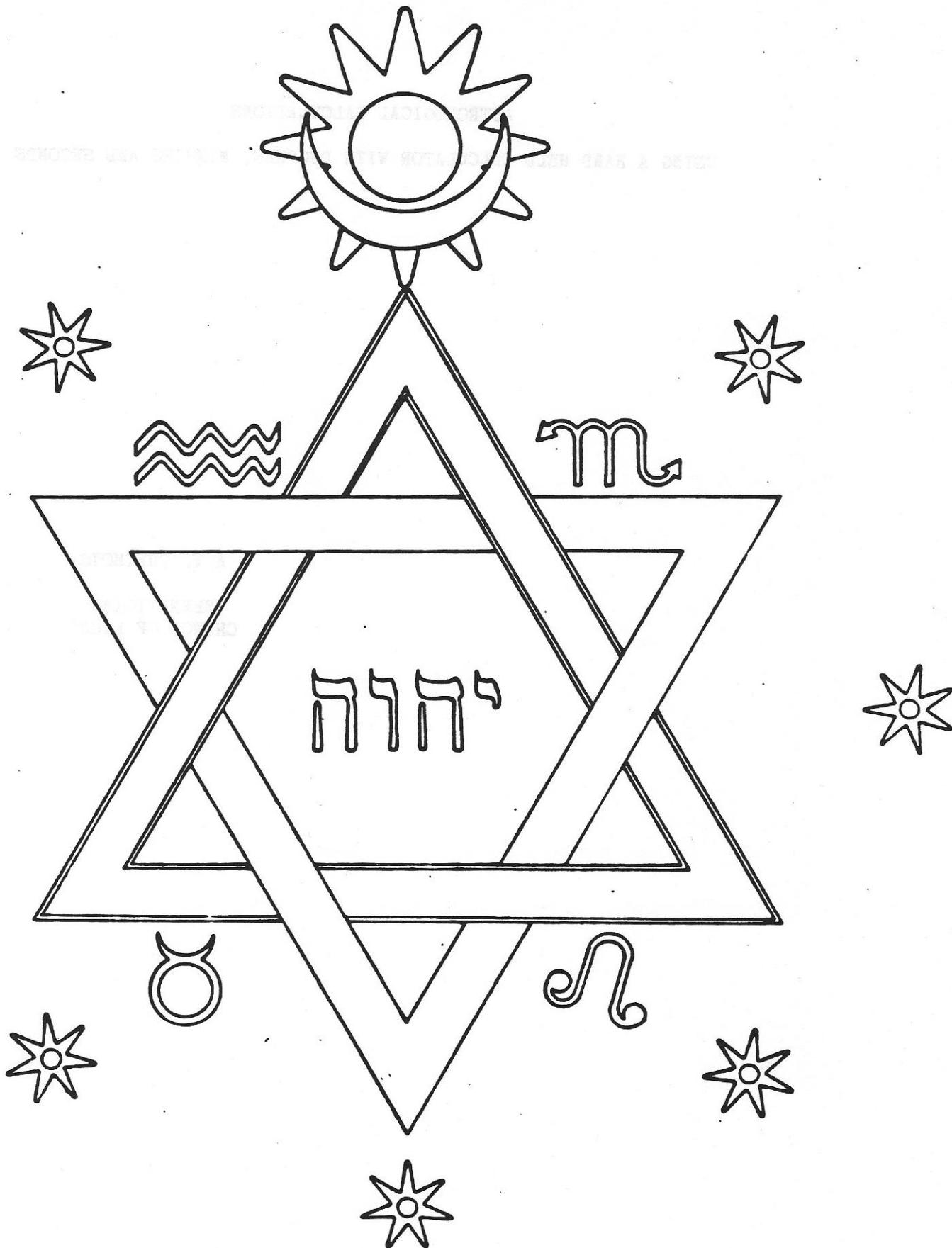


ASTROLOGICAL CALCULATIONS

USING A HAND HELD CALCULATOR WITH DEGREES, MINUTES AND SECONDS

A. W. CURTHOYS

HERMETICIAN  
CHURCH OF LIGHT





# Regulation Of The Stars Constellation Chart

## Church of Right - Los Angeles.

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## PREFACE

This manuscript goes forward with the sincere hope that it will assist today's student and astrologer to acquire the technique and expertise of using a modern hand held calculator with degrees, minutes and second capability.

Only one mathematical operation is necessary in solving the ordinary problems of astrological calculations and that is the one of interpolation. Normally all that transpires is solving for an unknown value between two rows of known values.

Imagine if you will that the degree's, minutes and seconds given in any Table of Houses or Ephemeris to be condensed into one single number. Then, for instance, 2 in any one row would relate to 4 in another. The next row would state that 4 relates to 6. The problem is we wish to know what 3 relates to. So we would set our problem on paper as follows.

$$\begin{array}{l} 4 = 6 \\ 3 = ? \\ 2 = 4 \end{array}$$

Taking 2 from 3 and 2 from 4 shows that 3 is one half the distance between 2 and 4. Since 4 from 6 = 2 the value sought is one to be added to 4 giving an answer of 5.

$$\begin{array}{l} 4 = 6 \\ 3 = ? \\ \underline{2 = 4} \\ \frac{1}{2} \times 2 = 1 \end{array}$$

All the calculations in this paper have been done that way. For the benefit of those who are unfamiliar with a calculator a review of the basic manipulations is given.

### HAND CALCULATOR PRELIMINARIES

TO ADD  $2 + 2$

PRESS 2  
PRESS +  
PRESS 2  
PRESS =      ANSWER = 4

---

TO ADD  $47.6782 + 37.6287$

PRESS 47.6782  
PRESS +  
PRESS 37.6287  
PRESS =      ANSWER = 85.3069

---

TO SUBTRACT  $6 - 4$

PRESS 6  
PRESS -  
PRESS 4  
PRESS =      ANSWER = 2

---

TO SUBTRACT  $476.3241 - 321.4132$

PRESS 476.3241  
PRESS -  
PRESS 321.4132  
PRESS =      ANSWER = 154.9109

---

TO MULTIPLY  $2 \times 2$

PRESS 2  
PRESS X  
PRESS 2  
PRESS =      ANSWER 4

---

TO MULTIPLY  $263.713 \times 32.4321$

PRESS 263.713  
PRESS X  
PRESS 32.4321  
PRESS =      ANSWER = 8552.7664

---

TO DIVIDE  $8 \div 2$

PRESS 8  
PRESS  $\div$   
PRESS 2  
PRESS =      ANSWER = 4

8

TO ADD ASTROLOGICAL TERMS YOU MUST FIRST CHANGE TO A DECIMAL

PRESS 8.1441  
PRESS 2nd  
PRESS DMS: DD ANSWER 8.2447222  
PRESS STO 5

PRESS RCL 4 → CASE AT 1000 HRS CT  
PRESS +  
PRESS RCL 5  
PRESS = ANSWER 27.52

PRESS INV  
PRESS 2nd  
PRESS DMS:DD ANSWER 27.3112  
27° Ari 31' 12"

FOR PRACTICE ADD 10° Tau 14' 11'' + 28° Tau 58' 44'' = 39° Tau 12' 55''  
9° Gem 12' 55''

$$AND \ 9^{\circ} \ Leo \ 36'' \ 55'' + 8^{\circ} \ Leo \ 41' \ 49'' = 18^{\circ} \ Leo \ 18' \ 44''$$

TO SUBTRACT ASTROLOGICAL TERMS YOU MUST FIRST CHANGE TO A DECIMAL

29 Vir 33' 14" - 14 Vir 44' 36"

PRESS 29.3314

PRESS 2nd

PRESS DMS:DD ANSWER 29.553889

STO 4

PRESS 14.4436

PRESS 2nd

PRESS DMS:DD ANSWER 14.743333

PRESS STO 5

PRESS RCL 5

PRESS -

PRESS RCL 4

PRESS = ANSWER 14.810556

PRESS INV

PRESS 2nd

PRESS DMS:DD ANSWER 14.4838

14 Vir 48' 38"

FOR PRACTICE FROM 9 Gem 09' 19" SUBTRACT 10 Tau 11' 21"

39 Tau 09' 19" - 10 Tau 11' 21" = 28 Tau 57' 58"

FROM 28 Can 45' 38" SUBTRACT 12 Can 22' 29"

28 Can 45' 38" - 12 Can 22' 29" = 16 Can 23' 09"

ASTROLOGICAL VALUES NOW CONVERTED TO DECIMALS CAN ALSO BE MULTIPLIED AND DIVIDED BY OTHER TERMS SUCH AS THE E.G.M.T.I., LATITUDE CORRECTION, AND HOUSE CUSP CORRECTIONS WHEN ALSO CONVERTED TO DECIMAL VALUES.

EXAMPLE  
THE MOON'S DAILY MOTION WAS FOUND TO BE  $12^{\circ} 25' 27''$  AND THE E.G.M.T.I.  
WAS FOUND TO BE  $16H\ 35' 46''$

PRESS 12.2527

PRESS 2nd

PRESS DMS:DD

PRESS = ANSWER 12.424167

STO 1

PRESS 16.3546

PRESS 2nd

PRESS DMS:DD

PRESS = ANSWER 16.596111

PRESS +

PRESS 24 ANSWER 0.6915046

PRESS STO 2

PRESS RCL 1

PRESS X

PRESS RCL 2

PRESS = ANSWER 8.5913688

PRESS INV

PRESS 2nd

PRESS DMS:DD

PRESS = ANSWER  $8.3528928$  OR  $8^{\circ} 35' 28.928''$  OR  $8^{\circ} 35' 29''$

FOR PRACTICE MULTIPLY  $13^{\circ} 40' 55'' \times 6H\ 22' 59''$

ANSWER  $3^{\circ} 38' 19.892''$  OR  $3^{\circ} 38' 20''$

### SIGNS AND THEIR OPPOSITES

1. ARIES	7. LIBRA
2. TAURUS	8. SCORPIO
3. GEMINI	9. SAGITTARIUS
4. CANCER	10. CAPRICORN
5. LEO	11. AQUARIUS
6. VIRGO	12. PISCES

### SYMBOLS OF THE PLANETS

1. SUN	6. JUPITER
2. MOON	7. SATURN
3. MERCURY	8. URANUS
4. VENUS	9. NEPTUNE
5. MARS	10. PLUTO

### TABLE OF ZODICAL LONGITUDE

60 SECONDS (60'')	makes one MINUTE
60 MINUTES (60')	makes one DEGREE
30 DEGREES (30°)	makes one SIGN
12 SIGNS (12S)	makes one ZODIAC
360 DEGREES	makes one CIRCLE

## SECTION ONE

## LOCAL MEAN TIME IS THE DOMINANT FACTOR

The position of an object or an event cannot be completely defined by three dimensions. When we say that a certain individual was on the street level at the intersection of Seventh and Broadway in Los Angeles, full information is not yet at hand. It was Einstein who first emphasized the importance of time as the fourth dimension. And the relation of velocity to time is a significant factor in explaining the release of planetary energies by progressed aspects which time and indicate the probable nature of the events that will enter a person's life. But even in such a simple matter as locating an individual in Los Angeles, in addition to the three dimensions-street level, Seventh Street, and Broadway-the fourth dimension, time must be added. It must be stated he was there on a given day of a given year at a specific time of day.

In like manner, to locate a birth, while the surface of the earth gives one dimension, we must ascertain the latitude of birth-the distance north or south of the earth's equator and the longitude of birth-the distance east or west of Greenwich. When the town or city in which, or near which, birth took place is known, the latitude and longitude of birth may be ascertained from a map or atlas. They are expressed usually in 's and 's and in the AFA Astrological Atlas of the United States in 's and tenths of 's which may be expressed as ''s.

Latitude and Longitude of birth on the surface of the earth, however do not completely locate the birth. To these data, which are essential to the erection of a birth chart, must be added the year, month, day of month and time of day when the birth took place.

Unfortunately for simplicity, the kind of time used in a given locality at different periods has been made a football of politicians. At various periods they have installed different systems of recording time. Yet as a correct chart cannot be erected unless the time used at the place of birth is known, this matter of ascertaining what kind of time was used on a given date, while often quite complicated, is of the utmost importance. And before any attempt is made to erect a chart of birth, positive information should be gained not merely as to the time of day the birth took place, but as to the kind of time used in recording it.

The Dominant Factor-As the astronomical data given in the ephemerides is calculated for Mean Time, unless the time of birth is given in terms of local mean time it becomes necessary to convert the recorded time

into local mean time. Because it is necessary first to find Local Mean Time before any of the other calculations can be made, it is called the DOMINANT FACTOR.

The first step in calculating any horoscope, therefore, is to ascertain this DOMINANT FACTOR, or Local Mean Time. And this necessitates a consideration of the various systems of recording time that have been employed, and how to convert the time thus recorded into local mean time.

In some countries, notably Russia, the Julian Calendar was used up to the time of the revolution in 1917. But there were exceptions, as some places on the Black Sea used the calendar of their neighbors. When however, the date is given Old Style, as it was reckoned in Russia, it must be converted into the Gregorian Calendar, or New Style, because the ephemeris is calculated New Style. This is done by adding 12 days to Old Style dates occurring in the 19th Century, and by adding 13 days to Old Style dates since 1900. Thus Josef Stalin's birth, according to his mother, occurred December 21, 1879, Old Style. Adding 12 days to this date brings us to January 2, 1880, as the date for which his birth-chart should be erected.

Before November 18, 1883, at noon, in the United States, and before 1880 in Great Britain, it was customary to use local mean time. Therefore the times of such births usually need no conversion, for as recorded they represent the DOMINANT FACTOR.

Such use of local mean time required that every place having a different longitude should have a different time. This was not only a nuisance, but as railroads stretched across the continent it became too impracticable to tolerate. That clocks in different longitudes might either keep identical time, or show differences easily adjusted, Standard Time was adopted in the United States and in most countries of the world.

The United States is divided into six Standard Time Zones each containing 15° longitude. The standard meridian for Eastern Time is 75°, or 5 hours, west; the standard meridian for Central Time is 90°, or 6 hours west; the standard meridian for Mountain Time is 105°, or 7 hours west; and the standard meridian for Pacific Time is 120°, or 8 hours west. Puerto Rico has a further zone, called Atlantic Time, which is but 4 hours west. Hawaii and Alaska use 150° west.

Standard Time is a logical necessity in this day of swift travel and instantaneous long distance communication. Nor is there anything complicated about it. The complication arose when Daylight Saving Time was adopted in many countries during World War I. It was in general

use in the U.S. during 1918 and 1919. and continued in use in some sections of the country up to the date of World War II. And while Daylight Saving Time was made legal in these communities, it so complicated railroad schedules that the railroads, to conform to the time used in other localities on their route, used Standard Time. Thus for years there were towns in the Eastern U.S. that were using two kinds of time.

During World War II, starting May 3, 1941, and lasting to August 9, England each year used Double Summer Time, the clock two hours ahead of Standard Time in summer, and having it one hour ahead during the balance of the year. In the United States War Time commenced February 9, 1942, 2:00 a.m. and ended September 30, 1945. The clock was set one hour ahead of Standard Time, not merely during summer, but for the whole year.

Daylight Saving Time in 1918 was in use in the U.S. from March 31 to October 27, and in 1919 from March 30 to October 26, but where continued the change date varied. When the birth is timed according to the Double Summer Time of England, it became necessary to subtract two hours from the clock to get Standard Time. When the birth is timed according to Daylight Saving Time, or War Time, such as was used in the U.S., it becomes necessary to subtract one hour from the clock to get the Standard Time. In the years between World War I and World War II careful inquiry should be made to be sure which time was used in the record. Two good sources of information are The American Atlas and Time Changes in the U.S.A.

When the time of birth is recorded in Standard Time, or is converted from Daylight Saving Time or War Time into Standard Time by subtracting one hour, we must next know what Standard Time Zone was used.

Theoretically, all places  $7\frac{1}{2}$ ° east and  $7\frac{1}{2}$ ° west of a standard meridian should keep the same time. As a matter of fact, railroad divisions and natural boundaries greatly influence the actual place where time changes are made. Furthermore, the dividing line where such changes of time take place has not remained constant., but has shifted along with railroad changes and the development of certain regions.

All of us are aware, through listening to either radio or T.V. broadcasts, that time is later in England than in the United States; and those west of the Eastern Time Zone are aware that time in New York or Washington is later than it is in the other U.S. Time Zones. For instance, those on the West Coast must turn on their radios or T.V.'s at 9:00 a.m. to listen to a presidential speech given from the White House in Washington D.C. at noon. From everyday experience we become aware

that there is a close relationship between longitude and time.

