

Eclipse Charts

1750-2200

By

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**This book
Is dedicated to
Ven. Khenpo Karthar Rinpoche**

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Introduction

In the long history of astronomy eclipses are perhaps the preeminent celestial phenomena, visually striking in their effect and witnessed by all humanity. It is no wonder that astrology, the cultural form of astronomy, has built up a long history on the lore of the eclipse and what they mean for nations and in the natal charts of individuals. This book is intended to make information on recent eclipses, at least from 1750 A.D. onward available and to provide a list of predicted eclipses for a couple of centuries into the future.

In the teachings of Tibetan Buddhism, it is pointed out that eclipses are very potent times. Of course, the full and new moons have always been considered important, and the eclipses are said to be even more so. In the Kalachakra (wheel of time) teachings, everything that takes place externally in our life happens because of subtle changes deep within us. In this tradition the eclipse is the paradigm of this essential change. It is written that during an eclipse, the two channels (left and right side of the central spinal channel) come into contact or merge with the central channel, this produces a greatly increased vision or experience, a vision available to those who can manage to be aware of it.

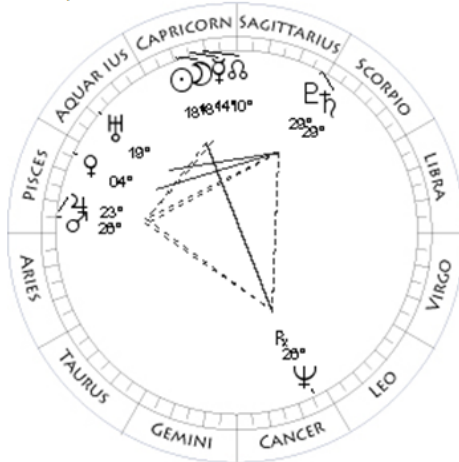
During these very seminal or intense times, it is advised for the practicing student of meditation to redouble efforts to observe what takes place within the nature of the own mind, for this is the screen on which all inner life is projected. It is made clear in these teachings that these effects take place whether or not we are able to perceive and remember them. For those who study this subject, it is considered very important to make joyous and wholesome actions during these times and to avoid inappropriate actions which tend to stain one's mind stream.

How to Use This Book

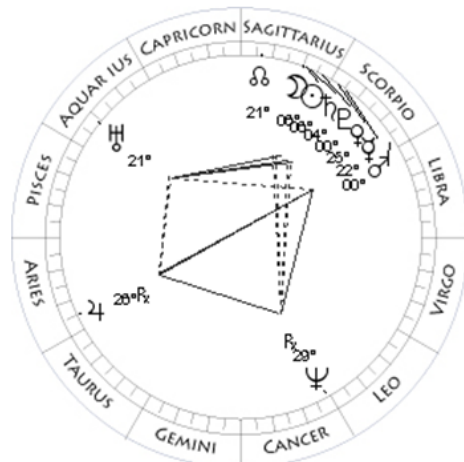
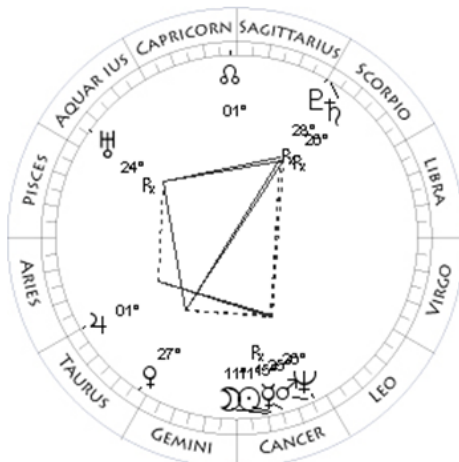
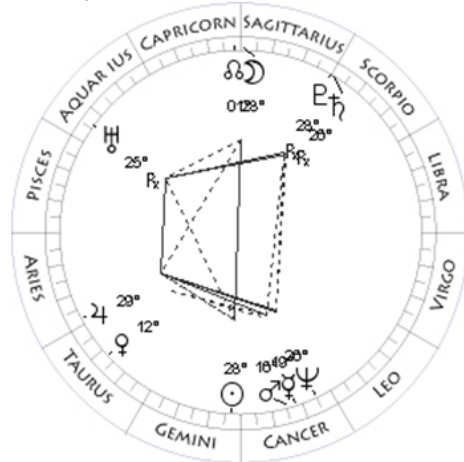
I have included introductory material on the lunation cycle, including some articles by the legendary astrology Nicholas DeVore, author of the classic "Encyclopedia of Astrology," used here with permission of the publisher. These are self-explanatory.

Aside from that, the majority of the book contains a list of all the eclipses from 1750 to 2200 A.D. complete with chart wheels and planetary positions for each eclipse. You can locate the eclipses for a particular year and see at a glance how they might affect your individual natal chart or the charts of countries. It is the wish of this author that this book of eclipses may be of use and benefit.

Jan 8, 1750 9:28 AM Total Solar



Jun 19, 1750 9:03 PM Total Umbral



Jul 3, 1750 6:38 PM Total Solar

Mo|18Cp03 + 0°43
 Su|18Cp07 - 0°00
 Me|14Cp01 - 1°43
 Ve|04Pi54 - 0°54
 Ma|26Pi24 - 0°23
 Ju|23Pi35 - 1°14
 Sa|29Sc03 + 1°58
 Ur|19Aq35 - 0°41
 Ne|26Cn30 - 0°25R
 Pl|29Sc45 +12°21
 No|09Cp54 - 0°00
 Coords: 29W/23N

Mo|11Cn28 - 0°57
 Su|11Cn34 - 0°00
 Me|15Cn42 - 4°24R
 Ve|27Ta35 - 2°44
 Ma|25Cn21 + 1°08
 Ju|01Ta19 - 1°13
 Sa|26Sc00 + 2°06R
 Ur|24Aq58 - 0°45R
 Ne|26Cn47 - 0°21
 Pl|28Sc14 +12°41R
 No|00Cp34 - 0°00
 Coords: 122E/62S

Nov 29, 1750 0:57 AM Partial Solar

Mo|28Sa20 - 0°15
 Su|28Ge18 - 0°00
 Me|19Cn04 - 1°04
 Ve|12Ta58 - 2°49
 Ma|16Cn26 + 1°06
 Ju|29Ar04 - 1°11
 Sa|26Sc41 + 2°09R
 Ur|25Aq15 - 0°45R
 Ne|26Cn18 - 0°21
 Pl|28Sc30 +12°45R
 No|01Cp18 - 0°00
 Coords: 45W/24S

Mo|06Sa55 - 1°21
 Su|06Sa47 - 0°00
 Me|22Sc18 + 1°07
 Ve|25Sc29 + 0°50
 Ma|00Sc23 + 0°48
 Ju|26Ar20 - 1°25R
 Sa|04Sa51 + 1°40
 Ur|21Aq51 - 0°44
 Ne|29Cn42 - 0°21R
 Pl|00Sa40 +11°50
 No|22Sa43 - 0°00

There are four charts on each page, organized chronologically by date, and listed from the top, left to right, and continuing below from left to right. The date for each chart (in bold) is positioned by the particular chart. However the list of planets for each chart is listed

by column, with (from left to right) the top left chart, the lower right chart, the top right chart, and the lower left chart. Sorry it is complex, but we have a lot of information on the page. The bodies for each date are list and underneath the geographic longitude and latitude (+ for west, - for East) at the moment of greatest eclipse.

Signs of the Zodiac

Ar = Aries

Ta = Taurus

Ge = Gemini

Cn = Cancer

Le = Leo

Vi = Virgo

Li = Libra

Sc = Scorpio

Sa = Sagittarius

Cp = Capricorn

Aq = Aquarius

Pi = Pisces

Sun, Moon, and Planets

Mo = Moon

Su = Sun

Me = Mercury

Ve = Venus

Ma = Mars

Ju = Jupiter

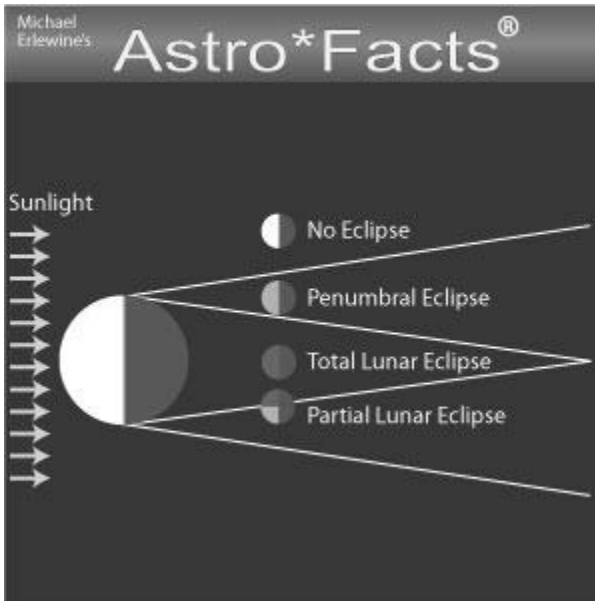
Sa = Saturn

Ur = Uranus

Ne = Neptune

Pl = Pluto

No = Northern Lunar Node



Lunar Eclipses

In a lunar eclipse, the Sun shining on Earth casts its shadow into space and a few times a year (at most) that shadow actually falls on the Moon and thus an eclipse. Lunar eclipses include the following types, which should be clear from the graphic above.

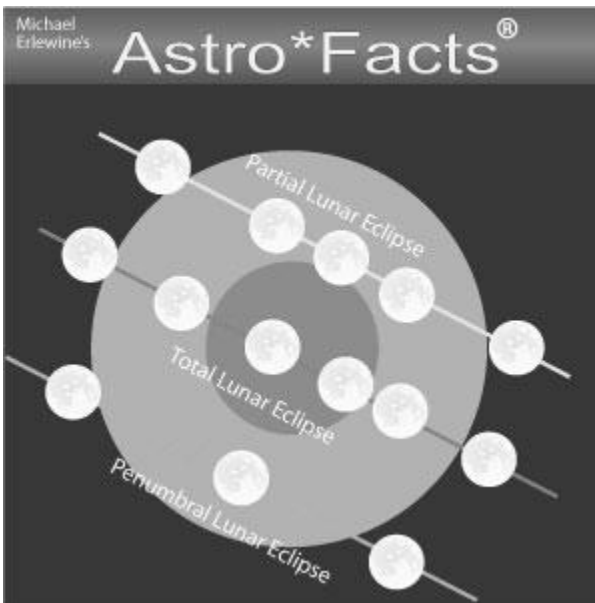
No Eclipse

Penumbral Eclipse

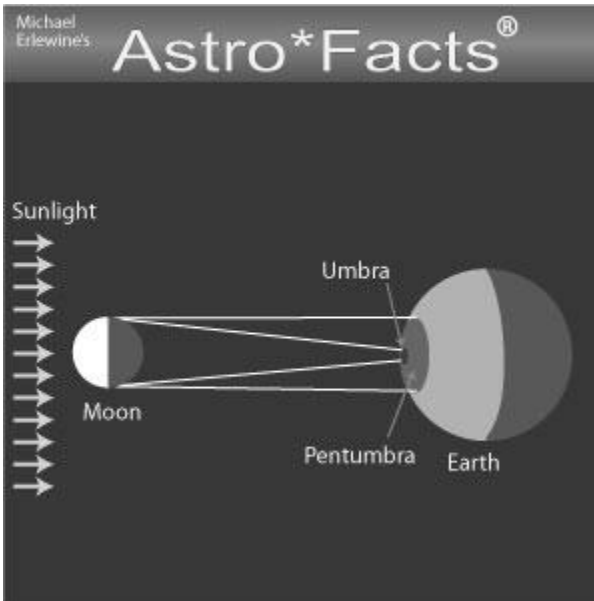
Total Eclipse

Partial Eclipse

The articles later in this book will provide more detail.



Additional Views Lunar Eclipses



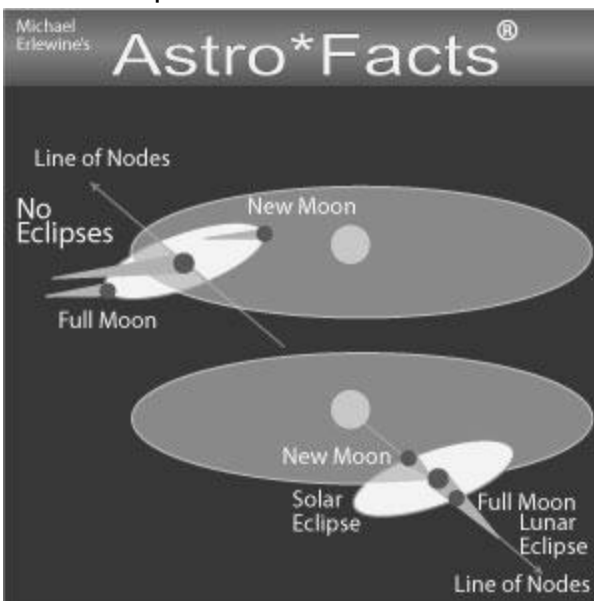
Solar Eclipse

On an eclipse of the Sun, the Moon comes between the Earth and the Sun. There are several types of solar eclipses, which are detailed in the articles later in this book.

Annular Eclipse

Total Eclipse

Partial Eclipse



Eastern Astrology: Lunation Cycle

The East seldom mentions the individual birth chart. Their primary interest is in the dynamics of the lunation cycle itself, which they divide and analyze in great detail in order to make use of the opportunities it offers for day-to-day decision-making. In other words, in the East the lunar cycle is used as a means to determine the kind of activity appropriate for each successive lunar day, and there are thirty of them. This amounts to a form of electional astrology.

In the West, electional astrology is thought of as a means to pick an appropriate time in the future for a particular ceremony or happening, like a wedding. Eastern astrology too uses electional astrology in this manner, but more often it uses electional astrology as a guide to day-to-day personal living and practice. Rather than concern itself with what lunar type a given phase of the Moon might produce (birth chart), oriental astrology asks what is the current lunar phase good for. What kind of action is auspicious (or not) today? In India and Tibet, it is the lunation cycle rather than the yearly sun or solar cycle that is the primary indicator used for planning activities and for personal guidance. In other words, in the East they live by and follow the cycle of the Moon on a day-to-day basis, just as we do the Sun here in the West.

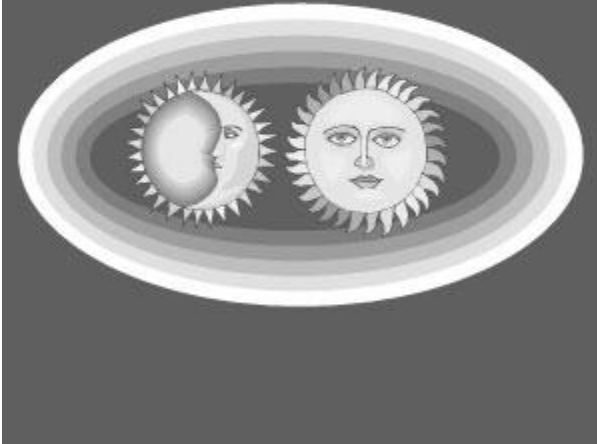


The Lunar Birthday

A very clear illustration of this idea is the fact that, in most Eastern countries, birthdays are observed according to the particular day of the moon cycle (lunar phase angle) during which a person was born, rather according to the solar return (birthday) as here in the West. If we celebrate your birthday in Nepal, we celebrate that phase of the moon (the lunar day, solunar angle) you were born in. Moreover, due to the fact that lunar months do not fit nicely within the solar year, a birthday in the East for any given individual can be up to a month away (during some years) from the solar return -- our Western-style birthday.

This simple fact makes it clear how important the moon and the lunar cycle are in these countries. A study of the existing literature on the meaning and use of the moon in astrology (East and West) shows much similarity but also considerable difference.

Astrology



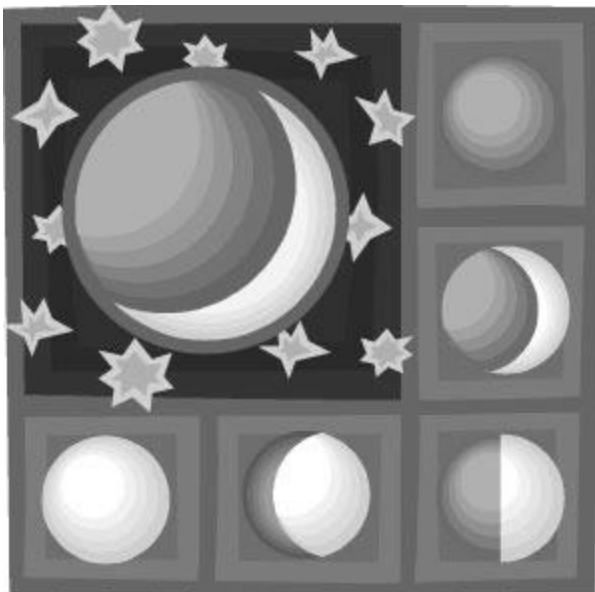
The Cycle of the Sun and Moon

There is general agreement (East and West) about the nature of the lunation cycle, in that it somehow proceeds from some sort of seed time at the new moon to a fruition at the full, and so on.

Tradition has it that we get an impulse, insight, or idea at the New Moon. During the two-weeks between the New Moon and the Full Moon (the waxing moon), this impulse or insight develops into something objective; we build it into something concrete. In other words, this seed impulse grows into something real and reaches fruition at the Full of the Moon. After the Full Moon, whatever we have built or manifest proceeds to break-up or dissolve, and we gather whatever experience or rewards we can from it. It breaks up during the waning two-weeks of the lunar cycle, from Full Moon to the next New Moon. Thus, the endless lunation cycle (like our lungs breathing) goes from a collapsed seed point (New Moon) to a full manifestation (Full Moon), and back again. This is the archetype of the cycle.

The lunar cycle endlessly expands and contracts, bearing forth and taking back -- creating and destroying. Given this fact and the tradition that has built up around it, those who study the lunar cycle seek to take advantage of this constant cycle and its very regular opportunities. In the West, this very practical knowledge has either

been lost or never really accumulated. It is hard to tell. My guess is that it has never been studied here in as much detail as in the East.



Lunar Gaps

Although measuring time and life by the moon is ancient, it is more than just some primitive sort of clock. The very sophisticated concept of lunar gaps springs from centuries of painstaking psychological observation by the lamas of Tibet, and the Hindu sages. They practice it today with the same vigor and intensity as they did a thousand years ago. Unlike many other traditions, where the line of successors (lineage) has been broken due to various events, the dharma tradition of Tibet remains pure and unbroken to this day.

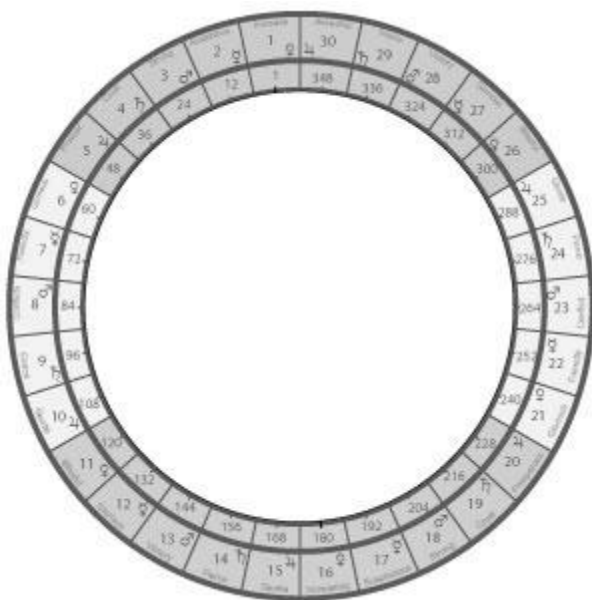
Although much of the Tibetan dharma tradition requires dedication and intense practice, learning to use the moon's phases and the concept of lunar gaps is easy to get into. The theory is simple.

It involves the ongoing relationship between the Sun, the Moon and the Earth -- the monthly cycle of the phases of the Moon. We already know about the moon cycle, and can even walk outside at night and see which lunar phase we are in.

This is not the place (and I am not the expert) to describe to you either the very complicated astronomical motions these three heavenly bodies produce, or the profound theories of what all of

this motion means in a philosophical sense. What is quite accessible is the concept of "lunar gaps."

As we know, the moon cycle goes through its phases from new moon to full moon, back to new moon in a cycle of about one month, some 30 days. This is seen as an ongoing cycle of activity -- endless in extent. It goes on forever.



Thirty Lunar Days

However, although the moon cycle is unending, it does have distinct phases like the Full Moon, New Moon, quarters, and so on. In Tibet and India, the monthly lunar cycle is divided into 30 separate parts called lunar days. There are thirty lunar days starting from the new moon (start of 1st day), counting through the waxing half of the moon cycle to the Full Moon (end of the 15th day), and on around through the waning cycle, back to the new moon again.

What is interesting about how the lamas (and most Hindus too) view this 30 day cycle is that the 30 lunar days are not considered of equal importance. The monthly cycle has very definite points in it of increased importance -- lunar gaps. It is at these lunar gaps or openings that it is possible to get special insight into different areas of our own life. In fact, the Tibetans take full advantage of these lunar gaps to perform very specific practices. That is, certain of the lunar days have proven themselves to be auspicious for particular kinds of activities.



Moments of Clarity

In the East, they speak of mental obscurations that tend to cloud our minds, but that can sometimes clear up, just as the Sun comes out from behind the clouds. These moments of clarity are the gaps in the clouds.

From a reading of the Eastern literature on this subject, one gets the sense that (in general) life (and our minds) are perceived as being filled with the noise of our own problems (obscurations), making clear insight often difficult. These obscurations can be many and their accumulation amounts to the sum total of our ignorance -- that which we ignore.

Therefore, in Eastern countries, these articulation points or windows in time/space (lunar gaps) are very much valued. In fact, the Eastern approach is to analyze the lunar cycle, in minute detail, in order to isolate these moments (gaps in time/space) where insight into our larger situation can be gained. Much of day-to-day practice in Eastern religions amounts to a scheduling of precise times for personal practice or activity built around the natural series of gaps that can be found in the continuous lunar cycle. In its own way, this is a very scientific approach. In the East, they have been astute observers of the mind for many centuries.

Here in the West, we are no stranger to clear days in our mind. We have those too! The only difference is that we tend to believe that

these so-called clear days appear randomly -- every now and then. The more sophisticated (and ancient) psychological analysis of the East has found that these clear days are (for the most part) anything but random events. They have their own internal ordering, and oftentimes this ordering can be associated with the phases of the moon.



Summary: Lunar Gaps

In summary, there are times each month when it is more auspicious or appropriate to perform or be involved in one kind (or another) of activity. There come gaps in the general obscuration or cloudiness of our mind when we can see through the clouds -- when penetrating insight is possible.

As noted, times when one can see without obscuration (see clearly) are very much valued in the Tibetan dharma tradition. These are viewed as real opportunities for insight and the subsequent development such insight generates. Knowing when and where to look for these insight gaps has been the subject of study and research in Tibet for centuries.

And this is not just academic research, reserved for the pundits. Everyone uses the lunar calendar on a regular basis. Lunar gaps are used to plan a wide variety of events in the Tibetan calendar, everything from finding a time to perform a simple healing ceremony to full scale empowerments.

The Moon

Observation

There are times to be set aside to observe our mind and life.



Observation Times

Aside from knowing when these lunar gaps can be experienced, the other major thing to know about this subject is what to do when the gaps occur. As you might imagine, there are a wide range of practices, depending on the particular lunar gap (phase) and the personal needs of the practitioner.

However, in general, these lunar gap times are set aside for special observation. Tibetans observe these days with great attention and care. In fact, in many Eastern countries, they don't have Saturday and Sunday off. Instead, new and full moon days are considered holy days (holidays), and normal routines are suspended at these times. These are days for observation.

This word "observation" is worth mentioning, for this is what takes place at these times. In the West, we might use the word meditation. In Tibet there are many words that come under the general concept of meditation. The word "observe" is a lot closer to what happens during these lunar gaps. Observe the nature of the day. Observe your mind at that time. Be alert, present and set that time aside for just examining yourself, your mind, the time -- what-have-you? It is while being present -- observing these seed times -- that the so-called lunar gap can present itself. Many great dharma teachers have pointed out the existence of gaps in our life, moments when clarity and real insight is possible.

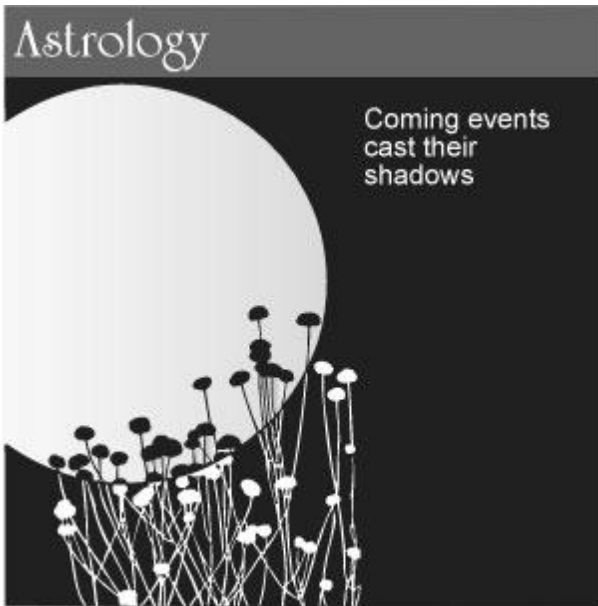


Lunar Opportunities

And lest we get too far a field sitting there waiting for a gap in time or space to occur, let me restate: The gap that appears is a gap in our particular set of obscurations, our own cloudiness. When such a gap takes place, there can be an intense insight into some aspect of our situation, the effects of which stay with us for a long time. One moment of real insight or vision can take weeks or months to examine in retrospect. Each time we bring it to mind, its richness is such that it continues to be a source of inspiration. This is what lunar gaps are all about.

At this point, it is hoped that you have some general idea of what lunar gaps are and how you might go about taking advantage of them.

These lunar opportunities are sometimes referred to as gaps or openings in the otherwise continuous stream of our lives -- windows. They conceive of these gaps as articulation points, much like an elbow is where the arm is articulated. They are natural joints or gaps in time/space upon which time and space turn and through which it is sometimes possible to gain access to information about the larger, dynamic life process that already encapsulates us. We have more detailed lists available, as well as lists customized to your particular location, including sunrise, etc.



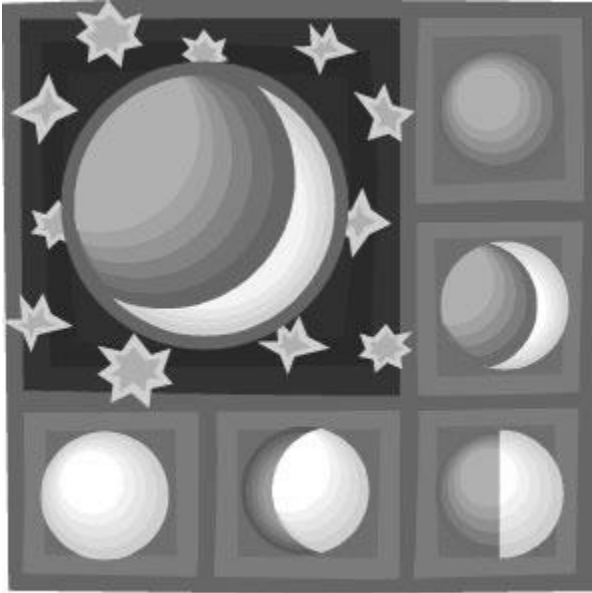
Taking Advantage of the Lunar Cycle

The phases of the moon have been observed for ages. The moon, from a Sanskrit term for measure, is the primary means by which the majority of the people in the world (even in this 21st century!) measure time and the events in their own lives. This article takes a look at what astrologers (and ordinary people) have come to understand about the lunation cycle -- the phases of the Moon. In particular, we will contrast methods of using the lunar cycle in the East and West.



Lunation Cycle in Western Astrology

Eastern and Western astrology use the lunar cycle in the same and different ways. In the West, the lunar cycle is most often seen as a key to the personality and the birth chart. Although books like Rudhyar's "The Lunation Cycle," and many others, describe the cycle as a dynamic process that unfolds each month, the practical result of their focus is not so much with this day-to-day process as with individual snapshots (the various lunar types) taken from the overall process. And then there are also books along the lines of William Butler Yeats' "A Vision." This extremely involved intellectual study attempts to deal with concepts of anima and animus -- the endless process of psychological self-projection and its resolution. Although somewhat of a mental challenge, analogous to a tongue-twister in speech, the practical benefit to this kind of writing is questionable. In this article we will not deal with these highly intellectual approaches to the Moon. Instead, let's take a quick look at the how the Moon has been considered in Western astrology.



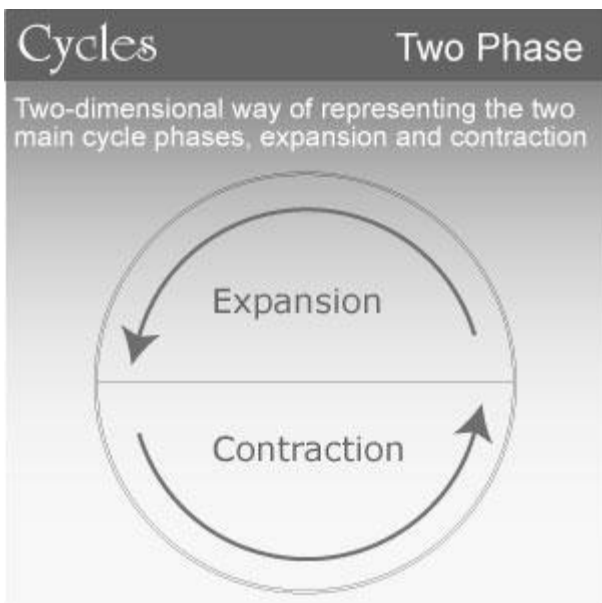
The Phases of the Moon

Here is a summary as any competent astrologer might present it to us:

The phases of the Moon are known to all. From the dark of the New Moon, the cycle builds through First Quarter and on to the brightness of the Full Moon (start of Third Quarter), after which the lunar light begins to diminish. After Full Moon, as the Moon's light starts to fail, comes the quarter moon phase, which rapidly darkens until we reach the New Moon. The lunar cycle is perhaps the easiest to grasp of all astrological cycles. It is longer than the cycle of a day and shorter than the cycle of a year -- both of which are hard to keep in mind.

As mentioned, the lunar cycle extends from the New Moon (Moon and Sun conjunct the same point in the zodiac) through the Full Moon (Moon and Sun on opposite sides of the Earth), and back to another New Moon. The New Moon point is considered a time of conception and beginning, the Full Moon a time of fruition and fullness - experiencing. It is often stated in the astrological literature that a seed idea, impulse, or insight present at the New Moon is externalized through the first two quarters (waxing moon) and reaches completion or fullness at the Full Moon. After the Full Moon, the implications or "meaning" of what was achieved through the externalization process of the waxing moon is seen, the lesson

learned, and preparation takes place for a new and perhaps more perfect idea to form at the next New Moon.



Phase Cycles

Keep in mind that the cycle of the Moon resembles all cycles (the heartbeat, the breath, the day, the year, etc.); the cycle has a point of greatest inwardness or conception (New Moon, inhalation-point) and a point of greatest externalization or fullness (Full Moon, exhalation-point).

Projects begun at the New Moon are said to reach fulfillment at the Full Moon. The first two quarters (when the Moon is waxing and growing with light) represent a period during which to strive and build into reality a project that has been conceived, probably around the time of the New Moon. This is the time to project outward and to make real something we have visualized in our minds. We all have projects -- a new effort, a new job, a new start, a new anything.



New Moon

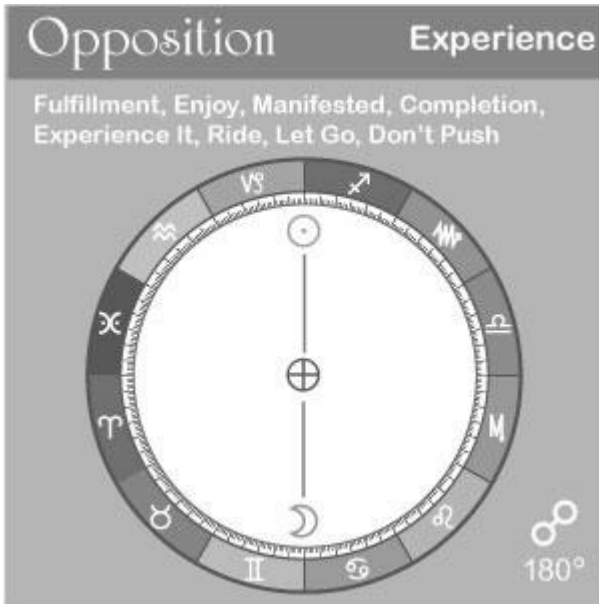
In the Western tradition, from the New Moon through the First Quarter is good for making this push from an insight outward, making our dreams into reality. The New Moon point is a time for vision and involves a new seed impulse, sometimes called the solar tone.



Second Quarter

The Second Quarter (end of First Quarter) represents, according to the tradition established by Dane Rudhyar, a crisis in action, when we must carry our new impulse or idea beyond the planning stage and into the sphere of action. This is a time when the idea breaks into reality and is launched. The First Quarter is a time to get underway and to figure out how to make our dreams (ideas) come true.

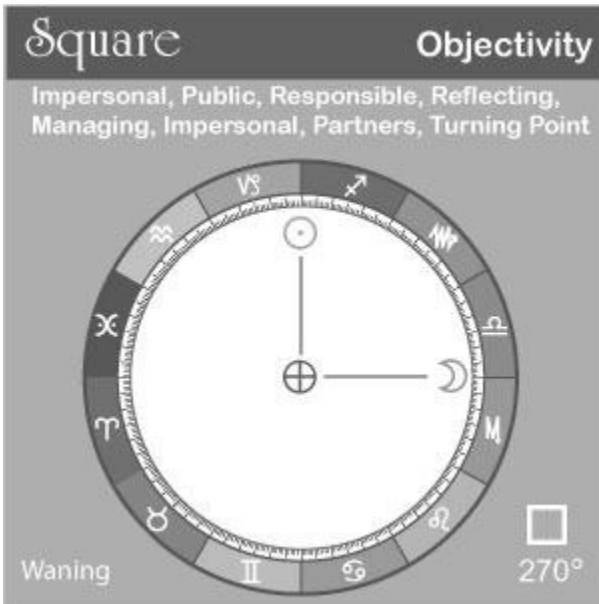
The end of the First Quarter and beginning of the Second Quarter marks that point in the lunar cycle when we are able to bring across some portion of an insight or idea into reality. The Second Quarter through the Full Moon (beginning Third Quarter) represents the time when we achieve outward realization or actualization of what we saw or felt at the New Moon impulse. It is a time for physical work and externalization. It is during the Second Quarter that we put into our project the energy and material that give it substance and form.



Full Moon

The Full Moon marks outward extension and completion of the project. For better or worse, this is it! If we have tuned into the insight available at the New Moon -- and if we have worked to that end -- the Full Moon can represent a time of fruition and completion. What we have dreamed or seen in the mind is now real and can be experienced in the flesh. If we have worked at cross purposes to the New Moon message, then the Full Moon might bring home that fact as well. We can reap the reward of our misguided effort. Above all, the Full Moon represents an experience -- a fullness, if you will.

The Third Quarter is a time during which we can appreciate, enjoy, and begin to reflect on the experience that peaked at the time of the Full Moon. This quarter is traditionally a time for growing awareness of what happened at the Full Moon, and learning and assimilation. The Full Moon impact and experience begins to pass, and we find ourselves having thoughts about that experience. If nothing more, we sense that the experience is over, and is passing. Reflection occurs. We begin to grasp and appreciate the Full Moon experience, for better or for worse. As the lunar light begins to diminish, we start drawing conclusions of one sort or another -- taking a lesson.

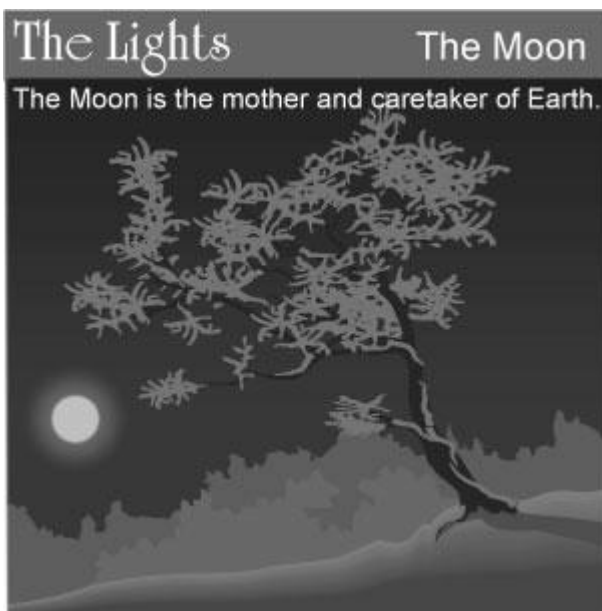


Fourth Quarter

The start of the Fourth Quarter is said to mark a crisis in consciousness. The experience of the Full Moon is over, and we are left to draw whatever conclusions we can from it. It is during the Fourth Quarter that we prune and weed out from our lives what we have seen to be of no value or use in this experience. It is a time for constructive elimination and release. It is often referred to as a 'seed time' and it is here we keep or take to heart the seed or kernel of the experience we had at the full of the moon. We are drawing to a close that experience and the entire cycle for that month. We are approaching another New Moon and the start of a new cycle and impulse.

Since we are dealing with a cycle or circle, there is no real beginning or end. All circles or cycles are endless or eternal (eternally repeating). The lunar cycle (phases of the Moon) is something that we can learn to use. After we read about and become aware of the different parts of this cycle, we can begin to observe the cycle happening around us. The lunar cycle described above in theory is seldom experienced in such clarity in everyday life. Over time, we recognize parts of the cycle and learn to use them. We might find it hard to push or begin projects during the Fourth Quarter -- in particular the three days or so just before a New Moon. But this is a good time to finish up a project, or clean up loose odds and ends of business -- draw things to a close. We

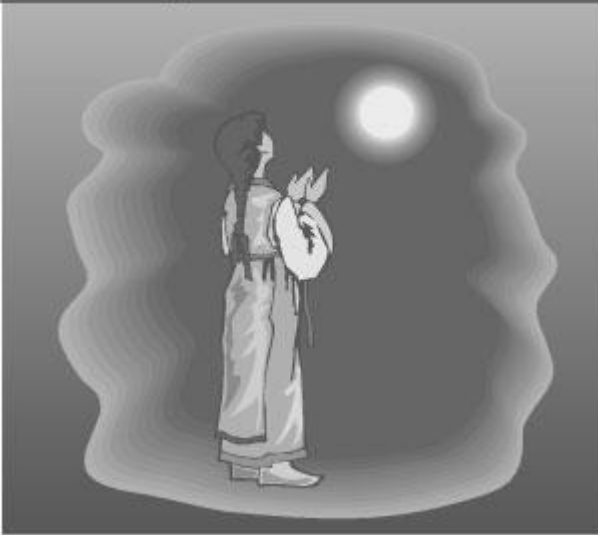
could find that get-togethers, parties, and social events seem to come off well around or just before the Full Moon. We learn to take advantage of the qualities and opportunities of each section of the moon cycle. And we don't have to wait to begin since we are already -- right now -- in that cycle. What we develop then is an awareness of the Moon cycle.



Seed Impulse: Themes

An important concept to grasp is that the lunar cycle is experienced by all beings. The seed insight or impulse available at the New Moon is open to each of us. It is a global experience belonging to the entire planet. Although we may take it personally and in our own way, it is, above all, a common experience. Each passing month or lunar cycle modifies this experience and presents a new or slightly altered theme or impulse at New Moon for us to consider. Endless variations on a theme, this seed-thought or impulse somehow sets the tone for succeeding lunar cycles. The moments of new and full moon are considered as special. This is particularly true at the time of an eclipse.

Astrology



Eclipses

Eclipses are simply New or Full Moons with extraordinary alignment or focus. They have been considered for centuries to be astrological events of the first magnitude. If we consider New and Full Moons to be important, then eclipses represent the keys to the lunar cycle for any year.

We mentioned earlier about the New Moon containing an impulse or insight that grows to fruition at the Full Moon. Eclipses, then, provide moments when extraordinary insight or vision are available to us. It is possible for some of us, at least at certain times in our lives, to experience what has been called the "vision of the eclipse," and to remember or keep that vision in mind. There appears to be a theme or principal insight connected with major eclipses. Let me make clear just what we mean here by the word vision.

"Vision" does not mean the fairytale dream picture we might conjure up -- but it is related. A vision is a moment of extreme clarity or understanding, when 'in a flash' we know or experience something in its entirety. We take it in. There are times in each of our lives when we have vision or see some intrinsic truth about our lives -- about life itself.



The Vision of the Eclipse

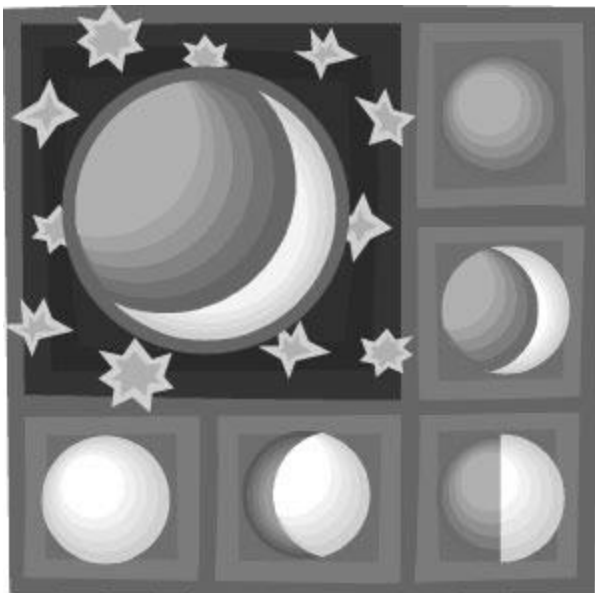
As mentioned above, there appears to be a common or communal vision that occurs around the time of major eclipses. While each of us interprets the insight or vision in a personal way, the theme or essence of the vision is a common experience. And it is possible to share that vision. Although we all experience it at once, only some of us are capable of remembering the experience in a conscious fashion. It seems that we are privileged to be consciously aware of the vision of an eclipse at special or crucial moments in our lifetimes -- times when we are particularly aware.

The message or vision or any given eclipse will tend to dominate our deeper or subconscious minds for months surrounding that eclipse. It is a peculiarity of these eclipse moments that they can happen days or even weeks before or after the actual moment of an eclipse. That is: the eclipse theme pervades the time prior to and after the actual physical event. Sometimes eclipses happen in pairs, two weeks apart. These are particularly powerful, and the whole time between these events can be a kind of waking dream - a vision.

Learning to recognize a moment of vision and taking advantage of these enhanced moments of vision surrounding and eclipse can be important. If the point in the zodiac where an eclipse occurs is in

high focus in your natal chart, then the particular eclipse may have special importance for you.

In general, eclipses of the Sun (New Moons) represent vision into the nature of our life (ideas about life), while eclipses of the Moon (Full Moons) represent a waking experience or sensational event -- living in our own dream.

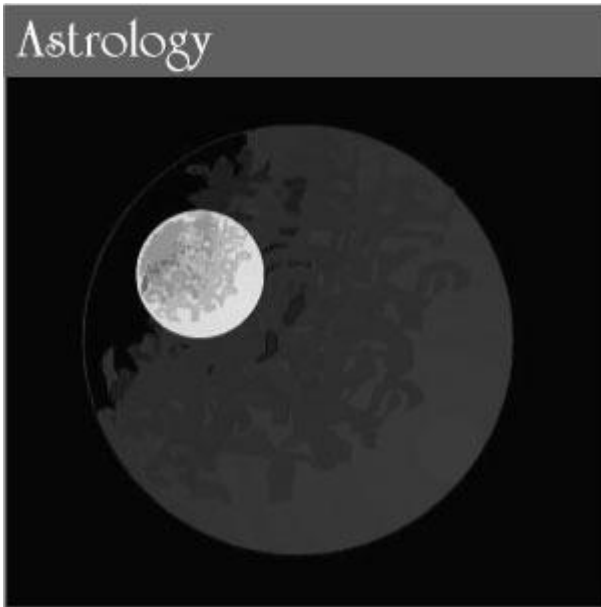


The Lunation Cycle: East and West

The lunar cycle and its gaps are available to everyone, all the time. If we don't observe these special times, it is because we have set no time aside to observe, to check it out for ourselves. In the East, most people are introduced to basic observation techniques or mind practice from an early age. It is unfortunate that mind practice is not much known of here in the West. I mean how many people do you know who practice observing or using their mind anyway? Most of us assume that the mind is perfectly usable just as we find it, and doesn't require any practice.

In the Tibet mind practice is not only acceptable, it is pretty much obligatory. This is true for countries like Tibet, Nepal, much of India, and even parts of China and Japan. Over there, the mind is considered by nature to be unruly and hard to manage. No one would think of trying to do much with it without considerable

practice. Mind practice or mind preparation or training, as it is sometimes called, is standard fare in the orient.



East and West

We might wonder why this style of mind practice has never caught on in North America. In part, this is due to our whole take on meditation and what we think that is. Meditation in the West has come to mean something almost like relaxation therapy, a way to relax and get away from it all -- to escape the worries of the world in the contemplation of some inner landscape. Somewhere, perhaps early in this century, the word meditation lost any semblance to its Eastern counterpart and became what most understand as meditation today -- a way to relax and get rid of tension.

Of course this is nothing like the Tibetan concept of mind practice or mind preparation, which involves the intense use of the mind. It is unfortunate that this very active mind practice has also come under the general label of meditation here in the West.

The Moon

The East

In Asia, it is the moon that is observed, and your lunar birthday, not the solar.

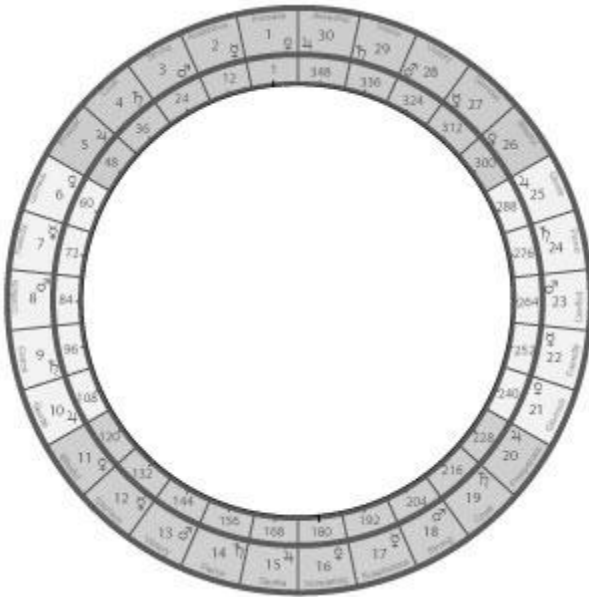


Gaps in the Clouds

Having pointed this out, it may be helpful to clarify and describe what it is that the Tibetan Buddhists (and other groups too) do when they sit down on their cushions. In general, if you ask them what they are doing on their cushions, the answer will not that they are "practicing", or they are "sitting". Indeed, that is what takes place. They sit and observe.

There are many Tibetan words for the different kinds of mind practice that are possible, while in the West we have just the one word: meditation. What then is mind practice?

The most important difference between sitting practice (mind practice) and meditation as it is understood in this country, is that mind practice is anything but relaxing or passive. It is very active.



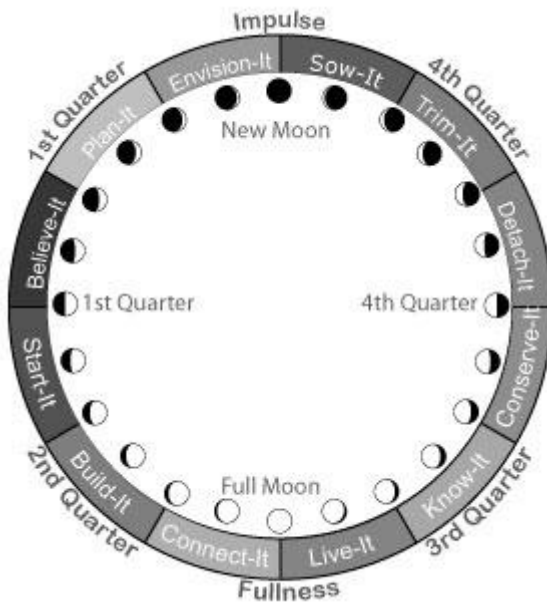
The Thirty Lunar Days

The actual technique is quite simple, taking only a few minutes to learn. And it is worth getting this instruction from someone authorized to give it. Most Buddhist and some Hindu groups offer this type of mind practice. When looking for training in mind practice, be sure to ask for a technique that emphasizes concentration on the present moment -- being present, and not some of the more dreamy relaxation techniques. What you need in order to use lunar gaps is to become very alert and observant. The technique is called Shamata training in Tibetan Buddhism and Zazen in Zen Buddhism. I would be happy to send a list of well-respected centers to anyone who writes me at Michael@erlewine.net. It is important that you receive instruction from someone trained in the technique, and get an authentic connection with a tradition.

Even the non-astrologer cannot help but notice the time of the Full Moon each month -- when the full disk of the Moon passes overhead around midnight. It is a fact that many have trouble sleeping when the Full Moon makes this overhead transit in the middle of the night. Often sleep will not come until the Moon finishes rising, transits overhead, and begins to set. This has been used by some as a way to determine whether a late-night party or a bout of TV watching will be a satisfying experience. In general, you

can plan on building tension (and attention) while the Full Moon is rising and an easing of that state just after the Moon crests overhead. After the Moon crests and begins to set is a good time to bring activities to a close. Sleep often will come with ease at this point.

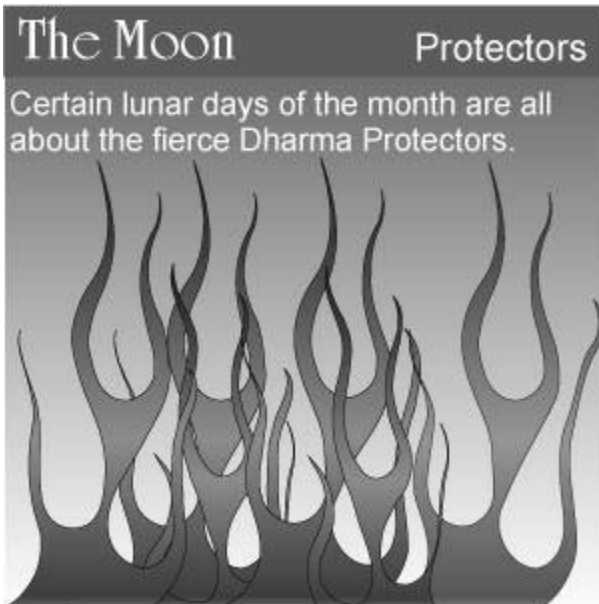
Learning to get in step with and to make use of the Moon cycle is part of astrological basic training. There has been general agreement among astrologers for thousands of years as to how the lunar cycle functions and the uses to which it can be put.



The Four Quarters

It seems that, although East and West agree on the importance of new and full moons, there is less congruence when it comes to the quarter moons. Here in the West, the lunar quarters are next in importance after the new and full moon times. However, in the East there are other days that are considered of greater importance, such as the 10th and 25th lunar days.

In both traditions, there is agreement that the 2 or 3 days preceding the moment of the new moon are difficult ones, which require special observation. In the West these days have been called the dark of the Moon, or devil's days, days when the darker forces have power. Both traditions affirm that we sort of survive these final days each month. Check it out for yourself. The three days before new moon can be a hard time. The East is in total agreement on this point, and the days prior to new moon are set aside for invoking the fierce dharma protectors, those energies that ward off harm and protect us during the worst of times.



Protector Days

In particular, the 29th day (the day before new moon) is called dharma protector day. It is a time given over to purification and preparation for the moment of new moon. Ritual fasting, confession of errors, and the like are common practices. In a similar vein, the days just prior to the full moon (the 13th and 14th) are also days of purification, days in which the various guardian and protector deities are again invoked, but in a somewhat more restrained way. For example, the 14th day is often given over to fire puja -- a ritual purification. In summary, during days prior to full and new moon, there is some attempt at purification, both physical and mental, in preparation for those auspicious events.

It is clear from the literature that the times of the new and full moon are considered of great importance. These days are set aside for special rituals and worship. As pointed out, full and new moon (full more than new) are times of collective worship and public confession. In many traditions, the monks and priests assemble for a day of special observance. In the East, the full moon celebration and the entire waxing lunar fortnight are oriented to the masculine element in consciousness, what are called the father-line deities. The new moon and the waning fortnight are given over to the mother-line deities and the feminine element. The full moon completes the masculine, or active, waxing phase of the cycle, and

the new moon completes the feminine, waning phase of the month. To my knowledge, this kind of analysis does not exist in the West.



Days of Observation

Aside from the new and full moon, the two most auspicious lunar days in the East are the 10th and the 25th. The 10th day (108° to 120°), called Daka Day, is considered auspicious for invoking the father-line deities -- the masculine. The 25th day (288° to 300°), called Dakini Day, is given over to the feminine principle and the mother line deities, in general. These two days, the 10th and the 25th, are formal feast days, days of observation when extra offerings are made and increased attention given to what is happening. There is some sense of celebration at these points in the month. In many respects, these two days even rival the new and full moon days in importance. The fact is that these four days (new, full, 10th, 25th) are the primary auspicious days as practiced in many Eastern rituals.



Health and Healing

There are many other days of lesser importance, which might also interest Western astrologers. Health and healing are important in Eastern ritual, and the 8th and 23rd days of the lunar month are auspicious for this purpose. It is these days that straddle the first and last lunar quarters. The 8th day (84° to 96°) is often called Medicine Buddha Day. Again this occurs in the male, or father-line, half of the month. The 23rd day (264° to 276°), occurring in the feminine half of the month, is dedicated to Tara practice. Tara is the female deity connected to health, long life, and healing in general.

The Moon

Purify

The 9th, 13th, 19th, and 29th lunar days are for purification, removing excess.



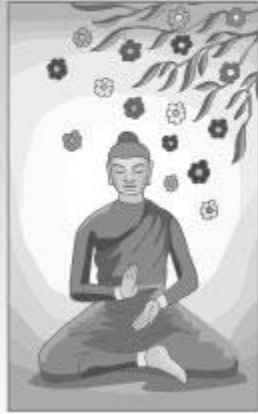
Purification Days

Earlier we mentioned the days given over to purification, most prominently the 13th and the 29th. In addition, on a lesser scale, the 9th and the 19th days are also noted as days when the protector deities should be invoked and kept in mind. These, too, are days of purification. And there are more, still finer subdivisions that are made. In this brief article, these major observance days are enough to give us the idea of how Eastern astrologers approach the lunar cycle. It should be kept in mind that, in the East, astrology is practiced by the general public. So it is not just astrologers who are using the lunar days; everyone observes these days.

Next, we might ask ourselves how this Eastern approach to the lunation cycle might be of value in the West? As mentioned earlier, a major fact is that the lunar cycle is perceived as having a variety of gaps, joints, or points of articulation that can be used. They can be seen as chinks in the armor of our particular obscurations. Many Western mystery traditions also observe the times of the full (and sometimes the new) moon. Full moon meditations are common. The quarter moons are given less attention, and few Western rituals exist (to my knowledge) for these events.

The Moon Meditation

In the East, training the mind is part of how one learns astrology.



Insight Moments

It is an intuitive fact that moments of clarity and insight (gaps) do come in the course of living. We all benefit from this kind of insight. What Eastern astrology seems to suggest to us is that many of these gaps are not just random events that occur in our life, haphazardly. They are regular opportunities, joints in the nick of time, when insights are somehow more possible than at other times. Therefore, it is common practice to set aside some portion of these special days for observance, for meditation.

It is unfortunate that the concept of meditation entertained by the public here in the West amounts to some kind of relaxation therapy -- a quiet time. This is very far from the truth of what is considered meditation in India, Japan, Tibet, and other Eastern countries. In fact, meditation is a form of observation. It is observation of what is, and of what is happening in one's mind and environment. When the Eastern mind meditates on special lunar days, it sets aside a time to observe with great care the nature of that particular day. Meditation as taught in Tibet and Japan is a technique that increases our abilities to observe. The meditator is not lost in deep inner space; that is our Western take on the concept of meditation. In the East, the meditator is right here, now, observing the mind and life. This is why it is said that these special days are days set aside for observation.

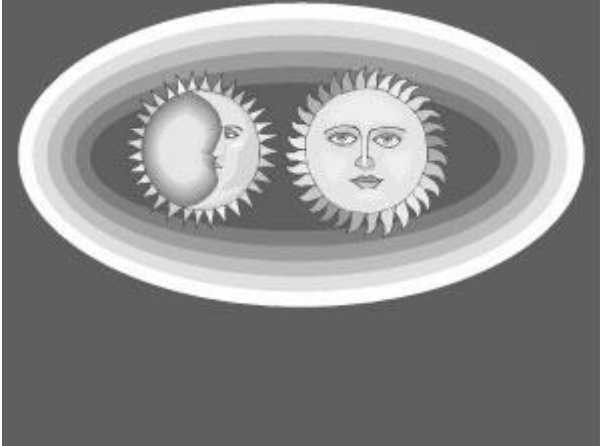


Open Channels

Here in the West, we are beginning to learn these techniques of observation. By setting aside a time on these special lunar days for observation, we can be open and aware to the possibilities of insight. This kind of awareness appears to be what is required to pick up on these natural events. If we have an insight at one of these time, we might be more willing to give it credence, knowing that it is happening on such-and-such a lunar day. And so on.

It is quite clear from the Eastern teachings that the moments of full and new moon are times when the various channels in the psychophysical body are somehow aligned. This is not to say the new or full moon days are days of peace and quiet. It is taught in the East that, although a new or full moon day may tend to be wild or hectic. Any patience or forbearance we can muster at that time will be much rewarded. In other words, there can be deep insights available to us at these times. According to these same teachings, an eclipse at the full or new moon is even more auspicious. In the teachings it is said that, during these very special events, both male and female energies (channels) are in simultaneous alignment -- the ultimate opportunity. The lunar cycle and its effects and opportunities have been analyzed in great detail in the Eastern teaching.

Astrology



East and West

In summary, the major difference between Eastern and Western astrology as related to the lunation cycle is that in the East any lunar theory is put to the test. It exists as a guide to practice. In other words, they practice what they preach. Here in the West, it would appear that we are somewhat more theoretical. We read about and discuss ideas on the lunar cycle, but very few astrologers that I have met make use of the lunar-phase cycle as a guide to day-to-day practice. As a society, we don't even observe the full or new moon, much less the quarters or any of the other possible lunar days. It is true that most astrologers are aware of the zodiac sign the Moon is in, but here we are not examining that part of the tradition; we are looking at the cycle of the lunar phases. Or, here in the West we may know that it is new or full moon, but we do nothing out of the ordinary in response to that information. And, of course, the general public seldom even takes note of lunar events.

The Eastern approach to the lunar cycle is quite ancient and very detailed. East or West, I assume that both astrological traditions have been engaged in recording something rather than nothing all of these centuries. In other words, I assume that the existing lunar tradition, East and West, is a reflection of reality rather than something we have made up. After all, that is what astrology is all about and why we practice it.

Here we have concentrated on the synodic cycle of the sun, moon, and earth -- the lunation cycle. We have ignored the use by astrologers of the Moon in the signs and houses, something practiced both here and in the East.

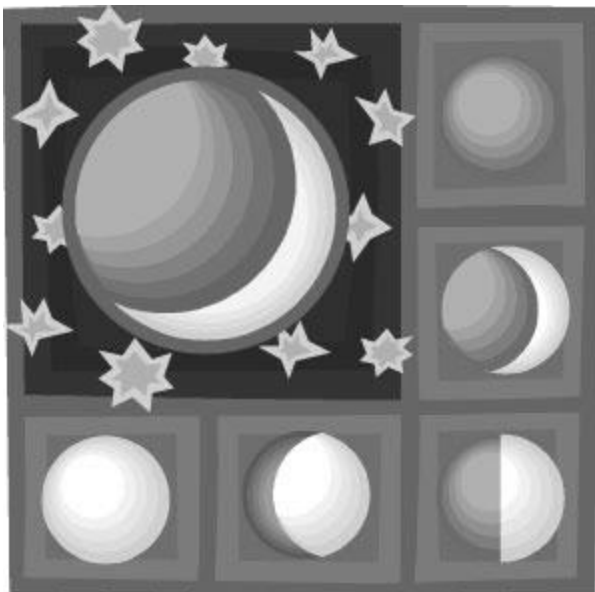


Summary

On a personal note, my study of the lunation cycle has led me from Western to Eastern texts in an attempt to obtain more practical information for day-to-day living. When I ran out of new texts to study, I sought out some of the living Eastern meditators who observe the lunar cycle on a regular basis. For example, we have had a wide variety of Eastern astrologers living and working at our center in recent years. In addition, one individual skilled in Sanskrit and Tibetan astrology spent almost two years here, translating various Buddhist texts on the subject.

From my experience with these sources, the primary piece of information that stays with me is that reading about or listening to someone with experience in this area is, by definition, preliminary. Both text and teachers (however fine they may be) can but point beyond themselves to the lunar cycle itself. Through any differences that exist, all sources seem united in this one maxim: go and see for yourself. Check it out. The purpose of the teachings is the experience itself that waits to be known. They are telling us:

Observe these days. Call it meditation or observation (whatever), but observe with care and attention if these insight gaps are there.



The Lunation Cycle and Science

In other sections, we have presented thoughts from both sides of the world, the East and the west, on lunar astrology. Is there any scientific evidence to back this up?

Scientific research into the lunation cycle over the last 15-20 years is fascinating from an astrologer's perspective. It was not very many years ago that science gave little or no credence to the possibility of a lunar effect on life here on earth. Today it is no longer a question of "is there an effect?" but rather one of "let me count the ways." In fact, the research at this point is so extensive that in this brief article we can only mention some of the high points in the existing literature.

It should go without saying, but I will repeat it here, that science still has little or nothing to say about psychological or personal events connected with lunar activity. Instead, it has discussed how the moon relates to such things as rainfall, weather, and atmosphere. More important to astrologers, and a step closer to the psychological, is the growing evidence for a hard connection between lunar activity and geomagnetic activity. It is this connection that we will detail here.



Earth's Aura

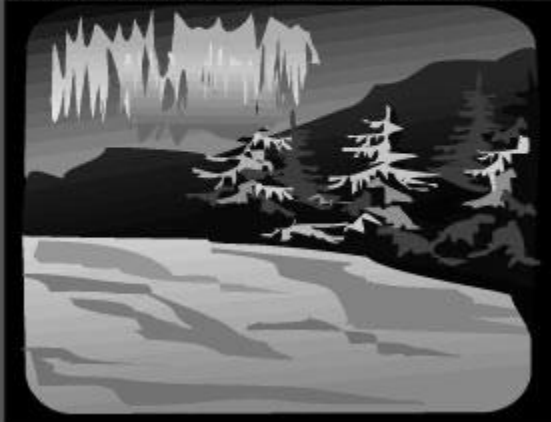
Geomagnetic activity coming from beyond the earth's aura or atmosphere has been linked to all kinds of mundane activities ranging from radio reception to the aurora borealis type displays and so on. The picture that emerges from modern research is one where each body (the earth, the, sun, and perhaps even each of us) is surrounded by some sort of magnetic field. We radiate, and this radiation surrounds us and even keeps some things out -- our aura or mandala.

The earth's aura (or magnetosphere as it is called) keeps at bay enormous amounts of radiation coming from the sun and from the galaxy in which our solar system is a part. Very energetic particles can penetrate our magnetosphere and find their way through the atmosphere to the surface of the earth itself. For the most part, these particles funnel in from the north and south polar caps via field lines of high geomagnetic declination. During times of increased solar activity such as solar flares, or during the peak of the sunspot cycle (like this year), very much more solar radiation reaches the earth than at other times. The weaker cosmic radiation must wait for the years of sunspot minimum to reach their maximum penetration. Please examine the diagrams of the magnetosphere shown below as we examine some of the scientific evidence that relates to the lunation cycle -- lunar power.

The Moon

Aurora

Solar radiation funneling in through the north pole creates the Aurora Borealis.



Auroras

Although we have long studied oceanic tides, we know now that there are atmospheric tides as well that move in response to the position of the Moon. For example, auroras are caused by the excitation of atmospheric molecules by energetic charged particles penetrating the atmosphere along geomagnetic field lines. Although the mechanism of this phenomenon is still being examined, it is generally understood that auroras are associated with the arrival of solar corpuscular radiation in the magnetosphere, 1 to 3 days after a solar flare. These particles (depending on their intrinsic energy and the current density of the atmosphere) penetrate the atmosphere.

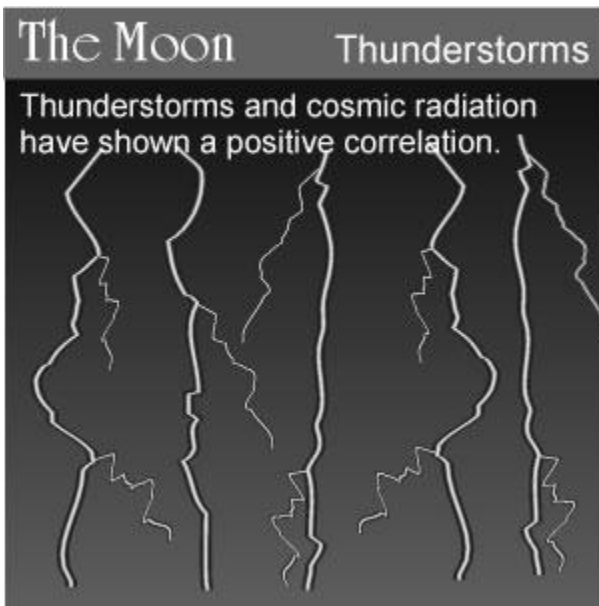
It has now been shown that these auroral peaks and valleys are modulated by the position of the Moon. This lunar auroral tidal effect in the upper atmosphere can be correlated with flood and ebb tides on earth, thus linking its rise and fall to the position of the Moon in its monthly cycle.



Rainfall

It has been well documented that rainfall is correlated with the Moon's position in its monthly cycle. According to many studies, rainfall maximizes midway through the 1st and Third Quarters of the lunar synodic month. In other words, about a half week after new and full moon rainfall reaches a peak. Correspondingly, a low point in rainfall occurs during the 2nd and Fourth Quarters with the lowest point of all occurring some three days before new or full moon.

In addition, it was found that increased rainfall at these two peak times in the month was greater at solar minimum than at solar maximum. The lunar cycle accounts for 65 percent of the variance during years of solar minimum, but only 14 percent during the year surrounding solar maximum. It has been suggested that cosmic radiation may be a factor, since this form of radiation penetrates more deeply into the solar system during years of low solar activity. During the years of high solar activity, a more powerful solar wind helps to keep out cosmic radiation.



Thunderstorms and Cosmic Radiation

Thunderstorms and Cosmic Radiation. It has been shown that the maximum in thunderstorms coincides with the maximum in galactic cosmic radiation and vice versa, that minimum thunderstorm activity coincides with the minimum in galactic cosmic ray radiation. There have been many studies on the relationship of cosmic radiation to lunar activity. Cosmic radiation consists of energetic particles entering our solar system from beyond its aura, or magnetosphere. As mentioned, there is an inverse relationship between cosmic radiation and solar activity. In other words, the increased solar wind at sunspot maximum keeps cosmic radiation out of the solar system and away from the earth. During the years of sunspot minimum, cosmic radiation is strong enough to penetrate the solar aura and reach the earth's atmosphere.

Thunderstorms and the Moon -- It has been shown that the maximum in thunderstorms coincides with maximum geomagnetic activity. In addition, it has been shown that thunderstorm activity is modulated by lunar position. The greatest number of thunderstorms occur after either new or full moon. Thunderstorm frequency reaches a maximum two days after full moon and remains high for most of the third quarter.

The Moon Geomagnetic

Geomagnetic activity is greater when the Moon is close to the plane of the Earth's orbit.



The Moon and Geomagnetic Activity

The Kp-geomagnetic index varies with the lunar phases. When the Moon is less than 3 1/2 degrees from the plane of the ecliptic, geomagnetic activity reaches a minimum during the 2nd lunar quarter and a maximum during 3rd lunar quarter. Lunar modulation while near the ecliptic suggests that the Moon is influencing the solar corpuscular flux which, guided by the solar magnetic field, approaches the earth generally from close to the plane of the ecliptic. Some of these particles become trapped in the magnetosphere.

There is a thin, neutral-sheet region close to the ecliptic plane in the tail of the earth's magnetosphere that the Moon might be modulating when it is traveling near the plane of the ecliptic. The high density of field lines near the ecliptic would make this region particularly sensitive to a magnetic perturbation, which could modulate the flux of particles reaching our atmosphere. In short, there is evidence that the moon has a magnetohydrodynamic wake with an enhanced magnetic field, which, when in the magnetospheric tail, causes magnetic disturbances on the earth.

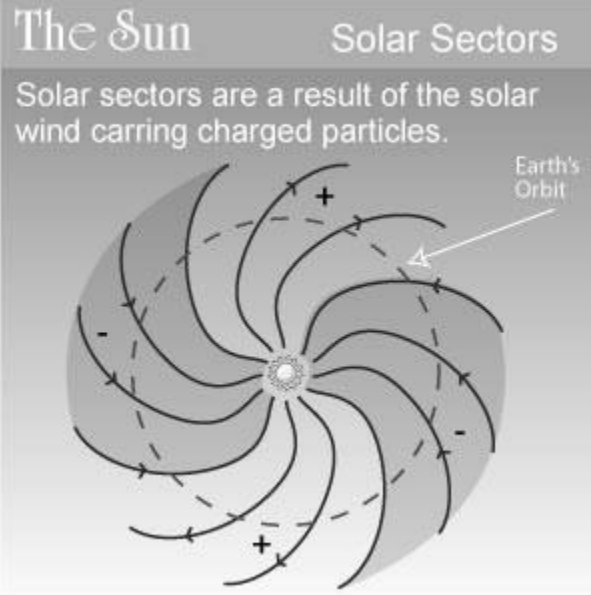
PCA or Polar Cap Absorption results from the remains of solar flares.



Polar Cap Absorption (PCA)

PCA happens when solar protons from solar flares enter the earth's upper atmosphere in high geomagnetic latitudes, often causing radio blackouts and increased auroral activity. These periods of severe ionospheric disturbance are often marked by Forbush decreases, when the counting rate of background galactic cosmic radiation has a sudden anomalous decrease which might take hours to days to recover to normal levels.

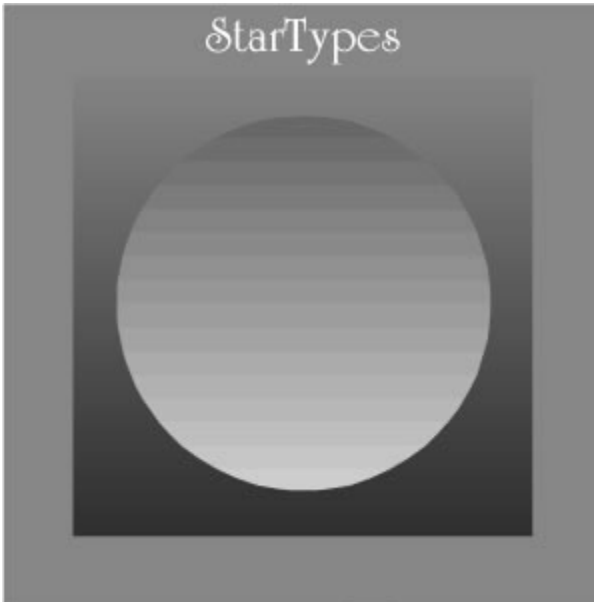
In effect, it is as if there were a magnetic screening of galactic cosmic radiation by the enhanced solar plasma. It has been noted, but unexplained, that PCA events and Forbush decreases seem to be ordered with the lunar synodic period (29.5 days). When this research was begun, it was expected that a 27.3-day period would be found, indicating a link with solar rotation. It was a surprise to scientists when, instead, results fingered the lunar synodic period (29.5 days). Therefore, it is possible that the moon somehow controls solar corpuscular radiation streaming toward the earth. The mechanism is still undetermined at this time.



Solar Sectors

Solar sectors and the geometry of the solar magnetic field represent important areas for research. The solar wind is a plasma of charged particles endlessly being ejected from the surface of the sun. These particles tend to concentrate in the plane of the ecliptic. All of the planets are within the aura or atmosphere of the sun, the solar wind. Each charged particle moves away from the sun in a straight line; however, since the sun itself is rotating, these particle streams get bent into a spiral of the type made famous by Archimedes. In addition, this plasma contains a frozen-in magnetic region constituting the sun's magnetic field that conforms to this spiral. This is the interplanetary magnetic field.

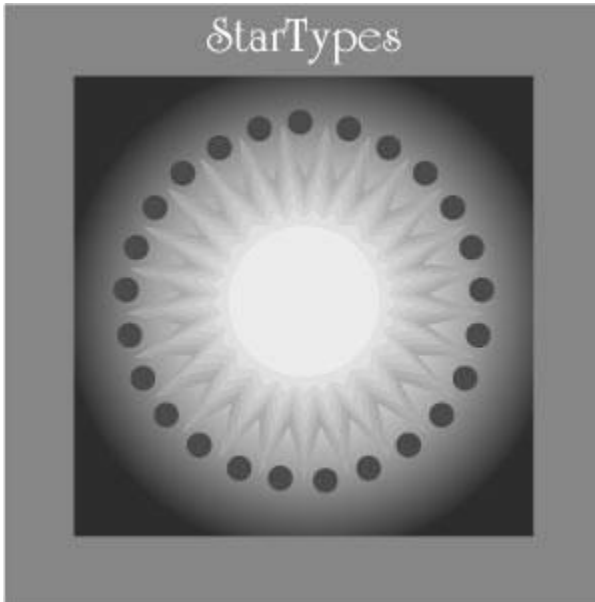
Because of this spiral effect, at the distance of the earth the magnetic field is oriented about 45 degrees west of the earth-sun line, on the morning side of the earth. Both the slow (4 days) and fast (10 minutes to several hours), charged, solar particles approach the earth guided by the solar magnetic field. They come in from the western side of the sun (morning side of earth) at about a 45-degree angle to the earth, although this angle fluctuates from moment to moment, based on the changes in the solar plasma. The fact is that each of us are exposed to this general direction around 9 AM each morning. We are most shielded from this direction around 9 P.M. each night.



Solar Magnetic Field

The great rotating disk of the solar magnetic field itself is divided into four primary sectors, each with an alternating polarity. The magnetic field direction is either positive (away from the sun) or negative (toward the sun). These sectors are tied into definite regions on the surface of the sun, which are of corresponding magnetic signs. It has been suggested that this may be thought of as a rigid disk in the plane of the ecliptic with four quadrants connected to the sun and rotating with it in its 27-day rotation cycle -- the co-rotating sector structure.

It has been found that geomagnetic and cosmic ray activity, as well as the velocity and number density of the solar wind flux, vary as a function of position within the solar sectors; thus there is a weekly fluctuation in the Kp-geomagnetic index. Studies show a maximum in thunderstorm activity when the earth passes from a positive sector into a negative sector. These four great sectors like a great pinwheel rotate past the earth exposing our planet to alternating positive and negative solar phases.

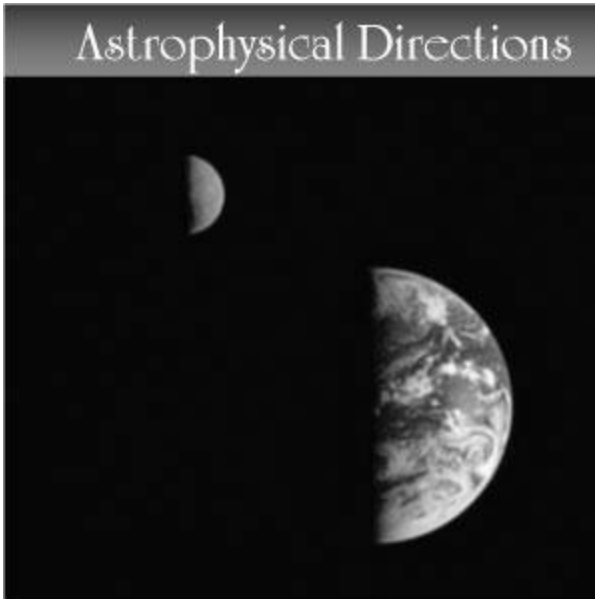


Lunar Variations

A study of the lunar position in relation to the Kp-geomagnetic index, PCA, and Forbush decreases shows that PCA and Forbush decreases reach a minimum during the middle of the 4th lunar quarter when the moon is near the 45° axis and thus between the earth and the spot where the charged particles arrive from the sun. A maximum for these values is reached when the moon is in the Second Quarter, unable to block the particle advance. It has been shown that the moon has an electrical charge of at least 100 V/m, which means that the moon has a positive electrical charge that can deflect solar protons.

There is also a minimum in the Kp-geomagnetic index during Second Quarters when PCA and Forbush decreases are at a maximum. It has been suggested that at Second Quarter the moon may least disturb the geomagnetic field, which is, at that time, most active.

There is a sharp rise in the Kp index just prior to full moon and continuing into third quarter. It has been suggested that this might be due to the magnetohydrodynamic wake of the moon interacting with the tail of the magnetosphere or modulating the flow of solar particles to the tail.



Father-line Deities

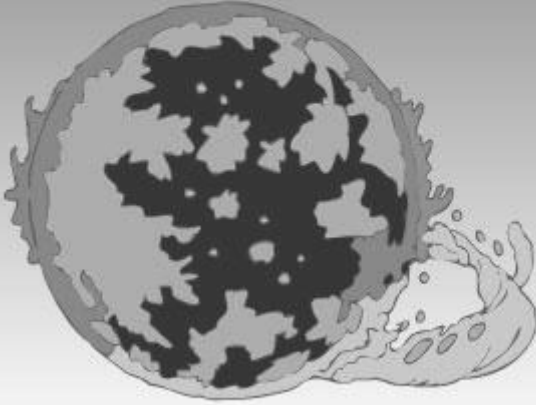
It is interesting to note that around that the Second Quarter, 10th/11th day are the maximum for PCP activity. This is when the father-line deities are observed in Eastern astrology. The 25th/26th days are when the Moon somehow block or inhibits the solar magnetic field. This is when the mother-line deities are celebrated in that tradition. Thus the time of greatest activity (male) has some scientific backup, and the same for least activity and greatest calm (female).

The western portion of the sun is strongly magnetically linked to the earth, while the eastern portion of the sun is not. This is due to the fact that solar corpuscular radiation approaches the earth from the west, guided by the solar magnetic field. As pointed out, these particles come in from the Western side of the sun at about a 45° angle to the morning side of earth. Statistical studies show that solar flares occurring on the eastern portion of the sun are much less frequently associated with geomagnetic storms than those occurring near the central or western portion.

The Sun

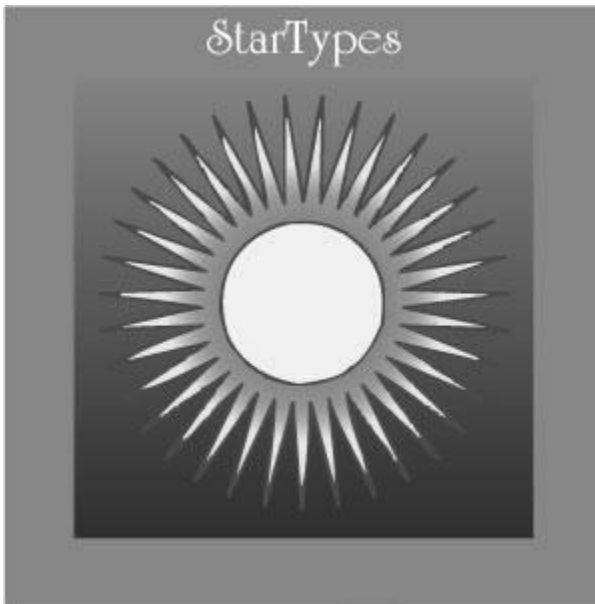
Solar Flares

Solar flares are the result of intense solar activity and can extend vast distances.



Solar Flares

Flares occur during periods of solar activity, which typically last a few days. These regions of activity (near sunspots) travel from east to west across the face of the sun, with a sunspot taking about seven days to travel from the central meridian to the western limb. Thus active solar regions (generating particles capable of reaching the earth) move into and through the western section of the sun, which is magnetically linked to the earth. During this period, recurrent particle streams from an active sunspot region can reach the earth. Some periods when solar protons have bombarded the upper atmosphere have lasted over ten days.



Summary

This has been a very brief description of some of the geophysical research that has been performed in the last 20 years and that might be of interest to astrologers. It seems that all bodies have a field or aura around them. The earth and the sun radiate, and that radiation is swept along behind whatever trajectory the object travels. It is fascinating to see scientific evidence emerging that seems to conform with the astrological tradition.

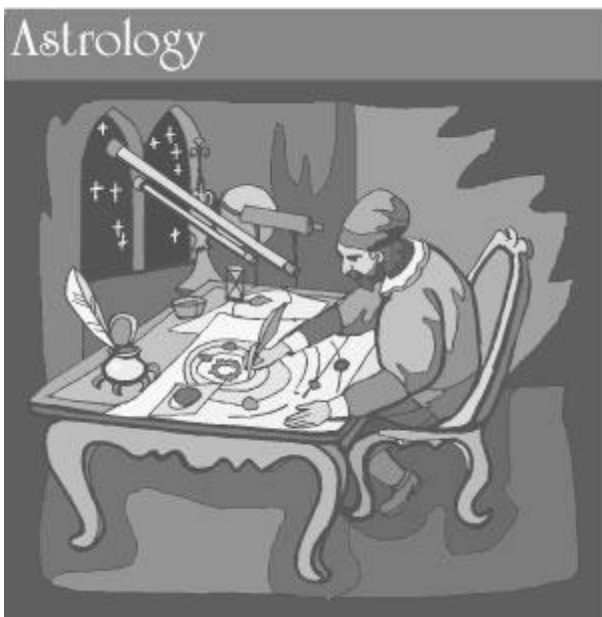
As pointed out in the another article on the lunation cycle, the 10th and 25th lunar days have been found (for ages) to be significant periods within the month, where some kind of change or transition takes place. It is interesting to note that, these points are more or less in line with the 45° vector along which solar corpuscular radiation reaches the earth.

The Moon in its monthly cycle appears to (somehow) modulate this stream of radiation when it reaches the area surrounding a solunar phase angle of some 315° . At this point the moon (perhaps due to its magnetic field) effectively blocks and cuts off some of the radiation stemming from the sun. At the opposite point in its orbit (around 135°), the Moon reaches a point of least blockage, where the most solar radiation can penetrate and reach the earth.

It is this point in the lunar Second Quarter, during which the greatest amount of radiation is available to the earth, that the

Eastern astrologers have set aside as a time for the masculine (active) element. The fourth quarter, where the Moon effectively blocks the solar radiation, is the point when the feminine energies are most observed.

It is interesting that, on the surface at any rate, ancient tradition and modern science appear to have some general agreement.



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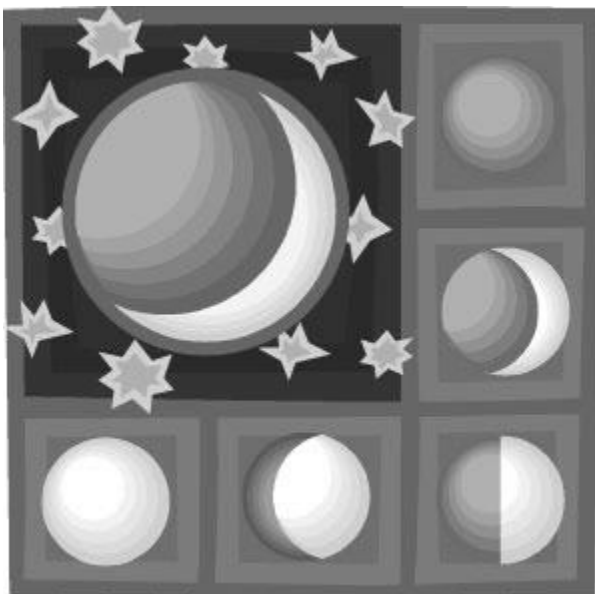
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Rinpoche, H.E. Shamar Rinpoche, Ven. Bokar, Rinpoche, Ven. Thrangu, Rinpoche, Ven. Khenpo Karthar, Rinpoche, Ven. Bardor Tulku, Rinpoche, and others.



Lunar Phenomena

Here are some very interesting facts about the moon and its relationship to the earth. A lot of this was programmed and released in a program called *Time Cycles* (written by myself) some years ago. No longer available, it is important that these concepts be made available again in terms of a computer program.

Technically oriented astrologers may want to consider the following and what it could mean. Here are the ideas:

The Pull of the Moon

The Moon's pull is strongest when it is nearest, and that happens when it is straight up or overhead (Moon up). This point is called the zenith. A second strong point occurs when the Moon is at the opposite point or beneath us at a point called the nadir (Moon down). The Moon is weakest in radial upward force when it is on either horizon, rising or setting. At these times the radial force is directed downwards toward the center of the Earth.



Moon Up / Moon Down

When the Moon is at the zenith, or overhead, gravitational force is at its strongest and it pulls us up, ever so slightly. When the Moon is at the nadir (on the other side of the Earth from us), a special form of centrifugal force, stronger than gravity, and pushes us out or away from the surface of the Earth. In other words, the effect of the Moon at zenith or nadir is to lift us up or away from the surface of the Earth, but for different reasons.

The two points during the day when the Moon is up or down are when the radial lunar force is at a maximum. However, sometimes the pull of Moon up is greater than that for Moon down, and vice versa. This variation depends upon what is called the diurnal inequality, which varies during the course of a month. This diurnal inequality is responsible for the difference in the height of successive high tides and depends upon which part of the ecliptic the Moon is located.



The Moon in the Signs

When the Moon is in the equinoctial signs, Aries and Libra, the pull of Moon up is the same as that of Moon down for a given day. However, when the Moon is in the solstitial signs, Cancer and Capricorn, the pull is unequal. When the Moon is above the equator and in the sign Cancer, the pull at Moon up is always stronger than the pull at Moon down. When the Moon is below the equator and in the sign Capricorn, the pull at Moon down is always stronger than the pull at Moon up.



Geographic Latitude

You geographic latitude will affect how unequal the Moon Up and down can be. If I am here in Big Rapids at almost 44 degrees of latitude North and the Moon has a declination of minus 28 degrees (which it can reach), then at Moon up, the angle between my zenith (Moon up) and the Moon is some 72 degrees. However, some 12 hours later, when the Moon is at my nadir (Moon down), the angle between my nadir's latitude (40 degrees South) and the declination of the Moon at - 28 degrees is only some 16 degrees. At this time, the Moon down pull will be much stronger than the Moon up pull.

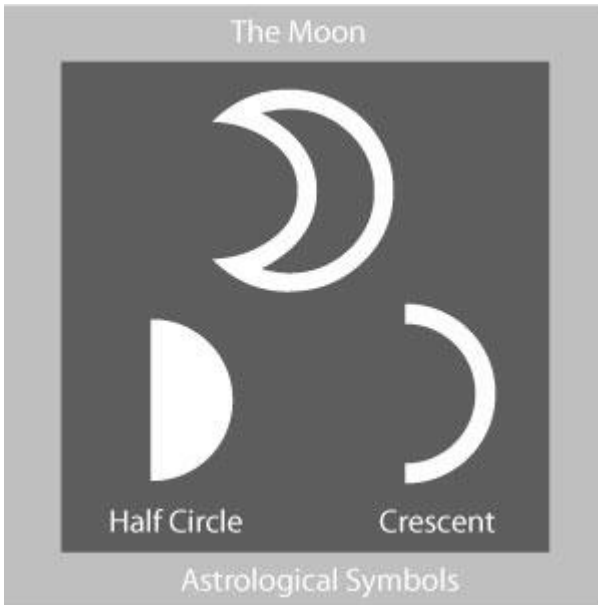
Moon on the Horizon

The Moon is weakest, as mentioned, when it is on the horizon, either rising or setting, each day. However, this too varies during the month depending on the declination of the Moon. The closer the Moon comes to your own geographic latitude, the stronger the effect. Therefore, if you are residing in a northern latitude, the Moon will be closer to you in the ecliptic sign Cancer and this will cause the Moon to be somewhat stronger at Moonrise and set.

Gravitational Force

Both the Sun and Moon exert a gravitational pull on the Earth. Although the Sun is much more massive, its greater distance results in the gravitational pull of the Moon being almost twice that

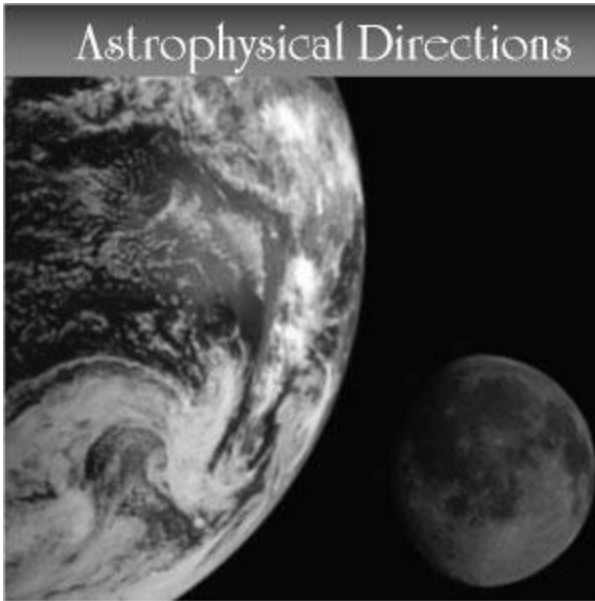
of the Sun. In any case, we experience their combined effect rather than each singly. This effect varies with the monthly lunar cycle.



New and Full Moons

At New and Full Moons, the combined pull of the Sun and the Moon is greatest. This pull is weakest at the lunar quarters. Therefore, this pull waxes and wanes with the month. It is strongest at new moon, grows weaker at First Quarter, is strong again at the Full Moon and then weak at Fourth Quarter, and on around. At New and Full Moon, the Moon's tidal effect is, in effect, added to the solar effect and the resultant tractive force is increased in the ration 3:2 , the tide-generating force of the Sun being one half that of the Moon. During the First and Last Quarters, when the Moon and Sun are some 90 degrees apart, the resultant tractive force is roughly one half of the lunar force alone.

This combined solar/lunar force is subject to some variation (other than that already pointed out) due to the fact that the Moon can have latitude above or below the ecliptic. The Moon's orbit can reach some 5 degrees above or below the plane of the Earth's orbit, the ecliptic. Where the Moon crosses the ecliptic are what are called the ascending and descending nodes of the Moon. At these points (twice a month), the combined force of the Sun and Moon is greatest.



The Tidal Vector

So far we have discussed something of the effects of the Moon as it transits overhead, beneath our feet. Or on the horizon each day. Yet it is the combined vector force of the Sun and Moon that produces the strongest pull that we feel during any 24 hour period. Keeping track of this vector force is a little complicated, and that is where a computer really helps. It does it for us. In fact the program will keep track of the Sun, Moon singly or their combined vector. In any case, here are the various components that the program will calculate and graph:

Radial component

This is the tidal component that lifts us away from the face of the Earth at zenith and nadir passage. You will note that there are two periods each day (zenith & nadir) when this component reaches a maximum value and that, depending on your geographic latitude, these are often unequal in magnitude. At the rising and setting points in the daily cycle, the effect is to push us down towards the center of the Earth. At all other points, aside from the above mentioned four, the effect is transverse or horizontal:

Astrophysical Directions



Horizontal component

In addition to the vertical or radial tidal components, there are horizontal or transverse forces that push and pull us across the surface of the Earth in various directions. The earth's rotation produces semidiurnal changes in the tide-generating forces both in direction and magnitude.

East/West horizontal component

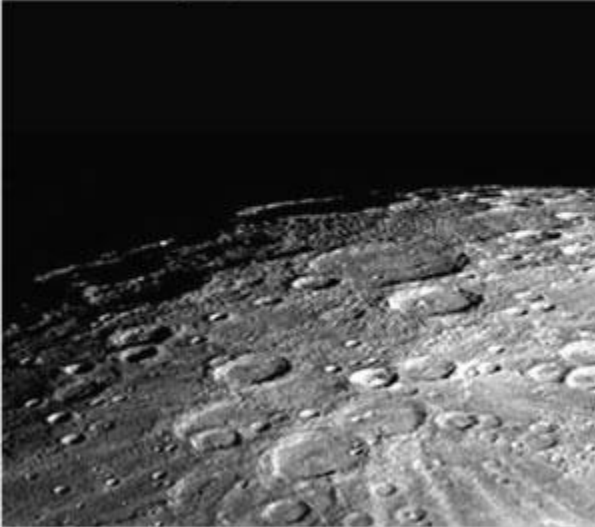
These forces reach zero values at zenith, nadir, rising and setting times and become strongest at the intermediate times (45 degree points) between the above four events. These horizontal components vary depending upon the geographic latitude. In a 24 hour period, the effect of the horizontal component is as follows:

Starting from Moon up, the transverse pull grows stronger to the West, reaches maximum magnitude some 45 degrees (3 hours) after Moon up, and fades until we reach the point at which the Moon is setting at which time the horizontal force has again dropped to zero. After this we are pulled to the East, dropping off again at Moon down. At this point, a Westerly pull is again felt, diminishing to zero at Moonrise. After Moonrise, we experience an Easterly pull, reaching a peak some three hours before the Moon is at our zenith, and dropping to zero at the zenith point.

North/South horizontal component

These force also have a North South component that varies on a 24 hour basis. It is much like the East/West component, and functions as follows. There is no North/South component for places located along the equator. In other latitudes, the force vector describes an ellipse. At Moon up and Moon down, it is directed toward the South, while at Moonrise and Moonset it is directed toward the North. The North/South component is of the same order of magnitude as the East/West component.

Astrophysical Directions



The Declination Cycle

The monthly cycle (tropical month of 27.32 days) of lunar declination contributes to the overall tidal effects. The closer the Moon comes to being overhead, the more powerful are its effects. If we live in the northern hemisphere, then when the Moon rides high above the celestial equator, when it is in the sign Cancer, it will come closest to our own geographic latitude, and to being overhead. This effect can further be enhanced when the latitude of the Moon reaches its maximum value of some 5 degrees. Thus the total declination of the Moon can reach some 28 1/2 degrees above and below the ecliptic. This happens (North or South) once in about 18.6 years.

Perigee/Apogee

These are the points when the Moon, due to its non-circular orbit, is closest and furthest (respectively) to the Earth. The Moon moves at its greatest speed when it is at perigee and at its slowest when furthest from the Earth at apogee. The gravitational pull of the Moon is much stronger at perigee than at apogee.

The apogee/perigee points (the line of nodes that connects them) are not fixed along the ecliptic, but move slowly forward along the ecliptic over a nine year period.

Astrophysical Directions



Lunar Speed

In addition, this line of apsides also fluctuates backwards and forwards in the ecliptic slightly with a period of 31.81 days. This is due to the eccentricity of the Moon's orbit, and this fluctuation is called evection. The resulting effect is the Moon speeds up and slows down at different rates in the four weeks from one perigee to the next.

The Moon's speed is also affected by the lunar phases, since the Sun's pull on the Moon is different in the various lunar quadrants. The Moon moves faster from the Last Quarter to the New Moon, and slower from the New Moon to the First Quarter. It also speeds up from the First Quarter to the Full Moon, and slows down from the Full Moon to the Last Quarter.

The Nodal Cycle.

The greatest possible astronomical tide-generating force occurs when, at the same time, the Sun is a perigee, the Sun and Moon are at Full or New Moon and both the Sun and Moon have zero declination. This happens about once in 1600 years, 250 B.C., 1400 A.D, and it will happen around 3300 A.D.

Astrophysical Directions



Major Tide-related Phenomena

Semi-Diurnal (12 hr., 25 min.) Time between Moon up and Moon down caused by the rotation of the Earth.

Diurnal (24 hr., 50 min.), time between succeeding upper and lower transits of the Moon caused by rotation of the Earth and declination of Sun and Moon.

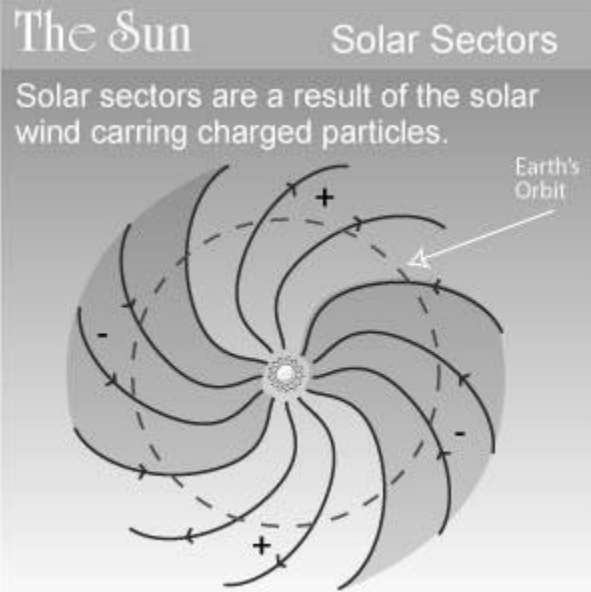
Interval between spring tides (14.76 days average), time from New Moon to Full Moon or vice versa caused by the phase relation between the Sun and Moon.

Lunar fortnightly (13.66 days), time for moon to change declination from zero to maximum and back to zero caused by the varying declination of the Moon.

Anomalistic month (17.55 days), time for moon to go from perigee to perigee caused by the ellipticity of the Moon's orbit.

Solar semi-annual (182.6 days), time for Sun to change declination from zero to maximum and back to zero caused by the varying declination of the Sun.

Anomalistic year (365.26 days), time for the Earth to go from perigee to perigee caused by the ellipticity of the Earth's orbit.



Solar Wind

In recent year, the phenomenon of the solar wind has become of more interest to researchers. In brief, the Sun spews forth an endless stream of charged particles in all directions -- the solar wind. This solar wind blows far out into the solar system and beyond. The Earth's magnetic fields serve to shield us from direct contact with the solar wind's charged particles. The Earth's magnetic field is rounded toward the Sun, and stretches out in a long tail away from the Sun, just like a comet. The solar wind rushes around and past the Earth and on out into space. The Moon passes thru the different sections of the Earth's magnetic sphere in its monthly orbit. At New Moon it is always in the upstream portion of the magnetosphere, facing the Sun and downstream in the Earth's tail at Full Moon. At First Quarter, the Moon is to the dusk side of Earth and at Fourth Quarter, the Moon is in the dawn side of the magnetosphere.

The interrelationship of the solar wind and the Earth's magnetosphere is receiving considerable attention in recent years. It has been suggested that the passage of the Moon thru the Earth's magnetic shield may serve to trigger various weather and magnetic activity. The interrelationship of indicators like the geomagnetic index, solar flux and other measures of solar activity with the Moon is just now in the process of being researched and understood.

From First to Last Quarter, the Moon is traveling faster than the Earth, and from Last Quarter to First Quarter, slower.



The Sun: Details

The Sun is a variable star that is unlike any we know. It revolves east to west (in the direction of the signs of the Zodiac -- counterclockwise). The equator of the Sun is another fundamental reference plane to which we could refer all planetary motion. The inclination of the solar equator to the ecliptic is $7^{\circ}15'$ and the longitude of the ascending node to the ecliptic of 1950 is $75^{\circ}04'$. Some interesting data about our Sun:

Period of synodic rotation $26.75 + 5.7^2 \sin \varphi$ d.

Period of sidereal rotation ($\varphi = 17^{\circ}$) = 25.38 days

Corresponding synodic period = 27.275 days

Sun's angular velocity ($\varphi = 17^{\circ}$) = $2.865 \times 10^{-6} \text{ rad s}^{-1}$

Sun's radius = 864934.6 miles

Sun's mass = $1.989(2) \times 10^{33} \text{ g}$

Mean distance from Earth = 92.9558×10^6 miles

Mean equatorial horizontal parallax = 8.79418

The Sun Data

SS-99 North Pole of Sun

15°Pi03'58 +82°44'60

SS-100 South Pole of Sun

05°Vi20'26 -81°51'32

SS-101 Ascending North Node Sun Equator to
ecliptic

15°Ge03'60 + 0°00'00

SS-102 Descending South Node Sun Equator to ecliptic

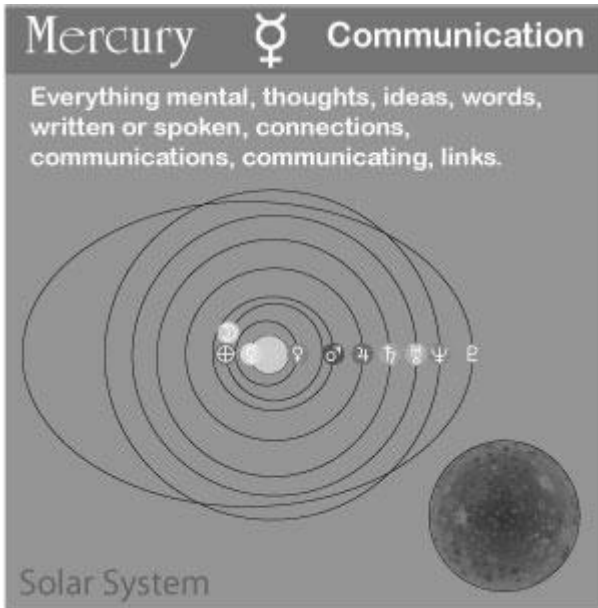
14°Sa55'53 + 1°12'39

SS-103 Ascending North Node Sun Equator to equator

14°Ar45'45 - 6°18'22

SS-104 Descending South Node Sun Equator to equator

14°Li45'45 + 6°18'22



The Moon: Details

Here is some basic data about the Moon:

Mean distance from Earth= 384401 km

Extreme range 356400406700 km

Mean horizontal paralax 3422.60"

Eccentricity of orbit = 0.0549

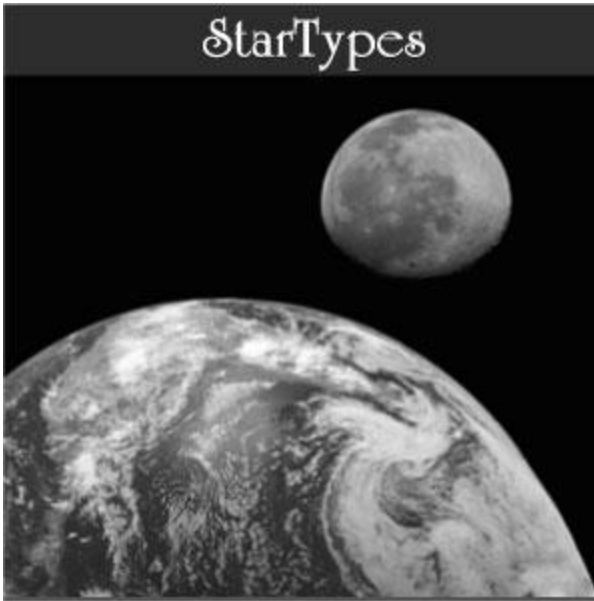
Inclination of orbit to ecliptic = 5°08'43"

Sidereal period (fixed stars)= 27.321661 ep. days

Synodical month (New Moon to New Moon) = 29.5305882 ep. days

Anomalistic month perigee to perigee) = 27.5545505 days

Tropical month (equinox to equinox) = 27.321582 days



Mother Moon: Details

Nodical month (node to node) = 27.212220 days

Period of Moon's node (nutration, retrograde) = 18.61 tropical years

Period of rotation of Moon's perigee (direct) = 8.85 years

Moon's sidereal mean daily motion = $13^{\circ}.176358$

Mean Transit interval = 24h 50.47m

Main periodic terms in the Moon's motion:

Principal elliptic term in longitude $22639'' \sin g$

Principal elliptic term in latitude $18461'' \sin u$

Evection = $4586'' \sin (2D-g)$

Variation = $2370'' \sin 2D$

Annual inequality = $-669'' \sin g'$

Parallactic inequality = $-125'' \sin D$

Where g = Moon's mean anomaly,

g' = Sun's mean anomaly,

D = Moon's age,

u = distance of mean Moon from ascending node.

Inclination of lunar equator to ecliptic = $1^{\circ}32.5'$

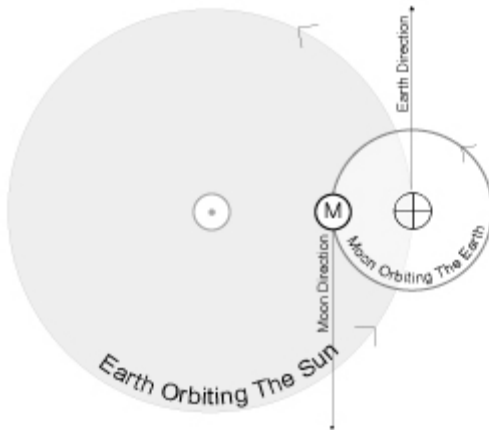
Inclination of lunar equator to orbit = $6^{\circ}41'$

Mean Moon radius = 1738.2 km

Moon mass = $1/81.301$ mass of Earth

New Moon

- 1) Moon Closer to The Sun
- 2) Sun/Moon/Earth Alignment
- 3) Moon Heading Opposite Direction Earth
- 4) Moon Heading Into Earth's Wake/Past



Moon In and Moon Out

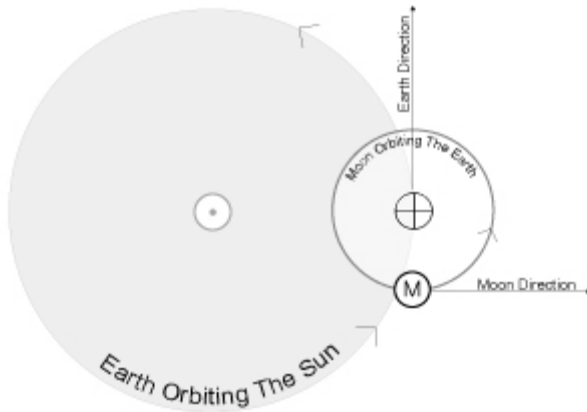
The New Moon

We know the Moon orbits the earth each month, shuttling between the earth and the Sun and between the Earth the outer planets, the nearest one which is Mars. It is useful to visualize how the Moon moves in relationship to being inside and outside the position of the earth in its own orbit. Think on these diagrams.

Above is a diagram of the moment of New Moon, when the Sun and Moon are aligned inside the earth's orbit. Note that at the New Moon the Moon is heading in the exact opposite direction to that of the earth, after plunging toward the Sun in the 4th Quarter. The Earth and Moon are in the same degree of the zodiac.

First Quarter Moon

- 1) Moon/Earth Equidistant the Sun
- 2) Moon in Wake of Earth
- 3) Moon Right Angles Earth
- 4) Moon Heading Outer Space

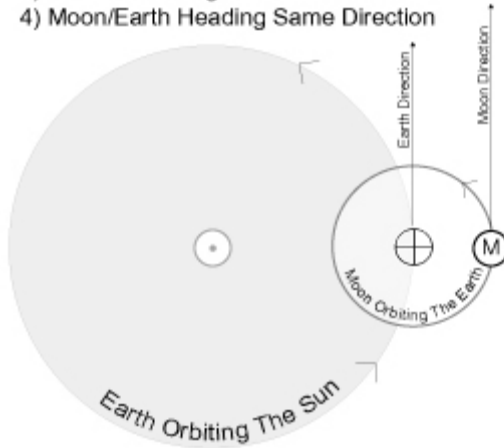


First Quarter

Here the Moon is balanced between the inside and the outer side of the earth's orbit and moving toward the outward side at right angles to the motion of the earth itself. The Moon is behind in the zodiac to the position of the earth.

Full Moon

- 1) Moon Outside Earth's Orbit
- 2) Sun/Earth/Moon Alignment
- 3) Moon/Earth Together
- 4) Moon/Earth Heading Same Direction



Full Moon

Here the Moon is on the outermost side of its orbit, aligned with the earth and the Sun. Notice that the direction and momentum of the Moon is the same as that of the earth. The earth is in the same degree of the zodiac as the Moon.

Last Quarter Moon

- 1) Moon Ahead of Earth in Space
- 2) Moon Right Angle to Earth
- 3) Moon Heading Toward Sun
- 4) Moon/Earth Equidistant From Sun



Last Quarter

Here the Moon is balanced between the inside and the outer side of the earth's orbit and moving toward the inward side of the earth's orbit, at 90 degrees to the orbit of the earth. Also note that the Moon is ahead of the earth in the zodiac at this point.

The Moon

The East

In Asia, it is the moon that is observed, and your lunar birthday, not the solar.



Mind Practice

The lunar cycle and its gaps are available to everyone, all the time. If we don't observe these special times, it is because we have set no time aside to observe, to check it out for ourselves. In the East, most people are introduced to basic observation techniques or mind practice from an early age. It is unfortunate that mind practice is not much known of here in the West. I mean how many people do you know who practice observing or using their mind anyway? Most of us assume that the mind is perfectly usable just as we find it, and doesn't require any practice.

In the Tibet mind practice is not only acceptable, it is pretty much obligatory. This is true for countries like Tibet, Nepal, much of India, and even parts of China and Japan. Over there, the mind is considered by nature to be unruly and hard to manage. No one would think of trying to do much with it without considerable practice. Mind practice or mind preparation or training, as it is sometimes called, is standard fare in the orient.

The Moon

Observation

There are times to be set aside to observe our mind and life.



Mind Practice

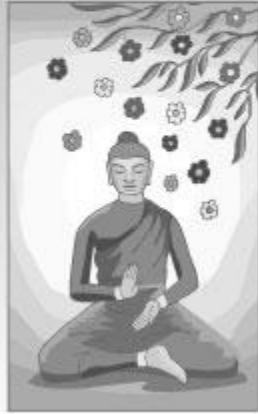
We might wonder why this style of mind practice has never caught on in North America. In part, this is due to our whole take on meditation and what we think that is. Meditation in the West has come to mean something almost like relaxation therapy, a way to relax and get away from it all -- to escape the worries of the world in the contemplation of some inner landscape. Somewhere, perhaps early in this century, the word meditation lost any semblance to its Eastern counterpart and became what most understand as meditation today -- a way to relax and get rid of tension.

Of course this is nothing like the Tibetan concept of mind practice or mind preparation, which involves the intense use of the mind. It is unfortunate that this very active mind practice has also come under the general label of meditation here in the West.

The Moon

Meditation

In the East, training the mind is part of how one learns astrology.



Sitting and Looking

Having pointed this out, it may be helpful to clarify and describe what it is that the Tibetan Buddhists (and other groups too) do when they sit down on their cushions. In general, if you ask them what they are doing on their cushions, the answer will not that they are "practicing", or they are "sitting". Indeed, that is what takes place. They sit and observe.

There are many Tibetan words for the different kinds of mind practice that are possible, while in the West we have just the one word: meditation. What then is mind practice?

The most important difference between sitting practice (mind practice) and meditation as it is understood in this country, is that mind practice is anything but relaxing or passive. It is very active.



The Techniques

The actual technique is quite simple, taking only a few minutes to learn. And it is worth getting this instruction from someone authorized to give it. Most Buddhist and some Hindu groups offer this type of mind practice. When looking for training in mind practice, be sure to ask for a technique that emphasizes concentration on the present moment -- being present, and not some of the more dreamy relaxation techniques. What you need in order to use lunar gaps is to become very alert and observant. The technique is called Shamata training in Tibetan Buddhism and Zazen in Zen Buddhism. I would be happy to send a list of well-respected centers to anyone who writes me at 315 Marion Avenue, Big Rapids, MI 49307. It is important that you receive instruction from someone trained in the technique, and get an authentic connection with a tradition.

Even the non-astrologer cannot help but notice the time of the Full Moon each month -- when the full disk of the Moon passes overhead around midnight. It is a fact that many have trouble sleeping when the Full Moon makes this overhead transit in the middle of the night. Often sleep will not come until the Moon finishes rising, transits overhead, and begins to set. This has been used by some as a way to determine whether a late-night party or a

bout of TV watching will be a satisfying experience. In general, you can plan on building tension (and attention) while the Full Moon is rising and an easing of that state just after the Moon crests overhead. After the Moon crests and begins to set is a good time to bring activities to a close. Sleep often will come with ease at this point.

Learning to get in step with and to make use of the Moon cycle is part of astrological basic training. There has been general agreement among astrologers for thousands of years as to how the lunar cycle functions and the uses to which it can be put.

Nodes of the Moon

By Nicolas DeVore

Variously called the Ascending and Descending Nodes, the North and South Nodes, Caput Draconis or the Dragon's Head, Cauda Draconis, the Katababazon, or the Dragon's Tail. The Nodes regress about 3° of arc per diem. There is much argument as to whether any intrinsic influences repose in the Nodes comparable to the radiation emitted by reflection of a planet. In all probability the ancients read more from a Celestial Figure by virtue of a greater comprehension of the astronomical mechanics it represents, than do most moderns. The position of the Node can show whether there was an eclipse condition shortly before or after birth, whether a planet near the Node would shortly be accented by the Moon's transit, or that of the Sun, and similar and sundry factors which the modern astrologer can trace from the ephemeris but often does not. The Nodes of themselves merely point to places where something may happen at such and such a time - which of itself is no small matter. Things happen because of the time, the place and the planet, and the Node is often the middle factor in that formula (v. Moon.)

In 18 years and 10 or 11 days the Node regresses 349 degrees, hence in that period at a point 11 degrees in advance, an eclipse or a series of eclipses recurs under similar conditions. Astronomers calculate eclipses by means of the Saros Cycle rather than by the use of the ephemeris.

Placement of the Ascending Node oriental of the Line of Advantage is deemed preferable, as stimulating, among other things, increased stature. The Line of advantage joins the third decans of the Third and Ninth Houses.

The position of the Sun on the North Node in the Nativity of H. P. Blavatsky is supposed to have profoundly influenced her life. It might well be for it indicates a prenatal solar eclipse at that point only a matter of days before her birth. The ancients held that the Moon's North Node partook of the nature of Venus and Jupiter, while the South Node partook of the nature of Mars and Saturn. Probably more helpful would be the observation that a planet in close conjunction to the North Node at birth would bring honors or riches; at the South Node, poverty and afflictions and a cruel or usurious nature - according to the character of the planet so placed,

as modified by the Houses thus tenanted. It is doubtless also of significance in connection with transit and progressions, particularly those of the Moon, only this would appear to involve the regressed position of the Node at the date for which the transit or progression is computed.

Penumbral Eclipse

By Nicolas DeVore

Said of eclipses of the Moon, when the Moon approaches closely enough to the Earth's shadow to cause an appreciable diminution of light though it does not directly touch it. These are often termed appulses. They are not generally classed as eclipses, though from their close resemblance to eclipse conditions they often produce effects similar to those attending an actual eclipse. In fact to an observer on the Moon, the Sun would be partially eclipsed by the Earth.

The Saros cycle is generally stated by astronomers to consist of 29 Solar eclipses in 1260y and 41 Lunar eclipses in 865y, making a total of 70 eclipses, on an average, for one complete series. However, each series of Lunar eclipses is both preceded and followed by about 10 periods of Penumbral eclipses, of some 180y duration. Since the Solar eclipse limit is much wider than that of the Lunar, a Lunar eclipse in the penumbra has an importance, astrologically, about equal to that of the Partial Solar eclipse, in that it embodies both the gravitational effect of a parallel, and the interference with normal radiation, that characterize all eclipses. An eclipse in the penumbra is generally termed an Appulse, in that the rim of the Moon just touches the Earth's shadow, while the body of the Moon receives the light of the Sun from only one side of the Earth, which during a portion of the time shuts off the light of part of the Sun's disc. By way of illustration, note Saros cycle 4, Lunar eclipse at the North Node: the last Lunar partial eclipse of the series (EP), October 7, 1930, 14° Aries, was to be followed by Penumbral eclipses in 1948, 1966 and 1984. In Saros series 11 is a continuing series at the South Node that follows an eclipse cycle which ended prior to 1800: also in this series the Total Solar eclipse of June 20, 1955 is so close to the node that there is a penumbral eclipse both before and after it. Therefore when making note of the position of a Solar eclipse in any map it is advisable also to note as temporarily sensitized degrees, the Moon's opposition points to the Sun 14 days earlier and later, and check on their strength by reference to the tables of eclipses and the chronological list of Appulses for the years 1871 to 1959. Even if it is on neither list, it represents what is sometimes called "approximate eclipse conditions," and can become an important factor if it falls exactly upon the degree which posits a planet.

The ancients did not have the benefit of the modern Ephemerides. They actually studied the motion of the bodies in the heavens, and thereby discovered the various cycles that would enable them to calculate the intervals between successive recurrences of similar phenomena; therewith to make calculations of the psychological fluctuations that produce events. Among these were the Mercury cycle of 92 years, the Venus cycle of 486 years, the heliacal rising of Sirius in September every 162 years, the Metonic 19-year luni-solar cycle of eclipses, the mutation periods based on the conjunctions of the great chronocrators Jupiter and Saturn, and most important of all the solilunar Saros cycle and its multiples and derivatives. As this cycle brought the recurrence of the same eclipse 18 years and 10 days later, at a point about 10 degrees farther along the ecliptic, it was found that each third return, an interval of 54 years and 1 month, brought a similar return of a visible eclipse at about the same time of day; also that in 12 times that period, or 649 years, the cycle was completed with a Solar eclipse prior to the seventh month after the Autumnal equinox, then the beginning of the ecclesiastical year; and that the lunar eclipse two weeks later began a new 649-year cycle. It was by such means that most of the prophecies and the dates of their fulfillment as recorded in the Bible were arrived at.

The 15-year Solar cycle of the Chaldeans was a slightly different cycle: largely a chronological point of reference, arrived at by dividing the 360 degrees of the circle into 24 hourly segments of 15 degrees. On the basis of 1 degree to a year, it became a method of reckoning occurrences, terrestrial as well as celestial, in fifteen-year intervals. This cycle was adopted by the Romans as the period of reappraisals for taxation, and became known as the Indiction cycle. The Solar cycle of 28 years was the period in which the days of the week reoccurred on the same days of the month.

J. J. Scaliger devised the Julian period from the product of these three cycles: the 28-year Solar cycle, the 19-year Soli-Lunar cycle, and the 15-year Indiction cycle ($28 \times 19 \times 15 = 7980$), and made it begin January 1, 4713 B.C., when the three cycles coincided.

About 1896, J. B. Dimbleby began the reconciling of Biblical dates, and arrived at the conclusion that the historical records of the Antidiluvian Epoch were based upon a 7-year Solar cycle - one fourth of the Solar cycle as it was employed in a later epoch; and that

after the deluge, chronology was recorded by the 15-year Solar cycle of the Chaldeans.

His chronology is thus given in successive years, beginning with the Creation year as 0 A.M. - Anno Mundi, "the year of the world" - thus avoiding much of the confusion incident to B.C. and A.D. dates. It begins with the eclipse that fell on the Autumnal Equinox, September 20, 3996 B.C., a year in which its two Solar eclipses fell in April and October, in which the Solar and Lunar years began simultaneously, and which coincides with the command recorded in Leviticus 23: 24.

Few astrologers of today take the trouble to study the major cycles through means of which the ancient Biblical prophets were able to foresee the workings of Destiny - that man could stay if he would, but seldom does. It is certain that a study of the Eclipse cycles, and the application of modern adaptations to the study of the various cycles that were successfully used by the early astrologer-astronomers, will be productive of gratifying results.

Umbral Eclipse

By Nicolas DeVore

Said of an eclipse of the Moon, when the Moon definitely enters the Earth's shadow. If the Moon is completely immersed in the Earth's shadow a total eclipse results; otherwise, a partial eclipse. Applied to an eclipse of the Sun it does not include a partial eclipse, but only those in which the Moon's disc is fully contained within that of the Sun, either total, annular, or annular-total.

Eclipses

By Nicolas DeVore

This phenomenon is one that involves Sun, Moon and Earth. There are two distinct types: (1) that in which the Moon stands between the Sun and Earth, cutting off from our vision not only the light of the Sun, but the Sun itself. This is a Solar Eclipse, and occurs only at the time of a new Moon, when the Sun and Moon form a conjunction near one of the Nodes at which the orbits of the Earth and Moon intersect; and (2) that in which the Earth cuts off from the Moon the light of the Sun, depriving it of its illumination but still leaving it in our line of vision as a dark and shadowy object. This is a Lunar Eclipse, and occurs only at the time of a Full Moon, when the Sun and Moon are in opposition, close to the Moon's nodes.

An Eclipse of the Sun comes from the West; of the Moon, from the East. An Eclipse can occur between the Sun, the Earth and a planet, but that is of infrequent occurrence; also between the Moon, the Earth and a planet, the Moon coming between the Earth and the planet. The Eclipse of a planet by the Moon is called an occultation (q.v.).

The position of a Solar Eclipse coincides with that of the Sun on that day. The position of a Lunar Eclipse coincides with the opposition point to the Sun's position on that day. Both Solar and Lunar Eclipses can occur at either Node. (q.v.). The magnitude of an eclipse depends upon (1) the relative distances of the luminaries from the Earth; and (2) their distance from the Nodes. The duration of an eclipse depends on the relative rapidity of motion of the bodies.

The ancient rule was that the effects of a Solar eclipse last as long in years as the eclipse lasts in hours; of a Lunar eclipse, a month for every hour. From a Figure cast for the moment of commencement of the eclipse, events were deduced as affecting countries ruled by the ascending Sign, based upon the strength of the planets in the Signs and Houses

Some modern authorities consider that the countries which lie within the eclipse shadow are probably those in which the events signified by the eclipse will be felt. In the Nativity, the eclipse is most powerful when it falls upon the birth position of a planet, luminary, or ascending degree.

Contrary to ancient superstitions, eclipses are not uniformly evil. One man's loss is often another's gain, and an eclipse in good aspect to a benefic under good directions can result favorably. Those on the places of the Sun, Moon, Ascendant, or M.C. and on the malefics are, however, unfavorable influences. Frequently their effects are not felt until some time thereafter, when another planet, principally Mars, transits over the degree on which the eclipse occurred. Thus an eclipse-degree becomes a sensitive point for several years after the eclipse has passed; in fact, until its consummation is attained with a subsequent transit of Saturn over the eclipse degree. Frequent reference to the following tables in connection with current or past events, will contribute vastly to an understanding of the major trends that are set into motion by the third dimension of the Moon's orbit - that which is vertical to the plane, marked midway by the passing of the Nodes.

The temperature on the Sunlit Full Moon exceeds the boiling point of water, at which time it emits infra-red rays that are several times more intense than the rays it reflects from the Sun. During the first five minutes of a Lunar Eclipse the surface temperature falls far below the freezing point, and the emission of the infra-red rays ceases.

Saros Cycle of Eclipses: The Plane of the Moon's Orbit has an inclination of 5-15 degrees to that of the Earth's orbit. Two opposite points of intersection of these orbits are the North or ascending Node, and the South or descending Node. These Nodes regree from month to month, and in approximately 19 years make a complete circle of the zodiac. In the following tables showing the nineteen Saros series, since each year one or more eclipses occur at each Node, separated roughly by half a year, the entire number of from 2 to 6 are listed as belonging to one Saros Series. Taking as the first of the series the group that follows the passing of the Node over 0° Aries, there result 19 series - after which each group repeats itself slightly altered.

It should be noted that a Solar Eclipse, caused by the passage of the apex of the Moon's shadow in a narrow path across the Earth some 70 miles in width, is visible only to a person located in the path. A Lunar Eclipse, partial or total, caused by the passage of the Moon into the Earth's shadow, is, however, visible all over the hemisphere that is turned toward the Moon.

If the Moon is at such distance from the Earth that the apex of its shadow falls short of the Earth's surface, the Moon's body will not entirely obliterate the Sun and a narrow rim of light will surround the dark body of the Moon. This is termed an Annular Eclipse. Sometimes an eclipse begins as an Annular Eclipse and then becomes total as the apex of the shadow approaches the equatorial* regions. This is called an Annular-Total Eclipse. Both are termed Umbral Eclipses. Where there is an appreciable separation in latitude there results a Partial Eclipse.

Because of its convexity, the circumference of the Earth's surface is some 4,000 miles farther from the Moon than its central position.

Because of the eight-hour fraction of a day, the umbral track of the eclipse shifts some 120° West at each return; hence on every fourth Saros return (54y 1m) it recurs in the same longitude, but somewhat farther North or South.

A complete Lunar cycle consists of 48 or 49 eclipses over a period of about 865 years; a solar cycle of 68 to 75 returns, over a period of about 1260 years. A Saros cycle consists usually of 14 partial, 17 annular and 10 total solar eclipses, and 29 Lunar eclipses - or a total of 70 eclipses.

Eclipse Limits

By Nicolas DeVore

When a conjunction of Sun and Moon occurs within $18^{\circ} 31'$ from either node, the major solar eclipse limit, a solar eclipse may occur; within $15^{\circ} 21'$, the minor solar eclipse unit, a solar eclipse will occur; within $11^{\circ} 15'$, the major central solar ecliptic limit, a total or annular eclipse may occur; within $9^{\circ} 55'$, the minor central solar ecliptic limit, a total or annular eclipse will occur. When an opposition of Sun and Moon occurs near either node the major lunar ecliptic limit is $12^{\circ} 15'$ and the minor $9^{\circ} 30'$; the major total lunar ecliptic limit is $3^{\circ} 45'$ and the minor $6^{\circ} 0'$.

The series of Metonic returns bear no relationship to the Saros series. Meton's cycle of 19-year intervals consists of an eclipse in approximately the same degree of the zodiac on the same date 19 years later. Approximately 23% of Solar eclipses have no Metonic returns; 38% have 1 return; 19%, 2 returns; 13%, 3 returns; and 7%, 4 returns. A Metonic return may be of a different phase and nature, and belong to a different Saros series. A Solar Eclipse begins as partial at one or the other poles, and increases in strength as it moves toward the Equator - finally fading away into outer space beyond the opposite pole. Thus an eclipse may be said to have a "birth" and a "death," with a life span of from 865 to 1252 years, or from 48 to 70 appearances.

Looking back to the "birth," or beginning partial (BP) of any series, you can, in delineating its recurring effects, take into consideration the Sign in which it first appeared, and the Ruler of the Sign.

The Solar Eclipse of June 8, 1937 in Gemini 18° , Saros series 11, which lasted for 7m 13s, was of longer duration than any in the last 1,200 years; although those of 1955 and 1973 were to be almost as long. That on July 20, 1963 at $0^{\circ} 28'$, Saros series 1, was to be one of the shortest, lasting 65s.

The Saros Cycle of 223 Lunar months was discovered by the Chaldeans. This is 18y 11d 8h, where 4 leap years are contained; otherwise, if 5 intervene, it is one day shorter; or if 3, one day longer. The series consists of 70 eclipses: 41 Solar, and 29 Lunar.

Penumbral Eclipses and Saros Cycle

By Nicolas DeVore

The Saros cycle is generally stated by astronomers to consist of 29 Solar eclipses in 1260y and 41 Lunar eclipses in 865y, making a total of 70 eclipses, on an average, for one complete series. However, each series of Lunar eclipses is both preceded and followed by about 10 periods of Penumbral eclipses, of some 180y duration. Since the Solar eclipse limit is much wider than that of the Lunar, a Lunar eclipse in the penumbra has an importance, astrologically, about equal to that of the Partial Solar eclipse, in that it embodies both the gravitational effect of a parallel, and the interference with normal radiation, that characterize all eclipses. An eclipse in the penumbra is generally termed an Appulse, in that the rim of the Moon just touches the Earth's shadow, while the body of the Moon receives the light of the Sun from only one side of the Earth, which during a portion of the time shuts off the light of part of the Sun's disc. By way of illustration, note Saros cycle 4, Lunar eclipse at the North Node: the last Lunar partial eclipse of the series (EP), October 7, 1930, 14° Aries, was to be followed by Penumbral eclipses in 1948, 1966 and 1984. In Saros series 11 is a continuing series at the South Node that follows an eclipse cycle which ended prior to 1800: also in this series the Total Solar eclipse of June 20, 1955 is so close to the node that there is a penumbral eclipse both before and after it. Therefore when making note of the position of a Solar eclipse in any map it is advisable also to note as temporarily sensitized degrees, the Moon's opposition points to the Sun 14 days earlier and later, and check on their strength by reference to the tables of eclipses and the chronological list of Appulses for the years 1871 to 1959. Even if it is on neither list, it represents what is sometimes called "approximate eclipse conditions," and can become an important factor if it falls exactly upon the degree which posits a planet.

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Saros Cycles of Eclipses

By Nicolas DeVore

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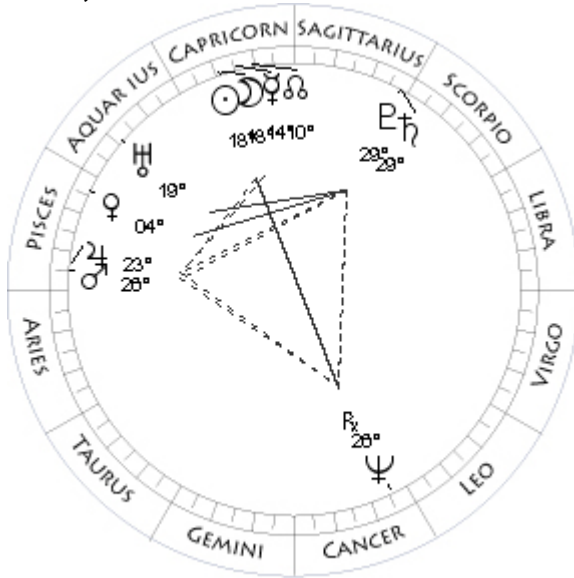
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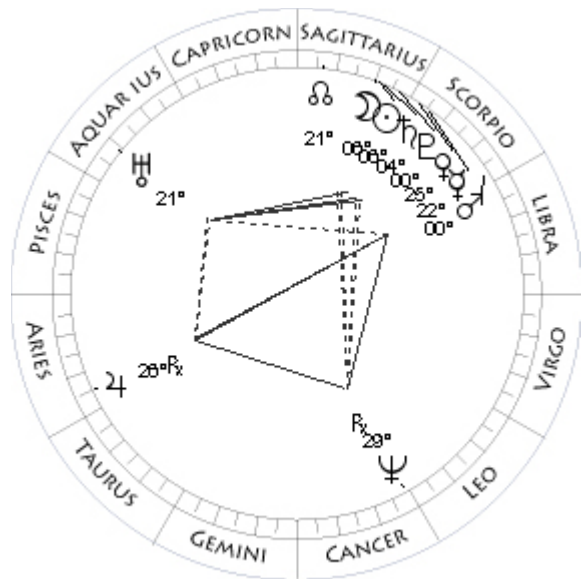
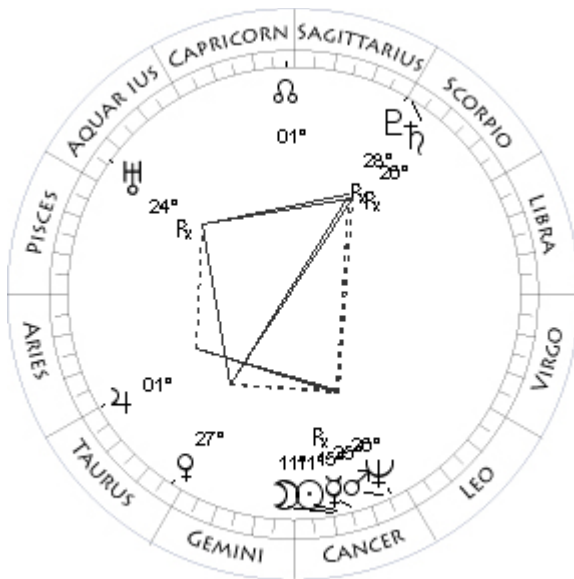
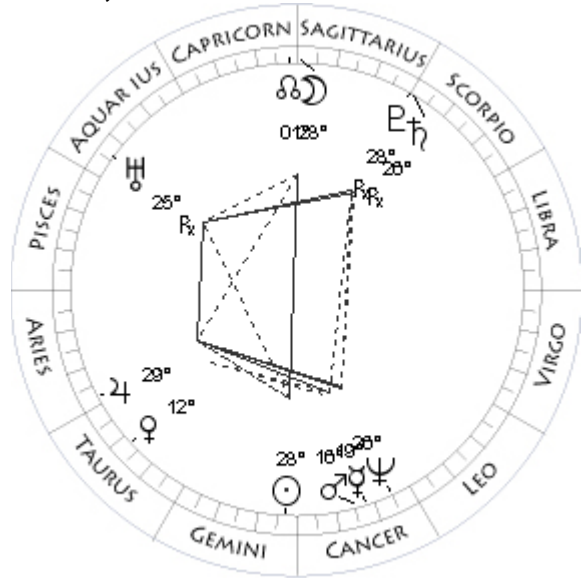
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Jan 8, 1750 9:28 AM Total Solar



Jun 19, 1750 9:03 PM Total Umbral



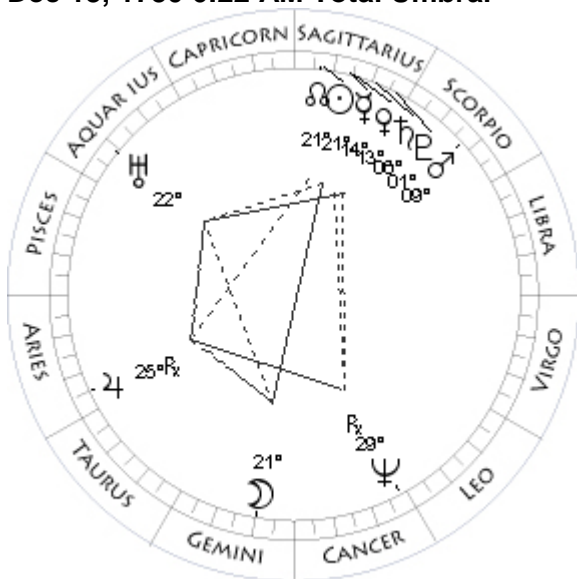
Jul 3, 1750 6:38 PM Total Solar

Mo 18Cp03 + 0°43	Mo 11Cn28 - 0°57
Su 18Cp07 - 0°00	Su 11Cn34 - 0°00
Me 14Cp01 - 1°43	Me 15Cn42 - 4°24R
Ve 04Pi54 - 0°54	Ve 27Ta35 - 2°44
Ma 26Pi24 - 0°23	Ma 25Cn21 + 1°08
Ju 23Pi35 - 1°14	Ju 01Ta19 - 1°13
Sa 29Sc03 + 1°58	Sa 26Sc00 + 2°06R
Ur 19Aq35 - 0°41	Ur 24Aq58 - 0°45R
Ne 26Cn30 - 0°25R	Ne 26Cn47 - 0°21
Pl 29Sc45 +12°21	Pl 28Sc14 +12°41R
No 09Cp54 - 0°00	No 00Cp34 - 0°00
Coords: 29W/23N	Coords: 122E/62S

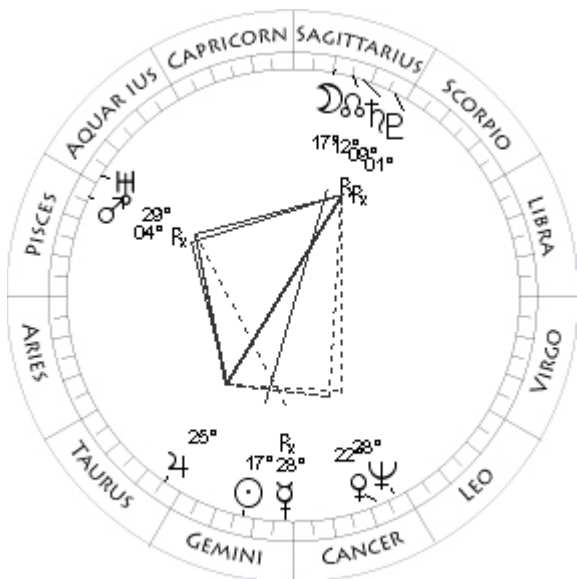
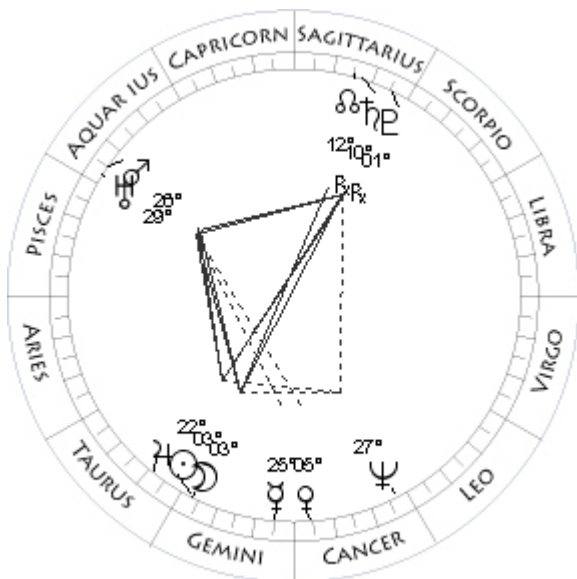
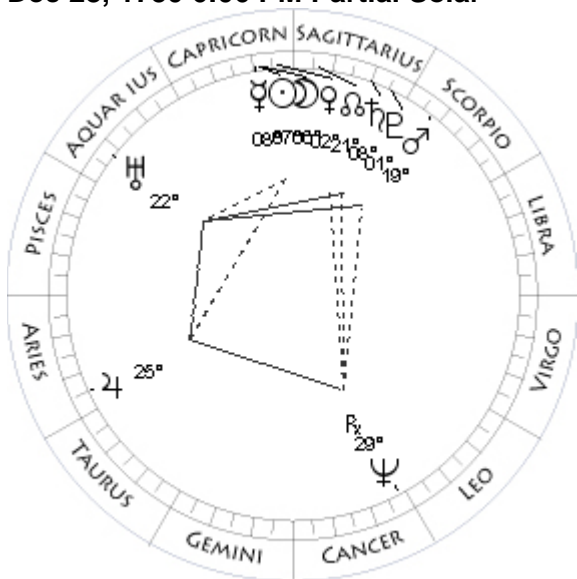
Nov 29, 1750 0:57 AM Partial Solar

Mo 28Sa20 - 0°15	Mo 06Sa55 - 1°21
Su 28Ge18 - 0°00	Su 06Sa47 - 0°00
Me 19Cn04 - 1°04	Me 22Sc18 + 1°07
Ve 12Ta58 - 2°49	Ve 25Sc29 + 0°50
Ma 16Cn26 + 1°06	Ma 00Sc23 + 0°48
Ju 29Ar04 - 1°11	Ju 26Ar20 - 1°25R
Sa 26Sc41 + 2°09R	Sa 04Sa51 + 1°40
Ur 25Aq15 - 0°45R	Ur 21Aq51 - 0°44
Ne 26Cn18 - 0°21	Ne 29Cn42 - 0°21R
Pl 28Sc30 +12°45R	Pl 00Sa40 +11°50
No 01Cp18 - 0°00	No 22Sa43 - 0°00
Coords: 45W/24S	

Dec 13, 1750 6:22 AM Total Umbral



Dec 28, 1750 6:06 PM Partial Solar



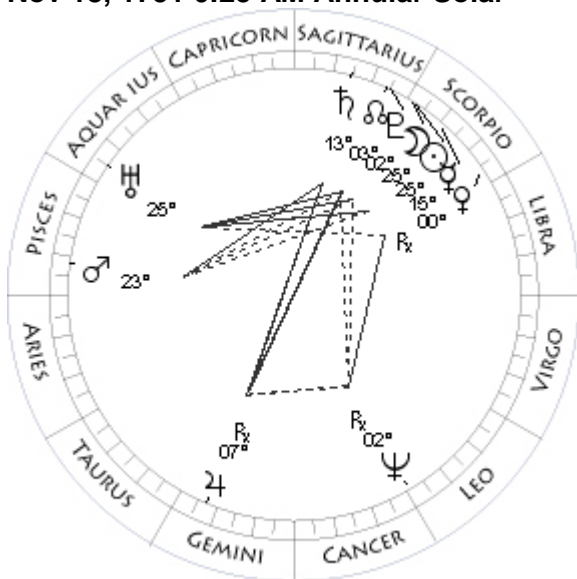
May 25, 1751 0:55 AM Total Solar

Mo 21Ge15 + 0°03	Mo 03Ge27 + 0°51
Su 21Sa15 - 0°00	Su 03Ge22 - 0°00
Me 14Sa12 - 0°33	Me 25Ge41 + 1°41
Ve 13Sa23 + 0°18	Ve 05Cn02 + 1°41
Ma 09Sc40 + 0°43	Ma 26Aq01 - 2°25
Ju 25Ar37 - 1°20R	Ju 22Ta03 - 0°49
Sa 06Sa32 + 1°39	Sa 10Sa46 + 1°50R
Ur 22Aq16 - 0°43	Ur 29Aq23 - 0°45
Ne 29Cn26 - 0°21R	Ne 27Cn41 - 0°18
Pl 01Sa12 +11°50	Pl 01Sa33 +12°21R
No 21Sa57 - 0°00	No 13Sa20 - 0°00
Coords: 145W/77N	

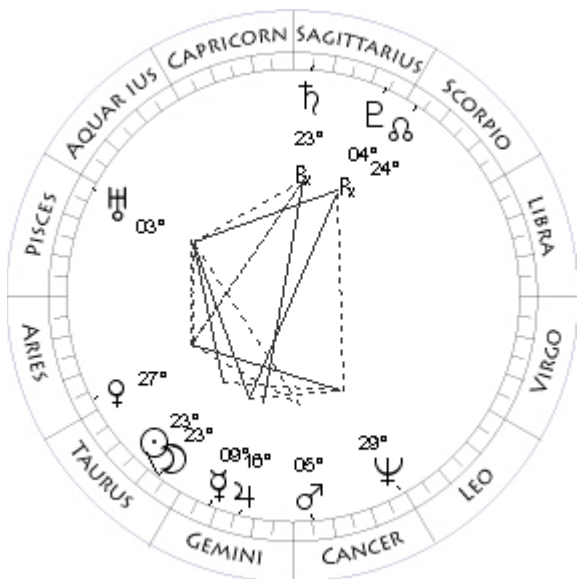
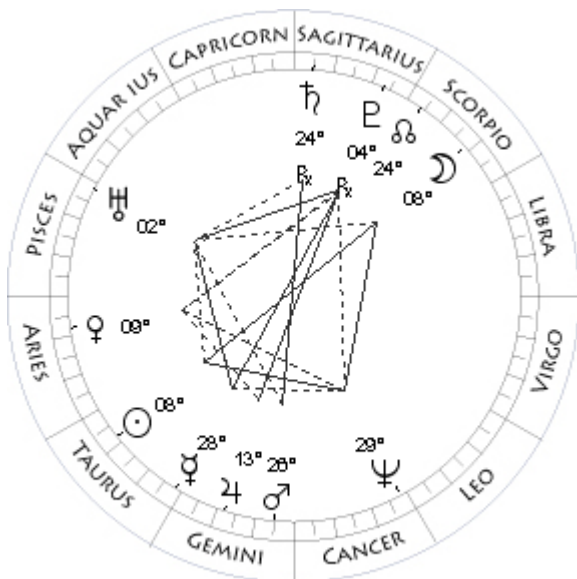
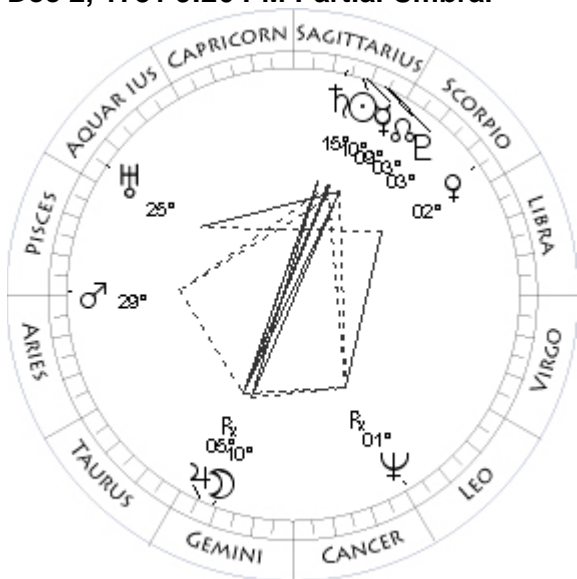
Jun 9, 1751 1:41 AM Partial Umbral

Mo 06Cp54 + 1°22	Mo 17Sa43 + 0°28
Su 07Cp02 - 0°00	Su 17Ge46 - 0°00
Me 08Cp42 - 1°51	Me 28Ge40 - 1°51R
Ve 02Cp52 - 0°19	Ve 22Cn53 + 1°57
Ma 19Sc51 + 0°35	Ma 04Pi45 - 2°59
Ju 25Ar38 - 1°16	Ju 25Ta31 - 0°49
Sa 08Sa17 + 1°39	Sa 09Sa40 + 1°49R
Ur 22Aq52 - 0°43	Ur 29Aq24 - 0°45R
Ne 29Cn05 - 0°21R	Ne 28Cn06 - 0°18
Pl 01Sa43 +11°51	Pl 01Sa10 +12°19R
No 21Sa08 - 0°00	No 12Sa33 - 0°00

Nov 18, 1751 0:25 AM Annular Solar



Dec 2, 1751 9:26 PM Partial Umbral



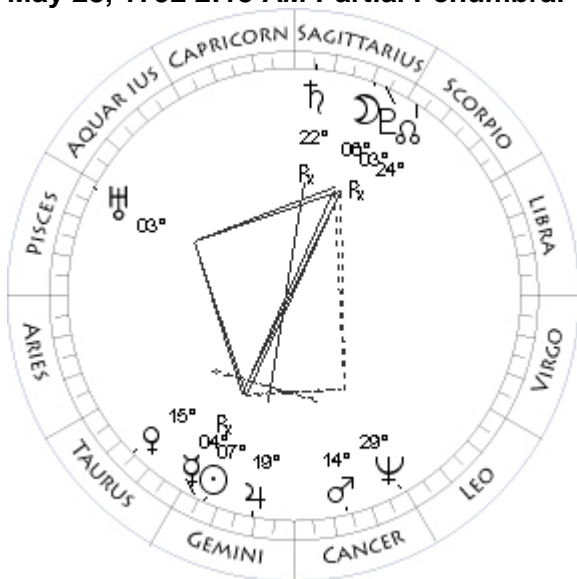
Apr 28, 1752 11:34 AM Partial Penumbral

Mo 25Sc27 - 0°45	Mo 08Sc39 - 1°26
Su 25Sc23 - 0°00	Su 08Ta30 - 0°00
Me 15Sc46 + 0°50	Me 28Ta51 + 2°32
Ve 00Sc42 - 1°14R	Ve 09Ar08 - 1°40
Ma 23Pi23 - 1°09	Ma 26Ge28 + 1°18
Ju 07Ge59 - 0°52R	Ju 13Ge15 - 0°21
Sa 13Sa36 + 1°21	Sa 24Sa22 + 1°24R
Ur 25Aq34 - 0°45	Ur 02Pi46 - 0°44
Ne 02Le04 - 0°17R	Ne 29Cn25 - 0°14
Pl 02Sa31 +11°23	Pl 04Sa36 +11°51R
No 03Sa58 - 0°00	No 25Sc22 - 0°00
Coords: 144W/75S	Coords: 175E/16S

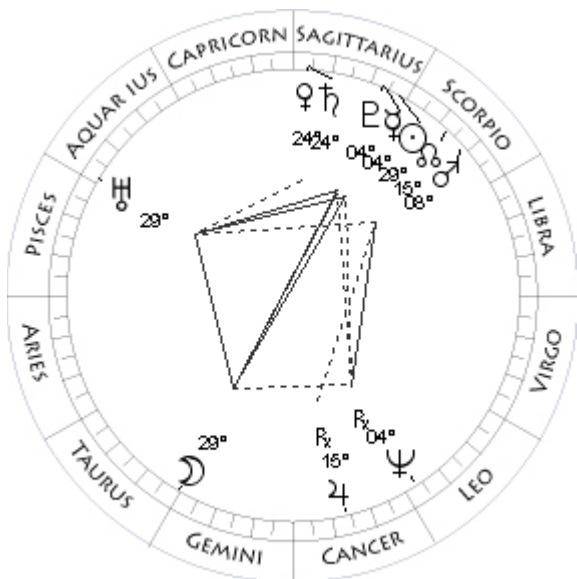
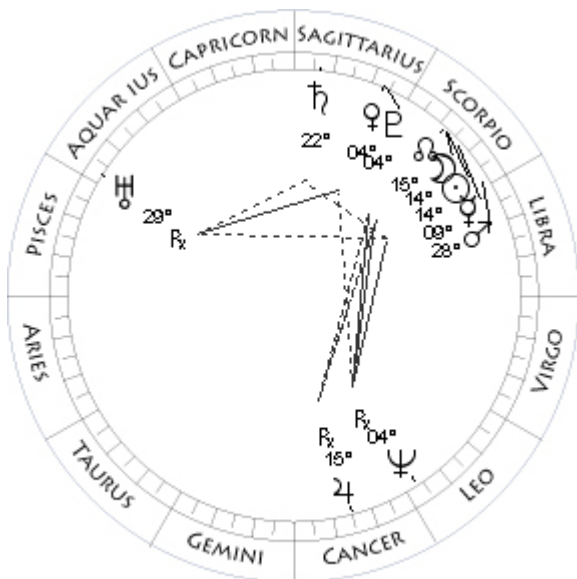
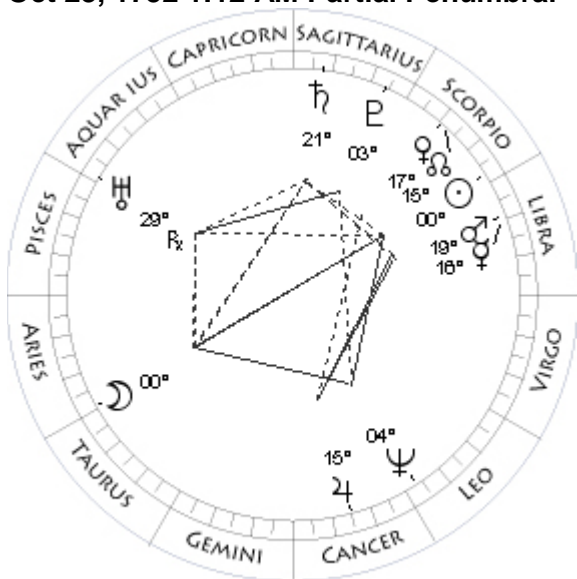
May 13, 1752 5:56 PM Total Solar

Mo 10Ge23 - 0°37	Mo 23Ta16 + 0°06
Su 10Sa27 - 0°00	Su 23Ta15 - 0°00
Me 09Sa15 - 0°49	Me 09Ge30 + 1°22
Ve 02Sc47 + 1°39	Ve 27Ar37 - 1°39
Ma 29Pi31 - 0°30	Ma 05Cn59 + 1°18
Ju 05Ge58 - 0°51R	Ju 16Ge33 - 0°19
Sa 15Sa20 + 1°20	Sa 23Sa37 + 1°24R
Ur 25Aq50 - 0°44	Ur 03Pi10 - 0°45
Ne 01Le53 - 0°17R	Ne 29Cn38 - 0°14
Pl 03Sa04 +11°22	Pl 04Sa14 +11°51R
No 03Sa11 - 0°00	No 24Sc33 - 0°00
Coords: 36W/21N	

May 28, 1752 2:13 AM Partial Penumbral



Oct 23, 1752 1:12 AM Partial Penumbral



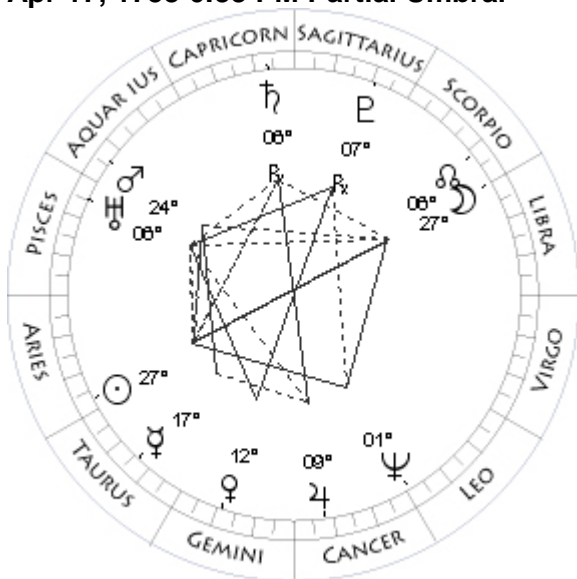
Nov 6, 1752 1:48 AM Annular Solar

Mo 06Sa55 + 1°08	Mo 14Sc07 - 0°07
Su 07Ge02 - 0°00	Su 14Sc06 - 0°00
Me 04Ge22 - 2°30R	Me 09Sc48 + 0°34
Ve 15Ta00 - 1°23	Ve 04Sa57 - 0°32
Ma 14Cn56 + 1°17	Ma 28Li33 + 0°34
Ju 19Ge46 - 0°18	Ju 15Cn46 - 0°03R
Sa 22Sa41 + 1°24R	Sa 22Sa29 + 1°00
Ur 03Pi22 - 0°45	Ur 29Aq29 - 0°46R
Ne 29Cn57 - 0°14	Ne 04Le20 - 0°12R
Pl 03Sa52 +11°51R	Pl 04Sa22 +10°56
No 23Sc48 - 0°00	No 15Sc13 - 0°00
	Coords: 148W/23S

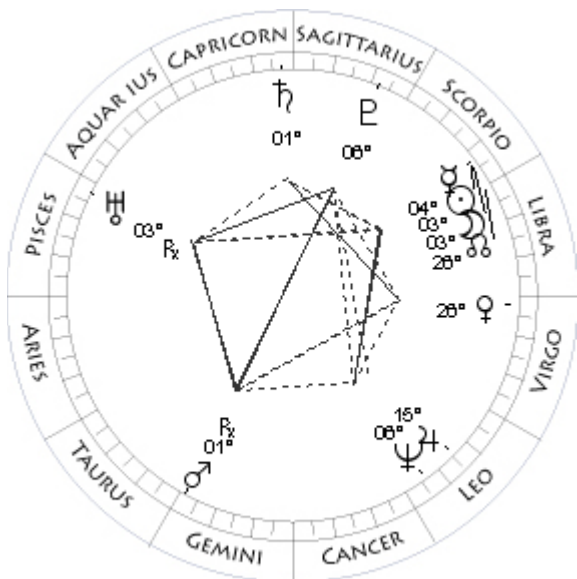
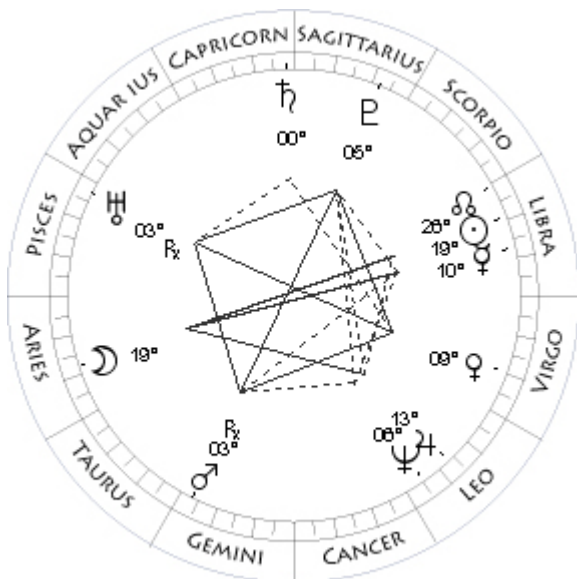
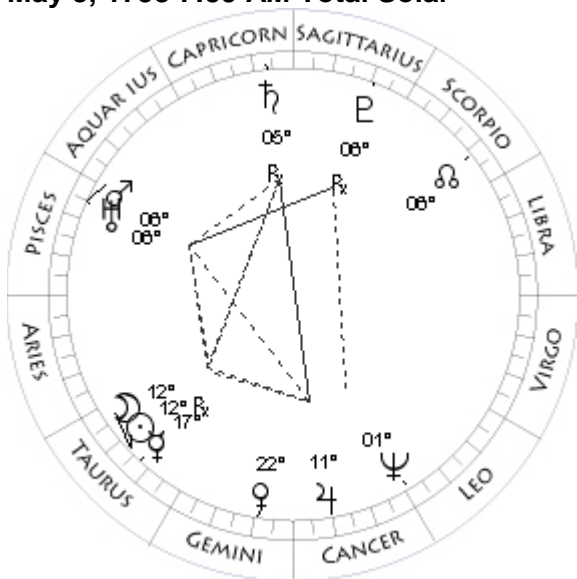
Nov 21, 1752 0:44 PM Partial Penumbral

Mo 00Ta11 + 1°23	Mo 29Ta34 - 1°18
Su 00Sc03 - 0°00	Su 29Sc42 - 0°00
Me 16Li44 + 1°53	Me 04Sa22 - 1°06
Ve 17Sc30 + 0°04	Ve 24Sa11 - 1°09
Ma 19Li11 + 0°40	Ma 08Sc58 + 0°26
Ju 15Cn37 - 0°05	Ju 15Cn11 - 0°01R
Sa 21Sa10 + 1°02	Sa 24Sa08 + 0°58
Ur 29Aq35 - 0°47R	Ur 29Aq33 - 0°46
Ne 04Le17 - 0°12	Ne 04Le16 - 0°12R
Pl 03Sa53 +10°59	Pl 04Sa56 +10°53
No 15Sc58 - 0°00	No 14Sc24 - 0°00
	Coords: 166W/19N

Apr 17, 1753 6:33 PM Partial Umbral



May 3, 1753 7:39 AM Total Solar



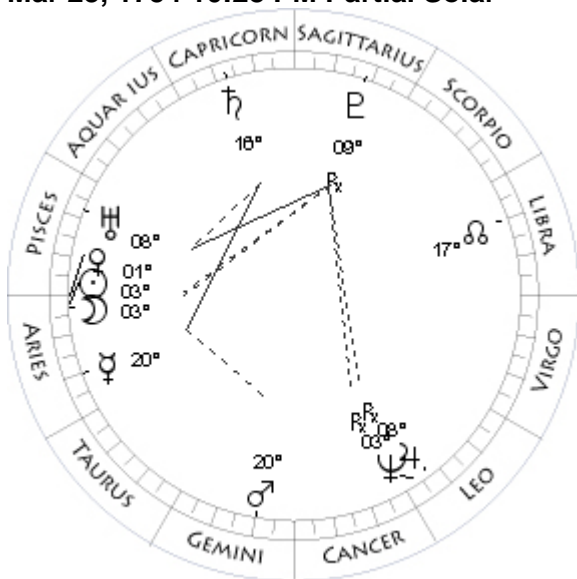
Oct 12, 1753 8:51 AM Partial Umbral

Mo 27Li56 - 0°44	Mo 19Ar15 + 0°42
Su 27Ar51 - 0°00	Su 19Li11 - 0°00
Me 17Ta16 + 2°53	Me 10Li49 + 1°40
Ve 12Ge04 + 4°16	Ve 09Vi50 + 0°53
Ma 24Aq31 - 1°26	Ma 03Ge46 - 1°04R
Ju 09Cn06 + 0°15	Ju 13Le53 + 0°33
Sa 06Cp11 + 0°55R	Sa 00Cp48 + 0°39
Ur 06Pi13 - 0°44	Ur 03Pi50 - 0°48R
Ne 01Le32 - 0°11	Ne 06Le21 - 0°08
Pl 07Sa12 +11°18R	Pl 05Sa49 +10°33
No 06Sc36 - 0°00	No 27Li12 - 0°00
Coords: 81W/11S	Coords: 136E/ 8N

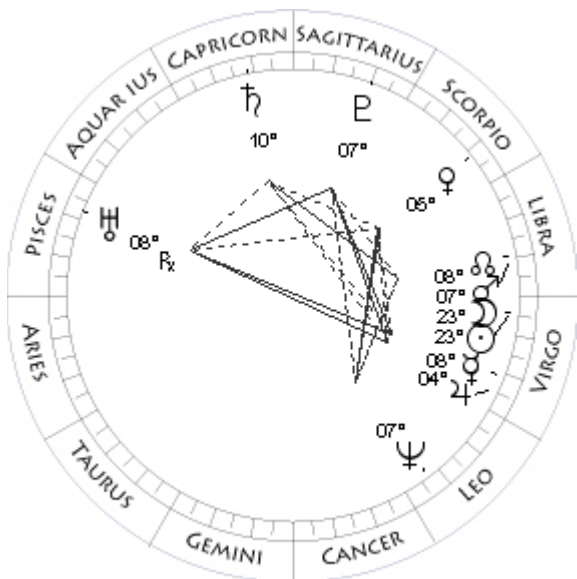
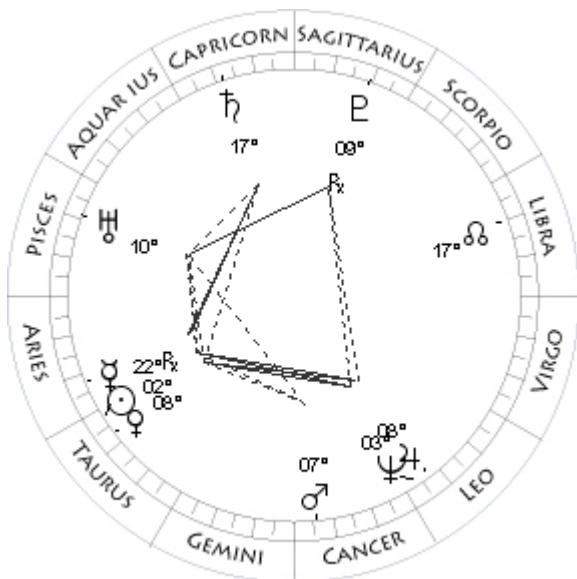
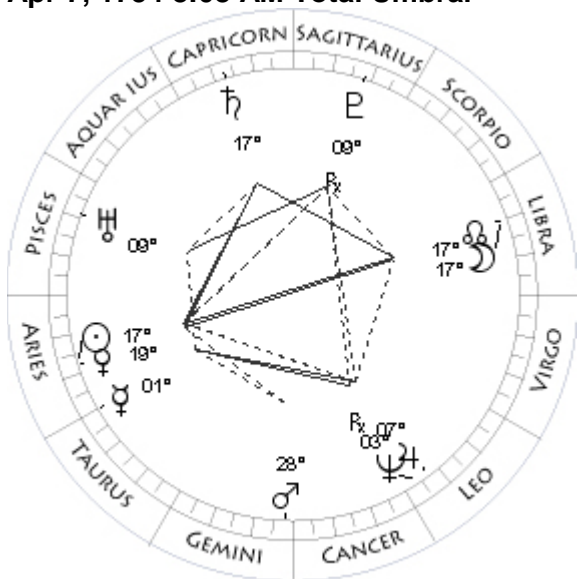
Oct 26, 1753 10:21 AM Total Solar

Mo 12Ta53 - 0°38	Mo 03Sc08 + 0°35
Su 12Ta57 - 0°00	Su 03Sc11 - 0°00
Me 17Ta31 + 0°48R	Me 04Sc34 + 0°18
Ve 22Ge10 + 4°28	Ve 26Vi37 + 1°28
Ma 06Pi02 - 1°39	Ma 01Ge53 - 0°26R
Ju 11Cn25 + 0°16	Ju 15Le42 + 0°35
Sa 05Cp55 + 0°55R	Sa 01Cp47 + 0°37
Ur 06Pi46 - 0°45	Ur 03Pi34 - 0°47R
Ne 01Le39 - 0°10	Ne 06Le30 - 0°08
Pl 06Sa53 +11°19R	Pl 06Sa15 +10°28
No 05Sc47 - 0°00	No 26Li27 - 0°00
Coords: 73W/25S	Coords: 30W/22N

Mar 23, 1754 10:28 PM Partial Solar



Apr 7, 1754 8:08 AM Total Umbral



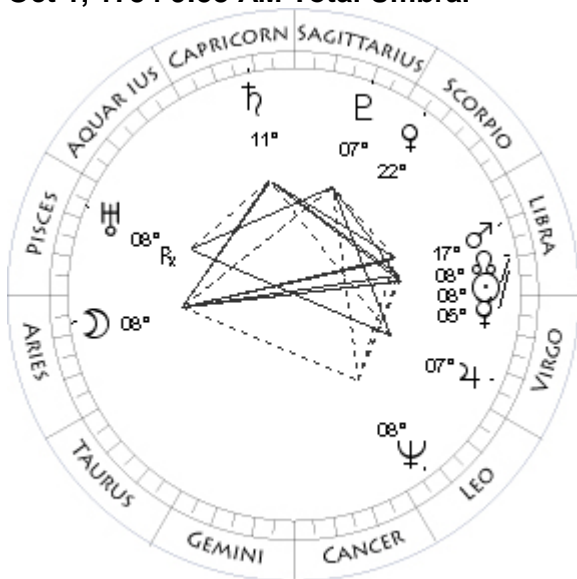
Apr 22, 1754 2:25 PM Partial Solar

Mo 03Ar21 + 1°18	Mo 02Ta11 - 1°20
Su 03Ar13 - 0°00	Su 02Ta19 - 0°00
Me 20Ar53 + 1°42	Me 22Ar55 + 0°07R
Ve 01Ar17 - 1°23	Ve 08Ta01 - 0°41
Ma 20Ge40 + 1°51	Ma 07Cn05 + 1°41
Ju 08Le08 + 0°56R	Ju 08Le30 + 0°54
Sa 16Cp36 + 0°27	Sa 17Cp30 + 0°26
Ur 08Pi47 - 0°44	Ur 10Pi12 - 0°45
Ne 03Le52 - 0°07R	Ne 03Le46 - 0°06
Pl 09Sa52 +10°40R	Pl 09Sa29 +10°46R
No 18Li35 - 0°00	No 17Li01 - 0°00

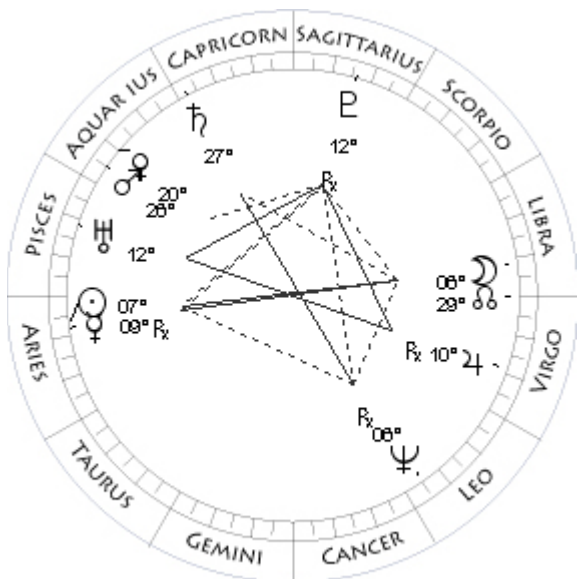
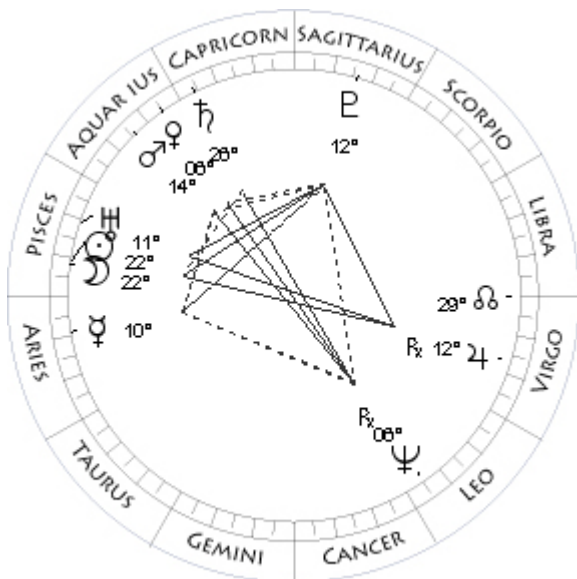
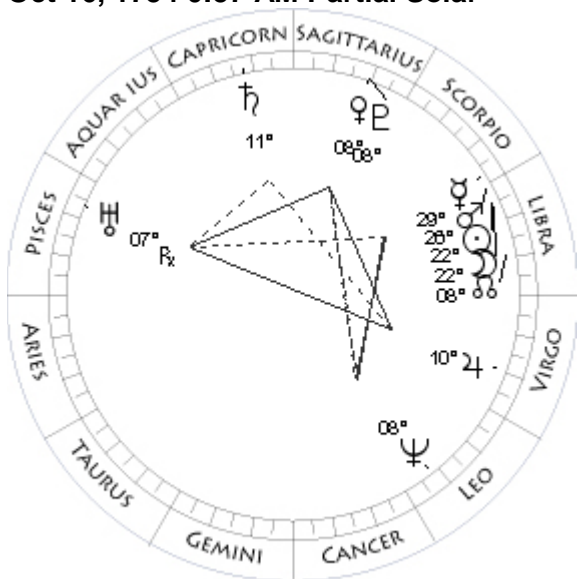
Sep 16, 1754 4:25 PM Partial Solar

Mo 17Li25 - 0°01	Mo 23Vi46 - 1°21
Su 17Ar24 - 0°00	Su 23Vi39 - 0°00
Me 01Ta11 + 3°10	Me 08Vi42 + 1°37
Ve 19Ar09 - 1°08	Ve 05Sc32 - 1°08
Ma 28Ge31 + 1°46	Ma 07Li16 + 0°37
Ju 07Le58 + 0°55	Ju 04Vi17 + 0°54
Sa 17Cp13 + 0°26	Sa 10Cp54 + 0°14
Ur 09Pi31 - 0°44	Ur 08Pi46 - 0°49R
Ne 03Le46 - 0°07R	Ne 07Le57 - 0°05
Pl 09Sa43 +10°43R	Pl 07Sa31 +10°11
No 17Li50 - 0°00	No 09Li14 - 0°00

Oct 1, 1754 9:58 AM Total Umbral



Oct 16, 1754 0:57 AM Partial Solar



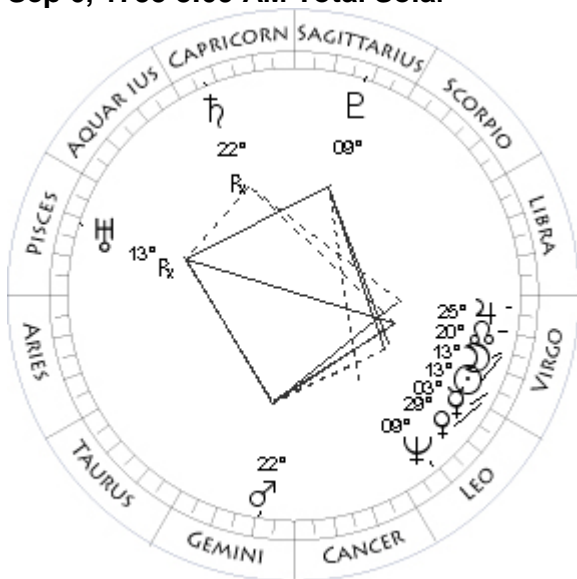
Mar 12, 1755 10:09 PM Annular Solar

Mo 08Ar07 + 0°02	Mo 22Pi07 + 0°40
Su 08Li07 - 0°00	Su 22Pi03 - 0°00
Me 05Li00 + 1°29	Me 10Ar17 + 2°17
Ve 22Sc22 - 2°06	Ve 06Aq19 + 3°06
Ma 17Li00 + 0°29	Ma 14Aq48 - 1°07
Ju 07Vi19 + 0°55	Ju 12Vi38 + 1°28R
Sa 11Cp07 + 0°12	Sa 26Cp25 - 0°00
Ur 08Pi14 - 0°48R	Ur 11Pi54 - 0°44
Ne 08Le19 - 0°04	Ne 06Le17 - 0°03R
Pl 07Sa47 +10°06	Pl 12Sa11 +10°04
No 08Li27 - 0°00	No 29Vi51 - 0°00
Coords: 152E/ 3N	Coords: 167E/42N

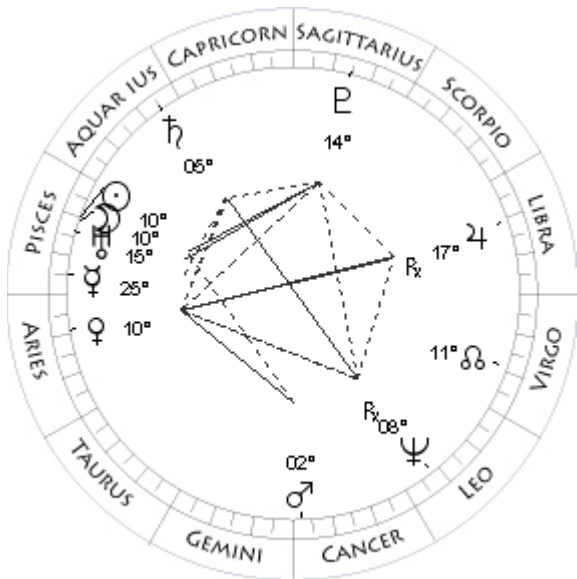
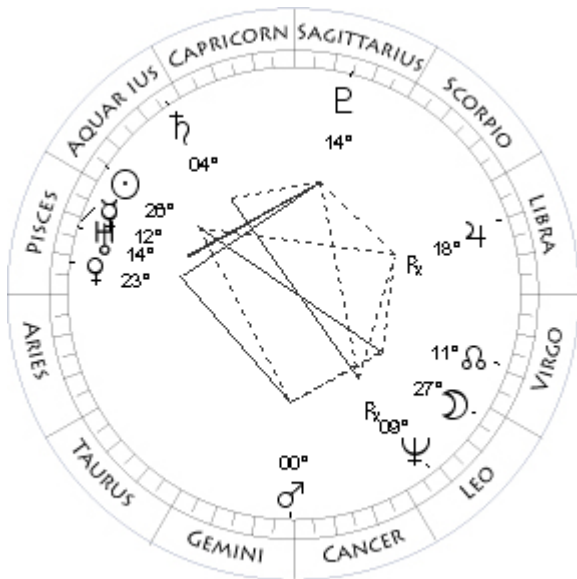
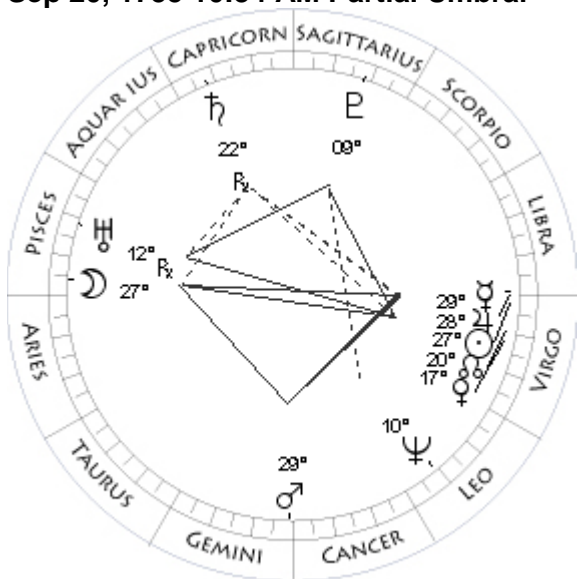
Mar 28, 1755 0:35 AM Partial Umbral

Mo 22Li27 + 1°16	Mo 06Li56 + 0°42
Su 22Li35 - 0°00	Su 07Ar01 - 0°00
Me 29Li46 - 0°01	Me 09Ar22 + 3°06R
Ve 08Sa38 - 2°56	Ve 20Aq34 + 1°23
Ma 26Li49 + 0°21	Ma 26Aq28 - 1°14
Ju 10Vi09 + 0°57	Ju 10Vi51 + 1°28R
Sa 11Cp40 + 0°11	Sa 27Cp32 - 0°02
Ur 07Pi49 - 0°48R	Ur 12Pi44 - 0°44
Ne 08Le35 - 0°04	Ne 06Le04 - 0°03R
Pl 08Sa10 +10°01	Pl 12Sa09 +10°08R
No 07Li41 - 0°00	No 29Vi03 - 0°00

Sep 6, 1755 8:09 AM Total Solar



Sep 20, 1755 10:34 AM Partial Umbral



Feb 16, 1756 2:47 AM Partial Penumbral

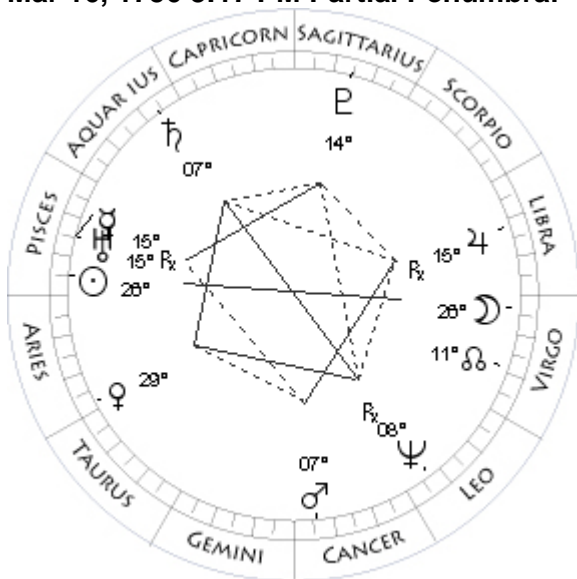
Mo 13Vi23 - 0°38	Mo 27Le04 - 1°16
Su 13Vi20 - 0°00	Su 26Aq56 - 0°00
Me 03Vi05 + 1°44	Me 12Pi23 - 0°15
Ve 29Le47 + 1°13	Ve 23Pi18 - 1°10
Ma 22Ge00 - 0°20	Ma 00Cn17 + 3°19
Ju 25Vi35 + 1°06	Ju 18Li16 + 1°30R
Sa 22Cp38 - 0°16R	Sa 04Aq14 - 0°25
Ur 13Pi18 - 0°49R	Ur 14Pi13 - 0°44
Ne 09Le46 - 0°01	Ne 09Le07 + 0°01R
Pl 09Sa39 + 9°44	Pl 14Sa14 + 9°25
No 20Vi27 - 0°00	No 11Vi50 - 0°00

Coords: 44W/32S

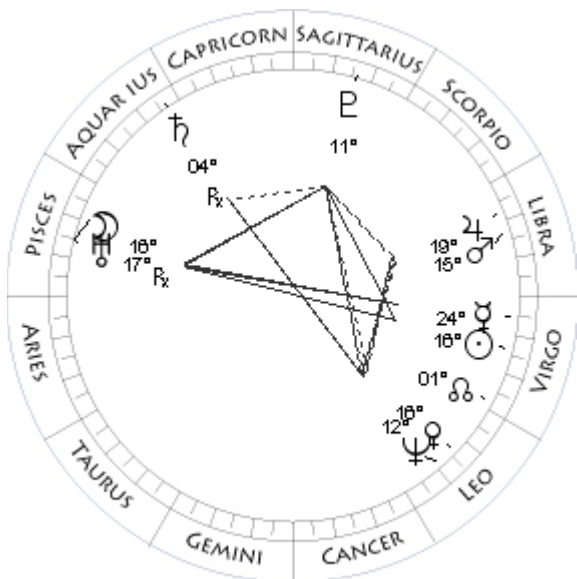
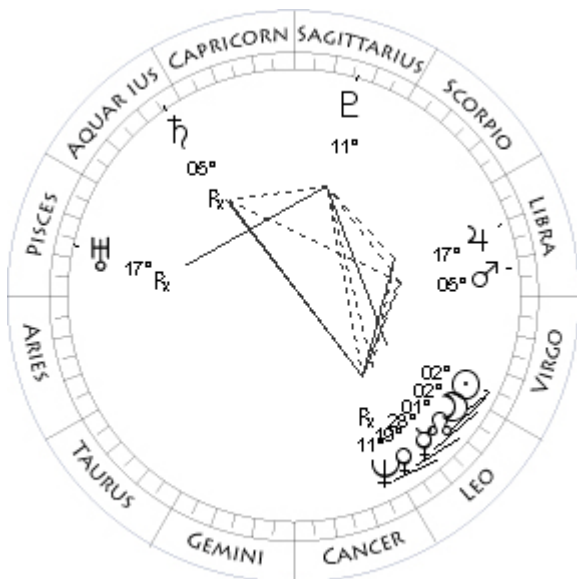
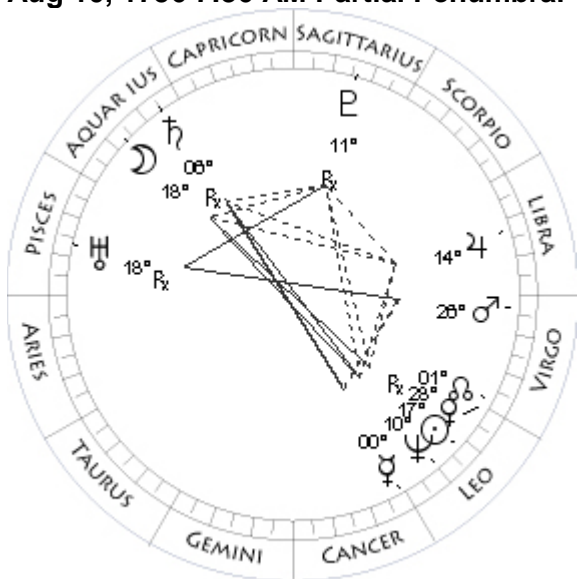
Mar 1, 1756 2:07 AM Annular Solar

Mo 27Pi02 - 0°37	Mo 10Pi59 - 0°00
Su 27Vi05 - 0°00	Su 10Pi59 - 0°00
Me 29Vi25 + 1°18	Me 25Pi59 + 2°57
Ve 17Vi17 + 1°25	Ve 10Ar28 - 0°39
Ma 29Ge39 - 0°02	Ma 02Cn49 + 3°00
Ju 28Vi37 + 1°06	Ju 17Li23 + 1°33R
Sa 22Cp19 - 0°16R	Sa 05Aq46 - 0°26
Ur 12Pi45 - 0°49R	Ur 15Pi00 - 0°44
Ne 10Le12 - 0°01	Ne 08Le46 + 0°01R
Pl 09Sa50 + 9°39	Pl 14Sa24 + 9°28
No 19Vi42 - 0°00	No 11Vi05 - 0°00

Mar 16, 1756 3:17 PM Partial Penumbral



Aug 10, 1756 7:36 AM Partial Penumbral



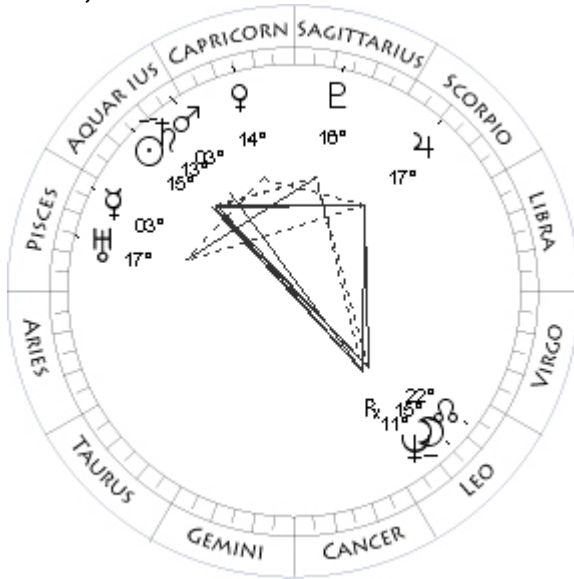
Aug 25, 1756 6:46 PM Annular Solar

Mo 26Vi21 + 1°24	Mo 02Vi51 + 0°06
Su 26Pi30 - 0°00	Su 02Vi51 - 0°00
Me 15Pi14 + 2°30R	Me 28Le06 + 1°46
Ve 29Ar23 + 0°07	Ve 19Le54 - 8°17R
Ma 07Cn28 + 2°40	Ma 05Li54 + 0°28
Ju 15Li50 + 1°35R	Ju 17Li11 + 1°07
Sa 07Aq17 - 0°28	Sa 05Aq13 - 0°46R
Ur 15Pi53 - 0°44	Ur 17Pi51 - 0°48R
Ne 08Le28 + 0°01R	Ne 11Le33 + 0°03
Pl 14Sa28 + 9°32	Pl 11Sa52 + 9°16
No 10Vi16 - 0°00	No 01Vi41 - 0°00
Coords: 133W/ 3N	Coords: 100E/16N

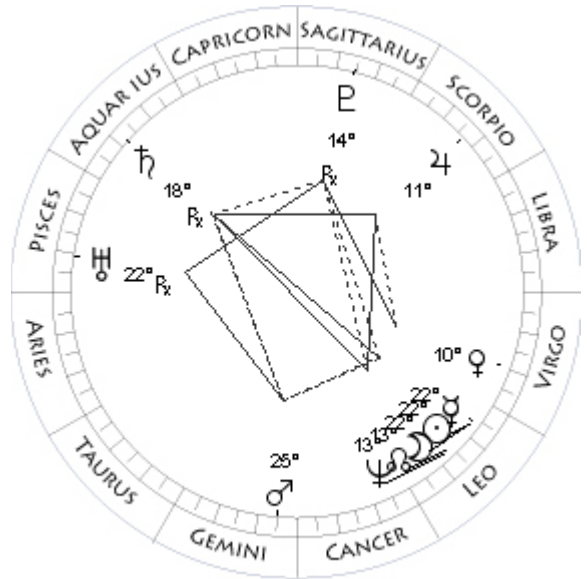
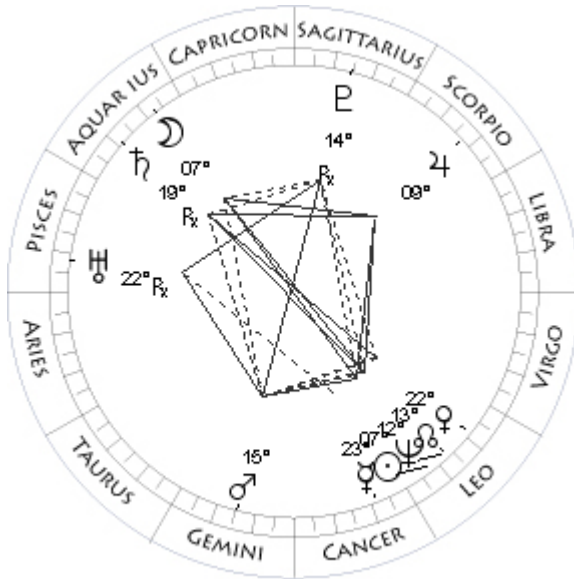
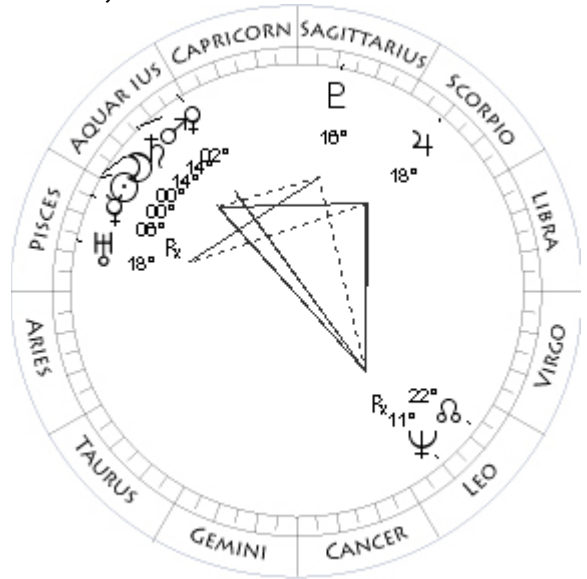
Sep 8, 1756 5:19 PM Partial Penumbral

Mo 18Aq05 + 1°15	Mo 16Pi15 - 1°19
Su 17Le57 - 0°00	Su 16Vi23 - 0°00
Me 00Le02 - 0°13	Me 24Vi18 + 1°06
Ve 28Le54 - 7°12R	Ve 16Le32 - 6°47
Ma 26Vi01 + 0°38	Ma 15Li00 + 0°19
Ju 14Li31 + 1°10	Ju 19Li50 + 1°05
Sa 06Aq16 - 0°46R	Sa 04Aq28 - 0°47R
Ur 18Pi24 - 0°48R	Ur 17Pi18 - 0°49R
Ne 10Le59 + 0°03	Ne 12Le01 + 0°03
Pl 11Sa55 + 9°22R	Pl 11Sa57 + 9°11
No 02Vi30 - 0°00	No 00Vi57 - 0°00
Coords: 113E/14S	

Feb 4, 1757 7:16 AM Partial Umbral



Feb 18, 1757 1:14 PM Total Solar



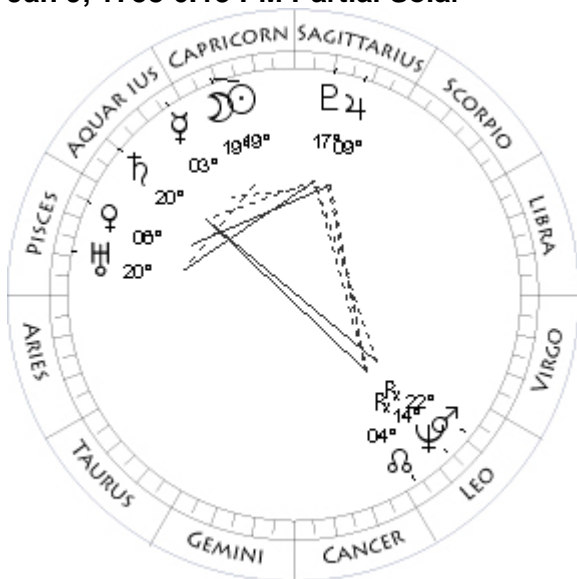
Jul 30, 1757 11:39 PM Partial Umbral

Mo 15Le50 - 0°37	Mo 07Aq52 + 0°31
Su 15Aq46 - 0°00	Su 07Le49 - 0°00
Me 03Pi47 + 0°16	Me 23Cn08 + 0°23
Ve 14Cp31 + 0°28	Ve 22Le03 + 1°28
Ma 03Aq01 - 1°01	Ma 15Ge47 - 0°08
Ju 17Sc26 + 1°10	Ju 09Sc41 + 1°00
Sa 13Aq11 - 0°50	Sa 19Aq37 - 1°15R
Ur 17Pi22 - 0°44	Ur 22Pi47 - 0°48R
Ne 11Le41 + 0°05R	Ne 12Le43 + 0°07
Pl 16Sa15 + 8°50	Pl 14Sa18 + 8°52R
No 23Le04 - 0°00	No 13Le43 - 0°00
Coords: 106E/16N	Coords: 6W/18S

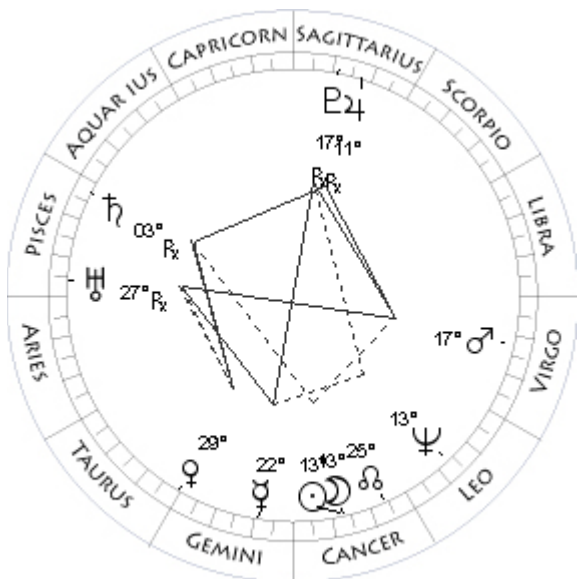
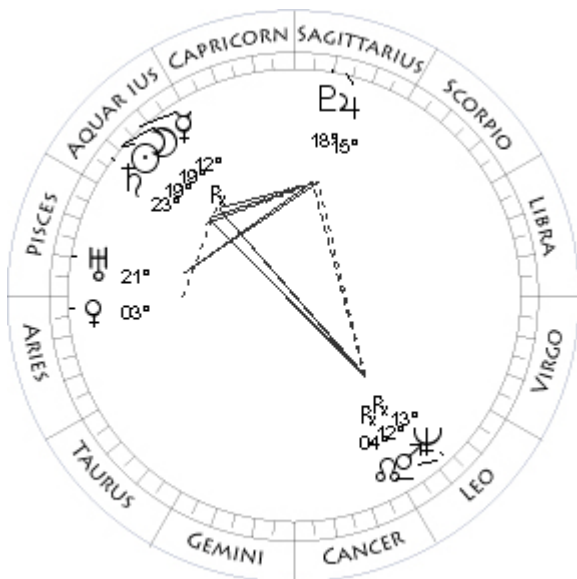
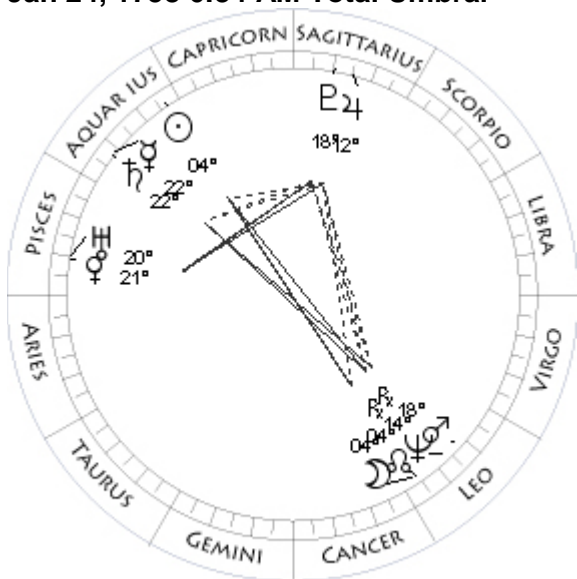
Aug 14, 1757 10:16 PM Annular Solar

Mo 00Pi06 - 0°42	Mo 22Le05 + 0°47
Su 00Pi10 - 0°00	Su 22Le09 - 0°00
Me 06Pi21 + 3°35R	Me 22Le57 + 1°46
Ve 02Aq05 - 0°14	Ve 10Vi25 + 1°25
Ma 14Aq10 - 1°05	Ma 25Ge40 + 0°05
Ju 18Sc20 + 1°12	Ju 11Sc03 + 0°56
Sa 14Aq53 - 0°51	Sa 18Aq31 - 1°17R
Ur 18Pi08 - 0°44	Ur 22Pi21 - 0°48R
Ne 11Le18 + 0°05R	Ne 13Le16 + 0°07
Pl 16Sa31 + 8°52	Pl 14Sa10 + 8°47R
No 22Le19 - 0°00	No 12Le56 - 0°00
Coords: 3W/54S	Coords: 114E/71N

Jan 9, 1758 6:13 PM Partial Solar



Jan 24, 1758 6:34 AM Total Umbral



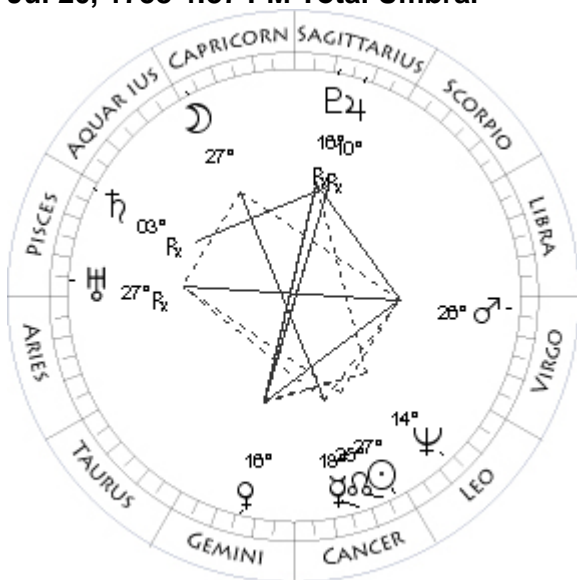
Feb 8, 1758 4:40 AM Partial Solar

Mo 19Cp41 + 1°20	Mo 19Aq20 - 1°22
Su 19Cp34 - 0°00	Su 19Aq28 - 0°00
Me 03Aq59 - 1°49	Me 12Aq47 + 3°41R
Ve 06Pi32 - 0°44	Ve 03Ar57 + 2°45
Ma 22Le28 + 4°02R	Ma 12Le20 + 4°33R
Ju 09Sa55 + 0°40	Ju 15Sa05 + 0°40
Sa 20Aq34 - 1°13	Sa 23Aq59 - 1°14
Ur 20Pi03 - 0°45	Ur 21Pi19 - 0°44
Ne 14Le40 + 0°09R	Ne 13Le51 + 0°10R
Pl 17Sa43 + 8°13	Pl 18Sa31 + 8°16
No 05Le06 - 0°00	No 03Le32 - 0°00

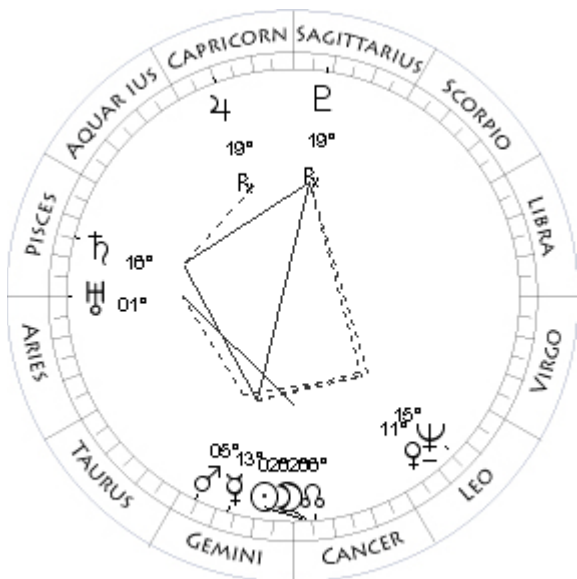
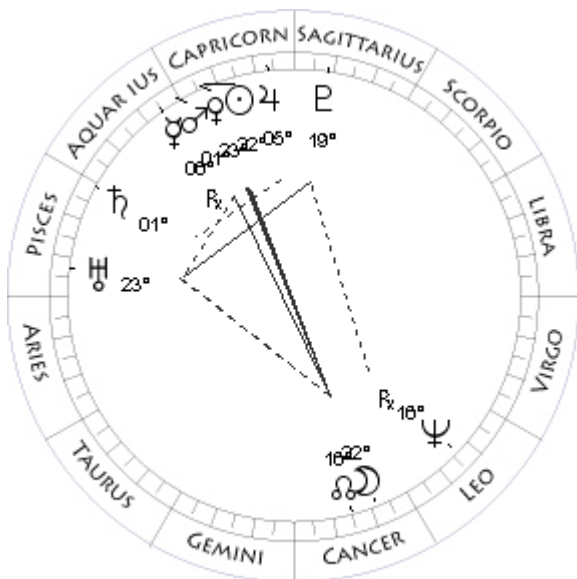
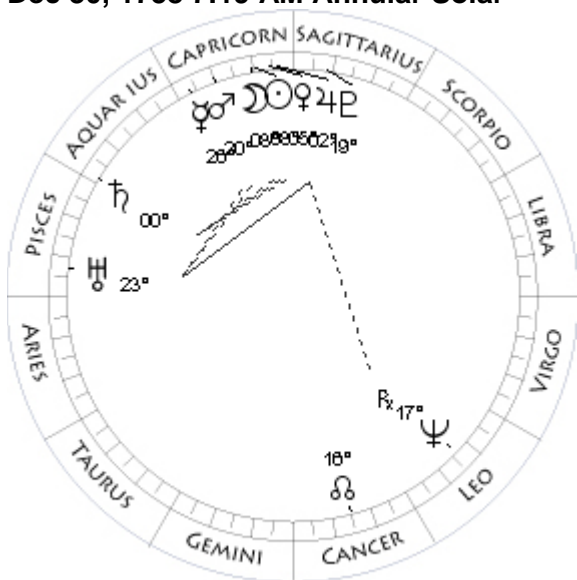
Jul 5, 1758 8:57 AM Partial Solar

Mo 04Le21 + 0°00	Mo 13Cn15 - 1°06
Su 04Aq20 - 0°00	Su 13Cn08 - 0°00
Me 22Aq02 + 0°51	Me 22Ge18 - 2°17
Ve 21Pi07 + 0°45	Ve 29Ta40 - 2°39
Ma 18Le10 + 4°27R	Ma 17Vi22 + 0°44
Ju 12Sa38 + 0°40	Ju 11Sa23 + 0°34R
Sa 22Aq13 - 1°13	Sa 03Pi42 - 1°38R
Ur 20Pi37 - 0°44	Ur 27Pi10 - 0°46R
Ne 14Le17 + 0°09R	Ne 13Le56 + 0°11
Pl 18Sa09 + 8°14	Pl 17Sa02 + 8°24R
No 04Le20 - 0°00	No 25Cn45 - 0°00

Jul 20, 1758 4:37 PM Total Umbral



Dec 30, 1758 7:19 AM Annular Solar



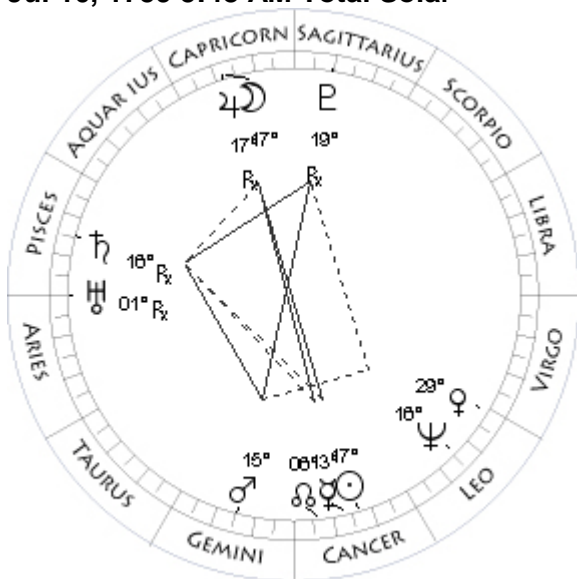
Jan 13, 1759 8:06 AM Partial Umbral

Mo 27Cp44 - 0°14	Mo 22Cn54 + 0°38
Su 27Cn45 - 0°00	Su 22Cp58 - 0°00
Me 18Cn10 + 0°50	Me 06Aq09 + 1°36R
Ve 16Ge40 - 2°08	Ve 23Cp09 - 0°54
Ma 26Vi20 + 0°30	Ma 01Aq18 - 1°04
Ju 10Sa17 + 0°31R	Ju 05Cp56 + 0°06
Sa 03Pi01 - 1°41R	Sa 01Pi37 - 1°36
Ur 27Pi03 - 0°47R	Ur 23Pi59 - 0°44
Ne 14Le28 + 0°11	Ne 16Le50 + 0°13R
Pl 16Sa44 + 8°20R	Pl 19Sa59 + 7°40
No 24Cn56 - 0°00	No 15Cn35 - 0°00
Coords: 112W/21S	Coords: 119E/22N

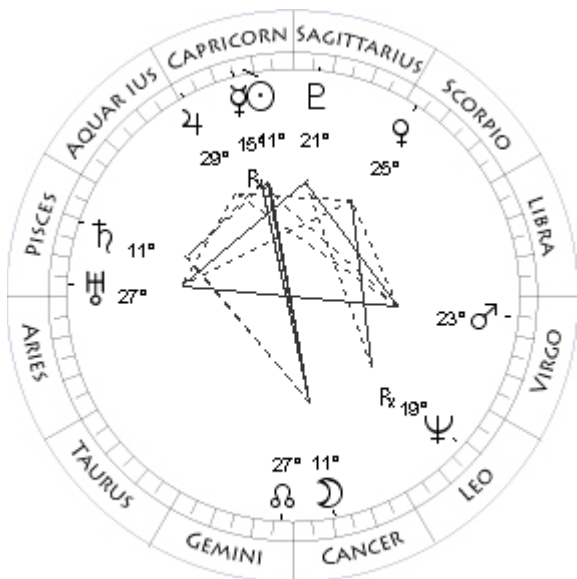
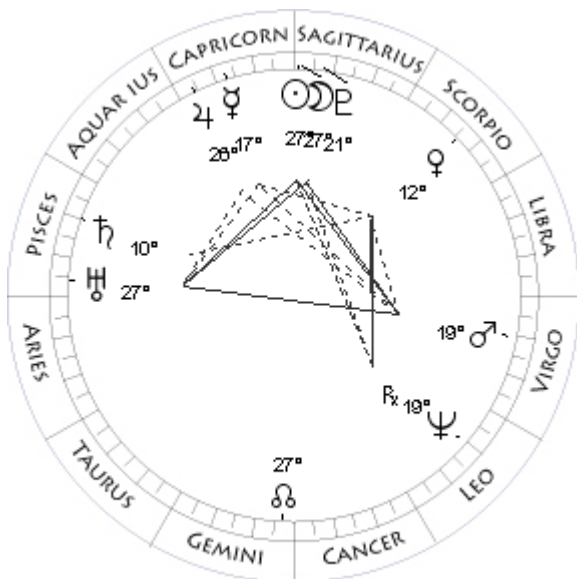
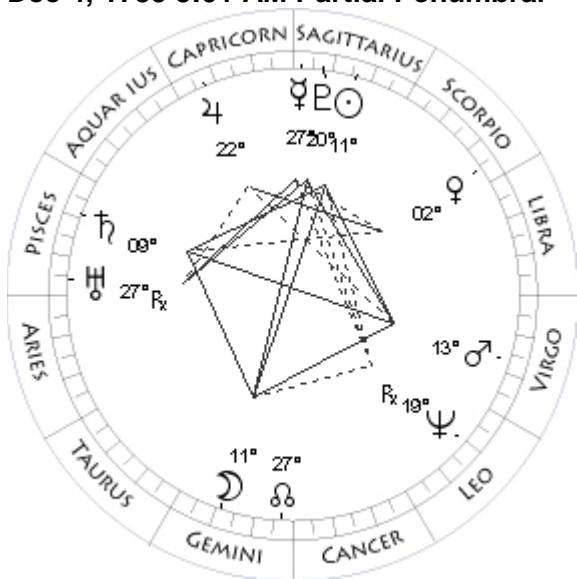
Jun 24, 1759 5:20 PM Total Solar

Mo 08Cp43 + 0°40	Mo 02Cn47 - 0°22
Su 08Cp39 - 0°00	Su 02Cn45 - 0°00
Me 26Cp56 - 1°39	Me 13Ge37 - 1°38
Ve 05Cp30 - 0°25	Ve 11Le41 + 1°54
Ma 20Cp19 - 1°03	Ma 05Ge10 - 0°01
Ju 02Cp44 + 0°07	Ju 19Cp32 - 0°14R
Sa 00Pi14 - 1°37	Sa 16Pi14 - 1°57
Ur 23Pi35 - 0°44	Ur 01Ar06 - 0°45
Ne 17Le09 + 0°13R	Ne 15Le44 + 0°14
Pl 19Sa30 + 7°39	Pl 19Sa34 + 7°50R
No 16Cn19 - 0°00	No 06Cn59 - 0°00
Coords: 72W/21N	

Jul 10, 1759 5:48 AM Total Solar



Dec 4, 1759 5:01 AM Partial Penumbral



Dec 19, 1759 1:49 PM Annular Solar

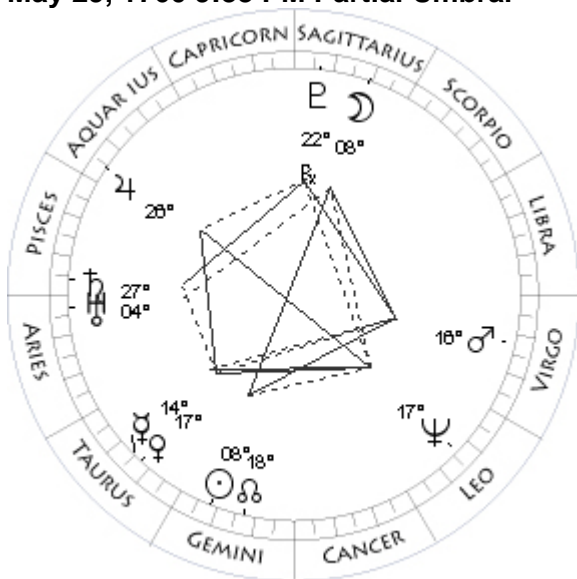
Mo 17Cp27 - 0°59	Mo 27Sa28 + 0°00
Su 17Cn33 - 0°00	Su 27Sa28 - 0°00
Me 13Cn51 + 1°11	Me 17Cp27 - 1°25
Ve 29Le23 + 1°25	Ve 12Sc27 + 3°15
Ma 15Ge57 + 0°09	Ma 19Vi14 + 2°33
Ju 17Cp35 - 0°17R	Ju 26Cp08 - 0°27
Sa 16Pi06 - 2°01R	Sa 10Pi39 - 1°59
Ur 01Ar09 - 0°45R	Ur 27Pi18 - 0°44
Ne 16Le13 + 0°15	Ne 19Le36 + 0°17R
Pl 19Sa13 + 7°47R	Pl 21Sa15 + 7°06
No 06Cn10 - 0°00	No 27Ge34 - 0°00

Jan 2, 1760 4:47 PM Partial Penumbral

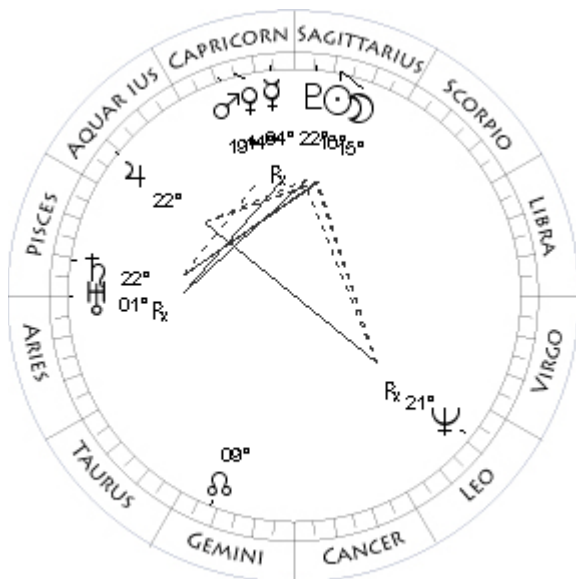
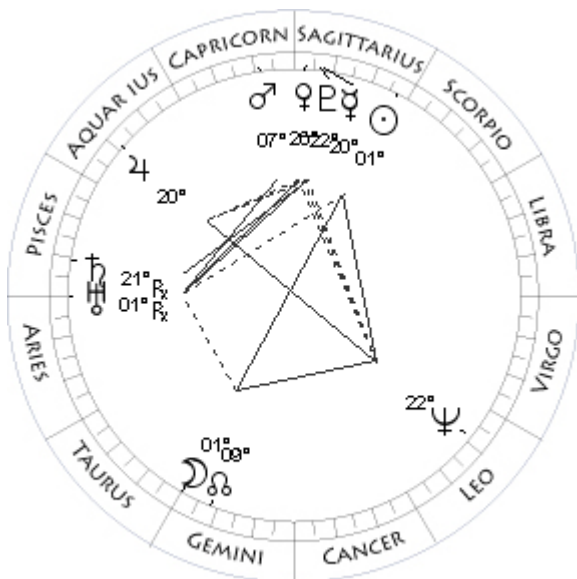
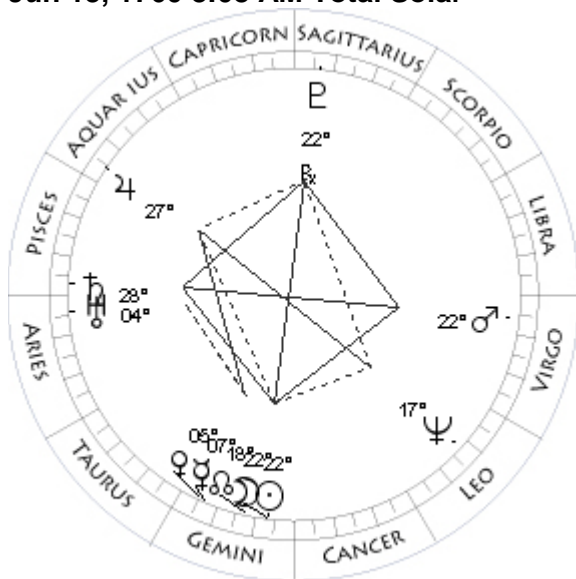
Mo 11Ge58 - 1°25	Mo 11Cn45 + 1°18
Su 11Sa50 - 0°00	Su 11Cp52 - 0°00
Me 27Sa23 - 2°17	Me 15Cp05 + 2°27R
Ve 02Sc03 + 1°55	Ve 25Sc09 + 3°35
Ma 13Vi06 + 2°14	Ma 23Vi41 + 2°53
Ju 22Cp50 - 0°26	Ju 29Cp20 - 0°28
Sa 09Pi54 - 2°02	Sa 11Pi40 - 1°57
Ur 27Pi14 - 0°45R	Ur 27Pi32 - 0°44
Ne 19Le46 + 0°17R	Ne 19Le20 + 0°17R
Pl 20Sa41 + 7°07	Pl 21Sa45 + 7°05
No 28Ge23 - 0°00	No 26Ge49 - 0°00

Coords: 109W/24N

May 29, 1760 9:33 PM Partial Umbral



Jun 13, 1760 8:08 AM Total Solar



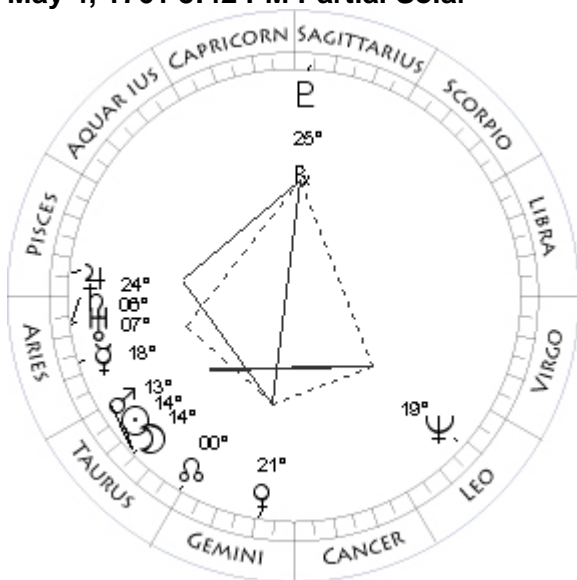
Nov 22, 1760 8:41 PM Partial Umbral

Mo 08Sa54 + 0°52	Mo 01Ge09 - 0°45
Su 08Ge49 - 0°00	Su 01Sa06 - 0°00
Me 14Ta52 - 3°11	Me 20Sa52 - 2°28
Ve 17Ta50 - 1°18	Ve 26Sa28 - 1°14
Ma 16Vi45 + 1°00	Ma 07Cp39 - 1°13
Ju 26Aq56 - 0°51	Ju 20Aq11 - 1°02
Sa 27Pi22 - 2°06	Sa 21Pi57 - 2°23R
Ur 04Ar28 - 0°43	Ur 01Ar20 - 0°44R
Ne 17Le17 + 0°18	Ne 22Le00 + 0°21
Pl 22Sa27 + 7°16R	Pl 22Sa25 + 6°35
No 18Ge58 - 0°00	No 09Ge36 - 0°00
Coords: 36W/21S	Coords: 46W/20N

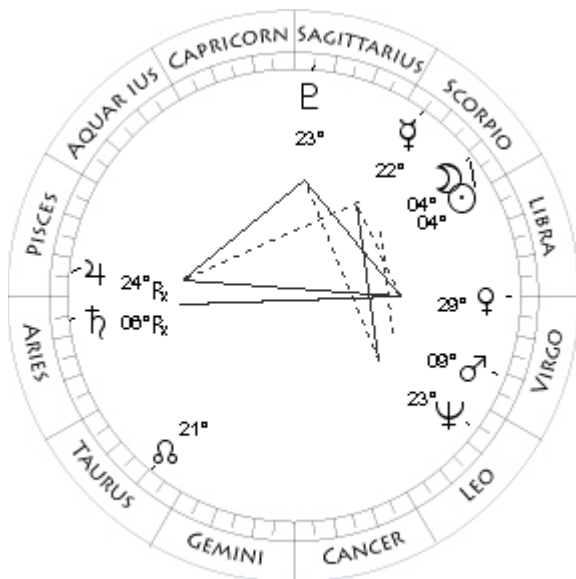
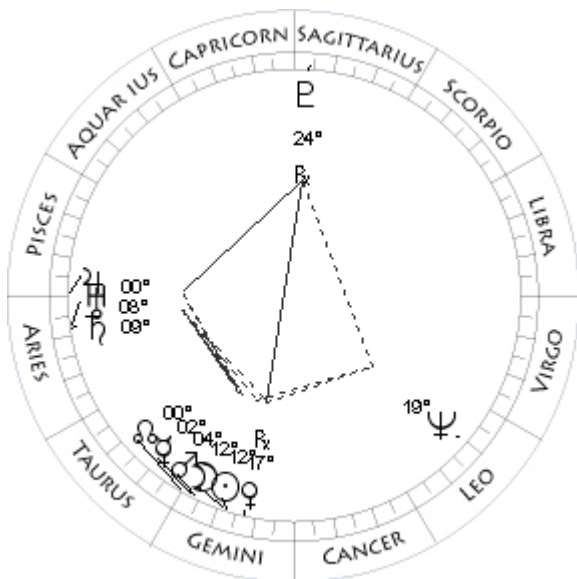
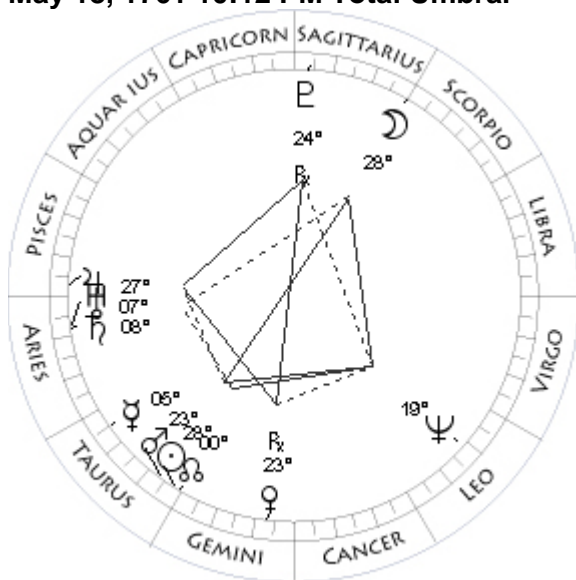
Dec 7, 1760 1:53 PM Annular Solar

Mo 22Ge34 + 0°24	Mo 15Sa58 - 0°37
Su 22Ge37 - 0°00	Su 16Sa02 - 0°00
Me 07Ge25 - 1°01	Me 04Cp38 - 1°07R
Ve 05Ge25 - 0°50	Ve 14Cp43 - 1°39
Ma 22Vi40 + 0°38	Ma 19Cp01 - 1°13
Ju 27Aq21 - 0°55	Ju 22Aq17 - 1°01
Sa 28Pi08 - 2°10	Sa 22Pi06 - 2°20
Ur 04Ar51 - 0°43	Ur 01Ar13 - 0°44R
Ne 17Le35 + 0°18	Ne 21Le57 + 0°21R
Pl 22Sa05 + 7°15R	Pl 22Sa56 + 6°33
No 18Ge12 - 0°00	No 08Ge49 - 0°00
Coords: 53W/46N	

May 4, 1761 5:42 PM Partial Solar



May 18, 1761 10:12 PM Total Umbral



Jun 3, 1761 1:22 AM Partial Solar

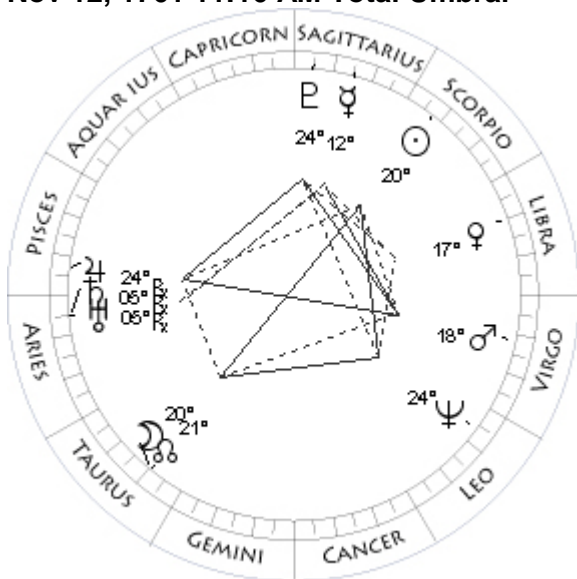
Mo 14Ta31 - 1°25	Mo 12Ge27 + 1°08
Su 14Ta23 - 0°00	Su 12Ge34 - 0°00
Me 18Ar18 - 3°03	Me 02Ge46 - 0°28
Ve 21Ge38 + 4°31	Ve 17Ge34 + 0°35R
Ma 13Ta22 - 0°06	Ma 04Ge20 + 0°13
Ju 24Pi58 - 1°05	Ju 00Ar00 - 1°12
Sa 06Ar43 - 2°11	Sa 09Ar27 - 2°17
Ur 07Ar16 - 0°41	Ur 08Ar27 - 0°42
Ne 19Le13 + 0°22	Ne 19Le31 + 0°22
Pl 25Sa13 + 6°40R	Pl 24Sa35 + 6°40R
No 00Ge58 - 0°00	No 29Ta25 - 0°00

Oct 27, 1761 10:20 PM Partial Solar

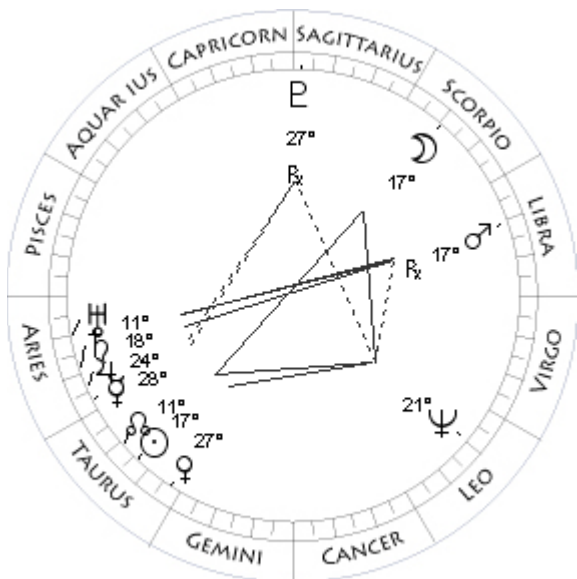
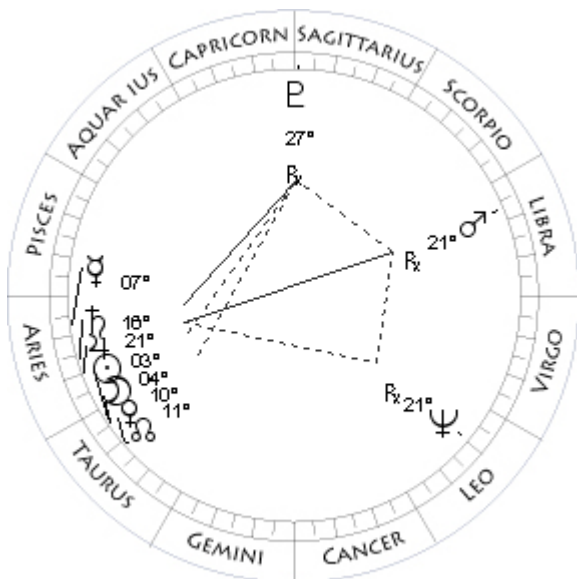
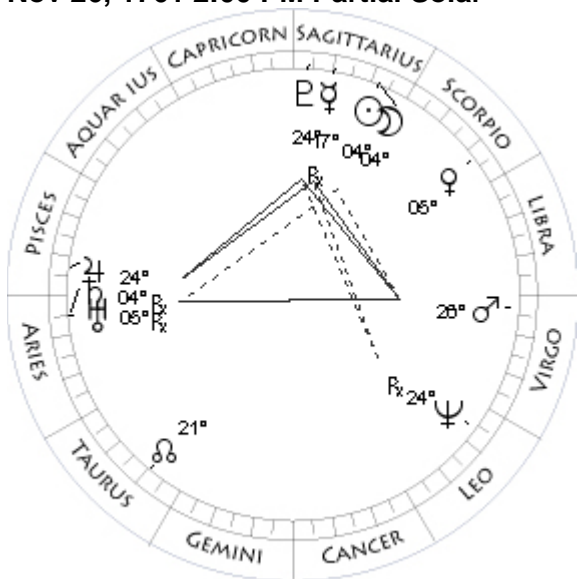
Mo 28Sc05 + 0°11	Mo 04Sc53 + 1°28
Su 28Ta03 - 0°00	Su 04Sc45 - 0°00
Me 05Ta30 - 2°43	Me 22Sc51 - 1°55
Ve 23Ge39 + 3°26R	Ve 29Vi00 + 1°32
Ma 23Ta36 + 0°03	Ma 09Vi09 + 1°31
Ju 27Pi36 - 1°08	Ju 24Pi48 - 1°34R
Sa 08Ar09 - 2°14	Sa 06Ar06 - 2°41R
Ur 07Ar54 - 0°41	Ur 06Ar04 - 0°44R
Ne 19Le18 + 0°22	Ne 23Le58 + 0°24
Pl 24Sa56 + 6°40R	Pl 23Sa43 + 6°06
No 00Ge13 - 0°00	No 21Ta39 - 0°00

Coords: 26W/20S

Nov 12, 1761 11:16 AM Total Umbral



Nov 26, 1761 2:00 PM Partial Solar



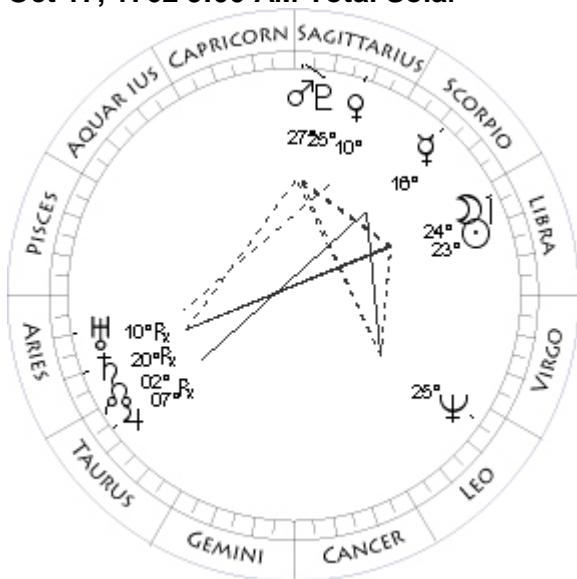
Apr 24, 1762 5:42 AM Annular Solar

Mo 20Ta22 - 0°04	Mo 04Ta02 - 0°42
Su 20Sc21 - 0°00	Su 03Ta58 - 0°00
Me 12Sa43 - 2°39	Me 07Ar31 - 2°49
Ve 17Li57 + 1°47	Ve 10Ta43 - 0°35
Ma 18Vi08 + 1°39	Ma 21Li15 + 1°35R
Ju 24Pi03 - 1°30R	Ju 21Ar09 - 1°05
Sa 05Ar15 - 2°39R	Sa 16Ar56 - 2°15
Ur 05Ar37 - 0°44R	Ur 10Ar31 - 0°40
Ne 24Le09 + 0°24	Ne 21Le25 + 0°26R
Pl 24Sa10 + 6°02	Pl 27Sa33 + 6°02R
No 20Ta49 - 0°00	No 12Ta12 - 0°00
Coords: 173E/18N	Coords: 116W/30S

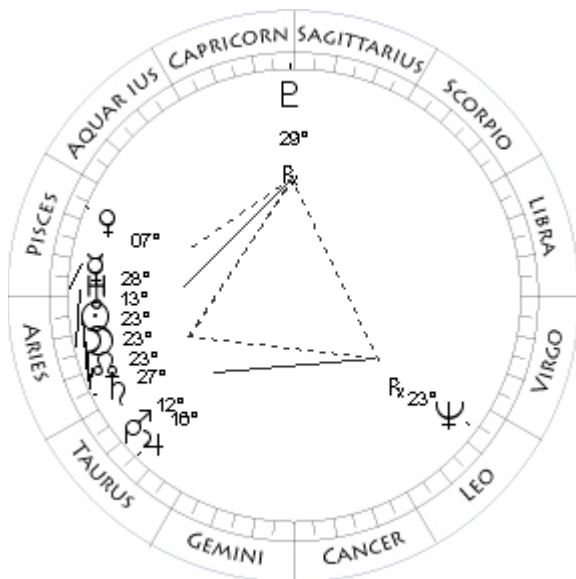
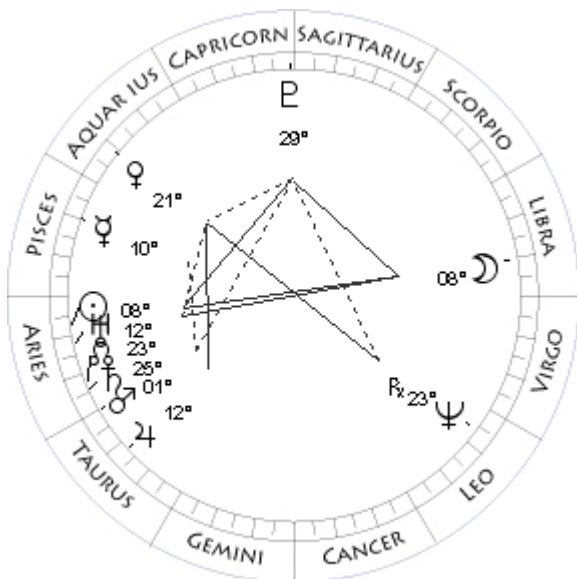
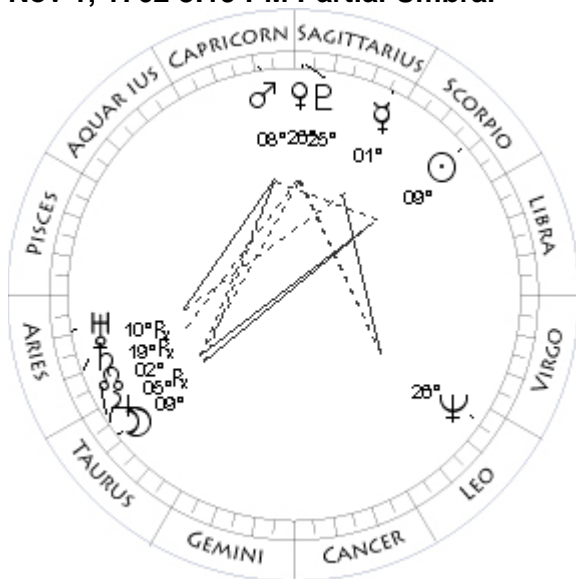
May 8, 1762 3:45 AM Partial Umbral

Mo 04Sa30 - 1°14	Mo 17Sc24 - 0°32
Su 04Sa37 - 0°00	Su 17Ta27 - 0°00
Me 17Sa37 - 0°38R	Me 28Ar11 - 2°18
Ve 05Sc23 + 1°44	Ve 27Ta51 - 0°03
Ma 26Vi01 + 1°46	Ma 17Li03 + 0°58R
Ju 24Pi05 - 1°26	Ju 24Ar25 - 1°05
Sa 04Ar49 - 2°36R	Sa 18Ar35 - 2°16
Ur 05Ar20 - 0°43R	Ur 11Ar14 - 0°40
Ne 24Le12 + 0°25R	Ne 21Le25 + 0°26
Pl 24Sa38 + 6°00	Pl 27Sa20 + 6°03R
No 20Ta04 - 0°00	No 11Ta28 - 0°00

Oct 17, 1762 9:00 AM Total Solar



Nov 1, 1762 8:19 PM Partial Umbral



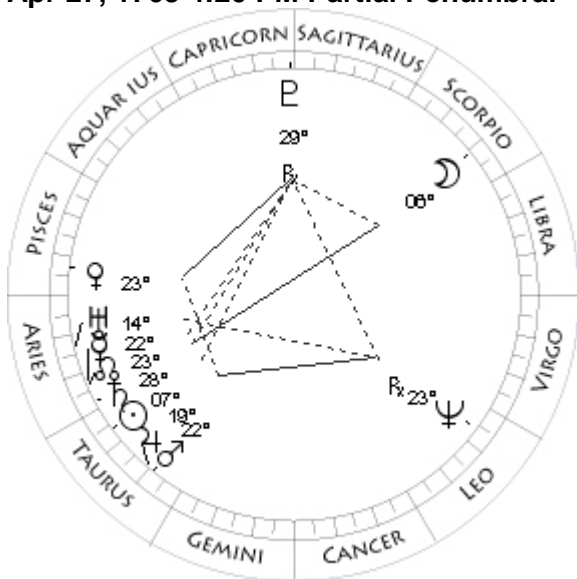
Mar 29, 1763 7:48 AM Partial Penumbral

Mo 24Li02 + 0°47	Mo 08Li29 + 1°20
Su 23Li58 - 0°00	Su 08Ar21 - 0°00
Me 16Sc09 - 2°17	Me 10Pi42 - 1°23
Ve 10Sa19 - 3°05	Ve 21Aq59 + 1°08
Ma 27Sa03 - 1°40	Ma 01Ta10 - 0°02
Ju 07Ta20 - 1°28R	Ju 12Ta55 - 0°51
Sa 20Ar56 - 2°48R	Sa 25Ar13 - 2°15
Ur 10Ar37 - 0°43R	Ur 12Ar49 - 0°38
Ne 25Le55 + 0°28	Ne 23Le57 + 0°31R
Pl 25Sa34 + 5°33	Pl 29Sa49 + 5°24
No 02Ta52 - 0°00	No 24Ar15 - 0°00
Coords: 68W/36N	

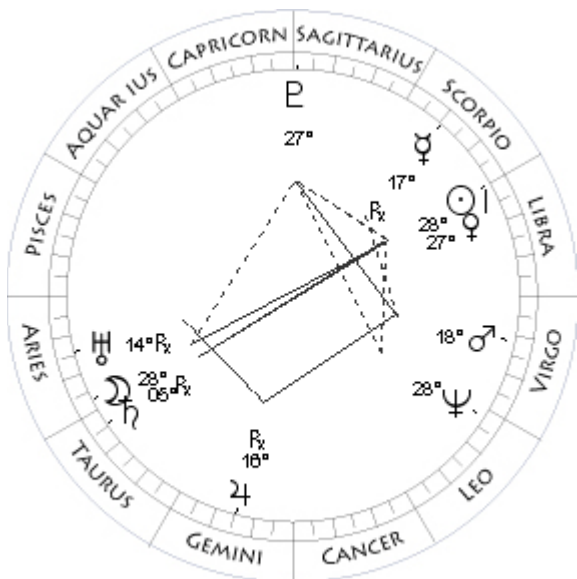
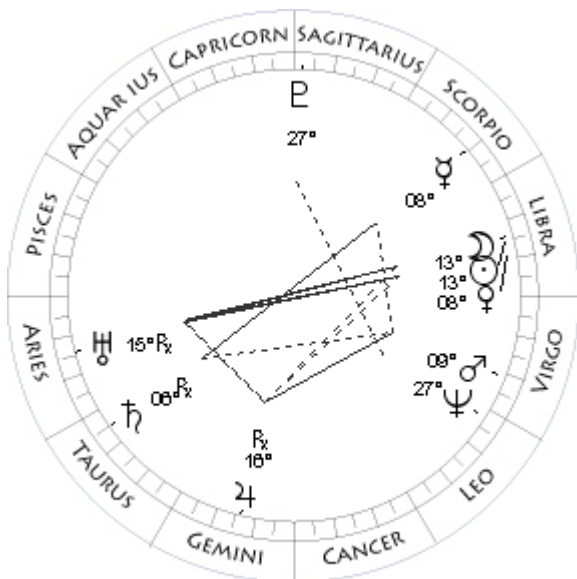
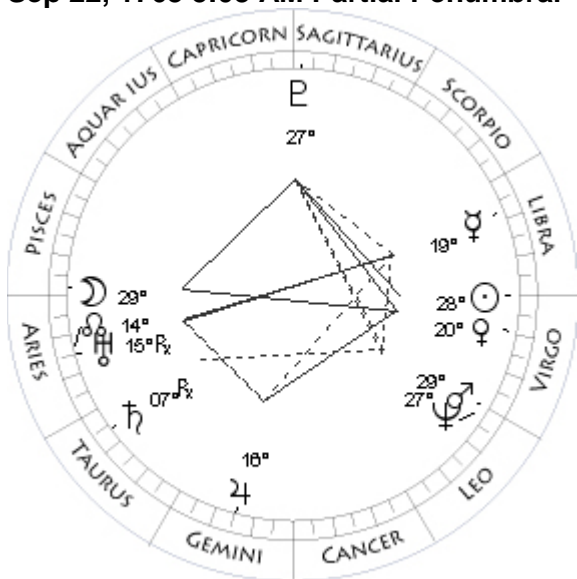
Apr 13, 1763 10:19 AM Annular Solar

Mo 09Ta22 + 0°38	Mo 23Ar12 - 0°00
Su 09Sc26 - 0°00	Su 23Ar12 - 0°00
Me 01Sa50 - 2°48	Me 28Pi48 - 2°37
Ve 26Sa27 - 3°37	Ve 07Pi56 - 0°13
Ma 08Cp30 - 1°36	Ma 12Ta07 + 0°08
Ju 05Ta15 - 1°27R	Ju 16Ta17 - 0°49
Sa 19Ar45 - 2°47R	Sa 27Ar07 - 2°15
Ur 10Ar03 - 0°42R	Ur 13Ar41 - 0°38
Ne 26Le12 + 0°28	Ne 23Le44 + 0°31R
Pl 25Sa56 + 5°30	Pl 29Sa47 + 5°25R
No 02Ta03 - 0°00	No 23Ar27 - 0°00
Coords: 51W/15N	Coords: 25W/ 9N

Apr 27, 1763 4:20 PM Partial Penumbra



Sep 22, 1763 5:03 AM Partial Penumbra



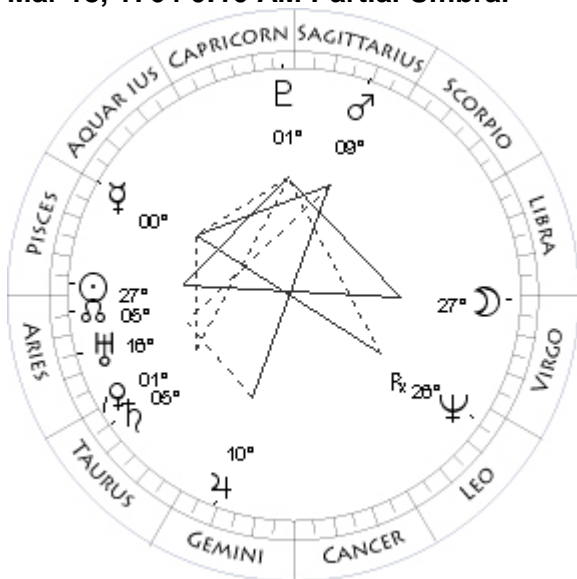
Oct 7, 1763 0:39 AM Total Solar

Mo 06Sc57 - 1°16	Mo 13Li29 + 0°04
Su 07Ta05 - 0°00	Su 13Li28 - 0°00
Me 22Ar32 - 1°55	Me 08Sc23 - 2°44
Ve 23Pi40 - 1°10	Ve 08Li39 + 1°22
Ma 22Ta17 + 0°17	Ma 09Vi05 + 1°17
Ju 19Ta34 - 0°48	Ju 16Ge40 - 0°46R
Sa 28Ar55 - 2°14	Sa 06Ta13 - 2°43R
Ur 14Ar29 - 0°38	Ur 15Ar13 - 0°41R
Ne 23Le37 + 0°30R	Ne 27Le47 + 0°31
Pl 29Sa39 + 5°25R	Pl 27Sa28 + 5°01
No 22Ar41 - 0°00	No 14Ar06 - 0°00
Coords: 114W/15S	

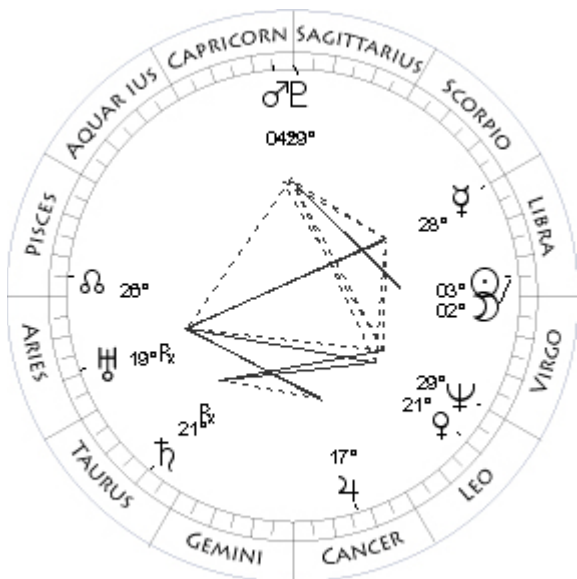
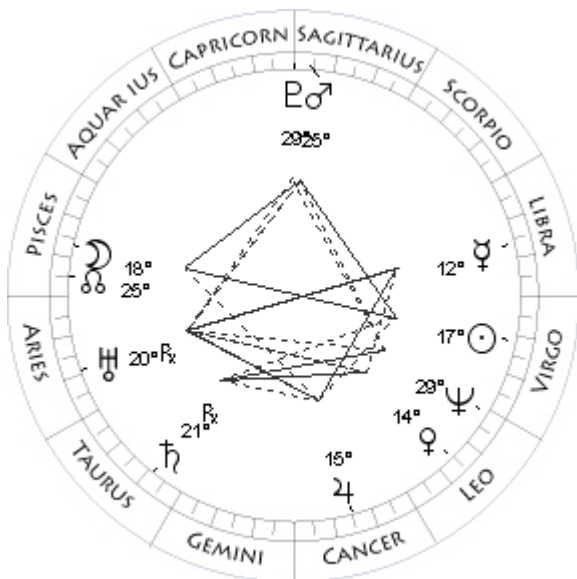
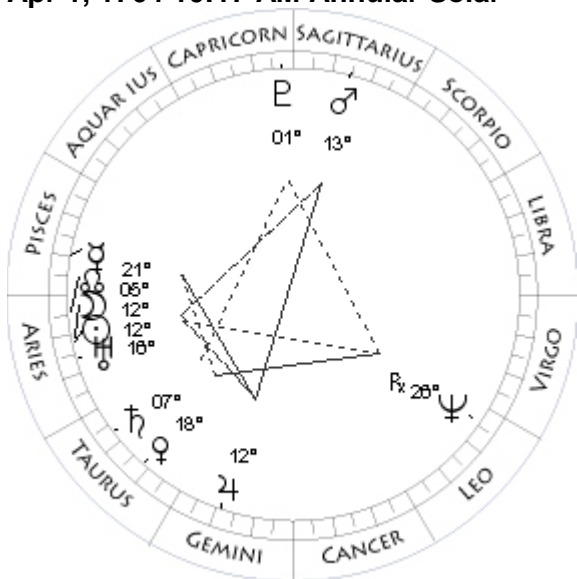
Oct 21, 1763 10:22 PM Partial Penumbra

Mo 29Pi02 - 1°23	Mo 28Ar09 + 1°16
Su 28Vi53 - 0°00	Su 28Li16 - 0°00
Me 19Li35 - 1°03	Me 17Sc11 - 2°55R
Ve 20Vi10 + 1°26	Ve 27Li19 + 1°04
Ma 29Le49 + 1°15	Ma 18Vi19 + 1°20
Ju 16Ge23 - 0°46	Ju 16Ge13 - 0°46R
Sa 07Ta09 - 2°41R	Sa 05Ta05 - 2°44R
Ur 15Ar48 - 0°41R	Ur 14Ar37 - 0°41R
Ne 27Le20 + 0°31	Ne 28Le10 + 0°32
Pl 27Sa18 + 5°05	Pl 27Sa44 + 4°57
No 14Ar53 - 0°00	No 13Ar18 - 0°00
Coords: 20W/12N	

Mar 18, 1764 0:10 AM Partial Umbral



Apr 1, 1764 10:17 AM Annular Solar



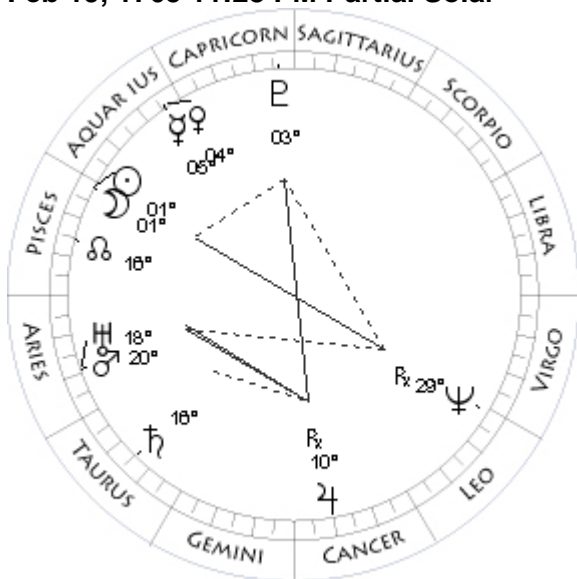
Sep 10, 1764 6:58 AM Partial Umbral

Mo 27Vi58 + 0°39	Mo 18Pi03 - 0°43
Su 27Pi55 - 0°00	Su 17Vi59 - 0°00
Me 00Pi52 - 1°35	Me 12Li19 - 1°26
Ve 01Ta38 + 0°14	Ve 14Le45 - 6°14
Ma 09Sa09 + 0°49	Ma 25Sa05 - 3°02
Ju 10Ge00 - 0°23	Ju 15Cn39 - 0°03
Sa 05Ta51 - 2°12	Sa 21Ta43 - 2°24R
Ur 16Ar01 - 0°37	Ur 20Ar22 - 0°39R
Ne 26Le25 + 0°35R	Ne 29Le05 + 0°34
Pl 01Cp51 + 4°47	Pl 29Sa21 + 4°32
No 05Ar28 - 0°00	No 26Pi08 - 0°00

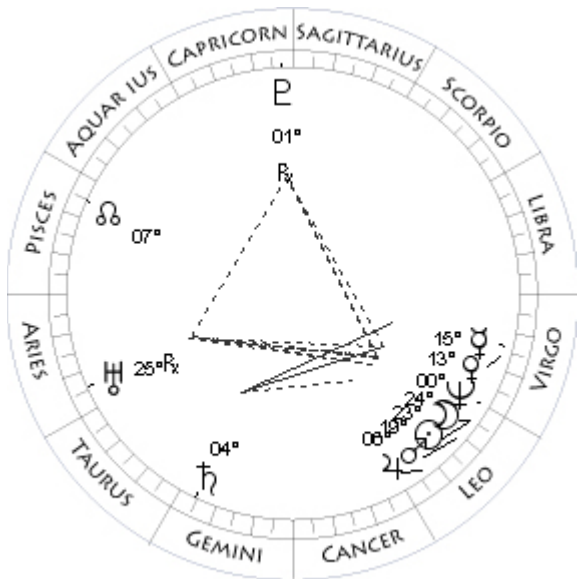
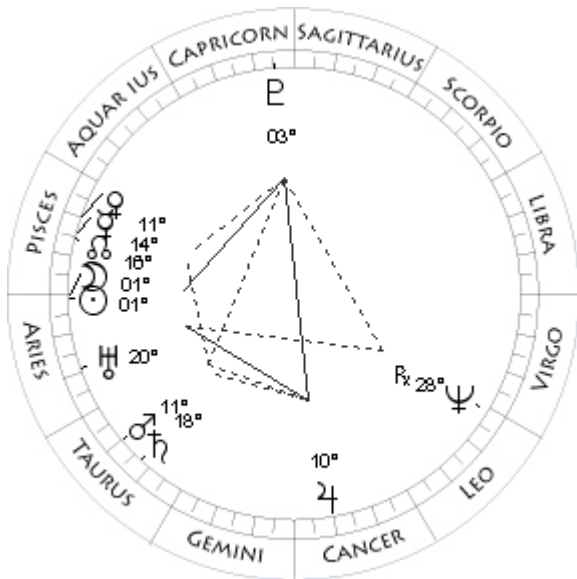
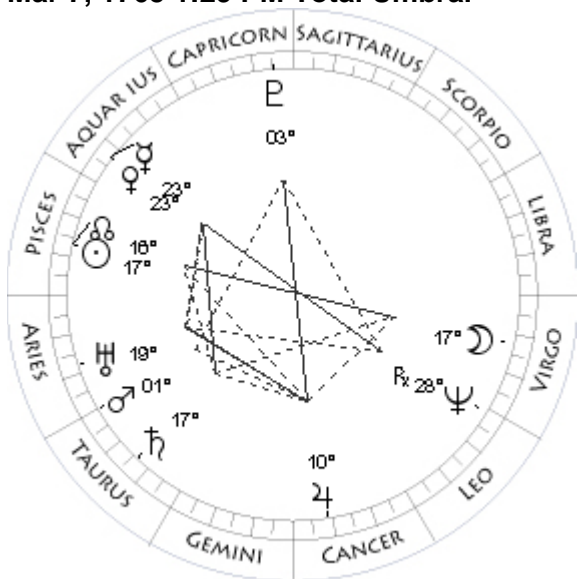
Sep 25, 1764 4:41 PM Total Solar

Mo 12Ar06 + 0°39	Mo 02Li59 - 0°39
Su 12Ar10 - 0°00	Su 03Li03 - 0°00
Me 21Pi13 - 2°26	Me 28Li24 - 3°15
Ve 18Ta51 + 1°02	Ve 21Le06 - 3°44
Ma 13Sa50 + 0°30	Ma 04Cp23 - 2°45
Ju 12Ge11 - 0°20	Ju 17Cn49 - 0°01
Sa 07Ta31 - 2°09	Sa 21Ta19 - 2°27R
Ur 16Ar50 - 0°36	Ur 19Ar49 - 0°39R
Ne 26Le08 + 0°35R	Ne 29Le37 + 0°35
Pl 01Cp55 + 4°47	Pl 29Sa25 + 4°28
No 04Ar42 - 0°00	No 25Pi19 - 0°00

Feb 19, 1765 11:28 PM Partial Solar



Mar 7, 1765 1:29 PM Total Umbral



Mar 21, 1765 1:01 PM Partial Solar

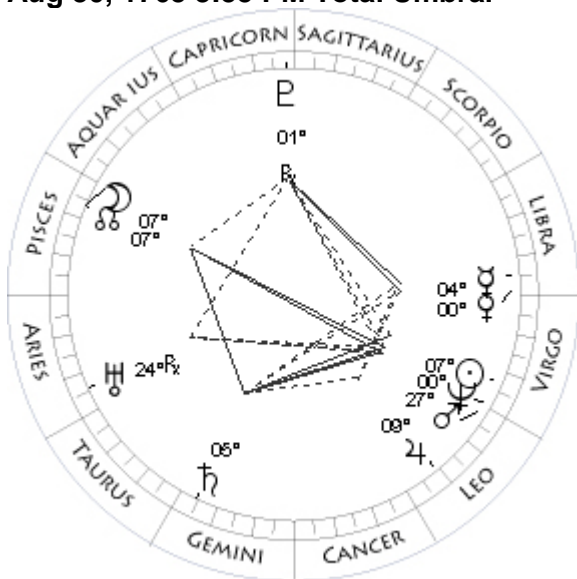
Mo 01Pi47 - 1°21	Mo 01Ar03 + 1°19
Su 01Pi39 - 0°00	Su 01Ar11 - 0°00
Me 05Aq00 + 0°28	Me 14Pi44 - 2°17
Ve 04Aq29 - 0°20	Ve 11Pi00 - 1°20
Ma 20Ar09 + 0°04	Ma 11Ta07 + 0°25
Ju 10Cn49 + 0°18R	Ju 10Cn52 + 0°20
Sa 16Ta01 - 2°06	Sa 18Ta29 - 1°59
Ur 18Ar31 - 0°35	Ur 20Ar00 - 0°35
Ne 29Le22 + 0°39R	Ne 28Le36 + 0°39R
Pl 03Cp29 + 4°10	Pl 03Cp56 + 4°11
No 17Pi31 - 0°00	No 15Pi57 - 0°00

Aug 16, 1765 3:53 PM Partial Solar

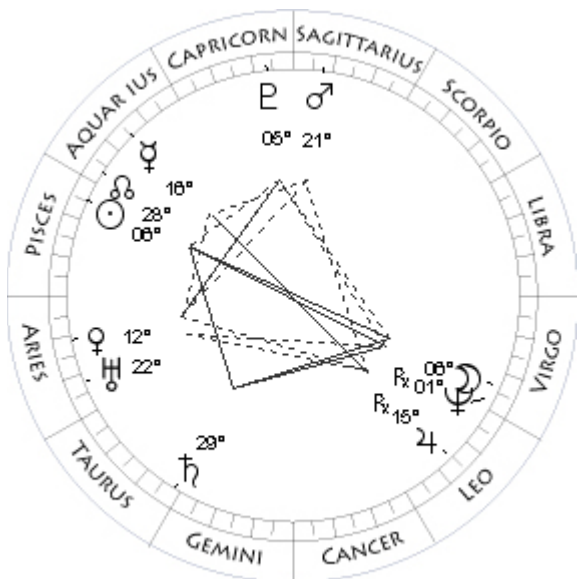
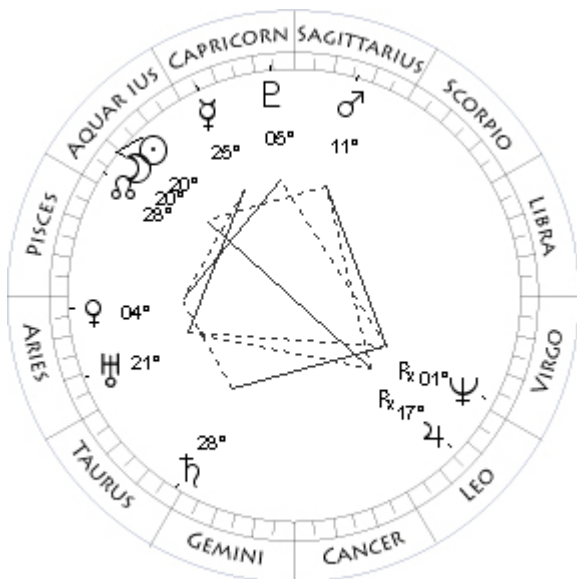
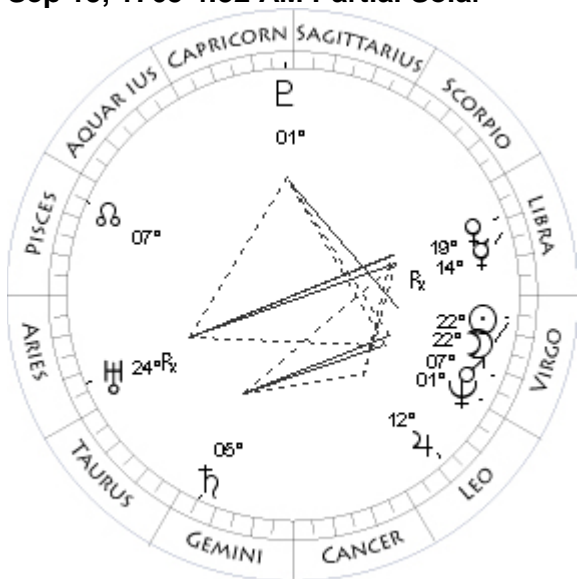
Mo 17Vi17 - 0°04	Mo 24Le01 + 1°13
Su 17Pi17 - 0°00	Su 23Le54 - 0°00
Me 23Aq03 - 1°42	Me 15Vi51 + 0°07
Ve 23Aq44 - 0°57	Ve 13Vi13 + 1°23
Ma 01Ta16 + 0°15	Ma 19Le01 + 1°09
Ju 10Cn29 + 0°19	Ju 06Le54 + 0°29
Sa 17Ta10 - 2°02	Sa 04Ge50 - 1°58
Ur 19Ar16 - 0°35	Ur 25Ar06 - 0°37R
Ne 28Le57 + 0°39R	Ne 00Vi18 + 0°38
Pl 03Cp46 + 4°10	Pl 01Cp36 + 4°01R
No 16Pi41 - 0°00	No 08Pi06 - 0°00

Coords: 161W/ 5N

Aug 30, 1765 3:55 PM Total Umbral



Sep 15, 1765 4:32 AM Partial Solar



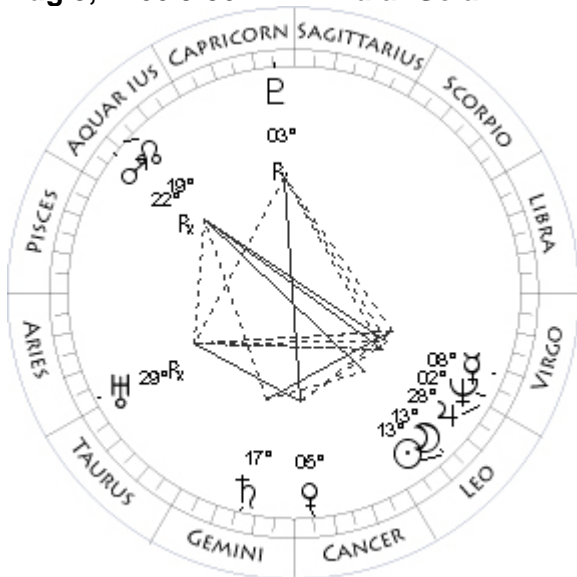
Feb 9, 1766 0:09 PM Total Solar

Mo 07Pi25 - 0°00	Mo 20Aq55 - 0°40
Su 07Vi25 - 0°00	Su 20Aq51 - 0°00
Me 04Li10 - 1°57	Me 25Cp22 - 0°00
Ve 00Li24 + 1°03	Ve 04Ar18 + 3°09
Ma 27Le56 + 1°10	Ma 11Sa37 + 0°23
Ju 09Le52 + 0°30	Ju 17Le01 + 1°02R
Sa 05Ge26 - 2°00	Sa 28Ta54 - 1°51
Ur 24Ar50 - 0°37R	Ur 21Ar59 - 0°34
Ne 00Vi49 + 0°38	Ne 01Vi56 + 0°42R
Pl 01Cp28 + 3°58R	Pl 05Cp14 + 3°34
No 07Pi22 - 0°00	No 28Aq44 - 0°00
	Coords: 27W/50S

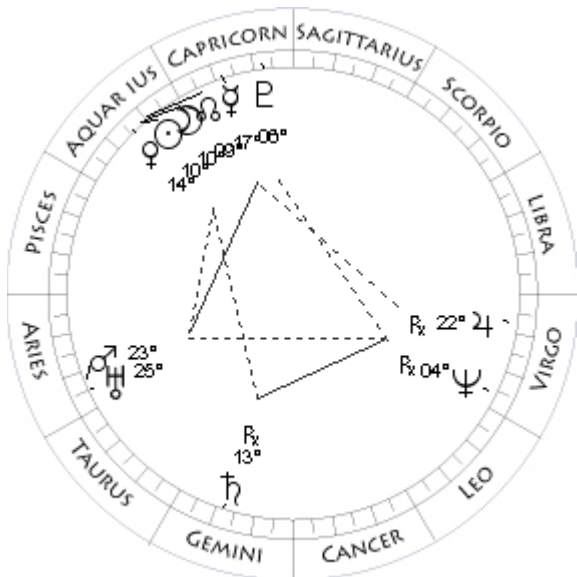
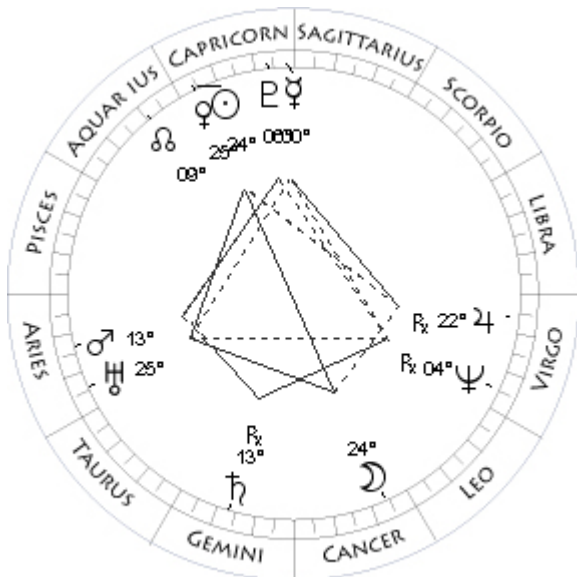
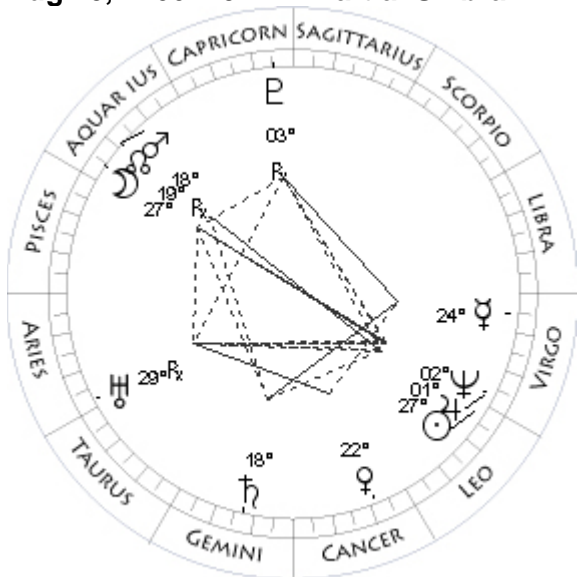
Feb 24, 1766 7:52 PM Partial Umbral

Mo 22Vi23 - 1°22	Mo 06Vi13 - 0°45
Su 22Vi31 - 0°00	Su 06Pi17 - 0°00
Me 14Li49 - 3°50R	Me 16Aq06 - 1°47
Ve 19Li26 + 0°28	Ve 12Ar08 + 5°43
Ma 07Vi48 + 1°09	Ma 21Sa15 + 0°09
Ju 12Le59 + 0°33	Ju 15Le05 + 1°03R
Sa 05Ge43 - 2°03	Sa 29Ta26 - 1°47
Ur 24Ar24 - 0°37R	Ur 22Ar35 - 0°33
Ne 01Vi23 + 0°38	Ne 01Vi30 + 0°42R
Pl 01Cp26 + 3°54	Pl 05Cp36 + 3°34
No 06Pi32 - 0°00	No 27Aq56 - 0°00
	Coords: 65W/ 9N

Aug 5, 1766 5:56 PM Annular Solar



Aug 20, 1766 7:01 AM Partial Umbral



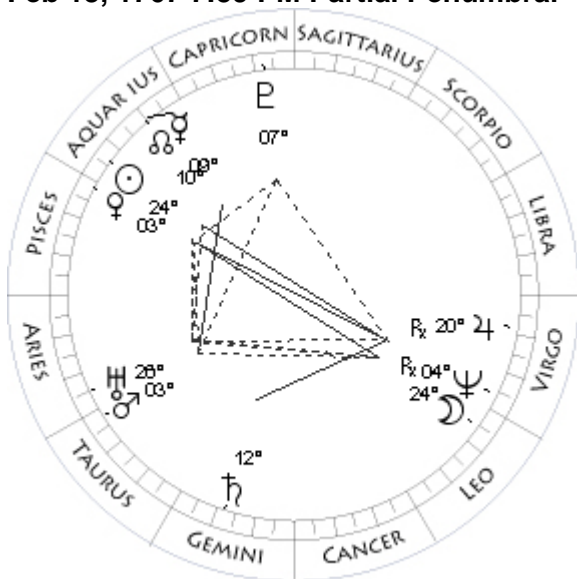
Jan 15, 1767 1:08 AM Partial Penumbral

Mo 13Le14 + 0°32	Mo 24Cn54 + 1°22
Su 13Le11 - 0°00	Su 24Cp46 - 0°00
Me 08Vi22 - 0°12	Me 00Cp53 + 1°56
Ve 05Cn35 - 1°17	Ve 25Cp59 - 0°59
Ma 22Aq42 - 6°48R	Ma 13Ar43 + 0°14
Ju 28Le39 + 0°54	Ju 22Vi50 + 1°21R
Sa 17Ge02 - 1°31	Sa 13Ge39 - 1°31R
Ur 29Ar16 - 0°34R	Ur 25Ar22 - 0°33
Ne 02Vi01 + 0°41	Ne 04Vi49 + 0°46R
Pl 03Cp51 + 3°26R	Pl 06Cp25 + 3°00
No 19Aq21 - 0°00	No 10Aq46 - 0°00

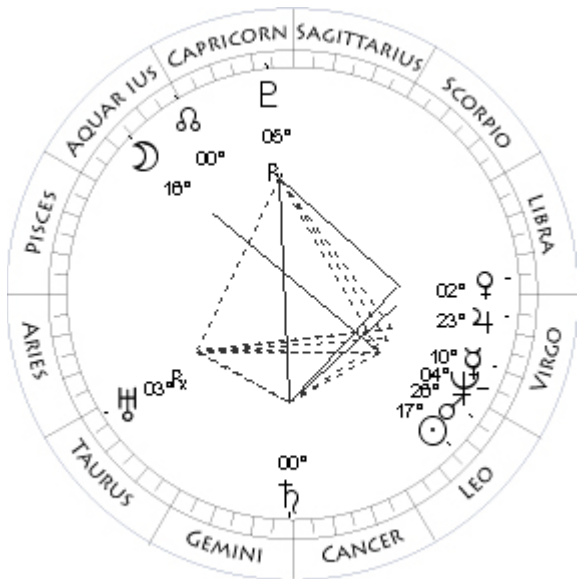
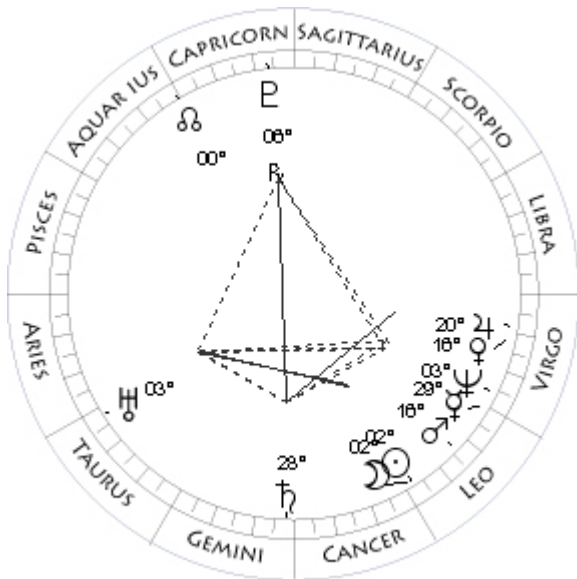
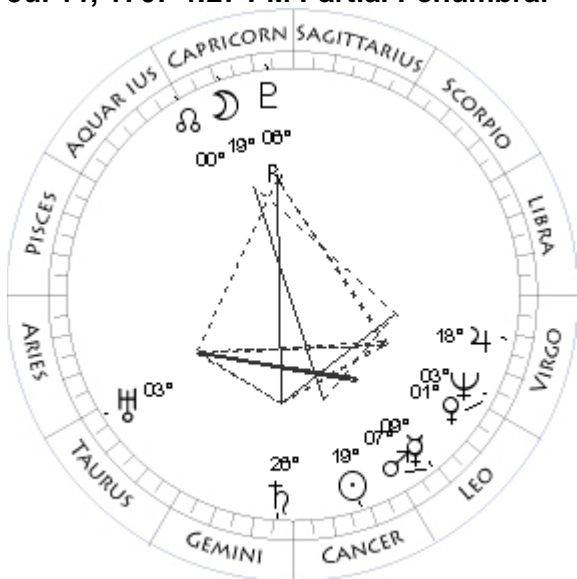
Jan 30, 1767 3:56 AM Total Solar

Mo 27Aq05 + 0°44	Mo 10Aq07 + 0°01
Su 27Le10 - 0°00	Su 10Aq08 - 0°00
Me 24Vi06 - 2°38	Me 17Cp54 - 0°23
Ve 22Cn39 - 0°29	Ve 14Aq58 - 1°20
Ma 18Aq58 - 6°46R	Ma 23Ar30 + 0°29
Ju 01Vi47 + 0°54	Ju 22Vi07 + 1°25R
Sa 18Ge14 - 1°32	Sa 13Ge04 - 1°28R
Ur 29Ar09 - 0°34R	Ur 25Ar37 - 0°32
Ne 02Vi33 + 0°42	Ne 04Vi28 + 0°46R
Pl 03Cp38 + 3°24R	Pl 06Cp54 + 2°59
No 18Aq35 - 0°00	No 09Aq57 - 0°00
Coords: 105E/12S	Coords: 124W/17S

Feb 13, 1767 7:59 PM Partial Penumbral



Jul 11, 1767 4:27 PM Partial Penumbral



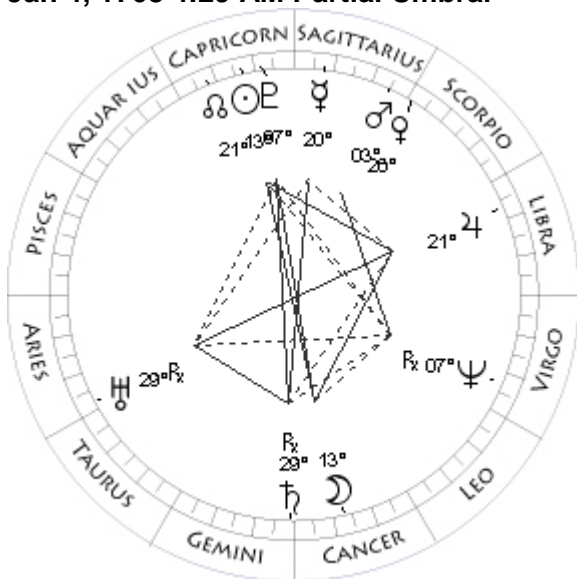
Jul 25, 1767 6:55 PM Annular Solar

Mo 24Le51 - 1°22	Mo 02Le27 - 0°09
Su 24Aq59 - 0°00	Su 02Le27 - 0°00
Me 09Aq31 - 1°49	Me 29Le22 - 0°36
Ve 03Pi21 - 1°28	Ve 16Vi55 + 0°27
Ma 03Ta03 + 0°40	Ma 16Le43 + 1°10
Ju 20Vi48 + 1°28R	Ju 20Vi34 + 1°10
Sa 12Ge53 - 1°24	Sa 28Ge32 - 1°02
Ur 26Ar02 - 0°32	Ur 03Ta15 - 0°31
Ne 04Vi05 + 0°46R	Ne 03Vi46 + 0°45
Pl 07Cp19 + 2°59	Pl 06Cp09 + 2°51R
No 09Aq11 - 0°00	No 00Aq36 - 0°00
Coords: 63W/12N	Coords: 105E/11N

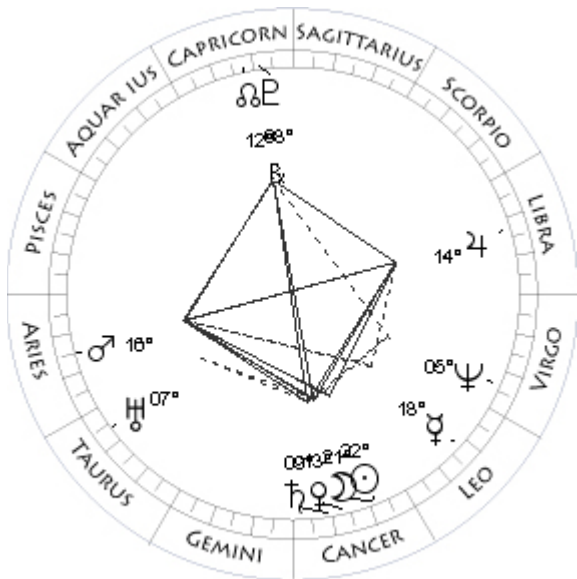
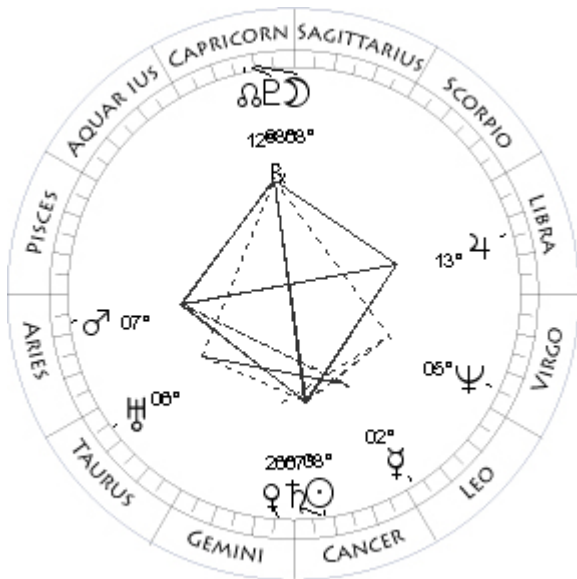
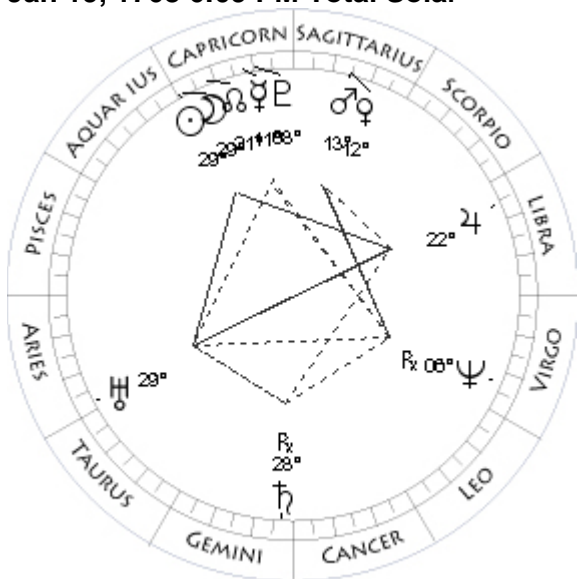
Aug 10, 1767 0:02 AM Partial Penumbral

Mo 19Cp06 - 1°04	Mo 16Aq53 + 1°27
Su 19Cn00 - 0°00	Su 17Le02 - 0°00
Me 09Le48 + 1°24	Me 10Vi30 - 3°30
Ve 01Vi27 + 1°19	Ve 02Li48 - 0°51
Ma 07Le48 + 1°11	Ma 26Le21 + 1°08
Ju 18Vi15 + 1°12	Ju 23Vi22 + 1°08
Sa 26Ge50 - 1°02	Sa 00Cn12 - 1°02
Ur 03Ta01 - 0°31	Ur 03Ta20 - 0°32R
Ne 03Vi20 + 0°45	Ne 04Vi17 + 0°45
Pl 06Cp28 + 2°53R	Pl 05Cp51 + 2°49R
No 01Aq21 - 0°00	No 29Cp48 - 0°00
Coords: 115W/23S	

Jan 4, 1768 4:29 AM Partial Umbral



Jan 19, 1768 6:09 PM Total Solar



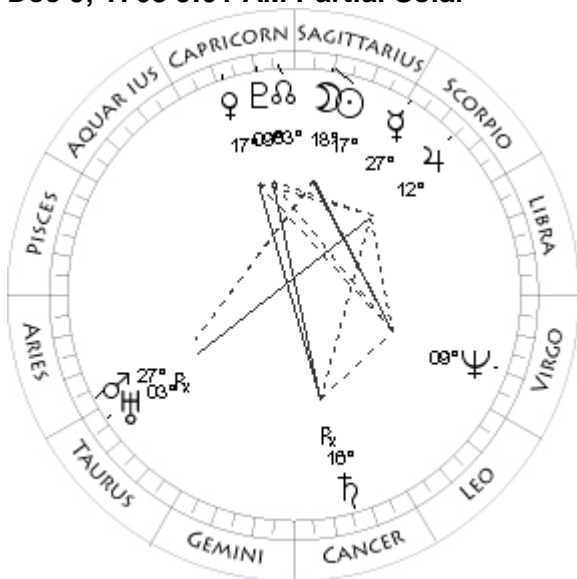
Jun 30, 1768 3:56 AM Total Umbral

Mo 13Cn32 + 0°44	Mo 08Cp46 - 0°20
Su 13Cp27 - 0°00	Su 08Cn44 - 0°00
Me 20Sa46 + 1°26	Me 02Le42 + 1°14
Ve 26Sc37 + 3°31	Ve 26Ge37 - 0°08
Ma 03Sa03 + 0°12	Ma 07Ar46 - 2°47
Ju 21Li06 + 1°18	Ju 13Li33 + 1°18
Sa 29Ge31 - 0°59R	Sa 07Cn47 - 0°33
Ur 29Ar22 - 0°31R	Ur 06Ta40 - 0°28
Ne 07Vi14 + 0°49R	Ne 05Vi11 + 0°49
Pl 07Cp59 + 2°26	Pl 08Cp47 + 2°17R
No 22Cp00 - 0°00	No 12Cp35 - 0°00

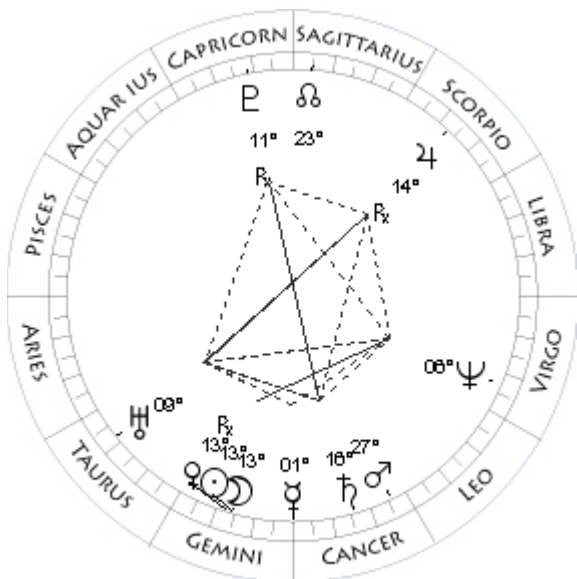
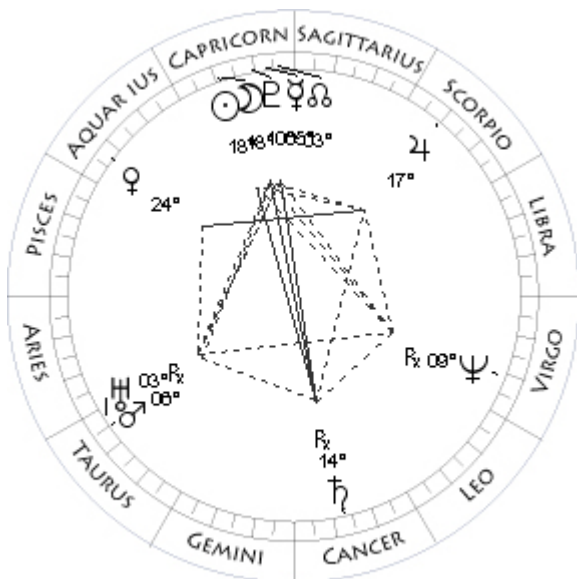
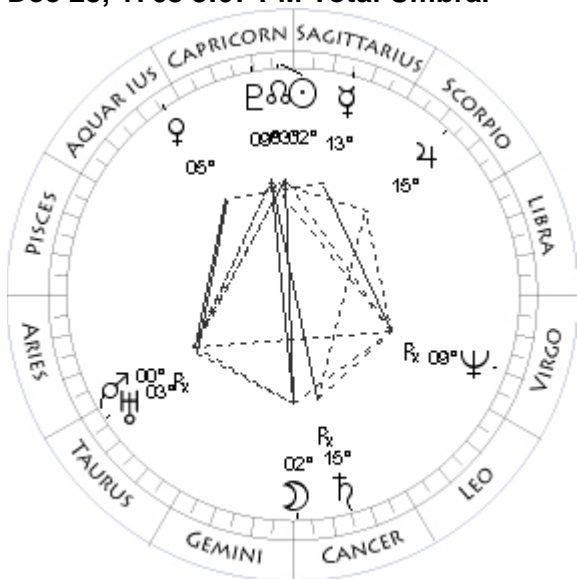
Jul 14, 1768 1:40 AM Total Solar

Mo 29Cp15 + 0°42	Mo 21Cn54 - 0°53
Su 29Cp19 - 0°00	Su 22Cn00 - 0°00
Me 11Cp33 - 0°41	Me 18Le18 - 1°10
Ve 12Sa57 + 3°08	Ve 13Cn40 + 0°25
Ma 13Sa48 + 0°02	Ma 16Ar21 - 2°59
Ju 22Li18 + 1°22	Ju 14Li39 + 1°15
Sa 28Ge23 - 0°57R	Sa 09Cn35 - 0°31
Ur 29Ar25 - 0°30	Ur 07Ta04 - 0°29
Ne 06Vi58 + 0°49R	Ne 05Vi33 + 0°49
Pl 08Cp30 + 2°25	Pl 08Cp27 + 2°16R
No 21Cp11 - 0°00	No 11Cp51 - 0°00
Coords: 103E/24N	Coords: 137W/43S

Dec 9, 1768 9:01 AM Partial Solar



Dec 23, 1768 3:07 PM Total Umbra



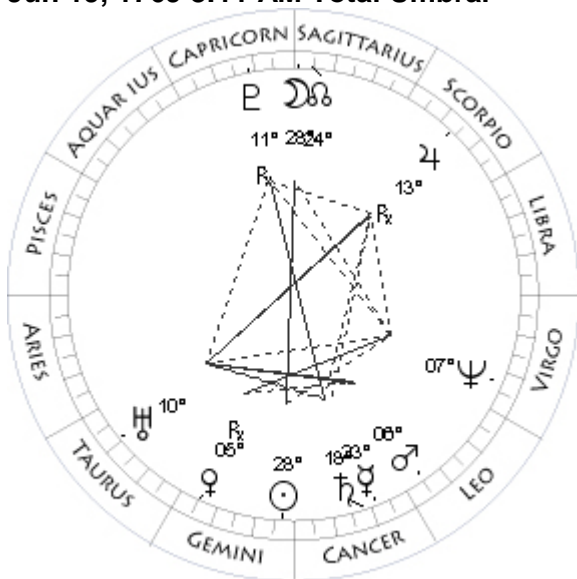
Jan 8, 1769 2:26 AM Partial Solar

Mo 18Sa04 - 1°22	Mo 18Cp05 + 1°22
Su 17Sa56 - 0°00	Su 18Cp13 - 0°00
Me 27Sc26 + 2°38	Me 05Cp34 - 0°55
Ve 17Cp35 - 1°43	Ve 24Aq07 - 1°41
Ma 27Ar50 + 0°45	Ma 06Ta11 + 1°21
Ju 12Sc37 + 1°01	Ju 17Sc56 + 1°03
Sa 16Cn45 - 0°23R	Sa 14Cn26 - 0°20R
Ur 03Ta53 - 0°29R	Ur 03Ta26 - 0°28R
Ne 09Vi37 + 0°52	Ne 09Vi24 + 0°53R
Pl 09Cp03 + 1°54	Pl 10Cp04 + 1°51
No 03Cp59 - 0°00	No 02Cp25 - 0°00

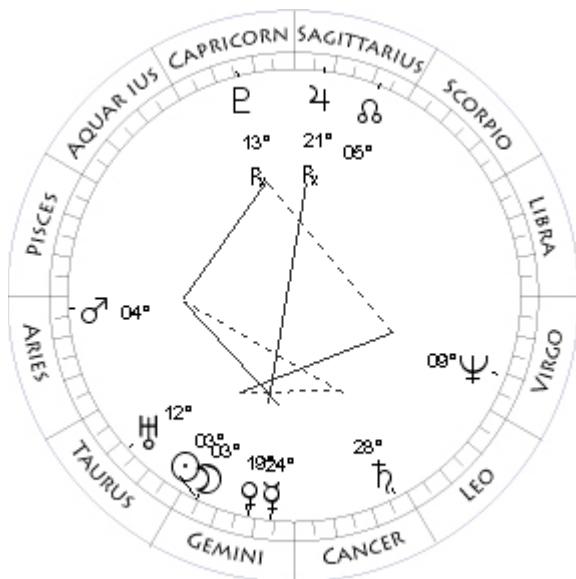
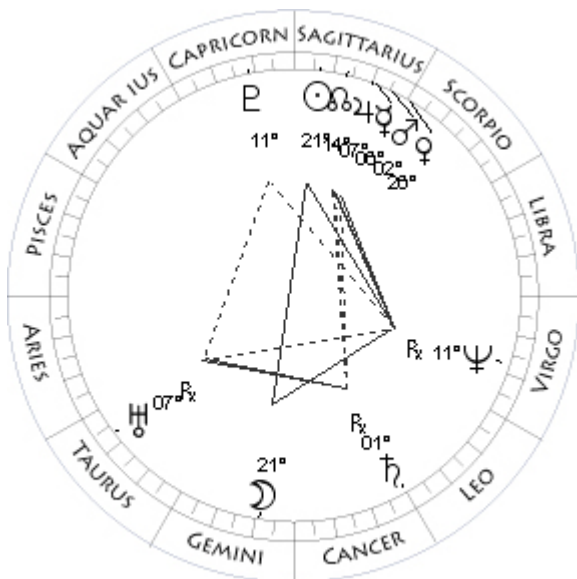
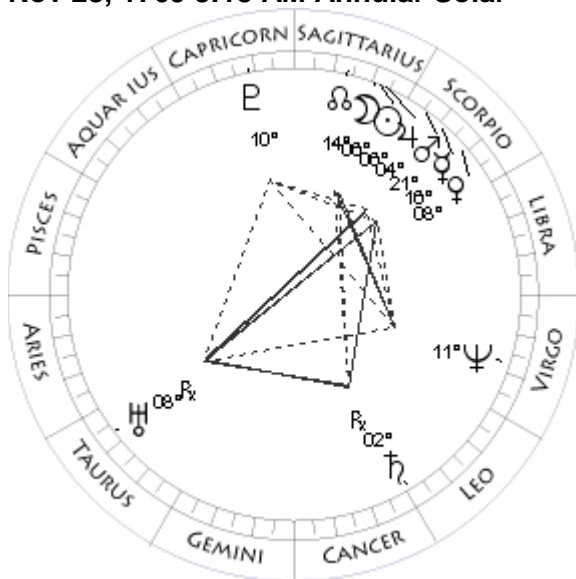
Jun 4, 1769 8:28 AM Total Solar

Mo 02Cn27 + 0°03	Mo 13Ge57 + 0°55
Su 02Cp27 - 0°00	Su 13Ge52 - 0°00
Me 13Sa00 + 0°59	Me 01Cn05 + 2°05
Ve 05Aq10 - 1°51	Ve 13Ge11 + 0°04R
Ma 00Ta56 + 1°06	Ma 27Cn19 + 1°22
Ju 15Sc19 + 1°02	Ju 14Sc57 + 1°10R
Sa 15Cn42 - 0°22R	Sa 16Cn50 - 0°03
Ur 03Ta35 - 0°29R	Ur 09Ta29 - 0°26
Ne 09Vi35 + 0°52R	Ne 06Vi55 + 0°53
Pl 09Cp32 + 1°53	Pl 11Cp25 + 1°43R
No 03Cp14 - 0°00	No 24Sa37 - 0°00
Coords: 133W/24N	Coords: 30W/87N

Jun 19, 1769 8:11 AM Total Umbral



Nov 28, 1769 8:18 AM Annular Solar



Dec 13, 1769 6:16 AM Partial Umbral

Mo 28Sa09 + 0°23	Mo 21Ge34 - 0°37
Su 28Ge11 - 0°00	Su 21Sa38 - 0°00
Me 23Cn16 + 1°02	Me 06Sa45 + 0°35
Ve 05Ge56 - 3°01R	Ve 26Sc47 + 1°19
Ma 06Le28 + 1°18	Ma 02Sa22 - 0°03
Ju 13Sc45 + 1°07R	Ju 07Sa42 + 0°36
Sa 18Cn39 - 0°02	Sa 01Le26 + 0°16R
Ur 10Ta11 - 0°26	Ur 07Ta59 - 0°26R
Ne 07Vi07 + 0°53	Ne 11Vi49 + 0°55R
Pl 11Cp05 + 1°42R	Pl 11Cp05 + 1°19
No 23Sa50 - 0°00	No 14Sa27 - 0°00

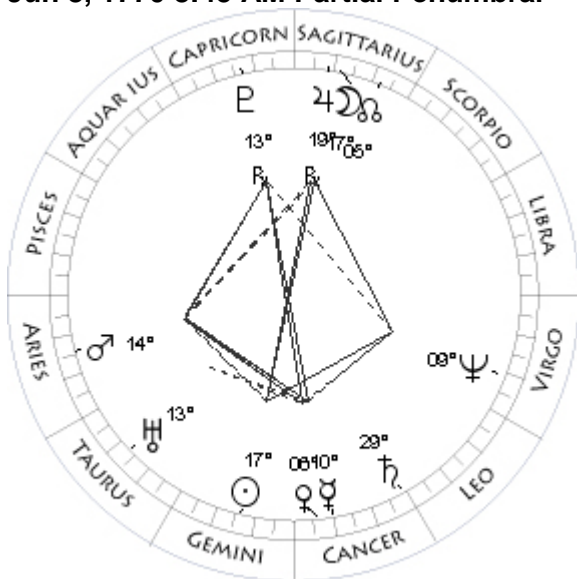
Coords: 123E/23S

May 25, 1770 1:30 AM Total Solar

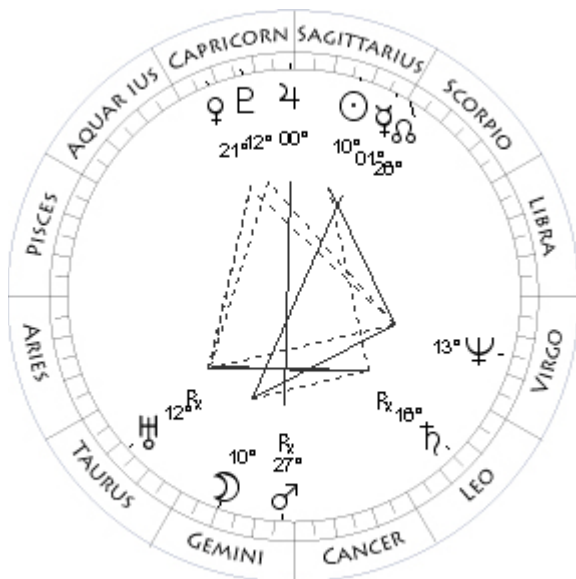
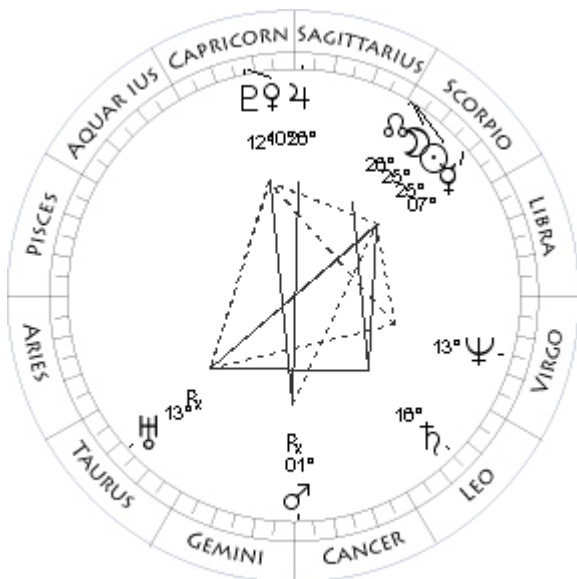
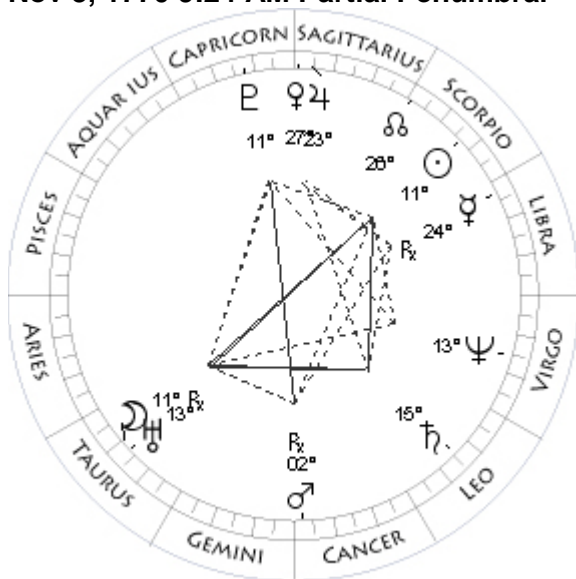
Mo 06Sa33 - 0°46	Mo 03Ge48 + 0°11
Su 06Sa29 - 0°00	Su 03Ge47 - 0°00
Me 16Sc25 + 2°17	Me 24Ge36 + 2°15
Ve 08Sc12 + 1°41	Ve 19Ge17 + 0°40
Ma 21Sc51 + 0°06	Ma 04Ar09 - 1°36
Ju 04Sa22 + 0°37	Ju 21Sa26 + 0°33R
Sa 02Le03 + 0°15R	Sa 28Cn15 + 0°29
Ur 08Ta27 - 0°27R	Ur 12Ta50 - 0°23
Ne 11Vi45 + 0°55	Ne 09Vi02 + 0°57
Pl 10Cp37 + 1°21	Pl 13Cp37 + 1°07R
No 15Sa15 - 0°00	No 05Sa50 - 0°00

Coords: 33W/80S

Jun 8, 1770 8:45 AM Partial Penumbral



Nov 3, 1770 9:24 AM Partial Penumbral



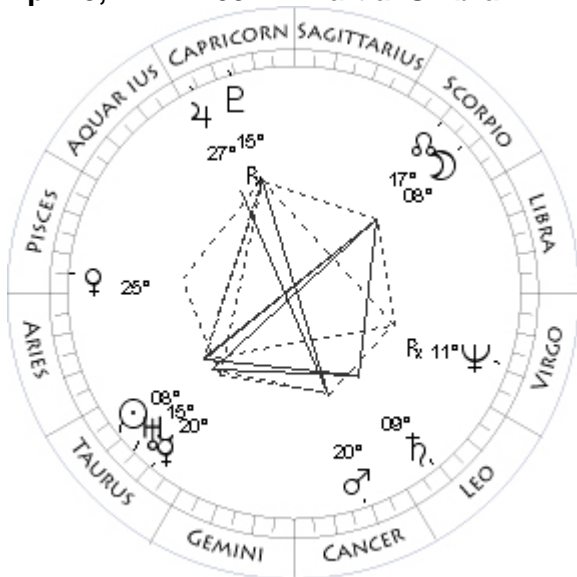
Nov 17, 1770 9:51 AM Annular Solar

Mo 17Sa23 + 1°04	Mo 25Sc10 - 0°08
Su 17Ge29 - 0°00	Su 25Sc10 - 0°00
Me 10Cn49 + 0°46	Me 07Sc48 + 1°57
Ve 06Cn46 + 1°10	Ve 10Cp45 - 3°36
Ma 14Ar46 - 1°37	Ma 01Cn53 + 1°40R
Ju 19Sa41 + 0°31R	Ju 26Sa46 + 0°07
Sa 29Cn41 + 0°30	Sa 16Le04 + 0°48
Ur 13Ta35 - 0°23	Ur 13Ta09 - 0°24R
Ne 09Vi08 + 0°56	Ne 13Vi47 + 0°58
Pl 13Cp20 + 1°06R	Pl 12Cp12 + 0°48
No 05Sa05 - 0°00	No 26Sc30 - 0°00
Coords: 132E/22S	Coords: 27W/27S

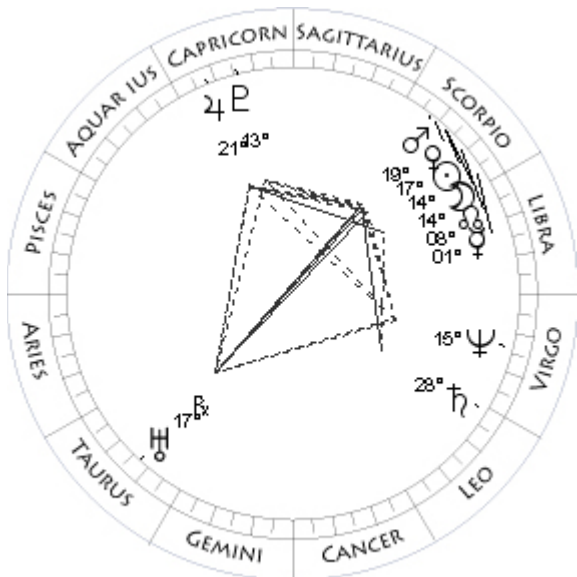
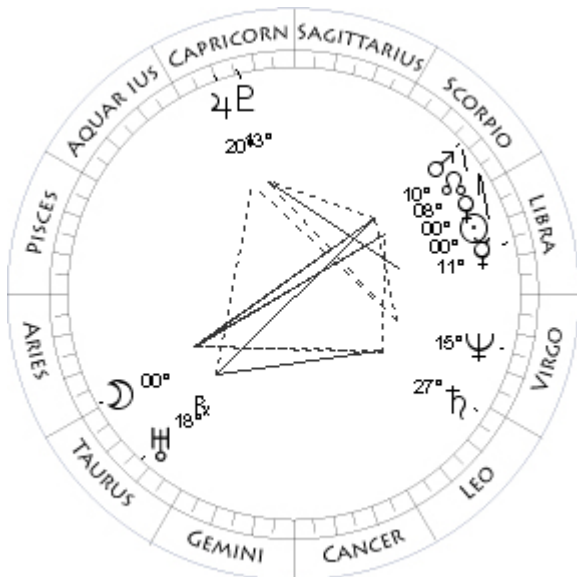
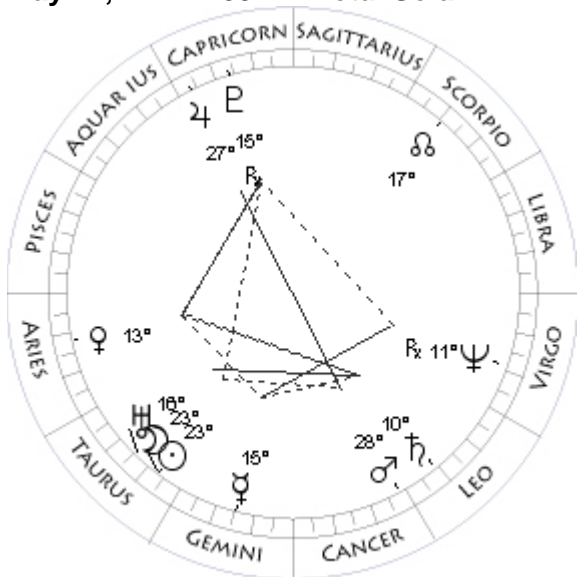
Dec 2, 1770 9:22 PM Partial Penumbral

Mo 11Ta10 + 1°24	Mo 10Ge43 - 1°17
Su 11Sc03 - 0°00	Su 10Sa50 - 0°00
Me 24Li44 + 1°50R	Me 01Sa17 + 0°14
Ve 27Sa58 - 3°43	Ve 21Cp47 - 2°35
Ma 02Cn50 + 1°00R	Ma 27Ge43 + 2°26R
Ju 23Sa53 + 0°08	Ju 00Cp09 + 0°05
Sa 15Le38 + 0°45	Sa 16Le07 + 0°51R
Ur 13Ta44 - 0°24R	Ur 12Ta34 - 0°24R
Ne 13Vi30 + 0°57	Ne 13Vi58 + 0°58
Pl 11Cp53 + 0°50	Pl 12Cp38 + 0°46
No 27Sc14 - 0°00	No 25Sc41 - 0°00
Coords: 145E/17N	Coords: 37W/21N

Apr 29, 1771 2:03 AM Partial Umbral



May 14, 1771 2:59 PM Total Solar



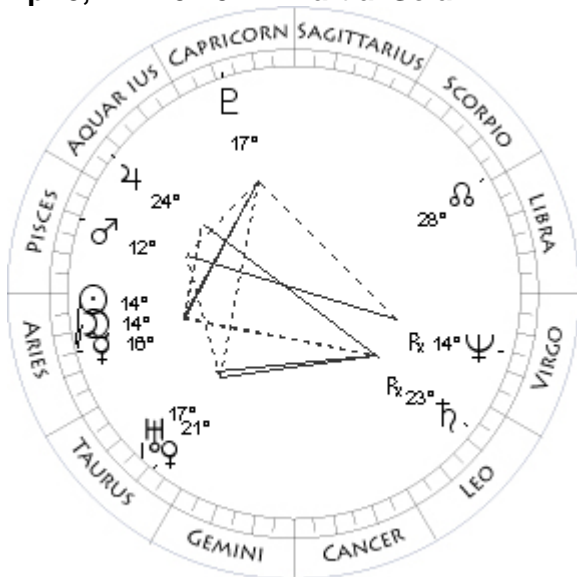
Oct 23, 1771 4:30 PM Partial Umbral

Mo 08Sc35 - 0°48	Mo 00Ta09 + 0°44
Su 08Ta31 - 0°00	Su 00Sc05 - 0°00
Me 20Ta39 + 1°21	Me 11Li44 + 1°58
Ve 25Pi40 - 1°17	Ve 00Sc12 + 1°00
Ma 20Cn02 + 1°49	Ma 10Sc01 + 0°02
Ju 27Cp01 - 0°12	Ju 20Cp04 - 0°30
Sa 09Le31 + 1°02	Sa 27Le44 + 1°13
Ur 15Ta14 - 0°20	Ur 18Ta29 - 0°21R
Ne 11Vi22 + 1°01R	Ne 15Vi21 + 1°00
Pl 15Cp53 + 0°34R	Pl 13Cp36 + 0°16
No 17Sc53 - 0°00	No 08Sc29 - 0°00
Coords: 108W/12N	

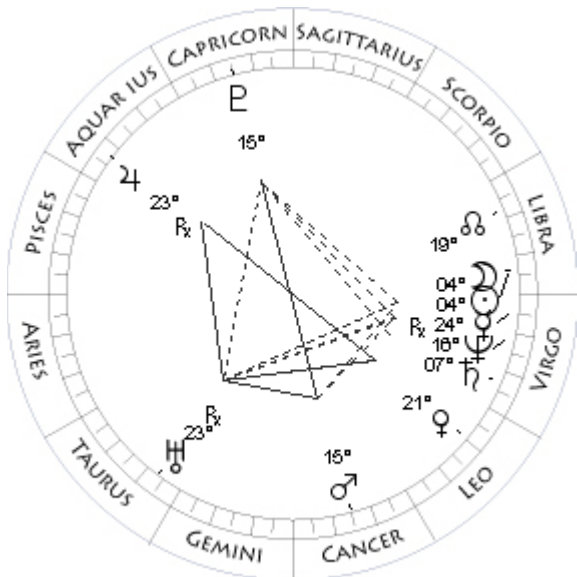
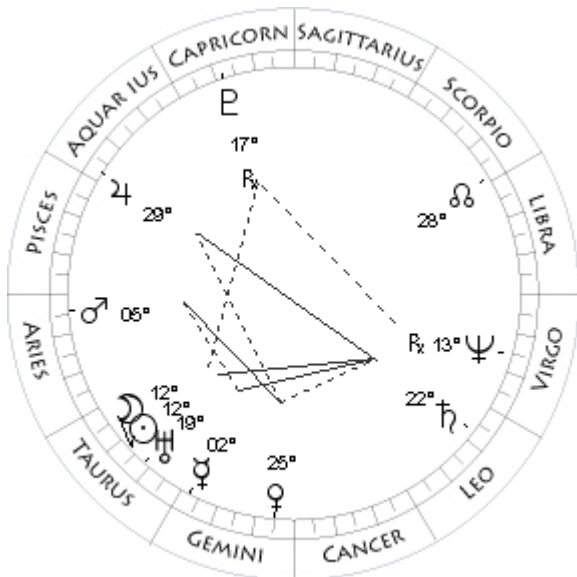
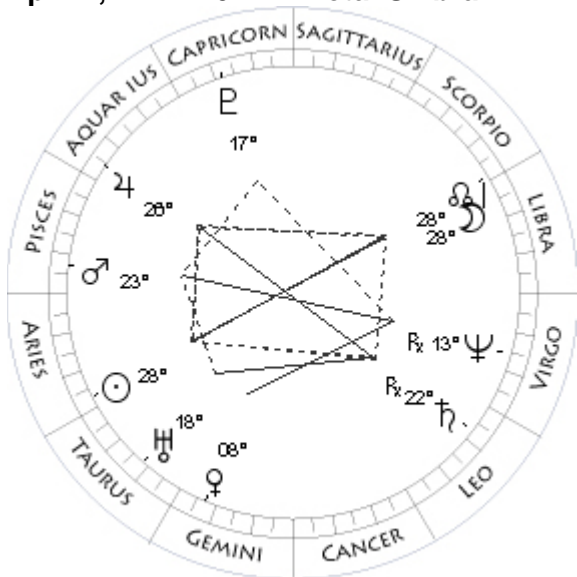
Nov 6, 1771 6:40 PM Total Solar

Mo 23Ta28 - 0°34	Mo 14Sc08 + 0°33
Su 23Ta31 - 0°00	Su 14Sc12 - 0°00
Me 15Ge30 + 2°23	Me 01Sc06 + 1°38
Ve 13Ar25 - 1°51	Ve 17Sc52 + 0°32
Ma 28Cn30 + 1°39	Ma 19Sc53 - 0°07
Ju 27Cp26 - 0°14	Ju 21Cp59 - 0°31
Sa 10Le14 + 1°01	Sa 28Le44 + 1°16
Ur 16Ta08 - 0°20	Ur 17Ta55 - 0°21R
Ne 11Vi14 + 1°00R	Ne 15Vi43 + 1°00
Pl 15Cp44 + 0°32R	Pl 13Cp51 + 0°15
No 17Sc04 - 0°00	No 07Sc44 - 0°00

Apr 3, 1772 5:43 AM Partial Solar



Apr 17, 1772 4:04 PM Total Umbral



May 2, 1772 9:26 PM Partial Solar

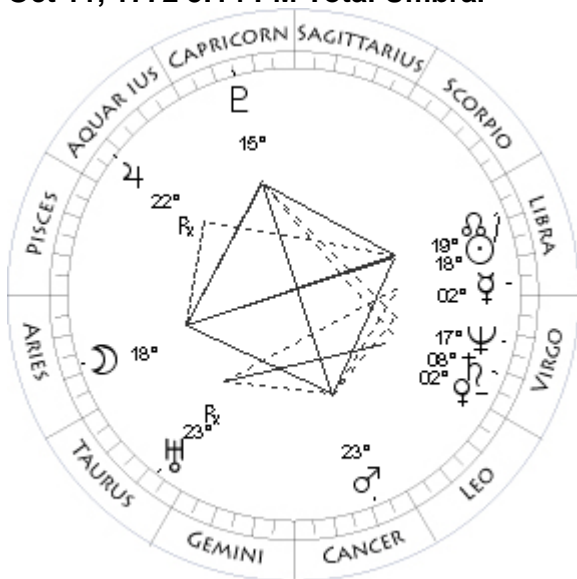
Mo 14Ar09 + 1°20	Mo 12Ta49 - 1°16
Su 14Ar01 - 0°00	Su 12Ta56 - 0°00
Me 16Ar06 - 0°41	Me 02Ge35 + 2°30
Ve 21Ta33 + 1°12	Ve 25Ge35 + 2°31
Ma 12Pi19 - 1°12	Ma 05Ar16 - 1°10
Ju 24Aq03 - 0°43	Ju 29Aq02 - 0°49
Sa 23Le15 + 1°36R	Sa 22Le57 + 1°33
Ur 17Ta47 - 0°18	Ur 19Ta24 - 0°17
Ne 14Vi03 + 1°05R	Ne 13Vi31 + 1°04R
Pl 17Cp46 + 0°01	Pl 17Cp46 - 0°02R
No 29Li52 - 0°00	No 28Li18 - 0°00

Sep 27, 1772 0:27 AM Partial Solar

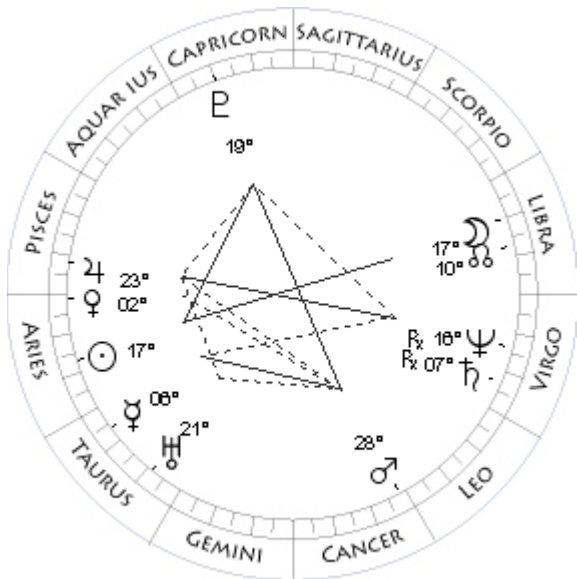
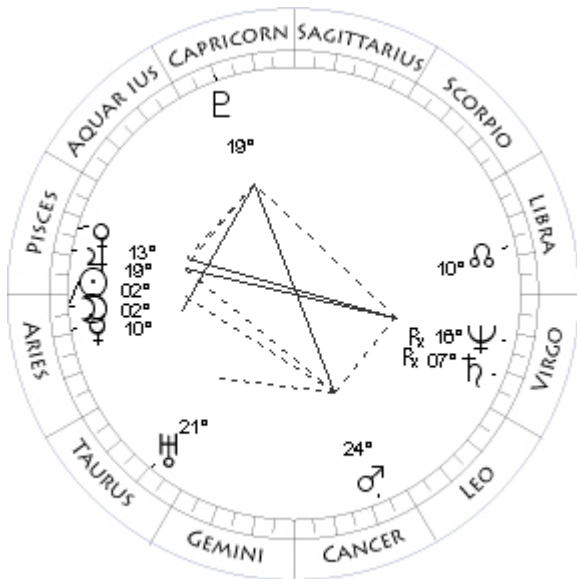
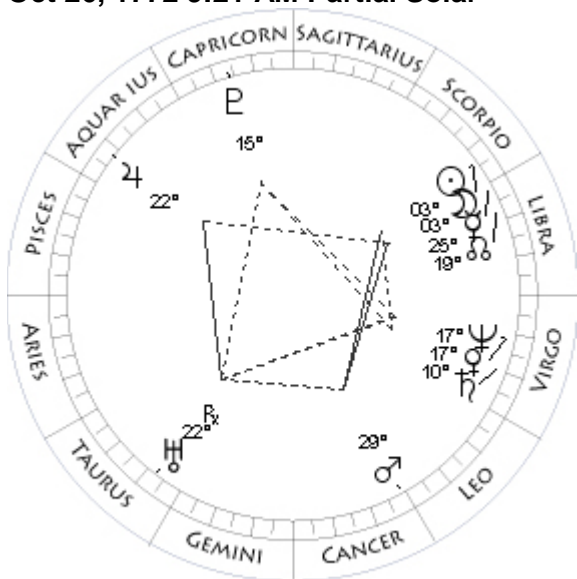
Mo 28Li09 - 0°03	Mo 04Li32 - 1°24
Su 28Ar09 - 0°00	Su 04Li25 - 0°00
Me 14Ta48 + 1°50	Me 24Vi15 - 1°01R
Ve 08Ge21 + 1°56	Ve 21Le16 - 3°19
Ma 23Pi32 - 1°12	Ma 15Cn37 + 0°38
Ju 26Aq40 - 0°46	Ju 23Aq32 - 1°15R
Sa 22Le54 + 1°35R	Sa 07Vi09 + 1°33
Ur 18Ta33 - 0°18	Ur 23Ta38 - 0°18R
Ne 13Vi45 + 1°04R	Ne 16Vi38 + 1°02
Pl 17Cp49 - 0°00	Pl 15Cp19 - 0°16
No 29Li06 - 0°00	No 20Li31 - 0°00

Coords: 119W/11S

Oct 11, 1772 5:14 PM Total Umbral



Oct 26, 1772 9:21 AM Partial Solar



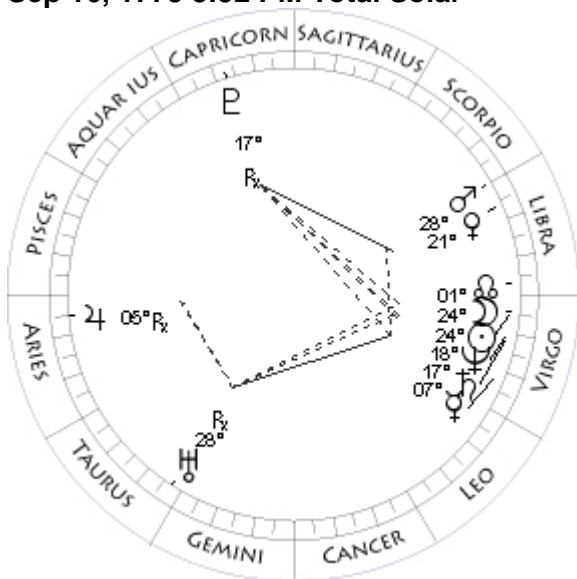
Mar 23, 1773 5:36 AM Annular Solar

Mo 18Ar56 + 0°05	Mo 02Ar59 + 0°42
Su 18Li56 - 0°00	Su 02Ar55 - 0°00
Me 02Li00 + 1°58	Me 10Ar26 - 0°20
Ve 02Vi59 - 1°17	Ve 13Pi45 - 1°22
Ma 23Cn14 + 0°58	Ma 24Cn21 + 2°59
Ju 22Aq51 - 1°13R	Ju 19Pi43 - 1°02
Sa 08Vi48 + 1°35	Sa 07Vi57 + 2°05R
Ur 23Ta13 - 0°18R	Ur 21Ta14 - 0°15
Ne 17Vi08 + 1°03	Ne 16Vi34 + 1°08R
Pl 15Cp22 - 0°17	Pl 19Cp30 - 0°32
No 19Li44 - 0°00	No 11Li08 - 0°00
Coords: 98W/ 8N	Coords: 76W/49N

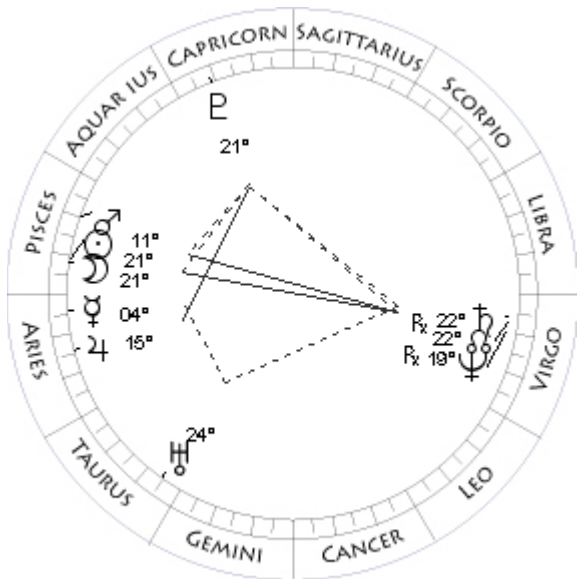
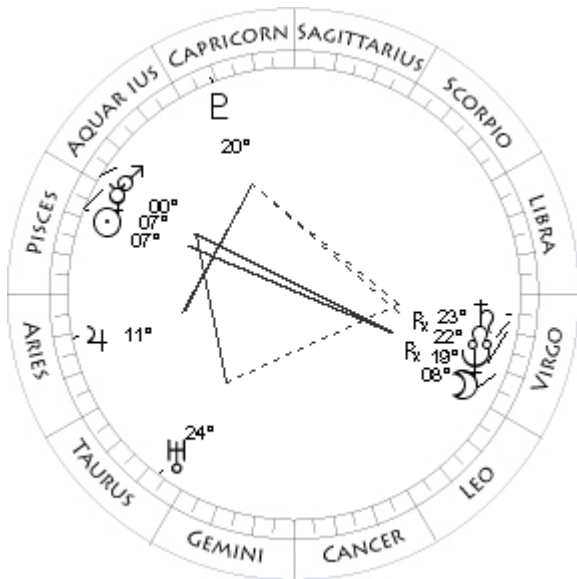
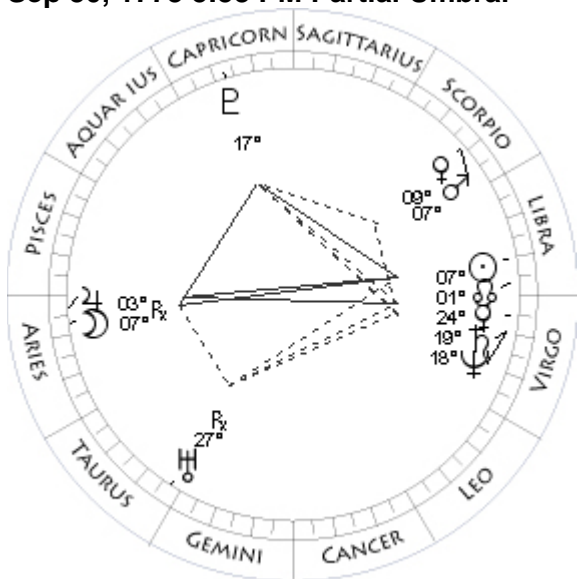
Apr 7, 1773 8:43 AM Partial Umbral

Mo 03Sc25 + 1°15	Mo 17Li46 + 0°40
Su 03Sc32 - 0°00	Su 17Ar50 - 0°00
Me 25Li43 + 1°19	Me 06Ta53 + 2°24
Ve 17Vi06 + 0°18	Ve 02Ar26 - 1°30
Ma 29Cn56 + 1°22	Ma 28Cn38 + 2°33
Ju 22Aq53 - 1°11	Ju 23Pi17 - 1°03
Sa 10Vi16 + 1°38	Sa 07Vi02 + 2°04R
Ur 22Ta42 - 0°18R	Ur 21Ta56 - 0°15
Ne 17Vi35 + 1°03	Ne 16Vi12 + 1°08R
Pl 15Cp32 - 0°18	Pl 19Cp39 - 0°34
No 18Li57 - 0°00	No 10Li19 - 0°00

Sep 16, 1773 3:52 PM Total Solar



Sep 30, 1773 5:53 PM Partial Umbral



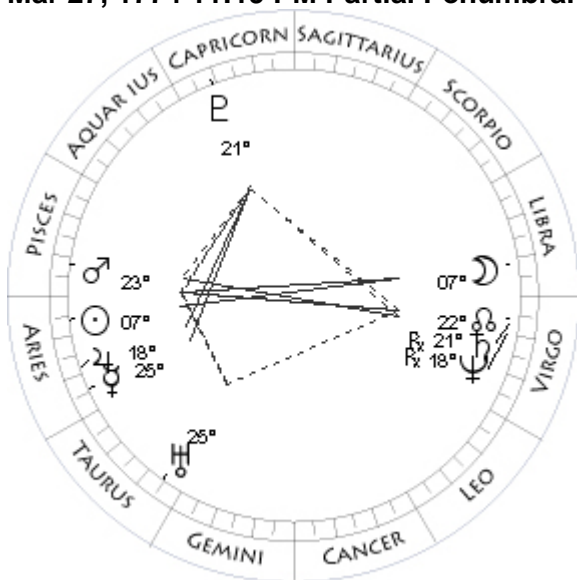
Feb 26, 1774 10:58 AM Partial Penumbral

Mo 24Vi05 - 0°41	Mo 08Vi06 - 1°17
Su 24Vi01 - 0°00	Su 07Pi59 - 0°00
Me 07Vi22 - 0°06	Me 07Pi35 - 1°49
Ve 21Li51 + 0°22	Ve 10Ar44 + 6°18
Ma 28Li22 - 0°03	Ma 00Pi10 - 1°05
Ju 05Ar40 - 1°38R	Ju 11Ar51 - 1°07
Sa 17Vi24 + 1°51	Sa 23Vi55 + 2°25R
Ur 28Ta06 - 0°14R	Ur 24Ta28 - 0°12
Ne 18Vi21 + 1°05	Ne 19Vi30 + 1°11R
Pl 17Cp14 - 0°49R	Pl 20Cp50 - 1°02
No 01Li44 - 0°00	No 23Vi07 - 0°00
	Coords: 162E/ 7N

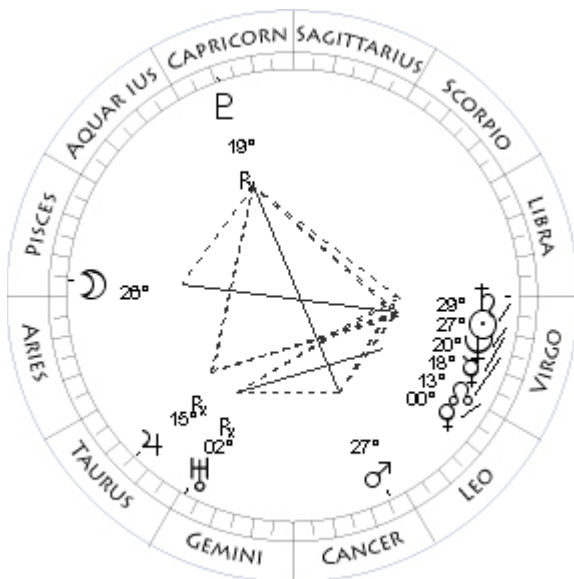
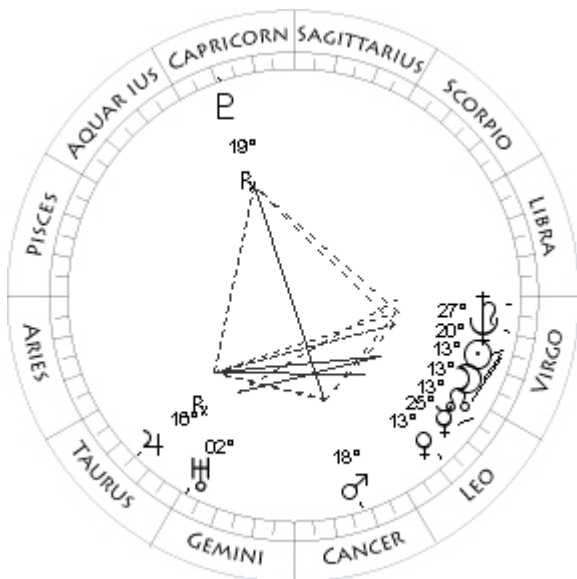
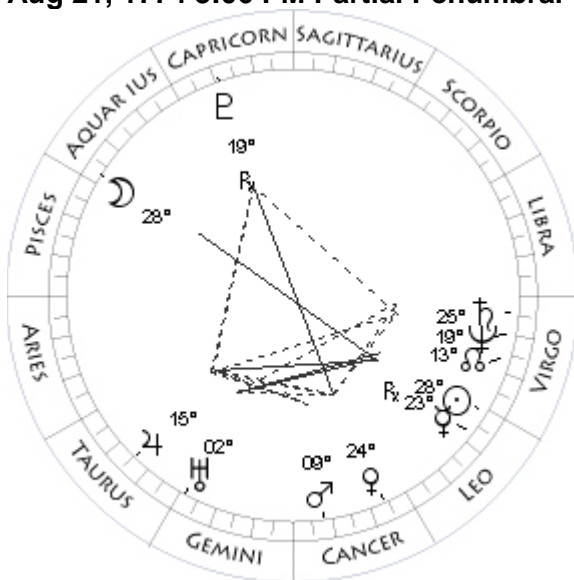
Mar 12, 1774 10:05 AM Annular Solar

Mo 07Ar47 - 0°34	Mo 21Pi56 + 0°02
Su 07Li50 - 0°00	Su 21Pi56 - 0°00
Me 24Vi20 + 1°55	Me 04Ar30 + 0°05
Ve 09Sc02 - 0°19	Ve 08Ar55 + 8°13R
Ma 07Sc58 - 0°12	Ma 11Pi10 - 1°03
Ju 03Ar48 - 1°39R	Ju 15Ar01 - 1°06
Sa 19Vi08 + 1°52	Sa 22Vi50 + 2°26R
Ur 27Ta51 - 0°14R	Ur 24Ta51 - 0°12
Ne 18Vi51 + 1°06	Ne 19Vi07 + 1°11R
Pl 17Cp12 - 0°50	Pl 21Cp09 - 1°04
No 00Li59 - 0°00	No 22Vi22 - 0°00
	Coords: 89W/ 3N

Mar 27, 1774 11:19 PM Partial Penumbral



Aug 21, 1774 3:06 PM Partial Penumbral



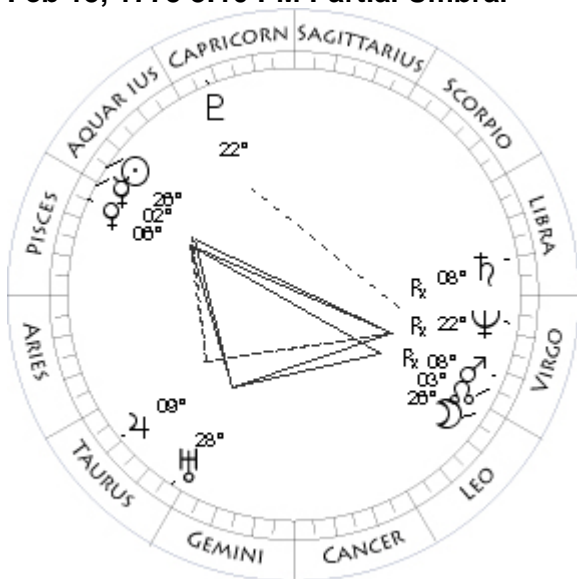
Sep 6, 1774 1:57 AM Annular Solar

Mo 07Li14 + 1°22	Mo 13Vi28 + 0°02
Su 07Ar21 - 0°00	Su 13Vi28 - 0°00
Me 25Ar12 + 2°59	Me 25Le37 + 0°31
Ve 00Ar00 + 7°46R	Ve 13Le21 + 0°26
Ma 23Pi21 - 1°00	Ma 18Cn49 + 0°44
Ju 18Ar41 - 1°04	Ju 16Ta08 - 1°19R
Sa 21Vi38 + 2°27R	Sa 27Vi19 + 2°05
Ur 25Ta27 - 0°12	Ur 02Ge25 - 0°11
Ne 18Vi42 + 1°11R	Ne 20Vi03 + 1°08
Pl 21Cp24 - 1°06	Pl 19Cp13 - 1°23R
No 21Vi33 - 0°00	No 12Vi58 - 0°00
	Coords: 151W/ 9N

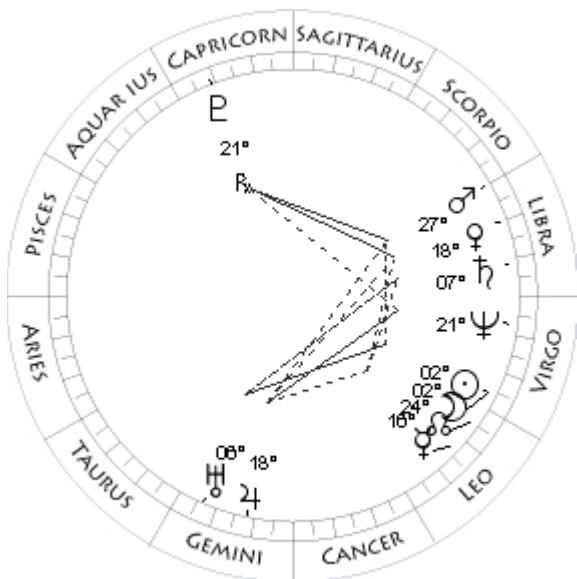
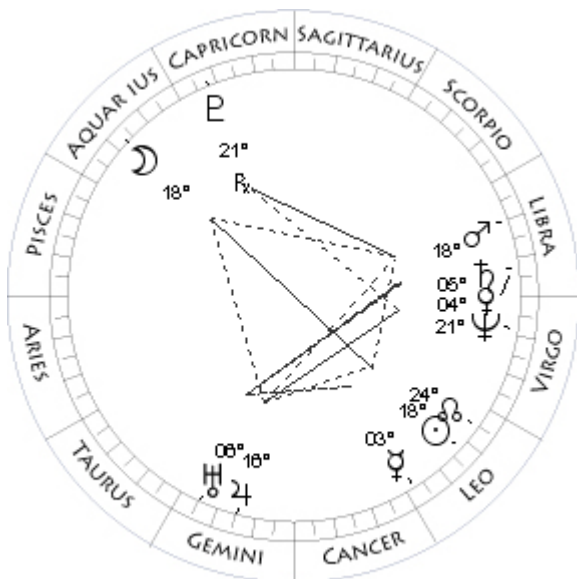
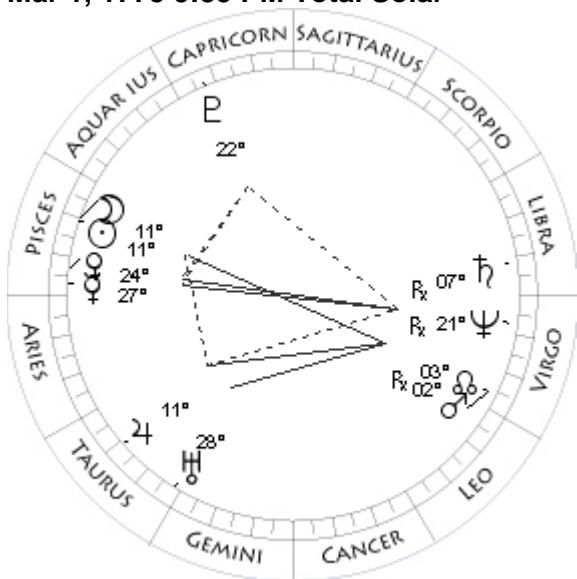
Sep 20, 1774 0:57 AM Partial Penumbral

Mo 28Aq38 + 1°19	Mo 26Pi58 - 1°16
Su 28Le31 - 0°00	Su 27Vi05 - 0°00
Me 23Le13 - 3°50R	Me 18Vi22 + 1°50
Ve 24Cn49 - 0°21	Ve 00Vi19 + 1°00
Ma 09Cn02 + 0°31	Ma 27Cn21 + 0°56
Ju 15Ta49 - 1°16	Ju 15Ta45 - 1°21R
Sa 25Vi29 + 2°06	Sa 29Vi02 + 2°05
Ur 02Ge18 - 0°11	Ur 02Ge21 - 0°11R
Ne 19Vi29 + 1°08	Ne 20Vi34 + 1°08
Pl 19Cp26 - 1°22R	Pl 19Cp06 - 1°24R
No 13Vi47 - 0°00	No 12Vi13 - 0°00
	Coords: 134W/11S

Feb 15, 1775 3:10 PM Partial Umbral



Mar 1, 1775 9:39 PM Total Solar



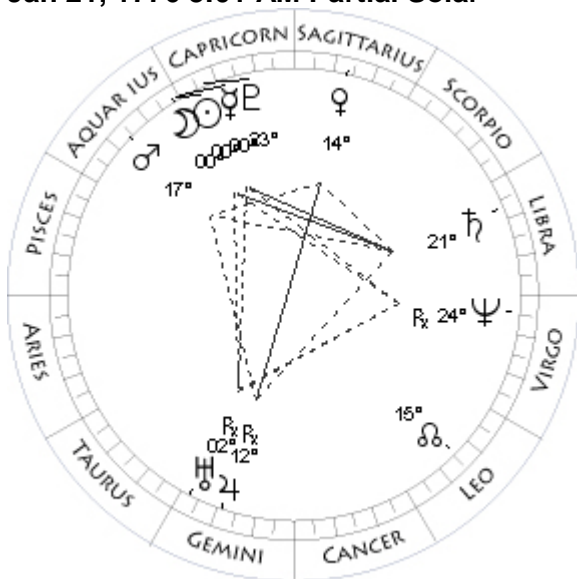
Aug 11, 1775 7:15 AM Partial Umbral

Mo 26Le54 - 0°38	Mo 18Aq23 + 0°35
Su 26Aq51 - 0°00	Su 18Le20 - 0°00
Me 02Pi06 - 1°39	Me 03Le21 - 2°53
Ve 06Pi16 - 1°28	Ve 04Li13 - 1°05
Ma 08Vi19 + 4°22R	Ma 18Li25 - 0°09
Ju 09Ta35 - 0°56	Ju 16Ge22 - 0°39
Sa 08Li09 + 2°35R	Sa 05Li38 + 2°17
Ur 28Ta27 - 0°09	Ur 06Ge16 - 0°08
Ne 22Vi02 + 1°14R	Ne 21Vi14 + 1°11
Pl 22Cp20 - 1°34	Pl 21Cp31 - 1°55R
No 04Vi21 - 0°00	No 25Le00 - 0°00
Coords: 136W/12N	Coords: 108E/15S

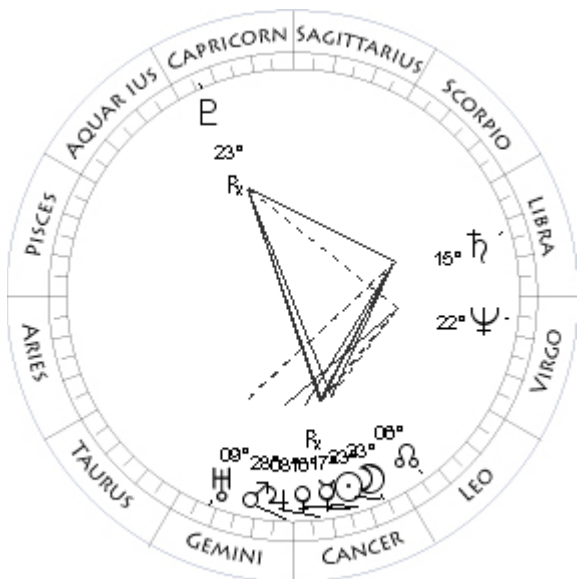
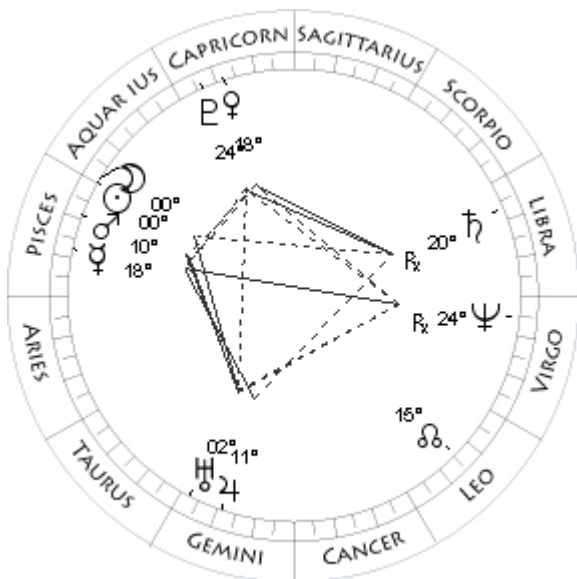
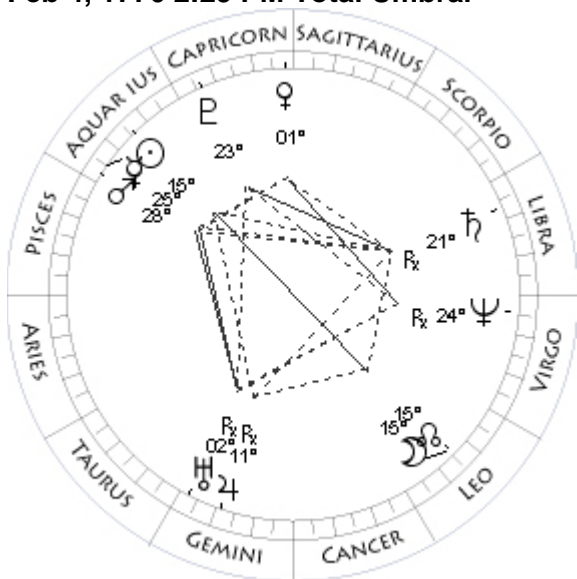
Aug 26, 1775 4:59 AM Annular Solar

Mo 11Pi07 - 0°41	Mo 02Vi38 + 0°44
Su 11Pi11 - 0°00	Su 02Vi42 - 0°00
Me 27Pi45 + 0°39	Me 16Le52 + 0°54
Ve 24Pi04 - 1°19	Ve 18Li08 - 2°45
Ma 02Vi45 + 4°17R	Ma 27Li55 - 0°21
Ju 11Ta48 - 0°53	Ju 18Ge34 - 0°39
Sa 07Li19 + 2°38R	Sa 07Li10 + 2°15
Ur 28Ta40 - 0°09	Ur 06Ge34 - 0°08
Ne 21Vi39 + 1°14R	Ne 21Vi45 + 1°11
Pl 22Cp42 - 1°36	Pl 21Cp14 - 1°56R
No 03Vi36 - 0°00	No 24Le13 - 0°00
Coords: 125E/48S	Coords: 132W/61N

Jan 21, 1776 3:01 AM Partial Solar



Feb 4, 1776 2:29 PM Total Umbral



Feb 19, 1776 1:19 PM Partial Solar

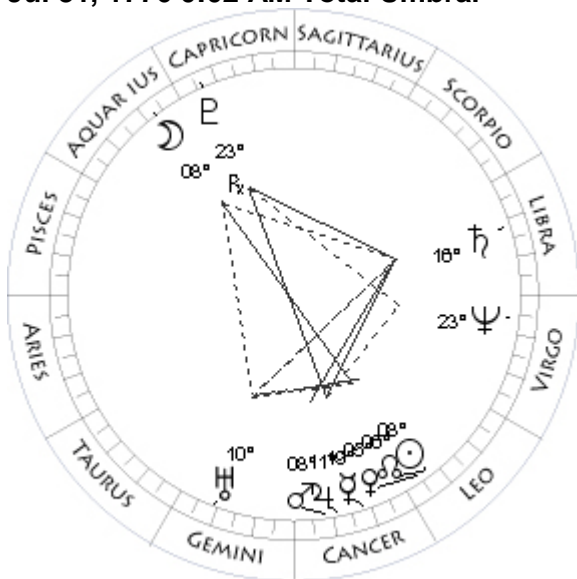
Mo 00Aq52 + 1°21	Mo 00Pi25 - 1°22
Su 00Aq45 - 0°00	Su 00Pi33 - 0°00
Me 00Aq29 - 2°03	Me 18Pi37 + 1°23
Ve 14Sa42 + 3°00	Ve 18Cp21 + 1°19
Ma 17Aq12 - 1°06	Ma 10Pi27 - 0°57
Ju 12Ge02 - 0°28R	Ju 11Ge58 - 0°22
Sa 21Li12 + 2°32	Sa 20Li55 + 2°40R
Ur 02Ge49 - 0°06R	Ur 02Ge42 - 0°06
Ne 24Vi46 + 1°16R	Ne 24Vi11 + 1°17R
Pl 23Cp18 - 2°03	Pl 24Cp12 - 2°06
No 16Le23 - 0°00	No 14Le49 - 0°00

Jul 15, 1776 3:39 PM Partial Solar

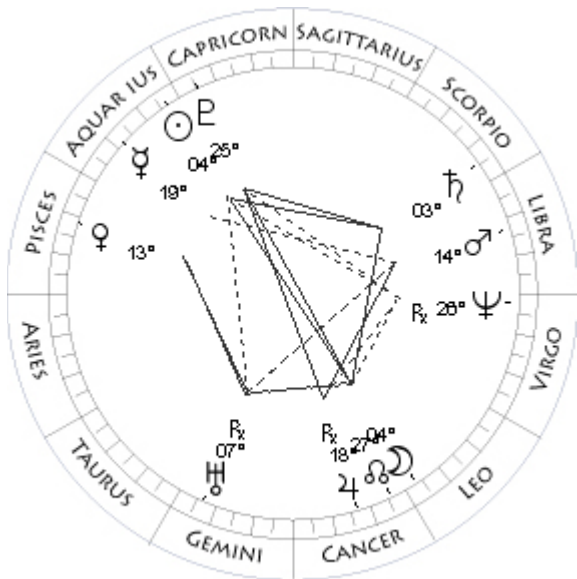
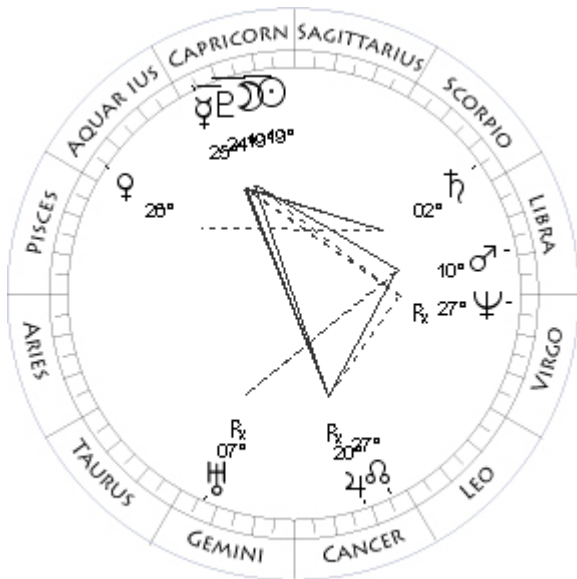
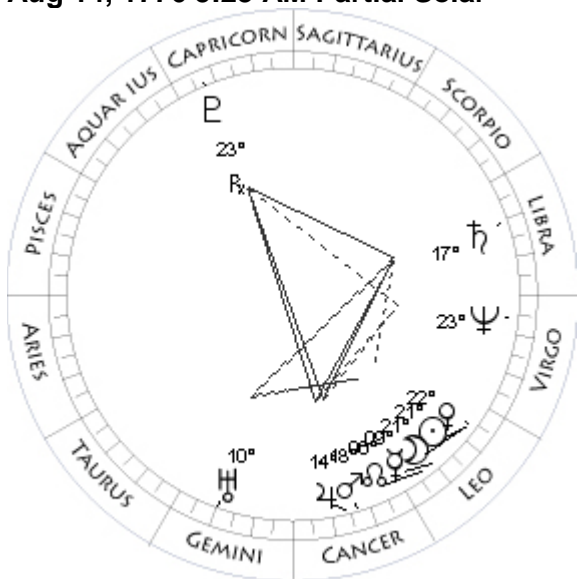
Mo 15Le27 - 0°01	Mo 23Cn40 - 1°10
Su 15Aq27 - 0°00	Su 23Cn34 - 0°00
Me 25Aq52 - 1°29	Me 17Cn43 - 4°53R
Ve 01Cp00 + 2°16	Ve 16Cn17 + 0°31
Ma 28Aq39 - 1°02	Ma 28Ge39 + 0°30
Ju 11Ge38 - 0°25R	Ju 08Cn21 - 0°03
Sa 21Li15 + 2°36R	Sa 15Li13 + 2°28
Ur 02Ge40 - 0°06R	Ur 09Ge27 - 0°04
Ne 24Vi31 + 1°17R	Ne 22Vi39 + 1°15
Pl 23Cp45 - 2°05	Pl 23Cp58 - 2°27R
No 15Le37 - 0°00	No 07Le02 - 0°00

Coords: 146W/16N

Jul 31, 1776 0:02 AM Total Umbral



Aug 14, 1776 5:23 AM Partial Solar



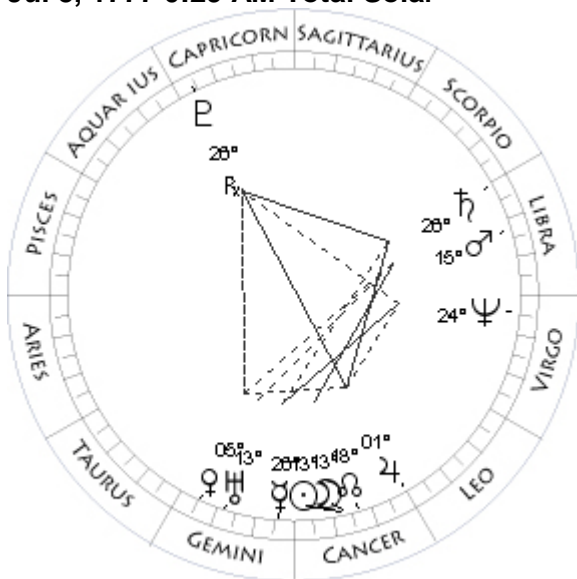
Jan 9, 1777 3:55 PM Annular Solar

Mo 08Aq13 - 0°09	Mo 19Cp55 + 0°40
Su 08Le14 - 0°00	Su 19Cp51 - 0°00
Me 19Cn04 - 1°54	Me 25Cp26 - 2°06
Ve 05Le10 + 1°01	Ve 26Aq35 - 1°38
Ma 08Cn54 + 0°39	Ma 10Li16 + 2°29
Ju 11Cn43 - 0°02	Ju 20Cn15 + 0°20R
Sa 16Li06 + 2°25	Sa 02Sc33 + 2°27
Ur 10Ge05 - 0°04	Ur 07Ge27 - 0°03R
Ne 23Vi02 + 1°14	Ne 27Vi05 + 1°18R
Pl 23Cp36 - 2°28R	Pl 24Cp41 - 2°34
No 06Le13 - 0°00	No 27Cn36 - 0°00
Coords: 1W/18S	

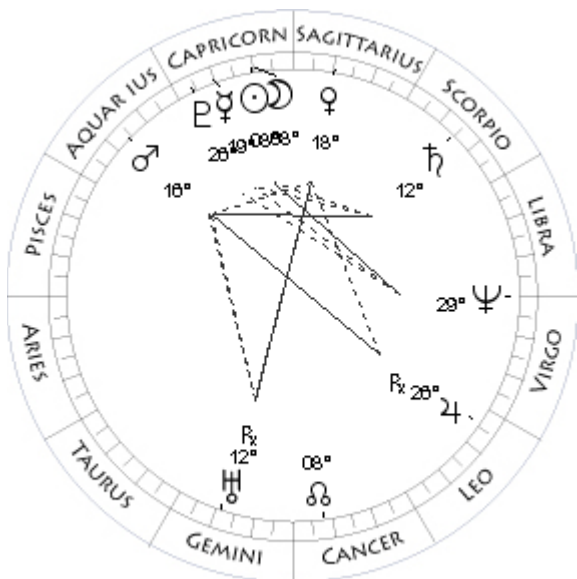
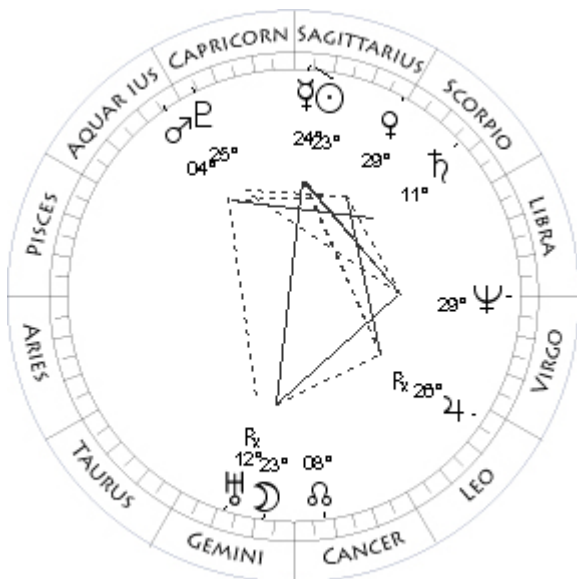
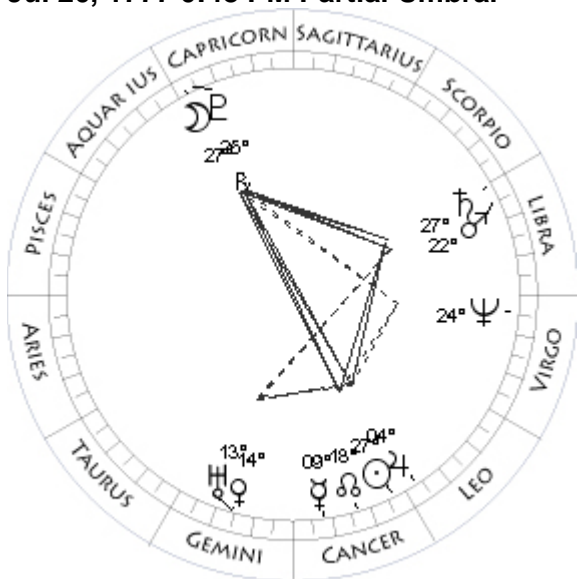
Jan 23, 1777 4:24 PM Partial Umbral

Mo 21Le45 + 1°23	Mo 04Le04 + 0°38
Su 21Le53 - 0°00	Su 04Aq07 - 0°00
Me 09Le51 + 1°10	Me 19Aq04 - 1°17
Ve 22Le45 + 1°19	Ve 13Pi30 - 1°08
Ma 18Cn12 + 0°48	Ma 14Li43 + 2°42
Ju 14Cn40 - 0°00	Ma 18Cn25 + 0°22R
Sa 17Li12 + 2°22	Sa 03Sc08 + 2°30
Ur 10Ge32 - 0°04	Ur 07Ge08 - 0°03R
Ne 23Vi28 + 1°14	Ne 26Vi56 + 1°19R
Pl 23Cp17 - 2°29R	Pl 25Cp09 - 2°35
No 05Le28 - 0°00	No 26Cn52 - 0°00
	Coords: 117W/20N

Jul 5, 1777 0:29 AM Total Solar



Jul 20, 1777 0:48 PM Partial Umbral



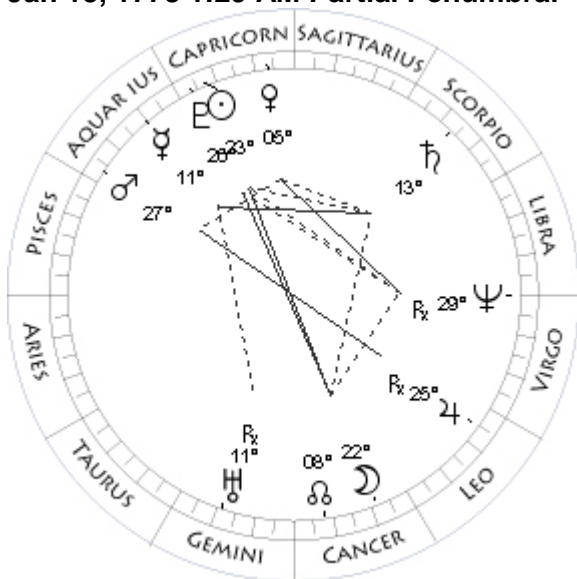
Dec 14, 1777 1:49 PM Partial Penumbral

Mo 13Cn14 - 0°26	Mo 23Ge10 - 1°25
Su 13Cn11 - 0°00	Su 23Sa01 - 0°00
Me 26Ge57 - 4°19	Me 24Sa59 - 1°33
Ve 05Ge30 - 4°24	Ve 29Sc04 + 1°14
Ma 15Li02 - 0°24	Ma 04Aq42 - 1°16
Ju 01Le05 + 0°30	Ju 26Le53 + 0°55R
Sa 26Li43 + 2°31	Sa 11Sc27 + 2°14
Ur 13Ge00 - 0°01	Ur 12Ge52 + 0°00R
Ne 24Vi35 + 1°18	Ne 29Vi14 + 1°20
Pl 26Cp03 - 2°59R	Pl 25Cp36 - 3°04
No 18Cn16 - 0°00	No 09Cn39 - 0°00
	Coords: 152W/22N

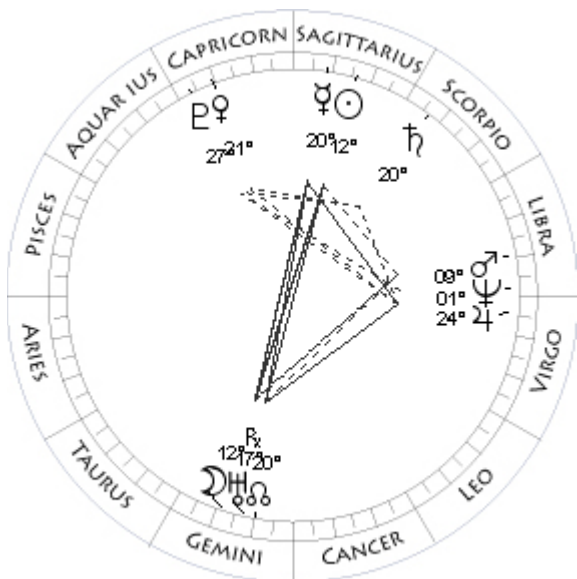
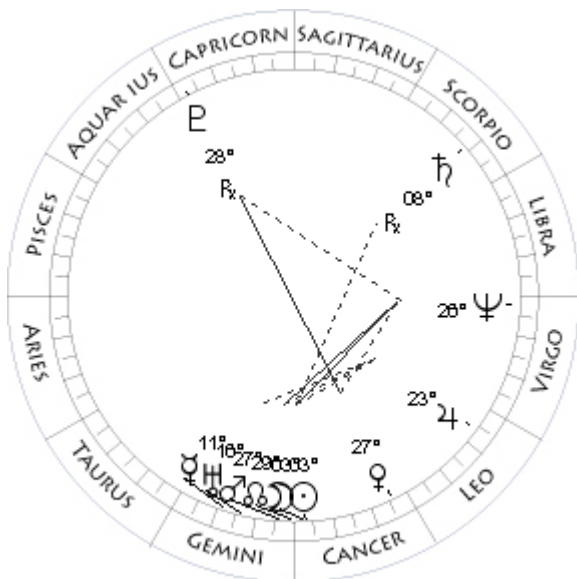
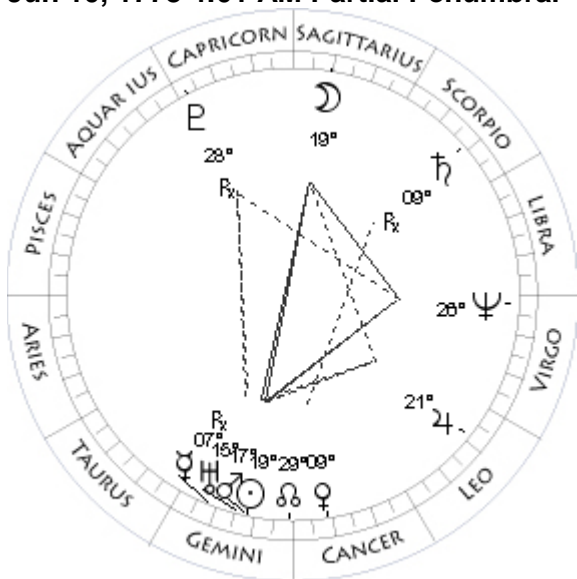
Dec 29, 1777 10:03 PM Annular Solar

Mo 27Cp53 - 0°54	Mo 08Cp40 + 0°01
Su 27Cn59 - 0°00	Su 08Cp40 - 0°00
Me 09Cn02 - 1°07	Me 19Cp37 - 2°09
Ve 14Ge28 - 4°24	Ve 18Sa16 + 0°40
Ma 22Li47 - 0°41	Ma 16Aq43 - 1°09
Ju 04Le28 + 0°31	Ju 26Le23 + 0°59R
Sa 27Li03 + 2°27	Sa 12Sc52 + 2°16
Ur 13Ge47 - 0°01	Ur 12Ge16 + 0°01R
Ne 24Vi54 + 1°17	Ne 29Vi19 + 1°21
Pl 25Cp41 - 3°00R	Pl 26Cp03 - 3°04
No 17Cn27 - 0°00	No 08Cn51 - 0°00
Coords: 169W/21S	Coords: 150E/23S

Jan 13, 1778 1:29 AM Partial Penumbral



Jun 10, 1778 4:01 AM Partial Penumbral



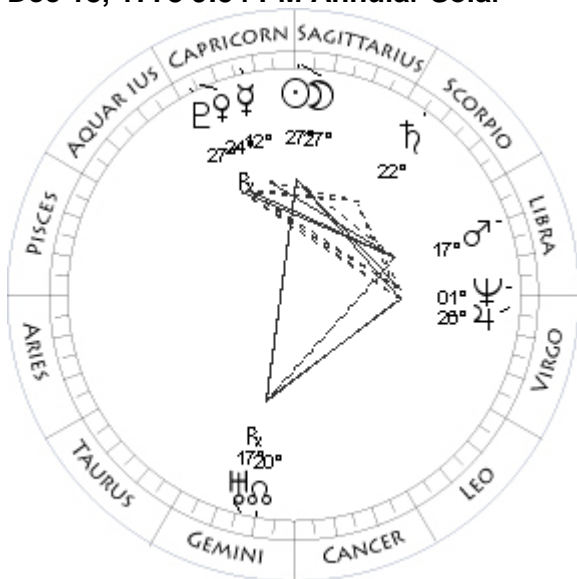
Jun 24, 1778 3:35 PM Total Solar

Mo 22Cn57 + 1°18	Mo 03Cn02 + 0°19
Su 23Cp04 - 0°00	Su 03Cn04 - 0°00
Me 11Aq19 - 0°57	Me 11Ge30 - 3°32
Ve 05Cp59 + 0°03	Ve 27Cn13 + 1°35
Ma 27Aq49 - 1°02	Ma 27Ge20 + 0°40
Ju 25Le18 + 1°02R	Ju 23Le55 + 0°58
Sa 13Sc56 + 2°19	Sa 08Sc52 + 2°28R
Ur 11Ge48 + 0°01R	Ur 16Ge31 + 0°02
Ne 29Vi16 + 1°21R	Ne 26Vi37 + 1°21
Pl 26Cp31 - 3°05	Pl 28Cp06 - 3°30R
No 08Cn06 - 0°00	No 29Ge29 - 0°00

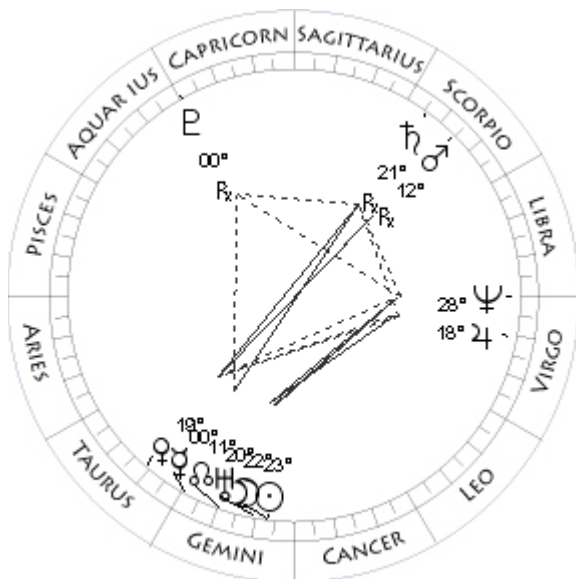
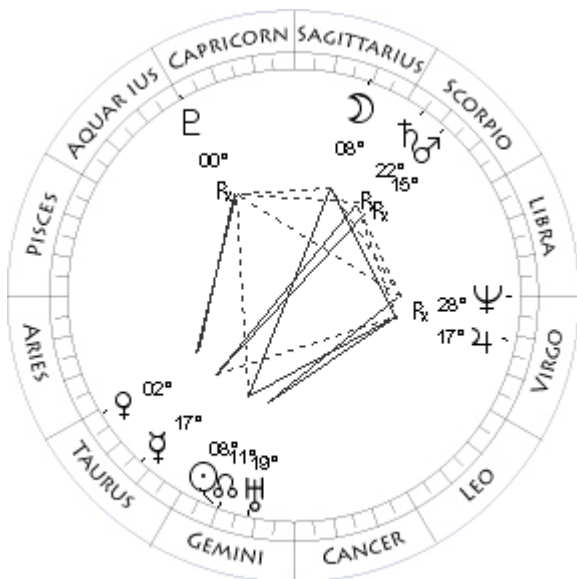
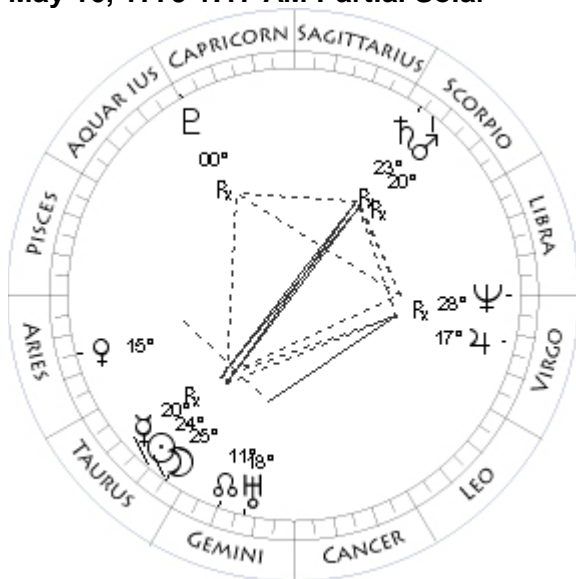
Dec 4, 1778 5:28 AM Partial Umbral

Mo 19Sa21 + 0°56	Mo 12Ge19 - 0°46
Su 19Ge15 - 0°00	Su 12Sa15 - 0°00
Me 07Ge53 - 4°06R	Me 20Sa01 - 1°46
Ve 09Cn36 + 1°15	Ve 21Cp15 - 2°23
Ma 17Ge31 + 0°32	Ma 09Li21 + 1°34
Ju 21Le36 + 0°59	Ju 24Vi59 + 1°11
Sa 09Sc26 + 2°32R	Sa 20Sc47 + 2°02
Ur 15Ge40 + 0°02	Ur 17Ge51 + 0°04R
Ne 26Vi32 + 1°22	Ne 01Li16 + 1°22
Pl 28Cp22 - 3°28R	Pl 27Cp02 - 3°34
No 00Cn15 - 0°00	No 20Ge53 - 0°00

Dec 18, 1778 9:54 PM Annular Solar



May 16, 1779 1:17 AM Partial Solar



May 30, 1779 4:52 AM Total Umbral

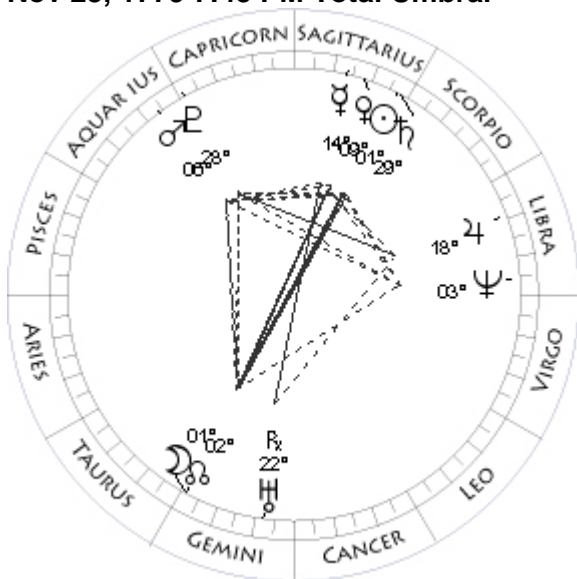
Mo 27Sa08 - 0°36	Mo 08Sa34 + 0°15
Su 27Sa12 - 0°00	Su 08Ge32 - 0°00
Me 12Cp48 - 2°13	Me 17Ta55 - 3°51
Ve 24Cp29 + 0°09R	Ve 02Ta04 - 2°00
Ma 17Li40 + 1°36	Ma 15Sc30 - 1°11R
Ju 26Vi21 + 1°14	Ju 17Vi38 + 1°22
Sa 22Sc24 + 2°03	Sa 22Sc33 + 2°20R
Ur 17Ge14 + 0°04R	Ur 19Ge06 + 0°05
Ne 01Li26 + 1°22	Ne 28Vi45 + 1°25R
Pl 27Cp25 - 3°34	Pl 00Aq18 - 3°58R
No 20Ge06 - 0°00	No 11Ge30 - 0°00

Coords: 160E/66S

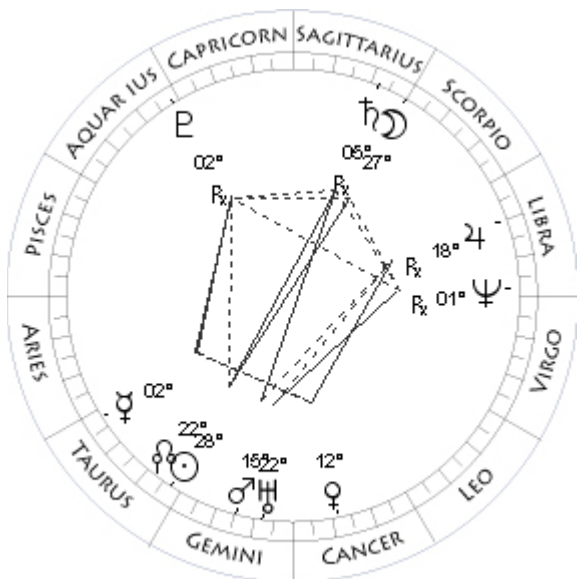
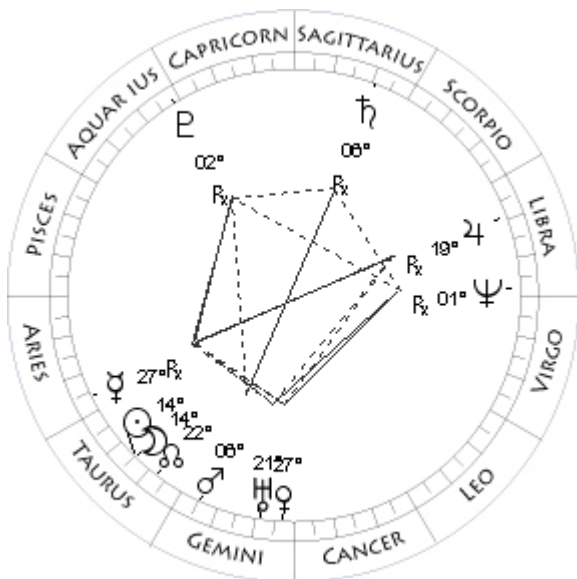
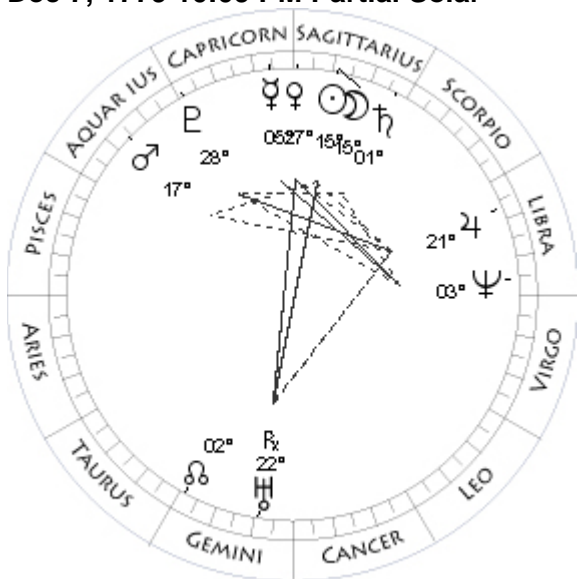
Jun 14, 1779 8:51 AM Partial Solar

Mo 25Ta05 - 1°29	Mo 22Ge56 + 1°04
Su 24Ta57 - 0°00	Su 23Ge02 - 0°00
Me 20Ta11 - 1°31R	Me 00Ge41 - 2°47
Ve 15Ar34 - 1°53	Ve 19Ta57 - 1°48
Ma 20Sc09 - 0°31R	Ma 12Sc43 - 1°45R
Ju 17Vi16 + 1°25	Ju 18Vi40 + 1°18
Sa 23Sc35 + 2°21R	Sa 21Sc34 + 2°18R
Ur 18Ge18 + 0°05	Ur 20Ge00 + 0°05
Ne 28Vi53 + 1°25R	Ne 28Vi44 + 1°24
Pl 00Aq27 - 3°55R	Pl 00Aq05 - 4°00R
No 12Ge15 - 0°00	No 10Ge42 - 0°00

Nov 23, 1779 7:45 PM Total Umbral



Dec 7, 1779 10:09 PM Partial Solar



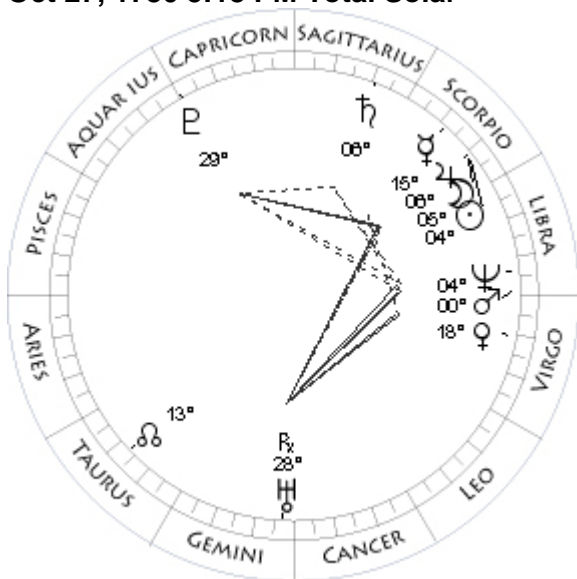
May 4, 1780 1:00 PM Annular Solar

Mo 01Ge28 - 0°04	Mo 14Ta39 - 0°45
Su 01Sa27 - 0°00	Su 14Ta35 - 0°00
Me 14Sa41 - 2°01	Me 27Ar02 - 2°01R
Ve 09Sa57 - 0°10	Ve 27Ge47 + 2°37
Ma 06Aq45 - 1°31	Ma 06Ge15 + 0°38
Ju 18Li43 + 1°10	Ju 19Li27 + 1°32R
Sa 29Sc46 + 1°48	Sa 06Sa43 + 2°01R
Ur 22Ge51 + 0°08R	Ur 21Ge52 + 0°08
Ne 03Li12 + 1°24	Ne 01Li16 + 1°28R
Pl 28Cp30 - 4°05	Pl 02Aq13 - 4°23R
No 02Ge06 - 0°00	No 23Ta29 - 0°00
Coords: 61W/20N	Coords: 6W/33S

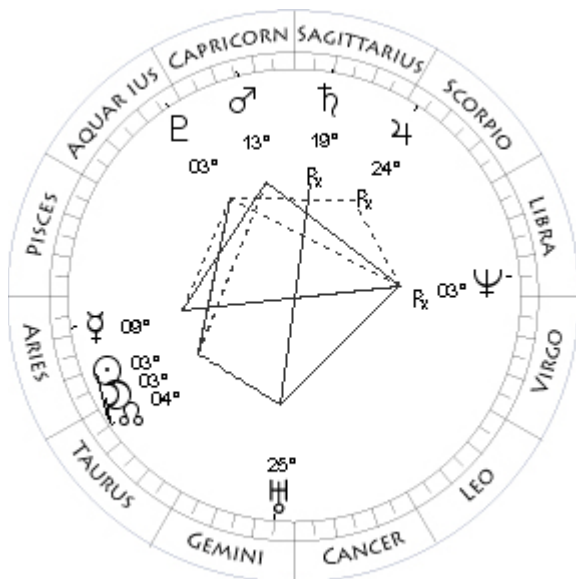
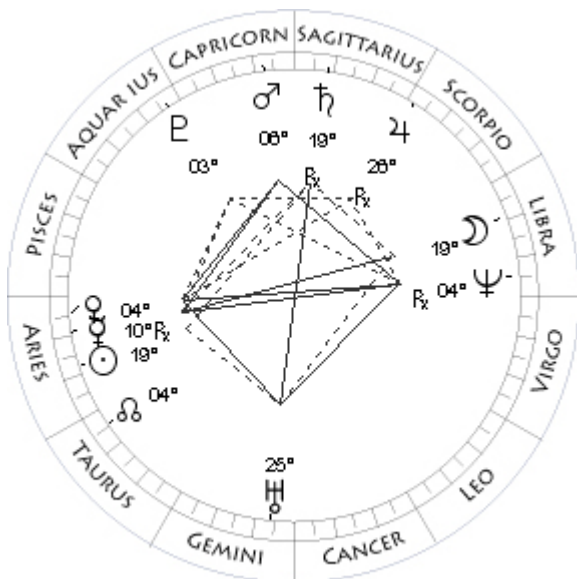
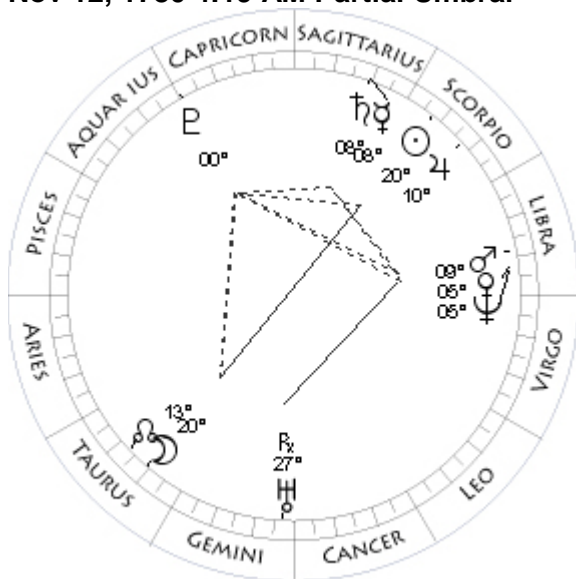
May 18, 1780 10:57 AM Partial Umbral

Mo 15Sa39 - 1°13	Mo 27Sc57 - 0°28
Su 15Sa46 - 0°00	Su 28Ta00 - 0°00
Me 05Cp05 - 2°16	Me 02Ta59 - 3°27
Ve 27Sa38 - 0°43	Ve 12Cn42 + 2°48
Ma 17Aq25 - 1°18	Ma 15Ge42 + 0°44
Ju 21Li11 + 1°12	Ju 18Li11 + 1°29R
Sa 01Sa25 + 1°47	Sa 05Sa45 + 2°01R
Ur 22Ge17 + 0°08R	Ur 22Ge36 + 0°08
Ne 03Li28 + 1°24	Ne 01Li03 + 1°28R
Pl 28Cp49 - 4°04	Pl 02Aq10 - 4°26R
No 01Ge21 - 0°00	No 22Ta45 - 0°00
	Coords: 166E/20S

Oct 27, 1780 5:18 PM Total Solar



Nov 12, 1780 4:19 AM Partial Umbral



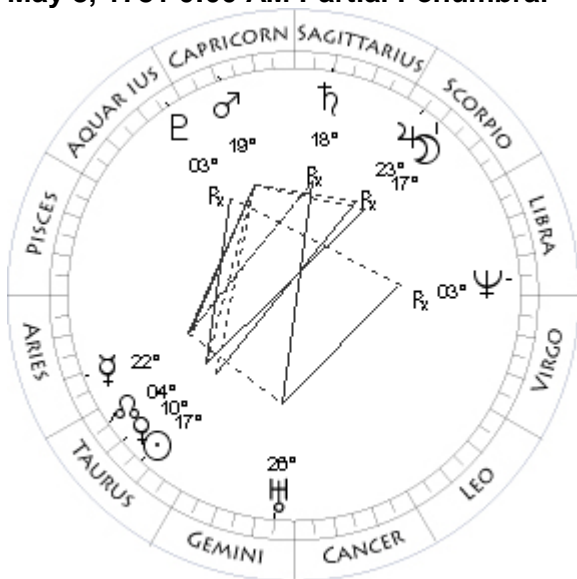
Apr 8, 1781 3:54 PM Partial Penumbral

Mo 05Sc00 + 0°48	Mo 19Li17 + 1°23
Su 04Sc56 - 0°00	Su 19Ar10 - 0°00
Me 15Sc30 - 0°54	Me 10Ar17 + 1°20R
Ve 18Vi38 + 0°30	Ve 04Ar42 - 1°30
Ma 00Li16 + 1°12	Ma 06Cp48 - 0°27
Ju 06Sc59 + 0°58	Ju 26Sc21 + 1°10R
Sa 06Sa53 + 1°32	Sa 19Sa47 + 1°35R
Ur 28Ge13 + 0°11R	Ur 25Ge00 + 0°12
Ne 04Li35 + 1°25	Ne 04Li06 + 1°31R
Pl 29Cp50 - 4°36	Pl 03Aq46 - 4°48
No 14Ta09 - 0°00	No 05Ta31 - 0°00

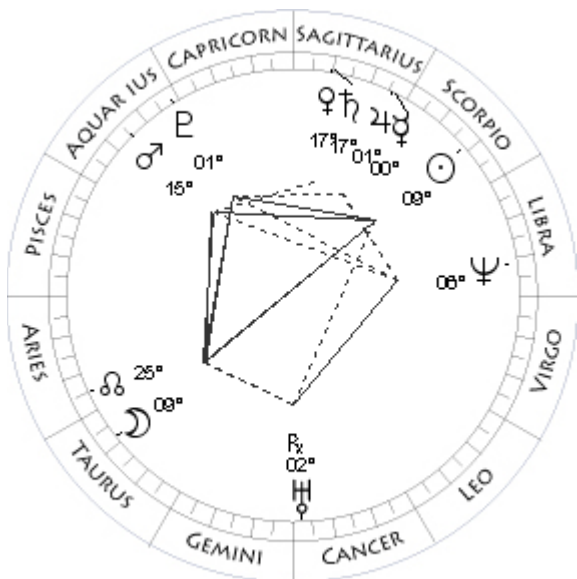
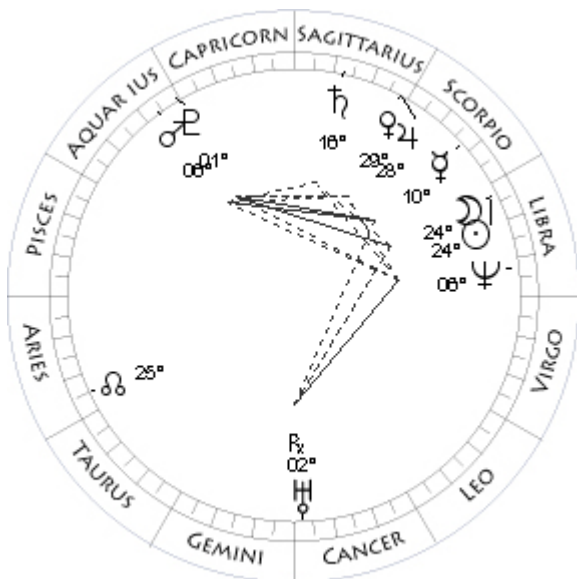
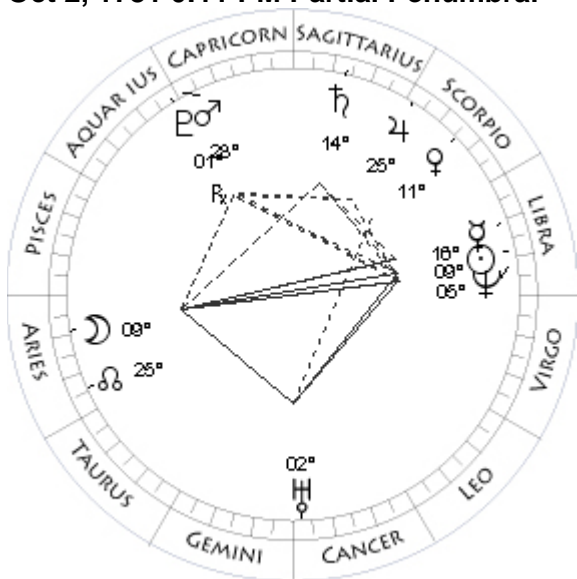
Apr 23, 1781 5:21 PM Annular Solar

Mo 20Ta23 + 0°37	Mo 03Ta52 - 0°03
Su 20Sc27 - 0°00	Su 03Ta52 - 0°00
Me 08Sa27 - 2°16	Me 09Ar02 - 2°10
Ve 05Li23 + 1°34	Ve 23Ar16 - 1°20
Ma 09Li58 + 1°10	Ma 13Cp41 - 0°59
Ju 10Sc23 + 0°58	Ju 24Sc54 + 1°10R
Sa 08Sa36 + 1°31	Sa 19Sa21 + 1°36R
Ur 27Ge49 + 0°11R	Ur 25Ge34 + 0°12
Ne 05Li03 + 1°25	Ne 03Li44 + 1°31R
Pl 00Aq01 - 4°35	Pl 03Aq54 - 4°51
No 13Ta20 - 0°00	No 04Ta44 - 0°00

May 8, 1781 0:00 AM Partial Penumbral



Oct 2, 1781 0:11 PM Partial Penumbral



Oct 17, 1781 8:56 AM Total Solar

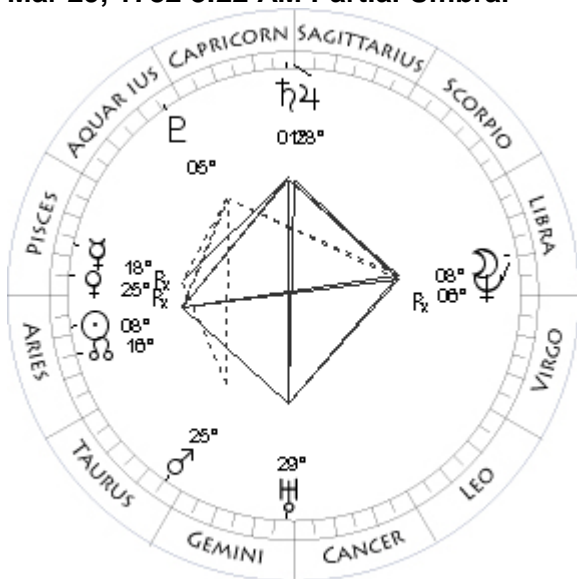
Mo 17Sc34 - 1°12	Mo 24Li22 + 0°06
Su 17Ta42 - 0°00	Su 24Li22 - 0°00
Me 22Ar12 - 3°04	Me 10Sc17 - 1°15
Ve 10Ta50 - 0°59	Ve 29Sc48 - 1°12
Ma 19Cp13 - 1°37	Ma 06Aq47 - 2°46
Ju 23Sc12 + 1°10R	Ju 28Sc48 + 0°38
Sa 18Sa39 + 1°37R	Sa 16Sa07 + 1°13
Ur 26Ge13 + 0°12	Ur 02Cn53 + 0°14R
Ne 03Li26 + 1°31R	Ne 06Li19 + 1°27
Pl 03Aq55 - 4°54R	Pl 01Aq30 - 5°06
No 03Ta58 - 0°00	No 25Ar22 - 0°00

Nov 1, 1781 5:56 AM Partial Penumbral

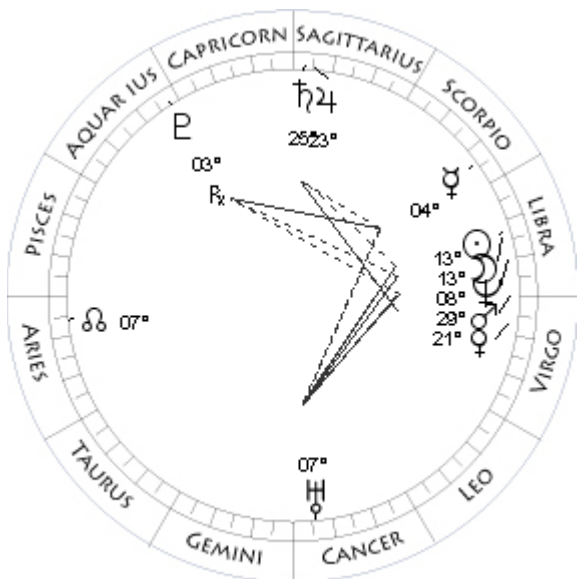
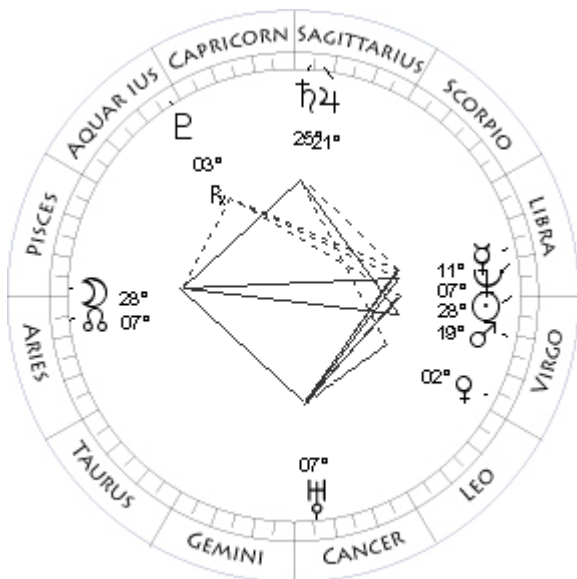
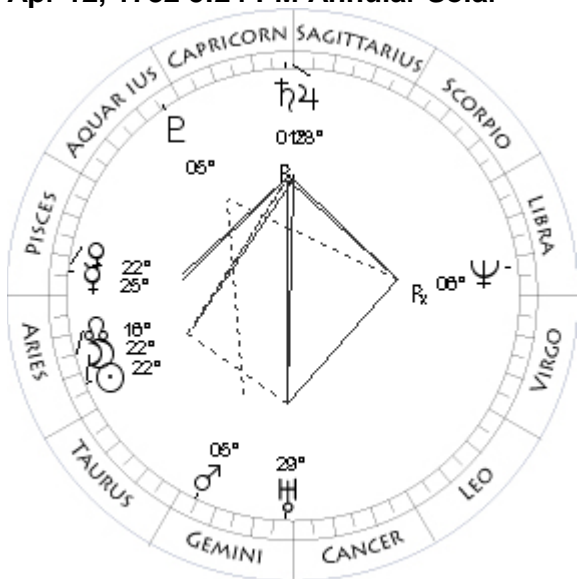
Mo 09Ar47 - 1°26	Mo 09Ta06 + 1°15
Su 09Li38 - 0°00	Su 09Sc13 - 0°00
Me 16Li59 + 0°27	Me 00Sa56 - 2°32
Ve 11Sc47 - 0°27	Ve 17Sa44 - 1°52
Ma 28Cp49 - 3°26	Ma 15Aq39 - 2°10
Ju 25Sc55 + 0°40	Ju 01Sa55 + 0°36
Sa 14Sa57 + 1°16	Sa 17Sa31 + 1°11
Ur 02Cn54 + 0°14	Ur 02Cn40 + 0°14R
Ne 05Li47 + 1°26	Ne 06Li50 + 1°27
Pl 01Aq32 - 5°07R	Pl 01Aq35 - 5°05
No 26Ar10 - 0°00	No 24Ar35 - 0°00

Coords: 175W/ 3N

Mar 29, 1782 8:22 AM Partial Umbral



Apr 12, 1782 5:24 PM Annular Solar



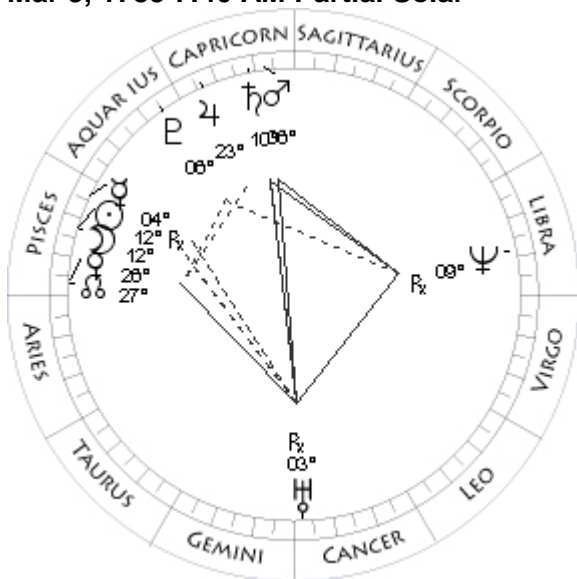
Sep 21, 1782 2:17 PM Partial Umbral

Mo 08Li50 + 0°41	Mo 28Pi45 - 0°46
Su 08Ar47 - 0°00	Su 28Vi40 - 0°00
Me 18Pi23 + 0°30R	Me 11Li17 + 0°12
Ve 25Pi42 + 7°20R	Ve 02Vi52 + 1°05
Ma 25Ta42 + 0°49	Ma 19Vi11 + 1°03
Ju 28Sa32 + 0°29	Ju 21Sa11 + 0°08
Sa 01Cp07 + 1°08	Sa 25Sa04 + 0°54
Ur 29Ge03 + 0°15	Ur 07Cn11 + 0°17
Ne 06Li38 + 1°33R	Ne 07Li28 + 1°29
Pl 05Aq17 - 5°14	Pl 03Aq20 - 5°37R
No 16Ar44 - 0°00	No 07Ar25 - 0°00

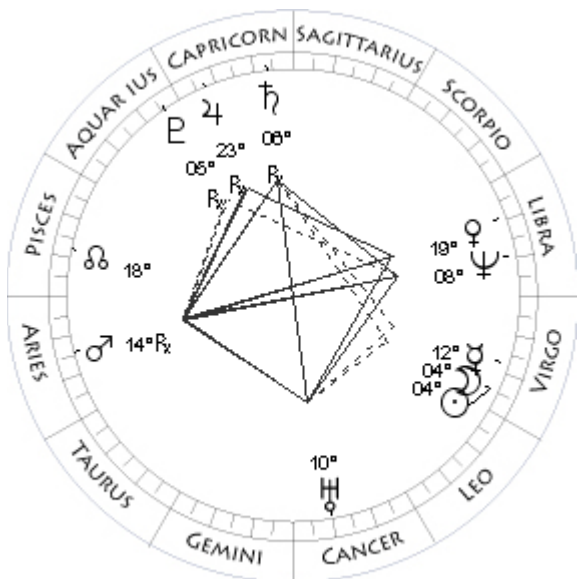
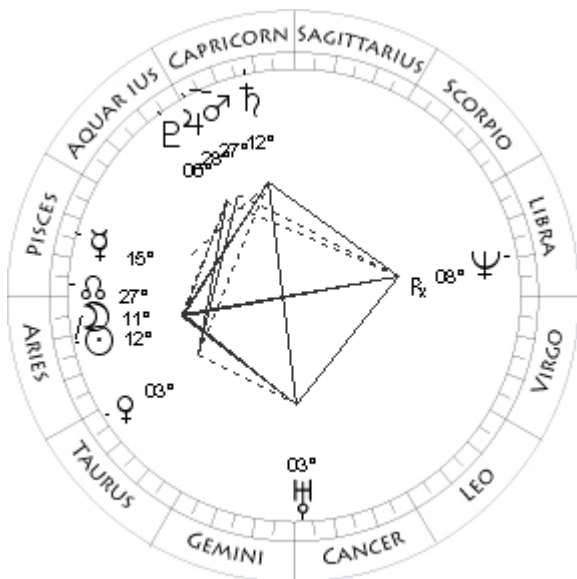
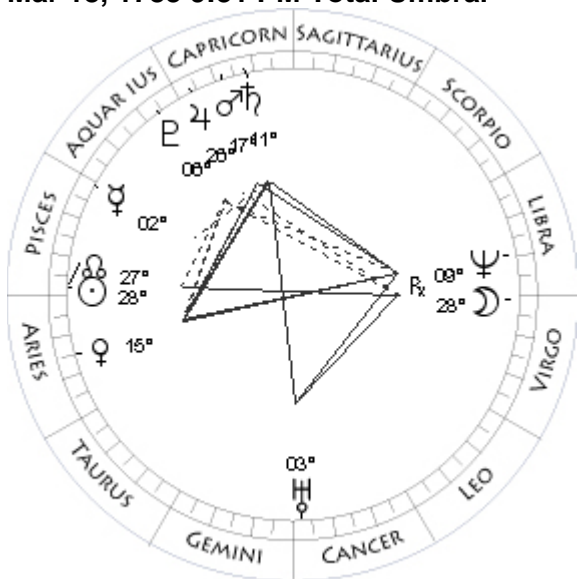
Oct 7, 1782 0:43 AM Total Solar

Mo 22Ar50 + 0°36	Mo 13Li48 - 0°36
Su 22Ar54 - 0°00	Su 13Li52 - 0°00
Me 25Pi26 - 2°11	Me 04Sc30 - 1°38
Ve 22Pi33 + 4°16	Ve 21Vi53 + 1°27
Ma 05Ge15 + 0°55	Ma 29Vi06 + 1°00
Ju 28Sa58 + 0°29	Ju 23Sa07 + 0°06
Sa 01Cp13 + 1°08R	Sa 25Sa49 + 0°51
Ur 29Ge25 + 0°15	Ur 07Cn22 + 0°17
Ne 06Li15 + 1°33R	Ne 08Li02 + 1°29
Pl 05Aq29 - 5°17	Pl 03Aq13 - 5°36R
No 15Ar59 - 0°00	No 06Ar35 - 0°00
Coords: 107E/45N	Coords: 145W/38S

Mar 3, 1783 7:40 AM Partial Solar



Mar 18, 1783 9:31 PM Total Umbra



Apr 1, 1783 8:38 PM Partial Solar

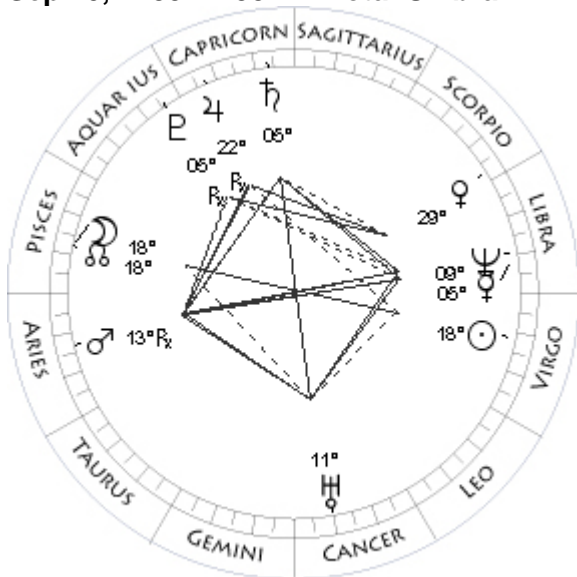
Mo 12Pi48 - 1°22	Mo 11Ar53 + 1°17
Su 12Pi40 - 0°00	Su 12Ar00 - 0°00
Me 04Pi49 + 3°20R	Me 15Pi03 - 2°09
Ve 26Pi31 - 1°17	Ve 03Ta04 - 0°19
Ma 06Cp58 - 0°22	Ma 27Cp10 - 0°57
Ju 23Cp59 - 0°09	Ju 28Cp53 - 0°13
Sa 10Cp38 + 0°40	Sa 12Cp13 + 0°40
Ur 03Cn19 + 0°19R	Ur 03Cn30 + 0°18
Ne 09Li34 + 1°35R	Ne 08Li48 + 1°36R
Pl 06Aq20 - 5°37	Pl 06Aq59 - 5°43
No 28Pi47 - 0°00	No 27Pi14 - 0°00

Aug 27, 1783 10:51 PM Partial Solar

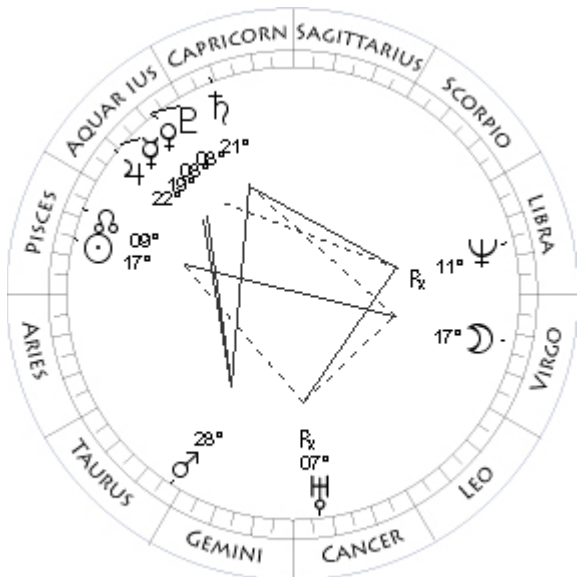
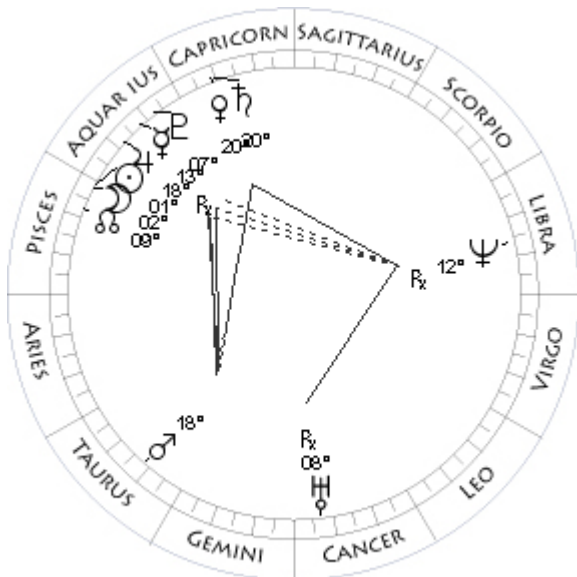
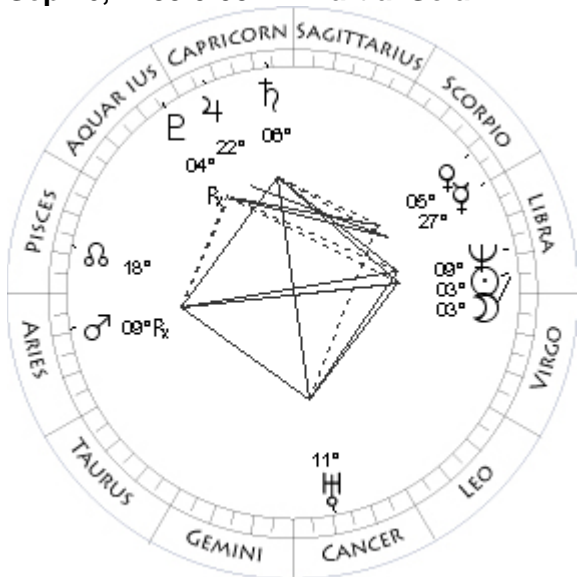
Mo 28Vi12 - 0°02	Mo 04Vi34 + 1°17
Su 28Pi12 - 0°00	Su 04Vi27 - 0°00
Me 02Pi00 - 0°08	Me 12Vi08 + 1°24
Ve 15Ar51 - 0°52	Ve 19Li22 - 3°08
Ma 17Cp37 - 0°39	Ma 14Ar46 - 4°58R
Ju 26Cp46 - 0°11	Ju 23Cp21 - 0°36R
Sa 11Cp38 + 0°40	Sa 06Cp05 + 0°30R
Ur 03Cn19 + 0°19	Ur 10Cn47 + 0°19
Ne 09Li11 + 1°36R	Ne 08Li42 + 1°31
Pl 06Aq43 - 5°40	Pl 05Aq25 - 6°07R
No 27Pi58 - 0°00	No 19Pi23 - 0°00

Coords: 39W/ 1N

Sep 10, 1783 11:33 PM Total Umbral



Sep 26, 1783 0:03 PM Partial Solar



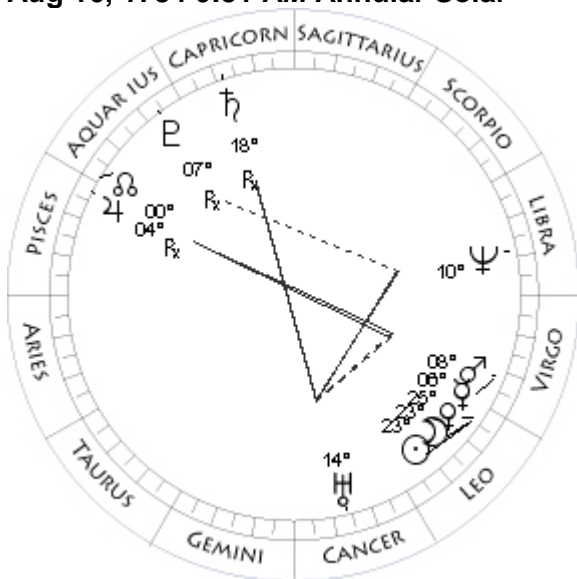
Feb 20, 1784 8:45 PM Total Solar

Mo 18Pi05 - 0°03	Mo 02Pi00 - 0°41
Su 18Vi04 - 0°00	Su 01Pi56 - 0°00
Me 05Li45 - 0°06	Me 13Aq13 + 2°36R
Ve 29Li32 - 4°57	Ve 20Cp22 + 1°10
Ma 13Ar38 - 4°55R	Ma 18Ta56 + 1°15
Ju 22Cp42 - 0°36R	Ju 18Aq49 - 0°41
Sa 05Cp57 + 0°28	Sa 20Cp04 + 0°13
Ur 11Cn18 + 0°20	Ur 08Cn02 + 0°22R
Ne 09Li11 + 1°31	Ne 12Li02 + 1°37R
Pl 05Aq11 - 6°07R	Pl 07Aq39 - 6°03
No 18Pi39 - 0°00	No 10Pi01 - 0°00
Coords: 102E/47S	

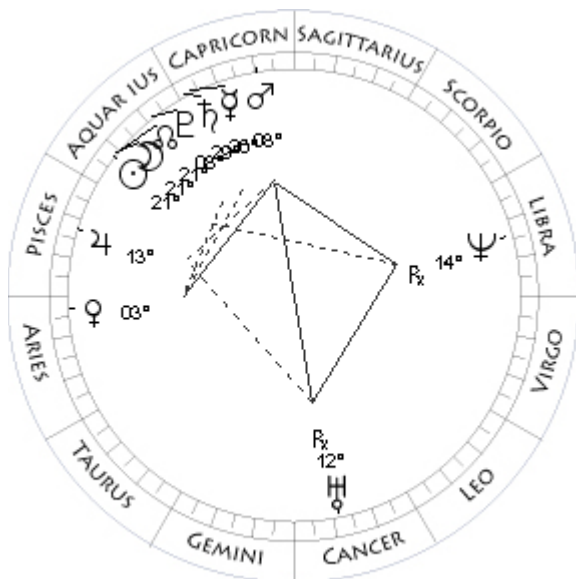
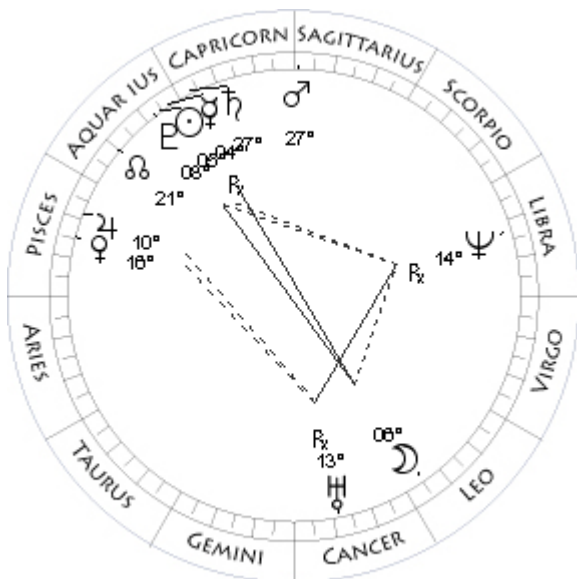
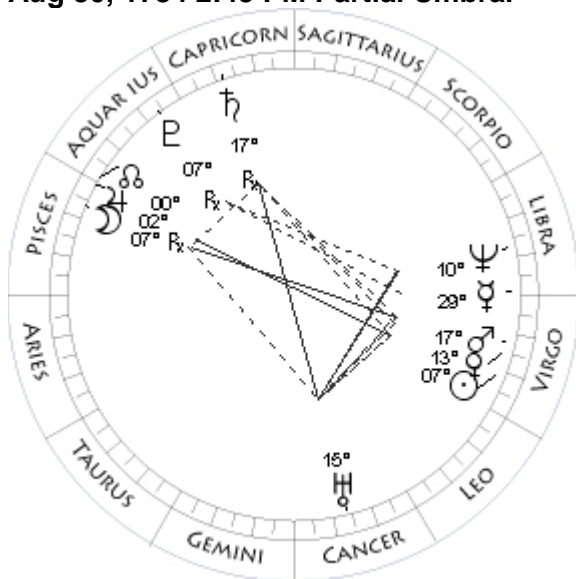
Mar 7, 1784 3:39 AM Partial Umbral

Mo 03Li07 - 1°19	Mo 17Vi12 - 0°43
Su 03Li15 - 0°00	Su 17Pi16 - 0°00
Me 27Li31 - 2°03	Me 19Aq48 - 0°31
Ve 05Sc56 - 6°50	Ve 08Aq31 + 0°12
Ma 09Ar43 - 4°24R	Ma 28Ta01 + 1°19
Ju 22Cp42 - 0°37	Ju 22Aq22 - 0°43
Sa 06Cp10 + 0°26	Sa 21Cp27 + 0°13
Ur 11Cn41 + 0°20	Ur 07Cn49 + 0°22R
Ne 09Li44 + 1°31	Ne 11Li42 + 1°37R
Pl 04Aq59 - 6°06R	Pl 08Aq04 - 6°05
No 17Pi49 - 0°00	No 09Pi12 - 0°00

Aug 16, 1784 0:31 AM Annular Solar



Aug 30, 1784 2:45 PM Partial Umbral



Jan 25, 1785 9:10 AM Partial Penumbral

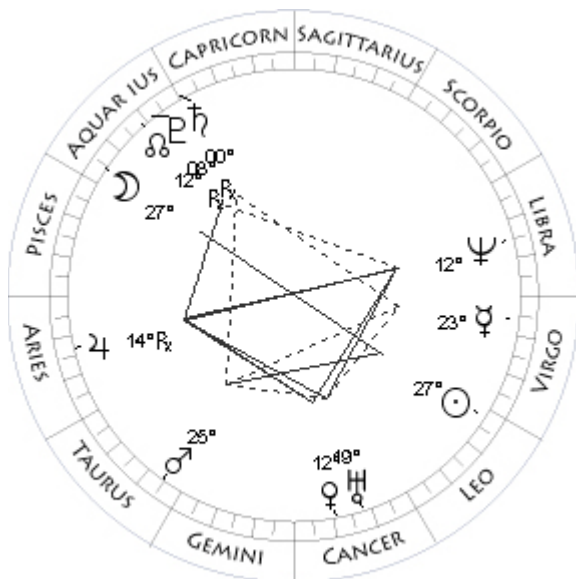
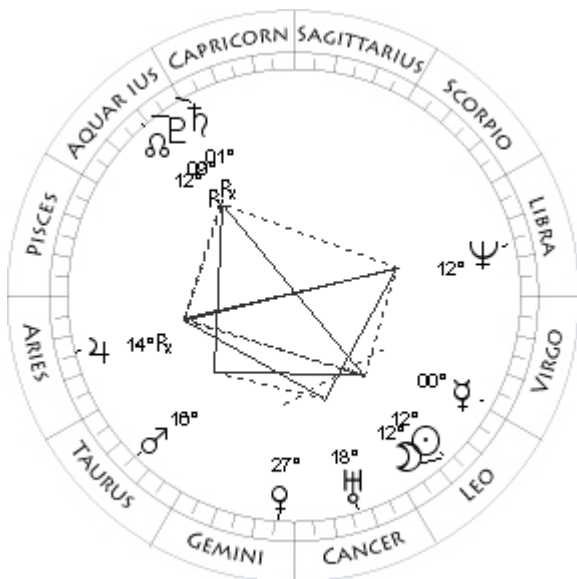
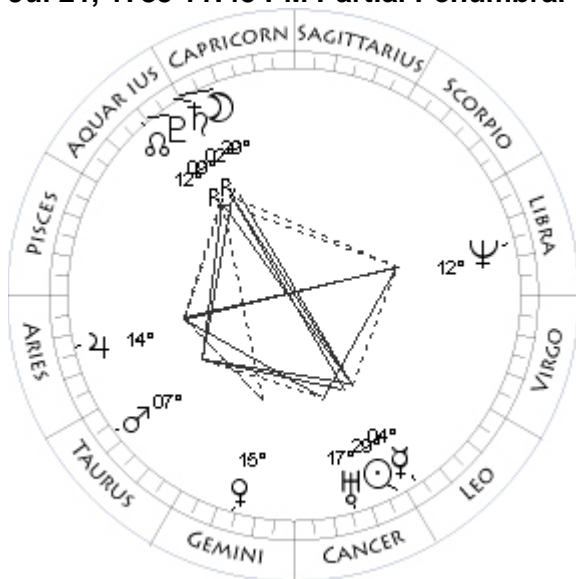
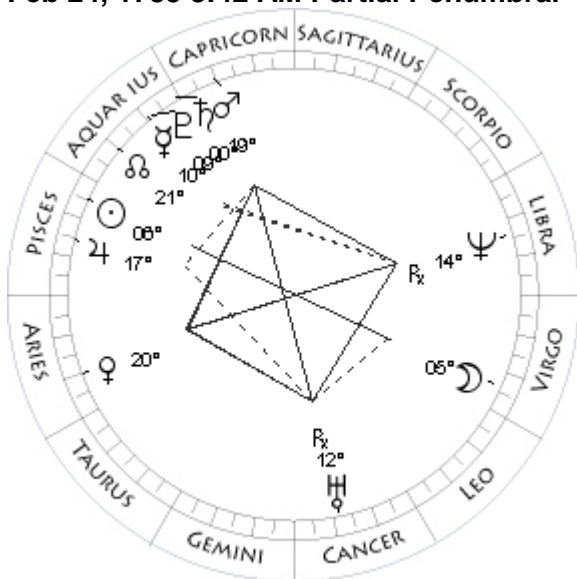
Mo 23Le44 + 0°36	Mo 06Le03 + 1°22
Su 23Le40 - 0°00	Su 05Aq55 - 0°00
Me 06Vi34 + 1°15	Me 04Aq00 + 3°31R
Ve 25Le39 + 1°21	Ve 16Pi04 - 1°01
Ma 08Vi04 + 1°02	Ma 27Sa53 - 0°22
Ju 04Pi08 - 1°19R	Ju 10Pi18 - 1°03
Sa 18Cp18 + 0°00R	Sa 27Cp24 - 0°11
Ur 14Cn35 + 0°22	Ur 13Cn29 + 0°26R
Ne 10Li29 + 1°33	Ne 14Li35 + 1°37R
Pl 07Aq21 - 6°36R	Pl 08Aq27 - 6°27
No 00Pi38 - 0°00	No 22Aq02 - 0°00
Coords: 160E/51N	Coords: 134E/20N

Feb 9, 1785 0:40 PM Total Solar

Mo 07Pi41 + 0°41	Mo 21Aq16 + 0°01
Su 07Vi46 - 0°00	Su 21Aq16 - 0°00
Me 29Vi58 - 0°28	Me 26Cp56 + 1°47
Ve 13Vi44 + 1°25	Ve 03Ar53 - 0°07
Ma 17Vi22 + 0°57	Ma 08Cp54 - 0°33
Ju 02Pi14 - 1°21R	Ju 13Pi44 - 1°03
Sa 17Cp40 - 0°01R	Sa 29Cp09 - 0°12
Ur 15Cn16 + 0°22	Ur 12Cn57 + 0°26R
Ne 10Li55 + 1°33	Ne 14Li26 + 1°38R
Pl 07Aq03 - 6°36R	Pl 08Aq56 - 6°28
No 29Aq52 - 0°00	No 21Aq14 - 0°00

Feb 24, 1785 3:42 AM Partial Penumbral

Jul 21, 1785 11:45 PM Partial Penumbral



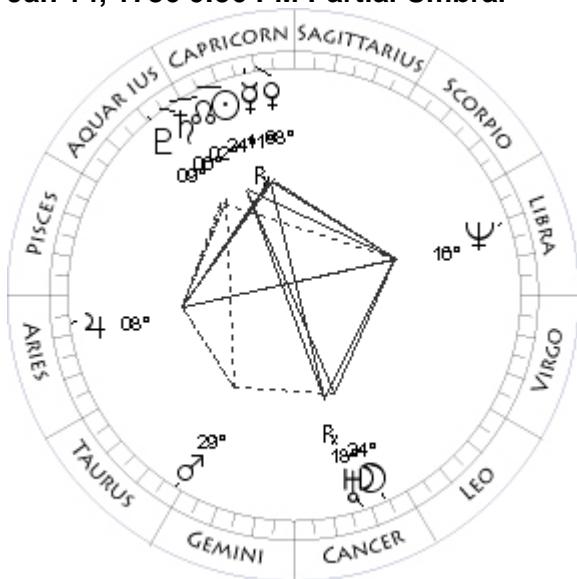
Aug 5, 1785 1:37 AM Annular Solar

Mo 05Vi53 - 1°20	Mo 12Le55 - 0°05
Su 06Pi00 - 0°00	Su 12Le55 - 0°00
Me 10Aq00 - 0°47	Me 00Vi34 + 1°06
Ve 20Ar32 + 0°59	Ve 27Ge17 - 3°34
Ma 19Cp40 - 0°45	Ma 16Ta24 - 1°53
Ju 17Pi13 - 1°02	Ju 14Ar37 - 1°29R
Sa 00Aq45 - 0°14	Sa 01Aq14 - 0°31R
Ur 12Cn34 + 0°25R	Ur 18Cn18 + 0°25
Ne 14Li11 + 1°39R	Ne 12Li19 + 1°35
Pl 09Aq22 - 6°30	Pl 09Aq16 - 7°03R
No 20Aq28 - 0°00	No 11Aq53 - 0°00
	Coords: 155W/13N

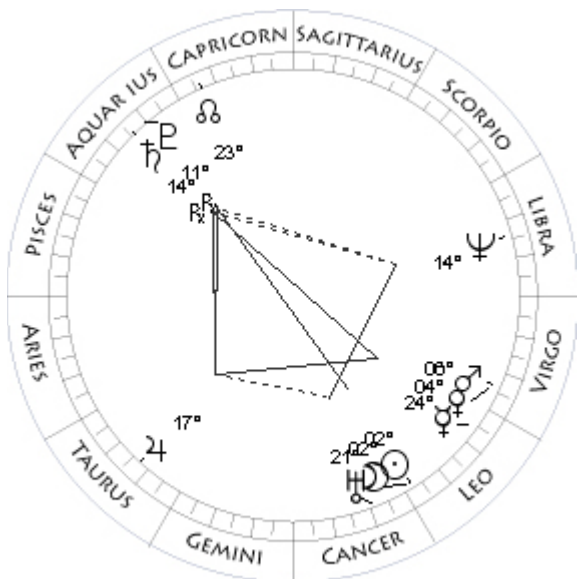
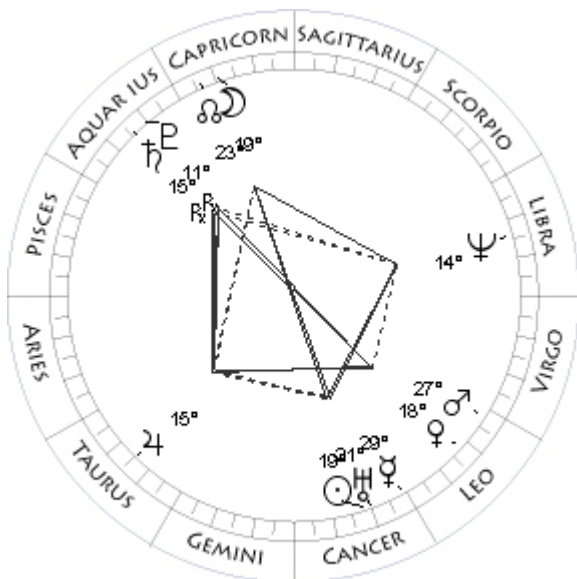
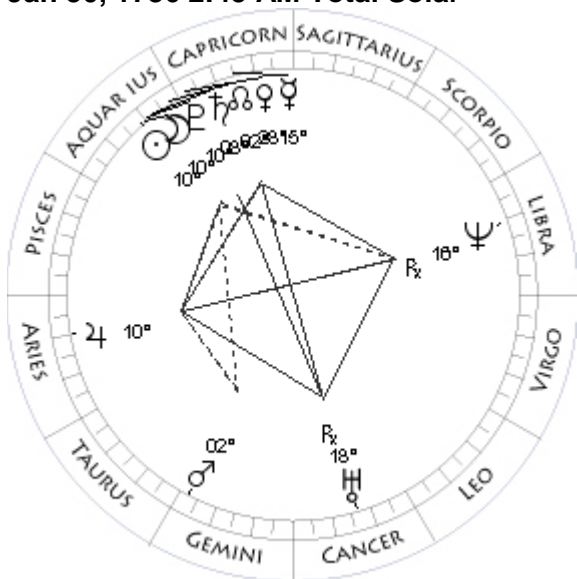
Aug 20, 1785 7:38 AM Partial Penumbral

Mo 29Cp33 - 1°09	Mo 27Aq26 + 1°24
Su 29Cn27 - 0°00	Su 27Le35 - 0°00
Me 04Le13 + 1°46	Me 23Vi14 - 0°57
Ve 15Ge10 - 4°14	Ve 12Cn16 - 2°32
Ma 07Ta32 - 1°57	Ma 25Ta16 - 1°44
Ju 14Ar21 - 1°25	Ju 14Ar09 - 1°33R
Sa 02Aq16 - 0°29R	Sa 00Aq12 - 0°32R
Ur 17Cn28 + 0°25	Ur 19Cn07 + 0°25
Ne 12Li04 + 1°36	Ne 12Li43 + 1°35
Pl 09Aq36 - 7°02R	Pl 08Aq56 - 7°04R
No 12Aq38 - 0°00	No 11Aq05 - 0°00
Coords: 5W/21S	Coords: 115E/11S

Jan 14, 1786 0:56 PM Partial Umbral



Jan 30, 1786 2:45 AM Total Solar



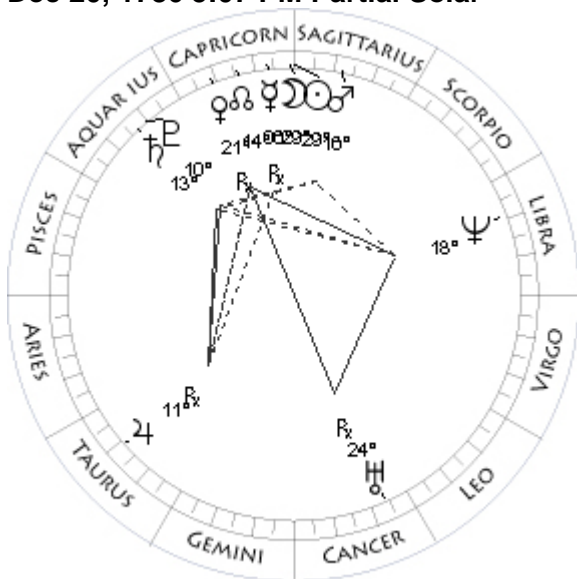
Jul 11, 1786 10:47 AM Total Umbral

Mo 24Cn43 + 0°45	Mo 19Cp12 - 0°24
Su 24Cp39 - 0°00	Su 19Cn10 - 0°00
Me 11Cp44 + 3°25R	Me 29Cn43 + 1°50
Ve 08Cp30 - 0°03	Ve 18Le11 + 1°39
Ma 29Ta13 + 2°28	Ma 27Le38 + 1°07
Ju 08Ar08 - 1°15	Ju 15Ta52 - 1°05
Sa 06Aq15 - 0°37	Sa 15Aq29 - 0°59R
Ur 18Cn42 + 0°29R	Ur 21Cn07 + 0°27
Ne 16Li47 + 1°38	Ne 14Li05 + 1°38
Pl 09Aq42 - 6°53	Pl 11Aq29 - 7°28R
No 03Aq17 - 0°00	No 23Cp52 - 0°00
Coords: 169W/22N	Coords: 160E/22S

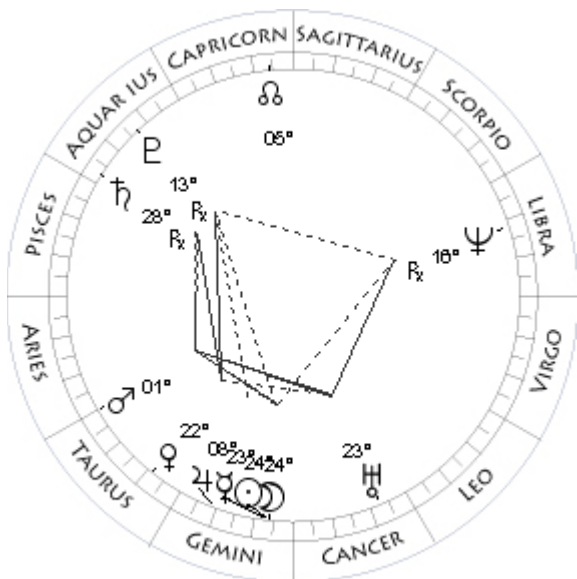
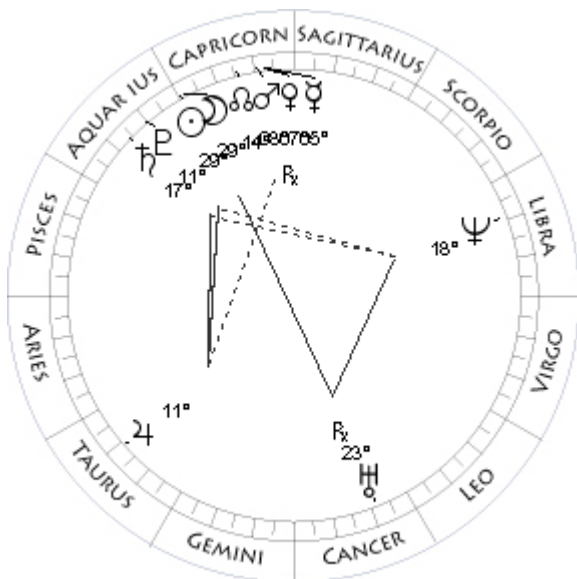
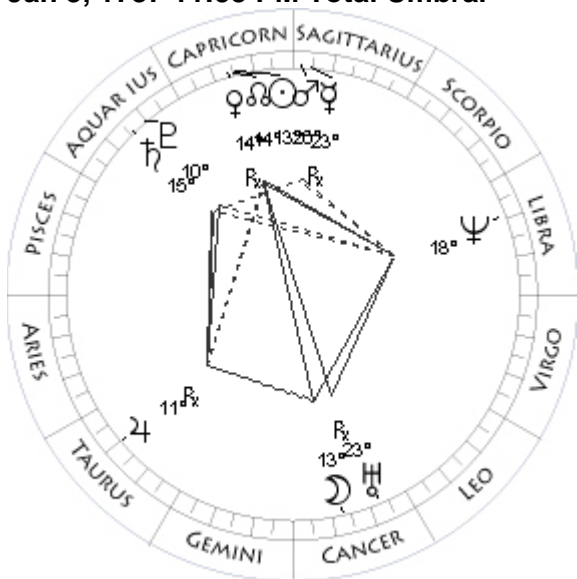
Jul 25, 1786 8:46 AM Total Solar

Mo 10Aq24 + 0°42	Mo 02Le22 - 0°48
Su 10Aq29 - 0°00	Su 02Le27 - 0°00
Me 15Cp10 + 1°07	Me 24Le17 + 0°54
Ve 28Cp02 - 0°40	Ve 04Vi53 + 1°26
Ma 02Ge42 + 2°24	Ma 06Vi14 + 1°00
Ju 10Ar37 - 1°11	Ju 17Ta57 - 1°07
Sa 08Aq06 - 0°38	Sa 14Aq32 - 1°01R
Ur 18Cn03 + 0°29R	Ur 21Cn58 + 0°27
Ne 16Li44 + 1°39R	Ne 14Li15 + 1°38
Pl 10Aq10 - 6°54	Pl 11Aq11 - 7°30R
No 02Aq28 - 0°00	No 23Cp08 - 0°00
Coords: 126W/25N	Coords: 31W/34S

Dec 20, 1786 5:07 PM Partial Solar



Jan 3, 1787 11:53 PM Total Umbral



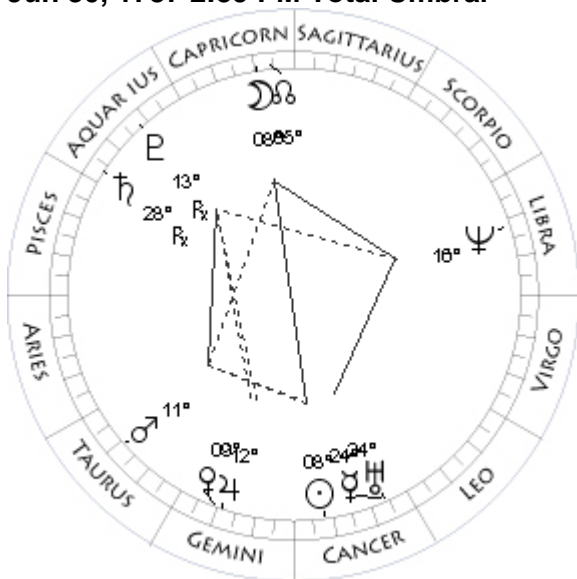
Jan 19, 1787 10:43 AM Partial Solar

Mo 29Sa14 - 1°22	Mo 29Cp16 + 1°21
Su 29Sa06 - 0°00	Su 29Cp23 - 0°00
Me 06Cp11 + 1°25R	Me 05Cp59 + 0°38
Ve 21Cp23 + 0°47R	Ve 07Cp16 + 6°34R
Ma 16Sa24 - 0°23	Ma 08Cp31 - 0°41
Ju 11Ta41 - 1°09R	Ju 11Ta36 - 1°00
Sa 13Aq54 - 1°02	Sa 17Aq06 - 1°02
Ur 24Cn33 + 0°32R	Ur 23Cn18 + 0°32R
Ne 18Li42 + 1°38	Ne 18Li58 + 1°40
Pl 10Aq34 - 7°19	Pl 11Aq24 - 7°19
No 15Cp16 - 0°00	No 13Cp42 - 0°00

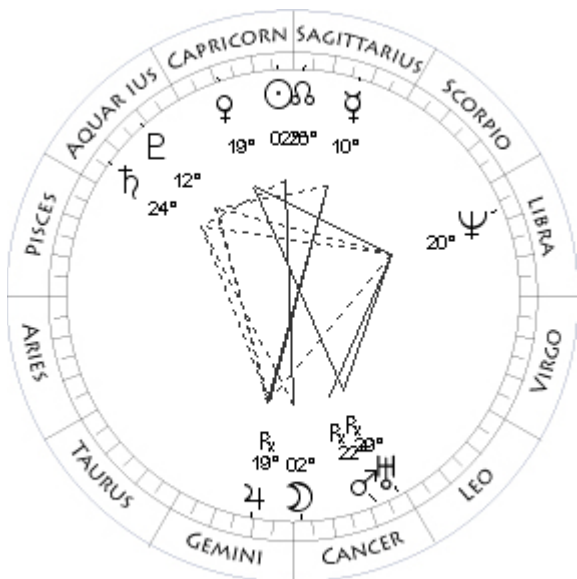
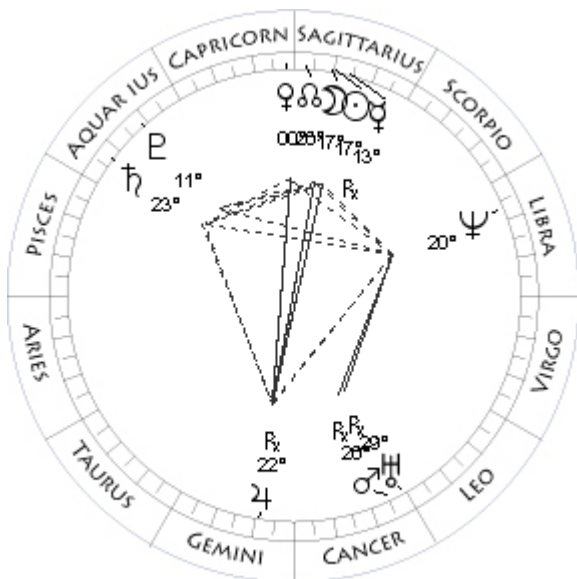
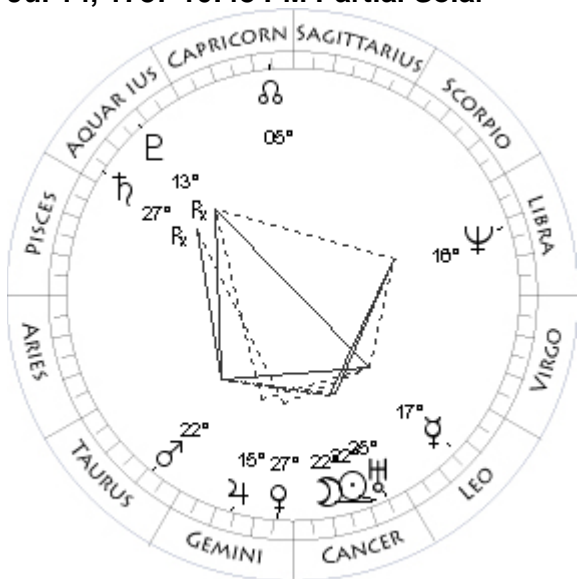
Jun 15, 1787 3:59 PM Total Solar

Mo 13Cn39 + 0°04	Mo 24Ge26 + 0°59
Su 13Cp39 - 0°00	Su 24Ge21 - 0°00
Me 23Sa40 + 2°56R	Me 23Ge11 + 0°54
Ve 14Cp39 + 4°24R	Ve 22Ta06 - 1°44
Ma 26Sa57 - 0°32	Ma 01Ta08 - 1°11
Ju 11Ta16 - 1°05R	Ju 08Ge50 - 0°36
Sa 15Aq22 - 1°02	Sa 28Aq48 - 1°23R
Ur 23Cn58 + 0°32R	Ur 23Cn55 + 0°30
Ne 18Li53 + 1°39	Ne 16Li13 + 1°41R
Pl 10Aq56 - 7°19	Pl 13Aq33 - 7°49R
No 14Cp31 - 0°00	No 05Cp54 - 0°00
Coords: 3W/23N	Coords: 103W/79N

Jun 30, 1787 2:39 PM Total Umbral



Jul 14, 1787 10:48 PM Partial Solar



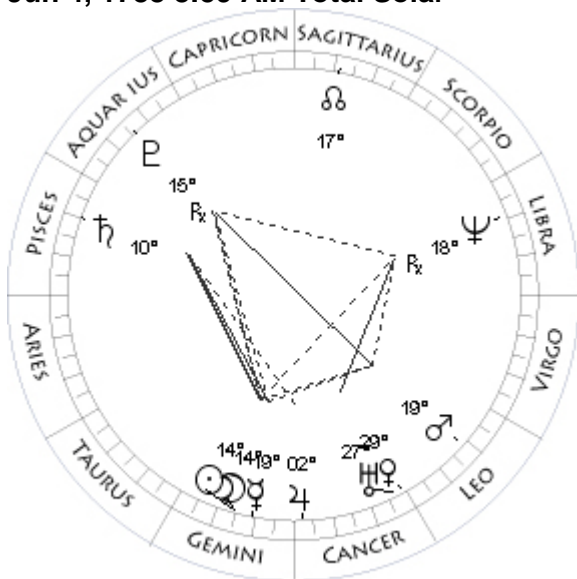
Dec 9, 1787 4:15 PM Annular Solar

Mo 08Cp34 + 0°19	Mo 17Sa41 - 0°46
Su 08Cn36 - 0°00	Su 17Sa37 - 0°00
Me 24Cn07 + 1°53	Me 13Sa48 + 2°03R
Ve 09Ge55 - 1°16	Ve 00Cp31 - 0°49
Ma 11Ta58 - 1°04	Ma 26Cn27 + 3°01R
Ju 12Ge11 - 0°35	Ju 22Ge00 - 0°29R
Sa 28Aq28 - 1°26R	Sa 23Aq46 - 1°27
Ur 24Cn46 + 0°30	Ur 29Cn42 + 0°34R
Ne 16Li11 + 1°41	Ne 20Li37 + 1°39
Pl 13Aq19 - 7°52R	Pl 11Aq52 - 7°46
No 05Cp07 - 0°00	No 26Sa32 - 0°00
Coords: 141W/23S	