One complete revolution of the earth on its axis, which is the time between two successive transits of the sun's semi-diameter across the same meridian, measures 24 hours. In the complete revolution the  $360^\circ$  of geographical longitude measuring the earth's circumference pass under the sun at meridian every hour. Dividing  $360^\circ$  by 24 gives  $15^\circ$  that pass under the sun at meridian every hour. Dividing this hour of  $60'$  by  $15$  gives  $4'$  as the time required for  $1^\circ$  longitude to pass under the sun at meridian.

For reckoning distance on any circle a starting point must be selected. This is true not only relative to the circle along which geographical longitude is measured, but also of the circle along which is measured time. And to use as such a Prime Meridian from which to compute geographical longitude, and to use as a standardized time reference in locating the position of the heavenly bodies, the longitude of Greenwich, England, is considered as  $0^\circ$  and 0 hours, and the universally accepted starting point. Any adequate map indicates how many degrees and minutes each important geographical area is east or west of Greenwich. And the international date line is 12 hours, or  $180^\circ$ , from Greenwich.

As the distance east or west of Greenwich may be expressed either in degrees or in hours and minutes of time, the prevalent manner of locating the standard time meridians has been to divide the world into 24 such standard time zones, each successive meridian being just  $15^\circ$  of geographical longitude and therefore representing just 1 hour difference in time from the next meridian.

On each of these standard meridians, the standard time and the local mean time are identical. But as clocks at all points approximately  $7\frac{1}{2}^\circ$  both east and west of such a standard meridian keep the local mean time of this standard meridian, since standard time came into use if the place is either east or west of the standard meridian, the clock time must be converted into local mean time (L.M.T.)

Clocks west of a standard meridian are FAST. Clocks east of a standard meridian are SLOW. And as  $1^\circ$  longitude is the equivalent of  $4'$  time, the number of  $^\circ$  east or west of the standard meridian may be converted into time merely by multiplying by 4 and calling the result minutes of time. If the place is East of the standard meridian, ADD the number of minutes thus found to the standard meridian. If the place is West of the standard meridian, SUBTRACT the number of minutes thus found from the standard time. The result is the Local Mean Time of birth, and this is the DOMINANT FACTOR.

The best reference for values is the AFA Astrological Atlas of the United States. There you will find the city listed with Latitude and Longitude in tenths of minutes and the local mean time correction given in plus or minus in minutes and seconds. The correction to Greenwich is given in hours, minutes and seconds.

**EXAMPLE**

United States Capitol 77W0.6 38N53.3      EST      LONG.  
-8:02      5:08:02

Four example charts will be given and the method of erecting each will be worked out in detail using a hand held calculator allowing the use of degrees, minutes and seconds. The data of the four birth-charts thus erected, and the letters by which their problems are designated, are as follows:

- (A) April 19, 1975, 2:10:15 a.m. Eastern Daylight Saving Time (EDST)  
Taunton, Ma., U.S.A. Longitude 71W05.9, Latitude 41N53.9.
- (B) August 21, 1970, 3:25:48 a.m. Pacific Daylight Saving Time (PDST)  
Thrail, Ca., U.S.A. Longitude 122W29, Latitude 41N54.
- (C) January 31, 1975, 4:56:22 a.m. Central Standard time (CST)  
Elmhurst Il., U.S.A. Longitude 87W56.4, Latitude 41N53.4
- (D) June, 22, 1970, 10:43:58 a.m., British Summer Time (BST) London,  
England, Longitude 51N31, Latitude 0W06, St. Paul's Cathedral.

**FINDING THE LOCAL MEAN TIME OF BIRTH:**

Your best step is to consult the AFA Atlas or if the place of birth is not given there, instead of multiplying in longitude between the birthplace and the standard meridian by 4, consult the Table of Conversion of Longitude to time given

- (A) The Longitude of Taunton, Ma. is 71W05.9 and the Eastern Meridian is 75° W.  $75W - 71W05.9 = 3^{\circ} 54.1'$  which in the table =  $15' 36''$  but the AFA gives  $15' 37''$ . The correction for L.M.T. is then  $+15' 37''$ . In the table 71W05.9 is equal to  $4h\ 44' 23''$  and a plus.

(B) The longitude of Thrail, Ca. is 122W29. The Pacific Meridian is 120°W. The difference is 2° 29' for which the table gives 9' 56''. As Thrail is west of the Meridian the 9' 56'' must be subtracted from the birth time to give 2:15:56. One hour daylight saving time has previously been subtracted. The table gives 8h 09' 56'' as the longitude correction.

(C) The longitude of Elmhurst, Il. is 87W56.4. Rounding off for the table would give 87W56 and since the Central Meridian is 90°W the difference is 2° 04' for which the table gives 8' 16''. As Elmhurst is East of the meridian the 8' 16'' must be added to the birth time giving 5:04:38 a.m. as the local mean time. The table gives 5h 51' 44'' as the longitude correction. However the AFA Atlas gives 8' 15'' and 5h 51' 45'' as the two corrections.

(D) The longitude of St. Paul's Cathedral in London is 0W06 for which the table gives 24'' which must be subtracted to give 9:43:34 as the local mean time as one hour has previously been subtracted because of Summer Time over Britain. The table again gives 24'' as a correction for longitude giving 9:43:58 as the interval to London.

Actually in 1970 apparently Britain was under the 15E00 Standard Meridian and no Daylight Saving Time. The use of both varies considerably through the years and Double Saving Time during the war years was observed so extra care has to be exercised and Time Changes in the World used as a guide.

To erect a chart of birth, or any horoscope, in addition to the data supplied, two things are required. One is a Table of Houses for the latitude of the place, and the other is an Ephemeris for the year of birth.

The student should calculate the precise value on the cusps of the wheel first. To do so since the tables usually give the values for each degree it will be necessary to interpolate for the precise value for the exact minute given in the latitude. Here use will be made of Michaelsen's Book of Tables, Dalton's Table of Houses and Rice's American Astrology table of Houses.

Next in order to calculate the precise position of the planets the student will have to interpolate in an Ephemeris for the exact value as the values are usually given for either Midnight (zero hour) or Noon for each day. Here use is made of Michaelsen's American Ephemeris and Raphael's Ephemeris alternating between Midnight (Zero hour) and Noon. Both volumes giving the Sun and Moon at midnight and Noon.

## SECTION TWO

### PLACING THE SIGNS ON THE HOUSES

The zenith of an observer, the point directly overhead, traces a circle in the sky due to the eastward rotation of the earth. For convenience, and to avoid technicalities, let us call this circle, parallel to the circle along which right ascension is measured, the Mundane circle. Right Ascension is the measurement in hours, minutes and seconds along the celestial equator beginning at the vernal equinox. And it is important, for from it are located the houses of a horoscope, the Mundane Houses.

But there is also a second important circle, the circle in the sky apparently followed by the Sun in its annual journey, which marks the center of a narrow belt along which all the planets apparently travel. This belt is called the Zodiac, and the circle followed by the Sun is called the Ecliptic. The positions of the planets as recorded in an ephemeris are given as they appear along this annual path of the Sun.

Thus all planets have two important apparent motions. They have a clockwise apparent motion that carries each from the Ascendant to the Midheaven, to the Descendant, to the I.C. and back to the Ascendant again each day. The Sun is thus seen to rise in the morning, to reach the Midheaven at noon, to disappear below the Descendant in the evening, and to reappear again on the Ascendant on the morning of the next day. All of the planets perform a similar daily journey. And in which house of the horoscope each planet has thus arrived in this clockwise daily journey is very important; for it indicates both the volume of energy the planet is able to deliver, and the department of life it influences.

But all of the planets have a slower counter-clockwise motion through the zodiac. While being swiftly carried clockwise by the diurnal rotation of the earth, they are slowly moving counter-clockwise along the zodiacal circle. Their position on this circle is plotted in the ephemeris for each day.

In erecting a horoscope, therefore, we have calculations to make relative to two different circles; the circle of Mundane houses, and the circle of the Zodiac.

Both the Mundane Circle and the Zodiacal circle are divided into segments of thirty degrees each. As a circle has 360 degrees there are thus 12 segments on each of the two circles. Each such 30 degree segment of the mundane circle is called a house, and each 30 degree segment of the zodiac is called a sign.

The positions of the planets as given in an ephemeris show them to have a longitude of so many degrees, minutes and sometimes seconds in a certain sign. That is, their positions are plotted in the ephemeris along the circle which is the apparent annual path of the sun. But that does not indicate whether they are above the horizon, below the horizon, half way up to the midheaven in an easterly direction, or how else they may be located

relative to the observer on earth. To ascertain this, the position of the zodiacal circle in reference to the mundane circle must be calculated.

In astrology the position of a planet relative to each of these circles is important. The tone quality of each planet is influenced by the sign of the zodiac it is in, that is, in which of the 30 degree segments along the apparent annual path of the sun it is found. Also the harmony or discord mapped by a given planet, and therefore the fortune-attracting or misfortune-attracting desires of the thought cells within the human soul that it maps, is revealed by the aspects it receives from other planets; and these are determined, with the exception of the parallel, from the number of degrees this planet is removed from other planets along this zodiacal circle which is the apparent annual path of the sun. Also, each aspect a planet receives increases its prominence, which means that it indicates the thought-cells within the soul which it maps have that much more energy with which to work.

Only an ephemeris for the year of birth is required to ascertain all the aspects between the planets, with the possible exception of aspects involving the Moon. For the day of the sign and degree they occupy are given in such an ephemeris, and with the possible exception of the Moon, these positions along the circle representing the apparent path of the sun, which is called the zodiac, are all that is needed to ascertain all the aspects between the planets.

But while the tone quality of the influence of a planet, and its harmony and discord, can thus be ascertained from its position in the zodiacal circle, the department of life chiefly influenced by the thought-cells it maps, and the volume of energy possessed by these thought -cells, can only be ascertained when its position relative to the mundane circle is known. When the significance of each planet in each house is known, it is the position of each planet relative to the circle from which are mapped the Mundane Houses that reveals for events and conditions affecting what department of life the thought-cells mapped by a planet will work.

If you step outdoors and face the South from time to time and watch the sun, moon, planets and stars, the relation of the two circles, both of which must be used to plot astrological positions, will become clear. To us in the northern latitudes the circle of the zodiac, which the sun follows, and from which the moon and planets never stray more than a few degrees, is always to the South. You will note that the sun, moon and planets rise in an easterly direction, arch up to the highest point while somewhat south of the zenith, and then set in a westerly direction. This clockwise apparent motion of stars and planets is due to the earth turning eastward on its axis.

The eastern horizon of the earth is called the Ascendant, abbreviated Asc.; the western horizon is called the Descendant; the meridian of the observer, that is, a circle passing through the poles of the earth and the

zenith, is the Midheaven, abbreviated M.C.; and the point opposite the midheaven is the I.C. Both terms from the Latin with M.C. meaning Medium Coeli and I.C. meaning Imum Coeli. The M.C. is the cusp of the 10th house and the I.C. is the cusp of the 4th house. A circle passing directly eastward from the zenith cuts the Ascendant, the I.C., the Descendant and again reaches the Midheaven at the zenith point. From this circle are mapped the Mundane Houses.

This mundane circle is divided into four quadrants by the Ascendant, I.C., Descendant and Midheaven. And while in all geographical latitudes a heavenly body in its apparent daily circle about the earth reaches the midheaven at the same moment, and reaches the nadir at the same moment, the times when it appears above the Ascendant and disappears below the Descendant are greatly influenced by the latitude of the observer. In other words, whether a planet is above or below the Ascendant or Descendant at the time of birth may well be determined by the latitude on the earth where the birth took place.

Not only is it important to know whether or not, and how far, a planet is above or below the Ascendant or Descendant, but whether or not, and how far, it is within or without one of the three equal divisions of each of the mentioned quadrants. Each of the equal divisions thus ascertained from the circle about the earth at a given geographical latitude is called a Mundane House.

Now the zodiacal circle is inclined to the earth's equator at an angle of about  $23\frac{1}{2}^{\circ}$ . But its inclination to the circle passing eastward through the zenith, from which the houses are ascertained, varies with each degree of geographical latitude. And thus to ascertain the exact degree of the zodiac on each of the cusps, or partitions, which divide the mundane circle into 12 equal segments, or houses, recourse is had to a table of houses.

#### Ephemeris Sidereal Time

To measure along a circle a starting point is necessary. The starting point for measuring geographical longitude is Greenwich, England. The starting point for measuring along the mundane circle is the Midheaven. The starting point for measuring along the circle of the zodiac is that point in the sky, called the vernal equinox, where the sun crosses from south to north declination and thus changes polarity each spring.

Now the time that has elapsed since the point of the vernal equinox, where the zodiacal circle commences, was on the Midheaven, which marks the starting point of what is here called the mundane circle, is the sidereal time. The sidereal time, therefore, shows exactly what sign and degree of the zodiac are on the midheaven. It thus brings the two circles—the zodiacal circle and what we here call the mundane circle—into coincidence at one point.

The ephemeris shows the sidereal time either for noon or midnight. That is, it indicates what sign and degree of the zodiac are on the midheaven at noon or midnight, as the case may be. Each hour and minute of clock time after noon or midnight increases the sidereal time by that interval; and each hour and minute before noon or midnight decreases the sidereal time by an equivalent interval. Therefore, to find the sidereal time of birth, we must find the local mean time interval to or from noon or midnight, according to which is used in the ephemeris, and add or subtract this interval to or from the sidereal time given in the ephemeris.

Time is the time of the day, reckoned from noon or midnight. It is the time of day, reckoned from noon or midnight, up to the time of birth.

Local mean time is the time of day reckoned from noon or midnight, plus the time interval between noon or midnight and the time of birth.

Solar time is the time of day reckoned from noon or midnight, plus the time interval between noon or midnight and the time of birth.

Solar time is the time of day reckoned from noon or midnight, plus the time interval between noon or midnight and the time of birth.

Solar time is the time of day reckoned from noon or midnight, plus the time interval between noon or midnight and the time of birth.

### Calculated methods

To calculate the time of birth, we must first determine the time of day at the moment of birth. This can be done by adding the time interval between noon or midnight and the time of birth to the time of day at the moment of birth.

To calculate the time of day at the moment of birth, we must first determine the time interval between noon or midnight and the time of birth. This can be done by adding the time interval between noon or midnight and the time of birth to the time of day at the moment of birth.

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### SECTION THREE

#### **FIRST KEY PROBLEM**

##### **FINDING THE SIDEREAL TIME OF BIRTH**

- First we must find the local mean time interval from noon or zero hour the birth took place. If the local mean time of birth (DOMINANT FACTOR) is p.m., it already represents the required plus INTERVAL if a noon ephemeris is used. If a zero hour (midnight) ephemeris is used, it must be added to 12 hours to get the required plus interval.

If the local mean time of birth (DOMINANT FACTOR) is a.m. and a noon ephemeris is used, it must be subtracted from 12 hours to get the required minus interval. If a zero hour (midnight) ephemeris is used, it already represents the required plus L.M.T. Interval.

Chart (A) uses a zero hour ephemeris. The birth took place at a L.M.T. of 1:25:52 a.m. so the L.M.T. Interval is + 1:25:52.

Chart (B) uses a zero hour ephemeris. The birth took place at a L.M.T. of 2:15:52 a.m. so the L.M.T. Interval is + 2:15:52.

Chart (C) uses a noon time ephemeris. The birth took place at a L.M.T. of 5:04:37 a.m. so subtracting from noon (11:59:60) gives a L.M.T. Interval of - 6:55:23.

Chart (D) uses a zero hour ephemeris. The birth took place at a L.M.T. of 9:43:34 a.m. so the L.M.T. Interval is + 9:43:34.

#### Further Examples

Using a noon ephemeris to get the L.M.T. Interval for a birth that took place 1:50:04 a.m. L.M.T. we merely subtract 1:50:04 from 11:59:60 to get a L.M.T.I. of - 10:09:56.

When using the zero hour ephemeris it is necessary to add 12 hours when the birth took place after noon and the birth is listed as p.m. A birth that took place at 2:18:16 p.m. would give a L.M.T.I. of + 14:18:16.

The next step in the First key problem concerns the Sidereal Time. The Sidereal Time at noon or zero hour for each day at Greenwich is given in the ephemeris for the year in which the birth date occurs. As most births do not occur at noon or zero hour Greenwich, a correction is required. When the L.M.T.I. is minus, it is subtracted from the Sidereal Time of birth given in the ephemeris. This results in the Sidereal Time of Birth Uncorrected.

Chart (A)    13:45:54    S.T. zero hour Apr. 19, 1975  
               + 1:25:52  
               15:11:46    add L.M.T.I.  
                     S.T. of birth uncorrected

Chart (B)    21:55:36    S.T. zero hour Aug. 21, 1970  
               + 2:15:52  
               24:11:28    add L.M.T.I.  
24:00:00  
               0:11:28    S.T. of birth uncorrected

Chart (C)    20:40:21    S.T. noon Jan. 31, 1975  
               - 6:55:23  
               13:44:58    subtract L.M.T.I.  
                     S.T. of birth uncorrected

Chart (D)    17:59:03    S.T. zero hour June 22, 1970  
               + 9:43:34  
               27:42:37    add L.M.T.I.  
24:00:00  
               3:42:37    S.T. of birth uncorrected

For the two further example charts;

16:03:00    S.T. noon Nov. 22, 1930  
               - 10:09:56  
               5:53:04    subtract L.M.T.I.  
                     S.T. of birth uncorrected

12:37:52    S.T. zero hour Apr. 2, 1943  
               + 14:18:16  
               26:56:08    add L.M.T.I.  
24:00:00  
               2:56:08    S.T. of birth uncorrected

In order to find the true sidereal time of birth, another correction is needed in this first key problem. Sidereal time increases at the rate of 9.86' per hour. As the sidereal time in the ephemeris is for noon or zero hour, Greenwich, this correction must be made for the interval before or after noon or midnight Greenwich on the same day. This requires that the equivalent Greenwich Mean Time Interval (E.G.M.T.I.) first be found. Before finishing the first key problem, it becomes necessary to calculate the Second Key Problem in order to apply the 9.86' correction for sidereal time.

## SECOND KEY PROBLEM

## FINDING THE EQUIVALENT GREENWICH MEAN TIME INTERVAL (E.G.M.T.I.)

As explained each degree of geographical longitude is the equivalent of 4 minutes of time. Therefore the number of degrees of geographical longitude a place is east or west of Greenwich can be converted into minutes of time merely by multiplying by 4. If the place is west of Greenwich this difference of time must be added to the Local Mean Time (DOMINANT FACTOR) to get the E.Q.M.T. If the place is east of Greenwich this difference of time must be subtracted from the Local Mean Time (DOMINANT FACTOR) to get the E.G.M.T.

The equivalent Greenwich Mean Time thus found is then a given number of hours and minutes after or before the noon or zero hour for which the ephemeris is computed. If the E.G.M.T. of birth is p.m., it already represents the required plus E.G.M.T.I. if a noon ephemeris is used. If a zero hour (Midnight) ephemeris is used, it must be added to 12 hours to get the required plus E.G.M.T.I.

If the Equivalent Greenwich Mean Time of birth is a.m., and a noon ephemeris is used, it must be subtracted from 12 hours to get the required minus E.G.M.T.I.. If a zero hour (Midnight) ephemeris is used, it already represents the required plus E.G.M.T.I..

In consulting the table of Conversion of Longitude to time if we wish to determine the longitude correction to Washington D.C. for an example we look in the degree column and find 77°. the time shown is 5 hours and 8 minutes. In the minute column find one minute which corresponds to 4 seconds of time.

	5:08:00 for 77° long.
add	0:00:04 for 1' long.
	5:08:04 Wash is W. of Greenwich

However the best way is to obtain a book listing most cities such as the already mentioned A.F.A. Atlas.

Chart (A)	1:25:52	L.M.T. of birth
	<u>4:44:23</u>	add for 71°W05.9
	6:10:15	E.Q.M.T. and E.G.M.T.I. due to zero hour ephemeris
Chart (B)	2:15:52	L.M.T. of birth
	<u>8:09:56</u>	add for 122°W29
	10:25:48	E.Q.G.M.T. and E.G.M.T.I. due to zero hour ephemeris

Chart (C)	5:04:37 <u>5:51:45</u> 10:56:22	L.M.T. of birth add for $87^{\circ}W56.4$ E.G.M.T.
	11:59:60 - <u>10:56:22</u> - 1:03:38	noon subtract E.G.M.T. minus E.G.M.T.I.
Chart (D)	9:43:34 <u>0:00:24</u>	L.M.T. of birth add for $0^{\circ}W06$ 9:43:58 E.G.M.T.I.

For the two further example charts, the first

	1:50:04 <u>8:09:56</u> 10:00:00	L.M.T. of birth add for $122^{\circ}W29$ E.G.M.T.
	12:00:00 <u>10:00:00</u> - 2:00:00	noon Greenwich subtract the E.G.M.T. minus E.G.M.T.I.
	14:18:16 <u>5:51:44</u> 20:10:00	L.M.T. of birth (12 added) add for $87^{\circ}W56$ E.G.M.T. and E.G.M.T.I. due to zero hour ephemeris

From 1960 to 1982 the tabulations in Raphael's Ephemeris were in Ephemeris Time (E.T.). At other years they were in G.M.T.. During those years when E.T. was used we have no choice but to include the correction known as Delta T to arrive at accurate results. Michaelson's American Ephemeris uses Delta T all years. For other ephemerides check their listings. Delta T ( $\Delta T$ ) corrections for all years will be given later on page 51.

Chart (A)	6:10:15 <u>46</u> 6:11:01	+ E.G.M.T.I. + $\Delta T$ + E.G.M.T.I.
Chart (B)	10:25:48 <u>41</u> 10:26:29	+ E.G.M.T.I. + $\Delta T$ + E.G.M.T.I.
Chart (C)	1:03:38 <u>46</u> 1:04:25	- E.G.M.T.I. + $\Delta T$ + E.G.M.T.I.

Chart (D)      9:43:58    + E.G.M.T.I.  
        41    + ΔT  
 9:44:39    + E.G.M.T.I.

The results of the examples represent an interval of time difference between the clock at the birth place and the clock at Greenwich. This actual time span is used to calculate the Limiting date (L.D.) as well as the '9.86' correction in the First Key Problem. The easiest guide to keeping these figures straight is the Student Chart Blank sold by The Church of Light. The example charts A,B,C, and D have been calculated on these blanks.

The Limiting Date appears on the last line of those blanks. While the mathematics of progressing the horoscope belongs in another volume, the student will find it easy to calculate the L.D. as he learns to erect the chart.

The Limiting date is a constant enabling the calculation of time within the particular calendar year a major progressed aspect becomes perfect. The hours and minutes of the interval from birth to Greenwich time are converted into months and days by dividing the hours by 2 and the minutes by 4. If this interval is minus, the hours and minutes so found are added to the birth day, month and year. If this interval is plus, the hours and minutes are subtracted from the birth date.

Chart (A)       $6 \div 2 = 3$        $10 \div 4 = 2.5$

Year	Month	Day
1975	4	19
-	3	3
1975	1	16
or Jan. 16, 1975		

Chart (B)       $10 \div 2 = 5$        $26 \div 4 = 6.5$

Year	Month	Day
1970	8	21
-	5	7
1970	3	14
or Mar. 14, 1970		

Chart (C)      adding one hour or 60' to 4' gives 64'       $64 \div 4 = 16$

Year	Month	Day
1975	1	31
+		16
1975	1	47
or Feb. 16, 1975		

## (A) TSARO HO EDITIONS DES GRANDS JOURS

$$\text{Chart (D)} \quad 8 \div 2 = 4 \quad 104 \div 4 = 26$$

Year	Month	Day
1970	6	22
	4	26
1970	5	52
	4	26
1970	1	26

Or Jan. 26, 1970

The L.D. of the other two charts are Dec. 22, 1930 and May 19, 1942.

This same difference in time between the clock at the birth place and the clock at Greenwich, which was used to find the L.D., is also used to determine the 9.86'' per hour correction in the First key Problem. To find the true Sidereal Time of Birth, multiply that interval by 9.86''. If the interval is plus, add the correction to the Uncorrected Sidereal Time; if minus, subtract it.

To save you the work of multiplying refer to the Table of Mean Time to Sidereal Time given later.

Chart (A) shows 1' 01'' correction for an E.G.M.T.I. of 6:11 + hours

Chart (B) shows 1' 43'' correction for an E.G.M.T.I. of 10:26 + hours

Chart (C) shows 0' 11'' correction for an E.G.M.T.I. of 1:04 - hours

Chart (D) shows 0' 24'' correction for an E.G.M.T.I. OF 9:44 + hours

You now have all the preliminary mathematics completed and you are now ready to proceed to learn how to effectively use your hand calculator to calculate the house cusps and the planets places to fill out the horoscope wheel.

## SECTION FOUR

### CALCULATIONS AND ERECTION OF CHART (A)

INTRODUCTION: Advanced professional calculators, such as the Texas Instrument (TI-55 III) that is used in these lessons are marvels made possible by the most recent breakthroughs in semi-conductors and their technology. (A TI-60 is now available). The integrated circuit, which made hand held calculators possible, appeared only a few years ago. The TI-55 III has many capabilities that made it possible to do both simple and advanced astrological calculations with a speed previously impossible.

The outstanding value of a calculator is that when making a calculation the answer is obtained by a process of keying in the problem with no recourse needed for unnecessary factors such as logarithms, diurnal tables or other books requiring (looking up). If you wish to multiply the daily travel of a planet by the Equivalent Greenwich Mean Time Interval you simply key those values into the calculator, press equals and there is the answer in seconds.

Such a calculator as I describe should only cost in the forty dollar range and can be put to use in solving many other daily problems such as balancing your check book not to mention helping your children with their math homework.

If you have not already done so, purchase such a calculator and read the instructions that come with the calculator thereby familiarizing yourself with the basics of operation of the calculator. Learn to add, subtract, multiply and divide ordinary numbers and I will take it from there and demonstrate how to do the astrological math to construct a horoscope.

CHART (A) The chart to be erected now is called Chart (A) and is for April 19, 1975 at 2:10:15 a.m. E.D.T. in Tauton Ma. where the longitude is 71W05.9. The clock correction to mean time given in the Atlas is + 15' 37" and the time correction to Greenwich is 4:44:23.

There are three values needed to construct the wheel. The Latitude (Lat), the Sidereal Time (S.T.) and the Equivalent Greenwich Mean Time Interval (E.G.M.T.I.). This lesson will demonstrate their use in the construction of the wheel.

Unless you are working near the equator usually the Lat. will vary in the tables by only one degree of latitude, so it is only necessary in the calculations to work with minutes and seconds, when necessary making the degrees similar. Near the equator the latitude can be given in five degree intervals. Taking our chart Lat. only in minutes (53.9) and dividing by 60 (sec. in a minute) the calculator gives 0.8983333 for an answer. Now push STO 0 and that value will be in memory zero for future use.

The value 0.8983333 means that the correct value for the Lat. is approximately 89.8% of the distance between 41 and 42 degrees North.

HINT: Before starting calculating on any day make sure it is working properly by solving an easy problem like  $24 \div 2 = 12$ .

CALCULATIONS: From Chart (A) we see the Sidereal Time used for chart erection to be 15:12:47. The value used in calculating will depend on the particular table of houses you use. We will start with the American Astrology Table of Houses, the Rice tables. Then we will use Dalton's and finally Michaelson's American Book of Tables.

Taking the next larger and next smaller S.T. from page 547 in the Rice tables we get the following proportion or interpolation;

(3)	15:16:00
(2)	15:12:47
(1)	15:12:00

taking the difference 2-1                    0:47  
and the difference 3-1                    4:00

we now have to learn a new technique. Since the calculator must be told to convert degrees, minutes and seconds to a decimal value we must key in our value and press 2nd followed by DMS-DD in order to obtain the sought decimal value the calculator needs to perform. What we will be doing is  $\div 0:47$  by 4:00.

Using our Rice values in three steps we will KEY IN

0.47	4.00	RCL 4
2nd		$\div$
DMS-DD (0.7833333)	DMS-DD (4.0000000)	RCL 5
STO 4	STO 5	= 0.1958333
		STO 1

Using Dalton's the proportion is

(3)	15:14:16
(2)	15:12:47
(1)	15:10:12

taking the difference 2-1                    2:35  
and the difference 3-1                    4:04

KEY IN 2.35	KEY IN 4.04	KEY IN RCL 4
2nd	2nd	$\div$
DMS-DD (2.5833333)	DMS-DD (4.0666667)	RCL 5
STO 4	STO 5	= 0.6352459
		STO 1

### Using Michaelsen's American Book of Tables

- (3) 15:16:00
- (2) 15:12:47
- (1) 15:12:00

difference 2-1 0:47  
 difference 3-1 4:00

KEY IN 0.47	KEY IN 4.0	KEY IN RCL 4
2nd	2nd	$\div$
DMS-DD (0.7833333)	DMS-DD (4.0000000)	RCL 5
STO 4	STO 5	= 0.1958333)
		STO 1

Depending on which table you use, you will now have the exact correction for the house cusps, Lat correction stored in memory zero (STO 0) and the S.T. correction stored in memory one (STO 1), for later use.

From Chart "A" we see the E.G.M.T.I. to be 6:11:01. So we KEY IN 6.1101 and Press DMS-DD, and then  $\div$  by 24 (hours in a day) and STORE it in Memory 2 (STO 2). Like so;

KEY IN 6.1101	KEY IN 2nd	KEY IN DMS-DD
	$\div$	
	24	
	=	
	0.2576505	
	STO 2	

We now have all three values in decimal figures stored in the memories for later use. You will use them only one at a time and only one table of houses at a time. We can now proceed to erect the wheel. we should have the latitude,  $53.9 \div 60$  stored in memory zero, the S.T. correction for the Rice tables  $0.47 \div 4$  equal to 0.195833 stored in memory one, and the E.G.M.T.I. correction,  $6:11:01 \div 24$  equal to 0.2576505 stored in 2.

The best technique in calculating house cusps for the beginner is to take a piece of plain paper and turn it sideways as I have and copy your results for later addition to the wheel. Mark the Lar. corr. at the top left corner, then just below the S.T. proportion corr. beginning at the left hand side, the house numbers at the top as I have indicated, and fill in the answers as you go along. I recommend doing all the Lat. corr. first followed by the S.T. corr. next.

## AMERICAN ASTROLOGY TABLES OF HOUSES

## RICE TABLES

Lat. Corr.      53.9 ÷ 60 = 0.8983333      STO 0

The technique is to take STO 0 and multiply that value by the difference in the two latitude values between 41 and 42 degrees and add that value to the 41 degree value. Do that for all the houses. Your results will look like the following.

	11	12	1	2	3	10
15:16:00 =	13Sag11.2	3Cap27.6	27Cap04.7	13Pis55.7	23Ari31.1	21Sco25' 36"
15:12:47 =						
15:12:00 =	12Sag17.6	2Cap31.6	25Cap53.6	12Pis29.6	22Ari18.3	20Sco26' 27"
	15:12:47	15:16:00				
	- 15:12:00	- 15:12:00				
	47	4:00	or 240'			

$$\frac{47}{240} = 0.1958333 \quad \text{STO 1}$$

Now take STO 0 and multiply that value by the difference in the new S.T. values and add that to the lesser S.T. value. Except, of course, when the values are reversed so that you must subtract, which goes for all motions in Lat., S.T., and the planets when retrograde. Your final values for the house cusps will look as follows.

	11	12	1	2	3	10
15:16:00 =	13Sag11.2	3Cap27.6	27Cap04.7	13Pis55.7	23Ari31.1	21Sco25' 36"
15:12:47 =	12Sag28.1	2Cap42.6	26Cap07.5	12Pis46.5	22Ari32.6	20Sco38' 02"
15:12:00 =	12Sag17.6	2Cap31.6	25Cap53.6	12Pis29.6	22Ari18.3	20Sco26' 27"

The exact calculations will now be given.

### CALCULATIONS FOR CHART "A" HOUSE CUSPS

In calculating the house cusps you will notice that mostly since the differences in values is so small no use of the DSM-DD Key is necessary. Determine the differences by sight.