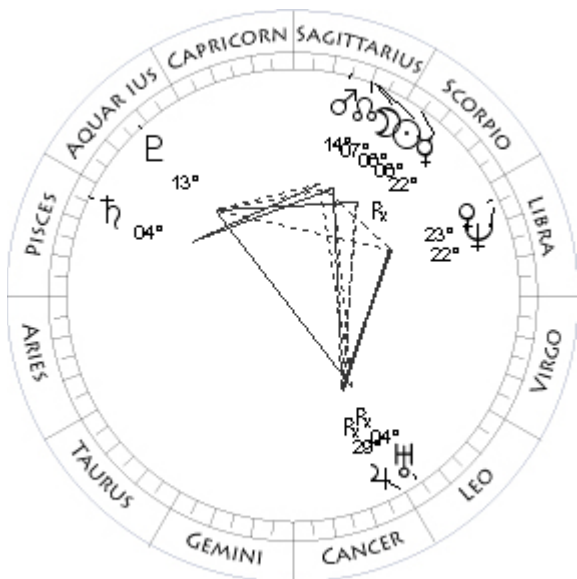
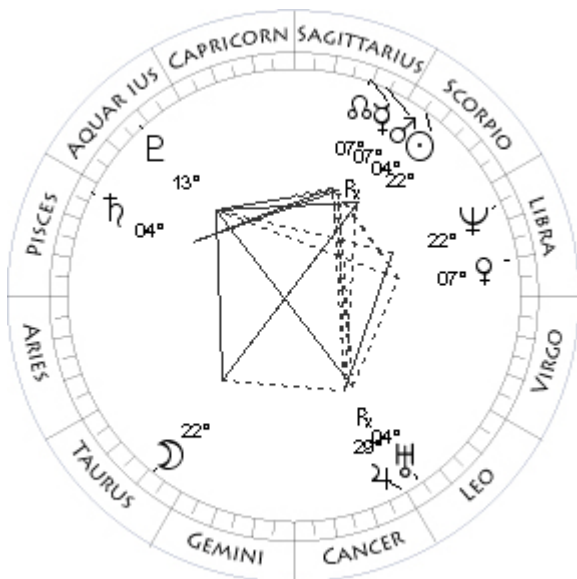
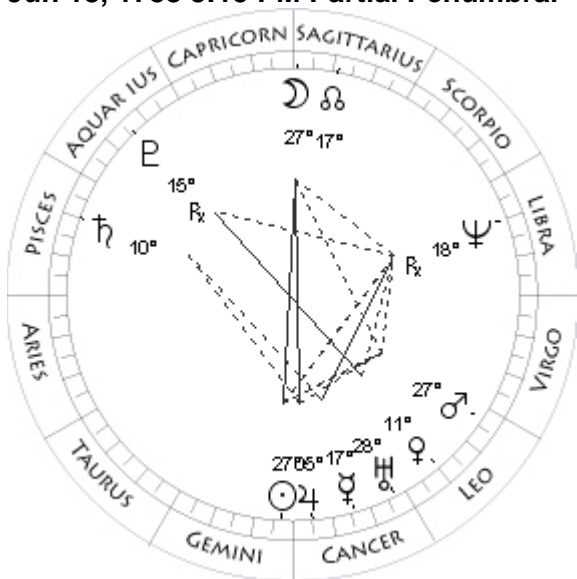
Dec 24, 1787 3:08 PM Partial Umbral

Mo 22Cn08 - 1°32	Mo 02Cn46 - 0°37
Su 22Cn16 - 0°00	Su 02Cp50 - 0°00
Me 17Le16 + 0°36	Me 10Sa44 + 2°21
Ve 27Ge10 - 0°40	Ve 19Cp16 - 1°17
Ma 22Ta05 - 0°55	Ma 22Cn43 + 3°40R
Ju 15Ge15 - 0°34	Ju 19Ge59 - 0°27R
Sa 27Aq50 - 1°28R	Sa 24Aq59 - 1°27
Ur 25Cn38 + 0°30	Ur 29Cn12 + 0°34R
Ne 16Li16 + 1°40	Ne 20Li54 + 1°40
Pl 13Aq02 - 7°55R	Pl 12Aq12 - 7°44
No 04Cp21 - 0°00	No 25Sa44 - 0°00
Coords: 133W/23N	

Jun 4, 1788 8:59 AM Total Solar



Jun 18, 1788 3:15 PM Partial Penumbral



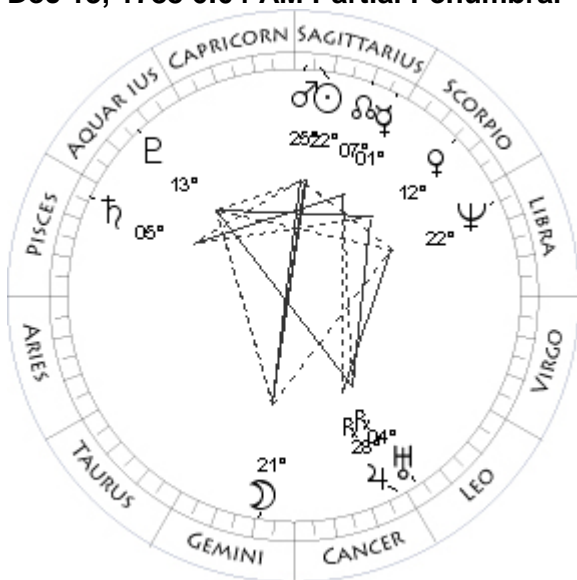
Nov 13, 1788 5:42 PM Partial Penumbral

Mo 14Ge18 + 0°15	Mo 22Ta13 + 1°25
Su 14Ge17 - 0°00	Su 22Sc06 - 0°00
Me 19Ge34 + 1°18	Me 07Sa40 - 1°36R
Ve 29Cn30 + 2°26	Ve 07Li31 + 1°41
Ma 19Le21 + 1°23	Ma 04Sa02 - 0°28
Ju 02Cn42 - 0°02	Ju 29Cn49 + 0°17
Sa 10Pi42 - 1°43	Sa 04Pi14 - 1°55
Ur 27Cn45 + 0°33	Ur 04Le52 + 0°36R
Ne 18Li31 + 1°43R	Ne 22Li00 + 1°39
Pl 15Aq16 - 8°12R	Pl 13Aq03 - 8°14
No 17Sa07 - 0°00	No 08Sa31 - 0°00
Coords: 44W/37N	Coords: 90W/20N

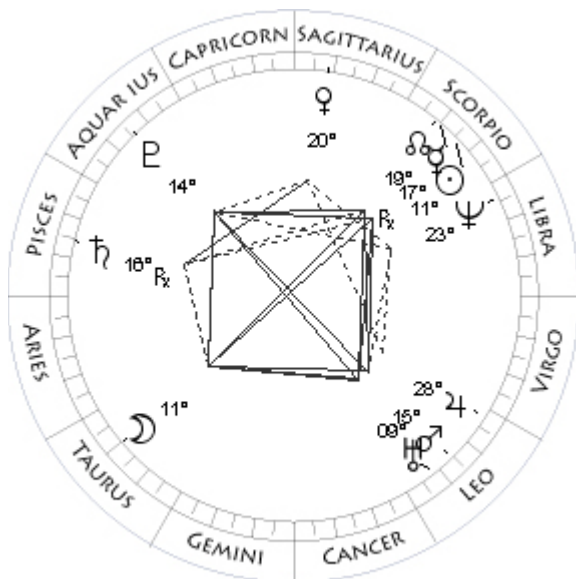
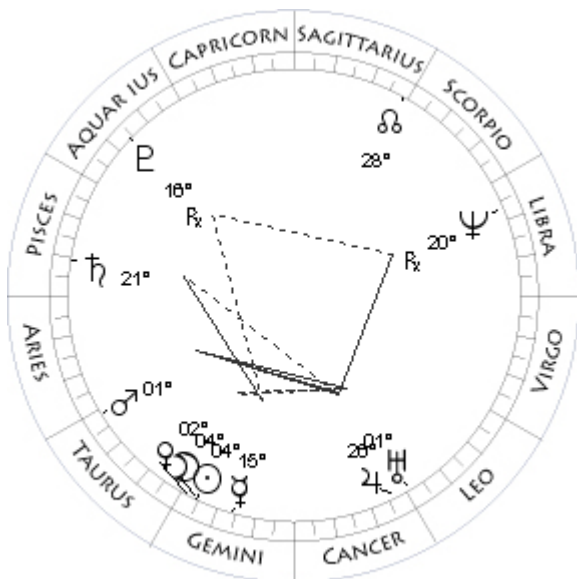
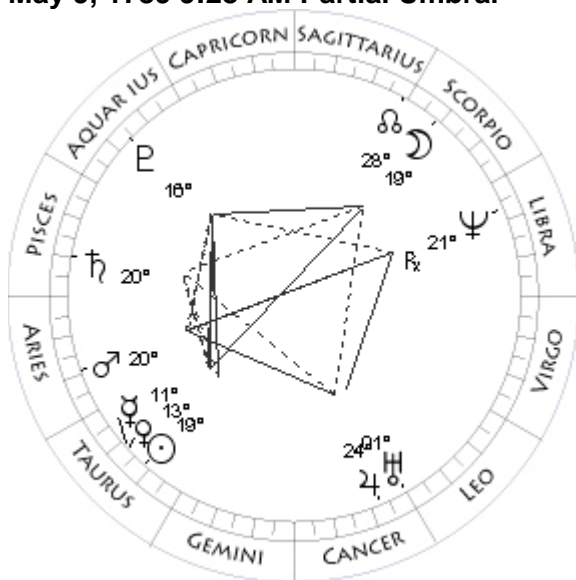
Nov 27, 1788 6:02 PM Annular Solar

Mo 27Sa48 + 1°00	Mo 06Sa17 - 0°09
Su 27Ge54 - 0°00	Su 06Sa16 - 0°00
Me 17Cn27 + 1°56	Me 22Sc57 + 2°22R
Ve 11Le30 + 1°25	Ve 23Li40 + 2°09
Ma 27Le23 + 1°12	Ma 14Sa19 - 0°35
Ju 05Cn54 - 0°01	Ju 29Cn35 + 0°20R
Sa 10Pi55 - 1°47	Sa 04Pi34 - 1°53
Ur 28Cn29 + 0°32	Ur 04Le43 + 0°36R
Ne 18Li23 + 1°43R	Ne 22Li26 + 1°40
Pl 15Aq06 - 8°15R	Pl 13Aq13 - 8°12
No 16Sa22 - 0°00	No 07Sa47 - 0°00
Coords: 131W/22S	

Dec 13, 1788 6:04 AM Partial Penumbral



May 9, 1789 9:28 AM Partial Umbral



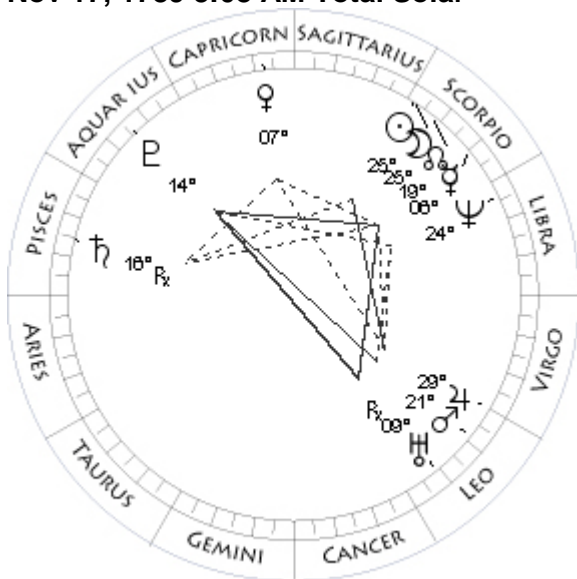
May 24, 1789 10:12 PM Total Solar

Mo 21Ge53 - 1°17	Mo 04Ge00 - 0°30
Su 22Sa01 - 0°00	Su 04Ge03 - 0°00
Me 01Sa24 + 1°50	Me 15Ge11 + 1°40
Ve 12Sc04 + 2°13	Ve 02Ge20 - 0°22
Ma 25Sa54 - 0°43	Ma 01Ta48 - 0°46
Ju 28Cn35 + 0°23R	Ju 26Cn35 + 0°33
Sa 05Pi19 - 1°50	Sa 21Pi58 - 1°59
Ur 04Le22 + 0°37R	Ur 01Le43 + 0°35
Ne 22Li50 + 1°40	Ne 20Li53 + 1°45R
Pl 13Aq30 - 8°10	Pl 16Aq53 - 8°33R
No 06Sa57 - 0°00	No 28Sc21 - 0°00
Coords: 151E/11S	

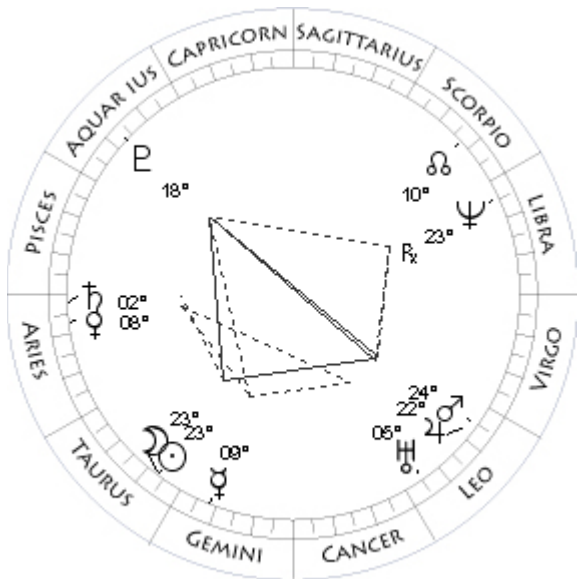
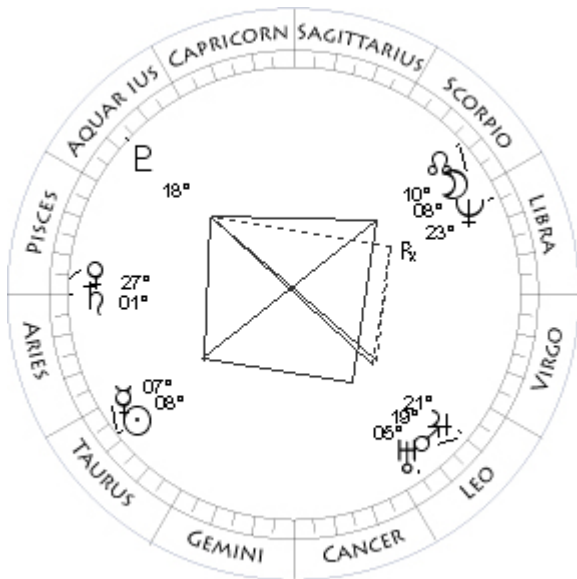
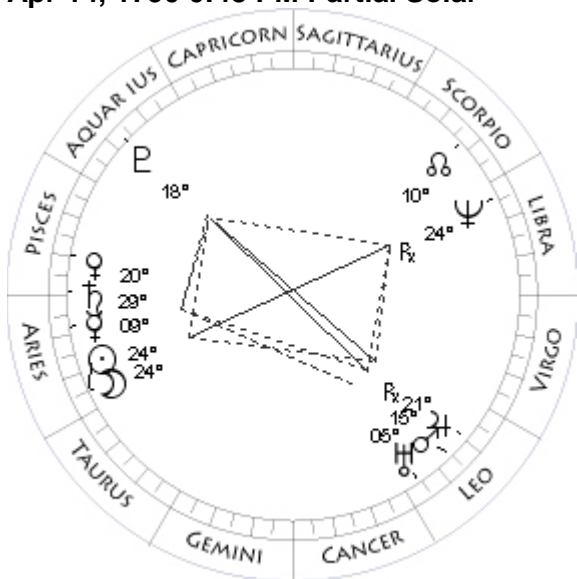
Nov 3, 1789 0:17 AM Partial Umbral

Mo 19Sc11 - 0°51	Mo 11Ta08 + 0°45
Su 19Ta06 - 0°00	Su 11Sc03 - 0°00
Me 11Ta49 - 0°48	Me 17Sc04 - 1°00R
Ve 13Ta14 - 0°55	Ve 20Sa23 - 1°59
Ma 20Ar08 - 0°53	Ma 15Le23 + 1°41
Ju 24Cn07 + 0°32	Ju 28Le23 + 0°49
Sa 20Pi49 - 1°55	Sa 16Pi44 - 2°18R
Ur 01Le12 + 0°36	Ur 09Le30 + 0°37
Ne 21Li13 + 1°46R	Ne 23Li43 + 1°40
Pl 16Aq53 - 8°29	Pl 14Aq32 - 8°41
No 29Sc10 - 0°00	No 19Sc46 - 0°00
Coords: 143E/18S	

Nov 17, 1789 3:08 AM Total Solar



Apr 14, 1790 0:48 PM Partial Solar



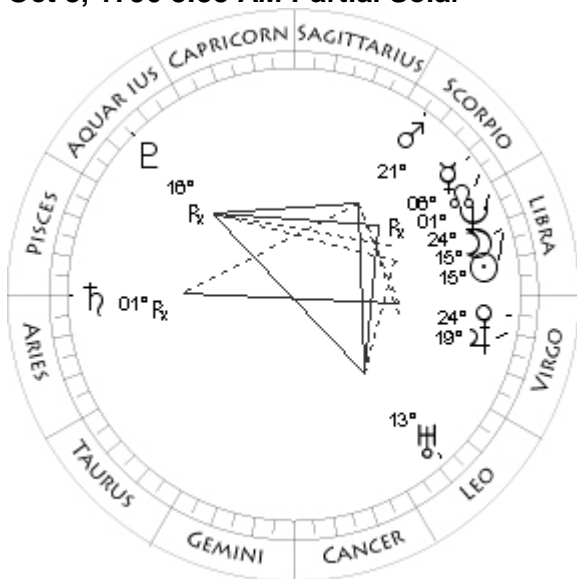
Apr 28, 1790 11:53 PM Total Umbral

Mo 25Sc13 + 0°32	Mo 08Sc49 - 0°07
Su 25Sc16 - 0°00	Su 08Ta48 - 0°00
Me 06Sc53 + 2°24	Me 07Ta45 - 0°20
Ve 07Cp11 - 2°22	Ve 27Pi09 + 0°55
Ma 21Le32 + 2°02	Ma 19Le14 + 2°07
Ju 29Le54 + 0°52	Ju 21Le28 + 1°07
Sa 16Pi30 - 2°16R	Sa 01Ar09 - 2°06
Ur 09Le33 + 0°38R	Ur 05Le33 + 0°38
Ne 24Li12 + 1°40	Ne 23Li43 + 1°47R
Pl 14Aq38 - 8°38	Pl 18Aq21 - 8°49
No 19Sc01 - 0°00	No 10Sc23 - 0°00
Coords: 134W/14N	Coords: 1W/15S

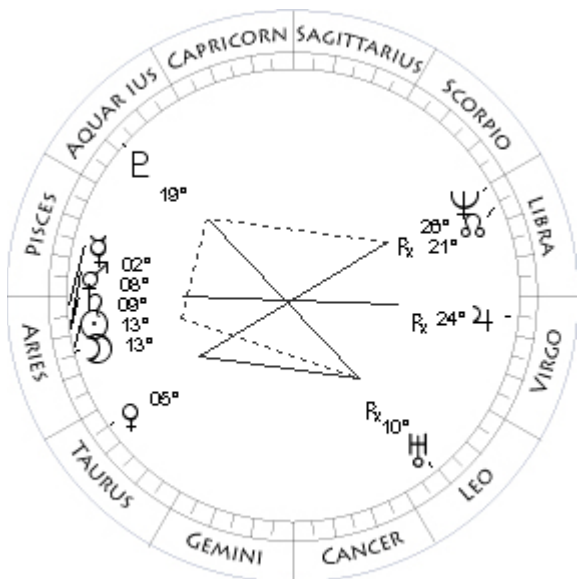
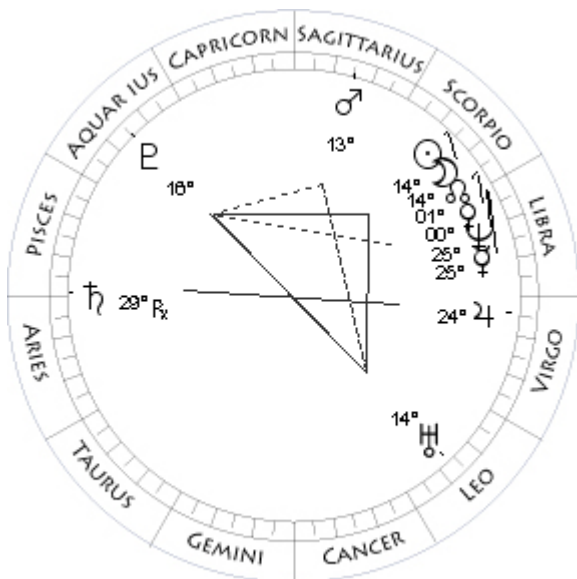
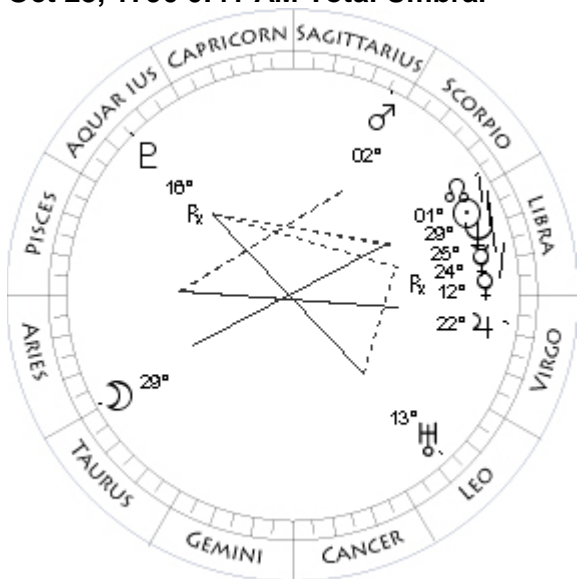
May 14, 1790 4:17 AM Partial Solar

Mo 24Ar52 + 1°23	Mo 23Ta22 - 1°13
Su 24Ar44 - 0°00	Su 23Ta29 - 0°00
Me 09Ar00 - 2°11	Me 09Ge20 + 1°59
Ve 20Pi53 + 3°35	Ve 08Ar22 - 1°00
Ma 15Le09 + 2°34	Ma 24Le55 + 1°42
Ju 21Le16 + 1°09R	Ju 22Le21 + 1°05
Sa 29Pi32 - 2°04	Sa 02Ar41 - 2°09
Ur 05Le26 + 0°39	Ur 05Le52 + 0°38
Ne 24Li06 + 1°47R	Ne 23Li20 + 1°47R
Pl 18Aq10 - 8°45	Pl 18Aq26 - 8°54
No 11Sc09 - 0°00	No 09Sc35 - 0°00

Oct 8, 1790 8:38 AM Partial Solar



Oct 23, 1790 0:41 AM Total Umbral



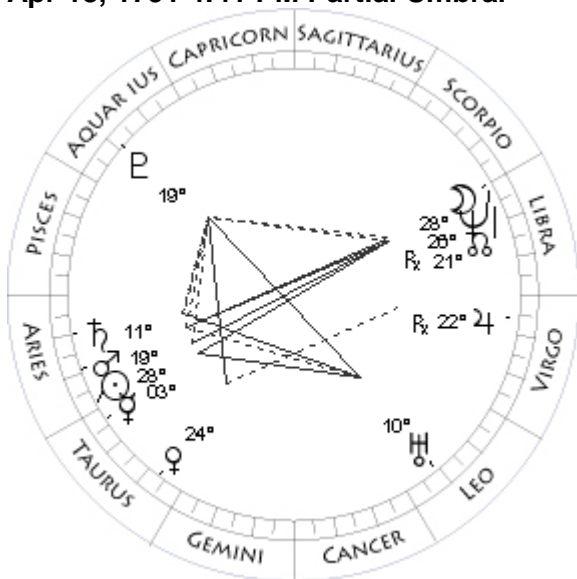
Nov 6, 1790 5:53 PM Partial Solar

Mo 15Li23 - 1°26	Mo 14Sc27 + 1°13
Su 15Li15 - 0°00	Su 14Sc34 - 0°00
Me 06Sc24 - 3°25R	Me 25Li45 + 2°16
Ve 24Vi11 + 1°28	Ve 00Sc52 + 1°20
Ma 21Sc52 - 0°35	Ma 13Sa09 - 0°50
Ju 19Vi06 + 1°02	Ju 24Vi42 + 1°06
Sa 01Ar28 - 2°38R	Sa 29Pi40 - 2°34R
Ur 13Le28 + 0°38	Ur 14Le11 + 0°39
Ne 24Li51 + 1°41	Ne 25Li57 + 1°41
Pl 16Aq10 - 9°09R	Pl 16Aq05 - 9°04
No 01Sc47 - 0°00	No 00Sc14 - 0°00

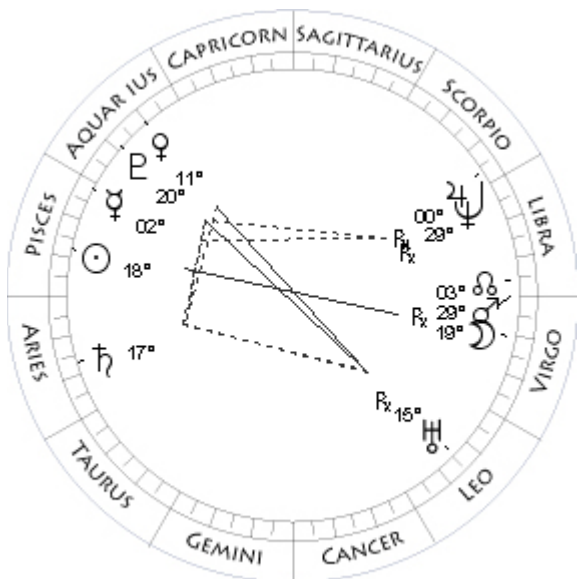
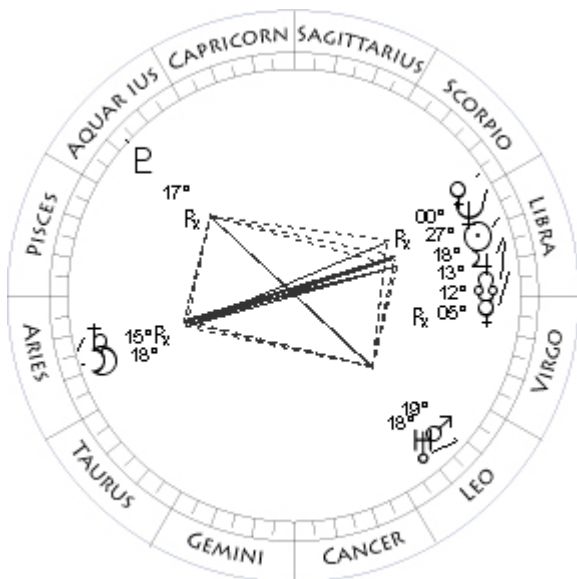
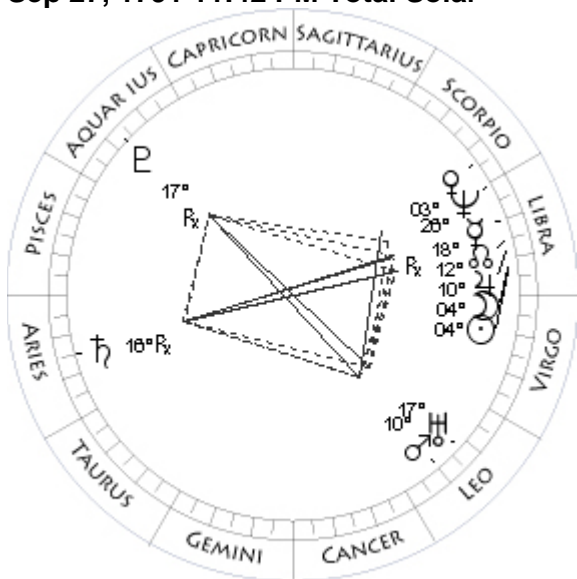
Apr 3, 1791 0:55 PM Annular Solar

Mo 29Ar51 + 0°07	Mo 13Ar47 + 0°45
Su 29Li50 - 0°00	Su 13Ar43 - 0°00
Me 24Li46 - 0°17R	Me 02Ar58 - 1°57
Ve 12Li27 + 1°31	Ve 05Ta47 - 0°13
Ma 02Sa22 - 0°43	Ma 08Ar04 - 0°45
Ju 22Vi01 + 1°04	Ju 24Vi27 + 1°34R
Sa 00Ar27 - 2°37R	Sa 09Ar24 - 2°12
Ur 13Le55 + 0°39	Ur 10Le12 + 0°41R
Ne 25Li24 + 1°41	Ne 26Li39 + 1°48R
Pl 16Aq05 - 9°07R	Pl 19Aq28 - 9°05
No 01Sc01 - 0°00	No 22Li24 - 0°00

Apr 18, 1791 4:41 PM Partial Umbral



Sep 27, 1791 11:42 PM Total Solar



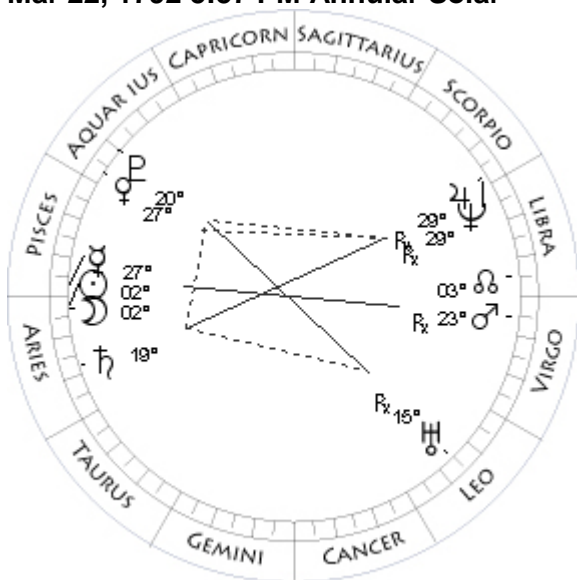
Oct 12, 1791 1:23 AM Partial Umbral

Mo 28Li29 + 0°37	Mo 18Ar37 - 0°32
Su 28Ar33 - 0°00	Su 18Li40 - 0°00
Me 03Ta53 + 0°10	Me 05Li06 + 0°24R
Ve 24Ta18 + 0°29	Ve 00Sc37 - 7°36R
Ma 19Ar39 - 0°37	Ma 19Le09 + 1°22
Ju 22Vi54 + 1°32R	Ju 13Li23 + 1°07
Sa 11Ar17 - 2°13	Sa 15Ar10 - 2°47R
Ur 10Le07 + 0°41	Ur 18Le08 + 0°40
Ne 26Li14 + 1°48R	Ne 27Li05 + 1°42
Pl 19Aq43 - 9°09	Pl 17Aq41 - 9°32R
No 21Li36 - 0°00	No 12Li16 - 0°00
Coords: 110W/10S	

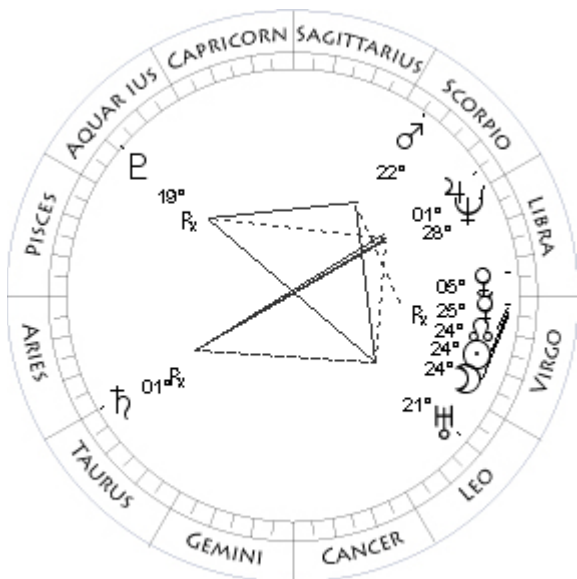
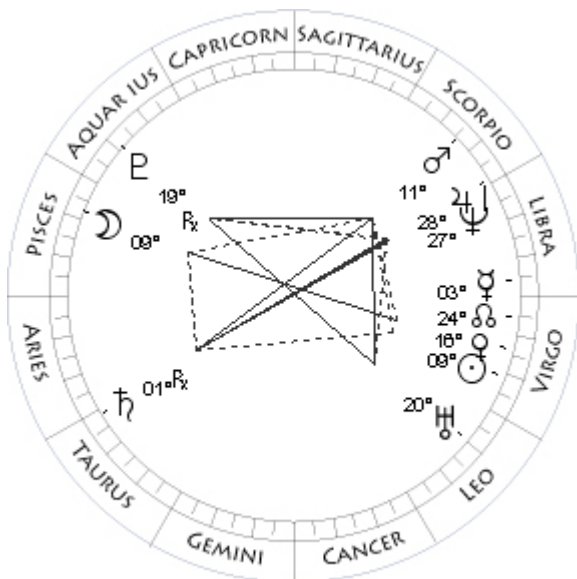
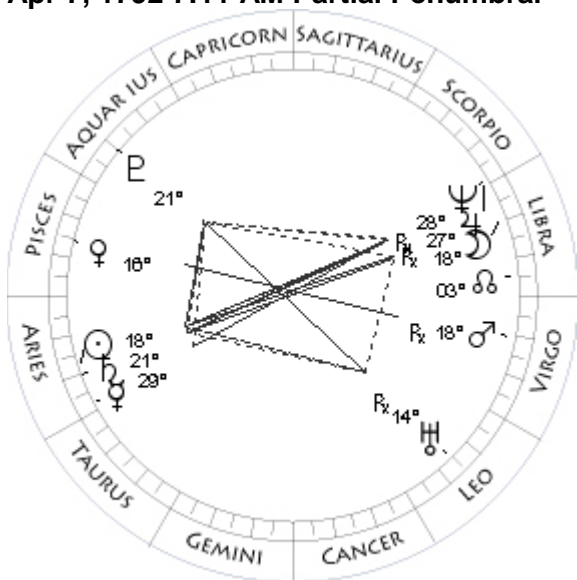
Mar 8, 1792 7:02 PM Partial Penumbral

Mo 04Li51 - 0°44	Mo 19Vi05 - 1°18
Su 04Li46 - 0°00	Su 18Pi58 - 0°00
Me 18Li06 - 3°32R	Me 02Pi35 - 2°12
Ve 03Sc59 - 7°13	Ve 11Aq01 + 0°02
Ma 10Le48 + 1°12	Ma 29Vi02 + 3°46R
Ju 10Li20 + 1°07	Ju 00Sc39 + 1°29R
Sa 16Ar17 - 2°46R	Sa 17Ar47 - 2°17
Ur 17Le33 + 0°40	Ur 15Le38 + 0°44R
Ne 26Li34 + 1°42	Ne 29Li28 + 1°48R
Pl 17Aq50 - 9°34R	Pl 20Aq21 - 9°21
No 13Li01 - 0°00	No 04Li23 - 0°00
Coords: 162W/47S	

Mar 22, 1792 5:57 PM Annular Solar



Apr 7, 1792 7:11 AM Partial Penumbral



Aug 31, 1792 10:42 PM Partial Penumbral

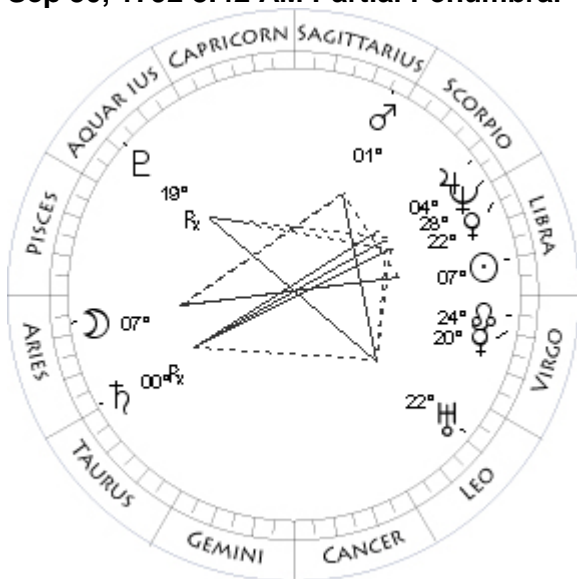
Mo 02Ar50 + 0°04	Mo 09Pi14 + 1°22
Su 02Ar50 - 0°00	Su 09Vi07 - 0°00
Me 27Pi40 - 1°42	Me 03Li08 - 3°42
Ve 27Aq47 - 0°42	Ve 16Vi04 + 1°24
Ma 23Vi40 + 3°30R	Ma 11Sc48 - 0°52
Ju 29Li27 + 1°31R	Ju 28Li55 + 1°02
Sa 19Ar28 - 2°16	Sa 01Ta54 - 2°40R
Ur 15Le13 + 0°43R	Ur 20Le35 + 0°40
Ne 29Li10 + 1°49R	Ne 27Li51 + 1°43
Pl 20Aq42 - 9°24	Pl 19Aq50 -10°00R
No 03Li39 - 0°00	No 25Vi04 - 0°00

Sep 16, 1792 9:13 AM Annular Solar

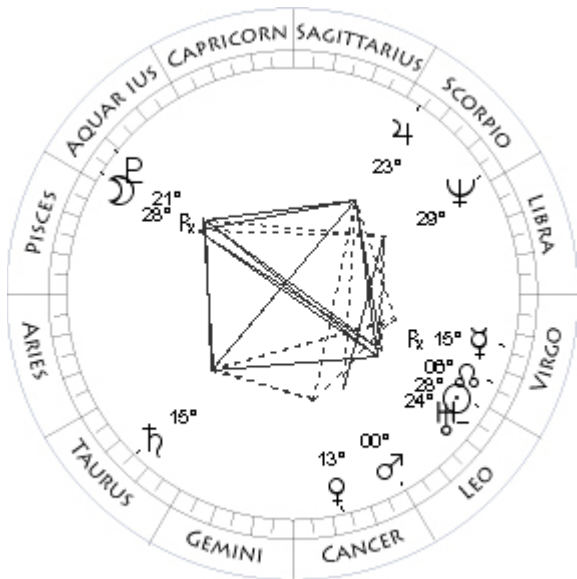
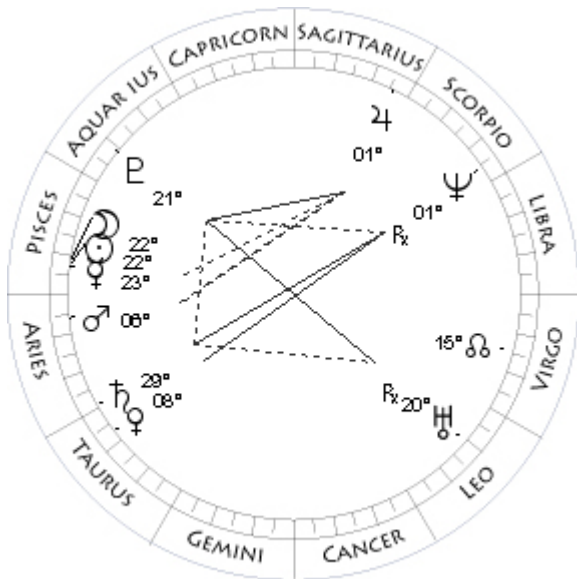
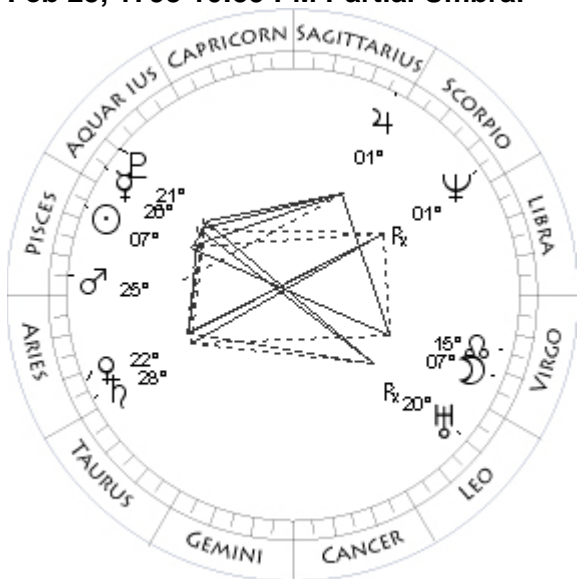
Mo 18Li01 + 1°20	Mo 24Vi08 - 0°01
Su 18Ar09 - 0°00	Su 24Vi08 - 0°00
Me 29Ar17 + 0°41	Me 25Vi47 - 3°12R
Ve 16Pi34 - 1°18	Ve 05Li14 + 1°11
Ma 18Vi37 + 2°56R	Ma 22Sc10 - 1°01
Ju 27Li40 + 1°32R	Ju 01Sc46 + 1°00
Sa 21Ar25 - 2°15	Sa 01Ta13 - 2°44R
Ur 14Le56 + 0°43R	Ur 21Le29 + 0°41
Ne 28Li46 + 1°49R	Ne 28Li19 + 1°43
Pl 21Aq02 - 9°28	Pl 19Aq33 - 9°59R
No 02Li50 - 0°00	No 24Vi15 - 0°00

Coords: 40W/ 1N

Sep 30, 1792 8:42 AM Partial Penumbral



Feb 25, 1793 10:59 PM Partial Umbral



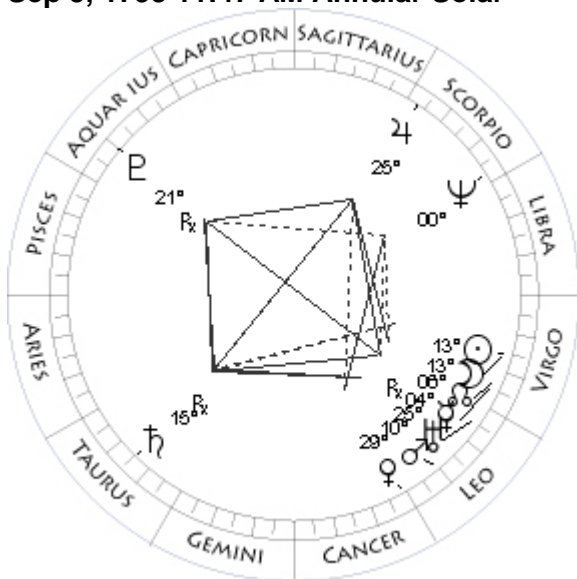
Mar 12, 1793 5:59 AM Total Solar

Mo 07Ar44 - 1°13	Mo 22Pi05 - 0°39
Su 07Li51 - 0°00	Su 22Pi10 - 0°00
Me 20Vi18 + 0°57	Me 23Pi03 - 1°26
Ve 22Li36 + 0°47	Ve 08Ta08 + 2°25
Ma 01Sa54 - 1°07	Ma 06Ar59 - 0°34
Ju 04Sc34 + 0°58	Ju 01Sa51 + 1°02
Sa 00Ta20 - 2°46R	Sa 29Ar58 - 2°15
Ur 22Le12 + 0°41	Ur 20Le25 + 0°45R
Ne 28Li47 + 1°43	Ne 01Sc37 + 1°49R
Pl 19Aq20 - 9°57R	Pl 21Aq54 - 9°43
No 23Vi30 - 0°00	No 14Vi53 - 0°00
Coords: 133E/ 2N	Coords: 108W/41S

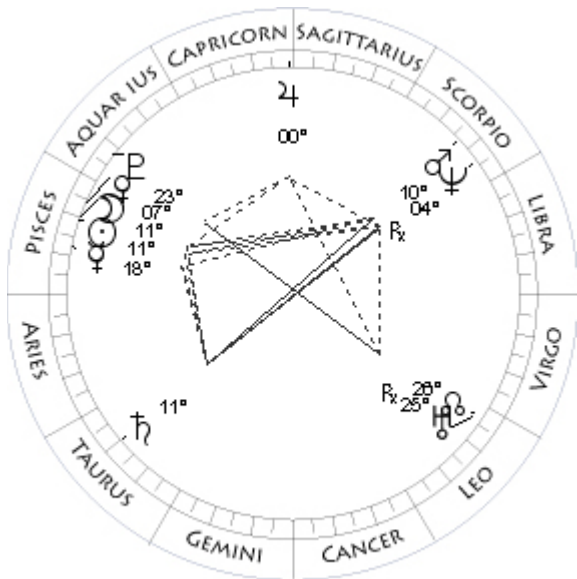
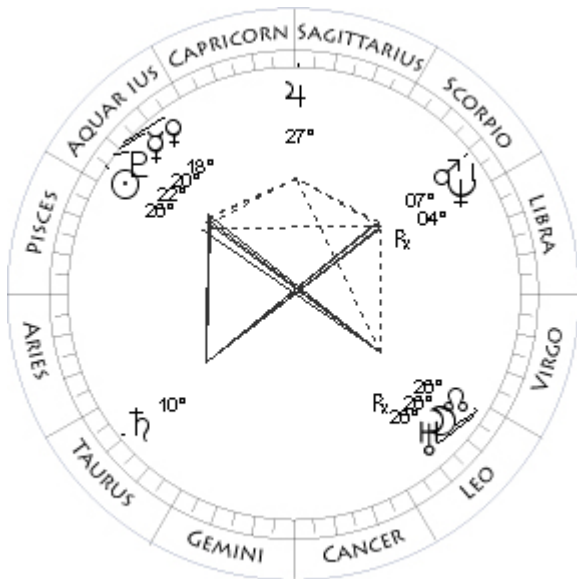
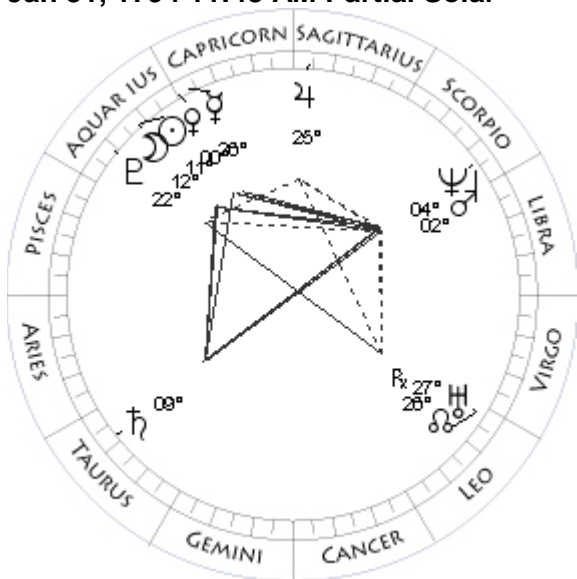
Aug 21, 1793 2:55 PM Partial Umbral

Mo 07Vi56 - 0°39	Mo 28Aq57 + 0°39
Su 07Pi53 - 0°00	Su 28Le54 - 0°00
Me 26Aq42 - 2°09	Me 15Vi40 - 4°26R
Ve 22Ar53 + 1°13	Ve 13Cn52 - 2°21
Ma 25Pi58 - 0°43	Ma 00Le48 + 1°01
Ju 01Sa17 + 1°00	Ju 23Sc41 + 0°44
Sa 28Ar30 - 2°18	Sa 15Ta46 - 2°27
Ur 20Le58 + 0°46R	Ur 24Le23 + 0°41
Ne 01Sc51 + 1°48R	Ne 29Li43 + 1°45
Pl 21Aq30 - 9°41	Pl 21Aq36 -10°22R
No 15Vi38 - 0°00	No 06Vi17 - 0°00
Coords: 18W/ 8N	Coords: 137W/11S

Sep 5, 1793 11:47 AM Annular Solar



Jan 31, 1794 11:48 AM Partial Solar



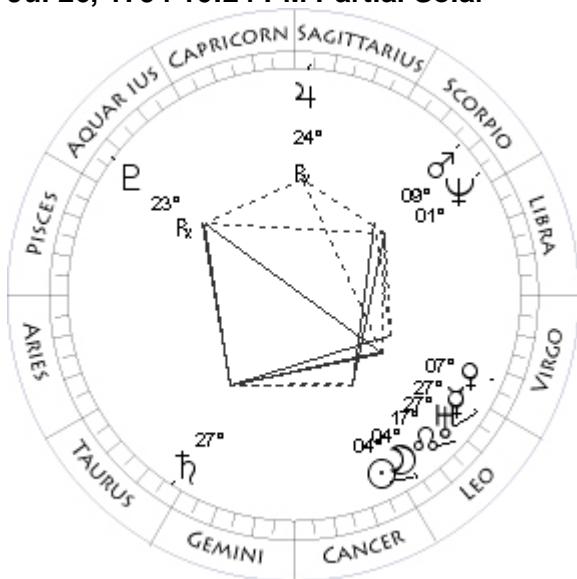
Feb 14, 1794 10:21 PM Total Umbral

Mo 13Vi13 + 0°40	Mo 26Le33 - 0°01
Su 13Vi17 - 0°00	Su 26Aq32 - 0°00
Me 04Vi01 - 2°29R	Me 20Aq46 - 2°06
Ve 29Cn54 - 1°14	Ve 18Aq30 - 1°10
Ma 10Le16 + 1°07	Ma 07Sc00 + 2°07
Ju 25Sc23 + 0°41	Ju 27Sa51 + 0°24
Sa 15Ta44 - 2°31R	Sa 10Ta05 - 2°13
Ur 25Le18 + 0°42	Ur 26Le25 + 0°47R
Ne 00Sc05 + 1°44	Ne 04Sc10 + 1°48R
Pl 21Aq17 -10°22R	Pl 22Aq36 -10°01
No 05Vi30 - 0°00	No 26Le53 - 0°00
Coords: 23W/51N	Coords: 28W/13N

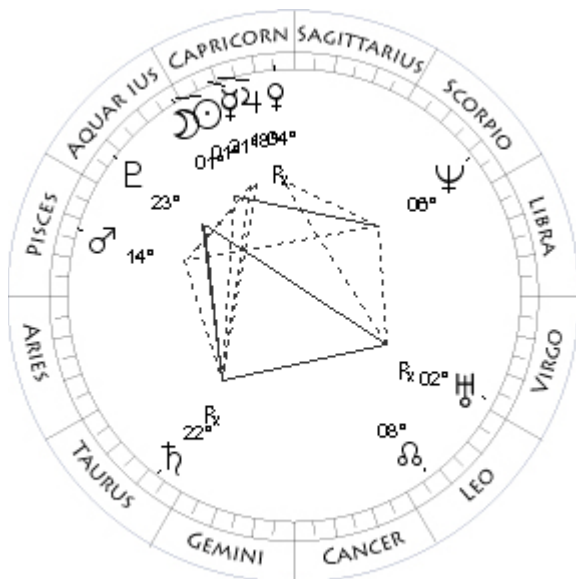
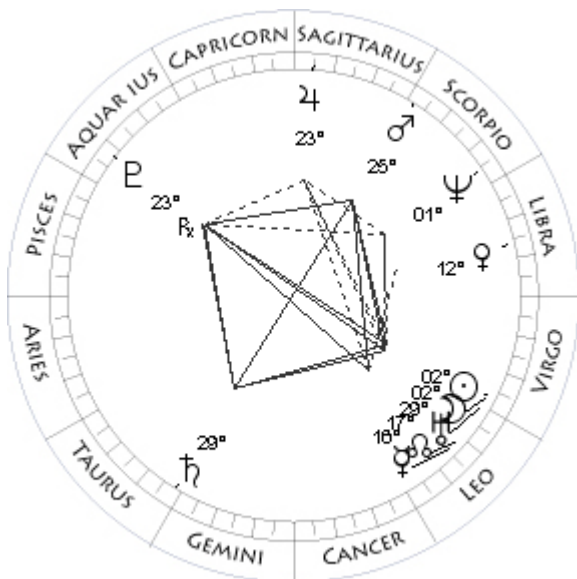
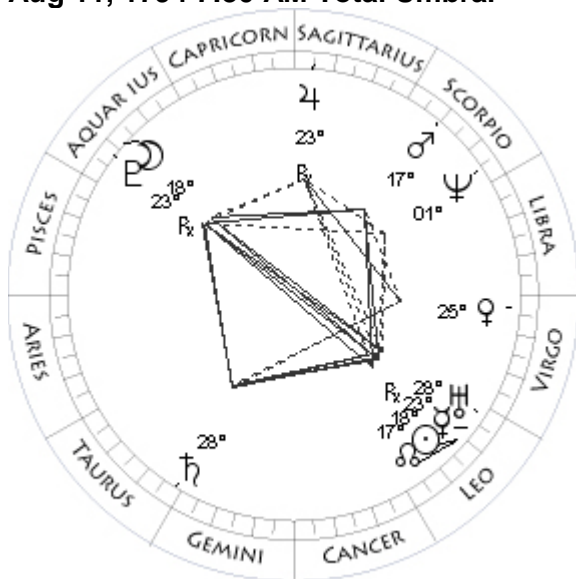
Mar 1, 1794 9:53 PM Partial Solar

Mo 12Aq03 + 1°21	Mo 11Pi28 - 1°20
Su 11Aq56 - 0°00	Su 11Pi36 - 0°00
Me 26Cp59 - 1°30	Me 18Pi34 - 1°06
Ve 00Aq25 - 0°44	Ve 07Pi14 - 1°24
Ma 02Sc02 + 2°04	Ma 10Sc38 + 2°09
Ju 25Sa17 + 0°25	Ju 00Cp07 + 0°24
Sa 09Ta19 - 2°17	Sa 11Ta12 - 2°10
Ur 27Le02 + 0°47R	Ur 25Le46 + 0°47R
Ne 04Sc12 + 1°47	Ne 04Sc01 + 1°49R
Pl 22Aq11 -10°00	Pl 23Aq02 -10°02
No 27Le39 - 0°00	No 26Le06 - 0°00

Jul 26, 1794 10:24 PM Partial Solar



Aug 11, 1794 7:30 AM Total Umbral



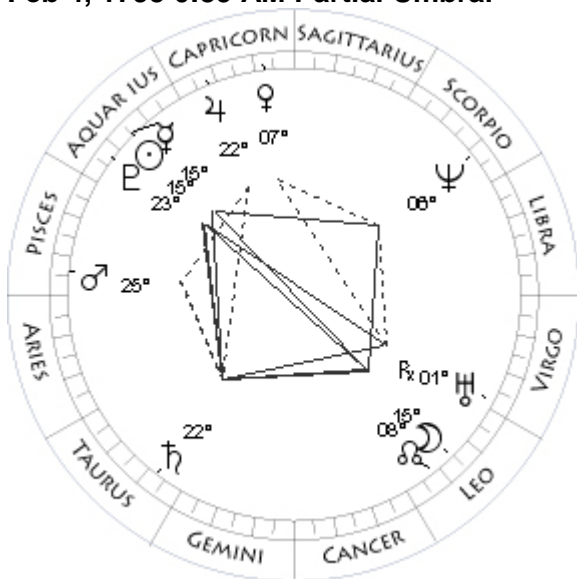
Aug 25, 1794 0:09 PM Partial Solar

Mo 04Le07 - 1°15	Mo 02Vi17 + 1°19
Su 04Le00 - 0°00	Su 02Vi25 - 0°00
Me 27Le56 - 2°53	Me 16Le16 - 1°40
Ve 07Vi20 + 1°22	Ve 12Li14 - 0°01
Ma 09Sc35 - 1°38	Ma 25Sc51 - 1°51
Ju 24Sa46 + 0°11R	Ju 23Sa53 + 0°06
Sa 27Ta49 - 2°05	Sa 29Ta24 - 2°10
Ur 27Le15 + 0°43	Ur 29Le04 + 0°43
Ne 01Sc29 + 1°47	Ne 01Sc56 + 1°45
Pl 23Aq40 -10°41R	Pl 23Aq01 -10°44R
No 18Le19 - 0°00	No 16Le45 - 0°00

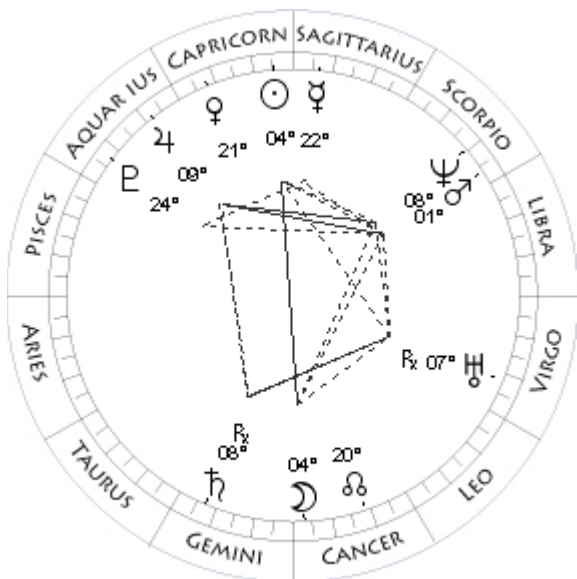
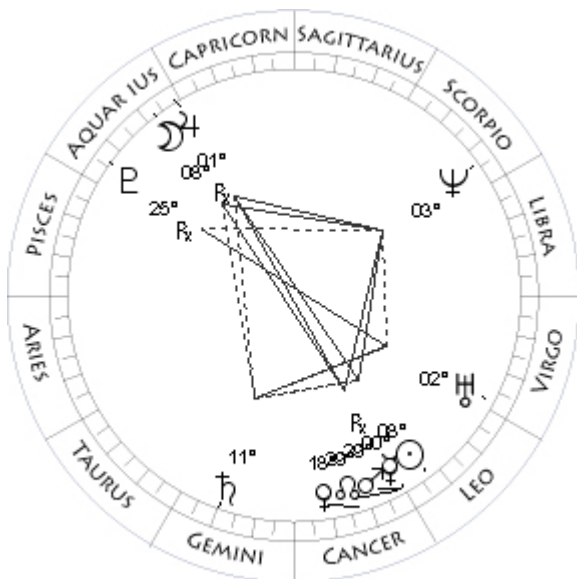
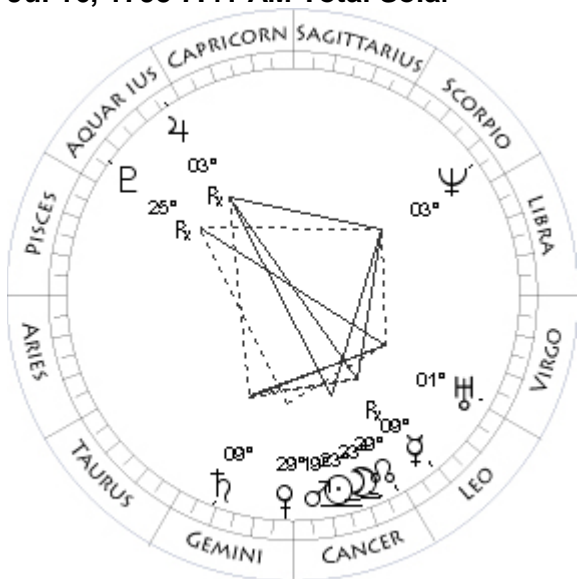
Jan 21, 1795 0:28 AM Annular Solar

Mo 18Aq44 - 0°05	Mo 01Aq06 + 0°41
Su 18Le44 - 0°00	Su 01Aq03 - 0°00
Me 23Le20 - 4°47R	Me 21Cp38 - 1°38
Ve 25Vi35 + 0°46	Ve 04Cp12 + 6°31R
Ma 17Sc35 - 1°47	Ma 14Pi23 - 0°46
Ju 23Sa58 + 0°08R	Ju 18Cp55 - 0°10
Sa 28Ta49 - 2°07	Sa 22Ta43 - 2°06R
Ur 28Le11 + 0°42	Ur 02Vi24 + 0°47R
Ne 01Sc40 + 1°46	Ne 06Sc18 + 1°47
Pl 23Aq20 -10°43R	Pl 23Aq18 -10°21
No 17Le30 - 0°00	No 08Le53 - 0°00
Coords: 111E/15S	Coords: 170W/25N

Feb 4, 1795 0:39 AM Partial Umbral



Jul 16, 1795 7:41 AM Total Solar



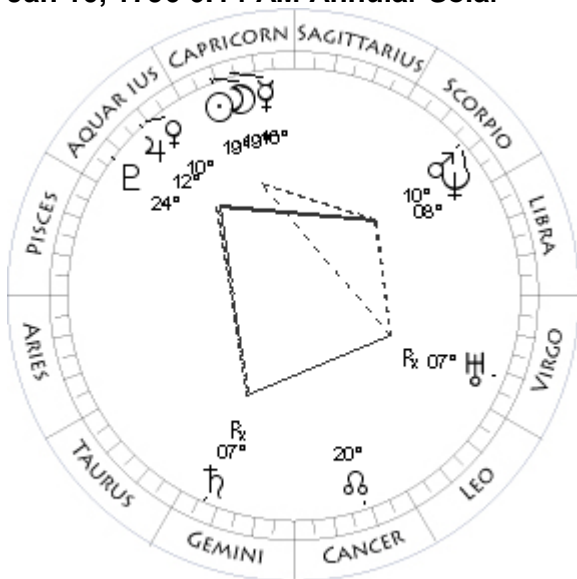
Jul 31, 1795 7:50 PM Partial Umbral

Mo 15Le12 + 0°37	Mo 08Aq22 - 0°50
Su 15Aq16 - 0°00	Su 08Le27 - 0°00
Me 15Aq07 - 2°04	Me 00Le13 - 4°25R
Ve 07Cp05 + 6°02	Ve 18Cn16 + 0°07
Ma 25Pi06 - 0°35	Ma 29Cn28 + 1°03
Ju 22Cp07 - 0°11	Ju 01Aq39 - 0°41R
Sa 22Ta50 - 2°02	Sa 11Ge03 - 1°43
Ur 01Vi51 + 0°48R	Ur 02Vi00 + 0°43
Ne 06Sc23 + 1°48	Ne 03Sc41 + 1°47
Pl 23Aq42 -10°21	Pl 25Aq04 -11°03R
No 08Le08 - 0°00	No 28Cn43 - 0°00
	Coords: 64W/19S

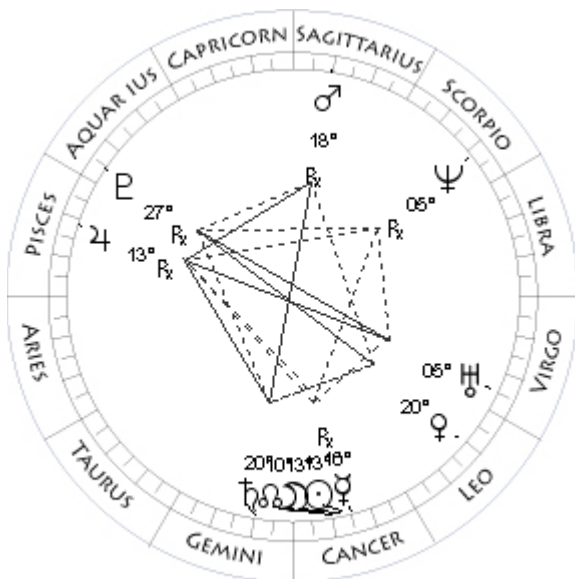
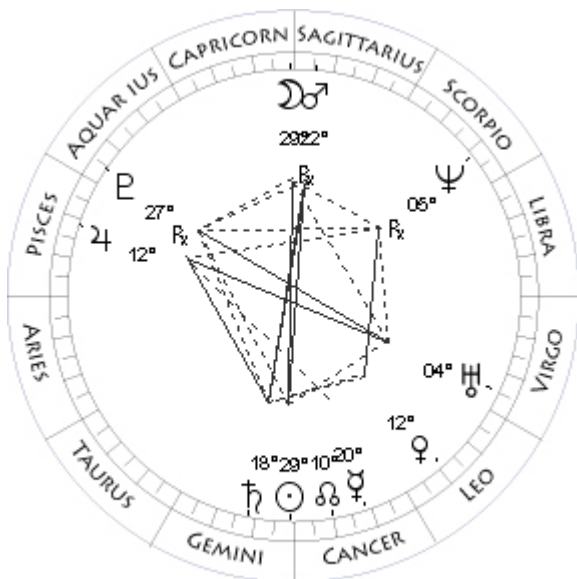
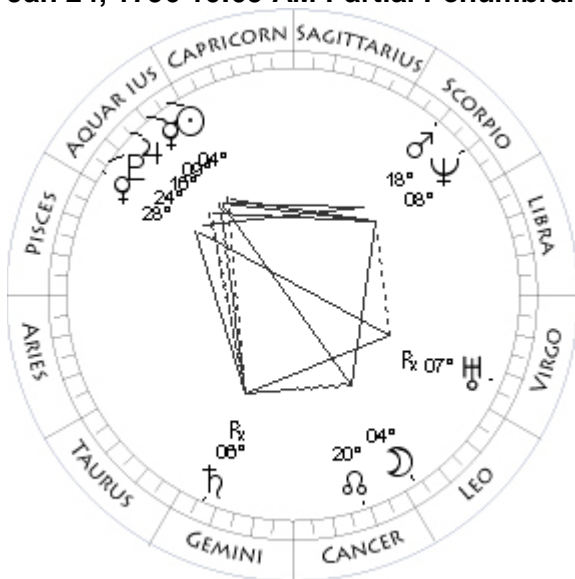
Dec 25, 1795 10:37 PM Partial Penumbra

Mo 23Cn41 - 0°31	Mo 04Cn21 - 1°25
Su 23Cn38 - 0°00	Su 04Cp13 - 0°00
Me 09Le32 - 3°48R	Me 22Sa04 - 0°23
Ve 29Ge27 - 0°34	Ve 21Cp34 - 1°20
Ma 19Cn25 + 0°58	Ma 01Sc05 + 1°15
Ju 03Aq38 - 0°39R	Ju 09Aq24 - 0°42
Sa 09Ge32 - 1°41	Sa 08Ge22 - 1°49R
Ur 01Vi08 + 0°44	Ur 07Vi55 + 0°47R
Ne 03Sc36 + 1°48	Ne 08Sc00 + 1°45
Pl 25Aq22 -11°00R	Pl 24Aq05 -10°44
No 29Cn33 - 0°00	No 20Cn56 - 0°00
	Coords: 21W/22N

Jan 10, 1796 6:14 AM Annular Solar



Jan 24, 1796 10:09 AM Partial Penumbral



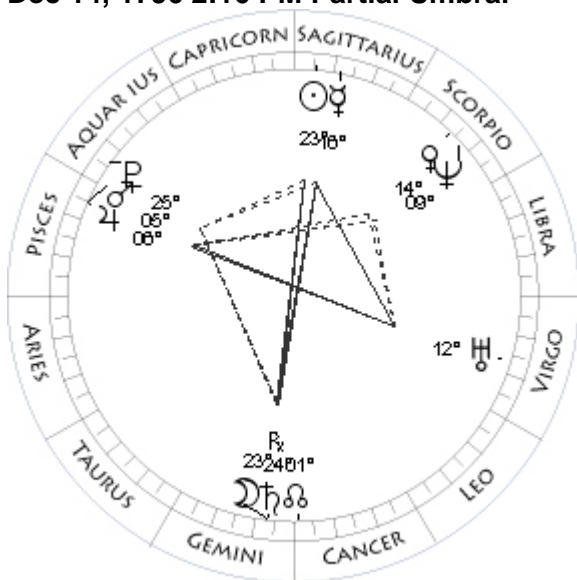
Jun 20, 1796 10:27 AM Partial Penumbral

Mo 19Cp50 + 0°01	Mo 29Sa46 + 1°01
Su 19Cp50 - 0°00	Su 29Ge41 - 0°00
Me 16Cp04 - 1°46	Me 20Cn16 - 1°11
Ve 10Aq44 - 1°35	Ve 12Le18 + 1°10
Ma 10Sc05 + 1°12	Ma 22Sa53 - 3°55R
Ju 12Aq49 - 0°42	Ju 12Pi50 - 1°09
Sa 07Ge27 - 1°46R	Sa 18Ge56 - 1°16
Ur 07Vi38 + 0°48R	Ur 04Vi34 + 0°45
Ne 08Sc19 + 1°46	Ne 05Sc57 + 1°49R
Pl 24Aq26 -10°42	Pl 27Aq11 -11°13R
No 20Cn07 - 0°00	No 11Cn32 - 0°00
Coords: 88W/21S	Coords: 157E/22S

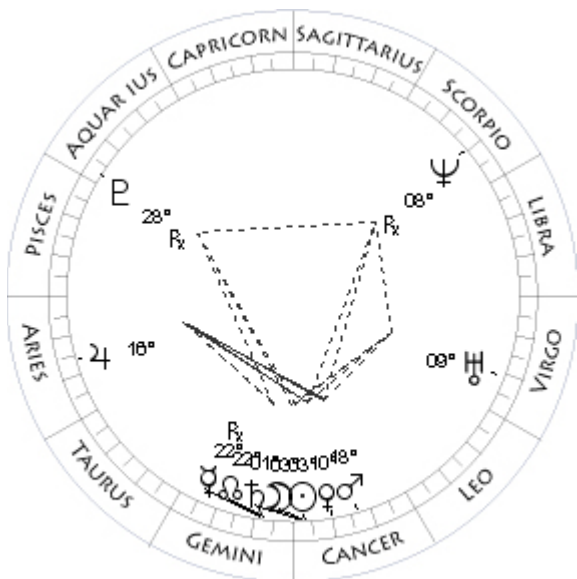
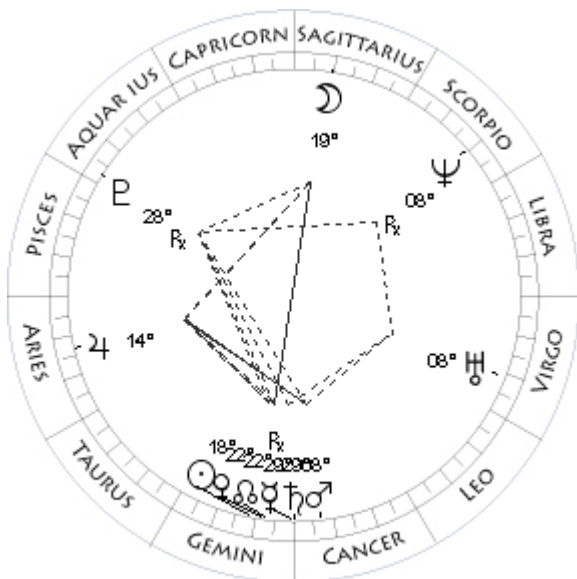
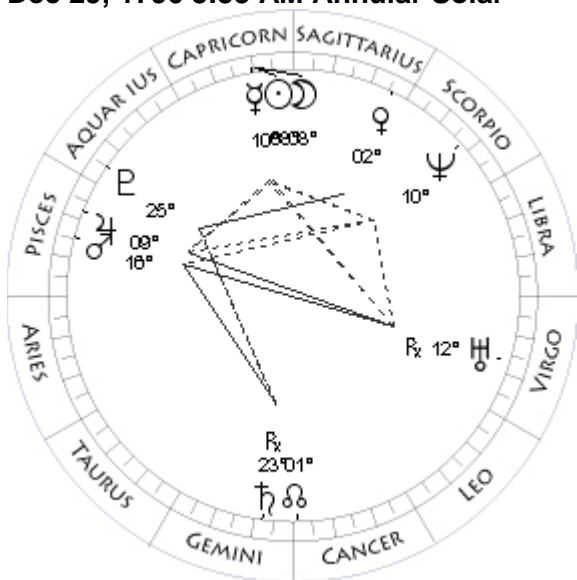
Jul 4, 1796 11:02 PM Total Solar

Mo 04Le07 + 1°17	Mo 13Cn29 + 0°15
Su 04Aq15 - 0°00	Su 13Cn31 - 0°00
Me 09Aq53 - 2°01	Me 16Cn15 - 4°34R
Ve 28Aq23 - 1°34	Ve 20Le04 - 0°55
Ma 18Sc13 + 1°08	Ma 18Sa55 - 4°25R
Ju 16Aq08 - 0°43	Ju 13Pi01 - 1°13R
Sa 06Ge56 - 1°42R	Sa 20Ge46 - 1°15
Ur 07Vi13 + 0°48R	Ur 05Vi08 + 0°45
Ne 08Sc29 + 1°47	Ne 05Sc49 + 1°49R
Pl 24Aq49 -10°41	Pl 27Aq01 -11°17R
No 19Cn22 - 0°00	No 10Cn46 - 0°00
Coords: 149E/20N	Coords: 165E/37N

Dec 14, 1796 2:16 PM Partial Umbral



Dec 29, 1796 5:55 AM Annular Solar



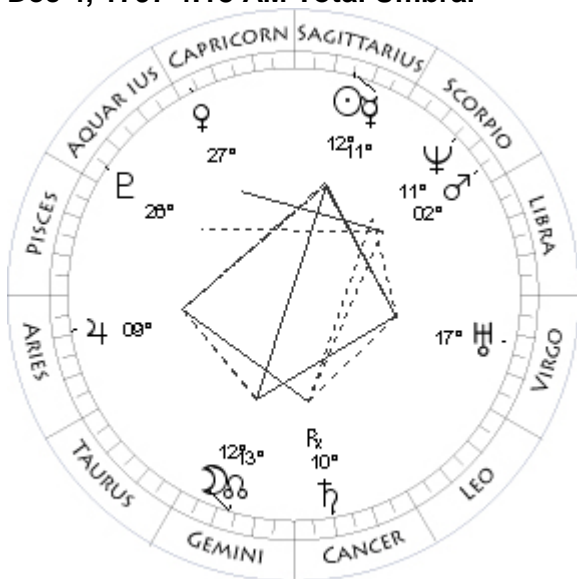
Jun 9, 1797 11:30 AM Total Umbral

Mo 23Ge30 - 0°46	Mo 19Sa01 + 0°20
Su 23Sa26 - 0°00	Su 18Ge59 - 0°00
Me 16Sa56 - 0°40	Me 29Ge45 - 1°56R
Ve 14Sc12 + 2°11	Ve 22Ge07 + 0°17
Ma 05Pi37 - 1°00	Ma 08Cn12 + 1°02
Ju 06Pi42 - 1°11	Ju 14Ar27 - 1°13
Sa 24Ge29 - 1°18R	Sa 29Ge47 - 0°48
Ur 12Vi46 + 0°47	Ur 08Vi53 + 0°46
Ne 09Sc50 + 1°45	Ne 08Sc21 + 1°50R
Pl 25Aq19 -11°06	Pl 28Aq43 -11°29R
No 02Cn09 - 0°00	No 22Ge47 - 0°00
Coords: 145W/23N	Coords: 173E/23S

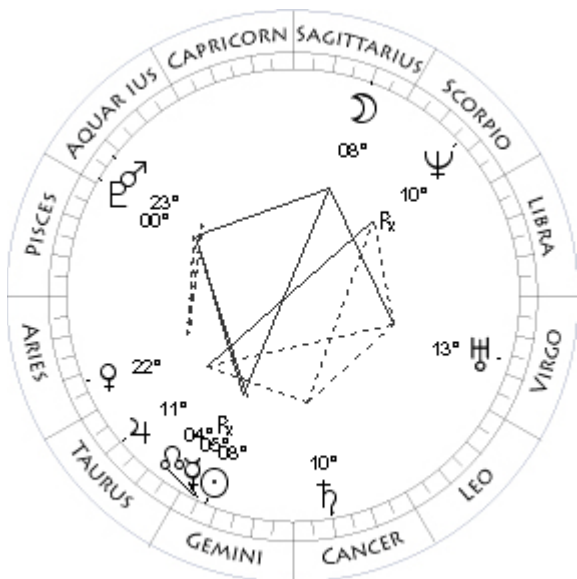
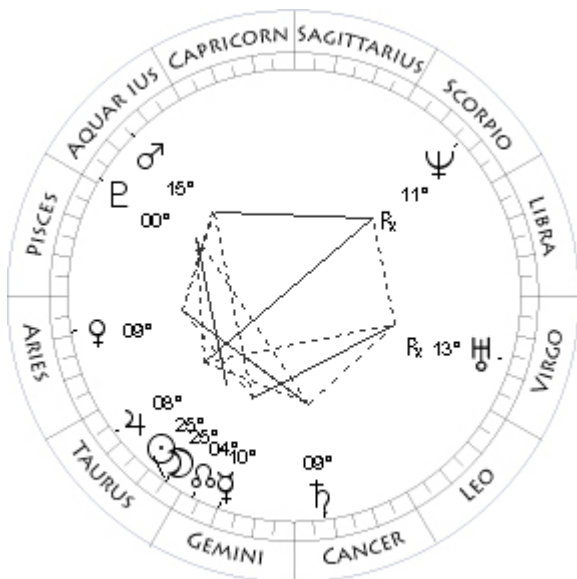
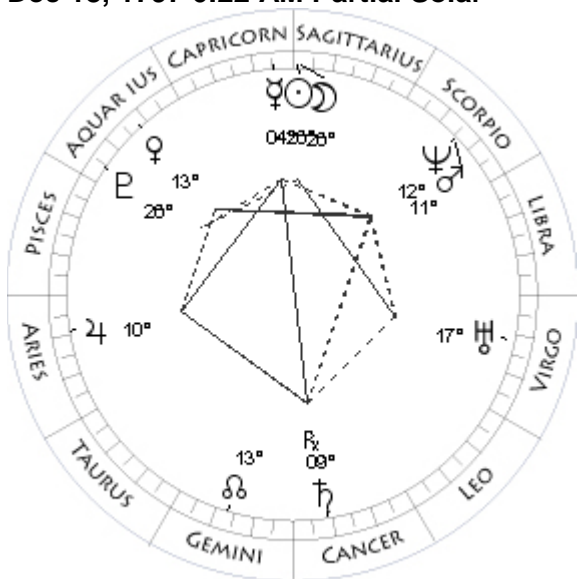
Jun 24, 1797 4:18 PM Total Solar

Mo 08Cp18 - 0°36	Mo 03Cn23 + 0°59
Su 08Cp22 - 0°00	Su 03Cn30 - 0°00
Me 10Cp09 - 1°53	Me 22Ge23 - 4°37R
Ve 02Sa00 + 1°51	Ve 10Cn48 + 0°51
Ma 16Pi14 - 0°41	Ma 18Cn03 + 1°05
Ju 09Pi02 - 1°09	Ju 16Ar42 - 1°17
Sa 23Ge17 - 1°16R	Sa 01Cn46 - 0°47
Ur 12Vi42 + 0°47R	Ur 09Vi18 + 0°45
Ne 10Sc13 + 1°46	Ne 08Sc06 + 1°49R
Pl 25Aq35 -11°03	Pl 28Aq36 -11°34R
No 01Cn23 - 0°00	No 21Ge59 - 0°00
Coords: 89W/65S	Coords: 135W/78N

Dec 4, 1797 4:18 AM Total Umbral



Dec 18, 1797 6:22 AM Partial Solar



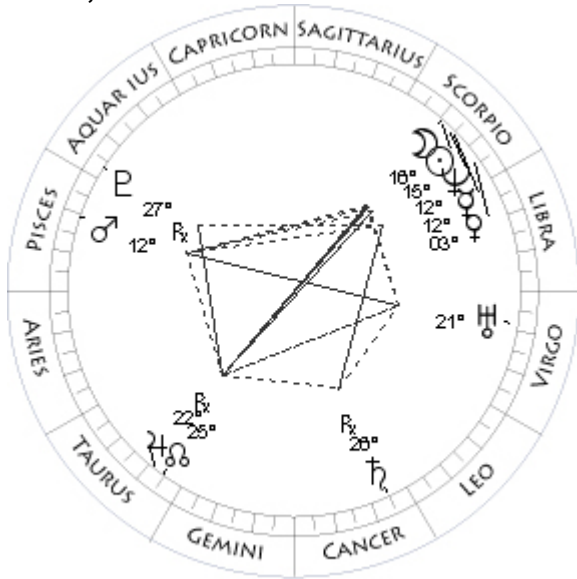
May 15, 1798 8:10 PM Annular Solar

Mo 12Ge36 - 0°05	Mo 25Ta13 - 0°49
Su 12Sa36 - 0°00	Su 25Ta08 - 0°00
Me 11Sa56 - 0°56	Me 10Ge39 + 1°08
Ve 27Cp30 - 2°27	Ve 09Ar36 - 1°13
Ma 02Sc03 + 0°51	Ma 15Aq42 - 2°07
Ju 09Ar53 - 1°26	Ju 08Ta17 - 0°59
Sa 10Cn36 - 0°41R	Sa 09Cn17 - 0°20
Ur 17Vi23 + 0°46	Ur 13Vi24 + 0°47R
Ne 11Sc37 + 1°44	Ne 11Sc09 + 1°51R
Pl 26Aq35 -11°27	Pl 00Pi06 -11°39
No 13Ge23 - 0°00	No 04Ge46 - 0°00
	Coords: 102E/38S

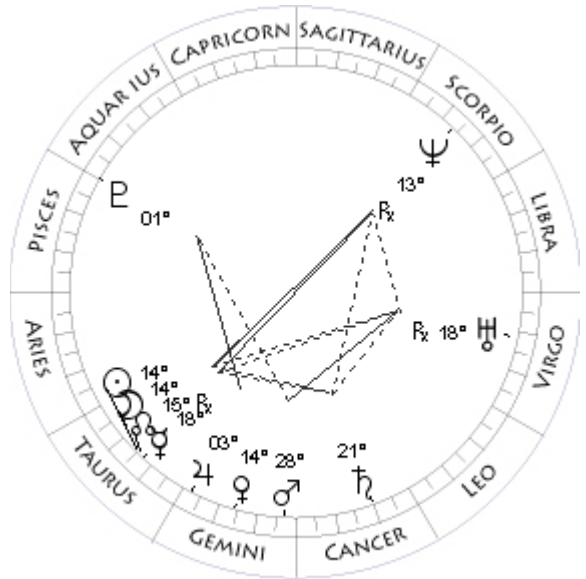
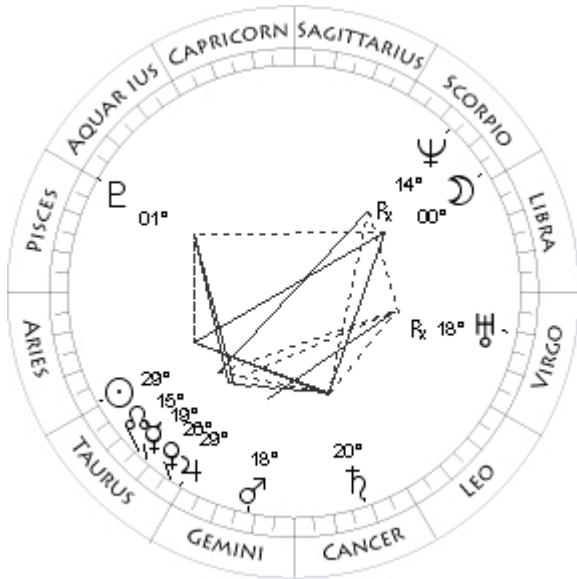
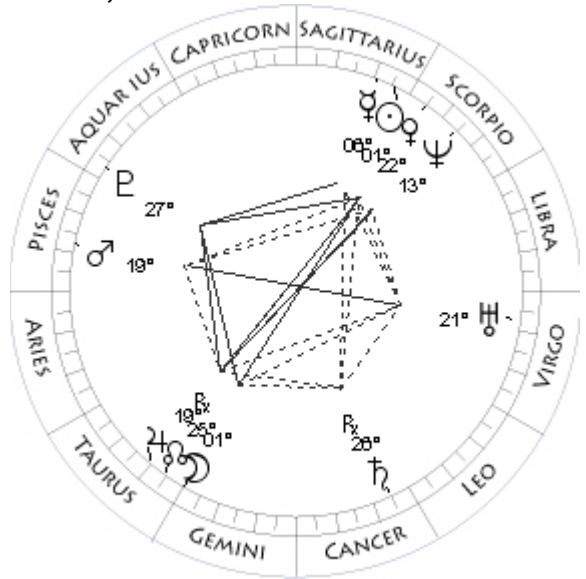
May 29, 1798 6:07 PM Total Umbral

Mo 26Sa49 - 1°13	Mo 08Sa28 - 0°24
Su 26Sa56 - 0°00	Su 08Ge30 - 0°00
Me 04Cp11 - 2°00	Me 05Ge17 - 2°39R
Ve 13Aq22 - 2°01	Ve 22Ar42 - 2°10
Ma 11Sc10 + 0°45	Ma 23Aq25 - 2°42
Ju 10Ar12 - 1°22	Ju 11Ta29 - 0°59
Sa 09Cn34 - 0°40R	Sa 10Cn50 - 0°18
Ur 17Vi32 + 0°47	Ur 13Vi26 + 0°46
Ne 12Sc03 + 1°45	Ne 10Sc48 + 1°51R
Pl 26Aq47 -11°24	Pl 00Pi09 -11°43
No 12Ge38 - 0°00	No 04Ge02 - 0°00
	Coords: 87W/22S

Nov 8, 1798 1:44 AM Total Solar



Nov 23, 1798 0:25 PM Partial Umbral



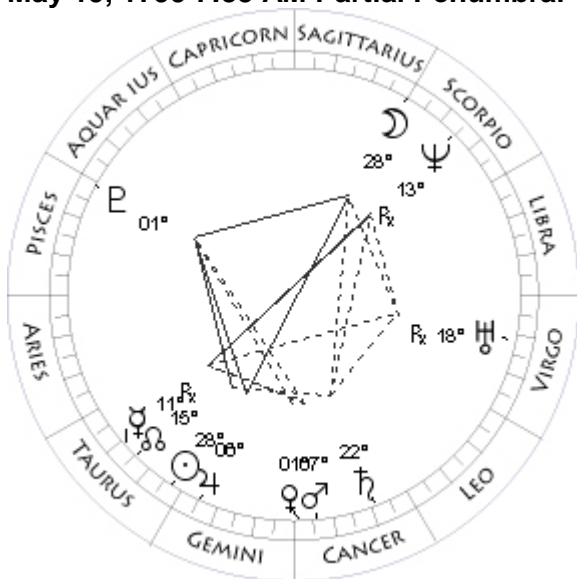
Apr 19, 1799 11:52 PM Partial Penumbral

Mo 16Sc01 + 0°49	Mo 00Sc01 + 1°26
Su 15Sc57 - 0°00	Su 29Ar53 - 0°00
Me 12Sc05 + 0°28	Me 19Ta02 + 2°53
Ve 03Sc12 + 1°16	Ve 26Ta30 + 0°35
Ma 12Pi24 - 1°47	Ma 18Ge43 + 1°13
Ju 22Ta02 - 1°13R	Ju 29Ta39 - 0°37
Sa 26Cn15 - 0°04R	Sa 20Cn07 + 0°11
Ur 21Vi14 + 0°45	Ur 18Vi44 + 0°48R
Ne 12Sc45 + 1°44	Ne 14Sc05 + 1°51R
Pl 27Aq52 -11°53R	Pl 01Pi11 -11°48
No 25Ta26 - 0°00	No 16Ta48 - 0°00
Coords: 173W/35N	Coords: 2W/10S

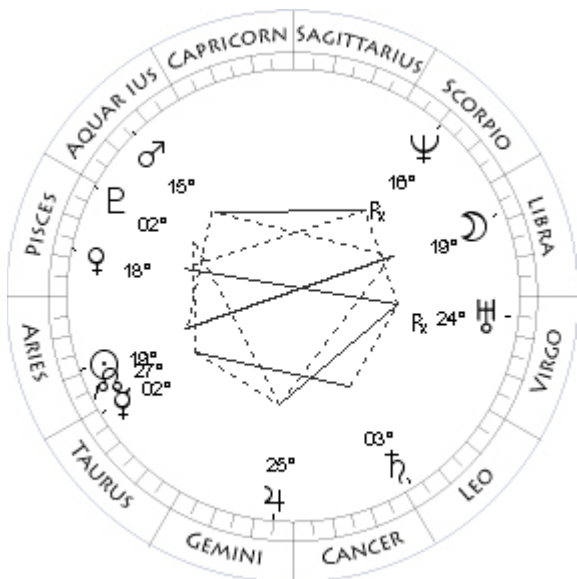
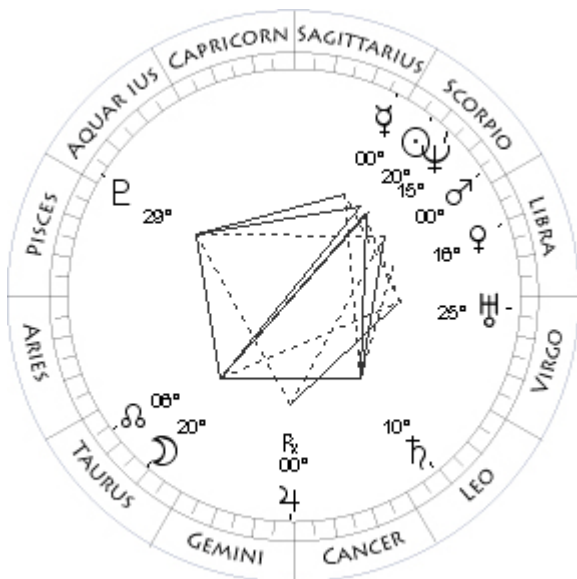
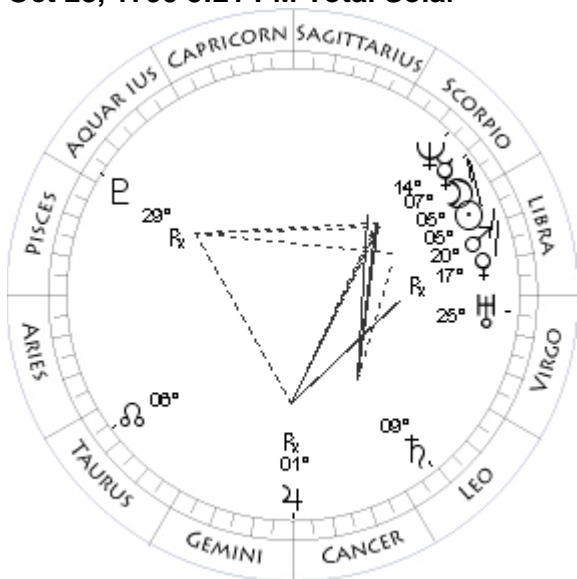
May 5, 1799 0:12 AM Annular Solar

Mo 01Ge29 + 0°36	Mo 14Ta28 - 0°07
Su 01Sa32 - 0°00	Su 14Ta27 - 0°00
Me 06Sa35 - 1°11	Me 18Ta24 + 0°38R
Ve 22Sc36 + 0°50	Ve 14Ge39 + 1°15
Ma 19Pi18 - 1°03	Ma 28Ge12 + 1°15
Ju 19Ta56 - 1°11R	Ju 03Ge00 - 0°35
Sa 26Cn00 - 0°03R	Sa 21Cn05 + 0°13
Ur 21Vi48 + 0°45	Ur 18Vi22 + 0°47R
Ne 13Sc20 + 1°44	Ne 13Sc41 + 1°51R
Pl 27Aq54 -11°49	Pl 01Pi24 -11°53
No 24Ta37 - 0°00	No 16Ta01 - 0°00
Coords: 170W/21N	Coords: 179W/ 9N

May 19, 1799 7:35 AM Partial Penumbral



Oct 28, 1799 5:21 PM Total Solar



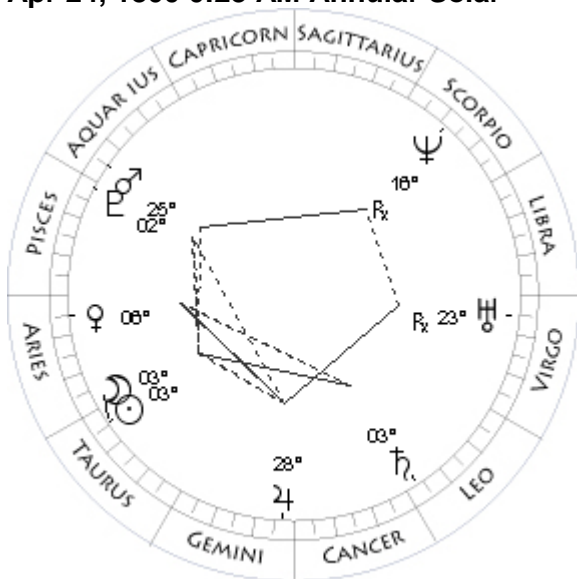
Nov 12, 1799 1:38 PM Partial Penumbral

Mo 28Sc08 - 1°08	Mo 20Ta07 + 1°13
Su 28Ta15 - 0°00	Su 20Sc14 - 0°00
Me 11Ta55 - 3°00R	Me 00Sa39 - 1°25
Ve 01Cn45 + 1°45	Ve 16Li33 - 1°03
Ma 07Cn13 + 1°15	Ma 00Sc39 + 0°35
Ju 06Ge18 - 0°33	Ju 00Cn29 - 0°24R
Sa 22Cn18 + 0°14	Sa 10Le11 + 0°32
Ur 18Vi12 + 0°47R	Ur 25Vi59 + 0°44
Ne 13Sc18 + 1°51R	Ne 15Sc00 + 1°43
Pl 01Pi31 -11°57	Pl 29Aq16 -12°10
No 15Ta15 - 0°00	No 05Ta52 - 0°00
Coords: 115E/21S	Coords: 151W/19N

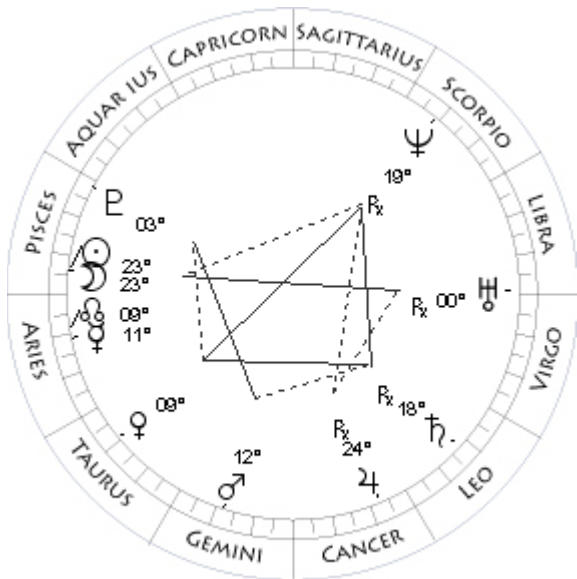
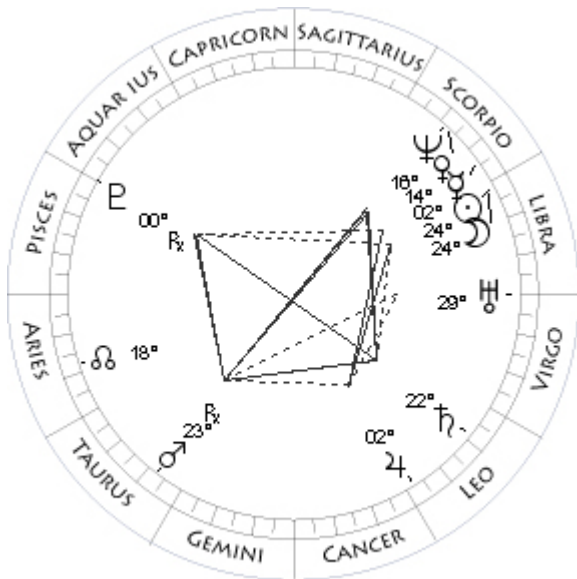
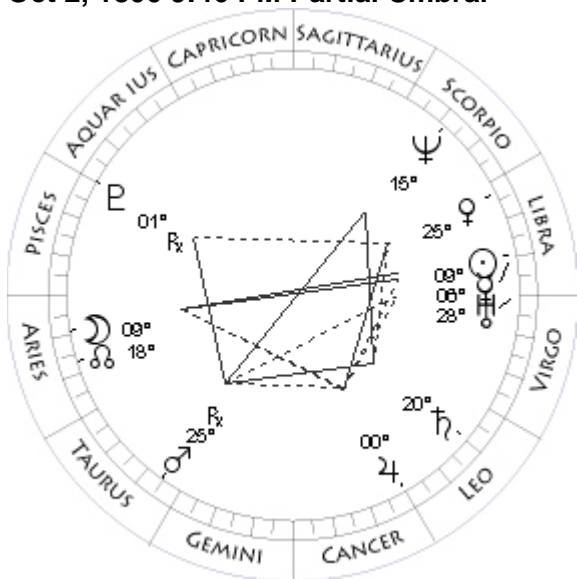
Apr 9, 1800 4:25 PM Partial Umbral

Mo 05Sc20 + 0°08	Mo 19Li38 + 0°43
Su 05Sc19 - 0°00	Su 19Ar34 - 0°00
Me 07Sc20 + 0°10	Me 02Ta07 + 3°05
Ve 17Li48 - 4°35R	Ve 18Pi50 - 1°21
Ma 20Li46 + 0°41	Ma 15Aq03 - 1°17
Ju 01Cn17 - 0°25R	Ju 25Ge41 - 0°03
Sa 09Le44 + 0°30	Sa 03Le21 + 0°47
Ur 25Vi17 + 0°44	Ur 24Vi02 + 0°48R
Ne 14Sc27 + 1°44	Ne 16Sc34 + 1°50R
Pl 29Aq19 -12°14R	Pl 02Pi21 -12°02
No 06Ta39 - 0°00	No 28Ar01 - 0°00

Apr 24, 1800 0:23 AM Annular Solar



Oct 2, 1800 9:46 PM Partial Umbral



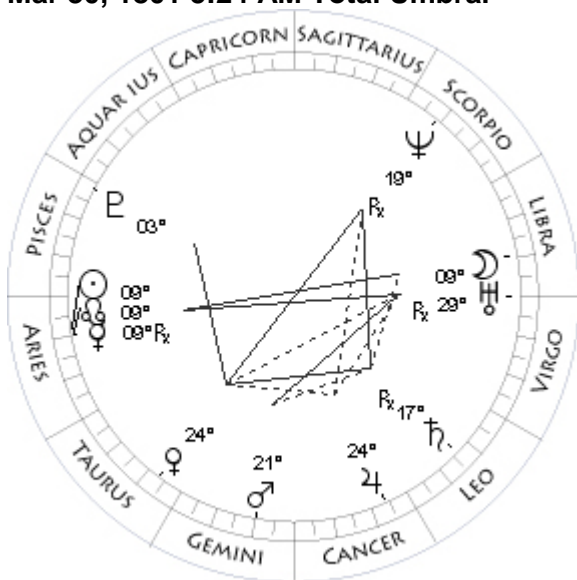
Oct 18, 1800 8:51 AM Total Solar

Mo 03Ta30 + 0°33	Mo 24Li41 - 0°34
Su 03Ta34 - 0°00	Su 24Li45 - 0°00
Me 23Ar57 + 0°01R	Me 02Sc34 - 0°09
Ve 06Ar14 - 1°37	Ve 14Sc24 + 0°05
Ma 25Aq33 - 1°31	Ma 23Ta20 - 1°19R
Ju 28Ge00 - 0°02	Ju 02Le40 + 0°18
Sa 03Le40 + 0°47	Sa 22Le00 + 0°59
Ur 23Vi33 + 0°47R	Ur 29Vi13 + 0°43
Ne 16Sc13 + 1°50R	Ne 16Sc10 + 1°43
Pl 02Pi37 -12°06	Pl 00Pi49 -12°34R
No 27Ar16 - 0°00	No 17Ar52 - 0°00
Coords: 151W/45N	Coords: 23W/40S

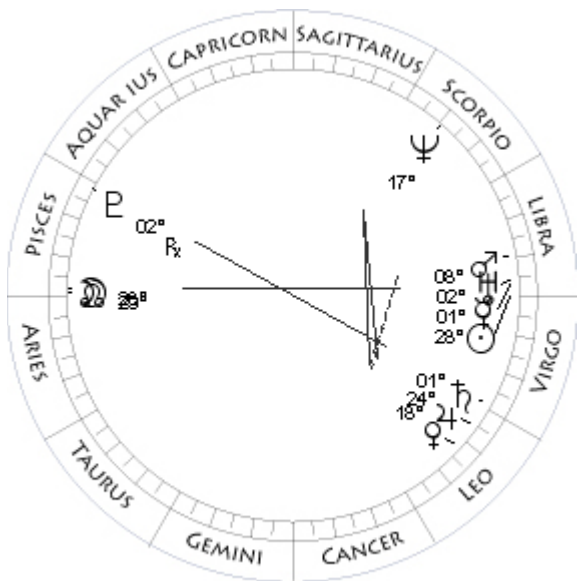
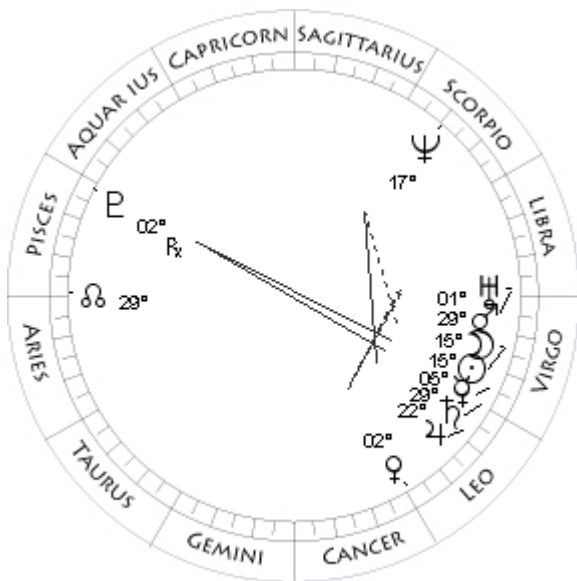
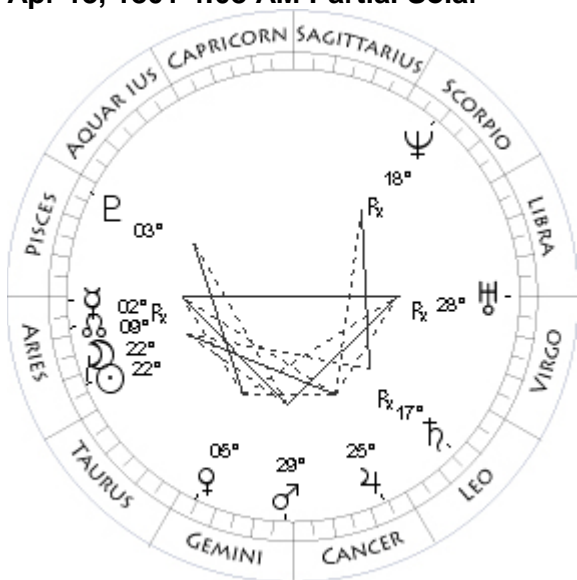
Mar 14, 1801 3:45 PM Partial Solar

Mo 09Ar31 - 0°49	Mo 23Pi45 - 1°24
Su 09Li26 - 0°00	Su 23Pi37 - 0°00
Me 06Li32 + 1°27	Me 11Ar48 + 2°23
Ve 25Li12 + 0°42	Ve 09Ta42 + 2°40
Ma 25Ta02 - 1°56R	Ma 12Ge44 + 1°47
Ju 00Le48 + 0°16	Ju 24Cn28 + 0°38R
Sa 20Le36 + 0°57	Sa 18Le11 + 1°22R
Ur 28Vi17 + 0°42	Ur 00Li08 + 0°47R
Ne 15Sc38 + 1°44	Ne 19Sc16 + 1°48R
Pl 01Pi01 -12°37R	Pl 03Pi03 -12°13
No 18Ar41 - 0°00	No 10Ar04 - 0°00
Coords: 31W/ 3N	

Mar 30, 1801 5:24 AM Total Umbral



Apr 13, 1801 4:08 AM Partial Solar



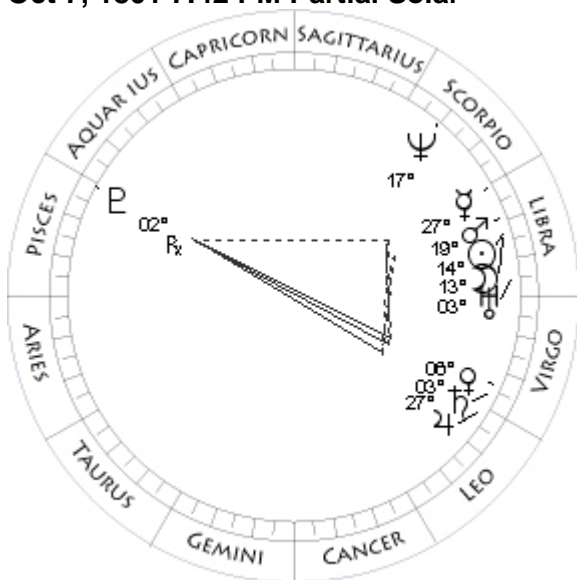
Sep 8, 1801 5:54 AM Partial Solar

Mo 09Li03 + 0°00	Mo 15Vi11 + 1°20
Su 09Ar03 - 0°00	Su 15Vi04 - 0°00
Me 09Ar41 + 2°55R	Me 05Vi27 + 1°46
Ve 24Ta21 + 3°57	Ve 02Le16 - 1°02
Ma 21Ge17 + 1°44	Ma 29Vi39 + 0°45
Ju 24Cn32 + 0°38	Ju 22Le06 + 0°43
Sa 17Le27 + 1°21R	Sa 29Le47 + 1°20
Ur 29Vi27 + 0°47R	Ur 01Li12 + 0°42
Ne 19Sc02 + 1°49R	Ne 17Sc05 + 1°44
Pl 03Pi27 -12°16	Pl 02Pi54 -12°56R
No 09Ar15 - 0°00	No 00Ar40 - 0°00

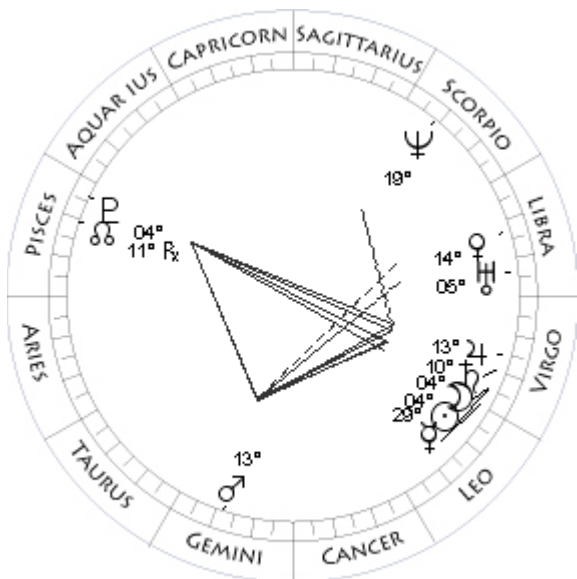
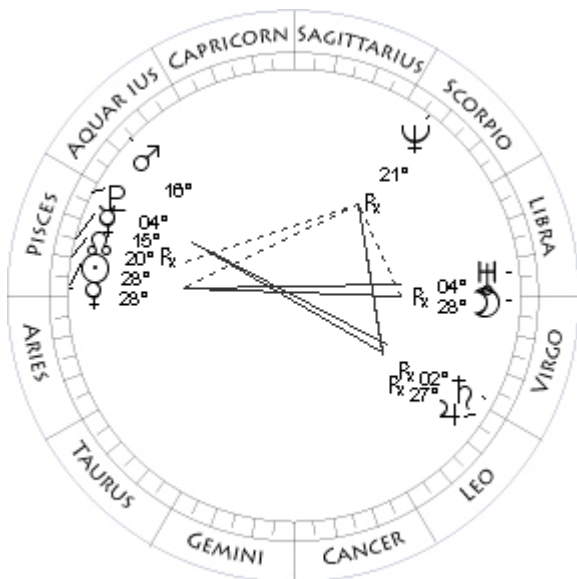
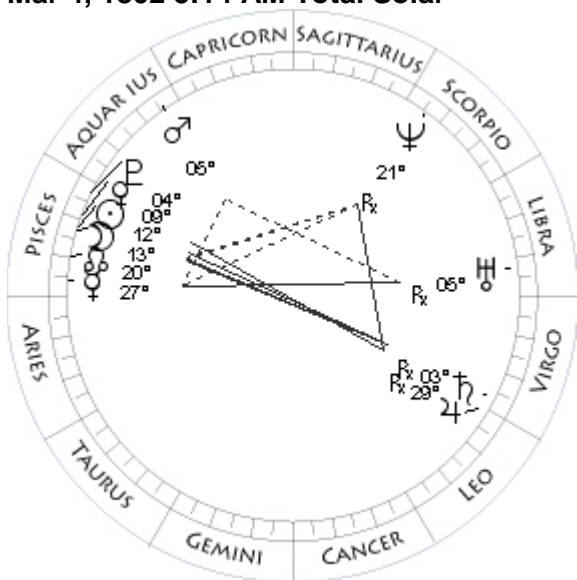
Sep 22, 1801 7:19 AM Total Umbral

Mo 22Ar38 + 1°14	Mo 28Pi48 - 0°06
Su 22Ar45 - 0°00	Su 28Vi47 - 0°00
Me 02Ar16 - 0°33R	Me 01Li36 + 1°14
Ve 05Ge03 + 4°50	Ve 18Le16 - 0°03
Ma 29Ge10 + 1°40	Ma 08Li50 + 0°38
Ju 25Cn14 + 0°38	Ju 24Le59 + 0°45
Sa 17Le09 + 1°21R	Sa 01Vi30 + 1°22
Ur 28Vi53 + 0°47R	Ur 02Li04 + 0°41
Ne 18Sc43 + 1°49R	Ne 17Sc26 + 1°44
Pl 03Pi45 -12°19	Pl 02Pi37 -12°56R
No 08Ar31 - 0°00	No 29Pi55 - 0°00

Oct 7, 1801 7:42 PM Partial Solar



Mar 4, 1802 5:14 AM Total Solar



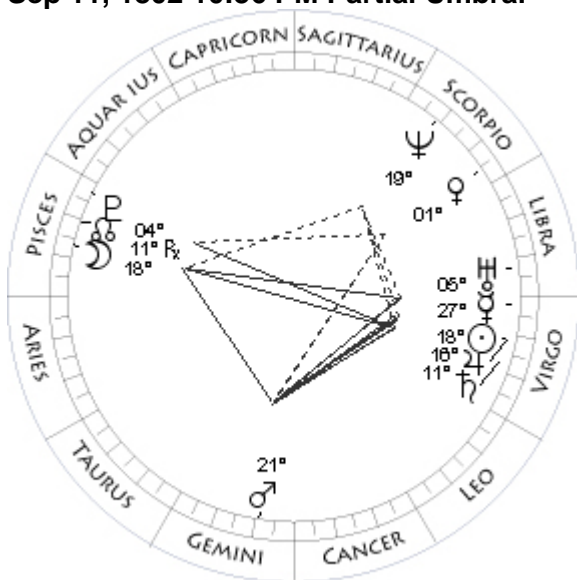
Mar 19, 1802 11:15 AM Partial Umbral

Mo 13Li56 - 1°16	Mo 28Vi06 - 0°41
Su 14Li03 - 0°00	Su 28Pi10 - 0°00
Me 27Li20 - 0°28	Me 15Pi55 + 2°20R
Ve 06Vi30 + 0°50	Ve 28Pi33 - 1°23
Ma 19Li06 + 0°30	Ma 16Aq46 - 1°09
Ju 27Le57 + 0°47	Ju 27Le28 + 1°17R
Sa 03Vi15 + 1°24	Sa 02Vi17 + 1°53R
Ur 03Li03 + 0°41	Ur 04Li55 + 0°46R
Ne 17Sc54 + 1°43	Ne 21Sc25 + 1°48R
Pl 02Pi21 -12°53R	Pl 04Pi30 -12°29
No 29Pi06 - 0°00	No 20Pi29 - 0°00

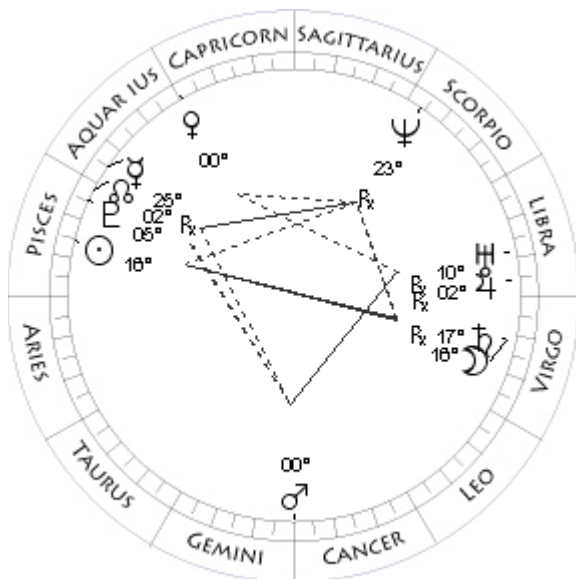
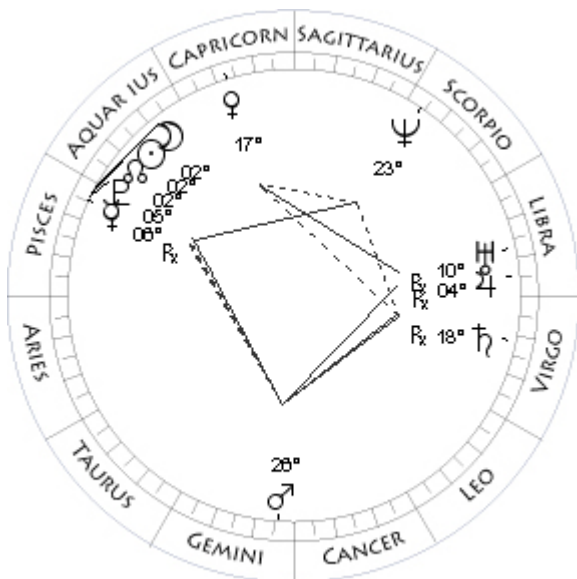
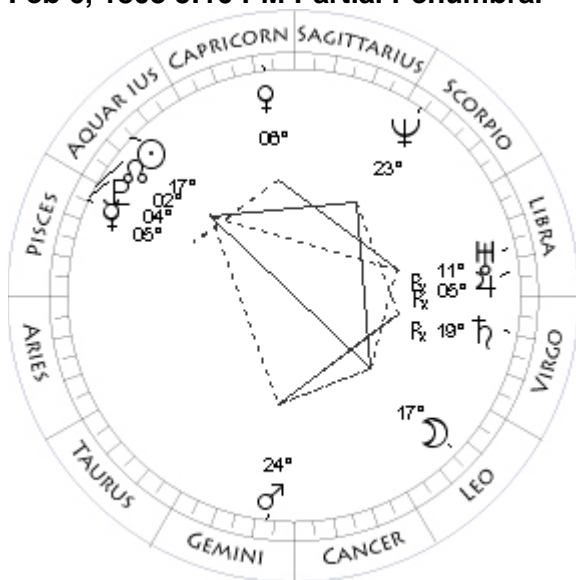
Aug 28, 1802 7:12 AM Annular Solar

Mo 13Pi02 - 0°42	Mo 04Vi17 + 0°40
Su 12Pi58 - 0°00	Su 04Vi13 - 0°00
Me 27Pi01 + 3°08	Me 29Le45 + 1°46
Ve 09Pi32 - 1°25	Ve 14Li49 - 0°11
Ma 05Aq06 - 1°00	Ma 13Ge21 - 0°43
Ju 29Le11 + 1°17R	Ju 13Vi34 + 1°01
Sa 03Vi25 + 1°53R	Sa 10Vi01 + 1°42
Ur 05Li33 + 0°45R	Ur 05Li02 + 0°41
Ne 21Sc34 + 1°47R	Ne 19Sc02 + 1°44
Pl 04Pi05 -12°28	Pl 04Pi31 -13°13R
No 21Pi18 - 0°00	No 11Pi55 - 0°00
Coords: 131W/44S	Coords: 106W/51N

Sep 11, 1802 10:36 PM Partial Umbral



Feb 6, 1803 5:10 PM Partial Penumbral



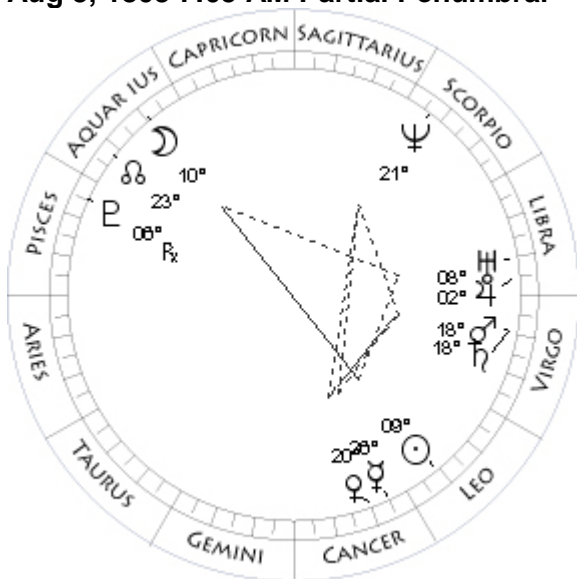
Feb 21, 1803 9:18 PM Total Solar

Mo 18Pi21 + 0°37	Mo 02Pi21 - 0°00
Su 18Vi25 - 0°00	Su 02Pi21 - 0°00
Me 27Vi06 + 0°59	Me 06Pi22 + 3°41R
Ve 01Sc36 - 1°11	Ve 17Cp18 + 4°18
Ma 21Ge37 - 0°26	Ma 26Ge32 + 3°00
Ju 16Vi44 + 1°02	Ju 04Li20 + 1°32R
Sa 11Vi52 + 1°42	Sa 18Vi29 + 2°16R
Ur 05Li53 + 0°40	Ur 10Li51 + 0°44R
Ne 19Sc18 + 1°44	Ne 23Sc46 + 1°45
Pl 04Pi13 -13°13R	Pl 05Pi06 -12°43
No 11Pi09 - 0°00	No 02Pi31 - 0°00
	Coords: 136E/11S

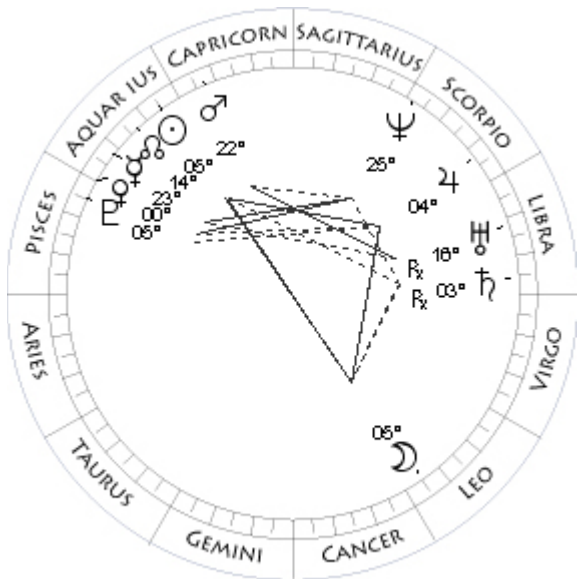
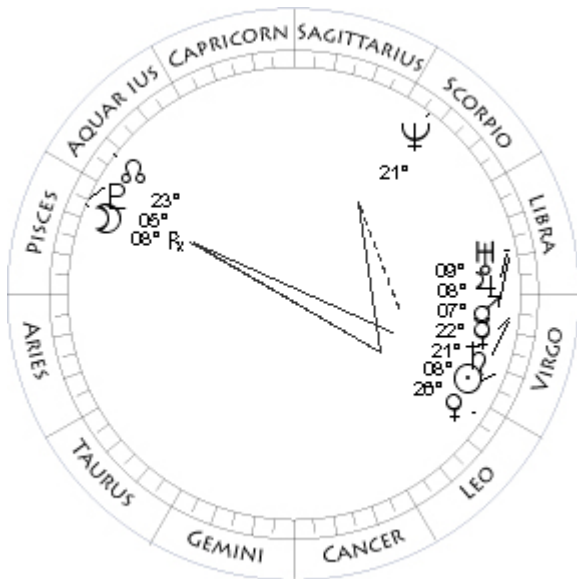
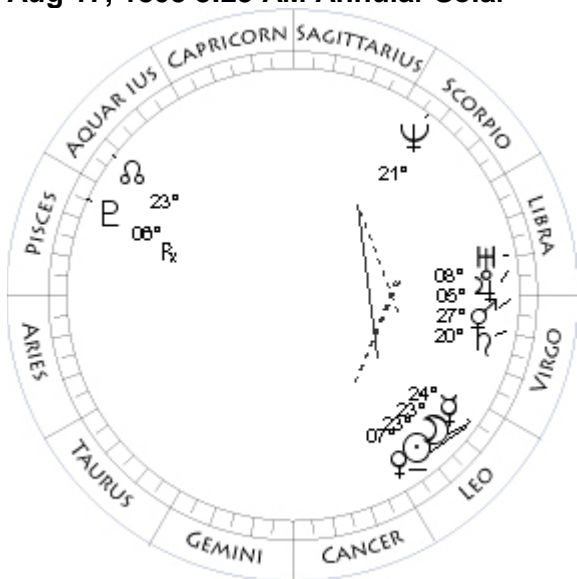
Mar 8, 1803 11:17 AM Partial Penumbral

Mo 17Le10 + 1°23	Mo 16Vi51 - 1°19
Su 17Aq02 - 0°00	Su 16Pi58 - 0°00
Me 05Pi04 + 0°20	Me 25Aq40 + 1°37R
Ve 06Cp41 + 5°42	Ve 00Aq27 + 2°47
Ma 24Ge11 + 3°17	Ma 00Cn40 + 2°43
Ju 05Li27 + 1°29R	Ju 02Li46 + 1°35R
Sa 19Vi31 + 2°14R	Sa 17Vi21 + 2°18R
Ur 11Li14 + 0°43R	Ur 10Li21 + 0°44R
Ne 23Sc41 + 1°44	Ne 23Sc44 + 1°46R
Pl 04Pi41 -12°43	Pl 05Pi30 -12°43
No 03Pi19 - 0°00	No 01Pi45 - 0°00
	Coords: 167E/ 4N

Aug 3, 1803 7:05 AM Partial Penumbral



Aug 17, 1803 8:25 AM Annular Solar



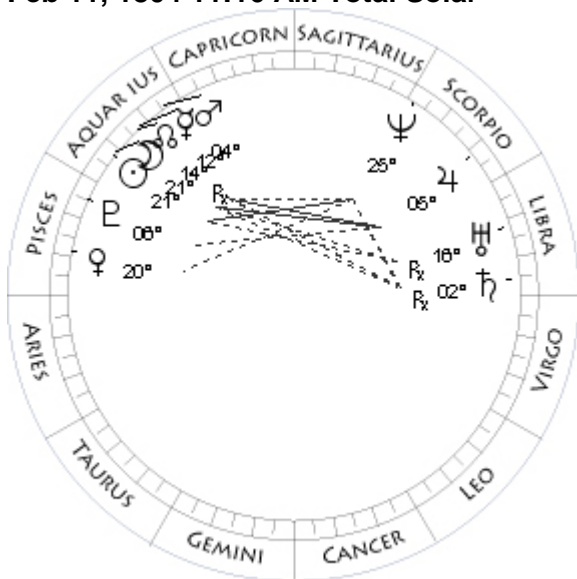
Sep 1, 1803 3:19 PM Partial Penumbral

Mo 10Aq03 - 1°13	Mo 08Pi03 + 1°20
Su 09Le56 - 0°00	Su 08Vi11 - 0°00
Me 26Cn13 + 0°36	Me 22Vi27 + 0°43
Ve 20Cn43 + 0°13	Ve 26Le47 + 1°12
Ma 18Vi49 + 0°47	Ma 07Li31 + 0°28
Ju 02Li35 + 1°11	Ju 08Li02 + 1°08
Sa 18Vi33 + 2°00	Sa 21Vi56 + 1°59
Ur 08Li20 + 0°40	Ur 09Li45 + 0°39
Ne 21Sc00 + 1°45	Ne 21Sc14 + 1°43
Pl 06Pi25 -13°26R	Pl 05Pi49 -13°29R
No 23Aq55 - 0°00	No 22Aq22 - 0°00
Coords: 104E/19S	

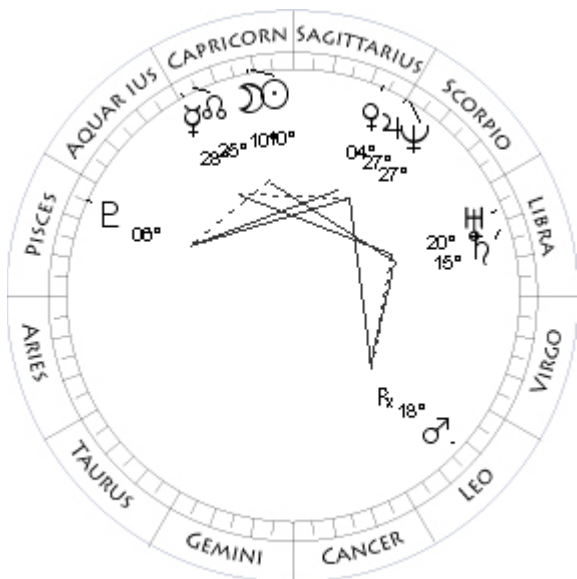
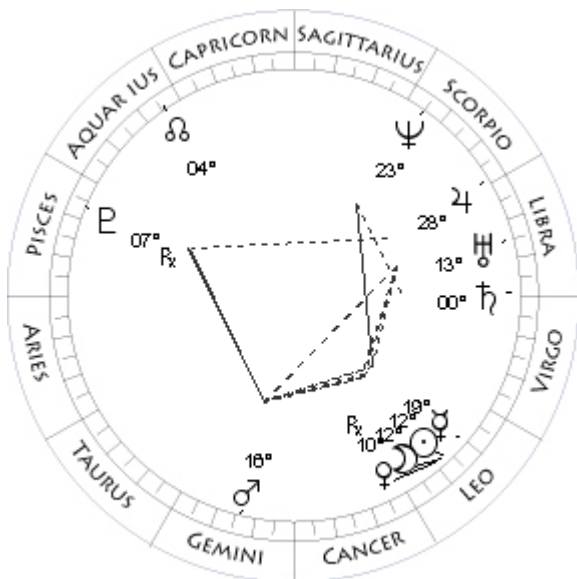
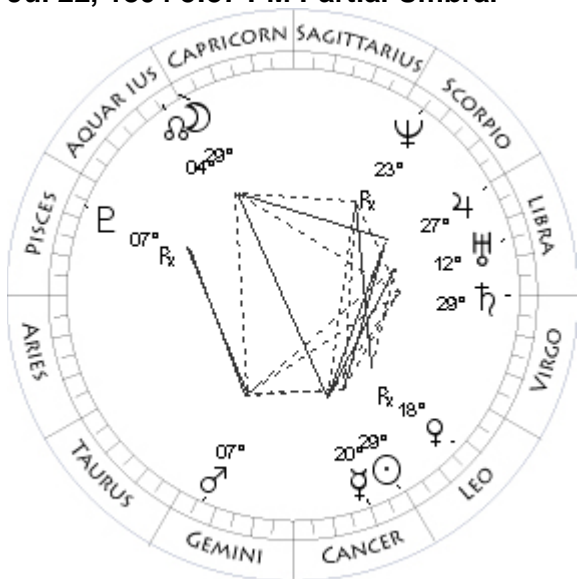
Jan 26, 1804 9:21 PM Partial Umbral

Mo 23Le25 - 0°00	Mo 05Le53 + 0°45
Su 23Le25 - 0°00	Su 05Aq49 - 0°00
Me 24Le26 + 1°46	Me 23Aq17 + 1°00
Ve 07Le56 + 0°46	Ve 00Pi52 - 1°33
Ma 27Vi41 + 0°38	Ma 22Cp50 - 0°55
Ju 05Li04 + 1°10	Ju 04Sc52 + 1°17
Sa 20Vi07 + 2°00	Sa 03Li26 + 2°26R
Ur 08Li57 + 0°39	Ur 16Li11 + 0°41R
Ne 21Sc04 + 1°44	Ne 25Sc41 + 1°43
Pl 06Pi08 -13°28R	Pl 05Pi42 -12°59
No 23Aq10 - 0°00	No 14Aq34 - 0°00
Coords: 55W/13N	Coords: 43W/20N

Feb 11, 1804 11:16 AM Total Solar



Jul 22, 1804 5:37 PM Partial Umbral



Aug 5, 1804 3:56 PM Total Solar

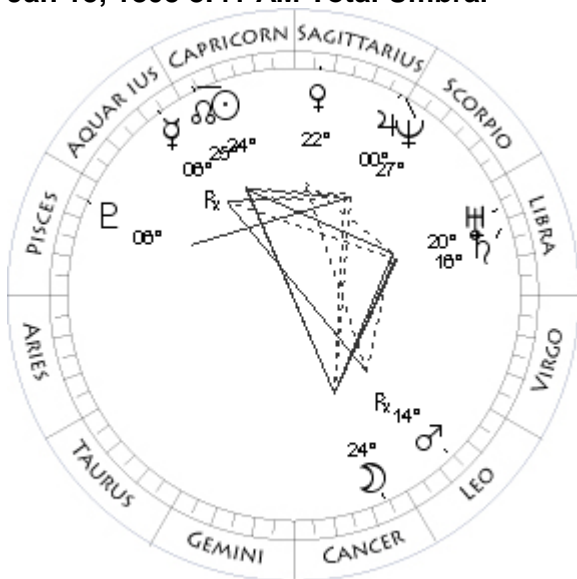
Mo 21Aq32 + 0°41	Mo 12Le51 - 0°44
Su 21Aq36 - 0°00	Su 12Le55 - 0°00
Me 12Aq44 + 3°37R	Me 19Le41 + 1°44
Ve 20Pi08 - 1°12	Ve 10Le50 - 7°20R
Ma 04Aq55 - 1°01	Ma 16Ge53 - 0°10
Ju 05Sc40 + 1°21	Ju 28Li36 + 1°06
Sa 02Li52 + 2°30R	Sa 00Li22 + 2°14
Ur 16Li00 + 0°41R	Ur 13Li01 + 0°38
Ne 25Sc53 + 1°44	Ne 23Sc11 + 1°44
Pl 06Pi06 -12°58	Pl 07Pi43 -13°41R
No 13Aq44 - 0°00	No 04Aq24 - 0°00

Jan 1, 1805 1:14 AM Partial Solar

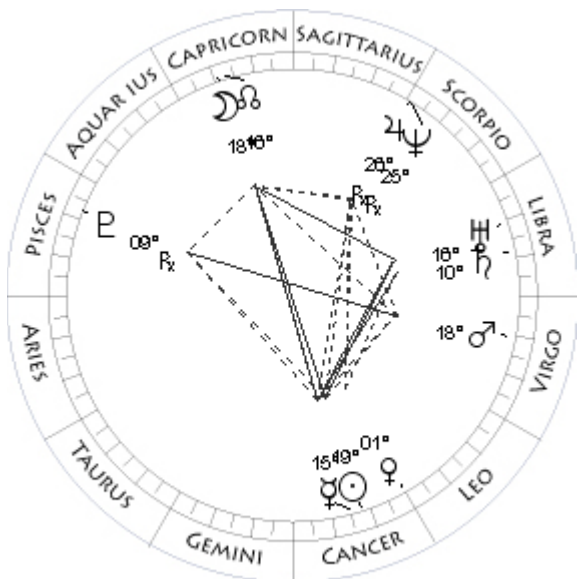
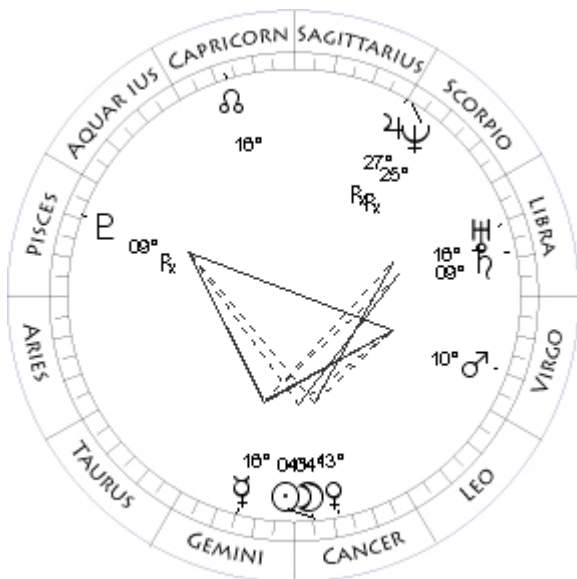
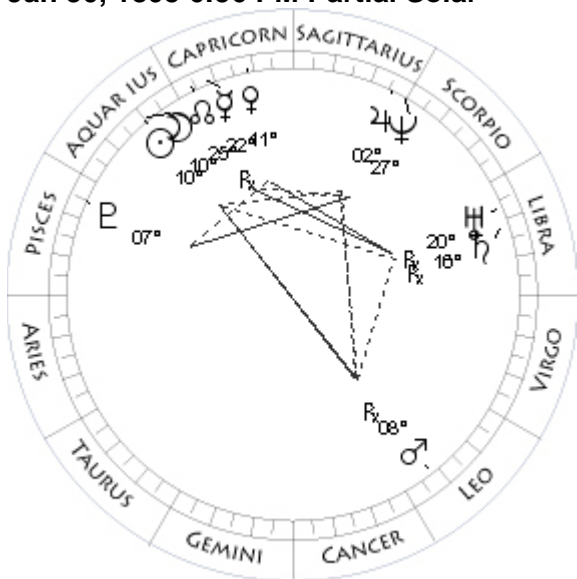
Mo 29Cp38 - 0°29	Mo 10Cp24 - 1°23
Su 29Cn36 - 0°00	Su 10Cp17 - 0°00
Me 20Cn57 + 0°59	Me 28Cp43 - 1°34
Ve 18Le15 - 4°45R	Ve 04Sa47 + 1°45
Ma 07Ge29 - 0°22	Ma 18Le10 + 3°47R
Ju 27Li11 + 1°09	Ju 27Sc32 + 0°52
Sa 29Vi07 + 2°16	Sa 15Li38 + 2°26
Ur 12Li33 + 0°39	Ur 20Li40 + 0°38
Ne 23Sc14 + 1°45R	Ne 27Sc13 + 1°41
Pl 07Pi57 -13°38R	Pl 06Pi28 -13°18
No 05Aq09 - 0°00	No 26Cp33 - 0°00

Coords: 97W/21S

Jan 15, 1805 8:41 AM Total Umbral



Jan 30, 1805 6:56 PM Partial Solar



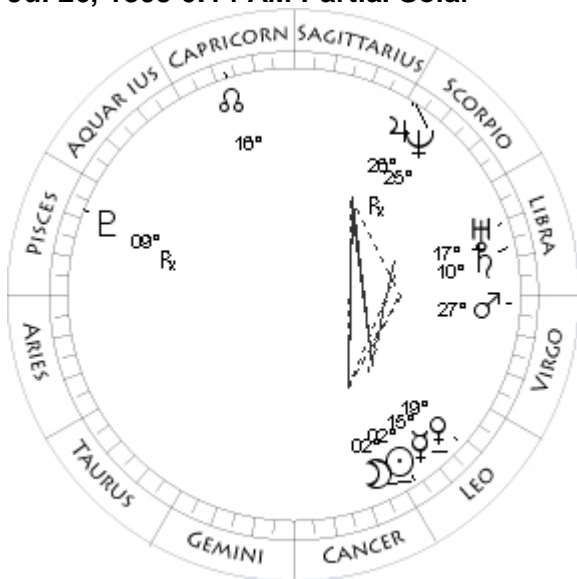
Jun 26, 1805 11:27 PM Partial Solar

Mo 24Cn52 + 0°04	Mo 04Cn54 + 1°04
Su 24Cp52 - 0°00	Su 04Cn48 - 0°00
Me 06Aq46 + 1°53R	Me 16Ge24 - 1°24
Ve 22Sa22 + 1°11	Ve 13Cn04 + 0°55
Ma 14Le34 + 4°17R	Ma 10Vi13 + 0°56
Ju 00Sa06 + 0°53	Ju 27Sc35 + 0°53R
Sa 16Li04 + 2°30	Sa 09Li35 + 2°31
Ur 20Li54 + 0°38	Ur 16Li49 + 0°38
Ne 27Sc36 + 1°41	Ne 25Sc48 + 1°45R
Pl 06Pi45 -13°15	Pl 09Pi35 -13°44R
No 25Cp48 - 0°00	No 17Cp11 - 0°00
Coords: 128E/21N	

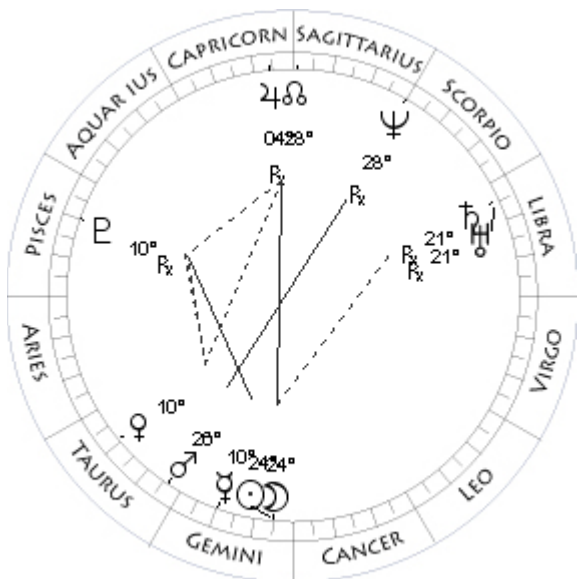
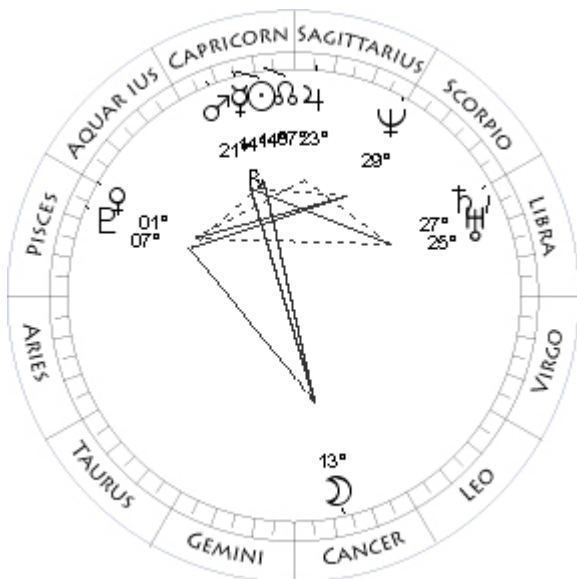
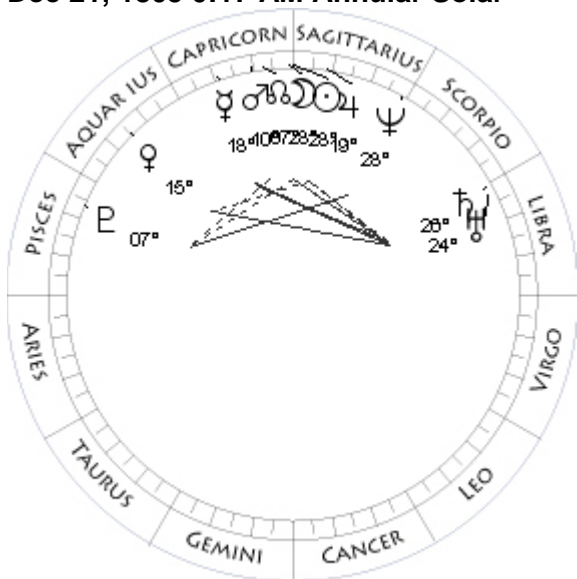
Jul 11, 1805 9:05 PM Total Umbral

Mo 10Aq25 + 1°21	Mo 18Cp59 + 0°14
Su 10Aq33 - 0°00	Su 19Cn00 - 0°00
Me 22Cp05 + 3°03R	Me 15Cn50 + 1°15
Ve 11Cp26 + 0°27	Ve 01Le22 + 1°18
Ma 08Le42 + 4°32R	Ma 18Vi46 + 0°42
Ju 02Sa29 + 0°54	Ju 26Sc42 + 0°49R
Sa 16Li08 + 2°34R	Sa 10Li07 + 2°27
Ur 20Li56 + 0°39R	Ur 16Li57 + 0°37
Ne 27Sc55 + 1°42	Ne 25Sc33 + 1°44R
Pl 07Pi07 -13°13	Pl 09Pi27 -13°49R
No 24Cp59 - 0°00	No 16Cp24 - 0°00
Coords: 45W/22S	

Jul 26, 1805 6:14 AM Partial Solar



Dec 21, 1805 0:17 AM Annular Solar



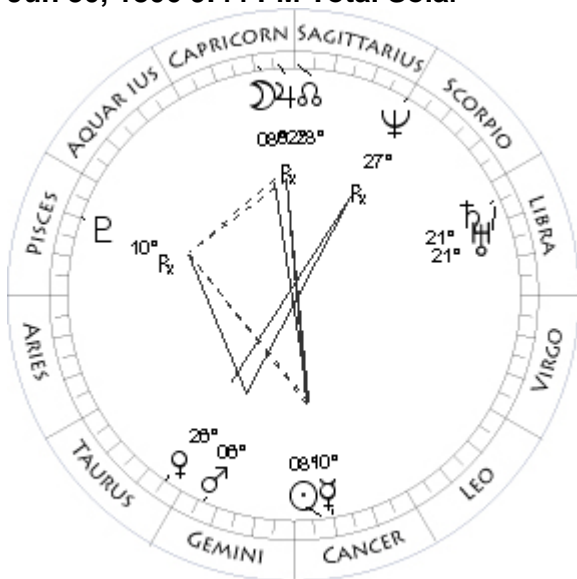
Jan 5, 1806 0:01 AM Partial Umbral

Mo 02Le35 - 1°28	Mo 13Cn59 - 0°37
Su 02Le44 - 0°00	Su 14Cp03 - 0°00
Me 15Le14 + 1°41	Me 14Cp42 + 2°44R
Ve 19Le02 + 1°29	Ve 01Pi14 - 0°50
Ma 27Vi22 + 0°30	Ma 21Cp53 - 1°02
Ju 26Sc28 + 0°46	Ju 23Sa13 + 0°22
Sa 10Li58 + 2°24	Sa 27Li31 + 2°27
Ur 17Li15 + 0°37	Ur 25Li22 + 0°36
Ne 25Sc25 + 1°44R	Ne 29Sc27 + 1°39
Pl 09Pi15 -13°53R	Pl 07Pi50 -13°32
No 15Cp38 - 0°00	No 07Cp01 - 0°00
	Coords: 1W/22N

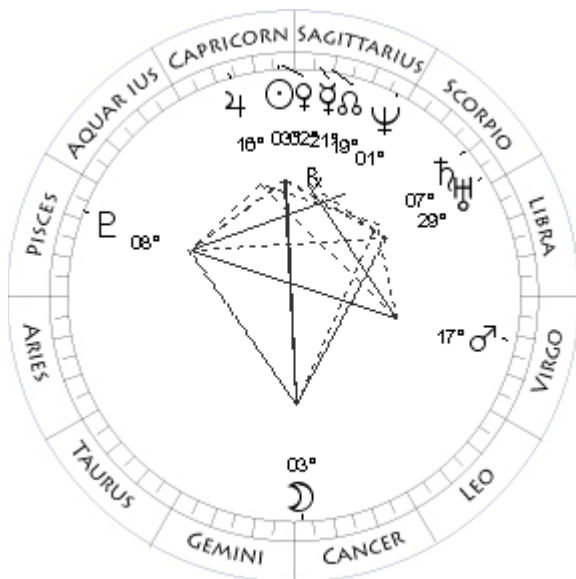
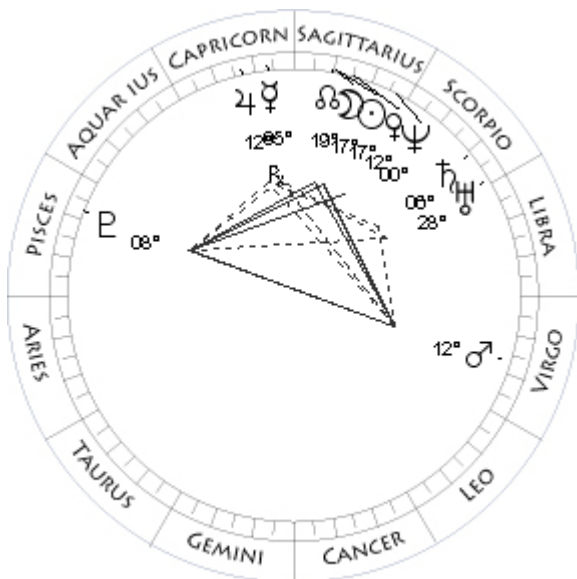
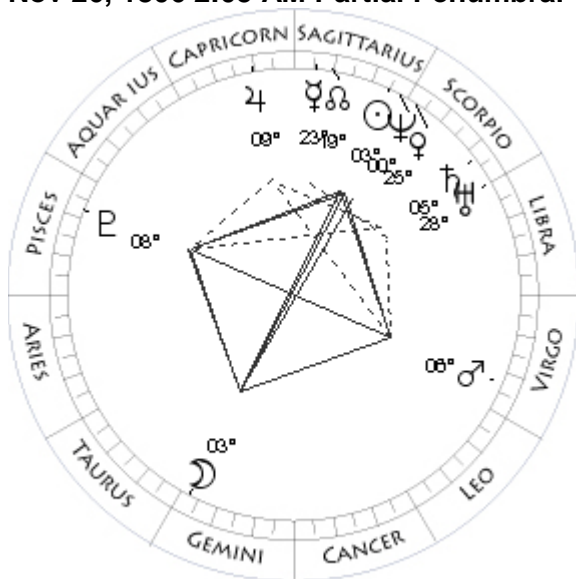
Jun 16, 1806 4:24 PM Total Solar

Mo 28Sa51 - 0°47	Mo 24Ge47 + 0°19
Su 28Sa47 - 0°00	Su 24Ge45 - 0°00
Me 18Cp43 - 1°22	Me 10Ge39 - 0°47
Ve 15Aq33 - 1°55	Ve 10Ta29 - 2°35
Ma 10Cp16 - 0°58	Ma 26Ta55 - 0°13
Ju 19Sa52 + 0°23	Ju 04Cp31 + 0°10R
Sa 26Li32 + 2°23	Sa 21Li47 + 2°37R
Ur 24Li55 + 0°35	Ur 21Li37 + 0°36R
Ne 28Sc59 + 1°39	Ne 28Sc15 + 1°44R
Pl 07Pi36 -13°36	Pl 10Pi57 -13°54R
No 07Cp48 - 0°00	No 28Sa24 - 0°00
	Coords: 146E/83S

Jun 30, 1806 9:44 PM Total Solar



Nov 26, 1806 2:05 AM Partial Penumbral



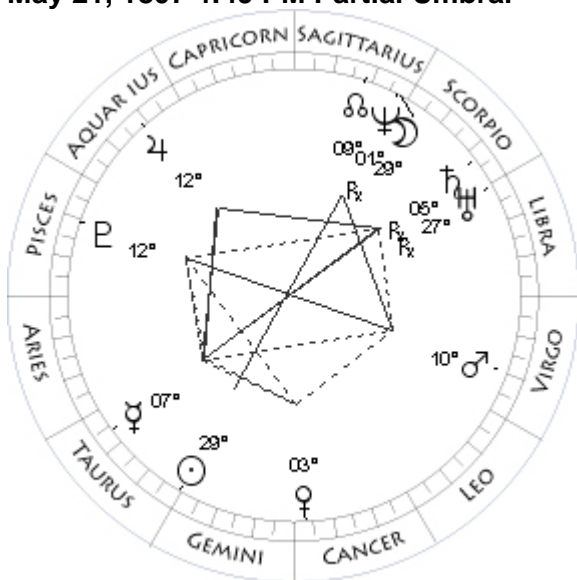
Dec 10, 1806 2:19 AM Annular Solar

Mo 08Cp13 + 0°55	Mo 17Sa26 - 0°09
Su 08Cn19 - 0°00	Su 17Sa25 - 0°00
Me 10Cn43 + 1°29	Me 05Cp45 - 1°01R
Ve 26Ta03 - 2°28	Ve 12Sa53 + 0°12
Ma 06Ge58 - 0°03	Ma 12Vi31 + 2°24
Ju 02Cp43 + 0°08R	Ju 12Cp38 - 0°10
Sa 21Li45 + 2°33	Sa 06Sc31 + 2°17
Ur 21Li33 + 0°35	Ur 28Li58 + 0°33
Ne 27Sc57 + 1°44R	Ne 00Sa42 + 1°37
Pl 10Pi53 -13°59R	Pl 08Pi47 -13°53
No 27Sa39 - 0°00	No 19Sa03 - 0°00
Coords: 34W/22S	Coords: 143W/32S

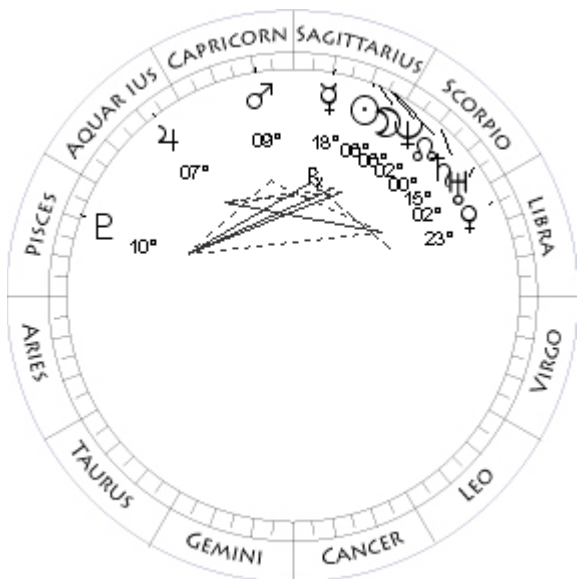
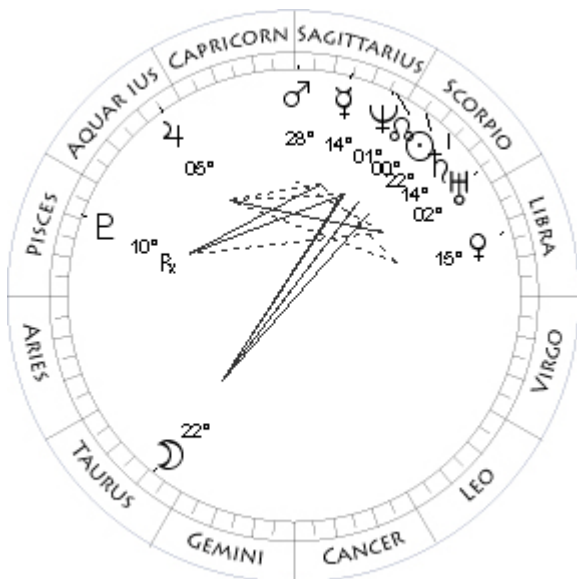
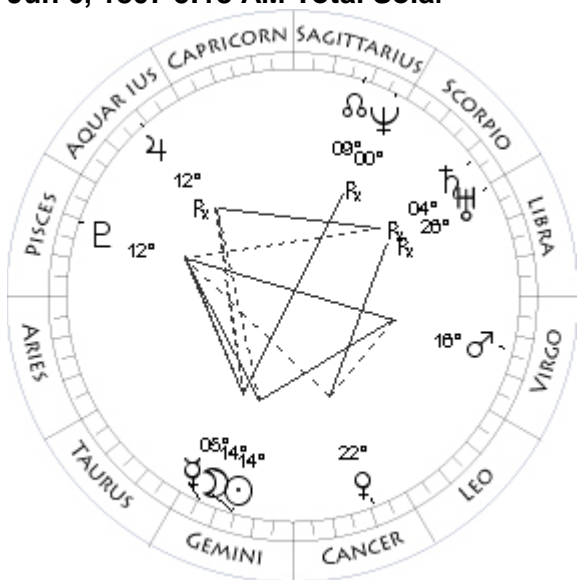
Dec 25, 1806 2:47 PM Partial Penumbral

Mo 03Ge20 + 1°26	Mo 03Cn05 - 1°17
Su 03Sa12 - 0°00	Su 03Cp13 - 0°00
Me 23Sa14 - 2°28	Me 21Sa51 + 3°03R
Ve 25Sc15 + 0°44	Ve 02Cp25 - 0°24
Ma 06Vi38 + 2°06	Ma 17Vi48 + 2°47
Ju 09Cp37 - 0°09	Ju 16Cp09 - 0°12
Sa 05Sc01 + 2°15	Sa 07Sc58 + 2°19
Ur 28Li15 + 0°32	Ur 29Li36 + 0°33
Ne 00Sa10 + 1°37	Ne 01Sa14 + 1°38
Pl 08Pi43 -13°57	Pl 08Pi57 -13°48
No 19Sa48 - 0°00	No 18Sa14 - 0°00
	Coords: 138W/22N

May 21, 1807 4:49 PM Partial Umbral



Jun 6, 1807 5:18 AM Total Solar



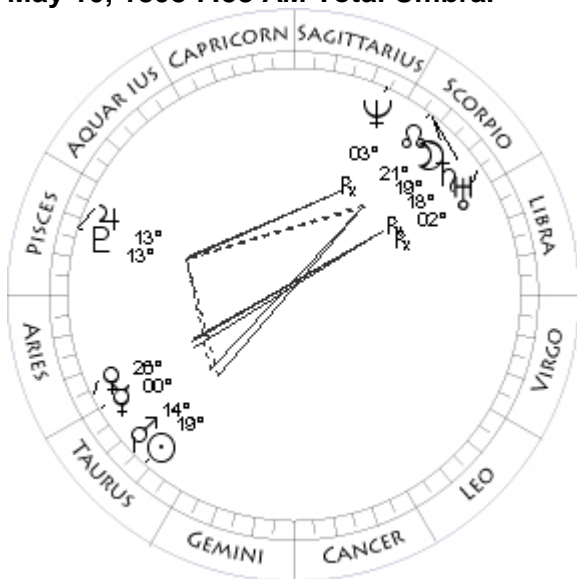
Nov 15, 1807 8:09 AM Partial Umbral

Mo 29Sc44 - 0°55	Mo 22Ta09 + 0°46
Su 29Ta39 - 0°00	Su 22Sc05 - 0°00
Me 07Ta26 - 2°39	Me 14Sa26 - 2°37
Ve 03Cn59 + 1°49	Ve 15Li21 - 0°30
Ma 10Vi03 + 1°22	Ma 28Sa14 - 1°08
Ju 12Aq01 - 0°33	Ju 05Aq46 - 0°47
Sa 05Sc28 + 2°39R	Sa 14Sc14 + 2°07
Ur 27Li03 + 0°34R	Ur 02Sc02 + 0°30
Ne 01Sa10 + 1°43R	Ne 01Sa52 + 1°36
Pl 12Pi09 -13°57	Pl 10Pi02 -14°14R
No 10Sa27 - 0°00	No 01Sa02 - 0°00
Coords: 107W/21S	Coords: 126E/19N

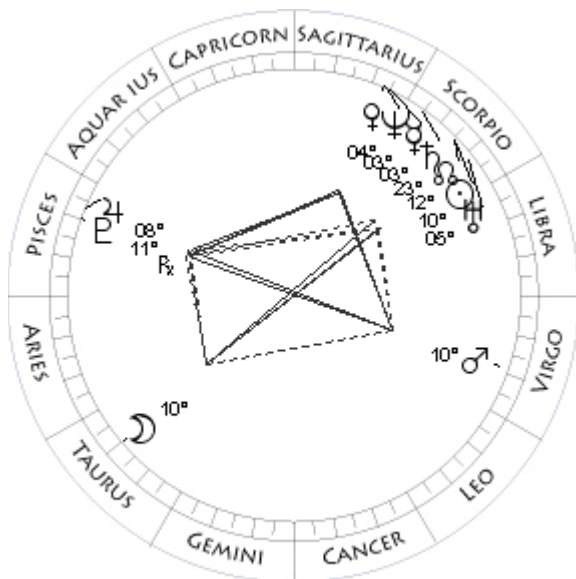
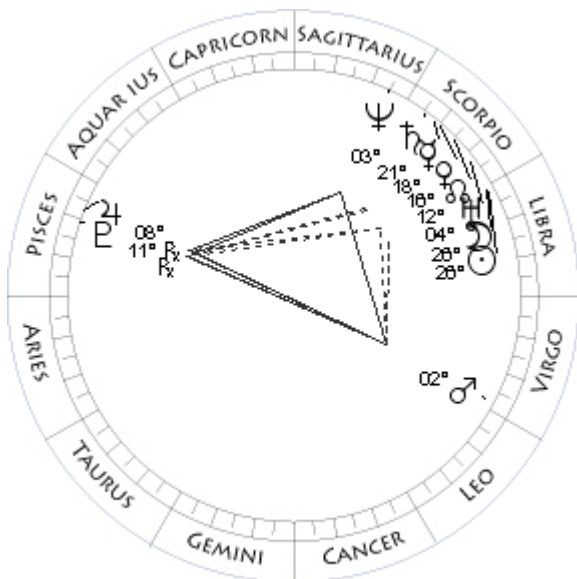
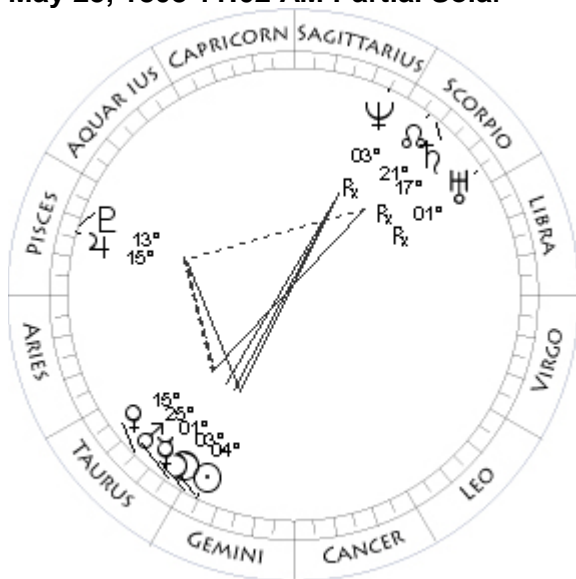
Nov 29, 1807 11:42 AM Total Solar

Mo 14Ge29 - 0°26	Mo 06Sa20 + 0°32
Su 14Ge32 - 0°00	Su 06Sa24 - 0°00
Me 05Ge50 - 0°16	Me 18Sa08 - 0°23R
Ve 22Cn13 + 2°05	Ve 23Li01 + 1°37
Ma 16Vi01 + 0°57	Ma 09Cp02 - 1°10
Ju 12Aq07 - 0°37R	Ju 07Aq57 - 0°47
Sa 04Sc34 + 2°36R	Sa 15Sc54 + 2°07
Ur 26Li36 + 0°34R	Ur 02Sc51 + 0°30
Ne 00Sa46 + 1°43R	Ne 02Sa23 + 1°36
Pl 12Pi14 -14°03	Pl 10Pi02 -14°10
No 09Sa37 - 0°00	No 00Sa17 - 0°00
	Coords: 4W/11N

May 10, 1808 7:38 AM Total Umbral



May 25, 1808 11:02 AM Partial Solar



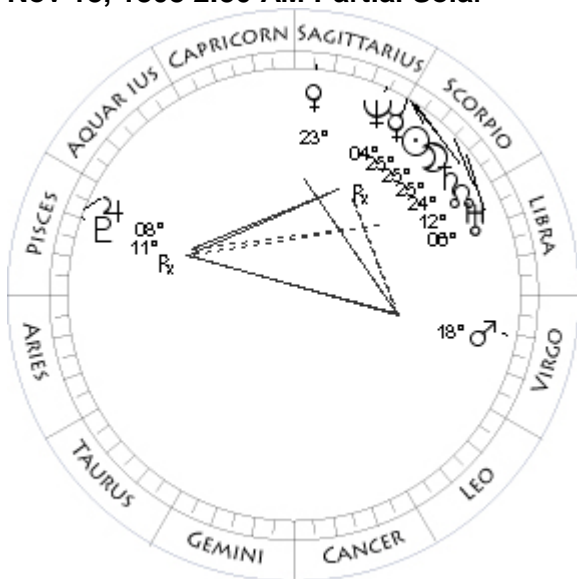
Oct 19, 1808 4:55 PM Partial Solar

Mo 19Sc27 - 0°10	Mo 26Li17 - 1°28
Su 19Ta26 - 0°00	Su 26Li09 - 0°00
Me 00Ta53 - 2°12	Me 18Sc36 - 2°23
Ve 26Ar42 - 1°35	Ve 16Sc43 - 0°01
Ma 14Ta51 - 0°07	Ma 02Vi04 + 1°27
Ju 13Pi00 - 1°00	Ju 08Pi30 - 1°26R
Sa 18Sc55 + 2°29R	Sa 21Sc31 + 1°57
Ur 02Sc18 + 0°32R	Ur 04Sc47 + 0°27
Ne 03Sa42 + 1°42R	Ne 03Sa03 + 1°35
Pl 13Pi18 -14°06	Pl 11Pi34 -14°34R
No 21Sc40 - 0°00	No 13Sc04 - 0°00
Coords: 115E/18S	

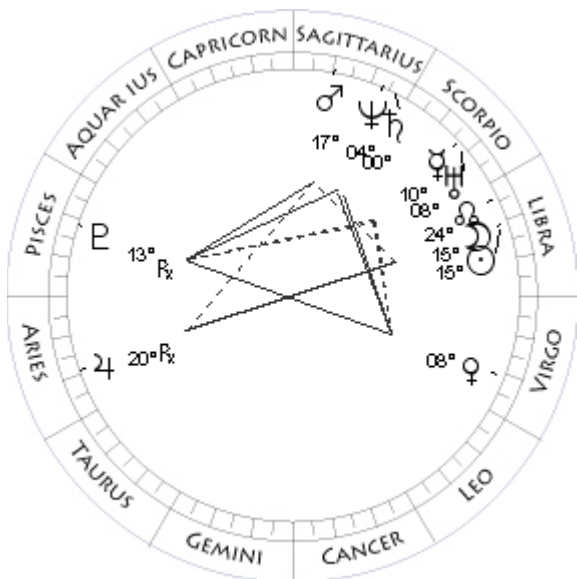
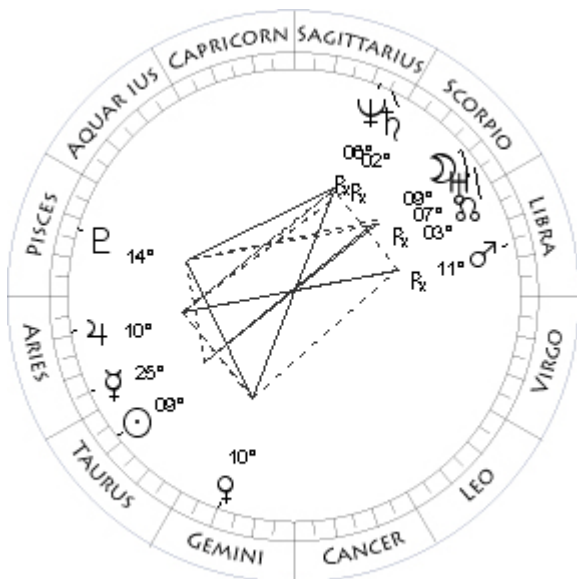
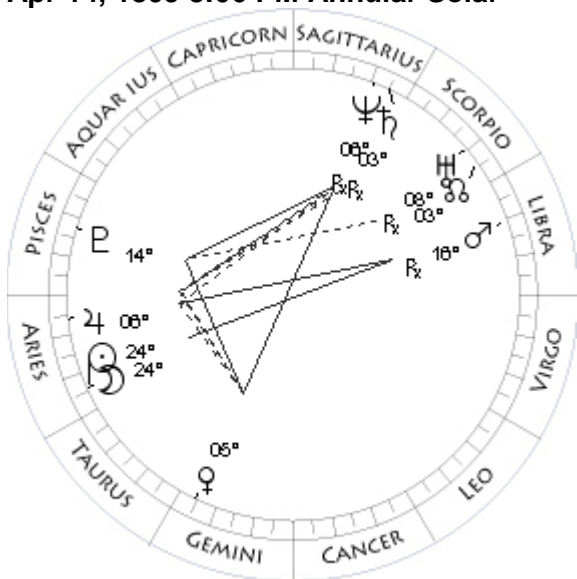
Nov 3, 1808 8:13 AM Total Umbral

Mo 03Ge53 - 1°09	Mo 10Ta47 + 0°09
Su 04Ge00 - 0°00	Su 10Sc47 - 0°00
Me 01Ge00 + 0°09	Me 03Sa01 - 2°47
Ve 15Ta09 - 1°17	Ve 04Sa52 - 0°40
Ma 25Ta46 + 0°02	Ma 10Vi36 + 1°35
Ju 15Pi10 - 1°04	Ju 08Pi08 - 1°23
Sa 17Sc48 + 2°27R	Sa 23Sc12 + 1°55
Ur 01Sc44 + 0°31R	Ur 05Sc42 + 0°27
Ne 03Sa18 + 1°42R	Ne 03Sa33 + 1°35
Pl 13Pi27 -14°11	Pl 11Pi24 -14°31R
No 20Sc52 - 0°00	No 12Sc18 - 0°00
Coords: 127E/15N	

Nov 18, 1808 2:30 AM Partial Solar



Apr 14, 1809 8:06 PM Annular Solar



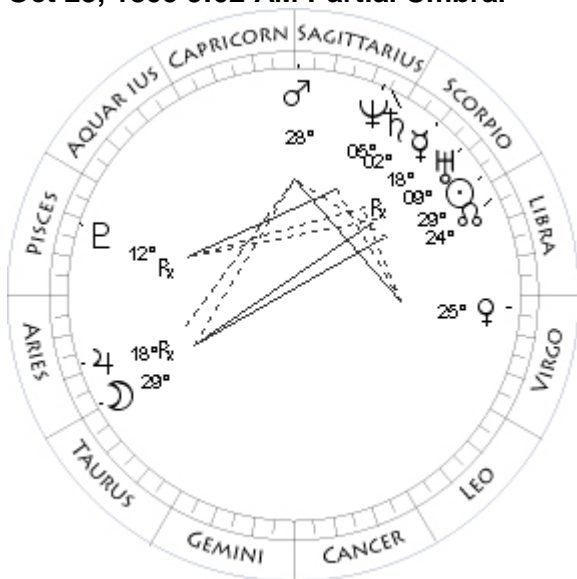
Apr 30, 1809 0:32 AM Partial Umbral

Mo 25Sc31 + 1°12	Mo 09Sc10 + 0°33
Su 25Sc38 - 0°00	Su 09Ta14 - 0°00
Me 25Sc40 + 0°32R	Me 25Ar43 - 1°47
Ve 23Sa09 - 1°15	Ve 10Ge46 + 5°11
Ma 18Vi56 + 1°44	Ma 11Li33 + 1°34R
Ju 08Pi30 - 1°20	Ju 10Ar15 - 1°07
Sa 24Sc57 + 1°54	Sa 02Sa08 + 2°10R
Ur 06Sc37 + 0°27	Ur 07Sc34 + 0°29R
Ne 04Sa05 + 1°34	Ne 06Sa11 + 1°40R
Pl 11Pi19 -14°26R	Pl 14Pi23 -14°15
No 11Sc31 - 0°00	No 02Sc53 - 0°00

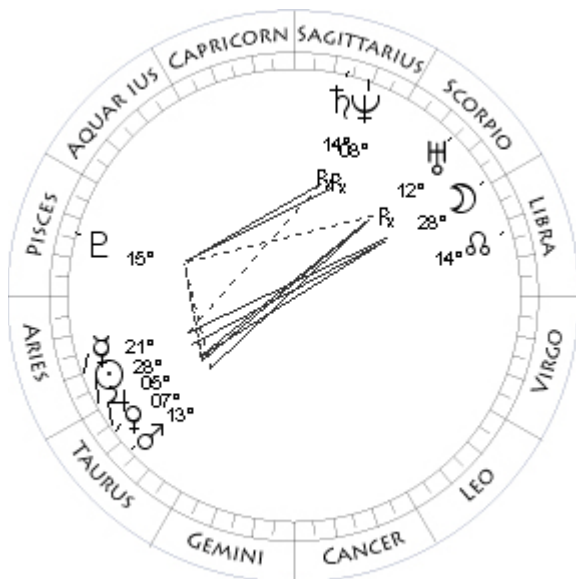
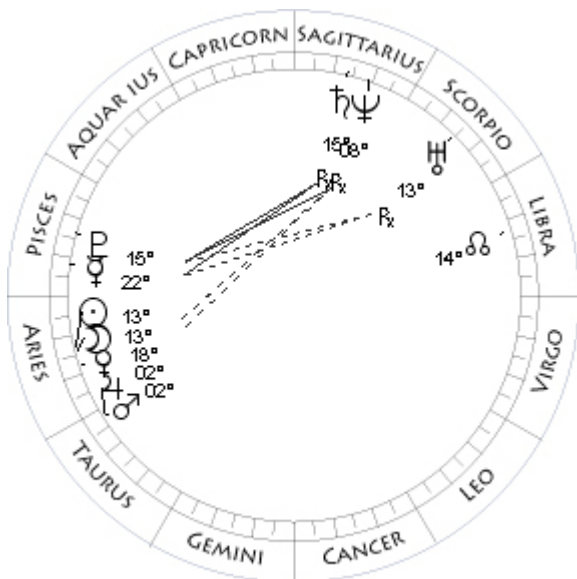
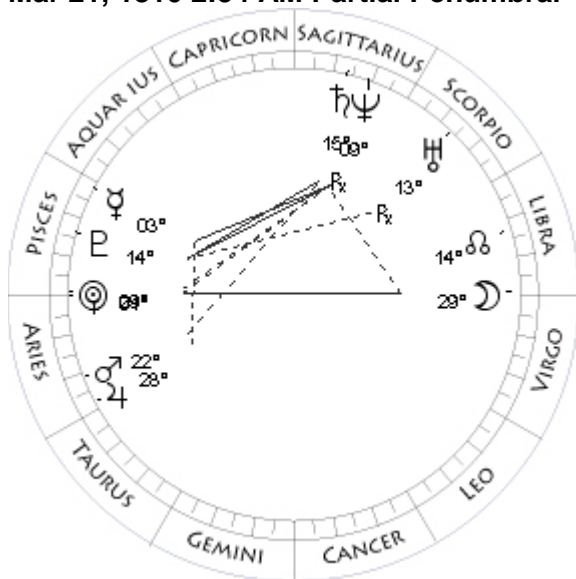
Oct 9, 1809 7:38 AM Total Solar

Mo 24Ar31 + 0°47	Mo 15Li40 - 0°46
Su 24Ar27 - 0°00	Su 15Li36 - 0°00
Me 00Ar08 - 2°37	Me 10Sc33 - 2°49
Ve 05Ge19 + 5°03	Ve 08Vi50 + 0°57
Ma 16Li34 + 2°12R	Ma 17Sa57 - 1°34
Ju 06Ar44 - 1°06	Ju 20Ar27 - 1°37R
Sa 03Sa00 + 2°09R	Sa 00Sa46 + 1°43
Ur 08Sc13 + 0°29R	Ur 08Sc30 + 0°24
Ne 06Sa31 + 1°39R	Ne 04Sa51 + 1°34
Pl 14Pi05 -14°10	Pl 13Pi02 -14°49R
No 03Sc41 - 0°00	No 24Li17 - 0°00
Coords: 157E/65N	Coords: 39W/55S

Oct 23, 1809 9:02 AM Partial Umbral



Mar 21, 1810 2:54 AM Partial Penumbral



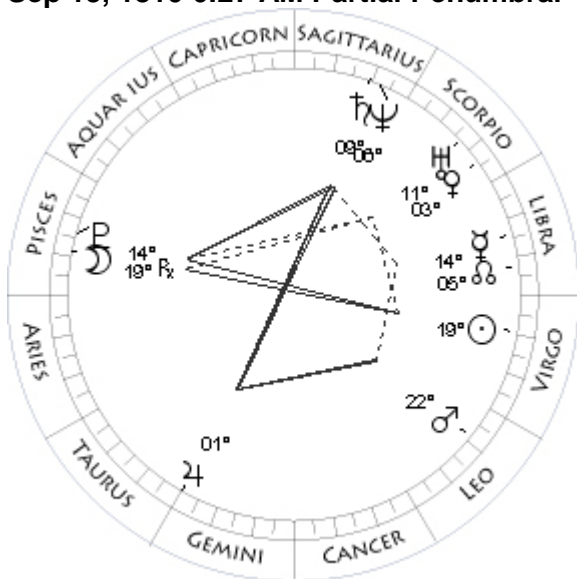
Apr 4, 1810 1:41 AM Annular Solar

Mo 29Ar31 - 0°30	Mo 13Ar39 + 0°06
Su 29Li34 - 0°00	Su 13Ar39 - 0°00
Me 18Sc12 - 2°52R	Me 22Pi57 - 2°26
Ve 25Vi47 + 1°28	Ve 18Ar36 - 1°05
Ma 28Sa12 - 1°33	Ma 02Ta41 - 0°03
Ju 18Ar34 - 1°36R	Ju 02Ta00 - 0°59
Sa 02Sa11 + 1°41	Sa 15Sa13 + 1°45R
Ur 09Sc21 + 0°24	Ur 13Sc25 + 0°25R
Ne 05Sa16 + 1°33	Ne 08Sa53 + 1°37R
Pl 12Pi49 -14°46R	Pl 15Pi04 -14°19
No 23Li33 - 0°00	No 14Li56 - 0°00
Coords: 139E/11N	Coords: 154W/11N

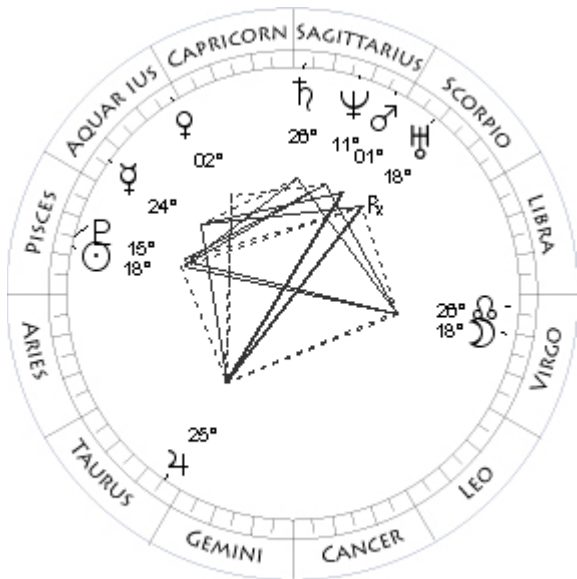
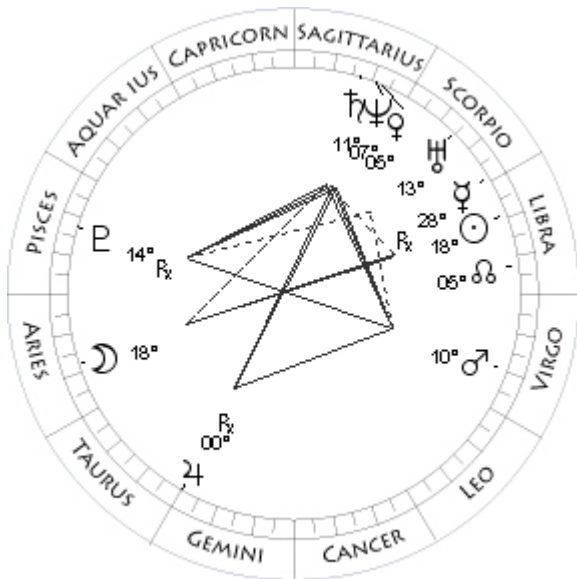
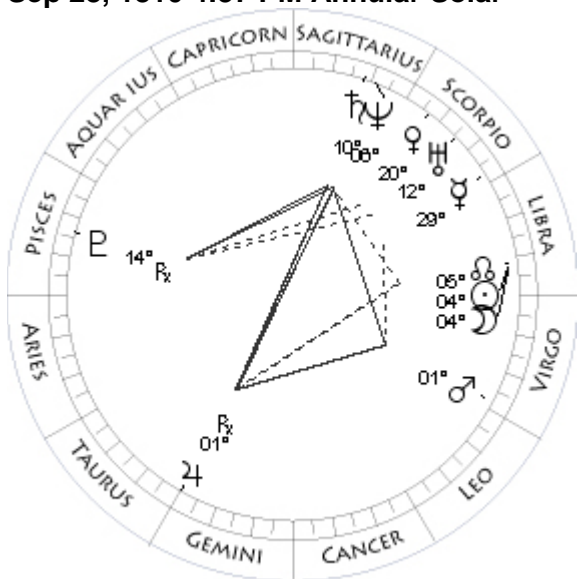
Apr 19, 1810 2:54 PM Partial Penumbral

Mo 29Vi59 - 1°20	Mo 28Li45 + 1°17
Su 29Pi52 - 0°00	Su 28Ar52 - 0°00
Me 03Pi00 - 1°42	Me 21Ar06 - 1°23
Ve 01Ar17 - 1°22	Ve 07Ta50 - 0°36
Ma 22Ar23 - 0°13	Ma 13Ta59 + 0°07
Ju 28Ar47 - 1°01	Ju 05Ta40 - 0°58
Sa 15Sa17 + 1°44	Sa 14Sa47 + 1°47R
Ur 13Sc51 + 0°25R	Ur 12Sc50 + 0°25R
Ne 09Sa01 + 1°36R	Ne 08Sa38 + 1°37R
Pl 14Pi43 -14°17	Pl 15Pi25 -14°23
No 15Li40 - 0°00	No 14Li06 - 0°00
	Coords: 137W/10S

Sep 13, 1810 6:27 AM Partial Penumbral



Sep 28, 1810 4:37 PM Annular Solar



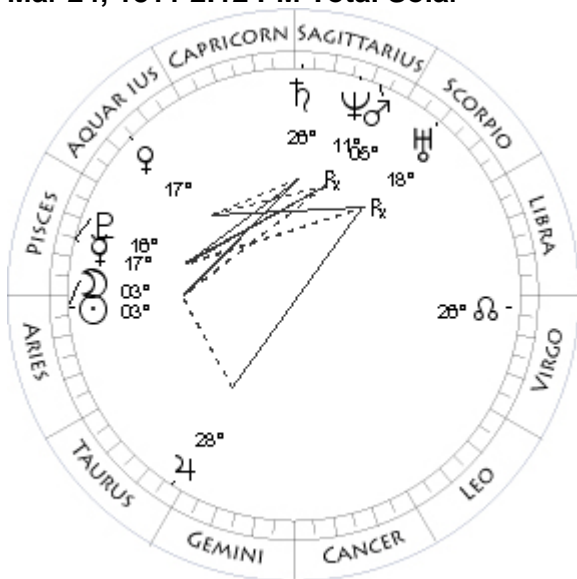
Oct 12, 1810 4:39 PM Partial Penumbral

Mo 19Pi54 + 1°25	Mo 18Ar35 - 1°11
Su 19Vi47 - 0°00	Su 18Li42 - 0°00
Me 14Li20 - 1°33	Me 28Li45 - 2°40R
Ve 03Sc31 - 1°22	Ve 05Sa25 - 3°22
Ma 22Le07 + 1°12	Ma 10Vi30 + 1°19
Ju 01Ge19 - 1°04	Ju 00Ge36 - 1°07R
Sa 09Sa26 + 1°29	Sa 11Sa26 + 1°23
Ur 11Sc29 + 0°22	Ur 13Sc01 + 0°21
Ne 06Sa27 + 1°33	Ne 07Sa03 + 1°32
Pl 14Pi50 -15°03R	Pl 14Pi16 -15°01R
No 06Li20 - 0°00	No 04Li47 - 0°00
Coords: 107W/ 6N	

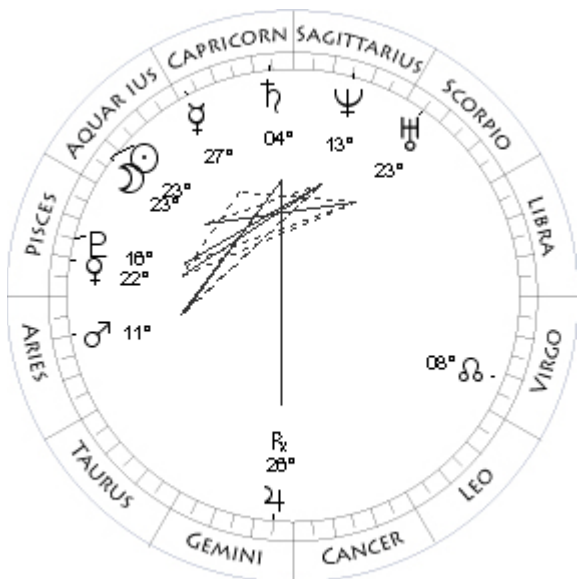
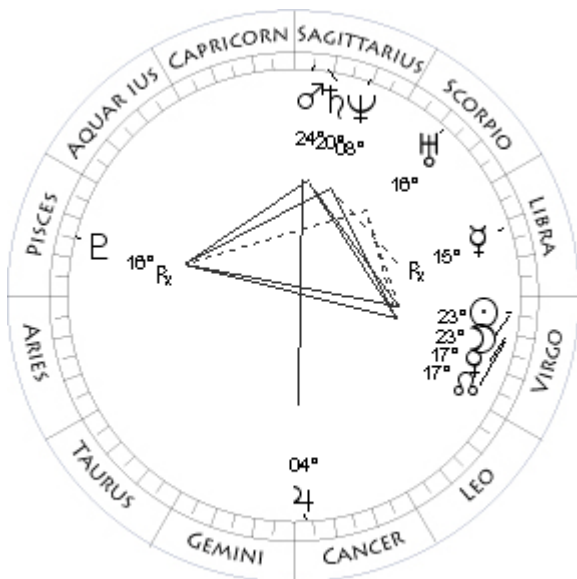
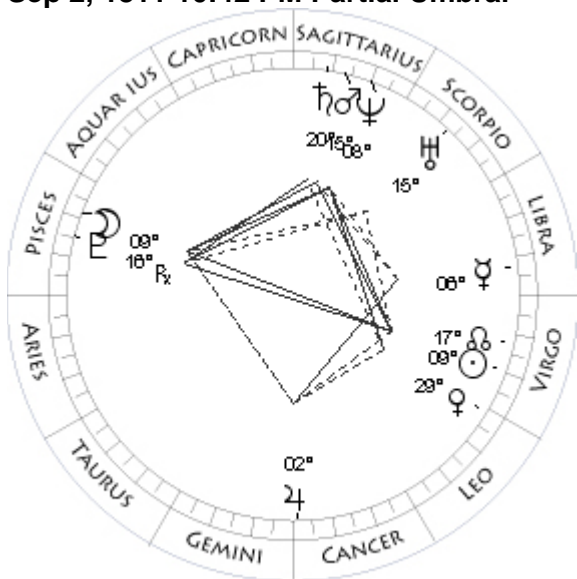
Mar 10, 1811 6:37 AM Partial Umbral

Mo 04Li53 - 0°04	Mo 18Vi54 - 0°41
Su 04Li53 - 0°00	Su 18Pi50 - 0°00
Me 29Li58 - 3°19	Me 24Aq47 - 1°46
Ve 20Sc35 - 2°29	Ve 02Aq14 + 2°27
Ma 01Vi48 + 1°16	Ma 01Sa16 + 1°11
Ju 01Ge18 - 1°06R	Ju 25Ta45 - 0°40
Sa 10Sa20 + 1°26	Sa 26Sa04 + 1°18
Ur 12Sc14 + 0°22	Ur 18Sc45 + 0°22R
Ne 06Sa43 + 1°33	Ne 11Sa13 + 1°34
Pl 14Pi31 -15°03R	Pl 15Pi38 -14°28
No 05Li31 - 0°00	No 26Vi55 - 0°00

Mar 24, 1811 2:12 PM Total Solar



Sep 2, 1811 10:42 PM Partial Umbral



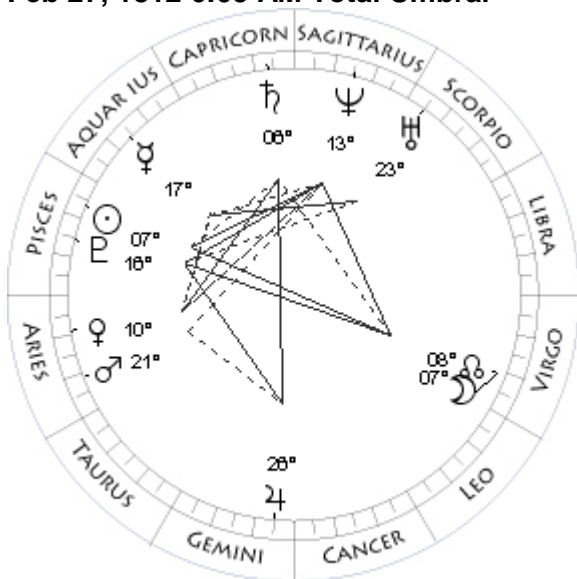
Sep 17, 1811 6:44 PM Annular Solar

Mo 03Ar00 - 0°37	Mo 23Vi53 + 0°37
Su 03Ar04 - 0°00	Su 23Vi57 - 0°00
Me 17Pi11 - 2°17	Me 15Li55 - 3°51R
Ve 17Aq04 + 1°04	Ve 17Vi30 + 1°25
Ma 05Sa49 + 0°58	Ma 24Sa07 - 2°40
Ju 28Ta08 - 0°37	Ju 04Cn03 - 0°21
Sa 26Sa32 + 1°19	Sa 20Sa29 + 1°05
Ur 18Sc28 + 0°22R	Ur 16Sc03 + 0°19
Ne 11Sa11 + 1°34R	Ne 08Sa39 + 1°31
Pl 16Pi01 -14°29	Pl 16Pi01 -15°15R
No 26Vi09 - 0°00	No 16Vi46 - 0°00

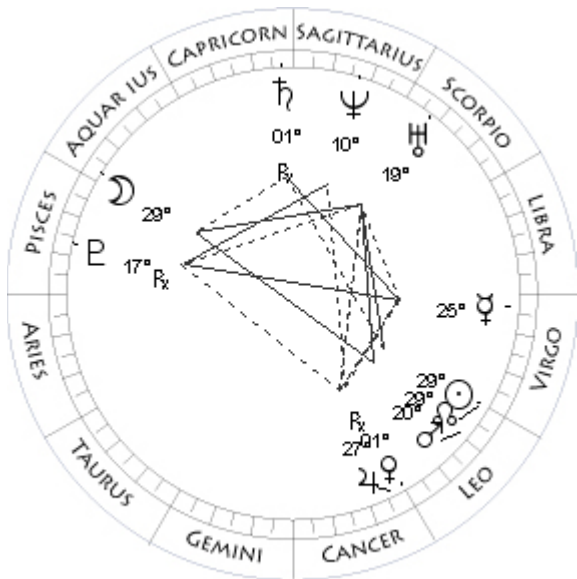
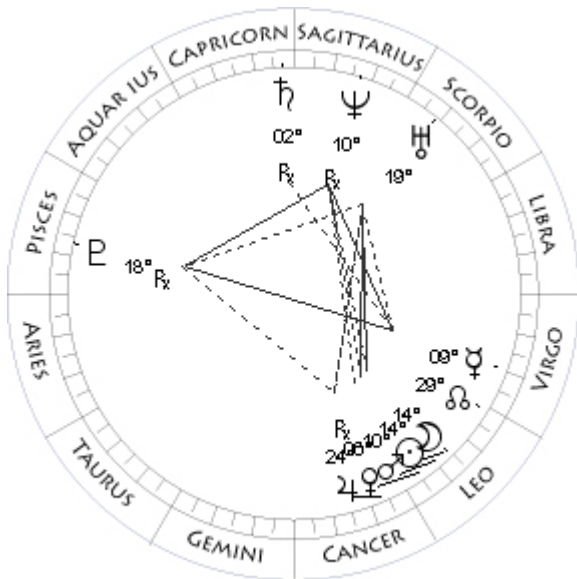
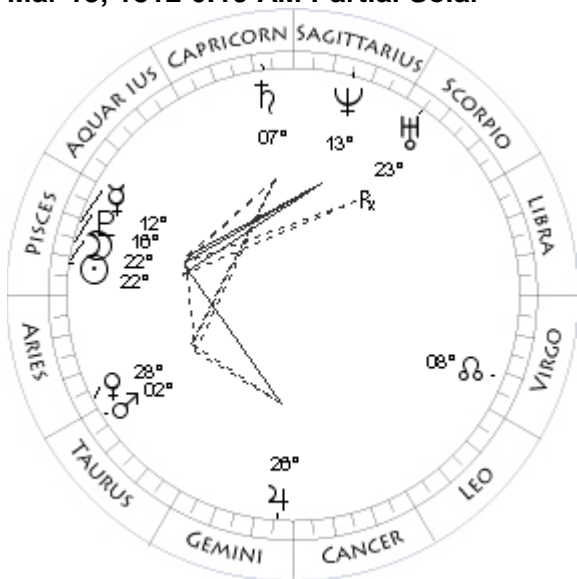
Feb 12, 1812 8:28 PM Partial Solar

Mo 09Pi35 + 0°43	Mo 23Aq11 + 1°22
Su 09Vi31 - 0°00	Su 23Aq03 - 0°00
Me 06Li21 - 2°07	Me 27Cp44 - 0°12
Ve 29Le05 + 1°15	Ve 22Pi28 - 1°08
Ma 15Sa19 - 2°50	Ma 11Ar14 - 0°10
Ju 02Cn07 - 0°22	Ju 26Ge18 - 0°05R
Sa 20Sa06 + 1°08	Sa 04Cp51 + 0°51
Ur 15Sc29 + 0°19	Ur 23Sc19 + 0°18
Ne 08Sa29 + 1°32	Ne 13Sa07 + 1°30
Pl 16Pi20 -15°14R	Pl 16Pi11 -14°39
No 17Vi34 - 0°00	No 08Vi56 - 0°00

Feb 27, 1812 6:05 AM Total Umbral



Mar 13, 1812 6:19 AM Partial Solar



Aug 7, 1812 5:16 AM Partial Solar

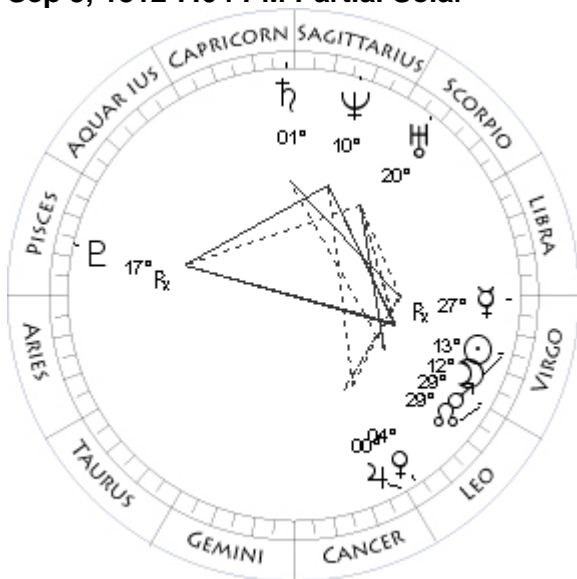
Mo 07Vi34 - 0°03	Mo 14Le36 - 1°19
Su 07Pi33 - 0°00	Su 14Le28 - 0°00
Me 17Aq27 - 1°48	Me 09Vi45 - 0°16
Ve 10Ar05 - 0°33	Ve 06Le19 - 7°31R
Ma 21Ar44 + 0°02	Ma 10Le57 + 1°08
Ju 26Ge16 - 0°03	Ju 24Cn05 + 0°14
Sa 06Cp03 + 0°51	Sa 02Cp02 + 0°45R
Ur 23Sc25 + 0°18	Ur 19Sc23 + 0°17
Ne 13Sa18 + 1°31	Ne 10Sa41 + 1°32R
Pl 16Pi33 -14°38	Pl 18Pi05 -15°21R
No 08Vi10 - 0°00	No 29Le36 - 0°00

Aug 22, 1812 3:01 PM Total Umbral

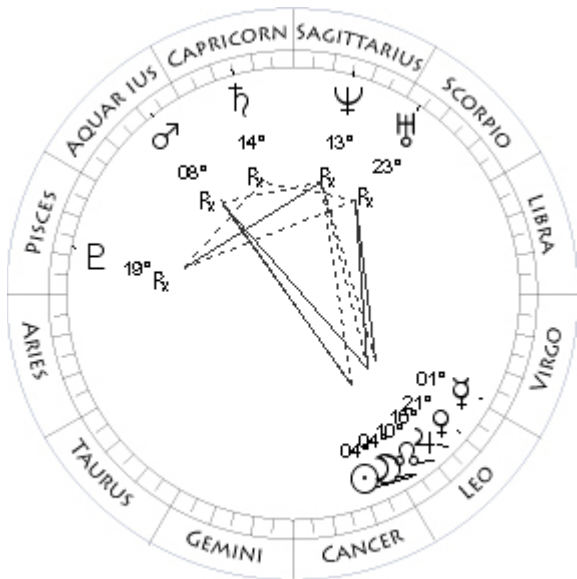
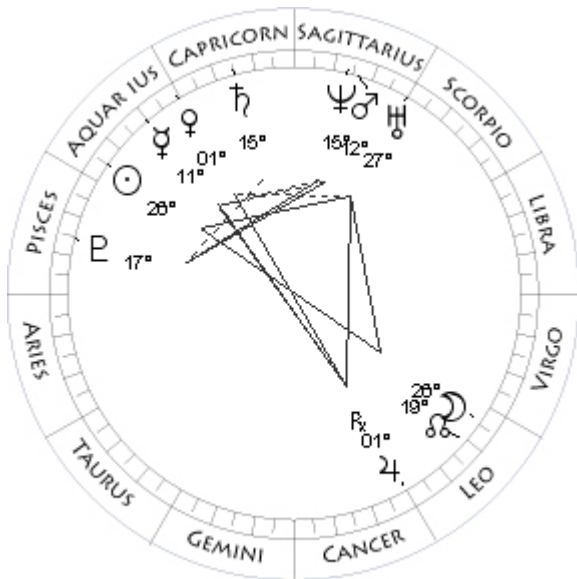
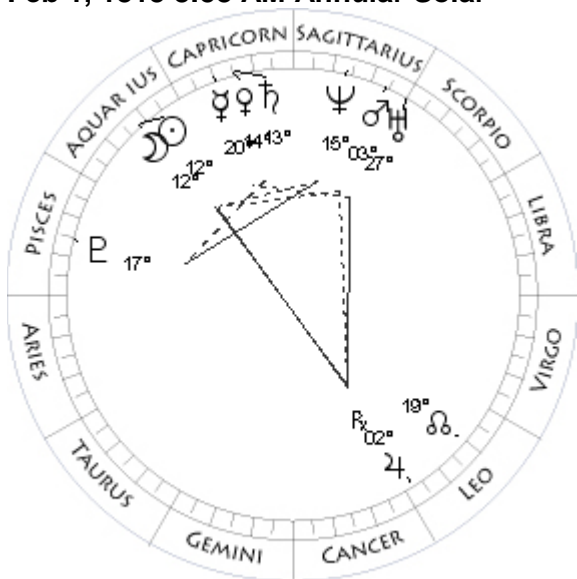
Mo 22Pi26 - 1°19	Mo 29Aq17 - 0°01
Su 22Pi34 - 0°00	Su 29Le17 - 0°00
Me 12Pi18 - 2°08	Me 25Vi58 - 2°50
Ve 28Ar13 + 0°14	Ve 01Le14 - 7°09R
Ma 02Ta31 + 0°13	Ma 20Le47 + 1°09
Ju 26Ge56 - 0°01	Ju 27Cn21 + 0°15
Sa 07Cp01 + 0°51	Sa 01Cp32 + 0°43R
Ur 23Sc19 + 0°18R	Ur 19Sc37 + 0°16
Ne 13Sa23 + 1°32	Ne 10Sa37 + 1°31
Pl 16Pi57 -14°39	Pl 17Pi48 -15°24R
No 07Vi23 - 0°00	No 28Le47 - 0°00

Coords: 135W/12S

Sep 5, 1812 7:04 PM Partial Solar



Feb 1, 1813 8:58 AM Annular Solar



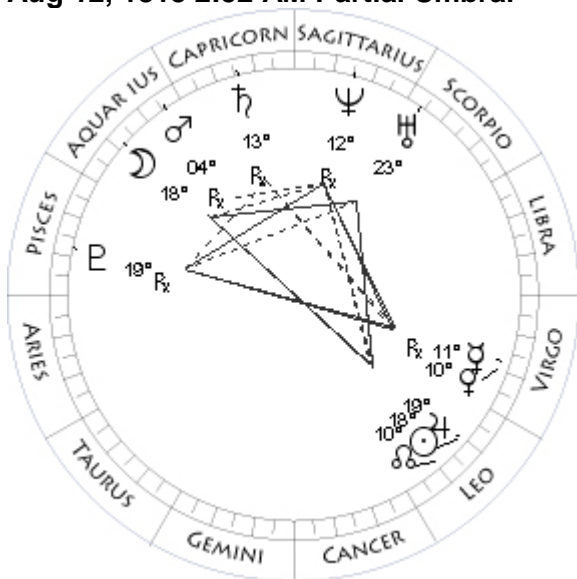
Feb 15, 1813 8:50 AM Partial Umbral

Mo 12Vi53 + 1°16	Mo 26Le18 + 0°36
Su 13Vi00 - 0°00	Su 26Aq22 - 0°00
Me 27Vi38 - 4°18R	Me 11Aq02 - 1°51
Ve 04Le17 - 5°25	Ve 01Aq21 - 0°19
Ma 29Le48 + 1°10	Ma 12Sa09 + 0°26
Ju 00Le10 + 0°17	Ju 01Le17 + 0°44R
Sa 01Cp22 + 0°41	Sa 15Cp25 + 0°25
Ur 20Sc00 + 0°16	Ur 27Sc50 + 0°15
Ne 10Sa40 + 1°30	Ne 15Sa18 + 1°28
Pl 17Pi31 -15°25R	Pl 17Pi28 -14°50
No 28Le02 - 0°00	No 19Le25 - 0°00
	Coords: 129E/13N

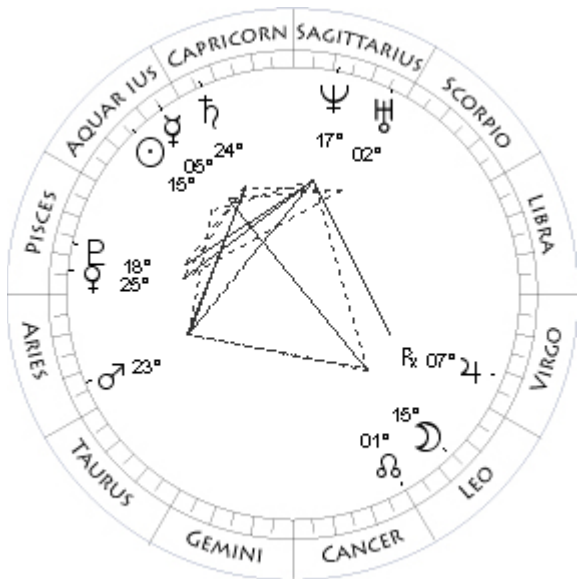
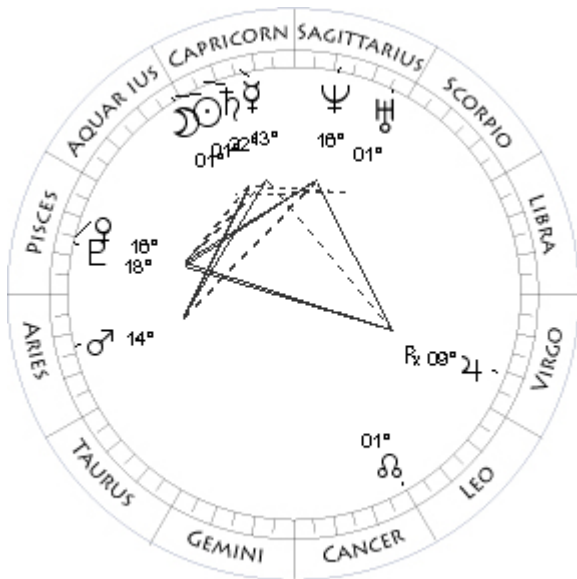
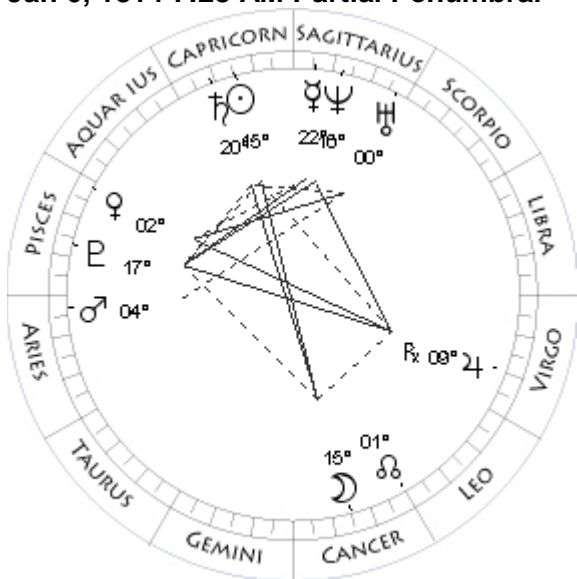
Jul 27, 1813 2:55 PM Total Solar

Mo 12Aq16 + 0°41	Mo 04Le09 - 0°35
Su 12Aq12 - 0°00	Su 04Le05 - 0°00
Me 20Cp16 - 0°32	Me 01Vi06 - 0°44
Ve 14Cp00 + 0°20	Ve 21Le21 + 1°30
Ma 03Sa33 + 0°36	Ma 08Aq34 - 6°36R
Ju 02Le59 + 0°43R	Ju 16Le23 + 0°43
Sa 13Cp57 + 0°26	Sa 14Cp40 + 0°16R
Ur 27Sc33 + 0°15	Ur 23Sc54 + 0°13R
Ne 15Sa01 + 1°28	Ne 13Sa00 + 1°30R
Pl 17Pi07 -14°52	Pl 19Pi30 -15°28R
No 20Le10 - 0°00	No 10Le50 - 0°00
	Coords: 40W/28N

Aug 12, 1813 2:52 AM Partial Umbral



Jan 6, 1814 7:28 AM Partial Penumbral



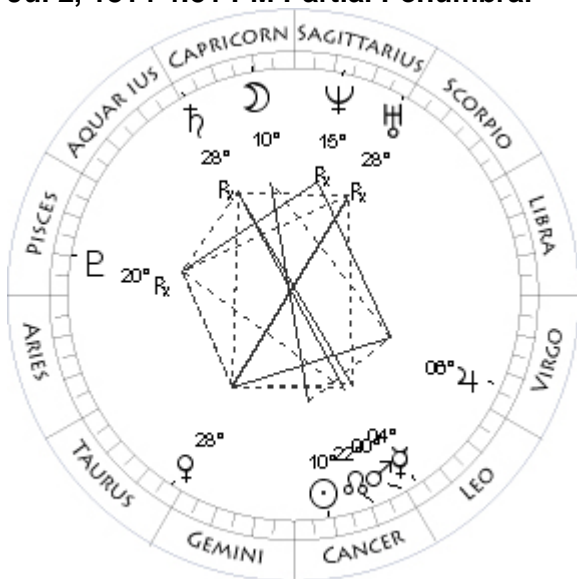
Jan 21, 1814 2:25 PM Annular Solar

Mo 18Aq51 - 0°46	Mo 01Aq01 + 0°01
Su 18Le56 - 0°00	Su 01Aq01 - 0°00
Me 11Vi45 - 3°40R	Me 13Cp30 - 0°46
Ve 10Vi21 + 1°24	Ve 16Pi07 + 1°15
Ma 04Aq35 - 6°40R	Ma 14Ar20 + 0°11
Ju 19Le46 + 0°44	Ju 09Vi03 + 1°15R
Sa 13Cp44 + 0°14R	Sa 22Cp47 + 0°00
Ur 23Sc56 + 0°13	Ur 01Sa33 + 0°11
Ne 12Sa50 + 1°29R	Ne 16Sa51 + 1°25
Pl 19Pi15 -15°32R	Pl 18Pi05 -15°04
No 10Le00 - 0°00	No 01Le24 - 0°00

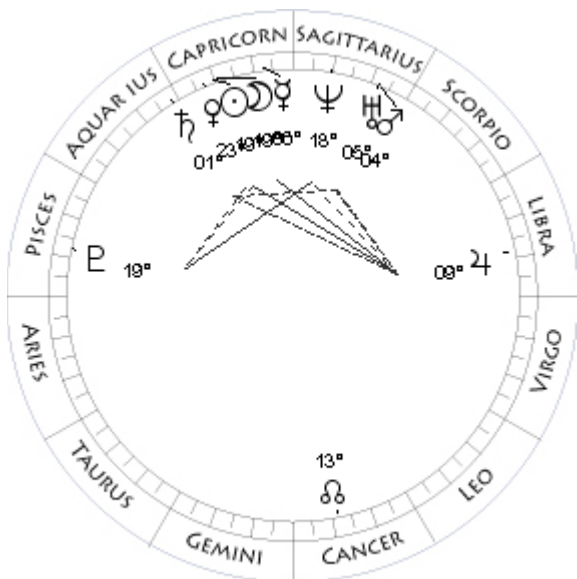
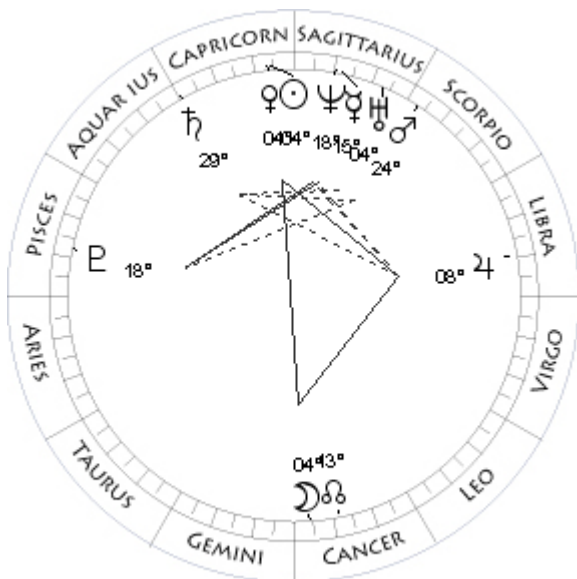
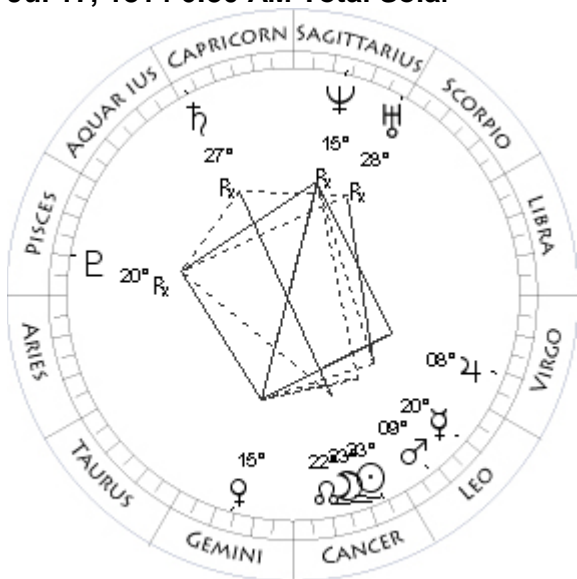
Feb 4, 1814 6:47 PM Partial Penumbral

Mo 15Cn34 - 1°26	Mo 15Le17 + 1°17
Su 15Cp26 - 0°00	Su 15Aq25 - 0°00
Me 22Sa51 + 1°17	Me 05Aq33 - 1°55
Ve 02Pi30 - 0°38	Ve 25Pi30 + 3°36
Ma 04Ar09 - 0°07	Ma 23Ar49 + 0°25
Ju 09Vi57 + 1°11R	Ju 07Vi39 + 1°18R
Sa 20Cp58 + 0°01	Sa 24Cp25 - 0°01
Ur 00Sa53 + 0°11	Ur 02Sa01 + 0°11
Ne 16Sa22 + 1°25	Ne 17Sa13 + 1°25
Pl 17Pi50 -15°08	Pl 18Pi24 -15°01
No 02Le13 - 0°00	No 00Le39 - 0°00
Coords: 111E/21N	Coords: 82W/17N

Jul 2, 1814 4:51 PM Partial Penumbral



Jul 17, 1814 6:30 AM Total Solar



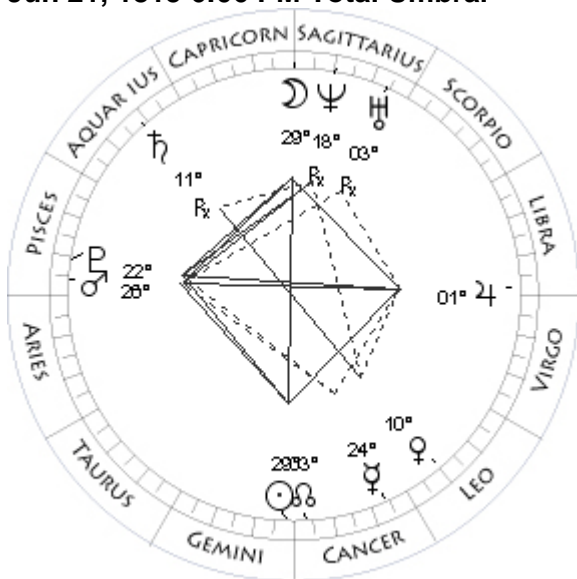
Dec 26, 1814 11:08 PM Partial Umbral

Mo 10Cp11 + 1°06	Mo 04Cn43 - 0°46
Su 10Cn05 - 0°00	Su 04Cp39 - 0°00
Me 04Le13 + 1°10	Me 15Sa33 + 0°49
Ve 28Ta29 - 2°23	Ve 04Cp47 - 0°30
Ma 00Le02 + 1°11	Ma 24Sc54 + 0°23
Ju 06Vi06 + 1°06	Ju 08Li53 + 1°18
Sa 28Cp45 - 0°14R	Sa 29Cp53 - 0°24
Ur 28Sc55 + 0°10R	Ur 04Sa35 + 0°08
Ne 15Sa43 + 1°29R	Ne 18Sa06 + 1°22
Pl 20Pi57 -15°30R	Pl 18Pi54 -15°21
No 22Cn49 - 0°00	No 13Cn26 - 0°00
Coords: 108W/22S	Coords: 13W/23N

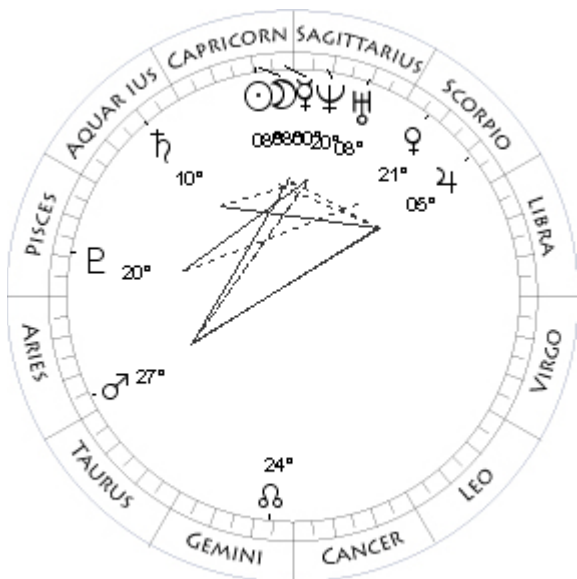
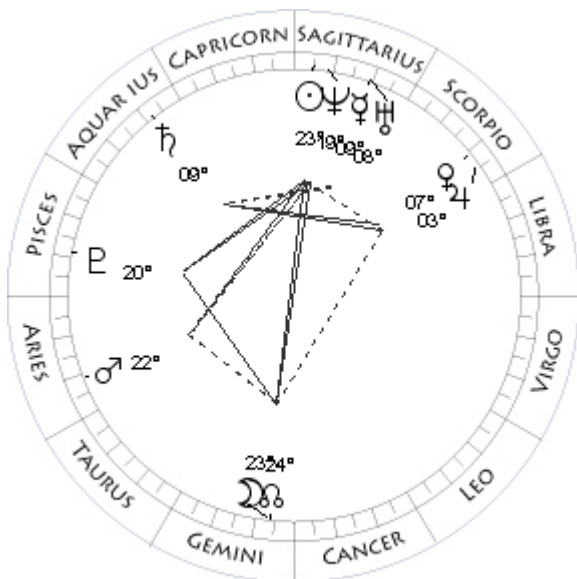
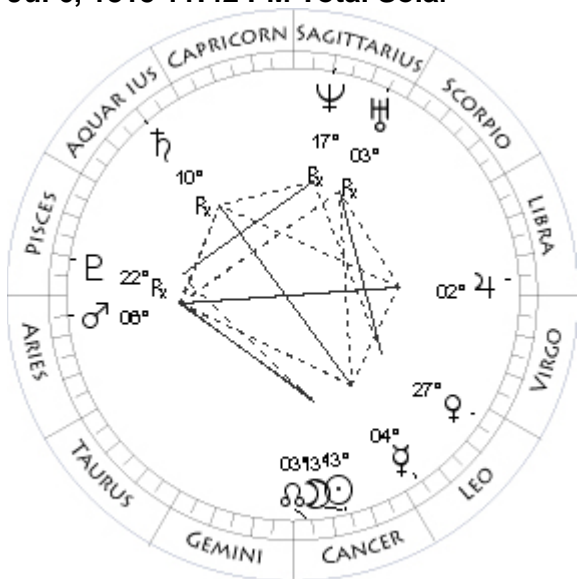
Jan 10, 1815 1:57 PM Annular Solar

Mo 23Cn57 + 0°10	Mo 19Cp29 - 0°36
Su 23Cn58 - 0°00	Su 19Cp33 - 0°00
Me 20Le06 - 1°24	Me 06Cp59 - 0°57
Ve 15Ge03 - 1°55	Ve 23Cp10 - 0°59
Ma 09Le17 + 1°10	Ma 04Sa50 + 0°14
Ju 08Vi35 + 1°05	Ju 09Li52 + 1°22
Sa 27Cp43 - 0°15R	Sa 01Aq33 - 0°25
Ur 28Sc35 + 0°10R	Ur 05Sa21 + 0°08
Ne 15Sa24 + 1°28R	Ne 18Sa37 + 1°22
Pl 20Pi51 -15°35R	Pl 19Pi05 -15°17
No 22Cn03 - 0°00	No 12Cn39 - 0°00
Coords: 85W/31N	

Jun 21, 1815 6:06 PM Total Umbral



Jul 6, 1815 11:42 PM Total Solar



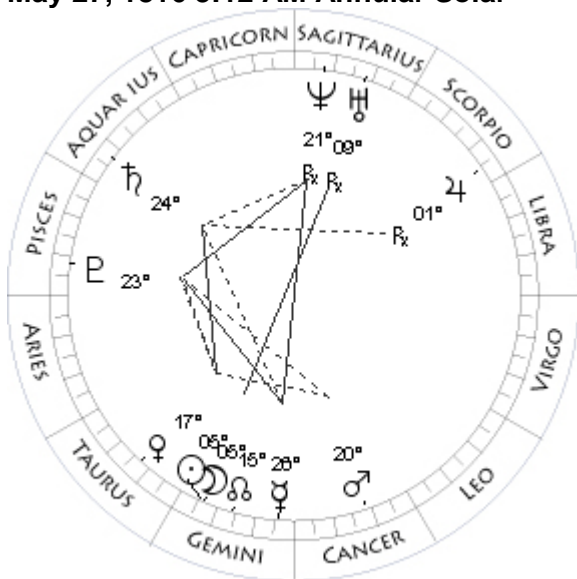
Dec 16, 1815 0:55 PM Total Umbral

Mo 29Sa27 + 0°25	Mo 23Ge47 - 0°05
Su 29Ge25 - 0°00	Su 23Sa46 - 0°00
Me 24Cn33 + 0°58	Me 09Sa21 + 0°26
Ve 10Le32 + 1°58	Ve 07Sc08 + 2°55
Ma 26Pi42 - 2°49	Ma 22Ar05 + 0°36
Ju 01Li09 + 1°21	Ju 03Sc19 + 1°08
Sa 11Aq38 - 0°44R	Sa 09Aq08 - 0°51
Ur 03Sa54 + 0°07R	Ur 08Sa10 + 0°05
Ne 18Sa15 + 1°26R	Ne 19Sa48 + 1°20
Pl 22Pi10 -15°34	Pl 20Pi01 -15°34
No 04Cn04 - 0°00	No 24Ge39 - 0°00
Coords: 89W/23S	Coords: 165W/23N

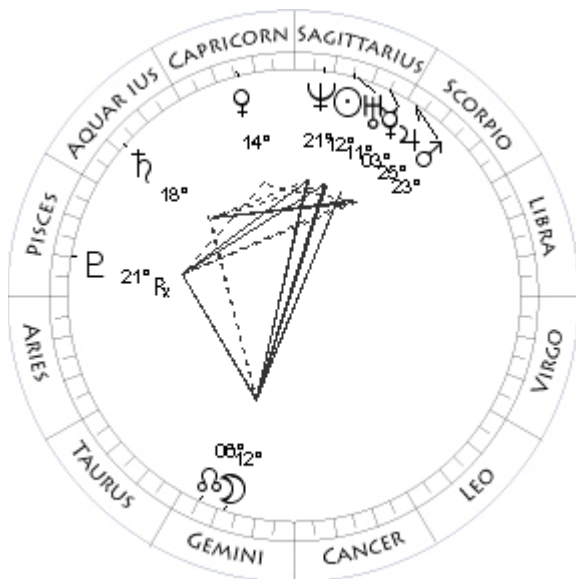
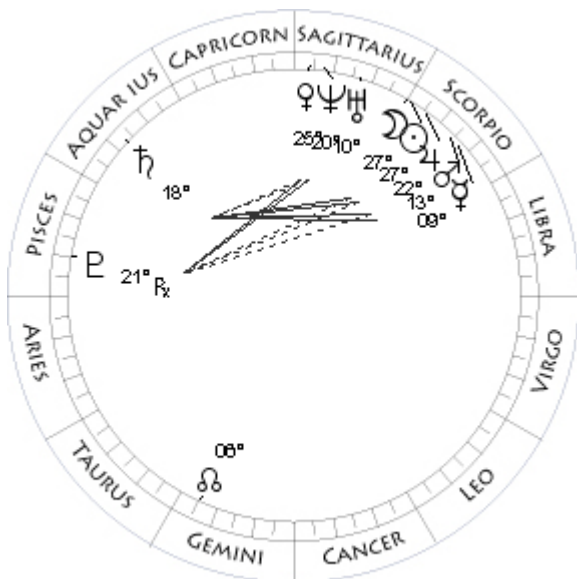
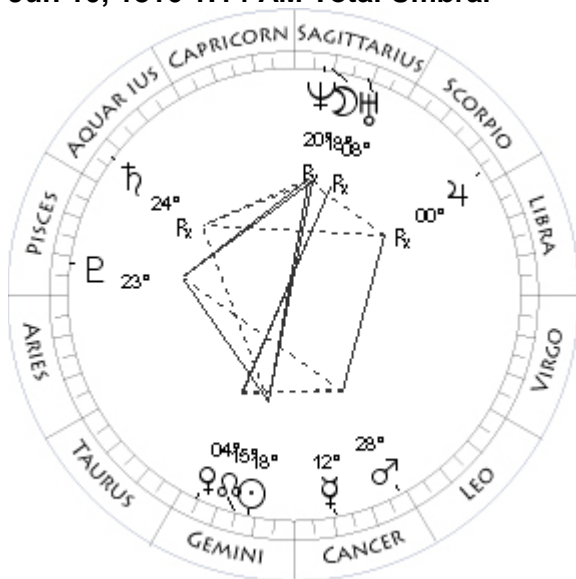
Dec 30, 1815 2:38 PM Partial Solar

Mo 13Cn50 + 0°55	Mo 08Cp00 - 1°13
Su 13Cn56 - 0°00	Su 08Cp07 - 0°00
Me 04Le51 - 2°18	Me 00Cp55 - 1°08
Ve 27Le29 + 1°25	Ve 21Sc24 + 3°10
Ma 06Ar04 - 3°10	Ma 27Ar06 + 0°56
Ju 02Li30 + 1°17	Ju 05Sc36 + 1°10
Sa 10Aq49 - 0°46R	Sa 10Aq34 - 0°51
Ur 03Sa25 + 0°07R	Ur 08Sa59 + 0°04
Ne 17Sa52 + 1°26R	Ne 20Sa20 + 1°20
Pl 22Pi08 -15°40R	Pl 20Pi08 -15°30
No 03Cn16 - 0°00	No 23Ge55 - 0°00
Coords: 167E/88N	

May 27, 1816 3:12 AM Annular Solar



Jun 10, 1816 1:14 AM Total Umbra



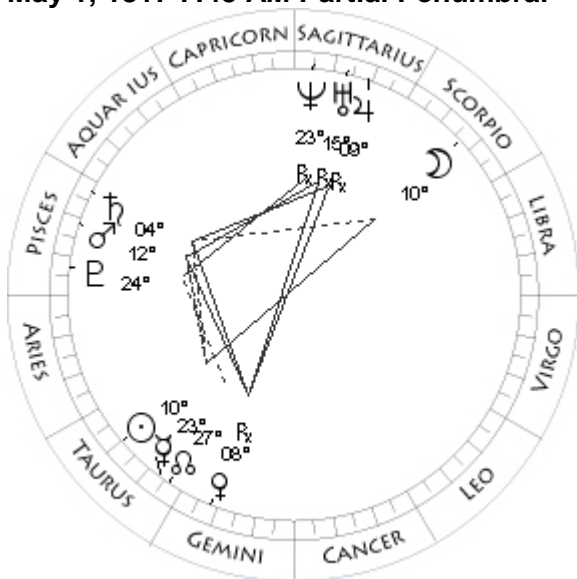
Nov 19, 1816 10:17 AM Total Solar

Mo 05Ge44 - 0°53	Mo 27Sc06 + 0°50
Su 05Ge39 - 0°00	Su 27Sc02 - 0°00
Me 26Ge57 + 2°13	Me 09Sc58 + 1°52
Ve 17Ta50 - 1°12	Ve 25Sa25 - 1°20
Ma 20Cn06 + 1°23	Ma 13Sc17 + 0°16
Ju 01Sc40 + 1°22R	Ju 22Sc05 + 0°49
Sa 24Aq00 - 1°08	Sa 18Aq04 - 1°18
Ur 09Sa31 + 0°03R	Ur 10Sa43 + 0°01
Ne 21Sa09 + 1°24R	Ne 20Sa56 + 1°17
Pl 23Pi13 -15°33	Pl 21Pi15 -15°53R
No 16Ge03 - 0°00	No 06Ge43 - 0°00
Coords: 153W/48S	Coords: 41W/35N

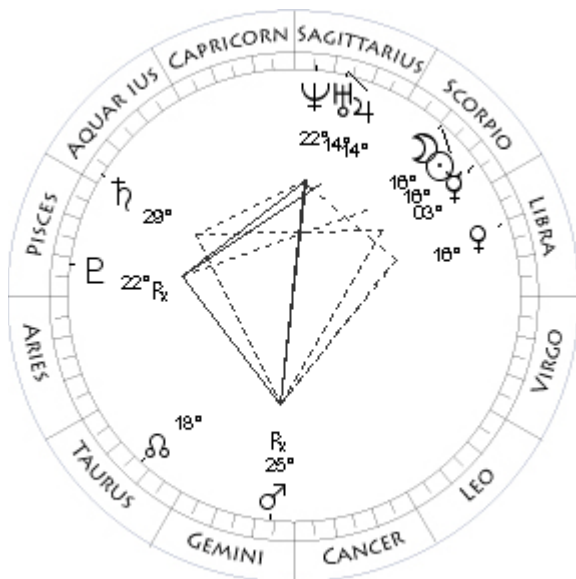
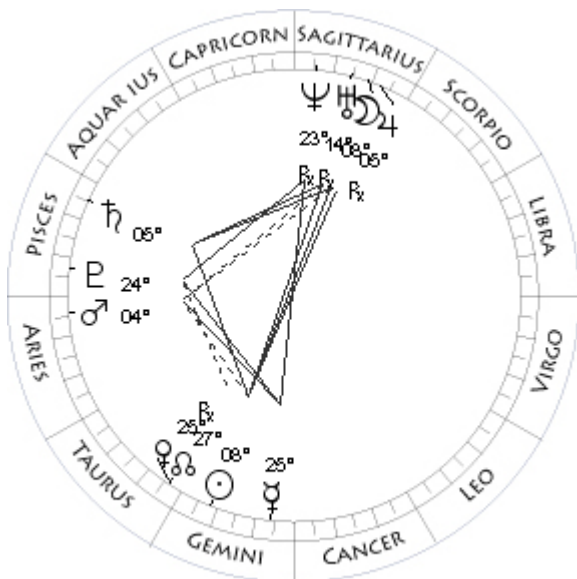
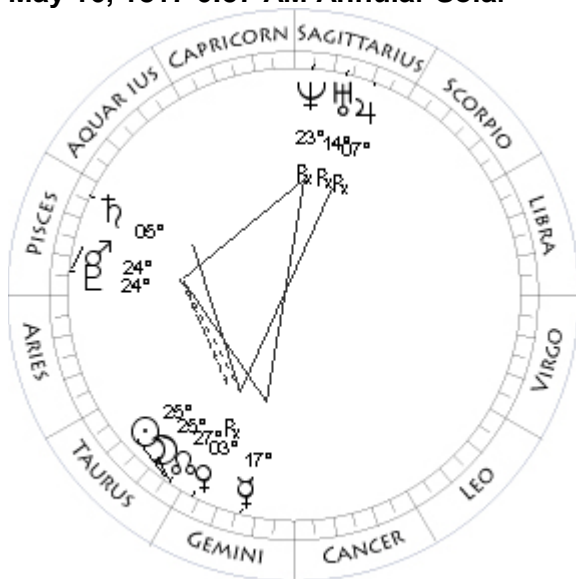
Dec 4, 1816 8:34 PM Partial Umbra

Mo 18Sa56 - 0°19	Mo 12Ge36 + 0°35
Su 18Ge58 - 0°00	Su 12Sa40 - 0°00
Me 12Cn15 + 0°38	Me 03Sa28 + 0°08
Ve 04Ge49 - 0°45	Ve 14Cp27 - 1°46
Ma 28Cn38 + 1°20	Ma 23Sc59 + 0°07
Ju 00Sc42 + 1°19R	Ju 25Sc28 + 0°48
Sa 24Aq01 - 1°10R	Sa 18Aq59 - 1°17
Ur 08Sa57 + 0°03R	Ur 11Sa40 + 0°01
Ne 20Sa47 + 1°24R	Ne 21Sa30 + 1°17
Pl 23Pi20 -15°38	Pl 21Pi12 -15°47R
No 15Ge19 - 0°00	No 05Ge54 - 0°00
	Coords: 49W/23N

May 1, 1817 7:43 AM Partial Penumbra



May 16, 1817 6:57 AM Annular Solar



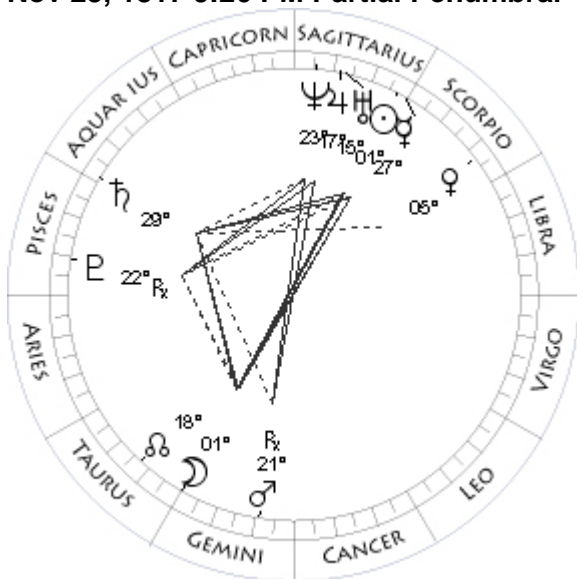
May 30, 1817 3:07 PM Partial Penumbra

Mo 10Sc40 + 1°29	Mo 08Sa40 - 1°04
Su 10Ta33 - 0°00	Su 08Ge46 - 0°00
Me 23Ta45 + 1°31	Me 25Ge25 + 0°04
Ve 08Ge45 + 5°13R	Ve 25Ta30 + 0°07R
Ma 12Pi52 - 1°32	Ma 04Ar51 - 1°43
Ju 09Sa00 + 0°54R	Ju 05Sa33 + 0°52R
Sa 04Pi19 - 1°26	Sa 05Pi47 - 1°33
Ur 15Sa05 - 0°00R	Ur 14Sa00 - 0°00R
Ne 23Sa58 + 1°21R	Ne 23Sa19 + 1°21R
Pl 24Pi00 -15°33	Pl 24Pi25 -15°42
No 28Ta05 - 0°00	No 26Ta32 - 0°00
Coords: 116E/14S	Coords: 132W/23S

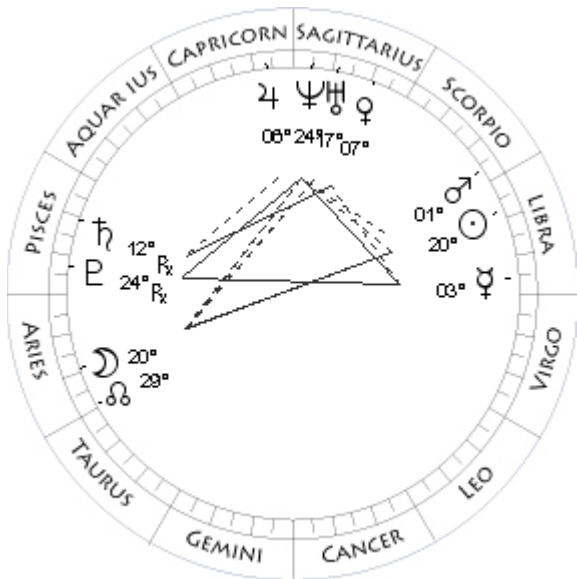
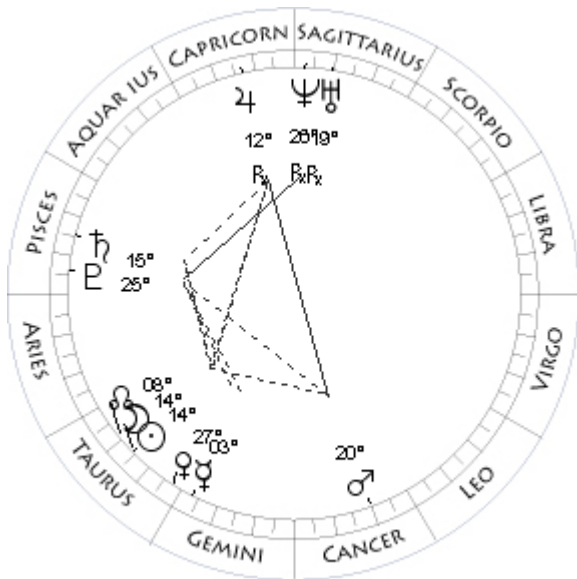
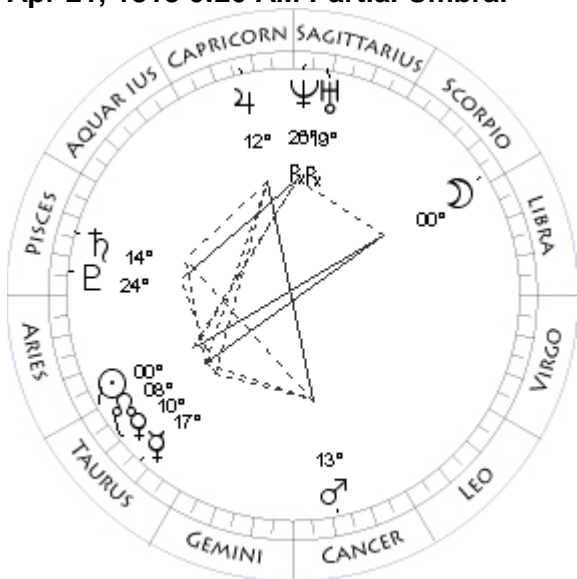
Nov 9, 1817 1:53 AM Total Solar

Mo 25Ta01 - 0°11	Mo 16Sc21 + 0°09
Su 25Ta00 - 0°00	Su 16Sc21 - 0°00
Me 17Ge04 + 2°21	Me 03Sc51 + 1°31
Ve 03Ge59 + 3°22R	Ve 16Li53 + 1°43
Ma 24Pi09 - 1°38	Ma 25Ge25 + 1°02R
Ju 07Sa21 + 0°53R	Ju 14Sa04 + 0°23
Sa 05Pi13 - 1°29	Sa 29Aq20 - 1°45
Ur 14Sa34 - 0°00R	Ur 14Sa16 - 0°02
Ne 23Sa40 + 1°21R	Ne 22Sa42 + 1°15
Pl 24Pi15 -15°37	Pl 22Pi32 -16°04R
No 27Ta17 - 0°00	No 17Ta56 - 0°00
Coords: 78W/ 8N	

Nov 23, 1817 9:26 PM Partial Penumbral



Apr 21, 1818 0:20 AM Partial Umbral



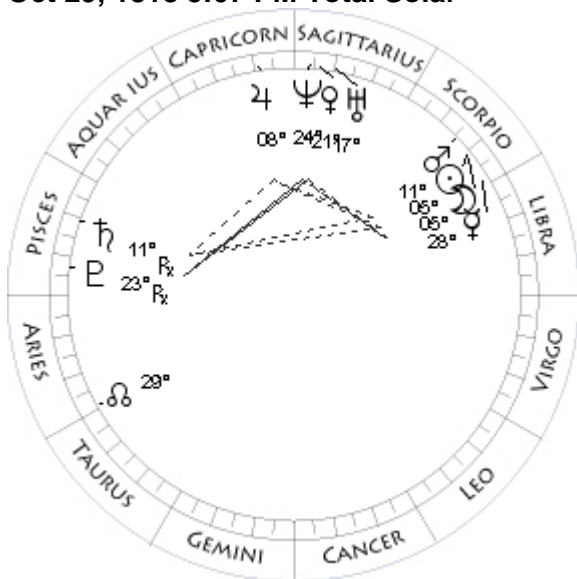
May 5, 1818 7:15 AM Annular Solar

Mo 01Ge11 + 1°12	Mo 14Ta07 + 0°29
Su 01Sa18 - 0°00	Su 14Ta10 - 0°00
Me 27Sc30 - 0°07	Me 03Ge46 + 2°28
Ve 05Sc15 + 1°38	Ve 27Ta49 + 0°03
Ma 21Ge56 + 1°47R	Ma 20Cn55 + 1°43
Ju 17Sa18 + 0°21	Ju 12Cp56 + 0°08R
Sa 29Aq41 - 1°43	Sa 15Pi49 - 1°47
Ur 15Sa07 - 0°02	Ur 19Sa30 - 0°04R
Ne 23Sa12 + 1°15	Ne 26Sa08 + 1°18R
Pl 22Pi25 -16°00R	Pl 25Pi13 -15°41
No 17Ta09 - 0°00	No 08Ta33 - 0°00
Coords: 35W/22N	Coords: 52W/46N

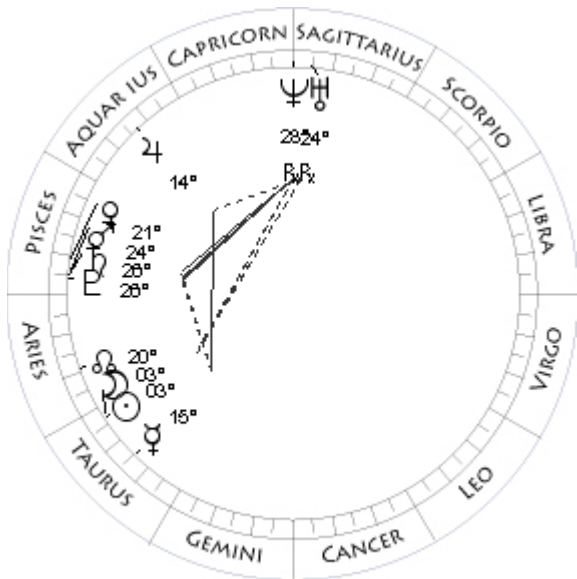
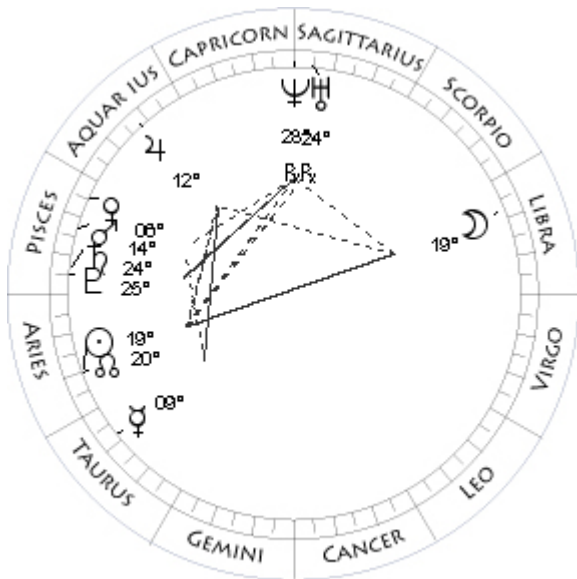
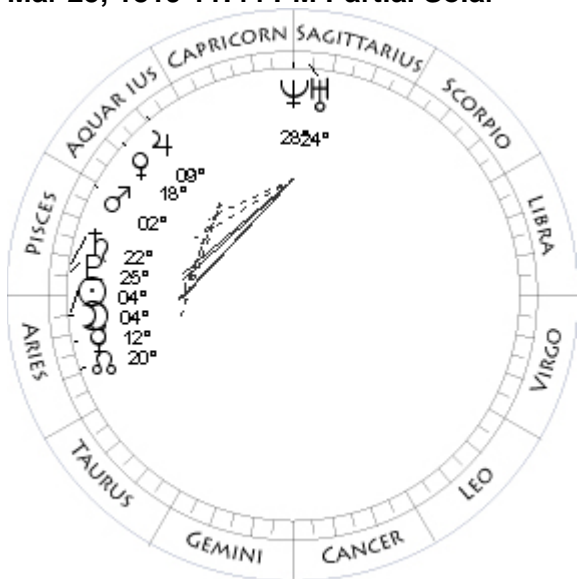
Oct 14, 1818 5:25 AM Partial Umbral

Mo 00Sc22 + 0°46	Mo 20Ar21 - 0°51
Su 00Ta18 - 0°00	Su 20Li17 - 0°00
Me 17Ta46 + 2°01	Me 03Li28 + 1°59
Ve 10Ta14 - 0°31	Ve 07Sa04 - 3°33
Ma 13Cn09 + 1°52	Ma 01Sc12 + 0°12
Ju 12Cp50 + 0°09	Ju 06Cp07 - 0°11
Sa 14Pi32 - 1°44	Sa 12Pi22 - 2°12R
Ur 19Sa52 - 0°04R	Ur 17Sa10 - 0°05
Ne 26Sa21 + 1°17R	Ne 24Sa08 + 1°13
Pl 24Pi56 -15°38	Pl 24Pi07 -16°18R
No 09Ta18 - 0°00	No 29Ar58 - 0°00

Oct 29, 1818 5:07 PM Total Solar



Mar 25, 1819 11:44 PM Partial Solar



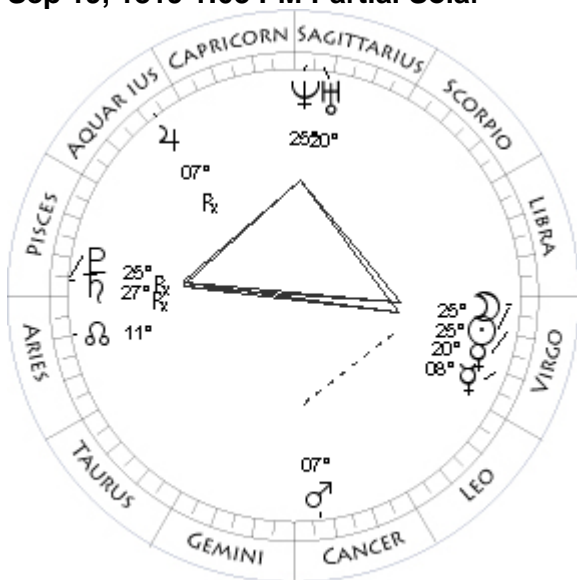
Apr 10, 1819 1:07 PM Total Umbral

Mo 05Sc39 - 0°33	Mo 19Li50 + 0°03
Su 05Sc43 - 0°00	Su 19Ar50 - 0°00
Me 28Li36 + 1°12	Me 09Ta08 + 2°32
Ve 21Sa48 - 4°10	Ve 06Pi04 - 0°23
Ma 11Sc51 + 0°03	Ma 14Pi10 - 1°14
Ju 08Cp22 - 0°12	Ju 12Aq31 - 0°30
Sa 11Pi45 - 2°10R	Sa 24Pi27 - 1°58
Ur 17Sa51 - 0°05	Ur 24Sa28 - 0°07R
Ne 24Sa30 + 1°13	Ne 28Sa39 + 1°14R
Pl 23Pi52 -16°15R	Pl 25Pi50 -15°43
No 29Ar09 - 0°00	No 20Ar32 - 0°00

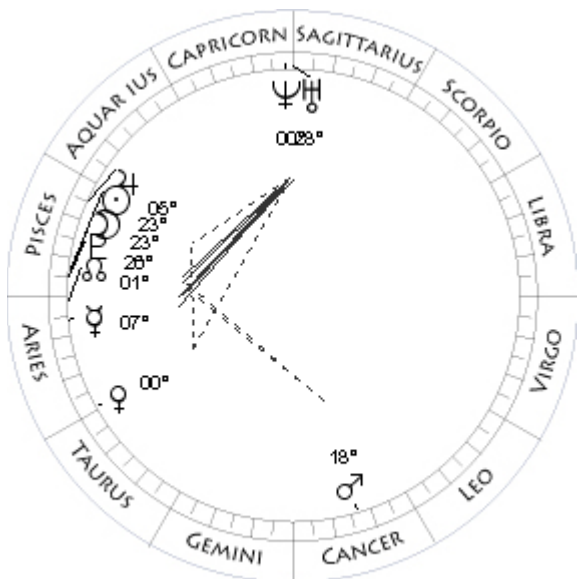
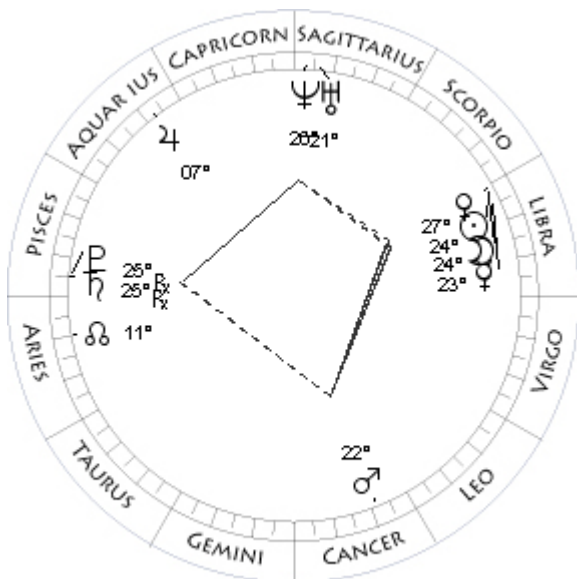
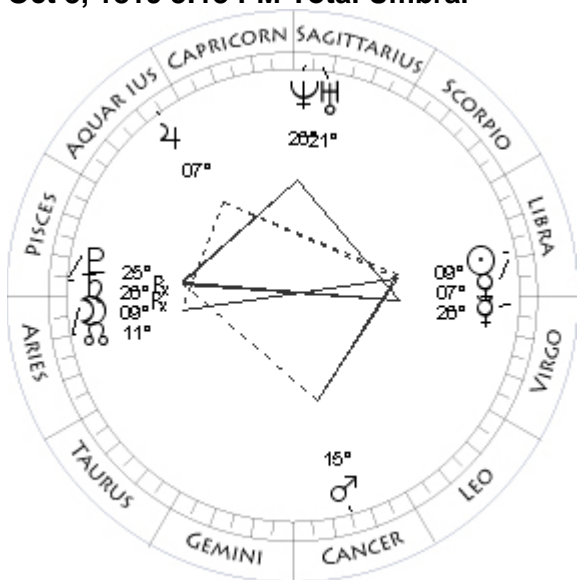
Apr 24, 1819 11:31 AM Partial Solar

Mo 04Ar38 - 1°25	Mo 03Ta19 + 1°11
Su 04Ar30 - 0°00	Su 03Ta26 - 0°00
Me 12Ar35 - 0°14	Me 15Ta55 + 2°26
Ve 18Aq50 + 0°51	Ve 21Pi56 - 1°12
Ma 02Pi03 - 1°12	Ma 24Pi58 - 1°15
Ju 09Aq54 - 0°27	Ju 14Aq27 - 0°32
Sa 22Pi36 - 1°57	Sa 26Pi00 - 2°00
Ur 24Sa31 - 0°07	Ur 24Sa15 - 0°07R
Ne 28Sa40 + 1°13	Ne 28Sa32 + 1°14R
Pl 25Pi27 -15°41	Pl 26Pi09 -15°46
No 21Ar21 - 0°00	No 19Ar47 - 0°00

Sep 19, 1819 1:03 PM Partial Solar



Oct 3, 1819 3:13 PM Total Umbral



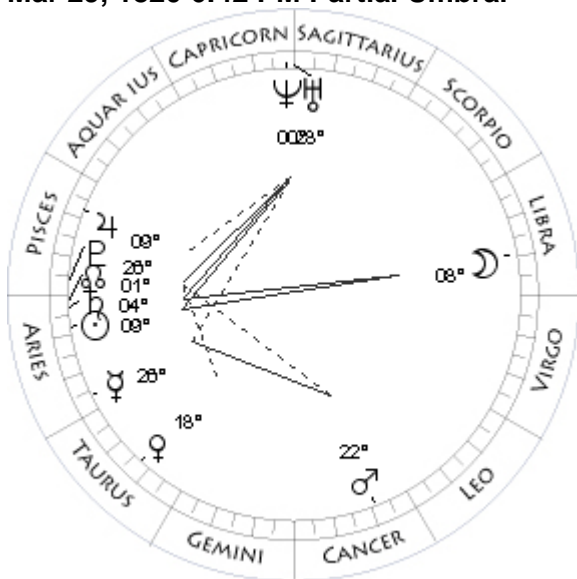
Oct 19, 1819 3:26 AM Partial Solar

Mo 25Vi52 + 1°23	Mo 24Li47 - 1°14
Su 25Vi44 - 0°00	Su 24Li55 - 0°00
Me 08Vi43 + 0°06	Me 23Li26 + 0°55
Ve 20Vi22 + 1°25	Ve 27Li21 + 1°00
Ma 07Cn56 + 0°19	Ma 22Cn58 + 1°02
Ju 07Aq42 - 0°56R	Ju 07Aq42 - 0°54
Sa 27Pi27 - 2°32R	Sa 25Pi18 - 2°31R
Ur 20Sa41 - 0°08	Ur 21Sa32 - 0°09
Ne 25Sa57 + 1°12	Ne 26Sa22 + 1°10
Pl 25Pi48 -16°28R	Pl 25Pi14 -16°25R
No 11Ar57 - 0°00	No 10Ar23 - 0°00

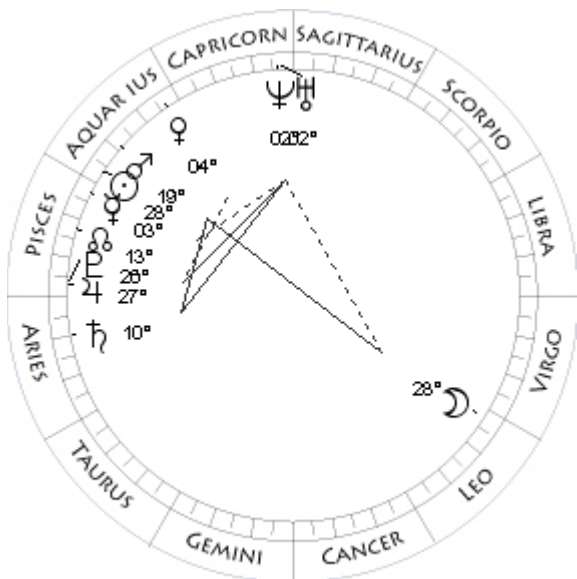
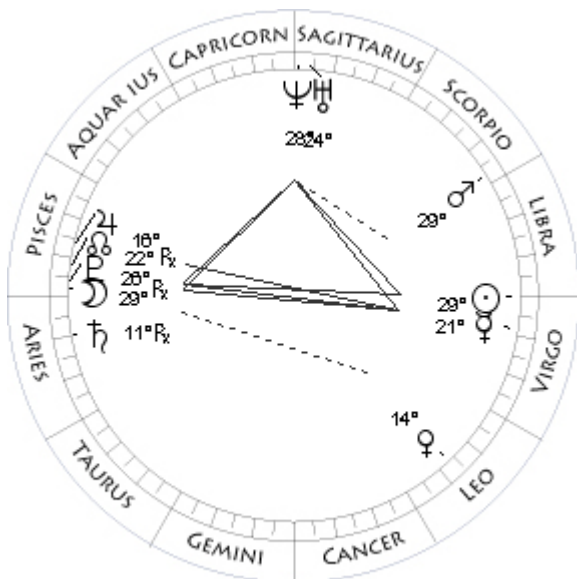
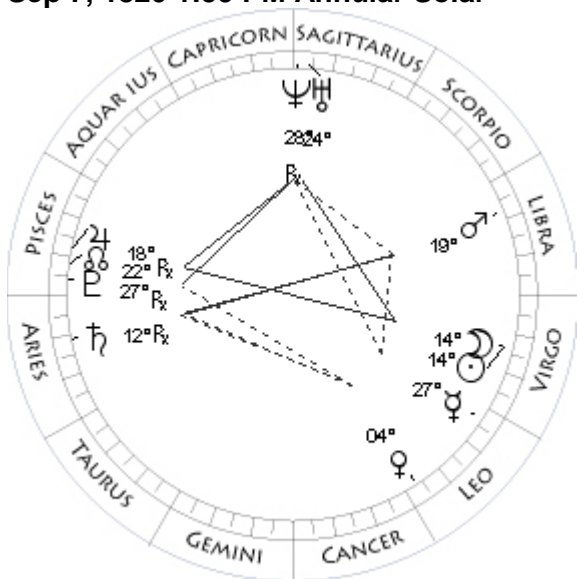
Mar 14, 1820 1:36 PM Total Solar

Mo 09Ar34 - 0°09	Mo 23Pi59 - 0°43
Su 09Li34 - 0°00	Su 23Pi56 - 0°00
Me 26Vi32 + 1°55	Me 07Ar18 + 0°17
Ve 07Li57 + 1°20	Ve 00Ta21 + 0°22
Ma 15Cn31 + 0°38	Ma 18Cn26 + 3°08
Ju 07Aq21 - 0°56	Ju 05Pi32 - 0°53
Sa 26Pi22 - 2°32R	Sa 02Ar20 - 2°08
Ur 21Sa00 - 0°08	Ur 28Sa41 - 0°10
Ne 26Sa06 + 1°11	Ne 00Cp47 + 1°10
Pl 25Pi31 -16°27R	Pl 26Pi18 -15°48
No 11Ar12 - 0°00	No 02Ar35 - 0°00
Coords: 129W/ 4N	Coords: 6W/41S

Mar 29, 1820 6:42 PM Partial Umbral



Sep 7, 1820 1:59 PM Annular Solar



Sep 22, 1820 6:35 AM Partial Umbral

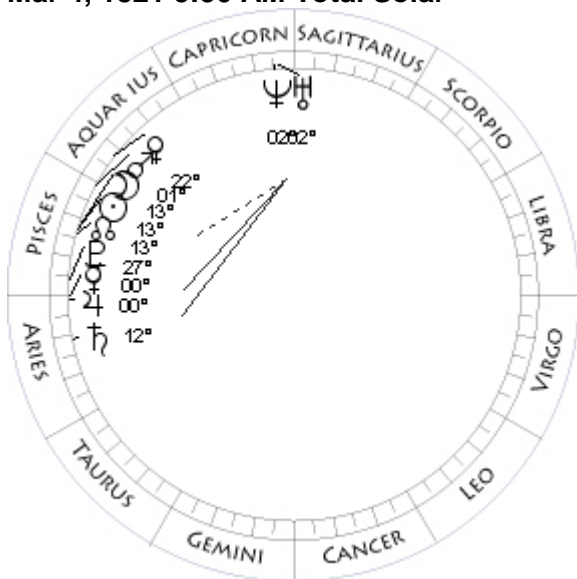
Mo 08Li56 - 0°39	Mo 29Pi05 + 0°34
Su 09Ar00 - 0°00	Su 29Vi09 - 0°00
Me 26Ar35 + 3°02	Me 21Vi18 + 1°49
Ve 18Ta19 + 1°16	Ve 14Le13 - 2°57
Ma 22Cn22 + 2°43	Ma 29Li48 - 0°01
Ju 09Pi02 - 0°55	Ju 16Pi50 - 1°33R
Sa 04Ar14 - 2°08	Sa 11Ar00 - 2°43R
Ur 28Sa50 - 0°10	Ur 24Sa59 - 0°12
Ne 00Cp52 + 1°10	Ne 28Sa09 + 1°09
Pl 26Pi42 -15°49	Pl 26Pi55 -16°35R
No 01Ar46 - 0°00	No 22Pi25 - 0°00

Feb 17, 1821 1:05 AM Partial Penumbral

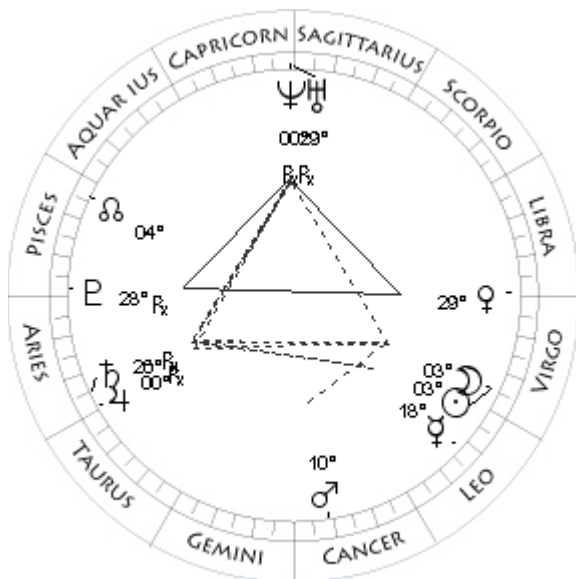
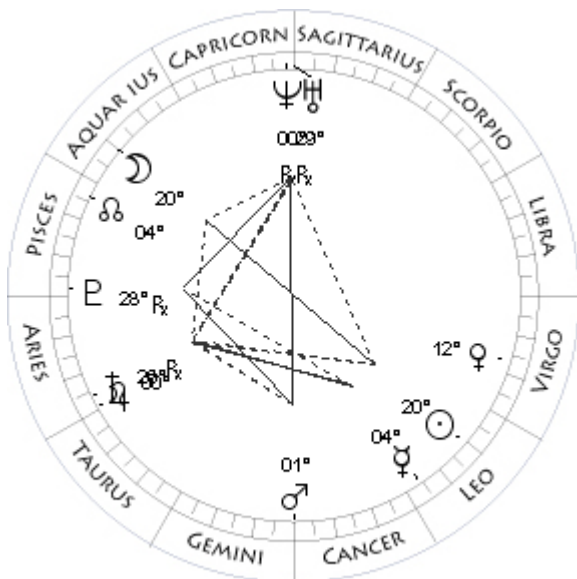
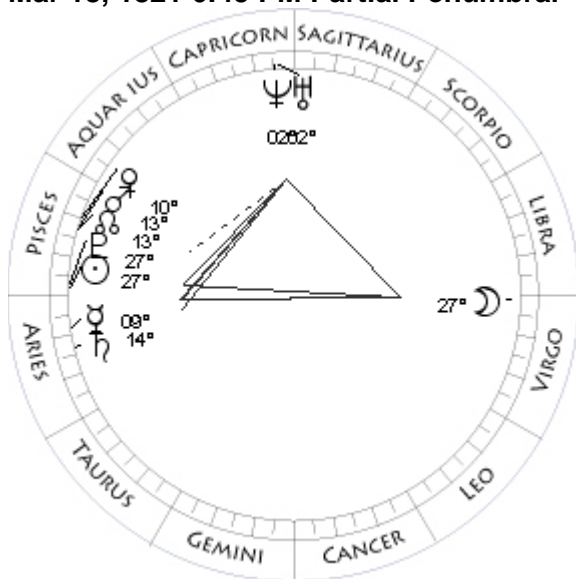
Mo 14Vi53 + 0°44	Mo 28Le15 + 1°24
Su 14Vi48 - 0°00	Su 28Aq07 - 0°00
Me 27Le01 + 0°36	Me 03Pi32 - 1°37
Ve 04Le08 - 4°55	Ve 04Aq05 - 0°26
Ma 19Li59 + 0°09	Ma 19Aq47 - 1°05
Ju 18Pi45 - 1°32R	Ju 27Pi14 - 1°07
Sa 12Ar02 - 2°41R	Sa 10Ar44 - 2°18
Ur 24Sa51 - 0°12	Ur 02Cp06 - 0°13
Ne 28Sa06 + 1°09R	Ne 02Cp29 + 1°06
Pl 27Pi13 -16°34R	Pl 26Pi48 -15°57
No 23Pi12 - 0°00	No 14Pi36 - 0°00

Coords: 9W/51N

Mar 4, 1821 5:50 AM Total Solar



Mar 18, 1821 6:45 PM Partial Penumbral



Aug 13, 1821 2:26 PM Partial Penumbral

Mo 13Pi23 - 0°02	Mo 20Aq33 - 1°17
Su 13Pi23 - 0°00	Su 20Le26 - 0°00
Me 00Ar31 + 0°56	Me 04Le33 - 2°34
Ve 22Aq56 - 1°00	Ve 12Vi50 + 1°22
Ma 01Pi46 - 1°05	Ma 01Cn21 + 0°19
Ju 00Ar46 - 1°06	Ju 00Ta11 - 1°25
Sa 12Ar25 - 2°16	Sa 26Ar42 - 2°37R
Ur 02Cp38 - 0°13	Ur 29Sa24 - 0°15R
Ne 02Cp48 + 1°06	Ne 00Cp31 + 1°07R
Pl 27Pi10 -15°55	Pl 28Pi50 -16°36R
No 13Pi48 - 0°00	No 05Pi12 - 0°00

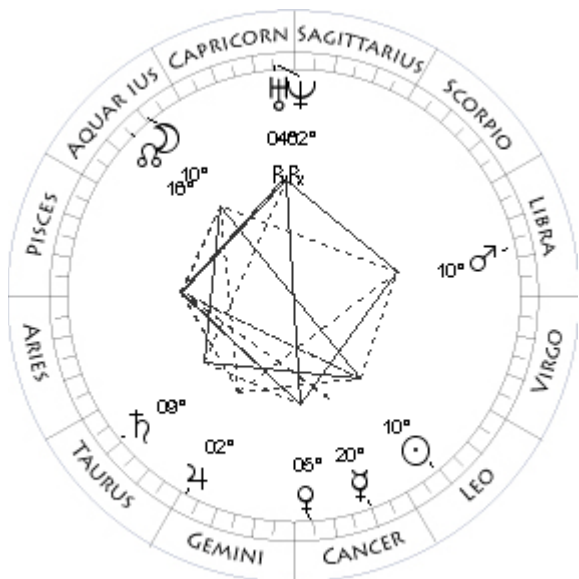
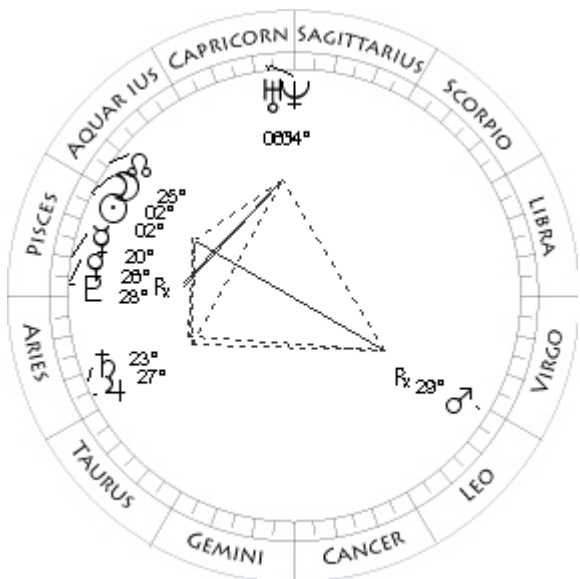
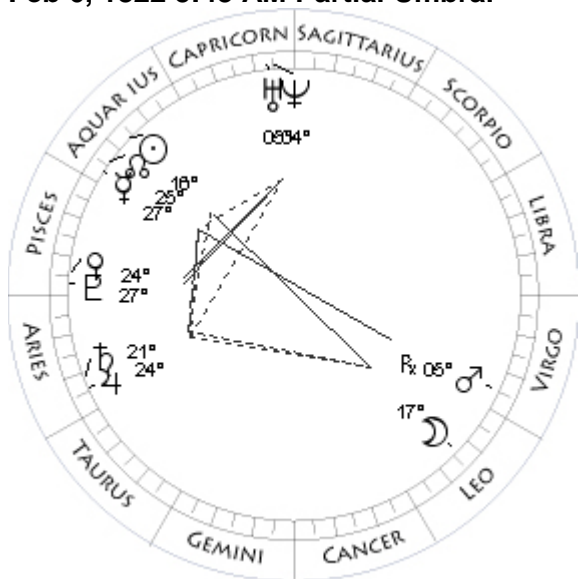
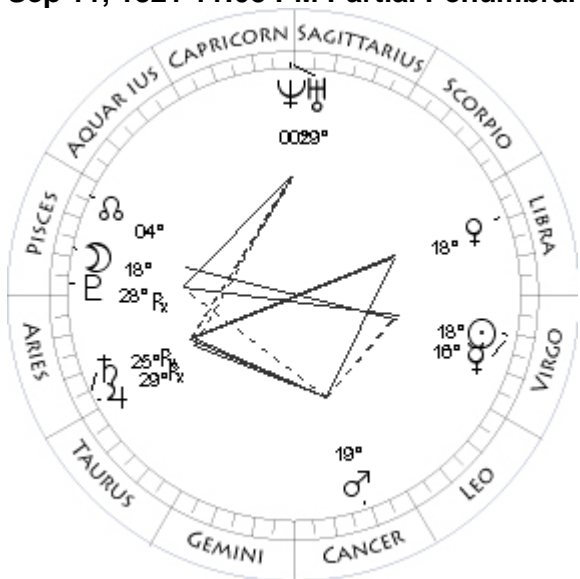
Coords: 145W/16S

Aug 27, 1821 3:19 PM Annular Solar

Mo 27Vi45 - 1°17	Mo 03Vi58 + 0°04
Su 27Pi53 - 0°00	Su 03Vi58 - 0°00
Me 09Ar19 + 3°29	Me 18Le17 + 0°57
Ve 10Pi57 - 1°21	Ve 29Vi59 + 1°00
Ma 13Pi13 - 1°04	Ma 10Cn25 + 0°31
Ju 04Ar16 - 1°06	Ju 00Ta09 - 1°28R
Sa 14Ar09 - 2°15	Sa 26Ar24 - 2°41R
Ur 02Cp57 - 0°13	Ur 29Sa11 - 0°15R
Ne 02Cp59 + 1°07	Ne 00Cp21 + 1°07R
Pl 27Pi32 -15°55	Pl 28Pi36 -16°39R
No 13Pi01 - 0°00	No 04Pi27 - 0°00

Sep 11, 1821 11:05 PM Partial Penumbral

Feb 6, 1822 5:43 AM Partial Umbral



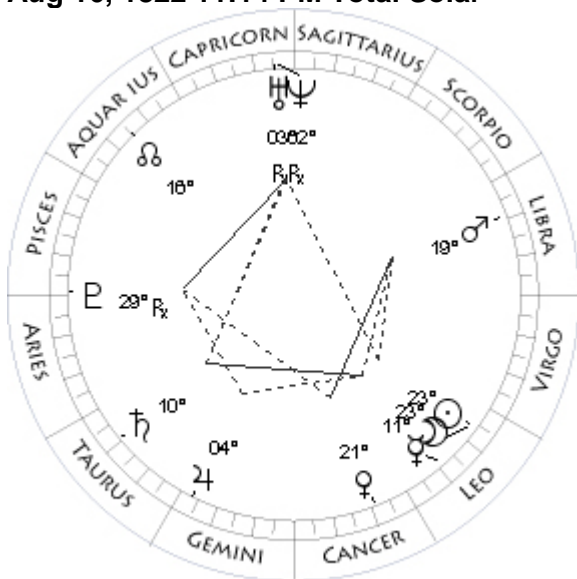
Feb 21, 1822 7:40 PM Total Solar

Mo 18Pi42 + 1°17	Mo 02Pi36 + 0°40
Su 18Vi50 - 0°00	Su 02Pi41 - 0°00
Me 16Vi51 + 1°42	Me 20Pi35 + 1°40
Ve 18Li39 + 0°24	Ve 26Pi40 + 7°13R
Ma 19Cn59 + 0°45	Ma 29Le05 + 4°26R
Ju 29Ar24 - 1°32R	Ju 27Ar20 - 1°03
Sa 25Ar44 - 2°44R	Sa 23Ar03 - 2°20
Ur 29Sa08 - 0°15	Ur 06Cp22 - 0°16
Ne 00Cp17 + 1°06	Ne 04Cp43 + 1°03
Pl 28Pi19 -16°41R	Pl 28Pi02 -16°03
No 03Pi38 - 0°00	No 25Aq01 - 0°00
Coords: 132E/28N	

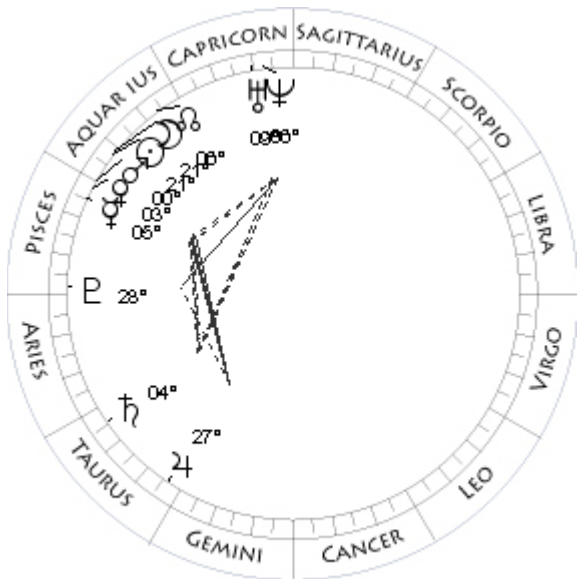
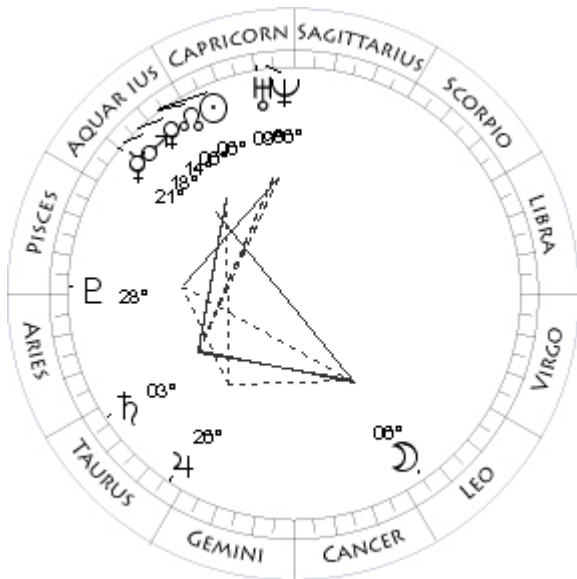
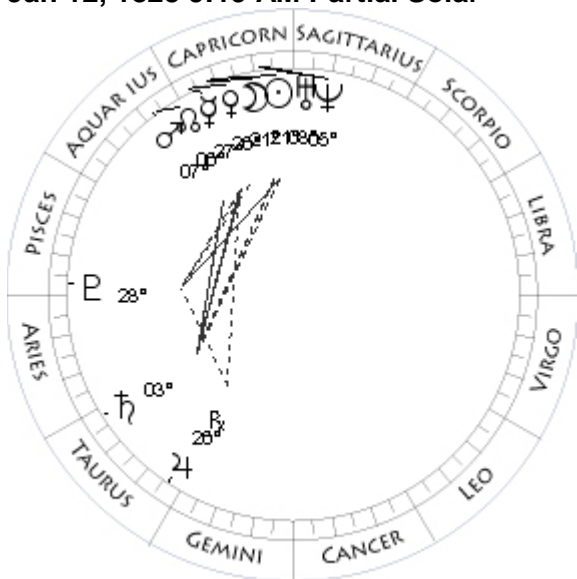
Aug 3, 1822 0:30 AM Partial Umbral

Mo 17Le01 + 0°46	Mo 10Aq07 - 0°33
Su 16Aq57 - 0°00	Su 10Le04 - 0°00
Me 27Aq40 - 1°26	Me 20Cn52 - 1°40
Ve 24Pi53 + 4°09	Ve 05Cn06 - 1°05
Ma 05Vi00 + 4°23R	Ma 10Li48 + 0°05
Ju 24Ar41 - 1°07	Ju 02Ge12 - 0°55
Sa 21Ar42 - 2°23	Sa 09Ta49 - 2°28
Ur 05Cp41 - 0°16	Ur 04Cp02 - 0°19R
Ne 04Cp18 + 1°03	Ne 02Cp56 + 1°04R
Pl 27Pi41 -16°06	Pl 00Ar09 -16°39R
No 25Aq51 - 0°00	No 16Aq26 - 0°00

Aug 16, 1822 11:14 PM Total Solar



Jan 12, 1823 9:19 AM Partial Solar



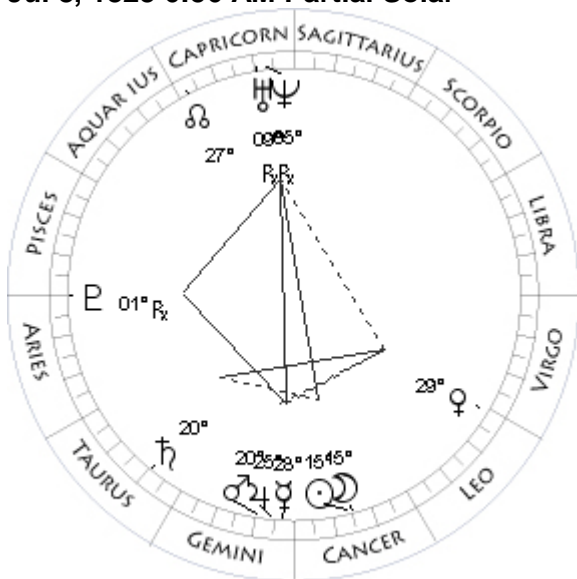
Jan 26, 1823 5:25 PM Total Umbral

Mo 23Le23 - 0°40	Mo 06Le03 + 0°04
Su 23Le27 - 0°00	Su 06Aq02 - 0°00
Me 11Le56 + 1°15	Me 21Aq28 - 1°09
Ve 21Cn38 - 0°21	Ve 14Aq08 - 1°22
Ma 19Li28 - 0°07	Ma 18Aq40 - 1°05
Ju 04Ge05 - 0°56	Ju 26Ta35 - 0°45
Sa 10Ta08 - 2°31	Sa 03Ta43 - 2°23
Ur 03Cp41 - 0°19R	Ur 09Cp08 - 0°19
Ne 02Cp41 + 1°04R	Ne 06Cp05 + 0°59
Pl 29Pi57 -16°43R	Pl 28Pi37 -16°15
No 15Aq41 - 0°00	No 07Aq04 - 0°00
Coords: 174W/26S	Coords: 102W/19N

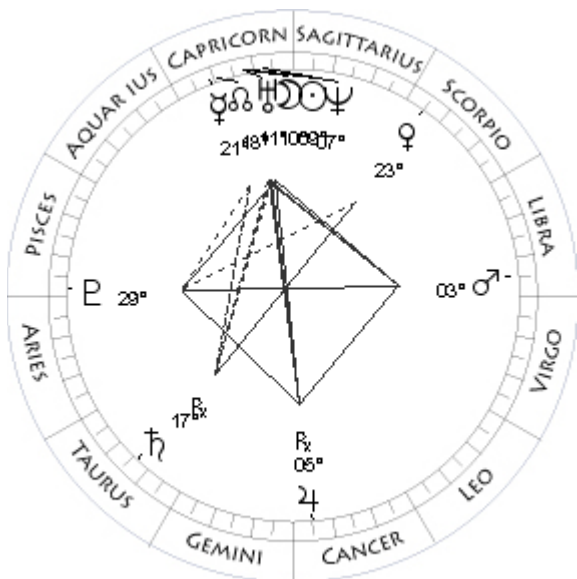
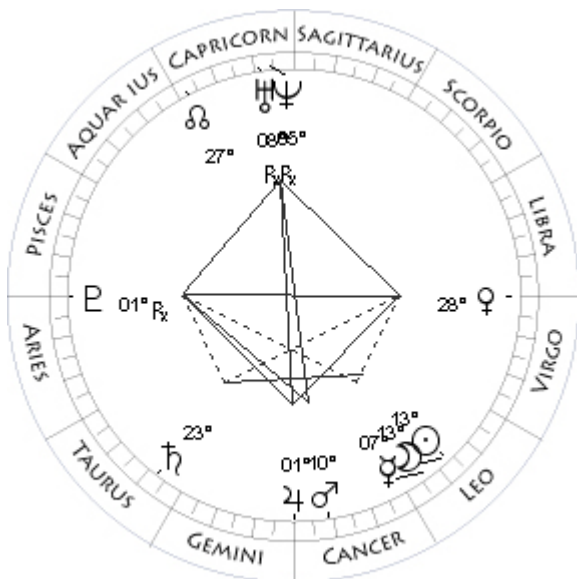
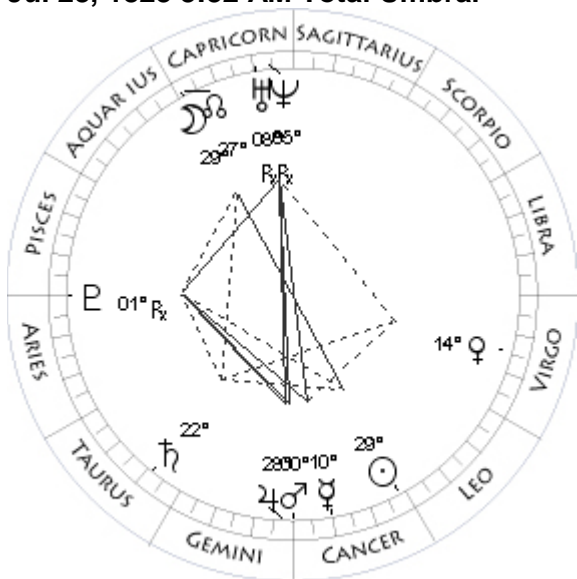
Feb 11, 1823 3:02 AM Partial Solar

Mo 21Cp35 - 1°23	Mo 21Aq31 + 1°20
Su 21Cp27 - 0°00	Su 21Aq39 - 0°00
Me 27Cp20 - 2°06	Me 05Pi57 + 2°28
Ve 26Cp08 - 1°04	Ve 03Pi26 - 1°29
Ma 07Aq20 - 1°07	Ma 00Pi51 - 1°02
Ju 26Ta41 - 0°49R	Ju 27Ta15 - 0°41
Sa 03Ta20 - 2°27	Sa 04Ta31 - 2°18
Ur 08Cp19 - 0°18	Ur 09Cp56 - 0°19
Ne 05Cp34 + 0°59	Ne 06Cp34 + 1°00
Pl 28Pi24 -16°19	Pl 28Pi55 -16°11
No 07Aq50 - 0°00	No 06Aq15 - 0°00

Jul 8, 1823 6:56 AM Partial Solar



Jul 23, 1823 3:32 AM Total Umbral



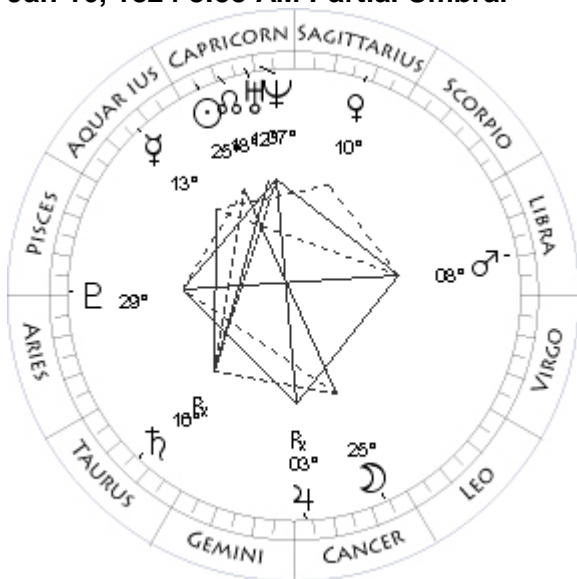
Aug 6, 1823 1:45 PM Partial Solar

Mo 15Cn21 + 1°08	Mo 13Le06 - 1°24
Su 15Cn15 - 0°00	Su 13Le14 - 0°00
Me 28Ge14 - 4°10	Me 07Le18 + 1°29
Ve 29Le15 + 1°19	Ve 28Vi53 - 1°10
Ma 20Ge38 + 0°20	Ma 10Cn17 + 0°39
Ju 25Ge12 - 0°20	Ju 01Cn25 - 0°18
Sa 20Ta54 - 2°09	Sa 23Ta04 - 2°14
Ur 09Cp22 - 0°22R	Ur 08Cp18 - 0°22R
Ne 05Cp48 + 1°02R	Ne 05Cp06 + 1°01R
Pl 01Ar29 -16°36R	Pl 01Ar16 -16°46R
No 28Cp28 - 0°00	No 26Cp55 - 0°00

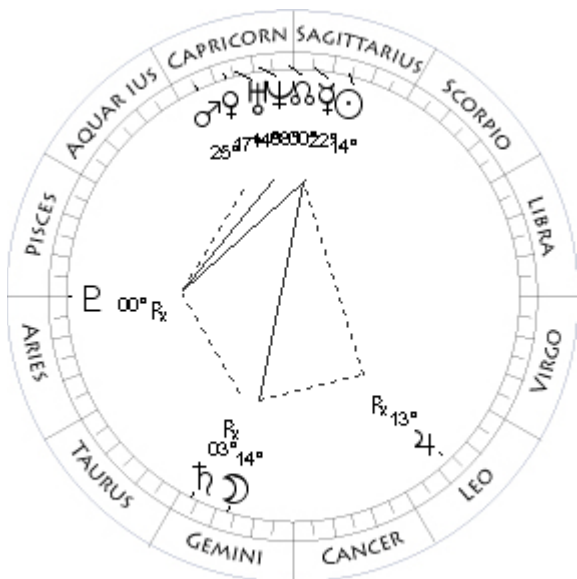
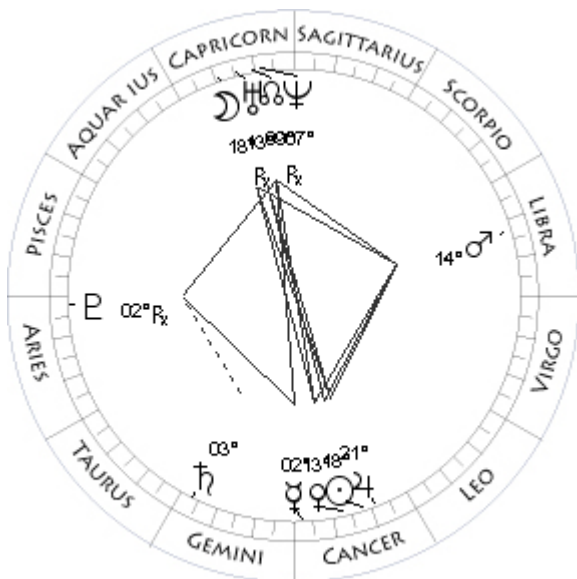
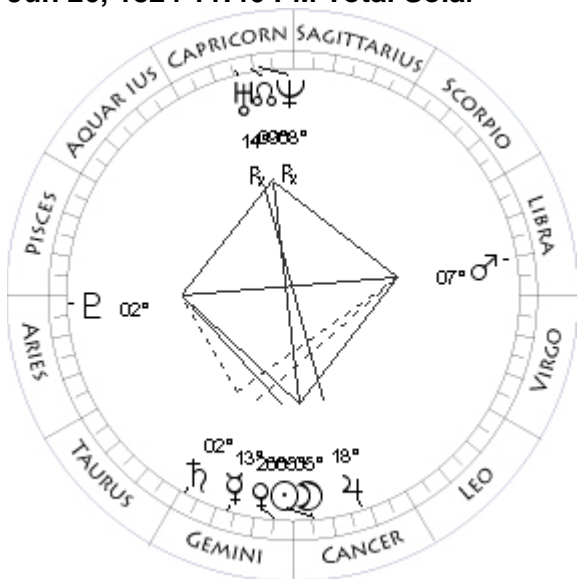
Jan 1, 1824 8:20 AM Annular Solar

Mo 29Cp25 + 0°09	Mo 10Cp01 - 0°47
Su 29Cn26 - 0°00	Su 09Cp57 - 0°00
Me 10Cn42 - 1°00	Me 21Cp00 - 2°09
Ve 14Vi51 + 0°16	Ve 23Sc27 + 3°06
Ma 00Cn42 + 0°30	Ma 03Li30 + 2°28
Ju 28Ge27 - 0°19	Ju 05Cn33 - 0°04R
Sa 22Ta09 - 2°12	Sa 17Ta16 - 2°19R
Ur 08Cp47 - 0°22R	Ur 11Cp36 - 0°21
Ne 05Cp25 + 1°01R	Ne 07Cp15 + 0°56
Pl 01Ar24 -16°41R	Pl 29Pi26 -16°29
No 27Cp41 - 0°00	No 19Cp05 - 0°00
Coords: 114W/80S	

Jan 16, 1824 8:53 AM Partial Umbral



Jun 26, 1824 11:46 PM Total Solar



Jul 11, 1824 4:15 AM Partial Umbral

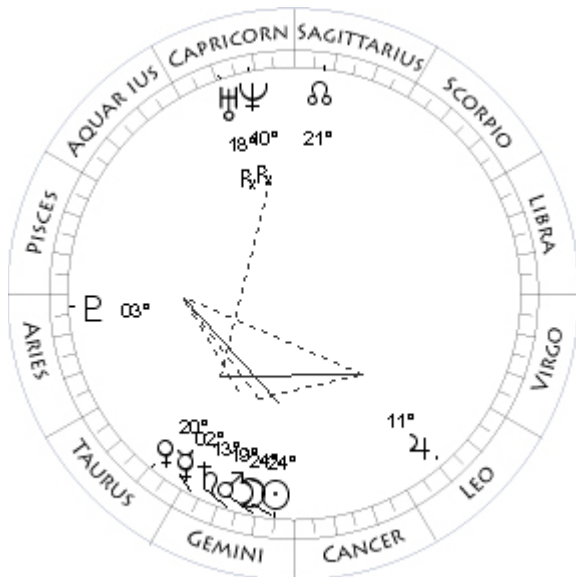
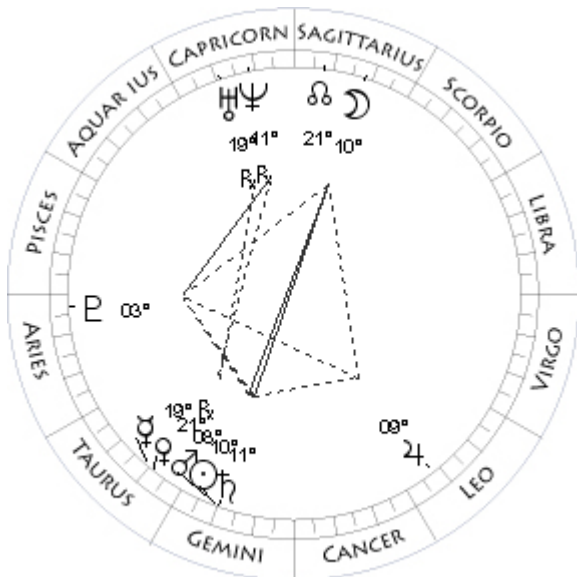
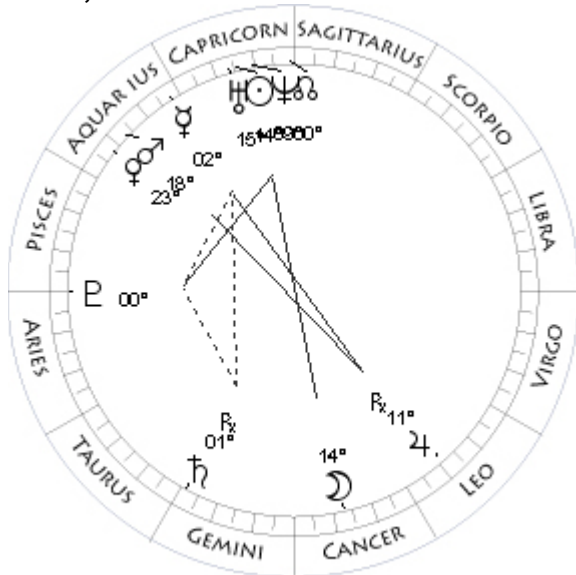
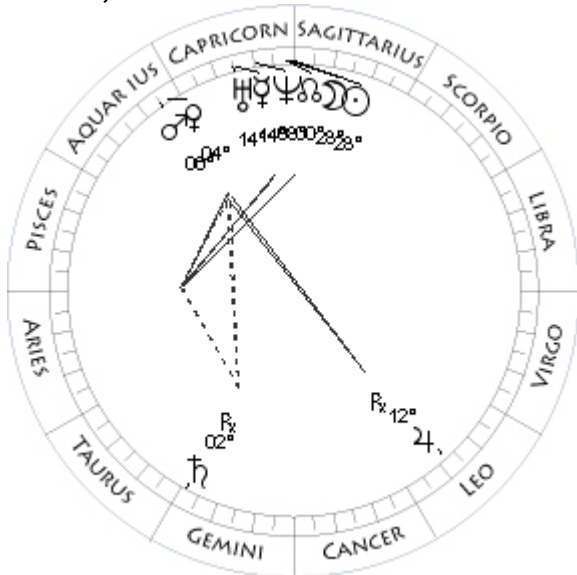
Mo 25Cn11 - 0°36	Mo 18Cp39 + 0°50
Su 25Cp15 - 0°00	Su 18Cn44 - 0°00
Me 13Aq45 - 0°44	Me 02Cn44 - 0°29
Ve 10Sa08 + 2°46	Ve 13Cn38 + 0°31
Ma 08Li36 + 2°43	Ma 14Li43 - 0°20
Ju 03Cn38 - 0°02R	Ju 21Cn44 + 0°16
Sa 16Ta59 - 2°15R	Sa 03Ge46 - 1°51
Ur 12Cp30 - 0°21	Ur 13Cp35 - 0°25R
Ne 07Cp49 + 0°56	Ne 07Cp57 + 0°58R
Pl 29Pi35 -16°24	Pl 02Ar36 -16°42R
No 18Cp17 - 0°00	No 08Cp56 - 0°00
Coords: 131E/21N	

Dec 6, 1824 10:32 AM Partial Penumbral

Mo 05Cn14 + 0°24	Mo 14Ge28 + 1°26
Su 05Cn12 - 0°00	Su 14Sa20 - 0°00
Me 13Ge33 - 3°21	Me 22Sa36 - 1°51
Ve 26Ge13 - 0°02	Ve 17Cp01 - 1°50
Ma 07Li57 - 0°02	Ma 25Cp15 - 1°18
Ju 18Cn35 + 0°14	Ju 13Le33 + 0°38R
Sa 02Ge12 - 1°50	Sa 03Ge33 - 2°03R
Ur 14Cp10 - 0°25R	Ur 14Cp06 - 0°24
Ne 08Cp19 + 0°58R	Ne 08Cp25 + 0°53
Pl 02Ar36 -16°37	Pl 00Ar30 -16°44R
No 09Cp41 - 0°00	No 01Cp05 - 0°00
Coords: 171E/46N	Coords: 160E/24N

Dec 20, 1824 10:40 AM Annular Solar

Jan 4, 1825 11:31 PM Partial Penumbral



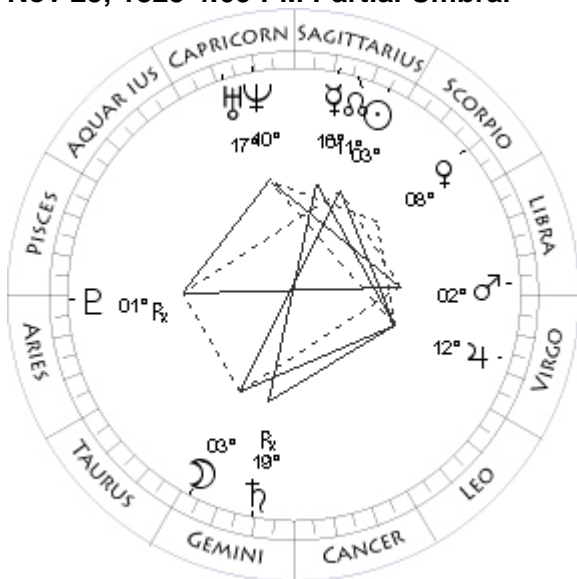
Jun 1, 1825 0:06 AM Partial Umbral

Mo 28Sa36 - 0°09	Mo 10Sa15 - 0°59
Su 28Sa35 - 0°00	Su 10Ge09 - 0°00
Me 14Cp20 - 2°12	Me 19Ta15 - 3°53
Ve 04Aq11 - 1°56	Ve 21Ta45 - 0°23R
Ma 06Aq11 - 1°14	Ma 08Ge50 + 0°23
Ju 12Le56 + 0°41R	Ju 09Le01 + 0°46
Sa 02Ge30 - 2°01R	Sa 11Ge10 - 1°28
Ur 14Cp53 - 0°24	Ur 19Cp24 - 0°27R
Ne 08Cp56 + 0°53	Ne 11Cp14 + 0°55R
Pl 00Ar30 -16°39	Pl 03Ar32 -16°32
No 00Cp20 - 0°00	No 21Sa44 - 0°00
Coords: 21W/33S	

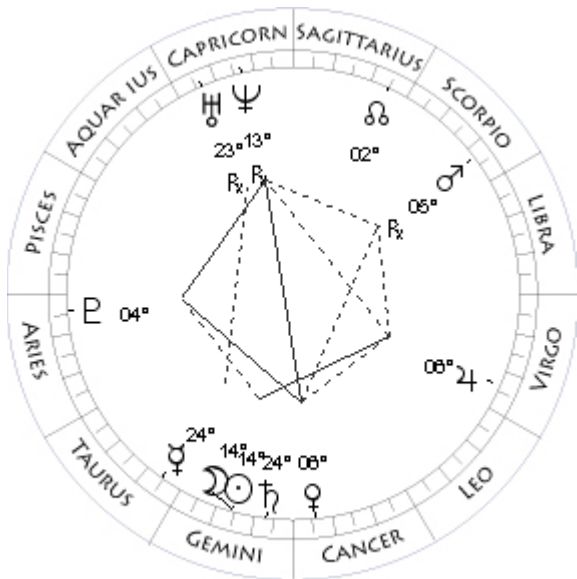
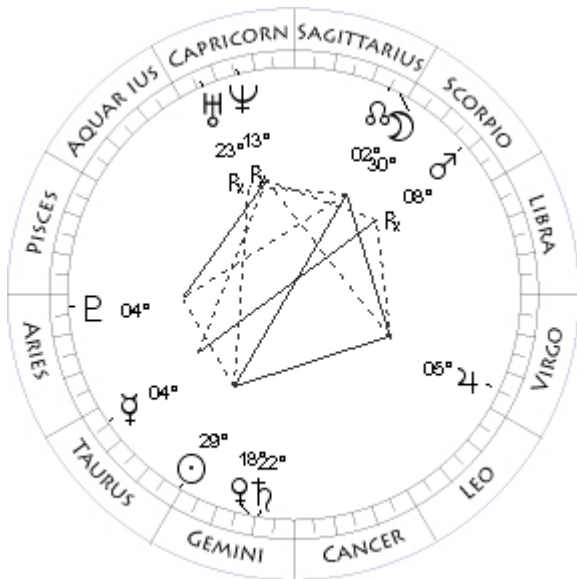
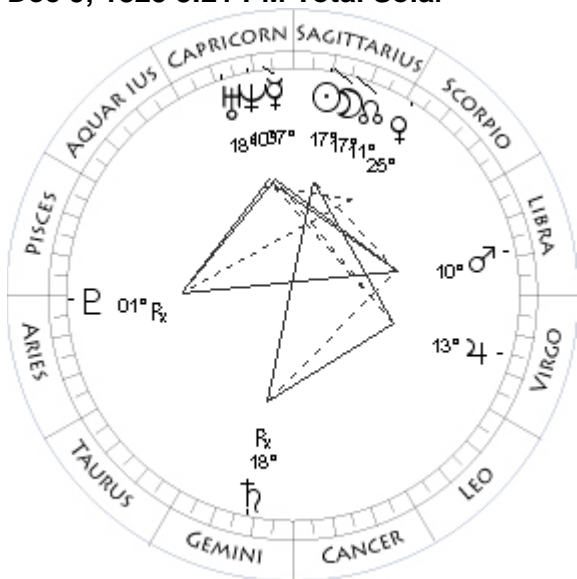
Jun 16, 1825 0:19 PM Total Solar

Mo 14Cn18 - 1°16	Mo 24Ge56 - 0°22
Su 14Cp26 - 0°00	Su 24Ge59 - 0°00
Me 02Aq49 - 0°08	Me 02Ge59 - 2°38
Ve 23Aq03 - 1°44	Ve 20Ta50 - 2°55
Ma 18Aq23 - 1°08	Ma 19Ge32 + 0°31
Ju 11Le34 + 0°45R	Ju 11Le39 + 0°46
Sa 01Ge35 - 1°58R	Sa 13Ge10 - 1°27
Ur 15Cp48 - 0°24	Ur 18Cp54 - 0°28R
Ne 09Cp31 + 0°53	Ne 10Cp51 + 0°55R
Pl 00Ar35 -16°33	Pl 03Ar40 -16°37
No 29Sa31 - 0°00	No 20Sa54 - 0°00
Coords: 8W/21N	

Nov 25, 1825 4:09 PM Partial Umbral



Dec 9, 1825 8:21 PM Total Solar



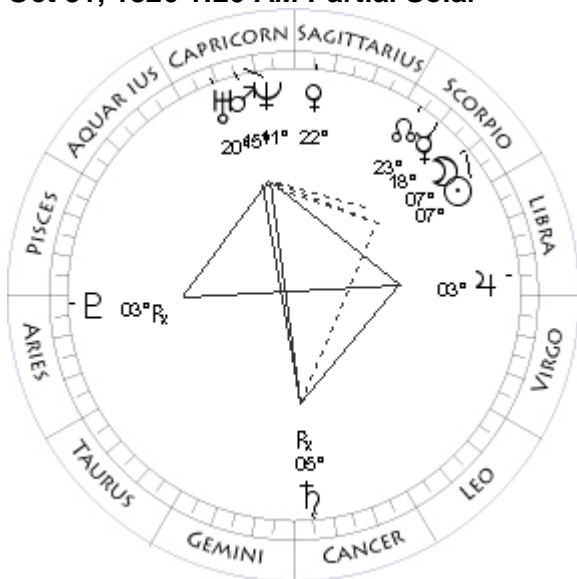
May 21, 1826 3:15 PM Total Umbral

Mo 03Ge15 + 0°47	Mo 30Sc00 - 0°14
Su 03Sa10 - 0°00	Su 29Ta59 - 0°00
Me 16Sa41 - 2°03	Me 04Ta57 - 3°28
Ve 08Sc07 + 1°35	Ve 18Ge30 + 0°46
Ma 02Li03 + 1°35	Ma 08Sc33 - 0°23R
Ju 12Vi37 + 1°03	Ju 05Vi05 + 1°15
Sa 19Ge40 - 1°34R	Sa 22Ge05 - 1°03
Ur 17Cp30 - 0°27	Ur 23Cp53 - 0°30R
Ne 10Cp10 + 0°50	Ne 13Cp40 + 0°51R
Pl 01Ar41 -16°53R	Pl 04Ar28 -16°33
No 12Sa19 - 0°00	No 02Sa57 - 0°00
Coords: 114W/22N	Coords: 130W/20S

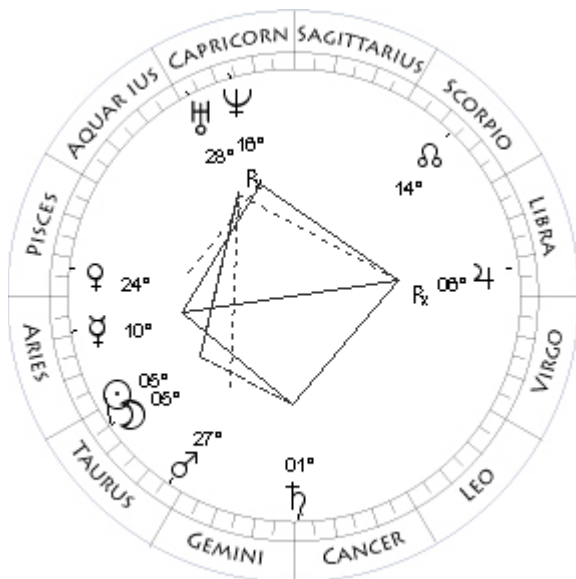
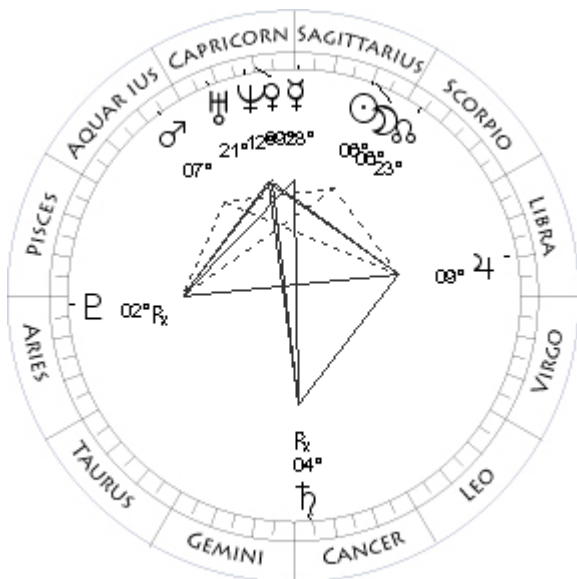
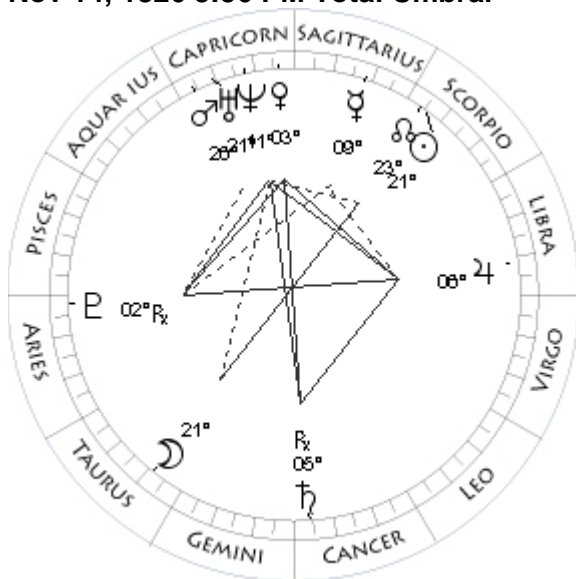
Jun 5, 1826 5:39 PM Partial Solar

Mo 17Sa30 + 0°31	Mo 14Ge21 - 1°04
Su 17Sa34 - 0°00	Su 14Ge27 - 0°00
Me 07Cp04 - 2°14	Me 24Ta40 - 2°04
Ve 25Sc50 + 1°13	Ve 06Cn55 + 1°17
Ma 10Li06 + 1°39	Ma 05Sc23 - 1°00R
Ju 13Vi48 + 1°06	Ju 06Vi17 + 1°13
Sa 18Ge32 - 1°33R	Sa 24Ge00 - 1°01
Ur 18Cp13 - 0°27	Ur 23Cp32 - 0°30R
Ne 10Cp39 + 0°50	Ne 13Cp22 + 0°51R
Pl 01Ar37 -16°48R	Pl 04Ar40 -16°38
No 11Sa34 - 0°00	No 02Sa09 - 0°00
Coords: 127E/ 9N	

Oct 31, 1826 1:20 AM Partial Solar



Nov 14, 1826 3:56 PM Total Umbral



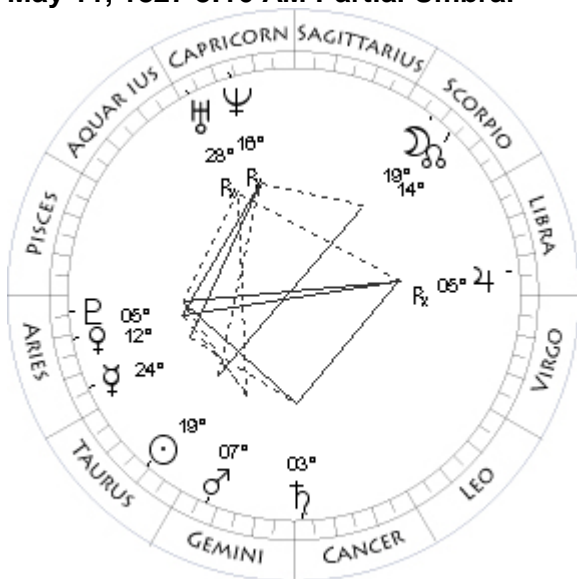
Nov 29, 1826 11:14 AM Partial Solar

Mo 07Sc15 - 1°29	Mo 06Sa39 + 1°12
Su 07Sc07 - 0°00	Su 06Sa46 - 0°00
Me 18Sc15 - 1°02	Me 28Sa07 - 2°12
Ve 22Sa39 - 4°17	Ve 09Cp15 - 2°49
Ma 15Cp24 - 1°48	Ma 07Aq30 - 1°27
Ju 03Li52 + 1°08	Ju 09Li08 + 1°12
Sa 05Cn59 - 0°59R	Sa 04Cn37 - 0°58R
Ur 20Cp33 - 0°30	Ur 21Cp37 - 0°29
Ne 11Cp37 + 0°47	Ne 12Cp24 + 0°46
Pl 03Ar08 -17°05R	Pl 02Ar47 -16°57R
No 24Sc21 - 0°00	No 22Sc47 - 0°00

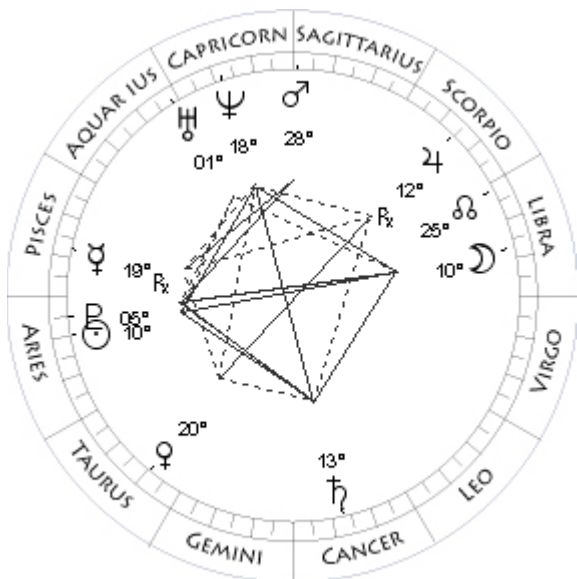
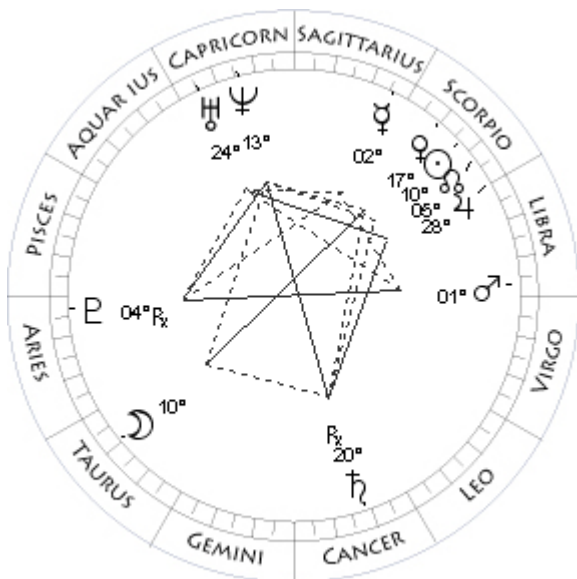
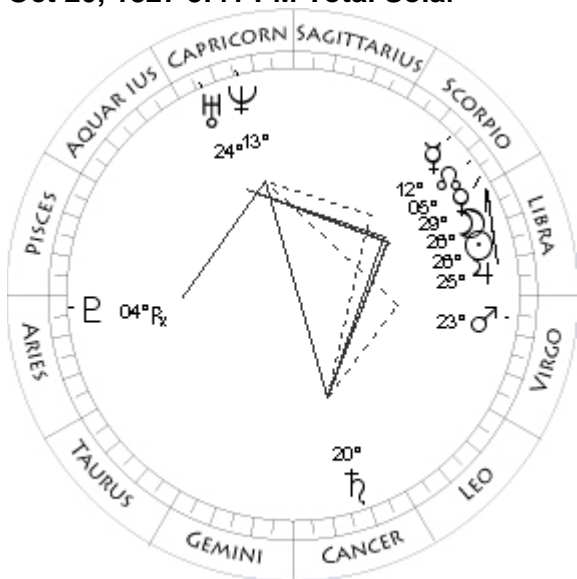
Apr 26, 1827 3:10 AM Annular Solar

Mo 21Ta49 + 0°10	Mo 05Ta11 + 0°51
Su 21Sc48 - 0°00	Su 05Ta06 - 0°00
Me 09Sa52 - 2°17	Me 10Ar14 - 2°14
Ve 03Cp20 - 4°07	Ve 24Pi19 - 1°18
Ma 26Cp17 - 1°38	Ma 27Ta19 + 0°28
Ju 06Li38 + 1°09	Ju 06Li26 + 1°34R
Sa 05Cn28 - 0°59R	Sa 01Cn51 - 0°37
Ur 21Cp00 - 0°29	Ur 28Cp12 - 0°31
Ne 11Cp58 + 0°47	Ne 16Cp11 + 0°47R
Pl 02Ar56 -17°02R	Pl 05Ar03 -16°30
No 23Sc34 - 0°00	No 14Sc58 - 0°00
Coords: 117W/18N	Coords: 75W/74N

May 11, 1827 8:16 AM Partial Umbral



Oct 20, 1827 3:41 PM Total Solar



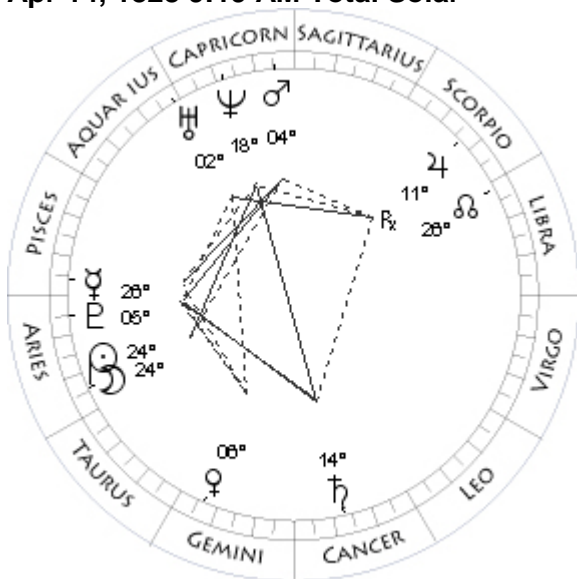
Nov 3, 1827 4:51 PM Partial Umbral

Mo 19Sc47 + 0°30	Mo 10Ta29 - 0°29
Su 19Ta50 - 0°00	Su 10Sc32 - 0°00
Me 24Ar44 - 3°03	Me 02Sa16 - 2°33
Ve 12Ar03 - 1°47	Ve 17Sc31 + 0°27
Ma 07Ge50 + 0°36	Ma 01Li53 + 1°14
Ju 05Li10 + 1°31R	Ju 28Li13 + 1°04
Sa 03Cn21 - 0°35	Sa 20Cn17 - 0°21R
Ur 28Cp11 - 0°32R	Ur 24Cp39 - 0°32
Ne 16Cp03 + 0°47R	Ne 13Cp50 + 0°44
Pl 05Ar22 -16°34	Pl 04Ar12 -17°09R
No 14Sc10 - 0°00	No 04Sc50 - 0°00
Coords: 125E/17S	Coords: 103W/15N

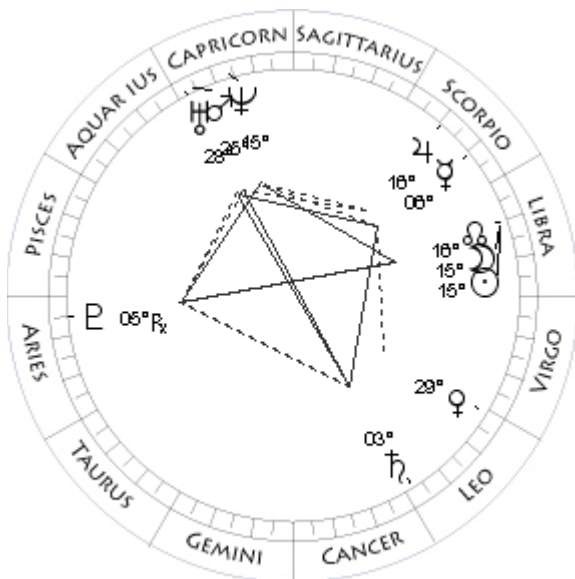
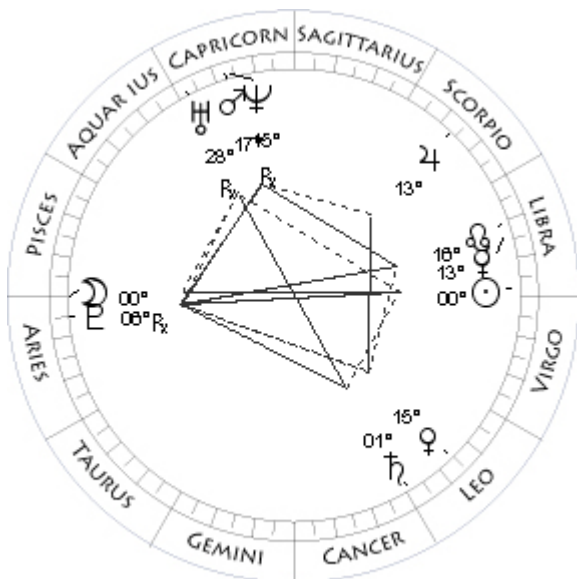
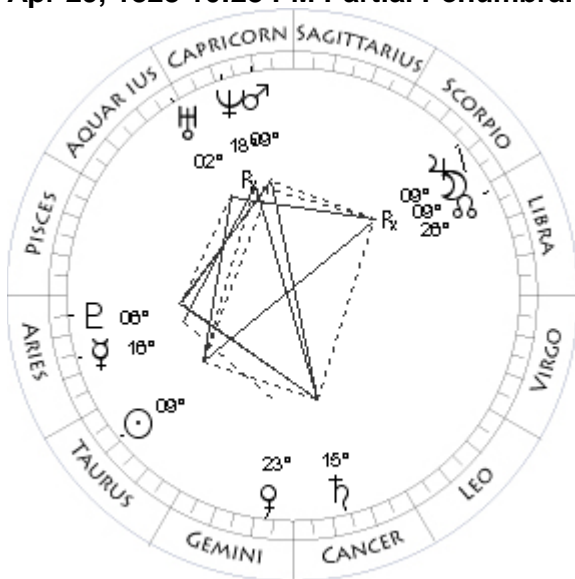
Mar 31, 1828 10:38 AM Partial Penumbra

Mo 26Li34 - 0°48	Mo 10Li50 - 1°22
Su 26Li30 - 0°00	Su 10Ar42 - 0°00
Me 12Sc53 - 1°22	Me 19Pi27 + 0°15R
Ve 29Li56 + 0°56	Ve 20Ta45 + 1°25
Ma 23Vi06 + 1°14	Ma 28Sa00 - 0°02
Ju 25Li10 + 1°04	Ju 12Sc55 + 1°22R
Sa 20Cn08 - 0°22	Sa 13Cn34 - 0°06
Ur 24Cp22 - 0°32	Ur 01Aq46 - 0°33
Ne 13Cp35 + 0°44	Ne 18Cp17 + 0°43
Pl 04Ar26 -17°11R	Pl 05Ar32 -16°31
No 05Sc34 - 0°00	No 26Li57 - 0°00

Apr 14, 1828 9:19 AM Total Solar



Apr 29, 1828 10:28 PM Partial Penumbral



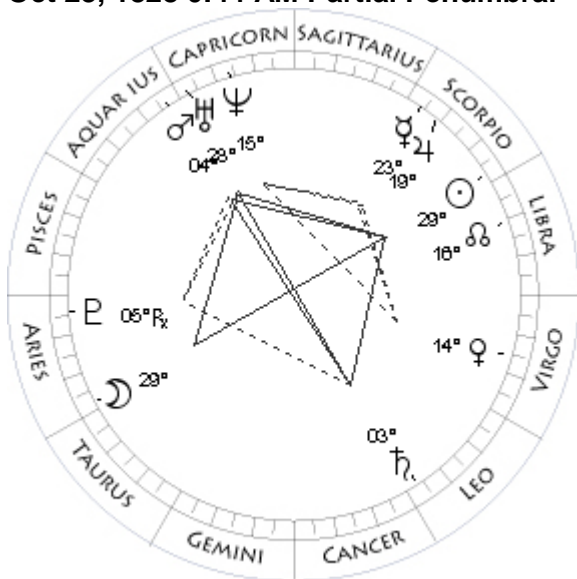
Sep 23, 1828 2:19 PM Partial Penumbral

Mo 24Ar24 + 0°09	Mo 00Ar38 + 1°28
Su 24Ar24 - 0°00	Su 00Li30 - 0°00
Me 26Pi57 - 2°15	Me 13Li35 + 0°06
Ve 06Ge42 + 2°11	Ve 15Le04 - 2°37
Ma 04Cp03 - 0°27	Ma 17Cp29 - 3°33
Ju 11Sc28 + 1°23R	Ju 13Sc31 + 0°52
Sa 14Cn09 - 0°05	Sa 01Le52 + 0°11
Ur 02Aq06 - 0°33	Ur 28Cp27 - 0°35R
Ne 18Cp23 + 0°43	Ne 15Cp37 + 0°41R
Pl 05Ar52 -16°32	Pl 06Ar04 -17°17R
No 26Li13 - 0°00	No 17Li37 - 0°00
Coords: 38W/18N	Coords: 143W/ 2N

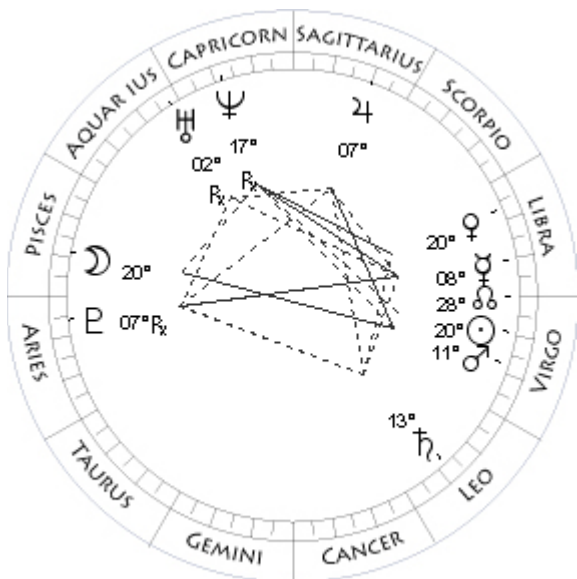
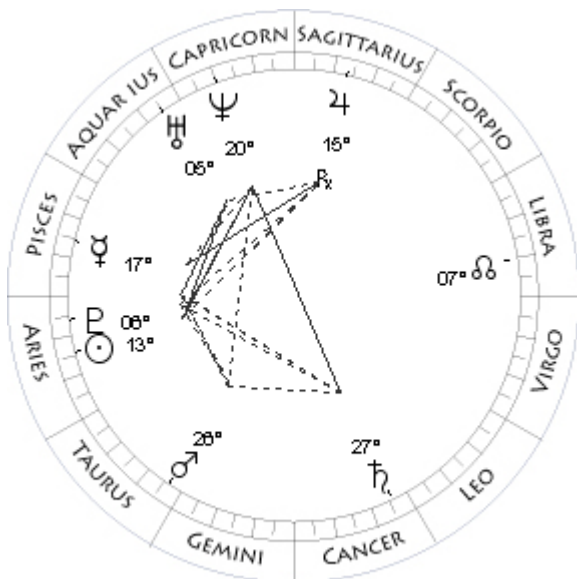
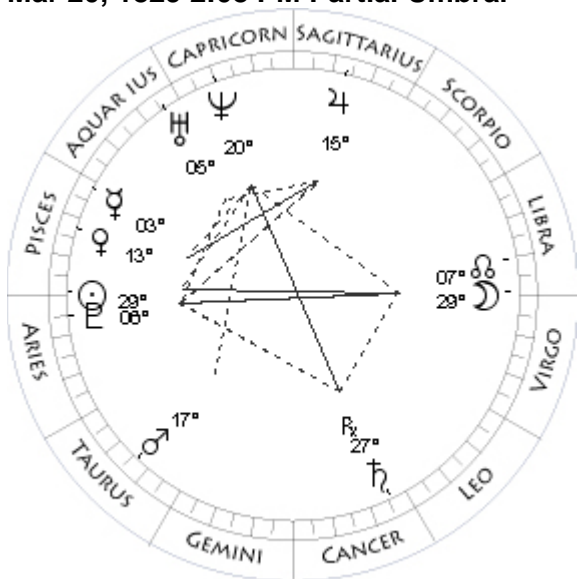
Oct 9, 1828 0:07 AM Annular Solar

Mo 09Sc25 + 1°14	Mo 15Li41 - 0°06
Su 09Ta32 - 0°00	Su 15Li41 - 0°00
Me 16Ar53 - 2°41	Me 06Sc34 - 1°43
Ve 23Ge48 + 2°49	Ve 29Le25 - 0°51
Ma 09Cp37 - 1°03	Ma 25Cp57 - 2°58
Ju 09Sc32 + 1°23R	Ju 16Sc32 + 0°50
Sa 15Cn11 - 0°03	Sa 03Le03 + 0°12
Ur 02Aq18 - 0°34	Ur 28Cp22 - 0°35
Ne 18Cp22 + 0°43R	Ne 15Cp39 + 0°41
Pl 06Ar14 -16°35	Pl 05Ar45 -17°17R
No 25Li23 - 0°00	No 16Li48 - 0°00
Coords: 22W/13S	Coords: 173W/12S

Oct 23, 1828 0:44 AM Partial Penumbral



Mar 20, 1829 2:08 PM Partial Umbral



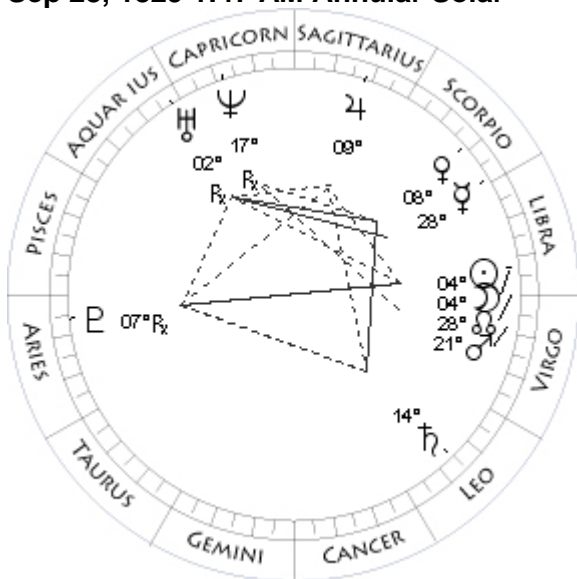
Apr 3, 1829 10:18 PM Total Solar

Mo 29Ar29 - 1°09	Mo 13Ar50 - 0°35
Su 29Li37 - 0°00	Su 13Ar54 - 0°00
Me 23Sc38 - 2°53	Me 17Pi10 - 2°14
Ve 14Vi01 + 0°26	Ve 01Ar37 - 1°28
Ma 04Aq29 - 2°28	Ma 26Ta50 + 0°46
Ju 19Sc29 + 0°48	Ju 15Sa15 + 0°48R
Sa 03Le48 + 0°14	Sa 27Cn24 + 0°30
Ur 28Cp28 - 0°35	Ur 05Aq50 - 0°35
Ne 15Cp48 + 0°40	Ne 20Cp29 + 0°39
Pl 05Ar30 -17°15R	Pl 06Ar40 -16°35
No 16Li04 - 0°00	No 07Li26 - 0°00
Coords: 142E/28S	

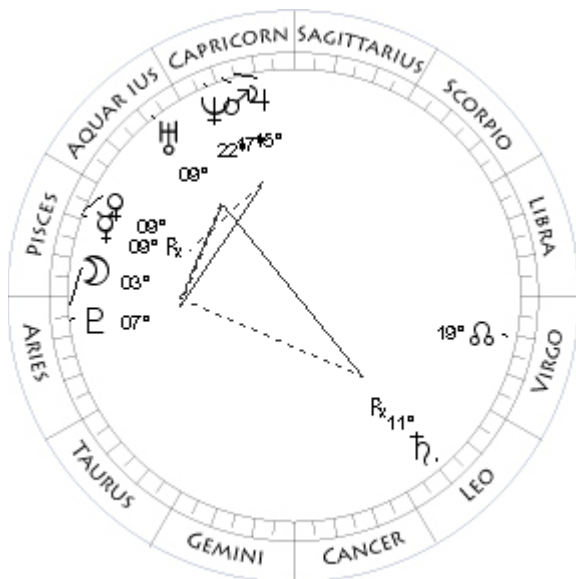
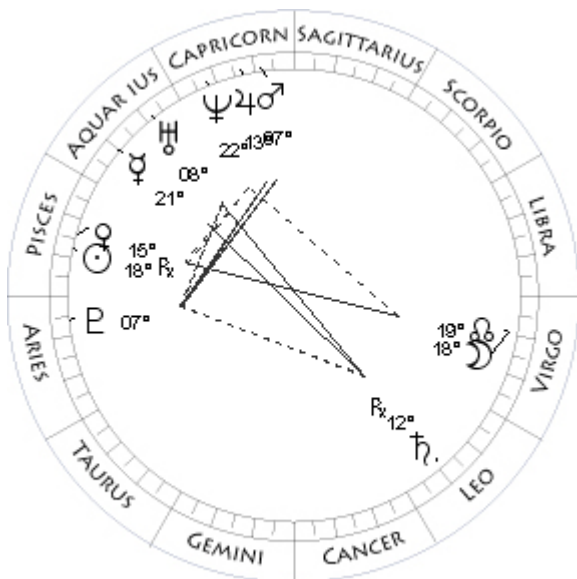
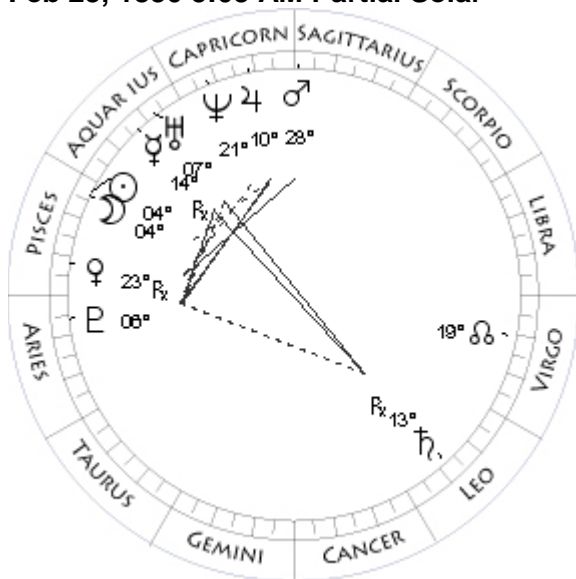
Sep 13, 1829 6:33 AM Partial Umbral

Mo 29Vi48 - 0°43	Mo 20Pi14 + 0°46
Su 29Pi44 - 0°00	Su 20Vi10 - 0°00
Me 03Pi21 - 0°15	Me 08Li26 - 0°15
Ve 13Pi52 - 1°23	Ve 20Li51 + 0°17
Ma 17Ta08 + 0°39	Ma 11Vi50 + 1°06
Ju 15Sa03 + 0°47	Ju 07Sa59 + 0°26
Sa 27Cn26 + 0°30R	Sa 13Le17 + 0°41
Ur 05Aq20 - 0°35	Ur 02Aq48 - 0°38R
Ne 20Cp17 + 0°39	Ne 17Cp53 + 0°38R
Pl 06Ar19 -16°35	Pl 07Ar23 -17°19R
No 08Li12 - 0°00	No 28Vi50 - 0°00

Sep 28, 1829 1:47 AM Annular Solar



Feb 23, 1830 5:03 AM Partial Solar



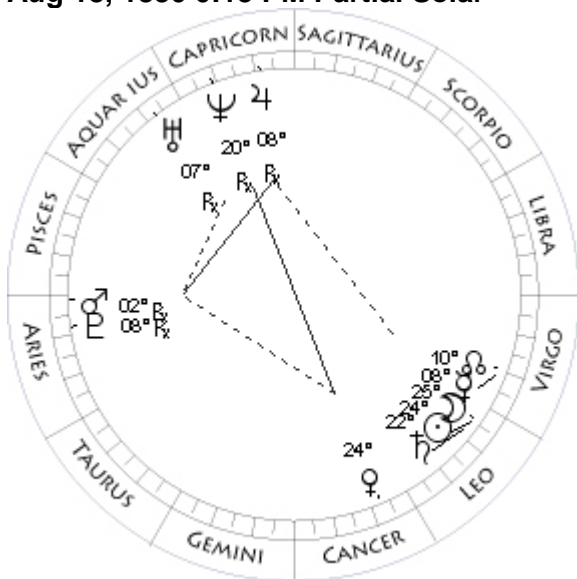
Mar 9, 1830 1:43 PM Total Umbral

Mo 04Li36 + 0°34	Mo 18Vi32 - 0°04
Su 04Li40 - 0°00	Su 18Pi32 - 0°00
Me 28Li59 - 2°07	Me 21Aq02 - 0°35
Ve 08Sc46 - 0°28	Ve 15Pi29 + 8°45R
Ma 21Vi18 + 1°04	Ma 07Cp55 - 0°22
Ju 09Sa58 + 0°24	Ju 13Cp03 + 0°07
Sa 14Le50 + 0°43	Sa 12Le16 + 1°06R
Ur 02Aq32 - 0°38R	Ur 08Aq43 - 0°36
Ne 17Cp49 + 0°37R	Ne 22Cp12 + 0°35
Pl 07Ar05 -17°20R	Pl 07Ar06 -16°39
No 28Vi03 - 0°00	No 19Vi27 - 0°00
Coords: 164W/35N	Coords: 157W/ 4N

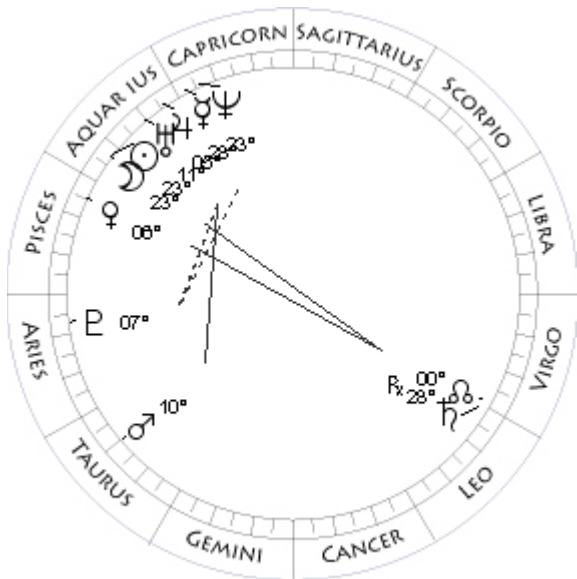
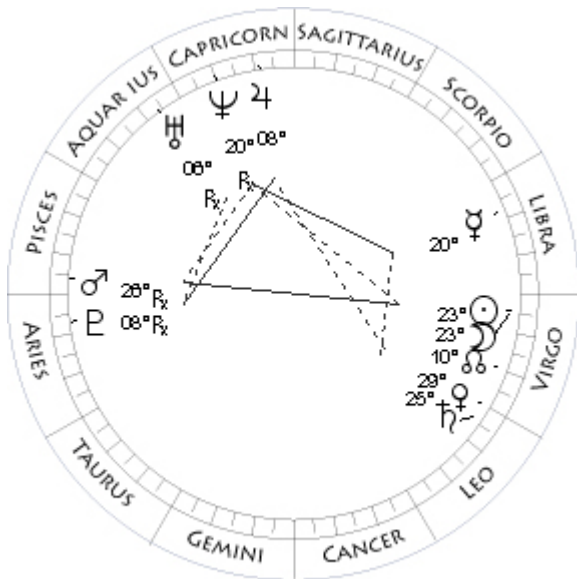
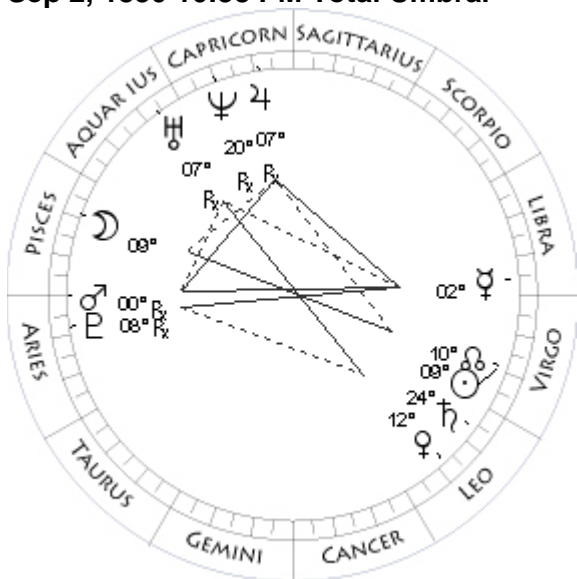
Mar 24, 1830 2:38 PM Partial Solar

Mo 04Pi15 + 1°22	Mo 03Ar21 - 1°17
Su 04Pi08 - 0°00	Su 03Ar29 - 0°00
Me 14Aq01 + 2°20R	Me 09Pi42 - 2°13
Ve 23Pi18 + 7°46R	Ve 09Pi00 + 6°42R
Ma 28Sa20 - 0°07	Ma 17Cp57 - 0°40
Ju 10Cp40 + 0°08	Ju 15Cp07 + 0°06
Sa 13Le12 + 1°06R	Sa 11Le34 + 1°06R
Ur 07Aq59 - 0°36	Ur 09Aq23 - 0°37
Ne 21Cp49 + 0°35	Ne 22Cp31 + 0°35
Pl 06Ar47 -16°41	Pl 07Ar28 -16°38
No 20Vi13 - 0°00	No 18Vi39 - 0°00

Aug 18, 1830 0:13 PM Partial Solar



Sep 2, 1830 10:38 PM Total Umbral



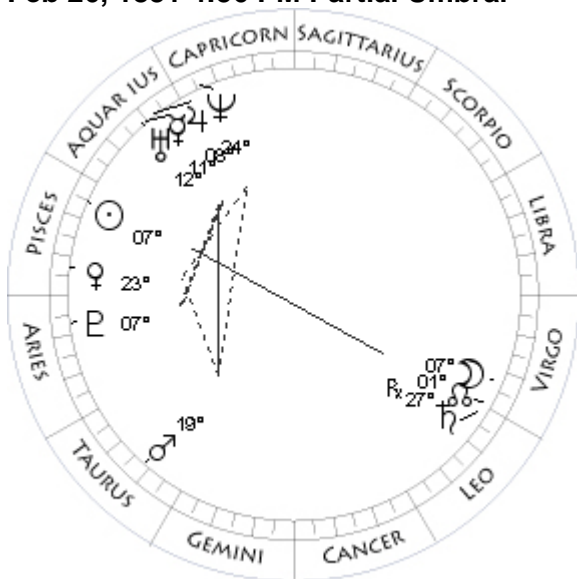
Sep 17, 1830 2:08 AM Partial Solar

Mo 25Le07 - 1°23	Mo 23Vi32 + 1°13
Su 24Le59 - 0°00	Su 23Vi40 - 0°00
Me 08Vi05 + 1°13	Me 20Li00 - 2°35
Ve 24Cn05 - 0°13	Ve 29Le59 + 1°03
Ma 02Ar09 - 5°37R	Ma 26Pi57 - 5°22R
Ju 08Cp24 - 0°13R	Ju 08Cp12 - 0°15
Sa 22Le06 + 1°07	Sa 25Le47 + 1°10
Ur 07Aq48 - 0°40R	Ur 06Aq53 - 0°40R
Ne 20Cp31 + 0°35R	Ne 20Cp04 + 0°34R
Pl 08Ar54 -17°17R	Pl 08Ar25 -17°23R
No 10Vi53 - 0°00	No 09Vi19 - 0°00

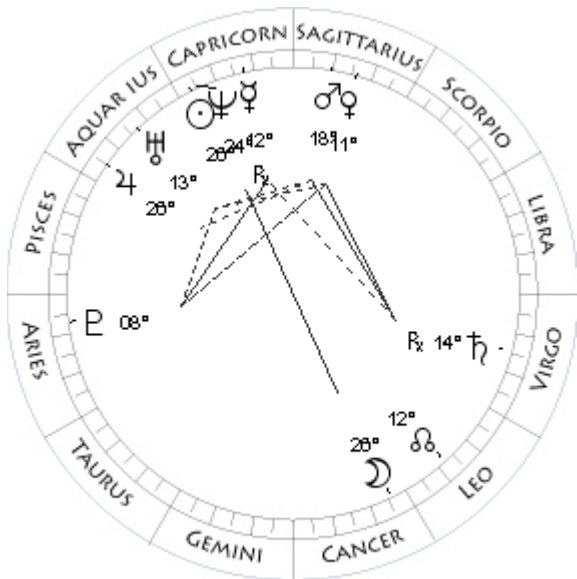
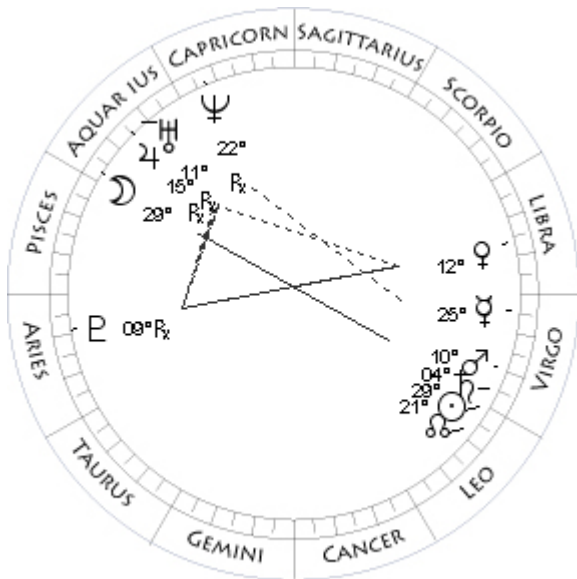
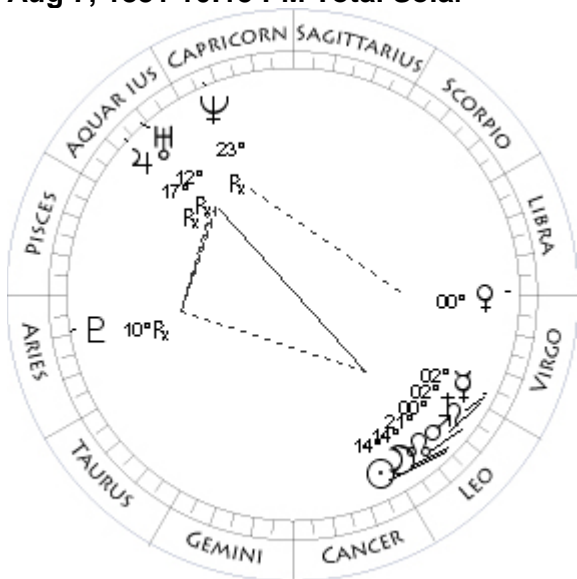
Feb 12, 1831 5:21 PM Annular Solar

Mo 09Pi54 + 0°02	Mo 23Aq23 + 0°42
Su 09Vi54 - 0°00	Su 23Aq19 - 0°00
Me 02Li35 - 0°39	Me 28Cp26 + 1°34
Ve 12Le42 + 0°31	Ve 06Pi06 - 1°28
Ma 00Ar34 - 5°45R	Ma 10Ta45 + 1°02
Ju 07Cp57 - 0°14R	Ju 05Aq12 - 0°26
Sa 24Le04 + 1°08	Sa 28Le45 + 1°38R
Ur 07Aq16 - 0°40R	Ur 11Aq13 - 0°37
Ne 20Cp14 + 0°34R	Ne 23Cp36 + 0°31
Pl 08Ar40 -17°21R	Pl 07Ar37 -16°47
No 10Vi04 - 0°00	No 01Vi26 - 0°00

Feb 26, 1831 4:56 PM Partial Umbral



Aug 7, 1831 10:15 PM Total Solar



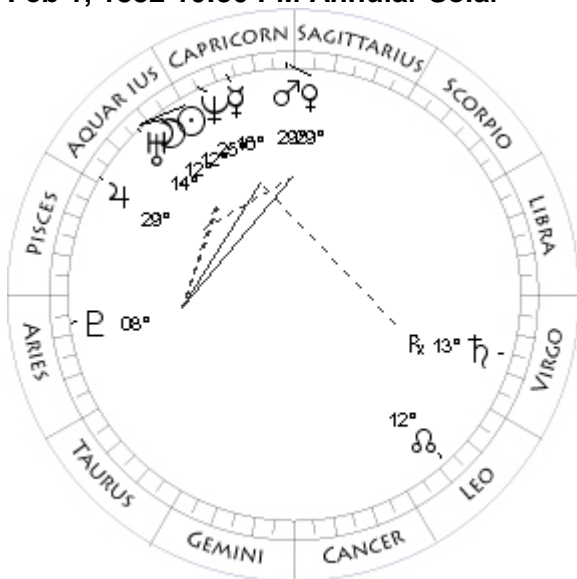
Aug 23, 1831 9:59 AM Partial Umbral

Mo 07Vi20 + 0°35	Mo 29Aq24 - 0°42
Su 07Pi24 - 0°00	Su 29Le29 - 0°00
Me 11Aq27 - 0°51	Me 25Vi23 - 1°06
Ve 23Pi32 - 1°18	Ve 12Li23 - 3°32
Ma 19Ta15 + 1°09	Ma 10Vi06 + 1°02
Ju 08Aq22 - 0°28	Ju 15Aq47 - 1°03R
Sa 27Le37 + 1°39R	Sa 04Vi25 + 1°32
Ur 12Aq00 - 0°38	Ur 11Aq50 - 0°42R
Ne 24Cp03 + 0°31	Ne 22Cp40 + 0°31R
Pl 07Ar54 -16°44	Pl 09Ar56 -17°21R
No 00Vi42 - 0°00	No 21Le17 - 0°00
Coords: 109W/ 9N	Coords: 149E/12S

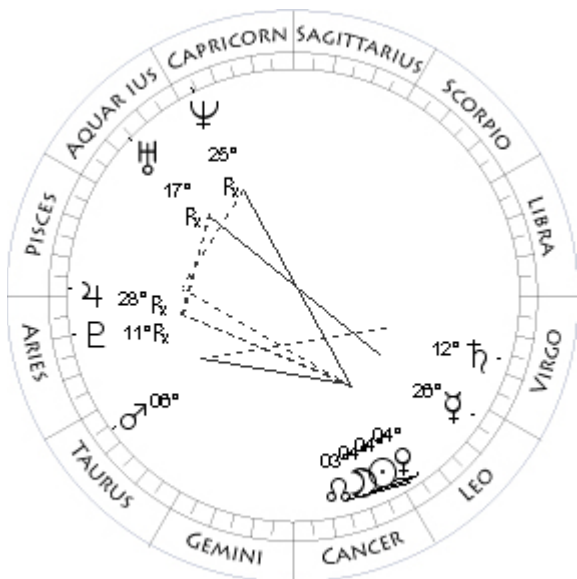
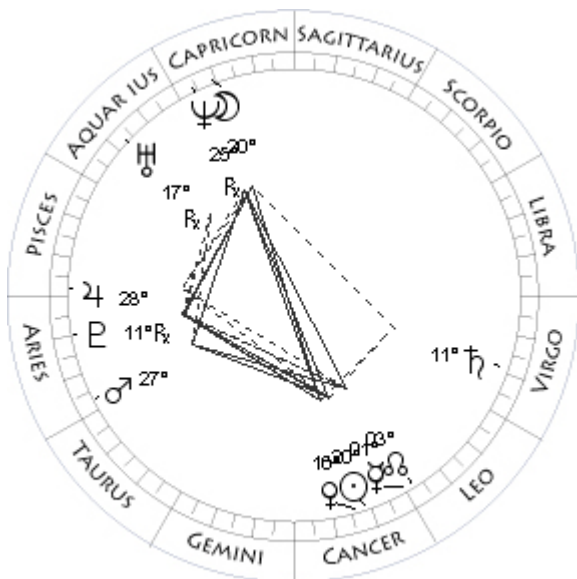
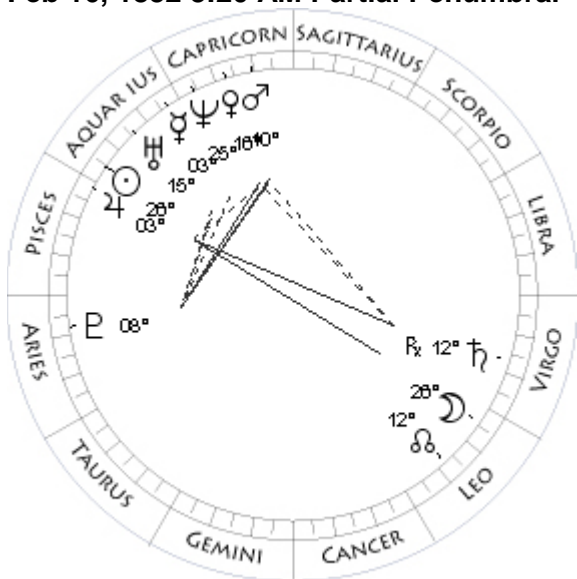
Jan 17, 1832 4:17 PM Partial Penumbral

Mo 14Le39 - 0°39	Mo 26Cn46 - 1°26
Su 14Le35 - 0°00	Su 26Cp38 - 0°00
Me 02Vi41 + 1°01	Me 12Cp06 + 3°22R
Ve 00Li01 - 1°28	Ve 11Sa59 + 2°39
Ma 00Vi16 + 1°06	Ma 18Sa54 - 0°10
Ju 17Aq46 - 1°01R	Ju 26Aq05 - 0°54
Sa 02Vi29 + 1°31	Sa 14Vi37 + 2°00R
Ur 12Aq26 - 0°42R	Ur 13Aq30 - 0°39
Ne 23Cp01 + 0°31R	Ne 24Cp46 + 0°27
Pl 10Ar07 -17°16R	Pl 08Ar18 -16°58
No 22Le07 - 0°00	No 13Le29 - 0°00
Coords: 161E/25S	Coords: 118W/19N

Feb 1, 1832 10:30 PM Annular Solar



Feb 16, 1832 3:20 AM Partial Penumbral



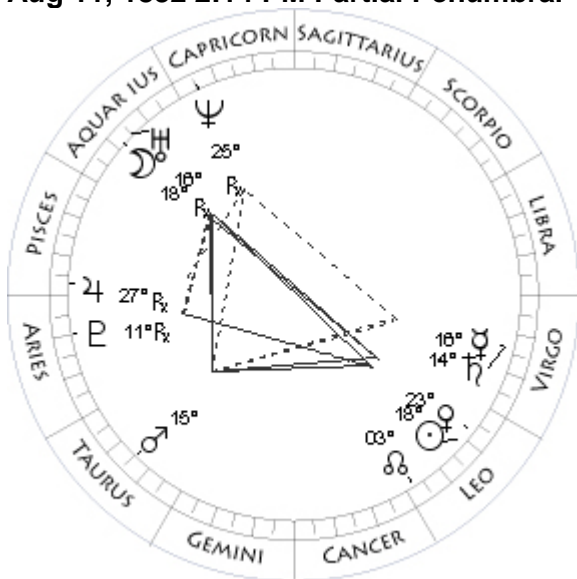
Jul 12, 1832 11:15 PM Partial Penumbral

Mo 12Aq09 + 0°02	Mo 20Cp36 + 1°10
Su 12Aq09 - 0°00	Su 20Cn30 - 0°00
Me 16Cp46 + 0°59	Me 01Le22 + 1°50
Ve 29Sa44 + 1°56	Ve 16Cn30 + 0°37
Ma 29Sa49 - 0°21	Ma 27Ar31 - 2°13
Ju 29Aq36 - 0°54	Ju 28Pi37 - 1°21
Sa 13Vi50 + 2°03R	Sa 11Vi27 + 1°54
Ur 14Aq23 - 0°39	Ur 17Aq35 - 0°43R
Ne 25Cp20 + 0°27	Ne 25Cp57 + 0°27R
Pl 08Ar30 -16°53	Pl 11Ar20 -17°10R
No 12Le41 - 0°00	No 04Le06 - 0°00
Coords: 154E/15S	Coords: 12W/21S

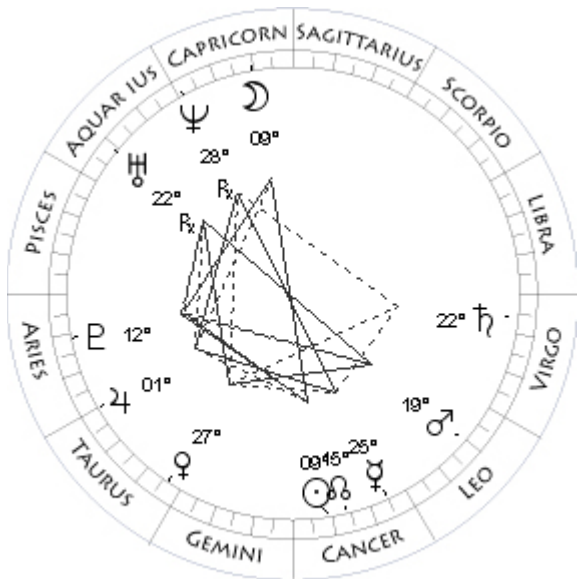
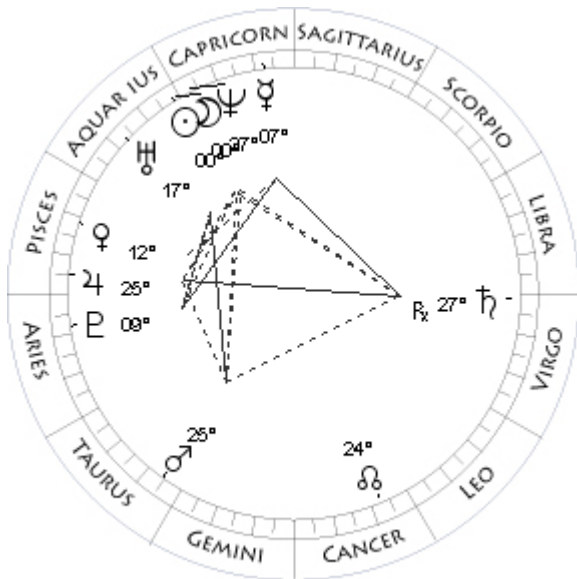
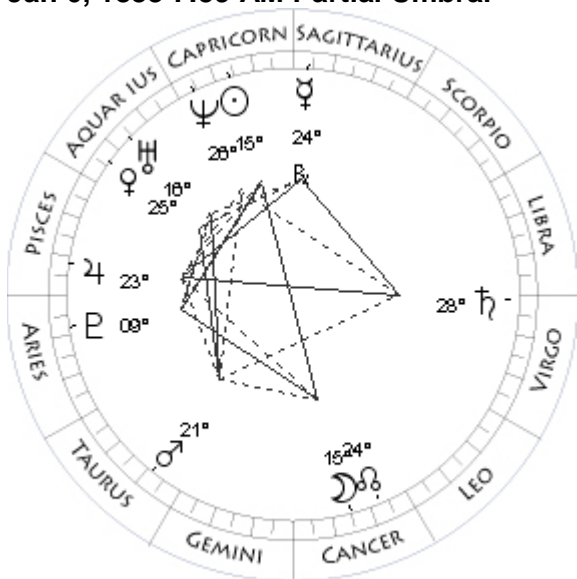
Jul 27, 1832 2:00 PM Total Solar

Mo 26Le24 + 1°16	Mo 04Le26 + 0°06
Su 26Aq31 - 0°00	Su 04Le27 - 0°00
Me 03Aq54 - 1°05	Me 26Le53 + 0°45
Ve 16Cp34 + 1°07	Ve 04Le30 + 1°04
Ma 10Cp05 - 0°33	Ma 06Ta54 - 2°13
Ju 03Pi00 - 0°54	Ju 28Pi32 - 1°26R
Sa 12Vi52 + 2°06R	Sa 12Vi56 + 1°53
Ur 15Aq12 - 0°39	Ur 17Aq03 - 0°44R
Ne 25Cp50 + 0°27	Ne 25Cp33 + 0°27R
Pl 08Ar44 -16°49	Pl 11Ar17 -17°15R
No 11Le56 - 0°00	No 03Le20 - 0°00

Aug 11, 1832 2:14 PM Partial Penumbral



Jan 6, 1833 7:59 AM Partial Umbral



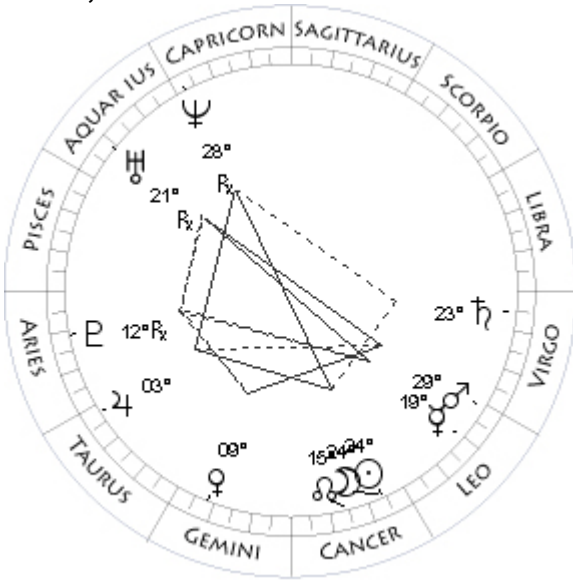
Jan 20, 1833 9:56 PM Annular Solar

Mo 18Aq41 - 1°23	Mo 00Aq38 - 0°35
Su 18Le50 - 0°00	Su 00Aq42 - 0°00
Me 16Vi11 - 1°37	Me 07Cp18 + 0°35
Ve 23Le02 + 1°21	Ve 12Pi35 - 1°05
Ma 15Ta50 - 2°09	Ma 25Ta02 + 2°10
Ju 27Pi44 - 1°30R	Ju 25Pi50 - 1°11
Sa 14Vi37 + 1°52	Sa 27Vi55 + 2°19R
Ur 16Aq28 - 0°44R	Ur 17Aq32 - 0°40
Ne 25Cp10 + 0°27R	Ne 27Cp02 + 0°23
Pl 11Ar09 -17°20R	Pl 09Ar24 -16°59
No 02Le32 - 0°00	No 23Cn56 - 0°00
Coords: 148W/17S	Coords: 137E/60S

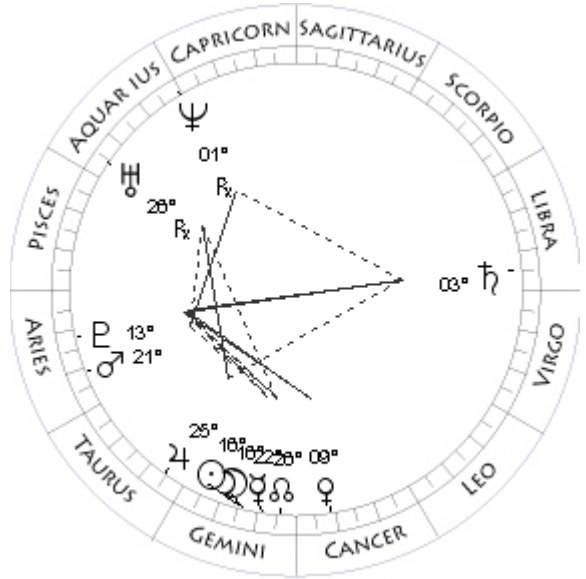
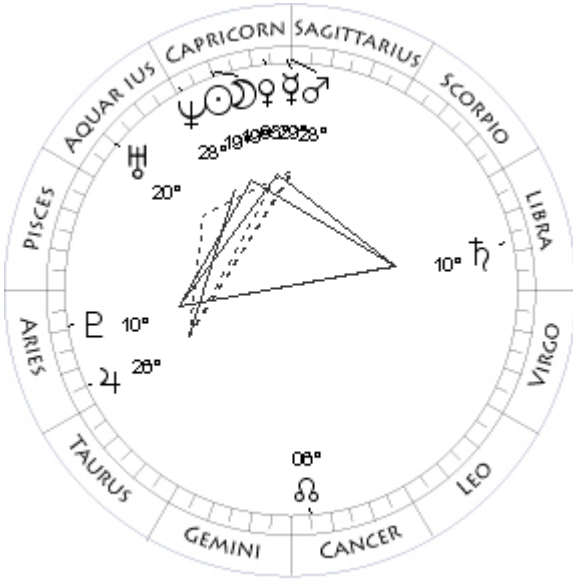
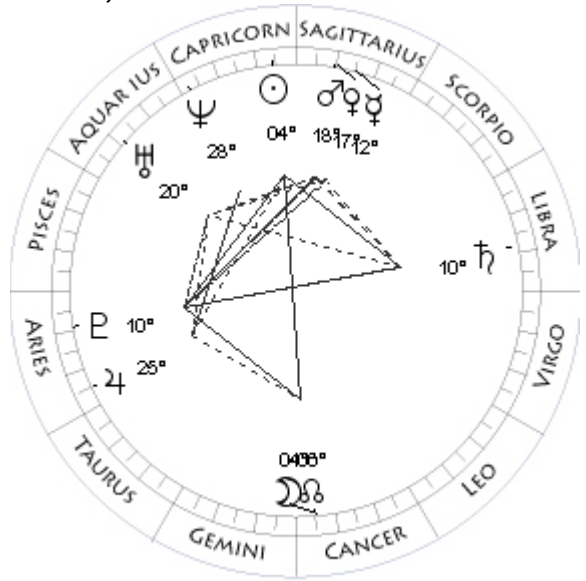
Jul 2, 1833 0:43 AM Partial Umbral

Mo 15Cn55 - 0°46	Mo 09Cp53 + 0°29
Su 15Cp51 - 0°00	Su 09Cn50 - 0°00
Me 24Sa53 + 2°48R	Me 25Cn33 + 1°52
Ve 25Aq13 - 1°41	Ve 27Ta09 - 3°51
Ma 21Ta51 + 2°08	Ma 19Le47 + 1°13
Ju 23Pi18 - 1°14	Ju 01Ta08 - 1°13
Sa 28Vi05 + 2°15	Sa 22Vi30 + 2°13
Ur 16Aq45 - 0°40	Ur 22Aq04 - 0°44R
Ne 26Cp29 + 0°24	Ne 28Cp30 + 0°23R
Pl 09Ar17 -17°05	Pl 12Ar22 -17°07
No 24Cn43 - 0°00	No 15Cn21 - 0°00
Coords: 118E/22N	

Jul 17, 1833 7:07 AM Total Solar



Dec 26, 1833 9:33 PM Total Umbra



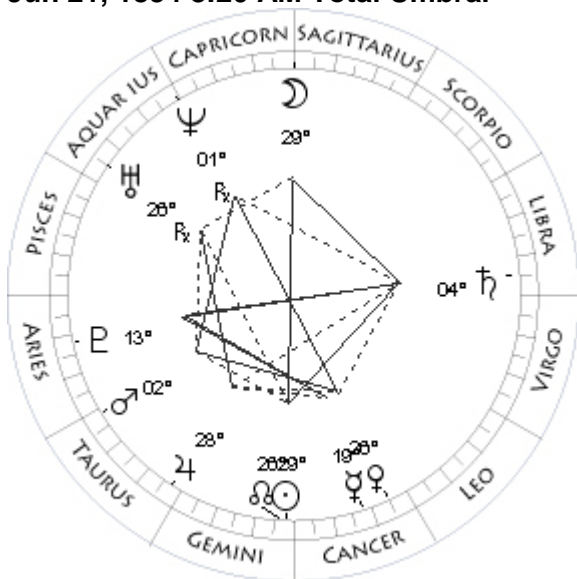
Jan 9, 1834 10:55 PM Partial Solar

Mo 24Cn18 + 0°50	Mo 19Cp11 - 1°12
Su 24Cn23 - 0°00	Su 19Cp18 - 0°00
Me 19Le50 + 0°24	Me 29Sa26 + 0°14
Ve 09Ge07 - 3°48	Ve 05Cp30 - 0°02
Ma 29Le09 + 1°06	Ma 28Sa41 - 0°32
Ju 03Ta12 - 1°16	Ju 26Ar18 - 1°12
Sa 23Vi37 + 2°11	Sa 10Li41 + 2°26
Ur 21Aq37 - 0°45R	Ur 20Aq43 - 0°42
Ne 28Cp06 + 0°23R	Ne 28Cp43 + 0°20
Pl 12Ar23 -17°13R	Pl 10Ar22 -17°06
No 14Cn33 - 0°00	No 05Cn11 - 0°00
Coords: 92W/77N	

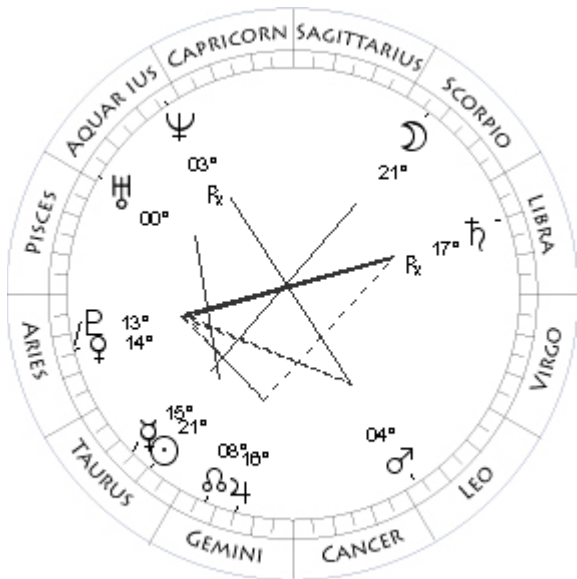
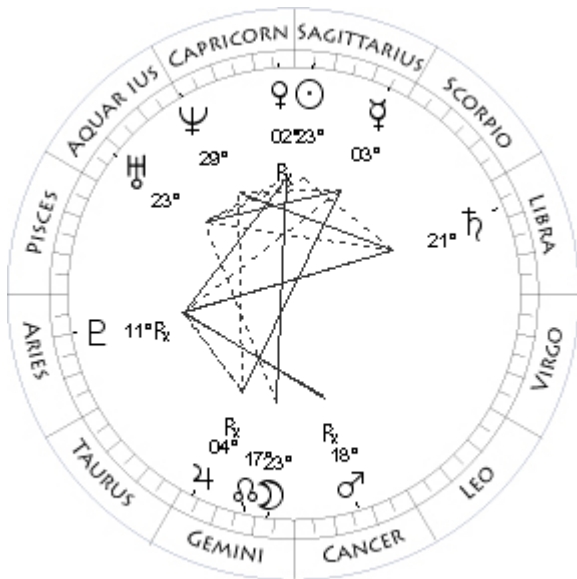
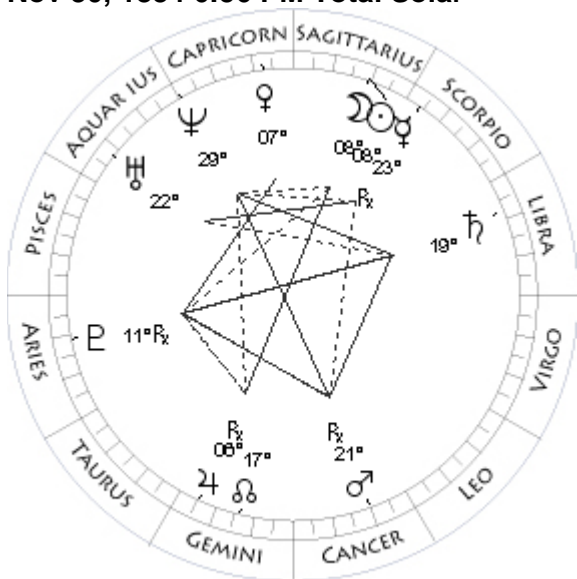
Jun 7, 1834 10:08 AM Partial Solar

Mo 04Cn59 - 0°05	Mo 16Ge12 - 0°57
Su 04Cp58 - 0°00	Su 16Ge07 - 0°00
Me 12Sa39 + 2°13	Me 22Ge25 + 1°25
Ve 17Sa51 + 0°33	Ve 09Cn36 + 1°22
Ma 18Sa19 - 0°23	Ma 21Ar55 - 1°20
Ju 25Ar41 - 1°17	Ju 25Ta12 - 0°49
Sa 10Li15 + 2°22	Sa 03Li59 + 2°32
Ur 20Aq03 - 0°42	Ur 26Aq32 - 0°45R
Ne 28Cp13 + 0°20	Ne 01Aq17 + 0°19R
Pl 10Ar19 -17°11	Pl 13Ar13 -17°00
No 05Cn56 - 0°00	No 27Ge20 - 0°00
Coords: 37W/23N	

Jun 21, 1834 8:20 AM Total Umbral



Nov 30, 1834 6:56 PM Total Solar



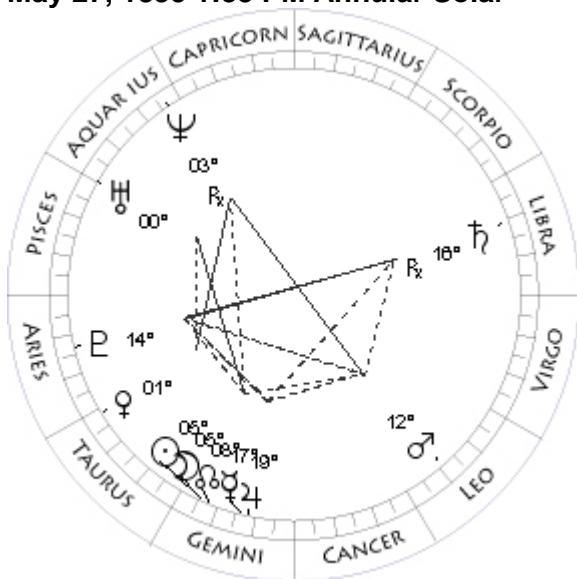
Dec 16, 1834 4:47 AM Partial Umbral

Mo 29Sa24 - 0°15	Mo 23Ge45 + 0°35
Su 29Ge25 - 0°00	Su 23Sa49 - 0°00
Me 19Cn21 + 1°54	Me 03Sa20 + 1°44
Ve 26Cn28 + 1°39	Ve 02Cp37 + 0°51R
Ma 02Ta09 - 1°16	Ma 18Cn02 + 3°16R
Ju 28Ta19 - 0°49	Ju 04Ge24 - 0°49R
Sa 04Li10 + 2°28	Sa 21Li16 + 2°23
Ur 26Aq23 - 0°45R	Ur 23Aq26 - 0°43
Ne 01Aq01 + 0°19R	Ne 29Cp58 + 0°16
Pl 13Ar22 -17°05	Pl 11Ar24 -17°17R
No 26Ge35 - 0°00	No 17Ge10 - 0°00
Coords: 125E/24S	

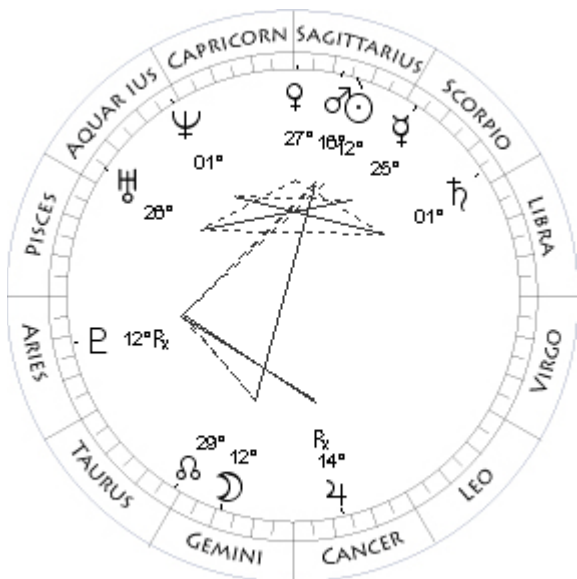
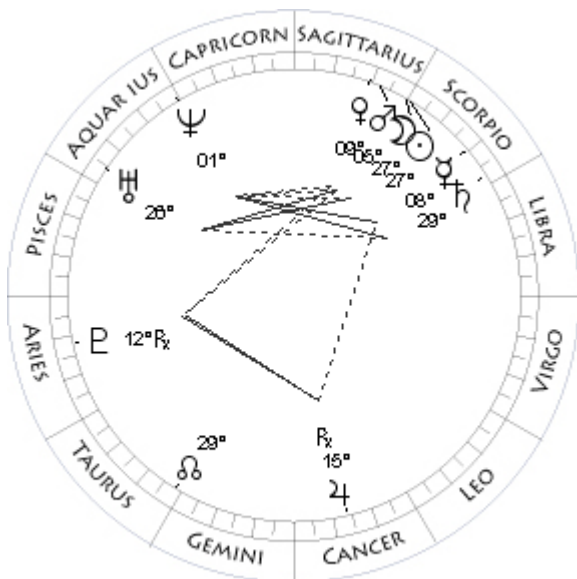
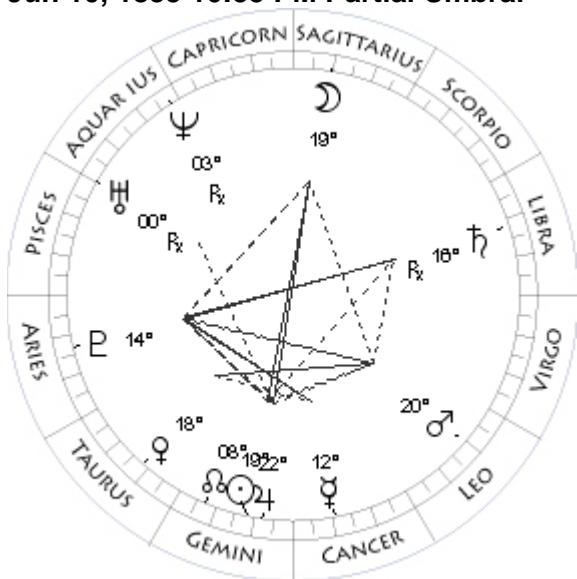
May 12, 1835 3:28 PM Partial Penumbral

Mo 08Sa14 + 0°51	Mo 21Sc17 + 1°33
Su 08Sa10 - 0°00	Su 21Ta09 - 0°00
Me 23Sc34 + 2°30R	Me 15Ta03 - 0°37
Ve 07Cp05 - 2°33	Ve 14Ar06 - 1°49
Ma 21Cn11 + 2°33R	Ma 04Le10 + 1°44
Ju 06Ge25 - 0°52R	Ju 16Ge09 - 0°21
Sa 19Li56 + 2°19	Sa 17Li34 + 2°44R
Ur 22Aq59 - 0°44	Ur 00Pi19 - 0°44
Ne 29Cp31 + 0°16	Ne 03Aq47 + 0°15R
Pl 11Ar30 -17°23R	Pl 13Ar49 -16°54
No 17Ge59 - 0°00	No 09Ge22 - 0°00
Coords: 127W/17S	

May 27, 1835 1:35 PM Annular Solar



Jun 10, 1835 10:35 PM Partial Umbral



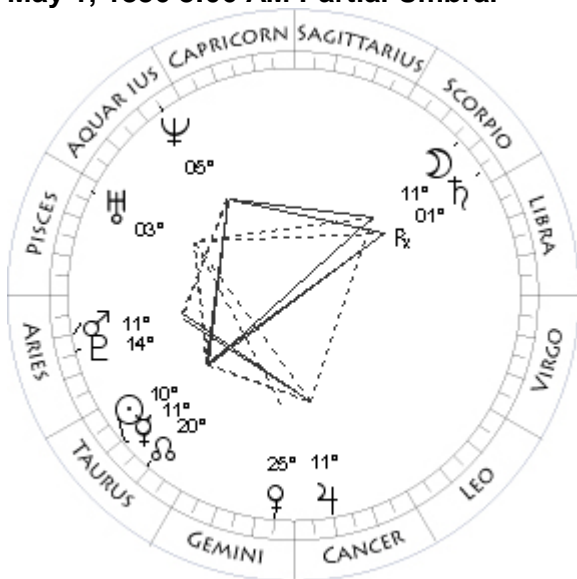
Nov 20, 1835 10:32 AM Total Solar

Mo 05Ge31 - 0°15	Mo 27Sc27 + 0°10
Su 05Ge30 - 0°00	Su 27Sc26 - 0°00
Me 17Ge07 + 1°43	Me 08Sc27 + 2°27
Ve 01Ta44 - 1°53	Ve 09Sa10 - 0°15
Ma 12Le09 + 1°32	Ma 05Sa38 - 0°26
Ju 19Ge30 - 0°19	Ju 15Cn27 - 0°02R
Sa 16Li51 + 2°41R	Sa 29Li45 + 2°17
Ur 00Pi31 - 0°45	Ur 26Aq42 - 0°45
Ne 03Aq41 + 0°15R	Ne 01Aq25 + 0°13
Pl 14Ar05 -16°58	Pl 12Ar42 -17°27R
No 08Ge35 - 0°00	No 29Ta13 - 0°00
	Coords: 22W/11S

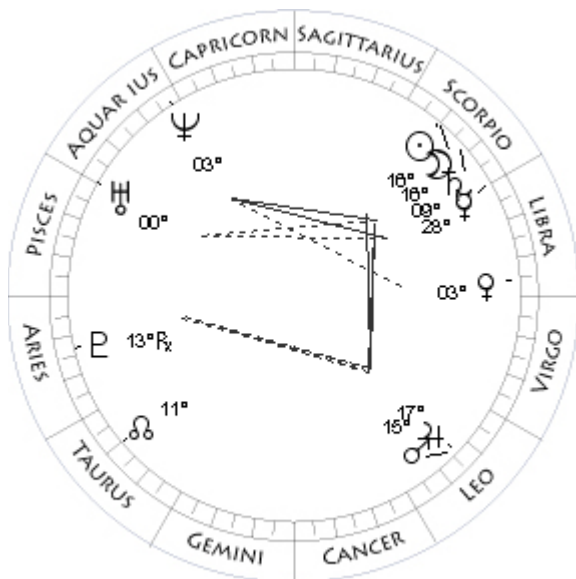
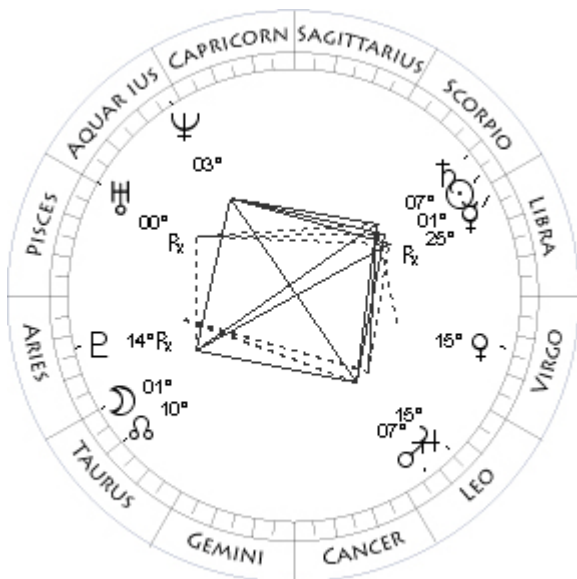
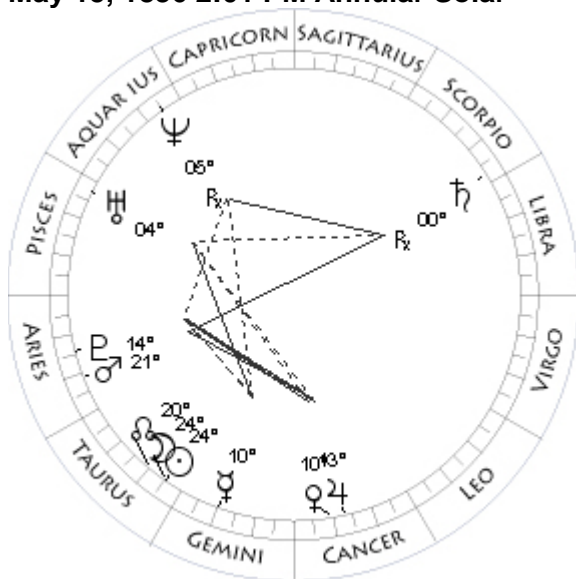
Dec 5, 1835 5:20 AM Partial Penumbral

Mo 19Sa09 - 1°00	Mo 12Ge18 + 1°11
Su 19Ge15 - 0°00	Su 12Sa25 - 0°00
Me 12Cn07 + 1°52	Me 25Sc25 + 1°22
Ve 18Ta51 - 1°41	Ve 27Sa41 - 0°50
Ma 20Le09 + 1°20	Ma 16Sa30 - 0°34
Ju 22Ge47 - 0°17	Ju 14Cn18 - 0°00R
Sa 16Li28 + 2°38R	Sa 01Sc20 + 2°19
Ur 00Pi32 - 0°45R	Ur 26Aq58 - 0°45
Ne 03Aq28 + 0°15R	Ne 01Aq46 + 0°12
Pl 14Ar18 -17°02	Pl 12Ar32 -17°23R
No 07Ge49 - 0°00	No 28Ta26 - 0°00
	Coords: 21W/24S

May 1, 1836 8:06 AM Partial Umbral



May 15, 1836 2:01 PM Annular Solar



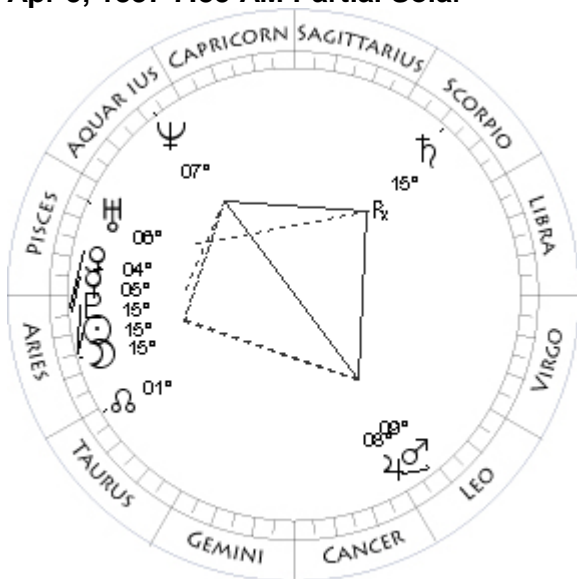
Oct 24, 1836 1:14 PM Partial Umbral

Mo 11Sc01 + 0°50	Mo 01Ta16 - 0°53
Su 10Ta57 - 0°00	Su 01Sc11 - 0°00
Me 11Ta14 - 0°07	Me 25Li27 - 0°09R
Ve 25Ge35 + 2°55	Ve 15Vi59 + 0°37
Ma 11Ar04 - 1°01	Ma 07Le56 + 1°25
Ju 11Cn11 + 0°15	Ju 15Le35 + 0°34
Sa 01Sc15 + 2°44R	Sa 07Sc13 + 2°11
Ur 03Pi56 - 0°44	Ur 00Pi42 - 0°47R
Ne 05Aq59 + 0°11	Ne 03Aq14 + 0°09
Pl 14Ar37 -16°53	Pl 14Ar11 -17°34R
No 20Ta35 - 0°00	No 11Ta15 - 0°00
Coords: 122E/14S	Coords: 158W/11N

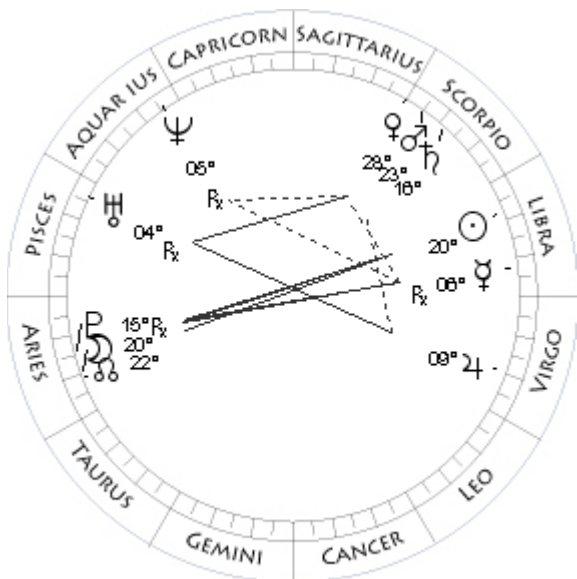
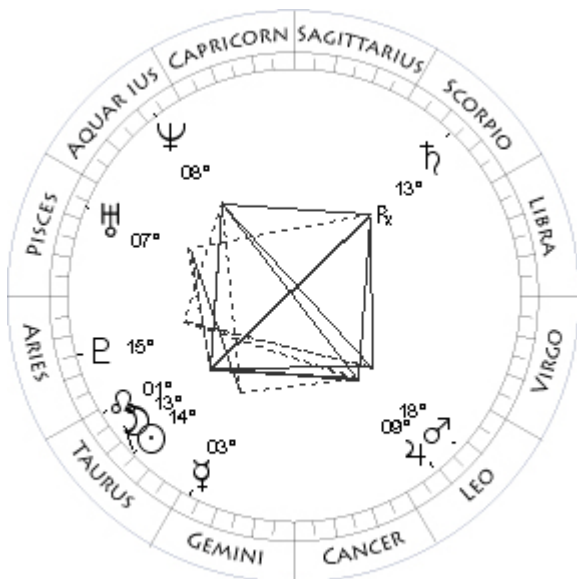
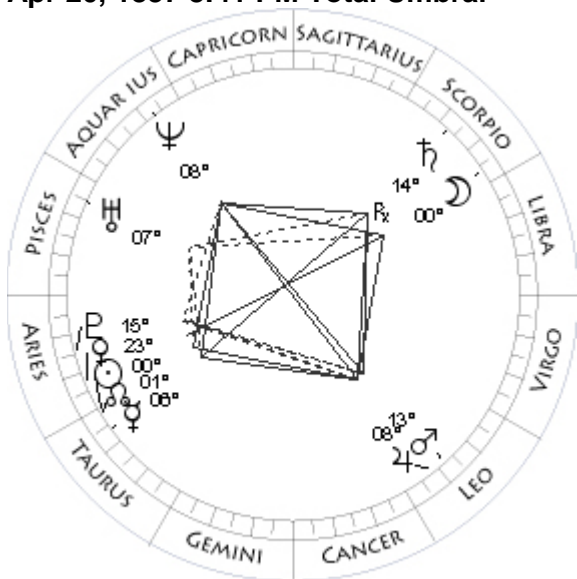
Nov 9, 1836 1:29 AM Total Solar

Mo 24Ta40 + 0°25	Mo 16Sc40 - 0°31
Su 24Ta43 - 0°00	Su 16Sc44 - 0°00
Me 10Ge45 + 2°00	Me 28Li03 + 2°15
Ve 10Cn04 + 3°06	Ve 03Li27 + 1°33
Ma 21Ar55 - 0°55	Ma 15Le02 + 1°48
Ju 13Cn37 + 0°16	Ju 17Le07 + 0°37
Sa 00Sc15 + 2°42R	Sa 09Sc05 + 2°11
Ur 04Pi17 - 0°45	Ur 00Pi36 - 0°46
Ne 05Aq59 + 0°11R	Ne 03Aq23 + 0°09
Pl 14Ar55 -16°56	Pl 13Ar55 -17°31R
No 19Ta50 - 0°00	No 10Ta26 - 0°00
	Coords: 137W/46S

Apr 5, 1837 7:35 AM Partial Solar



Apr 20, 1837 8:41 PM Total Umbral



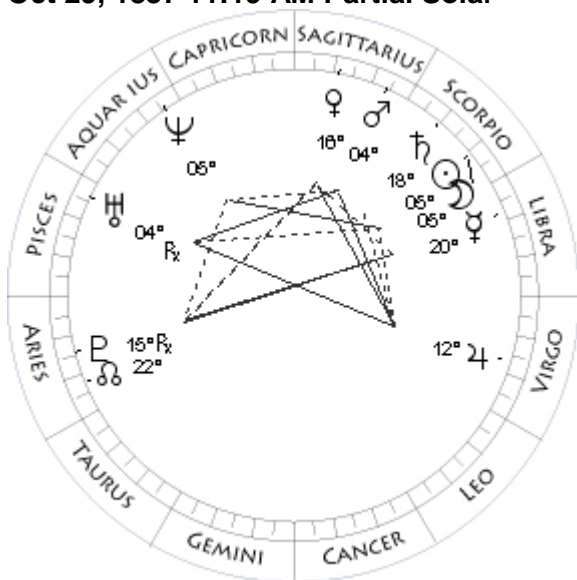
May 4, 1837 6:48 PM Partial Solar

Mo 15Ar27 - 1°28	Mo 13Ta56 + 1°07
Su 15Ar19 - 0°00	Su 14Ta03 - 0°00
Me 05Ar05 - 1°53	Me 03Ge19 + 2°20
Ve 04Ar00 - 1°28	Ve 10Ta23 - 0°55
Ma 09Le16 + 2°51	Ma 18Le06 + 1°58
Ju 08Le05 + 0°55	Ju 09Le31 + 0°52
Sa 15Sc53 + 2°34R	Sa 13Sc49 + 2°35R
Ur 06Pi43 - 0°44	Ur 07Pi53 - 0°45
Ne 07Aq52 + 0°07	Ne 08Aq12 + 0°07
Pl 15Ar01 -16°52	Pl 15Ar43 -16°55
No 02Ta38 - 0°00	No 01Ta04 - 0°00

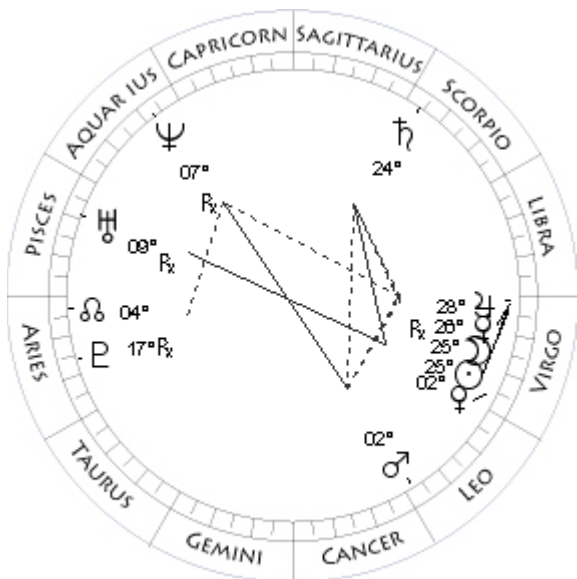
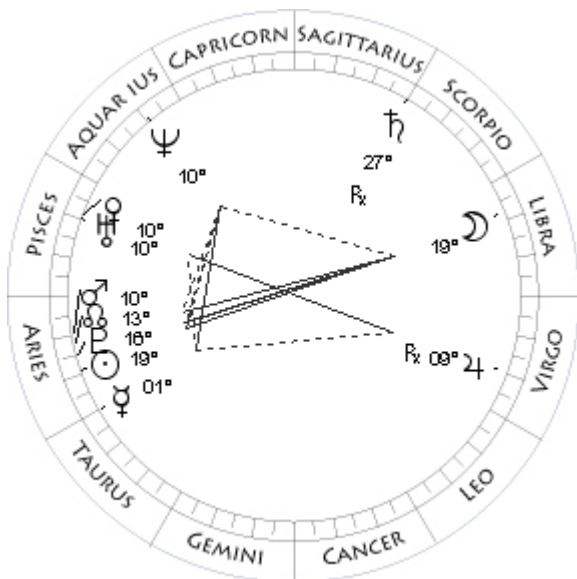
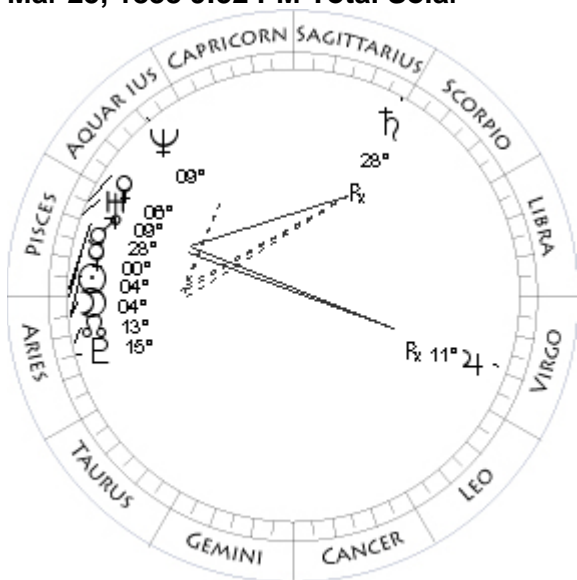
Oct 13, 1837 11:17 PM Total Umbral

Mo 00Sc33 + 0°06	Mo 20Ar26 - 0°11
Su 00Ta32 - 0°00	Su 20Li25 - 0°00
Me 06Ta58 + 0°21	Me 06Li00 + 0°38R
Ve 23Ar13 - 1°16	Ve 28Sc26 - 1°22
Ma 13Le12 + 2°21	Ma 23Sc16 - 0°33
Ju 08Le32 + 0°53	Ju 09Vi52 + 0°56
Sa 14Sc51 + 2°35R	Sa 16Sc22 + 2°03
Ur 07Pi24 - 0°45	Ur 04Pi57 - 0°48R
Ne 08Aq06 + 0°07	Ne 05Aq25 + 0°05R
Pl 15Ar24 -16°53	Pl 15Ar27 -17°36R
No 01Ta49 - 0°00	No 22Ar29 - 0°00
Coords: 50W/12S	Coords: 7W/ 8N

Oct 29, 1837 11:19 AM Partial Solar



Mar 25, 1838 9:52 PM Total Solar



Apr 10, 1838 1:58 AM Partial Umbral

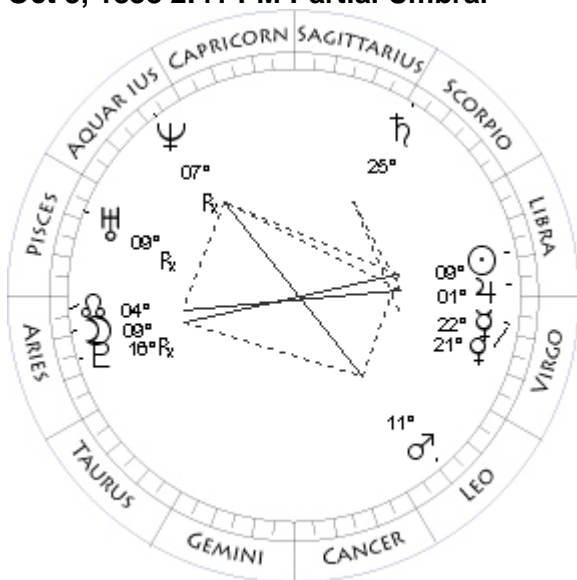
Mo 05Sc44 - 1°13	Mo 19Li42 - 0°36
Su 05Sc52 - 0°00	Su 19Ar46 - 0°00
Me 20Li12 + 2°01	Me 01Ta29 + 0°48
Ve 16Sa53 - 2°06	Ve 10Pi20 + 3°07
Ma 04Sa24 - 0°41	Ma 10Ar15 - 0°46
Ju 12Vi38 + 0°59	Ju 09Vi48 + 1°26R
Sa 18Sc09 + 2°01	Sa 27Sc58 + 2°18R
Ur 04Pi40 - 0°47R	Ur 10Pi42 - 0°44
Ne 05Aq28 + 0°05	Ne 10Aq07 + 0°03
Pl 15Ar10 -17°34R	Pl 16Ar09 -16°53
No 21Ar40 - 0°00	No 13Ar03 - 0°00

Sep 18, 1838 8:55 PM Annular Solar

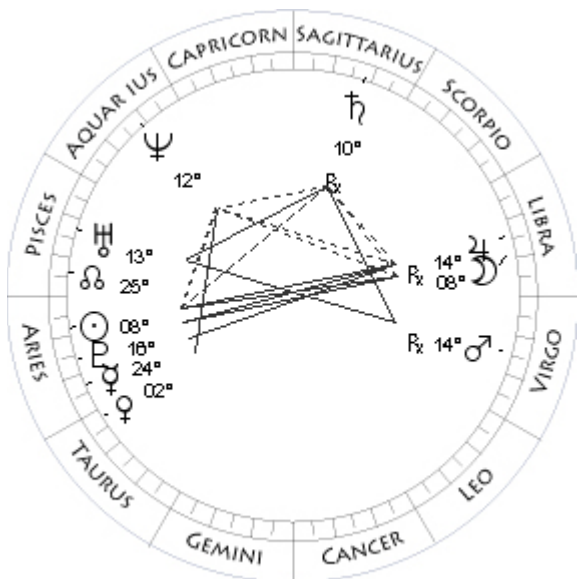
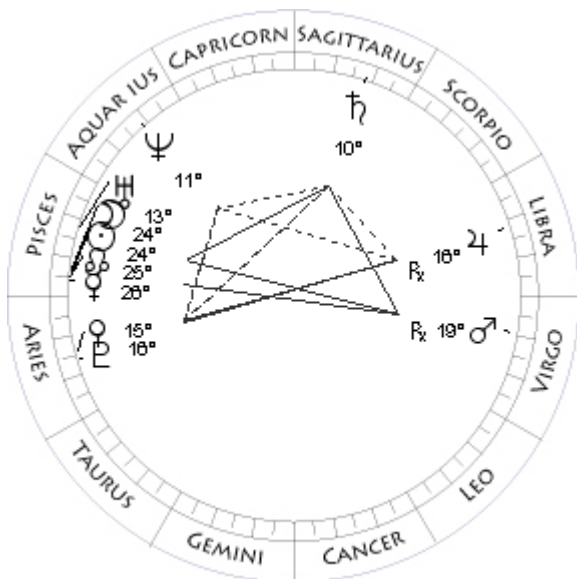
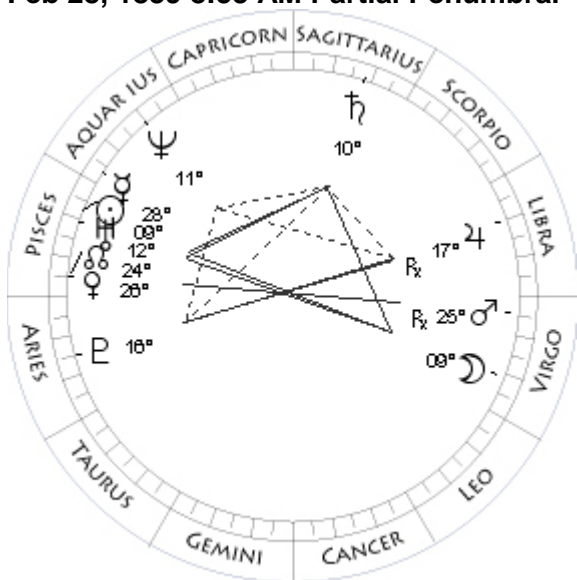
Mo 04Ar53 - 0°45	Mo 25Vi32 + 0°47
Su 04Ar49 - 0°00	Su 25Vi28 - 0°00
Me 00Ar34 - 1°36	Me 26Vi34 - 3°07R
Ve 06Pi22 + 6°07	Ve 02Vi50 + 1°08
Ma 28Pi31 - 0°53	Ma 02Le57 + 1°02
Ju 11Vi15 + 1°27R	Ju 28Vi22 + 1°06
Sa 28Sc34 + 2°16R	Sa 24Sc25 + 1°54
Ur 09Pi56 - 0°44	Ur 09Pi52 - 0°49R
Ne 09Aq48 + 0°03	Ne 07Aq53 + 0°01R
Pl 15Ar47 -16°53	Pl 17Ar00 -17°35R
No 13Ar51 - 0°00	No 04Ar29 - 0°00

Coords: 118E/39S

Oct 3, 1838 2:41 PM Partial Umbral



Feb 28, 1839 8:53 AM Partial Penumbral



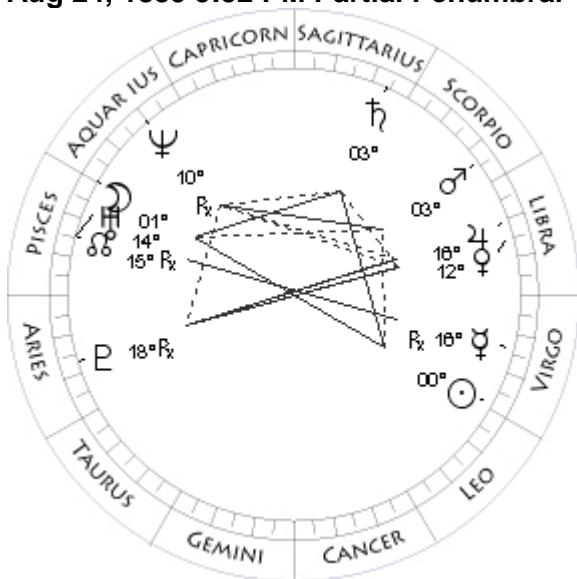
Mar 15, 1839 2:13 PM Total Solar

Mo 09Ar53 + 0°31	Mo 24Pi20 - 0°03
Su 09Li56 - 0°00	Su 24Pi21 - 0°00
Me 22Vi08 + 1°11	Me 26Pi20 - 1°17
Ve 21Vi02 + 1°26	Ve 15Ar08 - 0°48
Ma 11Le51 + 1°14	Ma 19Vi43 + 3°50R
Ju 01Li33 + 1°06	Ju 16Li14 + 1°35R
Sa 25Sc41 + 1°51	Sa 10Sa19 + 1°54
Ur 09Pi20 - 0°48R	Ur 13Pi05 - 0°44
Ne 07Aq42 + 0°01R	Ne 11Aq39 - 0°01
Pl 16Ar43 -17°36R	Pl 16Ar33 -16°55
No 03Ar42 - 0°00	No 25Pi04 - 0°00
Coords: 137W/ 4N	

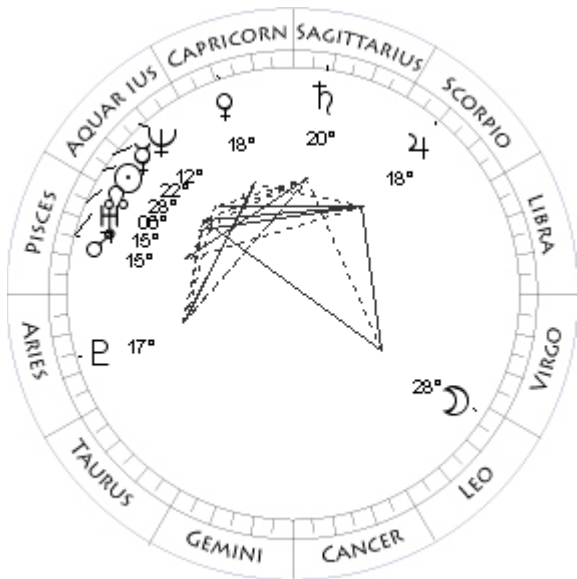
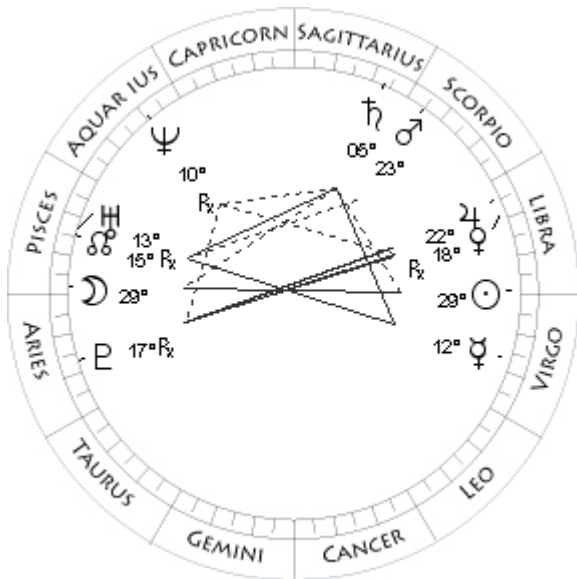
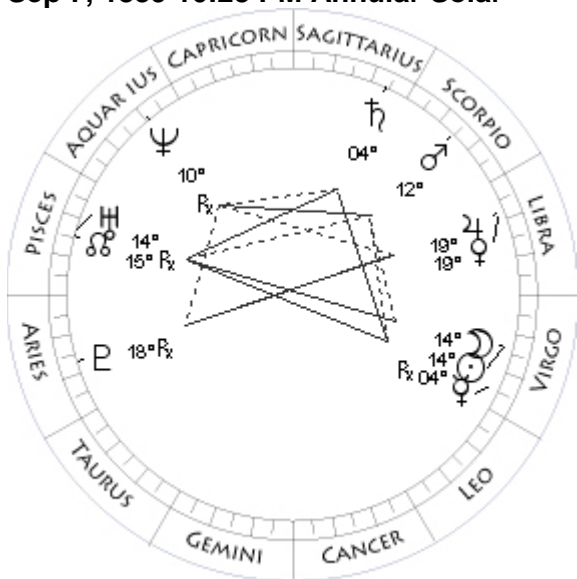
Mar 30, 1839 2:03 AM Partial Penumbral

Mo 09Vi16 + 1°25	Mo 08Li35 - 1°15
Su 09Pi08 - 0°00	Su 08Ar42 - 0°00
Me 28Aq04 - 2°09	Me 24Ar29 + 1°16
Ve 26Pi16 - 1°15	Ve 02Ta58 - 0°13
Ma 25Vi27 + 3°58R	Ma 14Vi35 + 3°23R
Ju 17Li42 + 1°32R	Ju 14Li29 + 1°36R
Sa 10Sa00 + 1°52	Sa 10Sa15 + 1°55R
Ur 12Pi13 - 0°44	Ur 13Pi53 - 0°44
Ne 11Aq10 - 0°01	Ne 12Aq03 - 0°01
Pl 16Ar13 -16°58	Pl 16Ar53 -16°54
No 25Pi53 - 0°00	No 24Pi18 - 0°00
Coords: 130E/ 9N	

Aug 24, 1839 9:52 PM Partial Penumbral



Sep 7, 1839 10:23 PM Annular Solar



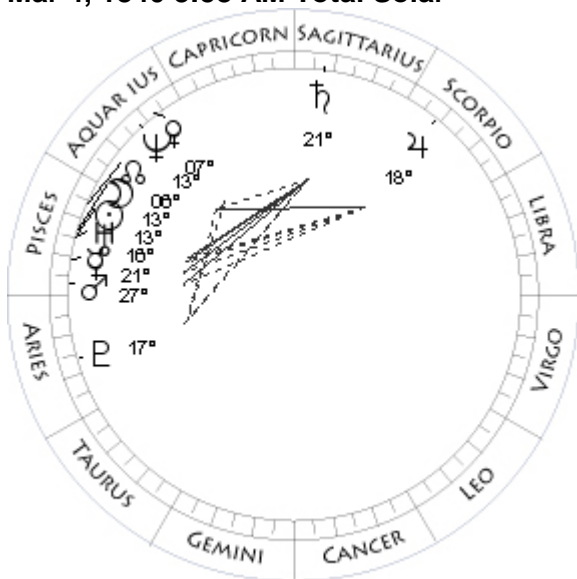
Sep 23, 1839 6:57 AM Partial Penumbral

Mo 01Pi07 - 1°21	Mo 29Pi26 + 1°14
Su 00Vi59 - 0°00	Su 29Vi33 - 0°00
Me 16Vi17 - 4°30R	Me 12Vi53 + 1°30
Ve 12Li40 - 3°58	Ve 18Li39 - 8°06R
Ma 03Sc48 - 0°38	Ma 23Sc25 - 0°57
Ju 16Li57 + 1°08	Ju 22Li41 + 1°04
Sa 03Sa56 + 1°42	Sa 05Sa22 + 1°36
Ur 14Pi58 - 0°49R	Ur 13Pi49 - 0°49R
Ne 10Aq40 - 0°03R	Ne 10Aq04 - 0°03R
Pl 18Ar26 -17°30R	Pl 17Ar58 -17°35R
No 16Pi29 - 0°00	No 14Pi55 - 0°00
Coords: 33W 12S	Coords: 107E 1N

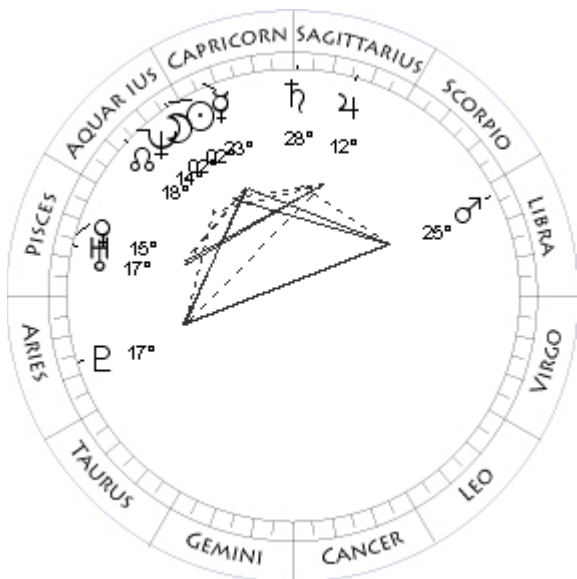
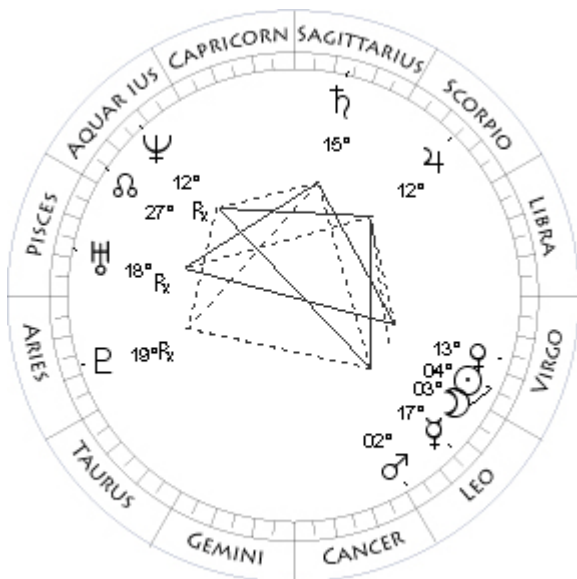
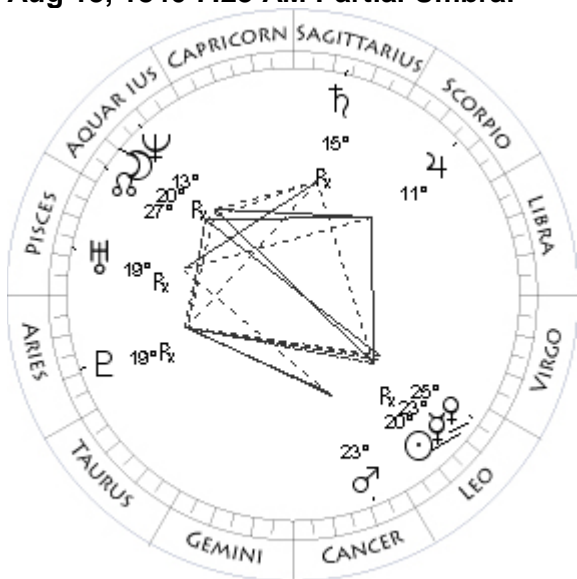
Feb 17, 1840 2:02 PM Partial Umbral

Mo 14Vi35 + 0°07	Mo 28Le07 + 0°46
Su 14Vi34 - 0°00	Su 28Aq03 - 0°00
Me 04Vi57 - 2°23R	Me 22Aq34 - 2°06
Ve 19Li02 - 6°11	Ve 18Cp49 + 0°58
Ma 12Sc59 - 0°48	Ma 15Pi44 - 0°52
Ju 19Li35 + 1°06	Ju 18Sc23 + 1°12
Sa 04Sa27 + 1°39	Sa 20Sa16 + 1°28
Ur 14Pi25 - 0°49R	Ur 15Pi20 - 0°44
Ne 10Aq21 - 0°03R	Ne 12Aq54 - 0°04
Pl 18Ar14 -17°33R	Pl 17Ar02 -17°01
No 15Pi44 - 0°00	No 07Pi07 - 0°00
Coords: 153E 13N	Coords: 153W 13N

Mar 4, 1840 3:58 AM Total Solar



Aug 13, 1840 7:23 AM Partial Umbral



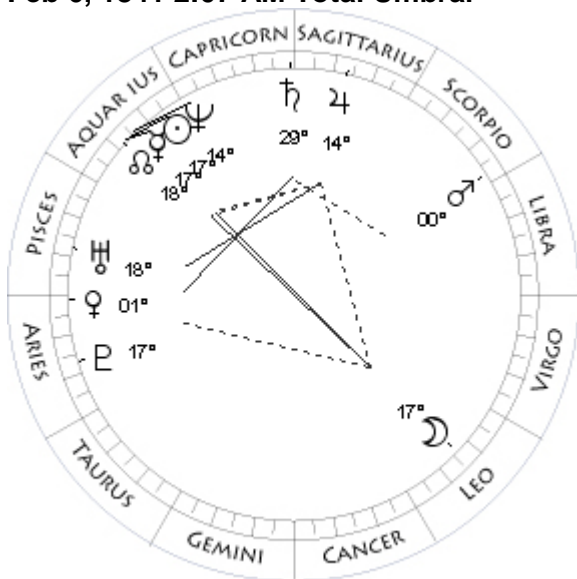
Aug 27, 1840 6:37 AM Total Solar

Mo 13Pi38 + 0°39	Mo 03Vi56 - 0°36
Su 13Pi42 - 0°00	Su 04Vi00 - 0°00
Me 21Pi38 - 0°56	Me 17Le30 - 1°28
Ve 07Aq34 + 0°03	Ve 13Vi07 + 1°25
Ma 27Pi52 - 0°43	Ma 02Le16 + 1°01
Ju 18Sc47 + 1°15	Ju 12Sc43 + 0°54
Sa 21Sa08 + 1°29	Sa 15Sa10 + 1°20
Ur 16Pi13 - 0°44	Ur 18Pi58 - 0°48R
Ne 13Aq27 - 0°05	Ne 12Aq52 - 0°07R
Pl 17Ar20 -16°57	Pl 19Ar25 -17°30R
No 06Pi18 - 0°00	No 26Aq58 - 0°00
Coords: 102W/30N	Coords: 63W/24S

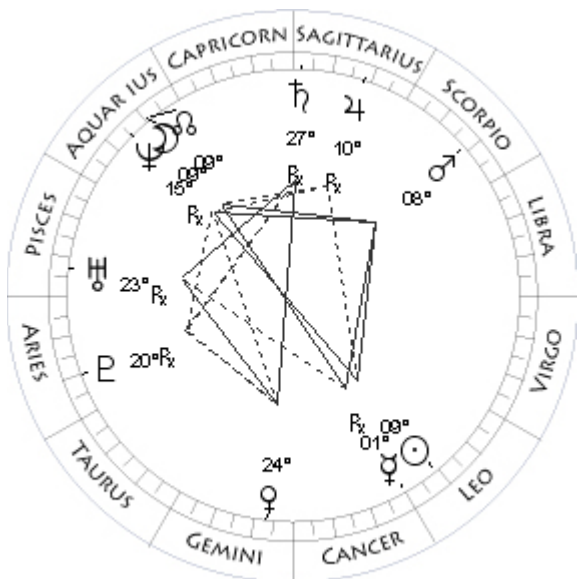
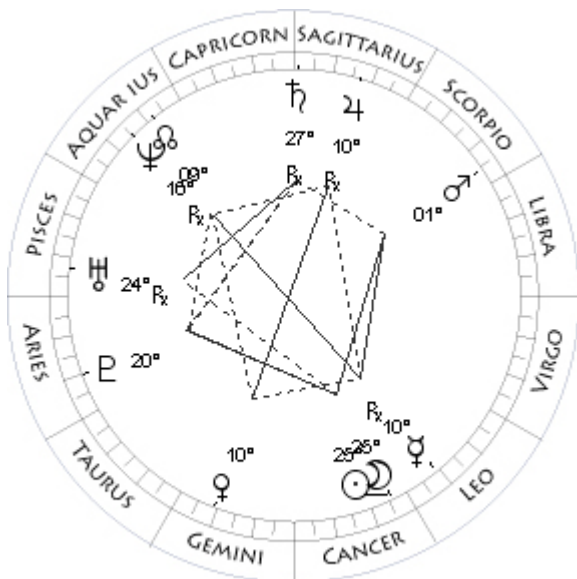
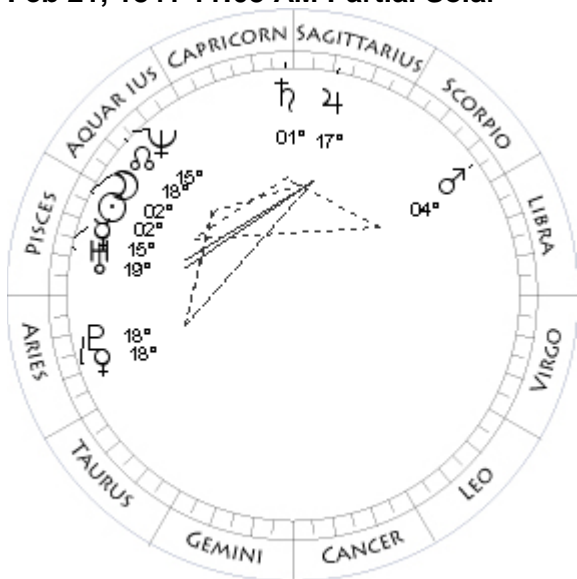
Jan 22, 1841 5:23 PM Partial Solar

Mo 20Aq36 - 0°37	Mo 02Aq45 - 1°24
Su 20Le33 - 0°00	Su 02Aq37 - 0°00
Me 23Le48 - 4°44R	Me 23Cp27 - 1°41
Ve 25Le50 + 1°23	Ve 15Pi12 - 0°57
Ma 23Cn17 + 0°54	Ma 25Li07 + 2°11
Ju 11Sc01 + 0°57	Ju 12Sa29 + 0°40
Sa 15Sa09 + 1°23R	Sa 28Sa26 + 1°03
Ur 19Pi28 - 0°48R	Ur 17Pi49 - 0°44
Ne 13Aq14 - 0°07R	Ne 14Aq05 - 0°08
Pl 19Ar34 -17°26R	Pl 17Ar44 -17°09
No 27Aq43 - 0°00	No 19Aq07 - 0°00
Coords: 109E/15S	

Feb 6, 1841 2:07 AM Total Umbral



Feb 21, 1841 11:03 AM Partial Solar



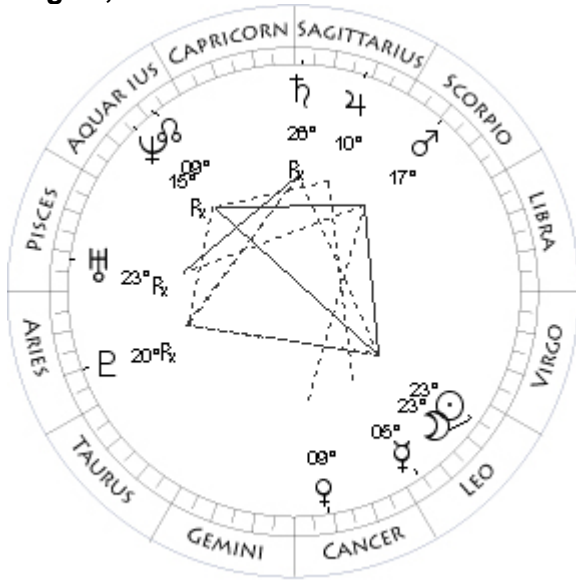
Jul 18, 1841 2:25 PM Partial Solar

Mo 17Le12 + 0°05	Mo 25Cn49 + 1°13
Su 17Aq12 - 0°00	Su 25Cn42 - 0°00
Me 17Aq39 - 2°03	Me 10Le20 - 4°02R
Ve 01Ar45 + 0°01	Ve 10Ge12 - 3°41
Ma 00Sc14 + 2°17	Ma 01Sc36 - 1°14
Ju 14Sa54 + 0°40	Ju 10Sa35 + 0°32R
Sa 29Sa51 + 1°03	Sa 27Sa54 + 1°01R
Ur 18Pi30 - 0°44	Ur 24Pi11 - 0°47R
Ne 14Aq37 - 0°08	Ne 16Aq12 - 0°11R
Pl 17Ar53 -17°04	Pl 20Ar42 -17°16
No 18Aq21 - 0°00	No 09Aq45 - 0°00

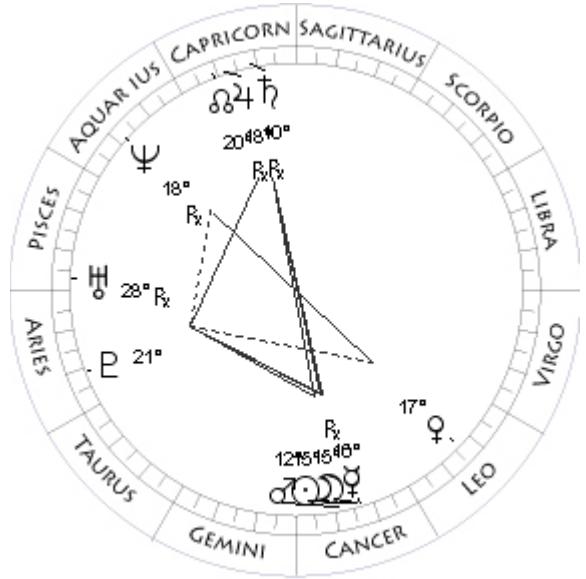
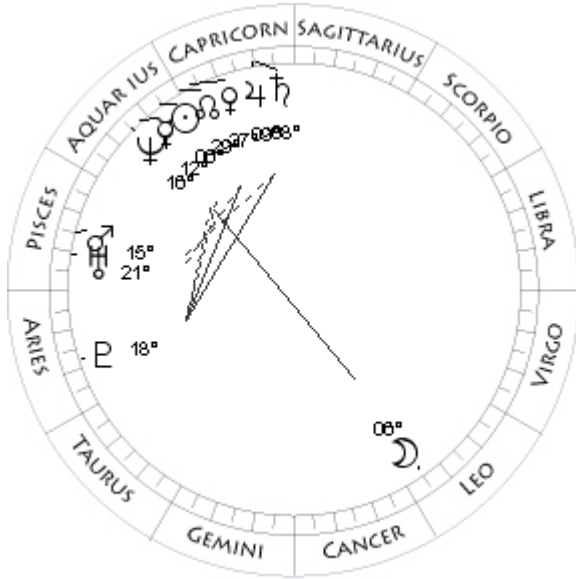
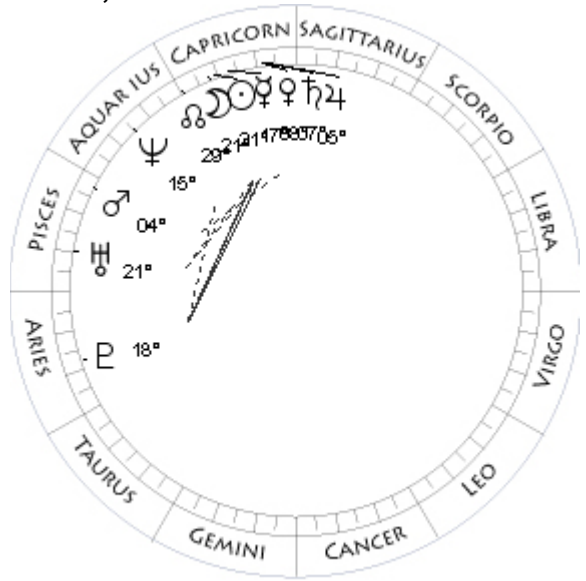
Aug 2, 1841 10:01 AM Total Umbral

Mo 02Pi35 + 1°19	Mo 09Aq52 + 0°05
Su 02Pi43 - 0°00	Su 09Le52 - 0°00
Me 15Pi43 - 0°34	Me 01Le09 - 4°21R
Ve 18Ar41 + 1°19	Ve 24Ge29 - 3°03
Ma 04Sc11 + 2°23	Ma 08Sc59 - 1°26
Ju 17Sa03 + 0°41	Ju 10Sa03 + 0°29R
Sa 01Cp08 + 1°03	Sa 27Sa08 + 0°59R
Ur 19Pi20 - 0°44	Ur 23Pi53 - 0°47R
Ne 15Aq12 - 0°08	Ne 15Aq49 - 0°11R
Pl 18Ar07 -17°00	Pl 20Ar40 -17°21R
No 17Aq32 - 0°00	No 08Aq58 - 0°00
	Coords: 149E/18S

Aug 16, 1841 9:20 PM Partial Solar



Jan 11, 1842 4:25 PM Annular Solar



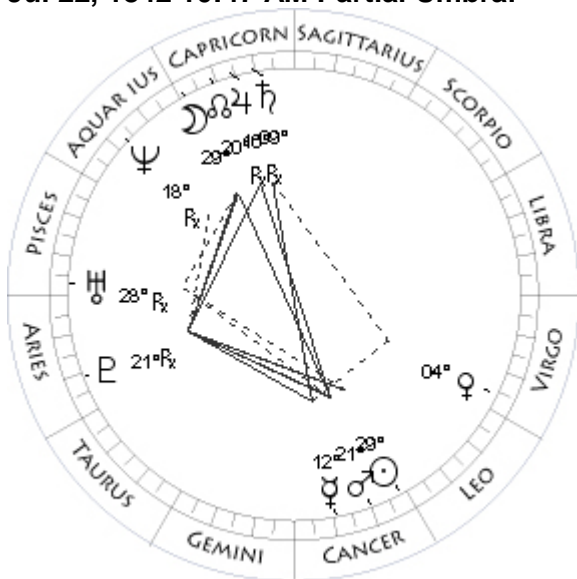
Jan 26, 1842 5:43 PM Partial Umbral

Mo 23Le37 - 1°20	Mo 06Le23 - 0°36
Su 23Le45 - 0°00	Su 06Aq27 - 0°00
Me 05Le13 - 0°36	Me 12Aq52 - 1°59
Ve 09Cn37 - 2°11	Ve 27Cp15 - 0°43
Ma 17Sc05 - 1°34	Ma 15Pi40 - 0°46
Ju 10Sa10 + 0°26	Ju 09Cp01 + 0°06
Sa 26Sa39 + 0°57R	Sa 08Cp58 + 0°38
Ur 23Pi27 - 0°48R	Ur 21Pi47 - 0°44
Ne 15Aq25 - 0°11R	Ne 16Aq21 - 0°12
Pl 20Ar34 -17°26R	Pl 18Ar46 -17°08
No 08Aq12 - 0°00	No 29Cp34 - 0°00
	Coords: 97W/18N

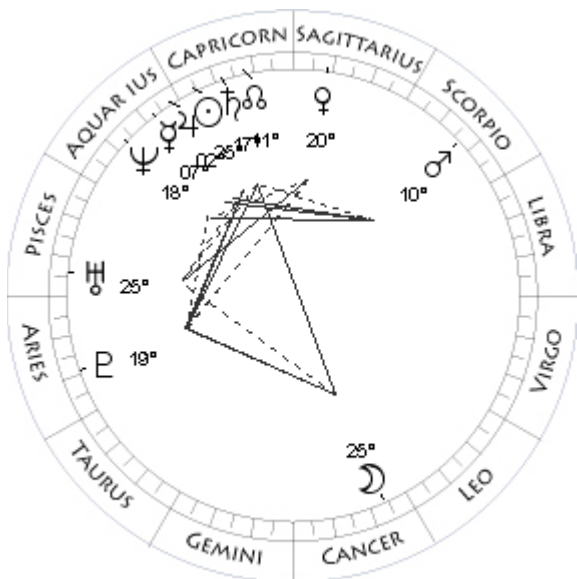
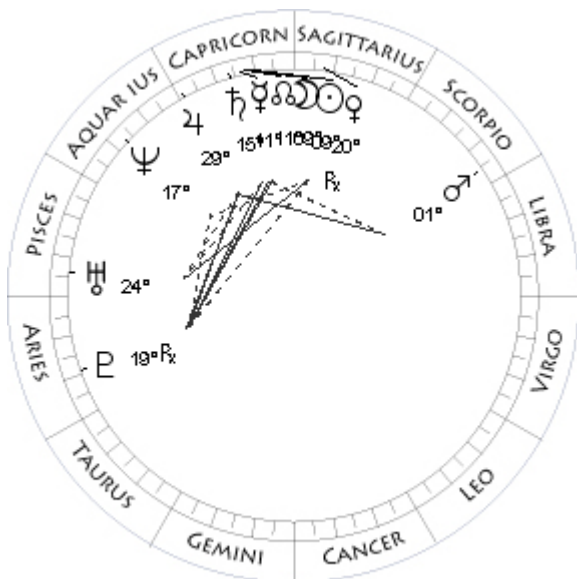
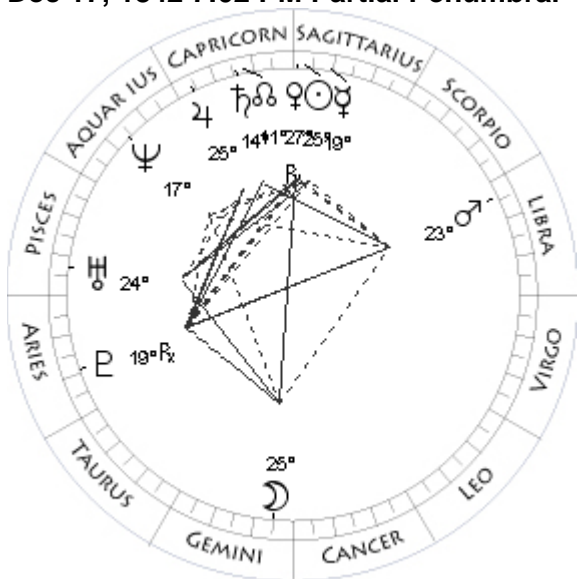
Jul 8, 1842 7:06 AM Total Solar

Mo 21Cp13 - 0°48	Mo 15Cn41 + 0°28
Su 21Cp08 - 0°00	Su 15Cn39 - 0°00
Me 17Cp27 - 1°47	Me 16Cn41 - 4°42R
Ve 08Cp21 - 0°09	Ve 17Le27 + 1°42
Ma 04Pi01 - 0°57	Ma 12Cn01 + 0°53
Ju 05Cp40 + 0°07	Ju 18Cp03 - 0°15R
Sa 07Cp16 + 0°39	Sa 10Cp46 + 0°32R
Ur 21Pi11 - 0°44	Ur 28Pi17 - 0°46R
Ne 15Aq48 - 0°12	Ne 18Aq43 - 0°15R
Pl 18Ar41 -17°13	Pl 21Ar41 -17°11
No 00Aq22 - 0°00	No 20Cp58 - 0°00
	Coords: 84W/50N

Jul 22, 1842 10:47 AM Partial Umbral



Dec 17, 1842 7:02 PM Partial Penumbral



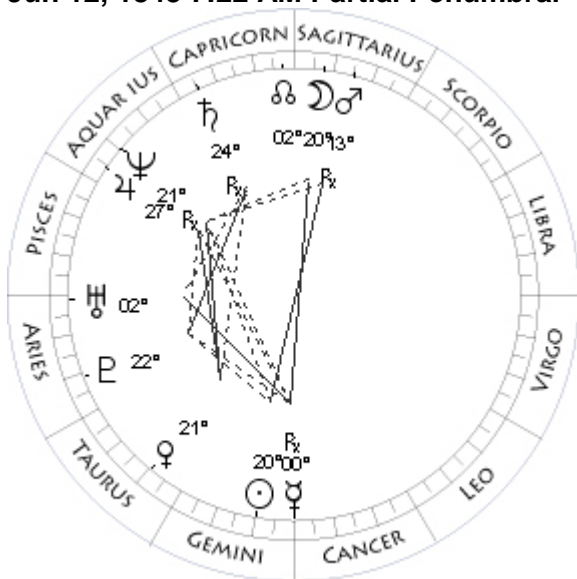
Dec 31, 1842 7:04 PM Annular Solar

Mo 29Cp04 + 0°46	Mo 09Cp48 - 0°10
Su 29Cn09 - 0°00	Su 09Cp47 - 0°00
Me 12Cn13 - 3°36	Me 11Cp44 - 1°54
Ve 04Vi18 + 1°26	Ve 20Sa32 + 4°30R
Ma 21Cn17 + 0°58	Ma 01Sc57 + 1°20
Ju 16Cp15 - 0°17R	Ju 29Cp00 - 0°27
Sa 09Cp46 + 0°31R	Sa 15Cp58 + 0°14
Ur 28Pi09 - 0°46R	Ur 24Pi43 - 0°44
Ne 18Aq23 - 0°15R	Ne 17Aq35 - 0°16
Pl 21Ar43 -17°16R	Pl 19Ar41 -17°17R
No 20Cp13 - 0°00	No 11Cp37 - 0°00
Coords: 161E/20S	Coords: 103E/33S

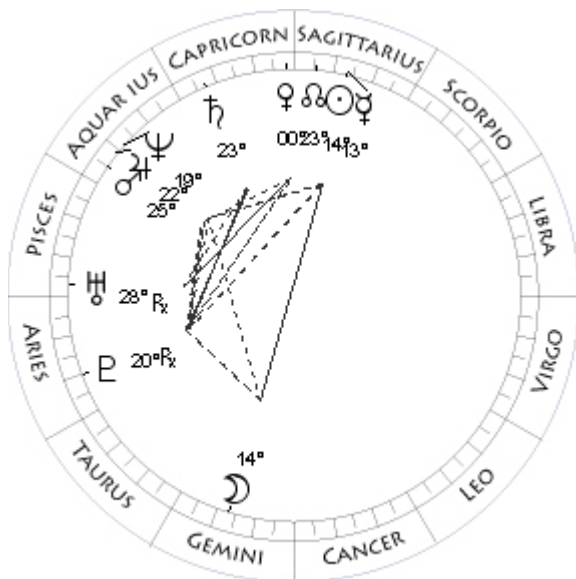
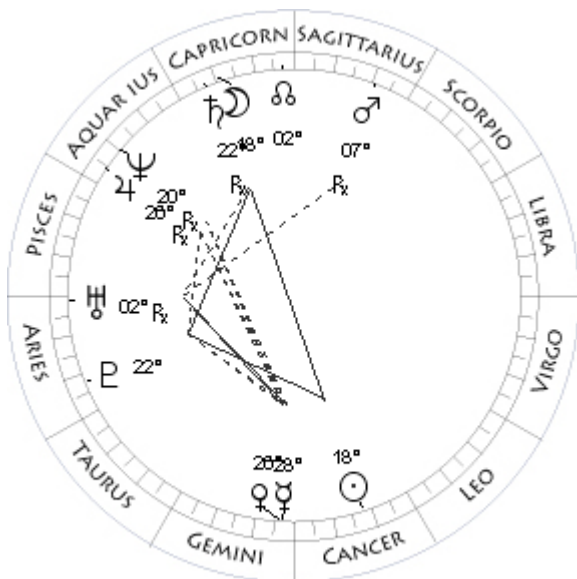
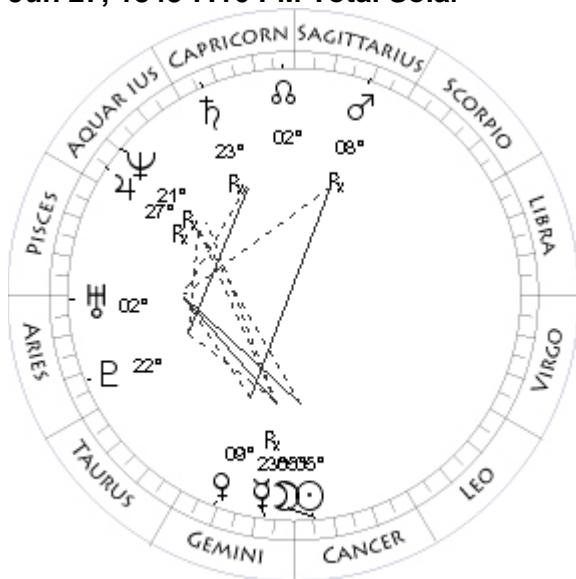
Jan 16, 1843 8:14 AM Partial Penumbral

Mo 25Ge39 + 1°27	Mo 25Cn30 - 1°16
Su 25Sa31 - 0°00	Su 25Cp38 - 0°00
Me 19Sa30 - 0°47	Me 07Aq33 - 1°53
Ve 27Sa45 + 1°31R	Ve 20Sa29 + 5°37
Ma 23Li46 + 1°21	Ma 10Sc47 + 1°18
Ju 25Cp51 - 0°26	Ju 02Aq38 - 0°28
Sa 14Cp21 + 0°15	Sa 17Cp49 + 0°13
Ur 24Pi28 - 0°45	Ur 25Pi10 - 0°44
Ne 17Aq10 - 0°16	Ne 18Aq06 - 0°16
Pl 19Ar44 -17°22R	Pl 19Ar43 -17°11
No 12Cp21 - 0°00	No 10Cp48 - 0°00
Coords: 74W/25N	Coords: 121E/20N