House 11  
 Lat. corr. 0.00  
 at 15:12:00 0.18  
 at 41 deg's 12Sag30.2  
 at 42 deg's 12Sag16.2  
 14.0

$$14.0 \times RCL 0 = 12.6 \\ 30.2 - 12.6 = 17.6 \\ 12Sag17.6$$

S.T. corr.  
 13Sag11.2 = 12Sag71.2  
 12Sag17.6 = 12Sag17.6  
 53.6

House 11  
 Lat. corr. 0.00  
 at 15:16:00 0.18  
 at 41 deg's 13Sag23.9  
 at 42 deg's 13Sag09.8  
 14.1

$$14.1 \times RCL 0 = 12.7 \\ 23.9 - 12.7 = 11.2 \\ 13Sag11.2$$

S.T. corr.  
 53.6 X RCL 1 = 10.5  
 17.6 + 10.5 = 28.1  
 12Sag28.1

House 12  
 Lat. corr.  
 at 15:12:00  
 at 41 deg's 2Cap59.5  
 at 42 deg's 2Cap28.4  
 31.1

$$31.1 \times RCL 0 = 27.9 \\ 59.5 - 27.9 = 31.6 \\ 2Cap31.6$$

S.T. corr.  
 3Cap27.6 = 2Cap87.6  
 2Cap31.6 = 2Cap31.6  
 56.0

House 12  
 Lat. corr. 0.00  
 at 15:16:00 0.18  
 at 41 deg's 3Cap55.6  
 at 42 deg's 3Cap24.4  
 31.2

$$31.2 \times RCL 0 = 28.0 \\ 55.6 - 28.0 = 27.6 \\ 3Cap27.6$$

S.T. corr.  
 56.0 X RCL 1 = 10.96 (11.0)  
 31.6 + 11.0 = 42.6  
 2Cap42.6

## Calculations for chart "A" house cusps continued

House 1  
 Lat. corr.  
 at 15:12:00  
 at 41 deg's 26Cap39.5  
 at 41 deg's 25Cap99.5  
 at 42 deg's 25Cap48.4  
 51.1

$$51.1 \times RCL\ 0 = 45.9 \\ 99.5 - 45.9 = 53.6 \\ 25Cap53.6$$

S.T. corr.  
 27Cap 04.8  
 26Cap 64.8  
 25Cap 124.8  
 25Cap 53.6  
 71.2

You could have used the DSM-DD KEY for the last S.T. corr. as follows;

$$27Cap04.8 = 27Cap04' 48'' \text{ Press } 27.0448, 2nd, DMS-DD, = 27.08 \text{ STO } 5 \\ 25Cap53.6 = 25Cap53' 36'' \text{ Press } 25.5336, 2nd, DMS-DD, = 25.893333 \text{ STO } 4$$

$$\begin{aligned} RCL\ 5 - RCL\ 4 \times RCL\ 1 &= 0.2323883 \\ 0.2323883 + RCL\ 4 &= 26.125722 \\ \text{INV } 2nd \text{ DMS-DD} &= 26Cap07' 33'' = 26Cap07.5 \end{aligned}$$

House 2  
 Lat. corr.  
 at 15:12:00  
 at 41 deg's 12Pis40.6  
 at 42 deg's 12Pis28.3  
 12.3  
 $12.3 \times RCL\ 0 = 11.0$   
 $40.6 - 11.0 = 29.6$   
 12Pis29.6

S.T. corr.  
 13Pis55.7  
 12Pis29.6  
 86.1

House 1  
 Lat. corr.  
 at 15:16:00  
 at 41 deg's 27Cap 50.6  
 at 41 deg's 26Cap110.6  
 at 42 deg's 26Cap 59.6  
 51.0

$$51.0 \times RCL\ 0 = 45.8 \\ 110.6 - 45.8 = 64.8 \\ 27Cap04.8$$

S.T. corr.  
 71.2 X RCL 1 = 13.9  
 $53.6 + 13.9 = 67.5$   
 26Cap07.5

House 2  
 Lat. corr.  
 at 15:16:00  
 at 41 deg's 14Pis05.9  
 at 42 deg's 13Pis54.6  
 11.3  
 $11.3 \times RCL\ 0 = 10.2$   
 $65.9 - 10.2 = 55.7$   
 13Pis55.7

S.T. corr.  
 $86.1 \times RCL\ 1 = 16.9$   
 $16.9 + 29.6 = 46.5$   
 12Pis46.5

CALCULATIONS FOR CHART "A" HOUSE CUSPS CON'T

House 3  
 Lat. corr.  
 at 15:12:00  
 at 42 deg's 22Ari19.0  
 at 41 deg's 22Ari12.4  
 6.6  
 $6.6 \times RCL\ 0 = 5.9$   
 $5.9 + 12.4 = 18.3$   
 22Ari18.3

S.T. corr.  
 23Ari31.1  
 22Ari18.3  
 72.8

House 3  
 Lat. corr.  
 at 15:16:00  
 at 42 deg's 23Ari31.8  
 at 41 deg's 23Ari24.8  
 7.0  
 $7.0 \times RCL\ 1 = 6.3$   
 $6.3 + 24.8 = 31.1$   
 23Ari31.1

S.T. corr.  
 72.8 X RCL 1 = 14.3  
 $18.3 + 14.3 = 32.6$   
 22Ari32.6

House 10

House 10 always only needs a S.T. correction, not a Latitude correction.  
 Use your DMS-DD KEY here.

at 42 deg's 21SCO25' 36"  
 KEY IN  
 21.2536  
 2nd  
 DMS-DD  
 =  
 21.426667  
 STO 5

at 41 deg's 20Sco26' 27"  
 KEY IN  
 20.2627  
 2nd  
 DMS-DD  
 =  
 20.440833  
 STO 4

$RCL\ 5 - RCL\ 4 = 0.9858333$   
 $0.9858333 \times RCL\ 1 = 0.193058$   
 $0.193058 + RCL\ 4 = 20.633892$   
 INV  
 2nd  
 DMS-DD = 20.380201  
 20 Sco 38' 02"

## THE SPHERICAL BASIS OF ASTROLOGY

## DALTON'S TABLE OF HOUSES

Lat. Corr.  $53.9 \div 60 = 0.8983333$  STO 0

S.T.

	11	12	1	2	3	10
15:14:16	12.82Sag	3.05Cap	26Cap33.2	13.22Pis	22.99Ari	21Sco00
15:12:47	12.49Sag	2.69Cap	26Cap06.9	12.71Pis	22.55Ari	20Sco38.1
15:10:12	11.92sag	2.06Cap	25Cap21.2	11.82PiS	21.79Ari	20Sco00
	2:35					
	4:04					

$2.35 \div 4:04 (155 \div 244) = 0.6352459$  STO 0

House cusp values converted to degrees, minutes and seconds

11th	12° Sag29' 24"
12th	2° Cap41' 24"
1st	26° Cap06' 54"
2nd	12° Pis42' 36"
3rd	22° Ari33' 00"
10th	20° Sco22' 50"

## THE AMERICAN BOOK OF TABLES

## MICHAELSEN'S

Lat. Corr.  $53.9 \div 60 = 0.8983333$  STO 0

S.T.

	11	12	1	2	3	10
15:16:00	13Sag11.4	3Cap27.3	27Cap04.3	13Pis56.1	23Ari31.3	21Sco26.0
15:12:47	12Sag28.0	2Cap42.2	26Cap07.1	12Pis46.3	22Ari32.6	20Sco37.7
15:12:00	12Sag17.4	2Cap31.2	25Cap53.2	12Pis29.3	22Ari18.3	20Sco26.0
	0:47					
	4:00					

$0:47 \div 4:00 (46 \div 240) = 0.1958333$  STO 1

House cusp values converted to degrees, minutes and seconds

11th	12° Sag28' 00"	2nd	12° Pis46' 18"
12th	2° Cap42' 12"	3rd	22° Ari32' 36"
1st	26° Cap07' 06"	10th	20° Sco37' 42"

### CALCULATIONS FOR CHART "A", PLANETS PLACES

From Chart "A" we see the Equivalent Greenwich Time Interval to be a plus 6:11:01. So we can plug that value into our calculator, if we haven't done so already, then change it into a decimal value, divide by 24 hours in a day, and finally key it into memory 2 for later use.

```

KEY IN
6.1101
2nd
DMS-DD (6.1836111)
÷
24 (0.2576505)
STO 0

```

We will then take each planet at a time, subtract its two zero hour positions to arrive at its daily travel: then multiply by the E.G.M.T.I. stored in 2, and finally add that correction to the previous zero hour position of the planet. The planets places are from Michaelson's American Ephemeris.

We are all set to go. You can see how easy it was to get the equivalent of the classical log into our calculator with no reference to any tables. The figure 0.2576505 means that all the planets have advanced about 25.8% of their total daily travel.

The values given as we go along are simply to check your technique and in actual work can be ignored as you do your calculations. It's the final value that you are concerned about.

Also notice that we have set up a system to assist you to remember where you are as you go along. The Lat. corr. is always in STO 0 (Mem 0), the S.T. corr. is always in STO 1 (Mem 1) and the E.G.M.T.I. is always in STO 2 (Mem 2).

~~RECALL~~ chart "A" planets places con't

~~RECALL~~ THE SUN

April 20, 29Ari18' 11''  
April 19, 28Ari19' 34''

KEY IN  
28.1934  
2nd  
DMS-DD (28.326111)  
STO 4

KEY IN  
29.1811  
2nd  
DMS-DD (29.303056)  
STO 5

KEY IN  
RCL 5 - RCL 4 (0.9769444)  
X RCL 2 (0.2517102)  
+ RCL 4 (28.577821)  
INV  
2nd  
DMS-DD (28.344016)  
SUN = 28Ari34' 40''

~~RECALL~~ THE MOON

April 20, 9Leo49' 12''  
April 19, 25Can47' 43''

KEY IN  
25.4743  
2nd  
DMS-DD (25.795278)  
STO 4

KEY IN  
39.4912 (add 30 deg. to keep  
2nd the same sign)  
DMS-DD (39.82)  
STO 5

KEY IN  
RCL 5 - RCL 4 (14.024722)  
X RCL 2 (3.6134762)  
+ RCL 4 (29.408754)  
INV  
2nd  
DMS-DD (29.243151)  
Moon = 29Can24' 32''

Again, all the values given in parentheses are simply to check your work as you go along and in actual practice they can be ignored until you reach your final desired value. Please note that on April 19th the Moon is increasing in motion quite a bit so for greatest accuracy in calculating it will need another correction. Later, on page 52, an easy method using the calculator to correct for ununiform motion will be given.

## MERCURY

April 20, 0Tau35 .0S 1mgd  
 April 19, 28Ari28 .01 1mgd

KEY IN 1 = Revant v160  
 28.28 (00000000000000000000000000000000)  
 2nd 00000000000000000000000000000000 = S JOR X 1  
 DMS-DD (28.466667)  
 STO 4 00101111111111111111111111111111

KEY IN 1 = Revant v160 .0S 1mgd  
 30.35 (30 deg added) .01 1mgd  
 2nd  
 DMS-DD (30.583333) Revant v160  
 STO 5 (00000111111111111111111111111111) = S JOR X 1  
 000001 = 0 + 00

KEY IN  
 RCL 5 - RCL 4 (2.1166667)  
 X RCL 2 (0.5453601)  
 + RCL 4 (29.00433)  
 INV PERIOD = 1.01 1mgd  
 2nd  
 DMS-DD (29.00433) Revant v160  
 Mercury = 29Ari00' 43'' 01 + 00  
 29Ari01 00000000000000000000000000000000

## MARS

April 20, 6Pis15 .01 1mgd  
 April 19, 5Pis29 .01 1mgd

KEY IN 00000000000000000000000000000000 = S JOR X 01  
 5.29 00000000000000000000000000000000 = 0 + 00  
 2nd 00000000000000000000000000000000 = 00000000000000000000000000000000  
 DMS-DD (5.4833333)  
 STO 4 00000000000000000000000000000000

KEY IN 00000000000000000000000000000000 = 00000000000000000000000000000000  
 6.15 00000000000000000000000000000000 = 00000000000000000000000000000000  
 2nd 00000000000000000000000000000000 = 00000000000000000000000000000000  
 DMS-DD (6.25)  
 STO 5 00000000000000000000000000000000

RCL 5 - RCL 4 (0.7666667) + 00  
 X RCL 2 (0.197532)  
 + RCL 4 (5.6808654)  
 INV  
 2nd  
 DMS-DD (5.4051115) Mars = 5Pis40' 51'' (5Pis41)

## VENUS

April 20, 7Gem08 .0S 1mgd  
 April 19, 5Gem58 .01 1mgd

KEY IN 1 = Revant v160  
 5.58 (00000000000000000000000000000000)  
 2nd 00000000000000000000000000000000 = S JOR X 00  
 DMS-DD (5.9666667)  
 STO 4 00000000000000000000000000000000

KEY IN 00000000000000000000000000000000 = S JOR X 00  
 7.08 00000000000000000000000000000000 = 00000000000000000000000000000000  
 2nd 00000000000000000000000000000000 = 00000000000000000000000000000000  
 DMS-DD (7.1333333) Revant v160  
 STO 5 (00000000000000000000000000000000) = S JOR X 00  
 00000000000000000000000000000000 = 00000000000000000000000000000000

KEY IN 00000000000000000000000000000000 = S JOR X 00  
 RCL 5 - RCL 4 (1.1666667)  
 X RCL 2 (0.3005922)  
 + RCL 4 (6.2672589)  
 INV  
 2nd  
 DMS-DD (6.1602132)

Venus = 6Gem16' 02''  
 6Gem16

## JUPITER

April 20, 7Ari44  
 April 19, 7Ari30

KEY IN 00000000000000000000000000000000 = S JOR X 00  
 By inspection there is only  
 14' daily travel  
 14 X RCL 2 = 3.6071065 So  
 add 4' to 30 = 7Ari34

## SATURN

April 20, 13Can09 .0S 1mgd  
 APRIL 19, 13Can06 .01 1mgd

Daily travel = 3'  
 3 X RCL 2 = 0.7729514 So  
 add 1' to 6 = 13Can07

## URANUS

April 20, 0Sco30R  
 April 19, 0Sco32R

Daily travel = 2'  
 $2 \times \text{RCL } 2 (0.5153009)$   
 $32 - 1' = 0\text{Sco}31\text{R}$

## PLUTO

April 20, 7Lib18R  
 April 19, 7Lib20R

Daily travel = 2'  
 $2 \times \text{RCL } 2 (0.5153009)$   
 $20 - 1' = 7\text{Lib}19\text{R}$

## MOON'S DECLINATION

April 20, 13N07  
 April 19, 16N49

## KEY IN

16.49  
 2nd, DMS (16.816667)  
 STO 5

## KEY IN

13.07  
 2nd, DMS-DD (13.116667)

RCL 5 - RCL 4 = 3.7  
 $3.7 \times \text{RCL } 2 (0.9533067)$   
 STO 6  
 $\text{RCL } 5 - \text{RCL } 6 = 15.86336$   
 INV, 2nd, DNS-DD, (15.51481)  
 15N51

## MARS DECLINATION

April 20, 10S32  
 April 19, 10S48

daily travel, 48 - 32 = 16  
 $16 \times \text{RCL } 2 = 4.1224074$   
 $48 - 4 = 44$   
 10S44

## VENUS

## NEPTUNE

## JUPITER

April 20, 11Sag27R  
 April 19, 11Sag28R

Daily travel = 1'  
 $1 \times \text{RCL } 2 (0.2576505)$   
 no corr. 11Sag28R

## SUN'S DECLINATION

April 20, 11N14 = 10N74

April 19, 10N53

Daily travel, 74 - 53 = 21'  
 $21 \times \text{RCL } 2 (5.4106597)$   
 $53 + 5 = 10N58$

## MERCURY'S DECLINATION

April 20, 11N18 = 10N78  
 April 19, = 10N24

Daily travel 78' - 24' = 54'  
 $54 \times \text{RCL } 2 (13.913125)$   
 $24 + 14 = 38$   
 10N38

## VENUS DECLINATION

April 20, 23N05 = 22N65  
 April 19, = 22N50

Daily travel 65 - 50 = 15'  
 $15 \times \text{RCL } 2 = 3.8647569$   
 $50 + 4 = 54$   
 22N54

## JUPITER DECLINATION

April 20, 2N04 = 1N64  
 April 19, = 1N58

Daily travel, 6'  
 $6 \times \text{RCL } 2 = 1.5459028$   
 $58 + 2 = 60$   
 2N00

## SATURN

no correction needed  
22N37

## URANUS

April 21, 11S06  
April 17, 11S10  
4 day travel = 4'  
1 day travel = 1'  
11S08

## NEPTUNE

4 day travel = 1'  
 $1 \div 4 = 0.25$   
 $0.25 \times RCL\ 2 = 0.0644126$   
 $X\ 2\ days = 0.1288252$   
no correction  
20S35

## PLUTO

no correction needed  
12N58

The declinations of the M.C. (cusp of the 10th house) and the Ascendant can most easily be calculated from the tables given on pages 48 and 49 for that purpose.