Jun 12, 1843 7:22 AM Partial Penumbral



Jun 27, 1843 7:16 PM Total Solar



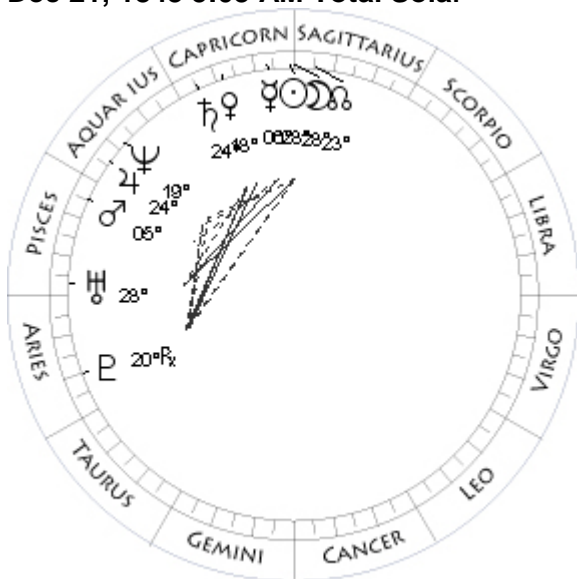
Jul 11, 1843 4:49 PM Partial Penumbral

Mo 20Sa44 - 1°03	Mo 18Cp31 + 1°28
Su 20Ge38 - 0°00	Su 18Cn40 - 0°00
Me 00Cn42 - 2°08R	Me 28Ge02 - 2°47
Ve 21Ta07 - 1°37	Ve 26Ge31 - 0°34
Ma 13Sa11 - 2°57R	Ma 07Sa12 - 3°48R
Ju 27Aq28 - 0°54	Ju 26Aq31 - 1°01R
Sa 24Cp44 + 0°02R	Sa 22Cp48 - 0°00R
Ur 02Ar00 - 0°44	Ur 02Ar16 - 0°45R
Ne 21Aq24 - 0°18R	Ne 20Aq55 - 0°19R
Pl 22Ar26 -17°01	Pl 22Ar42 -17°11
No 03Cp01 - 0°00	No 01Cp27 - 0°00
Coords: 111E/24S	Coords: 108W/21S

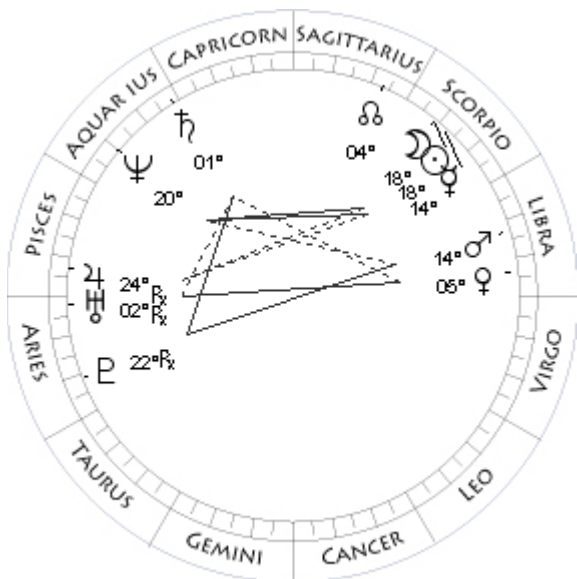
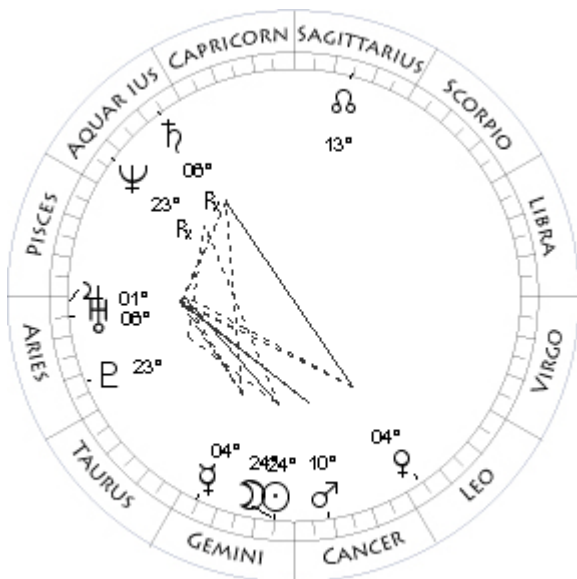
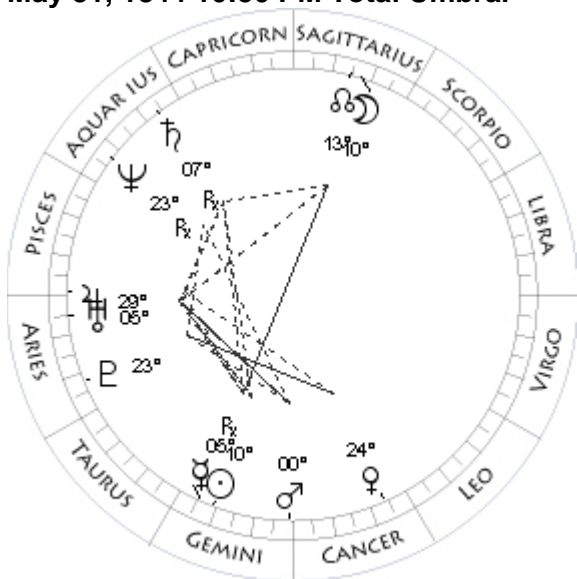
Dec 7, 1843 0:11 AM Partial Umbral

Mo 05Cn23 - 0°17	Mo 14Ge22 + 0°48
Su 05Cn25 - 0°00	Su 14Sa18 - 0°00
Me 23Ge19 - 4°38R	Me 13Sa55 - 1°01
Ve 09Ge43 - 1°08	Ve 00Cp36 - 0°56
Ma 08Sa50 - 3°34R	Ma 25Aq32 - 1°15
Ju 27Aq18 - 0°58R	Ju 22Aq08 - 1°00
Sa 23Cp47 + 0°01R	Sa 23Cp19 - 0°11
Ur 02Ar14 - 0°45	Ur 28Pi21 - 0°45R
Ne 21Aq12 - 0°19R	Ne 19Aq05 - 0°20
Pl 22Ar37 -17°06	Pl 20Ar51 -17°25R
No 02Cp11 - 0°00	No 23Sa36 - 0°00
Coords: 111E/ 6N	

Dec 21, 1843 5:03 AM Total Solar



May 31, 1844 10:50 PM Total Umbral



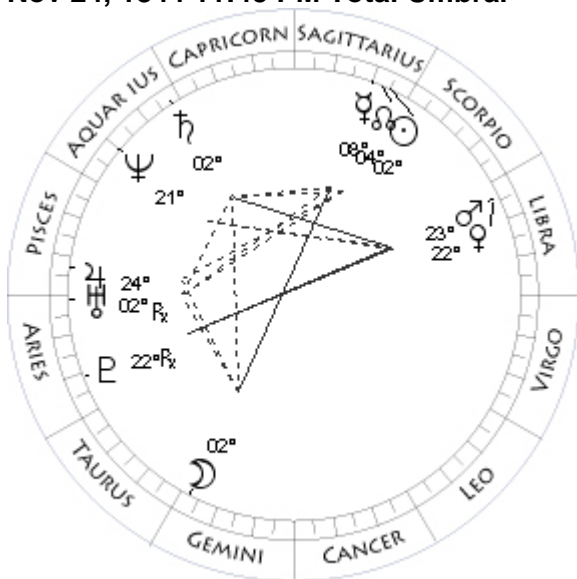
Jun 16, 1844 0:13 AM Partial Solar

Mo 28Sa41 + 0°31	Mo 24Ge48 - 1°00
Su 28Sa45 - 0°00	Su 24Ge54 - 0°00
Me 06Cp23 - 2°03	Me 04Ge32 - 4°06
Ve 18Cp22 - 1°22	Ve 04Le32 + 1°19
Ma 05Pi59 - 0°58	Ma 10Cn18 + 1°01
Ju 24Aq33 - 0°59	Ju 01Ar44 - 1°14
Sa 24Cp50 - 0°12	Sa 06Aq37 - 0°29R
Ur 28Pi25 - 0°44	Ur 06Ar00 - 0°43
Ne 19Aq25 - 0°20	Ne 23Aq36 - 0°22R
Pl 20Ar44 -17°20R	Pl 23Ar29 -17°01
No 22Sa51 - 0°00	No 13Sa26 - 0°00
Coords: 101W/ 8N	

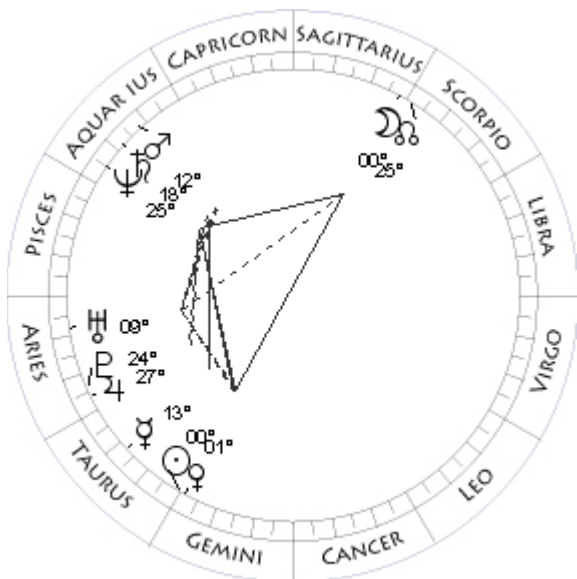
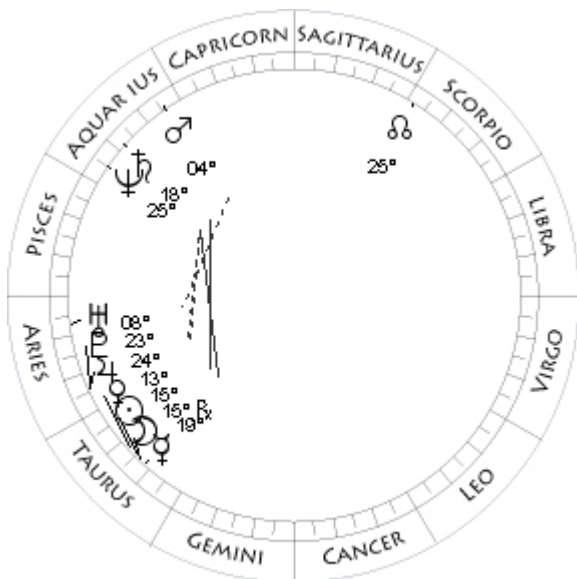
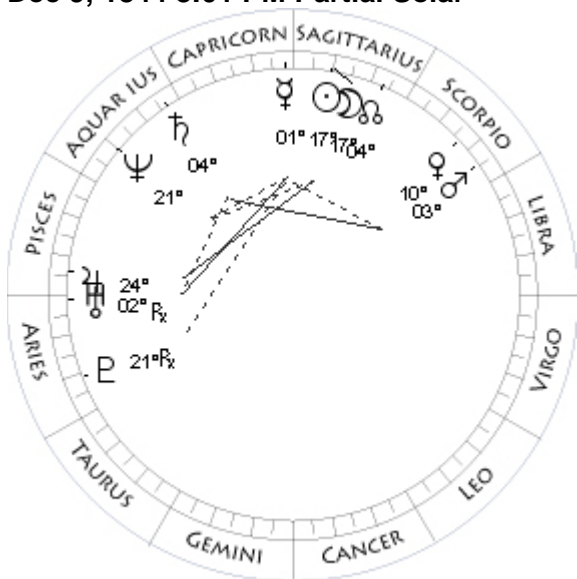
Nov 10, 1844 9:51 AM Partial Solar

Mo 10Sa32 - 0°18	Mo 18Sc17 - 1°31
Su 10Ge30 - 0°00	Su 18Sc09 - 0°00
Me 05Ge57 - 2°55R	Me 14Sc56 + 0°20
Ve 24Cn33 + 2°39	Ve 05Li28 + 1°38
Ma 00Cn26 + 0°58	Ma 14Li32 + 1°02
Ju 29Pi45 - 1°10	Ju 24Pi11 - 1°30R
Sa 07Aq08 - 0°27R	Sa 01Aq46 - 0°38
Ur 05Ar36 - 0°43	Ur 02Ar43 - 0°45R
Ne 23Aq42 - 0°22R	Ne 20Aq57 - 0°24
Pl 23Ar16 -16°57	Pl 22Ar14 -17°30R
No 14Sa14 - 0°00	No 05Sa38 - 0°00
Coords: 17W/22S	

Nov 24, 1844 11:45 PM Total Umbral



Dec 9, 1844 8:01 PM Partial Solar



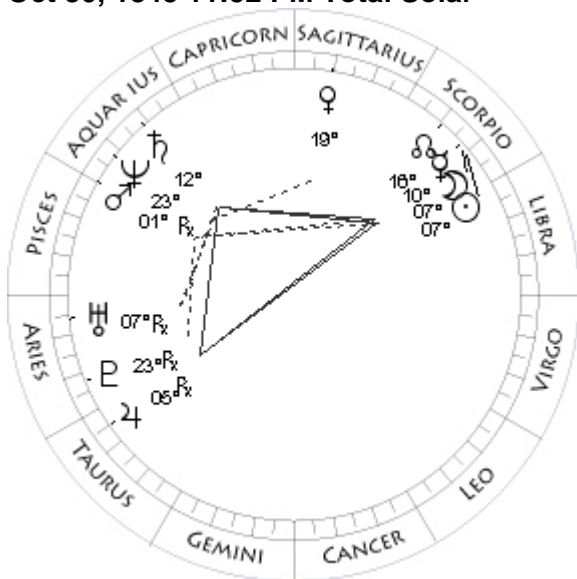
May 6, 1845 10:08 AM Partial Solar

Mo 02Ge53 + 0°11	Mo 15Ta48 + 0°54
Su 02Sa52 - 0°00	Su 15Ta43 - 0°00
Me 08Sa00 - 1°13	Me 19Ta27 + 0°32R
Ve 22Li39 + 2°02	Ve 13Ta05 - 0°50
Ma 23Li51 + 0°58	Ma 04Aq55 - 1°42
Ju 24Pi07 - 1°26	Ju 24Ar01 - 1°05
Sa 02Aq46 - 0°38	Sa 18Aq32 - 0°52
Ur 02Ar26 - 0°44R	Ur 08Ar24 - 0°41
Ne 21Aq05 - 0°24	Ne 25Aq48 - 0°25
Pl 22Ar01 -17°27R	Pl 23Ar44 -16°51
No 04Sa51 - 0°00	No 26Sc15 - 0°00
Coords: 1W/21N	

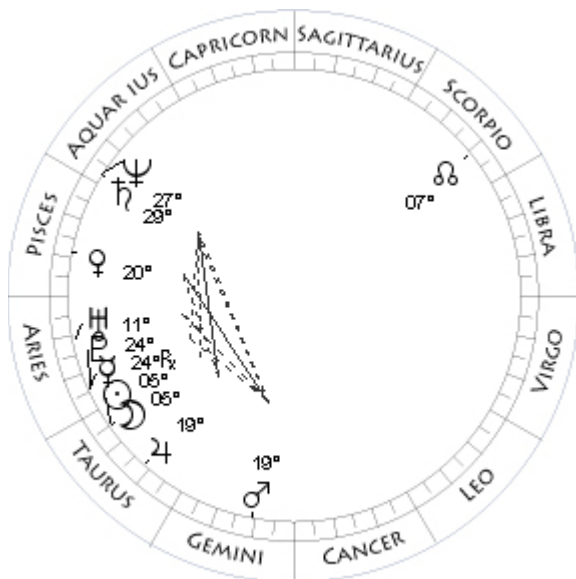
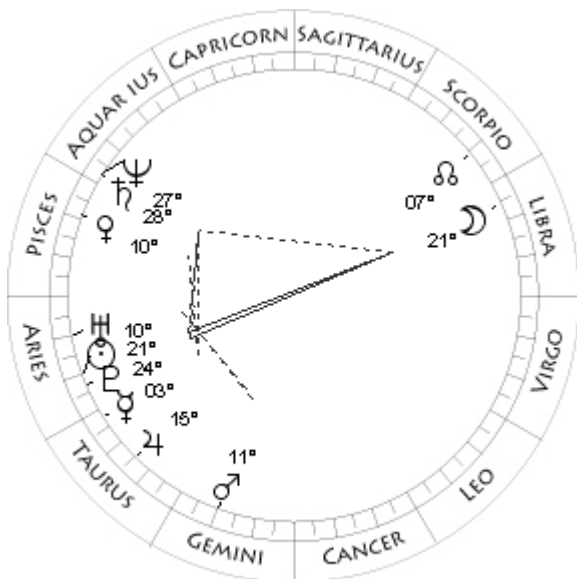
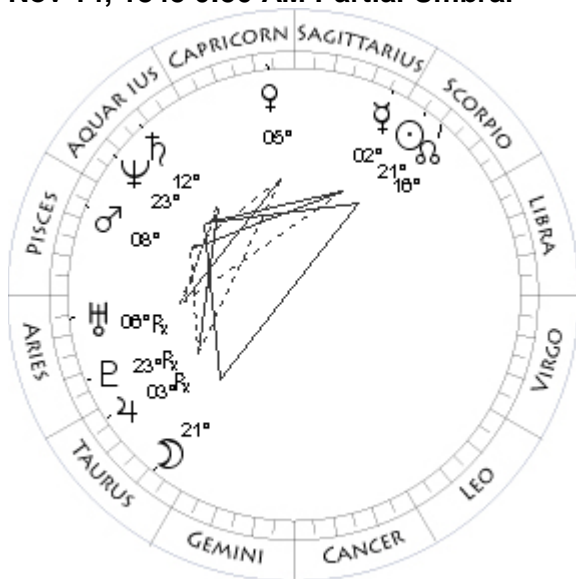
May 21, 1845 3:54 PM Total Umbral

Mo 17Sa49 + 1°11	Mo 00Sa21 + 0°26
Su 17Sa56 - 0°00	Su 00Ge24 - 0°00
Me 01Cp02 - 2°12	Me 13Ta01 - 3°12
Ve 10Sc32 + 2°04	Ve 01Ge51 - 0°17
Ma 03Sc22 + 0°53	Ma 12Aq55 - 2°21
Ju 24Pi48 - 1°22	Ju 27Ar29 - 1°06
Sa 04Aq03 - 0°38	Sa 18Aq55 - 0°55
Ur 02Ar20 - 0°44R	Ur 09Ar04 - 0°41
Ne 21Aq20 - 0°24	Ne 25Aq55 - 0°26
Pl 21Ar50 -17°23R	Pl 24Ar04 -16°53
No 04Sa04 - 0°00	No 25Sc27 - 0°00
Coords: 121W/20S	

Oct 30, 1845 11:52 PM Total Solar



Nov 14, 1845 0:50 AM Partial Umbral



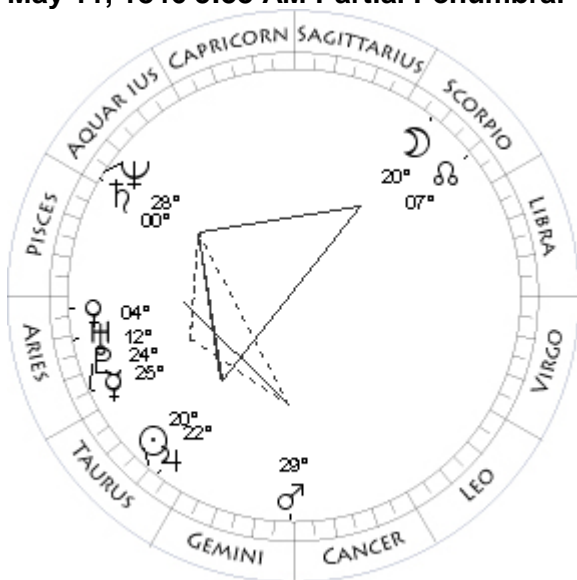
Apr 11, 1846 6:11 PM Partial Penumbral

Mo 07Sc32 - 0°50	Mo 21Li36 - 1°25
Su 07Sc27 - 0°00	Su 21Ar28 - 0°00
Me 10Sc04 + 0°02	Me 03Ta02 + 3°00
Ve 19Sa10 - 2°12	Ve 10Pi14 + 2°36
Ma 01Pi26 - 2°20	Ma 11Ge00 + 1°07
Ju 05Ta32 - 1°28R	Ju 15Ta53 - 0°50
Sa 12Aq28 - 1°06	Sa 28Aq00 - 1°13
Ur 07Ar08 - 0°44R	Ur 10Ar51 - 0°39
Ne 23Aq09 - 0°28R	Ne 27Aq31 - 0°29
Pl 23Ar27 -17°30R	Pl 24Ar09 -16°48
No 16Sc51 - 0°00	No 08Sc14 - 0°00
Coords: 145W/69S	Coords: 87W/10S

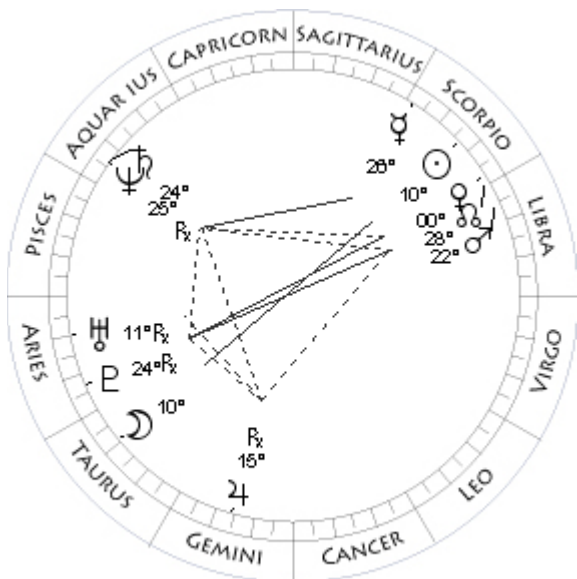
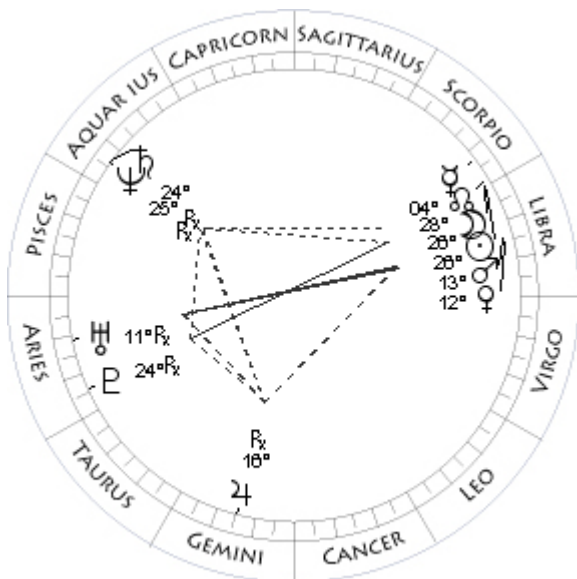
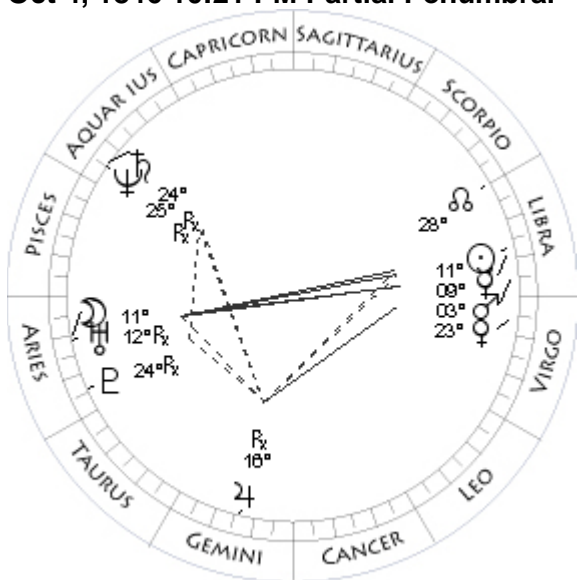
Apr 25, 1846 4:50 PM Total Solar

Mo 21Ta31 - 0°27	Mo 05Ta05 + 0°12
Su 21Sc34 - 0°00	Su 05Ta04 - 0°00
Me 02Sa03 - 1°27	Me 24Ar51 - 0°09R
Ve 05Cp34 - 2°36	Ve 20Pi11 + 0°31
Ma 08Pi11 - 1°37	Ma 19Ge56 + 1°10
Ju 03Ta42 - 1°26R	Ju 19Ta05 - 0°48
Sa 12Aq58 - 1°06	Sa 29Aq07 - 1°15
Ur 06Ar43 - 0°43R	Ur 11Ar37 - 0°39
Ne 23Aq11 - 0°28	Ne 27Aq49 - 0°29
Pl 23Ar12 -17°28R	Pl 24Ar28 -16°48
No 16Sc06 - 0°00	No 07Sc30 - 0°00

May 11, 1846 5:53 AM Partial Penumbral



Oct 4, 1846 10:21 PM Partial Penumbral



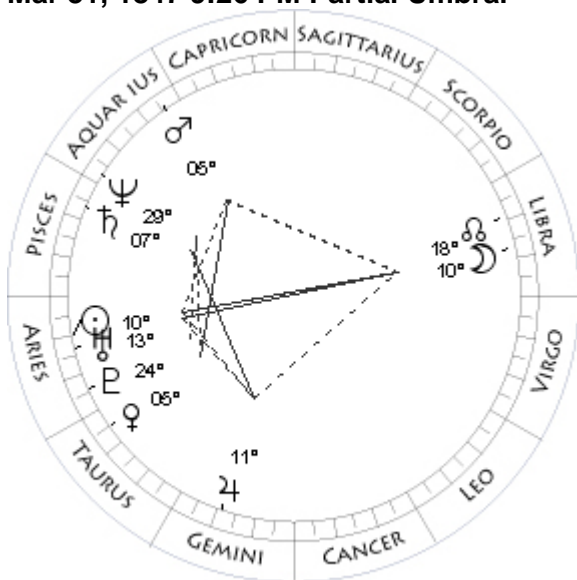
Oct 20, 1846 7:46 AM Annular Solar

Mo 20Sc10 + 1°10	Mo 26Li34 - 0°08
Su 20Ta08 - 0°00	Su 26Li34 - 0°00
Me 25Ar37 - 3°07	Me 04Sc46 - 0°15
Ve 04Ar07 - 1°06	Ve 12Li31 + 1°28
Ma 29Ge51 + 1°12	Ma 13Li06 + 0°48
Ju 22Ta45 - 0°47	Ju 16Ge18 - 0°47R
Sa 00Pi03 - 1°18	Sa 24Aq12 - 1°35R
Ur 12Ar25 - 0°40	Ur 11Ar40 - 0°42R
Ne 28Aq03 - 0°29	Ne 25Aq27 - 0°32R
Pl 24Ar49 -16°49	Pl 24Ar41 -17°29R
No 06Sc40 - 0°00	No 28Li05 - 0°00
	Coords: 57W/19S

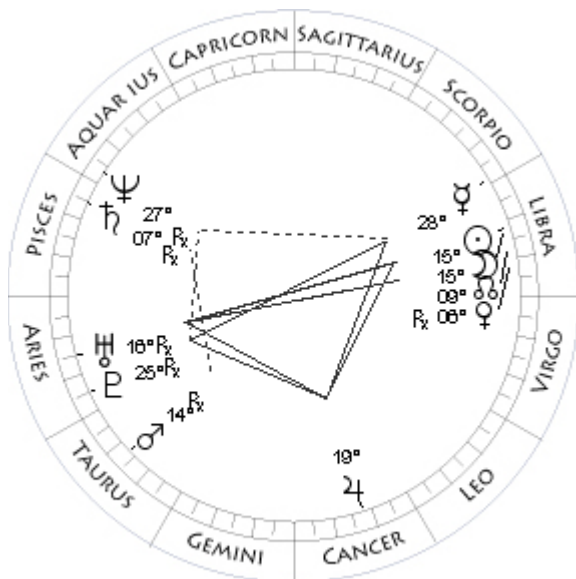
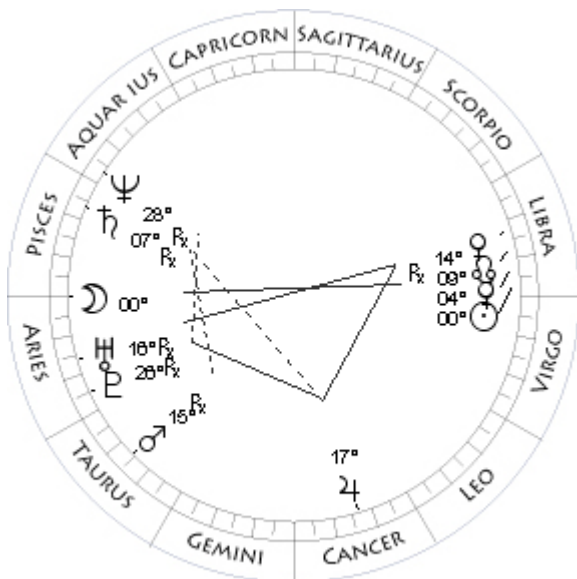
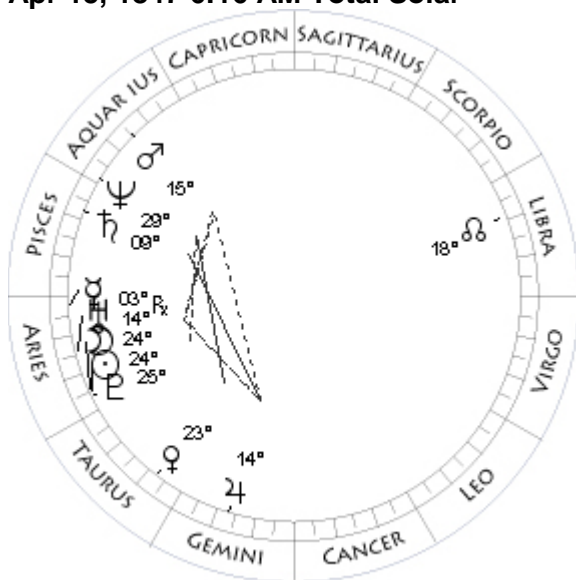
Nov 3, 1846 8:59 AM Partial Penumbral

Mo 11Ar26 + 1°31	Mo 10Ta29 - 1°08
Su 11Li18 - 0°00	Su 10Sc36 - 0°00
Me 09Li00 + 1°22	Me 26Sc15 - 1°44
Ve 23Vi21 + 1°27	Ve 00Sc07 + 1°16
Ma 03Li04 + 0°54	Ma 22Li20 + 0°43
Ju 16Ge40 - 0°47R	Ju 15Ge18 - 0°47R
Sa 24Aq37 - 1°36R	Sa 24Aq09 - 1°34
Ur 12Ar17 - 0°43R	Ur 11Ar09 - 0°42R
Ne 25Aq40 - 0°32R	Ne 25Aq22 - 0°32R
Pl 24Ar59 -17°28R	Pl 24Ar25 -17°28R
No 28Li54 - 0°00	No 27Li21 - 0°00
	Coords: 139E/14N

Mar 31, 1847 9:26 PM Partial Umbral



Apr 15, 1847 6:16 AM Total Solar



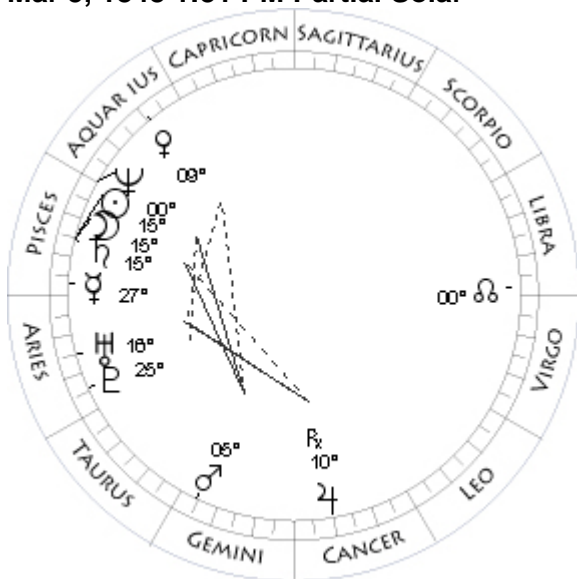
Sep 24, 1847 2:33 PM Partial Umbral

Mo 10Li37 - 0°45	Mo 00Ar59 + 0°49
Su 10Ar33 - 0°00	Su 00Li54 - 0°00
Me 10Ar26 + 2°49R	Me 04Li33 + 1°07
Ve 05Ta50 - 0°05	Ve 14Li54 - 8°20R
Ma 05Aq13 - 1°04	Ma 15Ta29 - 2°47R
Ju 11Ge55 - 0°21	Ju 17Cn33 - 0°03
Sa 07Pi44 - 1°33	Sa 07Pi55 - 2°03R
Ur 13Ar59 - 0°38	Ur 16Ar52 - 0°41R
Ne 29Aq22 - 0°32	Ne 28Aq08 - 0°36R
Pl 24Ar52 -16°47	Pl 26Ar11 -17°25R
No 19Li29 - 0°00	No 10Li07 - 0°00
	Coords: 139W/ 1N

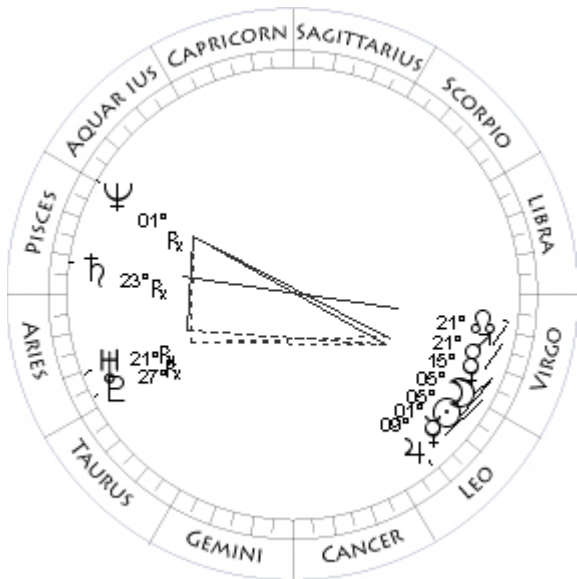
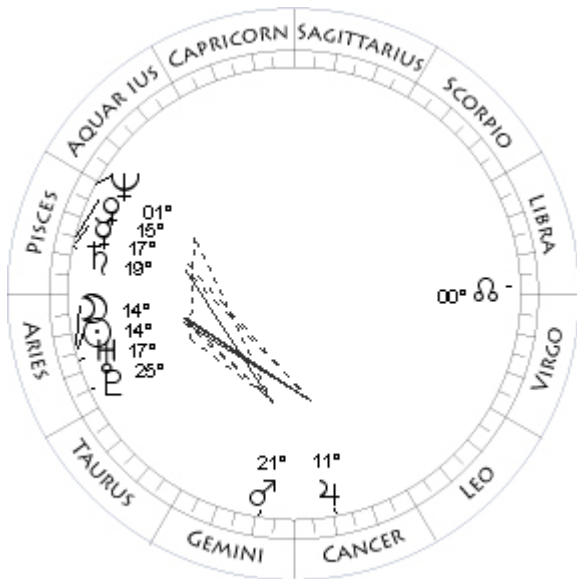
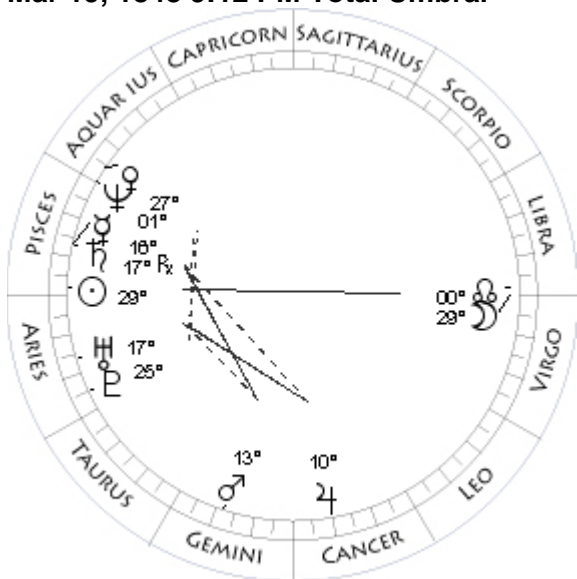
Oct 9, 1847 9:00 AM Annular Solar

Mo 24Ar36 - 0°32	Mo 15Li24 + 0°31
Su 24Ar39 - 0°00	Su 15Li27 - 0°00
Me 03Ar24 - 0°47R	Me 28Li53 - 0°31
Ve 23Ta19 + 0°36	Ve 06Li27 - 7°19R
Ma 15Aq34 - 1°20	Ma 14Ta03 - 2°18R
Ju 14Ge25 - 0°19	Ju 19Cn11 - 0°01
Sa 09Pi13 - 1°35	Sa 07Pi02 - 2°02R
Ur 14Ar48 - 0°38	Ur 16Ar16 - 0°41R
Ne 29Aq45 - 0°33	Ne 27Aq51 - 0°36R
Pl 25Ar12 -16°46	Pl 25Ar55 -17°26R
No 18Li43 - 0°00	No 09Li20 - 0°00
	Coords: 53W/28N

Mar 5, 1848 1:31 PM Partial Solar



Mar 19, 1848 9:12 PM Total Umbral



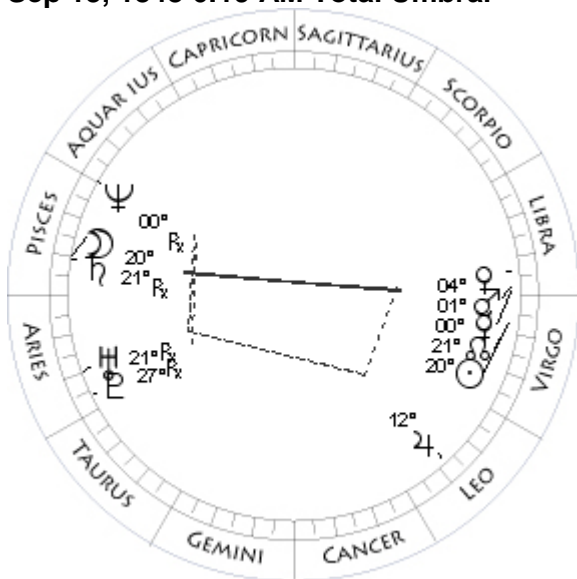
Apr 3, 1848 10:48 PM Partial Solar

Mo 15Pi17 + 1°24	Mo 14Ar11 - 1°15
Su 15Pi09 - 0°00	Su 14Ar18 - 0°00
Me 27Pi53 + 3°18	Me 17Pi35 - 1°13
Ve 09Aq50 - 0°05	Ve 15Pi33 - 1°18
Ma 05Ge14 + 1°40	Ma 21Ge49 + 1°37
Ju 10Cn31 + 0°17R	Ju 11Cn48 + 0°19
Sa 15Pi30 - 1°49	Sa 19Pi02 - 1°51
Ur 16Ar22 - 0°37	Ur 17Ar59 - 0°36
Ne 00Pi38 - 0°36	Ne 01Pi38 - 0°36
Pl 25Ar18 -16°49	Pl 25Ar56 -16°44
No 01Li30 - 0°00	No 29Vi56 - 0°00

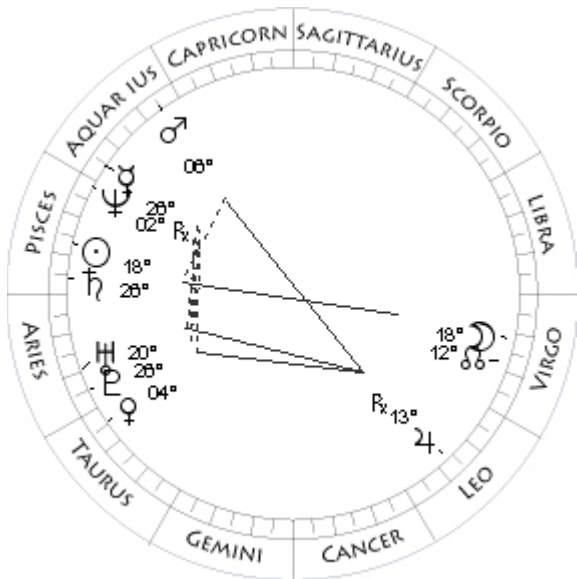
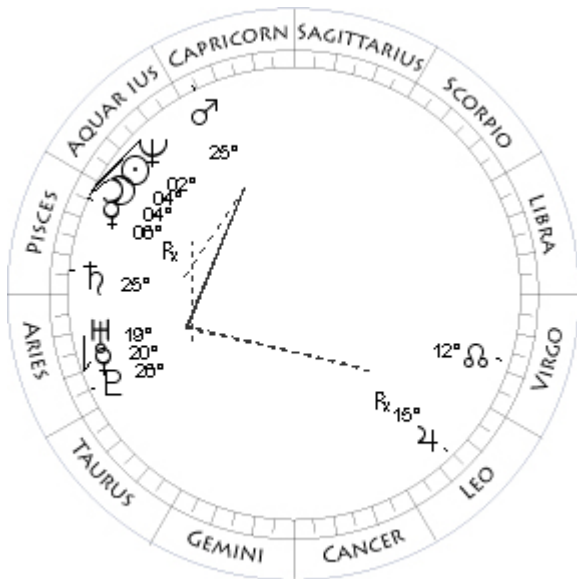
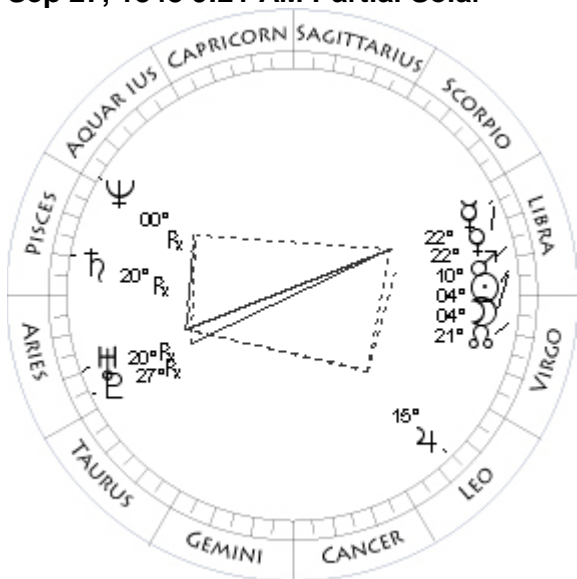
Aug 28, 1848 7:18 PM Partial Solar

Mo 29Vi26 - 0°06	Mo 05Vi41 - 1°26
Su 29Pi25 - 0°00	Su 05Vi33 - 0°00
Me 16Pi53 + 2°15R	Me 01Vi23 + 1°46
Ve 27Aq13 - 0°47	Ve 15Vi41 + 1°24
Ma 13Ge12 + 1°39	Ma 21Vi30 + 0°52
Ju 10Cn48 + 0°18	Ju 09Le30 + 0°29
Sa 17Pi15 - 1°49	Sa 23Pi09 - 2°23R
Ur 17Ar08 - 0°36	Ur 21Ar51 - 0°39R
Ne 01Pi08 - 0°36	Ne 01Pi04 - 0°40R
Pl 25Ar35 -16°46	Pl 27Ar34 -17°17R
No 00Li44 - 0°00	No 22Vi10 - 0°00

Sep 13, 1848 6:19 AM Total Umbral



Sep 27, 1848 9:21 AM Partial Solar



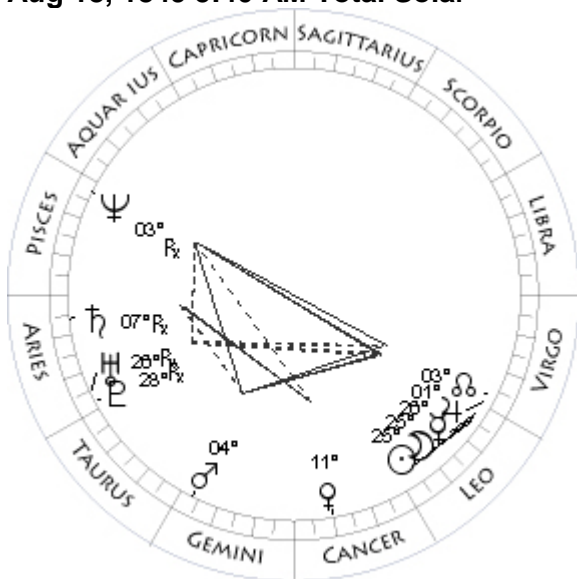
Feb 23, 1849 1:38 AM Annular Solar

Mo 20Pi34 + 0°05	Mo 04Pi27 + 0°43
Su 20Vi33 - 0°00	Su 04Pi23 - 0°00
Me 00Li02 + 0°52	Me 06Pi27 + 3°43R
Ve 04Li50 + 1°09	Ve 20Ar36 + 1°34
Ma 01Li28 + 0°45	Ma 25Cp55 - 0°52
Ju 12Le38 + 0°31	Ju 15Le24 + 1°01R
Sa 21Pi59 - 2°24R	Sa 25Pi08 - 2°04
Ur 21Ar24 - 0°39R	Ur 19Ar40 - 0°35
Ne 00Pi39 - 0°40R	Ne 02Pi22 - 0°39
Pl 27Ar22 -17°20R	Pl 26Ar06 -16°50
No 21Vi20 - 0°00	No 12Vi43 - 0°00
Coords: 144W/36N	

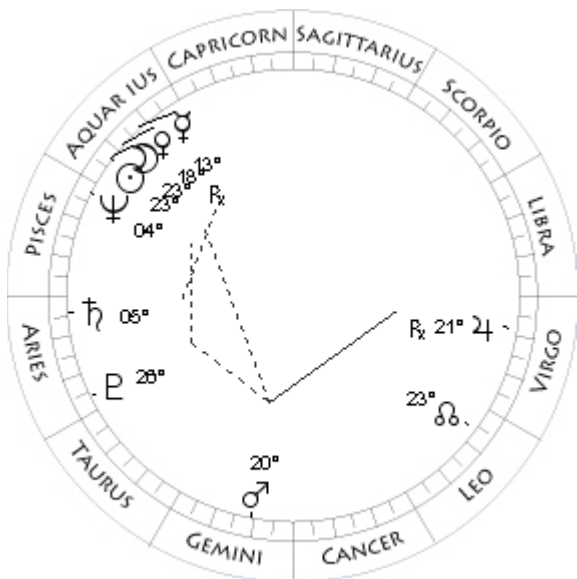
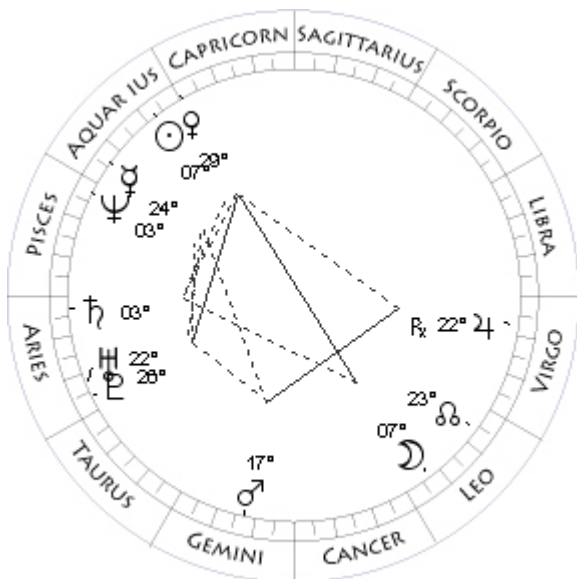
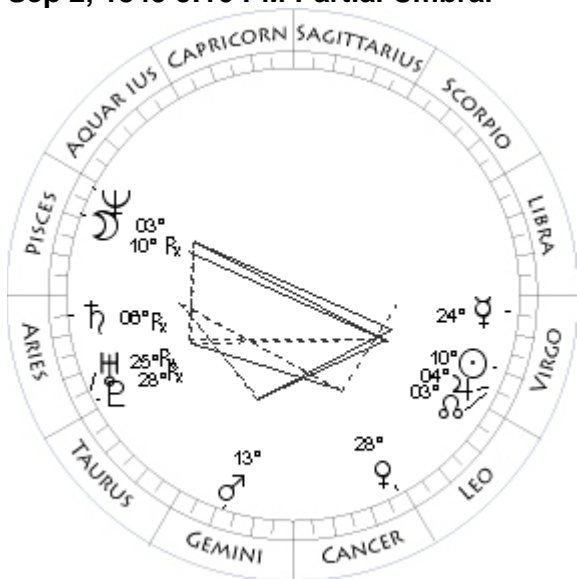
Mar 9, 1849 0:55 AM Partial Umbral

Mo 04Li16 + 1°10	Mo 18Vi19 + 0°34
Su 04Li23 - 0°00	Su 18Pi23 - 0°00
Me 22Li35 - 0°48	Me 26Aq43 + 1°31R
Ve 22Li21 + 0°43	Ve 04Ta34 + 2°56
Ma 10Li42 + 0°38	Ma 06Aq30 - 1°01
Ju 15Le17 + 0°33	Ju 13Le55 + 1°02R
Sa 20Pi54 - 2°24R	Sa 26Pi50 - 2°03
Ur 20Ar54 - 0°39R	Ur 20Ar20 - 0°35
Ne 00Pi19 - 0°40R	Ne 02Pi53 - 0°39
Pl 27Ar08 -17°23R	Pl 26Ar20 -16°46
No 20Vi36 - 0°00	No 11Vi59 - 0°00

Aug 18, 1849 5:40 AM Total Solar



Sep 2, 1849 5:10 PM Partial Umbral



Jan 28, 1850 1:05 AM Partial Penumbral

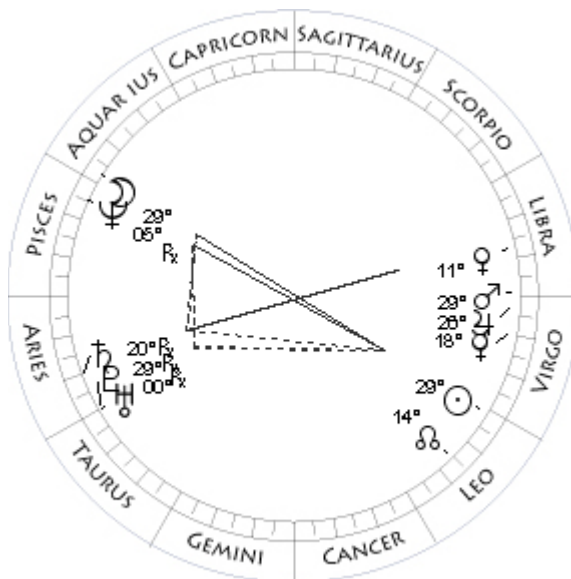
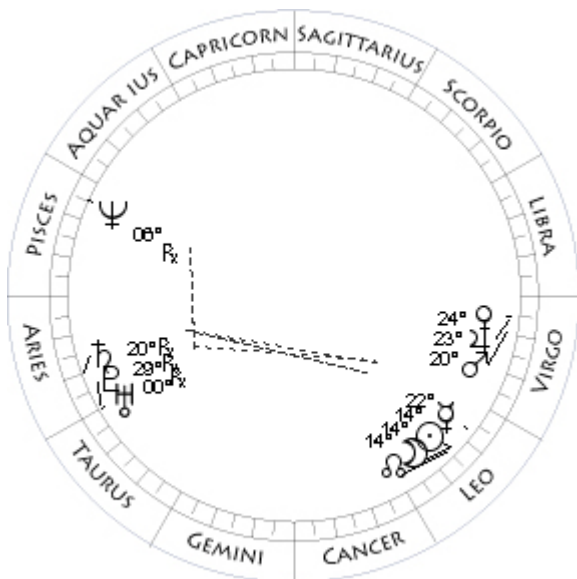
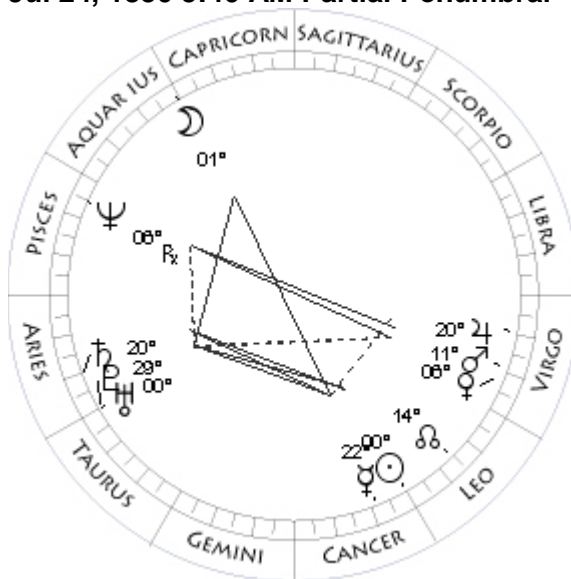
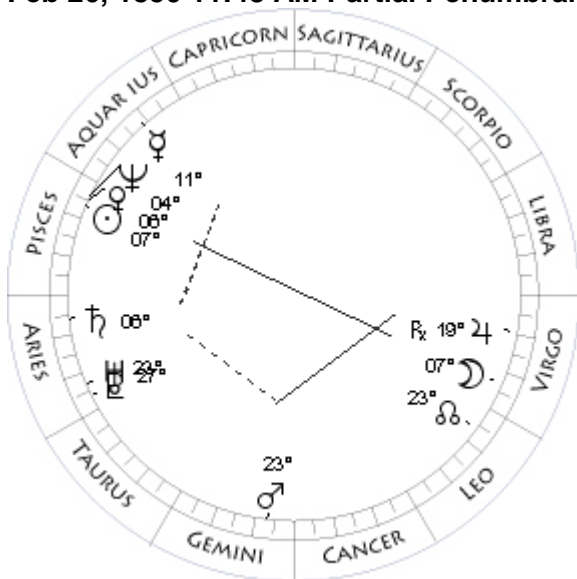
Mo 25Le11 - 0°43	Mo 07Le57 - 1°26
Su 25Le07 - 0°00	Su 07Aq50 - 0°00
Me 26Le49 + 1°45	Me 24Aq41 + 1°17
Ve 11Cn26 - 2°01	Ve 29Cp34 - 0°48
Ma 04Ge23 - 1°05	Ma 17Ge59 + 3°11
Ju 01Vi25 + 0°53	Ju 22Vi26 + 1°24R
Sa 07Ar17 - 2°34R	Sa 03Ar45 - 2°18
Ur 26Ar10 - 0°36R	Ur 22Ar39 - 0°34
Ne 03Pi39 - 0°44R	Ne 03Pi31 - 0°43
Pl 28Ar39 -17°11R	Pl 26Ar46 -16°56
No 03Vi23 - 0°00	No 24Le46 - 0°00
Coords: 84W/33S	

Feb 12, 1850 6:29 AM Annular Solar

Mo 10Pi00 - 0°38	Mo 23Aq15 + 0°03
Su 10Vi04 - 0°00	Su 23Aq15 - 0°00
Me 24Vi55 + 0°36	Me 13Aq13 + 3°33R
Ve 28Cn41 - 0°58	Ve 18Aq39 - 1°13
Ma 13Ge25 - 0°50	Ma 20Ge01 + 2°57
Ju 04Vi46 + 0°54	Ju 21Vi09 + 1°27R
Sa 06Ar24 - 2°37R	Sa 05Ar13 - 2°16
Ur 25Ar52 - 0°37R	Ur 23Ar06 - 0°34
Ne 03Pi13 - 0°44R	Ne 04Pi05 - 0°43
Pl 28Ar31 -17°15R	Pl 26Ar55 -16°51
No 02Vi34 - 0°00	No 23Le58 - 0°00
Coords: 86W/11S	

Feb 26, 1850 11:48 AM Partial Penumbral

Jul 24, 1850 5:40 AM Partial Penumbral



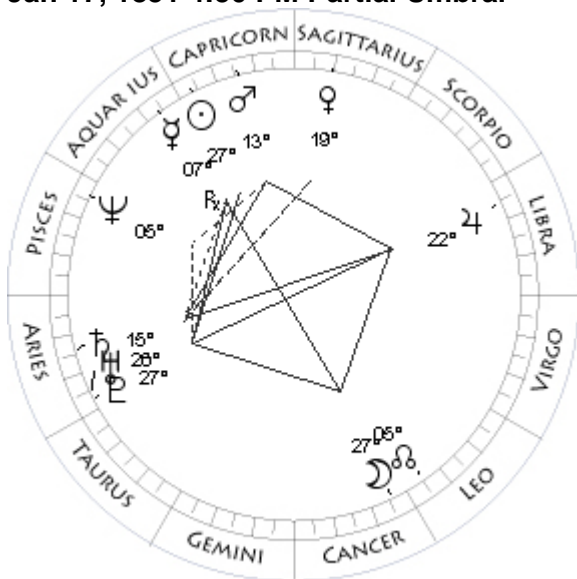
Aug 7, 1850 9:33 PM Total Solar

Mo 07Vi27 + 1°15	Mo 14Le56 + 0°01
Su 07Pi35 - 0°00	Su 14Le57 - 0°00
Me 11Aq34 + 0°48	Me 22Le42 + 1°42
Ve 06Pi27 - 1°25	Ve 24Vi08 + 0°43
Ma 23Ge48 + 2°43	Ma 20Vi11 + 0°47
Ju 19Vi31 + 1°29R	Ju 23Vi05 + 1°08
Sa 06Ar46 - 2°14	Sa 20Ar59 - 2°36R
Ur 23Ar40 - 0°33	Ur 00Ta19 - 0°34R
Ne 04Pi37 - 0°43	Ne 06Pi12 - 0°47R
Pl 27Ar07 -16°46	Pl 29Ar42 -17°04R
No 23Le13 - 0°00	No 14Le37 - 0°00
Coords: 173E/10N	Coords: 142E/18N

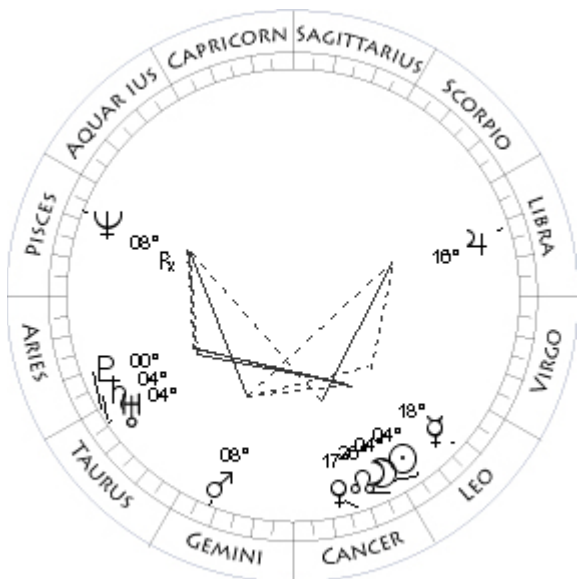
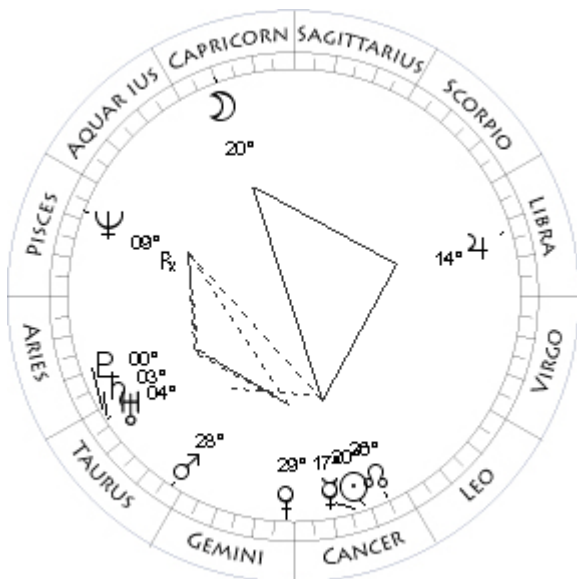
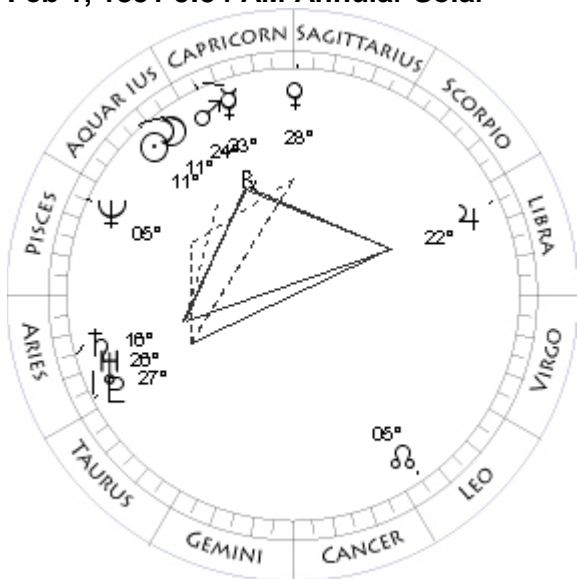
Aug 22, 1850 8:55 PM Partial Penumbral

Mo 01Aq02 + 1°15	Mo 29Aq13 - 1°19
Su 00Le55 - 0°00	Su 29Le21 - 0°00
Me 22Cn36 + 1°02	Me 18Vi52 + 0°21
Ve 06Vi57 + 1°21	Ve 11Li23 - 0°12
Ma 11Vi03 + 0°55	Ma 29Vi41 + 0°38
Ju 20Vi25 + 1°10	Ju 26Vi03 + 1°07
Sa 20Ar56 - 2°32	Sa 20Ar40 - 2°40R
Ur 00Ta16 - 0°33	Ur 00Ta12 - 0°34R
Ne 06Pi32 - 0°47R	Ne 05Pi48 - 0°48R
Pl 29Ar42 -16°59	Pl 29Ar37 -17°09R
No 15Le23 - 0°00	No 13Le49 - 0°00
	Coords: 47W/13S

Jan 17, 1851 4:50 PM Partial Umbral



Feb 1, 1851 5:54 AM Annular Solar



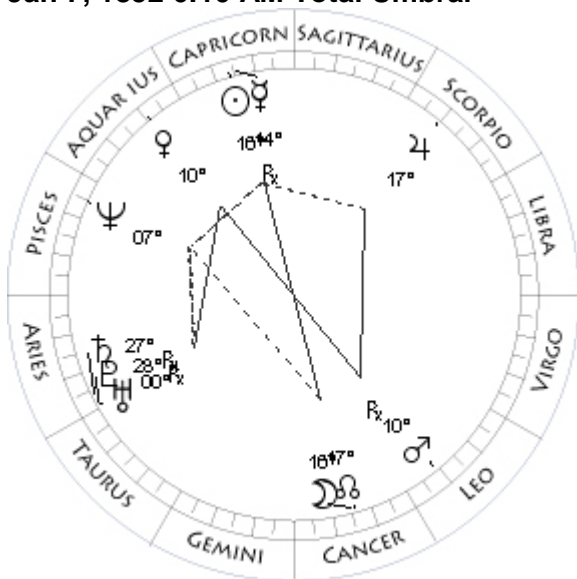
Jul 13, 1851 7:21 AM Partial Umbral

Mo 27Cn08 - 0°47	Mo 20Cp18 + 0°34
Su 27Cp04 - 0°00	Su 20Cn15 - 0°00
Me 07Aq00 + 2°14R	Me 17Cn21 + 1°17
Ve 19Sa21 + 5°29	Ve 29Ge06 - 0°27
Ma 13Cp43 - 0°49	Ma 28Ta09 - 0°37
Ju 22Li22 + 1°21	Ju 14Li40 + 1°15
Sa 15Ar03 - 2°27	Sa 03Ta18 - 2°26
Ur 26Ar26 - 0°32	Ur 04Ta04 - 0°31
Ne 05Pi19 - 0°46	Ne 09Pi01 - 0°50R
Pl 27Ar42 -16°57	Pl 00Ta38 -16°52
No 05Le59 - 0°00	No 26Cn38 - 0°00
Coords: 110W/20N	Coords: 109E/21S

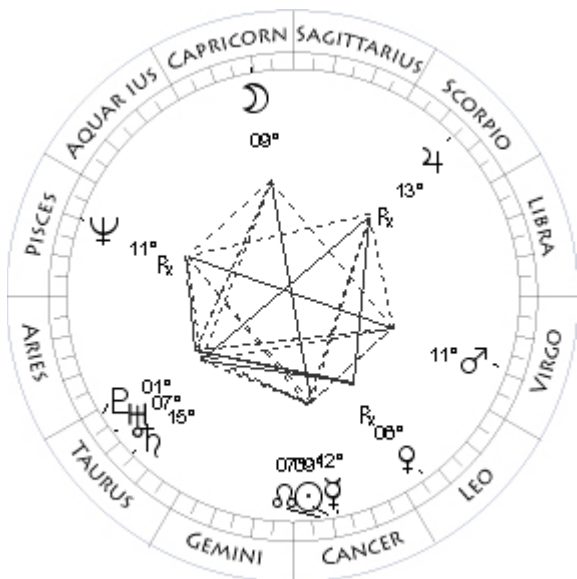
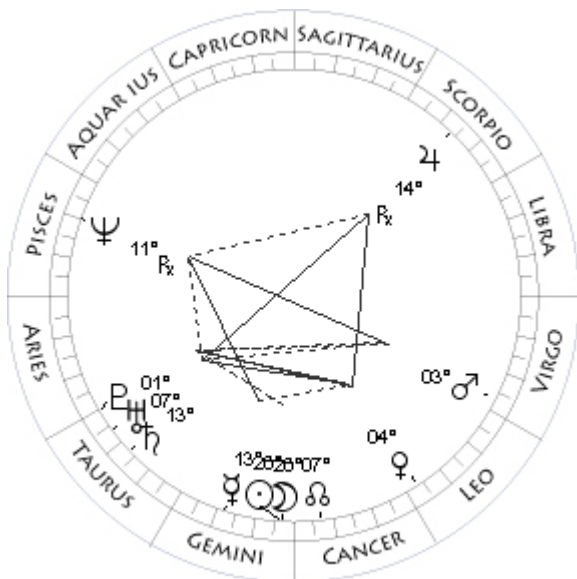
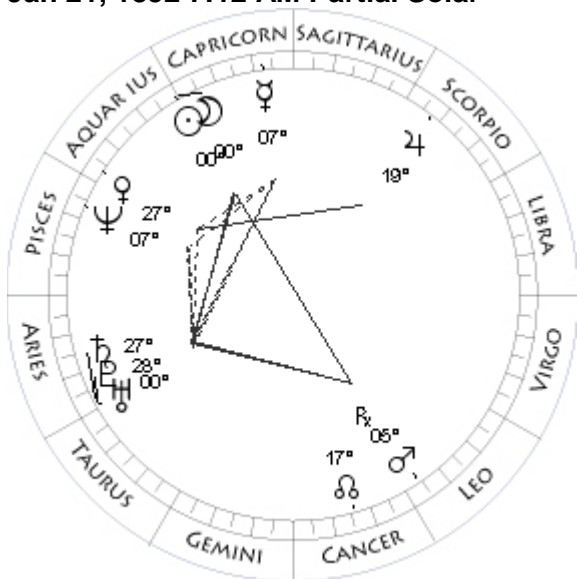
Jul 28, 1851 2:33 PM Total Solar

Mo 11Aq47 - 0°34	Mo 04Le47 + 0°46
Su 11Aq51 - 0°00	Su 04Le52 - 0°00
Me 23Cp03 + 3°00R	Me 18Le23 + 1°37
Ve 28Sa00 + 4°57	Ve 17Cn44 + 0°12
Ma 24Cp52 - 0°55	Ma 08Ge42 - 0°25
Ju 22Li58 + 1°25	Ju 16Li21 + 1°12
Sa 16Ar01 - 2°24	Sa 04Ta00 - 2°30
Ur 26Ar41 - 0°32	Ur 04Ta19 - 0°31
Ne 05Pi48 - 0°46	Ne 08Pi44 - 0°51R
Pl 27Ar47 -16°52	Pl 00Ta41 -16°57
No 05Le13 - 0°00	No 25Cn50 - 0°00
Coords: 107W/56S	

Jan 7, 1852 6:10 AM Total Umbral



Jan 21, 1852 7:12 AM Partial Solar



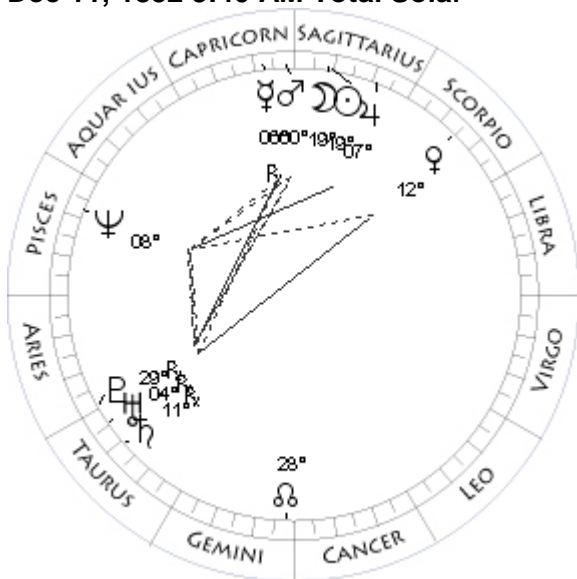
Jun 17, 1852 4:59 PM Partial Solar

Mo 16Cn10 - 0°06	Mo 26Ge39 - 1°02
Su 16Cp10 - 0°00	Su 26Ge34 - 0°00
Me 14Cp20 + 2°58R	Me 13Ge17 - 0°37
Ve 10Aq18 - 1°38	Ve 04Le13 + 1°00
Ma 10Le28 + 4°05R	Ma 03Vi12 + 1°07
Ju 17Sc48 + 1°03	Ju 14Sc05 + 1°08R
Sa 27Ar30 - 2°31	Sa 13Ta39 - 2°13
Ur 00Ta25 - 0°30R	Ur 07Ta12 - 0°28
Ne 07Pi10 - 0°50	Ne 11Pi29 - 0°53R
Pl 28Ar41 -16°58R	Pl 01Ta20 -16°40
No 17Cn13 - 0°00	No 08Cn37 - 0°00

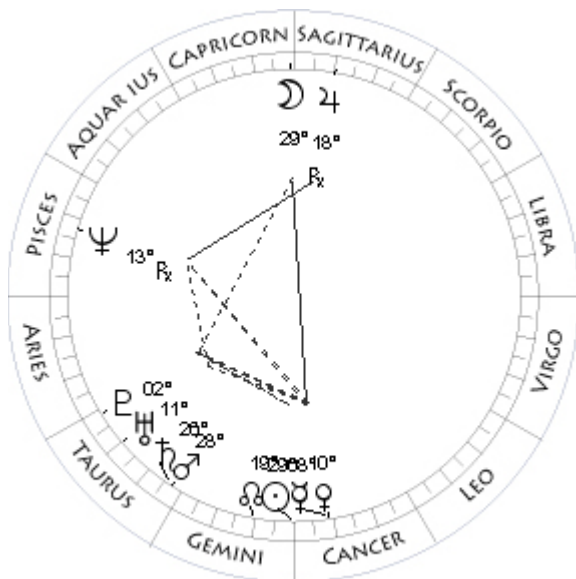
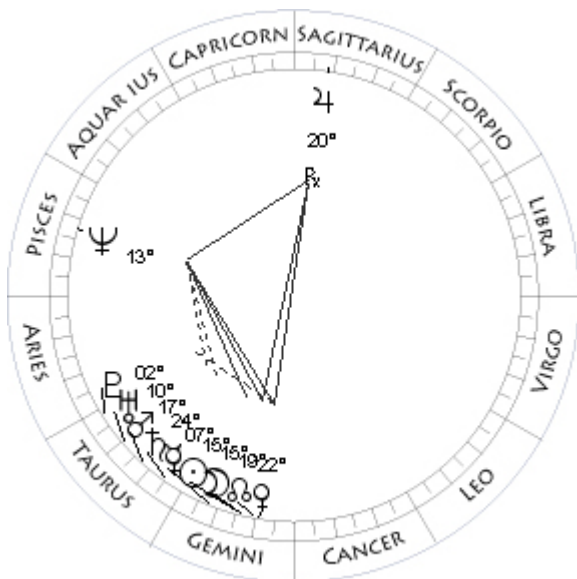
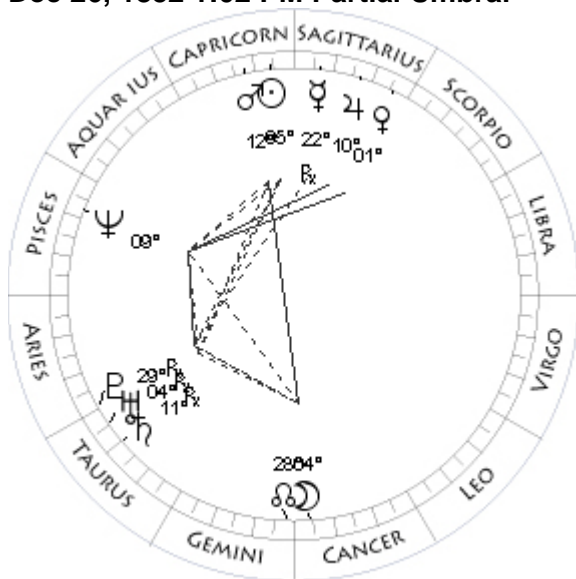
Jul 1, 1852 3:26 PM Total Umbral

Mo 00Aq21 - 1°12	Mo 09Cp50 - 0°10
Su 00Aq29 - 0°00	Su 09Cn51 - 0°00
Me 07Cp26 + 2°21	Me 12Cn55 + 1°32
Ve 27Aq45 - 1°36	Ve 06Le48 - 1°30R
Ma 05Le25 + 4°26R	Ma 11Vi04 + 0°55
Ju 19Sc51 + 1°04	Ju 13Sc26 + 1°05R
Sa 27Ar53 - 2°27	Sa 15Ta01 - 2°15
Ur 00Ta29 - 0°30	Ur 07Ta43 - 0°28
Ne 07Pi35 - 0°50	Ne 11Pi24 - 0°54R
Pl 28Ar42 -16°53	Pl 01Ta31 -16°44
No 16Cn28 - 0°00	No 07Cn52 - 0°00
	Coords: 129W/23S

Dec 11, 1852 3:40 AM Total Solar



Dec 26, 1852 1:02 PM Partial Umbral



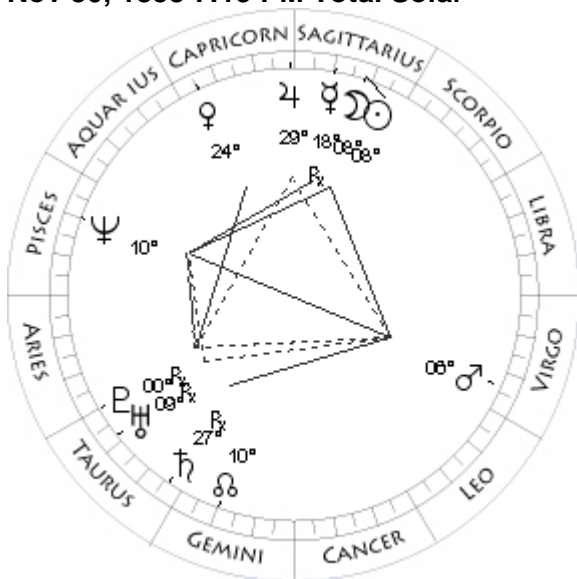
Jun 6, 1853 8:07 PM Annular Solar

Mo 19Sa24 + 0°51	Mo 15Ge59 - 0°20
Su 19Sa20 - 0°00	Su 15Ge57 - 0°00
Me 06Cp52 - 0°47R	Me 07Ge44 - 0°11
Ve 12Sc42 + 2°02	Ve 22Ge24 + 0°24
Ma 00Cp42 - 0°51	Ma 17Ta53 - 0°24
Ju 07Sa21 + 0°37	Ju 20Sa05 + 0°33R
Sa 11Ta58 - 2°31R	Sa 24Ta31 - 1°58
Ur 04Ta55 - 0°29R	Ur 10Ta35 - 0°25
Ne 08Pi50 - 0°54	Ne 13Pi42 - 0°56
Pl 29Ar51 -17°04R	Pl 02Ta07 -16°34
No 29Ge16 - 0°00	No 19Ge52 - 0°00
Coords: 134W/35N	Coords: 118E/ 2N

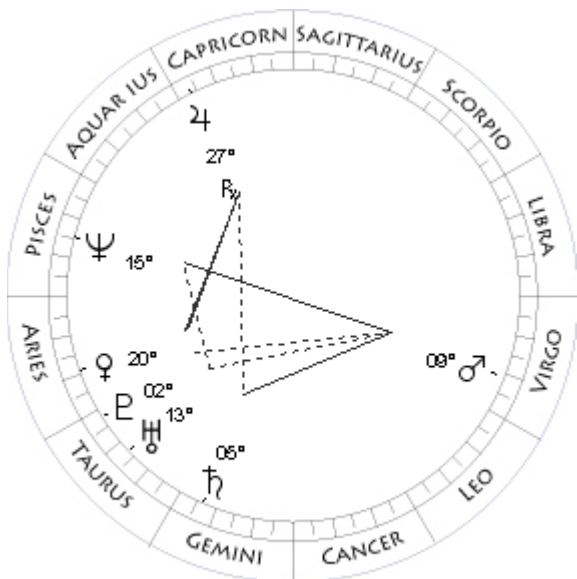
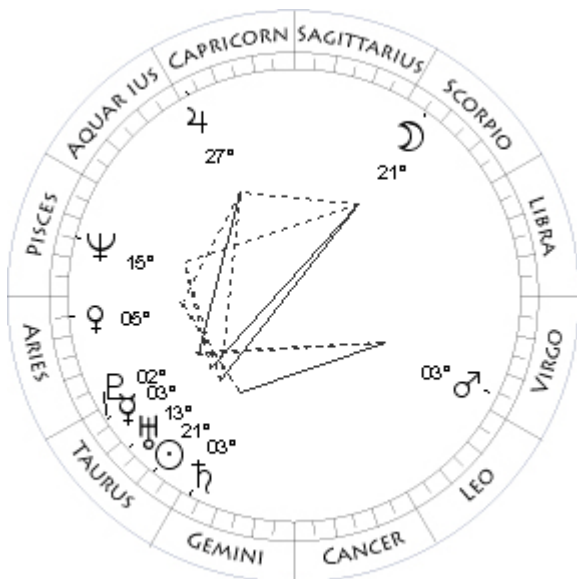
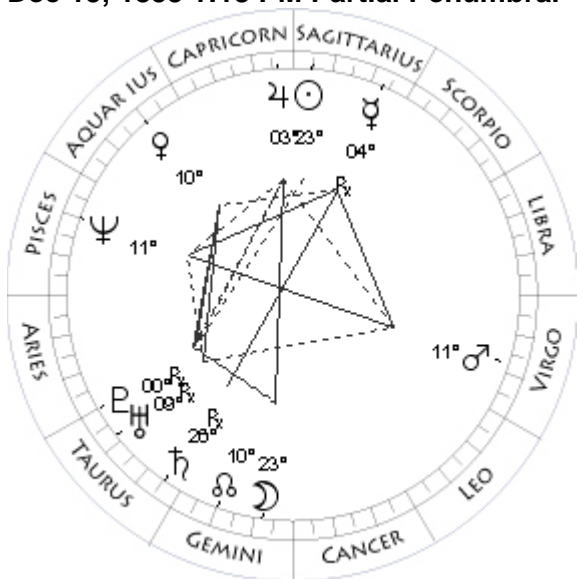
Jun 21, 1853 6:01 AM Partial Umbral

Mo 04Cn56 + 0°34	Mo 29Sa37 - 0°56
Su 05Cp00 - 0°00	Su 29Ge43 - 0°00
Me 22Sa18 + 3°06R	Me 08Cn52 + 1°46
Ve 01Sa33 + 1°41	Ve 10Cn05 + 0°55
Ma 12Cp28 - 0°57	Ma 28Ta16 - 0°15
Ju 10Sa43 + 0°36	Ju 18Sa15 + 0°31R
Sa 11Ta17 - 2°27R	Sa 26Ta15 - 1°58
Ur 04Ta36 - 0°28R	Ur 11Ta15 - 0°25
Ne 09Pi05 - 0°54	Ne 13Pi43 - 0°57R
Pl 29Ar43 -16°59R	Pl 02Ta21 -16°37
No 28Ge27 - 0°00	No 19Ge06 - 0°00
Coords: 165W/24N	

Nov 30, 1853 7:15 PM Total Solar



Dec 15, 1853 1:18 PM Partial Penumbral



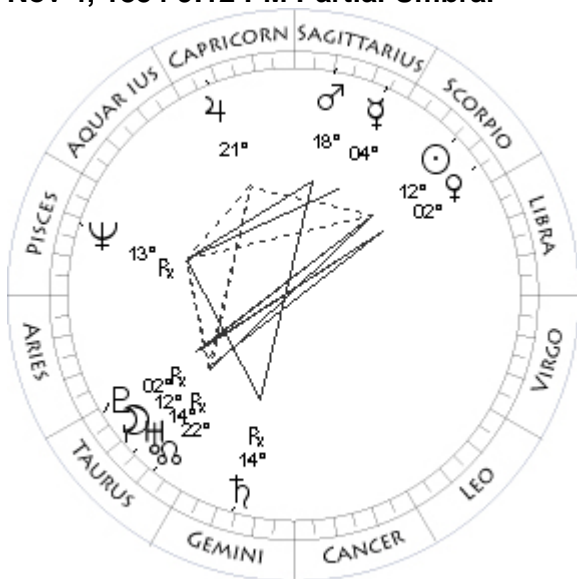
May 12, 1854 3:46 PM Partial Umbral

Mo 08Sa34 + 0°11	Mo 21Sc38 + 0°53
Su 08Sa34 - 0°00	Su 21Ta33 - 0°00
Me 18Sa09 + 0°00R	Me 03Ta55 - 2°04
Ve 24Cp55 - 2°39	Ve 05Ar33 - 1°16
Ma 06Vi07 + 2°16	Ma 03Vi54 + 1°41
Ju 29Sa46 + 0°06	Ju 27Cp31 - 0°12
Sa 27Ta30 - 2°15R	Sa 03Ge24 - 1°40
Ur 09Ta27 - 0°26R	Ur 13Ta06 - 0°23
Ne 10Pi57 - 0°58	Ne 15Pi36 - 0°59
Pl 00Ta59 -17°03R	Pl 02Ta34 -16°26
No 10Ge29 - 0°00	No 01Ge52 - 0°00
Coords: 109E/12S	Coords: 123W/17S

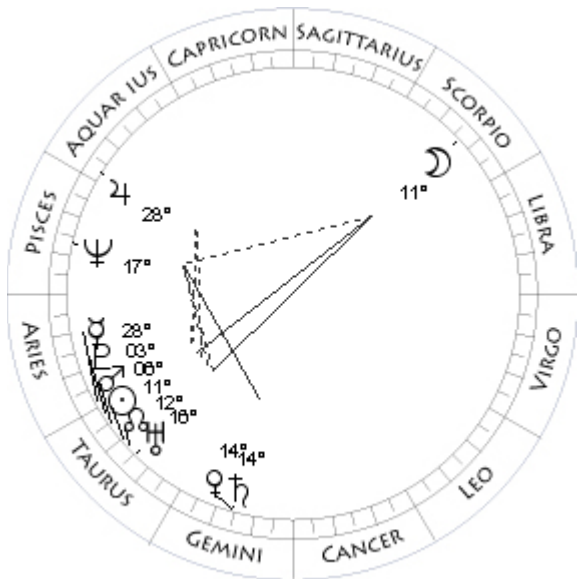
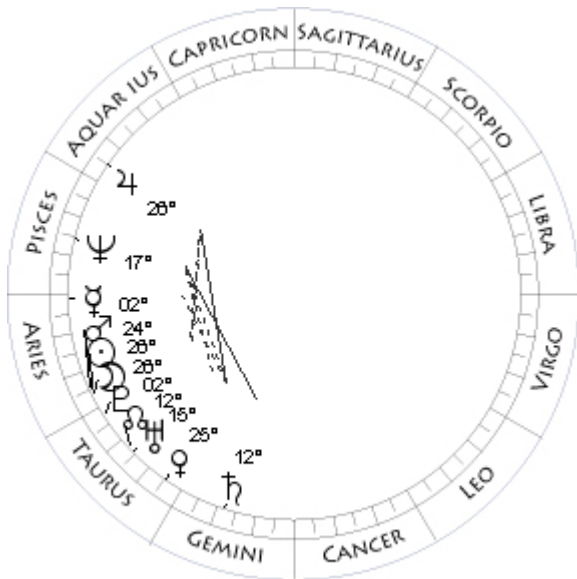
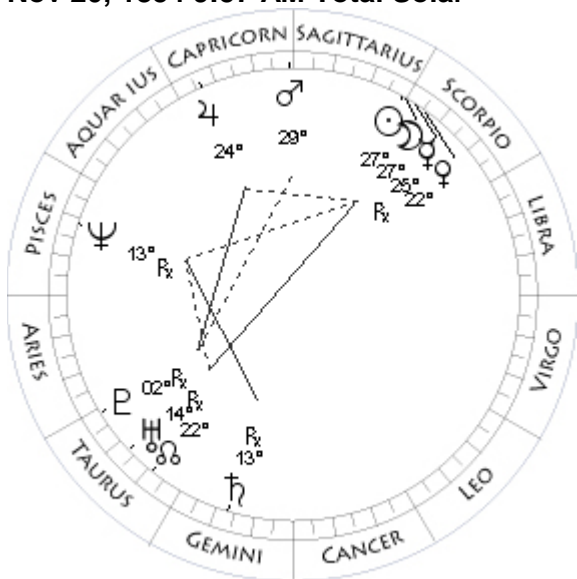
May 26, 1854 8:42 PM Annular Solar

Mo 23Ge26 + 1°11	Mo 05Ge10 + 0°21
Su 23Sa34 - 0°00	Su 05Ge13 - 0°00
Me 04Sa49 + 2°51R	Me 02Ge28 + 0°12
Ve 10Aq48 - 2°07	Ve 20Ar06 - 2°04
Ma 11Vi31 + 2°38	Ma 09Vi01 + 1°17
Ju 03Cp06 + 0°05	Ju 27Cp20 - 0°15R
Sa 26Ta24 - 2°13R	Sa 05Ge14 - 1°39
Ur 09Ta00 - 0°26R	Ur 13Ta54 - 0°22
Ne 11Pi05 - 0°58	Ne 15Pi49 - 0°59
Pl 00Ta48 -16°59R	Pl 02Ta52 -16°28
No 09Ge42 - 0°00	No 01Ge07 - 0°00
Coords: 159W/24N	Coords: 140E/43N

Nov 4, 1854 9:12 PM Partial Umbral



Nov 20, 1854 9:57 AM Total Solar



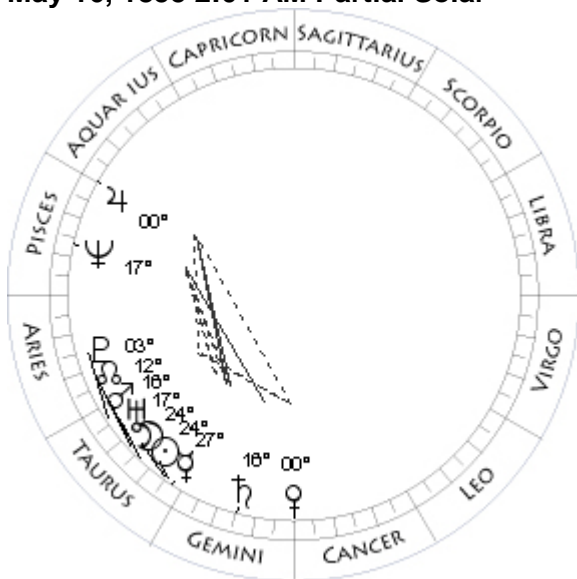
Apr 16, 1855 3:20 PM Partial Solar

Mo 12Ta15 - 0°55	Mo 26Ar12 - 1°31
Su 12Sc10 - 0°00	Su 26Ar04 - 0°00
Me 04Sa14 - 2°45	Me 02Ar03 - 2°38
Ve 02Sc41 + 1°12	Ve 25Ta36 + 0°42
Ma 18Sa18 - 1°01	Ma 24Ar37 - 0°28
Ju 21Cp45 - 0°30	Ju 26Aq18 - 0°44
Sa 14Ge38 - 1°49R	Sa 12Ge42 - 1°20
Ur 14Ta46 - 0°23R	Ur 15Ta29 - 0°20
Ne 13Pi16 - 1°02R	Ne 17Pi06 - 1°01
Pl 02Ta25 -17°03R	Pl 02Ta55 -16°21
No 22Ta32 - 0°00	No 13Ta55 - 0°00
Coords: 38W/15N	

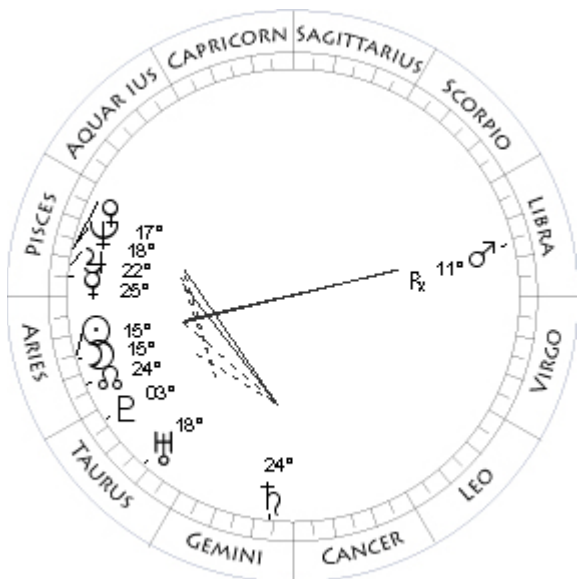
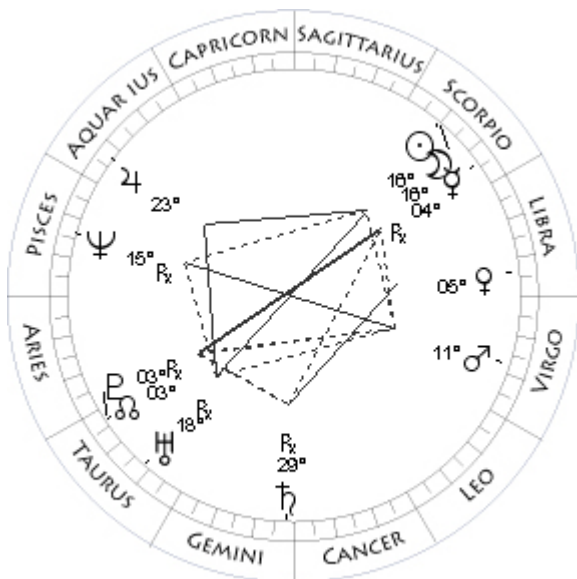
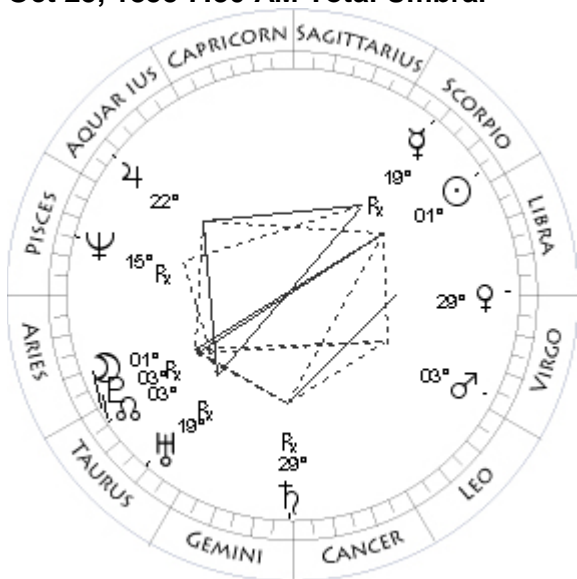
May 2, 1855 4:05 AM Total Umbral

Mo 27Sc45 - 0°31	Mo 11Sc11 + 0°09
Su 27Sc48 - 0°00	Su 11Ta11 - 0°00
Me 25Sc13 + 0°56R	Me 28Ar34 - 1°39
Ve 22Sc12 + 0°45	Ve 14Ge16 + 1°25
Ma 29Sa58 - 1°05	Ma 06Ta13 - 0°18
Ju 24Cp17 - 0°30	Ju 28Aq45 - 0°47
Sa 13Ge32 - 1°49R	Sa 14Ge24 - 1°18
Ur 14Ta08 - 0°23R	Ur 16Ta22 - 0°20
Ne 13Pi10 - 1°02R	Ne 17Pi32 - 1°01
Pl 02Ta08 -17°01R	Pl 03Ta16 -16°21
No 21Ta43 - 0°00	No 13Ta05 - 0°00
Coords: 13W/49S	

May 16, 1855 2:01 AM Partial Solar



Oct 25, 1855 7:30 AM Total Umbral



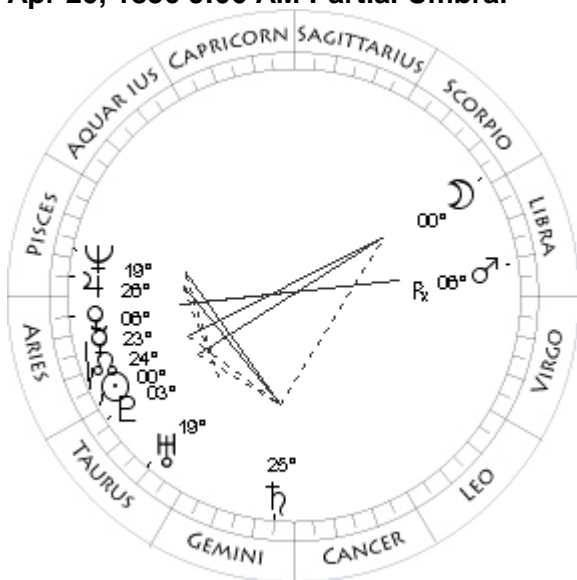
Nov 9, 1855 7:17 PM Partial Solar

Mo 24Ta31 + 1°04	Mo 16Sc44 - 1°11
Su 24Ta37 - 0°00	Su 16Sc52 - 0°00
Me 27Ta45 + 0°36	Me 04Sc08 + 1°34R
Ve 00Cn45 + 1°54	Ve 05Li24 - 0°26
Ma 16Ta26 - 0°09	Ma 11Vi56 + 1°40
Ju 00Pi31 - 0°51	Ju 23Aq31 - 1°08
Sa 16Ge05 - 1°16	Sa 29Ge20 - 1°15R
Ur 17Ta10 - 0°20	Ur 18Ta54 - 0°20R
Ne 17Pi51 - 1°02	Ne 15Pi29 - 1°05R
Pl 03Ta35 -16°22	Pl 03Ta19 -16°58R
No 12Ta21 - 0°00	No 02Ta57 - 0°00

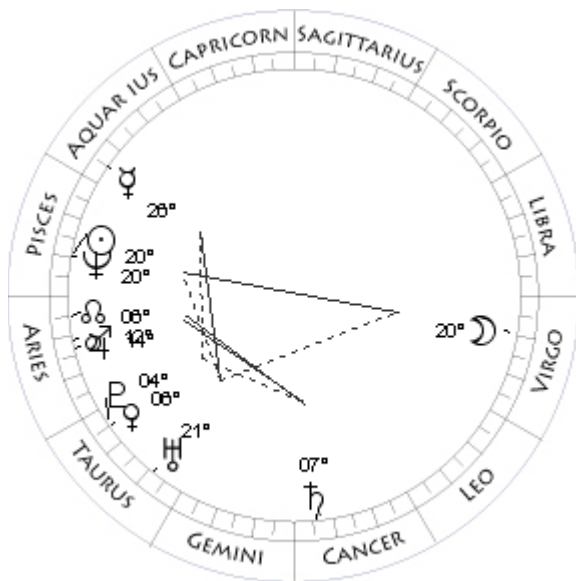
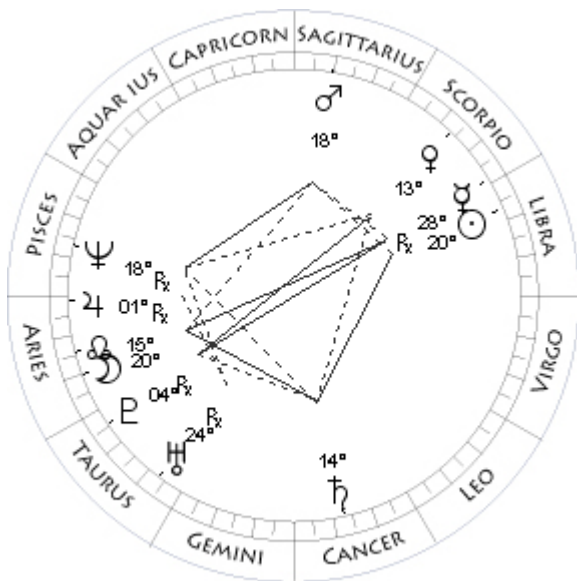
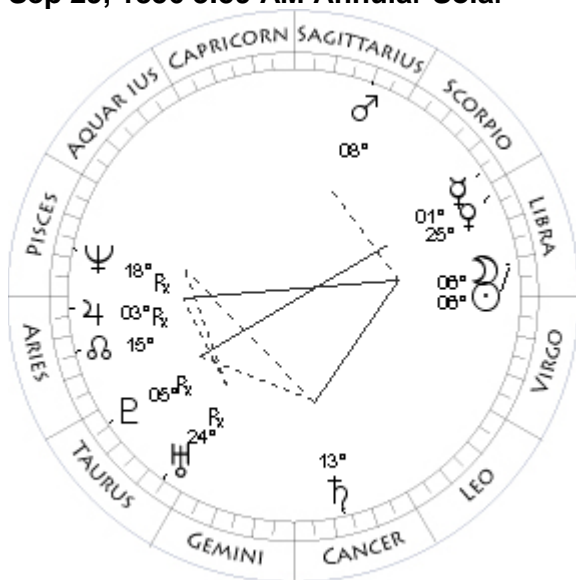
Apr 5, 1856 6:00 AM Total Solar

Mo 01Ta22 - 0°13	Mo 15Ar43 - 0°48
Su 01Sc21 - 0°00	Su 15Ar39 - 0°00
Me 19Sc04 - 2°45R	Me 25Pi34 - 2°26
Ve 29Vi39 - 3°29	Ve 17Pi46 - 1°21
Ma 03Vi05 + 1°31	Ma 11Li58 + 2°42R
Ju 22Aq49 - 1°10	Ju 22Pi42 - 1°02
Sa 29Ge54 - 1°15R	Sa 24Ge39 - 0°54
Ur 19Ta31 - 0°20R	Ur 18Ta51 - 0°17
Ne 15Pi42 - 1°06R	Ne 18Pi55 - 1°04
Pl 03Ta37 -16°59R	Pl 03Ta37 -16°18
No 03Ta46 - 0°00	No 25Ar08 - 0°00
Coords: 116E/12N	Coords: 119W/39S

Apr 20, 1856 9:06 AM Partial Umbral



Sep 29, 1856 3:59 AM Annular Solar



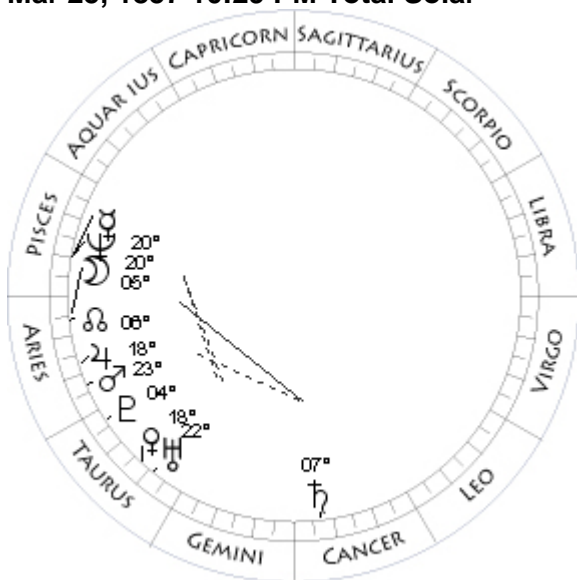
Oct 13, 1856 10:55 PM Total Umbral

Mo 00Sc24 - 0°33	Mo 20Ar45 + 0°29
Su 00Ta28 - 0°00	Su 20Li48 - 0°00
Me 23Ar16 - 1°18	Me 28Li44 - 2°24R
Ve 06Ar14 - 1°35	Ve 13Sc30 - 0°00
Ma 06Li37 + 2°08R	Ma 18Sa52 - 1°27
Ju 26Pi07 - 1°04	Ju 01Ar59 - 1°37R
Sa 25Ge54 - 0°51	Sa 14Cn06 - 0°39
Ur 19Ta40 - 0°17	Ur 24Ta14 - 0°17R
Ne 19Pi24 - 1°04	Ne 18Pi11 - 1°09R
Pl 03Ta58 -16°17	Pl 04Ta48 -16°54R
No 24Ar20 - 0°00	No 14Ar59 - 0°00
Coords: 137E/12S	Coords: 13W/ 9N

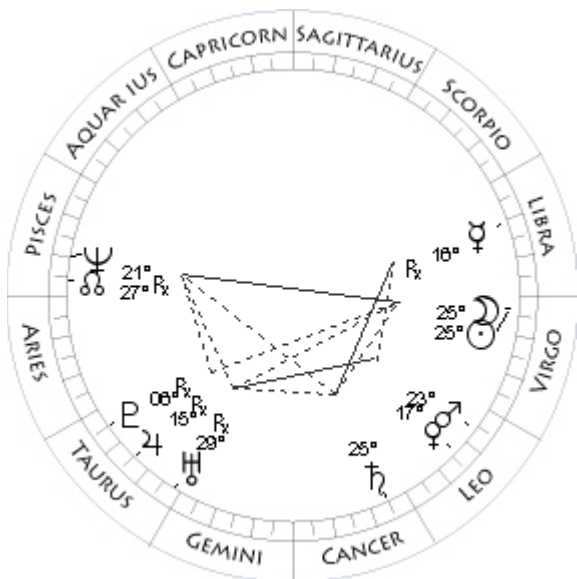
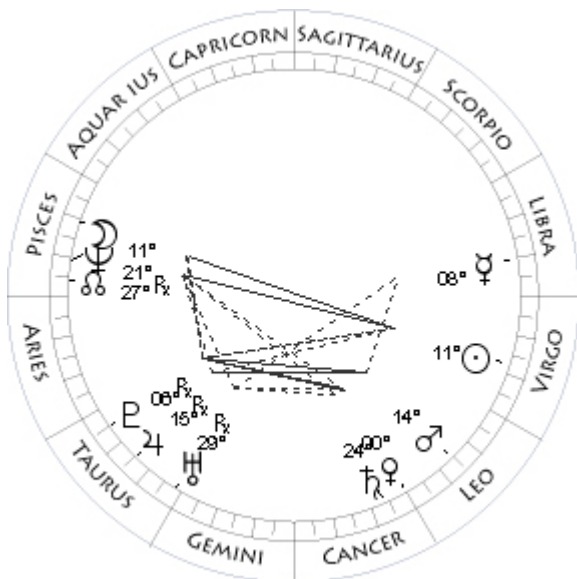
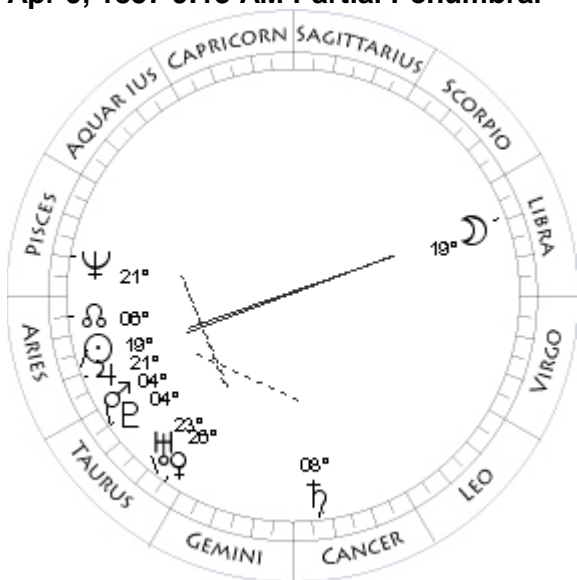
Mar 10, 1857 4:35 PM Partial Penumbral

Mo 06Li16 + 0°50	Mo 20Vi14 + 1°27
Su 06Li11 - 0°00	Su 20Pi06 - 0°00
Me 01Sc10 - 3°20	Me 26Aq06 - 1°48
Ve 25Li12 + 0°37	Ve 06Ta02 + 3°15
Ma 08Sa19 - 1°25	Ma 12Ar29 - 0°25
Ju 03Ar53 - 1°38R	Ju 14Ar29 - 1°06
Sa 13Cn34 - 0°39	Sa 07Cn17 - 0°25
Ur 24Ta39 - 0°17R	Ur 21Ta44 - 0°15
Ne 18Pi33 - 1°09R	Ne 20Pi07 - 1°06
Pl 05Ta04 -16°52R	Pl 04Ta03 -16°18
No 15Ar46 - 0°00	No 07Ar10 - 0°00
Coords: 169W/54N	Coords: 114W/ 5N

Mar 25, 1857 10:29 PM Total Solar



Apr 9, 1857 9:13 AM Partial Penumbral



Sep 4, 1857 5:22 AM Partial Penumbral

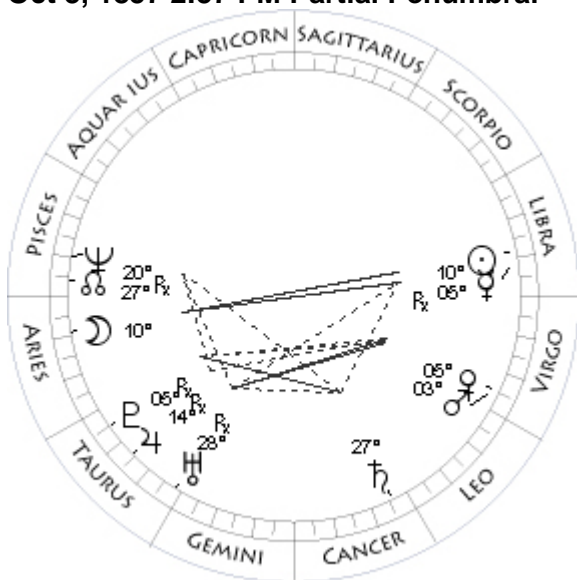
Mo 05Ar14 - 0°05	Mo 11Pi43 - 1°24
Su 05Ar14 - 0°00	Su 11Vi36 - 0°00
Me 20Pi12 - 2°15	Me 08Li29 - 2°17
Ve 18Ta24 + 4°44	Ve 00Le53 - 0°48
Ma 23Ar57 - 0°14	Ma 14Le58 + 1°09
Ju 18Ar04 - 1°04	Ju 15Ta59 - 1°19R
Sa 07Cn33 - 0°23	Sa 24Cn37 - 0°06
Ur 22Ta20 - 0°14	Ur 29Ta13 - 0°14R
Ne 20Pi41 - 1°07	Ne 21Pi32 - 1°13R
Pl 04Ta21 -16°15	Pl 06Ta23 -16°42R
No 06Ar21 - 0°00	No 27Pi46 - 0°00

Sep 18, 1857 5:36 AM Annular Solar

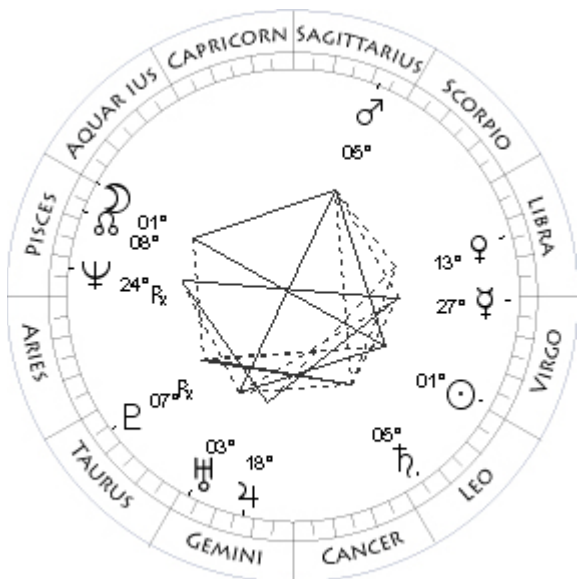
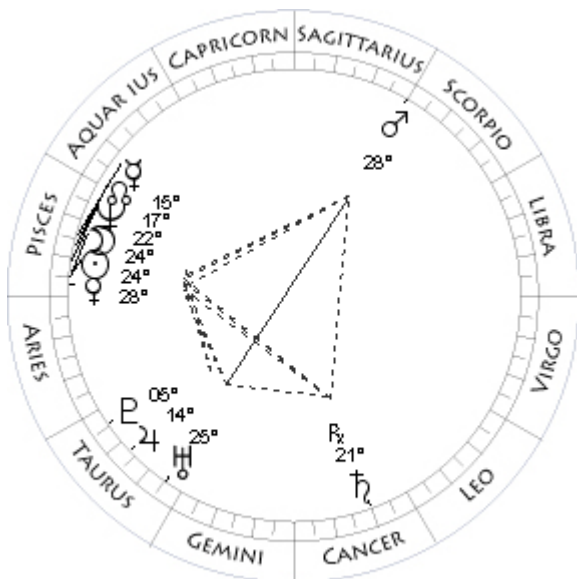
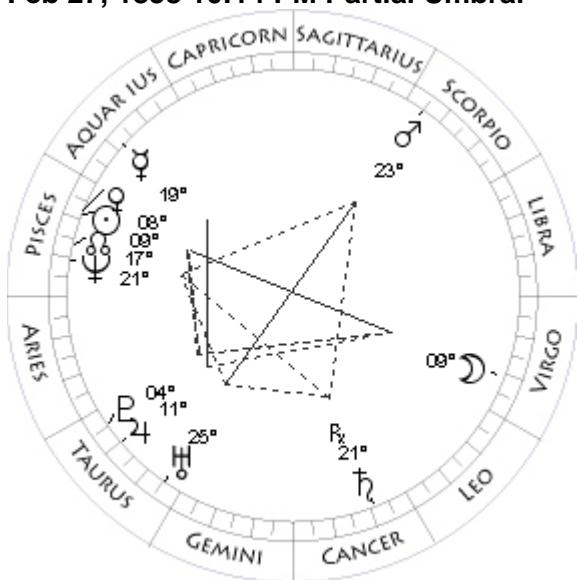
Mo 19Li21 - 1°12	Mo 25Vi15 + 0°10
Su 19Ar28 - 0°00	Su 25Vi14 - 0°00
Me 17Ar48 - 0°59	Me 16Li59 - 3°51R
Ve 26Ta09 + 5°49	Ve 17Le09 + 0°05
Ma 04Ta38 - 0°04	Ma 23Le48 + 1°14
Ju 21Ar32 - 1°04	Ju 15Ta41 - 1°21R
Sa 08Cn11 - 0°21	Sa 25Cn57 - 0°05
Ur 23Ta01 - 0°14	Ur 29Ta08 - 0°14R
Ne 21Pi13 - 1°07	Ne 21Pi09 - 1°13R
Pl 04Ta40 -16°13	Pl 06Ta13 -16°45R
No 05Ar35 - 0°00	No 27Pi01 - 0°00

Coords: 100W/11N

Oct 3, 1857 2:57 PM Partial Penumbral



Feb 27, 1858 10:14 PM Partial Umbral



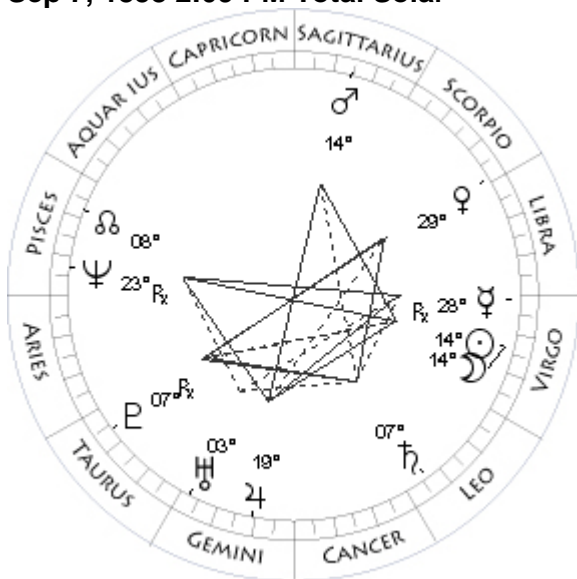
Mar 15, 1858 0:05 PM Total Solar

Mo 10Ar13 + 1°11	Mo 24Pi35 + 0°37
Su 10Li21 - 0°00	Su 24Pi39 - 0°00
Me 05Li43 - 1°34R	Me 15Pi12 - 2°05
Ve 05Vi27 + 0°54	Ve 28Pi22 - 1°22
Ma 03Vi23 + 1°18	Ma 28Sc25 + 1°21
Ju 14Ta37 - 1°23R	Ju 14Ta08 - 0°51
Sa 27Cn07 - 0°04	Sa 21Cn28 + 0°13R
Ur 28Ta52 - 0°14R	Ur 25Ta57 - 0°12
Ne 20Pi44 - 1°13R	Ne 22Pi27 - 1°09
Pl 05Ta59 -16°48R	Pl 05Ta06 -16°13
No 26Pi12 - 0°00	No 17Pi35 - 0°00
Coords: 132W/ 5N	

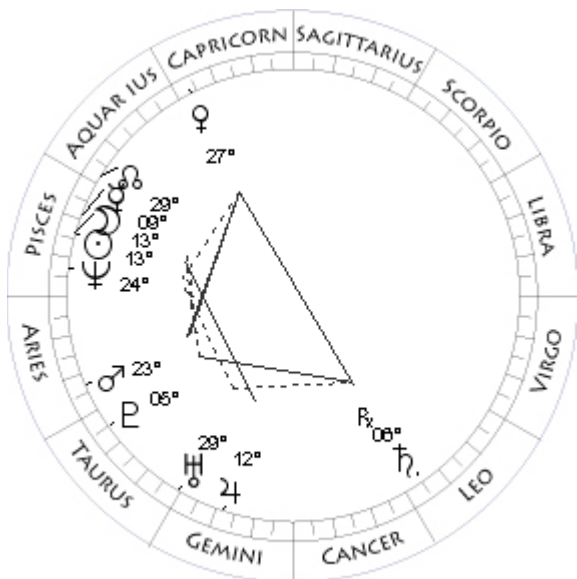
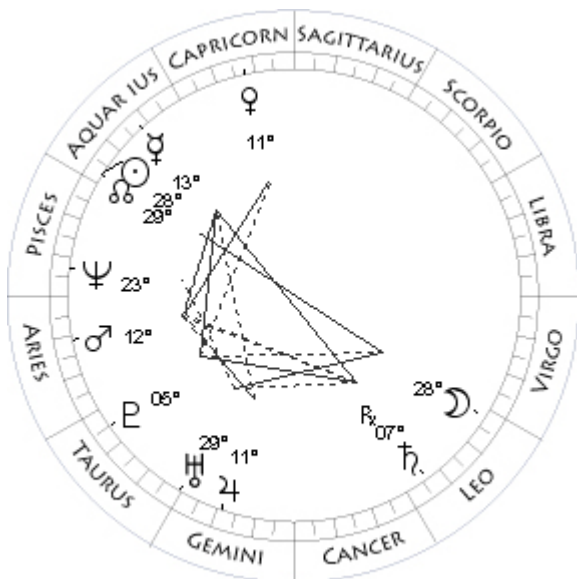
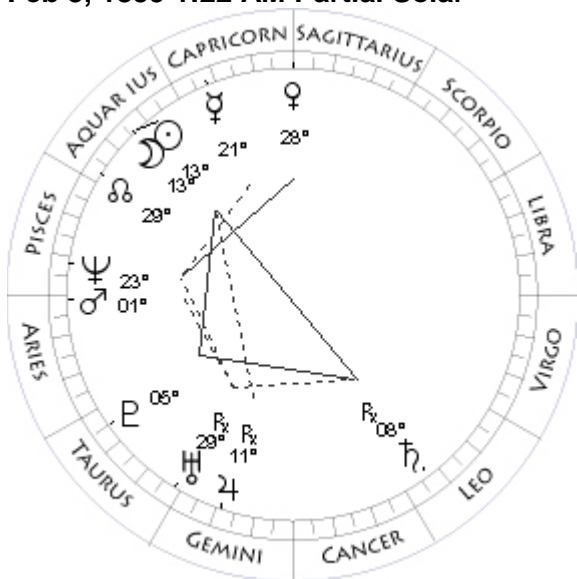
Aug 24, 1858 2:21 PM Partial Umbral

Mo 09Vi09 + 0°47	Mo 01Pi09 - 0°41
Su 09Pi05 - 0°00	Su 01Vi05 - 0°00
Me 19Aq11 - 1°51	Me 27Vi32 - 2°58
Ve 08Pi55 - 1°26	Ve 13Li47 - 0°23
Ma 23Sc28 + 1°29	Ma 05Sa57 - 2°35
Ju 11Ta20 - 0°54	Ju 18Ge15 - 0°40
Sa 21Cn55 + 0°11R	Sa 05Le48 + 0°25
Ur 25Ta31 - 0°12	Ur 03Ge22 - 0°10
Ne 21Pi51 - 1°09	Ne 24Pi07 - 1°15R
Pl 04Ta50 -16°17	Pl 07Ta27 -16°33R
No 18Pi24 - 0°00	No 09Pi00 - 0°00
Coords: 30W/ 9N	
Coords: 146W/12S	

Sep 7, 1858 2:09 PM Total Solar



Feb 3, 1859 1:22 AM Partial Solar



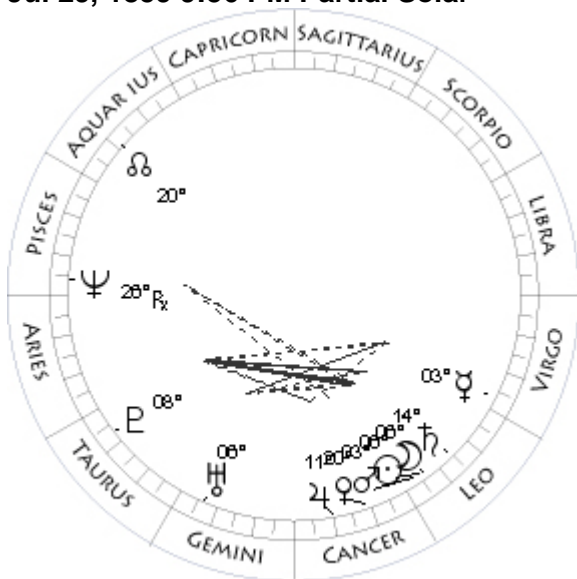
Feb 17, 1859 10:43 AM Total Umbral

Mo 14Vi34 - 0°33	Mo 28Le18 + 0°06
Su 14Vi38 - 0°00	Su 28Aq18 - 0°00
Me 28Vi22 - 4°16R	Me 13Aq27 - 1°55
Ve 29Li23 - 1°27	Ve 11Cp43 + 3°35
Ma 14Sa03 - 2°30	Ma 12Ar21 - 0°11
Ju 19Ge54 - 0°40	Ju 11Ge47 - 0°24
Sa 07Le27 + 0°27	Sa 07Le22 + 0°49R
Ur 03Ge28 - 0°10	Ur 29Ta30 - 0°09
Ne 23Pi45 - 1°16R	Ne 23Pi38 - 1°12
Pl 07Ta20 -16°37R	Pl 05Ta40 -16°15
No 08Pi15 - 0°00	No 29Aq38 - 0°00
Coords: 157E/12N	

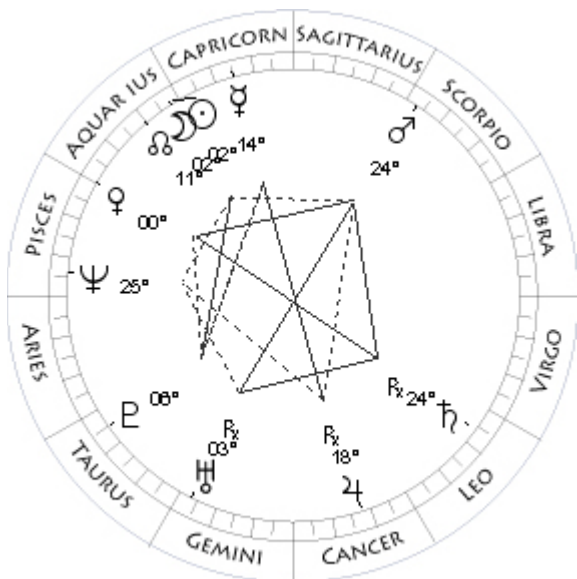
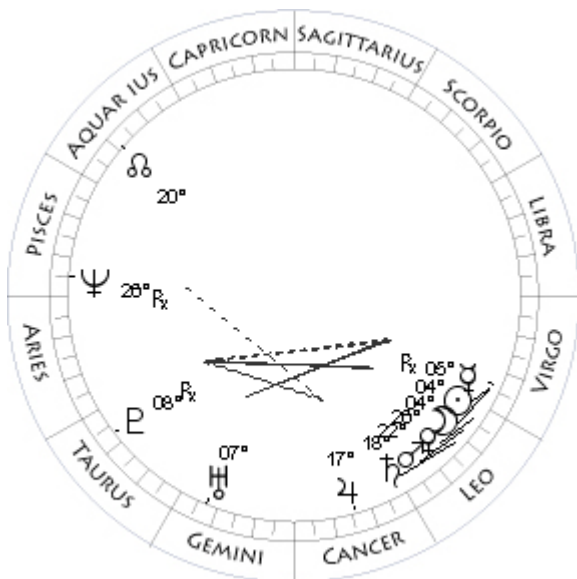
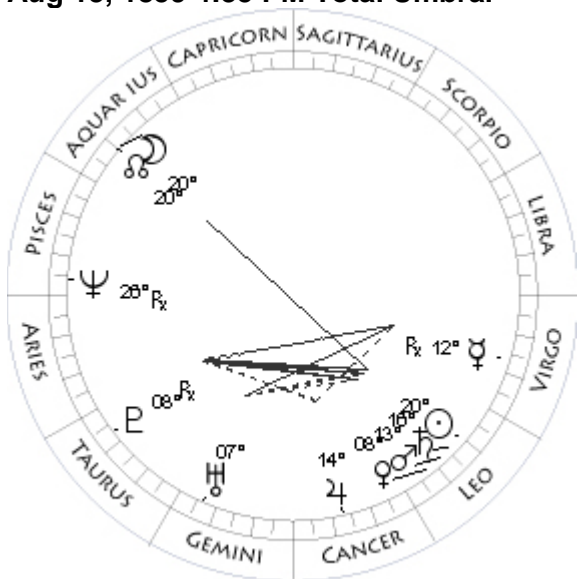
Mar 4, 1859 6:54 PM Partial Solar

Mo 13Aq53 - 1°24	Mo 13Pi35 + 1°18
Su 13Aq45 - 0°00	Su 13Pi43 - 0°00
Me 21Cp56 - 0°36	Me 09Pi58 - 1°56
Ve 28Sa52 + 4°41	Ve 27Cp16 + 2°14
Ma 01Ar40 - 0°24	Ma 23Ar35 + 0°01
Ju 11Ge33 - 0°27R	Ju 12Ge46 - 0°21
Sa 08Le30 + 0°48R	Sa 06Le22 + 0°50R
Ur 29Ta27 - 0°09R	Ur 29Ta45 - 0°09
Ne 23Pi09 - 1°13	Ne 24Pi11 - 1°12
Pl 05Ta33 -16°20	Pl 05Ta52 -16°11
No 00Pi23 - 0°00	No 28Aq49 - 0°00

Jul 29, 1859 9:56 PM Partial Solar



Aug 13, 1859 4:35 PM Total Umbral



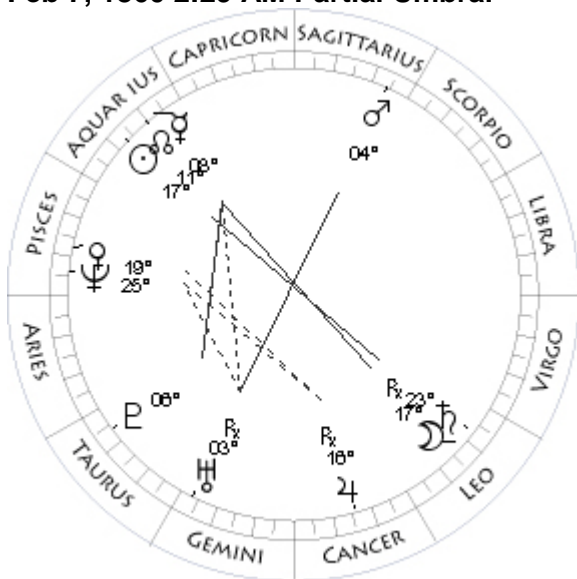
Aug 28, 1859 5:01 AM Partial Solar

Mo 06Le18 + 1°17	Mo 04Vi12 - 1°16
Su 06Le11 - 0°00	Su 04Vi20 - 0°00
Me 03Vi20 - 0°57	Me 05Vi36 - 4°11R
Ve 20Cn00 + 0°18	Ve 26Le04 + 1°14
Ma 03Le35 + 1°06	Ma 22Le19 + 1°10
Ju 11Cn14 - 0°03	Ju 17Cn10 - 0°00
Sa 14Le35 + 0°53	Sa 18Le19 + 0°55
Ur 06Ge53 - 0°07	Ur 07Ge37 - 0°07
Ne 26Pi56 - 1°18R	Ne 26Pi20 - 1°19R
Pl 08Ta27 -16°20	Pl 08Ta24 -16°29R
No 21Aq02 - 0°00	No 19Aq28 - 0°00

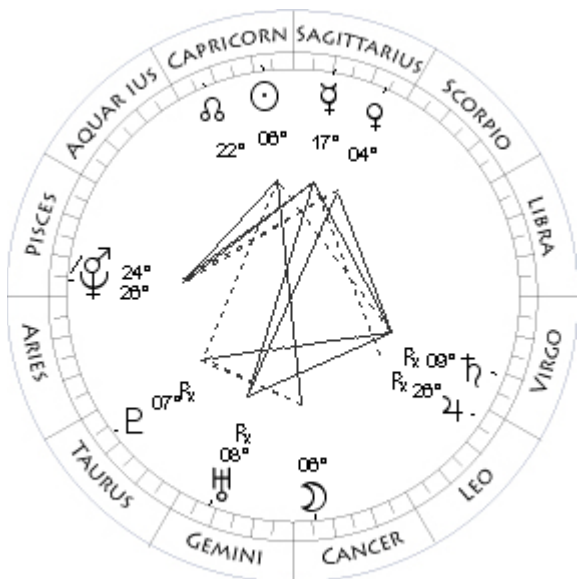
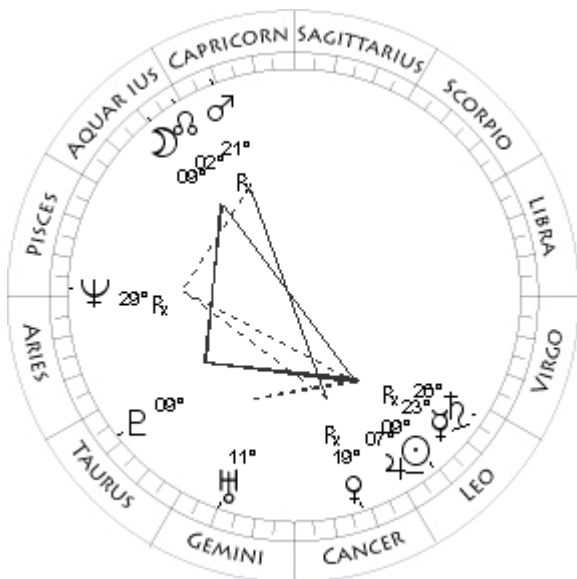
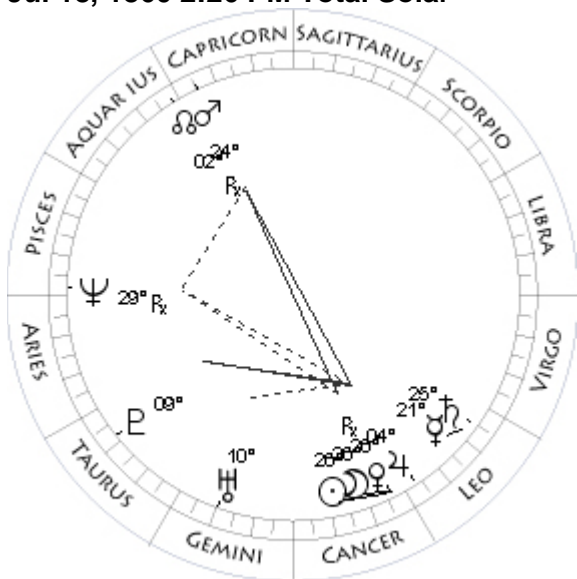
Jan 23, 1860 0:27 AM Annular Solar

Mo 20Aq21 + 0°00	Mo 02Aq22 - 0°48
Su 20Le21 - 0°00	Su 02Aq17 - 0°00
Me 12Vi54 - 3°44R	Me 14Cp49 - 0°48
Ve 08Le08 + 0°51	Ve 00Pi31 - 1°34
Ma 13Le04 + 1°08	Ma 24Sc56 + 0°49
Ju 14Cn20 - 0°02	Ju 18Cn40 + 0°20R
Sa 16Le29 + 0°54	Sa 24Le13 + 1°22R
Ur 07Ge20 - 0°07	Ur 03Ge52 - 0°06R
Ne 26Pi40 - 1°18R	Ne 25Pi00 - 1°16
Pl 08Ta27 -16°25R	Pl 06Ta29 -16°19
No 20Aq15 - 0°00	No 11Aq39 - 0°00
Coords: 113W/15S	Coords: 118E/72S

Feb 7, 1860 2:29 AM Partial Umbral



Jul 18, 1860 2:26 PM Total Solar



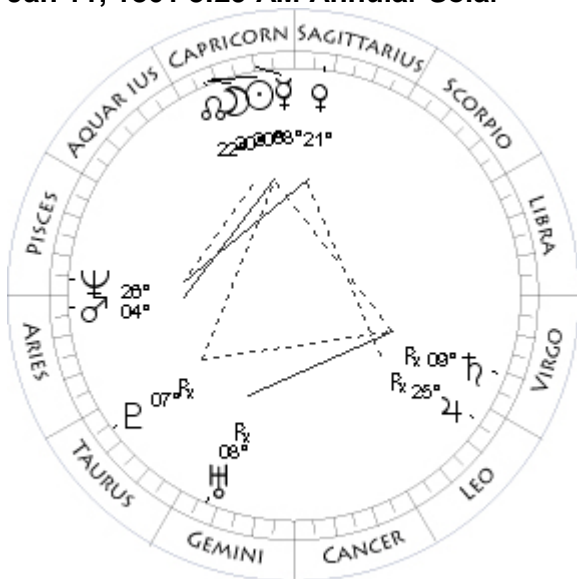
Aug 1, 1860 5:25 PM Partial Umbral

Mo 17Le32 - 0°36	Mo 09Aq32 + 0°41
Su 17Aq36 - 0°00	Su 09Le36 - 0°00
Me 08Aq25 - 1°58	Me 23Le44 - 4°31R
Ve 19Pi07 - 1°11	Ve 19Cn29 - 6°57R
Ma 04Sa04 + 0°40	Ma 21Cp11 - 6°19R
Ju 16Cn55 + 0°22R	Ju 07Le13 + 0°31
Sa 23Le03 + 1°24R	Sa 26Le55 + 1°20
Ur 03Ge43 - 0°06R	Ur 11Ge08 - 0°04
Ne 25Pi26 - 1°15	Ne 29Pi09 - 1°21R
Pl 06Ta32 -16°14	Pl 09Ta25 -16°15
No 10Aq51 - 0°00	No 01Aq30 - 0°00
Coords: 100W/17S	

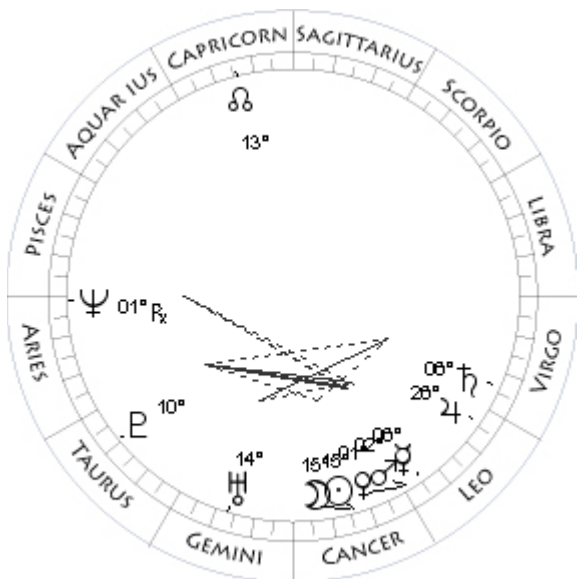
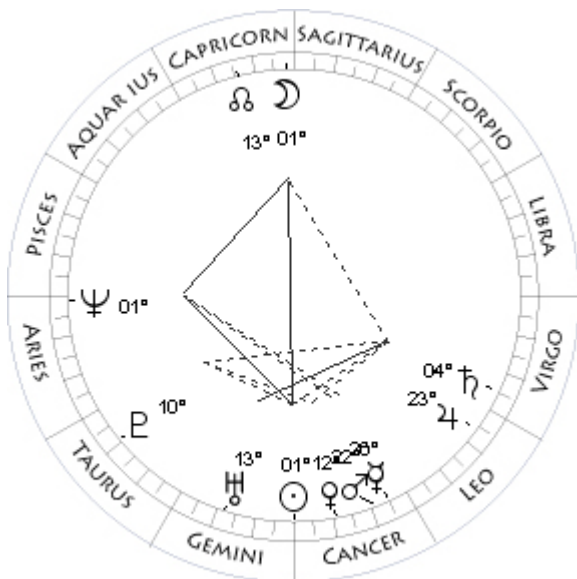
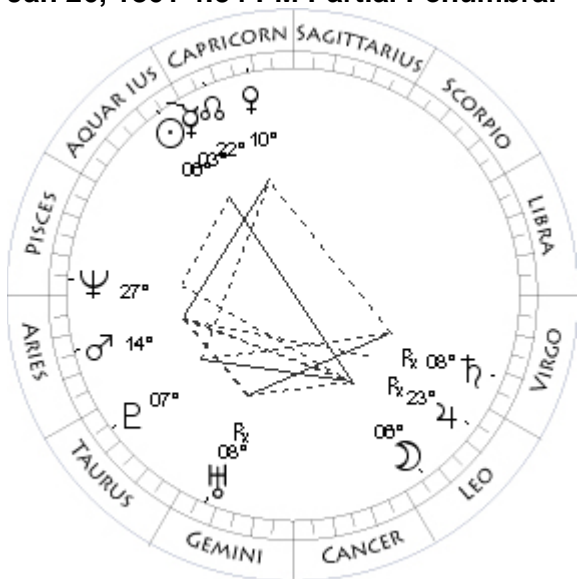
Dec 28, 1860 3:34 AM Partial Penumbral

Mo 26Cn09 + 0°33	Mo 06Cn51 + 1°27
Su 26Cn06 - 0°00	Su 06Cp43 - 0°00
Me 21Le57 - 1°40	Me 17Sa56 + 0°40
Ve 26Cn48 - 5°32R	Ve 04Sa09 + 1°35
Ma 24Cp48 - 6°08R	Ma 24Pi45 - 0°27
Ju 04Le06 + 0°30	Ju 26Le39 + 0°57R
Sa 25Le13 + 1°20	Sa 09Vi28 + 1°45R
Ur 10Ge34 - 0°04	Ur 08Ge56 - 0°03R
Ne 29Pi20 - 1°20R	Ne 26Pi43 - 1°19
Pl 09Ta21 -16°11	Pl 07Ta32 -16°23R
No 02Aq15 - 0°00	No 23Cp38 - 0°00

Jan 11, 1861 3:29 AM Annular Solar



Jan 26, 1861 4:54 PM Partial Penumbral



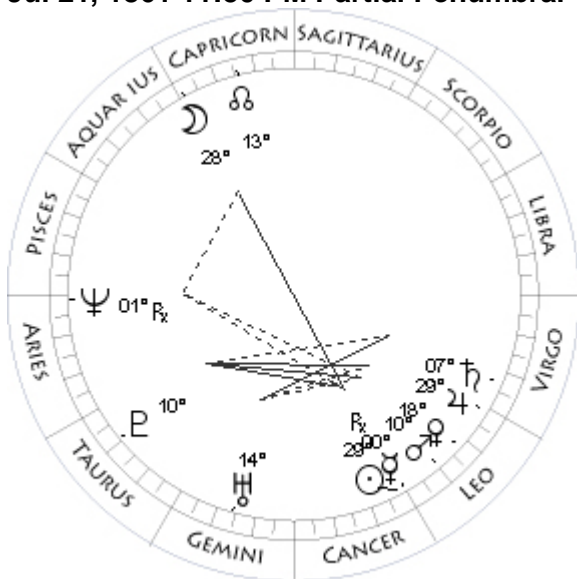
Jun 22, 1861 2:35 PM Partial Penumbral

Mo 20Cp59 - 0°10	Mo 01Cp11 - 1°08
Su 20Cp59 - 0°00	Su 01Cn05 - 0°00
Me 08Cp33 - 1°00	Me 26Cn21 + 0°51
Ve 21Sa28 + 1°02	Ve 12Cn26 + 0°59
Ma 04Ar19 - 0°09	Ma 22Cn10 + 1°10
Ju 25Le39 + 1°01R	Ju 23Le42 + 0°57
Sa 09Vi05 + 1°48R	Sa 04Vi40 + 1°46
Ur 08Ge29 - 0°02R	Ur 13Ge17 - 0°01
Ne 26Pi56 - 1°19	Ne 01Ar36 - 1°21
Pl 07Ta27 -16°18R	Pl 10Ta00 -15°58
No 22Cp54 - 0°00	No 14Cp18 - 0°00
Coords: 133W/32S	Coords: 142W/25S

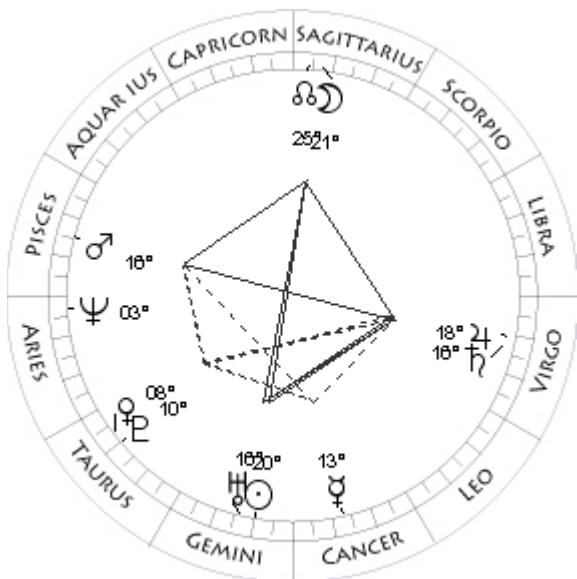
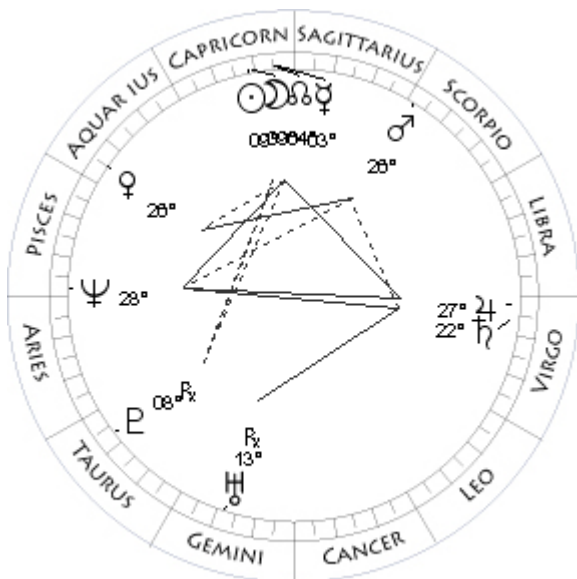
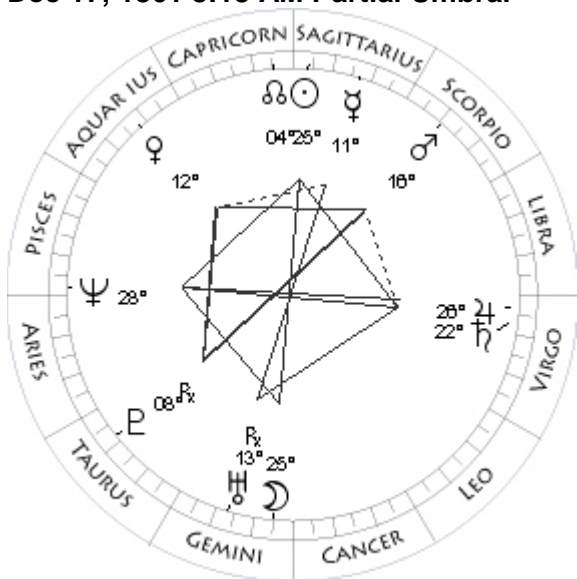
Jul 8, 1861 2:10 AM Annular Solar

Mo 06Le41 - 1°16	Mo 15Cn49 - 0°13
Su 06Aq49 - 0°00	Su 15Cn50 - 0°00
Me 03Aq31 - 2°02	Me 06Le05 - 2°33
Ve 10Cp47 + 0°20	Ve 01Le25 + 1°23
Ma 14Ar59 + 0°08	Ma 02Le02 + 1°10
Ju 23Le59 + 1°04R	Ju 26Le28 + 0°56
Sa 08Vi17 + 1°51R	Sa 06Vi01 + 1°45
Ur 08Ge09 - 0°02R	Ur 14Ge08 - 0°01
Ne 27Pi18 - 1°18	Ne 01Ar38 - 1°22R
Pl 07Ta27 -16°13	Pl 10Ta12 -16°02
No 22Cp04 - 0°00	No 13Cp28 - 0°00
Coords: 109W/17N	Coords: 146W/10N

Jul 21, 1861 11:50 PM Partial Penumbral



Dec 17, 1861 8:18 AM Partial Umbral



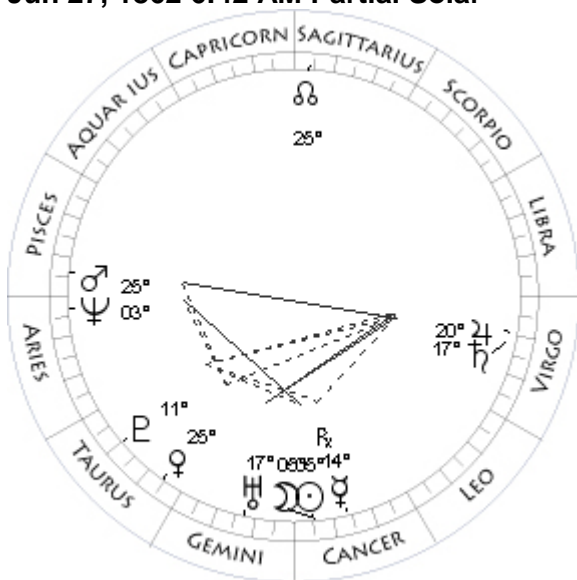
Dec 31, 1861 1:49 PM Total Solar

Mo 28Cp58 + 1°24	Mo 09Cp54 + 0°31
Su 29Cn06 - 0°00	Su 09Cp57 - 0°00
Me 00Le32 - 4°57R	Me 03Cp07 - 1°13
Ve 18Le26 + 1°32	Ve 26Aq18 - 0°44
Ma 10Le53 + 1°10	Ma 26Sc11 + 0°25
Ju 29Le11 + 0°56	Ju 27Vi15 + 1°17
Sa 07Vi26 + 1°44	Sa 22Vi41 + 2°06
Ur 14Ge49 - 0°00	Ur 13Ge18 + 0°01R
Ne 01Ar33 - 1°23R	Ne 28Pi58 - 1°22
Pl 10Ta19 -16°06	Pl 08Ta29 -16°16R
No 12Cp44 - 0°00	No 04Cp08 - 0°00
Coords: 3W/19S	

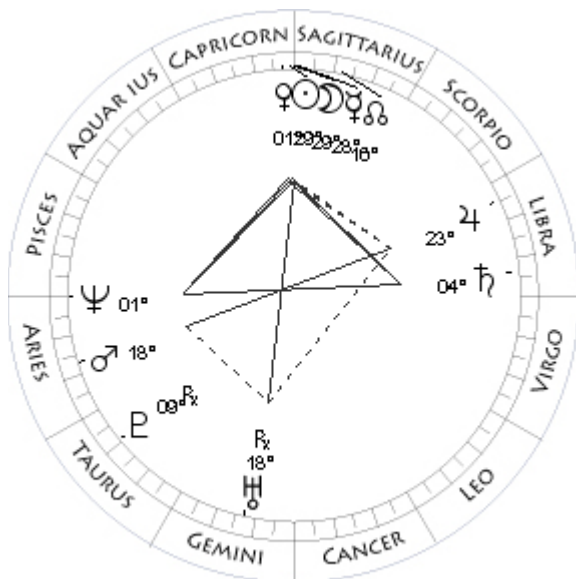
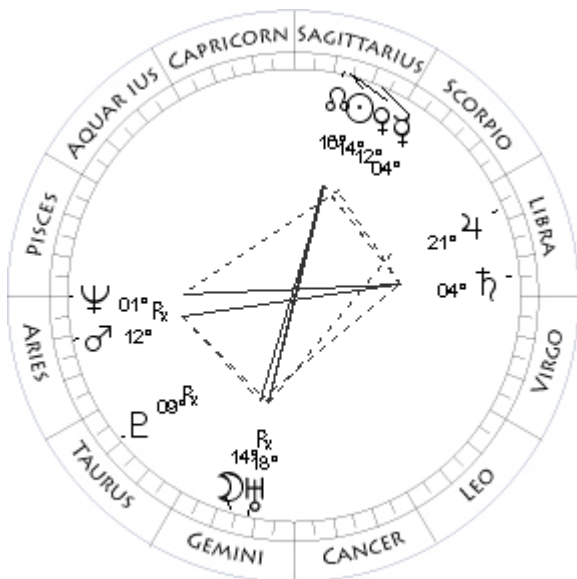
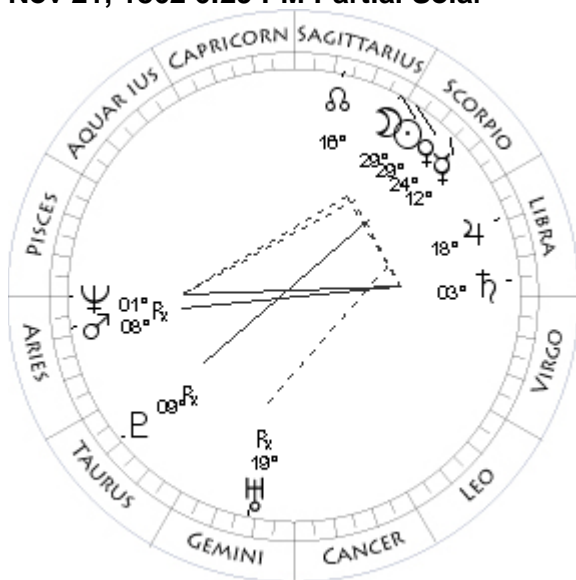
Jun 12, 1862 6:21 AM Total Umbral

Mo 25Ge32 + 0°48	Mo 21Sa01 - 0°23
Su 25Sa27 - 0°00	Su 20Ge59 - 0°00
Me 11Sa16 + 0°21	Me 13Cn59 + 0°24
Ve 12Aq43 - 1°59	Ve 08Ta15 - 2°24
Ma 16Sc41 + 0°33	Ma 16Pi06 - 2°47
Ju 26Vi26 + 1°13	Ju 18Vi42 + 1°18
Sa 22Vi28 + 2°02	Sa 16Vi23 + 2°09
Ur 13Ge51 + 0°01R	Ur 16Ge45 + 0°03
Ne 28Pi51 - 1°23	Ne 03Ar42 - 1°23
Pl 08Ta37 -16°20R	Pl 10Ta45 -15°49
No 04Cp53 - 0°00	No 25Sa31 - 0°00
Coords: 126E/24N	

Jun 27, 1862 6:42 AM Partial Solar



Nov 21, 1862 6:29 PM Partial Solar



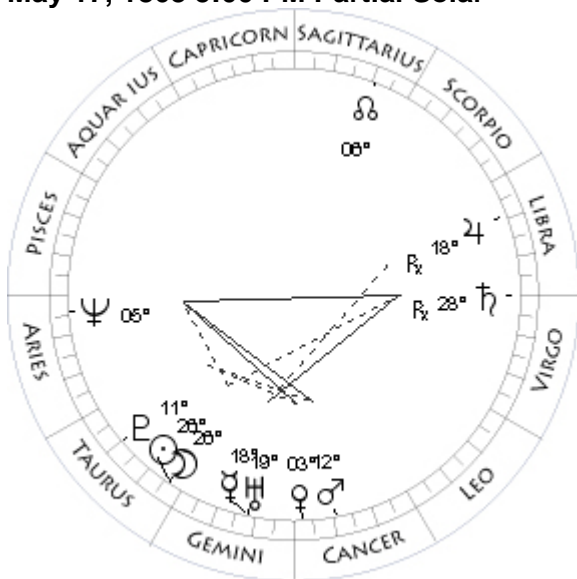
Dec 6, 1862 7:40 AM Total Umbral

Mo 05Cn13 - 0°55	Mo 14Ge01 + 0°12
Su 05Cn18 - 0°00	Su 14Sa00 - 0°00
Me 14Cn57 - 3°25R	Me 04Sa53 + 0°05
Ve 25Ta10 - 2°15	Ve 12Sa54 + 0°06
Ma 25Pi10 - 3°13	Ma 12Ar23 - 0°01
Ju 20Vi12 + 1°15	Ju 21Li07 + 1°11
Sa 17Vi11 + 2°07	Sa 04Li10 + 2°13
Ur 17Ge37 + 0°03	Ur 18Ge51 + 0°05R
Ne 03Ar51 - 1°24	Ne 01Ar05 - 1°26R
Pl 11Ta00 -15°53	Pl 09Ta45 -16°17R
No 24Sa43 - 0°00	No 16Sa08 - 0°00
Coords: 117E/23N	

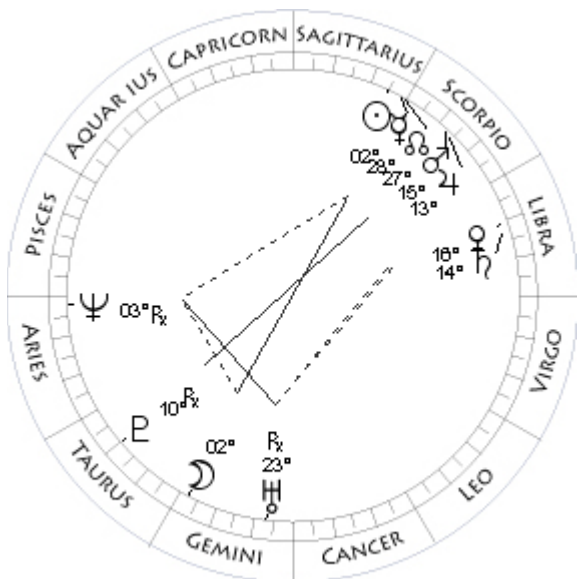
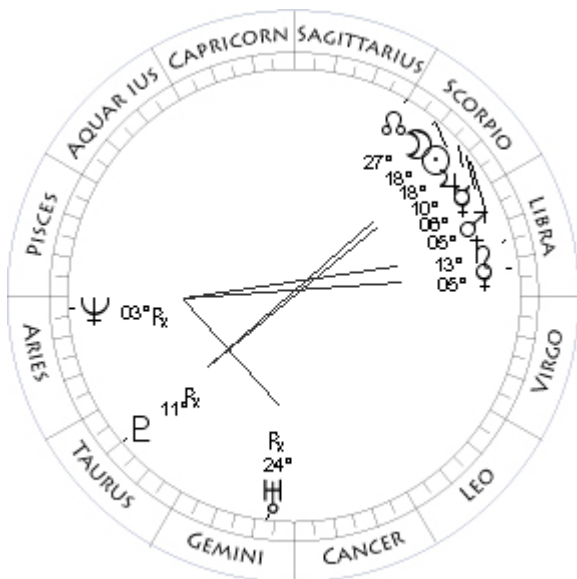
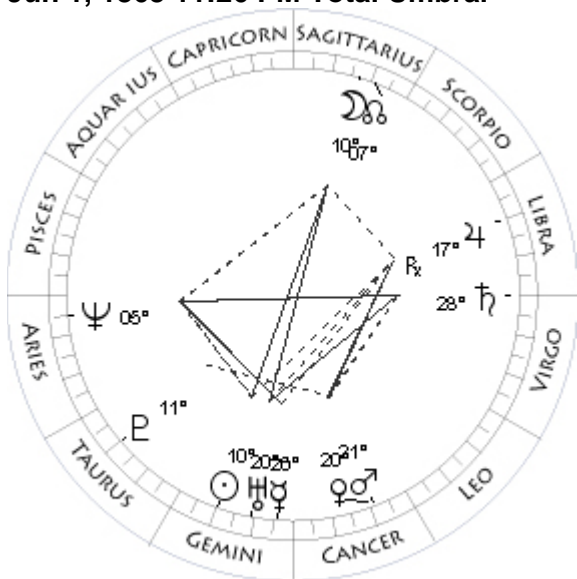
Dec 21, 1862 4:53 AM Partial Solar

Mo 29Sc23 - 1°31	Mo 29Sa01 + 1°11
Su 29Sc15 - 0°00	Su 29Sa08 - 0°00
Me 12Sc39 + 1°45	Me 28Sa11 - 1°26
Ve 24Sc35 + 0°40	Ve 01Cp37 - 0°29
Ma 08Ar31 - 0°38	Ma 18Ar01 + 0°27
Ju 18Li31 + 1°10	Ju 23Li25 + 1°14
Sa 03Li02 + 2°09	Sa 04Li59 + 2°16
Ur 19Ge27 + 0°04R	Ur 18Ge14 + 0°05R
Ne 01Ar11 - 1°26R	Ne 01Ar05 - 1°25
Pl 09Ta59 -16°20R	Pl 09Ta33 -16°14R
No 16Sa54 - 0°00	No 15Sa21 - 0°00

May 17, 1863 5:00 PM Partial Solar



Jun 1, 1863 11:26 PM Total Umbra



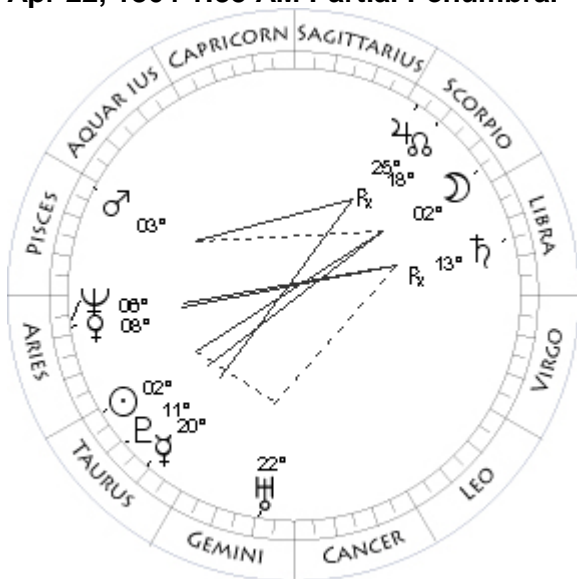
Nov 11, 1863 8:08 AM Total Solar

Mo 26Ta21 + 0°58	Mo 18Sc33 - 0°51
Su 26Ta15 - 0°00	Su 18Sc29 - 0°00
Me 18Ge23 + 2°20	Me 06Sc34 + 1°24
Ve 03Cn12 + 1°59	Ve 05Li33 - 0°03
Ma 12Cn07 + 1°22	Ma 05Sc28 + 0°25
Ju 18Li36 + 1°29R	Ju 10Sc08 + 0°58
Sa 28Vi55 + 2°31R	Sa 13Li21 + 2°15
Ur 19Ge20 + 0°06	Ur 24Ge22 + 0°08R
Ne 05Ar23 - 1°24	Ne 03Ar37 - 1°29R
Pl 11Ta10 -15°40	Pl 11Ta09 -16°15R
No 07Sa32 - 0°00	No 28Sc08 - 0°00
	Coords: 16W/75S

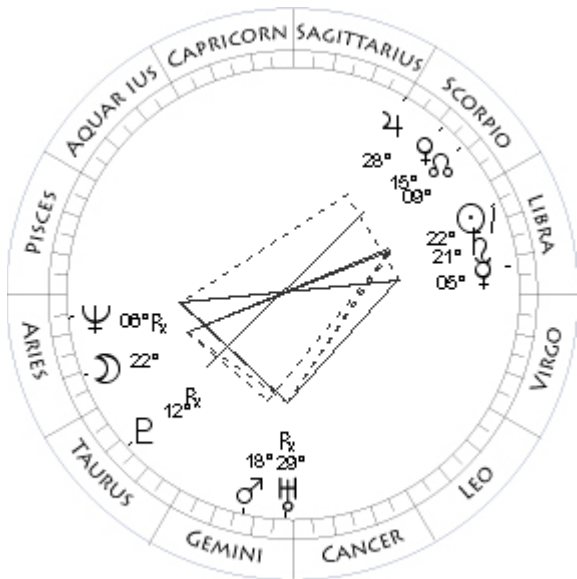
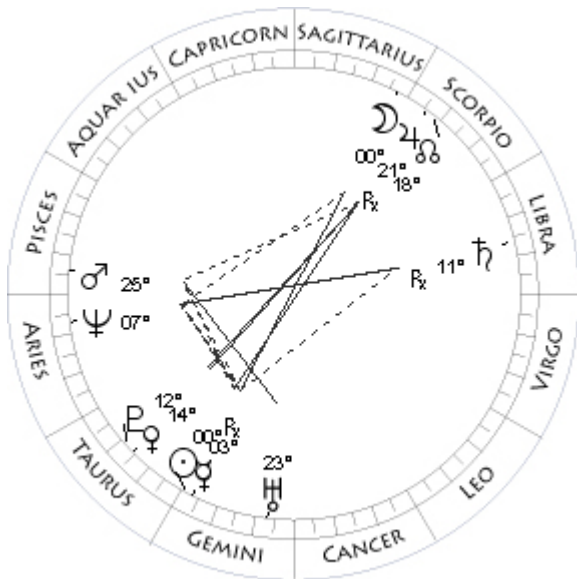
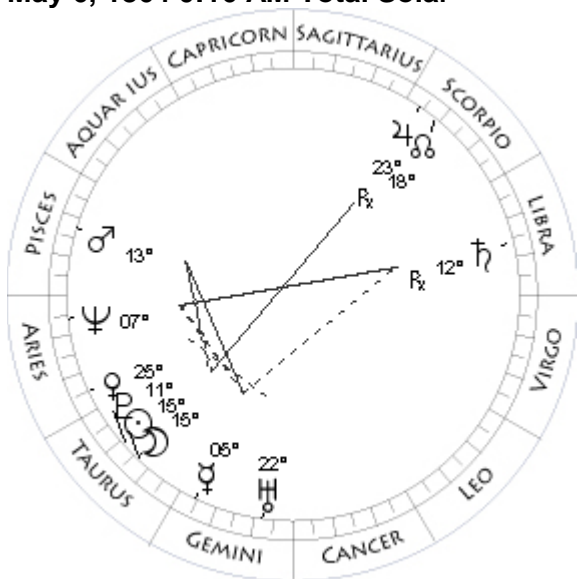
Nov 25, 1863 8:55 AM Partial Umbra

Mo 10Sa52 + 0°22	Mo 02Ge35 - 0°26
Su 10Ge55 - 0°00	Su 02Sa39 - 0°00
Me 26Ge33 - 0°16	Me 28Sc57 - 0°10
Ve 20Cn53 + 2°13	Ve 16Li38 + 1°36
Ma 21Cn31 + 1°20	Ma 15Sc03 + 0°18
Ju 17Li41 + 1°26R	Ju 13Sc10 + 0°58
Sa 28Vi44 + 2°28	Sa 14Li47 + 2°17
Ur 20Ge13 + 0°06	Ur 23Ge52 + 0°08R
Ne 05Ar44 - 1°25	Ne 03Ar25 - 1°29R
Pl 11Ta29 -15°42	Pl 10Ta53 -16°13R
No 06Sa44 - 0°00	No 27Sc23 - 0°00
	Coords: 8W/22S

Apr 22, 1864 1:35 AM Partial Penumbral



May 6, 1864 0:16 AM Total Solar



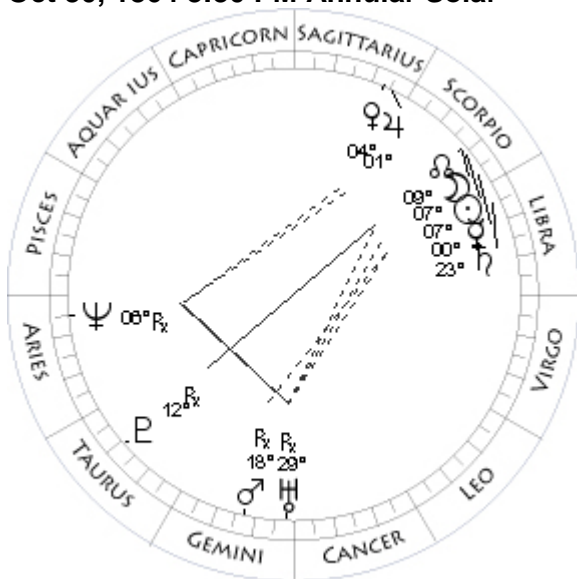
May 21, 1864 1:11 PM Partial Penumbral

Mo 02Sc18 - 1°28	Mo 00Sa34 + 1°06
Su 02Ta10 - 0°00	Su 00Ge41 - 0°00
Me 20Ta12 + 2°08	Me 03Ge31 - 1°04R
Ve 08Ar56 - 1°35	Ve 14Ta59 - 1°11
Ma 03Pi15 - 1°28	Ma 25Pi20 - 1°45
Ju 25Sc17 + 1°11R	Ju 21Sc41 + 1°09R
Sa 13Li24 + 2°45R	Sa 11Li45 + 2°40R
Ur 22Ge15 + 0°09	Ur 23Ge43 + 0°09
Ne 06Ar46 - 1°26	Ne 07Ar41 - 1°27
Pl 11Ta31 -15°34	Pl 12Ta11 -15°34
No 19Sc31 - 0°00	No 17Sc57 - 0°00
	Coords: 161W/19S

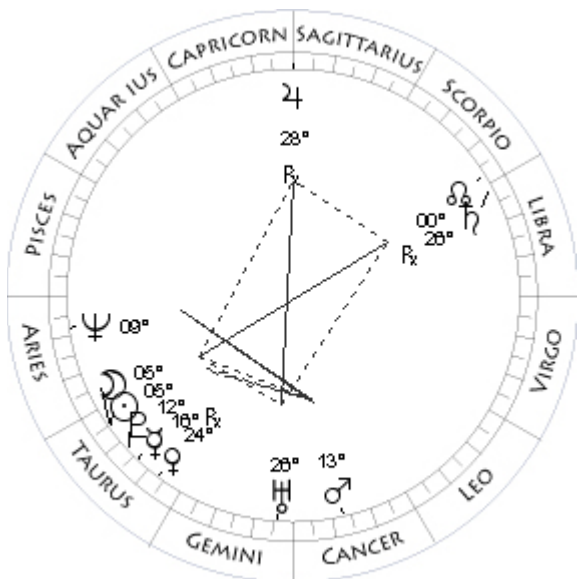
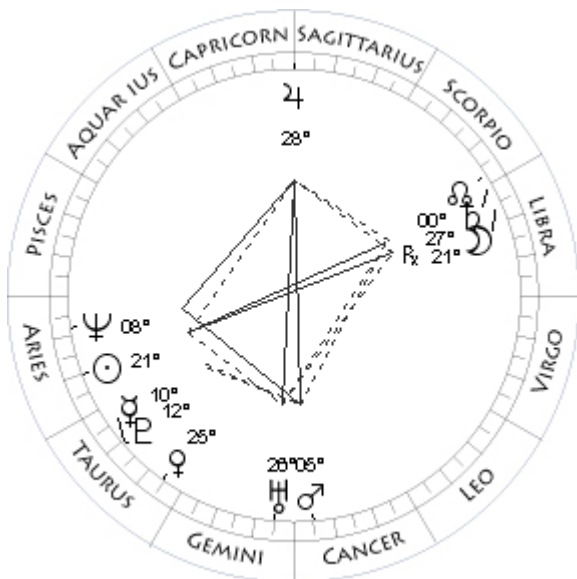
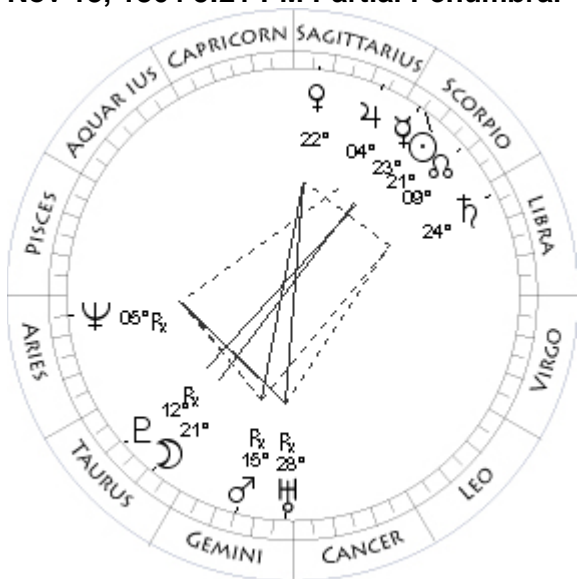
Oct 15, 1864 6:30 AM Partial Penumbral

Mo 15Ta43 + 0°15	Mo 22Ar18 + 1°33
Su 15Ta42 - 0°00	Su 22Li10 - 0°00
Me 05Ge08 + 2°24	Me 05Li43 + 2°01
Ve 25Ar59 - 1°31	Ve 15Sc47 - 0°06
Ma 13Pi44 - 1°37	Ma 18Ge16 - 0°20
Ju 23Sc39 + 1°11R	Ju 28Sc28 + 0°39
Sa 12Li29 + 2°43R	Sa 21Li10 + 2°16
Ur 22Ge54 + 0°09	Ur 29Ge26 + 0°11R
Ne 07Ar14 - 1°26	Ne 06Ar30 - 1°32R
Pl 11Ta50 -15°33	Pl 12Ta36 -16°08R
No 18Sc47 - 0°00	No 10Sc11 - 0°00
Coords: 172W/31N	Coords: 102E/10N

Oct 30, 1864 3:30 PM Annular Solar



Nov 13, 1864 5:21 PM Partial Penumbra



Apr 11, 1865 4:37 AM Partial Umbral

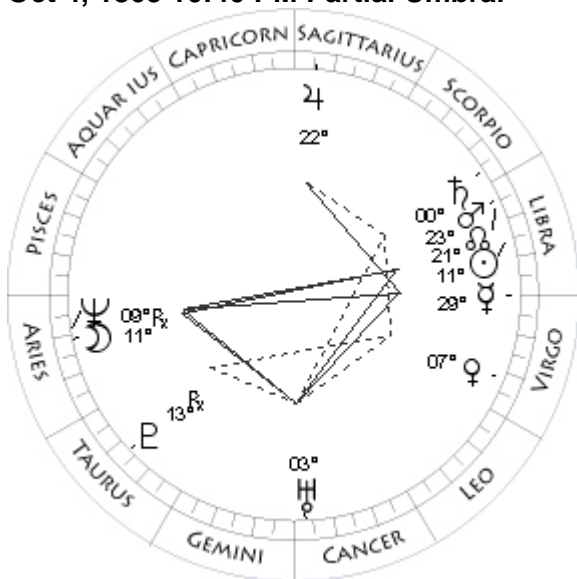
Mo 07Sc30 - 0°10	Mo 21Li23 - 0°48
Su 07Sc30 - 0°00	Su 21Ar19 - 0°00
Me 00Sc49 + 1°07	Me 10Ta42 + 2°35
Ve 04Sa46 - 0°48	Ve 25Ta08 + 6°05
Ma 18Ge26 + 0°19R	Ma 05Cn48 + 1°53
Ju 01Sa39 + 0°37	Ju 28Sa59 + 0°30
Sa 23Li02 + 2°16	Sa 27Li27 + 2°46R
Ur 29Ge12 + 0°11R	Ur 26Ge03 + 0°12
Ne 06Ar07 - 1°32R	Ne 08Ar32 - 1°28
Pl 12Ta19 -16°08R	Pl 12Ta12 -15°29
No 09Sc22 - 0°00	No 00Sc46 - 0°00

Apr 25, 1865 2:08 PM Total Solar

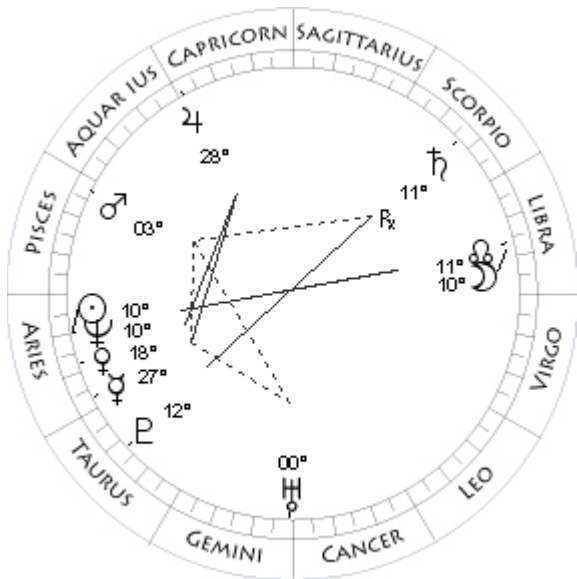
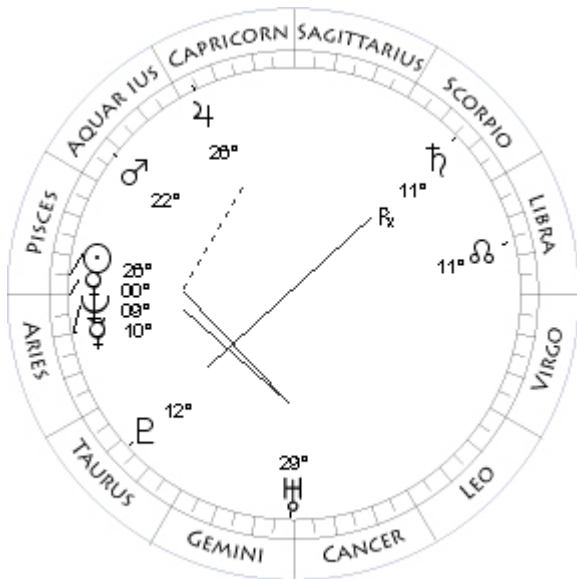
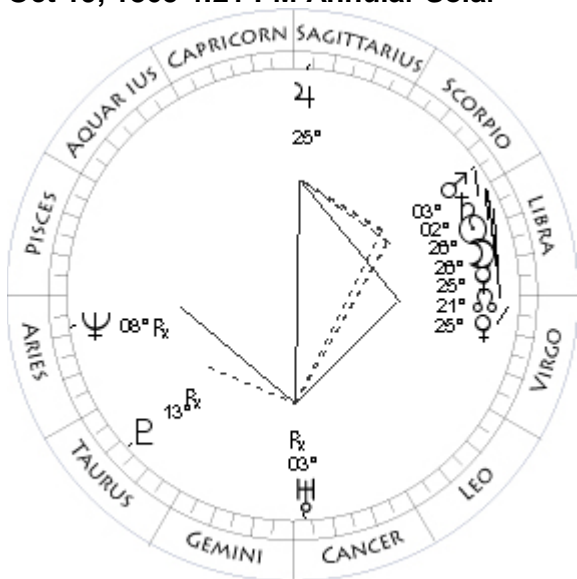
Mo 21Ta31 - 1°07	Mo 05Ta18 - 0°29
Su 21Sc38 - 0°00	Su 05Ta22 - 0°00
Me 23Sc38 - 0°26	Me 16Ta51 + 2°16
Ve 22Sa07 - 1°23	Ve 24Ta08 + 5°53R
Ma 15Ge37 + 1°02R	Ma 13Cn38 + 1°46
Ju 04Sa43 + 0°35	Ju 28Sa51 + 0°29R
Sa 24Li41 + 2°17	Sa 26Li21 + 2°46R
Ur 28Ge49 + 0°12R	Ur 26Ge36 + 0°12
Ne 05Ar50 - 1°32R	Ne 09Ar03 - 1°28
Pl 12Ta03 -16°08R	Pl 12Ta31 -15°27
No 08Sc37 - 0°00	No 30Li00 - 0°00

Coords: 96W|17N

Oct 4, 1865 10:40 PM Partial Umbral



Oct 19, 1865 4:21 PM Annular Solar



Mar 16, 1866 9:51 PM Partial Solar

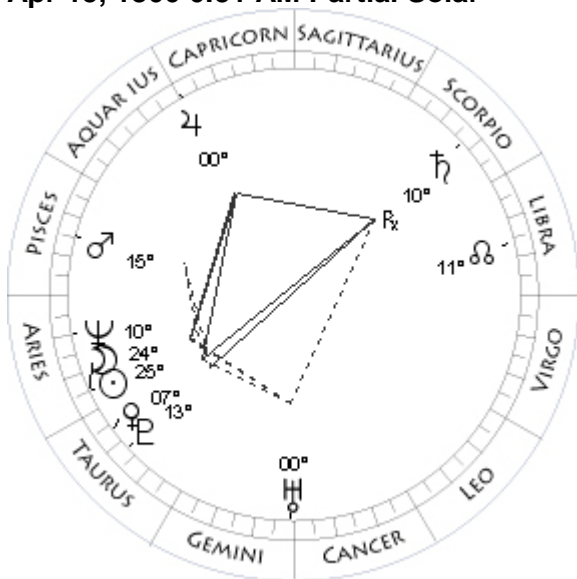
Mo 11Ar47 + 0°51	Mo 26Pi15 + 1°25
Su 11Li43 - 0°00	Su 26Pi07 - 0°00
Me 29Vi28 + 1°55	Me 10Ar25 + 0°32
Ve 07Vi37 + 0°59	Ve 00Ar48 - 1°20
Ma 23Li21 + 0°21	Ma 22Aq44 - 1°10
Ju 22Sa49 + 0°08	Ju 26Cp18 - 0°10
Sa 00Sc35 + 2°14	Sa 11Sc48 + 2°36R
Ur 03Cn55 + 0°14	Ur 29Ge52 + 0°16
Ne 09Ar05 - 1°35R	Ne 09Ar43 - 1°30
Pl 13Ta44 -15°59R	Pl 12Ta39 -15°27
No 21Li24 - 0°00	No 12Li46 - 0°00

Coords: 17W/ 5N

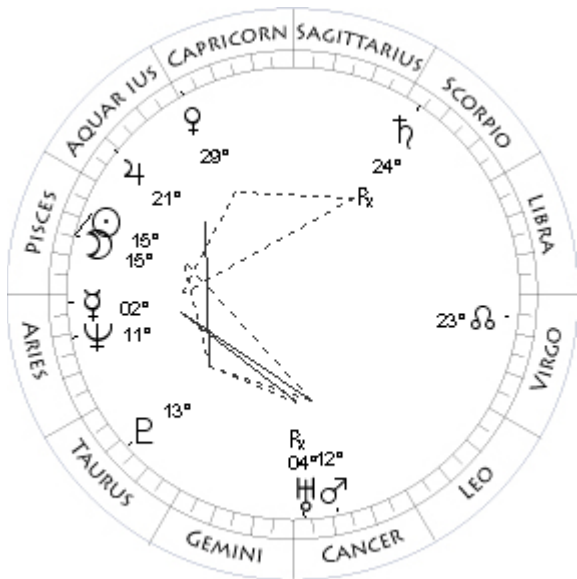
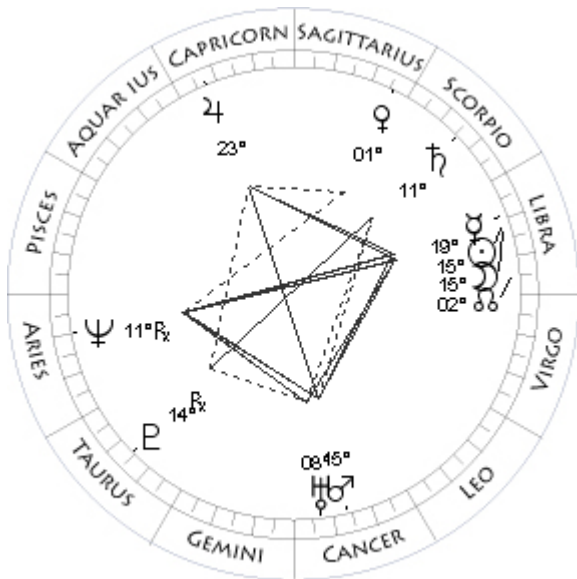
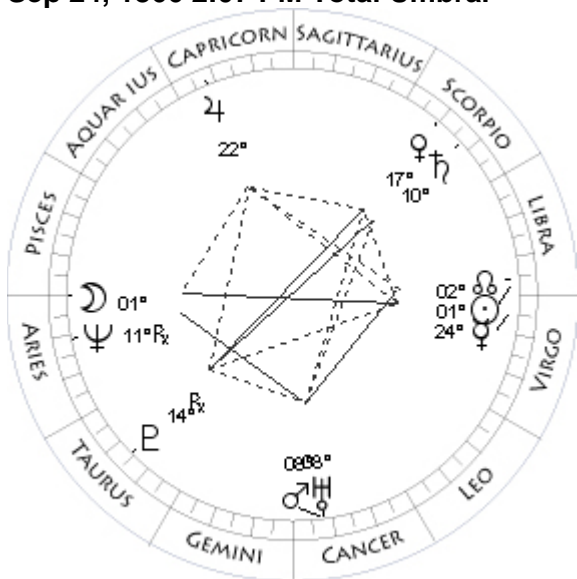
Mar 31, 1866 4:33 AM Total Umbral

Mo 26Li16 + 0°29	Mo 10Li16 - 0°09
Su 26Li19 - 0°00	Su 10Ar15 - 0°00
Me 25Li01 + 0°53	Me 27Ar46 + 3°03
Ve 25Vi32 + 1°28	Ve 18Ar32 - 1°02
Ma 03Sc20 + 0°13	Ma 03Pi50 - 1°14
Ju 25Sa04 + 0°06	Ju 28Cp31 - 0°12
Sa 02Sc20 + 2°14	Sa 11Sc05 + 2°38R
Ur 03Cn53 + 0°15R	Ur 00Cn04 + 0°16
Ne 08Ar41 - 1°35R	Ne 10Ar16 - 1°30
Pl 13Ta29 -16°01R	Pl 12Ta54 -15°24
No 20Li37 - 0°00	No 12Li01 - 0°00

Apr 15, 1866 6:51 AM Partial Solar



Sep 24, 1866 2:07 PM Total Umbra



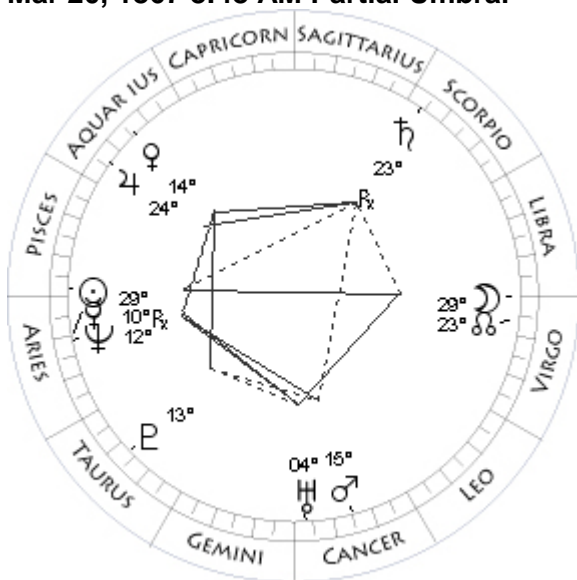
Oct 8, 1866 4:44 PM Partial Solar

Mo 24Ar57 - 1°12	Mo 15Li04 + 1°07
Su 25Ar05 - 0°00	Su 15Li10 - 0°00
Me 23Ar19 + 1°44R	Me 19Li19 + 0°39
Ve 07Ta12 - 0°32	Ve 01Sa34 - 3°57
Ma 15Pi33 - 1°17	Ma 15Cn13 + 0°39
Ju 00Aq22 - 0°14	Ju 23Cp04 - 0°35
Sa 10Sc05 + 2°39R	Sa 11Sc32 + 2°08
Ur 00Cn28 + 0°16	Ur 08Cn22 + 0°18
Ne 10Ar50 - 1°30	Ne 11Ar18 - 1°37R
Pl 13Ta13 -15°22	Pl 14Ta39 -15°53R
No 11Li13 - 0°00	No 01Li52 - 0°00

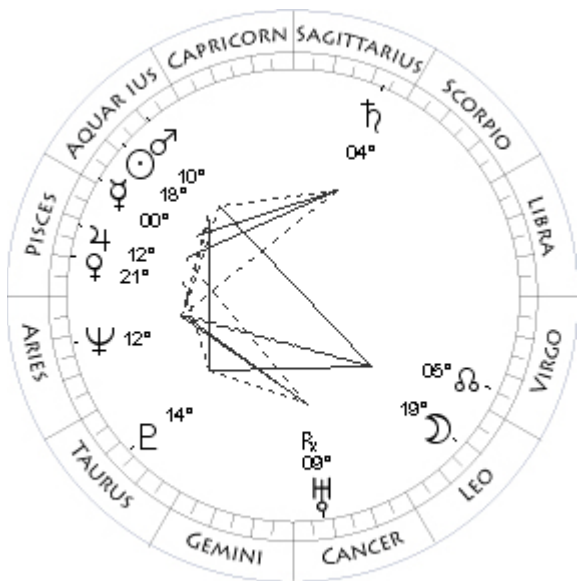
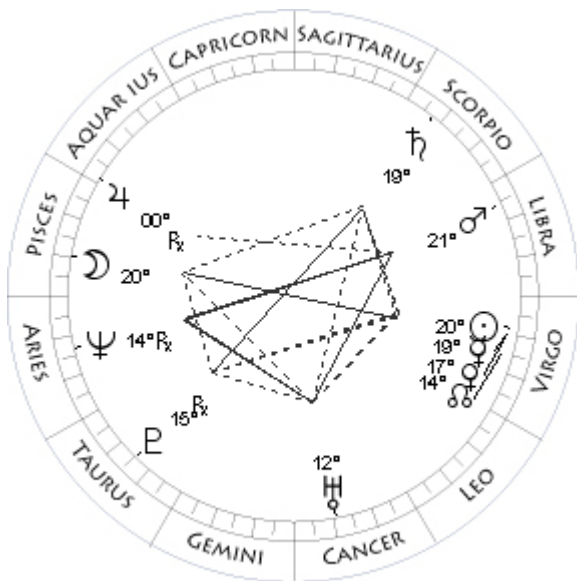
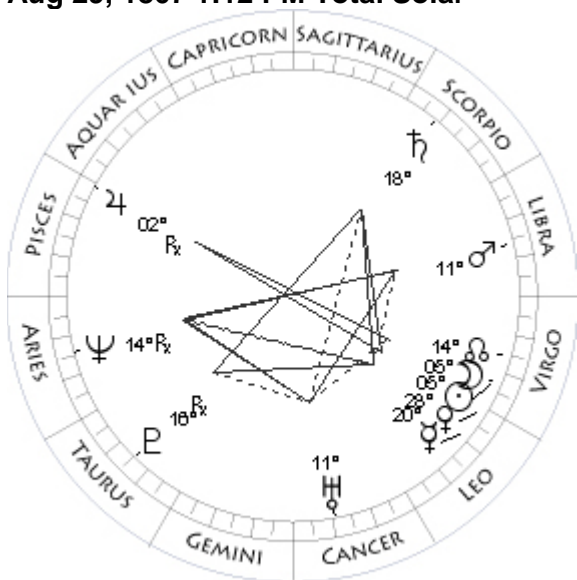
Mar 6, 1867 9:46 AM Annular Solar

Mo 01Ar17 + 0°08	Mo 15Pi27 + 0°44
Su 01Li17 - 0°00	Su 15Pi24 - 0°00
Me 24Vi23 + 1°47	Me 02Ar56 + 1°10
Ve 17Sc43 - 2°55	Ve 29Cp12 + 1°58
Ma 08Cn07 + 0°18	Ma 12Cn36 + 3°14
Ju 22Cp29 - 0°35	Ju 21Aq43 - 0°41
Sa 10Sc01 + 2°09	Sa 24Sc06 + 2°20R
Ur 08Cn13 + 0°17	Ur 04Cn19 + 0°19R
Ne 11Ar42 - 1°37R	Ne 11Ar30 - 1°32
Pl 14Ta51 -15°50R	Pl 13Ta25 -15°23
No 02Li37 - 0°00	No 24Vi00 - 0°00
Coords: 146W/ 1N	Coords: 18W/42N

Mar 20, 1867 8:48 AM Partial Umbral



Aug 29, 1867 1:12 PM Total Solar



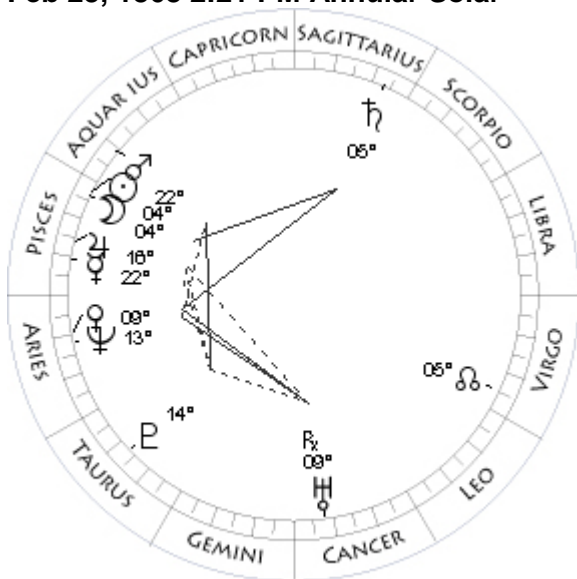
Sep 14, 1867 0:26 AM Partial Umbral

Mo 29Vi14 + 0°32	Mo 20Pi39 - 0°35
Su 29Pi18 - 0°00	Su 20Vi43 - 0°00
Me 10Ar16 + 3°29R	Me 19Vi29 + 1°39
Ve 14Aq31 + 0°47	Ve 17Vi36 + 1°25
Ma 15Cn51 + 2°52	Ma 21Li57 + 0°09
Ju 24Aq50 - 0°43	Ju 00Pi12 - 1°20R
Sa 23Sc53 + 2°22R	Sa 19Sc41 + 2°01
Ur 04Cn19 + 0°19	Ur 12Cn21 + 0°20
Ne 12Ar00 - 1°32	Ne 14Ar17 - 1°38R
Pl 13Ta38 -15°20	Pl 15Ta56 -15°40R
No 23Vi16 - 0°00	No 13Vi51 - 0°00
Coords: 130E/ 1N	

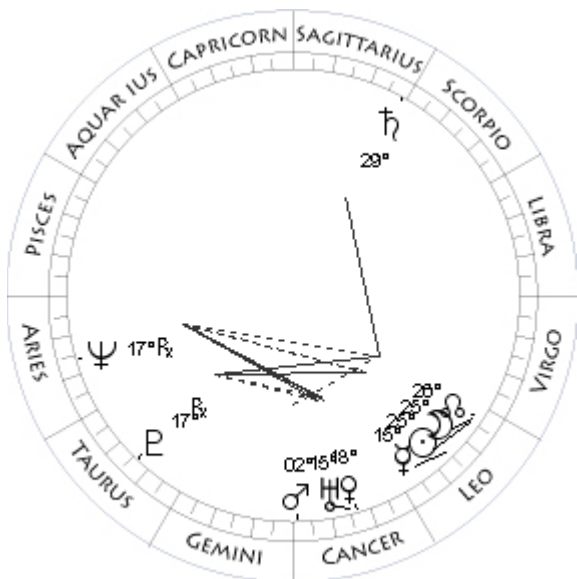
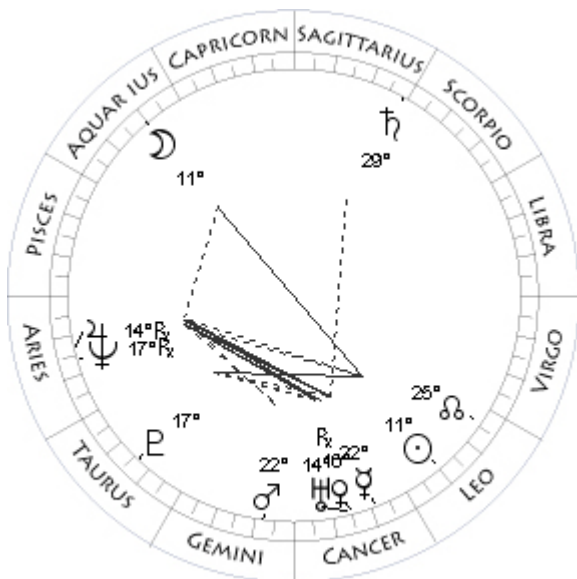
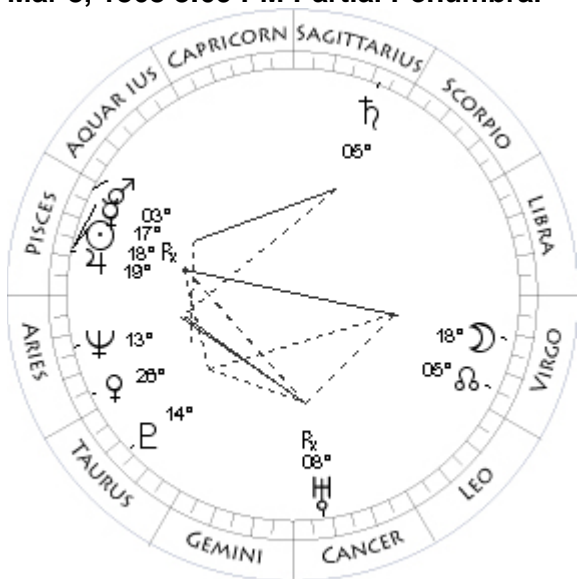
Feb 8, 1868 9:49 AM Partial Penumbral

Mo 05Vi46 - 0°47	Mo 19Le06 - 1°27
Su 05Vi42 - 0°00	Su 18Aq58 - 0°00
Me 20Le31 + 1°05	Me 00Pi25 - 1°18
Ve 28Le24 + 1°16	Ve 21Pi19 - 1°07
Ma 11Li48 + 0°20	Ma 10Aq04 - 1°04
Ju 02Pi08 - 1°20R	Ju 12Pi56 - 1°02
Sa 18Sc37 + 2°04	Sa 04Sa40 + 1°57
Ur 11Cn48 + 0°20	Ur 09Cn23 + 0°23R
Ne 14Ar38 - 1°38R	Ne 12Ar53 - 1°34
Pl 16Ta03 -15°36R	Pl 14Ta07 -15°25
No 14Vi40 - 0°00	No 06Vi03 - 0°00
Coords: 144E/14N	

Feb 23, 1868 2:21 PM Annular Solar



Mar 8, 1868 8:09 PM Partial Penumbral



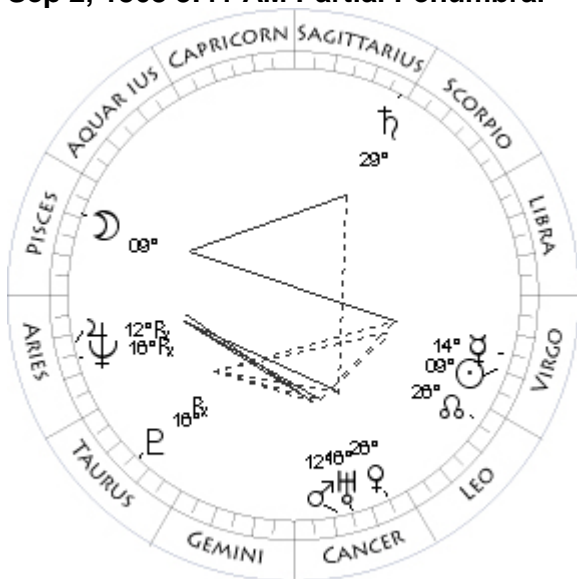
Aug 3, 1868 0:09 PM Partial Penumbral

Mo 04Pi18 + 0°04	Mo 11Aq29 + 1°19
Su 04Pi18 - 0°00	Su 11Le22 - 0°00
Me 22Pi04 + 1°50	Me 22Cn11 - 1°35
Ve 09Ar47 - 0°26	Ve 16Cn22 - 6°49R
Ma 22Aq00 - 1°06	Ma 22Ge47 + 0°05
Ju 16Pi32 - 1°02	Ju 14Ar14 - 1°28R
Sa 05Sa22 + 2°00	Sa 29Sc03 + 1°55
Ur 09Cn00 + 0°23R	Ur 14Cn51 + 0°22
Ne 13Ar19 - 1°34	Ne 17Ar16 - 1°38R
Pl 14Ta14 -15°20	Pl 17Ta00 -15°21
No 05Vi15 - 0°00	No 26Le40 - 0°00
	Coords: 179W/16S

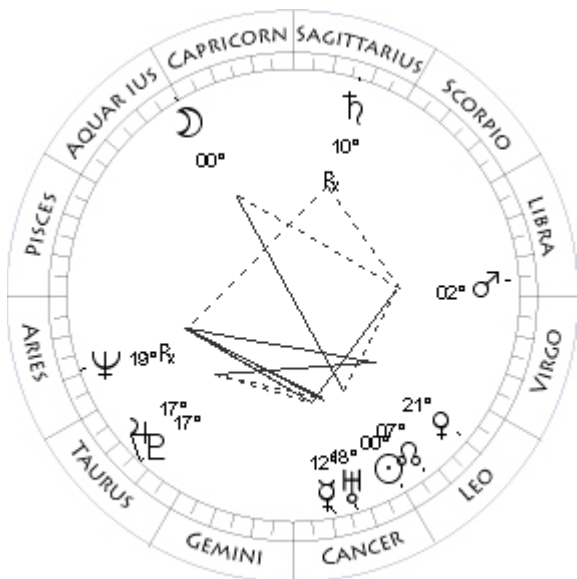
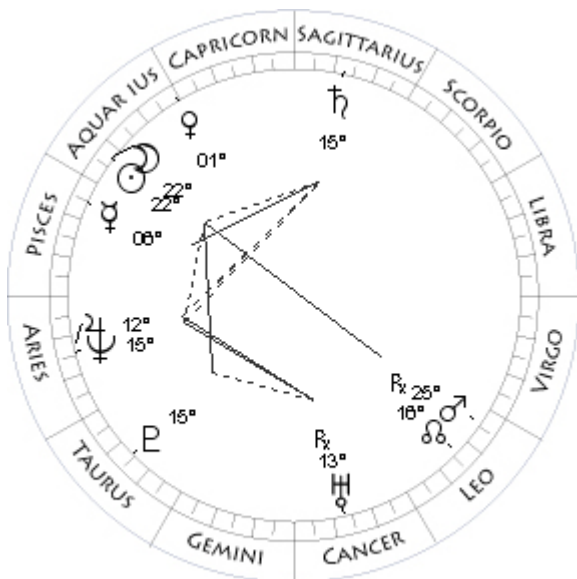
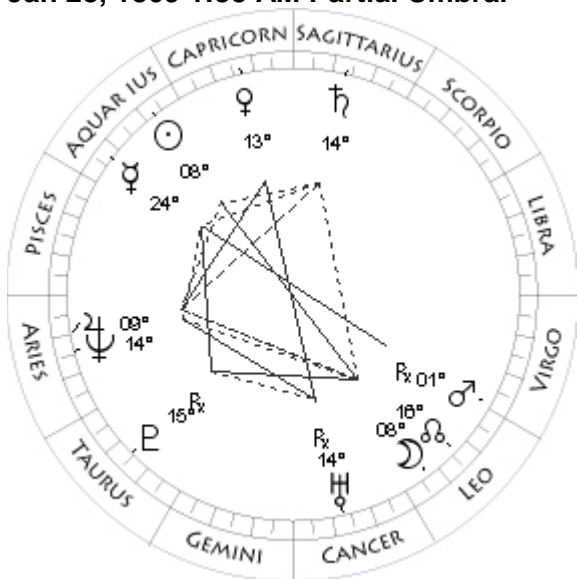
Aug 18, 1868 5:12 AM Total Solar

Mo 18Vi27 + 1°14	Mo 25Le29 - 0°03
Su 18Pi35 - 0°00	Su 25Le29 - 0°00
Me 17Pi45 + 3°34R	Me 15Le00 + 1°23
Ve 26Ar50 + 0°22	Ve 18Cn11 - 5°55
Ma 03Pi13 - 1°06	Ma 02Cn29 + 0°18
Ju 19Pi58 - 1°02	Ju 13Ar52 - 1°32R
Sa 05Sa40 + 2°02	Sa 29Sc15 + 1°52
Ur 08Cn49 + 0°23R	Ur 15Cn38 + 0°23
Ne 13Ar47 - 1°34	Ne 17Ar07 - 1°39R
Pl 14Ta24 -15°15	Pl 17Ta01 -15°25R
No 04Vi29 - 0°00	No 25Le53 - 0°00
Coords: 61W/ 6N	Coords: 102W/11N

Sep 2, 1868 3:41 AM Partial Penumbral



Jan 28, 1869 1:38 AM Partial Umbral



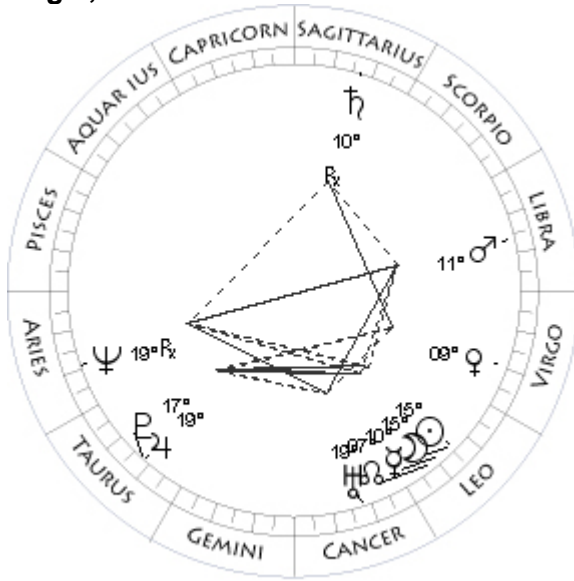
Feb 11, 1869 1:46 PM Annular Solar

Mo 09Pi47 - 1°16	Mo 22Aq53 - 0°34
Su 09Vi55 - 0°00	Su 22Aq57 - 0°00
Me 14Vi14 + 1°31	Me 06Pi58 + 2°33
Ve 26Cn28 - 4°18	Ve 01Aq09 - 0°25
Ma 12Cn00 + 0°31	Ma 25Le55 + 4°32R
Ju 12Ar48 - 1°35R	Ju 12Ar36 - 1°09
Sa 29Sc49 + 1°48	Sa 15Sa40 + 1°37
Ur 16Cn19 + 0°23	Ur 13Cn56 + 0°26R
Ne 16Ar50 - 1°40R	Ne 15Ar10 - 1°36
Pl 16Ta58 -15°30R	Pl 15Ta05 -15°16
No 25Le06 - 0°00	No 16Le30 - 0°00

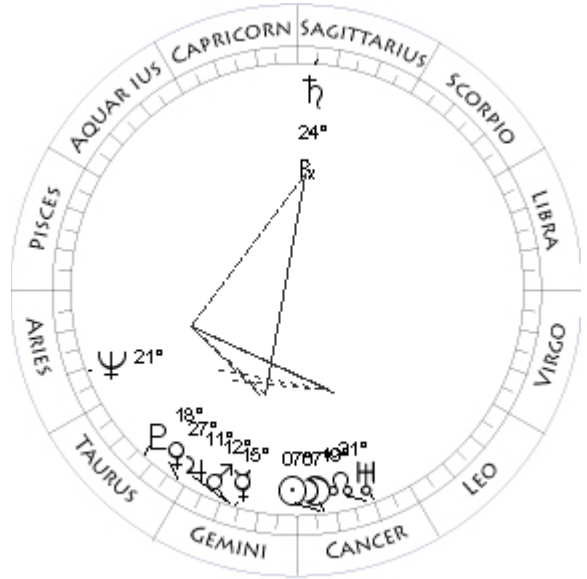
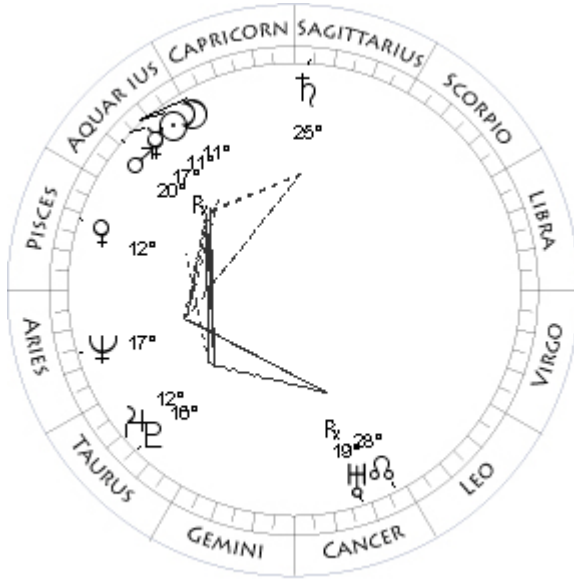
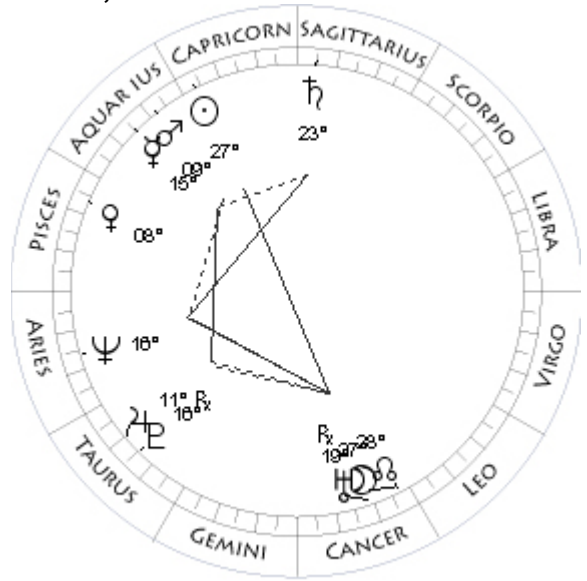
Jul 23, 1869 2:02 PM Partial Umbral

Mo 08Le19 - 0°47	Mo 00Aq44 + 0°38
Su 08Aq15 - 0°00	Su 00Le41 - 0°00
Me 24Aq17 - 0°57	Me 12Cn05 - 0°56
Ve 13Cp06 + 0°13	Ve 21Le02 + 1°32
Ma 01Vi09 + 4°21R	Ma 02Li38 + 0°19
Ju 09Ar55 - 1°12	Ju 17Ta26 - 1°07
Sa 14Sa33 + 1°36	Sa 10Sa55 + 1°37R
Ur 14Cn26 + 0°26R	Ur 18Cn29 + 0°25
Ne 14Ar51 - 1°37	Ne 19Ar35 - 1°39R
Pl 15Ta03 -15°21R	Pl 17Ta52 -15°10
No 17Le16 - 0°00	No 07Le55 - 0°00
Coords: 151W/19S	

Aug 7, 1869 10:01 PM Total Solar



Jan 17, 1870 2:46 PM Total Umbral



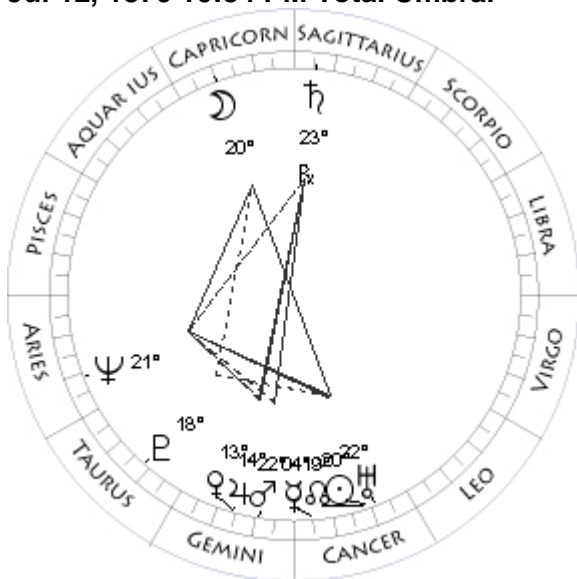
Jan 31, 1870 3:26 PM Partial Solar

Mo 15Le17 + 0°42	Mo 11Aq30 - 1°11
Su 15Le21 - 0°00	Su 11Aq37 - 0°00
Me 10Le41 + 1°35	Me 17Aq01 + 3°13R
Ve 09Vi45 + 1°24	Ve 12Pi51 + 4°49
Ma 11Li58 + 0°06	Ma 20Aq22 - 1°05
Ju 19Ta17 - 1°10	Ju 12Ta10 - 0°57
Sa 10Sa34 + 1°34R	Sa 25Sa13 + 1°13
Ur 19Cn23 + 0°25	Ur 19Cn03 + 0°29R
Ne 19Ar31 - 1°40R	Ne 17Ar07 - 1°38
Pl 17Ta57 -15°14	Pl 16Ta00 -15°13
No 07Le07 - 0°00	No 27Cn45 - 0°00
Coords: 133E/59N	

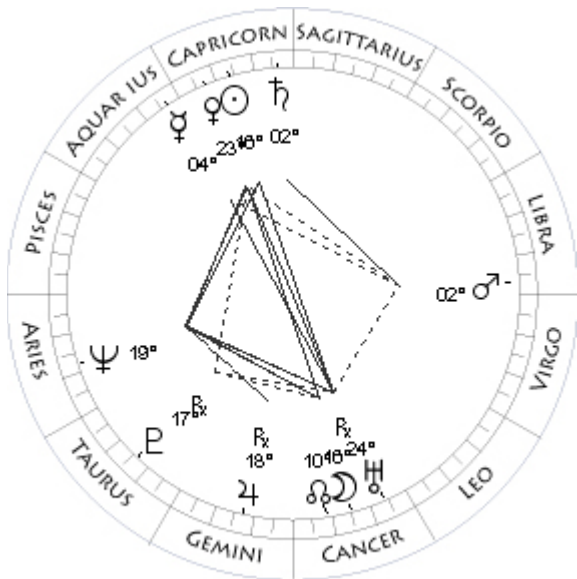
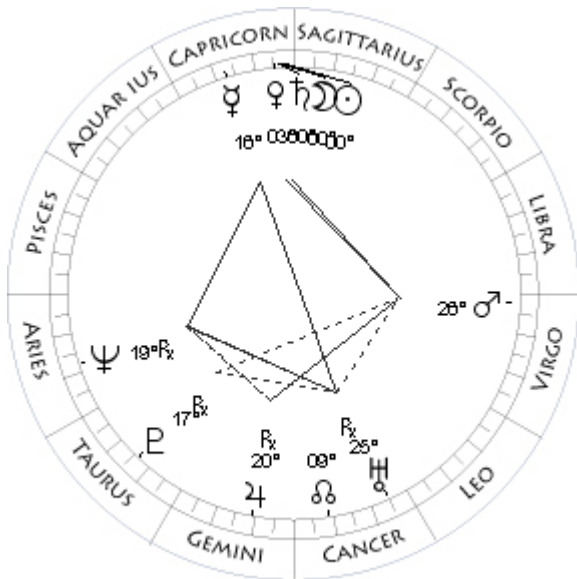
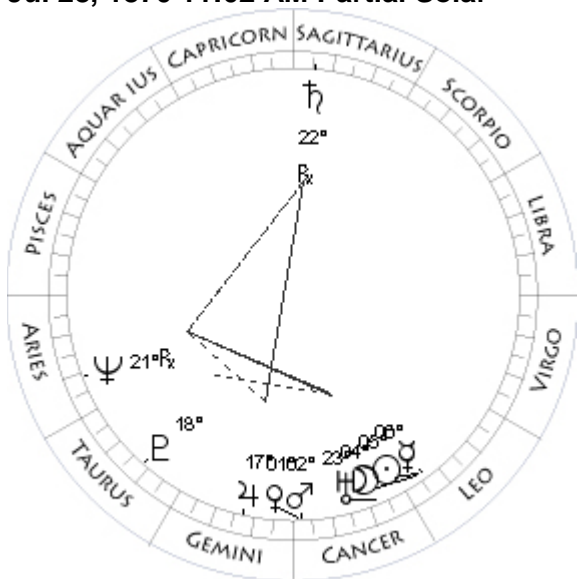
Jun 28, 1870 11:46 PM Partial Solar

Mo 27Cn22 - 0°06	Mo 07Cn06 - 1°06
Su 27Cp22 - 0°00	Su 07Cn00 - 0°00
Me 15Aq59 - 0°29	Me 15Ge20 - 3°13
Ve 08Pi12 + 1°54	Ve 27Ta36 - 2°11
Ma 09Aq17 - 1°06	Ma 12Ge28 + 0°09
Ju 11Ta15 - 1°01	Ju 11Ge41 - 0°36
Sa 23Sa50 + 1°13	Sa 24Sa21 + 1°15R
Ur 19Cn38 + 0°29R	Ur 21Cn17 + 0°28
Ne 16Ar54 - 1°39	Ne 21Ar38 - 1°39
Pl 16Ta02 -15°17R	Pl 18Ta30 -14°56
No 28Cn30 - 0°00	No 19Cn54 - 0°00
Coords: 141W/21N	

Jul 12, 1870 10:34 PM Total Umbral



Jul 28, 1870 11:02 AM Partial Solar



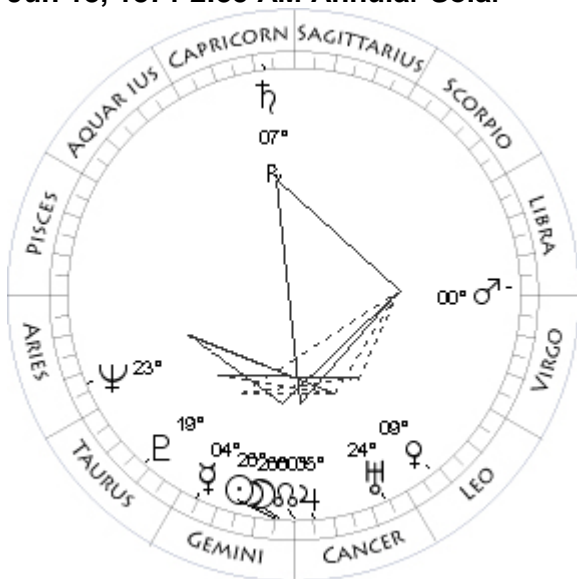
Dec 22, 1870 0:27 PM Total Solar

Mo 20Cp17 - 0°06	Mo 00Cp36 + 0°52
Su 20Cn18 - 0°00	Su 00Cp31 - 0°00
Me 04Cn47 - 0°21	Me 16Cp39 - 2°10
Ve 13Ge45 - 1°44	Ve 03Cp57 - 0°34
Ma 22Ge05 + 0°19	Ma 26Vi53 + 2°24
Ju 14Ge42 - 0°35	Ju 20Ge11 - 0°28R
Sa 23Sa25 + 1°13R	Sa 00Cp53 + 0°50
Ur 22Cn07 + 0°28	Ur 25Cn31 + 0°32R
Ne 21Ar47 - 1°40	Ne 19Ar02 - 1°42R
Pl 18Ta42 -14°59	Pl 17Ta13 -15°17R
No 19Cn09 - 0°00	No 10Cn33 - 0°00
Coords: 23W/22S	

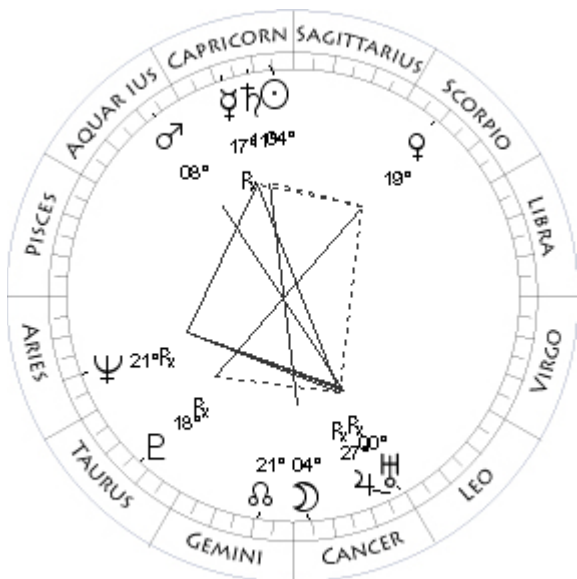
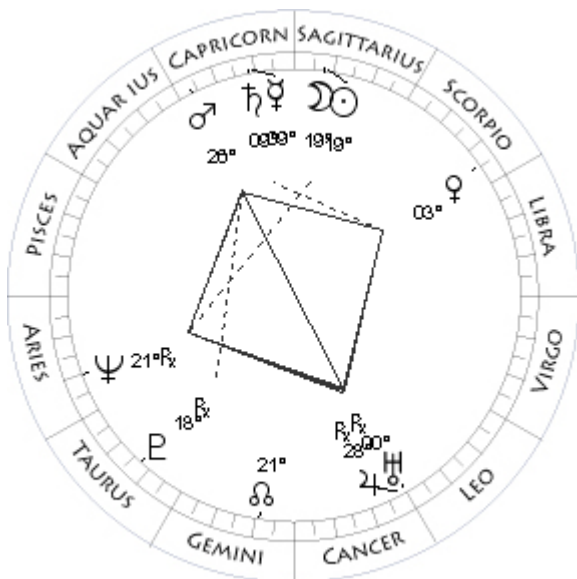
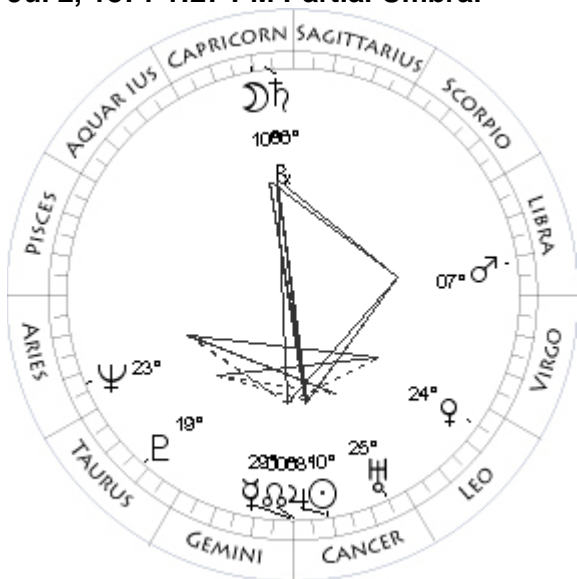
Jan 6, 1871 9:16 PM Partial Umbral

Mo 04Le58 + 1°26	Mo 16Cn07 + 0°34
Su 05Le07 - 0°00	Su 16Cp11 - 0°00
Me 06Le31 + 1°43	Me 04Aq10 + 0°05
Ve 01Cn59 - 1°02	Ve 23Cp16 - 1°04
Ma 02Cn34 + 0°29	Ma 02Li25 + 2°42
Ju 17Ge49 - 0°35	Ju 18Ge19 - 0°26R
Sa 22Sa35 + 1°11R	Sa 02Cp42 + 0°49
Ur 23Cn04 + 0°28	Ur 24Cn54 + 0°32R
Ne 21Ar50 - 1°41R	Ne 19Ar02 - 1°41
Pl 18Ta51 -15°03	Pl 17Ta03 -15°13R
No 18Cn20 - 0°00	No 09Cn44 - 0°00
Coords: 42W/23N	

Jun 18, 1871 2:35 AM Annular Solar



Jul 2, 1871 1:27 PM Partial Umbral



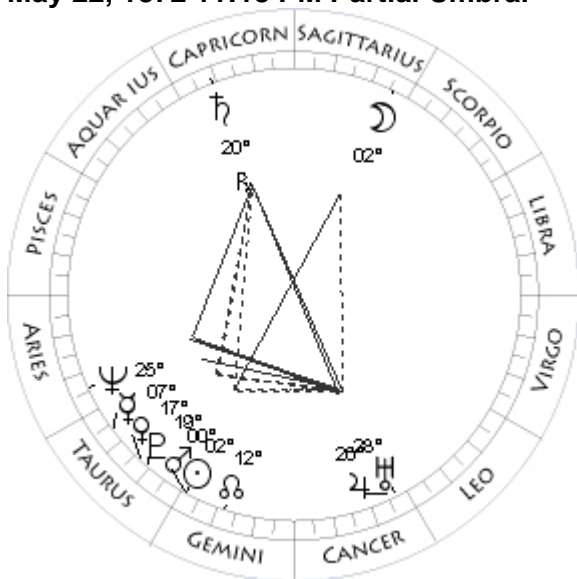
Dec 12, 1871 4:03 AM Total Solar

Mo 26Ge25 - 0°24	Mo 19Sa45 + 0°11
Su 26Ge23 - 0°00	Su 19Sa44 - 0°00
Me 04Ge34 - 2°34	Me 09Cp30 - 2°09
Ve 09Le25 + 2°03	Ve 03Sc02 + 2°38
Ma 00Li43 + 0°21	Ma 26Cp38 - 1°15
Ju 05Cn31 - 0°02	Ju 28Cn53 + 0°21R
Sa 07Cp22 + 0°47R	Sa 09Cp41 + 0°26
Ur 24Cn58 + 0°30	Ur 00Le40 + 0°34R
Ne 23Ar39 - 1°40	Ne 21Ar23 - 1°44R
Pl 19Ta14 -14°46	Pl 18Ta20 -15°12R
No 01Cn09 - 0°00	No 21Ge46 - 0°00
	Coords: 119W/13S

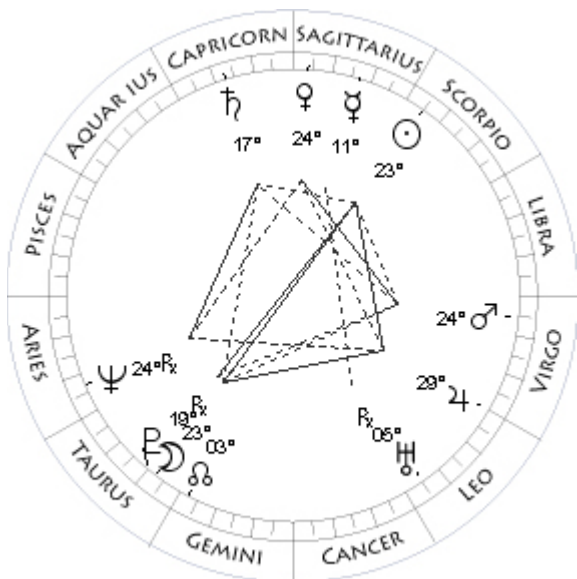
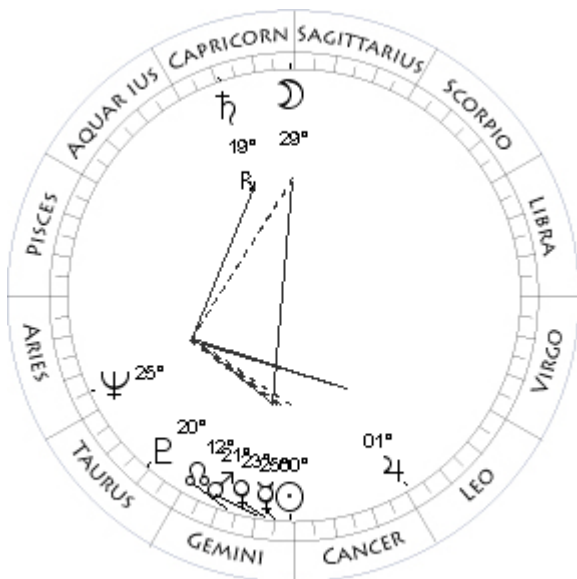
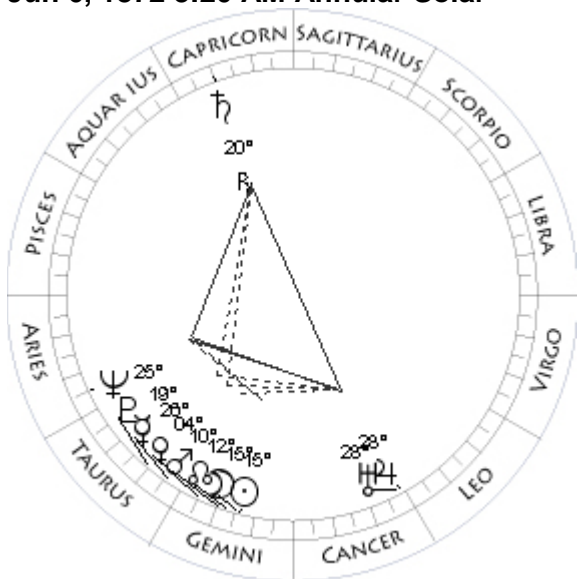
Dec 26, 1871 9:19 PM Partial Penumbral

Mo 10Cp04 - 0°51	Mo 04Cn37 + 1°10
Su 10Cn10 - 0°00	Su 04Cp44 - 0°00
Me 29Ge38 + 0°11	Me 17Cp51 + 0°45R
Ve 24Le56 + 1°26	Ve 19Sc01 + 2°51
Ma 07Li16 + 0°01	Ma 08Aq09 - 1°12
Ju 08Cn48 - 0°01	Ju 27Cn25 + 0°23R
Sa 06Cp19 + 0°45R	Sa 11Cp23 + 0°25
Ur 25Cn48 + 0°30	Ur 00Le10 + 0°35R
Ne 23Ar54 - 1°41	Ne 21Ar17 - 1°43R
Pl 19Ta29 -14°49	Pl 18Ta08 -15°08R
No 00Cn23 - 0°00	No 20Ge59 - 0°00
	Coords: 40W/25N

May 22, 1872 11:18 PM Partial Umbral



Jun 6, 1872 3:20 AM Annular Solar



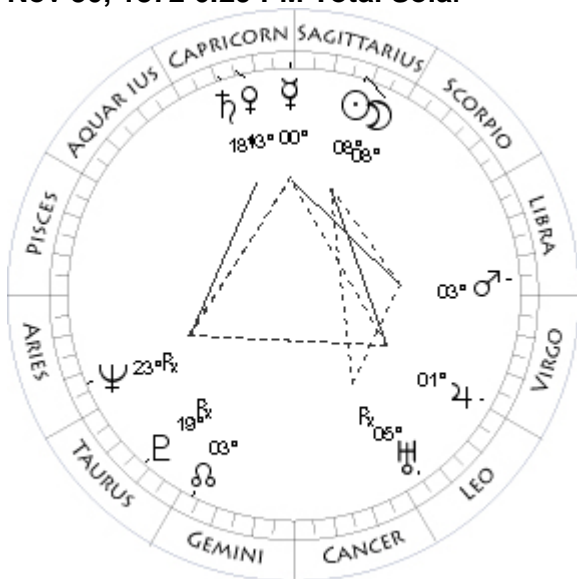
Jun 21, 1872 6:42 AM Partial Penumbral

Mo 02Sa11 + 0°57	Mo 29Sa58 - 1°35
Su 02Ge06 - 0°00	Su 00Cn08 - 0°00
Me 07Ta06 - 3°27	Me 25Ge40 + 0°40
Ve 17Ta22 - 1°07	Ve 23Ge16 - 0°03
Ma 00Ge46 + 0°13	Ma 21Ge08 + 0°30
Ju 26Cn20 + 0°32	Ju 01Le51 + 0°32
Sa 20Cp51 + 0°17R	Sa 19Cp18 + 0°15R
Ur 28Cn08 + 0°33	Ur 29Cn33 + 0°33
Ne 25Ar10 - 1°40	Ne 25Ar56 - 1°41
Pl 19Ta38 -14°35	Pl 20Ta14 -14°38
No 13Ge09 - 0°00	No 11Ge36 - 0°00
Coords: 10W/20S	Coords: 101E/25S

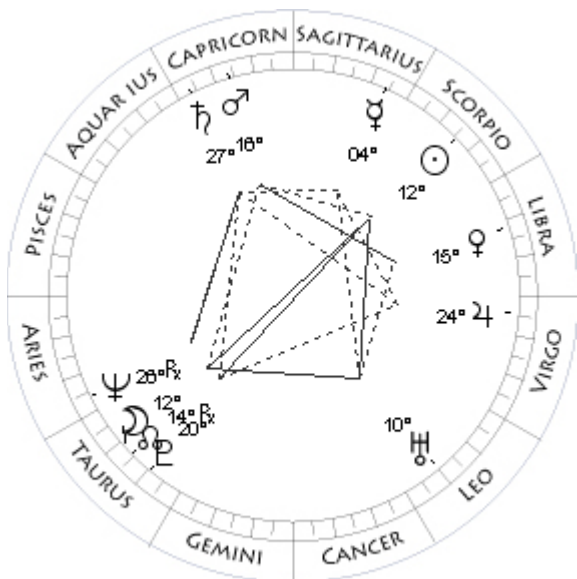
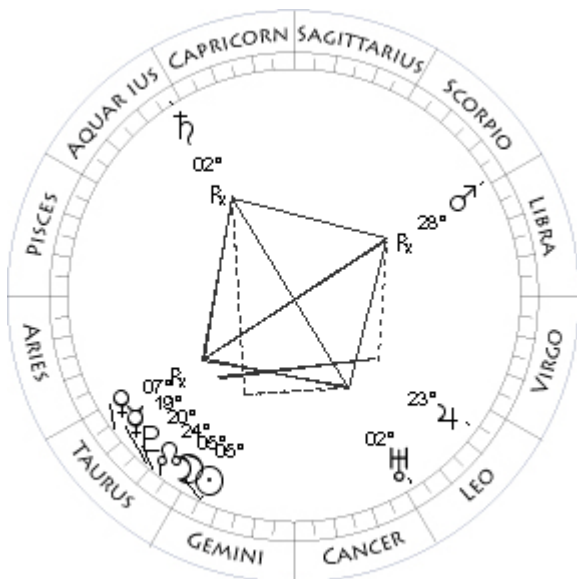
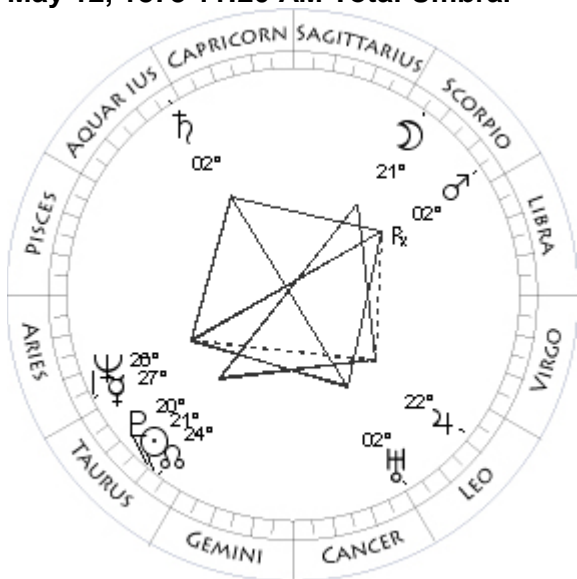
Nov 15, 1872 5:19 AM Partial Umbral

Mo 15Ge39 + 0°17	Mo 23Ta17 - 0°56
Su 15Ge40 - 0°00	Su 23Sc12 - 0°00
Me 26Ta03 - 2°02	Me 11Sa21 - 2°18
Ve 04Ge43 - 0°39	Ve 24Sa34 - 1°28
Ma 10Ge42 + 0°22	Ma 24Vi16 + 1°35
Ju 28Cn53 + 0°32	Ju 29Le54 + 0°50
Sa 20Cp13 + 0°16R	Sa 17Cp15 + 0°02
Ur 28Cn46 + 0°33	Ur 05Le52 + 0°36R
Ne 25Ar35 - 1°40	Ne 24Ar09 - 1°46R
Pl 19Ta56 -14°36	Pl 19Ta45 -15°07R
No 12Ge24 - 0°00	No 03Ge49 - 0°00
Coords: 125W/40N	

Nov 30, 1872 6:29 PM Total Solar



May 12, 1873 11:20 AM Total Umbral



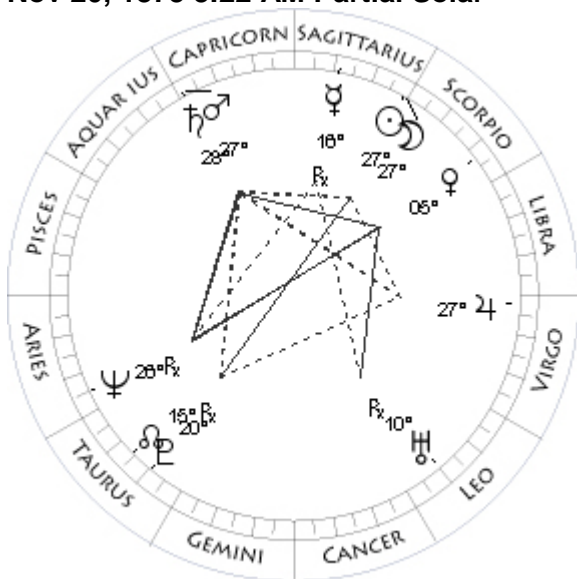
May 26, 1873 9:09 AM Partial Solar

Mo 08Sa52 - 0°30	Mo 05Ge02 + 1°00
Su 08Sa56 - 0°00	Su 05Ge08 - 0°00
Me 00Cp05 - 2°04	Me 19Ta25 - 1°33
Ve 13Cp38 - 1°54	Ve 07Ta03 - 0°19R
Ma 03Li08 + 1°40	Ma 28Li45 - 0°15R
Ju 01Vi03 + 0°54	Ju 23Le41 + 1°03
Sa 18Cp42 + 0°01	Sa 02Aq34 - 0°14R
Ur 05Le42 + 0°37R	Ur 02Le44 + 0°36
Ne 23Ar50 - 1°46R	Ne 27Ar26 - 1°41
Pl 19Ta28 -15°05R	Pl 20Ta38 -14°27
No 02Ge59 - 0°00	No 23Ta38 - 0°00
Coords: 112E/51S	

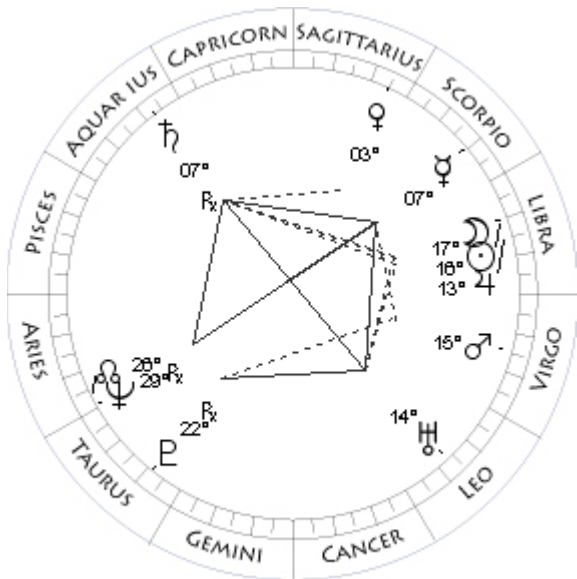
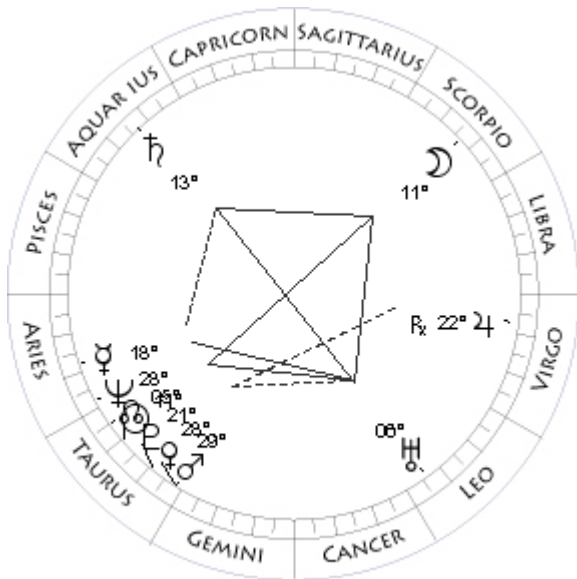
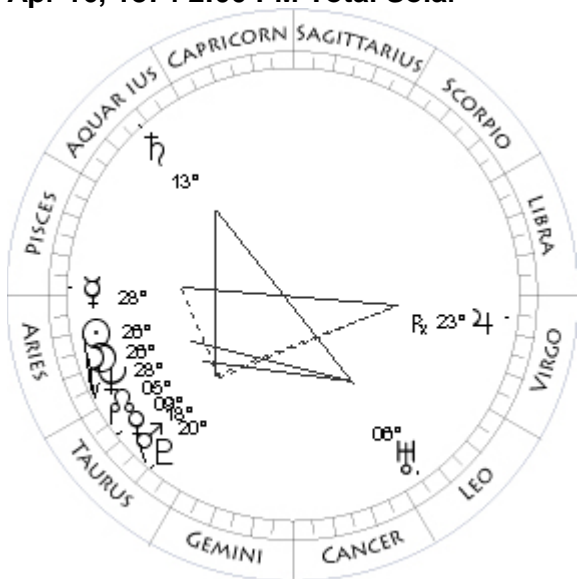
Nov 4, 1873 3:51 PM Total Umbral

Mo 21Sc46 + 0°13	Mo 12Ta21 - 0°14
Su 21Ta46 - 0°00	Su 12Sc20 - 0°00
Me 27Ar00 - 3°01	Me 04Sa14 - 2°35
Ve 11Ta13 + 2°48R	Ve 15Li52 + 1°40
Ma 02Sc06 + 0°21R	Ma 16Cp02 - 1°42
Ju 22Le25 + 1°05	Ju 24Vi32 + 1°05
Sa 02Aq44 - 0°13	Sa 27Cp07 - 0°26
Ur 02Le15 + 0°36	Ur 10Le30 + 0°38
Ne 26Ar59 - 1°41	Ne 26Ar44 - 1°48R
Pl 20Ta19 -14°27	Pl 20Ta55 -14°58R
No 24Ta22 - 0°00	No 15Ta03 - 0°00
Coords: 171E/18S	

Nov 20, 1873 3:22 AM Partial Solar



Apr 16, 1874 2:00 PM Total Solar



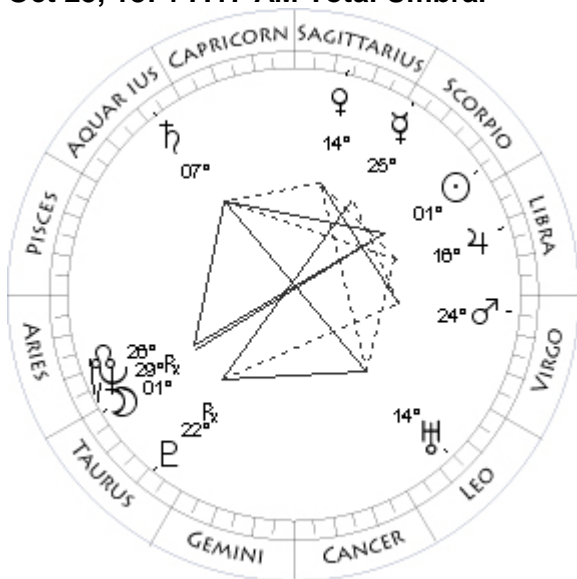
May 1, 1874 4:03 PM Partial Umbral

Mo 27Sc48 - 1°10	Mo 11Sc02 - 0°29
Su 27Sc56 - 0°00	Su 11Ta05 - 0°00
Me 16Sa58 - 1°53R	Me 18Ar45 - 2°40
Ve 05Sc07 + 1°32	Ve 28Ta01 + 0°10
Ma 27Cp42 - 1°32	Ma 29Ta23 + 0°27
Ju 27Vi05 + 1°08	Ju 22Vi17 + 1°29R
Sa 28Cp09 - 0°26	Sa 13Aq53 - 0°40
Ur 10Le33 + 0°38R	Ur 06Le34 + 0°39
Ne 26Ar21 - 1°47R	Ne 28Ar45 - 1°41
Pl 20Ta38 -14°58R	Pl 21Ta00 -14°19
No 14Ta13 - 0°00	No 05Ta37 - 0°00
Coords: 118W/16S	

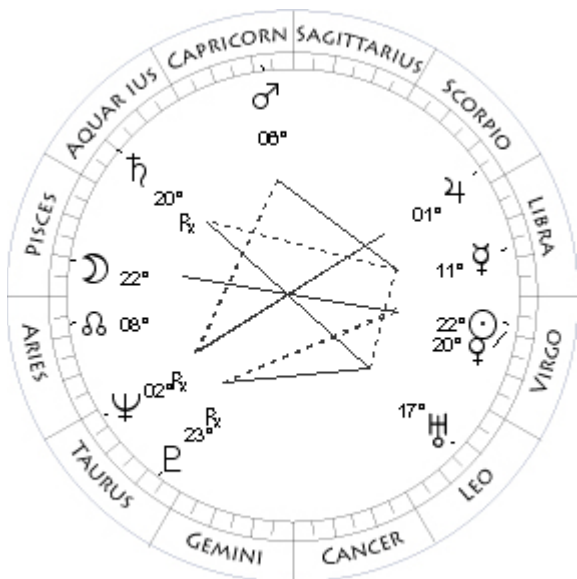
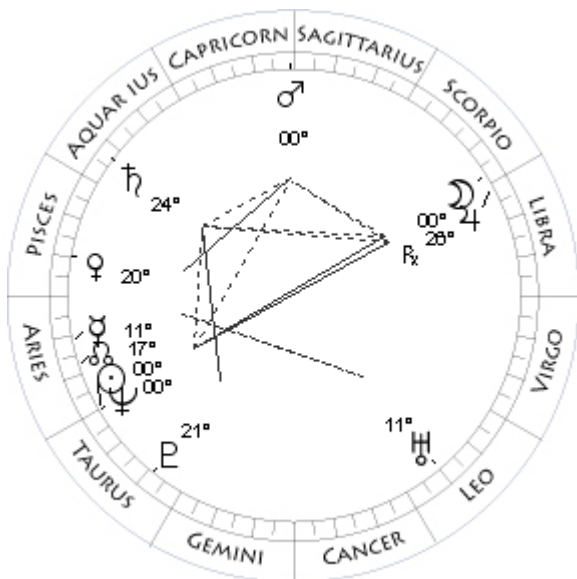
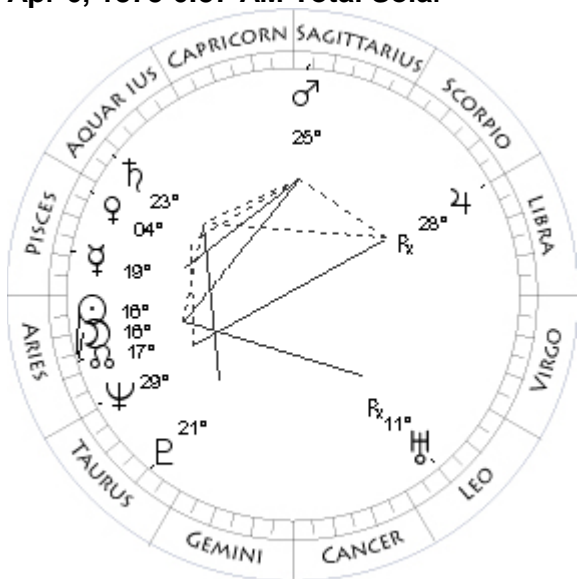
Oct 10, 1874 11:13 AM Partial Solar

Mo 26Ar28 - 0°51	Mo 17Li04 + 0°53
Su 26Ar24 - 0°00	Su 16Li59 - 0°00
Me 28Pi58 - 2°22	Me 07Sc56 - 1°46
Ve 09Ta28 - 0°27	Ve 03Sa01 - 4°12
Ma 18Ta46 + 0°18	Ma 15Vi15 + 1°15
Ju 23Vi23 + 1°32R	Ju 13Li13 + 1°06
Sa 13Aq10 - 0°38	Sa 07Aq40 - 0°54R
Ur 06Le26 + 0°39	Ur 14Le30 + 0°39
Ne 28Ar11 - 1°41	Ne 29Ar45 - 1°48R
Pl 20Ta40 -14°21	Pl 22Ta19 -14°47R
No 06Ta25 - 0°00	No 27Ar03 - 0°00

Oct 25, 1874 7:17 AM Total Umbra



Apr 6, 1875 6:37 AM Total Solar



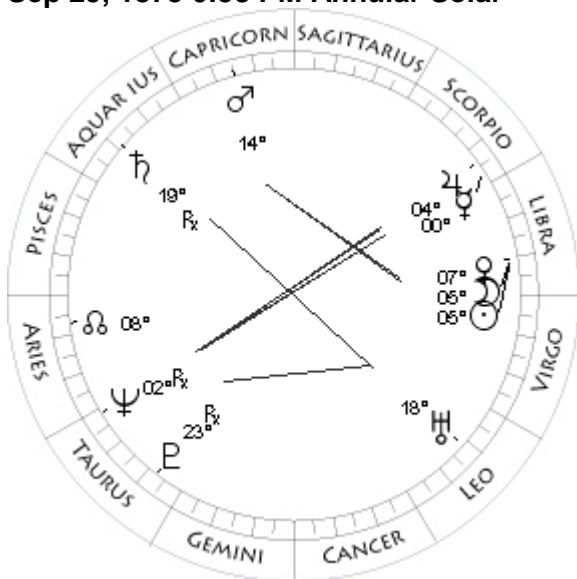
Apr 20, 1875 4:15 PM Partial Penumbra

Mo 01Ta41 + 0°27	Mo 00Sc03 - 1°09
Su 01Sc44 - 0°00	Su 00Ta10 - 0°00
Me 25Sc42 - 2°55	Me 11Ar32 - 2°22
Ve 14Sa58 - 4°53	Ve 20Pi57 - 1°14
Ma 24Vi30 + 1°16	Ma 00Cp12 - 0°27
Ju 16Li24 + 1°07	Ju 26Li21 + 1°32R
Sa 07Aq48 - 0°54	Sa 24Aq23 - 1°04
Ur 14Le57 + 0°39	Ur 11Le08 + 0°41
Ne 29Ar20 - 1°49R	Ne 00Ta29 - 1°42
Pl 22Ta04 -14°49R	Pl 21Ta40 -14°11
No 26Ar16 - 0°00	No 16Ar52 - 0°00
Coords: 113E/12N	Coords: 115W/13S

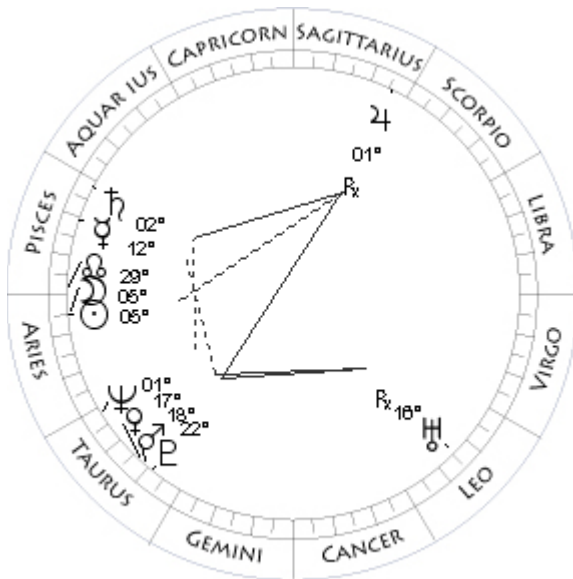
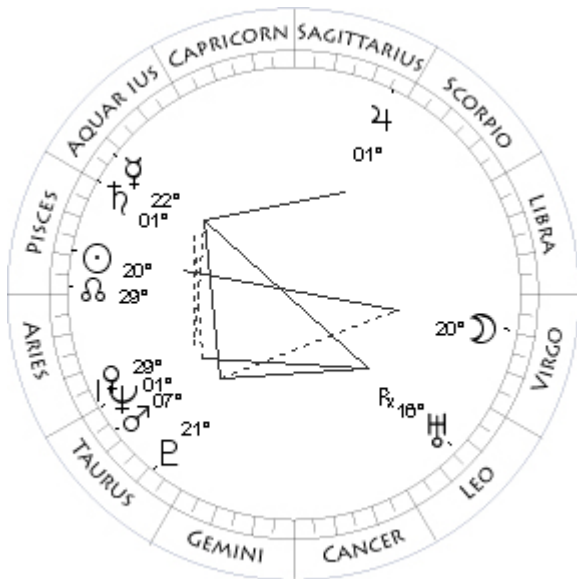
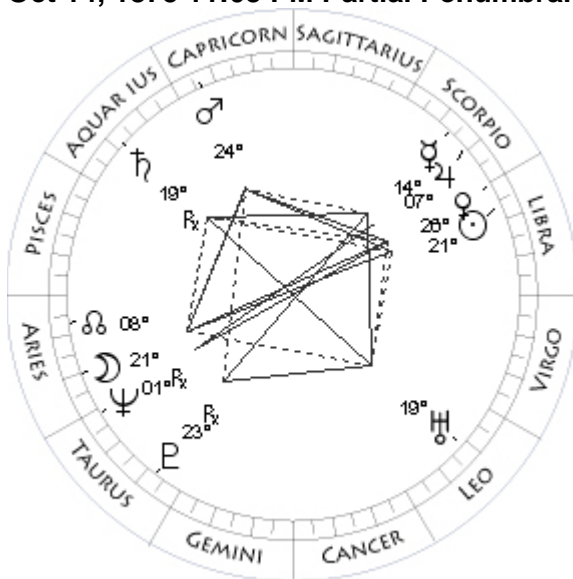
Sep 15, 1875 0:57 PM Partial Penumbra

Mo 16Ar04 - 0°08	Mo 22Pi23 - 1°27
Su 16Ar04 - 0°00	Su 22Vi15 - 0°00
Me 19Pi40 - 2°20	Me 11Li03 - 0°24
Ve 04Pi11 - 0°29	Ve 20Vi10 + 1°25
Ma 25Sa22 + 0°02	Ma 06Cp55 - 3°30
Ju 28Li10 + 1°32R	Ju 01Sc33 + 1°00
Sa 23Aq14 - 1°02	Sa 20Aq36 - 1°25R
Ur 11Le12 + 0°41R	Ur 17Le51 + 0°39
Ne 29Ar57 - 1°42	Ne 02Ta39 - 1°48R
Pl 21Ta23 -14°14	Pl 23Ta34 -14°32R
No 17Ar38 - 0°00	No 09Ar02 - 0°00

Sep 29, 1875 0:58 PM Annular Solar



Oct 14, 1875 11:03 PM Partial Penumbral



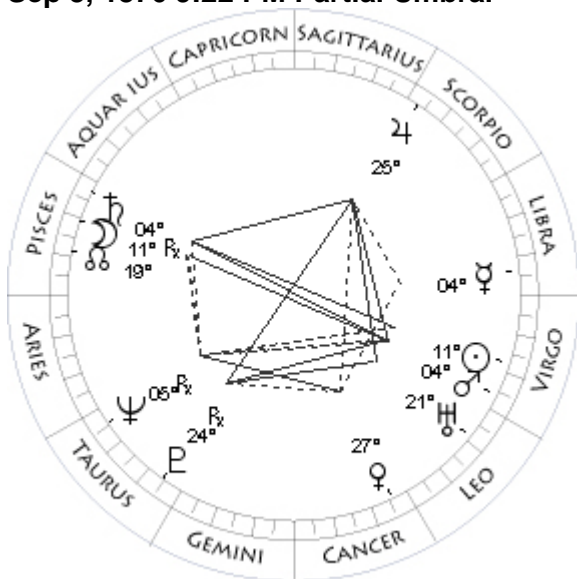
Mar 10, 1876 6:21 AM Partial Umbral

Mo 05Li59 + 0°13	Mo 20Vi08 + 0°49
Su 05Li58 - 0°00	Su 20Pi04 - 0°00
Me 00Sc19 - 2°09	Me 22Aq33 - 0°41
Ve 07Li37 + 1°18	Ve 29Ar03 + 0°31
Ma 14Cp40 - 3°05	Ma 07Ta57 + 0°27
Ju 04Sc20 + 0°59	Ju 01Sa55 + 1°02
Sa 19Aq55 - 1°24R	Sa 01Pi09 - 1°21
Ur 18Le33 + 0°40	Ur 16Le38 + 0°44R
Ne 02Ta20 - 1°49R	Ne 01Ta13 - 1°43
Pl 23Ta25 -14°36R	Pl 21Ta54 -14°11
No 08Ar18 - 0°00	No 29Pi41 - 0°00

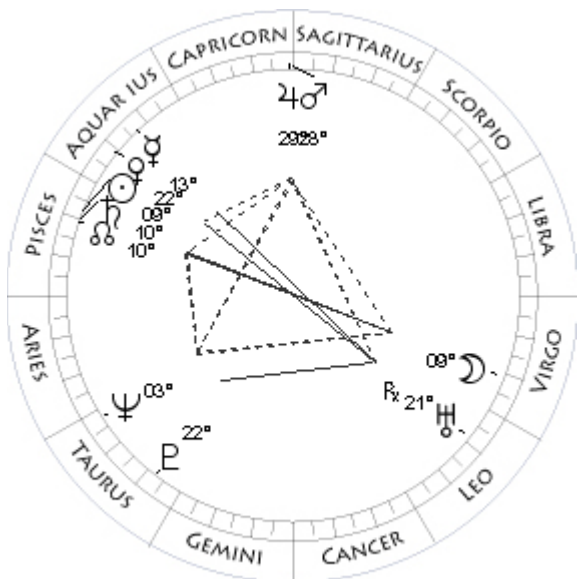
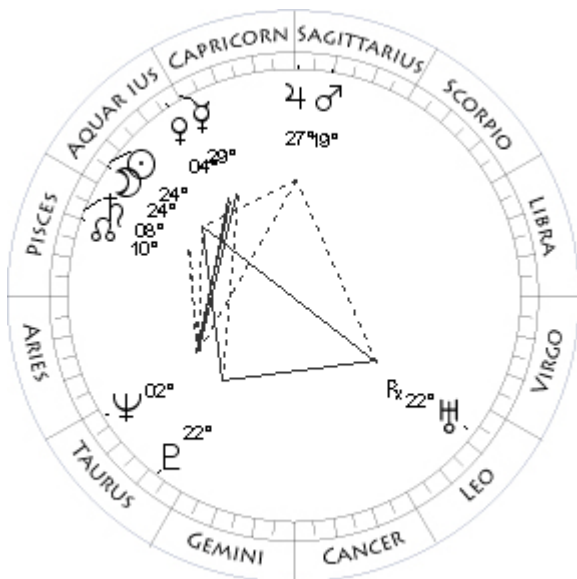
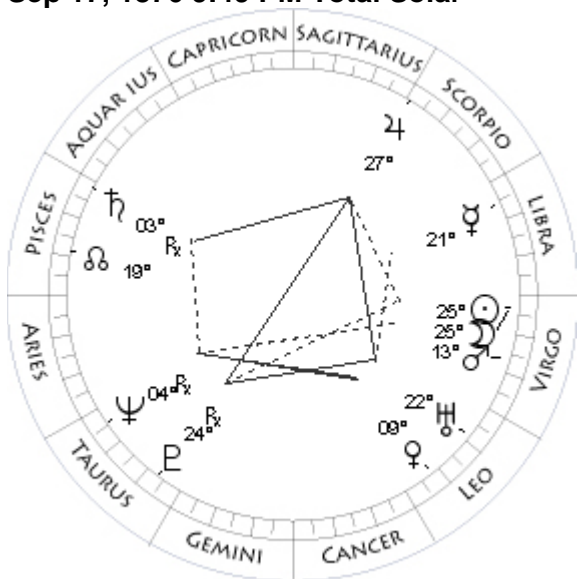
Mar 25, 1876 8:04 PM Total Solar

Mo 21Ar05 + 1°09	Mo 05Ar28 + 0°35
Su 21Li12 - 0°00	Su 05Ar32 - 0°00
Me 14Sc23 - 3°16	Me 12Pi14 - 2°17
Ve 26Li53 + 0°56	Ve 17Ta10 + 1°30
Ma 24Cp08 - 2°37	Ma 18Ta42 + 0°36
Ju 07Sc34 + 0°57	Ju 01Sa54 + 1°04R
Sa 19Aq29 - 1°24R	Sa 02Pi55 - 1°23
Ur 19Le12 + 0°40	Ur 16Le11 + 0°44R
Ne 01Ta56 - 1°49R	Ne 01Ta44 - 1°43
Pl 23Ta13 -14°38R	Pl 22Ta07 -14°07
No 07Ar29 - 0°00	No 28Pi52 - 0°00
Coords: 10W/ 9N	Coords: 141E/35N

Sep 3, 1876 9:22 PM Partial Umbral



Sep 17, 1876 9:49 PM Total Solar



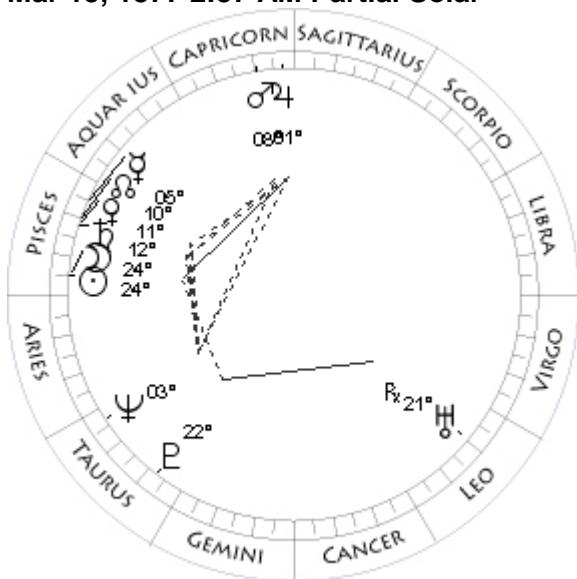
Feb 13, 1877 9:16 AM Partial Solar

Mo 11Pi44 - 0°45	Mo 24Aq58 - 1°25
Su 11Vi40 - 0°00	Su 24Aq51 - 0°00
Me 04Li39 - 0°46	Me 29Cp44 + 1°27
Ve 27Cn19 - 3°55	Ve 04Aq05 - 0°32
Ma 04Vi29 + 1°08	Ma 19Sa26 + 0°08
Ju 25Sc15 + 0°42	Ju 27Sa33 + 0°25
Sa 04Pi09 - 1°52R	Sa 08Pi46 - 1°40
Ur 21Le41 + 0°41	Ur 22Le35 + 0°46R
Ne 05Ta08 - 1°48R	Ne 02Ta48 - 1°45
Pl 24Ta34 -14°20R	Pl 22Ta38 -14°10
No 20Pi17 - 0°00	No 11Pi40 - 0°00

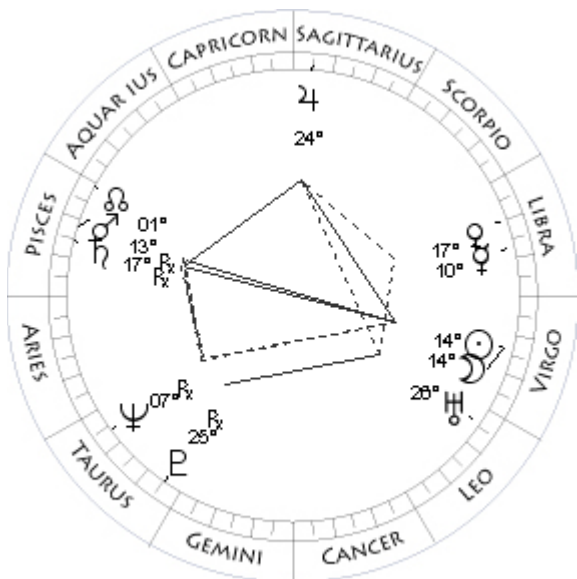
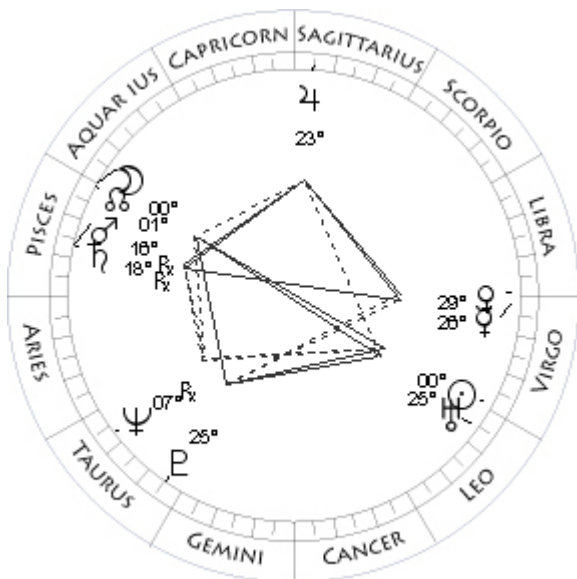
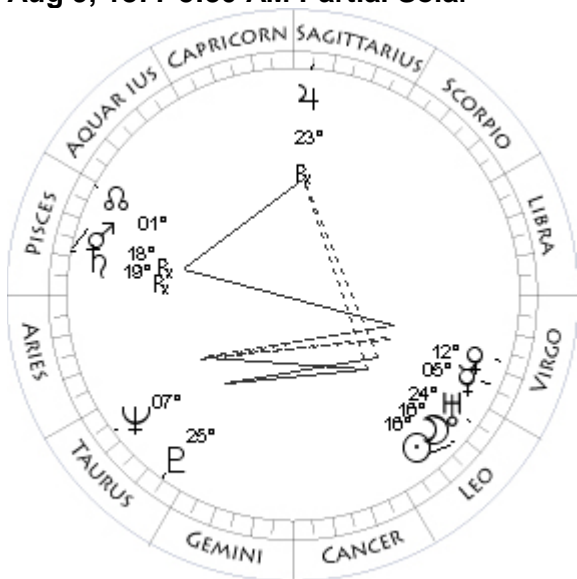
Feb 27, 1877 7:15 PM Total Umbral

Mo 25Vi15 - 0°30	Mo 09Vi22 + 0°07
Su 25Vi18 - 0°00	Su 09Pi21 - 0°00
Me 21Li39 - 2°40	Me 13Aq35 - 0°59
Ve 09Le20 - 2°22	Ve 22Aq01 - 1°02
Ma 13Vi24 + 1°07	Ma 28Sa50 - 0°05
Ju 27Sc13 + 0°39	Ju 29Sa47 + 0°25
Sa 03Pi09 - 1°52R	Sa 10Pi31 - 1°41
Ur 22Le30 + 0°41	Ur 21Le58 + 0°46R
Ne 04Ta53 - 1°49R	Ne 03Ta07 - 1°44
Pl 24Ta29 -14°24R	Pl 22Ta43 -14°06
No 19Pi32 - 0°00	No 10Pi55 - 0°00
Coords: 164E/24S	Coords: 75W/ 8N

Mar 15, 1877 2:37 AM Partial Solar



Aug 9, 1877 5:30 AM Partial Solar



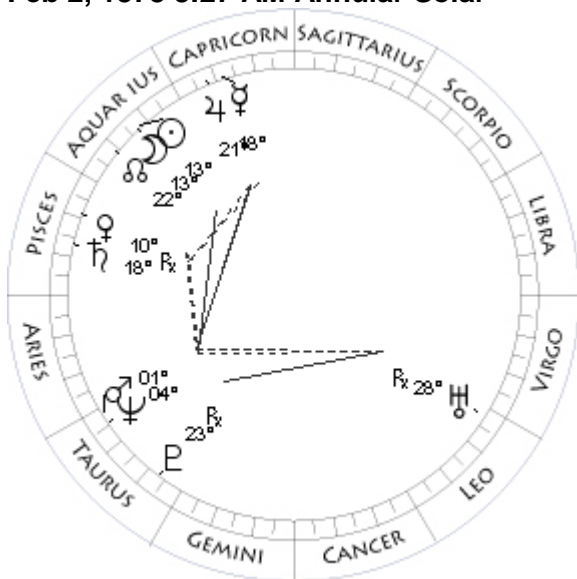
Aug 23, 1877 11:12 PM Total Umbral

Mo 24Pi31 + 1°16	Mo 00Pi52 - 0°04
Su 24Pi39 - 0°00	Su 00Vi52 - 0°00
Me 05Pi33 - 2°13	Me 26Vi50 - 1°10
Ve 11Pi03 - 1°22	Ve 29Vi55 + 0°57
Ma 08Cp47 - 0°22	Ma 16Pi48 - 6°24R
Ju 01Cp41 + 0°24	Ju 23Sa48 + 0°08
Sa 12Pi23 - 1°42	Sa 18Pi11 - 2°14R
Ur 21Le23 + 0°46R	Ur 25Le27 + 0°42
Ne 03Ta33 - 1°44	Ne 07Ta31 - 1°48R
Pl 22Ta53 -14°01	Pl 25Ta32 -14°08
No 10Pi06 - 0°00	No 01Pi32 - 0°00
	Coords: 13W/11S

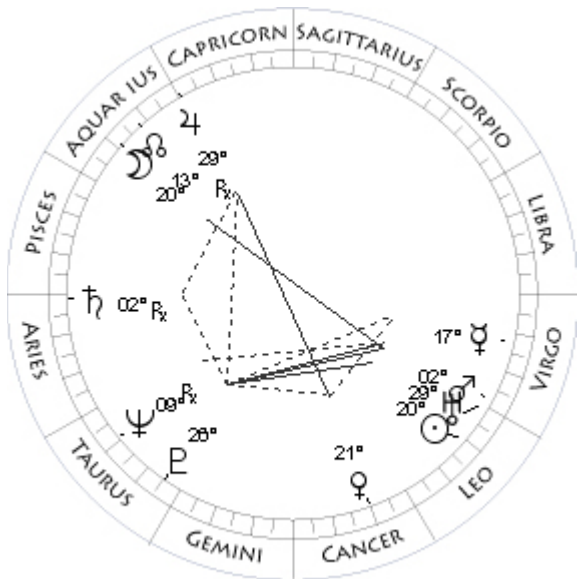
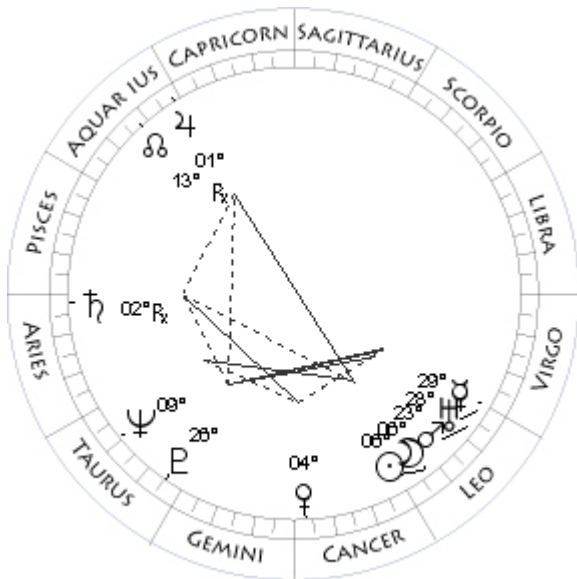
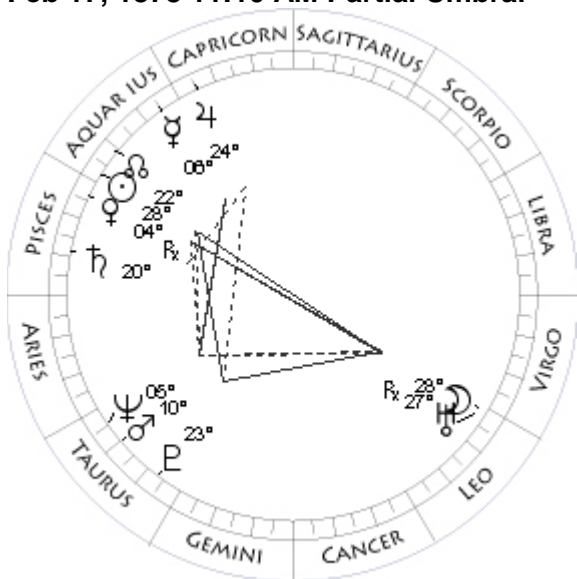
Sep 7, 1877 0:48 PM Partial Solar

Mo 16Le48 + 1°21	Mo 14Vi50 - 1°13
Su 16Le41 - 0°00	Su 14Vi58 - 0°00
Me 05Vi31 + 0°53	Me 10Li44 - 3°20
Ve 12Vi00 + 1°22	Ve 17Li32 + 0°19
Ma 18Pi48 - 6°06R	Ma 13Pi02 - 6°06R
Ju 23Sa59 + 0°10R	Ju 24Sa17 + 0°06
Sa 19Pi09 - 2°12R	Sa 17Pi06 - 2°15R
Ur 24Le32 + 0°42	Ur 26Le21 + 0°42
Ne 07Ta34 - 1°47	Ne 07Ta22 - 1°49R
Pl 25Ta30 -14°04	Pl 25Ta30 -14°11R
No 02Pi18 - 0°00	No 00Pi45 - 0°00

Feb 2, 1878 8:27 AM Annular Solar



Feb 17, 1878 11:10 AM Partial Umbral



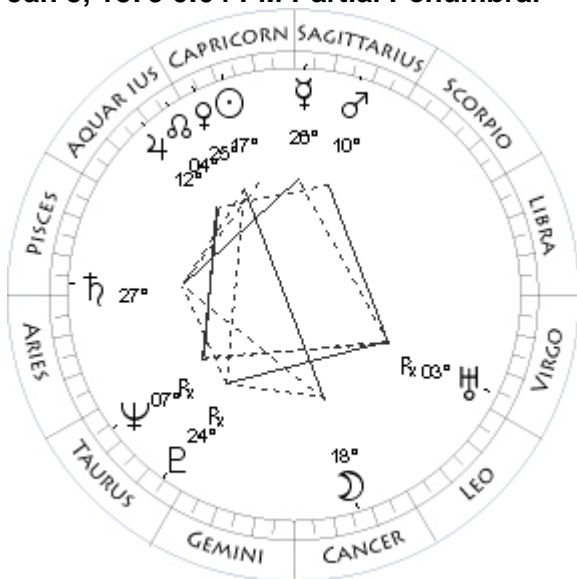
Jul 29, 1878 9:46 PM Total Solar

Mo 13Aq30 - 0°49	Mo 06Le37 + 0°37
Su 13Aq26 - 0°00	Su 06Le34 - 0°00
Me 18Cp00 + 0°56	Me 29Le36 + 0°35
Ve 10Pi30 + 5°32R	Ve 04Cn18 - 0°55
Ma 01Ta34 + 0°46	Ma 23Le12 + 1°09
Ju 21Cp36 - 0°10	Ju 01Aq39 - 0°39R
Sa 18Pi22 - 1°58	Sa 02Ar43 - 2°25R
Ur 28Le01 + 0°47R	Ur 28Le21 + 0°43
Ne 04Ta51 - 1°46	Ne 09Ta46 - 1°47
Pl 23Ta34 -14°05R	Pl 26Ta21 -13°51
No 22Aq56 - 0°00	No 13Aq32 - 0°00
Coords: 122W/68S	Coords: 124E/54N

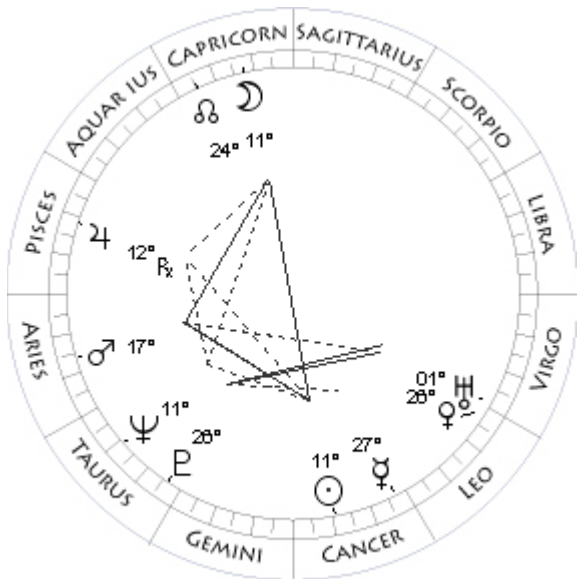
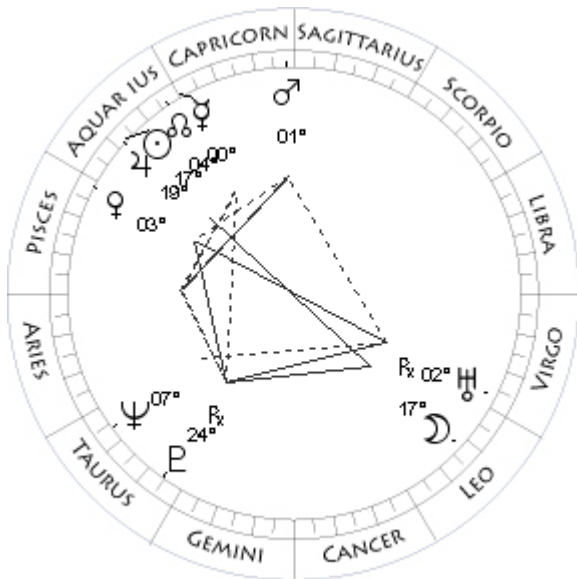
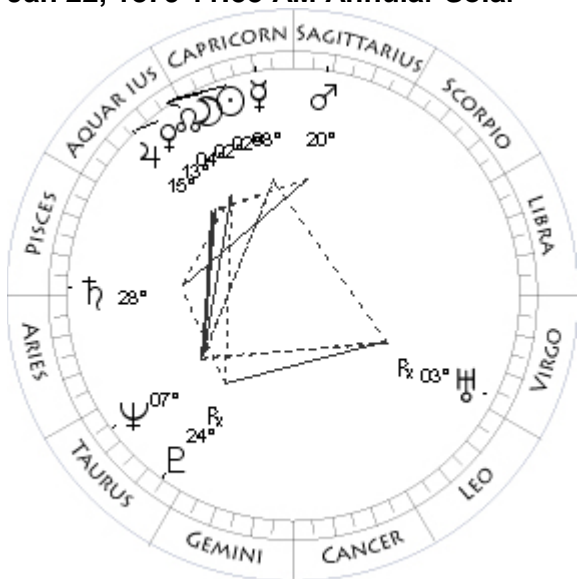
Aug 13, 1878 0:08 AM Partial Umbral

Mo 28Le39 - 0°35	Mo 20Aq01 + 0°37
Su 28Aq43 - 0°00	Su 20Le05 - 0°00
Me 06Aq30 - 1°13	Me 17Vi26 - 1°40
Ve 04Pi51 + 8°22R	Ve 21Cn10 - 0°13
Ma 10Ta58 + 0°56	Ma 02Vi07 + 1°06
Ju 24Cp55 - 0°11	Ju 29Cp55 - 0°41R
Sa 20Pi06 - 1°58	Sa 02Ar12 - 2°28R
Ur 27Le22 + 0°47R	Ur 29Le12 + 0°43
Ne 05Ta05 - 1°45	Ne 09Ta49 - 1°47R
Pl 23Ta35 -14°00	Pl 26Ta27 -13°55
No 22Aq08 - 0°00	No 12Aq47 - 0°00
Coords: 164E/11N	

Jan 8, 1879 0:04 PM Partial Penumbral



Jan 22, 1879 11:53 AM Annular Solar



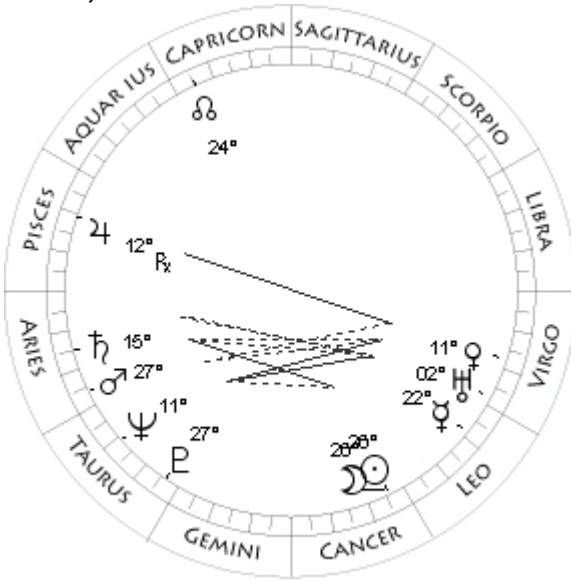
Feb 7, 1879 1:28 AM Partial Penumbral

Mo 18Cn02 + 1°27	Mo 17Le49 - 1°15
Su 17Cp54 - 0°00	Su 17Aq57 - 0°00
Me 26Sa14 + 2°40	Me 00Aq24 - 1°24
Ve 25Cp59 - 1°09	Ve 03Pi03 - 1°30
Ma 10Sa30 + 0°01	Ma 01Cp23 - 0°21
Ju 12Aq12 - 0°41	Ju 19Aq09 - 0°43
Sa 27Pi33 - 2°17	Sa 00Ar07 - 2°12
Ur 03Vi50 + 0°47R	Ur 02Vi48 + 0°48R
Ne 07Ta02 - 1°48R	Ne 07Ta08 - 1°46
Pl 24Ta40 -14°03R	Pl 24Ta31 -13°54R
No 04Aq55 - 0°00	No 03Aq21 - 0°00
Coords: 179E/24N	

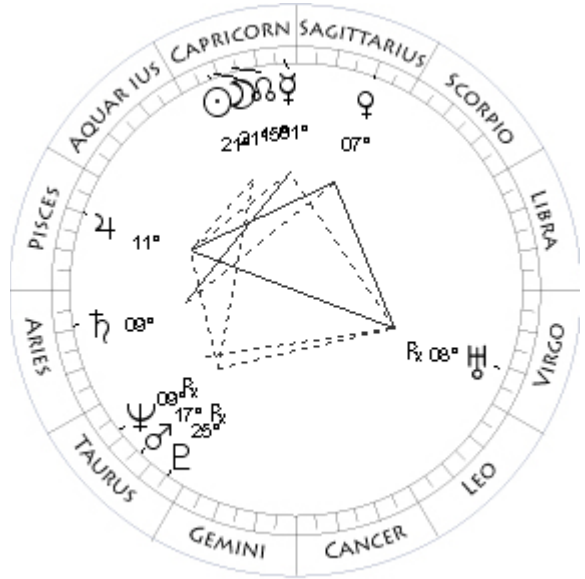
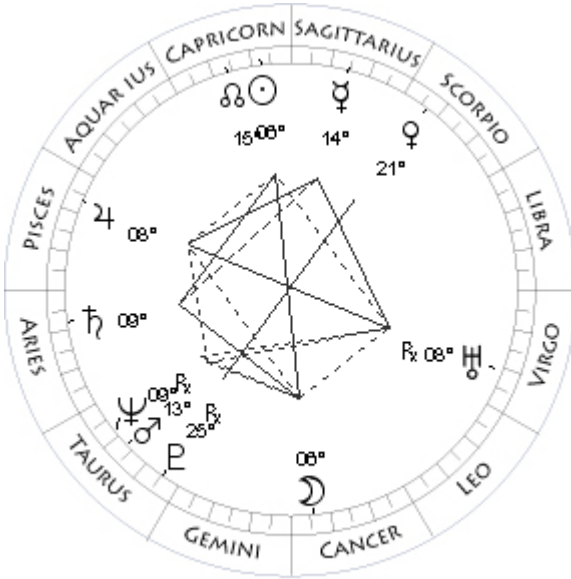
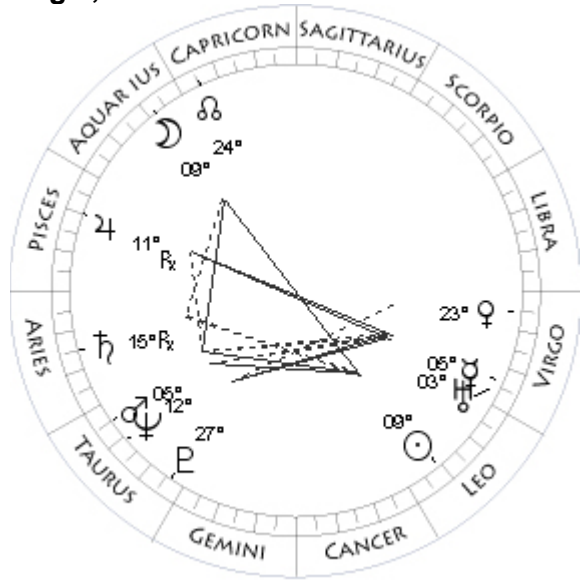
Jul 3, 1879 9:49 PM Partial Penumbral

Mo 02Aq10 - 0°10	Mo 11Cp38 - 1°12
Su 02Aq09 - 0°00	Su 11Cn32 - 0°00
Me 08Cp48 + 0°30	Me 27Cn50 + 1°51
Ve 13Aq33 - 1°25	Ve 26Le35 + 1°19
Ma 20Sa20 - 0°09	Ma 17Ar13 - 2°24
Ju 15Aq27 - 0°42	Ju 12Pi43 - 1°11R
Sa 28Pi38 - 2°14	Sa 15Ar17 - 2°25
Ur 03Vi24 + 0°48R	Ur 01Vi27 + 0°44
Ne 07Ta01 - 1°47	Ne 11Ta35 - 1°45
Pl 24Ta33 -13°59R	Pl 26Ta56 -13°36
No 04Aq11 - 0°00	No 25Cp34 - 0°00
Coords: 9W/30S	
Coords: 34W/24S	

Jul 19, 1879 9:04 AM Annular Solar



Aug 2, 1879 6:57 AM Partial Penumbral



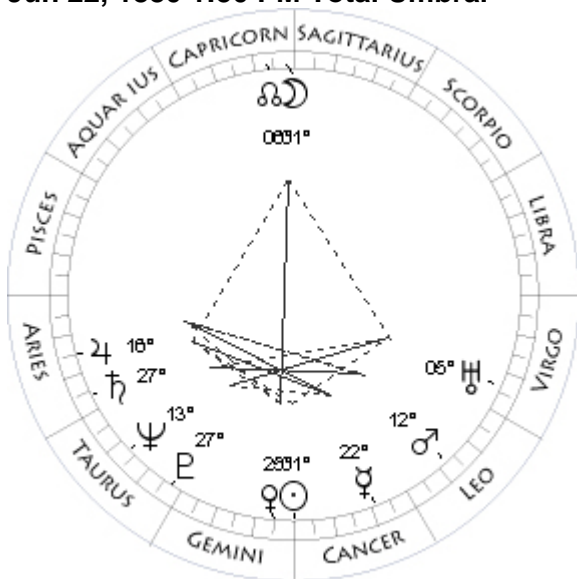
Dec 28, 1879 4:26 PM Partial Umbral

Mo 26Cn16 - 0°08	Mo 06Cn42 + 0°49
Su 26Cn17 - 0°00	Su 06Cp38 - 0°00
Me 22Le02 + 0°15	Me 14Sa13 + 2°08
Ve 11Vi48 + 0°02	Ve 21Sc23 + 2°47
Ma 27Ar16 - 2°30	Ma 13Ta59 + 1°43
Ju 12Pi15 - 1°16R	Ju 08Pi29 - 1°08
Sa 15Ar43 - 2°29	Sa 09Ar13 - 2°30
Ur 02Vi14 + 0°44	Ur 08Vi55 + 0°47R
Ne 11Ta53 - 1°46	Ne 09Ta24 - 1°49R
Pl 27Ta10 -13°39	Pl 25Ta45 -13°55R
No 24Cp45 - 0°00	No 16Cp10 - 0°00
Coords: 43W/13N	Coords: 114W/24N

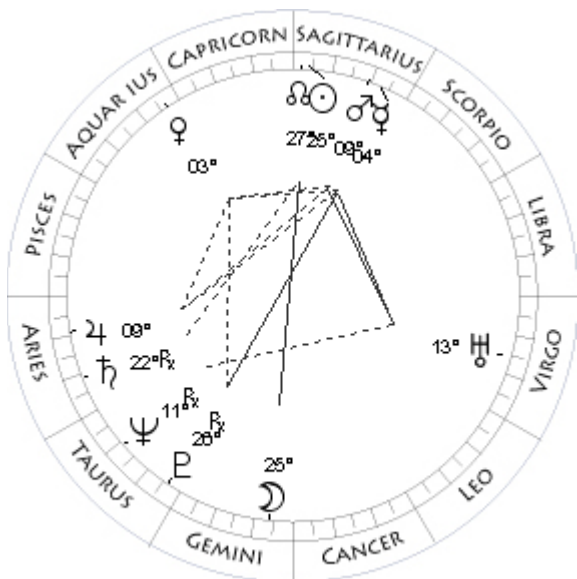
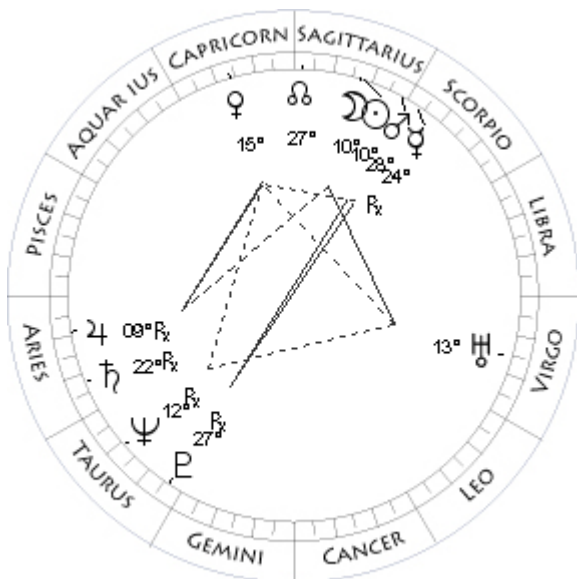
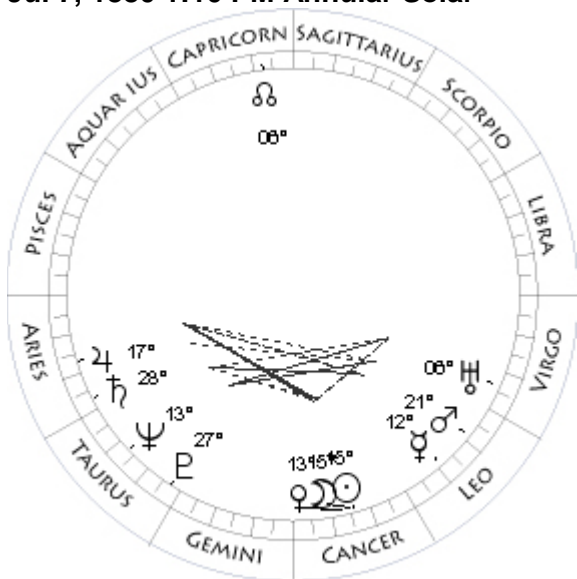
Jan 11, 1880 10:34 PM Total Solar

Mo 09Aq27 + 1°20	Mo 21Cp06 + 0°31
Su 09Le34 - 0°00	Su 21Cp09 - 0°00
Me 05Vi45 - 2°22	Me 01Cp32 + 0°07
Ve 23Vi49 - 1°37	Ve 07Sa48 + 2°29
Ma 05Ta42 - 2°32	Ma 17Ta06 + 1°51
Ju 11Pi13 - 1°19R	Ju 11Pi07 - 1°07
Sa 15Ar46 - 2°33R	Sa 09Ar49 - 2°26
Ur 03Vi01 + 0°43	Ur 08Vi38 + 0°48R
Ne 12Ta02 - 1°47	Ne 09Ta17 - 1°48R
Pl 27Ta19 -13°42	Pl 25Ta35 -13°52R
No 24Cp01 - 0°00	No 15Cp24 - 0°00
Coords: 103E/17S	Coords: 164E/ 8N

Jun 22, 1880 1:50 PM Total Umbral



Jul 7, 1880 1:10 PM Annular Solar



Dec 2, 1880 3:11 AM Partial Solar

Mo 01Cp29 - 0°27	Mo 10Sa31 - 1°32
Su 01Cn27 - 0°00	Su 10Sa23 - 0°00
Me 22Cn06 + 1°50	Me 24Sc16 + 2°37R
Ve 25Ge33 + 0°02	Ve 15Cp54 - 1°57
Ma 12Le32 + 1°17	Ma 28Sc42 - 0°03
Ju 16Ar09 - 1°16	Ju 09Ar37 - 1°27R
Sa 27Ar00 - 2°23	Sa 22Ar34 - 2°41R
Ur 05Vi36 + 0°45	Ur 13Vi39 + 0°46
Ne 13Ta32 - 1°44	Ne 12Ta11 - 1°50R
Pl 27Ta40 -13°24	Pl 27Ta08 -13°49R
No 06Cp48 - 0°00	No 28Sa11 - 0°00

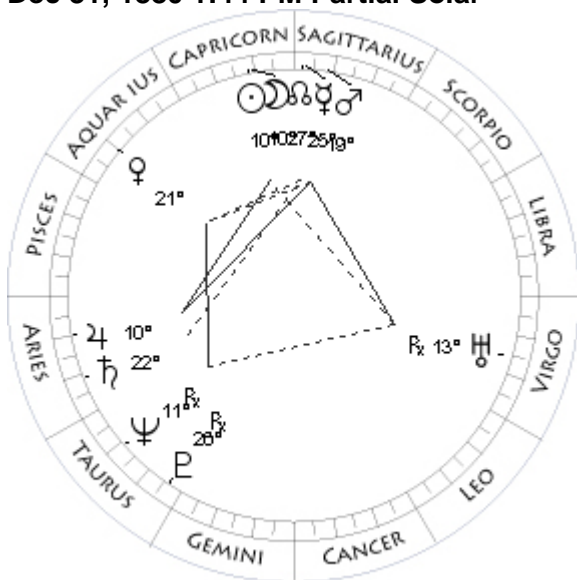
Coords: 153W/24S

Dec 16, 1880 3:39 PM Total Umbral

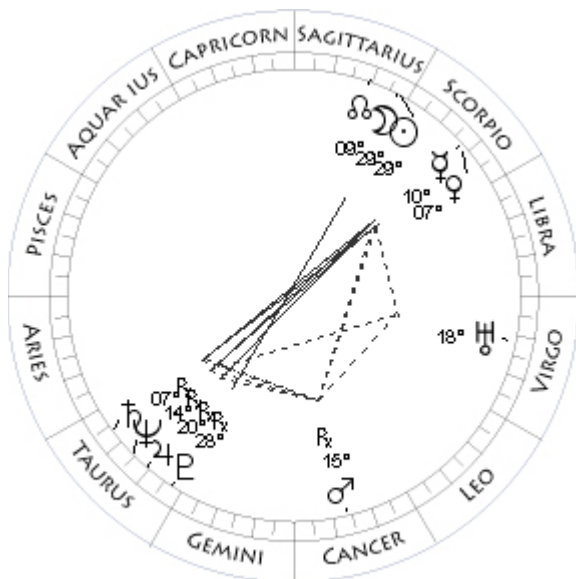
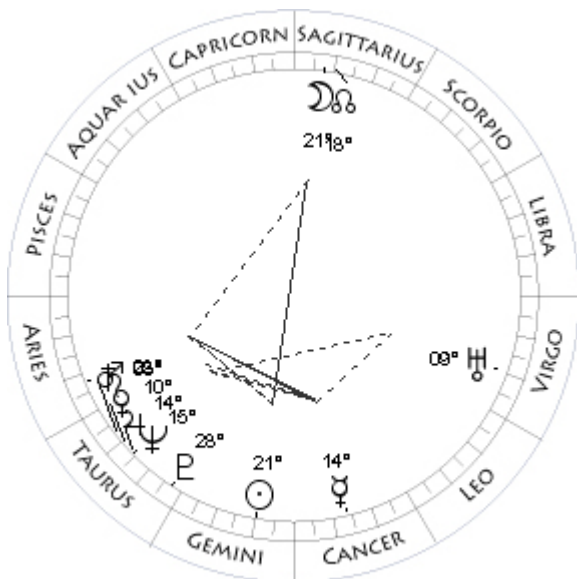
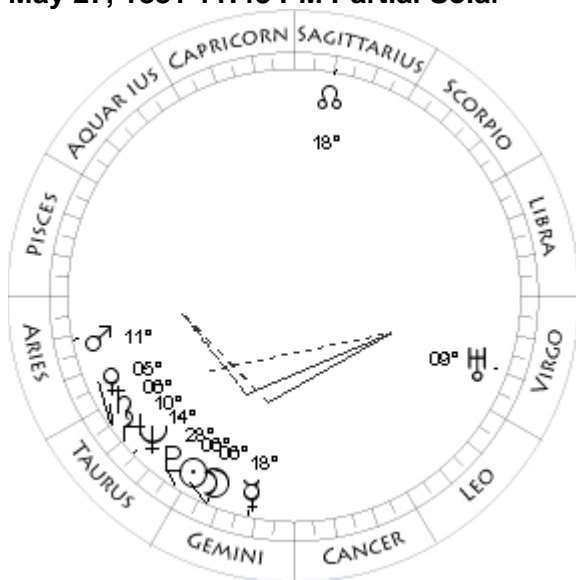
Mo 15Cn38 - 0°51	Mo 25Ge10 + 0°12
Su 15Cn43 - 0°00	Su 25Sa08 - 0°00
Me 12Le03 - 0°09	Me 04Sa40 + 1°42
Ve 13Cn56 + 0°37	Ve 03Aq32 - 2°03
Ma 21Le41 + 1°11	Ma 09Sa03 - 0°12
Ju 17Ar55 - 1°20	Ju 09Ar52 - 1°23
Sa 28Ar00 - 2°27	Sa 22Ar10 - 2°37R
Ur 06Vi12 + 0°45	Ur 13Vi47 + 0°47
Ne 13Ta53 - 1°45	Ne 11Ta52 - 1°49R
Pl 27Ta56 -13°26	Pl 26Ta53 -13°47R
No 06Cp00 - 0°00	No 27Sa25 - 0°00

Coords: 124W/24N

Dec 31, 1880 1:44 PM Partial Solar



May 27, 1881 11:48 PM Partial Solar



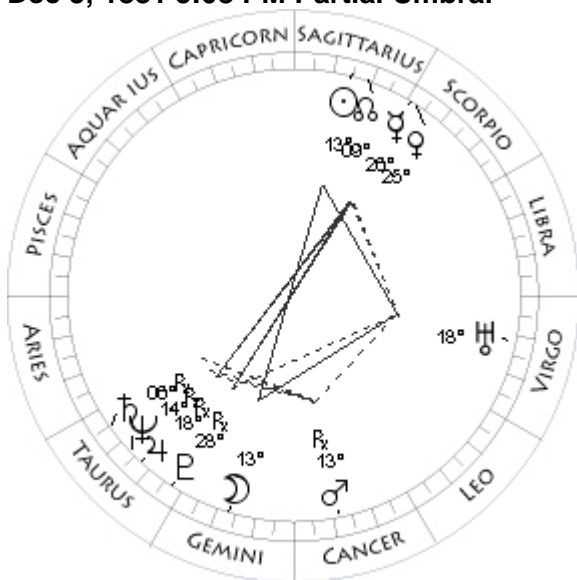
Jun 12, 1881 6:54 AM Total Umbral

Mo 10Cp13 + 1°11	Mo 21Sa22 + 0°18
Su 10Cp21 - 0°00	Su 21Ge24 - 0°00
Me 25Sa34 - 0°14	Me 14Cn46 + 1°46
Ve 21Aq27 - 1°47	Ve 10Ta36 - 2°41
Ma 19Sa52 - 0°22	Ma 23Ar03 - 1°26
Ju 10Ar52 - 1°18	Ju 14Ta17 - 1°00
Sa 22Ar09 - 2°33	Sa 08Ta11 - 2°16
Ur 13Vi42 + 0°47R	Ur 09Vi56 + 0°46
Ne 11Ta38 - 1°49R	Ne 15Ta24 - 1°44
Pl 26Ta40 -13°44R	Pl 28Ta23 -13°13
No 26Sa38 - 0°00	No 18Sa01 - 0°00
	Coords: 104E/23S

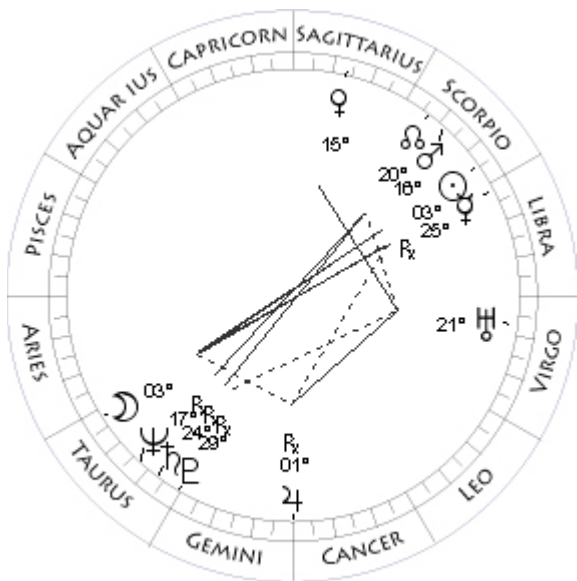
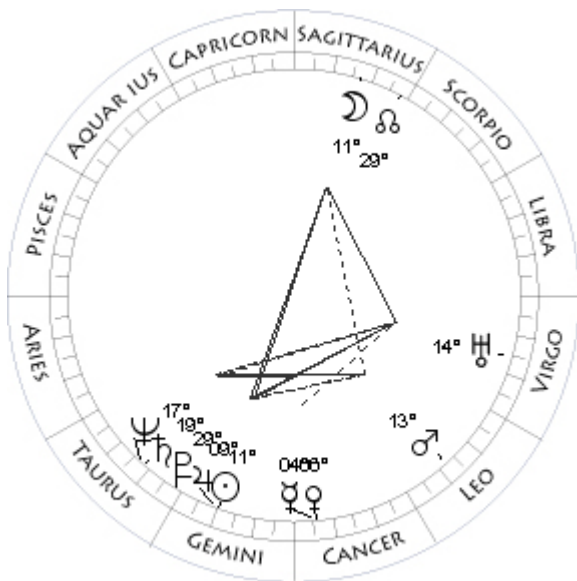
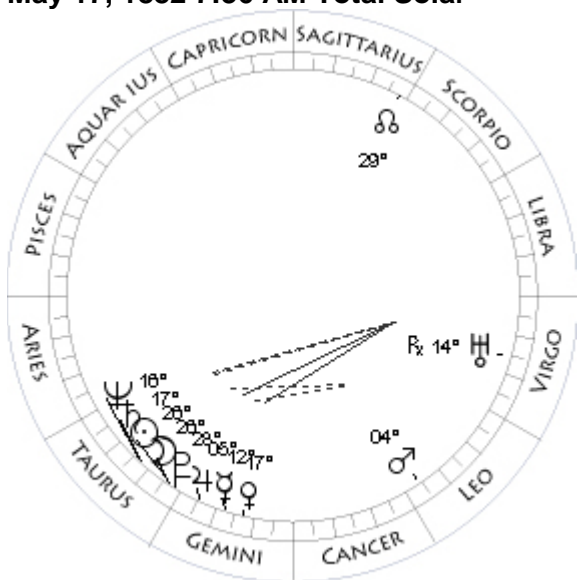
Nov 21, 1881 4:30 PM Annular Solar

Mo 06Ge51 + 1°02	Mo 29Sc38 - 0°52
Su 06Ge45 - 0°00	Su 29Sc33 - 0°00
Me 18Ge38 + 1°44	Me 10Sc10 + 2°28
Ve 05Ta04 - 0°46	Ve 07Sc43 + 1°29
Ma 11Ar40 - 1°28	Ma 15Cn26 + 2°03R
Ju 10Ta55 - 1°00	Ju 20Ta01 - 1°12R
Sa 06Ta30 - 2°14	Sa 07Ta22 - 2°39R
Ur 09Vi41 + 0°46	Ur 18Vi05 + 0°45
Ne 14Ta53 - 1°43	Ne 14Ta46 - 1°50R
Pl 28Ta03 -13°12	Pl 28Ta18 -13°40R
No 18Sa49 - 0°00	No 09Sa25 - 0°00
	Coords: 113E/81S

Dec 5, 1881 5:08 PM Partial Umbral



May 17, 1882 7:36 AM Total Solar



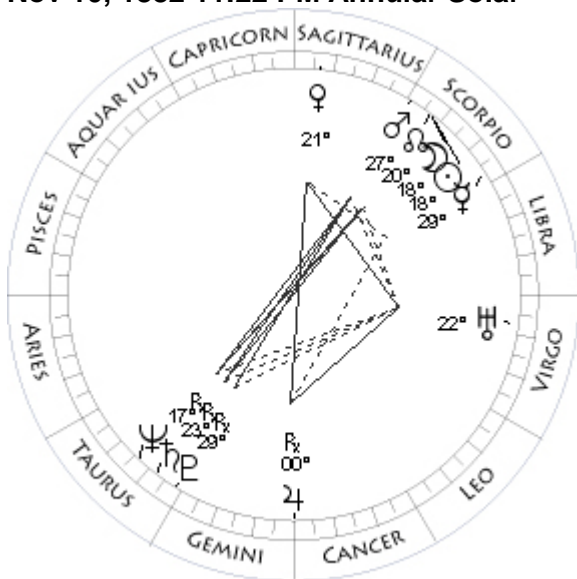
Jun 1, 1882 8:21 PM Partial Penumbral

Mo 13Ge44 - 0°26	Mo 11Sa04 + 1°02
Su 13Sa46 - 0°00	Su 11Ge11 - 0°00
Me 26Sc52 + 1°20	Me 04Cn37 + 1°38
Ve 25Sc17 + 1°07	Ve 06Cn42 + 1°24
Ma 13Cn13 + 2°44R	Ma 13Le17 + 1°28
Ju 18Ta18 - 1°09R	Ju 09Ge22 - 0°33
Sa 06Ta29 - 2°36R	Sa 19Ta01 - 2°04
Ur 18Vi25 + 0°46	Ur 14Vi28 + 0°46
Ne 14Ta24 - 1°50R	Ne 17Ta13 - 1°43
Pl 28Ta03 -13°39R	Pl 29Ta05 -13°02
No 08Sa40 - 0°00	No 29Sc14 - 0°00
Coords: 101W/22N	Coords: 54W/21S

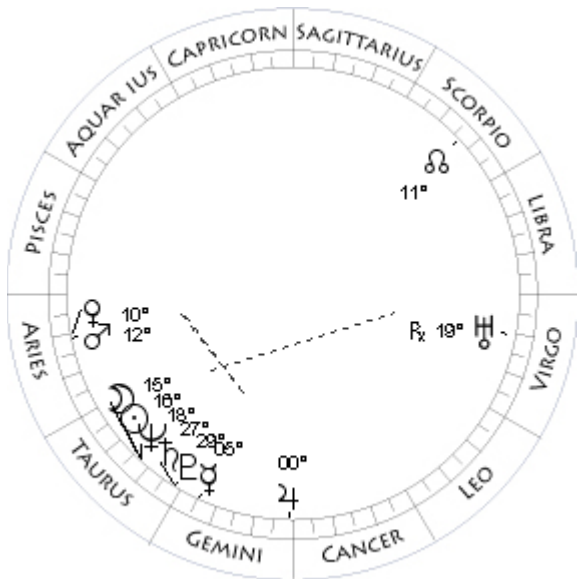
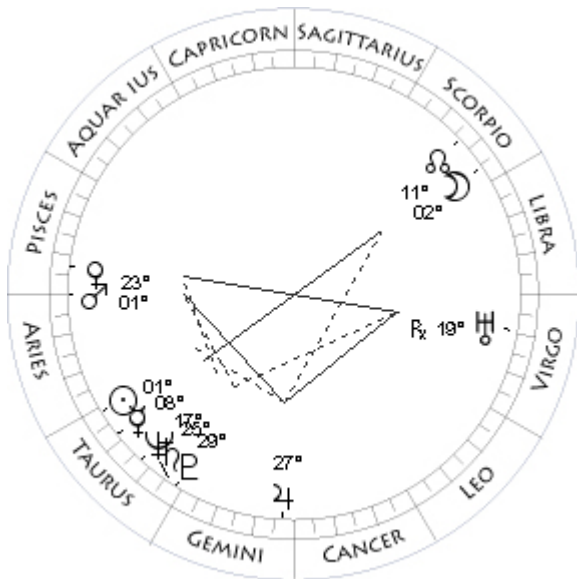
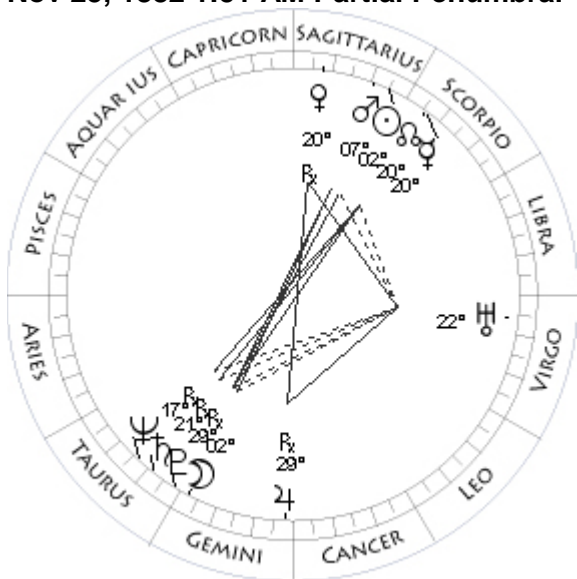
Oct 26, 1882 2:49 PM Partial Penumbral

Mo 26Ta17 + 0°19	Mo 03Ta15 + 1°34
Su 26Ta16 - 0°00	Su 03Sc06 - 0°00
Me 12Ge46 + 2°03	Me 25Li37 + 0°10R
Ve 17Ge49 + 0°52	Ve 15Sa02 - 5°03
Ma 04Le43 + 1°39	Ma 16Sc11 - 0°07
Ju 05Ge45 - 0°34	Ju 01Cn20 - 0°27R
Sa 17Ta05 - 2°04	Sa 24Ta13 - 2°25R
Ur 14Vi25 + 0°47R	Ur 21Vi36 + 0°44
Ne 16Ta40 - 1°43	Ne 17Ta49 - 1°50R
Pl 28Ta44 -13°02	Pl 29Ta45 -13°28R
No 00Sa03 - 0°00	No 21Sc28 - 0°00
Coords: 62W/38N	Coords: 133W/14N

Nov 10, 1882 11:22 PM Annular Solar



Nov 25, 1882 1:51 AM Partial Penumbral



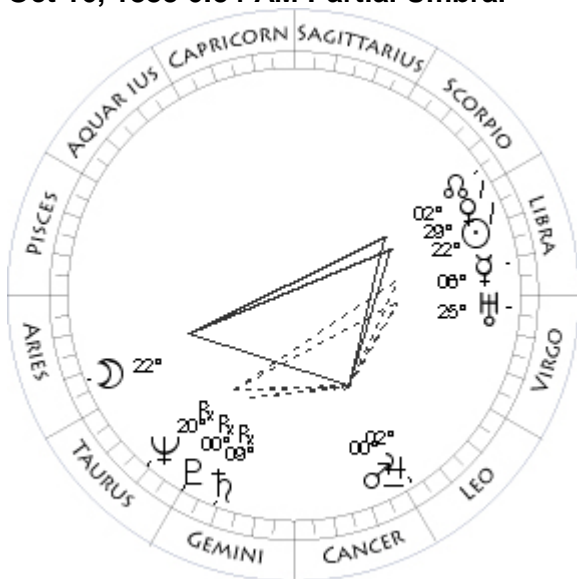
Apr 22, 1883 11:38 AM Partial Umbral

Mo 18Sc31 - 0°11	Mo 02Sc04 - 0°51
Su 18Sc30 - 0°00	Su 01Ta59 - 0°00
Me 29Li57 + 2°14	Me 08Ta55 + 0°26
Ve 21Sa39 - 4°45	Ve 23Pi36 - 1°20
Ma 27Sc03 - 0°16	Ma 01Ar17 - 1°07
Ju 00Cn36 - 0°26R	Ju 27Ge43 - 0°03
Sa 23Ta02 - 2°25R	Sa 25Ta55 - 1°50
Ur 22Vi19 + 0°45	Ur 19Vi43 + 0°48R
Ne 17Ta23 - 1°50R	Ne 17Ta53 - 1°42
Pl 29Ta29 -13°29R	Pl 29Ta07 -12°54
No 20Sc39 - 0°00	No 12Sc03 - 0°00
Coords: 177E/29S	Coords: 175E/13S

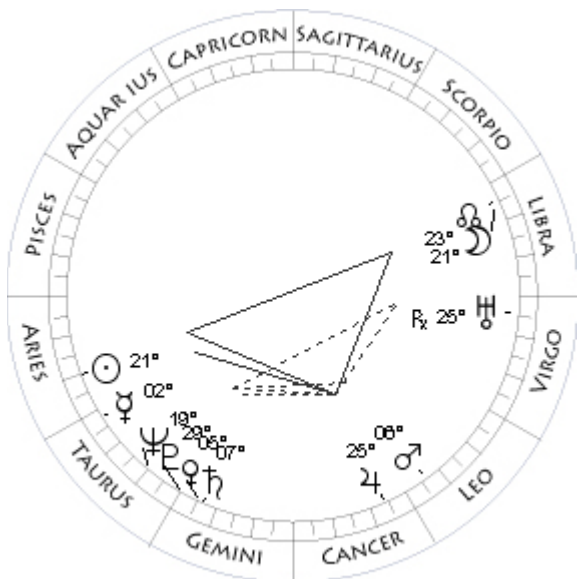
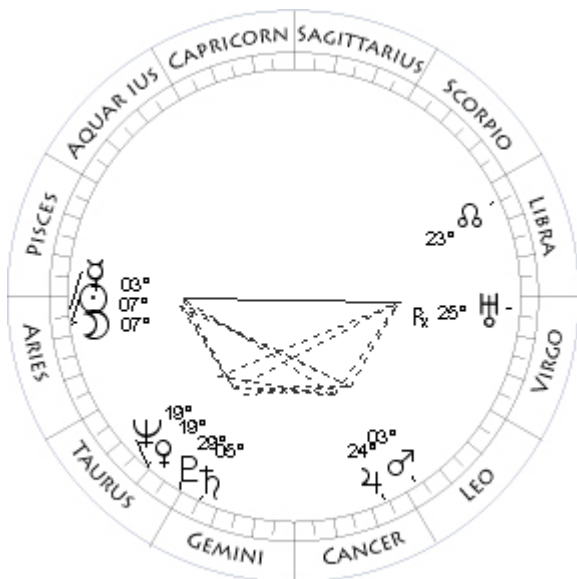
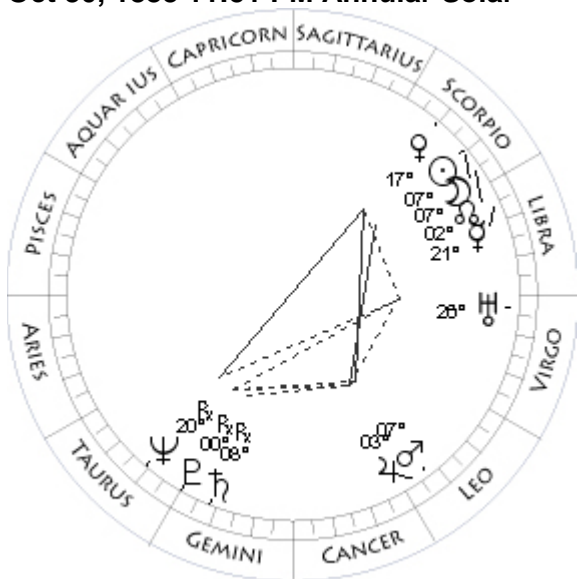
May 6, 1883 9:53 PM Total Solar

Mo 02Ge38 - 1°06	Mo 15Ta56 - 0°26
Su 02Sa44 - 0°00	Su 16Ta00 - 0°00
Me 20Sc33 + 0°59	Me 05Ge46 + 2°23
Ve 20Sa34 - 2°55R	Ve 10Ar40 - 1°44
Ma 07Sa13 - 0°25	Ma 12Ar23 - 1°03
Ju 29Ge18 - 0°25R	Ju 00Cn21 - 0°01
Sa 21Ta53 - 2°24R	Sa 27Ta44 - 1°49
Ur 22Vi50 + 0°45	Ur 19Vi23 + 0°47R
Ne 17Ta00 - 1°50R	Ne 18Ta26 - 1°42
Pl 29Ta13 -13°29R	Pl 29Ta26 -12°52
No 19Sc54 - 0°00	No 11Sc17 - 0°00

Oct 16, 1883 6:54 AM Partial Umbral



Oct 30, 1883 11:51 PM Annular Solar



Mar 27, 1884 6:01 AM Partial Solar

Mo 22Ar40 + 0°54	Mo 07Ar07 + 1°27
Su 22Li35 - 0°00	Su 07Ar00 - 0°00
Me 06Li59 + 0°56	Me 03Ar50 - 1°28
Ve 29Li14 + 0°52	Ve 19Ta14 + 1°40
Ma 00Le53 + 1°10	Ma 03Le43 + 3°05
Ju 02Le31 + 0°17	Ju 24Cn34 + 0°37
Sa 09Ge38 - 2°00R	Sa 05Ge39 - 1°34
Ur 25Vi33 + 0°43	Ur 25Vi37 + 0°48R
Ne 20Ta24 - 1°49R	Ne 19Ta13 - 1°43
Pl 00Ge53 -13°16R	Pl 29Ta36 -12°49
No 02Sc41 - 0°00	No 24Li03 - 0°00

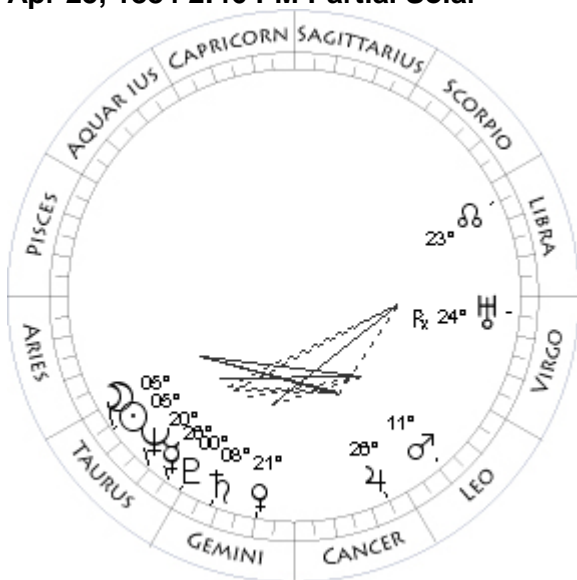
Coords: 107E/10N

Apr 10, 1884 11:46 AM Total Umbral

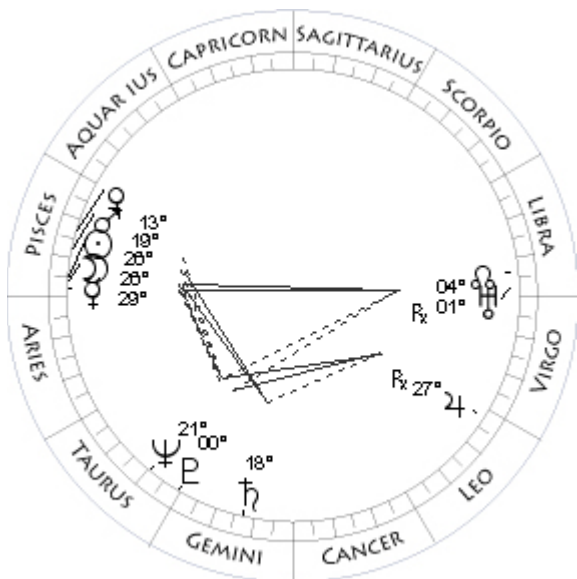
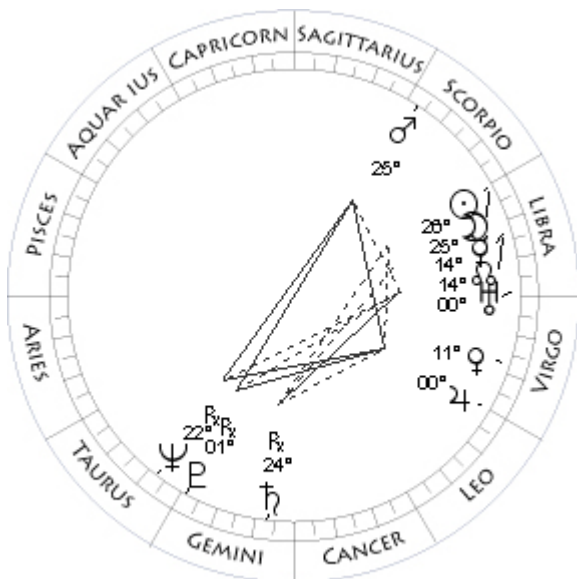
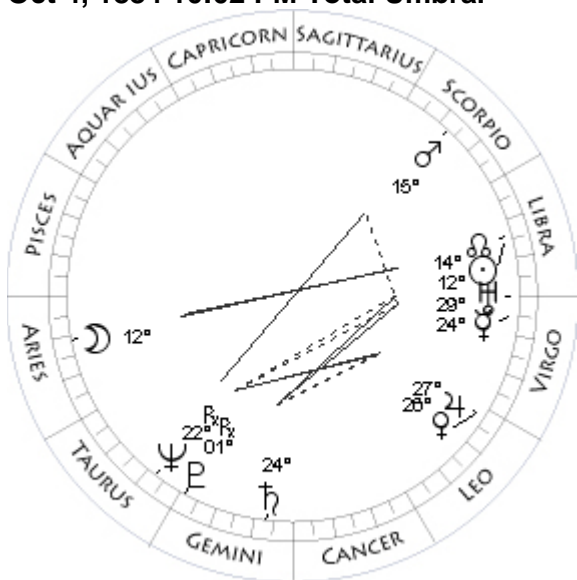
Mo 07Sc12 + 0°27	Mo 21Li01 - 0°11
Su 07Sc14 - 0°00	Su 21Ar00 - 0°00
Me 21Li44 + 2°00	Me 02Ta57 + 0°51
Ve 17Sc37 + 0°21	Ve 05Ge06 + 2°30
Ma 07Le57 + 1°31	Ma 06Le54 + 2°37
Ju 03Le49 + 0°19	Ju 25Cn12 + 0°37
Sa 08Ge51 - 2°01R	Sa 07Ge01 - 1°31
Ur 26Vi21 + 0°44	Ur 25Vi03 + 0°47R
Ne 20Ta01 - 1°49R	Ne 19Ta40 - 1°42
Pl 00Ge39 -13°17R	Pl 29Ta50 -12°45
No 01Sc54 - 0°00	No 23Li18 - 0°00

Coords: 175E/15N

Apr 25, 1884 2:46 PM Partial Solar



Oct 4, 1884 10:02 PM Total Umbral



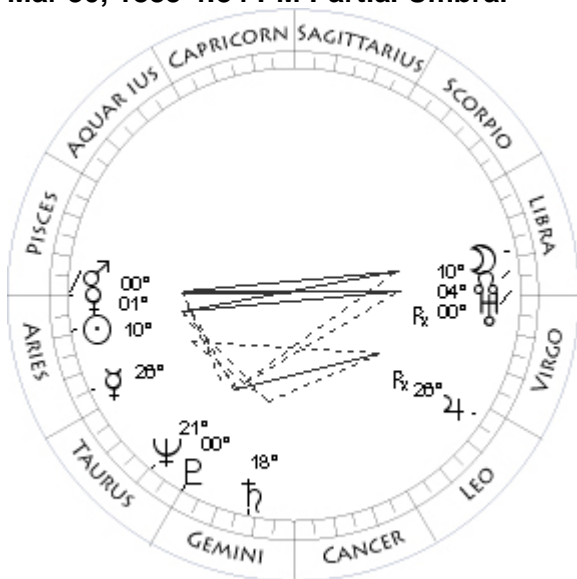
Oct 19, 1884 0:17 AM Partial Solar

Mo 05Ta39 - 1°09	Mo 25Li56 + 1°05
Su 05Ta46 - 0°00	Su 26Li02 - 0°00
Me 26Ta08 + 2°44	Me 14Li49 + 1°48
Ve 21Ge04 + 3°10	Ve 11Vi58 + 0°34
Ma 11Le51 + 2°11	Ma 25Sc01 - 0°31
Ju 26Cn29 + 0°36	Ju 00Vi08 + 0°48
Sa 08Ge41 - 1°29	Sa 24Ge05 - 1°29R
Ur 24Vi32 + 0°47R	Ur 00Li16 + 0°42
Ne 20Ta12 - 1°42	Ne 22Ta37 - 1°48R
Pl 00Ge08 -12°43	Pl 01Ge47 -13°05R
No 22Li30 - 0°00	No 13Li09 - 0°00

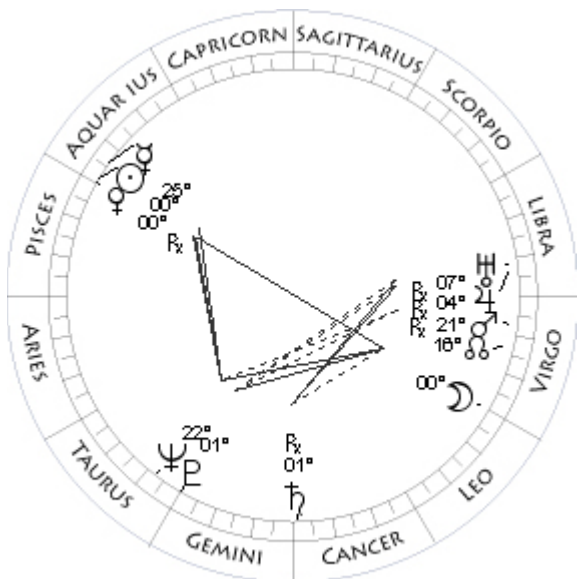
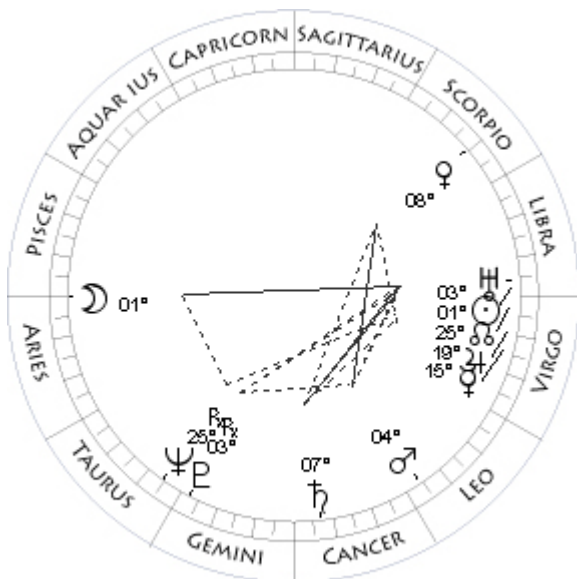
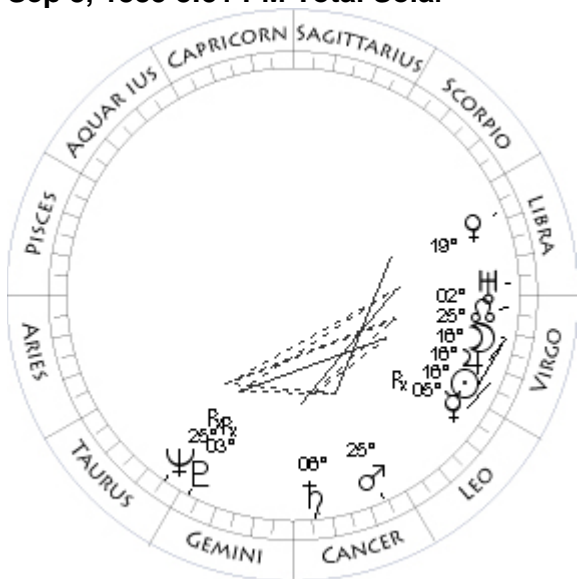
Mar 16, 1885 5:45 PM Annular Solar

Mo 12Ar06 + 0°11	Mo 26Pi24 + 0°46
Su 12Li05 - 0°00	Su 26Pi20 - 0°00
Me 24Vi10 + 1°23	Me 29Pi15 - 1°09
Ve 26Le33 - 0°33	Ve 13Pi45 - 1°24
Ma 15Sc06 - 0°23	Ma 19Pi13 - 0°59
Ju 27Le41 + 0°46	Ju 27Le47 + 1°16R
Sa 24Ge14 - 1°28	Sa 18Ge00 - 1°10
Ur 29Vi24 + 0°42	Ur 01Li05 + 0°47R
Ne 22Ta56 - 1°48R	Ne 21Ta07 - 1°42
Pl 01Ge59 -13°03R	Pl 00Ge23 -12°41
No 13Li54 - 0°00	No 05Li17 - 0°00
Coords: 27W/ 5N	Coords: 106E/49N

Mar 30, 1885 4:34 PM Partial Umbral



Sep 8, 1885 8:51 PM Total Solar



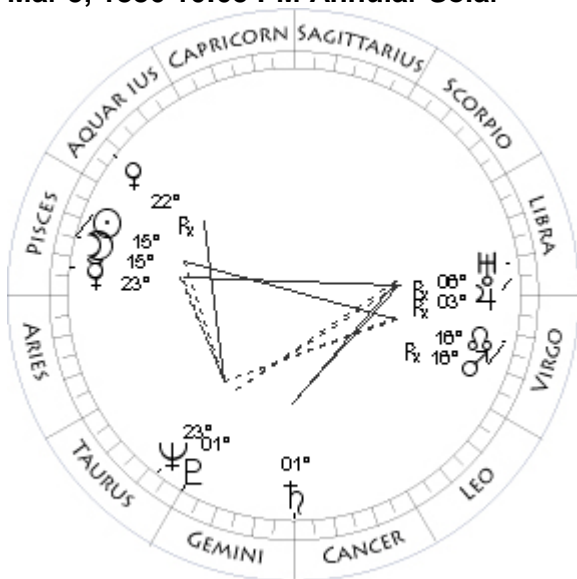
Sep 24, 1885 7:48 AM Partial Umbral

Mo 10Li06 + 0°30	Mo 01Ar21 - 0°32
Su 10Ar09 - 0°00	Su 01Li25 - 0°00
Me 26Ar13 + 1°21	Me 15Vi09 + 1°37
Ve 01Ar04 - 1°27	Ve 08Sc16 - 0°39
Ma 00Ar07 - 0°54	Ma 04Le31 + 1°04
Ju 26Le36 + 1°15R	Ju 19Vi42 + 1°02
Sa 18Ge52 - 1°08	Sa 07Cn46 - 0°54
Ur 00Li29 + 0°47R	Ur 03Li12 + 0°41
Ne 21Ta30 - 1°42	Ne 25Ta24 - 1°46R
Pl 00Ge35 -12°37	Pl 03Ge02 -12°49R
No 04Li33 - 0°00	No 25Vi08 - 0°00

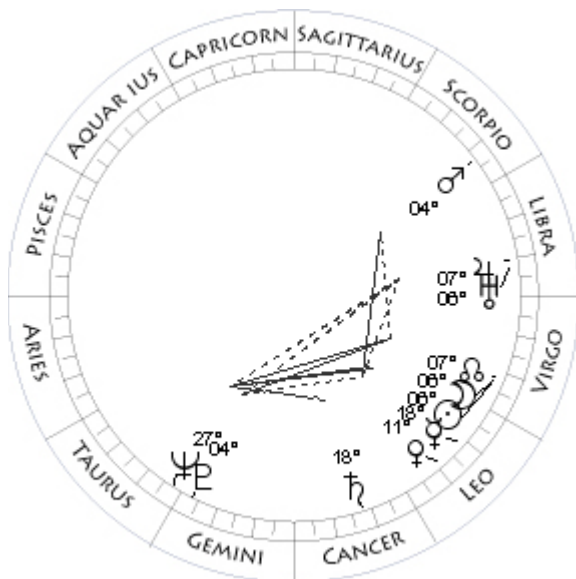
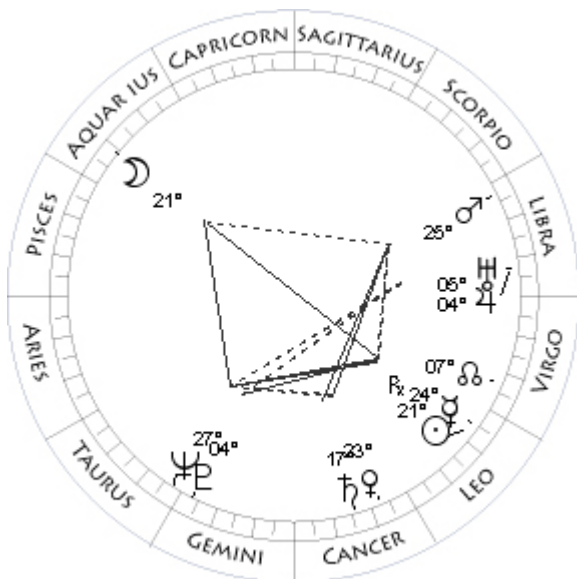
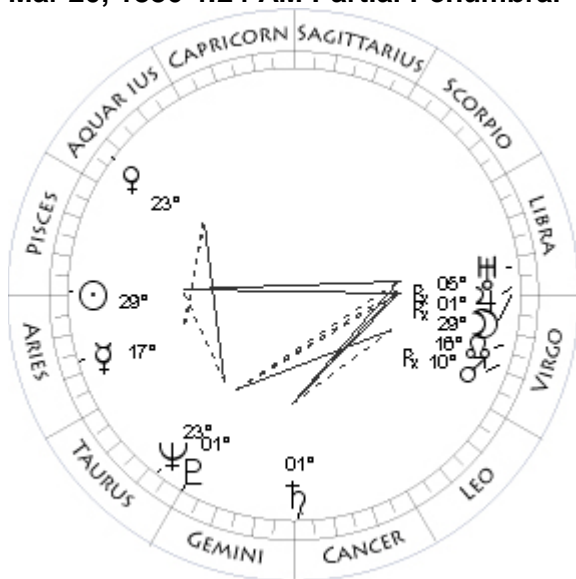
Feb 18, 1886 6:28 PM Partial Penumbral

Mo 16Vi24 - 0°50	Mo 00Vi12 - 1°27
Su 16Vi19 - 0°00	Su 00Pi05 - 0°00
Me 05Vi38 - 2°08R	Me 25Aq18 - 2°05
Ve 19Li44 + 0°12	Ve 00Pi09 + 8°35R
Ma 25Cn02 + 0°52	Ma 21Vi34 + 4°06R
Ju 16Vi22 + 1°01	Ju 04Li40 + 1°31R
Sa 06Cn51 - 0°54	Sa 01Cn35 - 0°43R
Ur 02Li15 + 0°41	Ur 07Li04 + 0°45R
Ne 25Ta34 - 1°45R	Ne 22Ta52 - 1°43
Pl 03Ge07 -12°46R	Pl 01Ge09 -12°37
No 25Vi57 - 0°00	No 17Vi20 - 0°00
Coords: 156E/49S	Coords: 86W/10N

Mar 5, 1886 10:05 PM Annular Solar



Mar 20, 1886 4:24 AM Partial Penumbra



Aug 14, 1886 6:41 PM Partial Penumbra

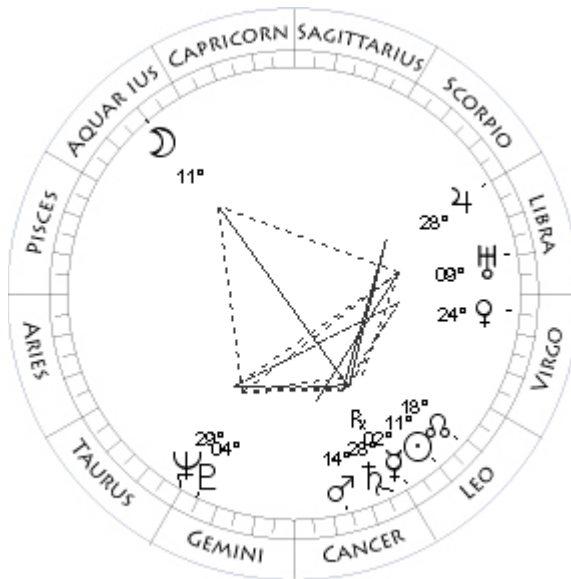
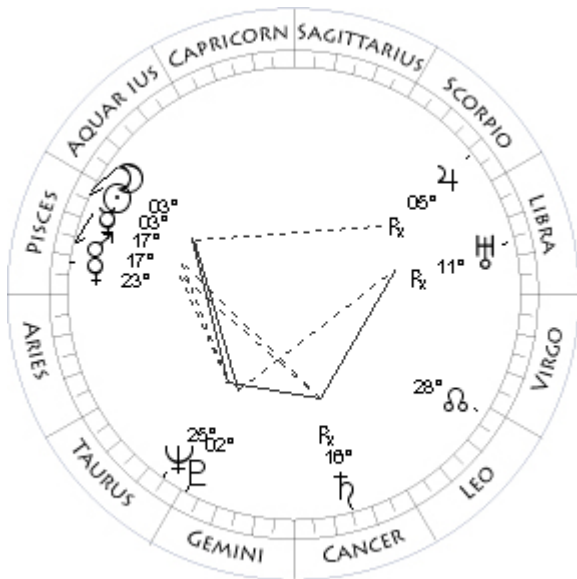
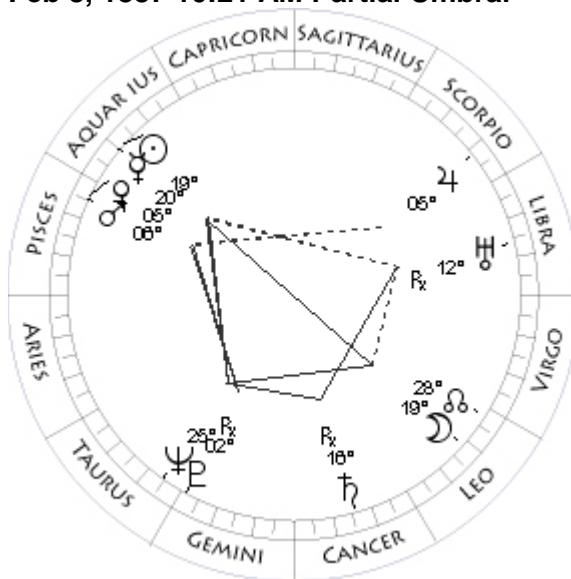
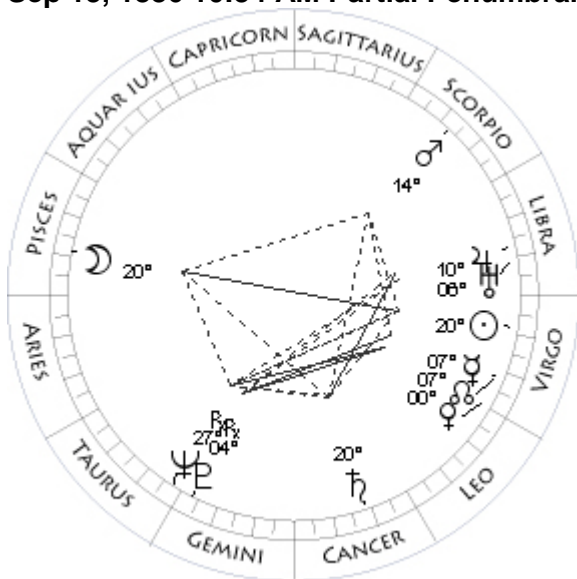
Mo 15Pi18 + 0°05	Mo 21Aq58 + 1°23
Su 15Pi18 - 0°00	Su 21Le50 - 0°00
Me 23Pi44 - 0°50	Me 24Le41 - 4°43R
Ve 22Aq54 + 7°49R	Ve 23Cn55 - 0°05
Ma 16Vi08 + 4°06R	Ma 25Li20 - 0°23
Ju 03Li05 + 1°34R	Ju 04Li51 + 1°10
Sa 01Cn27 - 0°41	Sa 17Cn12 - 0°22
Ur 06Li32 + 0°45R	Ur 05Li19 + 0°41
Ne 23Ta05 - 1°42	Ne 27Ta46 - 1°43
Pl 01Ge13 -12°33	Pl 04Ge01 -12°28
No 16Vi32 - 0°00	No 07Vi57 - 0°00
Coords: 80W/13S	

Aug 29, 1886 0:55 PM Total Solar

Mo 29Vi23 + 1°12	Mo 06Vi05 - 0°06
Su 29Pi31 - 0°00	Su 06Vi04 - 0°00
Me 17Ar50 + 1°59	Me 18Le58 - 1°07
Ve 23Aq42 + 5°23	Ve 11Le49 + 0°35
Ma 10Vi45 + 3°46R	Ma 04Sc44 - 0°34
Ju 01Li18 + 1°35R	Ju 07Li40 + 1°08
Sa 01Cn42 - 0°38	Sa 18Cn48 - 0°21
Ur 05Li56 + 0°45R	Ur 06Li06 + 0°40
Ne 23Ta23 - 1°42	Ne 27Ta51 - 1°44
Pl 01Ge22 -12°29	Pl 04Ge04 -12°31
No 15Vi46 - 0°00	No 07Vi10 - 0°00

Sep 13, 1886 10:34 AM Partial Penumbral

Feb 8, 1887 10:21 AM Partial Umbral



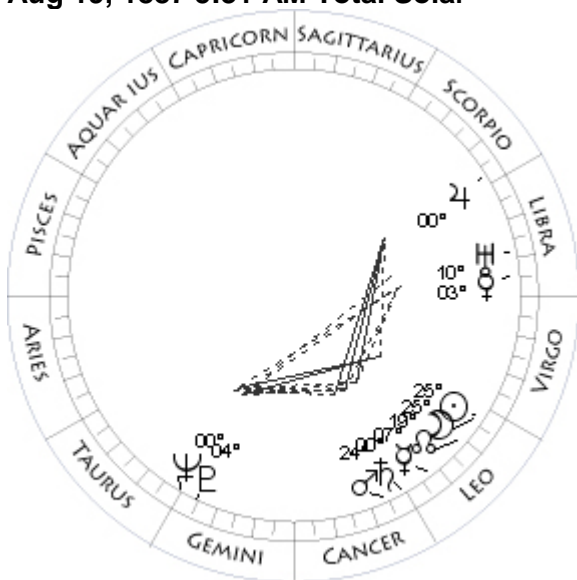
Feb 22, 1887 9:32 PM Annular Solar

Mo 20Pi25 - 1°12	Mo 03Pi56 - 0°32
Su 20Vi32 - 0°00	Su 03Pi59 - 0°00
Me 07Vi56 + 1°42	Me 17Pi10 - 0°31
Ve 00Vi05 + 1°06	Ve 23Pi27 - 1°17
Ma 14Sc38 - 0°44	Ma 17Pi43 - 0°52
Ju 10Li43 + 1°07	Ju 05Sc52 + 1°23R
Sa 20Cn12 - 0°20	Sa 16Cn03 - 0°06R
Ur 06Li59 + 0°40	Ur 11Li52 + 0°43R
Ne 27Ta48 - 1°44R	Ne 25Ta08 - 1°42
Pl 04Ge03 -12°35R	Pl 02Ge07 -12°25
No 06Vi23 - 0°00	No 27Le47 - 0°00
	Coords: 127E/45S

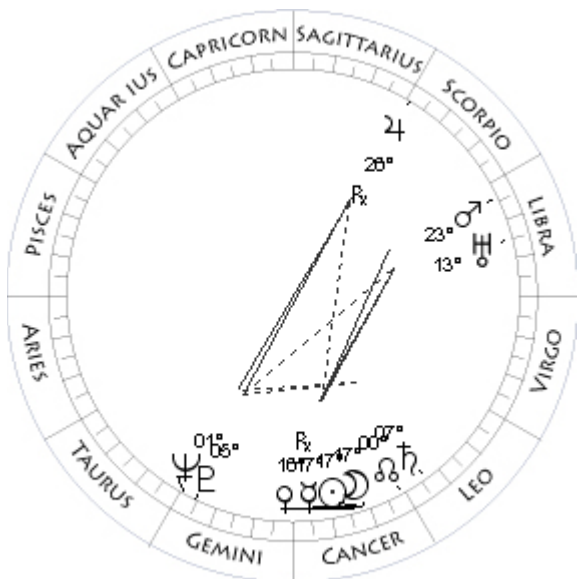
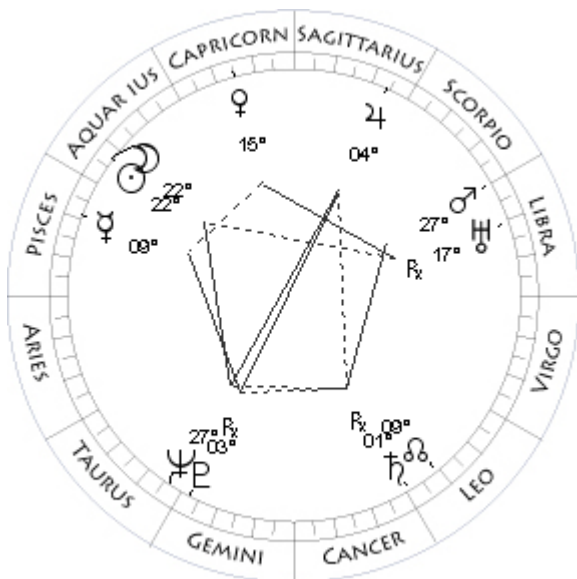
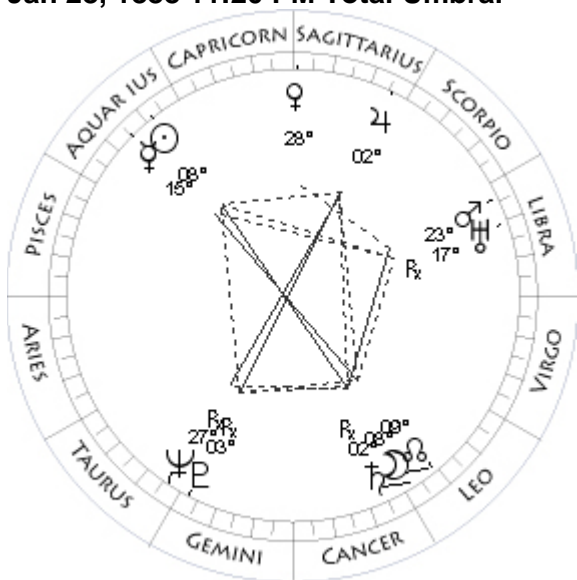
Aug 3, 1887 8:48 PM Partial Umbral

Mo 19Le27 - 0°47	Mo 11Aq12 + 0°43
Su 19Aq24 - 0°00	Su 11Le08 - 0°00
Me 20Aq41 - 2°01	Me 02Le08 - 4°18R
Ve 05Pi25 - 1°29	Ve 24Vi35 - 2°00
Ma 06Pi21 - 0°58	Ma 14Cn55 + 0°46
Ju 05Sc41 + 1°20	Ju 28Li26 + 1°07
Sa 16Cn48 - 0°07R	Sa 28Cn09 + 0°09
Ur 12Li15 + 0°43R	Ur 09Li22 + 0°40
Ne 25Ta02 - 1°43	Ne 29Ta51 - 1°41
Pl 02Ge06 -12°29R	Pl 04Ge51 -12°14
No 28Le33 - 0°00	No 19Le12 - 0°00
	Coords: 49W/17S

Aug 19, 1887 5:31 AM Total Solar



Jan 28, 1888 11:20 PM Total Umbral



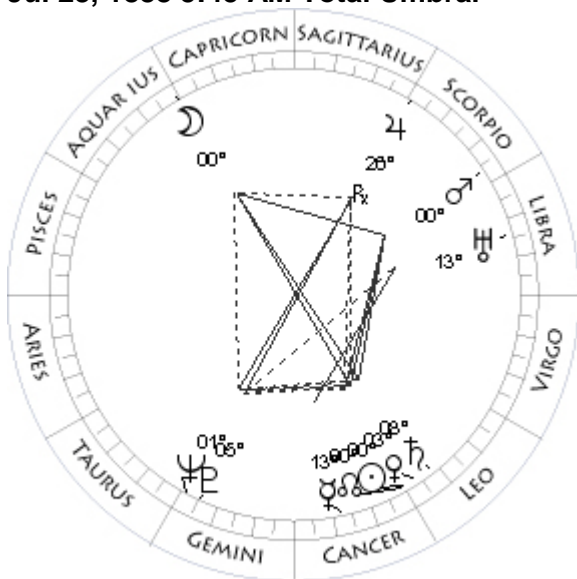
Feb 11, 1888 11:38 PM Partial Solar

Mo 25Le49 + 0°38	Mo 22Aq38 - 1°11
Su 25Le53 - 0°00	Su 22Aq45 - 0°00
Me 07Le35 - 0°18	Me 09Pi33 - 0°06
Ve 03Li34 - 4°30	Ve 15Cp19 + 0°55
Ma 24Cn55 + 0°55	Ma 27Li41 + 2°32
Ju 00Sc25 + 1°03	Ju 04Sa03 + 0°55
Sa 00Le04 + 0°11	Sa 01Le33 + 0°32R
Ur 10Li03 + 0°39	Ur 17Li02 + 0°41R
Ne 00Ge02 - 1°42	Ne 27Ta17 - 1°42
Pl 04Ge59 -12°17	Pl 03Ge03 -12°16R
No 18Le23 - 0°00	No 09Le02 - 0°00
Coords: 112W/50N	

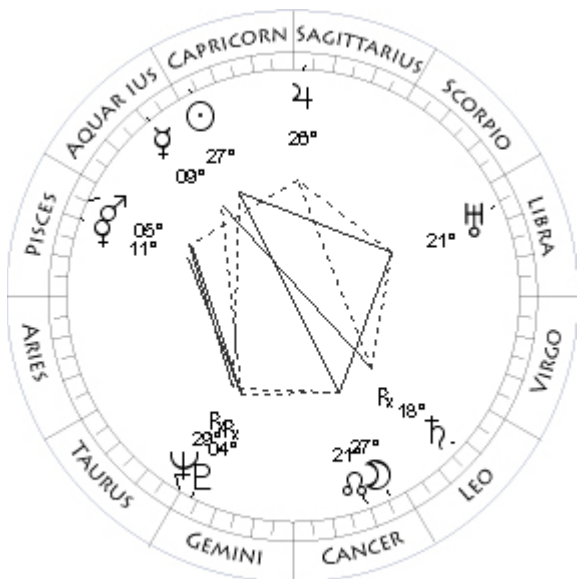
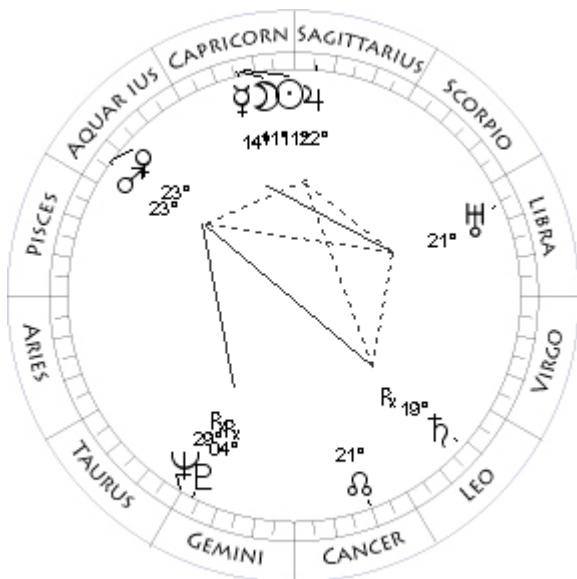
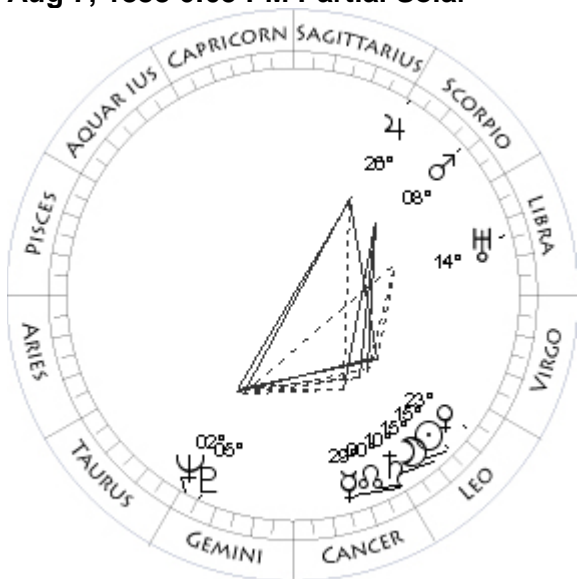
Jul 9, 1888 6:30 AM Partial Solar

Mo 08Le33 - 0°06	Mo 17Cn31 - 1°11
Su 08Aq33 - 0°00	Su 17Cn25 - 0°00
Me 15Aq41 - 1°55	Me 17Cn21 - 4°47R
Ve 28Sa27 + 1°41	Ve 16Cn43 + 0°42
Ma 23Li48 + 2°24	Ma 23Li56 - 0°50
Ju 02Sa15 + 0°54	Ju 26Sc49 + 0°51R
Sa 02Le38 + 0°31R	Sa 07Le05 + 0°38
Ur 17Li13 + 0°41R	Ur 13Li16 + 0°39
Ne 27Ta17 - 1°42R	Ne 01Ge29 - 1°38
Pl 03Ge06 -12°20R	Pl 05Ge26 -11°58
No 09Le46 - 0°00	No 01Le11 - 0°00
Coords: 13W/18N	

Jul 23, 1888 5:45 AM Total Umbral



Aug 7, 1888 6:05 PM Partial Solar



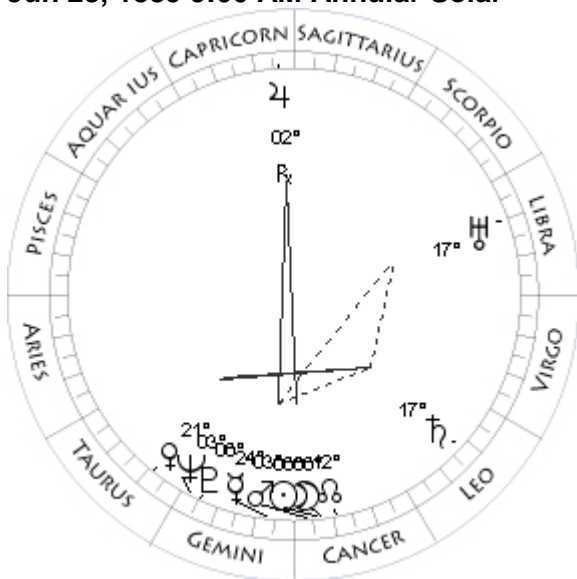
Jan 1, 1889 9:16 PM Total Solar

Mo 00Aq44 - 0°02	Mo 11Cp49 + 0°52
Su 00Le45 - 0°00	Su 11Cp44 - 0°00
Me 13Cn27 - 3°28	Me 14Cp10 - 1°57
Ve 03Le55 + 1°07	Ve 23Aq30 - 1°44
Ma 00Sc33 - 1°04	Ma 23Aq59 - 1°06
Ju 26Sc30 + 0°47R	Ju 22Sa44 + 0°23
Sa 08Le50 + 0°39	Sa 19Le25 + 1°04R
Ur 13Li35 + 0°38	Ur 21Li43 + 0°38
Ne 01Ge50 - 1°39	Ne 29Ta54 - 1°43R
Pl 05Ge40 -12°00	Pl 04Ge21 -12°15R
No 00Le26 - 0°00	No 21Cn50 - 0°00
	Coords: 138E/36N

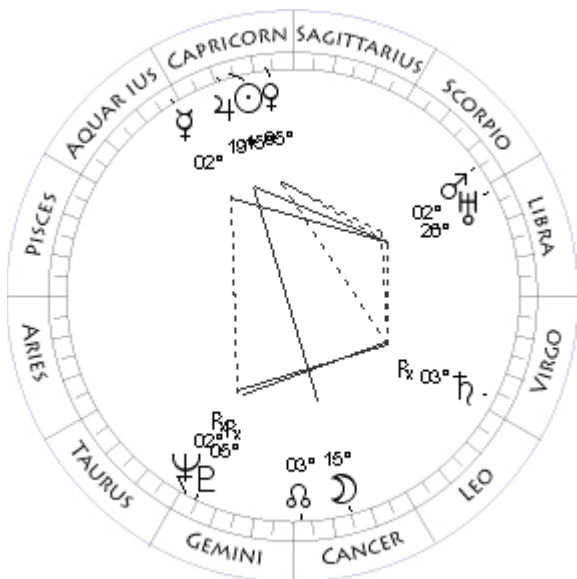
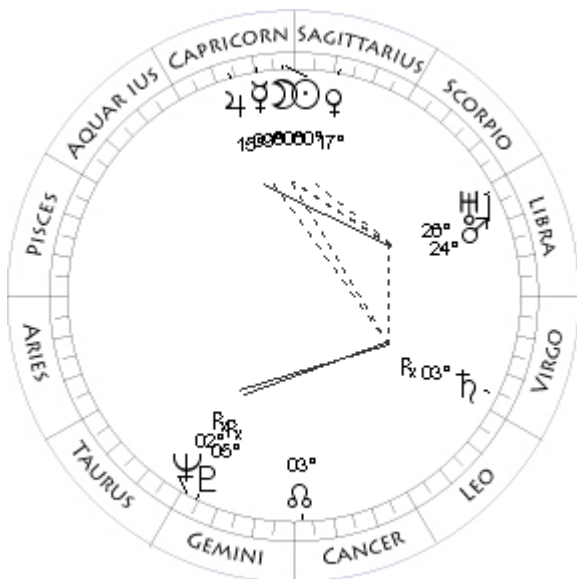
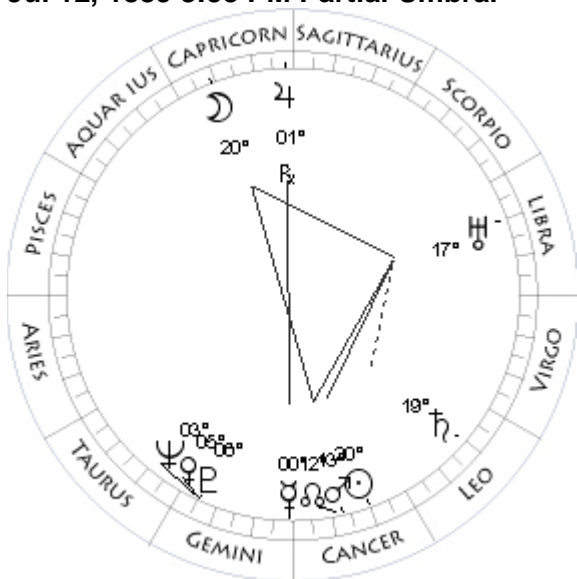
Jan 17, 1889 5:29 AM Partial Umbral

Mo 15Le27 + 1°22	Mo 27Cn18 + 0°34
Su 15Le35 - 0°00	Su 27Cp22 - 0°00
Me 29Cn35 + 0°18	Me 09Aq42 - 1°50
Ve 23Le03 + 1°24	Ve 11Pi28 - 1°01
Ma 08Sc55 - 1°16	Ma 05Pi58 - 0°56
Ju 26Sc51 + 0°44	Ju 26Sa03 + 0°22
Sa 10Le50 + 0°41	Sa 18Le26 + 1°06R
Ur 14Li07 + 0°38	Ur 21Li57 + 0°38
Ne 02Ge07 - 1°40	Ne 29Ta39 - 1°42R
Pl 05Ge51 -12°03	Pl 04Ge09 -12°11R
No 29Cn37 - 0°00	No 21Cn01 - 0°00

Jun 28, 1889 9:00 AM Annular Solar



Jul 12, 1889 8:53 PM Partial Umbral



Dec 22, 1889 0:54 PM Total Solar

Mo 06Cn51 - 0°29	Mo 00Cp57 + 0°12
Su 06Cn48 - 0°00	Su 00Cp57 - 0°00
Me 24Ge22 - 4°38	Me 09Cp11 - 2°05
Ve 21Ta45 - 3°24	Ve 17Sa04 + 0°27
Ma 03Cn53 + 0°46	Ma 24Li37 + 1°27
Ju 02Cp56 + 0°09R	Ju 15Cp39 - 0°11
Sa 17Le54 + 1°08	Sa 03Vi51 + 1°32R
Ur 17Li52 + 0°37	Ur 26Li00 + 0°35
Ne 03Ge19 - 1°37	Ne 02Ge25 - 1°41R
Pl 06Ge10 -11°44	Pl 05Ge29 -12°04R
No 12Cn26 - 0°00	No 03Cn03 - 0°00

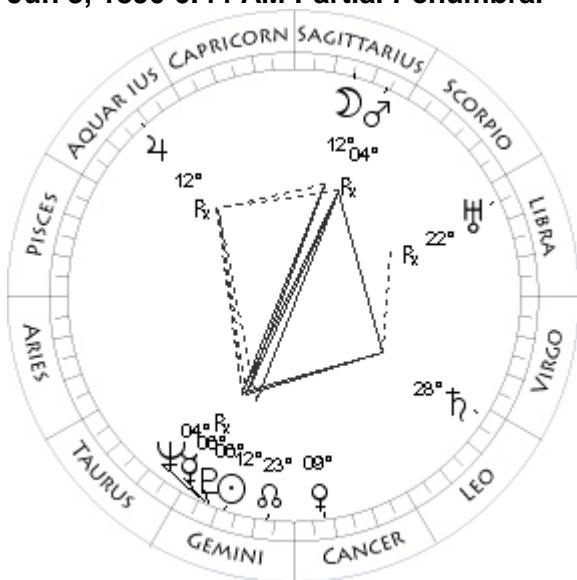
Coords: 47W/10S

Jan 6, 1890 5:21 AM Partial Penumbral

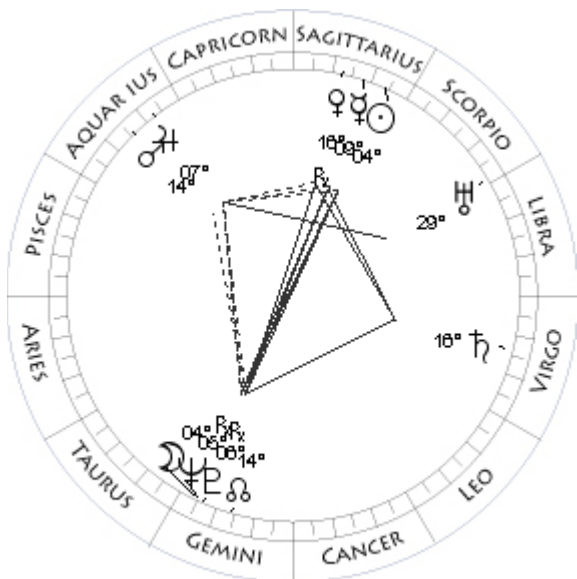
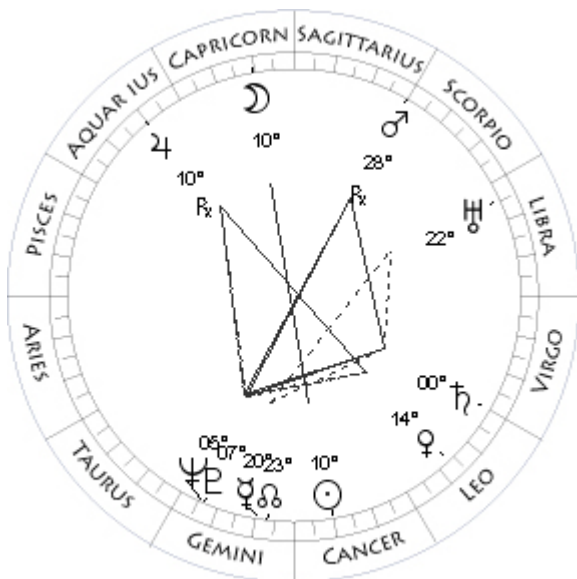
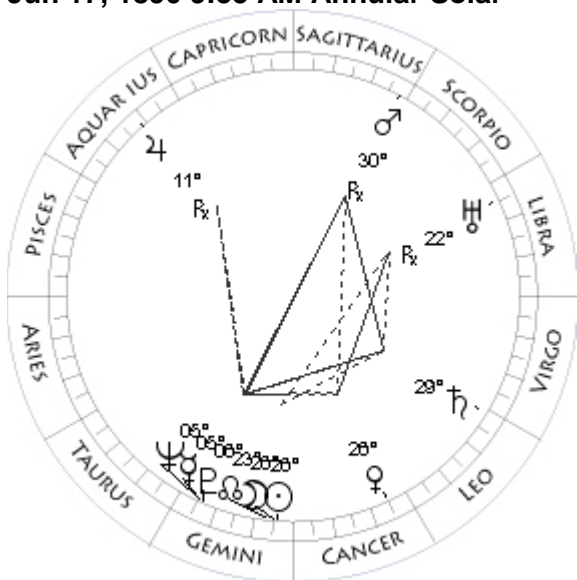
Mo 20Cp32 - 0°47	Mo 15Cn47 + 1°10
Su 20Cn37 - 0°00	Su 15Cp55 - 0°00
Me 00Cn00 - 2°33	Me 02Aq27 - 1°44
Ve 05Ge01 - 3°21	Ve 05Cp31 - 0°09
Ma 13Cn30 + 0°52	Ma 02Sc55 + 1°26
Ju 01Cp09 + 0°07R	Ju 19Cp03 - 0°12
Sa 19Le32 + 1°08	Sa 03Vi26 + 1°35R
Ur 17Li59 + 0°37	Ur 26Li25 + 0°35
Ne 03Ge45 - 1°37	Ne 02Ge06 - 1°41R
Pl 06Ge26 -11°46	Pl 05Ge15 -12°02R
No 11Cn40 - 0°00	No 02Cn16 - 0°00

Coords: 48W/23S

Jun 3, 1890 6:44 AM Partial Penumbral



Jun 17, 1890 9:55 AM Annular Solar



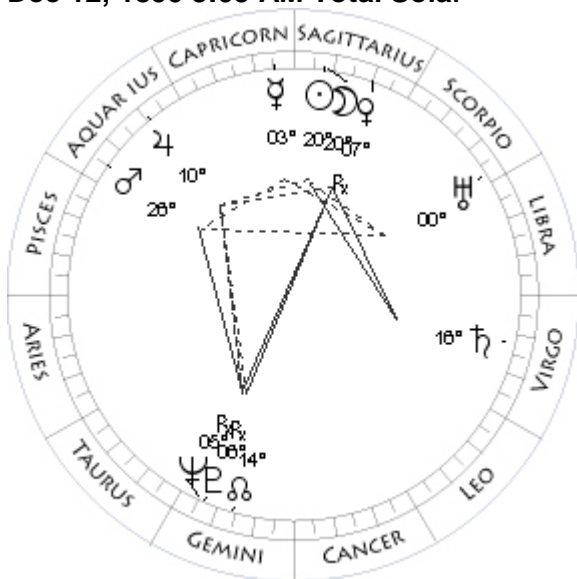
Jul 2, 1890 2:08 PM Partial Penumbral

Mo 12Sa41 + 1°01	Mo 10Cp26 - 1°30
Su 12Ge36 - 0°00	Su 10Cn35 - 0°00
Me 06Ge32 - 3°11R	Me 20Ge41 - 1°46
Ve 09Cn03 + 1°28	Ve 14Le11 + 1°46
Ma 04Sa09 - 2°04R	Ma 28Sc00 - 3°03R
Ju 12Aq09 - 0°35R	Ju 10Aq32 - 0°41R
Sa 28Le06 + 1°37	Sa 00Vi25 + 1°35
Ur 22Li54 + 0°36R	Ur 22Li35 + 0°35
Ne 04Ge35 - 1°35	Ne 05Ge37 - 1°35
Pl 06Ge33 -11°31	Pl 07Ge11 -11°32
No 24Ge26 - 0°00	No 22Ge53 - 0°00
Coords: 101E/21S	Coords: 149W/25S

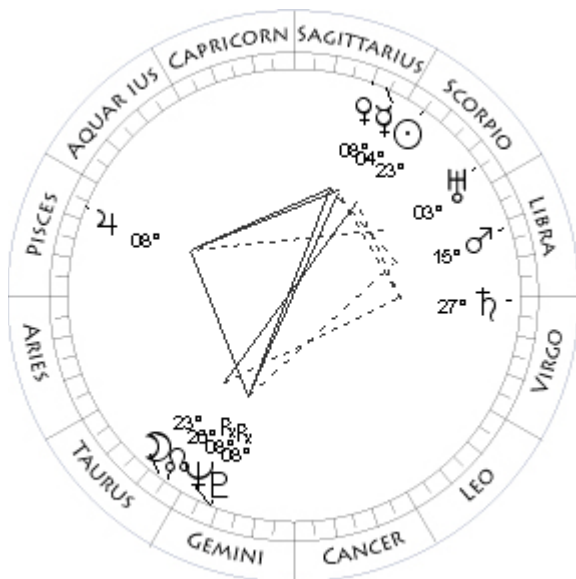
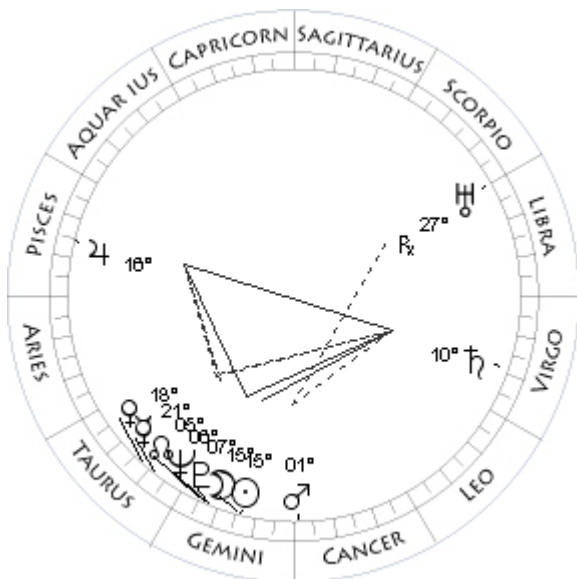
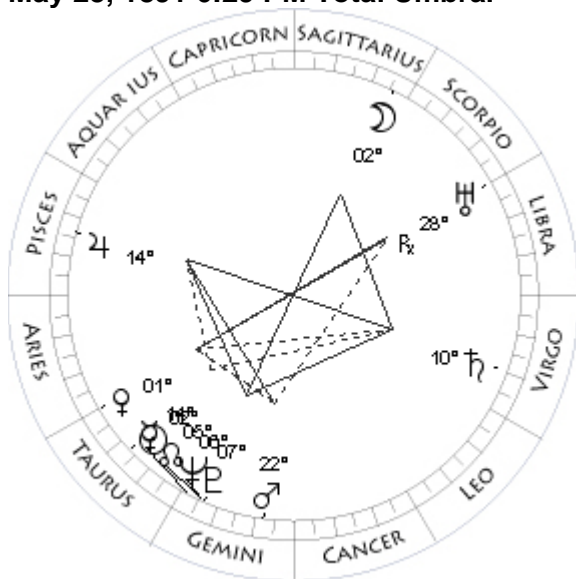
Nov 26, 1890 1:33 PM Partial Umbral

Mo 26Ge05 + 0°12	Mo 04Ge23 - 0°57
Su 26Ge07 - 0°00	Su 04Sa18 - 0°00
Me 05Ge43 - 4°06	Me 09Sa34 - 1°16
Ve 26Cn04 + 1°45	Ve 16Sa22 - 2°28R
Ma 30Sc00 - 2°40R	Ma 14Aq44 - 1°29
Ju 11Aq41 - 0°38R	Ju 07Aq36 - 0°46
Sa 29Le05 + 1°36	Sa 16Vi19 + 1°49
Ur 22Li39 + 0°35R	Ur 29Li18 + 0°32
Ne 05Ge06 - 1°35	Ne 05Ge26 - 1°40R
Pl 06Ge52 -11°31	Pl 06Ge57 -11°54R
No 23Ge41 - 0°00	No 15Ge06 - 0°00
Coords: 29W/36N	Coords: 154W/20N

Dec 12, 1890 3:05 AM Total Solar



May 23, 1891 6:29 PM Total Umbral



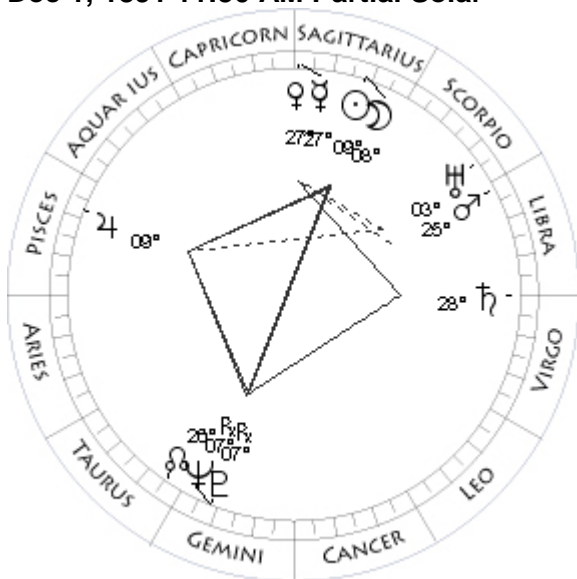
Jun 6, 1891 4:15 PM Total Solar

Mo 20Sa02 - 0°29	Mo 15Ge32 + 0°56
Su 20Sa06 - 0°00	Su 15Ge38 - 0°00
Me 03Cp42 - 2°14	Me 21Ta52 - 3°30
Ve 07Sa33 + 1°25R	Ve 18Ta03 - 1°34
Ma 26Aq20 - 1°11	Ma 01Cn59 + 0°56
Ju 10Aq24 - 0°45	Ju 16Pi30 - 1°06
Sa 16Vi58 + 1°53	Sa 10Vi51 + 2°01
Ur 00Sc05 + 0°32	Ur 27Li38 + 0°33R
Ne 05Ge00 - 1°40R	Ne 06Ge52 - 1°33
Pl 06Ge39 -11°53R	Pl 07Ge34 -11°19
No 14Ge16 - 0°00	No 04Ge55 - 0°00
Coords: 124W/53S	Coords: 166W/75N

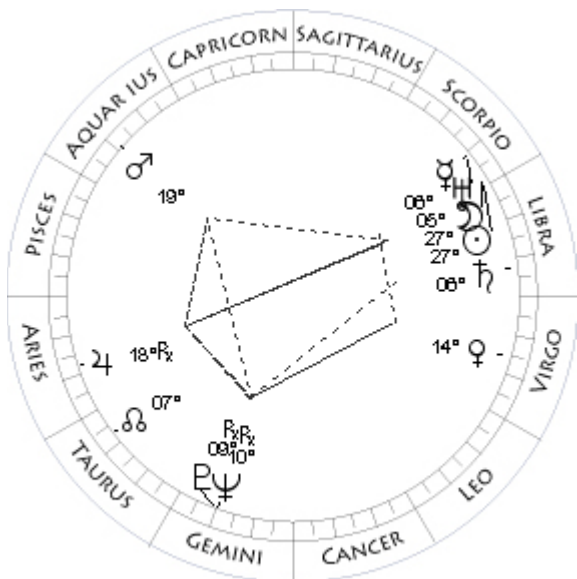
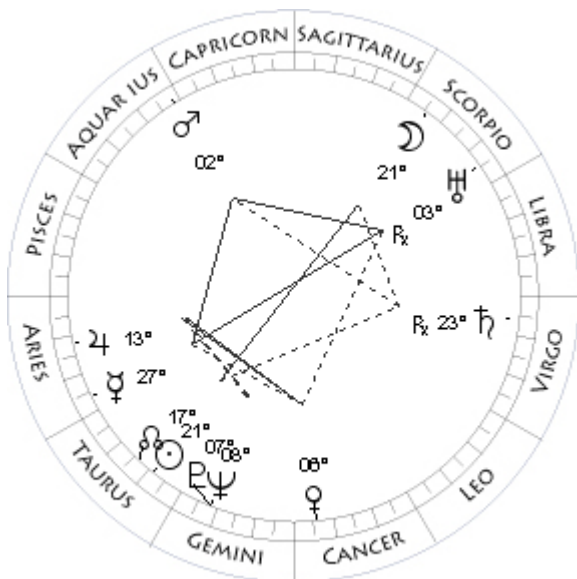
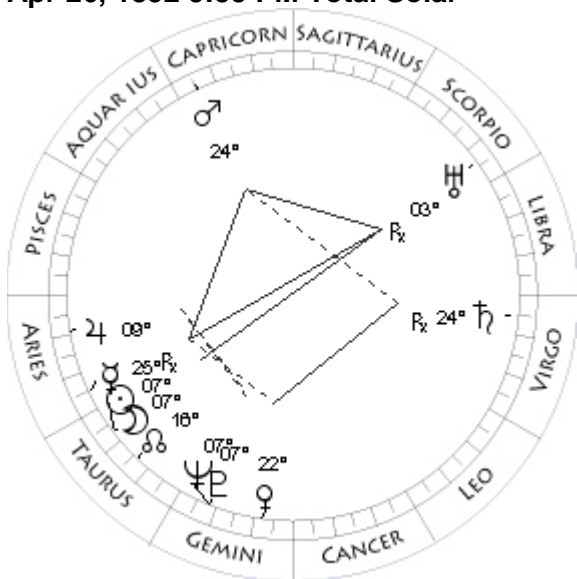
Nov 16, 1891 0:19 AM Total Umbral

Mo 02Sa20 + 0°17	Mo 23Ta24 - 0°16
Su 02Ge18 - 0°00	Su 23Sc23 - 0°00
Me 14Ta10 - 3°21	Me 04Sa14 - 1°32
Ve 01Ta21 - 1°48	Ve 08Sa19 - 0°21
Ma 22Ge45 + 0°52	Ma 15Li54 + 1°04
Ju 14Pi56 - 1°02	Ju 08Pi24 - 1°20
Sa 10Vi26 + 2°03	Sa 27Vi36 + 2°03
Ur 28Li02 + 0°34R	Ur 03Sc05 + 0°29
Ne 06Ge21 - 1°33	Ne 08Ge02 - 1°38R
Pl 07Ge15 -11°19	Pl 08Ge08 -11°41R
No 05Ge39 - 0°00	No 26Ta19 - 0°00
Coords: 82W/20S	

Dec 1, 1891 11:30 AM Partial Solar



Apr 26, 1892 9:55 PM Total Solar



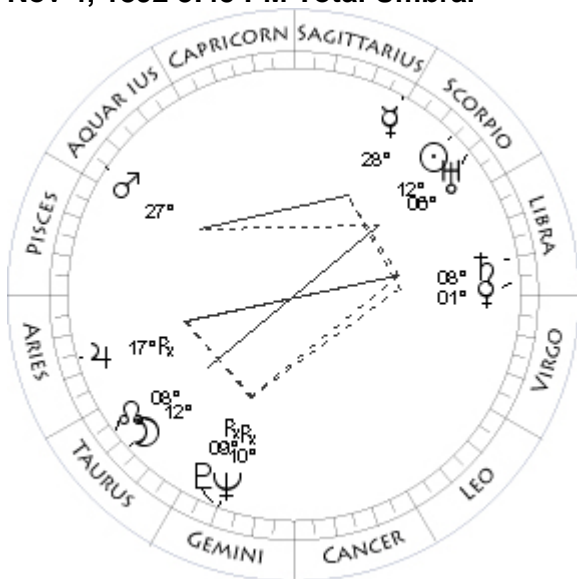
May 11, 1892 10:52 PM Partial Umbral

Mo 08Sa54 - 1°10	Mo 21Sc36 - 0°26
Su 09Sa02 - 0°00	Su 21Ta39 - 0°00
Me 27Sa09 - 2°23	Me 27Ar02 - 3°11
Ve 27Sa39 - 0°57	Ve 06Cn35 + 3°28
Ma 25Li43 + 1°01	Ma 02Aq23 - 1°54
Ju 09Pi27 - 1°16	Ju 13Ar05 - 1°08
Sa 28Vi48 + 2°06	Sa 23Vi29 + 2°25R
Ur 03Sc59 + 0°29	Ur 03Sc17 + 0°31R
Ne 07Ge36 - 1°38R	Ne 08Ge06 - 1°31
Pl 07Ge50 -11°41R	Pl 07Ge57 -11°07
No 25Ta30 - 0°00	No 16Ta54 - 0°00
	Coords: 16W/19S

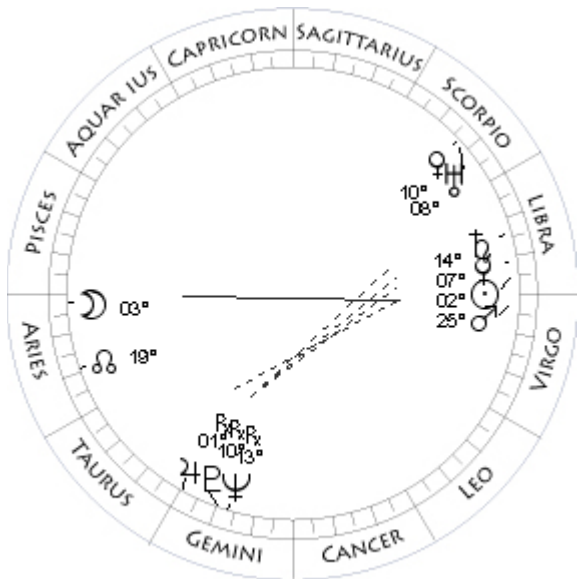
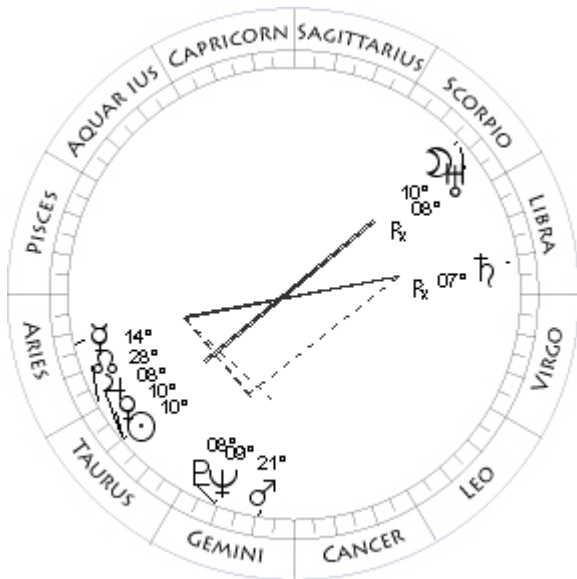
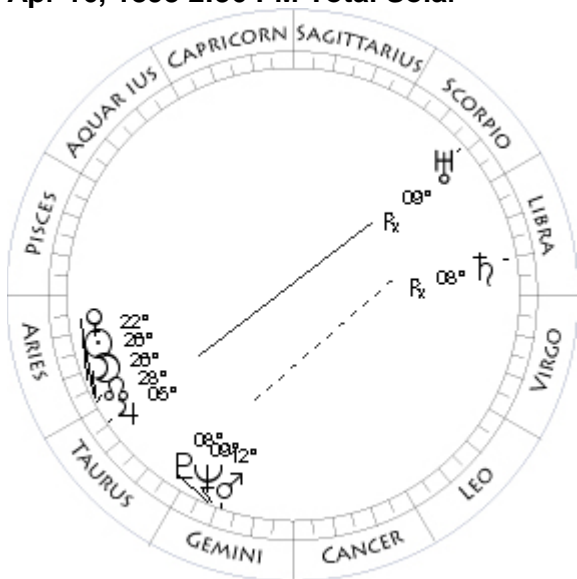
Oct 20, 1892 6:36 PM Partial Solar

Mo 07Ta11 - 0°54	Mo 27Li56 + 0°55
Su 07Ta06 - 0°00	Su 27Li51 - 0°00
Me 25Ar31 - 0°28R	Me 06Sc10 - 0°18
Ve 22Ge32 + 3°17	Ve 14Vi21 + 0°44
Ma 24Cp58 - 1°17	Ma 19Aq47 - 2°50
Ju 09Ar45 - 1°07	Ju 18Ar48 - 1°36R
Sa 24Vi00 + 2°28R	Sa 06Li19 + 2°09
Ur 03Sc55 + 0°31R	Ur 05Sc53 + 0°27
Ne 07Ge35 - 1°32	Ne 10Ge57 - 1°36R
Pl 07Ge38 -11°09	Pl 09Ge32 -11°26R
No 17Ta42 - 0°00	No 08Ta20 - 0°00
	Coords: 120E/42S

Nov 4, 1892 3:45 PM Total Umbral



Apr 16, 1893 2:36 PM Total Solar



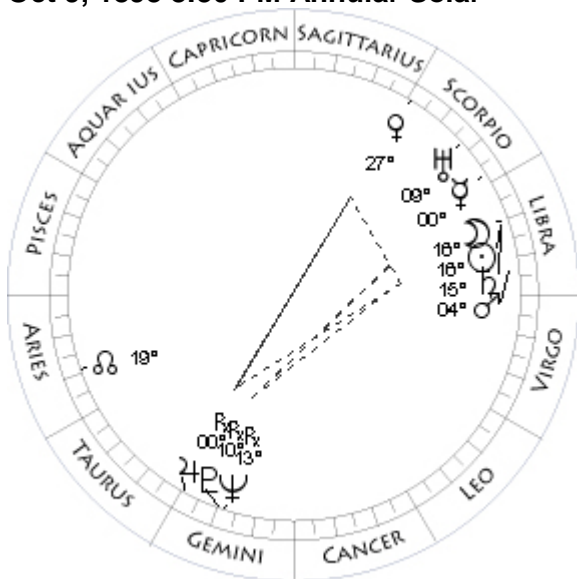
Apr 30, 1893 11:08 PM Partial Penumbra

Mo 12Ta41 + 0°26	Mo 10Sc40 - 1°05
Su 12Sc44 - 0°00	Su 10Ta47 - 0°00
Me 28Sc49 - 1°50	Me 14Ar06 - 2°56
Ve 01Li34 + 1°31	Ve 10Ta25 - 0°50
Ma 27Aq23 - 2°05	Ma 21Ge34 + 1°07
Ju 17Ar00 - 1°34R	Ju 08Ta37 - 0°57
Sa 08Li01 + 2°11	Sa 07Li11 + 2°40R
Ur 06Sc49 + 0°27	Ur 08Sc36 + 0°28R
Ne 10Ge37 - 1°36R	Ne 09Ge53 - 1°30
Pl 09Ge18 -11°27R	Pl 08Ge39 -10°56
No 07Ta33 - 0°00	No 28Ar09 - 0°00
Coords: 119W/16N	Coords: 12W/16S

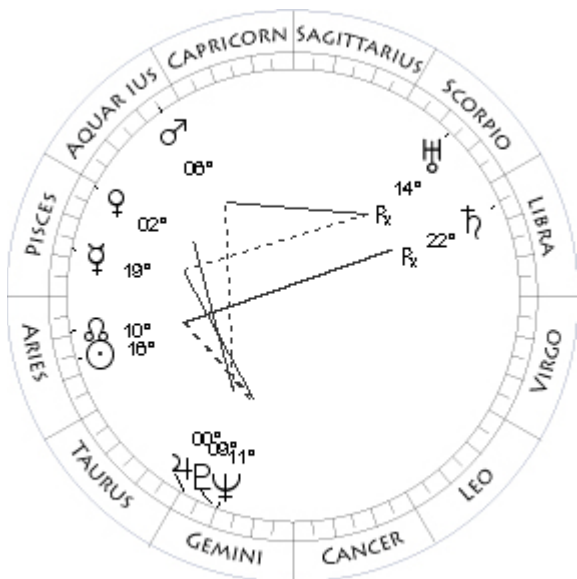
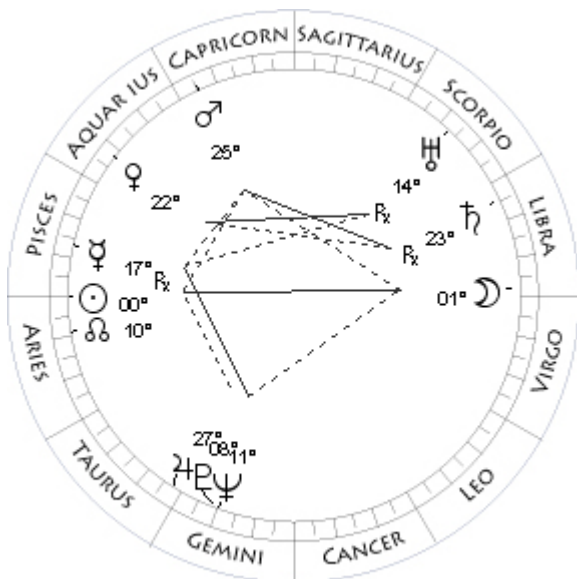
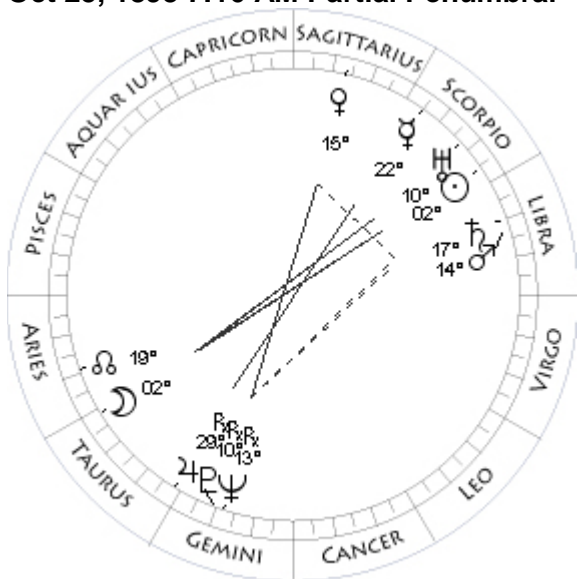
Sep 25, 1893 8:39 PM Partial Penumbra

Mo 26Ar50 - 0°11	Mo 03Ar07 - 1°30
Su 26Ar49 - 0°00	Su 02Li59 - 0°00
Me 04Ar39 - 1°05	Me 07Li24 + 1°00
Ve 22Ar41 - 1°13	Ve 10Sc38 - 0°47
Ma 12Ge17 + 1°04	Ma 25Vi48 + 0°59
Ju 05Ta11 - 0°58	Ju 01Ge24 - 1°06R
Sa 08Li07 + 2°42R	Sa 14Li13 + 2°15
Ur 09Sc12 + 0°28R	Ur 08Sc46 + 0°24
Ne 09Ge25 - 1°30	Ne 13Ge32 - 1°33R
Pl 08Ge23 -10°59	Pl 10Ge45 -11°08R
No 28Ar55 - 0°00	No 20Ar19 - 0°00

Oct 9, 1893 8:30 PM Annular Solar



Oct 25, 1893 7:16 AM Partial Penumbral



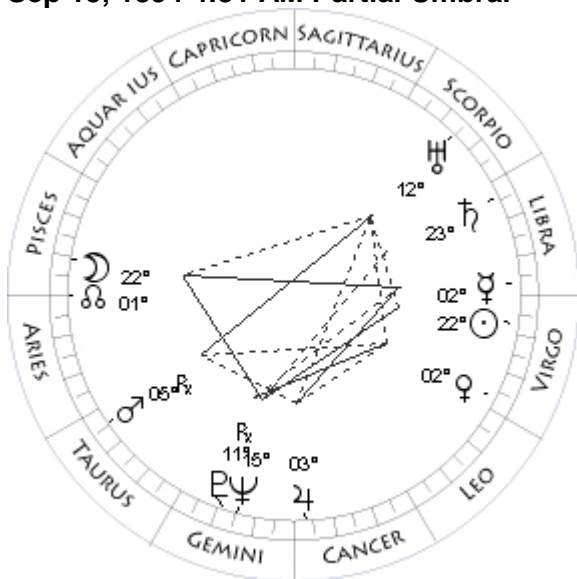
Mar 21, 1894 2:20 PM Partial Umbral

Mo 16Li47 + 0°16	Mo 01Li03 + 0°51
Su 16Li46 - 0°00	Su 00Ar58 - 0°00
Me 00Sc18 - 0°33	Me 17Pi40 + 2°07R
Ve 27Sc13 - 1°35	Ve 22Aq47 + 4°50
Ma 04Li50 + 0°55	Ma 25Cp11 - 0°50
Ju 00Ge47 - 1°08R	Ju 27Ta48 - 0°38
Sa 15Li56 + 2°14	Sa 23Li24 + 2°45R
Ur 09Sc33 + 0°24	Ur 14Sc54 + 0°25R
Ne 13Ge25 - 1°33R	Ne 11Ge00 - 1°29
Pl 10Ge39 -11°11R	Pl 08Ge58 -10°52
No 19Ar35 - 0°00	No 10Ar58 - 0°00
Coords: 123E/ 8N	

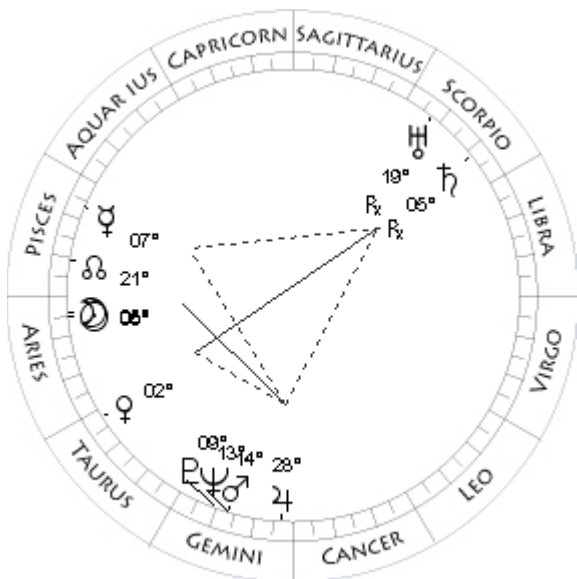
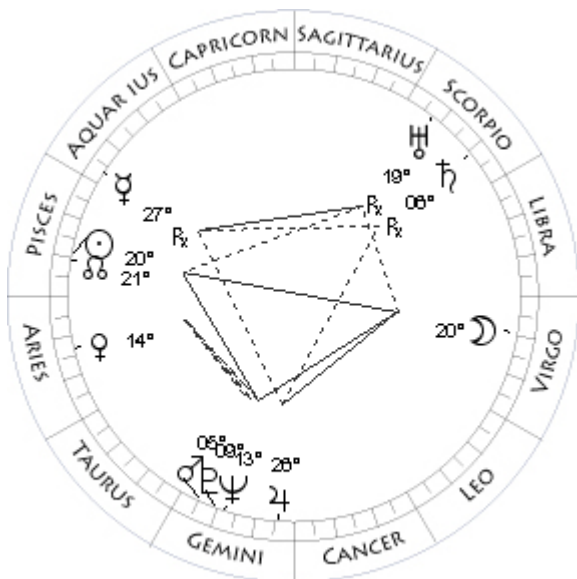
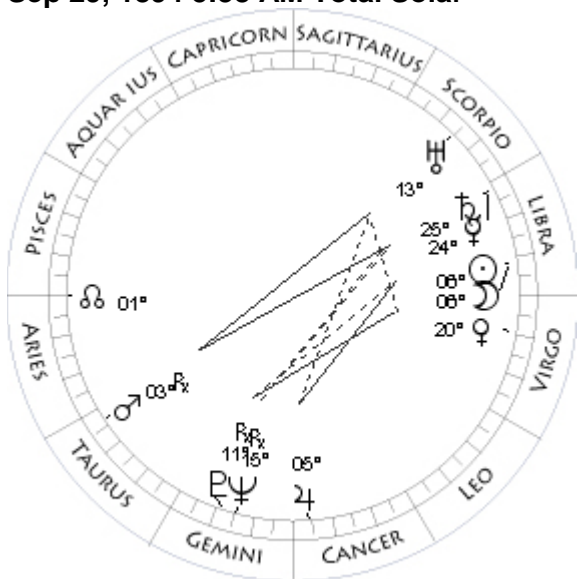
Apr 6, 1894 3:53 AM Total Solar

Mo 02Ta00 + 1°07	Mo 16Ar17 + 0°33
Su 02Sc07 - 0°00	Su 16Ar20 - 0°00
Me 22Sc45 - 2°11	Me 19Pi20 - 1°25
Ve 15Sa17 - 2°21	Ve 02Pi17 + 2°18
Ma 14Li53 + 0°50	Ma 06Aq10 - 1°08
Ju 29Ta26 - 1°08R	Ju 00Ge43 - 0°36
Sa 17Li48 + 2°15	Sa 22Li16 + 2°47R
Ur 10Sc30 + 0°24	Ur 14Sc25 + 0°25R
Ne 13Ge09 - 1°34R	Ne 11Ge20 - 1°29
Pl 10Ge27 -11°13R	Pl 09Ge09 -10°48
No 18Ar46 - 0°00	No 10Ar08 - 0°00
Coords: 114E/13N	Coords: 102W/36N

Sep 15, 1894 4:31 AM Partial Umbral



Sep 29, 1894 5:38 AM Total Solar



Mar 11, 1895 3:39 AM Total Umbral

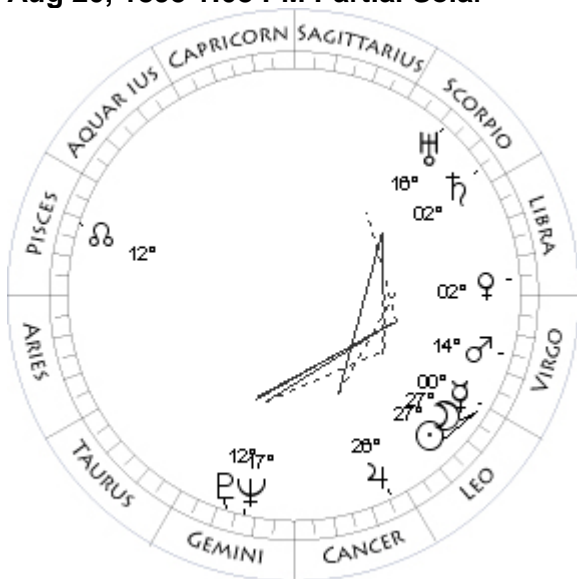
Mo 22Pi23 - 0°48	Mo 20Vi21 + 0°08
Su 22Vi19 - 0°00	Su 20Pi20 - 0°00
Me 02Li17 + 0°46	Me 27Aq49 + 1°17R
Ve 02Vi54 + 1°10	Ve 14Ar13 - 0°45
Ma 05Ta04 - 3°39R	Ma 05Ge16 + 1°33
Ju 03Cn55 - 0°22	Ju 26Ge51 - 0°02
Sa 23Li47 + 2°17	Sa 06Sc45 + 2°39R
Ur 12Sc37 + 0°22	Ur 19Sc49 + 0°21R
Ne 15Ge49 - 1°30	Ne 13Ge05 - 1°28
Pl 11Ge47 -10°53R	Pl 09Ge50 -10°41
No 01Ar34 - 0°00	No 22Pi11 - 0°00

Mar 26, 1895 10:09 AM Partial Solar

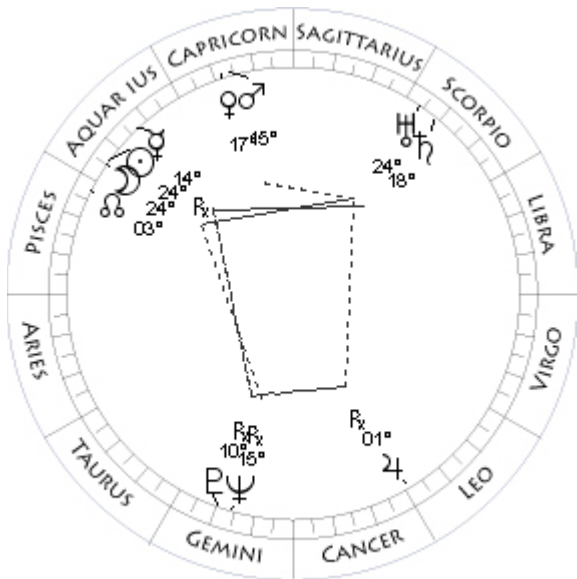
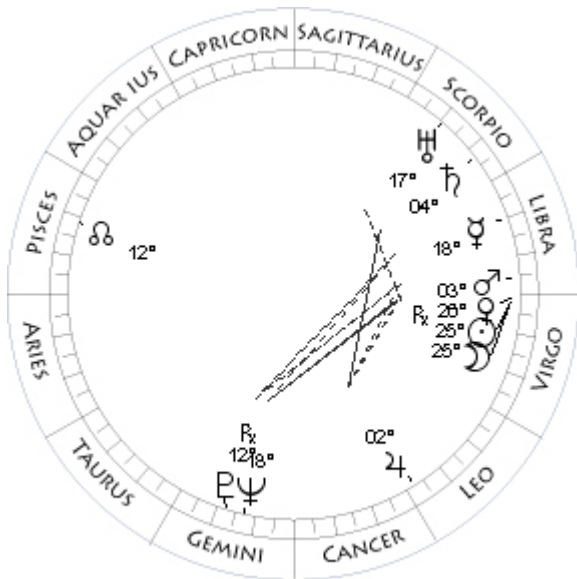
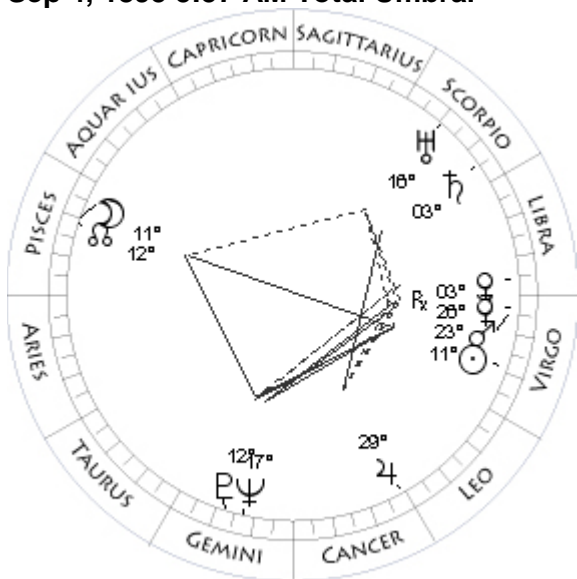
Mo 06Li01 - 0°27	Mo 05Ar23 + 1°14
Su 06Li04 - 0°00	Su 05Ar31 - 0°00
Me 24Li33 - 0°53	Me 07Pi51 - 1°35
Ve 20Vi17 + 1°26	Ve 02Ta57 - 0°06
Ma 03Ta48 - 3°19R	Ma 14Ge08 + 1°33
Ju 05Cn18 - 0°21	Ju 28Ge07 - 0°00
Sa 25Li23 + 2°16	Sa 05Sc59 + 2°41R
Ur 13Sc18 + 0°21	Ur 19Sc30 + 0°21R
Ne 15Ge47 - 1°30R	Ne 13Ge18 - 1°27
Pl 11Ge43 -10°55R	Pl 09Ge59 -10°37
No 00Ar49 - 0°00	No 21Pi23 - 0°00

Coords: 79W/26S

Aug 20, 1895 1:08 PM Partial Solar



Sep 4, 1895 5:57 AM Total Umbral



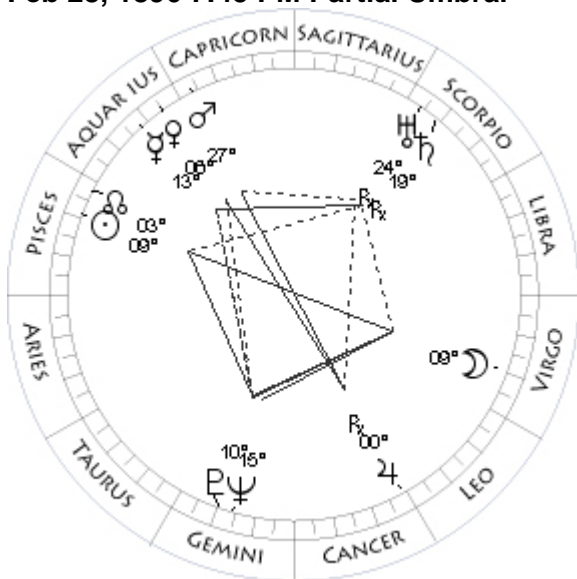
Sep 18, 1895 8:43 PM Partial Solar

Mo 27Le21 + 1°25	Mo 25Vi32 - 1°10
Su 27Le14 - 0°00	Su 25Vi40 - 0°00
Me 00Vi01 + 1°43	Me 18Li28 - 1°18
Ve 02Li39 - 5°01	Ve 26Vi18 - 8°39R
Ma 14Vi11 + 0°58	Ma 03Li01 + 0°46
Ju 26Cn58 + 0°14	Ju 02Le35 + 0°18
Sa 02Sc19 + 2°19	Sa 04Sc54 + 2°13
Ur 16Sc09 + 0°19	Ur 17Sc09 + 0°18
Ne 17Ge47 - 1°26	Ne 18Ge04 - 1°27
Pl 12Ge40 -10°34	Pl 12Ge45 -10°39R
No 13Pi35 - 0°00	No 12Pi02 - 0°00

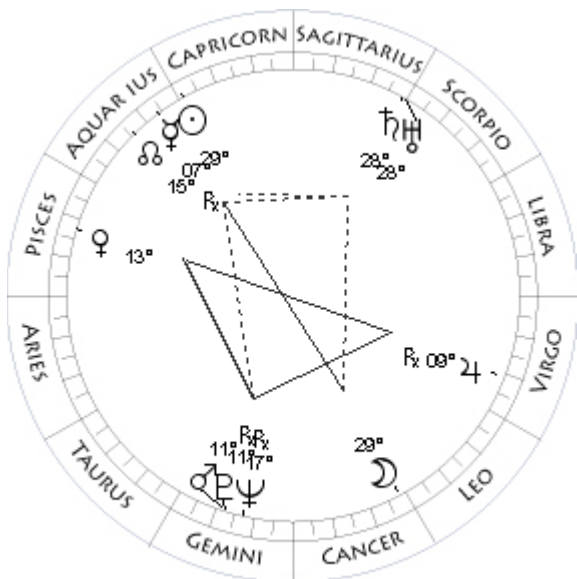
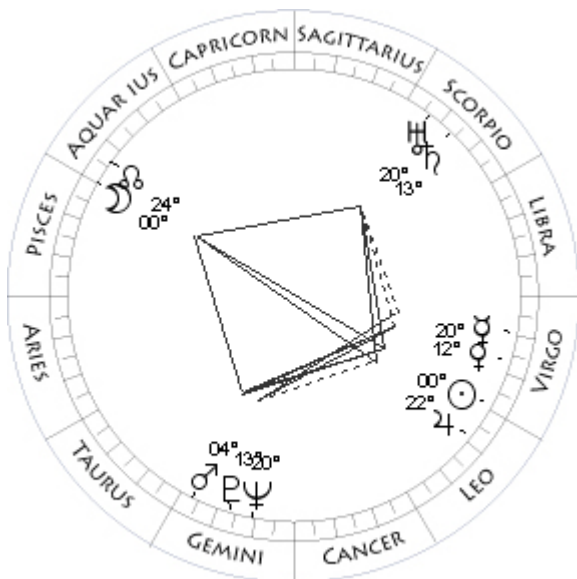
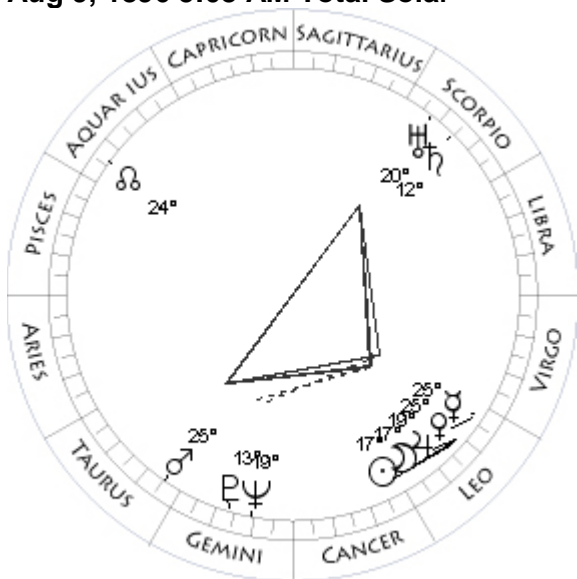
Feb 13, 1896 4:22 PM Annular Solar

Mo 11Pi27 - 0°08	Mo 24Aq36 - 0°50
Su 11Vi26 - 0°00	Su 24Aq31 - 0°00
Me 26Vi29 + 0°33	Me 14Aq06 + 3°31R
Ve 03Li15 - 7°37R	Ve 17Cp57 + 0°46
Ma 23Vi34 + 0°52	Ma 15Cp58 - 0°42
Ju 29Cn54 + 0°16	Ju 01Le34 + 0°42R
Sa 03Sc30 + 2°16	Sa 18Sc57 + 2°22
Ur 16Sc35 + 0°19	Ur 24Sc24 + 0°18
Ne 17Ge59 - 1°27	Ne 15Ge17 - 1°27R
Pl 12Ge45 -10°37	Pl 10Ge47 -10°35R
No 12Pi49 - 0°00	No 04Pi13 - 0°00
	Coords: 3W/64S

Feb 28, 1896 7:45 PM Partial Umbral



Aug 9, 1896 5:08 AM Total Solar



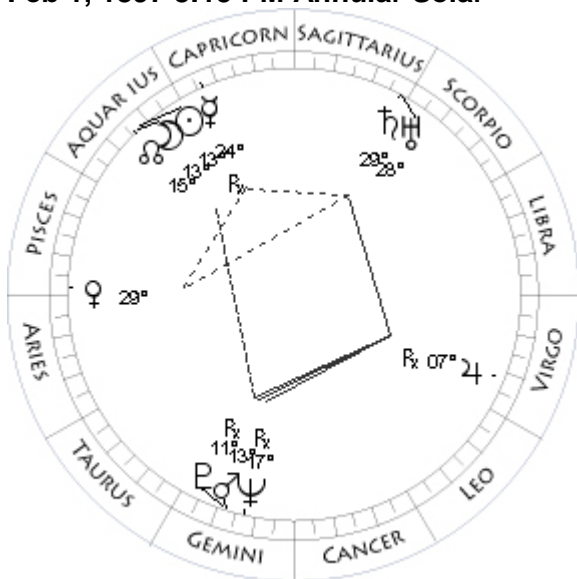
Aug 23, 1896 6:57 AM Partial Umbral

Mo 09Vi42 - 0°34	Mo 00Pi33 + 0°33
Su 09Pi46 - 0°00	Su 00Vi36 - 0°00
Me 13Aq20 + 0°33	Me 20Vi13 + 0°19
Ve 06Aq22 - 0°04	Ve 12Vi56 + 1°25
Ma 27Cp16 - 0°53	Ma 04Ge15 - 1°15
Ju 00Le06 + 0°43R	Ju 22Le28 + 0°44
Sa 19Sc06 + 2°25R	Sa 13Sc36 + 2°11
Ur 24Sc30 + 0°18R	Ur 20Sc42 + 0°16
Ne 15Ge15 - 1°26	Ne 20Ge03 - 1°24
Pl 10Ge46 -10°31	Pl 13Ge40 -10°21
No 03Pi24 - 0°00	No 24Aq04 - 0°00
Coords: 67W/ 7N	Coords: 104E/11S

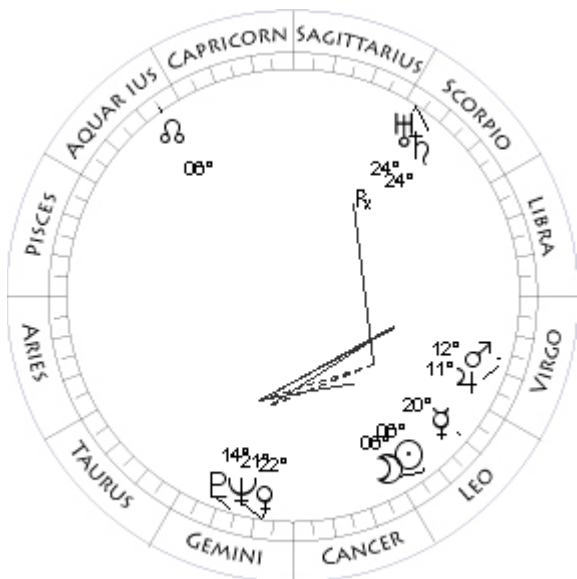
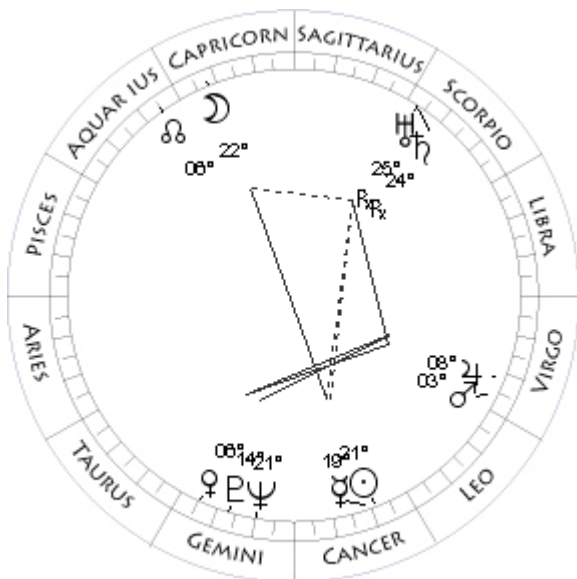
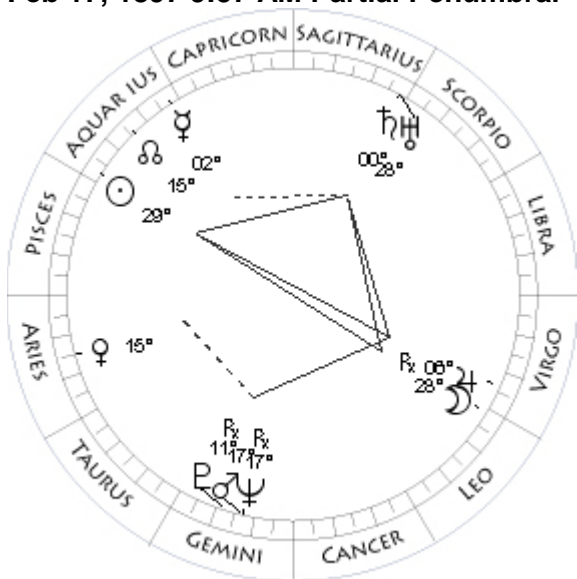
Jan 18, 1897 8:33 PM Partial Penumbral

Mo 17Le07 + 0°41	Mo 29Cn14 + 1°27
Su 17Le04 - 0°00	Su 29Cp05 - 0°00
Me 25Le52 + 1°39	Me 07Aq13 + 2°32R
Ve 25Le33 + 1°25	Ve 13Pi44 - 0°52
Ma 25Ta46 - 1°26	Ma 11Ge36 + 2°59
Ju 19Le24 + 0°43	Ju 09Vi17 + 1°14R
Sa 12Sc55 + 2°14	Sa 28Sc44 + 2°03
Ur 20Sc29 + 0°16	Ur 28Sc12 + 0°14
Ne 19Ge47 - 1°23	Ne 17Ge54 - 1°26R
Pl 13Ge32 -10°18	Pl 11Ge58 -10°27R
No 24Aq49 - 0°00	No 16Aq12 - 0°00
Coords: 132W/54N	Coords: 55W/22N

Feb 1, 1897 8:15 PM Annular Solar



Feb 17, 1897 9:57 AM Partial Penumbral



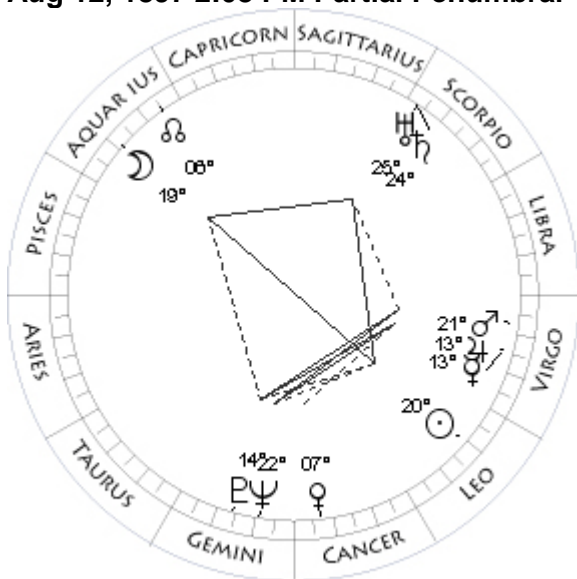
Jul 14, 1897 5:05 AM Partial Penumbral

Mo 13Aq19 - 0°11	Mo 22Cp05 - 1°16
Su 13Aq18 - 0°00	Su 21Cn58 - 0°00
Me 24Cp02 + 2°55R	Me 19Cn55 + 1°22
Ve 29Pi22 + 0°12	Ve 06Ge28 - 3°14
Ma 13Ge10 + 2°51	Ma 03Vi24 + 1°03
Ju 07Vi58 + 1°17R	Ju 08Vi16 + 1°04
Sa 29Sc41 + 2°05	Sa 24Sc17 + 2°08R
Ur 28Sc38 + 0°14	Ur 25Sc08 + 0°13R
Ne 17Ge40 - 1°25R	Ne 21Ge13 - 1°20
Pl 11Ge50 -10°24R	Pl 14Ge06 -10°01
No 15Aq27 - 0°00	No 06Aq51 - 0°00
Coords: 116E/27S	

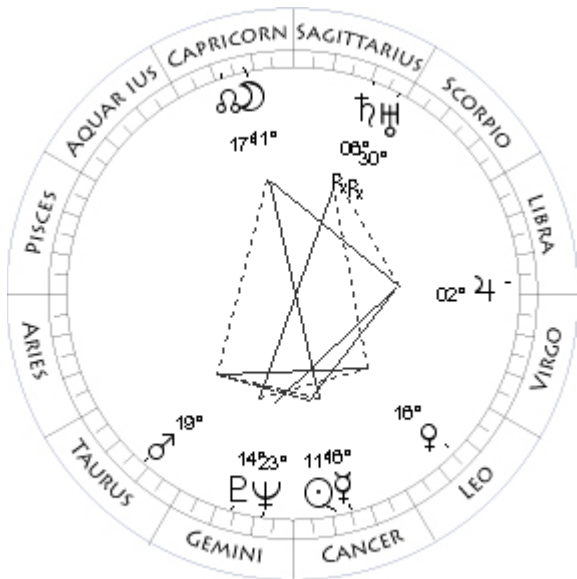
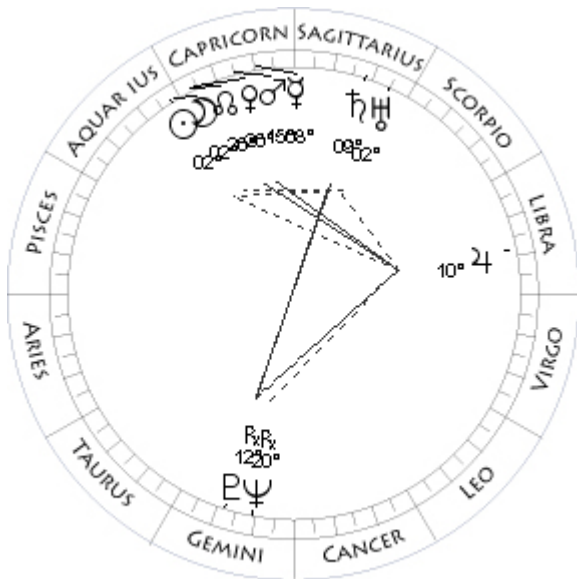
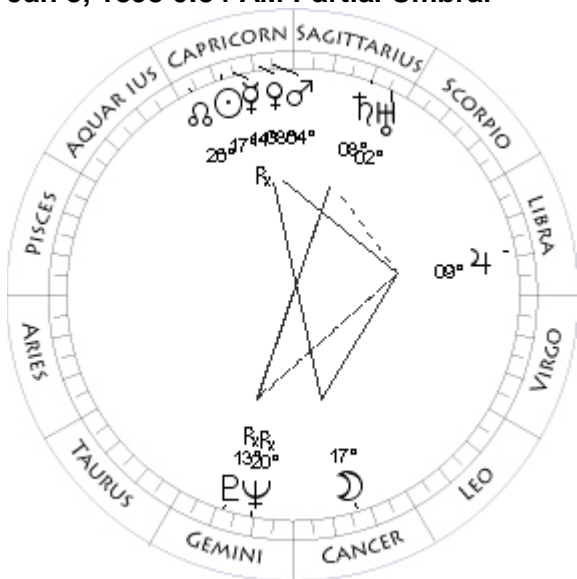
Jul 29, 1897 3:56 PM Annular Solar

Mo 28Le56 - 1°15	Mo 06Le42 - 0°04
Su 29Aq03 - 0°00	Su 06Le43 - 0°00
Me 02Aq42 + 0°02	Me 20Le59 + 1°33
Ve 15Ar40 + 1°43	Ve 22Ge25 - 2°39
Ma 17Ge06 + 2°39	Ma 12Vi56 + 0°54
Ju 06Vi05 + 1°19R	Ju 11Vi10 + 1°03
Sa 00Sa25 + 2°07	Sa 24Sc07 + 2°04
Ur 28Sc57 + 0°14	Ur 24Sc59 + 0°13R
Ne 17Ge31 - 1°24R	Ne 21Ge41 - 1°20
Pl 11Ge45 -10°20R	Pl 14Ge22 -10°03
No 14Aq38 - 0°00	No 06Aq02 - 0°00
Coords: 146E/11N	

Aug 12, 1897 2:08 PM Partial Penumbral



Jan 8, 1898 0:34 AM Partial Umbral



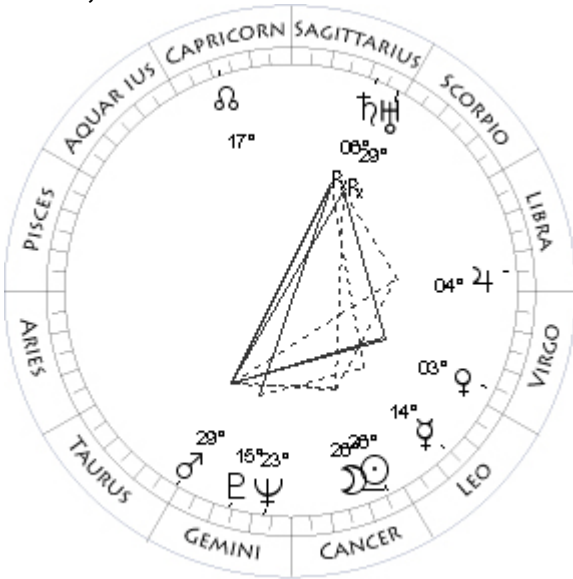
Jan 22, 1898 7:19 AM Total Solar

Mo 19Aq56 + 1°16	Mo 02Aq18 + 0°30
Su 20Le04 - 0°00	Su 02Aq21 - 0°00
Me 13Vi38 - 0°00	Me 08Cp53 + 2°12
Ve 07Cn36 - 1°53	Ve 26Cp25 - 0°47
Ma 21Vi40 + 0°47	Ma 15Cp11 - 0°48
Ju 13Vi58 + 1°03	Ju 10Li17 + 1°25
Sa 24Sc18 + 2°00	Sa 09Sa35 + 1°45
Ur 25Sc01 + 0°13	Ur 02Sa40 + 0°11
Ne 22Ge03 - 1°21	Ne 20Ge07 - 1°23R
Pl 14Ge33 -10°05	Pl 12Ge56 -10°12R
No 05Aq18 - 0°00	No 26Cp41 - 0°00
Coords: 149W/14S	Coords: 64W/ 9N

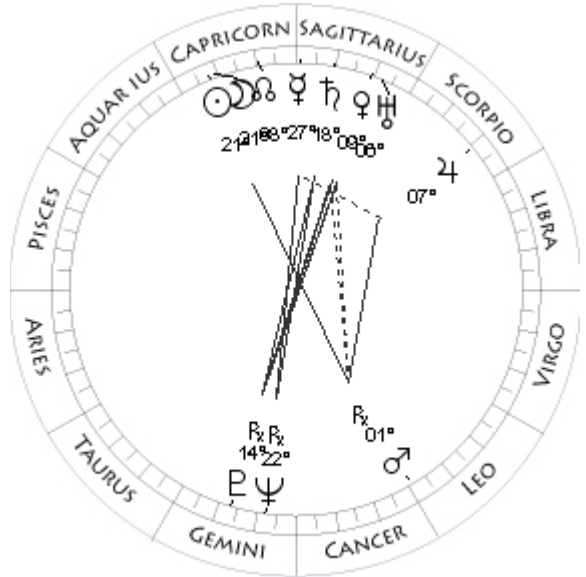
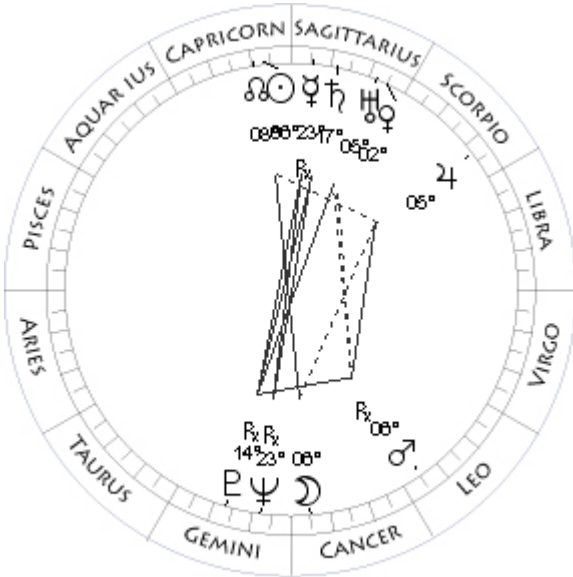
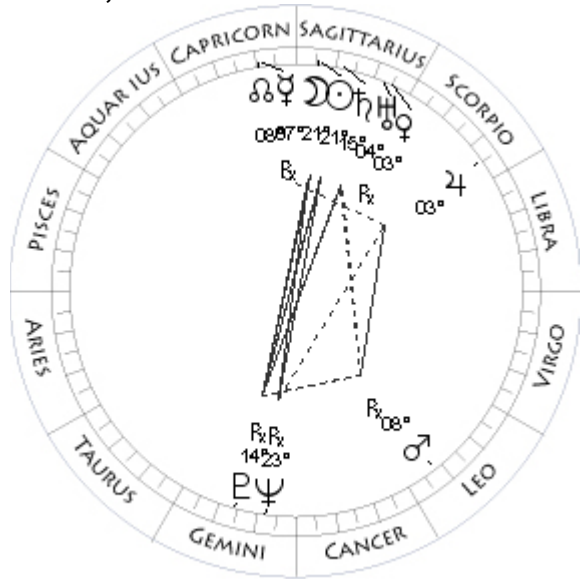
Jul 3, 1898 9:17 PM Partial Umbral

Mo 17Cn53 + 0°49	Mo 11Cp56 - 0°32
Su 17Cp49 - 0°00	Su 11Cn53 - 0°00
Me 14Cp39 + 3°05R	Me 16Cn11 + 1°38
Ve 08Cp28 - 0°15	Ve 16Le19 + 1°46
Ma 04Cp23 - 0°40	Ma 19Ta18 - 0°50
Ju 09Li52 + 1°21	Ju 02Li20 + 1°17
Sa 08Sa15 + 1°44	Sa 06Sa41 + 1°51R
Ur 02Sa03 + 0°11	Ur 30Sc00 + 0°10R
Ne 20Ge26 - 1°23R	Ne 23Ge01 - 1°17
Pl 13Ge07 -10°15R	Pl 14Ge51 - 9°46
No 27Cp26 - 0°00	No 18Cp05 - 0°00
	Coords: 42W/23S

Jul 18, 1898 7:36 PM Annular Solar



Dec 13, 1898 11:57 AM Partial Solar



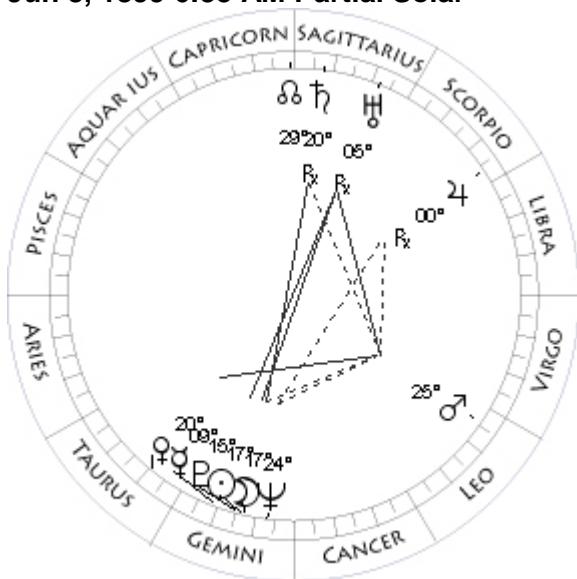
Dec 27, 1898 11:41 PM Total Umbral

Mo 26Cn03 - 0°46	Mo 06Cn20 + 0°13
Su 26Cn08 - 0°00	Su 06Cp19 - 0°00
Me 14Le58 + 1°27	Me 23Sa10 + 3°07R
Ve 03Vi53 + 1°25	Ve 02Sa36 + 4°06
Ma 29Ta49 - 0°40	Ma 06Le25 + 3°45R
Ju 04Li07 + 1°14	Ju 05Sc24 + 1°10
Sa 06Sa01 + 1°48R	Sa 17Sa14 + 1°23
Ur 29Sc40 + 0°09R	Ur 05Sa43 + 0°07
Ne 23Ge31 - 1°17	Ne 23Ge01 - 1°21R
Pl 15Ge09 - 9°47	Pl 14Ge18 -10°02R
No 17Cp17 - 0°00	No 08Cp42 - 0°00
Coords: 130E/35S	Coords: 5W/24N

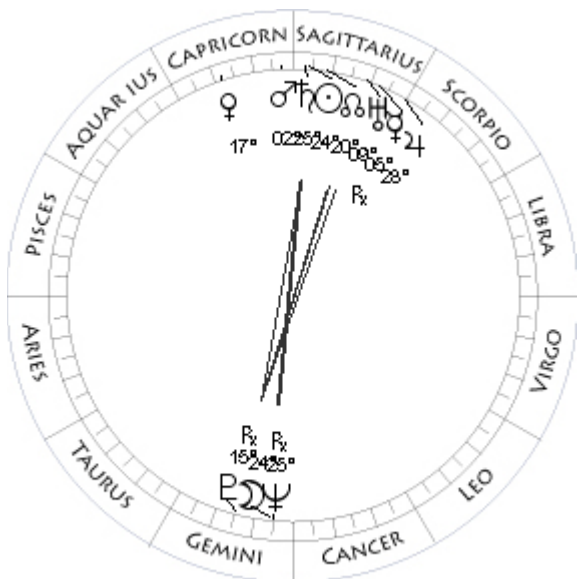
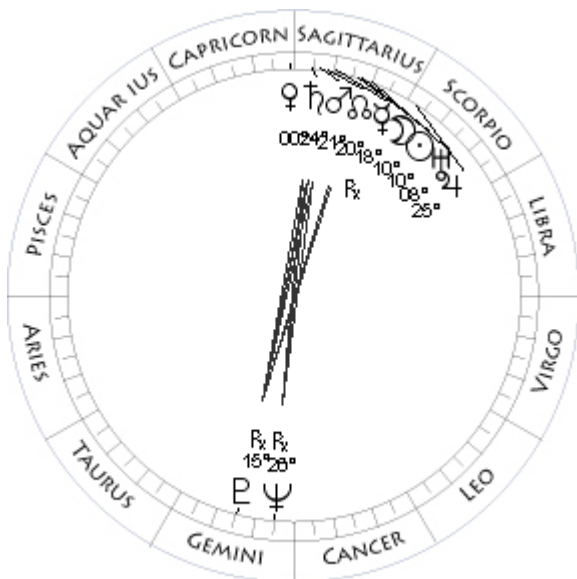
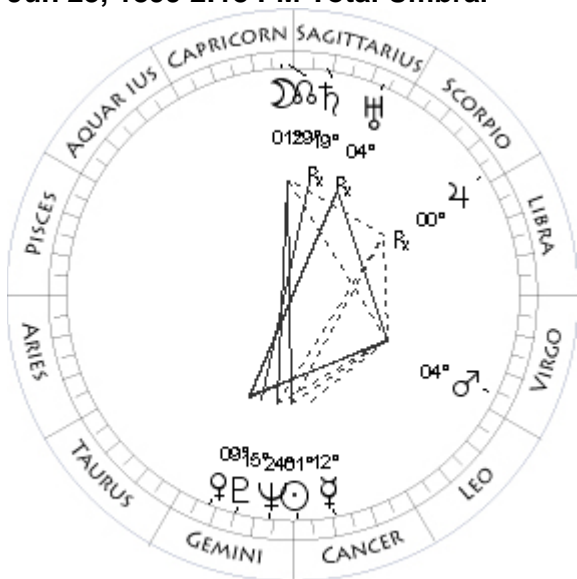
Jan 11, 1899 10:37 PM Partial Solar

Mo 21Sa42 - 1°32	Mo 21Cp26 + 1°11
Su 21Sa34 - 0°00	Su 21Cp34 - 0°00
Me 07Cp50 - 0°27R	Me 27Sa59 + 1°34
Ve 03Sa29 + 1°55R	Ve 09Sa23 + 4°44
Ma 08Le35 + 3°07R	Ma 01Le31 + 4°15R
Ju 03Sc00 + 1°08	Ju 07Sc27 + 1°12
Sa 15Sa33 + 1°24	Sa 18Sa53 + 1°23
Ur 04Sa53 + 0°07	Ur 06Sa30 + 0°07
Ne 23Ge26 - 1°21R	Ne 22Ge38 - 1°21R
Pl 14Ge35 -10°03R	Pl 14Ge04 -10°00R
No 09Cp28 - 0°00	No 07Cp54 - 0°00

Jun 8, 1899 6:33 AM Partial Solar



Jun 23, 1899 2:18 PM Total Umbral



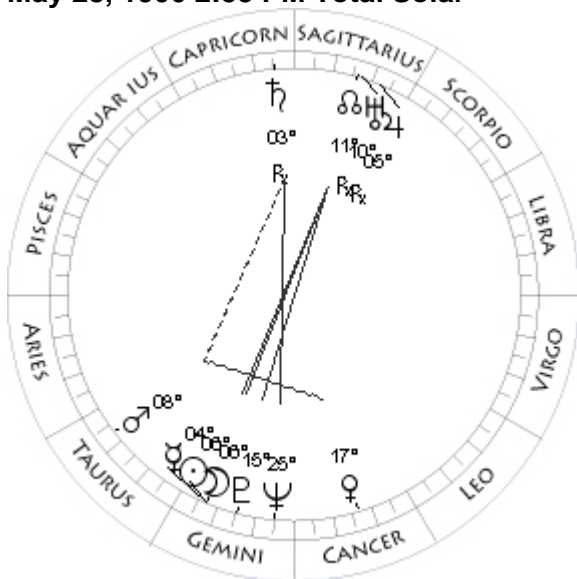
Dec 3, 1899 0:56 AM Annular Solar

Mo 17Ge20 + 1°07	Mo 10Sa45 - 0°52
Su 17Ge13 - 0°00	Su 10Sa41 - 0°00
Me 09Ge17 - 0°08	Me 18Sa05 + 0°23R
Ve 20Ta36 - 1°30	Ve 00Cp17 - 1°02
Ma 25Le40 + 1°19	Ma 21Sa53 - 0°44
Ju 00Sc52 + 1°20R	Ju 25Sc07 + 0°49
Sa 20Sa38 + 1°29R	Sa 24Sa19 + 1°02
Ur 05Sa33 + 0°06R	Ur 08Sa26 + 0°04
Ne 24Ge12 - 1°15	Ne 26Ge02 - 1°18R
Pl 15Ge15 - 9°32	Pl 15Ge47 - 9°49R
No 00Cp06 - 0°00	No 20Sa41 - 0°00
	Coords: 125W/86S

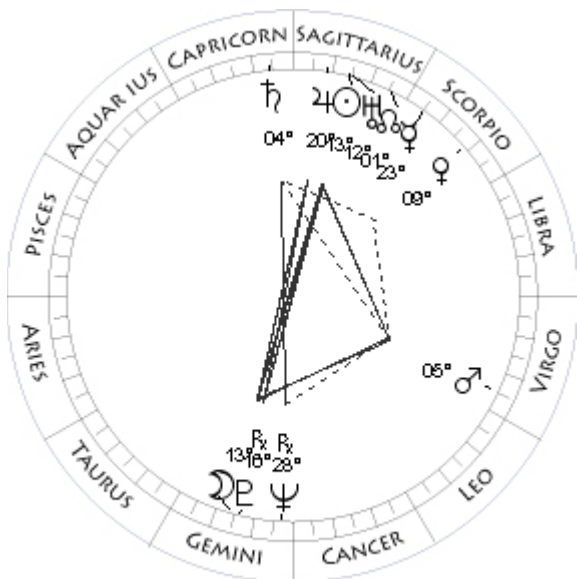
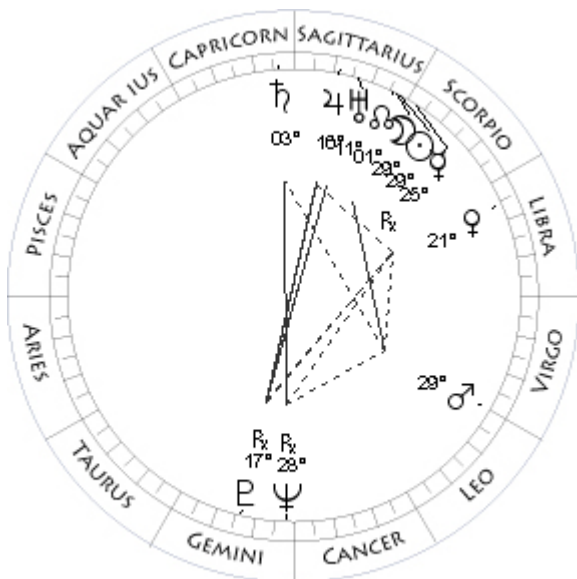
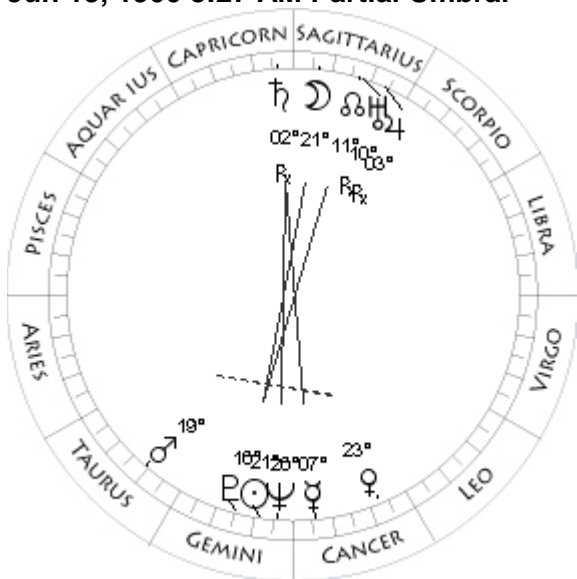
Dec 17, 1899 1:25 AM Total Umbral