M.C. = 20SCO38

20Sco40 = 17S55  
20Sco38 = ?  
20Sco30 = 17S53

$8 \div 10 \times 2 = 1.6$   
add 2 to 53  
17S55

Asc = 26Cap08

26Cap10 = 20S55  
26Cap08 = ?  
26Cap00 = 20S57

$8 \div 10 \times 2 = 1.6$   
subtract 2 from 57  
20S55

The student has no doubt noticed that when calculating the positions of the slower moving planets there is such a small difference, or no difference at all, that much time can be saved by visually inspecting the daily or four day motion. If the travel can be ascertained by mental arithmetic by all means do so. This applies to the positions of the planets and their declinations.

1 \_\_\_\_\_  
 (Name)  
 2 \_\_\_\_\_  
 (Month) (Day) (Year)  
 3 Place \_\_\_\_\_  
 4 Latitude \_\_\_\_\_  
 5 Longitude \_\_\_\_\_

#### DOMINANT FACTOR

6 Time of Birth \_\_\_\_\_  
 (Daylight Saving)  
 Correction for  
 7 Standard Time \_\_\_\_\_  
 8 Time of Birth \_\_\_\_\_  
 (Standard Time)  
 Correction for  
 9 Mean Time \_\_\_\_\_  
 Local Mean Time of  
 10 Birth, A.M or P.M. \_\_\_\_\_

#### FIRST KEY PROBLEM

11 Noon \_\_\_\_\_ 12:00

12 Local Mean Time \_\_\_\_\_

13 L.M.T. Interval \_\_\_\_\_

14 Sidereal Time \_\_\_\_\_  
 (Noon)

15 \_\_\_\_\_

16 \_\_\_\_\_

17 L.M.T. Interval \_\_\_\_\_

18 S. T. (Uncorrected) \_\_\_\_\_

Correction, 9.86s per h. for  
 19 E.G.M.T. Int. \_\_\_\_\_

20 Sidereal Time \_\_\_\_\_  
 (Of Birth)

#### SECOND KEY PROBLEM

Standard  
 21 Time of Birth \_\_\_\_\_  
 Hrs. E. or  
 22 W. of Greenwich \_\_\_\_\_

23 E.G.M.T. \_\_\_\_\_

24 Noon \_\_\_\_\_ 12:00

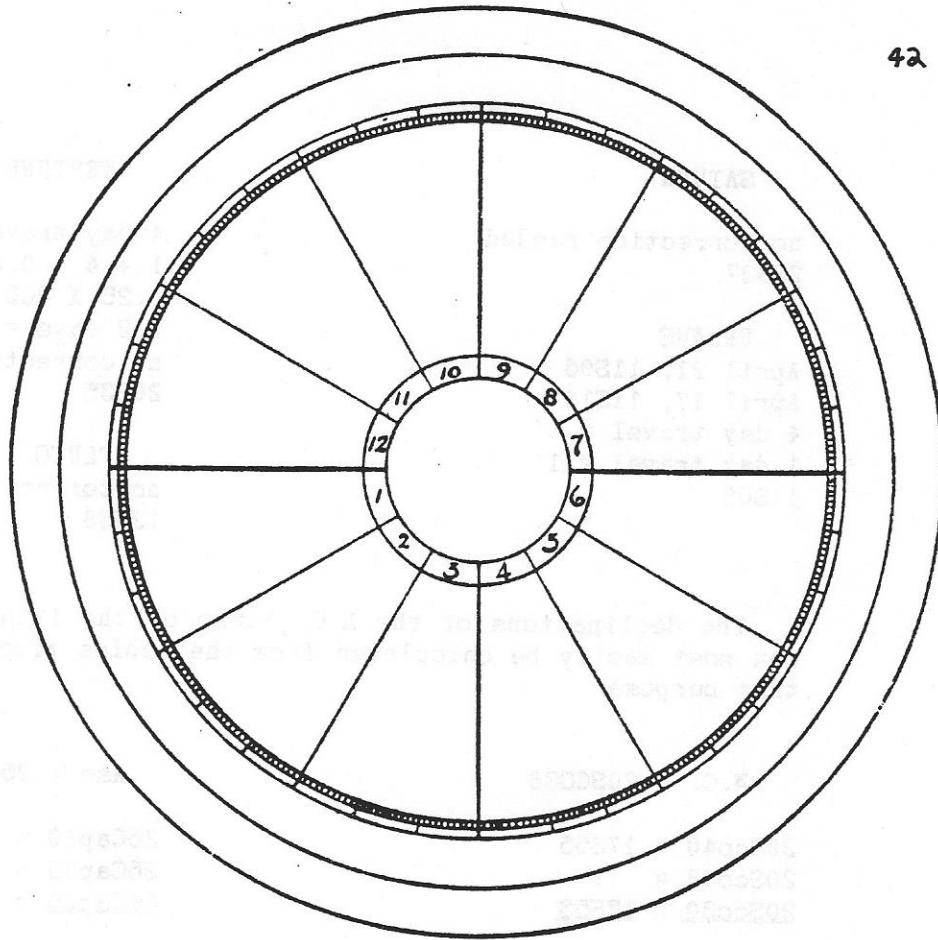
25 E.G.M.T. \_\_\_\_\_

26 E.G.M.T. Interval \_\_\_\_\_  
 (Indicate plus or minus)

#### ADDITIONAL FACTORS

27 Constant Log \_\_\_\_\_

28 Limiting Date \_\_\_\_\_  
 (Including year)



42

Mov.	Fix.	Mut.	Fire	Earth	Air	Water	Ang.	Suc.	Cad.
Per.	Comp.	Pub.	Life	Wealth	Assoc.	Psy.	Above	East	Ret.
Declinations		ASPECTS							
			○	□	⊗	♀	♂	21	b
			○						
			□						
			⊗						
			♀						
			♂						
			21						
			b		MC				
			H <sub>o</sub>		ASC				
			ψ						
			P	Dominant	Best	Worst		Planet	
			MC					Sign	
			ASC					House	

**CHART "A"**

(Name) APR. 19 1975  
 (Month) APRIL (Day) 19 (Year) 1975  
 Place TAUNTON MA.  
 Latitude 41°N 53.9'  
 Longitude 71°W 05.9'

**DOMINANT FACTOR**

Time of Birth 2:10:15  
 (Daylight Saving)  
 Correction for Standard Time (-1):00:00  
 Time of Birth 1:10:15  
 (Standard Time)  
 Correction for Mean Time (+0):15:37  
 Local Mean Time of Birth, A.M or P.M. 1:25:52

**FIRST KEY PROBLEM**

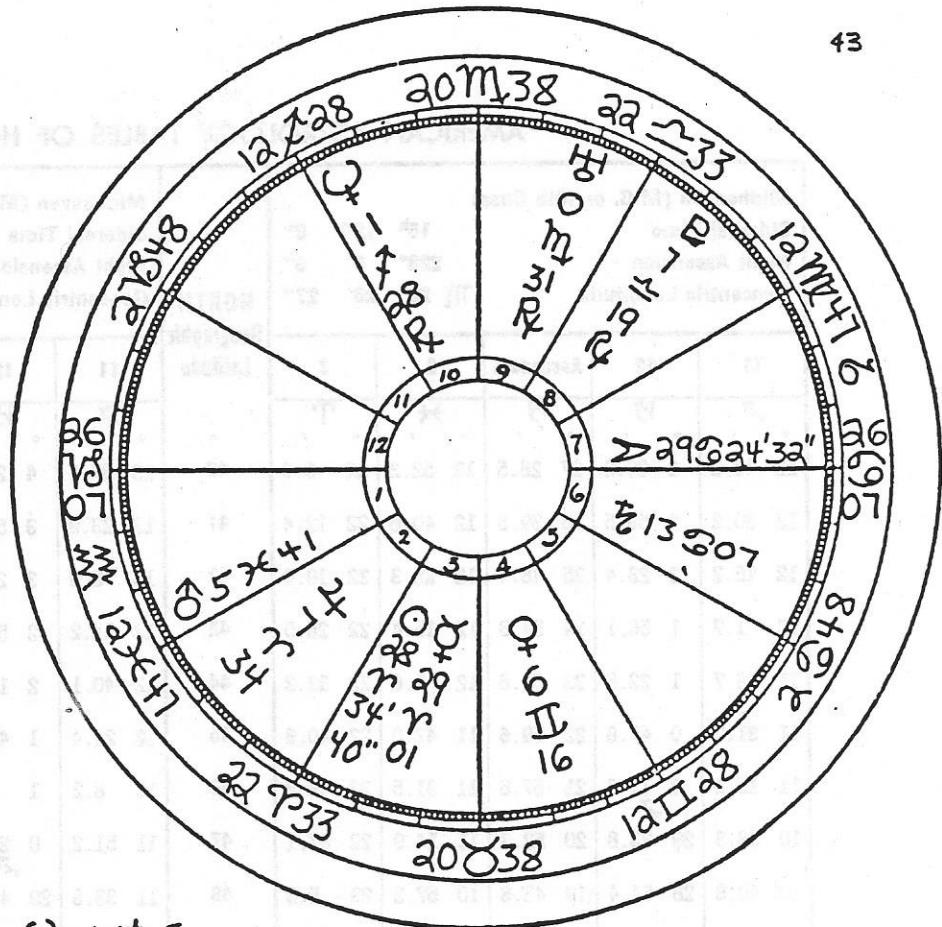
Noon 12:00  
 Local Mean Time (+1):25:52  
 L.M.T. Interval 13:45:54  
 Sidereal Time 15:11:46  
 AMER. EPH. 15:12:47  
 Noon ZERO HOUR  
 16 \_\_\_\_\_  
 L.M.T. Interval 15:11:46  
 S.T. (Uncorrected) 15:11:46  
 Correction, 9.86s per h. so (+0):01:01  
 E.G.M.T. Int. 15:12:47  
 Sidereal Time 15:12:47  
 (Of Birth)

**SECOND KEY PROBLEM**

Standard L.M. 1:25:52  
 Time of Birth 4:44:23  
 Hrs. E. or W. of Greenwich 22°E  
 E.G.M.T. 6:10:15  
 E.G.M.T. Interval (+6):10:15  
 (Indicate plus or minus)  
 $(+)\Delta T = (+) 6:11:01$

**ADDITIONAL FACTORS**

Constant Log JAN. 16, 1975  
 Limiting Date (Including year)



Mov.	Fix.	MUT.	FIRE	EARTH	AIR	WATER	ANG.	SUC.	CAD.	Exact ☽		Deyald ☽		home ☽		Binalar ☽					
										ASC	MC	PER.	COMP.	PUB.	LIFE	WEALTH	ASSOC.	PSY.	ABOVE	EAST	RET.
6	1	3	4	0	2	4	4	2	4	MC	4	4	3	3	2	3	3	2	4	5	3
Declinations																	ASPECTS				
				○	□	☽	☿	♂	♀	♃	♄	♅	♆	♇	♈	♉	♊	♋	♌	♍	
10N58	○			□	○	♃	•	P.	•	•	•	○	□	○	□	○	•	•	•	□	
15N51	○			□	○	*	•	△	•	□	□	○	□	*	△	○	○	○	○	○	
10N38	☽				•	P.	•	•	○	○	○	○	□	○	○	○	•	•	•	□	
22N54	♀				□	*	P.	•	○	○	○	○	□	○	○	○	○	○	○	○	
10S44	♂						○	△	○	○	○	○	□	○	○	○	•	•	•	•	
2N00	♃				□	•	○	○	○	○	○	○	□	○	○	○	○	○	○	○	
22N37	b						MC						ASC								
11S08	♄																				
20S35	♅																				
12N58	E																				
17S55	MC																				
20S55	ASC																				
Dominant		Best		Worst		Planet		Sign		House		L		P		*					
○	♃	○	♄	○	♅	○	♆	○	♇	○	♈	○	♉	○	♊	○	♋	○	♌	○	
☽	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	

## AMERICAN ASTROLOGY TABLES OF HOUSES

547

Midheaven (M.C. or 10th Cusp)					NORTH Geographic Latitude	Midheaven (M.C. or 10th Cusp)					
Sidereal Time			15 <sup>h</sup> 12 <sup>m</sup> 0 <sup>s</sup>			Sidereal Time			15 <sup>h</sup> 16 <sup>m</sup> 0 <sup>s</sup>		
Right Ascension		228° 0' 0"		Right Ascension		229° 0' 0"		Geocentric Longitude		Geocentric Longitude	
Geocentric Longitude		ℳ	20° 28' 27"	ℳ	21° 25' 36"	ℳ	21° 25' 36"	ℳ	21° 25' 36"	ℳ	21° 25' 36"
11	12	Ascendant	2	3	11	12	Ascendant	2	3	11	12
• ,	• ,	• ,	• ,	• ,	• ,	• ,	• ,	• ,	• ,	• ,	• ,
12 43.8	3 29.6	27 28.5	12 52.3	22 6.0	40	13 37.5	4 25.8	28 39.5	14 16.7	23 18.1	
12 30.2	2 59.5	26 39.5	12 40.6	22 12.4	41	13 23.9	3 55.6	27 50.6	14 5.9	23 24.8	
12 16.2	2 28.4	25 48.4	12 28.3	22 19.0	42	13 9.8	3 24.4	26 59.6	13 54.6	23 31.8	
12 1.7	1 56.1	24 54.8	12 15.4	22 26.0	43	12 55.2	2 51.9	26 6.0	13 42.7	23 39.1	
11 46.7	1 22.6	23 58.6	12 1.6	22 33.2	44	12 40.1	2 18.3	25 9.7	13 30.0	23 46.7	
11 31.2	0 47.8	22 59.6	11 47.0	22 40.8	45	12 24.4	1 43.3	24 10.7	13 16.6	23 54.7	
11 15.1	0 11.6	21 57.6	11 31.5	22 48.8	46	12 8.2	1 6.8	23 8.6	13 2.2	24 3.0	
10 58.3	29 33.8	20 52.3	11 14.9	22 57.1	47	11 51.2	0 28.9	22 3.1	12 46.9	24 11.8	
10 40.8	28 54.4	19 43.6	10 57.2	23 5.9	48	11 33.6	29 49.3	20 54.1	12 30.5	24 20.9	
10 22.6	28 13.3	18 31.0	10 38.2	23 15.1	49	11 15.3	29 7.8	19 41.2	12 13.0	24 30.7	
10 3.6	27 30.2	17 14.4	10 17.7	23 24.8	50	10 56.0	28 24.4	18 24.1	11 54.1	24 40.9	
9 43.7	26 45.1	15 53.4	9 55.6	23 35.2	51	10 36.0	27 38.9	17 2.5	11 33.7	24 51.7	
9 22.8	25 57.6	14 27.7	9 31.6	23 46.1	52	10 14.9	26 51.1	15 36.0	11 11.5	25 3.2	
9 0.8	25 7.7	12 56.8	9 5.5	23 57.7	53	9 52.7	26 0.8	14 4.2	10 47.3	25 15.5	
8 37.7	24 15.1	11 20.4	8 36.9	24 10.2	54	9 29.3	25 7.6	12 26.8	10 20.9	25 28.5	
8 13.3	23 19.5	9 38.1	8 5.4	24 23.5	55	9 4.7	24 11.5	10 43.2	9 51.8	25 42.5	
7 47.5	22 20.6	7 49.4	7 30.7	24 37.7	56	8 38.5	23 11.9	8 53.1	9 19.7	25 57.4	
7 20.0	21 18.2	5 54.0	6 52.0	24 53.0	57	8 10.7	22 8.8	6 55.9	8 43.9	26 13.6	
6 50.7	20 11.8	3 51.3	6 8.6	25 9.7	58	7 41.1	21 1.5	4 51.2	8 3.8	26 31.0	
6 19.4	19 1.0	1 40.9	5 19.7	25 27.7	59	7 9.4	19 49.7	2 38.4	7 18.5	26 50.0	
5 46.0	17 45.2	29 22.4	4 24.0	25 47.3	60	6 35.5	18 32.9	0 17.3	6 26.9	27 10.6	
5	6	Descendant	8	9	SOUTH Geographic Latitude	5	6	Descendant	8	9	
Midheaven (M.C. or 10th Cusp)						Midheaven (M.C. or 10th Cusp)					
Sidereal Time			3 <sup>h</sup> 12 <sup>m</sup> 0 <sup>s</sup>			Sidereal Time			3 <sup>h</sup> 16 <sup>m</sup> 0 <sup>s</sup>		
Right Ascension		48° 0' 0"		Right Ascension		49° 0' 0"		Geocentric Longitude		Geocentric Longitude	
Geocentric Longitude		ℳ	20° 26' 27"	ℳ	21° 25' 36"	ℳ	21° 25' 36"	ℳ	21° 25' 36"	ℳ	21° 25' 36"