Mo 01Cp50 + 0°13	Mo 24Ge53 - 0°25
Su 01Cn51 - 0°00	Su 24Sa56 - 0°00
Me 12Cn16 + 1°50	Me 05Sa55 + 2°51R
Ve 09Ge06 - 1°01	Ve 17Cp47 - 1°27
Ma 04Vi10 + 1°05	Ma 02Cp27 - 0°50
Ju 00Sc20 + 1°16R	Ju 28Sc07 + 0°49
Sa 19Sa31 + 1°28R	Sa 25Sa58 + 1°01
Ur 04Sa58 + 0°06R	Ur 09Sa17 + 0°04
Ne 24Ge47 - 1°14	Ne 25Ge38 - 1°18R
Pl 15Ge36 - 9°31	Pl 15Ge31 - 9°48R
No 29Sa18 - 0°00	No 19Sa57 - 0°00
	Coords: 146W/23S

May 28, 1900 2:53 PM Total Solar



Jun 13, 1900 3:27 AM Partial Umbral



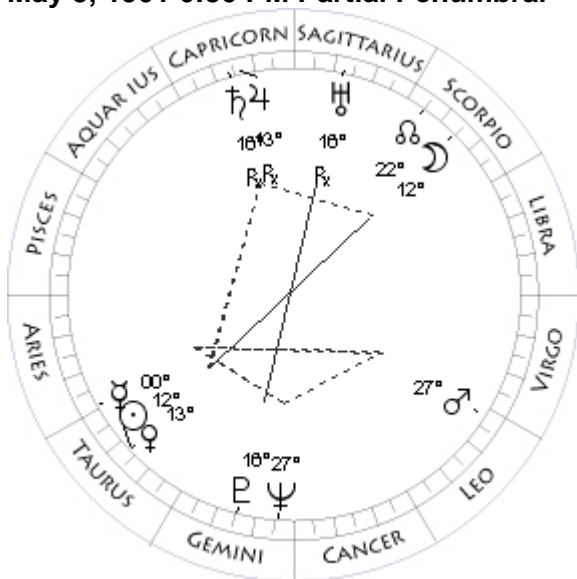
Nov 22, 1900 7:19 AM Annular Solar

Mo 06Ge49 + 0°23	Mo 29Sc34 - 0°12
Su 06Ge47 - 0°00	Su 29Sc34 - 0°00
Me 04Ge44 + 0°19	Me 25Sc23 + 1°10R
Ve 17Cn46 + 2°55	Ve 21Li59 + 1°56
Ma 08Ta23 - 0°36	Ma 29Le33 + 2°05
Ju 05Sa54 + 0°53R	Ju 16Sa59 + 0°22
Sa 03Cp33 + 1°01R	Sa 03Cp11 + 0°39
Ur 10Sa38 + 0°03R	Ur 11Sa56 + 0°01
Ne 25Ge58 - 1°12	Ne 28Ge36 - 1°15R
Pl 15Ge57 - 9°18	Pl 17Ge00 - 9°34R
No 11Sa20 - 0°00	No 01Sa56 - 0°00
	Coords: 65W/33S

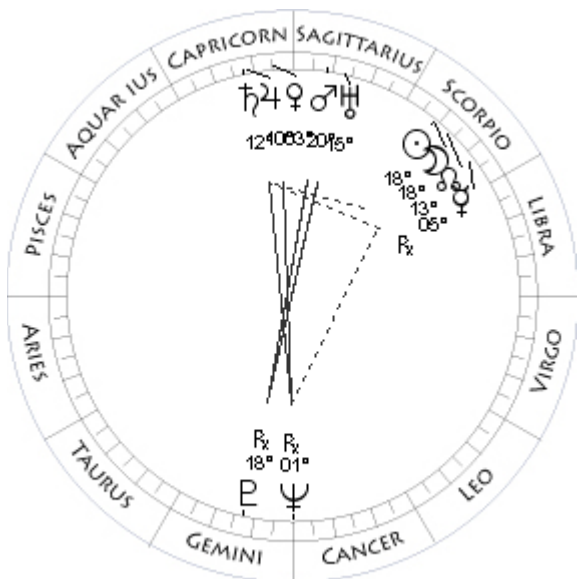
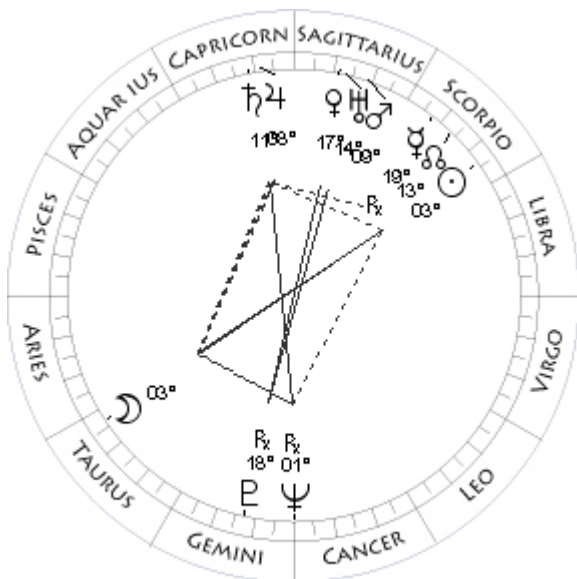
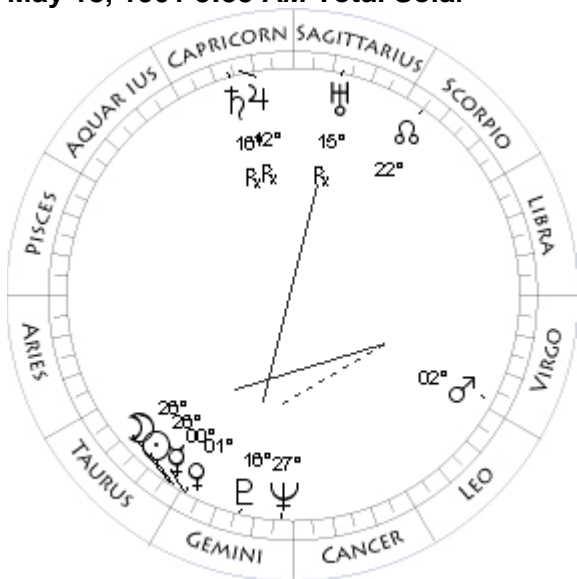
Dec 6, 1900 10:26 AM Partial Penumbral

Mo 21Sa33 + 0°58	Mo 13Ge46 - 1°06
Su 21Ge39 - 0°00	Su 13Sa53 - 0°00
Me 07Cn20 + 2°00	Me 23Sc18 + 2°28
Ve 23Cn43 + 1°09	Ve 09Sc12 + 1°56
Ma 19Ta46 - 0°26	Ma 05Vi05 + 2°26
Ju 03Sa59 + 0°51R	Ju 20Sa10 + 0°21
Sa 02Cp31 + 1°01R	Sa 04Cp44 + 0°38
Ur 10Sa00 + 0°03R	Ur 12Sa47 + 0°01
Ne 26Ge32 - 1°12	Ne 28Ge14 - 1°15R
Pl 16Ge19 - 9°17	Pl 16Ge44 - 9°34R
No 10Sa31 - 0°00	No 01Sa11 - 0°00
	Coords: 159E/21N

May 3, 1901 6:30 PM Partial Penumbral



May 18, 1901 5:33 AM Total Solar



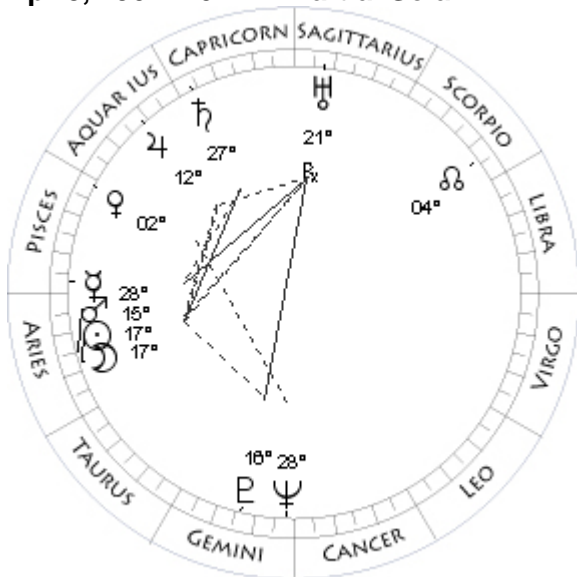
Oct 27, 1901 3:15 PM Partial Umbral

Mo 12Sc42 - 0°54	Mo 03Ta36 + 0°55
Su 12Ta37 - 0°00	Su 03Sc31 - 0°00
Me 00Ta23 - 1°35	Me 19Sc42 - 2°34R
Ve 13Ta20 - 0°44	Ve 17Sa16 - 2°28
Ma 27Le40 + 2°01	Ma 09Sa28 - 0°53
Ju 13Cp03 + 0°09R	Ju 08Cp06 - 0°11
Sa 16Cp21 + 0°32R	Sa 11Cp16 + 0°16
Ur 16Sa11 - 0°01R	Ur 14Sa39 - 0°02
Ne 27Ge18 - 1°10	Ne 01Cn21 - 1°11R
Pl 16Ge23 - 9°06	Pl 18Ge26 - 9°17R
No 23Sc20 - 0°00	No 13Sc58 - 0°00
Coords: 81W/17S	Coords: 127W/14N

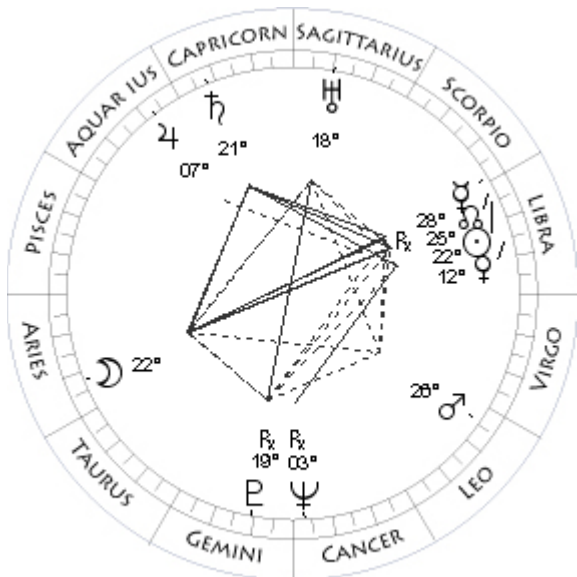
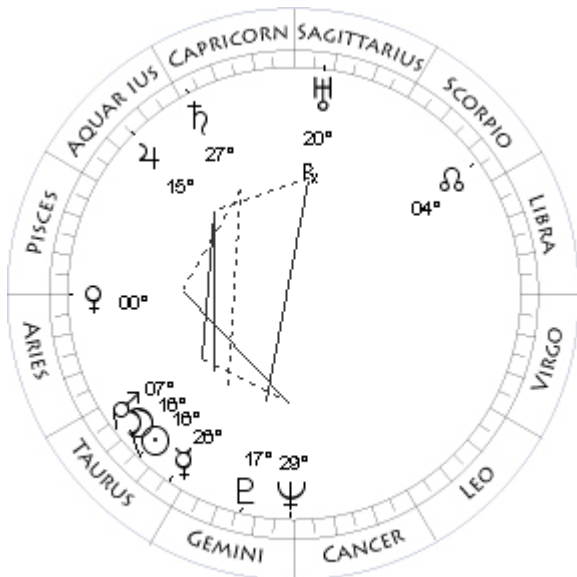
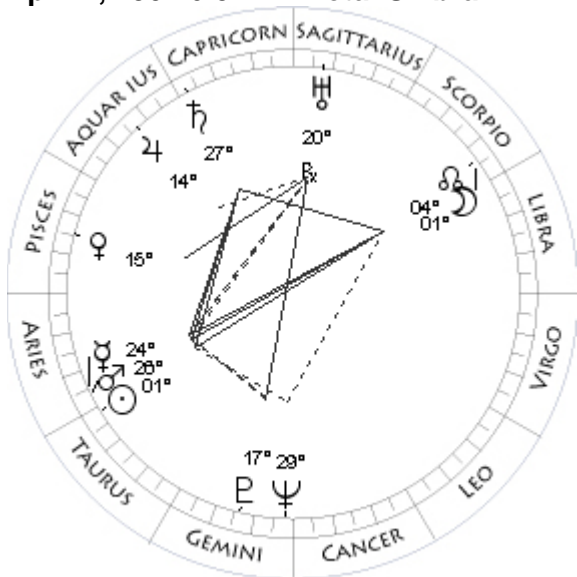
Nov 11, 1901 7:28 AM Annular Solar

Mo 26Ta32 - 0°22	Mo 18Sc11 + 0°26
Su 26Ta35 - 0°00	Su 18Sc14 - 0°00
Me 00Ge52 + 0°47	Me 05Sc02 + 1°39R
Ve 01Ge08 - 0°12	Ve 03Cp57 - 2°53
Ma 02Vi29 + 1°35	Ma 20Sa19 - 0°59
Ju 12Cp35 + 0°08R	Ju 10Cp36 - 0°12
Sa 16Cp00 + 0°31R	Sa 12Cp23 + 0°14
Ur 15Sa40 - 0°01R	Ur 15Sa25 - 0°02
Ne 27Ge45 - 1°09	Ne 01Cn07 - 1°12R
Pl 16Ge41 - 9°04	Pl 18Ge13 - 9°18R
No 22Sc34 - 0°00	No 13Sc11 - 0°00
	Coords: 69W/11N

Apr 8, 1902 2:04 PM Partial Solar



Apr 22, 1902 6:52 PM Total Umbral



May 7, 1902 10:34 PM Partial Solar

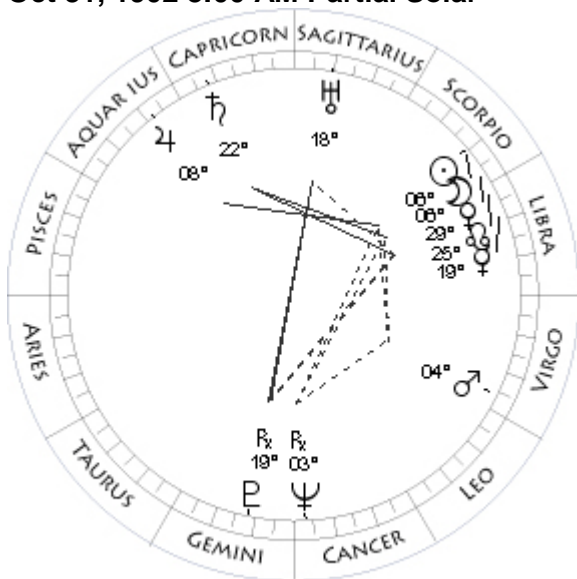
Mo 17Ar56 + 1°30	Mo 16Ta18 - 1°06
Su 17Ar49 - 0°00	Su 16Ta25 - 0°00
Me 28Pi28 - 2°25	Me 26Ta49 + 1°15
Ve 02Pi58 + 1°55	Ve 00Ar40 - 1°08
Ma 15Ar44 - 0°37	Ma 07Ta49 - 0°19
Ju 12Aq16 - 0°28	Ju 15Aq56 - 0°34
Sa 27Cp06 + 0°04	Sa 27Cp48 + 0°01
Ur 21Sa13 - 0°04R	Ur 20Sa35 - 0°04R
Ne 28Ge55 - 1°08	Ne 29Ge35 - 1°07
Pl 16Ge56 - 8°56	Pl 17Ge26 - 8°50
No 05Sc20 - 0°00	No 03Sc47 - 0°00

Oct 17, 1902 6:03 AM Total Umbral

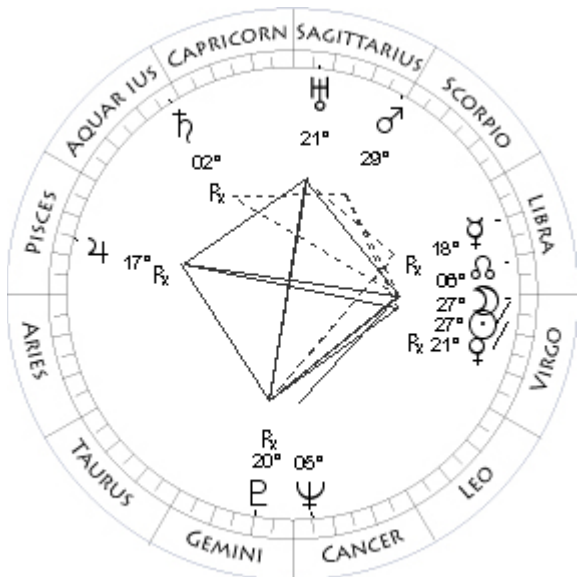
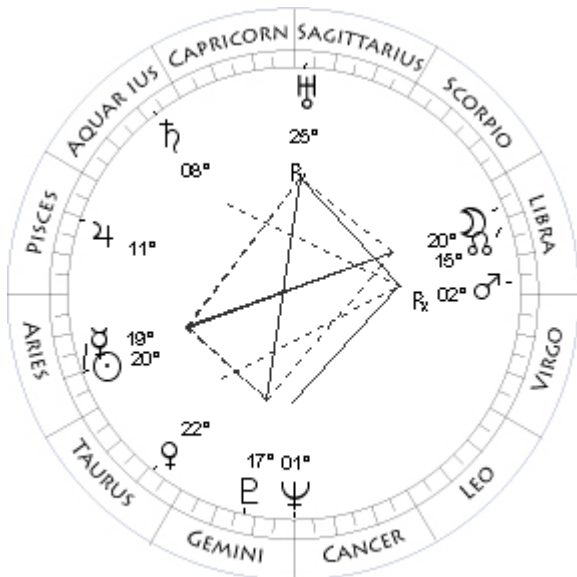
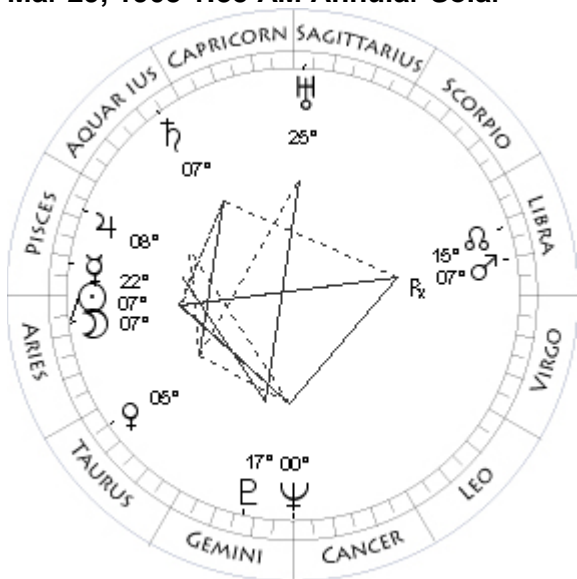
Mo 01Sc43 - 0°15	Mo 22Ar57 + 0°13
Su 01Ta42 - 0°00	Su 22Li56 - 0°00
Me 24Ar43 - 1°16	Me 28Li35 - 2°05R
Ve 15Pi33 + 0°11	Ve 12Li11 + 1°26
Ma 26Ar30 - 0°29	Ma 26Le06 + 1°25
Ju 14Aq17 - 0°31	Ju 07Aq41 - 0°53
Sa 27Cp36 + 0°03	Sa 21Cp33 - 0°12
Ur 20Sa59 - 0°04R	Ur 18Sa21 - 0°06
Ne 29Ge11 - 1°07	Ne 03Cn42 - 1°08R
Pl 17Ge09 - 8°53	Pl 19Ge34 - 9°00R
No 04Sc35 - 0°00	No 25Li11 - 0°00

Coords: 76W/12S

Oct 31, 1902 8:00 AM Partial Solar



Mar 29, 1903 1:35 AM Annular Solar



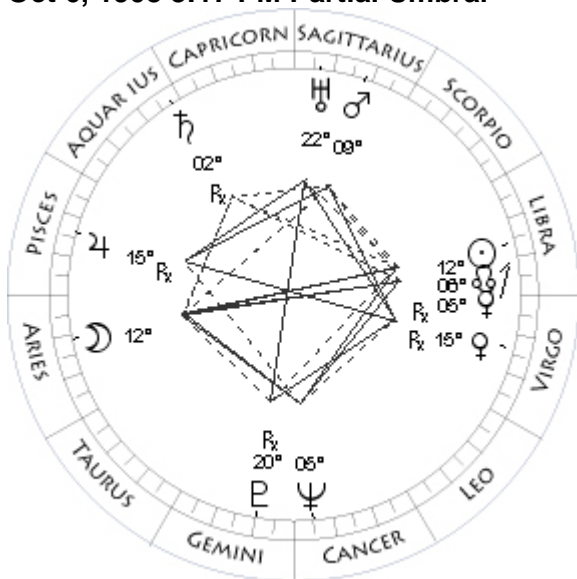
Apr 12, 1903 0:12 AM Partial Umbral

Mo 06Sc52 + 1°04	Mo 20Li52 + 0°27
Su 06Sc58 - 0°00	Su 20Ar56 - 0°00
Me 19Li19 + 1°52	Me 19Ar43 - 0°55
Ve 29Li49 + 1°12	Ve 22Ta29 + 0°43
Ma 04Vi14 + 1°35	Ma 02Li21 + 2°41R
Ju 08Aq35 - 0°52	Ju 11Pi43 - 0°56
Sa 22Cp11 - 0°12	Sa 08Aq09 - 0°25
Ur 18Sa59 - 0°06	Ur 25Sa35 - 0°08R
Ne 03Cn34 - 1°08R	Ne 01Cn10 - 1°05
Pl 19Ge24 - 9°01R	Pl 17Ge58 - 8°40
No 24Li26 - 0°00	No 15Li49 - 0°00

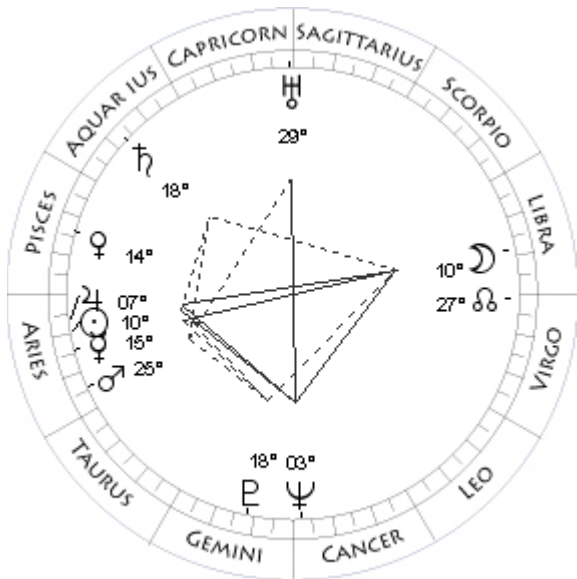
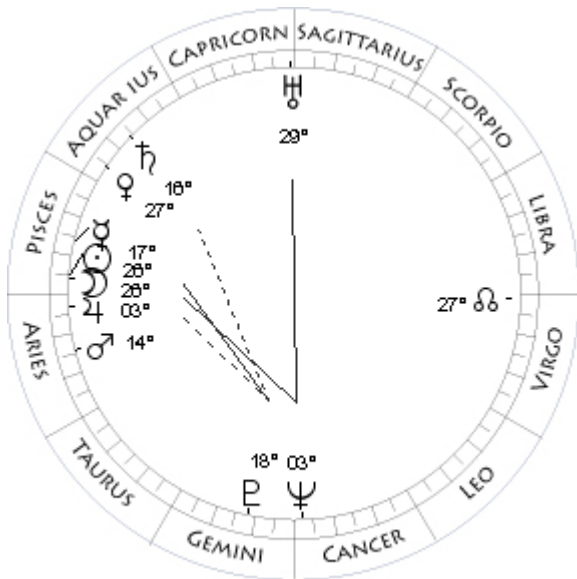
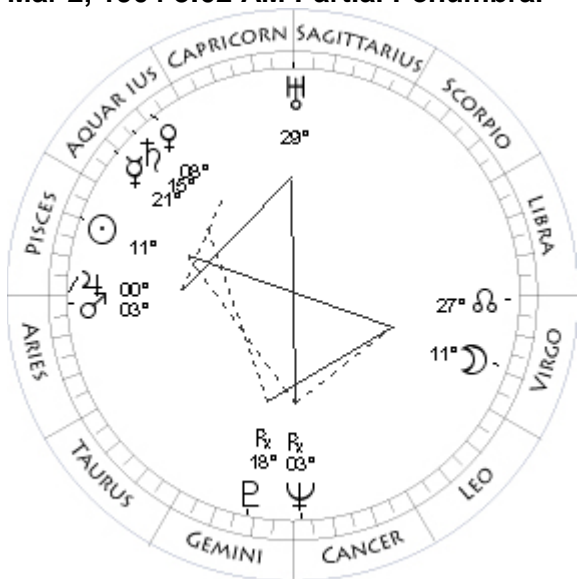
Sep 21, 1903 4:39 AM Total Solar

Mo 07Ar16 + 0°48	Mo 27Vi06 - 0°53
Su 07Ar12 - 0°00	Su 27Vi01 - 0°00
Me 22Pi51 - 2°14	Me 18Li03 - 3°52R
Ve 05Ta35 + 0°02	Ve 21Vi45 - 8°30R
Ma 07Li33 + 3°08R	Ma 29Sc03 - 1°15
Ju 08Pi40 - 0°54	Ju 17Pi08 - 1°32R
Sa 07Aq11 - 0°23	Sa 02Aq56 - 0°41R
Ur 25Sa38 - 0°07	Ur 21Sa48 - 0°09
Ne 00Cn59 - 1°05	Ne 05Cn51 - 1°04
Pl 17Ge48 - 8°43	Pl 20Ge42 - 8°40R
No 16Li34 - 0°00	No 07Li14 - 0°00
Coords: 130W/56N	Coords: 78W/58S

Oct 6, 1903 3:17 PM Partial Umbral



Mar 2, 1904 3:02 AM Partial Penumbral



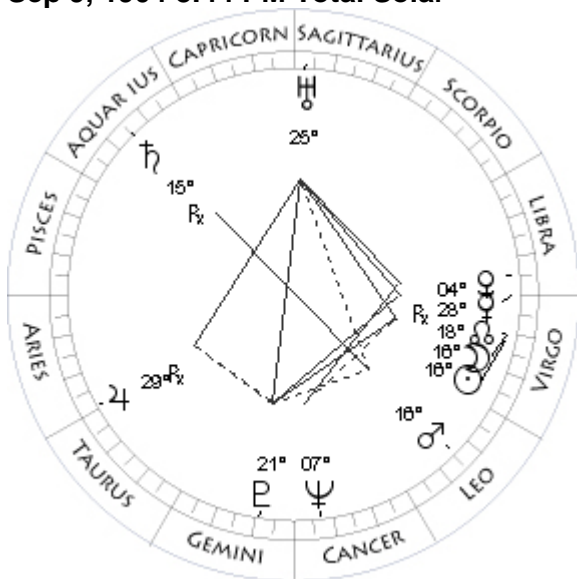
Mar 17, 1904 5:40 AM Annular Solar

Mo 12Ar08 - 0°30	Mo 26Pi14 + 0°07
Su 12Li11 - 0°00	Su 26Pi13 - 0°00
Me 05Li59 - 1°16R	Me 17Pi11 - 2°04
Ve 15Vi47 - 5°59R	Ve 27Aq02 - 0°52
Ma 09Sa51 - 1°19	Ma 14Ar37 - 0°25
Ju 15Pi18 - 1°31R	Ju 03Ar51 - 1°05
Sa 02Aq41 - 0°41R	Sa 16Aq46 - 0°48
Ur 22Sa10 - 0°09	Ur 29Sa49 - 0°11
Ne 05Cn57 - 1°04	Ne 03Cn08 - 1°03
Pl 20Ge40 - 8°43R	Pl 18Ge43 - 8°30
No 06Li25 - 0°00	No 27Vi48 - 0°00
Coords: 128W/ 4N	Coords: 95W/ 6N

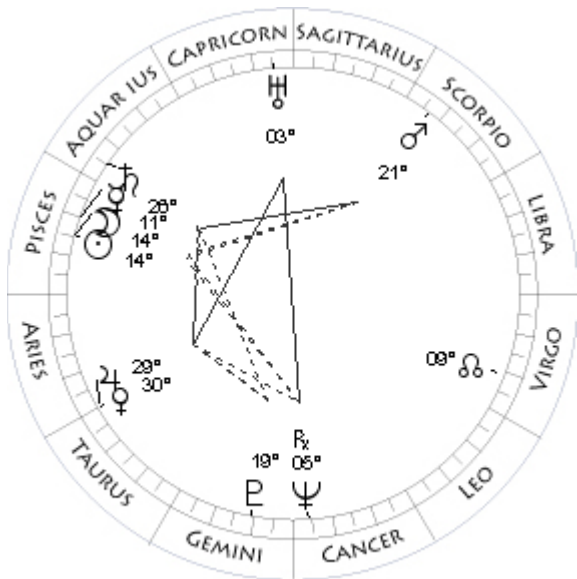
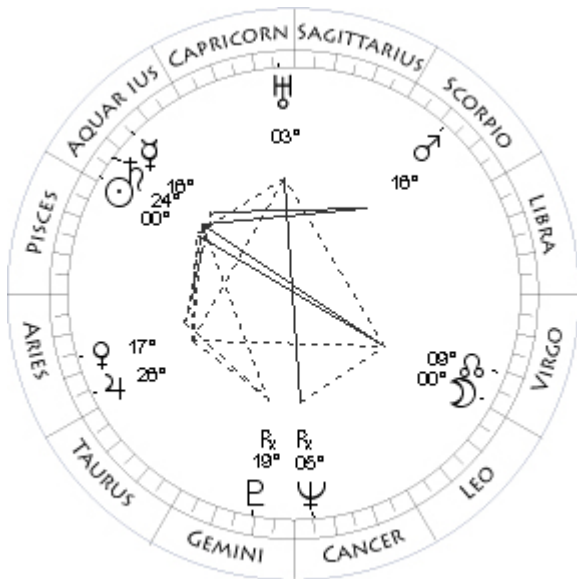
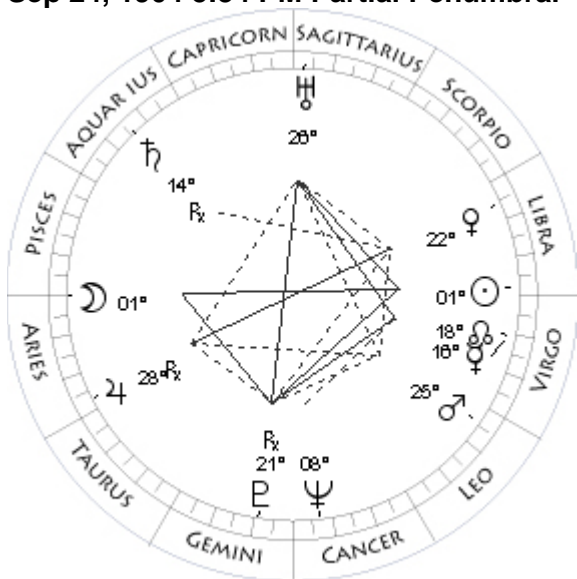
Mar 31, 1904 0:32 PM Partial Penumbral

Mo 11Vi16 - 1°28	Mo 10Li15 + 1°10
Su 11Pi08 - 0°00	Su 10Ar23 - 0°00
Me 21Aq43 - 1°55	Me 15Ar17 - 0°30
Ve 08Aq33 - 0°11	Ve 14Pi32 - 1°19
Ma 03Ar05 - 0°35	Ma 25Ar22 - 0°15
Ju 00Ar15 - 1°06	Ju 07Ar19 - 1°05
Sa 15Aq09 - 0°47	Sa 18Aq07 - 0°50
Ur 29Sa29 - 0°10	Ur 29Sa57 - 0°11
Ne 03Cn11 - 1°03R	Ne 03Cn13 - 1°02
Pl 18Ge41 - 8°33R	Pl 18Ge50 - 8°27
No 28Vi36 - 0°00	No 27Vi03 - 0°00

Sep 9, 1904 8:44 PM Total Solar



Sep 24, 1904 5:34 PM Partial Penumbral



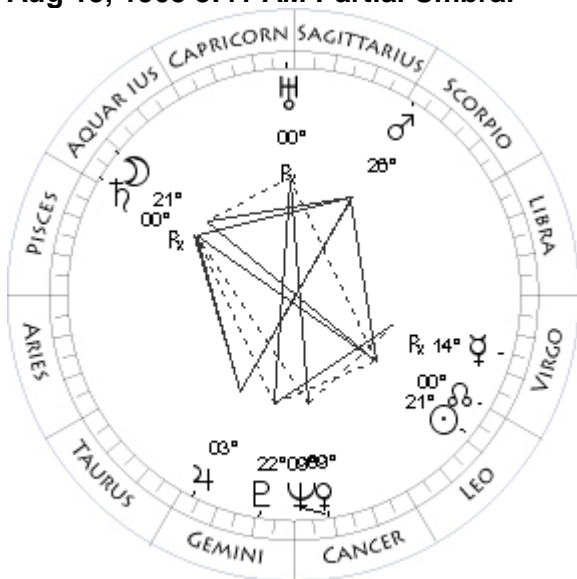
Feb 19, 1905 6:59 PM Partial Umbral

Mo 16Vi43 - 0°10	Mo 00Vi34 - 0°48
Su 16Vi43 - 0°00	Su 00Pi30 - 0°00
Me 28Vi43 - 4°13R	Me 16Aq18 - 1°59
Ve 04Li04 + 1°07	Ve 17Ar04 + 2°00
Ma 16Le26 + 1°10	Ma 16Sc22 + 1°44
Ju 29Ar31 - 1°31R	Ju 26Ar55 - 1°04
Sa 15Aq34 - 1°11R	Sa 24Aq19 - 1°10
Ur 25Sa58 - 0°12	Ur 03Cp16 - 0°13
Ne 07Cn54 - 1°00	Ne 05Cn33 - 1°00R
Pl 21Ge42 - 8°23	Pl 19Ge43 - 8°20R
No 18Vi27 - 0°00	No 09Vi50 - 0°00
	Coords: 78W/11N

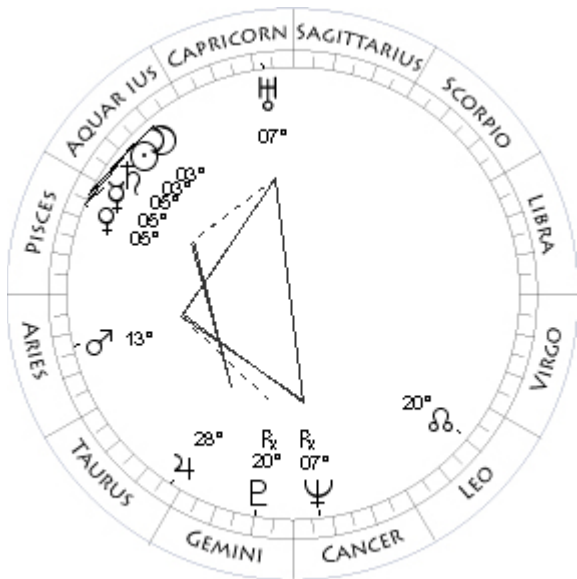
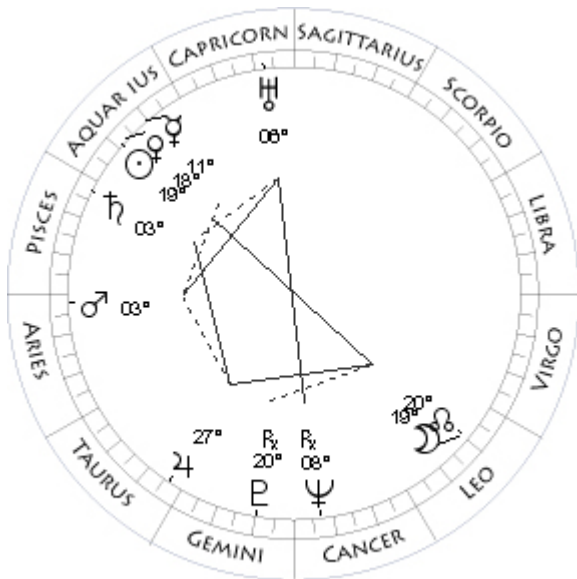
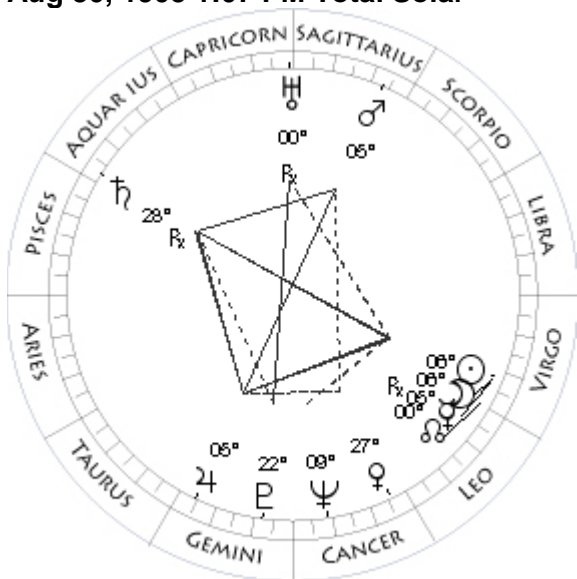
Mar 6, 1905 5:12 AM Annular Solar

Mo 01Ar06 - 1°09	Mo 14Pi56 - 0°31
Su 01Li14 - 0°00	Su 14Pi59 - 0°00
Me 16Vi55 - 0°28	Me 11Pi25 - 1°55
Ve 22Li26 + 0°37	Ve 30Ar00 + 3°40
Ma 25Le45 + 1°15	Ma 21Sc00 + 1°41
Ju 28Ar12 - 1°34R	Ju 29Ar41 - 1°01
Sa 14Aq50 - 1°11R	Sa 26Aq01 - 1°11
Ur 26Sa07 - 0°12	Ur 03Cp45 - 0°14
Ne 08Cn06 - 1°00	Ne 05Cn24 - 1°00R
Pl 21Ge43 - 8°25R	Pl 19Ge41 - 8°17
No 17Vi40 - 0°00	No 09Vi04 - 0°00
	Coords: 117W/39S

Aug 15, 1905 3:41 AM Partial Umbral



Aug 30, 1905 1:07 PM Total Solar



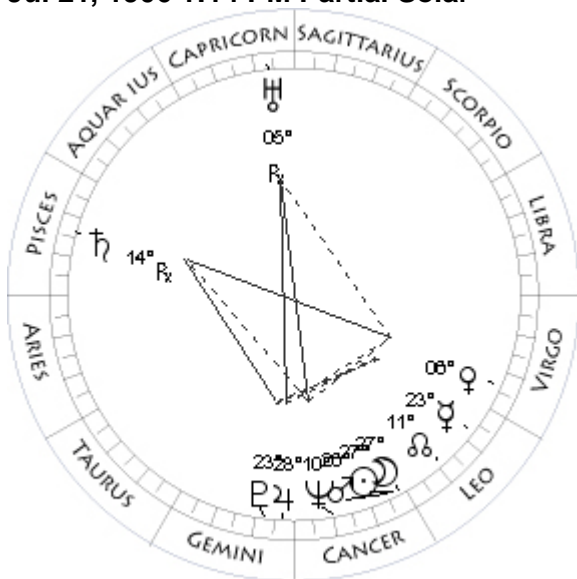
Feb 9, 1906 7:47 AM Total Umbral

Mo 21Aq42 + 0°47	Mo 19Le41 - 0°07
Su 21Le38 - 0°00	Su 19Aq41 - 0°00
Me 14Vi00 - 3°47R	Me 11Aq06 - 2°01
Ve 09Cn47 - 1°43	Ve 18Aq27 - 1°16
Ma 26Sc24 - 2°16	Ma 03Ar16 - 0°24
Ju 03Ge48 - 0°56	Ju 27Ta04 - 0°43
Sa 00Pi08 - 1°39R	Sa 03Pi33 - 1°31
Ur 00Cp30 - 0°16R	Ur 06Cp52 - 0°16
Ne 09Cn28 - 0°56	Ne 08Cn00 - 0°57R
Pl 22Ge28 - 8°03	Pl 20Ge49 - 8°06R
No 00Vi29 - 0°00	No 21Le03 - 0°00
Coords: 113E 15N	

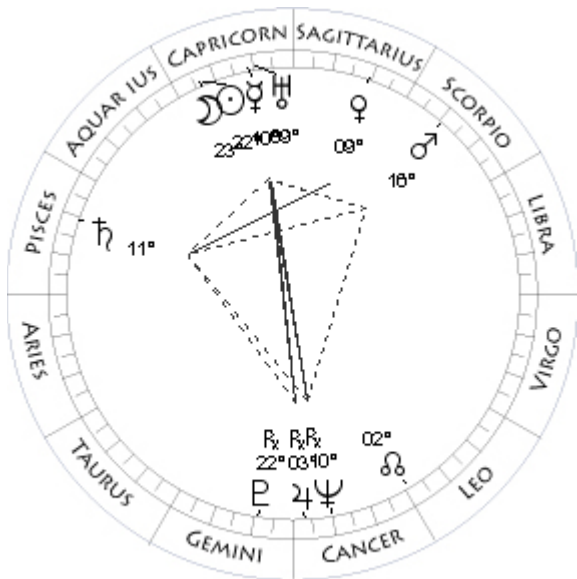
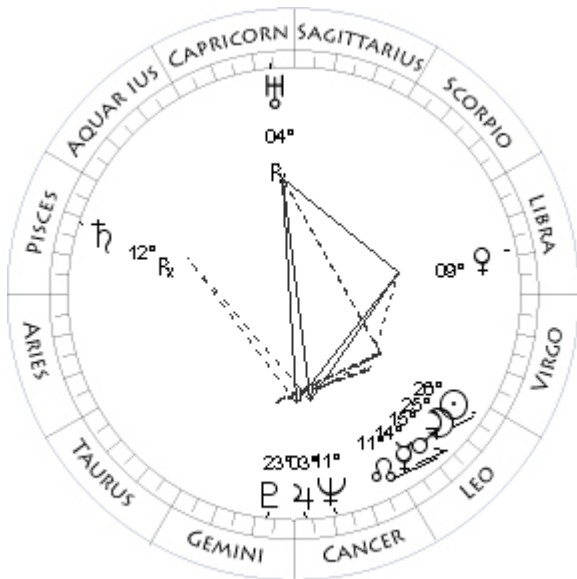
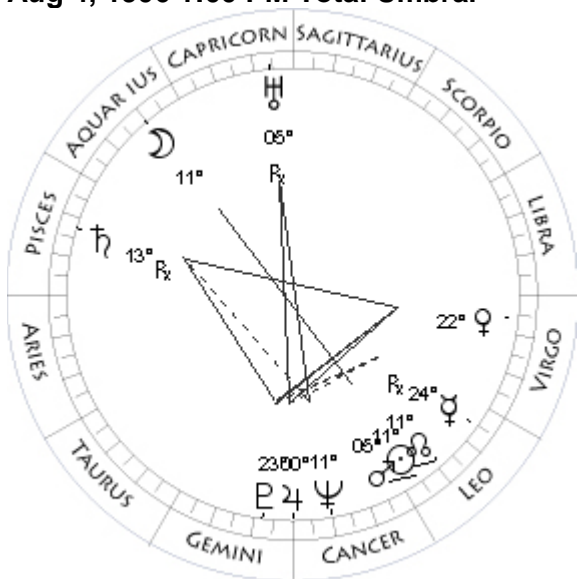
Feb 23, 1906 7:43 AM Partial Solar

Mo 06Vi24 + 0°34	Mo 03Pi41 - 1°10
Su 06Vi28 - 0°00	Su 03Pi48 - 0°00
Me 05Vi38 - 3°58R	Me 05Pi53 - 1°46
Ve 27Cn21 - 0°46	Ve 05Pi59 - 1°26
Ma 05Sa00 - 2°16	Ma 13Ar43 - 0°13
Ju 05Ge24 - 0°58	Ju 28Ta14 - 0°39
Sa 28Aq59 - 1°40R	Sa 05Pi14 - 1°32
Ur 00Cp17 - 0°16R	Ur 07Cp29 - 0°17
Ne 09Cn53 - 0°56	Ne 07Cn46 - 0°57R
Pl 22Ge38 - 8°05	Pl 20Ge44 - 8°03R
No 29Le40 - 0°00	No 20Le19 - 0°00

Jul 21, 1906 1:14 PM Partial Solar



Aug 4, 1906 1:00 PM Total Umbral



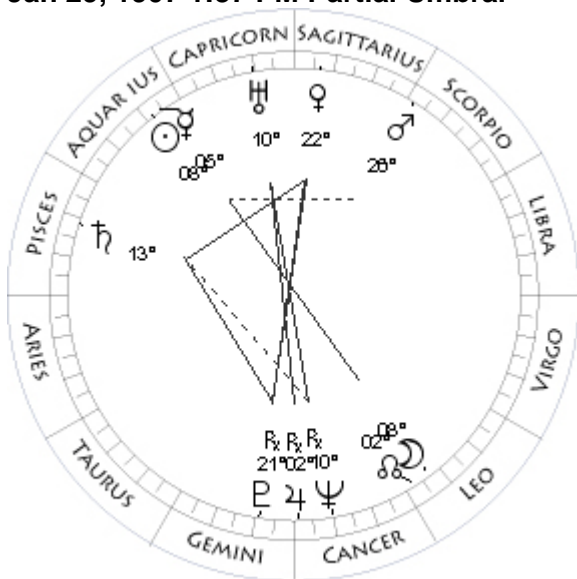
Aug 20, 1906 1:12 AM Partial Solar

Mo 27Cn57 - 1°15	Mo 25Le58 + 1°18
Su 27Cn51 - 0°00	Su 26Le07 - 0°00
Me 23Le29 - 1°51	Me 14Le10 - 3°09
Ve 06Vi25 + 1°20	Ve 09Li58 - 0°25
Ma 26Cn06 + 1°03	Ma 15Le04 + 1°08
Ju 28Ge02 - 0°20	Ju 03Cn53 - 0°18
Sa 14Pi32 - 1°59R	Sa 12Pi50 - 2°04R
Ur 05Cp37 - 0°19R	Ur 04Cp46 - 0°19R
Ne 10Cn49 - 0°52	Ne 11Cn46 - 0°53
Pl 23Ge04 - 7°45	Pl 23Ge33 - 7°48
No 12Le28 - 0°00	No 10Le54 - 0°00

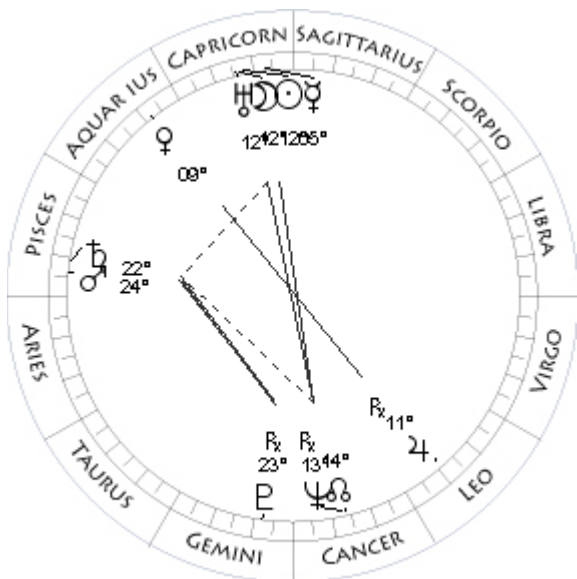
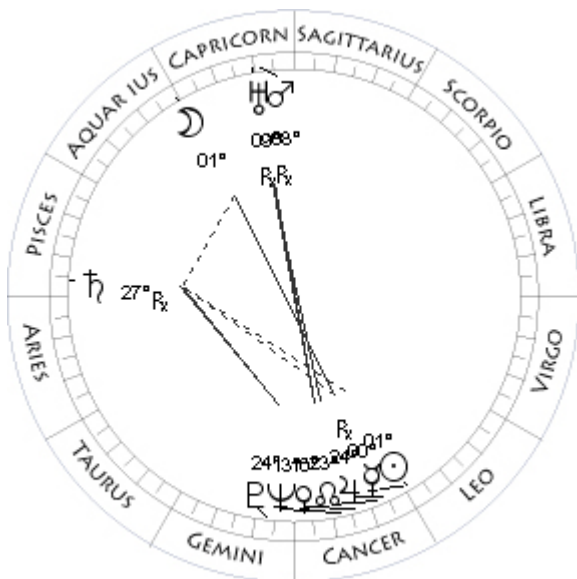
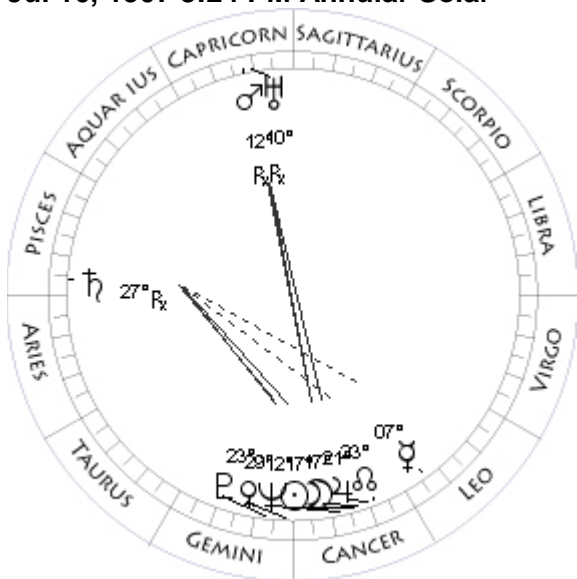
Jan 14, 1907 6:05 AM Total Solar

Mo 11Aq13 + 0°03	Mo 23Cp01 + 0°52
Su 11Le13 - 0°00	Su 22Cp56 - 0°00
Me 24Le33 - 4°36R	Me 10Cp56 - 1°06
Ve 22Vi32 + 0°39	Ve 09Sa29 + 4°37
Ma 05Le08 + 1°06	Ma 16Sc53 + 1°00
Ju 00Cn56 - 0°19	Ju 03Cn50 - 0°04R
Sa 13Pi51 - 2°02R	Sa 11Pi31 - 1°52
Ur 05Cp09 - 0°19R	Ur 09Cp27 - 0°19
Ne 11Cn18 - 0°53	Ne 10Cn55 - 0°54R
Pl 23Ge19 - 7°46	Pl 22Ge12 - 7°54R
No 11Le43 - 0°00	No 03Le06 - 0°00
Coords: 166W/17S	Coords: 86W/38N

Jan 29, 1907 1:37 PM Partial Umbral



Jul 10, 1907 3:24 PM Annular Solar



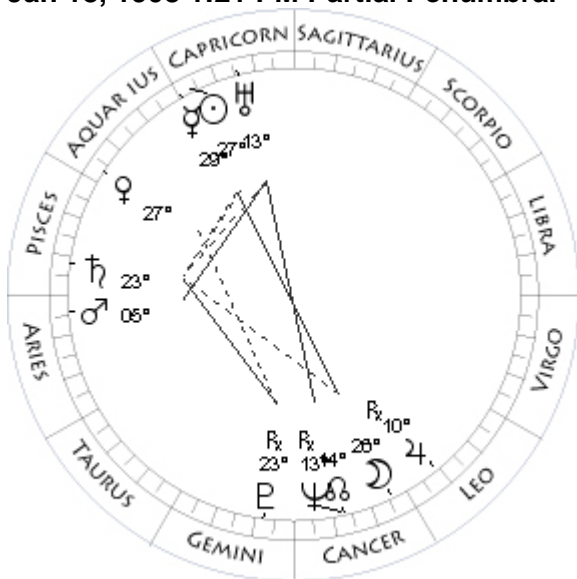
Jul 25, 1907 4:22 AM Partial Umbral

Mo 08Le27 + 0°33	Mo 01Aq00 - 0°42
Su 08Aq31 - 0°00	Su 01Le05 - 0°00
Me 05Aq38 - 2°03	Me 00Le59 - 4°58R
Ve 22Sa13 + 4°08	Ve 16Cn59 + 0°17
Ma 26Sc00 + 0°53	Ma 08Cp30 - 5°42R
Ju 02Cn13 - 0°01R	Ju 24Cn35 + 0°16
Sa 13Pi05 - 1°51	Sa 27Pi16 - 2°17R
Ur 10Cp19 - 0°19	Ur 09Cp53 - 0°23R
Ne 10Cn31 - 0°54R	Ne 13Cn05 - 0°49
Pl 21Ge58 - 7°52R	Pl 24Ge09 - 7°29
No 02Le18 - 0°00	No 22Cn56 - 0°00
Coords: 159W/19N	

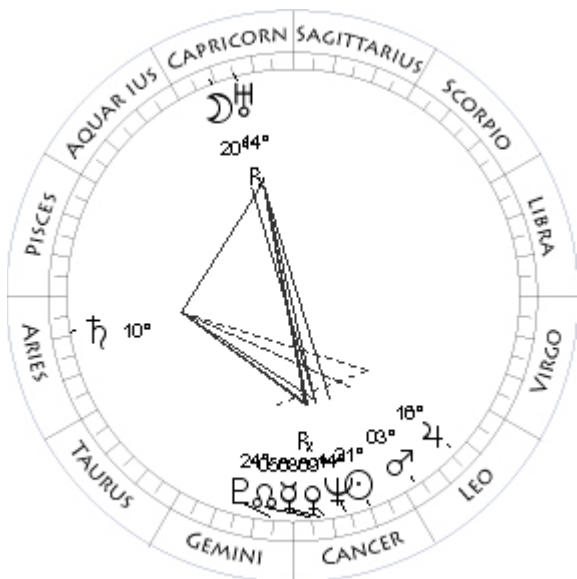
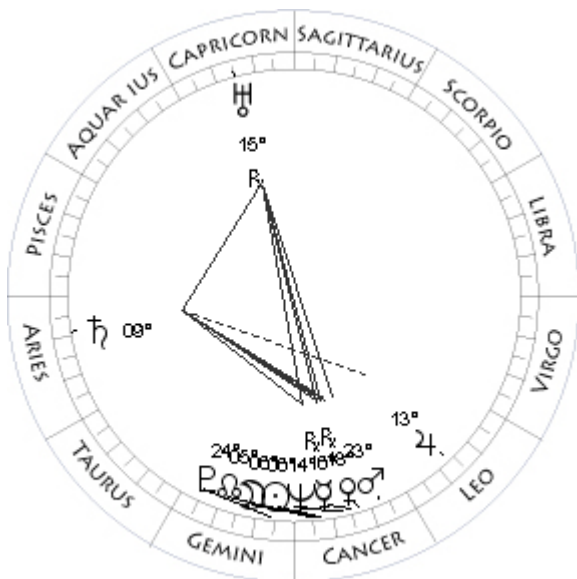
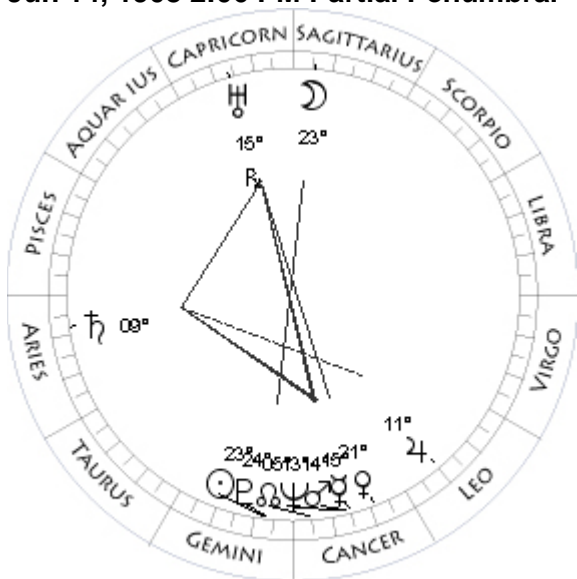
Jan 3, 1908 9:45 PM Total Solar

Mo 17Cn15 - 0°34	Mo 12Cp09 + 0°12
Su 17Cn12 - 0°00	Su 12Cp09 - 0°00
Me 07Le13 - 2°39	Me 05Cp53 - 1°19
Ve 29Ge14 - 0°20	Ve 09Aq23 - 1°42
Ma 12Cp13 - 5°25R	Ma 24Pi53 - 0°27
Ju 21Cn20 + 0°14	Ju 11Le47 + 0°43R
Sa 27Pi27 - 2°13R	Sa 22Pi04 - 2°11
Ur 10Cp27 - 0°22R	Ur 12Cp47 - 0°22
Ne 12Cn33 - 0°49	Ne 13Cn31 - 0°51R
Pl 23Ge50 - 7°28	Pl 23Ge26 - 7°39R
No 23Cn43 - 0°00	No 14Cn19 - 0°00
Coords: 145E/12S	

Jan 18, 1908 1:21 PM Partial Penumbral



Jun 14, 1908 2:06 PM Partial Penumbral



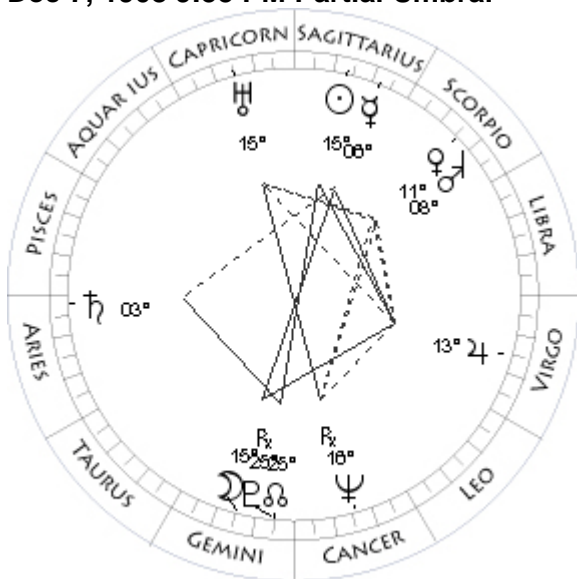
Jun 28, 1908 4:29 PM Annular Solar

Mo 26Cn57 + 1°09	Mo 06Cn31 + 0°08
Su 27Cp05 - 0°00	Su 06Cn32 - 0°00
Me 29Cp44 - 2°05	Me 16Cn01 - 3°29R
Ve 27Aq31 - 1°37	Ve 18Cn01 - 2°17R
Ma 05Ar10 - 0°10	Ma 23Cn57 + 1°08
Ju 10Le05 + 0°45R	Ju 13Le55 + 0°45
Sa 23Pi12 - 2°09	Sa 09Ar42 - 2°21
Ur 13Cp39 - 0°22	Ur 15Cp16 - 0°25R
Ne 13Cn06 - 0°50R	Ne 14Cn17 - 0°46
Pl 23Ge11 - 7°37R	Pl 24Ge36 - 7°12
No 13Cn33 - 0°00	No 04Cn58 - 0°00
Coords: 162W/22N	

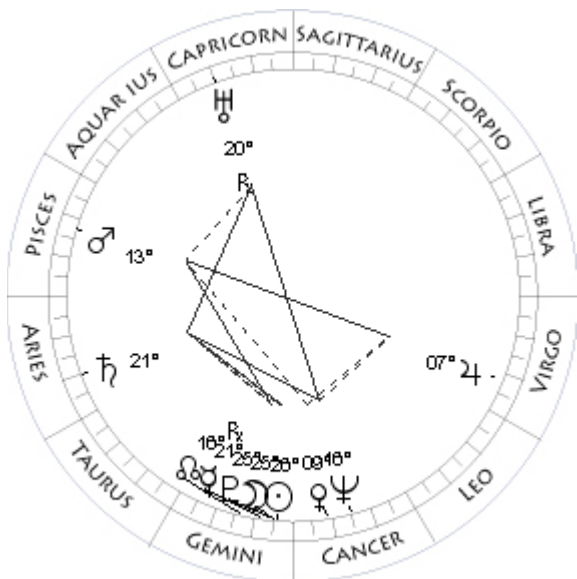
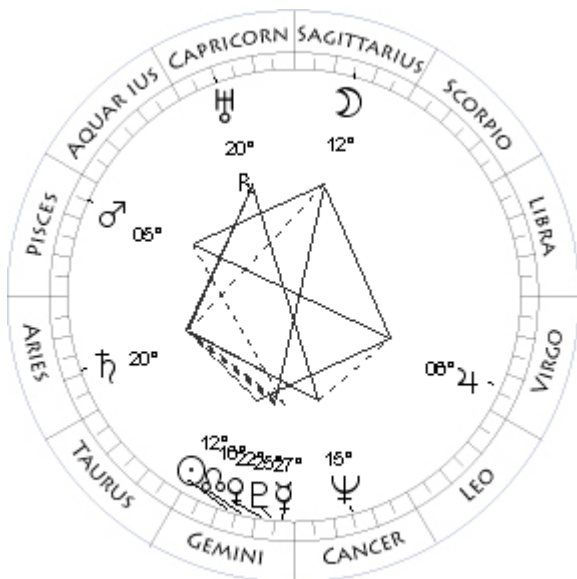
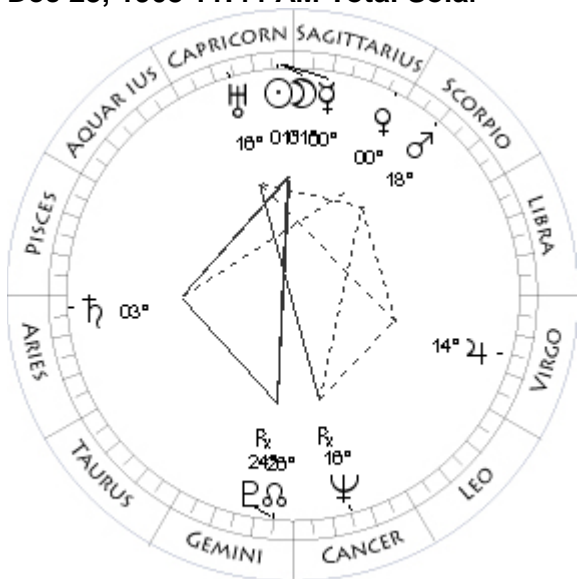
Jul 13, 1908 9:33 PM Partial Penumbral

Mo 23Sa10 + 1°06	Mo 20Cp53 - 1°26
Su 23Ge05 - 0°00	Su 21Cn02 - 0°00
Me 15Cn43 + 0°08	Me 08Cn22 - 4°34
Ve 21Cn50 + 0°46	Ve 09Cn04 - 5°19R
Ma 14Cn54 + 1°07	Ma 03Le40 + 1°09
Ju 11Le17 + 0°45	Ju 16Le58 + 0°45
Sa 09Ar00 - 2°17	Sa 10Ar07 - 2°25
Ur 15Cp48 - 0°25R	Ur 14Cp40 - 0°26R
Ne 13Cn46 - 0°46	Ne 14Cn51 - 0°45
Pl 24Ge16 - 7°12	Pl 24Ge57 - 7°12
No 05Cn43 - 0°00	No 04Cn09 - 0°00
Coords: 149W/22S	

Dec 7, 1908 9:55 PM Partial Umbral



Dec 23, 1908 11:44 AM Total Solar



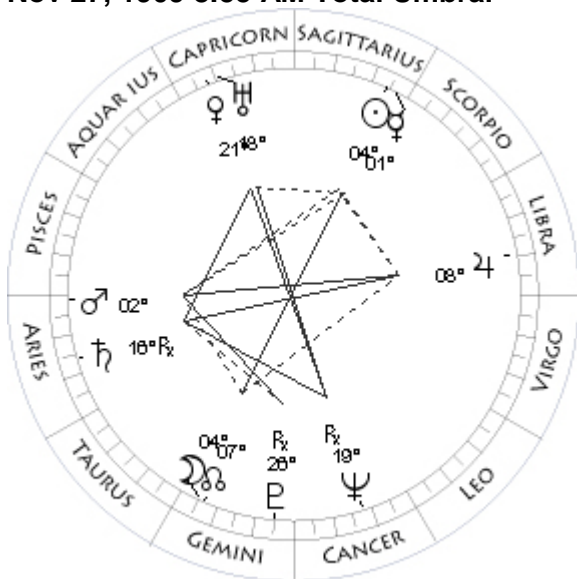
Jun 4, 1909 1:28 AM Total Umbral

Mo 15Ge32 - 0°57	Mo 12Sa48 + 0°21
Su 15Sa26 - 0°00	Su 12Ge47 - 0°00
Me 06Sa29 + 0°01	Me 27Ge37 - 0°32
Ve 11Sc36 + 1°54	Ve 22Ge29 + 0°30
Ma 08Sc04 + 0°42	Ma 05Pi36 - 2°39
Ju 13Vi43 + 1°05	Ju 06Vi10 + 1°12
Sa 03Ar22 - 2°31	Sa 20Ar08 - 2°20
Ur 15Cp13 - 0°24	Ur 20Cp28 - 0°28R
Ne 16Cn30 - 0°47R	Ne 15Cn34 - 0°42
Pl 25Ge00 - 7°23R	Pl 25Ge02 - 6°56
No 26Ge22 - 0°00	No 16Ge56 - 0°00
Coords: 29W/22N	

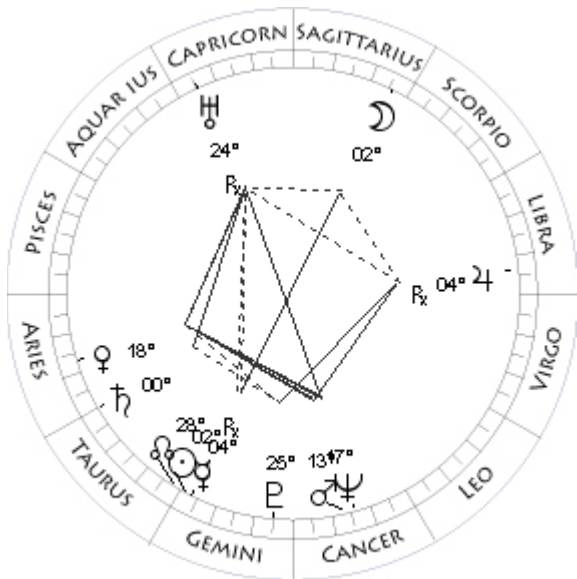
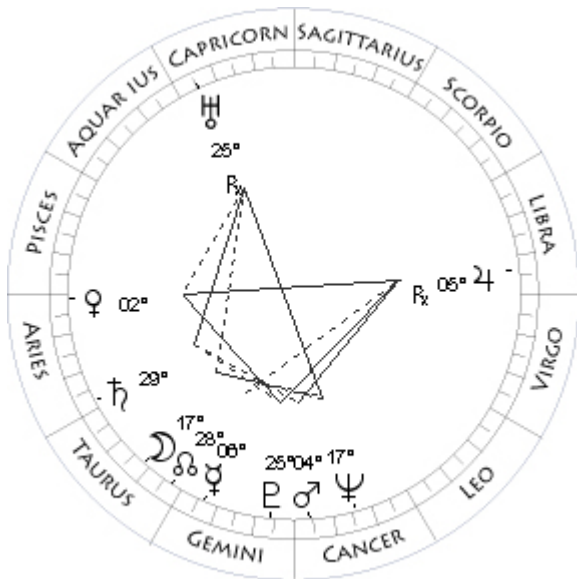
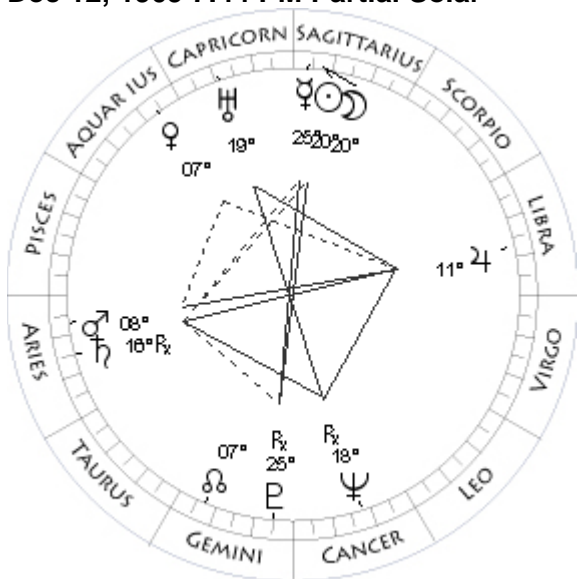
Jun 17, 1909 11:18 PM Total Solar

Mo 01Cp14 - 0°29	Mo 25Ge59 + 0°51
Su 01Cp17 - 0°00	Su 26Ge04 - 0°00
Me 00Cp53 - 1°32	Me 21Ge33 - 4°02R
Ve 00Sa49 + 1°32	Ve 09Cn33 + 1°00
Ma 18Sc19 + 0°35	Ma 13Pi46 - 3°09
Ju 14Vi27 + 1°09	Ju 07Vi42 + 1°10
Sa 03Ar37 - 2°27	Sa 21Ar18 - 2°22
Ur 16Cp05 - 0°24	Ur 20Cp01 - 0°28R
Ne 16Cn07 - 0°47R	Ne 16Cn02 - 0°42
Pl 24Ge42 - 7°23R	Pl 25Ge21 - 6°56
No 25Ge33 - 0°00	No 16Ge12 - 0°00
Coords: 126W/83N	

Nov 27, 1909 8:55 AM Total Umbral



Dec 12, 1909 7:44 PM Partial Solar



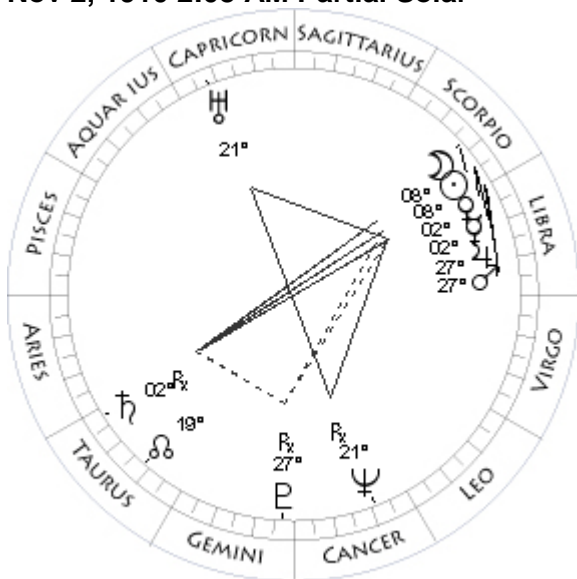
May 9, 1910 5:41 AM Total Solar

Mo 04Ge31 - 0°16	Mo 17Ta48 - 0°57
Su 04Sa30 - 0°00	Su 17Ta43 - 0°00
Me 01Sa12 - 0°16	Me 06Ge42 + 2°16
Ve 21Cp38 - 2°55	Ve 02Ar15 - 1°16
Ma 02Ar11 - 0°39	Ma 04Cn35 + 1°21
Ju 08Li53 + 1°11	Ju 05Li27 + 1°32R
Sa 16Ar50 - 2°41R	Sa 29Ar02 - 2°15
Ur 18Cp38 - 0°27	Ur 25Cp11 - 0°30R
Ne 19Cn01 - 0°43R	Ne 17Cn01 - 0°40
Pl 26Ge16 - 7°06R	Pl 25Ge29 - 6°42
No 07Ge36 - 0°00	No 28Ta59 - 0°00
Coords: 137E/21N	Coords: 125W/48S

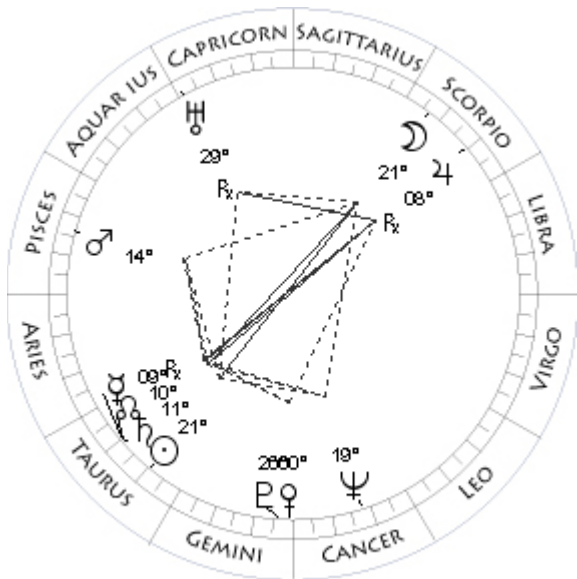
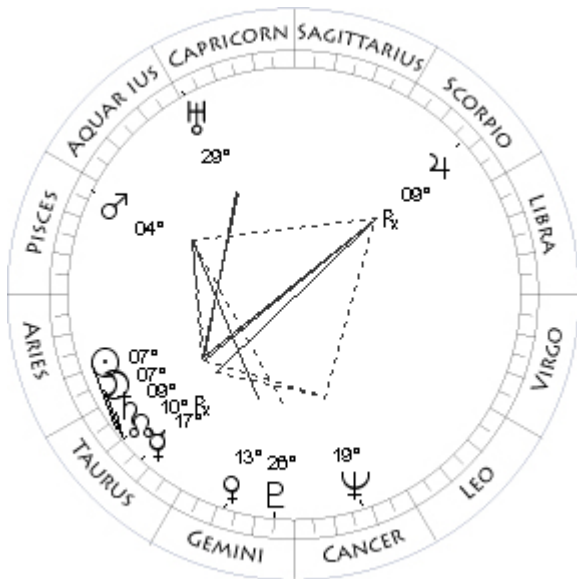
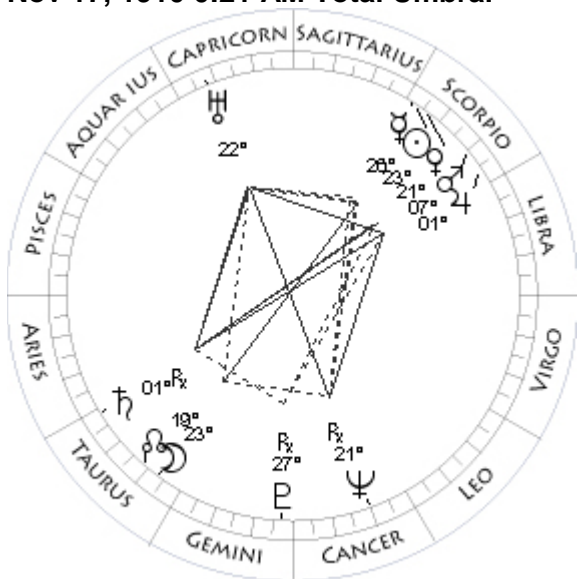
May 24, 1910 5:34 AM Total Umbral

Mo 20Sa03 - 1°09	Mo 02Sa08 - 0°21
Su 20Sa11 - 0°00	Su 02Ge10 - 0°00
Me 25Sa29 - 1°43	Me 04Ge25 - 1°15R
Ve 07Aq04 - 2°13	Ve 18Ar26 - 1°59
Ma 08Ar29 - 0°03	Ma 13Cn53 + 1°20
Ju 11Li10 + 1°14	Ju 04Li44 + 1°28R
Sa 16Ar25 - 2°38R	Sa 00Ta49 - 2°16
Ur 19Cp25 - 0°27	Ur 24Cp59 - 0°30R
Ne 18Cn41 - 0°43R	Ne 17Cn23 - 0°39
Pl 25Ge59 - 7°06R	Pl 25Ge48 - 6°41
No 06Ge47 - 0°00	No 28Ta11 - 0°00

Nov 2, 1910 2:08 AM Partial Solar



Nov 17, 1910 0:21 AM Total Umbral



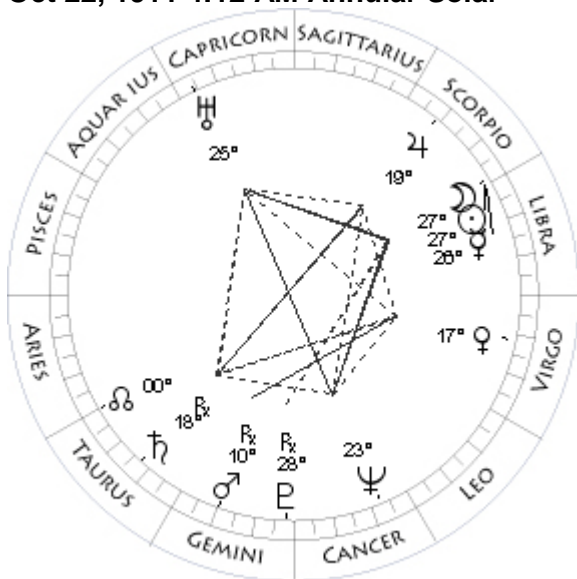
Apr 28, 1911 10:27 PM Total Solar

Mo 08Sc52 + 0°57	Mo 07Ta31 - 0°14
Su 08Sc47 - 0°00	Su 07Ta30 - 0°00
Me 02Sc14 + 1°05	Me 17Ta38 + 2°01R
Ve 02Sc41 + 1°08	Ve 13Ge16 + 1°34
Ma 27Li01 + 0°34	Ma 04Pi10 - 1°33
Ju 27Li57 + 1°04	Ju 09Sc58 + 1°24R
Sa 02Ta39 - 2°45R	Sa 09Ta27 - 2°09
Ur 21Cp41 - 0°30	Ur 29Cp20 - 0°32
Ne 21Cn34 - 0°39R	Ne 19Cn00 - 0°36
Pl 27Ge44 - 6°47R	Pl 26Ge19 - 6°27
No 19Ta37 - 0°00	No 10Ta12 - 0°00
Coords: 152E/ 2N	

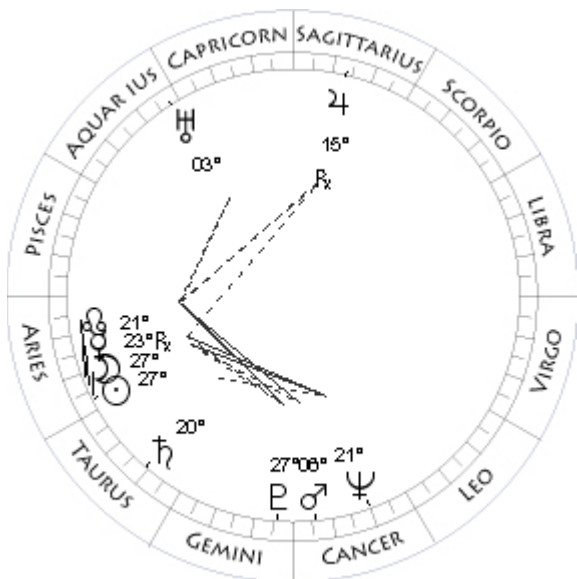
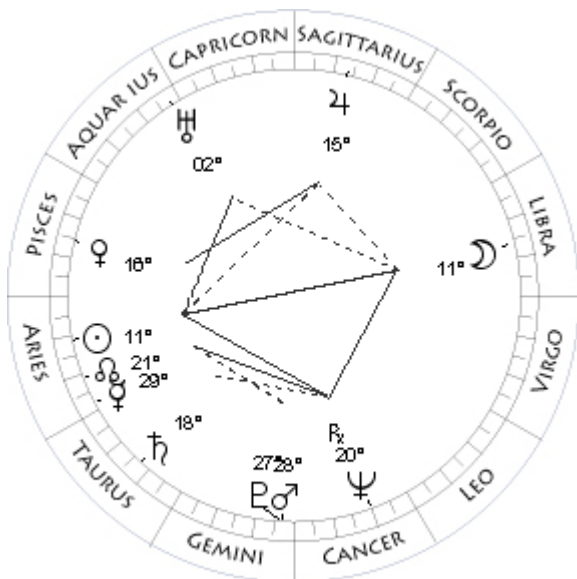
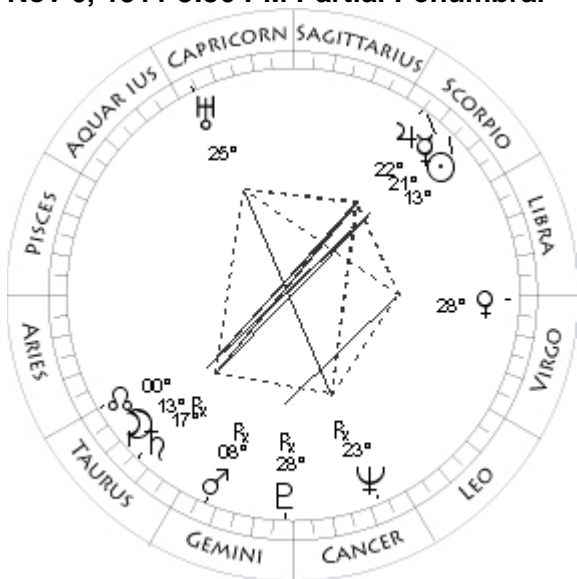
May 13, 1911 5:55 AM Partial Penumbral

Mo 23Ta44 + 0°25	Mo 21Sc15 - 1°02
Su 23Sc47 - 0°00	Su 21Ta22 - 0°00
Me 26Sc21 - 0°34	Me 09Ta58 - 1°47R
Ve 21Sc26 + 0°40	Ve 00Cn01 + 2°05
Ma 07Sc02 + 0°27	Ma 14Pi49 - 1°43
Ju 01Sc08 + 1°04	Ju 08Sc10 + 1°22R
Sa 01Ta30 - 2°43R	Sa 11Ta17 - 2°09
Ur 22Cp10 - 0°30	Ur 29Cp19 - 0°32R
Ne 21Cn26 - 0°39R	Ne 19Cn16 - 0°36
Pl 27Ge31 - 6°48R	Pl 26Ge35 - 6°25
No 18Ta49 - 0°00	No 09Ta26 - 0°00

Oct 22, 1911 4:12 AM Annular Solar



Nov 6, 1911 3:36 PM Partial Penumbral



Apr 1, 1912 10:14 PM Partial Umbral

Mo 27Li40 + 0°18	Mo 11Li54 + 0°53
Su 27Li39 - 0°00	Su 11Ar49 - 0°00
Me 26Li30 + 0°50	Me 29Ar04 + 3°06
Ve 17Vi34 - 2°30	Ve 16Pi54 - 1°22
Ma 10Ge51 - 0°29R	Ma 28Ge06 + 1°53
Ju 19Sc11 + 0°49	Ju 15Sa24 + 0°48
Sa 18Ta14 - 2°33R	Sa 18Ta14 - 2°00
Ur 25Cp31 - 0°33	Ur 02Aq55 - 0°33
Ne 23Cn47 - 0°35	Ne 20Cn59 - 0°33R
Pl 28Ge55 - 6°28R	Pl 27Ge02 - 6°14
No 00Ta52 - 0°00	No 22Ar15 - 0°00

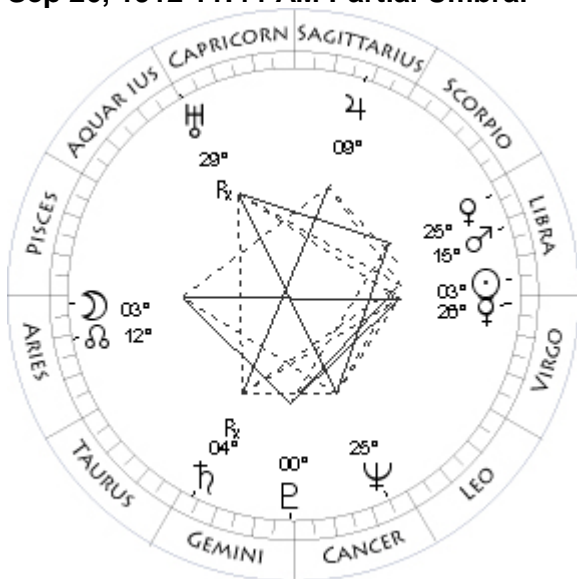
Coords: 121W/ 6N

Apr 17, 1912 11:34 AM Total Solar

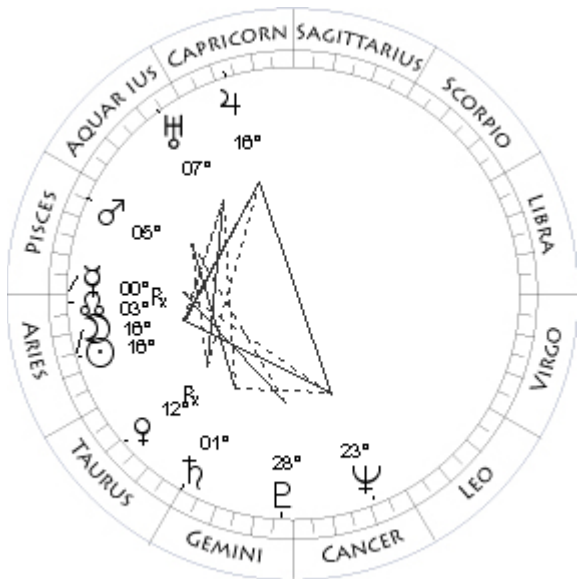
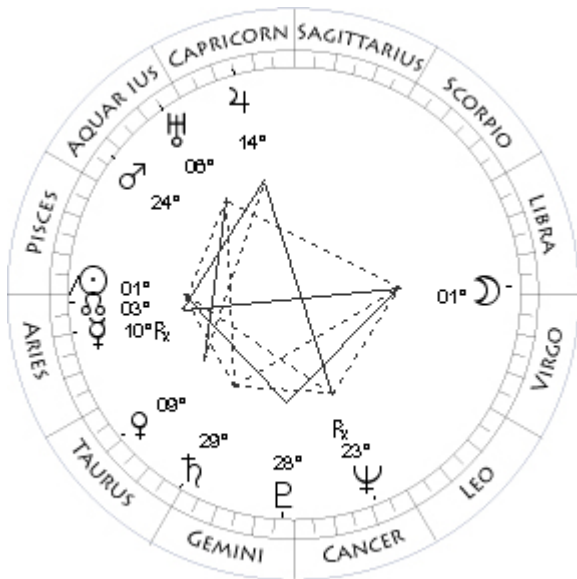
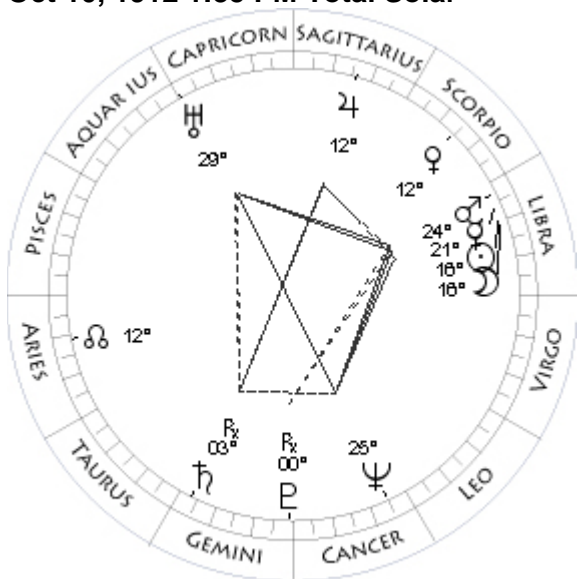
Mo 13Ta00 + 1°06	Mo 27Ar02 + 0°30
Su 13Sc07 - 0°00	Su 27Ar05 - 0°00
Me 21Sc28 - 0°52	Me 23Ar45 + 1°27R
Ve 28Vi01 - 0°04	Ve 05Ar59 - 1°33
Ma 08Ge14 + 0°16R	Ma 06Cn35 + 1°46
Ju 22Sc32 + 0°47	Ju 15Sa00 + 0°49R
Sa 17Ta02 - 2°33R	Sa 20Ta04 - 1°58
Ur 25Cp50 - 0°32	Ur 03Aq17 - 0°34
Ne 23Cn46 - 0°35R	Ne 21Cn04 - 0°33
Pl 28Ge45 - 6°29R	Pl 27Ge12 - 6°11
No 00Ta03 - 0°00	No 21Ar25 - 0°00

Coords: 121W/17N

Sep 26, 1912 11:44 AM Partial Umbral



Oct 10, 1912 1:35 PM Total Solar



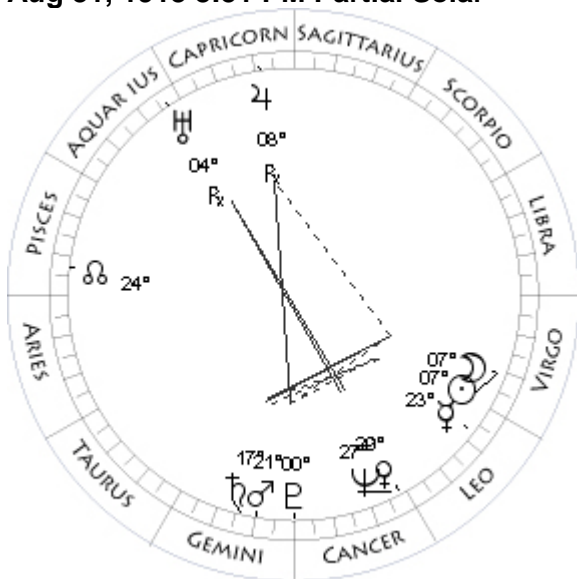
Mar 22, 1913 11:57 AM Total Umbral

Mo 03Ar05 - 0°51	Mo 01Li17 + 0°10
Su 03Li01 - 0°00	Su 01Ar16 - 0°00
Me 26Vi41 + 1°45	Me 10Ar57 + 3°30R
Ve 25Li15 + 0°31	Ve 09Ta43 + 5°46
Ma 15Li32 + 0°30	Ma 24Aq01 - 1°11
Ju 09Sa50 + 0°25	Ju 14Cp55 + 0°07
Sa 04Ge01 - 2°09R	Sa 29Ta39 - 1°45
Ur 29Cp35 - 0°36R	Ur 06Aq30 - 0°35
Ne 25Cn43 - 0°31	Ne 23Cn15 - 0°29R
Pl 00Cn04 - 6°08	Pl 28Ge01 - 5°58
No 12Ar51 - 0°00	No 03Ar28 - 0°00

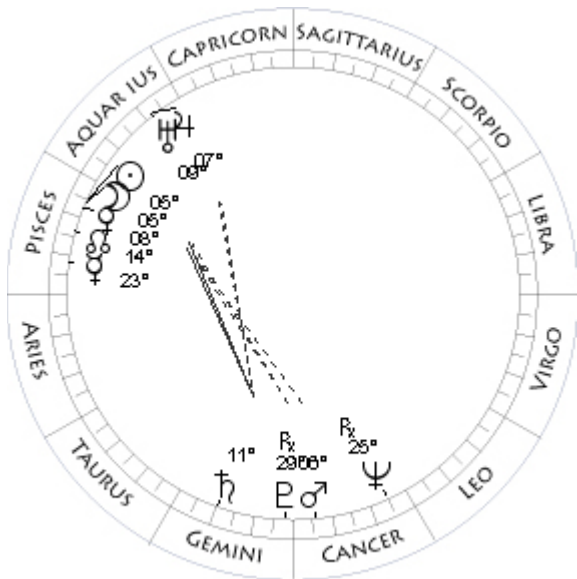
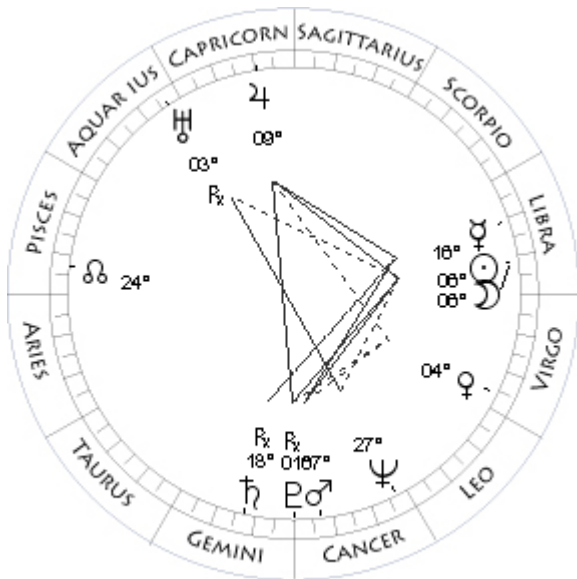
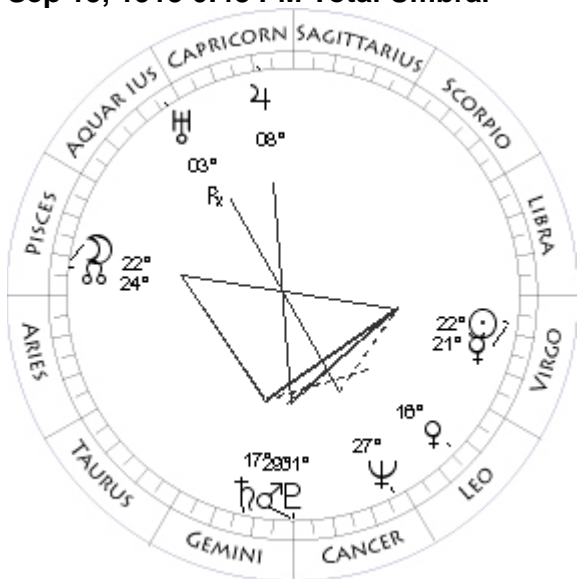
Apr 6, 1913 5:32 PM Partial Solar

Mo 16Li49 - 0°24	Mo 16Ar11 + 1°11
Su 16Li53 - 0°00	Su 16Ar19 - 0°00
Me 21Li27 + 0°34	Me 00Ar18 + 0°45R
Ve 12Sc36 - 0°06	Ve 12Ta20 + 6°59R
Ma 24Li55 + 0°22	Ma 05Pi48 - 1°16
Ju 12Sa04 + 0°23	Ju 16Cp33 + 0°06
Sa 03Ge35 - 2°11R	Sa 01Ge07 - 1°42
Ur 29Cp31 - 0°35	Ur 07Aq01 - 0°35
Ne 25Cn55 - 0°31	Ne 23Cn13 - 0°29
Pl 00Cn03 - 6°09R	Pl 28Ge07 - 5°55
No 12Ar06 - 0°00	No 02Ar40 - 0°00

Aug 31, 1913 8:51 PM Partial Solar



Sep 15, 1913 0:48 PM Total Umbra



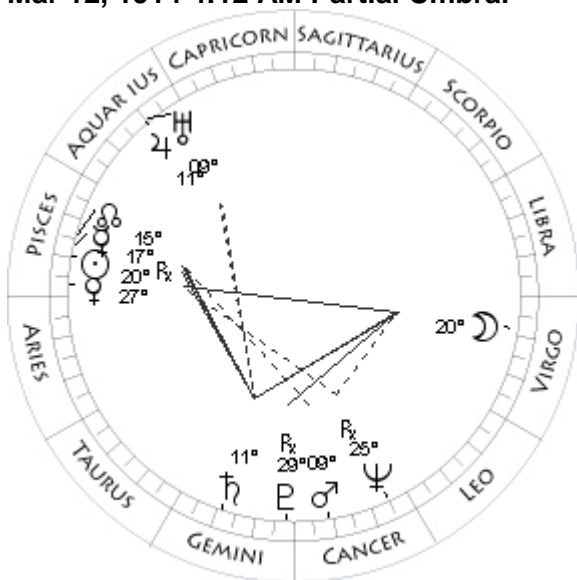
Sep 30, 1913 4:45 AM Partial Solar

Mo 07Vi57 + 1°29	Mo 06Li18 - 1°07
Su 07Vi49 - 0°00	Su 06Li25 - 0°00
Me 23Le29 + 1°15	Me 16Li44 + 0°16
Ve 29Cn24 - 0°37	Ve 04Vi16 + 0°56
Ma 21Ge25 - 0°21	Ma 07Cn37 + 0°17
Ju 08Cp02 - 0°13R	Ju 09Cp02 - 0°15
Sa 17Ge22 - 1°39	Sa 18Ge11 - 1°42R
Ur 04Aq20 - 0°38R	Ur 03Aq41 - 0°38R
Ne 27Cn15 - 0°27	Ne 27Cn58 - 0°27
Pl 00Cn58 - 5°47	Pl 01Cn09 - 5°50R
No 24Pi52 - 0°00	No 23Pi19 - 0°00

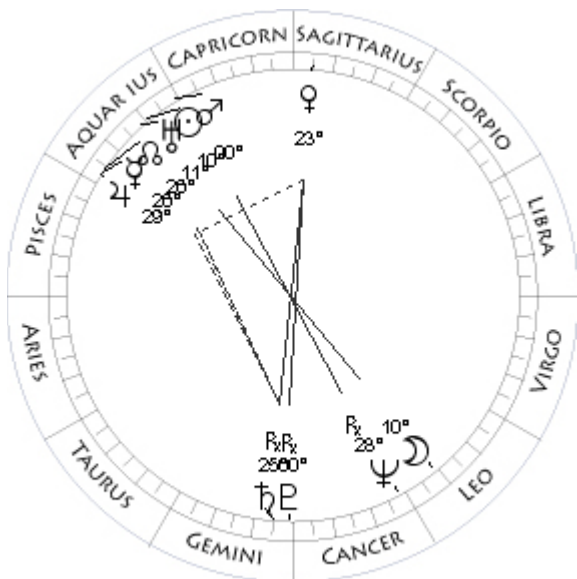
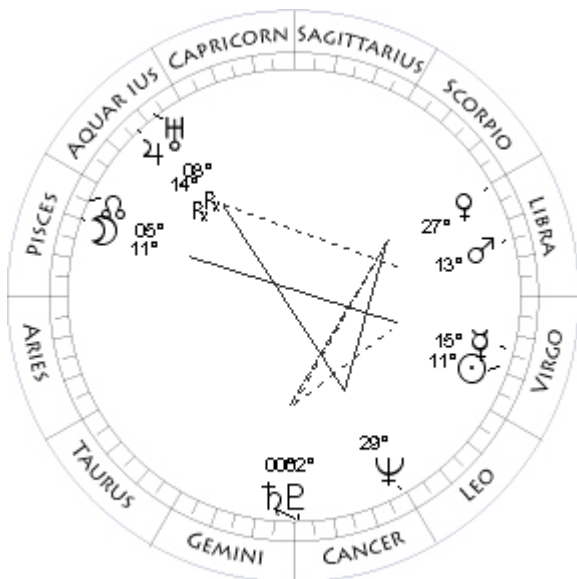
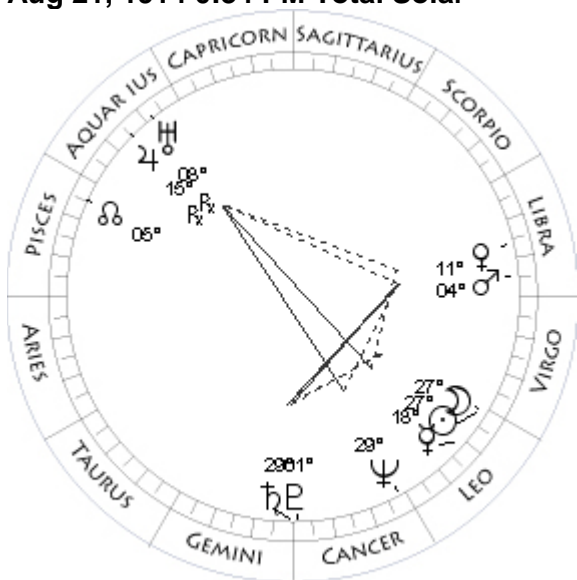
Feb 25, 1914 0:12 AM Annular Solar

Mo 22Pi05 - 0°11	Mo 05Pi39 - 0°51
Su 22Vi04 - 0°00	Su 05Pi34 - 0°00
Me 21Vi05 + 1°38	Me 23Pi17 + 1°54
Ve 16Le40 + 0°14	Ve 08Pi47 - 1°26
Ma 29Ge54 - 0°04	Ma 06Cn31 + 3°19
Ju 08Cp12 - 0°14	Ju 07Aq58 - 0°26
Sa 17Ge58 - 1°40	Sa 11Ge23 - 1°28
Ur 03Aq56 - 0°38R	Ur 09Aq10 - 0°36
Ne 27Cn39 - 0°27	Ne 25Cn52 - 0°26R
Pl 01Cn06 - 5°49	Pl 29Ge08 - 5°45R
No 24Pi06 - 0°00	No 15Pi29 - 0°00
Coords: 114E/62S	

Mar 12, 1914 4:12 AM Partial Umbral



Aug 21, 1914 0:34 PM Total Solar



Sep 4, 1914 1:54 PM Partial Umbral

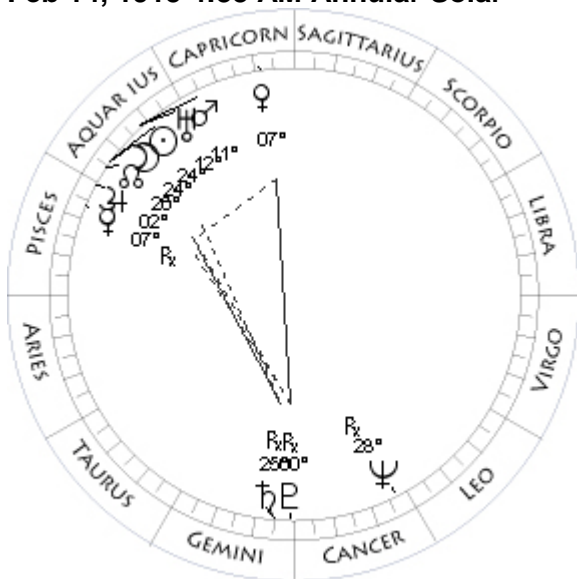
Mo 20Vi42 - 0°32	Mo 11Pi07 + 0°29
Su 20Pi46 - 0°00	Su 11Vi11 - 0°00
Me 17Pi45 + 3°26R	Me 15Vi40 + 1°30
Ve 27Pi43 - 1°21	Ve 27Li01 - 1°48
Ma 09Cn40 + 2°56	Ma 13Li29 + 0°20
Ju 11Aq15 - 0°29	Ju 14Aq21 - 1°02R
Sa 11Ge58 - 1°24	Sa 00Cn51 - 1°08
Ur 09Aq56 - 0°36	Ur 08Aq25 - 0°40R
Ne 25Cn36 - 0°26R	Ne 29Cn31 - 0°23
Pl 29Ge04 - 5°42R	Pl 02Cn05 - 5°29
No 14Pi41 - 0°00	No 05Pi21 - 0°00

Jan 31, 1915 4:57 AM Partial Penumbral

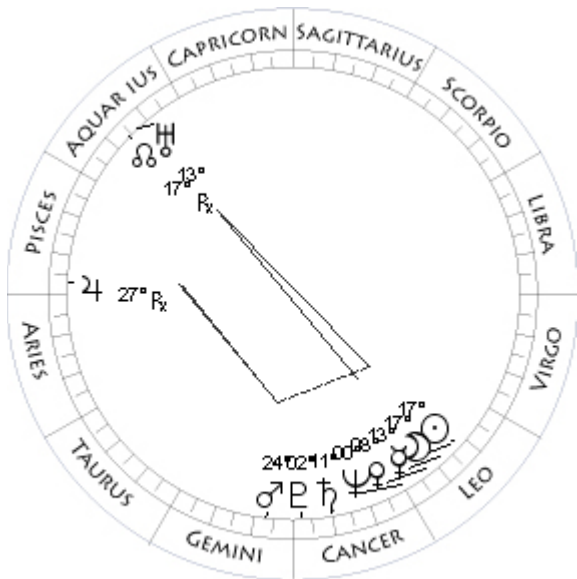
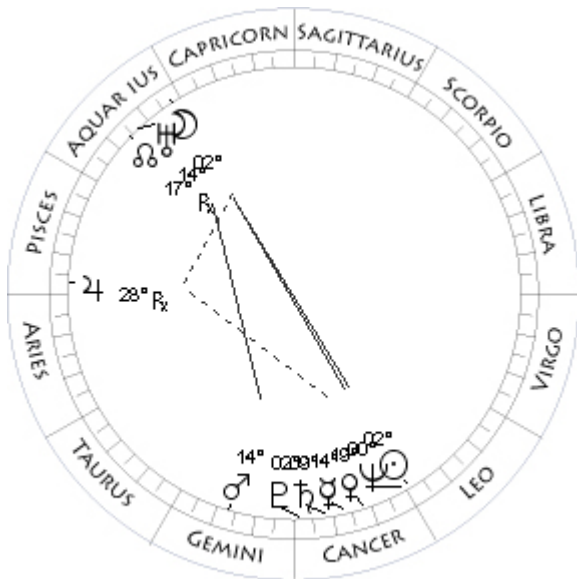
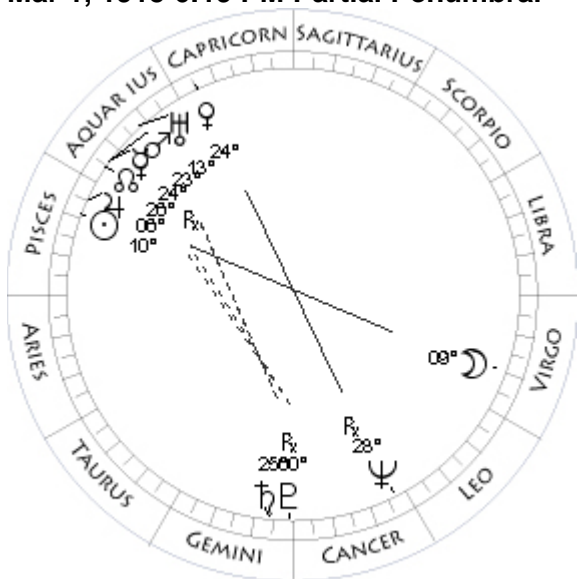
Mo 27Le40 + 0°45	Mo 10Le23 + 1°28
Su 27Le36 - 0°00	Su 10Aq15 - 0°00
Me 18Le13 + 1°30	Me 26Aq46 - 0°46
Ve 11Li57 - 0°36	Ve 23Sa38 + 3°55
Ma 04Li25 + 0°29	Ma 00Aq45 - 1°00
Ju 15Aq59 - 1°01R	Ju 29Aq07 - 0°53
Sa 29Ge44 - 1°08	Sa 25Ge59 - 1°02R
Ur 08Aq54 - 0°41R	Ur 11Aq34 - 0°38
Ne 29Cn04 - 0°23	Ne 28Cn45 - 0°22R
Pl 01Cn54 - 5°28	Pl 00Cn29 - 5°30R
No 06Pi05 - 0°00	No 27Aq29 - 0°00

Coords: 27W/54N

Feb 14, 1915 4:33 AM Annular Solar



Mar 1, 1915 6:19 PM Partial Penumbral



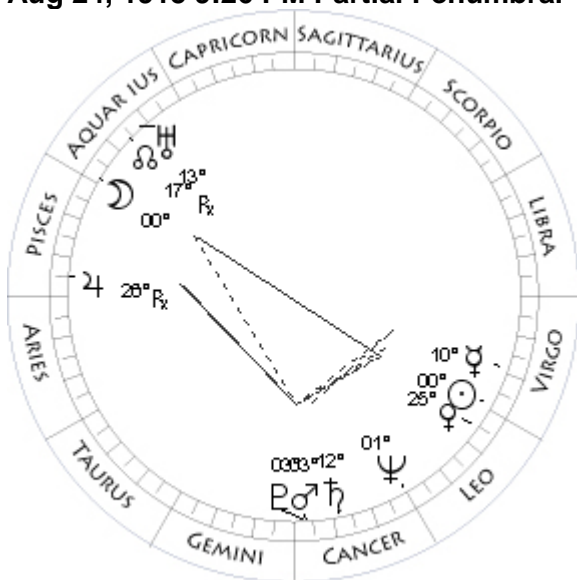
Jul 26, 1915 0:24 PM Partial Penumbral

Mo 24Aq26 - 0°12	Mo 02Aq33 - 1°21
Su 24Aq25 - 0°00	Su 02Le26 - 0°00
Me 07Pi56 + 2°40R	Me 14Cn13 - 0°45
Ve 07Cp46 + 3°01	Ve 19Cn18 + 0°22
Ma 11Aq40 - 1°04	Ma 14Ge05 - 0°09
Ju 02Pi26 - 0°53	Ju 28Pi26 - 1°24R
Sa 25Ge30 - 1°00R	Sa 09Cn29 - 0°37
Ur 12Aq22 - 0°38	Ur 14Aq09 - 0°42R
Ne 28Cn23 - 0°22R	Ne 00Le16 - 0°19
Pl 00Cn18 - 5°28R	Pl 02Cn29 - 5°09
No 26Aq44 - 0°00	No 18Aq08 - 0°00
Coords: 121W/24S	Coords: 176W/21S

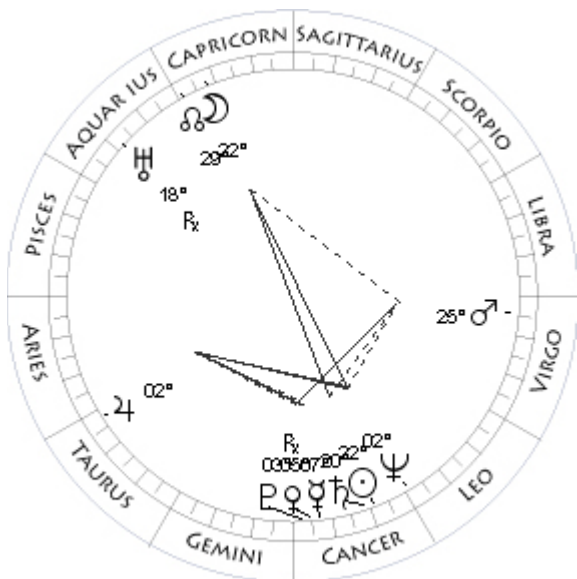
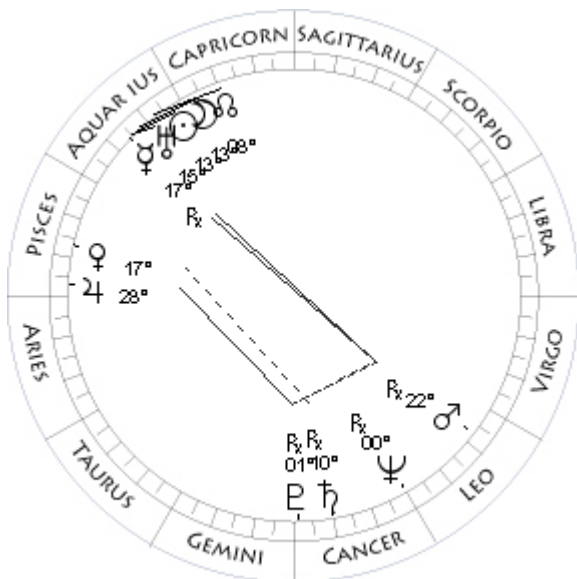
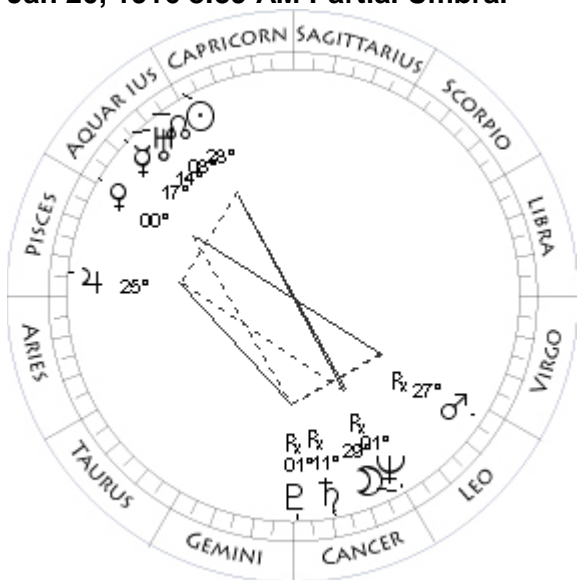
Aug 10, 1915 10:52 PM Annular Solar

Mo 09Vi59 - 1°14	Mo 17Le12 + 0°01
Su 10Pi06 - 0°00	Su 17Le12 - 0°00
Me 24Aq39 + 2°47R	Me 13Le27 + 1°39
Ve 24Cp39 + 1°50	Ve 08Le16 + 0°55
Ma 23Aq54 - 1°06	Ma 24Ge29 + 0°04
Ju 06Pi11 - 0°54	Ju 27Pi42 - 1°28R
Sa 25Ge23 - 0°57	Sa 11Cn19 - 0°36
Ur 13Aq14 - 0°38	Ur 13Aq33 - 0°42R
Ne 28Cn02 - 0°22R	Ne 00Le50 - 0°19
Pl 00Cn11 - 5°25R	Pl 02Cn47 - 5°09
No 25Aq55 - 0°00	No 17Aq19 - 0°00
Coords: 88W/ 7N	Coords: 161E/16N

Aug 24, 1915 9:26 PM Partial Penumbral



Jan 20, 1916 8:39 AM Partial Umbral



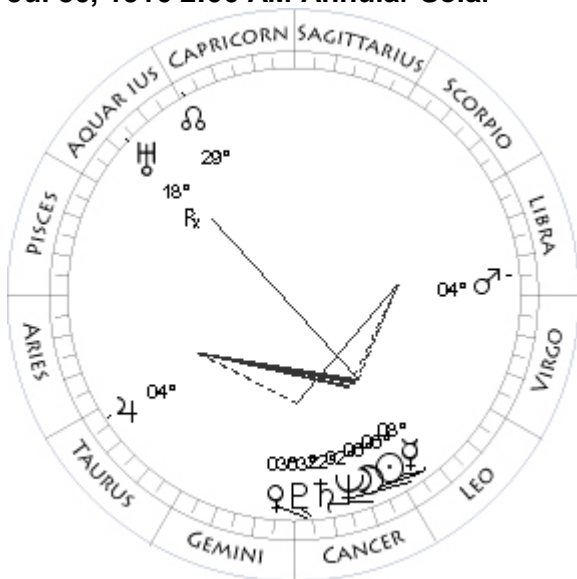
Feb 3, 1916 4:00 PM Total Solar

Mo 00Pi29 + 1°12	Mo 13Aq28 + 0°30
Su 00Vi37 - 0°00	Su 13Aq31 - 0°00
Me 10Vi41 + 1°21	Me 17Aq11 + 3°22R
Ve 25Le29 + 1°15	Ve 17Pi54 - 1°11
Ma 03Cn34 + 0°16	Ma 22Le35 + 4°32R
Ju 26Pi26 - 1°32R	Ju 28Pi11 - 1°09
Sa 12Cn49 - 0°36	Sa 10Cn46 - 0°25R
Ur 13Aq00 - 0°42R	Ur 15Aq34 - 0°39
Ne 01Le19 - 0°19	Ne 00Le57 - 0°18R
Pl 03Cn01 - 5°10	Pl 01Cn32 - 5°10R
No 16Aq35 - 0°00	No 07Aq58 - 0°00
Coords: 38W/10S	

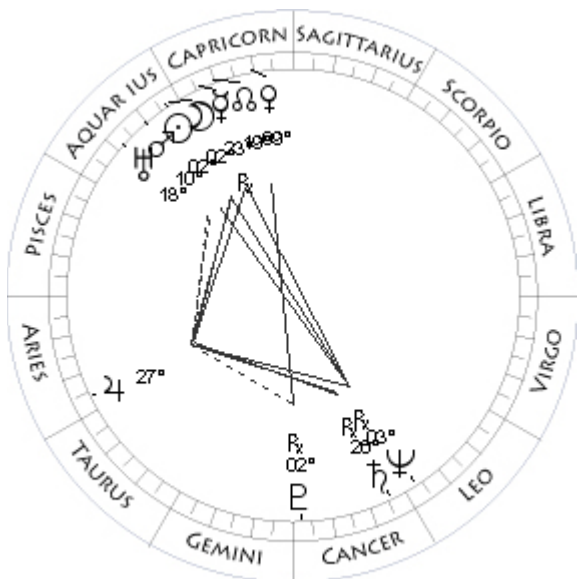
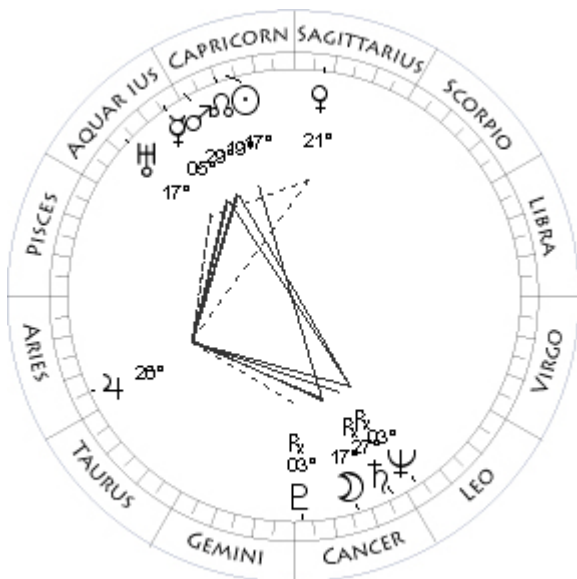
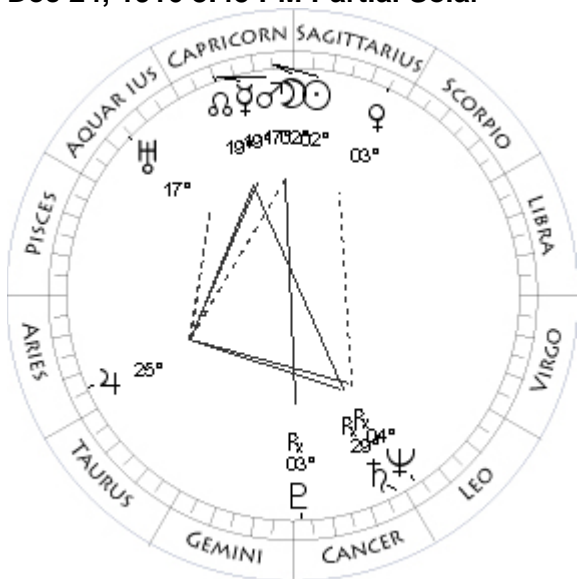
Jul 15, 1916 4:45 AM Partial Umbral

Mo 29Cn03 + 0°50	Mo 22Cp24 - 0°36
Su 28Cp59 - 0°00	Su 22Cn21 - 0°00
Me 17Aq38 - 0°21	Me 07Cn47 - 0°07
Ve 00Pi22 - 1°35	Ve 05Cn17 - 5°31R
Ma 27Le19 + 4°13R	Ma 25Vi17 + 0°33
Ju 25Pi24 - 1°11	Ju 02Ta46 - 1°16
Sa 11Cn46 - 0°27R	Sa 20Cn25 - 0°06
Ur 14Aq44 - 0°39	Ur 18Aq44 - 0°44R
Ne 01Le21 - 0°18R	Ne 02Le00 - 0°15
Pl 01Cn46 - 5°12R	Pl 03Cn19 - 4°51
No 08Aq43 - 0°00	No 29Cp21 - 0°00
Coords: 127E/21N	

Jul 30, 1916 2:06 AM Annular Solar



Dec 24, 1916 8:45 PM Partial Solar



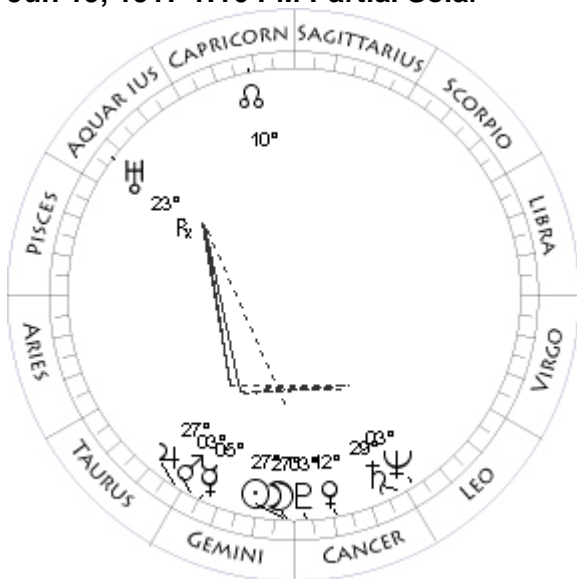
Jan 8, 1917 7:45 AM Total Umbral

Mo 06Le30 - 0°41	Mo 17Cn31 + 0°13
Su 06Le34 - 0°00	Su 17Cp30 - 0°00
Me 08Le27 + 1°44	Me 05Aq19 + 0°10
Ve 03Cn36 - 5°59	Ve 21Sa08 + 0°54
Ma 04Li08 + 0°19	Ma 29Cp03 - 1°05
Ju 04Ta18 - 1°19	Ju 26Ar00 - 1°13
Sa 22Cn21 - 0°05	Sa 27Cn55 + 0°11R
Ur 18Aq11 - 0°44R	Ur 17Aq56 - 0°41
Ne 02Le34 - 0°15	Ne 03Le56 - 0°14R
Pl 03Cn39 - 4°50	Pl 03Cn06 - 4°54R
No 28Cp34 - 0°00	No 19Cp59 - 0°00
Coords: 133W/29S	Coords: 114E/23N

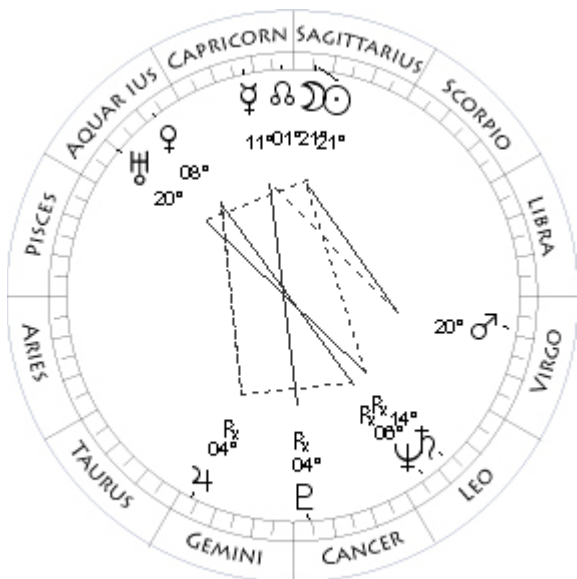
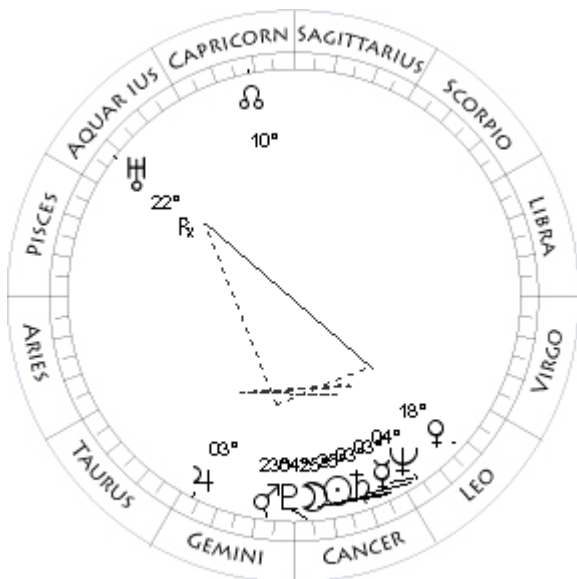
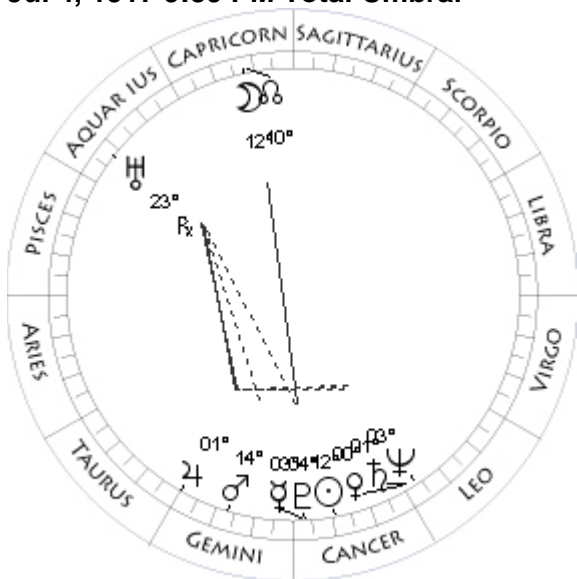
Jan 23, 1917 7:28 AM Partial Solar

Mo 02Cp53 - 1°33	Mo 02Aq38 + 1°10
Su 02Cp45 - 0°00	Su 02Aq45 - 0°00
Me 19Cp24 - 2°06	Me 23Cp40 + 3°32R
Ve 03Sa09 + 1°27	Ve 09Cp49 + 0°14
Ma 17Cp47 - 1°03	Ma 10Aq51 - 1°05
Ju 25Ar27 - 1°18	Ju 27Ar17 - 1°09
Sa 29Cn00 + 0°10R	Sa 26Cn41 + 0°13R
Ur 17Aq13 - 0°41	Ur 18Aq45 - 0°40
Ne 04Le18 - 0°14R	Ne 03Le31 - 0°14R
Pl 03Cn23 - 4°55R	Pl 02Cn49 - 4°52R
No 20Cp45 - 0°00	No 19Cp11 - 0°00

Jun 19, 1917 1:16 PM Partial Solar



Jul 4, 1917 9:39 PM Total Umbral



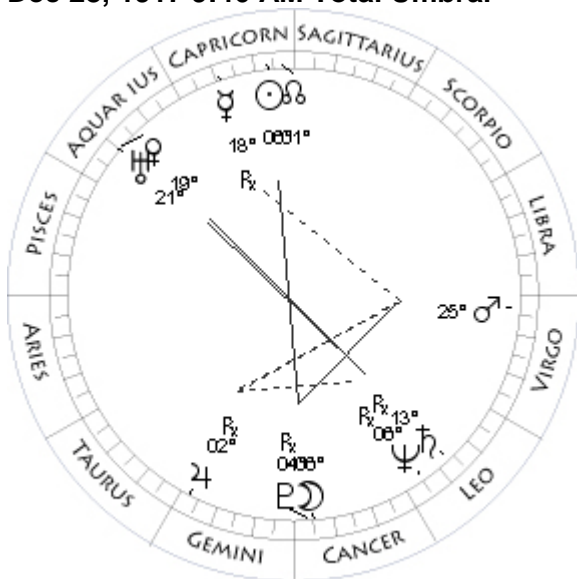
Jul 19, 1917 2:42 AM Partial Solar

Mo 27Ge46 + 1°11	Mo 25Cn43 - 1°22
Su 27Ge40 - 0°00	Su 25Cn51 - 0°00
Me 05Ge58 - 2°31	Me 03Le12 + 1°48
Ve 12Cn10 + 1°05	Ve 18Le17 + 1°34
Ma 03Ge21 - 0°03	Ma 23Ge53 + 0°18
Ju 27Ta46 - 0°50	Ju 03Ge48 - 0°50
Sa 29Cn25 + 0°23	Sa 03Le04 + 0°25
Ur 23Aq32 - 0°44R	Ur 22Aq46 - 0°45R
Ne 03Le15 - 0°12	Ne 04Le17 - 0°11
Pl 03Cn46 - 4°33	Pl 04Cn29 - 4°32
No 11Cp23 - 0°00	No 09Cp49 - 0°00

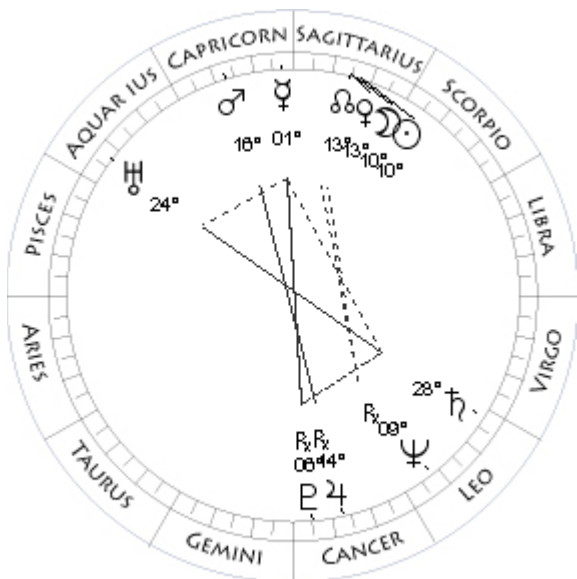
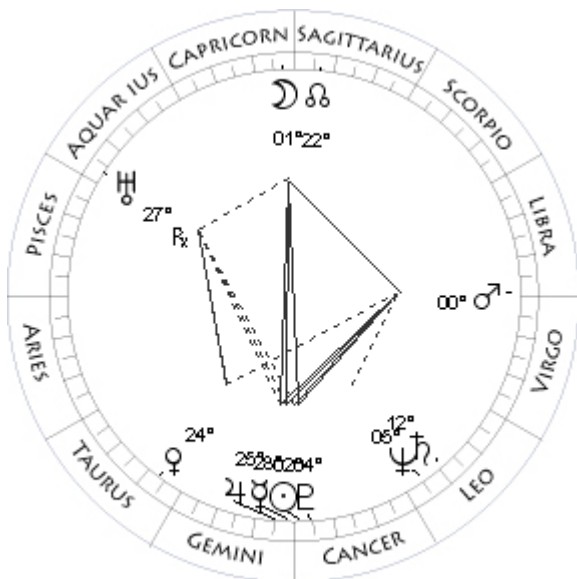
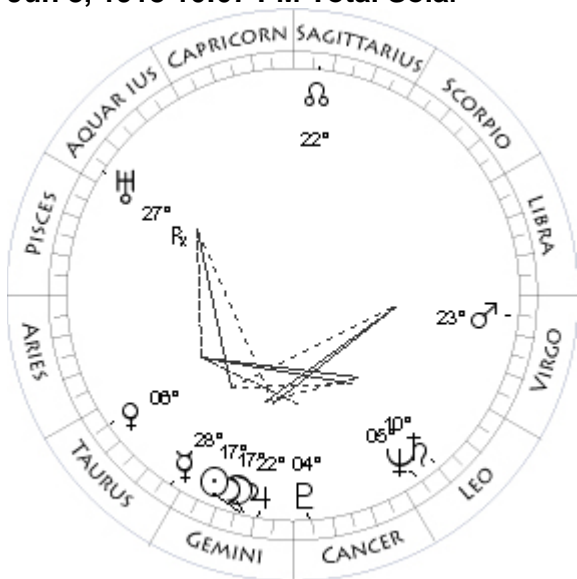
Dec 14, 1917 9:27 AM Annular Solar

Mo 12Cp17 + 0°08	Mo 21Sa56 - 0°53
Su 12Cn18 - 0°00	Su 21Sa51 - 0°00
Me 03Cn03 + 0°25	Me 11Cp48 - 2°04
Ve 00Le57 + 1°27	Ve 08Aq19 - 2°05
Ma 14Ge07 + 0°08	Ma 20Vi32 + 2°20
Ju 01Ge01 - 0°50	Ju 04Ge26 - 0°51R
Sa 01Le16 + 0°24	Sa 14Le14 + 0°45R
Ur 23Aq12 - 0°45R	Ur 20Aq38 - 0°42
Ne 03Le46 - 0°12	Ne 06Le47 - 0°10R
Pl 04Cn08 - 4°32	Pl 04Cn44 - 4°36R
No 10Cp34 - 0°00	No 01Cp58 - 0°00
Coords: 36W/23S	Coords: 112W/88S

Dec 28, 1917 9:46 AM Total Umbral



Jun 8, 1918 10:07 PM Total Solar



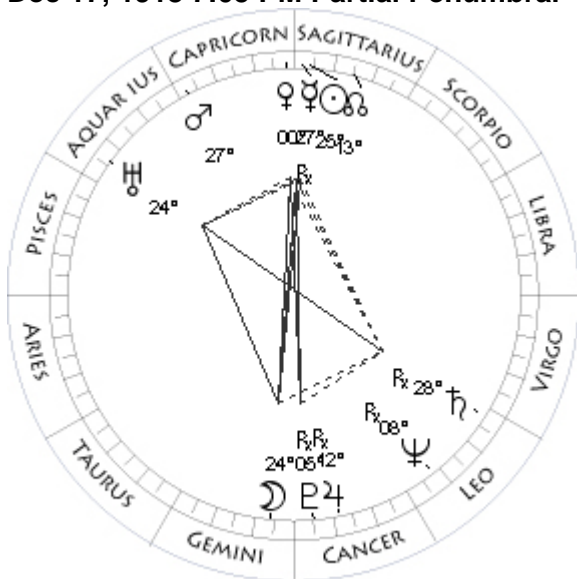
Jun 24, 1918 10:27 AM Partial Umbral

Mo 06Cn04 - 0°25	Mo 01Cp59 + 0°54
Su 06Cp07 - 0°00	Su 02Cn05 - 0°00
Me 18Cp43 + 0°53R	Me 28Ge48 + 0°50
Ve 19Aq35 - 0°34	Ve 24Ta18 - 2°04
Ma 25Vi52 + 2°37	Ma 00Li18 + 0°21
Ju 02Ge53 - 0°48R	Ju 25Ge45 - 0°17
Sa 13Le36 + 0°48R	Sa 12Le14 + 0°55
Ur 21Aq12 - 0°42	Ur 27Aq32 - 0°45R
Ne 06Le29 - 0°10R	Ne 05Le33 - 0°08
Pl 04Cn27 - 4°35R	Pl 04Cn58 - 4°13
No 01Cp14 - 0°00	No 21Sa48 - 0°00
Coords: 146E/23N	Coords: 157E/23S

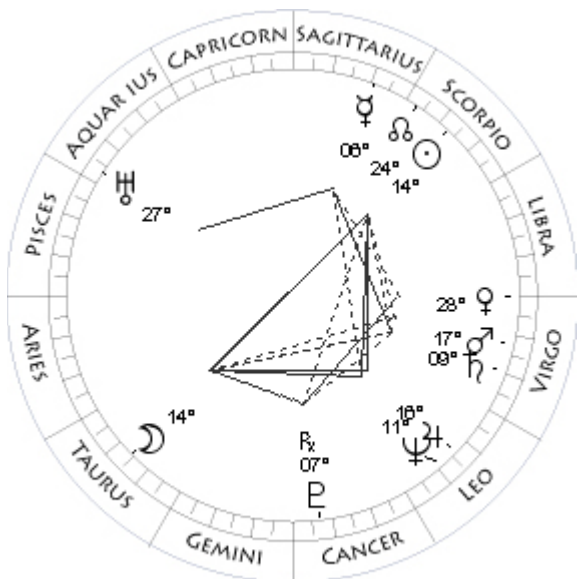
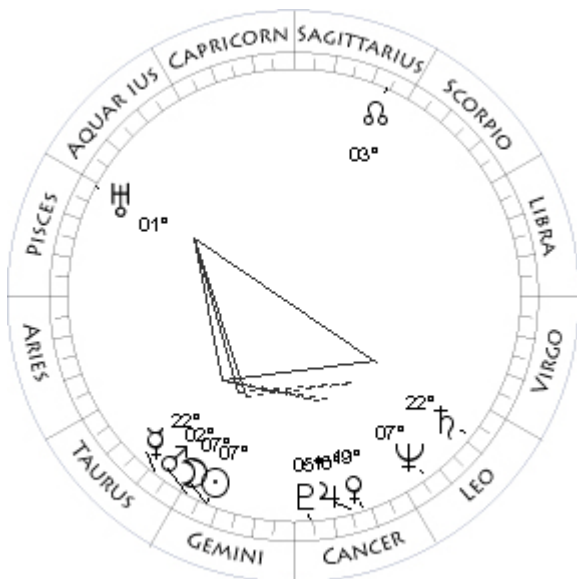
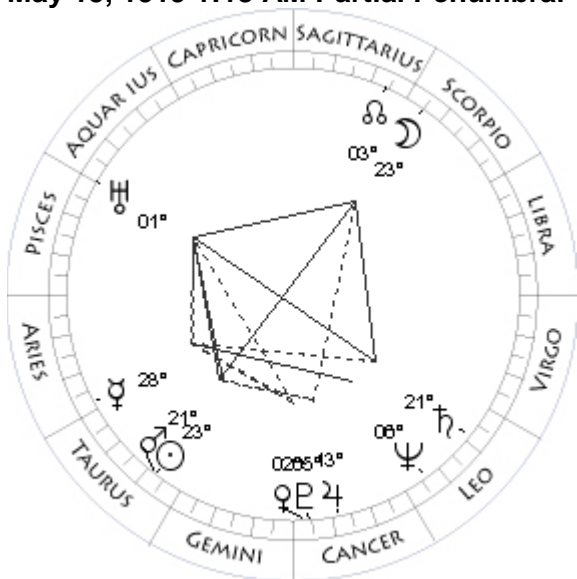
Dec 3, 1918 3:22 PM Annular Solar

Mo 17Ge19 + 0°27	Mo 10Sa41 - 0°13
Su 17Ge17 - 0°00	Su 10Sa40 - 0°00
Me 28Ta04 - 1°56	Me 01Cp38 - 1°59
Ve 06Ta28 - 2°14	Ve 13Sa01 - 0°00
Ma 23Vi38 + 0°43	Ma 16Cp59 - 1°15
Ju 22Ge11 - 0°19	Ju 14Cn22 - 0°02R
Sa 10Le40 + 0°54	Sa 28Le13 + 1°15
Ur 27Aq42 - 0°45R	Ur 24Aq10 - 0°44
Ne 05Le05 - 0°08	Ne 09Le12 - 0°06R
Pl 04Cn35 - 4°15	Pl 06Cn05 - 4°16R
No 22Sa37 - 0°00	No 13Sa13 - 0°00
Coords: 152E/51N	

Dec 17, 1918 7:05 PM Partial Penumbral



May 15, 1919 1:13 AM Partial Penumbral



May 29, 1919 1:08 PM Total Solar

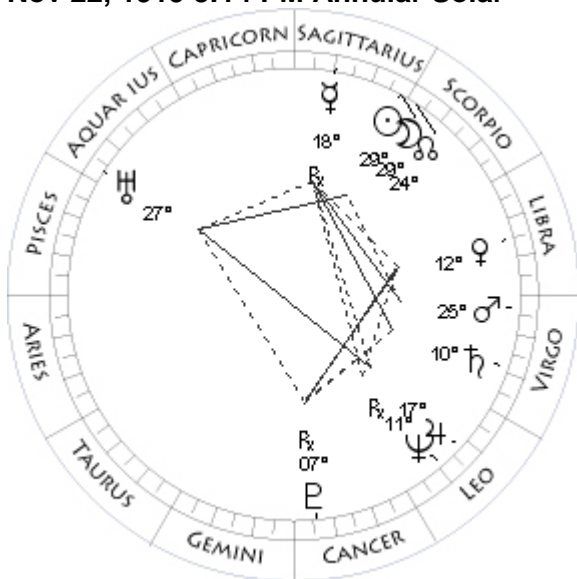
Mo 24Ge56 - 1°05	Mo 07Ge04 - 0°18
Su 25Sa04 - 0°00	Su 07Ge06 - 0°00
Me 27Sa07 + 1°45R	Me 22Ta17 - 1°23
Ve 00Cp50 - 0°34	Ve 19Cn05 + 2°23
Ma 27Cp59 - 1°13	Ma 02Ge14 + 0°12
Ju 12Cn48 - 0°00R	Ju 16Cn00 + 0°16
Sa 28Le12 + 1°18R	Sa 22Le27 + 1°25
Ur 24Aq36 - 0°43	Ur 01Pi40 - 0°45
Ne 08Le59 - 0°06R	Ne 07Le00 - 0°04
Pl 05Cn49 - 4°15R	Pl 05Cn26 - 3°56
No 12Sa28 - 0°00	No 03Sa51 - 0°00

Coords: 72W/22N

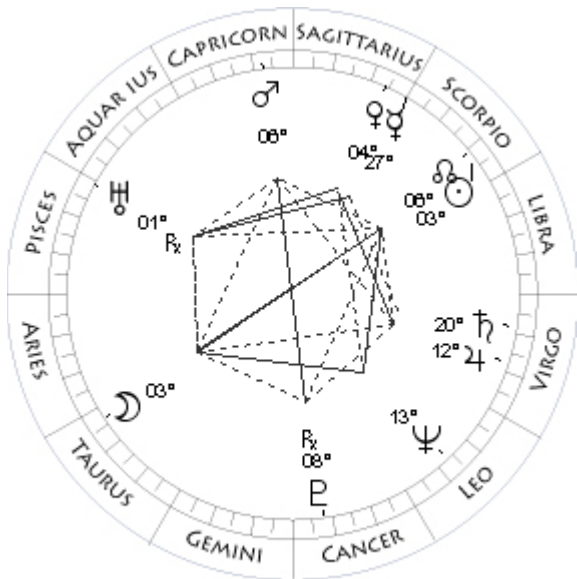
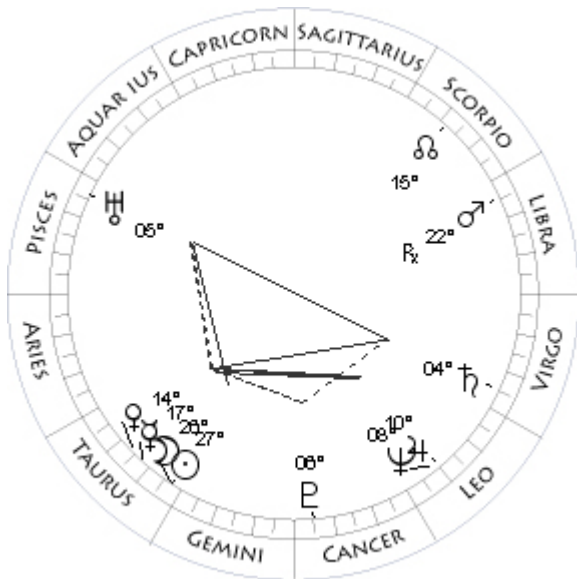
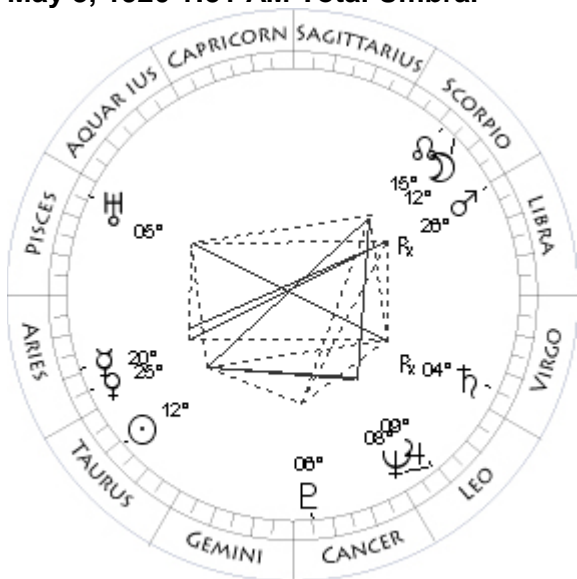
Nov 7, 1919 11:44 PM Partial Umbral

Mo 23Sc15 - 0°58	Mo 14Ta36 + 0°57
Su 23Ta10 - 0°00	Su 14Sc31 - 0°00
Me 28Ar34 - 3°00	Me 06Sa38 - 2°38
Ve 02Cn37 + 2°11	Ve 28Vi50 + 0°12
Ma 21Ta53 + 0°02	Ma 17Vi12 + 1°34
Ju 13Cn16 + 0°15	Ju 16Le58 + 0°35
Sa 21Le45 + 1°26	Sa 09Vi52 + 1°35
Ur 01Pi30 - 0°44	Ur 27Aq47 - 0°46
Ne 06Le44 - 0°04	Ne 11Le32 - 0°02
Pl 05Cn08 - 3°58	Pl 07Cn37 - 3°55R
No 04Sa37 - 0°00	No 25Sc14 - 0°00

Nov 22, 1919 3:14 PM Annular Solar



May 3, 1920 1:51 AM Total Umbral



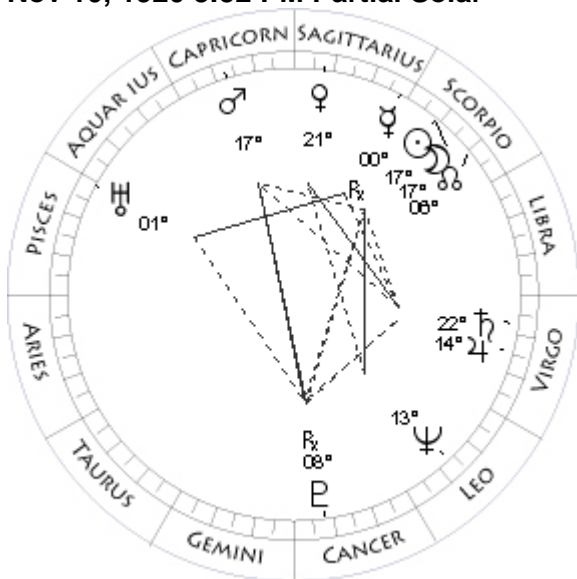
May 18, 1920 6:14 AM Partial Solar

Mo 29Sc14 + 0°24	Mo 26Ta53 - 1°02
Su 29Sc17 - 0°00	Su 27Ta00 - 0°00
Me 18Sa02 - 1°49R	Me 17Ta46 - 0°53
Ve 12Li34 + 1°37	Ve 14Ta23 - 1°07
Ma 25Vi36 + 1°40	Ma 22Li30 + 0°24R
Ju 17Le53 + 0°39	Ju 10Le58 + 0°51
Sa 10Vi49 + 1°38	Sa 04Vi56 + 1°54
Ur 27Aq52 - 0°45	Ur 05Pi28 - 0°45
Ne 11Le32 - 0°02R	Ne 08Le58 - 0°00
Pl 07Cn25 - 3°56R	Pl 06Cn19 - 3°38
No 24Sc28 - 0°00	No 15Sc04 - 0°00

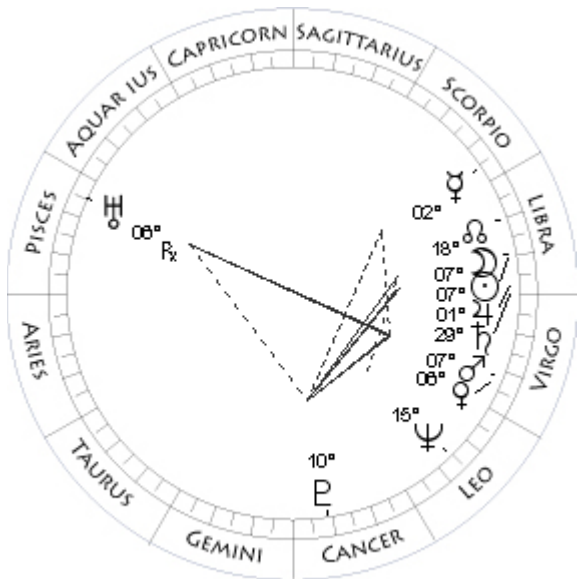
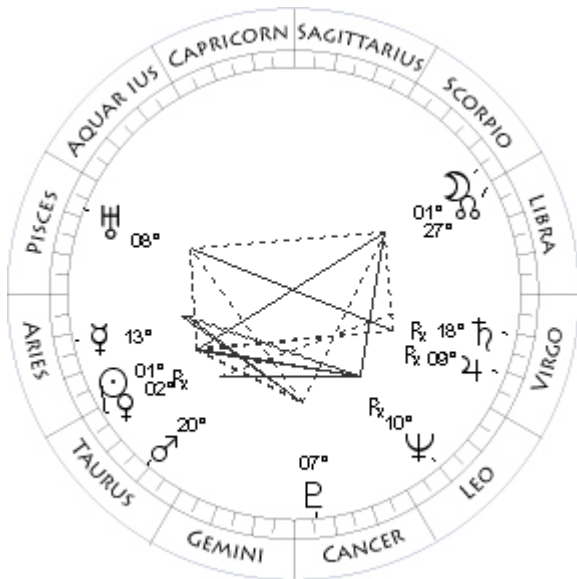
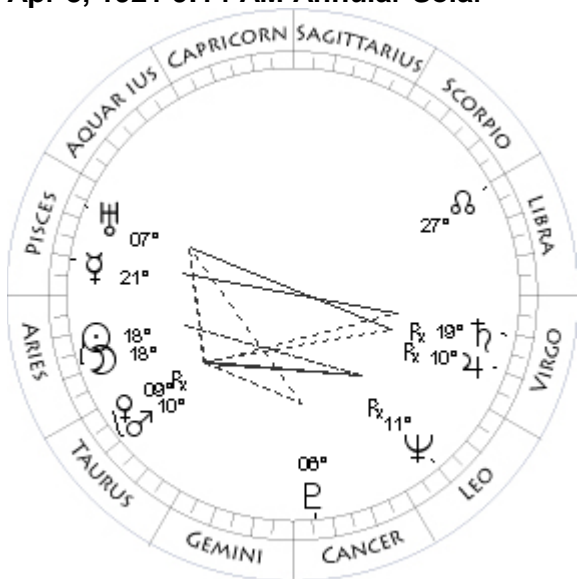
Oct 27, 1920 2:12 PM Total Umbral

Mo 12Sc21 - 0°18	Mo 03Ta54 + 0°15
Su 12Ta20 - 0°00	Su 03Sc52 - 0°00
Me 20Ar07 - 2°39	Me 27Sc43 - 2°56
Ve 25Ar46 - 1°27	Ve 04Sa09 - 0°56
Ma 26Li38 + 1°05R	Ma 06Cp38 - 1°41
Ju 09Le23 + 0°52	Ju 12Vi23 + 0°58
Sa 04Vi50 + 1°56R	Sa 20Vi53 + 1°52
Ur 05Pi06 - 0°45	Ur 01Pi50 - 0°47R
Ne 08Le48 - 0°00	Ne 13Le39 + 0°02
Pl 06Cn02 - 3°40	Pl 08Cn51 - 3°35R
No 15Sc52 - 0°00	No 06Sc28 - 0°00
Coords: 143W/13N	

Nov 10, 1920 3:52 PM Partial Solar



Apr 8, 1921 9:14 AM Annular Solar



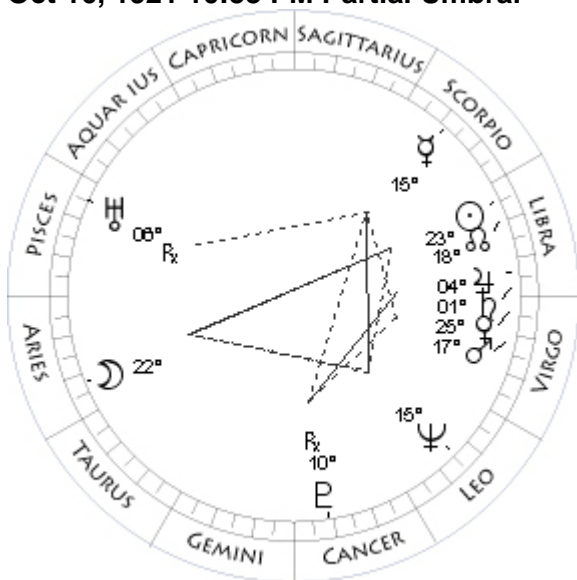
Apr 22, 1921 7:45 AM Total Umbral

Mo 17Sc52 + 1°02	Mo 01Sc36 + 0°24
Su 17Sc58 - 0°00	Su 01Ta38 - 0°00
Me 00Sa08 - 1°27R	Me 13Ar20 - 2°21
Ve 21Sa23 - 1°32	Ve 02Ta18 + 6°03R
Ma 17Cp08 - 1°36	Ma 20Ta18 + 0°16
Ju 14Vi37 + 1°01	Ju 09Vi13 + 1°23R
Sa 22Vi13 + 1°55	Sa 18Vi39 + 2°20R
Ur 01Pi45 - 0°46	Ur 08Pi32 - 0°45
Ne 13Le45 + 0°02	Ne 10Le58 + 0°04R
Pl 08Cn43 - 3°35R	Pl 07Cn00 - 3°21
No 05Sc43 - 0°00	No 27Li06 - 0°00
	Coords: 116E/12S

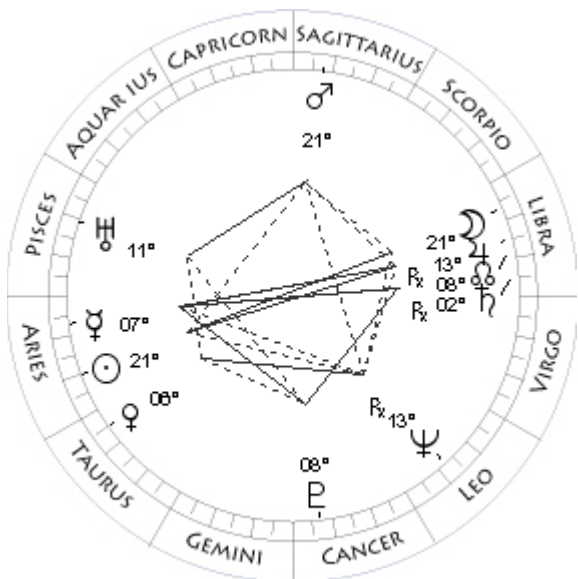
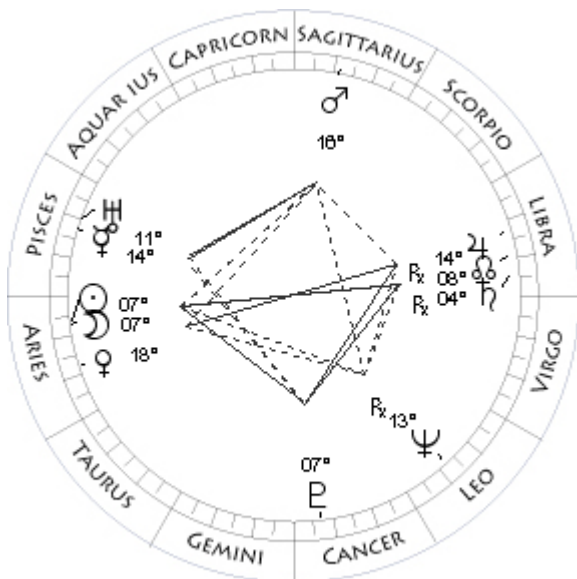
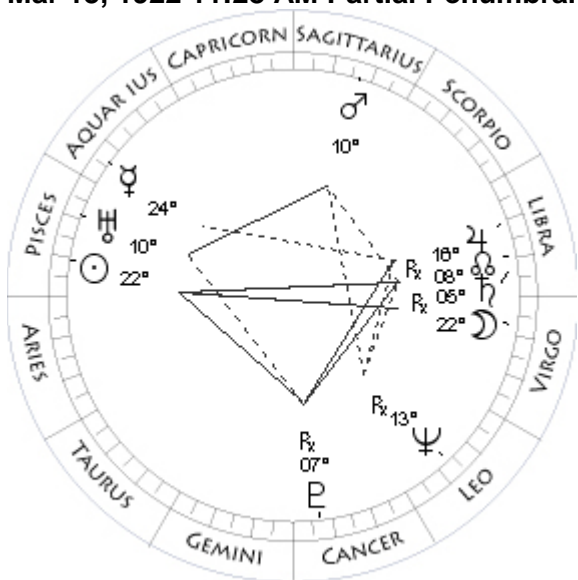
Oct 1, 1921 0:35 PM Total Solar

Mo 18Ar04 + 0°50	Mo 07Li52 - 0°56
Su 18Ar00 - 0°00	Su 07Li47 - 0°00
Me 21Pi54 - 2°24	Me 02Sc17 - 2°15
Ve 09Ta19 + 7°10R	Ve 06Vi29 + 1°01
Ma 10Ta18 + 0°07	Ma 07Vi34 + 1°15
Ju 10Vi05 + 1°25R	Ju 01Li13 + 1°05
Sa 19Vi26 + 2°22R	Sa 29Vi15 + 2°03
Ur 07Pi56 - 0°44	Ur 06Pi30 - 0°48R
Ne 11Le01 + 0°04R	Ne 15Le20 + 0°05
Pl 06Cn52 - 3°23	Pl 10Cn03 - 3°14
No 27Li51 - 0°00	No 18Li31 - 0°00
Coords: 6W/64N	

Oct 16, 1921 10:53 PM Partial Umbral



Mar 13, 1922 11:28 AM Partial Penumbral



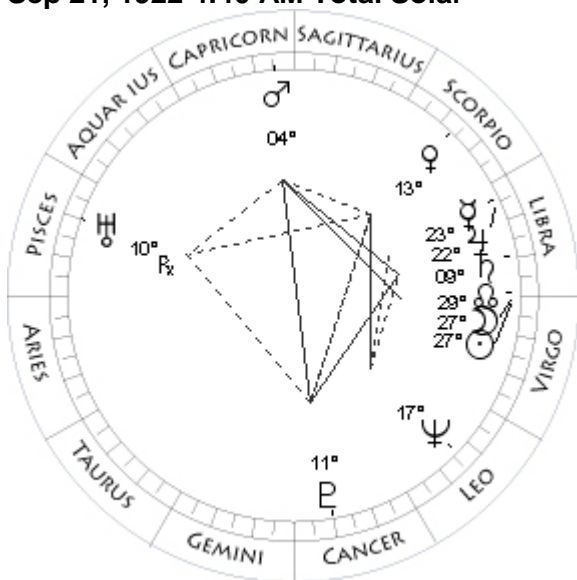
Mar 28, 1922 1:05 PM Annular Solar

Mo 22Ar59 - 0°27	Mo 07Ar05 + 0°09
Su 23Li02 - 0°00	Su 07Ar05 - 0°00
Me 15Sc44 - 3°15	Me 14Pi00 - 2°19
Ve 25Vi21 + 1°28	Ve 18Ar44 - 0°58
Ma 17Vi12 + 1°18	Ma 16Sa53 + 0°29
Ju 04Li30 + 1°06	Ju 14Li54 + 1°36R
Sa 01Li07 + 2°04	Sa 04Li02 + 2°38R
Ur 06Pi04 - 0°48R	Ur 11Pi08 - 0°44
Ne 15Le40 + 0°06	Ne 13Le22 + 0°08R
Pl 10Cn03 - 3°14R	Pl 07Cn57 - 3°04
No 17Li42 - 0°00	No 09Li05 - 0°00
Coords: 13W/ 9N	

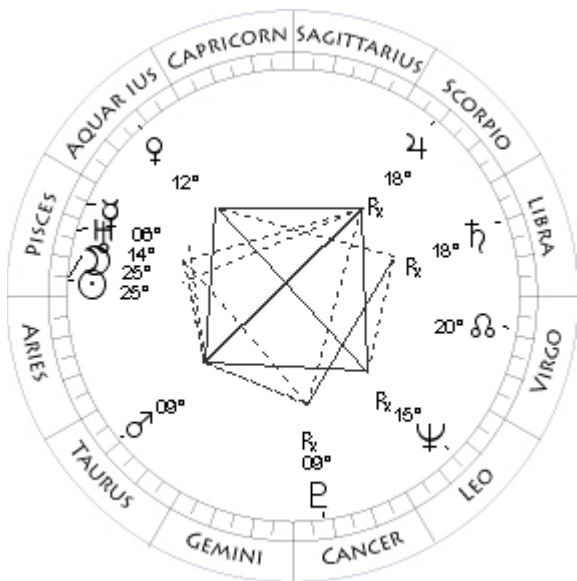
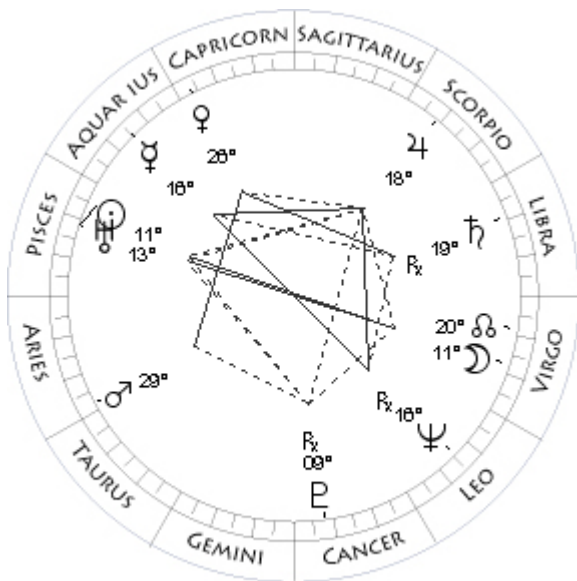
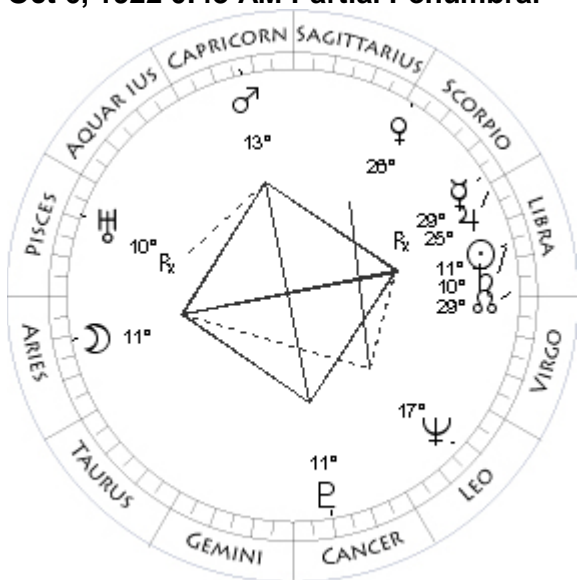
Apr 11, 1922 8:31 PM Partial Penumbral

Mo 22Vi15 - 1°30	Mo 21Li02 + 1°08
Su 22Pi07 - 0°00	Su 21Ar10 - 0°00
Me 24Aq37 - 0°52	Me 07Ar57 - 2°03
Ve 00Ar01 - 1°19	Ve 06Ta25 - 0°28
Ma 10Sa50 + 0°46	Ma 21Sa27 + 0°06
Ju 16Li41 + 1°34R	Ju 13Li04 + 1°36R
Sa 05Li12 + 2°37R	Sa 02Li57 + 2°38R
Ur 10Pi19 - 0°44	Ur 11Pi51 - 0°44
Ne 13Le38 + 0°07R	Ne 13Le13 + 0°08R
Pl 07Cn57 - 3°06R	Pl 08Cn01 - 3°02
No 09Li53 - 0°00	No 08Li20 - 0°00
Coords: 170E/ 2N	

Sep 21, 1922 4:40 AM Total Solar



Oct 6, 1922 0:43 AM Partial Penumbral



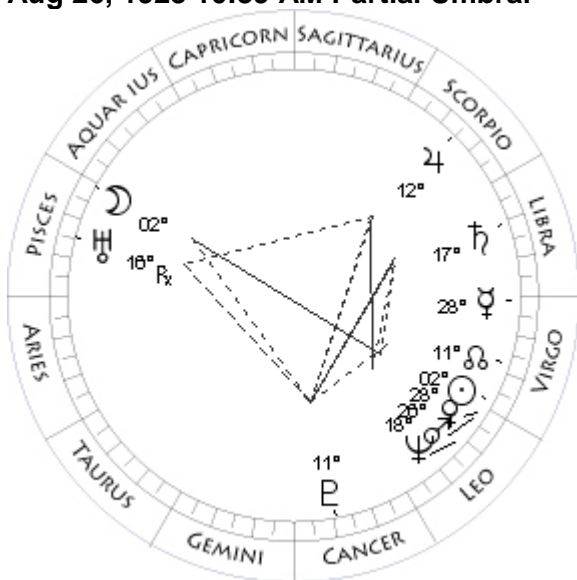
Mar 3, 1923 3:31 AM Partial Umbral

Mo 27Vi26 - 0°13	Mo 11Vi37 - 0°49
Su 27Vi25 - 0°00	Su 11Pi33 - 0°00
Me 23Li42 - 2°48	Me 16Aq02 - 1°08
Ve 13Sc37 - 3°28	Ve 26Cp32 + 1°37
Ma 04Cp21 - 3°03	Ma 29Ar23 + 0°14
Ju 22Li22 + 1°04	Ju 18Sc56 + 1°15
Sa 09Li02 + 2°12	Sa 19Li13 + 2°42R
Ur 10Pi58 - 0°49R	Ur 13Pi26 - 0°44
Ne 17Le12 + 0°09	Ne 16Le08 + 0°12R
Pl 11Cn08 - 2°53	Pl 09Cn10 - 2°46R
No 29Vi44 - 0°00	No 21Vi06 - 0°00
Coords: 105W/11S	

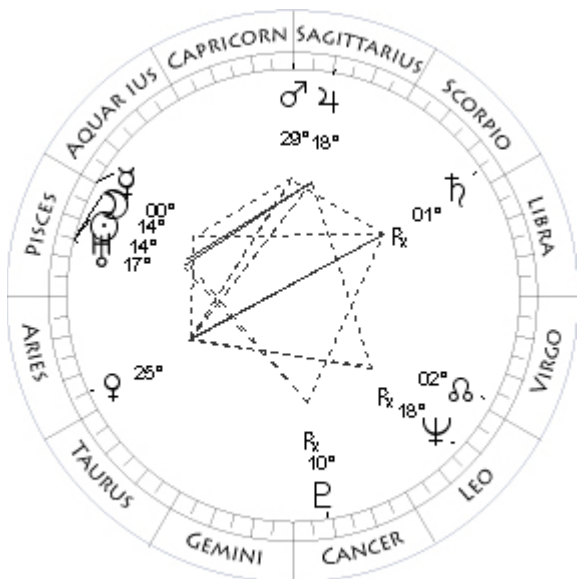
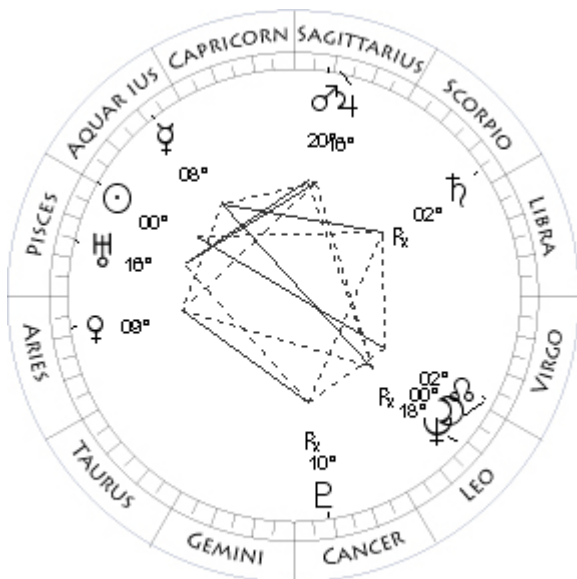
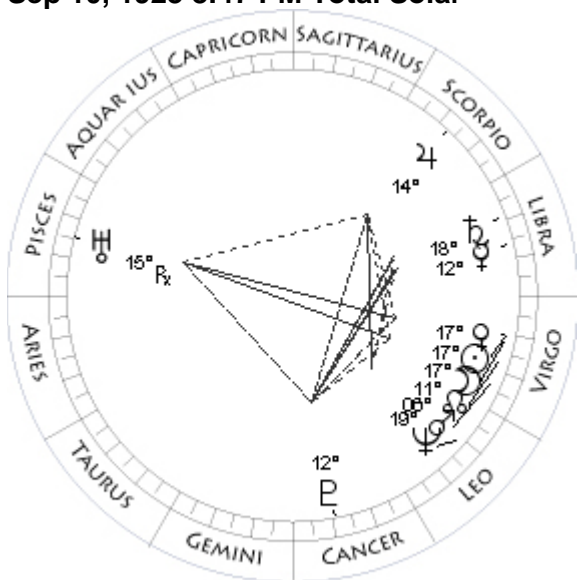
Mar 17, 1923 0:44 PM Annular Solar

Mo 11Ar52 - 1°06	Mo 25Pi51 - 0°29
Su 11Li59 - 0°00	Su 25Pi55 - 0°00
Me 29Li44 - 3°30R	Me 06Pi54 - 2°14
Ve 26Sc23 - 4°44	Ve 12Aq55 + 0°32
Ma 13Cp26 - 2°42	Ma 09Ta32 + 0°25
Ju 25Li30 + 1°03	Ju 18Sc43 + 1°17R
Sa 10Li51 + 2°12	Sa 18Li21 + 2°44R
Ur 10Pi27 - 0°48R	Ur 14Pi15 - 0°44
Ne 17Le36 + 0°09	Ne 15Le49 + 0°12R
Pl 11Cn13 - 2°53	Pl 09Cn06 - 2°45R
No 28Vi57 - 0°00	No 20Vi21 - 0°00
Coords: 2W/33S	

Aug 26, 1923 10:39 AM Partial Umbral



Sep 10, 1923 8:47 PM Total Solar



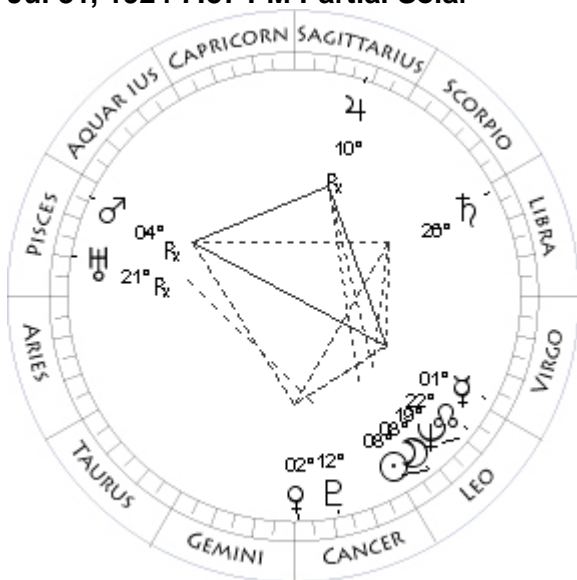
Feb 20, 1924 4:08 PM Total Umbral

Mo 02Pi14 + 0°51	Mo 00Vi46 - 0°08
Su 02Vi10 - 0°00	Su 00Pi46 - 0°00
Me 28Vi12 - 1°13	Me 08Aq56 - 1°20
Ve 28Le05 + 1°18	Ve 09Ar00 - 0°20
Ma 26Le27 + 1°09	Ma 20Sa25 + 0°10
Ju 12Sc35 + 0°55	Ju 16Sa52 + 0°41
Sa 17Li08 + 2°19	Sa 02Sc15 + 2°37R
Ur 16Pi07 - 0°49R	Ur 16Pi34 - 0°44
Ne 18Le28 + 0°13	Ne 18Le41 + 0°16R
Pl 11Cn57 - 2°32	Pl 10Cn27 - 2°26R
No 11Vi46 - 0°00	No 02Vi20 - 0°00
Coords: 160E/10S	Coords: 121W/11N

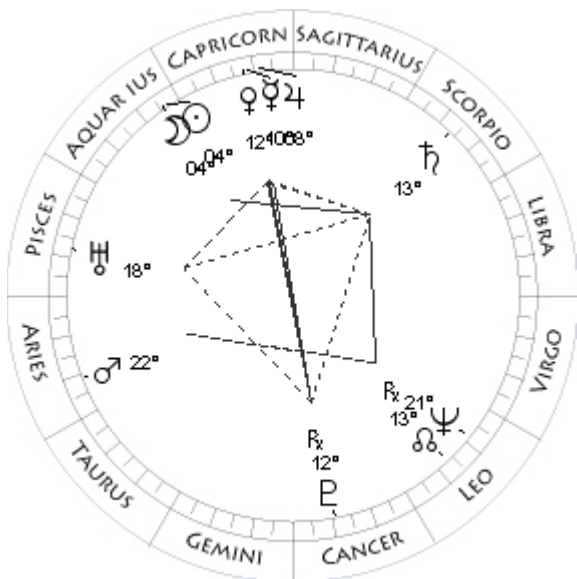
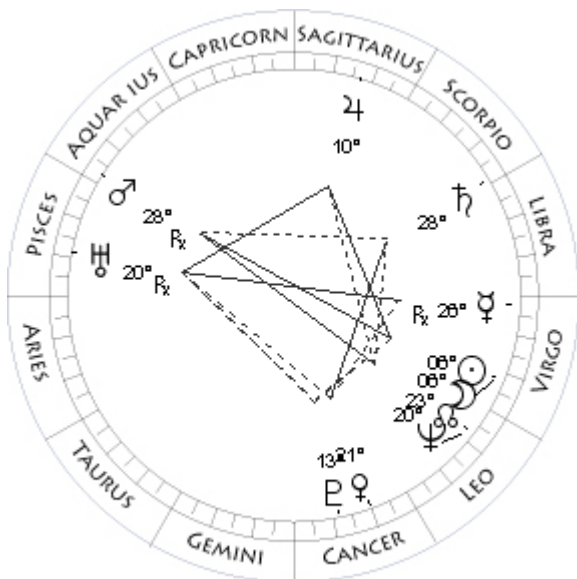
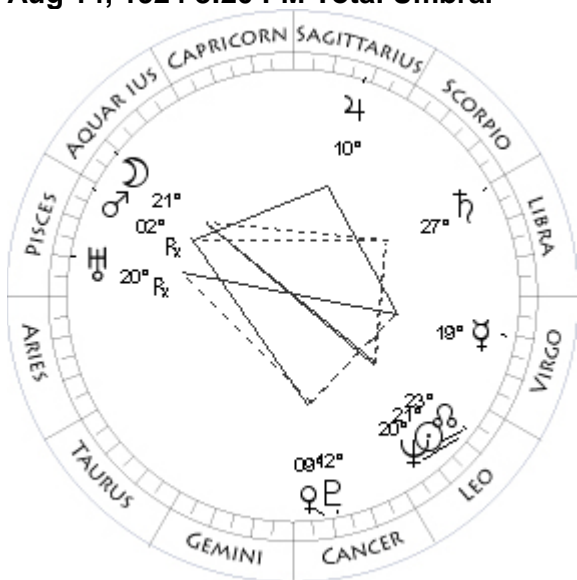
Mar 5, 1924 3:43 PM Partial Solar

Mo 17Vi03 + 0°31	Mo 14Pi42 - 1°09
Su 17Vi06 - 0°00	Su 14Pi49 - 0°00
Me 12Li23 - 3°28	Me 00Pi42 - 2°10
Ve 17Vi13 + 1°25	Ve 25Ar32 + 0°32
Ma 06Vi16 + 1°09	Ma 29Sa17 - 0°04
Ju 14Sc51 + 0°52	Ju 18Sa24 + 0°42
Sa 18Li45 + 2°17	Sa 01Sc52 + 2°40R
Ur 15Pi30 - 0°49R	Ur 17Pi21 - 0°44
Ne 19Le00 + 0°13	Ne 18Le19 + 0°16R
Pl 12Cn10 - 2°32	Pl 10Cn19 - 2°25R
No 10Vi57 - 0°00	No 01Vi36 - 0°00
Coords: 122E/34N	

Jul 31, 1924 7:57 PM Partial Solar



Aug 14, 1924 8:20 PM Total Umbral



Aug 30, 1924 8:22 AM Partial Solar

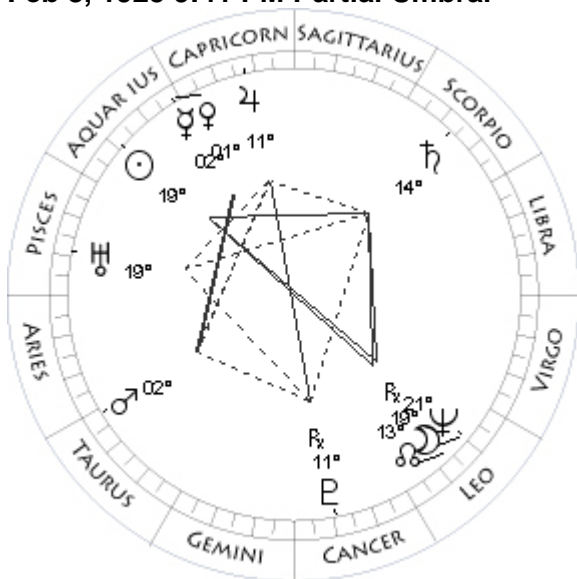
Mo 08Le24 - 1°20	Mo 06Vi32 + 1°14
Su 08Le17 - 0°00	Su 06Vi40 - 0°00
Me 01Vi42 + 0°28	Me 26Vi51 - 4°11R
Ve 02Cn26 - 5°46	Ve 21Cn15 - 3°30
Ma 04Pi58 - 6°20R	Ma 28Aq32 - 6°33R
Ju 10Sa07 + 0°31R	Ju 10Sa53 + 0°25
Sa 26Li30 + 2°25	Sa 28Li36 + 2°19
Ur 21Pi02 - 0°48R	Ur 20Pi03 - 0°48R
Ne 19Le40 + 0°16	Ne 20Le45 + 0°17
Pl 12Cn35 - 2°12	Pl 13Cn10 - 2°11
No 23Le45 - 0°00	No 22Le11 - 0°00

Jan 24, 1925 2:53 PM Total Solar

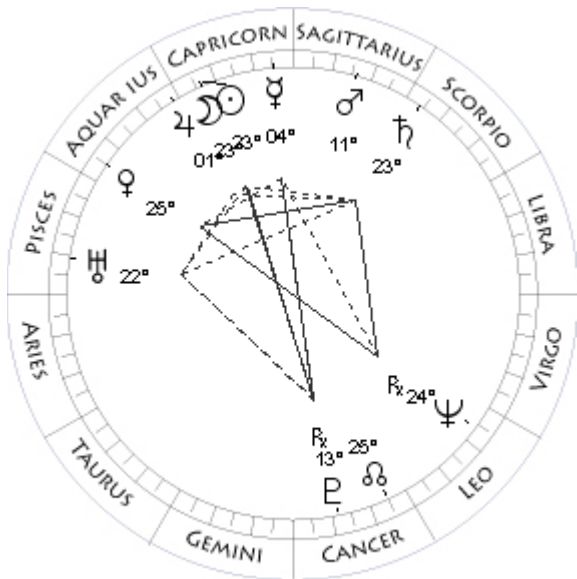
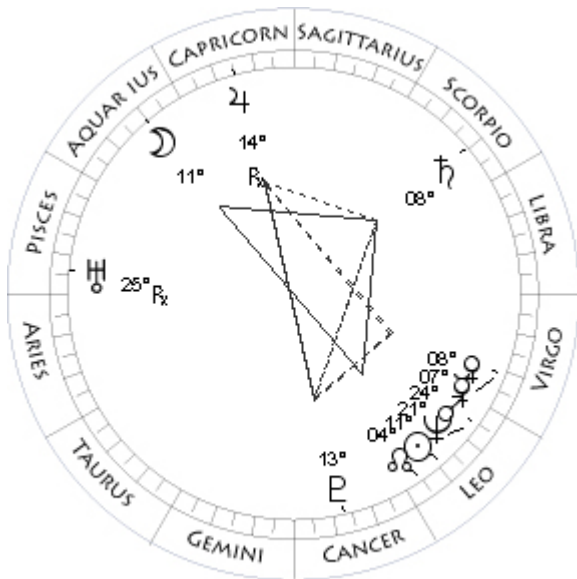
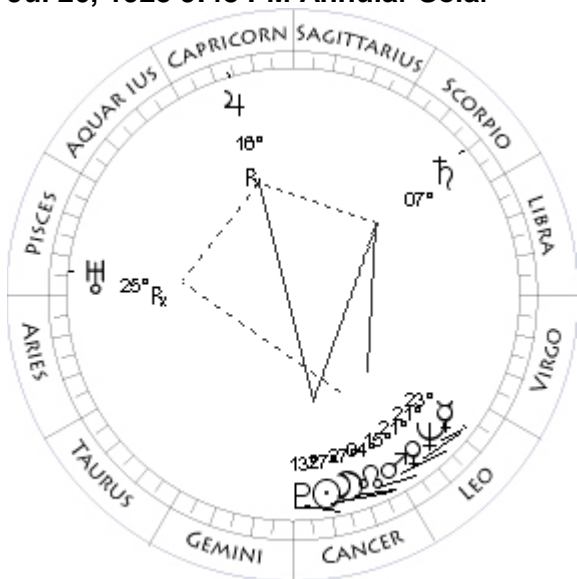
Mo 21Aq44 + 0°07	Mo 04Aq13 + 0°52
Su 21Le44 - 0°00	Su 04Aq09 - 0°00
Me 19Vi06 - 1°48	Me 10Cp57 + 0°21
Ve 09Cn19 - 4°53	Ve 12Cp06 + 0°08
Ma 02Pi32 - 6°46R	Ma 22Ar27 + 0°29
Ju 10Sa09 + 0°28	Ju 08Cp28 + 0°07
Sa 27Li22 + 2°22	Sa 13Sc37 + 2°23
Ur 20Pi37 - 0°48R	Ur 18Pi59 - 0°44
Ne 20Le11 + 0°16	Ne 21Le40 + 0°19R
Pl 12Cn53 - 2°12	Pl 12Cn03 - 2°07R
No 23Le00 - 0°00	No 14Le23 - 0°00

Coords: 56W/14S

Feb 8, 1925 9:41 PM Partial Umbral



Jul 20, 1925 9:48 PM Annular Solar



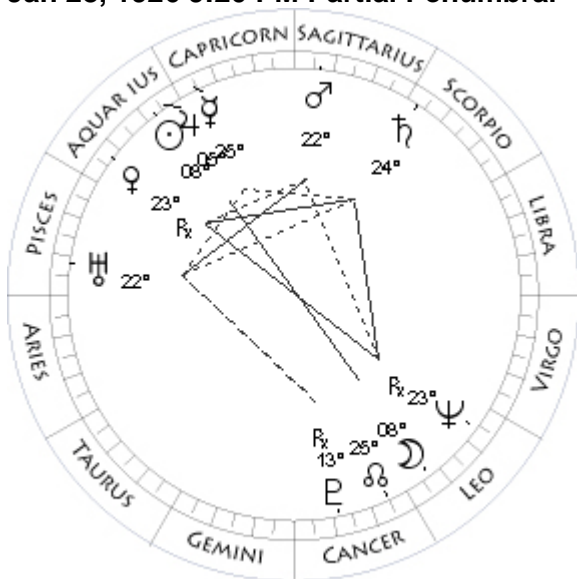
Aug 4, 1925 11:52 AM Partial Umbral

Mo 19Le35 + 0°32	Mo 11Aq29 - 0°38
Su 19Aq39 - 0°00	Su 11Le34 - 0°00
Me 02Aq22 - 1°28	Me 07Vi24 - 2°35
Ve 01Aq11 - 0°31	Ve 08Vi50 + 1°25
Ma 02Ta14 + 0°41	Ma 24Le42 + 1°08
Ju 11Cp43 + 0°06	Ju 14Cp37 - 0°17R
Sa 14Sc10 + 2°26	Sa 08Sc05 + 2°19
Ur 19Pi43 - 0°44	Ur 25Pi01 - 0°47R
Ne 21Le15 + 0°20R	Ne 21Le55 + 0°20
Pl 11Cn47 - 2°06R	Pl 13Cn49 - 1°51
No 13Le34 - 0°00	No 04Le13 - 0°00
Coords: 38W/15N	Coords: 177E/18S

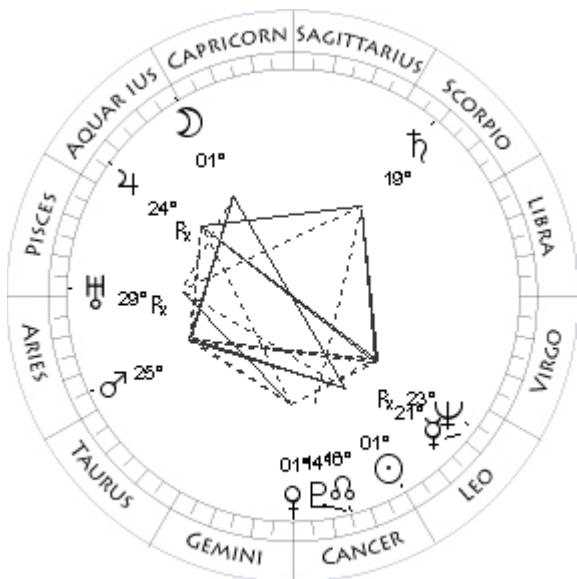
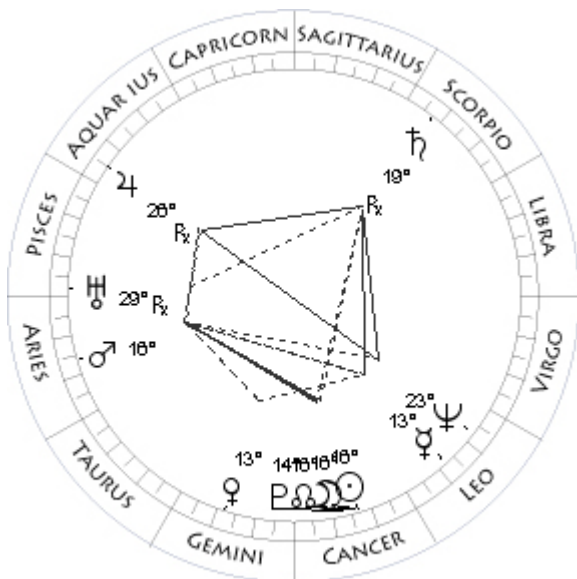
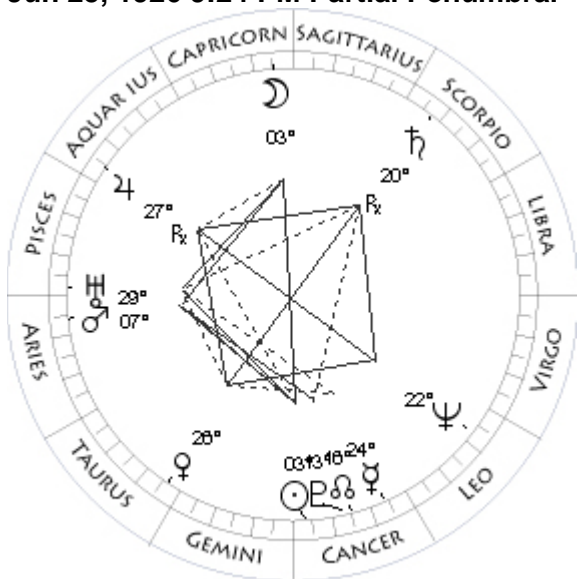
Jan 14, 1926 6:36 AM Total Solar

Mo 27Cn41 - 0°39	Mo 23Cp22 + 0°12
Su 27Cn37 - 0°00	Su 23Cp22 - 0°00
Me 23Le29 + 0°11	Me 04Cp07 - 0°03
Ve 21Le07 + 1°35	Ve 25Aq49 + 2°45
Ma 15Le29 + 1°11	Ma 11Sa54 + 0°03
Ju 16Cp17 - 0°15R	Ju 01Aq56 - 0°27
Sa 07Sc42 + 2°23	Sa 23Sc58 + 2°08
Ur 25Pi19 - 0°47R	Ur 22Pi22 - 0°44
Ne 21Le23 + 0°20	Ne 24Le11 + 0°23R
Pl 13Cn28 - 1°51	Pl 13Cn28 - 1°46R
No 05Le00 - 0°00	No 25Cn36 - 0°00
Coords: 150E/25S	Coords: 82W/10S

Jan 28, 1926 9:20 PM Partial Penumbral



Jun 25, 1926 9:24 PM Partial Penumbral



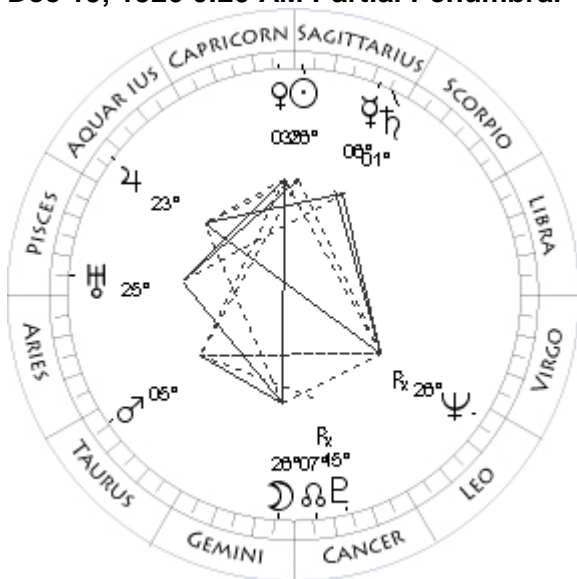
Jul 9, 1926 11:05 PM Annular Solar

Mo 08Le06 + 1°09	Mo 16Cn56 + 0°03
Su 08Aq14 - 0°00	Su 16Cn57 - 0°00
Me 25Cp59 - 1°34	Me 13Le19 - 0°12
Ve 23Aq35 + 6°15R	Ve 13Ge01 - 1°33
Ma 22Sa06 - 0°08	Ma 16Ar34 - 2°42
Ju 05Aq23 - 0°28	Ju 26Aq18 - 1°00R
Sa 24Sc59 + 2°11	Sa 19Sc35 + 2°15R
Ur 22Pi57 - 0°44	Ur 29Pi26 - 0°46R
Ne 23Le49 + 0°24R	Ne 23Le09 + 0°24
Pl 13Cn11 - 1°45R	Pl 14Cn20 - 1°31
No 24Cn50 - 0°00	No 16Cn15 - 0°00
Coords: 43W/19N	Coords: 165E/25N

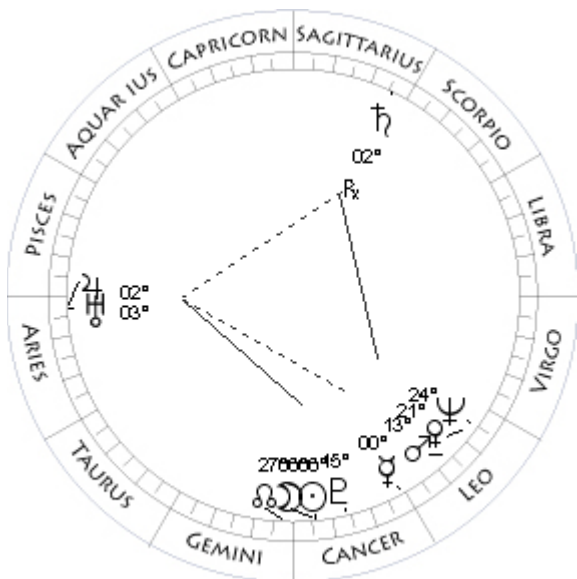
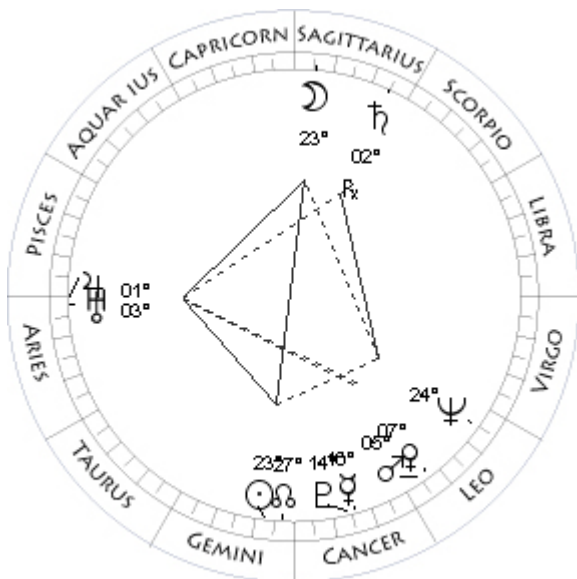
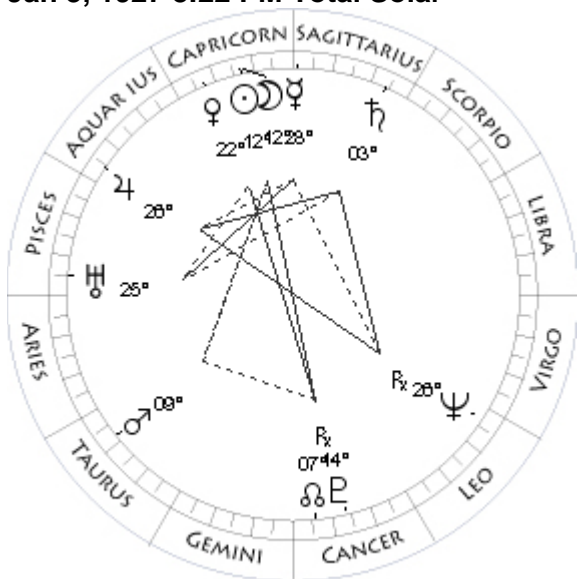
Jul 25, 1926 4:59 AM Partial Penumbral

Mo 03Cp38 + 1°10	Mo 01Aq21 - 1°22
Su 03Cn32 - 0°00	Su 01Le30 - 0°00
Me 24Cn56 + 1°44	Me 21Le14 - 3°33R
Ve 26Ta31 - 2°00	Ve 01Cn07 - 0°54
Ma 07Ar22 - 2°32	Ma 25Ar54 - 2°51
Ju 27Aq02 - 0°56R	Ju 24Aq23 - 1°03R
Sa 20Sc03 + 2°19R	Sa 19Sc25 + 2°11
Ur 29Pi25 - 0°45	Ur 29Pi17 - 0°46R
Ne 22Le44 + 0°24	Ne 23Le39 + 0°24
Pl 13Cn59 - 1°32	Pl 14Cn43 - 1°30
No 17Cn00 - 0°00	No 15Cn26 - 0°00
Coords: 40W/22S	

Dec 19, 1926 6:20 AM Partial Penumbral



Jan 3, 1927 8:22 PM Total Solar



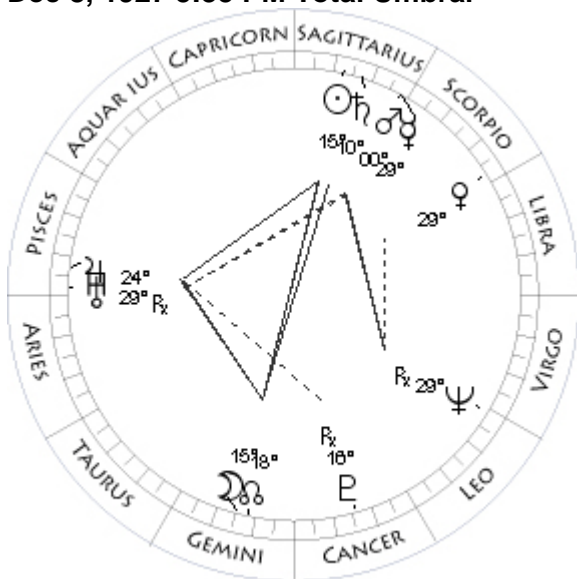
Jun 15, 1927 8:24 AM Total Umbral

Mo 26Ge41 - 0°58	Mo 23Sa17 + 0°26
Su 26Sa36 - 0°00	Su 23Ge15 - 0°00
Me 06Sa11 + 1°38	Me 16Cn58 + 1°40
Ve 03Cp20 - 0°39	Ve 07Le43 + 2°09
Ma 05Ta28 + 1°11	Ma 05Le23 + 1°20
Ju 23Aq52 - 0°58	Ju 01Ar08 - 1°13
Sa 01Sa54 + 1°50	Sa 02Sa57 + 2°03R
Ur 25Pi36 - 0°45	Ur 03Ar11 - 0°44
Ne 26Le53 + 0°27R	Ne 24Le38 + 0°28
Pl 15Cn14 - 1°25R	Pl 14Cn53 - 1°11
No 07Cn39 - 0°00	No 28Ge13 - 0°00
	Coords: 126E/23S

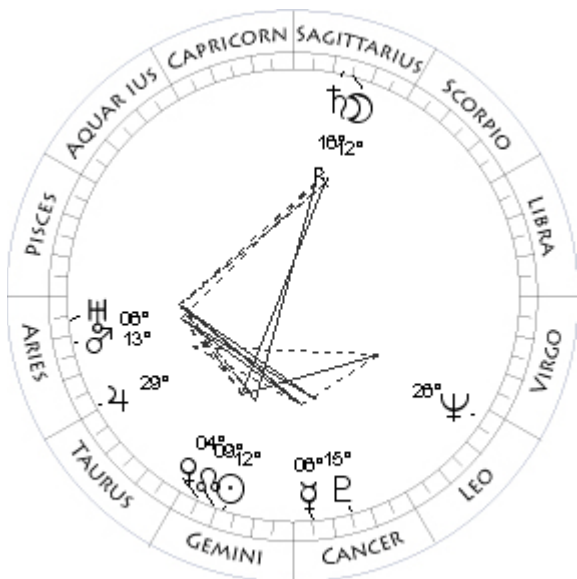
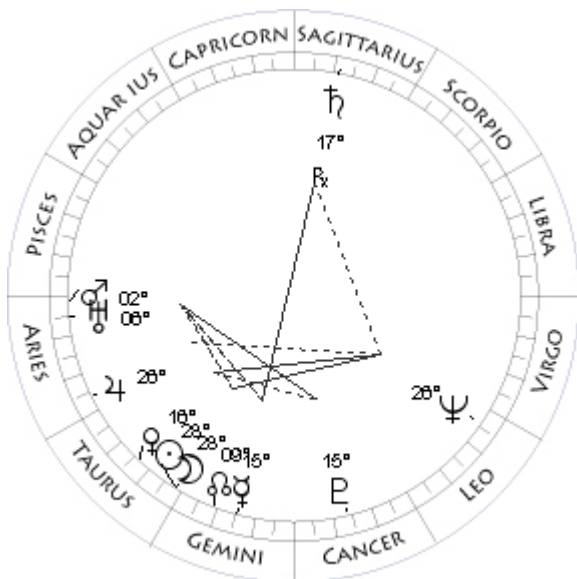
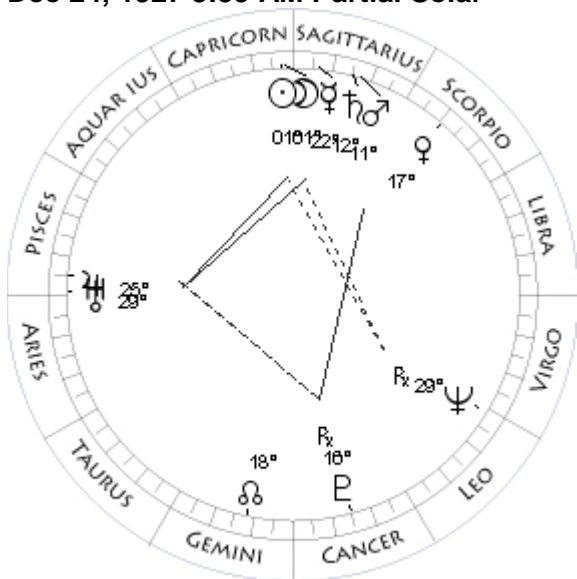
Jun 29, 1927 6:22 AM Total Solar

Mo 12Cp25 - 0°29	Mo 06Cn26 + 0°47
Su 12Cp29 - 0°00	Su 06Cn31 - 0°00
Me 28Sa09 - 0°22	Me 00Le15 - 0°47
Ve 22Cp56 - 1°09	Ve 21Le54 + 1°27
Ma 09Ta00 + 1°28	Ma 13Le53 + 1°15
Ju 26Aq53 - 0°57	Ju 02Ar30 - 1°17
Sa 03Sa34 + 1°51	Sa 02Sa06 + 2°01R
Ur 25Pi53 - 0°44	Ur 03Ar22 - 0°44
Ne 26Le39 + 0°27R	Ne 24Le58 + 0°28
Pl 14Cn55 - 1°24R	Pl 15Cn13 - 1°10
No 06Cn50 - 0°00	No 27Ge29 - 0°00
Coords: 125E/53S	Coords: 73W/78N

Dec 8, 1927 5:35 PM Total Umbral



Dec 24, 1927 3:59 AM Partial Solar



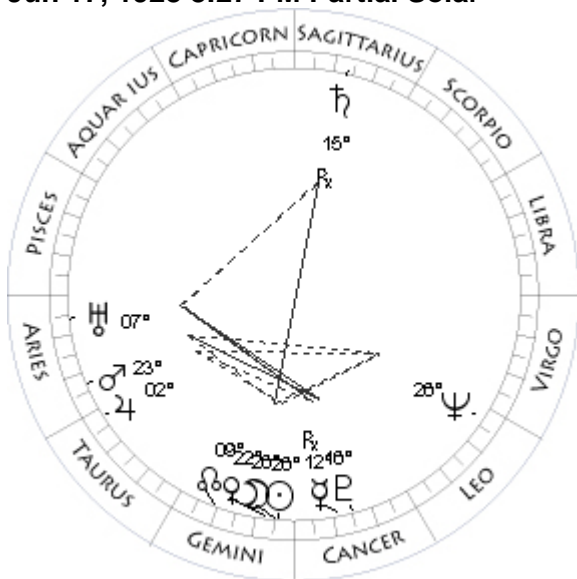
May 19, 1928 1:23 PM Total Solar

Mo 15Ge40 - 0°17	Mo 28Ta23 - 1°01
Su 15Sa39 - 0°00	Su 28Ta18 - 0°00
Me 29Sc03 + 1°13	Me 15Ge41 + 2°07
Ve 29Li50 + 2°25	Ve 16Ta38 - 1°03
Ma 00Sa12 - 0°02	Ma 02Ar01 - 1°32
Ju 24Pi14 - 1°22	Ju 26Ar39 - 1°06
Sa 10Sa49 + 1°32	Sa 17Sa09 + 1°41R
Ur 29Pi30 - 0°44R	Ur 06Ar15 - 0°42
Ne 29Le11 + 0°30R	Ne 26Le26 + 0°32
Pl 16Cn40 - 1°03R	Pl 15Cn30 - 0°51
No 18Ge53 - 0°00	No 10Ge16 - 0°00
Coords: 94W/22N	Coords: 15W/59S

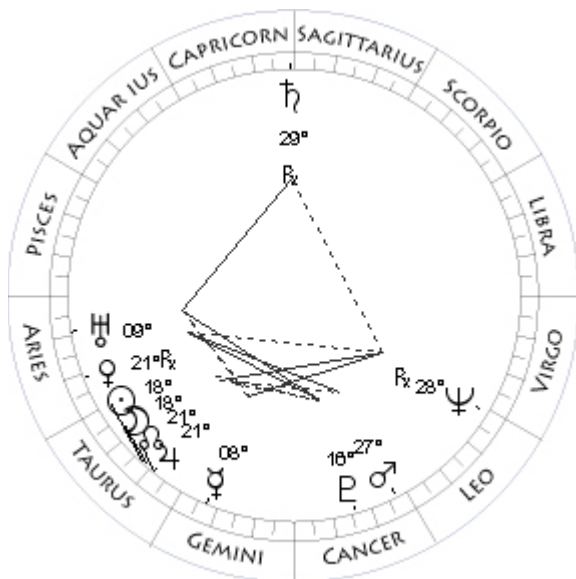
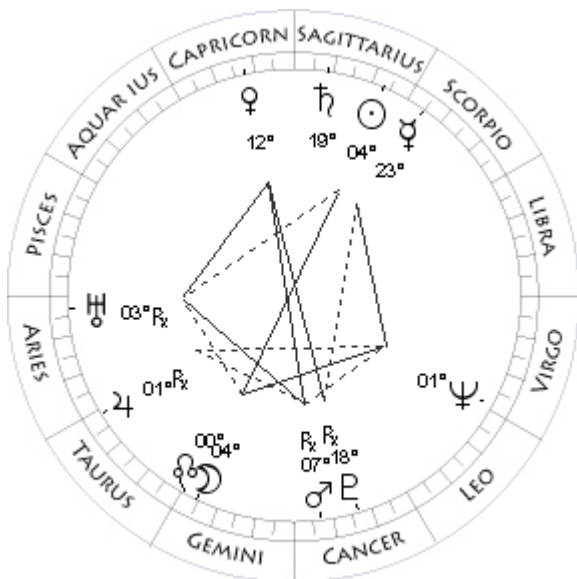
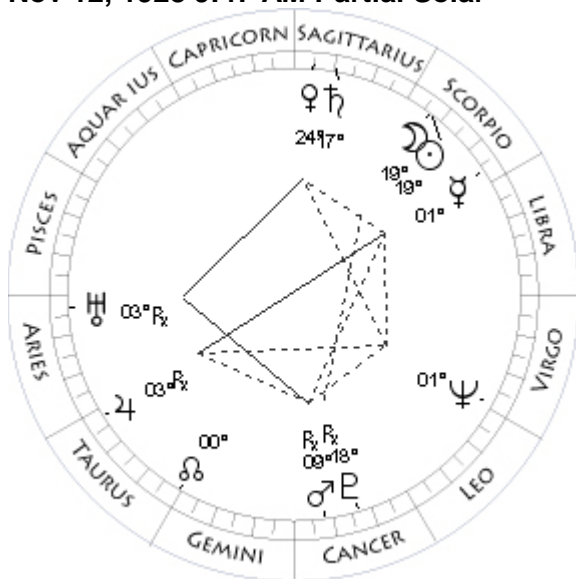
Jun 3, 1928 0:09 PM Total Umbral

Mo 01Cp14 - 1°09	Mo 12Sa36 - 0°17
Su 01Cp21 - 0°00	Su 12Ge39 - 0°00
Me 22Sa22 - 0°37	Me 06Cn07 + 1°33
Ve 17Sc20 + 2°35	Ve 04Ge59 - 0°32
Ma 11Sa11 - 0°11	Ma 13Ar14 - 1°33
Ju 25Pi35 - 1°18	Ju 29Ar52 - 1°07
Sa 12Sa37 + 1°32	Sa 16Sa05 + 1°41R
Ur 29Pi35 - 0°44	Ur 06Ar47 - 0°43
Ne 29Le03 + 0°31R	Ne 26Le35 + 0°32
Pl 16Cn22 - 1°02R	Pl 15Cn48 - 0°50
No 18Ge04 - 0°00	No 09Ge28 - 0°00
	Coords: 177W/23S

Jun 17, 1928 8:27 PM Partial Solar



Nov 12, 1928 9:47 AM Partial Solar



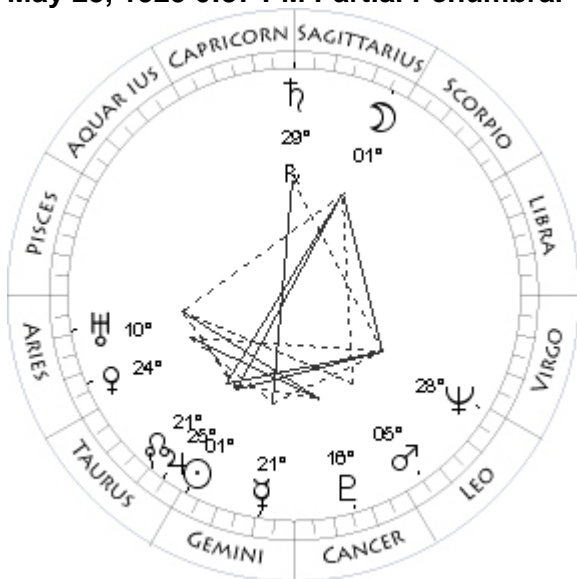
Nov 27, 1928 9:02 AM Total Umbral

Mo 26Ge12 + 1°31	Mo 04Ge51 + 0°24
Su 26Ge22 - 0°00	Su 04Sa54 - 0°00
Me 12Cn27 - 1°38R	Me 23Sc15 + 0°50
Ve 22Ge35 + 0°02	Ve 12Cp18 - 2°03
Ma 23Ar49 - 1°32	Ma 07Cn37 + 2°12R
Ju 02Ta41 - 1°09	Ju 01Ta48 - 1°23R
Sa 15Sa02 + 1°40R	Sa 19Sa39 + 1°12
Ur 07Ar09 - 0°43	Ur 03Ar34 - 0°44R
Ne 26Le51 + 0°32	Ne 01Vi22 + 0°34
Pl 16Cn08 - 0°49	Pl 18Cn05 - 0°41R
No 08Ge43 - 0°00	No 00Ge06 - 0°00
	Coords: 139E/22N

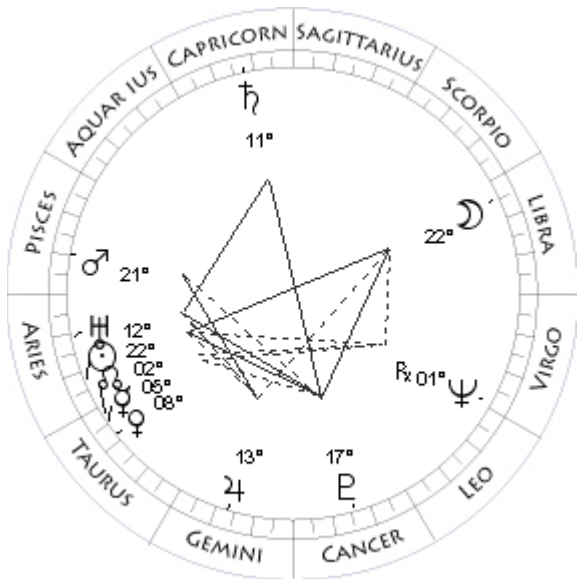
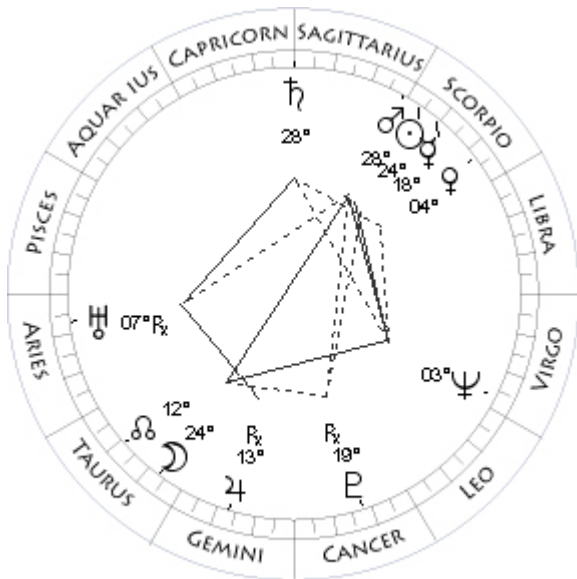
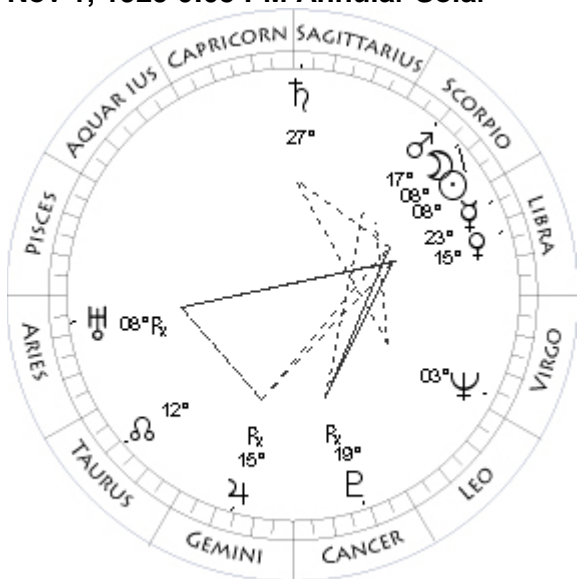
May 9, 1929 6:10 AM Total Solar

Mo 19Sc52 + 0°58	Mo 18Ta09 - 0°17
Su 19Sc47 - 0°00	Su 18Ta08 - 0°00
Me 01Sc15 + 2°13	Me 08Ge28 + 2°26
Ve 24Sa06 - 1°38	Ve 21Ar45 + 2°02R
Ma 09Cn17 + 1°28R	Ma 27Cn55 + 1°45
Ju 03Ta27 - 1°27R	Ju 21Ta59 - 0°48
Sa 17Sa58 + 1°14	Sa 29Sa50 + 1°14R
Ur 03Ar51 - 0°44R	Ur 09Ar36 - 0°41
Ne 01Vi15 + 0°34	Ne 28Le35 + 0°36R
Pl 18Cn16 - 0°42R	Pl 16Cn31 - 0°30
No 00Ge54 - 0°00	No 21Ta29 - 0°00
	Coords: 93W/ 2N

May 23, 1929 0:37 PM Partial Penumbral



Nov 1, 1929 0:05 PM Annular Solar



Nov 17, 1929 0:02 AM Partial Penumbral

Mo 01Sa47 - 0°58	Mo 24Ta03 + 1°05
Su 01Ge53 - 0°00	Su 24Sc10 - 0°00
Me 21Ge31 + 1°22	Me 18Sc04 + 0°30
Ve 24Ar11 - 0°41	Ve 04Sc34 + 1°27
Ma 05Le44 + 1°35	Ma 28Sc54 - 0°15
Ju 25Ta22 - 0°47	Ju 13Ge33 - 0°48R
Sa 29Sa04 + 1°14R	Sa 28Sa35 + 0°50
Ur 10Ar14 - 0°41	Ur 07Ar50 - 0°43R
Ne 28Le38 + 0°36	Ne 03Vi29 + 0°37
Pl 16Cn46 - 0°29	Pl 19Cn29 - 0°19R
No 20Ta43 - 0°00	No 11Ta19 - 0°00

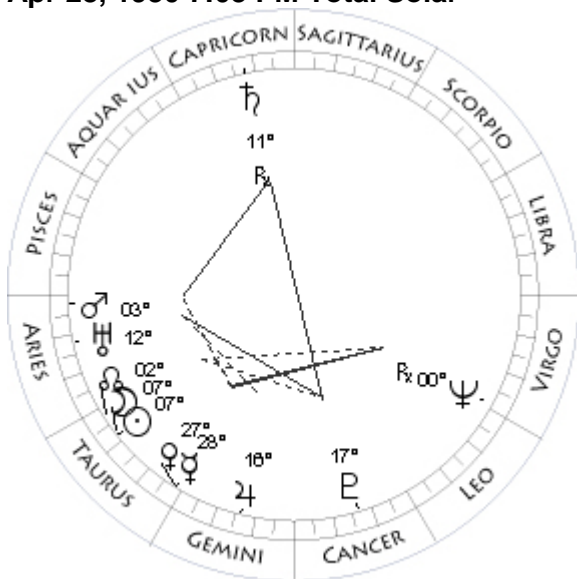
Coords: 169W/21S

Apr 13, 1930 5:58 AM Partial Umbral

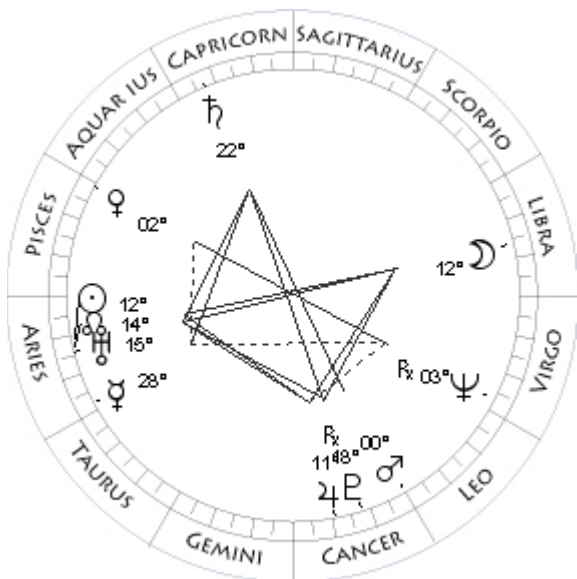
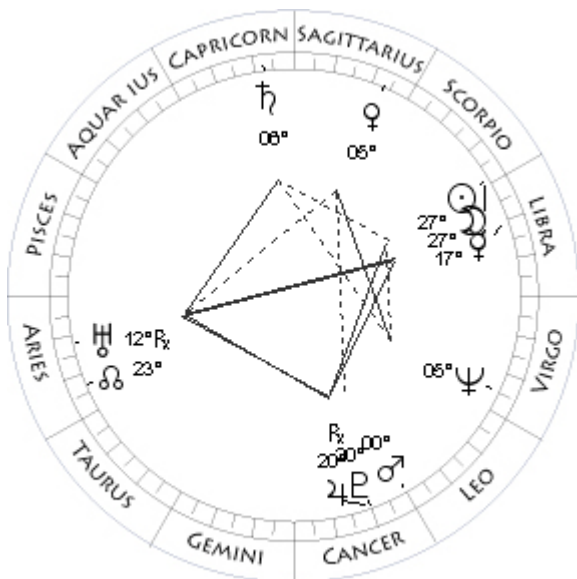
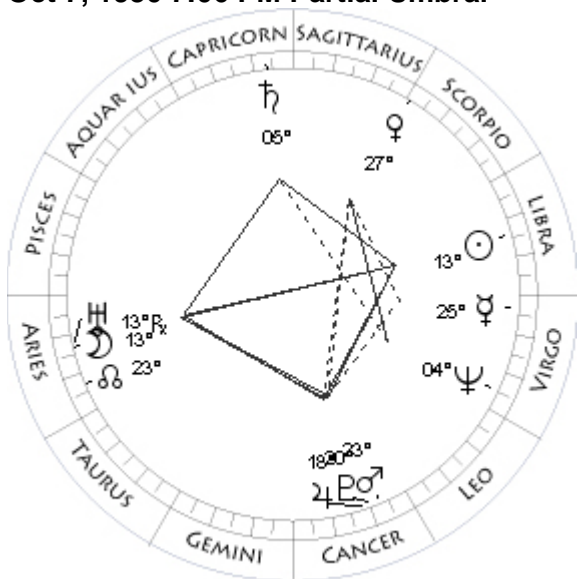
Mo 08Sc37 + 0°20	Mo 22Li40 + 0°56
Su 08Sc36 - 0°00	Su 22Ar35 - 0°00
Me 23Li13 + 1°59	Me 05Ta04 + 0°58
Ve 15Li14 + 1°37	Ve 08Ta48 - 0°22
Ma 17Sc55 - 0°06	Ma 21Pi06 - 1°11
Ju 15Ge12 - 0°49R	Ju 13Ge51 - 0°21
Sa 27Sa04 + 0°52	Sa 11Cp50 + 0°44
Ur 08Ar16 - 0°44R	Ur 12Ar00 - 0°39
Ne 03Vi15 + 0°37	Ne 01Vi01 + 0°40R
Pl 19Cn36 - 0°20R	Pl 17Cn28 - 0°09
No 12Ta09 - 0°00	No 03Ta32 - 0°00

Coords: 3W/ 4N

Apr 28, 1930 7:03 PM Total Solar



Oct 7, 1930 7:06 PM Partial Umbral



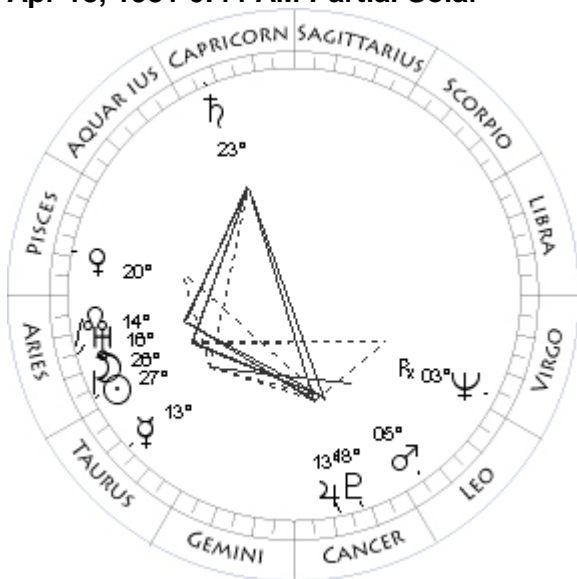
Oct 21, 1930 9:43 PM Total Solar

Mo 07Ta42 + 0°27	Mo 27Li44 - 0°22
Su 07Ta45 - 0°00	Su 27Li46 - 0°00
Me 28Ta06 + 2°44	Me 17Li01 + 1°45
Ve 27Ta54 + 0°17	Ve 05Sa04 - 5°49
Ma 03Ar09 - 1°09	Ma 00Le37 + 1°13
Ju 16Ge52 - 0°19	Ju 20Cn02 - 0°01
Sa 11Cp50 + 0°44R	Sa 06Cp40 + 0°28
Ur 12Ar51 - 0°39	Ur 12Ar48 - 0°42R
Ne 00Vi50 + 0°40R	Ne 05Vi10 + 0°40
Pl 17Cn36 - 0°08	Pl 20Cn53 + 0°03R
No 02Ta42 - 0°00	No 23Ar23 - 0°00
Coords: 121E/39N	Coords: 161E/30S

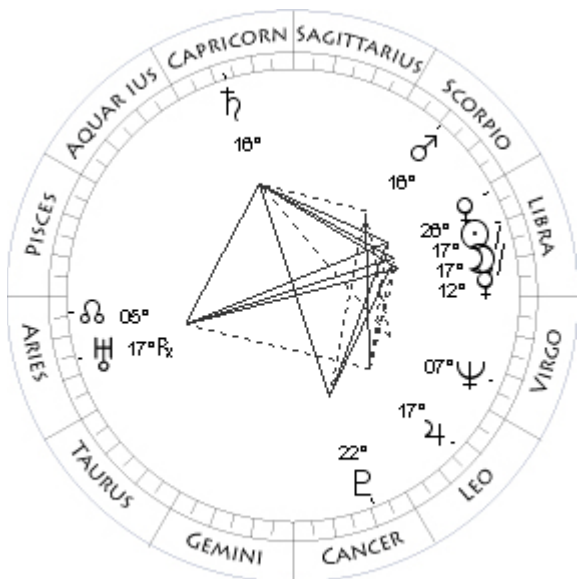
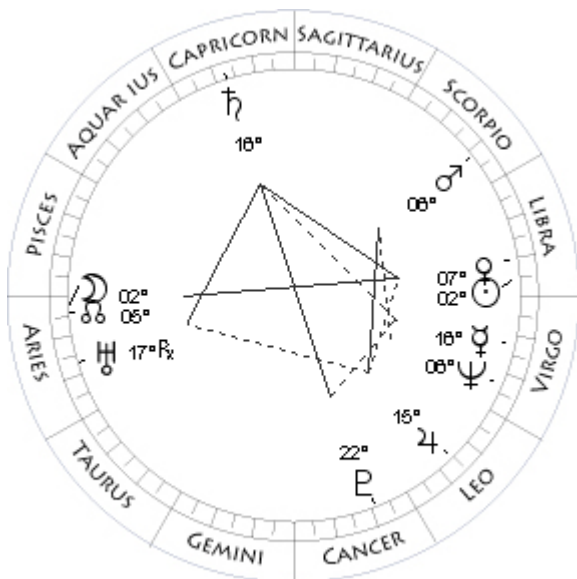
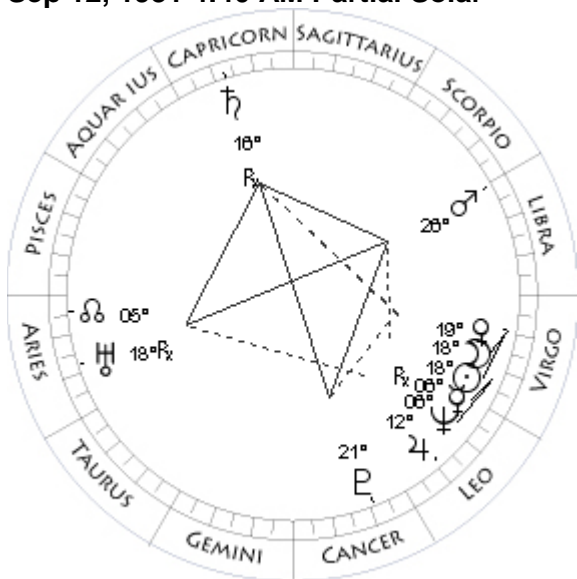
Apr 2, 1931 8:07 PM Total Umbral

Mo 13Ar52 - 0°54	Mo 12Li08 + 0°12
Su 13Li47 - 0°00	Su 12Ar07 - 0°00
Me 25Vi53 + 1°31	Me 28Ar50 + 1°33
Ve 27Sc07 - 5°03	Ve 02Pi25 - 0°34
Ma 23Cn32 + 0°53	Ma 00Le52 + 2°49
Ju 18Cn57 - 0°03	Ju 11Cn34 + 0°18
Sa 05Cp53 + 0°30	Sa 22Cp31 + 0°16
Ur 13Ar22 - 0°42R	Ur 15Ar09 - 0°38
Ne 04Vi46 + 0°40	Ne 03Vi27 + 0°44R
Pl 20Cn51 + 0°02	Pl 18Cn41 + 0°13R
No 24Ar07 - 0°00	No 14Ar45 - 0°00
Coords: 71W/ 5N	

Apr 18, 1931 0:44 AM Partial Solar



Sep 12, 1931 4:40 AM Partial Solar



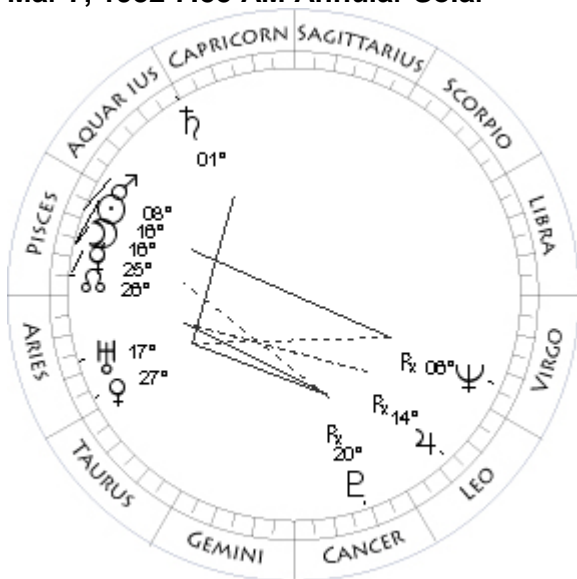
Sep 26, 1931 7:48 PM Total Umbral

Mo 26Ar55 + 1°08	Mo 02Ar46 - 0°15
Su 27Ar02 - 0°00	Su 02Li45 - 0°00
Me 13Ta15 + 2°59	Me 16Vi39 + 1°39
Ve 20Pi24 - 1°16	Ve 07Li46 + 1°15
Ma 05Le31 + 2°23	Ma 06Sc24 - 0°11
Ju 13Cn06 + 0°19	Ju 15Le02 + 0°32
Sa 23Cp05 + 0°15	Sa 16Cp40 + 0°02
Ur 16Ar01 - 0°38	Ur 17Ar59 - 0°41R
Ne 03Vi11 + 0°44R	Ne 06Vi32 + 0°43
Pl 18Cn44 + 0°14	Pl 22Cn01 + 0°24
No 13Ar57 - 0°00	No 05Ar23 - 0°00
Coords: 61W/ 1N	

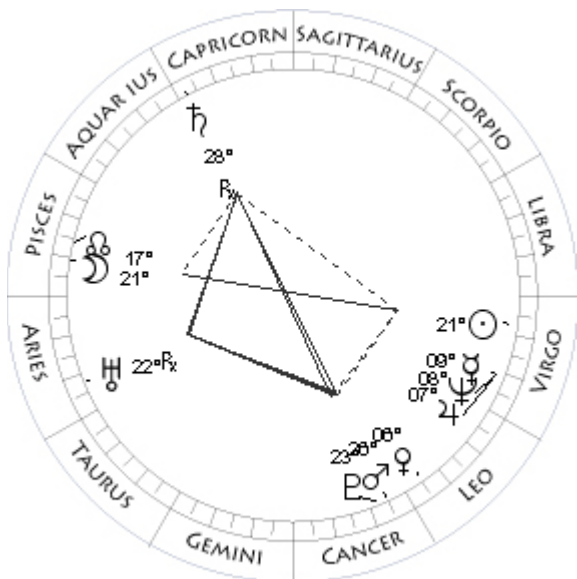
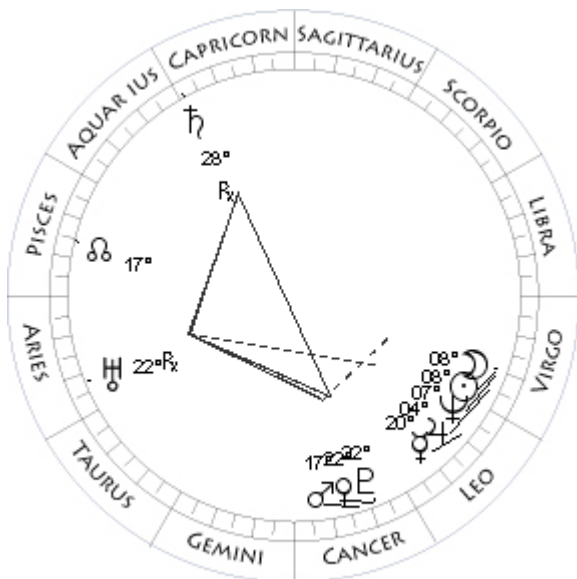
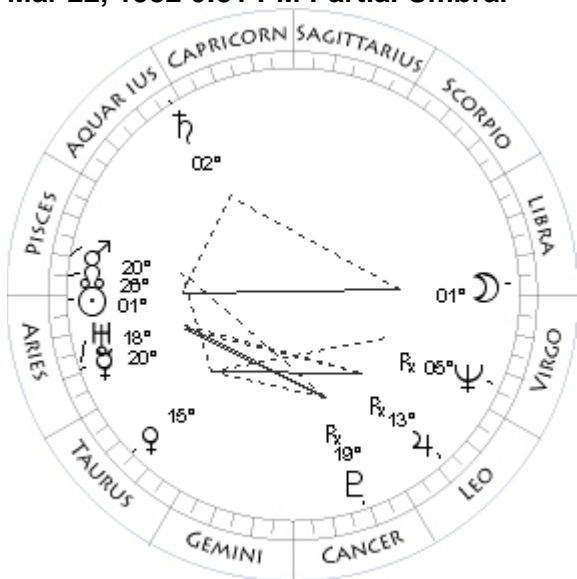
Oct 11, 1931 0:55 PM Partial Solar

Mo 18Vi36 + 1°32	Mo 17Li08 - 1°04
Su 18Vi28 - 0°00	Su 17Li15 - 0°00
Me 06Vi15 - 1°44R	Me 12Li01 + 1°30
Ve 19Vi34 + 1°25	Ve 26Li07 + 0°53
Ma 26Li33 - 0°02	Ma 16Sc33 - 0°21
Ju 12Le16 + 0°30	Ju 17Le32 + 0°35
Sa 16Cp43 + 0°04R	Sa 16Cp58 + 0°01
Ur 18Ar30 - 0°41R	Ur 17Ar23 - 0°41R
Ne 06Vi01 + 0°43	Ne 07Vi00 + 0°44
Pl 21Cn49 + 0°23	Pl 22Cn08 + 0°25
No 06Ar09 - 0°00	No 04Ar36 - 0°00

Mar 7, 1932 7:55 AM Annular Solar



Mar 22, 1932 0:31 PM Partial Umbral



Aug 31, 1932 8:03 PM Total Solar

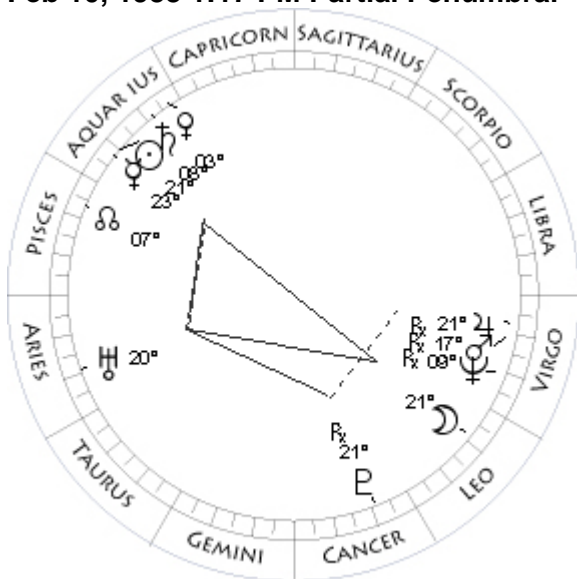
Mo 16Pi38 - 0°53	Mo 08Vi15 + 0°49
Su 16Pi33 - 0°00	Su 08Vi11 - 0°00
Me 25Pi10 - 0°47	Me 20Le37 - 0°47
Ve 27Ar58 + 0°43	Ve 22Cn29 - 3°13
Ma 08Pi52 - 1°03	Ma 17Cn36 + 0°41
Ju 14Le12 + 1°00R	Ju 04Vi28 + 0°53
Sa 01Aq14 - 0°10	Sa 28Cp55 - 0°27R
Ur 17Ar31 - 0°36	Ur 22Ar57 - 0°38R
Ne 06Vi20 + 0°48R	Ne 07Vi45 + 0°46
Pl 20Cn06 + 0°35R	Pl 22Cn53 + 0°45
No 26Pi46 - 0°00	No 17Pi22 - 0°00

Coords: 133W/61S

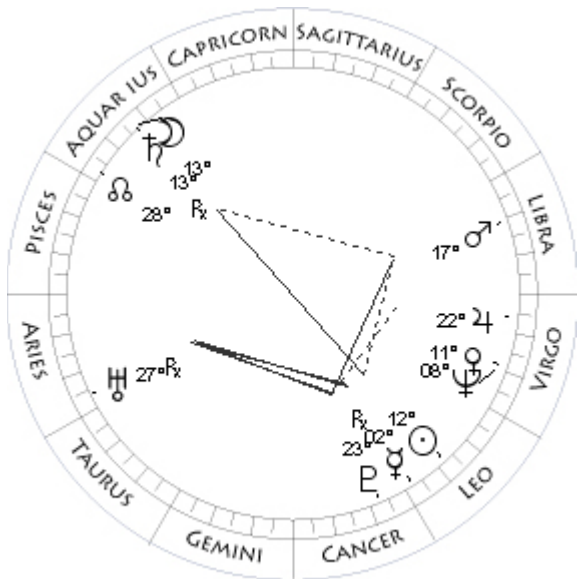
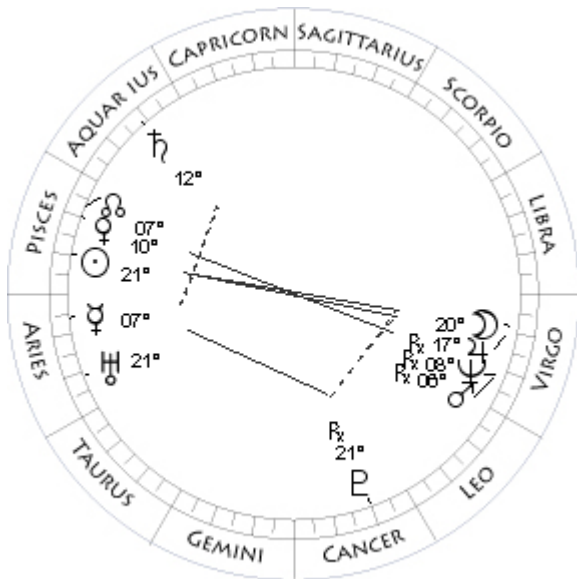
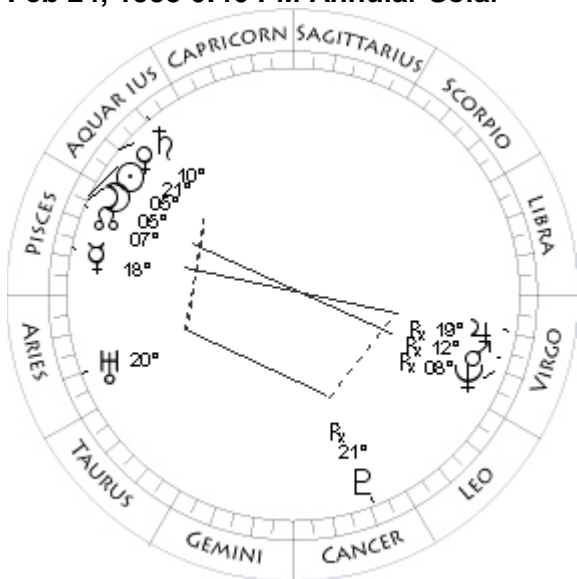
Sep 14, 1932 9:00 PM Partial Umbral

Mo 01Li37 - 0°30	Mo 21Pi46 + 0°26
Su 01Ar41 - 0°00	Su 21Vi49 - 0°00
Me 20Ar11 + 2°13	Me 09Vi23 + 1°43
Ve 15Ta17 + 1°46	Ve 06Le02 - 1°53
Ma 20Pi49 - 1°00	Ma 26Cn22 + 0°53
Ju 13Le03 + 1°00R	Ju 07Vi30 + 0°55
Sa 02Aq33 - 0°11	Sa 28Cp23 - 0°28R
Ur 18Ar20 - 0°36	Ur 22Ar32 - 0°39R
Ne 05Vi56 + 0°48R	Ne 08Vi16 + 0°47
Pl 19Cn59 + 0°36R	Pl 23Cn08 + 0°46
No 25Pi58 - 0°00	No 16Pi38 - 0°00

Feb 10, 1933 1:17 PM Partial Penumbral



Feb 24, 1933 0:46 PM Annular Solar



Mar 12, 1933 2:32 AM Partial Penumbral

Mo 21Le31 + 1°28	Mo 20Vi57 - 1°12
Su 21Aq23 - 0°00	Su 21Pi05 - 0°00
Me 23Aq21 - 1°58	Me 07Ar14 + 2°56
Ve 03Aq54 - 0°37	Ve 10Pi46 - 1°23
Ma 17Vi33 + 4°09R	Ma 06Vi52 + 4°03R
Ju 21Vi32 + 1°26R	Ju 17Vi59 + 1°29R
Sa 08Aq49 - 0°34	Sa 12Aq06 - 0°37
Ur 20Ar15 - 0°35	Ur 21Ar33 - 0°34
Ne 09Vi17 + 0°51R	Ne 08Vi28 + 0°51R
Pl 21Cn46 + 0°57R	Pl 21Cn21 + 0°59R
No 08Pi45 - 0°00	No 07Pi11 - 0°00

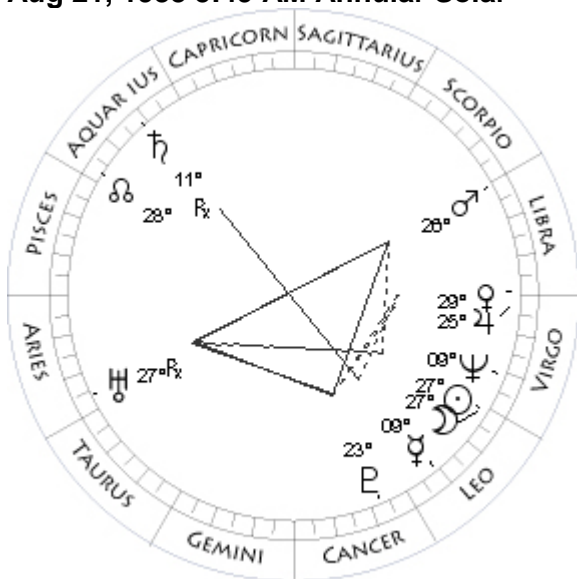
Coords: 165W/16N

Aug 5, 1933 7:46 PM Partial Penumbral

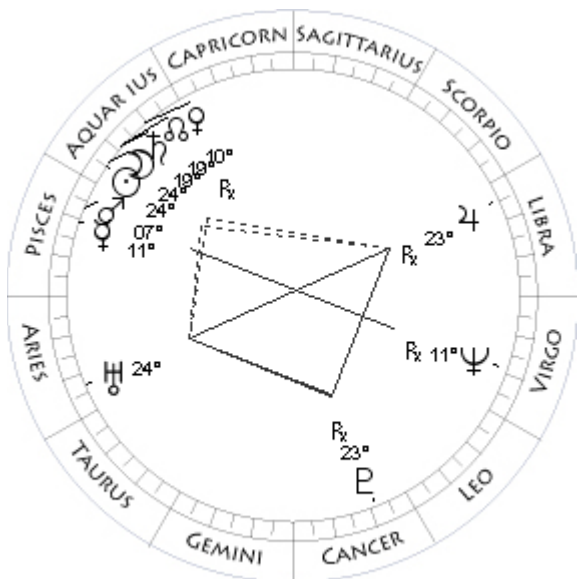
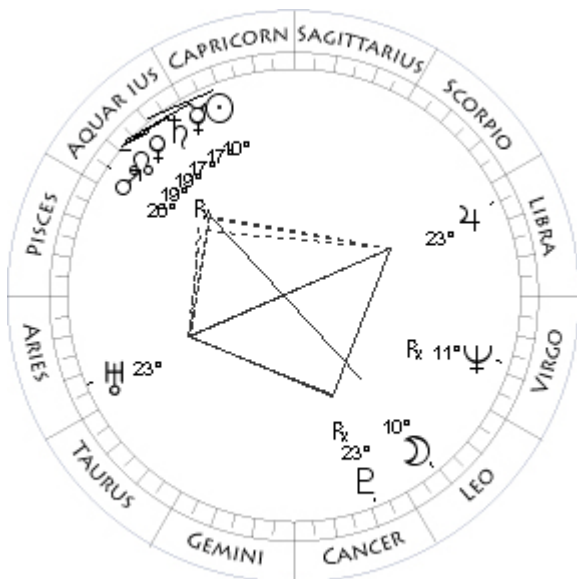
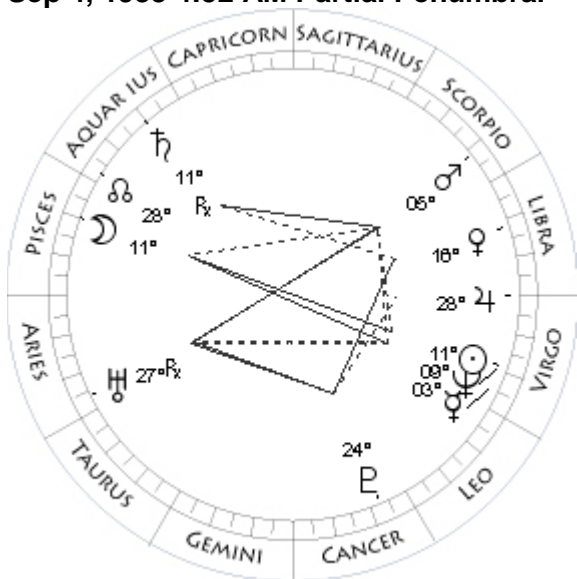
Mo 05Pi30 - 0°13	Mo 13Aq02 - 1°25
Su 05Pi29 - 0°00	Su 12Le54 - 0°00
Me 18Pi58 - 0°25	Me 02Le55 - 4°09R
Ve 21Aq21 - 1°05	Ve 11Vi04 + 1°22
Ma 12Vi54 + 4°17R	Ma 17Li12 - 0°08
Ju 19Vi58 + 1°28R	Ju 22Vi50 + 1°08
Sa 10Aq26 - 0°35	Sa 13Aq02 - 0°57R
Ur 20Ar49 - 0°35	Ur 27Ar25 - 0°36R
Ne 08Vi54 + 0°51R	Ne 08Vi55 + 0°50
Pl 21Cn32 + 0°58R	Pl 23Cn33 + 1°06
No 08Pi01 - 0°00	No 29Aq25 - 0°00

Coords: 66W/18S

Aug 21, 1933 5:49 AM Annular Solar



Sep 4, 1933 4:52 AM Partial Penumbral



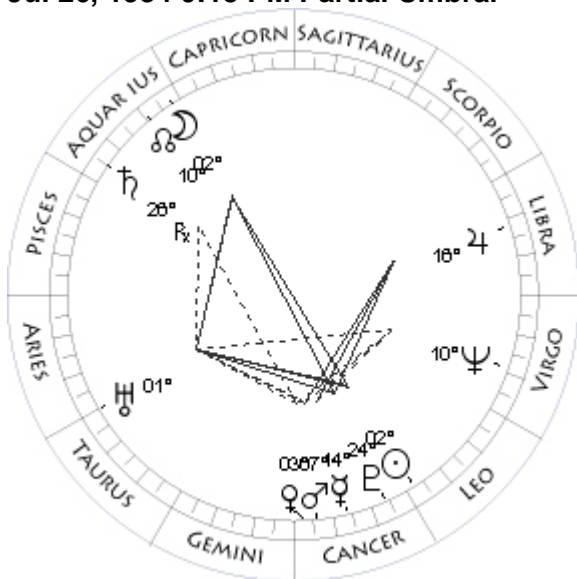
Jan 30, 1934 4:42 PM Partial Umbral

Mo 27Le43 + 0°05	Mo 10Le12 + 0°50
Su 27Le43 - 0°00	Su 10Aq08 - 0°00
Me 09Le39 - 0°05	Me 17Aq38 - 1°53
Ve 29Vi41 + 0°53	Ve 19Aq00 + 6°54R
Ma 26Li47 - 0°21	Ma 26Aq28 - 1°03
Ju 25Vi51 + 1°07	Ju 23Li06 + 1°24
Sa 11Aq54 - 0°58R	Sa 17Aq47 - 0°58
Ur 27Ar17 - 0°36R	Ur 23Ar49 - 0°34
Ne 09Vi28 + 0°50	Ne 11Vi49 + 0°54R
Pl 23Cn56 + 1°07	Pl 23Cn18 + 1°21R
No 28Aq36 - 0°00	No 20Aq00 - 0°00
Coords: 96W 17N	Coords: 113W 18N

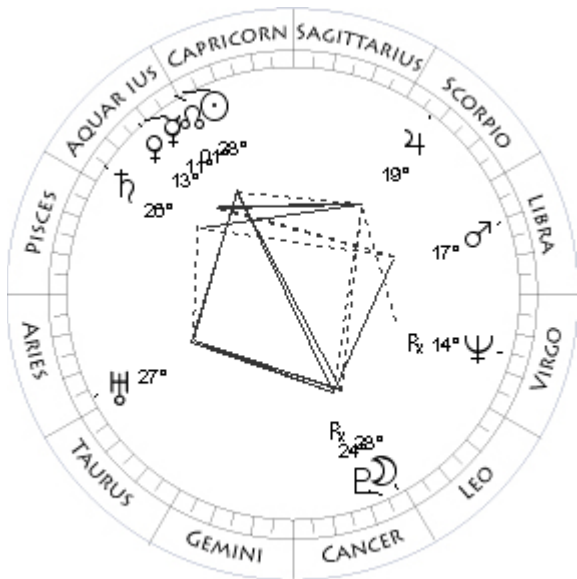
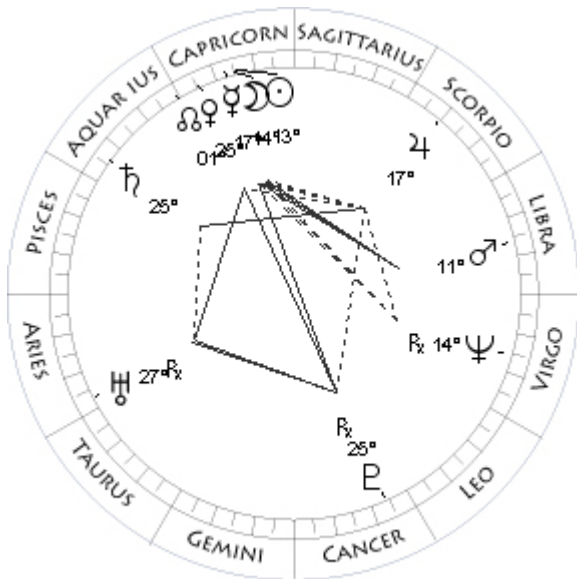
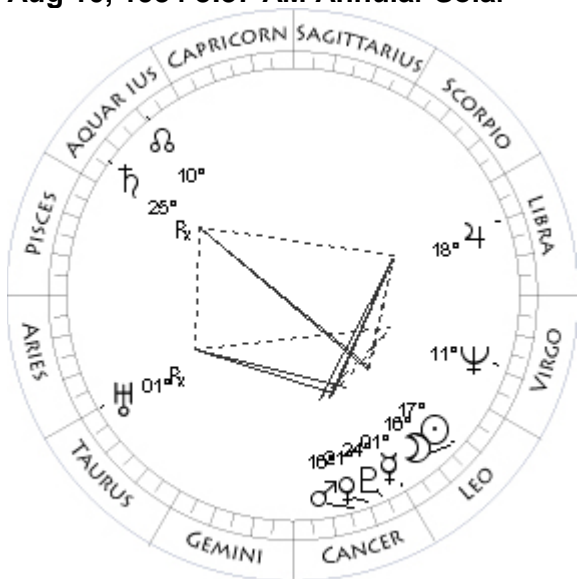
Feb 14, 1934 0:38 AM Total Solar

Mo 11Pi05 + 1°08	Mo 24Aq35 + 0°29
Su 11Vi12 - 0°00	Su 24Aq39 - 0°00
Me 03Vi49 + 1°46	Me 11Pi49 + 0°07
Ve 16Li25 + 0°13	Ve 10Aq42 + 8°16R
Ma 05Sc49 - 0°31	Ma 07Pi47 - 0°58
Ju 28Vi44 + 1°06	Ju 23Li07 + 1°28R
Sa 11Aq00 - 0°58R	Sa 19Aq31 - 0°59
Ur 27Ar00 - 0°36R	Ur 24Ar15 - 0°33
Ne 09Vi59 + 0°50	Ne 11Vi27 + 0°55R
Pl 24Cn13 + 1°08	Pl 23Cn01 + 1°22R
No 27Aq52 - 0°00	No 19Aq15 - 0°00
	Coords: 162W 13N

Jul 26, 1934 0:15 PM Partial Umbral



Aug 10, 1934 8:37 AM Annular Solar



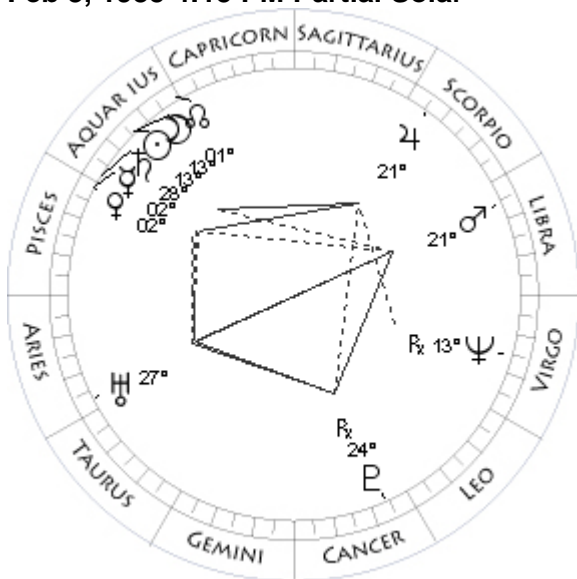
Jan 5, 1935 5:35 AM Partial Solar

Mo 02Aq52 - 0°41	Mo 14Cp06 - 1°33
Su 02Le49 - 0°00	Su 13Cp58 - 0°00
Me 14Cn55 - 3°12	Me 17Cp03 - 2°00
Ve 03Cn18 - 0°47	Ve 25Cp21 - 1°13
Ma 07Cn08 + 0°38	Ma 11Li31 + 2°16
Ju 16Li14 + 1°12	Ju 17Sc34 + 1°03
Sa 26Aq28 - 1°25R	Sa 25Aq25 - 1°22
Ur 01Ta24 - 0°33	Ur 27Ar30 - 0°32R
Ne 10Vi42 + 0°53	Ne 14Vi29 + 0°57R
Pl 24Cn33 + 1°28	Pl 25Cn12 + 1°44R
No 10Aq38 - 0°00	No 02Aq01 - 0°00
Coords: 178W/20S	

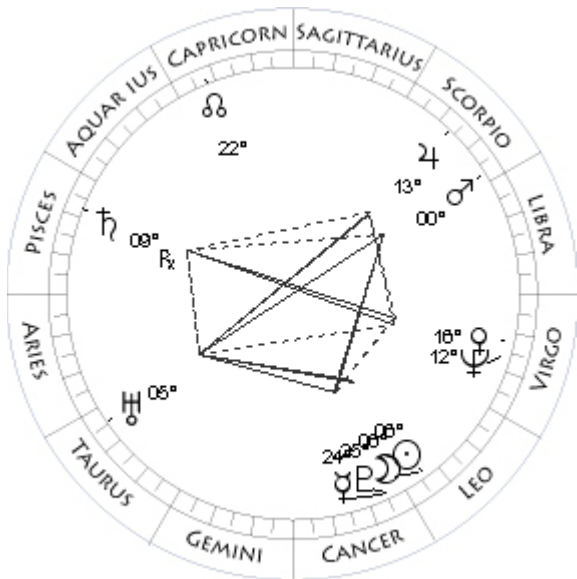
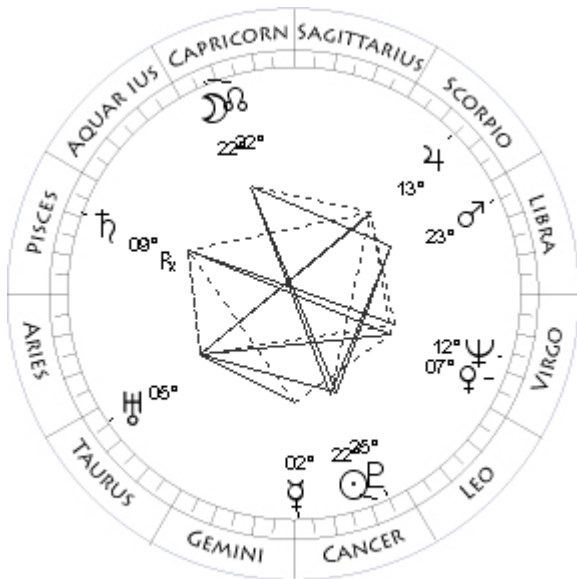
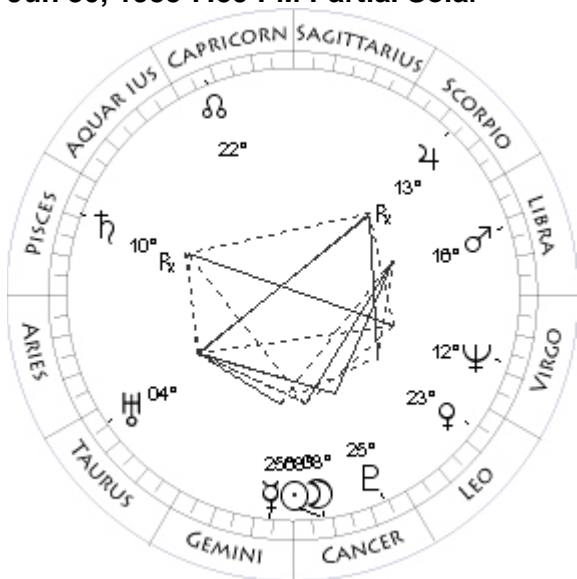
Jan 19, 1935 3:47 PM Total Umbral

Mo 16Le57 - 0°37	Mo 28Cn41 + 0°13
Su 17Le02 - 0°00	Su 28Cp40 - 0°00
Me 01Le20 + 0°23	Me 11Aq07 - 1°48
Ve 21Cn10 - 0°05	Ve 13Aq27 - 1°29
Ma 16Cn56 + 0°46	Ma 17Li03 + 2°27
Ju 18Li16 + 1°09	Ju 19Sc44 + 1°05
Sa 25Aq25 - 1°27R	Sa 26Aq58 - 1°22
Ur 01Ta27 - 0°33R	Ur 27Ar35 - 0°32
Ne 11Vi11 + 0°53	Ne 14Vi17 + 0°58R
Pl 24Cn56 + 1°30	Pl 24Cn53 + 1°45R
No 09Aq51 - 0°00	No 01Aq16 - 0°00
Coords: 35W/24S	

Feb 3, 1935 4:15 PM Partial Solar



Jun 30, 1935 7:59 PM Partial Solar



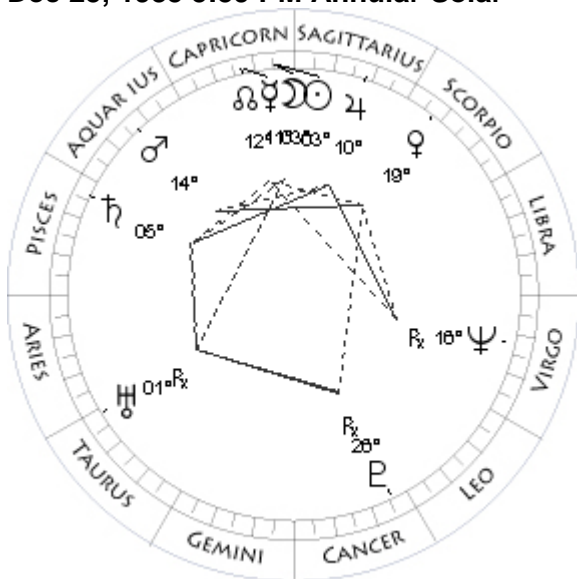
Jul 16, 1935 5:00 AM Total Umbra

Mo 13Aq48 + 1°10	Mo 22Cp44 + 0°04
Su 13Aq55 - 0°00	Su 22Cn45 - 0°00
Me 02Pi02 + 0°50	Me 02Cn15 - 2°17
Ve 02Pi14 - 1°31	Ve 07Vi06 - 0°13
Ma 21Li31 + 2°39	Ma 23Li02 - 0°42
Ju 21Sc31 + 1°07	Ju 13Sc28 + 1°02
Sa 28Aq42 - 1°22	Sa 09Pi44 - 1°48R
Ur 27Ar51 - 0°31	Ur 05Ta14 - 0°30
Ne 13Vi58 + 0°58R	Ne 12Vi32 + 0°57
Pl 24Cn34 + 1°46R	Pl 25Cn33 + 1°51
No 00Aq28 - 0°00	No 21Cp51 - 0°00

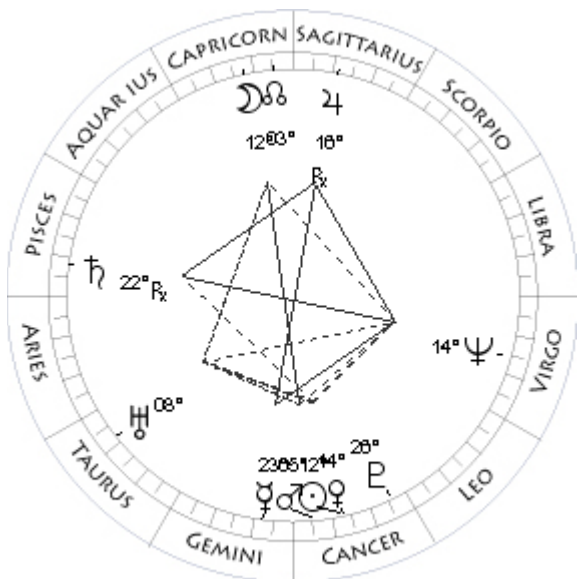
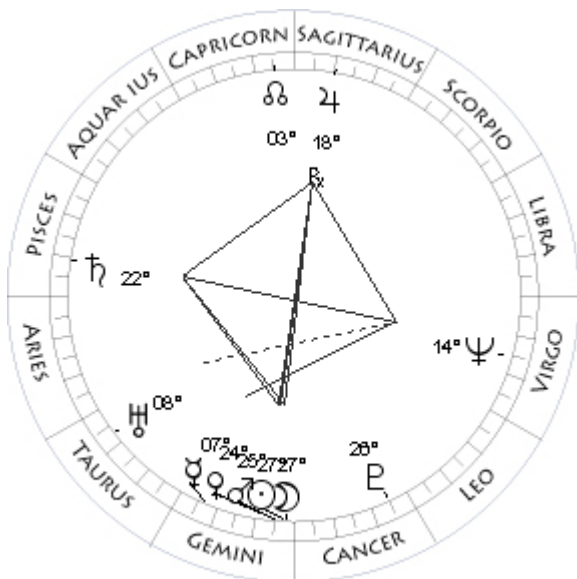
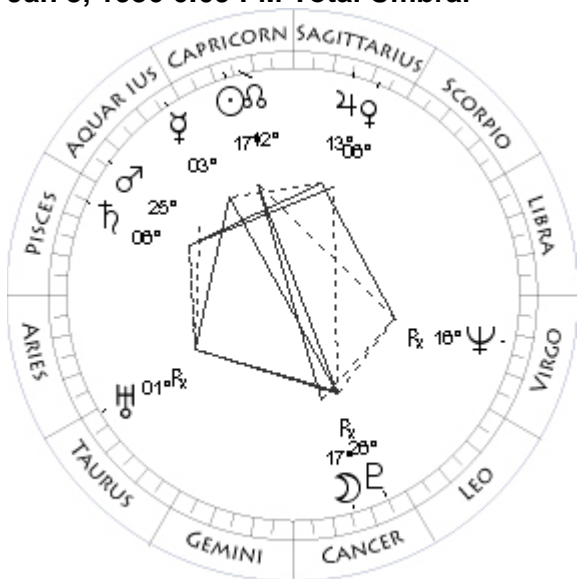
Jul 30, 1935 9:16 AM Partial Solar

Mo 08Cn12 + 1°15	Mo 06Le09 - 1°17
Su 08Cn05 - 0°00	Su 06Le17 - 0°00
Me 25Ge28 - 4°39	Me 24Cn36 + 0°45
Ve 23Le30 + 1°17	Ve 16Vi57 - 2°16
Ma 16Li08 - 0°24	Ma 00Sc22 - 0°56
Ju 13Sc36 + 1°06R	Ju 13Sc57 + 0°58
Sa 10Pi09 - 1°45R	Sa 09Pi03 - 1°51R
Ur 04Ta49 - 0°30	Ur 05Ta27 - 0°31
Ne 12Vi11 + 0°57	Ne 12Vi56 + 0°57
Pl 25Cn08 + 1°50	Pl 25Cn56 + 1°52
No 22Cp40 - 0°00	No 21Cp06 - 0°00

Dec 25, 1935 5:59 PM Annular Solar



Jan 8, 1936 6:09 PM Total Umbral



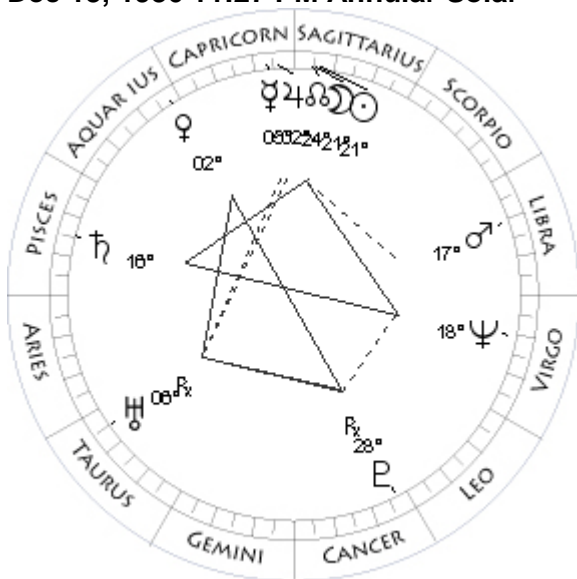
Jun 19, 1936 5:20 AM Total Solar

Mo 03Cp07 - 0°53	Mo 27Ge47 + 0°32
Su 03Cp02 - 0°00	Su 27Ge44 - 0°00
Me 11Cp49 - 2°07	Me 07Ge07 - 4°04
Ve 19Sc36 + 2°32	Ve 24Ge57 + 0°07
Ma 14Aq28 - 1°12	Ma 25Ge29 + 0°39
Ju 10Sa20 + 0°37	Ju 18Sa29 + 0°32R
Sa 05Pi26 - 1°45	Sa 22Pi21 - 2°01
Ur 01Ta39 - 0°30R	Ur 08Ta20 - 0°27
Ne 16Vi46 + 1°00R	Ne 14Vi09 + 1°01
Pl 26Cn47 + 2°08R	Pl 26Cn09 + 2°13
No 13Cp15 - 0°00	No 03Cp54 - 0°00
Coords: 5W/84S	Coords: 105W/56N

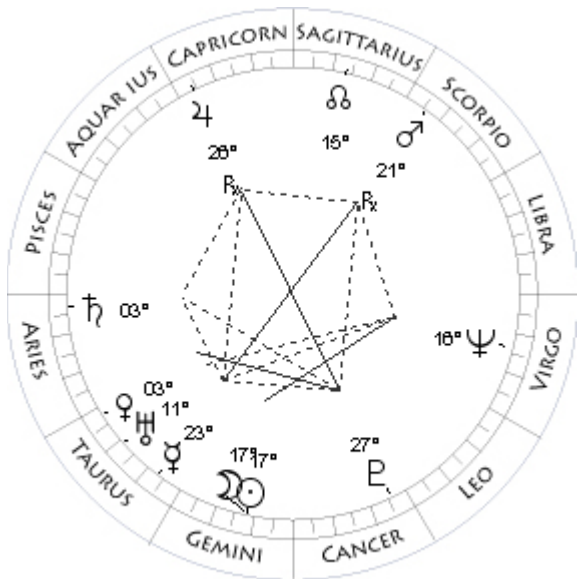
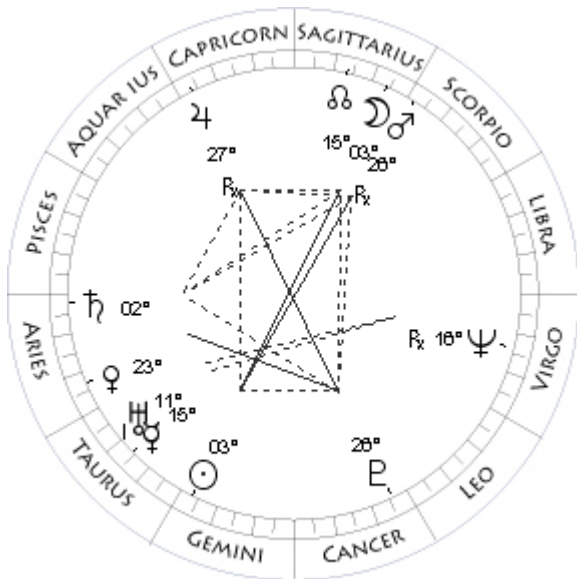
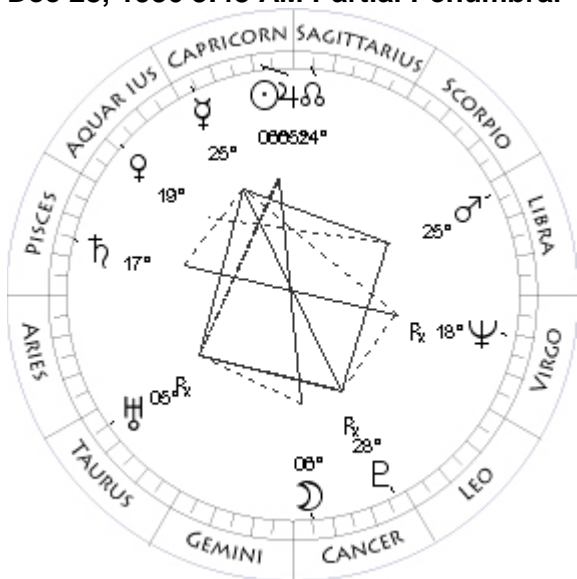
Jul 4, 1936 5:24 PM Partial Umbral

Mo 17Cn16 - 0°25	Mo 12Cp25 + 0°49
Su 17Cp19 - 0°00	Su 12Cn31 - 0°00
Me 03Aq59 - 1°41	Me 23Ge09 - 1°33
Ve 06Sa08 + 2°14	Ve 14Cn00 + 0°42
Ma 25Aq27 - 1°04	Ma 05Cn55 + 0°46
Ju 13Sa16 + 0°37	Ju 16Sa41 + 0°30R
Sa 06Pi38 - 1°44	Sa 22Pi32 - 2°05R
Ur 01Ta33 - 0°30R	Ur 08Ta55 - 0°28
Ne 16Vi40 + 1°01R	Ne 14Vi25 + 1°00
Pl 26Cn29 + 2°09R	Pl 26Cn33 + 2°14
No 12Cp30 - 0°00	No 03Cp05 - 0°00
Coords: 89W/22N	Coords: 100W/22S

Dec 13, 1936 11:27 PM Annular Solar



Dec 28, 1936 3:48 AM Partial Penumbra



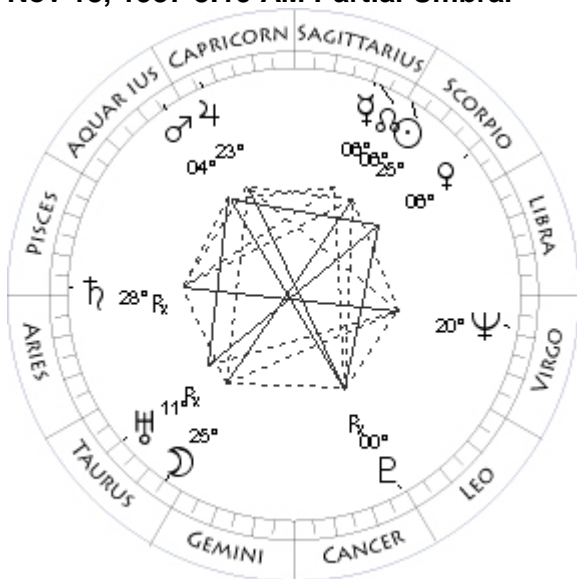
May 25, 1937 7:51 AM Partial Penumbra

Mo 21Sa49 - 0°14	Mo 03Sa47 - 1°02
Su 21Sa49 - 0°00	Su 03Ge41 - 0°00
Me 05Cp43 - 2°15	Me 15Ta20 - 3°25
Ve 02Aq50 - 2°10	Ve 23Ar53 - 1°02
Ma 17Li13 + 1°31	Ma 26Sc23 - 1°09R
Ju 02Cp38 + 0°06	Ju 27Cp10 - 0°13R
Sa 16Pi19 - 2°07	Sa 02Ar54 - 2°09
Ur 06Ta01 - 0°28R	Ur 11Ta00 - 0°25
Ne 18Vi57 + 1°03	Ne 16Vi11 + 1°05R
Pl 28Cn21 + 2°31R	Pl 26Cn56 + 2°37
No 24Sa30 - 0°00	No 15Sa54 - 0°00
Coords: 173E/38S	Coords: 119E/22S

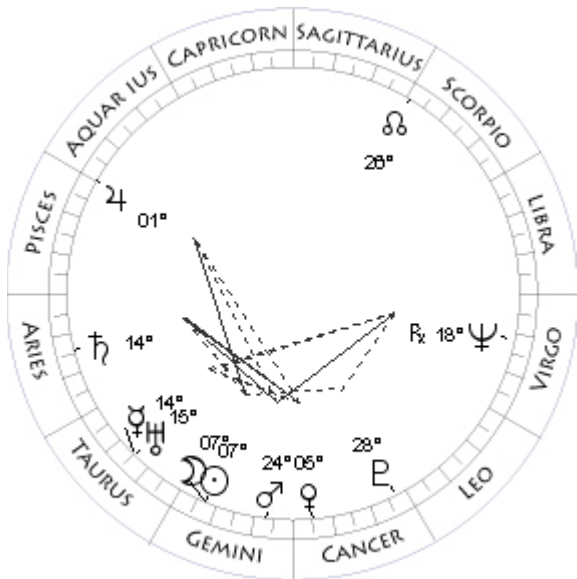
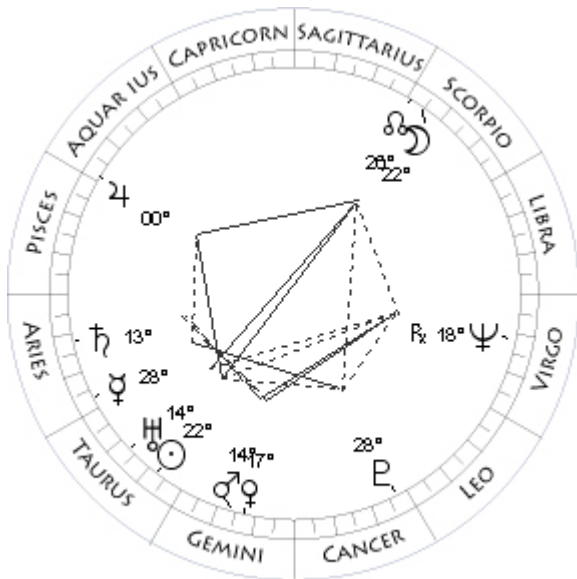
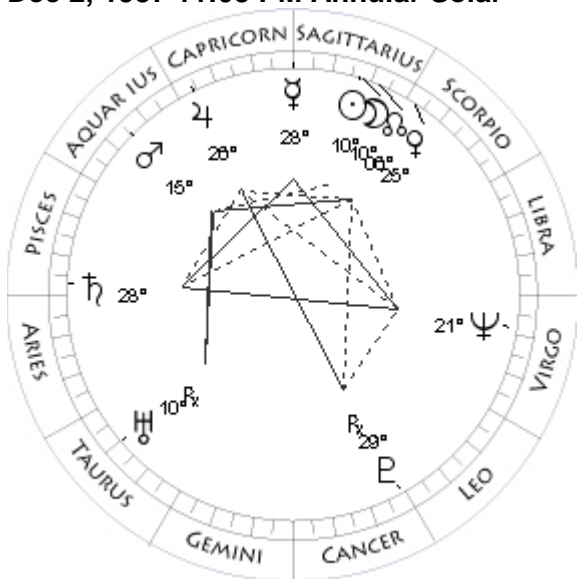
Jun 8, 1937 8:40 PM Total Solar

Mo 06Cn08 - 1°05	Mo 17Ge34 - 0°14
Su 06Cp16 - 0°00	Su 17Ge36 - 0°00
Me 25Cp45 - 1°29	Me 23Ta57 - 3°24
Ve 19Aq36 - 1°52	Ve 03Ta24 - 2°28
Ma 25Li14 + 1°32	Ma 21Sc53 - 1°49R
Ju 05Cp53 + 0°05	Ju 26Cp24 - 0°16R
Sa 17Pi06 - 2°05	Sa 03Ar56 - 2°12
Ur 05Ta44 - 0°28R	Ur 11Ta45 - 0°25
Ne 18Vi57 + 1°03R	Ne 16Vi13 + 1°04
Pl 28Cn05 + 2°33R	Pl 27Cn13 + 2°37
No 23Sa44 - 0°00	No 15Sa08 - 0°00
	Coords: 130E/10N

Nov 18, 1937 8:19 AM Partial Umbral



Dec 2, 1937 11:05 PM Annular Solar



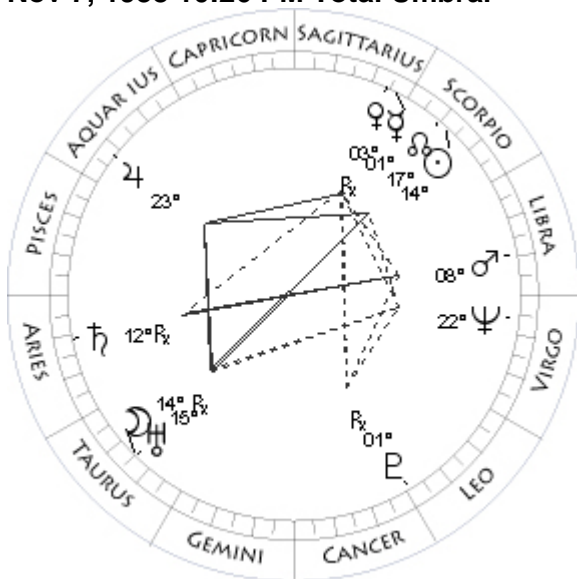
May 14, 1938 8:43 AM Total Umbral

Mo 25Ta40 + 0°58	Mo 22Sc56 - 0°22
Su 25Sc36 - 0°00	Su 22Ta54 - 0°00
Me 06Sa58 - 1°38	Me 28Ar16 - 3°13
Ve 06Sc55 + 1°24	Ve 17Ge32 + 0°59
Ma 04Aq52 - 1°39	Ma 14Ge06 + 0°44
Ju 23Cp42 - 0°29	Ju 00Pi01 - 0°49
Sa 28Pi31 - 2°30R	Sa 13Ar27 - 2°14
Ur 11Ta07 - 0°26R	Ur 14Ta15 - 0°22
Ne 20Vi48 + 1°05	Ne 18Vi26 + 1°08R
Pl 00Le04 + 2°53R	Pl 28Cn05 + 3°01
No 06Sa31 - 0°00	No 27Sc09 - 0°00
Coords: 129E/20N	Coords: 132E/19S

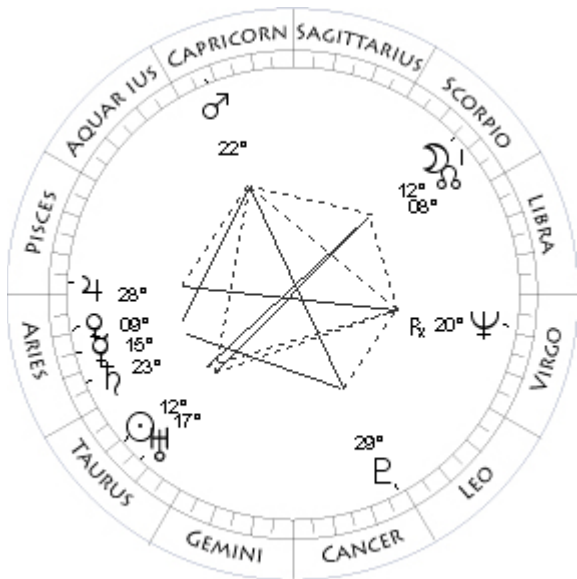
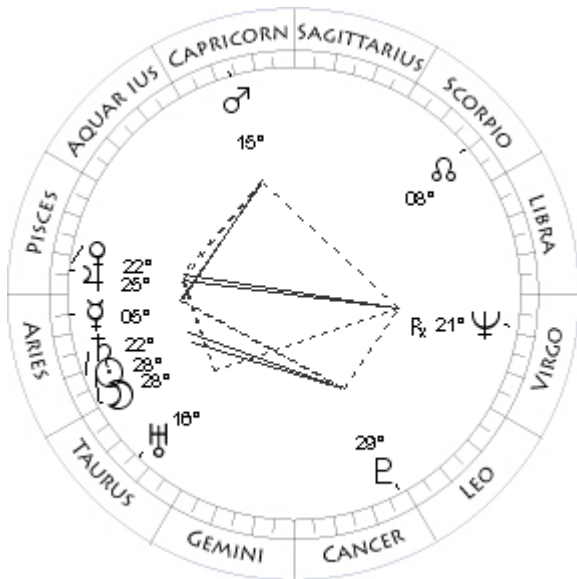
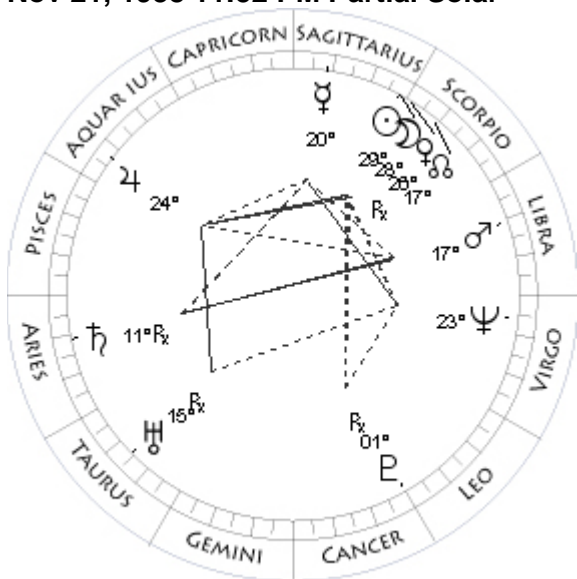
May 29, 1938 1:49 PM Total Solar

Mo 10Sa23 + 0°23	Mo 07Ge25 - 0°58
Su 10Sa23 - 0°00	Su 07Ge32 - 0°00
Me 28Sa34 - 2°23	Me 14Ta34 - 2°49
Ve 25Sc15 + 1°00	Ve 05Cn56 + 1°31
Ma 15Aq49 - 1°24	Ma 24Ge21 + 0°50
Ju 26Cp25 - 0°29	Ju 01Pi25 - 0°53
Sa 28Pi21 - 2°26	Sa 14Ar57 - 2°17
Ur 10Ta34 - 0°26R	Ur 15Ta06 - 0°22
Ne 21Vi02 + 1°05	Ne 18Vi22 + 1°08R
Pl 29Cn55 + 2°55R	Pl 28Cn20 + 3°01
No 05Sa45 - 0°00	No 26Sc21 - 0°00
Coords: 168E/ 4N	

Nov 7, 1938 10:26 PM Total Umbral



Nov 21, 1938 11:52 PM Partial Solar



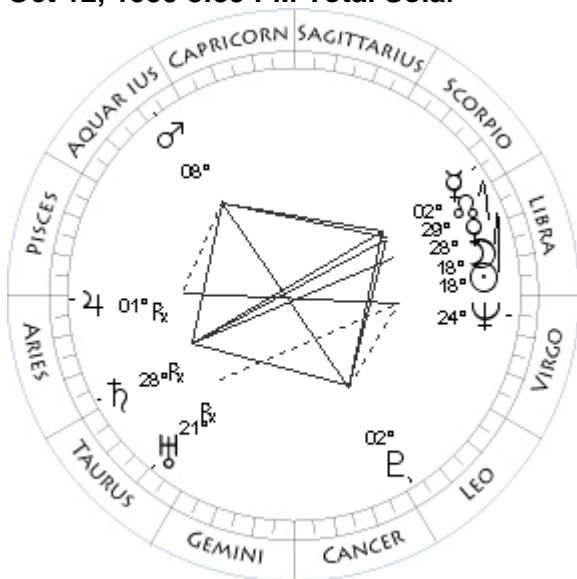
Apr 19, 1939 4:44 PM Annular Solar

Mo 14Ta53 + 0°16	Mo 28Ar48 + 0°53
Su 14Sc52 - 0°00	Su 28Ar44 - 0°00
Me 01Sa24 - 1°56	Me 05Ar56 - 1°18
Ve 03Sa33 - 5°18R	Ve 22Pi57 - 1°21
Ma 08Li38 + 1°09	Ma 15Cp32 - 0°50
Ju 23Aq03 - 1°07	Ju 25Pi26 - 1°03
Sa 12Ar24 - 2°43R	Sa 22Ar01 - 2°15
Ur 15Ta50 - 0°23R	Ur 16Ta43 - 0°20
Ne 22Vi42 + 1°07	Ne 21Vi01 + 1°12R
Pl 01Le30 + 3°16R	Pl 29Cn14 + 3°26
No 17Sc45 - 0°00	No 09Sc08 - 0°00
Coords: 19W/17N	Coords: 128E/73N

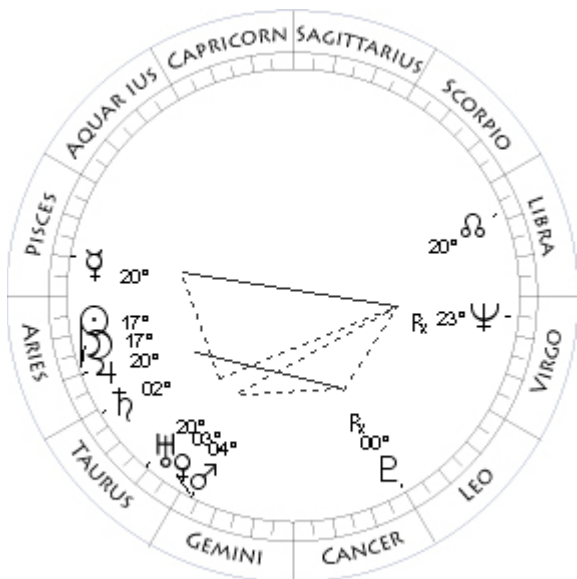
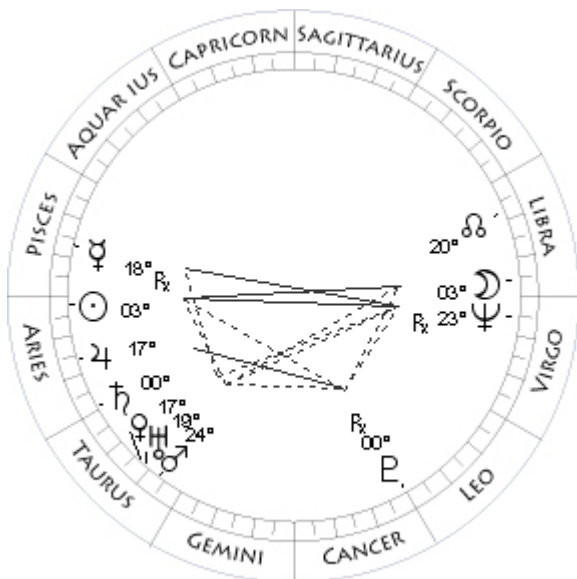
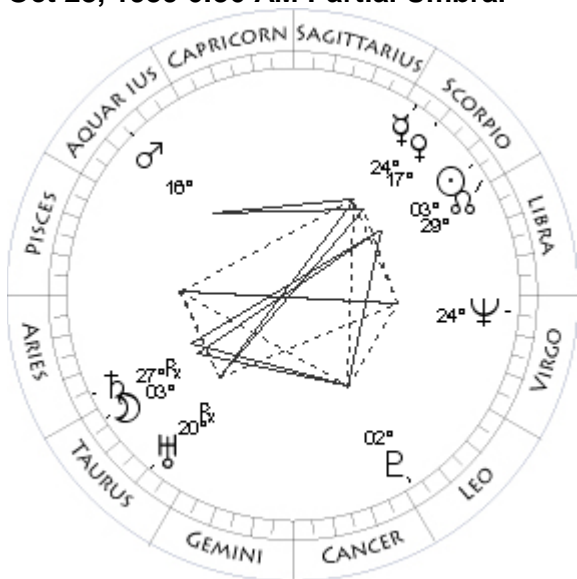
May 3, 1939 3:11 PM Total Umbral

Mo 28Sc55 + 1°01	Mo 12Sc15 + 0°21
Su 29Sc02 - 0°00	Su 12Ta18 - 0°00
Me 20Sa24 - 2°33	Me 15Ar40 - 2°58
Ve 26Sc14 - 2°33R	Ve 09Ar37 - 1°41
Ma 17Li28 + 1°07	Ma 22Cp00 - 1°22
Ju 24Aq16 - 1°05	Ju 28Pi25 - 1°05
Sa 11Ar41 - 2°40R	Sa 23Ar45 - 2°15
Ur 15Ta16 - 0°23R	Ur 17Ta30 - 0°19
Ne 23Vi01 + 1°08	Ne 20Vi46 + 1°12R
Pl 01Le26 + 3°18R	Pl 29Cn19 + 3°26
No 17Sc00 - 0°00	No 08Sc23 - 0°00
	Coords: 132W/15S

Oct 12, 1939 8:39 PM Total Solar



Oct 28, 1939 6:36 AM Partial Umbral



Mar 23, 1940 7:47 PM Partial Penumbral

Mo 18Li42 - 0°58	Mo 03Li10 - 1°32
Su 18Li37 - 0°00	Su 03Ar02 - 0°00
Me 02Sc33 - 0°40	Me 18Pi12 + 1°50R
Ve 28Li27 + 0°49	Ve 17Ta07 + 1°57
Ma 08Aq13 - 3°11	Ma 24Ta03 + 0°50
Ju 01Ar49 - 1°37R	Ju 17Ar16 - 1°05
Sa 28Ar32 - 2°46R	Sa 00Ta24 - 2°14
Ur 21Ta10 - 0°20R	Ur 19Ta20 - 0°17
Ne 24Vi01 + 1°09	Ne 23Vi54 + 1°15R
Pl 02Le49 + 3°37	Pl 00Le42 + 3°52R
No 29Li48 - 0°00	No 21Li10 - 0°00

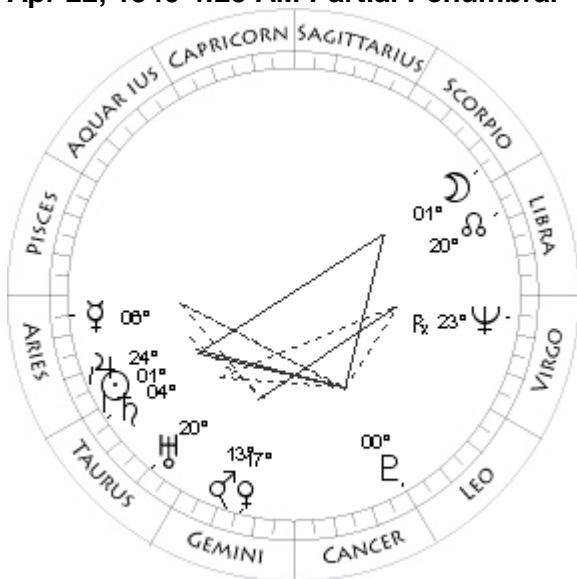
Coords: 157W/73S

Apr 7, 1940 8:20 PM Annular Solar

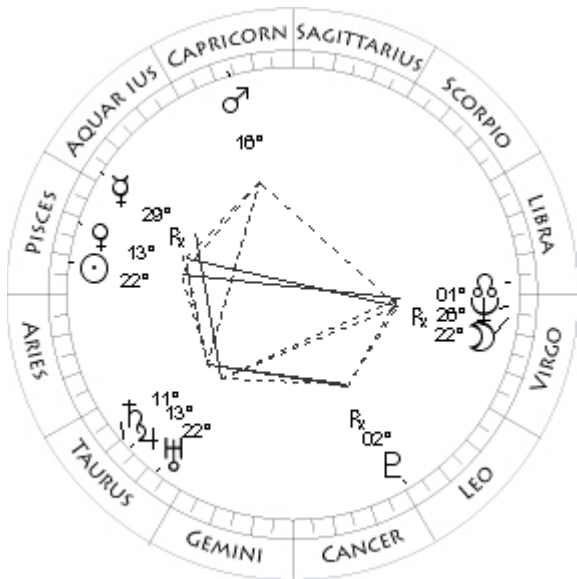
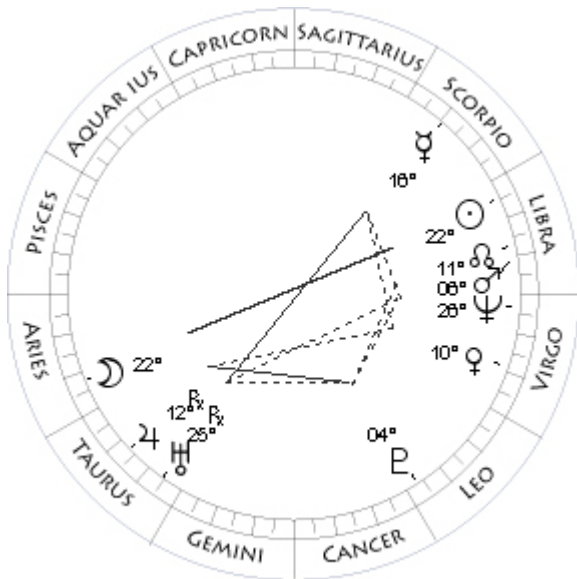
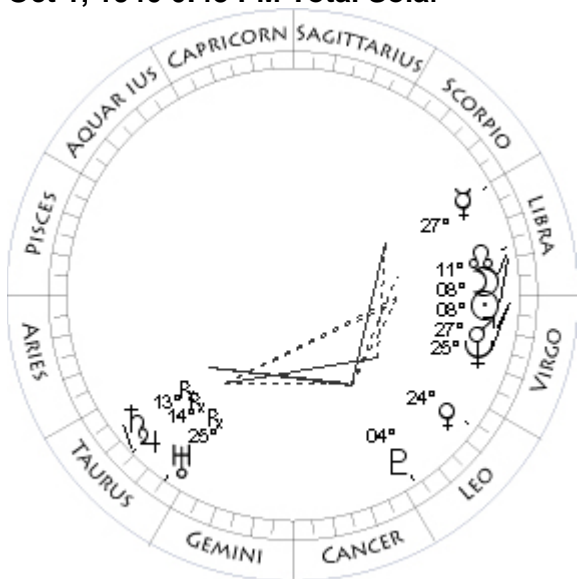
Mo 03Ta54 - 0°25	Mo 17Ar52 + 0°12
Su 03Sc57 - 0°00	Su 17Ar52 - 0°00
Me 24Sc48 - 2°15	Me 20Pi46 - 1°31
Ve 17Sc41 + 0°15	Ve 03Ge14 + 2°55
Ma 16Aq29 - 2°28	Ma 04Ge01 + 0°56
Ju 00Ar09 - 1°35R	Ju 20Ar52 - 1°04
Sa 27Ar18 - 2°46R	Sa 02Ta14 - 2°13
Ur 20Ta36 - 0°20R	Ur 20Ta03 - 0°17
Ne 24Vi31 + 1°10	Ne 23Vi30 + 1°15R
Pl 02Le54 + 3°40	Pl 00Le37 + 3°52R
No 28Li59 - 0°00	No 20Li22 - 0°00

Coords: 103E/12N

Apr 22, 1940 4:25 AM Partial Penumbral



Oct 1, 1940 0:43 PM Total Solar



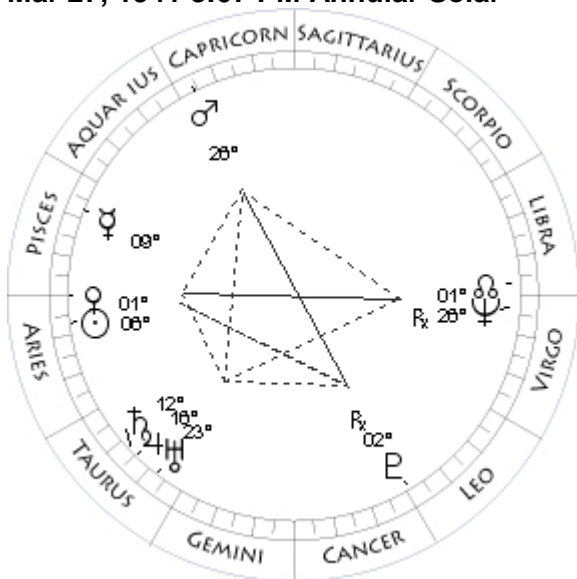
Oct 16, 1940 8:01 AM Partial Penumbral

Mo 01Sc46 + 1°05	Mo 22Ar42 - 1°04
Su 01Ta54 - 0°00	Su 22Li49 - 0°00
Me 06Ar24 - 2°44	Me 16Sc47 - 2°36
Ve 17Ge26 + 3°37	Ve 10Vi47 + 0°41
Ma 13Ge27 + 1°01	Ma 06Li56 + 0°56
Ju 24Ar20 - 1°04	Ju 12Ta56 - 1°25R
Sa 04Ta03 - 2°12	Sa 12Ta45 - 2°39R
Ur 20Ta49 - 0°17	Ur 25Ta21 - 0°17R
Ne 23Vi11 + 1°15R	Ne 26Vi16 + 1°12
Pl 00Le38 + 3°51	Pl 04Le16 + 4°03
No 19Li37 - 0°00	No 10Li14 - 0°00
	Coords: 124E/ 8N

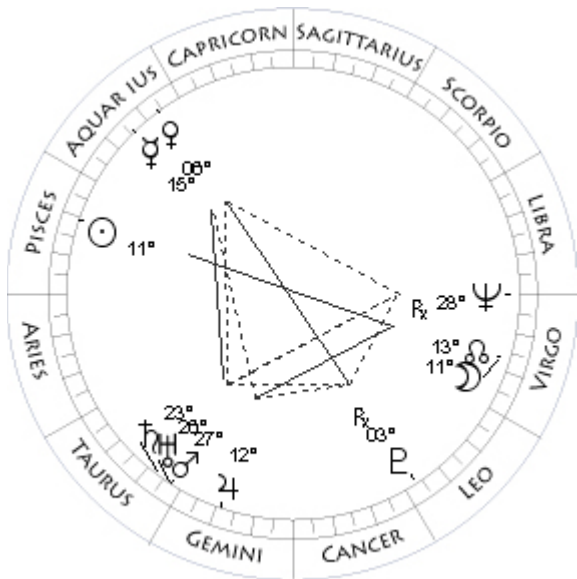
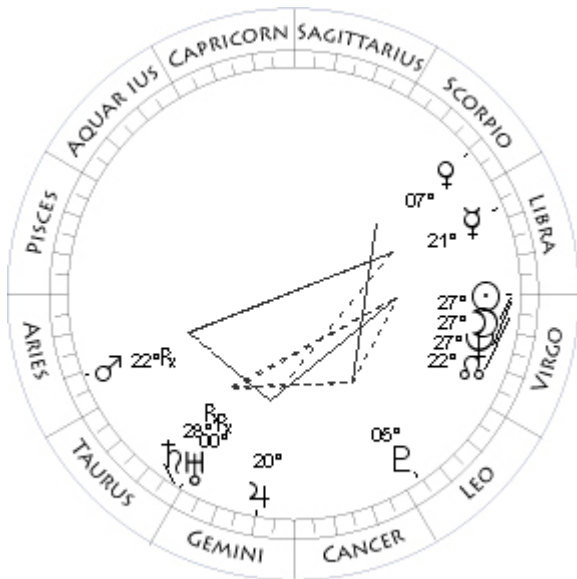
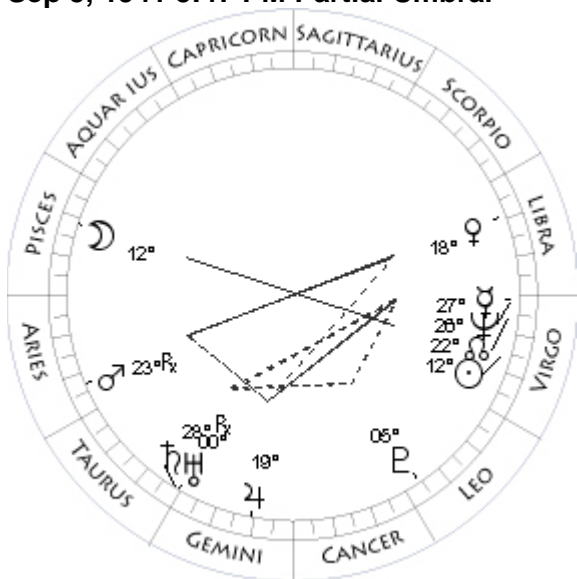
Mar 13, 1941 11:55 AM Partial Umbral

Mo 08Li12 - 0°16	Mo 22Vi36 - 0°51
Su 08Li11 - 0°00	Su 22Pi32 - 0°00
Me 27Li09 - 1°02	Me 29Aq03 + 0°59R
Ve 24Le02 - 0°21	Ve 13Pi10 - 1°24
Ma 27Vi23 + 1°00	Ma 16Cp11 - 0°35
Ju 14Ta29 - 1°24R	Ju 13Ta30 - 0°52
Sa 13Ta43 - 2°37R	Sa 11Ta18 - 2°09
Ur 25Ta46 - 0°17R	Ur 22Ta55 - 0°14
Ne 25Vi44 + 1°12	Ne 26Vi26 + 1°18R
Pl 04Le05 + 4°00	Pl 02Le15 + 4°18R
No 11Li01 - 0°00	No 02Li23 - 0°00
	Coords: 177E/ 2N

Mar 27, 1941 8:07 PM Annular Solar



Sep 5, 1941 5:47 PM Partial Umbral



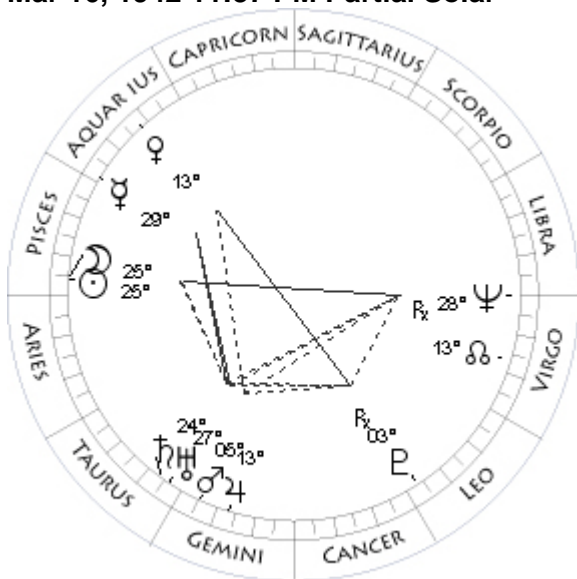
Sep 21, 1941 4:33 AM Total Solar

Mo 06Ar43 - 0°27	Mo 27Vi45 + 0°28
Su 06Ar46 - 0°00	Su 27Vi48 - 0°00
Me 09Pi07 - 1°38	Me 21Li00 - 1°28
Ve 01Ar00 - 1°26	Ve 07Sc07 - 0°49
Ma 26Cp06 - 0°52	Ma 22Ar14 - 4°17R
Ju 16Ta22 - 0°49	Ju 20Ge51 - 0°42
Sa 12Ta49 - 2°06	Sa 28Ta27 - 2°18R
Ur 23Ta29 - 0°14	Ur 00Ge15 - 0°13R
Ne 26Vi02 + 1°18R	Ne 27Vi27 + 1°15
Pl 02Le06 + 4°18R	Pl 05Le20 + 4°23
No 01Li38 - 0°00	No 22Vi14 - 0°00
Coords: 111E/26S	Coords: 119W/27N

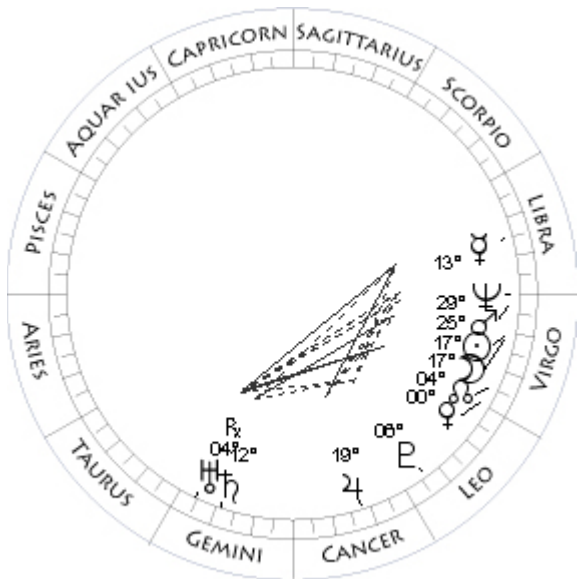
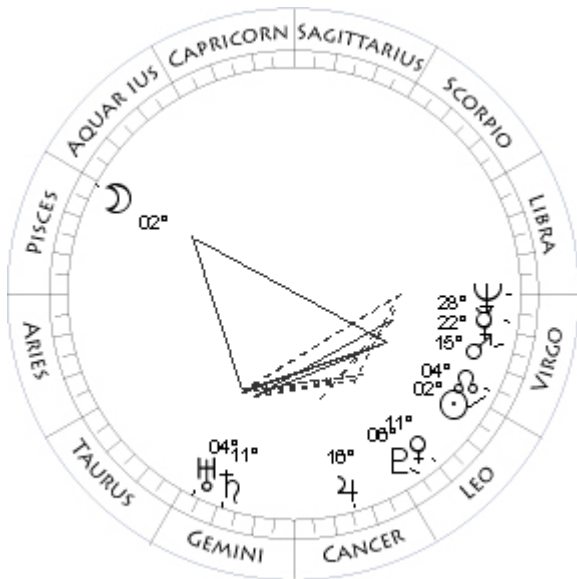
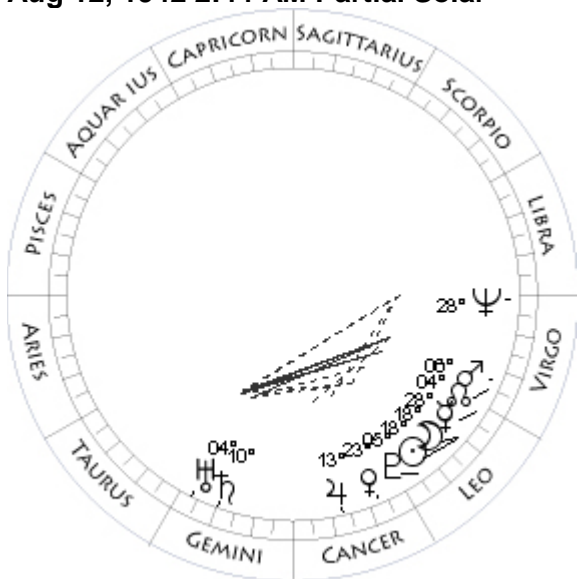
Mar 3, 1942 0:22 AM Total Umbral

Mo 12Pi50 + 0°54	Mo 11Vi49 - 0°09
Su 12Vi45 - 0°00	Su 11Pi48 - 0°00
Me 27Vi58 + 0°30	Me 15Aq04 + 0°21
Ve 18Li49 + 0°05	Ve 06Aq40 + 6°21
Ma 23Ar44 - 4°30R	Ma 27Ta28 + 1°24
Ju 19Ge33 - 0°41	Ju 12Ge28 - 0°22
Sa 28Ta32 - 2°15	Sa 23Ta00 - 1°58
Ur 00Ge21 - 0°13R	Ur 26Ta41 - 0°11
Ne 26Vi53 + 1°15	Ne 28Vi58 + 1°21R
Pl 05Le00 + 4°21	Pl 03Le52 + 4°44R
No 23Vi03 - 0°00	No 13Vi37 - 0°00

Mar 16, 1942 11:37 PM Partial Solar



Aug 12, 1942 2:44 AM Partial Solar



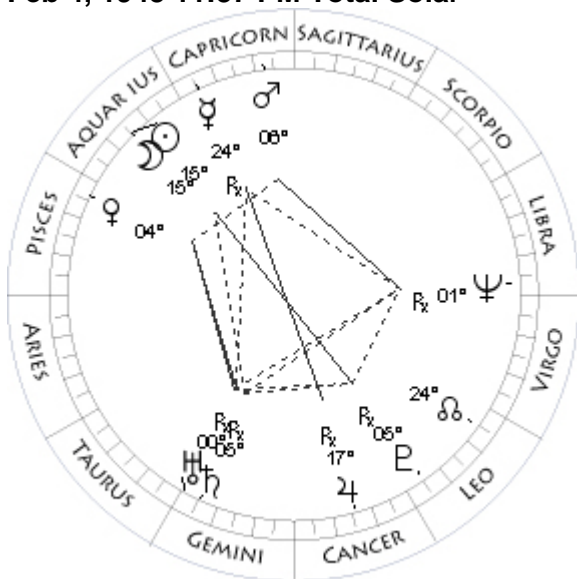
Aug 26, 1942 3:48 AM Total Umbral

Mo 25Pi38 - 1°07	Mo 02Pi18 + 0°11
Su 25Pi45 - 0°00	Su 02Vi17 - 0°00
Me 29Aq59 - 1°42	Me 22Vi16 + 0°13
Ve 13Aq27 + 4°14	Ve 11Le01 + 0°39
Ma 05Ge43 + 1°26	Ma 15Vi42 + 0°58
Ju 13Ge53 - 0°20	Ju 16Cn42 - 0°01
Sa 24Ta06 - 1°54	Sa 11Ge43 - 1°49
Ur 27Ta05 - 0°11	Ur 04Ge29 - 0°10
Ne 28Vi35 + 1°21R	Ne 28Vi36 + 1°17
Pl 03Le40 + 4°44R	Pl 06Le09 + 4°44
No 12Vi52 - 0°00	No 04Vi17 - 0°00

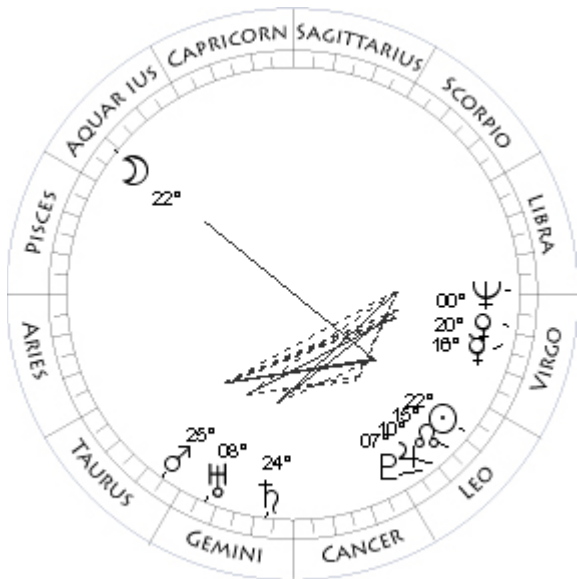
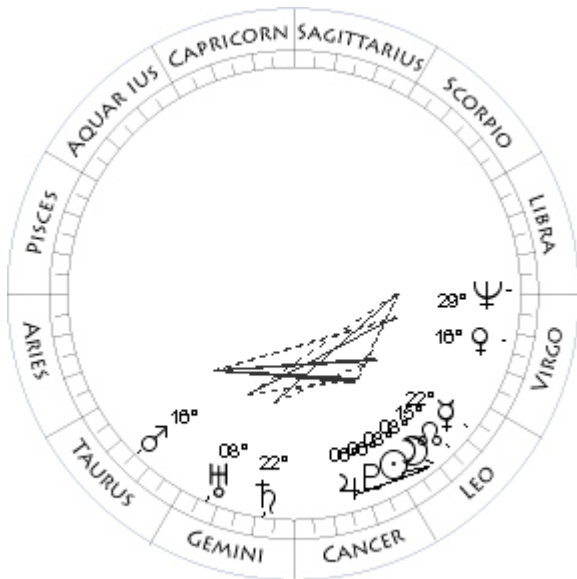
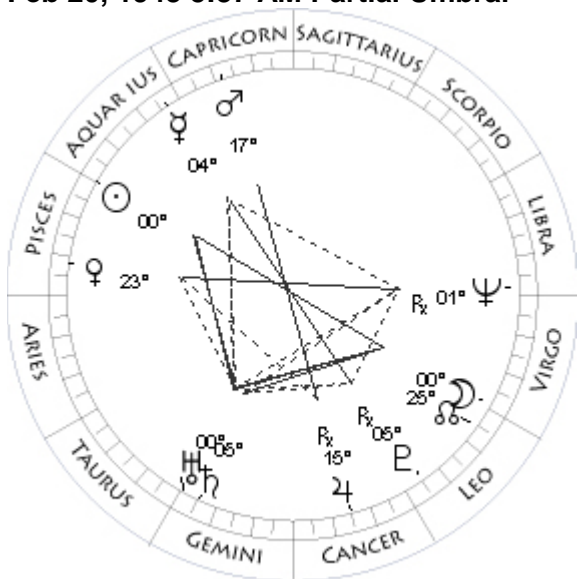
Sep 10, 1942 3:38 PM Partial Solar

Mo 18Le54 - 1°24	Mo 17Vi10 + 1°11
Su 18Le46 - 0°00	Su 17Vi18 - 0°00
Me 28Le13 + 1°36	Me 13Li24 - 1°57
Ve 23Cn55 + 0°03	Ve 00Vi04 + 1°09
Ma 06Vi48 + 1°03	Ma 25Vi38 + 0°52
Ju 13Cn56 - 0°03	Ju 19Cn28 + 0°00
Sa 10Ge50 - 1°47	Sa 12Ge20 - 1°51
Ur 04Ge14 - 0°10	Ur 04Ge35 - 0°10R
Ne 28Vi09 + 1°17	Ne 29Vi09 + 1°17
Pl 05Le46 + 4°43	Pl 06Le32 + 4°46
No 05Vi02 - 0°00	No 03Vi28 - 0°00

Feb 4, 1943 11:37 PM Total Solar



Feb 20, 1943 5:37 AM Partial Umbral



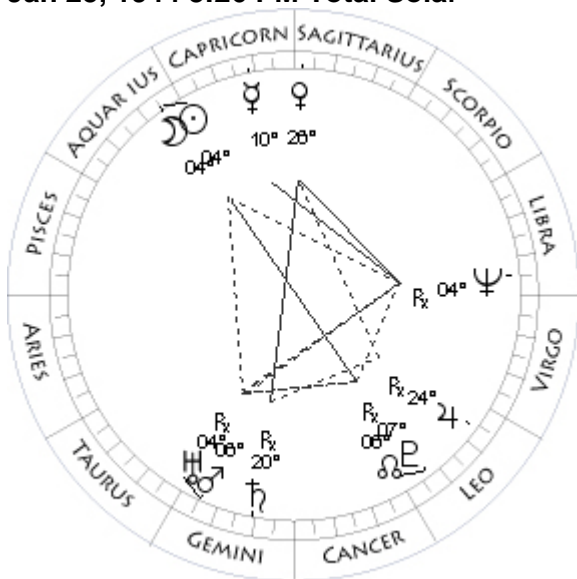
Aug 1, 1943 4:15 AM Annular Solar

Mo 15Aq22 + 0°53	Mo 08Le07 - 0°43
Su 15Aq18 - 0°00	Su 08Le03 - 0°00
Me 24Cp56 + 2°45R	Me 22Le34 + 1°31
Ve 04Pi31 - 1°30	Ve 16Vi54 - 2°47
Ma 06Cp42 - 0°31	Ma 16Ta12 - 1°46
Ju 17Cn07 + 0°20R	Ju 06Le51 + 0°30
Sa 05Ge35 - 1°44R	Sa 22Ge37 - 1°20
Ur 00Ge35 - 0°08R	Ur 08Ge02 - 0°07
Ne 01Li47 + 1°23R	Ne 29Vi58 + 1°20
Pl 05Le54 + 5°10R	Pl 06Le53 + 5°06
No 25Le40 - 0°00	No 16Le17 - 0°00
Coords: 175W/43N	Coords: 109W/35S

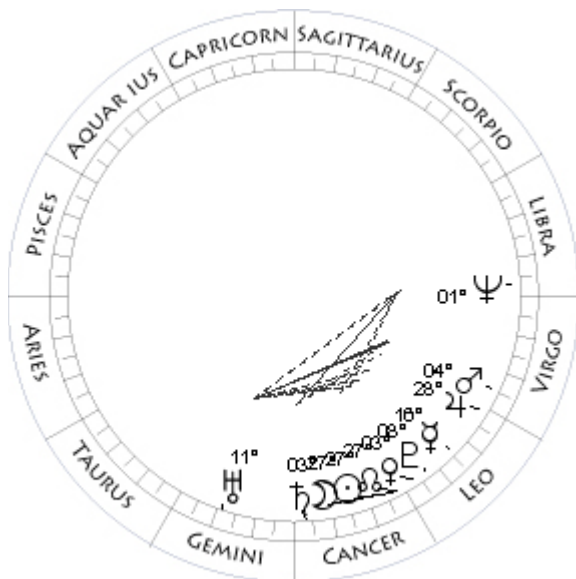
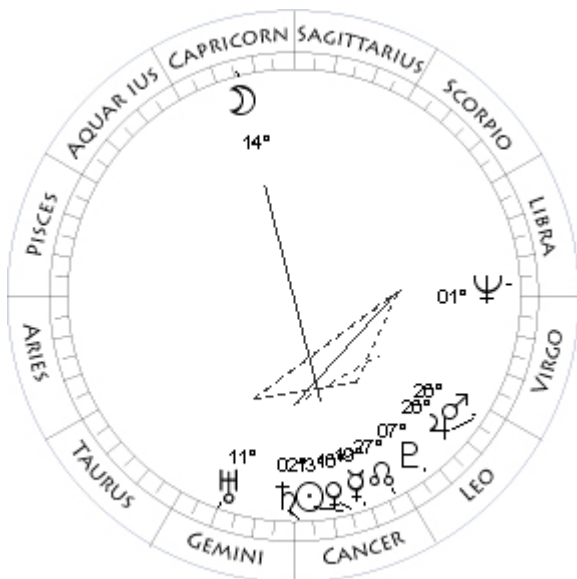
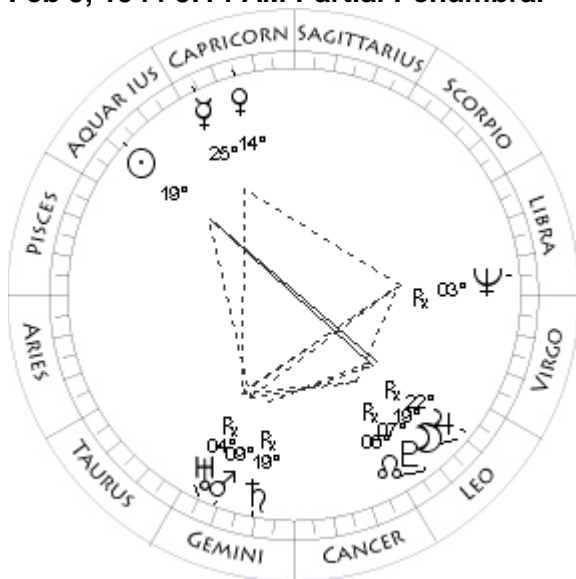
Aug 15, 1943 7:28 PM Partial Umbral

Mo 00Vi39 + 0°31	Mo 22Aq01 - 0°34
Su 00Pi43 - 0°00	Su 22Le05 - 0°00
Me 04Aq23 - 0°05	Me 16Vi06 - 0°10
Ve 23Pi29 - 1°15	Ve 20Vi33 - 5°40
Ma 17Cp54 - 0°42	Ma 25Ta15 - 1°38
Ju 15Cn49 + 0°22R	Ju 10Le05 + 0°31
Sa 05Ge46 - 1°40	Sa 24Ge02 - 1°20
Ur 00Ge39 - 0°08	Ur 08Ge28 - 0°06
Ne 01Li28 + 1°23R	Ne 00Li22 + 1°20
Pl 05Le34 + 5°11R	Pl 07Le18 + 5°08
No 24Le51 - 0°00	No 15Le30 - 0°00
	Coords: 69W/15S

Jan 25, 1944 3:26 PM Total Solar



Feb 9, 1944 5:14 AM Partial Penumbral



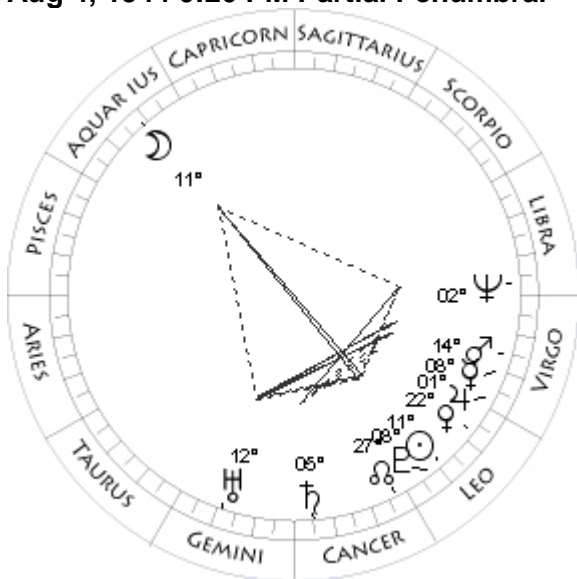
Jul 6, 1944 4:39 AM Partial Penumbral

Mo 04Aq34 + 0°12	Mo 14Cp05 + 1°15
Su 04Aq33 - 0°00	Su 13Cn58 - 0°00
Me 10Cp34 + 2°00	Me 19Cn33 + 1°42
Ve 26Sa59 + 1°29	Ve 16Cn28 + 0°47
Ma 06Ge17 + 2°39	Ma 26Le24 + 1°09
Ju 24Le17 + 1°02R	Ju 26Le07 + 0°56
Sa 20Ge18 - 1°18R	Sa 02Cn04 - 0°51
Ur 04Ge58 - 0°05R	Ur 11Ge00 - 0°03
Ne 04Li08 + 1°25R	Ne 01Li37 + 1°24
Pl 07Le40 + 5°36R	Pl 07Le37 + 5°30
No 06Le53 - 0°00	No 28Cn16 - 0°00

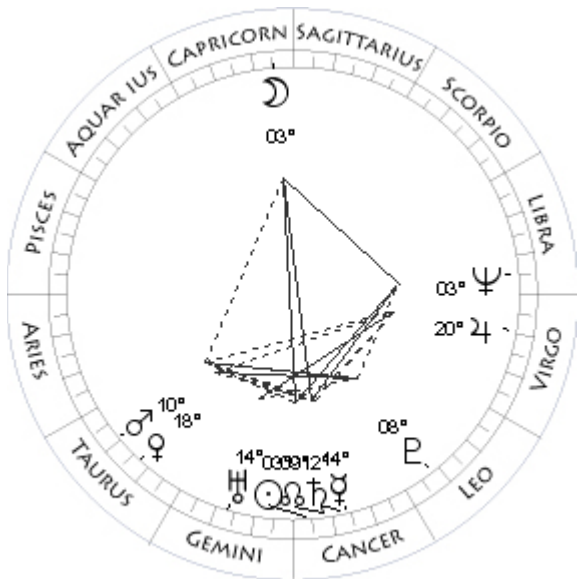
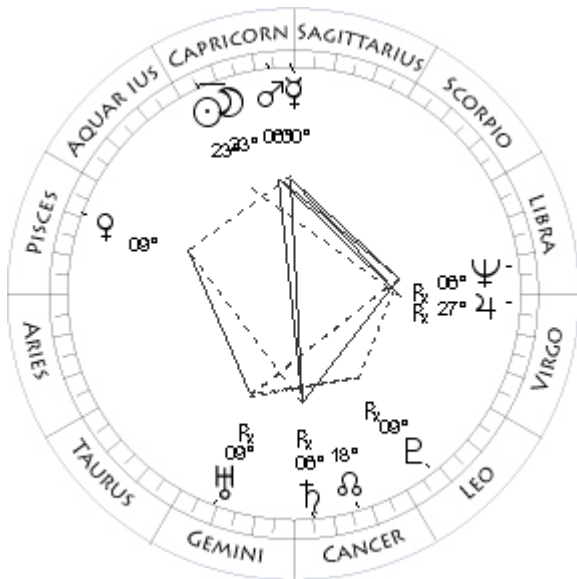
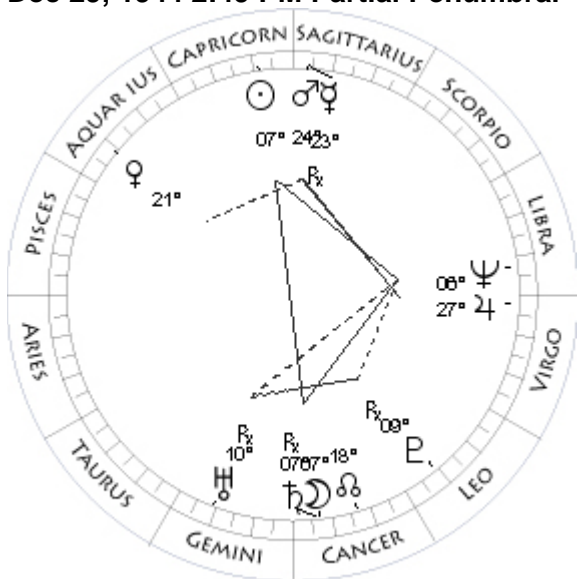
Jul 20, 1944 5:42 AM Annular Solar

Mo 19Le13 + 1°08	Mo 27Cn22 - 0°02
Su 19Aq21 - 0°00	Su 27Cn22 - 0°00
Me 25Cp31 - 0°22	Me 16Le21 + 1°25
Ve 14Cp44 + 0°44	Ve 03Le45 + 1°11
Ma 09Ge49 + 2°32	Ma 04Vi59 + 1°02
Ju 22Le26 + 1°04R	Ju 28Le50 + 0°55
Sa 19Ge48 - 1°14R	Sa 03Cn50 - 0°51
Ur 04Ge50 - 0°05R	Ur 11Ge41 - 0°03
Ne 03Li56 + 1°25R	Ne 01Li51 + 1°23
Pl 07Le20 + 5°37R	Pl 08Le01 + 5°31
No 06Le07 - 0°00	No 27Cn32 - 0°00
	Coords: 96W 19N

Aug 4, 1944 0:26 PM Partial Penumbral



Dec 29, 1944 2:49 PM Partial Penumbral



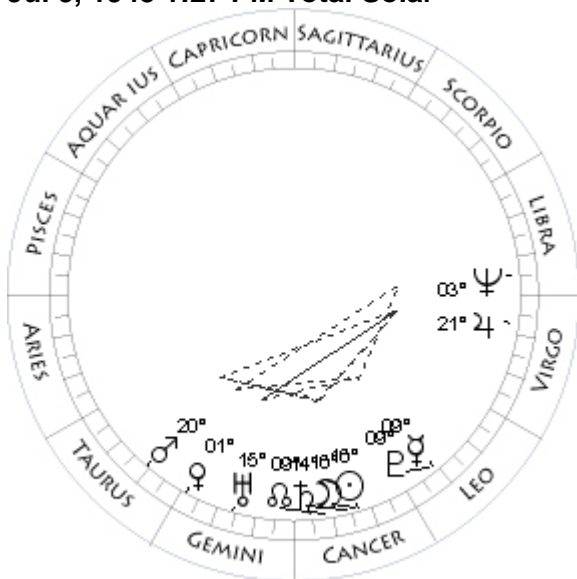
Jan 14, 1945 5:01 AM Annular Solar

Mo 11Aq50 - 1°17	Mo 23Cp38 - 0°29
Su 11Le59 - 0°00	Su 23Cp41 - 0°00
Me 08Vi36 - 0°39	Me 00Cp06 + 1°23
Ve 22Le34 + 1°26	Ve 09Pi30 - 0°57
Ma 14Vi28 + 0°54	Ma 06Cp17 - 0°40
Ju 01Vi58 + 0°55	Ju 27Vi30 + 1°20R
Sa 05Cn39 - 0°50	Sa 06Cn01 - 0°44R
Ur 12Ge18 - 0°03	Ur 09Ge34 - 0°02R
Ne 02Li12 + 1°23	Ne 06Li25 + 1°26R
Pl 08Le28 + 5°32	Pl 09Le27 + 6°01R
No 26Cn43 - 0°00	No 18Cn06 - 0°00
Coords: 175W/18S	Coords: 110W/51S

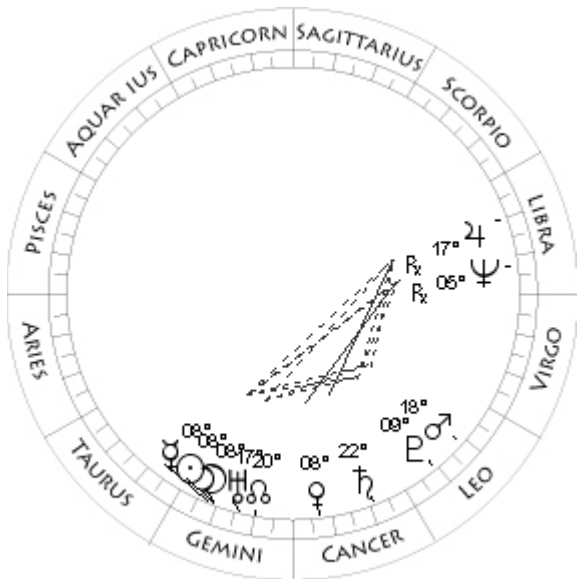
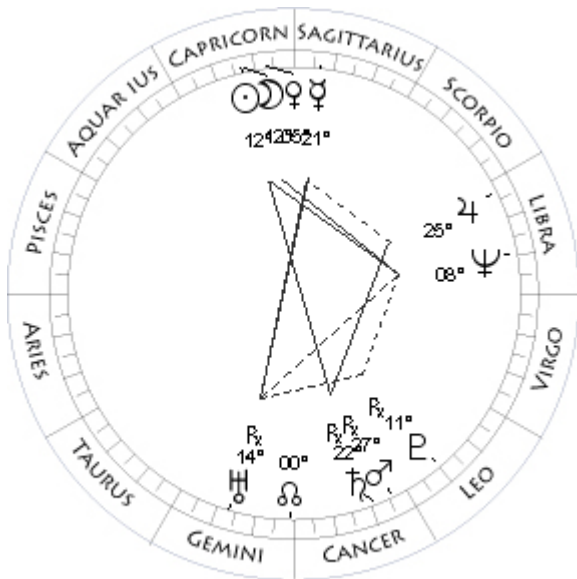
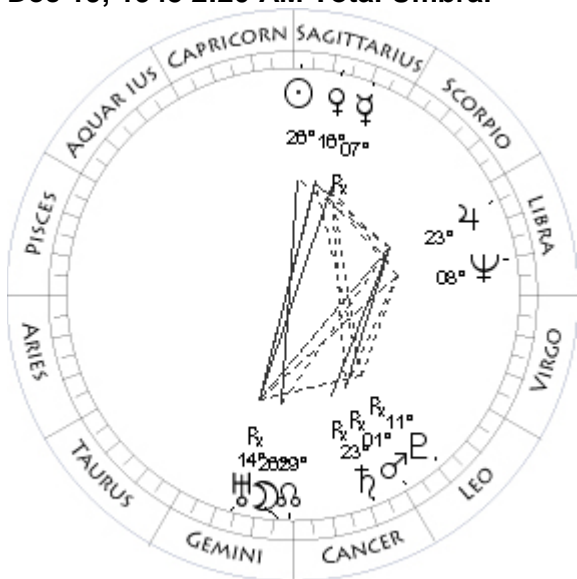
Jun 25, 1945 3:13 PM Partial Umbral

Mo 07Cn53 - 0°58	Mo 03Cp42 + 0°30
Su 07Cp48 - 0°00	Su 03Cn40 - 0°00
Me 23Sa55 + 3°08R	Me 14Cn59 + 1°52
Ve 21Aq43 - 1°48	Ve 18Ta00 - 3°04
Ma 24Sa40 - 0°31	Ma 10Ta22 - 1°03
Ju 27Vi12 + 1°16	Ju 20Vi01 + 1°15
Sa 07Cn16 - 0°46R	Sa 12Cn56 - 0°22
Ur 10Ge03 - 0°02R	Ur 14Ge29 - 0°00
Ne 06Li25 + 1°26	Ne 03Li41 + 1°27
Pl 09Le46 + 5°59R	Pl 08Le49 + 5°56
No 18Cn56 - 0°00	No 09Cn30 - 0°00
Coords: 138W/22N	Coords: 132W/23S

Jul 9, 1945 1:27 PM Total Solar



Dec 19, 1945 2:20 AM Total Umbra



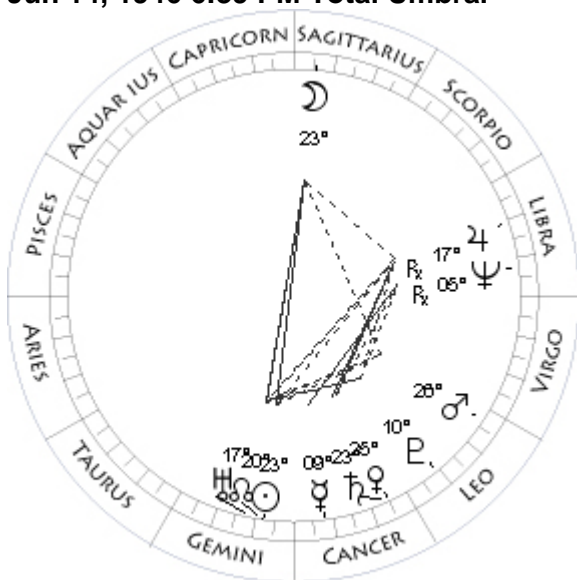
Jan 3, 1946 0:15 PM Partial Solar

Mo 16Cn52 + 0°42	Mo 12Cp25 - 1°08
Su 16Cn57 - 0°00	Su 12Cp32 - 0°00
Me 09Le39 + 1°16	Me 21Sa42 + 0°56
Ve 01Ge57 - 2°59	Ve 05Cp35 - 0°15
Ma 20Ta21 - 0°55	Ma 27Cn22 + 3°59R
Ju 21Vi48 + 1°13	Ju 25Li06 + 1°16
Sa 14Cn44 - 0°20	Sa 22Cn09 - 0°06R
Ur 15Ge15 - 0°00	Ur 14Ge21 + 0°02R
Ne 03Li49 + 1°26	Ne 08Li36 + 1°28
Pl 09Le11 + 5°56	Pl 11Le15 + 6°26R
No 08Cn46 - 0°00	No 29Ge21 - 0°00

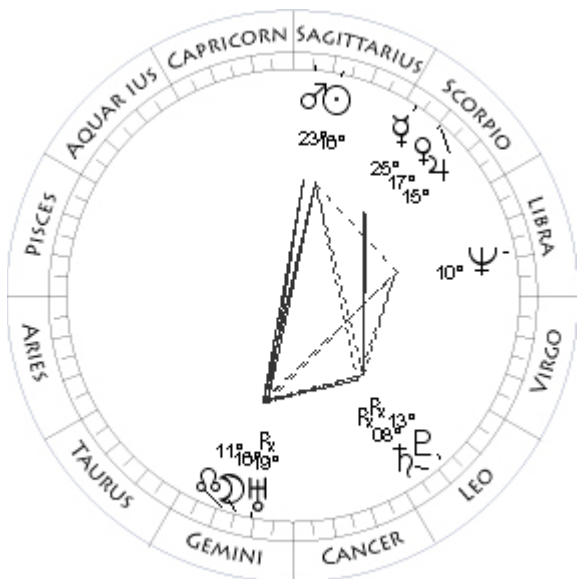
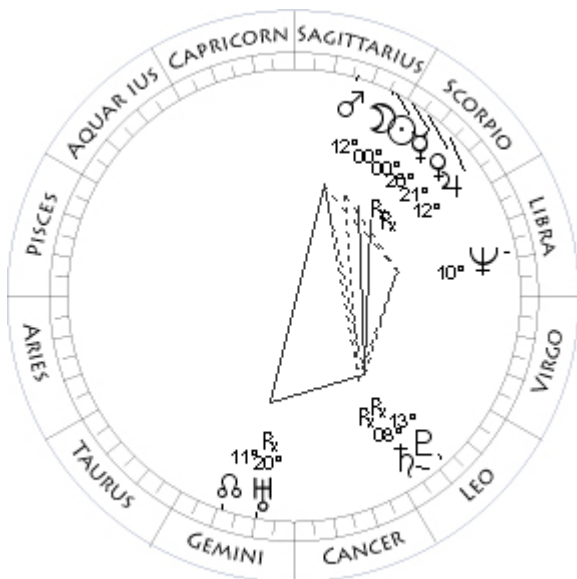
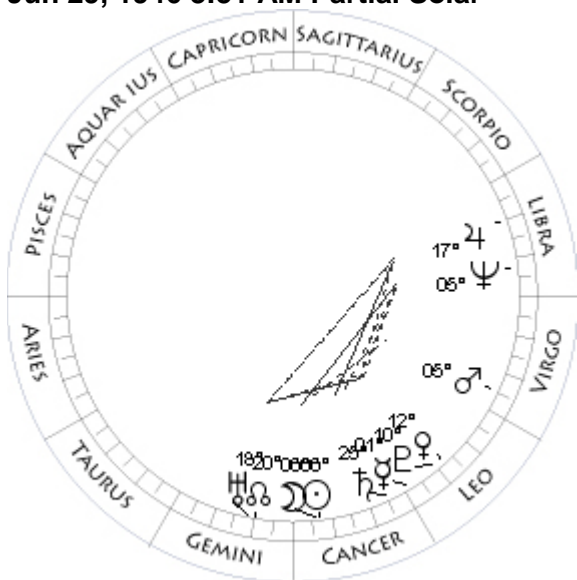
May 30, 1946 9:00 PM Partial Solar

Mo 26Ge51 - 0°17	Mo 08Ge55 - 1°05
Su 26Sa50 - 0°00	Su 08Ge50 - 0°00
Me 07Sa08 + 2°49R	Me 08Ge05 + 0°30
Ve 16Sa12 + 0°22	Ve 08Cn07 + 1°35
Ma 01Le51 + 3°23R	Ma 18Le43 + 1°29
Ju 23Li07 + 1°13	Ju 17Li47 + 1°26R
Sa 23Cn19 - 0°08R	Sa 22Cn10 + 0°08
Ur 14Ge57 + 0°02R	Ur 17Ge02 + 0°03
Ne 08Li29 + 1°27	Ne 05Li55 + 1°30R
Pl 11Le31 + 6°23R	Pl 09Le46 + 6°23
No 00Cn10 - 0°00	No 21Ge32 - 0°00

Jun 14, 1946 6:39 PM Total Umbral



Jun 29, 1946 3:51 AM Partial Solar



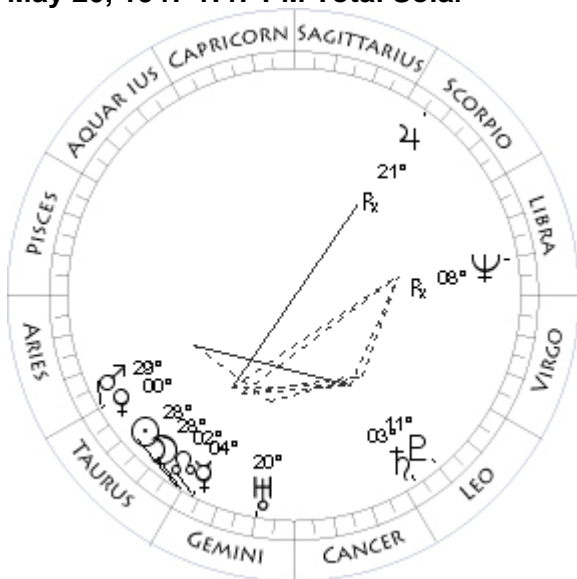
Nov 23, 1946 5:36 PM Partial Solar

Mo 23Sa03 - 0°12	Mo 00Sa56 + 0°59
Su 23Ge05 - 0°00	Su 00Sa50 - 0°00
Me 09Cn10 + 2°01	Me 26Sc08 + 1°16R
Ve 25Cn56 + 1°51	Ve 21Sc22 - 1°51R
Ma 26Le52 + 1°16	Ma 12Sa20 - 0°35
Ju 17Li27 + 1°22R	Ju 12Sc46 + 0°58
Sa 23Cn50 + 0°09	Sa 08Le53 + 0°27R
Ur 17Ge55 + 0°03	Ur 20Ge32 + 0°05R
Ne 05Li50 + 1°30R	Ne 10Li08 + 1°28
Pl 10Le03 + 6°22	Pl 13Le21 + 6°44R
No 20Ge45 - 0°00	No 12Ge11 - 0°00
Coords: 80W/23S	

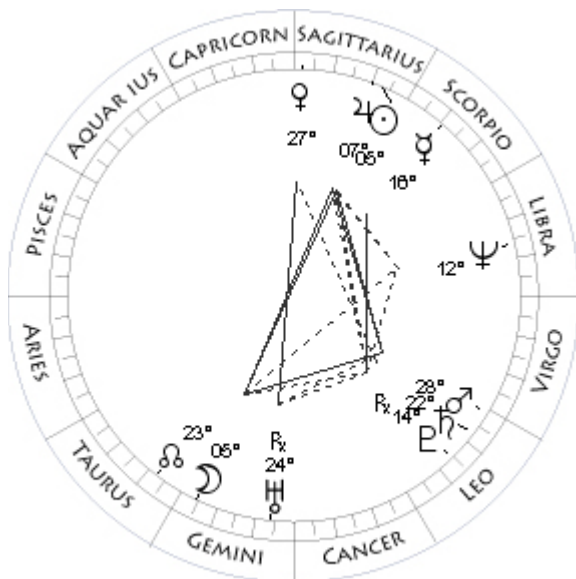
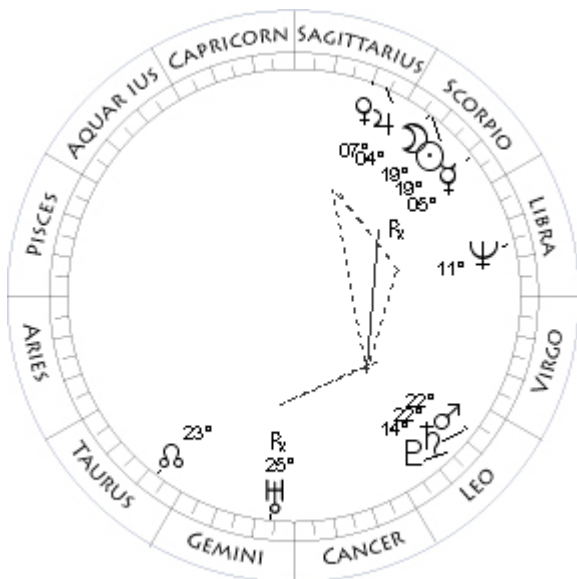
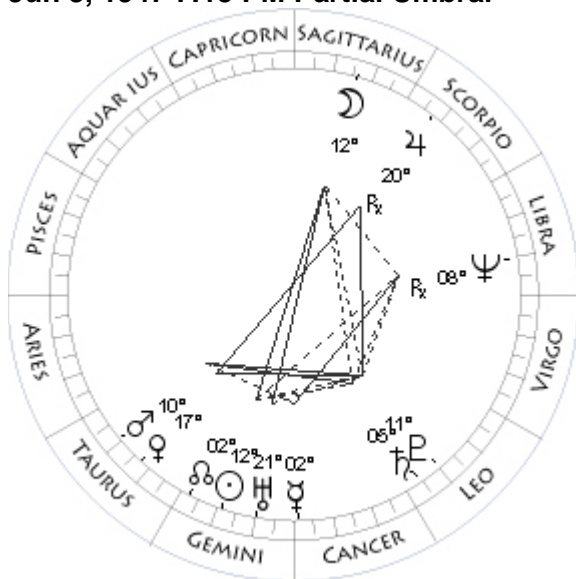
Dec 8, 1946 5:48 PM Total Umbral

Mo 06Cn39 + 1°27	Mo 16Ge00 + 0°23
Su 06Cn48 - 0°00	Su 16Sa03 - 0°00
Me 01Le47 + 1°02	Me 25Sc20 + 2°22
Ve 12Le56 + 1°51	Ve 17Sc07 + 1°38
Ma 05Vi03 + 1°04	Ma 23Sa28 - 0°42
Ju 17Li46 + 1°19	Ju 15Sc54 + 0°58
Sa 25Cn35 + 0°11	Sa 08Le35 + 0°29R
Ur 18Ge45 + 0°03	Ur 19Ge55 + 0°05R
Ne 05Li53 + 1°29	Ne 10Li28 + 1°29
Pl 10Le24 + 6°21	Pl 13Le14 + 6°47R
No 19Ge59 - 0°00	No 11Ge23 - 0°00
Coords: 91W/23N	

May 20, 1947 1:47 PM Total Solar



Jun 3, 1947 7:15 PM Partial Umbral



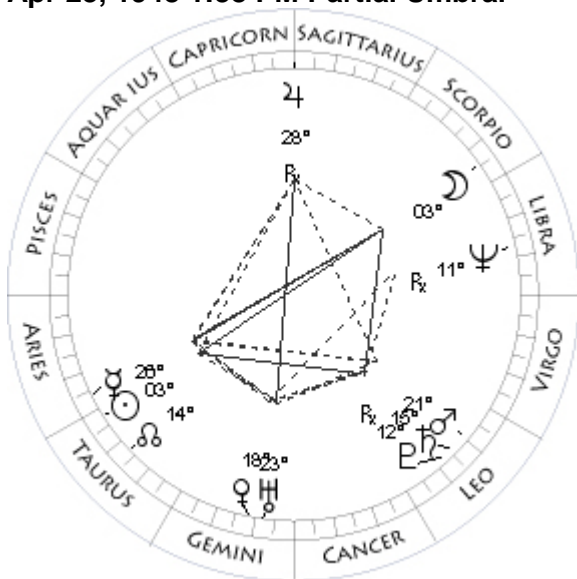
Nov 12, 1947 8:05 PM Annular Solar

Mo 28Ta44 - 0°21	Mo 19Sc38 + 0°21
Su 28Ta42 - 0°00	Su 19Sc36 - 0°00
Me 04Ge23 + 0°58	Me 05Sc56 + 1°44R
Ve 00Ta36 - 1°43	Ve 07Sa46 - 0°27
Ma 29Ar34 - 0°46	Ma 22Le24 + 1°51
Ju 21Sc54 + 1°10R	Ju 04Sa14 + 0°36
Sa 03Le51 + 0°41	Sa 22Le15 + 0°58
Ur 20Ge31 + 0°06	Ur 25Ge28 + 0°09R
Ne 08Li16 + 1°33R	Ne 11Li56 + 1°30
Pl 11Le09 + 6°50	Pl 14Le57 + 7°07
No 02Ge46 - 0°00	No 23Ta26 - 0°00
	Coords: 117E/ 3N

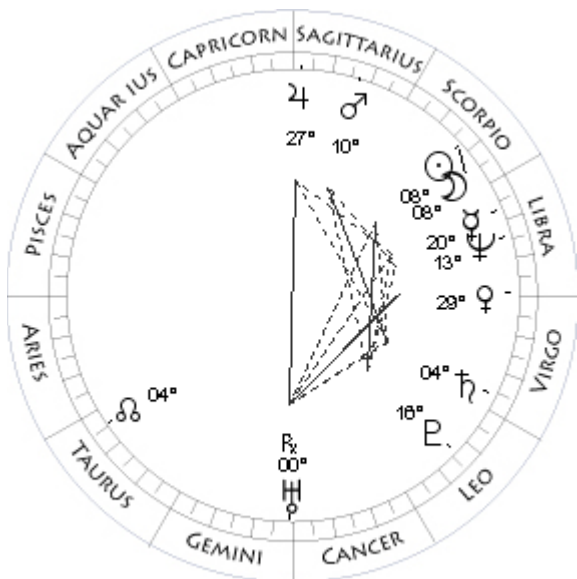
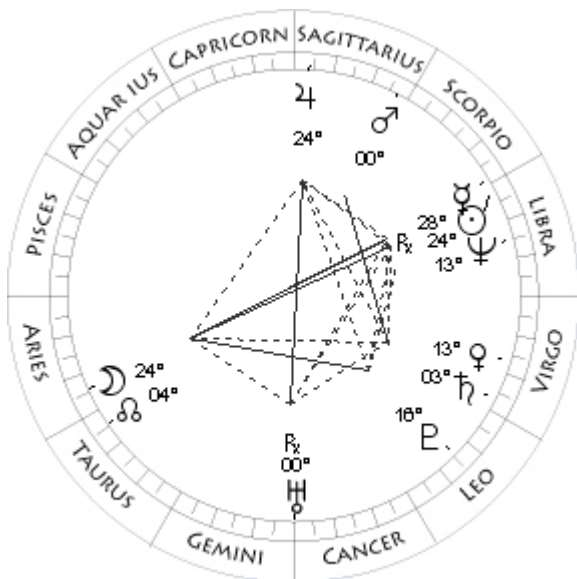
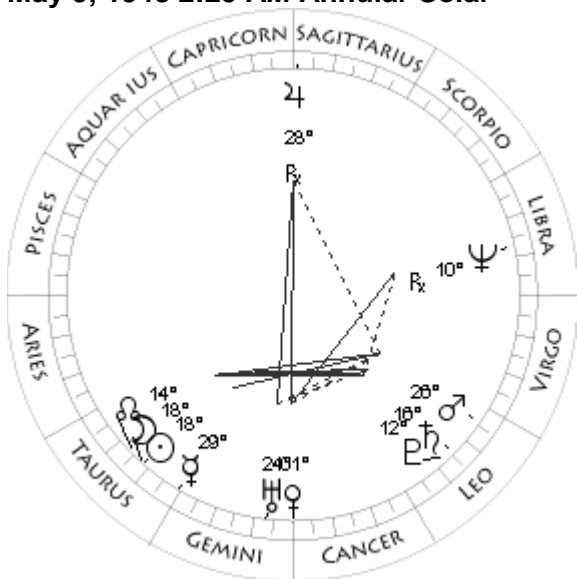
Nov 28, 1947 8:33 AM Partial Penumbral

Mo 12Sa16 - 0°53	Mo 05Ge09 + 1°04
Su 12Ge22 - 0°00	Su 05Sa16 - 0°00
Me 02Cn05 + 2°09	Me 16Sc47 + 1°57
Ve 17Ta47 - 1°28	Ve 27Sa07 - 1°03
Ma 10Ta11 - 0°38	Ma 28Le51 + 2°15
Ju 20Sc12 + 1°08R	Ju 07Sa41 + 0°35
Sa 05Le04 + 0°41	Sa 22Le39 + 1°01
Ur 21Ge20 + 0°06	Ur 24Ge55 + 0°09R
Ne 08Li06 + 1°32R	Ne 12Li22 + 1°30
Pl 11Le21 + 6°49	Pl 14Le56 + 7°11R
No 02Ge00 - 0°00	No 22Ta36 - 0°00
Coords: 70W/23S	Coords: 132E/22N

Apr 23, 1948 1:38 PM Partial Umbral



May 9, 1948 2:25 AM Annular Solar



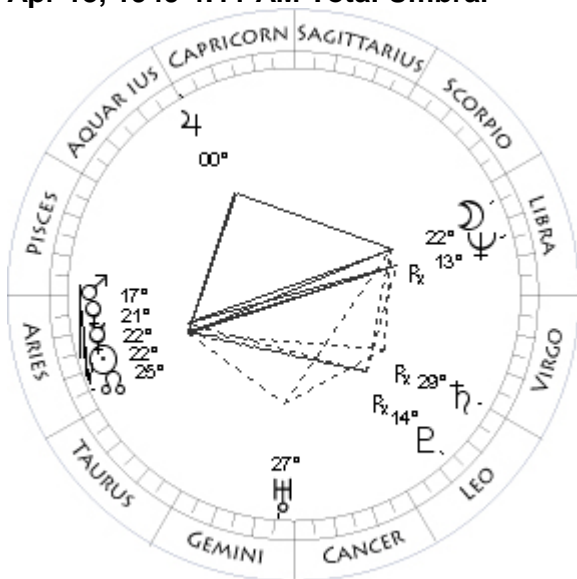
Oct 18, 1948 2:35 AM Annular Solar

Mo 03Sc23 + 0°59	Mo 24Ar43 - 0°56
Su 03Ta18 - 0°00	Su 24Li38 - 0°00
Me 26Ar55 - 1°10	Me 28Li52 - 1°51R
Ve 18Ge40 + 3°45	Ve 13Vi18 + 0°50
Ma 21Le30 + 2°20	Ma 00Sa38 - 0°44
Ju 28Sa50 + 0°31R	Ju 24Sa44 + 0°07
Sa 15Le48 + 1°14	Sa 03Vi08 + 1°21
Ur 23Ge21 + 0°09	Ur 00Cn31 + 0°12R
Ne 11Li02 + 1°36R	Ne 13Li11 + 1°31
Pl 12Le33 + 7°19R	Pl 16Le21 + 7°26
No 14Ta48 - 0°00	No 05Ta24 - 0°00
Coords: 155W/12S	

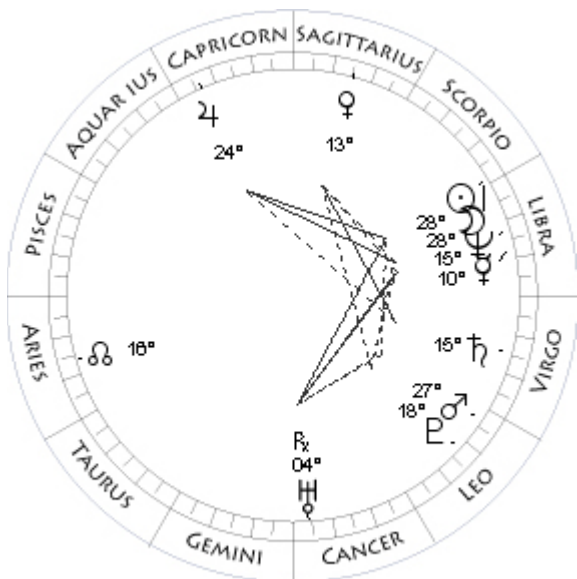
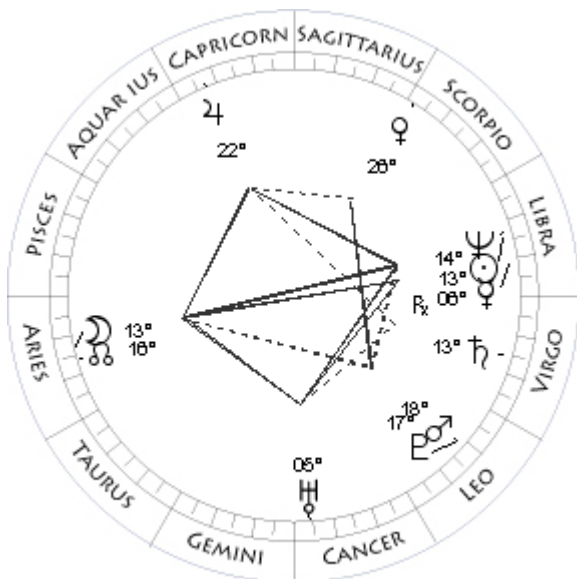
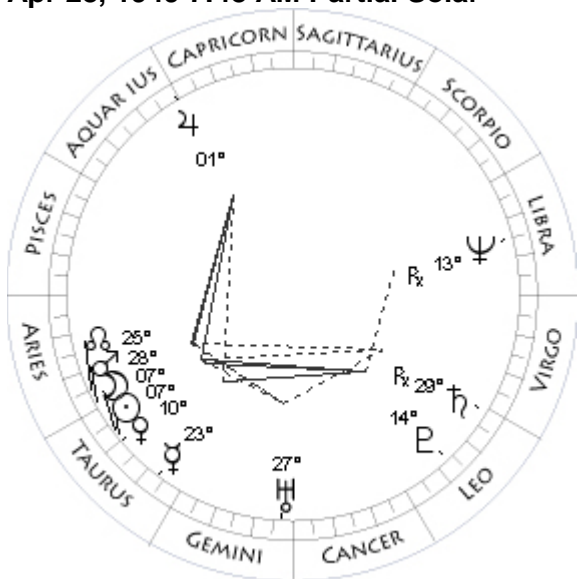
Nov 1, 1948 5:58 AM Total Solar

Mo 18Ta19 + 0°23	Mo 08Sc41 - 0°21
Su 18Ta22 - 0°00	Su 08Sc44 - 0°00
Me 29Ta49 + 1°25	Me 20Li43 + 1°58
Ve 01Cn15 + 3°56	Ve 29Vi58 + 1°29
Ma 26Le16 + 1°52	Ma 10Sa52 - 0°50
Ju 28Sa04 + 0°30R	Ju 27Sa13 + 0°06
Sa 16Le11 + 1°13	Sa 04Vi21 + 1°23
Ur 24Ge05 + 0°09	Ur 00Cn17 + 0°12R
Ne 10Li41 + 1°35R	Ne 13Li41 + 1°31
Pl 12Le36 + 7°17	Pl 16Le30 + 7°30
No 13Ta59 - 0°00	No 04Ta39 - 0°00
Coords: 131W/40N	Coords: 76W/33S

Apr 13, 1949 4:11 AM Total Umbral



Apr 28, 1949 7:48 AM Partial Solar



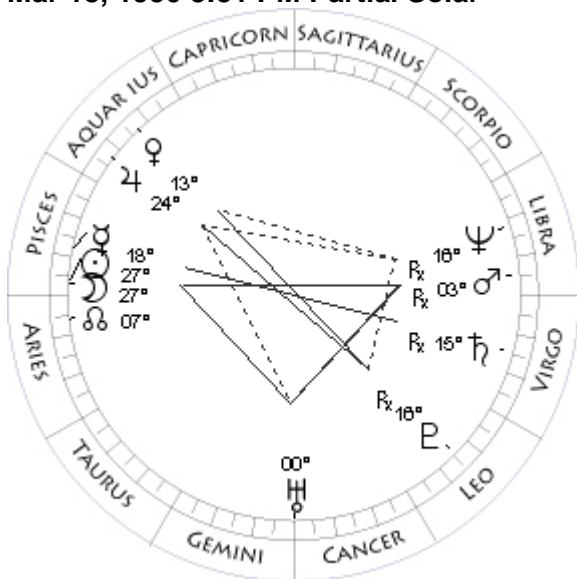
Oct 7, 1949 2:57 AM Total Umbral

Mo 22Li56 + 0°15	Mo 13Ar32 - 0°17
Su 22Ar55 - 0°00	Su 13Li31 - 0°00
Me 22Ar45 - 0°45	Me 06Li46 - 1°08R
Ve 21Ar56 - 1°11	Ve 26Sc12 - 1°51
Ma 17Ar11 - 0°38	Ma 18Le23 + 1°18
Ju 00Aq03 - 0°12	Ju 22Cp53 - 0°34
Sa 29Le36 + 1°46R	Sa 13Vi50 + 1°41
Ur 27Ge10 + 0°13	Ur 05Cn01 + 0°15
Ne 13Li33 + 1°38R	Ne 14Li52 + 1°32
Pl 14Le11 + 7°48R	Pl 17Le46 + 7°48
No 26Ar02 - 0°00	No 16Ar40 - 0°00

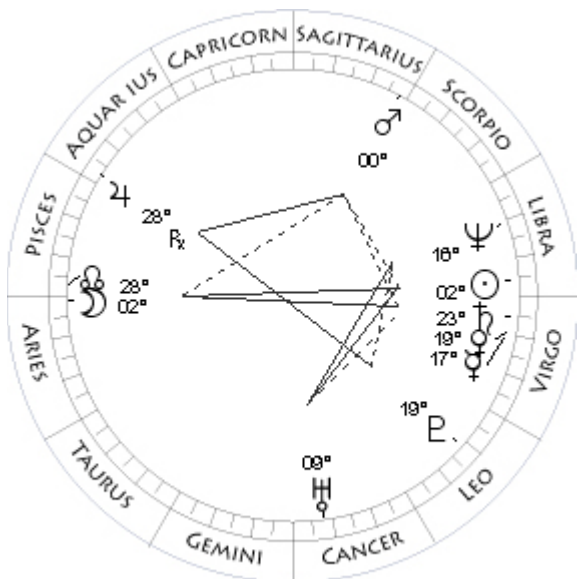
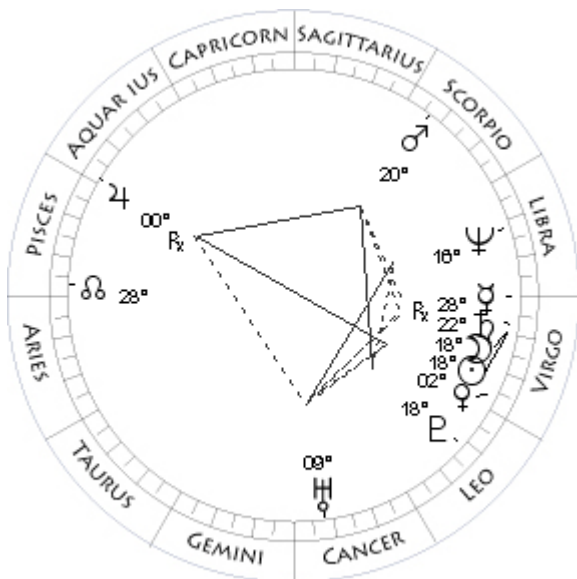
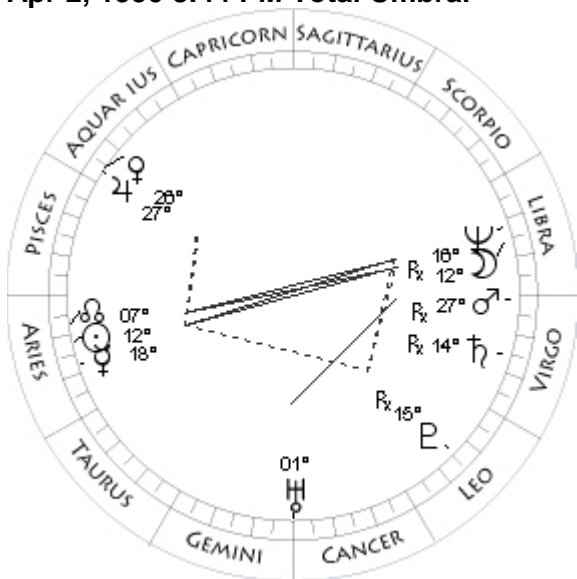
Oct 21, 1949 9:12 PM Partial Solar

Mo 07Ta35 + 1°05	Mo 28Li02 - 1°02
Su 07Ta42 - 0°00	Su 28Li09 - 0°00
Me 23Ta37 + 1°49	Me 10Li21 + 2°01
Ve 10Ta40 - 0°44	Ve 13Sa03 - 2°38
Ma 28Ar40 - 0°30	Ma 27Le03 + 1°29
Ju 01Aq24 - 0°15	Ju 24Cp04 - 0°34
Sa 29Le19 + 1°44R	Sa 15Vi27 + 1°43
Ur 27Ge45 + 0°13	Ur 04Cn58 + 0°15R
Ne 13Li10 + 1°38R	Ne 15Li25 + 1°33
Pl 14Le09 + 7°45	Pl 18Le00 + 7°52
No 25Ar14 - 0°00	No 15Ar53 - 0°00

Mar 18, 1950 3:31 PM Partial Solar



Apr 2, 1950 8:44 PM Total Umbral



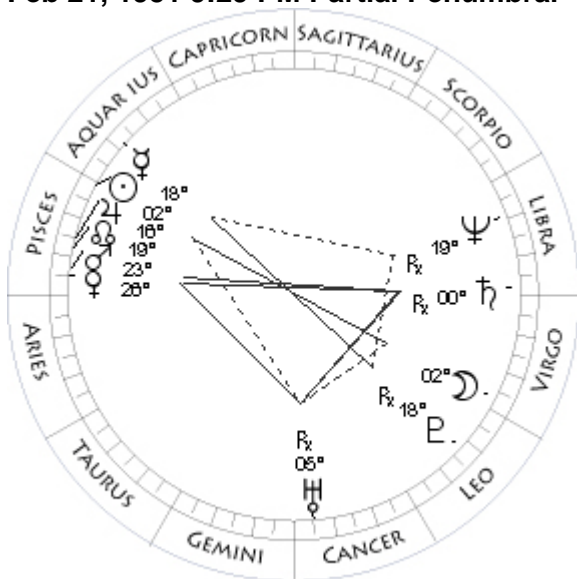
Sep 12, 1950 3:38 AM Total Solar

Mo 27Pi33 - 0°54	Mo 18Vi53 + 0°52
Su 27Pi29 - 0°00	Su 18Vi49 - 0°00
Me 18Pi35 - 2°03	Me 28Vi57 - 4°07R
Ve 13Aq54 + 3°46	Ve 02Vi35 + 1°12
Ma 03Li49 + 3°31R	Ma 20Sc41 - 1°03
Ju 24Aq23 - 0°42	Ju 00Pi21 - 1°19R
Sa 15Vi09 + 2°13R	Sa 22Vi12 + 1°56
Ur 00Cn58 + 0°16	Ur 09Cn00 + 0°18
Ne 16Li29 + 1°39R	Ne 16Li03 + 1°34
Pl 16Le08 + 8°17R	Pl 18Le47 + 8°08
No 08Ar03 - 0°00	No 28Pi39 - 0°00
Coords: 172W/55N	

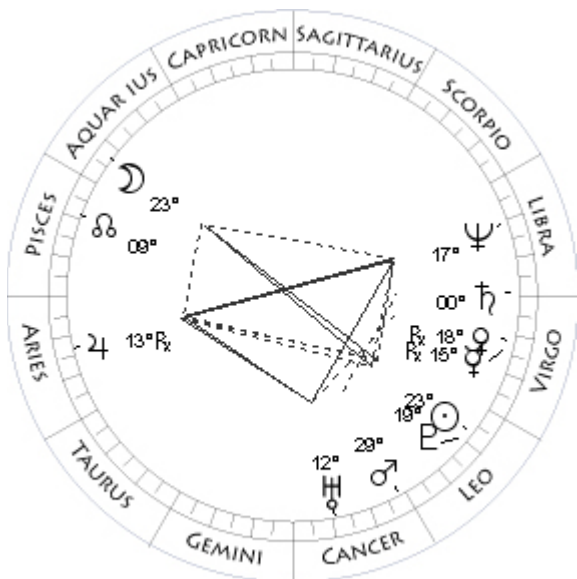
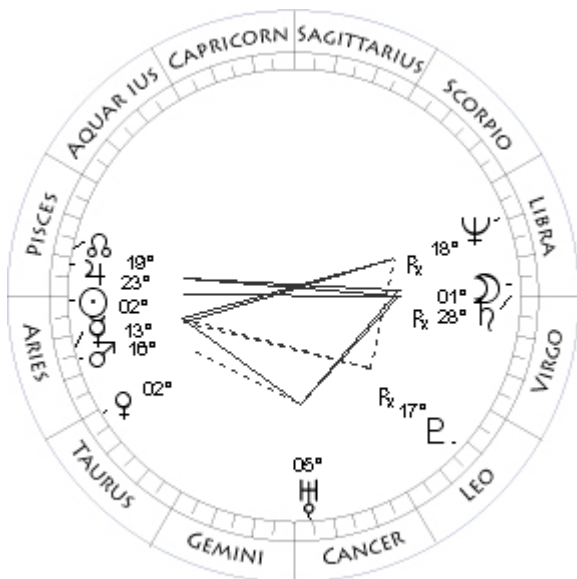
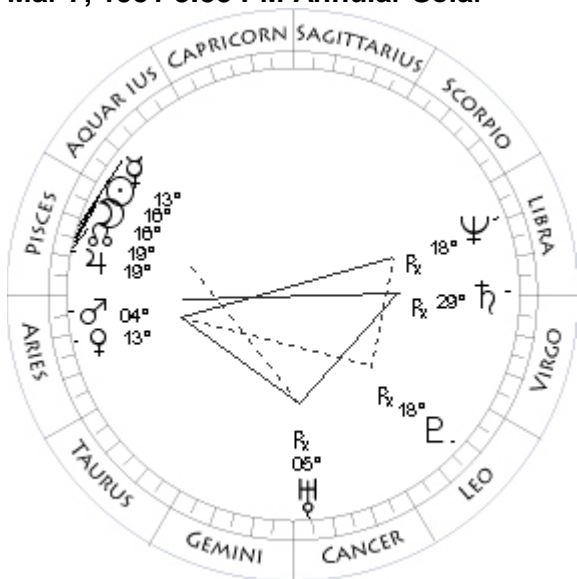
Sep 26, 1950 4:17 AM Total Umbral

Mo 12Li29 - 0°28	Mo 02Ar28 + 0°23
Su 12Ar33 - 0°00	Su 02Li31 - 0°00
Me 18Ar40 - 0°17	Me 17Vi57 - 0°22
Ve 26Aq30 + 1°44	Ve 19Vi58 + 1°25
Ma 27Vi59 + 3°08R	Ma 00Sa15 - 1°09
Ju 27Aq35 - 0°44	Ju 28Aq53 - 1°18R
Sa 14Vi03 + 2°13R	Sa 23Vi56 + 1°57
Ur 01Cn12 + 0°16	Ur 09Cn19 + 0°18
Ne 16Li05 + 1°40R	Ne 16Li33 + 1°34
Pl 15Le55 + 8°16R	Pl 19Le09 + 8°11
No 07Ar15 - 0°00	No 27Pi55 - 0°00

Feb 21, 1951 9:29 PM Partial Penumbral



Mar 7, 1951 8:53 PM Annular Solar



Mar 23, 1951 10:36 AM Partial Penumbral

Mo 02Vi35 + 1°29	Mo 01Li52 - 1°10
Su 02Pi27 - 0°00	Su 02Ar00 - 0°00
Me 18Aq46 - 2°01	Me 13Ar44 + 0°13
Ve 26Pi12 - 1°11	Ve 02Ta28 + 0°01
Ma 23Pi47 - 0°45	Ma 16Ar30 - 0°26
Ju 16Pi02 - 1°01	Ju 23Pi11 - 1°02
Sa 00Li57 + 2°29R	Sa 28Vi45 + 2°32R
Ur 05Cn35 + 0°20R	Ur 05Cn26 + 0°20
Ne 19Li15 + 1°40R	Ne 18Li36 + 1°41R
Pl 18Le20 + 8°45R	Pl 17Le44 + 8°44R
No 20Pi02 - 0°00	No 18Pi28 - 0°00

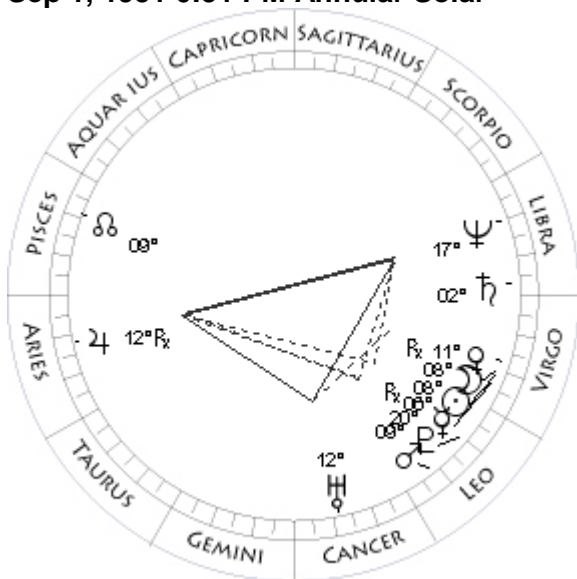
Coords: 42W/12N

Aug 17, 1951 3:14 AM Partial Penumbral

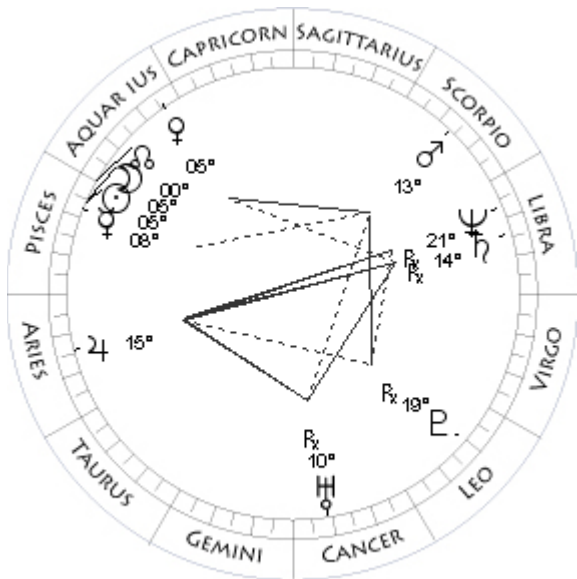
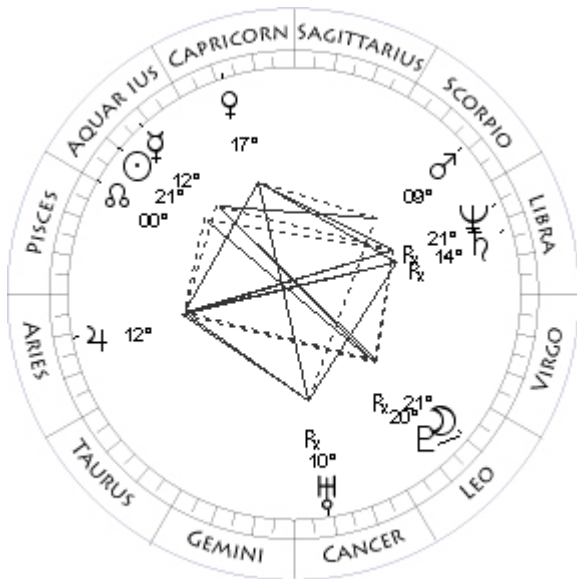
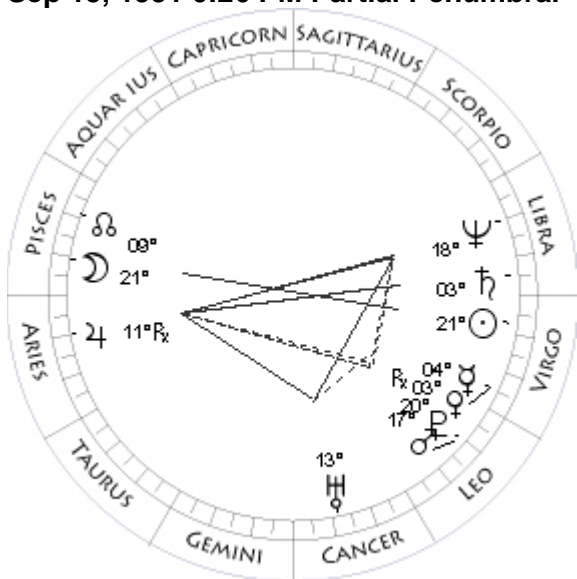
Mo 16Pi30 - 0°14	Mo 23Aq33 - 1°29
Su 16Pi29 - 0°00	Su 23Le26 - 0°00
Me 13Pi17 - 1°53	Me 15Vi09 - 3°55R
Ve 13Ar26 - 0°42	Ve 18Vi03 - 6°15R
Ma 04Ar36 - 0°36	Ma 29Cn09 + 0°59
Ju 19Pi24 - 1°01	Ju 13Ar54 - 1°31R
Sa 29Vi58 + 2°31R	Sa 00Li22 + 2°10
Ur 05Cn25 + 0°20R	Ur 12Cn16 + 0°20
Ne 18Li59 + 1°41R	Ne 17Li23 + 1°37
Pl 18Le01 + 8°45R	Pl 19Le38 + 8°30
No 19Pi18 - 0°00	No 10Pi42 - 0°00

Coords: 124E/18S

Sep 1, 1951 0:51 PM Annular Solar



Sep 15, 1951 0:26 PM Partial Penumbral



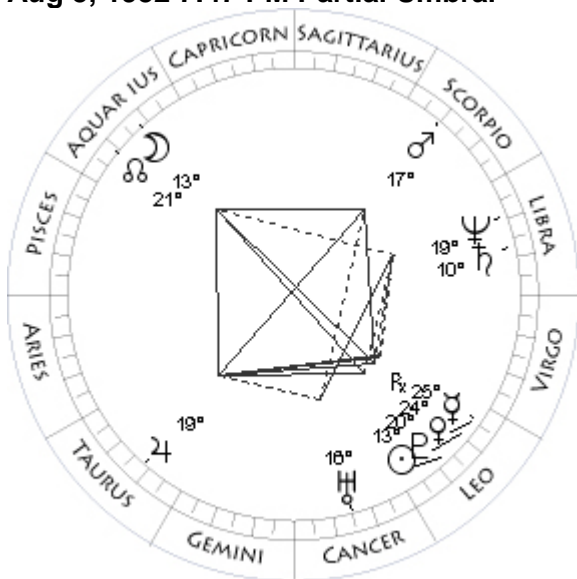
Feb 11, 1952 0:39 AM Partial Umbral

Mo 08Vi17 + 0°09	Mo 21Le19 + 0°51
Su 08Vi17 - 0°00	Su 21Aq14 - 0°00
Me 06Vi01 - 3°46R	Me 12Aq57 - 2°02
Ve 11Vi35 - 8°32R	Ve 17Cp33 + 0°35
Ma 09Le02 + 1°06	Ma 09Sc15 + 1°56
Ju 12Ar54 - 1°35R	Ju 12Ar14 - 1°09
Sa 02Li06 + 2°09	Sa 14Li43 + 2°35R
Ur 12Cn58 + 0°20	Ur 10Cn27 + 0°23R
Ne 17Li49 + 1°36	Ne 21Li37 + 1°41R
Pl 20Le06 + 8°31	Pl 20Le19 + 9°12R
No 09Pi53 - 0°00	No 01Pi17 - 0°00

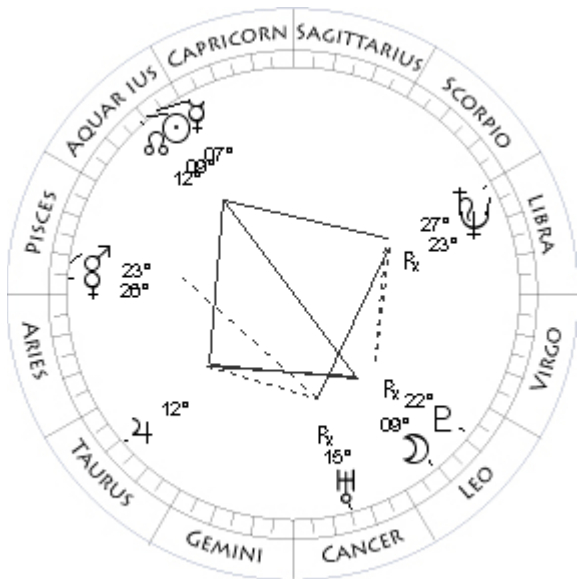
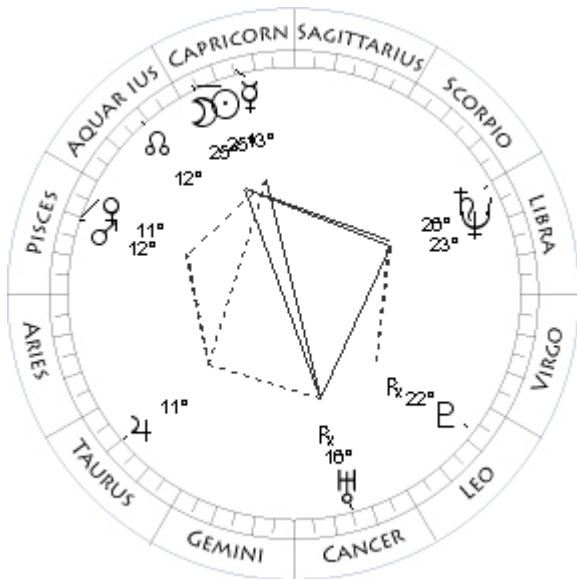
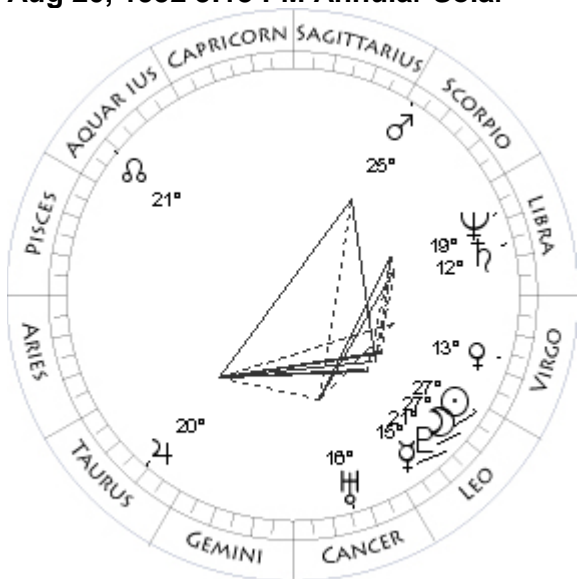
Feb 25, 1952 9:11 AM Total Solar

Mo 21Pi44 + 1°05	Mo 05Pi40 + 0°28
Su 21Vi51 - 0°00	Su 05Pi43 - 0°00
Me 04Vi03 + 0°19	Me 08Pi31 - 1°41
Ve 03Vi55 - 7°56R	Ve 05Aq09 - 0°09
Ma 17Le53 + 1°11	Ma 13Sc59 + 1°57
Ju 11Ar26 - 1°37R	Ju 15Ar10 - 1°07
Sa 03Li46 + 2°09	Sa 14Li07 + 2°39R
Ur 13Cn27 + 0°21	Ur 10Cn06 + 0°23R
Ne 18Li16 + 1°36	Ne 21Li25 + 1°42R
Pl 20Le30 + 8°34	Pl 19Le58 + 9°12R
No 09Pi09 - 0°00	No 00Pi31 - 0°00
	Coords: 33W/16N

Aug 5, 1952 7:47 PM Partial Umbral



Aug 20, 1952 3:13 PM Annular Solar



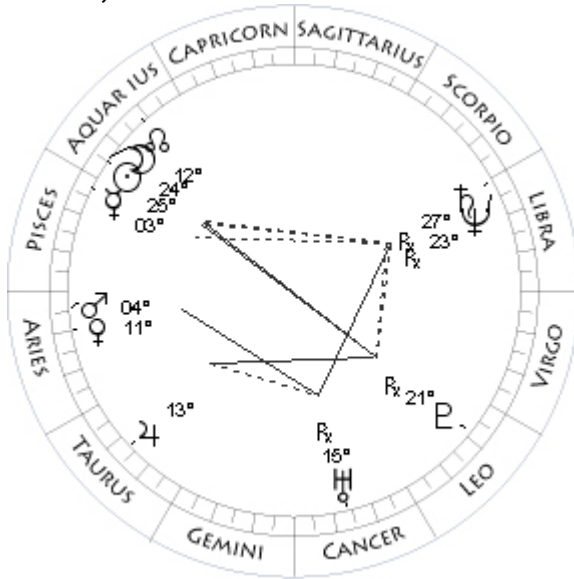
Jan 15, 1953 2:23 PM Partial Solar

Mo 13Aq22 - 0°45	Mo 25Cp18 - 1°33
Su 13Le18 - 0°00	Su 25Cp10 - 0°00
Me 25Le06 - 4°43R	Me 13Cp42 - 1°13
Ve 24Le52 + 1°27	Ve 11Pi21 - 0°48
Ma 17Sc50 - 1°55	Ma 12Pi06 - 0°49
Ju 19Ta03 - 1°10	Ju 11Ta09 - 1°03
Sa 10Li42 + 2°21	Sa 26Li56 + 2°30
Ur 16Cn00 + 0°23	Ur 16Cn07 + 0°27R
Ne 19Li17 + 1°39	Ne 23Li52 + 1°41
Pl 20Le56 + 8°54	Pl 22Le40 + 9°35R
No 21Aq55 - 0°00	No 13Aq18 - 0°00
Coords: 65W/18S	

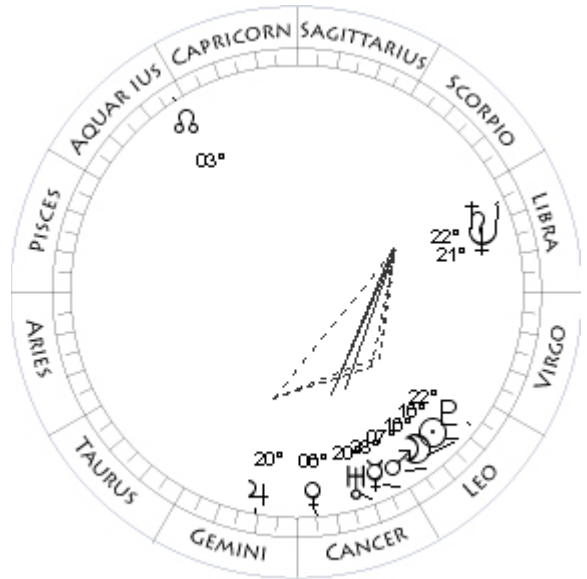
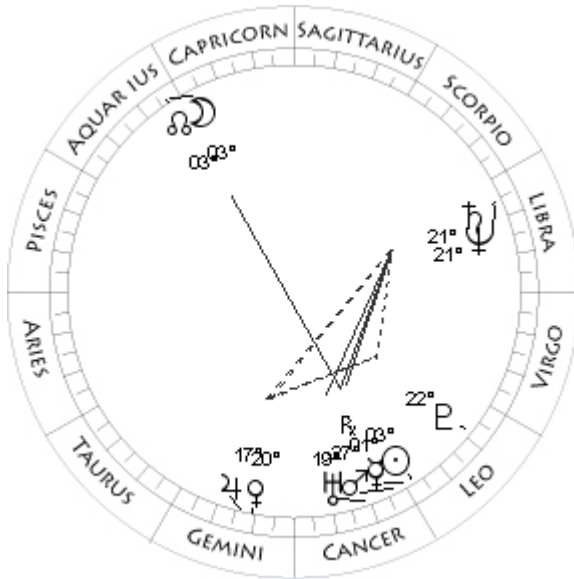
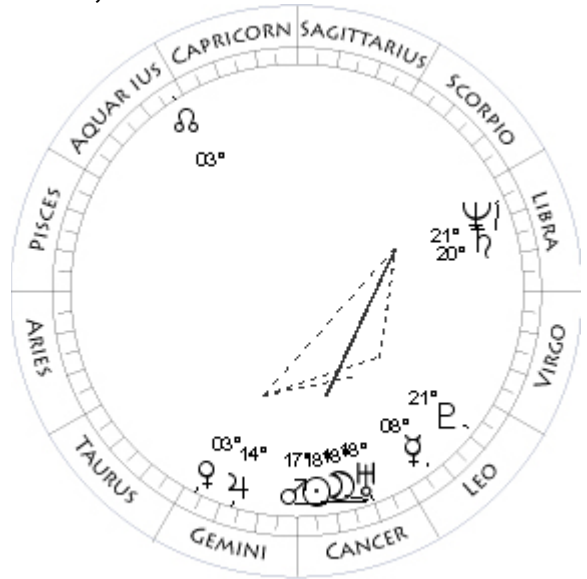
Jan 29, 1953 11:47 PM Total Umbral

Mo 27Le27 - 0°33	Mo 09Le49 + 0°14
Su 27Le31 - 0°00	Su 09Aq48 - 0°00
Me 15Le09 - 3°01	Me 07Aq01 - 2°03
Ve 13Vi07 + 1°24	Ve 26Pi42 + 0°29
Ma 25Sc49 - 1°59	Ma 23Pi07 - 0°37
Ju 20Ta19 - 1°12	Ju 12Ta00 - 0°59
Sa 12Li03 + 2°18	Sa 27Li16 + 2°33
Ur 16Cn47 + 0°23	Ur 15Cn32 + 0°27R
Ne 19Li37 + 1°38	Ne 23Li53 + 1°41R
Pl 21Le24 + 8°55	Pl 22Le20 + 9°37R
No 21Aq08 - 0°00	No 12Aq32 - 0°00
Coords: 7W/18N	

Feb 14, 1953 0:59 AM Partial Solar



Jul 11, 1953 2:44 AM Partial Solar



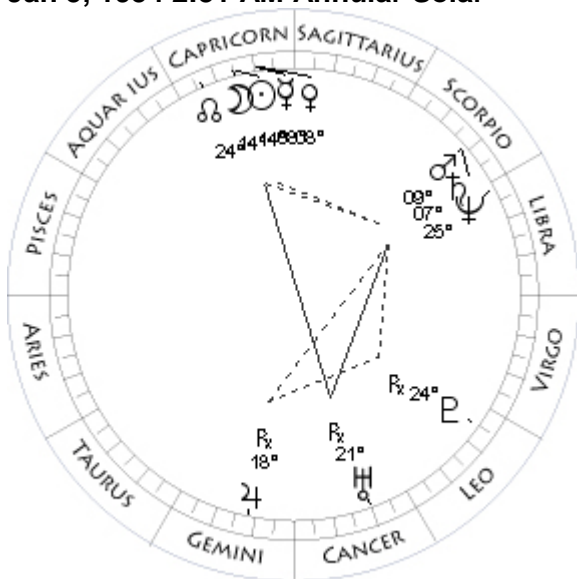
Jul 26, 1953 0:21 PM Total Umbra

Mo 24Aq56 + 1°09	Mo 03Aq12 - 0°00
Su 25Aq03 - 0°00	Su 03Le13 - 0°00
Me 03Pi45 - 1°27	Me 01Le21 - 4°56R
Ve 11Ar14 + 2°12	Ve 20Ge30 - 2°21
Ma 04Ar33 - 0°25	Ma 27Cn53 + 1°02
Ju 13Ta33 - 0°55	Ju 17Ge26 - 0°36
Sa 27Li14 + 2°37R	Sa 21Li26 + 2°27
Ur 15Cn01 + 0°27R	Ur 19Cn41 + 0°26
Ne 23Li46 + 1°42R	Ne 21Li16 + 1°41
Pl 21Le58 + 9°39R	Pl 22Le17 + 9°19
No 11Aq45 - 0°00	No 03Aq08 - 0°00
Coords: 176W/19S	

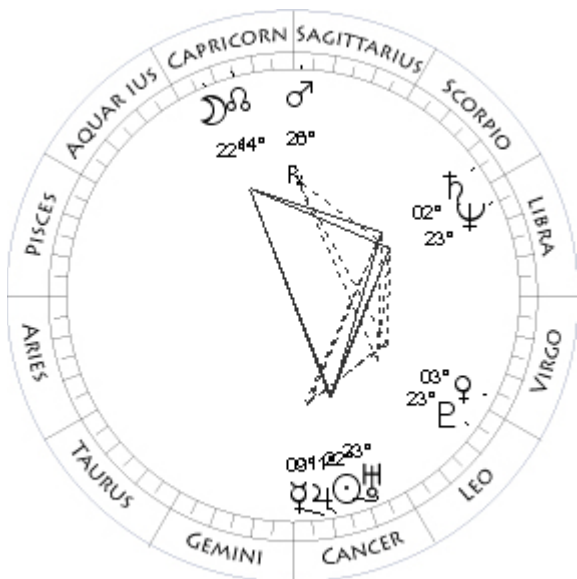
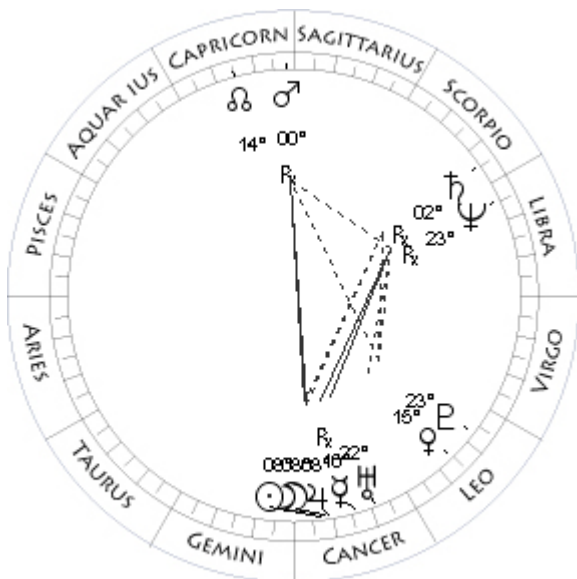
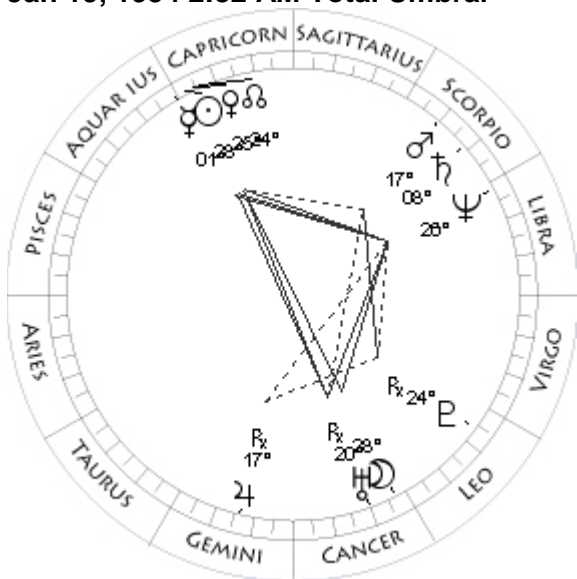
Aug 9, 1953 3:54 PM Partial Solar

Mo 18Cn38 + 1°20	Mo 16Le37 - 1°13
Su 18Cn31 - 0°00	Su 16Le45 - 0°00
Me 08Le22 - 2°45	Me 28Cn46 - 2°12
Ve 03Ge51 - 2°53	Ve 06Cn22 - 1°37
Ma 17Cn51 + 0°58	Ma 07Le01 + 1°06
Ju 14Ge18 - 0°36	Ju 20Ge03 - 0°35
Sa 20Li48 + 2°30	Sa 22Li18 + 2°23
Ur 18Cn45 + 0°25	Ur 20Cn30 + 0°26
Ne 21Li08 + 1°41	Ne 21Li29 + 1°40
Pl 21Le50 + 9°20	Pl 22Le43 + 9°20
No 03Aq57 - 0°00	No 02Aq23 - 0°00

Jan 5, 1954 2:31 AM Annular Solar



Jan 19, 1954 2:32 AM Total Umbral



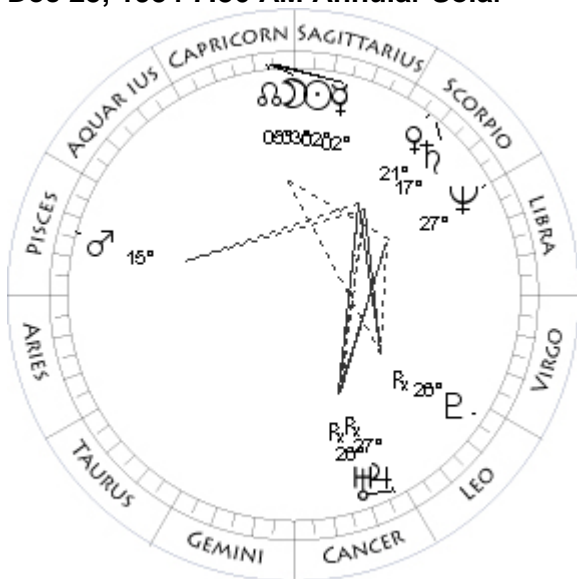
Jun 30, 1954 0:32 PM Total Solar

Mo 14Cp18 - 0°53	Mo 08Cn14 + 0°36
Su 14Cp14 - 0°00	Su 08Cn11 - 0°00
Me 08Cp28 - 1°25	Me 16Cn53 - 3°39R
Ve 08Cp17 - 0°21	Ve 15Le06 + 1°50
Ma 09Sc22 + 1°09	Ma 00Cp51 - 4°33R
Ju 18Ge32 - 0°27R	Ju 08Cn20 - 0°02
Sa 07Sc47 + 2°22	Sa 02Sc40 + 2°32R
Ur 21Cn21 + 0°30R	Ur 22Cn24 + 0°28
Ne 25Li55 + 1°41	Ne 23Li18 + 1°43R
Pl 24Le39 + 9°59R	Pl 23Le16 + 9°46
No 24Cp32 - 0°00	No 15Cp11 - 0°00
Coords: 123E/79S	Coords: 4W/60N

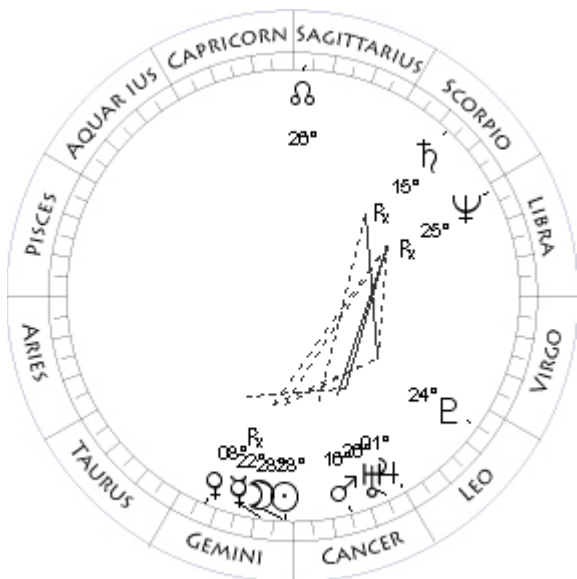
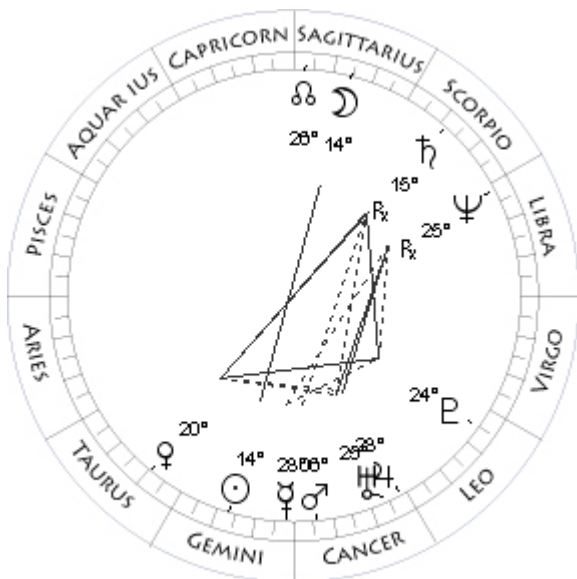
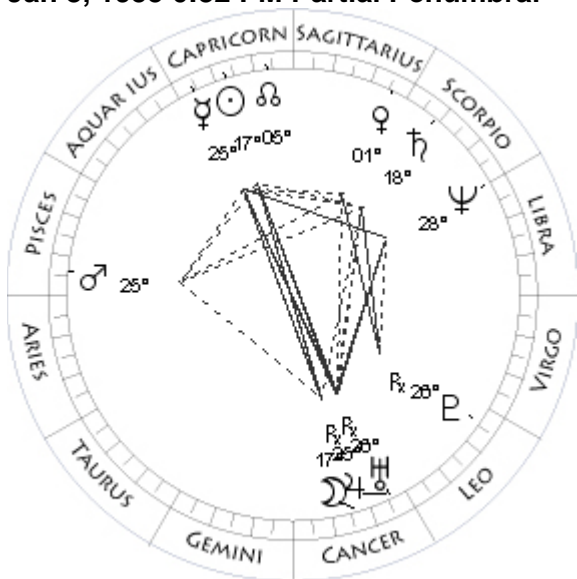
Jul 16, 1954 0:20 AM Partial Umbral

Mo 28Cn27 - 0°25	Mo 22Cp52 + 0°45
Su 28Cp30 - 0°00	Su 22Cn57 - 0°00
Me 01Aq20 - 2°05	Me 09Cn22 - 4°27
Ve 25Cp53 - 0°51	Ve 03Vi03 + 1°24
Ma 17Sc37 + 1°05	Ma 26Sa52 - 4°58R
Ju 17Ge15 - 0°25R	Ju 11Cn50 - 0°00
Sa 08Sc37 + 2°25	Sa 02Sc43 + 2°27
Ur 20Cn44 + 0°30R	Ur 23Cn20 + 0°28
Ne 26Li03 + 1°42	Ne 23Li19 + 1°42
Pl 24Le23 +10°02R	Pl 23Le40 + 9°45
No 23Cp47 - 0°00	No 14Cp22 - 0°00

Dec 25, 1954 7:36 AM Annular Solar



Jan 8, 1955 0:32 PM Partial Penumbral



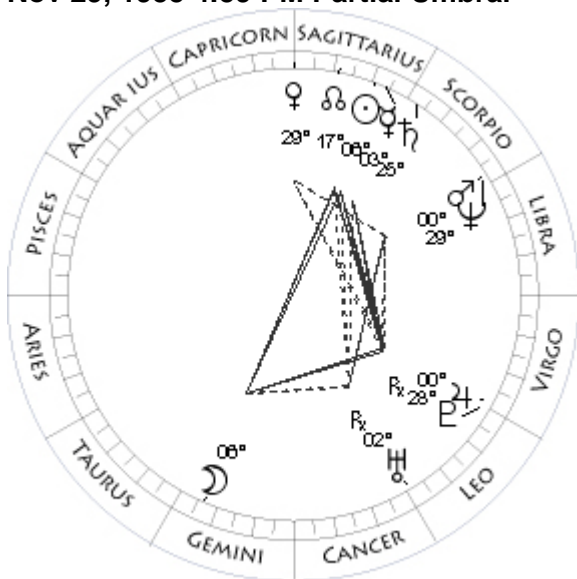
Jun 5, 1955 2:22 PM Partial Penumbral

Mo 03Cp00 - 0°14	Mo 14Sa15 - 1°07
Su 02Cp59 - 0°00	Su 14Ge09 - 0°00
Me 02Cp53 - 1°35	Me 28Ge44 - 0°39
Ve 21Sc15 + 3°37	Ve 20Ta36 - 1°23
Ma 15Pi01 - 0°46	Ma 06Cn54 + 1°03
Ju 27Cn38 + 0°22R	Ju 28Cn36 + 0°31
Sa 17Sc44 + 2°11	Sa 15Sc57 + 2°28R
Ur 26Cn35 + 0°33R	Ur 25Cn21 + 0°31
Ne 27Li53 + 1°41	Ne 25Li44 + 1°46R
Pl 26Le38 +10°21R	Pl 24Le31 +10°16
No 05Cp46 - 0°00	No 27Sa11 - 0°00
Coords: 68W/38S	Coords: 144W/24S

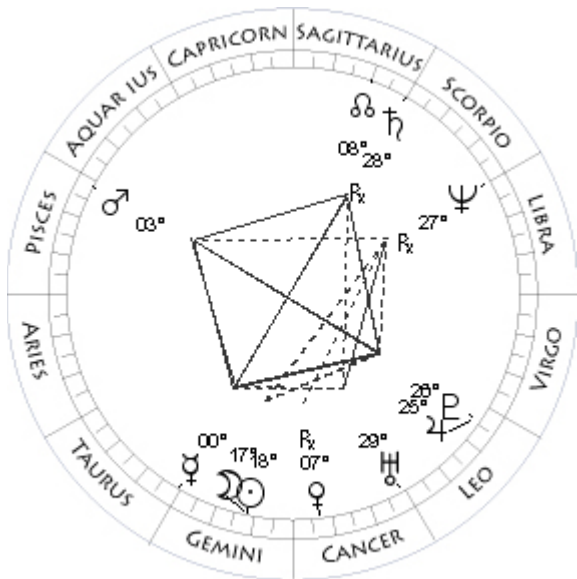
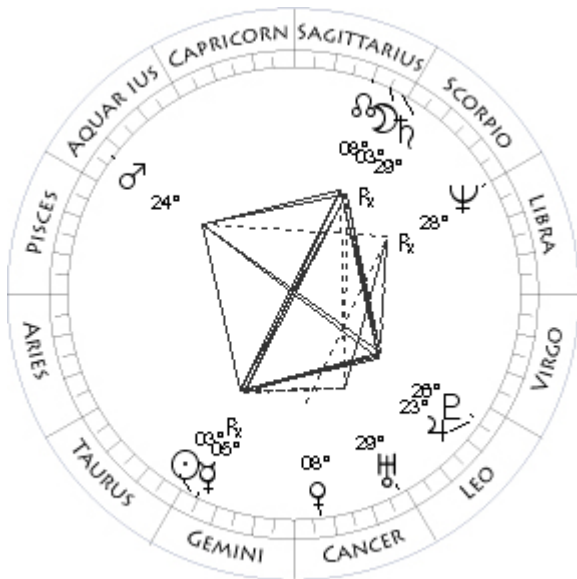
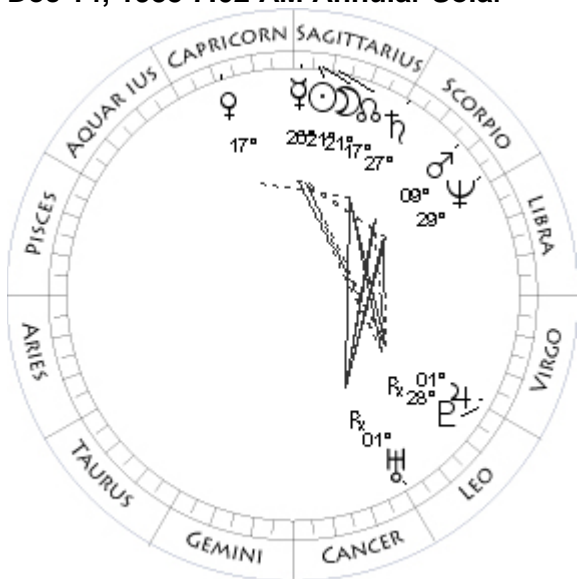
Jun 20, 1955 4:10 AM Total Solar

Mo 17Cn21 - 1°05	Mo 28Ge03 - 0°09
Su 17Cp28 - 0°00	Su 28Ge05 - 0°00
Me 25Cp58 - 2°08	Me 22Ge15 - 4°12R
Ve 01Sa53 + 4°02	Ve 08Ge17 - 0°55
Ma 25Pi13 - 0°28	Ma 16Cn22 + 1°06
Ju 25Cn53 + 0°24R	Ju 01Le26 + 0°31
Sa 18Sc59 + 2°13	Sa 15Sc10 + 2°26R
Ur 26Cn00 + 0°33R	Ur 26Cn07 + 0°31
Ne 28Li07 + 1°42	Ne 25Li33 + 1°45R
Pl 26Le24 +10°25R	Pl 24Le46 +10°14
No 05Cp01 - 0°00	No 26Sa24 - 0°00
Coords: 173W/21N	Coords: 117W/15N

Nov 29, 1955 4:59 PM Partial Umbral



Dec 14, 1955 7:02 AM Annular Solar



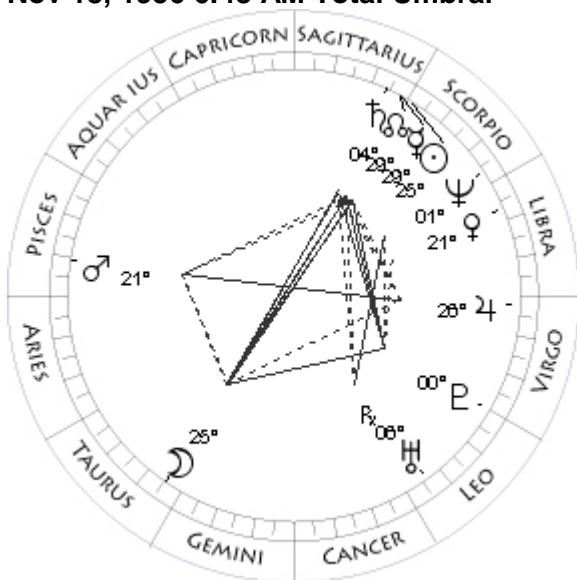
May 24, 1956 3:31 PM Partial Umbral

Mo 06Ge47 + 0°58	Mo 03Sa27 - 0°26
Su 06Sa42 - 0°00	Su 03Ge25 - 0°00
Me 03Sa59 - 0°24	Me 05Ge29 - 1°20R
Ve 29Sa27 - 1°08	Ve 08Cn04 + 3°12
Ma 00Sc26 + 0°50	Ma 24Aq28 - 2°23
Ju 00Vi58 + 0°53	Ju 23Le30 + 1°03
Sa 25Sc20 + 1°57	Sa 29Sc13 + 2°14R
Ur 02Le08 + 0°34R	Ur 29Cn15 + 0°34
Ne 29Li21 + 1°41	Ne 28Li09 + 1°47R
Pl 28Le36 +10°37R	Pl 26Le10 +10°45
No 17Sa48 - 0°00	No 08Sa26 - 0°00
Coords: 102W/22N	Coords: 126W/21S

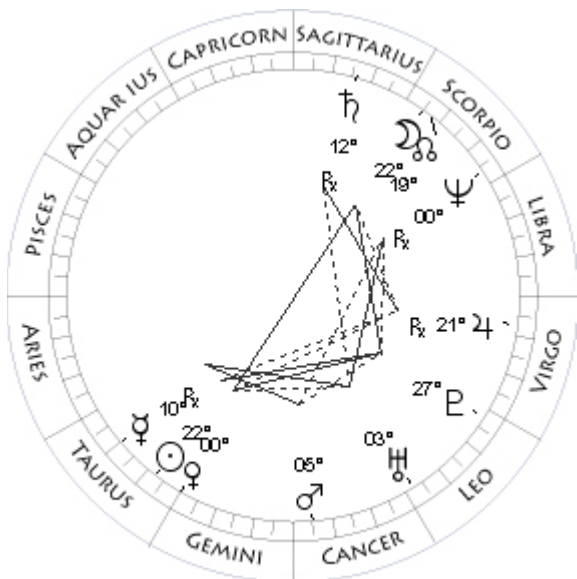
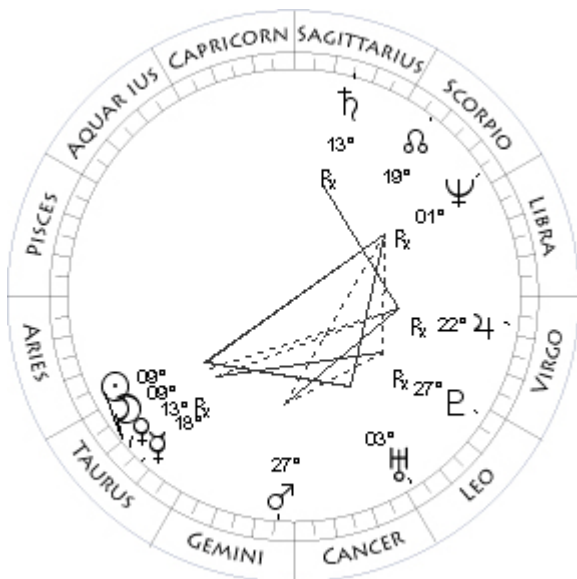
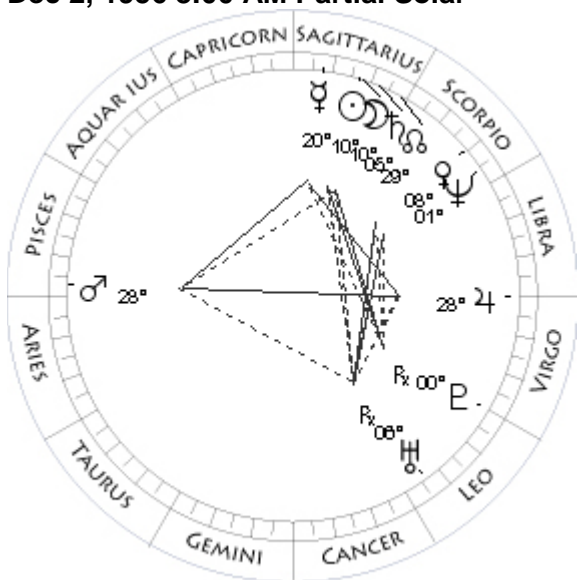
Jun 8, 1956 9:20 PM Total Solar

Mo 21Sa28 + 0°23	Mo 17Ge55 - 0°54
Su 21Sa31 - 0°00	Su 18Ge01 - 0°00
Me 26Sa55 - 1°45	Me 00Ge19 - 4°07
Ve 17Cp36 - 1°33	Ve 07Cn42 + 0°55R
Ma 09Sc54 + 0°44	Ma 03Pi03 - 2°59
Ju 01Vi29 + 0°56	Ju 25Le21 + 1°01
Sa 27Sc00 + 1°57	Sa 28Sc07 + 2°12R
Ur 01Le46 + 0°35R	Ur 29Cn57 + 0°33
Ne 29Li46 + 1°42	Ne 27Li53 + 1°46R
Pl 28Le34 +10°43R	Pl 26Le20 +10°41
No 17Sa02 - 0°00	No 07Sa37 - 0°00
Coords: 72W/ 2N	Coords: 141E/40S

Nov 18, 1956 6:48 AM Total Umbral



Dec 2, 1956 8:00 AM Partial Solar



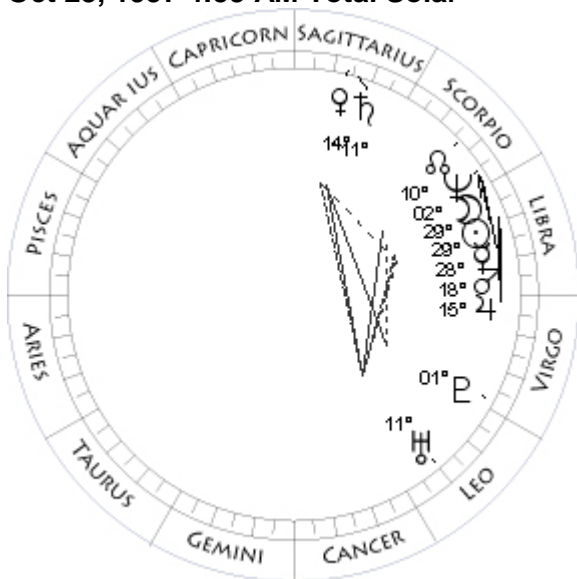
Apr 30, 1957 0:04 AM Partial Solar

Mo 25Ta57 + 0°17	Mo 09Ta28 + 0°56
Su 25Sc55 - 0°00	Su 09Ta24 - 0°00
Me 29Sc02 - 0°42	Me 18Ta28 + 1°49R
Ve 21Li07 + 1°51	Ve 13Ta25 - 0°39
Ma 21Pi50 - 1°16	Ma 27Ge06 + 1°17
Ju 26Vi47 + 1°07	Ju 22Vi23 + 1°29R
Sa 04Sa15 + 1°41	Sa 13Sa14 + 1°52R
Ur 06Le58 + 0°36R	Ur 03Le02 + 0°37
Ne 01Sc06 + 1°41	Ne 01Sc00 + 1°48R
Pl 00Vi24 +10°58	Pl 27Le56 +11°17R
No 29Sc01 - 0°00	No 20Sc24 - 0°00
Coords: 106E/20N	

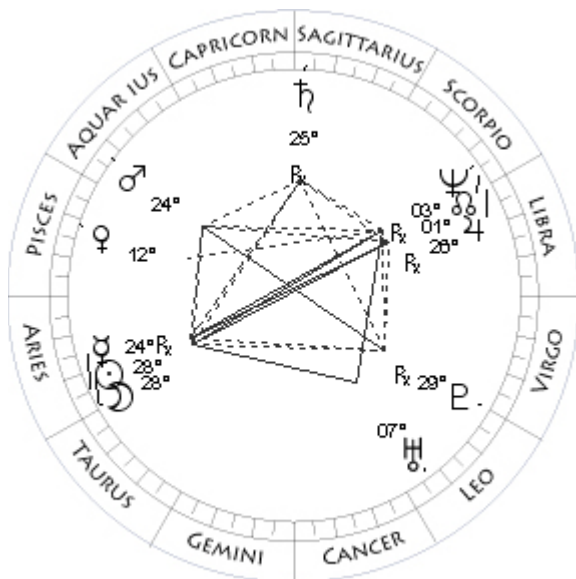
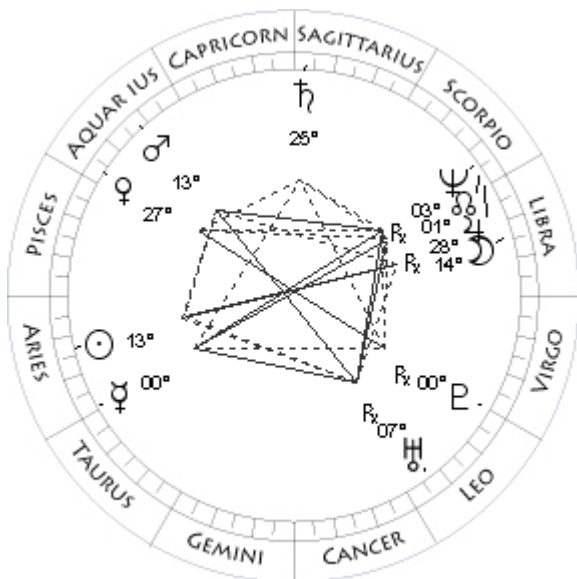
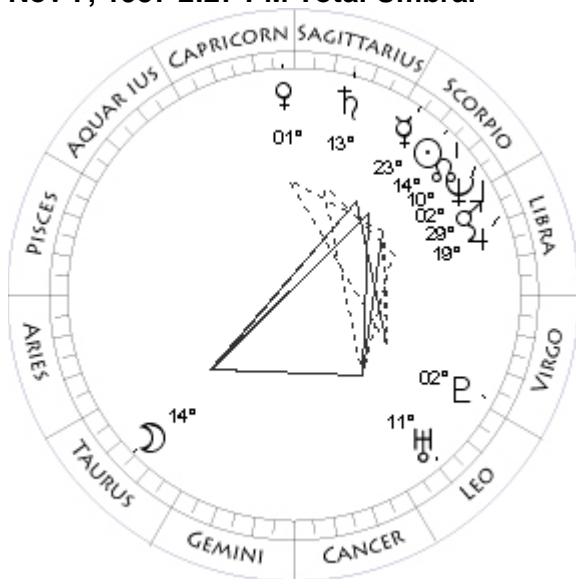
May 13, 1957 10:31 PM Total Umbral

Mo 10Sa02 + 1°00	Mo 22Sc50 + 0°17
Su 10Sa08 - 0°00	Su 22Ta53 - 0°00
Me 20Sa52 - 1°56	Me 10Ta57 - 1°56R
Ve 08Sc22 + 1°49	Ve 00Ge36 - 0°07
Ma 28Pi00 - 0°38	Ma 05Cn50 + 1°17
Ju 28Vi47 + 1°10	Ju 21Vi53 + 1°26R
Sa 05Sa55 + 1°41	Sa 12Sa22 + 1°52R
Ur 06Le48 + 0°37R	Ur 03Le22 + 0°36
Ne 01Sc34 + 1°42	Ne 00Sc39 + 1°48R
Pl 00Vi27 +11°03R	Pl 27Le55 +11°13
No 28Sc17 - 0°00	No 19Sc40 - 0°00
Coords: 21W/18S	

Oct 23, 1957 4:53 AM Total Solar



Nov 7, 1957 2:27 PM Total Umbral



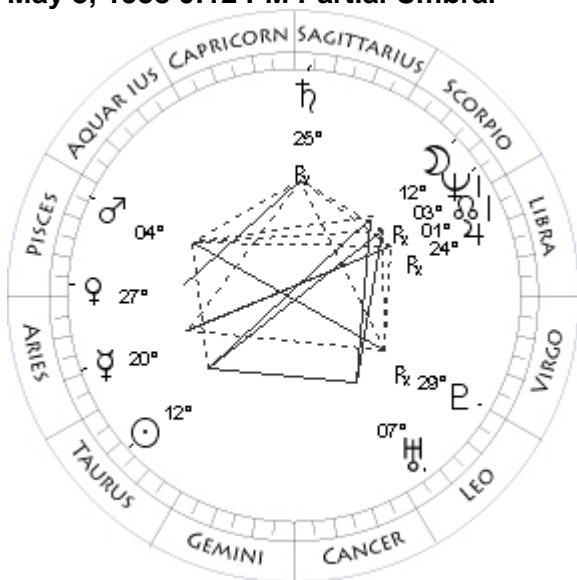
Apr 4, 1958 3:59 AM Partial Penumbral

Mo 29Li37 - 1°00	Mo 14Li01 - 1°34
Su 29Li32 - 0°00	Su 13Ar53 - 0°00
Me 28Li54 + 0°44	Me 00Ta30 + 3°10
Ve 14Sa53 - 2°46	Ve 27Aq37 + 1°27
Ma 18Li57 + 0°42	Ma 13Aq07 - 1°11
Ju 15Li56 + 1°07	Ju 28Li26 + 1°32R
Sa 11Sa33 + 1°26	Sa 25Sa42 + 1°24
Ur 11Le23 + 0°38	Ur 07Le35 + 0°40R
Ne 02Sc14 + 1°42	Ne 03Sc57 + 1°49R
Pl 01Vi53 +11°12	Pl 00Vi06 +11°48R
No 11Sc05 - 0°00	No 02Sc27 - 0°00

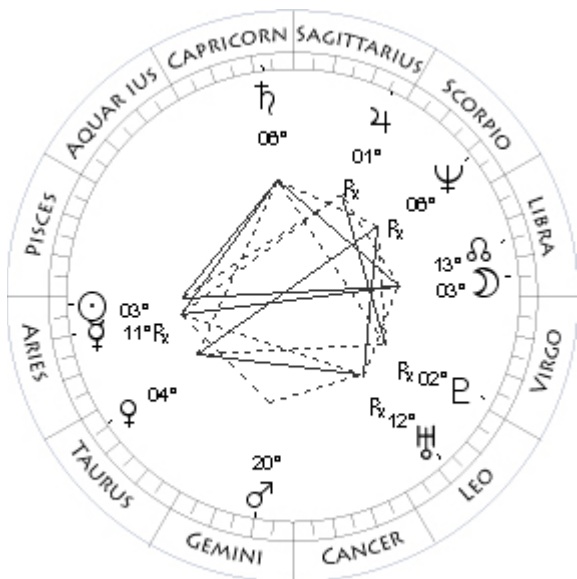
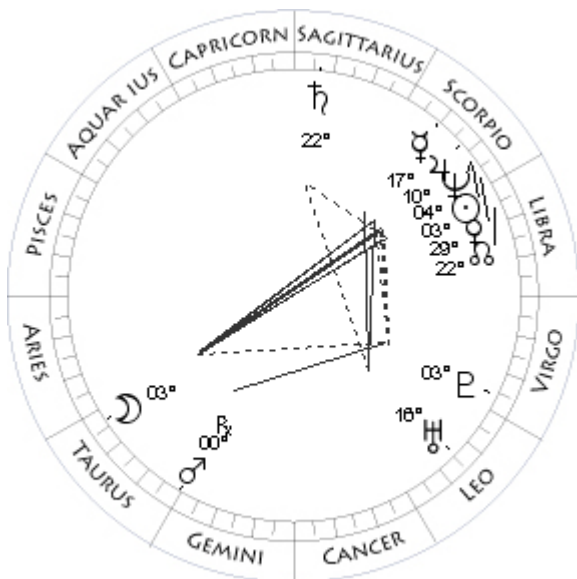
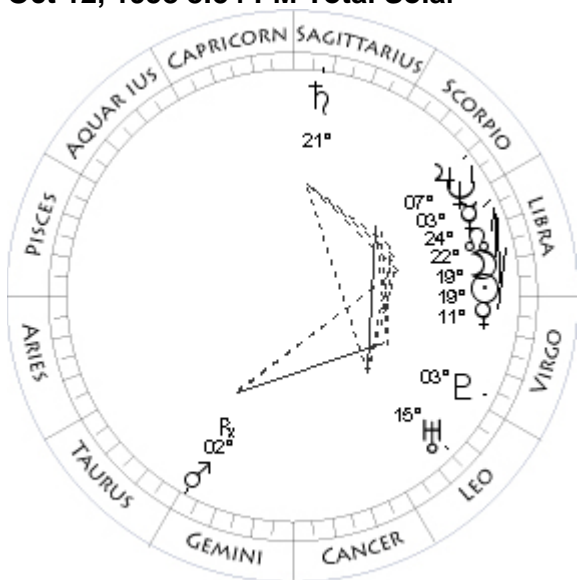
Apr 19, 1958 3:26 AM Annular Solar

Mo 14Ta53 - 0°24	Mo 28Ar35 + 0°15
Su 14Sc56 - 0°00	Su 28Ar35 - 0°00
Me 23Sc38 - 0°58	Me 24Ar34 + 1°18R
Ve 01Cp44 - 3°15	Ve 12Pi32 - 0°05
Ma 29Li10 + 0°35	Ma 24Aq09 - 1°25
Ju 19Li10 + 1°07	Ju 26Li33 + 1°32R
Sa 13Sa09 + 1°24	Sa 25Sa32 + 1°25R
Ur 11Le37 + 0°38	Ur 07Le32 + 0°39
Ne 02Sc49 + 1°42	Ne 03Sc33 + 1°49R
Pl 02Vi09 +11°18	Pl 29Le54 +11°45R
No 10Sc16 - 0°00	No 01Sc39 - 0°00
Coords: 139W/16N	Coords: 123W/26N

May 3, 1958 0:12 PM Partial Umbral



Oct 12, 1958 8:54 PM Total Solar



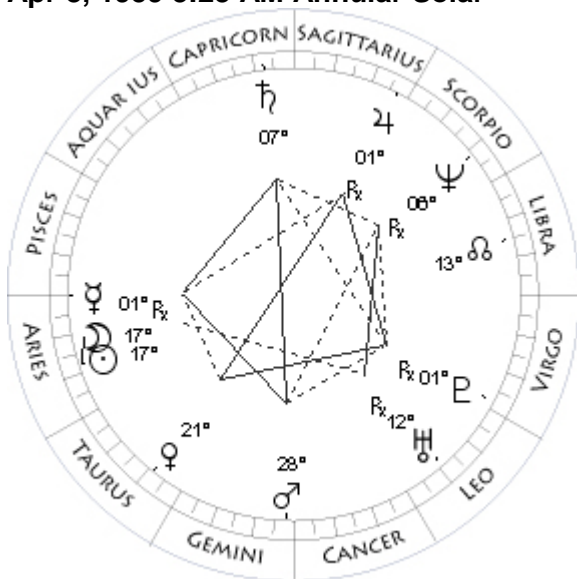
Oct 27, 1958 3:27 PM Partial Penumbral

Mo 12Sc26 + 1°02	Mo 03Ta36 - 1°02
Su 12Ta33 - 0°00	Su 03Sc43 - 0°00
Me 20Ar25 - 2°15	Me 17Sc35 - 1°13
Ve 27Pi50 - 1°09	Ve 29Li58 + 1°07
Ma 04Pi43 - 1°38	Ma 00Ge20 - 0°38R
Ju 24Li46 + 1°31R	Ju 10Sc17 + 0°57
Sa 25Sa03 + 1°26R	Sa 22Sa15 + 1°03
Ur 07Le41 + 0°39	Ur 16Le04 + 0°39
Ne 03Sc09 + 1°49R	Ne 04Sc30 + 1°42
Pl 29Le48 +11°42R	Pl 03Vi50 +11°37
No 00Sc54 - 0°00	No 21Li31 - 0°00
Coords: 176W/15S	Coords: 124W/12N

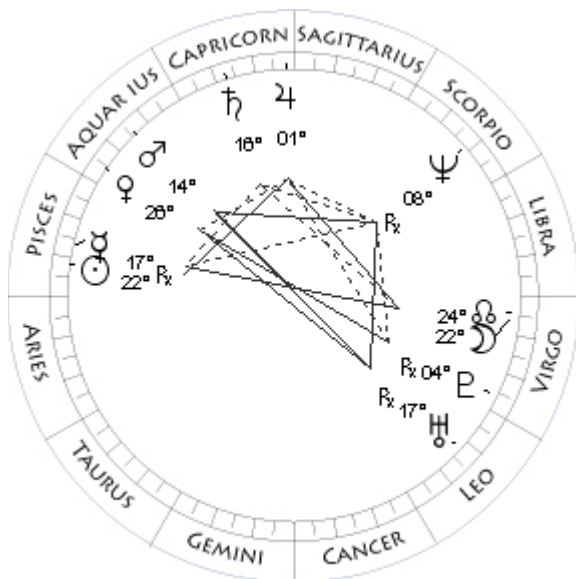
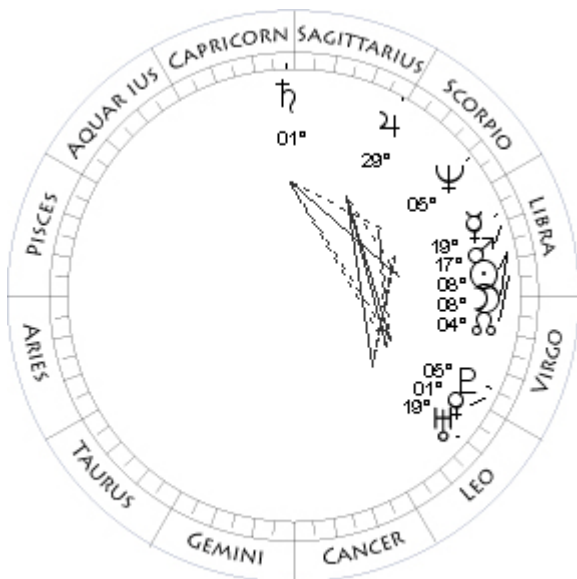
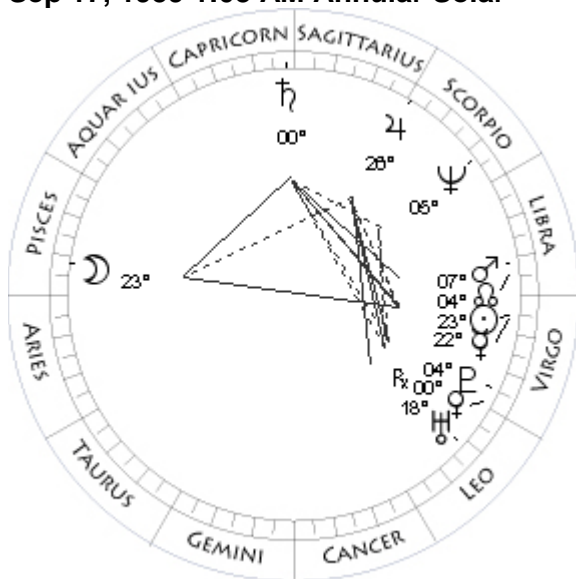
Mar 24, 1959 8:11 PM Partial Umbral

Mo 19Li02 - 0°18	Mo 03Li31 - 0°53
Su 19Li02 - 0°00	Su 03Ar27 - 0°00
Me 24Li17 + 0°26	Me 11Ar25 + 3°28R
Ve 11Li28 + 1°24	Ve 04Ta46 + 0°09
Ma 02Ge29 - 1°18R	Ma 20Ge53 + 1°50
Ju 07Sc05 + 0°58	Ju 01Sa56 + 1°05R
Sa 21Sa02 + 1°06	Sa 06Cp38 + 0°57
Ur 15Le38 + 0°39	Ur 12Le31 + 0°42R
Ne 03Sc57 + 1°42	Ne 06Sc26 + 1°49R
Pl 03Vi30 +11°32	Pl 02Vi14 +12°16R
No 22Li18 - 0°00	No 13Li40 - 0°00
Coords: 142E/24S	

Apr 8, 1959 3:23 AM Annular Solar



Sep 17, 1959 1:03 AM Annular Solar



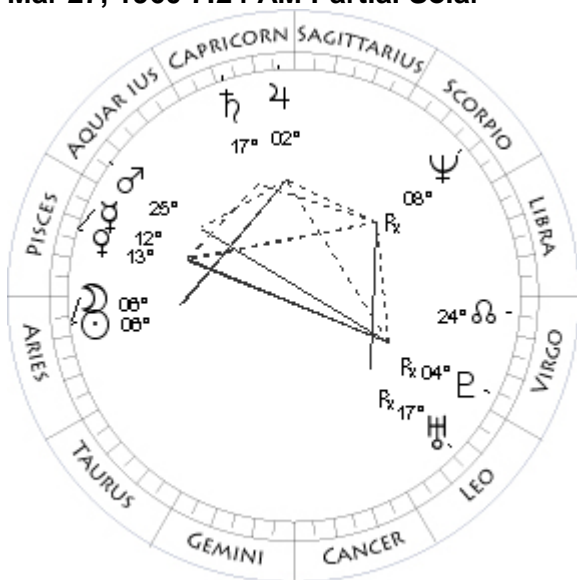
Oct 2, 1959 0:26 PM Total Solar

Mo 17Ar30 - 0°24	Mo 08Li31 + 0°25
Su 17Ar34 - 0°00	Su 08Li34 - 0°00
Me 01Ar20 + 0°39R	Me 19Li33 + 0°08
Ve 21Ta59 + 0°54	Ve 01Vi38 - 4°38
Ma 28Ge44 + 1°46	Ma 17Li22 + 0°31
Ju 01Sa22 + 1°06R	Ju 29Sc27 + 0°38
Sa 07Cp00 + 0°57	Sa 01Cp04 + 0°42
Ur 12Le17 + 0°42R	Ur 19Le43 + 0°40
Ne 06Sc05 + 1°49R	Ne 05Sc40 + 1°43
Pl 01Vi58 +12°13R	Pl 05Vi05 +11°53
No 12Li55 - 0°00	No 03Li31 - 0°00
Coords: 138W/19S	

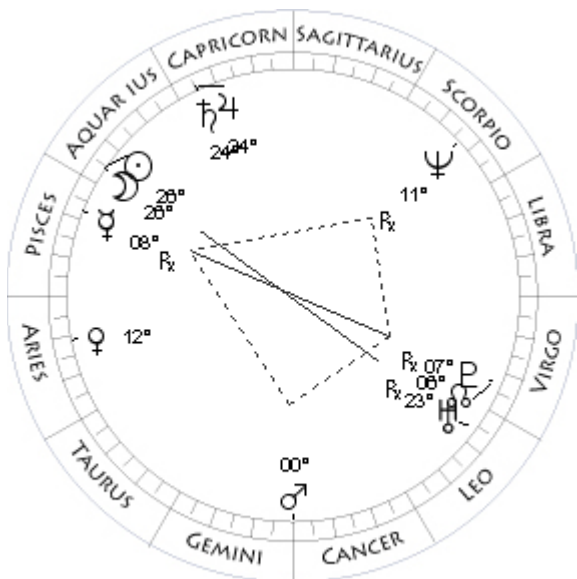
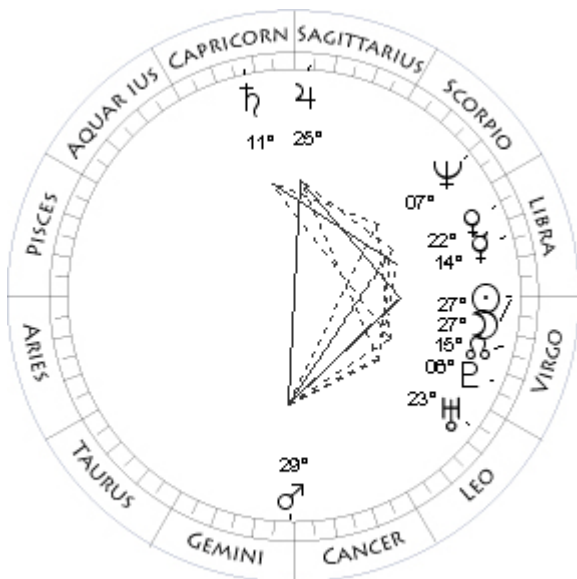
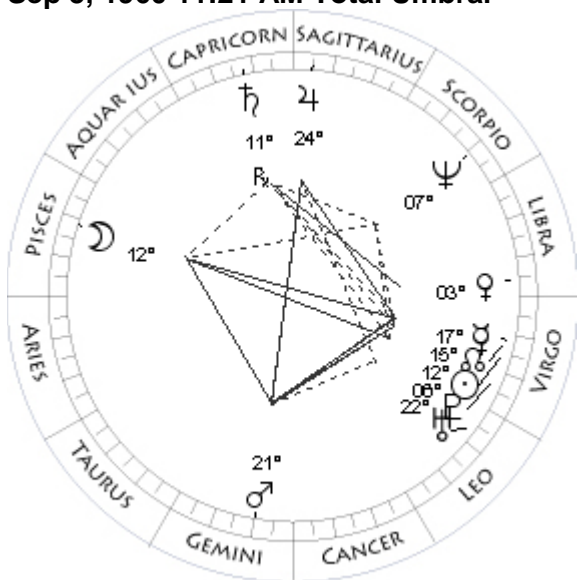
Mar 13, 1960 8:28 AM Total Umbra

Mo 23Pi30 + 0°58	Mo 22Vi48 - 0°10
Su 23Vi24 - 0°00	Su 22Pi47 - 0°00
Me 22Vi41 + 1°36	Me 17Pi55 + 3°17R
Ve 00Vi30 - 7°26R	Ve 26Aq39 - 0°55
Ma 07Li12 + 0°39	Ma 14Aq41 - 1°06
Ju 26Sc55 + 0°40	Ju 01Cp28 + 0°26
Sa 00Cp35 + 0°45	Sa 16Cp49 + 0°29
Ur 18Le57 + 0°40	Ur 17Le40 + 0°44R
Ne 05Sc11 + 1°43	Ne 08Sc51 + 1°49R
Pl 04Vi36 +11°49	Pl 04Vi27 +12°42R
No 04Li20 - 0°00	No 24Vi54 - 0°00
Coords: 125E/ 3N	

Mar 27, 1960 7:24 AM Partial Solar



Sep 5, 1960 11:21 AM Total Umbral



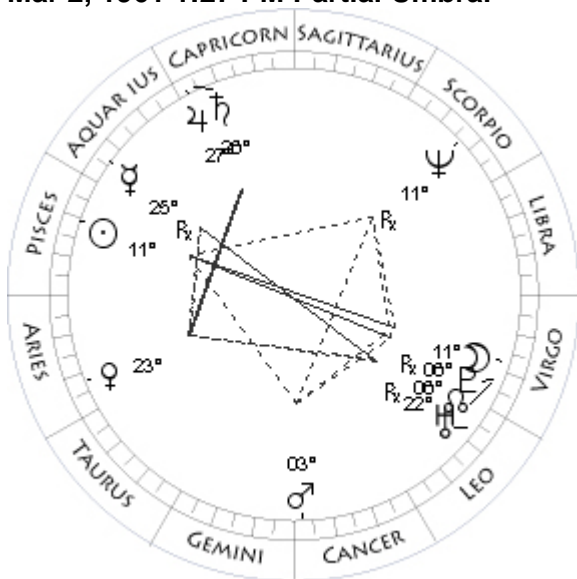
Sep 20, 1960 10:59 PM Partial Solar

Mo 06Ar31 - 1°05	Mo 27Vi51 + 1°08
Su 06Ar39 - 0°00	Su 27Vi58 - 0°00
Me 12Pi30 + 0°03	Me 14Li11 - 0°11
Ve 13Pi51 - 1°19	Ve 22Li19 + 0°32
Ma 25Aq25 - 1°13	Ma 29Ge53 - 0°07
Ju 02Cp45 + 0°25	Ju 25Sa16 + 0°05
Sa 17Cp38 + 0°29	Sa 11Cp50 + 0°16
Ur 17Le16 + 0°44R	Ur 23Le40 + 0°41
Ne 08Sc35 + 1°49R	Ne 07Sc26 + 1°44
Pl 04Vi08 +12°41R	Pl 06Vi38 +12°13
No 24Vi09 - 0°00	No 14Vi45 - 0°00

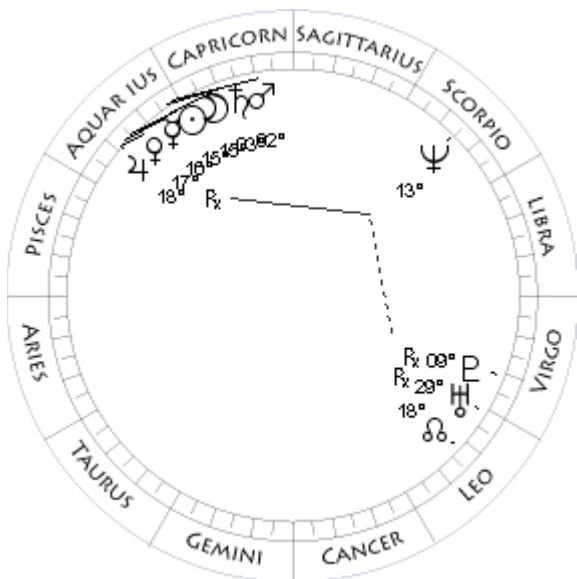
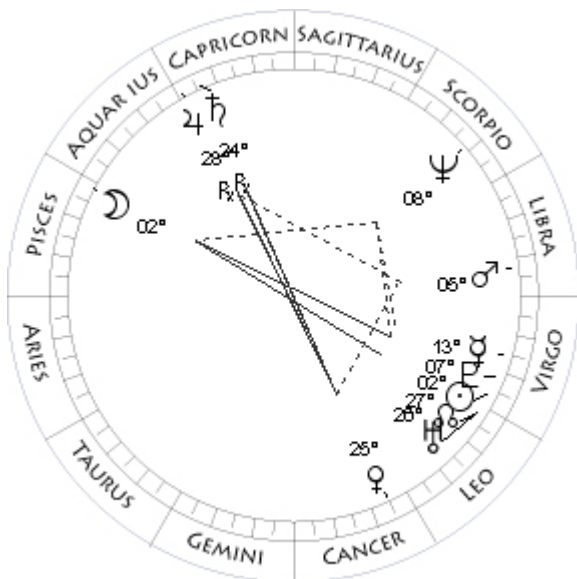
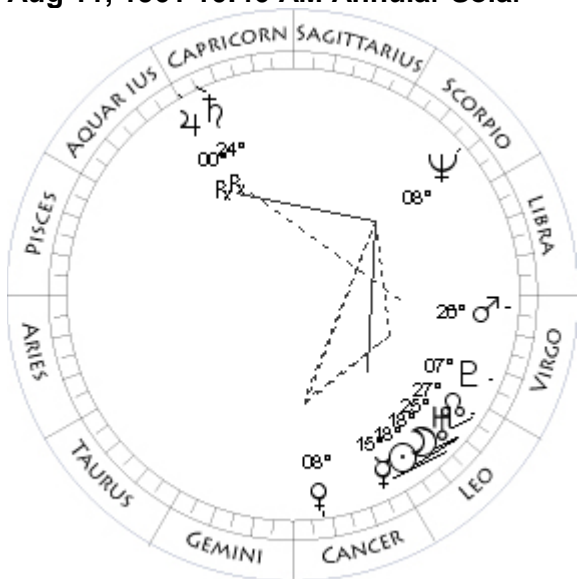
Feb 15, 1961 8:18 AM Total Solar

Mo 12Pi54 + 0°14	Mo 26Aq30 + 0°53
Su 12Vi53 - 0°00	Su 26Aq26 - 0°00
Me 17Vi58 + 1°26	Me 08Pi41 + 2°54R
Ve 03Li17 + 1°05	Ve 12Ar08 + 2°32
Ma 21Ge24 - 0°27	Ma 00Cn30 + 3°19
Ju 24Sa10 + 0°07	Ju 24Cp26 - 0°10
Sa 11Cp54 + 0°18R	Sa 24Cp49 + 0°04
Ur 22Le47 + 0°41	Ur 23Le38 + 0°46R
Ne 07Sc00 + 1°44	Ne 11Sc19 + 1°47R
Pl 06Vi08 +12°11	Pl 07Vi07 +13°05R
No 15Vi34 - 0°00	No 06Vi57 - 0°00
Coords: 40W/47N	

Mar 2, 1961 1:27 PM Partial Umbral



Aug 11, 1961 10:46 AM Annular Solar



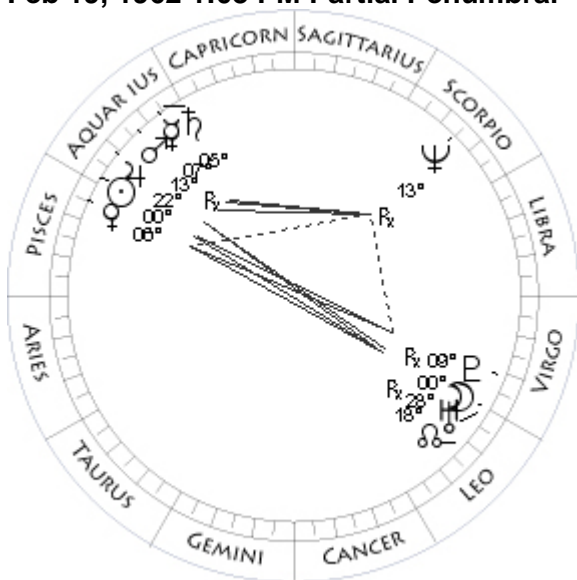
Aug 26, 1961 3:08 AM Partial Umbral

Mo 11Vi41 + 0°30	Mo 02Pi35 - 0°30
Su 11Pi45 - 0°00	Su 02Vi39 - 0°00
Me 25Aq25 + 2°39R	Me 13Vi33 + 1°15
Ve 23Ar15 + 4°40	Ve 25Cn56 - 0°36
Ma 03Cn18 + 2°59	Ma 05Li49 + 0°30
Ju 27Cp35 - 0°12	Ju 28Cp36 - 0°40R
Sa 26Cp21 + 0°02	Sa 24Cp04 - 0°12R
Ur 22Le59 + 0°46R	Ur 26Le34 + 0°42
Ne 11Sc13 + 1°48R	Ne 08Sc54 + 1°45
Pl 06Vi43 +13°07R	Pl 07Vi40 +12°33
No 06Vi08 - 0°00	No 26Le47 - 0°00
Coords: 161W/ 8N	

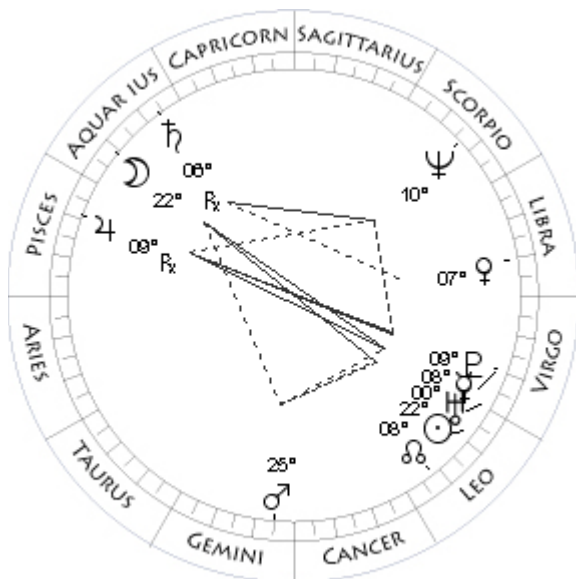
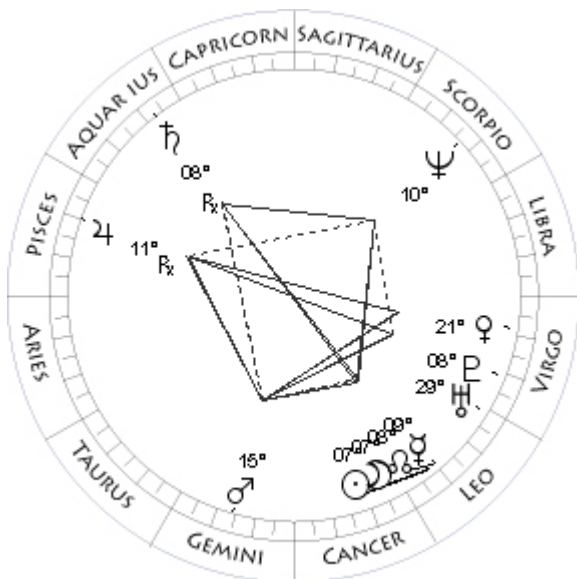
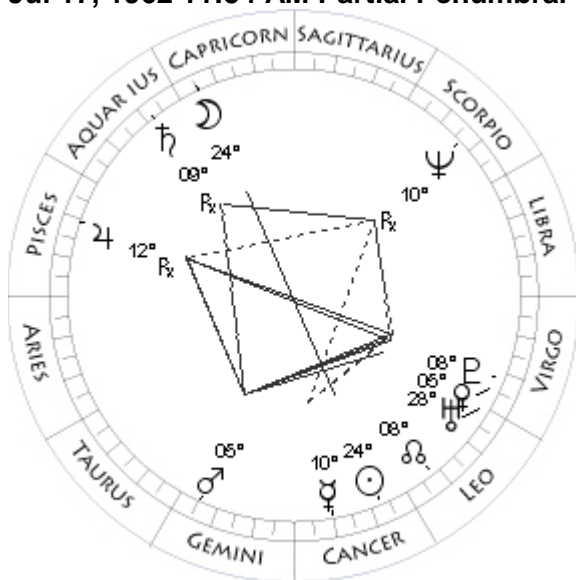
Feb 5, 1962 0:11 AM Total Solar

Mo 18Le35 - 0°47	Mo 15Aq43 + 0°13
Su 18Le31 - 0°00	Su 15Aq43 - 0°00
Me 15Le06 + 1°40	Me 16Aq55 + 3°32R
Ve 08Cn54 - 1°27	Ve 17Aq47 - 1°18
Ma 26Vi29 + 0°39	Ma 02Aq22 - 1°00
Ju 00Aq06 - 0°39R	Ju 18Aq37 - 0°41
Sa 24Cp55 - 0°11R	Sa 03Aq49 - 0°22
Ur 25Le40 + 0°42	Ur 29Le02 + 0°47R
Ne 08Sc40 + 1°46	Ne 13Sc28 + 1°47
Pl 07Vi11 +12°33	Pl 09Vi25 +13°27R
No 27Le34 - 0°00	No 18Le10 - 0°00
Coords: 4W/46S	

Feb 19, 1962 1:03 PM Partial Penumbral



Jul 17, 1962 11:54 AM Partial Penumbral



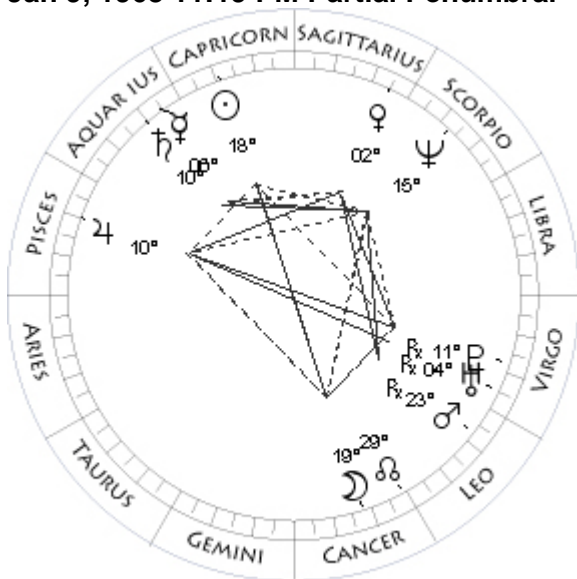
Jul 31, 1962 0:25 PM Annular Solar

Mo 00Vi18 + 1°07	Mo 07Le49 - 0°06
Su 00Pi25 - 0°00	Su 07Le49 - 0°00
Me 07Aq24 + 1°57R	Me 09Le57 + 1°44
Ve 06Pi00 - 1°27	Ve 21Vi00 + 0°33
Ma 13Aq43 - 1°04	Ma 15Ge29 - 0°11
Ju 22Aq06 - 0°43	Ju 11Pi21 - 1°18R
Sa 05Aq29 - 0°23	Sa 08Aq05 - 0°42R
Ur 28Le25 + 0°47R	Ur 29Le26 + 0°43
Ne 13Sc29 + 1°47R	Ne 10Sc44 + 1°47
Pl 09Vi03 +13°30R	Pl 08Vi45 +12°56
No 17Le24 - 0°00	No 08Le49 - 0°00
Coords: 168W/12N	

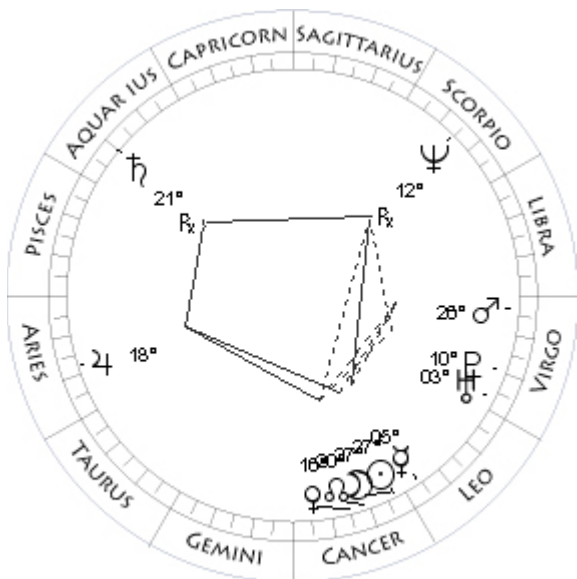
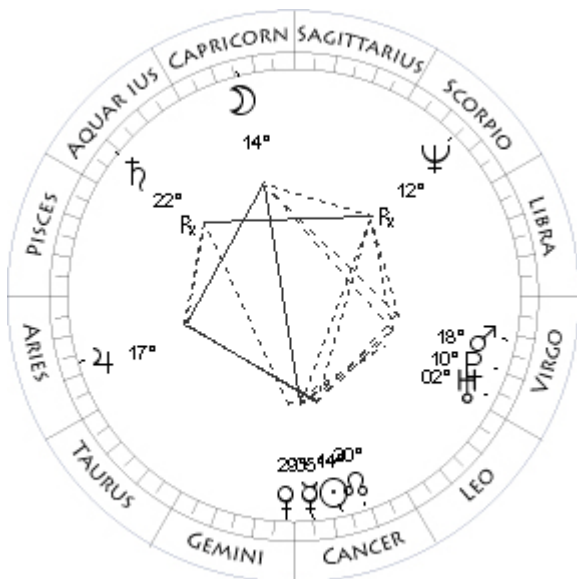
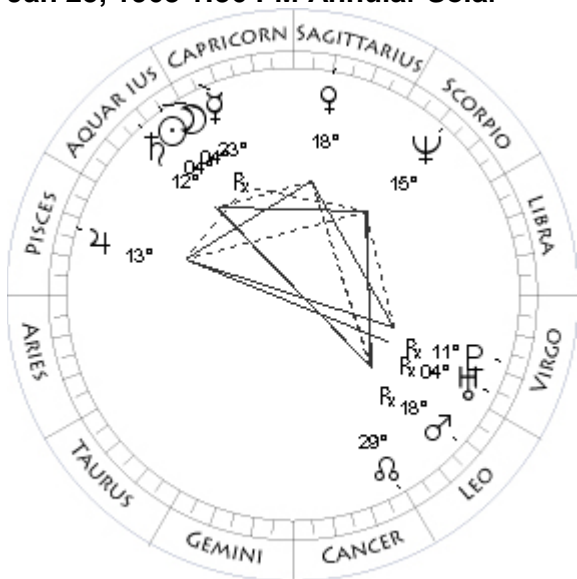
Aug 15, 1962 7:56 PM Partial Penumbral

Mo 24Cp32 + 1°19	Mo 22Aq21 - 1°13
Su 24Cn25 - 0°00	Su 22Le30 - 0°00
Me 10Cn55 + 0°07	Me 08Vi50 + 1°01
Ve 05Vi13 + 1°19	Ve 07Li38 - 0°38
Ma 05Ge51 - 0°23	Ma 25Ge41 + 0°02
Ju 12Pi19 - 1°14R	Ju 09Pi44 - 1°21R
Sa 09Aq06 - 0°41R	Sa 06Aq58 - 0°43R
Ur 28Le38 + 0°43	Ur 00Vi22 + 0°43
Ne 10Sc44 + 1°47R	Ne 10Sc52 + 1°46
Pl 08Vi21 +12°59	Pl 09Vi15 +12°55
No 09Le33 - 0°00	No 08Le00 - 0°00
Coords: 177E/20S	

Jan 9, 1963 11:19 PM Partial Penumbral



Jan 25, 1963 1:36 PM Annular Solar



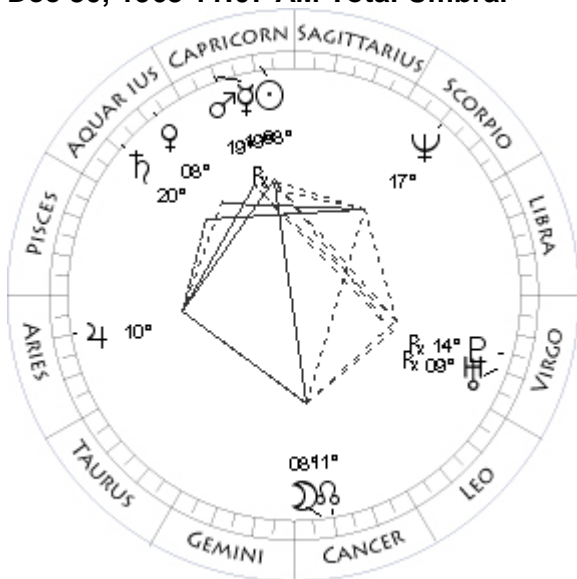
Jul 6, 1963 10:02 PM Partial Umbral

Mo 19Cn04 - 0°58	Mo 14Cp09 + 0°35
Su 18Cp59 - 0°00	Su 14Cn06 - 0°00
Me 06Aq29 + 0°19	Me 05Cn47 + 0°34
Ve 02Sa52 + 3°57	Ve 29Ge20 - 0°12
Ma 23Le21 + 3°59R	Ma 18Vi06 + 0°45
Ju 10Pi40 - 1°06	Ju 17Ar41 - 1°19
Sa 10Aq57 - 0°46	Sa 22Aq14 - 1°10R
Ur 04Vi54 + 0°47R	Ur 02Vi36 + 0°44
Ne 15Sc17 + 1°45	Ne 12Sc59 + 1°48R
Pl 11Vi59 +13°41R	Pl 10Vi04 +13°24
No 00Le13 - 0°00	No 20Cn47 - 0°00
Coords: 12W/21N	Coords: 31W/22S

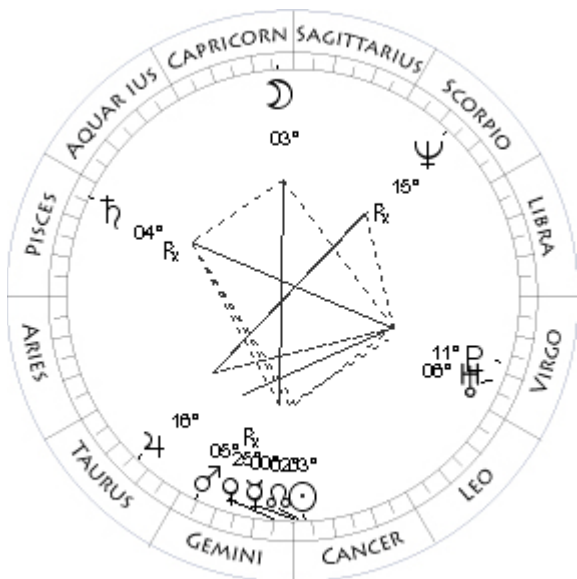
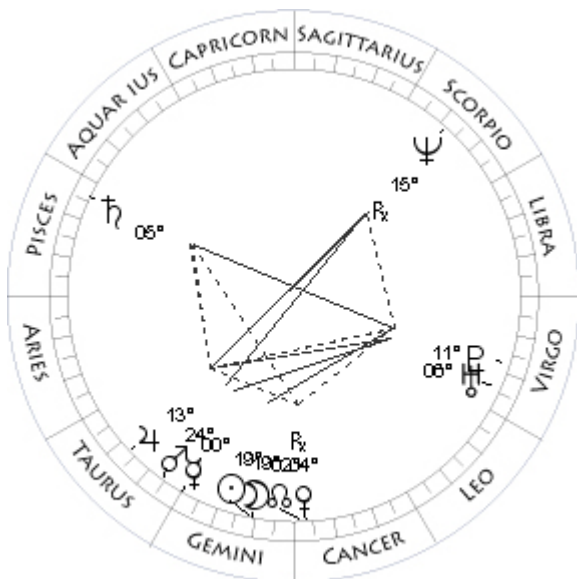
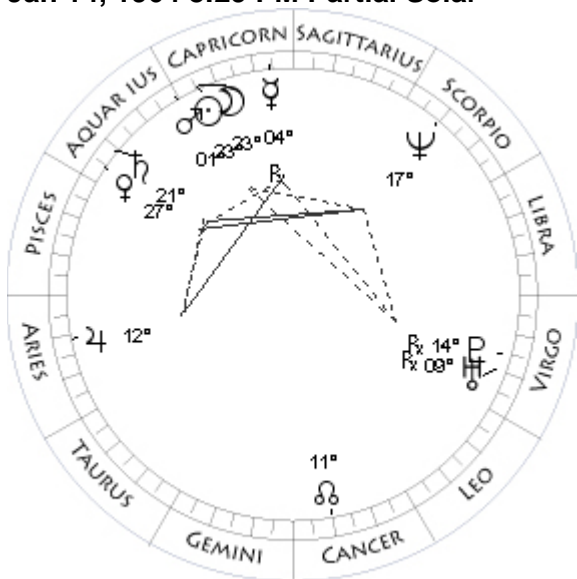
Jul 20, 1963 8:35 PM Total Solar

Mo 04Aq48 - 0°28	Mo 27Cn20 + 0°38
Su 04Aq52 - 0°00	Su 27Cn24 - 0°00
Me 23Cp40 + 3°31R	Me 05Le19 + 1°48
Ve 18Sa02 + 3°32	Ve 16Cn24 + 0°22
Ma 18Le49 + 4°27R	Ma 26Vi14 + 0°33
Ju 13Pi52 - 1°05	Ju 18Ar51 - 1°22
Sa 12Aq46 - 0°47	Sa 21Aq26 - 1°12R
Ur 04Vi24 + 0°48R	Ur 03Vi18 + 0°44
Ne 15Sc32 + 1°46	Ne 12Sc54 + 1°47R
Pl 11Vi43 +13°47R	Pl 10Vi25 +13°20
No 29Cn23 - 0°00	No 20Cn03 - 0°00
	Coords: 120E/61N

Dec 30, 1963 11:07 AM Total Umbral



Jan 14, 1964 8:29 PM Partial Solar



Jun 10, 1964 4:33 AM Partial Solar

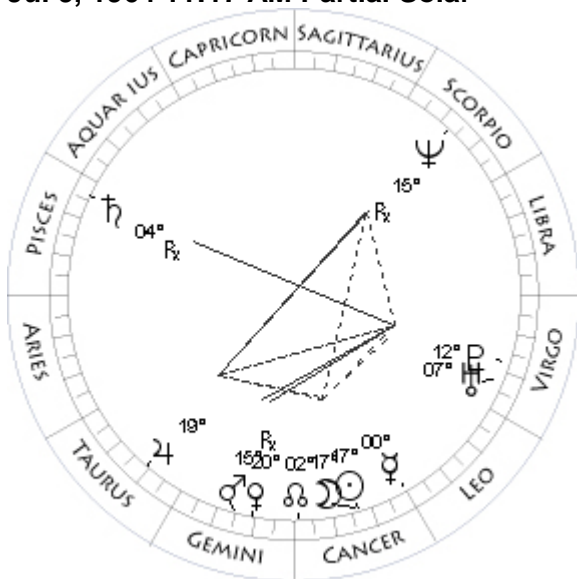
Mo 08Cn03 - 0°17	Mo 19Ge25 - 1°09
Su 08Cp02 - 0°00	Su 19Ge19 - 0°00
Me 19Cp09 + 1°11R	Me 00Ge56 - 1°44
Ve 08Aq16 - 1°47	Ve 04Cn09 + 0°27R
Ma 19Cp15 - 1°01	Ma 24Ta46 - 0°14
Ju 10Ar36 - 1°19	Ju 13Ta44 - 1°00
Sa 20Aq16 - 1°11	Sa 05Pi01 - 1°30
Ur 09Vi58 + 0°47R	Ur 06Vi15 + 0°46
Ne 17Sc09 + 1°44	Ne 15Sc36 + 1°49R
Pl 14Vi11 +13°58R	Pl 11Vi40 +13°54
No 11Cn26 - 0°00	No 02Cn49 - 0°00

Coords: 166E/23N

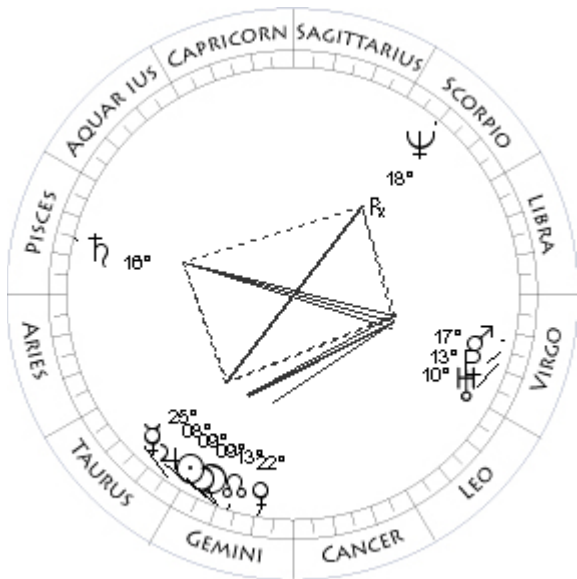
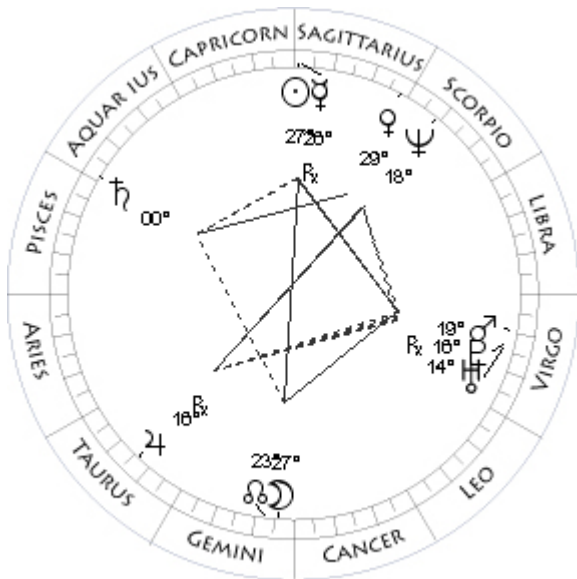
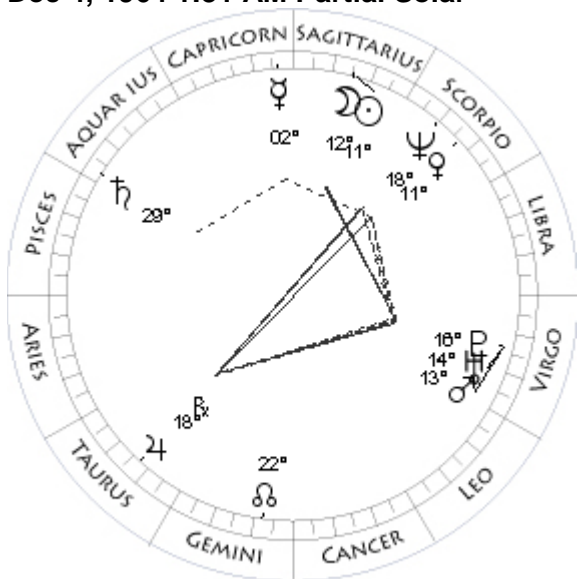
Jun 25, 1964 1:06 AM Total Umbral

Mo 23Cp35 - 1°08	Mo 03Cp29 - 0°08
Su 23Cp43 - 0°00	Su 03Cn30 - 0°00
Me 04Cp31 + 3°02R	Me 00Cn44 + 0°54
Ve 27Aq14 - 1°39	Ve 25Ge31 - 2°56R
Ma 01Aq16 - 1°04	Ma 05Ge23 - 0°04
Ju 12Ar14 - 1°15	Ju 16Ta49 - 1°01
Sa 21Aq54 - 1°11	Sa 04Pi57 - 1°34R
Ur 09Vi40 + 0°48R	Ur 06Vi42 + 0°45
Ne 17Sc30 + 1°45	Ne 15Sc20 + 1°48R
Pl 14Vi00 +14°05R	Pl 11Vi52 +13°49
No 10Cn38 - 0°00	No 02Cn02 - 0°00

Jul 9, 1964 11:17 AM Partial Solar



Dec 4, 1964 1:31 AM Partial Solar



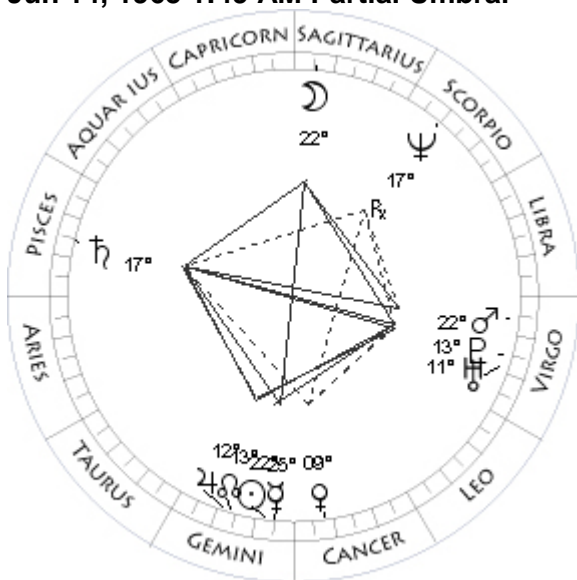
Dec 19, 1964 2:37 AM Total Umbral

Mo 17Cn07 + 1°22	Mo 27Ge11 + 0°23
Su 17Cn16 - 0°00	Su 27Sa14 - 0°00
Me 00Le52 + 1°51	Me 26Sa38 + 2°05R
Ve 20Ge26 - 4°56R	Ve 29Sc47 + 1°25
Ma 15Ge29 + 0°06	Ma 19Vi39 + 2°32
Ju 19Ta31 - 1°02	Ju 16Ta57 - 1°07R
Sa 04Pi34 - 1°37R	Sa 00Pi13 - 1°36
Ur 07Vi17 + 0°45	Ur 14Vi51 + 0°47
Ne 15Sc09 + 1°48R	Ne 18Sc57 + 1°43
Pl 12Vi09 +13°45	Pl 16Vi20 +14°14R
No 01Cn16 - 0°00	No 22Ge40 - 0°00

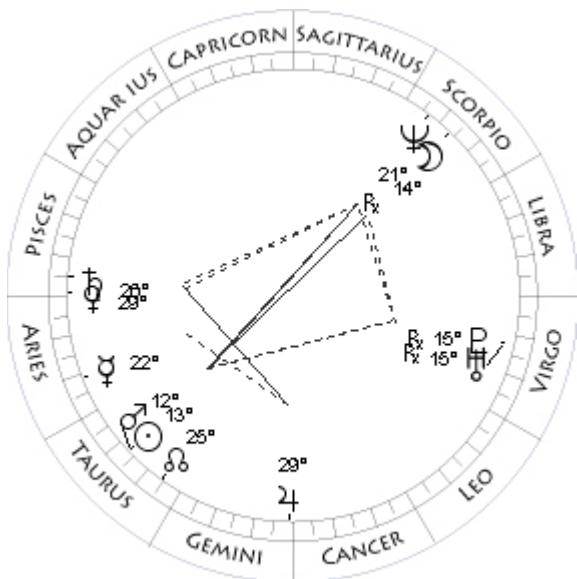
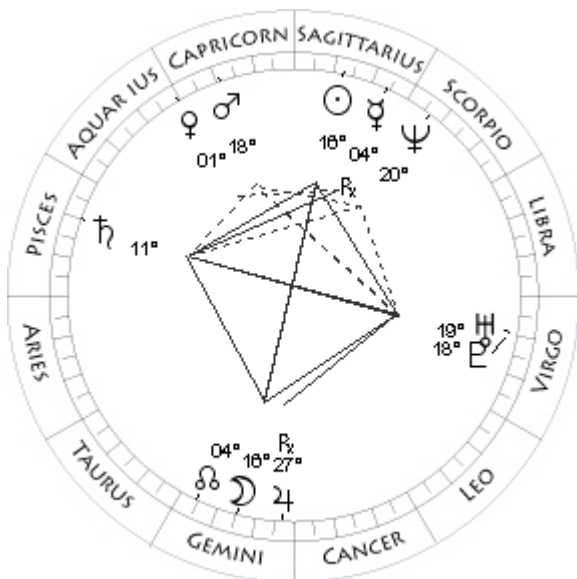
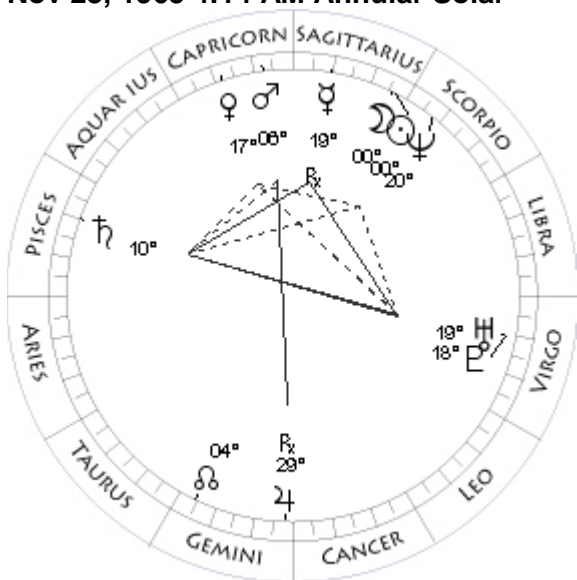
May 30, 1965 9:17 PM Total Solar

Mo 12Sa02 + 1°00	Mo 09Ge15 - 0°25
Su 11Sa57 - 0°00	Su 09Ge14 - 0°00
Me 02Cp50 - 1°56	Me 25Ta30 - 1°11
Ve 11Sc07 + 1°46	Ve 22Ge05 + 0°36
Ma 13Vi35 + 2°13	Ma 17Vi12 + 1°04
Ju 18Ta23 - 1°11R	Ju 08Ge48 - 0°34
Sa 29Aq14 - 1°37	Sa 16Pi34 - 1°49
Ur 14Vi43 + 0°46	Ur 10Vi46 + 0°46
Ne 18Sc27 + 1°43	Ne 18Sc05 + 1°49R
Pl 16Vi16 +14°06	Pl 13Vi41 +14°20
No 23Ge27 - 0°00	No 14Ge02 - 0°00

Jun 14, 1965 1:49 AM Partial Umbral



Nov 23, 1965 4:14 AM Annular Solar



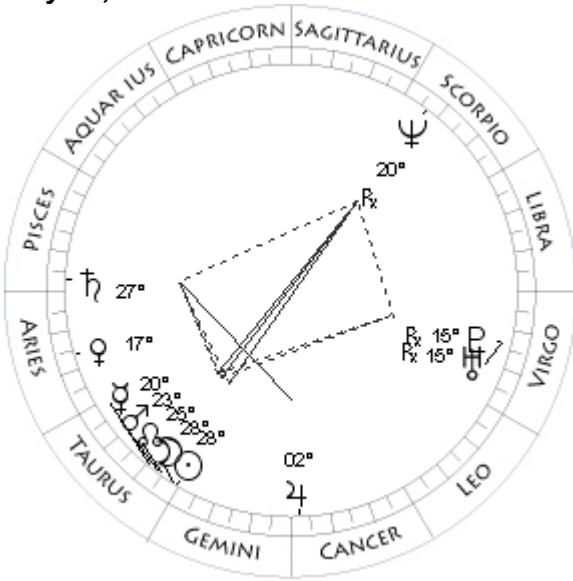
Dec 8, 1965 5:10 PM Partial Penumbral

Mo 22Sa43 - 0°49	Mo 16Ge18 + 1°04
Su 22Ge48 - 0°00	Su 16Sa25 - 0°00
Me 25Ge39 + 1°12	Me 04Sa22 + 2°33R
Ve 09Cn27 + 1°06	Ve 01Aq12 - 2°23
Ma 22Vi57 + 0°42	Ma 18Cp42 - 1°12
Ju 12Ge06 - 0°33	Ju 27Ge32 - 0°25R
Sa 17Pi03 - 1°52	Sa 11Pi01 - 2°00
Ur 11Vi00 + 0°46	Ur 19Vi30 + 0°46
Ne 17Sc45 + 1°48R	Ne 20Sc42 + 1°42
Pl 13Vi47 +14°15	Pl 18Vi26 +14°28
No 13Ge17 - 0°00	No 03Ge53 - 0°00
	Coords: 100W/24N

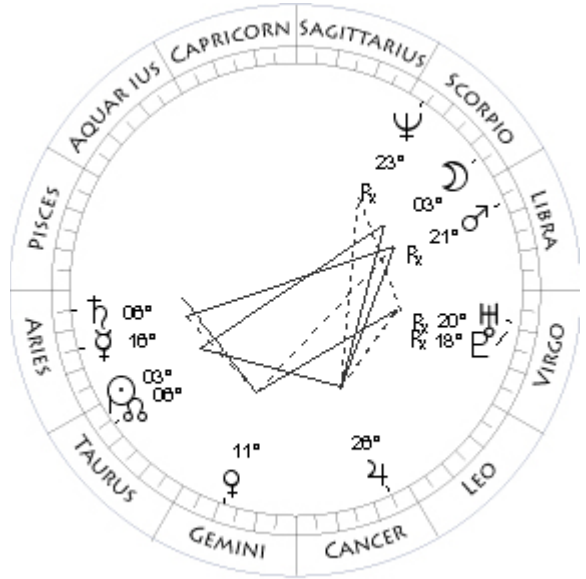
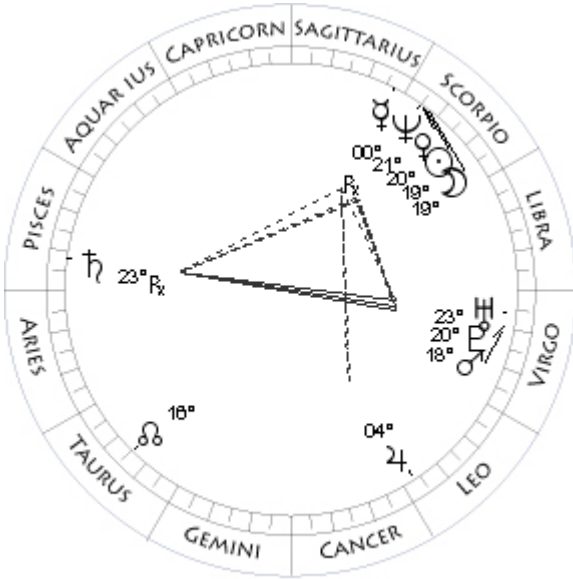
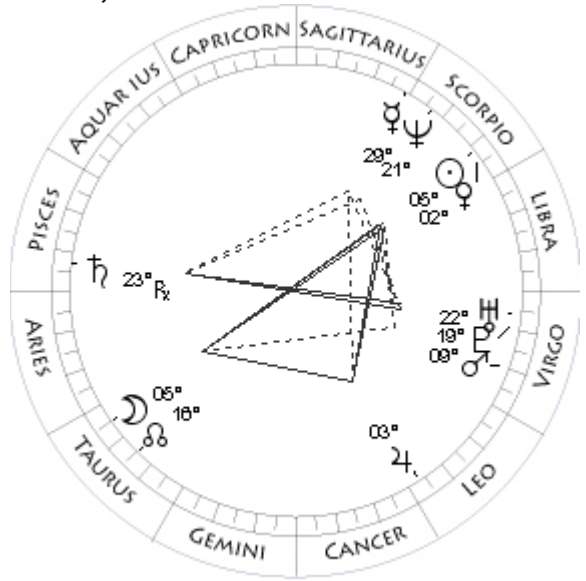
May 4, 1966 9:11 PM Partial Penumbral

Mo 00Sa42 + 0°22	Mo 14Sc02 + 1°02
Su 00Sa40 - 0°00	Su 13Ta57 - 0°00
Me 19Sa04 - 1°44R	Me 22Ar06 - 2°37
Ve 17Cp36 - 3°15	Ve 29Pi40 - 1°17
Ma 06Cp45 - 1°11	Ma 12Ta38 - 0°09
Ju 29Ge24 - 0°26R	Ju 29Ge52 - 0°03
Sa 10Pi33 - 2°02	Sa 26Pi09 - 1°59
Ur 19Vi09 + 0°45	Ur 15Vi38 + 0°48R
Ne 20Sc09 + 1°42	Ne 21Sc00 + 1°49R
Pl 18Vi15 +14°20	Pl 15Vi56 +14°51R
No 04Ge42 - 0°00	No 26Ta05 - 0°00
	Coords: 42W/15S

May 20, 1966 9:38 AM Annular Solar



Oct 29, 1966 10:12 AM Partial Penumbral



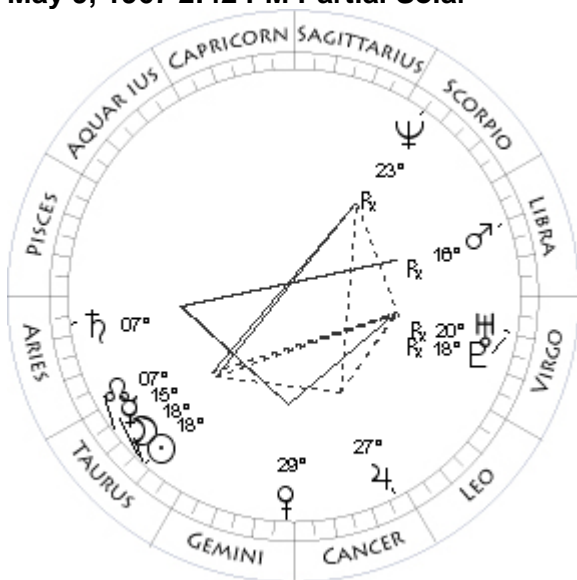
Nov 12, 1966 2:23 PM Total Solar

Mo 28Ta53 + 0°20	Mo 19Sc43 - 0°19
Su 28Ta56 - 0°00	Su 19Sc45 - 0°00
Me 20Ta44 - 0°42	Me 00Sa32 - 1°13R
Ve 17Ar02 - 1°55	Ve 20Sc39 + 0°36
Ma 23Ta54 + 0°01	Ma 18Vi08 + 1°38
Ju 02Cn57 - 0°01	Ju 04Ie21 + 0°20
Sa 27Pi31 - 2°02	Sa 23Pi05 - 2°24R
Ur 15Vi29 + 0°47R	Ur 23Vi24 + 0°45
Ne 20Sc35 + 1°49R	Ne 21Sc50 + 1°41
Pl 15Vi49 +14°46R	Pl 20Vi12 +14°33
No 25Ta16 - 0°00	No 15Ta56 - 0°00
Coords: 26W/39N	

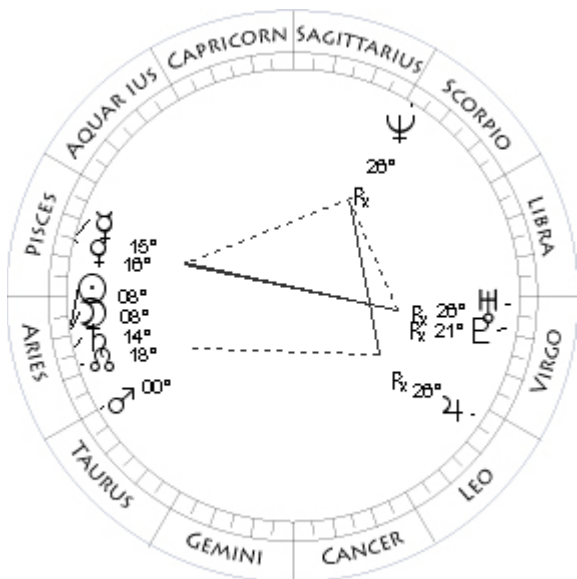
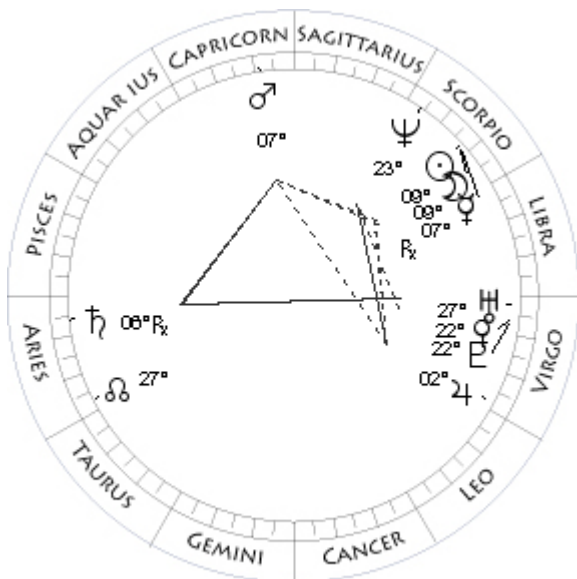
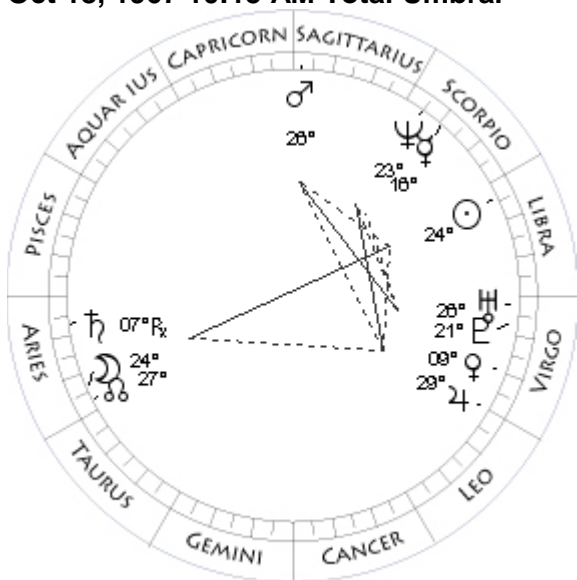
Apr 24, 1967 0:06 PM Total Umbra

Mo 05Ta38 - 0°58	Mo 03Sc38 + 0°18
Su 05Sc33 - 0°00	Su 03Ta38 - 0°00
Me 29Sc17 - 2°57	Me 16Ar04 - 2°16
Ve 02Sc52 + 1°03	Ve 11Ge52 + 1°45
Ma 09Vi55 + 1°31	Ma 21Li25 + 1°42R
Ju 03Ie38 + 0°18	Ju 26Cn12 + 0°35
Sa 23Pi36 - 2°26R	Sa 06Ar19 - 2°09
Ur 22Vi44 + 0°44	Ur 20Vi47 + 0°48R
Ne 21Sc19 + 1°41	Ne 23Sc31 + 1°48R
Pl 19Vi51 +14°28	Pl 18Vi17 +15°15R
No 16Ta41 - 0°00	No 07Ta19 - 0°00
Coords: 157E/12N	Coords: 178W/12S

May 9, 1967 2:42 PM Partial Solar



Oct 18, 1967 10:15 AM Total Umbral



Nov 2, 1967 5:38 AM Total Solar

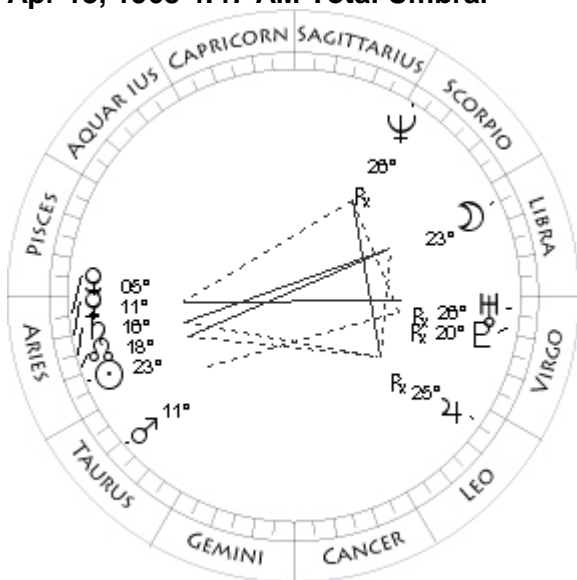
Mo 18Ta11 + 1°02	Mo 09Sc00 - 1°01
Su 18Ta17 - 0°00	Su 09Sc07 - 0°00
Me 15Ta49 - 0°18	Me 07Sc45 - 0°20R
Ve 29Ge17 + 2°19	Ve 22Vi43 + 0°09
Ma 16Li51 + 1°03R	Ma 07Cp31 - 1°35
Ju 27Cn59 + 0°35	Ju 02Vi06 + 0°50
Sa 07Ar59 - 2°11	Sa 06Ar49 - 2°40R
Ur 20Vi26 + 0°47R	Ur 27Vi28 + 0°44
Ne 23Sc07 + 1°48R	Ne 23Sc32 + 1°41
Pl 18Vi04 +15°10R	Pl 22Vi05 +14°46
No 06Ta31 - 0°00	No 27Ar09 - 0°00

Mar 28, 1968 10:59 PM Partial Solar

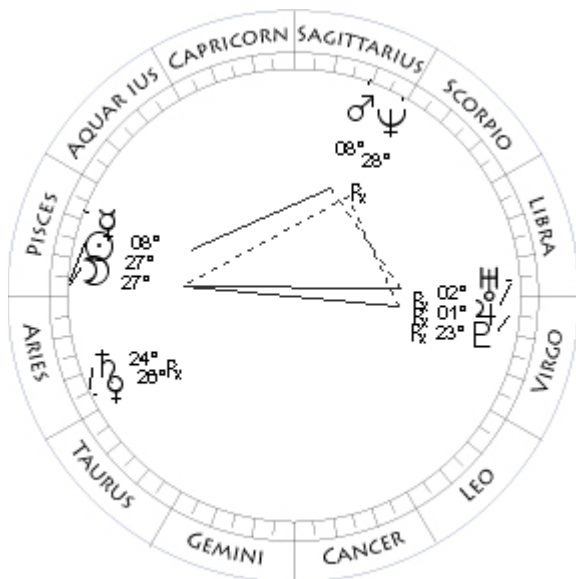
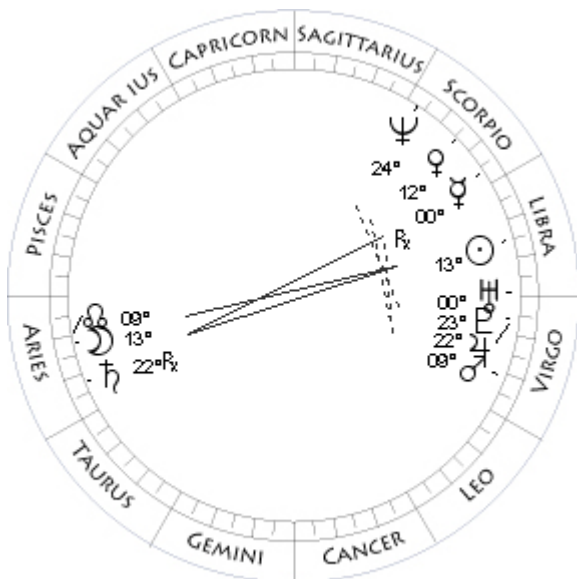
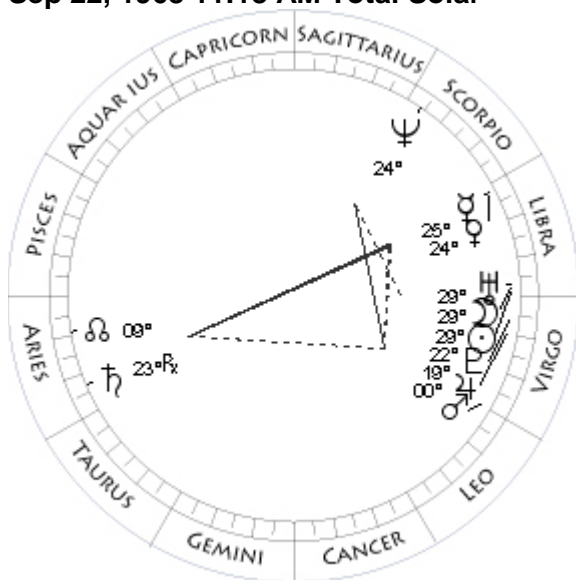
Mo 24Ar22 - 0°20	Mo 08Ar24 - 0°57
Su 24Li21 - 0°00	Su 08Ar20 - 0°00
Me 16Sc52 - 3°14	Me 15Pi20 - 2°20
Ve 09Vi58 - 1°43	Ve 16Pi31 - 1°22
Ma 26Sa36 - 1°38	Ma 00Ta43 - 0°04
Ju 29Le50 + 0°47	Ju 26Le43 + 1°14R
Sa 07Ar49 - 2°41R	Sa 14Ar28 - 2°14
Ur 26Vi40 + 0°43	Ur 26Vi41 + 0°47R
Ne 23Sc01 + 1°41	Ne 26Sc17 + 1°46R
Pl 21Vi39 +14°41	Pl 21Vi05 +15°40R
No 27Ar57 - 0°00	No 19Ar20 - 0°00

Coords: 157E/ 9N

Apr 13, 1968 4:47 AM Total Umbral



Sep 22, 1968 11:18 AM Total Solar



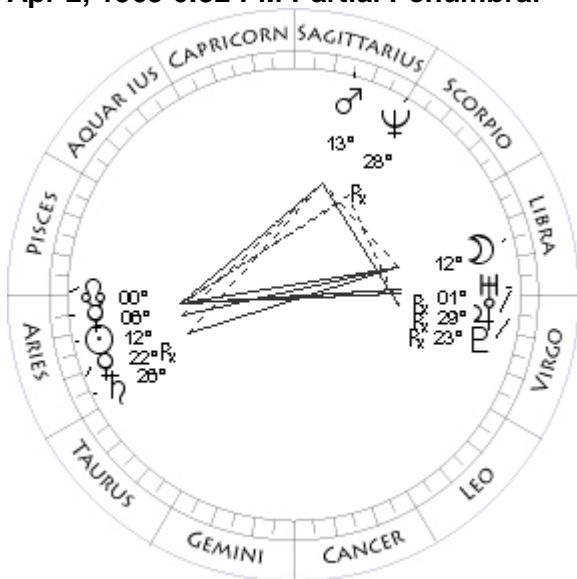
Oct 6, 1968 11:42 AM Total Umbral

Mo 23Li16 - 0°25	Mo 13Ar14 + 0°20
Su 23Ar20 - 0°00	Su 13Li17 - 0°00
Me 11Ar06 - 1°57	Me 00Sc42 - 3°28R
Ve 05Ar18 - 1°31	Ve 12Sc00 - 0°13
Ma 11Ta52 + 0°06	Ma 09Vi13 + 1°17
Ju 25Le57 + 1°12R	Ju 22Vi17 + 1°02
Sa 16Ar23 - 2°14	Sa 22Ar47 - 2°47R
Ur 26Vi05 + 0°47R	Ur 00Li30 + 0°42
Ne 26Sc00 + 1°46R	Ne 24Sc46 + 1°40
Pl 20Vi44 +15°37R	Pl 23Vi26 +14°55
No 18Ar32 - 0°00	No 09Ar12 - 0°00
	Coords: 179E/ 6N

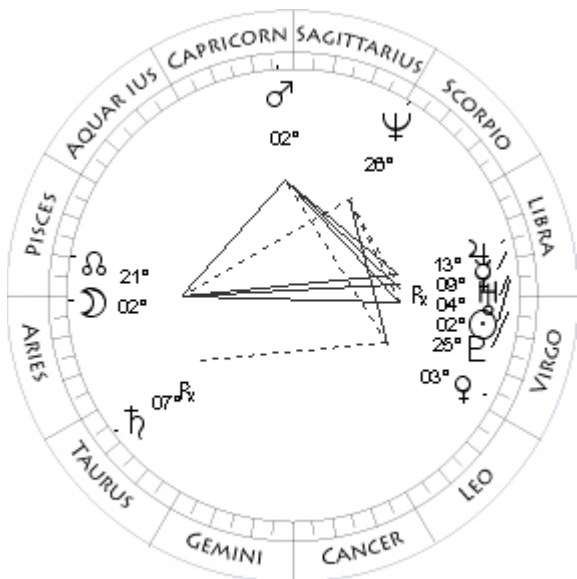
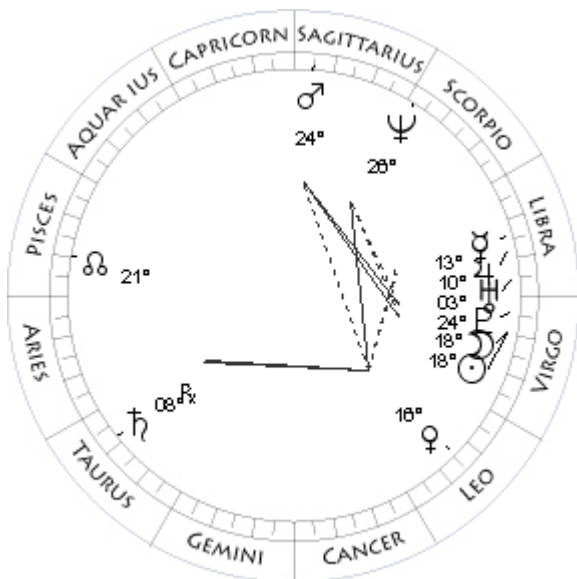
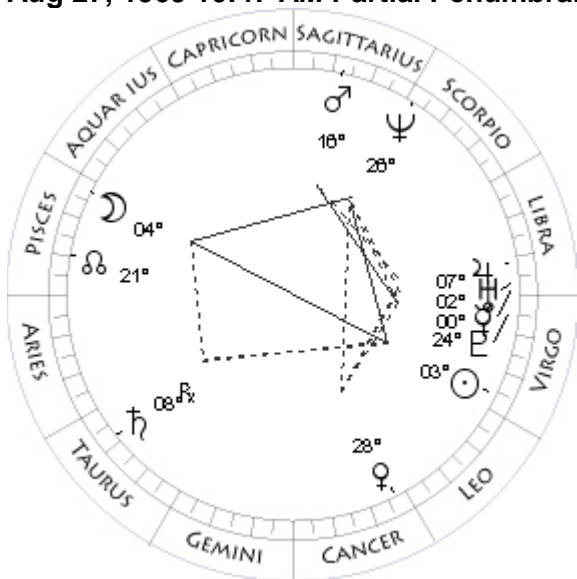
Mar 18, 1969 4:54 AM Annular Solar

Mo 29Vi35 + 0°55	Mo 27Pi26 - 0°16
Su 29Vi31 - 0°00	Su 27Pi26 - 0°00
Me 25Li42 - 2°56	Me 08Pi41 - 2°15
Ve 24Li49 + 0°26	Ve 26Ar50 + 7°06R
Ma 00Vi27 + 1°14	Ma 08Sa36 + 0°54
Ju 19Vi18 + 1°01	Ju 01Li38 + 1°35R
Sa 23Ar49 - 2°46R	Sa 24Ar40 - 2°16
Ur 29Vi37 + 0°42	Ur 02Li10 + 0°46R
Ne 24Sc23 + 1°41	Ne 28Sc38 + 1°44R
Pl 22Vi56 +14°53	Pl 23Vi41 +15°58R
No 09Ar56 - 0°00	No 00Ar35 - 0°00
Coords: 63W/56N	Coords: 116W/15S

Apr 2, 1969 6:32 PM Partial Penumbral



Aug 27, 1969 10:47 AM Partial Penumbral



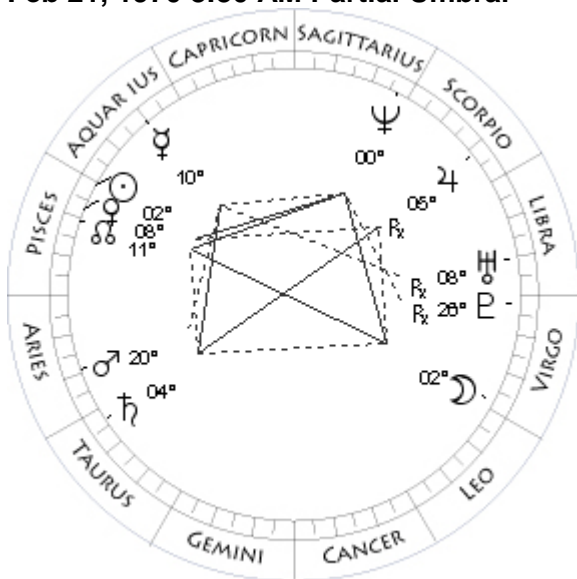
Sep 11, 1969 7:58 PM Annular Solar

Mo 12Li43 - 1°08	Mo 18Vi54 + 0°12
Su 12Ar51 - 0°00	Su 18Vi54 - 0°00
Me 06Ar27 - 1°39	Me 13Li47 - 3°33
Ve 22Ar11 + 7°51R	Ve 16Le21 + 0°21
Ma 13Sa25 + 0°35	Ma 24Sa22 - 2°55
Ju 29Vi38 + 1°35R	Ju 10Li25 + 1°07
Sa 26Ar34 - 2°15	Sa 08Ta32 - 2°39R
Ur 01Li30 + 0°46R	Ur 03Li25 + 0°41
Ne 28Sc25 + 1°45R	Ne 26Sc17 + 1°41
Pl 23Vi16 +15°58R	Pl 24Vi43 +15°09
No 29Pi45 - 0°00	No 21Pi10 - 0°00
	Coords: 114E/15N

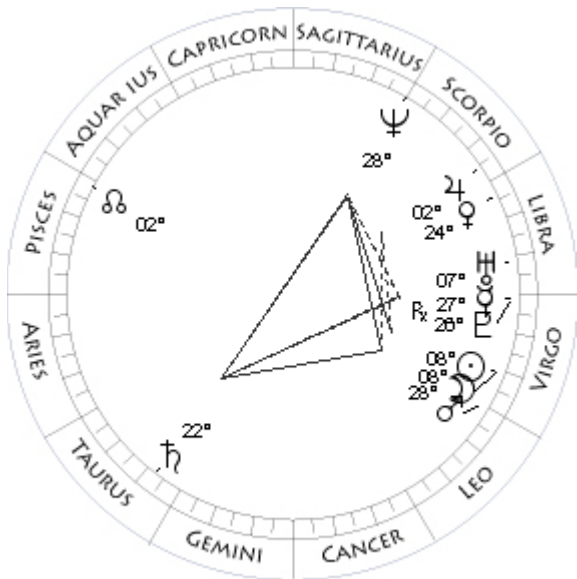
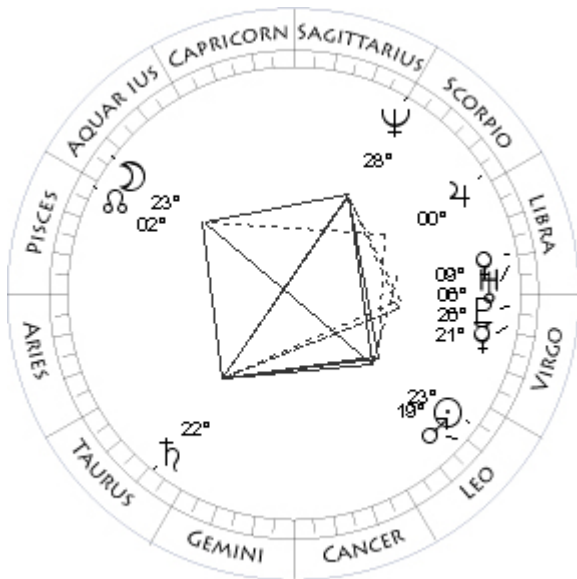
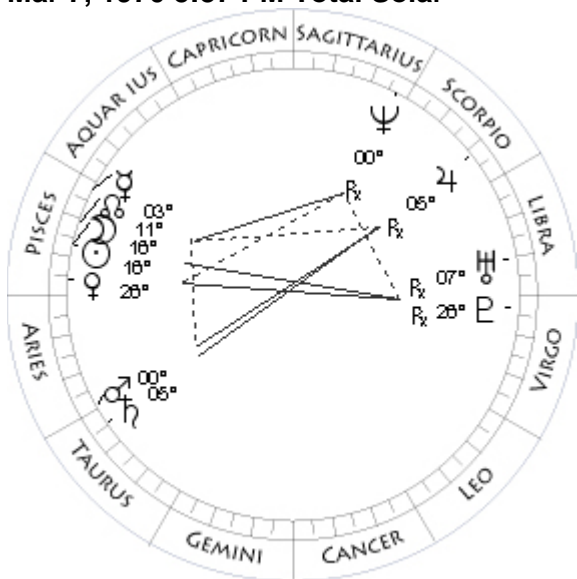
Sep 25, 1969 8:09 PM Partial Penumbral

Mo 04Pi07 - 1°33	Mo 02Ar28 + 1°02
Su 03Vi59 - 0°00	Su 02Li35 - 0°00
Me 00Li12 - 1°22	Me 09Li57 - 3°22R
Ve 28Cn03 - 0°28	Ve 03Vi17 + 0°58
Ma 16Sa03 - 3°08	Ma 02Cp51 - 2°42
Ju 07Li18 + 1°08	Ju 13Li23 + 1°06
Sa 08Ta55 - 2°35R	Sa 07Ta52 - 2°41R
Ur 02Li30 + 0°41	Ur 04Li18 + 0°41
Ne 26Sc03 + 1°42	Ne 26Sc35 + 1°40
Pl 24Vi09 +15°09	Pl 25Vi14 +15°09
No 21Pi59 - 0°00	No 20Pi26 - 0°00
	Coords: 55W/ 2N

Feb 21, 1970 8:30 AM Partial Umbral



Mar 7, 1970 5:37 PM Total Solar



Aug 17, 1970 3:23 AM Partial Umbral

Mo 02Vi23 + 0°52	Mo 23Aq53 - 0°49
Su 02Pi18 - 0°00	Su 23Le49 - 0°00
Me 10Aq38 - 1°24	Me 21Vi11 - 2°00
Ve 08Pi57 - 1°27	Ve 09Li16 - 0°50
Ma 20Ar08 + 0°01	Ma 19Le09 + 1°09
Ju 05Sc58 + 1°23R	Ju 00Sc12 + 1°04
Sa 04Ta09 - 2°17	Sa 22Ta19 - 2°19
Ur 08Li07 + 0°45R	Ur 06Li27 + 0°40
Ne 00Sa52 + 1°42	Ne 28Sc08 + 1°41
Pl 26Vi41 +16°11R	Pl 26Vi00 +15°27
No 12Pi34 - 0°00	No 03Pi12 - 0°00

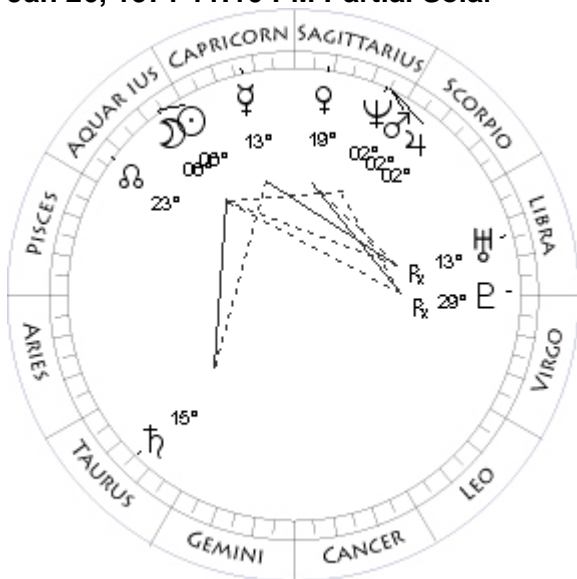
Coords: 124E/11N

Aug 31, 1970 9:55 PM Annular Solar

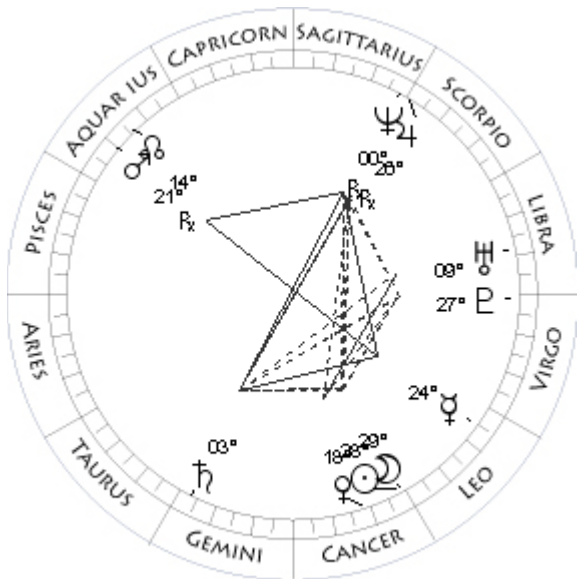
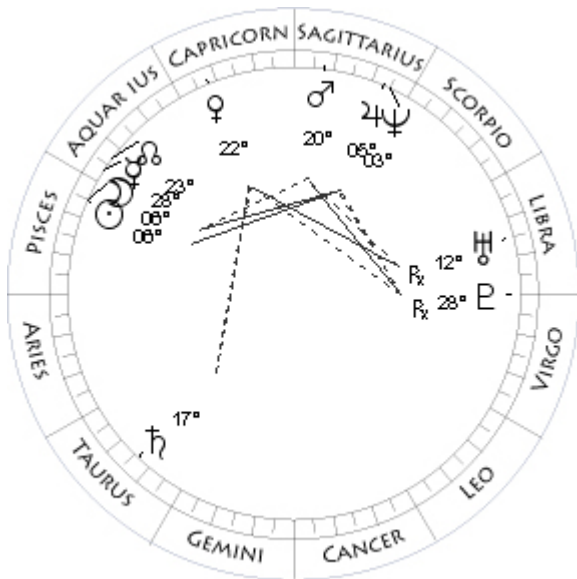
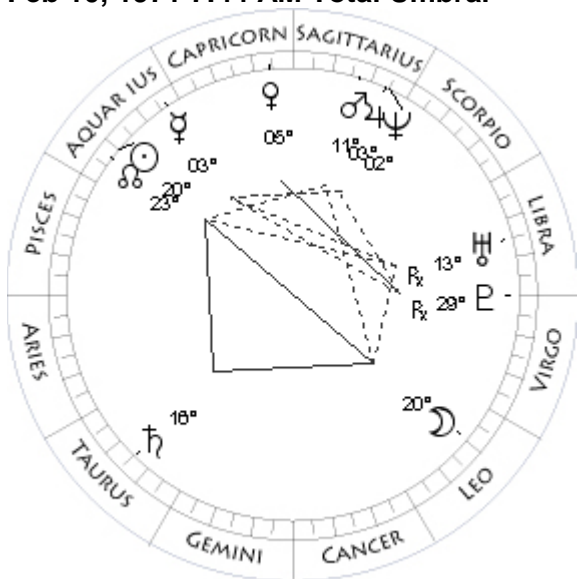
Mo 16Pi41 + 0°27	Mo 08Vi01 - 0°29
Su 16Pi45 - 0°00	Su 08Vi04 - 0°00
Me 03Pi12 - 2°11	Me 27Vi53 - 4°13R
Ve 26Pi54 - 1°20	Ve 24Li11 - 2°17
Ma 00Ta29 + 0°12	Ma 28Le33 + 1°10
Ju 05Sc35 + 1°26R	Ju 02Sc28 + 1°01
Sa 05Ta27 - 2°14	Sa 22Ta37 - 2°22
Ur 07Li36 + 0°45R	Ur 07Li15 + 0°40
Ne 00Sa53 + 1°42R	Ne 28Sc15 + 1°40
Pl 26Vi19 +16°14R	Pl 26Vi30 +15°24
No 11Pi48 - 0°00	No 02Pi25 - 0°00

Coords: 164E/20S

Jan 26, 1971 11:10 PM Partial Solar



Feb 10, 1971 7:44 AM Total Umbra



Feb 25, 1971 9:37 AM Partial Solar

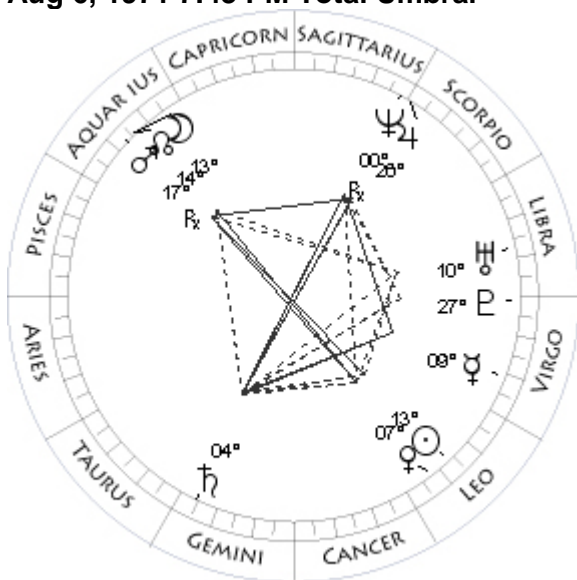
Mo 06Aq30 - 1°33	Mo 06Pi01 + 1°08
Su 06Aq22 - 0°00	Su 06Pi08 - 0°00
Me 13Cp25 + 0°10	Me 28Aq22 - 2°07
Ve 19Sa37 + 3°22	Ve 22Cp16 + 1°32
Ma 02Sa28 + 0°35	Ma 20Sa49 + 0°13
Ju 02Sa02 + 0°54	Ju 05Sa25 + 0°57
Sa 15Ta47 - 2°14	Sa 17Ta05 - 2°06
Ur 13Li32 + 0°42R	Ur 12Li55 + 0°43R
Ne 02Sa41 + 1°39	Ne 03Sa04 + 1°40
Pl 29Vi32 +16°17R	Pl 28Vi57 +16°28R
No 24Aq35 - 0°00	No 23Aq01 - 0°00

Jul 22, 1971 9:31 AM Partial Solar

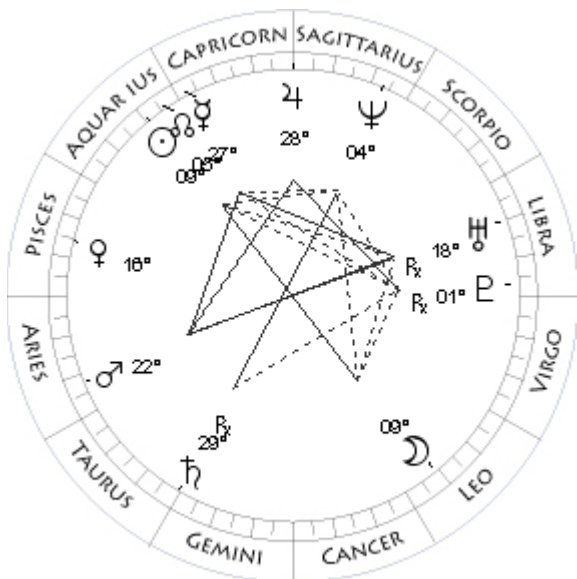
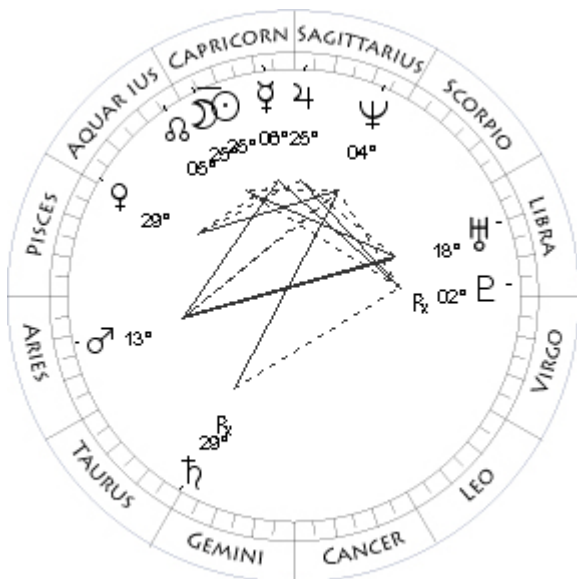
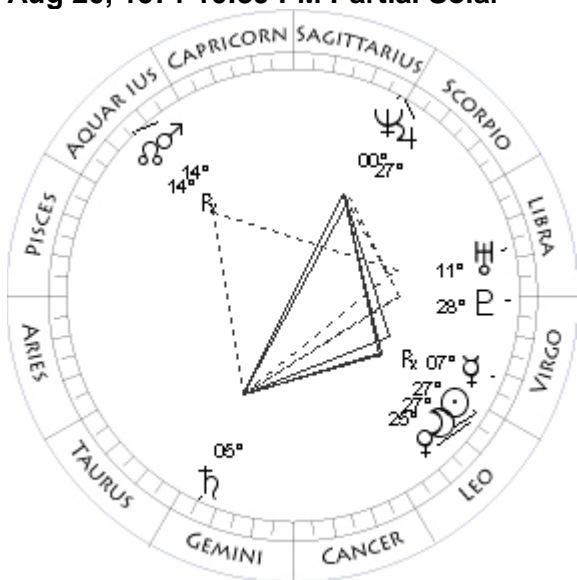
Mo 20Le56 + 0°15	Mo 29Cn04 + 1°24
Su 20Aq55 - 0°00	Su 28Cn57 - 0°00
Me 03Aq43 - 1°30	Me 24Le54 + 0°07
Ve 05Cp11 + 2°34	Ve 18Cn58 + 0°27
Ma 11Sa27 + 0°25	Ma 21Aq10 - 6°12R
Ju 03Sa56 + 0°55	Ju 26Sc37 + 0°49R
Sa 16Ta14 - 2°10	Sa 03Ge38 - 1°56
Ur 13Li19 + 0°43R	Ur 09Li58 + 0°40
Ne 02Sa56 + 1°40	Ne 00Sa25 + 1°41R
Pl 29Vi18 +16°23R	Pl 27Vi31 +15°50
No 23Aq49 - 0°00	No 15Aq14 - 0°00

Coords: 112E/15N

Aug 6, 1971 7:43 PM Total Umbral



Aug 20, 1971 10:39 PM Partial Solar



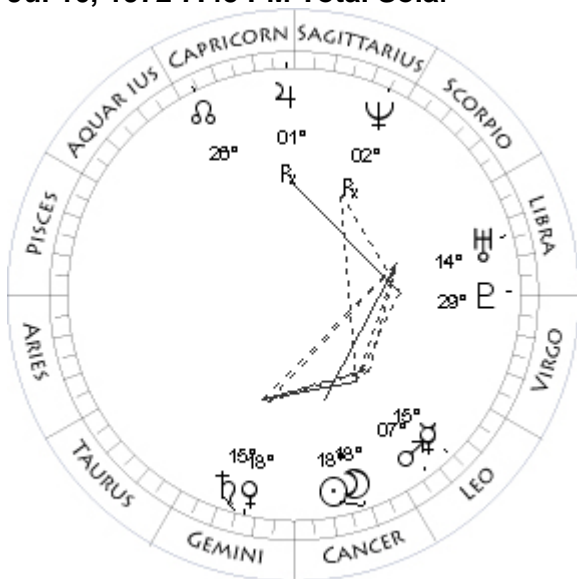
Jan 16, 1972 11:02 AM Annular Solar

Mo 13Aq41 - 0°05	Mo 25Cp30 - 0°54
Su 13Le41 - 0°00	Su 25Cp25 - 0°00
Me 09Vi04 - 2°49	Me 06Cp31 - 0°11
Ve 07Le56 + 0°58	Ve 29Aq48 - 1°36
Ma 17Aq55 - 6°48R	Ma 13Ar27 + 0°10
Ju 26Sc51 + 0°45	Ju 25Sa43 + 0°23
Sa 04Ge54 - 1°57	Sa 29Ta47 - 2°00R
Ur 10Li31 + 0°39	Ur 18Li18 + 0°40
Ne 00Sa19 + 1°41R	Ne 04Sa34 + 1°37
Pl 27Vi55 +15°44	Pl 02Li01 +16°24R
No 14Aq25 - 0°00	No 05Aq49 - 0°00
Coords: 66W/17S	Coords: 106W/75S

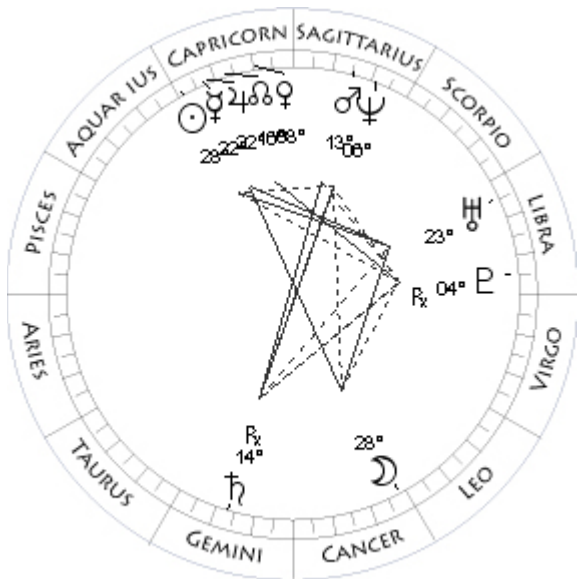
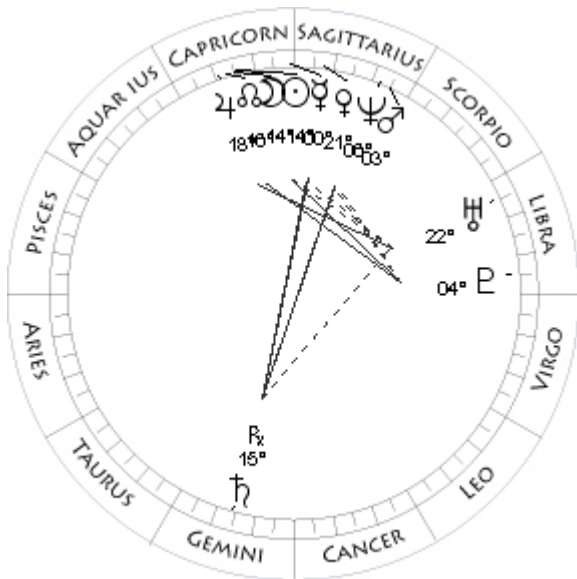
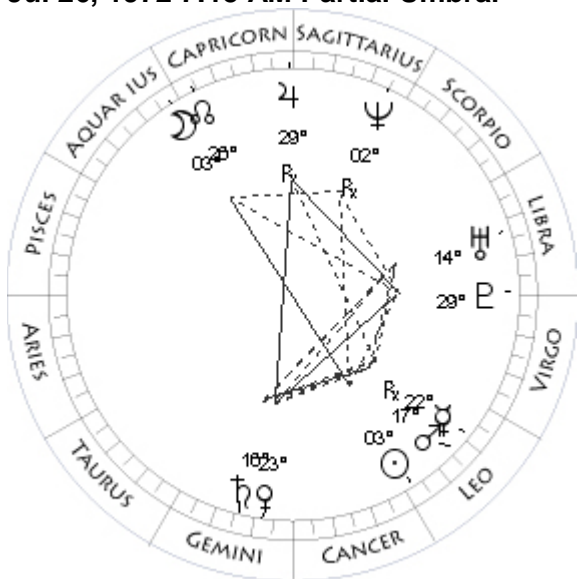
Jan 30, 1972 10:53 AM Total Umbral

Mo 27Le08 - 1°09	Mo 09Le36 - 0°24
Su 27Le15 - 0°00	Su 09Aq40 - 0°00
Me 07Vi33 - 4°42R	Me 27Cp34 - 1°37
Ve 25Le23 + 1°17	Ve 16Pi50 - 1°09
Ma 14Aq19 - 6°43R	Ma 22Ar40 + 0°24
Ju 27Sc42 + 0°42	Ju 28Sa35 + 0°22
Sa 05Ge46 - 2°00	Sa 29Ta35 - 1°56R
Ur 11Li09 + 0°39	Ur 18Li18 + 0°40R
Ne 00Sa20 + 1°40	Ne 04Sa53 + 1°37
Pl 28Vi21 +15°41	Pl 01Li52 +16°31R
No 13Aq40 - 0°00	No 05Aq04 - 0°00
	Coords: 160E/17N

Jul 10, 1972 7:45 PM Total Solar



Jul 26, 1972 7:15 AM Partial Umbral



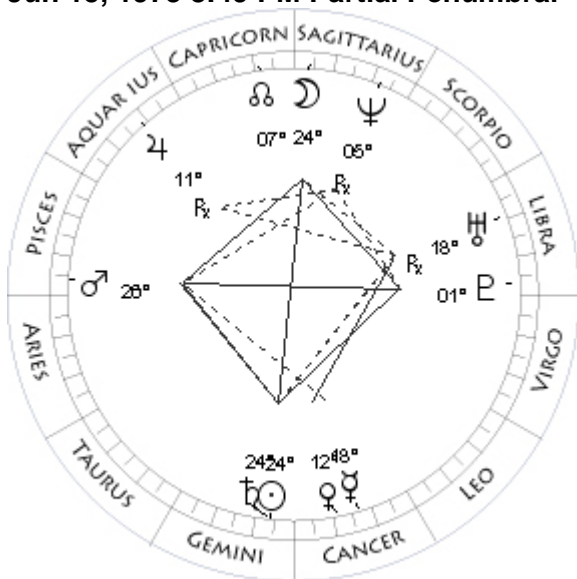
Jan 4, 1973 3:45 PM Annular Solar

Mo 18Cn40 + 0°41	Mo 14Cp11 - 0°14
Su 18Cn37 - 0°00	Su 14Cp10 - 0°00
Me 15Le01 - 0°21	Me 00Cp05 - 0°27
Ve 18Ge16 - 4°58	Ve 21Sa05 + 0°45
Ma 07Le42 + 1°11	Ma 03Sa24 + 0°14
Ju 01Cp28 + 0°09R	Ju 18Cp41 - 0°11
Sa 15Ge02 - 1°31	Sa 15Ge03 - 1°36R
Ur 14Li21 + 0°38	Ur 22Li49 + 0°37
Ne 02Sa47 + 1°41R	Ne 06Sa22 + 1°35
Pl 29Vi35 +16°08	Pl 04Li26 +16°30
No 26Cp28 - 0°00	No 17Cp03 - 0°00

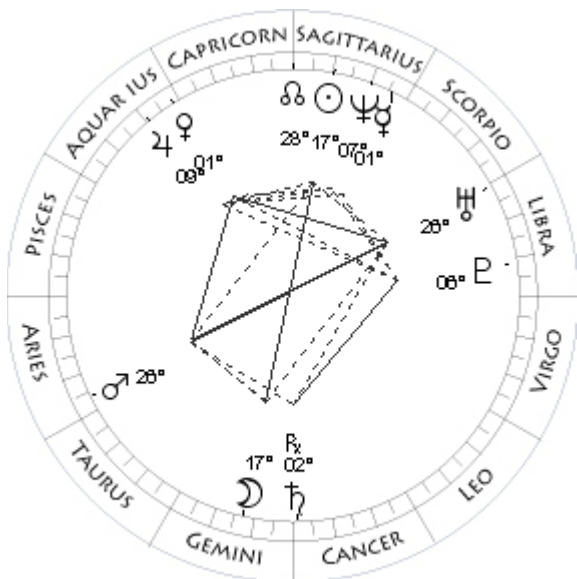
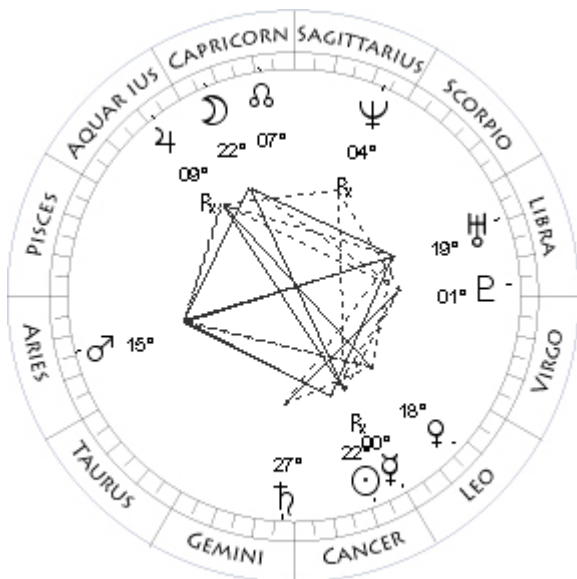
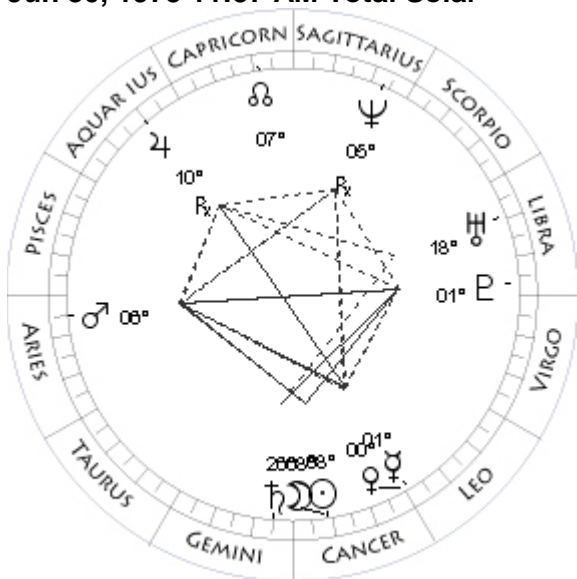
Jan 18, 1973 9:17 PM Partial Penumbral

Mo 03Aq19 + 0°40	Mo 28Cn33 - 1°05
Su 03Le24 - 0°00	Su 28Cp40 - 0°00
Me 22Le17 - 3°45R	Me 22Cp14 - 1°44
Ve 23Ge08 - 5°02	Ve 08Cp52 + 0°08
Ma 17Le30 + 1°10	Ma 13Sa09 + 0°04
Ju 29Sa51 + 0°07R	Ju 22Cp00 - 0°12
Sa 16Ge44 - 1°32	Sa 14Ge14 - 1°33R
Ur 14Li43 + 0°38	Ur 23Li02 + 0°38
Ne 02Sa35 + 1°40R	Ne 06Sa46 + 1°35
Pl 29Vi54 +16°02	Pl 04Li23 +16°38R
No 25Cp39 - 0°00	No 16Cp18 - 0°00
Coords: 107E/19S	Coords: 43W/19N

Jun 15, 1973 8:49 PM Partial Penumbral



Jun 30, 1973 11:37 AM Total Solar



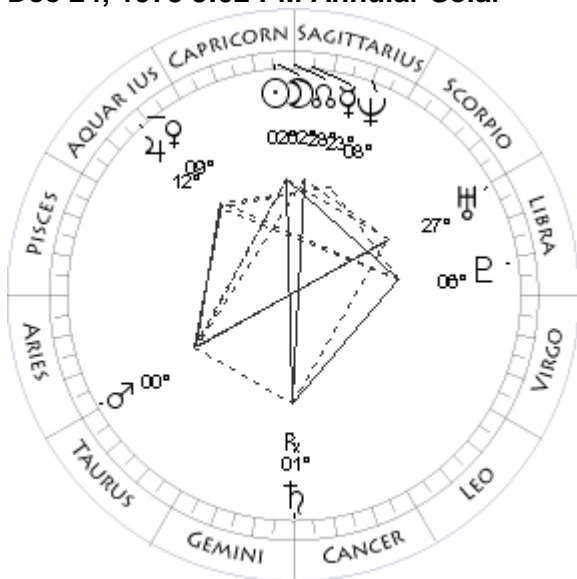
Jul 15, 1973 11:38 AM Partial Penumbral

Mo 24Sa41 - 1°11	Mo 22Cp41 + 1°22
Su 24Ge35 - 0°00	Su 22Cn50 - 0°00
Me 18Cn27 + 1°37	Me 00Le31 - 4°31R
Ve 12Cn19 + 1°11	Ve 18Le23 + 1°37
Ma 26Pi41 - 2°34	Ma 15Ar23 - 3°06
Ju 11Aq44 - 0°36R	Ju 09Aq06 - 0°42R
Sa 24Ge11 - 1°06	Sa 27Ge58 - 1°04
Ur 18Li59 + 0°37R	Ur 19Li05 + 0°36
Ne 05Sa34 + 1°40R	Ne 04Sa56 + 1°39R
Pl 01Li41 +16°34	Pl 01Li59 +16°19
No 08Cp28 - 0°00	No 06Cp54 - 0°00
Coords: 48W/25S	Coords: 174E/20S

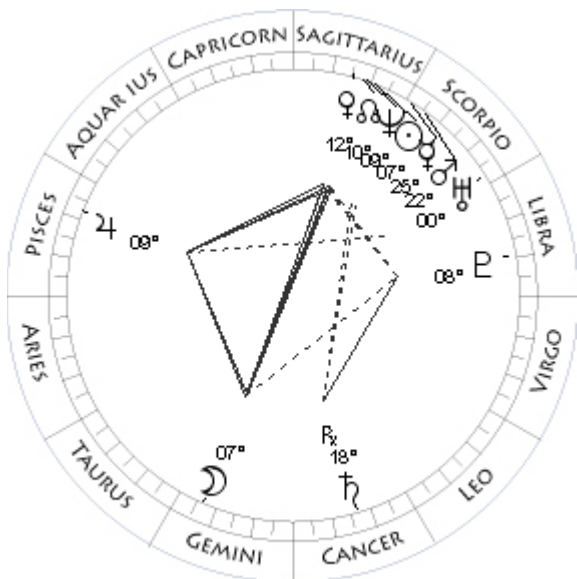
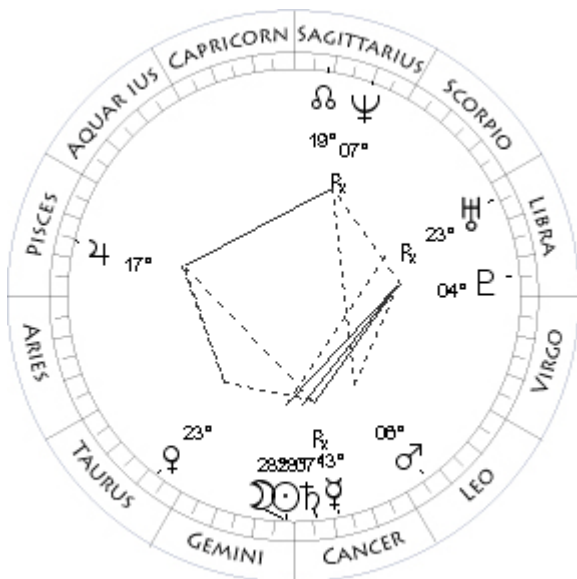
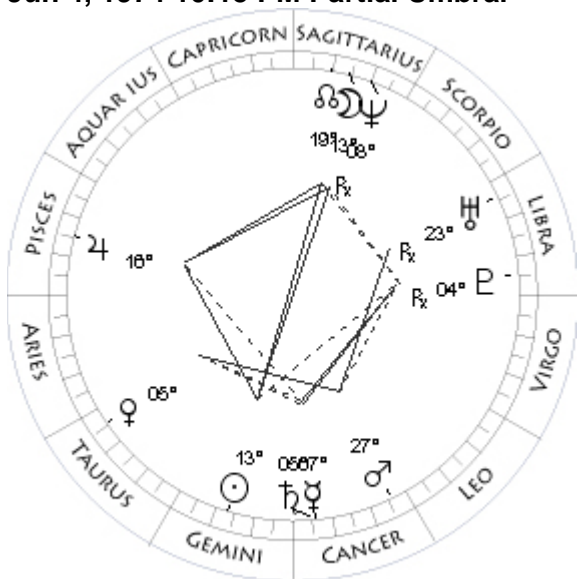
Dec 10, 1973 1:44 AM Partial Umbral

Mo 08Cn30 - 0°05	Mo 17Ge56 + 0°59
Su 08Cn32 - 0°00	Su 17Sa52 - 0°00
Me 01Le52 - 1°03	Me 01Sa44 + 1°04
Ve 00Le09 + 1°31	Ve 01Aq35 - 2°14
Ma 06Ar12 - 2°51	Ma 26Ar34 + 0°36
Ju 10Aq42 - 0°39R	Ju 09Aq56 - 0°44
Sa 26Ge05 - 1°05	Sa 02Cn20 - 1°04R
Ur 18Li56 + 0°37	Ur 26Li31 + 0°34
Ne 05Sa13 + 1°39R	Ne 07Sa34 + 1°33
Pl 01Li46 +16°27	Pl 06Li34 +16°25
No 07Cp41 - 0°00	No 29Sa05 - 0°00
Coords: 6W/19N	

Dec 24, 1973 3:02 PM Annular Solar



Jun 4, 1974 10:15 PM Partial Umbral



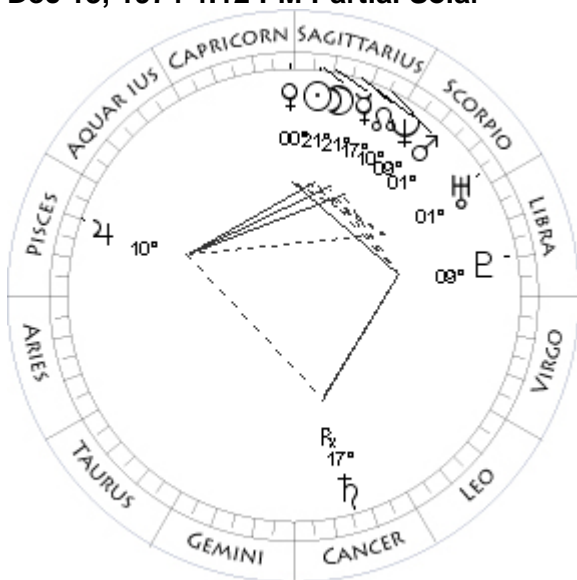
Jun 20, 1974 4:47 AM Total Solar

Mo 02Cp38 + 0°22	Mo 28Ge24 - 0°49
Su 02Cp41 - 0°00	Su 28Ge30 - 0°00
Me 23Sa46 - 0°40	Me 13Cn27 - 1°58R
Ve 09Aq36 - 0°13	Ve 23Ta11 - 1°55
Ma 00Ta06 + 1°00	Ma 06Le51 + 1°18
Ju 12Aq51 - 0°44	Ju 17Pi23 - 1°09
Sa 01Cn09 - 1°03R	Sa 07Cn00 - 0°36
Ur 27Li06 + 0°35	Ur 23Li43 + 0°35R
Ne 08Sa06 + 1°33	Ne 07Sa42 + 1°38R
Pl 06Li46 +16°33	Pl 04Li04 +16°44
No 28Sa19 - 0°00	No 18Sa54 - 0°00
	Coords: 104W/32S

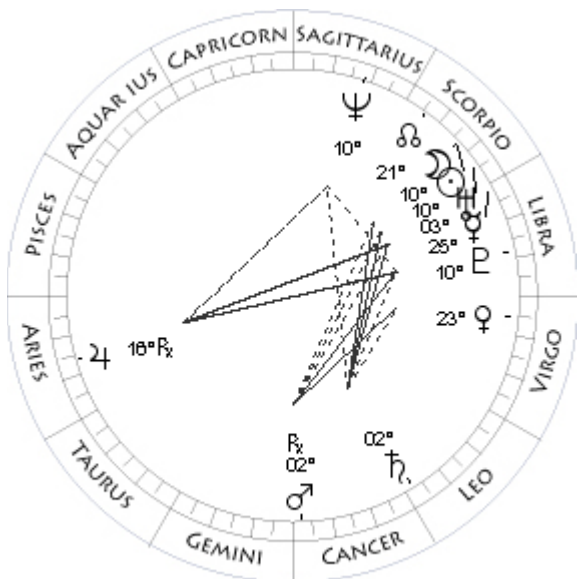
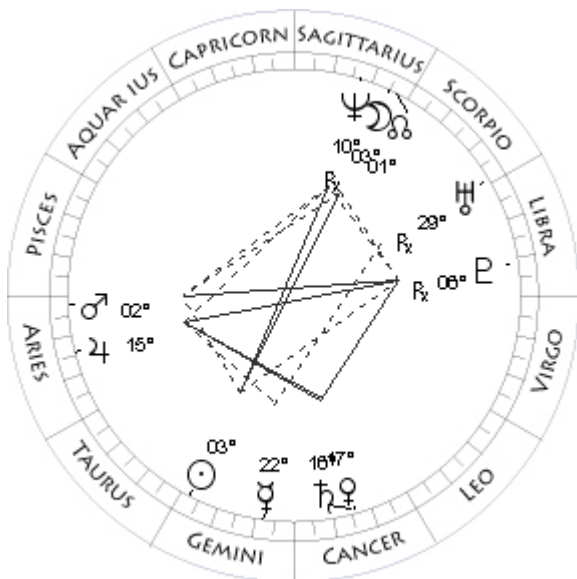
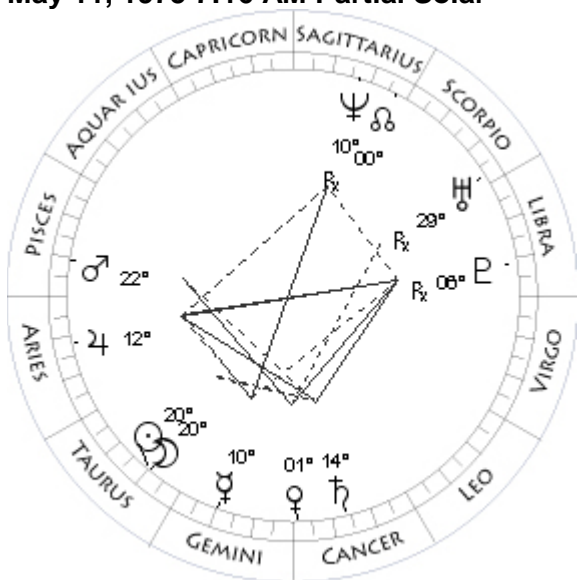
Nov 29, 1974 3:13 PM Total Umbral

Mo 13Sa56 - 0°30	Mo 07Ge02 + 0°18
Su 13Ge54 - 0°00	Su 07Sa02 - 0°00
Me 07Cn25 + 1°30	Me 25Sc55 + 0°42
Ve 05Ta21 - 2°06	Ve 12Sa45 - 0°06
Ma 27Cn30 + 1°22	Ma 22Sc08 + 0°08
Ju 16Pi12 - 1°04	Ju 09Pi08 - 1°16
Sa 05Cn03 - 0°37	Sa 18Cn08 - 0°27R
Ur 23Li58 + 0°35R	Ur 00Sc28 + 0°32
Ne 08Sa05 + 1°38R	Ne 09Sa16 + 1°31
Pl 04Li05 +16°51R	Pl 08Li44 +16°28
No 19Sa43 - 0°00	No 10Sa18 - 0°00
Coords: 26W/23S	Coords: 129W/22N

Dec 13, 1974 4:12 PM Partial Solar



May 11, 1975 7:16 AM Partial Solar



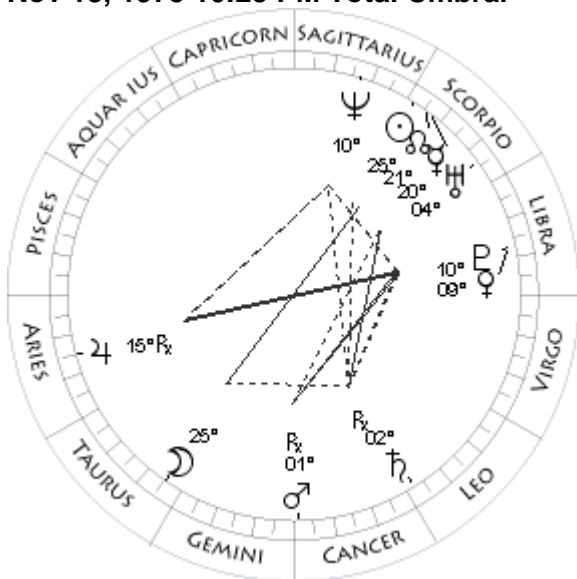
May 25, 1975 5:48 AM Total Umbral

Mo 21Sa10 + 1°00	Mo 03Sa23 + 0°14
Su 21Sa17 - 0°00	Su 03Ge25 - 0°00
Me 17Sa52 - 0°52	Me 22Ge50 + 1°15
Ve 00Cp23 - 0°39	Ve 17Cn04 + 2°35
Ma 01Sa57 - 0°00	Ma 02Ar56 - 1°38
Ju 10Pi37 - 1°13	Ju 15Ar26 - 1°09
Sa 17Cn17 - 0°26R	Sa 16Cn14 - 0°07
Ur 01Sc10 + 0°32	Ur 29Li06 + 0°33R
Ne 09Sa47 + 1°31	Ne 10Sa37 + 1°36R
Pl 09Li01 +16°35	Pl 06Li37 +17°07R
No 09Sa34 - 0°00	No 00Sa57 - 0°00

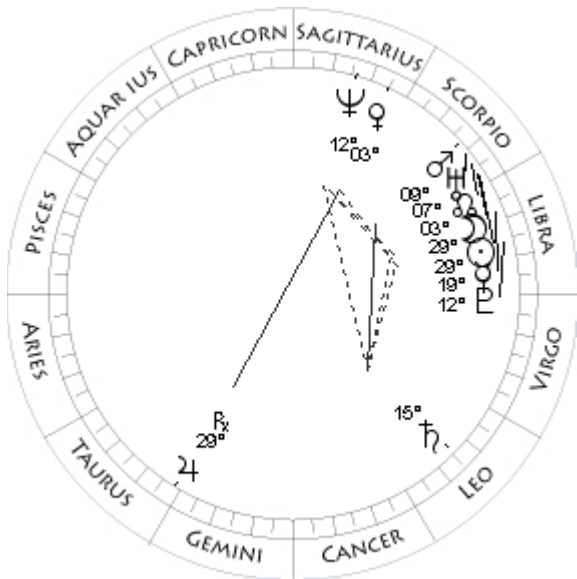
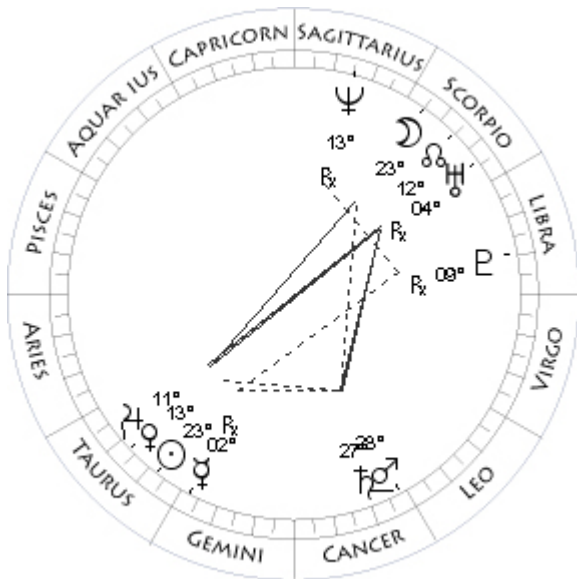
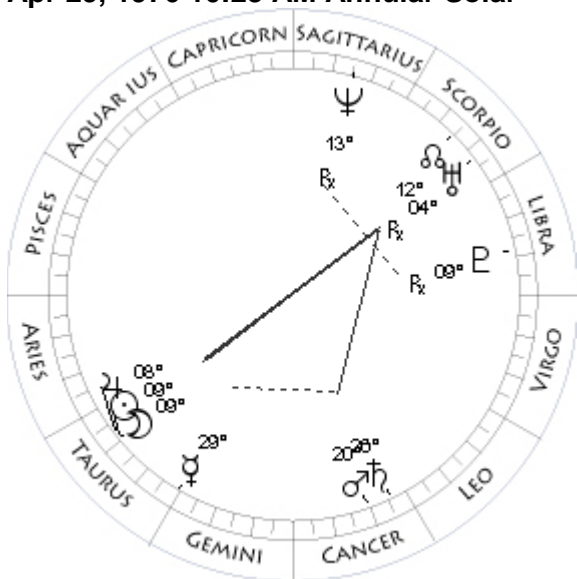
Nov 3, 1975 1:14 PM Partial Solar

Mo 20Ta05 + 1°00	Mo 10Sc35 - 1°02
Su 20Ta00 - 0°00	Su 10Sc30 - 0°00
Me 10Ge43 + 2°27	Me 25Li33 + 1°56
Ve 01Cn39 + 2°24	Ve 23Vi59 + 0°23
Ma 22Pi26 - 1°34	Ma 02Cn35 + 0°51R
Ju 12Ar33 - 1°08	Ju 16Ar59 - 1°34R
Sa 14Cn50 - 0°08	Sa 02Le51 + 0°08
Ur 29Li36 + 0°33R	Ur 03Sc18 + 0°29
Ne 10Sa59 + 1°36R	Ne 10Sa24 + 1°30
Pl 06Li50 +17°13R	Pl 10Li19 +16°25
No 01Sa41 - 0°00	No 22Sc21 - 0°00

Nov 18, 1975 10:23 PM Total Umbral



Apr 29, 1976 10:23 AM Annular Solar



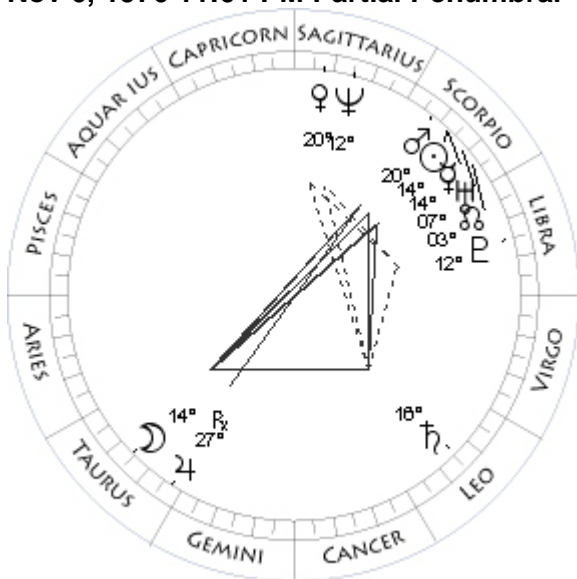
May 13, 1976 7:54 PM Partial Umbral

Mo 25Ta54 - 0°23	Mo 23Sc03 + 0°58
Su 25Sc58 - 0°00	Su 23Ta10 - 0°00
Me 20Sc15 + 0°24	Me 02Ge54 + 0°43R
Ve 09Li50 + 1°36	Ve 13Ta38 - 1°03
Ma 01Cn32 + 1°36R	Ma 28Cn32 + 1°40
Ju 15Ar33 - 1°31R	Ju 11Ta29 - 0°57
Sa 02Le58 + 0°10R	Sa 27Cn57 + 0°26
Ur 04Sc15 + 0°29	Ur 04Sc20 + 0°30R
Ne 10Sa57 + 1°29	Ne 13Sa08 + 1°34R
Pl 10Li49 +16°30	Pl 09Li16 +17°20R
No 21Sc33 - 0°00	No 12Sc11 - 0°00
Coords: 21W/19N	Coords: 61W/18S

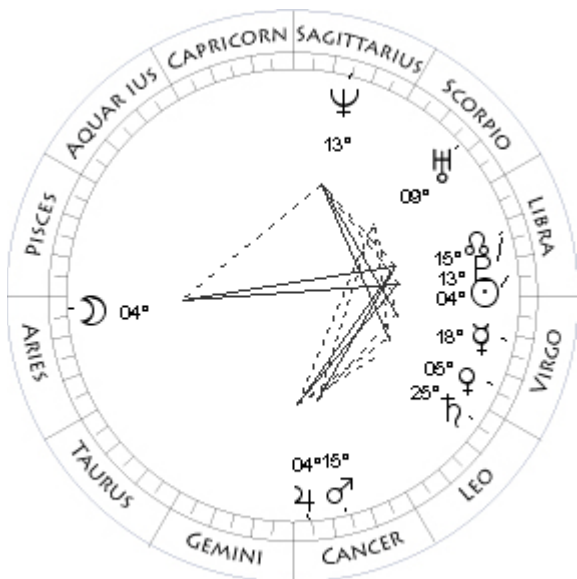
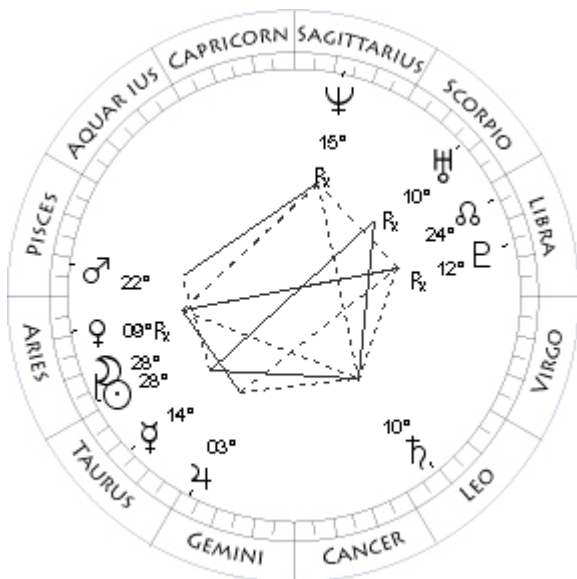
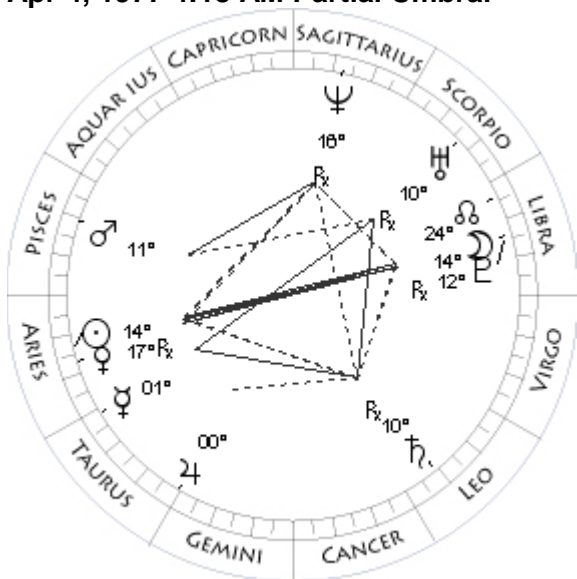
Oct 23, 1976 5:13 AM Total Solar

Mo 09Ta15 + 0°18	Mo 29Li57 - 0°20
Su 09Ta14 - 0°00	Su 29Li56 - 0°00
Me 29Ta34 + 2°44	Me 19Li55 + 1°40
Ve 25Ar56 - 1°23	Ve 03Sa03 - 1°04
Ma 20Cn41 + 1°49	Ma 09Sc49 + 0°04
Ju 08Ta03 - 0°58	Ju 29Ta23 - 1°09R
Sa 26Cn59 + 0°25	Sa 15Le44 + 0°41
Ur 04Sc56 + 0°31R	Ur 07Sc01 + 0°26
Ne 13Sa28 + 1°34R	Ne 12Sa11 + 1°28
Pl 09Li34 +17°25R	Pl 12Li19 +16°28
No 12Sc56 - 0°00	No 03Sc35 - 0°00
Coords: 18W/34N	Coords: 92W/30S

Nov 6, 1976 11:01 PM Partial Penumbral



Apr 4, 1977 4:18 AM Partial Umbral



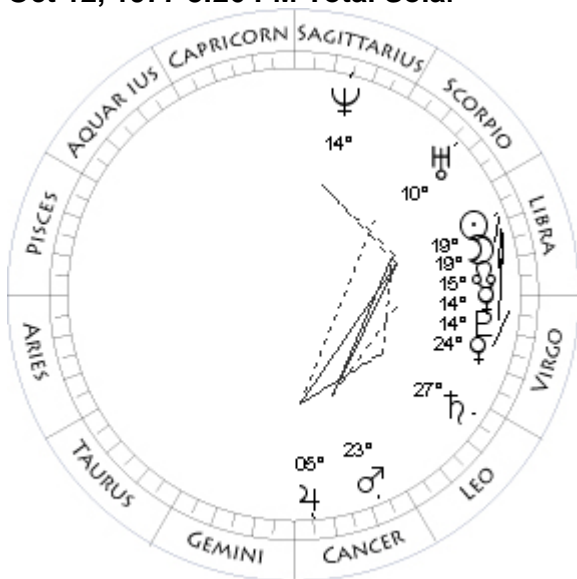
Apr 18, 1977 10:30 AM Annular Solar

Mo 14Ta34 - 1°00	Mo 28Ar13 - 0°21
Su 14Sc40 - 0°00	Su 28Ar17 - 0°00
Me 14Sc24 + 0°10	Me 14Ta23 + 2°57
Ve 20Sa57 - 1°43	Ve 09Ar52 + 5°14R
Ma 20Sc04 - 0°05	Ma 22Pi52 - 1°13
Ju 27Ta39 - 1°09R	Ju 03Ge02 - 0°35
Sa 16Le28 + 0°43	Sa 10Le00 + 0°59
Ur 07Sc56 + 0°26	Ur 10Sc15 + 0°28R
Ne 12Sa39 + 1°28	Ne 15Sa54 + 1°31R
Pl 12Li51 +16°32	Pl 12Li23 +17°34R
No 02Sc48 - 0°00	No 24Li11 - 0°00
Coords: 11W/15N	Coords: 28W/12S

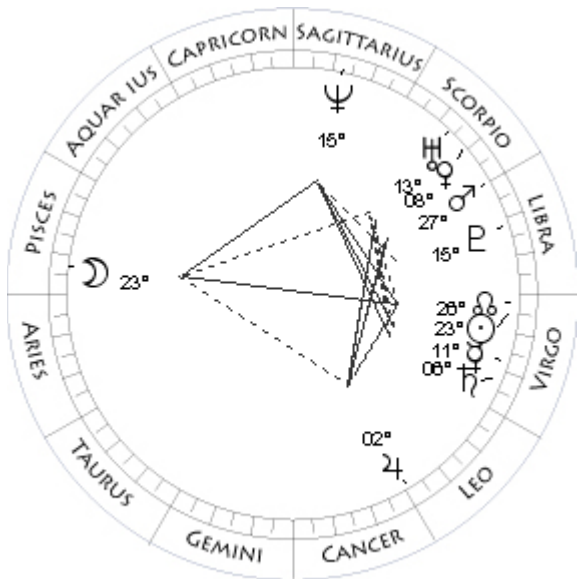
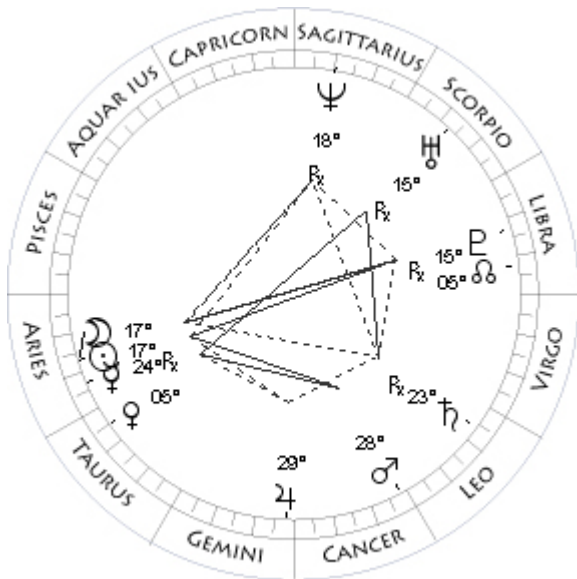
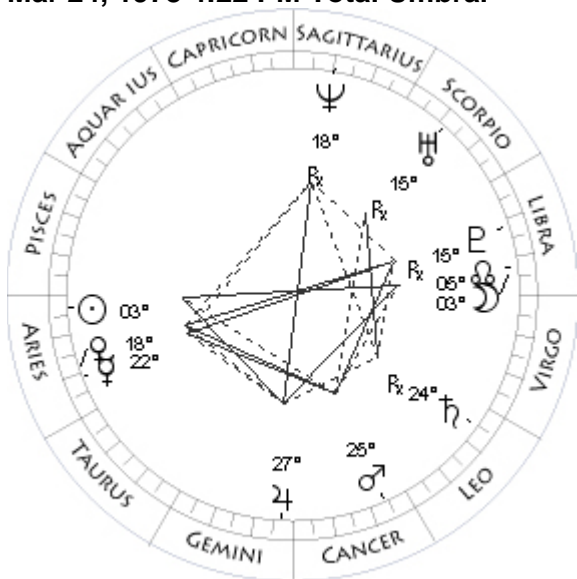
Sep 27, 1977 8:29 AM Partial Penumbral

Mo 14Li22 - 0°55	Mo 04Ar13 + 1°01
Su 14Ar17 - 0°00	Su 04Li08 - 0°00
Me 01Ta42 + 1°46	Me 18Vi11 + 1°41
Ve 17Ar40 + 7°45R	Ve 05Vi46 + 1°03
Ma 11Pi47 - 1°13	Ma 15Cn27 + 0°33
Ju 00Ge06 - 0°37	Ju 04Cn58 - 0°23
Sa 10Le00 + 0°59R	Sa 25Le54 + 1°06
Ur 10Sc49 + 0°28R	Ur 09Sc50 + 0°24
Ne 16Sa04 + 1°31R	Ne 13Sa40 + 1°27
Pl 12Li47 +17°35R	Pl 13Li42 +16°31
No 24Li57 - 0°00	No 15Li37 - 0°00
	Coords: 130E/ 3N

Oct 12, 1977 8:26 PM Total Solar



Mar 24, 1978 4:22 PM Total Umbral



Apr 7, 1978 3:03 PM Partial Solar

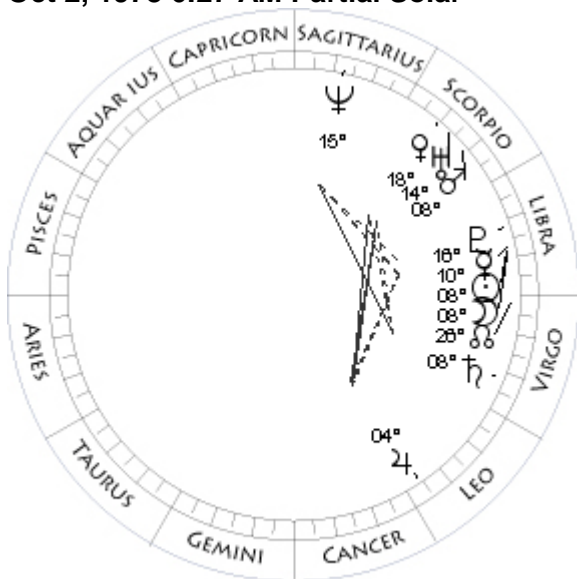
Mo 19Li21 + 0°23	Mo 17Ar20 - 1°03
Su 19Li24 - 0°00	Su 17Ar26 - 0°00
Me 14Li58 + 1°24	Me 24Ar15 + 2°59R
Ve 24Vi48 + 1°27	Ve 05Ta51 - 0°23
Ma 23Cn34 + 0°55	Ma 28Cn56 + 2°36
Ju 05Cn55 - 0°22	Ju 29Ge24 - 0°00
Sa 27Le29 + 1°08	Sa 23Le56 + 1°33R
Ur 10Sc43 + 0°23	Ur 15Sc29 + 0°24R
Ne 14Sa00 + 1°27	Ne 18Sa14 + 1°29R
Pl 14Li18 +16°31	Pl 15Li16 +17°40R
No 14Li48 - 0°00	No 05Li26 - 0°00

Coords: 123E/14N

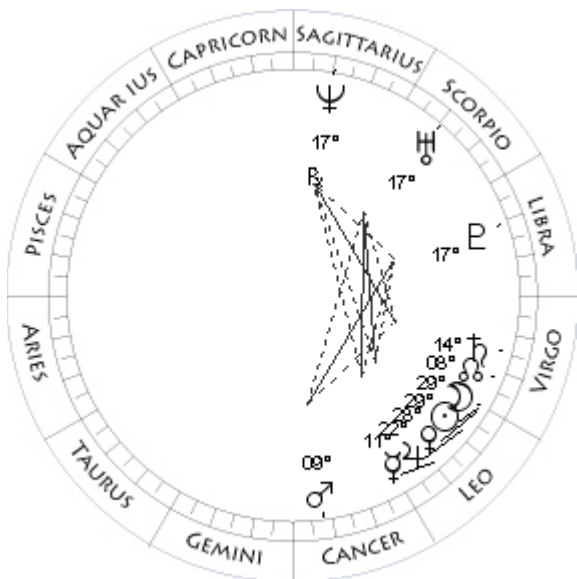
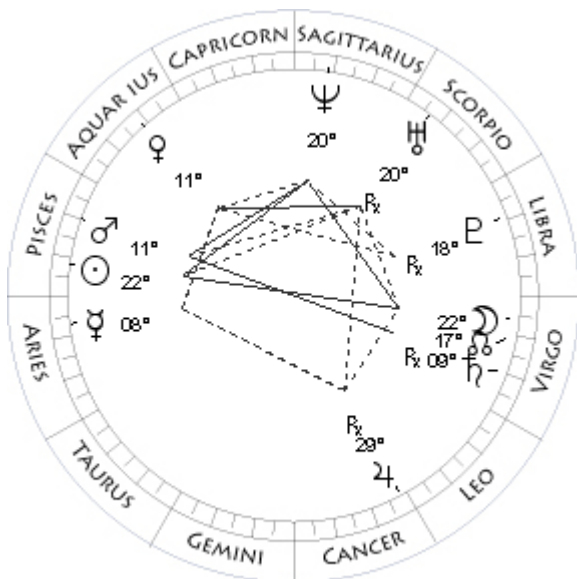
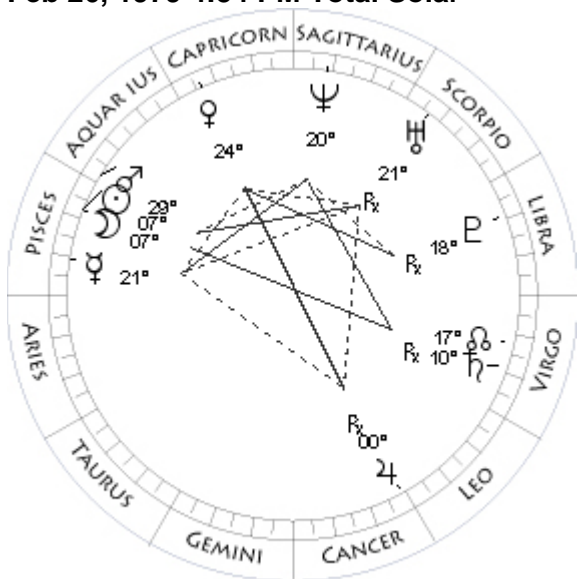
Sep 16, 1978 7:04 PM Total Umbral

Mo 03Li41 - 0°12	Mo 23Pi34 + 0°18
Su 03Ar41 - 0°00	Su 23Vi34 - 0°00
Me 22Ar13 + 2°24	Me 11Vi44 + 1°46
Ve 18Ar38 - 0°54	Ve 08Sc07 - 4°10
Ma 25Cn01 + 2°59	Ma 27Li57 + 0°00
Ju 27Ge46 - 0°02	Ju 02Le07 + 0°16
Sa 24Le31 + 1°34R	Sa 06Vi31 + 1°29
Ur 15Sc56 + 0°24R	Ur 13Sc41 + 0°21
Ne 18Sa19 + 1°28R	Ne 15Sa40 + 1°26
Pl 15Li39 +17°39R	Pl 15Li42 +16°36
No 06Li10 - 0°00	No 26Vi51 - 0°00

Oct 2, 1978 6:27 AM Partial Solar



Feb 26, 1979 4:54 PM Total Solar



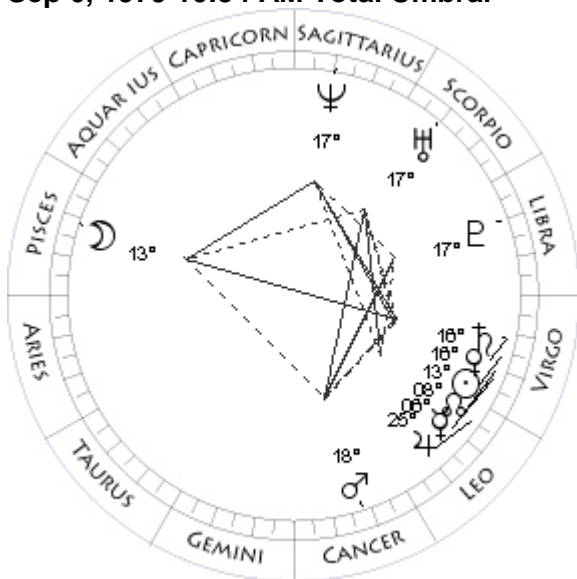
Mar 13, 1979 9:07 PM Partial Umbral

Mo 08Li35 + 1°05	Mo 22Vi38 + 0°28
Su 08Li43 - 0°00	Su 22Pi42 - 0°00
Me 10Li00 + 1°10	Me 08Ar25 + 3°02
Ve 18Sc24 - 5°46	Ve 11Aq55 + 0°19
Ma 08Sc25 - 0°10	Ma 11Pi04 - 1°04
Ju 04Le38 + 0°18	Ju 29Cn14 + 0°42R
Sa 08Vi22 + 1°31	Sa 09Vi35 + 2°03R
Ur 14Sc27 + 0°21	Ur 20Sc52 + 0°21R
Ne 15Sa53 + 1°25	Ne 20Sa29 + 1°25
Pl 16Li18 +16°34	Pl 18Li32 +17°38R
No 26Vi02 - 0°00	No 17Vi25 - 0°00
	Coords: 46W/ 3N

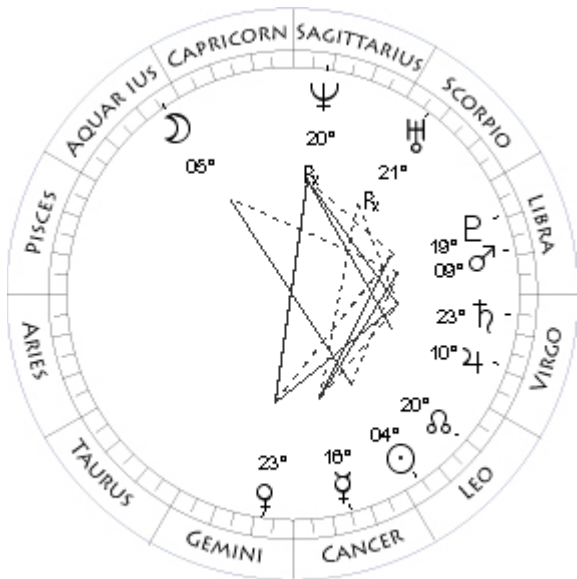
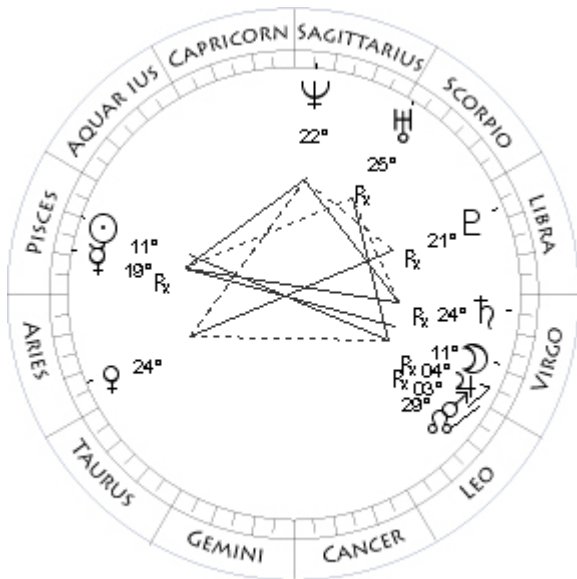
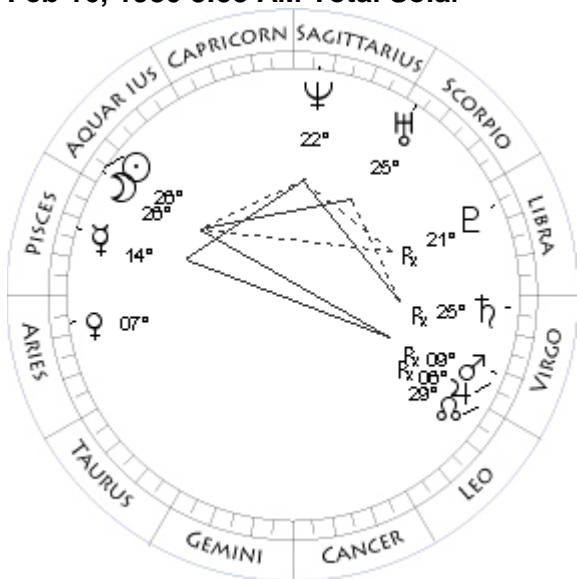
Aug 22, 1979 5:21 PM Annular Solar

Mo 07Pi34 + 0°54	Mo 29Le05 - 0°52
Su 07Pi30 - 0°00	Su 29Le01 - 0°00
Me 21Pi43 - 0°13	Me 11Le04 + 0°00
Ve 24Cp11 + 1°21	Ve 28Le16 + 1°20
Ma 29Aq06 - 1°05	Ma 09Cn18 + 0°29
Ju 00Le11 + 0°41R	Ju 22Le05 + 0°43
Sa 10Vi47 + 2°02R	Sa 14Vi55 + 1°48
Ur 21Sc00 + 0°21R	Ur 17Sc14 + 0°18
Ne 20Sa20 + 1°24	Ne 17Sa45 + 1°25R
Pl 18Li52 +17°33R	Pl 17Li18 +16°46
No 18Vi13 - 0°00	No 08Vi51 - 0°00
	Coords: 108E/59S

Sep 6, 1979 10:54 AM Total Umbral



Feb 16, 1980 8:53 AM Total Solar



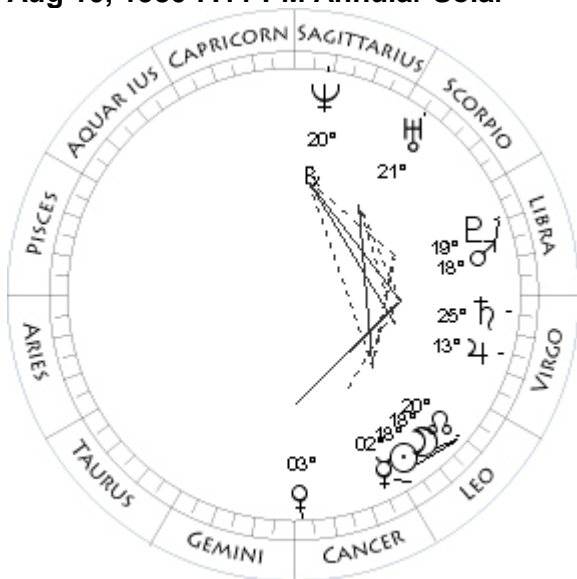
Mar 1, 1980 8:45 PM Partial Penumbral

Mo 13Pi12 - 0°26	Mo 11Vi19 + 1°06
Su 13Vi16 - 0°00	Su 11Pi26 - 0°00
Me 06Vi53 + 1°47	Me 19Pi43 + 3°33R
Ve 16Vi32 + 1°25	Ve 24Ar25 + 0°46
Ma 18Cn42 + 0°41	Ma 03Vi34 + 4°18R
Ju 25Le17 + 0°44	Ju 04Vi29 + 1°19R
Sa 16Vi44 + 1°49	Sa 24Vi36 + 2°24R
Ur 17Sc40 + 0°18	Ur 25Sc34 + 0°17R
Ne 17Sa45 + 1°24	Ne 22Sa32 + 1°22
Pl 17Li46 +16°41	Pl 21Li23 +17°35R
No 08Vi04 - 0°00	No 28Le40 - 0°00
	Coords: 52W/ 8N

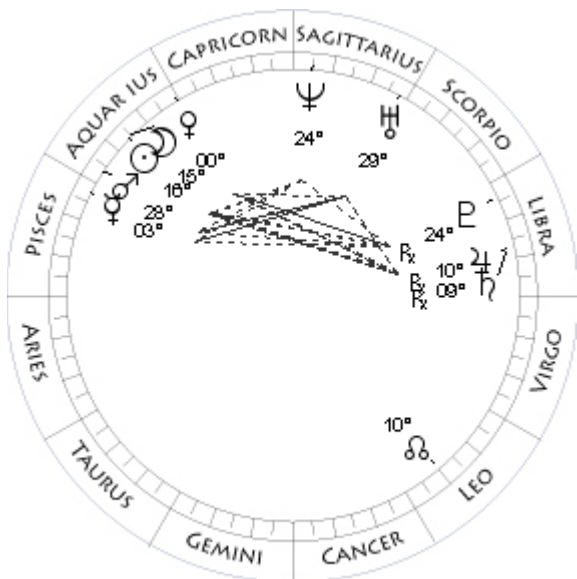
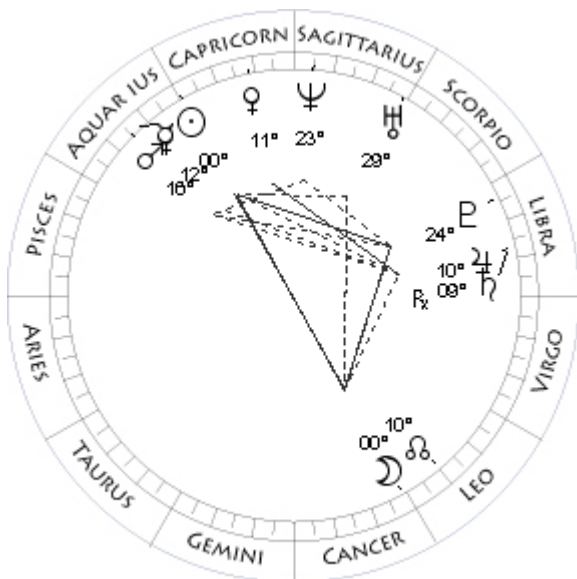
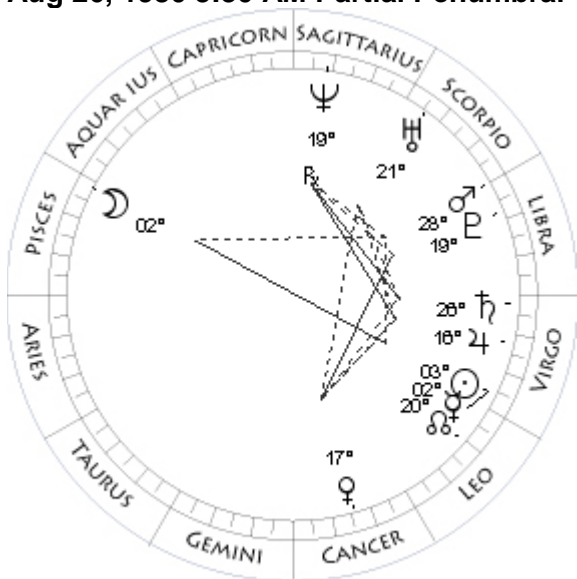
Jul 27, 1980 7:08 PM Partial Penumbral

Mo 26Aq51 + 0°13	Mo 05Aq00 + 1°23
Su 26Aq51 - 0°00	Su 04Le53 - 0°00
Me 14Pi26 + 0°23	Me 16Cn29 - 2°56
Ve 07Ar34 - 0°13	Ve 23Ge09 - 4°51
Ma 09Vi13 + 4°23R	Ma 09Li49 + 0°06
Ju 06Vi23 + 1°18R	Ju 10Vi49 + 1°03
Sa 25Vi37 + 2°21R	Sa 23Vi39 + 2°06
Ur 25Sc29 + 0°17	Ur 21Sc30 + 0°16R
Ne 22Sa18 + 1°21	Ne 20Sa13 + 1°23R
Pl 21Li38 +17°28R	Pl 19Li12 +16°59
No 29Le26 - 0°00	No 20Le50 - 0°00
	Coords: 74W/18S

Aug 10, 1980 7:11 PM Annular Solar



Aug 26, 1980 3:30 AM Partial Penumbral



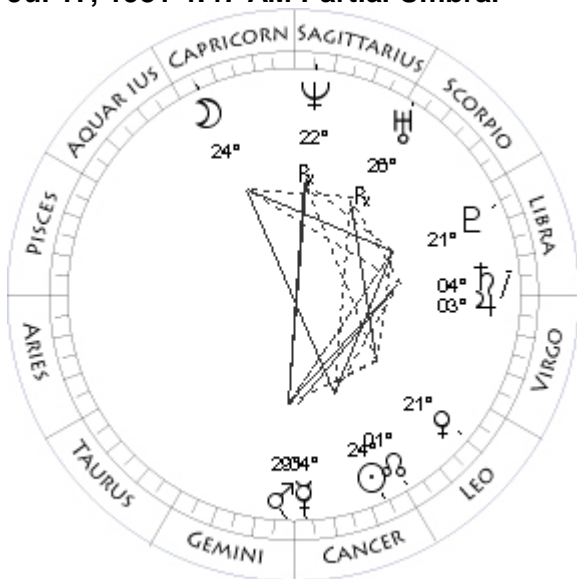
Jan 20, 1981 7:50 AM Partial Penumbral

Mo 18Le17 - 0°11	Mo 00Le16 - 0°58
Su 18Le17 - 0°00	Su 00Aq11 - 0°00
Me 02Le47 + 0°27	Me 12Aq55 - 1°45
Ve 03Cn22 - 4°05	Ve 11Cp20 + 0°02
Ma 18Li18 - 0°06	Ma 16Aq04 - 1°06
Ju 13Vi37 + 1°02	Ju 10Li22 + 1°24
Sa 25Vi04 + 2°05	Sa 09Li47 + 2°27R
Ur 21Sc33 + 0°15	Ur 29Sc16 + 0°13
Ne 20Sa02 + 1°23R	Ne 23Sa44 + 1°18
Pl 19Li29 +16°52	Pl 24Li20 +17°11
No 20Le06 - 0°00	No 11Le29 - 0°00
Coords: 109E/ 4N	Coords: 115E/19N

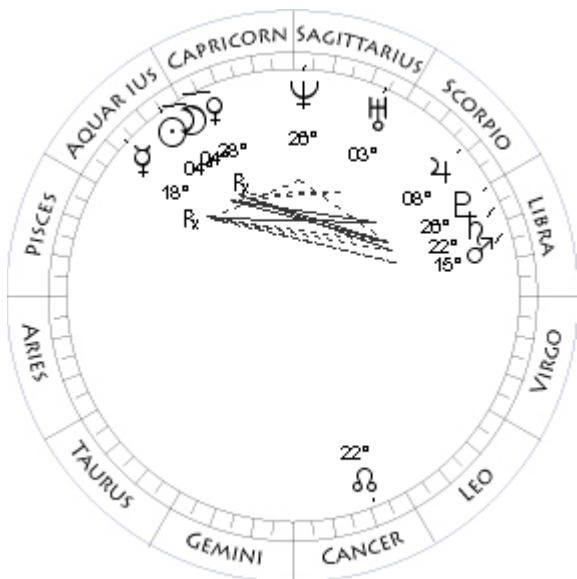
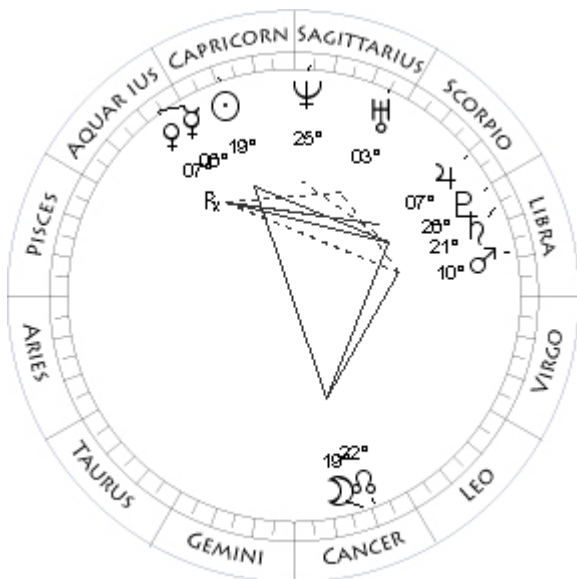
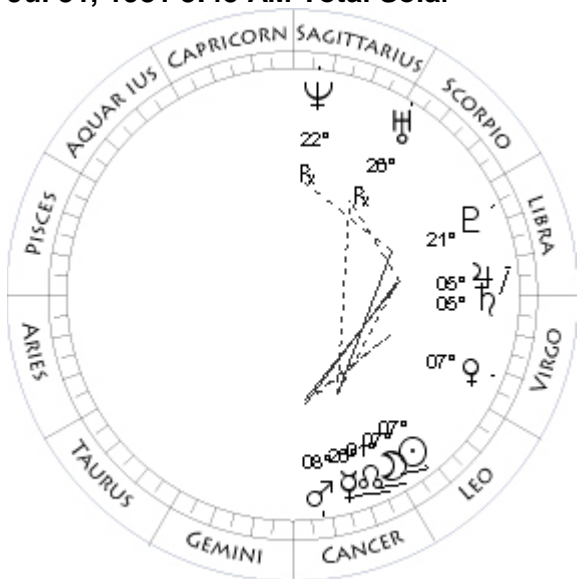
Feb 4, 1981 10:08 PM Annular Solar

Mo 02Pi55 - 1°10	Mo 15Aq58 - 0°28
Su 03Vi03 - 0°00	Su 16Aq02 - 0°00
Me 02Vi43 + 1°45	Me 03Pi48 + 1°08
Ve 17Cn16 - 2°55	Ve 00Aq51 - 0°36
Ma 28Li00 - 0°18	Ma 28Aq24 - 1°03
Ju 16Vi50 + 1°02	Ju 10Li11 + 1°28R
Sa 26Vi48 + 2°04	Sa 09Li31 + 2°31R
Ur 21Sc48 + 0°15	Ur 29Sc45 + 0°14
Ne 19Sa55 + 1°22R	Ne 24Sa11 + 1°19
Pl 19Li53 +16°45	Pl 24Li19 +17°20R
No 19Le17 - 0°00	No 10Le40 - 0°00
	Coords: 141E/44S

Jul 17, 1981 4:47 AM Partial Umbral



Jul 31, 1981 3:45 AM Total Solar



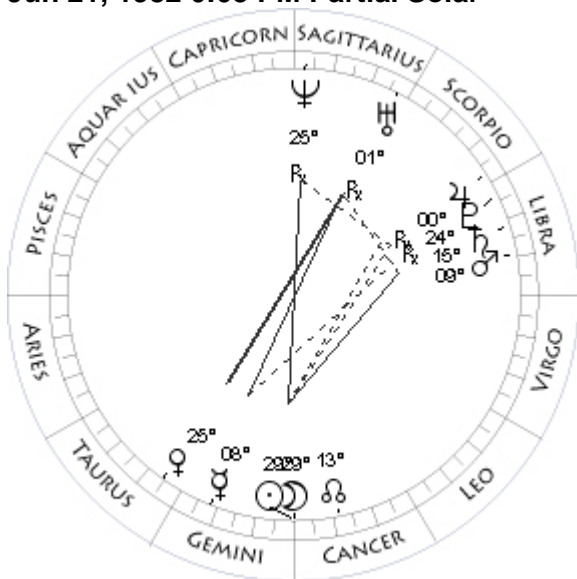
Jan 9, 1982 7:56 PM Total Umbral

Mo 24Cp34 + 0°39	Mo 19Cn16 - 0°18
Su 24Cn32 - 0°00	Su 19Cp15 - 0°00
Me 04Cn10 - 2°06	Me 06Aq18 - 1°35
Ve 21Le05 + 1°37	Ve 07Aq13 + 3°44R
Ma 29Ge13 + 0°28	Ma 10Li29 + 2°29
Ju 03Li59 + 1°14	Ju 07Sc17 + 1°12
Sa 04Li26 + 2°21	Sa 21Li51 + 2°28
Ur 26Sc11 + 0°12R	Ur 03Sa08 + 0°10
Ne 22Sa40 + 1°21R	Ne 25Sa29 + 1°15
Pl 21Li36 +17°05	Pl 26Li49 +17°01
No 02Le04 - 0°00	No 22Cn43 - 0°00
	Coords: 63W/22N

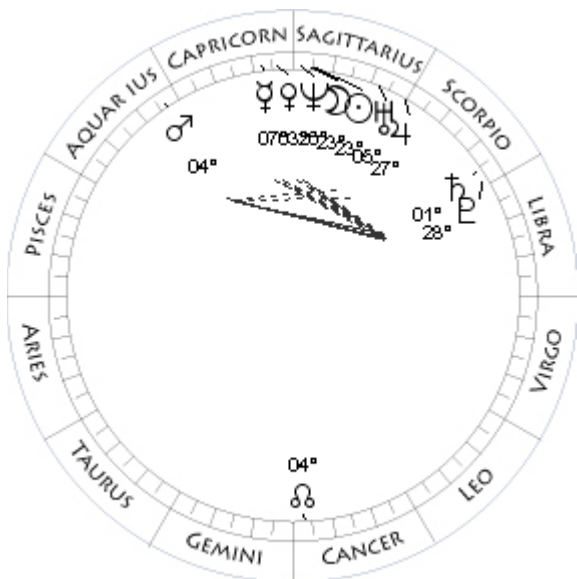
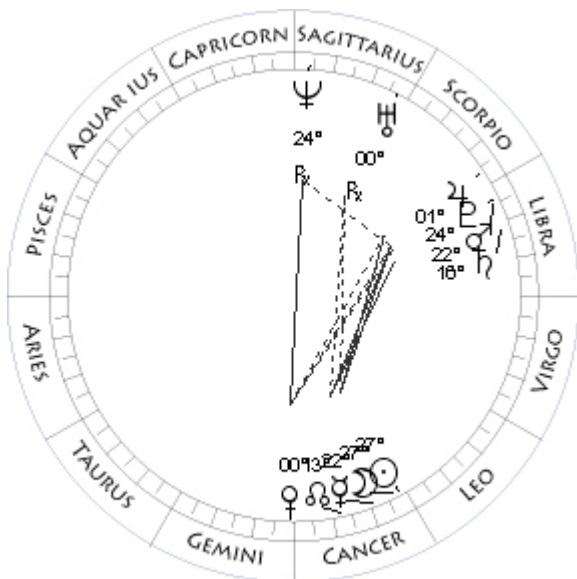
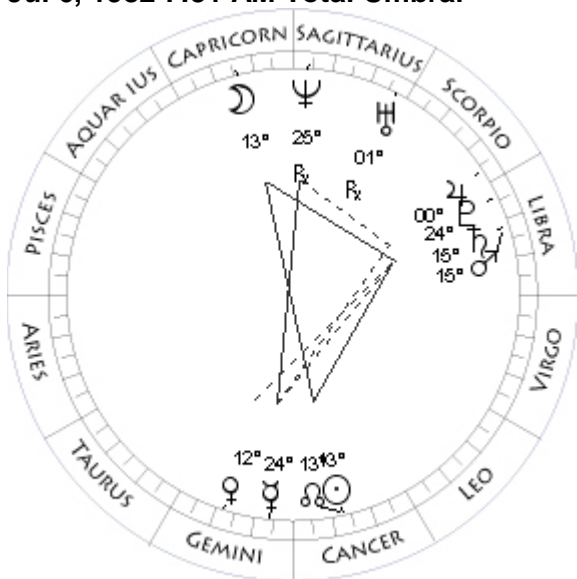
Jan 25, 1982 4:42 AM Partial Solar

Mo 07Le47 + 0°34	Mo 04Aq46 - 1°07
Su 07Le51 - 0°00	Su 04Aq53 - 0°00
Me 26Cn46 + 0°51	Me 18Aq17 + 1°57R
Ve 07Vi56 + 1°25	Ve 28Cp46 + 6°59R
Ma 08Cn35 + 0°37	Ma 15Li22 + 2°43
Ju 05Li59 + 1°12	Ju 08Sc57 + 1°15
Sa 05Li29 + 2°18	Sa 22Li13 + 2°32
Ur 26Sc03 + 0°12R	Ur 03Sa47 + 0°10
Ne 22Sa24 + 1°21R	Ne 26Sa00 + 1°16
Pl 21Li47 +16°57	Pl 26Li56 +17°10
No 01Le20 - 0°00	No 21Cn54 - 0°00
	Coords: 134W/53N

Jun 21, 1982 0:03 PM Partial Solar



Jul 6, 1982 7:31 AM Total Umbral



Jul 20, 1982 6:43 PM Partial Solar

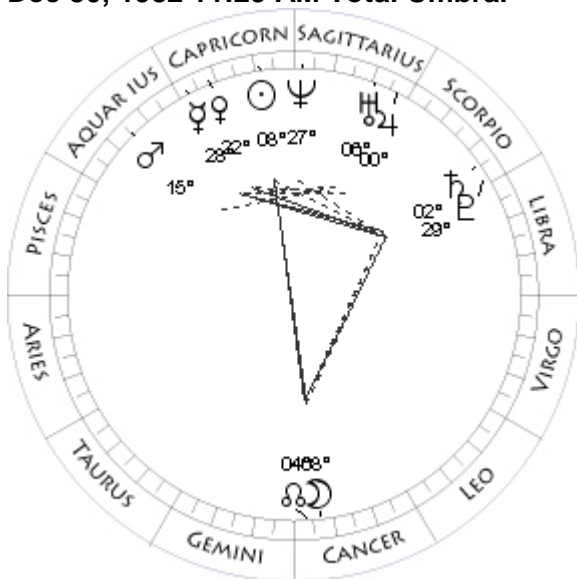
Mo 29Ge53 - 1°14	Mo 27Cn34 + 1°18
Su 29Ge48 - 0°00	Su 27Cn43 - 0°00
Me 08Ge47 - 3°59	Me 22Cn23 + 1°12
Ve 25Ta17 - 1°51	Ve 00Cn08 - 0°46
Ma 09Li05 + 0°00	Ma 22Li30 - 0°36
Ju 00Sc30 + 1°17R	Ju 01Sc13 + 1°09
Sa 15Li30 + 2°34	Sa 16Li21 + 2°27
Ur 01Sa30 + 0°09R	Ur 00Sa44 + 0°09R
Ne 25Sa33 + 1°19R	Ne 24Sa50 + 1°18R
Pl 24Li10 +17°18R	Pl 24Li12 +17°01
No 14Cn06 - 0°00	No 12Cn33 - 0°00

Dec 15, 1982 9:31 AM Partial Solar

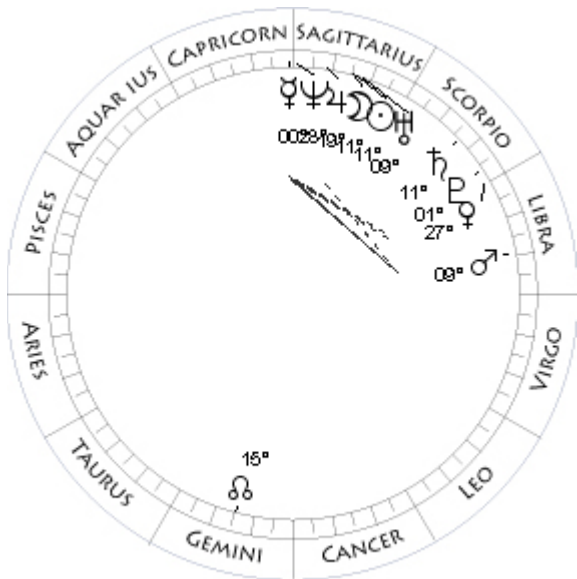
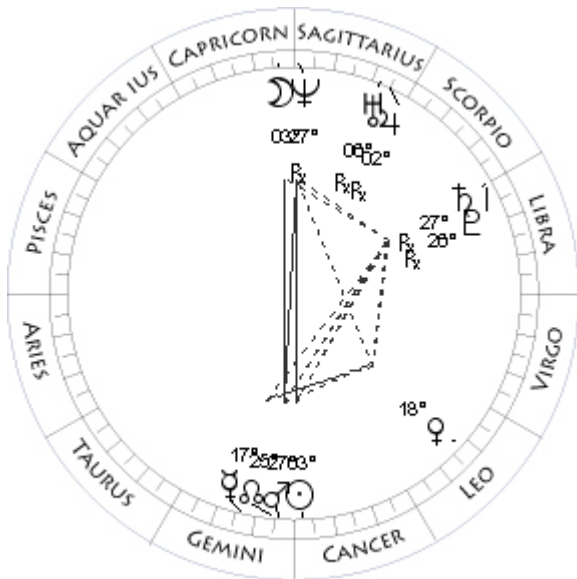
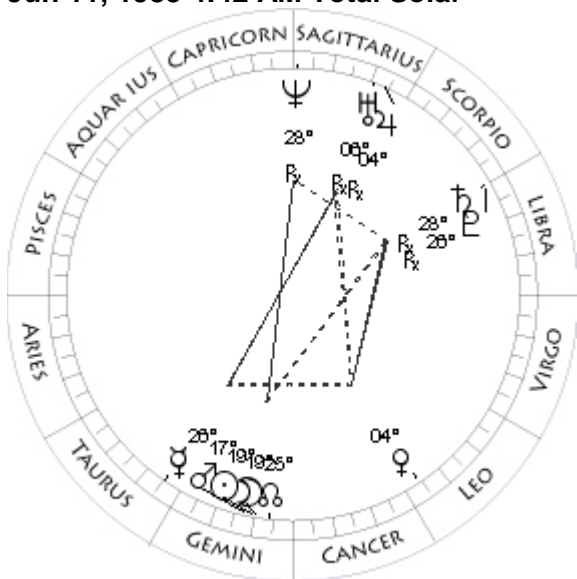
Mo 13Cp54 - 0°03	Mo 23Sa10 + 1°01
Su 13Cn55 - 0°00	Su 23Sa05 - 0°00
Me 24Ge48 - 1°28	Me 07Cp03 - 2°15
Ve 12Ge50 - 1°23	Ve 03Cp13 - 0°45
Ma 15Li21 - 0°20	Ma 04Aq01 - 1°16
Ju 00Sc33 + 1°13	Ju 27Sc48 + 0°49
Sa 15Li46 + 2°31	Sa 01Sc34 + 2°21
Ur 01Sa03 + 0°09R	Ur 05Sa59 + 0°07
Ne 25Sa10 + 1°19R	Ne 26Sa38 + 1°13
Pl 24Li07 +17°09	Pl 28Li52 +16°42
No 13Cn19 - 0°00	No 04Cn44 - 0°00

Coords: 112E/23S

Dec 30, 1982 11:29 AM Total Umbral



Jun 11, 1983 4:42 AM Total Solar



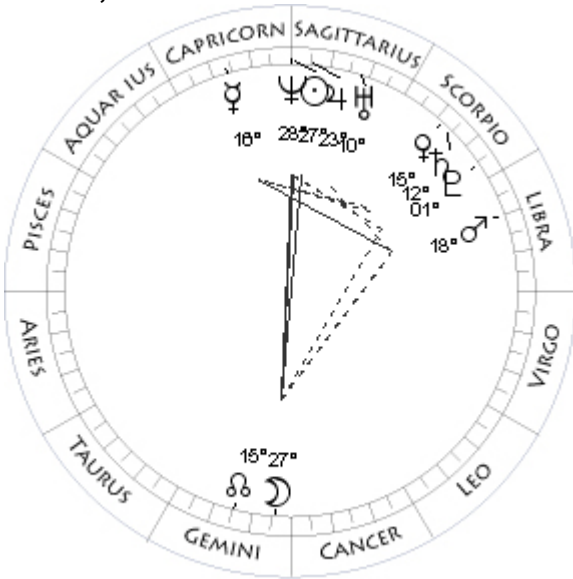
Jun 25, 1983 8:22 AM Partial Umbral

Mo 08Cn24 + 0°23	Mo 03Cp09 - 0°44
Su 08Cp27 - 0°00	Su 03Cn14 - 0°00
Me 28Cp00 - 1°17	Me 17Ge17 - 0°57
Ve 22Cp09 - 1°13	Ve 18Le16 + 1°25
Ma 15Aq49 - 1°10	Ma 27Ge21 + 0°38
Ju 00Sa53 + 0°49	Ju 02Sa45 + 0°50R
Sa 02Sc48 + 2°24	Sa 27Li45 + 2°34R
Ur 06Sa51 + 0°07	Ur 06Sa02 + 0°06R
Ne 27Sa12 + 1°13	Ne 27Sa43 + 1°16R
Pl 29Li13 +16°49	Pl 26Li45 +17°12R
No 03Cn56 - 0°00	No 24Ge34 - 0°00
Coords: 172E/24N	Coords: 125E/24S

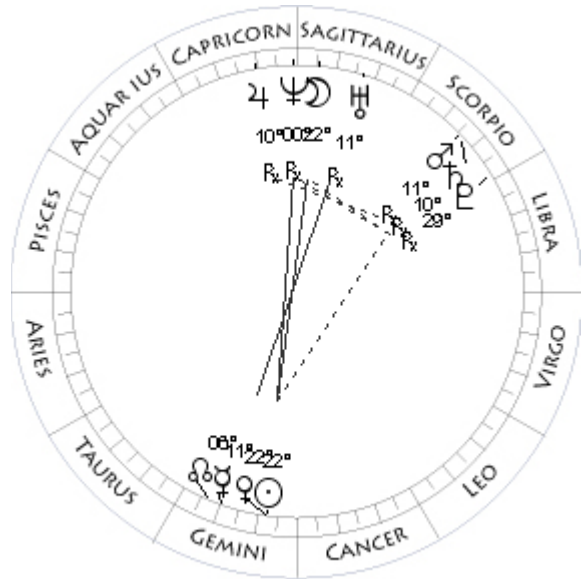
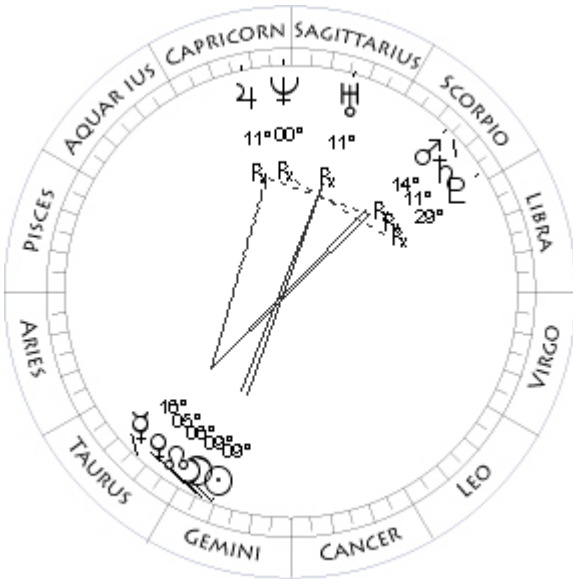
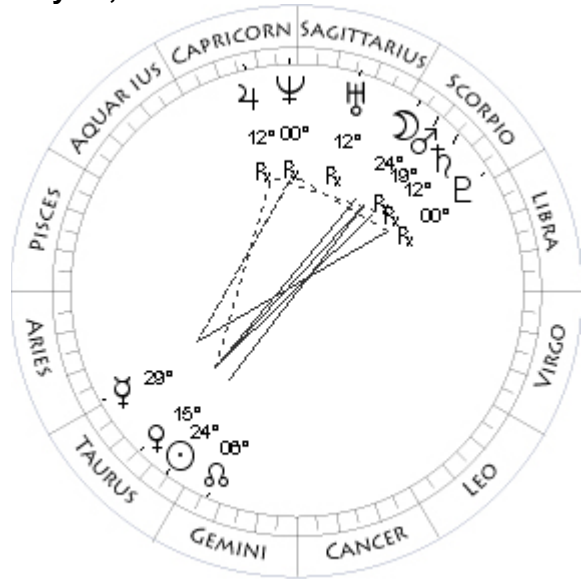
Dec 4, 1983 0:30 PM Annular Solar

Mo 19Ge45 - 0°30	Mo 11Sa49 + 0°23
Su 19Ge43 - 0°00	Su 11Sa47 - 0°00
Me 26Ta14 - 3°17	Me 00Cp04 - 2°23
Ve 04Le58 + 2°17	Ve 27Li31 + 2°16
Ma 17Ge40 + 0°30	Ma 09Li22 + 1°34
Ju 04Sa17 + 0°53R	Ju 19Sa42 + 0°22
Sa 28Li03 + 2°38R	Sa 11Sc15 + 2°13
Ur 06Sa34 + 0°06R	Ur 09Sa31 + 0°04
Ne 28Sa05 + 1°16R	Ne 28Sa20 + 1°10
Pl 26Li54 +17°19R	Pl 01Sc04 +16°30
No 25Ge19 - 0°00	No 15Ge59 - 0°00

Dec 20, 1983 1:48 AM Partial Penumbral



May 15, 1984 4:40 AM Partial Penumbral



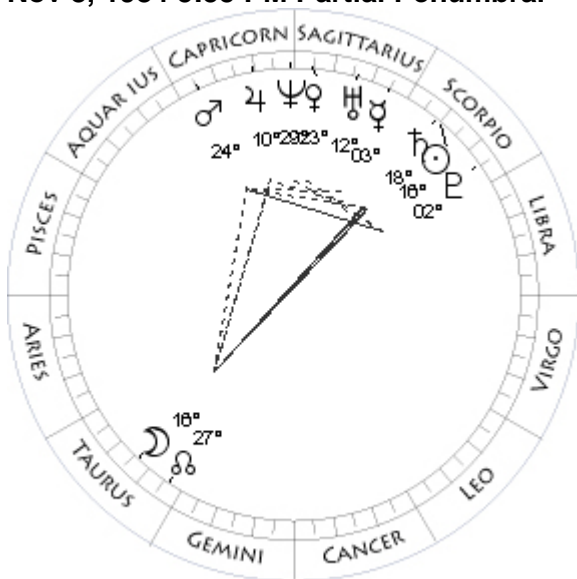
May 30, 1984 4:44 PM Annular Solar

Mo 27Ge28 + 1°03	Mo 09Ge24 + 0°15
Su 27Sa36 - 0°00	Su 09Ge26 - 0°00
Me 16Cp19 - 0°50	Me 16Ta57 - 2°42
Ve 15Sc40 + 2°22	Ve 05Ge02 - 0°26
Ma 18Li10 + 1°37	Ma 14Sc25 - 1°01R
Ju 23Sa14 + 0°20	Ju 11Cp31 + 0°08R
Sa 12Sc52 + 2°15	Sa 11Sc08 + 2°34R
Ur 10Sa27 + 0°03	Ur 11Sa39 + 0°02R
Ne 28Sa55 + 1°10	Ne 00Cp37 + 1°13R
Pl 01Sc31 +16°36	Pl 29Li44 +17°18R
No 15Ge10 - 0°00	No 06Ge33 - 0°00

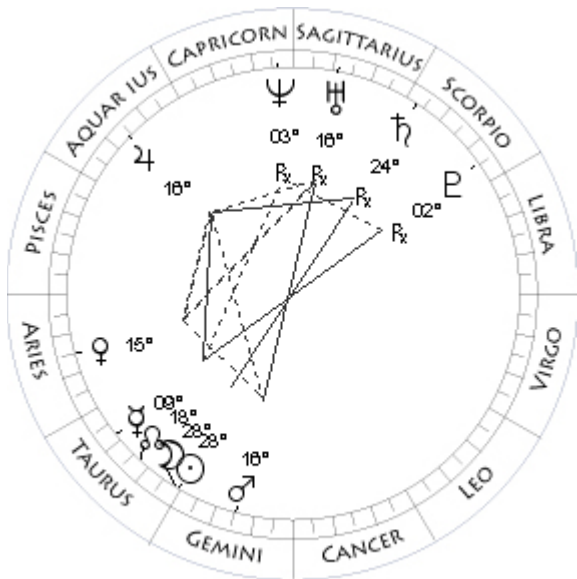
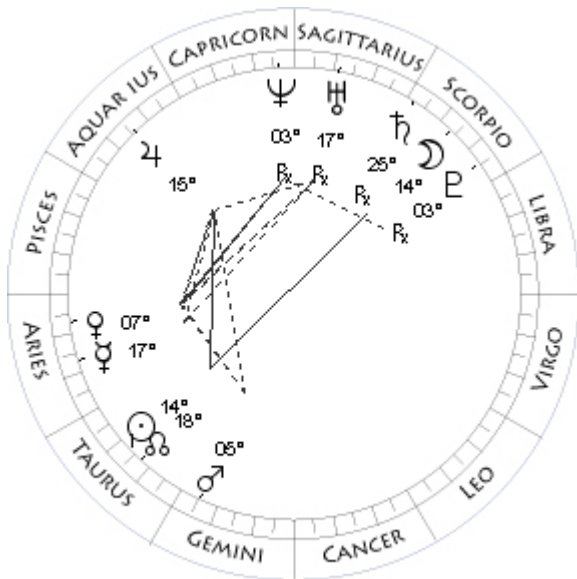
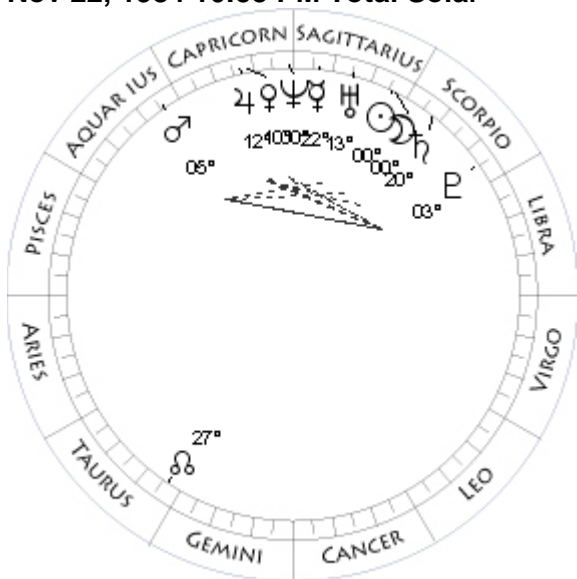
Jun 13, 1984 2:25 PM Partial Penumbral

Mo 24Sc38 + 1°06	Mo 22Sa35 - 1°27
Su 24Ta32 - 0°00	Su 22Ge45 - 0°00
Me 29Ar46 - 3°17	Me 11Ge27 - 0°28
Ve 15Ta59 - 0°58	Ve 22Ge07 + 0°07
Ma 19Sc27 - 0°18R	Ma 11Sc57 - 1°32R
Ju 12Cp36 + 0°10R	Ju 10Cp04 + 0°06R
Sa 12Sc12 + 2°36R	Sa 10Sc24 + 2°31R
Ur 12Sa17 + 0°02R	Ur 11Sa05 + 0°02R
Ne 00Cp58 + 1°13R	Ne 00Cp15 + 1°13R
Pl 00Sc05 +17°23R	Pl 29Li30 +17°11R
No 07Ge22 - 0°00	No 05Ge49 - 0°00
	Coords: 143W/25S

Nov 8, 1984 5:55 PM Partial Penumbral



Nov 22, 1984 10:53 PM Total Solar



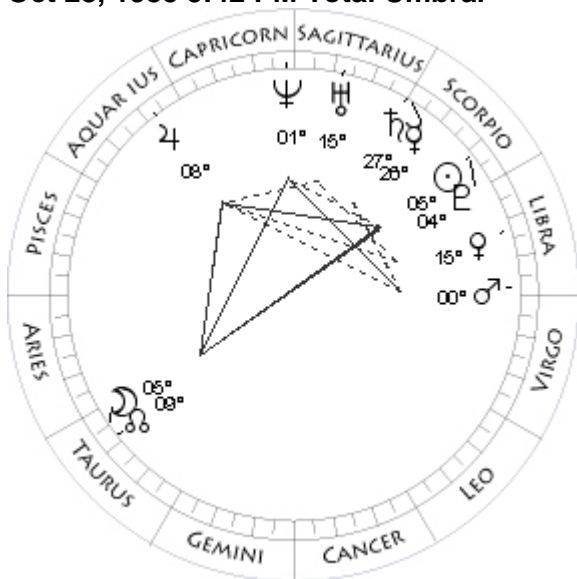
May 4, 1985 7:56 PM Total Umbral

Mo 16Ta36 - 1°00	Mo 14Sc18 + 0°21
Su 16Sc31 - 0°00	Su 14Ta17 - 0°00
Me 03Sa17 - 1°59	Me 17Ar49 - 3°01
Ve 23Sa41 - 1°49	Ve 07Ar46 + 1°22
Ma 24Cp47 - 1°45	Ma 05Ge52 + 0°36
Ju 10Cp11 - 0°11	Ju 15Aq29 - 0°32
Sa 18Sc46 + 2°02	Sa 25Sc38 + 2°22R
Ur 12Sa11 + 0°00	Ur 17Sa14 - 0°01R
Ne 29Sa36 + 1°08	Ne 03Cp23 + 1°09R
Pl 02Sc40 +16°16	Pl 03Sc03 +17°16R
No 27Ta58 - 0°00	No 18Ta36 - 0°00
Coords: 87W/16N	Coords: 60W/16S

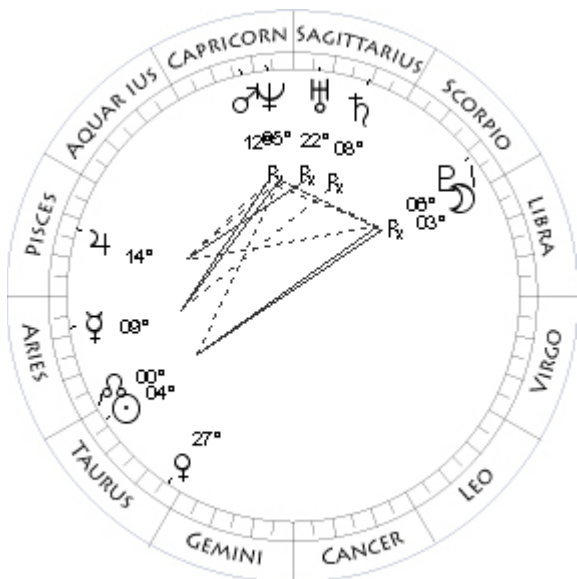
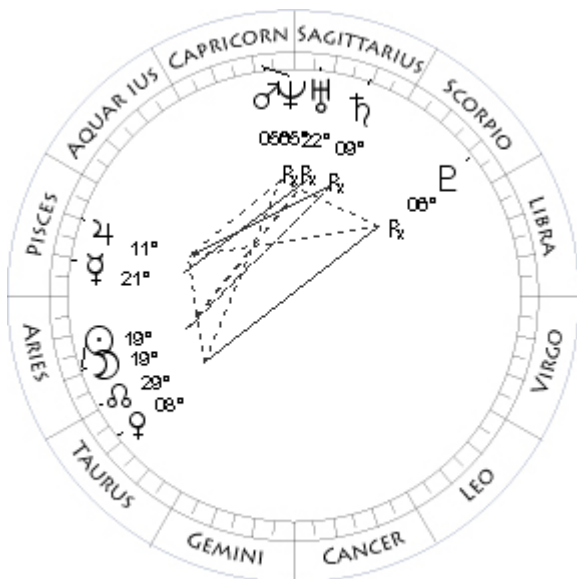
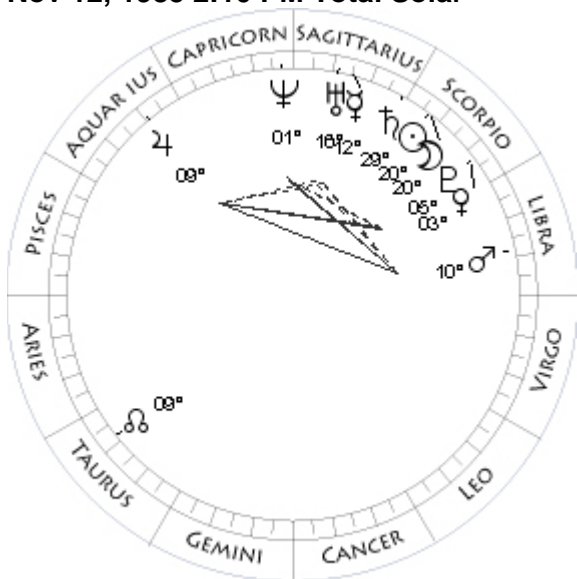
May 19, 1985 9:28 PM Partial Solar

Mo 00Sa47 - 0°18	Mo 28Ta43 + 0°58
Su 00Sa50 - 0°00	Su 28Ta50 - 0°00
Me 22Sa19 - 2°32	Me 09Ta18 - 2°15
Ve 10Cp46 - 2°13	Ve 15Ar50 - 0°55
Ma 05Aq25 - 1°33	Ma 16Ge10 + 0°43
Ju 12Cp54 - 0°12	Ju 16Aq34 - 0°35
Sa 20Sc28 + 2°02	Sa 24Sc31 + 2°22R
Ur 13Sa01 + 0°00	Ur 16Sa42 - 0°02R
Ne 00Cp04 + 1°07	Ne 03Cp07 + 1°10R
Pl 03Sc12 +16°18	Pl 02Sc39 +17°13R
No 27Ta13 - 0°00	No 17Ta48 - 0°00
Coords: 174E/38S	

Oct 28, 1985 5:42 PM Total Umbral



Nov 12, 1985 2:10 PM Total Solar



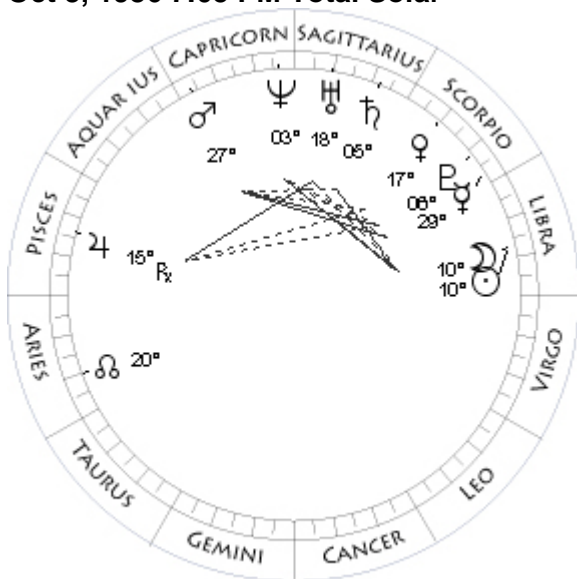
Apr 9, 1986 6:20 AM Partial Solar

Mo 05Ta16 - 0°22	Mo 19Ar12 - 0°59
Su 05Sc15 - 0°00	Su 19Ar07 - 0°00
Me 26Sc09 - 2°17	Me 21Pi59 - 1°35
Ve 15Li10 + 1°34	Ve 08Ta32 - 0°17
Ma 00Li42 + 1°12	Ma 05Cp55 - 0°21
Ju 08Aq10 - 0°51	Ju 11Pi01 - 0°55
Sa 27Sc45 + 1°50	Sa 09Sa21 + 2°00R
Ur 15Sa46 - 0°03	Ur 22Sa18 - 0°05R
Ne 01Cp26 + 1°05	Ne 05Cp49 + 1°06R
Pl 04Sc43 +16°05	Pl 06Sc27 +17°05R
No 09Ta13 - 0°00	No 00Ta37 - 0°00
Coords: 90W/13N	

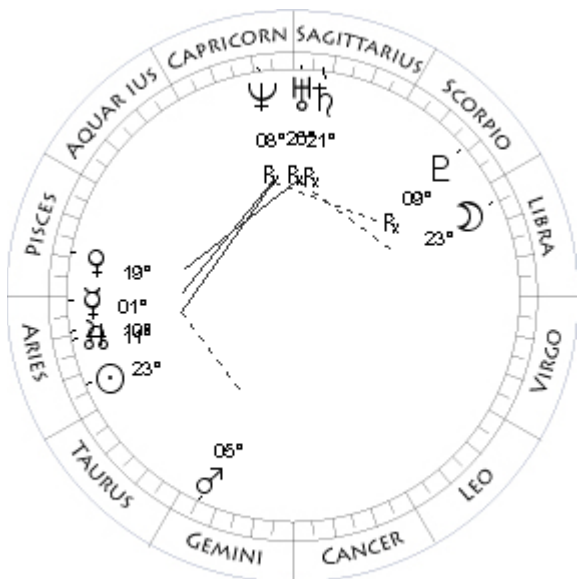
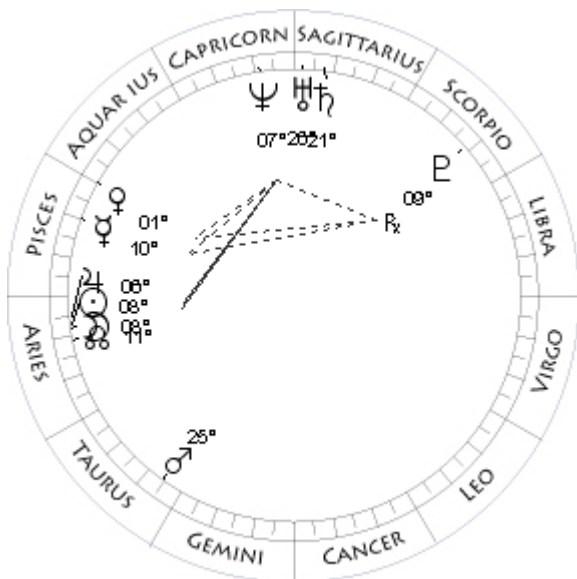
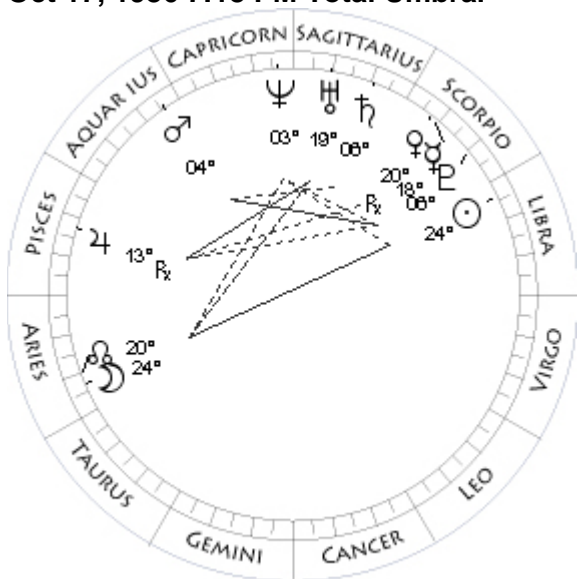
Apr 24, 1986 0:42 PM Total Umbral

Mo 20Sc01 - 0°59	Mo 03Sc59 - 0°22
Su 20Sc09 - 0°00	Su 04Ta03 - 0°00
Me 12Sa35 - 2°39	Me 09Ar02 - 2°45
Ve 03Sc43 + 1°23	Ve 27Ta14 + 0°23
Ma 10Li00 + 1°11	Ma 12Cp36 - 0°53
Ju 09Aq41 - 0°50	Ju 14Pi08 - 0°57
Sa 29Sc28 + 1°49	Sa 08Sa40 + 2°01R
Ur 16Sa33 - 0°03	Ur 22Sa03 - 0°05R
Ne 01Cp51 + 1°05	Ne 05Cp44 + 1°06R
Pl 05Sc19 +16°06	Pl 06Sc02 +17°06R
No 08Ta26 - 0°00	No 29Ar49 - 0°00
Coords: 140E/69S	Coords: 169W/13S

Oct 3, 1986 7:05 PM Total Solar



Oct 17, 1986 7:18 PM Total Umbral



Mar 29, 1987 0:48 PM Total Solar

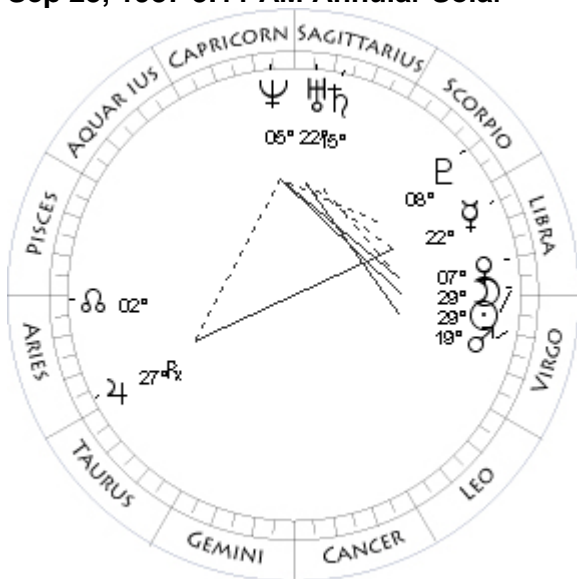
Mo 10Li21 + 0°58	Mo 08Ar19 - 0°18
Su 10Li17 - 0°00	Su 08Ar18 - 0°00
Me 29Li42 - 1°10	Me 10Pi42 - 1°42
Ve 17Sc51 - 6°08	Ve 01Pi02 - 0°39
Ma 27Cp13 - 3°22	Ma 25Ta12 + 0°47
Ju 15Pi01 - 1°30R	Ju 06Ar27 - 1°05
Sa 05Sa37 + 1°37	Sa 21Sa10 + 1°35
Ur 18Sa56 - 0°06	Ur 26Sa43 - 0°08
Ne 03Cp09 + 1°03	Ne 07Cp59 + 1°02
Pl 06Sc14 +15°58	Pl 09Sc24 +16°48R
No 21Ar13 - 0°00	No 11Ar51 - 0°00

Apr 14, 1987 2:18 AM Partial Penumbral

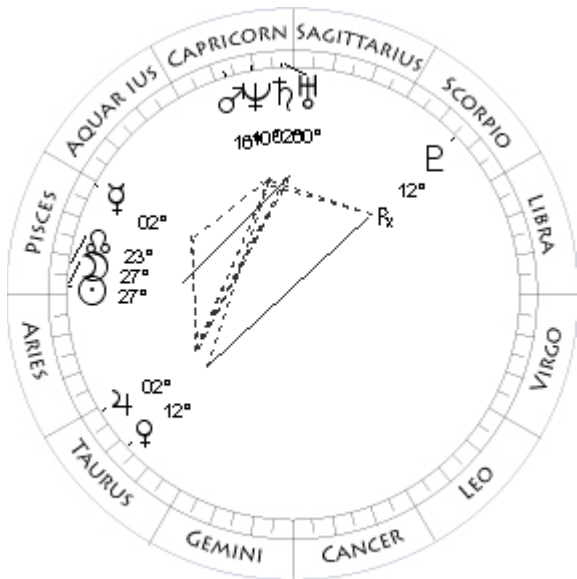
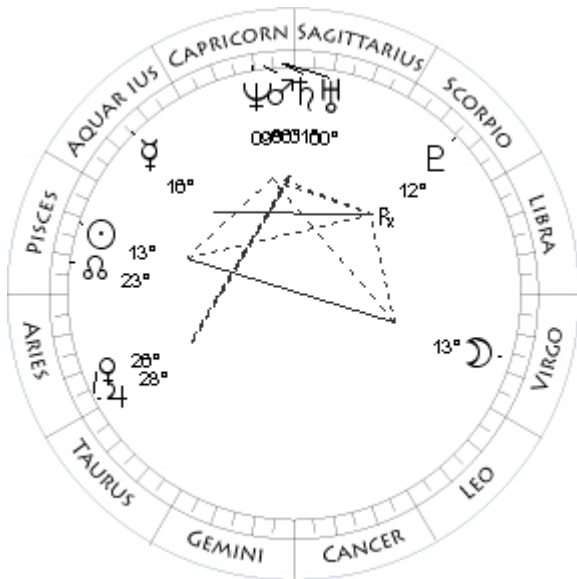
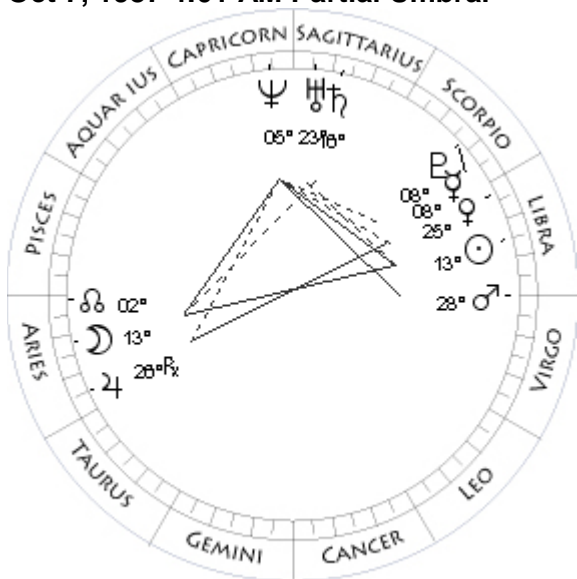
Mo 24Ar05 + 0°18	Mo 23Li30 - 1°06
Su 24Li08 - 0°00	Su 23Ar37 - 0°00
Me 18Sc06 - 2°38	Me 01Ar58 - 2°32
Ve 20Sc18 - 6°54R	Ve 19Pi41 - 1°18
Ma 04Aq58 - 2°47	Ma 05Ge37 + 0°53
Ju 13Pi45 - 1°28R	Ju 10Ar11 - 1°05
Sa 06Sa53 + 1°35	Sa 21Sa00 + 1°36R
Ur 19Sa26 - 0°06	Ur 26Sa39 - 0°08R
Ne 03Cp21 + 1°03	Ne 08Cp00 + 1°02R
Pl 06Sc46 +15°55	Pl 09Sc01 +16°52R
No 20Ar28 - 0°00	No 11Ar02 - 0°00

Coords: 67W/10N

Sep 23, 1987 3:11 AM Annular Solar



Oct 7, 1987 4:01 AM Partial Umbral



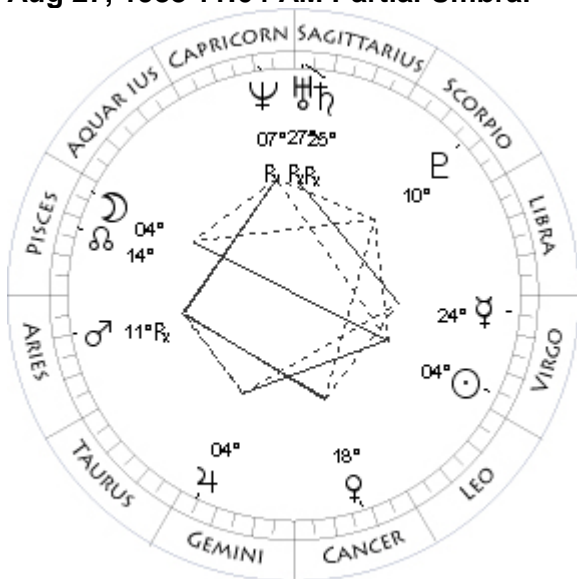
Mar 3, 1988 4:12 PM Partial Umbral

Mo 29Vi35 + 0°15	Mo 13Vi23 + 0°53
Su 29Vi34 - 0°00	Su 13Pi19 - 0°00
Me 22Li59 - 1°34	Me 16Aq27 + 0°14
Ve 07Li56 + 1°12	Ve 26Ar54 + 0°59
Ma 19Vi58 + 1°04	Ma 06Cp55 - 0°20
Ju 27Ar51 - 1°34R	Ju 28Ar59 - 1°02
Sa 15Sa30 + 1°19	Sa 01Cp22 + 1°07
Ur 22Sa55 - 0°10	Ur 00Cp36 - 0°11
Ne 05Cp15 + 1°00	Ne 09Cp48 + 0°58
Pl 08Sc22 +15°48	Pl 12Sc30 +16°23R
No 02Ar27 - 0°00	No 23Pi51 - 0°00
Coords: 138W/14N	Coords: 120W/ 7N

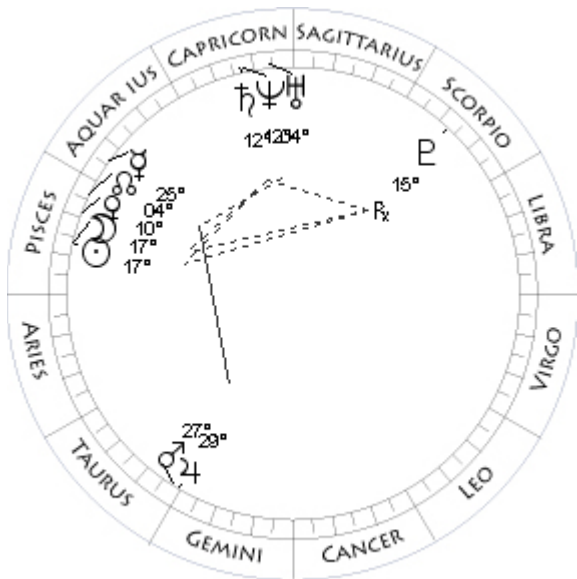
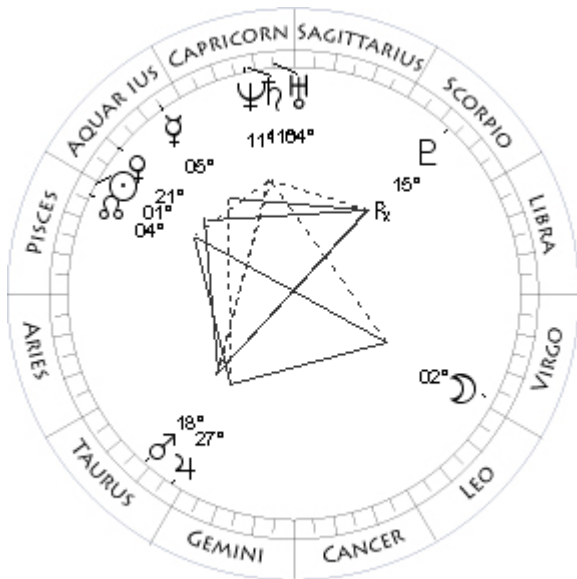
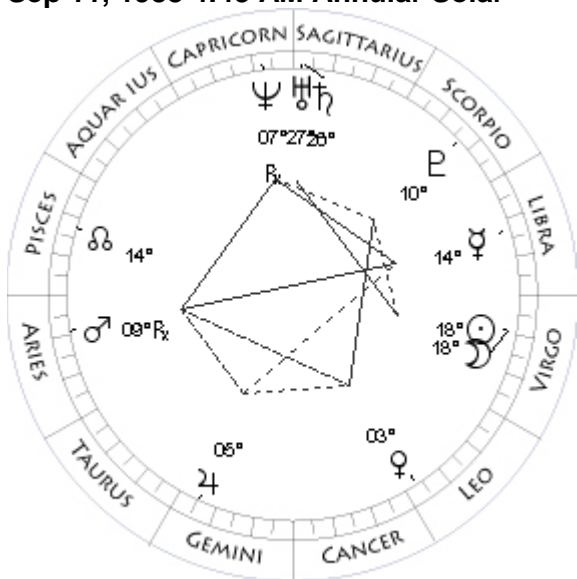
Mar 18, 1988 1:58 AM Total Solar

Mo 13Ar15 + 1°00	Mo 27Pi38 + 0°25
Su 13Li22 - 0°00	Su 27Pi42 - 0°00
Me 08Sc41 - 3°05	Me 02Pi12 - 1°49
Ve 25Li24 + 0°50	Ve 12Ta50 + 2°05
Ma 28Vi57 + 1°01	Ma 16Cp38 - 0°35
Ju 26Ar12 - 1°35R	Ju 02Ta01 - 1°00
Sa 16Sa24 + 1°16	Sa 02Cp05 + 1°08
Ur 23Sa15 - 0°10	Ur 00Cp55 - 0°11
Ne 05Cp21 + 1°00	Ne 10Cp02 + 0°58
Pl 08Sc52 +15°44	Pl 12Sc17 +16°29R
No 01Ar43 - 0°00	No 23Pi05 - 0°00
	Coords: 140W/21N

Aug 27, 1988 11:04 AM Partial Umbral



Sep 11, 1988 4:43 AM Annular Solar



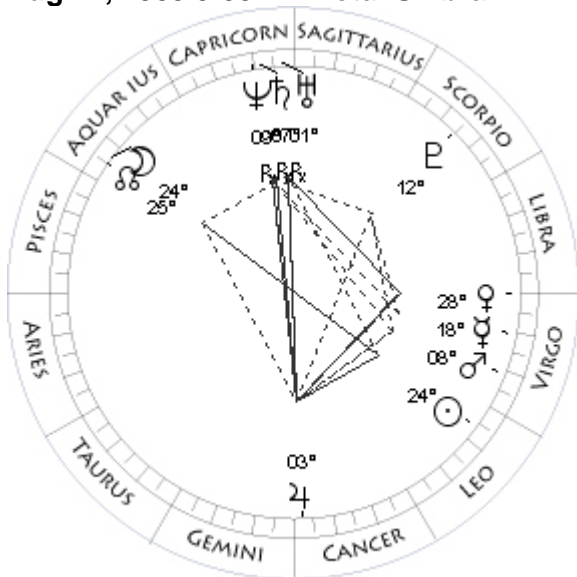
Feb 20, 1989 3:35 PM Total Umbral

Mo 04Pi27 - 0°53	Mo 02Vi00 + 0°16
Su 04Vi23 - 0°00	Su 01Pi59 - 0°00
Me 24Vi58 + 0°03	Me 05Aq39 - 0°08
Ve 18Cn42 - 2°42	Ve 21Aq11 - 1°08
Ma 11Ar29 - 5°17R	Ma 18Ta43 + 1°12
Ju 04Ge51 - 0°58	Ju 27Ta43 - 0°41
Sa 25Sa56 + 0°59R	Sa 11Cp02 + 0°41
Ur 27Sa04 - 0°13R	Ur 04Cp23 - 0°14
Ne 07Cp34 + 0°58R	Ne 11Cp40 + 0°54
Pl 10Sc11 +15°46	Pl 15Sc11 +16°00R
No 14Pi29 - 0°00	No 05Pi06 - 0°00
Coords: 165E/11S	Coords: 130W/11N

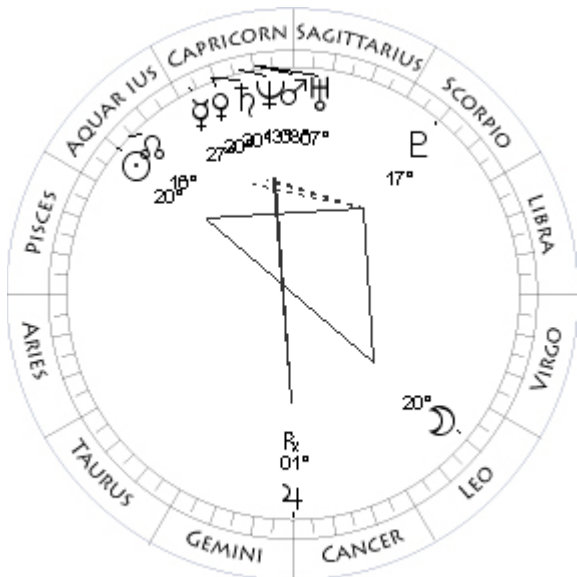
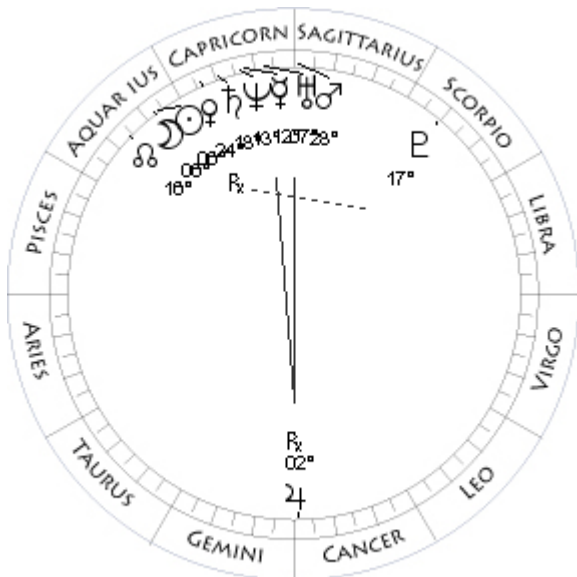
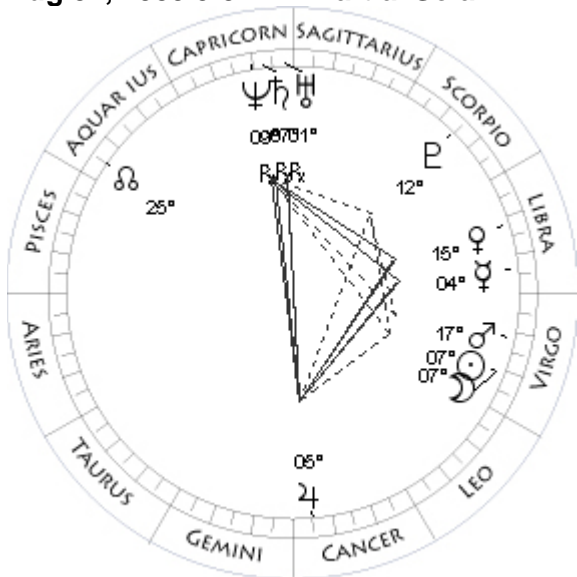
Mar 7, 1989 6:07 PM Partial Solar

Mo 18Vi37 - 0°25	Mo 17Pi01 + 1°07
Su 18Vi40 - 0°00	Su 17Pi09 - 0°00
Me 14Li49 - 2°01	Me 25Aq27 - 1°53
Ve 03Le57 - 1°29	Ve 10Pi03 - 1°24
Ma 09Ar48 - 5°14R	Ma 27Ta49 + 1°17
Ju 05Ge50 - 1°00	Ju 29Ta32 - 0°38
Sa 26Sa03 + 0°56	Sa 12Cp14 + 0°41
Ur 27Sa03 - 0°13	Ur 04Cp53 - 0°14
Ne 07Cp27 + 0°58R	Ne 12Cp01 + 0°55
Pl 10Sc33 +15°39	Pl 15Sc05 +16°07R
No 13Pi42 - 0°00	No 04Pi18 - 0°00
Coords: 95W/20S	

Aug 17, 1989 3:08 AM Total Umbral



Aug 31, 1989 5:31 AM Partial Solar



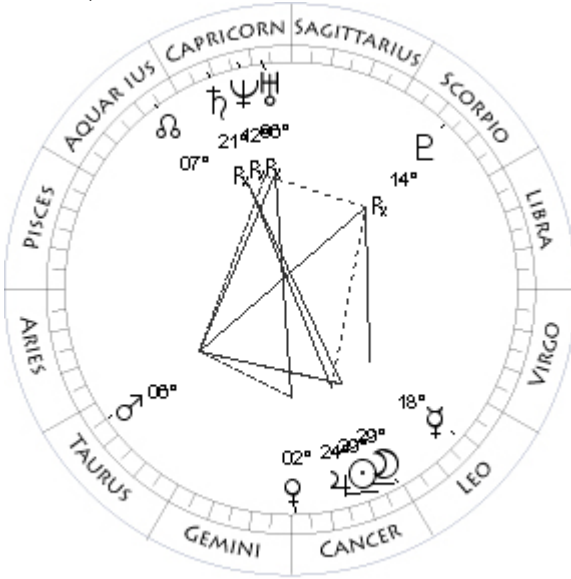
Jan 26, 1990 7:30 PM Annular Solar

Mo 24Aq12 - 0°09	Mo 06Aq40 - 0°54
Su 24Le12 - 0°00	Su 06Aq36 - 0°00
Me 18Vi41 - 0°21	Me 12Cp15 + 1°49
Ve 28Vi53 + 0°49	Ve 24Cp06 + 7°11R
Ma 08Vi35 + 1°02	Ma 28Sa00 - 0°20
Ju 03Cn20 - 0°19	Ju 02Cn11 - 0°03R
Sa 07Cp48 + 0°32R	Sa 18Cp38 + 0°16
Ur 01Cp34 - 0°16R	Ur 07Cp15 - 0°17
Ne 09Cp56 + 0°55R	Ne 13Cp00 + 0°51
Pl 12Sc33 +15°36	Pl 17Sc38 +15°28
No 25Aq42 - 0°00	No 17Aq05 - 0°00

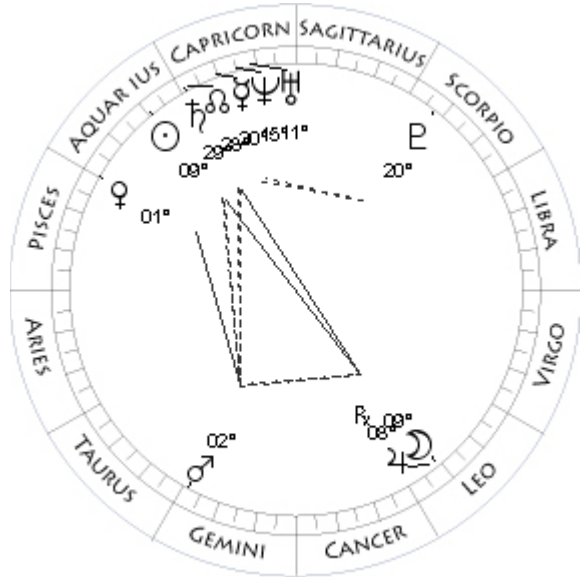
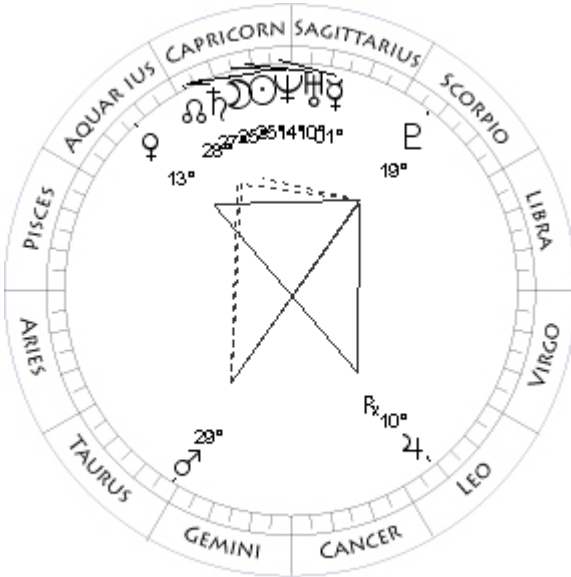
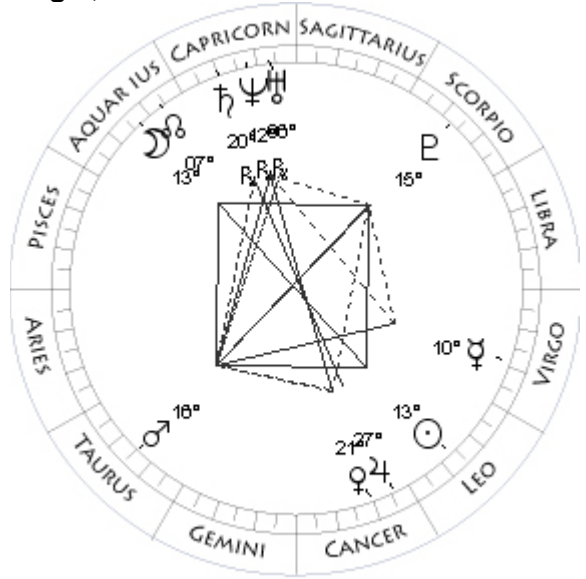
Feb 9, 1990 7:11 PM Total Umbral

Mo 07Vi41 - 1°05	Mo 20Le44 - 0°23
Su 07Vi48 - 0°00	Su 20Aq47 - 0°00
Me 04Li53 - 2°34	Me 27Cp02 - 0°26
Ve 15Li36 + 0°06	Ve 20Cp58 + 7°07
Ma 17Vi33 + 0°58	Ma 08Cp07 - 0°30
Ju 05Cn45 - 0°18	Ju 01Cn11 - 0°01R
Sa 07Cp24 + 0°31R	Sa 20Cp12 + 0°15
Ur 01Cp23 - 0°16R	Ur 07Cp58 - 0°17
Ne 09Cp44 + 0°55R	Ne 13Cp28 + 0°51
Pl 12Sc48 +15°28	Pl 17Sc46 +15°35
No 24Aq57 - 0°00	No 16Aq21 - 0°00
Coords: 76W/14N	

Jul 22, 1990 3:01 AM Total Solar



Aug 6, 1990 2:12 PM Partial Umbral



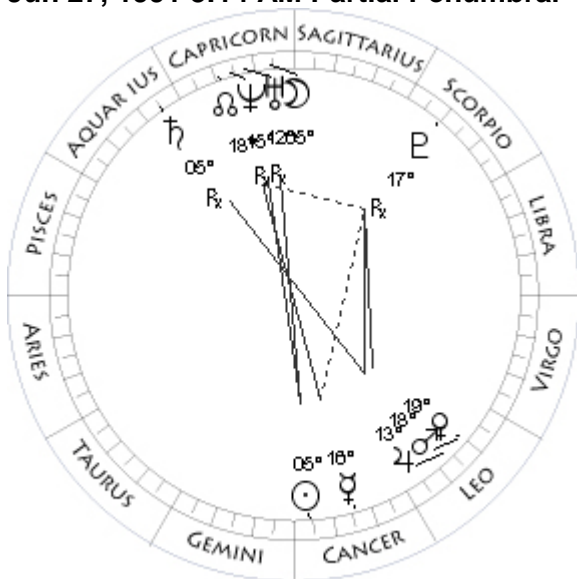
Jan 15, 1991 11:53 PM Annular Solar

Mo 29Cn08 + 0°45	Mo 25Cp21 - 0°15
Su 29Cn04 - 0°00	Su 25Cp20 - 0°00
Me 18Le33 + 1°20	Me 01Cp45 + 1°17
Ve 02Cn23 - 0°40	Ve 13Aq31 - 1°32
Ma 06Ta20 - 2°04	Ma 29Ta01 + 2°24
Ju 24Cn03 + 0°14	Ju 10Le17 + 0°44R
Sa 21Cp28 + 0°04R	Sa 27Cp26 - 0°10
Ur 06Cp43 - 0°20R	Ur 10Cp38 - 0°19
Ne 12Cp45 + 0°52R	Ne 14Cp42 + 0°47
Pl 14Sc59 +15°33R	Pl 19Sc59 +15°02
No 07Aq45 - 0°00	No 28Cp20 - 0°00
Coords: 169W/65N	Coords: 170E/36S

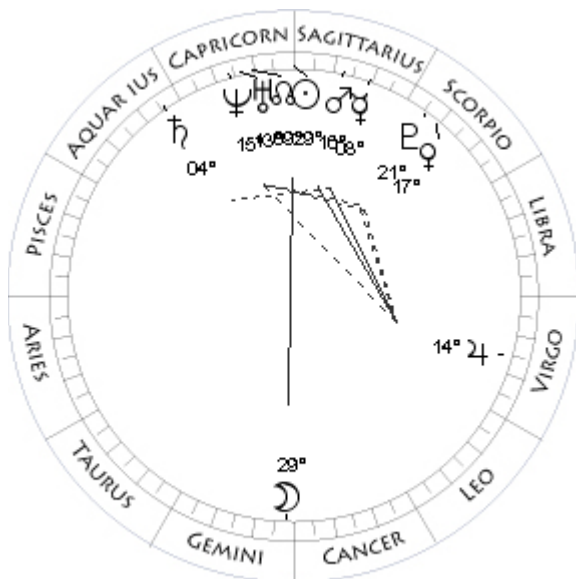
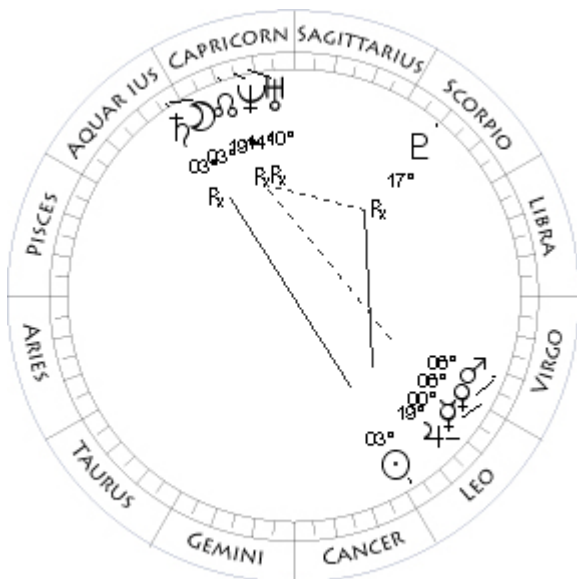
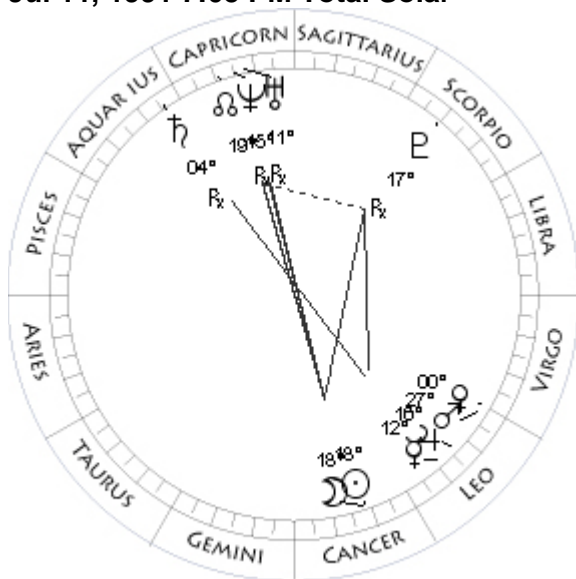
Jan 30, 1991 5:58 AM Partial Penumbral

Mo 13Aq47 + 0°36	Mo 09Le43 - 1°04
Su 13Le52 - 0°00	Su 09Aq50 - 0°00
Me 10Vi41 - 0°49	Me 20Cp08 - 0°43
Ve 21Cn05 + 0°02	Ve 01Pi19 - 1°33
Ma 16Ta06 - 2°00	Ma 02Ge22 + 2°21
Ju 27Cn28 + 0°16	Ju 08Le25 + 0°46R
Sa 20Cp24 + 0°02R	Sa 29Cp08 - 0°11
Ur 06Cp12 - 0°20R	Ur 11Cp26 - 0°20
Ne 12Cp23 + 0°52R	Ne 15Cp13 + 0°47
Pl 15Sc01 +15°24	Pl 20Sc14 +15°08
No 06Aq56 - 0°00	No 27Cp35 - 0°00
Coords: 148W/16S	

Jun 27, 1991 3:14 AM Partial Penumbral



Jul 11, 1991 7:05 PM Total Solar



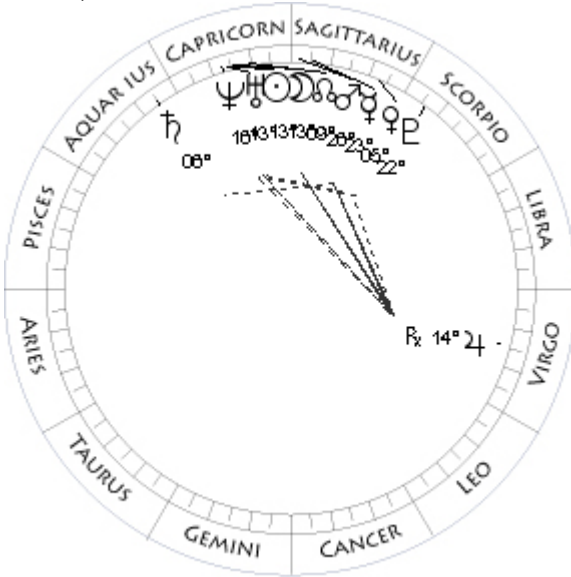
Jul 26, 1991 6:07 PM Partial Penumbral

Mo 05Cp07 - 1°16	Mo 03Aq07 + 1°17
Su 05Cn00 - 0°00	Su 03Le16 - 0°00
Me 16Cn38 + 1°53	Me 00Vi11 - 1°22
Ve 19Le38 + 1°13	Ve 06Vi43 - 3°12
Ma 18Le48 + 1°15	Ma 06Vi56 + 1°01
Ju 13Le37 + 0°44	Ju 19Le42 + 0°45
Sa 05Aq34 - 0°26R	Sa 03Aq31 - 0°29R
Ur 12Cp07 - 0°23R	Ur 10Cp57 - 0°23R
Ne 15Cp41 + 0°49R	Ne 14Cp54 + 0°48R
Pl 17Sc51 +15°26R	Pl 17Sc34 +15°11R
No 19Cp45 - 0°00	No 18Cp11 - 0°00
	Coords: 89W/18S

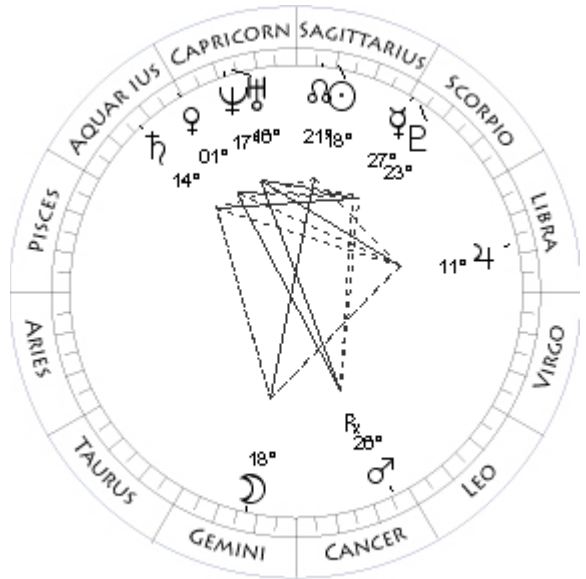
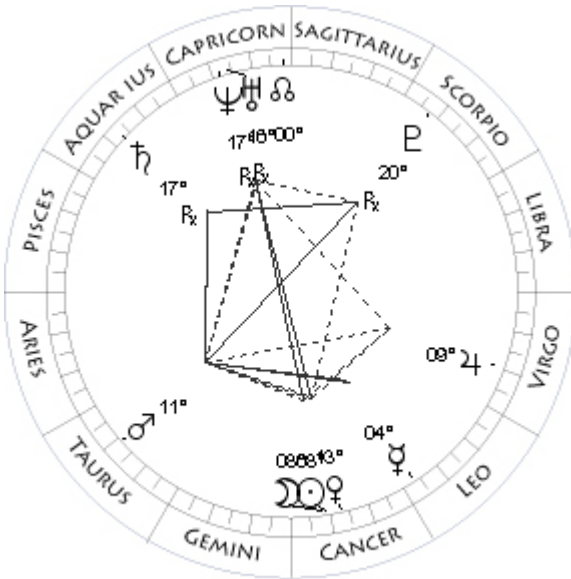
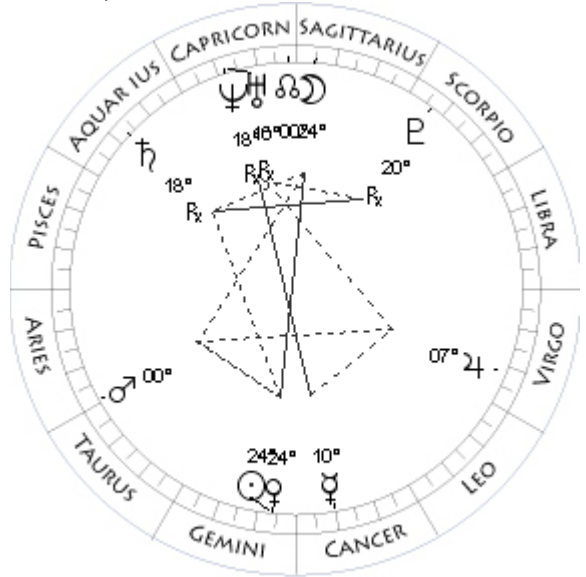
Dec 21, 1991 10:33 AM Partial Umbral

Mo 18Cn58 - 0°00	Mo 29Ge08 + 0°59
Su 18Cn59 - 0°00	Su 29Sa03 - 0°00
Me 12Le15 + 1°08	Me 08Sa35 + 2°44
Ve 00Vi21 - 0°32	Ve 17Sc47 + 2°19
Ma 27Le43 + 1°08	Ma 16Sa04 - 0°21
Ju 16Le33 + 0°44	Ju 14Vi29 + 1°07
Sa 04Aq37 - 0°27R	Sa 04Aq43 - 0°35
Ur 11Cp31 - 0°23R	Ur 13Cp04 - 0°22
Ne 15Cp17 + 0°49R	Ne 15Cp50 + 0°44
Pl 17Sc39 +15°19R	Pl 21Sc46 +14°31
No 18Cp58 - 0°00	No 10Cp22 - 0°00
	Coords: 159E/24N

Jan 4, 1992 11:04 PM Annular Solar



Jun 15, 1992 4:56 AM Partial Umbral



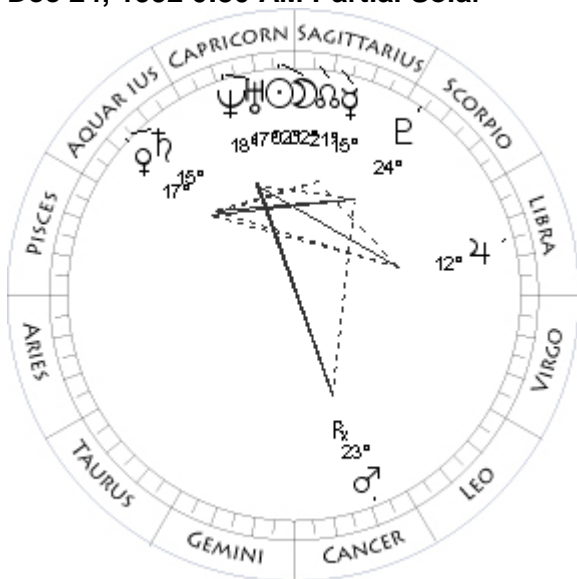
Jun 30, 1992 0:10 PM Total Solar

Mo 13Cp48 + 0°22	Mo 08Cn51 - 0°45
Su 13Cp51 - 0°00	Su 08Cn57 - 0°00
Me 23Sa03 + 0°53	Me 04Le16 + 0°51
Ve 05Sa14 + 2°00	Ve 13Cn34 + 0°47
Ma 26Sa43 - 0°30	Ma 11Ta33 - 1°08
Ju 14Vi35 + 1°11R	Ju 09Vi40 + 1°08
Sa 06Aq19 - 0°35	Sa 17Aq38 - 0°57R
Ur 13Cp55 - 0°22	Ur 16Cp20 - 0°26R
Ne 16Cp23 + 0°44	Ne 17Cp49 + 0°45R
Pl 22Sc13 +14°35	Pl 20Sc24 +15°02R
No 09Cp35 - 0°00	No 00Cp11 - 0°00
Coords: 170E/ 1N	

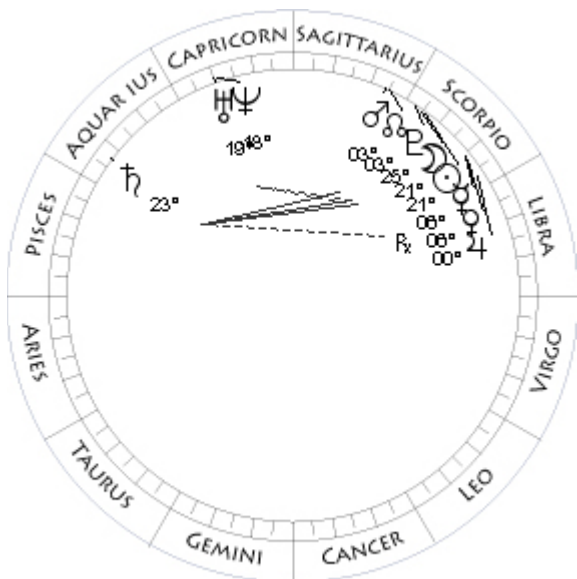
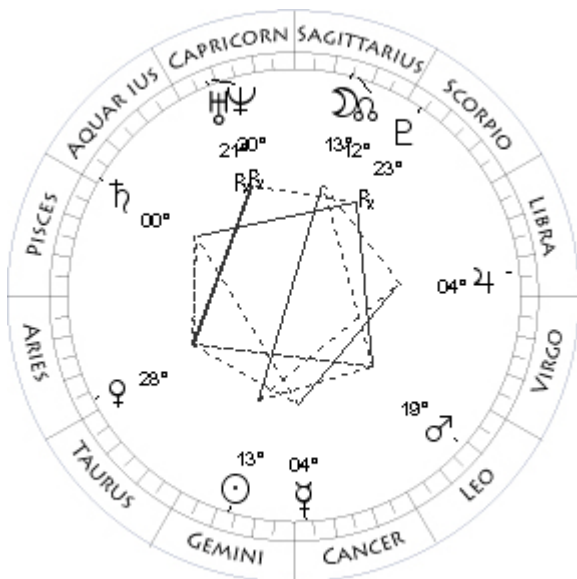
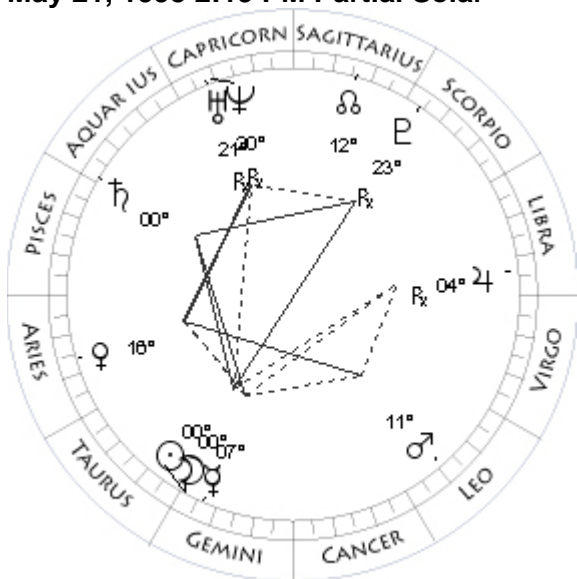
Dec 9, 1992 11:44 PM Total Umbral

Mo 24Sa23 - 0°35	Mo 18Ge12 + 0°18
Su 24Ge21 - 0°00	Su 18Sa11 - 0°00
Me 10Cn38 + 2°01	Me 27Sc25 + 2°16
Ve 24Ge46 + 0°13	Ve 01Aq28 - 2°18
Ma 00Ta24 - 1°14	Ma 26Cn47 + 2°59R
Ju 07Vi34 + 1°10	Ju 11Li01 + 1°13
Sa 18Aq14 - 0°54R	Sa 14Aq16 - 1°01
Ur 16Cp55 - 0°26R	Ur 16Cp25 - 0°25
Ne 18Cp13 + 0°45R	Ne 17Cp35 + 0°41
Pl 20Sc42 +15°09R	Pl 23Sc52 +14°06
No 01Cp00 - 0°00	No 21Sa35 - 0°00
	Coords: 2W/23N

Dec 24, 1992 0:30 AM Partial Solar



May 21, 1993 2:19 PM Partial Solar



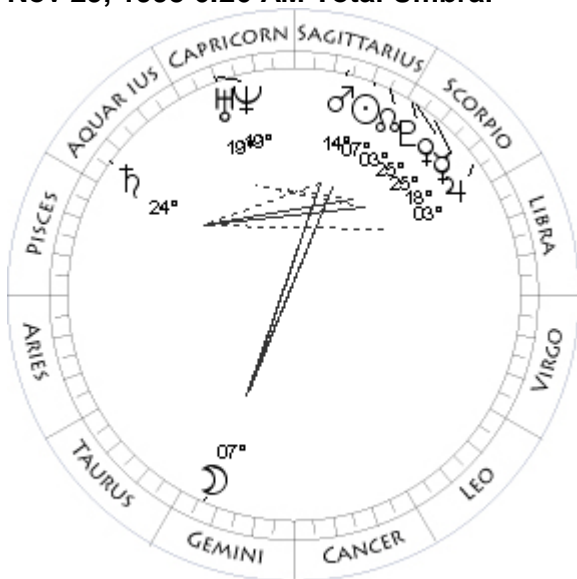
Jun 4, 1993 1:00 PM Total Umbral

Mo 02Cp21 + 0°59	Mo 13Sa53 + 0°09
Su 02Cp28 - 0°00	Su 13Ge55 - 0°00
Me 15Sa43 + 0°32	Me 04Cn01 + 2°08
Ve 17Aq42 - 1°56	Ve 28Ar17 - 2°17
Ma 23Cn19 + 3°36R	Ma 19Le25 + 1°25
Ju 12Li44 + 1°16	Ju 04Li46 + 1°25
Sa 15Aq33 - 1°01	Sa 00Pi18 - 1°19
Ur 17Cp12 - 0°25	Ur 21Cp35 - 0°28R
Ne 18Cp05 + 0°41	Ne 20Cp42 + 0°41R
Pl 24Sc22 +14°09	Pl 23Sc35 +14°48R
No 20Sa50 - 0°00	No 12Sa14 - 0°00
Coords: 164W/22S	

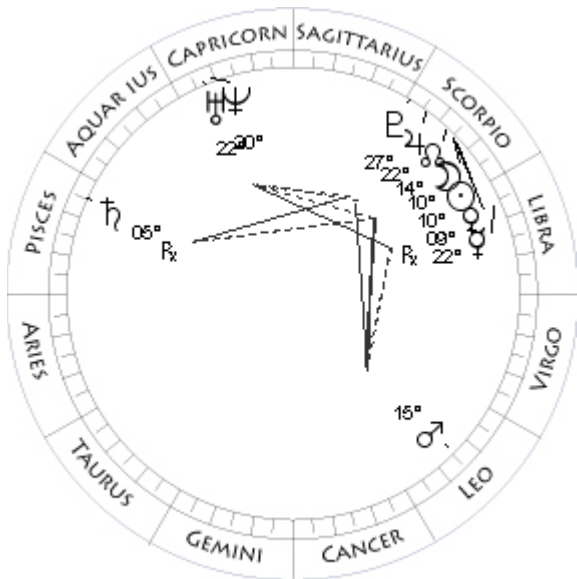
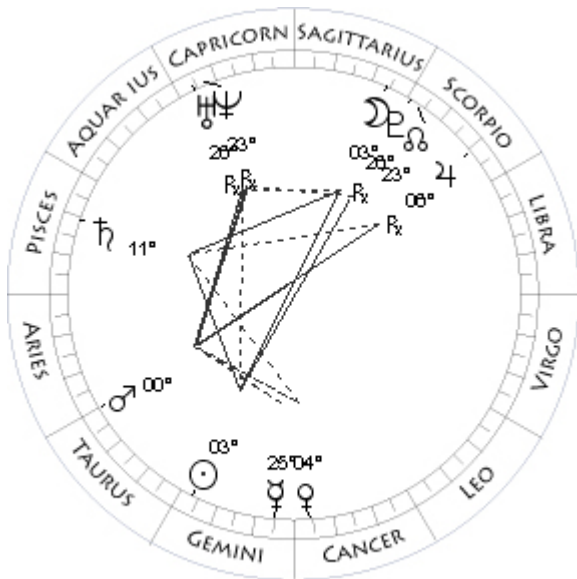
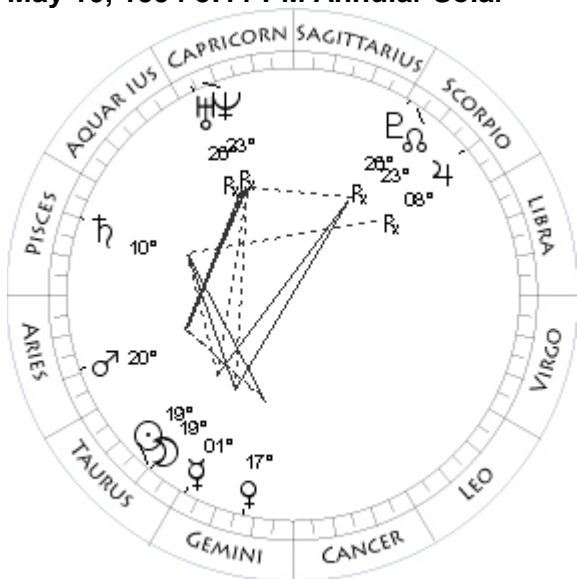
Nov 13, 1993 9:44 PM Partial Solar

Mo 00Ge37 + 1°03	Mo 21Sc37 - 1°03
Su 00Ge32 - 0°00	Su 21Sc32 - 0°00
Me 07Ge13 + 1°07	Me 06Sc42 + 1°55R
Ve 16Ar33 - 1°11	Ve 06Sc03 + 1°20
Ma 11Le53 + 1°37	Ma 03Sa22 - 0°25
Ju 04Li55 + 1°28R	Ju 00Sc46 + 1°04
Sa 00Pi01 - 1°16	Sa 23Aq52 - 1°29
Ur 21Cp56 - 0°28R	Ur 19Cp10 - 0°28
Ne 20Cp57 + 0°41R	Ne 18Cp56 + 0°38
Pl 23Sc58 +14°50R	Pl 25Sc18 +13°42
No 12Sa58 - 0°00	No 03Sa38 - 0°00

Nov 29, 1993 6:26 AM Total Umbral



May 10, 1994 5:11 PM Annular Solar



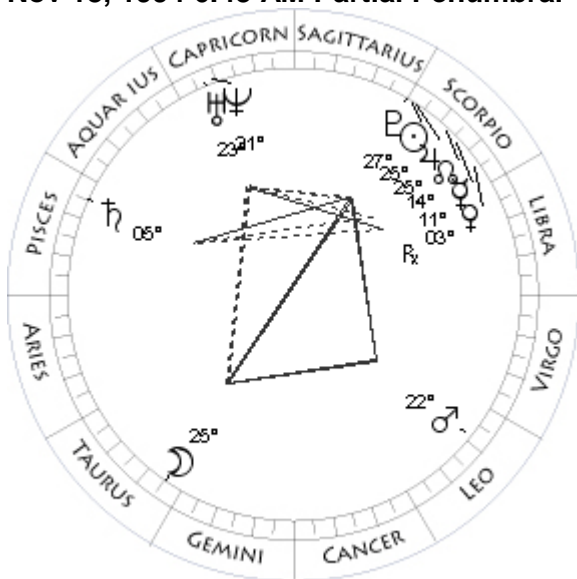
May 25, 1994 3:30 AM Partial Umbral

Mo 07Ge00 - 0°22	Mo 03Sa37 + 0°54
Su 07Sa03 - 0°00	Su 03Ge43 - 0°00
Me 18Sc47 + 1°53	Me 25Ge55 + 2°15
Ve 25Sc20 + 0°54	Ve 04Cn54 + 1°38
Ma 14Sa34 - 0°34	Ma 00Ta55 - 0°48
Ju 03Sc55 + 1°05	Ju 06Sc50 + 1°21R
Sa 24Aq31 - 1°27	Sa 11Pi43 - 1°39
Ur 19Cp49 - 0°27	Ur 26Cp06 - 0°31R
Ne 19Cp21 + 0°37	Ne 23Cp08 + 0°37R
Pl 25Sc54 +13°41	Pl 26Sc30 +14°24R
No 02Sa49 - 0°00	No 23Sc27 - 0°00

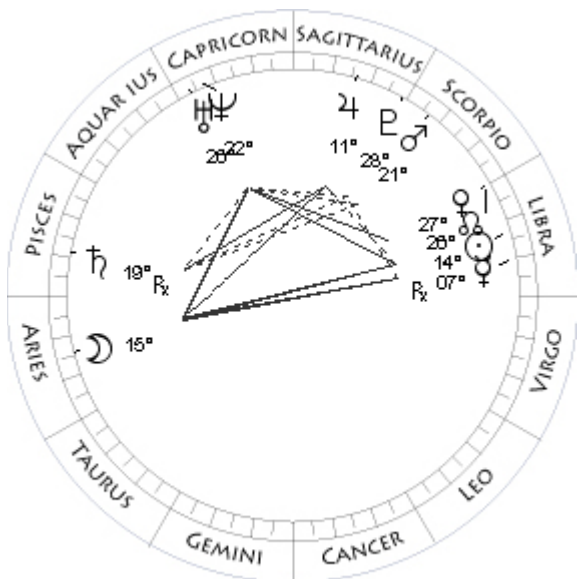
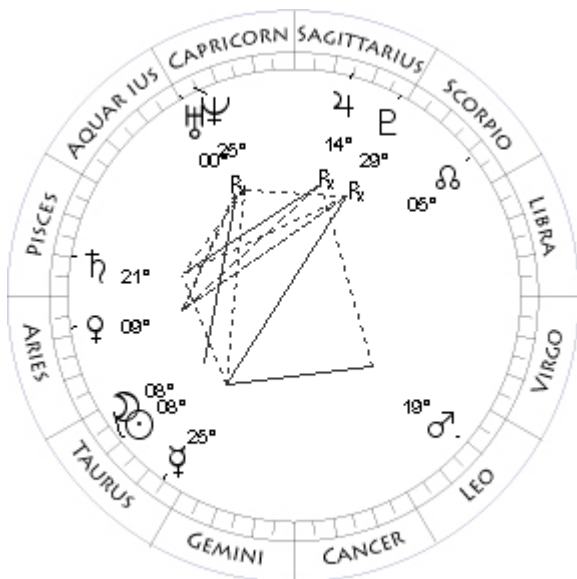
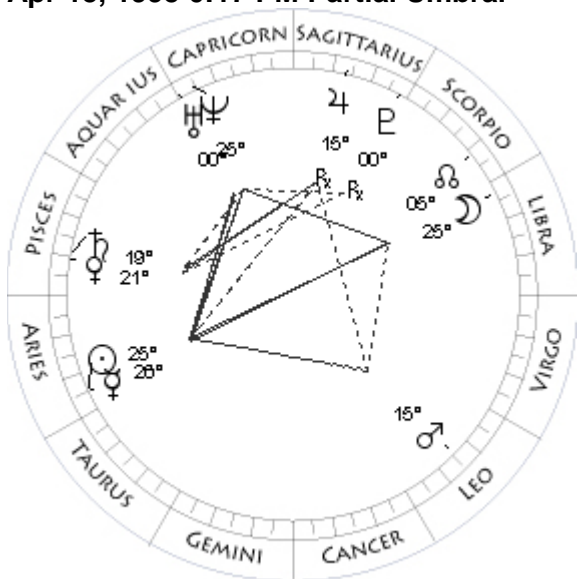
Nov 3, 1994 1:39 PM Total Solar

Mo 19Ta50 + 0°22	Mo 10Sc56 - 0°22
Su 19Ta49 - 0°00	Su 10Sc55 - 0°00
Me 01Ge43 + 1°29	Me 22Li30 + 2°05
Ve 17Ge33 + 1°08	Ve 09Sc56 - 5°16R
Ma 20Ar00 - 0°55	Ma 15Ie38 + 1°38
Ju 08Sc29 + 1°23R	Ju 22Sc06 + 0°48
Sa 10Pi54 - 1°36	Sa 05Pi42 - 1°55R
Ur 26Cp18 - 0°30R	Ur 22Cp50 - 0°30
Ne 23Cp18 + 0°37R	Ne 20Cp52 + 0°34
Pl 26Sc54 +14°25R	Pl 27Sc19 +13°18
No 24Sc13 - 0°00	No 14Sc51 - 0°00

Nov 18, 1994 6:43 AM Partial Penumbral



Apr 15, 1995 0:17 PM Partial Umbral



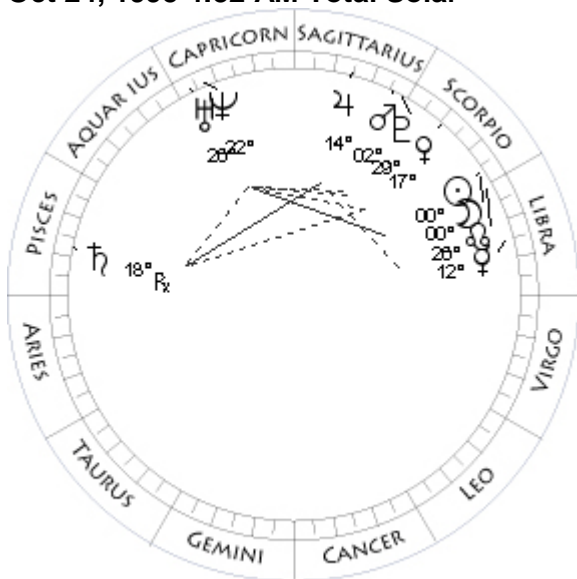
Apr 29, 1995 5:32 PM Annular Solar

Mo 25Ta35 - 0°59	Mo 08Ta54 - 0°18
Su 25Sc42 - 0°00	Su 08Ta56 - 0°00
Me 11Sc20 + 1°34	Me 25Ta02 + 1°51
Ve 03Sc05 - 1°40R	Ve 09Ar08 - 1°39
Ma 22Le06 + 2°01	Ma 19Le45 + 2°09
Ju 25Sc21 + 0°47	Ju 14Sa11 + 0°50R
Sa 05Pi45 - 1°53	Sa 21Pi14 - 1°52
Ur 23Cp19 - 0°30	Ur 00Aq28 - 0°32
Ne 21Cp11 + 0°34	Ne 25Cp34 + 0°33R
Pl 27Sc54 +13°16	Pl 29Sc48 +13°56R
No 14Sc05 - 0°00	No 05Sc28 - 0°00
Coords: 105E/18N	

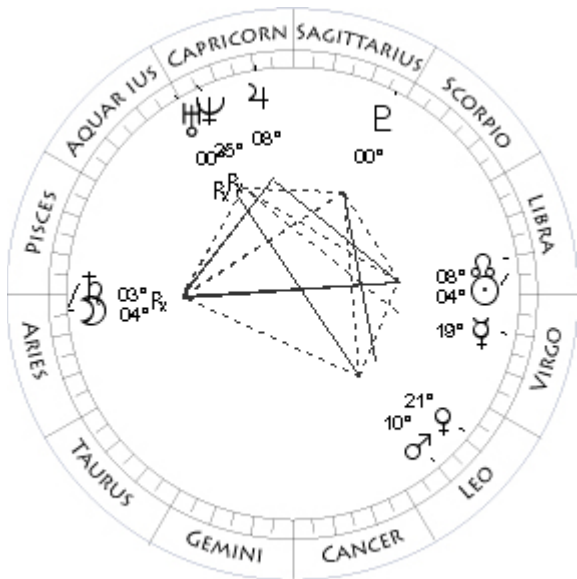
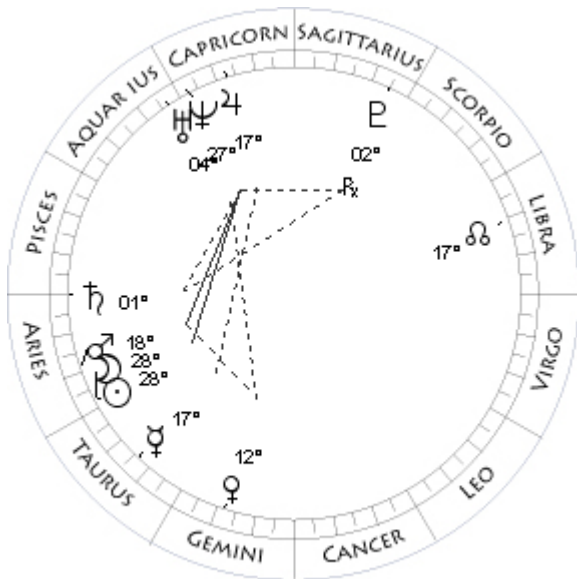
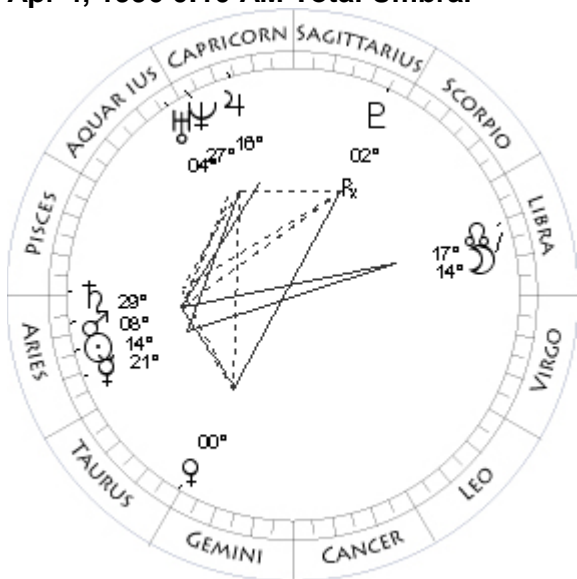
Oct 8, 1995 4:04 PM Partial Penumbral

Mo 25Li08 - 0°57	Mo 15Ar00 + 1°03
Su 25Ar04 - 0°00	Su 14Li54 - 0°00
Me 26Ar11 - 0°33	Me 07Li31 - 0°59R
Ve 21Pi59 - 1°22	Ve 27Li57 + 0°45
Ma 15Le47 + 2°36	Ma 21Sc22 - 0°33
Ju 15Sa05 + 0°50R	Ju 11Sa42 + 0°24
Sa 19Pi47 - 1°50	Sa 19Pi34 - 2°20R
Ur 00Aq19 - 0°32	Ur 26Cp32 - 0°33
Ne 25Cp31 + 0°33	Ne 22Cp47 + 0°31
Pl 00Sa08 +13°54R	Pl 28Sc50 +13°00
No 06Sc14 - 0°00	No 26Li54 - 0°00
Coords: 175W/11S	

Oct 24, 1995 4:32 AM Total Solar



Apr 4, 1996 0:10 AM Total Umbral



Apr 17, 1996 10:37 PM Partial Solar

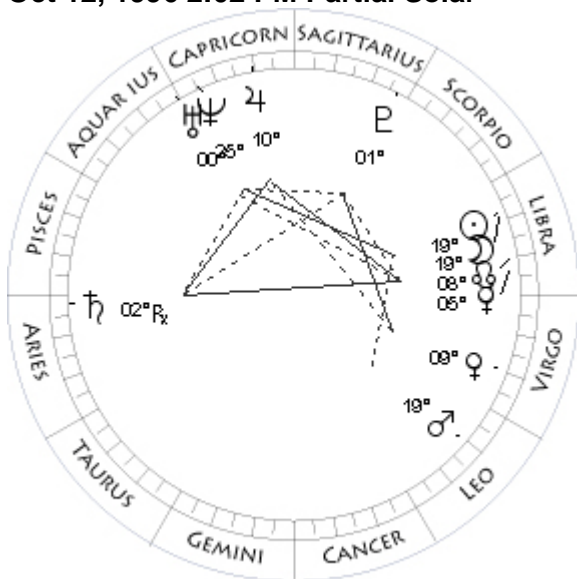
Mo 00Sc14 + 0°21	Mo 28Ar05 - 1°00
Su 00Sc18 - 0°00	Su 28Ar11 - 0°00
Me 12Li49 + 2°04	Me 17Ta03 + 2°18
Ve 17Sc16 + 0°09	Ve 12Ge47 + 4°11
Ma 02Sa23 - 0°41	Ma 18Ar47 - 0°40
Ju 14Sa30 + 0°22	Ju 17Cp14 + 0°06
Sa 18Pi41 - 2°19R	Sa 01Ar15 - 2°04
Ur 26Cp40 - 0°33	Ur 04Aq24 - 0°34
Ne 22Cp53 + 0°31	Ne 27Cp44 + 0°29
Pl 29Sc22 +12°55	Pl 02Sa38 +13°25R
No 26Li05 - 0°00	No 16Li43 - 0°00

Coords: 113W/ 8N

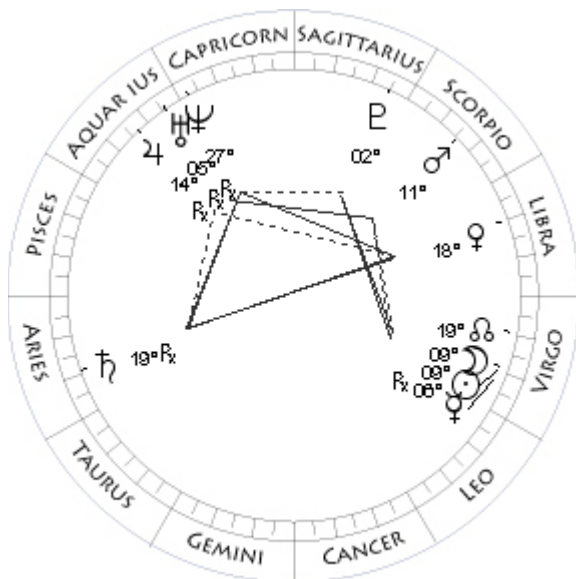
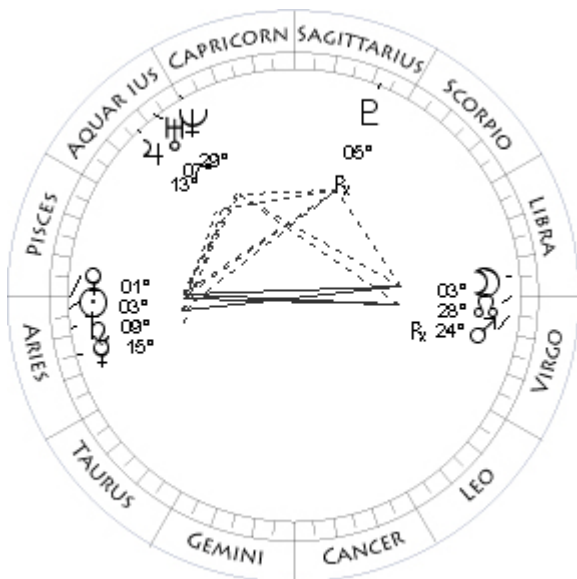
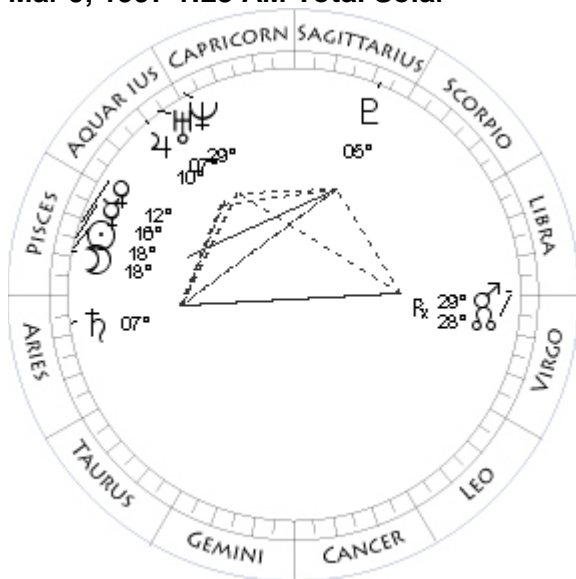
Sep 27, 1996 2:54 AM Total Umbral

Mo 14Li32 - 0°14	Mo 04Ar18 + 0°21
Su 14Ar31 - 0°00	Su 04Li17 - 0°00
Me 21Ar39 - 0°06	Me 19Vi01 - 0°07
Ve 00Ge21 + 3°25	Ve 21Le58 - 0°11
Ma 08Ar04 - 0°47	Ma 10Le40 + 1°10
Ju 16Cp14 + 0°07	Ju 08Cp41 - 0°13
Sa 29Pi36 - 2°02	Sa 03Ar56 - 2°37R
Ur 04Aq05 - 0°34	Ur 00Aq43 - 0°36R
Ne 27Cp35 + 0°29	Ne 25Cp01 + 0°28R
Pl 02Sa54 +13°22R	Pl 00Sa59 +12°37
No 17Li27 - 0°00	No 08Li08 - 0°00

Oct 12, 1996 2:02 PM Partial Solar



Mar 9, 1997 1:23 AM Total Solar



Mar 24, 1997 4:39 AM Partial Umbral

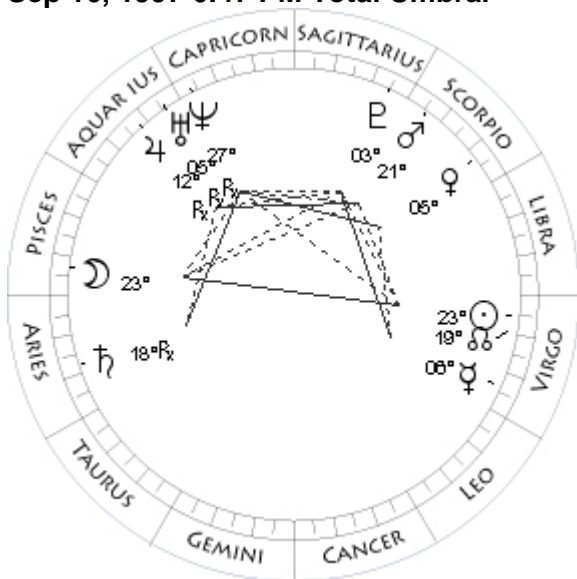
Mo 19Li24 + 1°03	Mo 03Li32 + 0°26
Su 19Li32 - 0°00	Su 03Ar35 - 0°00
Me 05Li28 + 1°58	Me 15Ar51 + 0°20
Ve 09Vi51 + 0°47	Ve 01Ar13 - 1°24
Ma 19Le54 + 1°21	Ma 24Vi06 + 3°32R
Ju 10Cp09 - 0°14	Ju 13Aq35 - 0°29
Sa 02Ar45 - 2°37R	Sa 09Ar25 - 2°11
Ur 00Aq39 - 0°36	Ur 07Aq40 - 0°35
Ne 25Cp00 + 0°27	Ne 29Cp34 + 0°25
Pl 01Sa25 +12°31	Pl 05Sa33 +12°48R
No 07Li19 - 0°00	No 28Vi42 - 0°00

Sep 2, 1997 0:04 AM Partial Solar

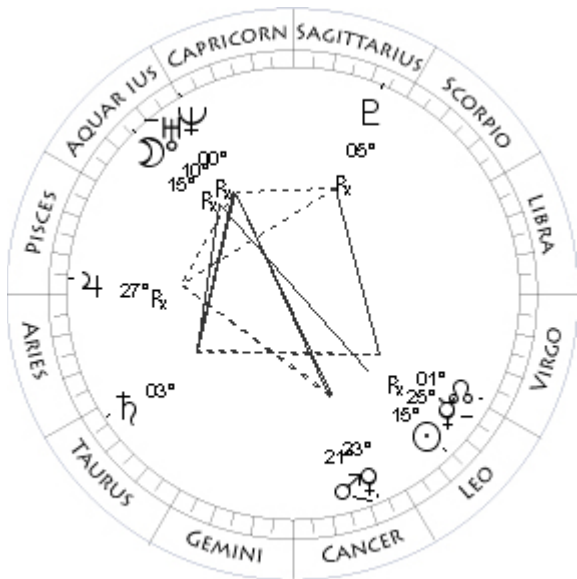
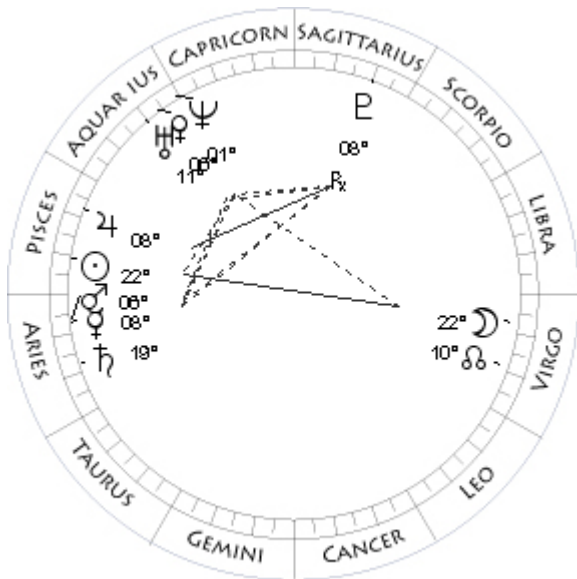
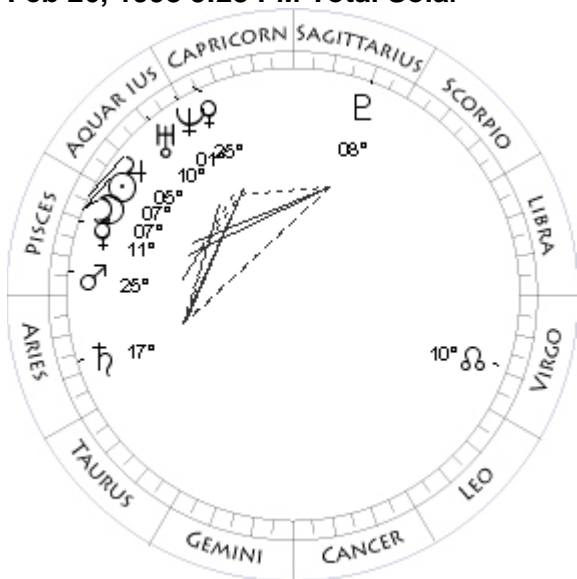
Mo 18Pi35 + 0°56	Mo 09Vi39 - 0°55
Su 18Pi31 - 0°00	Su 09Vi35 - 0°00
Me 16Pi09 - 1°49	Me 06Vi52 - 3°42R
Ve 12Pi22 - 1°25	Ve 18Li12 - 0°04
Ma 29Vi55 + 3°48R	Ma 11Sc49 - 0°49
Ju 10Aq32 - 0°27	Ju 14Aq08 - 1°00R
Sa 07Ar33 - 2°12	Sa 19Ar32 - 2°41R
Ur 07Aq01 - 0°35	Ur 05Aq26 - 0°39R
Ne 29Cp12 + 0°25	Ne 27Cp33 + 0°24R
Pl 05Sa37 +12°43	Pl 02Sa57 +12°20
No 29Vi30 - 0°00	No 20Vi08 - 0°00

Coords: 131W/57N

Sep 16, 1997 6:47 PM Total Umbral



Feb 26, 1998 5:28 PM Total Solar



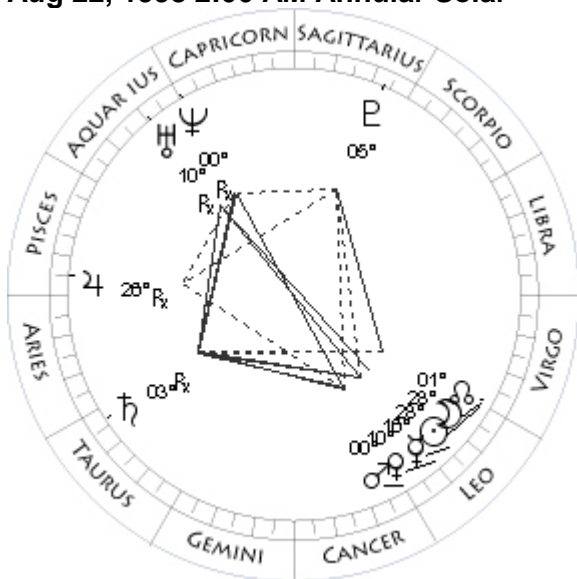
Mar 13, 1998 4:20 AM Partial Penumbral

Mo 23Pi53 - 0°23	Mo 22Vi16 + 1°04
Su 23Vi56 - 0°00	Su 22Pi24 - 0°00
Me 06Vi04 + 0°35	Me 08Ar28 + 0°48
Ve 05Sc27 - 1°00	Ve 06Aq51 + 3°20
Ma 21Sc39 - 0°58	Ma 06Ar35 - 0°36
Ju 12Aq50 - 1°00R	Ju 08Pi49 - 0°54
Sa 18Ar40 - 2°44R	Sa 19Ar29 - 2°16
Ur 05Aq03 - 0°38R	Ur 11Aq05 - 0°37
Ne 27Cp20 + 0°24R	Ne 01Aq27 + 0°21
Pl 03Sa11 +12°13	Pl 08Sa05 +12°13R
No 19Vi21 - 0°00	No 09Vi57 - 0°00

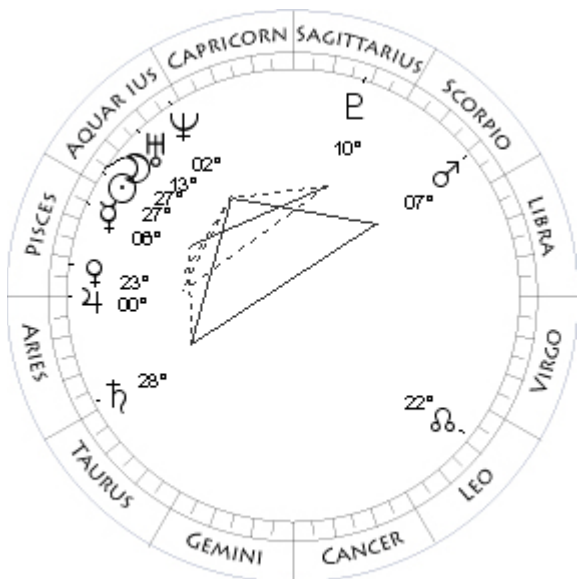
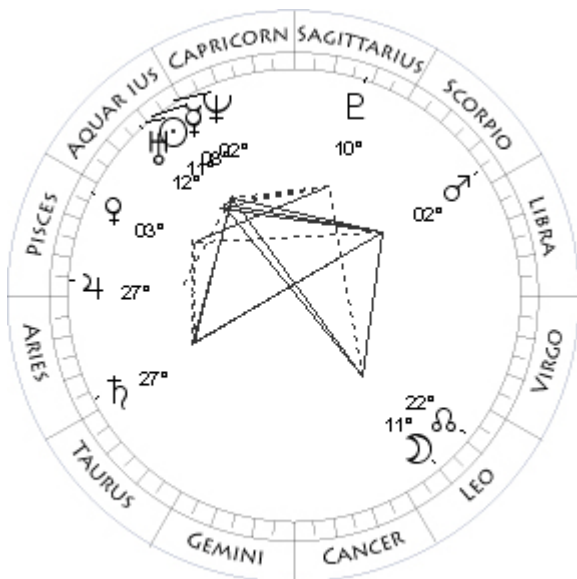
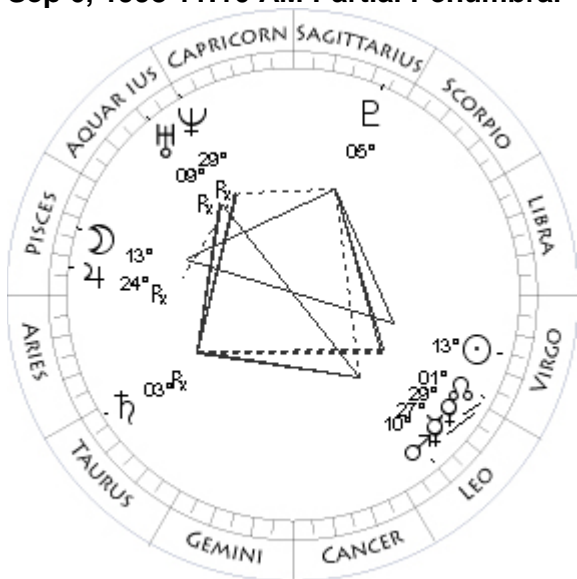
Aug 8, 1998 2:25 AM Partial Penumbral

Mo 07Pi55 + 0°14	Mo 15Aq29 + 1°27
Su 07Pi55 - 0°00	Su 15Le22 - 0°00
Me 11Pi42 - 1°35	Me 25Le34 - 4°48R
Ve 25Cp53 + 5°07	Ve 23Cn34 + 0°09
Ma 25Pi23 - 0°45	Ma 21Cn46 + 0°53
Ju 05Pi21 - 0°53	Ju 27Pi21 - 1°27R
Sa 17Ar51 - 2°18	Sa 03Ta34 - 2°33
Ur 10Aq21 - 0°36	Ur 10Aq34 - 0°41R
Ne 01Aq02 + 0°21	Ne 00Aq23 + 0°21R
Pl 08Sa02 +12°08	Pl 05Sa20 +12°03R
No 10Vi43 - 0°00	No 02Vi07 - 0°00

Aug 22, 1998 2:06 AM Annular Solar



Sep 6, 1998 11:10 AM Partial Penumbral



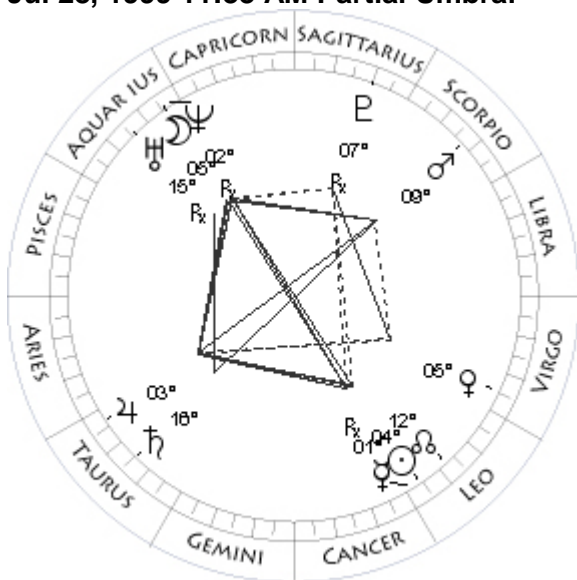
Jan 31, 1999 4:17 PM Partial Penumbral

Mo 28Le49 - 0°15	Mo 11Le25 - 0°59
Su 28Le48 - 0°00	Su 11Aq21 - 0°00
Me 16Le11 - 2°56	Me 08Aq50 - 2°04
Ve 10Le39 + 0°43	Ve 03Pi45 - 1°32
Ma 00Le50 + 0°59	Ma 02Sc03 + 2°05
Ju 26Pi09 - 1°30R	Ju 27Pi24 - 1°09
Sa 03Ta35 - 2°37R	Sa 27Ar45 - 2°24
Ur 10Aq02 - 0°41R	Ur 12Aq41 - 0°38
Ne 00Aq02 + 0°21R	Ne 02Aq14 + 0°18
Pl 05Sa19 +11°56	Pl 10Sa02 +11°28
No 01Vi23 - 0°00	No 22Le46 - 0°00
	Coords: 119W/16N

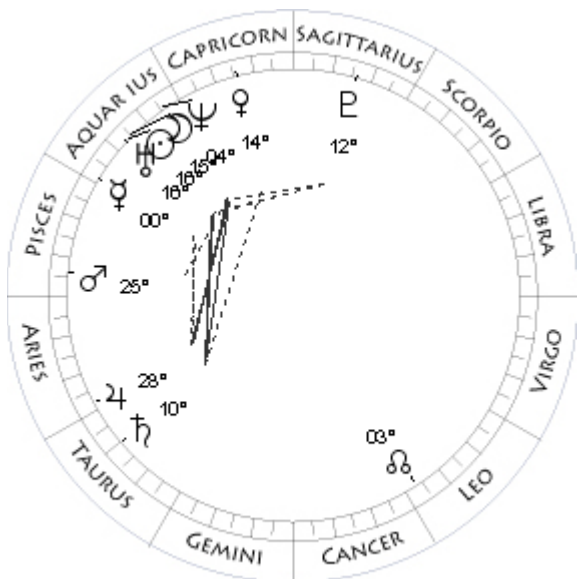
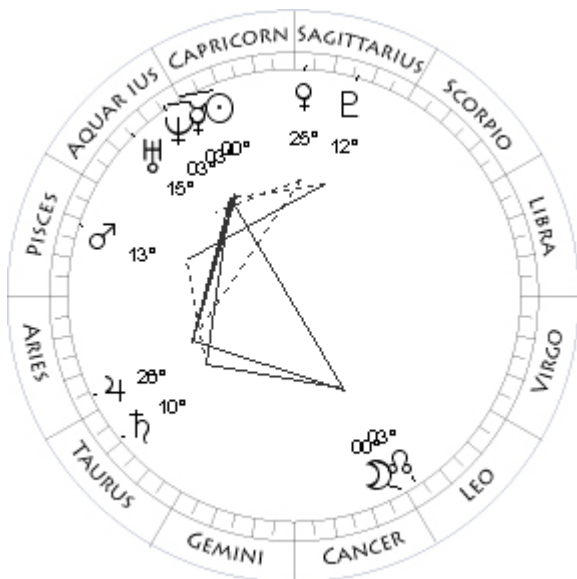
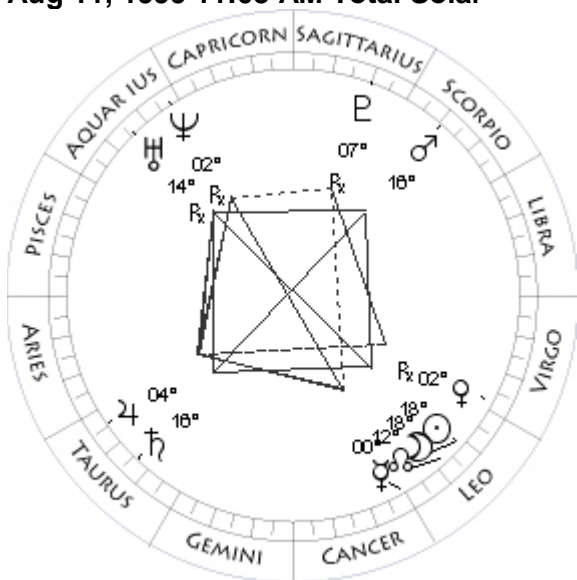
Feb 16, 1999 6:33 AM Annular Solar

Mo 13Pi33 - 1°06	Mo 27Aq04 - 0°27
Su 13Vi40 - 0°00	Su 27Aq08 - 0°00
Me 27Le24 + 1°04	Me 06Pi40 - 1°19
Ve 29Le35 + 1°11	Ve 23Pi06 - 1°13
Ma 10Le40 + 1°06	Ma 07Sc22 + 2°10
Ju 24Pi20 - 1°33R	Ju 00Ar43 - 1°07
Sa 03Ta13 - 2°40R	Sa 28Ar51 - 2°20
Ur 09Aq30 - 0°41R	Ur 13Aq35 - 0°38
Ne 29Cp43 + 0°20R	Ne 02Aq48 + 0°18
Pl 05Sa27 +11°49	Pl 10Sa20 +11°33
No 00Vi34 - 0°00	No 21Le57 - 0°00
	Coords: 94W/40S

Jul 28, 1999 11:33 AM Partial Umbral



Aug 11, 1999 11:03 AM Total Solar



Jan 21, 2000 4:43 AM Total Umbral

Mo 05Aq01 + 0°44	Mo 00Le27 - 0°18
Su 04Le58 - 0°00	Su 00Aq27 - 0°00
Me 01Le57 - 4°54R	Me 03Aq50 - 2°06
Ve 05Vi05 - 3°51	Ve 25Sa33 + 1°19
Ma 09Sc38 - 1°32	Ma 13Pi14 - 0°49
Ju 03Ta46 - 1°19	Ju 26Ar41 - 1°10
Sa 16Ta16 - 2°21	Sa 10Ta22 - 2°21
Ur 15Aq13 - 0°43R	Ur 15Aq53 - 0°39
Ne 02Aq56 + 0°17R	Ne 03Aq57 + 0°14
Pl 07Sa53 +11°36R	Pl 12Sa07 +10°54
No 13Le21 - 0°00	No 04Le00 - 0°00

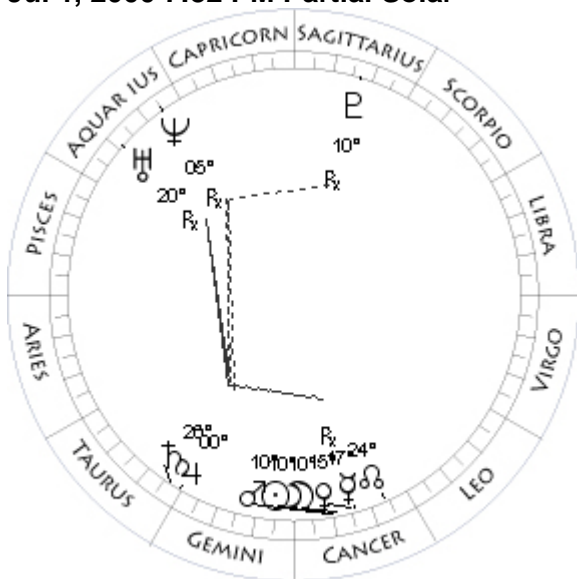
Coords: 172E/18S

Feb 5, 2000 0:49 PM Partial Solar

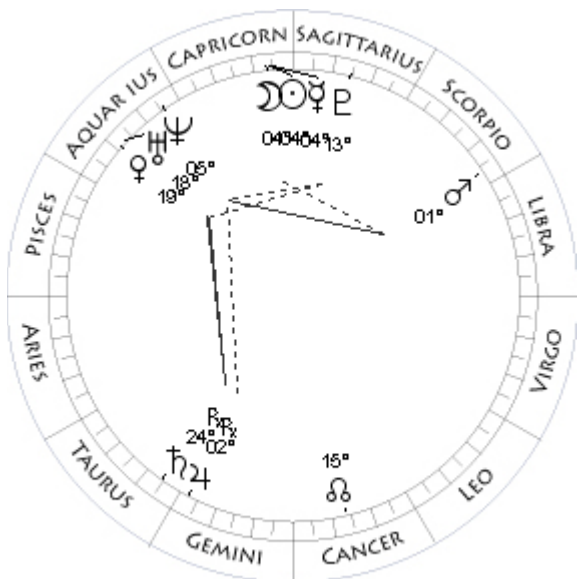
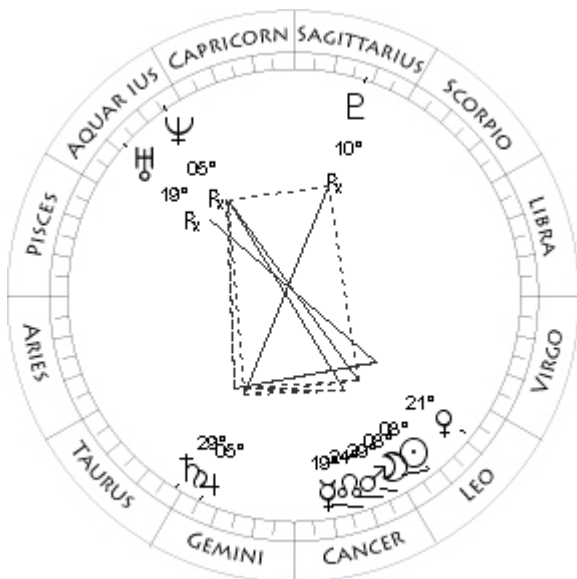
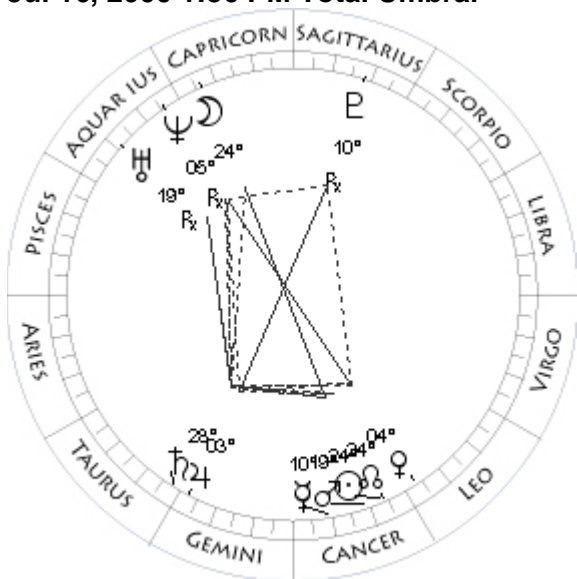
Mo 18Le17 + 0°29	Mo 15Aq54 - 1°07
Su 18Le21 - 0°00	Su 16Aq02 - 0°00
Me 00Le10 - 2°01	Me 00Pi20 - 1°03
Ve 02Vi10 - 6°51R	Ve 14Cp24 + 0°34
Ma 16Sc51 - 1°40	Ma 25Pi02 - 0°37
Ju 04Ta41 - 1°22	Ju 28Ar35 - 1°06
Sa 16Ta53 - 2°24	Sa 10Ta50 - 2°16
Ur 14Aq40 - 0°43R	Ur 16Aq46 - 0°39
Ne 02Aq34 + 0°17R	Ne 04Aq32 + 0°14
Pl 07Sa46 +11°30R	Pl 12Sa30 +10°57
No 12Le37 - 0°00	No 03Le11 - 0°00

Coords: 24W/45N

Jul 1, 2000 7:32 PM Partial Solar



Jul 16, 2000 1:56 PM Total Umbral



Jul 31, 2000 2:13 AM Partial Solar

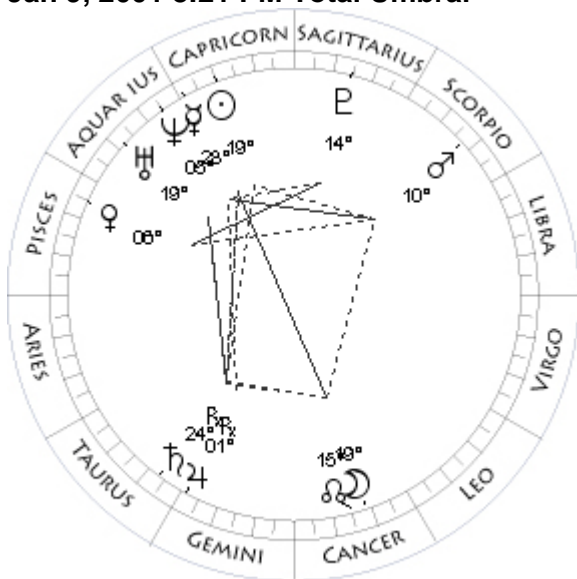
Mo 10Cn21 - 1°18	Mo 08Le03 + 1°14
Su 10Cn15 - 0°00	Su 08Le11 - 0°00
Me 17Cn29 - 3°55R	Me 19Cn02 - 1°09
Ve 15Cn51 + 0°51	Ve 21Le51 + 1°28
Ma 10Cn13 + 0°52	Ma 29Cn23 + 1°02
Ju 00Ge19 - 0°50	Ju 05Ge48 - 0°51
Sa 26Ta44 - 2°01	Sa 29Ta21 - 2°05
Ur 20Aq17 - 0°43R	Ur 19Aq17 - 0°44R
Ne 05Aq52 + 0°13R	Ne 05Aq06 + 0°13R
Pl 10Sa47 +11°13R	Pl 10Sa17 +11°02R
No 25Cn23 - 0°00	No 23Cn50 - 0°00

Dec 25, 2000 5:34 PM Partial Solar

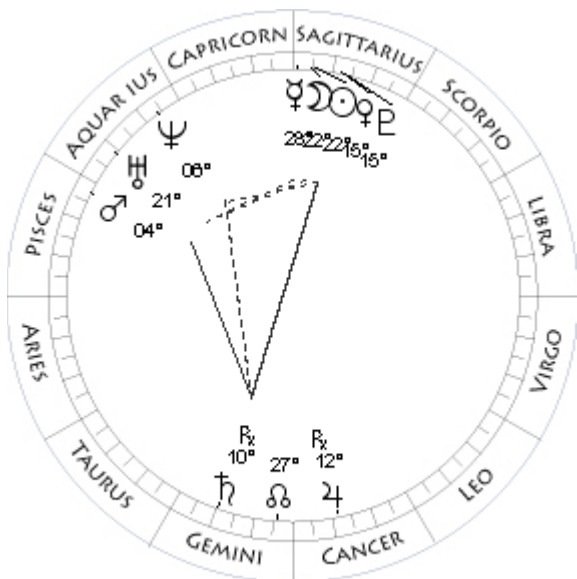
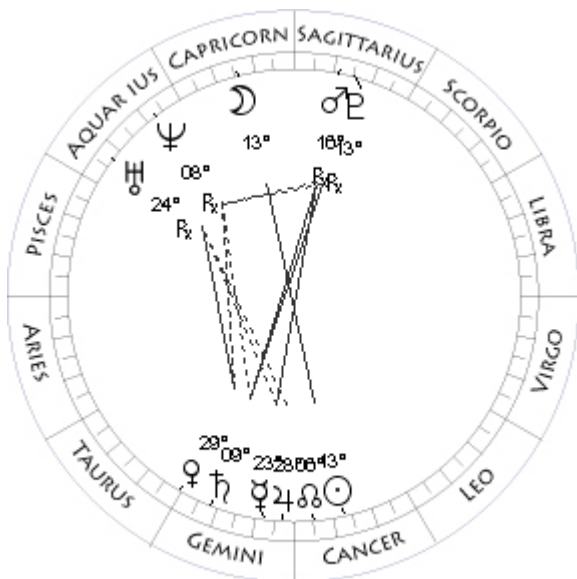
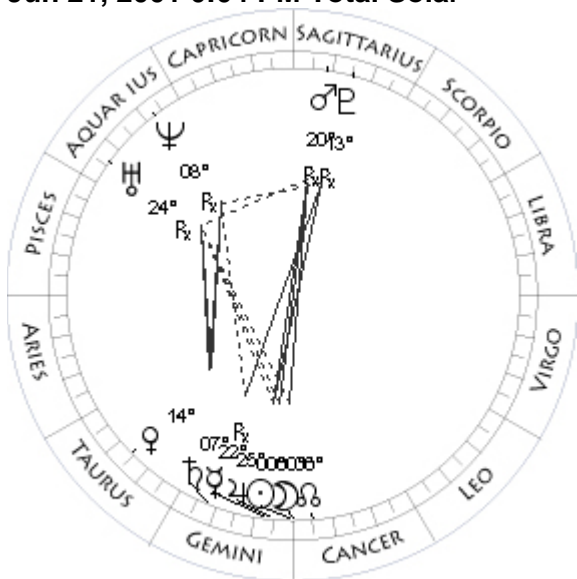
Mo 24Cp19 + 0°02	Mo 04Cp20 + 1°01
Su 24Cn20 - 0°00	Su 04Cp15 - 0°00
Me 10Cn26 - 4°24	Me 04Cp13 - 1°36
Ve 04Le00 + 1°15	Ve 19Aq59 - 1°51
Ma 19Cn56 + 0°58	Ma 01Sc16 + 1°16
Ju 03Ge14 - 0°51	Ju 02Ge45 - 0°50R
Sa 28Ta11 - 2°03	Sa 24Ta53 - 2°13R
Ur 19Aq49 - 0°44R	Ur 18Aq22 - 0°41
Ne 05Aq30 + 0°13R	Ne 05Aq08 + 0°10
Pl 10Sa30 +11°08R	Pl 13Sa34 +10°18
No 24Cn36 - 0°00	No 16Cn01 - 0°00

Coords: 153W/21S

Jan 9, 2001 8:21 PM Total Umbral



Jun 21, 2001 0:04 PM Total Solar



Jul 5, 2001 2:55 PM Partial Umbral

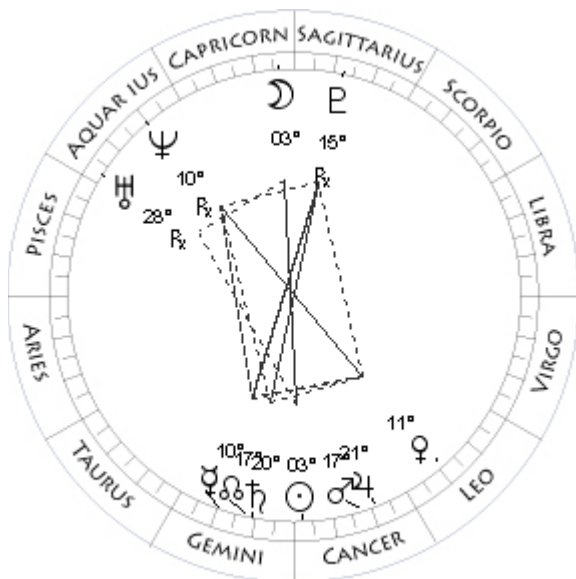
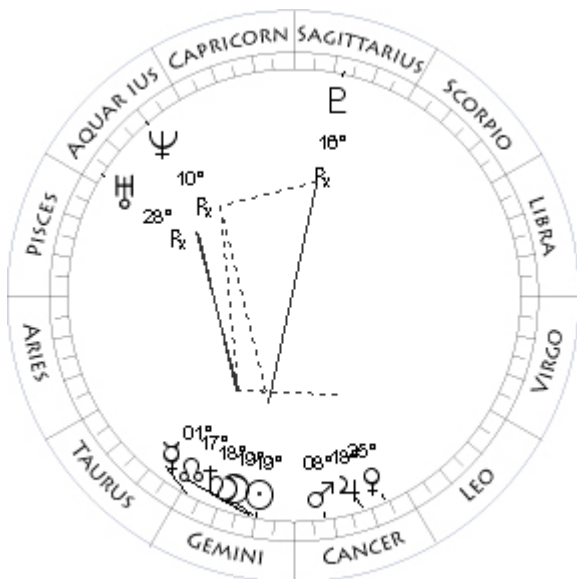
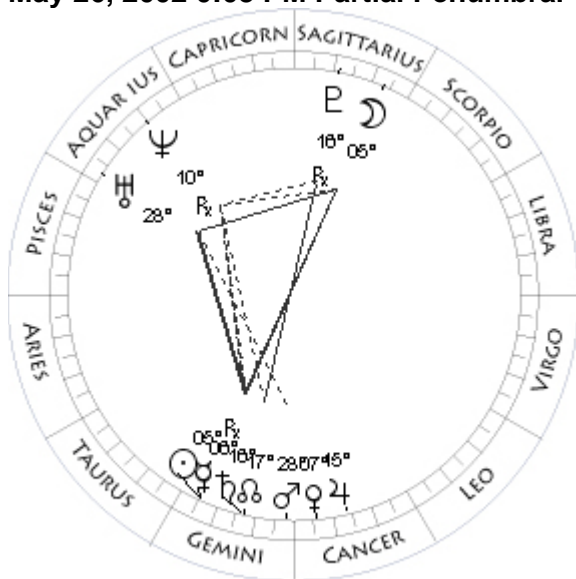
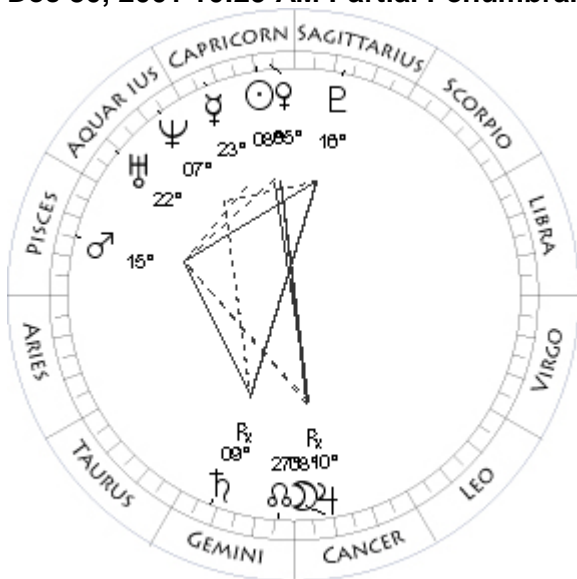
Mo 19Cn36 + 0°23	Mo 13Cp34 - 0°40
Su 19Cp39 - 0°00	Su 13Cn39 - 0°00
Me 28Cp50 - 2°07	Me 23Ge29 - 3°40
Ve 06Pi34 - 0°54	Ve 29Ta56 - 2°41
Ma 10Sc05 + 1°14	Ma 16Sa31 - 4°08R
Ju 01Ge36 - 0°46R	Ju 28Ge21 - 0°17
Sa 24Ta16 - 2°10R	Sa 09Ge29 - 1°41
Ur 19Aq06 - 0°41	Ur 24Aq19 - 0°45R
Ne 05Aq40 + 0°10	Ne 08Aq03 + 0°09R
Pl 14Sa06 +10°19	Pl 13Sa09 +10°38R
No 15Cn13 - 0°00	No 05Cn51 - 0°00
Coords: 57W/22N	Coords: 137W/23S

Dec 14, 2001 8:52 PM Annular Solar

Mo 00Cn13 - 0°34	Mo 22Sa58 + 0°23
Su 00Cn11 - 0°00	Su 22Sa57 - 0°00
Me 22Ge52 - 4°22R	Me 28Sa30 - 1°47
Ve 14Ta58 - 2°47	Ve 15Sa37 + 0°17
Ma 20Sa15 - 3°40R	Ma 04Pi21 - 1°04
Ju 25Ge08 - 0°18	Ju 12Cn54 - 0°02R
Sa 07Ge48 - 1°41	Sa 10Ge34 - 1°51R
Ur 24Aq38 - 0°44R	Ur 21Aq45 - 0°43
Ne 08Aq21 + 0°09R	Ne 06Aq55 + 0°07
Pl 13Sa29 +10°41R	Pl 15Sa26 + 9°45
No 06Cn36 - 0°00	No 27Ge16 - 0°00
Coords: 3W/11S	Coords: 131E/ 1N

Dec 30, 2001 10:29 AM Partial Penumbral

May 26, 2002 0:03 PM Partial Penumbral



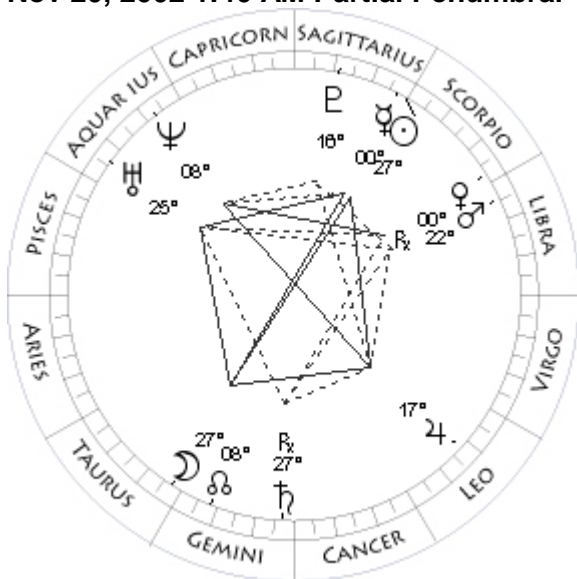
Jun 10, 2002 11:44 PM Annular Solar

Mo 08Cn40 + 1°03	Mo 19Ge52 + 0°11
Su 08Cp48 - 0°00	Su 19Ge55 - 0°00
Me 23Cp10 - 2°07	Me 01Ge34 - 4°09
Ve 05Cp12 - 0°21	Ve 25Cn29 + 1°58
Ma 15Pi44 - 0°44	Ma 08Cn52 + 1°02
Ju 10Cn52 + 0°00R	Ju 18Cn38 + 0°16
Sa 09Ge25 - 1°49R	Sa 18Ge40 - 1°17
Ur 22Aq23 - 0°42	Ur 28Aq48 - 0°45R
Ne 07Aq25 + 0°06	Ne 10Aq47 + 0°05R
Pl 16Sa01 + 9°45	Pl 16Sa12 +10°07R
No 26Ge26 - 0°00	No 17Ge50 - 0°00
Coords: 157E/24N	Coords: 179E/34N

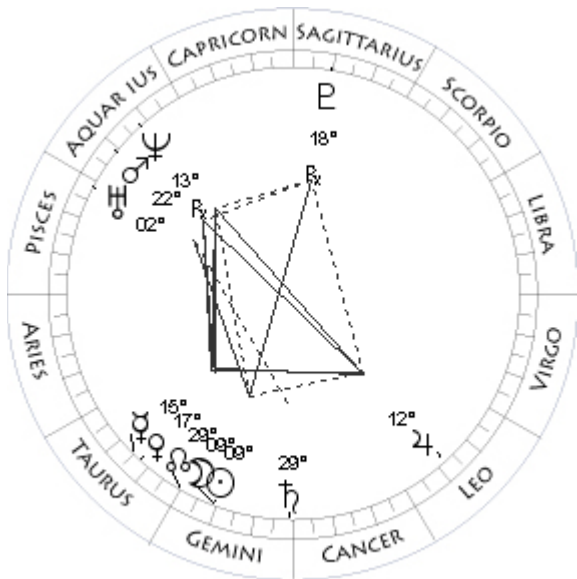
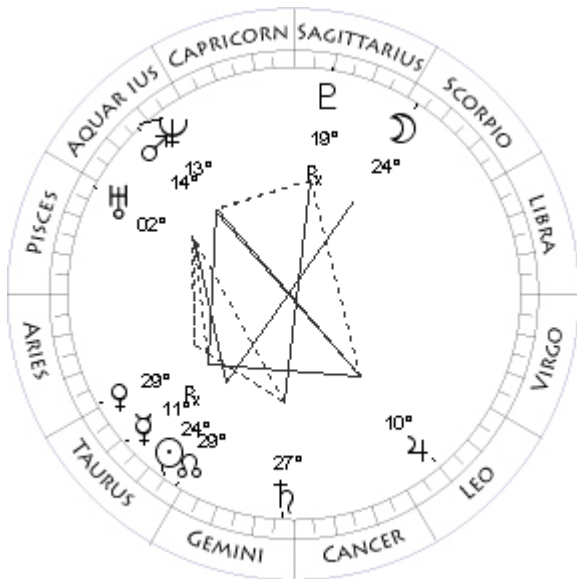
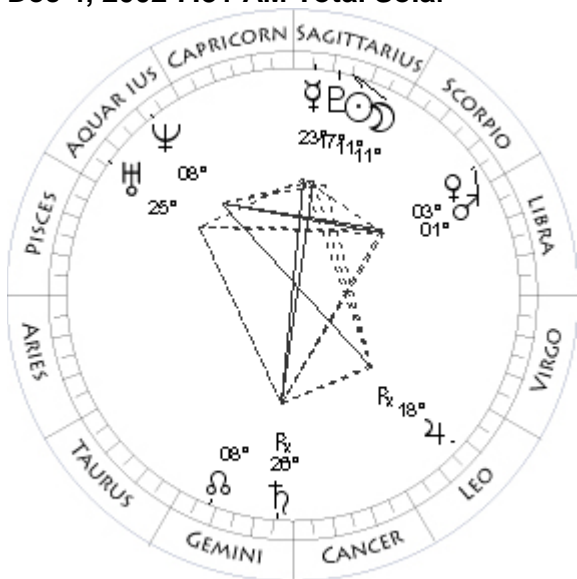
Jun 24, 2002 9:27 PM Partial Penumbral

Mo 05Sa10 + 1°09	Mo 03Cp02 - 1°23
Su 05Ge04 - 0°00	Su 03Cn11 - 0°00
Me 06Ge17 - 1°34R	Me 10Ge59 - 2°56
Ve 07Cn07 + 1°42	Ve 11Le43 + 1°55
Ma 28Ge42 + 0°58	Ma 17Cn55 + 1°04
Ju 15Cn29 + 0°15	Ju 21Cn36 + 0°17
Sa 16Ge39 - 1°18	Sa 20Ge27 - 1°16
Ur 28Aq49 - 0°44	Ur 28Aq39 - 0°45R
Ne 10Aq57 + 0°05R	Ne 10Aq33 + 0°05R
Pl 16Sa36 +10°08R	Pl 15Sa50 +10°05R
No 18Ge39 - 0°00	No 17Ge06 - 0°00
Coords: 179W/20S	Coords: 39W/25S

Nov 20, 2002 1:46 AM Partial Penumbral



Dec 4, 2002 7:31 AM Total Solar



May 16, 2003 3:40 AM Total Umbral

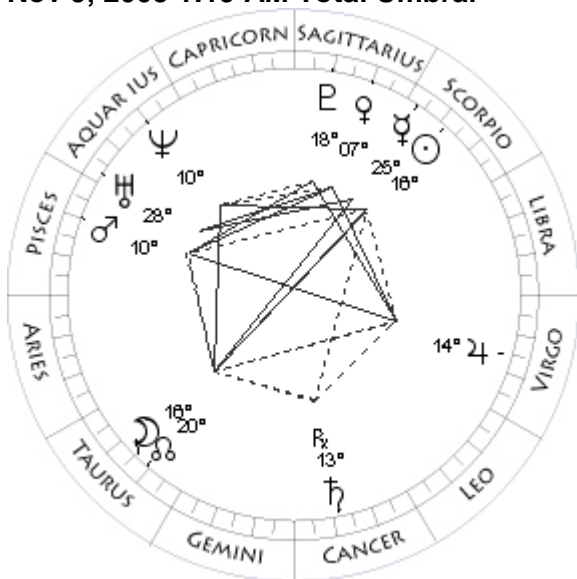
Mo 27Ta38 - 1°01	Mo 24Sc55 + 0°25
Su 27Sc34 - 0°00	Su 24Ta53 - 0°00
Me 00Sa57 - 0°46	Me 11Ta46 - 2°12R
Ve 00Sc05 - 1°00R	Ve 29Ar38 - 1°38
Ma 22Li37 + 0°57	Ma 14Aq03 - 2°03
Ju 17Le46 + 0°37	Ju 10Le40 + 0°50
Sa 27Ge43 - 1°20R	Sa 27Ge42 - 0°52
Ur 25Aq01 - 0°44	Ur 02Pi37 - 0°45
Ne 08Aq29 + 0°03	Ne 13Aq12 + 0°01
Pl 16Sa44 + 9°15	Pl 19Sa15 + 9°32R
No 09Ge15 - 0°00	No 29Ta52 - 0°00

May 31, 2003 4:08 AM Partial Solar

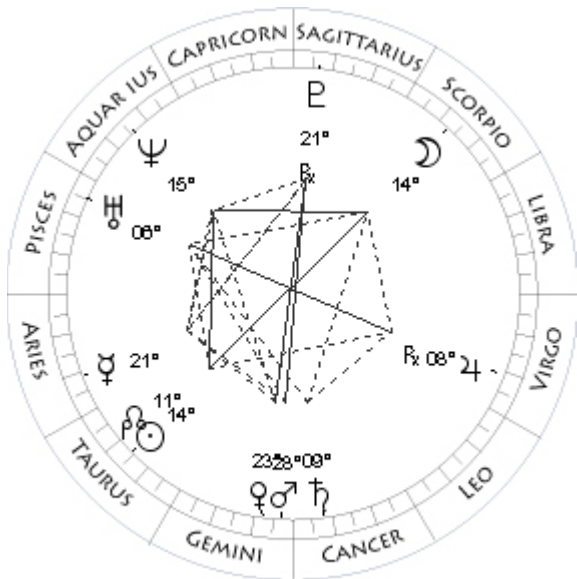
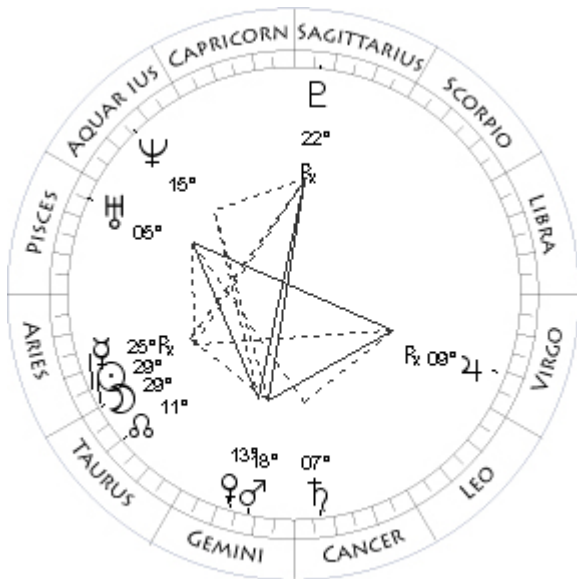
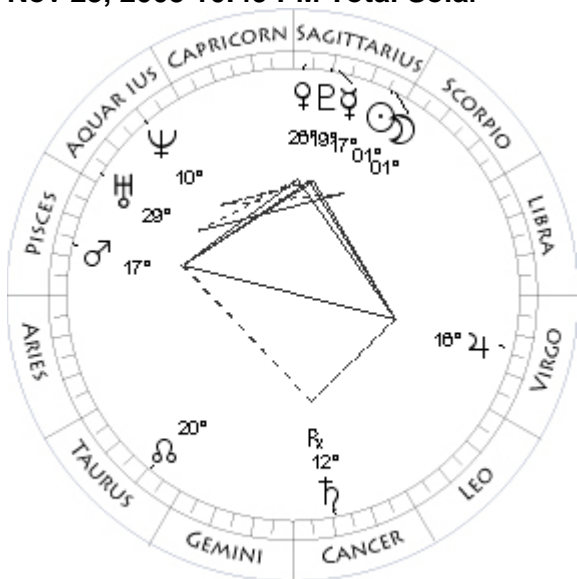
Mo 11Sa55 - 0°18	Mo 09Ge13 + 0°54
Su 11Sa58 - 0°00	Su 09Ge20 - 0°00
Me 23Sa03 - 1°59	Me 15Ta26 - 3°41
Ve 03Sc12 + 1°39	Ve 17Ta53 - 1°21
Ma 01Sc45 + 0°52	Ma 22Aq04 - 2°41
Ju 18Le06 + 0°40R	Ju 12Le40 + 0°49
Sa 26Ge41 - 1°20R	Sa 29Ge31 - 0°50
Ur 25Aq18 - 0°44	Ur 02Pi48 - 0°45
Ne 08Aq46 + 0°03	Ne 13Aq09 + 0°01R
Pl 17Sa16 + 9°13	Pl 18Sa53 + 9°32R
No 08Ge30 - 0°00	No 29Ta05 - 0°00

Coords: 60W/39S

Nov 9, 2003 1:19 AM Total Umbral



Nov 23, 2003 10:49 PM Total Solar



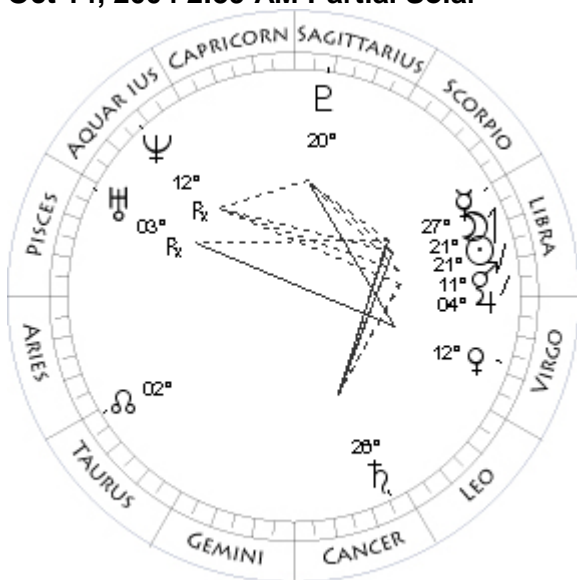
Apr 19, 2004 1:33 PM Partial Solar

Mo 16Ta15 - 0°23	Mo 29Ar55 - 1°02
Su 16Sc13 - 0°00	Su 29Ar50 - 0°00
Me 25Sc00 - 1°00	Me 25Ar33 + 1°12R
Ve 07Sa40 - 0°34	Ve 13Ge42 + 4°23
Ma 10Pi36 - 1°54	Ma 18Ge41 + 1°12
Ju 14Vi21 + 0°59	Ju 09Vi17 + 1°23R
Sa 13Cn03 - 0°44R	Sa 07Cn56 - 0°25
Ur 28Aq54 - 0°46	Ur 05Pi44 - 0°44
Ne 10Aq30 - 0°01	Ne 15Aq12 - 0°03
Pl 18Sa34 + 8°44	Pl 22Sa05 + 8°53R
No 20Ta30 - 0°00	No 11Ta54 - 0°00

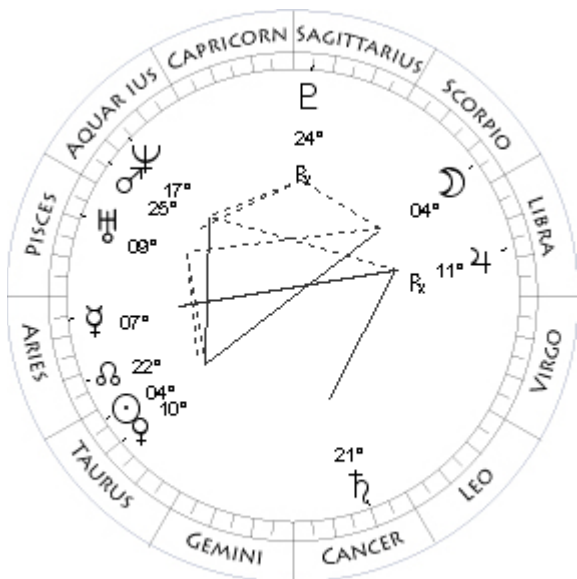
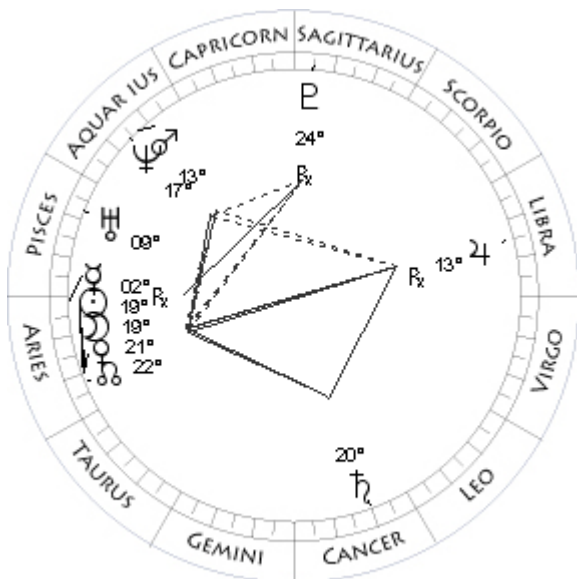
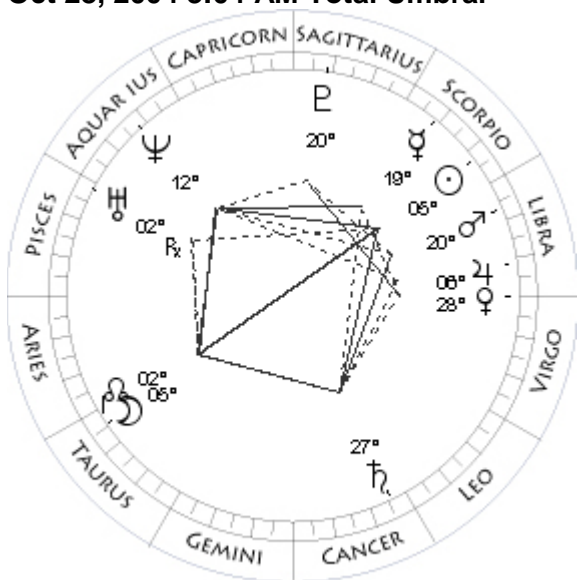
May 4, 2004 8:30 PM Total Umbral

Mo 01Sa07 - 0°59	Mo 14Sc39 - 0°19
Su 01Sa14 - 0°00	Su 14Ta42 - 0°00
Me 17Sa28 - 2°13	Me 21Ar51 - 2°28
Ve 26Sa10 - 1°10	Ve 23Ge05 + 4°33
Ma 17Pi38 - 1°11	Ma 28Ge25 + 1°14
Ju 16Vi21 + 1°03	Ju 08Vi55 + 1°20R
Sa 12Cn29 - 0°43R	Sa 09Cn13 - 0°23
Ur 29Aq00 - 0°45	Ur 06Pi15 - 0°45
Ne 10Aq42 - 0°01	Ne 15Aq22 - 0°03
Pl 19Sa06 + 8°41	Pl 21Sa50 + 8°55R
No 19Ta43 - 0°00	No 11Ta05 - 0°00
Coords: 91W/73S	Coords: 52W/17S

Oct 14, 2004 2:59 AM Partial Solar



Oct 28, 2004 3:04 AM Total Umbral



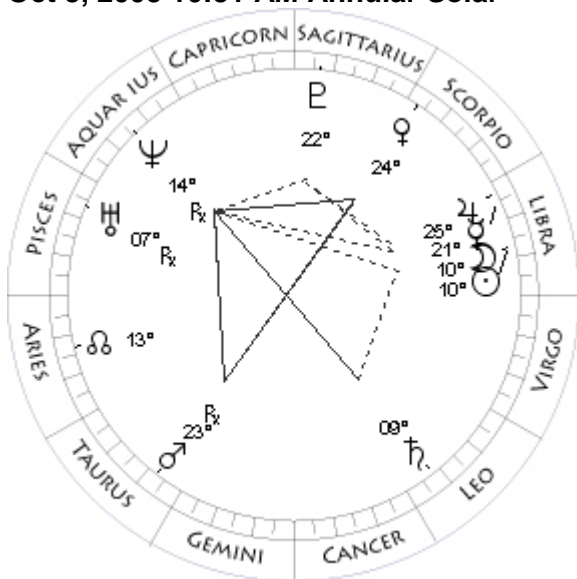
Apr 8, 2005 8:35 PM Total Solar

Mo 21Li12 + 1°00	Mo 19Ar07 - 0°20
Su 21Li07 - 0°00	Su 19Ar06 - 0°00
Me 27Li01 + 0°18	Me 02Ar17 + 0°30R
Ve 12Vi11 + 0°55	Ve 21Ar20 - 1°08
Ma 11Li31 + 0°48	Ma 13Aq51 - 1°14
Ju 04Li05 + 1°06	Ju 13Li18 + 1°36R
Sa 26Cn46 - 0°08	Sa 20Cn41 + 0°09
Ur 03Pi12 - 0°47R	Ur 09Pi03 - 0°44
Ne 12Aq39 - 0°05R	Ne 17Aq10 - 0°07
Pl 20Sa05 + 8°17	Pl 24Sa29 + 8°14R
No 02Ta30 - 0°00	No 23Ar08 - 0°00
	Coords: 119E/10S

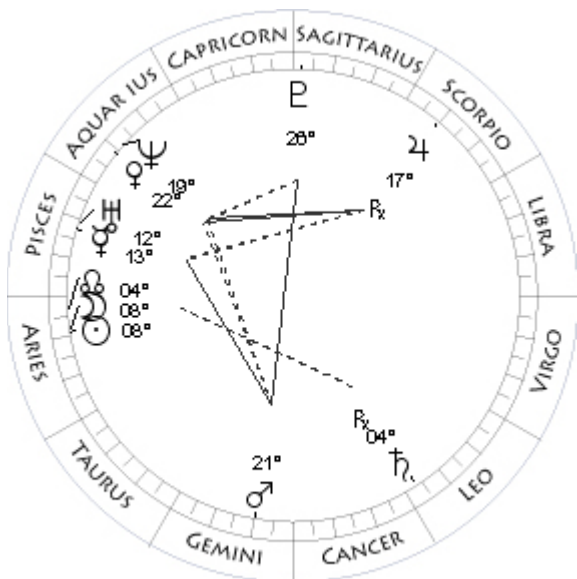
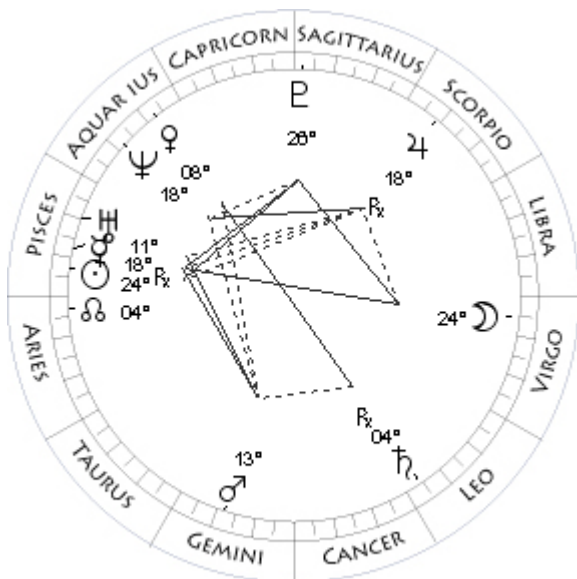
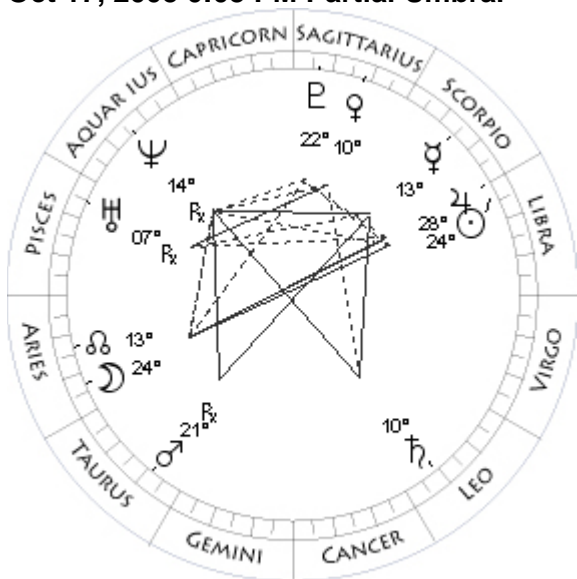
Apr 24, 2005 9:54 AM Partial Penumbral

Mo 05Ta00 + 0°16	Mo 04Sc12 - 1°03
Su 05Sc02 - 0°00	Su 04Ta19 - 0°00
Me 19Sc00 - 1°16	Me 07Ar24 - 2°29
Ve 28Vi55 + 1°29	Ve 10Ta35 - 0°40
Ma 20Li42 + 0°43	Ma 25Aq08 - 1°30
Ju 06Li59 + 1°07	Ju 11Li25 + 1°34R
Sa 27Cn14 - 0°07	Sa 21Cn24 + 0°10
Ur 02Pi58 - 0°47R	Ur 09Pi44 - 0°45
Ne 12Aq38 - 0°05	Ne 17Aq27 - 0°07
Pl 20Sa27 + 8°12	Pl 24Sa19 + 8°16R
No 01Ta45 - 0°00	No 22Ar19 - 0°00
	Coords: 150E/14S

Oct 3, 2005 10:31 AM Annular Solar



Oct 17, 2005 0:03 PM Partial Umbral



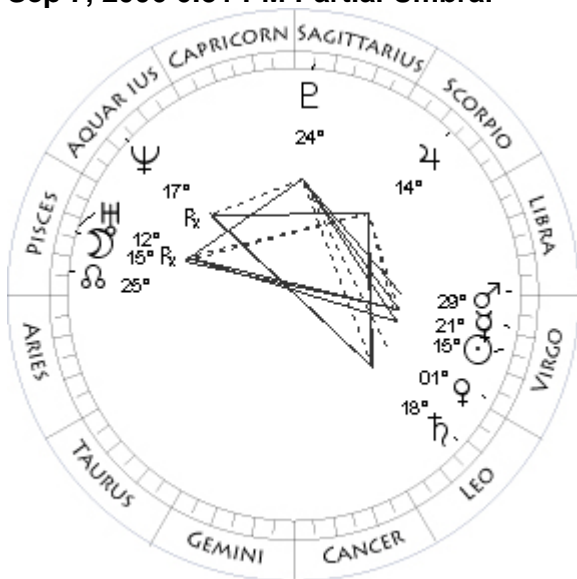
Mar 14, 2006 11:47 PM Partial Umbral

Mo 10Li20 + 0°18	Mo 24Vi20 + 0°55
Su 10Li19 - 0°00	Su 24Pi15 - 0°00
Me 21Li43 + 0°02	Me 18Pi36 + 3°12R
Ve 24Sc52 - 2°11	Ve 08Aq13 + 2°56
Ma 23Ta20 - 2°10R	Ma 13Ge06 + 1°46
Ju 25Li06 + 1°04	Ju 18Sc42 + 1°17R
Sa 09Le07 + 0°24	Sa 04Le48 + 0°44R
Ur 07Pi35 - 0°48R	Ur 11Pi30 - 0°44
Ne 14Aq59 - 0°09R	Ne 18Aq38 - 0°10
Pl 22Sa06 + 7°46	Pl 26Sa43 + 7°33
No 13Ar44 - 0°00	No 05Ar08 - 0°00
Coords: 29W/13N	Coords: 6W/ 3N

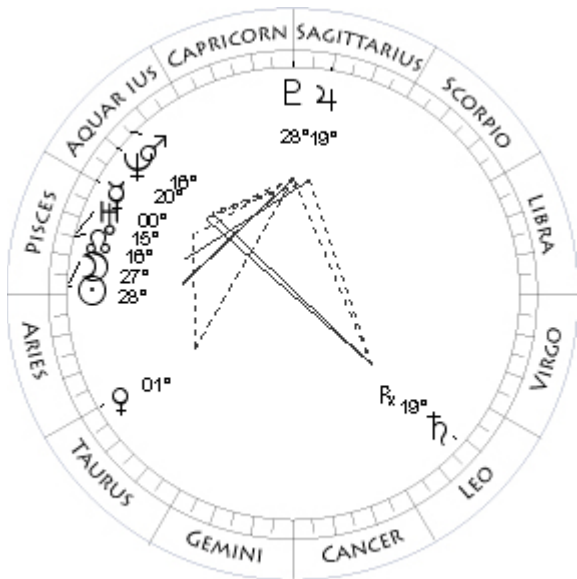
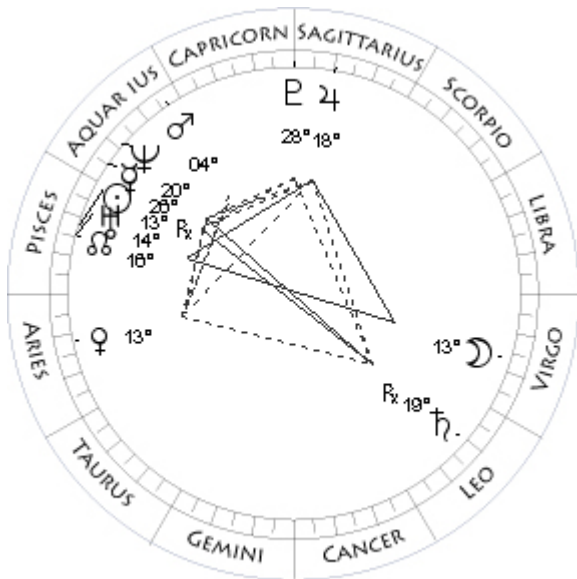
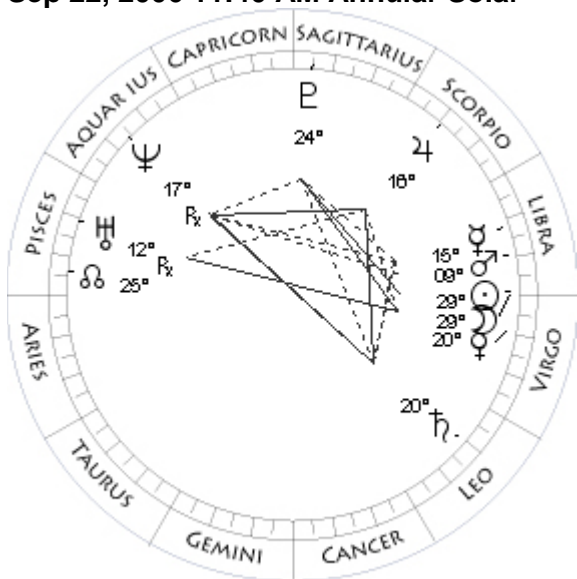
Mar 29, 2006 10:11 AM Total Solar

Mo 24Ar06 + 0°57	Mo 08Ar32 + 0°23
Su 24Li13 - 0°00	Su 08Ar35 - 0°00
Me 13Sc02 - 1°35	Me 13Pi52 - 0°11
Ve 10Sa23 - 2°59	Ve 22Aq07 + 1°20
Ma 21Ta34 - 1°36R	Ma 21Ge06 + 1°43
Ju 28Li08 + 1°03	Ju 17Sc55 + 1°19R
Sa 10Le09 + 0°26	Sa 04Le25 + 0°44R
Ur 07Pi12 - 0°48R	Ur 12Pi17 - 0°44
Ne 14Aq52 - 0°09R	Ne 19Aq04 - 0°10
Pl 22Sa23 + 7°41	Pl 26Sa46 + 7°36
No 12Ar59 - 0°00	No 04Ar22 - 0°00
Coords: 175W/10N	Coords: 17W/23N

Sep 7, 2006 6:51 PM Partial Umbral



Sep 22, 2006 11:40 AM Annular Solar



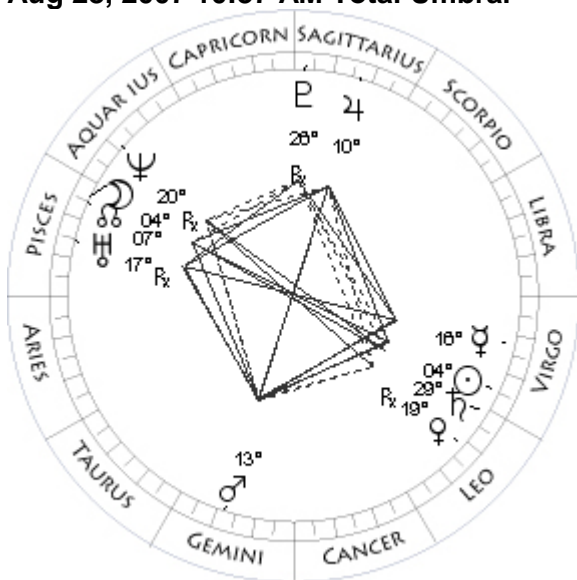
Mar 3, 2007 11:21 PM Total Umbral

Mo 15Pi05 - 0°57	Mo 13Vi01 + 0°17
Su 15Vi01 - 0°00	Su 13Pi00 - 0°00
Me 21Vi01 + 1°21	Me 26Aq24 + 2°35R
Ve 01Vi54 + 1°13	Ve 13Ar03 - 0°37
Ma 29Vi45 + 0°46	Ma 04Aq29 - 0°59
Ju 14Sc26 + 0°53	Ju 18Sa07 + 0°43
Sa 18Le47 + 0°52	Sa 19Le59 + 1°20R
Ur 12Pi39 - 0°49R	Ur 14Pi35 - 0°44
Ne 17Aq43 - 0°13R	Ne 20Aq24 - 0°14
Pl 24Sa05 + 7°19	Pl 28Sa46 + 6°55
No 25Pi46 - 0°00	No 16Pi23 - 0°00
Coords: 13W/ 7N	

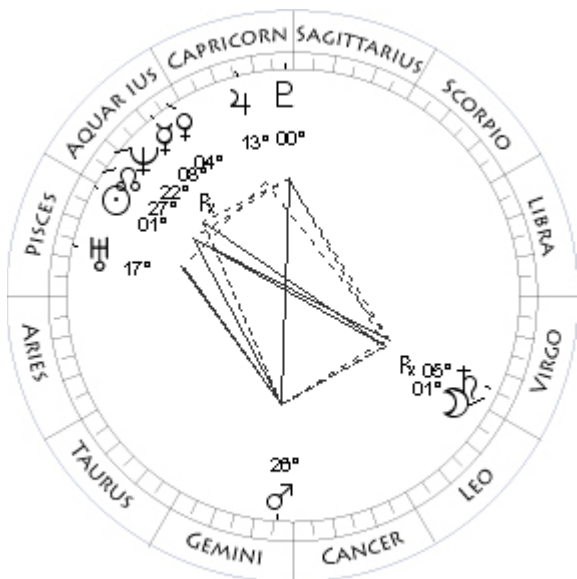
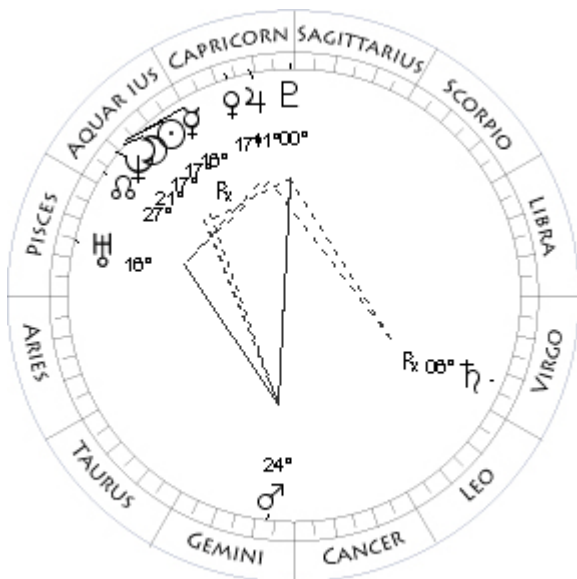
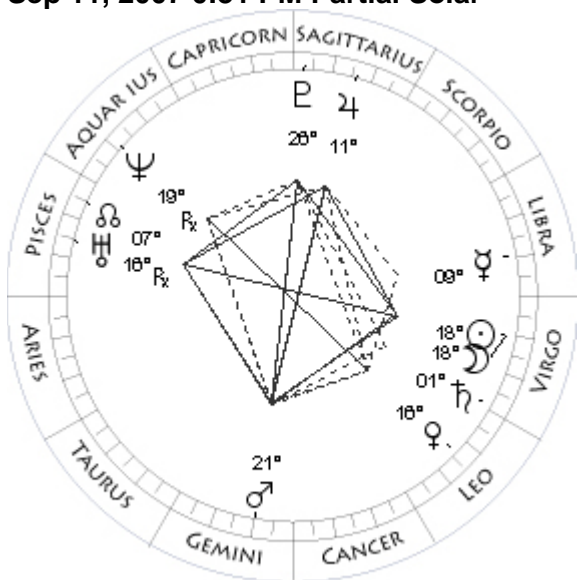
Mar 19, 2007 2:31 AM Partial Solar

Mo 29Vi17 - 0°22	Mo 27Pi59 + 1°05
Su 29Vi20 - 0°00	Su 28Pi07 - 0°00
Me 15Li42 - 0°14	Me 00Pi35 - 0°40
Ve 20Vi08 + 1°25	Ve 01Ta27 + 0°08
Ma 09Li18 + 0°39	Ma 16Aq01 - 1°08
Ju 16Sc55 + 0°50	Ju 19Sa17 + 0°43
Sa 20Le28 + 0°53	Sa 19Le02 + 1°20R
Ur 12Pi05 - 0°49R	Ur 15Pi27 - 0°44
Ne 17Aq24 - 0°13R	Ne 20Aq54 - 0°14
Pl 24Sa10 + 7°14	Pl 28Sa56 + 6°57
No 24Pi59 - 0°00	No 15Pi35 - 0°00

Aug 28, 2007 10:37 AM Total Umbral



Sep 11, 2007 0:31 PM Partial Solar



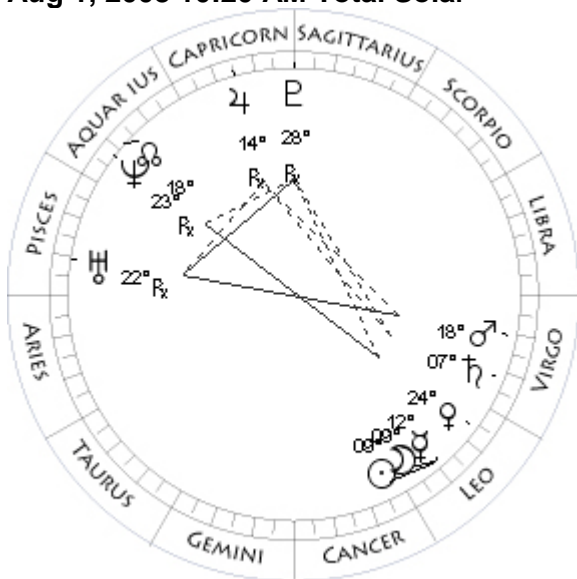
Feb 7, 2008 3:54 AM Annular Solar

Mo 04Pi46 - 0°13	Mo 17Aq49 - 0°54
Su 04Vi46 - 0°00	Su 17Aq45 - 0°00
Me 16Vi32 + 1°08	Me 16Aq51 + 3°37R
Ve 19Le06 - 8°09R	Ve 17Cp02 + 0°26
Ma 13Ge13 - 0°48	Ma 24Ge24 + 3°16
Ju 10Sa37 + 0°26	Ju 11Cp13 + 0°07
Sa 29Le21 + 1°17	Sa 06Vi30 + 1°49R
Ur 17Pi12 - 0°49R	Ur 16Pi57 - 0°44
Ne 20Aq15 - 0°17R	Ne 21Aq36 - 0°18
Pl 26Sa20 + 6°46R	Pl 00Cp22 + 6°17
No 06Pi59 - 0°00	No 28Aq22 - 0°00
Coords: 159E/10S	Coords: 152E/68S

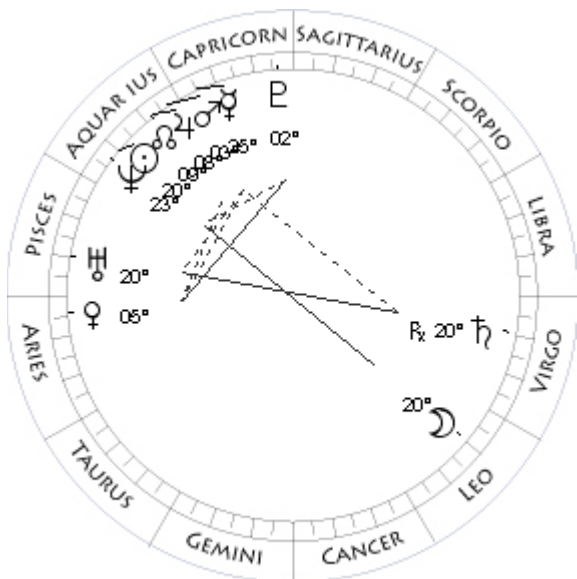
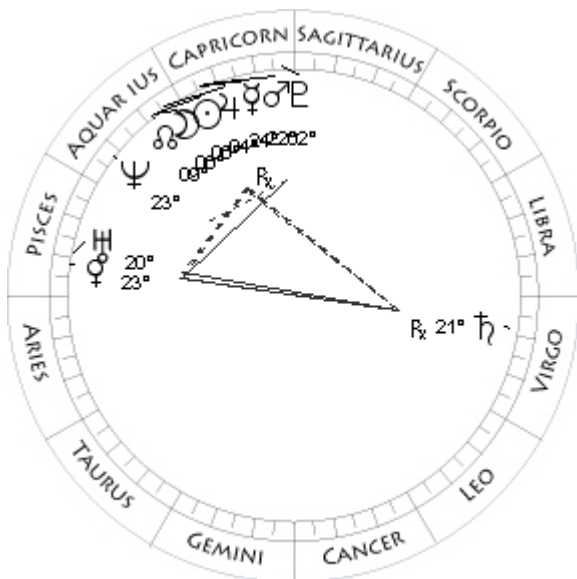
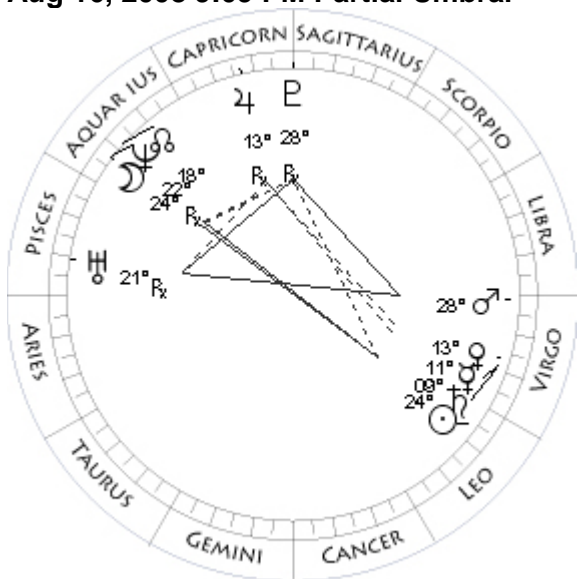
Feb 21, 2008 3:26 AM Total Umbral

Mo 18Vi17 - 1°02	Mo 01Vi49 - 0°23
Su 18Vi24 - 0°00	Su 01Pi53 - 0°00
Me 09Li13 - 0°32	Me 08Aq33 + 1°50R
Ve 16Le44 - 6°31	Ve 04Aq17 - 0°15
Ma 21Ge14 - 0°32	Ma 26Ge38 + 3°00
Ju 11Sa48 + 0°24	Ju 13Cp59 + 0°06
Sa 01Vi08 + 1°19	Sa 05Vi25 + 1°50R
Ur 16Pi38 - 0°49R	Ur 17Pi42 - 0°44
Ne 19Aq54 - 0°17R	Ne 22Aq07 - 0°18
Pl 26Sa19 + 6°42	Pl 00Cp42 + 6°18
No 06Pi14 - 0°00	No 27Aq38 - 0°00

Aug 1, 2008 10:20 AM Total Solar



Aug 16, 2008 9:09 PM Partial Umbral



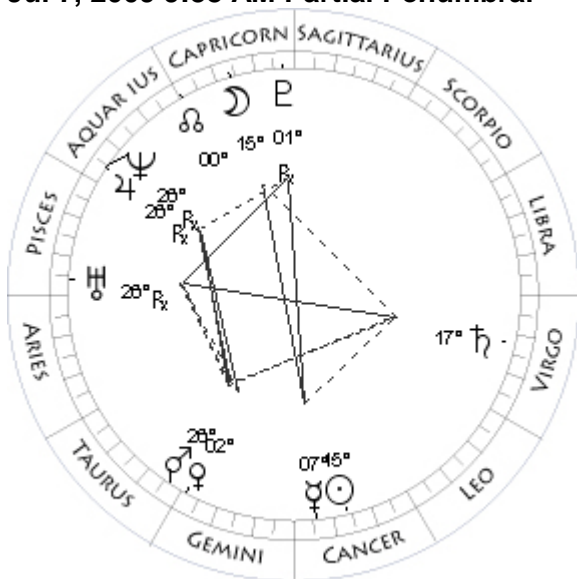
Jan 26, 2009 7:58 AM Annular Solar

Mo 09Le36 + 0°49	Mo 06Aq31 - 0°15
Su 09Le32 - 0°00	Su 06Aq30 - 0°00
Me 12Le27 + 1°45	Me 24Cp14 + 3°29R
Ve 24Le10 + 1°28	Ve 23Pi08 + 0°52
Ma 18Vi42 + 0°49	Ma 22Cp49 - 0°54
Ju 14Cp41 - 0°15R	Ju 04Aq53 - 0°27
Sa 07Vi48 + 1°40	Sa 21Vi11 + 2°10R
Ur 22Pi10 - 0°48R	Ur 20Pi11 - 0°44
Ne 23Aq15 - 0°21R	Ne 23Aq19 - 0°21
Pl 28Sa52 + 6°16R	Pl 02Cp08 + 5°41
No 19Aq02 - 0°00	No 09Aq37 - 0°00
Coords: 72W/65N	Coords: 70W/34S

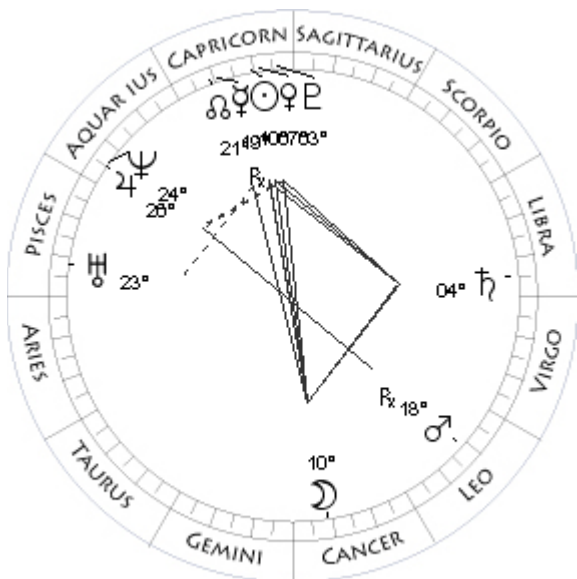
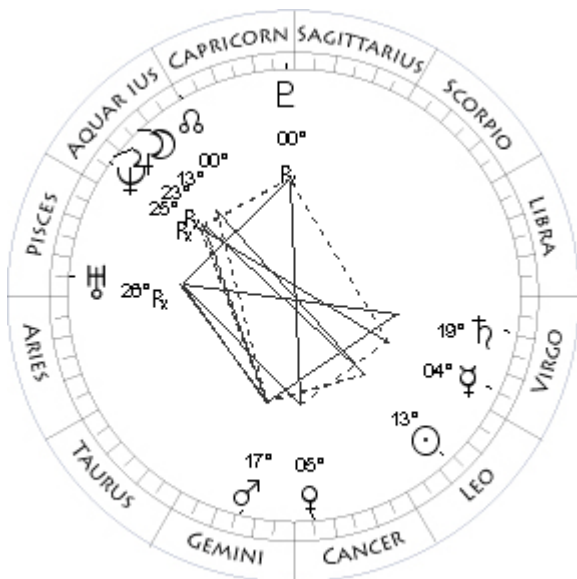
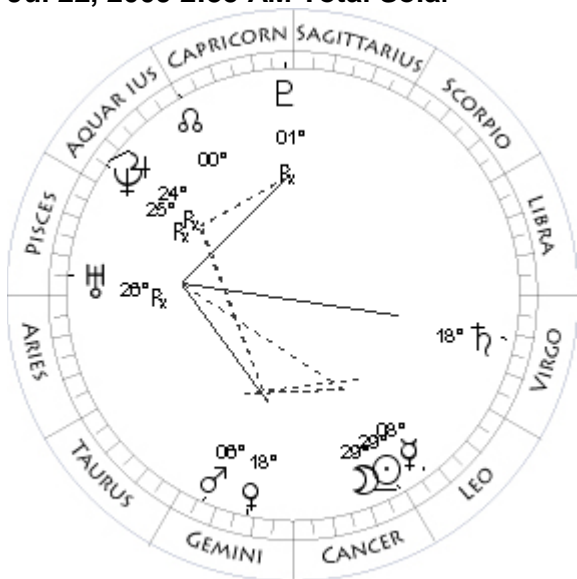
Feb 9, 2009 2:38 PM Partial Penumbral

Mo 24Aq17 + 0°32	Mo 20Le52 - 1°04
Su 24Le21 - 0°00	Su 20Aq59 - 0°00
Me 11Vi18 + 0°55	Me 25Cp22 + 1°09
Ve 13Vi09 + 1°24	Ve 05Ar03 + 2°51
Ma 28Vi24 + 0°39	Ma 03Aq50 - 1°00
Ju 13Cp19 - 0°16R	Ju 08Aq14 - 0°28
Sa 09Vi39 + 1°40	Sa 20Vi24 + 2°13R
Ur 21Pi42 - 0°48R	Ur 20Pi52 - 0°44
Ne 22Aq50 - 0°21R	Ne 23Aq51 - 0°21
Pl 28Sa38 + 6°12R	Pl 02Cp33 + 5°41
No 18Aq13 - 0°00	No 08Aq51 - 0°00
Coords: 43W/13S	Coords: 144W/14N

Jul 7, 2009 9:38 AM Partial Penumbra



Jul 22, 2009 2:35 AM Total Solar



Aug 6, 2009 0:39 AM Partial Penumbra

Mo 15Cp32 - 1°20	Mo 13Aq35 + 1°13
Su 15Cn25 - 0°00	Su 13Le43 - 0°00
Me 07Cn26 + 0°38	Me 04Vi56 + 0°42
Ve 02Ge15 - 2°36	Ve 05Cn45 - 1°22
Ma 26Ta40 - 0°37	Ma 17Ge08 - 0°13
Ju 26Aq15 - 0°58R	Ju 23Aq12 - 1°04R
Sa 17Vi04 + 2°02	Sa 19Vi54 + 1°59
Ur 26Pi37 - 0°46R	Ur 26Pi08 - 0°47R
Ne 26Aq06 - 0°24R	Ne 25Aq25 - 0°25R
Pl 01Cp37 + 5°44R	Pl 00Cp59 + 5°38R
No 01Aq02 - 0°00	No 29Cp28 - 0°00

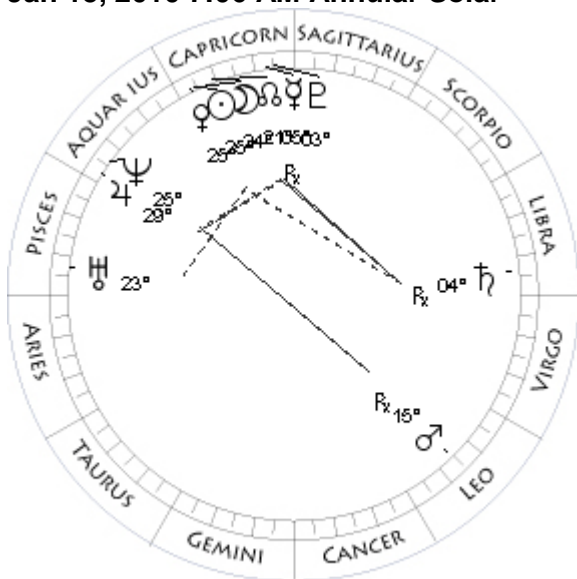
Coords: 143E/24S

Dec 31, 2009 7:22 PM Partial Umbra

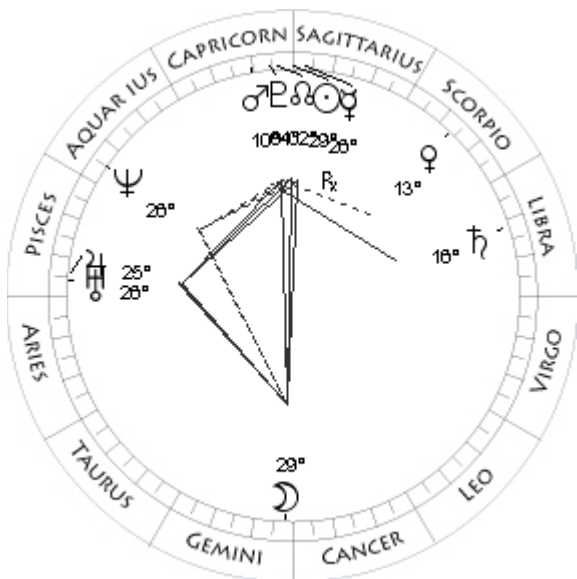
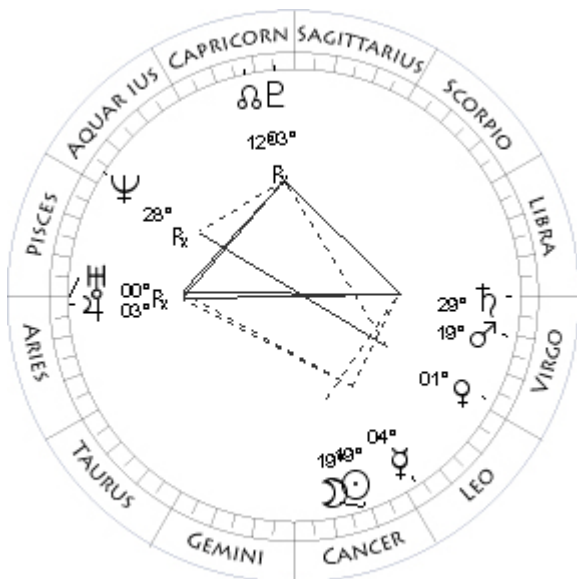
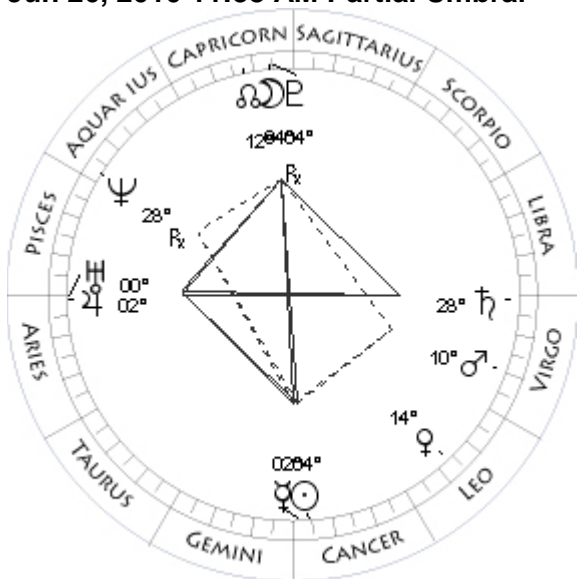
Mo 29Cn26 + 0°04	Mo 10Cn20 + 0°59
Su 29Cn27 - 0°00	Su 10Cp16 - 0°00
Me 08Le27 + 1°48	Me 19Cp11 + 1°35R
Ve 18Ge39 - 2°06	Ve 07Cp37 - 0°26
Ma 06Ge59 - 0°26	Ma 18Le51 + 3°45R
Ju 24Aq57 - 1°01R	Ju 26Aq20 - 0°56
Sa 18Vi22 + 2°00	Sa 04Li30 + 2°17
Ur 26Pi27 - 0°47R	Ur 23Pi05 - 0°45
Ne 25Aq47 - 0°25R	Ne 24Aq36 - 0°25
Pl 01Cp17 + 5°41R	Pl 03Cp18 + 5°06
No 00Aq15 - 0°00	No 21Cp38 - 0°00

Coords: 144W/24N

Jan 15, 2010 7:06 AM Annular Solar



Jun 26, 2010 11:38 AM Partial Umbral



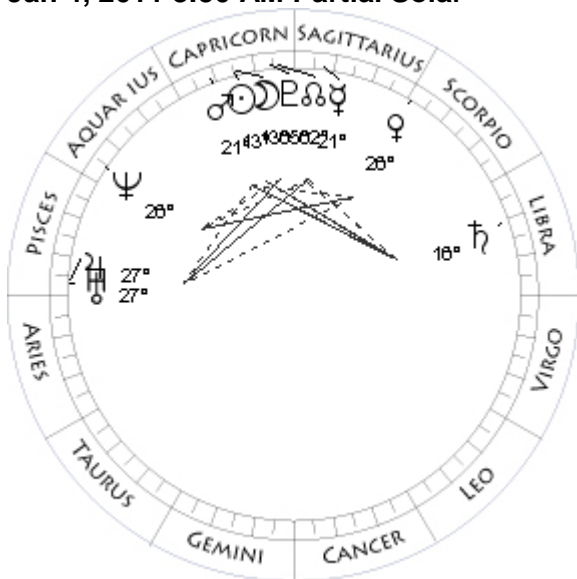
Jul 11, 2010 7:33 PM Total Solar

Mo 24Cp58 + 0°21	Mo 19Cn18 - 0°41
Su 25Cp02 - 0°00	Su 19Cn24 - 0°00
Me 05Cp34 + 3°00R	Me 04Le04 + 1°48
Ve 25Cp51 - 0°56	Ve 01Vi30 + 1°24
Ma 15Le17 + 4°16R	Ma 19Vi10 + 0°44
Ju 29Aq24 - 0°56	Ju 03Ar11 - 1°20
Sa 04Li39 + 2°21R	Sa 29Vi17 + 2°17
Ur 23Pi32 - 0°44	Ur 00Ar35 - 0°46R
Ne 25Aq04 - 0°25	Ne 28Aq18 - 0°29R
Pl 03Cp49 + 5°05	Pl 03Cp42 + 5°05R
No 20Cp52 - 0°00	No 11Cp28 - 0°00
Coords: 69W/ 2N	Coords: 122E/20S

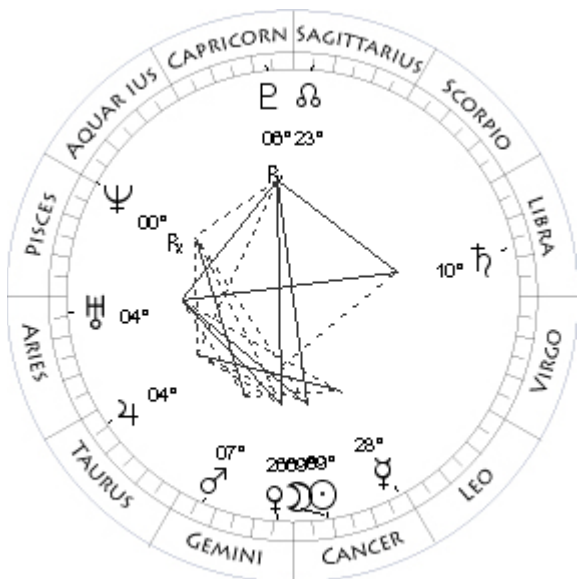
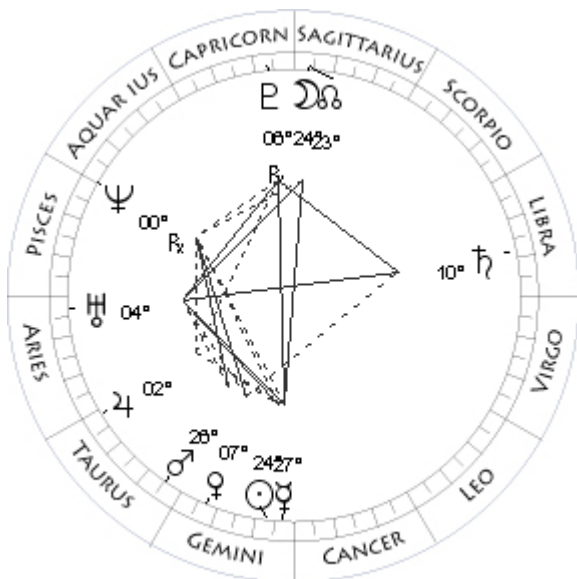
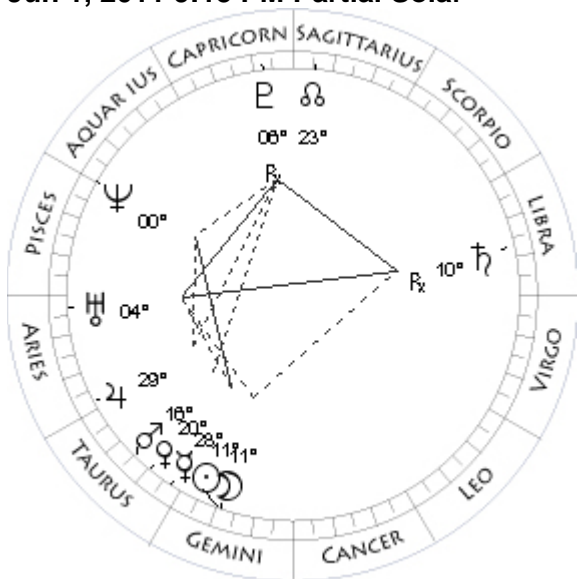
Dec 21, 2010 8:17 AM Total Umbral

Mo 04Cp50 - 0°39	Mo 29Ge22 + 0°19
Su 04Cn47 - 0°00	Su 29Sa21 - 0°00
Me 02Cn18 + 0°57	Me 26Sa16 + 2°22R
Ve 14Le04 + 1°54	Ve 13Sc55 + 3°12
Ma 10Vi24 + 0°58	Ma 10Cp11 - 0°56
Ju 02Ar15 - 1°16	Ju 25Pi17 - 1°18
Sa 28Vi26 + 2°20	Sa 16Li06 + 2°22
Ur 00Ar34 + 0°45	Ur 26Pi47 - 0°45
Ne 28Aq33 - 0°28R	Ne 26Aq29 - 0°29
Pl 04Cp05 + 5°07R	Pl 04Cp57 + 4°31
No 12Cp17 - 0°00	No 02Cp52 - 0°00
Coords: 174E/24S	Coords: 125E/24N

Jan 4, 2011 8:50 AM Partial Solar



Jun 1, 2011 9:15 PM Partial Solar



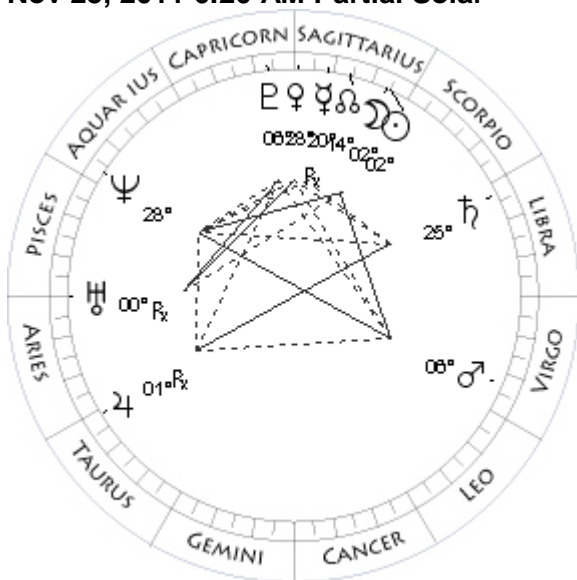
Jun 15, 2011 8:12 PM Total Umbral

Mo 13Cp32 + 0°59	Mo 24Sa22 + 0°05
Su 13Cp38 - 0°00	Su 24Ge24 - 0°00
Me 21Sa21 + 2°26	Me 27Ge56 + 1°17
Ve 26Sc51 + 3°31	Ve 07Ge37 - 0°49
Ma 21Cp00 - 1°00	Ma 26Ta13 - 0°16
Ju 27Pi01 - 1°15	Ju 02Ta14 - 1°09
Sa 16Li48 + 2°25	Sa 10Li27 + 2°33
Ur 27Pi02 - 0°44	Ur 04Ar20 - 0°44
Ne 26Aq51 - 0°29	Ne 00Pi54 - 0°32R
Pl 05Cp27 + 4°30	Pl 06Cp30 + 4°30R
No 02Cp07 - 0°00	No 23Sa31 - 0°00
	Coords: 57W/23S

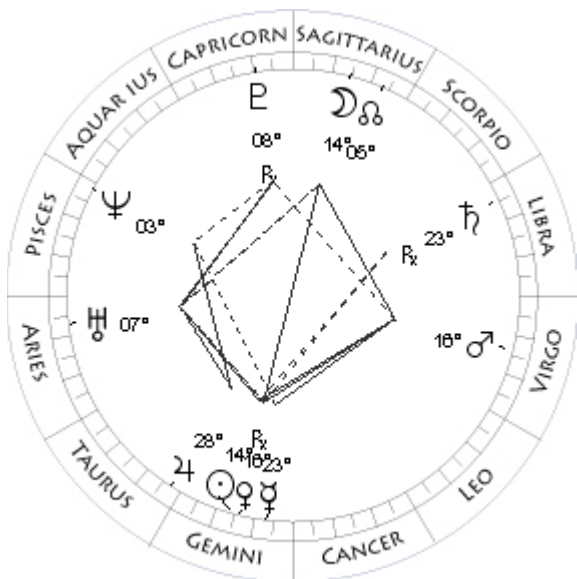
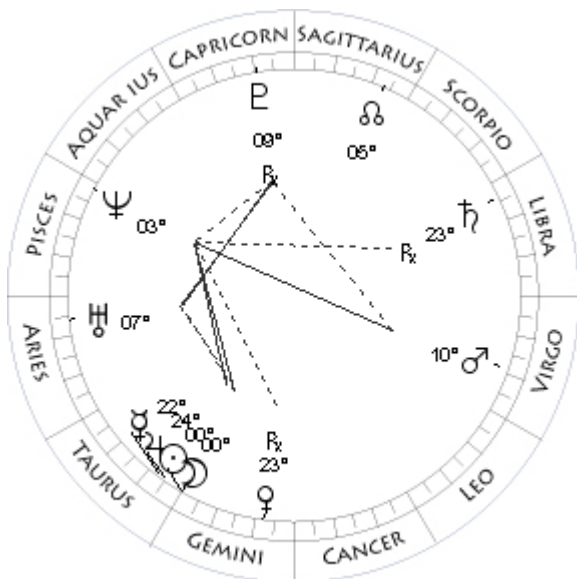
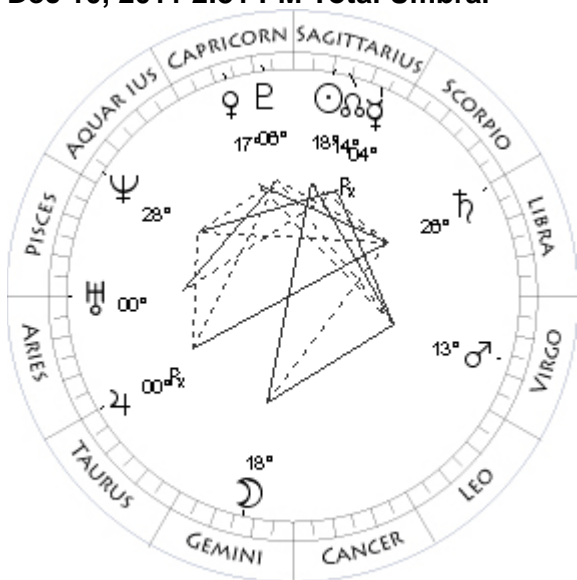
Jul 1, 2011 8:38 AM Partial Solar

Mo 11Ge08 + 1°07	Mo 09Cn03 - 1°25
Su 11Ge03 - 0°00	Su 09Cn12 - 0°00
Me 28Ta07 - 1°02	Me 28Cn32 + 1°47
Ve 20Ta37 - 1°17	Ve 26Ge34 - 0°12
Ma 16Ta04 - 0°25	Ma 07Ge17 - 0°05
Ju 29Ar27 - 1°07	Ju 04Ta59 - 1°11
Sa 10Li33 + 2°37R	Sa 10Li43 + 2°29
Ur 04Ar00 - 0°43	Ur 04Ar32 - 0°44
Ne 00Pi57 - 0°31	Ne 00Pi44 - 0°32R
Pl 06Cp50 + 4°31R	Pl 06Cp06 + 4°29R
No 24Sa15 - 0°00	No 22Sa42 - 0°00

Nov 25, 2011 6:20 AM Partial Solar



Dec 10, 2011 2:31 PM Total Umbra



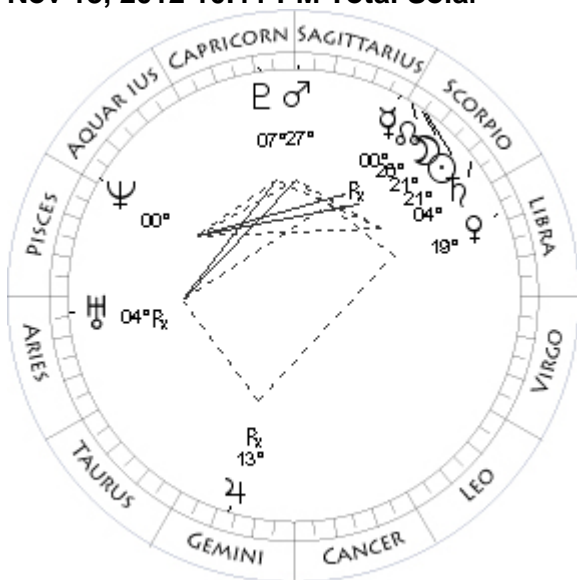
May 20, 2012 11:52 PM Annular Solar

Mo 02Sa43 - 1°04	Mo 00Ge22 + 0°26
Su 02Sa37 - 0°00	Su 00Ge21 - 0°00
Me 20Sa03 - 1°31R	Me 22Ta36 - 0°37
Ve 28Sa27 - 1°15	Ve 23Ge25 + 3°23R
Ma 06Vi47 + 2°04	Ma 10Vi39 + 1°25
Ju 01Ta56 - 1°25R	Ju 24Ta57 - 0°47
Sa 25Li08 + 2°18	Sa 23Li45 + 2°43R
Ur 00Ar44 - 0°45R	Ur 07Ar27 - 0°42
Ne 28Aq14 - 0°33	Ne 03Pi07 - 0°35
Pl 06Cp03 + 4°00	Pl 09Cp09 + 3°54R
No 14Sa55 - 0°00	No 05Sa30 - 0°00
	Coords: 176W/49N

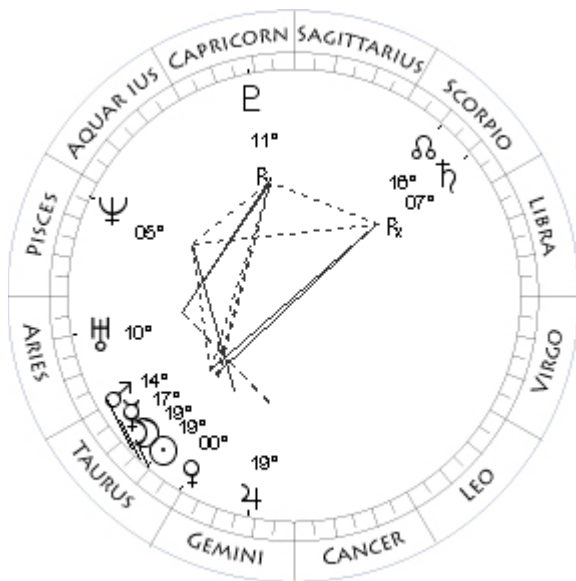
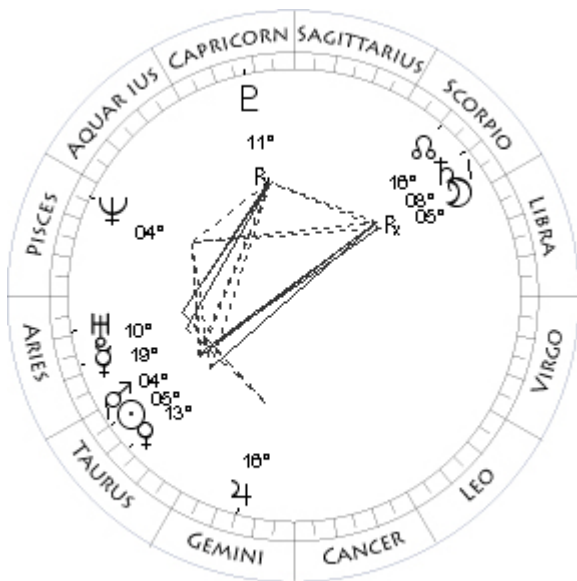
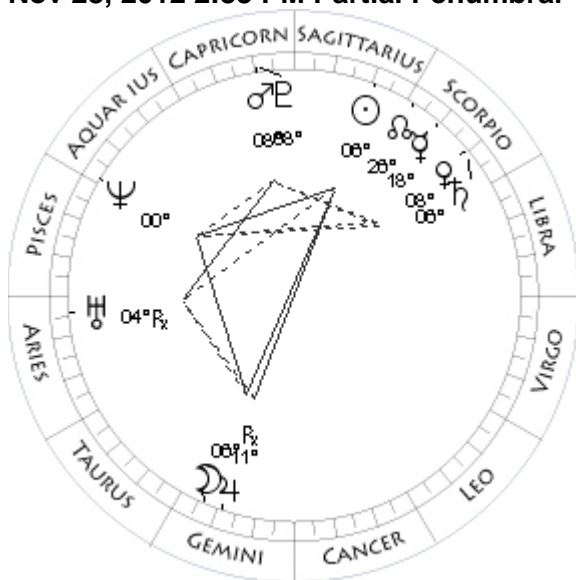
Jun 4, 2012 11:03 AM Partial Umbra

Mo 18Ge07 - 0°21	Mo 14Sa08 + 0°50
Su 18Sa11 - 0°00	Su 14Ge14 - 0°00
Me 04Sa56 + 2°39R	Me 23Ge53 + 1°38
Ve 17Cp27 - 1°40	Ve 16Ge45 + 0°32R
Ma 13Vi17 + 2°24	Ma 16Vi10 + 1°01
Ju 00Ta46 - 1°20R	Ju 28Ta20 - 0°47
Sa 26Li38 + 2°21	Sa 23Li07 + 2°40R
Ur 00Ar39 - 0°44	Ur 07Ar57 - 0°42
Ne 28Aq26 - 0°33	Ne 03Pi10 - 0°35
Pl 06Cp34 + 3°57	Pl 08Cp51 + 3°53R
No 14Sa06 - 0°00	No 04Sa44 - 0°00
	Coords: 166E/22S

Nov 13, 2012 10:11 PM Total Solar



Nov 28, 2012 2:33 PM Partial Penumbral



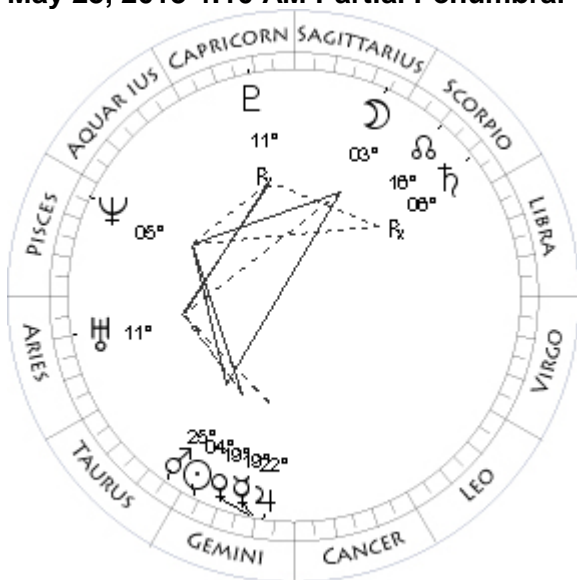
Apr 25, 2013 8:07 PM Partial Umbral

Mo 21Sc58 - 0°23	Mo 05Sc51 - 1°00
Su 21Sc57 - 0°00	Su 05Ta47 - 0°00
Me 00Sa27 - 0°51R	Me 19Ar06 - 2°11
Ve 19Li59 + 1°47	Ve 13Ta01 - 0°35
Ma 27Sa37 - 1°06	Ma 04Ta01 - 0°19
Ju 13Ge47 - 0°50R	Ju 16Ge26 - 0°20
Sa 04Sc41 + 2°14	Sa 08Sc24 + 2°41R
Ur 04Ar59 - 0°44R	Ur 10Ar03 - 0°40
Ne 00Pi23 - 0°37	Ne 04Pi55 - 0°38
Pl 07Cp44 + 3°26	Pl 11Cp31 + 3°17R
No 26Sc08 - 0°00	No 17Sc31 - 0°00
Coords: 161E/40S	Coords: 57W/14S

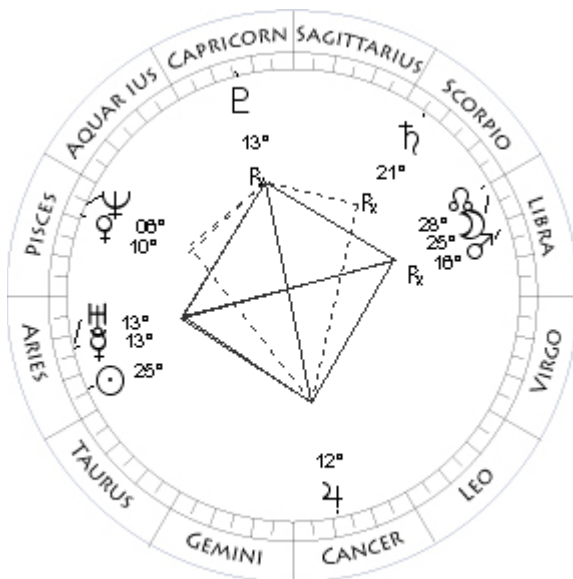
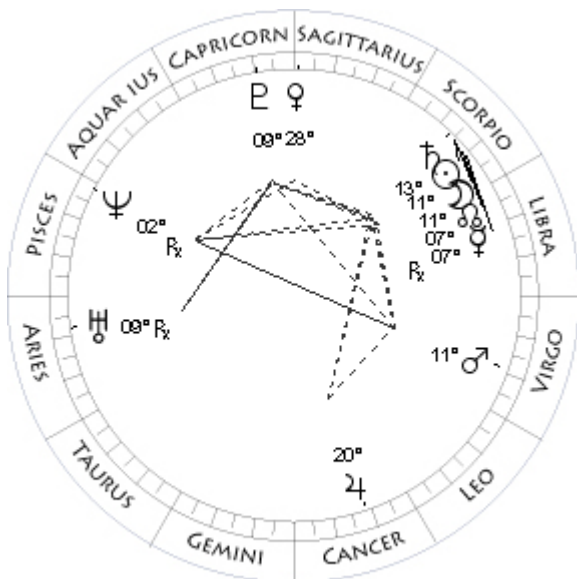
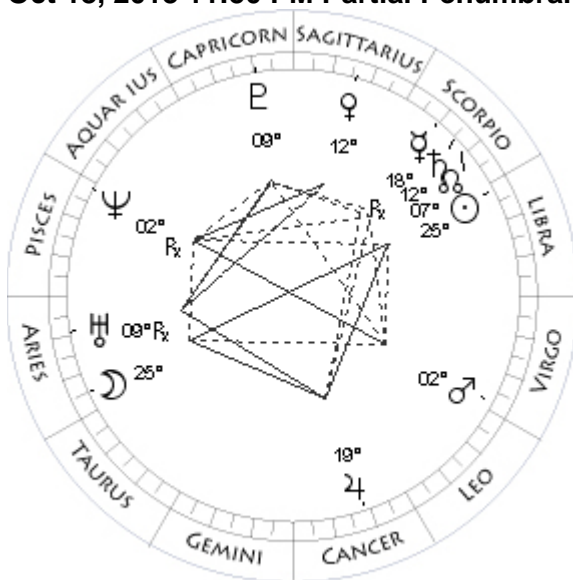
May 10, 2013 0:25 AM Annular Solar

Mo 06Ge40 - 0°58	Mo 19Ta29 - 0°15
Su 06Sa47 - 0°00	Su 19Ta32 - 0°00
Me 18Sc25 + 2°34	Me 17Ta18 - 0°15
Ve 08Sc07 + 1°42	Ve 00Ge29 - 0°01
Ma 08Cp45 - 1°09	Ma 14Ta30 - 0°10
Ju 11Ge54 - 0°48R	Ju 19Ge24 - 0°18
Sa 06Sc22 + 2°15	Sa 07Sc20 + 2°40R
Ur 04Ar43 - 0°44R	Ur 10Ar45 - 0°41
Ne 00Pi28 - 0°37	Ne 05Pi11 - 0°38
Pl 08Cp10 + 3°24	Pl 11Cp23 + 3°17R
No 25Sc21 - 0°00	No 16Sc45 - 0°00
Coords: 139W/20N	Coords: 176W/ 2N

May 25, 2013 4:10 AM Partial Penumbral



Oct 18, 2013 11:50 PM Partial Penumbral



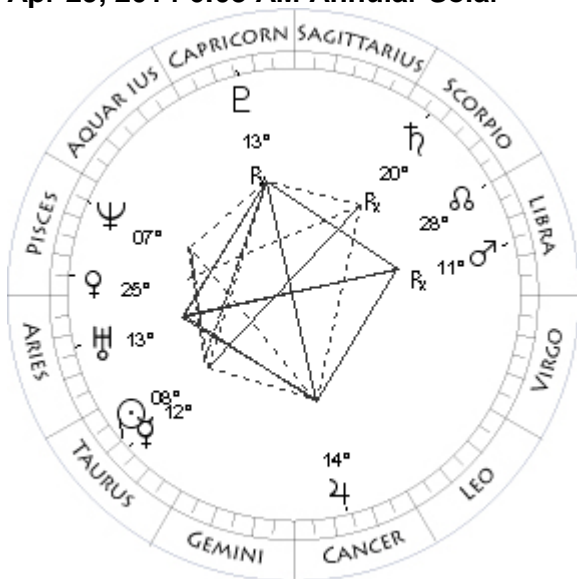
Nov 3, 2013 0:46 PM Total Solar

Mo 03Sa58 + 1°33	Mo 11Sc13 + 0°19
Su 04Ge08 - 0°00	Su 11Sc16 - 0°00
Me 19Ge13 + 1°58	Me 07Sc26 + 0°04R
Ve 19Ge06 + 0°36	Ve 28Sa13 - 3°41
Ma 25Ta31 - 0°00	Ma 11Vi12 + 1°35
Ju 22Ge44 - 0°16	Ju 20Cn29 - 0°01
Sa 06Sc18 + 2°39R	Sa 13Sc53 + 2°07
Ur 11Ar25 - 0°41	Ur 09Ar22 - 0°43R
Ne 05Pi21 - 0°39	Ne 02Pi38 - 0°41R
Pl 11Cp08 + 3°16R	Pl 09Cp27 + 2°53
No 15Sc57 - 0°00	No 07Sc21 - 0°00

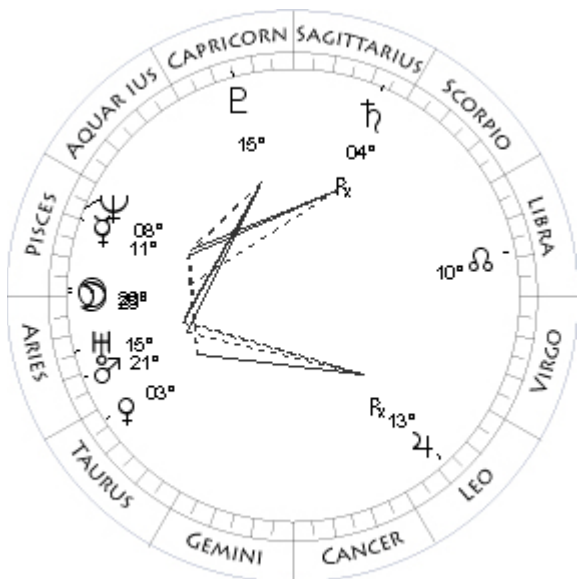
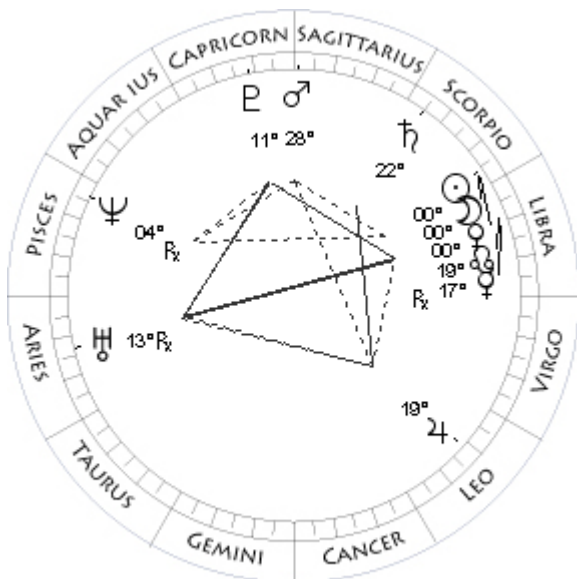
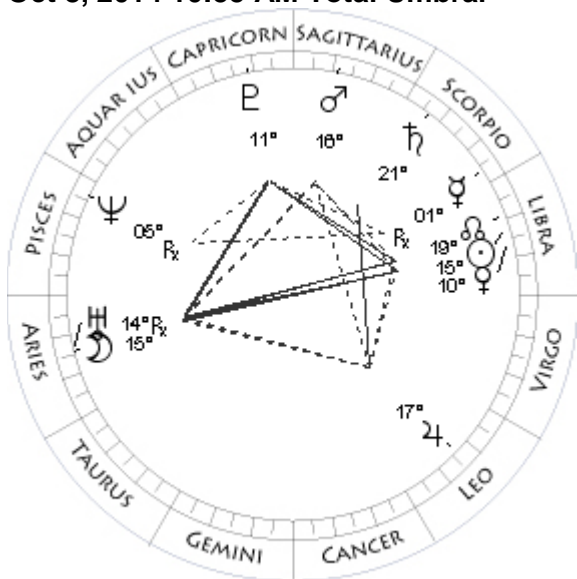
Apr 15, 2014 7:46 AM Total Umbra

Mo 25Ar51 + 1°05	Mo 25Li17 - 0°17
Su 25Li46 - 0°00	Su 25Ar16 - 0°00
Me 18Sc02 - 3°13R	Me 13Ar52 - 1°52
Ve 12Sa13 - 3°09	Ve 10Pi13 - 0°17
Ma 02Vi07 + 1°26	Ma 16Li29 + 2°15R
Ju 19Cn54 - 0°03	Ju 12Cn53 + 0°17
Sa 12Sc03 + 2°08	Sa 21Sc49 + 2°28R
Ur 09Ar55 - 0°44R	Ur 13Ar13 - 0°39
Ne 02Pi47 - 0°41R	Ne 06Pi49 - 0°41
Pl 09Cp10 + 2°55	Pl 13Cp33 + 2°40R
No 08Sc11 - 0°00	No 28Li44 - 0°00
	Coords: 116E/10S

Apr 29, 2014 6:03 AM Annular Solar



Oct 8, 2014 10:55 AM Total Umbral



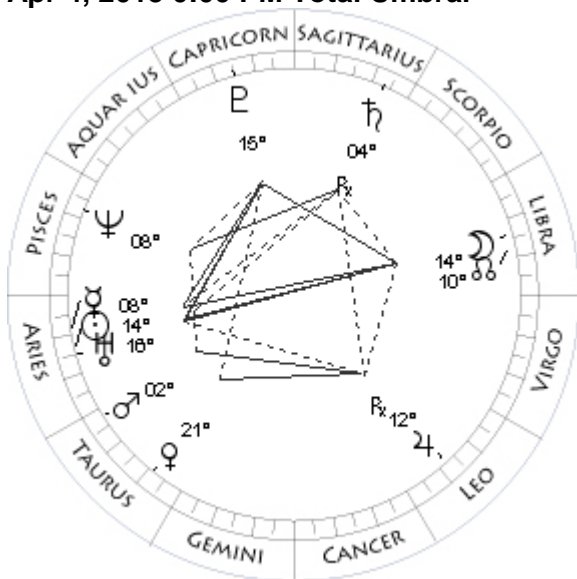
Oct 23, 2014 9:44 PM Partial Solar

Mo 08Ta45 - 0°57	Mo 00Sc17 + 1°01
Su 08Ta52 - 0°00	Su 00Sc25 - 0°00
Me 12Ta31 + 0°10	Me 17Li06 + 0°49R
Ve 25Pi42 - 1°11	Ve 00Sc03 + 1°03
Ma 11Li52 + 1°41R	Ma 28Sa09 - 1°31
Ju 14Cn43 + 0°18	Ju 19Le26 + 0°36
Sa 20Sc52 + 2°29R	Sa 22Sc57 + 1°57
Ur 13Ar59 - 0°39	Ur 13Ar53 - 0°42R
Ne 07Pi10 - 0°42	Ne 04Pi58 - 0°45R
Pl 13Cp30 + 2°40R	Pl 11Cp12 + 2°19
No 28Li00 - 0°00	No 18Li36 - 0°00
Coords: 129W/70S	

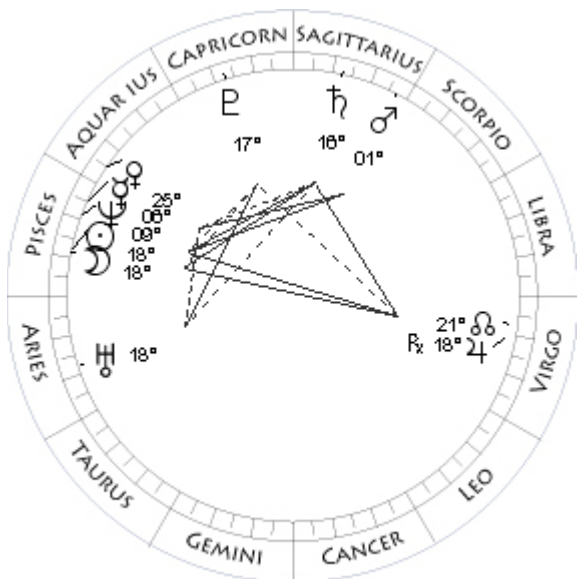
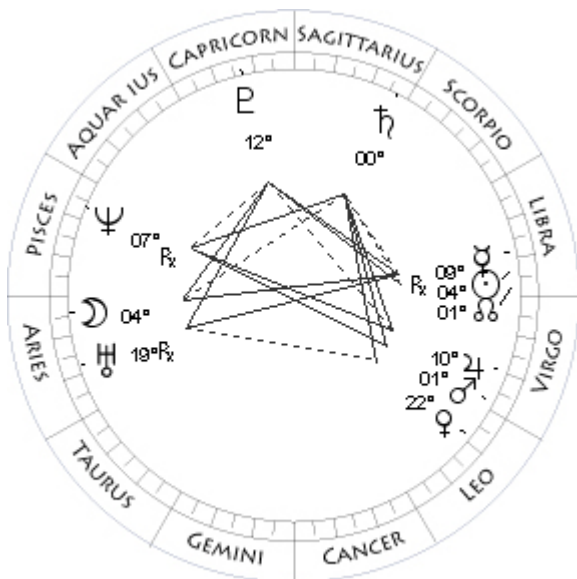
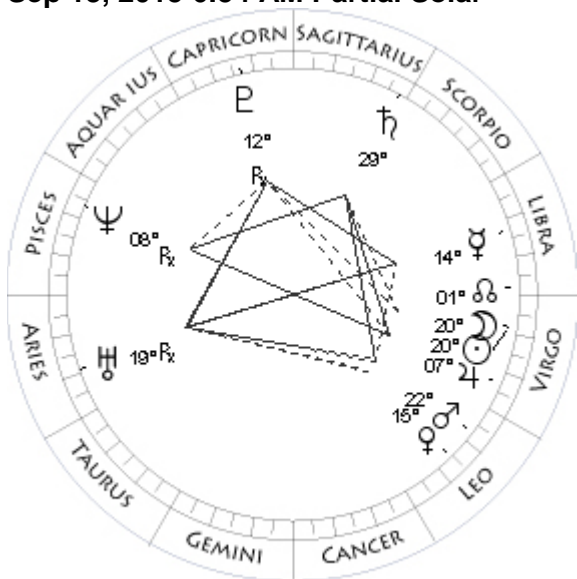
Mar 20, 2015 9:45 AM Total Solar

Mo 15Ar07 + 0°23	Mo 29Pi32 + 0°57
Su 15Li06 - 0°00	Su 29Pi28 - 0°00
Me 01Sc26 - 3°23R	Me 11Pi20 - 2°16
Ve 10Li44 + 1°22	Ve 03Ta36 + 0°15
Ma 16Sa58 - 1°31	Ma 21Ar36 - 0°16
Ju 17Le11 + 0°33	Ju 13Le10 + 0°59R
Sa 21Sc16 + 1°59	Sa 04Sa54 + 2°07R
Ur 14Ar30 - 0°42R	Ur 15Ar30 - 0°38
Ne 05Pi13 - 0°45R	Ne 08Pi07 - 0°44
Pl 11Cp01 + 2°22	Pl 15Cp19 + 2°05
No 19Li25 - 0°00	No 10Li47 - 0°00
Coords: 167E/ 6N	

Apr 4, 2015 0:00 PM Total Umbral



Sep 13, 2015 6:54 AM Partial Solar



Sep 28, 2015 2:47 AM Total Umbral

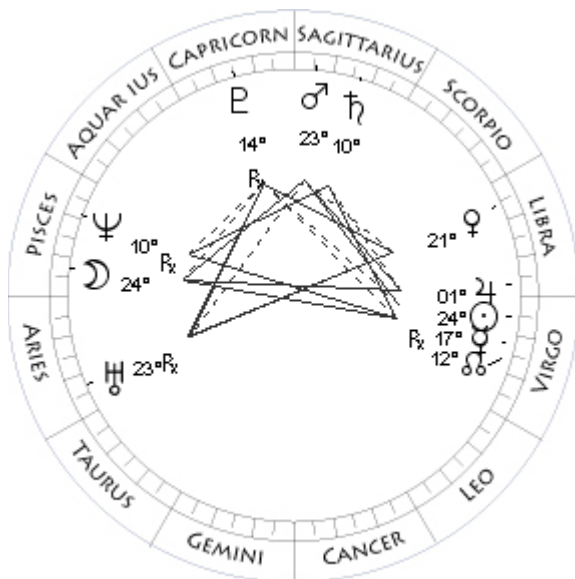
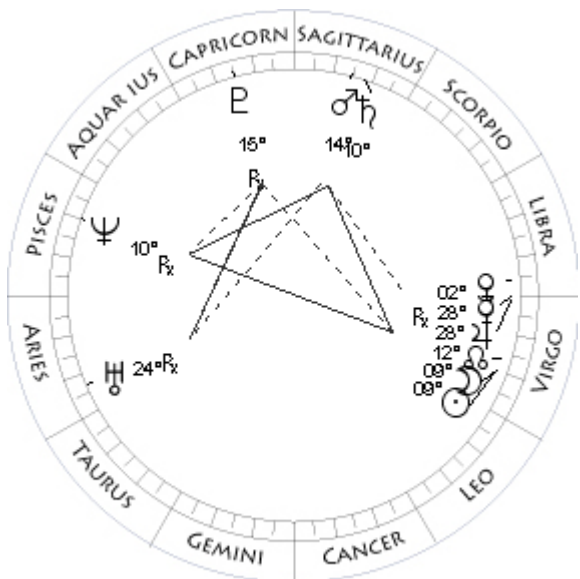
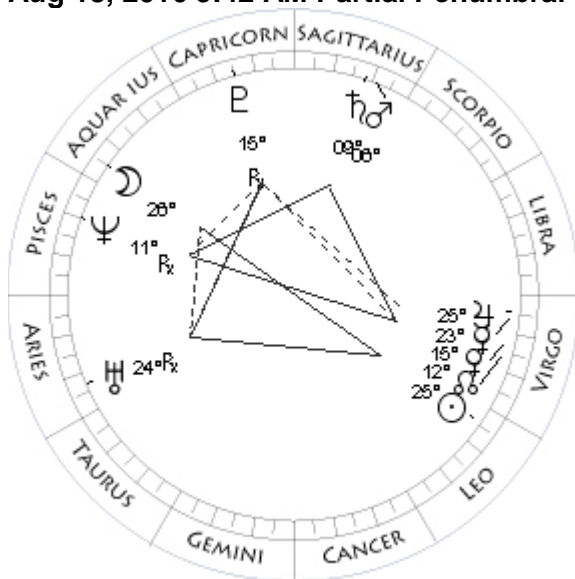
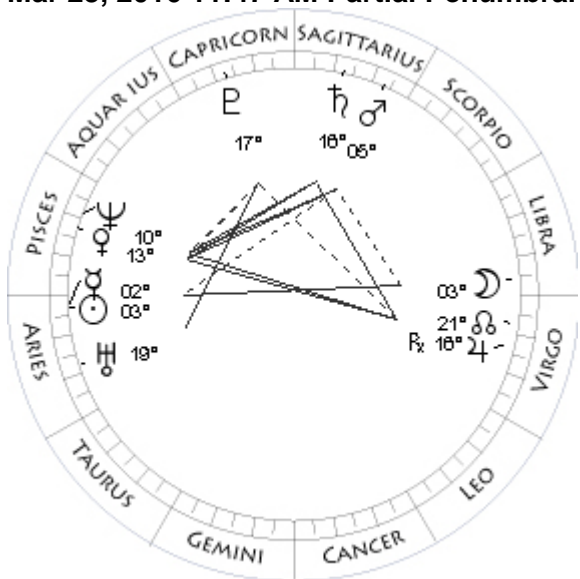
Mo 14Li21 + 0°24	Mo 04Ar37 - 0°20
Su 14Ar24 - 0°00	Su 04Li41 - 0°00
Me 08Ar31 - 1°35	Me 09Li54 - 3°07R
Ve 21Ta36 + 1°06	Ve 22Le11 - 3°37
Ma 02Ta50 - 0°05	Ma 01Vi54 + 1°16
Ju 12Le37 + 0°58R	Ju 10Vi15 + 0°55
Sa 04Sa34 + 2°09R	Sa 00Sa46 + 1°46
Ur 16Ar21 - 0°37	Ur 19Ar04 - 0°40R
Ne 08Pi38 - 0°45	Ne 07Pi43 - 0°49R
Pl 15Cp28 + 2°04	Pl 12Cp56 + 1°48
No 09Li59 - 0°00	No 00Li38 - 0°00

Mar 9, 2016 1:57 AM Total Solar

Mo 20Vi16 - 0°59	Mo 18Pi56 + 0°16
Su 20Vi11 - 0°00	Su 18Pi56 - 0°00
Me 14Li57 - 3°35	Me 06Pi10 - 2°11
Ve 15Le17 - 5°57	Ve 25Aq52 - 0°58
Ma 22Le35 + 1°12	Ma 01Sa05 + 1°14
Ju 07Vi07 + 0°54	Ju 18Vi13 + 1°29R
Sa 29Sc41 + 1°49	Sa 16Sa11 + 1°43
Ur 19Ar37 - 0°40R	Ur 18Ar42 - 0°36
Ne 08Pi06 - 0°49R	Ne 09Pi52 - 0°48
Pl 12Cp58 + 1°50R	Pl 17Cp03 + 1°30
No 01Li25 - 0°00	No 22Vi00 - 0°00
Coords: 149W/10N	

Mar 23, 2016 11:47 AM Partial Penumbral

Aug 18, 2016 9:42 AM Partial Penumbral



Sep 1, 2016 9:07 AM Annular Solar

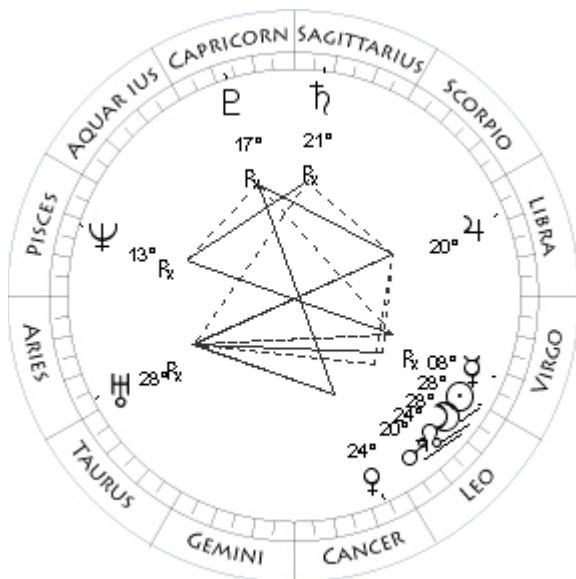
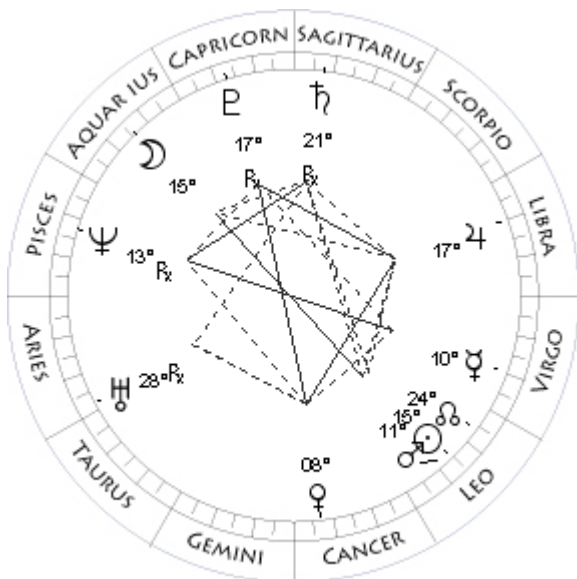
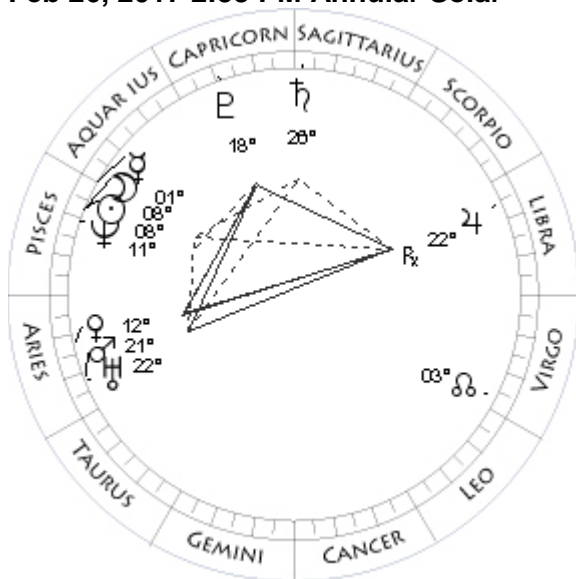
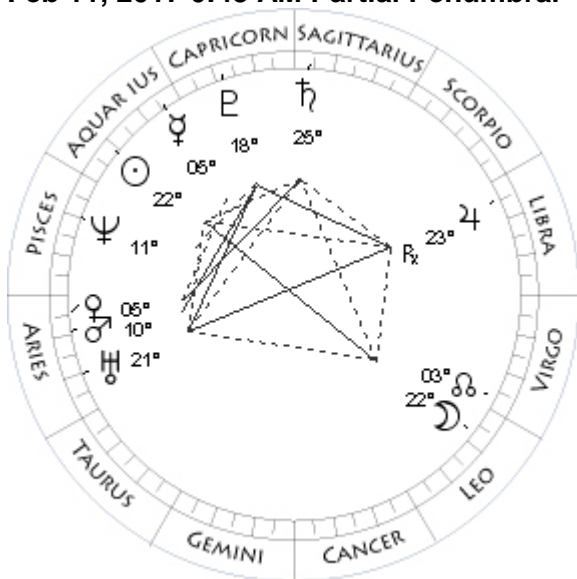
Mo 03Li10 + 1°02	Mo 09Vi23 - 0°18
Su 03Ar17 - 0°00	Su 09Vi22 - 0°00
Me 02Ar56 - 1°20	Me 28Vi55 - 4°14R
Ve 13Pi41 - 1°21	Ve 02Li49 + 1°02
Ma 05Sa29 + 1°03	Ma 14Sa10 - 2°44
Ju 16Vi23 + 1°29R	Ju 28Vi18 + 1°06
Sa 16Sa24 + 1°45	Sa 10Sa04 + 1°32
Ur 19Ar29 - 0°36	Ur 24Ar04 - 0°38R
Ne 10Pi24 - 0°48	Ne 10Pi41 - 0°53R
Pl 17Cp17 + 1°29	Pl 15Cp02 + 1°16R
No 21Vi14 - 0°00	No 12Vi40 - 0°00
	Coords: 38W/11S

Sep 16, 2016 6:54 PM Partial Penumbral

Mo 26Aq00 + 1°31	Mo 24Pi12 - 1°03
Su 25Le53 - 0°00	Su 24Vi20 - 0°00
Me 23Vi10 - 2°12	Me 17Vi06 - 2°18R
Ve 15Vi41 + 1°22	Ve 21Li40 + 0°27
Ma 06Sa49 - 2°50	Ma 23Sa17 - 2°35
Ju 25Vi25 + 1°07	Ju 01Li34 + 1°06
Sa 09Sa48 + 1°35	Sa 10Sa43 + 1°29
Ur 24Ar22 - 0°38R	Ur 23Ar37 - 0°38R
Ne 11Pi04 - 0°53R	Ne 10Pi16 - 0°53R
Pl 15Cp14 + 1°18R	Pl 14Cp54 + 1°14R
No 13Vi24 - 0°00	No 11Vi51 - 0°00
	Coords: 145E/11S

Feb 11, 2017 0:43 AM Partial Penumbral

Feb 26, 2017 2:53 PM Annular Solar



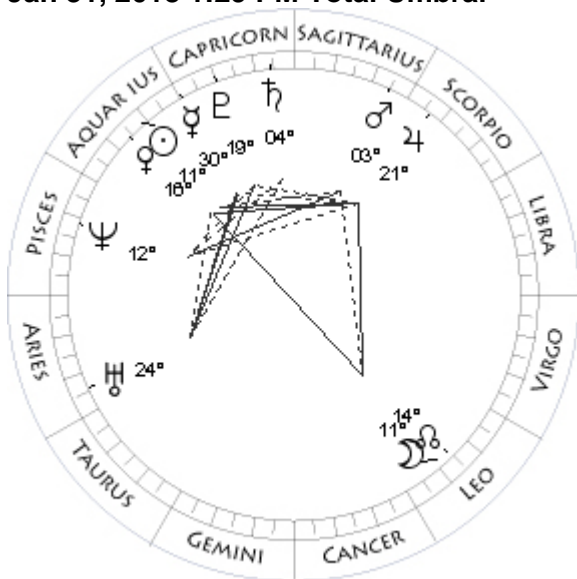
Aug 7, 2017 6:20 PM Partial Umbral

Aug 21, 2017 6:25 PM Total Solar

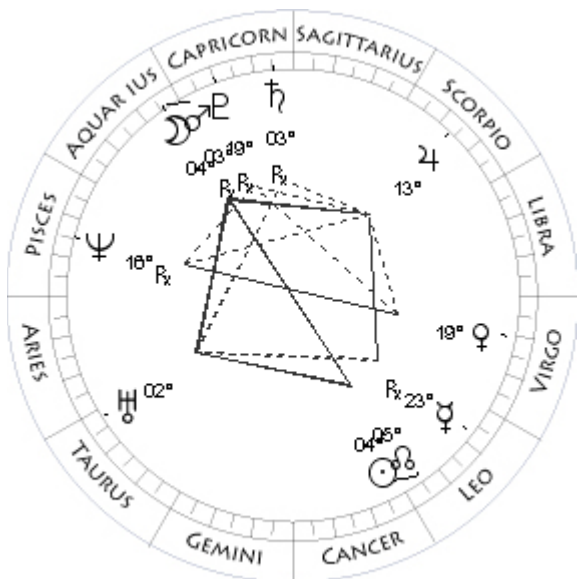
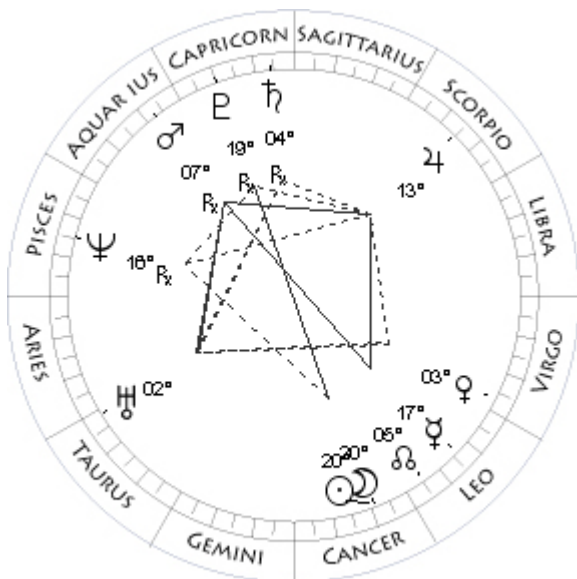
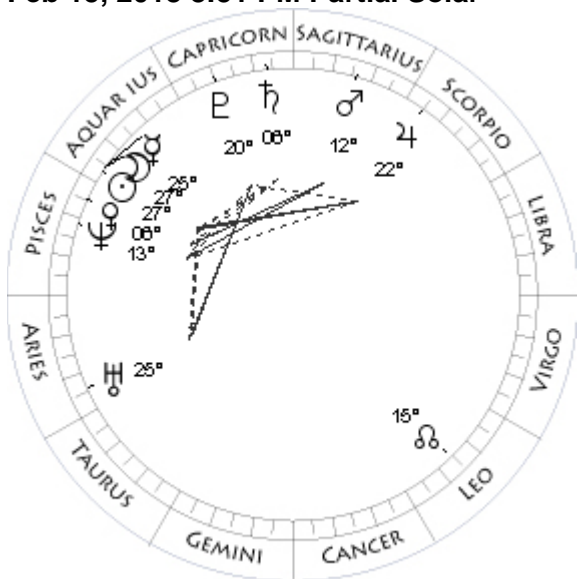
Mo 22Le33 - 0°59	Mo 15Aq29 + 0°48
Su 22Aq29 - 0°00	Su 15Le26 - 0°00
Me 05Aq29 - 1°33	Me 10Vi28 - 2°59
Ve 05Ar21 + 3°18	Ve 08Cn17 - 1°13
Ma 10Ar16 - 0°14	Ma 11Le45 + 1°08
Ju 23Li06 + 1°27R	Ju 17Li57 + 1°10
Sa 25Sa29 + 1°17	Sa 21Sa26 + 1°14R
Ur 21Ar22 - 0°35	Ur 28Ar31 - 0°35R
Ne 11Pi01 - 0°51	Ne 13Pi37 - 0°56R
Pl 18Cp15 + 0°57	Pl 17Cp24 + 0°43R
No 04Vi03 - 0°00	No 24Le38 - 0°00
Coords: 86W/15S	

Mo 08Pi08 - 0°26	Mo 28Le49 + 0°25
Su 08Pi12 - 0°00	Su 28Le53 - 0°00
Me 01Pi10 - 2°07	Me 08Vi11 - 4°42R
Ve 12Ar30 + 5°59	Ve 24Cn45 - 0°28
Ma 21Ar44 - 0°01	Ma 20Le42 + 1°09
Ju 22Li29 + 1°30R	Ju 20Li11 + 1°07
Sa 26Sa35 + 1°18	Sa 21Sa12 + 1°11R
Ur 22Ar00 - 0°34	Ur 28Ar24 - 0°36R
Ne 11Pi36 - 0°51	Ne 13Pi16 - 0°56R
Pl 18Cp41 + 0°56	Pl 17Cp08 + 0°42R
No 03Vi14 - 0°00	No 23Le54 - 0°00

Jan 31, 2018 1:29 PM Total Umbral



Feb 15, 2018 8:51 PM Partial Solar



Jul 13, 2018 3:00 AM Partial Solar

Mo 11Le38 - 0°18	Mo 20Cn48 - 1°23
Su 11Aq37 - 0°00	Su 20Cn42 - 0°00
Me 30Cp00 - 1°41	Me 17Le06 - 0°36
Ve 16Aq57 - 1°20	Ve 03Vi22 + 1°19
Ma 03Sa05 + 0°39	Ma 07Aq36 - 5°51R
Ju 21Sc12 + 1°07	Ju 13Sc21 + 1°03
Sa 04Cp48 + 0°53	Sa 04Cp44 + 0°50R
Ur 24Ar56 - 0°33	Ur 02Ta18 - 0°32
Ne 12Pi48 - 0°54	Ne 16Pi22 - 0°59R
Pl 19Cp46 + 0°24	Pl 19Cp56 + 0°10R
No 15Le17 - 0°00	No 06Le40 - 0°00

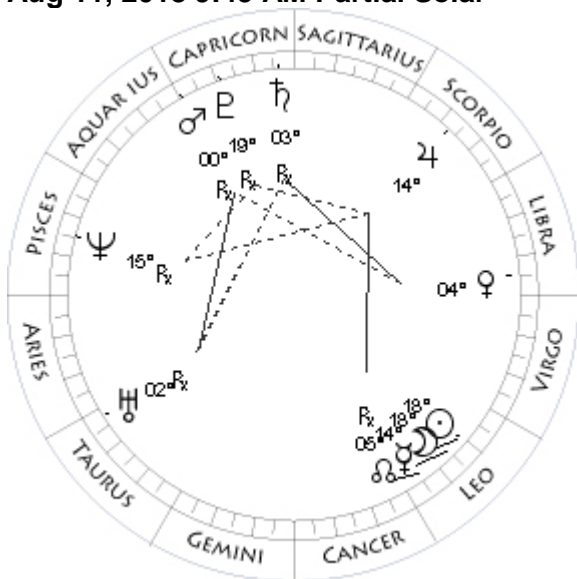
Coords: 161W/17N

Jul 27, 2018 8:22 PM Total Umbral

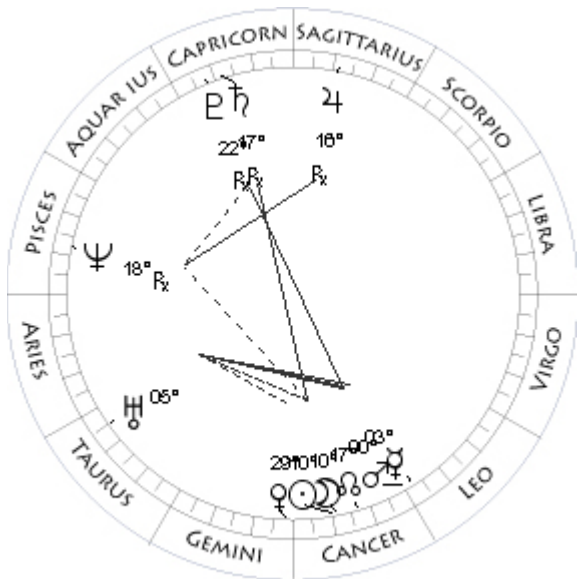
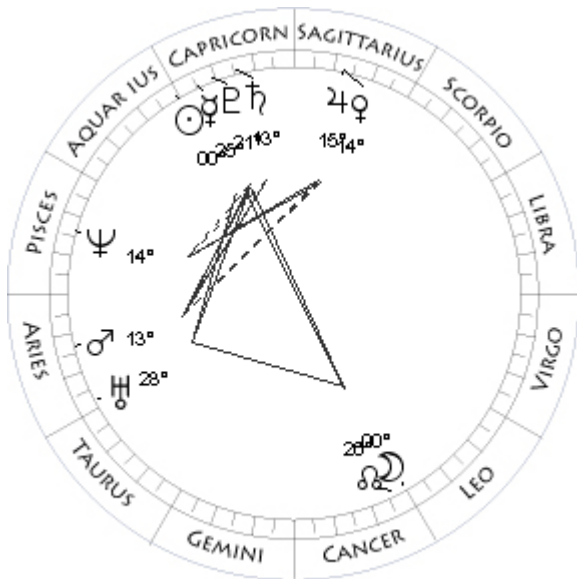
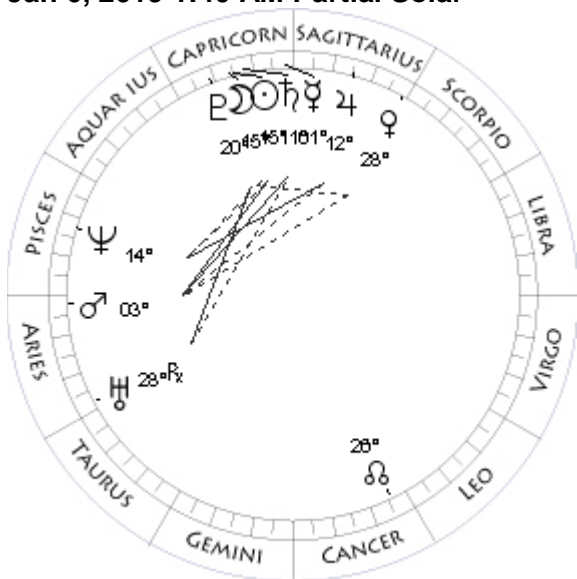
Mo 27Aq00 - 1°06	Mo 04Aq45 + 0°06
Su 27Aq08 - 0°00	Su 04Le45 - 0°00
Me 25Aq50 - 2°02	Me 23Le21 - 3°50R
Ve 06Pi09 - 1°28	Ve 19Vi25 + 0°23
Ma 12Sa24 + 0°28	Ma 03Aq59 - 6°30R
Ju 22Sc31 + 1°09	Ju 13Sc47 + 0°59
Sa 06Cp15 + 0°53	Sa 03Cp47 + 0°48R
Ur 25Ar24 - 0°33	Ur 02Ta31 - 0°33
Ne 13Pi20 - 0°54	Ne 16Pi08 - 0°59R
Pl 20Cp13 + 0°23	Pl 19Cp35 + 0°09R
No 14Le28 - 0°00	No 05Le53 - 0°00

Coords: 56W/19S

Aug 11, 2018 9:45 AM Partial Solar



Jan 6, 2019 1:40 AM Partial Solar



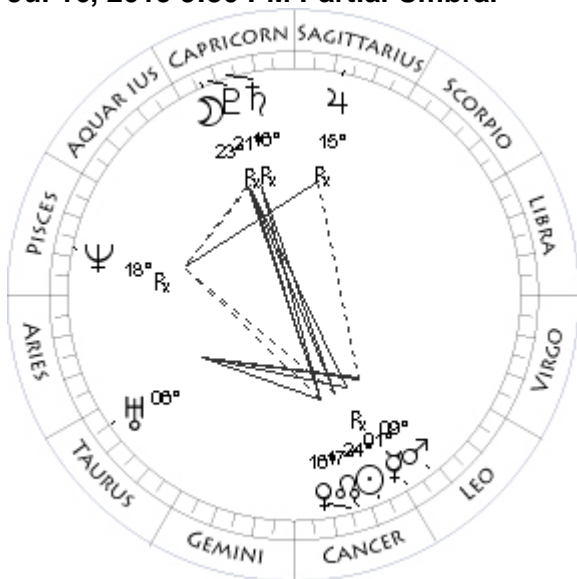
Jan 21, 2019 5:12 AM Total Umbral

Mo 18Le33 + 1°10	Mo 00Le48 + 0°22
Su 18Le42 - 0°00	Su 00Aq52 - 0°00
Me 14Le42 - 4°31R	Me 25Cp03 - 1°49
Ve 04Li29 - 0°54	Ve 14Sa38 + 3°05
Ma 00Aq20 - 6°31R	Ma 13Ar36 + 0°07
Ju 14Sc49 + 0°56	Ju 15Sa50 + 0°37
Sa 03Cp04 + 0°46R	Sa 13Cp45 + 0°28
Ur 02Ta34 - 0°33R	Ur 28Ar42 - 0°31
Ne 15Pi49 - 1°00R	Ne 14Pi37 - 0°58
Pl 19Cp16 + 0°07R	Pl 21Cp13 - 0°08
No 05Le07 - 0°00	No 26Cn30 - 0°00

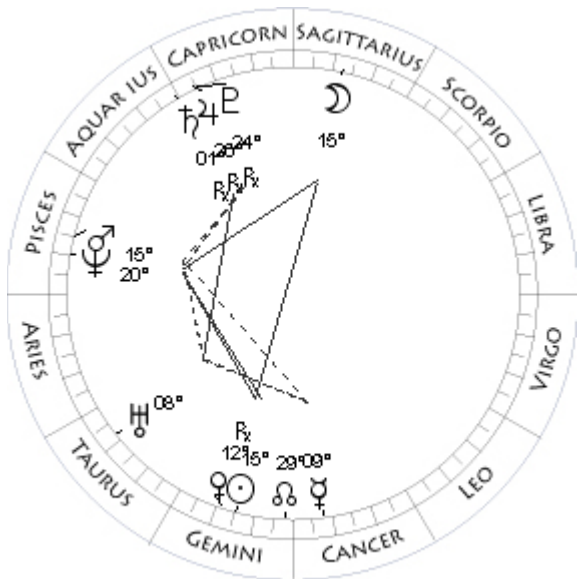
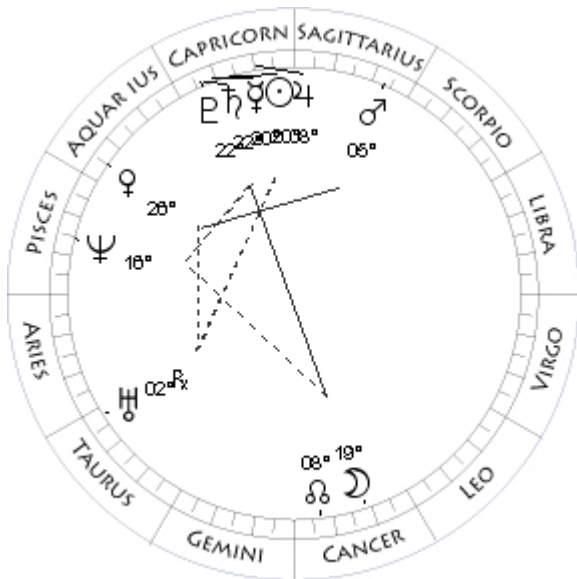
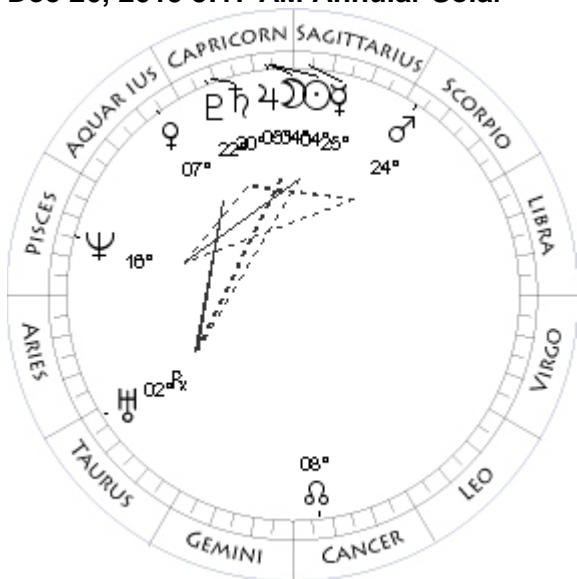
Jul 2, 2019 7:22 PM Total Solar

Mo 15Cp30 + 1°02	Mo 10Cn40 - 0°38
Su 15Cp26 - 0°00	Su 10Cn38 - 0°00
Me 01Cp23 - 0°29	Me 03Le26 - 1°21
Ve 28Sc34 + 3°26	Ve 29Ge00 - 0°07
Ma 03Ar21 - 0°11	Ma 00Le32 + 1°11
Ju 12Sa50 + 0°38	Ju 16Sa48 + 0°32R
Sa 11Cp59 + 0°29	Sa 17Cp43 + 0°20R
Ur 28Ar36 - 0°32R	Ur 05Ta58 - 0°30
Ne 14Pi13 - 0°58	Ne 18Pi43 - 1°02R
Pl 20Cp43 - 0°07	Pl 22Cp06 - 0°24R
No 27Cn18 - 0°00	No 17Cn53 - 0°00
Coords: 109E/17S	

Jul 16, 2019 9:30 PM Partial Umbral



Dec 26, 2019 5:17 AM Annular Solar



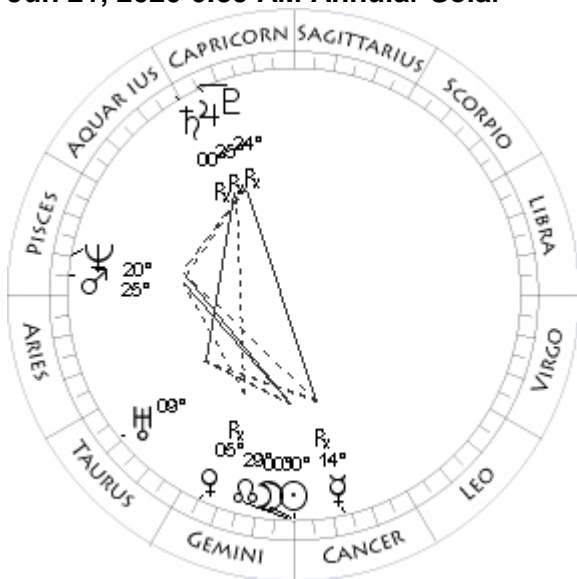
Jan 10, 2020 7:09 PM Partial Penumbra

Mo 23Cp59 - 0°35	Mo 19Cn52 + 1°03
Su 24Cn04 - 0°00	Su 20Cp00 - 0°00
Me 01Le33 - 4°34R	Me 20Cp06 - 1°56
Ve 16Cn16 + 0°27	Ve 26Aq23 - 1°41
Ma 09Le29 + 1°10	Ma 05Sa00 + 0°16
Ju 15Sa30 + 0°29R	Ju 08Cp56 + 0°04
Sa 16Cp41 + 0°18R	Sa 22Cp33 + 0°02
Ur 06Ta21 - 0°30	Ur 02Ta39 - 0°29R
Ne 18Pi35 - 1°02R	Ne 16Pi30 - 1°01
Pl 21Cp46 - 0°25R	Pl 22Cp39 - 0°40
No 17Cn08 - 0°00	No 07Cn43 - 0°00
Coords: 39W/22S	Coords: 75W/23N

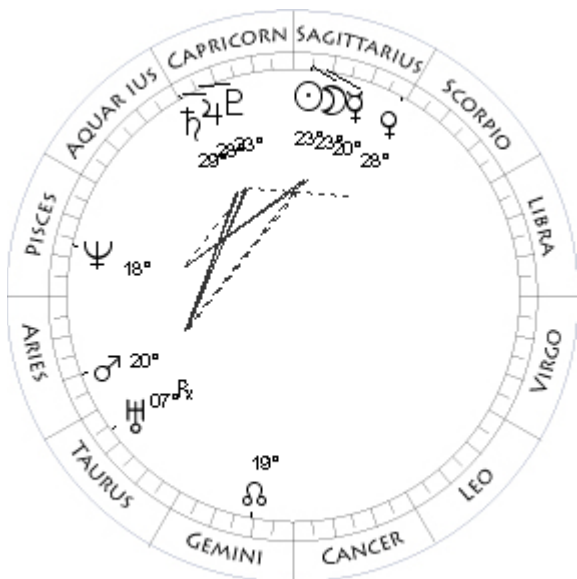
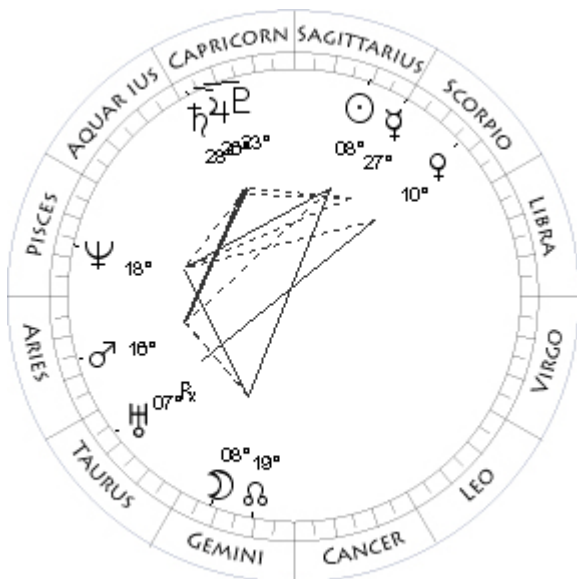
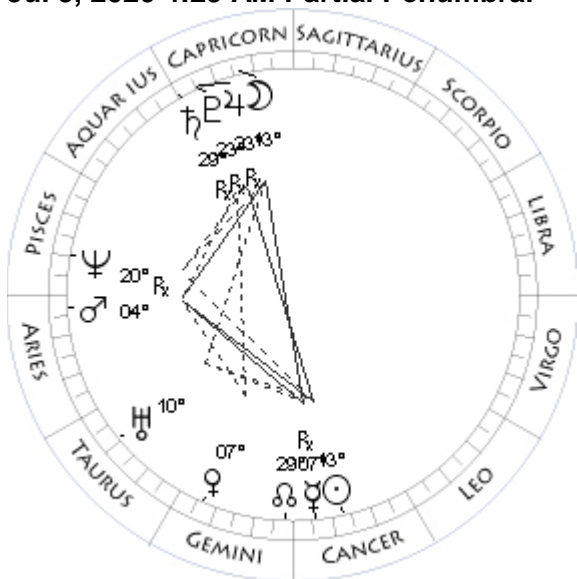
Jun 5, 2020 7:24 PM Partial Penumbra

Mo 04Cp08 + 0°24	Mo 15Sa40 + 1°14
Su 04Cp07 - 0°00	Su 15Ge35 - 0°00
Me 25Sa22 - 0°43	Me 09Cn05 + 1°22
Ve 07Aq19 - 1°52	Ve 12Ge18 - 0°00R
Ma 24Sc31 + 0°25	Ma 15Pi52 - 2°30
Ju 05Cp21 + 0°06	Ju 26Cp28 - 0°14R
Sa 20Cp44 + 0°04	Sa 01Aq26 - 0°10R
Ur 02Ta46 - 0°30R	Ur 08Ta49 - 0°27
Ne 16Pi11 - 1°02	Ne 20Pi54 - 1°04
Pl 22Cp08 - 0°39	Pl 24Cp32 - 0°56R
No 08Cn33 - 0°00	No 29Ge56 - 0°00
Coords: 102W/1N	Coords: 69W/21S

Jun 21, 2020 6:39 AM Annular Solar



Jul 5, 2020 4:29 AM Partial Penumbra



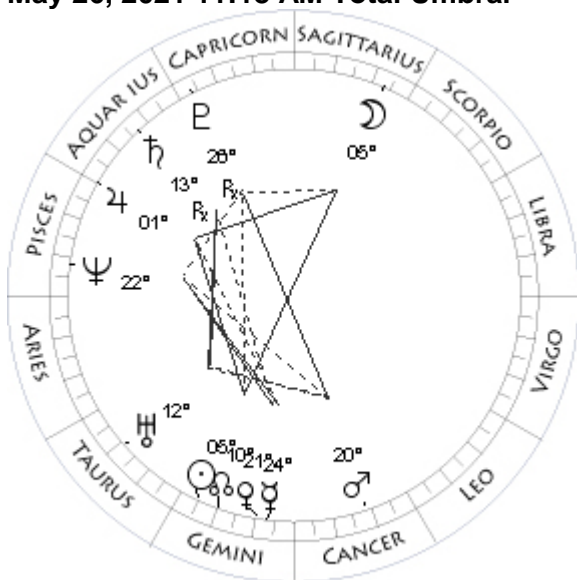
Nov 30, 2020 9:42 AM Partial Penumbra

Mo 00Cn19 + 0°07	Mo 08Ge44 - 1°02
Su 00Cn22 - 0°00	Su 08Sa39 - 0°00
Me 14Cn25 - 2°14R	Me 27Sc48 + 0°37
Ve 05Ge39 - 3°05R	Ve 10Sc58 + 1°39
Ma 25Pi49 - 2°54	Ma 16Ar57 - 0°05
Ju 25Cp07 - 0°16R	Ju 26Cp02 - 0°28
Sa 00Aq40 - 0°11R	Sa 28Cp21 - 0°22
Ur 09Ta30 - 0°27	Ur 07Ta32 - 0°28R
Ne 20Pi59 - 1°04	Ne 18Pi11 - 1°06
Pl 24Cp14 - 0°57R	Pl 23Cp11 - 1°09
No 29Ge07 - 0°00	No 20Ge32 - 0°00
Coords: 80W/30N	Coords: 148E/21N

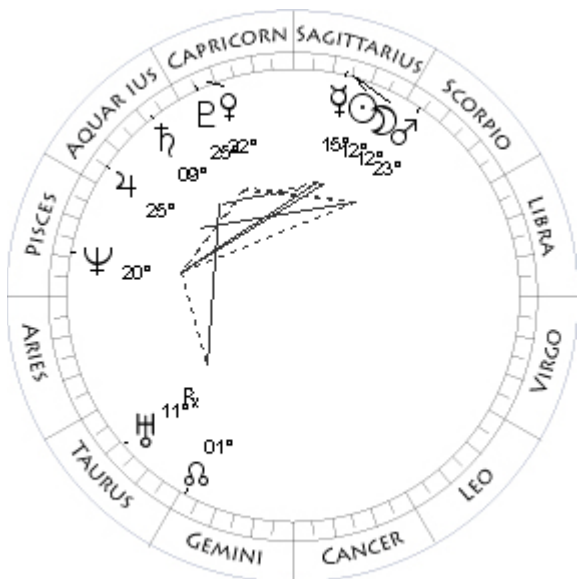
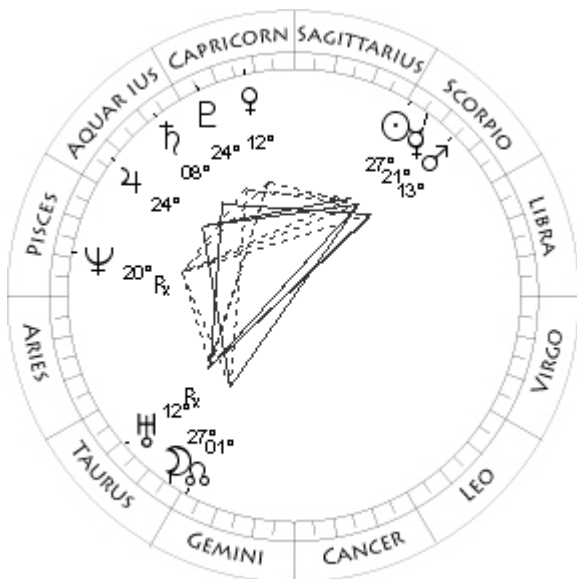
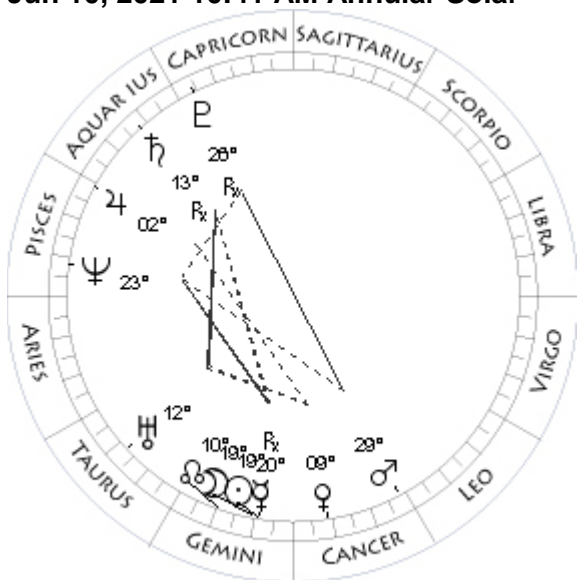
Dec 14, 2020 4:13 PM Total Solar

Mo 13Cp28 - 1°18	Mo 23Sa05 - 0°17
Su 13Cn37 - 0°00	Su 23Sa08 - 0°00
Me 07Cn27 - 4°48R	Me 20Sa06 - 0°58
Ve 07Ge06 - 4°20	Ve 28Sc45 + 1°18
Ma 04Ar14 - 3°14	Ma 20Ar44 + 0°27
Ju 23Cp30 - 0°18R	Ju 28Cp57 - 0°28
Sa 29Cp47 - 0°13R	Sa 29Cp45 - 0°22
Ur 10Ta01 - 0°27	Ur 07Ta07 - 0°28R
Ne 20Pi57 - 1°05R	Ne 18Pi15 - 1°05
Pl 23Cp55 - 0°59R	Pl 23Cp35 - 1°10
No 28Ge23 - 0°00	No 19Ge47 - 0°00

May 26, 2021 11:18 AM Total Umbral



Jun 10, 2021 10:41 AM Annular Solar



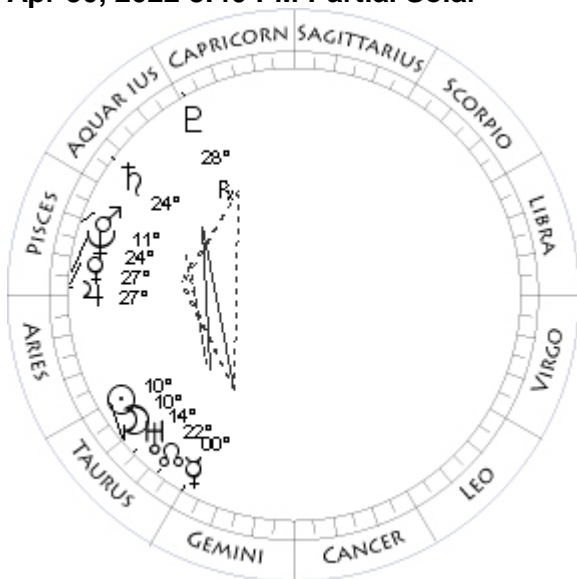
Nov 19, 2021 9:02 AM Partial Umbral

Mo 05Sa28 + 0°29	Mo 27Ta16 - 0°25
Su 05Ge26 - 0°00	Su 27Sc15 - 0°00
Me 24Ge15 + 1°00	Me 21Sc37 + 0°22
Ve 21Ge21 + 0°41	Ve 12Cp18 - 3°39
Ma 20Cn07 + 1°23	Ma 13Sc24 + 0°18
Ju 01Pi11 - 0°51	Ju 24Aq01 - 1°04
Sa 13Aq31 - 0°38R	Sa 08Aq09 - 0°49
Ur 12Ta08 - 0°24	Ur 12Ta12 - 0°25R
Ne 22Pi59 - 1°06	Ne 20Pi28 - 1°09R
Pl 26Cp33 - 1°28R	Pl 24Cp42 - 1°41
No 11Ge09 - 0°00	No 01Ge47 - 0°00
Coords: 170E/21S	Coords: 139E/19N