## TABLE OF HOUSES FOR LATITUDES 22° TO 56°.

45

## UPPER MERIDIAN, CUSP OF 10th H.

 43  
or  
47

H. M. S.					H. M. S.					H. M. S.					H. M. S.					H. M. S.																	
SID. T.	14	54	7	{ m	14	58	7	{ m	17°	15	2	8	{ m	18°	15	6	10	{ m	19°	15	10	12	{ m	20°	15	14	16	{ m	21°								
ARC	223°	31'.	8	} 16°	224°	31'.	9	} 17°	225°	32'.	1	} 18°	226°	32'.	5	} 19°	227°	33'.	1	} 20°	228°	33'.	9	} 21°													
Lat.	11	12	1	2	3	11	12	1	2	3	11	12	1	2	3	11	12	1	2	3	11	12	1	2	3	11	12										
22	11.9	6.3	3	1	9.8	15.6	12.8	7.2	4	6	11.0	16.7	13.7	8.1	5	11	12.3	17.9	14.6	9.1	6	17	13.5	19.0	15.5	10.0	7	24	14.7	20.2	16.5	11.0	8	32	16.0	21.3	
23	7	0	2	33	7	7	6	6.9	3	39	10.9	8	6	7.8	4	45	1	9	5	8.8	5	51	4	1	4	9.7	6	58	6	2	3	10.7	8	6	15.9	4	
24	6	5.6	2	5	6	7	5	6	3	11	8	8	4	5	4	17	0	18.0	3	5	5	24	3	1	2	4	6	31	5	3	2	4	7	39	8	4	
25	4	3	1	37	4	8	3	2	2	42	7	9	3	2	3	49	11.9	1	2	1	4	56	1	2	1	1	6	3	4	3	0	0	0	7	12	7	5
26	11.3	0	1	7	9.3	15.8	2	5.9	2	13	5	9	1	6.8	3	20	8	1	0	7.8	4	27	0	3	14.9	8.7	5	35	14.3	20.4	15.9	9.7	6	43	6	6	
27	1	4.6	0	37	1	9	0	6	1	43	10.4	17.0	12.9	5	2	50	6	2	13.9	4	3	57	12.9	19.3	8	4	5	5	2	5	7	4	6	14	5	21.6	
28	0	3	0	6	0	9	11.9	2	1	12	2	1	8	1	2	19	.5	2	7	1	3	27	8	4	6	0	4	35	1	6	5	0	5	44	15.4	7	
29	10.8	3.9	29	34	8.8	16.0	7	4.9	0	40	1	1	6	5.8	1	47	11.4	18.3	5	6.7	2	55	7	5	4	7.7	4	4	13.9	6	4	8.7	5	13	3	8	
30	6	6	29	0	7	0	5	5	0	7	0	2	4	4	1	14	2	4	4	4	2	23	5	5	3	3	3	31	8	20.7	2	3	4	41	1	9	
31	5	2	28	26	5	1	4	1	29	33	9.8	2	3	1	0	41	1	4	2	0	1	49	12.4	6	1	0	2	58	7	8	0	7.9	4	8	0	9	
32	3	2.8	27	51	3	1	2	3.8	28	58	6	17.3	1	4.7	0	6	10.9	5	0	5.6	1	14	2	19.7	13.9	6.6	2	23	6	9	14.8	5	33	14.9	22.0		
33	1	4	27	15	1	2	0	4	28	22	4	4	4	11.9	3	29	30	8	6	12.8	2	0	39	1	7	7	2	1	48	13.4	9	7	1	2	58	8	1
34	9.9	0	26	37	7.9	16.3	10.8	0	27	44	3	5	7	3.9	28	52	6	18.6	6	4.8	0	1	11.9	8	6	5.8	1	11	3	21.0	5	6.7	2	21	6	2	
35	7	1.6	25	58	7	3	6	2.6	27	5	1	5	5	5	2	58	14	4	7	4	29	23	8	9	4	4	0	33	1	1	3	3	1	43	5	3	
36	5	2.25	18	5	4	4	1	26	25	8.9	6	3	1	27	34	2	7	2	0	28	42	6	20.0	2	4.9	29	53	12.9	2	1	5.9	1	4	14.3	4		
37	3	0.8	24	36	3	5	2	1.7	25	44	7	17.7	1	2.6	26	52	0	8	0	3.6	28	1	4	1	0	5	29	11	8	3	13.9	4	0	23	22.5		
38	1	3	23	52	1	6	0	2	25	0	4	8	10.9	2	26	8	9.8	9	11.8	1	27	17	2	2	12.8	0	28	28	6	4	7	0	29	40	0	6	
39	8.9	29.8	23	7	6.8	16.6	9.8	0.8	24	15	2	8	7	1.7	25	23	6	19.0	6	2.6	26	32	0	3	5	3.6	27	43	4	21.5	5	4.5	28	55	13.8	7	
40	7	4	22	20	6	7	6	3	23	28	0	9	5	2	24	36	4	1	4	1	25	46	10.8	4	3	1	26	56	2	6	2	0	28	8	6	8	
41	5	28.9	21	31	3	8	4	29.8	22	39	7.7	18.0	3	0.7	23	47	1	2	2	1.6	24	57	5	20.5	1	2.6	26	7	0	7	0	3.5	27	19	4	9	
42	3	4	20	40	0	9	2	3	21	47	5	1	1	2	22	56	8.9	3	0	1	24	6	3	6	11.9	0	25	16	11.8	8	12.8	0	26	28	2	23.0	
43	0	27.8	19	47	5.7	17.0	8.9	28.7	20	54	2	2	9.8	29.7	22	2	7	4	10.7	0.6	23	12	1	7	6	1.5	24	22	6	9	5	2.4	25	34	0	2	
44	7.8	3	18	51	4	1	7	2	19	58	6.9	3	6	1	21	6	4	19.5	5	0	22	16	9.9	8	4	0.9	23	26	3	22.1	3	1.8	24	38	12.8	3	
45	5	26.7	17	53	2	1	4	27.6	19	0	7	4	3	28.5	20	8	1	6	2	29.4	21	17	6	21.0	1	3	22	27	1	2	0	3	23	39	5	5	
46	2	1	16	51	4.9	2	1	0	17	58	4	18.5	0	27.9	19	6	7.8	7	9.9	28.8	20	15	3	1	10.9	29.7	21	25	10.8	4	11.7	0.7	22	36	3	23.6	
47	0	25.5	15	47	5	3	7.9	26.4	16	54	1	6	8.8	3	18	1	5	9	7	2	19	10	0	2	6	1	20	20	5	5	4	0	21	31	0	7	
48	6.8	24.9	14	40	1	17.5	6	25.8	15	46	5.7	7	5	26.7	16	53	1	20.0	4	27.6	18	1	8.7	3	3	28.5	19	11	2	22.6	1	29.4	20	22	11.7	8	
49	5	2	13	30	3.7	6	3	1	14	35	3	9	2	0	15	42	6.7	2	1	26.9	16	50	3	21.5	0	27.8	17	59	9.9	7	10.8	28.7	19	9	4	24.0	
50	2	23.5	12	16	2	7	0	24.4	13	20	4.8	19.0	7.9	25.3	14	26	3	3	8.8	2	15	34	7.9	6	9.7	1	16	42	5	9	5	0	17	52	1	2	
51	5.8	22.8	10	57	2.7	8	6.6	23.7	12	2	3	2	6	24.6	13	7	5.9	5	5	25.5	14	14	5	8	4	26.4	15	22	1	23.1	2	27.3	16	31	10.7	4	
52	5	0	9	35	2	18.0	3	22.9	10	39	3.8	4	3	23.8	11	43	4	7	1	24.7	12	49	0	22.0	0	25.6	13	56	8.7	3	9.9	26.5	15	5	3	6	
53	2	21.2	8	8	1.6	1	0	1	9	11	2	5	6.9	0	10	15	4.9	9	7.8	23.9	11	19	6.5	1	8.6	24.7	12	26	2	4	5	25.6	13	33	9.9	8	
54	4.8	20.4	6	37	0.9	3	5.7	21.3	7	38	2.6	7	5	22.1	8	41	3	21.0	4	0	9	44	5.9	3	2	23.8	10	50	7.7	6	1	24.7	11	56	4	25.0	
55	4	19.5	5	0	2	4	3	20.4	6	0	1.9	8	1	12.1	2	7	3.6	1	0	22.1	8	4	3	5	7.8	22.9	9	8	1	8	8.7	23.8	10	13	8.9	2	
56	0	18.6	3	18	29.3	6	4.9	19.4	4	17	1	20.0	5.6	20.2	5	16	2.8	3	6.6	21.1	6	17	4.6	7	4	21.9	7	20	6.4	24.0	2	22.8	8	24	3	4	

## **Placidus Table of Houses for Latitudes 0° to 60° North**

14h 56m 0s					224° 0' 0"					15h 0m 0s					225° 0' 0"					15h 4m 0s					226° 0' 0"													
16h 8m 28s					17h 8m 28s					18h 8m 28s					19h 8m 27s					15h 8m 0s					227° 0' 0"													
11	12	ASC	2	3	11	12	ASC	2	3	11	12	ASC	2	3	11	12	ASC	2	3	11	12	ASC	2	3	11	12	ASC	2	3									
15h16	12h53	11h23	12h39	15h12	16h11	13h49	12h32	13h43	16h17	0	17h7	14h44	13h32	14h48	17h21	16h2	15h40	14h32	15h53	18h40	17h23	14h22	13h1	15h31	18h40	17h26												
14 37	11 35	9 57	12 12	15 24	15 33	12 30	10 58	13 18	16 29	5	16 28	13 26	11 59	14 25	17 34	16 44	13 22	12 6	17 48	16 44	14 13	11 23	15 8	18 54	16 31	13 39	14 43	19 9	19 26									
13 58	10 48	8 15	11 44	15 36	14 53	11 10	9 17	12 10	16 42	14 13	9 46	7 29	12 23	16 55	15 18	8 10	8 42	8 32	13 33	18 2	15 18	10 10	7 39	15 8	18 54	16 31	13 39	14 43	19 9	19 26								
13 18	8 50	6 25	11 13	15 48	12 36	4 24	10 40	16 2	13 31	8 17	5 29	11 51	17 17	10 20	14 26	9 13	6 34	13 3	18 18	15 12	9 51	7 14	14 9	19 29	15 3	9 33	6 48	14 3	19 32									
12 27	7 3	3 58	10 32	16 5	12 18	6 44	3 31	10 25	16 8	12 19	7 39	5 3	11 44	17 13	21	14 17	8 55	6 8	12 56	18 21	15 12	9 51	7 14	14 9	19 29	15 3	9 33	6 48	14 3	19 32								
12 18	6 44	3 31	10 25	16 8	12 26	5 25	3 4	10 17	16 11	13 13	7 40	4 37	11 37	17 16	22	14 8	8 36	5 42	12 50	18 24	14 84	9 13	6 22	13 56	19 36	14 84	9 13	6 22	13 56	19 36								
12 0	6 5	2 36	10 9	16 14	11 51	5 45	2 8	10 1	16 17	12 55	7 1	3 42	11 23	17 23	24	13 50	7 57	4 48	12 36	18 31	14 43	8 54	5 54	13 50	19 43	14 35	8 34	5 27	13 43	19 43								
11 42	5 25	1 38	9 53	16 20	11 32	5 1	8 9	44	16 23	11 37	6 21	2 44	11 7	17 29	26	13 31	7 17	3 51	12 22	18 38	14 26	8 14	4 58	13 36	19 47	14 26	8 14	4 58	13 36	19 47								
11 32	5 1	8 9	44	16 23	11 23	4 44	0 37	9 25	16 27	12 27	6 1	2 14	10 59	17 33	27	13 22	6 57	3 21	12 14	18 42	14 16	7 53	4 28	13 29	19 51	13 25	6 3	1 46	12 50	20 17								
11 13	4 22	0 5	9 26	16 30	10 9	2 26	3 8	10 29	16 34	11 57	4 56	0 39	10 33	17 44	30	12 52	6 52	1 46	11 50	18 54	13 56	7 11	3 27	13 14	19 59	13 46	6 49	2 54	13 6	20 4								
10 53	3 38	26 58	9 7	16 37	10 42	3 15	23 28	16 41	11 47	4 34	0 5	10 24	17 48	31	12 41	5 30	1 13	11 41	18 88	13 36	6 26	2 21	12 58	20 8	13 25	6 3	1 46	12 50	20 17									
10 42	3 15	23 28	16 41	11 37	10 32	2 51	27 47	8 46	11 26	3 47	28 54	10 4	17 56	33	12 31	5 7	0 38	11 32	19 2	13 14	5 39	1 10	12 41	20 17	12 16	3 31	2 27	5 11	20 42									
10 21	2 27	27 27	9 8	35 16	10 21	1 27	23 39	7 32	11 15	3 23	28 17	9 5	16 0	34	12 9	4 19	29 25	11 13	19 11	13 3	5 15	0 33	12 32	20 22	12 52	4 50	29 53	12 23	20 27									
9 9	2 37	25 50	8 12	16 57	9 46	1 11	25 57	17 1	10 40	2 6	26 16	9 20	18 13	37	11 22	3 27	2 24	10 22	19 25	12 40	4 24	29 15	12 13	20 32	13 25	6 3	1 46	12 50	20 17									
9 9	29 48	22 52	7 16	17 18	10 40	2 6	25 32	32	10 3	1 39	25 32	9 8	18 18	38	11 22	2 35	26 41	10 29	19 30	12 16	3 31	27 50	11 51	20 42	12 3	3 32	7 5	11 40	20 48									
8 56	29 18	22 22	3 7	17 21	8 42	28 47	21 12	6 47	17 26	9 36	29 42	22 20	8 12	18 39	42	10 29	0 37	23 29	9 37	19 53	11 23	1 33	24 38	11 21	21 6	11 22	20 48	13 25	6 3	1 46	12 50	20 17						
8 28	26 19	20 19	6 30	30 31	8 28	26 19	23 10	21 26	7 56	1 29	20 31	20 31	7 39	18 51	44	10 18	0 5	22 35	9 22	19 59	11 8	1 23	24 44	10 48	21 13	13 25	6 3	1 46	12 50	20 17								
8 14	27 43	19 23	6 12	17 37	7 59	19 18	25 5	54	17 43	8 52	28 3	19 32	7 21	18 58	45	9 48	28 58	20 40	8 49	20 12	10 50	2 34	26 16	11 21	28 20	12 25	5 24	1 21	10 34	21 20								
7 43	26 34	17 23	5 33	17 49	7 27	26 27	18 30	7 2	19 5	8 20	26 51	51	17 26	6 42	19 12	47	9 12	27 45	18 34	8 12	20 27	10 5	28 39	19 42	9 43	21 42	13 21	5 1	1 21	13 34								
7 27	25 55	16 19	5 12	17 56	6 47	23 19	11 9	4 5	16 36	7 32	26 51	12 18	19 19	48	8 55	27 27	6 1	17 26	5 2	20 35	9 48	26 0	18 34	9 21	21 51	13 25	6 3	1 46	12 50	20 17								
7 10	25 18	15 12	4 49	18 3	6 45	23 22	10 21	26	5 56	4 45	23 22	10 21	26	5 56	43	10 18	0 5	22 35	9 22	19 59	11 8	1 23	24 44	10 48	21 13	13 25	6 3	1 46	12 50	20 17								
6 52	24 38	14 1	4 25	18 10	6 34	23 45	13 25	15 7	5 57	19 27	4 53	23 45	13 52	5 32	19 35	50	8 19	23 43	14 58	7 7	20 82	9 11	24 36	16 6	8 42	22 22	13 21	5 1	1 21	13 34								
6 34	23 57	12 47	3 58	18 18	7 26	24 50	13 52	5 32	19 35	50	8 39	20 46	6 30	2 51	20 25	55	6 31	21 37	7 31	4 33	21 44	7 22	22 28	8 34	6 20	23 4	13 21	5 1	1 21	13 34								
6 15	23 13	11 28	3 30	18 26	7 7	24	6 12	33	5	19 44	51	7 59	24 58	13 39	8 31	20 20	10 22	29 17	20 47	10 1	21	34	8 51	25 52	14 45	8 18	22 18	13 21	5 1	1 21	13 34							
5 55	22 27	10 6	2 58	19 35	6 47	23 19	11 9	4 36	13 61	53	52	7 39	24 52	12 14	6 14	21 11	8 31	23 25	14 45	7 24	22 40	9 24	15 11	50	7 24	22 40	9 24	15 11	50	7 24	22 40	9 24	15 11	50				
5 34	21 39	8 38	2 26	18 44	6 25	22 31	9 41	4 4	20 3	53	57	7 17	23 23	10 45	5 58	22 26	6	17 26	5 2	22 26	9 30	27 19	17 22	9 4	21	59	7 24	22 40	9 24	15 11	50	7 24	22 40	9 24	15 11	50		
5 12	20 48	7 6	1 49	18 54	6 3	21 40	8 8	3	20 30	13 54	6 55	6 55	23 21	9 11	11 21	33	7 46	23 24	10 15	6 54	23 24	7 26	22 28	8 34	6 20	23 4	13 21	5 1	1 21	13 34								
4 48	18 59	3 46	0 24	19 16	5 15	19 49	4 45	2	9	20 37	56	6 5	20 39	5 46	3 55	21 57	6 56	21 30	6 47	5 42	23 18	6 56	21 30	6 47	5 42	23 18	6 56	21 30	6 47	5 42	23 18							
5 58	17 59	1 58	29 53	19 28	4 48	18 49	2 55	1	22	20 49	57	5 59	19 38	3 84	3 11	22 11	6 29	20 28	4 53	5 1	23	48	6 29	20 28	4 53	5 1	23	48	6 29	20 28	4 53	5 1	23	48				
3 30	16 56	0 3	28 40	19 41	4 20	17 45	0 58	0 30	21 3	58	5 10	18 33	1 55	2 22	22 26	6	0 19	22 22	3 22	4 15	23 48	5 30	18 12	0 44	3 22	4 15	23 48	5 30	18 12	0 44	3 22	4 15	23 48					
3 0	15 49	28d	1 27	37 19 55	3 50	16 37	28d	25	21	19 55	3 50	16 37	28d	24	21	19 55	6 0	4x7	16 11	27 36	0 22	23 0	4x7	16 11	27 36	0 22	23 0	4x7	16 11	27 36	0 22	23 0	4x7	16 11	27 36	0 22	23 0	4x7
2 29	14d38	25d53	26d26	20d10	3x18	15d24	26d44	28d24	21	735	60	4x7	16 11	27 36	0 22	23 0	4x7	16 11	27 36	0 22	23 0	4x7	16 11	27 36	0 22	23 0	4x7	16 11	27 36	0 22	23 0	4x7						