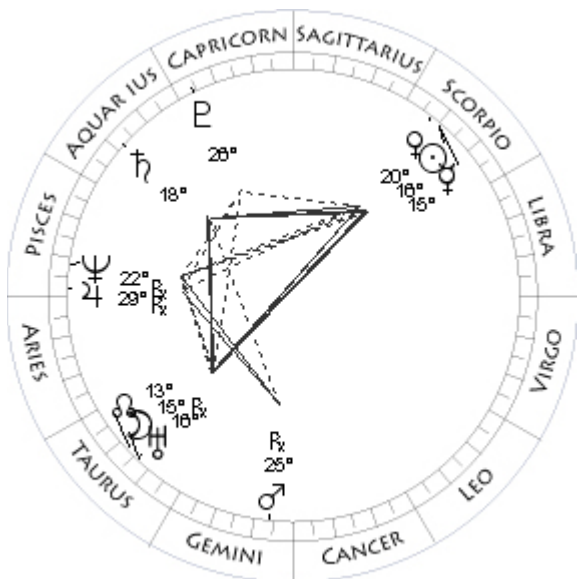
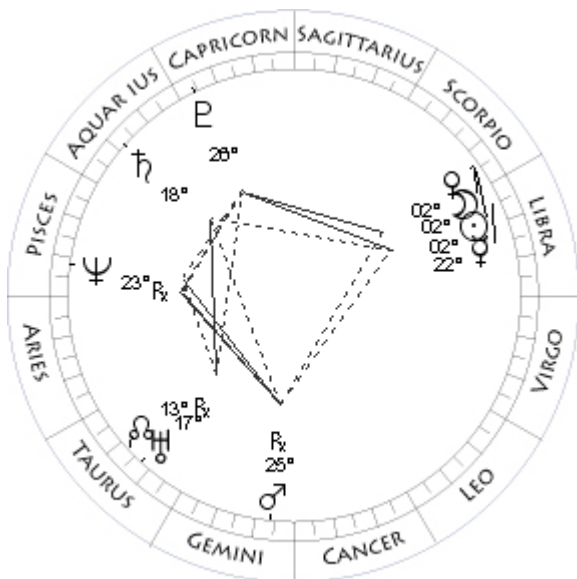
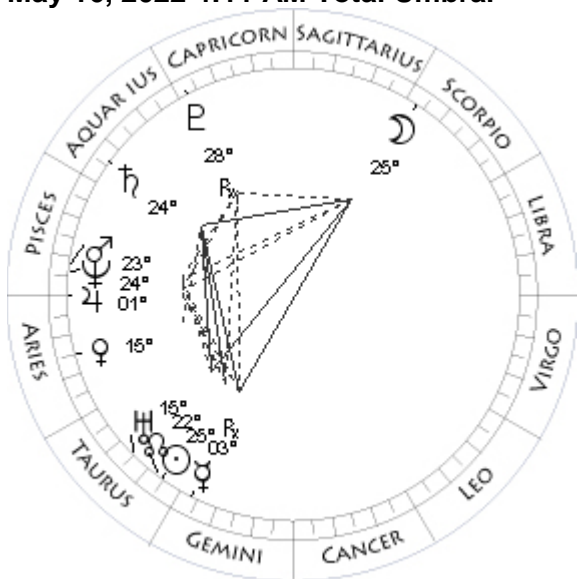
Dec 4, 2021 7:33 AM Total Solar

Mo 19Ge41 + 0°49	Mo 12Sa15 - 0°58
Su 19Ge47 - 0°00	Su 12Sa22 - 0°00
Me 20Ge42 - 2°59R	Me 15Sa13 - 1°13
Ve 09Cn39 + 1°12	Ve 22Cp20 - 2°37
Ma 29Cn19 + 1°20	Ma 23Sc41 + 0°09
Ju 02Pi01 - 0°55	Ju 25Aq50 - 1°02
Sa 13Aq15 - 0°41R	Sa 09Aq14 - 0°49
Ur 12Ta55 - 0°24	Ur 11Ta39 - 0°25R
Ne 23Pi10 - 1°07	Ne 20Pi26 - 1°09
Pl 26Cp18 - 1°30R	Pl 25Cp03 - 1°42
No 10Ge22 - 0°00	No 01Ge00 - 0°00

Apr 30, 2022 8:40 PM Partial Solar



May 16, 2022 4:11 AM Total Umbral



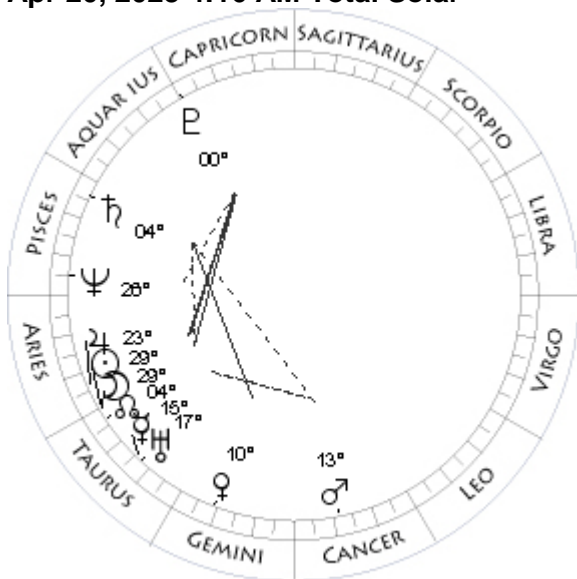
Oct 25, 2022 10:59 AM Partial Solar

Mo 10Ta34 - 1°06	Mo 02Sc05 + 1°02
Su 10Ta29 - 0°00	Su 02Sc01 - 0°00
Me 00Ge49 + 2°43	Me 22Li41 + 1°34
Ve 27Pi56 - 1°18	Ve 02Sc41 + 0°59
Ma 11Pi54 - 1°32	Ma 25Ge25 + 0°13R
Ju 27Pi58 - 1°04	Ju 00Ar15 - 1°35R
Sa 24Aq16 - 1°01	Sa 18Aq35 - 1°18
Ur 14Ta33 - 0°22	Ur 17Ta31 - 0°23R
Ne 24Pi35 - 1°08	Ne 23Pi05 - 1°13R
Pl 28Cp31 - 1°58R	Pl 26Cp06 - 2°12
No 23Ta11 - 0°00	No 13Ta47 - 0°00

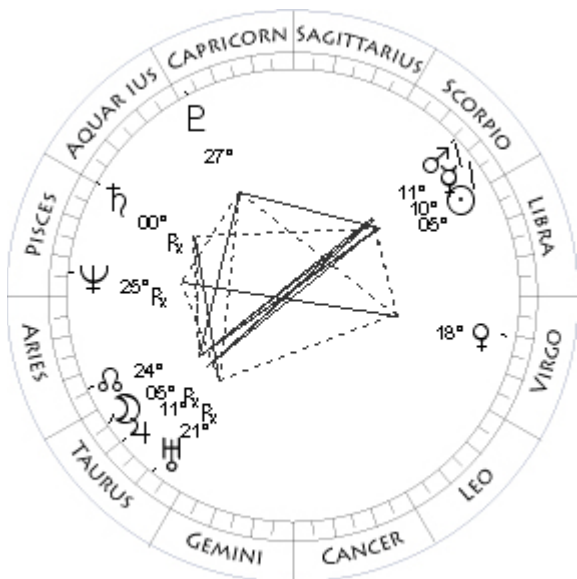
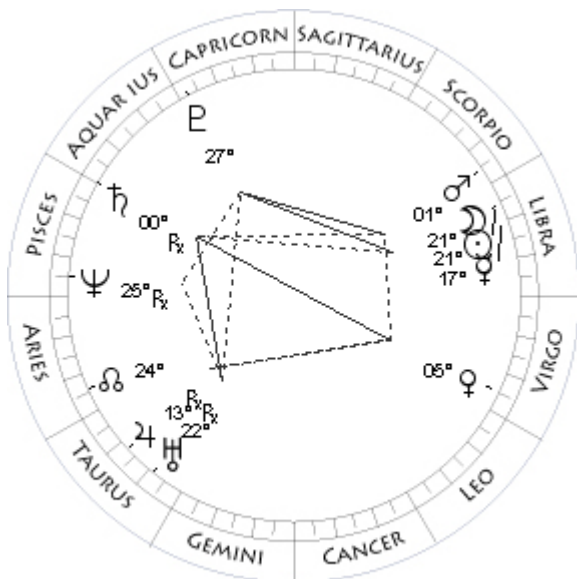
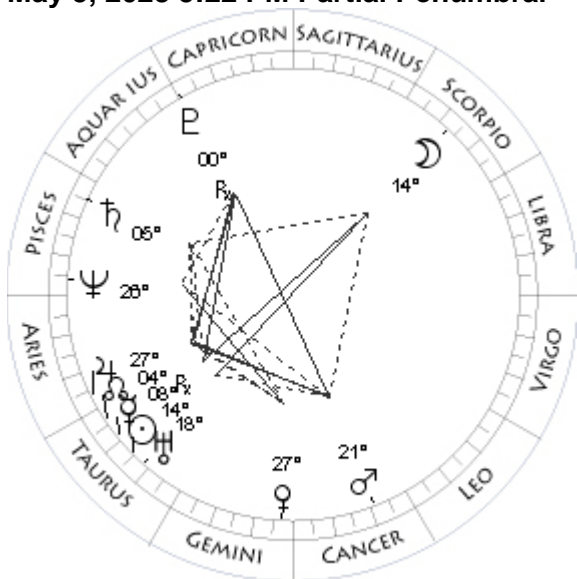
Nov 8, 2022 10:59 AM Total Umbral

Mo 25Sc15 - 0°15	Mo 15Ta59 + 0°14
Su 25Ta18 - 0°00	Su 16Sc01 - 0°00
Me 03Ge37 + 0°23R	Me 15Sc53 + 0°07
Ve 15Ar31 - 1°51	Ve 20Sc14 + 0°31
Ma 23Pi26 - 1°39	Ma 25Ge02 + 0°52R
Ju 01Ar00 - 1°07	Ju 29Pi12 - 1°32R
Sa 24Aq56 - 1°04	Sa 18Aq49 - 1°17
Ur 15Ta26 - 0°22	Ur 16Ta57 - 0°22R
Ne 24Pi58 - 1°09	Ne 22Pi51 - 1°13R
Pl 28Cp28 - 2°00R	Pl 26Cp16 - 2°13
No 22Ta22 - 0°00	No 13Ta02 - 0°00
	Coords: 169E/17N

Apr 20, 2023 4:16 AM Total Solar



May 5, 2023 5:22 PM Partial Penumbral



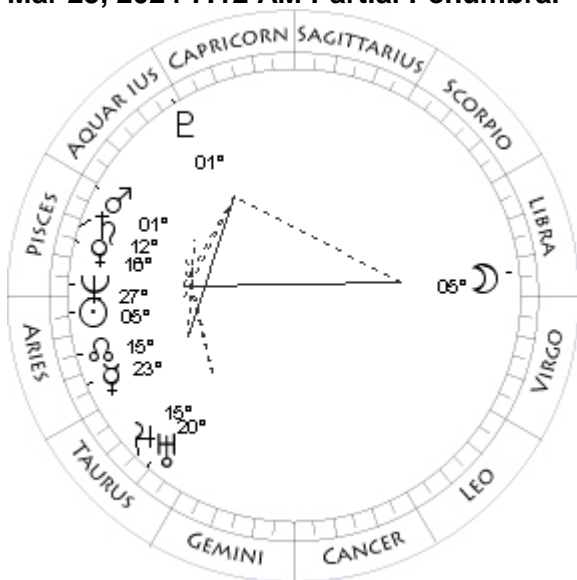
Oct 14, 2023 5:59 PM Annular Solar

Mo 29Ar51 - 0°23	Mo 21Li09 + 0°21
Su 29Ar51 - 0°00	Su 21Li08 - 0°00
Me 15Ta33 + 2°55	Me 17Li12 + 1°20
Ve 10Ge24 + 1°58	Ve 05Vi03 - 1°10
Ma 13Cn08 + 1°52	Ma 01Sc45 + 0°14
Ju 23Ar45 - 1°04	Ju 13Ta02 - 1°25R
Sa 04Pi33 - 1°23	Sa 00Pi52 - 1°46R
Ur 17Ta49 - 0°19	Ur 22Ta14 - 0°19R
Ne 26Pi25 - 1°11	Ne 25Pi37 - 1°17R
Pl 00Aq15 - 2°28	Pl 27Cp48 - 2°44
No 04Ta25 - 0°00	No 25Ar01 - 0°00
Coords: 126W/10S	

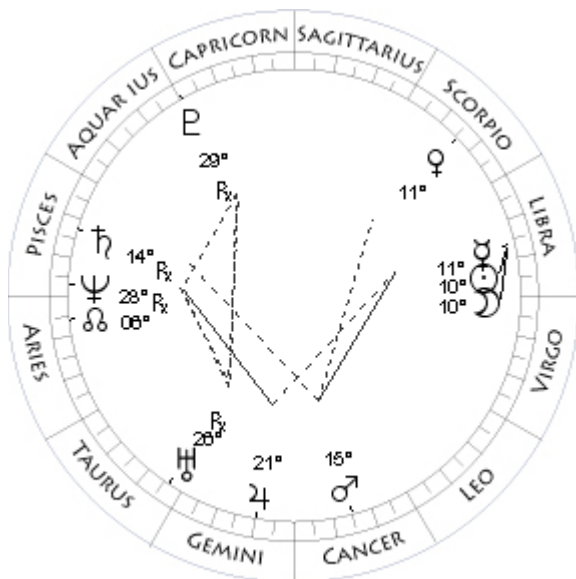
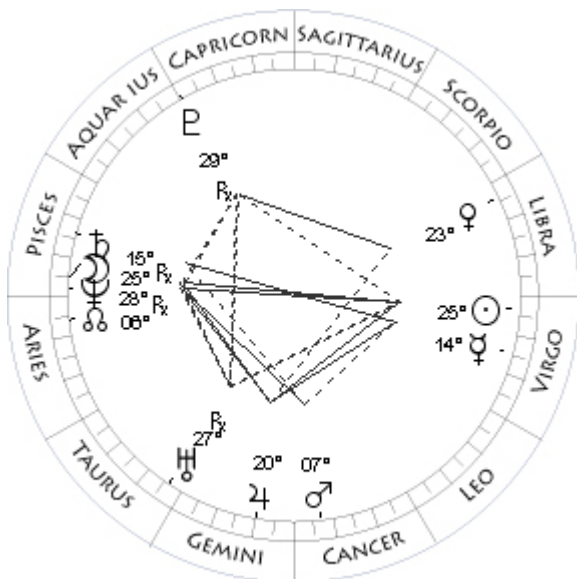
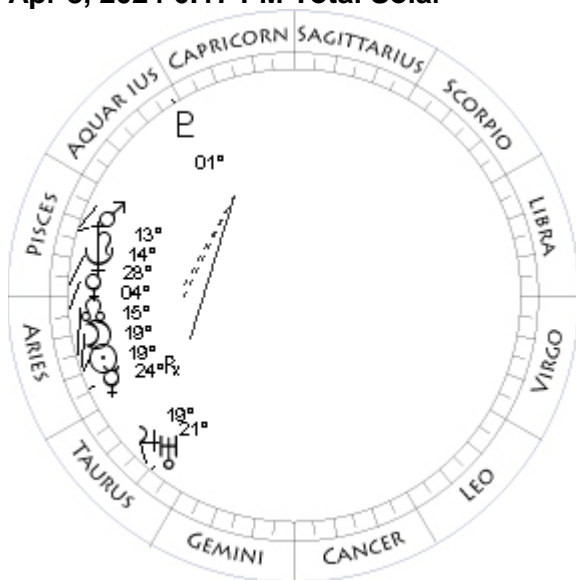
Oct 28, 2023 8:13 PM Partial Umbral

Mo 14Sc51 - 0°59	Mo 05Ta02 + 0°56
Su 14Ta58 - 0°00	Su 05Sc09 - 0°00
Me 08Ta58 - 0°23R	Me 10Sc42 - 0°10
Ve 27Ge56 + 2°34	Ve 18Vi49 + 0°19
Ma 21Cn36 + 1°43	Ma 11Sc23 + 0°05
Ju 27Ar27 - 1°04	Ju 11Ta14 - 1°25R
Sa 05Pi44 - 1°26	Sa 00Pi33 - 1°45R
Ur 18Ta43 - 0°19	Ur 21Ta43 - 0°19R
Ne 26Pi54 - 1°11	Ne 25Pi19 - 1°16R
Pl 00Aq17 - 2°31R	Pl 27Cp53 - 2°44
No 03Ta36 - 0°00	No 24Ar16 - 0°00
Coords: 98W/17S	

Mar 25, 2024 7:12 AM Partial Penumbral



Apr 8, 2024 6:17 PM Total Solar



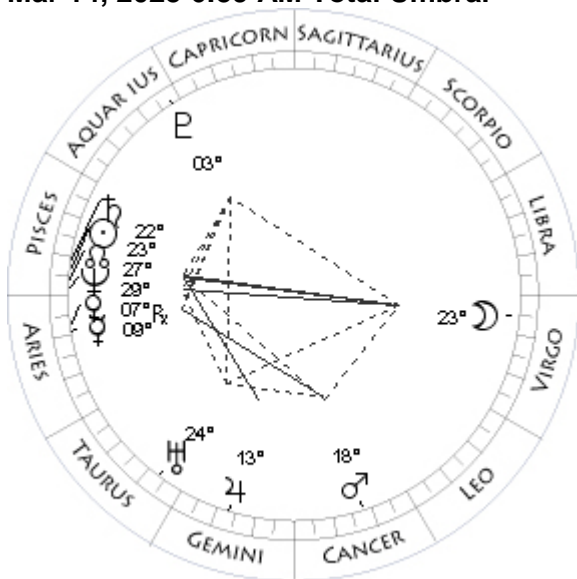
Sep 18, 2024 2:44 AM Partial Umbral

Mo 05Li12 + 0°57	Mo 25Pi46 - 1°00
Su 05Ar08 - 0°00	Su 25Vi41 - 0°00
Me 23Ar40 + 2°29	Me 14Vi48 + 1°48
Ve 16Pi35 - 1°23	Ve 23Li55 + 0°21
Ma 01Pi48 - 1°12	Ma 07Cn48 + 0°14
Ju 15Ta57 - 0°50	Ju 20Ge36 - 0°43
Sa 12Pi50 - 1°39	Sa 15Pi16 - 2°12R
Ur 20Ta29 - 0°17	Ur 27Ta09 - 0°16R
Ne 27Pi41 - 1°13	Ne 28Pi37 - 1°20R
Pl 01Aq41 - 2°55	Pl 29Cp41 - 3°16R
No 16Ar25 - 0°00	No 07Ar03 - 0°00

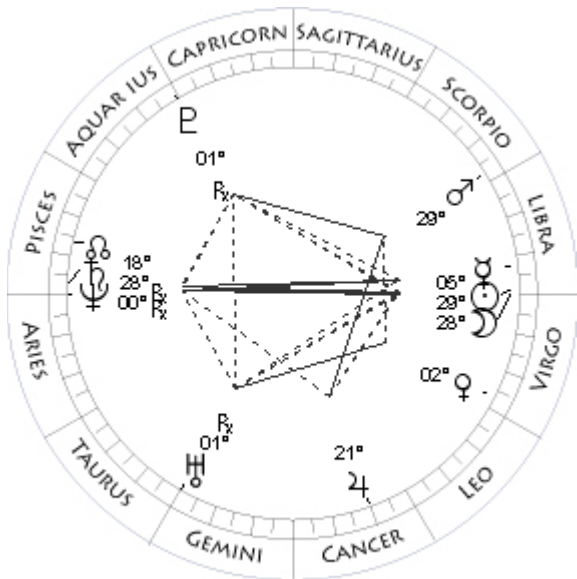
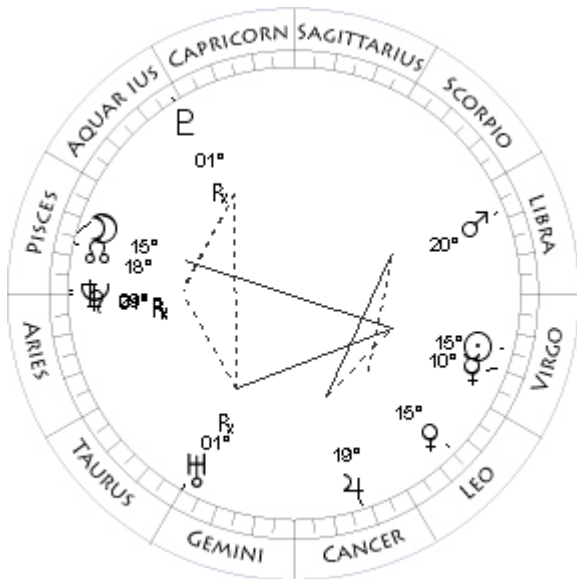
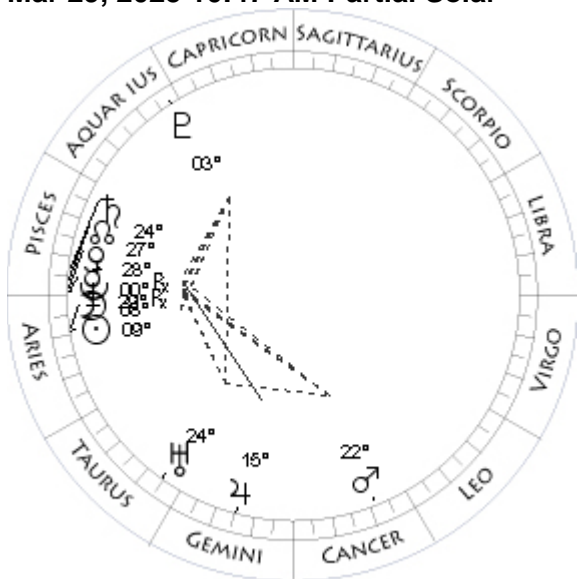
Oct 2, 2024 6:45 PM Annular Solar

Mo 19Ar21 + 0°21	Mo 10Li01 - 0°19
Su 19Ar24 - 0°00	Su 10Li04 - 0°00
Me 24Ar48 + 2°50R	Me 11Li33 + 1°07
Ve 04Ar27 - 1°30	Ve 11Sc47 - 0°21
Ma 13Pi04 - 1°15	Ma 15Cn47 + 0°34
Ju 19Ta03 - 0°48	Ju 21Ge16 - 0°43
Sa 14Pi27 - 1°41	Sa 14Pi14 - 2°12R
Ur 21Ta11 - 0°16	Ur 26Ta52 - 0°16R
Ne 28Pi13 - 1°13	Ne 28Pi13 - 1°20R
Pl 01Aq53 - 2°58	Pl 29Cp34 - 3°16R
No 15Ar39 - 0°00	No 06Ar16 - 0°00
Coords: 104E/25N	Coords: 114E/22S

Mar 14, 2025 6:59 AM Total Umbral



Mar 29, 2025 10:47 AM Partial Solar



Sep 7, 2025 6:11 PM Total Umbral

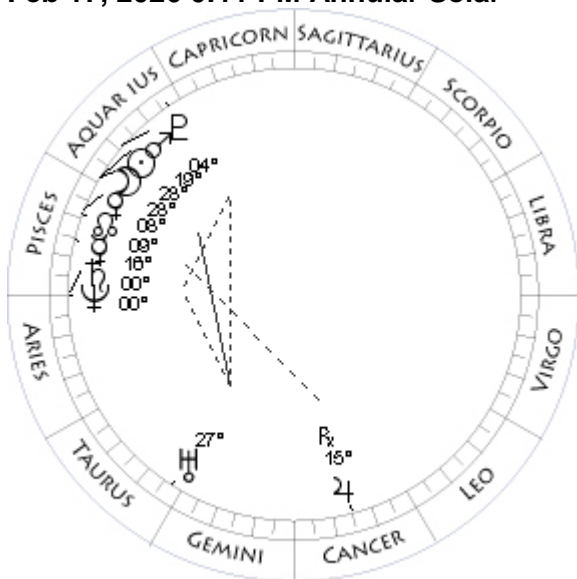
Mo 23Vi58 + 0°19	Mo 15Pi23 - 0°16
Su 23Pi57 - 0°00	Su 15Vi23 - 0°00
Me 09Ar31 + 3°04	Me 10Vi04 + 1°47
Ve 07Ar45 + 8°25R	Ve 15Le43 + 0°27
Ma 18Cn54 + 3°09	Ma 20Li20 + 0°11
Ju 13Ge34 - 0°21	Ju 19Cn03 - 0°01
Sa 22Pi19 - 1°55	Sa 29Pi31 - 2°30R
Ur 24Ta03 - 0°14	Ur 01Ge28 - 0°13R
Ne 29Pi25 - 1°16	Ne 01Ar12 - 1°22R
Pl 03Aq08 - 3°24	Pl 01Aq34 - 3°47R
No 27Pi40 - 0°00	No 18Pi16 - 0°00

Coords: 102E/ 3N

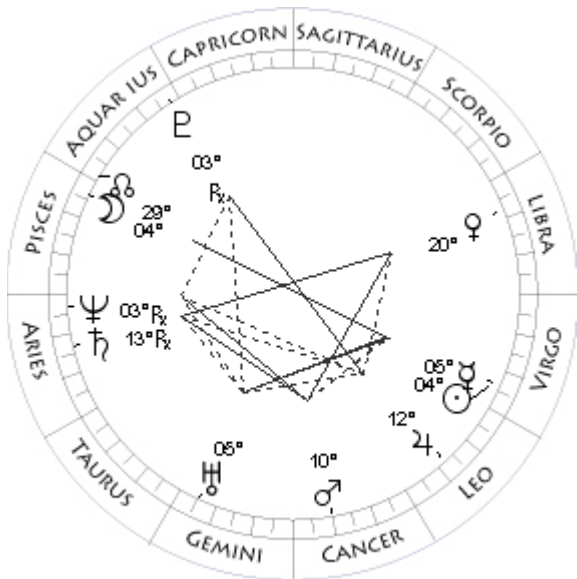
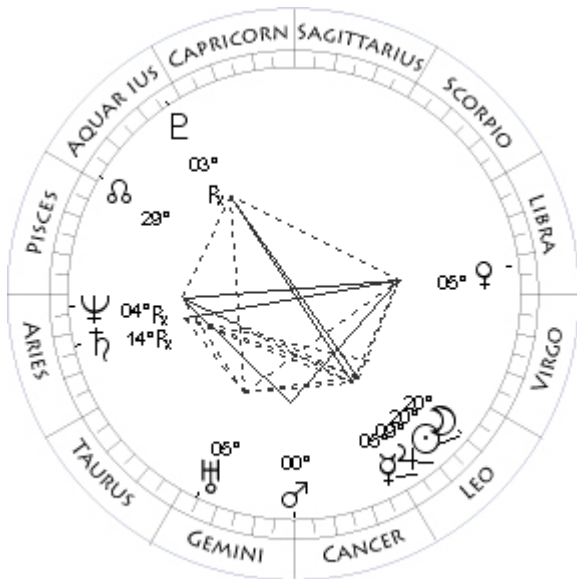
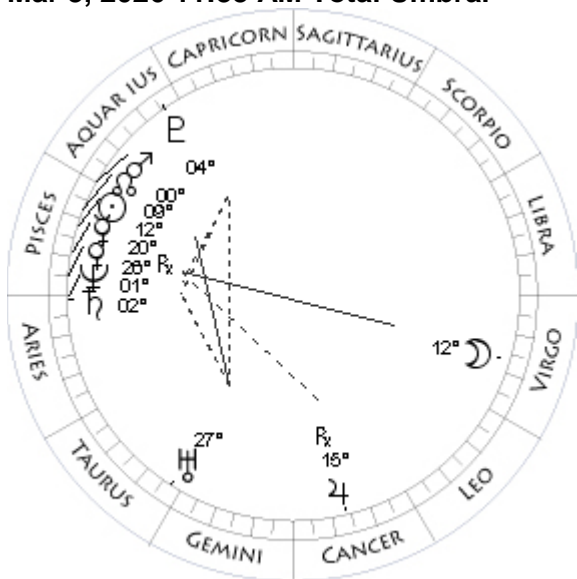
Sep 21, 2025 7:41 PM Partial Solar

Mo 08Ar52 + 1°03	Mo 28Vi58 - 0°58
Su 09Ar00 - 0°00	Su 29Vi05 - 0°00
Me 00Ar29 + 2°16R	Me 05Li59 + 0°55
Ve 28Pi50 + 7°40R	Ve 02Vi49 + 1°01
Ma 22Cn47 + 2°44	Ma 29Li40 + 0°01
Ju 15Ge36 - 0°19	Ju 21Cn15 + 0°00
Sa 24Pi11 - 1°56	Sa 28Pi27 - 2°31R
Ur 24Ta39 - 0°13	Ur 01Ge22 - 0°13R
Ne 29Pi59 - 1°16	Ne 00Ar50 - 1°22R
Pl 03Aq26 - 3°27	Pl 01Aq23 - 3°47R
No 26Pi52 - 0°00	No 17Pi31 - 0°00

Feb 17, 2026 0:11 PM Annular Solar



Mar 3, 2026 11:33 AM Total Umbra



Aug 12, 2026 5:45 PM Total Solar

Mo 28Aq54 - 0°55	Mo 20Le06 + 0°53
Su 28Aq50 - 0°00	Su 20Le03 - 0°00
Me 16Pi41 + 0°38	Me 05Le08 + 0°37
Ve 08Pi52 - 1°28	Ve 05Li54 - 1°08
Ma 19Aq42 - 1°05	Ma 00Cn56 + 0°15
Ju 15Cn51 + 0°20R	Ju 09Le33 + 0°30
Sa 00Ar23 - 2°09	Sa 14Ar30 - 2°35R
Ur 27Ta33 - 0°11	Ur 05Ge21 - 0°09
Ne 00Ar41 - 1°19	Ne 04Ar06 - 1°24R
Pl 04Aq08 - 3°50	Pl 03Aq48 - 4°17R
No 09Pi39 - 0°00	No 00Pi19 - 0°00

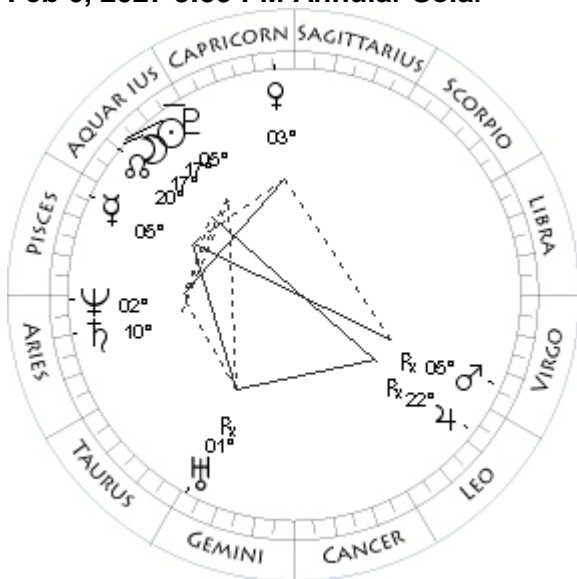
Coords: 85W/65S

Aug 28, 2026 4:12 AM Partial Umbra

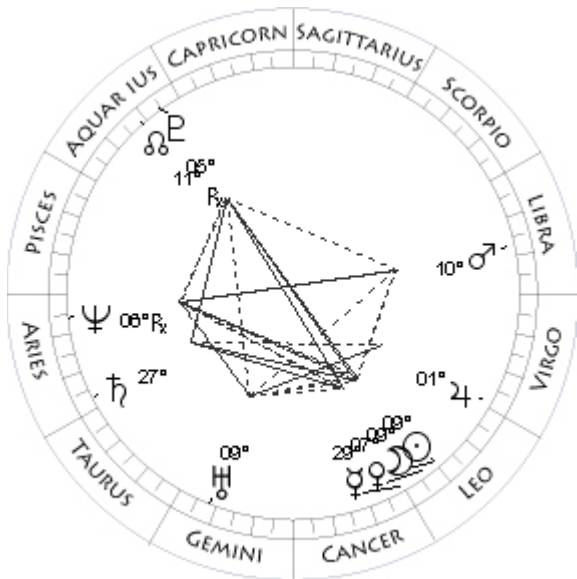
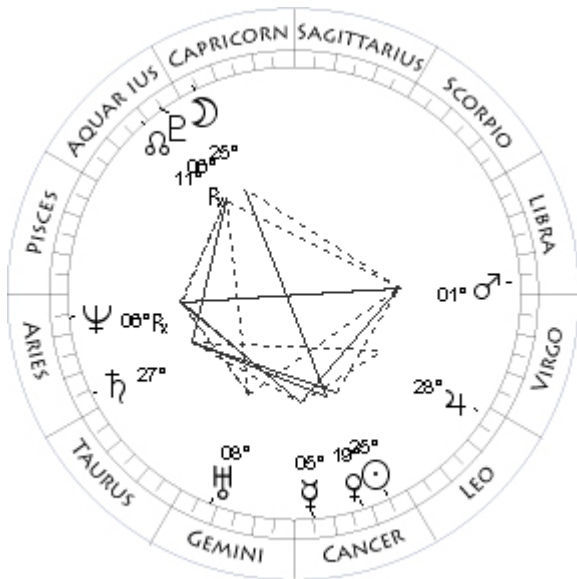
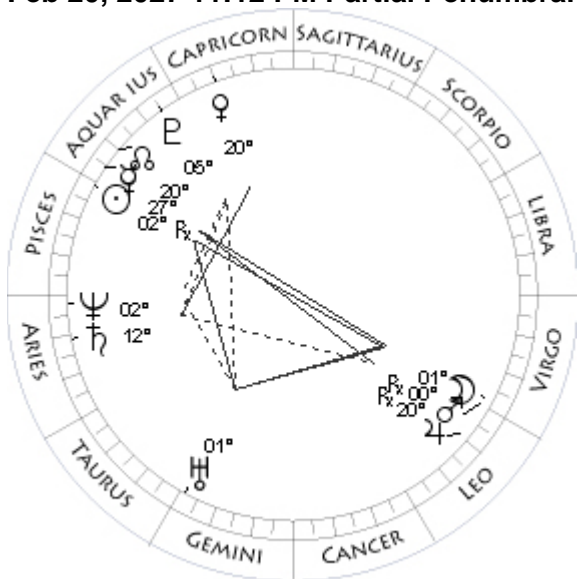
Mo 12Vi50 - 0°21	Mo 04Pi50 + 0°28
Su 12Pi54 - 0°00	Su 04Vi54 - 0°00
Me 20Pi30 + 3°35R	Me 05Vi22 + 1°44
Ve 26Pi19 - 1°19	Ve 20Li02 - 2°54
Ma 00Pi43 - 1°06	Ma 10Cn58 + 0°29
Ju 15Cn11 + 0°21R	Ju 12Le54 + 0°31
Sa 02Ar01 - 2°08	Sa 13Ar52 - 2°38R
Ur 27Ta48 - 0°11	Ur 05Ge37 - 0°09
Ne 01Ar10 - 1°18	Ne 03Ar47 - 1°25R
Pl 04Aq31 - 3°52	Pl 03Aq29 - 4°18R
No 08Pi55 - 0°00	No 29Aq30 - 0°00

Coords: 171E/ 6N

Feb 6, 2027 3:59 PM Annular Solar



Feb 20, 2027 11:12 PM Partial Penumbra



Jul 18, 2027 4:02 PM Partial Penumbra

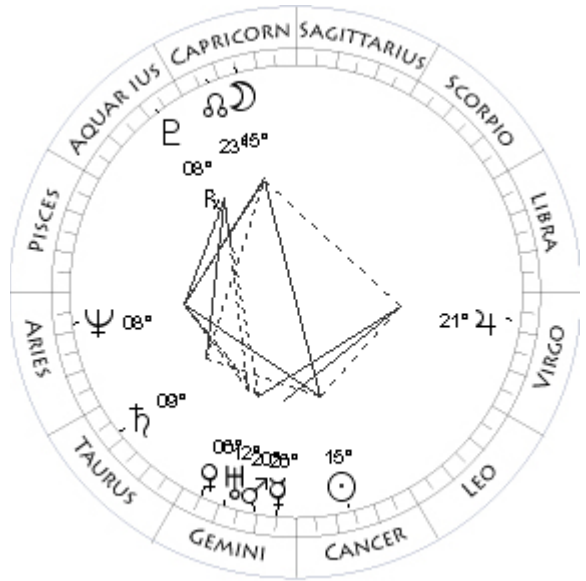
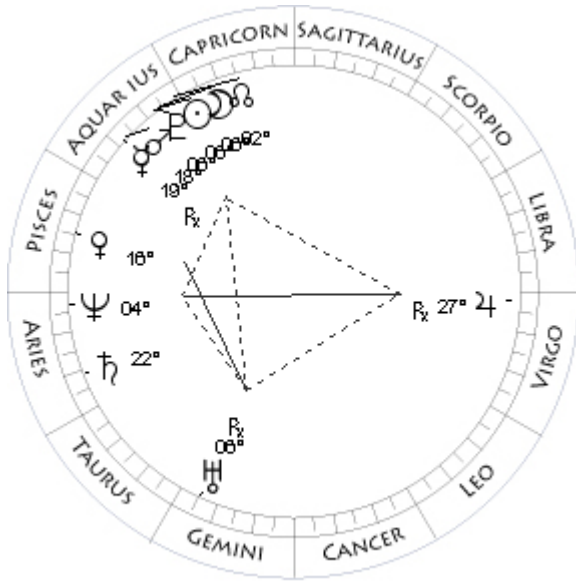
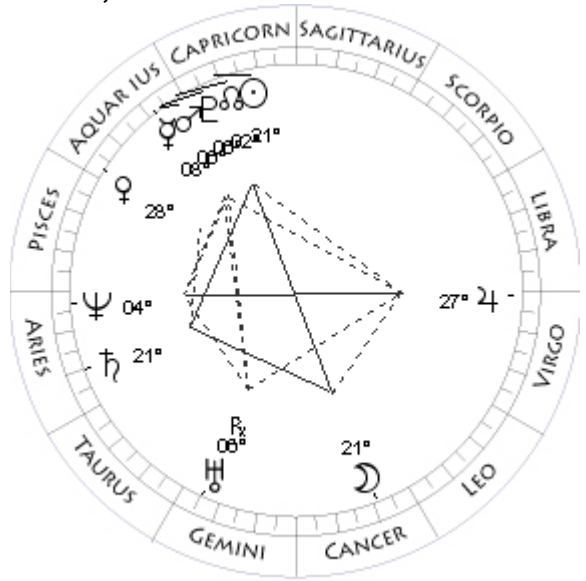
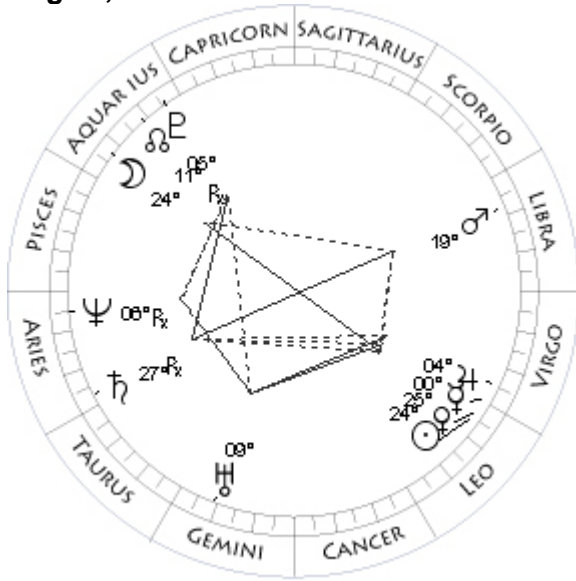
Mo 17Aq38 - 0°16	Mo 25Cp57 - 1°25
Su 17Aq38 - 0°00	Su 25Cn50 - 0°00
Me 05Pi09 + 1°18	Me 05Cn33 - 2°01
Ve 03Cp31 + 2°11	Ve 19Cn07 + 0°33
Ma 05Vi40 + 4°24R	Ma 01Li58 + 0°21
Ju 22Le36 + 1°03R	Ju 28Le29 + 0°55
Sa 10Ar46 - 2°19	Sa 27Ar27 - 2°29
Ur 01Ge41 - 0°08R	Ur 08Ge35 - 0°06
Ne 02Ar30 - 1°21	Ne 06Ar40 - 1°25R
Pl 05Aq25 - 4°18	Pl 06Aq06 - 4°46R
No 20Aq54 - 0°00	No 12Aq19 - 0°00
	Coords: 121W/22S

Aug 2, 2027 10:06 AM Total Solar

Mo 01Vi58 - 1°03	Mo 09Le55 + 0°09
Su 02Pi05 - 0°00	Su 09Le55 - 0°00
Me 27Aq14 + 3°40R	Me 29Cn57 + 1°01
Ve 20Cp11 + 1°17	Ve 07Le17 + 1°01
Ma 00Vi15 + 4°28R	Ma 10Li42 + 0°08
Ju 20Le44 + 1°04R	Ju 01Vi30 + 0°54
Sa 12Ar11 - 2°17	Sa 27Ar49 - 2°33
Ur 01Ge45 - 0°08	Ur 09Ge10 - 0°06
Ne 02Ar57 - 1°21	Ne 06Ar32 - 1°26R
Pl 05Aq51 - 4°20	Pl 05Aq46 - 4°47R
No 20Aq08 - 0°00	No 11Aq32 - 0°00
	Coords: 33W/25N

Aug 17, 2027 7:13 AM Partial Penumbral

Jan 12, 2028 4:12 AM Partial Umbral



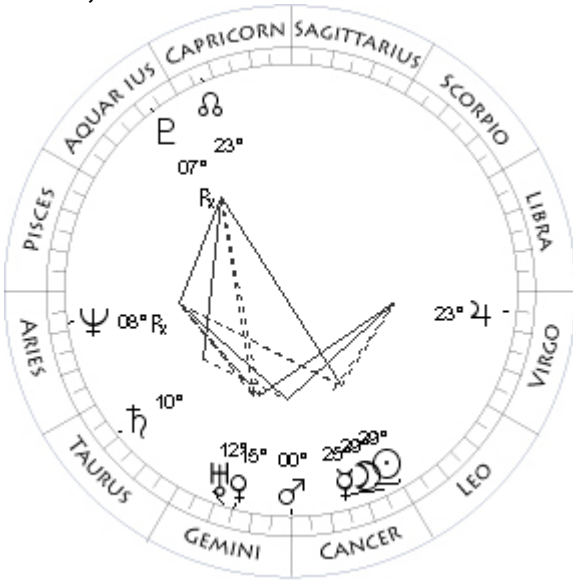
Jan 26, 2028 3:07 PM Annular Solar

Mo 24Aq03 + 1°09	Mo 06Aq08 + 0°21
Su 24Le11 - 0°00	Su 06Aq11 - 0°00
Me 00Vi13 + 1°40	Me 19Aq15 + 2°02R
Ve 25Le39 + 1°20	Ve 16Pi03 - 1°07
Ma 19Li53 - 0°05	Ma 18Aq06 - 1°05
Ju 04Vi40 + 0°55	Ju 27Vi11 + 1°23R
Sa 27Ar49 - 2°37R	Sa 22Ar02 - 2°26
Ur 09Ge36 - 0°06	Ur 06Ge04 - 0°05R
Ne 06Ar18 - 1°27R	Ne 04Ar23 - 1°24
Pl 05Aq25 - 4°48R	Pl 06Aq40 - 4°45
No 10Aq45 - 0°00	No 02Aq09 - 0°00
Coords: 108E/12S	

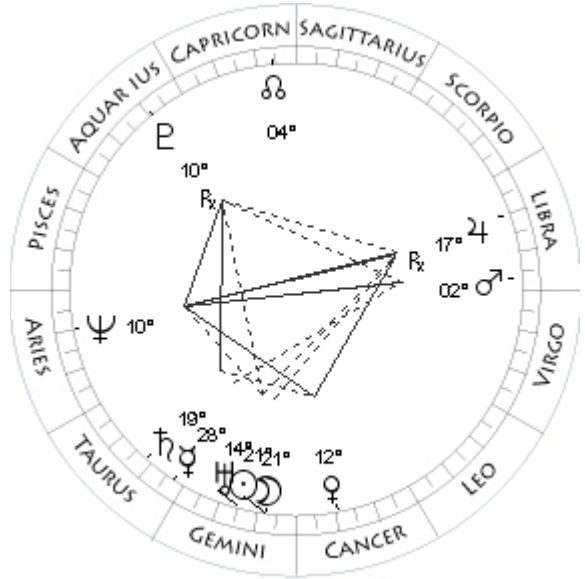
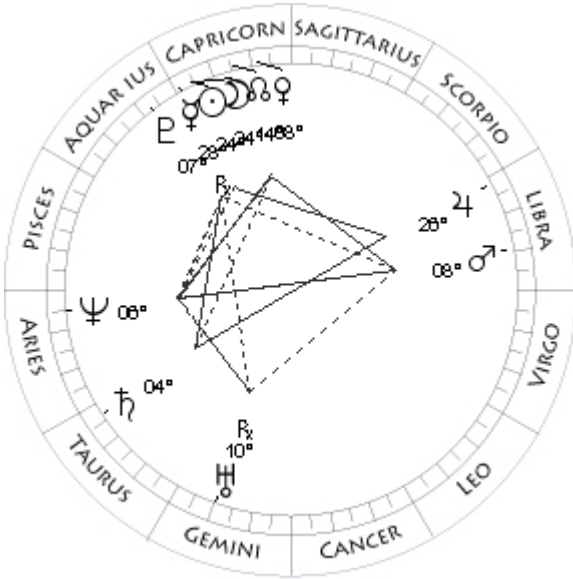
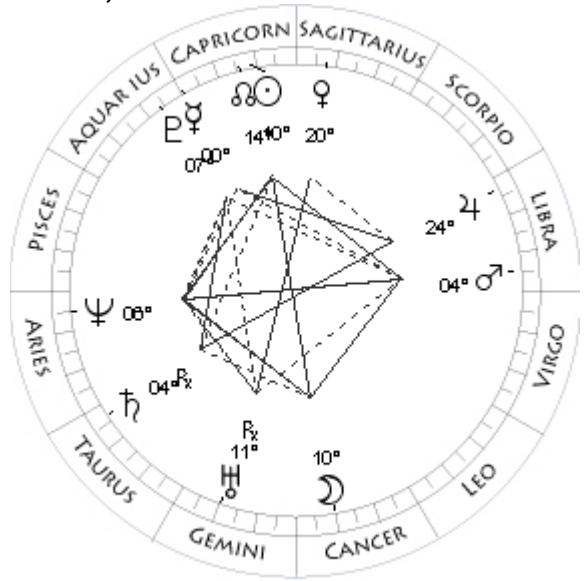
Jul 6, 2028 6:19 PM Partial Umbral

Mo 21Cn32 + 1°00	Mo 15Cp15 - 0°44
Su 21Cp28 - 0°00	Su 15Cn12 - 0°00
Me 08Aq59 - 1°25	Me 26Ge14 - 1°24
Ve 28Aq38 - 1°39	Ve 06Ge30 - 4°20
Ma 06Aq42 - 1°07	Ma 20Ge24 + 0°17
Ju 27Vi31 + 1°19	Ju 21Vi33 + 1°13
Sa 21Ar21 - 2°30	Sa 09Ta26 - 2°21
Ur 06Ge22 - 0°05R	Ur 12Ge07 - 0°03
Ne 04Ar06 - 1°25	Ne 08Ar55 - 1°27
Pl 06Aq13 - 4°45	Pl 08Aq02 - 5°14R
No 02Aq55 - 0°00	No 23Cp34 - 0°00
Coords: 86W/23S	

Jul 22, 2028 2:55 AM Total Solar



Dec 31, 2028 4:52 PM Total Umbra



Jan 14, 2029 5:12 PM Partial Solar

Mo 29Cn46 - 0°36	Mo 24Cp43 + 0°59
Su 29Cn51 - 0°00	Su 24Cp50 - 0°00
Me 25Cn51 + 1°21	Me 28Cp35 + 2°46R
Ve 15Ge57 - 4°18	Ve 08Cp17 + 0°02
Ma 00Cn53 + 0°28	Ma 08Li58 + 2°43
Ju 23Vi53 + 1°10	Ju 26Li19 + 1°19
Sa 10Ta26 - 2°25	Sa 04Ta29 - 2°26
Ur 12Ge51 - 0°03	Ur 10Ge40 - 0°01R
Ne 08Ar54 - 1°28R	Ne 06Ar22 - 1°27
Pl 07Aq42 - 5°16R	Pl 07Aq55 - 5°13
No 22Cp45 - 0°00	No 13Cp24 - 0°00

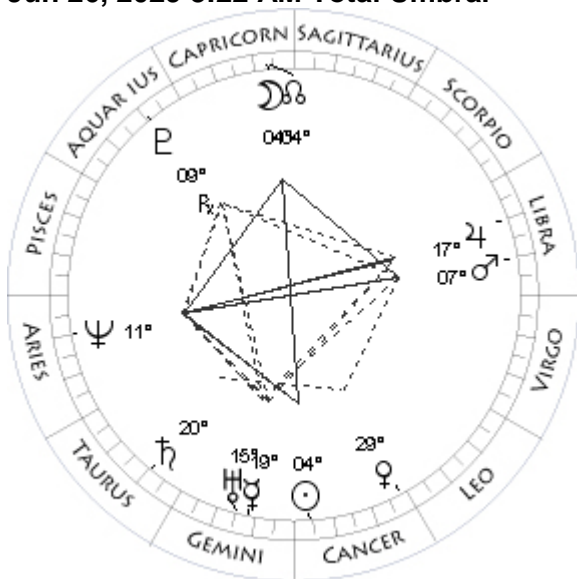
Coords: 127W/16S

Jun 12, 2029 4:04 AM Partial Solar

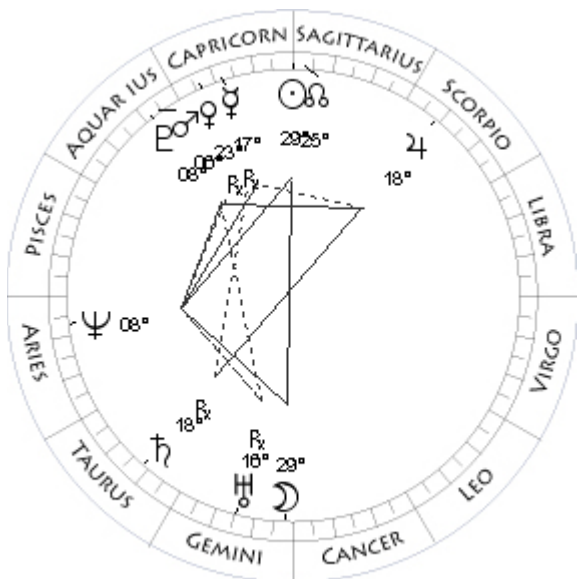
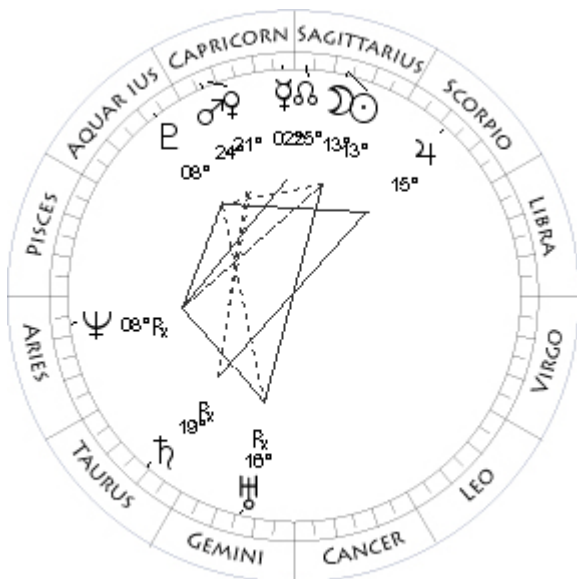
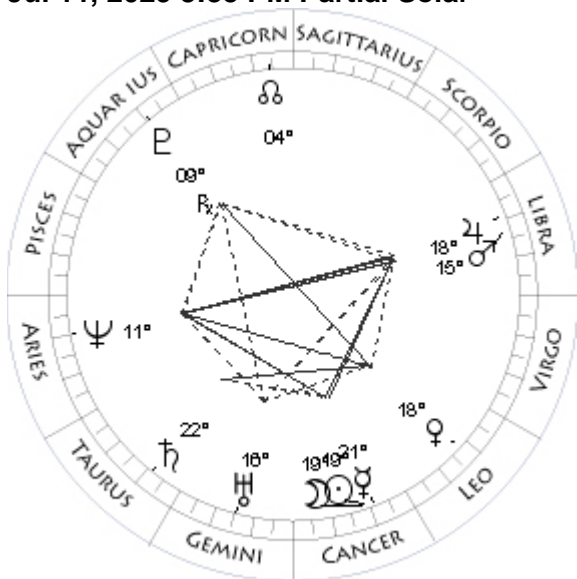
Mo 10Cn34 + 0°19	Mo 21Ge35 + 1°12
Su 10Cp33 - 0°00	Su 21Ge30 - 0°00
Me 00Aq05 - 1°05	Me 28Ta11 - 3°12
Ve 20Sa43 + 0°38	Ve 12Cn24 + 1°17
Ma 04Li12 + 2°28	Ma 02Li18 + 0°24
Ju 24Li56 + 1°16	Ju 17Li31 + 1°23R
Sa 04Ta26 - 2°31R	Sa 19Ta17 - 2°07
Ur 11Ge06 - 0°01R	Ur 14Ge47 + 0°00
Ne 06Ar11 - 1°28	Ne 10Ar54 - 1°28
Pl 07Aq29 - 5°12	Pl 10Aq08 - 5°39R
No 14Cp09 - 0°00	No 05Cp32 - 0°00

Coords: 108W/23N

Jun 26, 2029 3:22 AM Total Umbral



Jul 11, 2029 3:35 PM Partial Solar



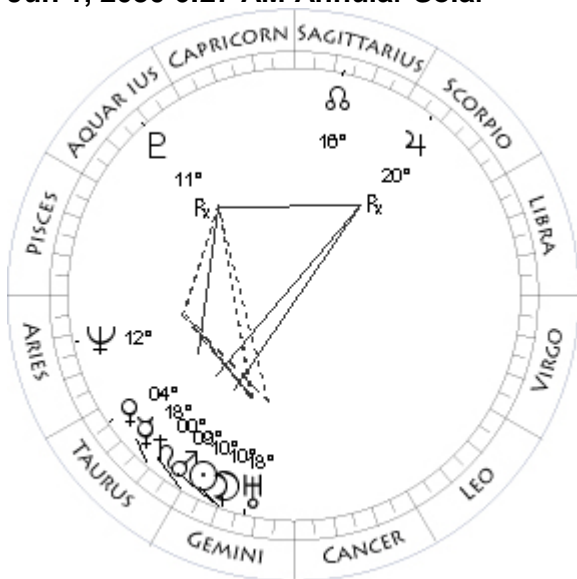
Dec 5, 2029 3:02 PM Partial Solar

Mo 04Cp49 + 0°01	Mo 13Sa51 - 1°04
Su 04Cn50 - 0°00	Su 13Sa46 - 0°00
Me 19Ge26 - 0°49	Me 02Cp22 - 2°23
Ve 29Cn23 + 1°35	Ve 21Cp36 - 2°25
Ma 07Li51 + 0°03	Ma 24Cp06 - 1°18
Ju 17Li44 + 1°19	Ju 15Sc31 + 0°59
Sa 20Ta50 - 2°08	Sa 19Ta48 - 2°26R
Ur 15Ge35 + 0°00	Ur 16Ge38 + 0°02R
Ne 11Ar05 - 1°29	Ne 08Ar25 - 1°31R
Pl 09Aq55 - 5°41R	Pl 08Aq26 - 5°41
No 04Cp48 - 0°00	No 26Sa12 - 0°00

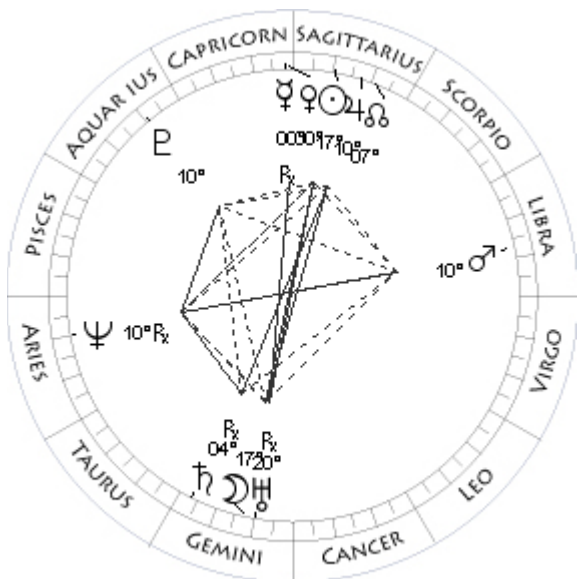
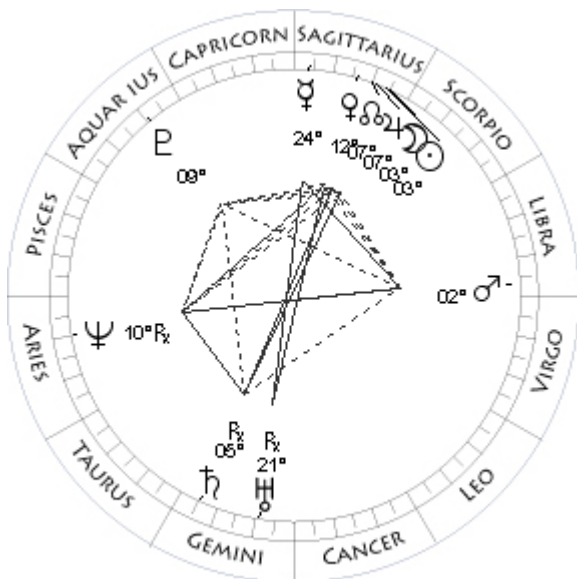
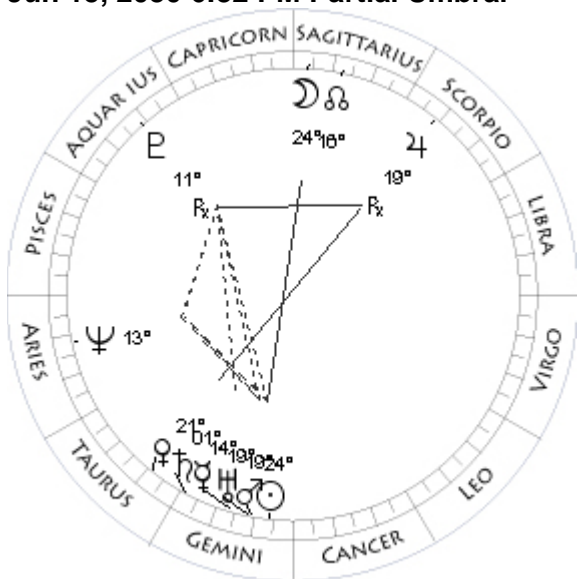
Dec 20, 2029 10:41 PM Total Umbral

Mo 19Cn28 - 1°21	Mo 29Ge17 - 0°21
Su 19Cn38 - 0°00	Su 29Sa21 - 0°00
Me 21Cn47 + 1°35	Me 17Cp33 - 0°39R
Ve 18Le09 + 1°40	Ve 23Cp43 + 0°21R
Ma 15Li10 - 0°16	Ma 06Aq02 - 1°14
Ju 18Li38 + 1°15	Ju 18Sc33 + 0°59
Sa 22Ta20 - 2°10	Sa 18Ta52 - 2°23R
Ur 16Ge26 + 0°01	Ur 16Ge00 + 0°02R
Ne 11Ar10 - 1°30	Ne 08Ar21 - 1°31
Pl 09Aq37 - 5°44R	Pl 08Aq47 - 5°40
No 03Cp59 - 0°00	No 25Sa23 - 0°00
Coords: 19W/23N	

Jun 1, 2030 6:27 AM Annular Solar



Jun 15, 2030 6:32 PM Partial Umbral



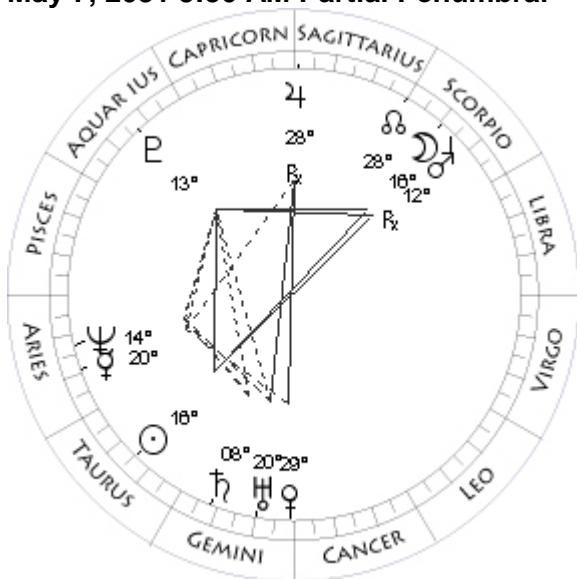
Nov 25, 2030 6:50 AM Total Solar

Mo 10Ge52 + 0°30	Mo 03Sa03 - 0°24
Su 10Ge50 - 0°00	Su 03Sa03 - 0°00
Me 18Ta33 - 2°40	Me 24Sa38 - 2°29
Ve 04Ta51 - 1°59	Ve 12Sa02 - 0°11
Ma 09Ge06 + 0°21	Ma 02Li18 + 1°35
Ju 20Sc28 + 1°09R	Ju 07Sa15 + 0°36
Sa 00Ge01 - 1°50	Sa 05Ge38 - 2°05R
Ur 18Ge11 + 0°03	Ur 21Ge35 + 0°06R
Ne 12Ar52 - 1°29	Ne 10Ar48 - 1°34R
Pl 11Aq54 - 6°04R	Pl 09Aq50 - 6°09
No 16Sa47 - 0°00	No 07Sa25 - 0°00
Coords: 80W/56N	Coords: 71W/43S

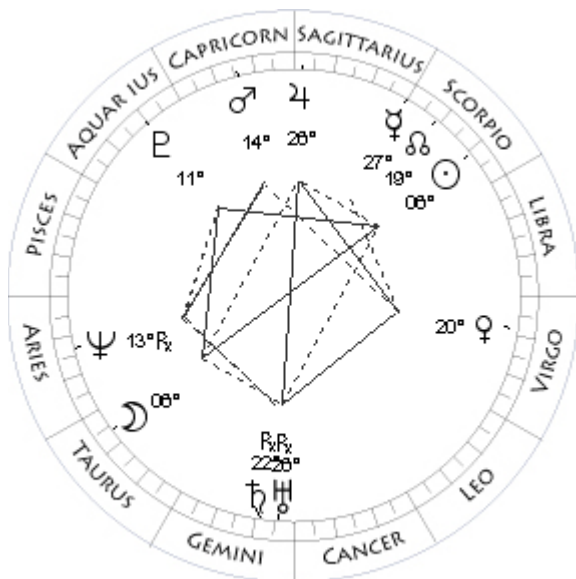
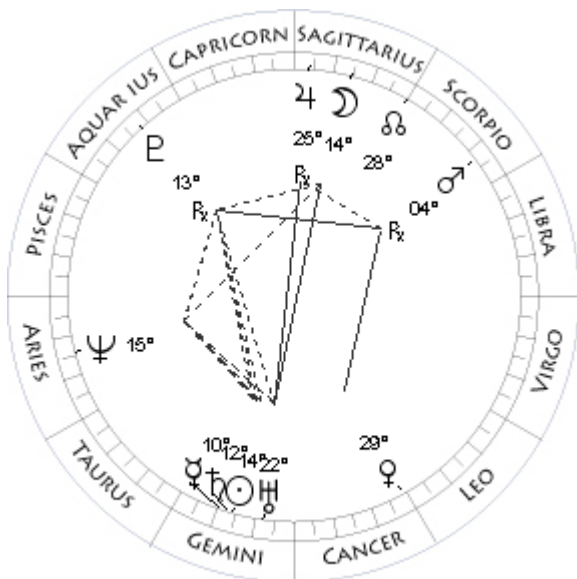
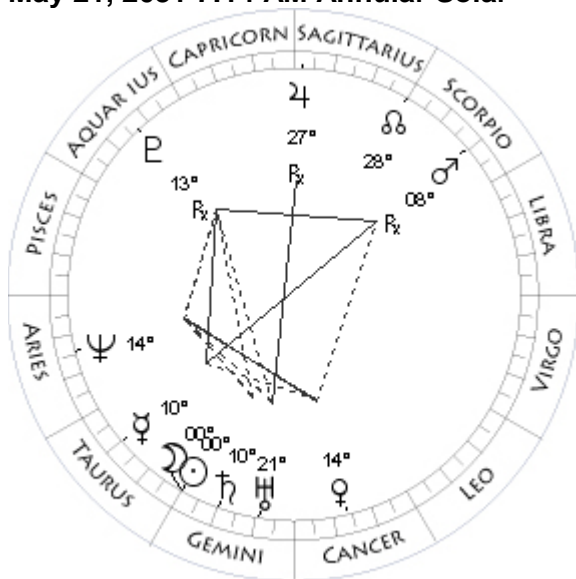
Dec 9, 2030 10:27 PM Partial Penumbral

Mo 24Sa37 + 0°46	Mo 17Ge47 - 0°58
Su 24Ge43 - 0°00	Su 17Sa54 - 0°00
Me 14Ge30 - 0°16	Me 00Cp32 - 0°04R
Ve 21Ta59 - 1°47	Ve 00Cp24 - 0°45
Ma 19Ge10 + 0°29	Ma 10Li36 + 1°39
Ju 19Sc02 + 1°06R	Ju 10Sa32 + 0°35
Sa 01Ge51 - 1°50	Sa 04Ge27 - 2°04R
Ur 19Ge03 + 0°04	Ur 20Ge59 + 0°06R
Ne 13Ar09 - 1°30	Ne 10Ar38 - 1°33R
Pl 11Aq44 - 6°07R	Pl 10Aq06 - 6°08
No 16Sa01 - 0°00	No 06Sa38 - 0°00
Coords: 82W/23S	Coords: 21W/22N

May 7, 2031 3:50 AM Partial Penumbra



May 21, 2031 7:14 AM Annular Solar



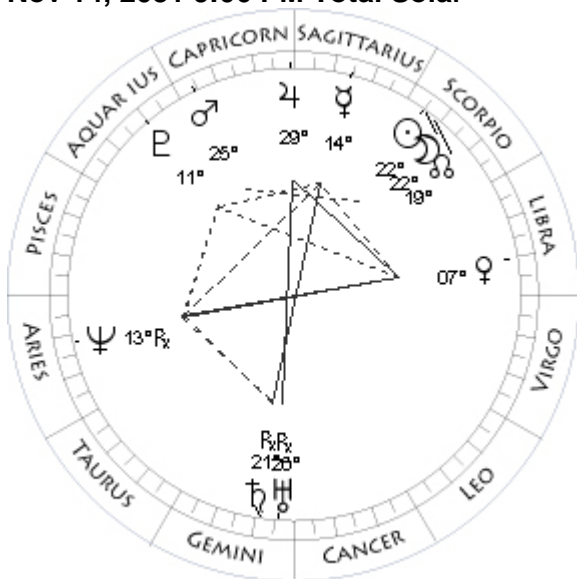
Jun 5, 2031 11:43 AM Partial Penumbra

Mo 16Sc30 - 1°04	Mo 14Sa29 + 1°29
Su 16Ta26 - 0°00	Su 14Ge39 - 0°00
Me 20Ar10 - 3°03	Me 10Ge35 + 0°15
Ve 29Ge54 + 2°40	Ve 29Cn57 + 2°31
Ma 12Sc52 + 0°26R	Ma 04Sc52 - 0°50R
Ju 28Sa16 + 0°31R	Ju 25Sa21 + 0°29R
Sa 08Ge56 - 1°31	Sa 12Ge42 - 1°29
Ur 20Ge52 + 0°07	Ur 22Ge30 + 0°07
Ne 14Ar19 - 1°30	Ne 15Ar09 - 1°32
Pl 13Aq34 - 6°25	Pl 13Aq28 - 6°32R
No 28Sc47 - 0°00	No 27Sc14 - 0°00
	Coords: 176E/21S

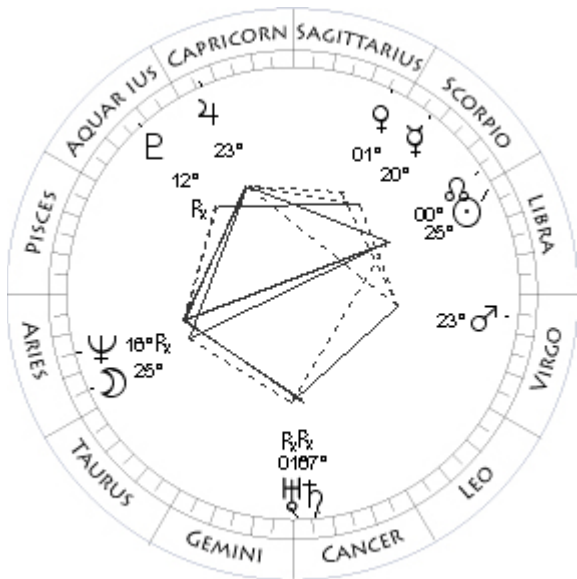
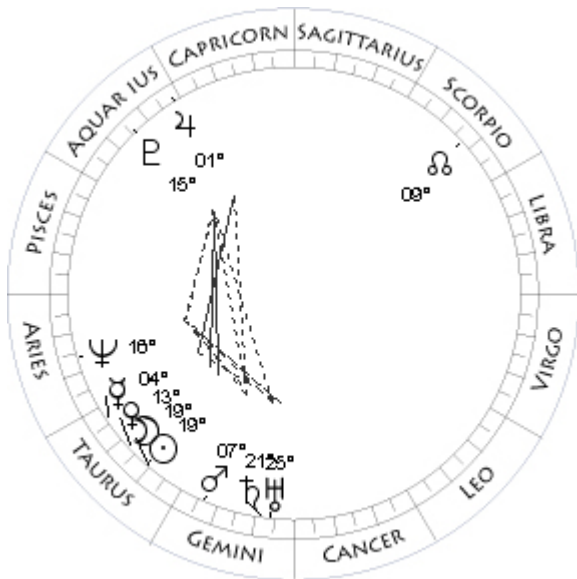
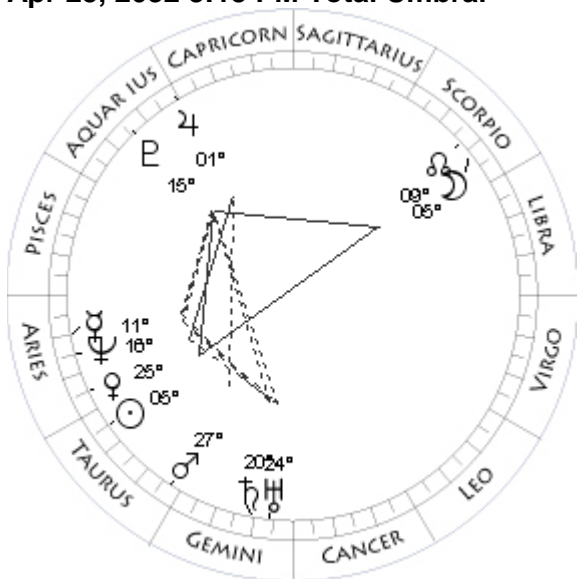
Oct 30, 2031 7:45 AM Partial Penumbra

Mo 00Ge02 - 0°11	Mo 06Ta47 + 1°07
Su 00Ge05 - 0°00	Su 06Sc41 - 0°00
Me 10Ta41 - 2°13	Me 27Sc40 - 2°19
Ve 14Cn57 + 2°50	Ve 20Vi33 + 0°31
Ma 08Sc01 - 0°13R	Ma 14Cp14 - 1°48
Ju 27Sa05 + 0°30R	Ju 26Sa52 + 0°07
Sa 10Ge44 - 1°30	Sa 22Ge28 - 1°35R
Ur 21Ge38 + 0°07	Ur 26Ge57 + 0°09R
Ne 14Ar45 - 1°31	Ne 13Ar37 - 1°37R
Pl 13Aq34 - 6°29R	Pl 11Aq11 - 6°38
No 28Sc02 - 0°00	No 19Sc28 - 0°00
Coords: 72W/ 9N	Coords: 121E/15N

Nov 14, 2031 9:06 PM Total Solar



Apr 25, 2032 3:13 PM Total Umbral



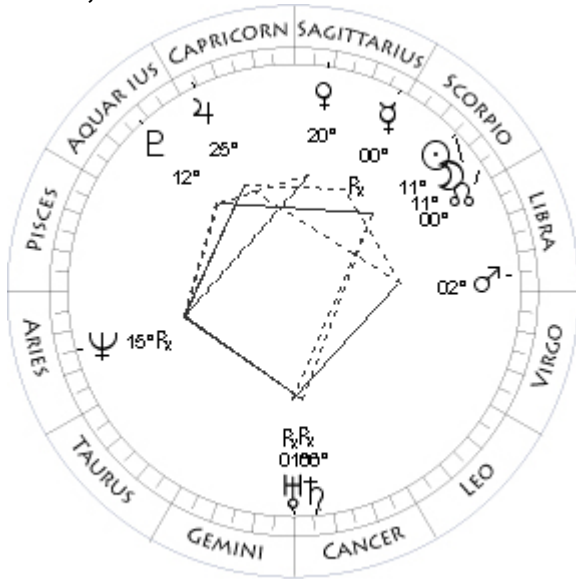
May 9, 2032 1:25 PM Total Solar

Mo 22Sc15 + 0°18	Mo 19Ta22 - 0°53
Su 22Sc18 - 0°00	Su 19Ta29 - 0°00
Me 14Sa22 - 2°34	Me 04Ta26 - 1°49
Ve 07Li30 + 1°35	Ve 13Ta06 - 0°58
Ma 25Cp48 - 1°38	Ma 07Ge23 + 0°34
Ju 29Sa54 + 0°05	Ju 01Aq59 - 0°15
Sa 21Ge36 - 1°36R	Sa 21Ge41 - 1°06
Ur 26Ge31 + 0°09R	Ur 25Ge10 + 0°10
Ne 13Ar16 - 1°36R	Ne 16Ar35 - 1°32
Pl 11Aq16 - 6°37	Pl 15Aq08 - 6°52
No 18Sc38 - 0°00	No 09Sc17 - 0°00

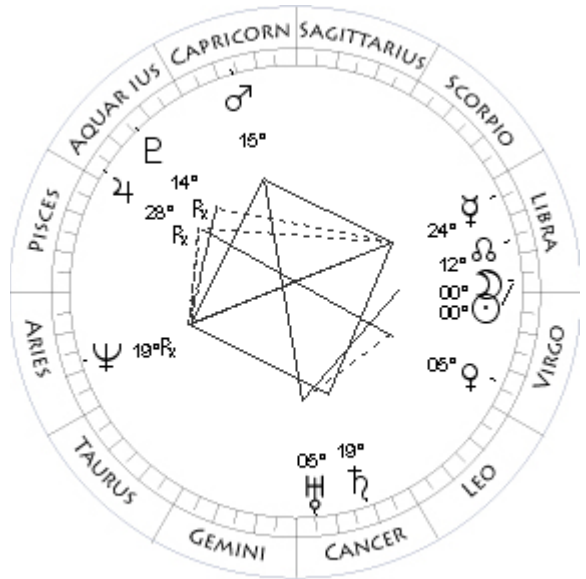
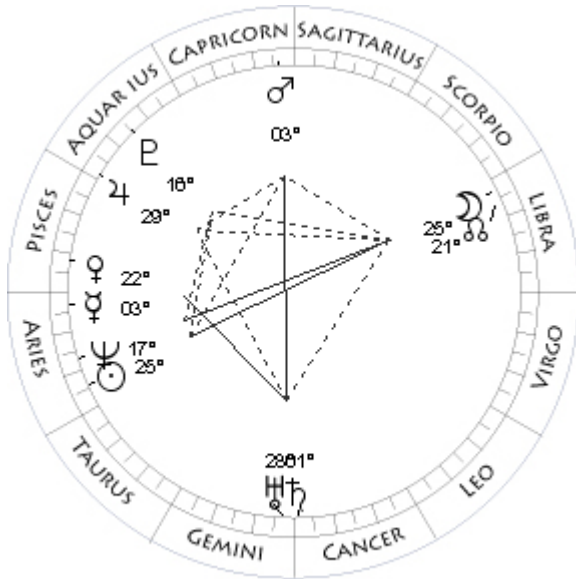
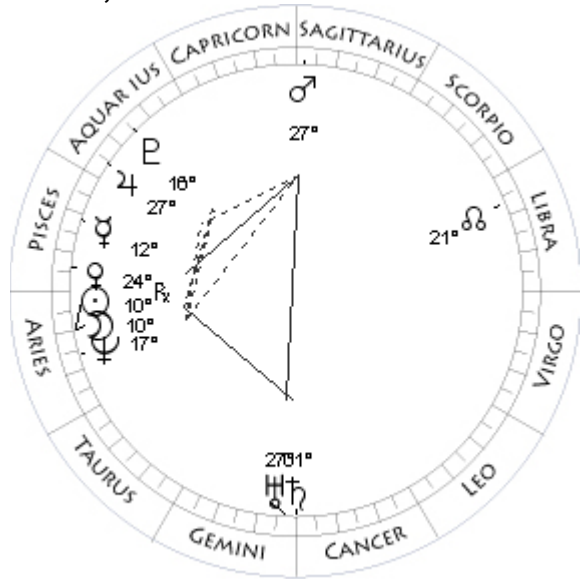
Oct 18, 2032 7:02 PM Total Umbral

Mo 05Sc59 - 0°20	Mo 25Ar58 + 0°25
Su 05Ta59 - 0°00	Su 25Li58 - 0°00
Me 11Ar22 - 2°46	Me 20Sc01 - 2°42
Ve 25Ar57 - 1°19	Ve 01Sa46 - 1°14
Ma 27Ta41 + 0°26	Ma 23Vi00 + 1°15
Ju 01Aq15 - 0°13	Ju 23Cp49 - 0°32
Sa 20Ge08 - 1°08	Sa 07Cn11 - 1°00R
Ur 24Ge30 + 0°10	Ur 01Cn36 + 0°12R
Ne 16Ar07 - 1°32	Ne 16Ar12 - 1°39R
Pl 15Aq04 - 6°49	Pl 12Aq46 - 7°06R
No 10Sc01 - 0°00	No 00Sc41 - 0°00
Coords: 131W/14S	Coords: 71W/10N

Nov 3, 2032 5:32 AM Partial Solar



Mar 30, 2033 6:00 PM Total Solar



Apr 14, 2033 7:12 PM Total Umbral

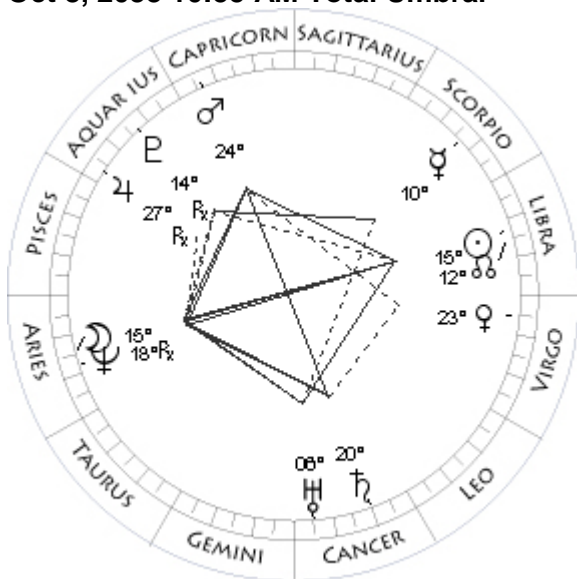
Mo 11Sc14 + 0°59	Mo 25Li06 + 0°21
Su 11Sc21 - 0°00	Su 25Ar09 - 0°00
Me 00Sa11 - 2°33R	Me 03Ar48 - 2°32
Ve 20Sa20 - 1°55	Ve 22Pi42 + 3°58
Ma 02Li38 + 1°15	Ma 03Cp25 - 0°22
Ju 25Cp37 - 0°33	Ju 29Aq59 - 0°45
Sa 06Cn58 - 1°00R	Sa 01Cn58 - 0°40
Ur 01Cn21 + 0°13R	Ur 28Ge18 + 0°13
Ne 15Ar48 - 1°39R	Ne 17Ar52 - 1°33
Pl 12Aq46 - 7°04	Pl 16Aq28 - 7°11
No 29Li52 - 0°00	No 21Li16 - 0°00

Sep 23, 2033 1:52 PM Partial Solar

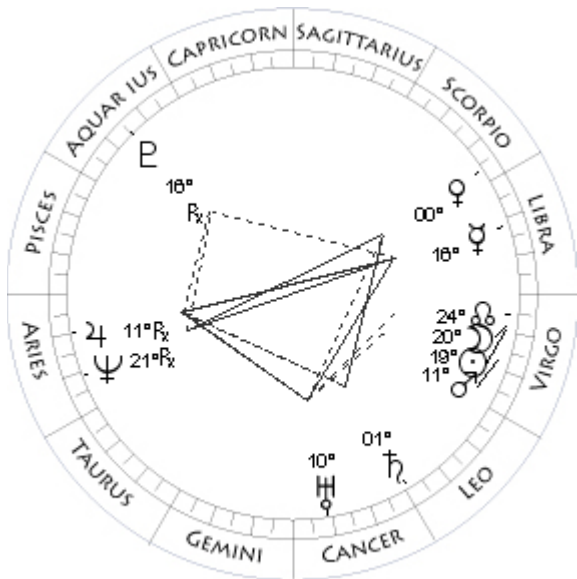
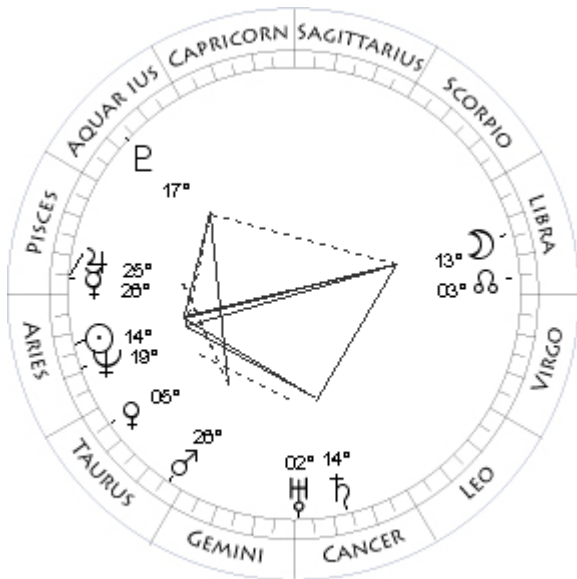
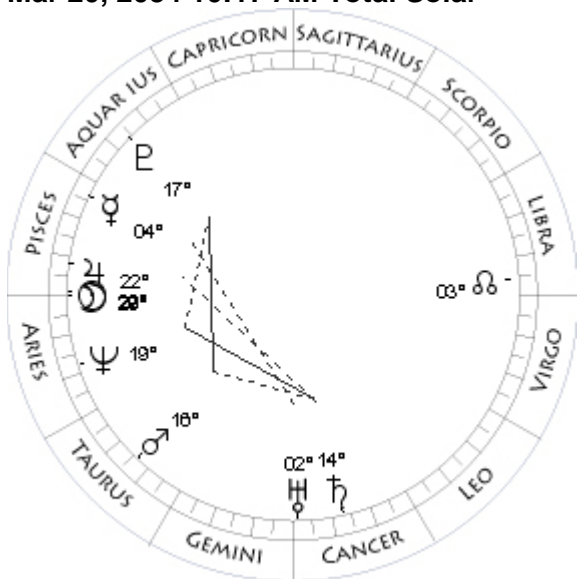
Mo 10Ar25 + 0°59	Mo 00Li56 - 1°02
Su 10Ar21 - 0°00	Su 00Li52 - 0°00
Me 12Pi53 - 1°50	Me 24Li19 - 1°37
Ve 24Pi45 + 7°12R	Ve 05Vi36 + 1°06
Ma 27Sa10 + 0°04	Ma 15Cp54 - 3°28
Ju 27Aq03 - 0°43	Ju 28Aq53 - 1°17R
Sa 01Cn00 - 0°42	Sa 19Cn54 - 0°25
Ur 27Ge53 + 0°13	Ur 05Cn58 + 0°15
Ne 17Ar18 - 1°33	Ne 19Ar13 - 1°40R
Pl 16Aq13 - 7°08	Pl 14Aq34 - 7°35R
No 22Li04 - 0°00	No 12Li42 - 0°00

Coords: 153E/71N

Oct 8, 2023 10:55 AM Total Umbral



Mar 20, 2024 10:17 AM Total Solar



Apr 3, 2024 7:05 PM Partial Penumbral

Mo 15Ar26 - 0°17	Mo 13Li59 + 1°00
Su 15Li29 - 0°00	Su 14Ar06 - 0°00
Me 10Sc36 - 3°09	Me 26Pi59 - 2°20
Ve 23Vi56 + 1°27	Ve 05Ta45 - 0°17
Ma 24Cp15 - 2°57	Ma 26Ta47 + 0°44
Ju 27Aq50 - 1°15R	Ju 25Pi57 - 1°02
Sa 20Cn45 - 0°24	Sa 14Cn41 - 0°08
Ur 06Cn06 + 0°15	Ur 02Cn18 + 0°17
Ne 18Ar49 - 1°41R	Ne 19Ar36 - 1°35
Pl 14Aq24 - 7°34R	Pl 17Aq48 - 7°33
No 11Li55 - 0°00	No 02Li31 - 0°00

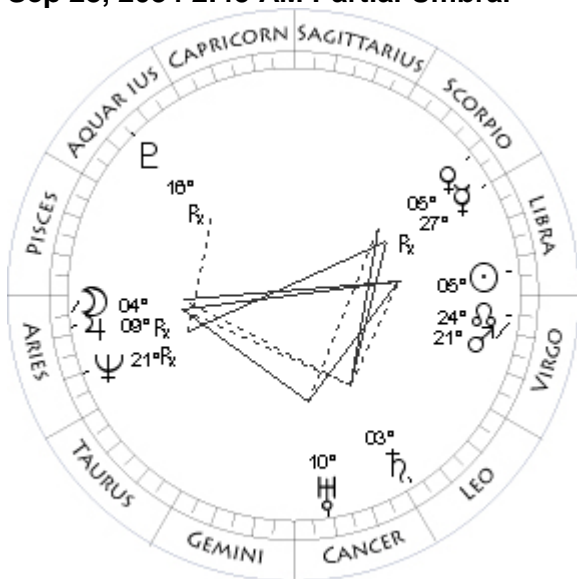
Coords: 167E/ 6N

Sep 12, 2024 4:17 PM Annular Solar

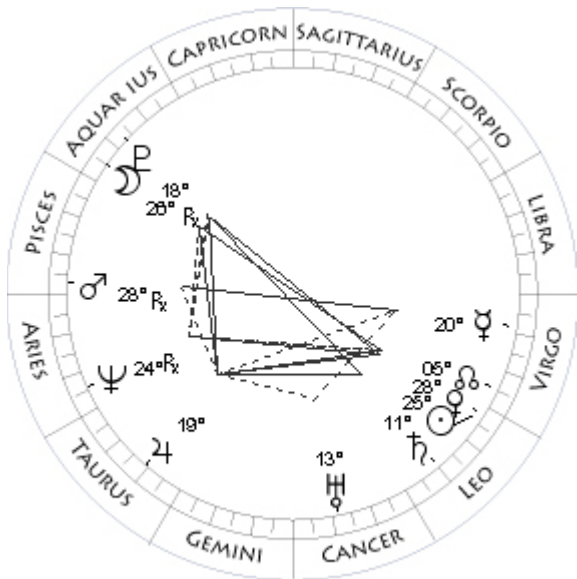
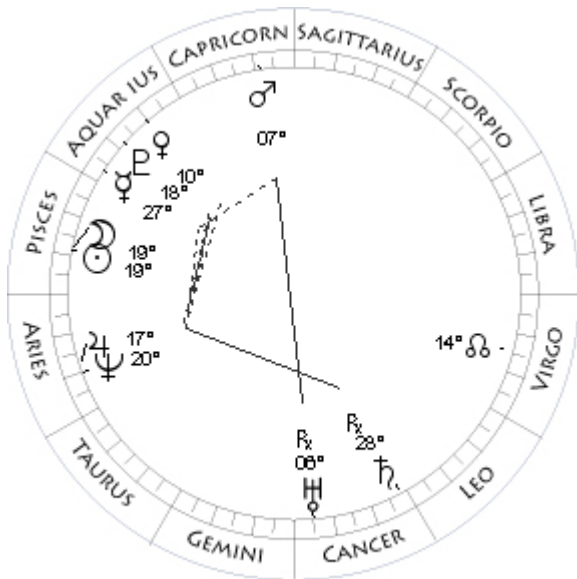
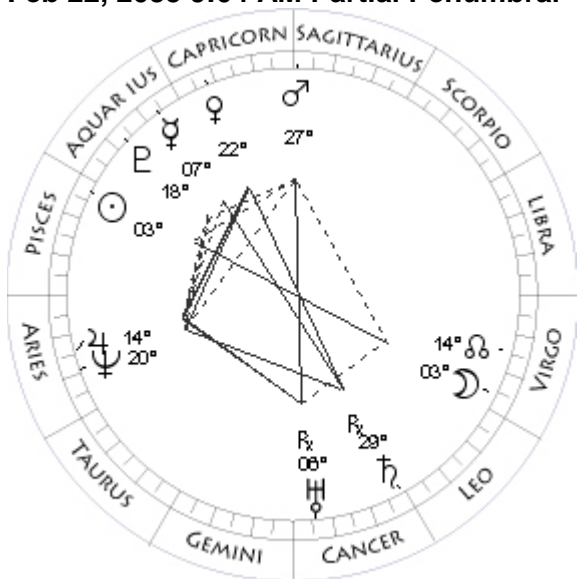
Mo 29Pi53 + 0°17	Mo 20Vi00 - 0°22
Su 29Pi53 - 0°00	Su 19Vi59 - 0°00
Me 04Pi46 - 1°55	Me 16Li09 - 2°04
Ve 18Ar02 - 0°51	Ve 00Sc34 - 5°08
Ma 16Ta58 + 0°36	Ma 11Vi54 + 1°07
Ju 22Pi31 - 1°01	Ju 11Ar24 - 1°36R
Sa 14Cn23 - 0°09	Sa 01Le48 + 0°08
Ur 02Cn04 + 0°17	Ur 10Cn05 + 0°18
Ne 19Ar04 - 1°35	Ne 21Ar48 - 1°42R
Pl 17Aq30 - 7°30	Pl 16Aq20 - 8°02R
No 03Li17 - 0°00	No 23Vi57 - 0°00

Coords: 22W/16N

Sep 28, 2024 2:45 AM Partial Umbral



Feb 22, 2025 9:04 AM Partial Penumbral



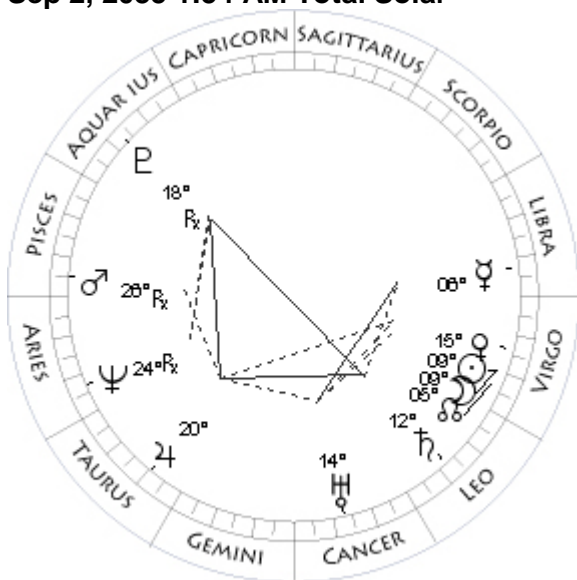
Mar 9, 2025 11:04 PM Annular Solar

Mo 04Ar56 - 1°00	Mo 19Pi08 - 0°25
Su 05Li04 - 0°00	Su 19Pi12 - 0°00
Me 27Li53 - 3°40R	Me 27Aq58 - 1°58
Ve 05Sc59 - 7°02	Ve 10Aq53 + 0°09
Ma 21Vi45 + 1°04	Ma 07Cp51 - 0°19
Ju 09Ar27 - 1°38R	Ju 17Ar57 - 1°05
Sa 03Le13 + 0°09	Sa 28Cn48 + 0°27R
Ur 10Cn26 + 0°18	Ur 06Cn30 + 0°20R
Ne 21Ar25 - 1°42R	Ne 20Ar52 - 1°37
Pl 16Aq05 - 8°00R	Pl 18Aq43 - 7°52
No 23Vi08 - 0°00	No 14Vi30 - 0°00
	Coords: 155E/29S

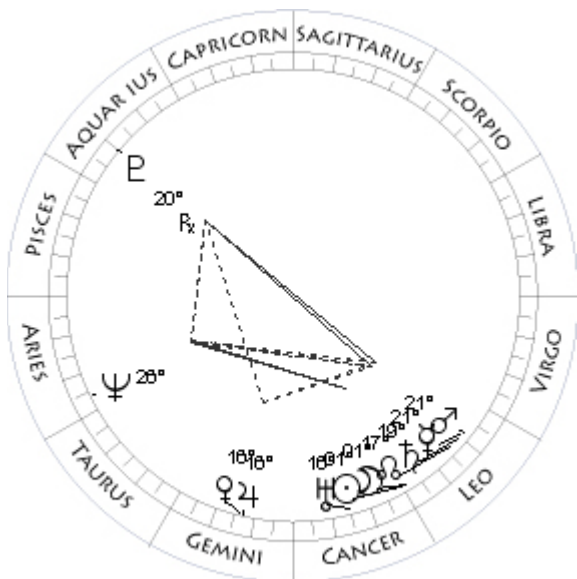
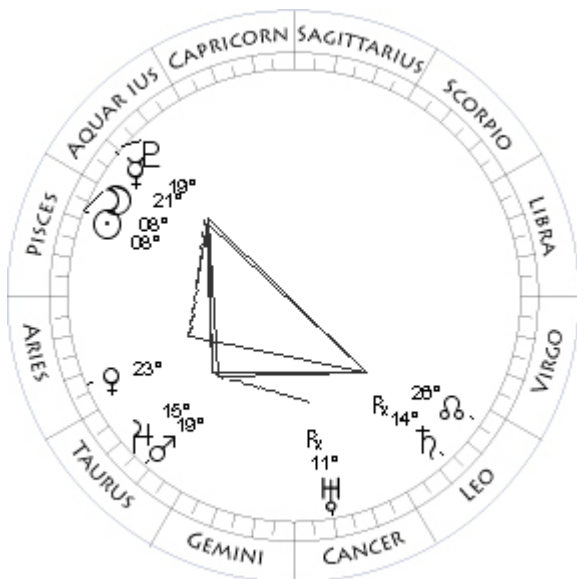
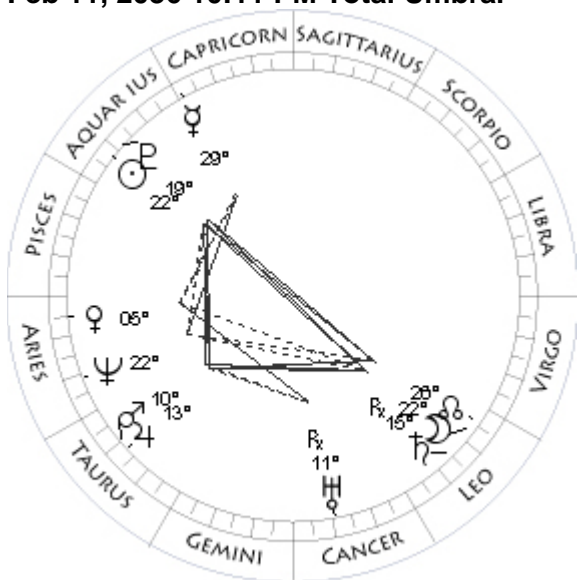
Aug 19, 2025 1:10 AM Partial Umbral

Mo 03Vi38 - 1°00	Mo 26Aq00 + 0°52
Su 03Pi34 - 0°00	Su 25Le56 - 0°00
Me 07Aq15 - 0°14	Me 20Vi41 - 0°28
Ve 22Cp20 + 1°08	Ve 28Le30 + 1°22
Ma 27Sa34 - 0°03	Ma 28Pi22 - 5°55R
Ju 14Ar32 - 1°07	Ju 19Ta58 - 1°12
Sa 29Cn34 + 0°26R	Sa 11Le13 + 0°36
Ur 06Cn40 + 0°20R	Ur 13Cn26 + 0°21
Ne 20Ar23 - 1°37	Ne 24Ar31 - 1°42R
Pl 18Aq16 - 7°50	Pl 18Aq24 - 8°27R
No 15Vi20 - 0°00	No 05Vi55 - 0°00
	Coords: 133E/ 9N

Sep 2, 2035 1:54 AM Total Solar



Feb 11, 2036 10:11 PM Total Umbral



Feb 27, 2036 4:45 AM Partial Solar

Mo 09Vi24 + 0°22	Mo 08Pi02 - 1°05
Su 09Vi28 - 0°00	Su 08Pi10 - 0°00
Me 06Li28 - 2°41	Me 21Aq36 - 1°59
Ve 15Vi52 + 1°25	Ve 23Ar02 + 1°04
Ma 26Pi24 - 6°02R	Ma 19Ta29 + 1°06
Ju 20Ta37 - 1°15	Ju 15Ta09 - 0°52
Sa 12Le57 + 0°38	Sa 14Le05 + 1°04R
Ur 14Cn03 + 0°21	Ur 11Cn10 + 0°24R
Ne 24Ar19 - 1°43R	Ne 22Ar42 - 1°38
Pl 18Aq06 - 8°27R	Pl 19Aq52 - 8°14
No 05Vi11 - 0°00	No 25Le45 - 0°00

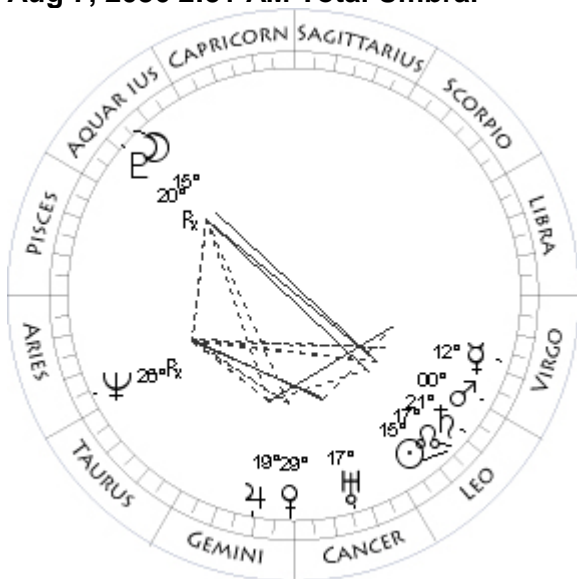
Coords: 158W/29N

Jul 23, 2036 10:30 AM Partial Solar

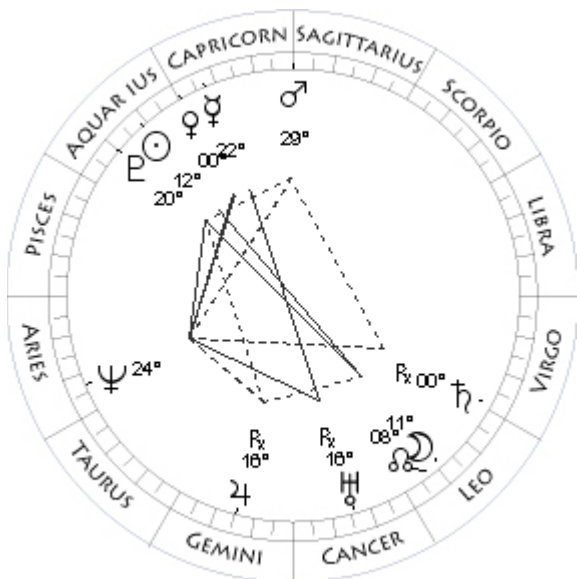
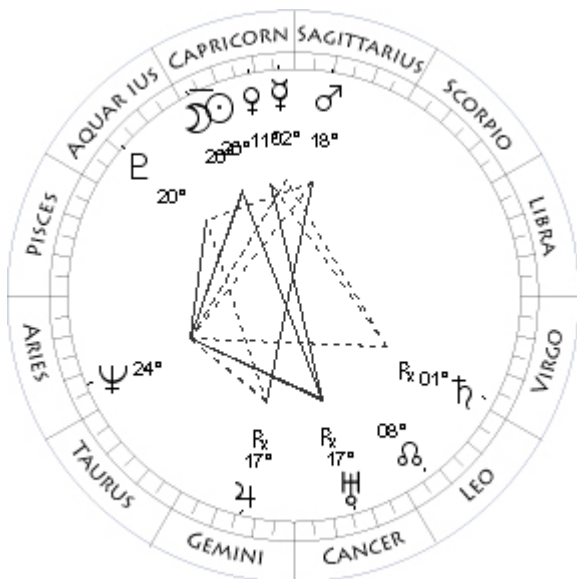
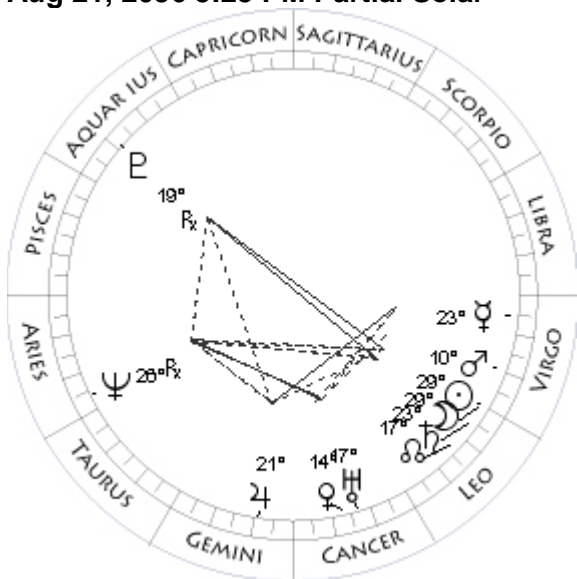
Mo 22Le46 - 0°19	Mo 01Le16 - 1°27
Su 22Aq46 - 0°00	Su 01Le10 - 0°00
Me 29Cp14 - 0°35	Me 21Le24 + 1°13
Ve 05Ar43 - 0°06	Ve 16Ge38 - 4°09
Ma 10Ta04 + 0°58	Ma 21Le36 + 1°10
Ju 13Ta03 - 0°56	Ju 16Ge49 - 0°37
Sa 15Le15 + 1°03R	Sa 19Le55 + 1°03
Ur 11Cn32 + 0°24R	Ur 16Cn18 + 0°23
Ne 22Ar19 - 1°39	Ne 26Ar53 - 1°42
Pl 19Aq25 - 8°12	Pl 20Aq31 - 8°49R
No 26Le33 - 0°00	No 17Le57 - 0°00

Coords: 31W/14N

Aug 7, 2036 2:51 AM Total Umbral



Aug 21, 2036 5:23 PM Partial Solar



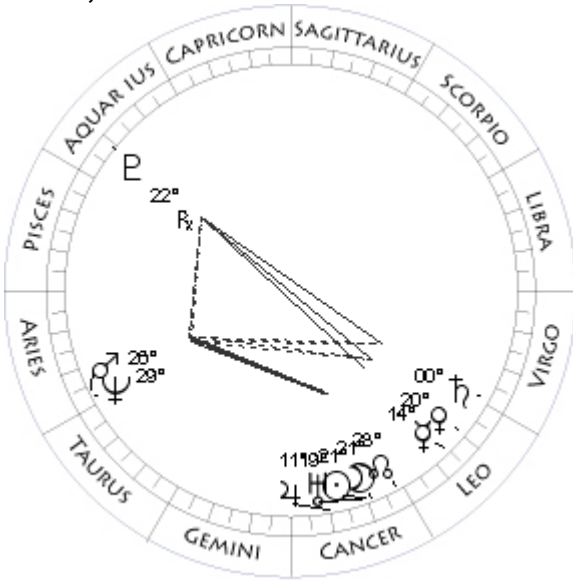
Jan 16, 2037 9:47 AM Partial Solar

Mo 15Aq12 + 0°11	Mo 26Cp41 + 1°02
Su 15Le12 - 0°00	Su 26Cp36 - 0°00
Me 12Vi05 - 0°53	Me 02Cp59 + 1°14
Ve 29Ge33 - 3°28	Ve 11Cp04 - 0°04
Ma 00Vi51 + 1°06	Ma 18Sa37 - 0°08
Ju 19Ge33 - 0°36	Ju 17Ge07 - 0°27R
Sa 21Le45 + 1°04	Sa 01Vi50 + 1°32R
Ur 17Cn08 + 0°23	Ur 17Cn11 + 0°27R
Ne 26Ar53 - 1°42R	Ne 24Ar08 - 1°42
Pl 20Aq12 - 8°51R	Pl 20Aq07 - 8°35
No 17Le10 - 0°00	No 08Le35 - 0°00

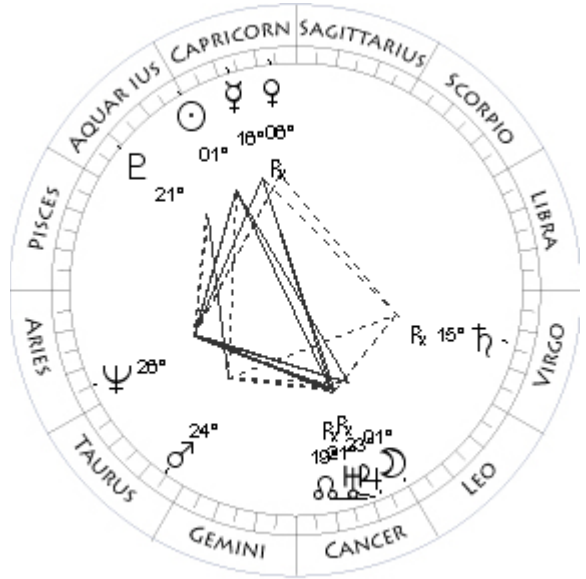
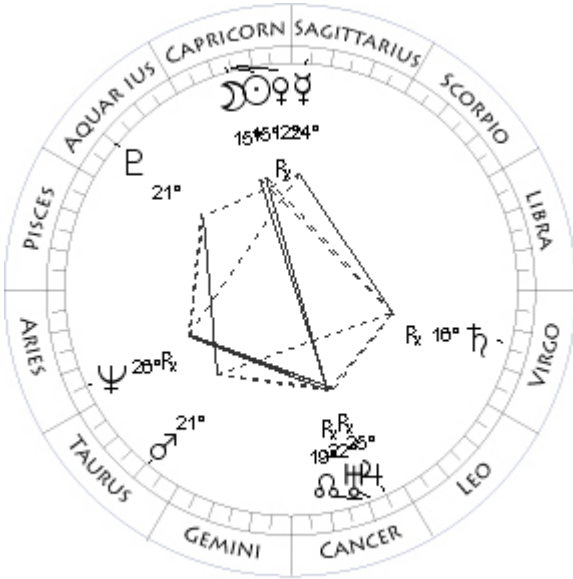
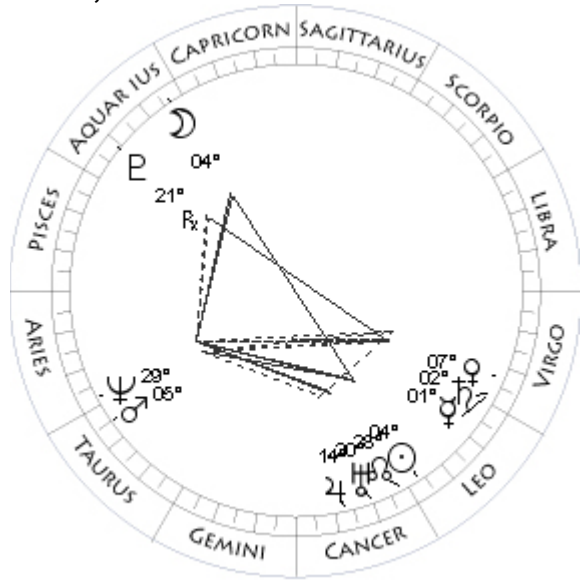
Jan 31, 2037 2:00 PM Total Umbral

Mo 29Le06 + 1°06	Mo 11Le59 + 0°22
Su 29Le14 - 0°00	Su 12Aq02 - 0°00
Me 23Vi53 - 3°28	Me 22Cp45 - 0°52
Ve 14Cn04 - 2°29	Ve 00Aq06 - 0°40
Ma 10Vi06 + 1°02	Ma 29Sa23 - 0°19
Ju 21Ge56 - 0°36	Ju 16Ge18 - 0°24R
Sa 23Le37 + 1°05	Sa 00Vi49 + 1°35R
Ur 17Cn54 + 0°24	Ur 16Cn34 + 0°27R
Ne 26Ar46 - 1°43R	Ne 24Ar19 - 1°41
Pl 19Aq52 - 8°52R	Pl 20Aq33 - 8°35
No 16Le24 - 0°00	No 07Le47 - 0°00
Coords: 154W/18N	

Jul 13, 2037 2:38 AM Total Solar



Jul 27, 2037 4:08 AM Partial Umbral



Jan 5, 2038 1:45 PM Annular Solar

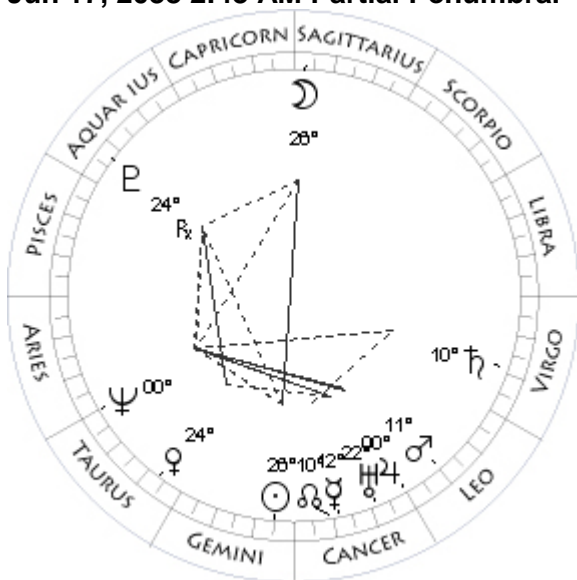
Mo 21Cn07 - 0°43	Mo 15Cp20 + 0°24
Su 21Cn05 - 0°00	Su 15Cp19 - 0°00
Me 14Le55 + 0°59	Me 24Sa35 + 0°48
Ve 20Le31 + 1°40	Ve 12Cp51 + 4°29R
Ma 26Ar50 - 2°18	Ma 21Ta13 + 2°02
Ju 11Cn14 - 0°02	Ju 25Cn59 + 0°22R
Sa 00Vi38 + 1°30	Sa 16Vi09 + 1°55R
Ur 19Cn56 + 0°26	Ur 22Cn26 + 0°30R
Ne 29Ar03 - 1°42	Ne 26Ar20 - 1°44R
Pl 22Aq14 - 9°11R	Pl 21Aq16 - 8°58
No 29Cn10 - 0°00	No 19Cn50 - 0°00

Coords: 139W/25S

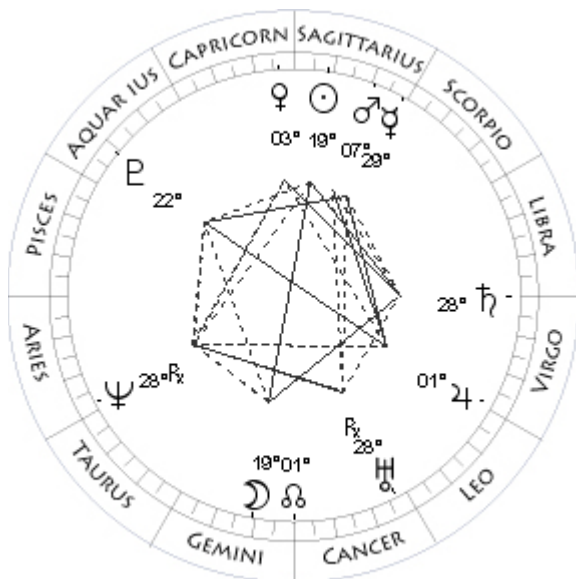
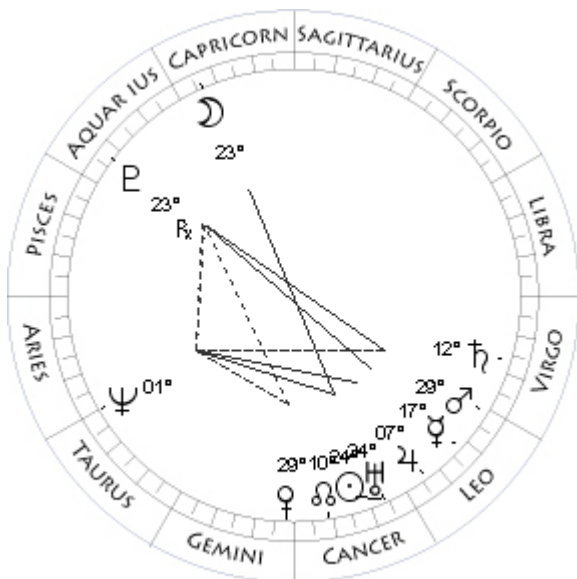
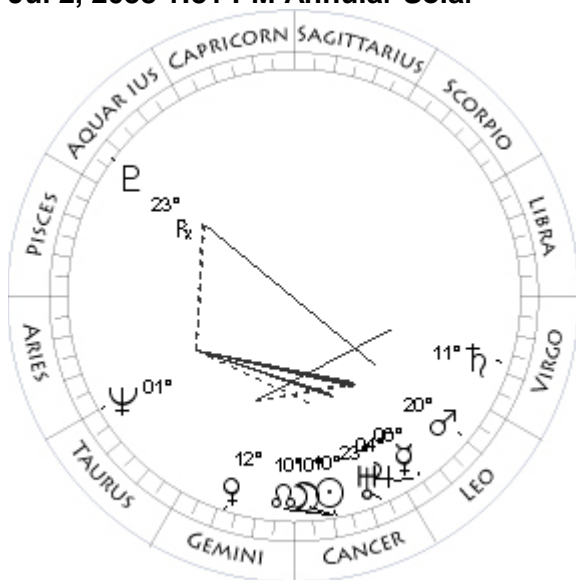
Jan 21, 2038 3:48 AM Partial Penumbral

Mo 04Aq26 - 0°31	Mo 01Le04 + 1°03
Su 04Le30 - 0°00	Su 01Aq11 - 0°00
Me 01Vi25 - 1°26	Me 16Cp59 - 1°06
Ve 07Vi22 + 1°25	Ve 06Cp22 + 6°27R
Ma 05Ta52 - 2°20	Ma 24Ta51 + 2°06
Ju 14Cn22 - 0°00	Ju 23Cn54 + 0°24R
Sa 02Vi13 + 1°30	Sa 15Vi39 + 1°59R
Ur 20Cn47 + 0°26	Ur 21Cn45 + 0°30R
Ne 29Ar09 - 1°43	Ne 26Ar24 - 1°43
Pl 21Aq58 - 9°13R	Pl 21Aq41 - 8°57
No 28Cn26 - 0°00	No 19Cn00 - 0°00

Jun 17, 2038 2:43 AM Partial Penumbral



Jul 2, 2038 1:31 PM Annular Solar



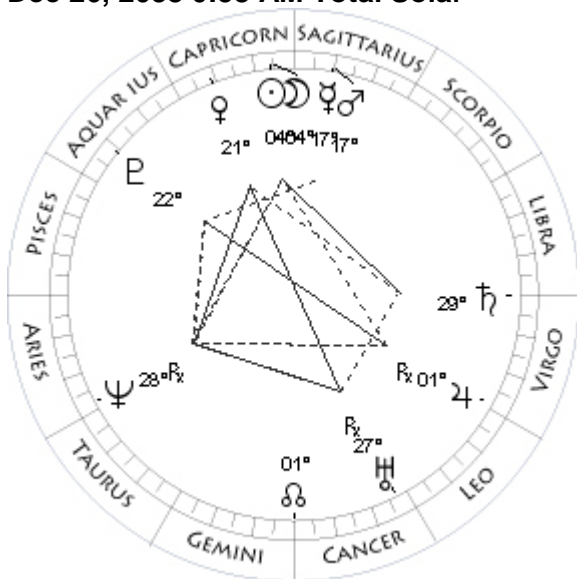
Jul 16, 2038 11:34 AM Partial Penumbral

Mo 26Sa09 + 1°18	Mo 23Cp55 - 1°14
Su 26Ge03 - 0°00	Su 24Cn04 - 0°00
Me 12Cn58 + 2°01	Me 17Le40 - 2°11
Ve 24Ta10 - 1°43	Ve 29Ge22 - 0°39
Ma 11Le13 + 1°20	Ma 29Le07 + 1°07
Ju 00Le53 + 0°30	Ju 07Le04 + 0°32
Sa 10Vi32 + 1°56	Sa 12Vi52 + 1°52
Ur 22Cn41 + 0°29	Ur 24Cn25 + 0°29
Ne 00Ta48 - 1°41	Ne 01Ta18 - 1°43
Pl 24Aq07 - 9°27R	Pl 23Aq41 - 9°34R
No 11Cn13 - 0°00	No 09Cn40 - 0°00
	Coords: 172E/23S

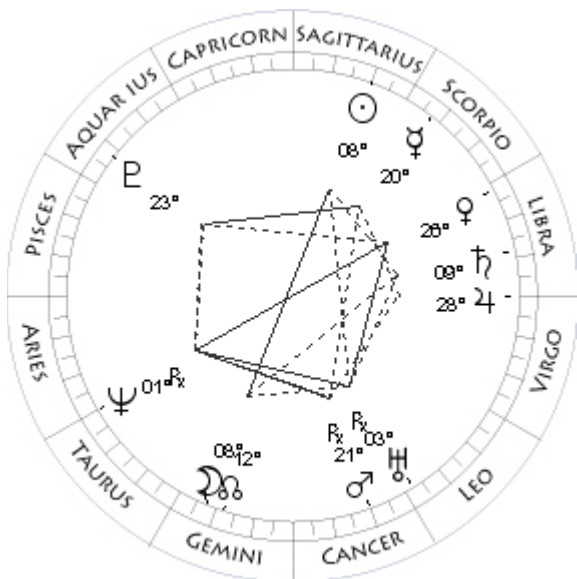
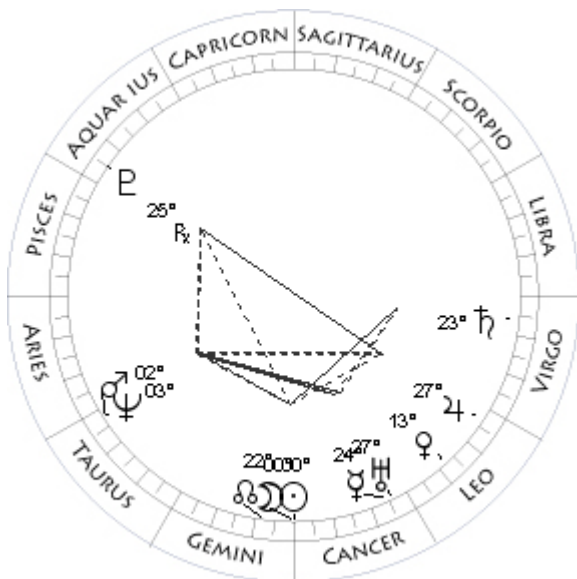
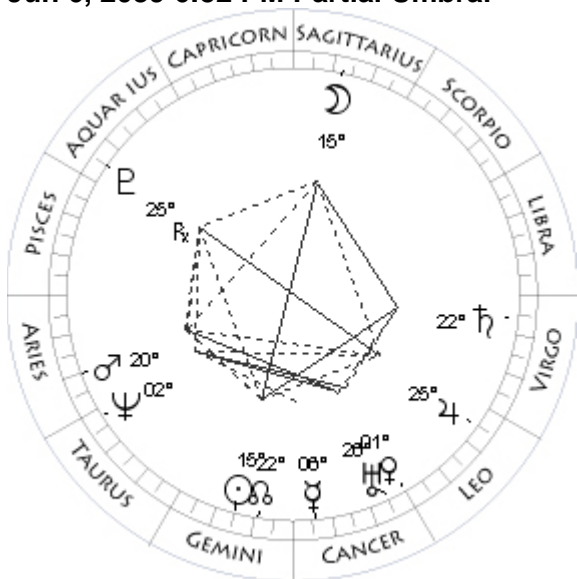
Dec 11, 2038 5:43 PM Partial Penumbral

Mo 10Cn46 + 0°02	Mo 19Ge51 - 1°02
Su 10Cn47 - 0°00	Su 19Sa47 - 0°00
Me 06Le20 + 0°41	Me 29Sc00 + 2°13
Ve 12Ge37 - 1°14	Ve 03Cp20 - 0°51
Ma 20Le35 + 1°13	Ma 07Sa15 - 0°11
Ju 04Le05 + 0°31	Ju 01Vi24 + 0°55
Sa 11Vi38 + 1°54	Sa 28Vi36 + 2°06
Ur 23Cn35 + 0°29	Ur 28Cn10 + 0°33R
Ne 01Ta07 - 1°42	Ne 28Ar48 - 1°46R
Pl 23Aq55 - 9°31R	Pl 22Aq11 - 9°24
No 10Cn24 - 0°00	No 01Cn49 - 0°00
	Coords: 93W/22N

Dec 26, 2038 0:58 AM Total Solar



Jun 6, 2039 6:52 PM Partial Umbral



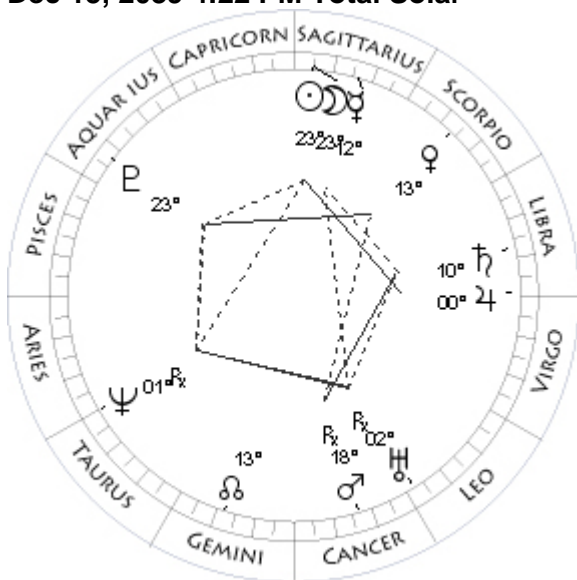
Jun 21, 2039 5:10 PM Annular Solar

Mo 04Cp17 - 0°17	Mo 00Cn07 + 0°44
Su 04Cp20 - 0°00	Su 00Cn13 - 0°00
Me 17Sa53 + 0°25	Me 24Cn44 + 0°20
Ve 21Cp15 - 1°18	Ve 13Le18 + 1°21
Ma 17Sa34 - 0°20	Ma 02Ta00 - 1°19
Ju 01Vi20 + 0°58R	Ju 27Le12 + 0°59
Sa 29Vi07 + 2°10	Sa 23Vi07 + 2°14
Ur 27Cn40 + 0°33R	Ur 27Cn16 + 0°31
Ne 28Ar38 - 1°45R	Ne 03Ta05 - 1°42
Pl 22Aq28 - 9°21	Pl 25Aq32 - 9°51R
No 01Cn03 - 0°00	No 21Ge39 - 0°00
Coords: 164W/40S	Coords: 101E/79N

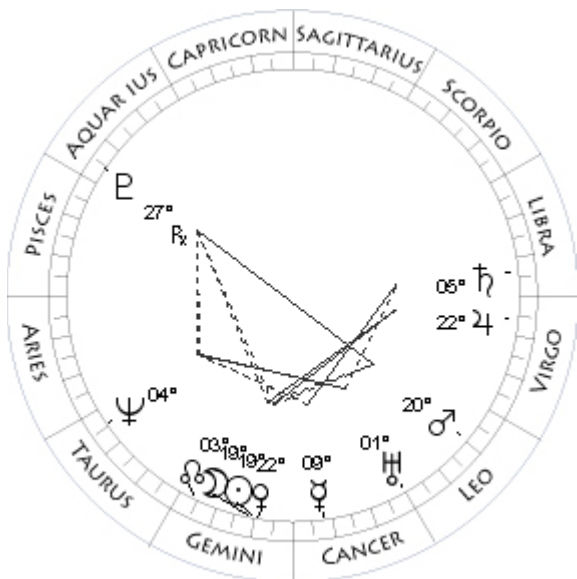
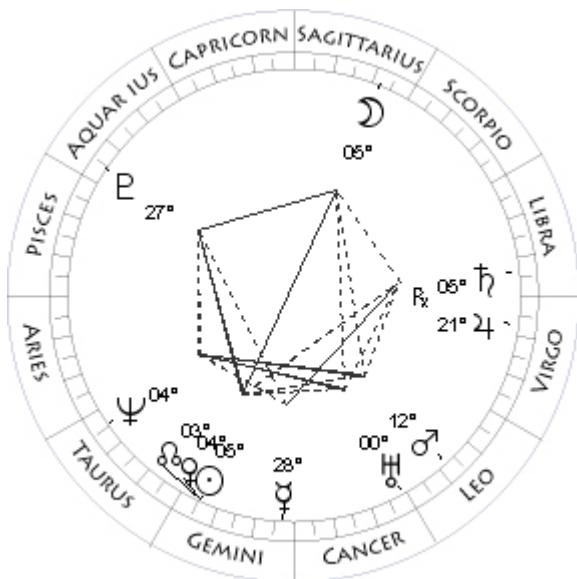
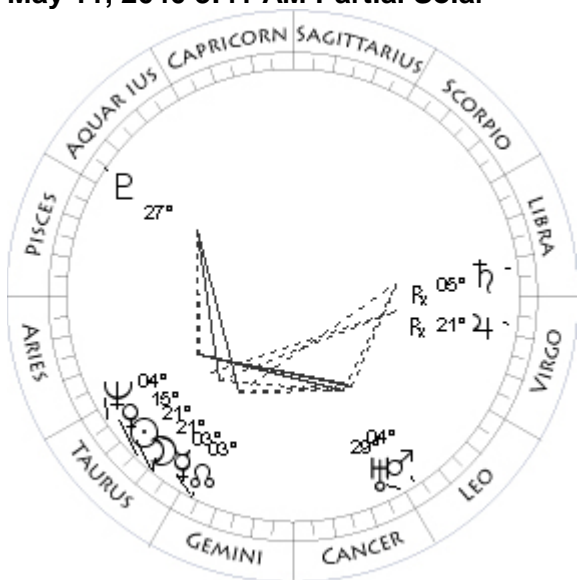
Nov 30, 2039 4:54 PM Partial Umbral

Mo 15Sa58 + 0°33	Mo 08Ge21 - 0°26
Su 15Ge57 - 0°00	Su 08Sa20 - 0°00
Me 06Cn43 + 2°07	Me 20Sc07 + 1°51
Ve 01Le06 + 2°28	Ve 26Li09 + 2°08
Ma 20Ar58 - 1°23	Ma 21Cn26 + 2°28R
Ju 25Le01 + 1°00	Ju 28Vi35 + 1°09
Sa 22Vi36 + 2°17	Sa 09Li45 + 2°14
Ur 26Cn28 + 0°31	Ur 03Le12 + 0°35R
Ne 02Ta42 - 1°42	Ne 01Ta18 - 1°47R
Pl 25Aq39 - 9°46R	Pl 23Aq29 - 9°47
No 22Ge26 - 0°00	No 13Ge04 - 0°00
Coords: 77W/22S	Coords: 104W/21N

Dec 15, 2039 4:22 PM Total Solar



May 11, 2040 3:41 AM Partial Solar



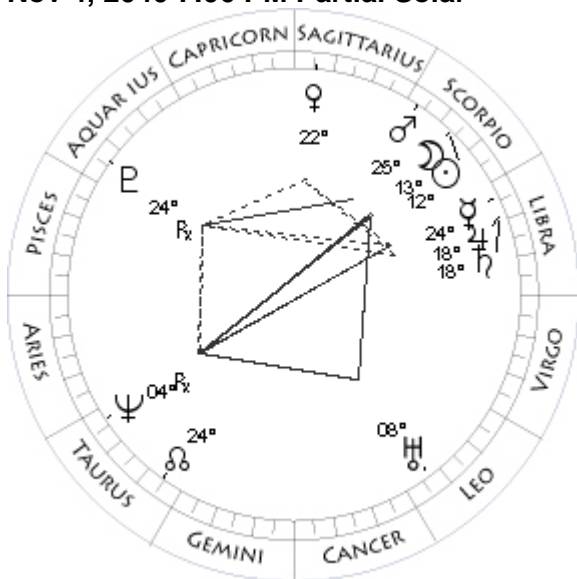
May 26, 2040 11:45 AM Total Umbra

Mo 23Sa25 - 0°58	Mo 05Sa48 - 0°11
Su 23Sa33 - 0°00	Su 05Ge51 - 0°00
Me 12Sa17 + 0°04	Me 28Ge23 + 2°10
Ve 13Sc58 + 2°12	Ve 04Ge36 - 0°21
Ma 18Cn25 + 3°11R	Ma 12Le37 + 1°33
Ju 00Li17 + 1°13	Ju 21Vi59 + 1°23
Sa 10Li51 + 2°18	Sa 05Li20 + 2°34R
Ur 02Le49 + 0°35R	Ur 00Le24 + 0°34
Ne 01Ta02 - 1°47R	Ne 04Ta32 - 1°42
Pl 23Aq41 - 9°45	Pl 27Aq07 -10°04
No 12Ge17 - 0°00	No 03Ge39 - 0°00
Coords: 176W/81S	Coords: 177E/21S

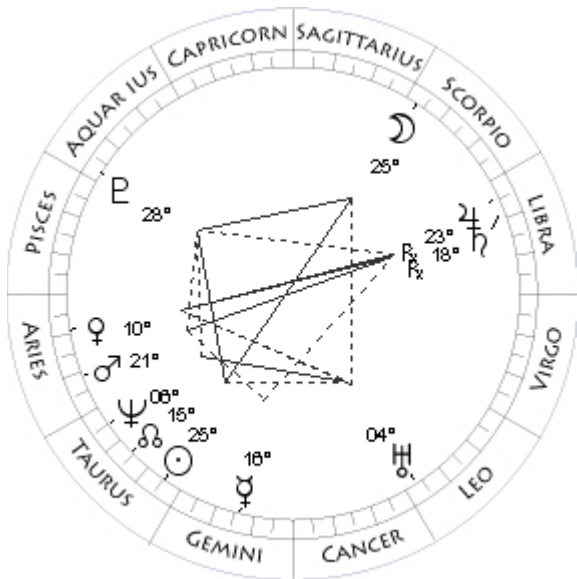
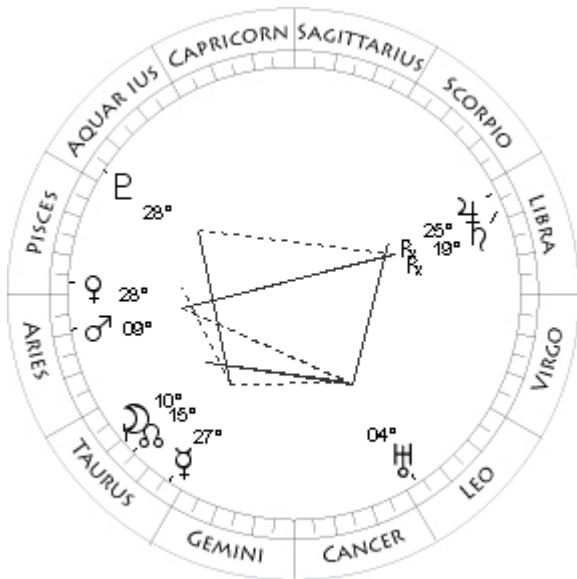
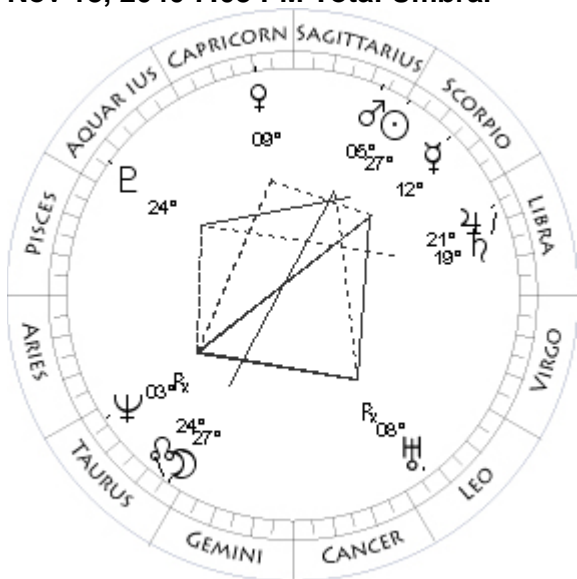
Jun 9, 2040 5:44 PM Partial Solar

Mo 21Ta10 - 1°09	Mo 19Ge20 + 1°25
Su 21Ta05 - 0°00	Su 19Ge30 - 0°00
Me 03Ge14 + 1°31	Me 09Cn08 - 0°08
Ve 15Ta44 - 0°54	Ve 22Ge07 + 0°13
Ma 04Le26 + 1°46	Ma 20Le33 + 1°22
Ju 21Vi57 + 1°26R	Ju 22Vi38 + 1°20
Sa 05Li49 + 2°37R	Sa 05Li14 + 2°30
Ur 29Cn51 + 0°34	Ur 01Le03 + 0°34
Ne 04Ta00 - 1°41	Ne 04Ta59 - 1°42
Pl 27Aq04 - 9°59	Pl 27Aq05 -10°08R
No 04Ge28 - 0°00	No 02Ge54 - 0°00

Nov 4, 2040 7:06 PM Partial Solar



Nov 18, 2040 7:03 PM Total Umbral



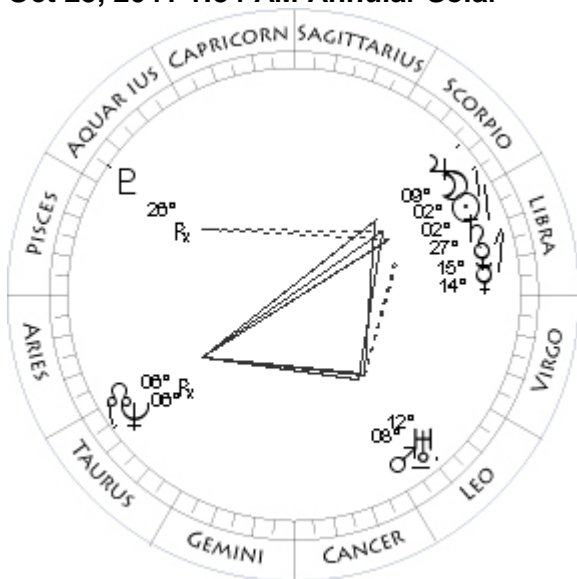
Apr 30, 2041 11:50 AM Total Solar

Mo 13Sc03 + 1°04	Mo 10Ta32 - 0°26
Su 12Sc59 - 0°00	Su 10Ta31 - 0°00
Me 24Li20 + 2°10	Me 27Ta04 + 1°56
Ve 22Sa44 - 2°01	Ve 28Pi12 + 0°51
Ma 25Sc06 - 0°15	Ma 09Ar59 - 1°03
Ju 18Li50 + 1°07	Ju 25Li07 + 1°31R
Sa 18Li26 + 2°15	Sa 19Li38 + 2°45R
Ur 08Le03 + 0°36	Ur 04Le07 + 0°37
Ne 04Ta14 - 1°49R	Ne 05Ta46 - 1°42
Pl 24Aq48 -10°14R	Pl 28Aq22 -10°16
No 25Ta04 - 0°00	No 15Ta42 - 0°00
Coords: 12W/10S	

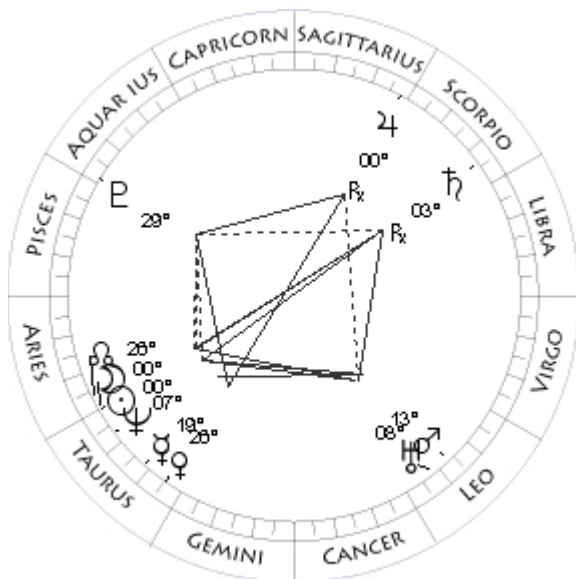
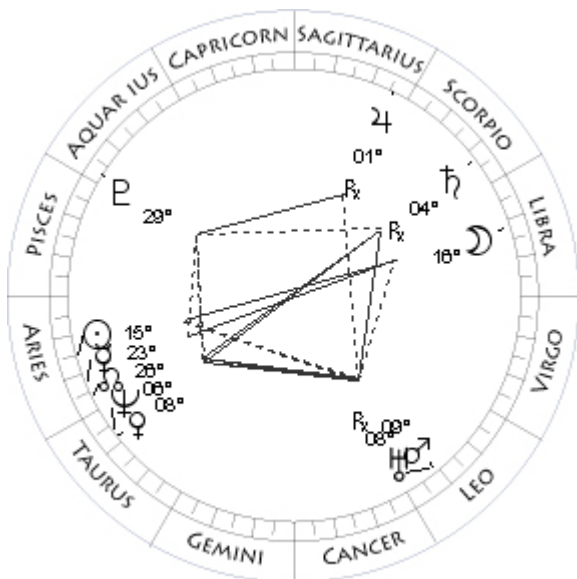
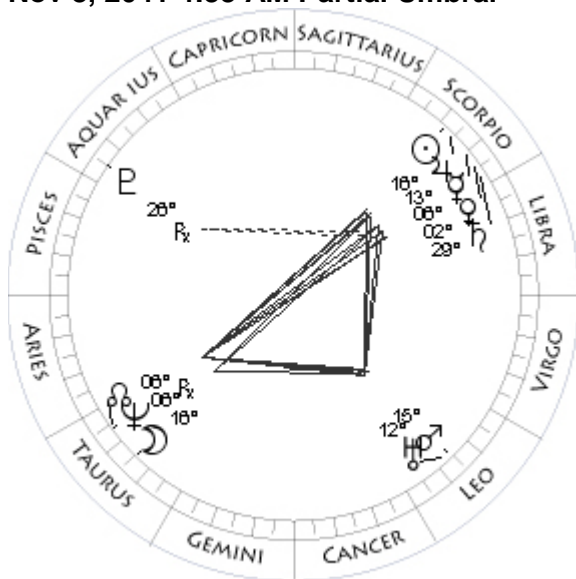
May 16, 2041 0:41 AM Partial Umbral

Mo 27Ta01 + 0°13	Mo 25Sc26 - 0°56
Su 27Sc04 - 0°00	Su 25Ta33 - 0°00
Me 12Sc50 + 1°31	Me 16Ge31 + 2°11
Ve 09Cp20 - 2°24	Ve 10Ar09 - 1°03
Ma 05Sa06 - 0°24	Ma 21Ar52 - 0°57
Ju 21Li39 + 1°08	Ju 23Li27 + 1°29R
Sa 19Li59 + 2°17	Sa 18Li40 + 2°43R
Ur 08Le03 + 0°37R	Ur 04Le30 + 0°37
Ne 03Ta51 - 1°48R	Ne 06Ta20 - 1°42
Pl 24Aq49 -10°11	Pl 28Aq31 -10°21
No 24Ta19 - 0°00	No 14Ta53 - 0°00
Coords: 71W/20N	

Oct 25, 2041 1:34 AM Annular Solar



Nov 8, 2041 4:33 AM Partial Umbral



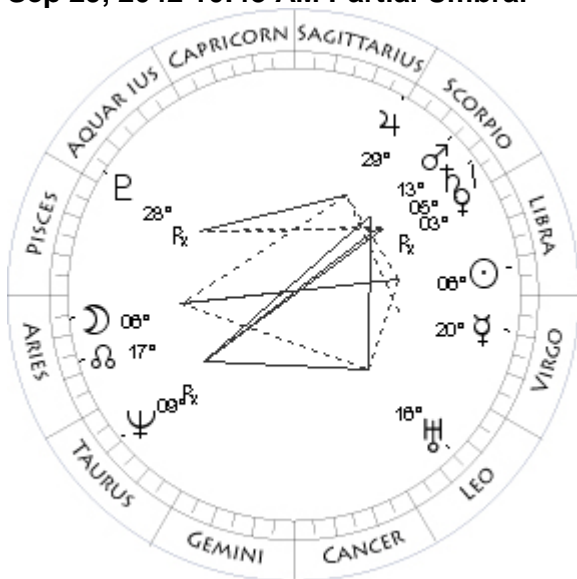
Apr 5, 2042 2:28 PM Partial Penumbral

Mo 02Sc02 + 0°23	Mo 16Li01 + 1°00
Su 02Sc01 - 0°00	Su 15Ar56 - 0°00
Me 14Li45 + 2°05	Me 23Ar29 - 0°01
Ve 15Li15 + 1°31	Ve 08Ta37 - 0°10
Ma 08Le35 + 1°23	Ma 09Le58 + 2°53
Ju 09Sc59 + 0°57	Ju 01Sa32 + 1°06R
Sa 27Li55 + 2°15	Sa 04Sc36 + 2°43R
Ur 12Le30 + 0°38	Ur 08Le40 + 0°40R
Ne 06Ta51 - 1°49R	Ne 06Ta59 - 1°42
Pl 26Aq17 -10°37R	Pl 29Aq21 -10°29
No 06Ta18 - 0°00	No 27Ar42 - 0°00
Coords: 163W/10N	

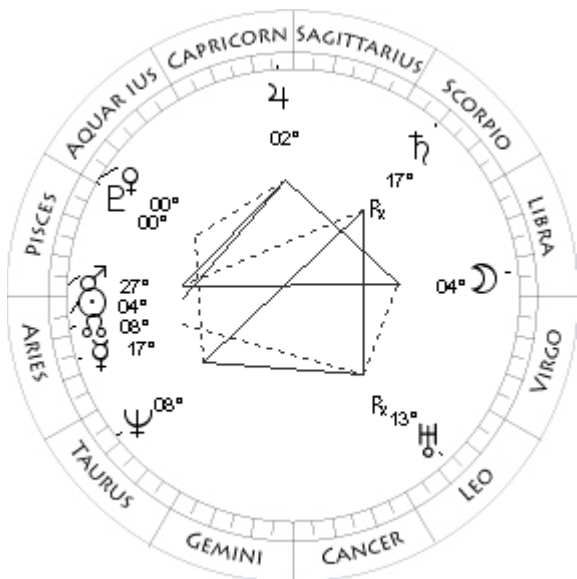
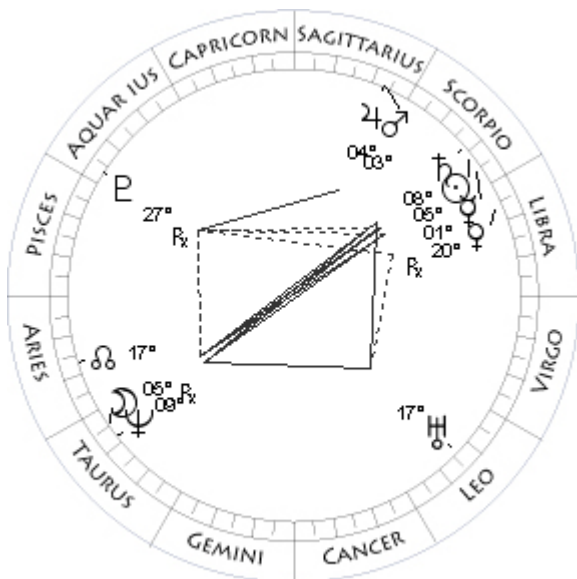
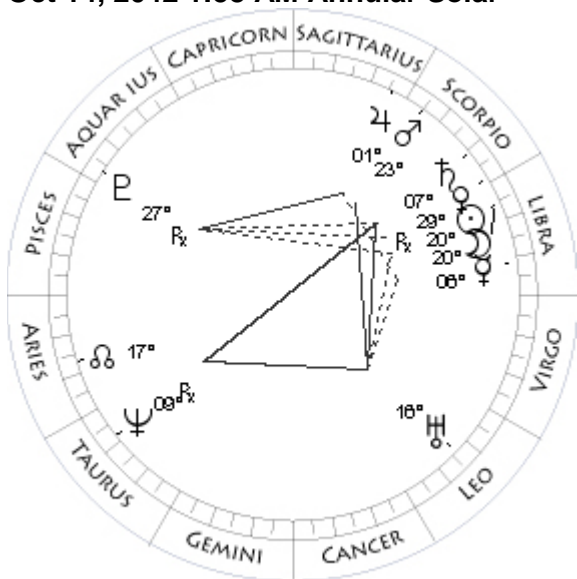
Apr 20, 2042 2:15 AM Total Solar

Mo 16Ta02 + 0°54	Mo 00Ta05 + 0°18
Su 16Sc09 - 0°00	Su 00Ta09 - 0°00
Me 06Sc57 + 1°13	Me 19Ta25 + 2°25
Ve 02Sc55 + 1°19	Ve 26Ta19 + 0°30
Ma 15Le07 + 1°45	Ma 13Le35 + 2°24
Ju 13Sc05 + 0°56	Ju 00Sa26 + 1°07R
Sa 29Li37 + 2°16	Sa 03Sc32 + 2°44R
Ur 12Le43 + 0°38	Ur 08Le38 + 0°40
Ne 06Ta27 - 1°49R	Ne 07Ta31 - 1°42
Pl 26Aq14 -10°34R	Pl 29Aq37 -10°33
No 05Ta33 - 0°00	No 26Ar55 - 0°00
Coords: 137W/27N	

Sep 29, 2042 10:43 AM Partial Umbral



Oct 14, 2042 1:58 AM Annular Solar



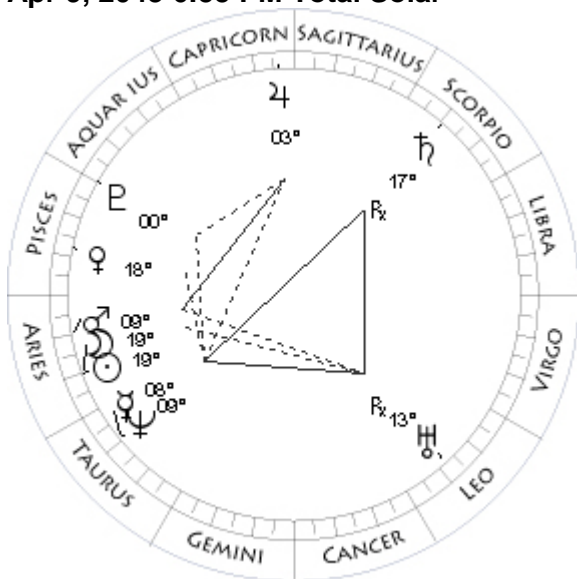
Oct 28, 2042 7:32 PM Partial Penumbral

Mo 06Ar30 - 1°03	Mo 05Ta20 + 1°35
Su 06Li26 - 0°00	Su 05Sc31 - 0°00
Me 20Vi15 + 0°14	Me 01Sc58 + 0°54
Ve 03Sc45 - 7°24R	Ve 20Li42 - 5°03R
Ma 13Sc10 - 0°22	Ma 03Sa50 - 0°39
Ju 29Sc08 + 0°39	Ju 04Sa47 + 0°35
Sa 05Sc30 + 2°13	Sa 08Sc55 + 2°11
Ur 16Le10 + 0°39	Ur 17Le10 + 0°40
Ne 09Ta49 - 1°49R	Ne 09Ta03 - 1°49R
Pl 28Aq01 -11°02R	Pl 27Aq41 -10°57R
No 18Ar20 - 0°00	No 16Ar46 - 0°00
Coords: 163E/ 2N	Coords: 62W/15N

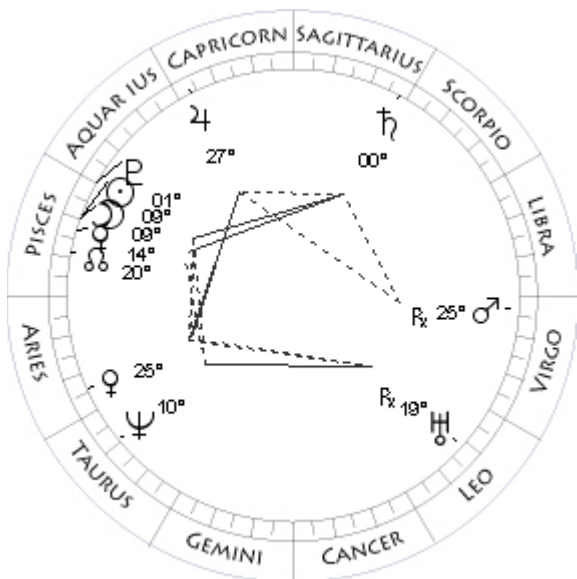
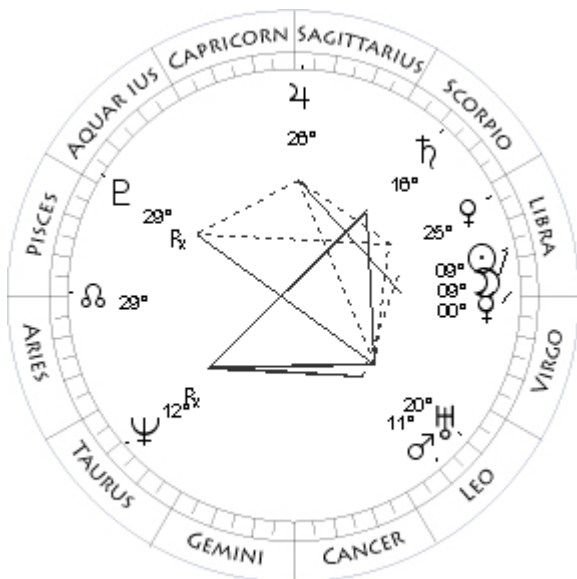
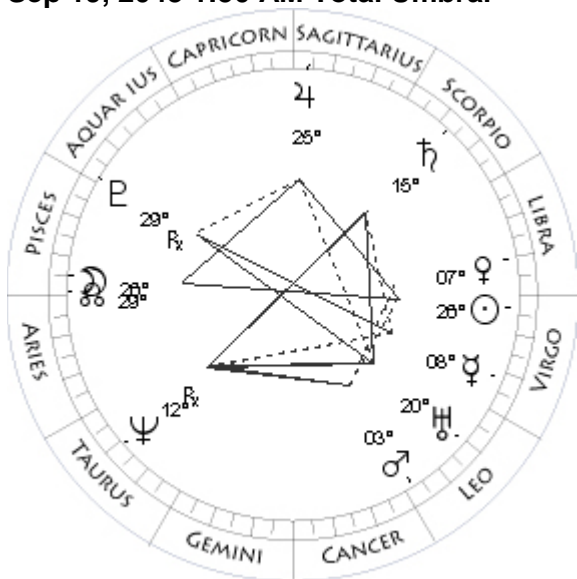
Mar 25, 2043 2:30 PM Total Umbral

Mo 20Li49 - 0°16	Mo 04Li51 + 0°21
Su 20Li52 - 0°00	Su 04Ar51 - 0°00
Me 06Li59 + 1°58	Me 17Ar17 + 0°23
Ve 29Li04 - 7°36R	Ve 00Pi16 - 0°44
Ma 23Sc20 - 0°31	Ma 27Pi51 - 0°55
Ju 01Sa49 + 0°37	Ju 02Cp35 + 0°26
Sa 07Sc10 + 2°11	Sa 17Sc52 + 2°32R
Ur 16Le45 + 0°39	Ur 13Le36 + 0°42R
Ne 09Ta28 - 1°49R	Ne 08Ta46 - 1°43
Pl 27Aq49 -11°00R	Pl 00Pi28 -10°45
No 17Ar33 - 0°00	No 08Ar57 - 0°00
Coords: 138W/24S	

Apr 9, 2023 6:55 PM Total Solar



Sep 19, 2023 1:50 AM Total Umbral



Oct 3, 2023 3:00 AM Partial Solar

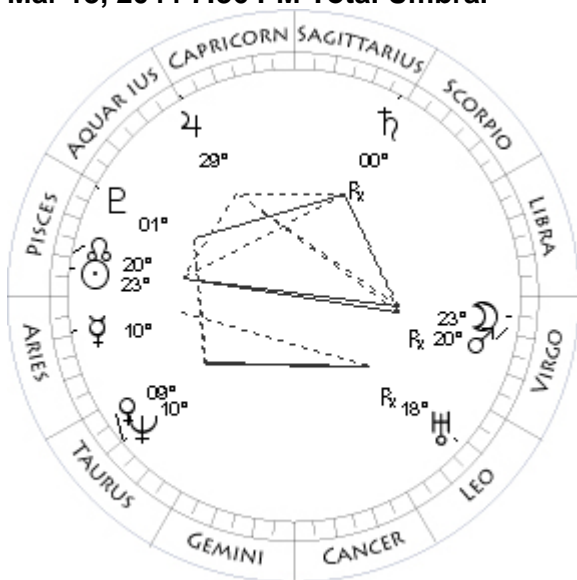
Mo 19Ar41 + 1°01	Mo 09Li42 - 0°56
Su 19Ar50 - 0°00	Su 09Li49 - 0°00
Me 08Ta31 + 2°55	Me 00Li29 + 1°50
Ve 18Pi39 - 1°18	Ve 25Li05 + 0°46
Ma 09Ar39 - 0°48	Ma 11Le57 + 1°12
Ju 03Cp25 + 0°26	Ju 26Sa33 + 0°05
Sa 17Sc03 + 2°34R	Sa 16Sc26 + 2°04
Ur 13Le22 + 0°42R	Ur 20Le49 + 0°40
Ne 09Ta18 - 1°43	Ne 12Ta03 - 1°49R
Pl 00Pi48 -10°49	Pl 29Aq24 -11°22R
No 08Ar09 - 0°00	No 28Pi48 - 0°00

Coords: 162W/62N

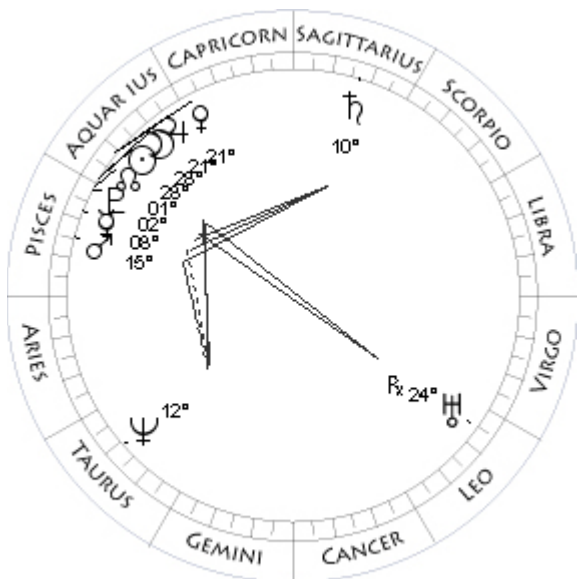
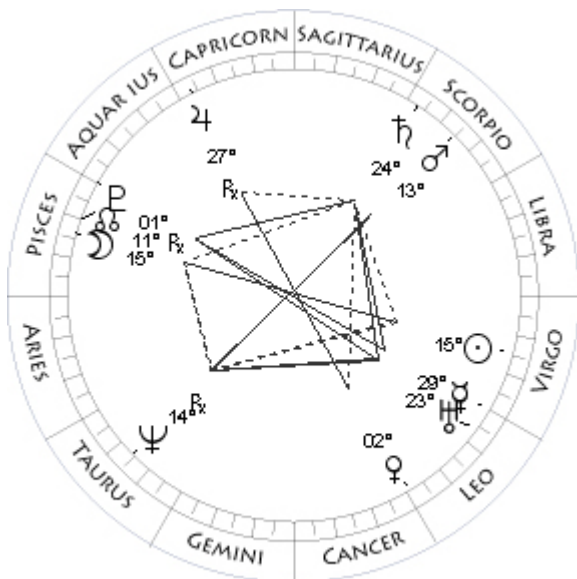
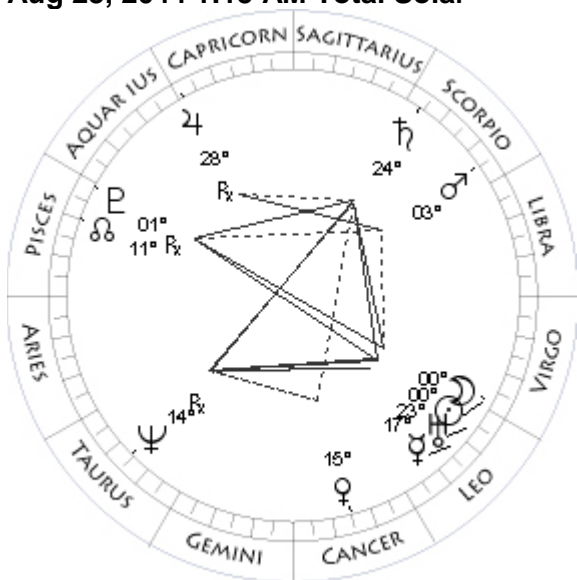
Feb 28, 2024 8:22 PM Annular Solar

Mo 26Pi03 - 0°20	Mo 09Pi58 - 0°56
Su 26Vi03 - 0°00	Su 09Pi54 - 0°00
Me 08Vi14 + 0°50	Me 14Pi29 - 1°29
Ve 07Li38 + 1°10	Ve 25Ar11 + 1°17
Ma 03Le25 + 1°01	Ma 25Vi58 + 4°00R
Ju 25Sa04 + 0°07	Ju 27Cp06 - 0°10
Sa 15Sc04 + 2°07	Sa 00Sa09 + 2°11
Ur 20Le07 + 0°40	Ur 19Le16 + 0°45R
Ne 12Ta20 - 1°48R	Ne 10Ta16 - 1°44
Pl 29Aq39 -11°23R	Pl 01Pi09 -11°00
No 29Pi33 - 0°00	No 20Pi56 - 0°00

Mar 13, 2044 7:36 PM Total Umbral



Aug 23, 2044 1:15 AM Total Solar



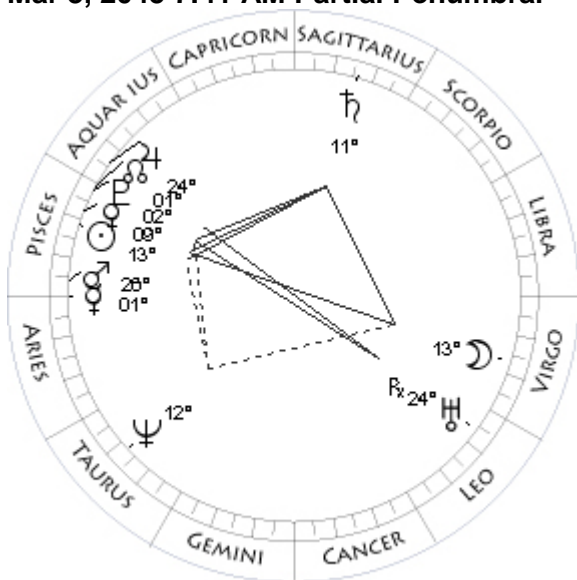
Sep 7, 2044 11:19 AM Total Umbral

Mo 23Vi49 - 0°20	Mo 15Pi26 + 0°24
Su 23Pi53 - 0°00	Su 15Vi30 - 0°00
Me 10Ar14 + 0°55	Me 29Le44 + 1°12
Ve 09Ta58 + 2°30	Ve 02Le26 - 1°10
Ma 20Vi42 + 3°53R	Ma 13Sc20 - 0°45
Ju 29Cp46 - 0°12	Ju 27Cp29 - 0°38R
Sa 00Sa12 + 2°14R	Sa 24Sc59 + 1°56
Ur 18Le45 + 0°44R	Ur 23Le58 + 0°41
Ne 10Ta37 - 1°44	Ne 14Ta46 - 1°48R
Pl 01Pi32 -11°02	Pl 01Pi17 -11°43R
No 20Pi11 - 0°00	No 10Pi47 - 0°00
Coords: 68W/ 2N	

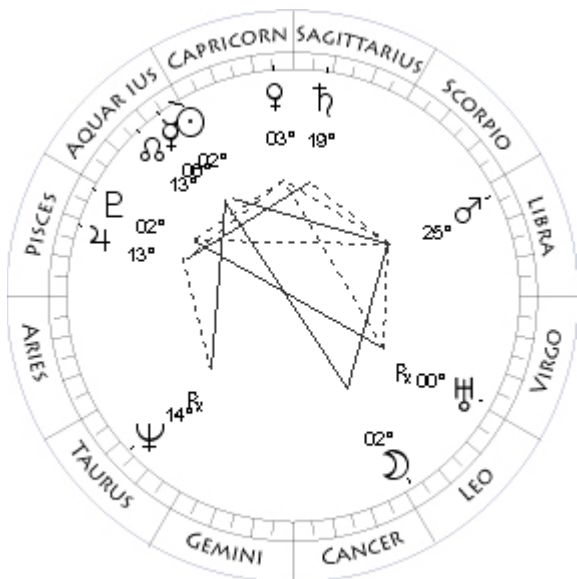
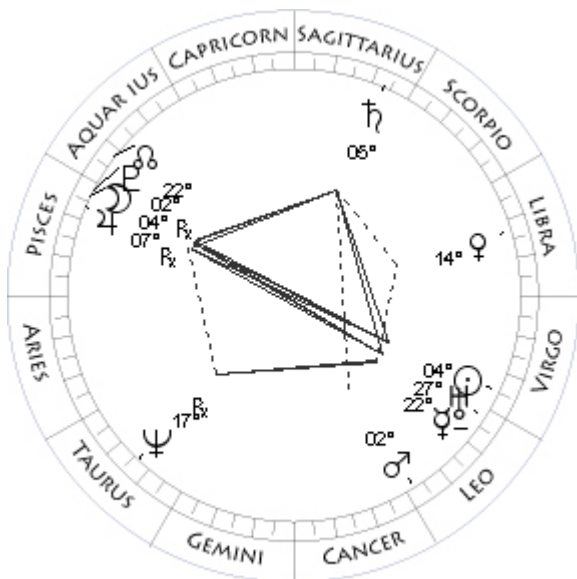
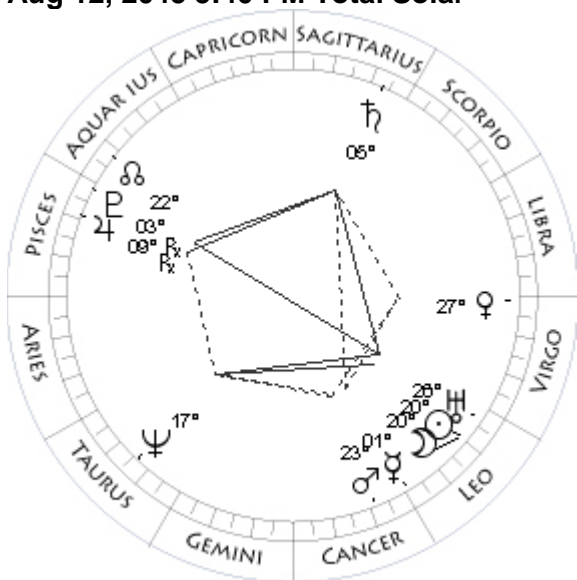
Feb 16, 2045 11:53 PM Annular Solar

Mo 00Vi39 + 0°57	Mo 28Aq43 - 0°17
Su 00Vi35 - 0°00	Su 28Aq43 - 0°00
Me 17Le07 - 2°42	Me 08Pi39 - 1°15
Ve 15Cn43 - 2°18	Ve 21Aq20 - 1°11
Ma 03Sc19 - 0°34	Ma 15Pi36 - 0°53
Ju 28Cp34 - 0°38R	Ju 21Aq29 - 0°41
Sa 24Sc09 + 2°00	Sa 10Sa57 + 1°50
Ur 23Le02 + 0°41	Ur 24Le40 + 0°46R
Ne 14Ta53 - 1°47R	Ne 12Ta16 - 1°45
Pl 01Pi37 -11°43R	Pl 02Pi11 -11°18
No 11Pi36 - 0°00	No 02Pi11 - 0°00
Coords: 122E/64N	Coords: 166E/28S

Mar 3, 2045 7:41 AM Partial Penumbral



Aug 12, 2045 5:40 PM Total Solar



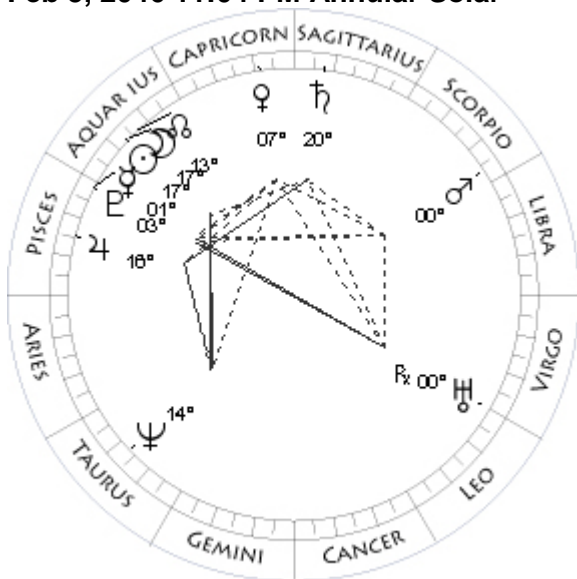
Aug 27, 2045 1:53 PM Partial Penumbral

Mo 13Vi00 - 1°02	Mo 04Pi35 + 1°05
Su 13Pi08 - 0°00	Su 04Vi43 - 0°00
Me 01Ar15 + 1°36	Me 22Le50 + 1°24
Ve 09Pi16 - 1°24	Ve 14Li57 - 0°04
Ma 26Pi49 - 0°46	Ma 02Le50 + 1°00
Ju 24Aq51 - 0°43	Ju 07Pi41 - 1°21R
Sa 11Sa32 + 1°52	Sa 05Sa26 + 1°42
Ur 24Le04 + 0°46R	Ur 27Le44 + 0°42
Ne 12Ta33 - 1°44	Ne 17Ta07 - 1°47R
Pl 02Pi35 -11°19	Pl 02Pi57 -12°02R
No 01Pi25 - 0°00	No 22Aq02 - 0°00
Coords: 113E/ 6N	

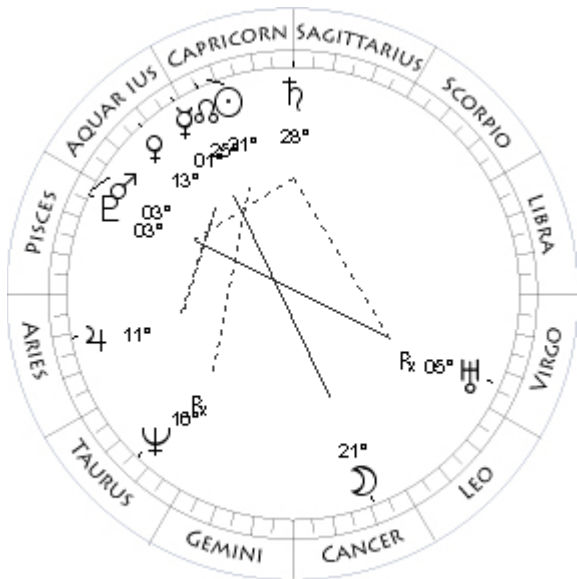
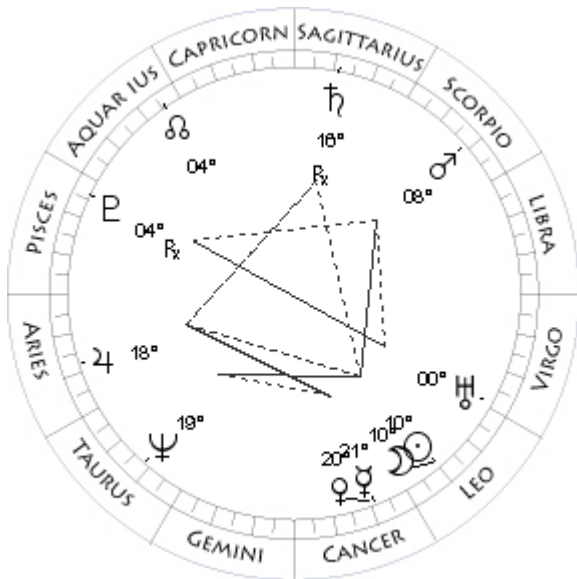
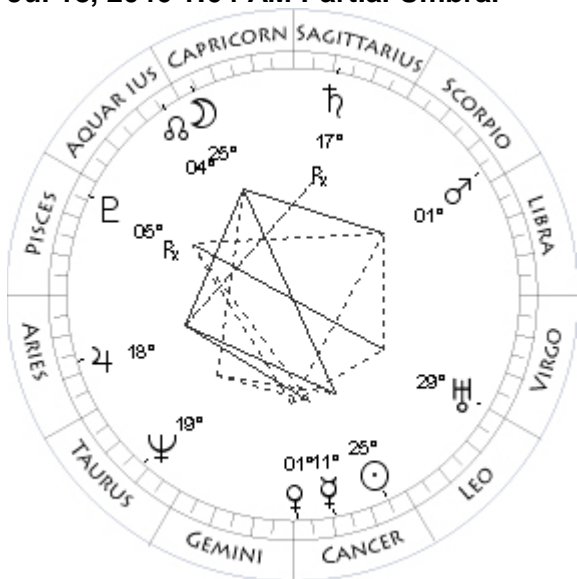
Jan 22, 2046 1:00 PM Partial Umbral

Mo 20Le25 + 0°13	Mo 02Le44 + 1°00
Su 20Le26 - 0°00	Su 02Aq40 - 0°00
Me 01Le56 - 1°42	Me 06Aq48 - 2°05
Ve 27Vi36 + 0°46	Ve 03Cp41 + 6°21
Ma 23Cn15 + 0°53	Ma 25Li27 + 2°12
Ju 09Pi34 - 1°19R	Ju 13Pi05 - 1°04
Sa 05Sa10 + 1°45	Sa 19Sa34 + 1°26
Ur 26Le48 + 0°42	Ur 00Vi42 + 0°47R
Ne 17Ta08 - 1°46	Ne 14Ta20 - 1°46R
Pl 03Pi16 -12°01R	Pl 02Pi49 -11°36
No 22Aq49 - 0°00	No 14Aq12 - 0°00
Coords: 168W/21N	

Feb 5, 2046 11:04 PM Annular Solar



Jul 18, 2046 1:04 AM Partial Umbral



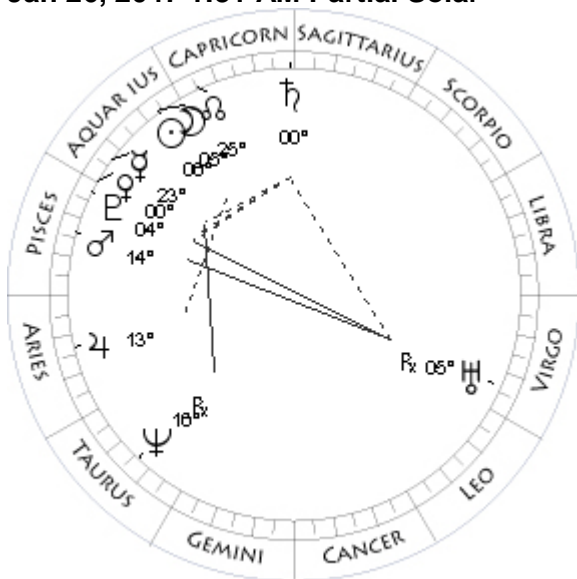
Aug 2, 2046 10:19 AM Total Solar

Mo 17Aq15 + 0°20	Mo 10Le15 - 0°32
Su 17Aq19 - 0°00	Su 10Le20 - 0°00
Me 01Pi45 - 1°00	Me 21Cn35 - 0°51
Ve 07Cp46 + 5°50	Ve 20Cn36 + 0°08
Ma 00Sc33 + 2°19	Ma 08Sc51 - 1°20
Ju 16Pi15 - 1°03	Ju 18Ar57 - 1°26
Sa 20Sa52 + 1°27	Sa 16Sa52 + 1°26R
Ur 00Vi07 + 0°47R	Ur 00Vi37 + 0°43
Ne 14Ta22 - 1°46	Ne 19Ta17 - 1°45
Pl 03Pi12 -11°35	Pl 04Pi53 -12°17R
No 13Aq26 - 0°00	No 04Aq02 - 0°00
Coords: 171E/ 5N	Coords: 15W/13S

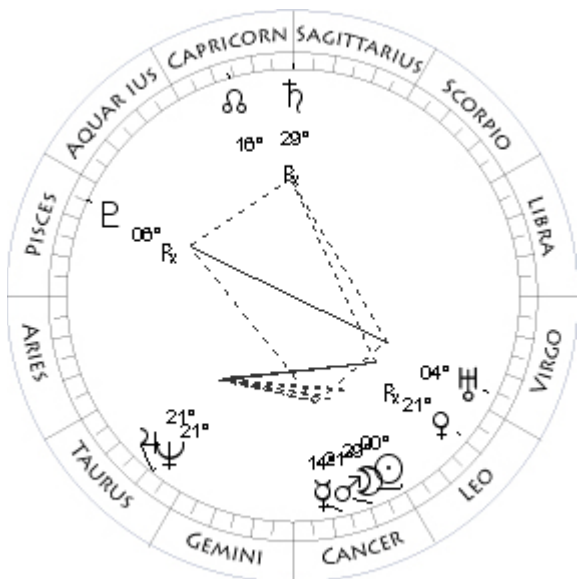
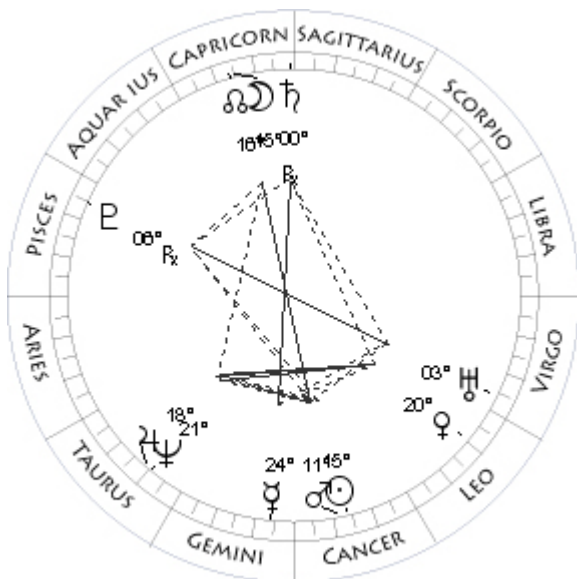
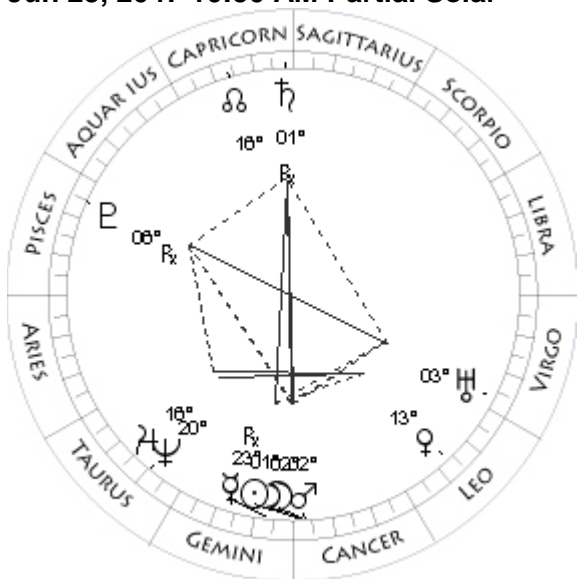
Jan 12, 2047 1:24 AM Total Umbral

Mo 25Cp41 - 0°48	Mo 21Cn45 + 0°19
Su 25Cn38 - 0°00	Su 21Cp45 - 0°00
Me 11Cn33 - 4°21	Me 01Aq32 - 2°05
Ve 01Cn55 - 0°33	Ve 13Aq13 - 1°35
Ma 01Sc16 - 1°07	Ma 03Pi46 - 0°59
Ju 18Ar17 - 1°22	Ju 11Ar35 - 1°15
Sa 17Sa29 + 1°28R	Sa 28Sa38 + 1°03
Ur 29Le44 + 0°43	Ur 05Vi57 + 0°47R
Ne 19Ta03 - 1°44	Ne 16Ta38 - 1°47R
Pl 05Pi09 -12°14R	Pl 03Pi54 -11°55
No 04Aq51 - 0°00	No 25Cp25 - 0°00

Jan 26, 2047 1:31 AM Partial Solar



Jun 23, 2047 10:50 AM Partial Solar



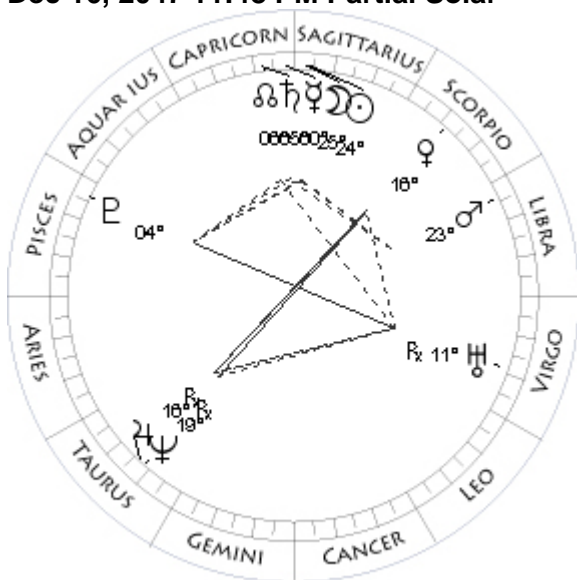
Jul 7, 2047 10:34 AM Total Umbra

Mo 05Aq53 + 0°58	Mo 15Cp16 - 0°04
Su 06Aq00 - 0°00	Su 15Cn17 - 0°00
Me 23Aq45 - 0°39	Me 24Ge58 - 3°33
Ve 00Pi40 - 1°34	Ve 20Le46 - 1°00
Ma 14Pi39 - 0°49	Ma 11Cn45 + 0°52
Ju 13Ar33 - 1°12	Ju 18Ta47 - 1°03
Sa 00Cp09 + 1°03	Sa 00Cp15 + 1°03R
Ur 05Vi30 + 0°48R	Ur 03Vi42 + 0°44
Ne 16Ta35 - 1°46R	Ne 21Ta01 - 1°43
Pl 04Pi15 -11°53	Pl 06Pi41 -12°28R
No 24Cp41 - 0°00	No 16Cp05 - 0°00
Coords: 157E/23S	

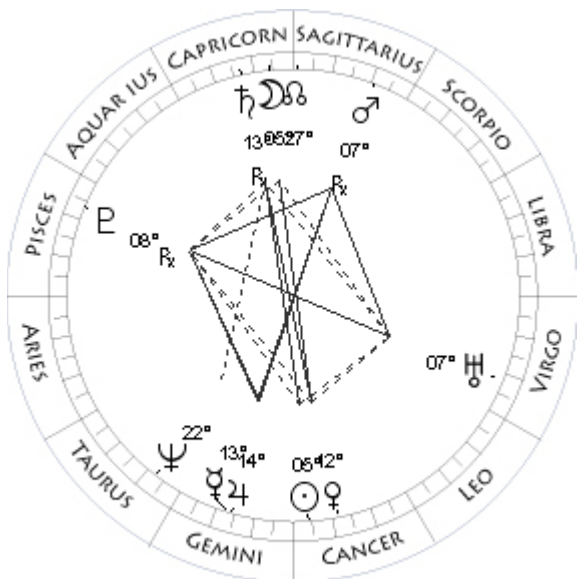
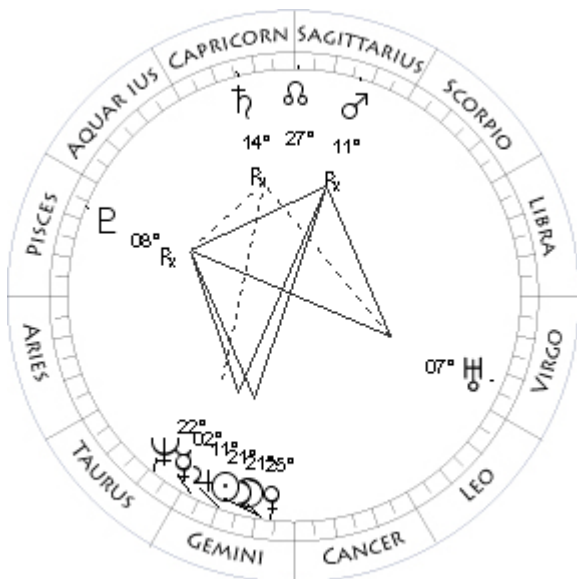
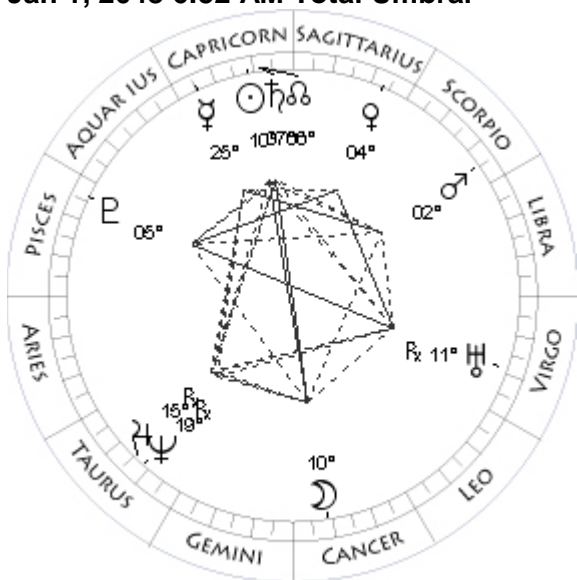
Jul 22, 2047 10:34 PM Partial Solar

Mo 02Cn02 + 1°16	Mo 29Cn55 - 1°16
Su 01Cn57 - 0°00	Su 00Le04 - 0°00
Me 23Ge44 - 4°27R	Me 14Cn05 - 0°13
Ve 13Le56 + 1°05	Ve 21Le10 - 4°19R
Ma 02Cn25 + 0°46	Ma 21Cn58 + 0°57
Ju 16Ta07 - 1°02	Ju 21Ta20 - 1°04
Sa 01Cp16 + 1°04R	Sa 29Sa15 + 1°01R
Ur 03Vi07 + 0°45	Ur 04Vi29 + 0°44
Ne 20Ta38 - 1°43	Ne 21Ta21 - 1°44
Pl 06Pi48 -12°24R	Pl 06Pi27 -12°32R
No 16Cp49 - 0°00	No 15Cp16 - 0°00

Dec 16, 2047 11:48 PM Partial Solar



Jan 1, 2048 6:52 AM Total Umbral



Jun 11, 2048 0:56 PM Annular Solar

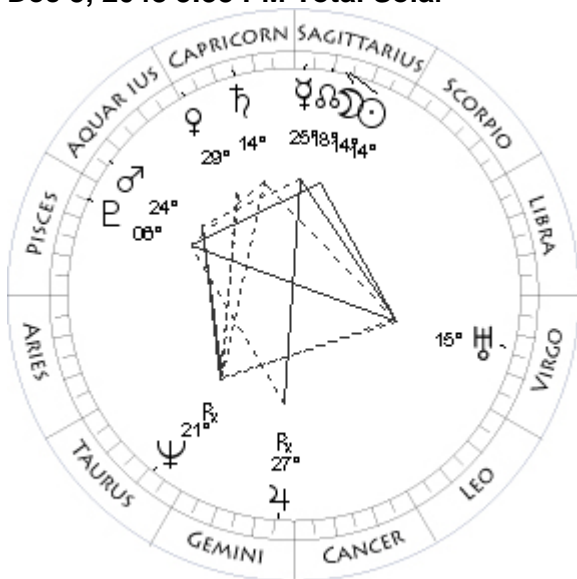
Mo 25Sa01 - 1°05	Mo 21Ge19 + 0°35
Su 24Sa57 - 0°00	Su 21Ge17 - 0°00
Me 00Cp57 - 1°51	Me 02Ge46 - 4°10
Ve 16Sc05 + 2°09	Ve 25Ge01 + 0°19
Ma 23Li39 + 1°22	Ma 11Sa02 - 2°44R
Ju 16Ta39 - 1°08R	Ju 11Ge27 - 0°34
Sa 05Cp37 + 0°41	Sa 14Cp16 + 0°34R
Ur 11Vi10 + 0°47R	Ur 07Vi23 + 0°46
Ne 19Ta20 - 1°48R	Ne 22Ta28 - 1°42
Pl 04Pi47 -12°18	Pl 08Pi12 -12°36R
No 07Cp28 - 0°00	No 28Sa04 - 0°00

Jun 26, 2048 2:00 AM Partial Umbral

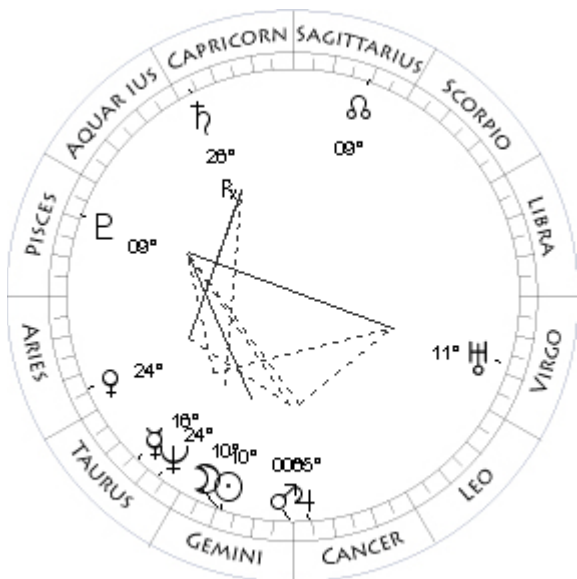
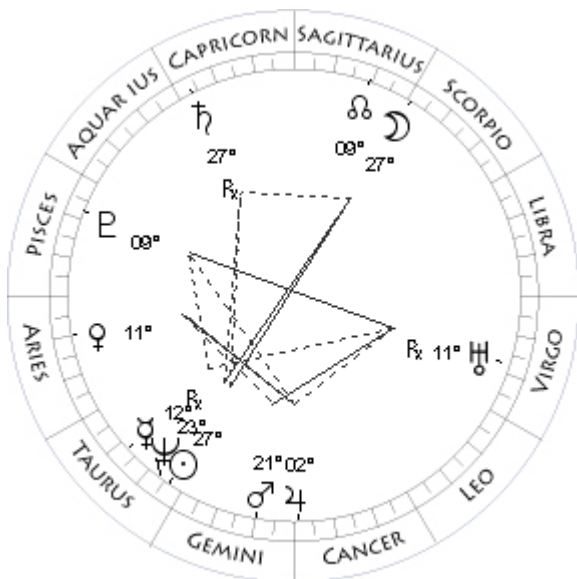
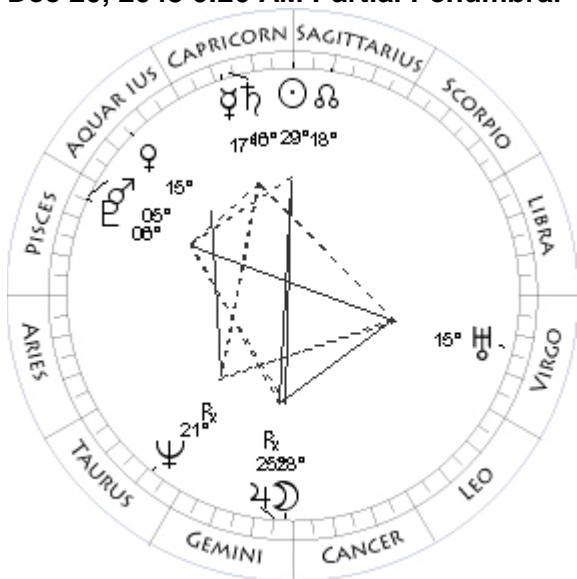
Mo 10Cn28 - 0°20	Mo 05Cp05 + 0°41
Su 10Cp31 - 0°00	Su 05Cn11 - 0°00
Me 25Cp12 - 2°05	Me 13Ge13 - 2°45
Ve 04Sa41 + 1°49	Ve 12Cn53 + 0°51
Ma 02Sc32 + 1°22	Ma 07Sa03 - 3°17R
Ju 15Ta48 - 1°04R	Ju 14Ge47 - 0°33
Sa 07Cp25 + 0°40	Sa 13Cp15 + 0°33R
Ur 11Vi04 + 0°47R	Ur 07Vi50 + 0°45
Ne 19Ta03 - 1°47R	Ne 22Ta56 - 1°42
Pl 05Pi01 -12°14	Pl 08Pi08 -12°41R
No 06Cp40 - 0°00	No 27Sa18 - 0°00

Coords: 102E/23N

Dec 5, 2048 3:33 PM Total Solar



Dec 20, 2048 6:26 AM Partial Penumbral



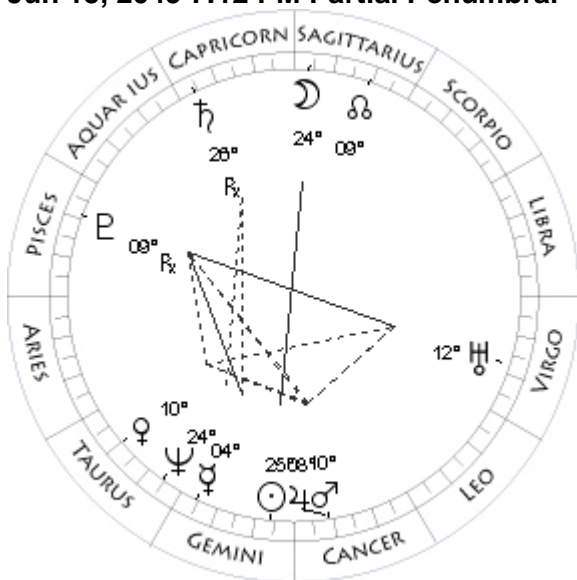
May 17, 2049 11:24 AM Partial Penumbral

Mo 14Sa11 - 0°24	Mo 27Sc05 - 1°07
Su 14Sa11 - 0°00	Su 27Ta01 - 0°00
Me 25Sa49 - 2°03	Me 12Ta37 - 2°28R
Ve 29Cp20 - 2°29	Ve 11Ar18 - 1°15
Ma 24Aq30 - 1°18	Ma 21Ge04 + 0°52
Ju 27Ge30 - 0°26R	Ju 02Cn21 - 0°02
Sa 14Cp30 + 0°16	Sa 27Cp18 + 0°05R
Ur 15Vi51 + 0°46	Ur 11Vi48 + 0°47R
Ne 21Ta53 - 1°48R	Ne 23Ta43 - 1°40
Pl 06Pi00 -12°37	Pl 09Pi26 -12°43
No 18Sa42 - 0°00	No 10Sa04 - 0°00
Coords: 172E/21S	

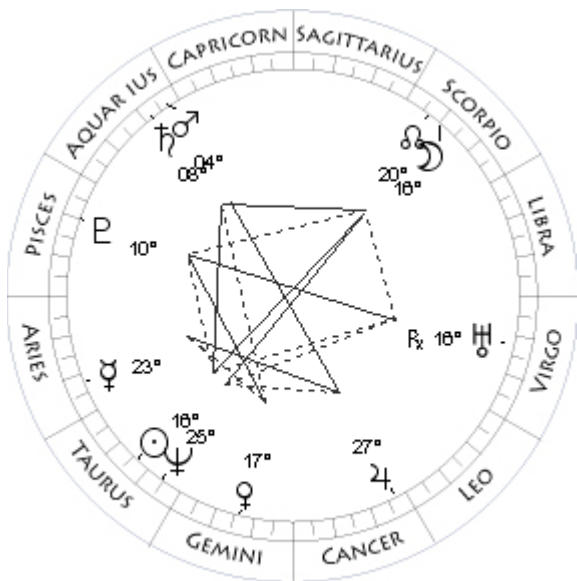
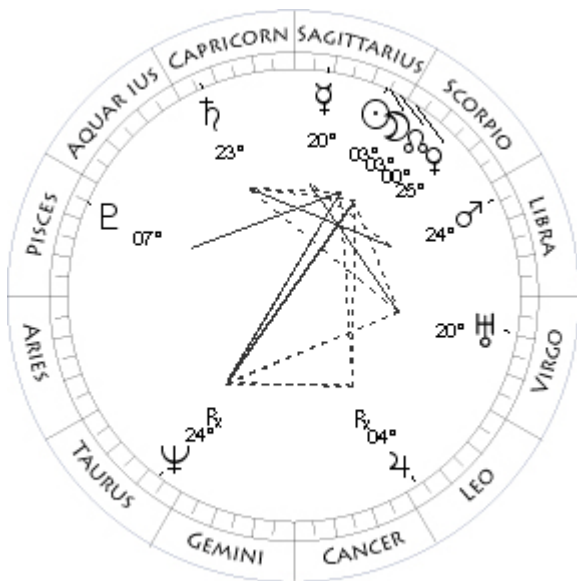
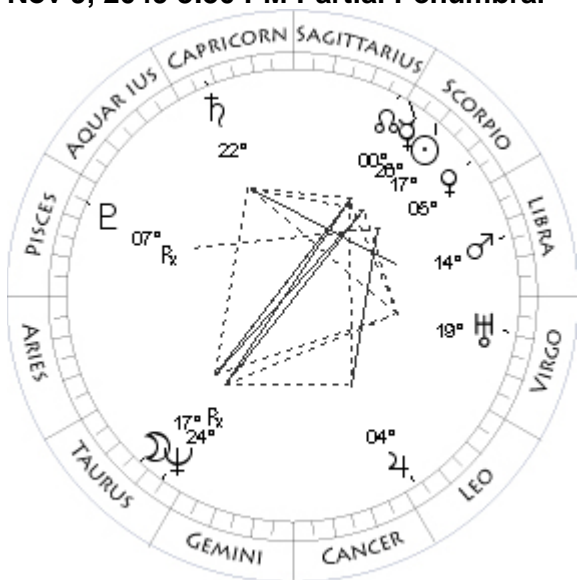
May 31, 2049 1:57 PM Annular Solar

Mo 28Ge56 - 0°57	Mo 10Ge32 - 0°06
Su 29Sa03 - 0°00	Su 10Ge34 - 0°00
Me 17Cp33 - 2°05	Me 16Ta41 - 3°42
Ve 15Aq42 - 2°01	Ve 24Ar49 - 2°10
Ma 05Pi21 - 1°01	Ma 00Cn28 + 0°56
Ju 25Ge32 - 0°25R	Ju 05Cn20 - 0°01
Sa 16Cp08 + 0°15	Sa 26Cp54 + 0°04R
Ur 15Vi57 + 0°47	Ur 11Vi53 + 0°46
Ne 21Ta33 - 1°47R	Ne 24Ta15 - 1°41
Pl 06Pi10 -12°33	Pl 09Pi31 -12°48
No 17Sa55 - 0°00	No 09Sa19 - 0°00

Jun 15, 2049 7:12 PM Partial Penumbral



Nov 9, 2049 3:50 PM Partial Penumbral



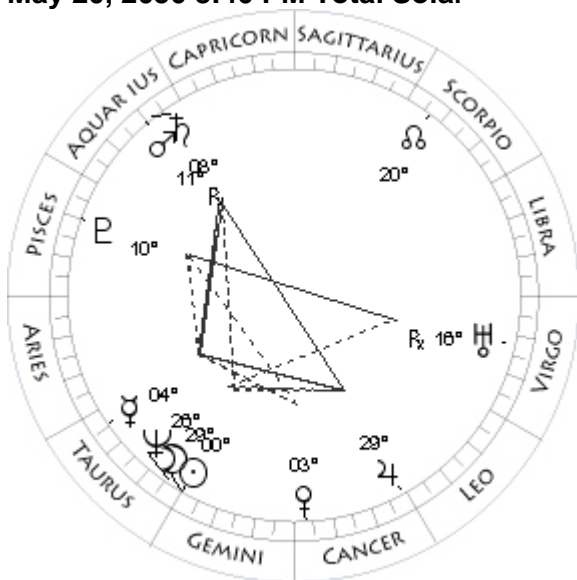
Nov 25, 2049 5:31 AM Total Solar

Mo 24Sa58 + 1°25	Mo 03Sa19 + 0°17
Su 25Ge08 - 0°00	Su 03Sa23 - 0°00
Me 04Ge55 - 2°04	Me 20Sa03 - 2°16
Ve 10Ta37 - 2°34	Ve 25Sc00 + 0°48
Ma 10Cn29 + 1°00	Ma 24Li20 + 0°59
Ju 08Cn41 + 0°00	Ju 04Le20 + 0°21R
Sa 26Cp10 + 0°03R	Sa 23Cp44 - 0°10
Ur 12Vi09 + 0°46	Ur 20Vi19 + 0°45
Ne 24Ta46 - 1°41	Ne 24Ta29 - 1°47R
Pl 09Pi31 -12°53R	Pl 07Pi17 -12°57
No 08Sa31 - 0°00	No 29Sc55 - 0°00
Coords: 72W/22S	

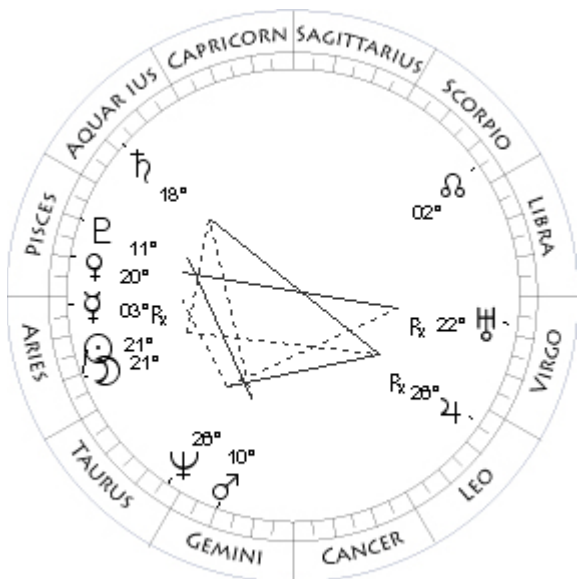
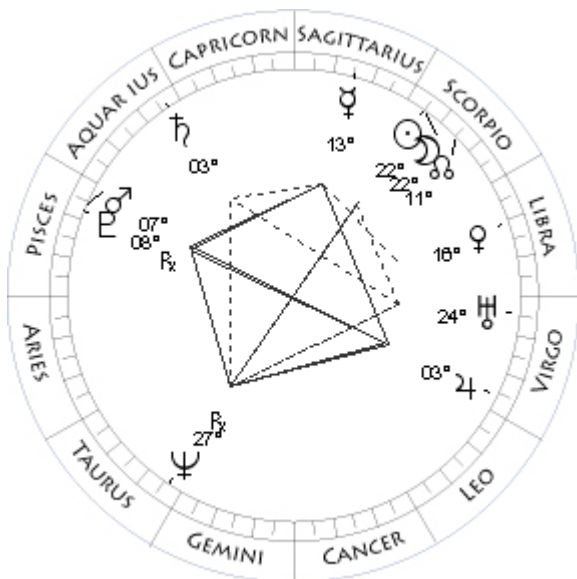
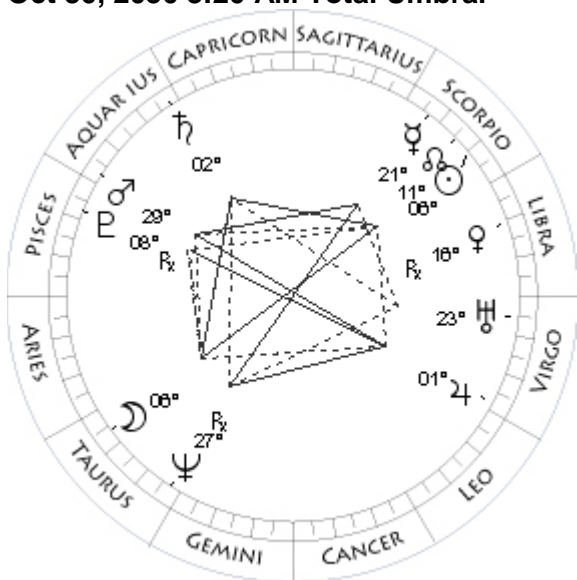
May 6, 2050 10:30 PM Total Umbra

Mo 17Ta46 + 1°08	Mo 16Sc37 - 0°24
Su 17Sc41 - 0°00	Su 16Ta36 - 0°00
Me 26Sc38 - 1°03	Me 23Ar17 - 2°37
Ve 05Sc27 + 1°16	Ve 17Ge19 + 1°17
Ma 14Li25 + 1°03	Ma 04Aq03 - 1°39
Ju 04Le10 + 0°18	Ju 27Cn39 + 0°34
Sa 22Cp28 - 0°09	Sa 08Aq49 - 0°24
Ur 19Vi47 + 0°45	Ur 16Vi44 + 0°47R
Ne 24Ta56 - 1°47R	Ne 25Ta29 - 1°40
Pl 07Pi18 -13°01R	Pl 10Pi36 -12°54
No 00Sa45 - 0°00	No 21Sc18 - 0°00
Coords: 118W/18N	Coords: 22W/17S

May 20, 2050 8:40 PM Total Solar



Oct 30, 2050 3:20 AM Total Umbral



Nov 14, 2050 1:28 PM Partial Solar

Mo 29Ta55 - 0°50	Mo 22Sc15 + 0°58
Su 00Ge02 - 0°00	Su 22Sc22 - 0°00
Me 04Ta51 - 3°14	Me 13Sa04 - 2°31
Ve 03Cn56 + 1°46	Ve 16Li52 - 0°51
Ma 11Aq03 - 2°16	Ma 07Pi00 - 1°41
Ju 29Cn40 + 0°34	Ju 03Vi45 + 0°52
Sa 08Aq55 - 0°25R	Sa 03Aq31 - 0°37
Ur 16Vi36 + 0°47R	Ur 24Vi34 + 0°45
Ne 26Ta00 - 1°40	Ne 27Ta07 - 1°46R
Pl 10Pi46 -12°59	Pl 08Pi36 -13°15R
No 20Sc34 - 0°00	No 11Sc09 - 0°00

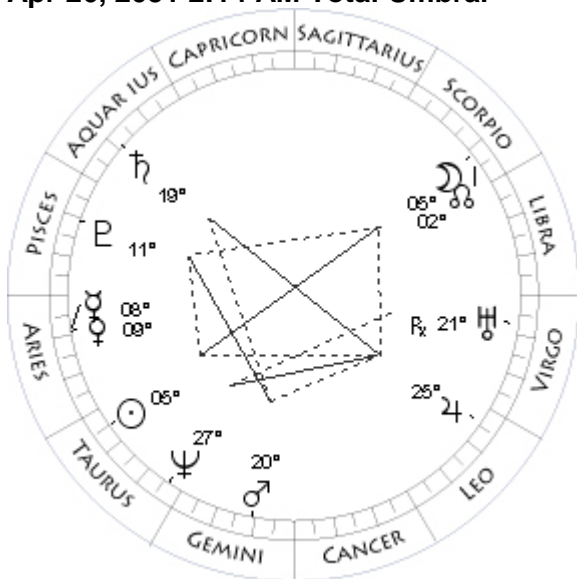
Coords: 124E/40S

Apr 11, 2051 2:08 AM Total Solar

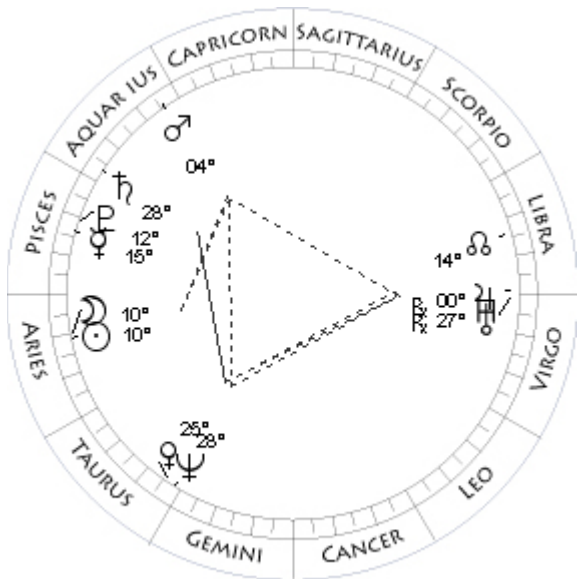
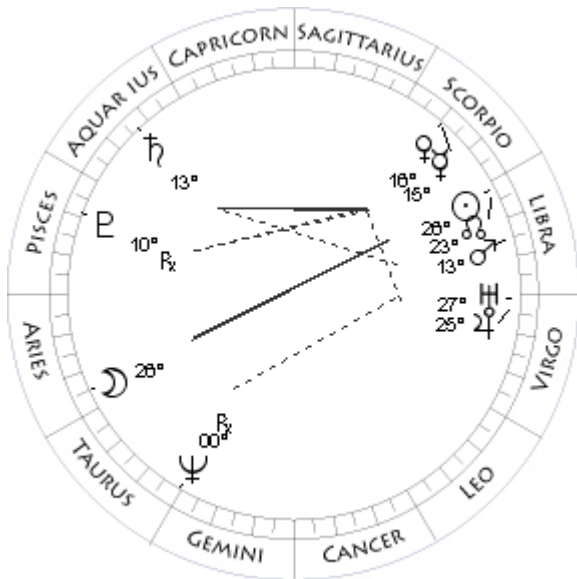
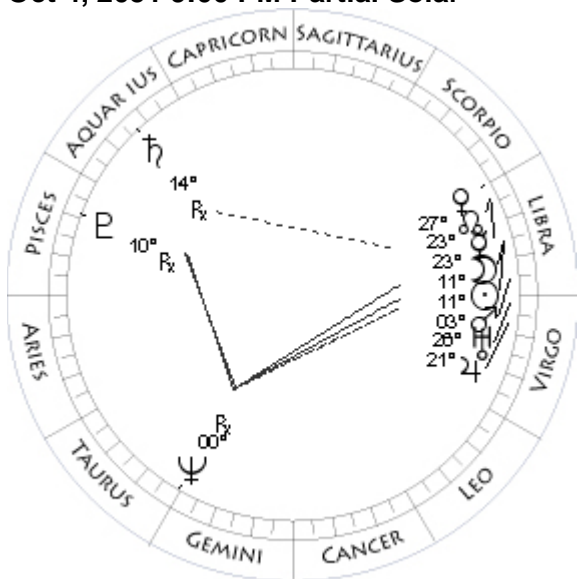
Mo 06Ta56 + 0°27	Mo 21Ar14 + 1°02
Su 06Sc54 - 0°00	Su 21Ar10 - 0°00
Me 21Sc13 - 1°21	Me 03Ar08 + 0°12R
Ve 16Li55 - 4°25R	Ve 20Pi50 - 1°21
Ma 29Aq12 - 2°27	Ma 10Ge44 + 1°06
Ju 01Vi48 + 0°48	Ju 26Le02 + 1°11R
Sa 02Aq44 - 0°37	Sa 18Aq38 - 0°48
Ur 23Vi52 + 0°44	Ur 22Vi21 + 0°48R
Ne 27Ta32 - 1°46R	Ne 26Ta44 - 1°39
Pl 08Pi42 -13°20R	Pl 11Pi25 -13°02
No 11Sc58 - 0°00	No 03Sc21 - 0°00

Coords: 66W/74N

Apr 26, 2051 2:14 AM Total Umbral



Oct 4, 2051 9:00 PM Partial Solar



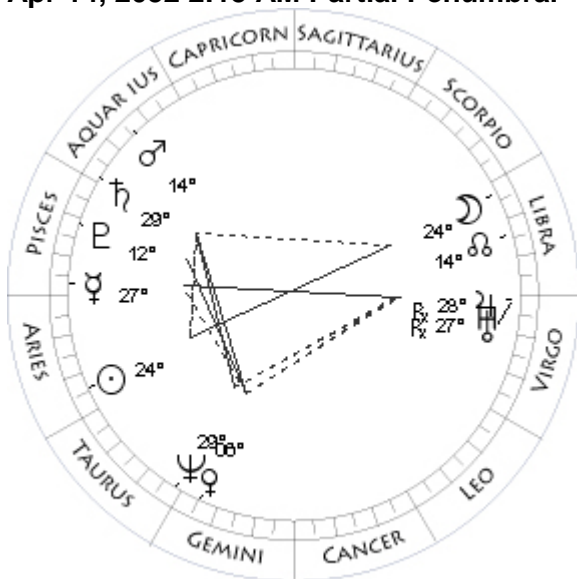
Oct 19, 2051 7:10 PM Total Umbral

Mo 05Sc47 + 0°18	Mo 26Ar19 - 0°15
Su 05Ta50 - 0°00	Su 26Li22 - 0°00
Me 08Ar53 - 2°33	Me 15Sc36 - 1°43
Ve 09Ar04 - 1°37	Ve 16Sc26 + 0°04
Ma 20Ge26 + 1°09	Ma 13Li07 + 0°50
Ju 25Le52 + 1°09	Ju 25Vi03 + 1°03
Sa 19Aq37 - 0°50	Sa 13Aq55 - 1°06
Ur 21Vi52 + 0°47R	Ur 27Vi50 + 0°43
Ne 27Ta15 - 1°39	Ne 00Ge06 - 1°44R
Pl 11Pi43 -13°06	Pl 10Pi09 -13°37R
No 02Sc33 - 0°00	No 23Li11 - 0°00
Coords: 69W 10N	

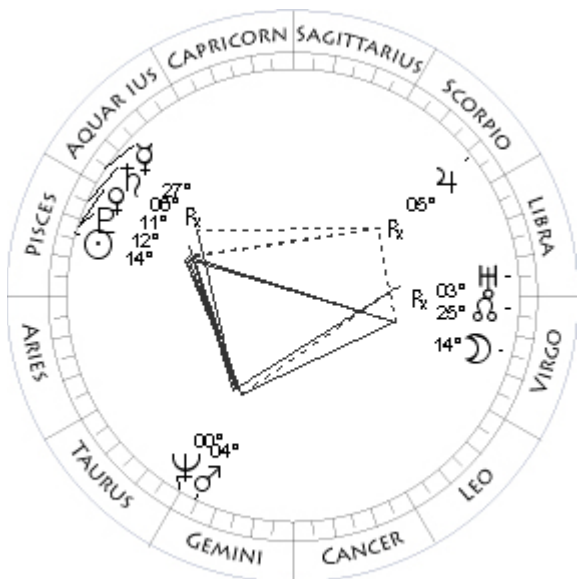
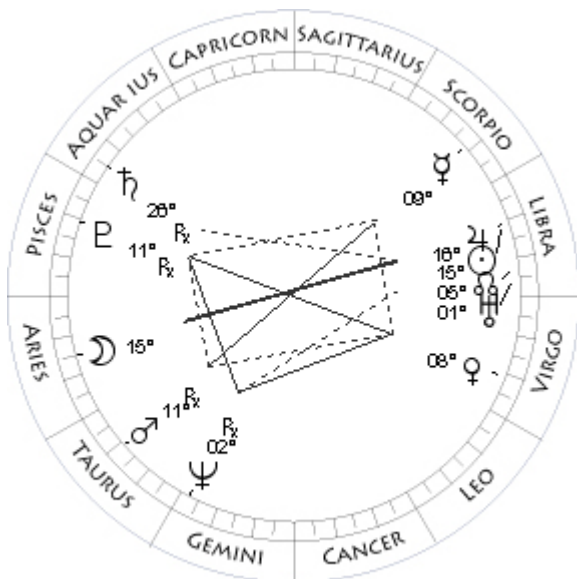
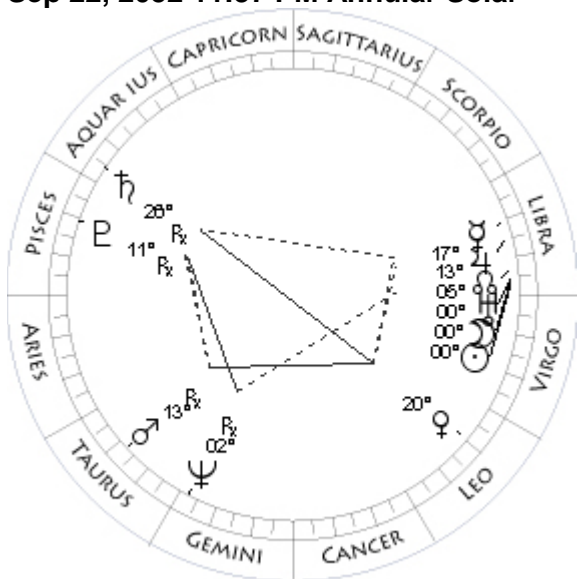
Mar 30, 2052 6:29 PM Total Solar

Mo 11Li41 - 1°05	Mo 10Ar46 + 0°20
Su 11Li36 - 0°00	Su 10Ar46 - 0°00
Me 23Li05 - 0°01	Me 15Pi23 - 0°27
Ve 27Li55 + 0°40	Ve 25Ta54 + 4°03
Ma 03Li26 + 0°54	Ma 04Aq34 - 1°02
Ju 21Vi59 + 1°01	Ju 00Li00 + 1°34R
Sa 14Aq04 - 1°07R	Sa 28Aq28 - 1°10
Ur 26Vi57 + 0°43	Ur 27Vi45 + 0°47R
Ne 00Ge23 - 1°44R	Ne 28Ta36 - 1°39
Pl 10Pi23 -13°40R	Pl 12Pi25 -13°13
No 23Li59 - 0°00	No 14Li34 - 0°00
Coords: 102E 22N	

Apr 14, 2052 2:15 AM Partial Penumbra



Sep 22, 2052 11:37 PM Annular Solar



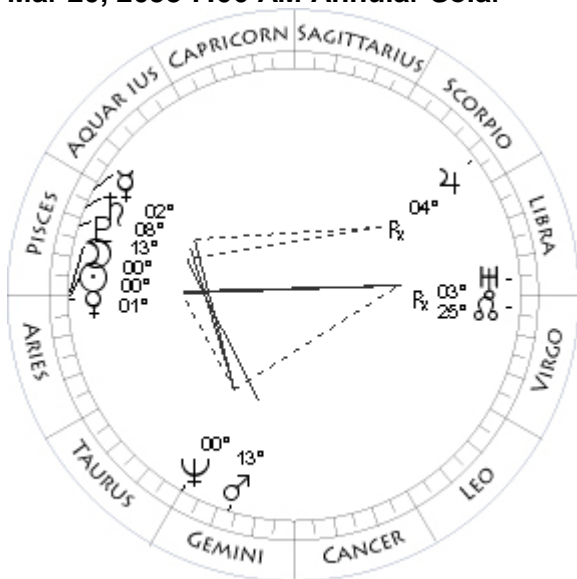
Oct 8, 2052 10:43 AM Partial Umbral

Mo 24Li44 + 0°57	Mo 15Ar45 - 0°58
Su 24Ar51 - 0°00	Su 15Li52 - 0°00
Me 27Pi46 - 2°27	Me 09Sc06 - 2°08
Ve 06Ge29 + 4°58	Ve 08Vi43 + 0°51
Ma 14Aq47 - 1°18	Ma 11Ta36 - 2°35R
Ju 28Vi20 + 1°33R	Ju 16Li23 + 1°06
Sa 29Aq48 - 1°13	Sa 26Aq08 - 1°35R
Ur 27Vi11 + 0°47R	Ur 01Li42 + 0°42
Ne 29Ta02 - 1°38	Ne 02Ge36 - 1°43R
Pl 12Pi45 -13°16	Pl 11Pi37 -13°54R
No 13Li48 - 0°00	No 04Li25 - 0°00
	Coords: 164E/ 5N

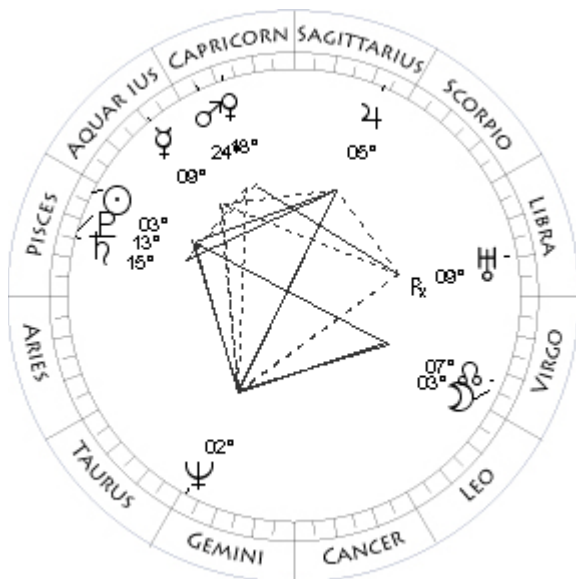
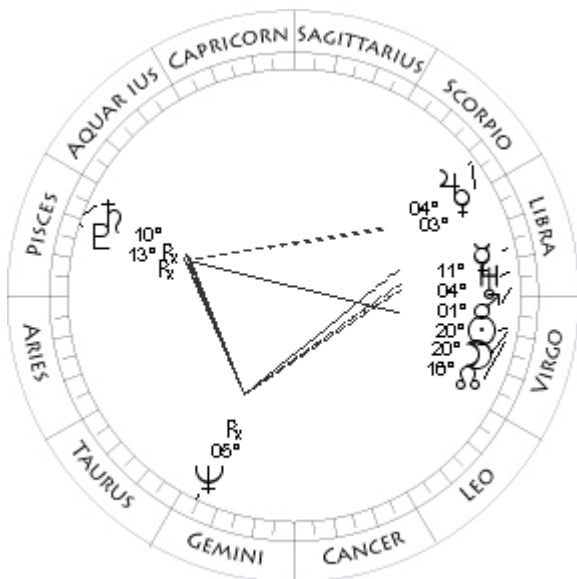
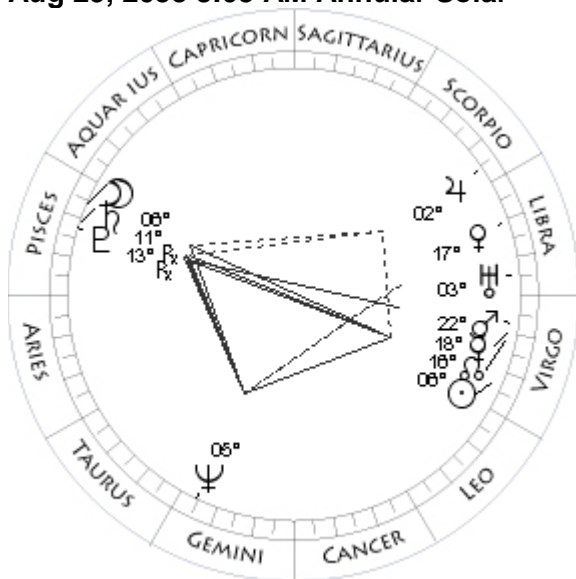
Mar 4, 2053 5:20 PM Partial Penumbra

Mo 00Li41 - 0°25	Mo 14Vi40 - 1°01
Su 00Li40 - 0°00	Su 14Pi36 - 0°00
Me 17Li10 - 0°17	Me 27Aq15 + 2°27R
Ve 20Le32 - 0°01	Ve 11Pi41 - 1°25
Ma 13Ta22 - 3°05R	Ma 04Ge52 + 1°38
Ju 13Li03 + 1°06	Ju 05Sc46 + 1°26R
Sa 26Aq50 - 1°36R	Sa 06Pi09 - 1°29
Ur 00Li44 + 0°42	Ur 03Li52 + 0°46R
Ne 02Ge48 - 1°42R	Ne 00Ge15 - 1°39
Pl 11Pi55 -13°56R	Pl 12Pi59 -13°24
No 05Li14 - 0°00	No 26Vi37 - 0°00
	Coords: 103W/ 5N

Mar 20, 2053 7:06 AM Annular Solar



Aug 29, 2053 8:03 AM Annular Solar



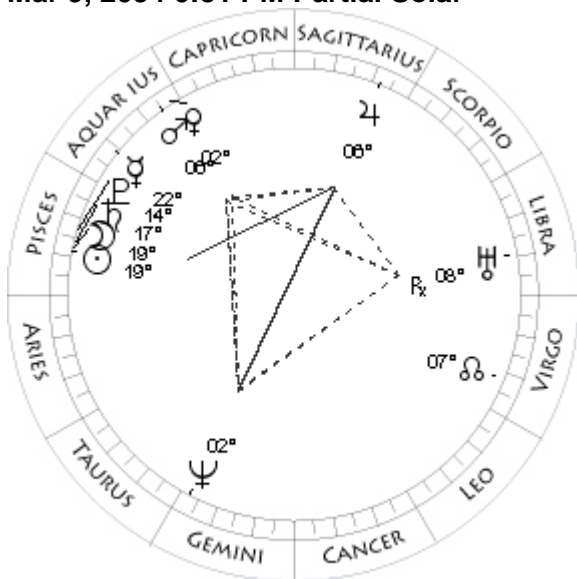
Sep 12, 2053 9:31 AM Total Solar

Mo 00Ar05 - 0°23	Mo 20Vi02 + 0°18
Su 00Ar09 - 0°00	Su 20Vi06 - 0°00
Me 02Pi30 - 0°51	Me 11Li12 - 0°38
Ve 01Ar07 - 1°23	Ve 03Sc31 - 1°14
Ma 13Ge37 + 1°38	Ma 01Li18 + 0°46
Ju 04Sc45 + 1°28R	Ju 04Sc42 + 1°00
Sa 08Pi00 - 1°31	Sa 10Pi28 - 2°02R
Ur 03Li13 + 0°46R	Ur 04Li32 + 0°41
Ne 00Ge32 - 1°38	Ne 05Ge08 - 1°40R
Pl 13Pi24 -13°25	Pl 13Pi27 -14°10R
No 25Vi47 - 0°00	No 16Vi28 - 0°00
Coords: 83W/23S	Coords: 42W/21N

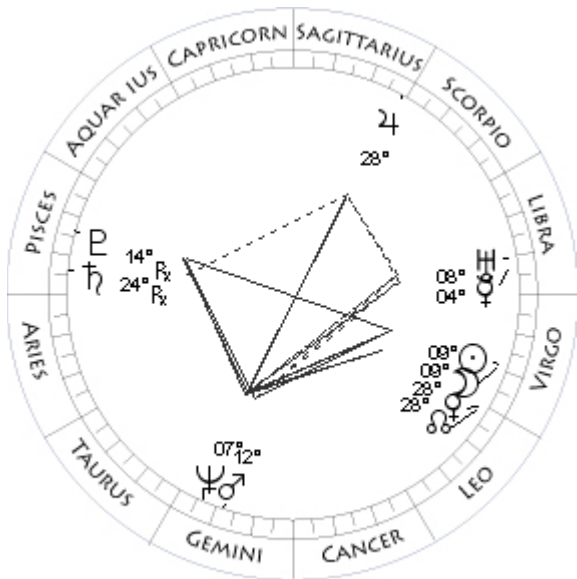
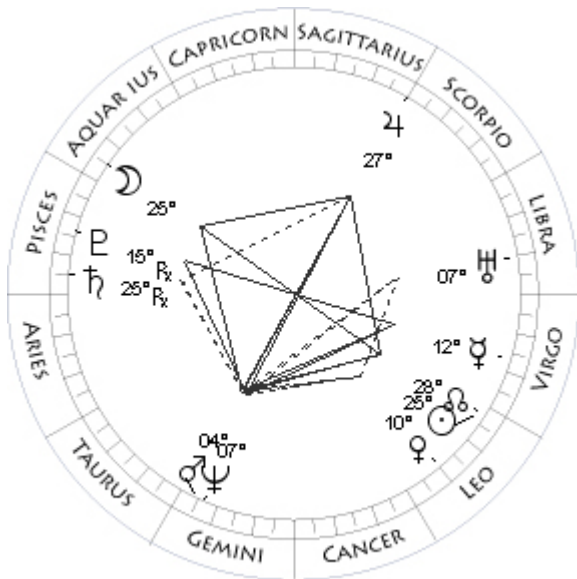
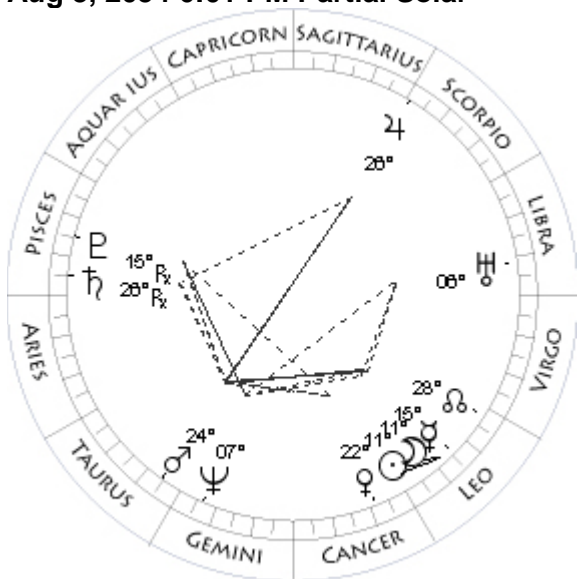
Feb 22, 2054 6:49 AM Total Umbral

Mo 06Pi32 + 0°56	Mo 03Vi52 - 0°20
Su 06Vi28 - 0°00	Su 03Pi52 - 0°00
Me 18Vi45 + 1°03	Me 09Aq51 + 1°37
Ve 17Li27 - 0°15	Ve 18Cp27 + 4°11
Ma 22Vi16 + 0°53	Ma 24Cp58 - 0°50
Ju 02Sc15 + 1°02	Ju 05Sa15 + 0°57
Sa 11Pi32 - 2°01R	Sa 15Pi34 - 1°48
Ur 03Li42 + 0°41	Ur 09Li13 + 0°44R
Ne 05Ge07 - 1°39	Ne 02Ge22 - 1°38
Pl 13Pi45 -14°10R	Pl 13Pi56 -13°37
No 17Vi12 - 0°00	No 07Vi50 - 0°00

Mar 9, 2054 0:31 PM Partial Solar



Aug 3, 2054 6:01 PM Partial Solar



Aug 18, 2054 9:24 AM Total Umbral

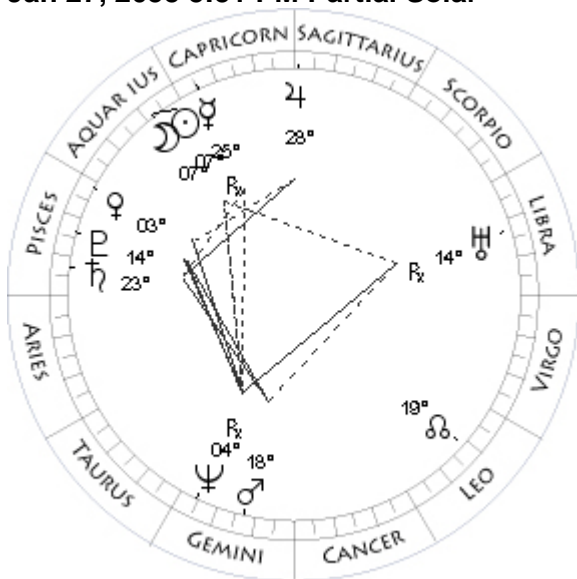
Mo 19Pi02 - 1°04	Mo 25Aq42 + 0°15
Su 19Pi10 - 0°00	Su 25Le42 - 0°00
Me 22Aq29 - 1°06	Me 12Vi49 + 0°52
Ve 02Aq32 + 2°38	Ve 10Le47 + 0°48
Ma 06Aq26 - 1°00	Ma 04Ge08 - 1°11
Ju 06Sa12 + 0°59	Ju 27Sc34 + 0°43
Sa 17Pi26 - 1°48	Sa 25Pi36 - 2°20R
Ur 08Li40 + 0°45R	Ur 07Li36 + 0°40
Ne 02Ge32 - 1°37	Ne 07Ge15 - 1°37
Pl 14Pi21 -13°37	Pl 15Pi16 -14°22R
No 07Vi02 - 0°00	No 28Le27 - 0°00

Coords: 140E/13S

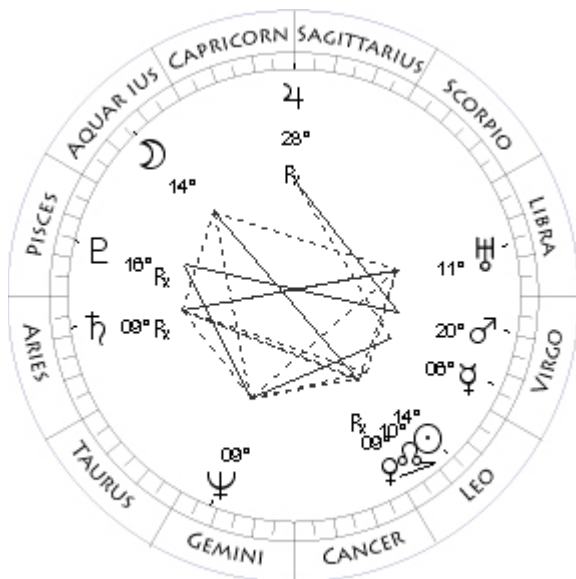
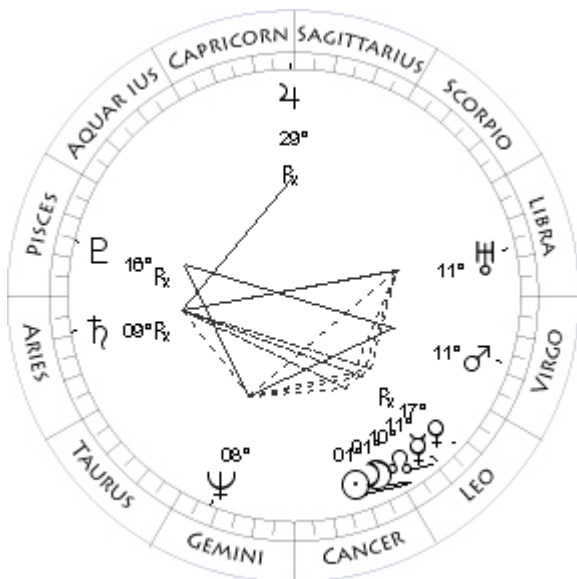
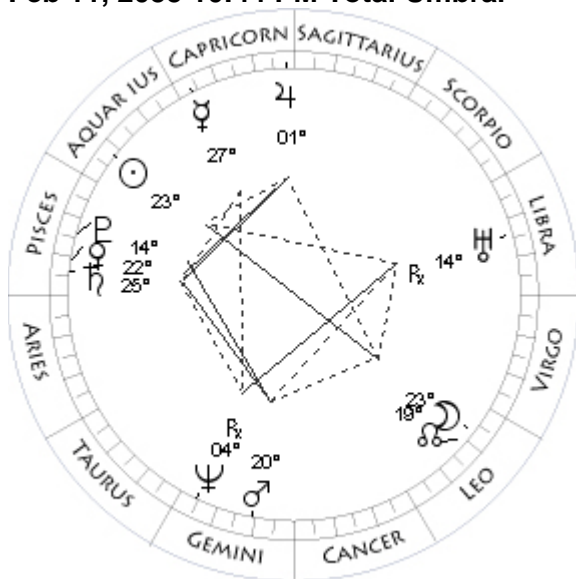
Sep 2, 2054 1:07 AM Partial Solar

Mo 11Le45 - 1°31	Mo 09Vi42 + 1°02
Su 11Le39 - 0°00	Su 09Vi50 - 0°00
Me 15Le45 + 1°46	Me 04Li42 - 1°05
Ve 22Cn51 + 0°14	Ve 28Le51 + 1°12
Ma 24Ta52 - 1°22	Ma 12Ge45 - 0°57
Ju 26Sc47 + 0°47	Ju 28Sc57 + 0°40
Sa 26Pi22 - 2°17R	Sa 24Pi36 - 2°22R
Ur 06Li55 + 0°41	Ur 08Li24 + 0°40
Ne 07Ge01 - 1°36	Ne 07Ge22 - 1°38
Pl 15Pi33 -14°19R	Pl 14Pi58 -14°24R
No 29Le14 - 0°00	No 27Le41 - 0°00

Jan 27, 2055 5:51 PM Partial Solar



Feb 11, 2055 10:44 PM Total Umbral



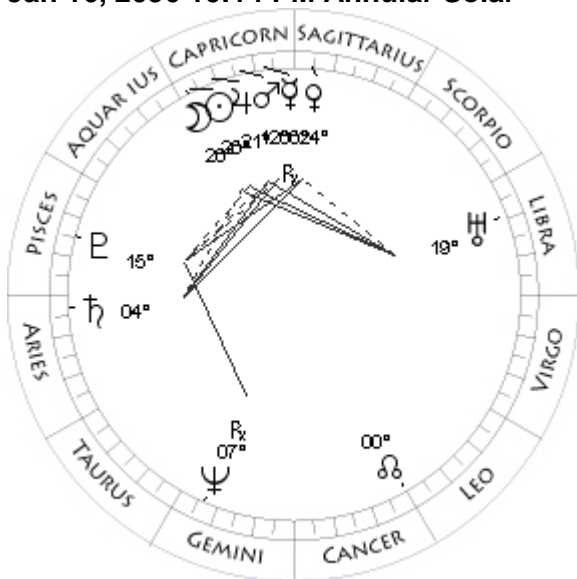
Jul 24, 2055 9:55 AM Total Solar

Mo 07Aq50 + 1°03	Mo 01Le35 - 0°47
Su 07Aq46 - 0°00	Su 01Le32 - 0°00
Me 25Cp07 + 3°28R	Me 11Le39 + 1°47
Ve 03Pi24 - 1°33	Ve 17Le40 - 4°56R
Ma 18Ge00 + 3°09	Ma 11Vi37 + 0°56
Ju 28Sa09 + 0°23	Ju 29Sa53 + 0°09R
Sa 23Pi43 - 2°05	Sa 09Ar38 - 2°26R
Ur 14Li38 + 0°42R	Ur 11Li07 + 0°39
Ne 04Ge39 - 1°38R	Ne 08Ge58 - 1°34
Pl 14Pi32 -13°53	Pl 16Pi59 -14°29R
No 19Le52 - 0°00	No 10Le27 - 0°00
	Coords: 26W/33S

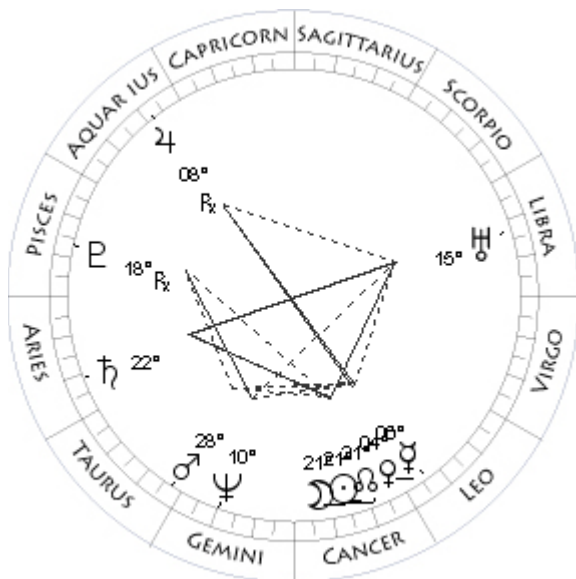
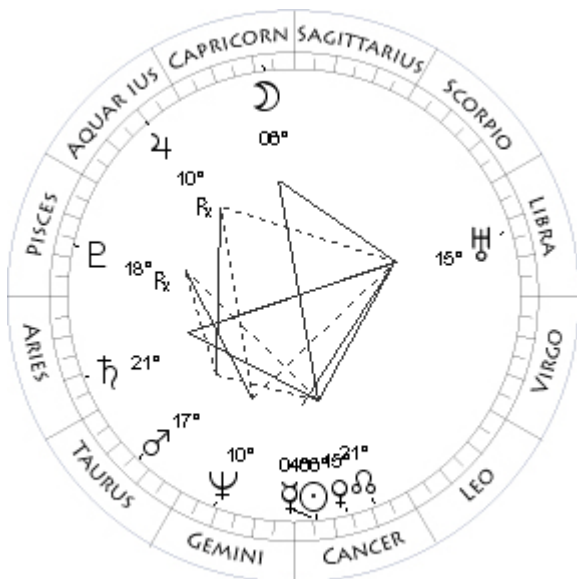
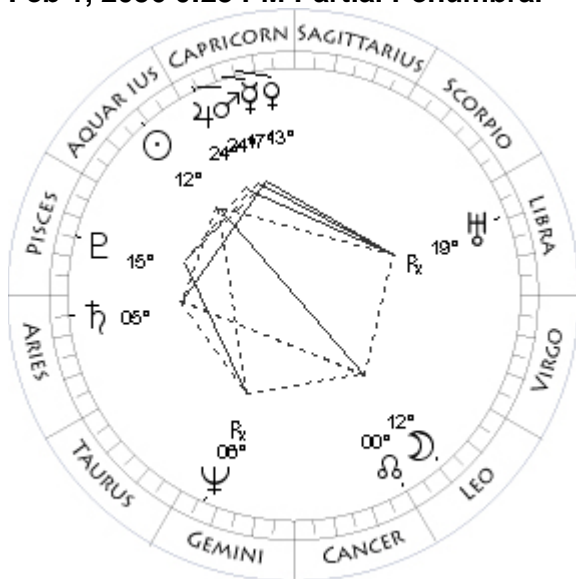
Aug 7, 2055 10:51 AM Partial Umbral

Mo 23Le07 + 0°21	Mo 14Aq53 - 0°26
Su 23Aq11 - 0°00	Su 14Le57 - 0°00
Me 27Cp19 + 0°56	Me 06Vi18 + 0°39
Ve 22Pi12 - 1°12	Ve 09Le44 - 7°22R
Ma 20Ge06 + 2°56	Ma 20Vi20 + 0°48
Ju 01Cp02 + 0°23	Ju 28Sa51 + 0°07R
Sa 25Pi20 - 2°04	Sa 09Ar24 - 2°30R
Ur 14Li24 + 0°42R	Ur 11Li38 + 0°39
Ne 04Ge34 - 1°37R	Ne 09Ge17 - 1°35
Pl 14Pi54 -13°51	Pl 16Pi46 -14°33R
No 19Le03 - 0°00	No 09Le43 - 0°00
	Coords: 161E/17S

Jan 16, 2056 10:14 PM Annular Solar



Feb 1, 2056 0:23 PM Partial Penumbral



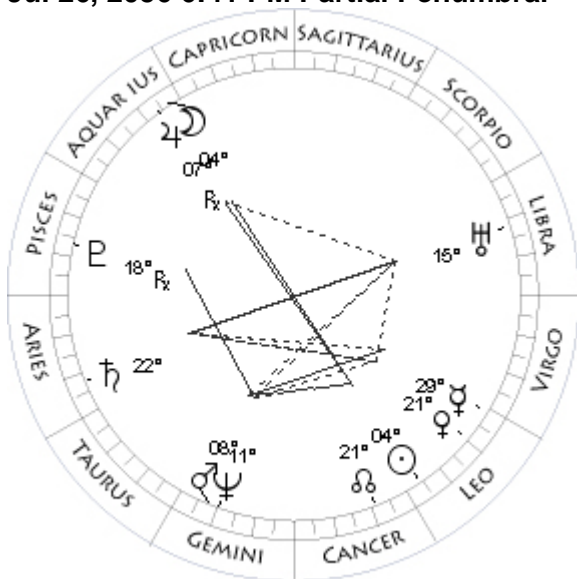
Jun 27, 2056 10:00 AM Partial Penumbral

Mo 26Cp31 + 0°24	Mo 06Cp36 + 1°22
Su 26Cp31 - 0°00	Su 06Cn30 - 0°00
Me 06Cp36 + 2°56R	Me 04Cn56 + 1°04
Ve 24Sa29 + 1°09	Ve 15Cn11 + 0°56
Ma 12Cp49 - 0°47	Ma 17Ta20 - 0°50
Ju 21Cp21 - 0°11	Ju 10Aq33 - 0°37R
Sa 04Ar24 - 2°20	Sa 21Ar31 - 2°24
Ur 19Li25 + 0°39	Ur 15Li19 + 0°39
Ne 07Ge04 - 1°37R	Ne 10Ge21 - 1°31
Pl 15Pi32 -14°08	Pl 18Pi30 -14°32R
No 01Le06 - 0°00	No 22Cn30 - 0°00
Coords: 153E/ 4N	Coords: 149E/22S

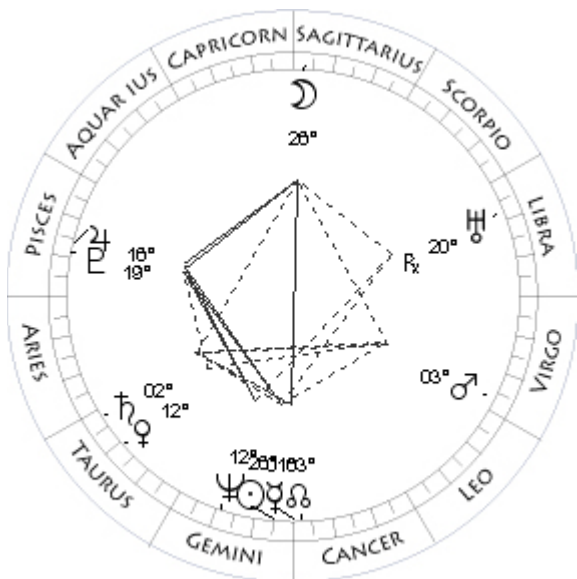
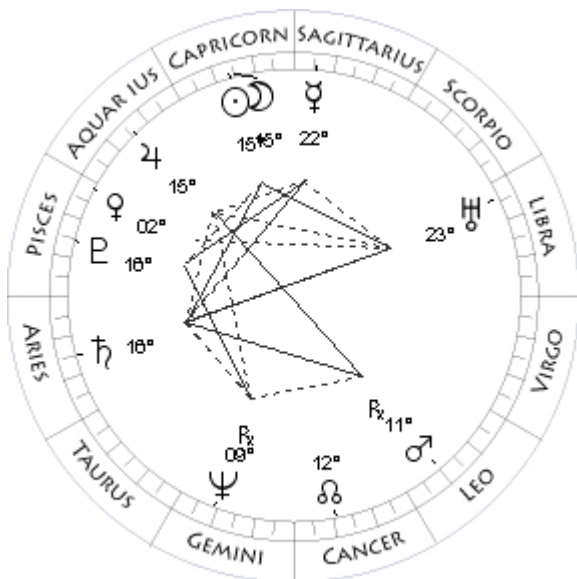
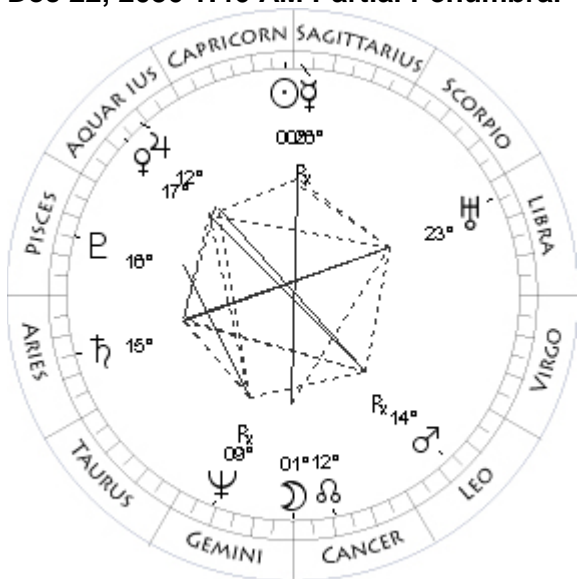
Jul 12, 2056 8:19 PM Annular Solar

Mo 12Le14 + 1°02	Mo 21Cn11 - 0°02
Su 12Aq22 - 0°00	Su 21Cn13 - 0°00
Me 17Cp55 + 0°24	Me 06Le37 + 1°46
Ve 13Cp46 + 0°25	Ve 04Le08 + 1°20
Ma 24Cp43 - 0°54	Ma 28Ta21 - 0°40
Ju 24Cp57 - 0°12	Ju 08Aq58 - 0°40R
Sa 05Ar40 - 2°17	Sa 22Ar16 - 2°28
Ur 19Li24 + 0°40R	Ur 15Li29 + 0°38
Ne 06Ge52 - 1°36R	Ne 10Ge51 - 1°32
Pl 15Pi52 -14°05	Pl 18Pi23 -14°38R
No 00Le17 - 0°00	No 21Cn41 - 0°00
Coords: 178W/18N	Coords: 124E/19N

Jul 26, 2056 6:41 PM Partial Penumbral



Dec 22, 2056 1:46 AM Partial Penumbral



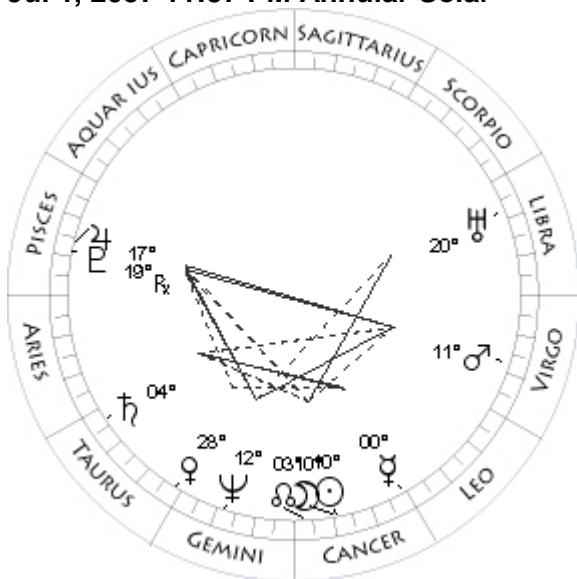
Jan 5, 2057 9:45 AM Total Solar

Mo 04Aq22 - 1°10	Mo 15Cp29 - 0°17
Su 04Le31 - 0°00	Su 15Cp32 - 0°00
Me 29Le12 + 0°22	Me 22Sa56 + 2°19
Ve 21Le14 + 1°30	Ve 02Pi42 - 0°49
Ma 08Ge02 - 0°29	Ma 11Le19 + 4°01R
Ju 07Aq13 - 0°42R	Ju 15Aq18 - 0°43
Sa 22Ar36 - 2°32	Sa 16Ar08 - 2°30
Ur 15Li49 + 0°37	Ur 23Li56 + 0°37
Ne 11Ge14 - 1°32	Ne 09Ge33 - 1°36R
Pl 18Pi13 -14°42R	Pl 16Pi36 -14°23
No 20Cn57 - 0°00	No 12Cn20 - 0°00
Coords: 82W/20S	Coords: 35W/39S

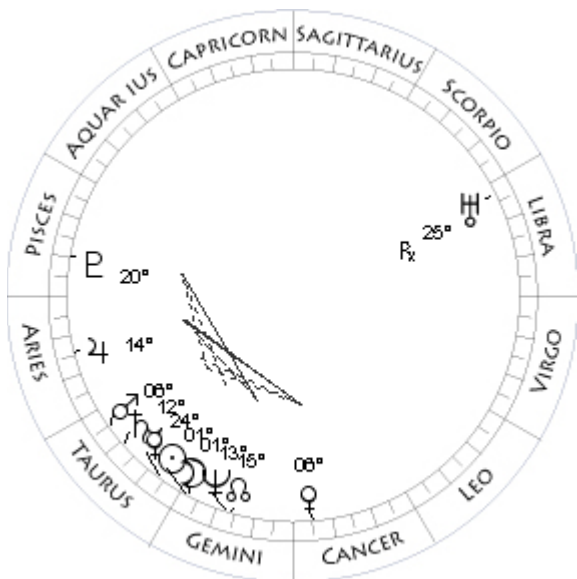
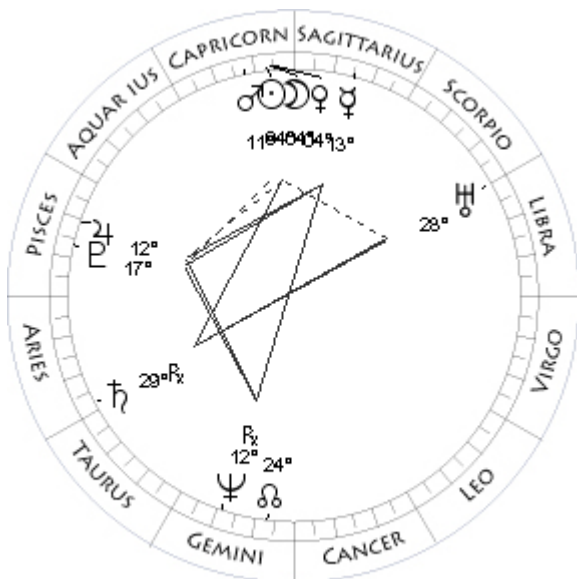
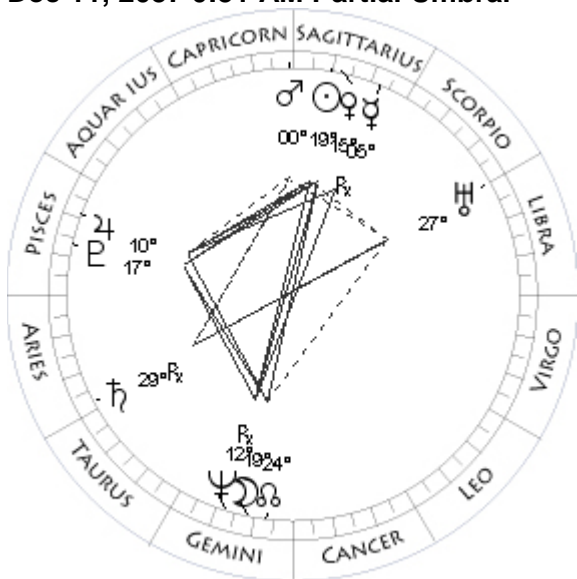
Jun 17, 2057 2:23 AM Partial Umbral

Mo 01Cn00 - 1°03	Mo 26Sa27 + 0°38
Su 00Cp56 - 0°00	Su 26Ge26 - 0°00
Me 26Sa36 + 2°31R	Me 01Cn16 + 1°25
Ve 17Aq53 - 1°54	Ve 12Ta20 - 2°33
Ma 14Le07 + 3°26R	Ma 03Vi22 + 1°10
Ju 12Aq13 - 0°43	Ju 16Pi51 - 1°07
Sa 15Ar50 - 2°34	Sa 02Ta56 - 2°20
Ur 23Li33 + 0°36	Ur 20Li05 + 0°37R
Ne 09Ge54 - 1°36R	Ne 12Ge08 - 1°29
Pl 16Pi25 -14°27	Pl 19Pi46 -14°40
No 13Cn06 - 0°00	No 03Cn43 - 0°00

Jul 1, 2057 11:37 PM Annular Solar



Dec 11, 2057 0:51 AM Partial Umbral



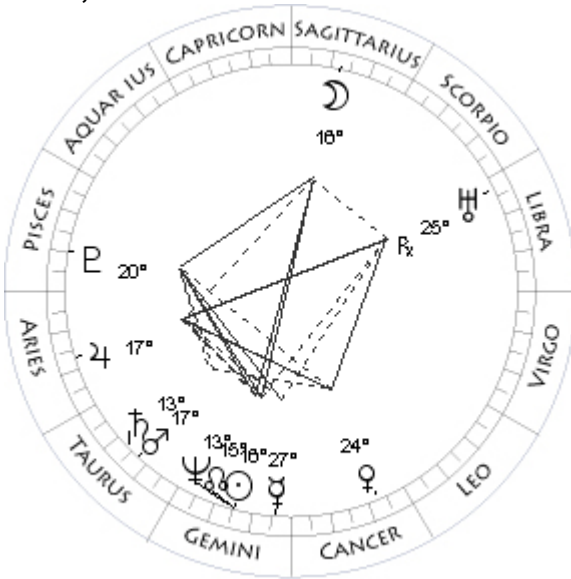
Dec 26, 2057 1:12 AM Total Solar

Mo 10Cn32 + 0°40	Mo 04Cp37 - 0°57
Su 10Cn38 - 0°00	Su 04Cp44 - 0°00
Me 00Le16 + 1°45	Me 13Sa08 + 1°45
Ve 28Ta43 - 2°26	Ve 04Cp26 - 0°25
Ma 11Vi44 + 0°56	Ma 11Cp45 - 0°55
Ju 17Pi24 - 1°11	Ju 12Pi07 - 1°10
Sa 04Ta10 - 2°23	Sa 29Ar08 - 2°34R
Ur 20Li03 + 0°36	Ur 28Li14 + 0°34
Ne 12Ge40 - 1°30	Ne 12Ge06 - 1°34R
Pl 19Pi44 -14°45R	Pl 17Pi42 -14°37
No 02Cn56 - 0°00	No 23Ge33 - 0°00
Coords: 176E/71N	Coords: 26W/85S

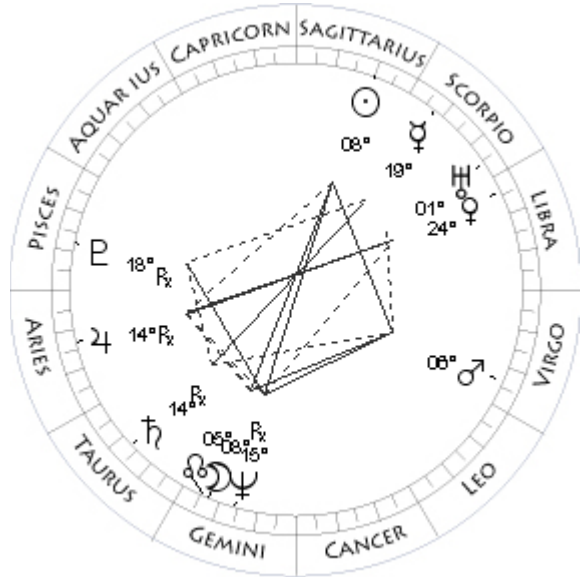
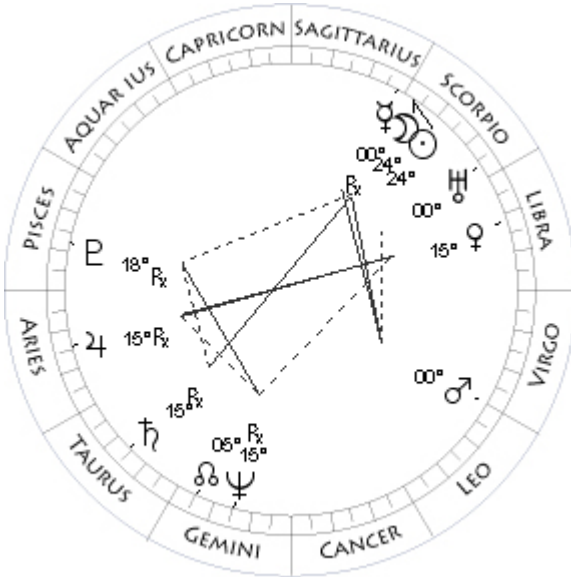
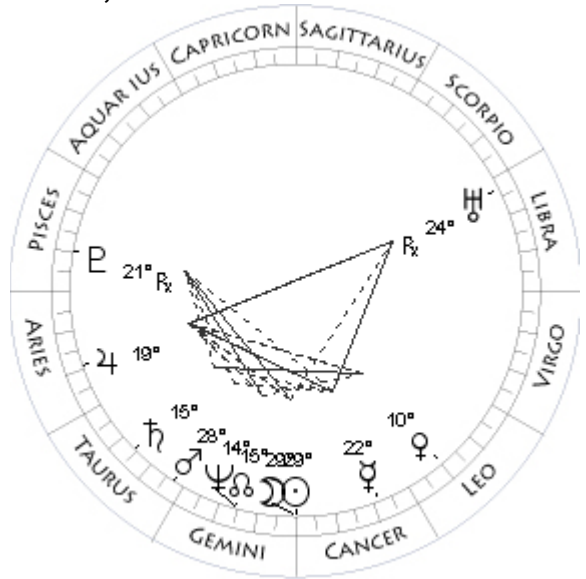
May 22, 2058 10:37 AM Partial Solar

Mo 19Ge29 - 0°26	Mo 01Ge43 - 1°13
Su 19Sa28 - 0°00	Su 01Ge37 - 0°00
Me 05Sa50 + 2°41R	Me 24Ta09 - 0°34
Ve 15Sa33 + 0°11	Ve 06Cn23 + 1°51
Ma 00Cp20 - 0°50	Ma 06Ta20 - 0°36
Ju 10Pi01 - 1°13	Ju 14Ar42 - 1°09
Sa 29Ar29 - 2°38R	Sa 12Ta04 - 2°10
Ur 27Li39 + 0°34	Ur 25Li27 + 0°35R
Ne 12Ge30 - 1°34R	Ne 13Ge20 - 1°28
Pl 17Pi35 -14°42	Pl 20Pi50 -14°41
No 24Ge21 - 0°00	No 15Ge45 - 0°00

Jun 6, 2058 7:13 PM Total Umbral



Jun 21, 2058 0:17 AM Partial Solar



Nov 16, 2058 3:20 AM Partial Solar

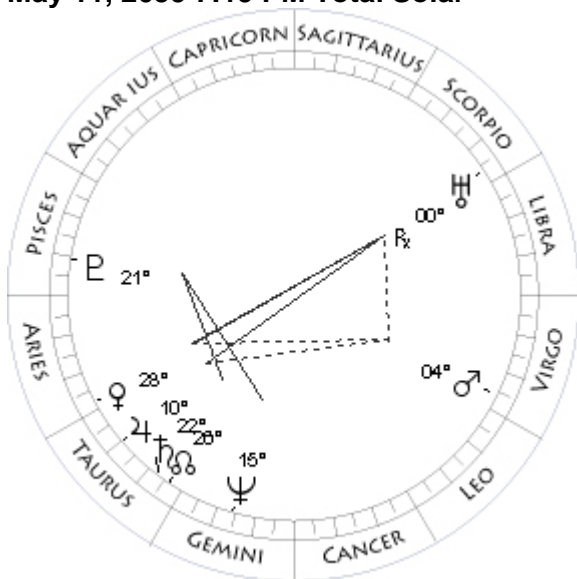
Mo 16Sa18 - 0°07	Mo 24Sc05 + 1°05
Su 16Ge21 - 0°00	Su 24Sc01 - 0°00
Me 27Ge16 + 1°45	Me 00Sa18 - 0°29R
Ve 24Cn23 + 2°06	Ve 15Li54 - 0°22
Ma 17Ta41 - 0°27	Ma 00Vi11 + 1°55
Ju 17Ar36 - 1°11	Ju 15Ar12 - 1°31R
Sa 13Ta54 - 2°11	Sa 15Ta27 - 2°34R
Ur 25Li02 + 0°35R	Ur 00Sc47 + 0°31
Ne 13Ge54 - 1°27	Ne 15Ge31 - 1°32R
Pl 20Pi58 -14°47	Pl 18Pi52 -15°02R
No 14Ge56 - 0°00	No 06Ge20 - 0°00

Coords: 71W/23S

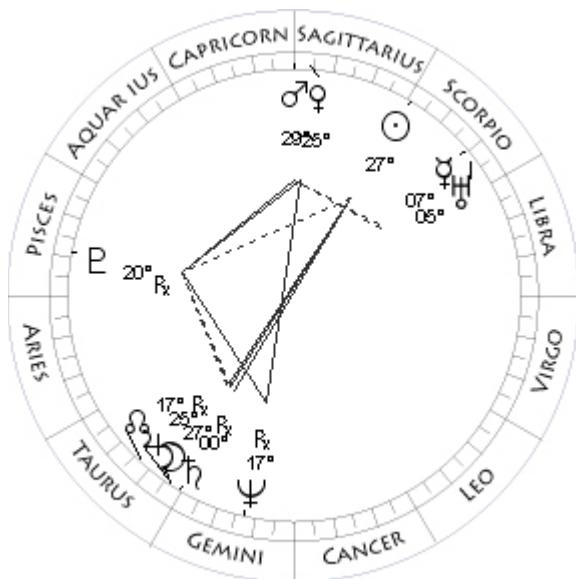
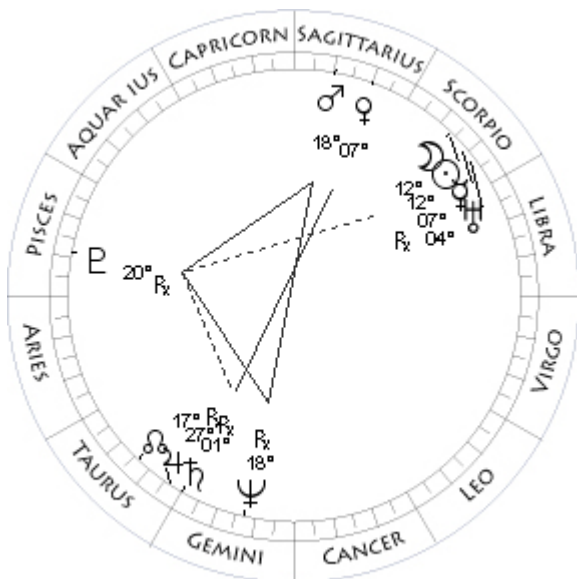
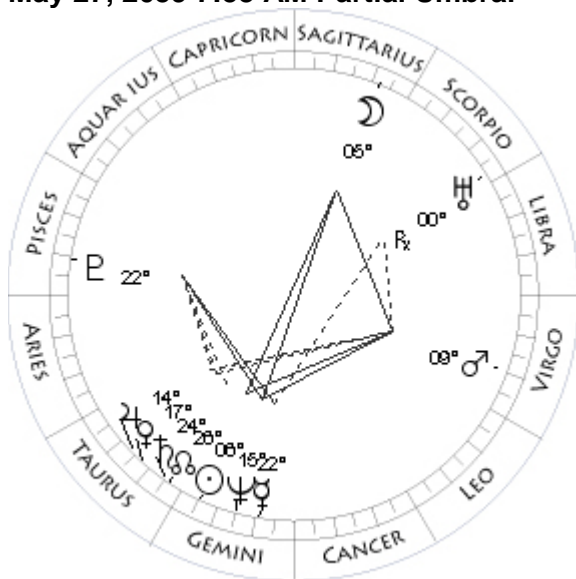
Nov 30, 2058 3:14 AM Total Umbral

Mo 29Ge47 + 1°20	Mo 08Ge06 + 0°12
Su 29Ge56 - 0°00	Su 08Sa09 - 0°00
Me 22Cn34 + 1°43	Me 19Sc33 + 2°35
Ve 10Le43 + 2°00	Ve 24Li11 + 1°38
Ma 28Ta00 - 0°18	Ma 06Vi24 + 2°13
Ju 19Ar56 - 1°14	Ju 14Ar27 - 1°28R
Sa 15Ta28 - 2°13	Sa 14Ta24 - 2°33R
Ur 24Li49 + 0°34R	Ur 01Sc34 + 0°31
Ne 14Ge26 - 1°27	Ne 15Ge08 - 1°32R
Pl 21Pi00 -14°52R	Pl 18Pi48 -14°57R
No 14Ge11 - 0°00	No 05Ge36 - 0°00

May 11, 2059 7:19 PM Total Solar



May 27, 2059 7:53 AM Partial Umbral



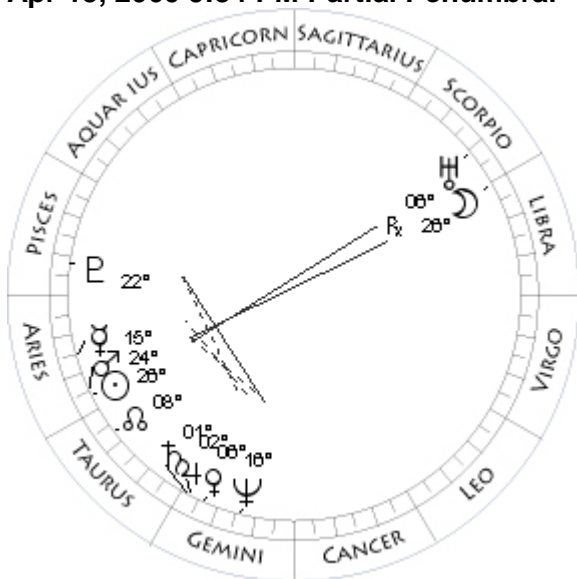
Nov 5, 2059 9:15 AM Annular Solar

Mo 21Ta09 - 0°30	Mo 12Sc58 + 0°24
Su 21Ta08 - 0°00	Su 12Sc58 - 0°00
Me 19Ta36 - 0°08	Me 07Sc42 + 0°19R
Ve 28Ar50 - 1°34	Ve 07Sa39 - 0°42
Ma 04Vi11 + 1°46	Ma 18Sa26 - 0°59
Ju 10Ta40 - 0°58	Ju 27Ta28 - 1°10R
Sa 22Ta38 - 1°58	Sa 01Ge16 - 2°16R
Ur 00Sc43 + 0°33R	Ur 04Sc30 + 0°28
Ne 15Ge07 - 1°26	Ne 18Ge05 - 1°30R
Pl 21Pi54 -14°48	Pl 20Pi12 -15°16R
No 26Ta59 - 0°00	No 17Ta35 - 0°00
Coords: 100E/11S	Coords: 47W/ 9N

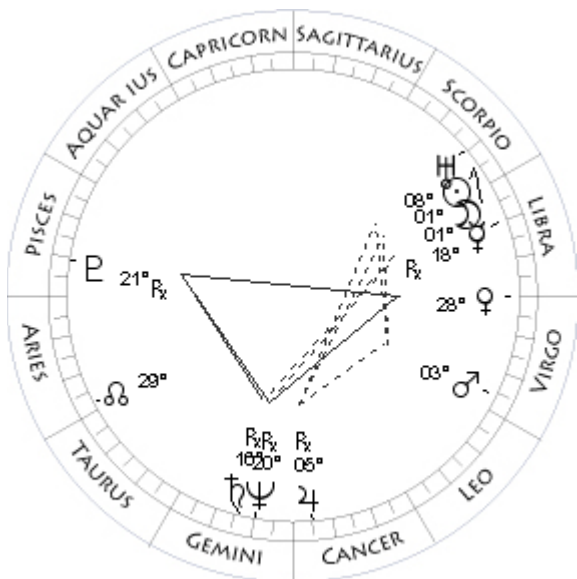
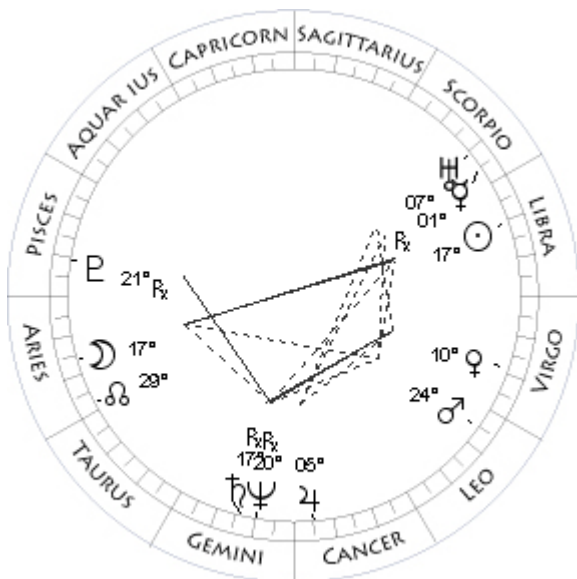
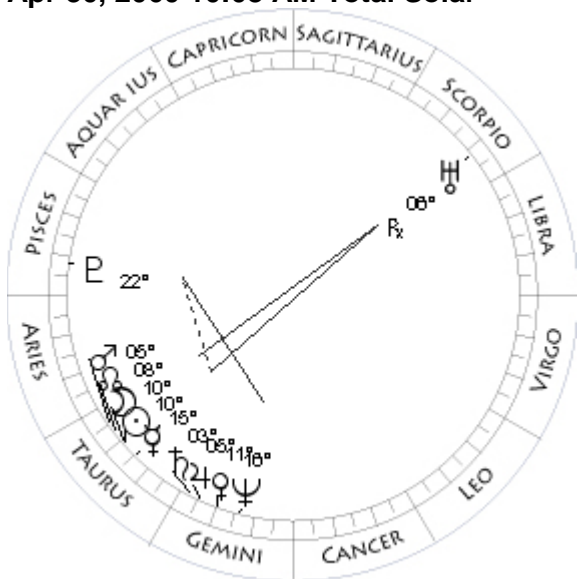
Nov 19, 2059 0:59 PM Partial Umbral

Mo 05Sa58 - 0°52	Mo 27Ta05 + 0°53
Su 06Ge05 - 0°00	Su 27Sc12 - 0°00
Me 22Ge03 + 2°02	Me 07Sc50 + 2°21
Ve 17Ta46 - 1°15	Ve 25Sa10 - 1°16
Ma 09Vi43 + 1°19	Ma 29Sa00 - 1°04
Ju 14Ta18 - 0°58	Ju 25Ta34 - 1°09R
Sa 24Ta38 - 1°57	Sa 00Ge09 - 2°16R
Ur 00Sc09 + 0°33R	Ur 05Sc22 + 0°28
Ne 15Ge40 - 1°25	Ne 17Ge44 - 1°30R
Pl 22Pi06 -14°53	Pl 20Pi05 -15°12R
No 26Ta10 - 0°00	No 16Ta50 - 0°00
Coords: 119E/22S	Coords: 161W/20N

Apr 15, 2060 9:34 PM Partial Penumbral



Apr 30, 2060 10:08 AM Total Solar



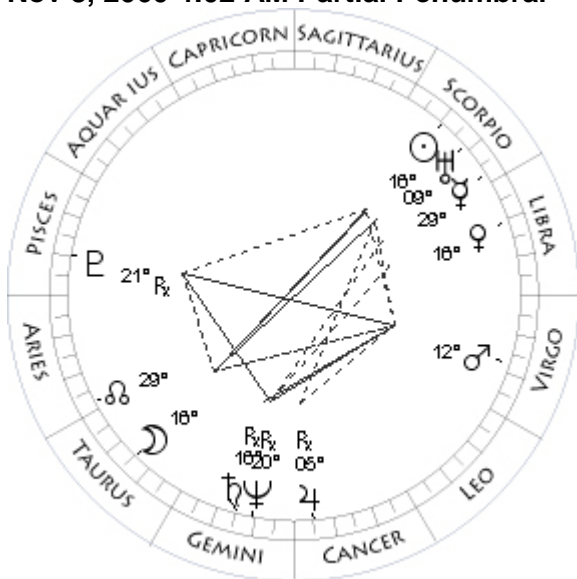
Oct 9, 2060 6:51 PM Partial Penumbral

Mo 26Li45 + 1°03	Mo 17Ar19 - 1°05
Su 26Ar41 - 0°00	Su 17Li15 - 0°00
Me 15Ar37 - 1°49	Me 01Sc52 - 3°14R
Ve 06Ge37 + 5°13	Ve 10Vi53 + 0°57
Ma 24Ar33 - 0°30	Ma 24Le58 + 1°21
Ju 02Ge26 - 0°36	Ju 05Cn38 - 0°24
Sa 01Ge40 - 1°43	Sa 17Ge20 - 1°47R
Ur 06Sc38 + 0°30R	Ur 07Sc16 + 0°26
Ne 16Ge31 - 1°24	Ne 20Ge47 - 1°26R
Pl 22Pi37 -14°51	Pl 21Pi50 -15°32R
No 08Ta59 - 0°00	No 29Ar36 - 0°00
	Coords: 74W/ 6N

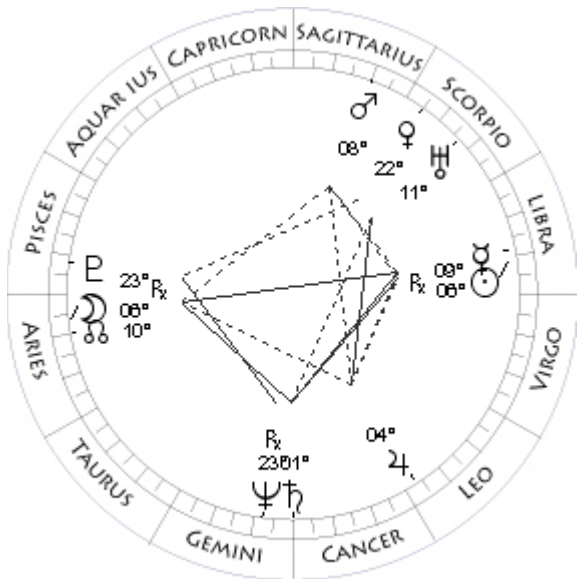
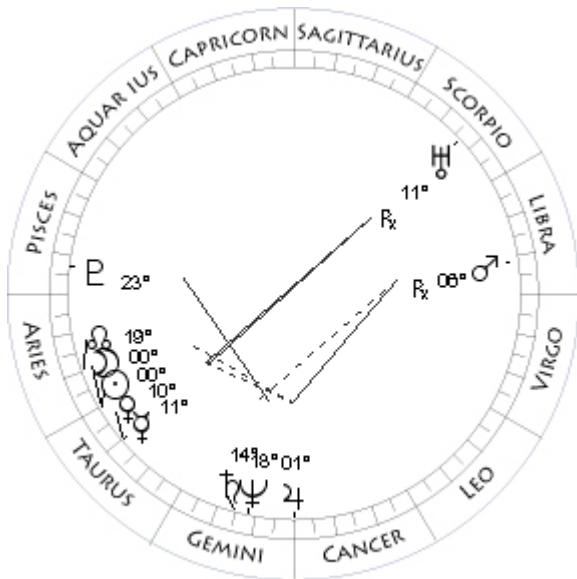
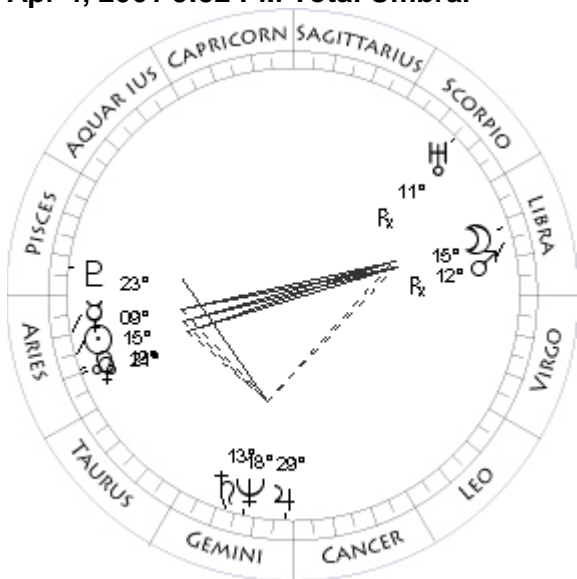
Oct 24, 2060 9:22 AM Annular Solar

Mo 10Ta47 + 0°15	Mo 01Sc42 - 0°14
Su 10Ta50 - 0°00	Su 01Sc44 - 0°00
Me 15Ta38 + 0°22	Me 18Li03 + 0°55R
Ve 11Ge00 + 5°18	Ve 28Vi30 + 1°29
Ma 05Ta28 - 0°21	Ma 03Vi36 + 1°30
Ju 05Ge36 - 0°34	Ju 05Cn56 - 0°23R
Sa 03Ge23 - 1°41	Sa 16Ge51 - 1°48R
Ur 06Sc01 + 0°30R	Ur 08Sc10 + 0°26
Ne 16Ge56 - 1°24	Ne 20Ge36 - 1°27R
Pl 22Pi55 -14°55	Pl 21Pi35 -15°30R
No 08Ta12 - 0°00	No 28Ar50 - 0°00
Coords: 21W/28N	Coords: 28W/26S

Nov 8, 2060 4:02 AM Partial Penumbral



Apr 4, 2061 9:52 PM Total Umbral



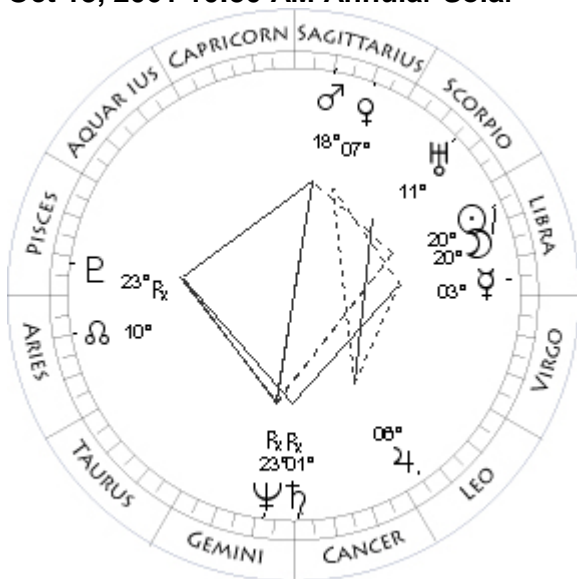
Apr 20, 2061 2:54 AM Total Solar

Mo 16Ta20 + 1°33	Mo 00Ta26 + 0°58
Su 16Sc31 - 0°00	Su 00Ta34 - 0°00
Me 29Li35 + 2°04	Me 11Ta22 + 0°53
Ve 16Li37 + 1°43	Ve 10Ta01 - 0°35
Ma 12Vi04 + 1°39	Ma 06Li58 + 2°13R
Ju 05Cn31 - 0°22R	Ju 01Cn13 - 0°00
Sa 16Ge01 - 1°49R	Sa 14Ge34 - 1°20
Ur 09Sc06 + 0°26	Ur 11Sc19 + 0°27R
Ne 20Ge18 - 1°27R	Ne 18Ge48 - 1°22
Pl 21Pi24 -15°26R	Pl 23Pi53 -15°02
No 28Ar03 - 0°00	No 19Ar25 - 0°00
	Coords: 60W/64N

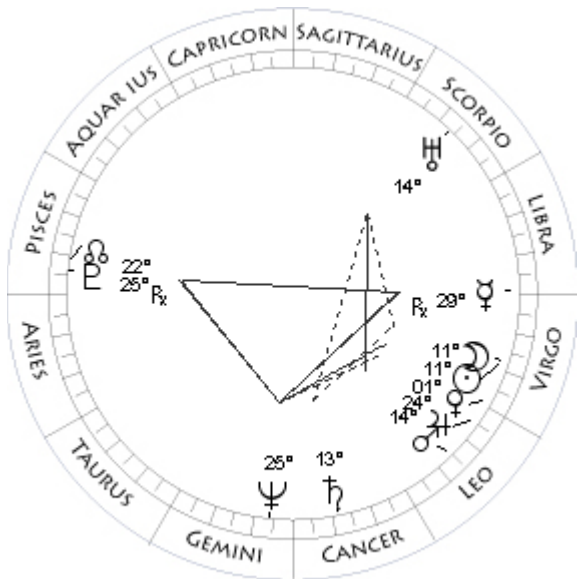
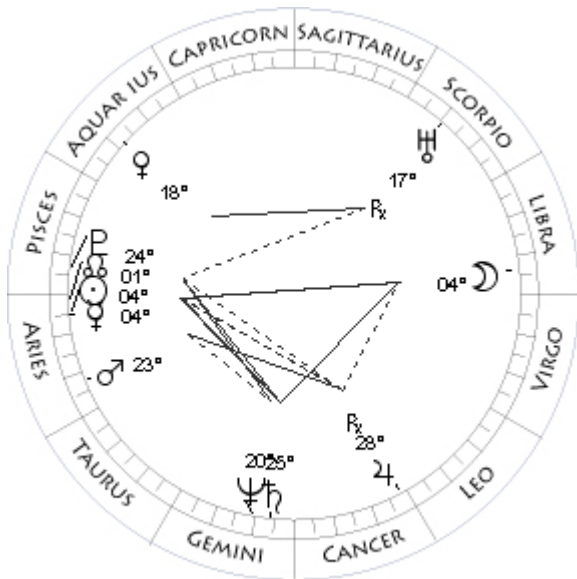
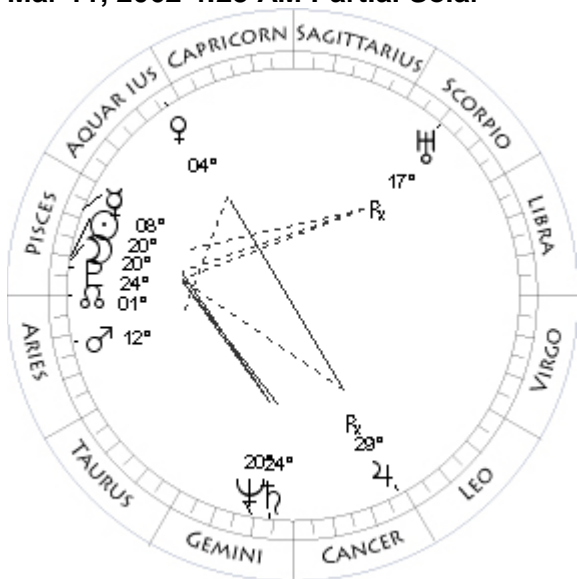
Sep 29, 2061 9:36 AM Total Umbral

Mo 15Li40 + 0°24	Mo 06Ar48 - 0°23
Su 15Ar39 - 0°00	Su 06Li47 - 0°00
Me 09Ar57 - 1°33	Me 09Li47 - 2°50R
Ve 21Ar11 - 1°04	Ve 22Sc38 - 2°33
Ma 12Li23 + 2°47R	Ma 08Sa12 - 1°22
Ju 29Ge00 - 0°02	Ju 04Le15 + 0°17
Sa 13Ge05 - 1°22	Sa 01Cn23 - 1°14
Ur 11Sc55 + 0°27R	Ur 11Sc02 + 0°23
Ne 18Ge27 - 1°23	Ne 23Ge06 - 1°23R
Pl 23Pi32 -14°59	Pl 23Pi17 -15°43R
No 20Ar14 - 0°00	No 10Ar50 - 0°00
	Coords: 146E/ 2N

Oct 13, 2061 10:30 AM Annular Solar



Mar 11, 2062 4:23 AM Partial Solar



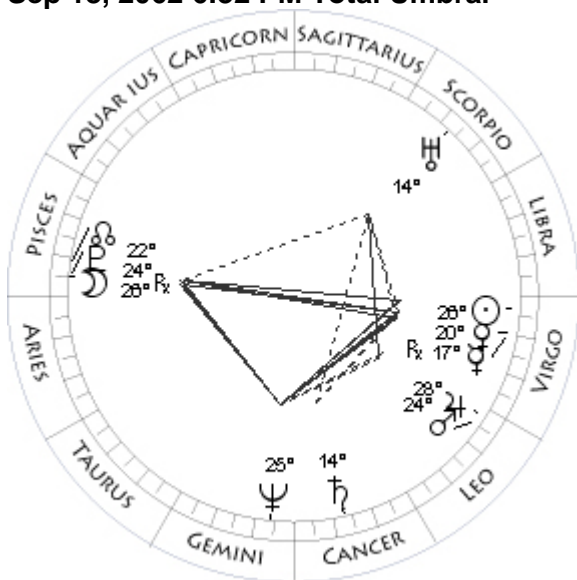
Mar 25, 2062 3:31 AM Total Umbral

Mo 20Li31 - 0°53	Mo 04Li43 - 0°18
Su 20Li37 - 0°00	Su 04Ar47 - 0°00
Me 03Li05 + 1°18	Me 04Ar52 - 1°16
Ve 07Sa21 - 3°27	Ve 18Aq55 + 1°01
Ma 18Sa09 - 1°25	Ma 23Ar07 - 0°17
Ju 06Le12 + 0°19	Ju 28Cn55 + 0°40R
Sa 01Cn34 - 1°14R	Sa 25Ge24 - 0°56
Ur 11Sc50 + 0°23	Ur 17Sc03 + 0°24R
Ne 23Ge01 - 1°24R	Ne 20Ge28 - 1°21
Pl 23Pi01 -15°42R	Pl 24Pi26 -15°07
No 10Ar05 - 0°00	No 01Ar28 - 0°00

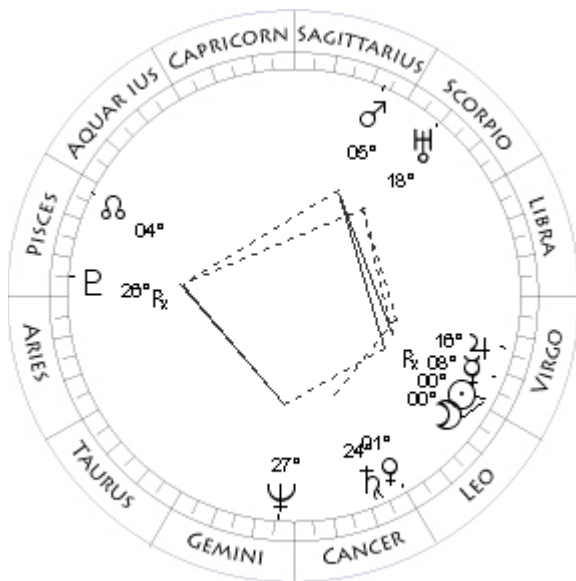
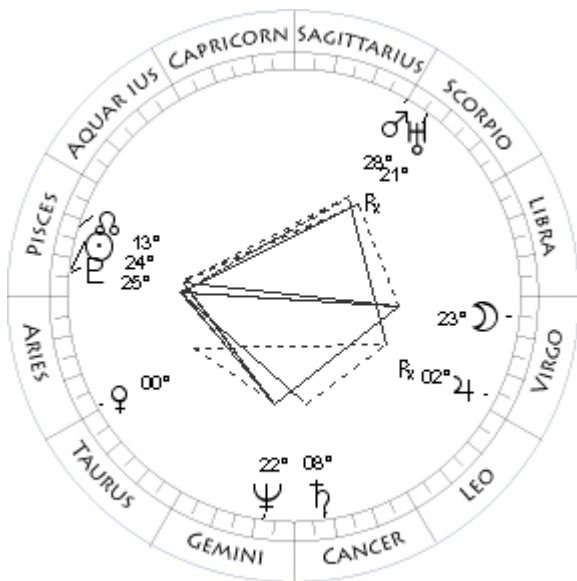
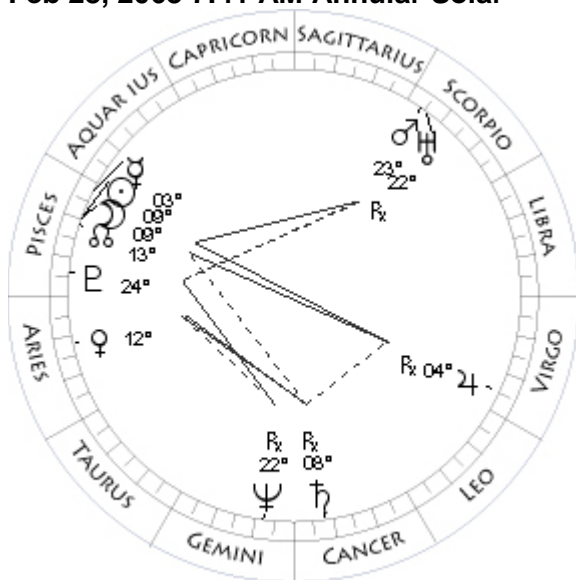
Sep 3, 2062 8:51 AM Partial Solar

Mo 20Pi56 - 0°58	Mo 11Vi14 + 1°01
Su 20Pi53 - 0°00	Su 11Vi10 - 0°00
Me 08Pi44 - 2°11	Me 29Vi50 - 4°17R
Ve 04Aq15 + 2°20	Ve 01Vi10 + 1°15
Ma 12Ar33 - 0°27	Ma 14Le51 + 1°08
Ju 29Cn13 + 0°40R	Ju 24Le46 + 0°43
Sa 24Ge50 - 0°59	Sa 13Cn09 - 0°40
Ur 17Sc22 + 0°24R	Ur 14Sc15 + 0°21
Ne 20Ge20 - 1°21	Ne 25Ge11 - 1°19
Pl 24Pi04 -15°06	Pl 25Pi03 -15°52R
No 02Ar13 - 0°00	No 22Pi53 - 0°00

Sep 18, 2062 6:32 PM Total Umbral



Feb 28, 2063 7:41 AM Annular Solar



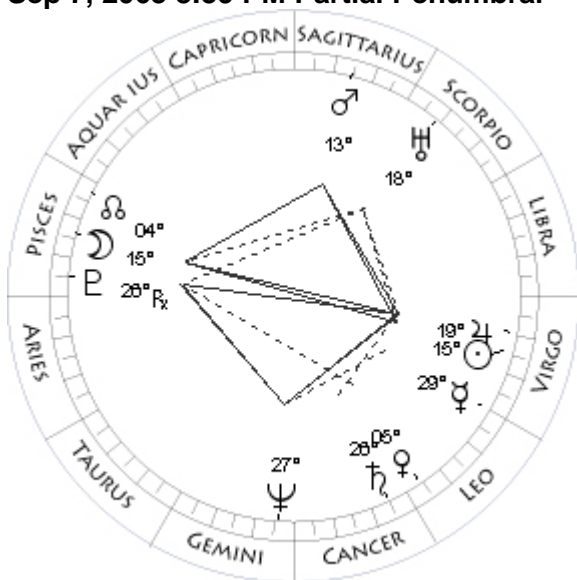
Mar 14, 2063 4:03 PM Partial Umbral

Mo 26Pi05 + 0°21	Mo 23Vi59 - 1°00
Su 26Vi09 - 0°00	Su 24Pi07 - 0°00
Me 17Vi36 - 2°01R	Me 00Ar14 - 0°55
Ve 20Vi17 + 1°25	Ve 00Ta11 + 0°15
Ma 24Le35 + 1°13	Ma 28Sc04 + 1°25
Ju 28Le01 + 0°45	Ju 02Vi53 + 1°18R
Sa 14Cn21 - 0°40	Sa 08Cn47 - 0°25
Ur 14Sc53 + 0°20	Ur 21Sc59 + 0°20R
Ne 25Ge20 - 1°20	Ne 22Ge35 - 1°19
Pl 24Pi44 -15°53R	Pl 25Pi19 -15°15
No 22Pi04 - 0°00	No 12Pi42 - 0°00
	Coords: 121W/ 1N

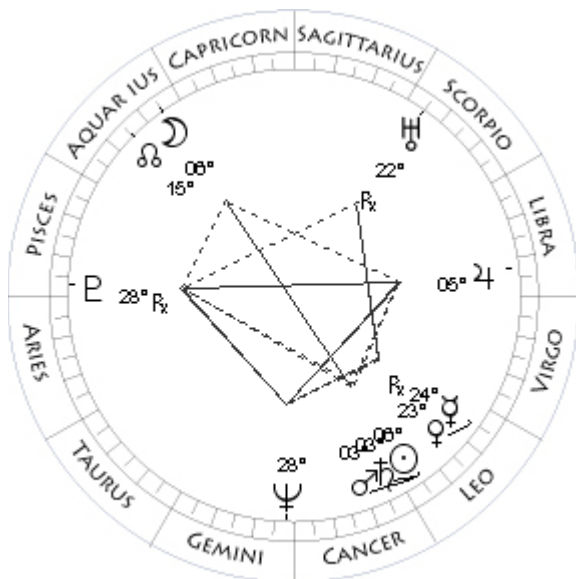
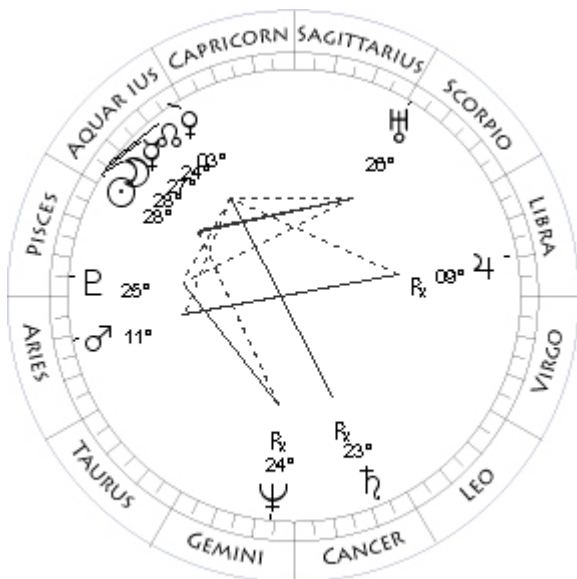
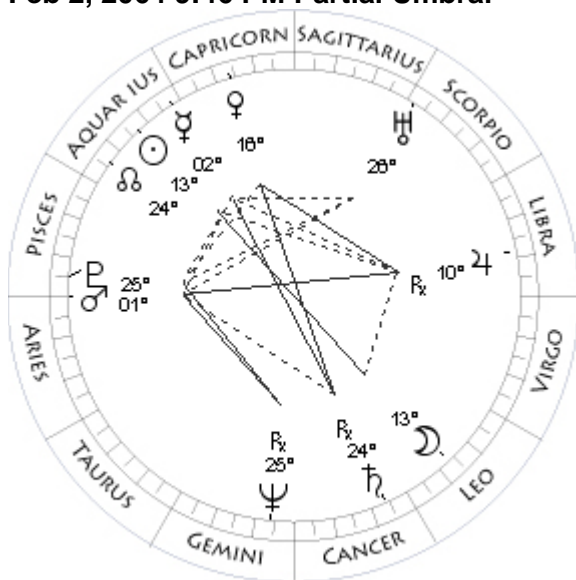
Aug 24, 2063 1:19 AM Total Solar

Mo 09Pi46 - 0°18	Mo 00Vi58 + 0°17
Su 09Pi45 - 0°00	Su 00Vi59 - 0°00
Me 03Pi04 - 2°06	Me 08Vi27 - 4°39R
Ve 12Ar52 - 0°31	Ve 01Le20 - 6°58
Ma 23Sc39 + 1°32	Ma 05Sa00 - 2°28
Ju 04Vi40 + 1°18R	Ju 16Vi21 + 1°01
Sa 08Cn52 - 0°27R	Sa 24Cn44 - 0°08
Ur 22Sc07 + 0°20R	Ur 18Sc24 + 0°18
Ne 22Ge33 - 1°19R	Ne 27Ge13 - 1°16
Pl 24Pi56 -15°16	Pl 26Pi28 -16°00R
No 13Pi27 - 0°00	No 04Pi06 - 0°00
	Coords: 169W/25N

Sep 7, 2063 8:39 PM Partial Penumbral



Feb 2, 2064 9:46 PM Partial Umbral



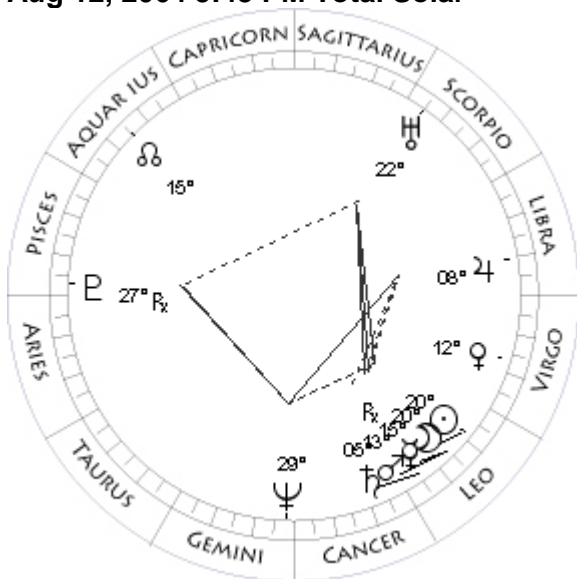
Feb 17, 2064 6:57 AM Annular Solar

Mo 15Pi10 + 1°01	Mo 28Aq20 + 0°19
Su 15Vi17 - 0°00	Su 28Aq24 - 0°00
Me 29Le36 - 1°11	Me 27Aq14 - 2°02
Ve 05Le27 - 5°10	Ve 03Aq58 - 0°21
Ma 13Sa32 - 2°24	Ma 11Ar53 - 0°14
Ju 19Vi31 + 1°02	Ju 09Li29 + 1°30R
Sa 26Cn19 - 0°07	Sa 23Cn59 + 0°10R
Ur 18Sc50 + 0°18	Ur 26Sc38 + 0°16
Ne 27Ge28 - 1°17	Ne 24Ge52 - 1°17R
Pl 26Pi10 -16°02R	Pl 25Pi49 -15°26
No 03Pi19 - 0°00	No 24Aq43 - 0°00
	Coords: 70W/ 7N

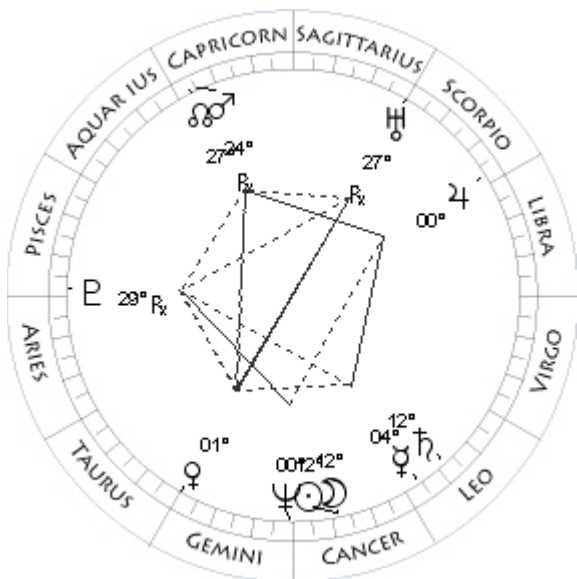
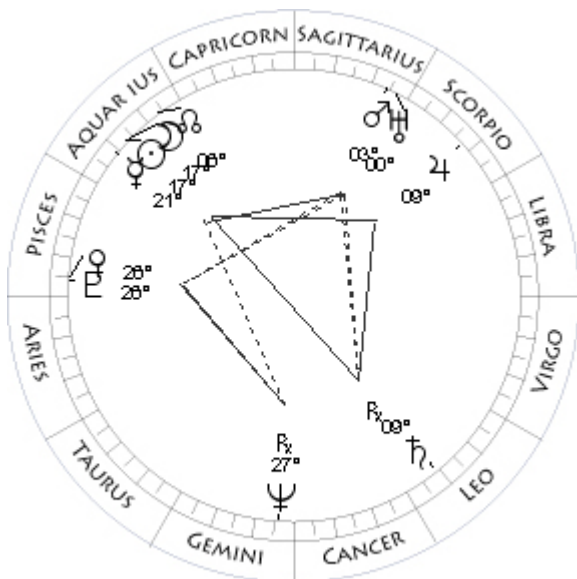
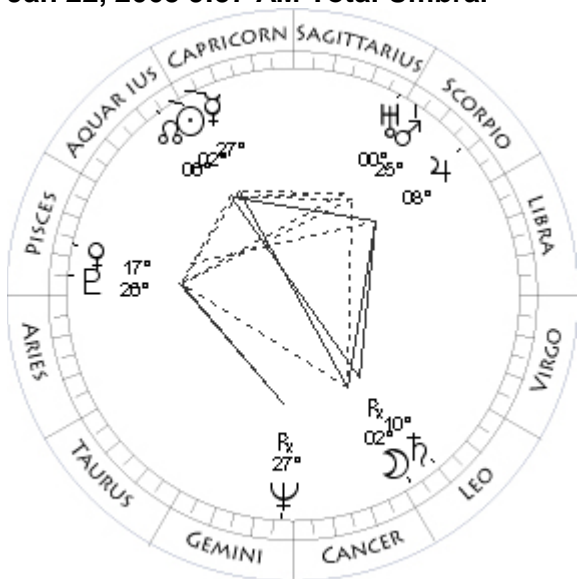
Jul 28, 2064 7:50 AM Partial Umbral

Mo 13Le54 + 1°00	Mo 06Aq07 - 0°53
Su 13Aq51 - 0°00	Su 06Le04 - 0°00
Me 02Aq50 - 1°46	Me 24Le25 - 3°54R
Ve 16Cp07 + 0°18	Ve 23Le48 + 1°31
Ma 01Ar07 - 0°27	Ma 03Le38 + 1°05
Ju 10Li13 + 1°27R	Ju 05Li39 + 1°12
Sa 24Cn58 + 0°08R	Sa 03Le46 + 0°22
Ur 26Sc23 + 0°16	Ur 22Sc38 + 0°15R
Ne 25Ge03 - 1°18R	Ne 28Ge44 - 1°13
Pl 25Pi30 -15°28	Pl 28Pi03 -16°01R
No 25Aq28 - 0°00	No 16Aq08 - 0°00
	Coords: 116E/20S

Aug 12, 2064 5:43 PM Total Solar



Jan 22, 2065 9:57 AM Total Umbra



Feb 5, 2065 9:50 AM Partial Solar

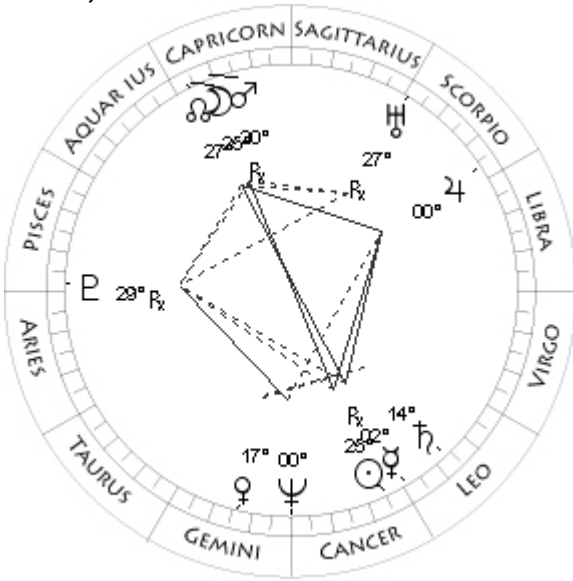
Mo 20Le44 - 0°27	Mo 17Aq02 + 0°58
Su 20Le49 - 0°00	Su 17Aq09 - 0°00
Me 15Le02 - 4°19R	Me 21Aq36 - 1°57
Ve 12Vi40 + 1°24	Ve 26Pi11 + 3°48
Ma 13Le32 + 1°08	Ma 03Sa41 + 0°43
Ju 08Li12 + 1°10	Ju 09Sc45 + 1°17
Sa 05Le44 + 0°23	Sa 09Le46 + 0°47R
Ur 22Sc43 + 0°15	Ur 00Sa54 + 0°13
Ne 29Ge10 - 1°13	Ne 27Ge16 - 1°15R
Pl 27Pi51 -16°06R	Pl 26Pi44 -15°36
No 15Aq19 - 0°00	No 05Aq58 - 0°00

Jul 3, 2065 5:31 PM Partial Solar

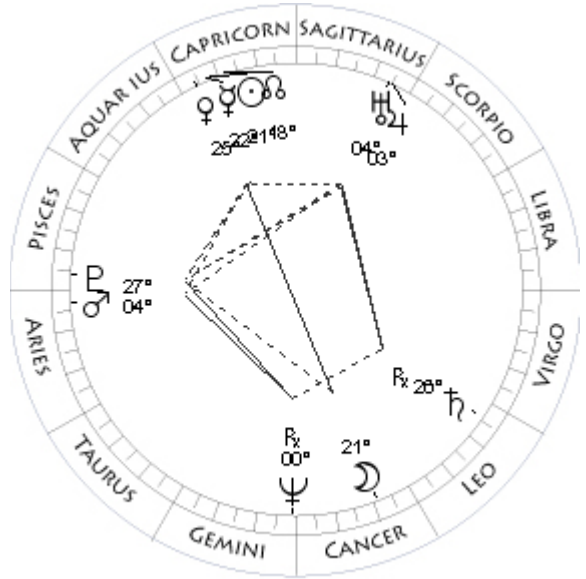
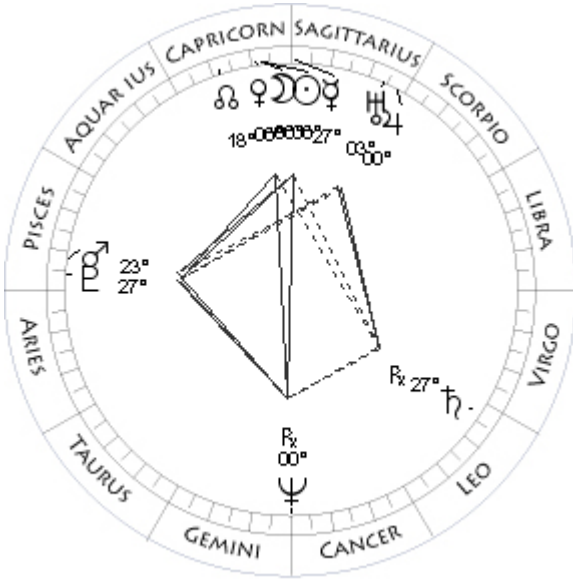
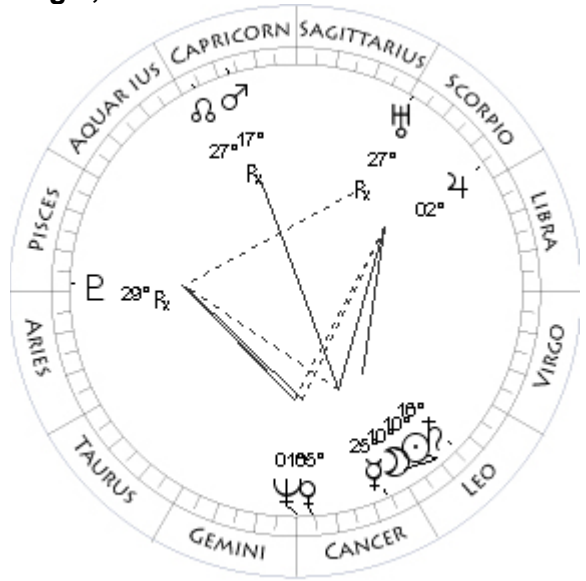
Mo 02Le57 + 0°19	Mo 12Cn28 + 1°21
Su 02Aq56 - 0°00	Su 12Cn22 - 0°00
Me 27Cp41 - 1°52	Me 04Le48 - 1°33
Ve 17Pi32 + 1°23	Ve 01Ge08 - 2°21
Ma 25Sc19 + 0°51	Ma 24Cp46 - 5°15R
Ju 08Sc42 + 1°14	Ju 00Sc25 + 1°13
Sa 10Le55 + 0°46R	Sa 12Le45 + 0°51
Ur 00Sa28 + 0°13	Ur 27Sc37 + 0°12R
Ne 27Ge33 - 1°15R	Ne 00Cn02 - 1°10
Pl 26Pi28 -15°39	Pl 29Pi24 -16°00R
No 06Aq42 - 0°00	No 28Cp06 - 0°00

Coords: 146E/20N

Jul 17, 2065 5:46 PM Total Umbral



Aug 2, 2065 5:31 AM Partial Solar



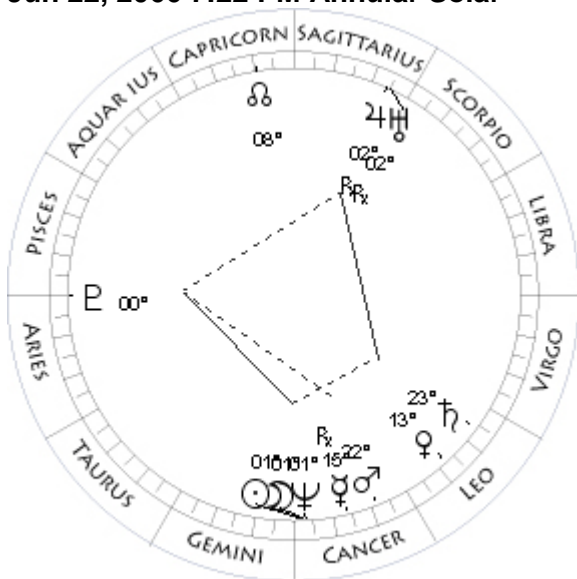
Dec 27, 2065 8:37 AM Partial Solar

Mo 25Cp43 - 0°08	Mo 06Cp13 - 1°05
Su 25Cn44 - 0°00	Su 06Cp09 - 0°00
Me 02Le18 - 4°40R	Me 27Sa50 - 0°49
Ve 17Ge07 - 1°53	Ve 06Cp47 - 0°30
Ma 20Cp57 - 5°55R	Ma 23Pi29 - 0°32
Ju 00Sc59 + 1°10	Ju 00Sa20 + 0°50
Sa 14Le27 + 0°51	Sa 27Le09 + 1°16R
Ur 27Sc20 + 0°12R	Ur 03Sa34 + 0°10
Ne 00Cn32 - 1°10	Ne 00Cn31 - 1°13R
Pl 29Pi20 -16°06R	Pl 27Pi18 -15°56
No 27Cp22 - 0°00	No 18Cp45 - 0°00
Coords: 95W/21S	

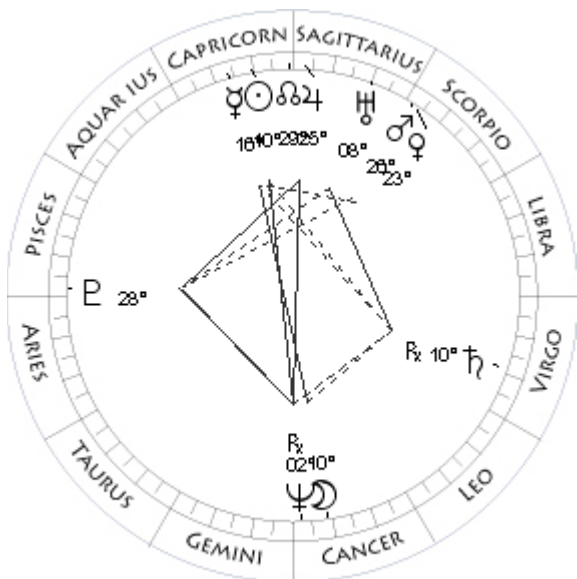
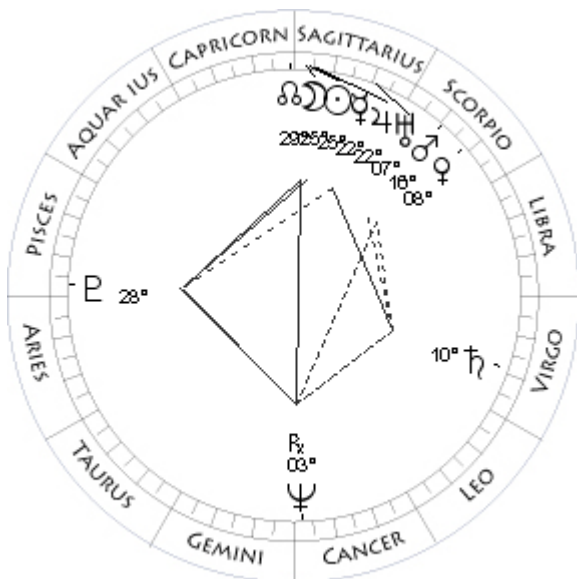
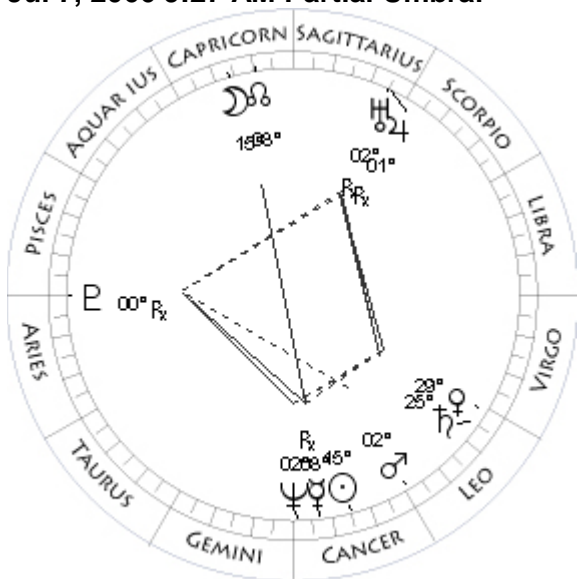
Jan 11, 2066 3:02 PM Total Umbral

Mo 10Le22 - 1°12	Mo 21Cn38 - 0°20
Su 10Le31 - 0°00	Su 21Cp42 - 0°00
Me 25Cn05 - 3°29	Me 22Cp09 - 1°58
Ve 05Cn09 - 1°10	Ve 25Cp59 - 1°01
Ma 17Cp10 - 6°04R	Ma 04Ar04 - 0°12
Ju 02Sc15 + 1°06	Ju 03Sa14 + 0°50
Sa 16Le24 + 0°52	Sa 26Le25 + 1°19R
Ur 27Sc12 + 0°12R	Ur 04Sa21 + 0°10
Ne 01Cn02 - 1°10	Ne 00Cn06 - 1°13R
Pl 29Pi11 -16°11R	Pl 27Pi27 -15°51
No 26Cp33 - 0°00	No 17Cp57 - 0°00
Coords: 136W/21N	

Jun 22, 2066 7:22 PM Annular Solar



Jul 7, 2066 9:27 AM Partial Umbral



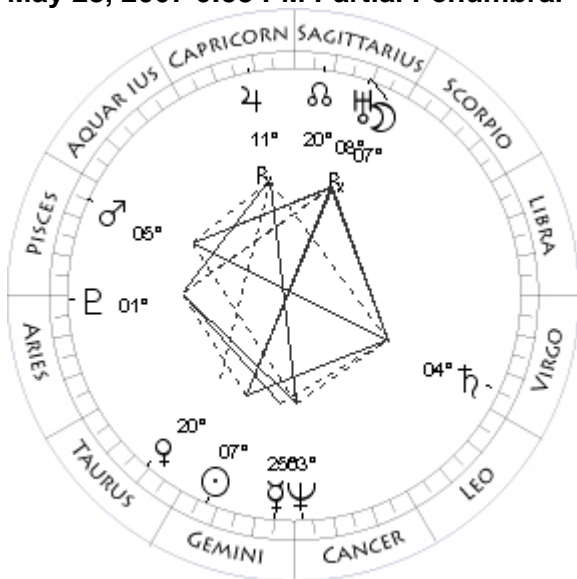
Dec 17, 2066 0:20 AM Total Solar

Mo 01Cn45 + 0°39	Mo 25Sa22 - 0°25
Su 01Cn43 - 0°00	Su 25Sa22 - 0°00
Me 15Cn30 - 2°21R	Me 22Sa53 - 1°05
Ve 13Le12 + 1°58	Ve 08Sc38 + 2°52
Ma 22Cn42 + 1°09	Ma 16Sc39 + 0°35
Ju 02Sa44 + 0°51R	Ju 22Sa36 + 0°22
Sa 23Le46 + 1°19	Sa 10Vi57 + 1°41
Ur 02Sa37 + 0°09R	Ur 07Sa12 + 0°06
Ne 01Cn47 - 1°07	Ne 03Cn07 - 1°10R
Pl 00Ar34 -16°03	Pl 28Pi26 -16°08
No 09Cp21 - 0°00	No 29Sa58 - 0°00
	Coords: 176W/47S

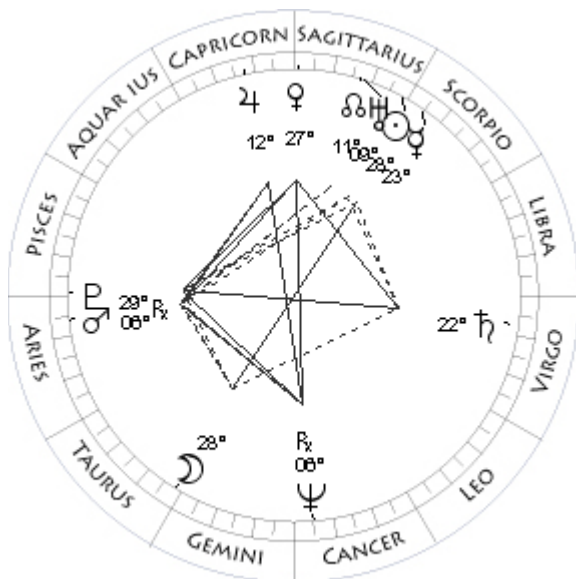
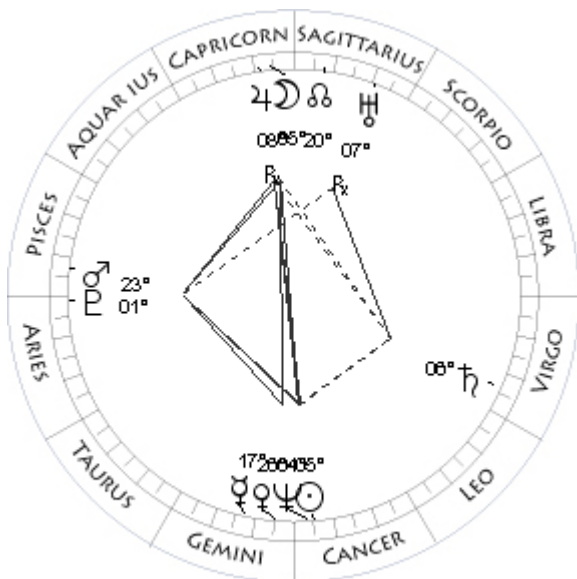
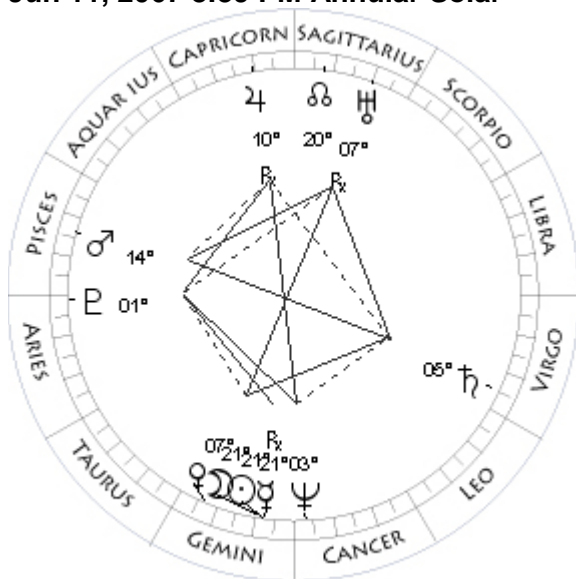
Dec 31, 2066 2:27 PM Total Solar

Mo 15Cp32 + 0°37	Mo 10Cn06 - 0°57
Su 15Cn38 - 0°00	Su 10Cp13 - 0°00
Me 08Cn08 - 4°49R	Me 16Cp08 - 2°04
Ve 29Le22 + 1°25	Ve 23Sc38 + 3°07
Ma 02Le02 + 1°10	Ma 26Sc19 + 0°27
Ju 01Sa34 + 0°48R	Ju 25Sa53 + 0°20
Sa 25Le14 + 1°19	Sa 10Vi52 + 1°44R
Ur 02Sa11 + 0°08R	Ur 08Sa02 + 0°06
Ne 02Cn19 - 1°07	Ne 02Cn42 - 1°10R
Pl 00Ar34 -16°09R	Pl 28Pi30 -16°02
No 08Cp35 - 0°00	No 29Sa12 - 0°00
Coords: 141E/22S	Coords: 144W/22N

May 28, 2067 6:53 PM Partial Penumbra



Jun 11, 2067 8:39 PM Annular Solar



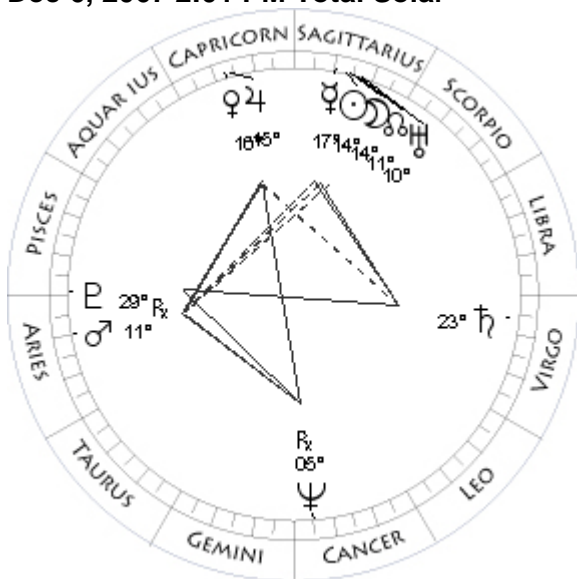
Jun 27, 2067 2:38 AM Partial Penumbra

Mo 07Sa38 - 1°11	Mo 05Cp26 + 1°21
Su 07Ge33 - 0°00	Su 05Cn36 - 0°00
Me 25Ge38 + 0°44	Me 17Ge37 - 4°20
Ve 20Ta13 - 1°11	Ve 26Ge04 - 0°07
Ma 05Pi45 - 2°22	Ma 23Pi35 - 3°17
Ju 11Cp28 + 0°10R	Ju 08Cp11 + 0°06R
Sa 04Vi32 + 1°48	Sa 06Vi21 + 1°45
Ur 08Sa17 + 0°05R	Ur 07Sa08 + 0°05R
Ne 03Cn01 - 1°04	Ne 04Cn04 - 1°04
Pl 01Ar31 -16°01	Pl 01Ar44 -16°12
No 21Sa21 - 0°00	No 19Sa48 - 0°00
Coords: 76W/23S	

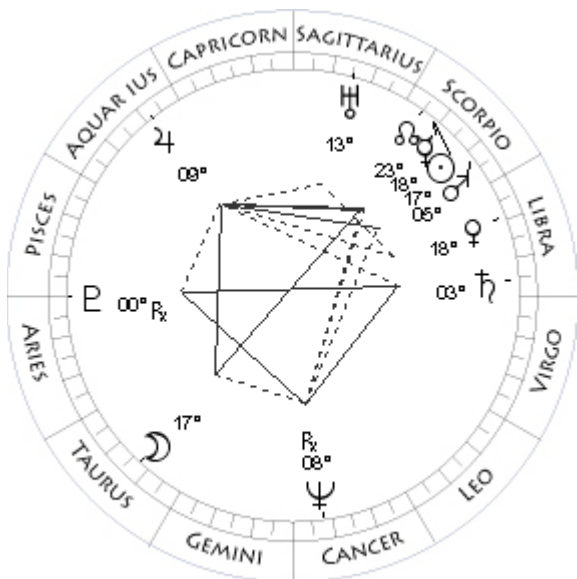
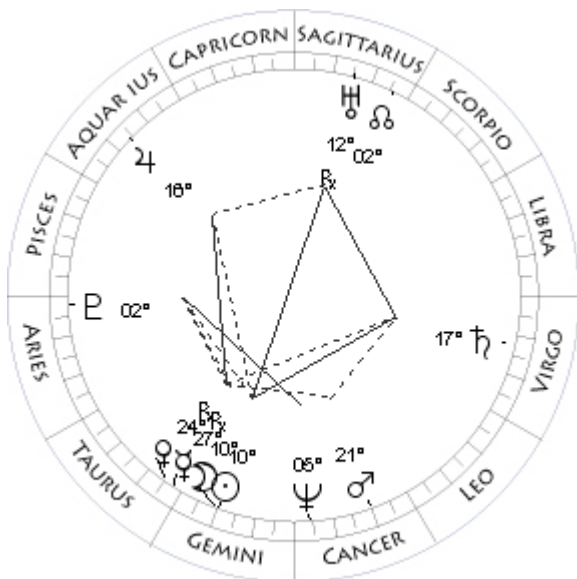
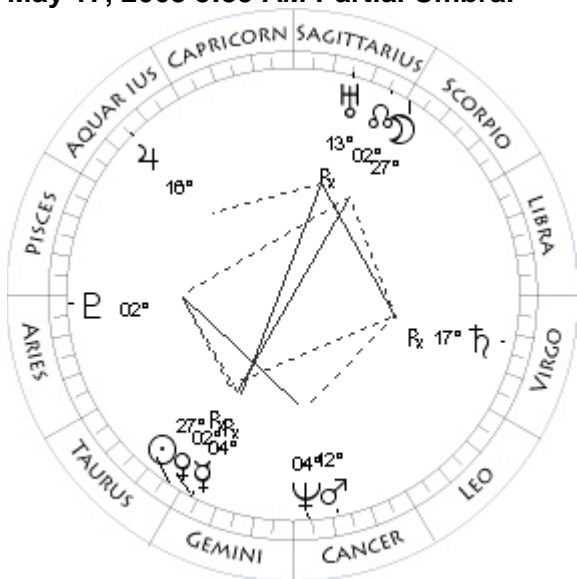
Nov 21, 2067 0:02 AM Partial Penumbra

Mo 21Ge00 - 0°02	Mo 28Ta49 + 1°09
Su 21Ge02 - 0°00	Su 28Sc44 - 0°00
Me 21Ge46 - 3°04R	Me 23Sc18 + 0°18
Ve 07Ge24 - 0°43	Ve 27Sa36 - 1°22
Ma 14Pi34 - 2°48	Ma 06Ar32 - 0°50
Ju 10Cp03 + 0°08R	Ju 12Cp20 - 0°10
Sa 05Vi15 + 1°47	Sa 22Vi28 + 1°54
Ur 07Sa42 + 0°05R	Ur 09Sa48 + 0°03
Ne 03Cn31 - 1°04	Ne 06Cn04 - 1°06R
Pl 01Ar40 -16°06	Pl 29Pi41 -16°24R
No 20Sa37 - 0°00	No 12Sa01 - 0°00
Coords: 130E/21N	

Dec 6, 2067 2:01 PM Total Solar



May 17, 2068 5:39 AM Partial Umbral



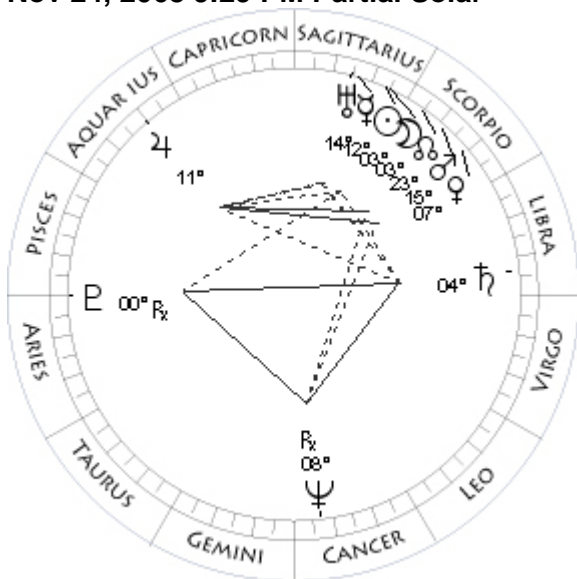
May 31, 2068 3:53 AM Total Solar

Mo 14Sa27 + 0°16	Mo 10Ge27 - 0°46
Su 14Sa31 - 0°00	Su 10Ge34 - 0°00
Me 17Sa54 - 1°20	Me 27Ta39 - 3°25R
Ve 16Cp49 - 1°48	Ve 24Ta50 + 0°02R
Ma 11Ar09 - 0°08	Ma 21Cn25 + 1°20
Ju 15Cp34 - 0°12	Ju 16Aq44 - 0°37
Sa 23Vi25 + 1°58	Sa 17Vi24 + 2°11
Ur 10Sa45 + 0°03	Ur 12Sa48 + 0°01R
Ne 05Cn41 - 1°07R	Ne 05Cn16 - 1°01
Pl 29Pi36 -16°19R	Pl 02Ar42 -16°08
No 11Sa12 - 0°00	No 01Sa51 - 0°00
	Coords: 123W/31S

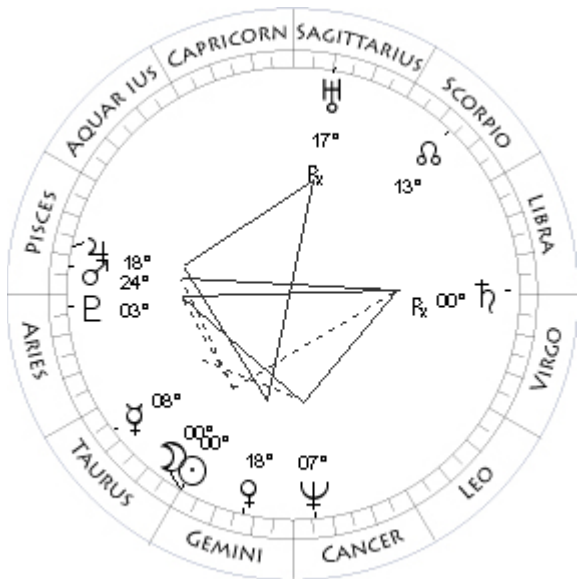
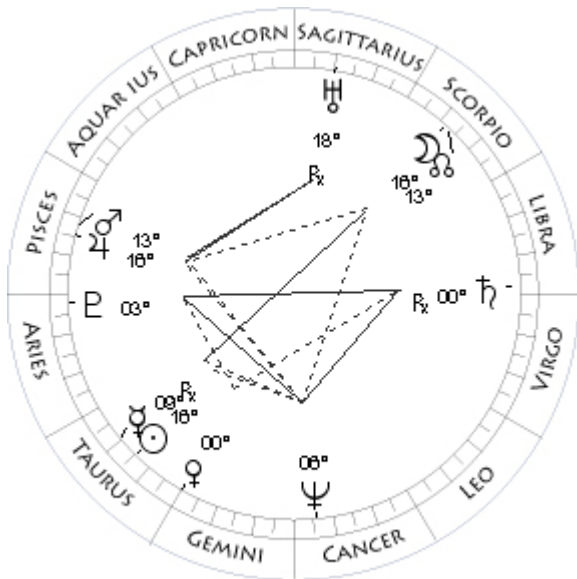
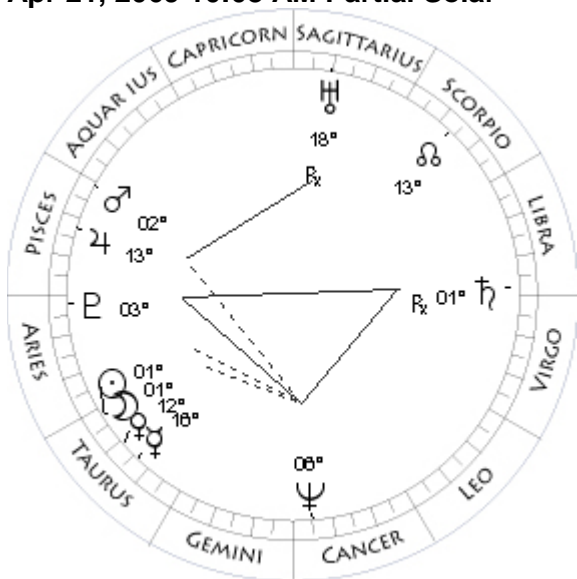
Nov 9, 2068 11:45 AM Total Umbral

Mo 27Sc11 - 0°27	Mo 17Ta56 + 0°28
Su 27Ta10 - 0°00	Su 17Sc55 - 0°00
Me 04Ge25 + 0°07R	Me 18Sc13 + 0°01
Ve 02Ge51 + 3°14R	Ve 18Li52 + 1°43
Ma 12Cn49 + 1°22	Ma 05Sc07 + 0°27
Ju 16Aq17 - 0°34	Ju 09Aq15 - 0°49
Sa 17Vi16 + 2°13R	Sa 03Li17 + 2°06
Ur 13Sa22 + 0°02R	Ur 13Sa21 - 0°00
Ne 04Cn49 - 1°01	Ne 08Cn32 - 1°03R
Pl 02Ar30 -16°04	Pl 00Ar59 -16°34R
No 02Sa35 - 0°00	No 23Sc15 - 0°00
	Coords: 180W/18N

Nov 24, 2068 9:29 PM Partial Solar



Apr 21, 2069 10:08 AM Partial Solar



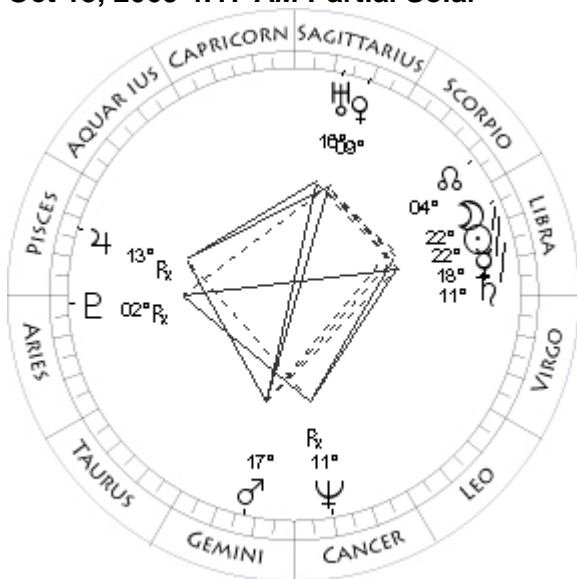
May 6, 2069 9:07 AM Total Umbra

Mo 03Sa19 + 0°57	Mo 16Sc24 + 0°15
Su 03Sa26 - 0°00	Su 16Ta27 - 0°00
Me 12Sa24 - 1°34	Me 09Ta52 - 0°32R
Ve 07Sc59 + 1°36	Ve 00Ge43 + 0°06
Ma 15Sc33 + 0°19	Ma 13Pi21 - 1°37
Ju 11Aq20 - 0°48	Ju 16Pi21 - 0°59
Sa 04Li42 + 2°09	Sa 00Li43 + 2°33R
Ur 14Sa15 - 0°00	Ur 18Sa21 - 0°02R
Ne 08Cn14 - 1°03R	Ne 06Cn40 - 0°59
Pl 00Ar49 -16°29R	Pl 03Ar26 -16°06
No 22Sc26 - 0°00	No 13Sc50 - 0°00
	Coords: 138E/17S

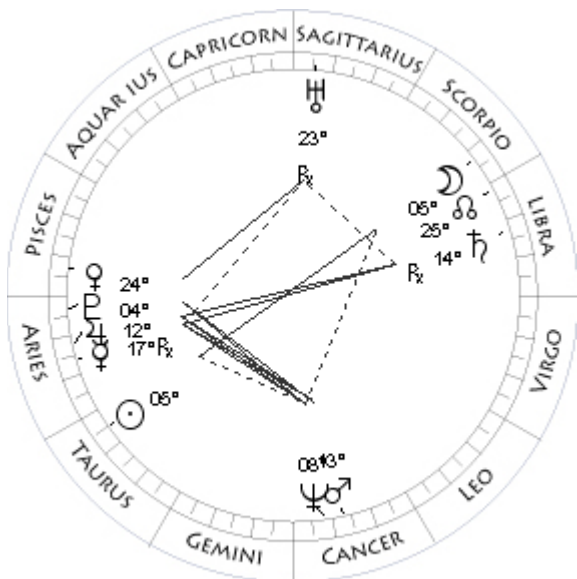
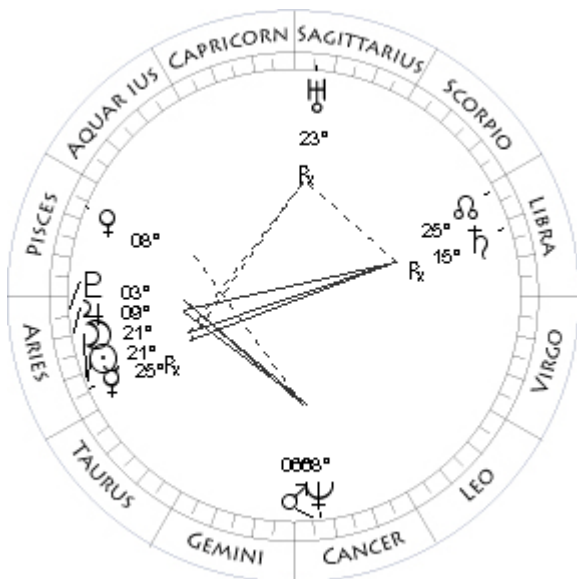
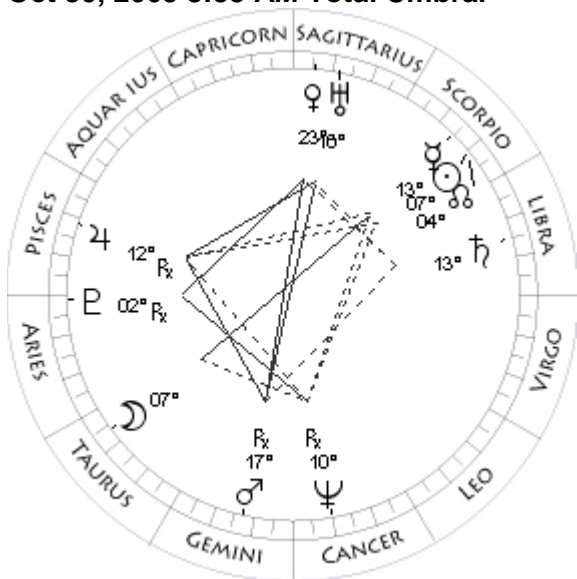
May 20, 2069 5:50 PM Partial Solar

Mo 01Ta59 + 1°05	Mo 00Ge08 - 1°29
Su 01Ta55 - 0°00	Su 00Ge19 - 0°00
Me 16Ta44 + 2°49	Me 08Ta04 - 3°22
Ve 12Ta18 - 0°31	Ve 18Ge19 + 0°41
Ma 02Pi09 - 1°27	Ma 24Pi03 - 1°46
Ju 13Pi33 - 0°56	Ju 18Pi39 - 1°02
Sa 01Li30 + 2°35R	Sa 00Li16 + 2°30R
Ur 18Sa47 - 0°02R	Ur 17Sa50 - 0°02R
Ne 06Cn19 - 0°59	Ne 07Cn04 - 0°58
Pl 03Ar07 -16°03	Pl 03Ar41 -16°11
No 14Sc37 - 0°00	No 13Sc04 - 0°00

Oct 15, 2069 4:17 AM Partial Solar



Oct 30, 2069 3:33 AM Total Umbral



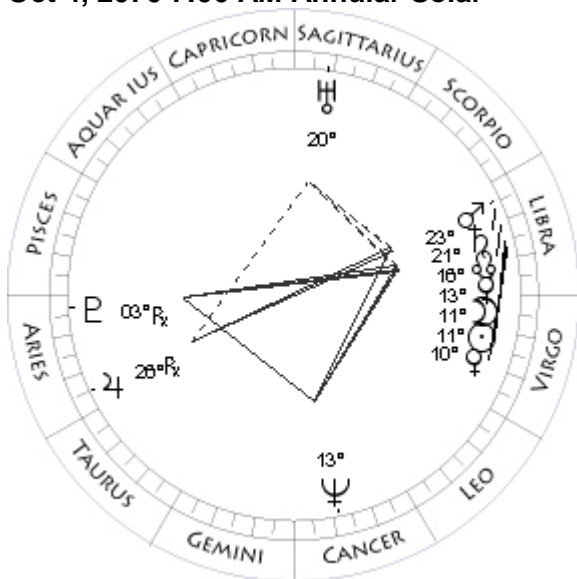
Apr 11, 2070 2:33 AM Total Solar

Mo 22Li30 - 1°07	Mo 21Ar34 + 0°22
Su 22Li25 - 0°00	Su 21Ar34 - 0°00
Me 18Li36 + 1°18	Me 25Ar10 + 2°37R
Ve 09Sa09 - 3°40	Ve 08Pi03 - 0°24
Ma 17Ge36 - 0°30	Ma 06Cn08 + 1°53
Ju 13Pi42 - 1°28R	Ju 09Ar35 - 1°05
Sa 11Li35 + 2°11	Sa 15Li43 + 2°45R
Ur 16Sa15 - 0°03	Ur 23Sa26 - 0°05R
Ne 11Cn00 - 0°59R	Ne 08Cn20 - 0°56
Pl 02Ar34 -16°46R	Pl 03Ar58 -16°07
No 05Sc16 - 0°00	No 25Li50 - 0°00
	Coords: 135W/29N

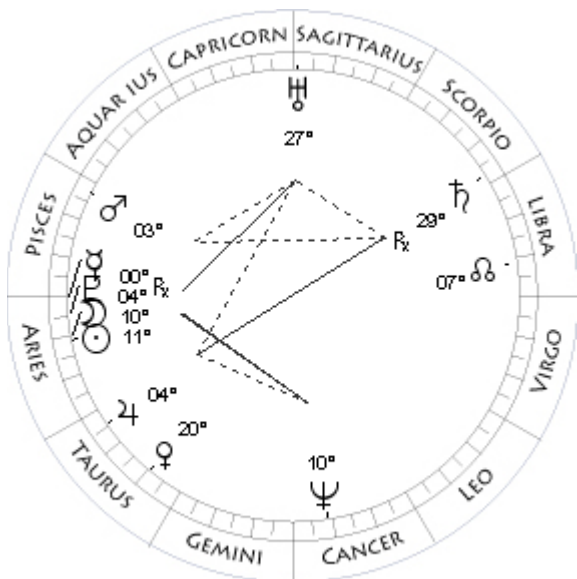
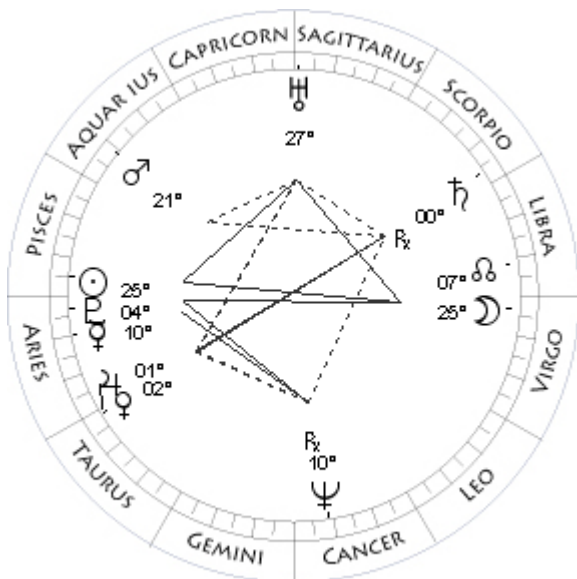
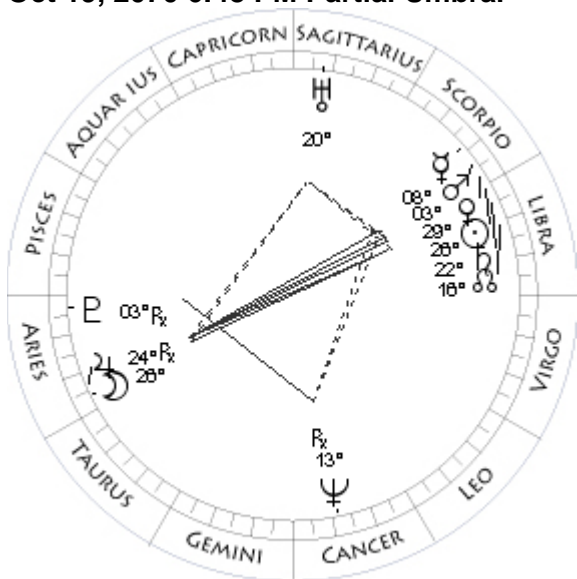
Apr 25, 2070 9:18 AM Total Solar

Mo 07Ta15 - 0°14	Mo 05Sc25 + 0°54
Su 07Sc18 - 0°00	Su 05Ta32 - 0°00
Me 13Sc28 - 0°18	Me 17Ar12 - 1°02R
Ve 23Sa05 - 4°15	Ve 24Pi24 - 1°13
Ma 17Ge43 + 0°08R	Ma 13Cn56 + 1°46
Ju 12Pi55 - 1°25R	Ju 12Ar58 - 1°06
Sa 13Li22 + 2°13	Sa 14Li40 + 2°44R
Ur 16Sa57 - 0°03	Ur 23Sa11 - 0°05R
Ne 10Cn55 - 0°59R	Ne 08Cn35 - 0°56
Pl 02Ar18 -16°43R	Pl 04Ar19 -16°10
No 04Sc28 - 0°00	No 25Li05 - 0°00
	Coords: 140E/12S

Oct 4, 2070 7:06 AM Annular Solar



Oct 19, 2070 6:48 PM Partial Umbral



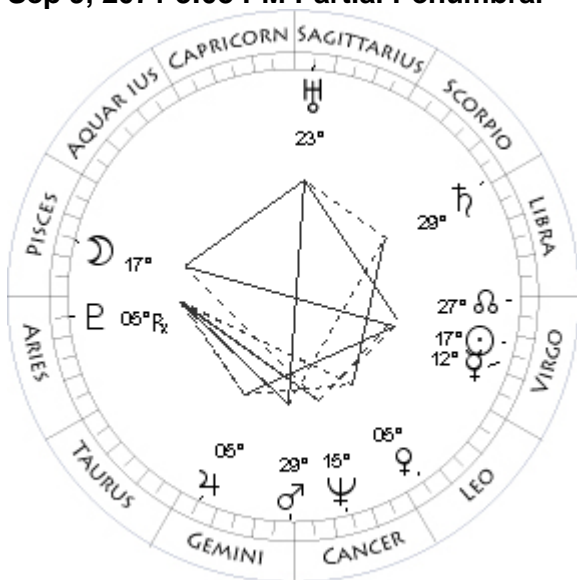
Mar 16, 2071 1:28 AM Partial Penumbral

Mo 11Li27 - 0°28	Mo 25Vi38 - 1°03
Su 11Li25 - 0°00	Su 25Pi34 - 0°00
Me 13Li07 + 1°05	Me 10Ar39 + 3°09
Ve 10Li19 + 1°19	Ve 02Ta24 + 0°23
Ma 23Li11 + 0°23	Ma 21Aq35 - 1°09
Ju 26Ar19 - 1°35R	Ju 01Ta29 - 1°00
Sa 21Li05 + 2°15	Sa 00Sc43 + 2°43R
Ur 20Sa04 - 0°07	Ur 27Sa45 - 0°08
Ne 13Cn12 - 0°55	Ne 10Cn26 - 0°54R
Pl 03Ar57 -16°53R	Pl 04Ar25 -16°12
No 16Li31 - 0°00	No 07Li54 - 0°00
Coords: 61W/33S	

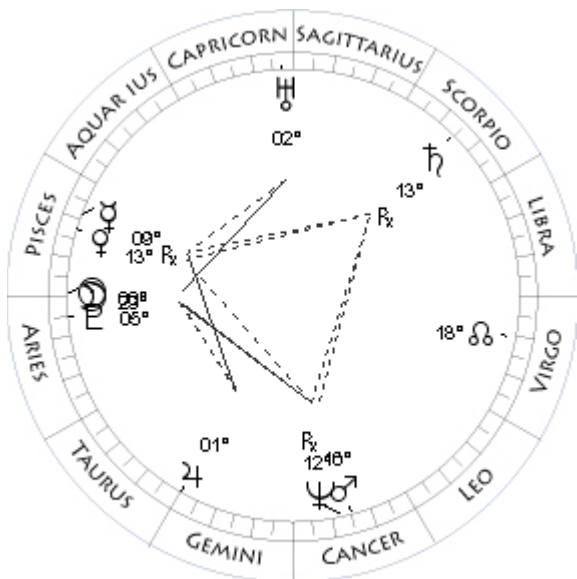
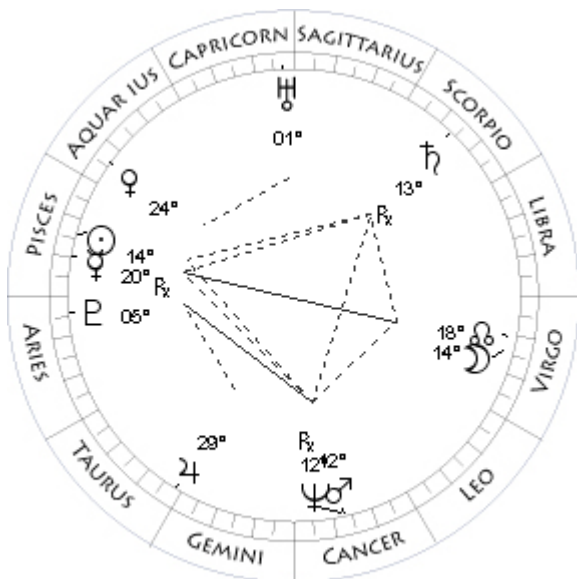
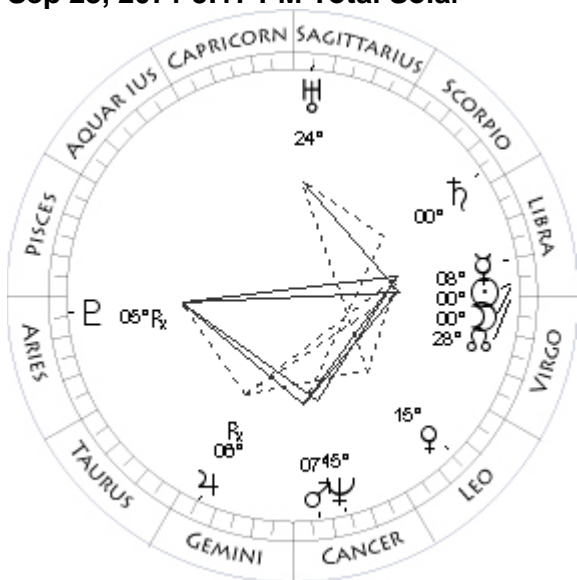
Mar 31, 2071 2:58 PM Annular Solar

Mo 26Ar37 - 0°56	Mo 10Ar56 - 0°21
Su 26Li44 - 0°00	Su 11Ar00 - 0°00
Me 08Sc33 - 0°38	Me 00Ar54 + 2°00R
Ve 29Li40 + 0°59	Ve 20Ta45 + 1°19
Ma 03Sc36 + 0°15	Ma 03Pi39 - 1°14
Ju 24Ar16 - 1°35R	Ju 04Ta58 - 0°58
Sa 22Li58 + 2°15	Sa 29Li44 + 2°45R
Ur 20Sa38 - 0°07	Ur 27Sa52 - 0°09
Ne 13Cn14 - 0°55R	Ne 10Cn27 - 0°53
Pl 03Ar39 -16°51R	Pl 04Ar49 -16°12
No 15Li41 - 0°00	No 07Li04 - 0°00
Coords: 74W/ 9N	

Sep 9, 2071 3:03 PM Partial Penumbral



Sep 23, 2071 5:17 PM Total Solar



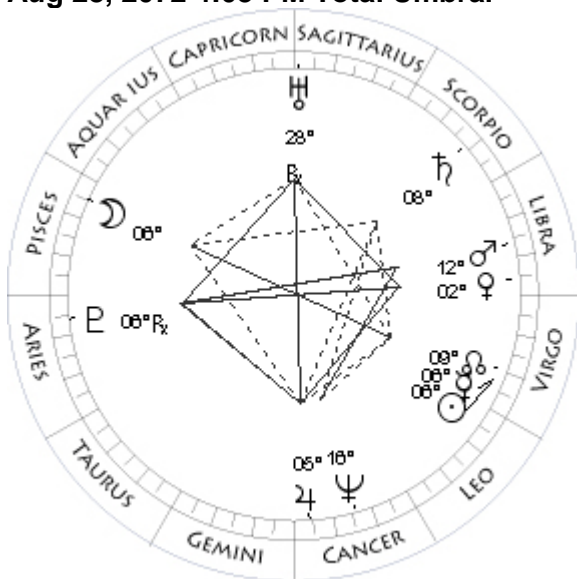
Mar 4, 2072 3:20 PM Total Umbral

Mo 17Pi08 + 0°59	Mo 14Vi54 - 0°21
Su 17Vi04 - 0°00	Su 14Pi54 - 0°00
Me 12Vi23 + 1°47	Me 20Pi49 + 3°39R
Ve 05Le31 - 4°41	Ve 24Aq55 - 1°00
Ma 29Ge47 - 0°06	Ma 12Cn55 + 3°15
Ju 05Ge42 - 1°01	Ju 29Ta11 - 0°39
Sa 29Li04 + 2°17	Sa 13Sc35 + 2°33R
Ur 23Sa52 - 0°10	Ur 01Cp45 - 0°11
Ne 15Cn03 - 0°51	Ne 12Cn45 - 0°51R
Pl 05Ar36 -16°57R	Pl 05Ar15 -16°18
No 28Vi29 - 0°00	No 19Vi07 - 0°00
Coords: 133W/ 6N	

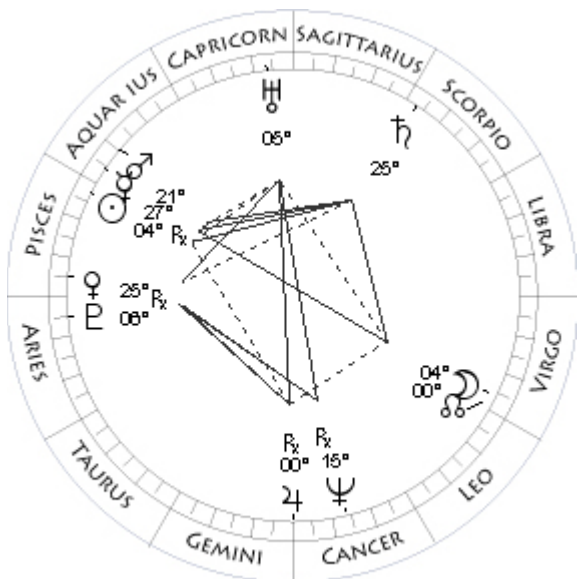
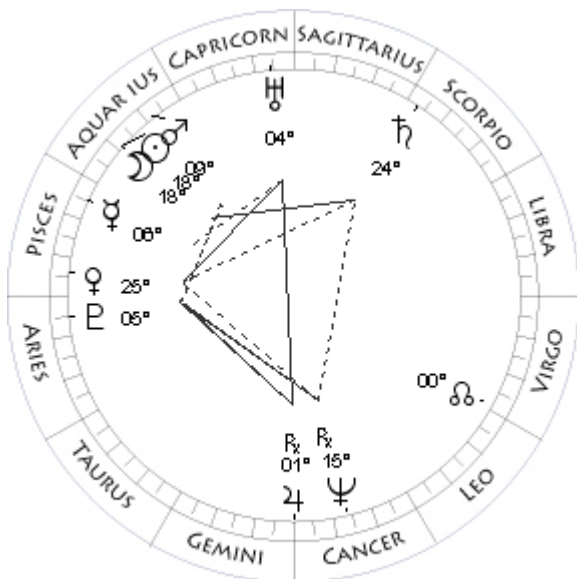
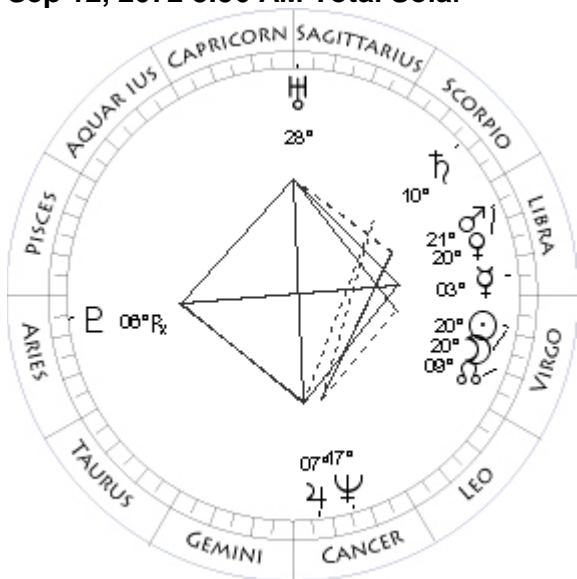
Mar 19, 2072 8:07 PM Partial Solar

Mo 00Li45 + 0°15	Mo 29Pi57 - 1°02
Su 00Li48 - 0°00	Su 00Ar05 - 0°00
Me 08Li12 + 0°50	Me 09Pi39 + 1°15R
Ve 15Le40 - 2°51	Ve 13Pi47 - 1°22
Ma 07Cn44 + 0°13	Ma 16Cn28 + 2°51
Ju 06Ge05 - 1°02R	Ju 01Ge28 - 0°36
Sa 00Sc33 + 2°15	Sa 13Sc04 + 2°36R
Ur 24Sa03 - 0°10	Ur 02Cp04 - 0°12
Ne 15Cn17 - 0°51	Ne 12Cn39 - 0°50R
Pl 05Ar19 -16°58R	Pl 05Ar38 -16°17
No 27Vi45 - 0°00	No 18Vi19 - 0°00

Aug 28, 2072 4:03 PM Total Umbral



Sep 12, 2072 8:56 AM Total Solar



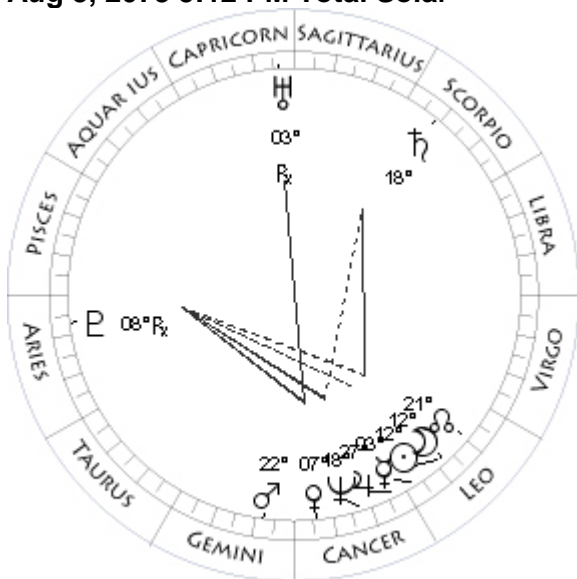
Feb 7, 2073 1:53 AM Partial Solar

Mo 06Pi14 + 0°19	Mo 18Aq58 + 1°03
Su 06Vi13 - 0°00	Su 18Aq54 - 0°00
Me 06Vi58 + 1°43	Me 06Pi19 + 1°23
Ve 02Li46 + 0°59	Ve 25Pi24 + 4°24
Ma 12Li10 + 0°21	Ma 09Aq22 - 1°03
Ju 05Cn28 - 0°20	Ju 01Cn16 - 0°03R
Sa 08Sc58 + 2°14	Sa 24Sc56 + 2°14
Ur 28Sa12 - 0°14R	Ur 04Cp54 - 0°14
Ne 16Cn58 - 0°47	Ne 15Cn27 - 0°48R
Pl 06Ar57 -17°00R	Pl 05Ar48 -16°29
No 09Vi44 - 0°00	No 01Vi08 - 0°00

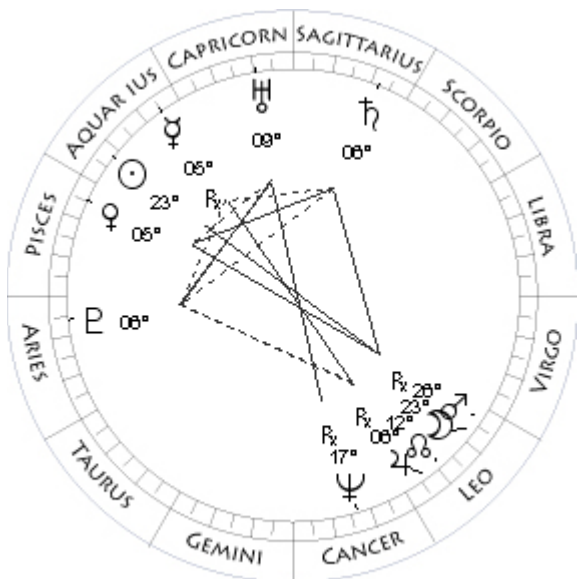
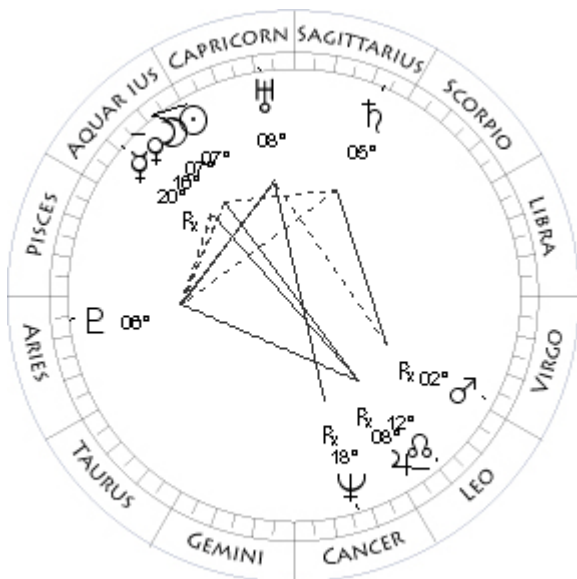
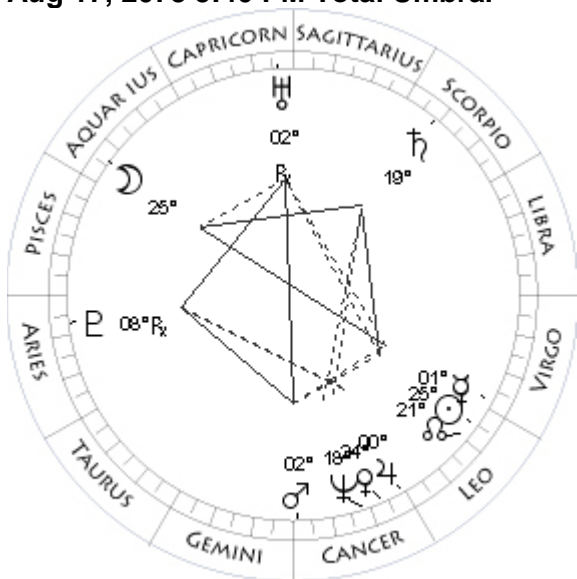
Feb 22, 2073 7:22 AM Total Umbral

Mo 20Vi20 + 0°59	Mo 04Vi13 + 0°21
Su 20Vi28 - 0°00	Su 04Pi17 - 0°00
Me 03Li31 + 0°33	Me 27Aq06 + 3°35R
Ve 20Li39 + 0°23	Ve 25Pi58 + 7°27R
Ma 21Li46 + 0°12	Ma 21Aq19 - 1°05
Ju 07Cn38 - 0°19	Ju 00Cn48 - 0°01R
Sa 10Sc11 + 2°11	Sa 25Sc24 + 2°17
Ur 28Sa12 - 0°14	Ur 05Cp33 - 0°14
Ne 17Cn18 - 0°47	Ne 15Cn09 - 0°47R
Pl 06Ar41 -17°03R	Pl 06Ar07 -16°25
No 08Vi58 - 0°00	No 00Vi20 - 0°00
Coords: 101W/69N	Coords: 107E/10N

Aug 3, 2073 5:12 PM Total Solar



Aug 17, 2073 5:40 PM Total Umbral



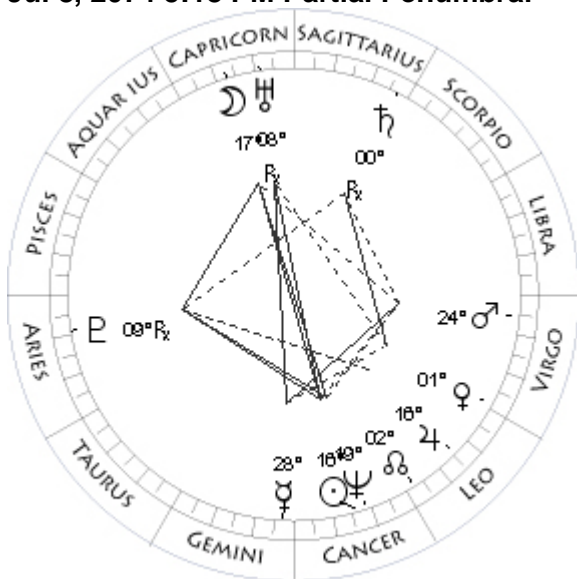
Jan 27, 2074 6:41 AM Annular Solar

Mo 12Le03 - 0°52	Mo 07Aq41 + 0°24
Su 12Le00 - 0°00	Su 07Aq41 - 0°00
Me 03Le13 + 1°11	Me 20Aq05 + 2°11R
Ve 07Cn27 - 1°02	Ve 16Aq19 - 1°23
Ma 22Ge59 + 0°02	Ma 02Vi10 + 4°19R
Ju 27Cn02 + 0°15	Ju 08Le41 + 0°44R
Sa 18Sc56 + 2°11	Sa 05Sa12 + 1°56
Ur 03Cp02 - 0°17R	Ur 08Cp23 - 0°17
Ne 18Cn20 - 0°43	Ne 18Cn00 - 0°44R
Pl 08Ar25 -16°58R	Pl 06Ar43 -16°37
No 21Le44 - 0°00	No 12Le23 - 0°00
	Coords: 79W/ 7N

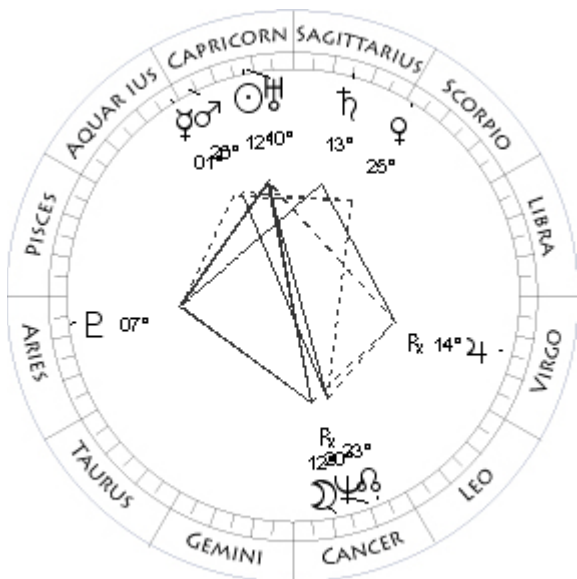
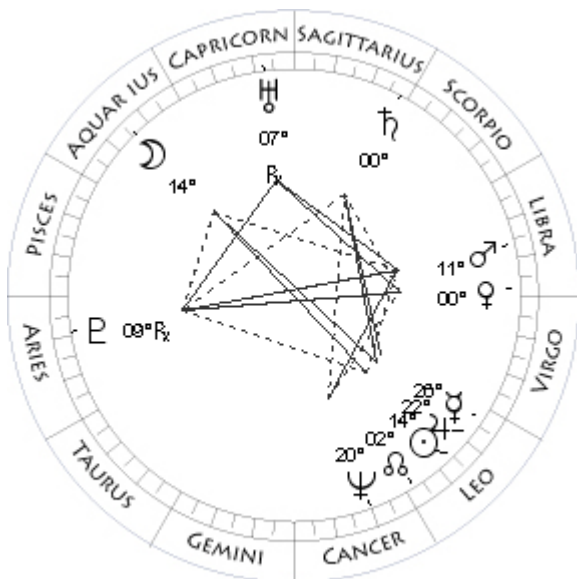
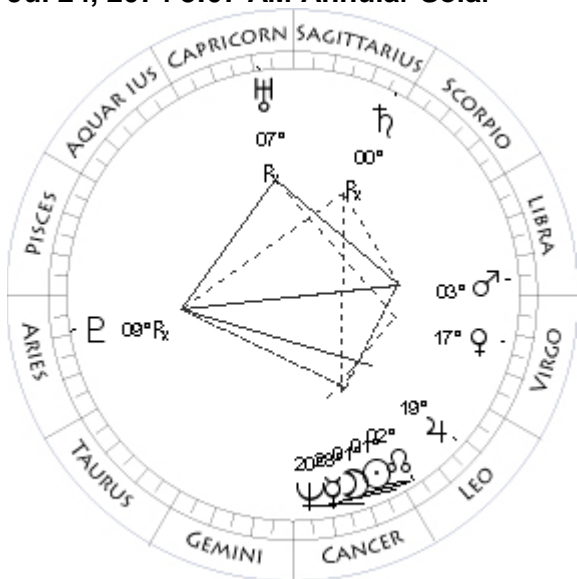
Feb 11, 2074 8:53 PM Partial Penumbral

Mo 25Aq23 - 0°22	Mo 23Le22 + 1°02
Su 25Le27 - 0°00	Su 23Aq30 - 0°00
Me 01Vi41 + 1°39	Me 05Aq33 + 2°57R
Ve 24Cn06 - 0°19	Ve 05Pi51 - 1°29
Ma 02Cn18 + 0°14	Ma 26Le37 + 4°32R
Ju 00Le04 + 0°16	Ju 06Le39 + 0°45R
Sa 19Sc22 + 2°07	Sa 06Sa12 + 1°58
Ur 02Cp42 - 0°17R	Ur 09Cp11 - 0°17
Ne 18Cn48 - 0°43	Ne 17Cn37 - 0°44R
Pl 08Ar15 -17°02R	Pl 06Ar59 -16°32
No 21Le00 - 0°00	No 11Le34 - 0°00
	Coords: 50W/15N

Jul 8, 2074 5:18 PM Partial Penumbral



Jul 24, 2074 3:07 AM Annular Solar



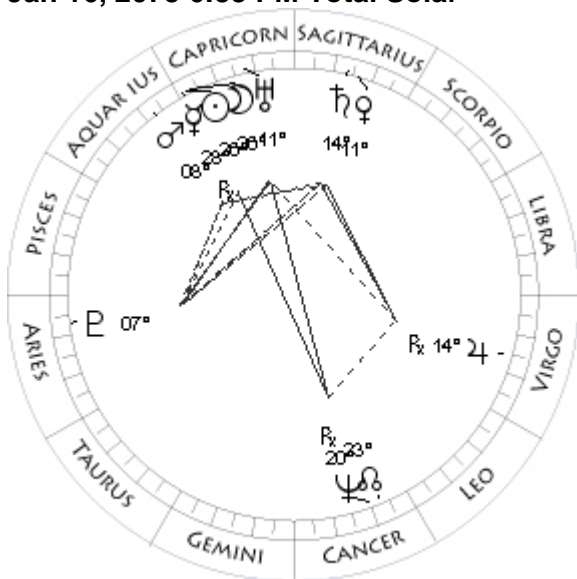
Aug 7, 2074 1:53 AM Partial Penumbral

Mo 17Cp03 + 1°26	Mo 14Aq51 - 1°06
Su 16Cn57 - 0°00	Su 14Le59 - 0°00
Me 28Ge29 - 1°13	Me 26Le46 + 1°34
Ve 01Vi07 + 1°19	Ve 00Li31 - 1°14
Ma 24Vi23 + 0°36	Ma 11Li42 + 0°09
Ju 16Le06 + 0°43	Ju 22Le20 + 0°44
Sa 00Sa57 + 2°02R	Sa 00Sa25 + 1°55
Ur 08Cp23 - 0°20R	Ur 07Cp20 - 0°20R
Ne 19Cn32 - 0°40	Ne 20Cn36 - 0°40
Pl 09Ar39 -16°53R	Pl 09Ar30 -17°03R
No 03Le47 - 0°00	No 02Le14 - 0°00
Coords: 102W/21S	

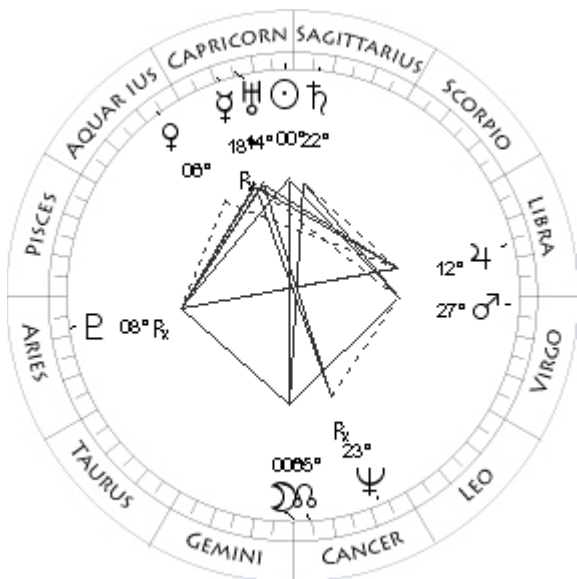
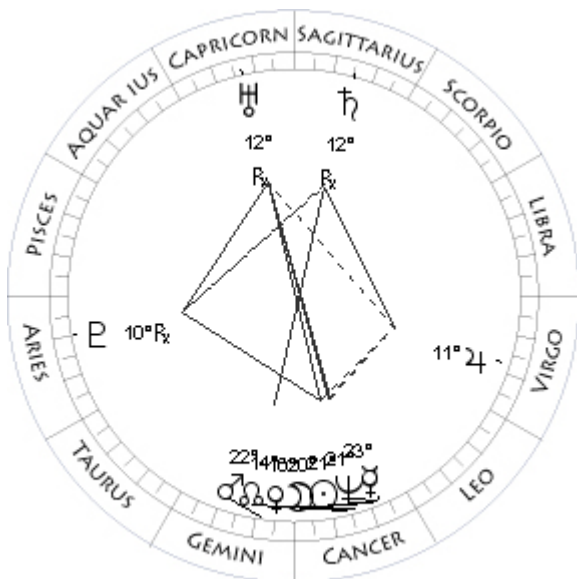
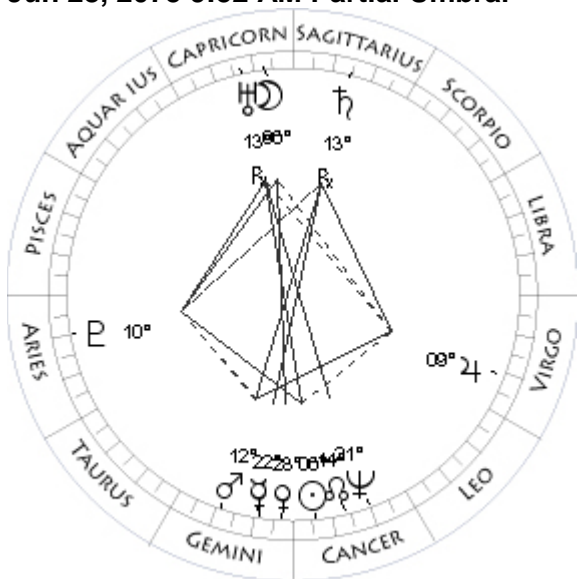
Jan 2, 2075 9:52 AM Partial Penumbral

Mo 01Le37 - 0°07	Mo 12Cn11 - 1°03
Su 01Le39 - 0°00	Su 12Cp07 - 0°00
Me 28Cn36 + 1°26	Me 01Aq35 - 0°58
Ve 17Vi09 + 0°12	Ve 25Sc48 + 3°03
Ma 03Li17 + 0°21	Ma 26Cp54 - 1°05
Ju 19Le19 + 0°44	Ju 14Vi35 + 1°10R
Sa 00Sa30 + 1°58R	Sa 13Sa16 + 1°35
Ur 07Cp47 - 0°20R	Ur 10Cp55 - 0°20
Ne 20Cn06 - 0°40	Ne 20Cn59 - 0°41R
Pl 09Ar37 -16°58R	Pl 07Ar34 -16°50
No 02Le58 - 0°00	No 24Cn22 - 0°00
Coords: 134W/13N	

Jan 16, 2075 6:33 PM Total Solar



Jun 28, 2075 9:52 AM Partial Umbral



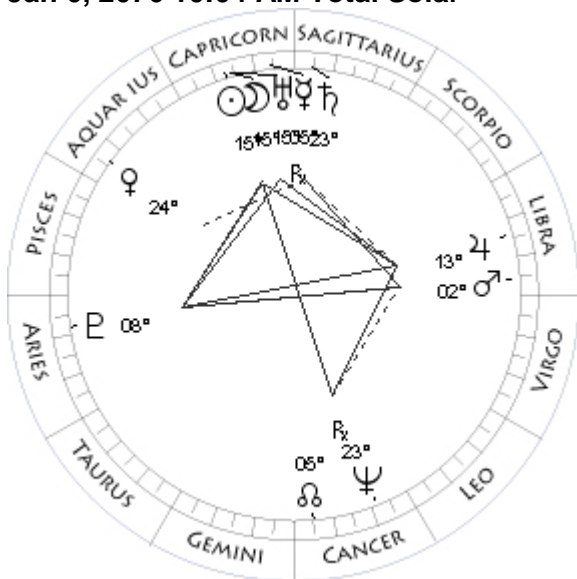
Jul 13, 2075 6:03 AM Annular Solar

Mo 26Cp41 - 0°17	Mo 20Cn57 + 0°35
Su 26Cp45 - 0°00	Su 21Cn02 - 0°00
Me 28Cp32 + 2°58R	Me 23Cn40 + 1°37
Ve 11Sa51 + 2°44	Ve 16Cn32 + 0°33
Ma 08Aq09 - 1°06	Ma 22Ge25 + 0°17
Ju 14Vi05 + 1°14R	Ju 11Vi40 + 1°06
Sa 14Sa45 + 1°35	Sa 12Sa45 + 1°40R
Ur 11Cp46 - 0°20	Ur 12Cp37 - 0°23R
Ne 20Cn35 - 0°41R	Ne 21Cn50 - 0°36
Pl 07Ar41 -16°45	Pl 10Ar45 -16°58R
No 23Cn37 - 0°00	No 14Cn13 - 0°00
	Coords: 95W/63N

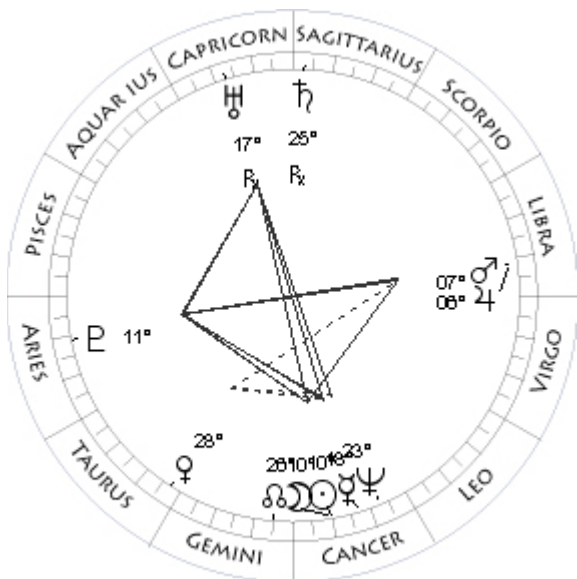
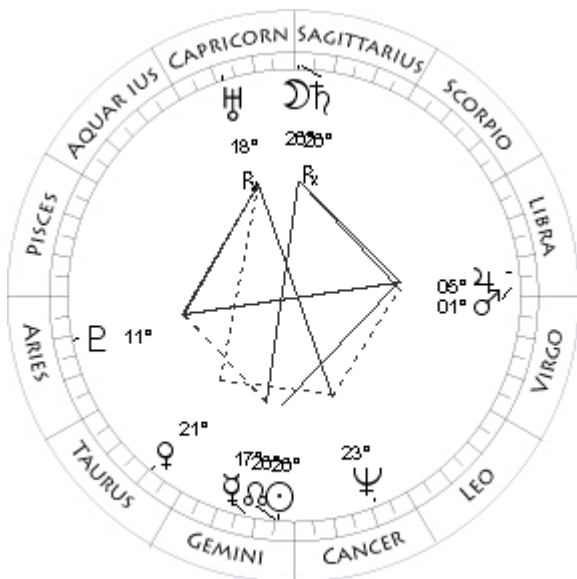
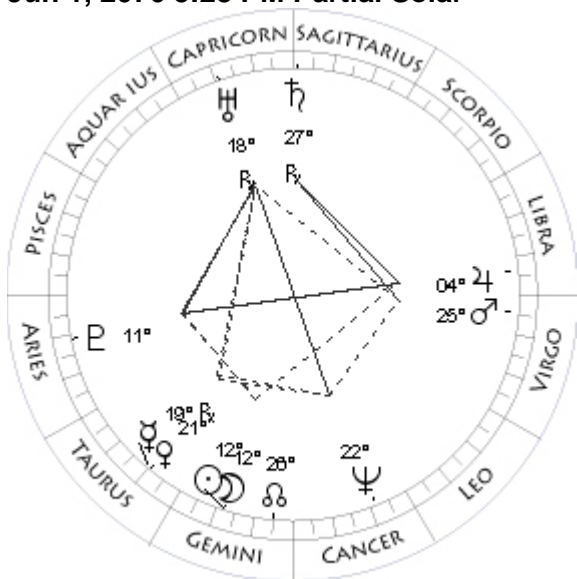
Dec 22, 2075 8:53 AM Partial Umbral

Mo 06Cp55 + 0°42	Mo 00Cn38 - 0°27
Su 06Cn53 - 0°00	Su 00Cp37 - 0°00
Me 22Ge29 - 0°35	Me 18Cp38 - 0°34R
Ve 28Ge19 - 0°02	Ve 06Aq44 - 1°57
Ma 12Ge07 + 0°06	Ma 27Vi24 + 2°24
Ju 09Vi18 + 1°07	Ju 12Li29 + 1°15
Sa 13Sa37 + 1°42R	Sa 22Sa05 + 1°14
Ur 13Cp13 - 0°23R	Ur 14Cp13 - 0°22
Ne 21Cn17 - 0°36	Ne 23Cn35 - 0°37R
Pl 10Ar44 -16°52	Pl 08Ar39 -16°59R
No 15Cn00 - 0°00	No 05Cn38 - 0°00
Coords: 147E/23S	Coords: 134E/23N

Jan 6, 2076 10:04 AM Total Solar



Jun 1, 2076 5:28 PM Partial Solar



Jun 17, 2076 2:37 AM Total Umbral

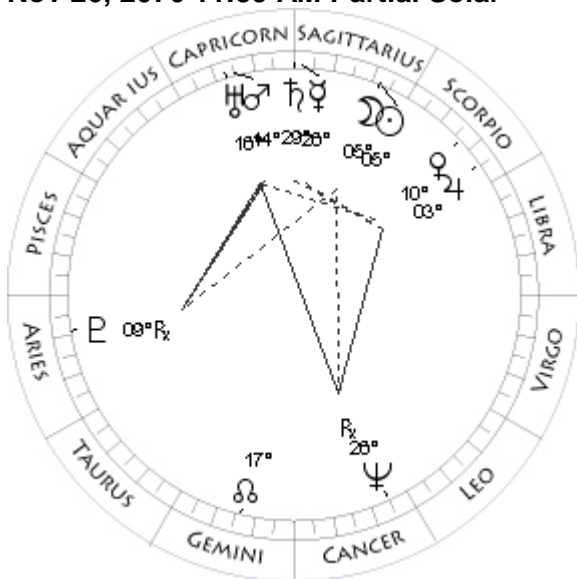
Mo 15Cp49 - 0°57	Mo 26Sa47 - 0°03
Su 15Cp57 - 0°00	Su 26Ge49 - 0°00
Me 05Cp22 + 3°14R	Me 17Ge54 - 0°02
Ve 24Aq59 - 1°44	Ve 21Ta25 - 2°54
Ma 02Li51 + 2°41	Ma 01Li04 + 0°25
Ju 13Li50 + 1°19	Ju 05Li07 + 1°21
Sa 23Sa49 + 1°14	Sa 26Sa35 + 1°17R
Ur 15Cp07 - 0°23	Ur 18Cp00 - 0°26R
Ne 23Cn10 - 0°37R	Ne 23Cn04 - 0°33
Pl 08Ar41 -16°53	Pl 11Ar45 -16°52
No 04Cn50 - 0°00	No 26Ge13 - 0°00

Coords: 179E/88S

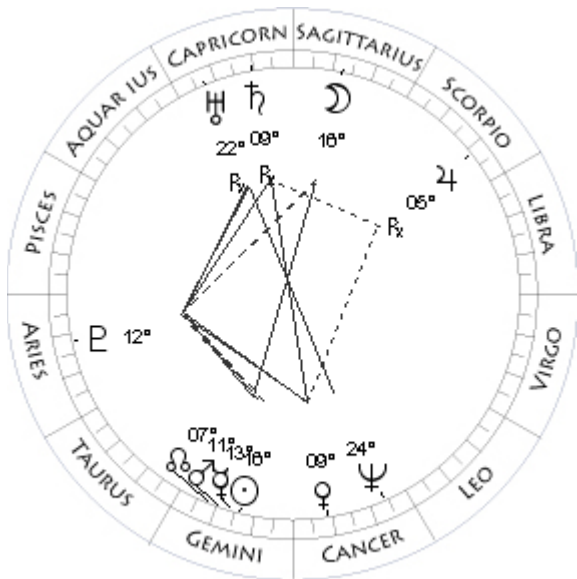
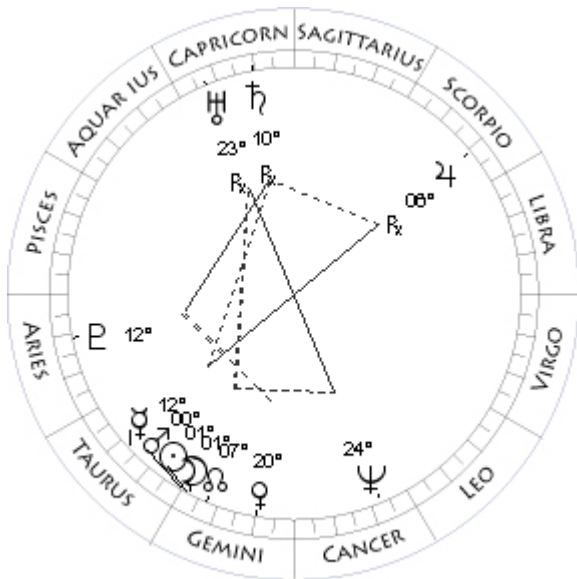
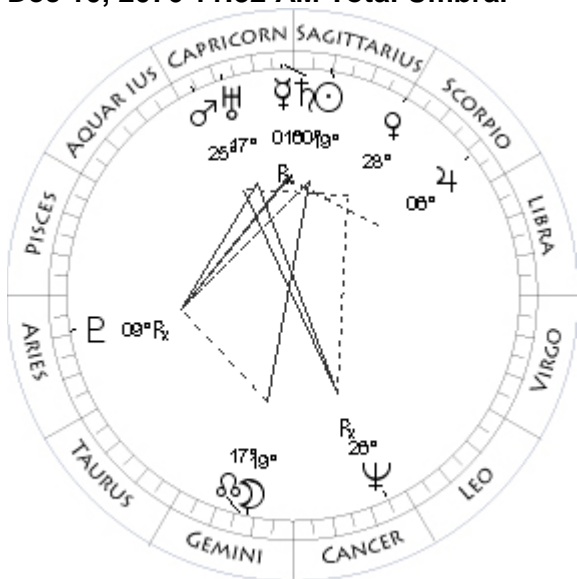
Jul 1, 2076 6:48 AM Partial Solar

Mo 12Ge12 - 1°17	Mo 10Cn12 + 1°16
Su 12Ge07 - 0°00	Su 10Cn21 - 0°00
Me 19Ta58 - 2°37	Me 18Cn27 + 1°46
Ve 21Ta14 - 0°30R	Ve 28Ta13 - 3°48
Ma 25Vi23 + 0°49	Ma 07Li26 + 0°05
Ju 04Li41 + 1°25	Ju 06Li06 + 1°18
Sa 27Sa42 + 1°18R	Sa 25Sa33 + 1°16R
Ur 18Cp31 - 0°26R	Ur 17Cp27 - 0°26R
Ne 22Cn34 - 0°33	Ne 23Cn34 - 0°33
Pl 11Ar34 -16°46	Pl 11Ar50 -16°57
No 27Ge02 - 0°00	No 25Ge28 - 0°00

Nov 26, 2076 11:39 AM Partial Solar



Dec 10, 2076 11:32 AM Total Umbral



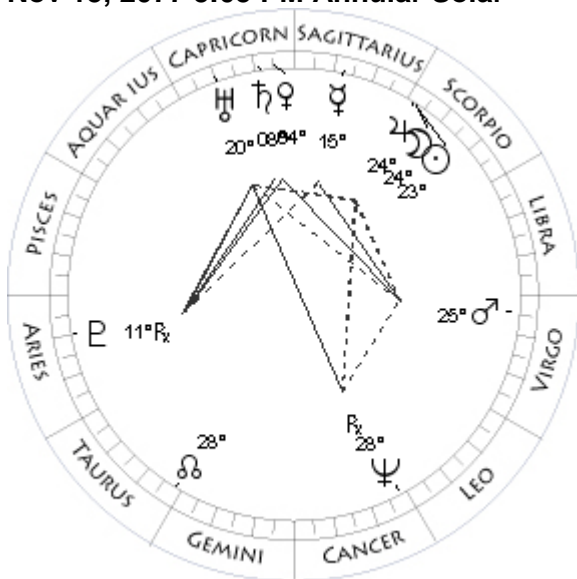
May 22, 2077 2:43 AM Total Solar

Mo 05Sa10 + 1°06	Mo 01Ge42 - 0°34
Su 05Sa06 - 0°00	Su 01Ge41 - 0°00
Me 26Sa44 - 2°26	Me 12Ta46 - 2°08
Ve 10Sc36 + 1°33	Ve 20Ge39 + 0°47
Ma 14Cp47 - 1°16	Ma 00Ge09 + 0°10
Ju 03Sc27 + 1°05	Ju 06Sc56 + 1°22R
Sa 29Sa12 + 0°53	Sa 10Cp24 + 0°49R
Ur 16Cp50 - 0°25	Ur 23Cp04 - 0°28R
Ne 26Cn23 - 0°33R	Ne 24Cn26 - 0°30
Pl 09Ar53 -17°11R	Pl 12Ar29 -16°46
No 17Ge37 - 0°00	No 08Ge16 - 0°00
	Coords: 148W/13S

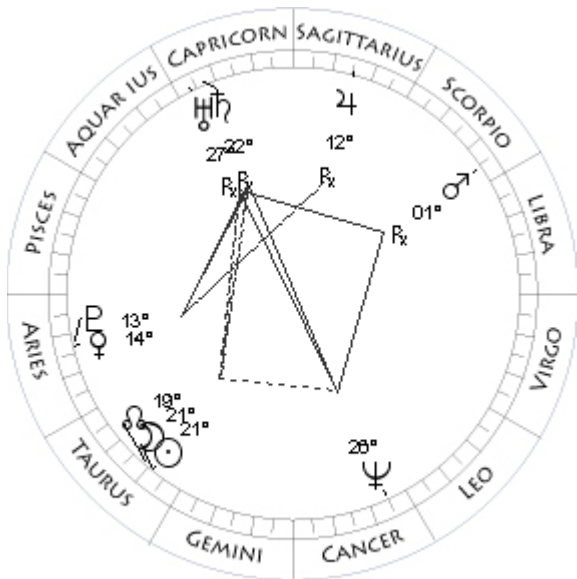
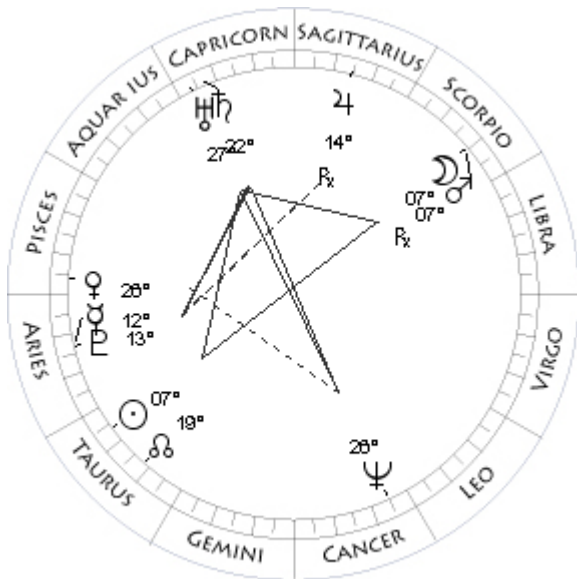
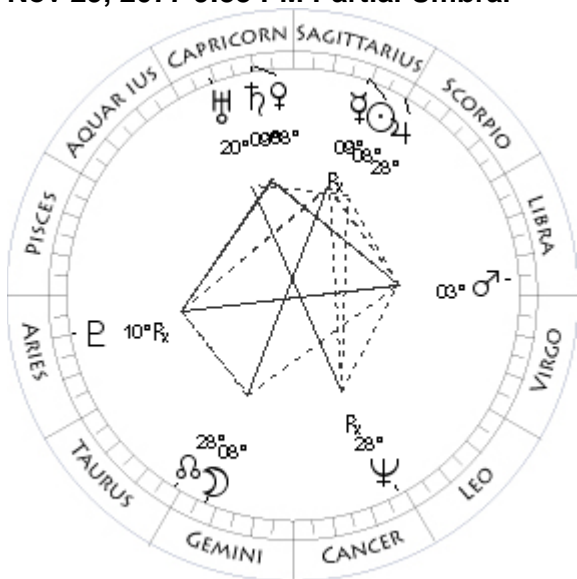
Jun 6, 2077 2:56 PM Partial Umbral

Mo 19Ge15 + 0°12	Mo 16Sa27 - 0°47
Su 19Sa18 - 0°00	Su 16Ge34 - 0°00
Me 01Cp20 + 0°04R	Me 13Ge39 + 0°25
Ve 28Sc05 + 1°12	Ve 09Cn33 + 1°19
Ma 25Cp35 - 1°15	Ma 11Ge07 + 0°20
Ju 06Sc10 + 1°06	Ju 05Sc33 + 1°18R
Sa 00Cp48 + 0°52	Sa 09Cp31 + 0°48R
Ur 17Cp33 - 0°25	Ur 22Cp41 - 0°29R
Ne 26Cn07 - 0°33R	Ne 24Cn52 - 0°29
Pl 09Ar47 -17°07R	Pl 12Ar43 -16°51
No 16Ge53 - 0°00	No 07Ge27 - 0°00
Coords: 175E/23N	Coords: 135W/24S

Nov 15, 2077 5:05 PM Annular Solar



Nov 29, 2077 9:33 PM Partial Umbral



Apr 27, 2078 4:32 AM Partial Penumbral

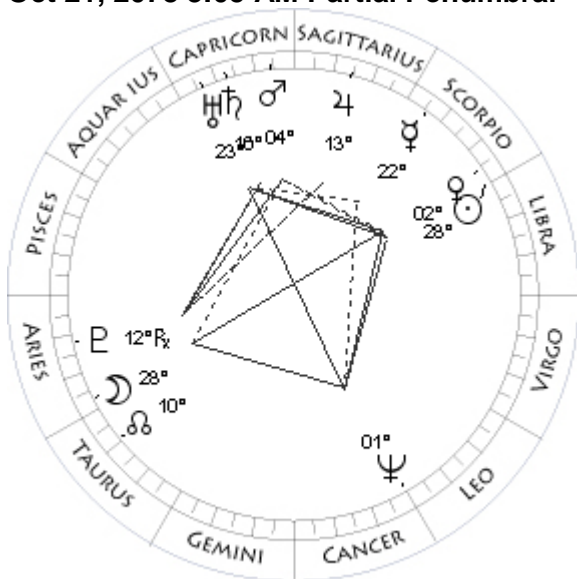
Mo 24Sc00 + 0°26	Mo 07Sc25 + 1°06
Su 23Sc59 - 0°00	Su 07Ta21 - 0°00
Me 15Sa46 - 2°30	Me 12Ar54 - 2°46
Ve 04Cp18 - 4°11	Ve 26Pi58 - 1°20
Ma 25Vi01 + 1°35	Ma 07Sc11 + 1°08R
Ju 24Sc53 + 0°48	Ju 14Sa11 + 0°51R
Sa 08Cp13 + 0°29	Sa 22Cp36 + 0°19
Ur 20Cp21 - 0°28	Ur 27Cp29 - 0°30
Ne 28Cn45 - 0°29R	Ne 26Cn08 - 0°27
Pl 11Ar07 -17°18R	Pl 13Ar02 -16°43
No 28Ta52 - 0°00	No 20Ta15 - 0°00

May 11, 2078 5:54 PM Total Solar

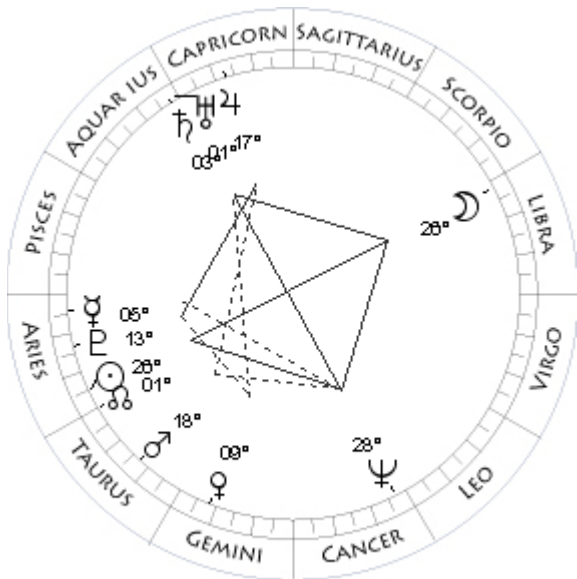
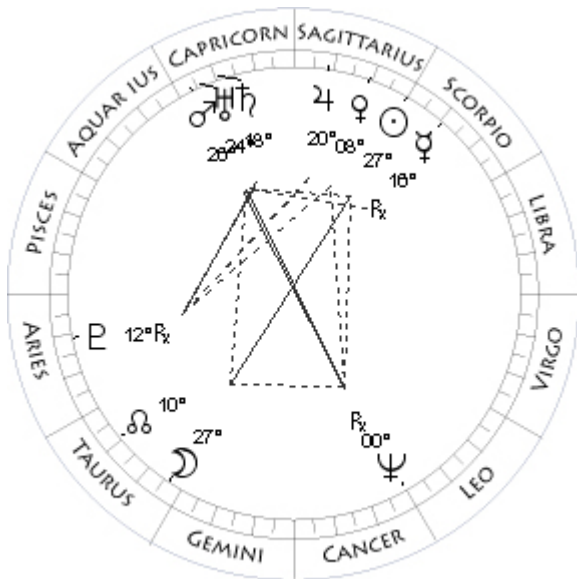
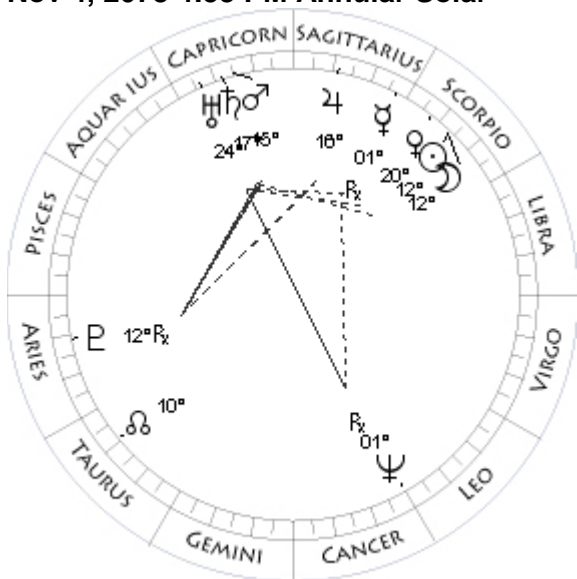
Mo 08Ge11 + 0°52	Mo 21Ta25 + 0°11
Su 08Sa19 - 0°00	Su 21Ta28 - 0°00
Me 09Sa18 + 0°56R	Me 07Ta19 - 1°40
Ve 08Cp59 - 2°51	Ve 14Ar00 - 1°47
Ma 03Li06 + 1°40	Ma 01Sc58 + 0°31R
Ju 28Sc01 + 0°47	Ju 12Sa47 + 0°51R
Sa 09Cp39 + 0°28	Sa 22Cp32 + 0°19R
Ur 20Cp58 - 0°28	Ur 27Cp27 - 0°31R
Ne 28Cn35 - 0°29R	Ne 26Cn22 - 0°26
Pl 10Ar57 -17°14R	Pl 13Ar20 -16°46
No 28Ta07 - 0°00	No 19Ta29 - 0°00

Coords: 34W/23N

Oct 21, 2078 3:05 AM Partial Penumbral



Nov 4, 2078 4:53 PM Annular Solar



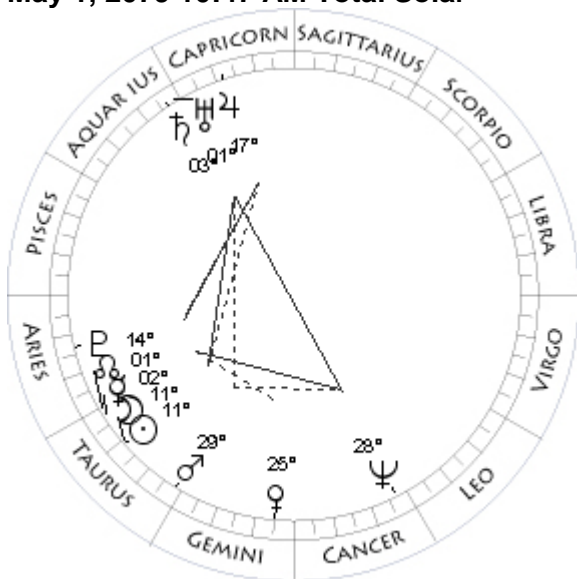
Nov 19, 2078 0:37 PM Partial Penumbral

Mo 28Ar12 - 1°08	Mo 27Ta23 + 1°32
Su 28Li08 - 0°00	Su 27Sc35 - 0°00
Me 22Sc17 - 2°46	Me 16Sc54 + 1°41R
Ve 02Sc02 + 0°55	Ve 08Sa51 - 0°11
Ma 04Cp45 - 1°47	Ma 26Cp37 - 1°33
Ju 13Sa59 + 0°23	Ju 20Sa01 + 0°20
Sa 16Cp48 + 0°05	Sa 18Cp52 + 0°03
Ur 23Cp41 - 0°31	Ur 24Cp30 - 0°31
Ne 01Le00 - 0°25	Ne 00Le58 - 0°25R
Pl 12Ar40 -17°26R	Pl 12Ar11 -17°20R
No 10Ta53 - 0°00	No 09Ta20 - 0°00
Coords: 166W/21N	

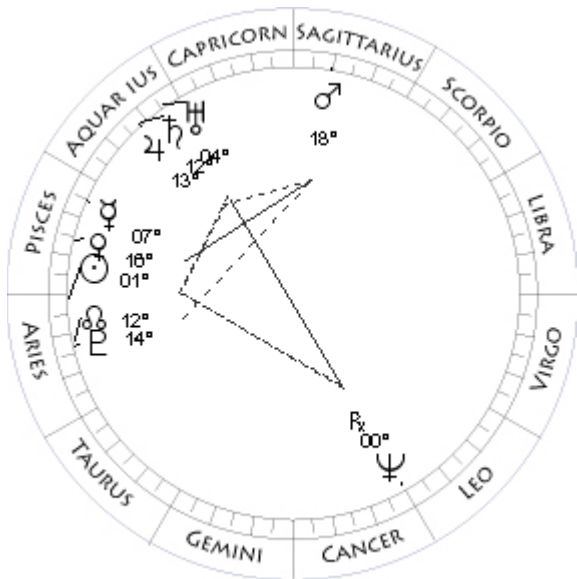
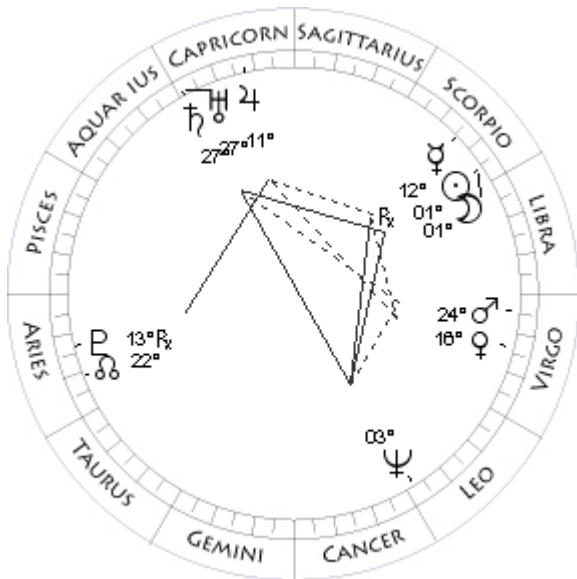
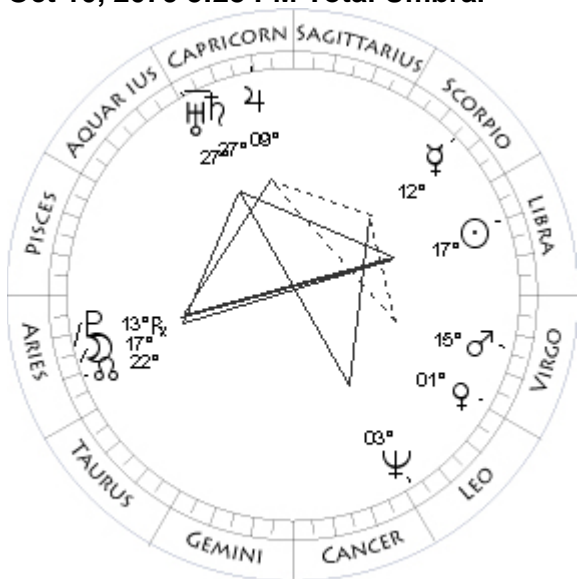
Apr 16, 2079 5:07 AM Partial Umbral

Mo 12Sc38 - 0°12	Mo 26Li25 + 0°26
Su 12Sc40 - 0°00	Su 26Ar24 - 0°00
Me 01Sa11 - 2°29R	Me 05Ar10 - 2°32
Ve 20Sc17 + 0°25	Ve 09Ge03 + 2°15
Ma 15Cp28 - 1°41	Ma 18Ta27 + 0°16
Ju 16Sa52 + 0°21	Ju 17Cp01 + 0°07
Sa 17Cp41 + 0°04	Sa 03Aq27 - 0°09
Ur 24Cp00 - 0°31	Ur 01Aq28 - 0°32
Ne 01Le02 - 0°25R	Ne 28Cn15 - 0°23
Pl 12Ar24 -17°24R	Pl 13Ar49 -16°45
No 10Ta07 - 0°00	No 01Ta31 - 0°00

May 1, 2079 10:47 AM Total Solar



Oct 10, 2079 5:28 PM Total Umbral



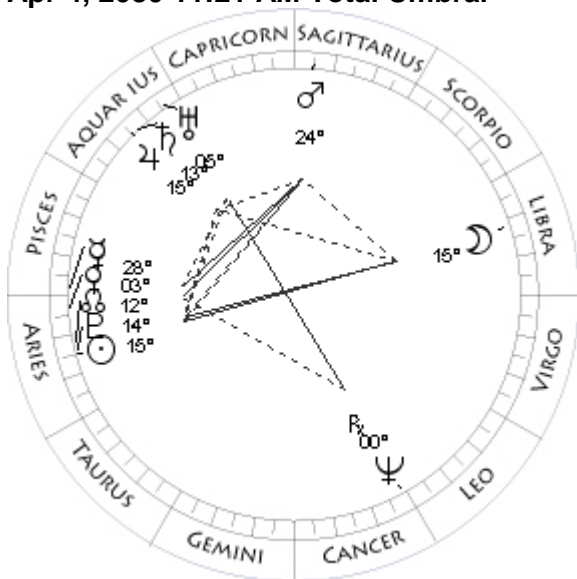
Oct 24, 2079 6:08 PM Annular Solar

Mo 11Ta08 + 0°55	Mo 01Sc23 - 0°51
Su 11Ta16 - 0°00	Su 01Sc30 - 0°00
Me 02Ta52 - 1°14	Me 12Sc16 - 2°15R
Ve 25Ge44 + 2°52	Ve 16Vi08 + 0°28
Ma 29Ta16 + 0°25	Ma 24Vi36 + 1°17
Ju 17Cp32 + 0°06	Ju 11Cp37 - 0°14
Sa 03Aq56 - 0°10	Sa 27Cp53 - 0°24
Ur 01Aq37 - 0°33	Ur 27Cp49 - 0°33
Ne 28Cn23 - 0°23	Ne 03Le13 - 0°21
Pl 14Ar11 -16°46	Pl 13Ar42 -17°28R
No 00Ta42 - 0°00	No 21Ar22 - 0°00
	Coords: 160E/63S

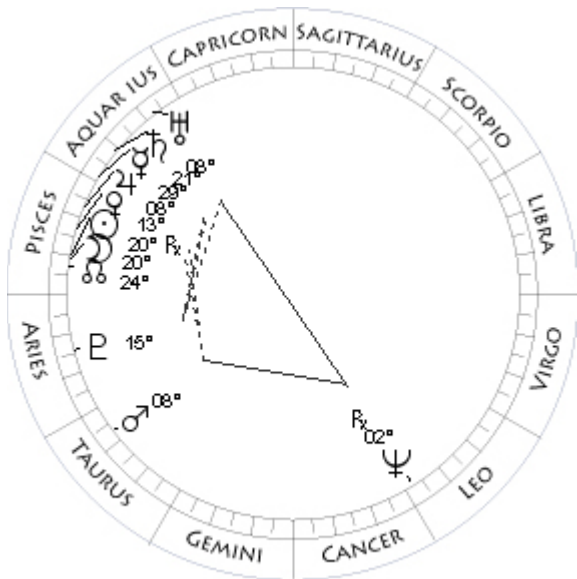
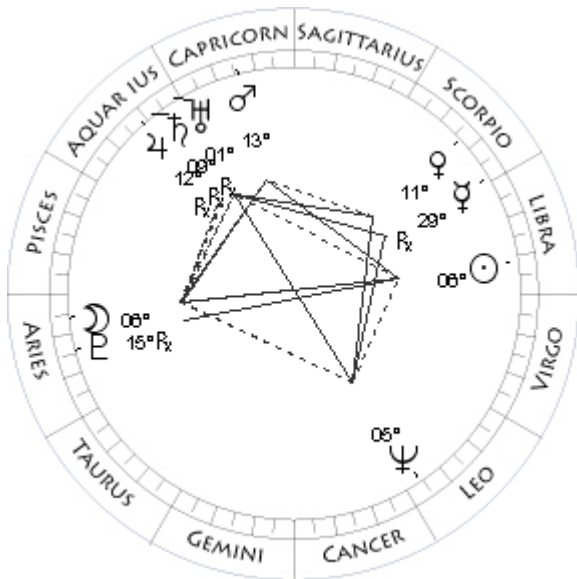
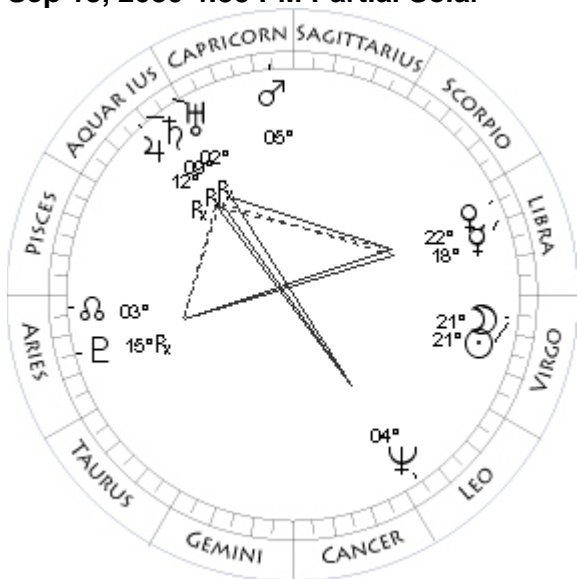
Mar 21, 2080 0:16 PM Partial Solar

Mo 17Ar36 - 0°25	Mo 01Ar52 - 1°00
Su 17Li35 - 0°00	Su 01Ar48 - 0°00
Me 12Sc25 - 3°13	Me 07Pi00 - 2°01
Ve 01Vi24 - 0°47	Ve 16Pi31 - 1°24
Ma 15Vi52 + 1°16	Ma 18Sa54 + 0°28
Ju 09Cp50 - 0°13	Ju 13Aq09 - 0°28
Sa 27Cp31 - 0°23	Sa 12Aq29 - 0°34
Ur 27Cp41 - 0°34	Ur 04Aq47 - 0°34
Ne 03Le04 - 0°21	Ne 00Le33 - 0°19R
Pl 13Ar59 -17°29R	Pl 14Ar16 -16°47
No 22Ar07 - 0°00	No 13Ar29 - 0°00
	Coords: 95W/ 7N

Apr 4, 2080 11:21 AM Total Umbral



Sep 13, 2080 4:35 PM Partial Solar



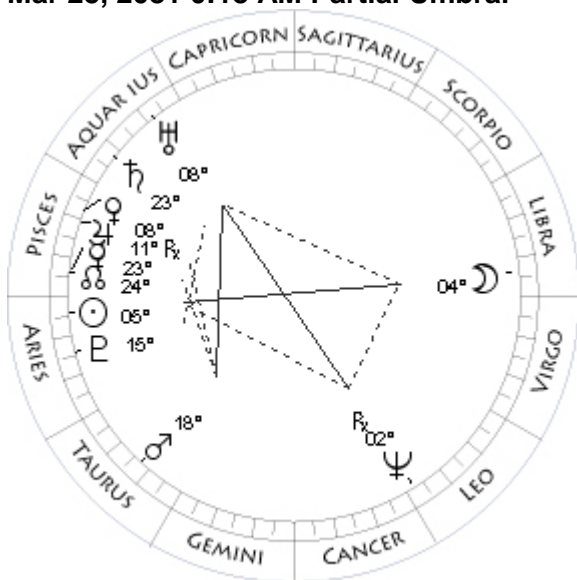
Sep 29, 2080 1:50 AM Total Umbral

Mo 15Li34 - 0°16	Mo 06Ar48 + 0°18
Su 15Ar37 - 0°00	Su 06Li52 - 0°00
Me 28Pi49 - 2°19	Me 29Li05 - 3°41R
Ve 03Ar49 - 1°28	Ve 11Sc27 - 0°31
Ma 24Sa29 + 0°09	Ma 13Cp45 - 3°00
Ju 15Aq42 - 0°30	Ju 12Aq07 - 0°58R
Sa 13Aq39 - 0°35	Sa 09Aq09 - 0°53R
Ur 05Aq15 - 0°34	Ur 01Aq51 - 0°36R
Ne 00Le27 - 0°19R	Ne 05Le03 - 0°17
Pl 14Ar36 -16°46	Pl 15Ar18 -17°31R
No 12Ar45 - 0°00	No 03Ar21 - 0°00

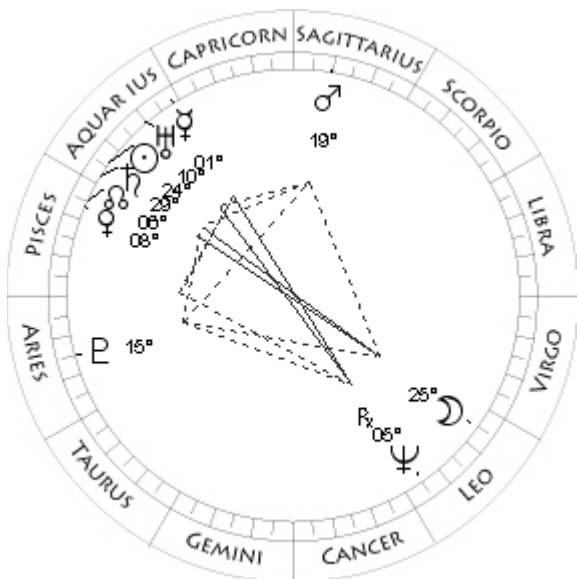
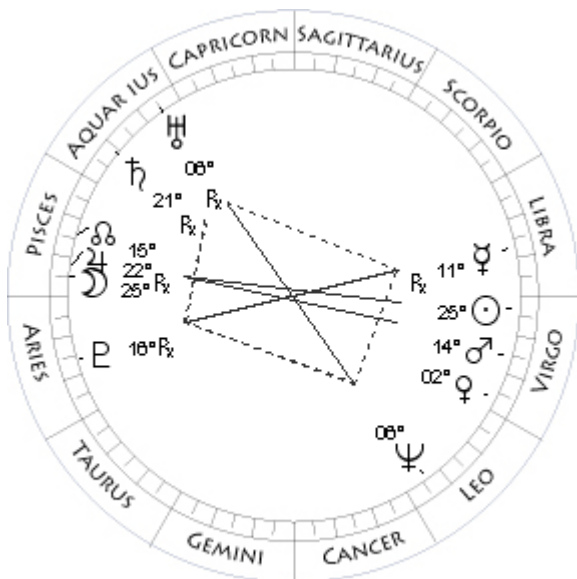
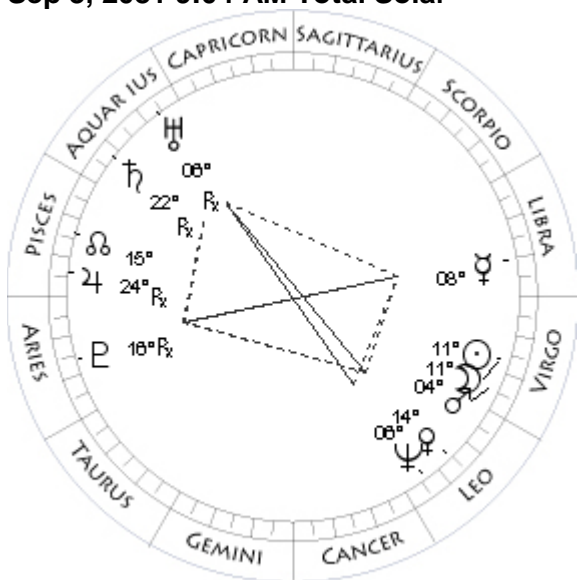
Mar 10, 2081 3:20 PM Annular Solar

Mo 21Vi53 + 1°04	Mo 20Pi44 - 0°20
Su 21Vi49 - 0°00	Su 20Pi44 - 0°00
Me 18Li05 - 2°11	Me 29Aq42 - 2°01
Ve 22Li52 + 0°17	Ve 13Pi45 + 8°41R
Ma 05Cp07 - 3°25	Ma 08Ta04 + 0°24
Ju 12Aq54 - 0°58R	Ju 08Pi22 - 0°53
Sa 09Aq40 - 0°53R	Sa 21Aq51 - 0°57
Ur 02Aq05 - 0°37R	Ur 08Aq14 - 0°35
Ne 04Le41 - 0°17	Ne 02Le57 - 0°16R
Pl 15Ar35 -17°29R	Pl 15Ar03 -16°50
No 04Ar10 - 0°00	No 24Pi44 - 0°00

Mar 25, 2081 0:18 AM Partial Umbral



Sep 3, 2081 9:04 AM Total Solar



Sep 18, 2081 3:32 AM Partial Penumbral

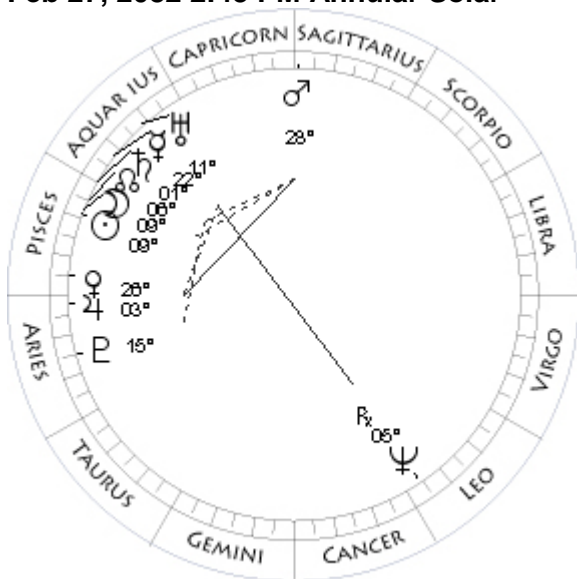
Mo 04Li54 - 0°59	Mo 25Pi48 + 0°58
Su 05Ar02 - 0°00	Su 25Vi56 - 0°00
Me 23Pi38 - 2°07	Me 11Li25 - 4°03R
Ve 08Pi34 + 6°31R	Ve 02Vi50 + 1°04
Ma 18Ta06 + 0°33	Ma 14Vi00 + 1°07
Ju 11Pi44 - 0°55	Ju 22Pi35 - 1°33R
Sa 23Aq22 - 0°59	Sa 21Aq47 - 1°23R
Ur 08Aq51 - 0°36	Ur 06Aq11 - 0°39R
Ne 02Le45 - 0°15R	Ne 06Le57 - 0°13
Pl 15Ar24 -16°49	Pl 16Ar36 -17°32R
No 23Pi59 - 0°00	No 14Pi36 - 0°00

Feb 13, 2082 6:26 AM Partial Umbral

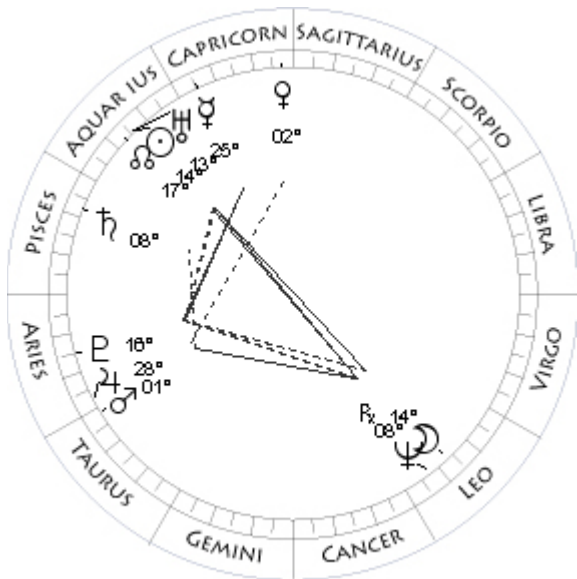
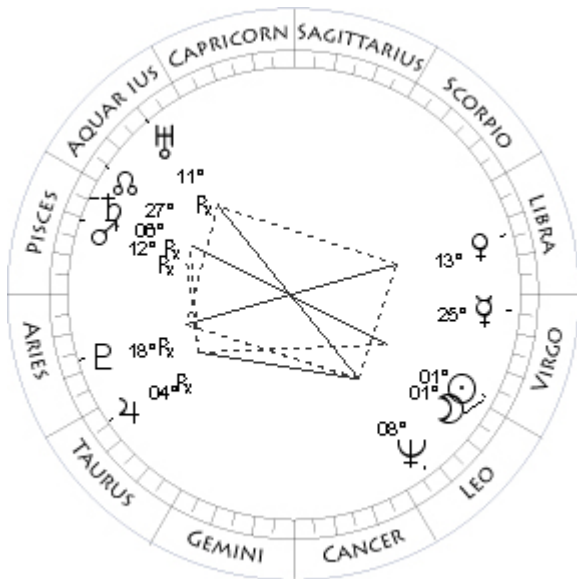
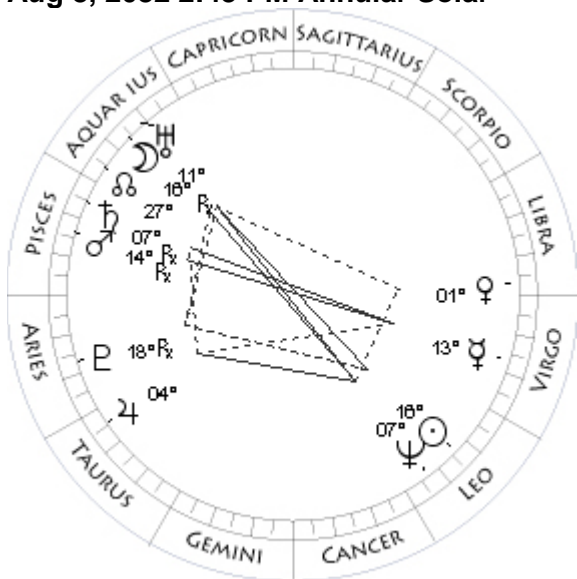
Mo 11Vi34 + 0°21	Mo 25Le02 + 1°01
Su 11Vi35 - 0°00	Su 24Aq58 - 0°00
Me 08Li24 - 2°51	Me 01Aq47 - 0°45
Ve 14Le47 + 0°31	Ve 08Pi17 - 1°29
Ma 04Vi37 + 1°08	Ma 19Sa14 + 0°11
Ju 24Pi31 - 1°32R	Ju 00Ar12 - 1°07
Sa 22Aq42 - 1°23R	Sa 29Aq18 - 1°19
Ur 06Aq34 - 0°39R	Ur 10Aq44 - 0°36
Ne 06Le31 - 0°13	Ne 05Le47 - 0°12R
Pl 16Ar51 -17°29R	Pl 15Ar36 -16°58
No 15Pi23 - 0°00	No 06Pi45 - 0°00

Coords: 54W/24N

Feb 27, 2082 2:43 PM Annular Solar



Aug 8, 2082 2:43 PM Annular Solar



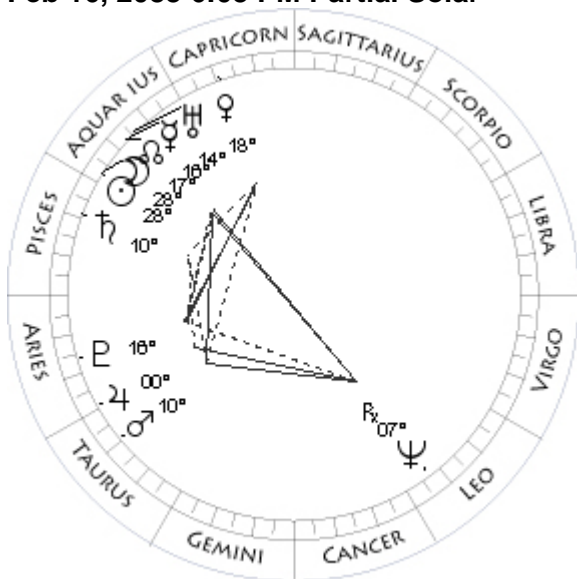
Aug 24, 2082 1:13 AM Total Solar

Mo 09Pi22 + 0°18	Mo 01Vi18 - 0°24
Su 09Pi26 - 0°00	Su 01Vi22 - 0°00
Me 22Aq57 - 2°00	Me 25Vi18 - 3°39
Ve 26Pi11 - 1°18	Ve 13Li39 - 3°41
Ma 28Sa29 - 0°02	Ma 12Pi03 - 6°35R
Ju 03Ar27 - 1°06	Ju 04Ta55 - 1°25R
Sa 01Pi02 - 1°19	Sa 06Pi21 - 1°50R
Ur 11Aq32 - 0°37	Ur 11Aq08 - 0°41R
Ne 05Le26 - 0°12R	Ne 08Le19 - 0°09
Pl 15Ar52 -16°54	Pl 18Ar05 -17°28R
No 06Pi00 - 0°00	No 26Aq36 - 0°00
	Coords: 152W/10S

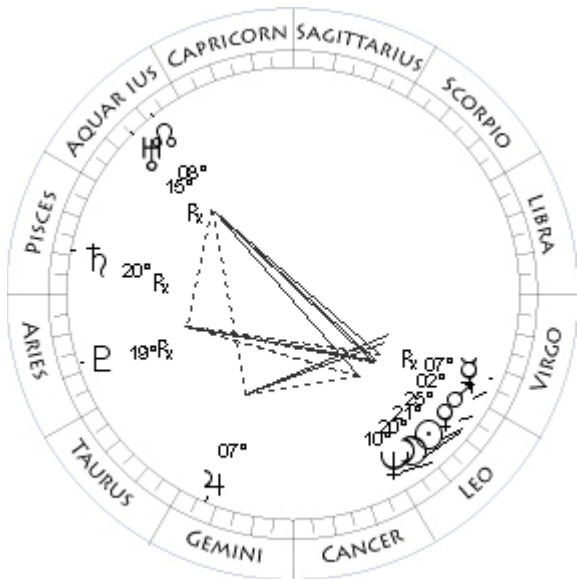
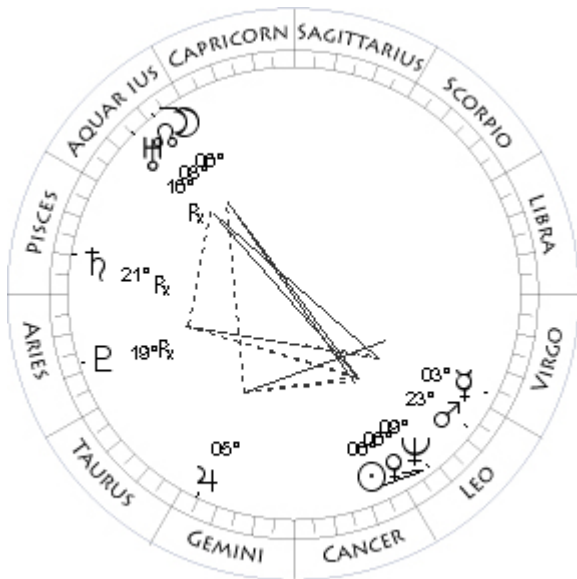
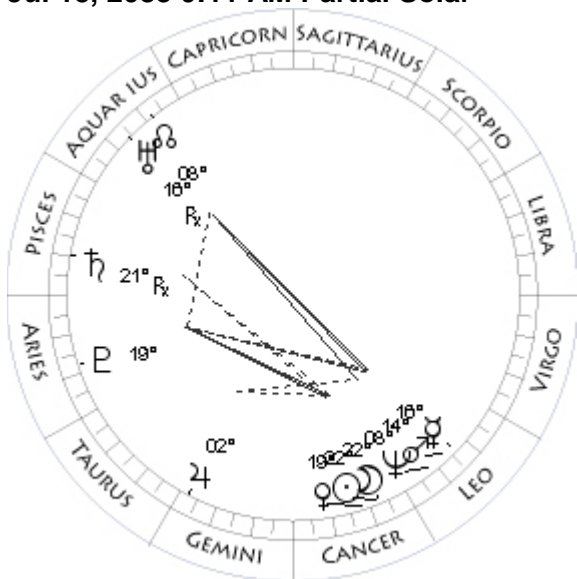
Feb 2, 2083 6:24 PM Total Umbral

Mo 16Aq36 - 0°57	Mo 14Le06 + 0°20
Su 16Le32 - 0°00	Su 14Aq05 - 0°00
Me 13Vi28 - 0°57	Me 25Cp12 - 0°59
Ve 01Li45 - 1°33	Ve 02Cp03 + 1°53
Ma 14Pi42 - 6°17R	Ma 01Ta31 + 0°43
Ju 04Ta32 - 1°22	Ju 28Ar15 - 1°07
Sa 07Pi28 - 1°48R	Sa 08Pi39 - 1°39
Ur 11Aq44 - 0°41R	Ur 13Aq57 - 0°38
Ne 07Le45 - 0°09	Ne 08Le21 - 0°08R
Pl 18Ar15 -17°23R	Pl 16Ar29 -17°03
No 27Aq25 - 0°00	No 17Aq59 - 0°00
	Coords: 88W/17N

Feb 16, 2083 6:03 PM Partial Solar



Jul 15, 2083 0:11 AM Partial Solar



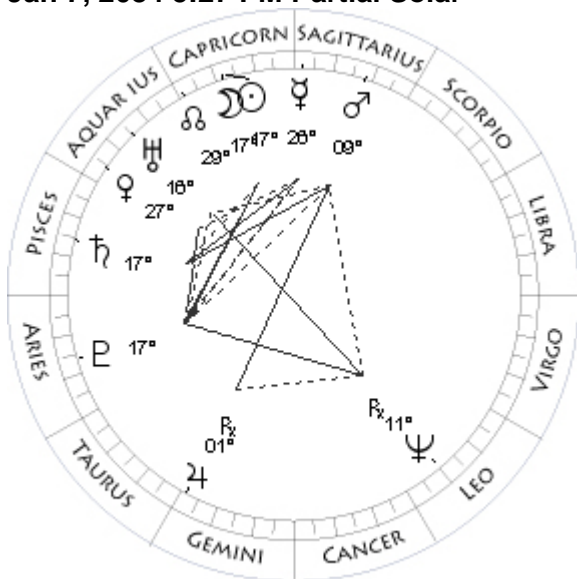
Jul 29, 2083 1:02 AM Total Umbra

Mo 28Aq07 + 0°57	Mo 06Aq10 - 0°13
Su 28Aq15 - 0°00	Su 06Le11 - 0°00
Me 16Aq58 - 2°01	Me 03Vi02 - 1°35
Ve 18Cp41 + 1°04	Ve 06Le40 + 1°05
Ma 10Ta21 + 0°53	Ma 23Le07 + 1°09
Ju 00Ta24 - 1°03	Ju 05Ge23 - 0°52
Sa 10Pi18 - 1°39	Sa 21Pi02 - 2°08R
Ur 14Aq45 - 0°38	Ur 16Aq23 - 0°43R
Ne 07Le58 - 0°08R	Ne 09Le29 - 0°05
Pl 16Ar42 -16°59	Pl 19Ar23 -17°20R
No 17Aq14 - 0°00	No 08Aq39 - 0°00

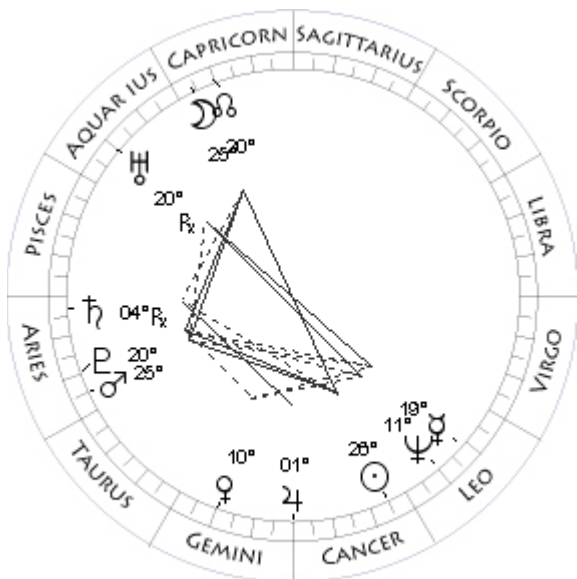
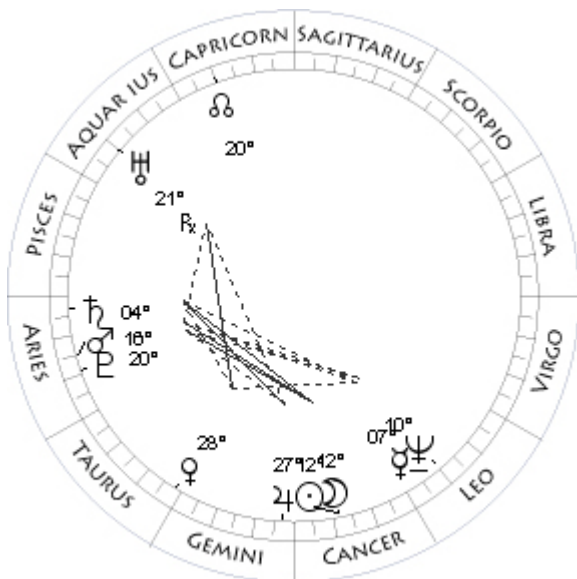
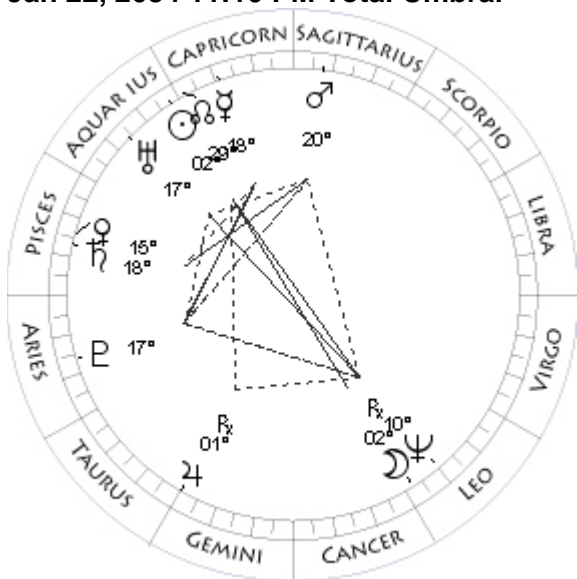
Aug 13, 2083 0:31 PM Partial Solar

Mo 22Cn54 + 1°25	Mo 20Le52 - 1°08
Su 22Cn47 - 0°00	Su 21Le01 - 0°00
Me 16Le58 + 0°52	Me 07Vi22 - 4°28R
Ve 19Cn23 + 0°39	Ve 25Le46 + 1°22
Ma 14Le16 + 1°12	Ma 02Vi54 + 1°06
Ju 02Ge52 - 0°51	Ju 07Ge45 - 0°53
Sa 21Pi29 - 2°05R	Sa 20Pi13 - 2°11R
Ur 16Aq54 - 0°43R	Ur 15Aq46 - 0°43R
Ne 08Le58 - 0°06	Ne 10Le04 - 0°05
Pl 19Ar24 -17°15	Pl 19Ar17 -17°25R
No 09Aq23 - 0°00	No 07Aq50 - 0°00

Jan 7, 2084 5:27 PM Partial Solar



Jan 22, 2084 11:10 PM Total Umbral



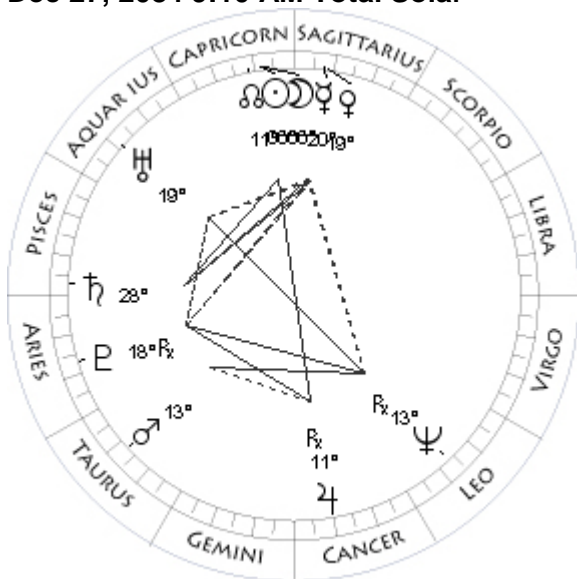
Jul 3, 2084 1:47 AM Annular Solar

Mo 17Cp25 - 1°05	Mo 12Cn10 + 0°44
Su 17Cp21 - 0°00	Su 12Cn08 - 0°00
Me 26Sa52 + 0°40	Me 07Le46 + 0°37
Ve 27Aq06 - 1°41	Ve 28Ta52 - 3°47
Ma 09Sa57 + 0°04	Ma 16Ar25 - 2°29
Ju 01Ge39 - 0°48R	Ju 27Ge56 - 0°18
Sa 17Pi03 - 2°00	Sa 04Ar02 - 2°16
Ur 16Aq16 - 0°40	Ur 21Aq25 - 0°44R
Ne 11Le20 - 0°04R	Ne 10Le43 - 0°02
Pl 17Ar20 -17°14	Pl 20Ar24 -17°11
No 00Aq02 - 0°00	No 20Cp38 - 0°00
	Coords: 170E/75N

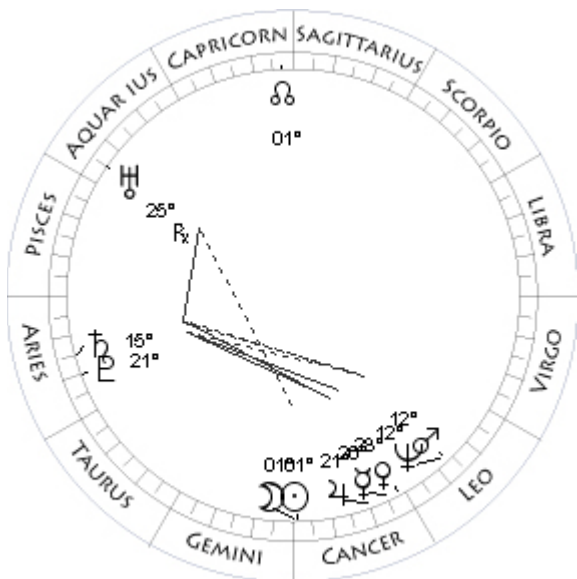
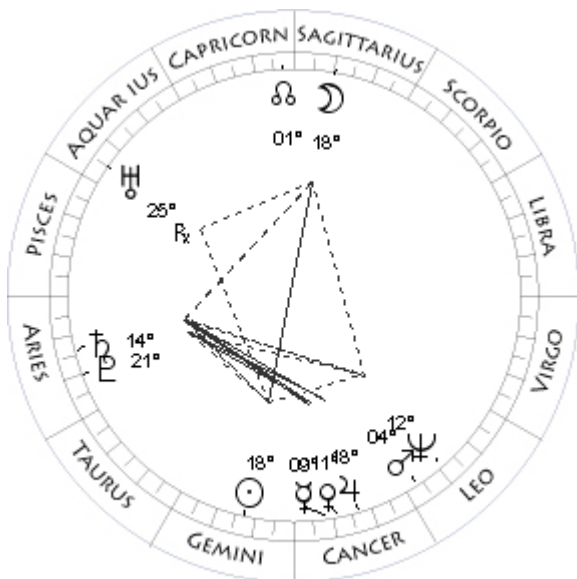
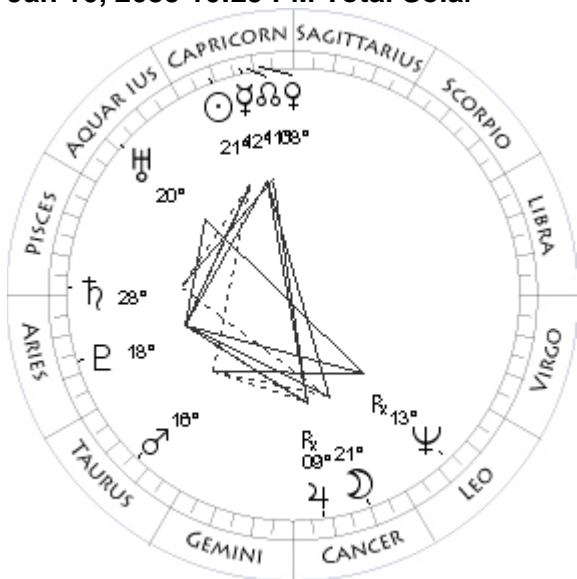
Jul 17, 2084 4:55 PM Partial Umbral

Mo 02Le48 - 0°20	Mo 25Cp59 + 0°32
Su 02Aq52 - 0°00	Su 26Cn05 - 0°00
Me 18Cp55 - 1°10	Me 19Le07 - 2°27
Ve 15Pi12 - 1°03	Ve 10Ge42 - 3°44
Ma 20Sa34 - 0°07	Ma 25Ar55 - 2°36
Ju 01Ge08 - 0°44R	Ju 01Cn12 - 0°17
Sa 18Pi25 - 1°59	Sa 04Ar09 - 2°20R
Ur 17Aq07 - 0°39	Ur 20Aq58 - 0°44R
Ne 10Le56 - 0°04R	Ne 11Le14 - 0°02
Pl 17Ar25 -17°08	Pl 20Ar27 -17°17
No 29Cp14 - 0°00	No 19Cp52 - 0°00
	Coords: 108W/20S

Dec 27, 2084 9:10 AM Total Solar



Jan 10, 2085 10:29 PM Total Solar



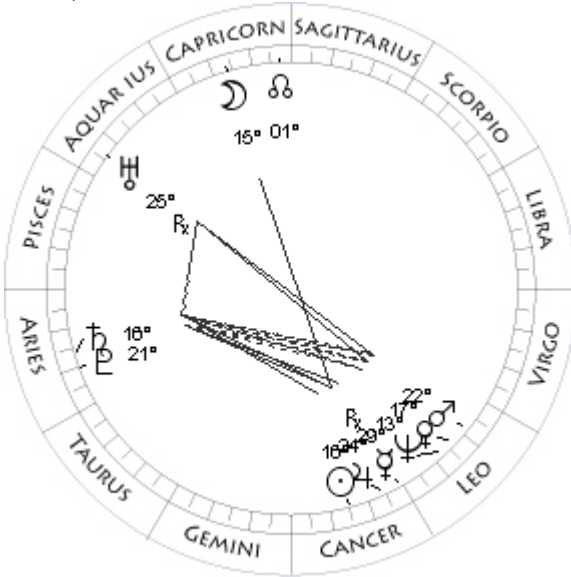
Jun 8, 2085 2:14 AM Partial Penumbral

Mo 06Cp34 - 0°25	Mo 18Sa08 - 1°15
Su 06Cp34 - 0°00	Su 18Ge03 - 0°00
Me 20Sa34 + 0°16	Me 09Cn30 + 2°04
Ve 19Sa57 + 0°32	Ve 11Cn59 + 1°23
Ma 13Ta10 + 1°36	Ma 04Le13 + 1°23
Ju 11Cn06 - 0°02R	Ju 18Cn10 + 0°14
Sa 28Pi03 - 2°18	Sa 14Ar57 - 2°18
Ur 19Aq35 - 0°41	Ur 25Aq58 - 0°44R
Ne 13Le51 + 0°00R	Ne 12Le08 + 0°02
Pl 18Ar23 -17°19R	Pl 21Ar11 -17°03
No 11Cp15 - 0°00	No 02Cp38 - 0°00
Coords: 48W/47S	

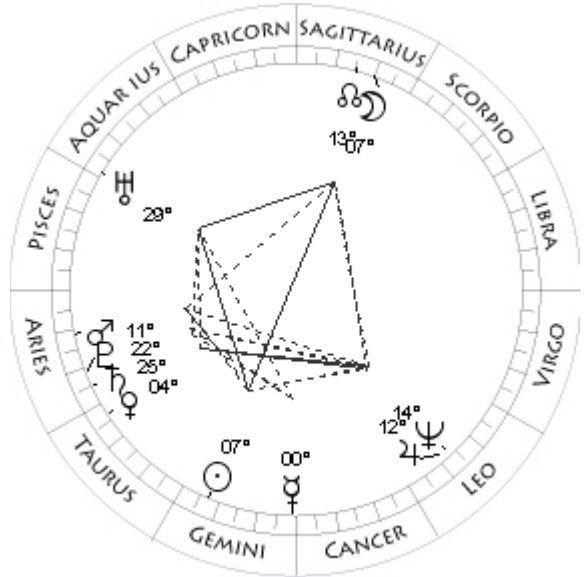
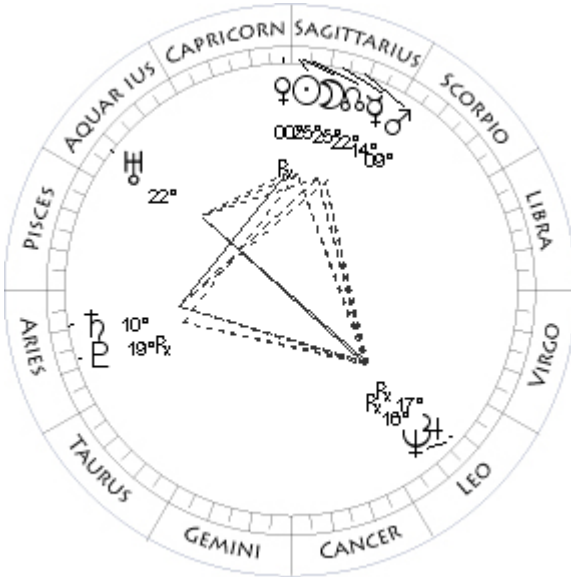
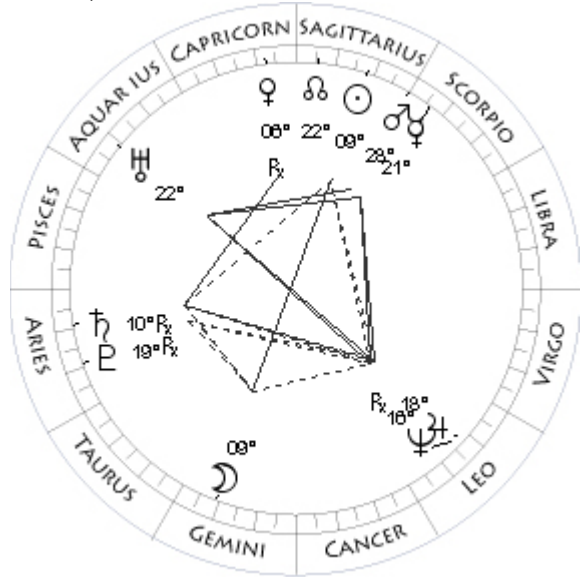
Jun 22, 2085 3:18 AM Annular Solar

Mo 21Cn16 - 0°56	Mo 01Cn26 + 0°03
Su 21Cp24 - 0°00	Su 01Cn28 - 0°00
Me 12Cp42 - 1°19	Me 26Cn00 + 0°16
Ve 08Cp13 - 0°04	Ve 28Cn59 + 1°40
Ma 16Ta38 + 1°46	Ma 12Le44 + 1°18
Ju 09Cn09 + 0°00R	Ju 21Cn10 + 0°15
Sa 28Pi56 - 2°15	Sa 15Ar54 - 2°21
Ur 20Aq18 - 0°41	Ur 25Aq47 - 0°45R
Ne 13Le31 + 0°00R	Ne 12Le31 + 0°02
Pl 18Ar24 -17°14	Pl 21Ar21 -17°08
No 10Cp29 - 0°00	No 01Cp54 - 0°00
Coords: 24W/21N	Coords: 131W/26N

Jul 7, 2085 10:01 AM Partial Penumbral



Dec 1, 2085 8:22 AM Partial Penumbral



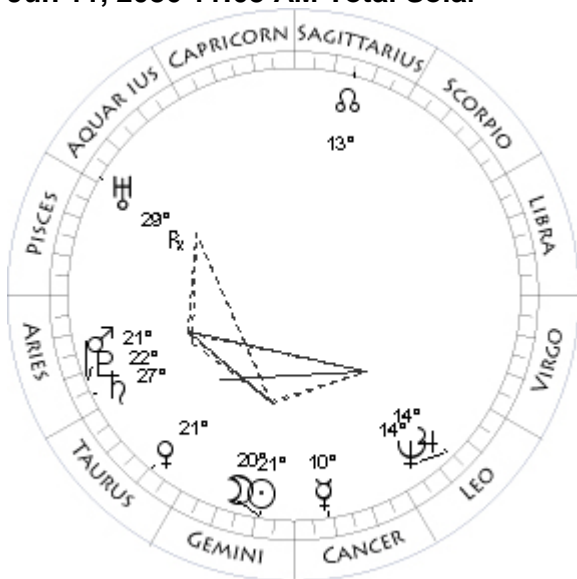
Dec 16, 2085 10:34 PM Annular Solar

Mo 15Cp53 + 1°16	Mo 25Sa37 + 0°16
Su 16Cn02 - 0°00	Su 25Sa41 - 0°00
Me 29Cn49 - 3°28R	Me 14Sa55 - 0°04
Ve 17Le21 + 1°43	Ve 00Cp49 + 1°01R
Ma 22Le05 + 1°12	Ma 09Sa12 - 0°10
Ju 24Cn32 + 0°17	Ju 17Le46 + 0°42R
Sa 16Ar38 - 2°25	Sa 10Ar12 - 2°32
Ur 25Aq26 - 0°45R	Ur 22Aq58 - 0°43
Ne 13Le00 + 0°02	Ne 16Le18 + 0°04R
Pl 21Ar28 -17°13	Pl 19Ar29 -17°24R
No 01Cp05 - 0°00	No 22Sa29 - 0°00
Coords: 149E/21S	

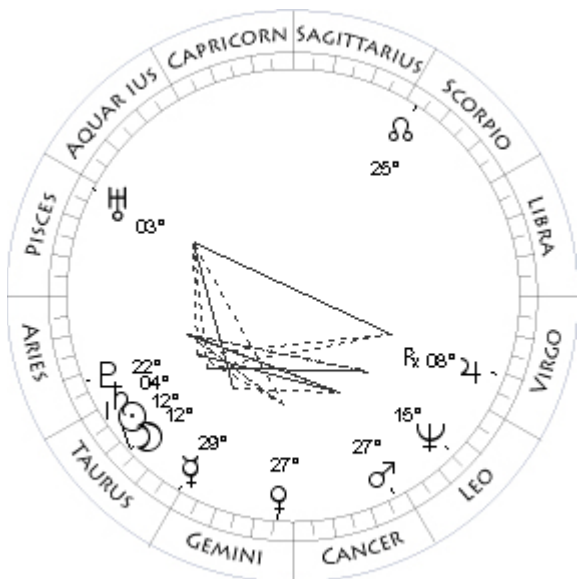
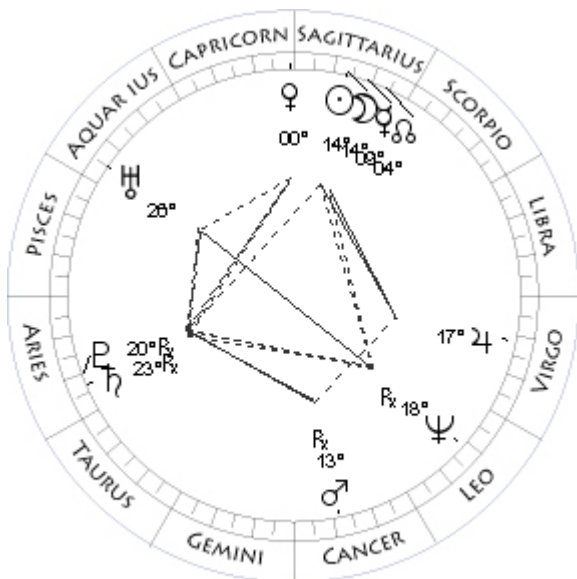
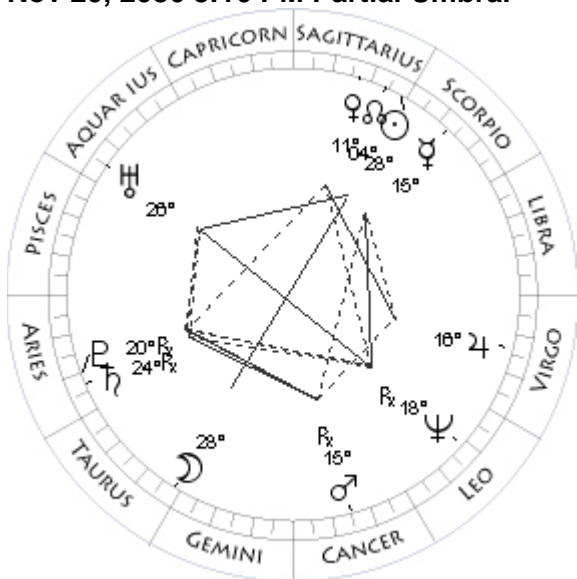
May 28, 2086 0:40 PM Partial Umbral

Mo 09Ge55 + 1°10	Mo 07Sa43 - 0°31
Su 09Sa51 - 0°00	Su 07Ge42 - 0°00
Me 21Sc45 + 1°47	Me 00Cn28 + 2°06
Ve 06Cp32 - 2°32R	Ve 04Ta25 - 1°52
Ma 28Sc10 - 0°01	Ma 11Ar32 - 1°30
Ju 18Le03 + 0°38	Ju 12Le22 + 0°48
Sa 10Ar17 - 2°36R	Sa 25Ar49 - 2°18
Ur 22Aq29 - 0°43	Ur 29Aq59 - 0°45
Ne 16Le29 + 0°04R	Ne 14Le04 + 0°06
Pl 19Ar37 -17°29R	Pl 22Ar02 -17°00
No 23Sa18 - 0°00	No 13Sa52 - 0°00
Coords: 128E/23N	

Jun 11, 2086 11:03 AM Total Solar



Nov 20, 2086 8:16 PM Partial Umbral



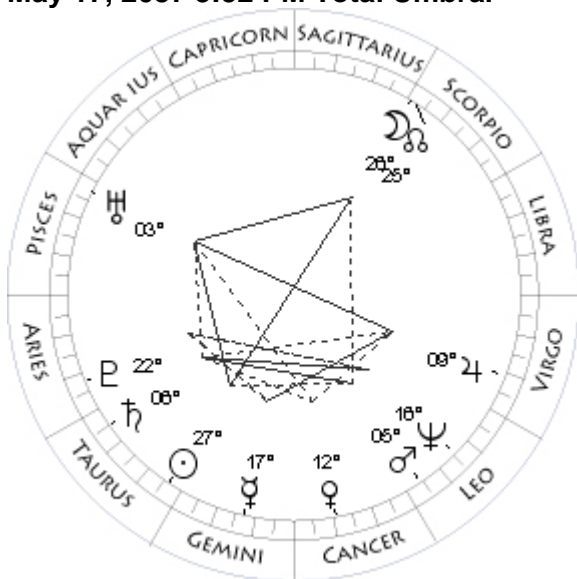
Dec 6, 2086 5:35 AM Partial Solar

Mo 20Ge56 - 0°41	Mo 14Sa25 + 0°56
Su 21Ge02 - 0°00	Su 14Sa33 - 0°00
Me 10Cn23 - 0°17	Me 09Sa17 - 0°20
Ve 21Ta02 - 1°40	Ve 00Cp27 - 0°52
Ma 21Ar57 - 1°29	Ma 13Cn10 + 2°42R
Ju 14Le34 + 0°47	Ju 17Vi41 + 1°05
Sa 27Ar11 - 2°21	Sa 23Ar39 - 2°40R
Ur 29Aq58 - 0°45R	Ur 26Aq30 - 0°44
Ne 14Le22 + 0°06	Ne 18Le41 + 0°08R
Pl 22Ar15 -17°04	Pl 20Ar38 -17°28R
No 13Sa08 - 0°00	No 03Sa43 - 0°00
Coords: 13W/23S	

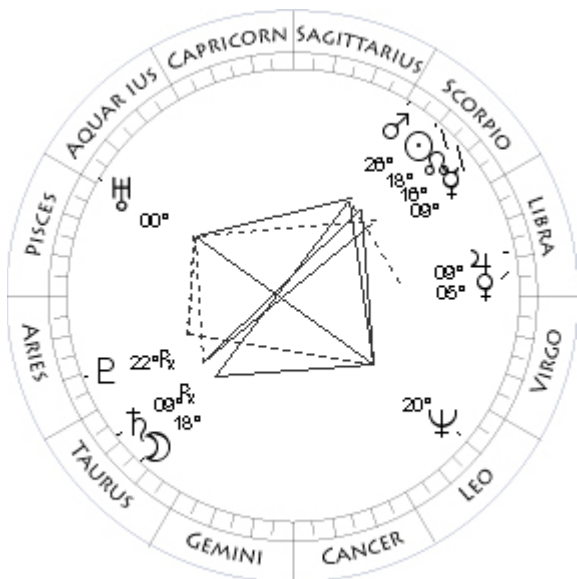
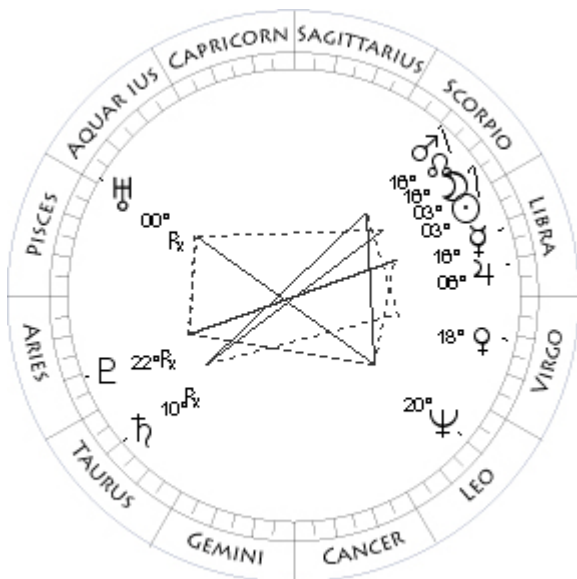
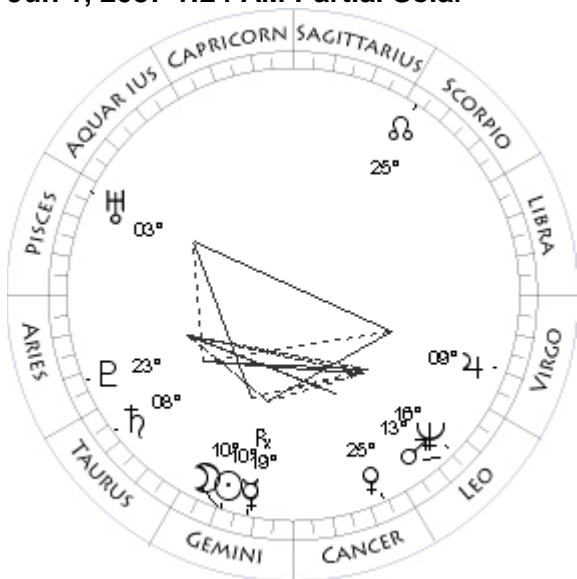
May 2, 2087 6:01 PM Partial Solar

Mo 28Ta59 + 0°29	Mo 12Ta39 + 1°08
Su 28Sc59 - 0°00	Su 12Ta35 - 0°00
Me 15Sc10 + 1°25	Me 29Ta58 + 2°04
Ve 11Sa11 - 0°16	Ve 27Ge23 + 2°58
Ma 15Cn34 + 1°56R	Ma 27Cn31 + 1°52
Ju 16Vi05 + 1°01	Ju 08Vi55 + 1°19R
Sa 24Ar22 - 2°43R	Sa 04Ta28 - 2°13
Ur 26Aq11 - 0°45	Ur 03Pi28 - 0°44
Ne 18Le45 + 0°08R	Ne 15Le58 + 0°10
Pl 20Ar49 -17°33R	Pl 22Ar30 -16°55
No 04Sa32 - 0°00	No 25Sc54 - 0°00
Coords: 52W/20N	

May 17, 2087 3:52 PM Total Umbral



Jun 1, 2087 1:24 AM Partial Solar



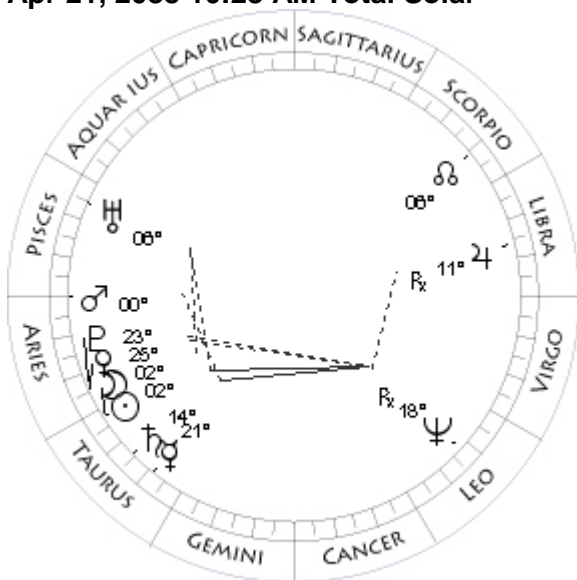
Oct 26, 2087 11:43 AM Partial Solar

Mo 26Sc58 + 0°11	Mo 03Sc22 - 1°09
Su 27Ta00 - 0°00	Su 03Sc18 - 0°00
Me 17Ge54 + 2°07	Me 16Li06 + 2°05
Ve 12Cn23 + 3°08	Ve 18Vi22 + 0°40
Ma 05Le25 + 1°40	Ma 16Sc11 - 0°05
Ju 09Vi09 + 1°17	Ju 06Li39 + 1°06
Sa 06Ta20 - 2°13	Sa 10Ta42 - 2°41R
Ur 03Pi48 - 0°45	Ur 00Pi08 - 0°46R
Ne 16Le05 + 0°10	Ne 20Le45 + 0°11
Pl 22Ar50 -16°58	Pl 22Ar19 -17°37R
No 25Sc07 - 0°00	No 16Sc33 - 0°00
Coords: 121W/19S	

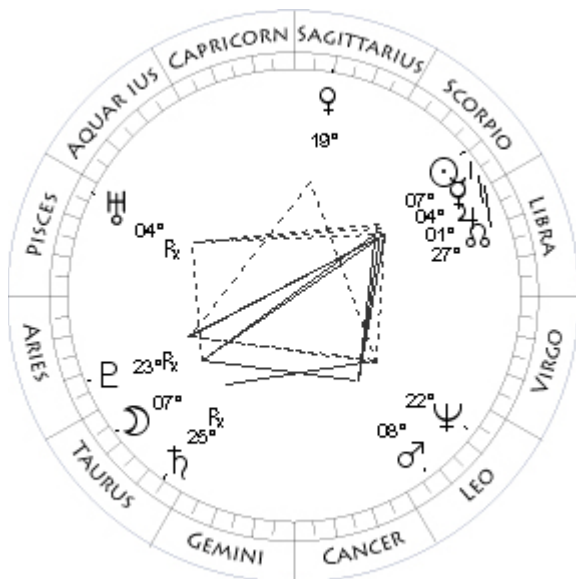
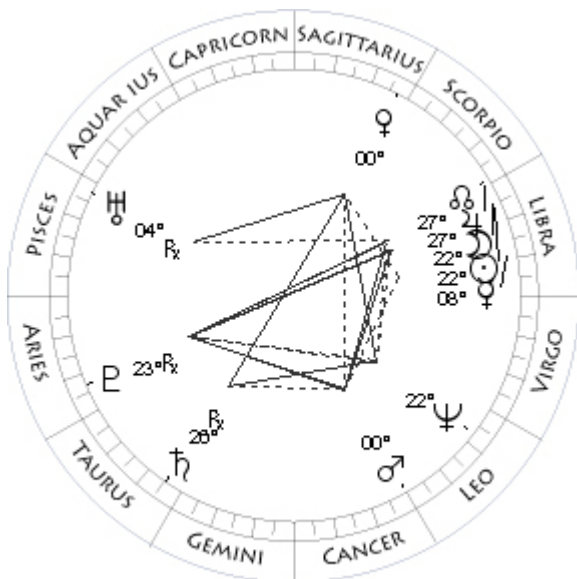
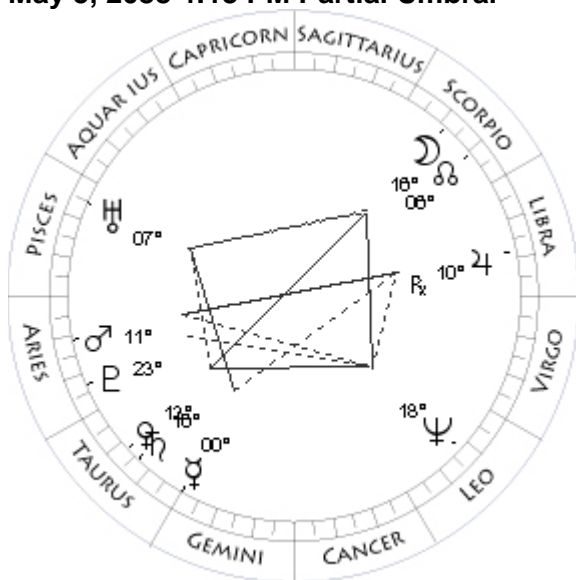
Nov 10, 2087 0:03 PM Total Umbral

Mo 10Ge41 - 1°26	Mo 18Ta16 - 0°12
Su 10Ge51 - 0°00	Su 18Sc19 - 0°00
Me 19Ge18 - 1°06R	Me 09Sc46 + 1°05
Ve 25Cn14 + 2°45	Ve 05Li21 + 1°33
Ma 13Le22 + 1°29	Ma 26Sc43 - 0°14
Ju 09Vi59 + 1°14	Ju 09Li37 + 1°08
Sa 08Ta03 - 2°15	Sa 09Ta30 - 2°40R
Ur 03Pi58 - 0°45	Ur 00Pi04 - 0°46
Ne 16Le18 + 0°10	Ne 20Le55 + 0°12
Pl 23Ar06 -17°01	Pl 22Ar03 -17°35R
No 24Sc21 - 0°00	No 15Sc45 - 0°00
Coords: 175W/17N	

Apr 21, 2088 10:28 AM Total Solar



May 5, 2088 4:13 PM Partial Umbral



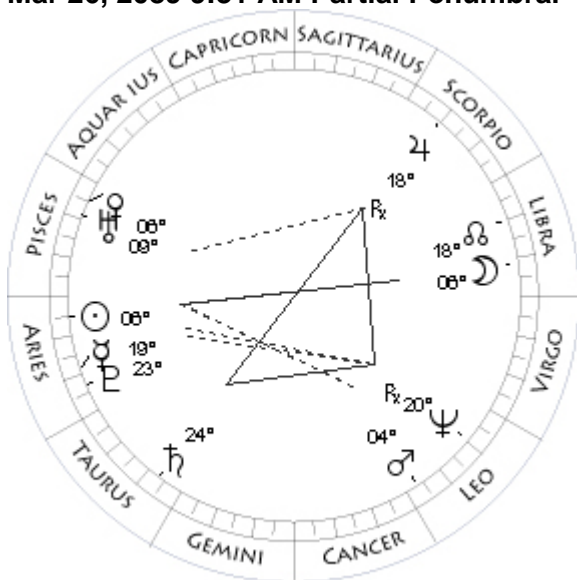
Oct 14, 2088 2:45 PM Annular Solar

Mo 02Ta19 + 0°25	Mo 22Li16 - 0°30
Su 02Ta19 - 0°00	Su 22Li15 - 0°00
Me 21Ta58 + 2°31	Me 08Li34 + 1°58
Ve 25Ar29 - 1°16	Ve 00Sa39 - 1°25
Ma 00Ar47 - 1°08	Ma 00Le53 + 1°06
Ju 11Li41 + 1°34R	Ju 27Li44 + 1°03
Sa 14Ta56 - 2°05	Sa 26Ta13 - 2°25R
Ur 06Pi57 - 0°44	Ur 04Pi22 - 0°47R
Ne 18Le10 + 0°14R	Ne 22Le42 + 0°15
Pl 23Ar16 -16°54	Pl 23Ar36 -17°37R
No 07Sc07 - 0°00	No 27Li48 - 0°00
Coords: 15W/36N	

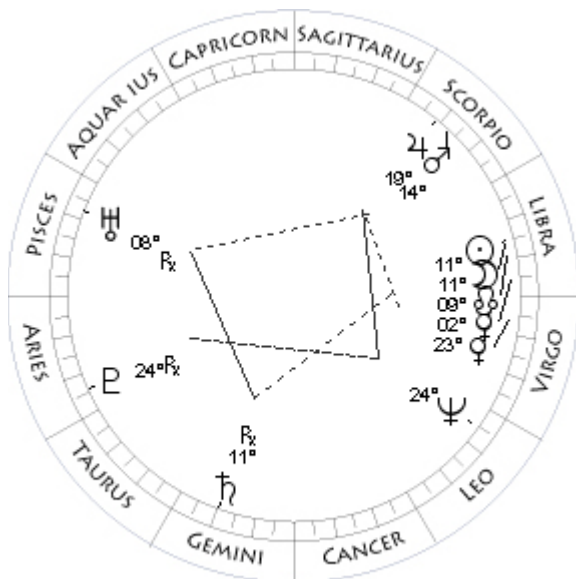
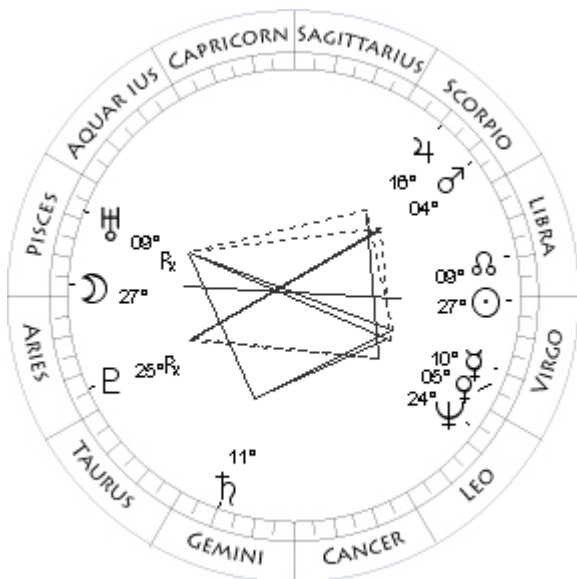
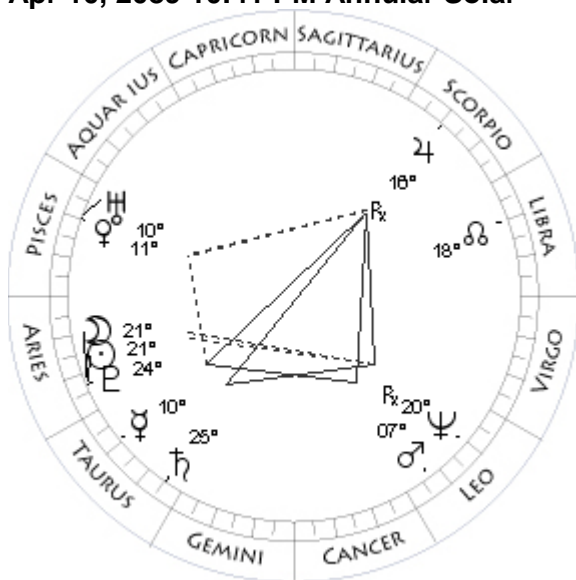
Oct 30, 2088 3:00 AM Partial Umbral

Mo 16Sc02 + 0°51	Mo 07Ta33 - 0°54
Su 16Ta10 - 0°00	Su 07Sc41 - 0°00
Me 00Ge53 + 2°01	Me 04Sc50 + 0°46
Ve 13Ta03 - 0°53	Ve 19Sa03 - 2°08
Ma 11Ar46 - 1°05	Ma 08Le24 + 1°29
Ju 10Li16 + 1°32R	Ju 01Sc07 + 1°03
Sa 16Ta46 - 2°04	Sa 25Ta10 - 2°26R
Ur 07Pi26 - 0°45	Ur 04Pi06 - 0°47R
Ne 18Le11 + 0°14	Ne 22Le59 + 0°15
Pl 23Ar36 -16°55	Pl 23Ar18 -17°36R
No 06Sc22 - 0°00	No 26Li58 - 0°00
Coords: 116W/16S	

Mar 26, 2089 9:31 AM Partial Penumbral



Apr 10, 2089 10:41 PM Annular Solar



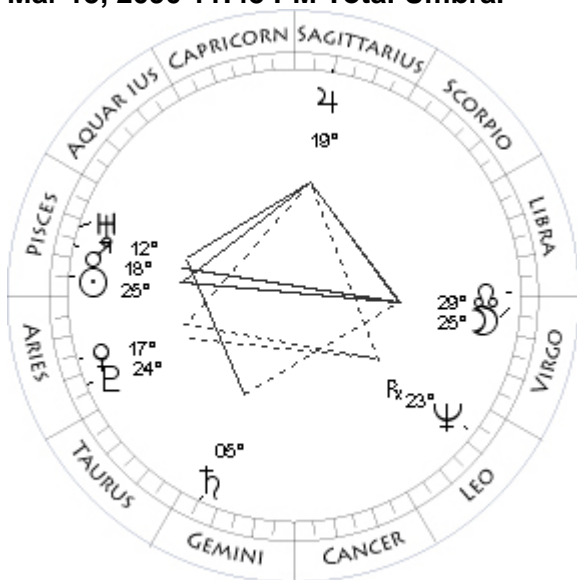
Sep 19, 2089 10:08 PM Partial Penumbral

Mo 06Li32 - 1°05	Mo 27Pi48 + 1°03
Su 06Ar28 - 0°00	Su 27Vi43 - 0°00
Me 19Ar27 + 0°31	Me 10Vi01 + 0°59
Ve 06Pi12 + 5°56	Ve 05Vi40 + 1°09
Ma 04Le13 + 3°08	Ma 04Sc57 - 0°11
Ju 18Sc08 + 1°19R	Ju 16Sc40 + 0°51
Sa 24Ta02 - 1°55	Sa 11Ge19 - 1°57
Ur 09Pi31 - 0°44	Ur 09Pi14 - 0°48R
Ne 20Le41 + 0°17R	Ne 24Le10 + 0°18
Pl 23Ar39 -16°54	Pl 25Ar07 -17°34R
No 19Li10 - 0°00	No 09Li46 - 0°00

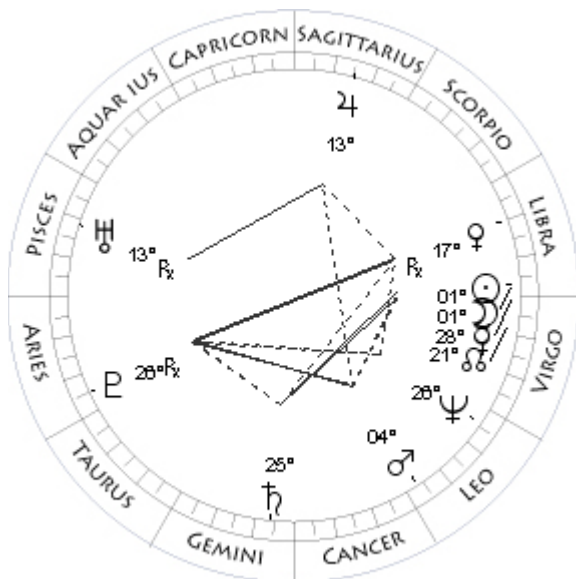
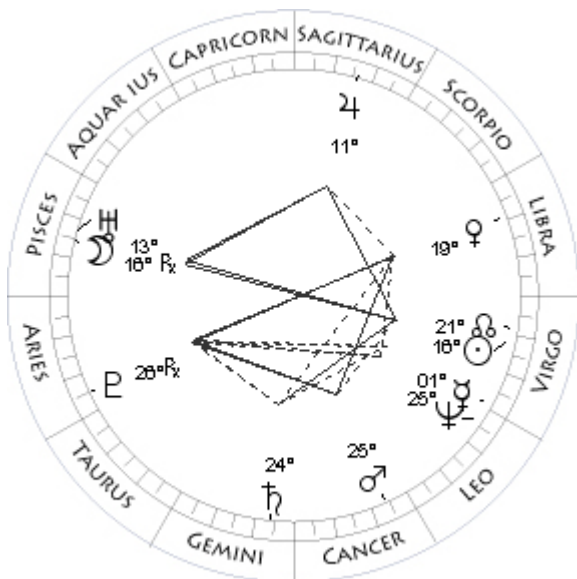
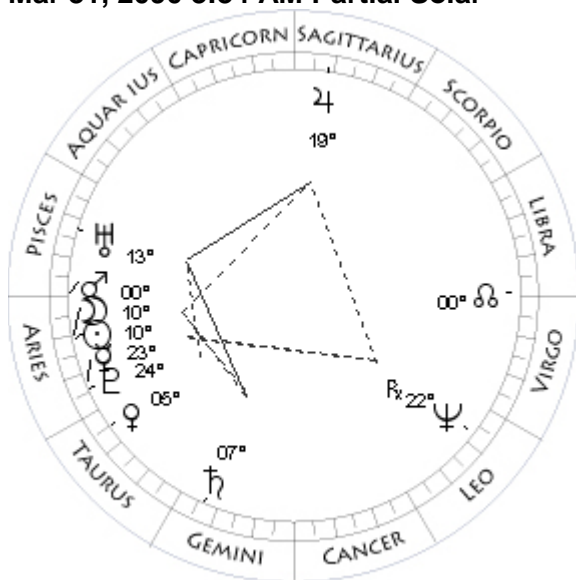
Oct 4, 2089 1:11 AM Total Solar

Mo 21Ar44 - 0°19	Mo 11Li31 + 0°13
Su 21Ar48 - 0°00	Su 11Li34 - 0°00
Me 10Ta12 + 2°59	Me 02Li48 + 1°49
Ve 11Pi19 + 2°55	Ve 23Vi07 + 1°26
Ma 07Le38 + 2°37	Ma 14Sc34 - 0°20
Ju 16Sc47 + 1°21R	Ju 19Sc19 + 0°49
Sa 25Ta43 - 1°52	Sa 11Ge12 - 1°59R
Ur 10Pi18 - 0°44	Ur 08Pi44 - 0°48R
Ne 20Le28 + 0°18R	Ne 24Le35 + 0°19
Pl 24Ar01 -16°53	Pl 24Ar51 -17°36R
No 18Li21 - 0°00	No 09Li01 - 0°00
Coords: 155E/10S	Coords: 163W/ 7N

Mar 15, 2090 11:45 PM Total Umbral



Mar 31, 2090 3:34 AM Partial Solar



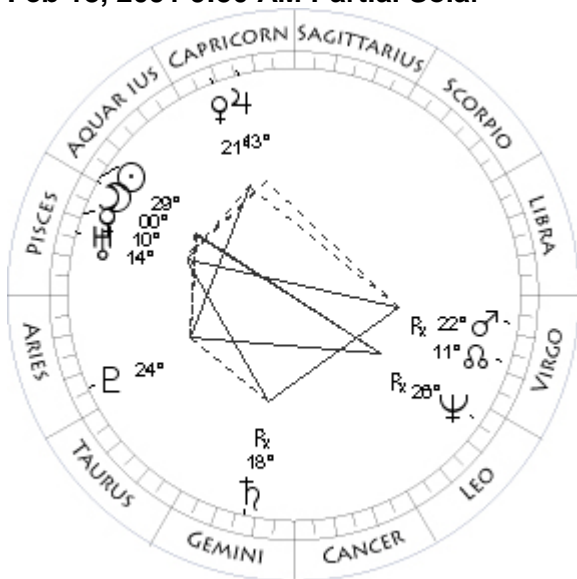
Sep 8, 2090 10:49 PM Total Umbral

Mo 25Vi53 - 0°22	Mo 16Pi49 + 0°23
Su 25Pi53 - 0°00	Su 16Vi48 - 0°00
Me 12Ar47 + 1°08	Me 01Vi13 + 1°15
Ve 17Ar09 - 0°48	Ve 19Li26 - 6°27
Ma 18Pi10 - 1°00	Ma 25Cn23 + 0°50
Ju 19Sa12 + 0°44	Ju 11Sa40 + 0°25
Sa 05Ge51 - 1°38	Sa 24Ge43 - 1°27
Ur 12Pi41 - 0°44	Ur 13Pi47 - 0°49R
Ne 23Le09 + 0°22R	Ne 25Le55 + 0°22
Pl 24Ar25 -16°55	Pl 26Ar20 -17°30R
No 00Li24 - 0°00	No 21Vi02 - 0°00
Coords: 6W/ 1N	

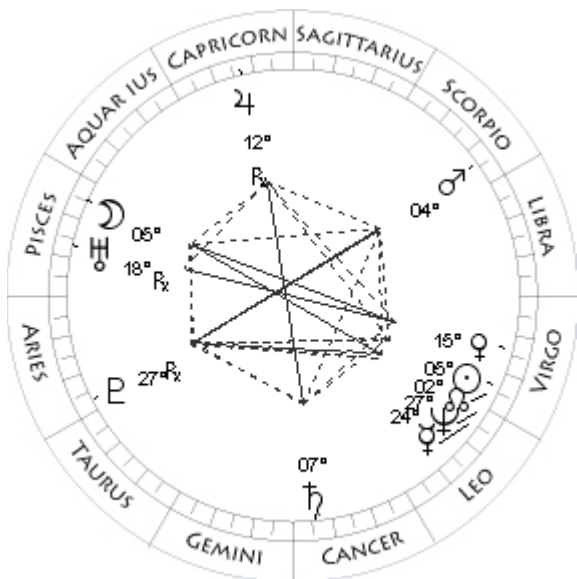
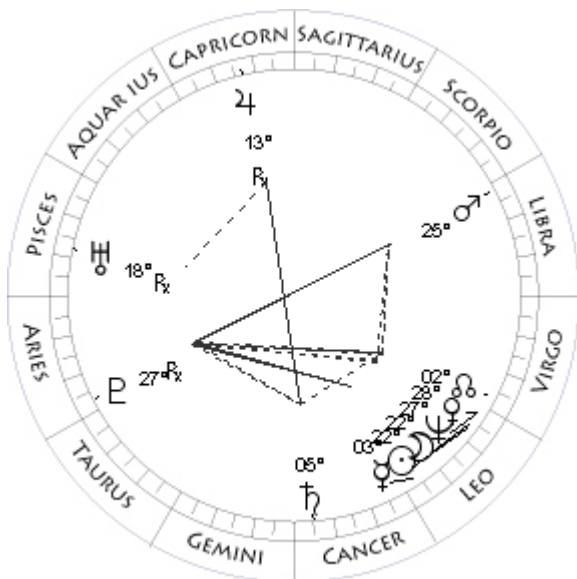
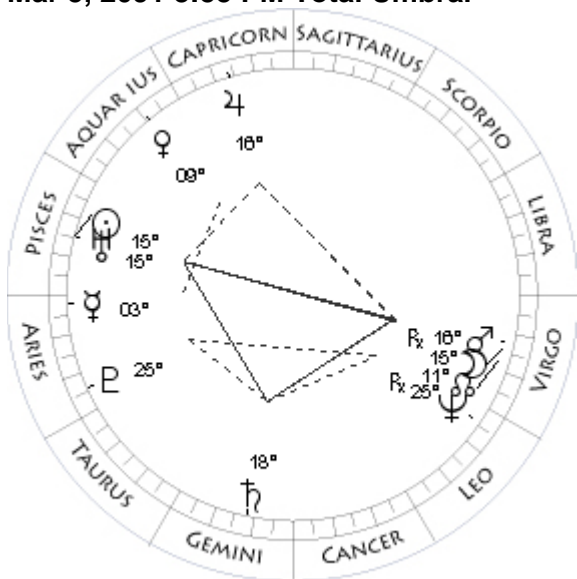
Sep 23, 2090 4:53 PM Total Solar

Mo 10Ar48 - 1°00	Mo 01Li03 + 0°56
Su 10Ar56 - 0°00	Su 01Li11 - 0°00
Me 23Ar27 + 3°21	Me 28Vi09 + 1°38
Ve 05Ta48 - 0°10	Ve 17Li52 - 8°14R
Ma 00Ar03 - 0°55	Ma 04Le30 + 1°02
Ju 19Sa47 + 0°45	Ju 13Sa22 + 0°23
Sa 07Ge05 - 1°34	Sa 25Ge16 - 1°28
Ur 13Pi31 - 0°44	Ur 13Pi13 - 0°49R
Ne 22Le51 + 0°22R	Ne 26Le25 + 0°22
Pl 24Ar46 -16°53	Pl 26Ar06 -17°33R
No 29Vi36 - 0°00	No 20Vi15 - 0°00

Feb 18, 2091 9:50 AM Partial Solar



Mar 5, 2091 3:55 PM Total Umbral



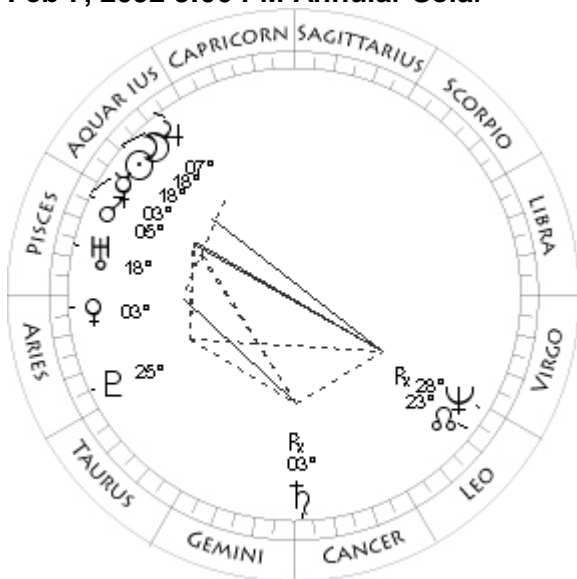
Aug 15, 2091 0:31 AM Total Solar

Mo 00Pi03 + 1°04	Mo 22Le33 - 0°56
Su 29Aq59 - 0°00	Su 22Le30 - 0°00
Me 10Pi04 - 1°12	Me 03Le50 - 1°22
Ve 21Cp12 + 0°55	Ve 28Le17 + 1°24
Ma 22Vi25 + 4°07R	Ma 25Li38 - 0°20
Ju 13Cp38 + 0°07	Ju 13Cp27 - 0°15R
Sa 18Ge27 - 1°18R	Sa 05Cn45 - 0°55
Ur 14Pi57 - 0°44	Ur 18Pi52 - 0°48R
Ne 26Le05 + 0°25R	Ne 27Le07 + 0°26
Pl 24Ar57 -17°01	Pl 27Ar38 -17°22R
No 12Vi25 - 0°00	No 03Vi01 - 0°00
	Coords: 151W/55S

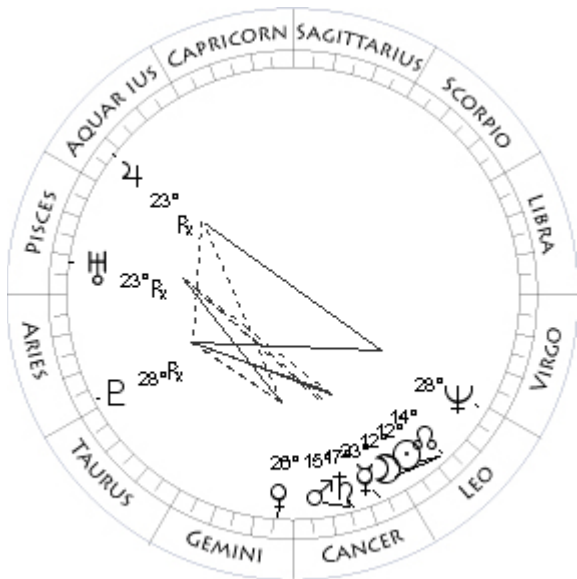
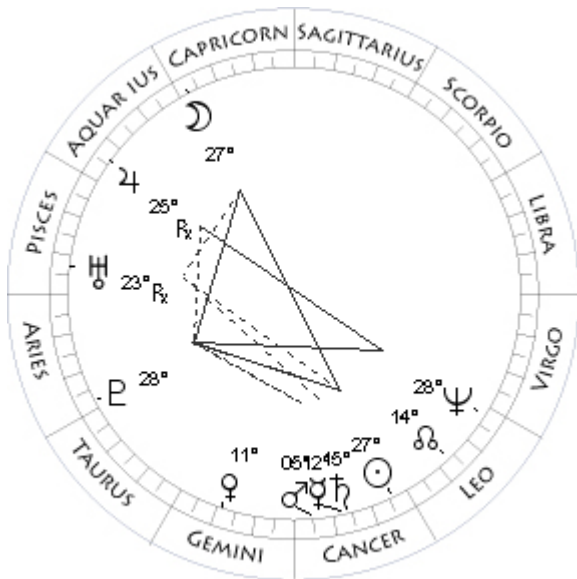
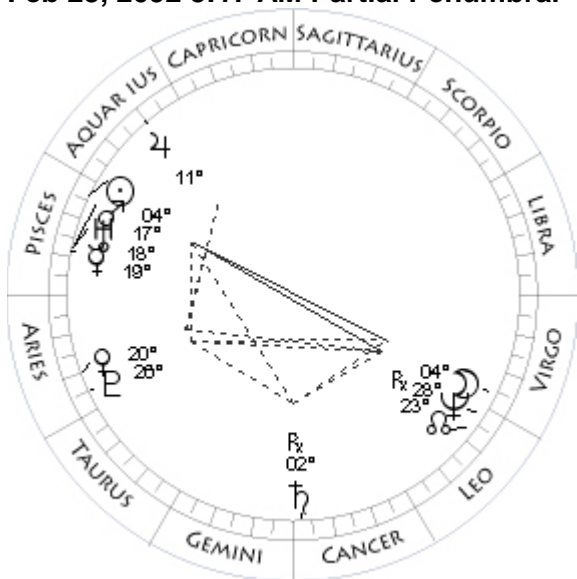
Aug 29, 2091 0:35 AM Total Umbral

Mo 15Vi16 + 0°20	Mo 05Pi56 - 0°18
Su 15Pi20 - 0°00	Su 05Vi59 - 0°00
Me 03Ar24 + 1°53	Me 24Le20 + 1°27
Ve 09Aq36 + 0°02	Ve 15Vi36 + 1°25
Ma 16Vi59 + 4°08R	Ma 04Sc30 - 0°31
Ju 16Cp23 + 0°06	Ju 12Cp42 - 0°16R
Sa 18Ge41 - 1°14	Sa 07Cn05 - 0°55
Ur 15Pi49 - 0°44	Ur 18Pi22 - 0°49R
Ne 25Le40 + 0°26R	Ne 27Le38 + 0°26
Pl 25Ar13 -16°57	Pl 27Ar31 -17°26R
No 11Vi37 - 0°00	No 02Vi17 - 0°00
	Coords: 124W/ 6N

Feb 7, 2092 3:06 PM Annular Solar



Feb 23, 2092 5:17 AM Partial Penumbra



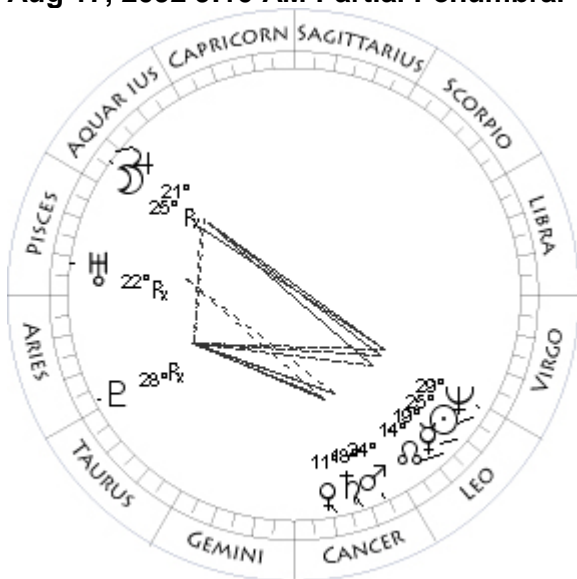
Jul 19, 2092 0:38 AM Partial Penumbra

Mo 18Aq50 + 0°25	Mo 27Cp30 + 1°31
Su 18Aq50 - 0°00	Su 27Cn24 - 0°00
Me 03Pi33 - 0°54	Me 12Cn37 - 4°14
Ve 03Ar41 + 0°03	Ve 11Ge51 - 3°37
Ma 05Pi15 - 1°00	Ma 05Cn18 + 0°36
Ju 07Aq43 - 0°27	Ju 25Aq05 - 0°59R
Sa 03Cn10 - 0°47R	Sa 15Cn06 - 0°25
Ur 18Pi07 - 0°44	Ur 23Pi38 - 0°47R
Ne 28Le39 + 0°29R	Ne 28Le18 + 0°29
Pl 25Ar49 -17°03	Pl 28Ar42 -17°10
No 23Le40 - 0°00	No 15Le04 - 0°00

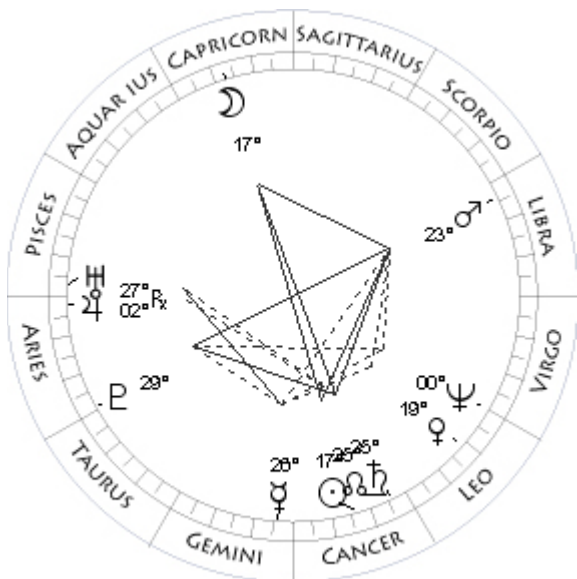
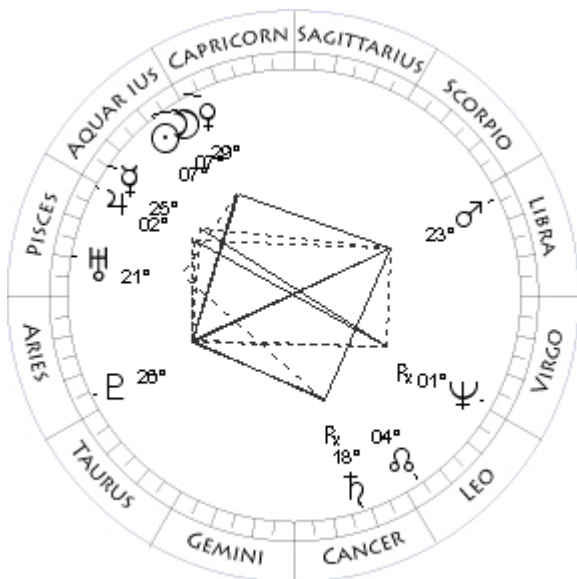
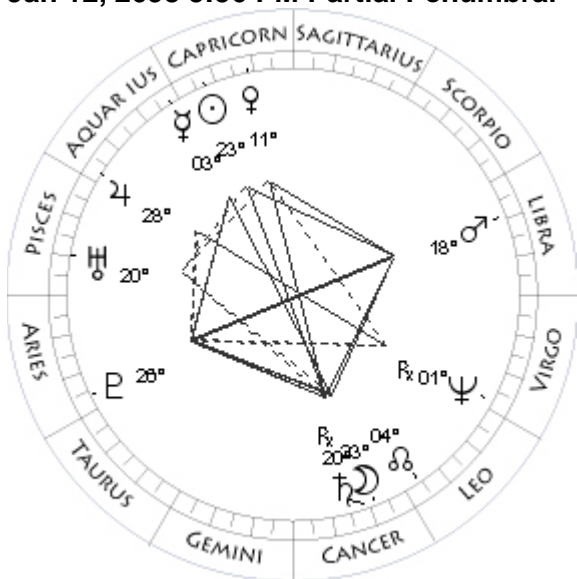
Aug 3, 2092 9:56 AM Annular Solar

Mo 04Vi27 + 1°01	Mo 12Le05 - 0°11
Su 04Pi35 - 0°00	Su 12Le06 - 0°00
Me 19Pi18 + 2°42	Me 23Cn42 - 0°39
Ve 20Ar45 + 1°24	Ve 26Ge52 - 2°58
Ma 17Pi32 - 0°53	Ma 15Cn33 + 0°45
Ju 11Aq19 - 0°28	Ju 23Aq19 - 1°02R
Sa 02Cn41 - 0°44R	Sa 17Cn02 - 0°24
Ur 18Pi57 - 0°44	Ur 23Pi18 - 0°48R
Ne 28Le13 + 0°29R	Ne 28Le50 + 0°29
Pl 26Ar02 -16°58	Pl 28Ar43 -17°16R
No 22Le50 - 0°00	No 14Le15 - 0°00
	Coords: 30W/ 6N

Aug 17, 2092 9:10 AM Partial Penumbral



Jan 12, 2093 5:56 PM Partial Penumbral



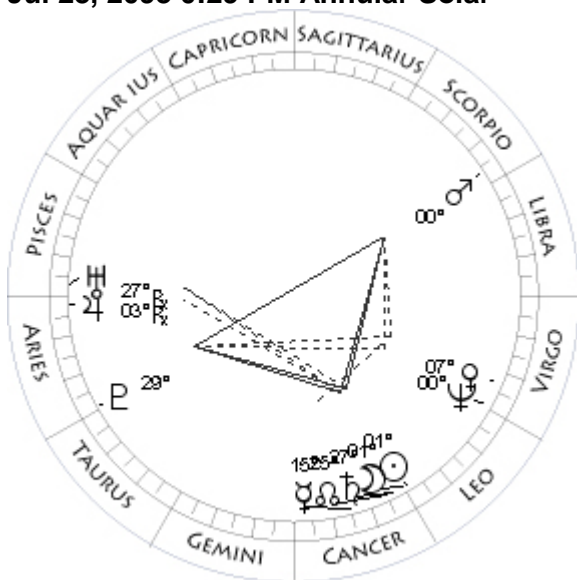
Jan 27, 2093 3:19 AM Total Solar

Mo 25Aq22 - 1°02	Mo 07Aq52 - 0°16
Su 25Le30 - 0°00	Su 07Aq56 - 0°00
Me 19Le05 + 1°36	Me 25Aq56 - 0°28
Ve 11Cn35 - 2°08	Ve 29Cp14 - 0°44
Ma 24Cn42 + 0°53	Ma 23Li57 + 2°25
Ju 21Aq30 - 1°04R	Ju 02Pi10 - 0°54
Sa 18Cn41 - 0°23	Sa 18Cn51 - 0°10R
Ur 22Pi52 - 0°48R	Ur 21Pi22 - 0°44
Ne 29Le21 + 0°29	Ne 01Vi11 + 0°33R
Pl 28Ar39 -17°21R	Pl 26Ar44 -17°06
No 13Le31 - 0°00	No 04Le54 - 0°00
Coords: 136E/14S	Coords: 137W/34S

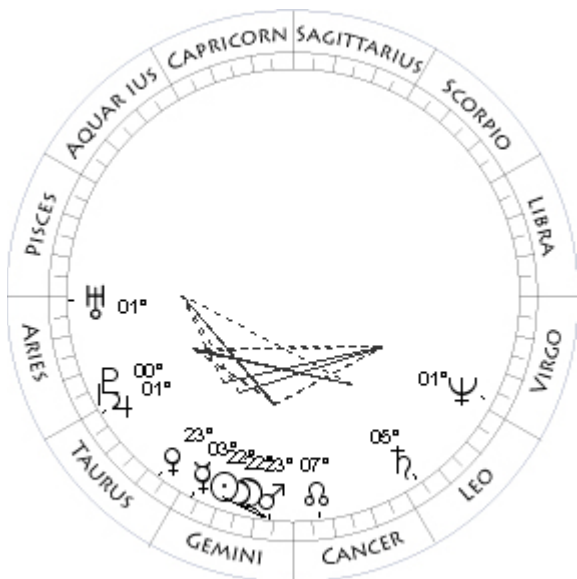
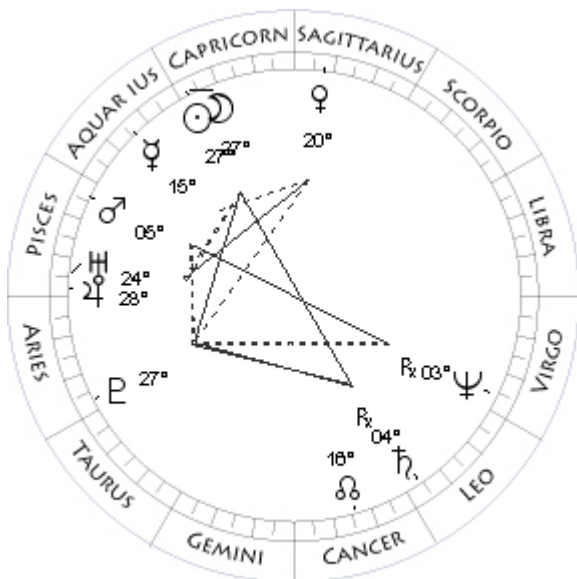
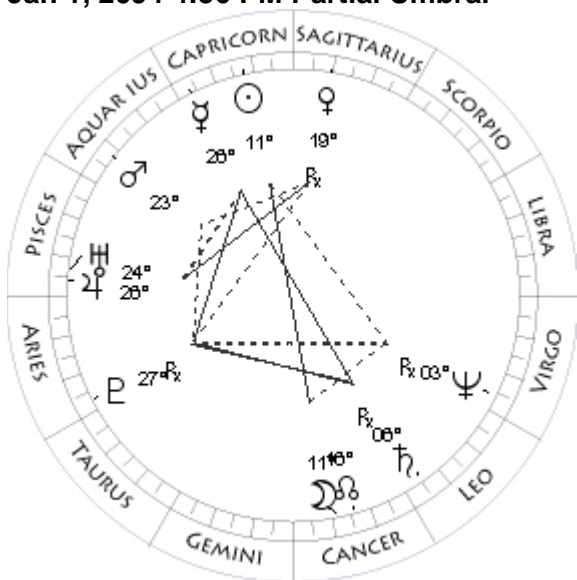
Jul 8, 2093 5:21 PM Partial Umbral

Mo 23Cn21 - 1°04	Mo 17Cp23 + 0°47
Su 23Cp17 - 0°00	Su 17Cn21 - 0°00
Me 03Aq21 - 2°04	Me 26Ge46 - 3°21
Ve 11Cp09 - 0°11	Ve 19Le30 + 1°43
Ma 18Li39 + 2°15	Ma 23Li45 - 0°43
Ju 28Aq56 - 0°55	Ju 02Ar55 - 1°19
Sa 20Cn00 - 0°12R	Sa 25Cn58 + 0°06
Ur 20Pi47 - 0°45	Ur 27Pi46 - 0°46R
Ne 01Vi31 + 0°33R	Ne 00Vi06 + 0°33
Pl 26Ar40 -17°11	Pl 29Ar40 -17°04
No 05Le39 - 0°00	No 26Cn17 - 0°00
Coords: 93W/20N	Coords: 101W/22S

Jul 23, 2003 0:29 PM Annular Solar



Jan 1, 2004 4:56 PM Partial Umbral



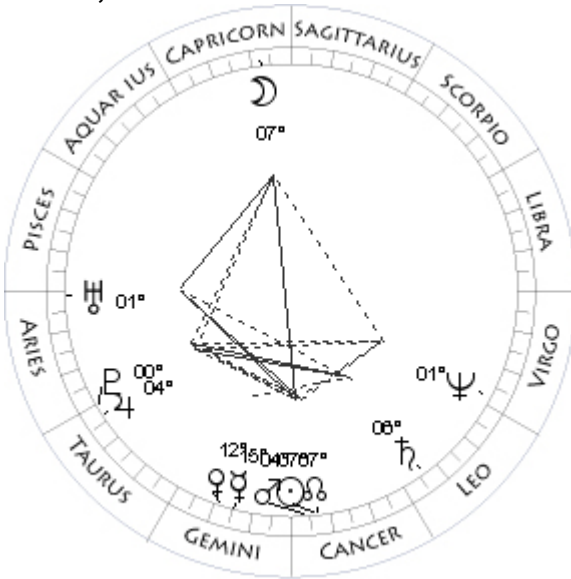
Jan 16, 2004 6:55 PM Total Solar

Mo 01Le23 + 0°31	Mo 27Cp01 - 0°57
Su 01Le28 - 0°00	Su 27Cp09 - 0°00
Me 15Cn48 - 0°08	Me 15Aq29 + 0°11
Ve 07Vi04 + 1°25	Ve 20Sa37 + 5°28
Ma 00Sc41 - 0°59	Ma 05Pi05 - 0°58
Ju 03Ar13 - 1°23R	Ju 28Pi58 - 1°12
Sa 27Cn53 + 0°07	Sa 04Le52 + 0°28R
Ur 27Pi36 - 0°47R	Ur 24Pi44 - 0°44
Ne 00Vi34 + 0°33	Ne 03Vi41 + 0°37R
Pl 29Ar44 -17°10	Pl 27Ar42 -17°08
No 25Cn30 - 0°00	No 16Cn07 - 0°00
Coords: 2W/54N	

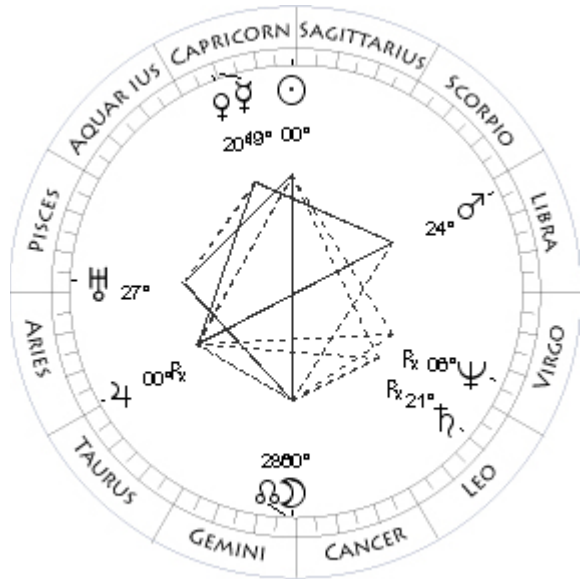
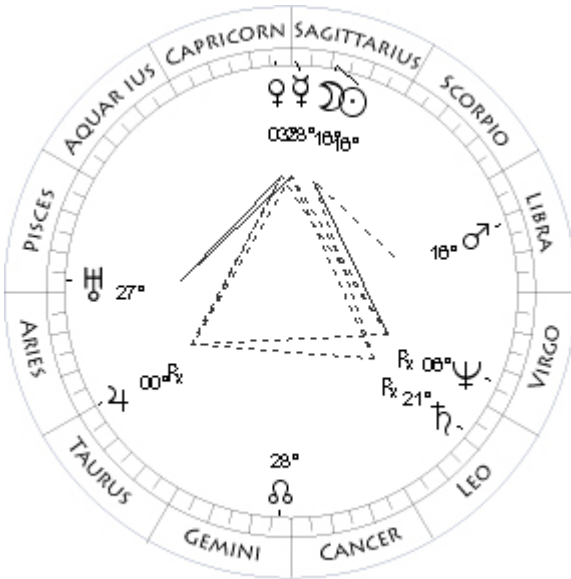
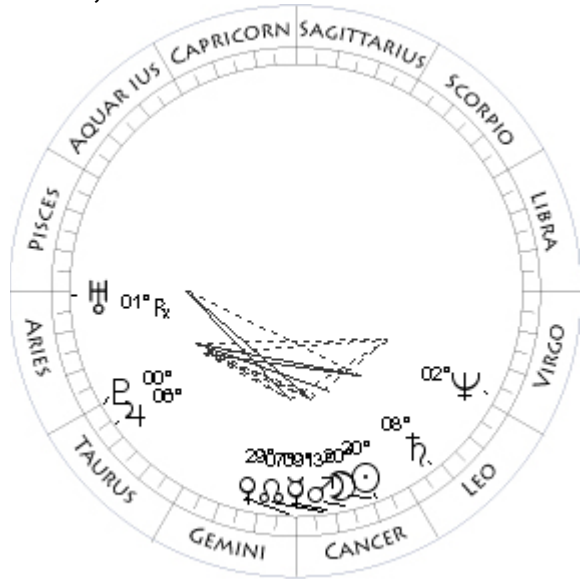
Jun 13, 2004 0:18 AM Partial Solar

Mo 11Cn48 - 0°27	Mo 22Ge41 - 1°21
Su 11Cp47 - 0°00	Su 22Ge35 - 0°00
Me 26Cp33 - 2°04	Me 03Ge56 - 4°12
Ve 19Sa22 + 4°31R	Ve 23Ta30 - 1°36
Ma 23Aq18 - 1°07	Ma 23Ge45 + 0°38
Ju 26Pi37 - 1°15	Ju 01Ta41 - 1°09
Sa 06Le02 + 0°26R	Sa 05Le07 + 0°36
Ur 24Pi16 - 0°45	Ur 01Ar33 - 0°45
Ne 03Vi57 + 0°36R	Ne 01Vi39 + 0°37
Pl 27Ar42 -17°14R	Pl 00Ta22 -16°54
No 16Cn55 - 0°00	No 08Cn19 - 0°00
Coords: 107W/22N	

Jun 28, 2024 9:59 AM Total Umbral



Jul 12, 2024 1:21 PM Partial Solar



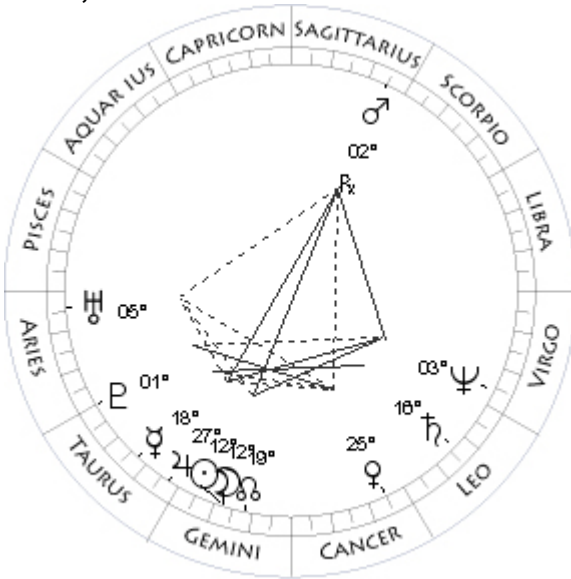
Dec 7, 2024 8:02 PM Partial Solar

Mo 07Cp15 + 0°02	Mo 16Sa18 + 1°06
Su 07Cn17 - 0°00	Su 16Sa14 - 0°00
Me 15Ge40 - 2°33	Me 28Sa19 - 2°06
Ve 12Ge02 - 1°06	Ve 03Cp07 - 0°58
Ma 04Cn11 + 0°45	Ma 16Li28 + 1°27
Ju 04Ta28 - 1°11	Ju 00Ta38 - 1°21R
Sa 06Le51 + 0°37	Sa 21Le34 + 0°58R
Ur 01Ar44 - 0°45	Ur 27Pi51 - 0°45
Ne 01Vi58 + 0°37	Ne 06Vi21 + 0°39R
Pl 00Ta34 -16°59	Pl 28Ar56 -17°20R
No 07Cn30 - 0°00	No 28Ge54 - 0°00
Coords: 149E/23S	

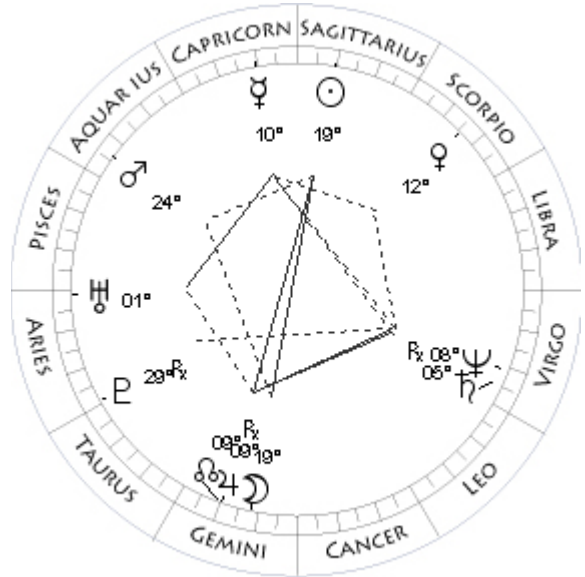
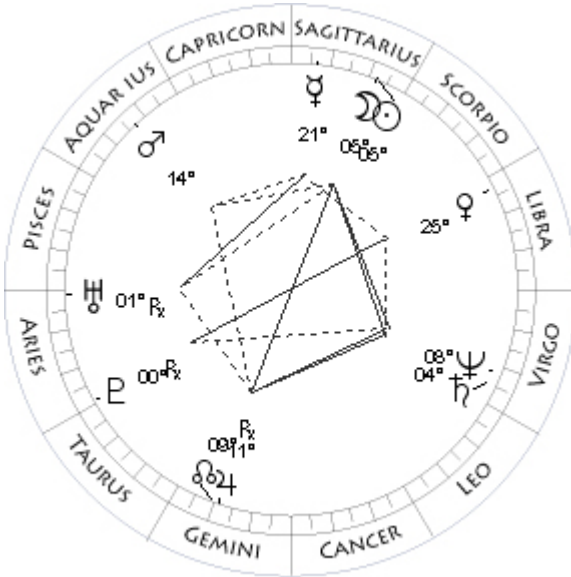
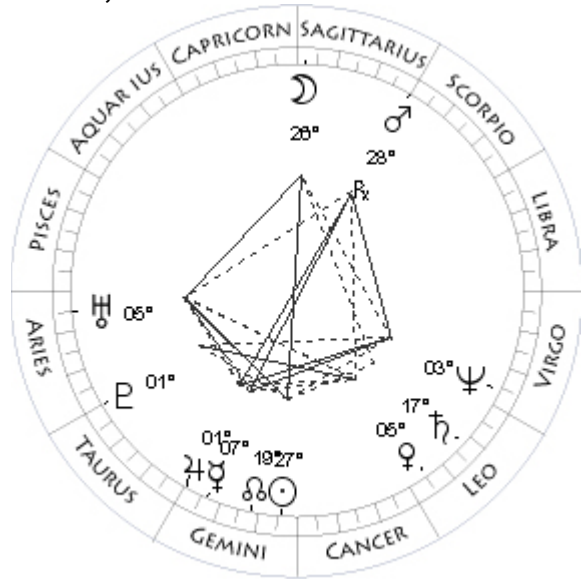
Dec 21, 2024 7:53 PM Total Umbral

Mo 20Cn37 + 1°11	Mo 00Cn24 + 0°11
Su 20Cn46 - 0°00	Su 00Cp27 - 0°00
Me 09Cn19 + 0°17	Me 19Cp04 - 2°03
Ve 29Ge08 - 0°32	Ve 20Cp37 - 1°23
Ma 13Cn37 + 0°51	Ma 24Li34 + 1°27
Ju 06Ta37 - 1°13	Ju 00Ta09 - 1°17R
Sa 08Le35 + 0°37	Sa 21Le14 + 1°00R
Ur 01Ar45 - 0°46R	Ur 27Pi57 - 0°44
Ne 02Vi20 + 0°37	Ne 06Vi18 + 0°40R
Pl 00Ta42 -17°03	Pl 28Ar47 -17°16R
No 06Cn45 - 0°00	No 28Ge10 - 0°00
Coords: 61W/24N	

Jun 2, 2005 10:04 AM Total Solar



Jun 17, 2005 9:56 PM Partial Umbral



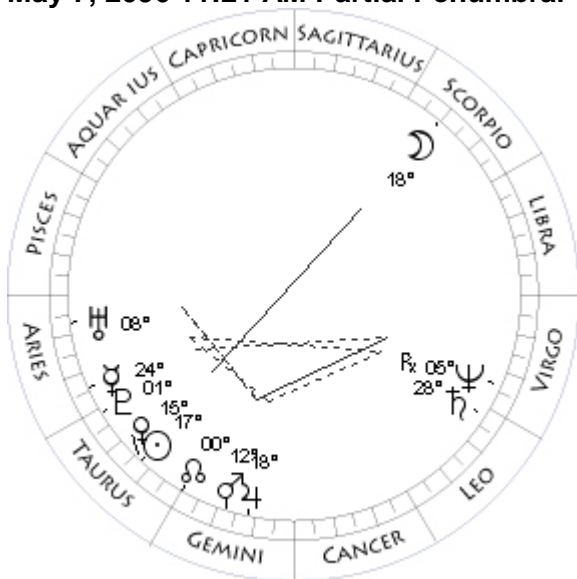
Nov 27, 2005 0:59 AM Annular Solar

Mo 12Ge14 - 0°38	Mo 05Sa03 + 0°27
Su 12Ge13 - 0°00	Su 05Sa03 - 0°00
Me 18Ta17 - 3°42	Me 21Sa55 - 2°18
Ve 25Cn59 + 2°41	Ve 25Li18 + 2°02
Ma 02Sa52 - 1°48R	Ma 14Aq20 - 1°30
Ju 27Ta39 - 0°48	Ju 11Ge52 - 0°50R
Sa 16Le38 + 1°07	Sa 04Vi53 + 1°25
Ur 05Ar10 - 0°43	Ur 01Ar54 - 0°45R
Ne 03Vi40 + 0°41	Ne 08Vi30 + 0°43
Pl 01Ta10 -16°49	Pl 00Ta07 -17°21R
No 19Ge33 - 0°00	No 10Ge09 - 0°00
Coords: 37W/17S	Coords: 170W/ 7N

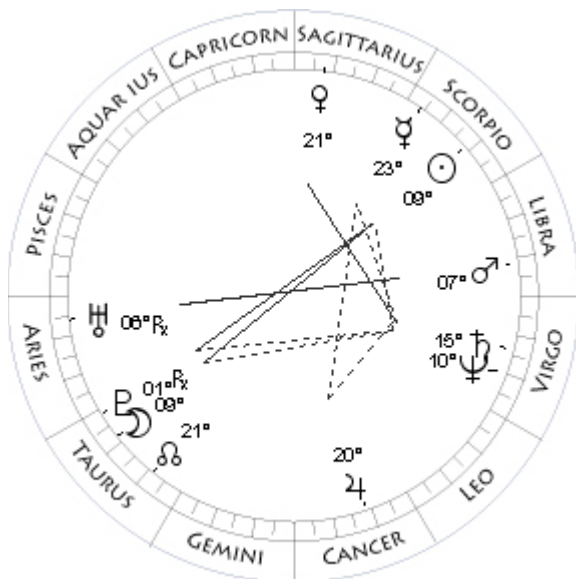
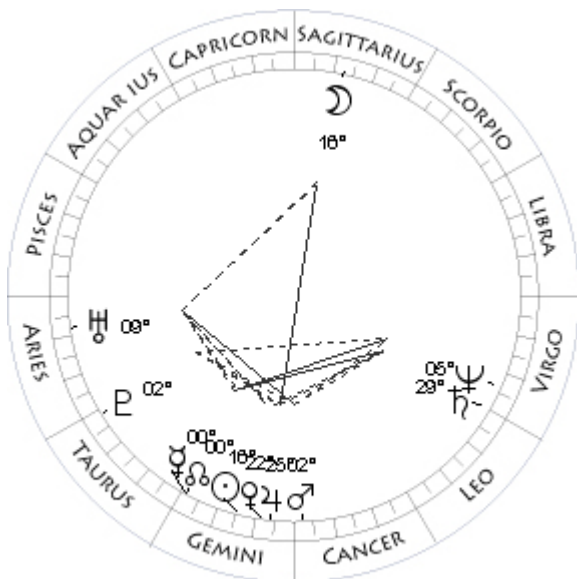
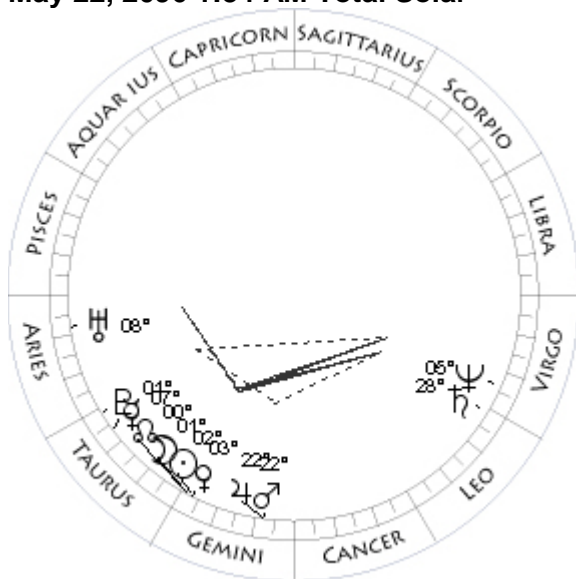
Dec 11, 2005 6:11 AM Partial Umbral

Mo 26Sa55 - 0°43	Mo 19Ge20 + 0°52
Su 27Ge02 - 0°00	Su 19Sa28 - 0°00
Me 07Ge26 - 1°54	Me 10Cp15 - 1°58
Ve 05Le42 + 1°15	Ve 12Sc27 + 2°03
Ma 28Sc24 - 2°27R	Ma 24Aq58 - 1°15
Ju 01Ge12 - 0°47	Ju 09Ge56 - 0°48R
Sa 17Le59 + 1°07	Sa 05Vi12 + 1°28
Ur 05Ar32 - 0°44	Ur 01Ar49 - 0°44
Ne 03Vi53 + 0°41	Ne 08Vi33 + 0°43R
Pl 01Ta26 -16°53	Pl 29Ar55 -17°17R
No 18Ge44 - 0°00	No 09Ge23 - 0°00
Coords: 31W/24S	

May 7, 2006 11:21 AM Partial Penumbral



May 22, 2006 1:34 AM Total Solar



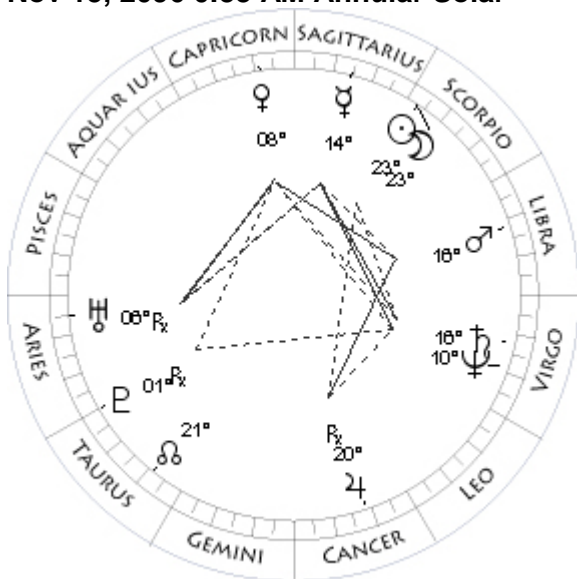
Jun 6, 2006 2:40 AM Partial Penumbral

Mo 18Sc02 + 1°09	Mo 16Sa18 - 1°25
Su 17Ta57 - 0°00	Su 16Ge28 - 0°00
Me 24Ar31 - 2°42	Me 00Ge33 - 1°23
Ve 15Ta56 - 0°48	Ve 22Ge24 + 0°20
Ma 12Ge37 + 0°44	Ma 02Cn32 + 0°55
Ju 18Ge52 - 0°19	Ju 25Ge28 - 0°16
Sa 28Le23 + 1°38	Sa 29Le35 + 1°36
Ur 08Ar00 - 0°42	Ur 09Ar09 - 0°42
Ne 05Vi47 + 0°45R	Ne 05Vi53 + 0°44
Pl 01Ta38 -16°42	Pl 02Ta15 -16°47
No 01Ge33 - 0°00	No 29Ta58 - 0°00
Coords: 171E/16S	

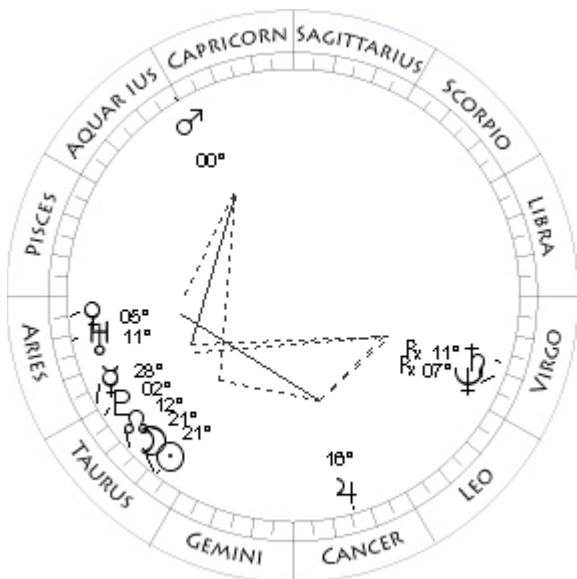
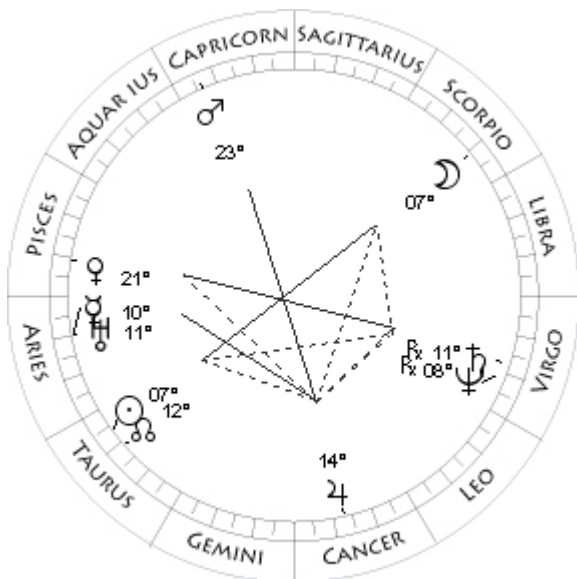
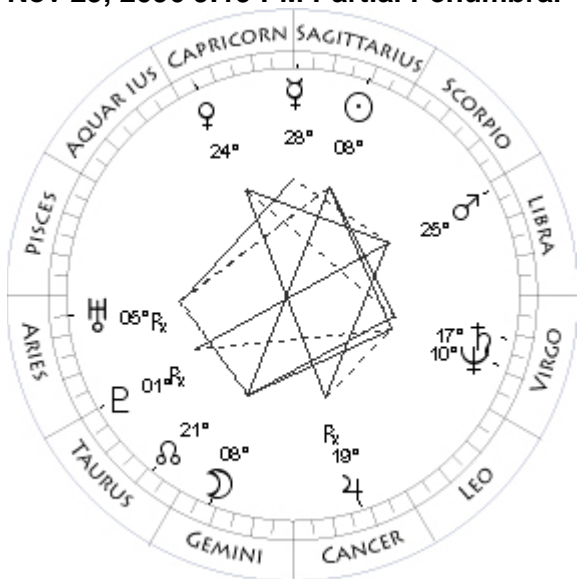
Oct 31, 2006 11:27 AM Partial Penumbral

Mo 01Ge59 + 0°07	Mo 09Ta09 - 1°09
Su 02Ge02 - 0°00	Su 09Sc05 - 0°00
Me 07Ta07 - 3°11	Me 23Sc55 - 1°29
Ve 03Ge55 - 0°16	Ve 21Sa07 - 2°15
Ma 22Ge30 + 0°50	Ma 07Li05 + 1°07
Ju 22Ge04 - 0°18	Ju 20Cn17 - 0°02
Sa 28Le48 + 1°37	Sa 15Vi42 + 1°42
Ur 08Ar38 - 0°42	Ur 06Ar32 - 0°44R
Ne 05Vi46 + 0°45	Ne 10Vi16 + 0°45
Pl 01Ta57 -16°44	Pl 01Ta36 -17°22R
No 00Ge46 - 0°00	No 22Ta10 - 0°00
Coords: 154W/27N	

Nov 15, 2006 0:33 AM Annular Solar



Nov 29, 2006 9:19 PM Partial Penumbral



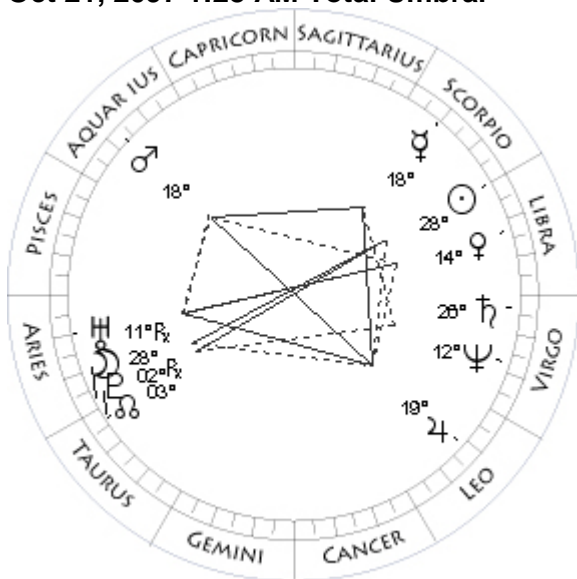
Apr 26, 2007 0:14 PM Partial Umbral

Mo 23Sc38 - 0°11	Mo 07Sc05 + 0°30
Su 23Sc41 - 0°00	Su 07Ta04 - 0°00
Me 14Sa24 - 2°32	Me 10Ar08 - 2°36
Ve 08Cp01 - 2°39	Ve 21Pi50 + 0°26
Ma 16Li16 + 1°05	Ma 23Cp47 - 1°11
Ju 20Cn12 - 0°01R	Ju 14Cn18 + 0°17
Sa 16Vi54 + 1°45	Sa 11Vi55 + 2°07R
Ur 06Ar08 - 0°44R	Ur 11Ar13 - 0°40
Ne 10Vi33 + 0°46	Ne 08Vi05 + 0°49R
Pl 01Ta20 -17°20R	Pl 02Ta21 -16°39
No 21Ta24 - 0°00	No 12Ta48 - 0°00
Coords: 164W/30S	Coords: 176W/13S

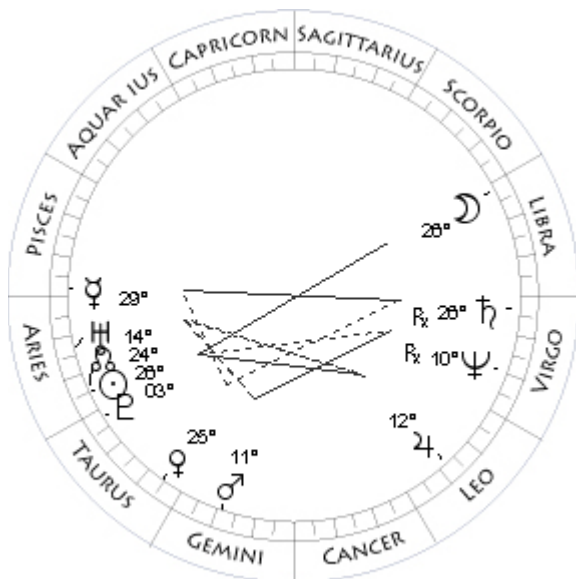
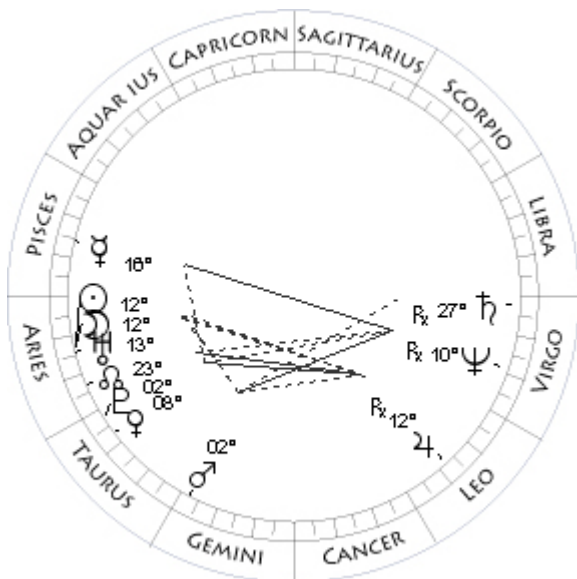
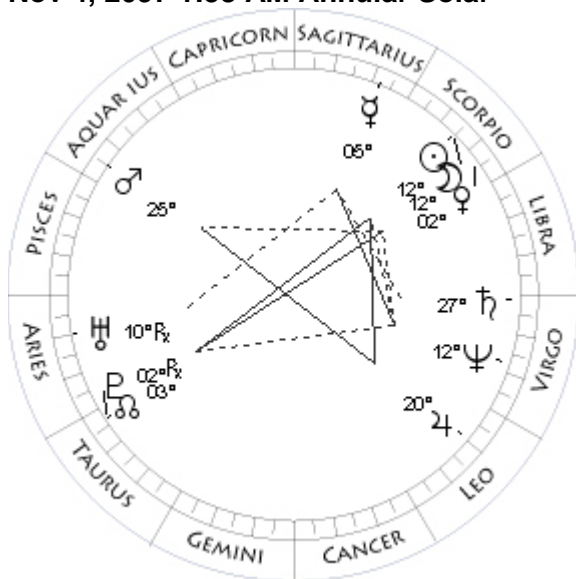
May 11, 2007 6:31 PM Total Solar

Mo 08Ge30 + 1°32	Mo 21Ta45 + 0°51
Su 08Sa42 - 0°00	Su 21Ta53 - 0°00
Me 28Sa30 - 1°45	Me 28Ar56 - 2°45
Ve 24Cp52 - 2°41	Ve 05Ar49 - 1°07
Ma 25Li39 + 1°02	Ma 00Aq58 - 1°49
Ju 19Cn24 + 0°01R	Ju 16Cn42 + 0°18
Sa 17Vi49 + 1°48	Sa 11Vi41 + 2°04R
Ur 05Ar52 - 0°43R	Ur 11Ar59 - 0°40
Ne 10Vi42 + 0°46	Ne 07Vi58 + 0°48R
Pl 01Ta05 -17°18R	Pl 02Ta42 -16°40
No 20Ta37 - 0°00	No 11Ta59 - 0°00
Coords: 37W/23N	Coords: 149E/67N

Oct 21, 2007 1:28 AM Total Umbral



Nov 4, 2007 1:58 AM Annular Solar



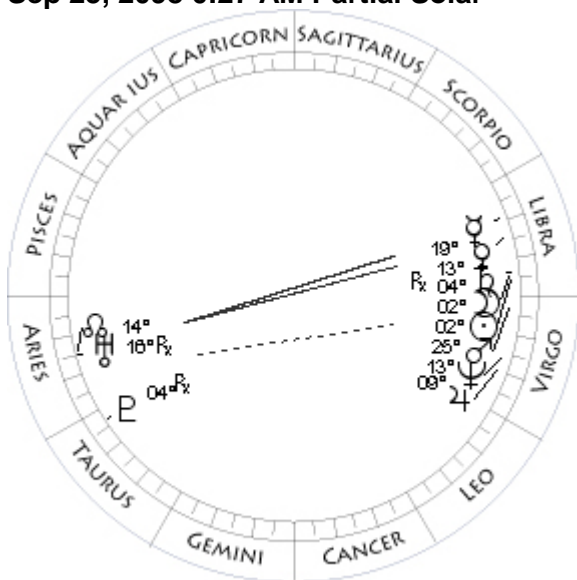
Apr 1, 2008 7:58 PM Partial Solar

Mo 28Ar29 - 0°27	Mo 12Ar42 - 1°02
Su 28Li28 - 0°00	Su 12Ar39 - 0°00
Me 18Sc05 - 1°50	Me 16Pi51 - 0°39
Ve 14Li58 + 1°28	Ve 08Ta30 - 0°03
Ma 18Aq05 - 2°51	Ma 02Ge44 + 0°58
Ju 19Le06 + 0°34	Ju 12Le33 + 0°57R
Sa 26Vi20 + 1°57	Sa 27Vi03 + 2°29R
Ur 11Ar02 - 0°43R	Ur 13Ar36 - 0°39
Ne 12Vi09 + 0°48	Ne 10Vi45 + 0°53R
Pl 02Ta50 -17°19R	Pl 02Ta45 -16°37
No 03Ta24 - 0°00	No 24Ar46 - 0°00

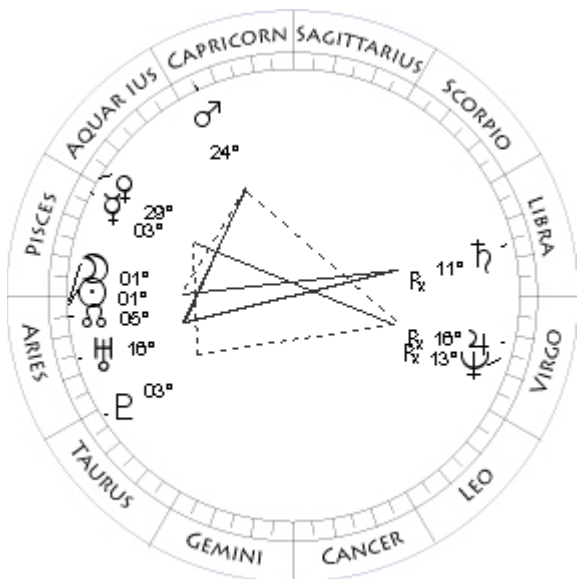
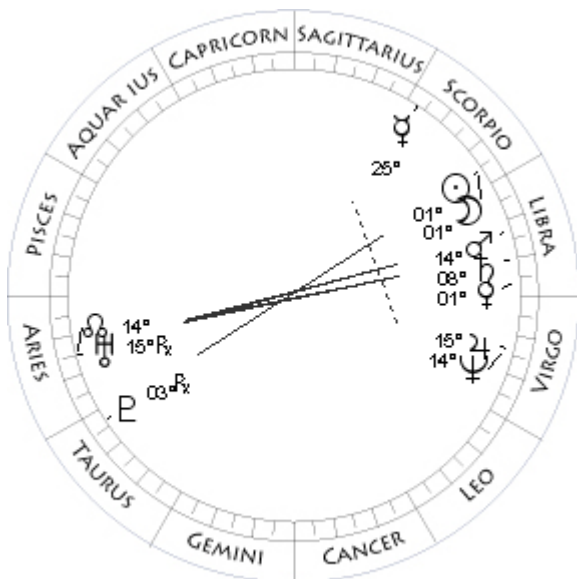
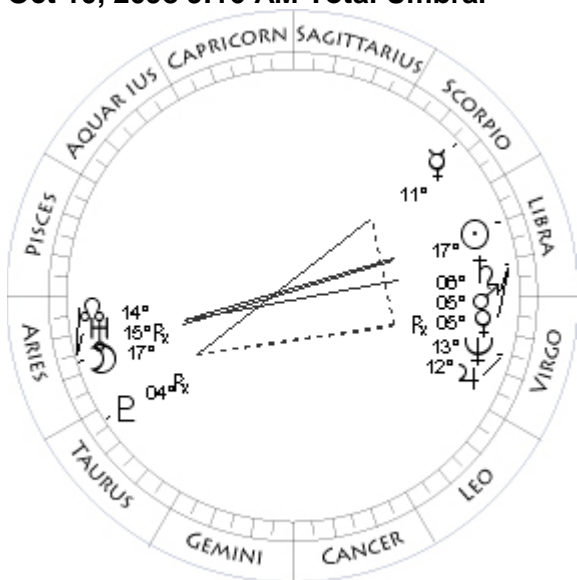
Apr 15, 2008 7:01 PM Total Umbral

Mo 12Sc20 - 0°49	Mo 26Li19 - 0°13
Su 12Sc27 - 0°00	Su 26Ar23 - 0°00
Me 05Sa43 - 2°47	Me 29Pi24 - 2°29
Ve 02Sc31 + 1°15	Ve 25Ta29 + 0°37
Ma 25Aq33 - 2°10	Ma 11Ge55 + 1°02
Ju 20Le45 + 0°37	Ju 12Le36 + 0°55
Sa 27Vi50 + 1°59	Sa 26Vi05 + 2°28R
Ur 10Ar32 - 0°43R	Ur 14Ar23 - 0°39
Ne 12Vi30 + 0°49	Ne 10Vi29 + 0°52R
Pl 02Ta34 -17°19R	Pl 03Ta05 -16°36
No 02Ta39 - 0°00	No 24Ar02 - 0°00
Coords: 88W/66S	Coords: 75W/10S

Sep 25, 2008 0:27 AM Partial Solar



Oct 10, 2008 9:16 AM Total Umbral



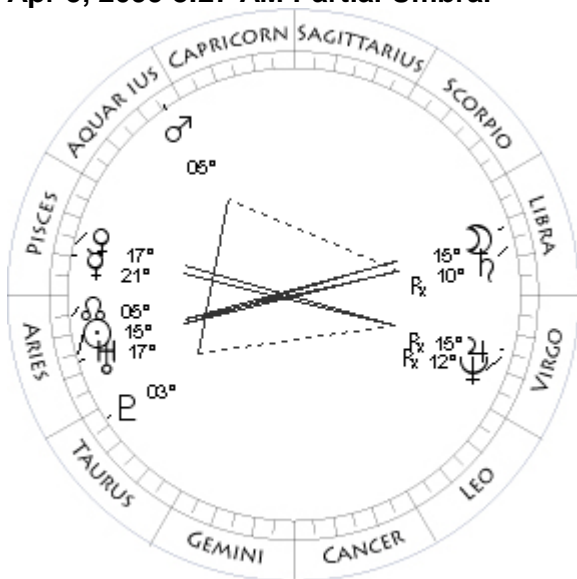
Oct 24, 2008 10:32 AM Partial Solar

Mo 02Li36 + 1°07	Mo 01Sc24 - 1°30
Su 02Li32 - 0°00	Su 01Sc35 - 0°00
Me 19Li27 - 0°24	Me 25Sc12 - 3°06
Ve 13Li54 - 8°26R	Ve 01Li39 - 3°55
Ma 25Vi41 + 1°00	Ma 14Li40 + 0°51
Ju 09Vi47 + 0°54	Ju 15Vi33 + 0°58
Sa 04Li26 + 2°07	Sa 08Li01 + 2°09
Ur 16Ar13 - 0°42R	Ur 15Ar03 - 0°42R
Ne 13Vi26 + 0°51	Ne 14Vi23 + 0°52
Pl 04Ta20 -17°13R	Pl 03Ta48 -17°16R
No 15Ar27 - 0°00	No 13Ar53 - 0°00

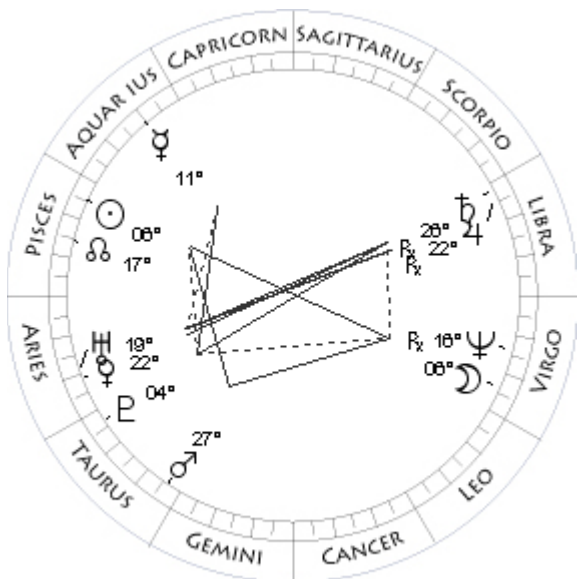
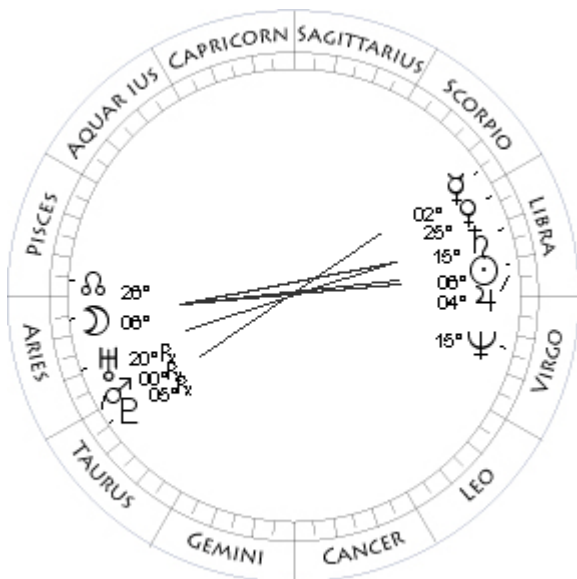
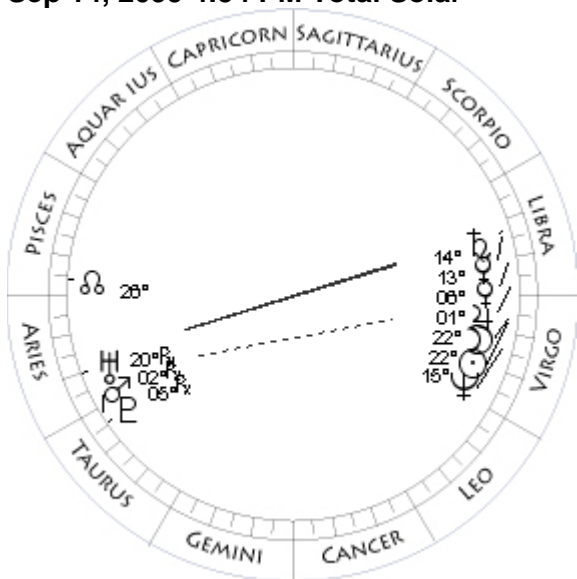
Mar 21, 2009 10:50 PM Annular Solar

Mo 17Ar35 + 0°15	Mo 01Ar38 - 0°22
Su 17Li39 - 0°00	Su 01Ar38 - 0°00
Me 11Sc02 - 2°13	Me 03Pi58 - 0°57
Ve 05Li02 - 7°03R	Ve 29Aq59 - 0°49
Ma 05Li34 + 0°55	Ma 24Cp57 - 0°47
Ju 12Vi54 + 0°56	Ju 16Vi36 + 1°28R
Sa 06Li20 + 2°08	Sa 11Li37 + 2°41R
Ur 15Ar36 - 0°42R	Ur 16Ar43 - 0°37
Ne 13Vi57 + 0°52	Ne 13Vi17 + 0°56R
Pl 04Ta04 -17°15R	Pl 03Ta30 -16°36
No 14Ar38 - 0°00	No 06Ar01 - 0°00
Coords: 142E/ 7N	Coords: 149E/20S

Apr 5, 2009 8:27 AM Partial Umbral



Sep 14, 2009 4:54 PM Total Solar



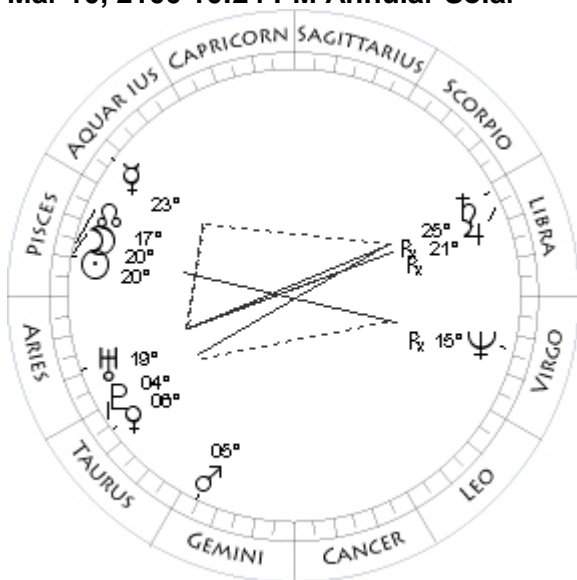
Sep 29, 2009 10:33 AM Total Solar

Mo 15Li45 - 0°56	Mo 06Ar30 + 0°54
Su 15Ar53 - 0°00	Su 06Li38 - 0°00
Me 21Pi19 - 2°24	Me 02Sc23 - 2°39
Ve 17Pi33 - 1°18	Ve 25Li10 + 0°41
Ma 05Aq00 - 1°04	Ma 00Ta46 - 3°37R
Ju 15Vi00 + 1°27R	Ju 04Li20 + 1°05
Sa 10Li30 + 2°42R	Sa 15Li57 + 2°14
Ur 17Ar32 - 0°37	Ur 20Ar13 - 0°40R
Ne 12Vi56 + 0°56R	Ne 15Vi42 + 0°55
Pl 03Ta48 -16°34	Pl 05Ta17 -17°10R
No 05Ar16 - 0°00	No 25Pi53 - 0°00
Coords: 161E/ 3N	

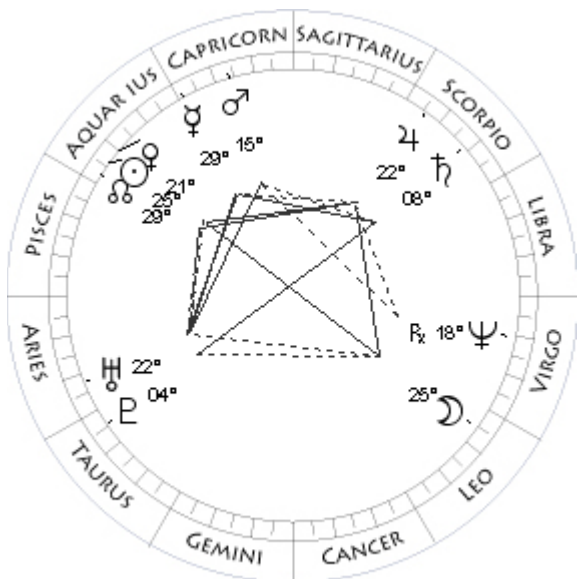
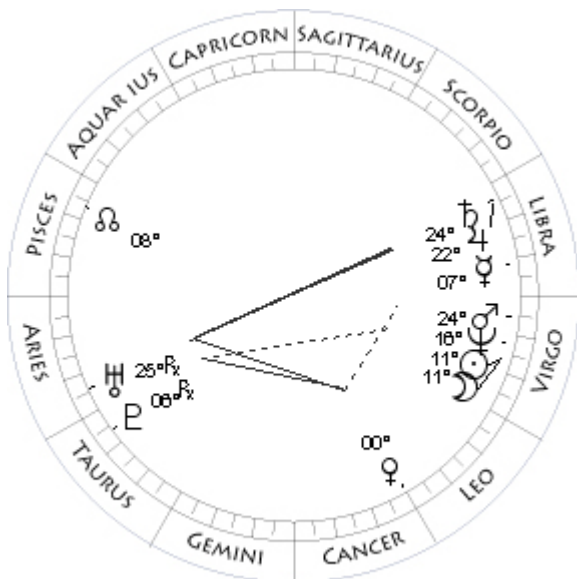
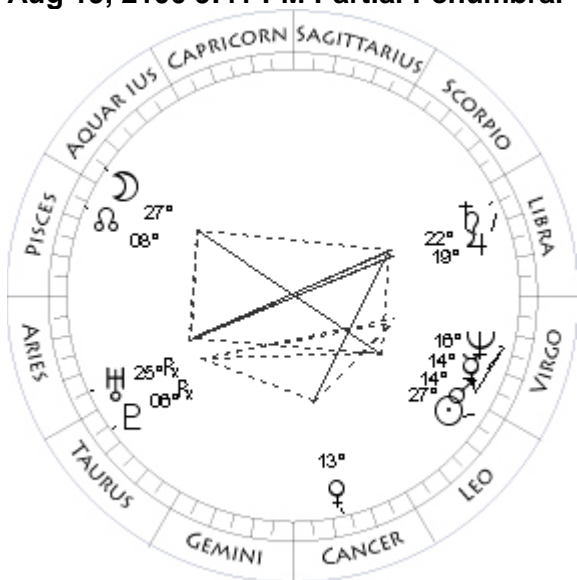
Feb 24, 2100 3:01 PM Partial Penumbral

Mo 22Vi13 + 0°24	Mo 06Vi07 + 1°02
Su 22Vi13 - 0°00	Su 06Pi04 - 0°00
Me 13Li49 - 0°48	Me 11Aq19 + 1°22
Ve 06Li56 + 1°08	Ve 22Ar25 + 1°38
Ma 02Ta28 - 3°58R	Ma 27Ta03 + 1°29
Ju 01Li09 + 1°05	Ju 22Li42 + 1°30R
Sa 14Li12 + 2°15	Sa 26Li16 + 2°40R
Ur 20Ar45 - 0°40R	Ur 19Ar12 - 0°36
Ne 15Vi10 + 0°54	Ne 16Vi15 + 1°00R
Pl 05Ta30 -17°07R	Pl 04Ta02 -16°39
No 26Pi40 - 0°00	No 18Pi02 - 0°00
Coords: 138W/10N	

Mar 10, 2100 10:24 PM Annular Solar



Aug 19, 2100 9:41 PM Partial Penumbral



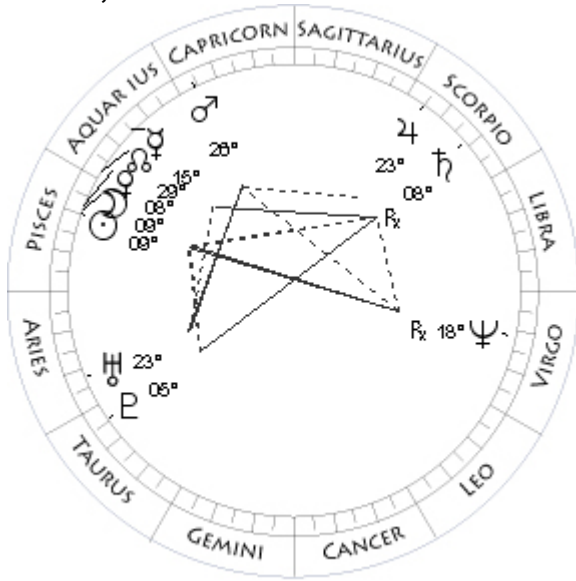
Sep 4, 2100 8:45 AM Total Solar

Mo 20Pi21 + 0°16	Mo 11Vi53 - 0°20
Su 20Pi25 - 0°00	Su 11Vi57 - 0°00
Me 23Aq45 - 1°08	Me 07Li09 - 1°16
Ve 06Ta32 + 3°04	Ve 00Le55 - 0°55
Ma 05Ge15 + 1°31	Ma 24Vi05 + 0°53
Ju 21Li37 + 1°32R	Ju 22Li41 + 1°05
Sa 25Li37 + 2°43R	Sa 24Li00 + 2°18
Ur 19Ar54 - 0°36	Ur 25Ar13 - 0°38R
Ne 15Vi51 + 1°00R	Ne 16Vi54 + 0°57
Pl 04Ta16 -16°35	Pl 06Ta38 -17°00R
No 17Pi17 - 0°00	No 07Pi53 - 0°00
Coords: 162E/12N	Coords: 39W/10S

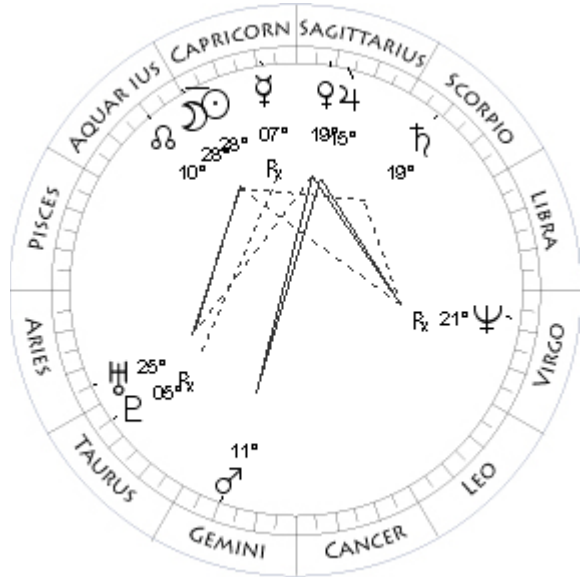
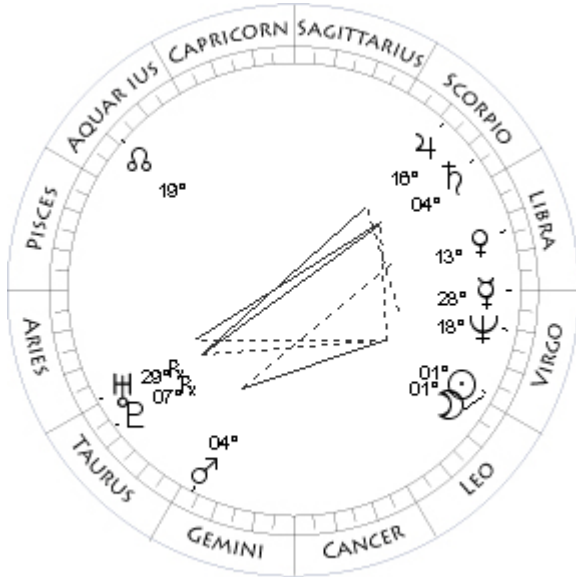
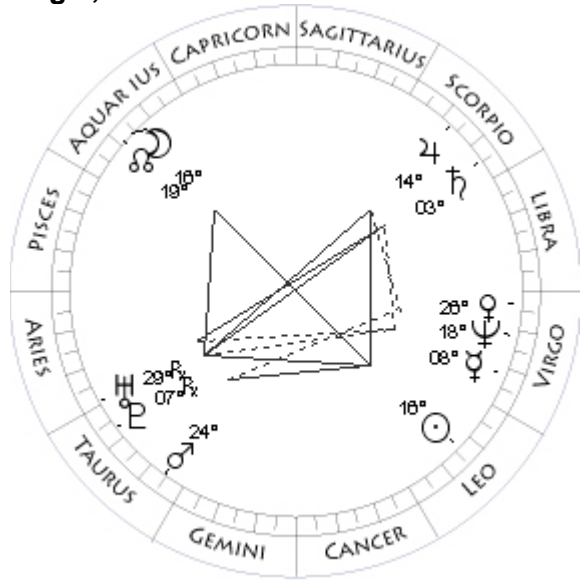
Feb 14, 2101 2:46 AM Total Umbra

Mo 27Aq06 - 1°01	Mo 25Le13 + 0°21
Su 27Le02 - 0°00	Su 25Aq13 - 0°00
Me 14Vi21 + 0°49	Me 29Cp12 + 0°44
Ve 13Cn37 - 1°57	Ve 21Aq13 - 1°14
Ma 14Vi13 + 0°59	Ma 15Cp59 - 0°40
Ju 19Li56 + 1°08	Ju 22Sc29 + 1°09
Sa 22Li33 + 2°21	Sa 08Sc45 + 2°32
Ur 25Ar32 - 0°37R	Ur 22Ar36 - 0°35
Ne 16Vi20 + 0°57	Ne 18Vi47 + 1°03R
Pl 06Ta45 -16°56R	Pl 04Ta53 -16°39
No 08Pi42 - 0°00	No 29Aq16 - 0°00
Coords: 36W/13S	

Feb 28, 2101 2:12 AM Partial Solar



Aug 9, 2101 8:22 AM Total Umbral



Aug 24, 2101 7:33 PM Partial Solar

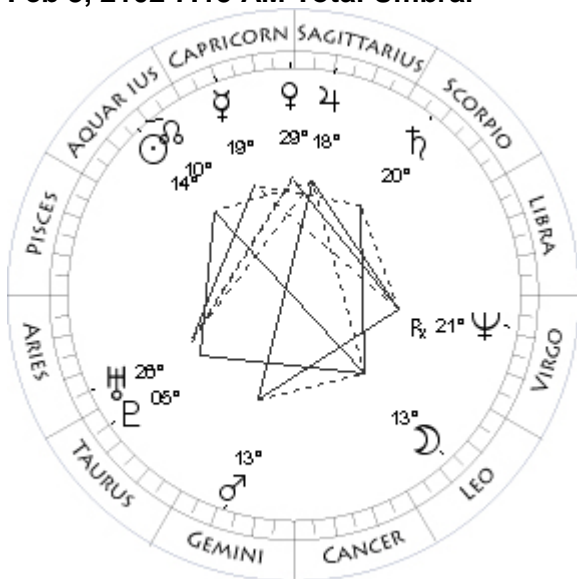
Mo 09Pi11 + 0°56	Mo 01Vi23 - 1°04
Su 09Pi19 - 0°00	Su 01Vi32 - 0°00
Me 15Aq33 - 1°18	Me 28Vi42 - 1°49
Ve 08Pi43 - 1°25	Ve 13Li53 - 0°15
Ma 26Cp21 - 0°50	Ma 04Ge06 - 1°21
Ju 23Sc11 + 1°11	Ju 16Sc19 + 0°53
Sa 08Sc38 + 2°36R	Sa 04Sc03 + 2°18
Ur 23Ar10 - 0°34	Ur 29Ar33 - 0°35R
Ne 18Vi25 + 1°03R	Ne 18Vi37 + 1°01
Pl 05Ta04 -16°35	Pl 07Ta43 -16°53R
No 28Aq31 - 0°00	No 19Aq07 - 0°00

Jan 19, 2102 2:17 AM Partial Solar

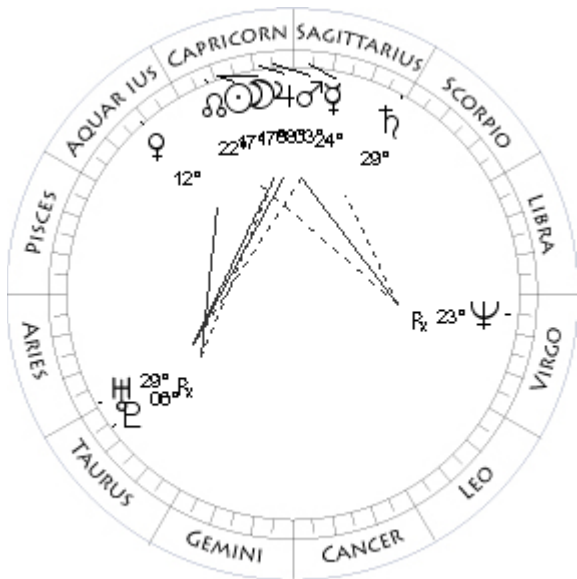
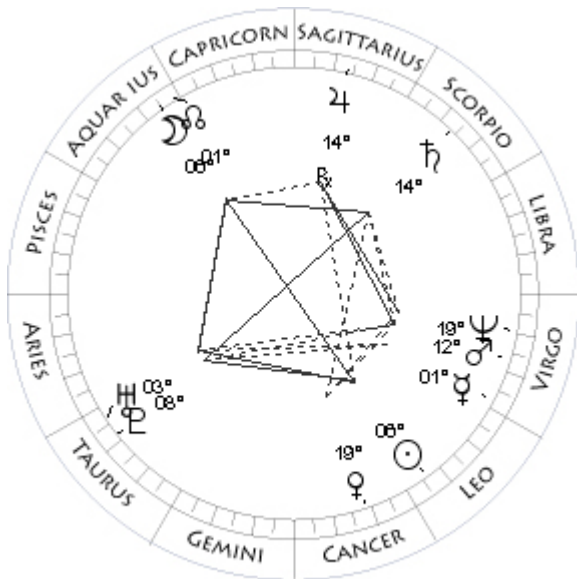
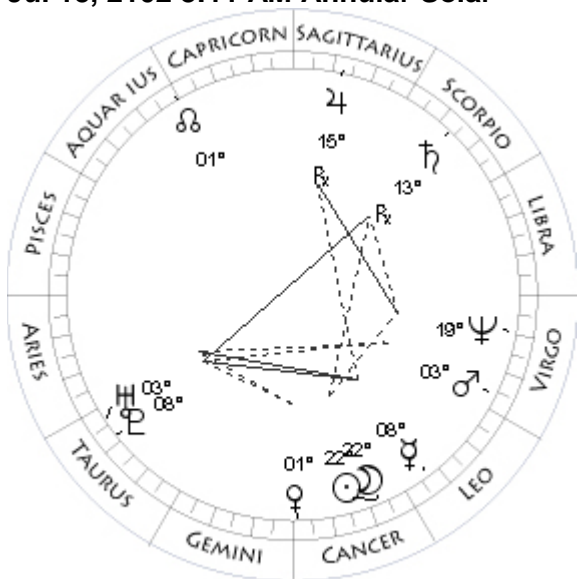
Mo 16Aq40 - 0°17	Mo 28Cp37 - 1°05
Su 16Le40 - 0°00	Su 28Cp33 - 0°00
Me 08Vi24 + 0°33	Me 07Cp43 + 2°48R
Ve 26Vi09 + 0°42	Ve 19Sa44 + 5°20
Ma 24Ta44 - 1°32	Ma 11Ge25 + 2°56
Ju 14Sc43 + 0°57	Ju 15Sa27 + 0°38
Sa 03Sc02 + 2°22	Sa 19Sc17 + 2°16
Ur 29Ar42 - 0°35R	Ur 25Ar51 - 0°33
Ne 18Vi05 + 1°01	Ne 21Vi33 + 1°05R
Pl 07Ta46 -16°48R	Pl 05Ta45 -16°45R
No 19Aq56 - 0°00	No 11Aq19 - 0°00

Coords: 124E/16S

Feb 3, 2102 7:15 AM Total Umbral



Jul 15, 2102 8:11 AM Annular Solar



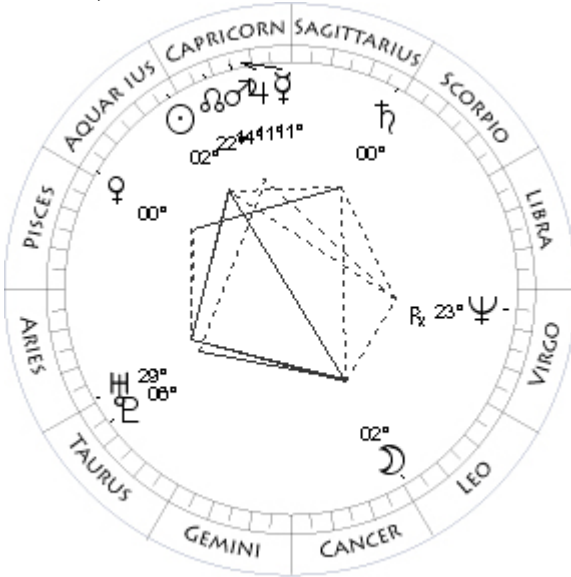
Jul 30, 2102 0:25 AM Total Umbral

Mo 13Le57 - 0°19	Mo 06Aq28 + 0°28
Su 14Aq01 - 0°00	Su 06Le33 - 0°00
Me 19Cp38 + 0°18	Me 01Vi40 + 0°11
Ve 29Sa30 + 4°47	Ve 19Cn50 + 0°13
Ma 13Ge15 + 2°48	Ma 12Vi59 + 0°56
Ju 18Sa12 + 0°38	Ju 14Sa48 + 0°28R
Sa 20Sc06 + 2°19	Sa 14Sc05 + 2°17
Ur 26Ar09 - 0°33	Ur 03Ta43 - 0°32
Ne 21Vi17 + 1°06R	Ne 19Vi53 + 1°04
Pl 05Ta48 -16°40	Pl 08Ta45 -16°40
No 10Aq30 - 0°00	No 01Aq09 - 0°00
Coords: 105E/16N	

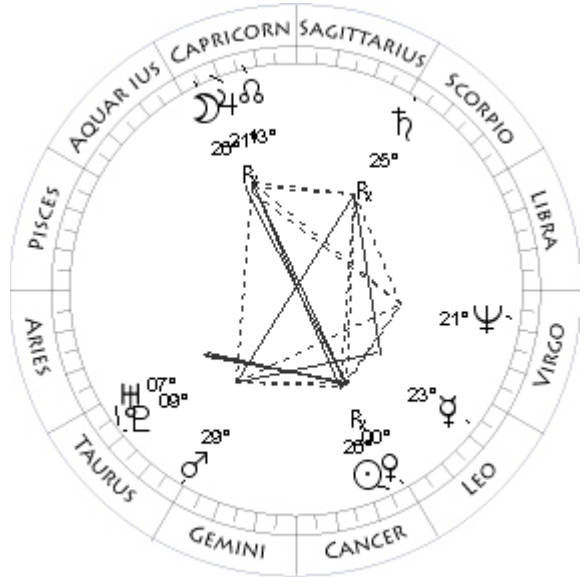
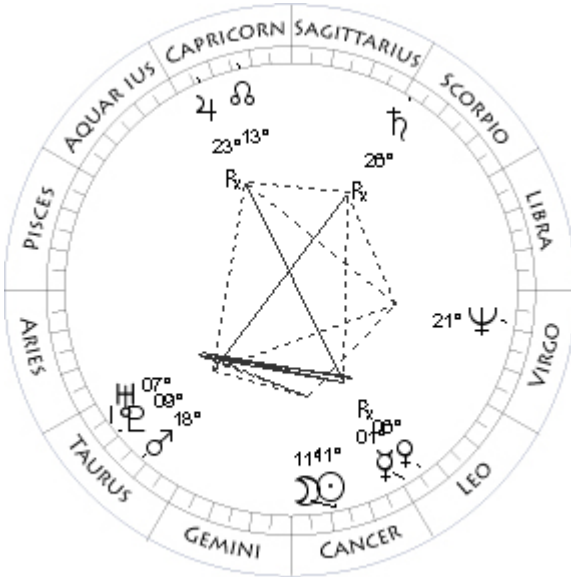
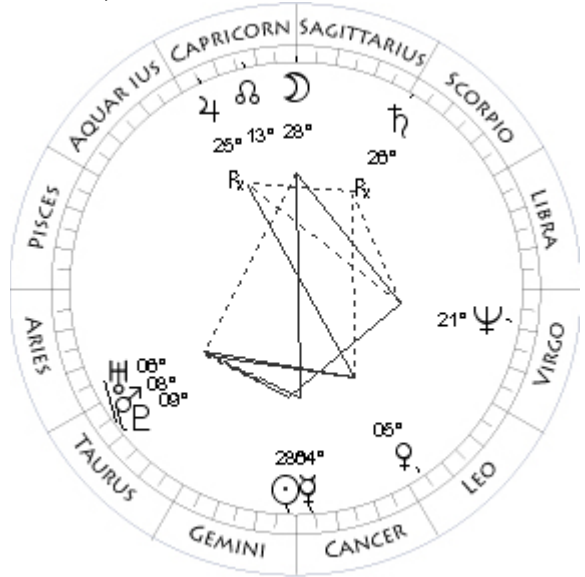
Jan 8, 2103 6:00 PM Total Solar

Mo 22Cn35 + 0°49	Mo 17Cp46 - 0°25
Su 22Cn33 - 0°00	Su 17Cp46 - 0°00
Me 08Le12 + 1°45	Me 24Sa50 + 2°09
Ve 01Cn57 - 0°25	Ve 12Aq24 - 1°39
Ma 03Vi58 + 1°04	Ma 03Cp57 - 0°38
Ju 15Sa41 + 0°31R	Ju 08Cp25 + 0°06
Sa 13Sc59 + 2°21R	Sa 29Sc13 + 2°01
Ur 03Ta30 - 0°32	Ur 29Ar47 - 0°32
Ne 19Vi30 + 1°04	Ne 23Vi53 + 1°08R
Pl 08Ta40 -16°35	Pl 06Ta46 -16°45R
No 01Aq56 - 0°00	No 22Cp32 - 0°00
Coords: 133W/76N	

Jan 23, 2103 6:30 AM Total Solar



Jun 20, 2103 9:32 AM Partial Penumbral



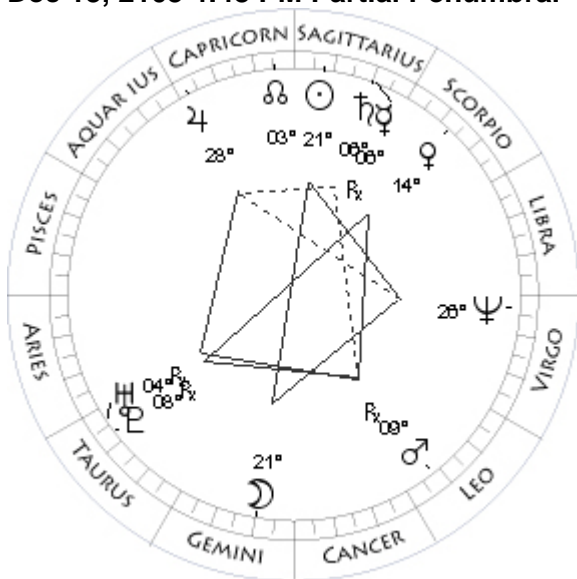
Jul 4, 2103 9:58 AM Annular Solar

Mo 02Le26 - 0°56	Mo 11Cn53 + 0°07
Su 02Aq34 - 0°00	Su 11Cn54 - 0°00
Me 11Cp27 - 0°01	Me 01Le42 + 1°43
Ve 00Pi26 - 1°36	Ve 06Le46 - 1°41R
Ma 14Cp52 - 0°46	Ma 18Ta43 - 0°54
Ju 11Cp42 + 0°04	Ju 23Cp37 - 0°16R
Sa 00Sa26 + 2°03	Sa 26Sc13 + 2°10R
Ur 29Ar53 - 0°31	Ur 07Ta10 - 0°29
Ne 23Vi43 + 1°08R	Ne 21Vi25 + 1°08
Pl 06Ta45 -16°40	Pl 09Ta32 -16°26
No 21Cp46 - 0°00	No 13Cp11 - 0°00
	Coords: 33W/30N

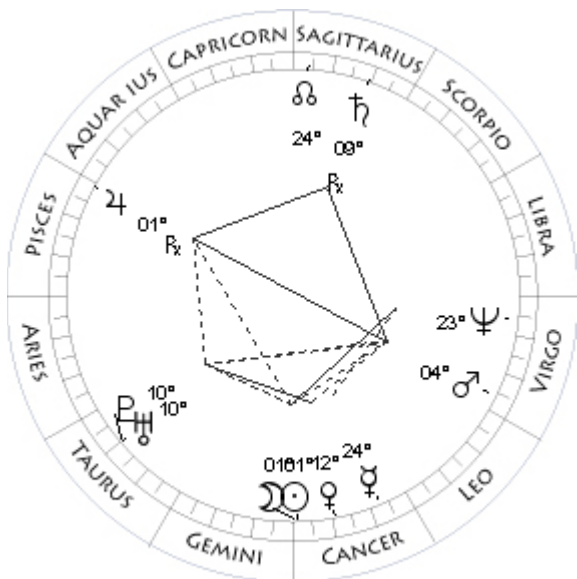
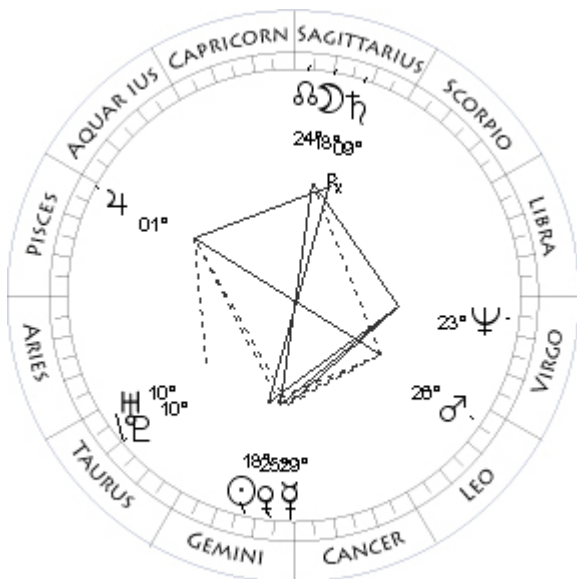
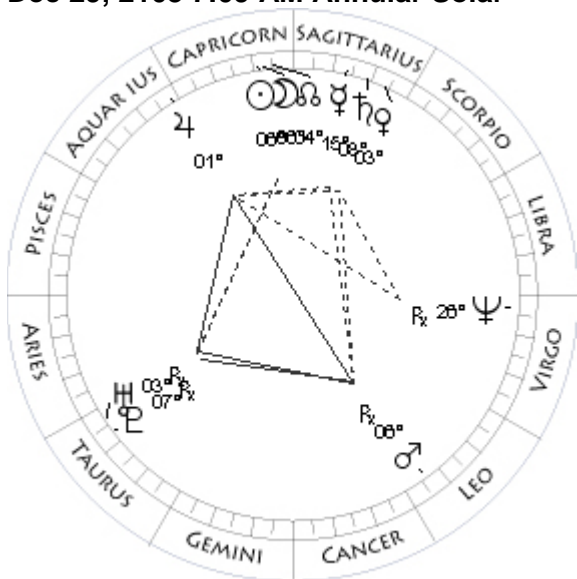
Jul 19, 2103 5:24 PM Partial Penumbral

Mo 28Sa36 - 1°20	Mo 26Cp20 + 1°12
Su 28Ge31 - 0°00	Su 26Cn30 - 0°00
Me 04Cn40 + 1°33	Me 23Le08 - 0°17
Ve 05Le07 + 0°56	Ve 00Le22 - 5°10R
Ma 08Ta31 - 1°01	Ma 29Ta34 - 0°44
Ju 25Cp13 - 0°14R	Ju 21Cp40 - 0°18R
Sa 26Sc55 + 2°13R	Sa 25Sc47 + 2°07R
Ur 06Ta40 - 0°29	Ur 07Ta33 - 0°30
Ne 21Vi14 + 1°08	Ne 21Vi44 + 1°07
Pl 09Ta19 -16°23	Pl 09Ta41 -16°31
No 13Cp55 - 0°00	No 12Cp22 - 0°00
	Coords: 100W/20S

Dec 13, 2103 4:48 PM Partial Penumbral



Dec 29, 2103 7:09 AM Annular Solar



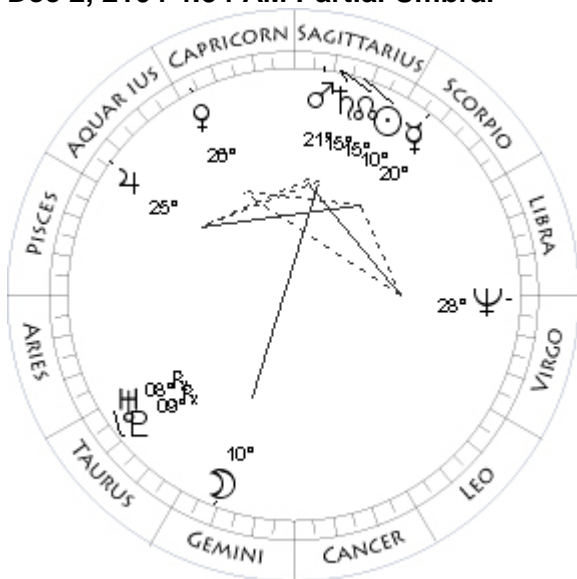
Jun 8, 2104 7:34 PM Partial Umbral

Mo 21Ge04 + 1°11	Mo 18Sa11 - 0°36
Su 21Sa00 - 0°00	Su 18Ge11 - 0°00
Me 06Sa38 + 2°44R	Me 29Ge59 + 1°49
Ve 14Sc47 + 2°00	Ve 25Ge11 + 0°26
Ma 09Le04 + 3°02R	Ma 26Le28 + 1°20
Ju 28Cp24 - 0°27	Ju 01Pi42 - 0°53
Sa 06Sa46 + 1°43	Sa 09Sa59 + 1°54R
Ur 04Ta13 - 0°30R	Ur 10Ta04 - 0°27
Ne 26Vi03 + 1°10	Ne 23Vi20 + 1°11
Pl 08Ta01 -16°49R	Pl 10Ta06 -16°15
No 04Cp35 - 0°00	No 25Sa09 - 0°00
Coords: 106W/24N	Coords: 66W/23S

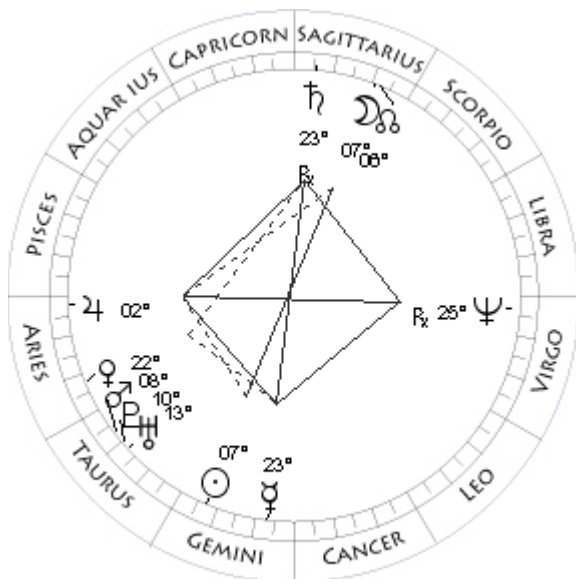
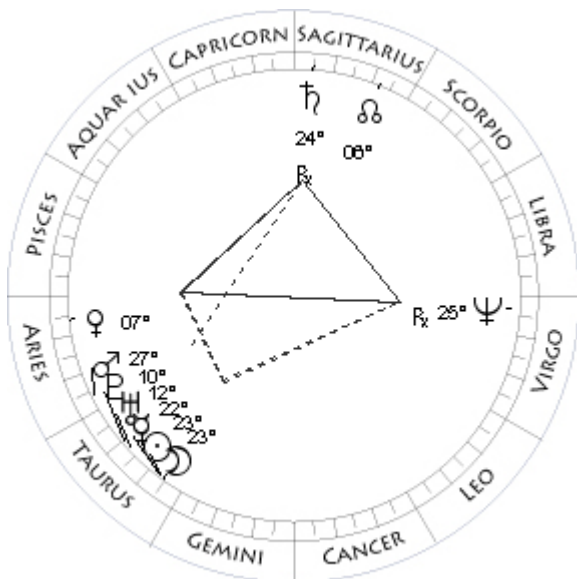
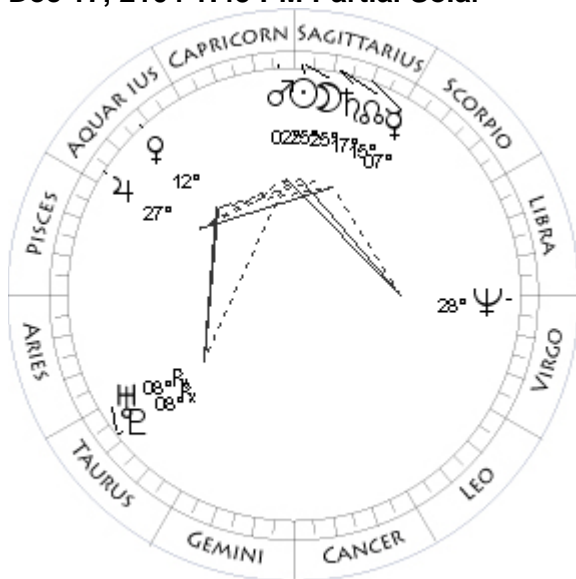
Jun 22, 2104 6:12 PM Total Solar

Mo 06Cp48 + 0°16	Mo 01Cn24 - 0°37
Su 06Cp52 - 0°00	Su 01Cn30 - 0°00
Me 15Sa23 + 1°36	Me 24Cn25 + 1°40
Ve 03Sa55 + 1°39	Ve 12Cn18 + 0°56
Ma 06Le50 + 3°44R	Ma 04Vi11 + 1°08
Ju 01Aq48 - 0°28	Ju 01Pi54 - 0°57R
Sa 08Sa32 + 1°43	Sa 09Sa01 + 1°53R
Ur 03Ta56 - 0°30R	Ur 10Ta42 - 0°27
Ne 26Vi07 + 1°10R	Ne 23Vi26 + 1°11
Pl 07Ta50 -16°44R	Pl 10Ta21 -16°18
No 03Cp45 - 0°00	No 24Sa25 - 0°00

Dec 2, 2104 4:54 AM Partial Umbral



Dec 17, 2104 1:45 PM Partial Solar



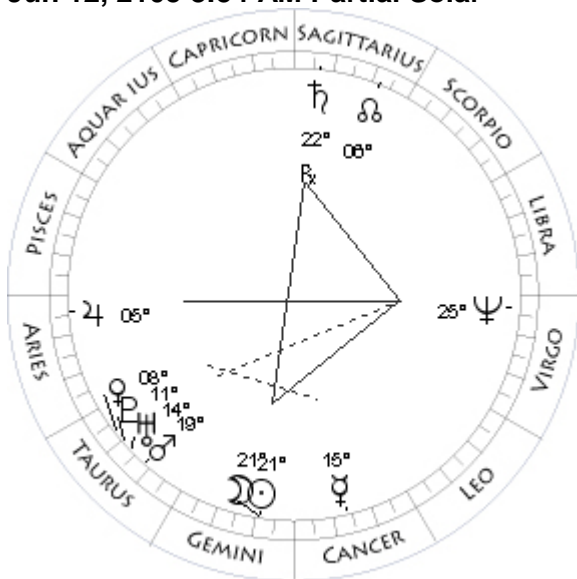
May 14, 2105 1:48 AM Partial Solar

Mo 10Ge06 + 0°30	Mo 23Ta17 + 1°11
Su 10Sa06 - 0°00	Su 23Ta13 - 0°00
Me 20Sc56 + 2°35	Me 22Ta58 + 0°05
Ve 26Cp36 - 2°41	Ve 07Ar13 - 1°16
Ma 21Sa03 - 0°41	Ma 27Ar13 - 0°46
Ju 25Aq17 - 1°02	Ju 00Ar16 - 1°06
Sa 15Sa37 + 1°24	Sa 24Sa03 + 1°30R
Ur 08Ta43 - 0°28R	Ur 12Ta33 - 0°24
Ne 28Vi05 + 1°12	Ne 25Vi39 + 1°15R
Pl 09Ta10 -16°46R	Pl 10Ta31 -16°07
No 15Sa49 - 0°00	No 07Sa11 - 0°00

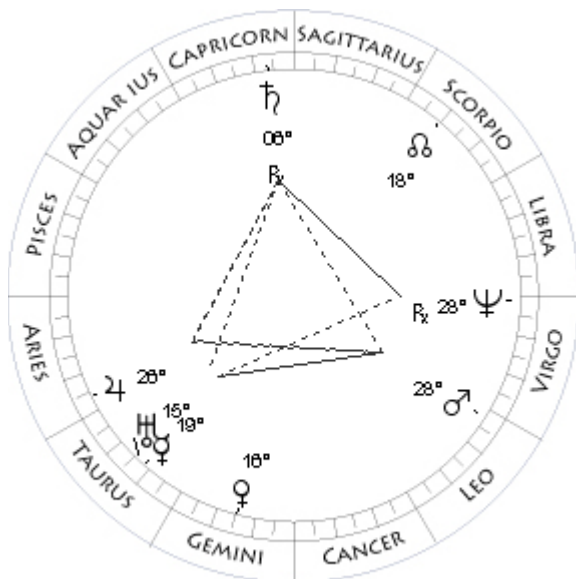
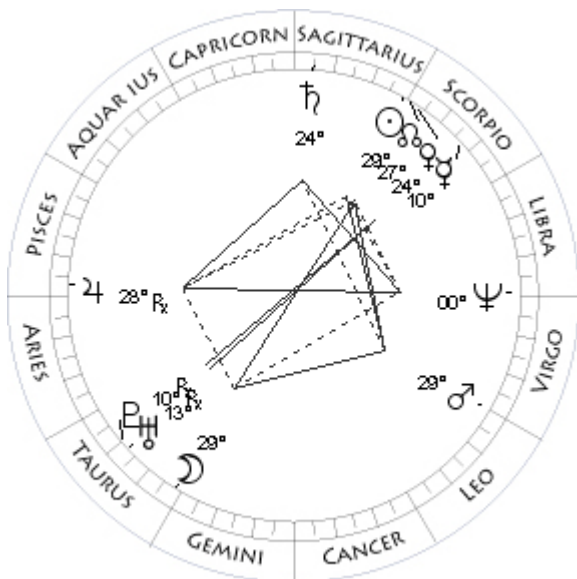
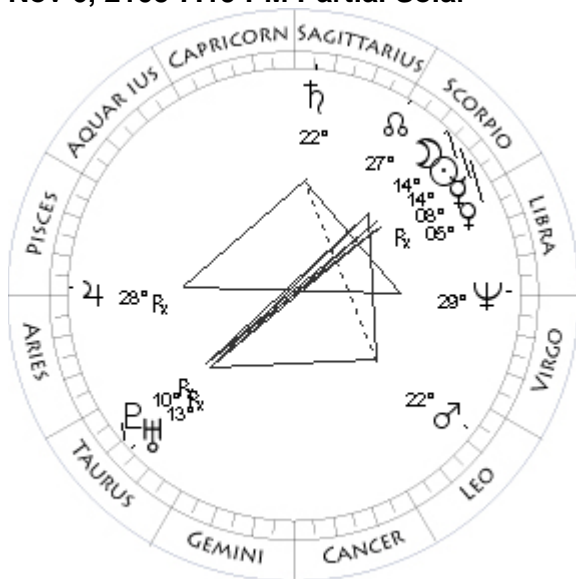
May 28, 2105 10:30 PM Total Umbral

Mo 25Sa34 + 0°55	Mo 07Sa28 + 0°06
Su 25Sa42 - 0°00	Su 07Ge31 - 0°00
Me 07Sa37 + 1°11	Me 23Ge52 + 2°03
Ve 12Aq58 - 2°06	Ve 22Ar36 - 2°04
Ma 02Cp34 - 0°49	Ma 08Ta23 - 0°38
Ju 27Aq38 - 1°00	Ju 02Ar54 - 1°09
Sa 17Sa26 + 1°23	Sa 23Sa06 + 1°30R
Ur 08Ta17 - 0°27R	Ur 13Ta23 - 0°24
Ne 28Vi15 + 1°13	Ne 25Vi32 + 1°15R
Pl 08Ta57 -16°43R	Pl 10Ta51 -16°08
No 15Sa00 - 0°00	No 06Sa24 - 0°00
	Coords: 22W/21S

Jun 12, 2105 8:54 AM Partial Solar



Nov 6, 2105 7:19 PM Partial Solar



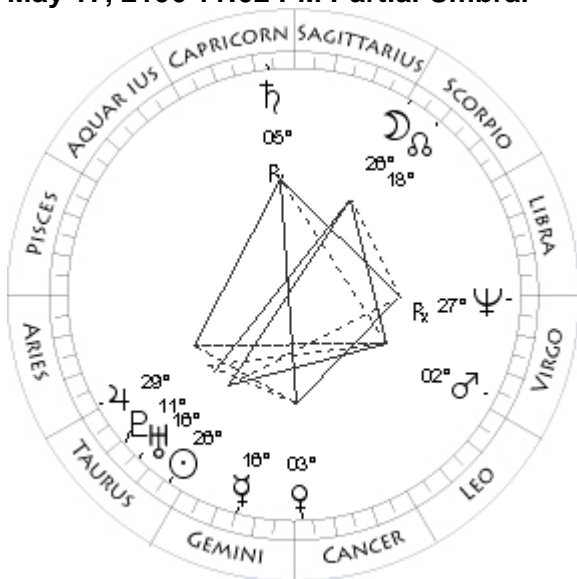
Nov 21, 2105 8:38 PM Total Umbral

Mo 21Ge10 - 1°21	Mo 29Ta19 - 0°11
Su 21Ge21 - 0°00	Su 29Sc23 - 0°00
Me 15Cn25 + 1°31	Me 10Sc05 + 2°18
Ve 08Ta18 - 2°23	Ve 24Sc16 + 0°44
Ma 19Ta03 - 0°29	Ma 29Le53 + 2°03
Ju 05Ar03 - 1°12	Ju 28Pi23 - 1°28R
Sa 22Sa03 + 1°29R	Sa 24Sa29 + 1°04
Ur 14Ta07 - 0°24	Ur 13Ta21 - 0°25R
Ne 25Vi31 + 1°14	Ne 00Li01 + 1°14
Pl 11Ta08 -16°11	Pl 10Ta22 -16°43R
No 05Sa38 - 0°00	No 27Sc02 - 0°00
	Coords: 47W/20N

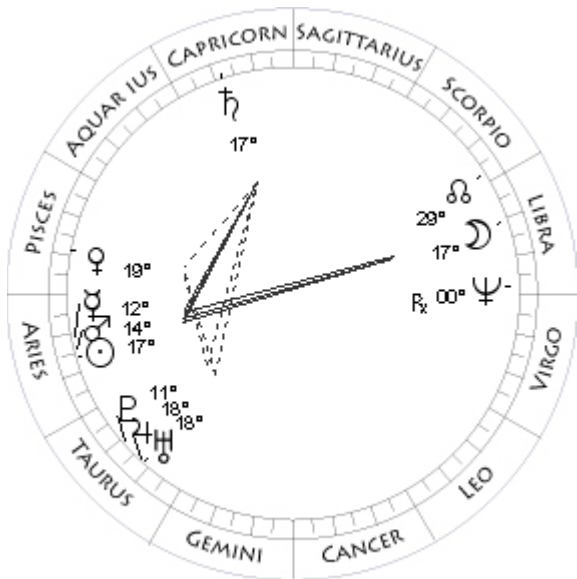
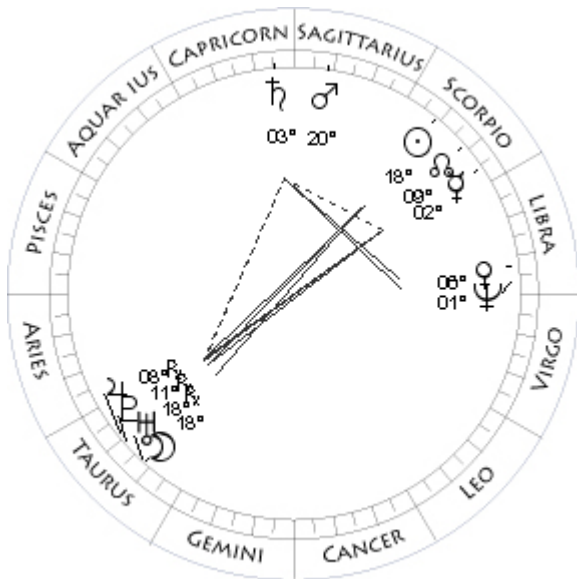
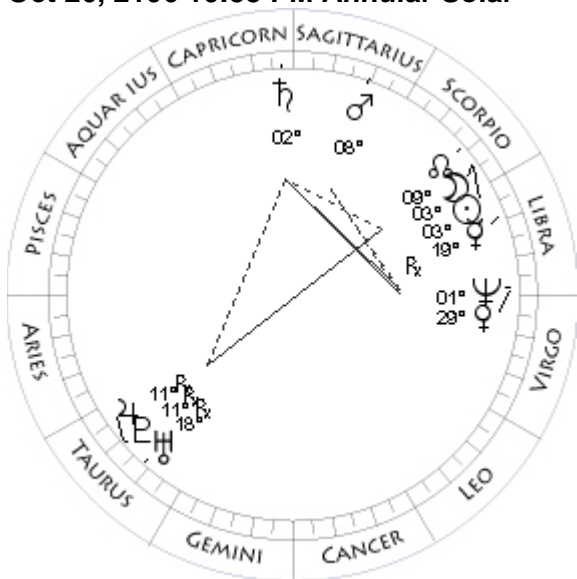
May 3, 2106 6:15 PM Total Solar

Mo 14Sc20 - 1°11	Mo 12Ta59 + 0°28
Su 14Sc15 - 0°00	Su 12Ta59 - 0°00
Me 08Sc31 + 0°25R	Me 19Ta08 + 0°35
Ve 05Sc21 + 1°11	Ve 16Ge30 + 1°26
Ma 22Le53 + 1°43	Ma 28Le15 + 2°04
Ju 28Pi52 - 1°31R	Ju 26Ar38 - 1°04
Sa 22Sa54 + 1°05	Sa 06Cp24 + 1°02R
Ur 13Ta58 - 0°25R	Ur 15Ta49 - 0°21
Ne 29Vi38 + 1°13	Ne 28Vi01 + 1°18R
Pl 10Ta39 -16°44R	Pl 11Ta14 -16°02
No 27Sc50 - 0°00	No 18Sc24 - 0°00
	Coords: 102E/43N

May 17, 2106 11:02 PM Partial Umbral



Oct 26, 2106 10:33 PM Annular Solar



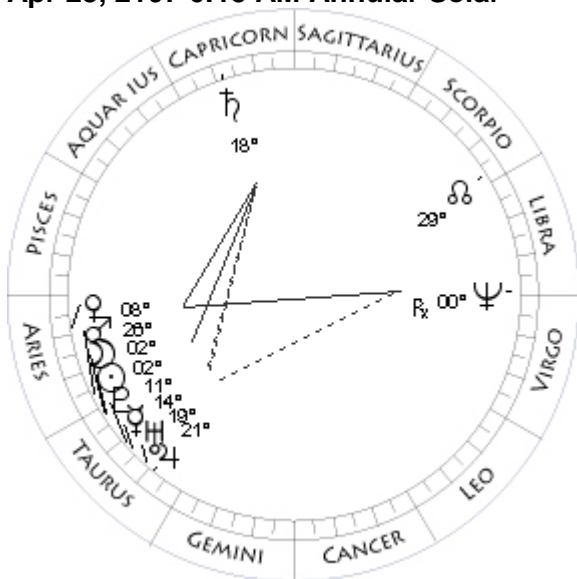
Nov 11, 2106 11:18 AM Partial Umbral

Mo 26Sc36 + 0°47	Mo 18Ta33 - 0°53
Su 26Ta43 - 0°00	Su 18Sc41 - 0°00
Me 16Ge16 + 2°18	Me 02Sc13 + 2°00
Ve 03Cn18 + 1°56	Ve 06Li26 - 0°21
Ma 02Vi56 + 1°38	Ma 20Sa11 - 0°57
Ju 29Ar56 - 1°04	Ju 08Ta55 - 1°25R
Sa 05Cp51 + 1°02R	Sa 03Cp34 + 0°41
Ur 16Ta38 - 0°21	Ur 18Ta05 - 0°22R
Ne 27Vi49 + 1°18R	Ne 01Li53 + 1°16
Pl 11Ta34 -16°02	Pl 11Ta34 -16°39R
No 17Sc39 - 0°00	No 08Sc15 - 0°00
Coords: 14W/19S	Coords: 173E/16N

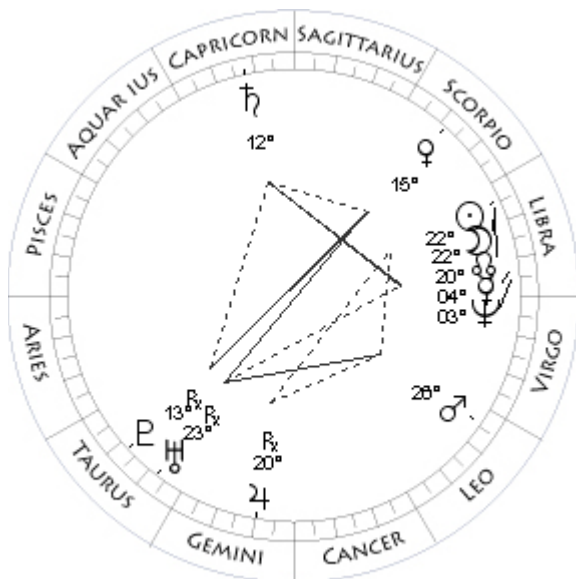
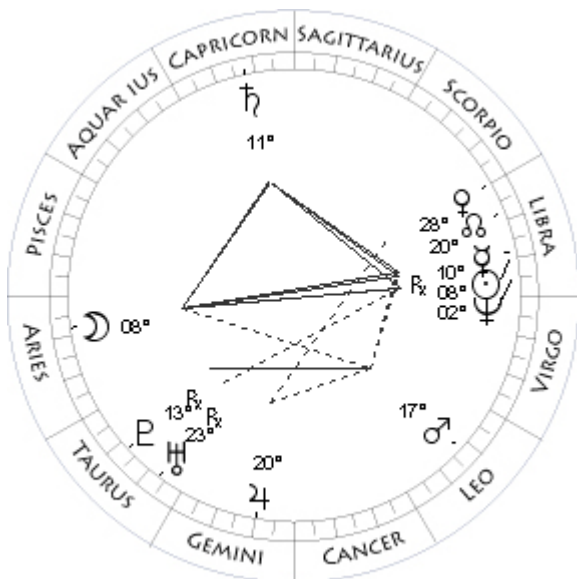
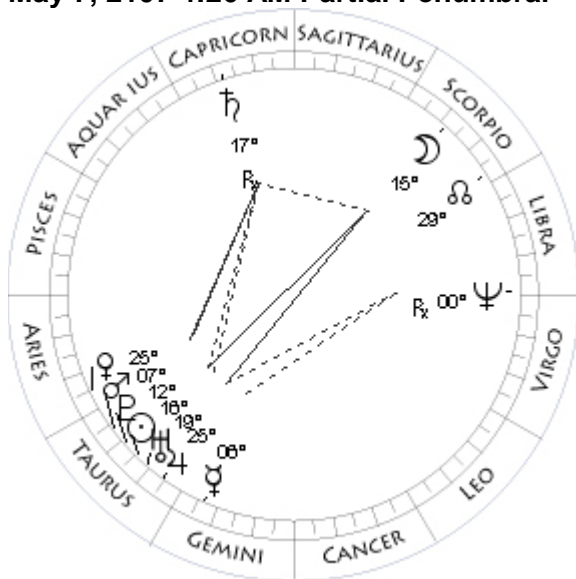
Apr 7, 2107 5:26 PM Partial Penumbral

Mo 03Sc09 - 0°32	Mo 17Li22 - 1°07
Su 03Sc08 - 0°00	Su 17Ar18 - 0°00
Me 19Li00 + 1°02R	Me 12Ar12 - 1°28
Ve 29Vi47 - 3°17	Ve 19Pi51 - 1°21
Ma 08Sa49 - 0°50	Ma 14Ar44 - 0°40
Ju 11Ta00 - 1°26R	Ju 18Ta15 - 0°49
Sa 02Cp13 + 0°43	Sa 17Cp43 + 0°33
Ur 18Ta43 - 0°22R	Ur 18Ta16 - 0°19
Ne 01Li24 + 1°16	Ne 00Li51 + 1°22R
Pl 11Ta52 -16°39R	Pl 11Ta36 -15°58
No 09Sc04 - 0°00	No 00Sc27 - 0°00
Coords: 174E/46S	

Apr 23, 2107 6:15 AM Annular Solar



May 7, 2107 4:26 AM Partial Penumbra



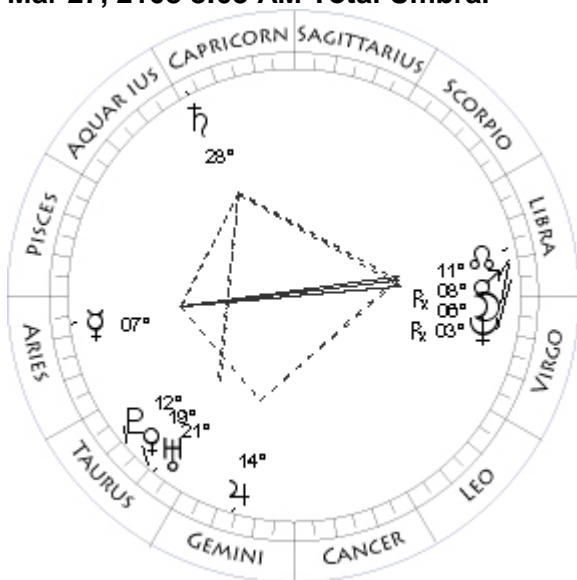
Oct 2, 2107 5:19 AM Partial Penumbra

Mo 02Ta28 - 0°16	Mo 08Ar31 + 1°06
Su 02Ta32 - 0°00	Su 08Li26 - 0°00
Me 14Ta18 + 1°04	Me 10Li10 - 2°38R
Ve 08Ar51 - 1°35	Ve 28Li02 + 0°35
Ma 26Ar35 - 0°31	Ma 17Le32 + 1°14
Ju 21Ta46 - 0°47	Ju 20Ge53 - 0°44
Sa 18Cp01 + 0°32	Sa 11Cp38 + 0°19
Ur 19Ta06 - 0°19	Ur 23Ta50 - 0°19R
Ne 00Li28 + 1°21R	Ne 02Li38 + 1°18
Pl 11Ta57 -15°57	Pl 13Ta18 -16°30R
No 29Li38 - 0°00	No 21Li03 - 0°00

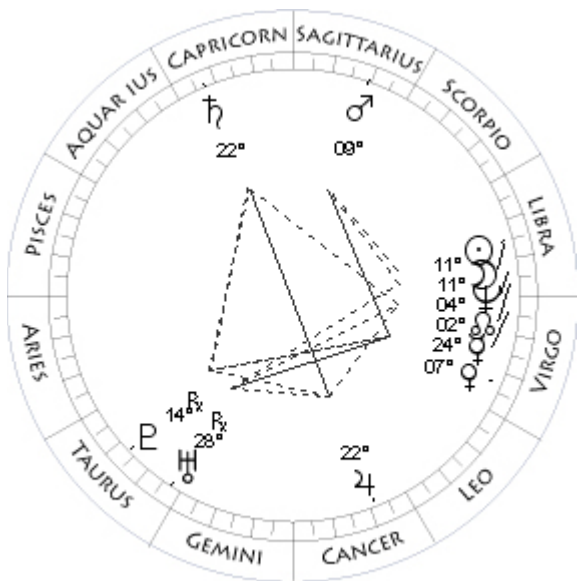
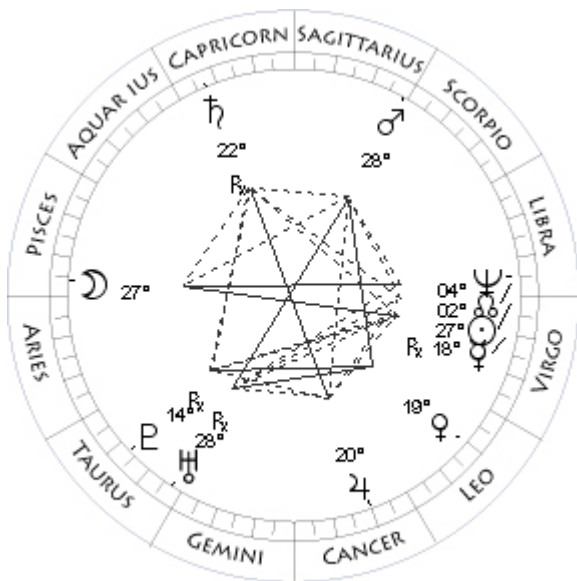
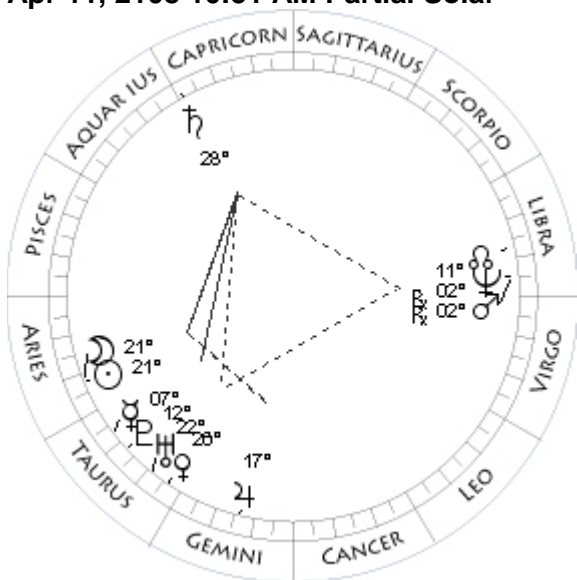
Oct 16, 2107 9:14 AM Total Solar

Mo 15Sc53 + 1°29	Mo 22Li21 + 0°10
Su 16Ta05 - 0°00	Su 22Li25 - 0°00
Me 06Ge55 + 2°35	Me 04Li37 + 1°27
Ve 25Ar52 - 1°32	Ve 15Sc33 - 0°01
Ma 07Ta04 - 0°22	Ma 26Le02 + 1°24
Ju 25Ta01 - 0°46	Ju 20Ge55 - 0°44R
Sa 17Cp58 + 0°32R	Sa 12Cp10 + 0°17
Ur 19Ta54 - 0°18	Ur 23Ta25 - 0°19R
Ne 00Li11 + 1°21R	Ne 03Li09 + 1°18
Pl 12Ta17 -15°56	Pl 13Ta04 -16°32R
No 28Li54 - 0°00	No 20Li18 - 0°00
	Coords: 41W/ 1N

Mar 27, 2108 8:03 AM Total Umbral



Apr 11, 2108 10:51 AM Partial Solar



Sep 20, 2108 5:43 AM Partial Umbral

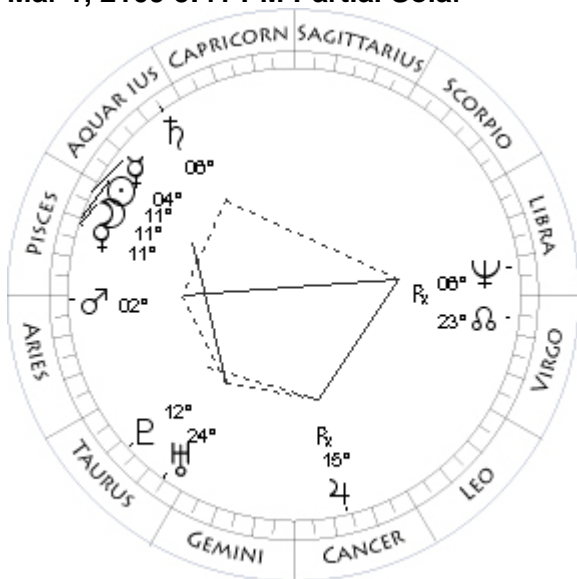
Mo 06Li48 - 0°24	Mo 27Pi28 + 0°26
Su 06Ar48 - 0°00	Su 27Vi27 - 0°00
Me 07Ar53 - 1°07	Me 18Vi30 - 1°54R
Ve 19Ta32 + 4°52	Ve 19Le50 + 0°08
Ma 08Li15 + 3°12R	Ma 28Sc55 - 1°11
Ju 14Ge59 - 0°20	Ju 20Cn50 - 0°01
Sa 28Cp02 + 0°05	Sa 22Cp51 - 0°10R
Ur 21Ta42 - 0°16	Ur 28Ta20 - 0°16R
Ne 03Li22 + 1°24R	Ne 04Li19 + 1°20
Pl 12Ta21 -15°55	Pl 14Ta27 -16°22R
No 11Li41 - 0°00	No 02Li19 - 0°00

Oct 5, 2108 0:57 AM Total Solar

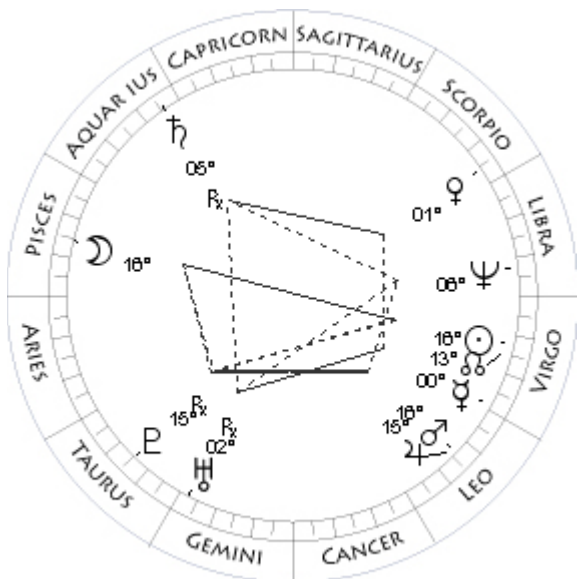
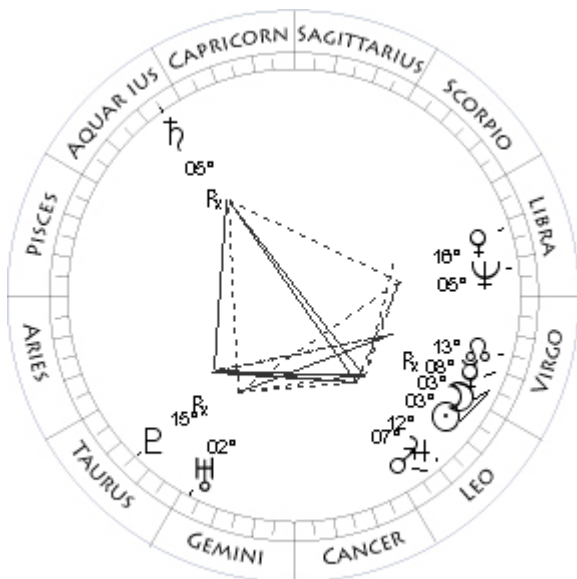
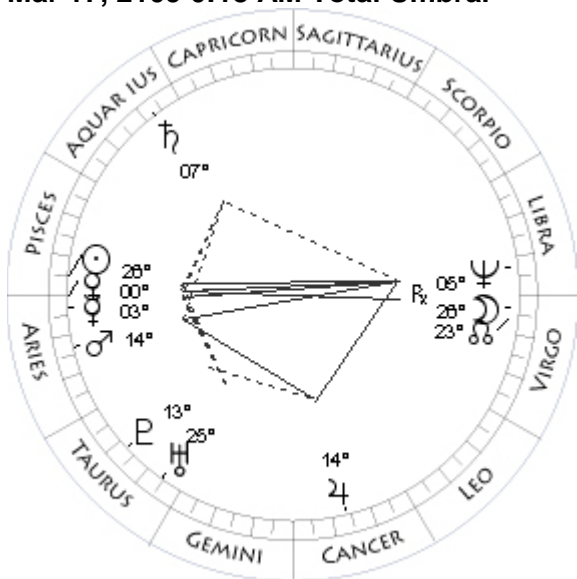
Mo 21Ar35 - 0°57	Mo 11Li50 + 0°53
Su 21Ar43 - 0°00	Su 11Li58 - 0°00
Me 07Ta42 + 1°32	Me 24Vi56 + 1°41
Ve 26Ta54 + 6°00	Ve 07Vi27 + 0°54
Ma 02Li36 + 2°44R	Ma 09Sa10 - 1°17
Ju 17Ge25 - 0°18	Ju 22Cn45 + 0°00
Sa 28Cp51 + 0°04	Sa 22Cp52 - 0°11
Ur 22Ta26 - 0°16	Ur 28Ta02 - 0°16R
Ne 02Li58 + 1°24R	Ne 04Li52 + 1°20
Pl 12Ta40 -15°52	Pl 14Ta15 -16°25R
No 10Li53 - 0°00	No 01Li32 - 0°00

Coords: 172E/52N

Mar 1, 2109 5:41 PM Partial Solar



Mar 17, 2109 0:18 AM Total Umbra



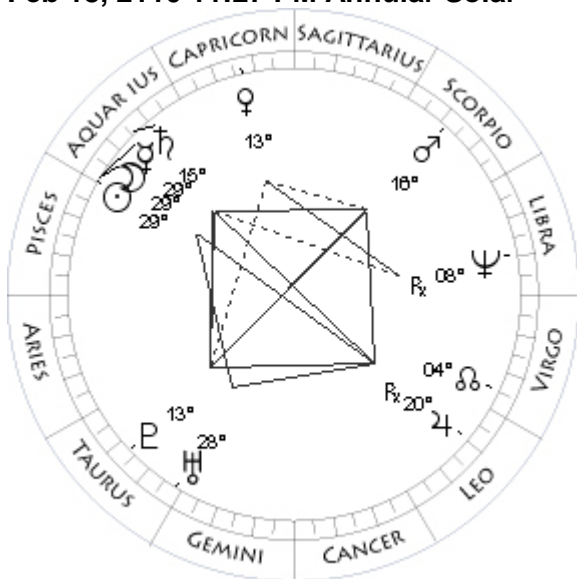
Aug 26, 2109 7:53 AM Partial Solar

Mo 11Pi05 + 1°05	Mo 03Vi06 - 0°59
Su 11Pi01 - 0°00	Su 03Vi03 - 0°00
Me 04Pi28 - 2°06	Me 08Vi39 - 4°34R
Ve 11Pi27 - 1°26	Ve 16Li01 - 0°26
Ma 02Ar24 - 0°38	Ma 07Le36 + 1°04
Ju 15Cn02 + 0°19R	Ju 12Le25 + 0°30
Sa 06Aq16 - 0°20	Sa 05Aq47 - 0°39R
Ur 24Ta49 - 0°14	Ur 02Ge35 - 0°12
Ne 06Li18 + 1°26R	Ne 05Li32 + 1°23
Pl 12Ta54 -15°56	Pl 15Ta39 -16°08R
No 23Vi42 - 0°00	No 14Vi18 - 0°00

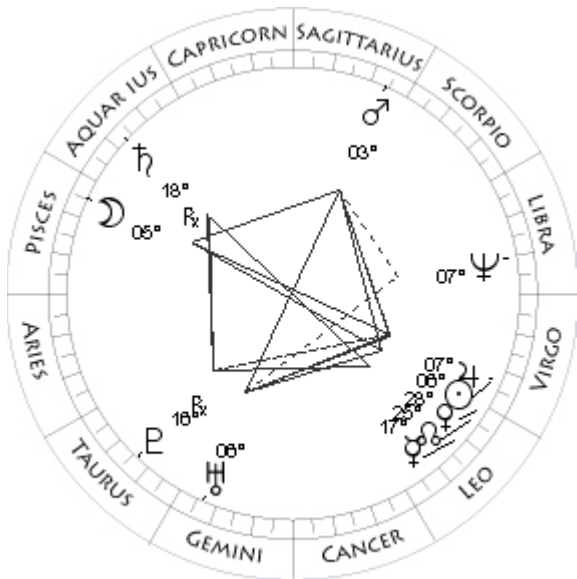
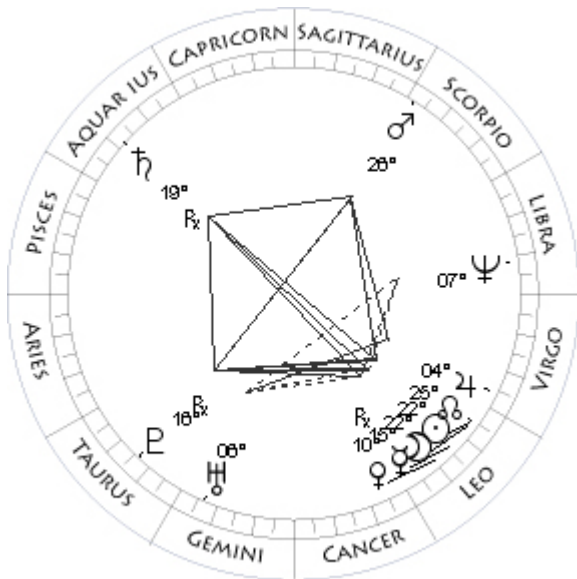
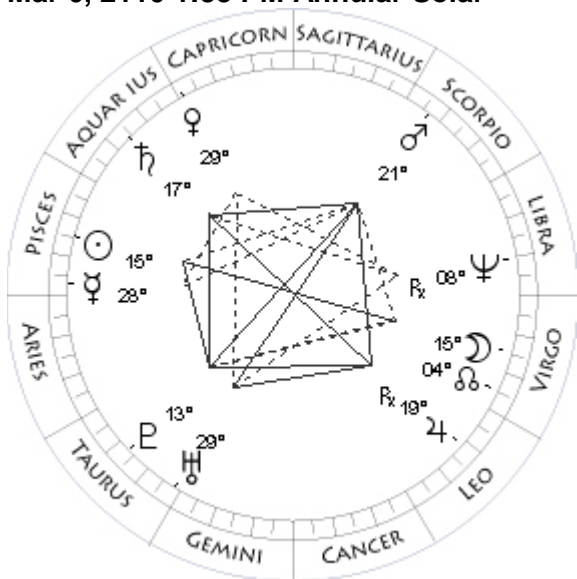
Sep 9, 2109 7:40 AM Total Umbra

Mo 26Vi13 + 0°18	Mo 16Pi32 - 0°14
Su 26Pi18 - 0°00	Su 16Vi35 - 0°00
Me 03Ar31 - 0°44	Me 00Vi43 - 1°05
Ve 00Ar31 - 1°22	Ve 01Sc32 - 1°31
Ma 14Ar08 - 0°28	Ma 16Le31 + 1°09
Ju 14Cn57 + 0°20	Ju 15Le21 + 0°32
Sa 07Aq46 - 0°22	Sa 05Aq02 - 0°40R
Ur 25Ta16 - 0°13	Ur 02Ge39 - 0°12R
Ne 05Li54 + 1°27R	Ne 06Li00 + 1°22
Pl 13Ta07 -15°52	Pl 15Ta33 -16°12R
No 22Vi54 - 0°00	No 13Vi34 - 0°00

Feb 18, 2110 11:27 PM Annular Solar



Mar 6, 2110 1:33 PM Annular Solar



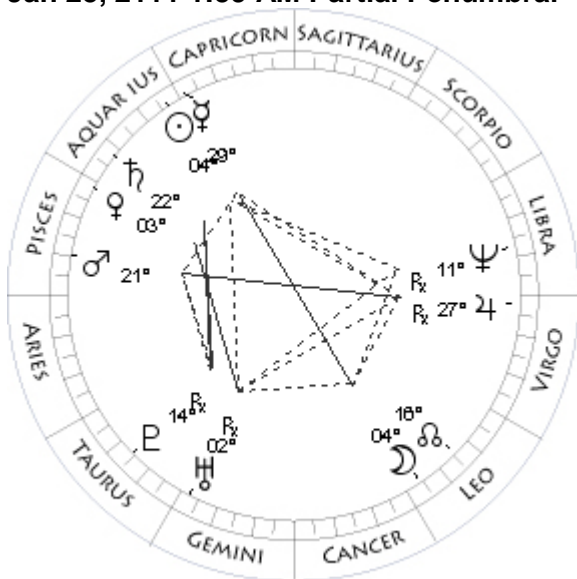
Aug 15, 2110 4:47 PM Annular Solar

Mo 29Aq56 + 0°26	Mo 22Le35 - 0°16
Su 29Aq56 - 0°00	Su 22Le35 - 0°00
Me 29Aq07 - 2°00	Me 15Le40 - 4°10R
Ve 13Cp15 + 3°29	Ve 10Le57 + 0°52
Ma 16Sc14 + 1°47	Ma 26Sc12 - 2°09
Ju 20Le57 + 1°03R	Ju 04Vi18 + 0°54
Sa 15Aq20 - 0°45	Sa 19Aq03 - 1°10R
Ur 28Ta43 - 0°11	Ur 06Ge34 - 0°09
Ne 08Li47 + 1°28R	Ne 07Li19 + 1°25
Pl 13Ta45 -15°54	Pl 16Ta39 -15°58R
No 04Vi57 - 0°00	No 25Le32 - 0°00
Coords: 175E/14N	

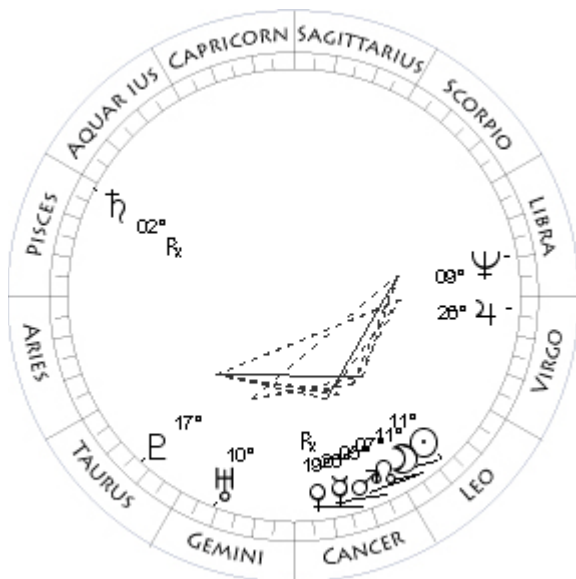
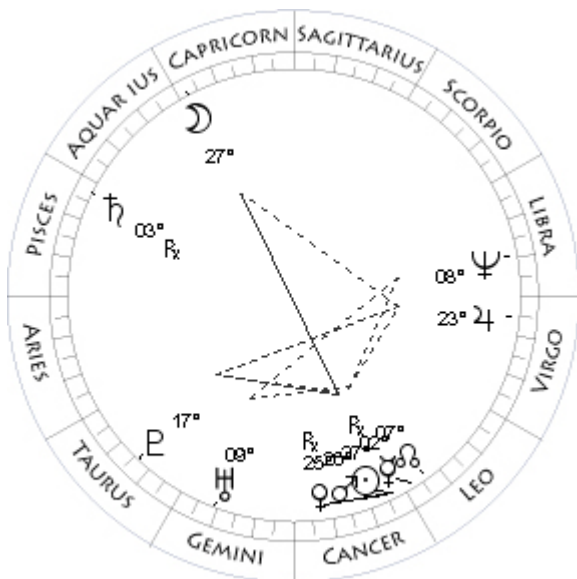
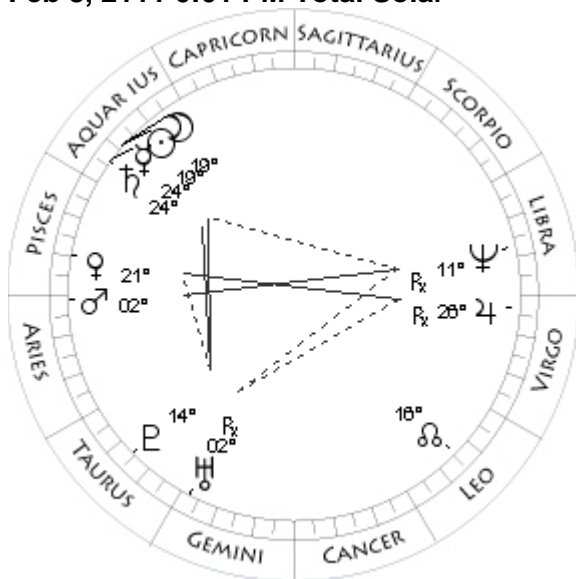
Aug 29, 2110 4:35 PM Partial Umbral

Mo 15Vi29 + 1°00	Mo 05Pi56 - 0°58
Su 15Pi37 - 0°00	Su 06Vi04 - 0°00
Me 28Pi14 - 0°17	Me 17Le47 - 0°19
Ve 29Cp16 + 2°08	Ve 28Le13 + 1°14
Ma 21Sc08 + 1°44	Ma 03Sa59 - 2°10
Ju 19Le05 + 1°03R	Ju 07Vi20 + 0°54
Sa 17Aq07 - 0°46	Sa 18Aq02 - 1°11R
Ur 29Ta01 - 0°10	Ur 06Ge48 - 0°09
Ne 08Li26 + 1°29R	Ne 07Li45 + 1°25
Pl 13Ta56 -15°49	Pl 16Ta37 -16°03R
No 04Vi07 - 0°00	No 24Le48 - 0°00
Coords: 160W/ 7N	

Jan 25, 2111 1:59 AM Partial Penumbral



Feb 8, 2111 0:01 PM Total Solar



Jul 21, 2111 0:49 AM Partial Umbral

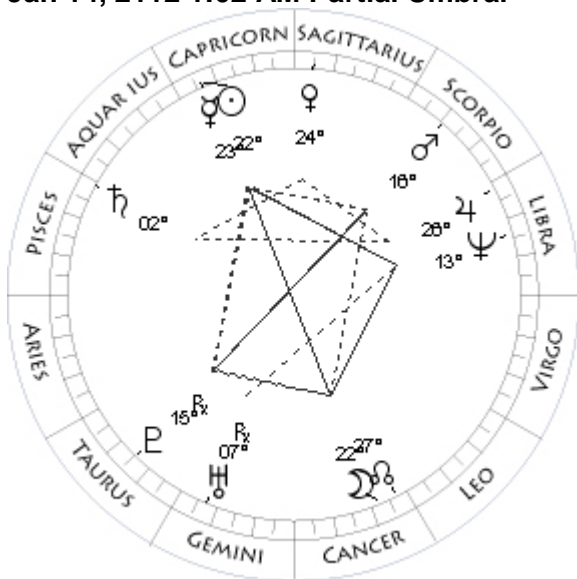
Mo 04Le31 - 1°04	Mo 27Cp50 + 0°51
Su 04Aq27 - 0°00	Su 27Cn48 - 0°00
Me 29Cp26 - 1°54	Me 02Le44 - 4°48R
Ve 03Pi18 - 1°34	Ve 25Cn56 - 5°35R
Ma 21Pi16 - 0°40	Ma 26Cn09 + 1°02
Ju 27Vi19 + 1°22R	Ju 23Vi35 + 1°10
Sa 22Aq41 - 1°08	Sa 03Pi32 - 1°35R
Ur 02Ge58 - 0°08R	Ur 09Ge48 - 0°06
Ne 11Li21 + 1°29R	Ne 08Li52 + 1°28
Pl 14Ta38 -15°57R	Pl 17Ta29 -15°44
No 16Le56 - 0°00	No 07Le34 - 0°00

Aug 4, 2111 6:56 PM Annular Solar

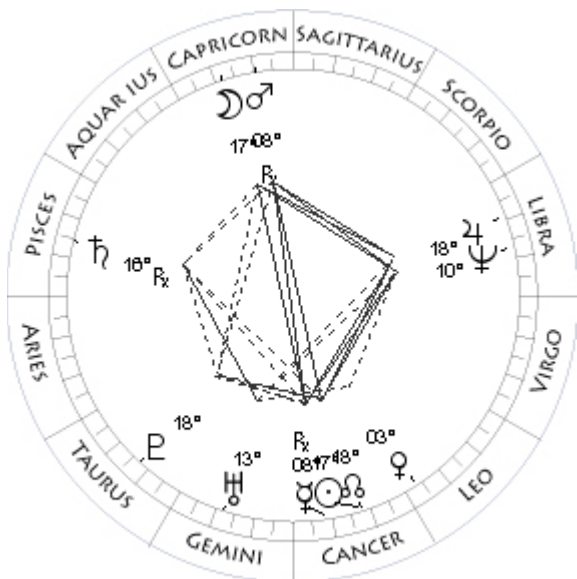
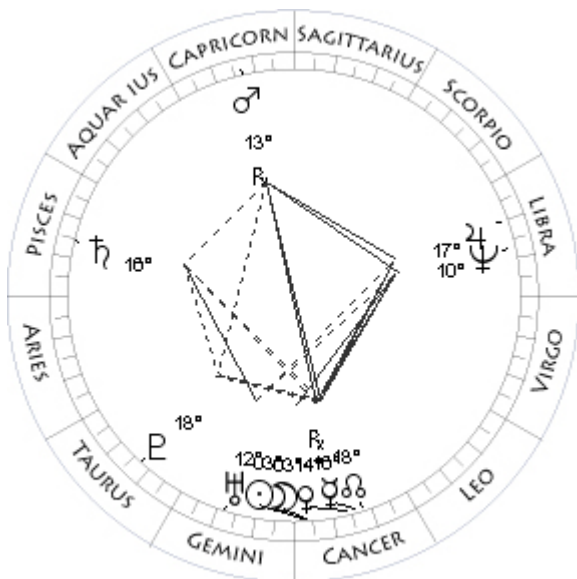
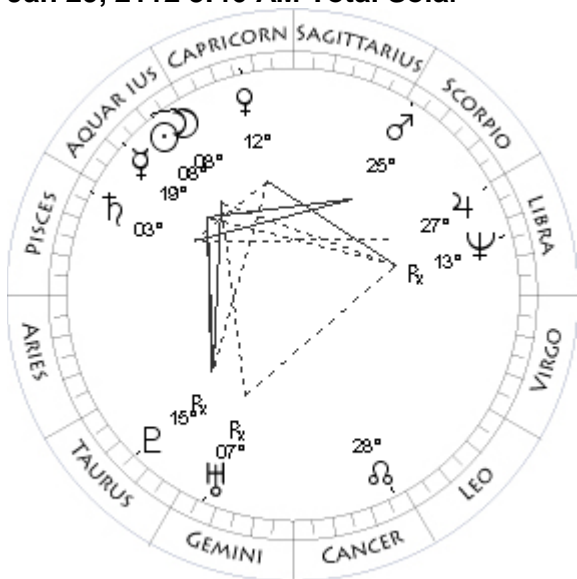
Mo 19Aq01 - 0°16	Mo 11Le49 + 0°26
Su 19Aq06 - 0°00	Su 11Le54 - 0°00
Me 24Aq12 - 1°54	Me 26Cn12 - 3°23
Ve 21Pi04 - 1°12	Ve 19Cn01 - 6°50R
Ma 02Ar14 - 0°28	Ma 05Le43 + 1°05
Ju 26Vi26 + 1°25R	Ju 26Vi07 + 1°09
Sa 24Aq24 - 1°08	Sa 02Pi38 - 1°37R
Ur 02Ge52 - 0°07R	Ur 10Ge22 - 0°05
Ne 11Li11 + 1°30R	Ne 09Li09 + 1°28
Pl 14Ta40 -15°52	Pl 17Ta35 -15°48
No 16Le10 - 0°00	No 06Le47 - 0°00

Coords: 7W/30S

Jan 14, 2112 1:02 AM Partial Umbral



Jan 29, 2112 3:46 AM Total Solar



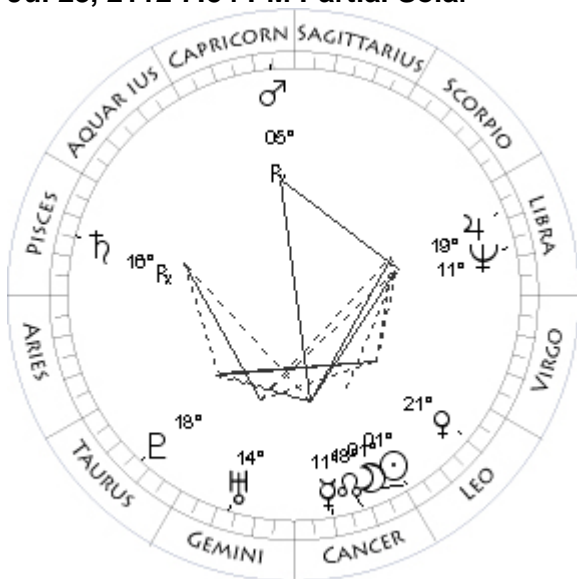
Jun 24, 2112 7:06 AM Partial Solar

Mo 22Cn59 - 0°28	Mo 03Cn07 - 1°26
Su 22Cp58 - 0°00	Su 03Cn01 - 0°00
Me 23Cp29 - 1°59	Me 16Cn34 - 2°27R
Ve 24Sa01 + 1°00	Ve 14Cn51 + 1°01
Ma 16Sc58 + 1°02	Ma 13Cp10 - 4°24R
Ju 26Li15 + 1°18	Ju 17Li45 + 1°20
Sa 02Pi03 - 1°31	Sa 16Pi41 - 1°52
Ur 07Ge32 - 0°04R	Ur 12Ge32 - 0°02
Ne 13Li34 + 1°31	Ne 10Li48 + 1°32
Pl 15Ta40 -15°54R	Pl 18Ta06 -15°30
No 28Cn12 - 0°00	No 19Cn36 - 0°00

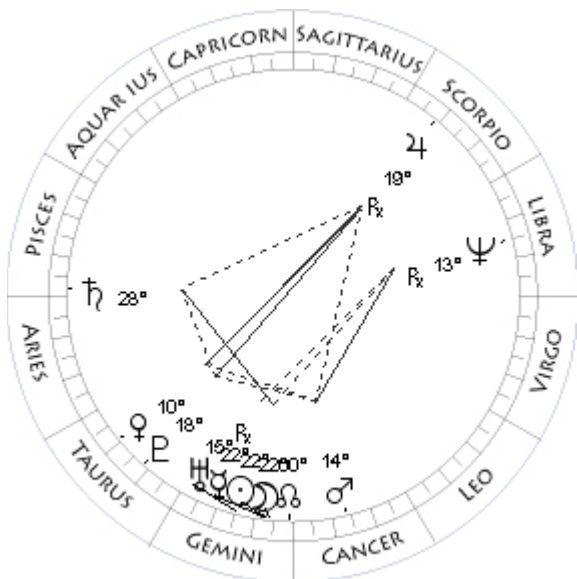
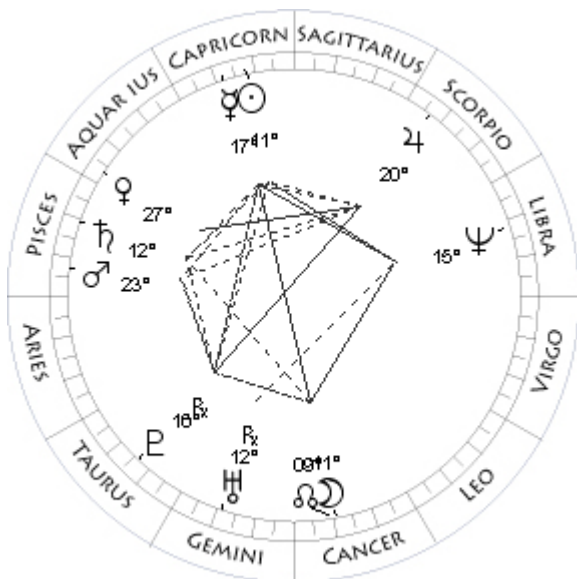
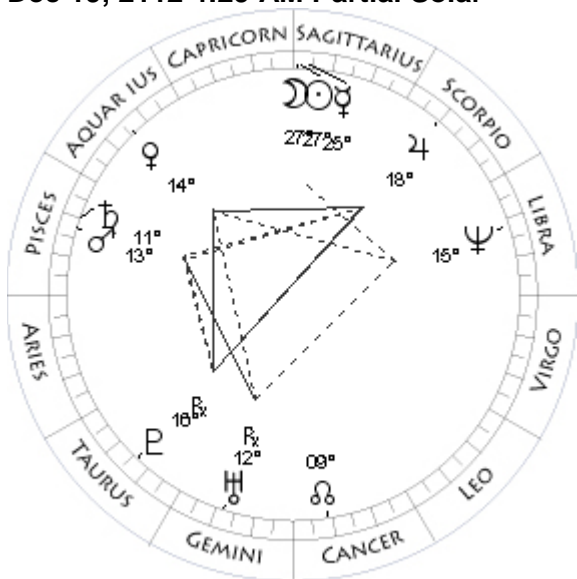
Jul 9, 2112 5:16 PM Total Umbral

Mo 08Aq13 - 0°56	Mo 17Cp42 + 0°06
Su 08Aq21 - 0°00	Su 17Cn44 - 0°00
Me 19Aq08 - 1°45	Me 08Cn48 - 4°49R
Ve 12Cp47 + 0°19	Ve 03Le45 + 1°23
Ma 25Sc53 + 0°55	Ma 08Cp38 - 5°11R
Ju 27Li13 + 1°22	Ju 18Li33 + 1°16
Sa 03Pi42 - 1°31	Sa 16Pi33 - 1°55R
Ur 07Ge13 - 0°04R	Ur 13Ge22 - 0°02
Ne 13Li31 + 1°32R	Ne 10Li53 + 1°31
Pl 15Ta37 -15°49R	Pl 18Ta20 -15°34
No 27Cn24 - 0°00	No 18Cn47 - 0°00
Coords: 166E/80S	Coords: 102W/22S

Jul 23, 2112 7:54 PM Partial Solar



Dec 19, 2112 4:29 AM Partial Solar



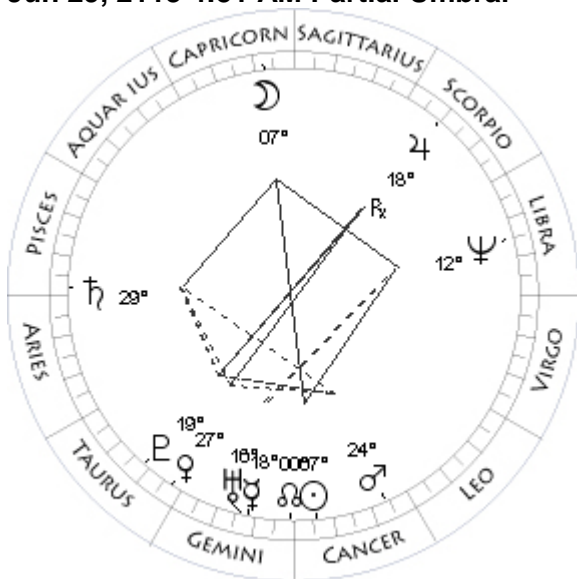
Jan 2, 2113 4:19 AM Total Umbral

Mo 01Le02 + 1°07	Mo 11Cn36 + 0°11
Su 01Le11 - 0°00	Su 11Cp39 - 0°00
Me 11Cn20 - 2°35	Me 17Cp45 - 2°05
Ve 21Le01 + 1°32	Ve 27Aq42 - 0°42
Ma 05Cp13 - 5°25R	Ma 23Pi42 - 0°32
Ju 19Li50 + 1°12	Ju 20Sc49 + 1°00
Sa 16Pi06 - 1°59R	Sa 12Pi03 - 1°53
Ur 14Ge02 - 0°02	Ur 12Ge16 - 0°01R
Ne 11Li04 + 1°30	Ne 15Li42 + 1°32
Pl 18Ta29 -15°37	Pl 16Ta44 -15°51R
No 18Cn02 - 0°00	No 09Cn26 - 0°00

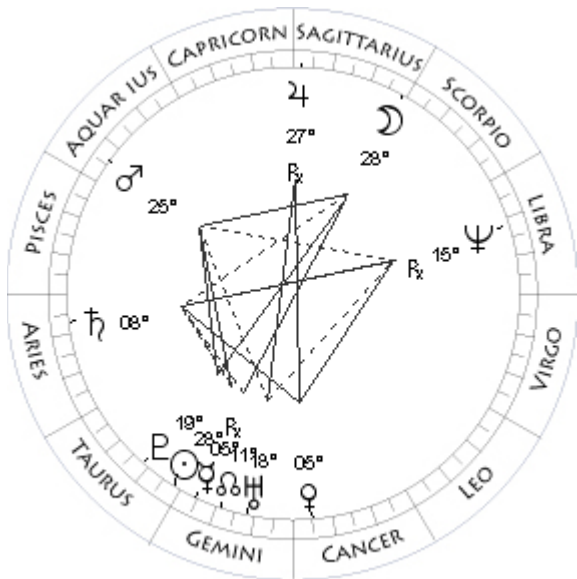
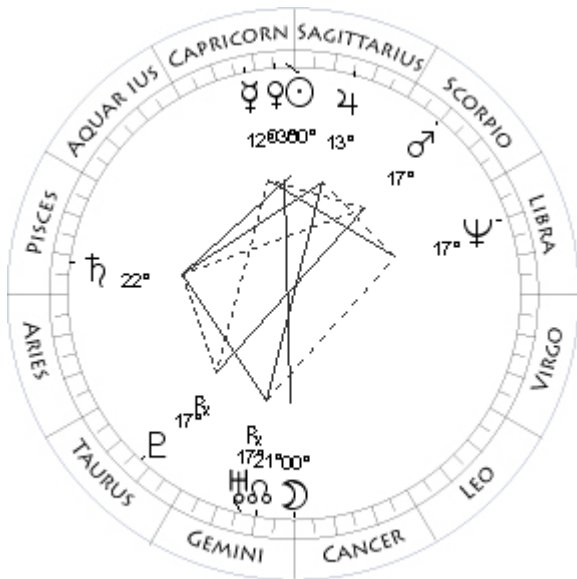
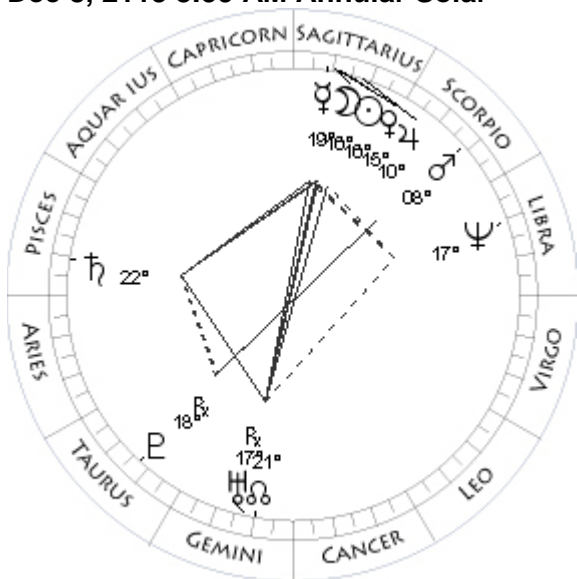
Jun 13, 2113 5:21 PM Total Solar

Mo 27Sa28 + 1°07	Mo 22Ge43 - 0°42
Su 27Sa24 - 0°00	Su 22Ge42 - 0°00
Me 25Sa24 - 1°11	Me 22Ge34 - 3°15R
Ve 14Aq38 - 1°59	Ve 10Ta12 - 2°22
Ma 13Pi46 - 0°51	Ma 14Cn42 + 1°06
Ju 18Sc14 + 1°00	Ju 19Sc16 + 1°08R
Sa 11Pi04 - 1°55	Sa 28Pi31 - 2°05
Ur 12Ge48 - 0°01R	Ur 15Ge57 + 0°01
Ne 15Li31 + 1°31	Ne 13Li00 + 1°34R
Pl 16Ta54 -15°55R	Pl 18Ta51 -15°21
No 10Cn11 - 0°00	No 00Cn50 - 0°00

Jun 29, 2113 4:51 AM Partial Umbral



Dec 8, 2113 8:59 AM Annular Solar



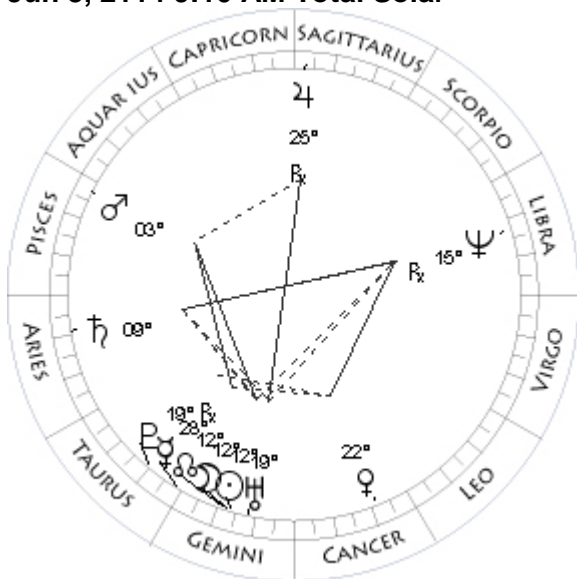
Dec 22, 2113 2:54 PM Partial Umbral

Mo 07Cp22 - 0°39	Mo 00Cn31 + 0°52
Su 07Cn28 - 0°00	Su 00Cp39 - 0°00
Me 18Ge56 - 4°16	Me 12Cp12 - 2°12
Ve 27Ta43 - 2°13	Ve 03Cp38 - 0°30
Ma 24Cn41 + 1°08	Ma 17Sc56 + 0°37
Ju 18Sc12 + 1°04R	Ju 13Sa19 + 0°35
Sa 29Pi00 - 2°10	Sa 22Pi58 - 2°13
Ur 16Ge51 + 0°01	Ur 17Ge09 + 0°03R
Ne 12Li59 + 1°33	Ne 17Li43 + 1°33
Pl 19Ta08 -15°24	Pl 17Ta51 -15°47R
No 00Cn01 - 0°00	No 20Ge40 - 0°00
	Coords: 136W/24N

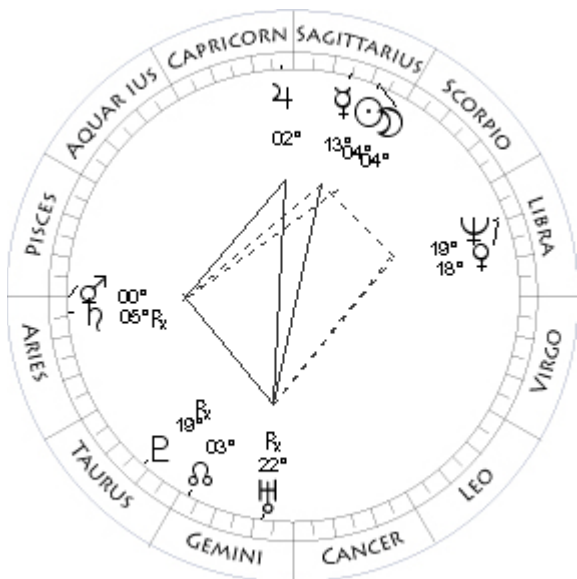
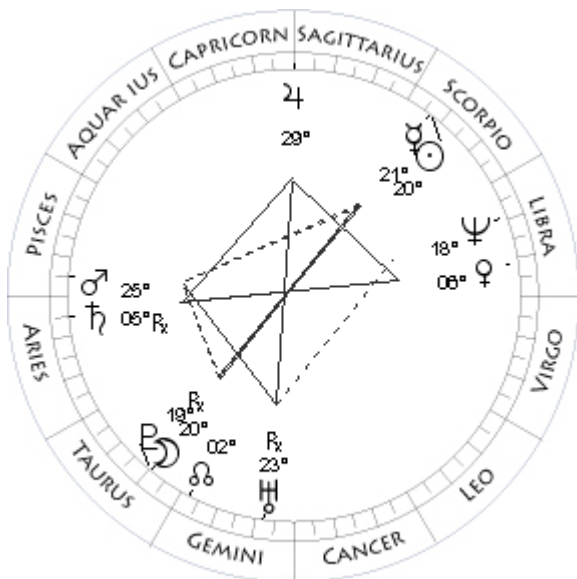
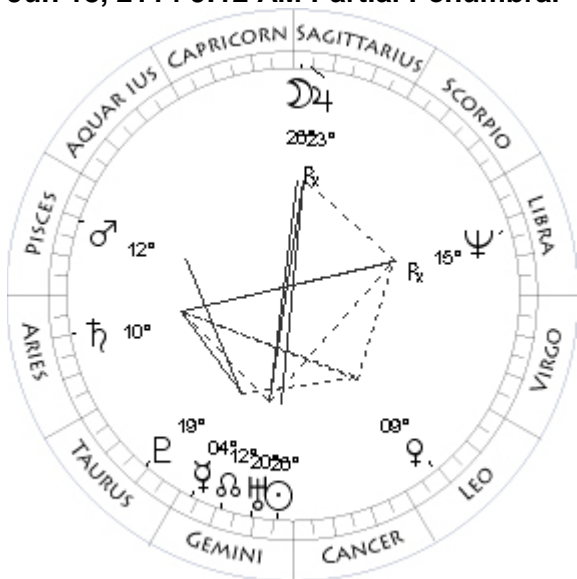
May 19, 2114 6:03 PM Partial Penumbral

Mo 16Sa10 + 0°28	Mo 28Sc35 + 1°13
Su 16Sa09 - 0°00	Su 28Ta30 - 0°00
Me 19Sa48 - 1°23	Me 05Ge26 - 0°01R
Ve 15Sa42 + 0°04	Ve 05Cn55 + 2°01
Ma 08Sc37 + 0°43	Ma 25Aq01 - 2°07
Ju 10Sa09 + 0°36	Ju 27Sa10 + 0°32R
Sa 22Pi29 - 2°16	Sa 08Ar29 - 2°11
Ur 17Ge45 + 0°03R	Ur 18Ge32 + 0°04
Ne 17Li27 + 1°32	Ne 15Li31 + 1°37R
Pl 18Ta04 -15°50R	Pl 19Ta16 -15°11
No 21Ge25 - 0°00	No 12Ge50 - 0°00
Coords: 49W/ 7N	Coords: 89W/19S

Jun 3, 2114 9:10 AM Total Solar



Jun 18, 2114 9:12 AM Partial Penumbra



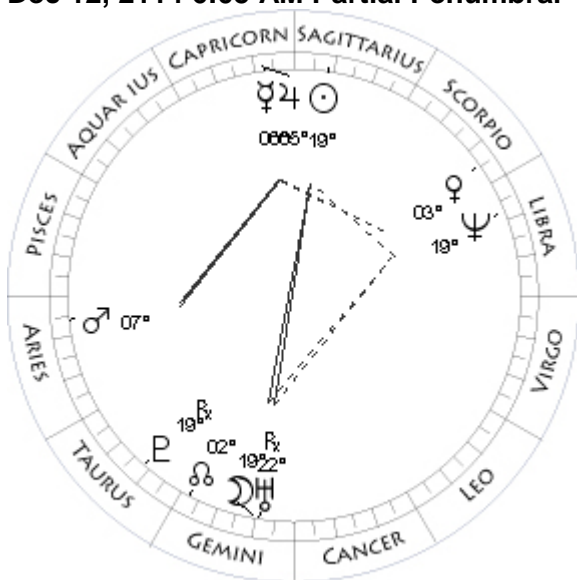
Nov 12, 2114 7:55 PM Partial Penumbra

Mo 12Ge31 + 0°03	Mo 20Ta10 - 1°11
Su 12Ge34 - 0°00	Su 20Sc06 - 0°00
Me 28Ta35 - 3°36R	Me 21Sc02 - 0°08
Ve 22Cn49 + 2°15	Ve 06Li36 - 0°00
Ma 03Pi54 - 2°38	Ma 25Pi46 - 1°32
Ju 25Sa33 + 0°31R	Ju 29Sa22 + 0°07
Sa 09Ar45 - 2°14	Sa 05Ar36 - 2°36R
Ur 19Ge23 + 0°04	Ur 23Ge17 + 0°06R
Ne 15Li18 + 1°37R	Ne 18Li51 + 1°33
Pl 19Ta35 -15°12	Pl 19Ta31 -15°45R
No 12Ge03 - 0°00	No 03Ge27 - 0°00
Coords: 41W/25N	Coords: 58W/17N

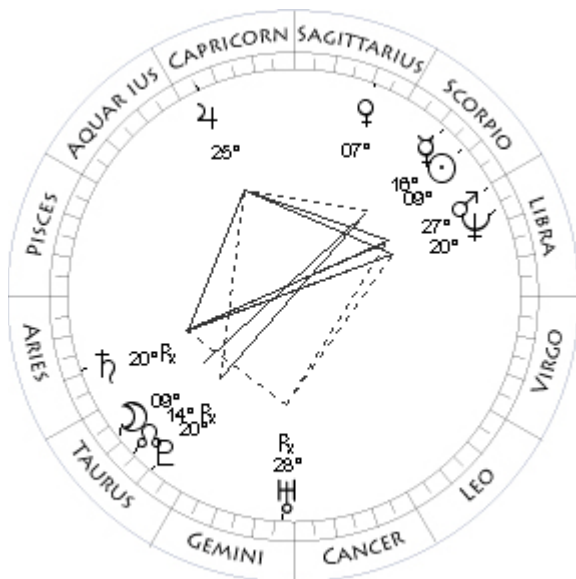
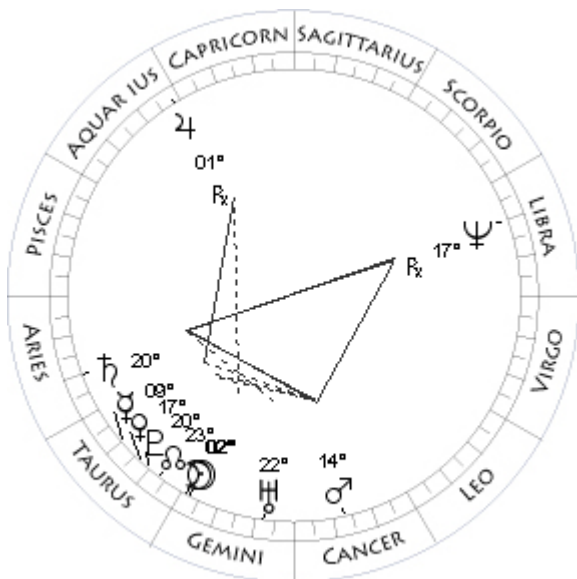
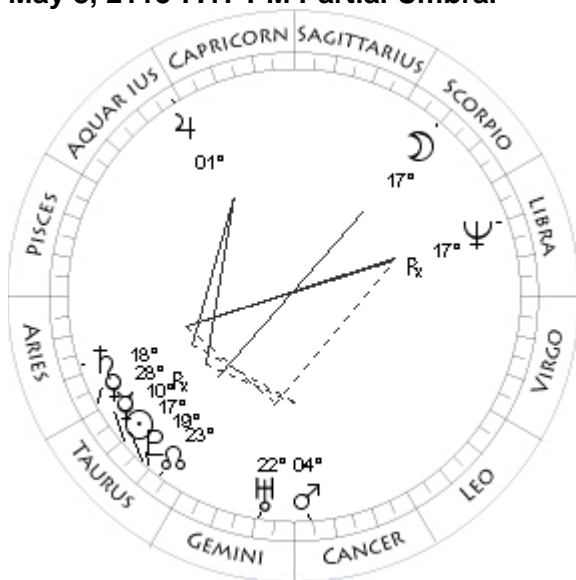
Nov 27, 2114 8:20 AM Annular Solar

Mo 26Sa45 - 1°21	Mo 04Sa41 - 0°10
Su 26Ge55 - 0°00	Su 04Sa44 - 0°00
Me 04Ge04 - 3°36	Me 13Sa46 - 1°36
Ve 09Le41 + 2°06	Ve 18Li29 + 1°39
Ma 12Pi27 - 3°12	Ma 00Ar37 - 0°47
Ju 23Sa40 + 0°29R	Ju 02Cp24 + 0°05
Sa 10Ar47 - 2°17	Sa 05Ar08 - 2°33R
Ur 20Ge16 + 0°04	Ur 22Ge44 + 0°06R
Ne 15Li10 + 1°36R	Ne 19Li17 + 1°33
Pl 19Ta54 -15°14	Pl 19Ta15 -15°44R
No 11Ge15 - 0°00	No 02Ge41 - 0°00
Coords: 138E/25S	Coords: 48W/31S

Dec 12, 2114 6:05 AM Partial Penumbral



May 8, 2115 7:17 PM Partial Umbral



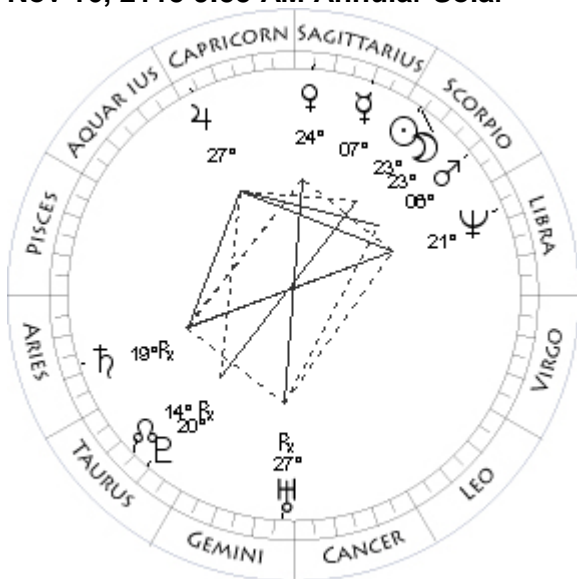
May 24, 2115 2:09 AM Total Solar

Mo 19Ge39 + 1°31	Mo 02Ge19 + 0°47
Su 19Sa51 - 0°00	Su 02Ge27 - 0°00
Me 06Cp22 - 2°19	Me 09Ta41 - 3°29
Ve 03Sc06 + 2°34	Ve 17Ta13 - 1°11
Ma 07Ar04 - 0°12	Ma 14Cn11 + 1°19
Ju 05Cp42 + 0°04	Ju 01Aq54 - 0°16R
Sa 05Ar02 - 2°29	Sa 20Ar33 - 2°17
Ur 22Ge07 + 0°06R	Ur 22Ge52 + 0°07
Ne 19Li40 + 1°34	Ne 17Li40 + 1°39R
Pl 19Ta00 -15°42R	Pl 20Ta19 -15°04
No 01Ge53 - 0°00	No 23Ta16 - 0°00
Coords: 110W/67N	

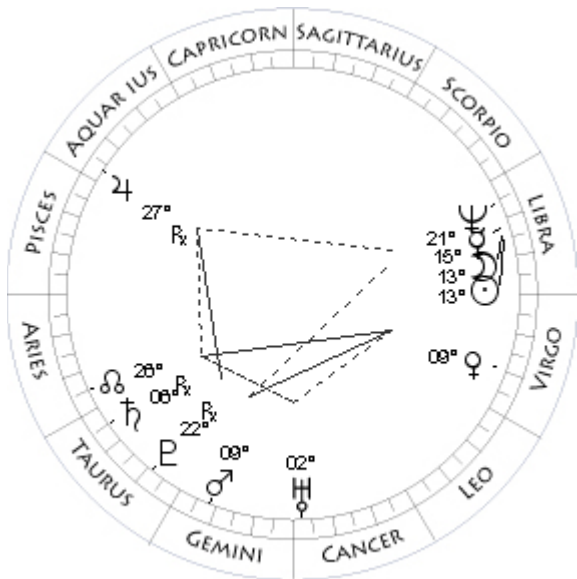
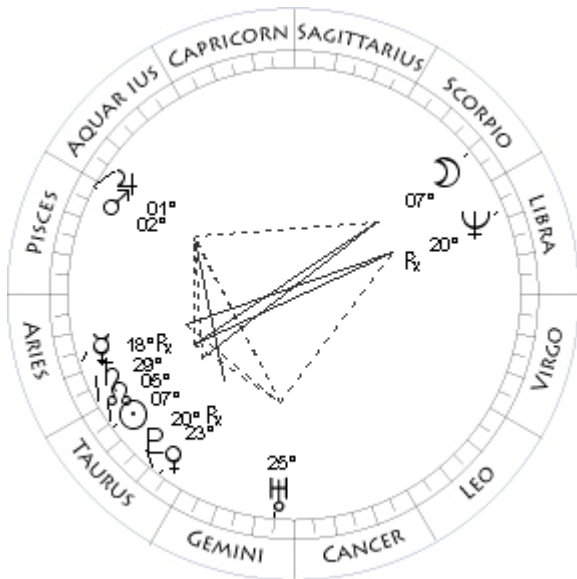
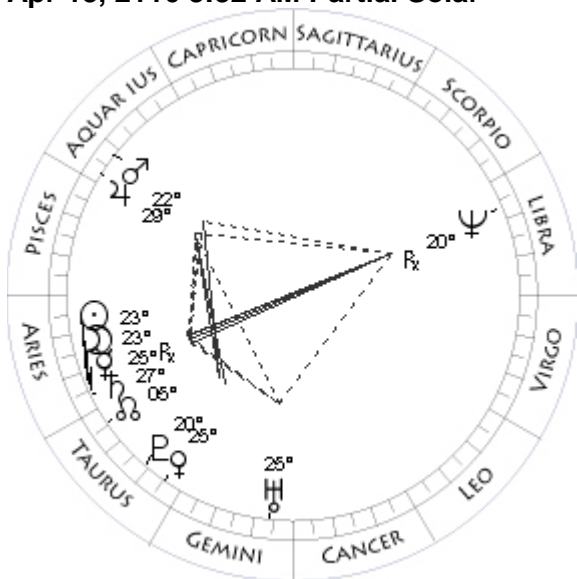
Nov 2, 2115 9:32 AM Partial Umbral

Mo 17Sc43 + 0°33	Mo 09Ta24 - 0°29
Su 17Ta42 - 0°00	Su 09Sc24 - 0°00
Me 10Ta54 - 0°38R	Me 16Sc07 - 0°26
Ve 28Ar30 - 1°30	Ve 07Sa10 - 0°50
Ma 04Cn38 + 1°20	Ma 27Li30 + 0°35
Ju 01Aq43 - 0°13	Ju 25Cp09 - 0°31
Sa 18Ar51 - 2°15	Sa 20Ar02 - 2°45R
Ur 22Ge02 + 0°07	Ur 28Ge05 + 0°09R
Ne 17Li59 + 1°39R	Ne 20Li35 + 1°34
Pl 19Ta57 -15°04	Pl 20Ta43 -15°37R
No 24Ta05 - 0°00	No 14Ta40 - 0°00
Coords: 70W/17S	

Nov 16, 2115 9:55 AM Annular Solar



Apr 13, 2116 3:32 AM Partial Solar



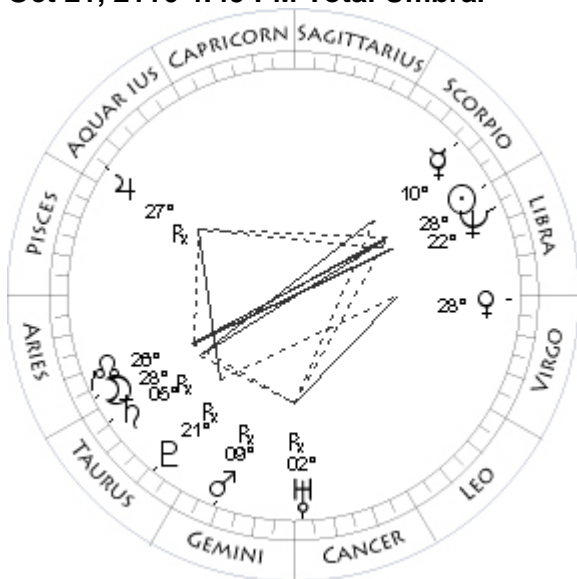
Apr 27, 2116 2:37 AM Total Umbral

Mo 23Sc21 - 0°48	Mo 07Sc02 - 0°10
Su 23Sc27 - 0°00	Su 07Ta05 - 0°00
Me 07Sa37 - 1°50	Me 18Ar16 - 1°11R
Ve 24Sa25 - 1°24	Ve 23Ta31 + 5°57R
Ma 06Sc51 + 0°28	Ma 02Pi55 - 1°32
Ju 27Cp12 - 0°31	Ju 01Pi48 - 0°47
Sa 19Ar07 - 2°43R	Sa 29Ar06 - 2°14
Ur 27Ge41 + 0°10R	Ur 25Ge41 + 0°10
Ne 21Li04 + 1°35	Ne 20Li29 + 1°41R
Pl 20Ta27 -15°37R	Pl 20Ta40 -14°57
No 13Ta56 - 0°00	No 05Ta19 - 0°00

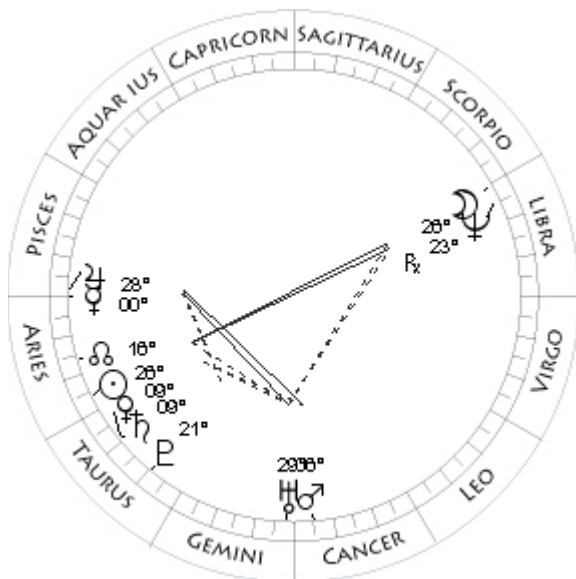
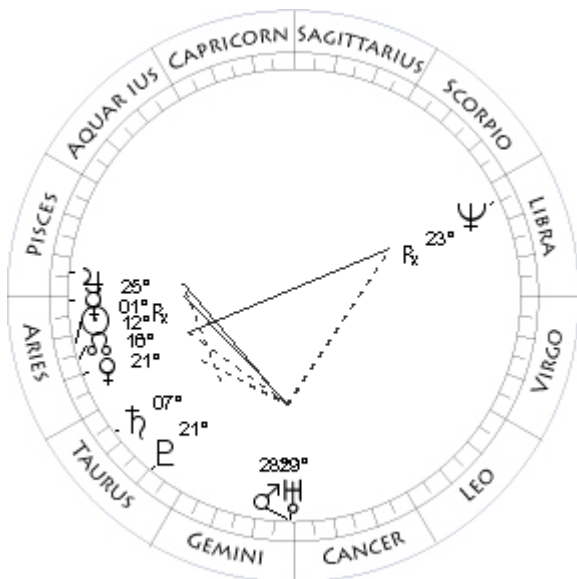
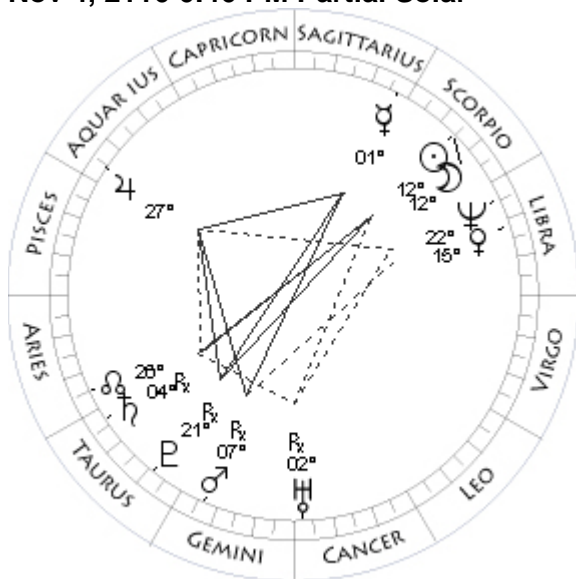
Oct 6, 2116 8:27 AM Partial Solar

Mo 23Ar30 - 1°04	Mo 13Li23 + 1°10
Su 23Ar26 - 0°00	Su 13Li19 - 0°00
Me 25Ar43 + 2°26R	Me 15Li36 + 0°59
Ve 25Ta32 + 6°15	Ve 09Vi37 + 0°59
Ma 22Aq34 - 1°20	Ma 09Ge11 - 1°15
Ju 29Aq23 - 0°44	Ju 27Aq34 - 1°14R
Sa 27Ar20 - 2°14	Sa 06Ta26 - 2°43R
Ur 25Ge08 + 0°10	Ur 02Cn51 + 0°13
Ne 20Li51 + 1°41R	Ne 21Li43 + 1°35
Pl 20Ta21 -14°59	Pl 22Ta09 -15°26R
No 06Ta03 - 0°00	No 26Ar43 - 0°00

Oct 21, 2116 4:49 PM Total Umbral



Nov 4, 2116 6:46 PM Partial Solar



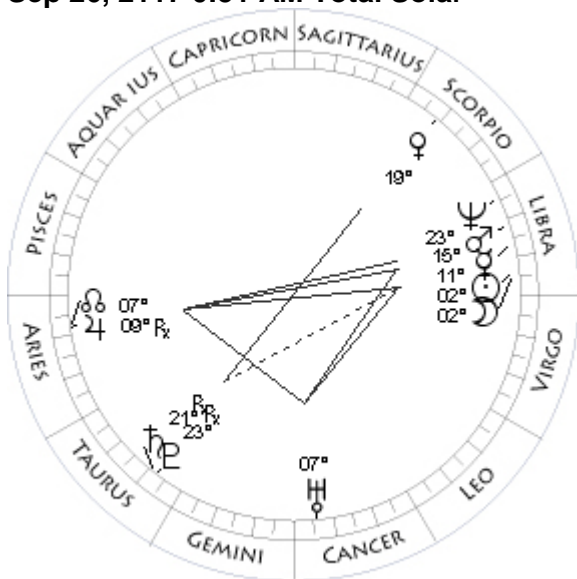
Apr 2, 2117 6:10 AM Annular Solar

Mo 28Ar26 + 0°13	Mo 12Ar28 - 0°24
Su 28Li30 - 0°00	Su 12Ar29 - 0°00
Me 10Sc39 - 0°43	Me 01Ar43 + 1°52R
Ve 28Vi17 + 1°28	Ve 21Ar24 - 1°00
Ma 09Ge44 - 0°39R	Ma 28Ge35 + 1°52
Ju 27Aq06 - 1°12R	Ju 25Pi15 - 1°02
Sa 05Ta16 - 2°44R	Sa 07Ta42 - 2°11
Ur 02Cn46 + 0°13R	Ur 29Ge05 + 0°14
Ne 22Li17 + 1°35	Ne 23Li24 + 1°42R
Pl 21Ta55 -15°28R	Pl 21Ta06 -14°53
No 25Ar55 - 0°00	No 17Ar18 - 0°00
Coords: 104W/11N	Coords: 101W/18S

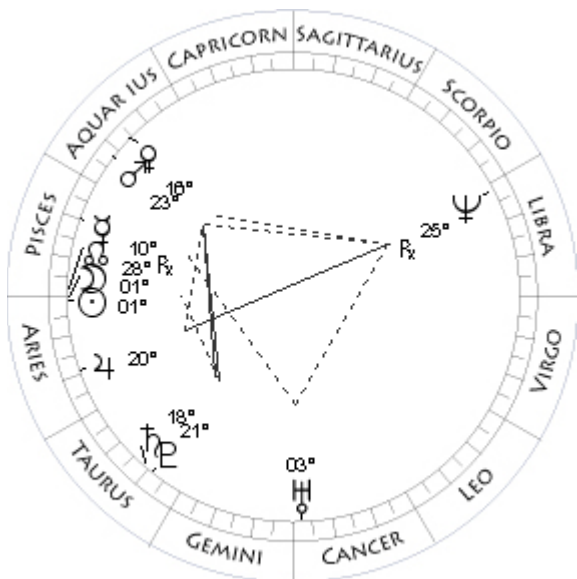
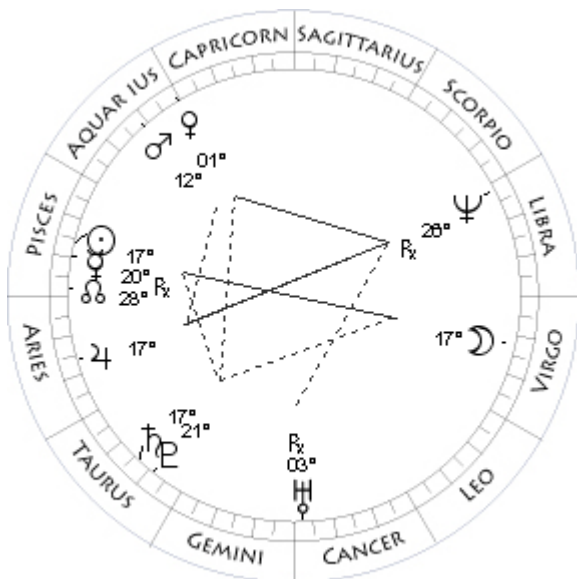
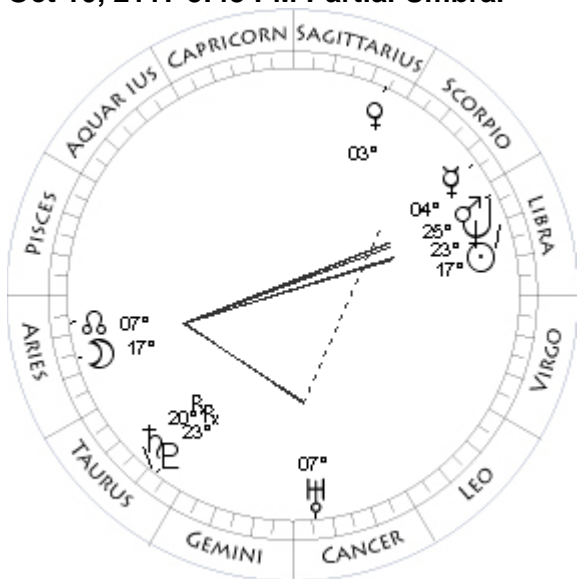
Apr 16, 2117 4:27 PM Partial Umbral

Mo 12Sc22 - 1°28	Mo 26Li32 - 0°54
Su 12Sc33 - 0°00	Su 26Ar40 - 0°00
Me 01Sa26 - 2°07	Me 00Ar57 - 1°34
Ve 15Li37 + 1°39	Ve 09Ta15 - 0°31
Ma 07Ge14 + 0°02R	Ma 06Cn30 + 1°46
Ju 27Aq22 - 1°10	Ju 28Pi36 - 1°03
Sa 04Ta09 - 2°44R	Sa 09Ta29 - 2°09
Ur 02Cn31 + 0°13R	Ur 29Ge30 + 0°14
Ne 22Li48 + 1°36	Ne 23Li00 + 1°43R
Pl 21Ta39 -15°29R	Pl 21Ta23 -14°50
No 25Ar10 - 0°00	No 16Ar32 - 0°00
	Coords: 113W/11S

Sep 26, 2117 0:51 AM Total Solar



Oct 10, 2117 5:43 PM Partial Umbral



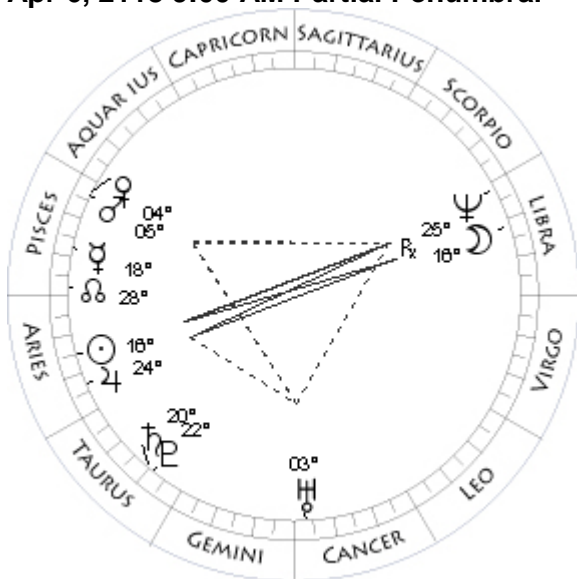
Mar 7, 2118 11:28 PM Partial Penumbral

Mo 02Li56 + 0°27	Mo 17Vi09 + 1°03
Su 02Li56 - 0°00	Su 17Pi06 - 0°00
Me 11Li06 + 0°43	Me 20Pi54 + 3°40R
Ve 19Sc23 - 2°59	Ve 01Aq01 + 1°54
Ma 15Li34 + 0°32	Ma 12Aq21 - 1°04
Ju 09Ar15 - 1°37R	Ju 17Ar09 - 1°05
Sa 21Ta26 - 2°29R	Sa 17Ta15 - 2°05
Ur 07Cn10 + 0°16	Ur 03Cn13 + 0°17R
Ne 23Li25 + 1°37	Ne 26Li14 + 1°43R
Pl 23Ta17 -15°15R	Pl 21Ta40 -14°52
No 07Ar57 - 0°00	No 29Pi19 - 0°00
Coords: 178W/22N	Coords: 11W/ 6N

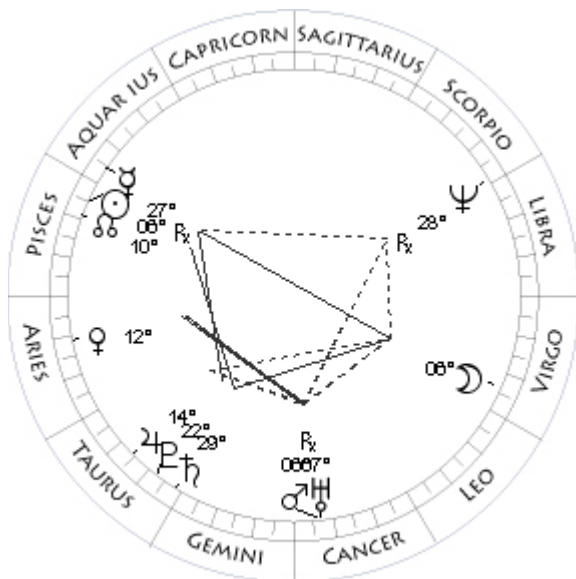
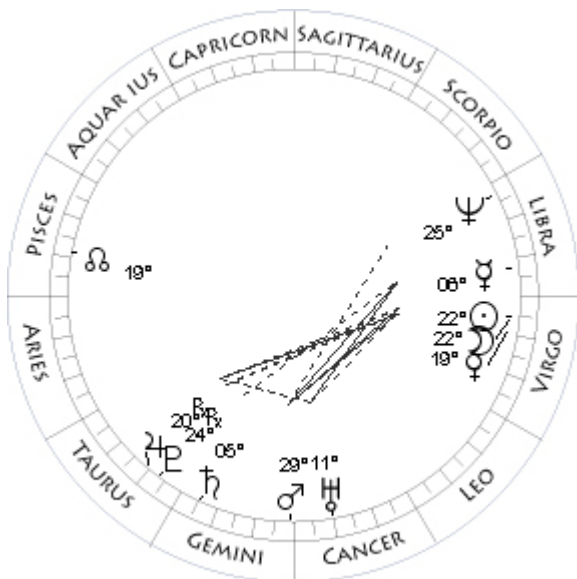
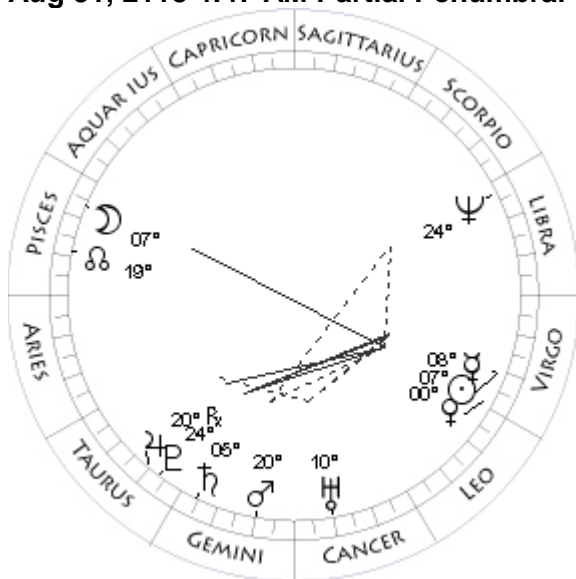
Mar 22, 2118 5:56 AM Annular Solar

Mo 17Ar17 + 0°52	Mo 01Ar16 + 0°15
Su 17Li24 - 0°00	Su 01Ar20 - 0°00
Me 04Sc28 - 1°00	Me 10Pi43 + 1°11R
Ve 03Sa33 - 4°05	Ve 16Aq48 + 0°43
Ma 25Li18 + 0°24	Ma 23Aq19 - 1°10
Ju 07Ar18 - 1°37R	Ju 20Ar27 - 1°04
Sa 20Ta42 - 2°32R	Sa 18Ta35 - 2°02
Ur 07Cn17 + 0°16	Ur 03Cn16 + 0°17
Ne 23Li57 + 1°37	Ne 25Li55 + 1°43R
Pl 23Ta05 -15°18R	Pl 21Ta52 -14°48
No 07Ar10 - 0°00	No 28Pi34 - 0°00
Coords: 91W/ 8N	Coords: 85W/14N

Apr 6, 2118 9:00 AM Partial Penumbral



Aug 31, 2118 4:47 AM Partial Penumbral



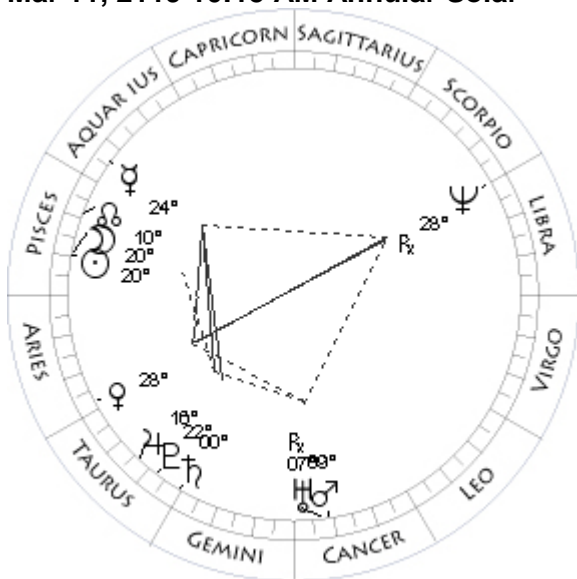
Sep 15, 2118 4:24 PM Total Solar

Mo 16Li06 - 1°35	Mo 22Vi32 - 0°16
Su 16Ar18 - 0°00	Su 22Vi36 - 0°00
Me 18Pi32 - 1°46	Me 06Li21 + 0°25
Ve 04Pi04 - 0°22	Ve 19Vi59 + 1°25
Ma 05Pi00 - 1°16	Ma 29Ge58 - 0°09
Ju 24Ar03 - 1°03	Ju 20Ta17 - 1°18R
Sa 20Ta14 - 2°00	Sa 05Ge45 - 2°07
Ur 03Cn30 + 0°17	Ur 11Cn19 + 0°19
Ne 25Li32 + 1°44R	Ne 25Li10 + 1°38
Pl 22Ta08 -14°44	Pl 24Ta22 -15°04R
No 27Pi45 - 0°00	No 19Pi10 - 0°00

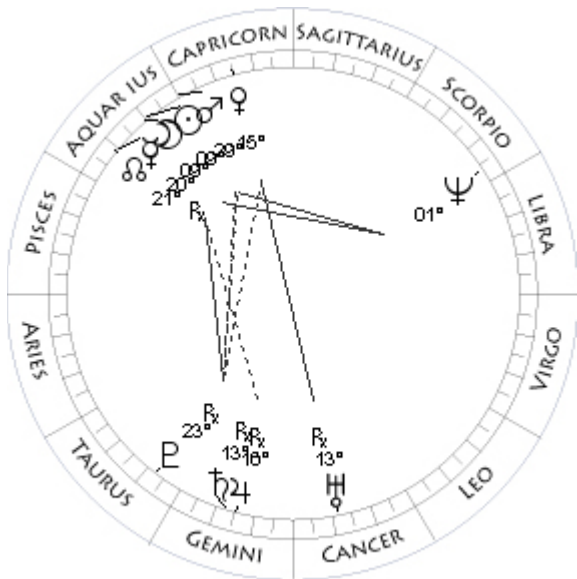
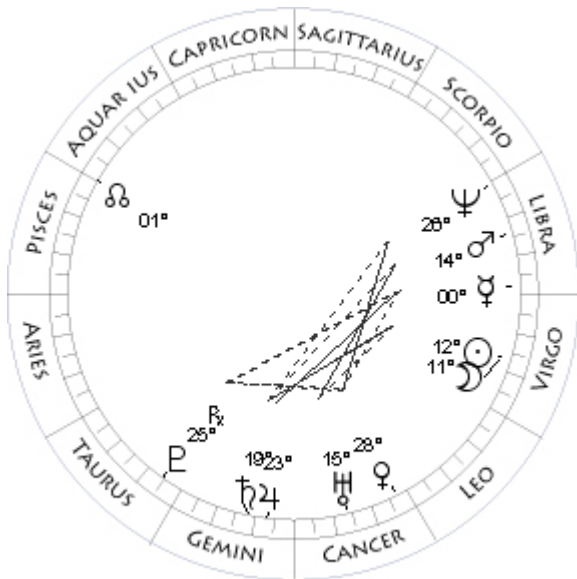
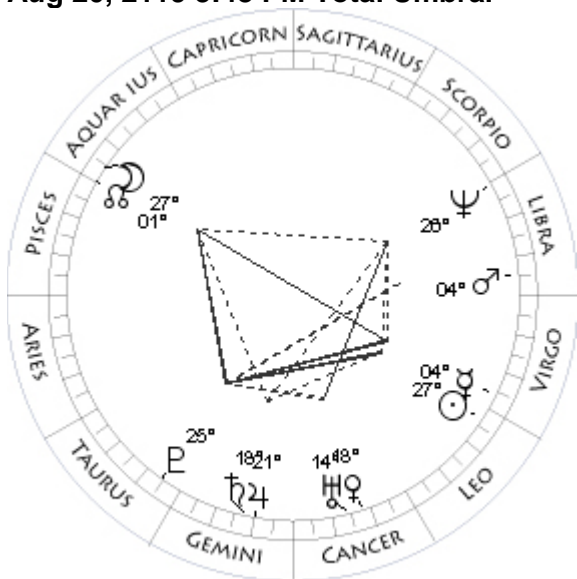
Feb 25, 2119 11:01 AM Total Umbral

Mo 07Pi39 - 1°05	Mo 06Vi17 + 0°22
Su 07Vi35 - 0°00	Su 06Pi17 - 0°00
Me 08Vi38 + 1°43	Me 27Aq14 + 3°28R
Ve 00Vi46 + 1°16	Ve 12Ar17 - 0°24
Ma 20Ge56 - 0°27	Ma 06Cn58 + 3°18
Ju 20Ta12 - 1°15	Ju 14Ta34 - 0°53
Sa 05Ge29 - 2°04	Sa 29Ta28 - 1°52
Ur 10Cn48 + 0°18	Ur 07Cn50 + 0°21R
Ne 24Li42 + 1°39	Ne 28Li38 + 1°44R
Pl 24Ta27 -15°00R	Pl 22Ta32 -14°47
No 19Pi59 - 0°00	No 10Pi33 - 0°00
	Coords: 162E/10N

Mar 11, 2119 10:15 AM Annular Solar



Aug 20, 2119 3:48 PM Total Umbral



Sep 5, 2119 2:40 AM Partial Solar

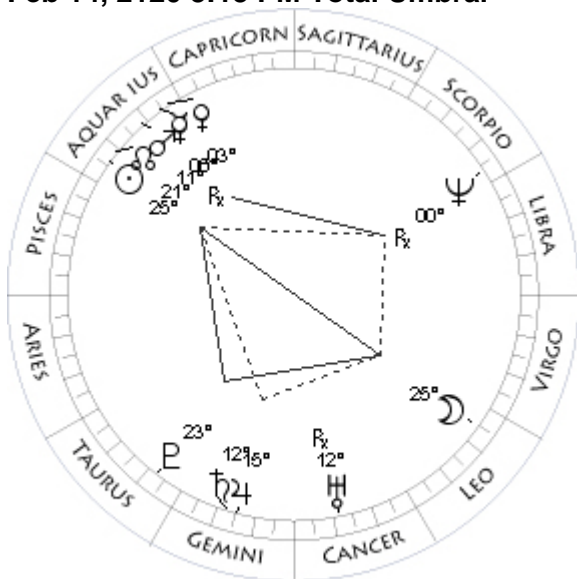
Mo 20Pi10 + 0°55	Mo 11Vi58 - 1°00
Su 20Pi18 - 0°00	Su 12Vi06 - 0°00
Me 24Aq31 + 0°33	Me 00Li49 + 0°07
Ve 28Ar59 + 0°24	Ve 28Cn11 - 4°08
Ma 09Cn54 + 2°57	Ma 14Li08 + 0°22
Ju 16Ta53 - 0°50	Ju 23Ge30 - 0°37
Sa 00Ge18 - 1°48	Sa 19Ge08 - 1°39
Ur 07Cn42 + 0°21R	Ur 15Cn18 + 0°21
Ne 28Li23 + 1°44R	Ne 26Li56 + 1°40
Pl 22Ta41 -14°43	Pl 25Ta25 -14°52R
No 09Pi48 - 0°00	No 00Pi24 - 0°00

Jan 30, 2120 11:05 AM Partial Solar

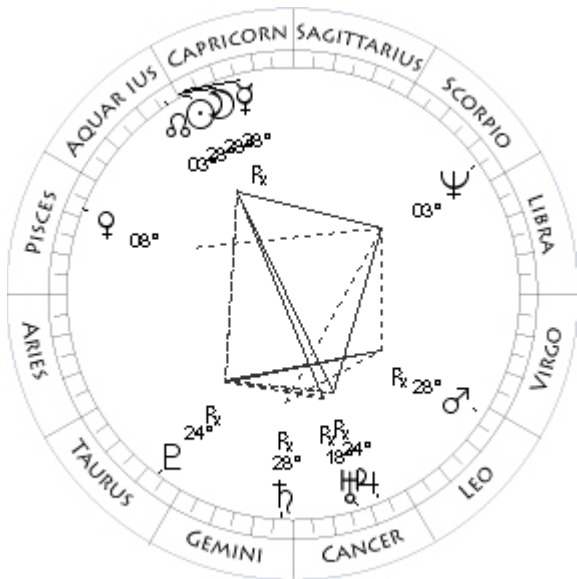
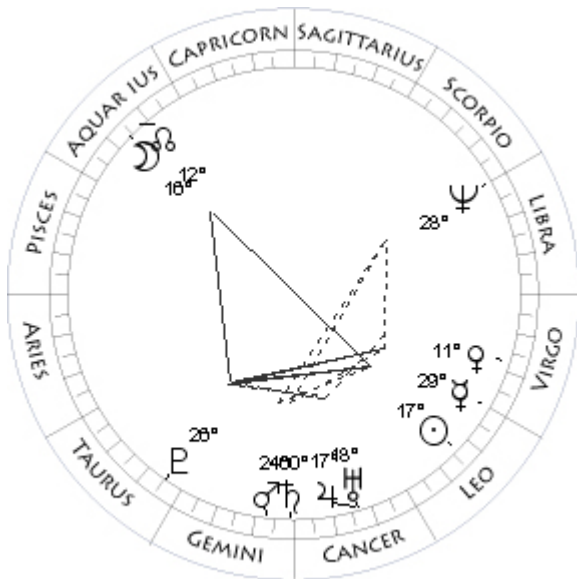
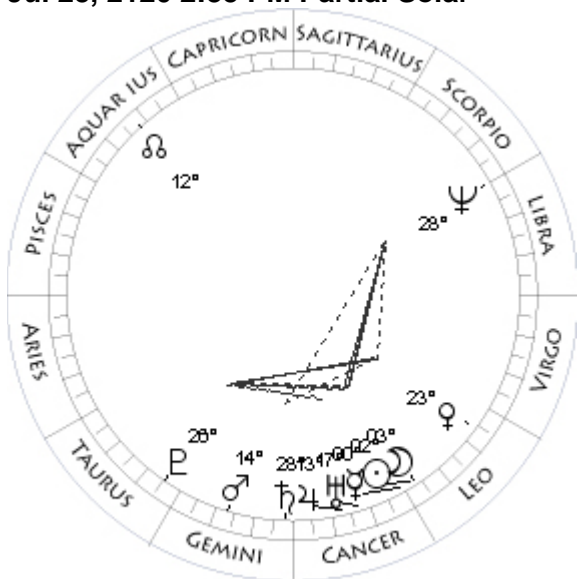
Mo 27Aq11 - 0°21	Mo 09Aq48 - 1°06
Su 27Le11 - 0°00	Su 09Aq45 - 0°00
Me 04Vi05 + 1°37	Me 20Aq35 + 2°29R
Ve 18Cn59 - 5°45	Ve 15Cp04 + 0°12
Ma 04Li13 + 0°32	Ma 29Cp47 - 0°59
Ju 21Ge24 - 0°37	Ju 16Ge08 - 0°25R
Sa 18Ge12 - 1°37	Sa 13Ge03 - 1°34R
Ur 14Cn38 + 0°21	Ur 13Cn12 + 0°25R
Ne 26Li33 + 1°40	Ne 01Sc00 + 1°43
Pl 25Ta26 -14°48	Pl 23Ta27 -14°48R
No 01Pi13 - 0°00	No 22Aq35 - 0°00

Coords: 124W/13S

Feb 14, 2120 3:13 PM Total Umbral



Jul 25, 2120 2:35 PM Partial Solar



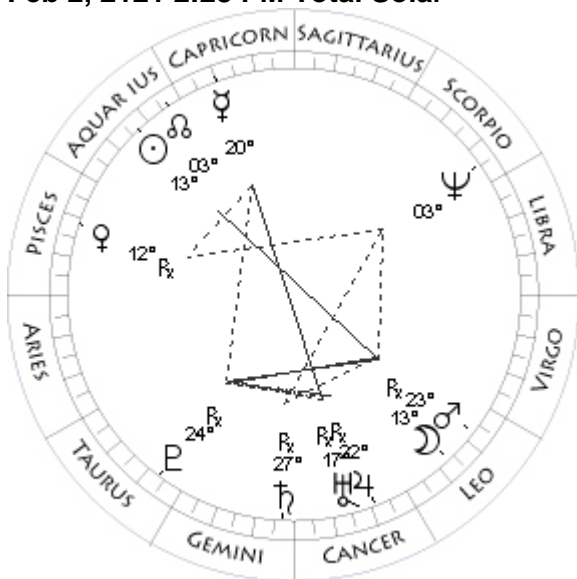
Aug 9, 2120 7:57 AM Total Umbral

Mo 25Le03 - 0°18	Mo 16Aq57 + 0°23
Su 25Aq07 - 0°00	Su 17Le03 - 0°00
Me 06Aq26 + 2°50R	Me 29Le44 + 1°29
Ve 03Aq58 - 0°28	Ve 11Vi49 + 1°24
Ma 11Aq36 - 1°03	Ma 24Ge07 + 0°00
Ju 15Ge59 - 0°22	Ju 17Cn04 - 0°00
Sa 12Ge52 - 1°31	Sa 00Cn08 - 1°08
Ur 12Cn42 + 0°24R	Ur 18Cn23 + 0°24
Ne 00Sc57 + 1°44R	Ne 28Li28 + 1°42
Pl 23Ta27 -14°43	Pl 26Ta22 -14°36
No 21Aq47 - 0°00	No 12Aq26 - 0°00
Coords: 135W/13N	Coords: 118E/15S

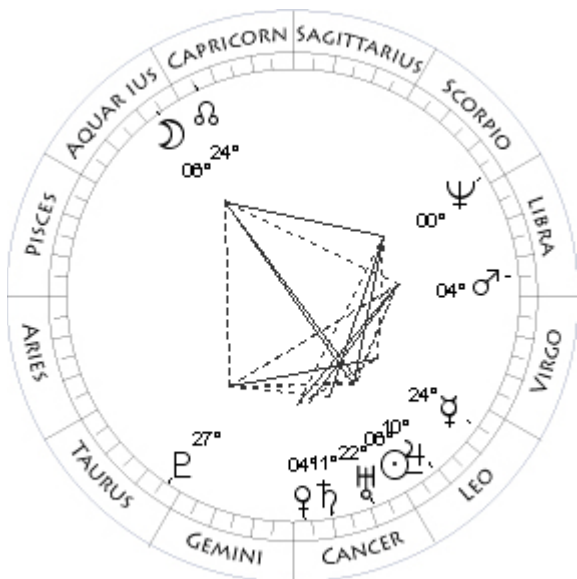
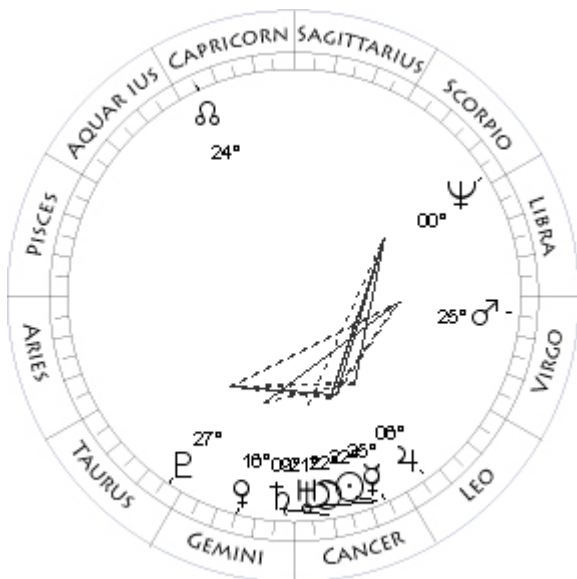
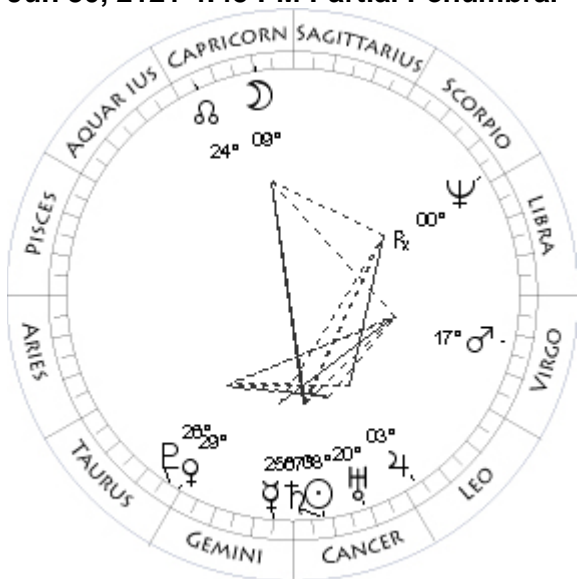
Jan 19, 2121 2:50 AM Total Solar

Mo 03Le00 + 0°53	Mo 28Cp58 - 0°26
Su 02Le58 - 0°00	Su 28Cp58 - 0°00
Me 00Le15 + 1°28	Me 28Cp06 + 3°11R
Ve 23Le52 + 1°33	Ve 08Pi51 + 2°01
Ma 14Ge08 - 0°12	Ma 28Le07 + 4°12R
Ju 13Cn53 - 0°02	Ju 24Cn04 + 0°22R
Sa 28Ge31 - 1°08	Sa 28Ge19 - 1°05R
Ur 17Cn32 + 0°24	Ur 18Cn21 + 0°28R
Ne 28Li17 + 1°43	Ne 03Sc06 + 1°43
Pl 26Ta15 -14°32	Pl 24Ta29 -14°42R
No 13Aq13 - 0°00	No 03Aq49 - 0°00
	Coords: 150W/44S

Feb 2, 2121 2:28 PM Total Solar



Jun 30, 2121 4:45 PM Partial Penumbral



Jul 14, 2121 4:38 PM Annular Solar

Mo 13Le34 - 0°55	Mo 22Cn18 + 0°12
Su 13Aq42 - 0°00	Su 22Cn19 - 0°00
Me 20Cp20 + 2°10	Me 25Cn14 + 1°38
Ve 12Pi36 + 5°08R	Ve 16Ge10 - 1°41
Ma 23Le24 + 4°32R	Ma 25Vi22 + 0°35
Ju 22Cn14 + 0°24R	Ju 06Le37 + 0°30
Sa 27Ge32 - 1°02R	Sa 09Cn32 - 0°38
Ur 17Cn46 + 0°28R	Ur 21Cn09 + 0°26
Ne 03Sc10 + 1°44	Ne 00Sc24 + 1°44
Pl 24Ta25 -14°38R	Pl 27Ta04 -14°20
No 03Aq03 - 0°00	No 24Cp28 - 0°00

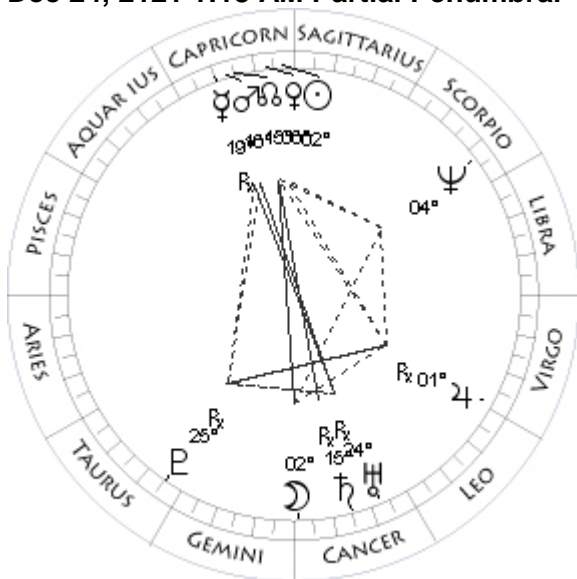
Coords: 146W/16N

Jul 30, 2121 0:48 AM Partial Penumbral

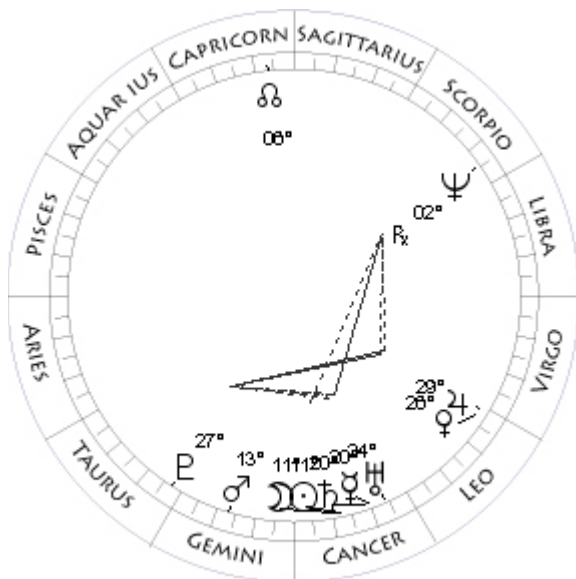
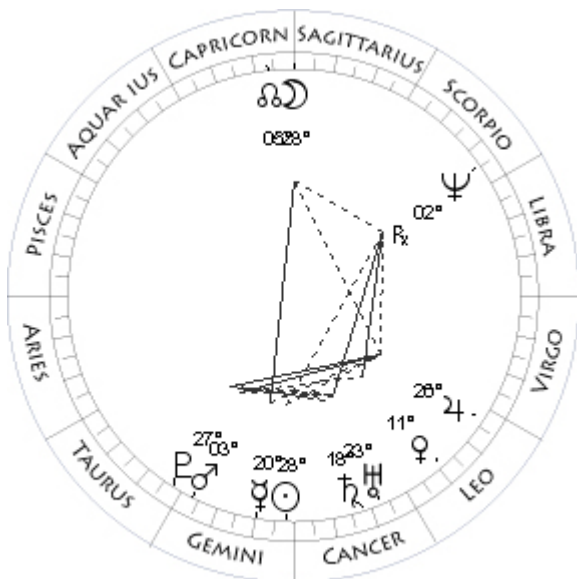
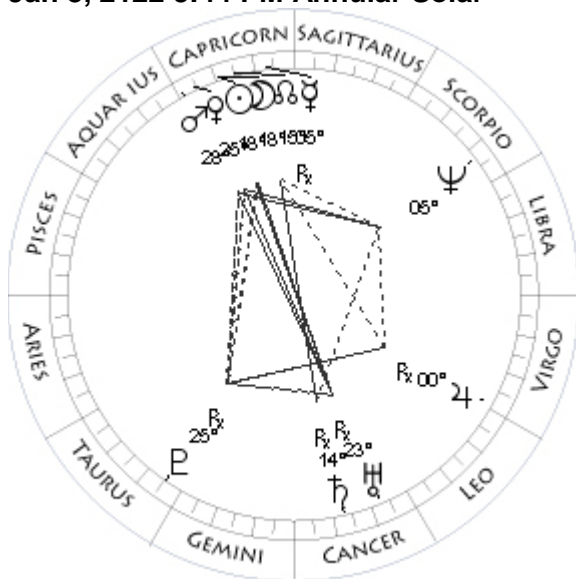
Mo 09Cp03 - 1°24	Mo 06Aq48 + 1°08
Su 08Cn58 - 0°00	Su 06Le58 - 0°00
Me 25Ge38 - 0°22	Me 24Le52 + 1°19
Ve 29Ta56 - 2°09	Ve 04Cn14 - 1°01
Ma 17Vi27 + 0°49	Ma 04Li26 + 0°22
Ju 03Le37 + 0°30	Ju 10Le00 + 0°32
Sa 07Cn43 - 0°39	Sa 11Cn27 - 0°37
Ur 20Cn18 + 0°26	Ur 22Cn04 + 0°27
Ne 00Sc26 + 1°45R	Ne 00Sc29 + 1°43
Pl 26Ta51 -14°17	Pl 27Ta15 -14°24
No 25Cp12 - 0°00	No 23Cp39 - 0°00

Coords: 110W/25S

Dec 24, 2121 1:18 AM Partial Penumbral



Jan 8, 2122 3:44 PM Annular Solar



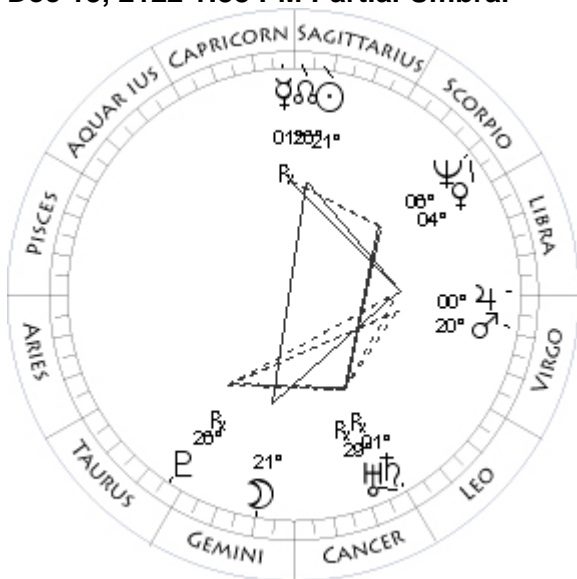
Jun 20, 2122 2:23 AM Partial Umbral

Mo 02Cn15 + 1°11	Mo 28Sa39 - 0°40
Su 02Cp10 - 0°00	Su 28Ge37 - 0°00
Me 19Cp46 - 0°25R	Me 20Ge37 + 0°07
Ve 06Cp07 - 0°35	Ve 11Le57 + 2°03
Ma 16Cp46 - 1°01	Ma 03Ge42 - 0°05
Ju 01Vi21 + 0°57R	Ju 26Le55 + 0°58
Sa 15Cn37 - 0°30R	Sa 18Cn37 - 0°09
Ur 24Cn13 + 0°31R	Ur 23Cn58 + 0°29
Ne 04Sc49 + 1°42	Ne 02Sc43 + 1°46R
Pl 25Ta46 -14°40R	Pl 27Ta36 -14°06
No 15Cp52 - 0°00	No 06Cp26 - 0°00

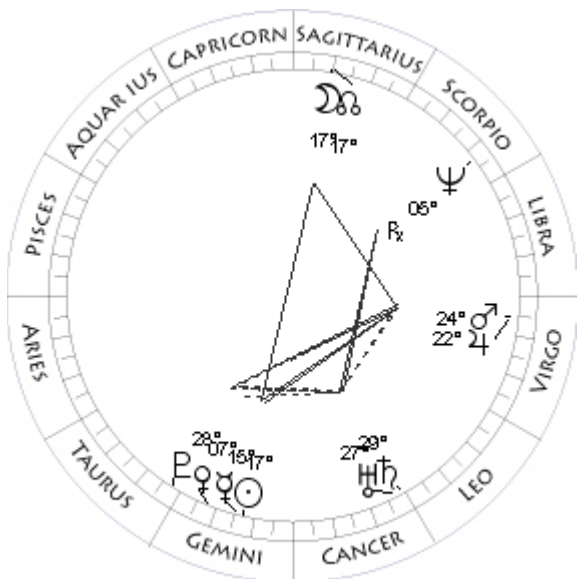
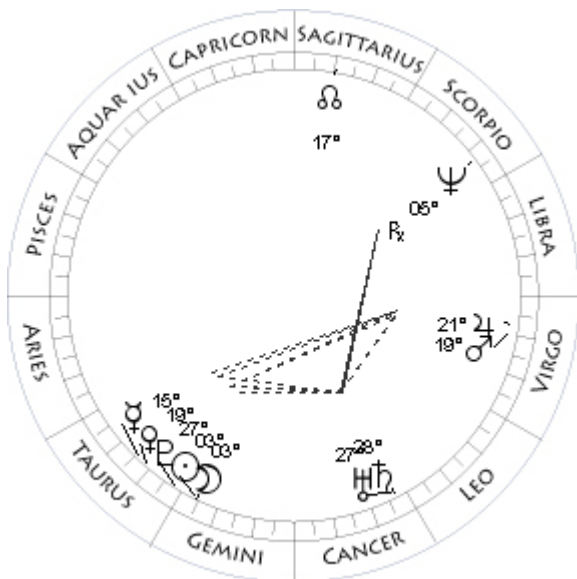
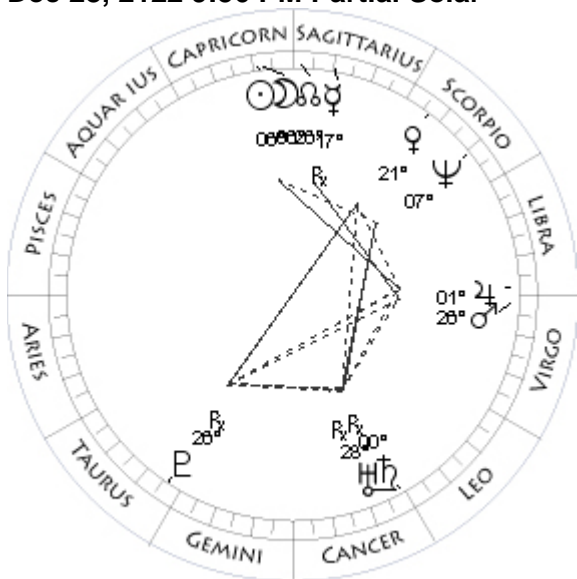
Jul 4, 2122 1:21 AM Total Solar

Mo 18Cp00 + 0°15	Mo 11Cn51 - 0°33
Su 18Cp04 - 0°00	Su 11Cn56 - 0°00
Me 05Cp30 + 3°16R	Me 20Cn41 + 1°48
Ve 25Cp44 - 1°06	Ve 26Le50 + 1°26
Ma 28Cp54 - 1°04	Ma 13Ge35 + 0°05
Ju 00Vi38 + 1°01R	Ju 29Le16 + 0°57
Sa 14Cn21 - 0°29R	Sa 20Cn23 - 0°08
Ur 23Cn34 + 0°31R	Ur 24Cn47 + 0°29
Ne 05Sc08 + 1°43	Ne 02Sc36 + 1°46R
Pl 25Ta34 -14°37R	Pl 27Ta51 -14°09
No 15Cp02 - 0°00	No 05Cp42 - 0°00
	Coords: 155W/11S

Dec 13, 2122 1:38 PM Partial Umbral



Dec 28, 2122 9:56 PM Partial Solar



May 25, 2123 9:29 AM Partial Solar

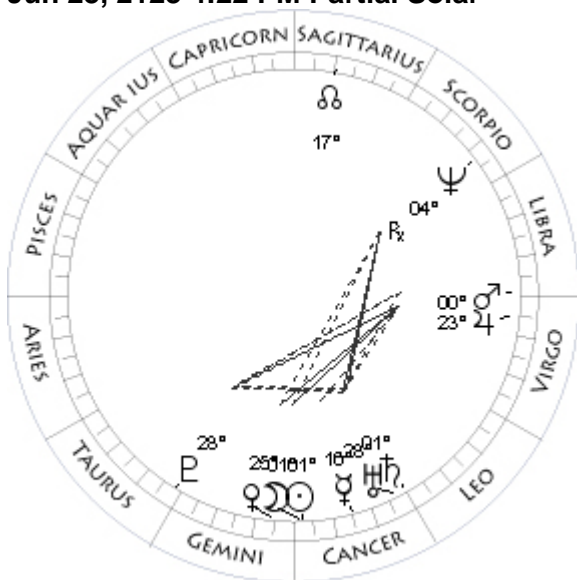
Mo 21Ge16 + 0°30	Mo 03Ge51 + 1°15
Su 21Sa15 - 0°00	Su 03Ge47 - 0°00
Me 01Cp37 + 0°23R	Me 15Ta42 - 1°59
Ve 04Sc38 + 2°36	Ve 19Ta29 - 1°07
Ma 20Vi45 + 2°18	Ma 19Vi06 + 1°12
Ju 00Li03 + 1°11	Ju 21Vi55 + 1°23
Sa 01Le23 + 0°08R	Sa 28Cn11 + 0°21
Ur 29Cn22 + 0°33R	Ur 27Cn02 + 0°32
Ne 06Sc40 + 1°42	Ne 05Sc25 + 1°48R
Pl 26Ta55 -14°33R	Pl 27Ta59 -13°55
No 27Sa05 - 0°00	No 18Sa28 - 0°00

Coords: 154W/24N

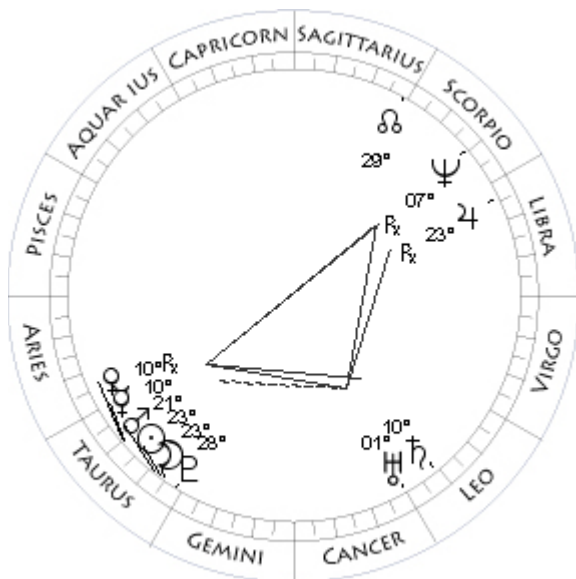
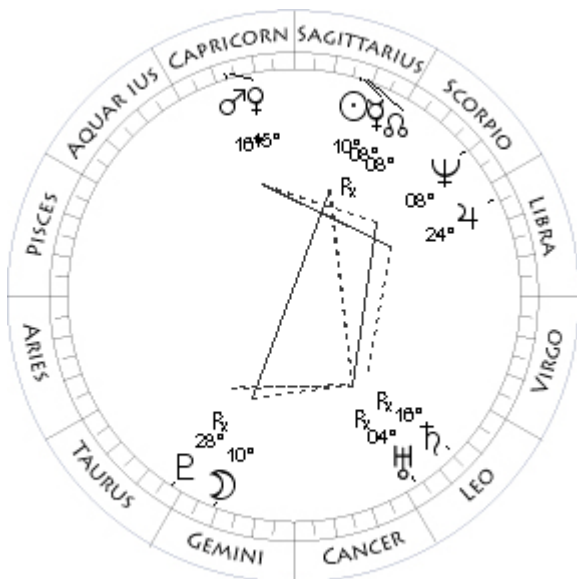
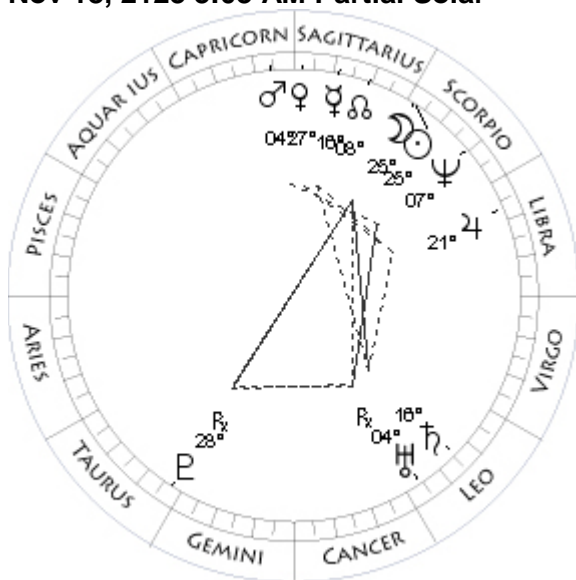
Jun 9, 2123 5:02 AM Total Umbral

Mo 06Cp44 + 0°55	Mo 17Sa57 + 0°02
Su 06Cp52 - 0°00	Su 17Ge59 - 0°00
Me 17Sa40 + 2°55R	Me 15Ge33 + 0°30
Ve 21Sc26 + 2°48	Ve 07Ge37 - 0°36
Ma 26Vi39 + 2°37	Ma 24Vi10 + 0°46
Ju 01Li16 + 1°15	Ju 22Vi30 + 1°20
Sa 00Le25 + 0°09R	Sa 29Cn41 + 0°22
Ur 28Cn49 + 0°34R	Ur 27Cn43 + 0°32
Ne 07Sc04 + 1°43	Ne 05Sc07 + 1°47R
Pl 26Ta41 -14°30R	Pl 28Ta19 -13°56
No 26Sa17 - 0°00	No 17Sa41 - 0°00

Jun 23, 2123 4:22 PM Partial Solar



Nov 18, 2123 3:03 AM Partial Solar



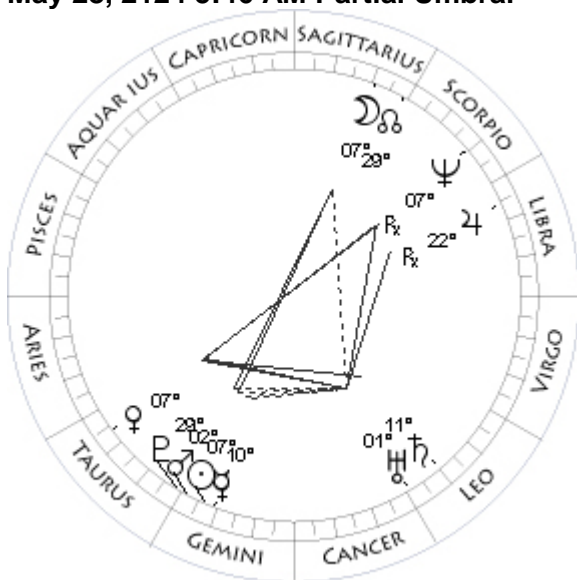
Dec 3, 2123 5:20 AM Total Umbral

Mo 01Cn39 - 1°17	Mo 10Ge27 - 0°10
Su 01Cn49 - 0°00	Su 10Sa31 - 0°00
Me 16Cn09 + 1°57	Me 08Sa48 + 1°19R
Ve 25Ge22 - 0°02	Ve 15Cp38 - 1°55
Ma 00Li19 + 0°25	Ma 16Cp13 - 1°14
Ju 23Vi40 + 1°16	Ju 24Li07 + 1°09
Sa 01Le19 + 0°23	Sa 16Le06 + 0°43R
Ur 28Cn30 + 0°32	Ur 04Le23 + 0°35R
Ne 04Sc53 + 1°47R	Ne 08Sc27 + 1°42
Pl 28Ta37 -13°57	Pl 28Ta06 -14°25R
No 16Sa55 - 0°00	No 08Sa19 - 0°00

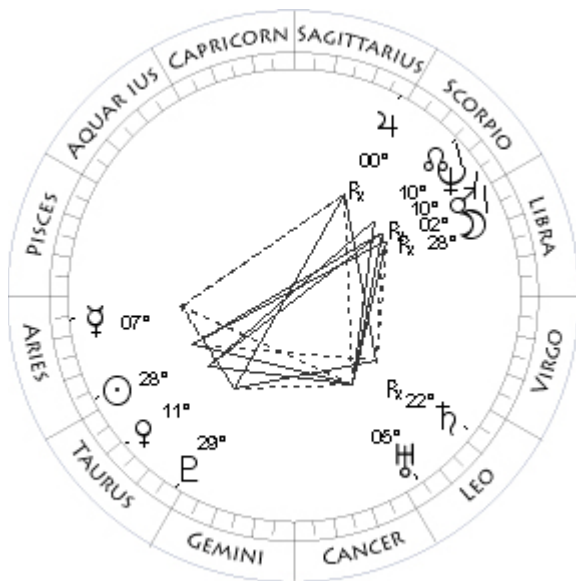
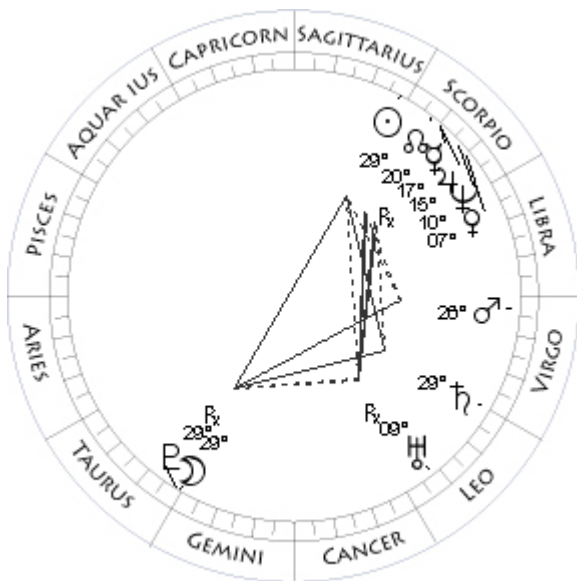
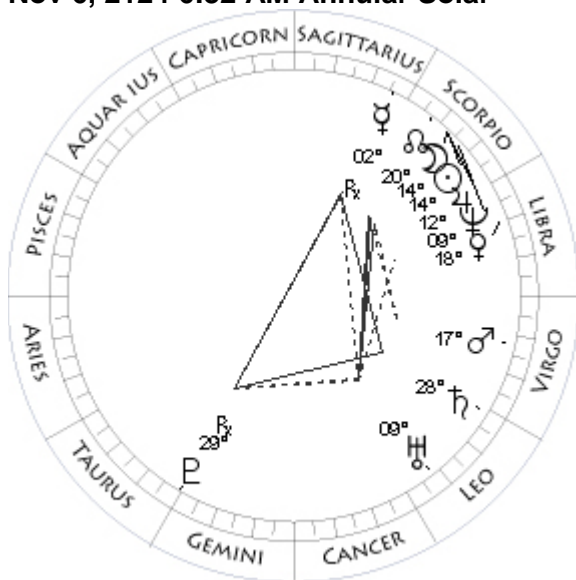
May 14, 2124 1:55 AM Total Solar

Mo 25Sc20 - 1°12	Mo 23Ta37 + 0°32
Su 25Sc15 - 0°00	Su 23Ta36 - 0°00
Me 16Sa56 - 2°28	Me 10Ta33 - 1°30
Ve 27Sa09 - 1°31	Ve 10Ta21 + 2°40R
Ma 04Cp41 - 1°13	Ma 21Ta50 + 0°00
Ju 21Li16 + 1°08	Ju 23Li34 + 1°29R
Sa 16Le03 + 0°40	Sa 10Le14 + 0°54
Ur 04Le36 + 0°35R	Ur 01Le06 + 0°35
Ne 07Sc56 + 1°42	Ne 07Sc55 + 1°49R
Pl 28Ta24 -14°26R	Pl 28Ta41 -13°46
No 09Sa07 - 0°00	No 29Sc41 - 0°00
Coords: 143W/50N	

May 28, 2124 5:46 AM Partial Umbral



Nov 6, 2124 6:32 AM Annular Solar



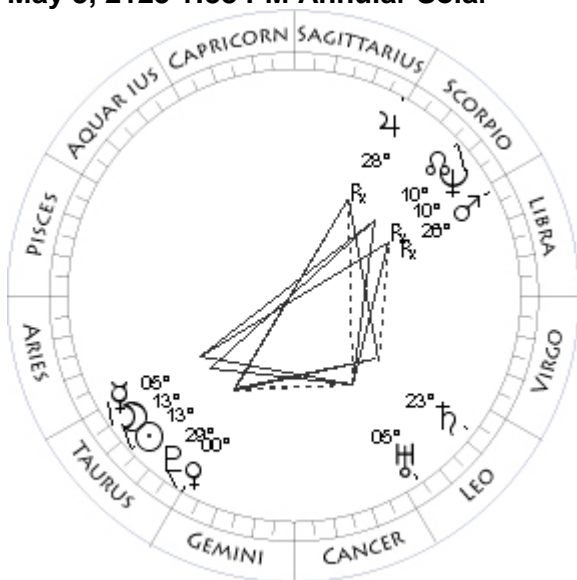
Nov 21, 2124 7:42 PM Partial Umbral

Mo 07Sa07 + 0°43	Mo 29Ta37 - 0°52
Su 07Ge14 - 0°00	Su 29Sc45 - 0°00
Me 10Ge27 + 0°51	Me 17Sc11 + 1°56R
Ve 07Ta10 - 0°27	Ve 07Sc28 + 1°31
Ma 02Ge01 + 0°09	Ma 26Vi12 + 1°40
Ju 22Li26 + 1°26R	Ju 15Sc57 + 0°56
Sa 11Le12 + 0°54	Sa 29Le31 + 1°12
Ur 01Le37 + 0°34	Ur 09Le15 + 0°37R
Ne 07Sc34 + 1°48R	Ne 10Sc12 + 1°42
Pl 29Ta01 -13°46	Pl 29Ta18 -14°15R
No 28Sc56 - 0°00	No 19Sc32 - 0°00
	Coords: 61W/19N

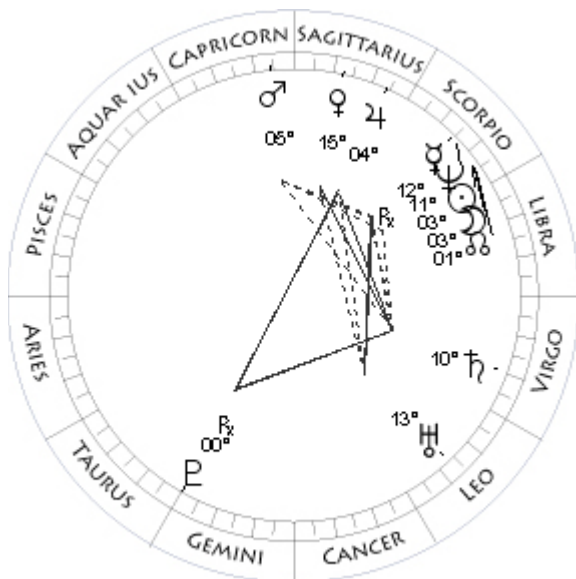
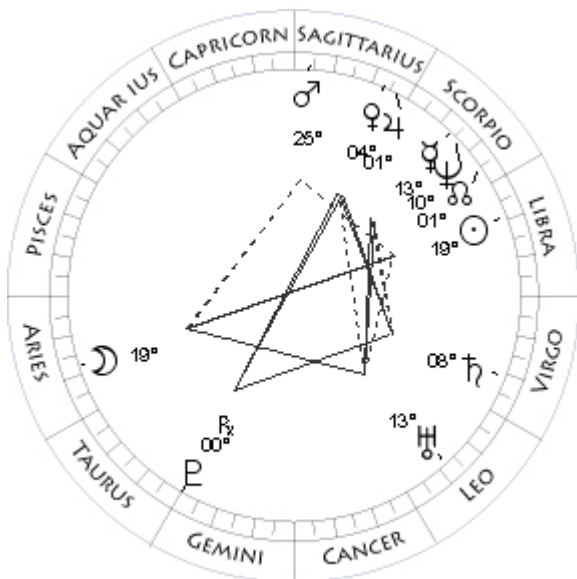
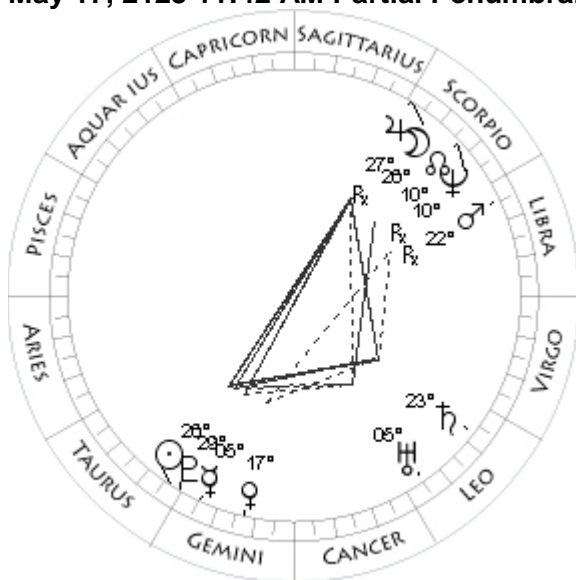
Apr 18, 2125 1:14 AM Partial Penumbral

Mo 14Sc07 - 0°34	Mo 28Li08 - 1°10
Su 14Sc06 - 0°00	Su 28Ar04 - 0°00
Me 02Sa11 - 2°25R	Me 07Ar14 - 2°31
Ve 18Li07 + 1°39	Ve 11Ta36 - 0°26
Ma 17Vi16 + 1°33	Ma 02Sc06 + 1°46R
Ju 12Sc33 + 0°57	Ju 00Sa28 + 1°08R
Sa 28Le47 + 1°09	Sa 22Le58 + 1°28R
Ur 09Le15 + 0°37	Ur 05Le10 + 0°38
Ne 09Sc37 + 1°42	Ne 10Sc52 + 1°49R
Pl 29Ta36 -14°15R	Pl 29Ta04 -13°39
No 20Sc21 - 0°00	No 11Sc44 - 0°00
	Coords: 67W/51S

May 3, 2125 1:38 PM Annular Solar



May 17, 2125 11:42 AM Partial Penumbra



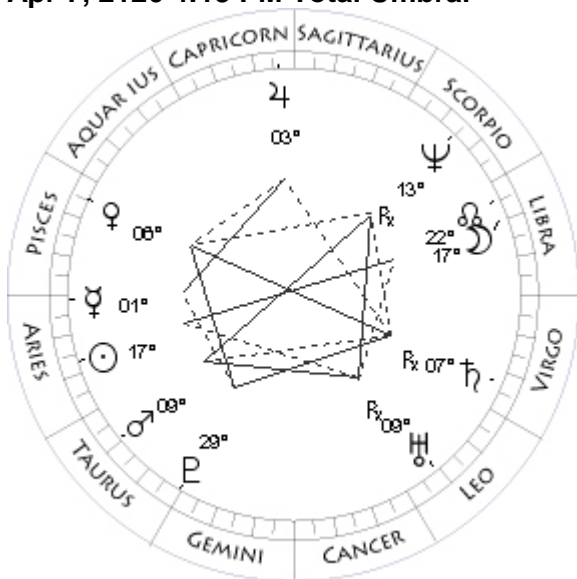
Oct 12, 2125 0:38 PM Partial Penumbra

Mo 13Ta08 - 0°13	Mo 19Ar18 + 1°08
Su 13Ta11 - 0°00	Su 19Li14 - 0°00
Me 05Ta47 - 1°05	Me 13Sc52 - 3°14
Ve 00Ge42 + 0°12	Ve 04Sa55 - 4°20
Ma 26Li22 + 1°10R	Ma 25Sa12 - 1°42
Ju 28Sc50 + 1°08R	Ju 01Sa22 + 0°38
Sa 23Le01 + 1°27	Sa 08Vi57 + 1°29
Ur 05Le21 + 0°37	Ur 13Le19 + 0°38
Ne 10Sc26 + 1°49R	Ne 10Sc48 + 1°42
Pl 29Ta24 -13°37	Pl 00Ge59 -14°02R
No 10Sc55 - 0°00	No 02Sc20 - 0°00
	Coords: 167W/ 9N

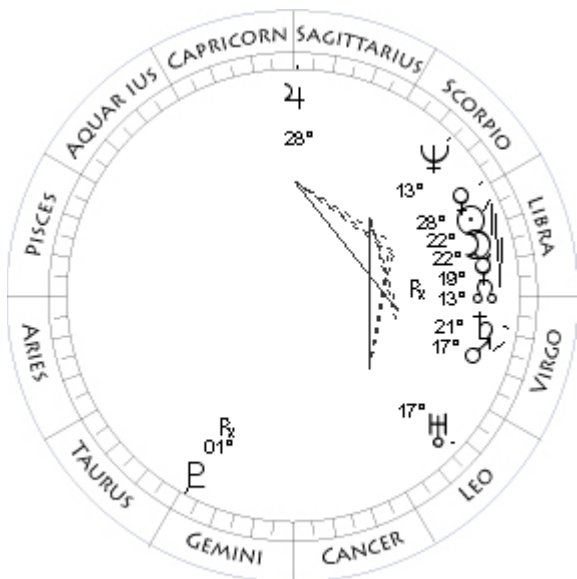
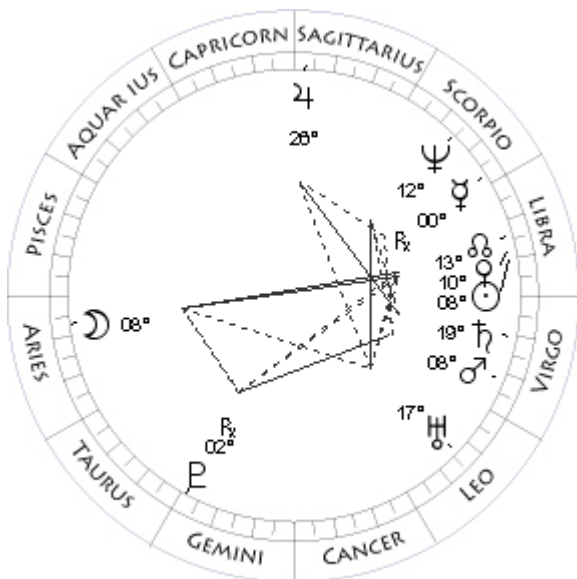
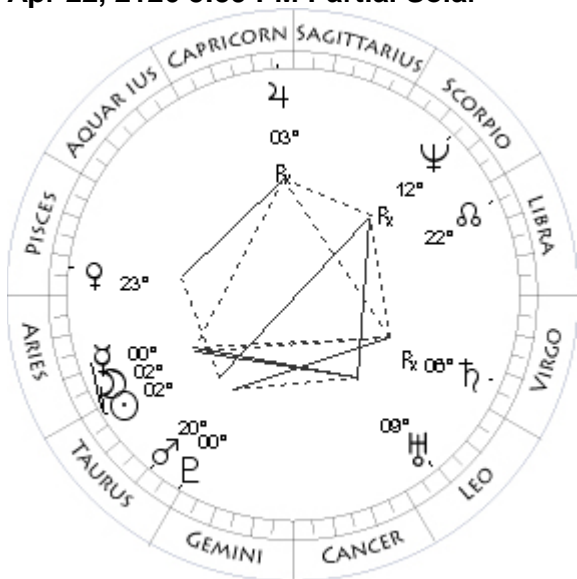
Oct 26, 2125 5:26 PM Total Solar

Mo 26Sc29 + 1°25	Mo 03Sc16 + 0°08
Su 26Ta39 - 0°00	Su 03Sc19 - 0°00
Me 05Ge34 + 1°14	Me 12Sc35 - 2°02R
Ve 17Ge43 + 0°47	Ve 15Sa52 - 5°00
Ma 22Li35 + 0°33R	Ma 05Cp29 - 1°40
Ju 27Sc07 + 1°07R	Ju 04Sa12 + 0°36
Sa 23Le25 + 1°25	Sa 10Vi23 + 1°32
Ur 05Le42 + 0°37	Ur 13Le42 + 0°38
Ne 10Sc04 + 1°49R	Ne 11Sc19 + 1°42
Pl 29Ta43 -13°36	Pl 00Ge46 -14°04R
No 10Sc11 - 0°00	No 01Sc35 - 0°00
	Coords: 176E/18S

Apr 7, 2126 4:13 PM Total Umbral



Apr 22, 2126 5:59 PM Partial Solar



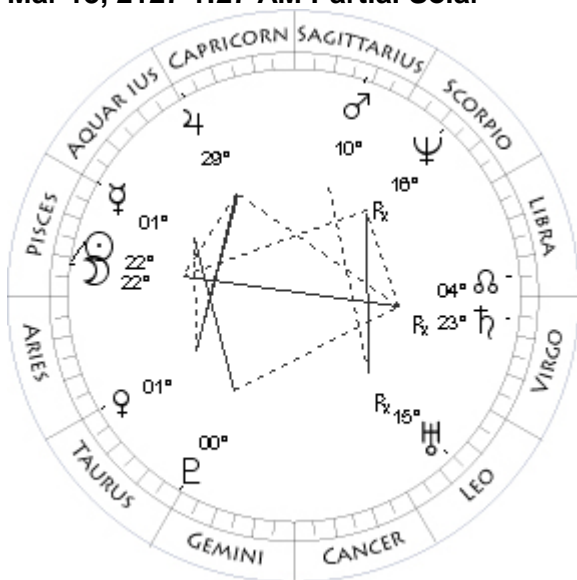
Oct 1, 2126 0:45 PM Partial Umbral

Mo 17Li39 - 0°27	Mo 08Ar10 + 0°29
Su 17Ar39 - 0°00	Su 08Li09 - 0°00
Me 01Ar35 - 2°17	Me 00Sc10 - 3°41R
Ve 06Pi03 - 0°30	Ve 10Li24 + 1°17
Ma 09Ta38 + 0°05	Ma 08Vi02 + 1°15
Ju 03Cp08 + 0°27	Ju 26Sa09 + 0°06
Sa 07Vi13 + 1°58R	Sa 19Vi22 + 1°48
Ur 09Le51 + 0°40R	Ur 17Le23 + 0°39
Ne 13Sc22 + 1°49R	Ne 12Sc31 + 1°43
Pl 29Ta49 -13°32	Pl 02Ge06 -13°49R
No 22Li57 - 0°00	No 13Li36 - 0°00
	Coords: 166W/ 4N

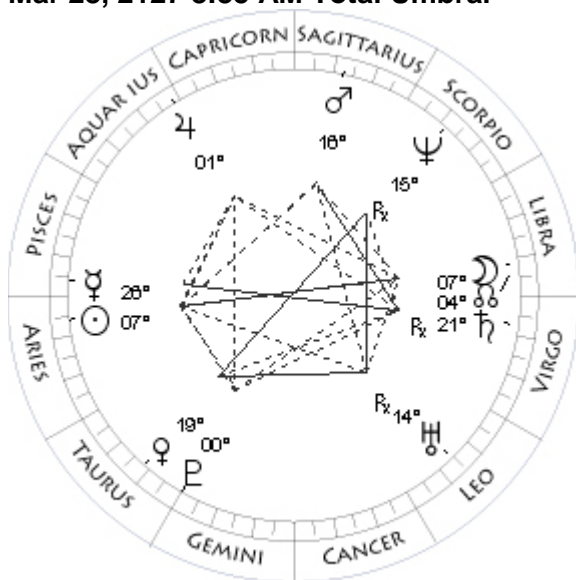
Oct 16, 2126 9:08 AM Total Solar

Mo 02Ta18 - 0°54	Mo 22Li40 + 0°51
Su 02Ta26 - 0°00	Su 22Li48 - 0°00
Me 00Ta44 - 0°43	Me 19Li36 - 1°12R
Ve 23Pi40 - 1°16	Ve 28Li56 + 0°56
Ma 20Ta32 + 0°14	Ma 17Vi18 + 1°18
Ju 03Cp22 + 0°27R	Ju 28Sa10 + 0°05
Sa 06Vi37 + 1°57R	Sa 21Vi06 + 1°50
Ur 09Le50 + 0°40	Ur 17Le58 + 0°40
Ne 12Sc59 + 1°49R	Ne 13Sc02 + 1°42
Pl 00Ge07 -13°29	Pl 01Ge56 -13°52R
No 22Li10 - 0°00	No 12Li48 - 0°00
	Coords: 59W/45N

Mar 13, 2127 1:27 AM Partial Solar



Mar 28, 2127 8:35 AM Total Umbral



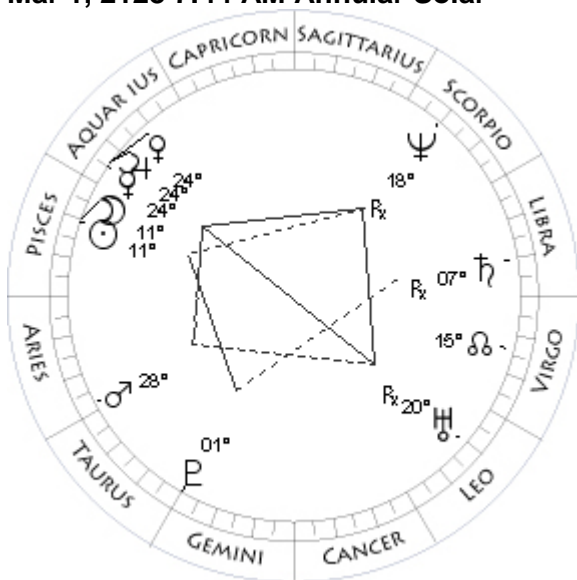
Sep 6, 2127 3:19 PM Partial Solar

Mo 22Pi04 + 1°07	Mo 13Vi42 - 1°03
Su 22Pi00 - 0°00	Su 13Vi38 - 0°00
Me 01Pi03 - 2°02	Me 10Li14 - 3°01
Ve 01Ta26 + 0°34	Ve 28Cn58 - 3°47
Ma 10Sa28 + 0°50	Ma 25Sa12 - 3°15
Ju 29Cp14 - 0°11	Ju 27Cp20 - 0°37R
Sa 23Vi07 + 2°22R	Sa 27Vi35 + 2°02
Ur 15Le11 + 0°43R	Ur 20Le32 + 0°40
Ne 16Sc04 + 1°48R	Ne 13Sc57 + 1°44
Pl 00Ge25 -13°28	Pl 03Ge14 -13°32R
No 04Li59 - 0°00	No 25Vi35 - 0°00

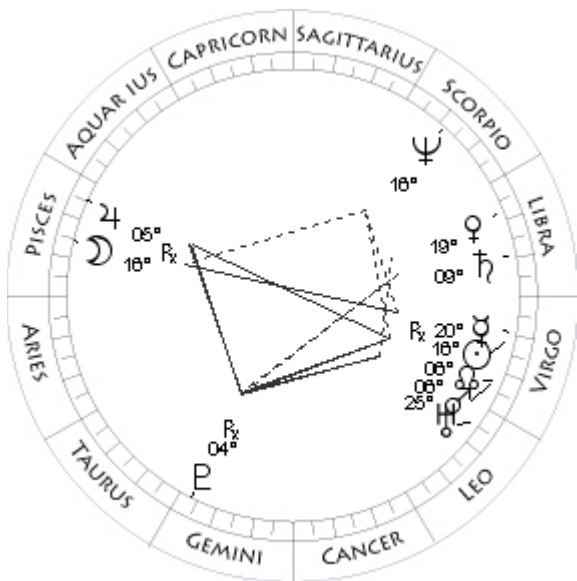
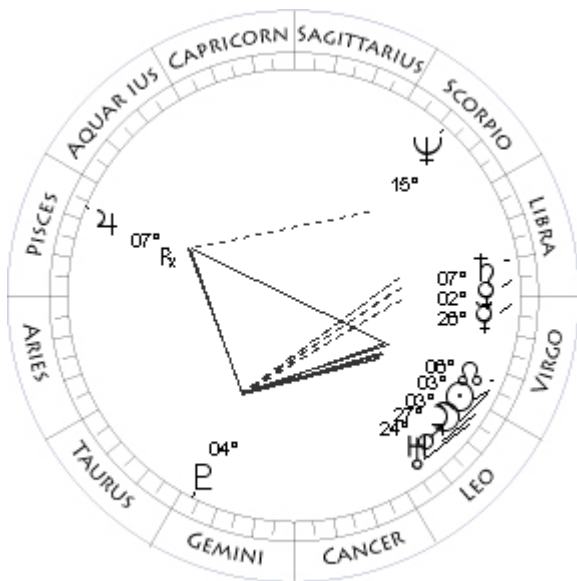
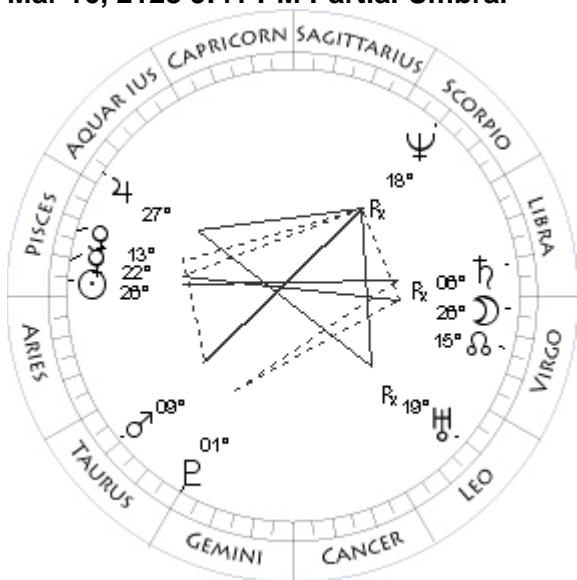
Sep 20, 2127 2:52 PM Total Umbral

Mo 07Li08 + 0°16	Mo 27Pi11 - 0°11
Su 07Ar13 - 0°00	Su 27Vi14 - 0°00
Me 26Pi44 - 2°04	Me 12Li21 - 4°02R
Ve 19Ta12 + 1°33	Ve 11Le15 - 2°16
Ma 16Sa26 + 0°34	Ma 02Cp57 - 2°59
Ju 01Aq50 - 0°13	Ju 26Cp53 - 0°37R
Sa 21Vi55 + 2°22R	Sa 29Vi19 + 2°02
Ur 14Le46 + 0°43R	Ur 21Le19 + 0°40
Ne 15Sc49 + 1°48R	Ne 14Sc18 + 1°43
Pl 00Ge37 -13°24	Pl 03Ge11 -13°36R
No 04Li11 - 0°00	No 24Vi51 - 0°00

Mar 1, 2128 7:44 AM Annular Solar



Mar 16, 2128 9:41 PM Partial Umbral



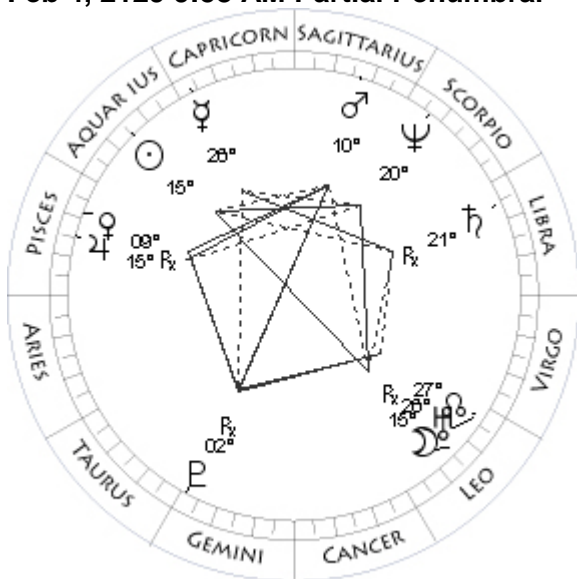
Aug 25, 2128 11:40 PM Annular Solar

Mo 11Pi00 + 0°27	Mo 03Vi06 - 0°20
Su 11Pi00 - 0°00	Su 03Vi07 - 0°00
Me 24Aq47 - 2°02	Me 26Vi33 - 3°46
Ve 24Aq10 - 1°03	Ve 02Li40 + 0°55
Ma 28Ar34 + 0°11	Ma 27Le15 + 1°09
Ju 24Aq11 - 0°41	Ju 07Pi40 - 1°20R
Sa 07Li43 + 2°35R	Sa 07Li32 + 2°13
Ur 20Le28 + 0°45R	Ur 24Le18 + 0°41
Ne 18Sc23 + 1°47R	Ne 15Sc53 + 1°44
Pl 01Ge18 -13°21	Pl 04Ge12 -13°18
No 16Vi14 - 0°00	No 06Vi49 - 0°00
Coords: 59W/19N	Coords: 180W/10S

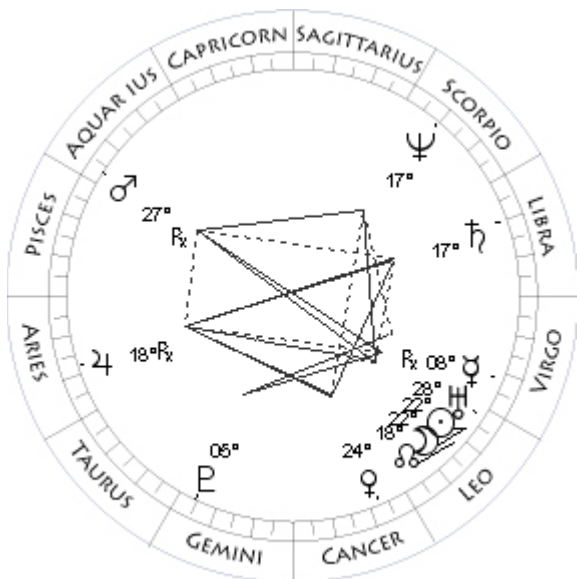
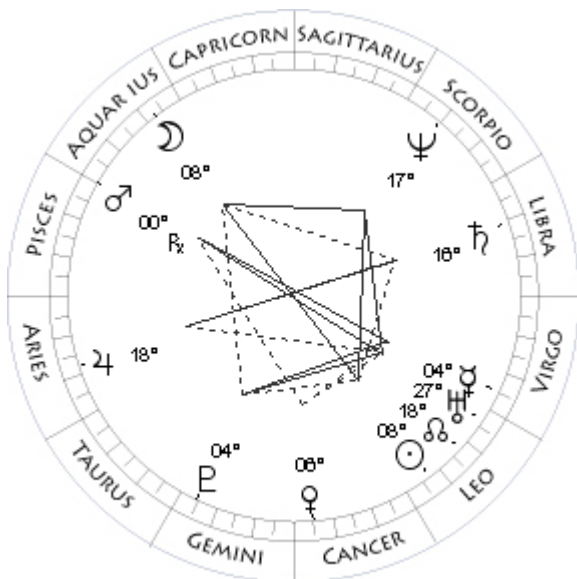
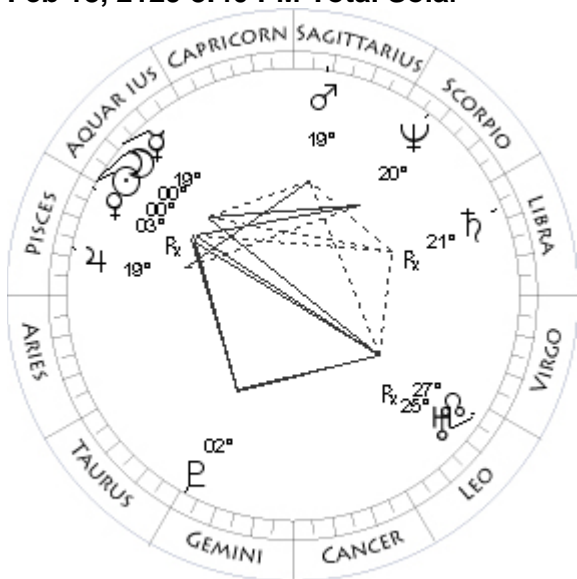
Sep 9, 2128 0:06 AM Partial Umbral

Mo 26Vi27 + 0°58	Mo 16Pi32 - 0°54
Su 26Pi35 - 0°00	Su 16Vi40 - 0°00
Me 22Pi01 - 1°51	Me 20Vi17 - 3°58R
Ve 13Pi33 - 1°23	Ve 19Li36 + 0°18
Ma 09Ta40 + 0°22	Ma 06Vi10 + 1°09
Ju 27Aq46 - 0°43	Ju 05Pi50 - 1°21R
Sa 06Li35 + 2°37R	Sa 09Li07 + 2°12
Ur 19Le54 + 0°45R	Ur 25Le09 + 0°41
Ne 18Sc13 + 1°48R	Ne 16Sc09 + 1°43
Pl 01Ge26 -13°16	Pl 04Ge13 -13°22R
No 15Vi24 - 0°00	No 06Vi05 - 0°00
Coords: 37W/ 2N	

Feb 4, 2129 9:58 AM Partial Penumbral



Feb 18, 2129 8:40 PM Total Solar



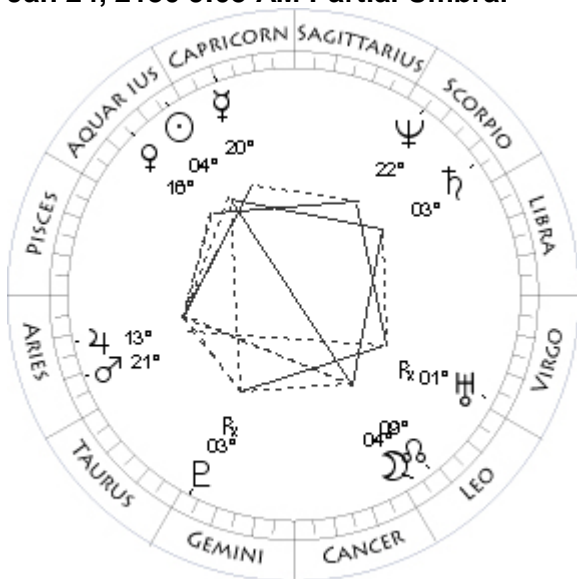
Jul 31, 2129 8:20 AM Partial Umbral

Mo 15Le40 - 1°05	Mo 08Aq19 + 0°56
Su 15Aq35 - 0°00	Su 08Le16 - 0°00
Me 26Cp51 - 1°03	Me 04Vi58 - 1°49
Ve 09Pi47 + 5°53R	Ve 06Cn23 - 0°54
Ma 10Sa39 + 0°25	Ma 00Pi40 - 6°25R
Ju 15Pi43 - 1°03	Ju 18Ar46 - 1°25
Sa 21Li42 + 2°35R	Sa 16Li31 + 2°24
Ur 26Le29 + 0°46R	Ur 27Le09 + 0°42
Ne 20Sc31 + 1°45	Ne 17Sc49 + 1°45
Pl 02Ge15 -13°18R	Pl 04Ge59 -13°01
No 28Le13 - 0°00	No 18Le51 - 0°00
Coords: 146E/15N	Coords: 124E/17S

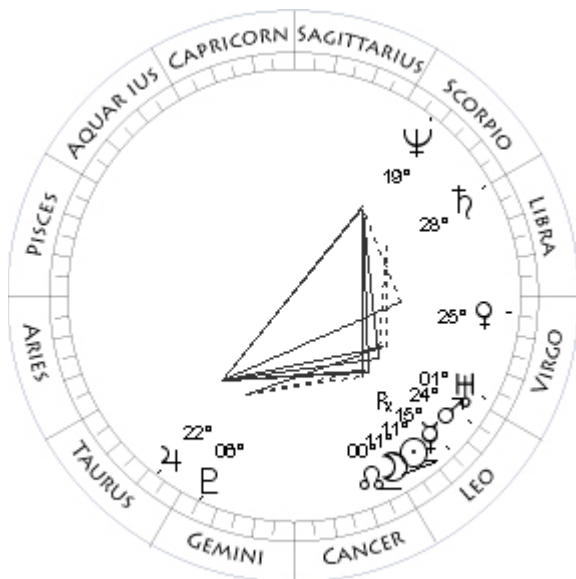
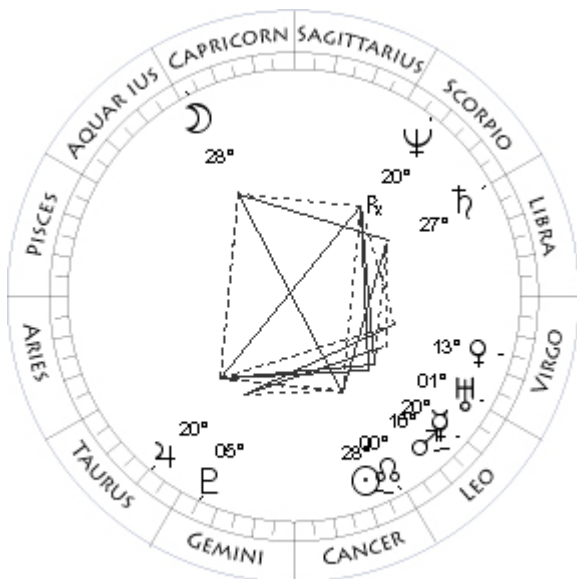
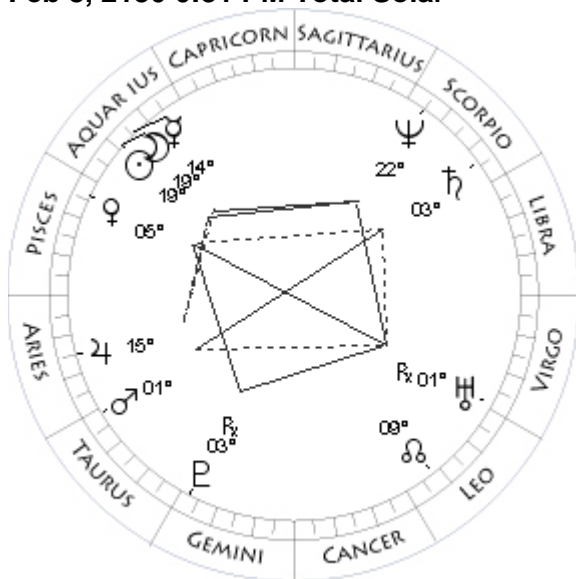
Aug 15, 2129 1:28 AM Annular Solar

Mo 00Pi13 - 0°00	Mo 22Le18 + 0°22
Su 00Pi13 - 0°00	Su 22Le22 - 0°00
Me 19Aq29 - 2°03	Me 08Vi20 - 4°30R
Ve 03Pi23 + 8°27R	Ve 24Cn00 - 0°10
Ma 19Sa46 + 0°14	Ma 27Aq37 - 6°50R
Ju 19Pi04 - 1°02	Ju 18Ar47 - 1°29R
Sa 21Li23 + 2°38R	Sa 17Li39 + 2°21
Ur 25Le51 + 0°46R	Ur 28Le03 + 0°42
Ne 20Sc35 + 1°46	Ne 17Sc53 + 1°45
Pl 02Ge14 -13°14	Pl 05Ge08 -13°04
No 27Le27 - 0°00	No 18Le04 - 0°00
Coords: 122E/25S	Coords: 166W/37N

Jan 24, 2130 9:05 AM Partial Umbral



Feb 8, 2130 0:31 PM Total Solar



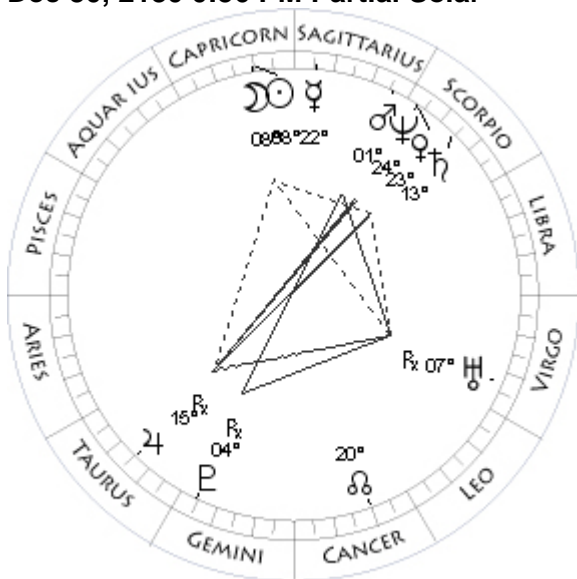
Jul 21, 2130 0:34 AM Total Umbral

Mo 04Le08 - 0°28	Mo 28Cp09 + 0°11
Su 04Aq08 - 0°00	Su 28Cn11 - 0°00
Me 20Cp14 - 1°12	Me 20Le30 - 2°43
Ve 16Aq09 - 1°26	Ve 13Vi36 - 0°01
Ma 21Ar52 + 0°24	Ma 16Le01 + 1°11
Ju 13Ar10 - 1°12	Ju 20Ta59 - 1°05
Sa 03Sc39 + 2°30	Sa 27Li33 + 2°28
Ur 01Vi52 + 0°47R	Ur 01Vi00 + 0°43
Ne 22Sc31 + 1°44	Ne 20Sc01 + 1°46R
Pl 03Ge18 -13°11R	Pl 05Ge49 -12°47
No 09Le28 - 0°00	No 00Le04 - 0°00
Coords: 134E/19N	

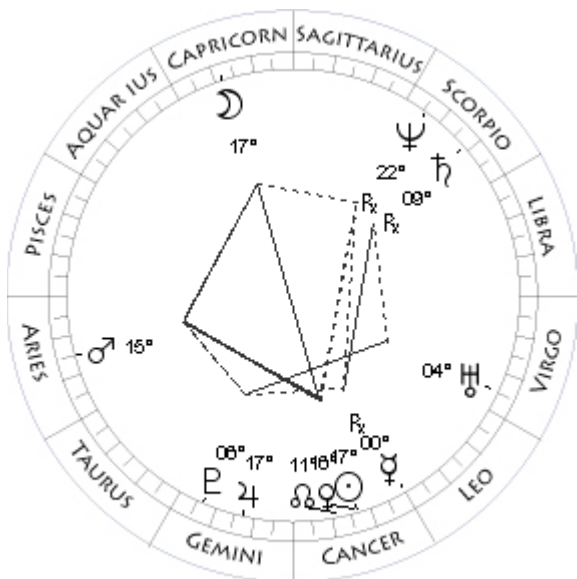
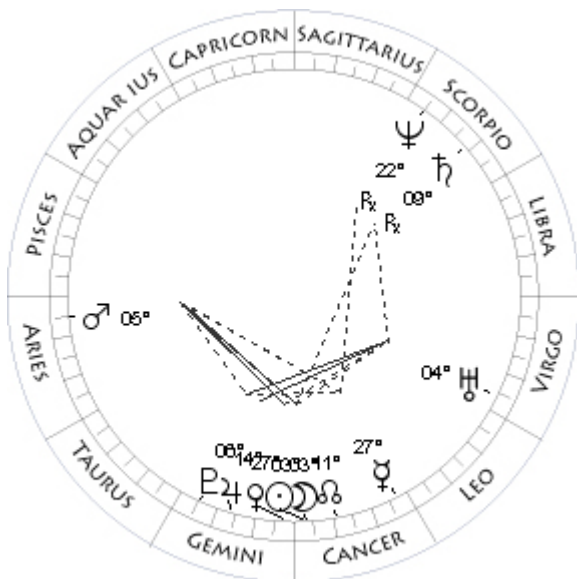
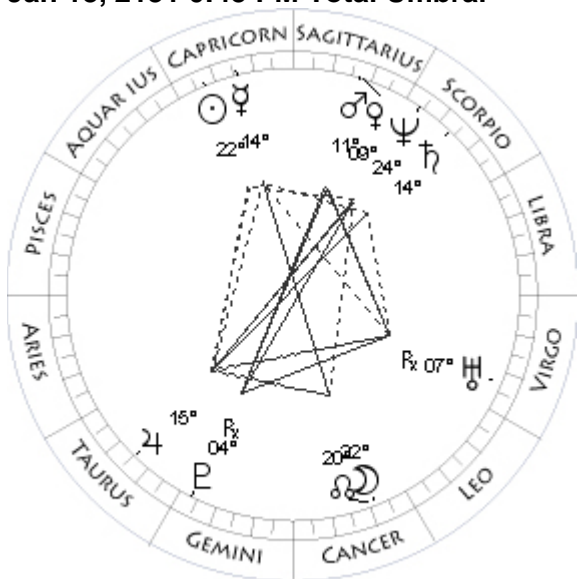
Aug 4, 2130 2:34 AM Partial Solar

Mo 19Aq22 - 0°56	Mo 11Le30 + 1°02
Su 19Aq30 - 0°00	Su 11Le38 - 0°00
Me 14Aq40 - 2°04	Me 15Le58 - 4°57R
Ve 05Pi07 - 1°30	Ve 25Vi28 - 1°44
Ma 01Ta43 + 0°38	Ma 24Le55 + 1°09
Ju 15Ar43 - 1°09	Ju 22Ta57 - 1°06
Sa 03Sc56 + 2°34	Sa 28Li10 + 2°24
Ur 01Vi16 + 0°47R	Ur 01Vi49 + 0°43
Ne 22Sc42 + 1°44	Ne 19Sc59 + 1°45
Pl 03Ge13 -13°06R	Pl 06Ge00 -12°50
No 08Le40 - 0°00	No 29Cn19 - 0°00
Coords: 51W/76S	

Dec 30, 2130 0:56 PM Partial Solar



Jan 13, 2131 0:45 PM Total Umbral



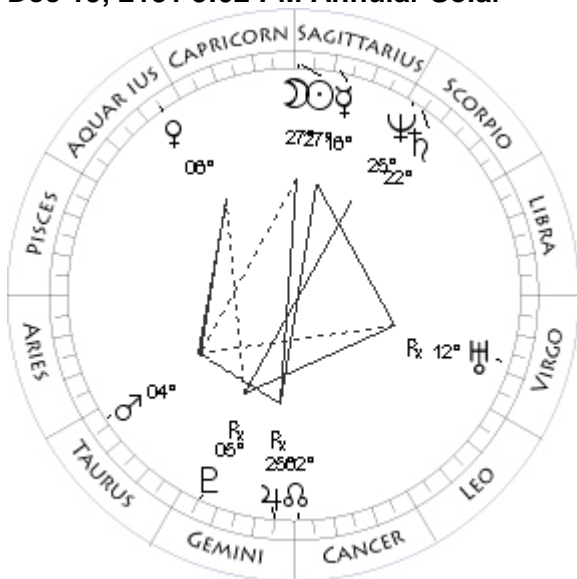
Jun 25, 2131 0:38 AM Total Solar

Mo 08Cp38 + 1°07	Mo 03Cn11 - 0°46
Su 08Cp35 - 0°00	Su 03Cn09 - 0°00
Me 22Sa58 + 0°08	Me 27Cn36 + 0°06
Ve 23Sc37 + 2°45	Ve 27Ge41 + 0°03
Ma 01Sa48 + 0°14	Ma 05Ar47 - 2°35
Ju 15Ta49 - 1°06R	Ju 14Ge18 - 0°34
Sa 13Sc24 + 2°17	Sa 09Sc27 + 2°30R
Ur 07Vi27 + 0°47R	Ur 04Vi19 + 0°45
Ne 24Sc04 + 1°42	Ne 22Sc34 + 1°46R
Pl 04Ge36 -13°05R	Pl 06Ge18 -12°32
No 21Cn28 - 0°00	No 12Cn07 - 0°00
	Coords: 175W/28S

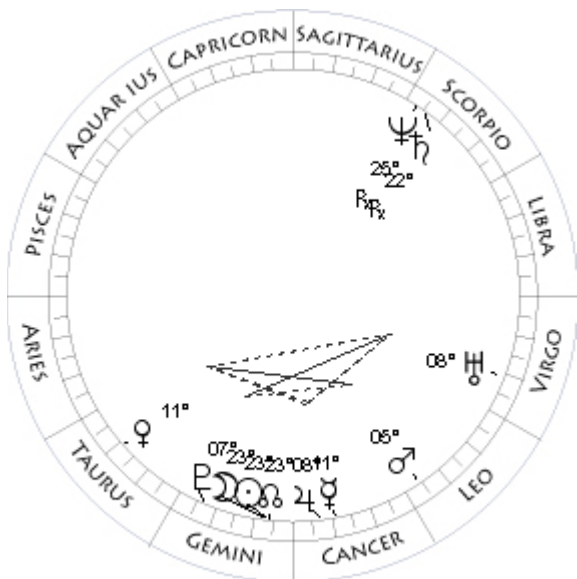
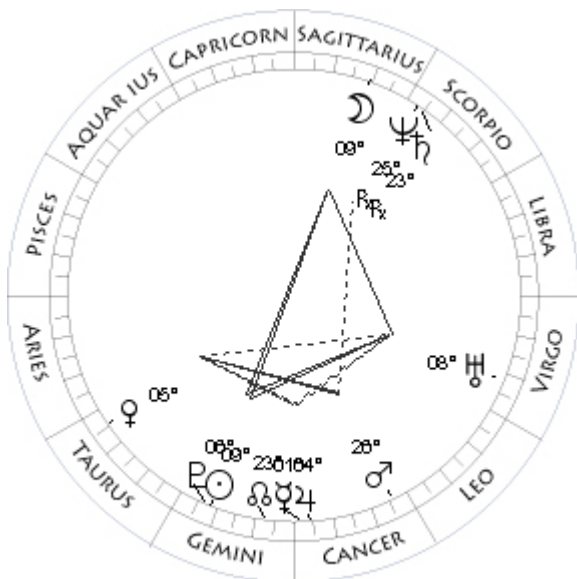
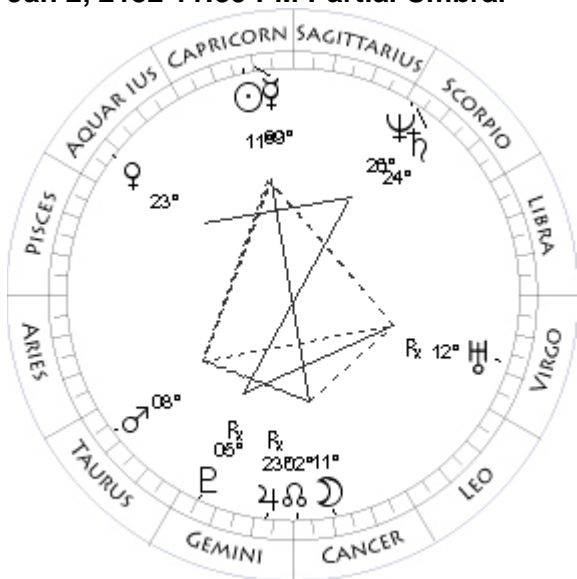
Jul 10, 2131 11:43 AM Partial Umbral

Mo 22Cn47 + 0°11	Mo 17Cp48 - 0°34
Su 22Cp50 - 0°00	Su 17Cn54 - 0°00
Me 14Cp18 - 1°22	Me 00Le40 - 3°41R
Ve 09Sa48 + 2°26	Ve 16Cn40 + 0°38
Ma 11Sa22 + 0°05	Ma 15Ar49 - 2°49
Ju 15Ta38 - 1°01	Ju 17Ge44 - 0°33
Sa 14Sc28 + 2°20	Sa 09Sc11 + 2°26R
Ur 07Vi09 + 0°47R	Ur 04Vi58 + 0°44
Ne 24Sc26 + 1°42	Ne 22Sc19 + 1°46R
Pl 04Ge24 -13°02R	Pl 06Ge36 -12°34
No 20Cn43 - 0°00	No 11Cn18 - 0°00
	Coords: 174E/23S

Dec 19, 2131 5:02 PM Annular Solar



Jan 2, 2132 11:39 PM Partial Umbral



May 30, 2132 0:38 AM Partial Penumbral

Mo 27Sa19 + 0°28	Mo 09Sa06 + 1°17
Su 27Sa18 - 0°00	Su 09Ge00 - 0°00
Me 16Sa47 - 0°09	Me 01Cn51 + 2°04
Ve 06Aq13 - 2°04	Ve 05Ta29 - 0°54
Ma 04Ta29 + 1°04	Ma 26Cn32 + 1°25
Ju 25Ge47 - 0°26R	Ju 04Cn59 - 0°02
Sa 22Sc59 + 2°05	Sa 23Sc12 + 2°23R
Ur 12Vi22 + 0°47R	Ur 08Vi19 + 0°46
Ne 25Sc50 + 1°41	Ne 25Sc22 + 1°46R
Pl 05Ge47 -12°55R	Pl 06Ge43 -12°20
No 02Cn42 - 0°00	No 24Ge07 - 0°00

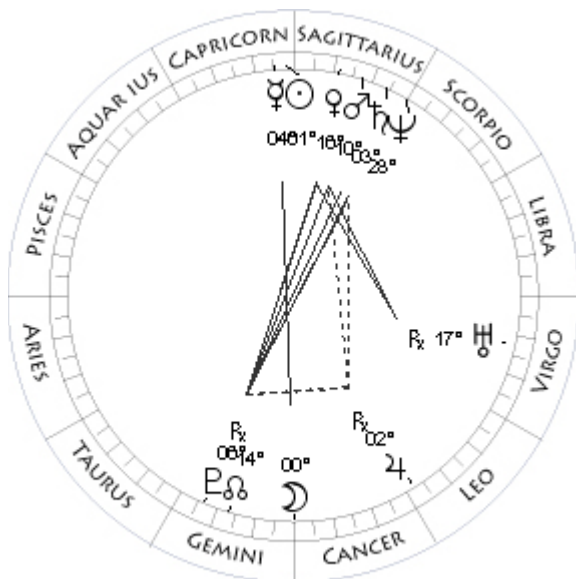
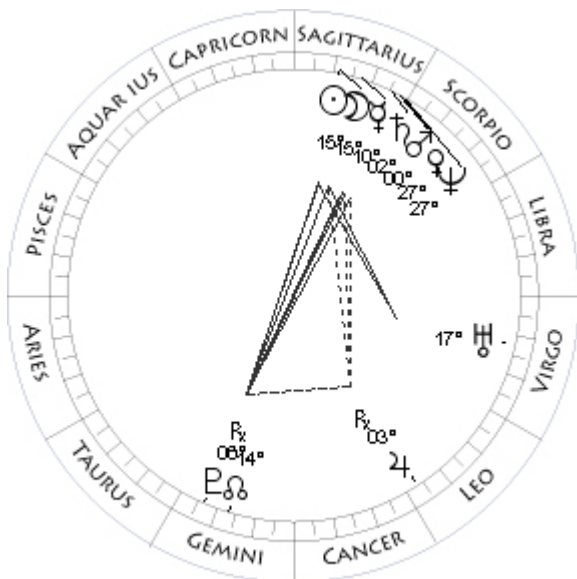
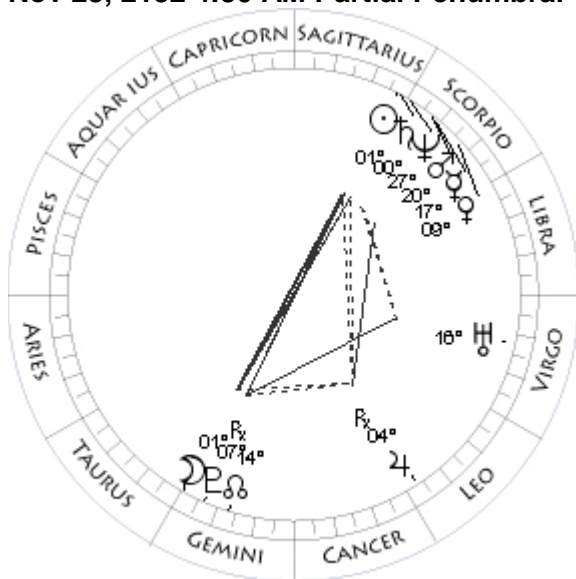
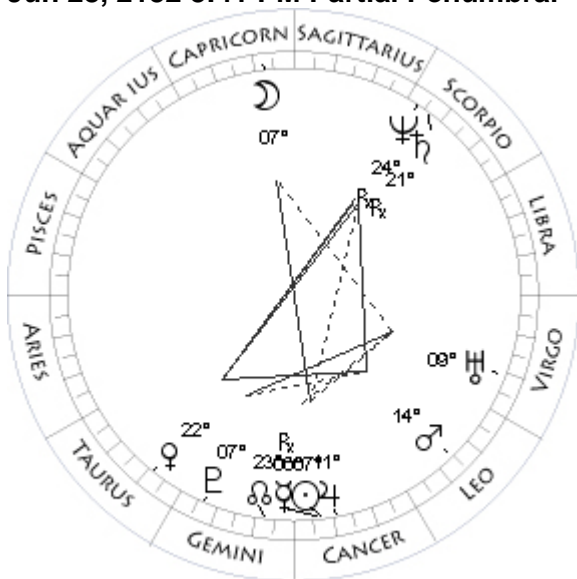
Jun 13, 2132 4:42 PM Total Solar

Mo 11Cn42 + 0°51	Mo 23Ge01 - 0°01
Su 11Cp51 - 0°00	Su 23Ge03 - 0°00
Me 09Cp04 - 1°33	Me 11Cn41 - 0°35
Ve 23Aq19 - 1°48	Ve 11Ta38 - 2°39
Ma 08Ta02 + 1°22	Ma 05Le27 + 1°21
Ju 23Ge54 - 0°24R	Ju 08Cn13 - 0°01
Sa 24Sc24 + 2°06	Sa 22Sc14 + 2°21R
Ur 12Vi15 + 0°47R	Ur 08Vi36 + 0°46
Ne 26Sc16 + 1°41	Ne 25Sc00 + 1°46R
Pl 05Ge33 -12°53R	Pl 07Ge03 -12°20
No 01Cn57 - 0°00	No 23Ge20 - 0°00

Coords: 6W/24N

Jun 28, 2132 3:41 PM Partial Penumbral

Nov 23, 2132 4:30 AM Partial Penumbral



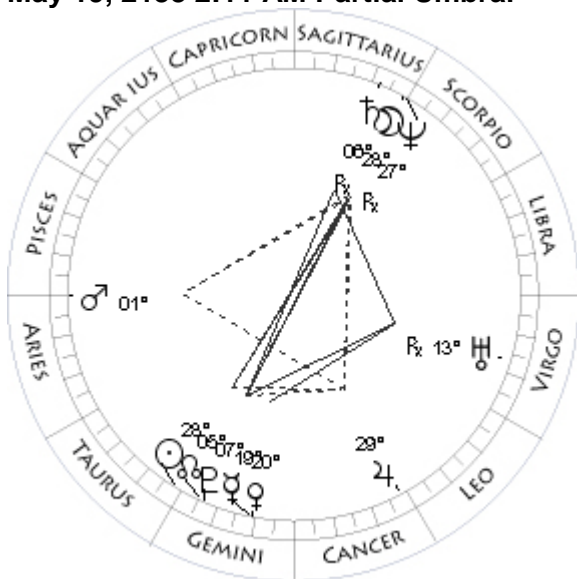
Dec 7, 2132 4:14 PM Annular Solar

Dec 22, 2132 2:55 PM Partial Penumbral

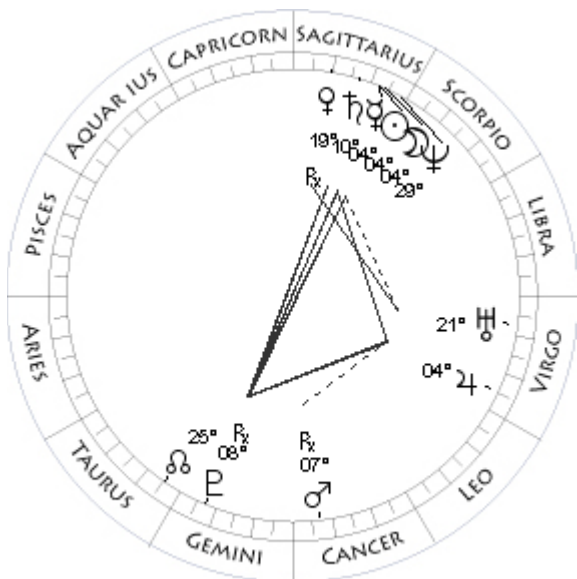
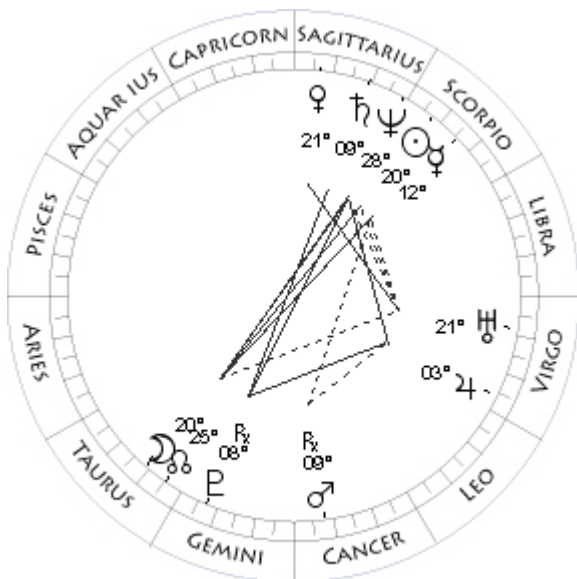
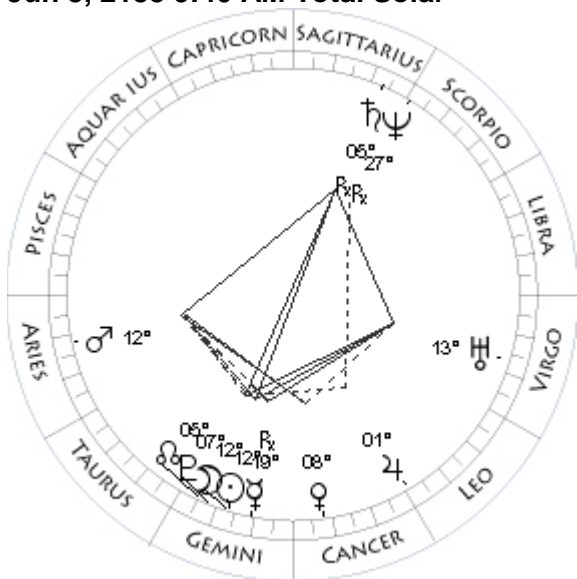
Mo 07Cp11 - 1°16	Mo 15Sa48 - 0°09
Su 07Cn20 - 0°00	Su 15Sa51 - 0°00
Me 06Cn46 - 4°18R	Me 10Sa39 - 0°23
Ve 22Ta29 - 3°23	Ve 27Sc57 + 1°05
Ma 14Le36 + 1°16	Ma 00Sa11 + 0°00
Ju 11Cn35 + 0°01	Ju 03Le55 + 0°22R
Sa 21Sc29 + 2°18R	Sa 02Sa02 + 1°50
Ur 09Vi04 + 0°45	Ur 17Vi03 + 0°46
Ne 24Sc42 + 1°45R	Ne 27Sc32 + 1°39
Pl 07Ge22 -12°21	Pl 06Ge59 -12°45R
No 22Ge33 - 0°00	No 13Ge58 - 0°00
Coords: 126W/24S	

Mo 01Ge14 - 1°12	Mo 00Cn51 + 1°31
Su 01Sa11 - 0°00	Su 01Cp02 - 0°00
Me 17Sc56 + 1°17	Me 04Cp11 - 1°44
Ve 09Sc49 + 1°28	Ve 16Sa43 + 0°32
Ma 20Sc06 + 0°09	Ma 10Sa45 - 0°09
Ju 04Le23 + 0°19R	Ju 02Le46 + 0°24R
Sa 00Sa19 + 1°50	Sa 03Sa44 + 1°50
Ur 16Vi46 + 0°46	Ur 17Vi09 + 0°47R
Ne 27Sc00 + 1°39	Ne 28Sc03 + 1°40
Pl 07Ge16 -12°45R	Pl 06Ge43 -12°43R
No 14Ge44 - 0°00	No 13Ge10 - 0°00
Coords: 136W/25N	

May 19, 2133 2:11 AM Partial Umbral



Jun 3, 2133 9:40 AM Total Solar



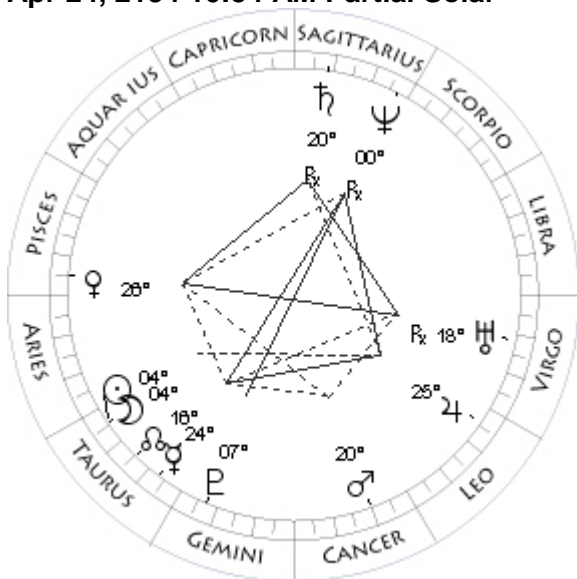
Nov 12, 2133 5:45 PM Partial Umbral

Mo 28Sc16 + 0°37	Mo 20Ta25 - 0°30
Su 28Ta15 - 0°00	Su 20Sc24 - 0°00
Me 19Ge07 + 2°04	Me 12Sc27 + 0°57
Ve 20Ge19 + 0°53	Ve 21Sa33 - 4°49
Ma 01Ar05 - 1°34	Ma 09Cn10 + 1°23R
Ju 29Cn25 + 0°33	Ju 03Vi33 + 0°50
Sa 06Sa28 + 2°05R	Sa 09Sa13 + 1°34
Ur 13Vi01 + 0°47R	Ur 21Vi03 + 0°45
Ne 27Sc54 + 1°46R	Ne 28Sc42 + 1°38
Pl 07Ge25 -12°09	Pl 08Ge28 -12°33R
No 05Ge22 - 0°00	No 25Ta57 - 0°00
	Coords: 90W/17N

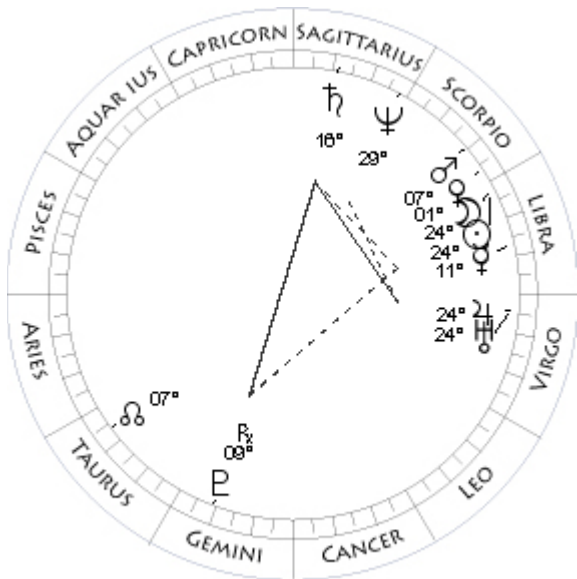
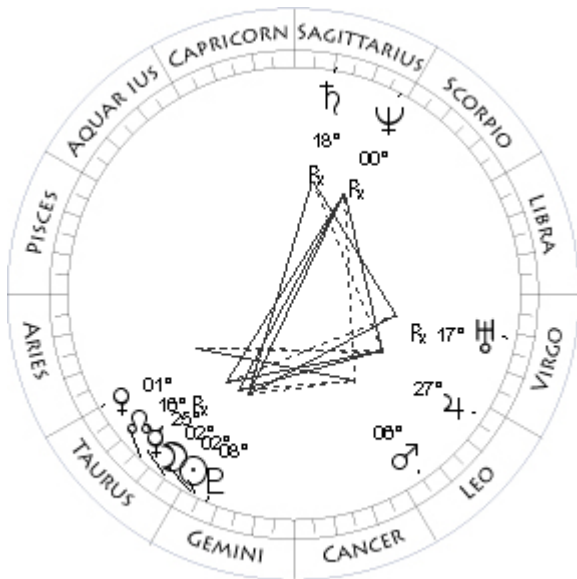
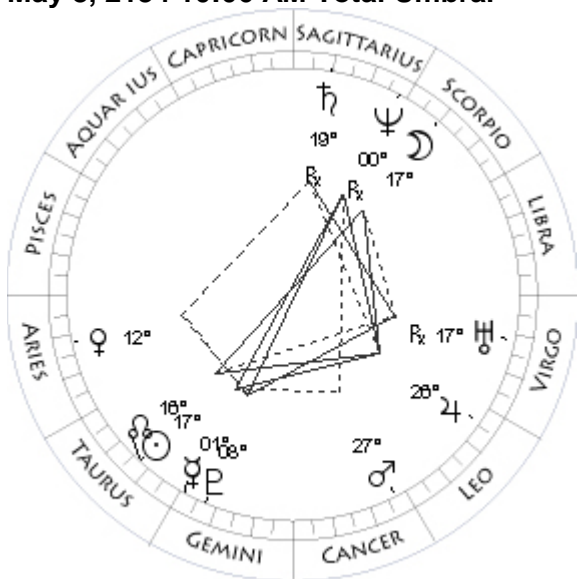
Nov 26, 2133 6:01 PM Annular Solar

Mo 12Ge50 + 0°43	Mo 04Sa25 - 0°47
Su 12Ge58 - 0°00	Su 04Sa32 - 0°00
Me 19Ge57 - 1°28R	Me 04Sa53 - 0°37
Ve 08Cn55 + 1°25	Ve 19Sa13 - 2°52R
Ma 12Ar36 - 1°36	Ma 07Cn37 + 2°05R
Ju 01Le58 + 0°33	Ju 04Vi54 + 0°53
Sa 05Sa20 + 2°04R	Sa 10Sa51 + 1°33
Ur 13Vi06 + 0°46	Ur 21Vi31 + 0°45
Ne 27Sc30 + 1°45R	Ne 29Sc13 + 1°38
Pl 07Ge46 -12°08	Pl 08Ge13 -12°33R
No 04Ge33 - 0°00	No 25Ta13 - 0°00
	Coords: 143E/72S

Apr 24, 2134 10:54 AM Partial Solar



May 8, 2134 10:06 AM Total Umbral



May 23, 2134 10:56 PM Partial Solar

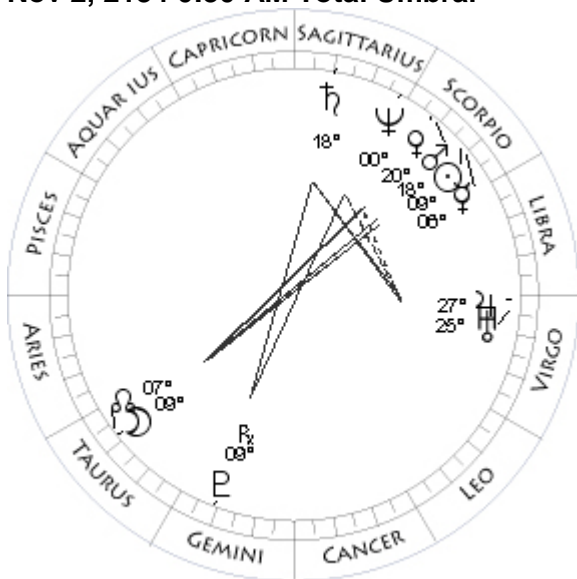
Mo 04Ta12 - 1°07	Mo 02Ge32 + 1°27
Su 04Ta09 - 0°00	Su 02Ge43 - 0°00
Me 24Ta01 + 2°36	Me 25Ta03 - 2°12R
Ve 26Pi12 - 1°21	Ve 01Ta19 - 1°48
Ma 20Cn36 + 1°56	Ma 06Le29 + 1°35
Ju 25Le53 + 1°09	Ju 27Le22 + 1°05
Sa 20Sa06 + 1°41R	Sa 18Sa25 + 1°41R
Ur 18Vi13 + 0°48R	Ur 17Vi48 + 0°47R
Ne 00Sa47 + 1°44R	Ne 00Sa01 + 1°44R
Pl 07Ge51 -12°00	Pl 08Ge30 -11°57
No 17Ta20 - 0°00	No 15Ta47 - 0°00

Oct 17, 2134 4:35 PM Partial Solar

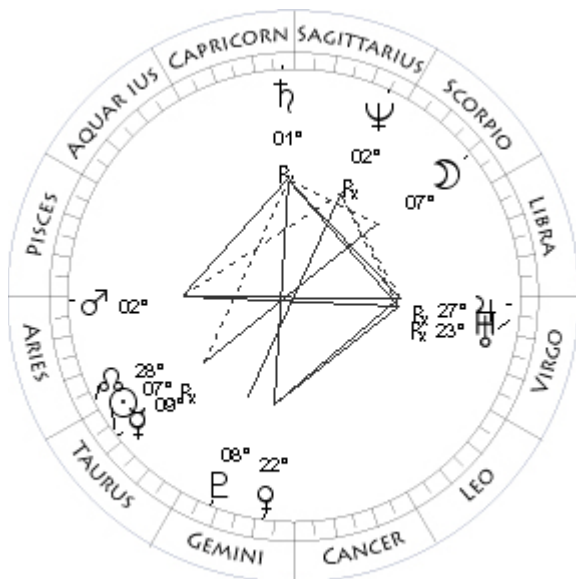
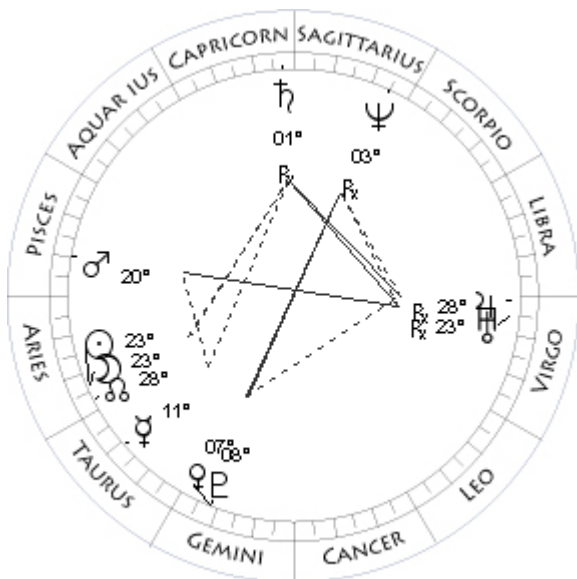
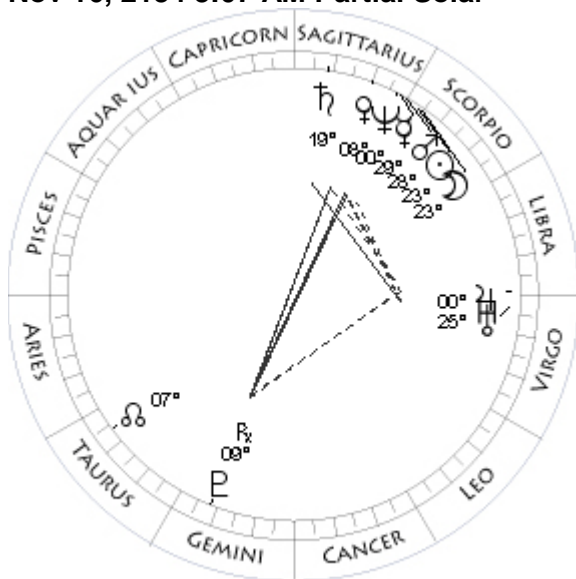
Mo 17Sc40 - 0°06	Mo 24Li13 + 1°12
Su 17Ta43 - 0°00	Su 24Li10 - 0°00
Me 01Ge58 + 1°54	Me 11Li03 + 1°56
Ve 12Ar46 - 1°43	Ve 01Sc15 + 0°52
Ma 27Cn57 + 1°46	Ma 07Sc47 + 0°05
Ju 26Le16 + 1°07	Ju 24Vi36 + 1°02
Sa 19Sa25 + 1°41R	Sa 16Sa46 + 1°18
Ur 17Vi56 + 0°47R	Ur 24Vi20 + 0°44
Ne 00Sa26 + 1°44R	Ne 29Sc53 + 1°38
Pl 08Ge09 -11°58	Pl 09Ge54 -12°17R
No 16Ta36 - 0°00	No 08Ta00 - 0°00

Coords: 152E/17S

Nov 2, 2134 0:30 AM Total Umbral



Nov 16, 2134 3:07 AM Partial Solar



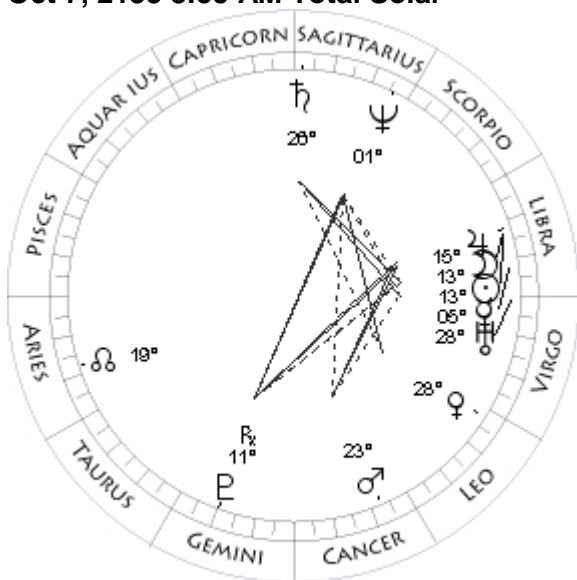
Apr 13, 2135 1:22 PM Annular Solar

Mo 09Ta22 + 0°11	Mo 23Ar15 - 0°27
Su 09Sc25 - 0°00	Su 23Ar15 - 0°00
Me 06Sc59 + 0°41	Me 11Ta31 + 3°00
Ve 20Sc25 + 0°19	Ve 07Ge38 + 2°35
Ma 18Sc22 - 0°04	Ma 20Pi50 - 1°12
Ju 27Vi34 + 1°04	Ju 28Vi29 + 1°33R
Sa 18Sa12 + 1°16	Sa 01Cp58 + 1°13R
Ur 25Vi09 + 0°44	Ur 23Vi32 + 0°48R
Ne 00Sa24 + 1°37	Ne 03Sa15 + 1°42R
Pl 09Ge40 -12°19R	Pl 08Ge37 -11°50
No 07Ta12 - 0°00	No 28Ar35 - 0°00

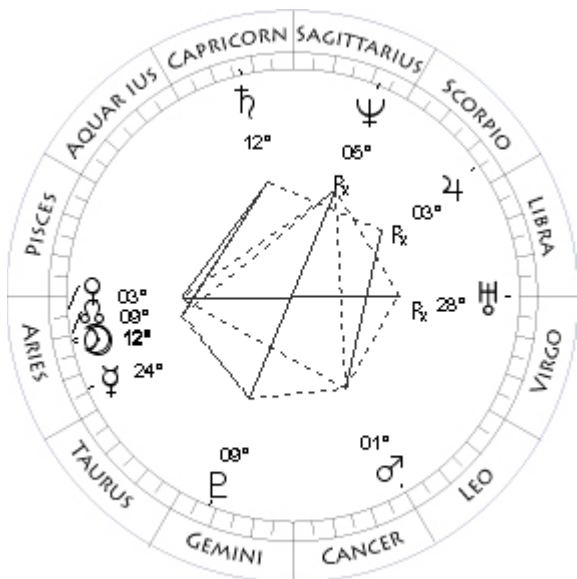
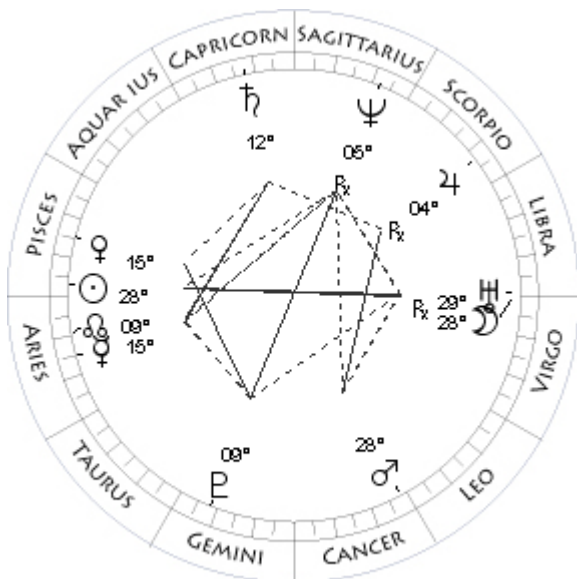
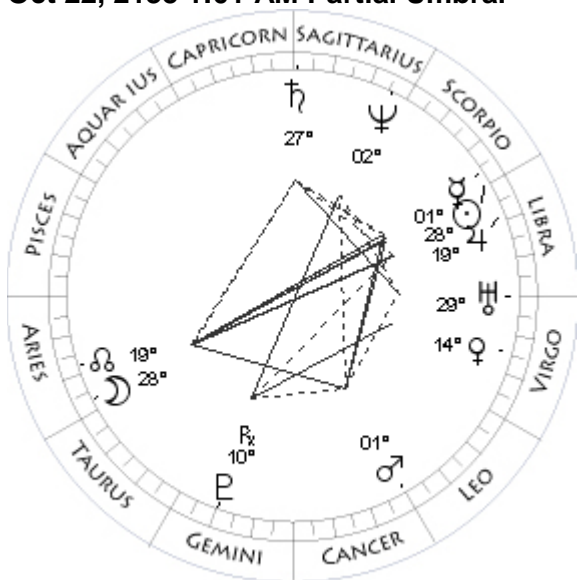
Apr 28, 2135 0:21 AM Partial Umbral

Mo 23Sc23 - 1°27	Mo 07Sc14 - 0°51
Su 23Sc34 - 0°00	Su 07Ta23 - 0°00
Me 29Sc37 - 0°53	Me 09Ta24 + 1°24R
Ve 08Sa03 - 0°16	Ve 22Ge47 + 3°13
Ma 28Sc16 - 0°13	Ma 02Ar04 - 1°11
Ju 00Li03 + 1°06	Ju 27Vi09 + 1°30R
Sa 19Sa41 + 1°14	Sa 01Cp44 + 1°14R
Ur 25Vi47 + 0°44	Ur 23Vi04 + 0°47R
Ne 00Sa55 + 1°37	Ne 02Sa56 + 1°43R
Pl 09Ge26 -12°20R	Pl 08Ge53 -11°47
No 06Ta27 - 0°00	No 27Ar49 - 0°00

Oct 7, 2135 8:55 AM Total Solar



Oct 22, 2135 1:01 AM Partial Umbral



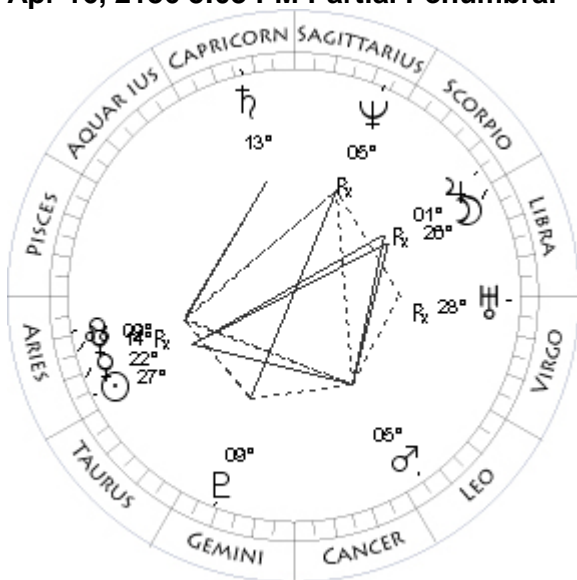
Mar 18, 2136 7:49 AM Partial Penumbral

Mo 13Li43 + 0°30	Mo 28Vi07 + 1°05
Su 13Li43 - 0°00	Su 28Pi04 - 0°00
Me 05Li50 + 1°45	Me 15Ar31 + 1°24
Ve 28Le23 - 0°31	Ve 15Pi59 - 1°24
Ma 23Cn34 + 0°49	Ma 28Cn43 + 3°19
Ju 15Li52 + 1°06	Ju 04Sc51 + 1°28R
Sa 26Sa31 + 0°56	Sa 12Cp21 + 0°45
Ur 28Vi13 + 0°43	Ur 29Vi34 + 0°47R
Ne 01Sa41 + 1°37	Ne 05Sa47 + 1°40R
Pl 11Ge01 -12°03R	Pl 09Ge16 -11°44
No 19Ar13 - 0°00	No 10Ar36 - 0°00
Coords: 58W/20N	Coords: 115E/ 2N

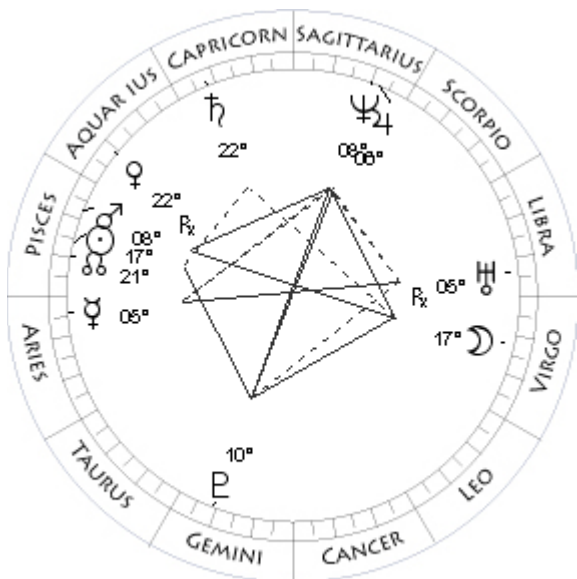
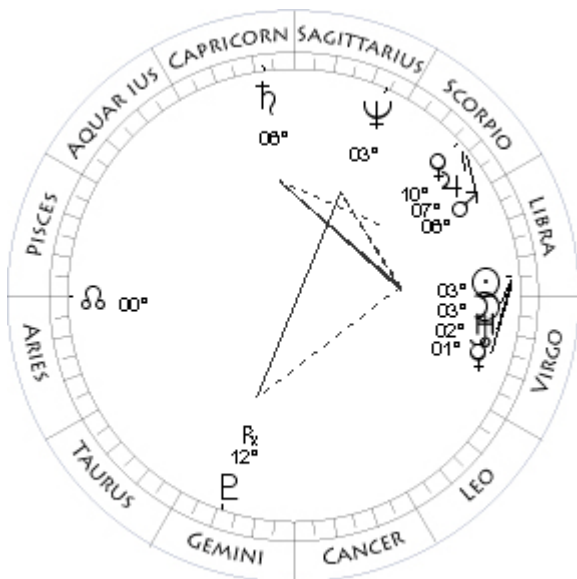
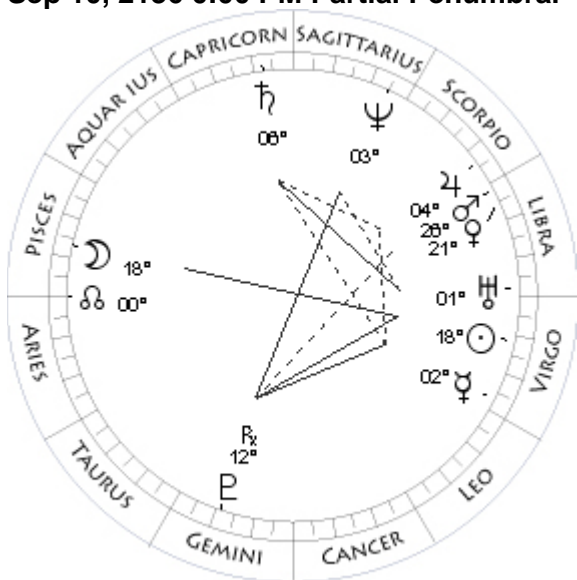
Apr 1, 2136 1:21 PM Annular Solar

Mo 28Ar07 + 0°49	Mo 12Ar07 + 0°12
Su 28Li14 - 0°00	Su 12Ar11 - 0°00
Me 01Sc15 + 0°26	Me 24Ar30 + 3°20
Ve 14Vi31 + 0°37	Ve 03Ar40 - 1°27
Ma 01Le01 + 1°10	Ma 01Le24 + 2°51
Ju 19Li03 + 1°06	Ju 03Sc28 + 1°30R
Sa 27Sa31 + 0°54	Sa 12Cp58 + 0°45
Ur 29Vi05 + 0°43	Ur 28Vi57 + 0°47R
Ne 02Sa07 + 1°37	Ne 05Sa39 + 1°41R
Pl 10Ge51 -12°05R	Pl 09Ge26 -11°40
No 18Ar27 - 0°00	No 09Ar50 - 0°00

Apr 16, 2136 5:03 PM Partial Penumbral



Sep 10, 2136 0:00 PM Partial Penumbral



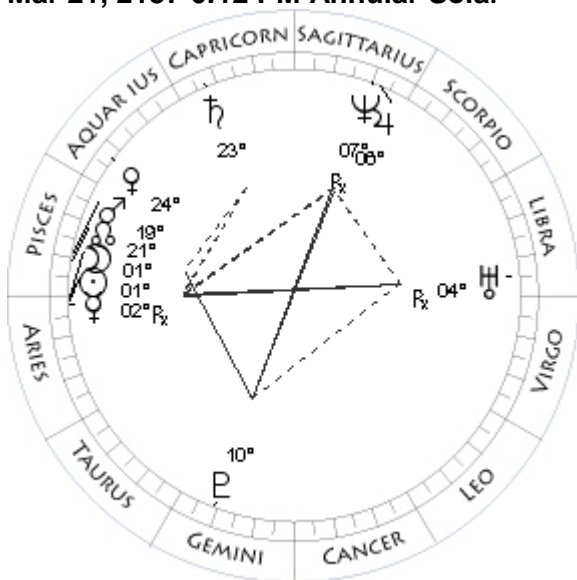
Sep 26, 2136 0:07 AM Total Solar

Mo 26Li53 - 1°33	Mo 03Li14 - 0°13
Su 27Ar05 - 0°00	Su 03Li18 - 0°00
Me 14Ar51 + 0°36R	Me 01Li12 + 1°34
Ve 22Ar27 - 1°16	Ve 10Sc32 - 0°41
Ma 05Le59 + 2°25	Ma 06Sc40 - 0°09
Ju 01Sc38 + 1°30R	Ju 07Sc13 + 0°58
Sa 13Cp17 + 0°45	Sa 06Cp54 + 0°32
Ur 28Vi22 + 0°47R	Ur 02Li03 + 0°42
Ne 05Sa24 + 1°41R	Ne 03Sa33 + 1°36
Pl 09Ge40 -11°37	Pl 12Ge05 -11°47R
No 09Ar02 - 0°00	No 00Ar27 - 0°00
Coords: 103W/12S	Coords: 169W/13S

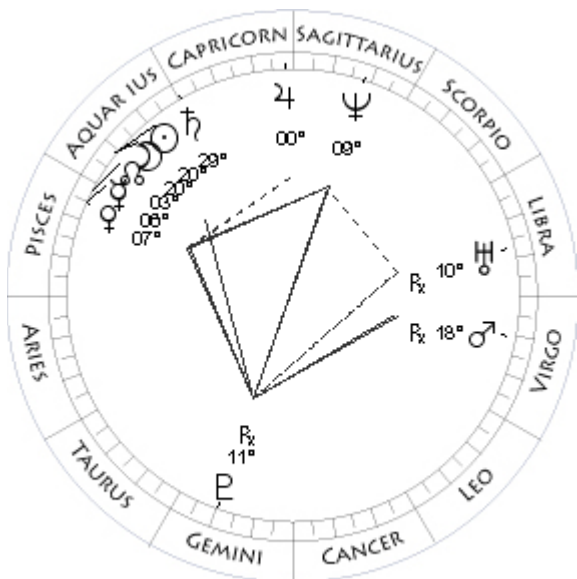
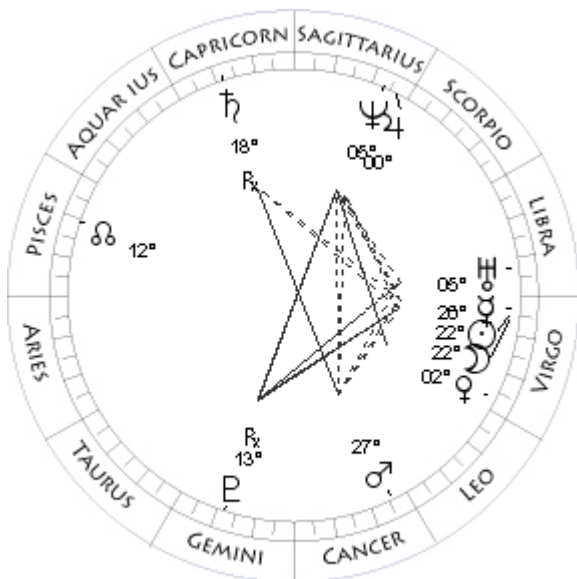
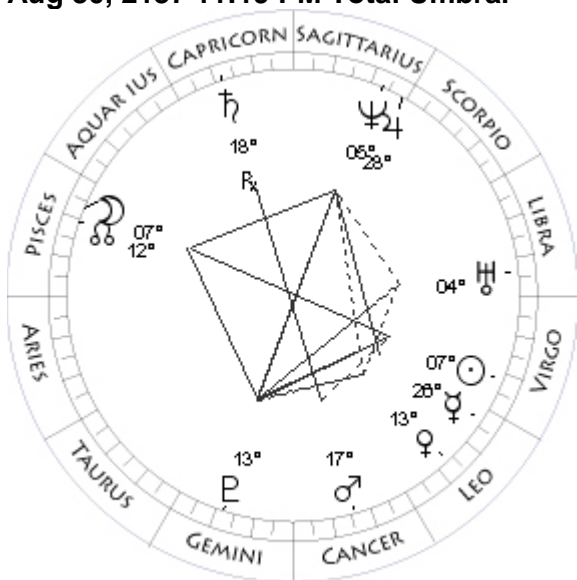
Mar 7, 2137 7:09 PM Total Umbral

Mo 18Pi15 - 1°09	Mo 17Vi18 + 0°23
Su 18Vi11 - 0°00	Su 17Pi19 - 0°00
Me 02Vi50 + 1°19	Me 05Ar13 + 2°07
Ve 21Li59 + 0°11	Ve 22Aq10 + 7°34R
Ma 26Li19 + 0°01	Ma 08Pi45 - 1°04
Ju 04Sc16 + 1°00	Ju 06Sa01 + 0°59
Sa 06Cp42 + 0°34	Sa 22Cp09 + 0°18
Ur 01Li04 + 0°42	Ur 05Li02 + 0°46R
Ne 03Sa15 + 1°37	Ne 08Sa01 + 1°38
Pl 12Ge08 -11°44R	Pl 10Ge10 -11°35
No 01Ar16 - 0°00	No 21Pi49 - 0°00
	Coords: 76W/ 5N

Mar 21, 2137 6:12 PM Annular Solar



Aug 30, 2137 11:19 PM Total Umbral



Sep 15, 2137 9:51 AM Partial Solar

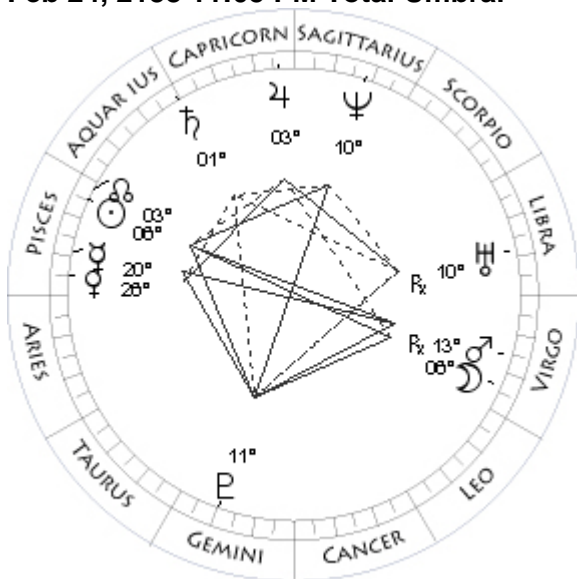
Mo 01Ar07 + 0°53	Mo 22Vi35 - 0°57
Su 01Ar14 - 0°00	Su 22Vi44 - 0°00
Me 02Ar40 + 3°24R	Me 26Vi23 + 1°23
Ve 24Aq07 + 5°11	Ve 02Vi50 + 1°07
Ma 19Pi45 - 1°01	Ma 27Cn00 + 0°51
Ju 06Sa21 + 1°01	Ju 00Sa31 + 0°38
Sa 23Cp12 + 0°17	Sa 18Cp06 + 0°04R
Ur 04Li26 + 0°46R	Ur 05Li51 + 0°41
Ne 07Sa58 + 1°38R	Ne 05Sa29 + 1°35
Pl 10Ge17 -11°31	Pl 13Ge08 -11°32R
No 21Pi05 - 0°00	No 11Pi41 - 0°00

Coords: 144E/55N

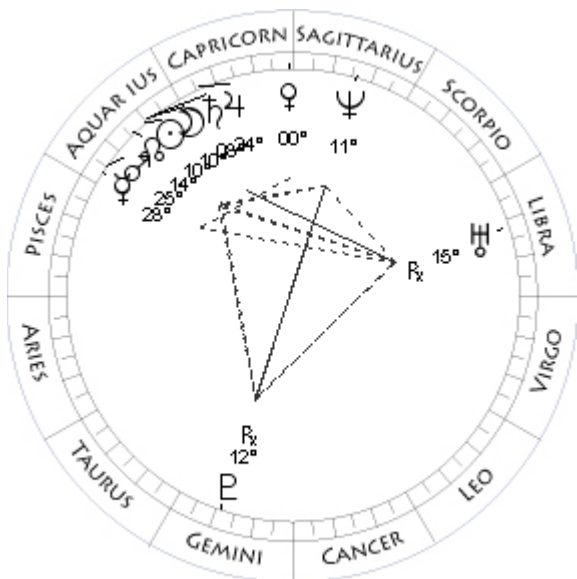
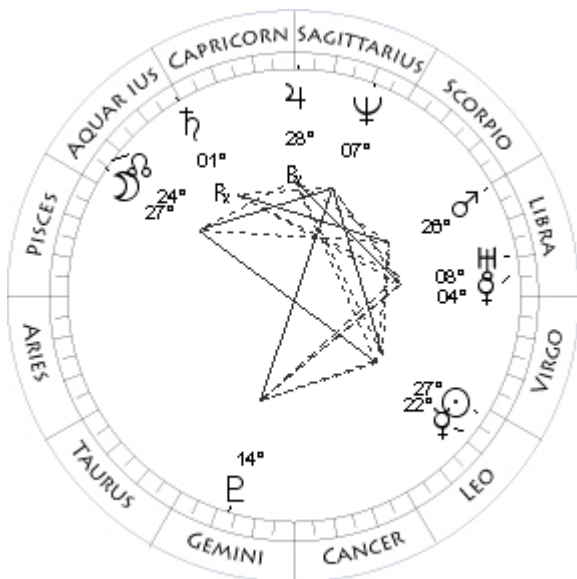
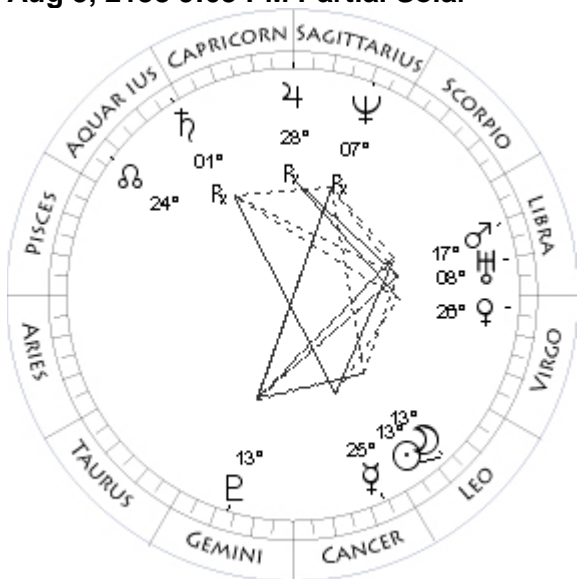
Feb 9, 2138 7:50 PM Partial Solar

Mo 07Pi45 - 0°25	Mo 20Aq57 - 1°06
Su 07Vi45 - 0°00	Su 20Aq54 - 0°00
Me 26Le48 + 1°31	Me 06Pi14 - 0°43
Ve 13Le55 + 0°35	Ve 07Pi25 - 1°29
Ma 17Cn17 + 0°38	Ma 18Vi31 + 4°09R
Ju 28Sc36 + 0°41	Ju 00Cp32 + 0°24
Sa 18Cp27 + 0°05R	Sa 29Cp47 - 0°07
Ur 04Li55 + 0°41	Ur 10Li50 + 0°44R
Ne 05Sa18 + 1°36	Ne 09Sa56 + 1°35
Pl 13Ge06 -11°29	Pl 11Ge10 -11°29R
No 12Pi30 - 0°00	No 03Pi52 - 0°00

Feb 24, 2138 11:05 PM Total Umbral



Aug 5, 2138 9:03 PM Partial Solar



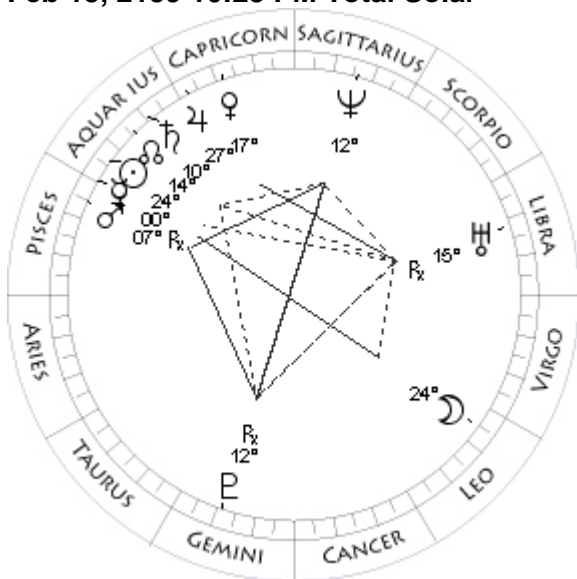
Aug 20, 2138 3:34 PM Total Umbral

Mo 06Vi07 - 0°17	Mo 27Aq30 + 0°19
Su 06Pi11 - 0°00	Su 27Le34 - 0°00
Me 20Pi19 + 2°50	Me 22Le18 + 1°40
Ve 26Pi17 - 1°16	Ve 04Li14 - 4°39
Ma 13Vi32 + 4°18R	Ma 26Li35 - 0°17
Ju 03Cp05 + 0°23	Ju 28Sa16 + 0°06R
Sa 01Aq26 - 0°08	Sa 01Aq00 - 0°25R
Ur 10Li24 + 0°44R	Ur 08Li51 + 0°40
Ne 10Sa08 + 1°35	Ne 07Sa26 + 1°35
Pl 11Ge08 -11°25	Pl 14Ge02 -11°13
No 03Pi04 - 0°00	No 23Aq43 - 0°00
Coords: 17W/ 9N	Coords: 127W/12S

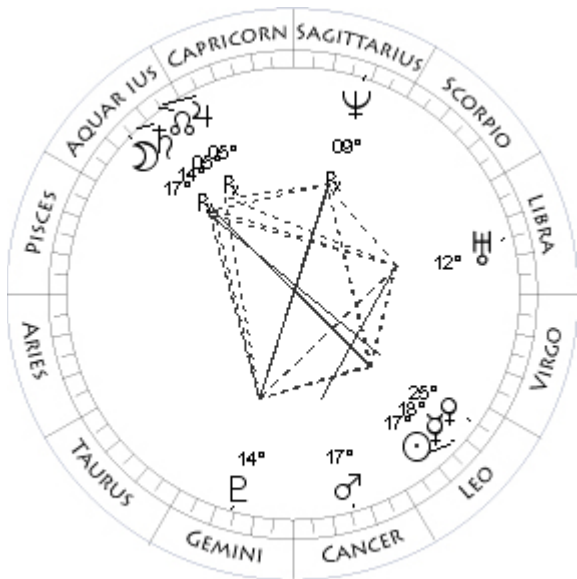
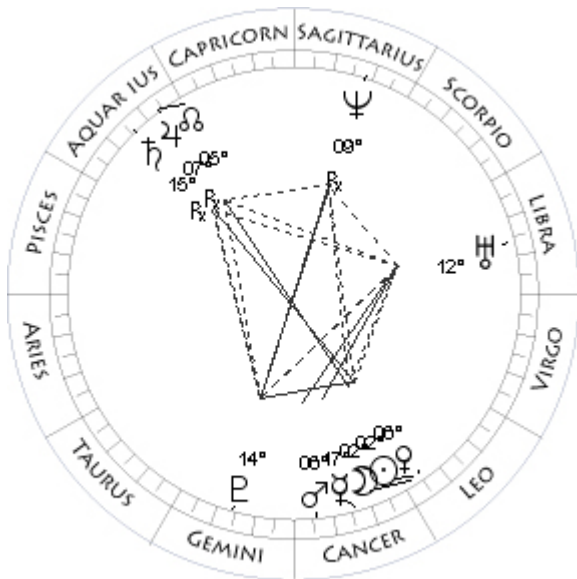
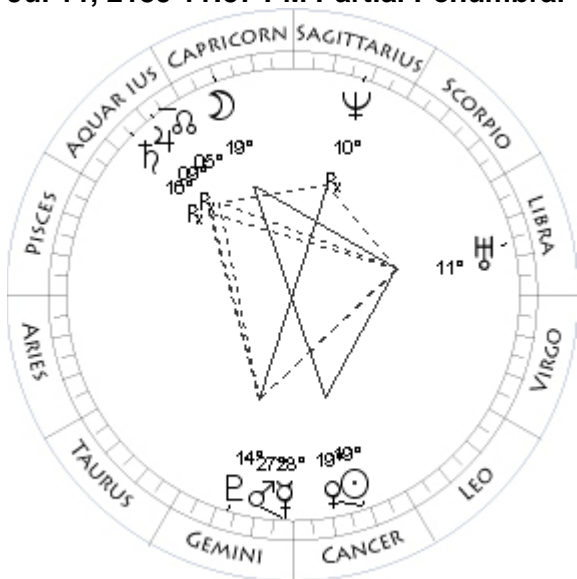
Jan 30, 2139 11:37 AM Total Solar

Mo 13Le27 + 0°58	Mo 10Aq09 - 0°26
Su 13Le24 - 0°00	Su 10Aq10 - 0°00
Me 25Cn08 - 0°34	Me 28Aq25 - 0°12
Ve 26Vi15 - 2°10	Ve 00Cp27 + 1°39
Ma 17Li28 - 0°05	Ma 25Aq49 - 1°04
Ju 28Sa49 + 0°08R	Ju 24Cp22 - 0°11
Sa 01Aq59 - 0°24R	Sa 08Aq42 - 0°32
Ur 08Li10 + 0°40	Ur 15Li51 + 0°42R
Ne 07Sa28 + 1°36R	Ne 11Sa52 + 1°32
Pl 13Ge52 -11°10	Pl 12Ge15 -11°18R
No 24Aq30 - 0°00	No 15Aq05 - 0°00
	Coords: 20W/41S

Feb 13, 2139 10:23 PM Total Solar



Jul 11, 2139 11:57 PM Partial Penumbra



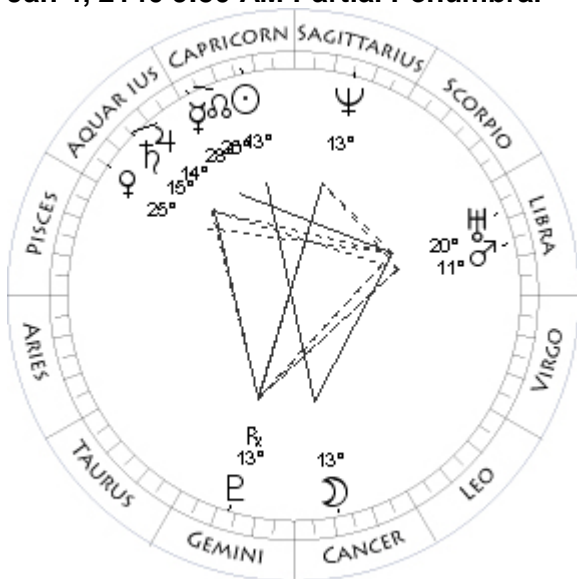
Jul 25, 2139 11:21 PM Annular Solar

Mo 24Le41 - 0°54	Mo 02Le44 + 0°16
Su 24Aq49 - 0°00	Su 02Le45 - 0°00
Me 00Pi31 + 3°25R	Me 17Cn18 - 0°04
Ve 17Cp53 + 0°52	Ve 06Le25 + 1°08
Ma 07Pi15 - 0°59	Ma 06Cn59 + 0°35
Ju 27Cp37 - 0°12	Ju 07Aq21 - 0°40R
Sa 10Aq25 - 0°33	Sa 15Aq15 - 0°54R
Ur 15Li37 + 0°42R	Ur 12Li20 + 0°39
Ne 12Sa09 + 1°33	Ne 09Sa48 + 1°35R
Pl 12Ge09 -11°15R	Pl 14Ge41 -10°55
No 14Aq20 - 0°00	No 05Aq45 - 0°00
Coords: 27W/12N	Coords: 162E/36N

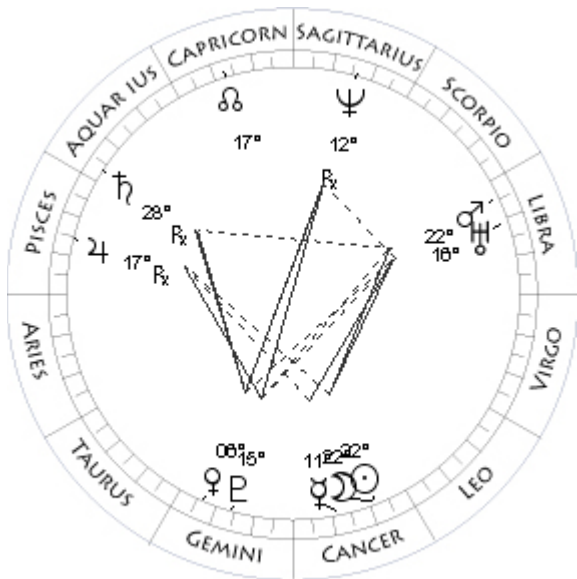
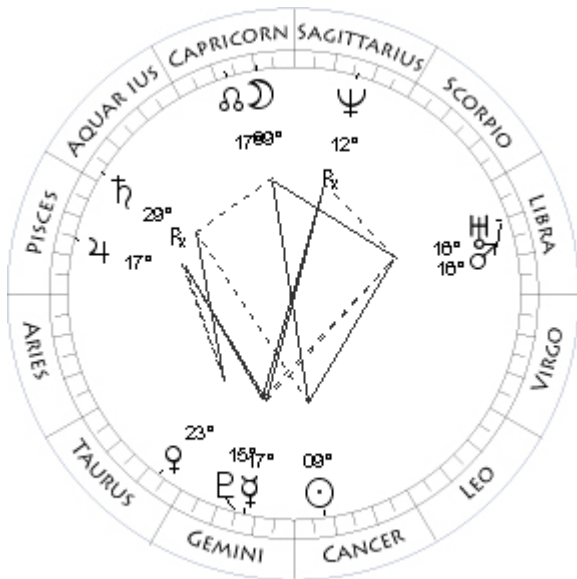
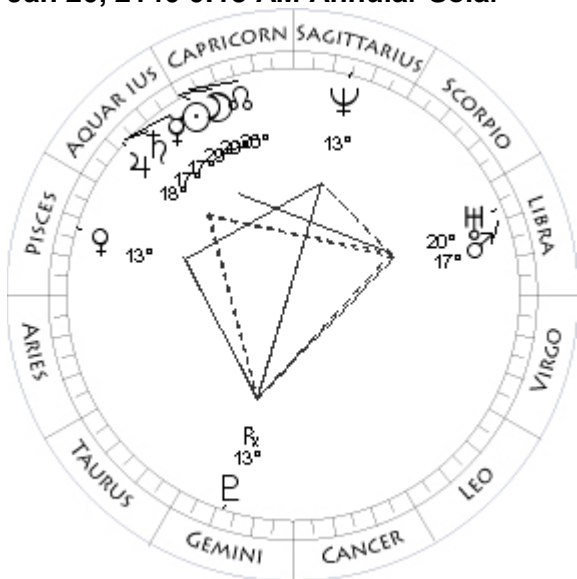
Aug 10, 2139 8:13 AM Partial Penumbra

Mo 19Cp30 - 1°28	Mo 17Aq18 + 1°03
Su 19Cn25 - 0°00	Su 17Le27 - 0°00
Me 28Ge41 - 3°08	Me 18Le21 + 1°45
Ve 19Cn13 + 0°43	Ve 25Le22 + 1°24
Ma 27Ge31 + 0°27	Ma 17Cn12 + 0°45
Ju 09Aq04 - 0°38R	Ju 05Aq22 - 0°42R
Sa 16Aq12 - 0°53R	Sa 14Aq07 - 0°56R
Ur 11Li59 + 0°40	Ur 12Li54 + 0°39
Ne 10Sa02 + 1°36R	Ne 09Sa39 + 1°34R
Pl 14Ge26 -10°53	Pl 14Ge55 -10°57
No 06Aq29 - 0°00	No 04Aq56 - 0°00
Coords: 3W/23S	Coords: 122E/15S

Jan 4, 2140 9:50 AM Partial Penumbral



Jan 20, 2140 0:18 AM Annular Solar



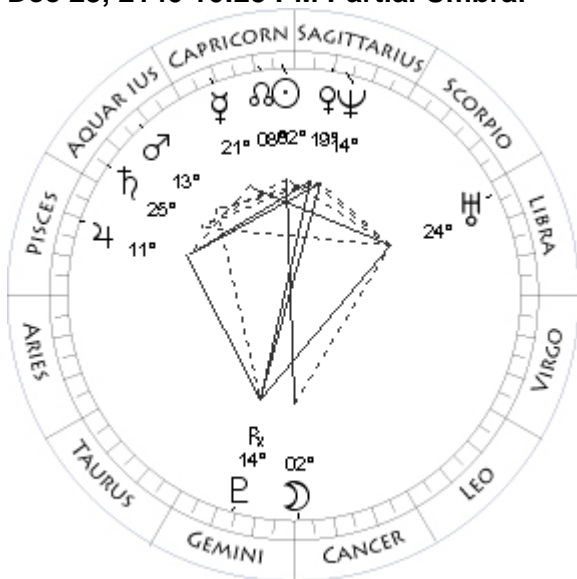
Jun 30, 2140 9:08 AM Partial Umbral

Mo 13Cn26 + 1°11	Mo 09Cp05 - 0°45
Su 13Cp22 - 0°00	Su 09Cn03 - 0°00
Me 28Cp22 - 2°02	Me 17Ge43 - 2°23
Ve 25Aq30 - 1°45	Ve 23Ta47 - 3°22
Ma 11Li40 + 2°16	Ma 16Li31 - 0°19
Ju 14Aq46 - 0°42	Ju 17Pi19 - 1°10
Sa 15Aq57 - 0°56	Sa 29Aq06 - 1°19R
Ur 20Li27 + 0°39	Ur 16Li32 + 0°38
Ne 13Sa14 + 1°30	Ne 12Sa30 + 1°34R
Pl 13Ge36 -11°10R	Pl 15Ge12 -10°39
No 27Cp09 - 0°00	No 17Cp43 - 0°00
Coords: 146E/24N	Coords: 136E/24S

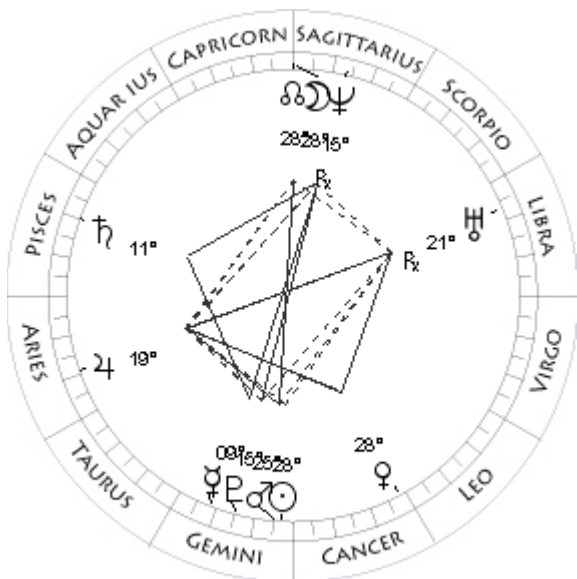
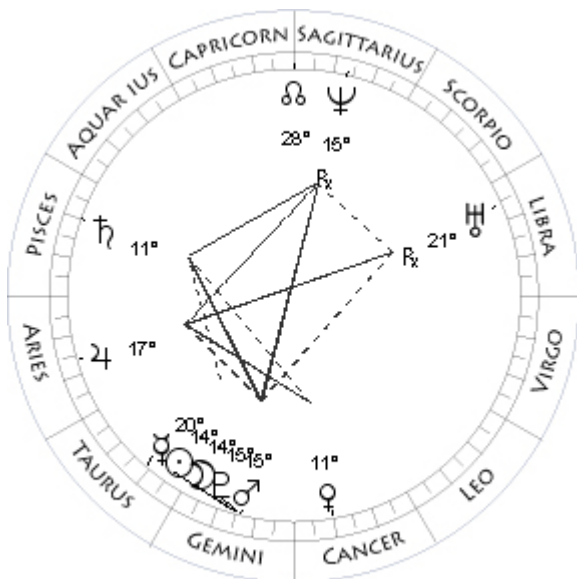
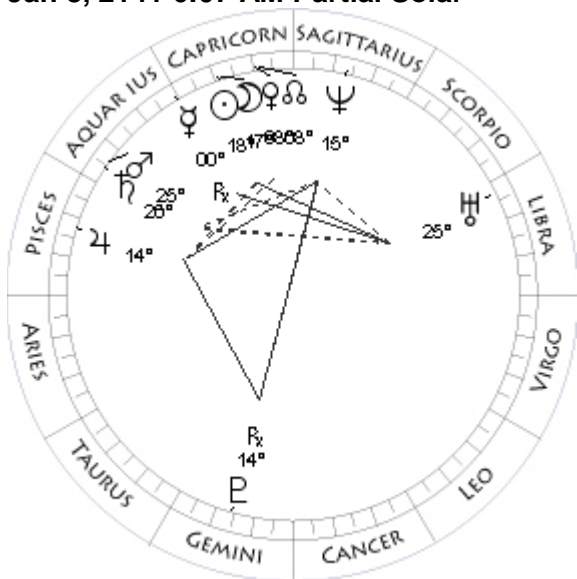
Jul 14, 2140 8:31 AM Total Solar

Mo 29Cp11 + 0°15	Mo 22Cn17 - 0°28
Su 29Cp16 - 0°00	Su 22Cn23 - 0°00
Me 17Aq05 + 0°29	Me 11Cn34 + 0°25
Ve 13Pi42 - 0°59	Ve 06Ge49 - 3°17
Ma 17Li40 + 2°28	Ma 22Li43 - 0°36
Ju 18Aq19 - 0°42	Ju 17Pi16 - 1°14R
Sa 17Aq42 - 0°57	Sa 28Aq29 - 1°22R
Ur 20Li38 + 0°39	Ur 16Li42 + 0°38
Ne 13Sa43 + 1°30	Ne 12Sa12 + 1°34R
Pl 13Ge23 -11°07R	Pl 15Ge29 -10°40
No 26Cp19 - 0°00	No 16Cp59 - 0°00

Dec 23, 2140 10:25 PM Partial Umbral



Jan 8, 2141 6:07 AM Partial Solar



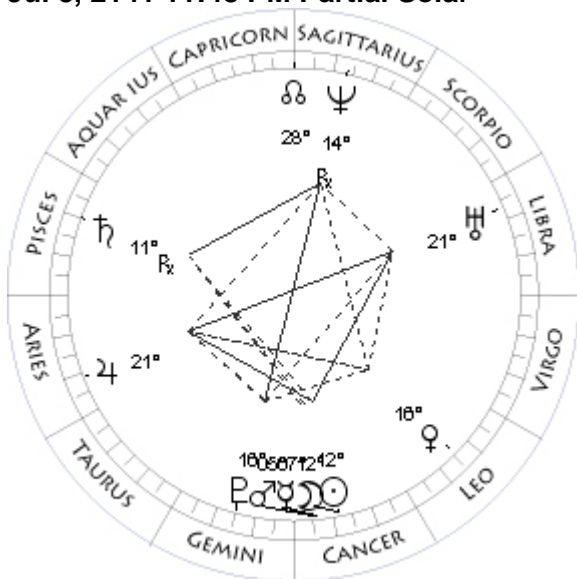
Jun 4, 2141 5:05 PM Partial Solar

Mo 02Cn27 + 0°31	Mo 14Ge22 + 1°19
Su 02Cp27 - 0°00	Su 14Ge18 - 0°00
Me 21Cp19 - 1°58	Me 20Ta17 - 3°39
Ve 19Sa03 + 0°27	Ve 11Cn08 + 1°29
Ma 13Aq17 - 1°13	Ma 15Ge42 + 0°29
Ju 11Pi44 - 1°10	Ju 17Ar11 - 1°11
Sa 25Aq31 - 1°21	Sa 11Pi13 - 1°38
Ur 24Li47 + 0°36	Ur 21Li30 + 0°37R
Ne 14Sa58 + 1°28	Ne 15Sa24 + 1°33R
Pl 14Ge49 -10°58R	Pl 15Ge36 -10°25
No 08Cp22 - 0°00	No 29Sa45 - 0°00
Coords: 24W/24N	

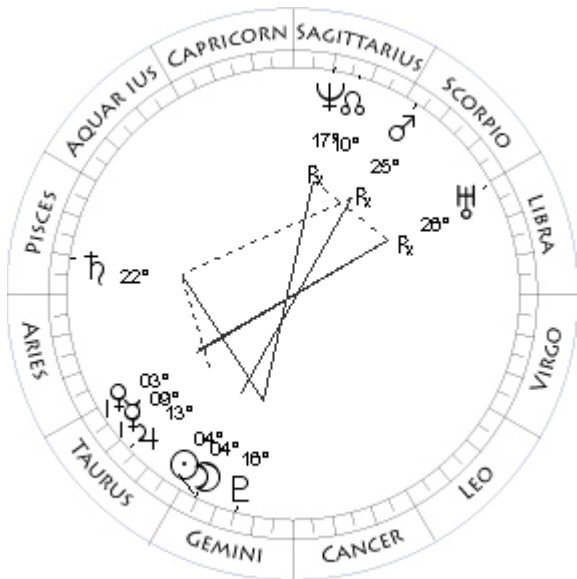
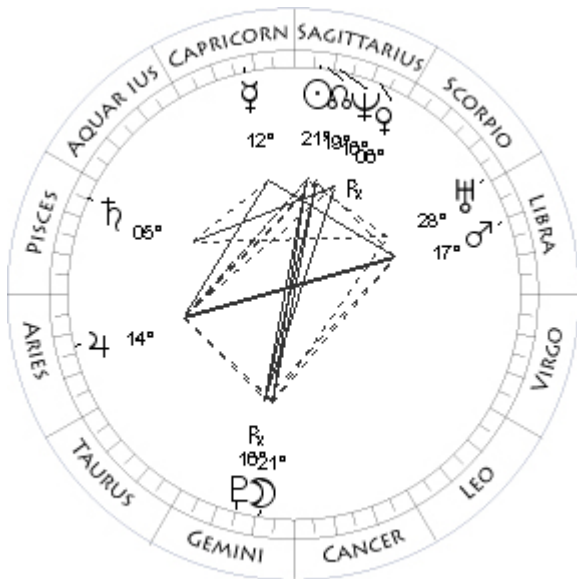
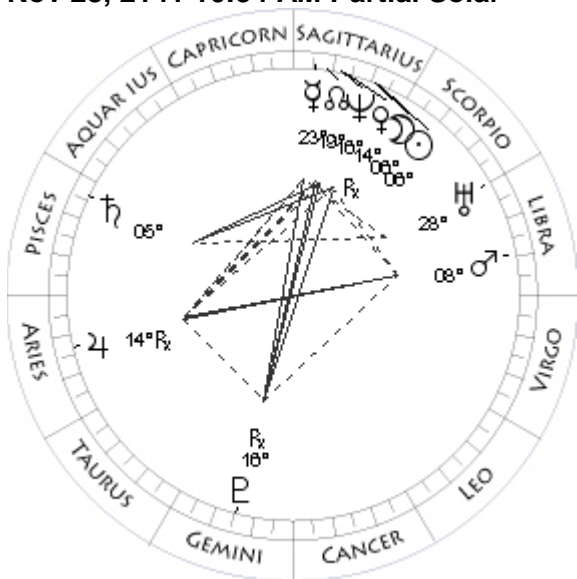
Jun 19, 2141 11:30 AM Total Umbral

Mo 17Cp55 + 0°55	Mo 28Sa23 - 0°03
Su 18Cp03 - 0°00	Su 28Ge25 - 0°00
Me 00Aq48 + 1°16R	Me 09Ge05 - 1°49
Ve 08Cp18 - 0°11	Ve 28Cn55 + 1°46
Ma 25Aq18 - 1°05	Ma 25Ge51 + 0°37
Ju 14Pi19 - 1°07	Ju 19Ar40 - 1°14
Sa 26Aq59 - 1°21	Sa 11Pi27 - 1°41
Ur 25Li11 + 0°37	Ur 21Li18 + 0°37R
Ne 15Sa29 + 1°28	Ne 15Sa00 + 1°32R
Pl 14Ge33 -10°55R	Pl 15Ge56 -10°25
No 07Cp34 - 0°00	No 28Sa58 - 0°00
Coords: 172E/23S	

Jul 3, 2141 11:48 PM Partial Solar



Nov 28, 2141 10:54 AM Partial Solar



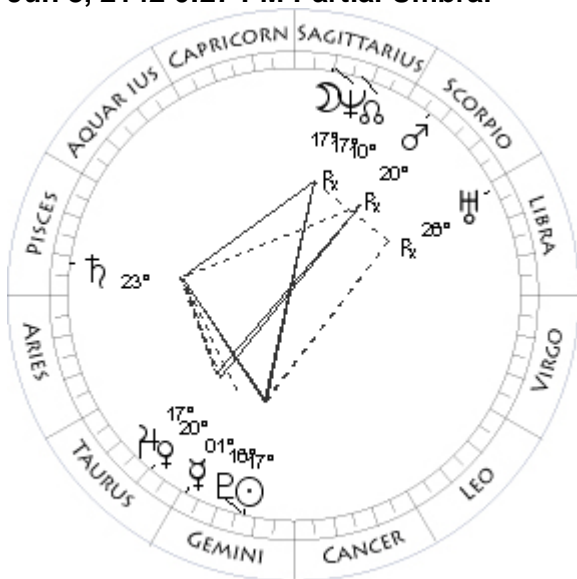
Dec 13, 2141 2:05 PM Total Umbral

Mo 12Cn06 - 1°13	Mo 21Ge36 - 0°10
Su 12Cn16 - 0°00	Su 21Sa40 - 0°00
Me 07Cn22 + 0°51	Me 12Cp21 - 1°49
Ve 16Le13 + 1°47	Ve 06Sa12 + 1°28R
Ma 05Cn41 + 0°44	Ma 17Li24 + 1°32
Ju 21Ar39 - 1°17	Ju 14Ar18 - 1°24
Sa 11Pi20 - 1°45R	Sa 05Pi50 - 1°46
Ur 21Li16 + 0°36	Ur 28Li54 + 0°33
Ne 14Sa39 + 1°32R	Ne 16Sa40 + 1°26
Pl 16Ge15 -10°25	Pl 16Ge02 -10°44R
No 28Sa12 - 0°00	No 19Sa35 - 0°00
Coords: 147W/23N	

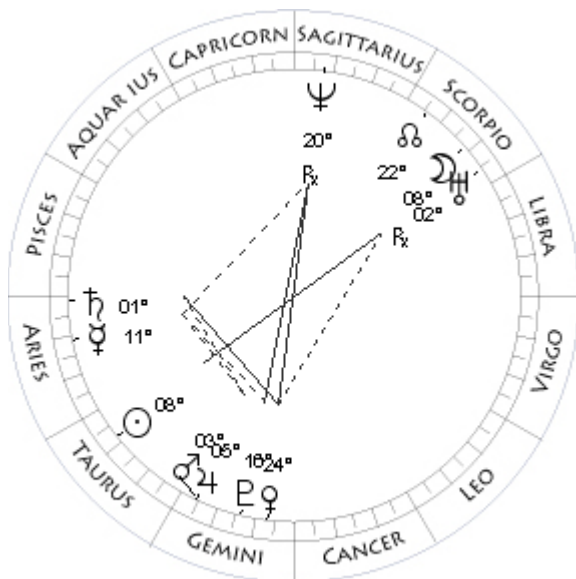
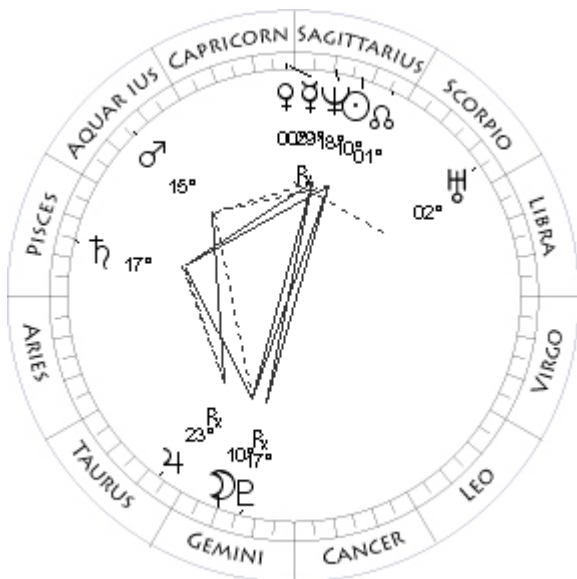
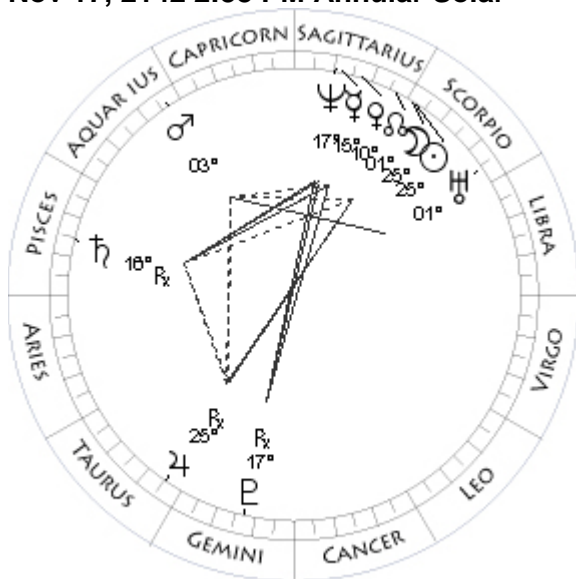
May 25, 2142 9:27 AM Total Solar

Mo 06Sa24 - 1°13	Mo 04Ge10 + 0°35
Su 06Sa19 - 0°00	Su 04Ge10 - 0°00
Me 23Sa15 - 2°19	Me 09Ta37 - 3°08
Ve 14Sa40 - 2°19R	Ve 03Ta39 - 1°47
Ma 08Li39 + 1°30	Ma 25Sc11 - 0°59R
Ju 14Ar28 - 1°28R	Ju 13Ta49 - 0°58
Sa 05Pi07 - 1°48	Sa 22Pi24 - 1°54
Ur 28Li10 + 0°33	Ur 26Li37 + 0°35R
Ne 16Sa06 + 1°26	Ne 17Sa55 + 1°30R
Pl 16Ge19 -10°45R	Pl 16Ge20 -10°12
No 20Sa23 - 0°00	No 10Sa58 - 0°00
Coords: 32W/57N	

Jun 8, 2142 0:27 PM Partial Umbral



Nov 17, 2142 2:38 PM Annular Solar



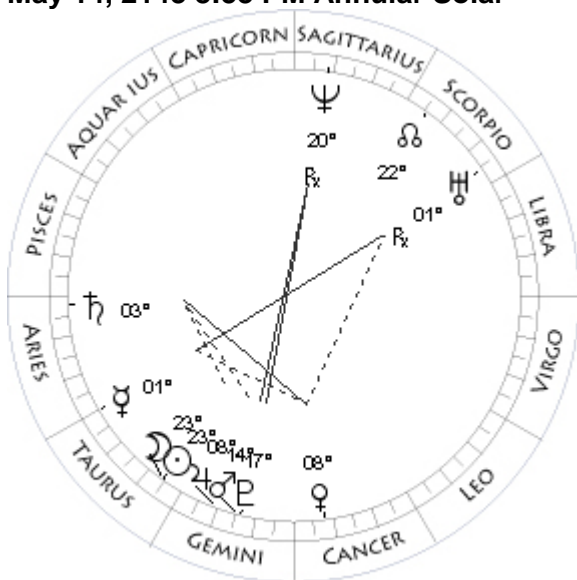
Dec 3, 2142 4:11 AM Partial Umbral

Mo 17Sa37 + 0°39	Mo 10Ge43 - 0°51
Su 17Ge43 - 0°00	Su 10Sa51 - 0°00
Me 01Ge59 - 1°20	Me 29Sa48 - 1°31R
Ve 20Ta38 - 1°33	Ve 00Cp01 - 0°58
Ma 20Sc51 - 1°36R	Ma 15Aq16 - 1°25
Ju 17Ta01 - 0°58	Ju 23Ta46 - 1°08R
Sa 23Pi09 - 1°57	Sa 17Pi08 - 2°09
Ur 26Li15 + 0°34R	Ur 02Sc52 + 0°31
Ne 17Sa33 + 1°30R	Ne 18Sa22 + 1°23
Pl 16Ge40 -10°11	Pl 17Ge16 -10°30R
No 10Sa13 - 0°00	No 00Sa49 - 0°00
Coords: 173W/22S	

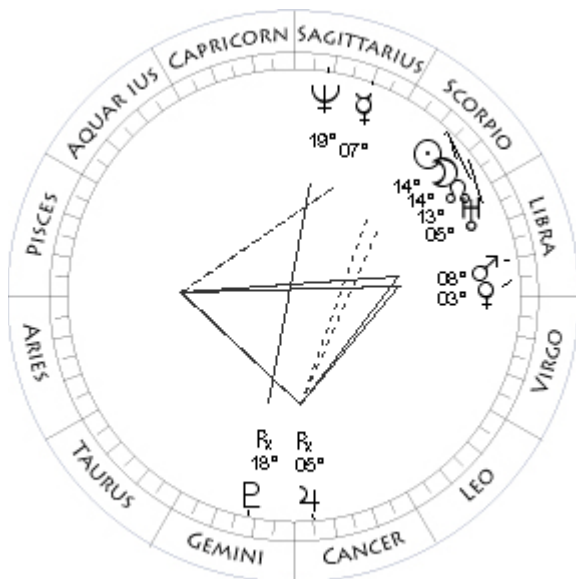
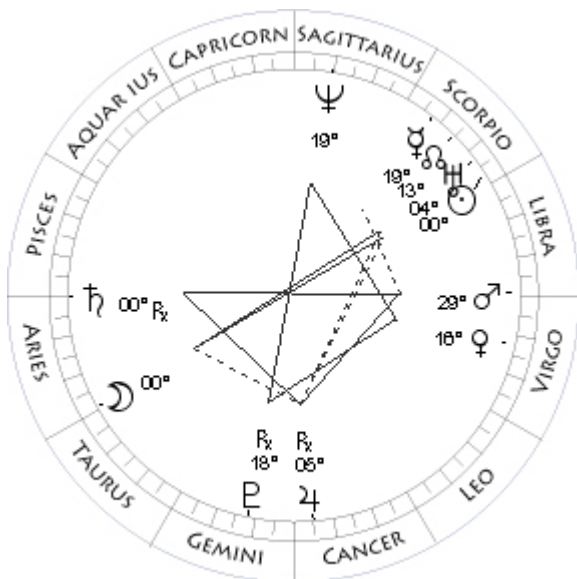
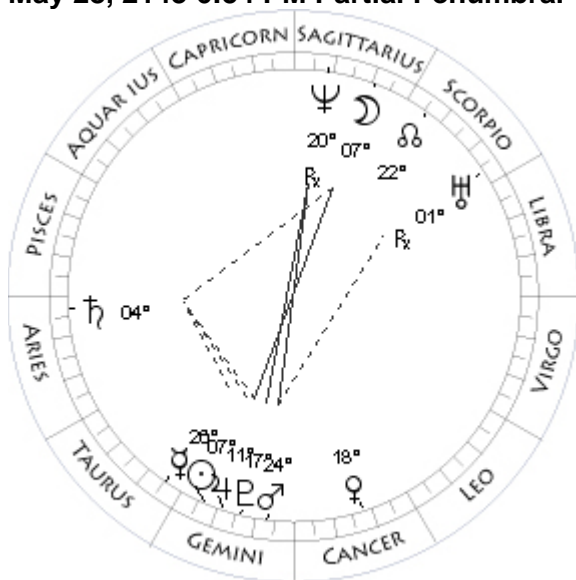
Apr 29, 2143 8:56 AM Partial Penumbral

Mo 25Sc08 - 0°35	Mo 08Sc50 - 1°13
Su 25Sc08 - 0°00	Su 08Ta46 - 0°00
Me 15Sa55 - 2°32	Me 11Ar49 - 2°41
Ve 10Sa34 - 0°22	Ve 24Ge17 + 3°21
Ma 03Aq35 - 1°40	Ma 03Ge56 + 0°35
Ju 25Ta50 - 1°10R	Ju 05Ge06 - 0°35
Sa 16Pi59 - 2°11R	Sa 01Ar30 - 2°03
Ur 01Sc59 + 0°31	Ur 02Sc30 + 0°33R
Ne 17Sa47 + 1°24	Ne 20Sa45 + 1°27R
Pl 17Ge34 -10°30R	Pl 16Ge47 -10°01
No 01Sa38 - 0°00	No 23Sc01 - 0°00
Coords: 135E/16S	

May 14, 2143 8:53 PM Annular Solar



May 28, 2143 6:54 PM Partial Penumbral



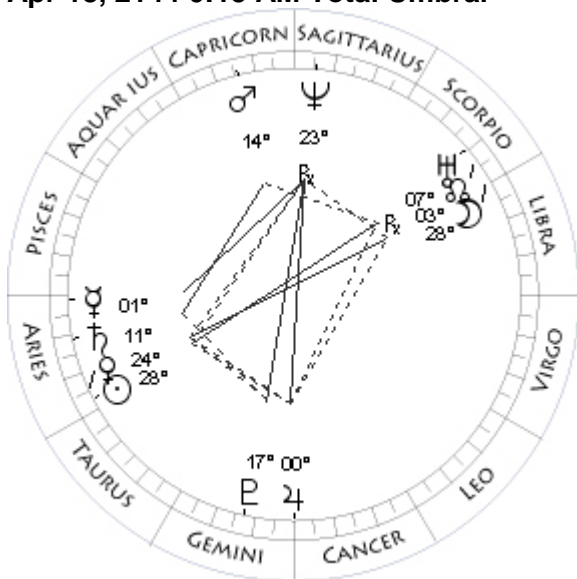
Oct 23, 2143 8:06 PM Partial Penumbral

Mo 23Ta44 - 0°09	Mo 00Ta10 + 1°10
Su 23Ta47 - 0°00	Su 00Sc05 - 0°00
Me 01Ta22 - 2°41	Me 19Sc53 - 1°54
Ve 08Cn32 + 3°31	Ve 16Vi59 + 0°47
Ma 14Ge36 + 0°43	Ma 29Vi32 + 1°11
Ju 08Ge37 - 0°33	Ju 05Cn55 - 0°24R
Sa 03Ar03 - 2°05	Sa 00Ar51 - 2°33R
Ur 01Sc52 + 0°32R	Ur 04Sc50 + 0°28
Ne 20Sa25 + 1°28R	Ne 19Sa06 + 1°22
Pl 17Ge06 - 9°59	Pl 18Ge58 -10°13R
No 22Sc12 - 0°00	No 13Sc37 - 0°00
Coords: 133E/ 9N	Coords: 54W/13N