APRIL 1975

## LONGITUDE

Day	Sid. Time	○	D	D 12 Hour	Mean ○	True ○	♀	♀	♂	♀	♀	♀	♀	♀	♀	♀	♀	♀
1	12 34 56	10T 38 38	11° 4 57	17° 38 24	3° 50	2° 10	23M 49	148	21° 46	3T 13	12S 14	18 17R	11° 43R	7° 49R				
2	12 38 53	11 37 50	24 5 33	05 26 55	2 46	2 25	25 33	15 48	3 27	3 27	12 16	1 15	11 42	7 47				
3	12 42 49	12 37 1	68 43 3	12 54 31	3 43	2 12R	27 18	16 59	18	3 42	12 18	1 12	11 42	7 46				
4	12 46 46	13 36 10	19 1 58	25 5 59	3 40	2 12	29 4	18 11	24 3	3 56	12 20	1 10	11 41	7 44				
5	12 50 42	14 35 17	12 7 11	7M 6 9	3 37	2 10	0T 52	19 23	24 49	4 11	12 23	1 8	11 40	7 42				
6	12 54 39	15 34 22	13 3 29	18 59 40	3 34	2 7	2 41	20 35	25 35	4 25	12 25	1 5	11 40	7 41				
7	12 58 33	16 33 26	24 55 13	00 50 36	3 30	2 1	4 32	21 46	26 20	4 40	12 27	1 3	11 39	7 39				
8	13 2 32	17 32 27	6X 46 13	12 42 26	3 27	1 54	6 24	22 58	27 6	4 54	12 30	1 0	11 38	7 37				
9	13 6 20	18 31 27	18 39 34	24 37 54	3 24	1 46	8 18	24 9	27 52	5 5	12 33	0 58	11 37	7 34				
10	13 10 25	19 30 25	07 37 42	6T 39 9	3 21	1 38	10 13	25 20	28 38	5 23	12 36	0 55	11 37	7 33				
11	13 14 22	20 29 21	12 42 27	18 47 45	3 18	1 30	9 26	31 29	23 51	5 37	12 39	0 53	11 36	7 33				
12	13 18 18	21 28 15	24 55 11	18 4 53	3 15	1 23	14 7	27 43	0K 9	5 51	12 42	0 50	11 35	7 31				
13	13 22 15	22 27 6	78 16 59	13 31 36	3 11	1 19	16 6	28 84	0 55	6 5	12 45	0 48	11 34	7 29				
14	13 26 11	23 25 56	19 48 53	08 5 59	3 8	1 16D	18 7	0K 5	1 40	6 20	12 48	0 45	11 33	7 28				
15	13 30 8	24 44 4	20 22 4	0II 58 18	3 5	1 15	20 9	1 15	2 26	6 34	12 51	0 43	11 32	7 26				
16	13 34 4	23 30 15	15 27 55	22 1 6	3 2	1 16	22 12	2 26	3 12	6 40	12 55	0 40	11 31	7 25				
17	13 38 1	26 22 13	28 38 4	58 19 3	2 59	1 18	24 17	3 37	3 58	7 2	12 58	0 38	11 30	7 23				
18	13 41 57	27 20 53	12S 4 13	18 53 44	2 56	1 19	26 22	4 47	4 43	7 16	13 2	0 35	11 29	7 21				
19	13 45 54	28 19 34	25 47 43	20 46 14	2 82	1 20R	28 28	5 58	8 29	7 30	13 6	0 32	11 28	7 20				
20	13 49 51	29 18 11	9R 49 12	16 56 31	2 49	1 20	08 35	7 8	6 15	7 44	13 9	0 30	11 27	7 18				
21	13 53 47	08 16 45	24 7 53	18 22 58	2 46	1 18	2 43	8 19	7 0	7 58	13 13	0 27	11 26	7 17				
22	13 57 44	15 17 1	89 41 12	16 1 50	2 43	1 15	4 51	9 29	7 46	8 12	13 17	0 25	11 25	7 15				
23	14 1 40	15 40 2	13 40 23	24 30 40	2 40	1 11	6 58	10 39	8 32	8 26	13 21	0 22	11 24	7 14				
24	14 5 37	12 15 15	85 11 22	15 33 49	2 36	1 7	9 6	11 49	9 17	8 40	13 25	0 20	11 22	7 12				
25	14 9 33	10 41 22	22 54 21	08 12 1	2 33	1 4	11 13	12 58	10 3	8 54	13 30	0 17	11 21	7 11				
26	14 13 30	5 9 6	78 26 0	14 35 32	2 30	1 1	13 20	14 8	10 49	9 7	13 34	0 15	11 20	7 10				
27	14 17 26	6 7 28	21 40 2	28 30 59	2 27	1 0D	15 25	15 18	11 34	9 21	13 38	0 12	11 19	7 8				
28	14 21 23	7 5 40	52 32 5	12 19 9	2 24	1 0	17 29	16 27	12 20	9 35	13 43	0 9	11 17	7 7				
29	14 25 20	8 4 7	19 0 6	25 35 3	2 21	1 1	19 31	17 37	13 5	9 49	13 47	0 7	11 16	7 5				
30	14 29 16	9 8 2 25	23 4 11	83 27 48	1 17	1 218 31	18H 46	13M 51	10T 2	13S 52	0 4	11R 15	7A 4					

## DECLINATION and LATITUDE

Day	○	D	D 12 Hr.	♀	♀	♂	♀	♀	♀	♀	♀	♀	♀	♀	♀	♀	♀	♀		
1	Dec 13	21S19	0R48	21S30	4S35	2S19	16N49	0R37	15S25	1914	0R17	18 5	22N40	0913	1 1824	0N34	20S30	1RN35		
2	4 36	21 24	1 53 21	0 3 53	2 17	13 0 40	15 10 1	1 14	0 23	1 14	22 40	0 15	20 36	1 13	1 20 35	1 25 17	20 36	1 25 17		
3	4 59	20 22	2 55 19	3 9 2	15 27	0 37 4	14 56	0 29	5 22	40 0	12	13 11	0 10	20 35	1 36	1 25 16	1 25 16	1 25 16		
4	5 22	18 23	3 45 17	3 2 24	2 13	17 60	0 47	14 41	1 15	0 35	5 22	40 0	1 16	20 34	1 36	1 25 15	1 25 15	1 25 15		
5	5 45	15 37	4 24 13	1 30 20	3 0	12 27	1 14	20 40	1 11	2 22	40 0	1 12	21 11	0 10	20 34	1 36	1 25 14	1 25 14	1 25 14	
6	6 8	12 14	4 51 10	22 0 51	2 6	18 45	0 53	14 12	1 17	0 46	1 22	40 0	1 12	25 11	0 11	22 39	0 11	22 39	0 11	
7	6 31	8 25	5 6 6	22 0 42	0 4 2	19 7	0 57	13 67	1 17	0 52	1 22	39 0	1 12	22 39	0 12	22 39	0 12	22 39	0 12	
8	6 53	4 16	5 7 2	8 2 8	0N45	1 57 2	19 29	60 10	13 42	1 18	0 57	1 22	39 0	1 12	22 39	0 12	22 39	0 12	22 39	0 12
9	7 16	0N 2	4 53 25	2N13	1 34	52 19	50 1	3 13	27 1	1 18	1 31	22	39 0	1 12	22 39	0 12	22 39	0 12	22 39	0 12
10	7 38	4 23	4 30 6	30 2 25	2 25	1 46	20 10	1 6	13 11	1 19	1 9 1	22	39 0	1 12	22 39	0 12	22 39	0 12	22 39	0 12
11	8 0	8 35	3 53 10	36 1 36	3 16	1 40 20	30 1	9 12	12 56	1 20	1 14 1	22	39 0	1 12	22 39	0 12	22 39	0 12	22 39	0 12
12	8 22	12 30	3 4 18	4 8 1	2 8	33 20	50 1	12 12	40 1	2 20	1 20 1	5 22	39 0	1 12	22 39	0 12	22 39	0 12	22 39	0 12
13	8 44	15 56	2 7 17	25 5 1	1 26	21 8	1 15	12 24	1 21	1 25	1 22	39 0	1 11	22 38	0 11	22 38	0 11	22 38	0 11	
14	9 6	18 41	1 2 19 43	5 54	1 19 21	27 1	18 12	9 21	2 1	21	1 31 1	5 22	38 0	1 10	22 36	0 10	22 36	0 10	22 36	0 10
15	9 28	20 33	0 7 21 7	6 47	1 11 21	45 2	11 22	1 53	2 22	1 36	1 22	38 0	1 9	22 36	0 9	22 36	0 9	22 36	0 9	
16	9 49	21 23	1 17 21	22 7	4 1	2 22 2	2 1	25	1 37	2 1	2 42	1 22	38 0	1 8	22 36	0 8	22 36	0 8	22 36	0 8
17	10 11	19 30	2 2 24	22 25	8 36	0 53 22	19 1	28 1	1 21	2 1	2 47	1 23	38 0	1 7	22 35	0 7	22 35	0 7	22 35	0 7
18	10 32	19 30	3 24 18	9 30	0 44	22 35	1 30	11 4	1 23	1 53	1 23	2 35	1 22	37 0	1 6	22 35	0 6	22 35	0 6	
19	10 53	16 49	4 15 5	10 50	4 54	1 24 1	10 14	1 45	2 35	1 25	2 42	1 23	35 0	1 5	22 34	0 5	22 34	0 5	22 34	0 5
20	11 14	13 7	4 51 10	18 24	5 1	1 36	10 32	1 24	2 4	1 24	2 49	1 22	37 0	1 4	22 33	0 4	22 33	0 4	22 33	0 4
21	11 34	8 36	5 10 6	12 20	2 30	1 39	10 15	1 25	2 9	1 25	2 37	1 23	36 0	1 3	22 32	0 3	22 32	0 3	22 32	0 3
22	11 53	3 31 0	10 0 52	13 5 3	3 30 23	3 23 1	42 9	5 1	2 15	2 15	2 36	1 22	36 0	1 2	22 31	0 2	22 31	0 2	22 31	0 2
23	12 15	1S49	4 49 4	4S29	13 58	0N 8	23 46	1 45	9 42	1 26	2 20	1	6 22	36 0	1 10	21 24	0 10	21 24	0 10	
24	12 35	7 4 10	4 10 9	19 34	4 49 0	19 23	59 1	47	9 25	1 26	2 26	1	6 22	36 0	1 9	21 23	0 9	21 23	0 9	
25	12 55	11 54 3	13 0 40	24 11	5 0	9 50	9 17	2 27	2 31	2 31	2 31	1	6 22	35 0	1 8	21 22	0 8	21 22	0 8	
26	13 14	15 58	2 6 17	38	16 29 0	40 2	1 53	8 52	1 27	2 36	1	6 22	35 0	1 7	21 21	0 7	21 21	0 7		
27	13 34	19 0	0 51 20	4 51	24 32	1 55	8 35	1 28	2 42	1	6 22	35 0	1 6	22 34	0 6	22 34	0 6	22 34	0 6	
2																				

T	N	M
S	X	
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0 0 0	0 0 0	30 00
10 0	0 0 4	50
20 0	0 0 8	40
30 0	0 1 2	30
40 0	0 1 5	20
50 0	0 1 9	10
1 0 0	0 2 3	29 00
10 0	0 2 7	50
20 0	0 3 1	40
30 0	0 3 5	30
40 0	0 3 9	20
50 0	0 4 3	10
2 0 0	0 4 7	28 00
10 0	0 5 1	50
20 0	0 5 5	40
30 1	0 0 0	30
40 1	0 0 4	20
50 1	0 0 8	10
3 0 0	1 1 2	27 00
10 1	1 1 6	50
20 1	1 2 0	40
30 1	1 2 4	30
40 1	1 2 8	20
50 1	1 3 2	10
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20 2	0 0 7	40
30 2	0 1 1	30
40 2	0 1 5	20
50 2	0 1 9	10
6 0 0	2 2 3	24 00

T	N	M
S	X	
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6 0 0	2 2 3	24 00
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20 2	2 3 1	40
30 2	2 3 5	30
40 2	2 3 9	20
50 2	2 4 3	10
7 0 0	2 4 7	23 00
10 2	2 5 1	50
20 2	2 5 5	40
30 2	2 5 9	30
40 3	0 0 3	20
50 3	0 0 7	10
8 0 0	3 1 1	22 00
10 3	3 1 5	50
20 3	3 1 9	40
30 3	3 2 3	30
40 3	3 2 7	20
50 3	3 3 1	10
9 0 0	3 3 4	21 00
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40 3	3 5 0	20
50 3	3 5 4	10
10 0 0	3 5 8	20 00
10 4	0 2	50
20 4	0 6	40
30 4	1 0	30
40 4	1 4	20
50 4	1 8	10
11 0 0	4 2 2	19 00
10 4	2 6	50
20 4	2 9	40
30 4	3 3	30
40 4	3 7	20
50 4	4 1	10
12 0 0	4 4 5	18 00

T	N	M
S	X	
0 0 0	0 0 0	0 0 0
12 0 0	4 4 5	18 00
10 4	4 4 9	50
20 4	4 5 3	40
30 4	4 5 7	30
40 5	0 0 1	20
50 5	0 0 4	10
13 0 0	5 0 8	17 00
10 5	1 2	50
20 5	1 6	40
30 5	2 0	30
40 5	2 4	20
50 5	2 8	10
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10 5	3 6	50
20 5	4 0	40
30 5	4 3	30
40 5	4 7	20
50 5	5 1	10
15 0 0	5 5 5	15 00
10 5	5 5 9	50
20 6	0 3	40
30 6	0 6	30
40 6	1 0	20
50 6	1 4	10
16 0 0	6 1 8	14 00
10 6	2 2	50
20 6	2 6	40
30 6	2 9	30
40 6	3 3	20
50 6	3 7	10
17 0 0	6 4 1	13 00
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20 6	4 9	40
30 6	5 2	30
40 6	5 6	20
50 7	0 0	10
18 0 0	7 0 4	12 00

T	N	M
S	X	
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18 0 0	7 0 4	12 00
10 7	0 8	50
20 7	1 2	40
30 7	1 5	30
40 7	1 9	20
50 7	2 3	10
19 0 0	7 2 7	11 00
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10 7	5 3	50
20 7	5 6	40
30 8	0 0	30
40 8	0 3	20
50 8	0 7	10
21 0 0	8 1 1	9 00
10 8	1 5	50
20 8	1 9	40
30 8	2 2	30
40 8	2 6	20
50 8	3 0	10
22 0 0	8 3 4	8 00
10 8	3 8	50
20 8	4 2	40
30 8	4 5	30
40 8	4 9	20
50 8	5 3	10
23 0 0	8 5 6	7 00
10 9	0 0	50
20 9	0 4	40
30 9	0 8	30
40 9	1 2	20
50 9	1 6	10
24 0 0	9 1 9	6 00