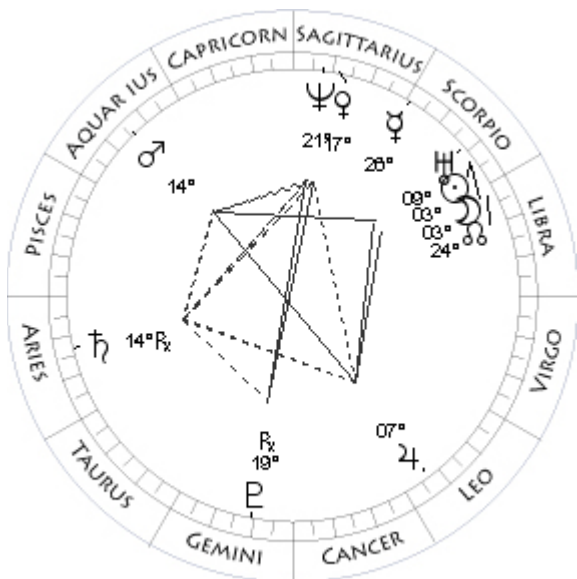
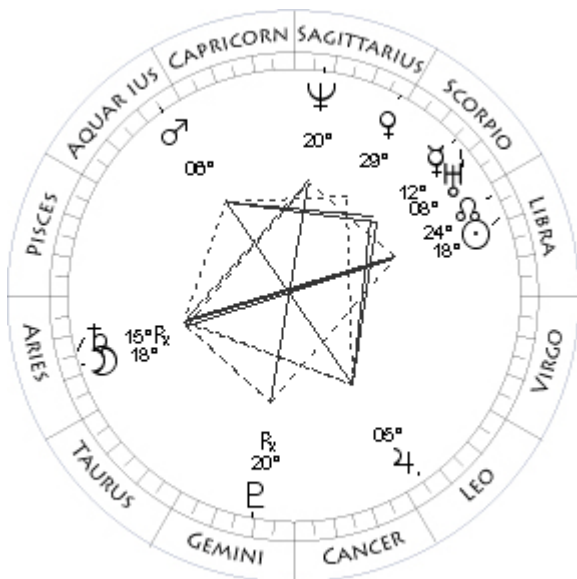
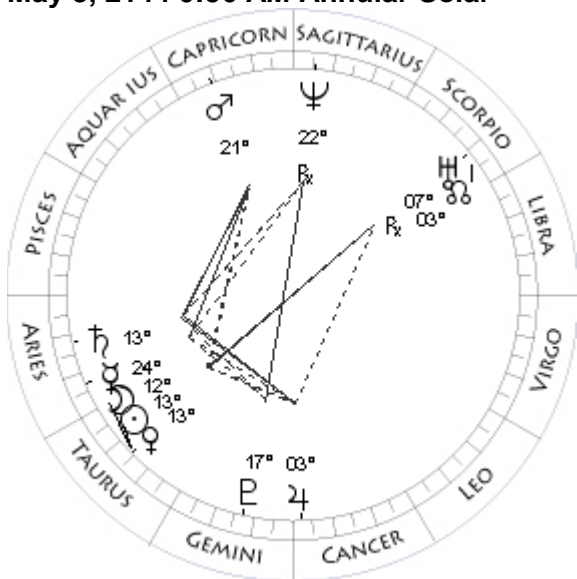
Nov 7, 2143 1:46 AM Total Solar

Mo 07Sa01 + 1°21	Mo 14Sc14 + 0°07
Su 07Ge12 - 0°00	Su 14Sc18 - 0°00
Me 26Ta22 - 0°53	Me 07Sa34 - 2°48
Ve 18Cn53 + 3°02	Ve 03Li30 + 1°31
Ma 24Ge02 + 0°48	Ma 08Li29 + 1°10
Ju 11Ge51 - 0°32	Ju 05Cn37 - 0°23R
Sa 04Ar15 - 2°08	Sa 00Ar06 - 2°31R
Ur 01Sc22 + 0°32R	Ur 05Sc43 + 0°28
Ne 20Sa05 + 1°28R	Ne 19Sa32 + 1°22
Pl 17Ge24 - 9°58	Pl 18Ge46 -10°14R
No 21Sc28 - 0°00	No 12Sc52 - 0°00
Coords: 76W/20S	

Apr 18, 2144 0:15 AM Total Umbral



May 3, 2144 0:56 AM Annular Solar



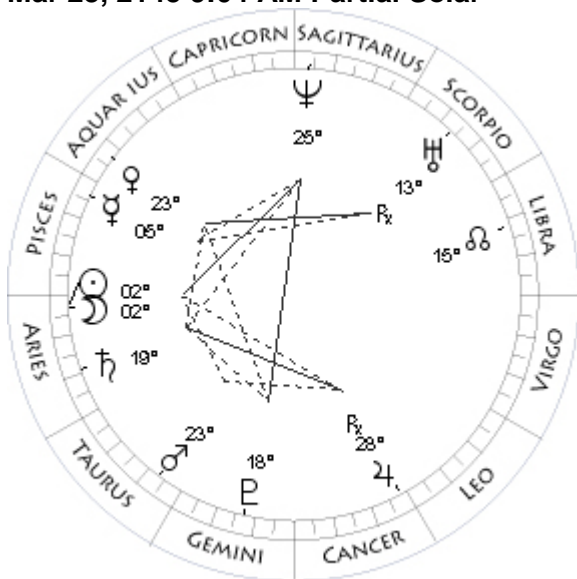
Oct 11, 2144 7:57 PM Partial Umbral

Mo 28Li25 - 0°29	Mo 18Ar57 + 0°32
Su 28Ar25 - 0°00	Su 18Li56 - 0°00
Me 01Ar42 - 2°34	Me 12Sc22 - 2°15
Ve 24Ar44 - 1°13	Ve 29Sc47 - 1°39
Ma 14Cp23 - 0°44	Ma 06Aq27 - 3°11
Ju 00Cn51 - 0°02	Ju 05Le59 + 0°17
Sa 11Ar33 - 2°11	Sa 15Ar28 - 2°45R
Ur 07Sc50 + 0°30R	Ur 08Sc31 + 0°25
Ne 23Sa07 + 1°25R	Ne 20Sa57 + 1°20
Pl 17Ge36 - 9°49	Pl 20Ge06 - 9°56R
No 04Sc14 - 0°00	No 24Li53 - 0°00
	Coords: 57W/ 8N

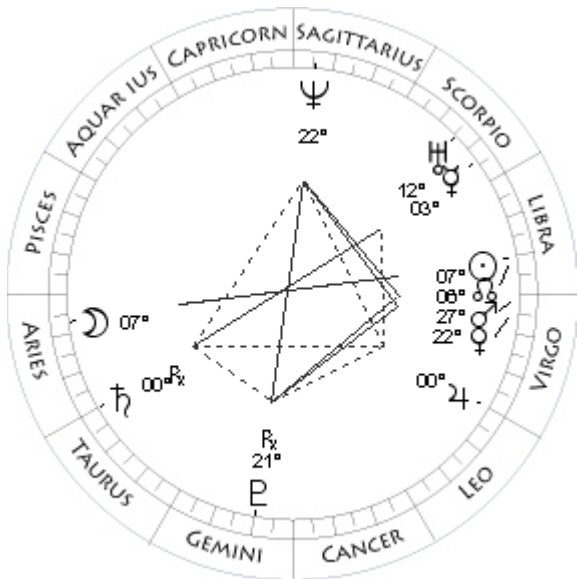
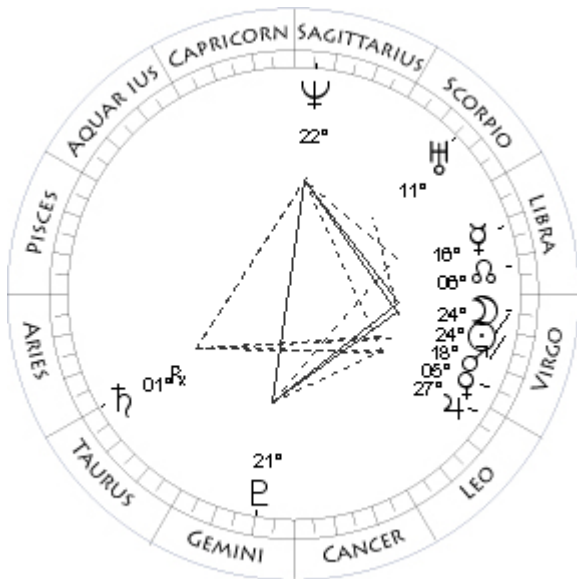
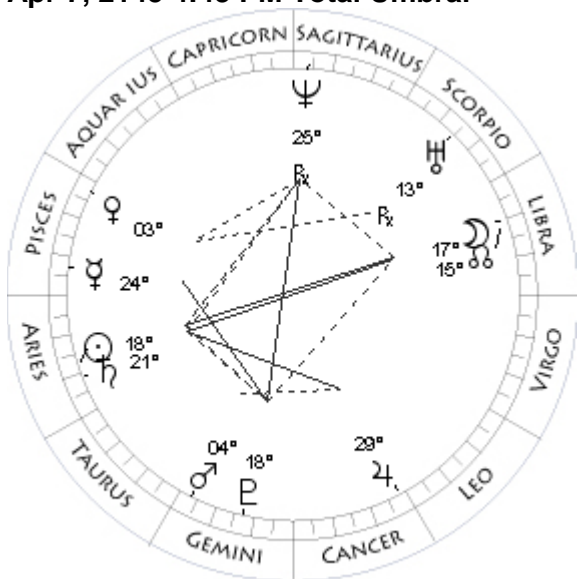
Oct 26, 2144 5:28 PM Total Solar

Mo 12Ta56 - 0°51	Mo 03Sc35 + 0°49
Su 13Ta04 - 0°00	Su 03Sc43 - 0°00
Me 24Ar14 - 2°20	Me 26Sc52 - 3°04
Ve 13Ta19 - 0°48	Ve 17Sa09 - 2°23
Ma 21Cp02 - 1°18	Ma 14Aq41 - 2°31
Ju 03Cn24 + 0°00	Ju 07Le36 + 0°20
Sa 13Ar19 - 2°12	Sa 14Ar20 - 2°44R
Ur 07Sc11 + 0°30R	Ur 09Sc26 + 0°25
Ne 22Sa53 + 1°25R	Ne 21Sa19 + 1°20
Pl 17Ge52 - 9°46	Pl 19Ge57 - 9°58R
No 03Sc27 - 0°00	No 24Li05 - 0°00
	Coords: 176E/53S

Mar 23, 2145 9:04 AM Partial Solar



Apr 7, 2145 4:43 PM Total Umbral



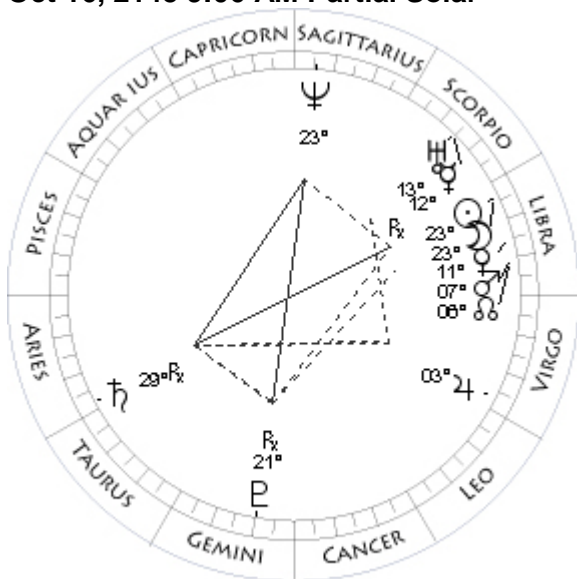
Sep 16, 2145 10:51 PM Partial Solar

Mo 02Ar58 + 1°09	Mo 24Vi21 - 1°06
Su 02Ar54 - 0°00	Su 24Vi18 - 0°00
Me 05Pi12 - 1°01	Me 16Li19 - 0°57
Ve 23Aq31 + 4°37	Ve 05Vi24 + 1°11
Ma 23Ta45 + 0°48	Ma 18Vi29 + 1°03
Ju 28Cn55 + 0°39R	Ju 27Le37 + 0°44
Sa 19Ar41 - 2°15	Sa 01Ta24 - 2°43R
Ur 13Sc36 + 0°26R	Ur 11Sc32 + 0°23
Ne 25Sa27 + 1°21	Ne 22Sa44 + 1°19
Pl 18Ge17 - 9°40	Pl 21Ge13 - 9°37
No 16Li16 - 0°00	No 06Li52 - 0°00

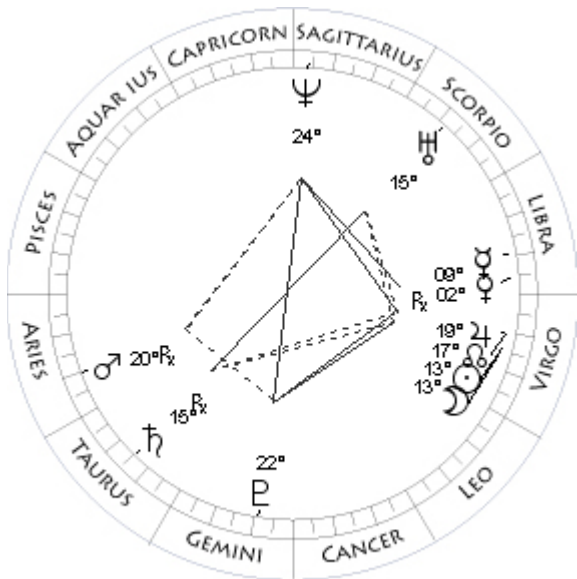
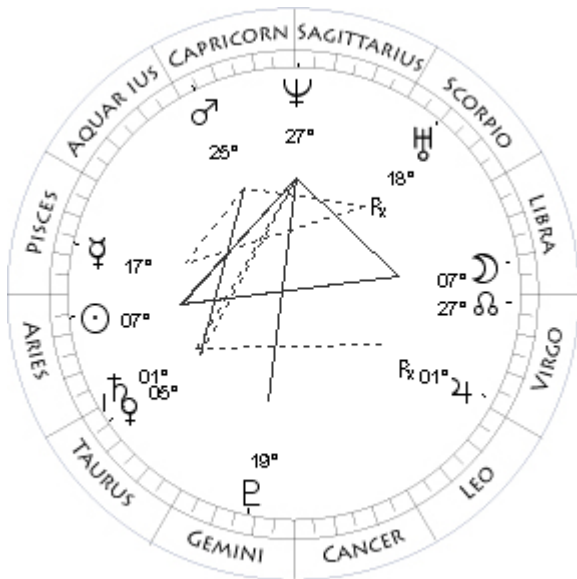
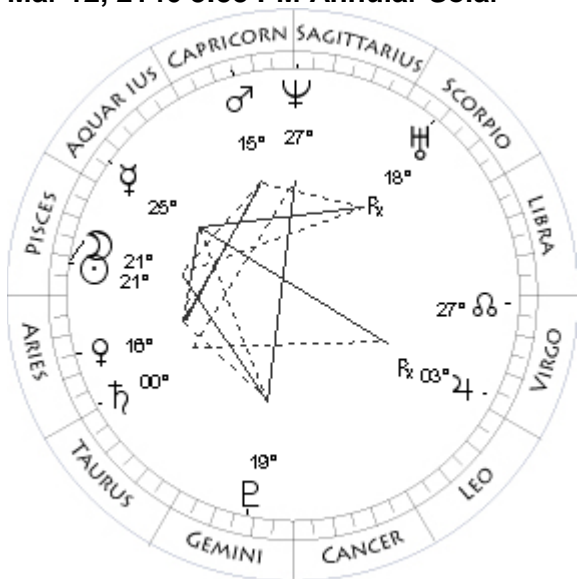
Sep 30, 2145 10:15 PM Total Umbral

Mo 17Li59 + 0°14	Mo 07Ar54 - 0°08
Su 18Ar03 - 0°00	Su 07Li58 - 0°00
Me 24Pi00 - 2°27	Me 03Sc42 - 2°42
Ve 03Pi32 + 2°12	Ve 22Vi42 + 1°26
Ma 04Ge00 + 0°54	Ma 27Vi26 + 1°00
Ju 29Cn12 + 0°39	Ju 00Vi26 + 0°45
Sa 21Ar36 - 2°14	Sa 00Ta31 - 2°45R
Ur 13Sc05 + 0°27R	Ur 12Sc15 + 0°23
Ne 25Sa25 + 1°22R	Ne 22Sa53 + 1°19
Pl 18Ge27 - 9°37	Pl 21Ge12 - 9°39R
No 15Li27 - 0°00	No 06Li07 - 0°00
	Coords: 24W/ 3N

Oct 16, 2145 9:06 AM Partial Solar



Mar 12, 2146 3:53 PM Annular Solar



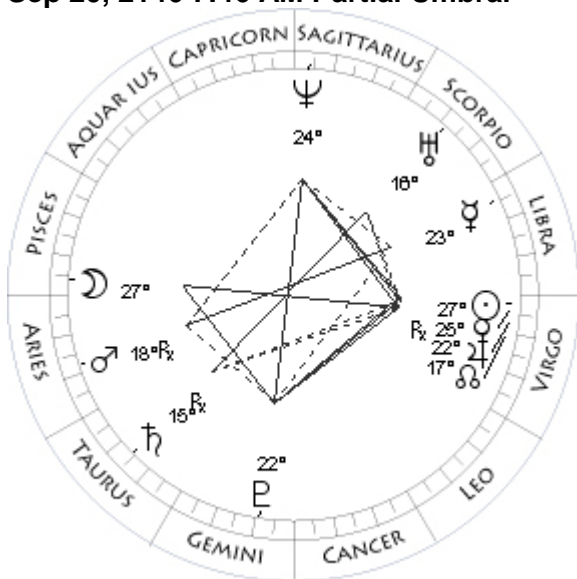
Mar 28, 2146 5:39 AM Partial Umbral

Mo 23Li00 + 1°30	Mo 07Li20 + 0°56
Su 23Li12 - 0°00	Su 07Ar29 - 0°00
Me 12Sc06 - 3°15R	Me 17Pi31 - 2°20
Ve 11Li56 + 1°27	Ve 05Ta28 - 0°04
Ma 07Li21 + 0°57	Ma 25Cp51 - 0°49
Ju 03Vi17 + 0°48	Ju 01Vi32 + 1°16R
Sa 29Ar21 - 2°46R	Sa 01Ta54 - 2°14
Ur 13Sc08 + 0°22	Ur 18Sc13 + 0°23R
Ne 23Sa10 + 1°18	Ne 27Sa38 + 1°18
Pl 21Ge06 - 9°41R	Pl 19Ge20 - 9°24
No 05Li18 - 0°00	No 26Vi41 - 0°00

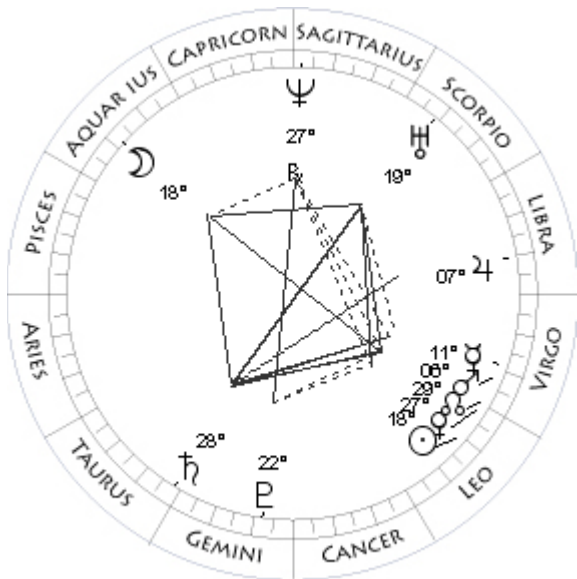
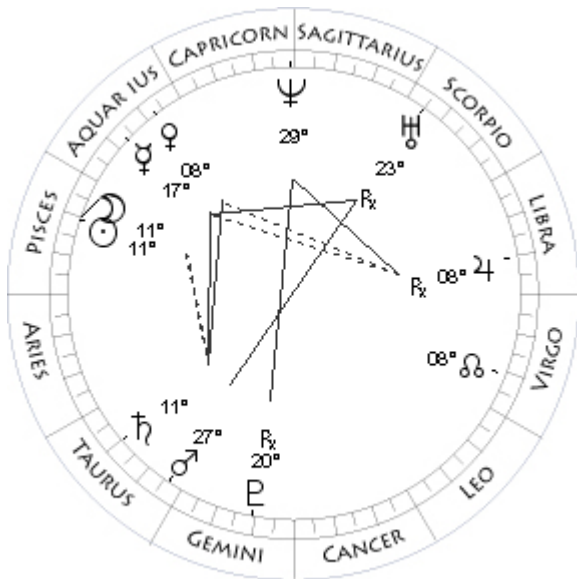
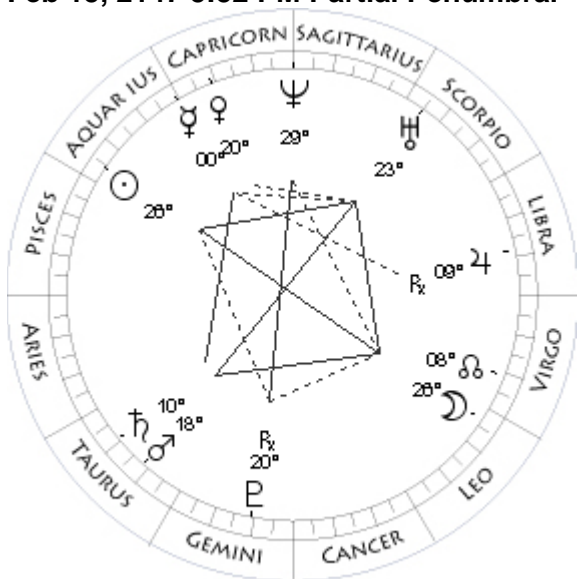
Sep 6, 2146 6:38 AM Annular Solar

Mo 21Pi59 + 0°28	Mo 13Vi40 - 0°23
Su 21Pi59 - 0°00	Su 13Vi41 - 0°00
Me 25Aq25 - 1°14	Me 09Li04 - 1°23
Ve 16Ar22 - 0°45	Ve 02Li31 - 7°52R
Ma 15Cp13 - 0°31	Ma 20Ar37 - 4°50R
Ju 03Vi09 + 1°17R	Ju 19Vi11 + 1°01
Sa 00Ta06 - 2°16	Sa 15Ta48 - 2°32R
Ur 18Sc35 + 0°23R	Ur 15Sc30 + 0°20
Ne 27Sa33 + 1°18	Ne 24Sa52 + 1°17
Pl 19Ge14 - 9°28	Pl 22Ge12 - 9°20
No 27Vi30 - 0°00	No 18Vi06 - 0°00
Coords: 72W/18S	

Sep 20, 2146 7:46 AM Partial Umbral



Feb 15, 2147 5:52 PM Partial Penumbral



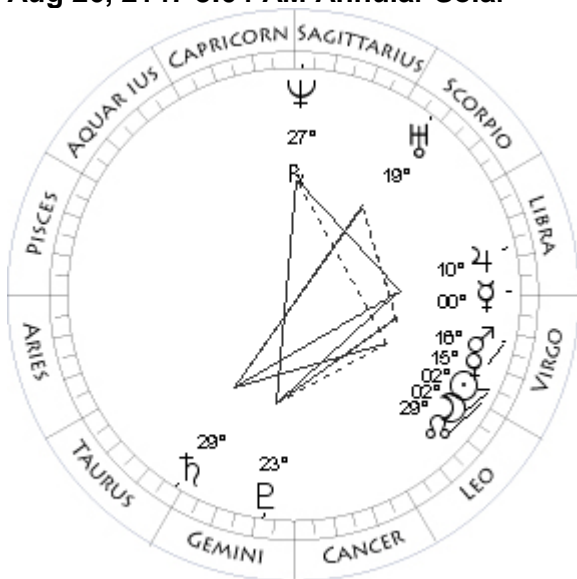
Mar 2, 2147 5:13 AM Total Solar

Mo 27Pi13 - 0°51	Mo 11Pi12 - 0°14
Su 27Vi20 - 0°00	Su 11Pi17 - 0°00
Me 23Li14 - 3°16	Me 17Aq50 - 1°25
Ve 25Vi08 - 8°37R	Ve 08Aq17 - 0°05
Ma 18Ar51 - 4°38R	Ma 27Ta00 + 1°21
Ju 22Vi13 + 1°01	Ju 08Li24 + 1°32R
Sa 15Ta24 - 2°35R	Sa 11Ta15 - 2°12
Ur 16Sc05 + 0°20	Ur 23Sc20 + 0°19R
Ne 24Sa55 + 1°17	Ne 29Sa34 + 1°15
Pl 22Ge15 - 9°22	Pl 20Ge15 - 9°16R
No 17Vi21 - 0°00	No 08Vi44 - 0°00
	Coords: 109W/20S

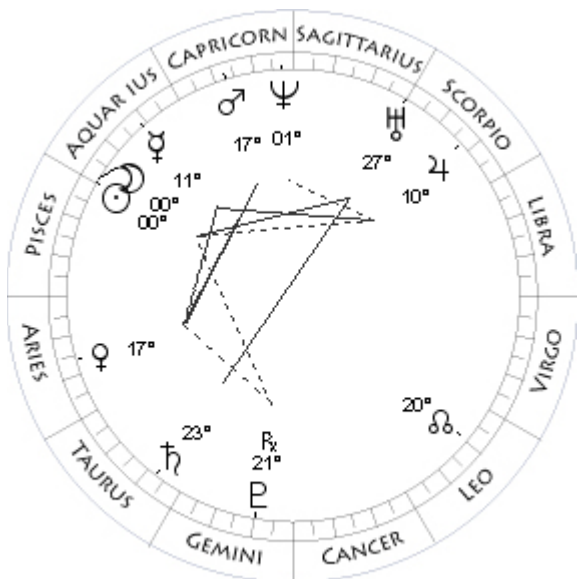
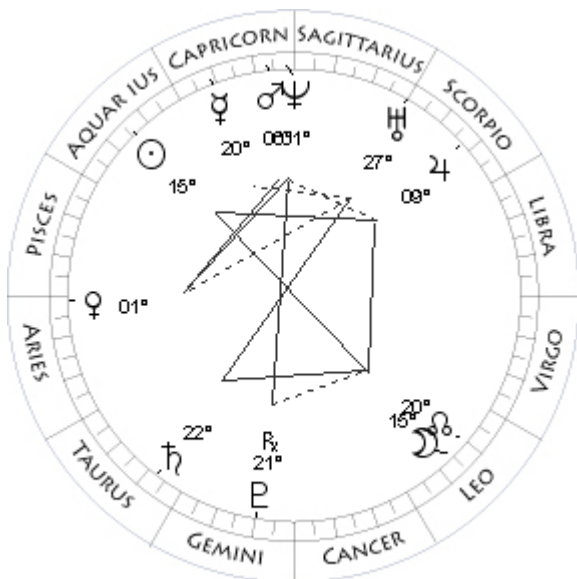
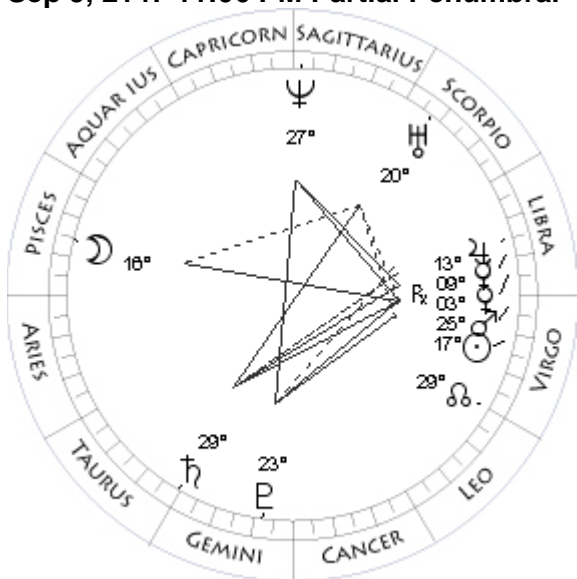
Aug 11, 2147 3:51 PM Partial Umbral

Mo 26Le46 - 1°05	Mo 18Aq48 + 1°00
Su 26Aq42 - 0°00	Su 18Le46 - 0°00
Me 00Aq36 + 0°38	Me 11Vi07 + 0°23
Ve 20Cp38 + 0°42	Ve 27Le40 + 1°25
Ma 18Ta32 + 1°17	Ma 06Vi59 + 1°03
Ju 09Li39 + 1°29R	Ju 07Li51 + 1°10
Sa 10Ta10 - 2°15	Sa 28Ta48 - 2°10
Ur 23Sc17 + 0°19	Ur 19Sc21 + 0°18
Ne 29Sa17 + 1°14	Ne 27Sa15 + 1°16R
Pl 20Ge18 - 9°19R	Pl 22Ge58 - 9°00
No 09Vi30 - 0°00	No 00Vi08 - 0°00
Coords: 95W/12N	Coords: 123W/14S

Aug 26, 2147 8:04 AM Annular Solar



Sep 9, 2147 11:06 PM Partial Penumbral



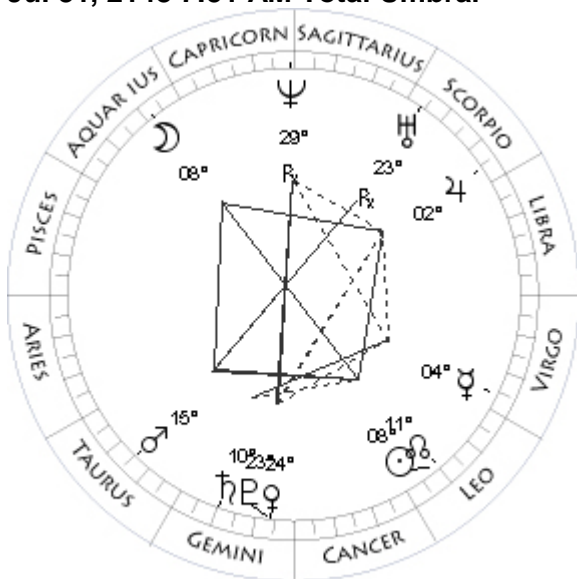
Feb 4, 2148 5:08 PM Partial Umbral

Mo 02Vi48 + 0°17	Mo 15Le17 - 0°29
Su 02Vi52 - 0°00	Su 15Aq17 - 0°00
Me 00Li04 - 1°53	Me 20Cp53 + 0°15
Ve 15Vi47 + 1°24	Ve 01Ar34 + 0°16
Ma 16Vi16 + 0°58	Ma 06Cp17 - 0°28
Ju 10Li32 + 1°08	Ju 09Sc42 + 1°17
Sa 29Ta24 - 2°13	Sa 22Ta50 - 2°06
Ur 19Sc37 + 0°17	Ur 27Sc36 + 0°16
Ne 27Sa06 + 1°15R	Ne 01Cp06 + 1°11
Pl 23Ge09 - 9°02	Pl 21Ge26 - 9°06R
No 29Le21 - 0°00	No 20Le45 - 0°00
Coords: 65W/29N	Coords: 106W/16N

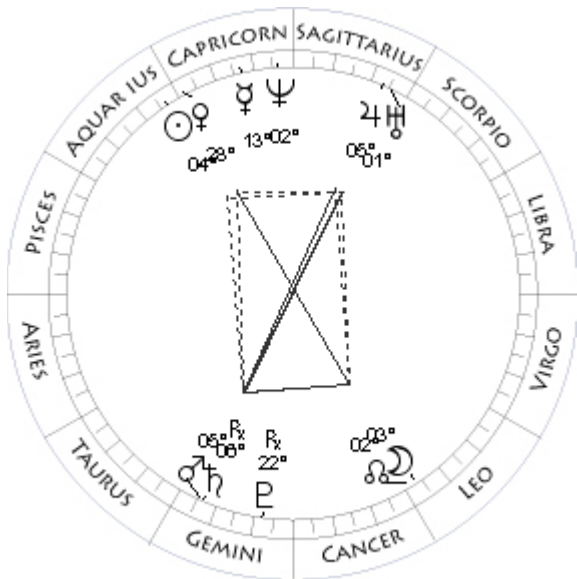
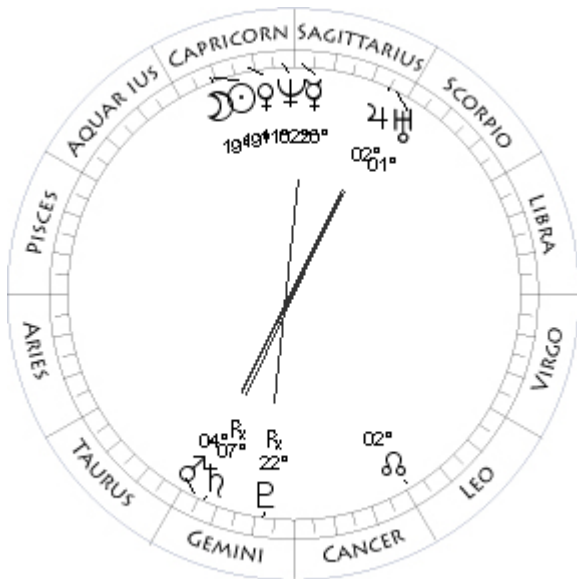
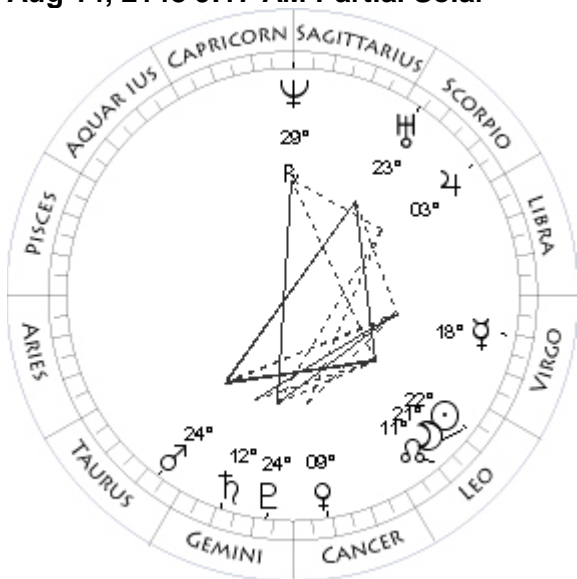
Feb 19, 2148 9:12 PM Total Solar

Mo 16Pi49 - 1°33	Mo 00Pi29 - 0°55
Su 17Vi01 - 0°00	Su 00Pi38 - 0°00
Me 09Li22 - 3°57R	Me 11Aq37 - 1°34
Ve 03Li50 + 1°10	Ve 17Ar17 + 1°47
Ma 25Vi37 + 0°53	Ma 17Cp20 - 0°40
Ju 13Li26 + 1°07	Ju 10Sc16 + 1°20
Sa 29Ta38 - 2°16	Sa 23Ta22 - 2°02
Ur 20Sc04 + 0°17	Ur 27Sc51 + 0°16
Ne 27Sa03 + 1°14	Ne 01Cp30 + 1°11
Pl 23Ge15 - 9°04	Pl 21Ge19 - 9°03R
No 28Le35 - 0°00	No 19Le57 - 0°00

Jul 31, 2148 7:51 AM Total Umbral



Aug 14, 2148 9:17 AM Partial Solar



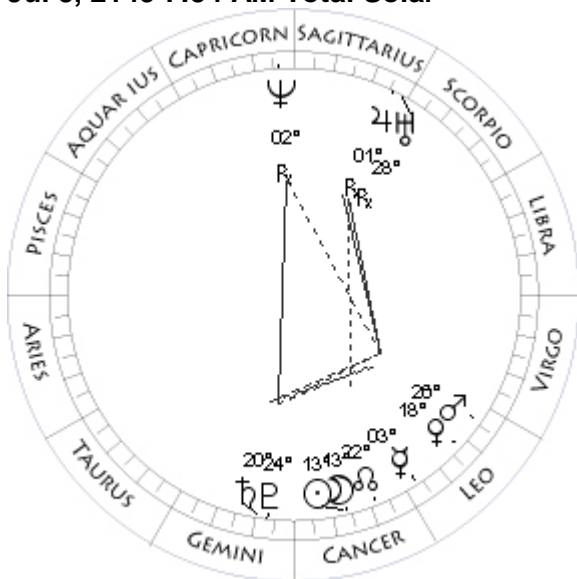
Jan 9, 2149 9:25 PM Partial Solar

Mo 08Aq37 + 0°15	Mo 19Cp50 + 1°07
Su 08Le38 - 0°00	Su 19Cp47 - 0°00
Me 04Vi11 - 0°00	Me 26Sa39 + 2°00
Ve 24Ge33 - 2°36	Ve 11Cp02 - 0°17
Ma 15Ta40 - 1°52	Ma 04Ge29 + 2°39
Ju 02Sc07 + 1°07	Ju 02Sa57 + 0°51
Sa 10Ge58 - 1°47	Sa 07Ge22 - 1°52R
Ur 23Sc51 + 0°15R	Ur 01Sa06 + 0°12
Ne 29Sa39 + 1°13R	Ne 02Cp23 + 1°08
Pl 23Ge49 - 8°44	Pl 22Ge50 - 8°55R
No 11Le21 - 0°00	No 02Le44 - 0°00
Coords: 116E/18S	

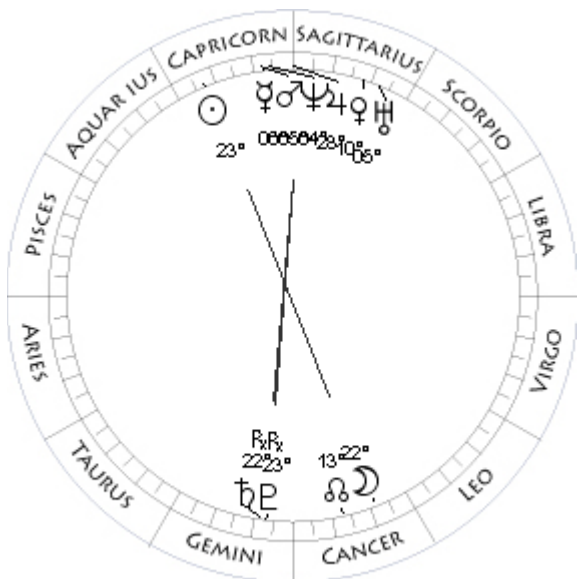
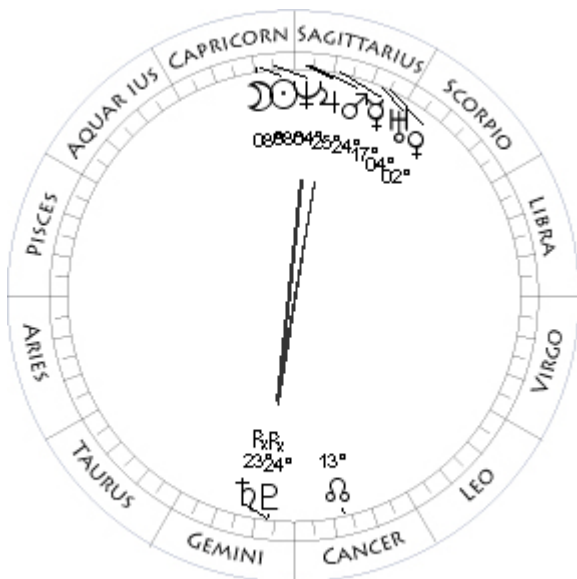
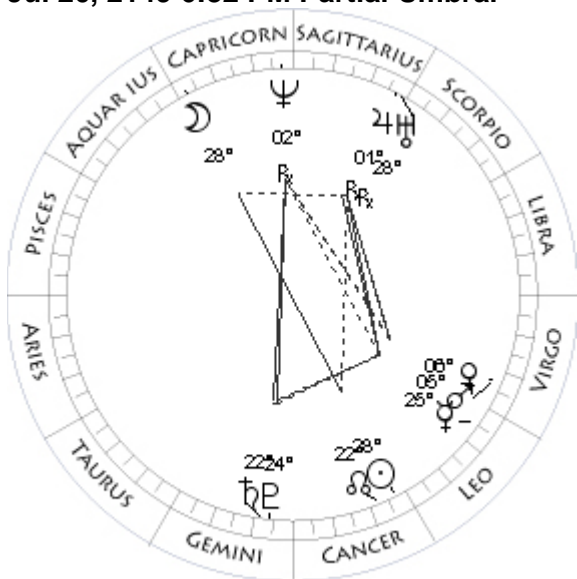
Jan 23, 2149 9:12 PM Total Umbral

Mo 21Le58 + 0°58	Mo 03Le58 + 0°10
Su 22Le06 - 0°00	Su 04Aq02 - 0°00
Me 18Vi51 - 2°31	Me 13Cp01 - 0°05
Ve 09Cn58 - 1°50	Ve 28Cp38 - 0°48
Ma 24Ta24 - 1°45	Ma 05Ge59 + 2°36
Ju 03Sc41 + 1°03	Ju 05Sa22 + 0°51
Sa 12Ge06 - 1°49	Sa 06Ge50 - 1°48R
Ur 23Sc55 + 0°14	Ur 01Sa40 + 0°12
Ne 29Sa25 + 1°13R	Ne 02Cp53 + 1°08
Pl 24Ge02 - 8°45	Pl 22Ge37 - 8°52R
No 10Le36 - 0°00	No 02Le00 - 0°00
Coords: 45W/19N	

Jul 5, 2149 7:54 AM Total Solar



Jul 20, 2149 6:32 PM Partial Umbral



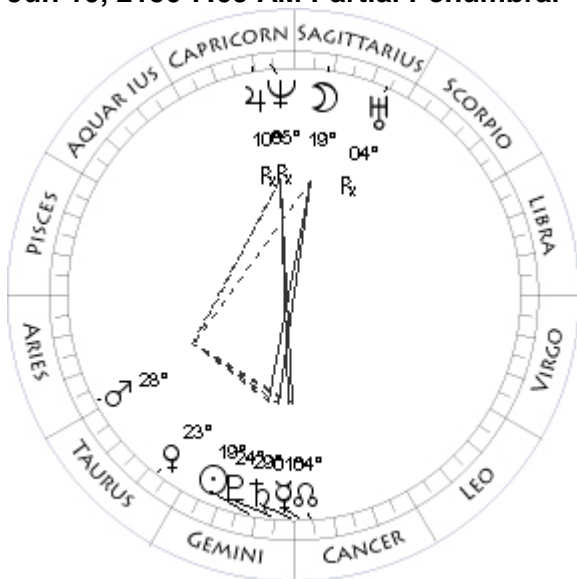
Dec 30, 2149 1:07 AM Annular Solar

Mo 13Cn38 - 0°51	Mo 08Cp29 + 0°29
Su 13Cn36 - 0°00	Su 08Cp28 - 0°00
Me 03Le55 + 1°40	Me 17Sa03 + 1°31
Ve 18Le22 + 1°46	Ve 02Sa49 + 4°04
Ma 26Le22 + 1°11	Ma 24Sa50 - 0°29
Ju 01Sa46 + 0°50R	Ju 25Sa33 + 0°21
Sa 20Ge39 - 1°21	Sa 23Ge06 - 1°24R
Ur 28Sc49 + 0°12R	Ur 04Sa50 + 0°09
Ne 02Cp31 + 1°11R	Ne 04Cp05 + 1°05
Pl 24Ge18 - 8°26	Pl 24Ge05 - 8°40R
No 23Cn24 - 0°00	No 13Cn59 - 0°00
Coords: 62W/36S	Coords: 165W/ 9N

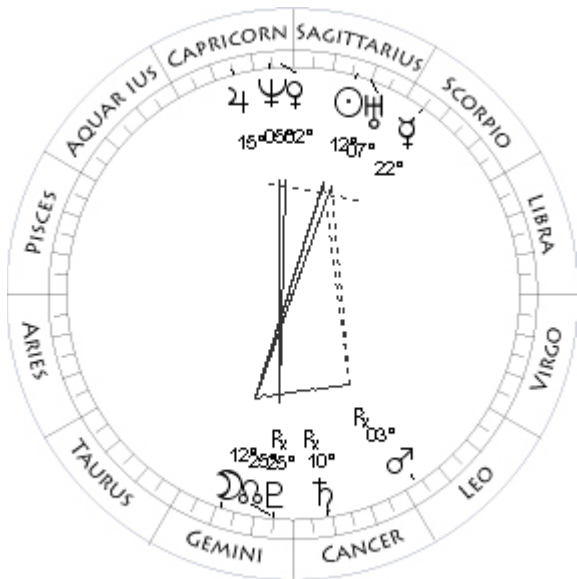
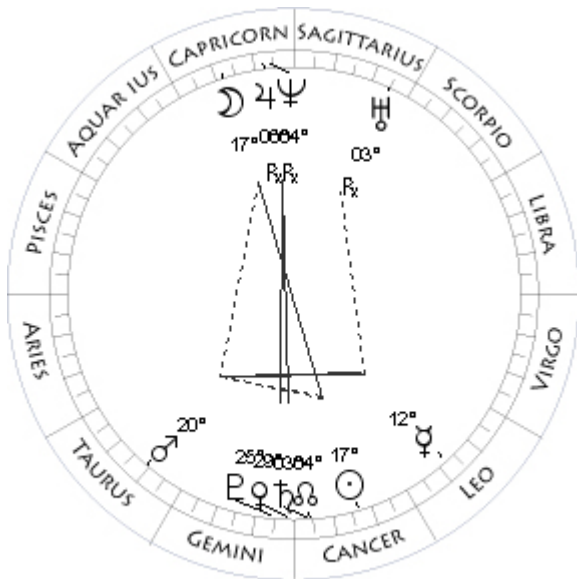
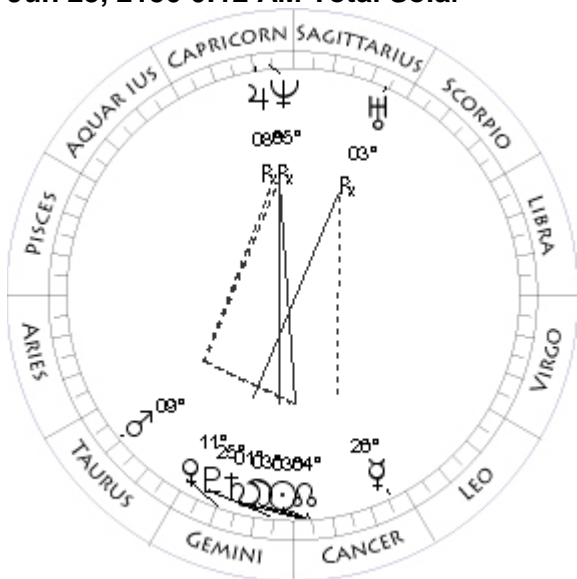
Jan 13, 2150 8:25 AM Partial Umbral

Mo 28Cp14 - 0°30	Mo 22Cn54 + 0°51
Su 28Cn20 - 0°00	Su 23Cp03 - 0°00
Me 25Le05 - 0°28	Me 06Cp37 - 0°24
Ve 06Vi29 + 1°24	Ve 10Sa11 + 4°36
Ma 05Vi47 + 1°03	Ma 05Cp25 - 0°38
Ju 01Sa04 + 0°46R	Ju 28Sa43 + 0°20
Sa 22Ge29 - 1°21	Sa 22Ge05 - 1°21R
Ur 28Sc31 + 0°11R	Ur 05Sa33 + 0°09
Ne 02Cp07 + 1°11R	Ne 04Cp37 + 1°05
Pl 24Ge38 - 8°27	Pl 23Ge50 - 8°38R
No 22Cn35 - 0°00	No 13Cn14 - 0°00
Coords: 84W/21S	Coords: 124E/22N

Jun 10, 2150 7:09 AM Partial Penumbral



Jun 25, 2150 0:12 AM Total Solar



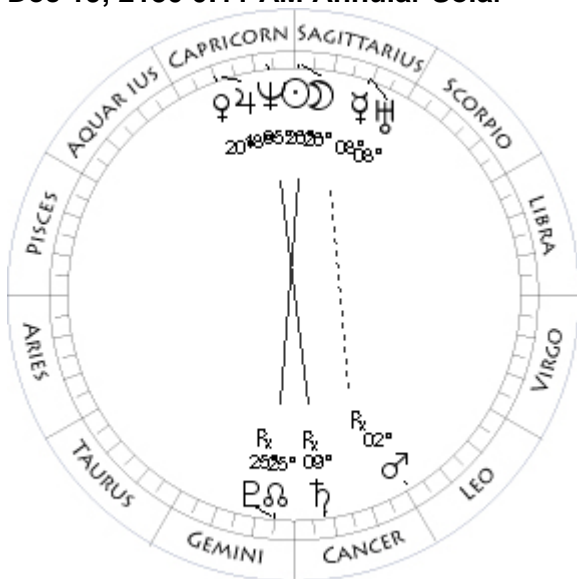
Jul 9, 2150 10:07 PM Partial Penumbral

Mo 19Sa34 + 1°22	Mo 17Cp35 - 1°11
Su 19Ge29 - 0°00	Su 17Cn45 - 0°00
Me 01Cn35 + 1°50	Me 12Le51 - 1°02
Ve 23Ta24 - 1°28	Ve 29Ge17 - 0°24
Ma 28Ar43 - 1°12	Ma 20Ta20 - 0°58
Ju 10Cp17 + 0°10R	Ju 06Cp37 + 0°06R
Sa 29Ge41 - 0°55	Sa 03Cn32 - 0°52
Ur 04Sa21 + 0°08R	Ur 03Sa21 + 0°08R
Ne 05Cp26 + 1°08R	Ne 04Cp39 + 1°08R
Pl 24Ge44 - 8°11	Pl 25Ge25 - 8°11
No 05Cn24 - 0°00	No 03Cn50 - 0°00
Coords: 107E/22S	Coords: 29W/23S

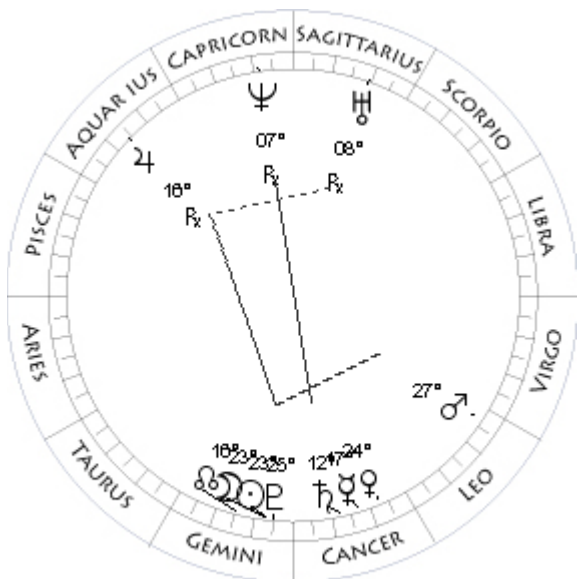
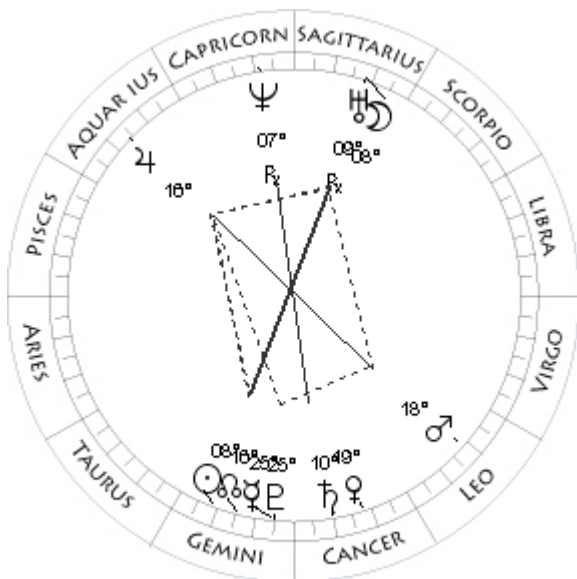
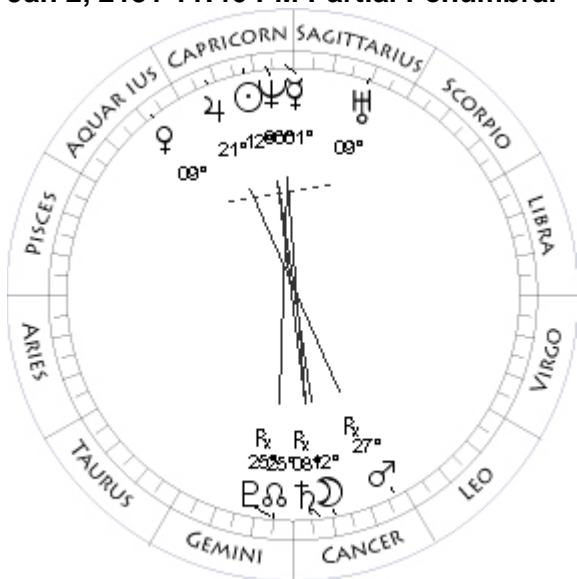
Dec 4, 2150 1:09 PM Partial Penumbral

Mo 03Cn29 - 0°06	Mo 12Ge21 - 1°12
Su 03Cn32 - 0°00	Su 12Sa18 - 0°00
Me 26Cn58 + 1°32	Me 22Sc34 + 2°35
Ve 11Ge11 - 1°00	Ve 02Cp23 - 1°03
Ma 09Ta34 - 1°06	Ma 03Le34 + 2°39R
Ju 08Cp30 + 0°08R	Ju 15Cp07 - 0°10
Sa 01Cn36 - 0°53	Sa 10Cn25 - 0°50R
Ur 03Sa48 + 0°08R	Ur 07Sa33 + 0°06
Ne 05Cp03 + 1°08R	Ne 05Cp14 + 1°02
Pl 25Ge04 - 8°10	Pl 25Ge38 - 8°24R
No 04Cn37 - 0°00	No 26Ge01 - 0°00
Coords: 178W/18N	Coords: 160W/21N

Dec 19, 2150 0:11 AM Annular Solar



Jan 2, 2151 11:46 PM Partial Penumbral



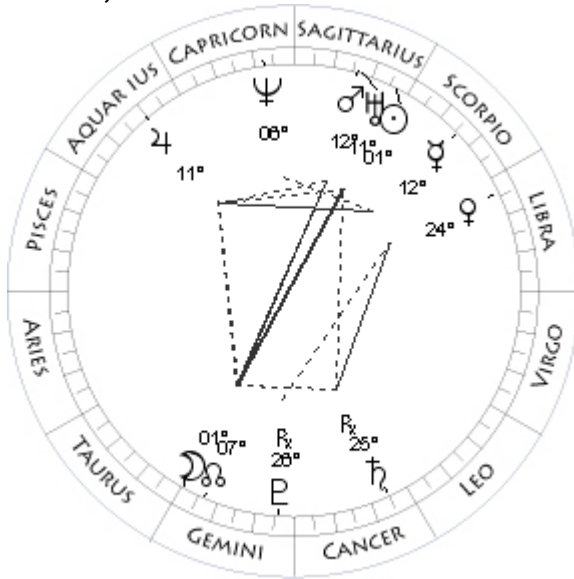
May 30, 2151 9:03 AM Partial Umbral

Mo 26Sa55 - 0°08	Mo 08Sa48 + 0°41
Su 26Sa59 - 0°00	Su 08Ge47 - 0°00
Me 08Sa57 + 1°09	Me 25Ge20 + 2°04
Ve 20Cp25 - 1°29	Ve 19Cn01 + 2°56
Ma 02Le15 + 3°20R	Ma 18Le59 + 1°31
Ju 18Cp18 - 0°12	Ju 16Aq42 - 0°35
Sa 09Cn20 - 0°49R	Sa 10Cn40 - 0°26
Ur 08Sa26 + 0°06	Ur 09Sa29 + 0°05R
Ne 05Cp46 + 1°02	Ne 07Cp57 + 1°05R
Pl 25Ge21 - 8°24R	Pl 25Ge29 - 7°56
No 25Ge15 - 0°00	No 16Ge39 - 0°00
Coords: 175W/32S	Coords: 136E/21S

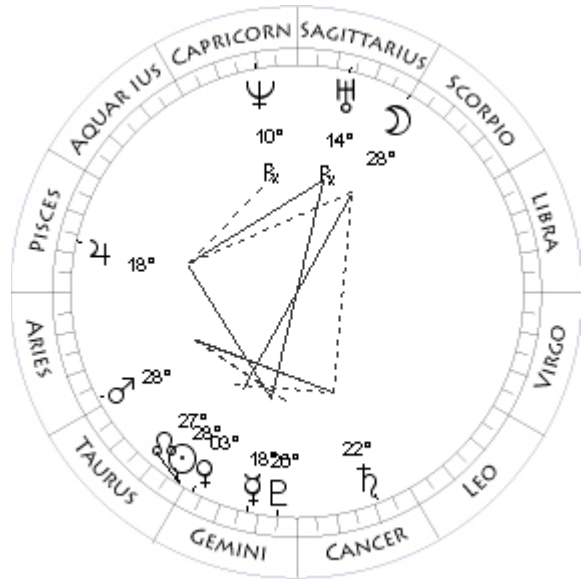
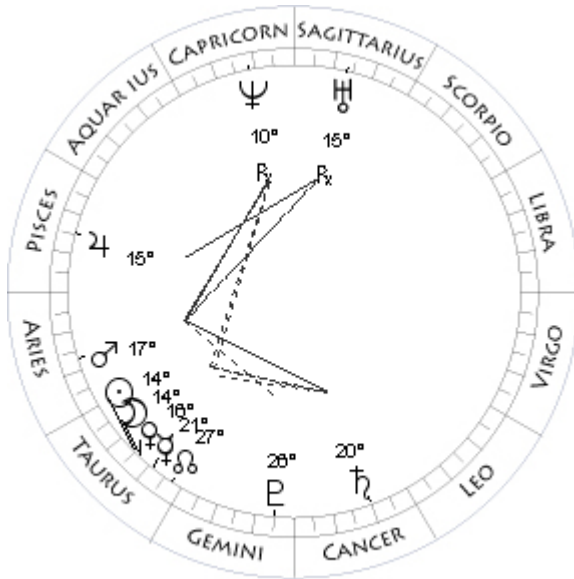
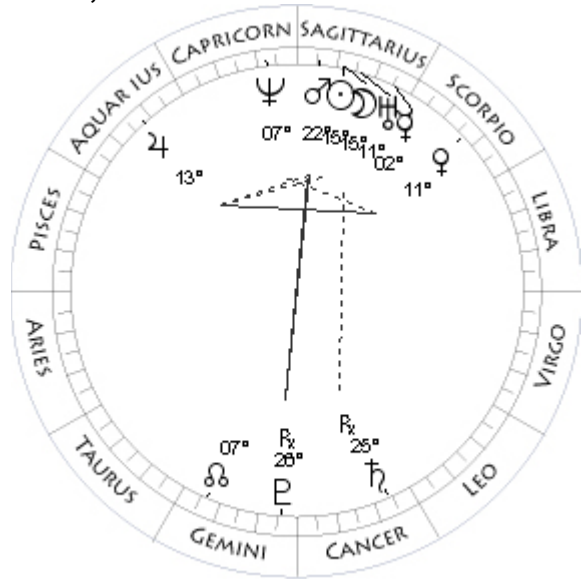
Jun 14, 2151 5:08 PM Total Solar

Mo 12Cn02 + 1°31	Mo 23Ge21 + 0°39
Su 12Cp14 - 0°00	Su 23Ge28 - 0°00
Me 01Cp09 - 0°41	Me 17Cn43 + 1°20
Ve 09Aq04 - 1°42	Ve 24Cn05 + 1°06
Ma 27Cn58 + 3°56R	Ma 27Le20 + 1°17
Ju 21Cp44 - 0°13	Ju 16Aq35 - 0°38R
Sa 08Cn07 - 0°47R	Sa 12Cn32 - 0°24
Ur 09Sa17 + 0°06	Ur 08Sa51 + 0°04R
Ne 06Cp20 + 1°02	Ne 07Cp35 + 1°05R
Pl 25Ge04 - 8°23R	Pl 25Ge51 - 7°55
No 24Ge27 - 0°00	No 15Ge50 - 0°00
Coords: 4W/24N	

Nov 24, 2151 2:03 AM Partial Umbral



Dec 8, 2151 2:13 AM Annular Solar



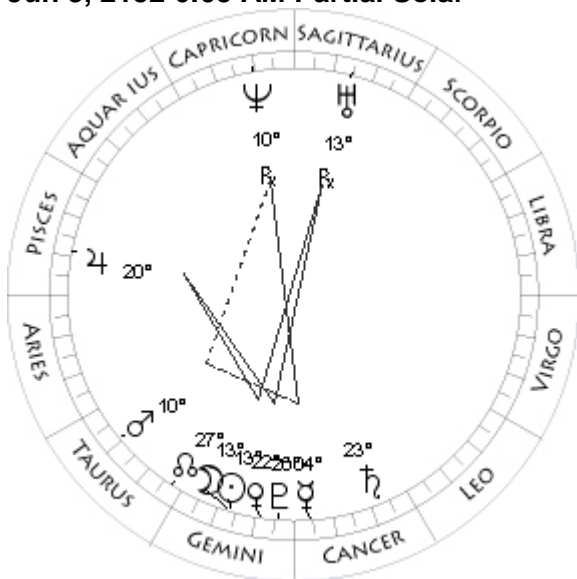
May 4, 2152 6:08 PM Partial Solar

Mo 01Ge28 - 0°31	Mo 14Ta51 - 1°11
Su 01Sa28 - 0°00	Su 14Ta48 - 0°00
Me 12Sc16 + 2°15	Me 21Ta52 + 0°44
Ve 24Li21 + 1°56	Ve 16Ta06 - 0°43
Ma 12Sa29 - 0°33	Ma 17Ar59 - 0°55
Ju 11Aq01 - 0°47	Ju 15Pi58 - 0°58
Sa 25Cn48 - 0°12R	Sa 20Cn54 + 0°05
Ur 11Sa05 + 0°03	Ur 15Sa05 + 0°01R
Ne 06Cp59 + 1°00	Ne 10Cp38 + 1°01R
Pl 26Ge53 - 8°07R	Pl 26Ge00 - 7°43
No 07Ge14 - 0°00	No 28Ta37 - 0°00

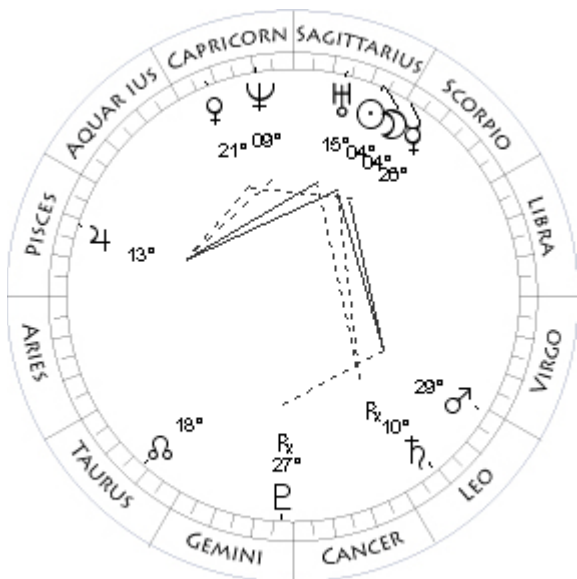
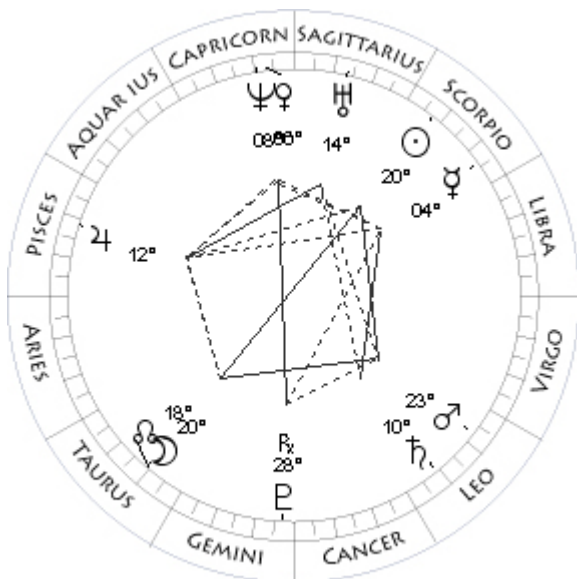
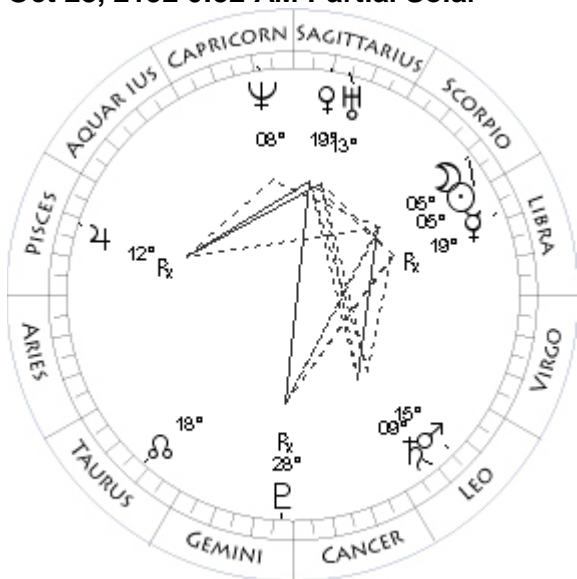
May 18, 2152 5:30 PM Total Umbral

Mo 15Sa31 - 0°46	Mo 28Sc15 - 0°03
Su 15Sa39 - 0°00	Su 28Ta18 - 0°00
Me 02Sa04 + 0°49	Me 18Ge12 + 2°19
Ve 11Sc26 + 1°55	Ve 03Ge19 - 0°11
Ma 22Sa47 - 0°40	Ma 28Ar38 - 0°49
Ju 13Aq19 - 0°46	Ju 18Pi16 - 1°01
Sa 25Cn12 - 0°11R	Sa 22Cn06 + 0°06
Ur 11Sa57 + 0°02	Ur 14Sa34 + 0°01R
Ne 07Cp28 + 0°59	Ne 10Cp25 + 1°01R
Pl 26Ge38 - 8°07R	Pl 26Ge16 - 7°41
No 06Ge30 - 0°00	No 27Ta53 - 0°00
Coords: 104W/75S	Coords: 97W/20S

Jun 3, 2152 6:05 AM Partial Solar



Oct 28, 2152 0:52 AM Partial Solar



Nov 12, 2152 8:17 AM Total Umbral

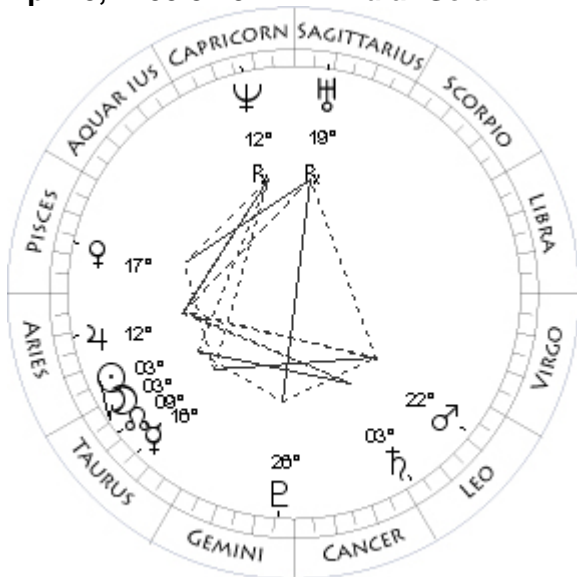
Mo 13Ge02 + 1°23	Mo 20Ta21 + 0°09
Su 13Ge13 - 0°00	Su 20Sc24 - 0°00
Me 04Cn40 + 1°01	Me 04Sc13 + 1°57
Ve 22Ge24 + 0°26	Ve 06Cp22 - 2°57
Ma 10Ta16 - 0°40	Ma 23Le06 + 1°50
Ju 20Pi19 - 1°05	Ju 12Pi45 - 1°21
Sa 23Cn41 + 0°07	Sa 10Le00 + 0°24
Ur 13Sa56 + 0°01R	Ur 14Sa37 - 0°01
Ne 10Cp06 + 1°01R	Ne 08Cp47 + 0°57
Pl 26Ge37 - 7°39	Pl 28Ge08 - 7°49R
No 27Ta04 - 0°00	No 18Ta29 - 0°00

Coords: 128E/18N

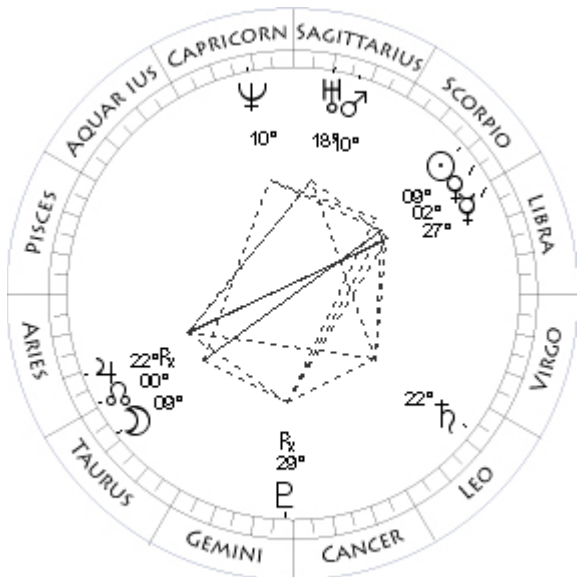
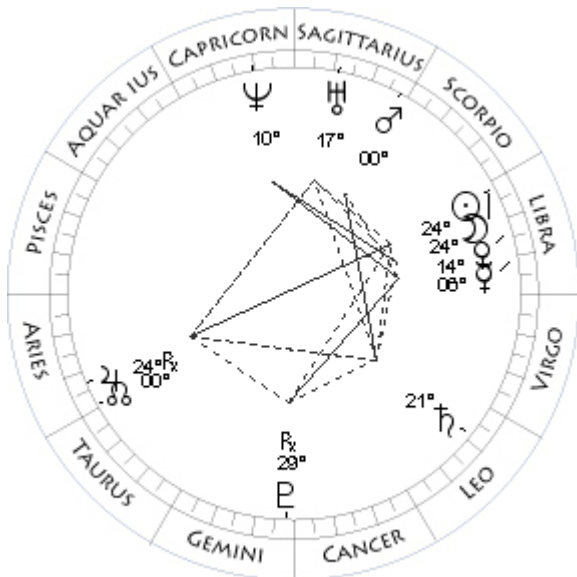
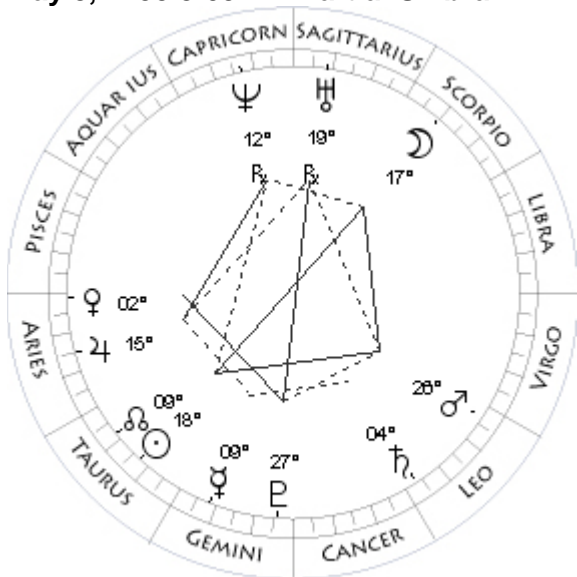
Nov 26, 2152 11:36 AM Partial Solar

Mo 05Sc08 + 1°14	Mo 04Sa28 - 1°26
Su 05Sc05 - 0°00	Su 04Sa39 - 0°00
Me 19Li54 + 1°16R	Me 26Sc19 + 0°30
Ve 19Sa04 - 2°30	Ve 21Cp43 - 2°57
Ma 15Le42 + 1°30	Ma 29Le03 + 2°12
Ju 12Pi53 - 1°24R	Ju 13Pi20 - 1°18
Sa 09Le33 + 0°22	Sa 10Le03 + 0°26R
Ur 13Sa47 - 0°01	Ur 15Sa27 - 0°01
Ne 08Cp25 + 0°57	Ne 09Cp13 + 0°56
Pl 28Ge20 - 7°48R	Pl 27Ge54 - 7°50R
No 19Ta17 - 0°00	No 17Ta44 - 0°00

Apr 23, 2153 8:23 PM Annular Solar



May 8, 2153 8:09 AM Partial Umbral



Oct 17, 2153 5:06 PM Total Solar

Mo 03Ta57 - 0°30	Mo 24Li34 + 0°32
Su 03Ta57 - 0°00	Su 24Li35 - 0°00
Me 16Ta07 + 1°09	Me 06Li34 + 1°38
Ve 17Pi43 + 0°05	Ve 14Li17 + 1°25
Ma 22Le11 + 2°22	Ma 00Sa17 - 0°41
Ju 12Ar29 - 1°05	Ju 24Ar23 - 1°35R
Sa 03Le29 + 0°39	Sa 21Le52 + 0°52
Ur 19Sa57 - 0°02R	Ur 17Sa29 - 0°04
Ne 12Cp56 + 0°57R	Ne 10Cp23 + 0°54
Pl 26Ge51 - 7°28	Pl 29Ge30 - 7°30R
No 09Ta52 - 0°00	No 00Ta30 - 0°00

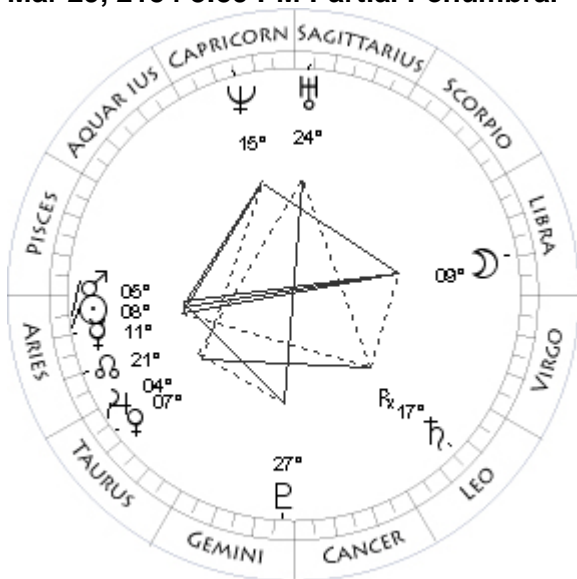
Coords: 112E/18S

Nov 1, 2153 8:28 AM Partial Umbral

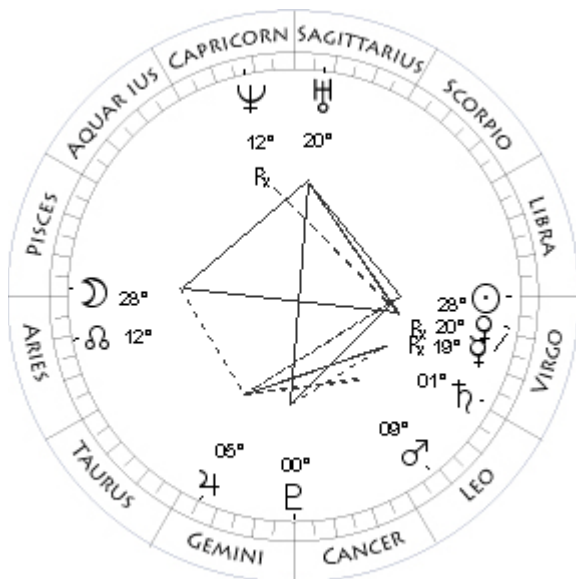
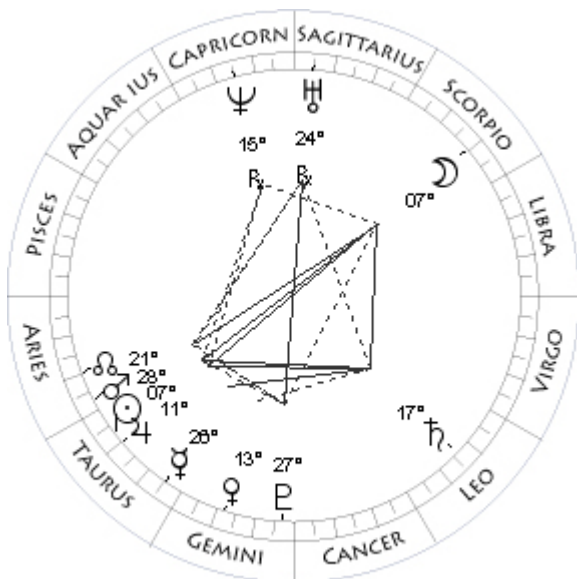
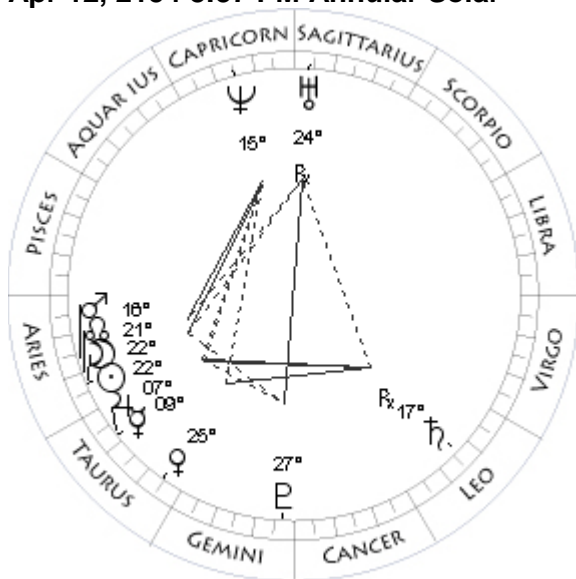
Mo 17Sc54 - 0°47	Mo 09Ta01 + 0°47
Su 18Ta02 - 0°00	Su 09Sc09 - 0°00
Me 09Ge03 + 2°35	Me 27Li11 + 1°42
Ve 02Ar22 - 1°08	Ve 02Sc36 + 1°10
Ma 26Le35 + 1°55	Ma 10Sa48 - 0°48
Ju 15Ar47 - 1°07	Ju 22Ar28 - 1°34R
Sa 04Le11 + 0°39	Sa 22Le54 + 0°54
Ur 19Sa32 - 0°03R	Ur 18Sa11 - 0°04
Ne 12Cp49 + 0°57R	Ne 10Cp39 + 0°54
Pl 27Ge06 - 7°26	Pl 29Ge22 - 7°31R
No 09Ta06 - 0°00	No 29Ar44 - 0°00

Coords: 123E/18S

Mar 29, 2154 3:59 PM Partial Penumbral



Apr 12, 2154 8:37 PM Annular Solar



Apr 28, 2154 0:59 AM Partial Penumbral

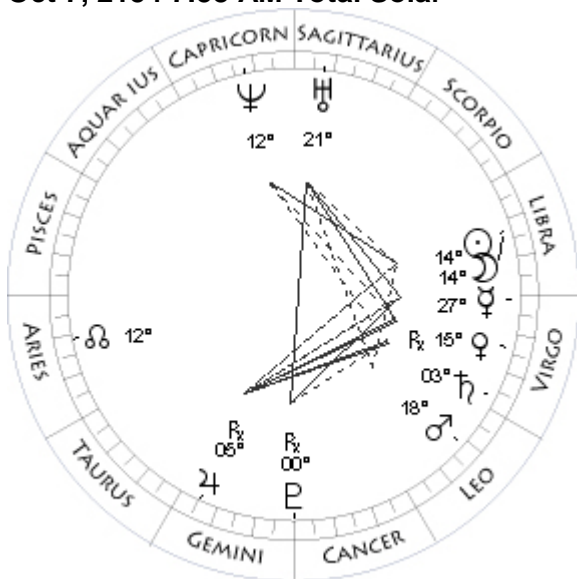
Mo 09Li00 + 1°07	Mo 07Sc36 - 1°30
Su 08Ar57 - 0°00	Su 07Ta48 - 0°00
Me 11Ar12 - 0°57	Me 26Ta01 + 2°47
Ve 07Ta50 + 0°03	Ve 13Ge09 + 1°29
Ma 05Ar38 - 0°48	Ma 28Ar11 - 0°32
Ju 04Ta22 - 0°59	Ju 11Ta17 - 0°56
Sa 17Le19 + 1°14R	Sa 17Le04 + 1°12
Ur 24Sa42 - 0°06	Ur 24Sa21 - 0°06R
Ne 15Cp04 + 0°53	Ne 15Cp07 + 0°54R
Pl 27Ge36 - 7°16	Pl 27Ge57 - 7°11
No 21Ar53 - 0°00	No 20Ar19 - 0°00

Sep 21, 2154 7:23 PM Partial Penumbral

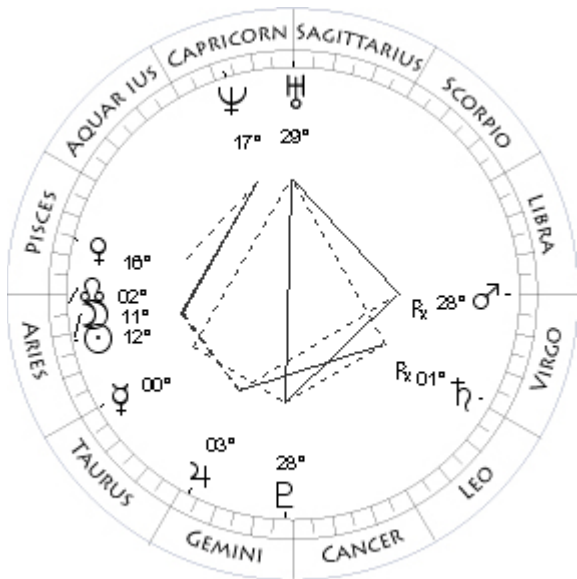
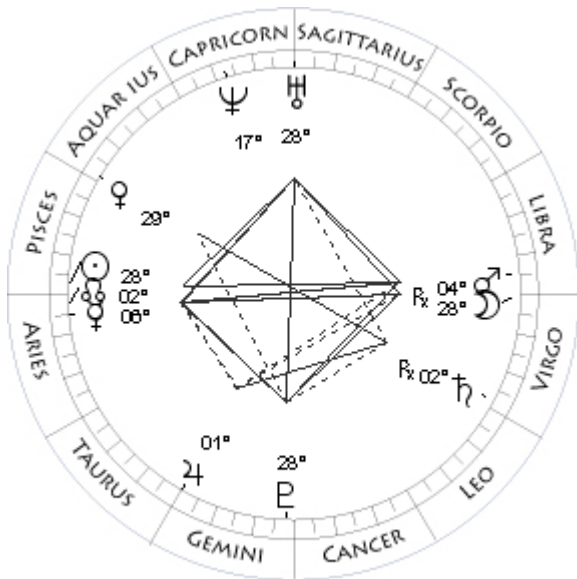
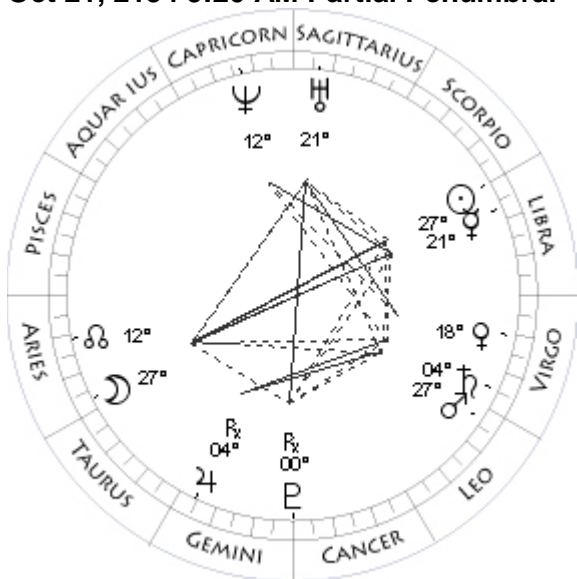
Mo 22Ar53 + 0°10	Mo 28Pi55 - 1°12
Su 22Ar57 - 0°00	Su 28Vi51 - 0°00
Me 09Ta06 + 1°35	Me 19Vi20 - 1°46R
Ve 25Ta01 + 0°46	Ve 20Vi34 - 8°23R
Ma 16Ar36 - 0°41	Ma 09Le30 + 1°06
Ju 07Ta40 - 0°57	Ju 05Ge54 - 1°03
Sa 17Le00 + 1°13R	Sa 01Vi27 + 1°15
Ur 24Sa37 - 0°06R	Ur 20Sa55 - 0°07
Ne 15Cp09 + 0°53	Ne 12Cp23 + 0°52R
Pl 27Ge44 - 7°13	Pl 00Cn36 - 7°09
No 21Ar07 - 0°00	No 12Ar33 - 0°00

Coords: 134E/18N

Oct 7, 2154 7:58 AM Total Solar



Oct 21, 2154 9:20 AM Partial Penumbral



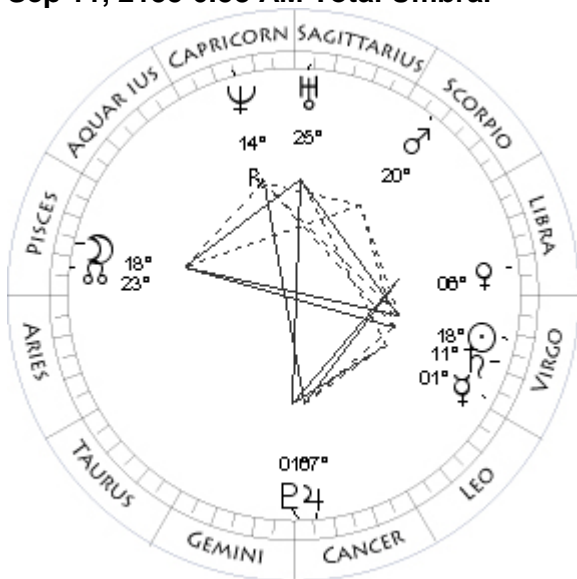
Mar 19, 2155 3:07 AM Total Umbral

Mo 14Li01 - 0°11	Mo 28Vi15 + 0°24
Su 14Li05 - 0°00	Su 28Pi16 - 0°00
Me 27Vi31 + 1°48	Me 06Ar22 - 0°34
Ve 15Vi35 - 5°43R	Ve 29Aq36 - 0°53
Ma 18Le57 + 1°17	Ma 04Li11 + 3°33R
Ju 05Ge38 - 1°04R	Ju 01Ge01 - 0°37
Sa 03Vi12 + 1°18	Sa 02Vi14 + 1°46R
Ur 21Sa19 - 0°07	Ur 28Sa57 - 0°09
Ne 12Cp26 + 0°51	Ne 17Cp05 + 0°49
Pl 00Cn37 - 7°11R	Pl 28Ge37 - 7°01
No 11Ar44 - 0°00	No 03Ar06 - 0°00
Coords: 52W/15S	

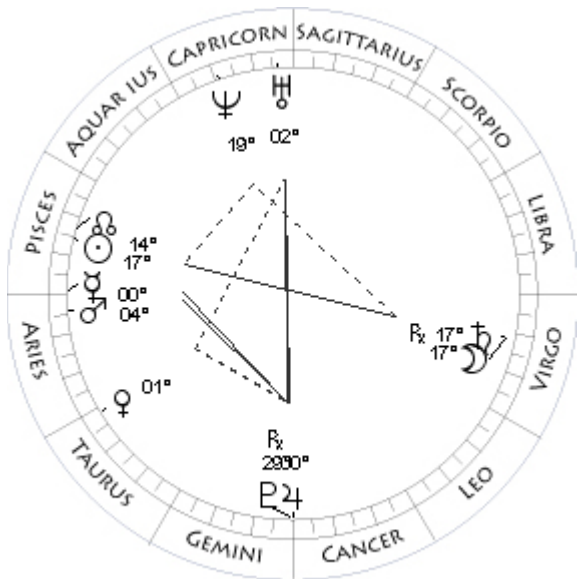
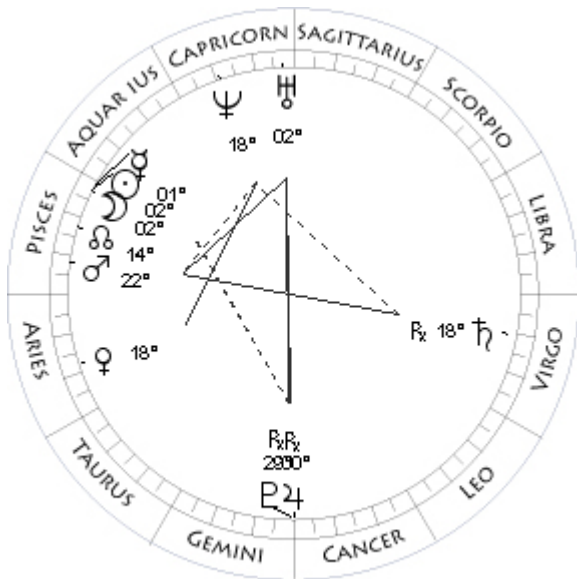
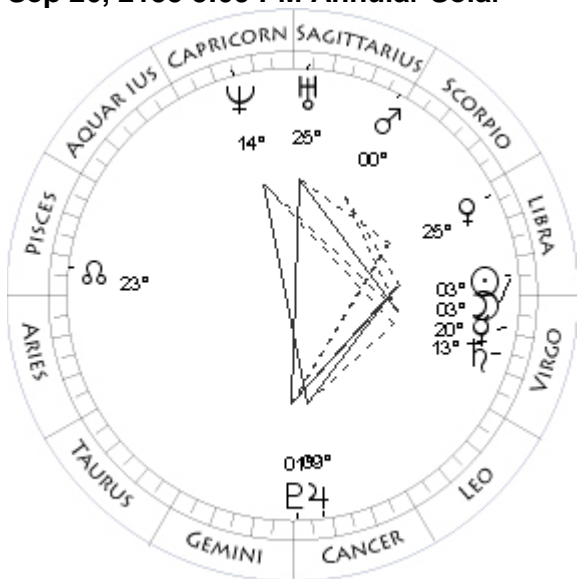
Apr 2, 2155 2:01 AM Annular Solar

Mo 27Ar48 + 1°26	Mo 11Ar58 + 0°51
Su 27Li59 - 0°00	Su 12Ar06 - 0°00
Me 21Li00 + 1°29	Me 00Ta34 + 2°08
Ve 18Vi52 - 2°50	Ve 16Pi44 - 1°19
Ma 27Le14 + 1°27	Ma 28Vi48 + 3°13R
Ju 04Ge44 - 1°05R	Ju 03Ge28 - 0°35
Sa 04Vi36 + 1°20	Sa 01Vi24 + 1°46R
Ur 21Sa50 - 0°07	Ur 29Sa03 - 0°09
Ne 12Cp35 + 0°51	Ne 17Cp16 + 0°50
Pl 00Cn33 - 7°13R	Pl 28Ge41 - 6°58
No 10Ar59 - 0°00	No 02Ar22 - 0°00
Coords: 145E/12N	
Coords: 102W/55N	

Sep 11, 2155 6:58 AM Total Umbral



Sep 26, 2155 5:09 PM Annular Solar



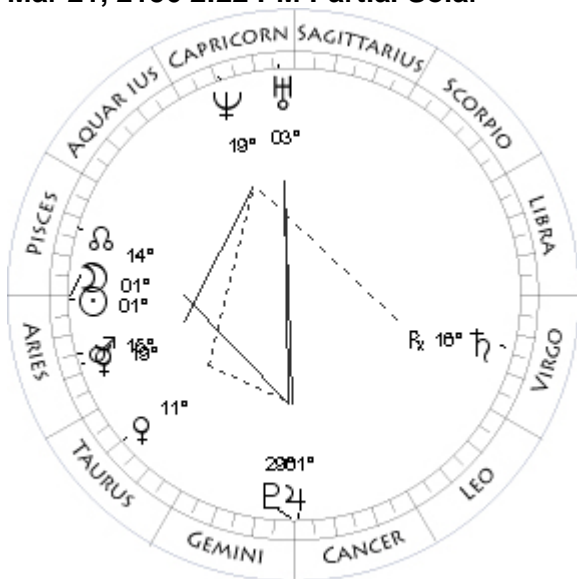
Feb 21, 2156 4:30 AM Partial Solar

Mo 18Pi22 - 0°29	Mo 02Pi03 - 1°07
Su 18Vi22 - 0°00	Su 02Pi01 - 0°00
Me 01Vi58 - 0°50	Me 01Pi58 - 1°58
Ve 06Li09 + 1°06	Ve 18Ar34 + 2°04
Ma 20Sc02 - 0°59	Ma 22Pi48 - 0°47
Ju 07Cn14 - 0°20	Ju 00Cn41 - 0°03R
Sa 11Vi52 + 1°37	Sa 18Vi35 + 2°10R
Ur 25Sa04 - 0°11	Ur 02Cp29 - 0°12
Ne 14Cp38 + 0°49R	Ne 18Cp37 + 0°45
Pl 01Cn37 - 6°51	Pl 29Ge46 - 6°49R
No 23Pi47 - 0°00	No 15Pi09 - 0°00

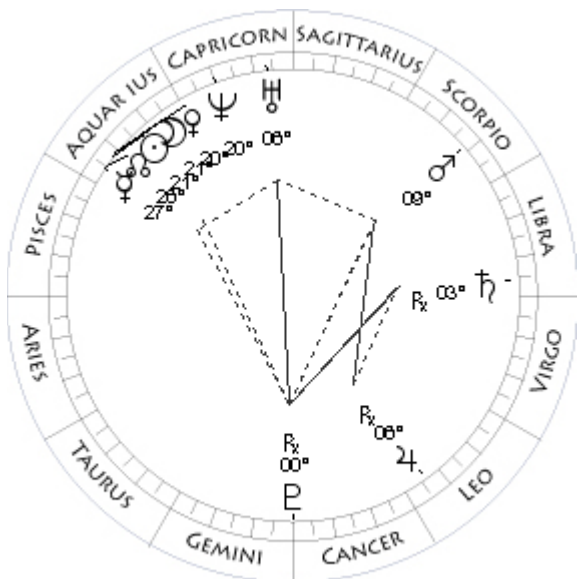
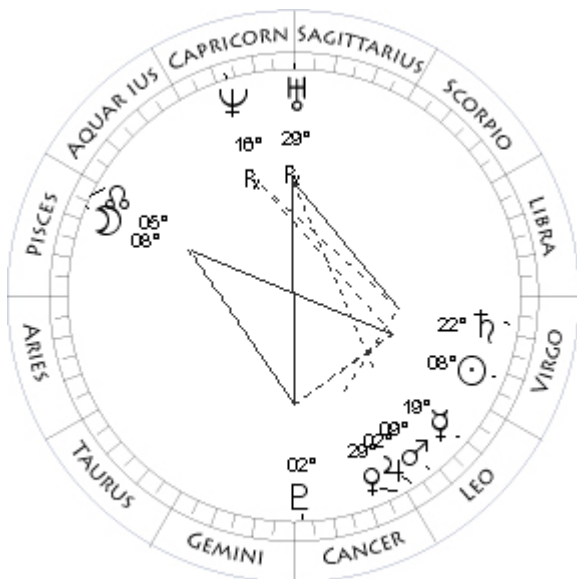
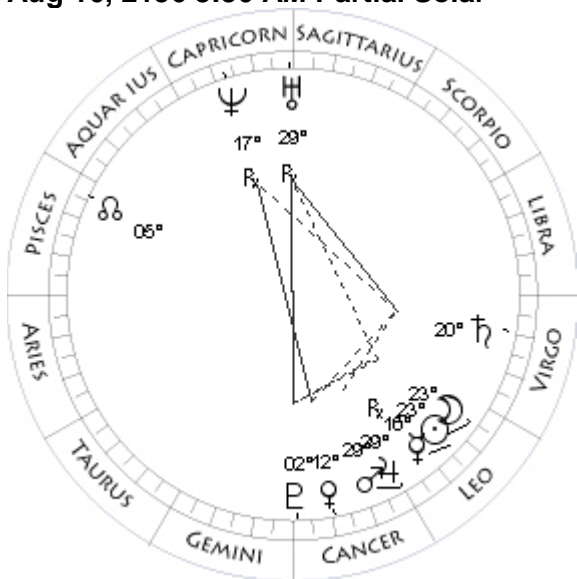
Mar 7, 2156 6:49 AM Total Umbral

Mo 03Li17 - 0°53	Mo 17Vi07 - 0°16
Su 03Li25 - 0°00	Su 17Pi11 - 0°00
Me 20Vi37 + 1°50	Me 00Ar13 - 0°10
Ve 25Li10 + 0°36	Ve 01Ta47 + 3°51
Ma 00Sa28 - 1°06	Ma 04Ar33 - 0°38
Ju 09Cn03 - 0°19	Ju 00Cn52 - 0°01
Sa 13Vi47 + 1°39	Sa 17Vi25 + 2°12R
Ur 25Sa16 - 0°11	Ur 02Cp58 - 0°12
Ne 14Cp34 + 0°48	Ne 19Cp01 + 0°46
Pl 01Cn41 - 6°52	Pl 29Ge41 - 6°46R
No 22Pi58 - 0°00	No 14Pi21 - 0°00
Coords: 142E/58S	Coords: 100E/ 5N

Mar 21, 2156 2:22 PM Partial Solar



Aug 16, 2156 3:36 AM Partial Solar



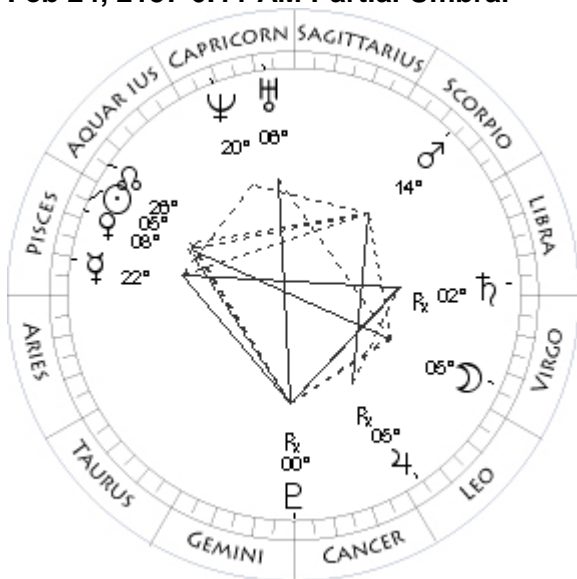
Aug 30, 2156 11:15 PM Total Umbral

Mo 01Ar16 + 1°33	Mo 08Pi04 + 0°15
Su 01Ar28 - 0°00	Su 08Vi09 - 0°00
Me 19Ar01 + 2°47	Me 19Le59 - 0°02
Ve 11Ta00 + 5°34	Ve 29Cn21 - 0°44
Ma 15Ar33 - 0°29	Ma 09Le04 + 1°04
Ju 01Cn44 + 0°01	Ju 02Le43 + 0°17
Sa 16Vi17 + 2°12R	Sa 22Vi02 + 1°55
Ur 03Cp15 - 0°12	Ur 29Sa23 - 0°14R
Ne 19Cp18 + 0°46	Ne 16Cp58 + 0°46R
Pl 29Ge42 - 6°43	Pl 02Cn35 - 6°32
No 13Pi36 - 0°00	No 05Pi00 - 0°00

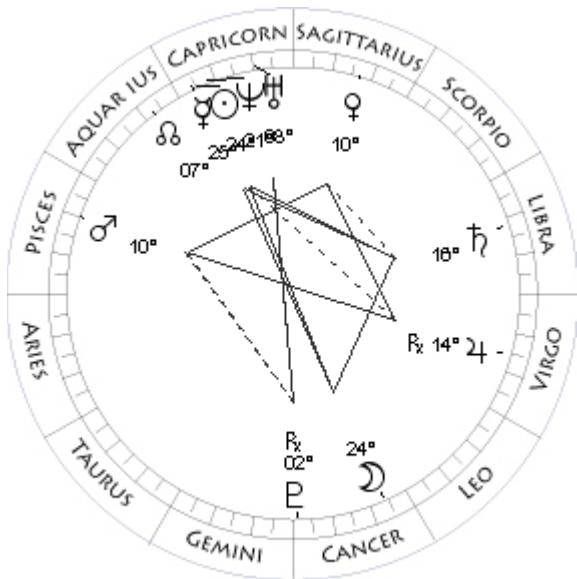
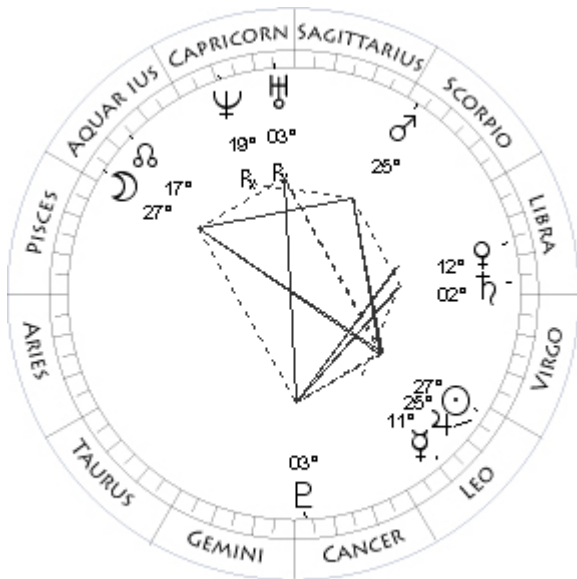
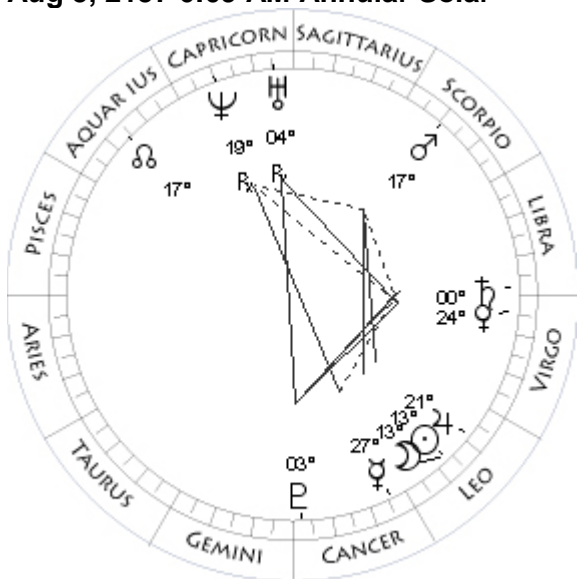
Feb 9, 2157 8:20 PM Total Solar

Mo 23Le56 + 1°02	Mo 21Aq18 - 0°26
Su 23Le52 - 0°00	Su 21Aq19 - 0°00
Me 16Le38 - 4°06R	Me 27Aq17 - 1°49
Ve 12Cn24 - 1°39	Ve 20Aq37 - 1°16
Ma 29Cn32 + 0°58	Ma 09Sc27 + 1°58
Ju 29Cn38 + 0°15	Ju 06Le51 + 0°44R
Sa 20Vi15 + 1°55	Sa 03Li04 + 2°26R
Ur 29Sa34 - 0°14R	Ur 06Cp09 - 0°15
Ne 17Cp14 + 0°46R	Ne 20Cp24 + 0°42
Pl 02Cn23 - 6°31	Pl 00Cn57 - 6°33R
No 05Pi47 - 0°00	No 26Aq22 - 0°00
	Coords: 109E/37S

Feb 24, 2157 6:11 AM Partial Umbral



Aug 5, 2157 6:09 AM Annular Solar



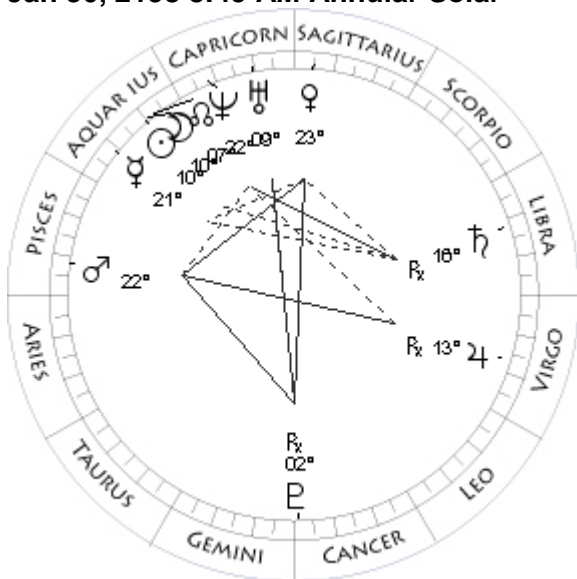
Aug 20, 2157 3:41 PM Partial Umbral

Mo 05Vi44 - 0°53	Mo 27Aq49 + 0°59
Su 05Pi52 - 0°00	Su 27Le58 - 0°00
Me 22Pi29 + 0°16	Me 11Le54 + 0°34
Ve 08Pi40 - 1°26	Ve 12Li02 - 0°27
Ma 14Sc08 + 2°00	Ma 25Sc28 - 1°54
Ju 05Le12 + 0°45R	Ju 25Le16 + 0°44
Sa 02Li14 + 2°29R	Sa 02Li09 + 2°09
Ur 06Cp46 - 0°15	Ur 03Cp52 - 0°17R
Ne 20Cp51 + 0°42	Ne 19Cp23 + 0°42R
Pl 00Cn49 - 6°30R	Pl 03Cn31 - 6°13
No 25Aq36 - 0°00	No 16Aq13 - 0°00
	Coords: 125W/11S

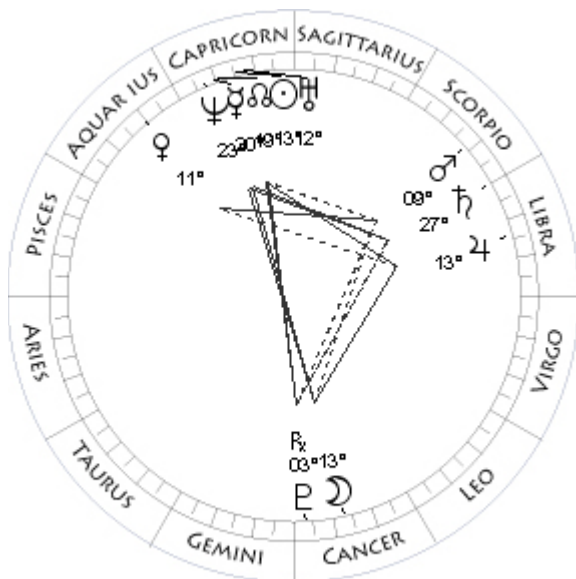
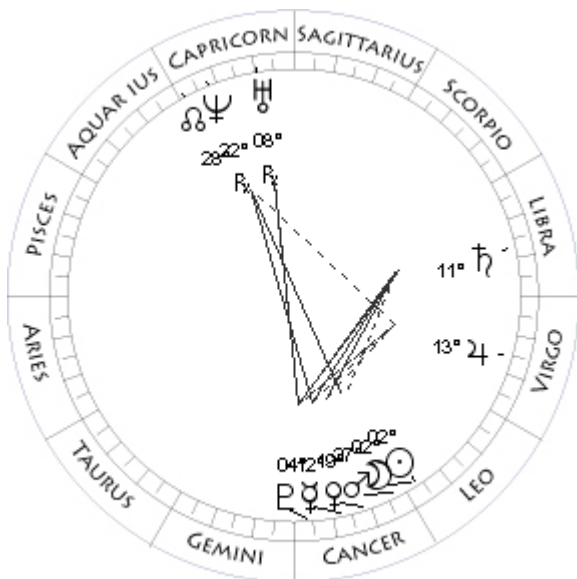
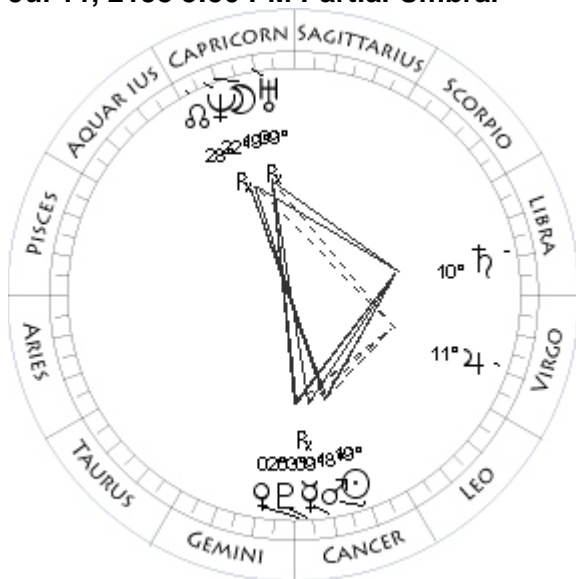
Jan 14, 2158 6:24 PM Partial Penumbral

Mo 13Le11 + 0°21	Mo 24Cn37 + 1°11
Su 13Le12 - 0°00	Su 24Cp33 - 0°00
Me 27Cn20 - 3°19	Me 25Cp21 - 2°00
Ve 24Vi48 + 0°37	Ve 10Sa31 + 4°30
Ma 17Sc14 - 1°48	Ma 10Pi56 - 0°52
Ju 21Le53 + 0°43	Ju 14Vi13 + 1°12R
Sa 00Li33 + 2°11	Sa 16Li20 + 2°27
Ur 04Cp14 - 0°18R	Ur 08Cp47 - 0°17
Ne 19Cp43 + 0°43R	Ne 21Cp33 + 0°38
Pl 03Cn15 - 6°13	Pl 02Cn27 - 6°18R
No 17Aq02 - 0°00	No 08Aq25 - 0°00
	Coords: 86W/22N

Jan 30, 2158 8:49 AM Annular Solar



Jul 11, 2158 3:50 PM Partial Umbral



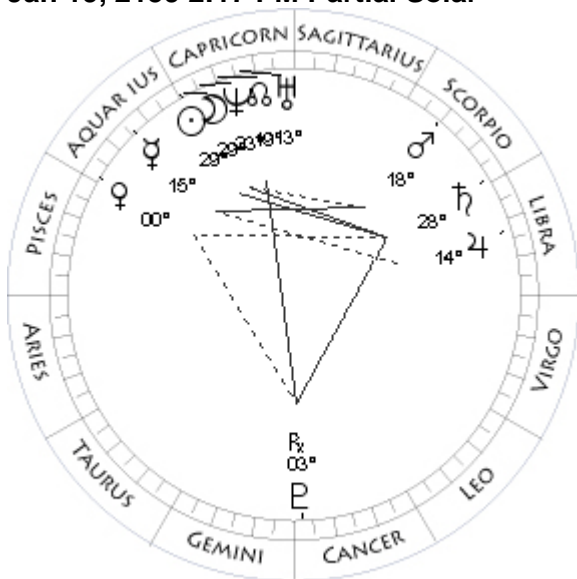
Jul 25, 2158 3:43 PM Total Solar

Mo 10Aq22 + 0°15	Mo 02Le44 - 0°24
Su 10Aq26 - 0°00	Su 02Le50 - 0°00
Me 21Aq54 - 1°40	Me 12Cn56 - 2°25
Ve 23Sa55 + 4°01	Ve 19Cn10 + 0°18
Ma 22Pi56 - 0°40	Ma 27Cn42 + 1°01
Ju 13Vi05 + 1°16R	Ju 13Vi54 + 1°04
Sa 16Li25 + 2°32R	Sa 11Li13 + 2°23
Ur 09Cp40 - 0°18	Ur 08Cp59 - 0°21R
Ne 22Cp08 + 0°38	Ne 22Cp15 + 0°39R
Pl 02Cn11 - 6°16R	Pl 04Cn06 - 5°54
No 07Aq36 - 0°00	No 28Cp16 - 0°00

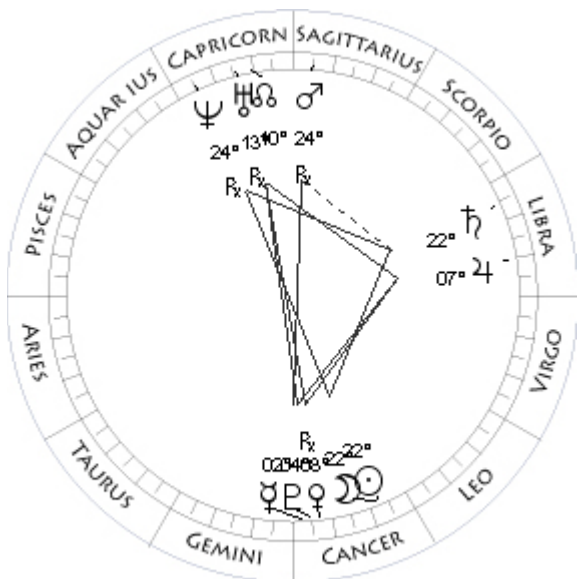
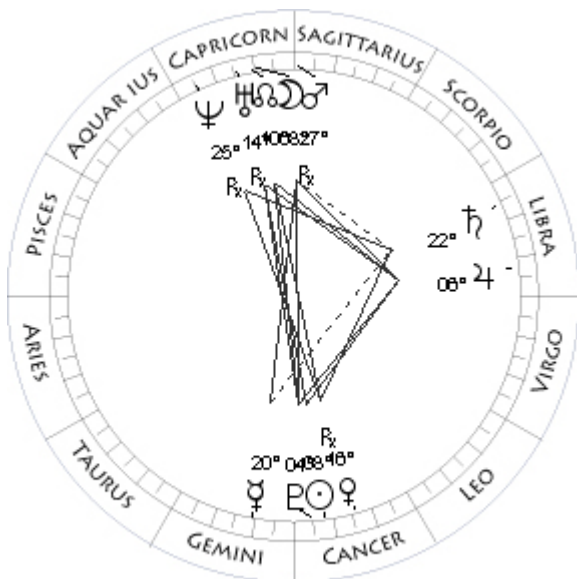
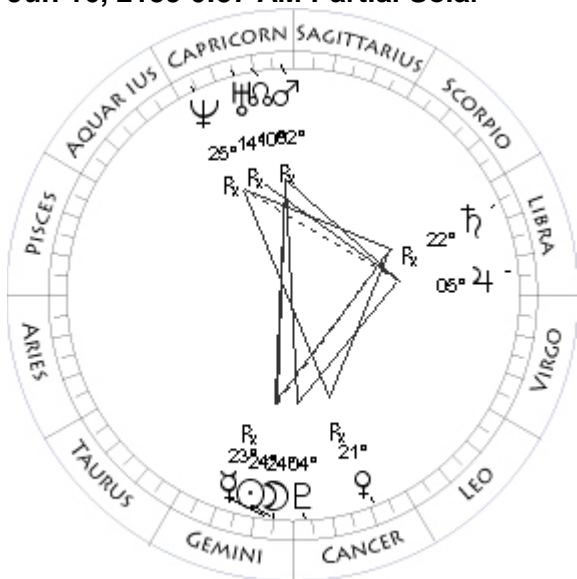
Jan 4, 2159 7:13 AM Partial Umbral

Mo 19Cp31 - 0°49	Mo 13Cn38 + 0°31
Su 19Cn29 - 0°00	Su 13Cp39 - 0°00
Me 09Cn41 - 4°48R	Me 20Cp15 - 2°06
Ve 02Cn04 - 0°17	Ve 11Aq21 - 1°43
Ma 18Cn33 + 0°57	Ma 09Sc11 + 1°10
Ju 11Vi25 + 1°05	Ju 13Li45 + 1°18
Sa 10Li24 + 2°26	Sa 27Li50 + 2°26
Ur 09Cp31 - 0°21R	Ur 12Cp08 - 0°20
Ne 22Cp37 + 0°39R	Ne 23Cp16 + 0°35
Pl 03Cn47 - 5°54	Pl 03Cn45 - 6°01R
No 29Cp00 - 0°00	No 19Cp39 - 0°00
Coords: 124W/23S	Coords: 107E/23N

Jan 19, 2159 2:17 PM Partial Solar



Jun 16, 2159 0:37 AM Partial Solar



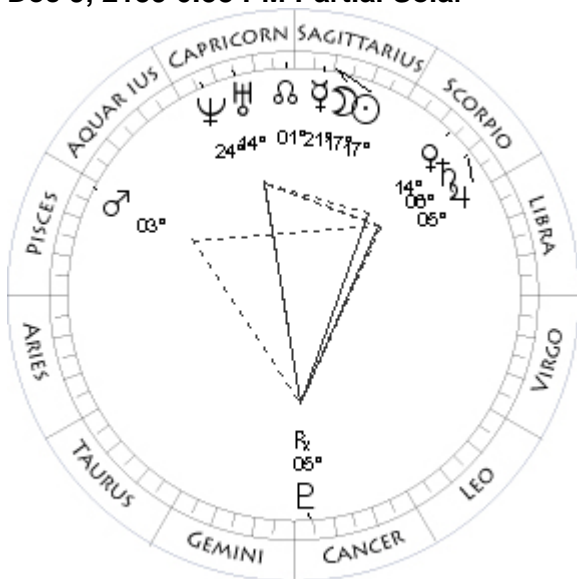
Jun 30, 2159 5:55 PM Total Umbral

Mo 29Cp05 + 0°54	Mo 08Cp49 - 0°07
Su 29Cp14 - 0°00	Su 08Cn50 - 0°00
Me 15Aq09 - 1°29	Me 20Ge10 - 4°14
Ve 00Pi16 - 1°37	Ve 16Cn59 - 2°31R
Ma 18Sc07 + 1°06	Ma 27Sa48 - 4°18R
Ju 14Li34 + 1°22	Ju 06Li03 + 1°18
Sa 28Li31 + 2°30	Sa 22Li05 + 2°33
Ur 13Cp03 - 0°20	Ur 14Cp23 - 0°24R
Ne 23Cp50 + 0°35	Ne 25Cp11 + 0°35R
Pl 03Cn28 - 5°59R	Pl 04Cn35 - 5°37
No 18Cp50 - 0°00	No 10Cp15 - 0°00
	Coords: 92W/23S

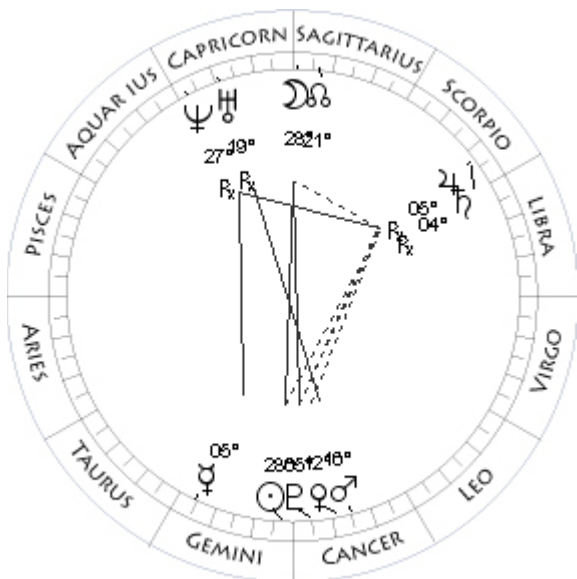
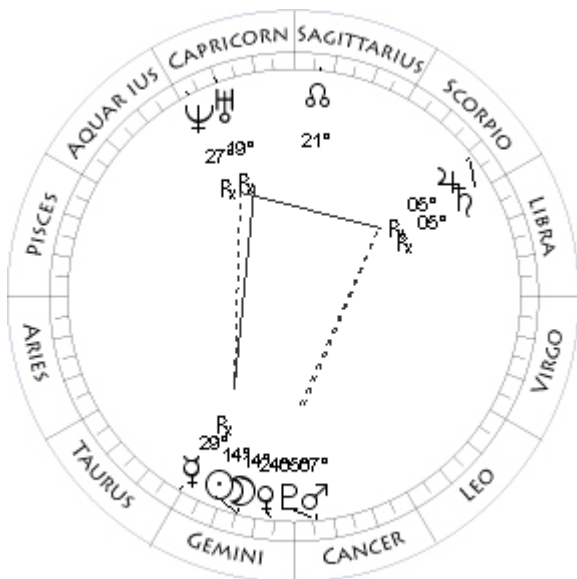
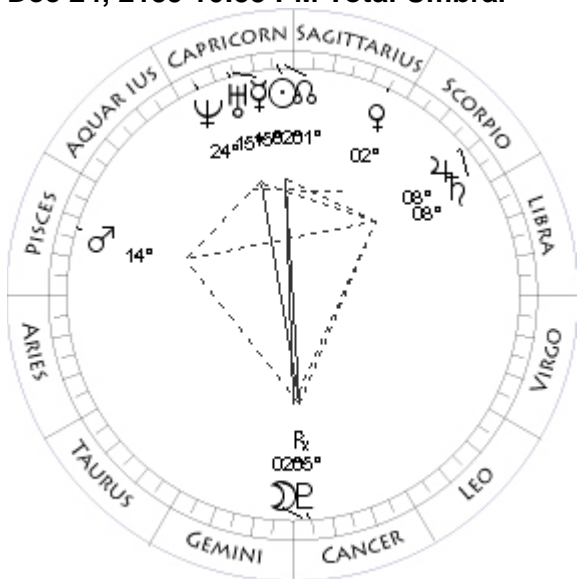
Jul 15, 2159 7:15 AM Partial Solar

Mo 24Ge52 + 1°24	Mo 22Cn33 - 1°08
Su 24Ge47 - 0°00	Su 22Cn43 - 0°00
Me 23Ge08 - 3°31R	Me 02Cn57 - 1°36
Ve 21Cn59 + 0°44R	Ve 08Cn28 - 5°18R
Ma 02Cp23 - 3°33R	Ma 24Sa13 - 4°40R
Ju 05Li06 + 1°22	Ju 07Li31 + 1°15
Sa 22Li08 + 2°37R	Sa 22Li24 + 2°29
Ur 14Cp57 - 0°24R	Ur 13Cp48 - 0°24R
Ne 25Cp32 + 0°35R	Ne 24Cp47 + 0°35R
Pl 04Cn14 - 5°38	Pl 04Cn56 - 5°36
No 11Cp02 - 0°00	No 09Cp29 - 0°00

Dec 9, 2159 6:53 PM Partial Solar



Dec 24, 2159 10:55 PM Total Umbral



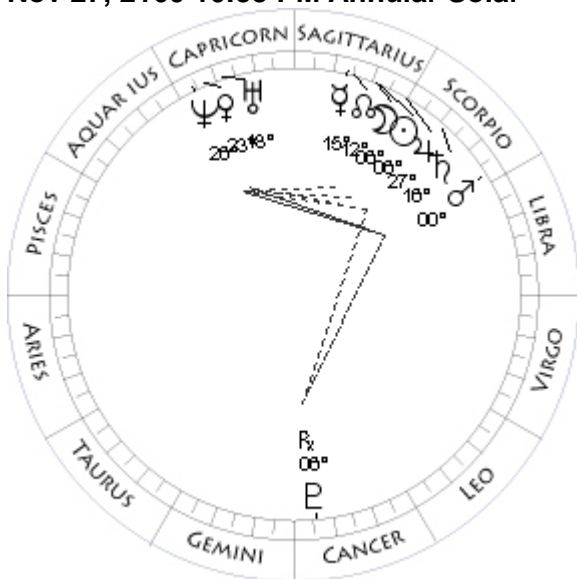
Jun 4, 2160 4:53 PM Total Solar

Mo 17Sa31 - 1°14	Mo 14Ge41 + 0°40
Su 17Sa26 - 0°00	Su 14Ge41 - 0°00
Me 21Sa09 - 1°25	Me 29Ta35 - 3°46R
Ve 14Sc07 + 1°52	Ve 24Ge52 + 0°31
Ma 03Pi03 - 1°10	Ma 07Cn17 + 1°02
Ju 05Sc56 + 1°06	Ju 05Sc50 + 1°19R
Sa 06Sc54 + 2°17	Sa 05Sc00 + 2°37R
Ur 14Cp37 - 0°23	Ur 19Cp40 - 0°26R
Ne 24Cp28 + 0°32	Ne 27Cp59 + 0°31R
Pl 05Cn22 - 5°43R	Pl 05Cn04 - 5°20
No 01Cp40 - 0°00	No 22Sa15 - 0°00

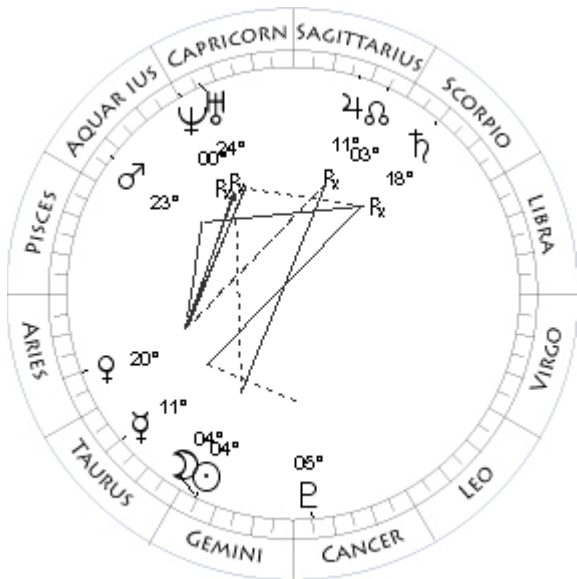
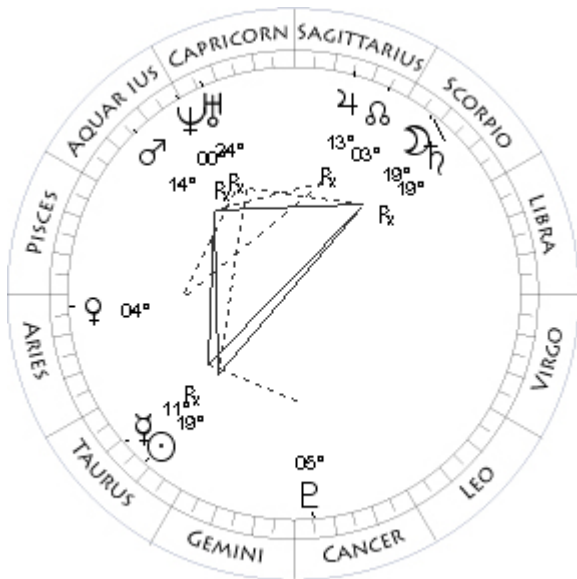
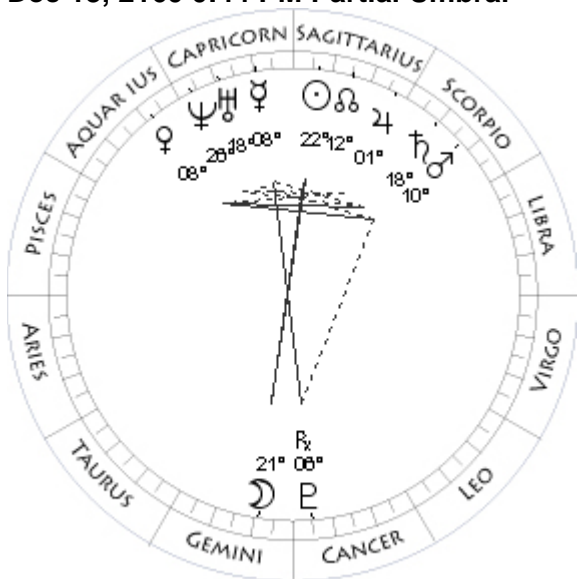
Jun 18, 2160 7:04 PM Partial Umbral

Mo 02Cn48 - 0°10	Mo 28Sa03 + 0°34
Su 02Cp52 - 0°00	Su 28Ge10 - 0°00
Me 15Cp01 - 2°12	Me 05Ge21 - 3°34
Ve 02Sa51 + 1°31	Ve 12Cn09 + 1°01
Ma 14Pi02 - 0°50	Ma 16Cn29 + 1°05
Ju 08Sc37 + 1°08	Ju 05Sc02 + 1°16R
Sa 08Sc19 + 2°20	Sa 04Sc27 + 2°34R
Ur 15Cp29 - 0°23	Ur 19Cp12 - 0°27R
Ne 24Cp59 + 0°31	Ne 27Cp42 + 0°31R
Pl 05Cn04 - 5°43R	Pl 05Cn23 - 5°19
No 00Cp52 - 0°00	No 21Sa30 - 0°00
Coords: 16W/23N	Coords: 74W/23S

Nov 27, 2160 10:53 PM Annular Solar



Dec 13, 2160 0:44 PM Partial Umbral



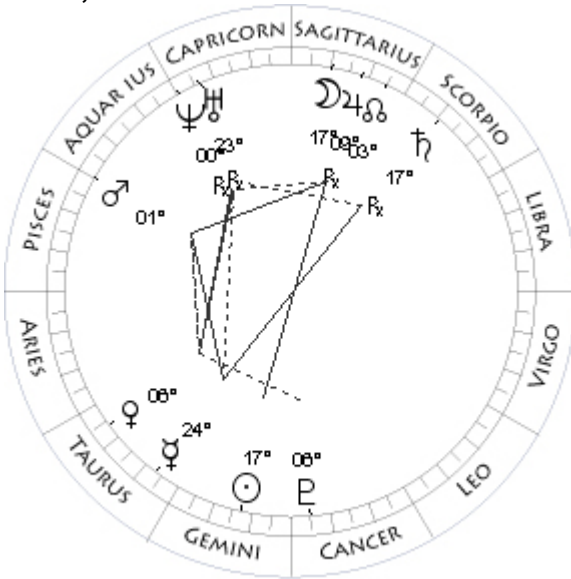
May 9, 2161 4:32 PM Partial Penumbral

Mo 06Sa13 - 0°36	Mo 19Sc28 - 1°16
Su 06Sa13 - 0°00	Su 19Ta24 - 0°00
Me 15Sa24 - 1°38	Me 11Ta41 - 0°52R
Ve 23Cp23 - 2°57	Ve 04Ar03 - 1°16
Ma 00Sc15 + 0°51	Ma 14Aq30 - 1°48
Ju 27Sc40 + 0°47	Ju 13Sa08 + 0°52R
Sa 16Sc18 + 2°08	Sa 19Sc26 + 2°31R
Ur 18Cp02 - 0°26	Ur 24Cp29 - 0°28R
Ne 26Cp17 + 0°28	Ne 00Aq31 + 0°27R
Pl 06Cn40 - 5°24R	Pl 05Cn36 - 5°05
No 12Sa55 - 0°00	No 04Sa18 - 0°00
Coords: 171E/60S	Coords: 111W/19S

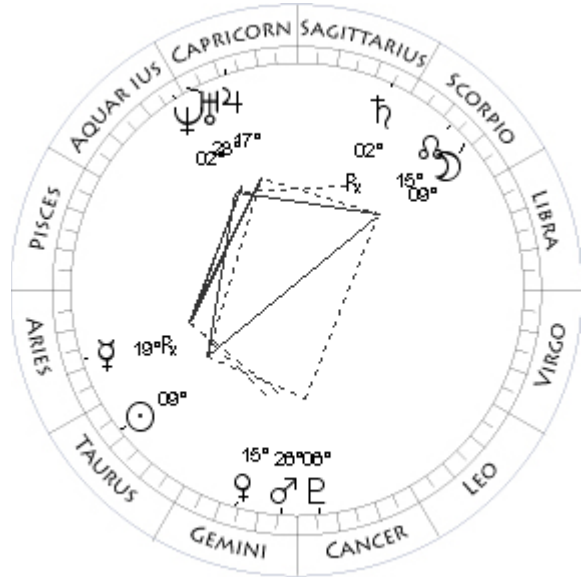
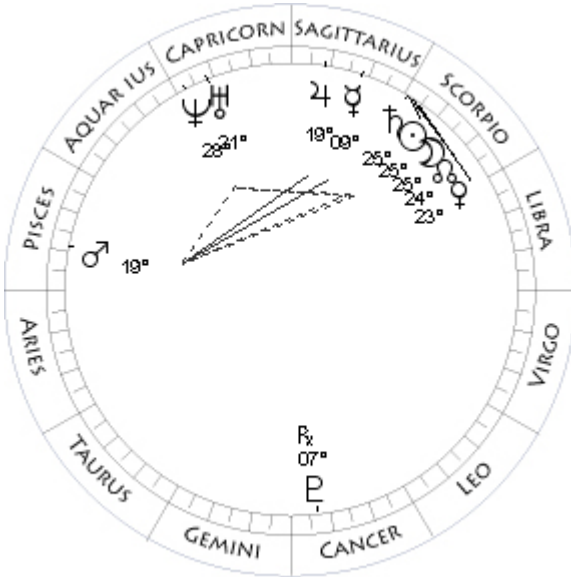
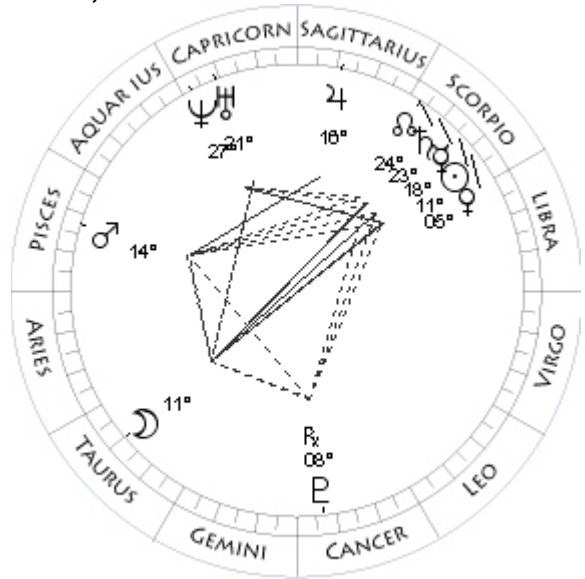
May 25, 2161 3:59 AM Annular Solar

Mo 21Ge52 - 0°50	Mo 04Ge16 - 0°05
Su 22Sa01 - 0°00	Su 04Ge20 - 0°00
Me 08Cp58 - 2°19	Me 11Ta14 - 3°33
Ve 08Aq40 - 2°14	Ve 20Ar53 - 1°59
Ma 10Sc18 + 0°46	Ma 23Aq30 - 2°22
Ju 01Sa04 + 0°47	Ju 11Sa19 + 0°51R
Sa 18Sc02 + 2°10	Sa 18Sc18 + 2°30R
Ur 18Cp50 - 0°26	Ur 24Cp15 - 0°29R
Ne 26Cp45 + 0°28	Ne 00Aq23 + 0°27R
Pl 06Cn24 - 5°24R	Pl 05Cn54 - 5°03
No 12Sa06 - 0°00	No 03Sa29 - 0°00
Coords: 167W/22N	Coords: 120W/16N

Jun 8, 2161 2:03 AM Partial Penumbral



Nov 3, 2161 3:40 AM Partial Penumbral



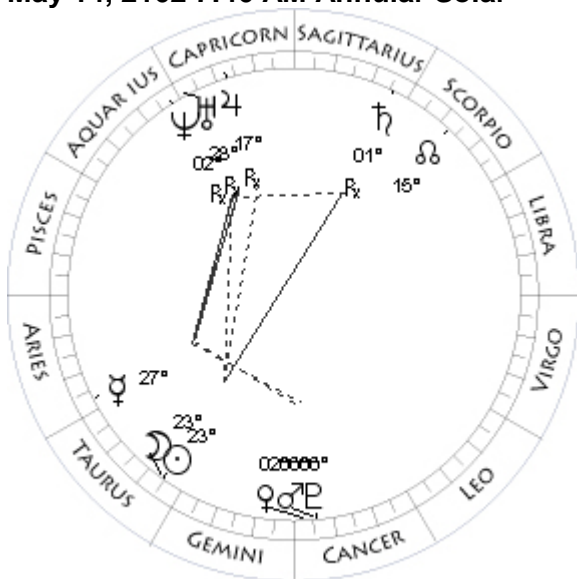
Nov 17, 2161 10:13 AM Total Solar

Mo 17Sa31 + 1°17	Mo 25Sc16 + 0°06
Su 17Ge41 - 0°00	Su 25Sc20 - 0°00
Me 24Ta27 - 2°57	Me 09Sa50 - 1°54
Ve 06Ta31 - 2°14	Ve 23Sc28 + 0°39
Ma 01Pi03 - 2°57	Ma 19Pi45 - 1°25
Ju 09Sa34 + 0°50R	Ju 19Sa36 + 0°21
Sa 17Sc23 + 2°28R	Sa 25Sc22 + 1°57
Ur 23Cp53 - 0°29R	Ur 21Cp34 - 0°28
Ne 00Aq10 + 0°27R	Ne 28Cp10 + 0°25
Pl 06Cn12 - 5°02	Pl 07Cn57 - 5°04R
No 02Sa45 - 0°00	No 24Sc09 - 0°00
	Coords: 24W/13S

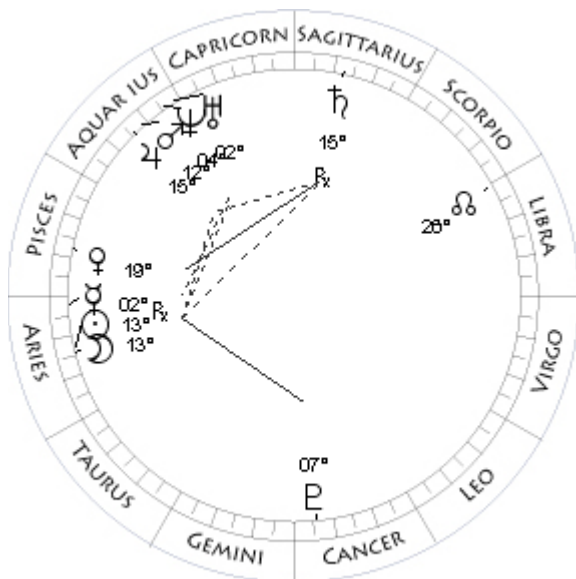
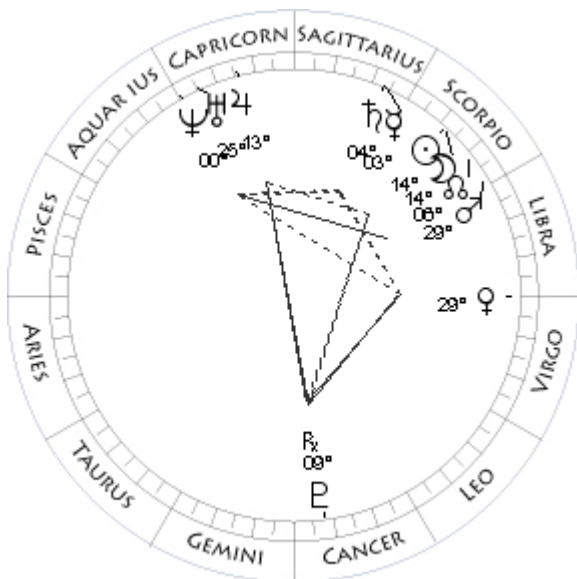
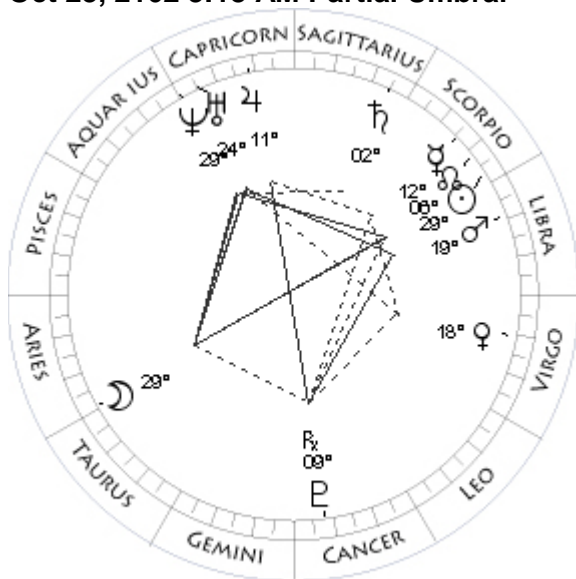
Apr 29, 2162 8:11 AM Partial Umbral

Mo 11Ta05 + 1°12	Mo 09Sc07 - 0°32
Su 11Sc01 - 0°00	Su 09Ta08 - 0°00
Me 18Sc00 - 0°30	Me 19Ar22 - 1°27R
Ve 05Sc33 + 1°06	Ve 15Ge15 + 1°36
Ma 14Pi24 - 2°14	Ma 26Ge57 + 1°16
Ju 16Sa36 + 0°23	Ju 17Cp31 + 0°08
Sa 23Sc41 + 1°58	Sa 02Sa43 + 2°14R
Ur 21Cp05 - 0°29	Ur 28Cp41 - 0°31
Ne 27Cp55 + 0°25	Ne 02Aq43 + 0°23
Pl 08Cn07 - 5°04R	Pl 06Cn31 - 4°48
No 24Sc54 - 0°00	No 15Sc31 - 0°00
	Coords: 124E/15S

May 14, 2162 7:46 AM Annular Solar



Oct 23, 2162 3:18 AM Partial Umbral



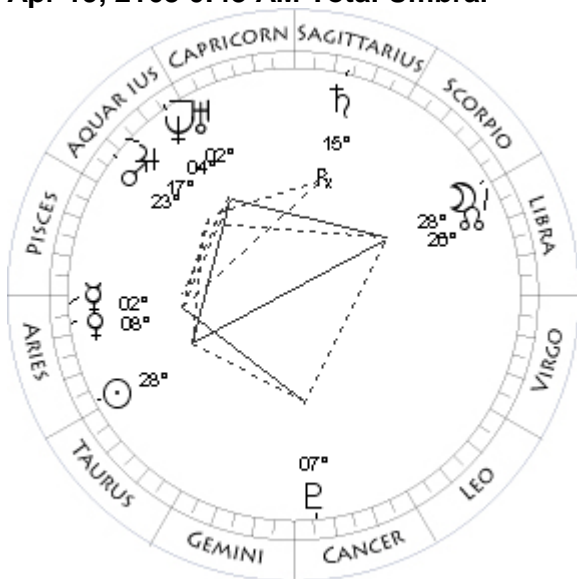
Nov 7, 2162 1:54 AM Total Solar

Mo 23Ta32 - 0°47	Mo 14Sc34 + 0°47
Su 23Ta39 - 0°00	Su 14Sc42 - 0°00
Me 27Ar34 - 3°13	Me 03Sa57 - 2°13
Ve 02Cn46 + 2°08	Ve 29Vi20 - 0°02
Ma 06Cn24 + 1°17	Ma 29Li05 + 0°37
Ju 17Cp24 + 0°06R	Ju 13Cp40 - 0°13
Sa 01Sa40 + 2°14R	Sa 04Sa21 + 1°42
Ur 28Cp38 - 0°31R	Ur 25Cp14 - 0°31
Ne 02Aq42 + 0°23R	Ne 00Aq09 + 0°21
Pl 06Cn45 - 4°46	Pl 09Cn12 - 4°45R
No 14Sc44 - 0°00	No 05Sc22 - 0°00
Coords: 73W/42S	Coords: 158W/34N

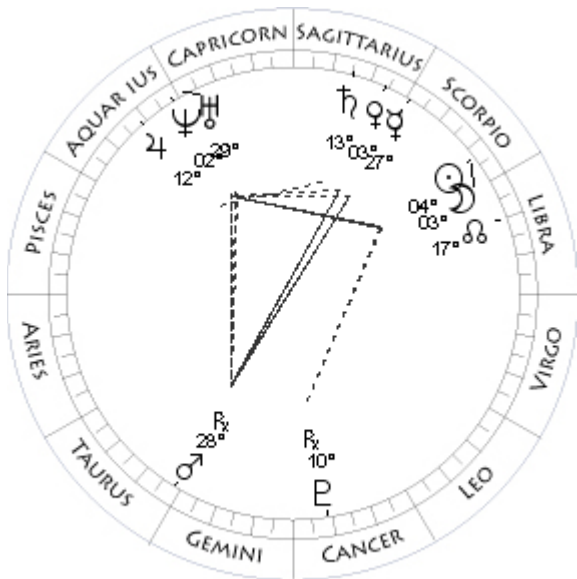
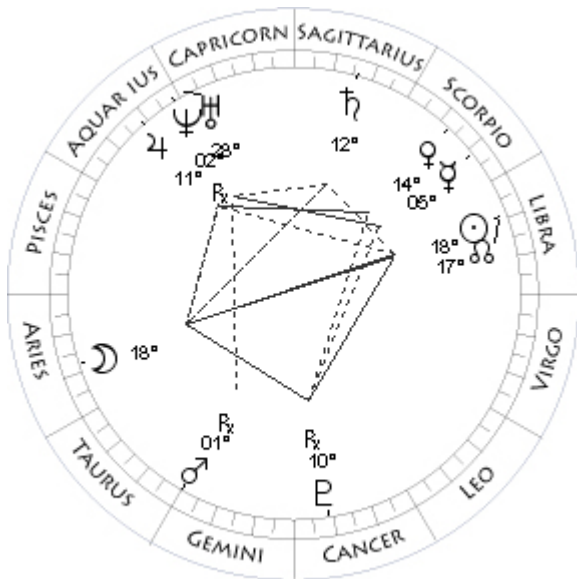
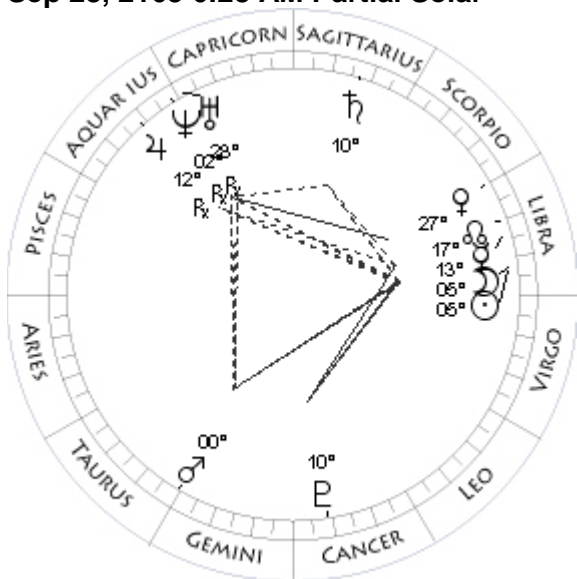
Apr 3, 2163 4:35 PM Partial Solar

Mo 29Ar48 + 0°34	Mo 13Ar49 + 1°11
Su 29Li47 - 0°00	Su 13Ar46 - 0°00
Me 12Sc01 - 0°46	Me 02Ar42 + 1°46R
Ve 18Vi42 - 2°17	Ve 19Pi21 - 1°22
Ma 19Li14 + 0°43	Ma 12Aq14 - 1°09
Ju 11Cp22 - 0°12	Ju 15Aq17 - 0°28
Sa 02Sa42 + 1°44	Sa 15Sa49 + 1°49R
Ur 24Cp54 - 0°31	Ur 02Aq21 - 0°32
Ne 29Cp59 + 0°21	Ne 04Aq38 + 0°19
Pl 09Cn19 - 4°44R	Pl 07Cn21 - 4°32
No 06Sc10 - 0°00	No 27Li33 - 0°00

Apr 19, 2163 0:43 AM Total Umbral



Sep 28, 2163 6:28 AM Partial Solar



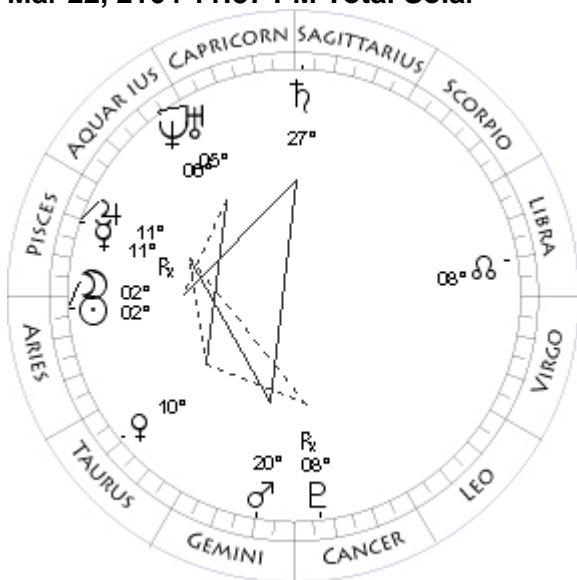
Oct 12, 2163 5:46 AM Total Umbral

Mo 28Li45 + 0°11	Mo 18Ar41 - 0°06
Su 28Ar50 - 0°00	Su 18Li45 - 0°00
Me 02Ar42 - 1°47	Me 05Sc54 - 1°03
Ve 08Ar11 - 1°33	Ve 14Sc56 - 0°07
Ma 23Aq27 - 1°24	Ma 01Ge04 - 1°33R
Ju 17Aq43 - 0°31	Ju 11Aq53 - 0°55
Sa 15Sa24 + 1°51R	Sa 12Sa00 + 1°28
Ur 02Aq41 - 0°33	Ur 28Cp53 - 0°34
Ne 04Aq51 + 0°19	Ne 02Aq10 + 0°18R
Pl 07Cn28 - 4°30	Pl 10Cn28 - 4°24R
No 26Li44 - 0°00	No 17Li24 - 0°00

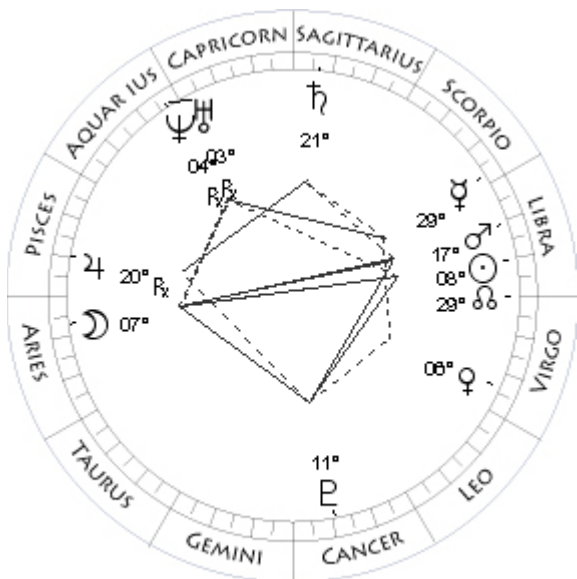
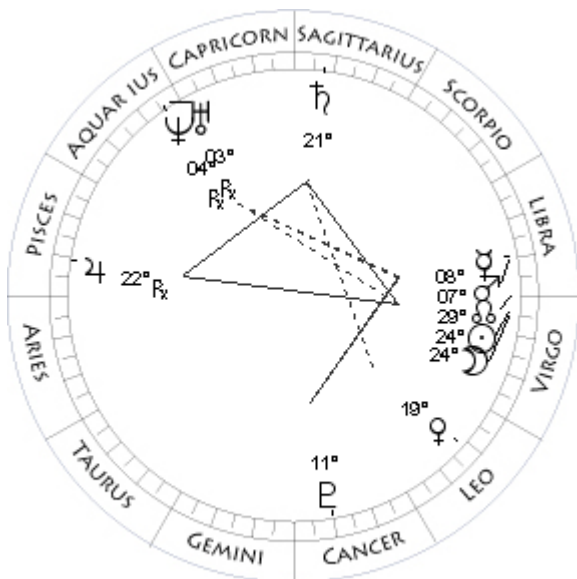
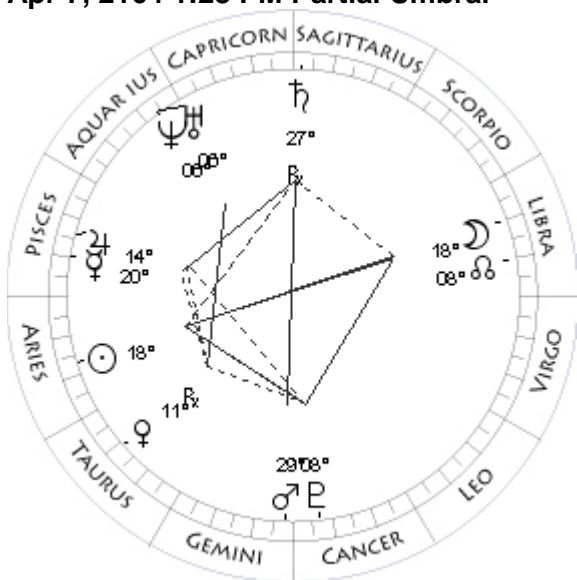
Oct 27, 2163 5:14 PM Partial Solar

Mo 05Li03 - 1°09	Mo 03Sc54 + 1°28
Su 05Li00 - 0°00	Su 04Sc06 - 0°00
Me 13Li51 + 0°35	Me 27Sc02 - 2°34
Ve 27Li44 + 0°30	Ve 03Sa56 - 0°51
Ma 00Ge15 - 2°00	Ma 28Ta40 - 0°51R
Ju 12Aq01 - 0°56R	Ju 12Aq29 - 0°54
Sa 10Sa55 + 1°30	Sa 13Sa26 + 1°25
Ur 28Cp55 - 0°34R	Ur 29Cp02 - 0°34
Ne 02Aq14 + 0°18R	Ne 02Aq13 + 0°17
Pl 10Cn26 - 4°23	Pl 10Cn25 - 4°24R
No 18Li09 - 0°00	No 16Li35 - 0°00

Mar 22, 2164 11:57 PM Total Solar



Apr 7, 2164 1:28 PM Partial Umbral



Sep 16, 2164 1:42 PM Annular Solar

Mo 02Ar55 + 0°30	Mo 24Vi19 - 0°27
Su 02Ar56 - 0°00	Su 24Vi19 - 0°00
Me 11Pi46 + 1°01R	Me 08Li29 + 0°19
Ve 10Ta23 + 5°58	Ve 19Le26 + 0°17
Ma 20Ge40 + 1°49	Ma 07Li55 + 0°40
Ju 11Pi04 - 0°54	Ju 22Pi27 - 1°32R
Sa 27Sa09 + 1°24	Sa 21Sa07 + 1°10
Ur 05Aq58 - 0°34	Ur 03Aq15 - 0°37R
Ne 06Aq34 + 0°16	Ne 04Aq36 + 0°14R
Pl 08Cn26 - 4°15R	Pl 11Cn29 - 4°03
No 08Li47 - 0°00	No 29Vi23 - 0°00

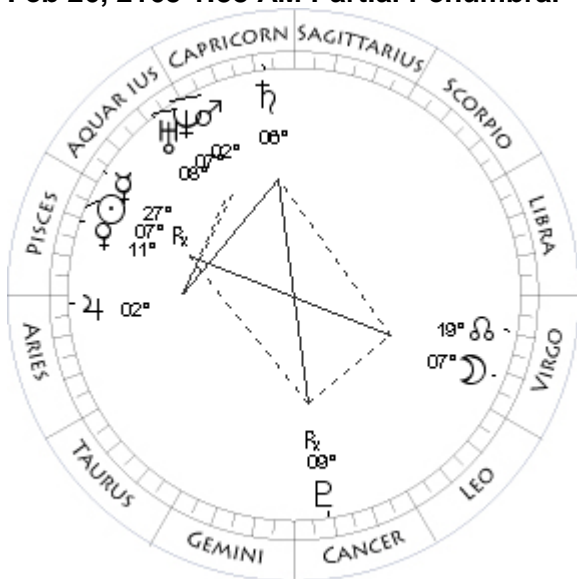
Coords: 172W/30N

Sep 30, 2164 3:34 PM Partial Umbral

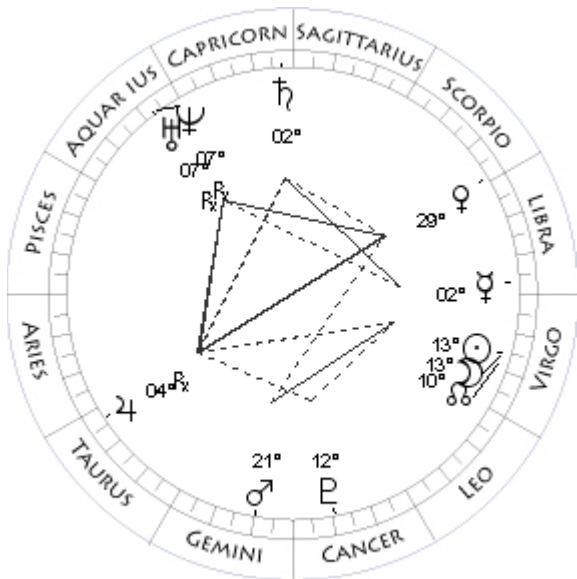
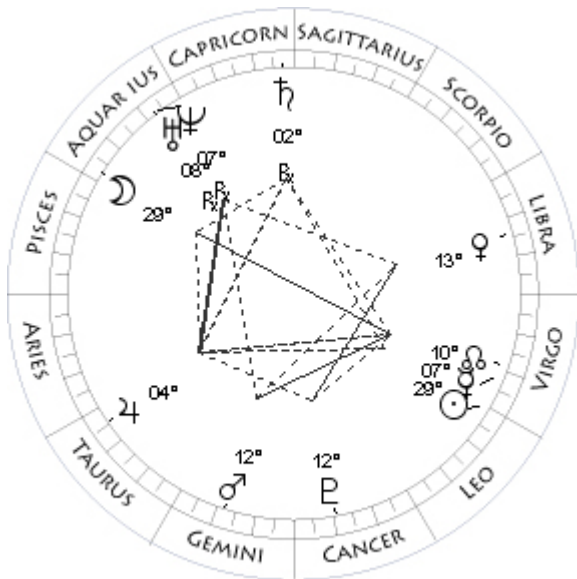
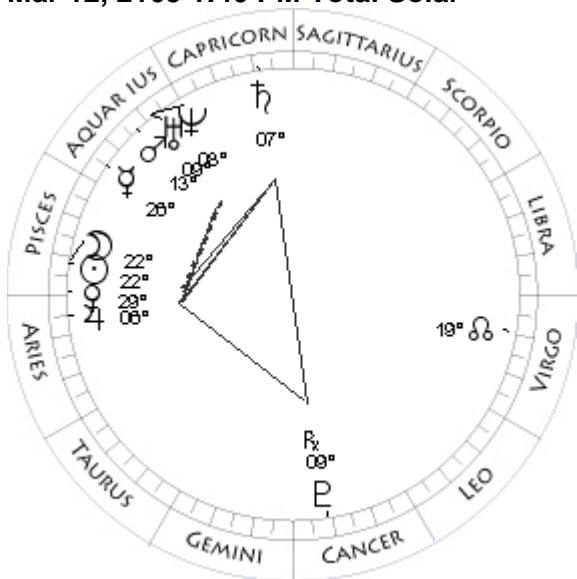
Mo 18Li10 + 0°54	Mo 07Ar56 - 0°48
Su 18Ar19 - 0°00	Su 08Li05 - 0°00
Me 20Pi35 - 1°55	Me 29Li42 - 1°25
Ve 11Ta59 + 7°09R	Ve 06Vi20 + 0°56
Ma 29Ge16 + 1°45	Ma 17Li07 + 0°33
Ju 14Pi35 - 0°56	Ju 20Pi39 - 1°32R
Sa 27Sa18 + 1°25R	Sa 21Sa47 + 1°08
Ur 06Aq29 - 0°34	Ur 03Aq03 - 0°37R
Ne 06Aq53 + 0°15	Ne 04Aq26 + 0°14R
Pl 08Cn29 - 4°12	Pl 11Cn34 - 4°04
No 07Li58 - 0°00	No 28Vi38 - 0°00

Coords: 124W/ 2N

Feb 26, 2165 1:38 AM Partial Penumbral



Mar 12, 2165 1:40 PM Total Solar



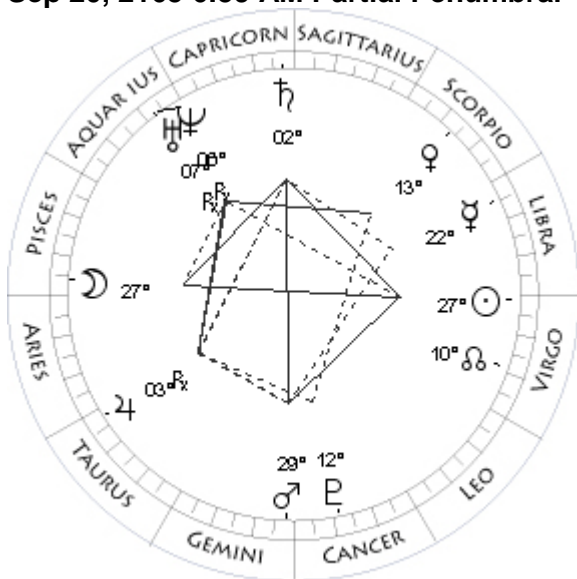
Aug 21, 2165 11:28 PM Partial Penumbral

Mo 07Vi49 - 1°06	Mo 29Aq21 + 1°04
Su 07Pi45 - 0°00	Su 29Le18 - 0°00
Me 27Aq56 + 3°24R	Me 07Vi13 + 1°33
Ve 11Pi37 - 1°27	Ve 13Li49 - 0°38
Ma 02Aq34 - 0°56	Ma 12Ge32 - 0°47
Ju 02Ar48 - 1°06	Ju 04Ta32 - 1°25
Sa 06Cp41 + 0°56	Sa 02Cp13 + 0°49R
Ur 08Aq43 - 0°35	Ur 08Aq13 - 0°39R
Ne 07Aq58 + 0°12	Ne 07Aq22 + 0°10R
Pl 09Cn40 - 3°59R	Pl 12Cn15 - 3°43
No 20Vi47 - 0°00	No 11Vi25 - 0°00
	Coords: 8W/11S

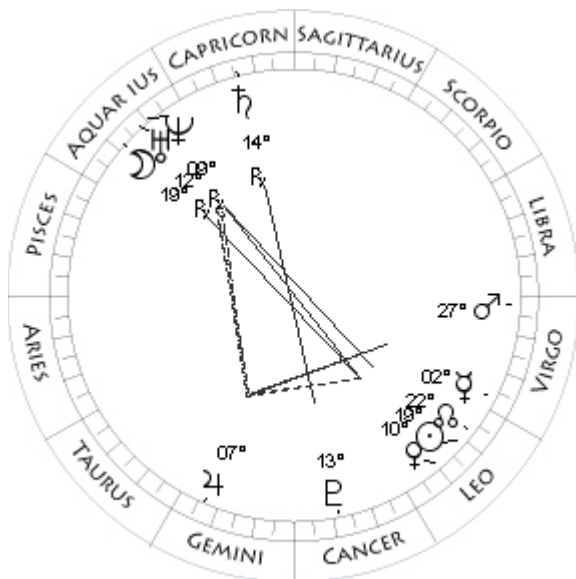
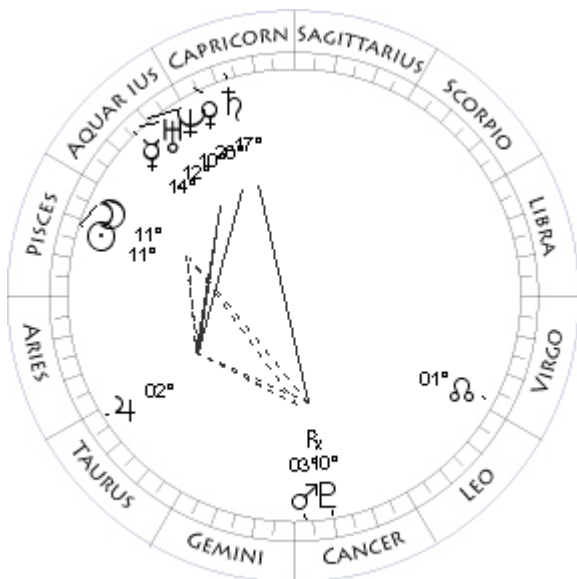
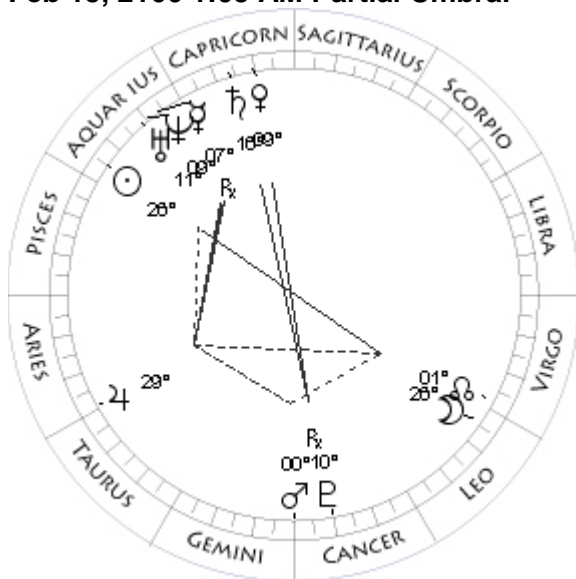
Sep 5, 2165 2:47 PM Annular Solar

Mo 22Pi12 - 0°13	Mo 13Vi22 + 0°14
Su 22Pi17 - 0°00	Su 13Vi26 - 0°00
Me 26Aq04 + 0°19	Me 02Li18 + 0°04
Ve 29Pi43 - 1°21	Ve 29Li22 - 1°55
Ma 13Aq37 - 1°05	Ma 21Ge21 - 0°32
Ju 06Ar13 - 1°05	Ju 04Ta16 - 1°28R
Sa 07Cp38 + 0°57	Sa 02Cp03 + 0°47
Ur 09Aq26 - 0°35	Ur 07Aq44 - 0°39R
Ne 08Aq26 + 0°12	Ne 07Aq03 + 0°10R
Pl 09Cn34 - 3°57R	Pl 12Cn28 - 3°43
No 20Vi01 - 0°00	No 10Vi38 - 0°00

Sep 20, 2165 6:59 AM Partial Penumbral



Feb 15, 2166 1:05 AM Partial Umbral



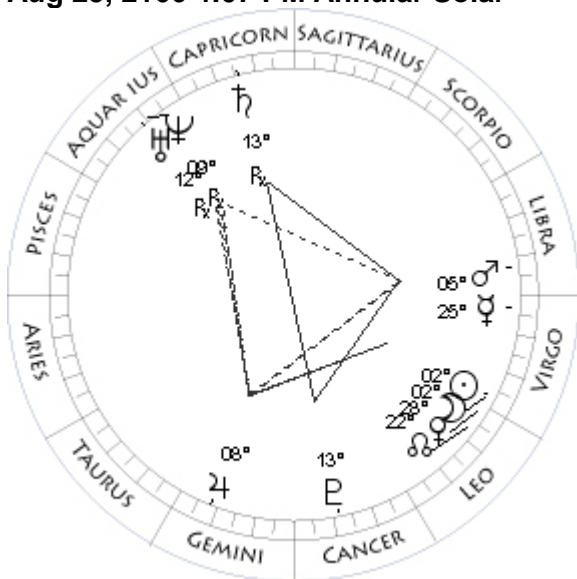
Mar 2, 2166 5:47 AM Total Solar

Mo 27Pi30 - 1°30	Mo 11Pi33 - 0°54
Su 27Vi42 - 0°00	Su 11Pi42 - 0°00
Me 22Li49 - 1°54	Me 14Aq44 - 0°12
Ve 13Sc56 - 3°17	Ve 26Cp26 + 1°47
Ma 29Ge29 - 0°13	Ma 03Cn34 + 2°59
Ju 03Ta18 - 1°31R	Ju 02Ta31 - 1°01
Sa 02Cp13 + 0°44	Sa 17Cp26 + 0°30
Ur 07Aq22 - 0°39R	Ur 12Aq46 - 0°37
Ne 06Aq47 + 0°10R	Ne 10Aq14 + 0°08
Pl 12Cn38 - 3°43	Pl 10Cn46 - 3°38R
No 09Vi52 - 0°00	No 01Vi14 - 0°00
Coords: 134W/65S	

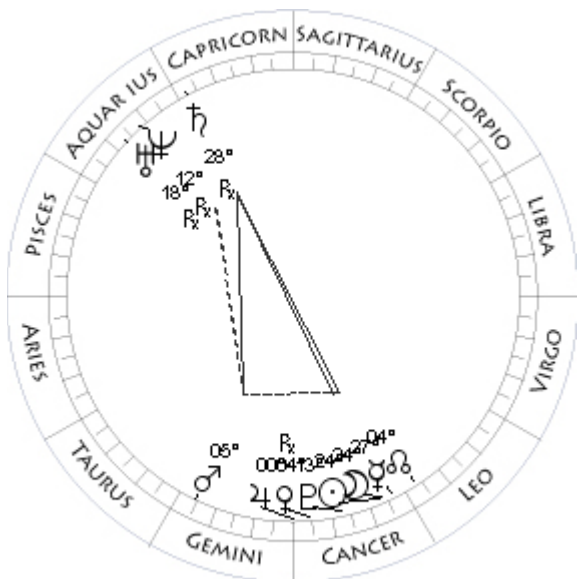
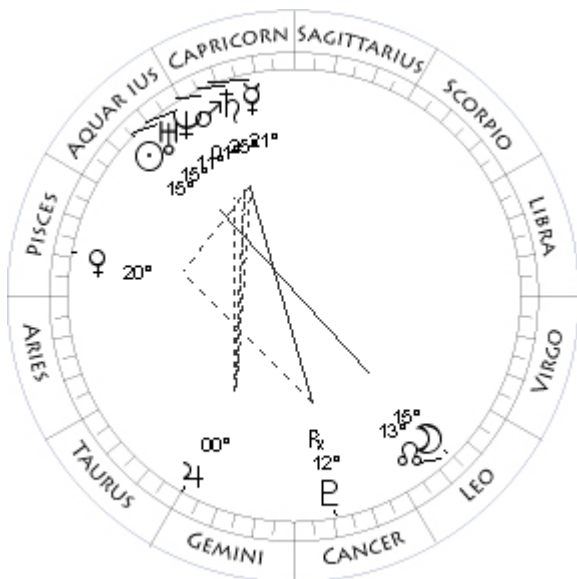
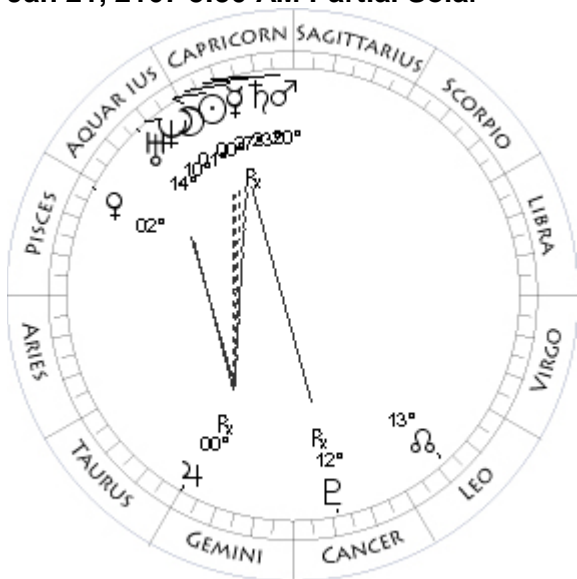
Aug 11, 2166 3:11 PM Total Umbral

Mo 26Le23 - 0°30	Mo 19Aq07 + 0°20
Su 26Aq23 - 0°00	Su 19Le08 - 0°00
Me 07Aq26 + 2°47R	Me 02Vi44 + 1°24
Ve 09Cp49 + 2°55	Ve 10Le41 + 0°56
Ma 00Cn45 + 3°19	Ma 27Vi00 + 0°41
Ju 29Ar47 - 1°04	Ju 07Ge10 - 0°54
Sa 16Cp02 + 0°30	Sa 14Cp27 + 0°21R
Ur 11Aq56 - 0°37	Ur 12Aq51 - 0°41R
Ne 09Aq42 + 0°08	Ne 09Aq55 + 0°06R
Pl 10Cn56 - 3°40R	Pl 13Cn10 - 3°23
No 02Vi02 - 0°00	No 22Le38 - 0°00
Coords: 133W/15S	

Aug 25, 2166 4:07 PM Annular Solar



Jan 21, 2167 5:50 AM Partial Solar



Feb 4, 2167 5:36 AM Total Umbral

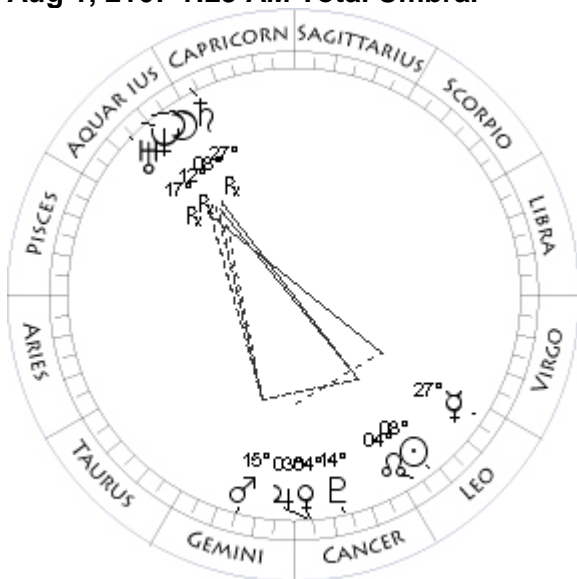
Mo 02Vi29 + 0°54	Mo 15Le07 + 0°10
Su 02Vi38 - 0°00	Su 15Aq11 - 0°00
Me 25Vi30 - 0°14	Me 21Cp33 + 2°05
Ve 28Le01 + 1°16	Ve 20Pi02 - 1°10
Ma 05Li53 + 0°32	Ma 01Aq23 - 0°59
Ju 08Ge54 - 0°55	Ju 00Ge57 - 0°42
Sa 13Cp49 + 0°19R	Sa 25Cp01 + 0°05
Ur 12Aq19 - 0°41R	Ur 15Aq07 - 0°38
Ne 09Aq33 + 0°06R	Ne 11Aq24 + 0°04
Pl 13Cn26 - 3°23	Pl 12Cn15 - 3°21R
No 21Le53 - 0°00	No 13Le17 - 0°00

Coords: 36W/75N

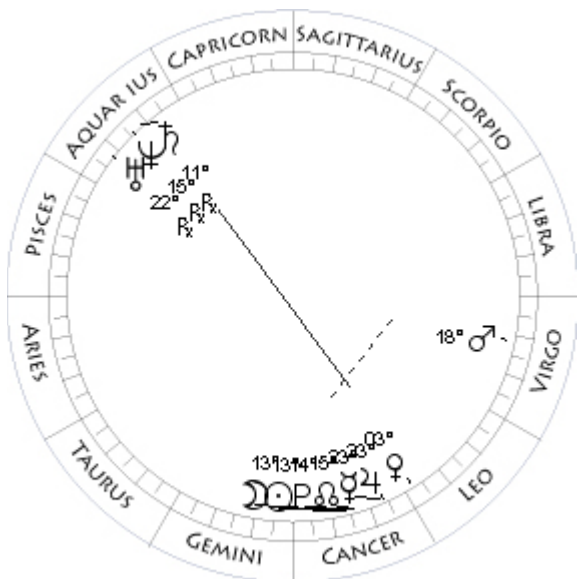
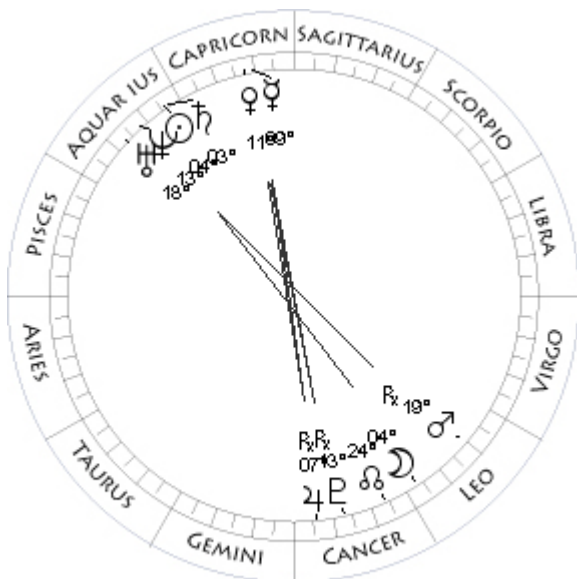
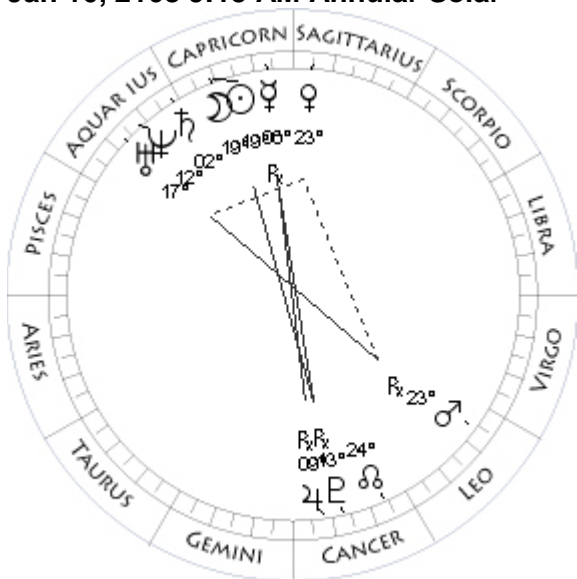
Jul 16, 2167 3:11 PM Total Solar

Mo 01Aq01 + 1°07	Mo 24Cn04 - 0°55
Su 00Aq57 - 0°00	Su 24Cn03 - 0°00
Me 27Cp57 + 3°20R	Me 27Cn49 + 1°41
Ve 02Pi54 - 1°35	Ve 04Cn51 - 5°27R
Ma 20Cp37 - 0°53	Ma 05Ge08 - 0°26
Ju 00Ge49 - 0°46R	Ju 00Cn31 - 0°18
Sa 23Cp23 + 0°06	Sa 28Cp26 - 0°09R
Ur 14Aq18 - 0°38	Ur 18Aq04 - 0°43R
Ne 10Aq53 + 0°04	Ne 12Aq53 + 0°03R
Pl 12Cn30 - 3°22R	Pl 13Cn42 - 3°04
No 14Le01 - 0°00	No 04Le41 - 0°00

Aug 1, 2167 1:23 AM Total Umbral



Jan 10, 2168 9:13 AM Annular Solar



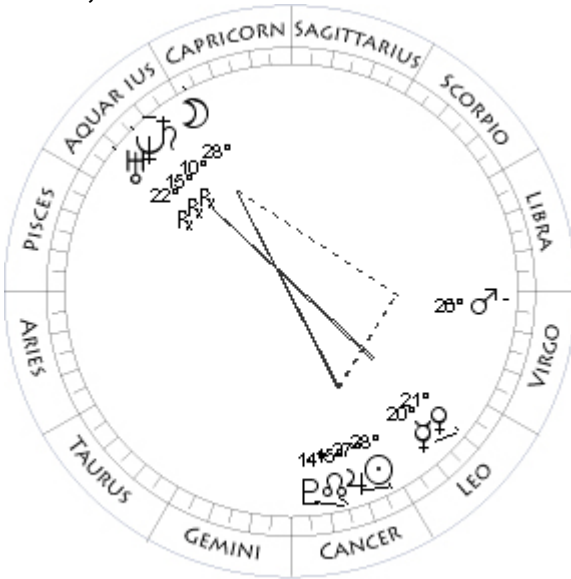
Jan 24, 2168 5:11 PM Partial Umbral

Mo 08Aq41 - 0°25	Mo 04Le06 + 0°51
Su 08Le47 - 0°00	Su 04Aq15 - 0°00
Me 27Le17 + 1°14	Me 09Cp54 + 1°26
Ve 04Cn13 - 5°50	Ve 11Cp47 + 0°13
Ma 15Ge49 - 0°14	Ma 19Le51 + 4°26R
Ju 03Cn49 - 0°17	Ju 07Cn24 + 0°00R
Sa 27Cp18 - 0°10R	Sa 03Aq52 - 0°21
Ur 17Aq30 - 0°43R	Ur 18Aq18 - 0°40
Ne 12Aq29 + 0°02R	Ne 13Aq07 + 0°00
Pl 14Cn03 - 3°03	Pl 13Cn37 - 3°01R
No 03Le52 - 0°00	No 24Cn31 - 0°00
	Coords: 105W/20N

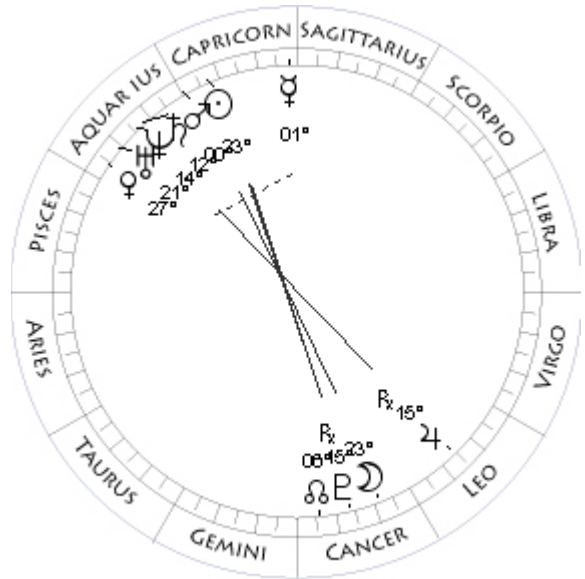
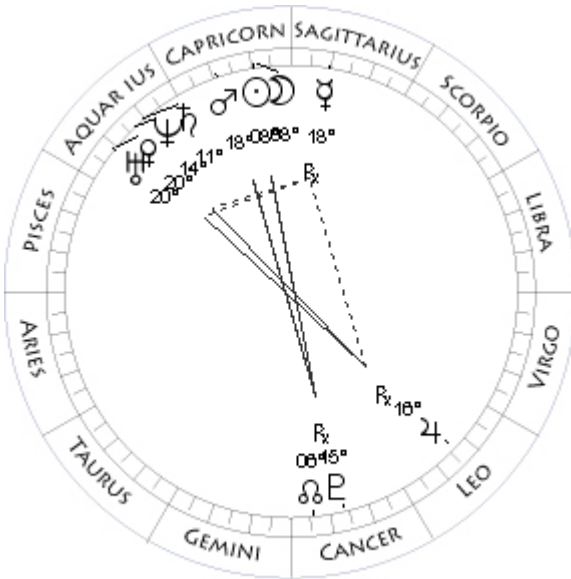
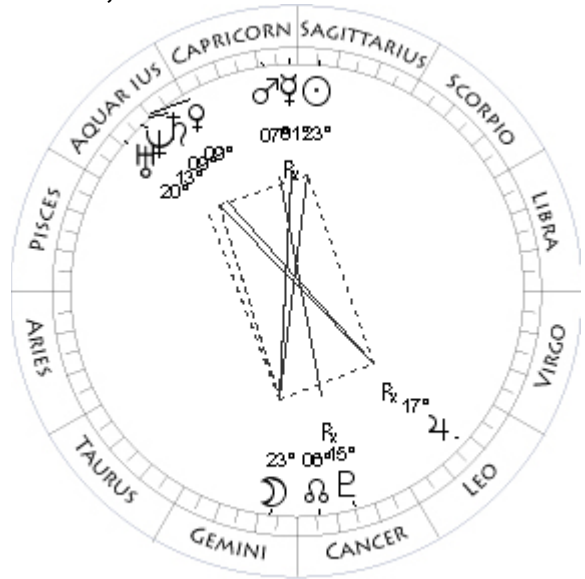
Jul 5, 2168 7:39 AM Total Solar

Mo 19Cp39 + 0°29	Mo 13Cn56 - 0°10
Su 19Cp39 - 0°00	Su 13Cn59 - 0°00
Me 06Cp09 + 3°17R	Me 23Cn52 + 1°50
Ve 23Sa54 + 0°51	Ve 03Le01 + 1°27
Ma 23Le57 + 3°59R	Ma 18Vi11 + 0°48
Ju 09Cn08 - 0°02R	Ju 23Cn56 + 0°16
Sa 02Aq10 - 0°20	Sa 11Aq31 - 0°39R
Ur 17Aq30 - 0°40	Ur 22Aq34 - 0°44R
Ne 12Aq36 + 0°01	Ne 15Aq24 - 0°01R
Pl 13Cn53 - 3°02R	Pl 14Cn34 - 2°44
No 25Cn16 - 0°00	No 15Cn54 - 0°00
Coords: 42W/10N	Coords: 66W/13N

Jul 20, 2168 4:33 AM Partial Penumbra



Dec 14, 2168 9:53 PM Partial Penumbra



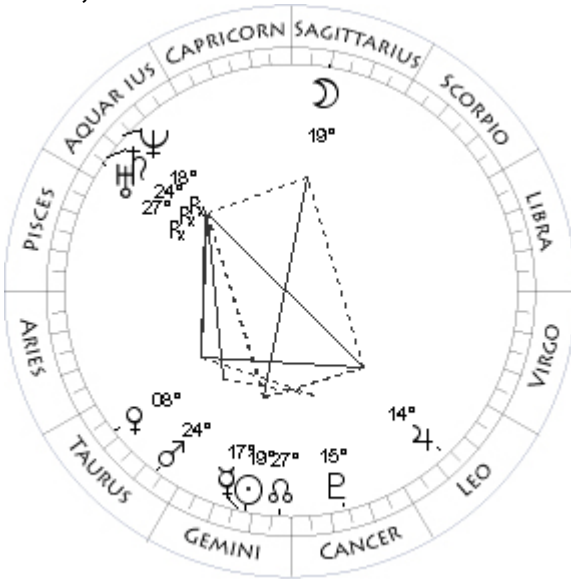
Dec 29, 2168 8:13 AM Annular Solar

Mo 28Cp01 - 1°07	Mo 08Cp05 - 0°08
Su 28Cn10 - 0°00	Su 08Cp09 - 0°00
Me 20Le30 + 1°04	Me 18Sa44 + 2°54R
Ve 21Le09 + 1°35	Ve 20Aq45 - 0°28
Ma 26Vi48 + 0°35	Ma 18Cp47 - 1°00
Ju 27Cn15 + 0°17	Ju 16Le56 + 0°43R
Sa 10Aq31 - 0°41R	Sa 11Aq09 - 0°45
Ur 22Aq06 - 0°44R	Ur 20Aq46 - 0°41
Ne 15Aq02 - 0°02R	Ne 14Aq21 - 0°03
Pl 14Cn56 - 2°44	Pl 15Cn18 - 2°42R
No 15Cn07 - 0°00	No 06Cn32 - 0°00
	Coords: 57W/31S

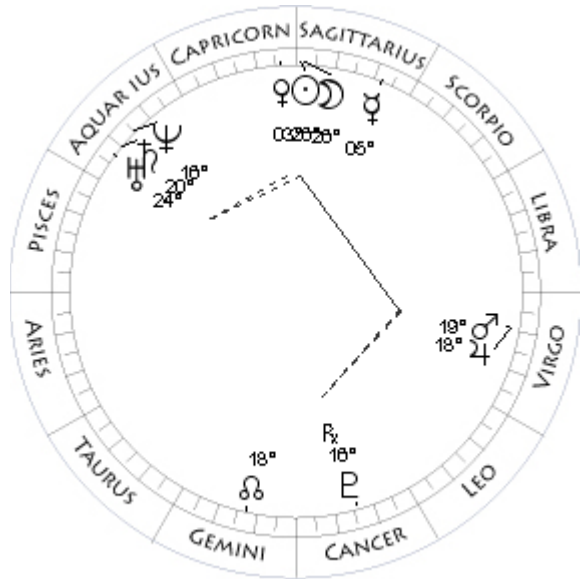
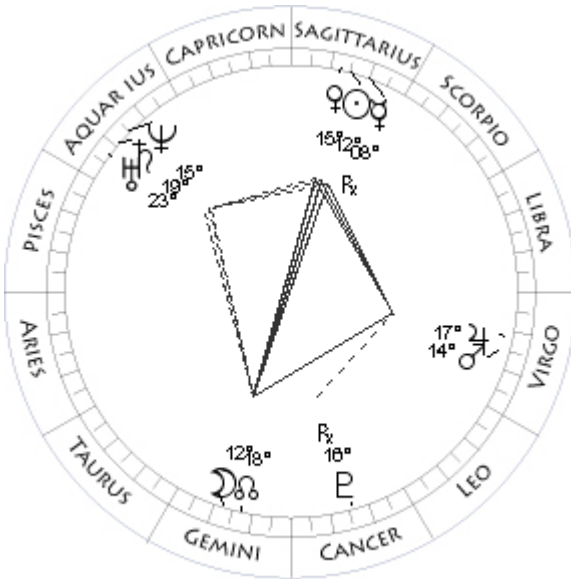
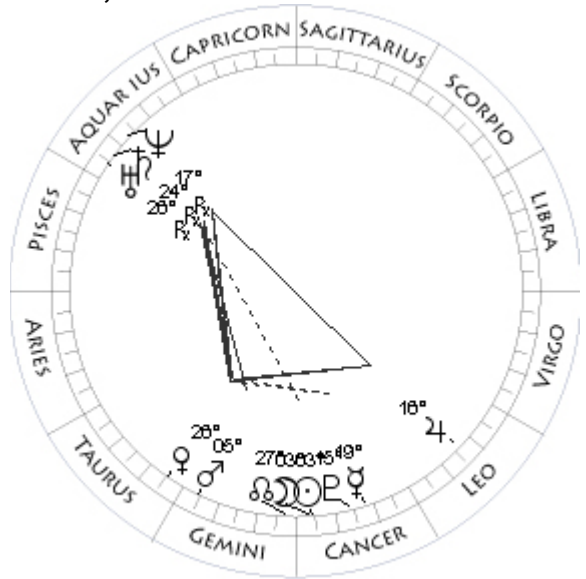
Jan 13, 2169 8:38 AM Partial Penumbra

Mo 23Ge31 - 1°13	Mo 23Cn15 + 1°30
Su 23Sa28 - 0°00	Su 23Cp27 - 0°00
Me 01Cp30 + 0°48R	Me 01Cp14 + 0°54
Ve 09Aq39 - 2°06	Ve 27Aq29 + 2°18
Ma 07Cp43 - 0°56	Ma 00Aq27 - 1°03
Ju 17Le48 + 0°40R	Ju 15Le27 + 0°46R
Sa 09Aq42 - 0°45	Sa 12Aq50 - 0°46
Ur 20Aq09 - 0°42	Ur 21Aq30 - 0°41
Ne 13Aq55 - 0°03	Ne 14Aq51 - 0°03
Pl 15Cn35 - 2°42R	Pl 15Cn00 - 2°41R
No 07Cn17 - 0°00	No 05Cn44 - 0°00
	Coords: 127E/23N

Jun 9, 2169 3:51 PM Partial Umbral



Jun 25, 2169 0:31 AM Total Solar



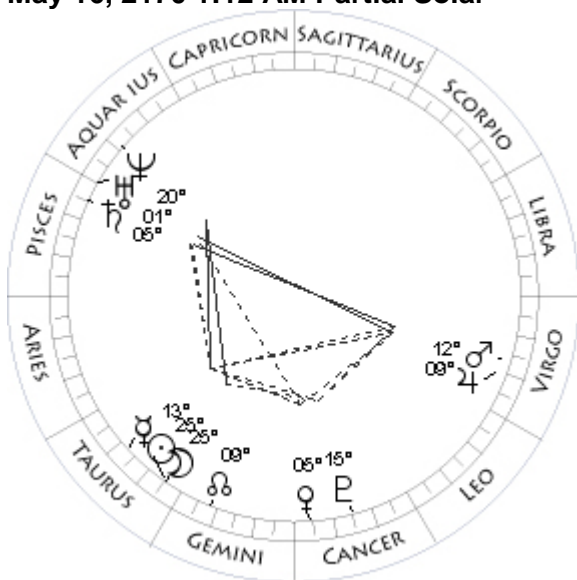
Dec 4, 2169 10:26 AM Partial Umbral

Mo 19Sa17 + 0°45	Mo 12Ge35 - 0°32
Su 19Ge15 - 0°00	Su 12Sa35 - 0°00
Me 17Ge08 + 0°33	Me 08Sa30 + 1°39R
Ve 08Ta47 - 2°13	Ve 15Sa31 - 0°02
Ma 24Ta17 - 0°17	Ma 14Vi18 + 2°12
Ju 14Le13 + 0°46	Ju 17Vi34 + 1°04
Sa 24Aq38 - 1°04R	Sa 19Aq33 - 1°11
Ur 27Aq08 - 0°44R	Ur 23Aq41 - 0°43
Ne 18Aq05 - 0°05R	Ne 15Aq49 - 0°07
Pl 15Cn05 - 2°26	Pl 16Cn57 - 2°21R
No 27Ge56 - 0°00	No 18Ge31 - 0°00
Coords: 122W/22S	Coords: 159E/22N

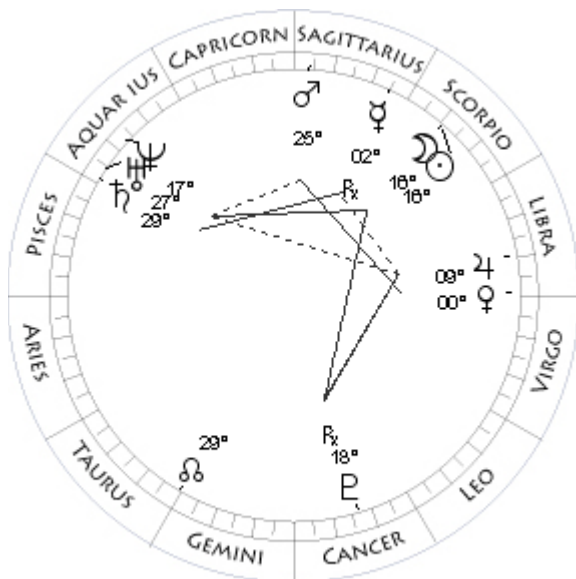
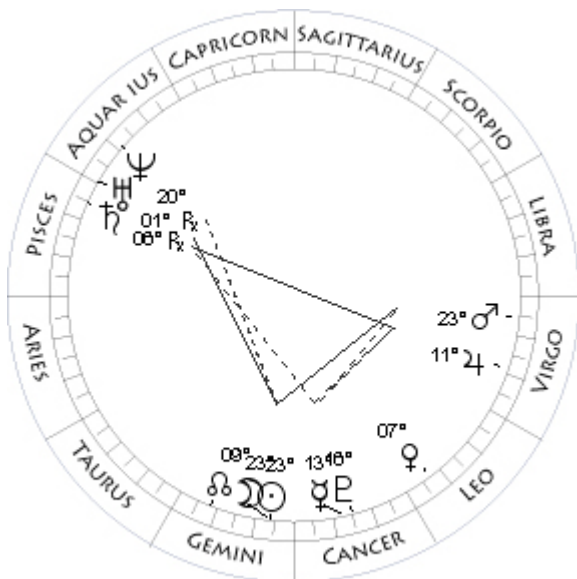
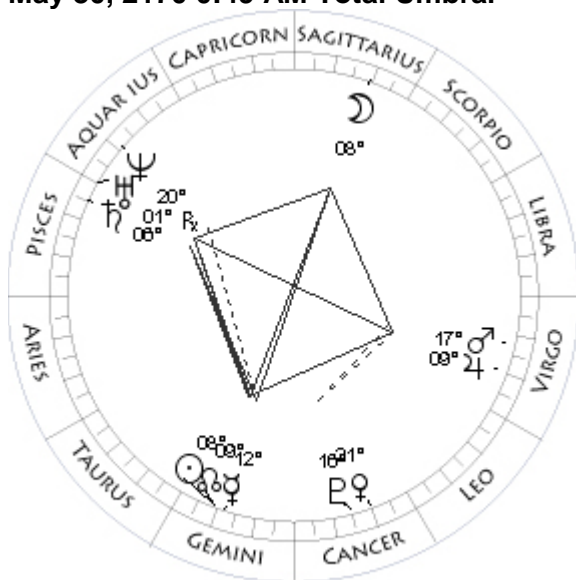
Dec 18, 2169 10:31 AM Annular Solar

Mo 03Cn48 + 0°35	Mo 26Sa41 - 0°46
Su 03Cn56 - 0°00	Su 26Sa48 - 0°00
Me 19Cn20 + 1°57	Me 05Sa39 + 2°28
Ve 26Ta30 - 2°03	Ve 03Cp07 - 0°35
Ma 05Ge20 - 0°06	Ma 19Vi59 + 2°30
Ju 16Le55 + 0°46	Ju 18Vi33 + 1°07
Sa 24Aq18 - 1°07R	Sa 20Aq38 - 1°11
Ur 26Aq56 - 0°45R	Ur 24Aq08 - 0°43
Ne 17Aq52 - 0°05R	Ne 16Aq09 - 0°07
Pl 15Cn27 - 2°25	Pl 16Cn43 - 2°21R
No 27Ge07 - 0°00	No 17Ge46 - 0°00
Coords: 169W/59N	

May 16, 2170 1:12 AM Partial Solar



May 30, 2170 0:49 AM Total Umbral



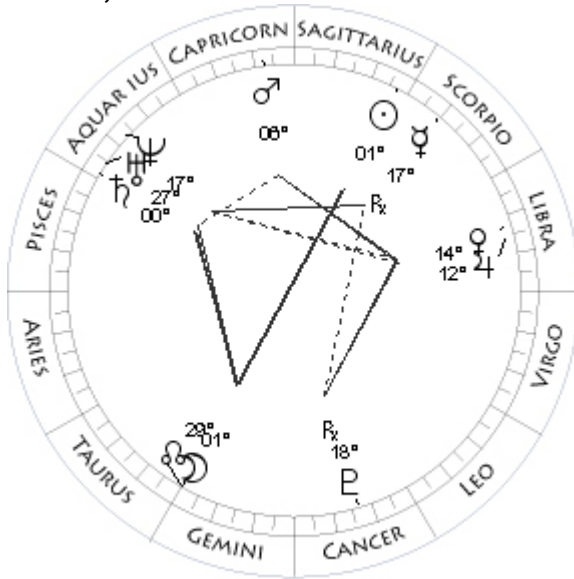
Jun 14, 2170 1:09 PM Partial Solar

Mo 25Ta27 - 1°14	Mo 23Ge31 + 1°19
Su 25Ta22 - 0°00	Su 23Ge42 - 0°00
Me 13Ta04 - 1°23	Me 13Cn23 + 2°02
Ve 05Cn14 + 2°13	Ve 07Le59 + 2°13
Ma 12Vi59 + 1°34	Ma 23Vi35 + 0°44
Ju 09Vi08 + 1°16	Ju 11Vi17 + 1°11
Sa 05Pi46 - 1°24	Sa 06Pi34 - 1°30
Ur 01Pi00 - 0°44	Ur 01Pi07 - 0°45R
Ne 20Aq23 - 0°09	Ne 20Aq16 - 0°09R
Pl 15Cn44 - 2°08	Pl 16Cn20 - 2°05
No 09Ge54 - 0°00	No 08Ge21 - 0°00

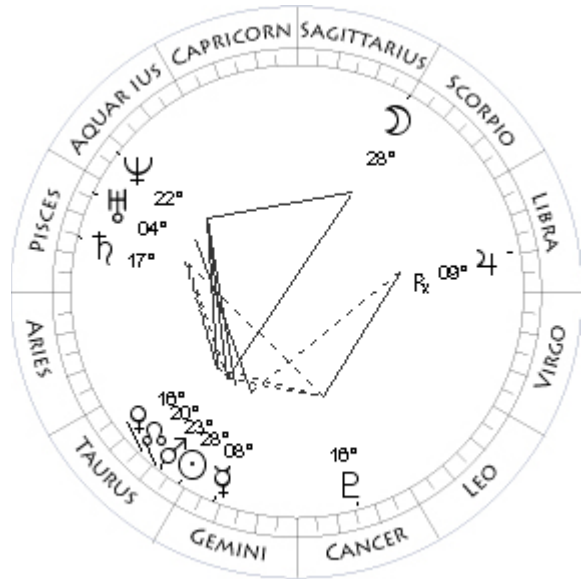
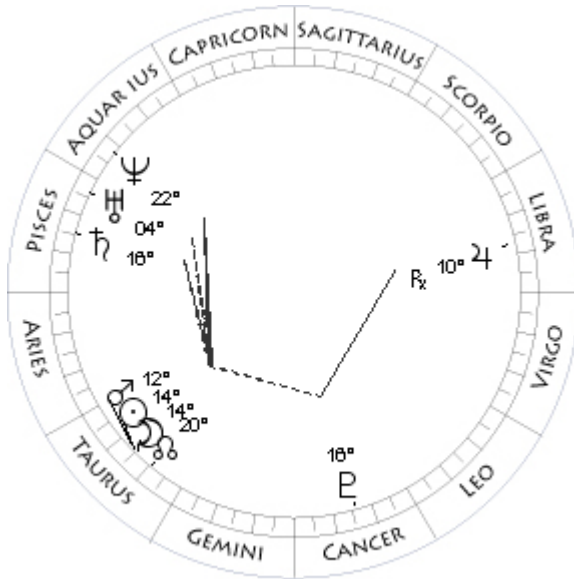
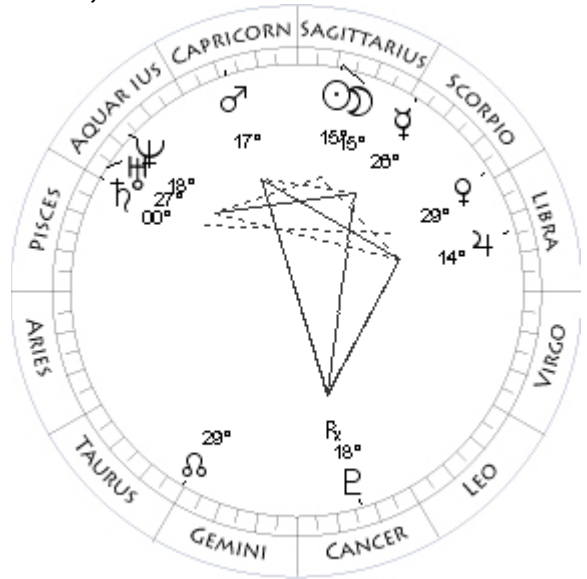
Nov 8, 2170 9:16 AM Partial Solar

Mo 08Sa47 + 0°01	Mo 16Sc07 + 1°16
Su 08Ge50 - 0°00	Su 16Sc04 - 0°00
Me 12Ge47 + 0°58	Me 02Sa59 - 2°14R
Ve 21Cn04 + 2°25	Ve 00Li11 + 0°14
Ma 17Vi22 + 1°08	Ma 25Sa14 - 1°07
Ju 09Vi52 + 1°14	Ju 09Li16 + 1°07
Sa 06Pi19 - 1°27	Sa 29Aq53 - 1°40
Ur 01Pi09 - 0°45	Ur 27Aq14 - 0°45
Ne 20Aq23 - 0°09R	Ne 17Aq39 - 0°11
Pl 16Cn00 - 2°06	Pl 18Cn28 - 2°01R
No 09Ge10 - 0°00	No 00Ge34 - 0°00

Nov 23, 2170 4:10 PM Total Umbral



Dec 7, 2170 8:11 PM Partial Solar



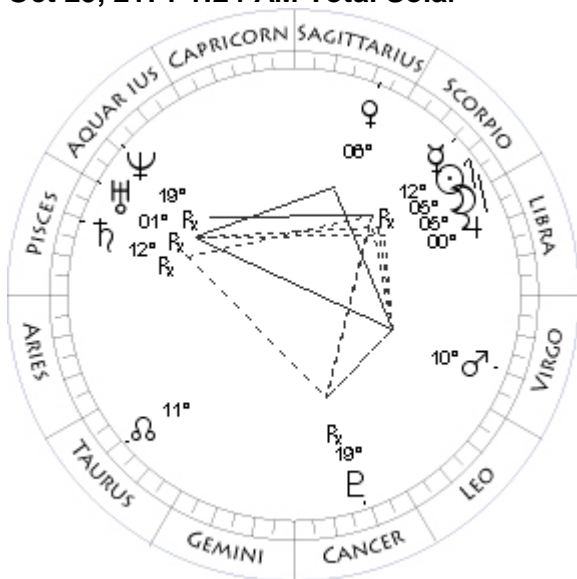
May 5, 2171 3:17 AM Annular Solar

Mo 01Ge23 + 0°08	Mo 14Ta36 - 0°34
Su 01Sa27 - 0°00	Su 14Ta35 - 0°00
Me 17Sc52 + 2°04R	Me 07Ta34 - 1°01
Ve 14Li47 + 1°39	Ve 28Ar37 - 1°26
Ma 06Cp44 - 1°10	Ma 12Ta40 - 0°11
Ju 12Li05 + 1°09	Ju 10Li31 + 1°32R
Sa 00Pi13 - 1°38	Sa 16Pi19 - 1°42
Ur 27Aq22 - 0°45	Ur 04Pi39 - 0°44
Ne 17Aq48 - 0°11	Ne 22Aq30 - 0°13
Pl 18Cn19 - 2°00R	Pl 16Cn44 - 1°48
No 29Ta45 - 0°00	No 21Ta09 - 0°00
Coords: 114W/21N	Coords: 145W/19S

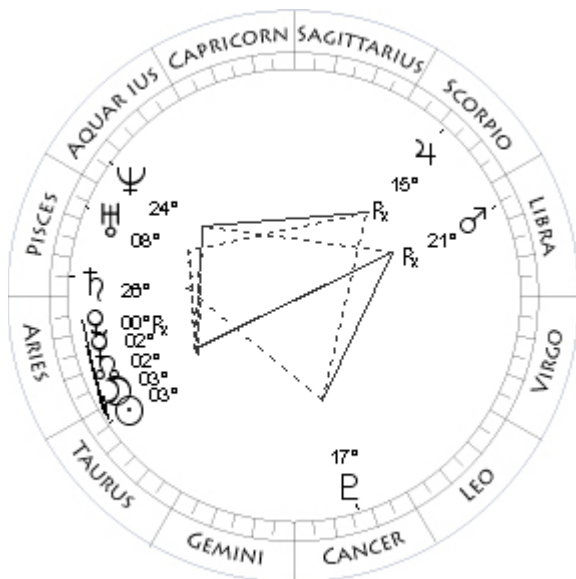
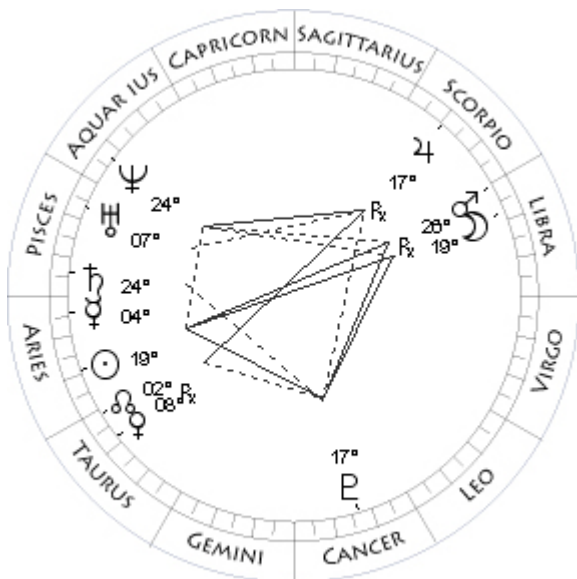
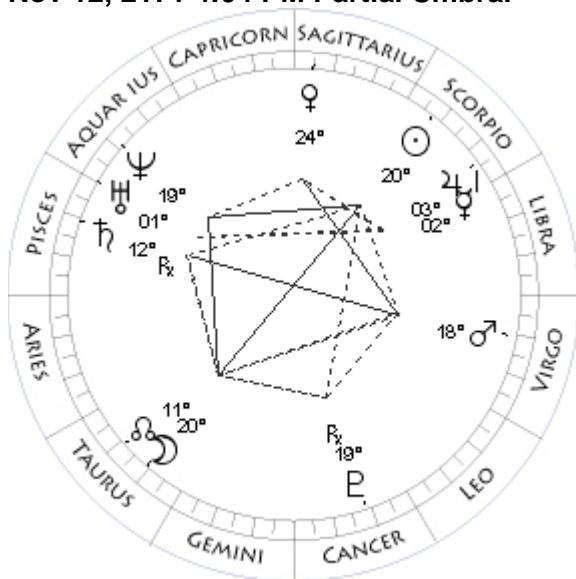
May 19, 2171 3:50 PM Partial Umbral

Mo 15Sa36 - 1°26	Mo 28Sc29 - 0°43
Su 15Sa47 - 0°00	Su 28Ta38 - 0°00
Me 26Sc04 + 2°01	Me 08Ge38 + 1°23
Ve 29Li49 + 2°22	Ve 16Ta27 - 1°06
Ma 17Cp35 - 1°11	Ma 23Ta18 - 0°02
Ju 14Li23 + 1°12	Ju 09Li30 + 1°29R
Sa 00Pi53 - 1°36	Sa 17Pi23 - 1°45
Ur 27Aq40 - 0°44	Ur 04Pi58 - 0°45
Ne 18Aq03 - 0°11	Ne 22Aq36 - 0°13
Pl 18Cn06 - 2°00R	Pl 16Cn57 - 1°47
No 29Ta00 - 0°00	No 20Ta23 - 0°00
	Coords: 121W/21S

Oct 29, 2171 1:24 AM Total Solar



Nov 12, 2171 4:04 PM Partial Umbral



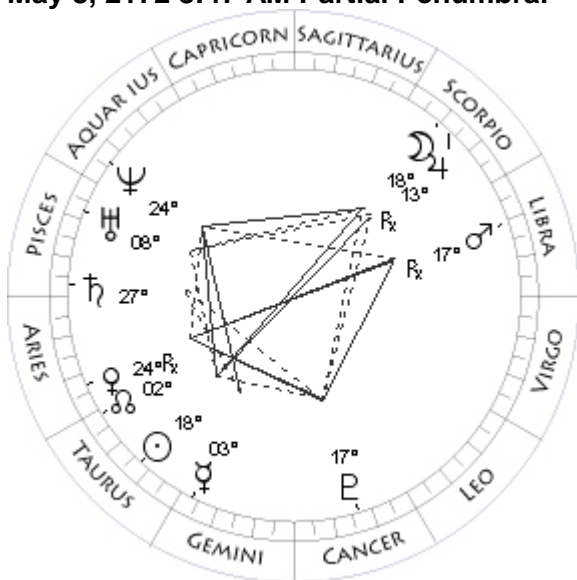
Apr 9, 2172 0:03 AM Partial Penumbral

Mo 05Sc29 + 0°34	Mo 19Li51 + 1°09
Su 05Sc30 - 0°00	Su 19Ar48 - 0°00
Me 12Sc24 - 1°41R	Me 04Ar35 - 2°14
Ve 06Sa12 - 0°57	Ve 08Ta41 + 7°19R
Ma 10Vi12 + 1°30	Ma 26Li59 + 2°17R
Ju 00Sc43 + 1°03	Ju 17Sc06 + 1°21R
Sa 12Pi15 - 2°05R	Sa 24Pi50 - 1°54
Ur 01Pi17 - 0°46R	Ur 07Pi32 - 0°44
Ne 19Aq50 - 0°15R	Ne 24Aq14 - 0°16
Pl 19Cn43 - 1°40R	Pl 17Cn41 - 1°29
No 11Ta47 - 0°00	No 03Ta09 - 0°00
Coords: 169W/18N	

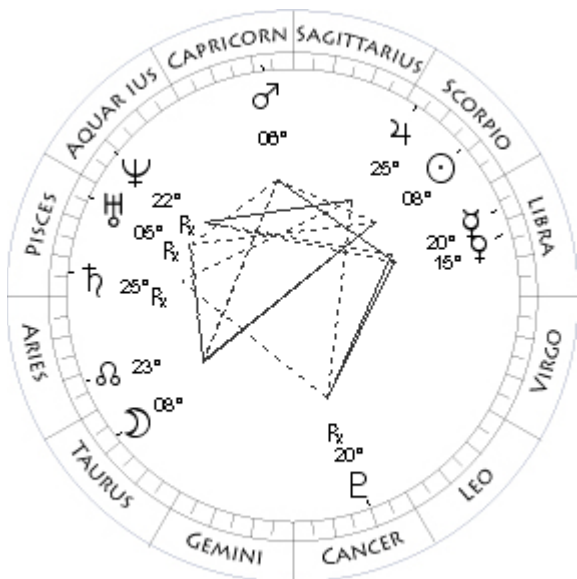
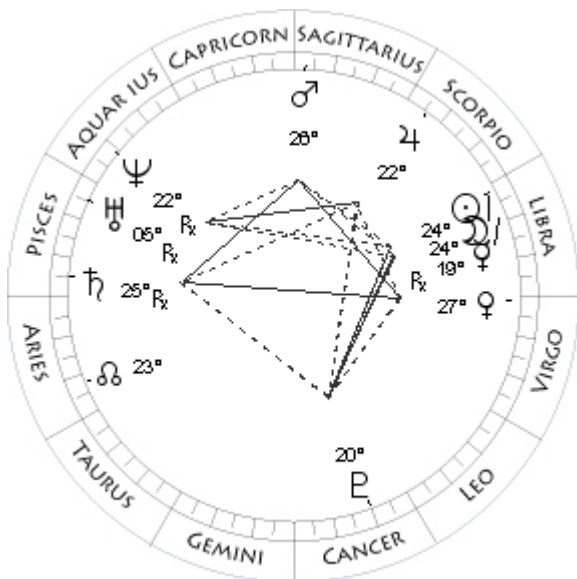
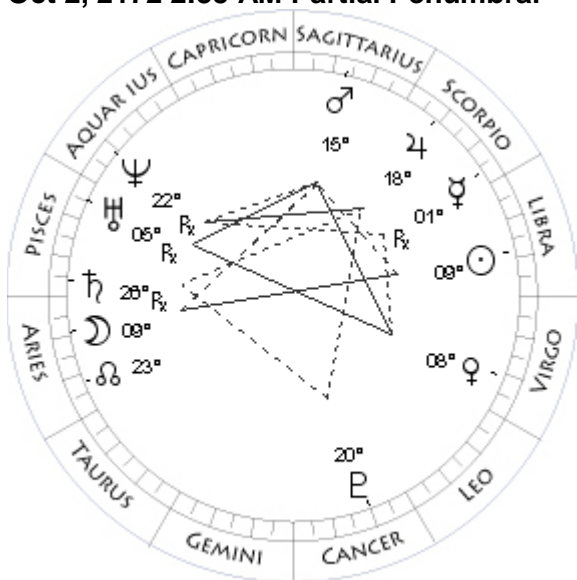
Apr 23, 2172 3:47 AM Annular Solar

Mo 20Ta00 + 0°46	Mo 03Ta36 + 0°06
Su 20Sc07 - 0°00	Su 03Ta40 - 0°00
Me 02Sc09 + 2°10	Me 02Ta12 - 0°40
Ve 24Sa04 - 1°34	Ve 00Ta58 + 5°56R
Ma 18Vi40 + 1°38	Ma 21Li39 + 1°48R
Ju 03Sc53 + 1°03	Ju 15Sc30 + 1°21R
Sa 12Pi00 - 2°03R	Sa 26Pi25 - 1°56
Ur 01Pi14 - 0°46	Ur 08Pi07 - 0°44
Ne 19Aq52 - 0°15	Ne 24Aq32 - 0°16
Pl 19Cn38 - 1°39R	Pl 17Cn46 - 1°28
No 11Ta01 - 0°00	No 02Ta25 - 0°00
Coords: 115W/18N	

May 8, 2172 8:47 AM Partial Penumbral



Oct 2, 2172 2:55 AM Partial Penumbral



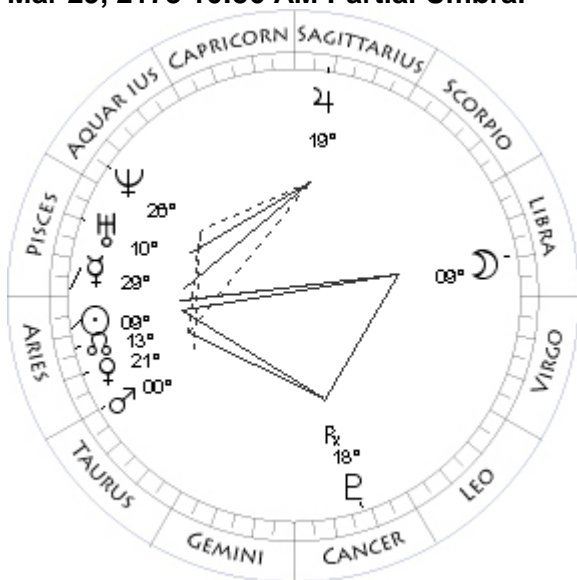
Oct 17, 2172 3:55 PM Total Solar

Mo 18Sc15 - 1°26	Mo 24Li51 - 0°08
Su 18Ta27 - 0°00	Su 24Li55 - 0°00
Me 03Ge43 + 1°50	Me 19Li28 - 0°48R
Ve 24Ar15 + 2°29R	Ve 27Vi44 + 1°28
Ma 17Li01 + 1°10R	Ma 26Sa21 - 1°35
Ju 13Sc35 + 1°21R	Ju 22Sc07 + 0°48
Sa 27Pi56 - 1°59	Sa 25Pi45 - 2°27R
Ur 08Pi38 - 0°45	Ur 05Pi30 - 0°47R
Ne 24Aq44 - 0°17	Ne 22Aq07 - 0°19R
Pl 17Cn57 - 1°27	Pl 20Cn56 - 1°18
No 01Ta36 - 0°00	No 23Ar01 - 0°00
Coords: 133E/19S	

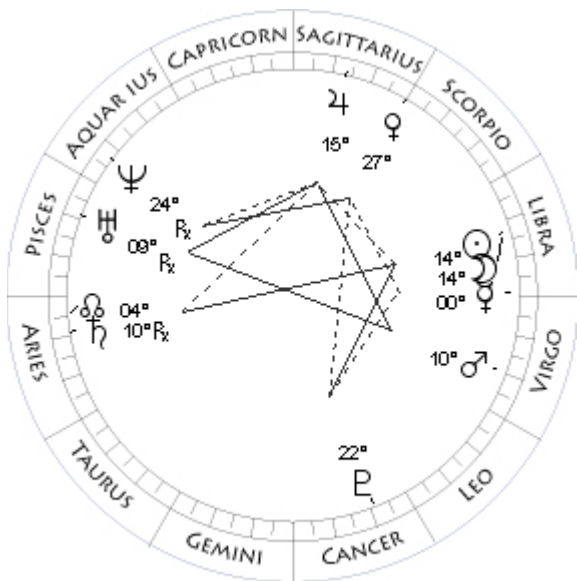
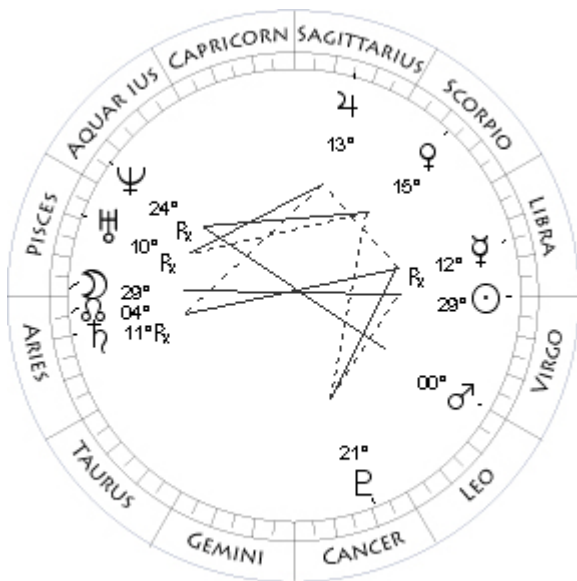
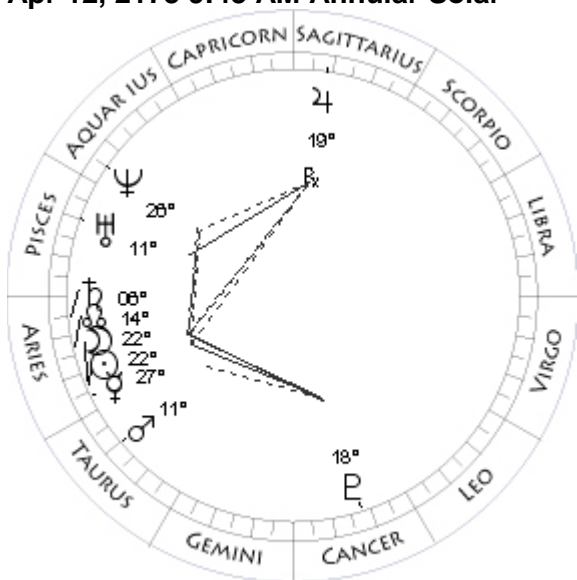
Oct 31, 2172 5:03 PM Partial Penumbral

Mo 09Ar39 - 1°15	Mo 08Ta43 + 1°24
Su 09Li35 - 0°00	Su 08Sc54 - 0°00
Me 01Sc16 - 3°40R	Me 20Li33 + 2°07
Ve 08Vi44 + 1°01	Ve 15Li06 + 1°36
Ma 15Sa18 - 1°35	Ma 06Cp38 - 1°34
Ju 18Sc59 + 0°50	Ju 25Sc06 + 0°46
Sa 26Pi49 - 2°28R	Sa 25Pi00 - 2°25R
Ur 05Pi55 - 0°48R	Ur 05Pi17 - 0°47R
Ne 22Aq19 - 0°19R	Ne 22Aq03 - 0°19R
Pl 20Cn52 - 1°19	Pl 20Cn55 - 1°18R
No 23Ar50 - 0°00	No 22Ar16 - 0°00
Coords: 99W/16N	

Mar 29, 2173 10:56 AM Partial Umbral



Apr 12, 2173 9:43 AM Annular Solar



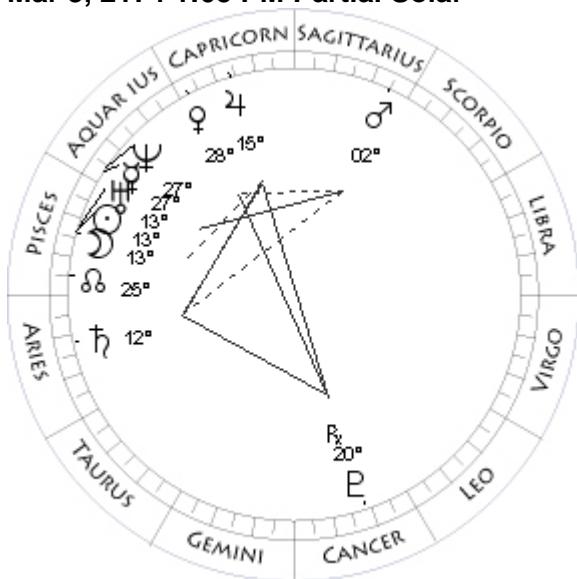
Sep 21, 2173 2:44 PM Partial Umbral

Mo 09Li08 + 0°27	Mo 29Pi03 - 0°32
Su 09Ar09 - 0°00	Su 29Vi03 - 0°00
Me 29Pi25 - 2°00	Me 12Li56 - 3°58R
Ve 21Ar24 - 0°57	Ve 15Sc05 - 3°33
Ma 00Ta52 - 0°07	Ma 00Vi22 + 1°14
Ju 19Sa47 + 0°46	Ju 13Sa06 + 0°24
Sa 04Ar36 - 2°06	Sa 11Ar23 - 2°40R
Ur 10Pi46 - 0°44	Ur 10Pi24 - 0°48R
Ne 26Aq05 - 0°20	Ne 24Aq47 - 0°23R
Pl 18Cn52 - 1°09R	Pl 21Cn57 - 0°58
No 14Ar23 - 0°00	No 05Ar04 - 0°00

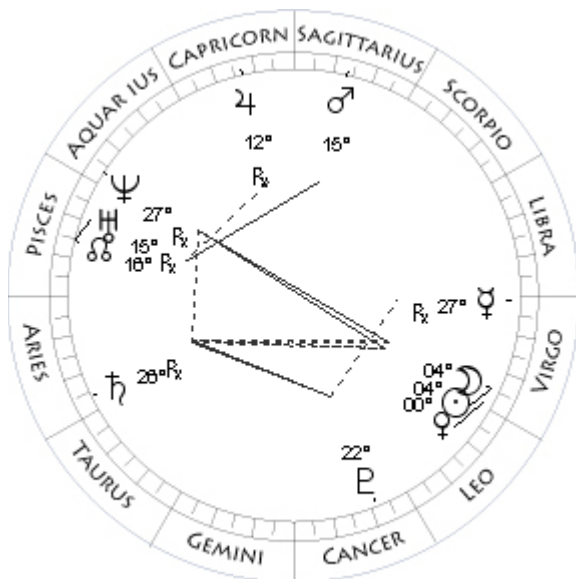
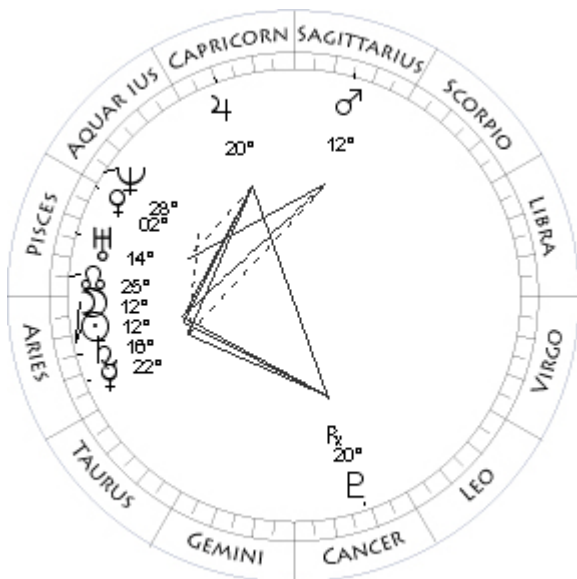
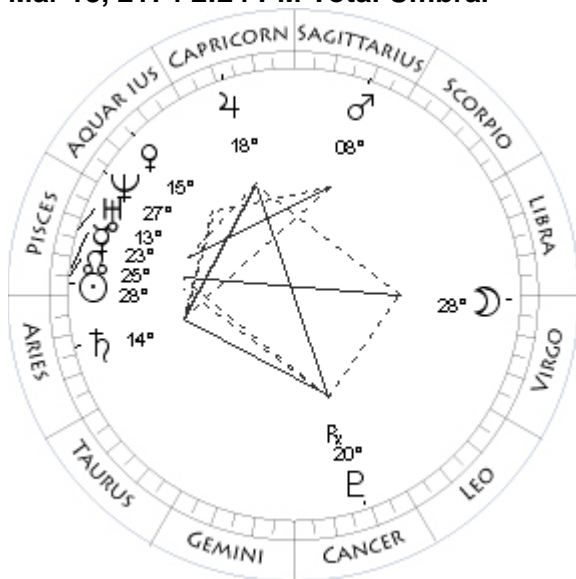
Oct 7, 2173 0:33 AM Annular Solar

Mo 22Ar46 + 0°48	Mo 14Li02 - 0°51
Su 22Ar54 - 0°00	Su 14Li10 - 0°00
Me 27Ar18 - 0°16	Me 00Li00 + 0°02
Ve 08Ta39 - 0°27	Ve 27Sc55 - 4°54
Ma 11Ta08 + 0°03	Ma 10Vi00 + 1°17
Ju 19Sa46 + 0°46R	Ju 15Sa19 + 0°22
Sa 06Ar19 - 2°07	Sa 10Ar11 - 2°41R
Ur 11Pi28 - 0°44	Ur 09Pi52 - 0°48R
Ne 26Aq28 - 0°20	Ne 24Aq30 - 0°23R
Pl 18Cn53 - 1°08	Pl 22Cn05 - 0°57
No 13Ar39 - 0°00	No 04Ar15 - 0°00
Coords: 114W/57S	

Mar 3, 2174 1:05 PM Partial Solar



Mar 18, 2174 2:24 PM Total Umbra



Apr 1, 2174 10:32 PM Partial Solar

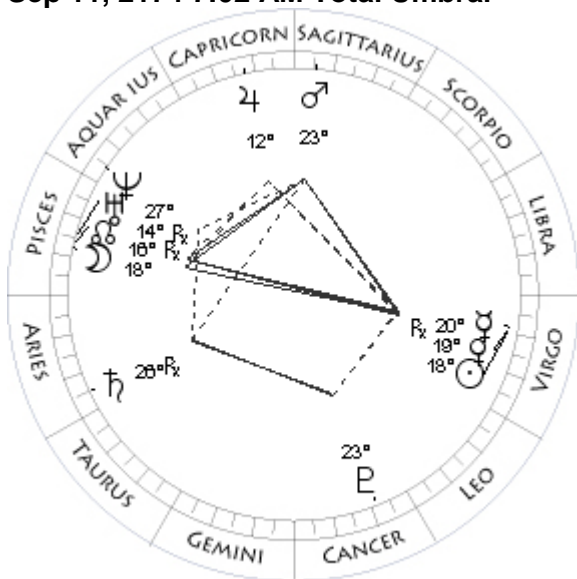
Mo 13Pi07 - 1°08	Mo 12Ar09 + 1°31
Su 13Pi04 - 0°00	Su 12Ar21 - 0°00
Me 27Aq27 - 2°05	Me 22Ar33 + 0°12
Ve 28Cp16 + 1°35	Ve 02Pi16 - 0°27
Ma 02Sa45 + 1°09	Ma 12Sa47 + 0°42
Ju 15Cp57 + 0°07	Ju 20Cp08 + 0°04
Sa 12Ar41 - 2°15	Sa 16Ar16 - 2°13
Ur 13Pi04 - 0°44	Ur 14Pi42 - 0°44
Ne 27Aq21 - 0°23	Ne 28Aq21 - 0°24
Pl 20Cn14 - 0°49R	Pl 20Cn04 - 0°47R
No 26Pi26 - 0°00	No 24Pi53 - 0°00

Aug 27, 2174 10:13 AM Partial Solar

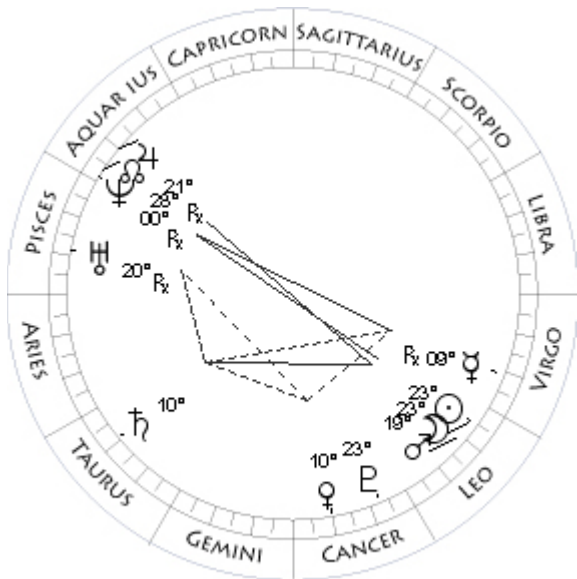
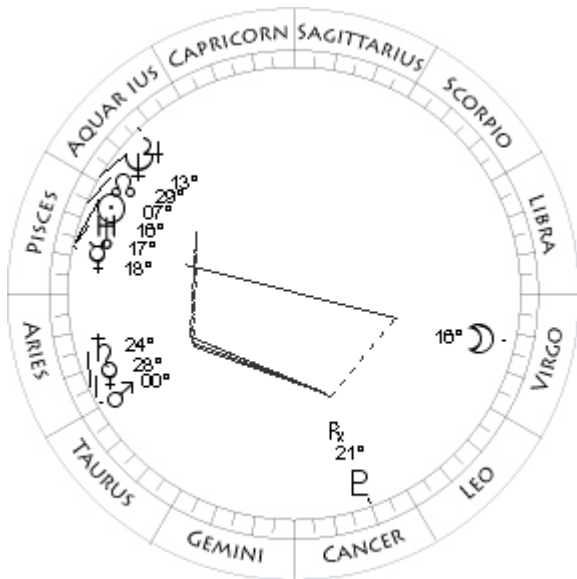
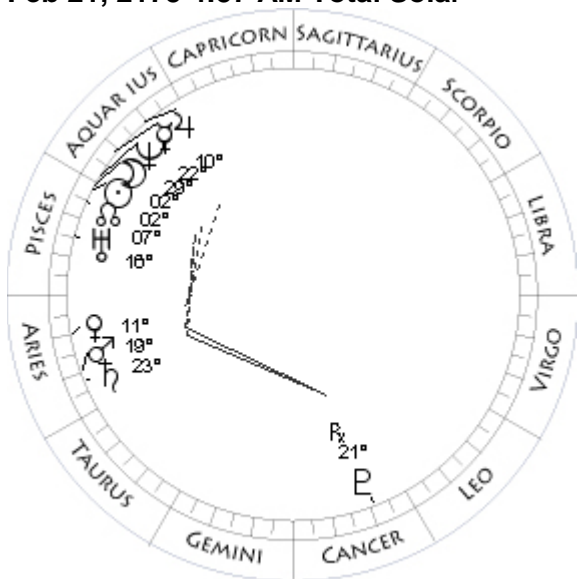
Mo 28Vi03 - 0°14	Mo 04Vi27 + 1°06
Su 28Pi08 - 0°00	Su 04Vi23 - 0°00
Me 23Pi59 - 1°48	Me 27Vi40 - 3°48R
Ve 15Aq30 + 0°28	Ve 00Vi53 + 1°18
Ma 08Sa32 + 0°58	Ma 15Sa08 - 3°01
Ju 18Cp19 + 0°06	Ju 12Cp39 - 0°14R
Sa 14Ar29 - 2°13	Sa 26Ar42 - 2°40R
Ur 13Pi55 - 0°44	Ur 15Pi32 - 0°49R
Ne 27Aq53 - 0°23	Ne 27Aq41 - 0°27R
Pl 20Cn06 - 0°48R	Pl 22Cn45 - 0°37
No 25Pi38 - 0°00	No 17Pi04 - 0°00

Coords: 146W/ 1N

Sep 11, 2174 7:02 AM Total Umbral



Feb 21, 2175 4:57 AM Total Solar



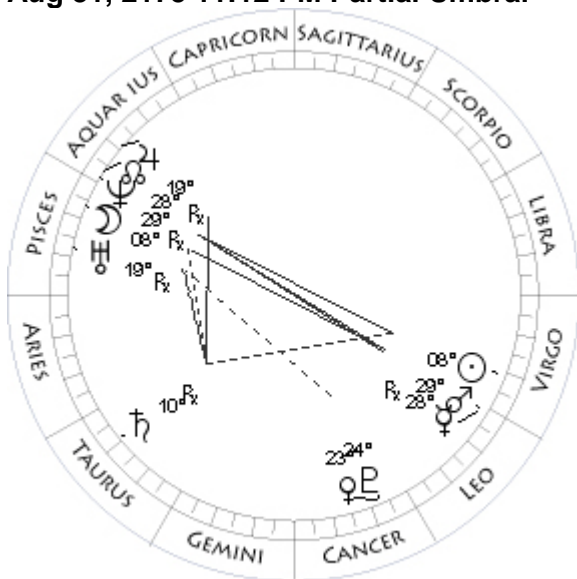
Mar 7, 2175 1:53 PM Partial Umbral

Mo 18Pi41 + 0°12	Mo 16Vi44 - 0°52
Su 18Vi46 - 0°00	Su 16Pi53 - 0°00
Me 20Vi18 - 3°44R	Me 18Pi16 - 1°37
Ve 19Vi19 + 1°25	Ve 28Ar02 + 0°36
Ma 23Sa11 - 2°50	Ma 00Ta10 + 0°09
Ju 12Cp26 - 0°15	Ju 13Aq53 - 0°29
Sa 26Ar03 - 2°43R	Sa 24Ar46 - 2°17
Ur 14Pi56 - 0°49R	Ur 17Pi02 - 0°44
Ne 27Aq18 - 0°27R	Ne 29Aq38 - 0°27
Pl 23Cn00 - 0°37	Pl 21Cn25 - 0°27R
No 16Pi17 - 0°00	No 06Pi53 - 0°00
	Coords: 154W/ 4N

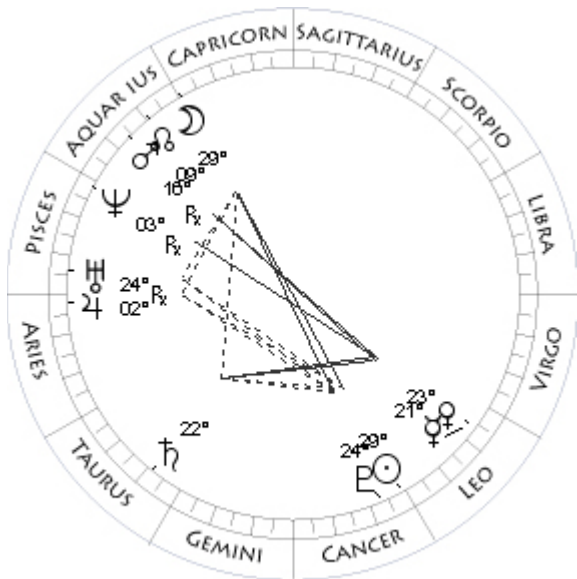
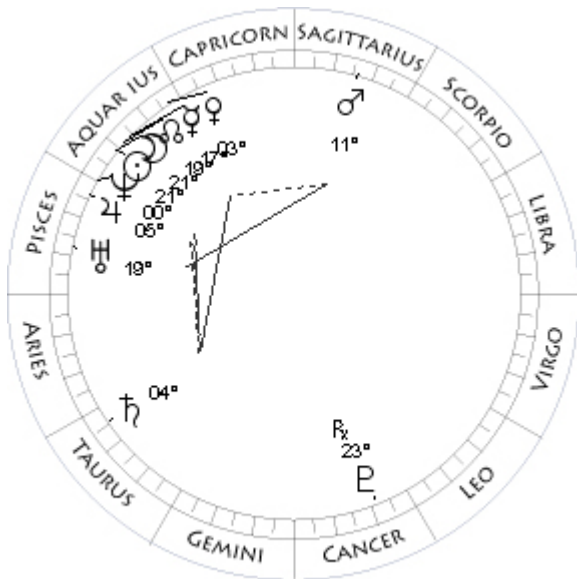
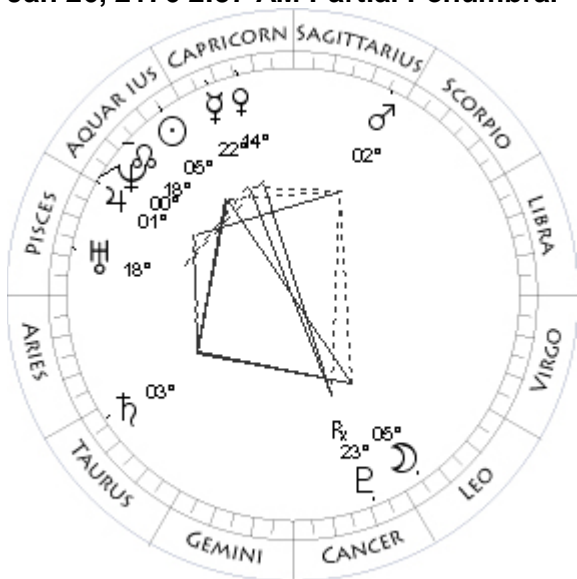
Aug 16, 2175 1:02 PM Annular Solar

Mo 02Pi24 - 0°27	Mo 23Le40 + 0°25
Su 02Pi25 - 0°00	Su 23Le41 - 0°00
Me 22Aq25 - 2°05	Me 09Vi20 - 4°32R
Ve 11Ar05 - 0°19	Ve 10Cn44 - 4°45
Ma 19Ar43 - 0°02	Ma 19Le12 + 1°09
Ju 10Aq41 - 0°27	Ju 21Aq28 - 1°02R
Sa 23Ar17 - 2°20	Sa 10Ta22 - 2°32
Ur 16Pi13 - 0°44	Ur 20Pi03 - 0°48R
Ne 29Aq06 - 0°27	Ne 00Pi17 - 0°31R
Pl 21Cn36 - 0°28R	Pl 23Cn43 - 0°16
No 07Pi39 - 0°00	No 28Aq19 - 0°00
	Coords: 123W/34S

Aug 31, 2175 11:12 PM Partial Umbral



Jan 26, 2176 2:57 AM Partial Penumbral



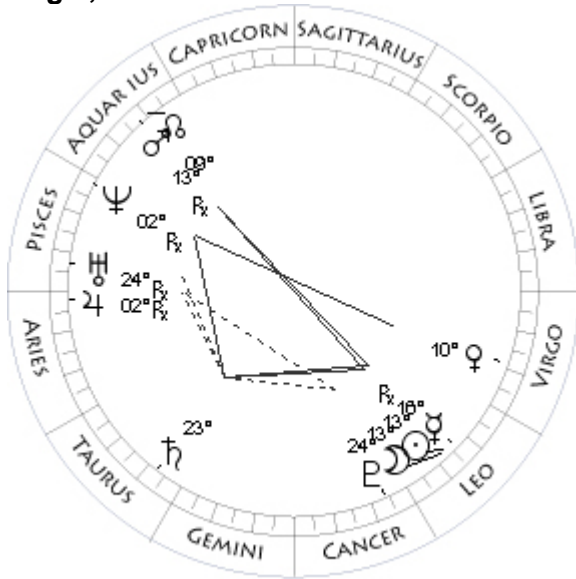
Feb 10, 2176 5:15 PM Annular Solar

Mo 08Pi23 + 0°56	Mo 21Aq30 + 0°14
Su 08Vi32 - 0°00	Su 21Aq35 - 0°00
Me 28Le10 - 2°54R	Me 17Aq24 - 2°05
Ve 23Cn00 - 3°23	Ve 03Aq41 - 0°33
Ma 29Le02 + 1°10	Ma 11Sa41 + 0°28
Ju 19Aq32 - 1°03R	Ju 05Pi06 - 0°54
Sa 10Ta20 - 2°35R	Sa 04Ta44 - 2°20
Ur 19Pi29 - 0°49R	Ur 19Pi23 - 0°44
Ne 29Aq52 - 0°31R	Ne 00Pi50 - 0°31
Pl 24Cn02 - 0°16	Pl 23Cn00 - 0°06R
No 27Aq30 - 0°00	No 18Aq53 - 0°00

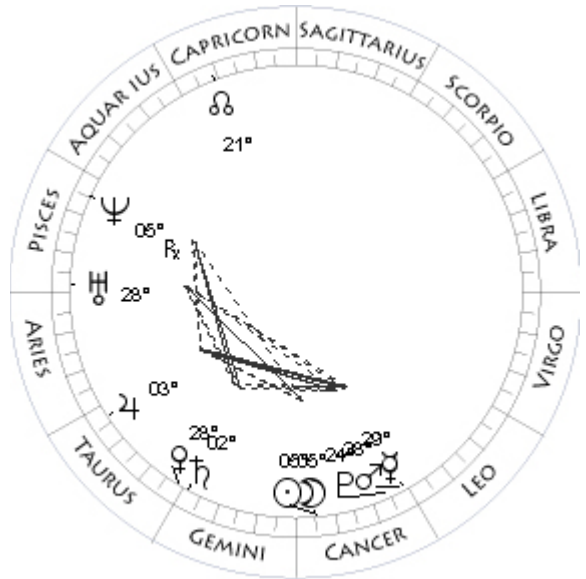
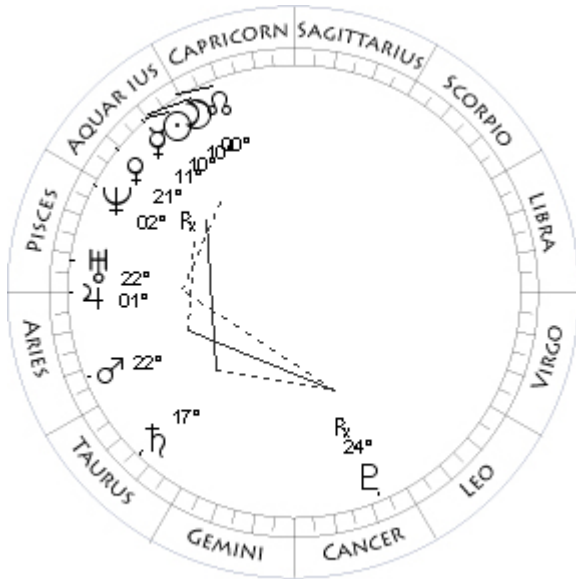
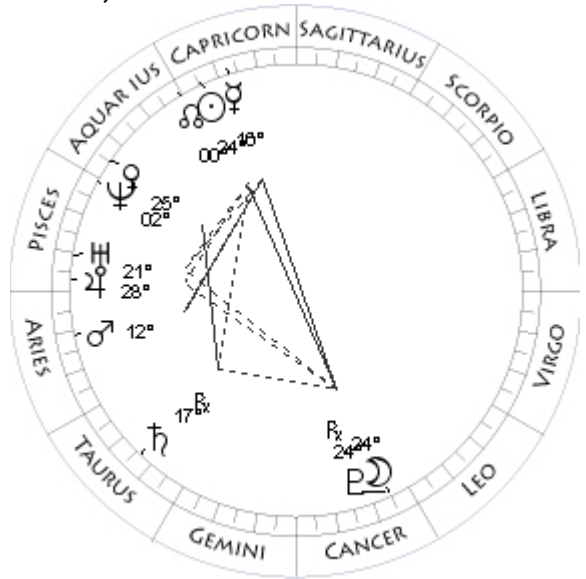
Jul 21, 2176 10:30 PM Partial Umbral

Mo 05Le48 + 1°12	Mo 29Cp56 - 0°54
Su 05Aq45 - 0°00	Su 29Cn54 - 0°00
Me 22Cp04 - 1°16	Me 21Le45 - 2°54
Ve 14Cp12 + 0°07	Ve 23Le56 + 1°35
Ma 02Sa01 + 0°38	Ma 16Aq48 - 6°14R
Ju 01Pi27 - 0°54	Ju 02Ar53 - 1°22
Sa 03Ta56 - 2°24	Sa 22Ta21 - 2°14
Ur 18Pi37 - 0°45	Ur 24Pi48 - 0°47R
Ne 00Pi16 - 0°30	Ne 03Pi11 - 0°34R
Pl 23Cn18 - 0°07R	Pl 24Cn19 + 0°04
No 19Aq42 - 0°00	No 10Aq17 - 0°00
	Coords: 24W/21S

Aug 4, 2176 10:59 PM Total Solar



Jan 14, 2177 4:02 PM Partial Umbral



Jan 29, 2177 10:24 PM Partial Solar

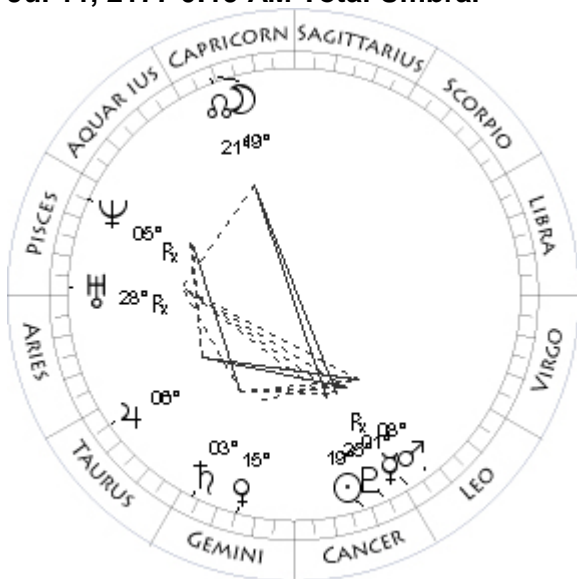
Mo 13Le13 - 0°19	Mo 10Aq15 + 0°54
Su 13Le18 - 0°00	Su 10Aq23 - 0°00
Me 16Le37 - 4°57R	Me 11Aq55 - 2°05
Ve 10Vi57 + 1°25	Ve 21Aq57 + 6°32R
Ma 13Aq26 - 6°44R	Ma 22Ar35 + 0°21
Ju 02Ar34 - 1°26R	Ju 01Ar04 - 1°10
Sa 23Ta15 - 2°16	Sa 17Ta19 - 2°14
Ur 24Pi29 - 0°48R	Ur 22Pi37 - 0°44
Ne 02Pi51 - 0°34R	Ne 02Pi35 - 0°34
Pl 24Cn40 + 0°05	Pl 24Cn28 + 0°16R
No 09Aq33 - 0°00	No 00Aq07 - 0°00

Jun 26, 2177 8:06 AM Partial Solar

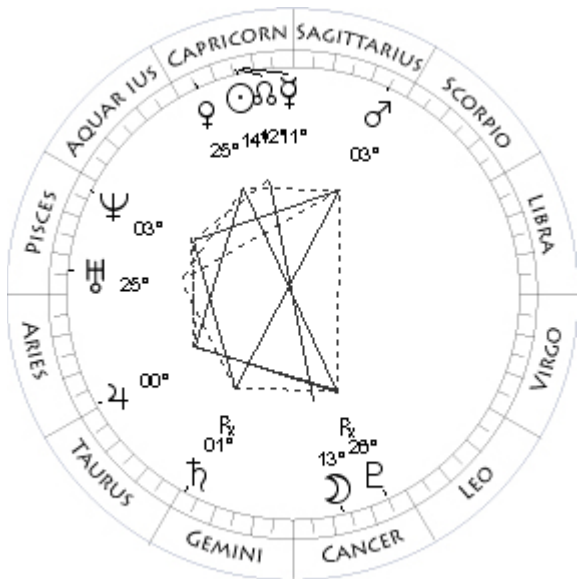
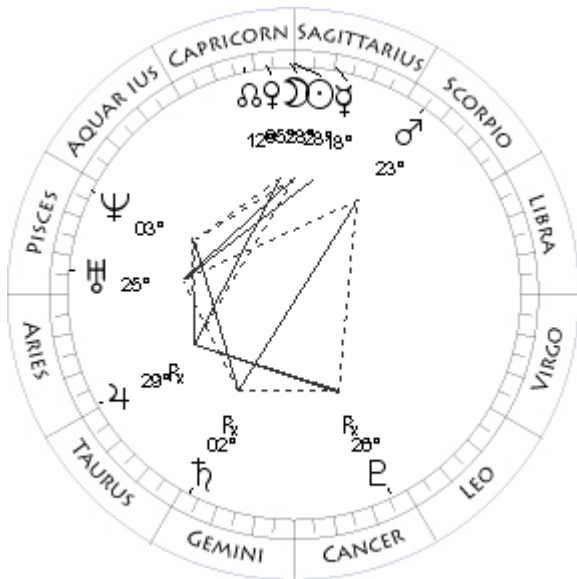
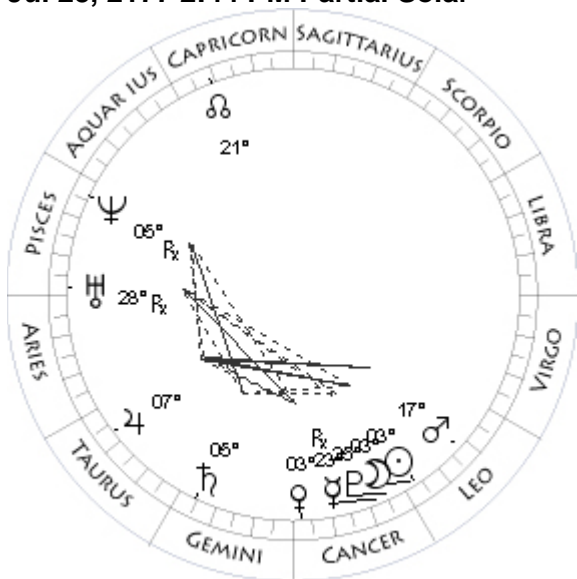
Mo 24Cn50 + 0°31	Mo 05Cn20 + 1°28
Su 24Cp51 - 0°00	Su 05Cn16 - 0°00
Me 16Cp47 - 1°27	Me 29Cn29 - 0°09
Ve 25Aq35 + 2°53	Ve 28Ta35 - 1°59
Ma 12Ar24 + 0°05	Ma 28Cn57 + 1°12
Ju 28Pi17 - 1°12	Ju 03Ta49 - 1°10
Sa 17Ta11 - 2°18R	Sa 02Ge20 - 1°53
Ur 21Pi59 - 0°45	Ur 28Pi58 - 0°46
Ne 02Pi03 - 0°34	Ne 05Pi52 - 0°37R
Pl 24Cn47 + 0°15R	Pl 24Cn53 + 0°24
No 00Aq56 - 0°00	No 22Cp19 - 0°00

Coords: 122W/22N

Jul 11, 2177 0:19 AM Total Umbral



Jul 25, 2177 2:44 PM Partial Solar



Dec 20, 2177 2:55 AM Partial Solar

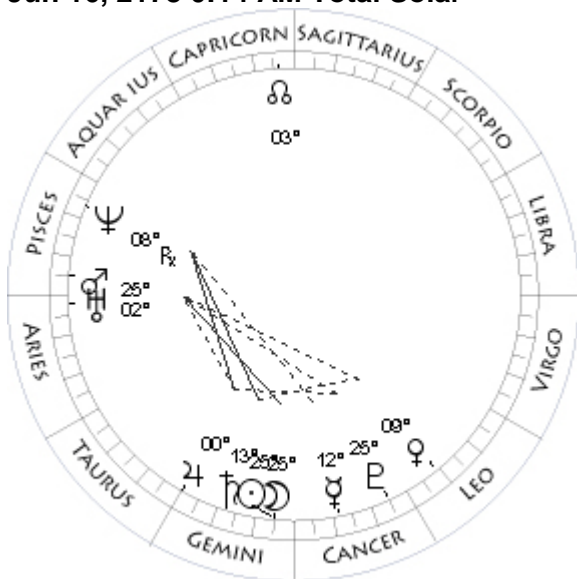
Mo 19Cp14 - 0°12	Mo 28Sa39 - 1°15
Su 19Cn15 - 0°00	Su 28Sa35 - 0°00
Me 01Le42 - 3°46R	Me 18Sa07 - 0°11
Ve 15Ge50 - 1°30	Ve 05Cp55 - 0°41
Ma 08Le16 + 1°11	Ma 23Sc00 + 0°25
Ju 06Ta06 - 1°13	Ju 29Ar50 - 1°18R
Sa 03Ge57 - 1°54	Sa 02Ge39 - 2°06R
Ur 28Pi57 - 0°46R	Ur 25Pi11 - 0°45
Ne 05Pi41 - 0°38R	Ne 03Pi33 - 0°38
Pl 25Cn14 + 0°25	Pl 26Cn33 + 0°36R
No 21Cp32 - 0°00	No 12Cp57 - 0°00

Jan 4, 2178 7:44 AM Total Umbral

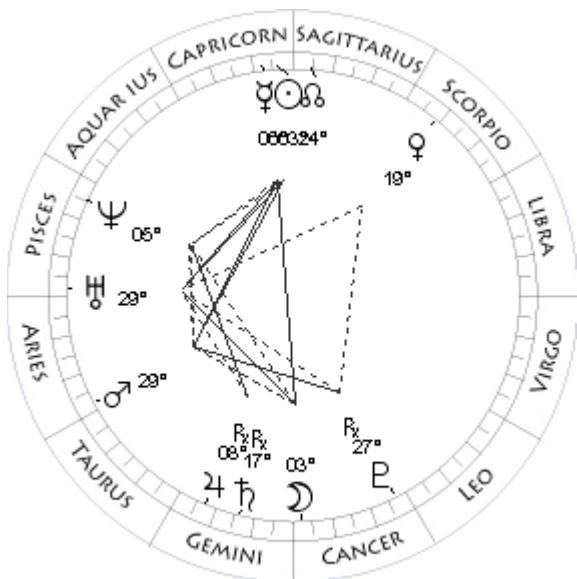
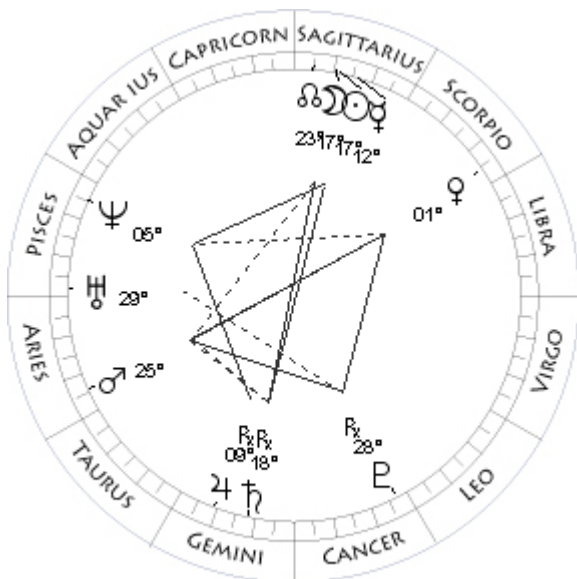
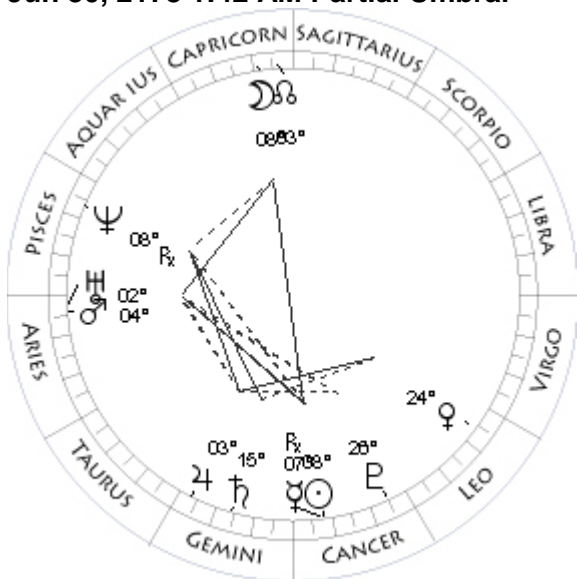
Mo 03Le01 - 1°04	Mo 13Cn59 - 0°09
Su 03Le11 - 0°00	Su 14Cp04 - 0°00
Me 23Cn24 - 4°38R	Me 11Cp53 - 1°38
Ve 03Cn11 - 0°53	Ve 25Cp01 - 1°10
Ma 17Le31 + 1°10	Ma 03Sa14 + 0°16
Ju 07Ta54 - 1°16	Ju 00Ta00 - 1°13
Sa 05Ge21 - 1°56	Sa 01Ge45 - 2°03R
Ur 28Pi47 - 0°47R	Ur 25Pi29 - 0°44
Ne 05Pi23 - 0°38R	Ne 03Pi54 - 0°38
Pl 25Cn37 + 0°26	Pl 26Cn16 + 0°37R
No 20Cp46 - 0°00	No 12Cp09 - 0°00

Coords: 115E/23N

Jun 16, 2178 0:14 AM Total Solar



Jun 30, 2178 1:42 AM Partial Umbral



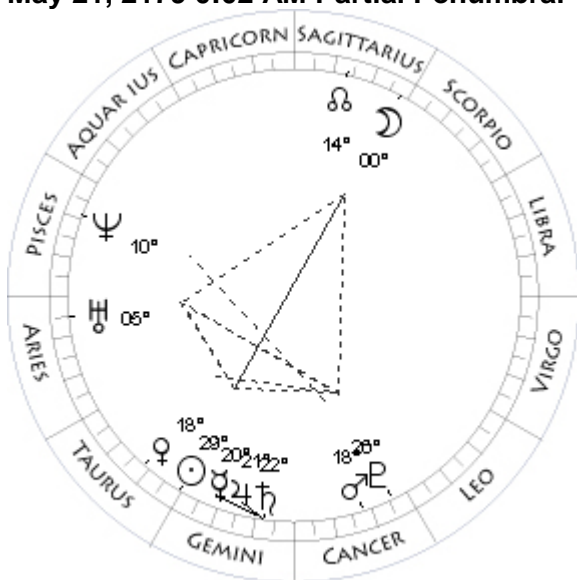
Dec 9, 2178 7:13 AM Annular Solar

Mo 25Ge11 + 0°44	Mo 17Sa20 - 0°36
Su 25Ge10 - 0°00	Su 17Sa20 - 0°00
Me 12Cn56 - 0°54	Me 12Sa19 - 0°26
Ve 09Ie49 + 2°10	Ve 01Sc44 + 2°24
Ma 25Pi41 - 2°37	Ma 25Ar04 + 0°26
Ju 00Ge33 - 0°48	Ju 09Ge58 - 0°49R
Sa 13Ge17 - 1°32	Sa 18Ge40 - 1°40R
Ur 02Ar46 - 0°45	Ur 29Pi02 - 0°45
Ne 08Pi11 - 0°41R	Ne 05Pi33 - 0°42
Pl 25Cn51 + 0°45	Pl 28Cn01 + 0°58R
No 03Cp32 - 0°00	No 24Sa12 - 0°00
Coords: 176E/71N	Coords: 70W/62S

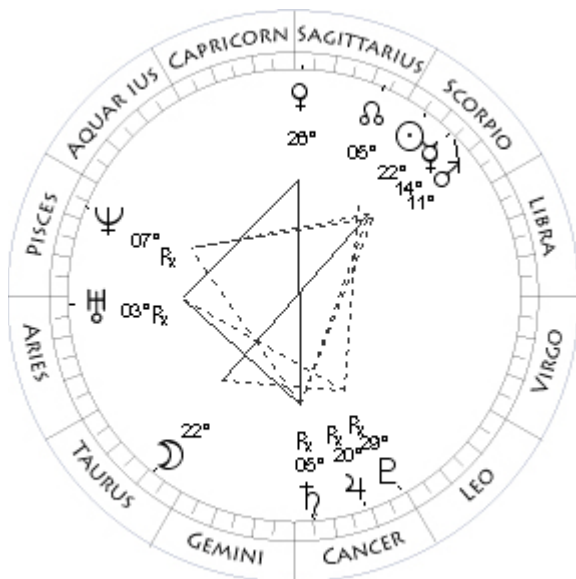
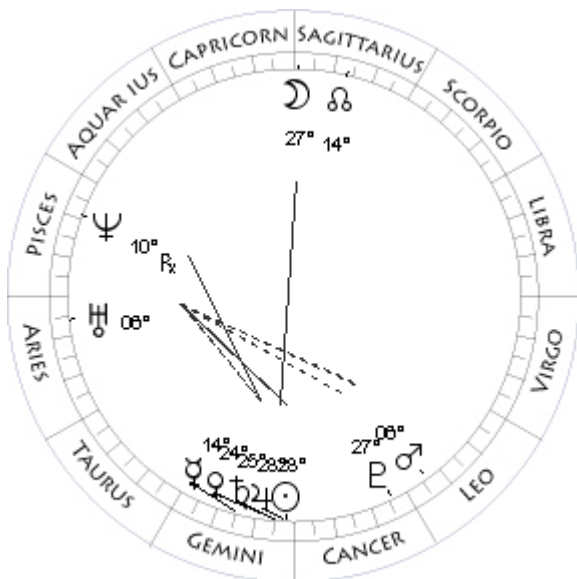
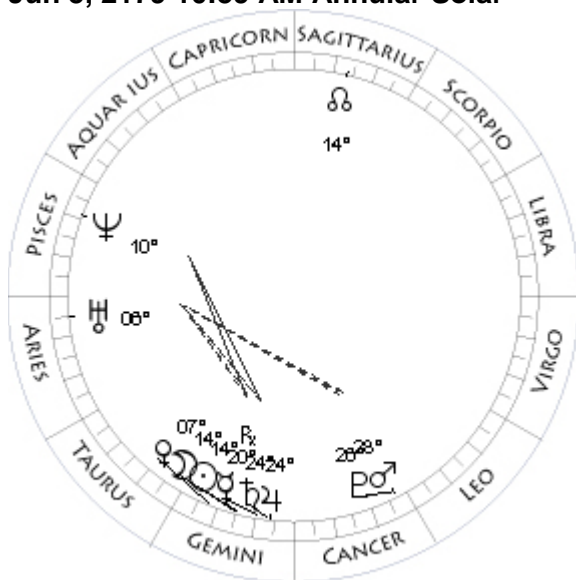
Dec 24, 2178 9:19 PM Partial Umbral

Mo 08Cp30 + 0°30	Mo 03Cn02 - 0°50
Su 08Cn35 - 0°00	Su 03Cp11 - 0°00
Me 07Cn49 - 4°21R	Me 06Cp53 - 1°49
Ve 24Ie00 + 1°25	Ve 19Sc30 + 2°33
Ma 04Ar44 - 2°55	Ma 29Ar15 + 0°53
Ju 03Ge38 - 0°48	Ju 08Ge01 - 0°47R
Sa 15Ge03 - 1°32	Sa 17Ge24 - 1°38R
Ur 02Ar55 - 0°45	Ur 29Pi09 - 0°44
Ne 08Pi05 - 0°41R	Ne 05Pi49 - 0°42
Pl 26Cn11 + 0°46	Pl 27Cn46 + 0°59R
No 02Cp47 - 0°00	No 23Sa22 - 0°00
	Coords: 40W/23N

May 21, 2179 0:02 AM Partial Penumbral



Jun 5, 2179 10:59 AM Annular Solar



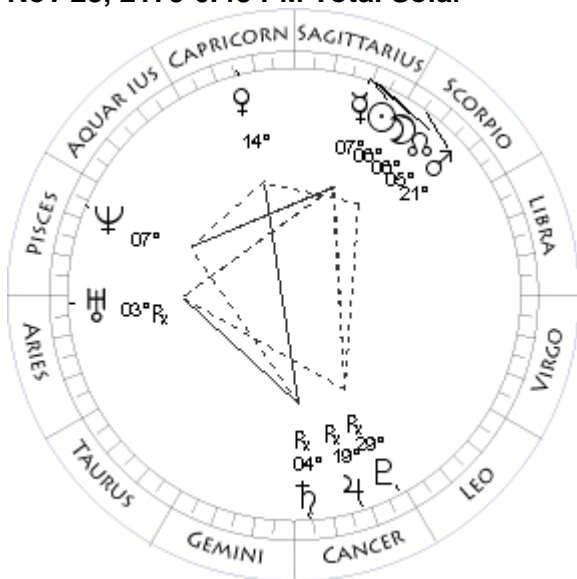
Jun 19, 2179 9:09 AM Partial Penumbral

Mo 00Sa03 - 1°19	Mo 27Sa59 + 1°13
Su 29Ta59 - 0°00	Su 28Ge09 - 0°00
Me 20Ge40 + 1°57	Me 14Ge30 - 4°22
Ve 18Ta46 - 1°02	Ve 24Ge50 + 0°03
Ma 18Cn50 + 1°26	Ma 06Le48 + 1°19
Ju 21Ge27 - 0°19	Ju 28Ge09 - 0°16
Sa 22Ge10 - 1°09	Sa 25Ge56 - 1°06
Ur 05Ar52 - 0°43	Ur 06Ar43 - 0°44
Ne 10Pi17 - 0°44	Ne 10Pi25 - 0°45R
Pl 26Cn35 + 1°06	Pl 27Cn10 + 1°08
No 15Sa35 - 0°00	No 14Sa02 - 0°00
	Coords: 137E/22S

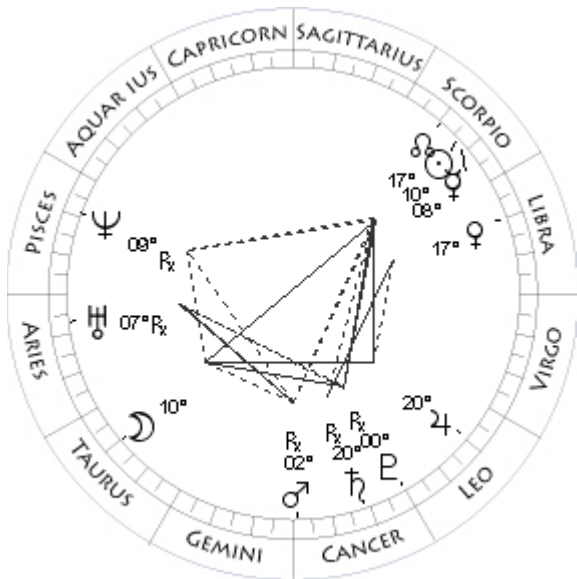
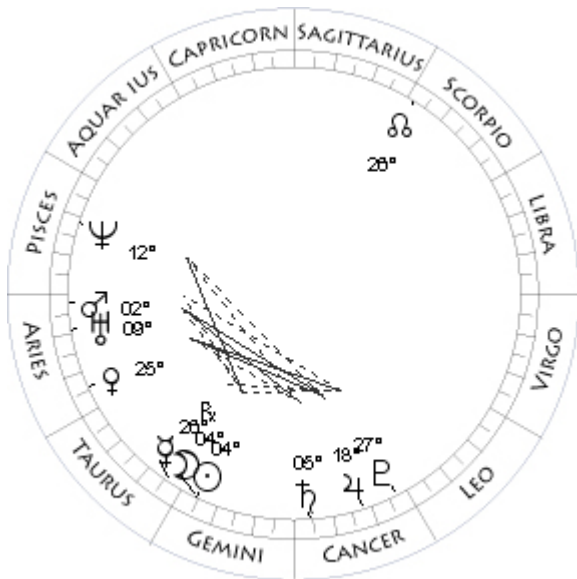
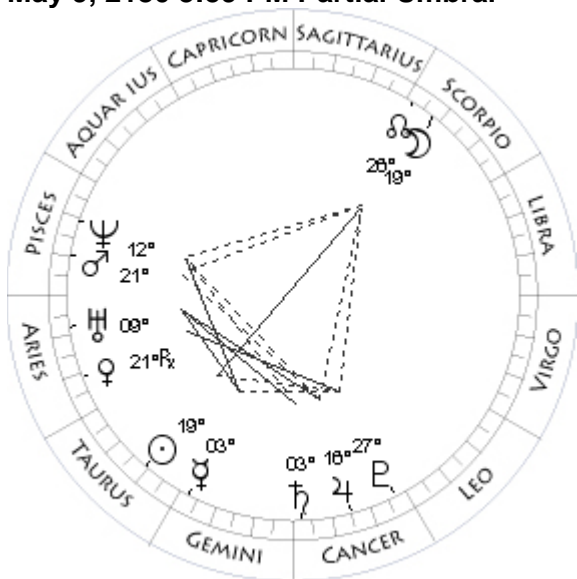
Nov 14, 2179 11:21 AM Partial Penumbral

Mo 14Ge47 - 0°01	Mo 22Ta04 + 1°13
Su 14Ge50 - 0°00	Su 22Sc00 - 0°00
Me 20Ge44 - 1°44R	Me 14Sc20 + 0°53
Ve 07Ge44 - 0°30	Ve 26Sa51 - 1°41
Ma 28Cn15 + 1°22	Ma 11Sc50 + 0°18
Ju 24Ge57 - 0°17	Ju 20Cn09 - 0°02R
Sa 24Ge08 - 1°07	Sa 05Cn33 - 1°06R
Ur 06Ar23 - 0°43	Ur 03Ar19 - 0°45R
Ne 10Pi25 - 0°44	Ne 07Pi38 - 0°46R
Pl 26Cn52 + 1°07	Pl 29Cn34 + 1°19R
No 14Sa46 - 0°00	No 06Sa11 - 0°00
Coords: 15W/21N	Coords: 175E/19N

Nov 28, 2179 6:48 PM Total Solar



May 9, 2180 3:59 PM Partial Umbral



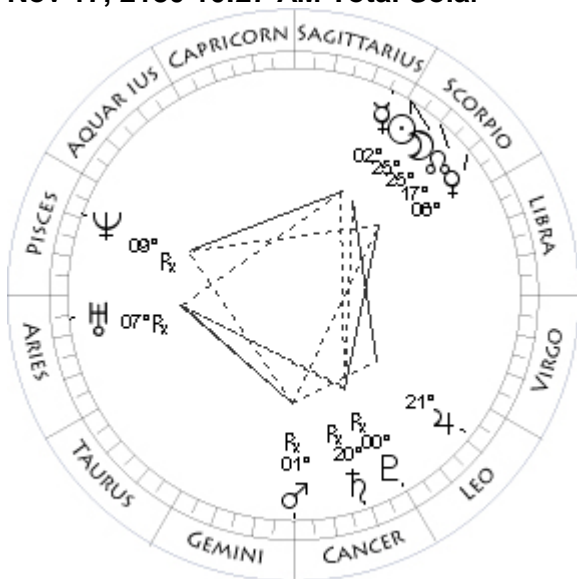
May 24, 2180 2:28 PM Annular Solar

Mo 06Sa22 + 0°05	Mo 04Ge04 - 0°43
Su 06Sa26 - 0°00	Su 04Ge11 - 0°00
Me 07Sa12 - 0°43	Me 26Ta01 - 2°20R
Ve 14Cp14 - 2°04	Ve 25Ar13 - 0°48
Ma 21Sc38 + 0°10	Ma 02Ar36 - 1°40
Ju 19Cn28 - 0°00R	Ju 18Cn56 + 0°17
Sa 04Cn44 - 1°06R	Sa 05Cn06 - 0°39
Ur 03Ar04 - 0°44R	Ur 09Ar51 - 0°42
Ne 07Pi39 - 0°46	Ne 12Pi32 - 0°47
Pl 29Cn27 + 1°20R	Pl 27Cn55 + 1°29
No 05Sa26 - 0°00	No 26Sc01 - 0°00
Coords: 105E/16S	

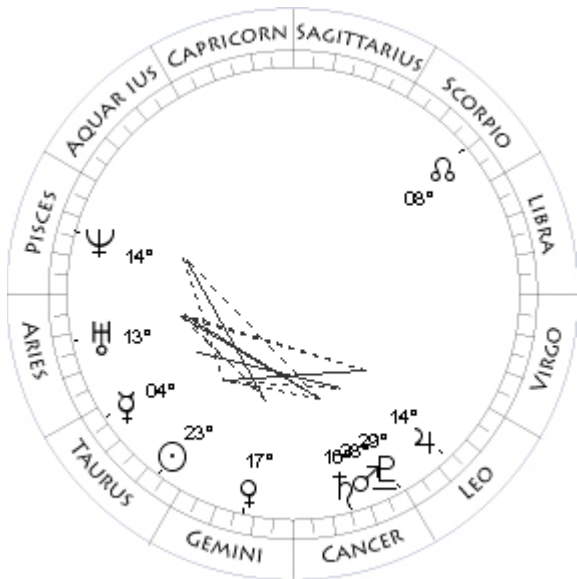
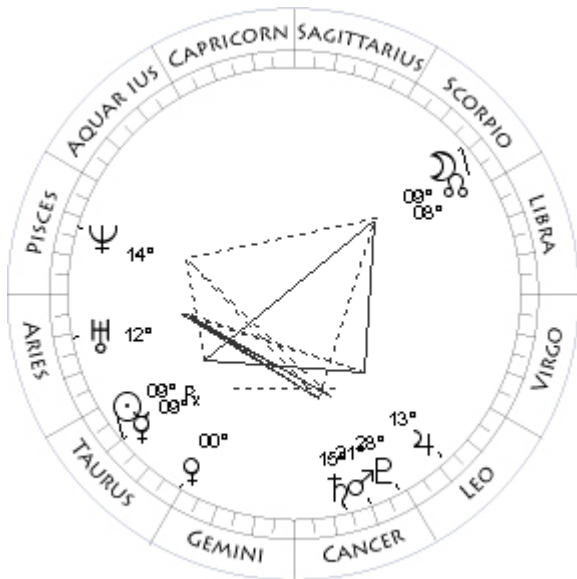
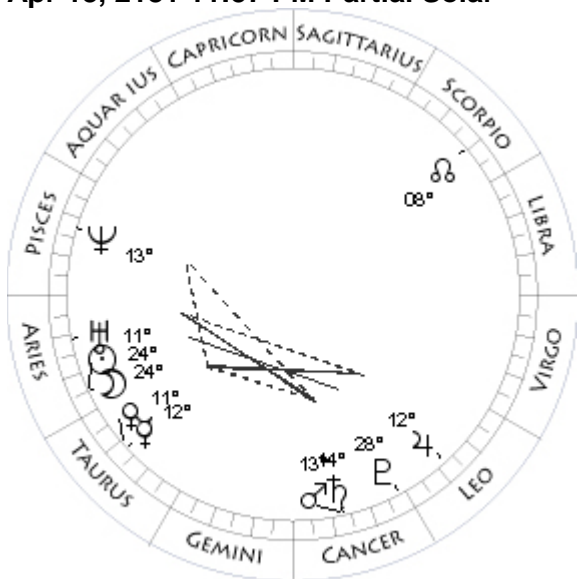
Nov 2, 2180 10:49 AM Partial Umbral

Mo 19Sc46 - 0°36	Mo 10Ta43 + 0°36
Su 19Ta46 - 0°00	Su 10Sc42 - 0°00
Me 03Ge00 + 1°40	Me 08Sc22 + 0°38
Ve 21Ar39 + 1°56R	Ve 17Li55 + 1°36
Ma 21Pi21 - 1°34	Ma 02Cn16 + 0°43R
Ju 16Cn16 + 0°16	Ju 20Le34 + 0°35
Sa 03Cn25 - 0°41	Sa 20Cn22 - 0°29R
Ur 09Ar13 - 0°41	Ur 07Ar42 - 0°44R
Ne 12Pi19 - 0°47	Ne 09Pi56 - 0°50R
Pl 27Cn42 + 1°29	Pl 00Le54 + 1°41R
No 26Sc48 - 0°00	No 17Sc27 - 0°00
Coords: 119W/18S	

Nov 17, 2180 10:27 AM Total Solar



Apr 13, 2181 11:57 PM Partial Solar



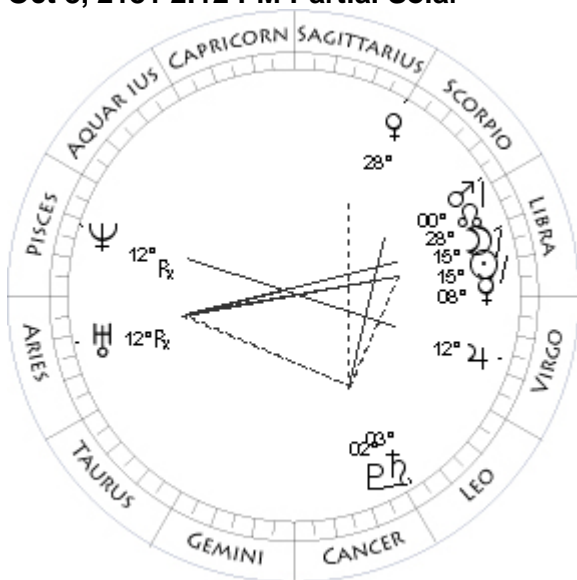
Apr 29, 2181 8:34 AM Total Umbral

Mo 25Sc36 + 0°46	Mo 09Sc27 + 0°08
Su 25Sc45 - 0°00	Su 09Ta32 - 0°00
Me 02Sa21 - 1°00	Me 09Ta48 + 1°04R
Ve 06Sc37 + 1°27	Ve 00Ge08 + 0°18
Ma 01Cn14 + 1°27R	Ma 21Cn05 + 1°50
Ju 21Le52 + 0°39	Ju 13Le13 + 0°53
Sa 20Cn07 - 0°28R	Sa 15Cn16 - 0°10
Ur 07Ar17 - 0°44R	Ur 12Ar28 - 0°40
Ne 09Pi51 - 0°50R	Ne 14Pi15 - 0°50
Pl 00Le51 + 1°42R	Pl 28Cn52 + 1°51
No 16Sc39 - 0°00	No 08Sc01 - 0°00
Coords: 26W/30N	Coords: 129E/15S

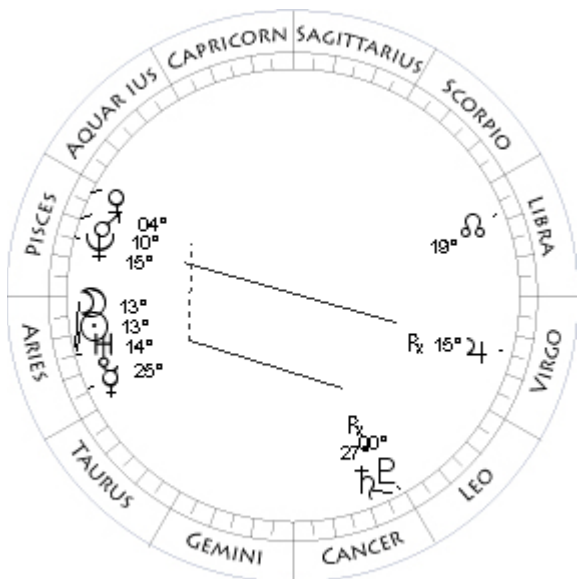
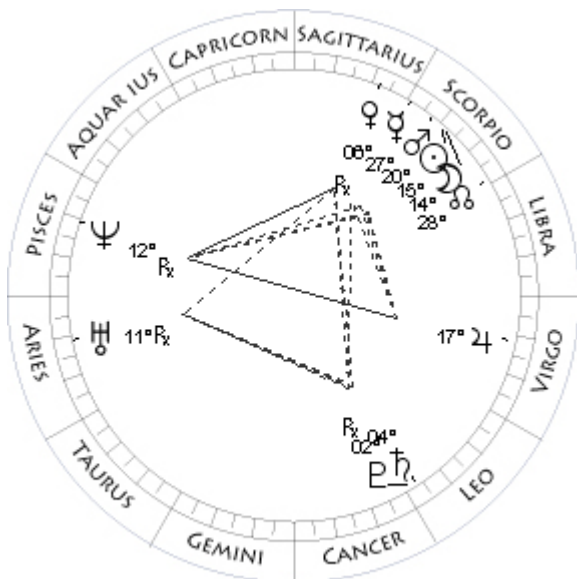
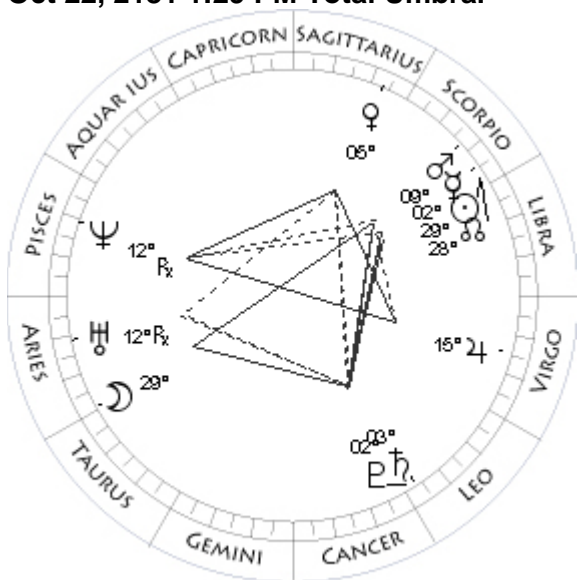
May 13, 2181 2:49 PM Partial Solar

Mo 24Ar35 + 1°14	Mo 23Ta11 - 1°23
Su 24Ar32 - 0°00	Su 23Ta21 - 0°00
Me 12Ta43 + 3°00	Me 04Ta02 - 2°33
Ve 11Ta17 - 0°21	Ve 17Ge32 + 0°55
Ma 13Cn01 + 2°00	Ma 28Cn54 + 1°40
Ju 12Le34 + 0°55	Ju 14Le26 + 0°52
Sa 14Cn15 - 0°12	Sa 16Cn30 - 0°09
Ur 11Ar38 - 0°40	Ur 13Ar10 - 0°40
Ne 13Pi50 - 0°49	Ne 14Pi34 - 0°50
Pl 28Cn48 + 1°51	Pl 29Cn01 + 1°51
No 08Sc50 - 0°00	No 07Sc16 - 0°00

Oct 8, 2181 2:12 PM Partial Solar



Oct 22, 2181 1:29 PM Total Umbral



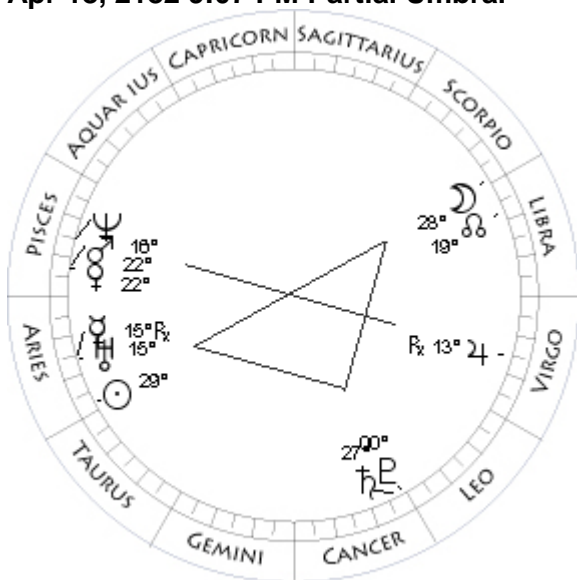
Nov 7, 2181 1:31 AM Partial Solar

Mo 15Li50 - 1°12	Mo 14Sc53 + 1°27
Su 15Li47 - 0°00	Su 15Sc05 - 0°00
Me 08Li41 + 1°42	Me 27Sc16 - 1°18
Ve 28Sc21 - 5°12	Ve 06Sa09 - 5°31R
Ma 00Sc03 + 0°14	Ma 20Sc13 - 0°03
Ju 12Vi33 + 0°55	Ju 17Vi53 + 1°00
Sa 03Le10 + 0°05	Sa 04Le24 + 0°08
Ur 12Ar45 - 0°43R	Ur 11Ar39 - 0°43R
Ne 12Pi37 - 0°54R	Ne 12Pi09 - 0°54R
Pl 02Le05 + 2°01	Pl 02Le12 + 2°04R
No 29Li26 - 0°00	No 27Li52 - 0°00

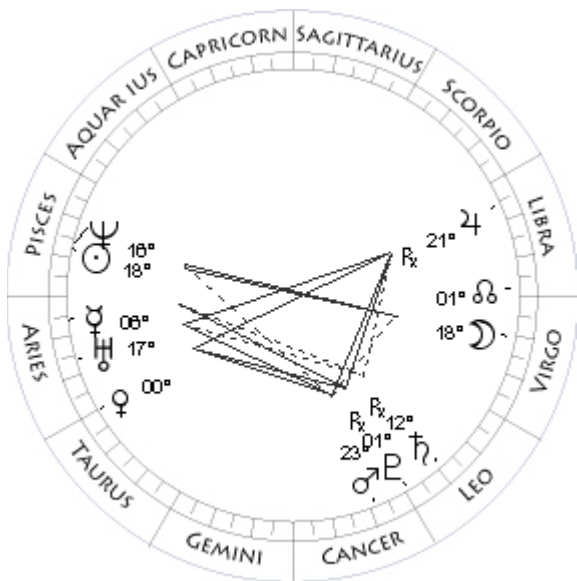
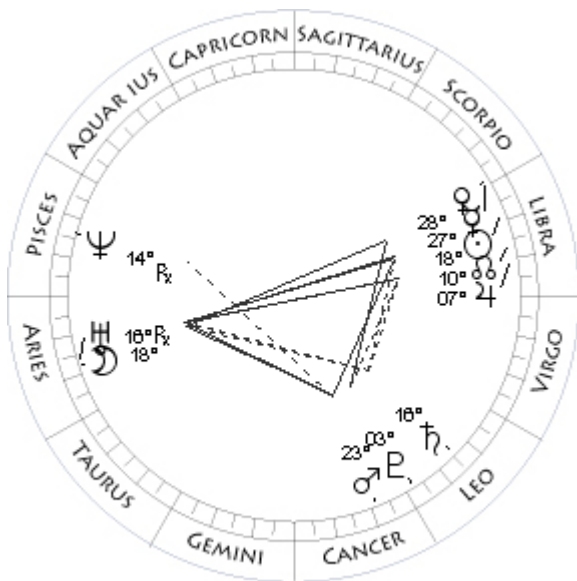
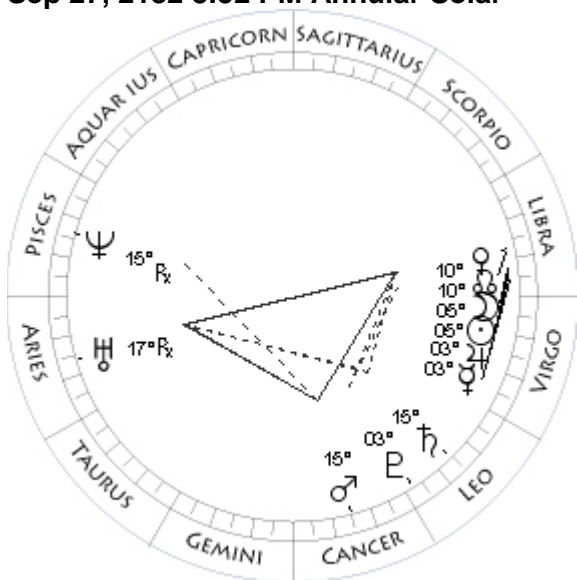
Apr 3, 2182 7:53 AM Total Solar

Mo 29Ar33 - 0°03	Mo 13Ar47 + 0°32
Su 29Li36 - 0°00	Su 13Ar47 - 0°00
Me 02Sc47 + 0°24	Me 25Ar27 + 3°19
Ve 05Sa28 - 5°58	Ve 04Pi25 - 0°35
Ma 09Sc31 + 0°06	Ma 10Pi36 - 1°13
Ju 15Vi13 + 0°57	Ju 15Vi15 + 1°26R
Sa 03Le56 + 0°06	Sa 27Cn32 + 0°23
Ur 12Ar12 - 0°43R	Ur 14Ar45 - 0°38
Ne 12Pi20 - 0°54R	Ne 15Pi38 - 0°53
Pl 02Le11 + 2°03	Pl 00Le07 + 2°14R
No 28Li41 - 0°00	No 20Li04 - 0°00
Coords: 154W/11N	Coords: 51W/37N

Apr 18, 2182 9:07 PM Partial Umbral



Sep 27, 2182 8:52 PM Annular Solar



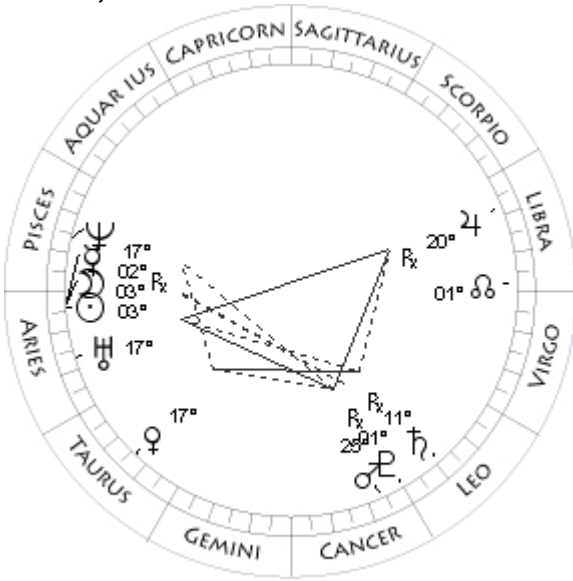
Oct 11, 2182 11:31 PM Partial Umbral

Mo 28Li56 + 0°52	Mo 18Ar45 - 0°46
Su 29Ar04 - 0°00	Su 18Li53 - 0°00
Me 15Ar31 + 0°18R	Me 27Li42 + 0°07
Ve 22Pi53 - 1°17	Ve 28Li12 + 0°53
Ma 22Pi42 - 1°14	Ma 23Cn23 + 0°50
Ju 13Vi57 + 1°24R	Ju 07Li01 + 1°05
Sa 27Cn54 + 0°24	Sa 16Le19 + 0°38
Ur 15Ar38 - 0°38	Ur 16Ar46 - 0°42R
Ne 16Pi08 - 0°53	Ne 14Pi49 - 0°58R
Pl 00Le06 + 2°14	Pl 03Le25 + 2°24
No 19Li15 - 0°00	No 09Li55 - 0°00
Coords: 43W/10S	Coords: 4W/ 7N

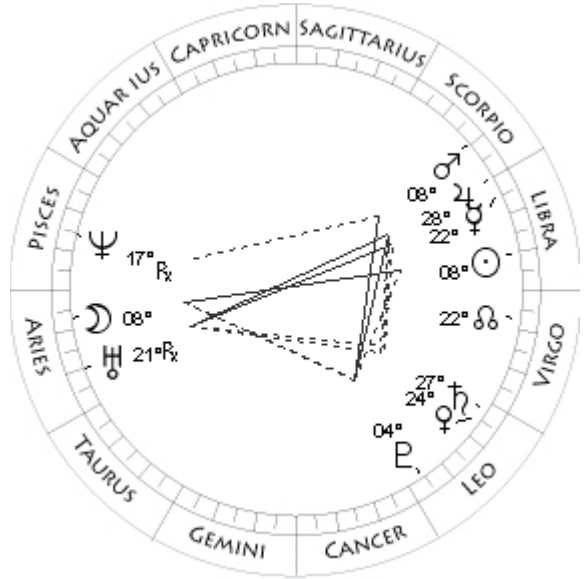
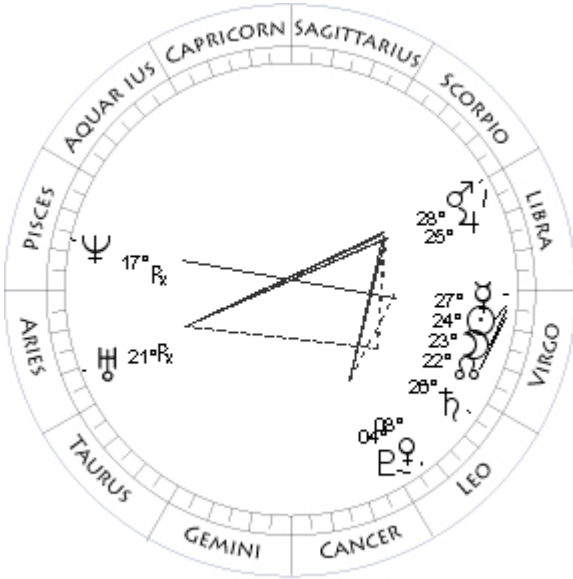
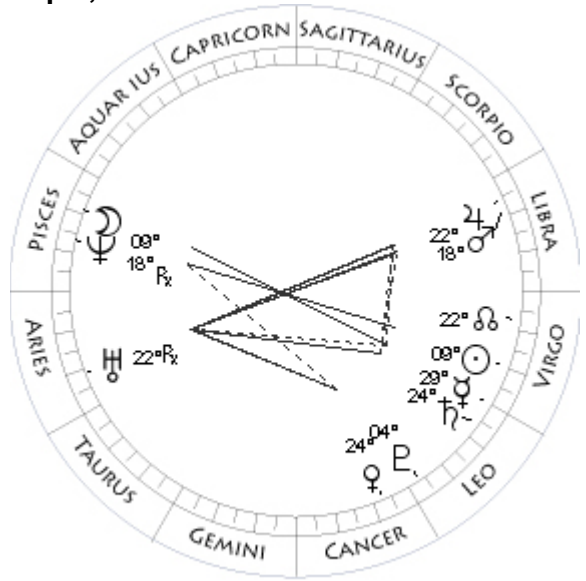
Mar 9, 2183 9:17 AM Partial Penumbral

Mo 05Li00 - 0°30	Mo 18Vi48 - 1°08
Su 05Li00 - 0°00	Su 18Pi45 - 0°00
Me 03Li25 + 1°31	Me 06Ar34 + 2°13
Ve 10Li37 + 1°14	Ve 00Ta37 + 0°47
Ma 15Cn55 + 0°30	Ma 23Cn08 + 3°29
Ju 03Li58 + 1°05	Ju 21Li45 + 1°32R
Sa 15Le03 + 0°36	Sa 12Le29 + 0°59R
Ur 17Ar20 - 0°42R	Ur 17Ar07 - 0°37
Ne 15Pi09 - 0°58R	Ne 16Pi51 - 0°55
Pl 03Le15 + 2°23	Pl 01Le38 + 2°37R
No 10Li40 - 0°00	No 02Li04 - 0°00
Coords: 147E/33S	Coords: 137E/ 3N

Mar 23, 2183 10:00 PM Total Solar



Sep 2, 2183 7:09 AM Partial Penumbra



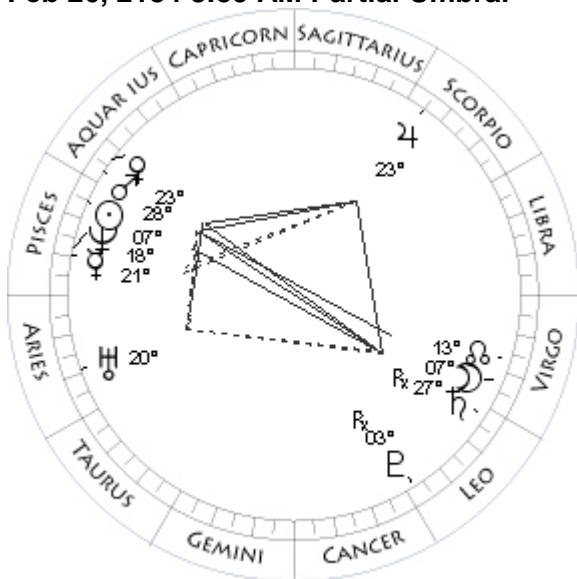
Sep 16, 2183 9:36 PM Annular Solar

Mo 03Ar09 - 0°11	Mo 23Vi59 + 0°10
Su 03Ar14 - 0°00	Su 24Vi03 - 0°00
Me 02Ar55 + 3°16R	Me 27Vi55 + 1°21
Ve 17Ta07 + 1°49	Ve 08Le25 - 1°46
Ma 25Cn24 + 3°02	Ma 28Li14 + 0°02
Ju 20Li13 + 1°34R	Ju 25Li04 + 1°04
Sa 11Le48 + 0°59R	Sa 26Le04 + 1°04
Ur 17Ar54 - 0°37	Ur 21Ar53 - 0°40R
Ne 17Pi24 - 0°56	Ne 17Pi44 - 1°01R
Pl 01Le29 + 2°37R	Pl 04Le22 + 2°44
No 01Li18 - 0°00	No 21Vi55 - 0°00
Coords: 142E/13N	

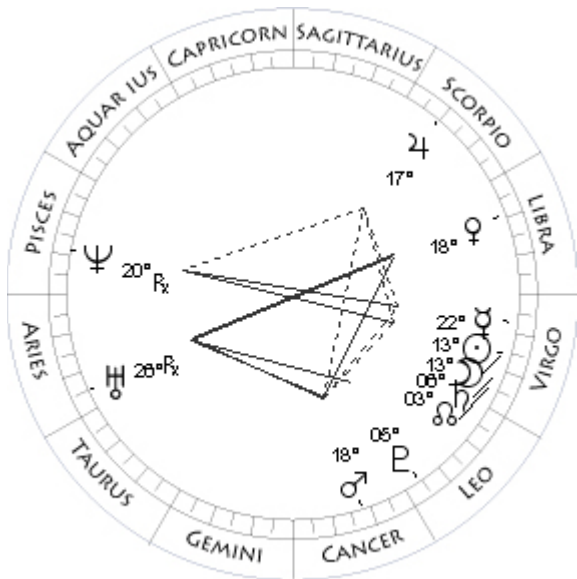
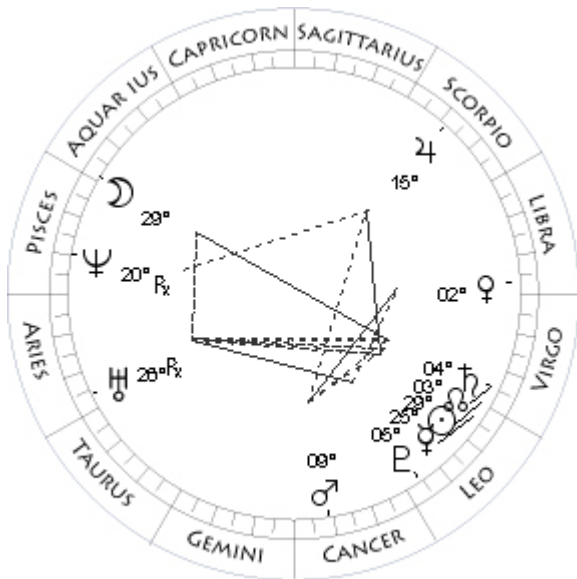
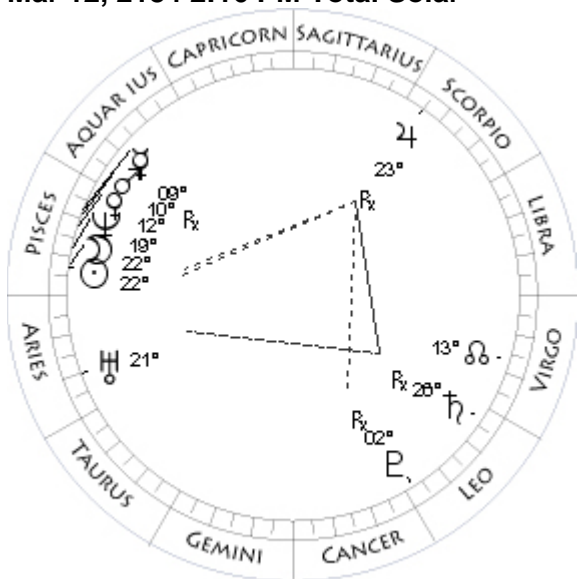
Oct 1, 2183 2:59 PM Partial Penumbra

Mo 09Pi56 + 1°08	Mo 08Ar14 - 1°28
Su 09Vi53 - 0°00	Su 08Li27 - 0°00
Me 29Le59 + 1°37	Me 22Li47 - 0°13
Ve 24Cn08 - 3°07	Ve 24Le05 - 0°30
Ma 18Li40 + 0°12	Ma 08Sc07 - 0°07
Ju 22Li15 + 1°06	Ju 28Li06 + 1°03
Sa 24Le17 + 1°02	Sa 27Le44 + 1°06
Ur 22Ar20 - 0°39R	Ur 21Ar20 - 0°40R
Ne 18Pi08 - 1°01R	Ne 17Pi21 - 1°01R
Pl 04Le05 + 2°43	Pl 04Le36 + 2°46
No 22Vi42 - 0°00	No 21Vi09 - 0°00
Coords: 133W/ 2N	

Feb 26, 2184 8:59 AM Partial Umbral



Mar 12, 2184 2:16 PM Total Solar



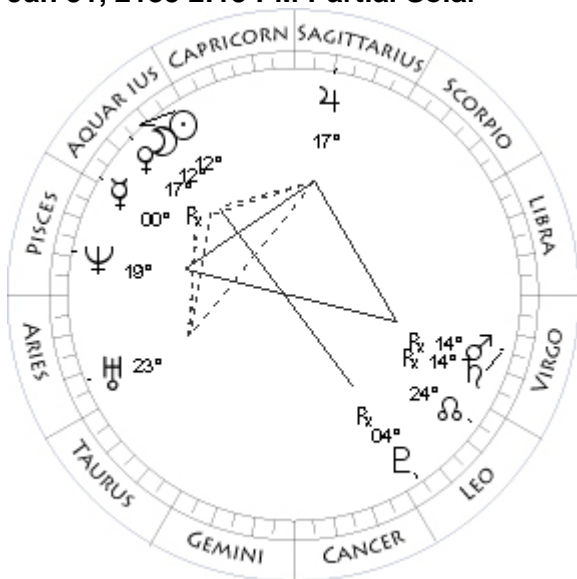
Aug 21, 2184 10:32 PM Total Umbral

Mo 07Vi27 - 0°31	Mo 29Aq38 + 0°24
Su 07Pi27 - 0°00	Su 29Le39 - 0°00
Me 21Pi21 + 2°53	Me 25Le32 + 1°43
Ve 23Aq54 - 1°06	Ve 02Li02 + 0°52
Ma 28Aq22 - 1°05	Ma 09Cn37 + 0°26
Ju 23Sc02 + 1°11	Ju 15Sc59 + 0°54
Sa 27Le57 + 1°33R	Sa 04Vi45 + 1°27
Ur 20Ar22 - 0°36	Ur 26Ar39 - 0°37R
Ne 18Pi34 - 0°59	Ne 20Pi42 - 1°04R
Pl 03Le09 + 3°01R	Pl 05Le08 + 3°04
No 13Vi19 - 0°00	No 03Vi55 - 0°00
Coords: 132E/ 8N	Coords: 23W/11S

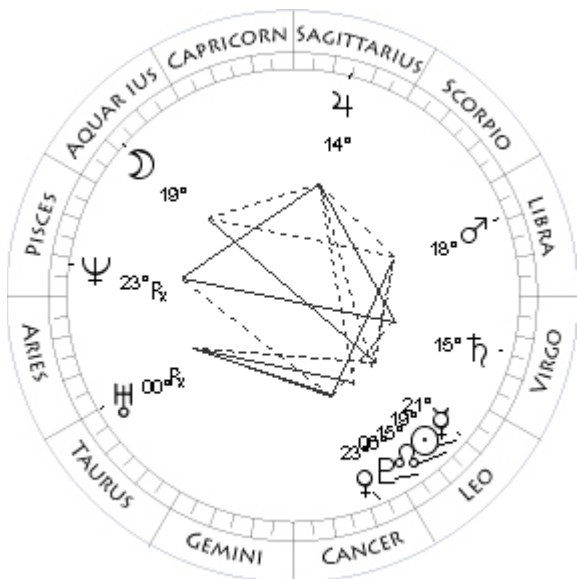
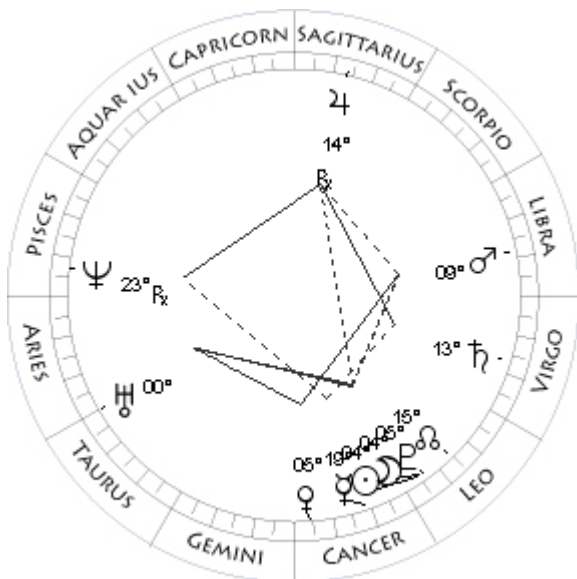
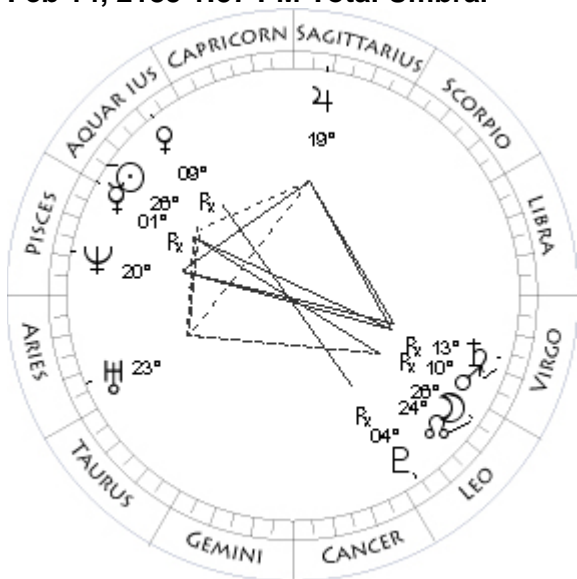
Sep 4, 2184 11:04 PM Annular Solar

Mo 22Pi33 - 0°53	Mo 13Vi03 + 0°50
Su 22Pi43 - 0°00	Su 13Vi11 - 0°00
Me 09Pi08 + 2°38R	Me 22Vi26 + 1°11
Ve 12Pi53 - 1°23	Ve 18Li49 + 0°11
Ma 10Pi22 - 1°05	Ma 18Cn37 + 0°38
Ju 23Sc12 + 1°14R	Ju 17Sc50 + 0°51
Sa 26Le49 + 1°33R	Sa 06Vi32 + 1°28
Ur 21Ar06 - 0°35	Ur 26Ar21 - 0°37R
Ne 19Pi08 - 0°59	Ne 20Pi20 - 1°04R
Pl 02Le56 + 3°01R	Pl 05Le27 + 3°06
No 12Vi31 - 0°00	No 03Vi10 - 0°00
	Coords: 124E/67N

Jan 31, 2185 2:13 PM Partial Solar



Feb 14, 2185 1:57 PM Total Umbra



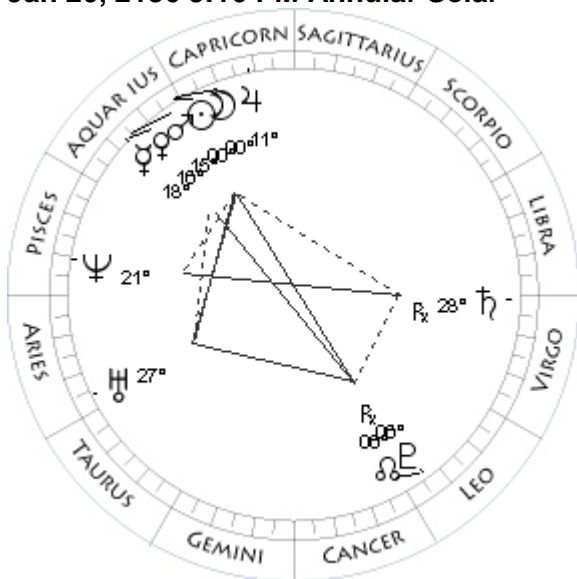
Jul 26, 2185 10:31 PM Total Solar

Mo 12Aq11 + 1°08	Mo 04Le32 - 1°00
Su 12Aq08 - 0°00	Su 04Le30 - 0°00
Me 00Pi29 + 0°02	Me 19Cn44 + 0°07
Ve 17Aq12 + 7°06R	Ve 05Cn22 - 0°46
Ma 14Vi23 + 4°08R	Ma 09Li38 + 0°10
Ju 17Sa45 + 0°39	Ju 14Sa41 + 0°30R
Sa 14Vi17 + 1°58R	Sa 13Vi19 + 1°49
Ur 23Ar18 - 0°35	Ur 00Ta49 - 0°34
Ne 19Pi50 - 1°02	Ne 23Pi32 - 1°07R
Pl 04Le59 + 3°24R	Pl 05Le46 + 3°25
No 25Le18 - 0°00	No 15Le58 - 0°00
	Coords: 176E/65S

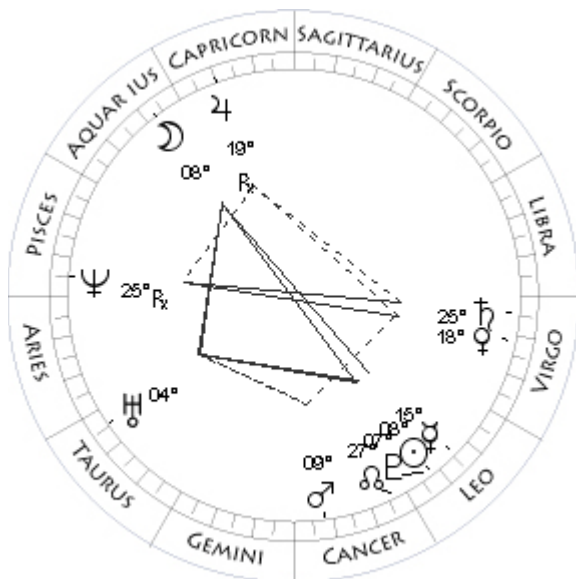
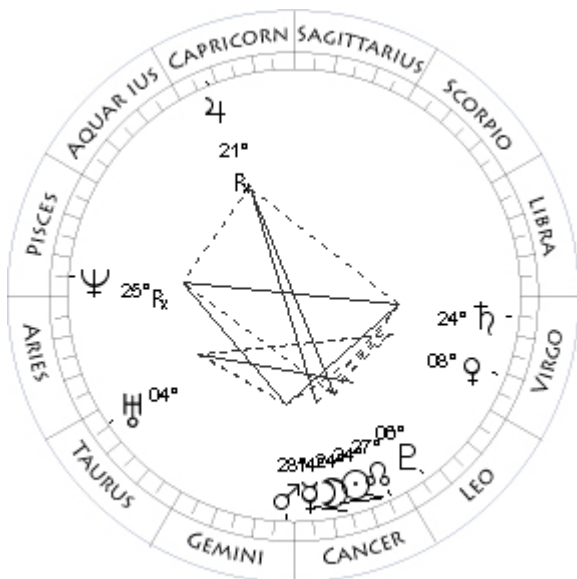
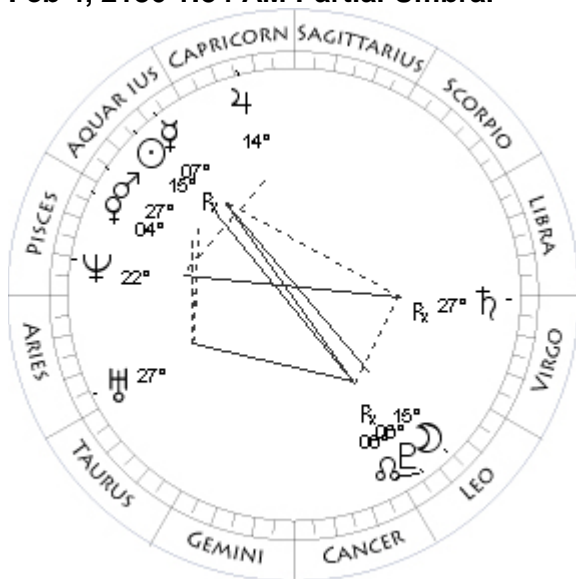
Aug 11, 2185 8:14 AM Total Umbra

Mo 26Le14 + 0°09	Mo 19Aq09 - 0°21
Su 26Aq18 - 0°00	Su 19Le15 - 0°00
Me 01Pi08 + 3°29R	Me 21Le01 + 1°45
Ve 09Aq27 + 8°08R	Ve 23Cn55 - 0°02
Ma 10Vi19 + 4°23R	Ma 18Li54 - 0°04
Ju 19Sa58 + 0°39	Ju 14Sa22 + 0°27
Sa 13Vi19 + 2°00R	Sa 15Vi03 + 1°48
Ur 23Ar45 - 0°34	Ur 00Ta50 - 0°35R
Ne 20Pi18 - 1°02	Ne 23Pi15 - 1°07R
Pl 04Le42 + 3°24R	Pl 06Le10 + 3°26
No 24Le34 - 0°00	No 15Le09 - 0°00
	Coords: 122E/15S

Jan 20, 2186 5:16 PM Annular Solar



Feb 4, 2186 1:54 AM Partial Umbral



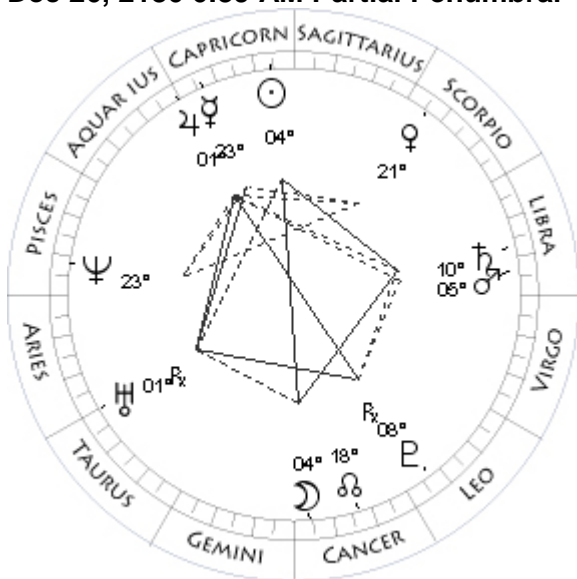
Jul 16, 2186 3:08 PM Total Solar

Mo 00Aq49 + 0°30	Mo 24Cn24 - 0°15
Su 00Aq49 - 0°00	Su 24Cn26 - 0°00
Me 18Aq19 + 0°39	Me 14Cn49 + 0°37
Ve 16Aq15 - 1°29	Ve 08Vi30 - 0°16
Ma 15Aq55 - 1°06	Ma 28Ge59 + 0°26
Ju 11Cp09 + 0°06	Ju 21Cp41 - 0°17R
Sa 28Vi27 + 2°15R	Sa 24Vi06 + 2°08
Ur 27Ar01 - 0°33	Ur 04Ta39 - 0°32
Ne 21Pi41 - 1°05	Ne 25Pi56 - 1°09R
Pl 06Le35 + 3°47R	Pl 06Le48 + 3°48
No 06Le33 - 0°00	No 27Cn11 - 0°00

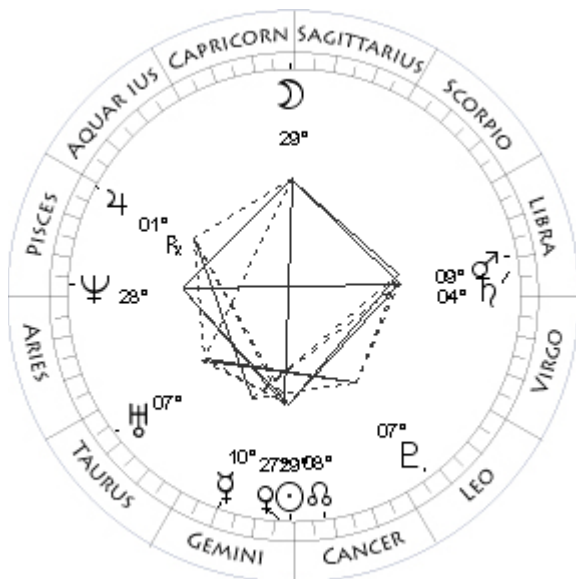
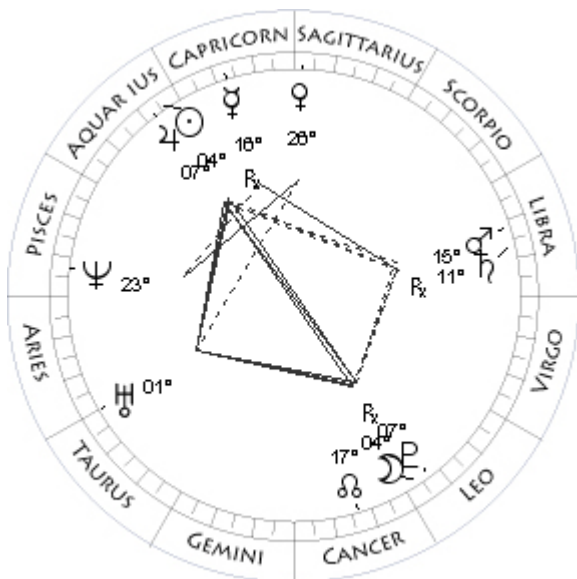
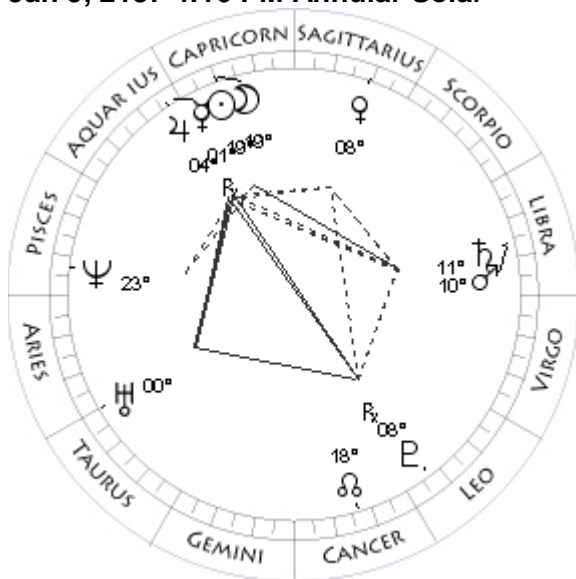
Jul 31, 2186 11:00 AM Partial Penumbra

Mo 15Le16 + 0°50	Mo 08Aq27 - 1°02
Su 15Aq25 - 0°00	Su 08Le36 - 0°00
Me 07Aq42 + 3°37R	Me 15Le54 + 1°46
Ve 04Pi13 - 1°31	Ve 18Vi16 - 2°28
Ma 27Aq16 - 1°04	Ma 09Cn00 + 0°35
Ju 14Cp18 + 0°04	Ju 19Cp50 - 0°18R
Sa 27Vi56 + 2°18R	Sa 25Vi26 + 2°06
Ur 27Ar18 - 0°33	Ur 04Ta51 - 0°32
Ne 22Pi06 - 1°05	Ne 25Pi44 - 1°10R
Pl 06Le17 + 3°48R	Pl 07Le12 + 3°48
No 05Le47 - 0°00	No 26Cn24 - 0°00
Coords: 163E/19S	

Dec 26, 2186 6:39 AM Partial Penumbral



Jan 9, 2187 4:16 PM Annular Solar



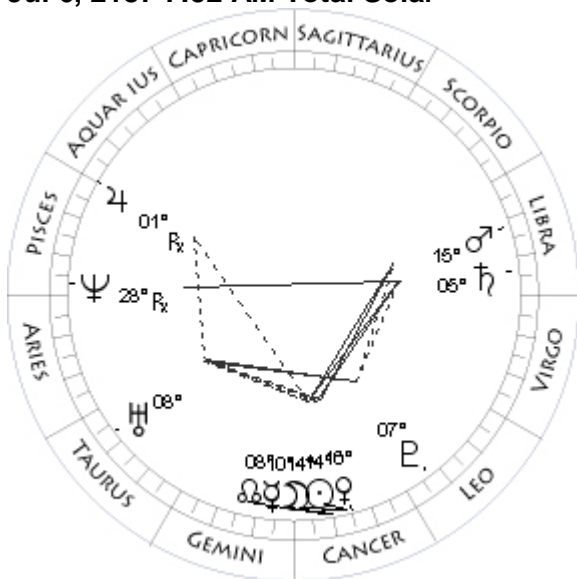
Jan 24, 2187 5:28 PM Partial Penumbral

Mo 04Cn42 - 1°13	Mo 04Le26 + 1°30
Su 04Cp39 - 0°00	Su 04Aq39 - 0°00
Me 23Cp49 - 1°51	Me 16Cp49 + 3°08R
Ve 21Sc33 + 2°30	Ve 26Sa43 + 1°34
Ma 05Li11 + 2°16	Ma 15Li46 + 2°43
Ju 01Aq08 - 0°27	Ju 07Aq58 - 0°29
Sa 10Li50 + 2°19	Sa 11Li23 + 2°27R
Ur 01Ta01 - 0°32R	Ur 01Ta03 - 0°31
Ne 23Pi22 - 1°09	Ne 23Pi58 - 1°08
Pl 08Le28 + 4°08R	Pl 07Le54 + 4°11R
No 18Cn34 - 0°00	No 17Cn01 - 0°00
Coords: 100E/22N	Coords: 101W/21N

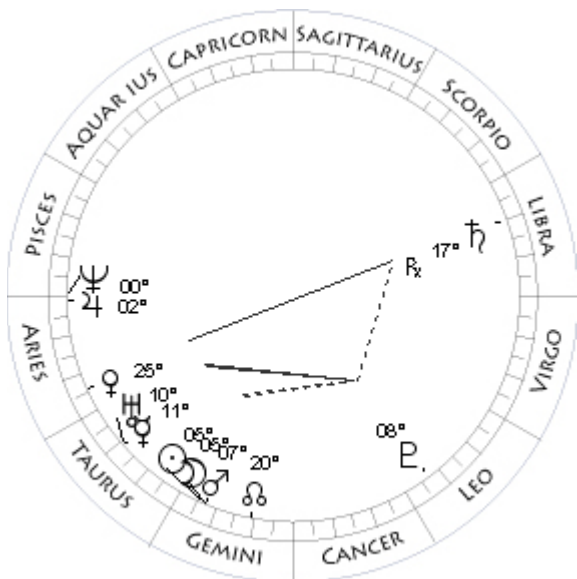
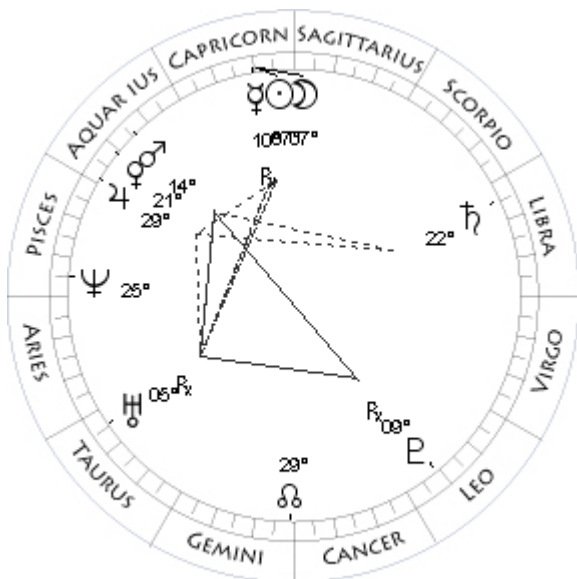
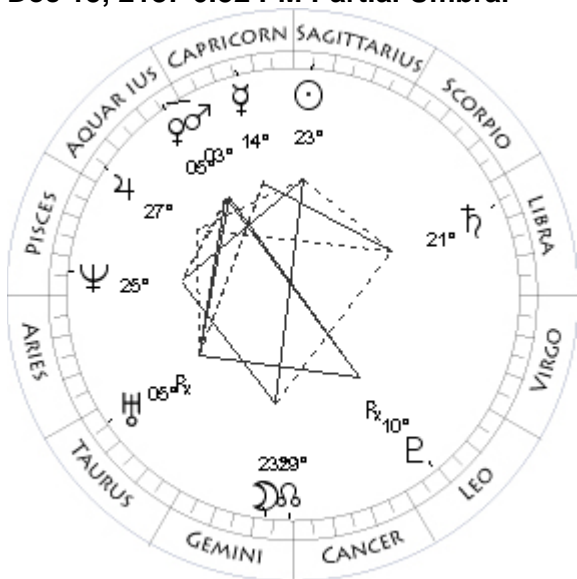
Jun 20, 2187 10:37 PM Partial Umbra

Mo 19Cp16 - 0°07	Mo 29Sa44 + 0°50
Su 19Cp19 - 0°00	Su 29Ge42 - 0°00
Me 01Aq43 + 1°22R	Me 10Ge33 - 1°45
Ve 08Sa35 + 2°11	Ve 27Ge25 + 0°09
Ma 10Li57 + 2°29	Ma 09Li08 + 0°06
Ju 04Aq25 - 0°28	Ju 01Pi41 - 0°55R
Sa 11Li18 + 2°23	Sa 04Li46 + 2°27
Ur 00Ta56 - 0°31	Ur 07Ta48 - 0°29
Ne 23Pi36 - 1°09	Ne 28Pi14 - 1°11
Pl 08Le12 + 4°10R	Pl 07Le30 + 4°10
No 17Cn48 - 0°00	No 09Cn13 - 0°00
	Coords: 21W/23S

Jul 6, 2187 7:52 AM Total Solar



Dec 15, 2187 6:52 PM Partial Umbral



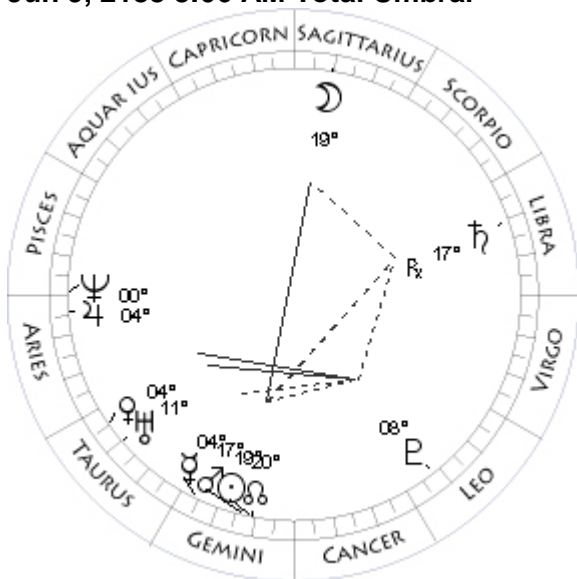
Dec 29, 2187 6:52 PM Annular Solar

Mo 14Cn16 + 0°30	Mo 07Cp51 - 0°45
Su 14Cn23 - 0°00	Su 07Cp59 - 0°00
Me 10Cn52 + 1°02	Me 10Cp30 + 2°08R
Ve 16Cn19 + 0°43	Ve 21Aq39 - 1°52
Ma 15Li34 - 0°15	Ma 14Aq45 - 1°11
Ju 01Pi16 - 0°59R	Ju 29Aq39 - 0°58
Sa 05Li20 + 2°23	Sa 22Li52 + 2°24
Ur 08Ta21 - 0°29	Ur 05Ta04 - 0°29R
Ne 28Pi15 - 1°12R	Ne 25Pi37 - 1°12
Pl 07Le52 + 4°10	Pl 09Le49 + 4°33R
No 08Cn24 - 0°00	No 29Ge03 - 0°00
Coords: 64W/53N	Coords: 111E/77S

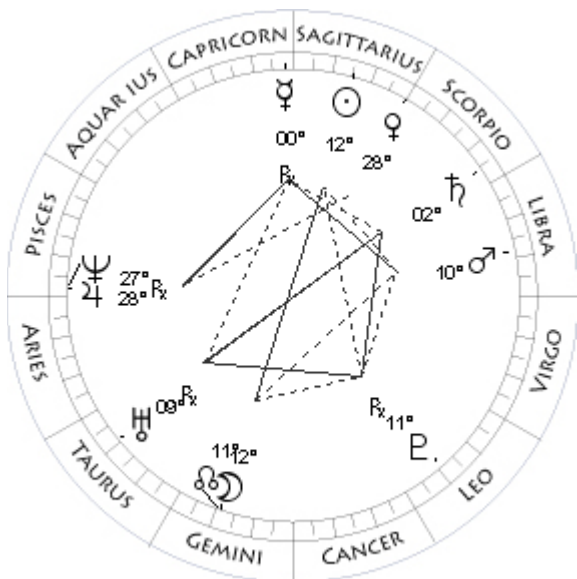
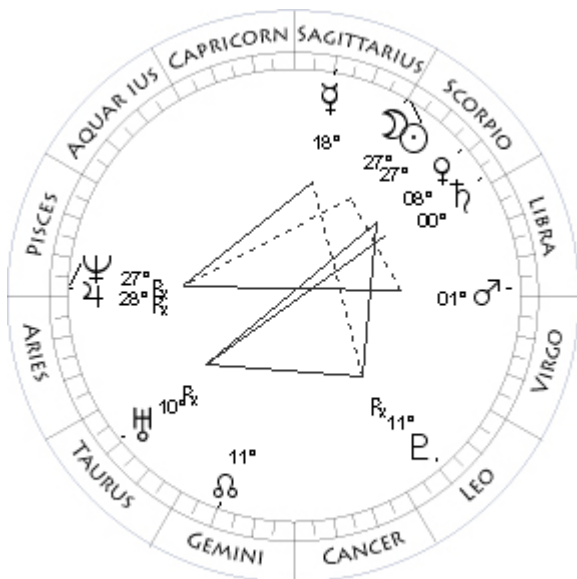
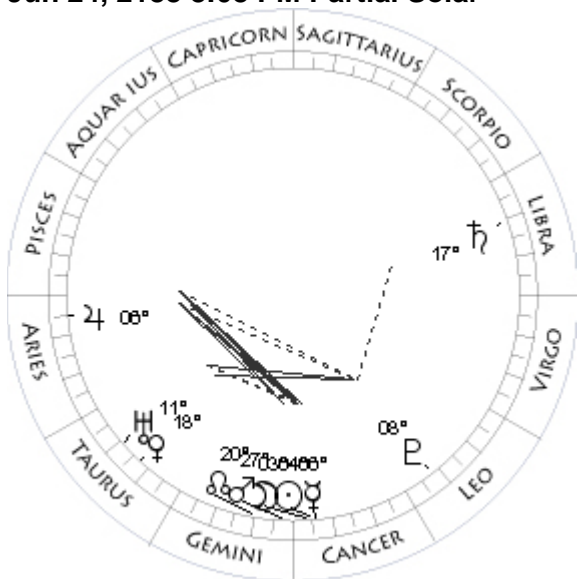
May 26, 2188 8:09 AM Partial Solar

Mo 23Ge43 - 0°32	Mo 05Ge59 - 1°18
Su 23Sa44 - 0°00	Su 05Ge55 - 0°00
Me 14Cp14 - 1°40	Me 11Ta37 - 3°05
Ve 05Aq09 - 2°11	Ve 25Ar07 - 1°08
Ma 03Aq48 - 1°16	Ma 07Ge25 + 0°20
Ju 27Aq08 - 0°59	Ju 02Ar29 - 1°08
Sa 21Li55 + 2°21	Sa 17Li34 + 2°40R
Ur 05Ta19 - 0°30R	Ur 10Ta30 - 0°26
Ne 25Pi29 - 1°13	Ne 00Ar08 - 1°13
Pl 10Le02 + 4°31R	Pl 08Le24 + 4°34
No 29Ge48 - 0°00	No 21Ge11 - 0°00
Coords: 76W/23N	

Jun 9, 2188 8:06 AM Total Umbral



Jun 24, 2188 8:08 PM Partial Solar



Nov 18, 2188 5:48 PM Partial Solar

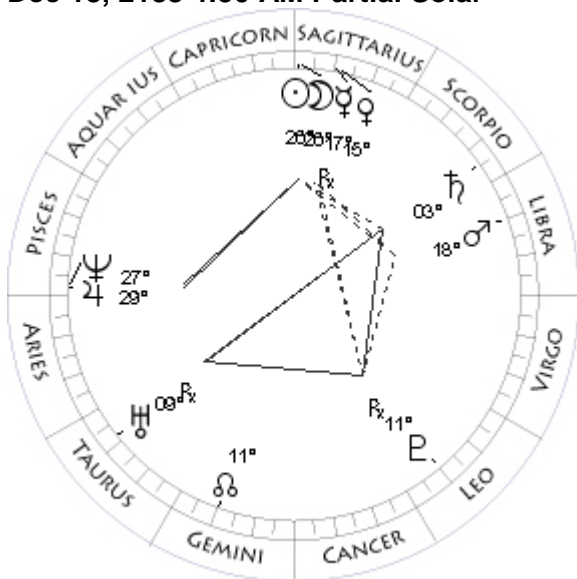
Mo 19Sa17 + 0°06	Mo 27Sc10 + 1°17
Su 19Ge20 - 0°00	Su 27Sc07 - 0°00
Me 04Ge10 - 1°13	Me 18Sa07 - 2°33
Ve 04Ta49 - 2°27	Ve 08Sc54 + 1°24
Ma 17Ge13 + 0°28	Ma 01Li14 + 1°31
Ju 04Ar37 - 1°11	Ju 28Pi16 - 1°28R
Sa 17Li11 + 2°37R	Sa 00Sc24 + 2°17
Ur 11Ta13 - 0°26	Ur 10Ta22 - 0°27R
Ne 00Ar21 - 1°13	Ne 27Pi48 - 1°16R
Pl 08Le38 + 4°34	Pl 11Le40 + 4°50R
No 20Ge27 - 0°00	No 11Ge51 - 0°00

Coords: 122E/23S

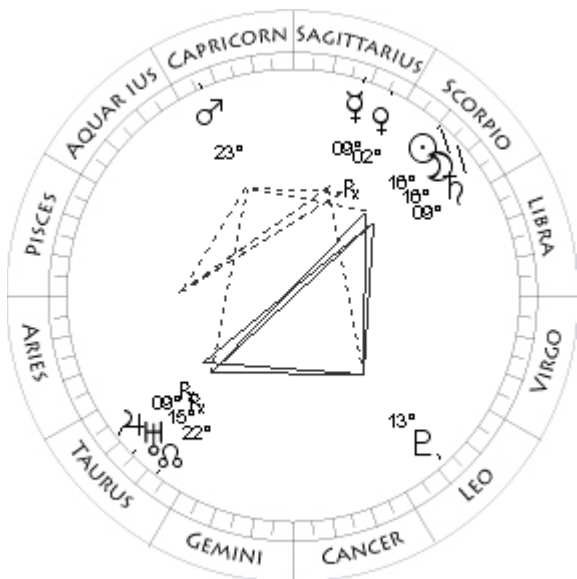
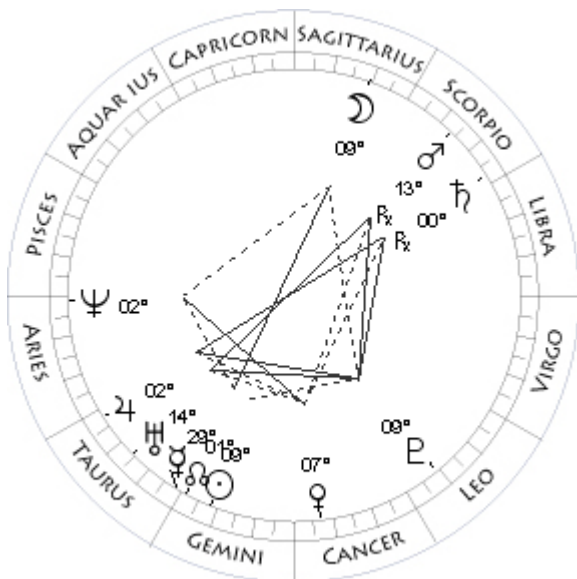
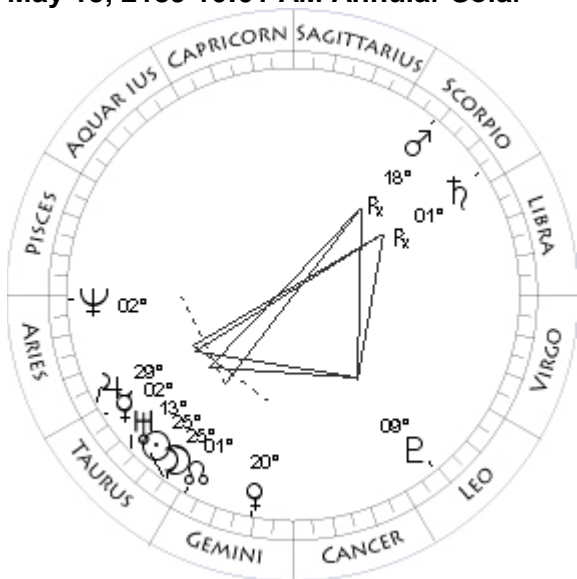
Dec 4, 2188 0:09 AM Total Umbral

Mo 03Cn58 + 1°15	Mo 12Ge29 + 0°07
Su 04Cn09 - 0°00	Su 12Sa32 - 0°00
Me 06Cn49 + 1°21	Me 00Cp54 - 1°22R
Ve 18Ta28 - 3°02	Ve 28Sc02 + 0°58
Ma 27Ge52 + 0°36	Ma 10Li06 + 1°34
Ju 06Ar28 - 1°15	Ju 28Pi28 - 1°24
Sa 17Li08 + 2°33	Sa 02Sc03 + 2°18
Ur 11Ta54 - 0°26	Ur 09Ta49 - 0°27R
Ne 00Ar29 - 1°14	Ne 27Pi42 - 1°16R
Pl 08Le57 + 4°33	Pl 11Le34 + 4°53R
No 19Ge38 - 0°00	No 11Ge02 - 0°00

Dec 18, 2188 4:50 AM Partial Solar



May 15, 2189 10:01 AM Annular Solar



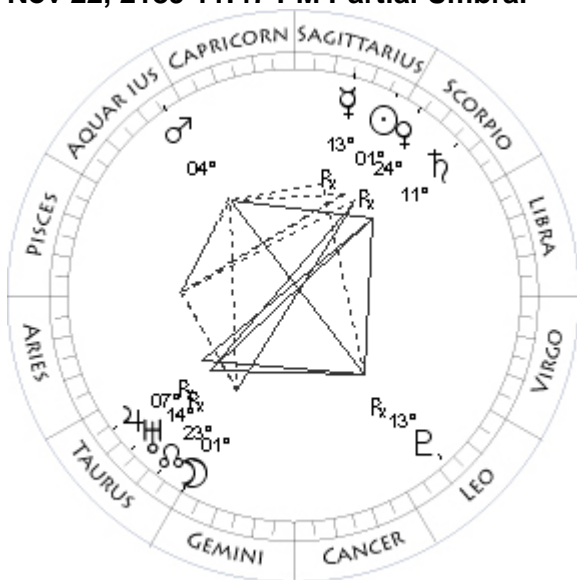
May 29, 2189 11:27 PM Partial Umbral

Mo 26Sa45 - 1°25	Mo 09Sa02 - 0°39
Su 26Sa57 - 0°00	Su 09Ge10 - 0°00
Me 17Sa41 + 2°38R	Me 29Ta25 - 0°42
Ve 15Sa53 + 0°27	Ve 07Cn58 + 1°32
Ma 18Li06 + 1°37	Ma 13Sc50 - 0°49R
Ju 29Pi21 - 1°20	Ju 02Ta44 - 1°05
Sa 03Sc24 + 2°21	Sa 00Sc12 + 2°41R
Ur 09Ta25 - 0°27R	Ur 14Ta33 - 0°24
Ne 27Pi44 - 1°15	Ne 02Ar24 - 1°16
Pl 11Le24 + 4°55R	Pl 09Le49 + 4°57
No 10Ge17 - 0°00	No 01Ge40 - 0°00
	Coords: 7W/22S

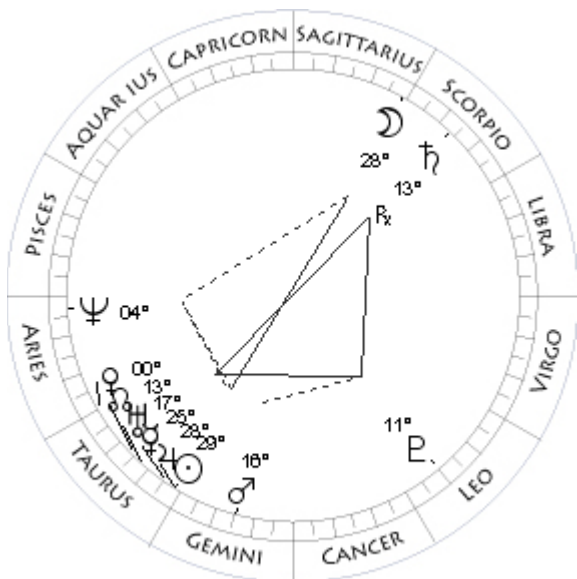
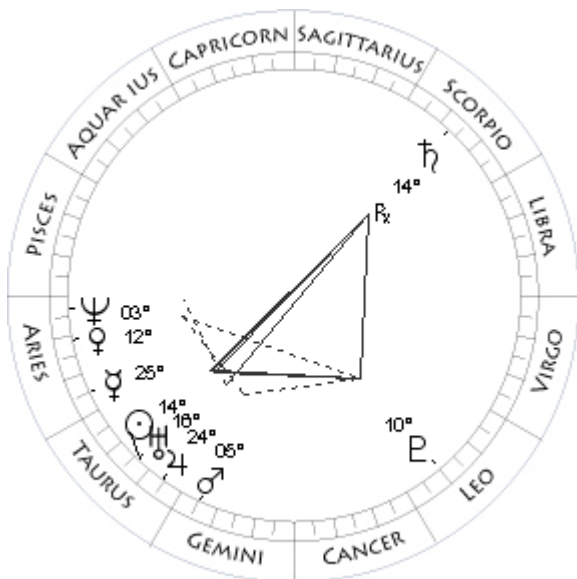
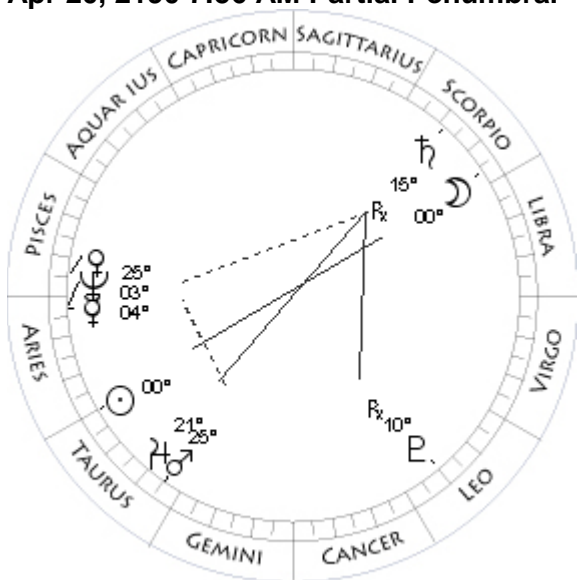
Nov 8, 2189 9:50 AM Total Solar

Mo 25Ta10 - 0°37	Mo 16Sc28 + 0°36
Su 25Ta09 - 0°00	Su 16Sc29 - 0°00
Me 02Ta56 - 2°40	Me 09Sa42 - 2°48
Ve 20Ge22 + 1°02	Ve 02Sa26 - 5°20R
Ma 18Sc35 - 0°10R	Ma 23Cp51 - 1°45
Ju 29Ar30 - 1°04	Ju 09Ta09 - 1°25R
Sa 01Sc03 + 2°43R	Sa 09Sc46 + 2°11
Ur 13Ta45 - 0°24	Ur 15Ta04 - 0°25R
Ne 02Ar04 - 1°15	Ne 00Ar14 - 1°20R
Pl 09Le39 + 4°58	Pl 13Le05 + 5°12
No 02Ge26 - 0°00	No 23Ta04 - 0°00
Coords: 43W/22S	Coords: 41W/16N

Nov 22, 2189 11:47 PM Partial Umbral



Apr 20, 2190 7:56 AM Partial Penumbral



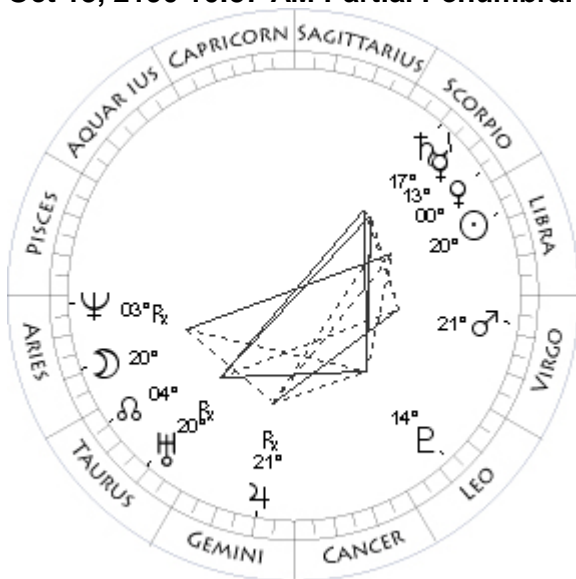
May 4, 2190 10:49 AM Annular Solar

Mo 01Ge02 + 0°45	Mo 14Ta15 + 0°03
Su 01Sa09 - 0°00	Su 14Ta18 - 0°00
Me 13Sa07 - 0°55R	Me 25Ar38 - 2°19
Ve 24Sc21 - 2°19R	Ve 12Ar06 - 1°41
Ma 04Aq45 - 1°34	Ma 05Ge40 + 0°34
Ju 07Ta20 - 1°23R	Ju 24Ta35 - 0°46
Sa 11Sc30 + 2°12	Sa 14Sc42 + 2°37R
Ur 14Ta29 - 0°24R	Ur 16Ta59 - 0°21
Ne 00Ar02 - 1°19R	Ne 03Ar56 - 1°17
Pl 13Le04 + 5°15R	Pl 10Le58 + 5°23
No 22Ta18 - 0°00	No 13Ta42 - 0°00
	Coords: 15W/19N

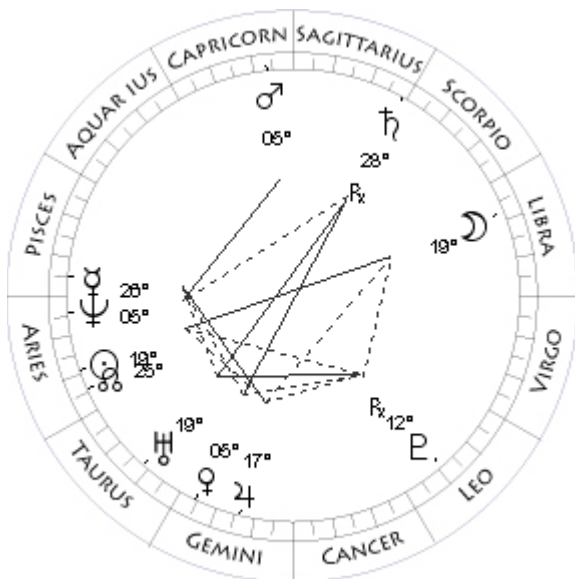
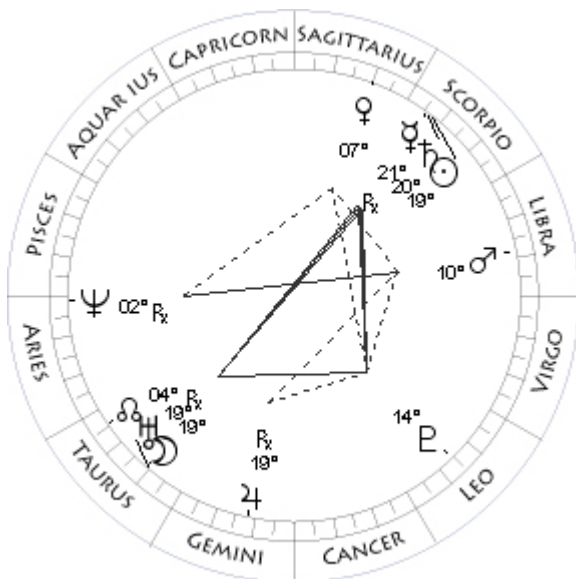
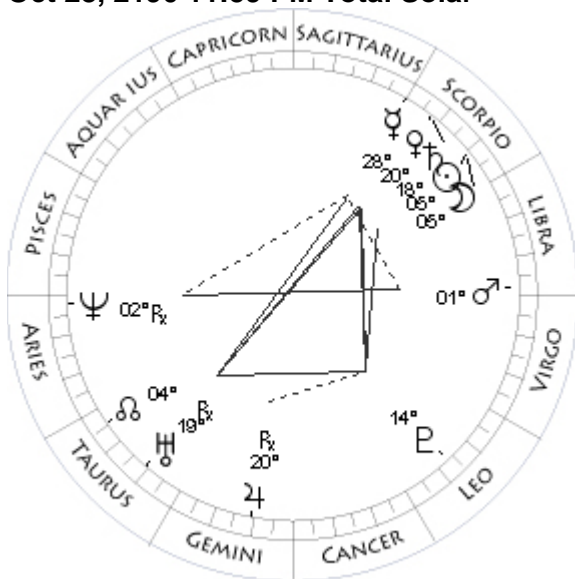
May 19, 2190 4:28 PM Partial Penumbral

Mo 00Sc36 + 1°12	Mo 28Sc50 - 1°23
Su 00Ta33 - 0°00	Su 29Ta03 - 0°00
Me 04Ar10 - 2°38	Me 25Ta30 - 0°11
Ve 25Pi10 - 1°22	Ve 00Ta27 - 1°44
Ma 25Ta47 + 0°26	Ma 16Ge11 + 0°41
Ju 21Ta18 - 0°48	Ju 28Ta11 - 0°45
Sa 15Sc45 + 2°36R	Sa 13Sc35 + 2°36R
Ur 16Ta10 - 0°21	Ur 17Ta51 - 0°21
Ne 03Ar28 - 1°17	Ne 04Ar22 - 1°18
Pl 10Le56 + 5°24R	Pl 11Le05 + 5°22
No 14Ta26 - 0°00	No 12Ta53 - 0°00
	Coords: 112W/21S

Oct 13, 2190 10:37 AM Partial Penumbral



Oct 28, 2190 11:59 PM Total Solar



Nov 12, 2190 0:54 AM Partial Penumbral

Mo 20Ar27 - 1°17	Mo 19Ta42 + 1°22
Su 20Li23 - 0°00	Su 19Sc53 - 0°00
Me 13Sc52 - 2°18	Me 21Sc25 - 0°14R
Ve 00Sc42 + 0°48	Ve 07Sa36 - 0°22
Ma 21Vi32 + 1°13	Ma 10Li03 + 1°12
Ju 21Ge01 - 0°46R	Ju 19Ge13 - 0°45R
Sa 17Sc07 + 2°05	Sa 20Sc34 + 2°02
Ur 20Ta23 - 0°22R	Ur 19Ta13 - 0°21R
Ne 03Ar06 - 1°23R	Ne 02Ar27 - 1°22R
Pl 14Le18 + 5°30	Pl 14Le31 + 5°36
No 05Ta07 - 0°00	No 03Ta33 - 0°00

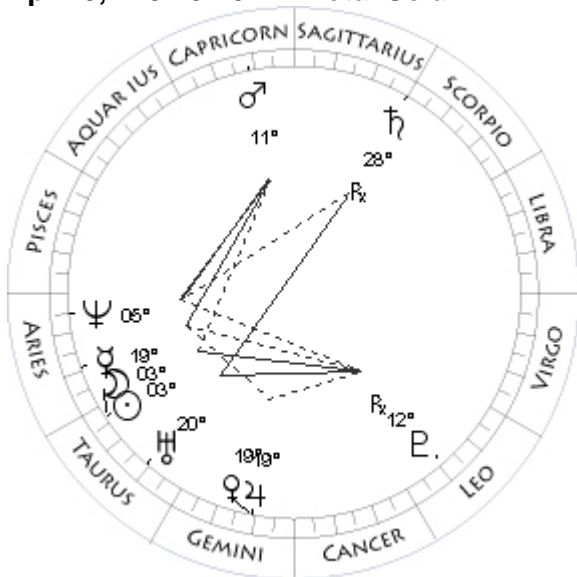
Coords: 162E/ 7N

Apr 9, 2191 6:35 PM Partial Umbral

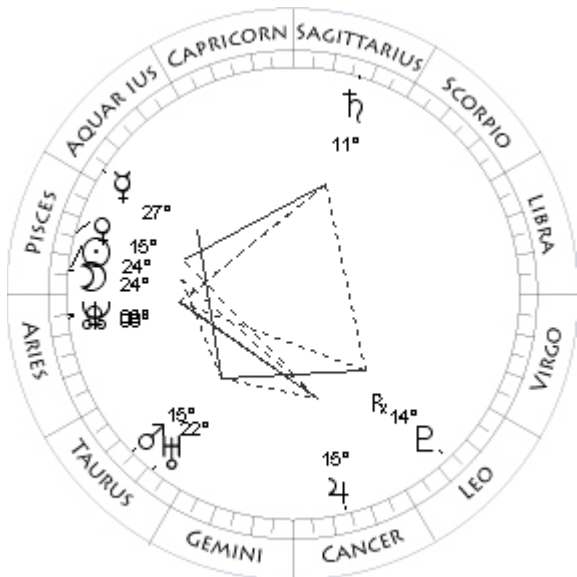
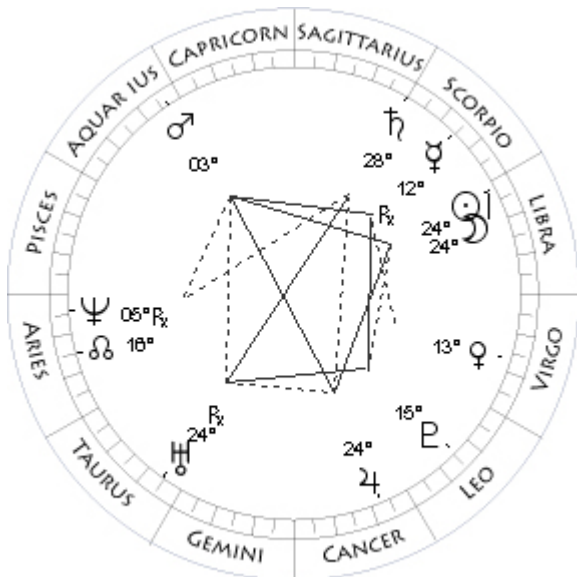
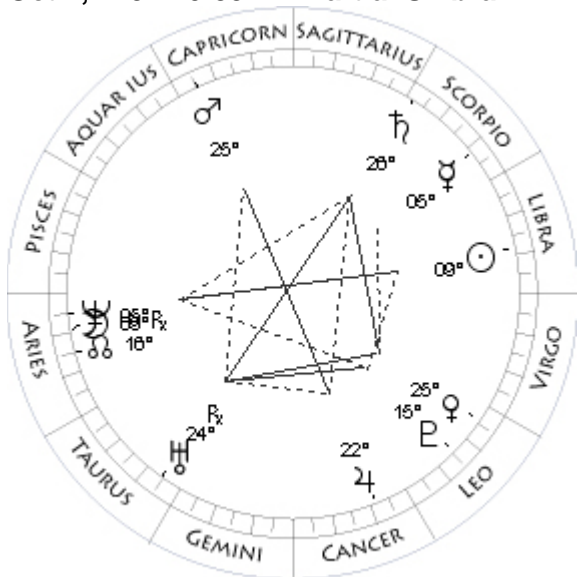
Mo 05Sc45 - 0°06	Mo 19Li57 + 0°29
Su 05Sc50 - 0°00	Su 19Ar57 - 0°00
Me 28Sc26 - 3°02	Me 26Pi19 - 2°29
Ve 20Sc06 + 0°13	Ve 05Ge30 + 3°01
Ma 01Li18 + 1°13	Ma 05Cp31 - 0°17
Ju 20Ge24 - 0°46R	Ju 17Ge10 - 0°19
Sa 18Sc54 + 2°03	Sa 28Sc53 + 2°20R
Ur 19Ta48 - 0°22R	Ur 19Ta29 - 0°18
Ne 02Ar44 - 1°23R	Ne 05Ar15 - 1°19
Pl 14Le27 + 5°34	Pl 12Le24 + 5°49R
No 04Ta17 - 0°00	No 25Ar40 - 0°00

Coords: 173W/20S

Apr 23, 2191 5:19 PM Total Solar



Oct 2, 2191 10:39 PM Partial Umbral



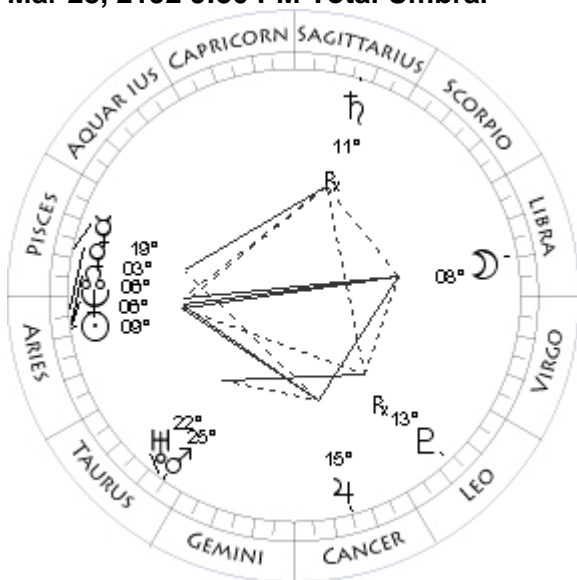
Oct 18, 2191 8:04 AM Annular Solar

Mo 03Ta29 + 0°46	Mo 24Li51 - 0°48
Su 03Ta38 - 0°00	Su 24Li59 - 0°00
Me 19Ar41 - 1°59	Me 12Sc57 - 3°10R
Ve 19Ge08 + 3°41	Ve 13Vi22 + 0°44
Ma 11Cp22 - 0°45	Ma 03Aq52 - 2°46
Ju 19Ge43 - 0°17	Ju 24Cn06 + 0°01
Sa 28Sc05 + 2°22R	Sa 28Sc01 + 1°52
Ur 20Ta15 - 0°18	Ur 24Ta31 - 0°18R
Ne 05Ar45 - 1°19	Ne 05Ar17 - 1°26R
Pl 12Le22 + 5°48R	Pl 15Le47 + 5°55
No 24Ar56 - 0°00	No 15Ar32 - 0°00
Coords: 119E/57N	Coords: 6W/59S

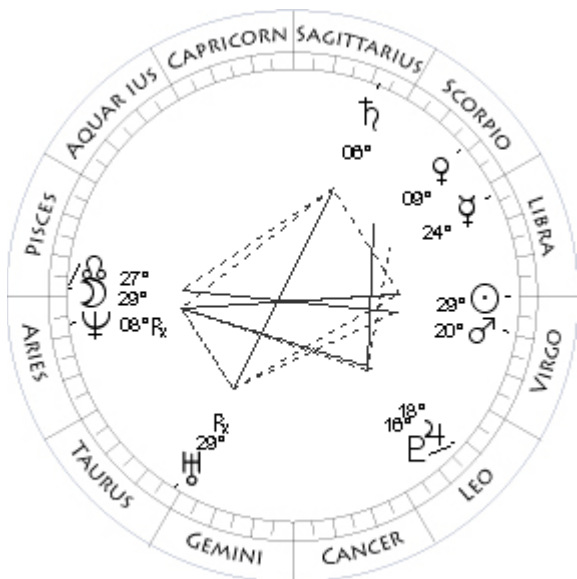
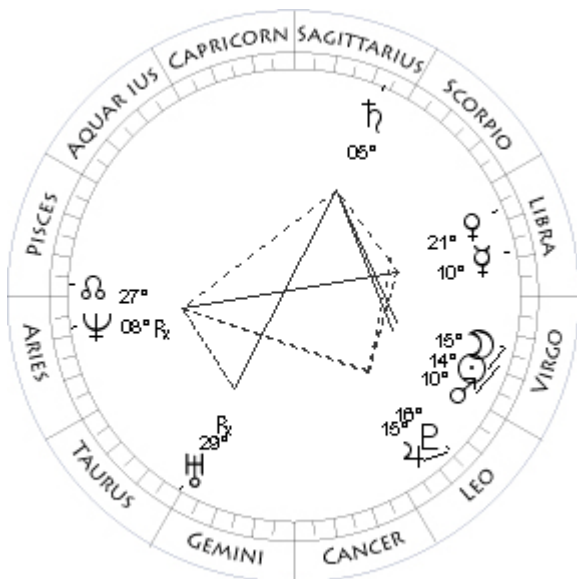
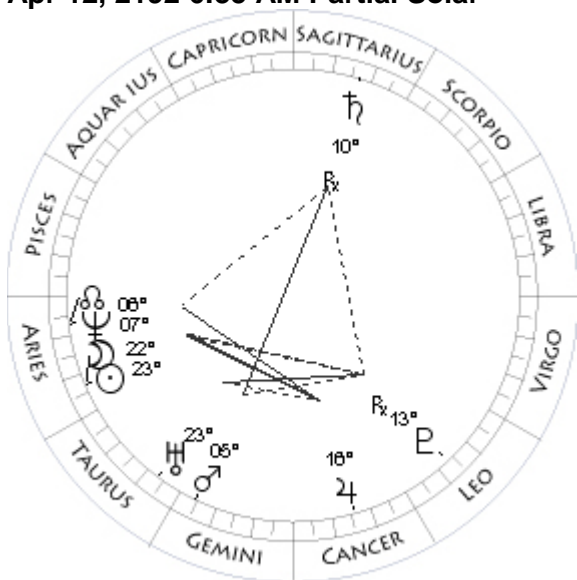
Mar 13, 2192 9:33 PM Partial Solar

Mo 09Ar48 - 0°35	Mo 24Pi07 - 1°10
Su 09Li48 - 0°00	Su 24Pi04 - 0°00
Me 05Sc33 - 2°47	Me 27Aq42 - 1°22
Ve 25Le54 - 0°19	Ve 15Pi11 - 1°24
Ma 25Cp10 - 3°21	Ma 15Ta11 + 0°36
Ju 22Cn36 - 0°01	Ju 15Cn02 + 0°19
Sa 26Sc28 + 1°54	Sa 11Sa13 + 1°57
Ur 24Ta59 - 0°18R	Ur 22Ta16 - 0°16
Ne 05Ar42 - 1°26R	Ne 06Ar26 - 1°21
Pl 15Le34 + 5°52	Pl 14Le09 + 6°15R
No 16Ar21 - 0°00	No 07Ar43 - 0°00
Coords: 18W/ 3N	

Mar 28, 2192 9:50 PM Total Umbral



Apr 12, 2192 6:35 AM Partial Solar



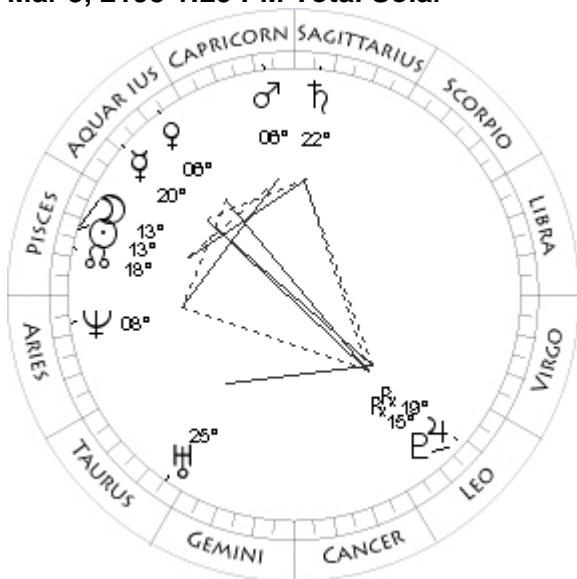
Sep 6, 2192 4:58 PM Partial Solar

Mo 08Li56 - 0°12	Mo 15Vi01 + 1°10
Su 09Ar00 - 0°00	Su 14Vi57 - 0°00
Me 19Pi17 - 2°21	Me 10Li23 - 1°26
Ve 03Ar52 - 1°25	Ve 21Li27 + 0°03
Ma 25Ta27 + 0°45	Ma 10Vi35 + 1°06
Ju 15Cn34 + 0°20	Ju 15Le05 + 0°31
Sa 11Sa10 + 1°59R	Sa 05Sa19 + 1°43
Ur 22Ta53 - 0°16	Ur 29Ta35 - 0°15R
Ne 06Ar59 - 1°21	Ne 08Ar41 - 1°28R
Pl 13Le57 + 6°14R	Pl 16Le27 + 6°11
No 06Ar55 - 0°00	No 28Pi21 - 0°00

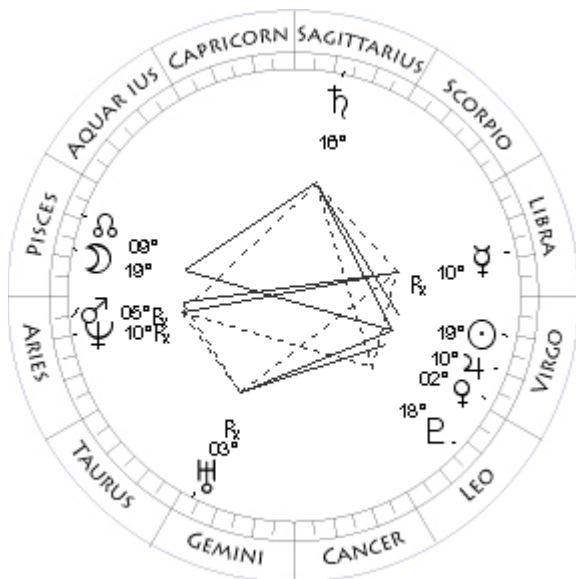
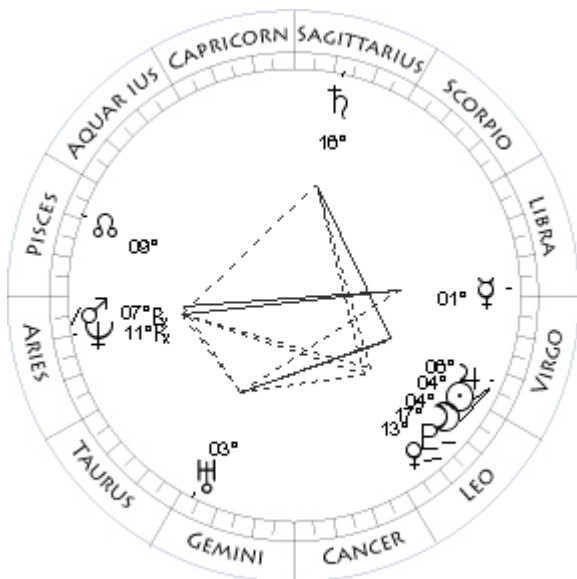
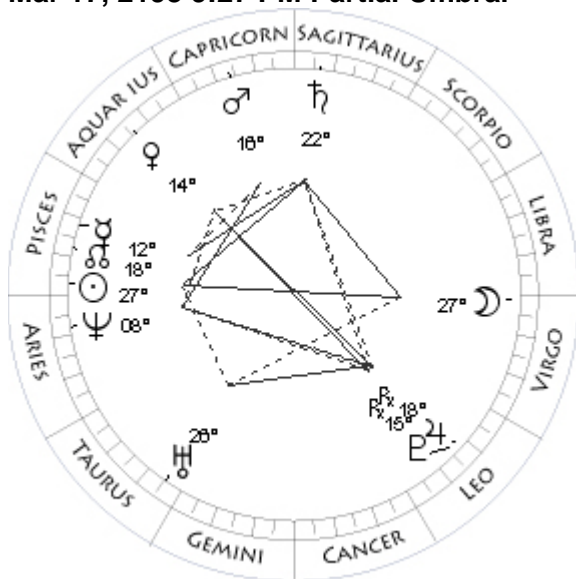
Sep 21, 2192 2:56 PM Total Umbral

Mo 22Ar57 + 1°28	Mo 29Pi23 + 0°08
Su 23Ar10 - 0°00	Su 29Vi27 - 0°00
Me 14Ar53 - 1°40	Me 24Li58 - 3°23
Ve 21Ar42 - 1°13	Ve 09Sc05 - 0°51
Ma 05Ge10 + 0°51	Ma 20Vi05 + 1°04
Ju 16Cn43 + 0°20	Ju 18Le03 + 0°32
Sa 10Sa47 + 2°00R	Sa 06Sa11 + 1°40
Ur 23Ta35 - 0°15	Ur 29Ta27 - 0°15R
Ne 07Ar32 - 1°21	Ne 08Ar18 - 1°28R
Pl 13Le50 + 6°13R	Pl 16Le48 + 6°13
No 06Ar09 - 0°00	No 27Pi34 - 0°00

Mar 3, 2193 1:29 PM Total Solar



Mar 17, 2193 9:27 PM Partial Umbral



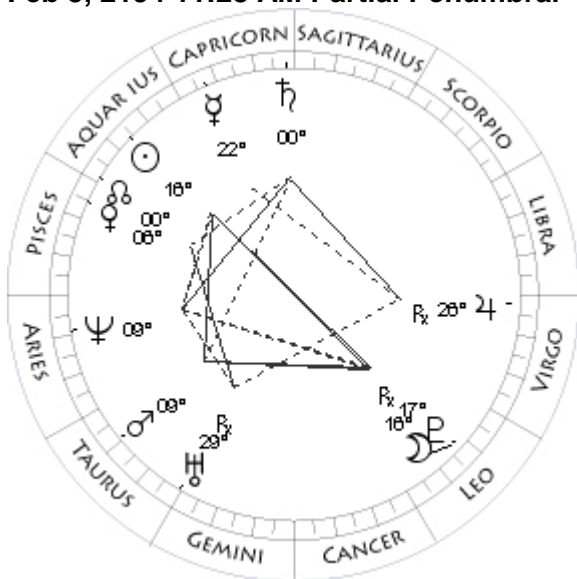
Aug 26, 2193 8:02 PM Annular Solar

Mo 13Pi27 - 0°28	Mo 04Vi12 + 0°29
Su 13Pi29 - 0°00	Su 04Vi13 - 0°00
Me 20Aq27 - 1°33	Me 01Li25 - 1°56
Ve 06Aq57 + 6°08	Ve 13Le25 + 0°40
Ma 06Cp33 - 0°16	Ma 07Ar54 - 5°35R
Ju 19Le27 + 1°02R	Ju 06Vi59 + 0°54
Sa 22Sa00 + 1°33	Sa 16Sa04 + 1°24
Ur 25Ta59 - 0°13	Ur 03Ge44 - 0°12
Ne 08Ar12 - 1°24	Ne 11Ar14 - 1°30R
Pl 15Le49 + 6°39R	Pl 17Le36 + 6°33
No 18Pi56 - 0°00	No 09Pi36 - 0°00
Coords: 103E/37N	

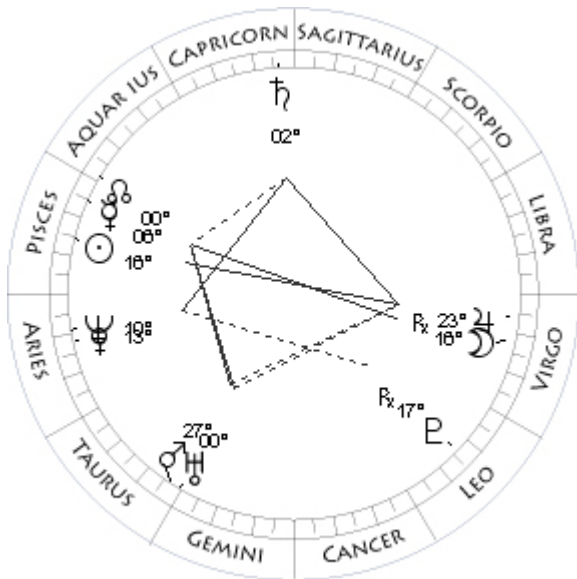
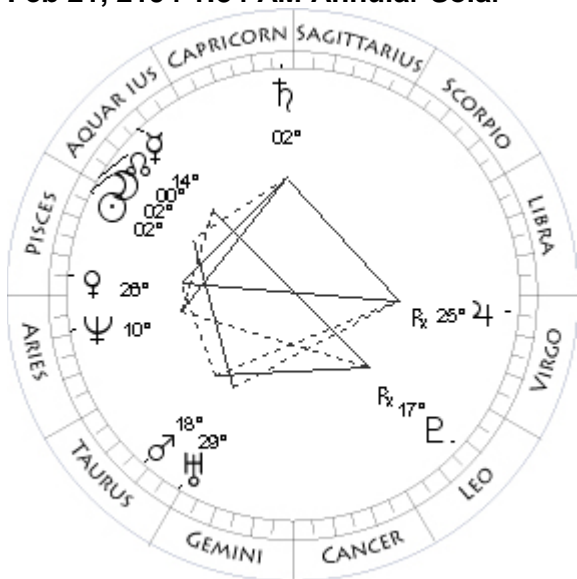
Sep 11, 2193 6:50 AM Partial Umbral

Mo 27Vi41 - 0°50	Mo 19Pi01 + 0°52
Su 27Pi49 - 0°00	Su 19Vi10 - 0°00
Me 12Pi46 - 2°15	Me 10Li30 - 4°02R
Ve 14Aq42 + 4°02	Ve 02Vi24 + 1°09
Ma 16Cp06 - 0°32	Ma 05Ar40 - 5°32R
Ju 18Le04 + 1°02R	Ju 10Vi21 + 0°54
Sa 22Sa30 + 1°34	Sa 16Sa27 + 1°21
Ur 26Ta26 - 0°13	Ur 03Ge47 - 0°12R
Ne 08Ar43 - 1°24	Ne 10Ar53 - 1°30R
Pl 15Le35 + 6°39R	Pl 18Le00 + 6°35
No 18Pi10 - 0°00	No 08Pi47 - 0°00

Feb 5, 2194 11:28 AM Partial Penumbral



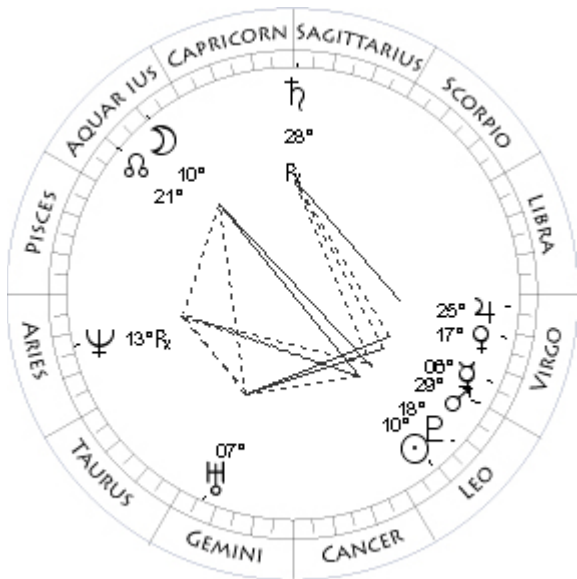
Feb 21, 2194 1:34 AM Annular Solar



Mar 7, 2194 1:01 AM Partial Penumbral

Mo 16Le57 + 1°12	Mo 16Vi32 - 1°29
Su 16Aq54 - 0°00	Su 16Pi44 - 0°00
Me 22Cp35 + 0°09	Me 06Pi58 - 2°09
Ve 06Pi38 - 1°31	Ve 13Ar17 - 0°46
Ma 09Ta31 + 1°01	Ma 27Ta23 + 1°15
Ju 26Vi40 + 1°24R	Ju 23Vi29 + 1°29R
Sa 00Cp40 + 1°07	Sa 02Cp56 + 1°08
Ur 29Ta47 - 0°10R	Ur 00Ge09 - 0°10
Ne 09Ar34 - 1°27	Ne 10Ar29 - 1°26
Pl 17Le53 + 7°03R	Pl 17Le16 + 7°04R
No 00Pi59 - 0°00	No 29Aq25 - 0°00

Coords: 168E/17N

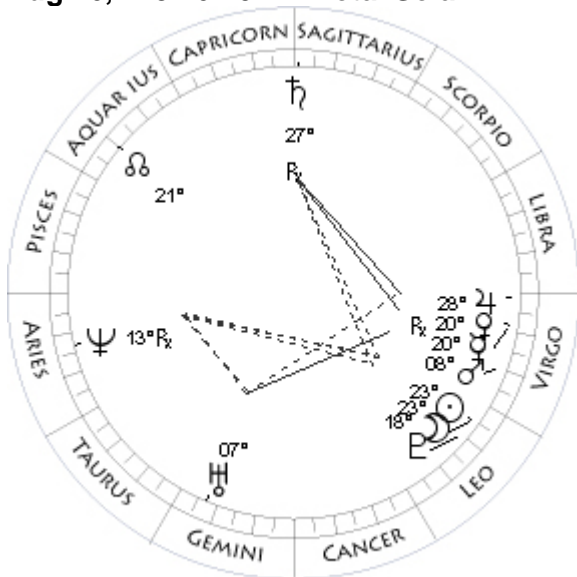


Aug 2, 2194 5:11 AM Partial Penumbral

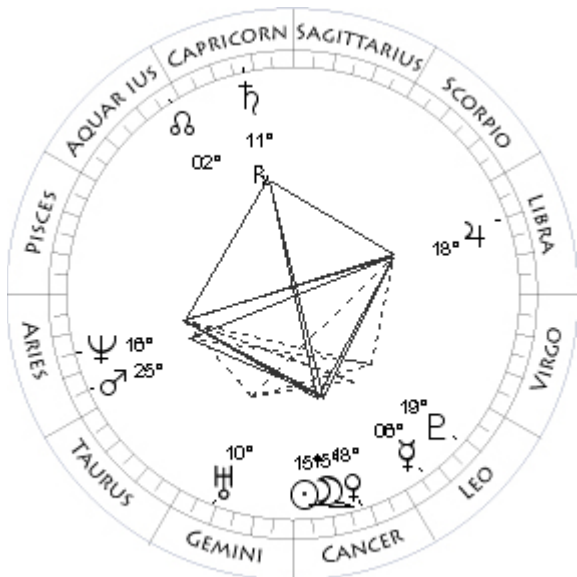
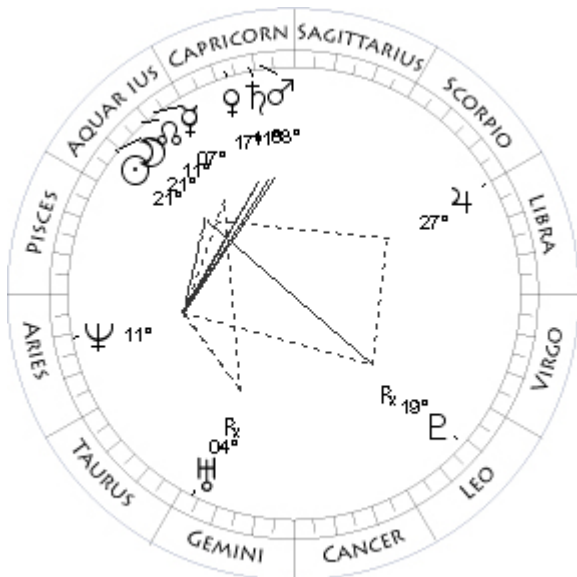
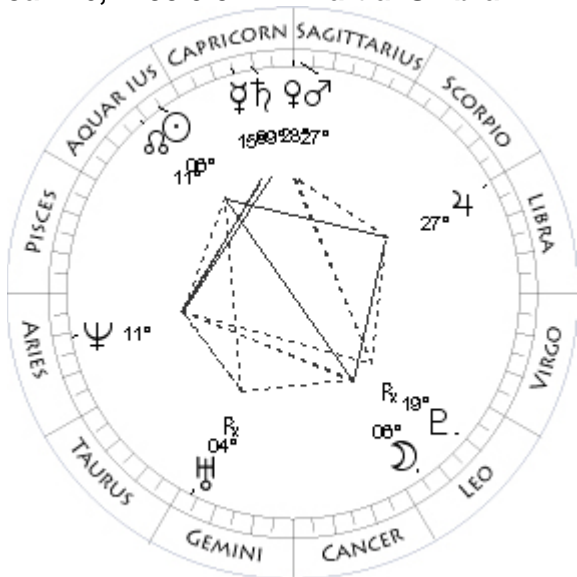
Mo 02Pi35 + 0°13	Mo 10Aq23 - 0°58
Su 02Pi40 - 0°00	Su 10Le21 - 0°00
Me 14Aq07 - 1°40	Me 06Vi07 - 0°08
Ve 26Pi01 - 1°14	Ve 17Vi58 - 3°01
Ma 18Ta52 + 1°10	Ma 29Le38 + 1°07
Ju 25Vi11 + 1°27R	Ju 25Vi52 + 1°08
Sa 02Cp00 + 1°07	Sa 28Sa04 + 1°04R
Ur 29Ta53 - 0°10	Ur 07Ge19 - 0°08
Ne 10Ar01 - 1°26	Ne 13Ar54 - 1°31R
Pl 17Le33 + 7°04R	Pl 18Le23 + 6°54
No 00Pi10 - 0°00	No 21Aq34 - 0°00

Coords: 153W/ 2N

Aug 16, 2194 6:20 AM Total Solar



Jan 26, 2195 0:51 AM Partial Umbral



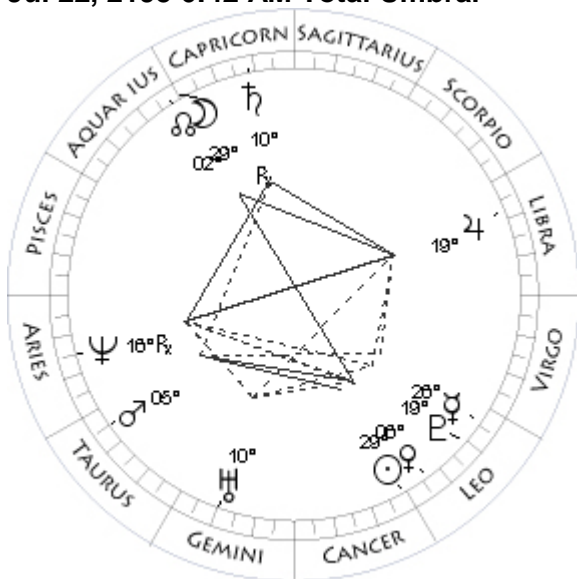
Feb 10, 2195 6:27 AM Annular Solar

Mo 23Le43 - 0°15	Mo 21Aq23 + 0°53
Su 23Le48 - 0°00	Su 21Aq31 - 0°00
Me 20Vi22 - 2°39	Me 07Aq59 - 1°45
Ve 20Vi31 - 5°51R	Ve 17Cp27 + 0°41
Ma 08Vi30 + 1°03	Ma 08Cp13 - 0°28
Ju 28Vi29 + 1°07	Ju 27Li31 + 1°25
Sa 27Sa35 + 1°02R	Sa 11Cp20 + 0°42
Ur 07Ge42 - 0°08	Ur 04Ge00 - 0°07R
Ne 13Ar43 - 1°32R	Ne 11Ar52 - 1°29
Pl 18Le46 + 6°55	Pl 19Le19 + 7°28R
No 20Aq50 - 0°00	No 11Aq24 - 0°00
Coords: 42W/55N	

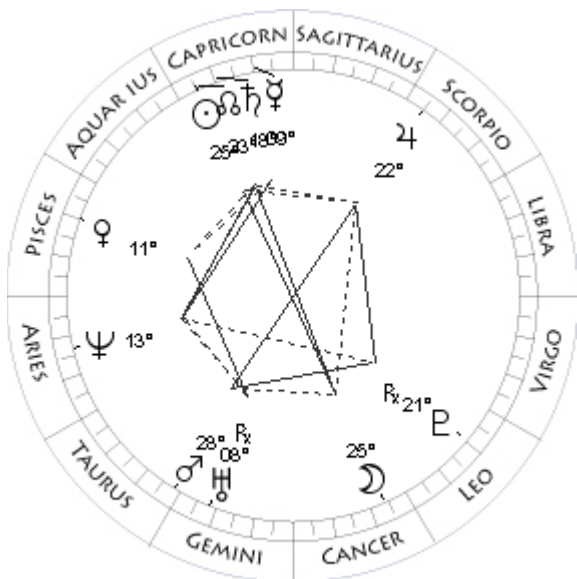
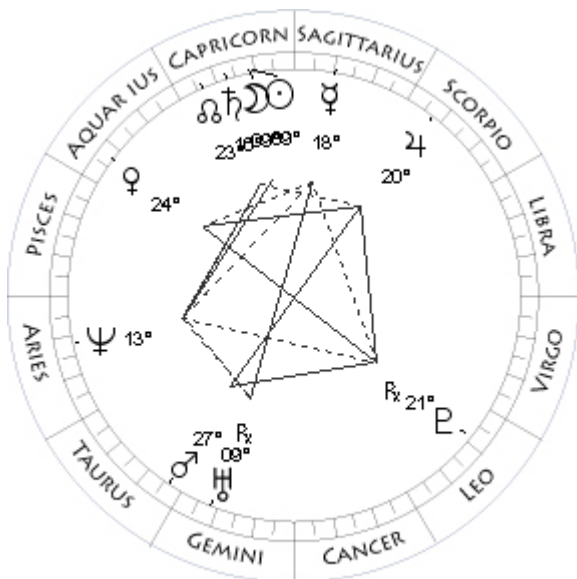
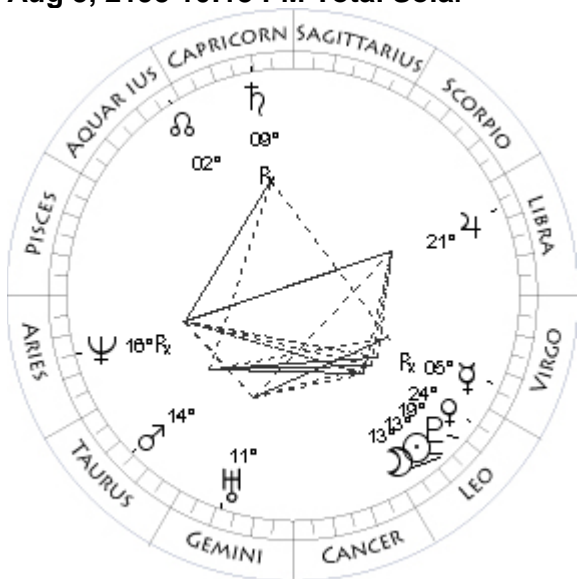
Jul 7, 2195 3:34 PM Partial Solar

Mo 06Le02 + 0°32	Mo 15Cn47 + 1°32
Su 06Aq03 - 0°00	Su 15Cn43 - 0°00
Me 15Cp20 - 0°13	Me 06Le48 + 1°34
Ve 28Sa52 + 1°27	Ve 18Cn38 + 0°48
Ma 27Sa18 - 0°17	Ma 25Ar51 - 2°09
Ju 27Li07 + 1°21	Ju 18Li24 + 1°16
Sa 09Cp45 + 0°42	Sa 11Cp45 + 0°38R
Ur 04Ge06 - 0°07R	Ur 10Ge17 - 0°05
Ne 11Ar30 - 1°29	Ne 16Ar10 - 1°31
Pl 19Le38 + 7°27R	Pl 19Le10 + 7°17
No 12Aq13 - 0°00	No 03Aq36 - 0°00

Jul 22, 2195 6:42 AM Total Umbral



Aug 5, 2195 10:13 PM Total Solar



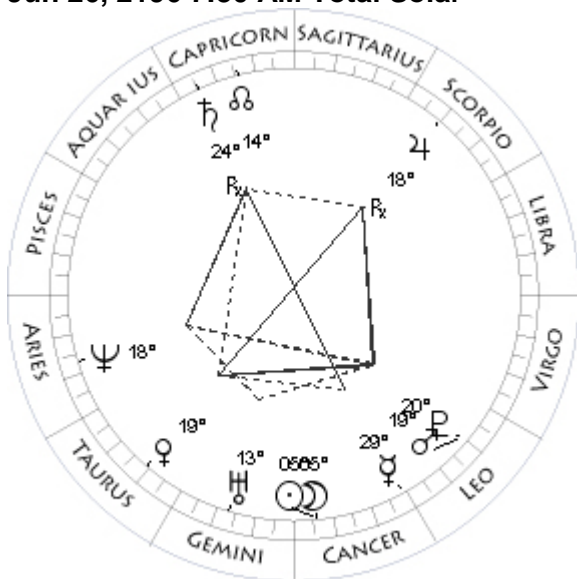
Dec 31, 2195 11:02 AM Partial Solar

Mo 29Cp39 - 0°17	Mo 09Cp50 - 1°15
Su 29Cn40 - 0°00	Su 09Cp45 - 0°00
Me 26Le27 - 0°33	Me 18Sa20 + 1°28
Ve 06Le38 + 1°12	Ve 24Aq02 - 1°48
Ma 05Ta40 - 2°10	Ma 27Ta07 + 2°15
Ju 19Li40 + 1°13	Ju 20Sc27 + 1°01
Sa 10Cp42 + 0°36R	Sa 16Cp47 + 0°19
Ur 10Ge58 - 0°05	Ur 09Ge05 - 0°04R
Ne 16Ar12 - 1°32R	Ne 13Ar25 - 1°33
Pl 19Le32 + 7°17	Pl 21Le40 + 7°47R
No 02Aq50 - 0°00	No 24Cp14 - 0°00

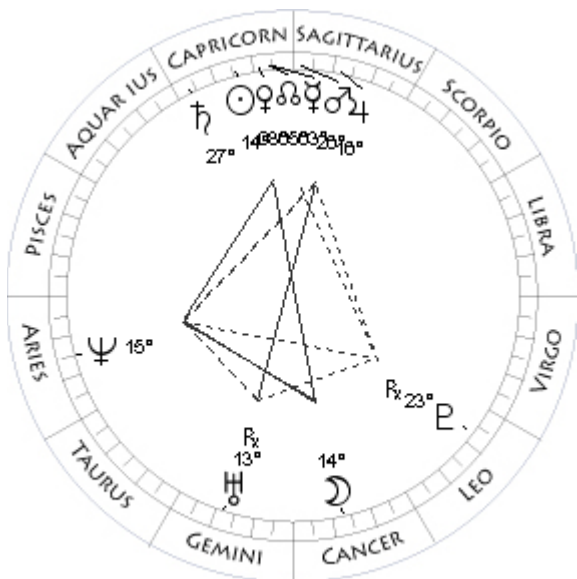
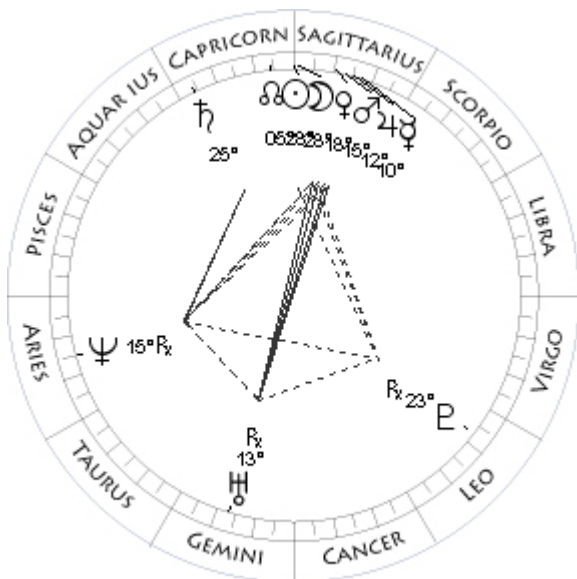
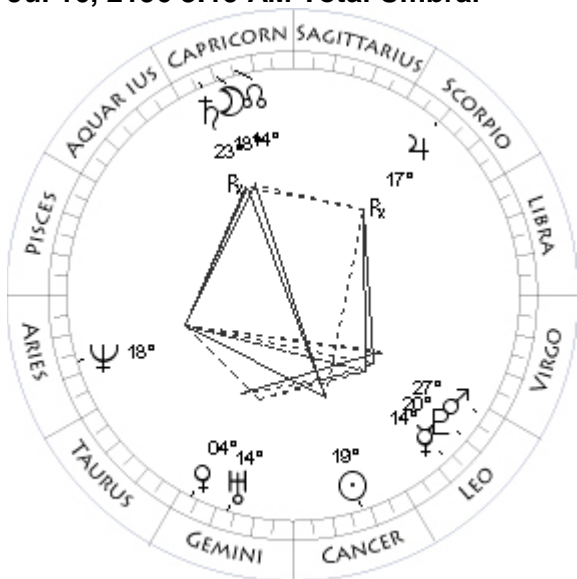
Jan 15, 2196 4:35 PM Total Umbral

Mo 13Le29 - 0°59	Mo 25Cn12 - 0°09
Su 13Le40 - 0°00	Su 25Cp16 - 0°00
Me 05Vi32 - 3°34R	Me 09Cp18 - 0°33
Ve 24Le40 + 1°26	Ve 11Pi19 - 0°56
Ma 14Ta57 - 2°07	Ma 28Ta36 + 2°19
Ju 21Li26 + 1°10	Ju 22Sc57 + 1°02
Sa 09Cp48 + 0°35R	Sa 18Cp34 + 0°17
Ur 11Ge32 - 0°05	Ur 08Ge38 - 0°04R
Ne 16Ar08 - 1°33R	Ne 13Ar32 - 1°32
Pl 19Le56 + 7°17	Pl 21Le24 + 7°49R
No 02Aq03 - 0°00	No 23Cp26 - 0°00
Coords: 167W/55S	Coords: 113W/21N

Jun 26, 2196 7:30 AM Total Solar



Jul 10, 2196 8:19 AM Total Umbral



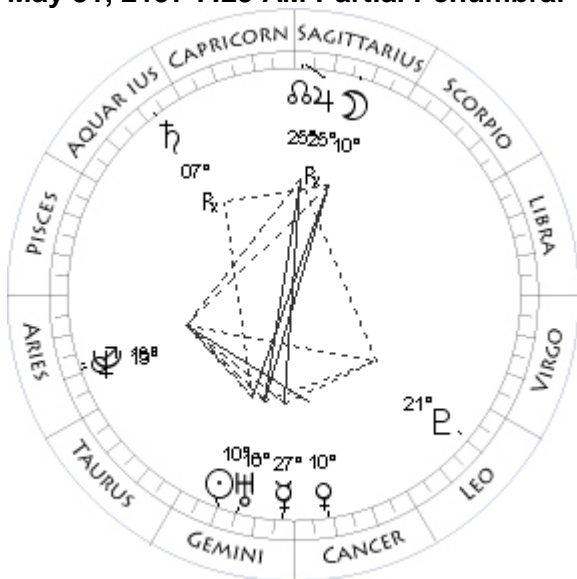
Dec 19, 2196 3:39 PM Annular Solar

Mo 05Cn38 + 0°48	Mo 28Sa30 - 0°37
Su 05Cn37 - 0°00	Su 28Sa30 - 0°00
Me 29Cn34 + 1°24	Me 10Sa35 + 1°04
Ve 19Ta57 - 3°01	Ve 18Sa23 + 0°21
Ma 19Le24 + 1°16	Ma 15Sa26 - 0°19
Ju 18Sc13 + 1°05R	Ju 12Sa47 + 0°36
Sa 24Cp43 + 0°07R	Sa 25Cp35 - 0°07
Ur 13Ge45 - 0°02	Ur 13Ge56 - 0°00R
Ne 18Ar17 - 1°33	Ne 15Ar39 - 1°35R
Pl 20Le25 + 7°41	Pl 23Le22 + 8°08R
No 14Cp49 - 0°00	No 05Cp29 - 0°00
Coords: 96W/76N	

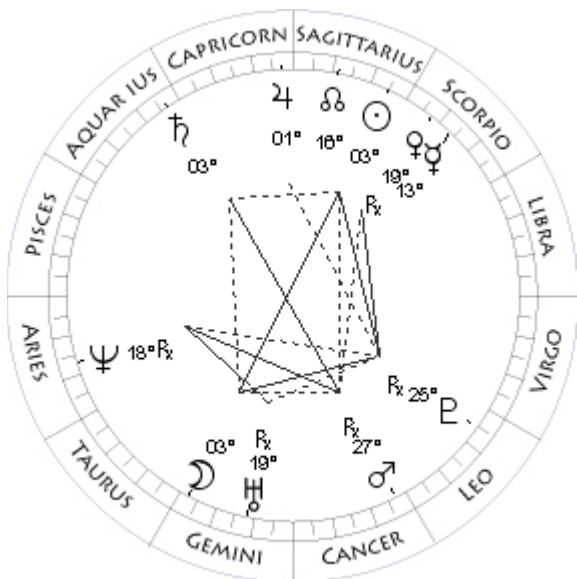
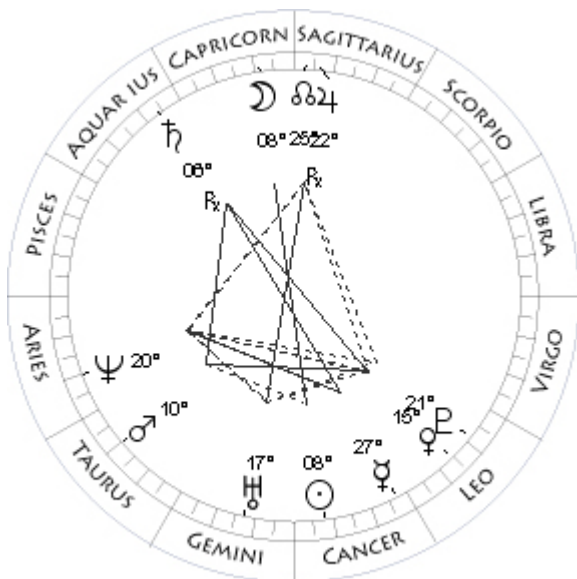
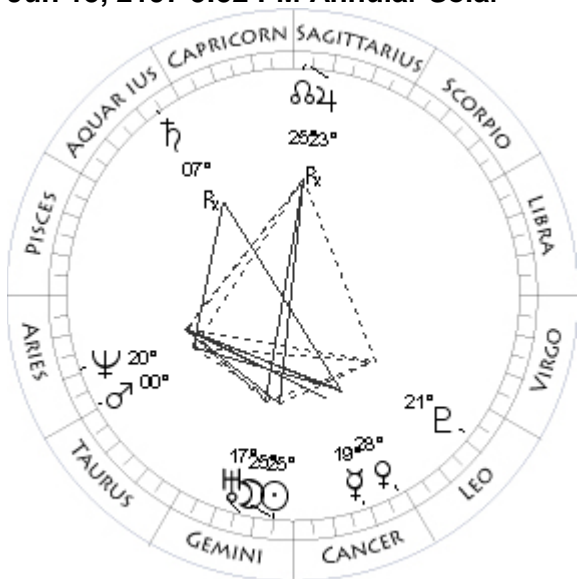
Jan 4, 2197 5:56 AM Partial Umbral

Mo 18Cp55 + 0°25	Mo 14Cn14 - 0°50
Su 19Cn00 - 0°00	Su 14Cp23 - 0°00
Me 14Le04 - 1°06	Me 03Cp47 - 0°49
Ve 04Ge10 - 2°56	Ve 08Cp00 - 0°17
Ma 27Le56 + 1°09	Ma 26Sa47 - 0°28
Ju 17Sc46 + 1°02R	Ju 16Sa09 + 0°35
Sa 23Cp43 + 0°06R	Sa 27Cp22 - 0°08
Ur 14Ge30 - 0°02	Ur 13Ge21 - 0°00R
Ne 18Ar25 - 1°33	Ne 15Ar40 - 1°34
Pl 20Le44 + 7°40	Pl 23Le09 + 8°11R
No 14Cp05 - 0°00	No 04Cp39 - 0°00
Coords: 123E/22S	

May 31, 2197 7:29 AM Partial Penumbral



Jun 15, 2197 5:52 PM Annular Solar



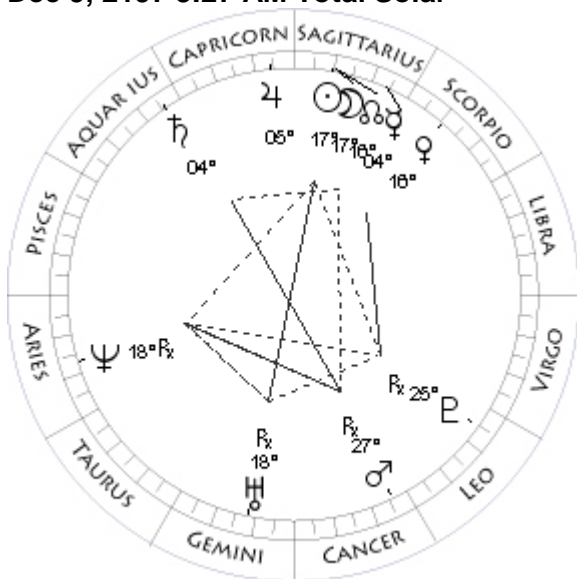
Jun 29, 2197 4:15 PM Partial Penumbral

Mo 10Sa35 - 1°23	Mo 08Cp26 + 1°09
Su 10Ge32 - 0°00	Su 08Cn36 - 0°00
Me 27Ge43 + 2°06	Me 27Cn37 - 1°54
Ve 10Cn12 + 1°36	Ve 15Le05 + 1°51
Ma 18Ar50 - 1°21	Ma 10Ta34 - 1°11
Ju 25Sa42 + 0°32R	Ju 22Sa02 + 0°28R
Sa 07Aq58 - 0°21R	Sa 06Aq43 - 0°25R
Ur 16Ge16 + 0°01	Ur 17Ge58 + 0°01
Ne 19Ar57 - 1°33	Ne 20Ar33 - 1°34
Pl 21Le29 + 8°08	Pl 21Le59 + 8°04
No 26Sa52 - 0°00	No 25Sa19 - 0°00
Coords: 113E/23S	Coords: 117W/22S

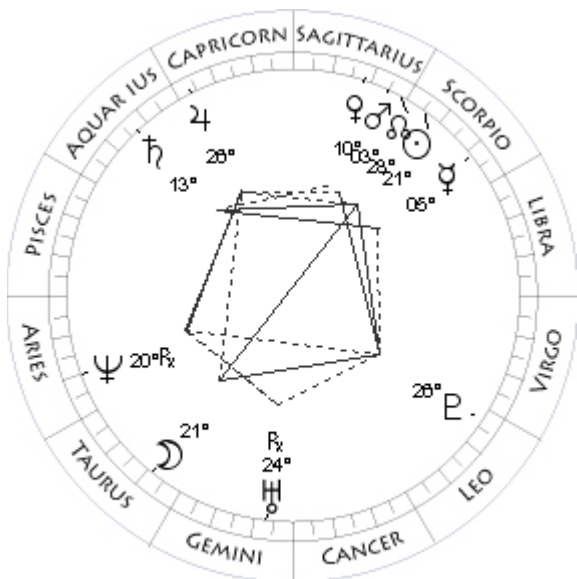
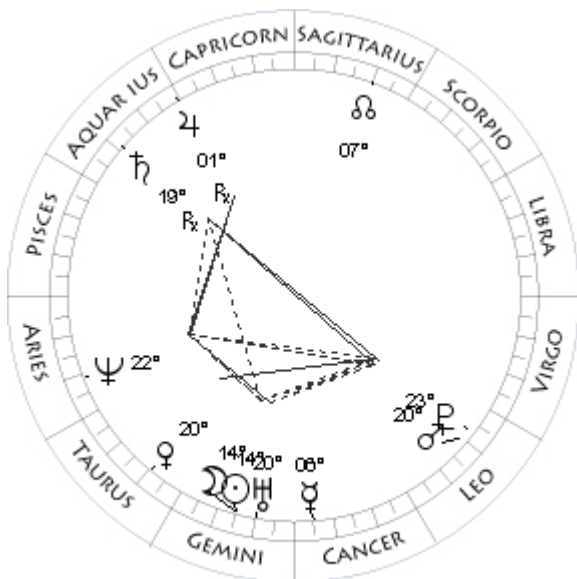
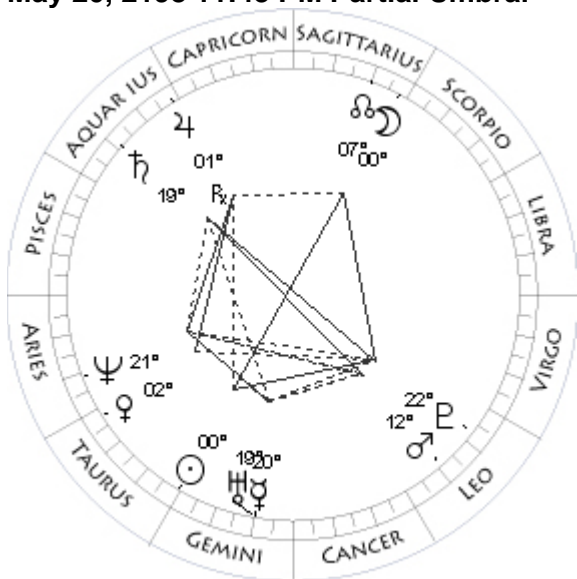
Nov 24, 2197 7:10 PM Partial Penumbral

Mo 25Ge15 + 0°04	Mo 03Ge07 + 1°14
Su 25Ge18 - 0°00	Su 03Sa03 - 0°00
Me 19Cn40 + 1°11	Me 13Sc55 + 2°13
Ve 28Cn38 + 1°52	Ve 19Sc40 - 1°35R
Ma 00Ta22 - 1°17	Ma 27Cn43 + 2°12R
Ju 23Sa46 + 0°30R	Ju 01Cp58 + 0°06
Sa 07Aq27 - 0°23R	Sa 03Aq33 - 0°32
Ur 17Ge10 + 0°01	Ur 19Ge28 + 0°03R
Ne 20Ar19 - 1°34	Ne 18Ar12 - 1°38R
Pl 21Le42 + 8°06	Pl 25Le04 + 8°25R
No 26Sa03 - 0°00	No 17Sa28 - 0°00
	Coords: 69W/22N

Dec 9, 2197 3:27 AM Total Solar



May 20, 2198 11:43 PM Partial Umbral



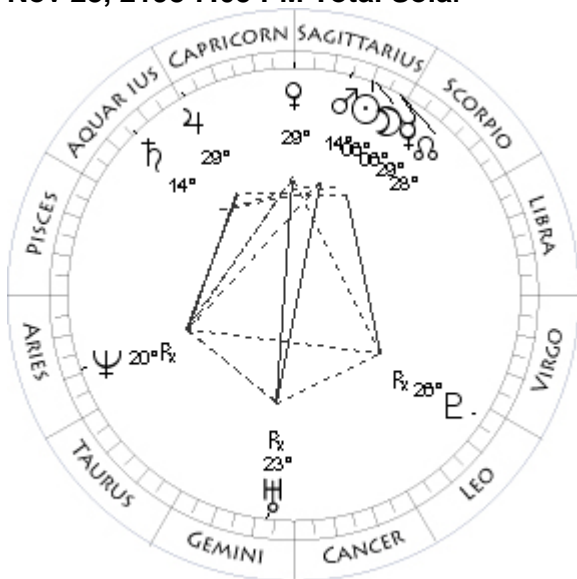
Jun 4, 2198 9:04 PM Annular Solar

Mo 17Sa29 + 0°04	Mo 14Ge34 - 0°39
Su 17Sa34 - 0°00	Su 14Ge41 - 0°00
Me 04Sa22 + 0°42	Me 06Cn00 + 0°55
Ve 16Sc48 + 1°38	Ve 20Ta40 - 1°26
Ma 27Cn08 + 2°53R	Ma 20Le07 + 1°26
Ju 05Cp08 + 0°05	Ju 01Aq24 - 0°17R
Sa 04Aq47 - 0°33	Sa 19Aq41 - 0°51R
Ur 18Ge52 + 0°03R	Ur 20Ge34 + 0°05
Ne 18Ar00 - 1°37R	Ne 22Ar15 - 1°35
Pl 25Le01 + 8°29R	Pl 23Le04 + 8°31
No 16Sa43 - 0°00	No 07Sa18 - 0°00
Coords: 126W/18S	Coords: 136E/24S

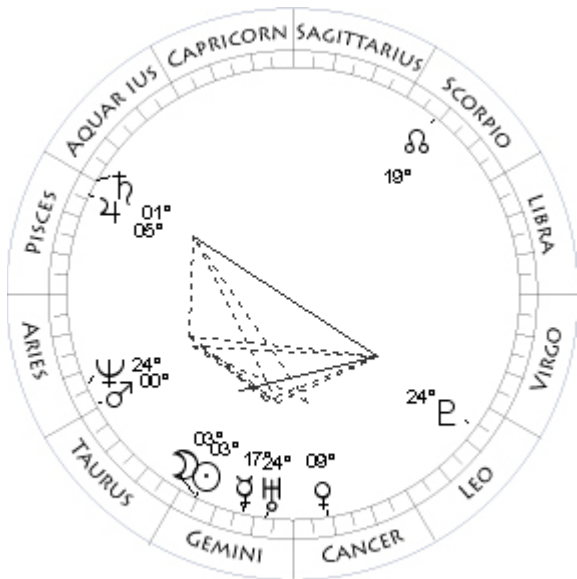
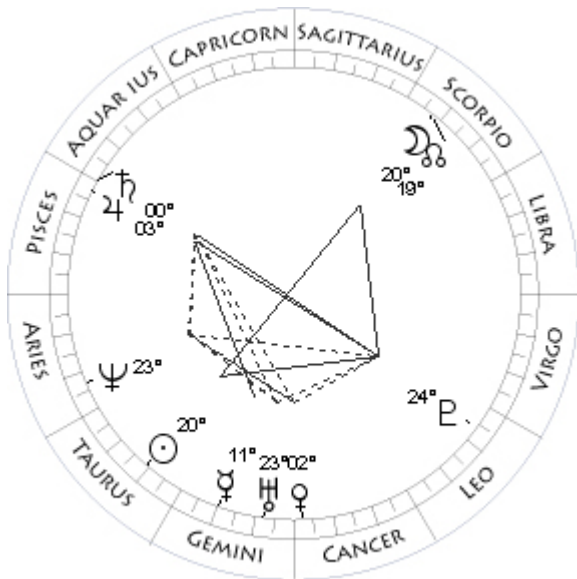
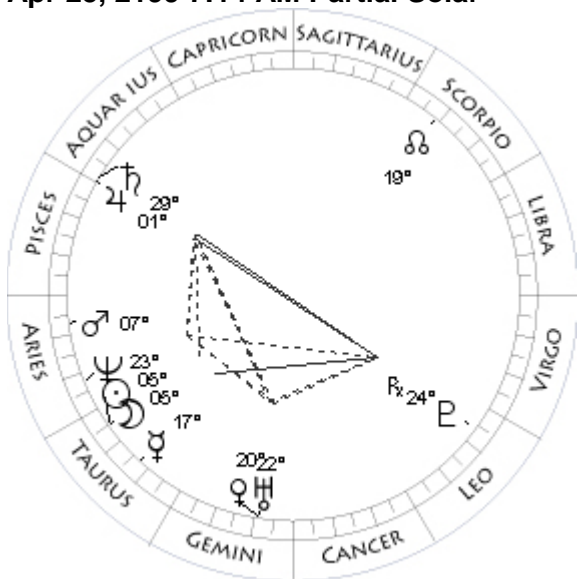
Nov 13, 2198 6:27 PM Partial Umbral

Mo 00Sa22 - 0°40	Mo 21Ta42 + 0°38
Su 00Ge22 - 0°00	Su 21Sc41 - 0°00
Me 20Ge52 + 2°20	Me 05Sc35 + 1°56
Ve 02Ta39 - 1°42	Ve 10Sa26 - 0°29
Ma 12Le05 + 1°39	Ma 03Sa14 - 0°23
Ju 01Aq49 - 0°14R	Ju 26Cp50 - 0°30
Sa 19Aq39 - 0°49	Sa 13Aq43 - 1°00
Ur 19Ge42 + 0°04	Ur 24Ge23 + 0°07R
Ne 21Ar50 - 1°34	Ne 20Ar43 - 1°40R
Pl 22Le55 + 8°33	Pl 26Le35 + 8°45
No 08Sa05 - 0°00	No 28Sc44 - 0°00
Coords: 3W/21S	Coords: 79W/19N

Nov 28, 2198 7:05 PM Total Solar



Apr 25, 2199 7:14 AM Partial Solar



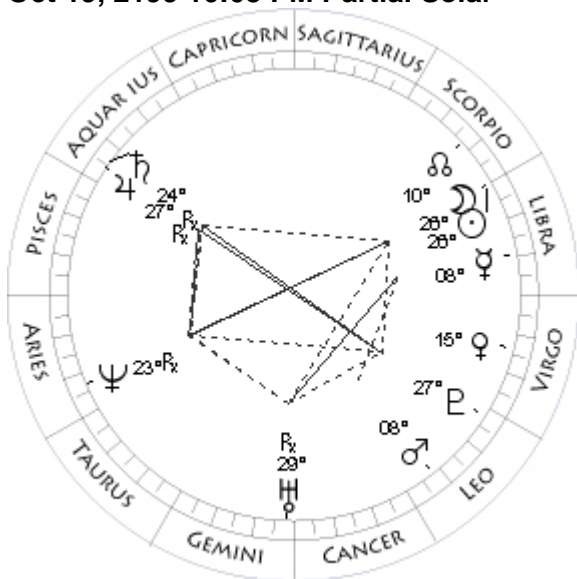
May 10, 2199 4:18 PM Total Umbral

Mo 06Sa41 + 0°45	Mo 20Sc06 + 0°04
Su 06Sa50 - 0°00	Su 20Ta11 - 0°00
Me 29Sc05 + 0°21	Me 11Ge19 + 2°33
Ve 29Sa09 - 1°04	Ve 02Cn36 + 4°01
Ma 14Sa06 - 0°31	Ma 19Ar36 - 0°57
Ju 29Cp26 - 0°30	Ju 03Pi43 - 0°48
Sa 14Aq34 - 1°00	Sa 00Pi41 - 1°13
Ur 23Ge49 + 0°07R	Ur 23Ge14 + 0°08
Ne 20Ar25 - 1°40R	Ne 23Ar39 - 1°35
Pl 26Le38 + 8°49R	Pl 24Le25 + 8°58
No 27Sc56 - 0°00	No 19Sc18 - 0°00
Coords: 106E/27N	Coords: 115W/18S

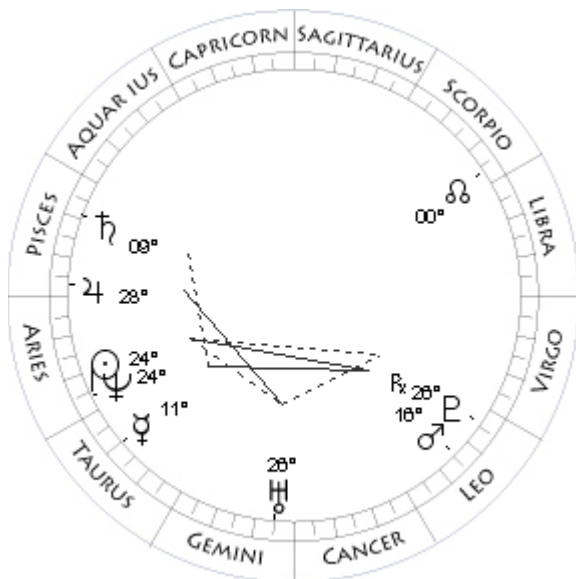
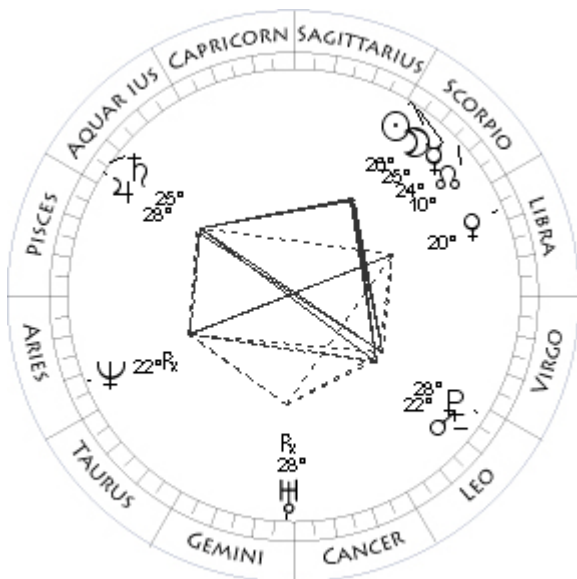
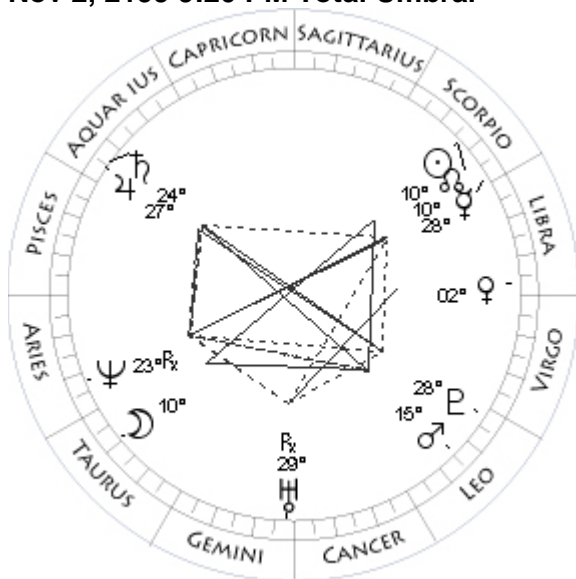
May 24, 2199 9:34 PM Partial Solar

Mo 05Ta18 + 1°17	Mo 03Ge43 - 1°19
Su 05Ta14 - 0°00	Su 03Ge54 - 0°00
Me 17Ta40 + 1°12	Me 17Ge34 + 0°30
Ve 20Ge30 + 3°50	Ve 09Cn50 + 3°21
Ma 07Ar46 - 1°02	Ma 00Ta25 - 0°51
Ju 01Pi26 - 0°45	Ju 05Pi20 - 0°52
Sa 29Aq45 - 1°10	Sa 01Pi14 - 1°15
Ur 22Ge29 + 0°08	Ur 24Ge00 + 0°08
Ne 23Ar06 - 1°35	Ne 24Ar07 - 1°36
Pl 24Le26 + 9°01R	Pl 24Le30 + 8°56
No 20Sc07 - 0°00	No 18Sc33 - 0°00

Oct 19, 2199 10:03 PM Partial Solar



Nov 2, 2199 9:20 PM Total Umbral



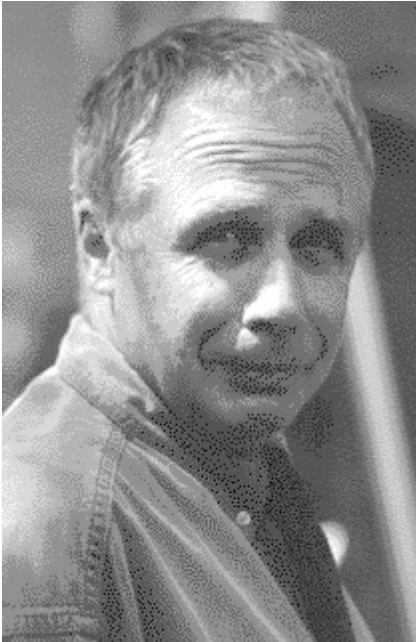
Nov 18, 2199 9:53 AM Partial Solar

Mo 26Li41 - 1°14	Mo 25Sc54 + 1°26
Su 26Li37 - 0°00	Su 26Sc07 - 0°00
Me 08Li33 + 1°46	Me 24Sc07 + 0°02
Ve 15Vi42 + 0°52	Ve 20Li55 + 1°50
Ma 08Le41 + 1°16	Ma 22Le38 + 1°59
Ju 27Aq03 - 1°11R	Ju 28Aq11 - 1°07
Sa 24Aq53 - 1°29R	Sa 25Aq10 - 1°27
Ur 29Ge28 + 0°10R	Ur 28Ge45 + 0°10R
Ne 23Ar41 - 1°42R	Ne 22Ar55 - 1°42R
Pl 27Le52 + 9°00	Pl 28Le12 + 9°09
No 10Sc43 - 0°00	No 09Sc09 - 0°00

Apr 14, 2200 3:42 PM Total Solar

Mo 10Ta29 - 0°02	Mo 24Ar34 + 0°34
Su 10Sc32 - 0°00	Su 24Ar35 - 0°00
Me 28Li46 + 1°40	Me 11Ta10 + 1°42
Ve 02Li12 + 1°30	Ve 24Ar05 - 1°10
Ma 15Le44 + 1°35	Ma 16Le13 + 2°40
Ju 27Aq14 - 1°09	Ju 28Pi06 - 1°02
Sa 24Aq50 - 1°28	Sa 09Pi44 - 1°30
Ur 29Ge12 + 0°10R	Ur 26Ge15 + 0°11
Ne 23Ar18 - 1°42R	Ne 24Ar51 - 1°36
Pl 28Le04 + 9°04	Pl 26Le07 + 9°26R
No 09Sc58 - 0°00	No 01Sc21 - 0°00

Coords: 36W/15N



Michael Erlewine

Internationally known astrologer and author Noel Tyl (author of 34 books on astrology) has this to say about Michael Erlewine:

“Michael Erlewine is the giant influence whose creativity is forever imprinted on all astrologers’ work since the beginning of the Computer era! He is the man who single-handedly applied computer technology to astrological measurement, research, and interpretation, and has been the formative and leading light of astrology’s modern growth. Erlewine humanized it all, adding perception

and incisive practical analyses to modern, computerized astrology. Now, for a second generation of astrologers and their public, Erlewine’s genius continues with StarTypes ... and it’s simply amazing!”

A Brief Bio of Michael Erlewine

Michael Erlewine has studied and practiced astrology for over 40 years, as an author, teacher, lecturer, personal consultant, programmer, and conference producer.

Erlewine was the first astrologer to program astrology, on microcomputers and make those programs available to his fellow astrologers. This was in 1977. He founded Matrix Astrology in 1978, and his company, along with Microsoft, are the two oldest software companies still on the Internet.

Michael, soon joined by his astrologer-brother Stephen Erlewine, went on to revolutionize astrology by producing, for the new microcomputers, the first written astrological reports, first research system, first high resolution chart wheels, geographic and star maps, and on and on.

Along the way Matrix produced programs that spoke astrology (audio), personal astrological videos, infomercials, and many other pioneering feats.

Michael Erlewine has received major awards from UAC (United Astrological Conferences), AFA (American Federation of Astrologers), and the PIA (Professional Astrologers Incorporated), and scores of on online awards.

Michael and Stephen Erlewine have published a yearly calendar for almost 30 years, since 1969. Michael Erlewine has produced and put on more than 36 conferences in the areas of astrology and Buddhism.



Example Astro*Image Card

Aside from his current work as a consultant for NBC's iVillage and Astrology.com, Erlewine has personally designed over 6,000 tarot-like astrology cards, making authentic astrology available to people with little or no experience in the topic. These Astro*Image™ cards are available through a variety of small astrological programs and in eBooks. Some examples can be found at WWW.StarTypes.com, where there is also a link to his astrological software.

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Personal Astrology Readings

Michael Erlewine has been doing personal astrology readings for almost forty years and enjoys sharing his knowledge with others. However, his busy schedule makes it difficult to honor all requests. However, feel free to email (Michael@Erlewine.net) him if you wish a personal chart reading. He will let you know if his current schedule will allow him to work with you.

The sections that follow will give you more details about Michael Erlewine and his very active center.



The Heart Center House

In 1972, Michael and Margaret Erlewine established the Heart Center, a center for community studies. Today, the Heart Center continues to be a center for astrological and spiritual work. Over the years, hundreds of invited guests have stayed at the Heart Center, some for just a night, others for many years. Astrologers, authors, musicians, Sanskrit scholars, swamis - you name it, the Heart Center has been a home for a wide group of individuals, all united by their interest in spiritual or cultural ideas.



Heart Center Library

Erlewine also founded and directs The Heart Center Astrological Library, the largest astrological library in the United States, and

probably the world, that is open to researchers. Meticulously catalogued, the current library project is the scanning of the Table of Contents for all major books and periodicals on astrology.

The library does not have regular hours, so contact ahead of time if you wish to visit. Michael@erlewine.net.



The All-Music Guide / All-Movie Guide

Michael Erlewine's devotion to studying and playing the music of Black Americans, in particular blues, led to his traveling to small blues clubs of Chicago and hearing live, blues greats like Little Walter, Magic Sam, Big Walter Horton, and many others. He went on to interview many dozens of performers. Much of this interviewing took place at the Ann Arbor Blues Festivals, in 1969 and 1970, the first electric blues festivals of any size ever held in North America, and then later at the Ann Arbor Blues & Jazz Festivals.

With their extensive knowledge of the blues music, Erlewine and his brother Daniel were asked to play host to the score or so of professional blues musicians and their bands. They were in charge of serving them food and (of course) drink. Michael went on to interview most of the performers in these early festivals, with an audio recorder, and later on with video.

The interviewing led to more study and ultimately resulted in Michael founding and developing AMG, the All-Music Guide, today the largest single database of music reviews and documentation on the planet.

Erlewine started from a one-room office, and the reviewers and music aficionados of the time laughed at his attempt to cover all music. But he persisted, and the all-Music Guide appeared as a Gopher Site, before the World Wide Web even existed—a database of popular music for all music lovers.

Over the years AMG grew, and the All-Movie Guide and All Game Guide were born, and also flourished. Later, Erlewine would create ClassicPosters.com, devoted to the history and documentation of rock n' roll posters, some 35,000 of them.

These guides changed the way music was reviewed and rated. Previous to AMG, review guides like the "Rolling Stones Record Guide" were run by a few sophisticated reviewers, and the emphasis was on the expertise of the reviewer, and their point of view. Erlewine insisted on treating all artists equally, and not comparing artist to artist, what can be important, Michael points out, is to find the best music any artist has produced, not if the artist is better or worse than Jimmie Hendrix or Bob Dylan.

Erlewine sold AMG in 1996, at which time he had 150 fulltime employees, and 500 free-lance writers. He had edited and published any number of books and CD-ROMs on music and film. During the time he owned and ran AMG, there were no advertisements on the site and nothing for sale. As Erlewine writes, "All of us deserve to have access to our own popular culture. That is what AMG and ClassicPosters.com are all about." Today, AMG reviews can be found everywhere across the Internet. Erlewine's music collection is housed in an AMG warehouse, numbering almost 500,000 CDs.



Heart Center Meditation Room

Michael Erlewine has been active in Buddhism since the 1950s. Here are his own words:

“Back in the late 1950s, and early 1960, Buddhism was one of many ideas we stayed up late, smoked cigarettes, drank lots of coffee, and talked about, along with existentialism, poetry, and the like.

“It was not until I met the Tibetan lama, Chogyam Trungpa Rinpoche, in 1974 that I understood Buddhism as not just Philosophy, but also as path, a way to get through life. Having been raised Catholic, serving as an altar boy, learning church Latin, and all that, I had not been given any kind of a path, other than the path of faith. I hung onto that faith as long as I could, but it told me very little about how to live and work in this world.,

“I had been trying to learn the basics of Tibetan Buddhism before I met Trungpa Rinpoche, but the spark that welded all of that together was missing. Trungpa provided that spark. I got to be his chauffeur for a weekend, and to design a poster for his public talk.

“More important: only about an hour after we met, Trungpa took me into a small room for a couple of hours and taught me to meditate. I didn't even understand what I was learning. All that I know was that I was learning about myself.

“After that meeting, I begin to understand a lot more of what I had read, but it was almost ten years later that I met my teacher, Khenpo Karthar, Rinpoche, the abbot of Karma Triyana Dharmachakra Monastery, in the mountains above Woodstock, NY. Meeting Rinpoche was life-changing.



Heart Center Symbol

“It was not long after that we started the Heart Center Meditation Center here in Big Rapids, which is still going today. My wife and I became more and more involved with the monastery in New York, and we ended up serving on several boards, and even as fundraisers for the monastery. We helped to raise the funds to build a 3-year retreat in upstate New York, one for men and one for women.

“We also established KTD Dharma Goods, a mail-order dharma goods business that helped practitioners find the meditation materials they might need. We published many sadhanas, the traditional Buddhist practice texts, plus other teachings, in print and on audio tape.

Years have gone by, and I am still working with Khenpo, Rinpoche and the sangha at the Woodstock monastery. Some years ago, Rinpoche surprised my wife and I by telling us we should go to Tibet and meet His Holiness the 17th Karmapa, and that we should go right away, that summer, and I hate to leave the house!

That trip, and a second trip that followed some years later, turned out to be pilgrimages that were also life changing. Our center in Big Rapids has a separate building as a shrine room and even a small Stupa; pictures are shown below.

I can never repay the kindness that Khenpo Rinpoche and the other rinpoches that I have taken teachings from have shown me.



Music Career

Michael Erlewine's career in music started early on, when he dropped out of high school and hitchhiked to Venice West, in Santa Monica, California, in an attempt to catch a ride on the tail end of the Beatnik era. This was 1960, and he was a little late for that, but right on time for the folk music revival that was just beginning to bloom at that time. Like many other people his age, Erlewine traveled from college center to center across the nation: Ann Arbor, Berkeley, Cambridge, and Greenwich Village. There was a well-beaten track on which traveled the young folk musicians of the future.

Erlewine, who also played folk guitar, hitchhiked for a stint with a young Bob Dylan, and then more extensively with guitar virtuoso and instrumentalist Perry Lederman. Erlewine helped to put on Dylan's first concert in Ann Arbor. He hung out with people like Ramblin' Jack Elliot, Joan Baez, The New Lost City Ramblers, and the County Gentlemen.

In 1965, the same year that the Grateful Dead were forming, Michael Erlewine, his brother Daniel, and a few others formed the first new-style band in the Midwest, the Prime Movers Blues Band. Iggy Pop was their drummer, and his stint in the band was how he got the name Iggy. This was the beginning of the hippie era. Michael was the band's lead singer, and played amplified Chicago-style blues harmonica. He still plays.

Erlewine was also the manager of the band, and personally designed and silkscreened the band's posters, one of which is shown below.

The Prime Movers became a seminal band throughout the Midwest, and even traveled as far as the West Coast, where the band spent 1967, the "summer of Love," playing at all of the famous clubs, for example, opening for Eric Clapton and Cream, at the Fillmore Auditorium.

As the 60s wound down, and bands began to break up, Erlewine was still studying the music of American Blacks, in particular blues. Because of their knowledge of blues and the players, Michael and his brother Dan were invited to help host the first major electric blues festival in the United States, the 1969 Ann Arbor Blues Festival. They got to wine and dine the performers, and generally look after them.

Michael interviewed (audio and video) most of the players at the first two Ann Arbor Blues Festivals, they included: Big Joe Turner, Luther Allison, Carey Bell, Bobby Bland, Clifton Chenier, James Cotton, Pee Wee Crayton, Arthur, Crudup, Jimmy Dawkins, Doctor Ross, Sleepy John Estes, Lowell Fulson, Buddy Guy, John Lee hooker, Howlin' wolf, J.B. Hutto, Albert King, B.B King, Freddie king, Sam Lay, Light-nin' Hopkins, Manse Lipscomb, Robert Lockwood, Magic Sam, Fred Mcdowell, Muddy Waters, Charlie Musslewhite, Louis Myers , Junior Parker, Brewer Phillips, Otis rush, Johnnie Shines, George Smith, Son House, Victoria Spivey, Hubert Sumlin, Sunnyland Slim, Roosevelt Sykes, Eddie Taylor, Hound Dog Taylor, Big mama Thornton, Eddie Vinson, Sippie Wallace, Junior Wells, Big Joe Williams, Robert Pete Williams, Johnny Young, and Mighty Joe Young.

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