T	N	M
S	X	
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24 0 0	9 1 9	6 00
10 9	2 2	50
20 9	2 6	40
30 9	3 0	30
40 9	3 3	20
50 9	3 7	10
25 0 0	9 4 1	5 00
10 9	4 5	50
20 9	4 8	40
30 9	5 1	30
40 9	5 5	20
50 9	5 9	10
26 0 0	10 0 2	4 00
10 10	0 5	50
20 10	0 9	40
30 10	1 3	30
40 10	1 7	20
50 10	2 1	10
27 0 0	10 2 5	3 00
10 10	2 8	50
20 10	3 1	40
30 10	3 5	30
40 10	3 9	20
50 10	4 3	10
28 0 0	10 4 6	2 00
10 10	4 9	50
20 10	5 3	40
30 10	5 7	30
40 11	0 1	20
50 11	0 4	10
29 0 0	11 0 7	1 00
10 11	1 0	50
20 11	1 4	40
30 11	1 7	30
40 11	2 1	20
50 11	2 5	10
30 0 0	11 2 8	0 00

S	N	R
TTR	S	X
0 0 0	0 0 0	0 0 0
0 0 0	1 2 8	30 00
10 11	3 1	50
20 11	3 5	40
30 11	3 8	30
40 11	4 1	20
50 11	4 5	10
1 0 0	1 4 9	29 00
10 11	5 3	50
20 11	5 7	40
30 12	0 0	30
40 12	0 4	20
50 12	0 8	10
2 0 0	1 2 11	28 00
10 12	1 4	50
20 12	1 7	40
30 12	2 1	30
40 12	2 4	20
50 12	2 7	10
3 0 0	1 2 31	27 00
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20 12	3 9	40
30 12	4 2	30
40 12	4 5	20
50 12	4 9	10
4 0 0	1 2 52	26 00
10 12	5 5	50
20 12	5 8	40
30 13	0 2	30
40 13	0 5	20
50 13	0 8	10
5 0 0	1 3 12	25 00
10 13	1 5	50
20 13	1 8	40
30 13	2 2	30
40 13	2 5	20
50 13	2 8	10
6 0 0	1 3 32	24 00

T	N	R
S	TTR	X
0 0 0	0 0 0	0 0 0
6 0 0	13 3 2	24 00
10 13	3 5	50
20 13	3 8	40
30 13	4 2	30
40 14	0 0 3	20
50 14	0 4 6	10
7 0 0	13 5 2	23 00
10 13	5 5	50
20 13	5 8	40
30 14	0 2	30
40 14	0 5	20
50 14	0 8	10
8 0 0	14 1 1	22 00
10 14	1 4	50
20 14	1 7	40
30 14	2 1	30
40 14	2 4	20
50 14	2 7	10
9 0 0	14 3 0	21 00
10 14	3 3	50
20 14	3 6	40
30 14	4 0	30
40 14	4 3	20
50 14	4 6	10
10 0 0	14 4 9	20 00
10 14	5 2	50
20 14	5 5	40
30 14	5 8	30
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50 15	0 4	10
11 0 0	15 0 7	19 00
10 15	1 0	50
20 15	1 3	40
30 15	1 7	30
40 15	2 0	20
50 15	2 3	10
12 0 0	15 2 6	18 00

T	N	R
S	TTR	X
0 0 0	0 0 0	0 0 0
12 0 0	15 2 6	18 00
10 15	2 9	50
20 15	3 2	40
30 15	3 6	30
40 15	3 9	20
50 15	4 2	10
13 0 0	15 4 5	17 00
10 15	4 8	50
20 15	5 1	40
30 15	5 4	30
40 15	5 7	20
50 15	6 0	10
14 0 0	16 0 3	16 00
10 16	0 6	50
20 16	0 9	40
30 16	1 2	30
40 16	1 5	20
50 16	1 8	10
15 0 0	16 2 0	15 00
10 16	2 3	50
20 16	2 6	40
30 16	2 9	30
40 16	3 2	20
50 16	3 5	10
16 0 0	16 3 8	14 00
10 16	4 1	50
20 16	4 4	40
30 16	4 7	30
40 16	5 0	20
50 16	5 3	10
17 0 0	16 5 5	13

	N	S	E		N	S	E		N	S	E
	S	S	S		S	S	S		S	S	S
0	0	0	0		0	0	0		0	0	0
0	00	20	09	30	00	6	00	21	18	24	00
10	20	11	50		10	21	20	50		20	22
20	20	13	40		20	21	22	40		40	22
30	20	15	30		30	21	24	30		13	00
40	20	17	20		40	21	26	20		20	22
50	20	19	10		50	21	27	10		40	22
1	00	20	22	29	00	7	00	21	29	23	00
10	20	24	50		10	21	31	50		14	00
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50	20	44	10		50	21	47	10		18	00
3	00	20	46	27	00	9	00	21	48	21	00
10	20	48	50		10	21	50	50		19	00
20	20	50	40		20	21	52	40		30	23
30	20	52	30		30	21	53	30		20	00
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4	00	20	57	26	00	10	00	21	57	20	00
10	20	59	50		10	21	59	50		22	00
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5	00	21	08	25	00	11	00	22	06	19	00
10	21	10	50		10	22	08	50		25	00
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40	21	15	20		40	22	11	20		28	00
50	21	16	10		50	22	13	10		29	00
6	00	21	18	24	00	12	00	22	14	18	00

## Time Zones of the World

STANDARD TIME NAME	ABBREV	MERIDIAN	h =
GREENWICH	GHT	0°W	0
WEST AFRICA	WAT	15	1
AZORES	AT	30	2
BRAZIL ZONE 2		45	3
NEWFOUNDLAND	NST	52°W 30°	3:30
ATLANTIC	AST	60	4
EASTERN	EST	75	5
CENTRAL	CST	90	6
MOUNTAIN	MST	105	7
PACIFIC	PST	120	8
YUKON	YST	135	9
ALASKA-HAWAII	AKST	150	10
HAWAIIAN	HST	157°W 30°	10:30
HOME	NT	165	11
BERING	BST	165	11
INT'L DATE LINE		180°W	12

STANDARD TIME NAME	ABBREV	MERIDIAN	h =
CENTRAL EUROPEAN	CET	15°E	1
MIDDLE EUROPE	MET	15	1
EASTERN EUROPEAN	EET	30	2
BAGHDAD	BT	45	3
USSR ZONE 3		60	4
USSR ZONE 4		75	5
INDIAN	IST	82°E 30°	5:30
USSR ZONE 5		90	6
NORTH SUMATRA	NST	97°E 30°	6:30
SOUTH SUMATRA	SST	105	7
JAVA	JT	112°E 30°	7:30
CHINA COAST	CCT	120	8
JAPAN	JST	135	9
SOUTH AUSTRALIA	SAST	142°E 30°	9:30
GUAM	GST	150	10
NEW ZEALAND	NZT	165	11
		180°E	12

## Solar-Sidereal Time Correction

MIN	0h	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	11h	12h	13h	14h	15h	16h	17h	18h	19h	20h	21h	22h	23h	MIN																																																																																																
0	0 0 0 10 0 20 0 30 0 39 0 49 0 59 1 9 1 19 1 29 1 39 1 48 1 58 2 8 2 18 2 28 2 38 2 48 2 57 3 7 3 17 3 27 3 37 3 47 0	1	0 0 0 10 0 20 0 30 0 40 0 49 0 59 1 9 1 19 1 29 1 39 1 49 1 58 2 8 2 18 2 28 2 38 2 48 2 58 3 7 3 17 3 27 3 37 3 47 1	2	0 0 0 10 0 20 0 30 0 50 0 59 1 9 1 19 1 29 1 39 1 49 1 59 2 8 2 18 2 28 2 38 2 48 2 58 3 8 3 18 3 28 3 38 3 48 2	3	0 0 0 10 0 20 0 30 0 50 0 60 1 9 1 19 1 29 1 39 1 49 1 59 2 9 2 18 2 29 2 38 2 48 2 58 3 8 3 18 3 27 3 37 3 47 3	4	0 0 0 11 0 20 0 30 0 50 0 60 1 10 1 20 1 29 1 39 1 49 1 59 2 9 2 19 2 29 2 39 2 48 2 58 3 8 3 18 3 28 3 37 3 47 4	5	0 0 0 11 0 21 0 30 0 40 0 50 0 60 1 10 1 20 1 30 1 39 1 49 1 59 2 9 2 19 2 29 2 39 2 48 2 58 3 8 3 18 3 28 3 38 3 48 5	6	0 0 0 11 0 21 0 31 0 41 0 50 1 0 1 10 1 20 1 30 1 40 1 49 1 59 2 9 2 19 2 29 2 39 2 49 2 58 3 8 3 18 3 28 3 38 3 48 6	7	0 0 0 11 0 21 0 31 0 41 0 51 1 0 1 10 1 20 1 30 1 40 1 50 1 60 2 9 2 19 2 29 2 39 2 49 2 59 3 8 3 18 3 28 3 38 3 48 7	8	0 0 0 11 0 21 0 31 0 41 0 51 1 1 1 10 1 20 1 30 1 40 1 50 1 60 2 9 2 19 2 29 2 39 2 49 2 59 3 9 3 18 3 28 3 38 3 48 8	9	0 0 0 11 0 21 0 31 0 41 0 51 1 1 1 10 1 20 1 30 1 40 1 50 1 60 2 9 2 19 2 29 2 39 2 49 2 59 3 9 3 19 3 28 3 38 3 48 9	10	0 0 0 11 0 21 0 31 0 41 0 51 1 1 1 10 1 20 1 30 1 40 1 50 1 60 2 9 2 19 2 29 2 39 2 49 2 59 3 9 3 19 3 28 3 38 3 48 10	11	0 0 0 12 0 22 0 31 0 41 0 51 1 1 1 11 1 21 1 31 1 40 1 50 2 0 2 10 2 20 2 30 2 40 2 49 2 59 3 9 3 19 3 29 3 39 3 49 11	12	0 0 0 12 0 22 0 32 0 41 0 51 1 1 1 11 1 21 1 31 1 41 1 50 2 0 2 10 2 20 2 30 2 40 2 50 2 59 3 9 3 19 3 29 3 39 3 49 12	13	0 0 0 12 0 22 0 32 0 42 0 51 1 1 1 11 1 21 1 31 1 41 1 51 2 0 2 10 2 20 2 30 2 40 2 50 2 60 3 9 3 19 3 29 3 39 3 49 13	14	0 0 0 12 0 22 0 32 0 42 0 52 1 1 1 11 1 21 1 31 1 41 1 51 2 1 2 10 2 20 2 30 2 40 2 50 2 60 3 10 3 19 3 29 3 39 3 49 14	15	0 0 0 12 0 22 0 32 0 42 0 52 1 2 1 11 1 21 1 31 1 41 1 51 2 1 2 11 2 20 2 30 2 40 2 50 2 60 3 10 3 20 3 29 3 39 3 49 15	16	0 0 0 12 0 22 0 32 0 42 0 52 1 2 1 12 1 21 1 31 1 41 1 51 2 1 2 11 2 21 2 30 2 40 2 50 3 0 3 10 3 20 3 30 3 39 3 49 16	17	0 0 0 13 0 23 0 32 0 42 0 52 1 2 1 12 1 22 1 32 1 41 1 51 2 1 2 11 2 21 2 31 2 40 2 51 3 0 3 10 3 20 3 30 3 40 3 49 17	18	0 0 0 13 0 23 0 33 0 42 0 52 1 2 1 12 1 22 1 32 1 42 1 51 2 1 2 11 2 21 2 31 2 41 2 51 3 0 3 10 3 20 3 30 3 40 3 50 18	19	0 0 0 13 0 23 0 33 0 43 0 52 1 2 1 12 1 22 1 32 1 42 1 51 2 1 2 11 2 21 2 31 2 41 2 51 3 1 3 11 3 20 3 30 3 40 3 50 19	20	0 0 0 13 0 23 0 33 0 43 0 53 1 2 1 12 1 22 1 32 1 42 1 52 2 2 2 11 2 21 2 31 2 41 2 51 3 1 3 11 3 20 3 30 3 40 3 50 20	21	0 0 0 13 0 23 0 33 0 43 0 53 1 3 1 12 1 22 1 32 1 42 1 52 2 2 2 12 2 21 2 31 2 41 2 51 3 1 3 11 3 21 3 30 3 40 3 50 21	22	0 0 0 13 0 23 0 33 0 43 0 53 1 3 1 13 1 22 1 32 1 42 1 52 2 2 2 12 2 21 2 31 2 41 2 51 3 1 3 11 3 21 3 31 3 40 3 50 22	23	0 0 0 14 0 23 0 33 0 43 0 53 1 3 1 13 1 23 1 32 1 42 1 52 2 2 2 12 2 22 2 32 2 41 2 51 3 1 3 11 3 21 3 31 3 41 3 50 23	24	0 0 0 14 0 24 0 34 0 43 0 53 1 3 1 13 1 23 1 33 1 43 1 52 2 2 2 12 2 22 2 32 2 41 2 52 3 1 3 11 3 21 3 31 3 41 3 51 24	25	0 0 0 14 0 24 0 34 0 44 0 53 1 3 1 13 1 23 1 33 1 43 1 53 2 2 2 12 2 22 2 32 2 42 2 52 3 2 3 11 3 21 3 31 3 41 3 51 25	26	0 0 0 14 0 24 0 34 0 44 0 54 1 3 1 13 1 23 1 33 1 43 1 53 2 2 2 12 2 22 2 32 2 42 2 52 3 2 3 12 3 21 3 31 3 41 3 51 26	27	0 0 0 14 0 24 0 34 0 44 0 54 1 4 1 13 1 23 1 33 1 43 1 53 2 2 2 12 2 22 2 32 2 42 2 52 3 2 3 12 3 22 3 31 3 41 3 51 27	28	0 0 0 14 0 24 0 34 0 44 0 54 1 4 1 14 1 23 1 33 1 43 1 53 2 2 2 12 2 22 2 32 2 42 2 52 3 2 3 13 3 22 3 32 3 41 3 51 28	29	0 0 0 15 0 24 0 34 0 44 0 54 1 4 1 14 1 24 1 33 1 43 1 53 2 2 2 12 2 22 2 32 2 42 2 52 3 2 3 13 3 22 3 32 3 42 3 51 29	30	0 0 0 15 0 24 0 34 0 44 0 54 1 4 1 14 1 24 1 34 1 43 1 53 2 2 2 12 2 22 2 32 2 43 2 52 3 2 3 13 3 22 3 32 3 42 3 51 30	31	0 0 0 15 0 25 0 35 0 45 0 54 1 4 1 14 1 24 1 34 1 44 1 54 2 2 2 13 2 23 2 33 2 43 2 53 3 3 3 12 3 22 3 32 3 42 3 52 31	32	0 0 0 15 0 25 0 35 0 45 0 55 1 4 1 14 1 24 1 34 1 44 1 54 2 2 2 13 2 23 2 33 2 43 2 53 3 3 3 12 3 22 3 32 3 42 3 52 32	33	0 0 0 15 0 25 0 35 0 45 0 55 1 5 1 14 1 24 1 34 1 44 1 54 2 2 2 13 2 23 2 33 2 43 2 53 3 3 3 13 3 22 3 32 3 42 3 52 33	34	0 0 0 16 0 25 0 35 0 45 0 55 1 5 1 15 1 24 1 34 1 44 1 54 2 2 2 13 2 23 2 33 2 43 2 53 3 3 3 13 3 23 3 32 3 42 3 52 34	35	0 0 0 16 0 25 0 35 0 45 0 55 1 5 1 15 1 25 1 34 1 44 1 54 2 2 2 13 2 23 2 33 2 43 2 53 3 3 3 13 3 23 3 32 3 43 3 52 35	36	0 0 0 16 0 26 0 35 0 45 0 55 1 5 1 15 1 25 1 35 1 44 1 54 2 2 2 14 2 24 2 34 2 44 2 52 3 3 3 12 3 22 3 32 3 42 3 52 36	37	0 0 0 16 0 26 0 36 0 46 0 55 1 5 1 15 1 25 1 35 1 45 1 54 2 2 2 14 2 24 2 34 2 44 2 52 3 3 3 12 3 22 3 32 3 42 3 52 37	38	0 0 0 16 0 26 0 36 0 46 0 56 1 5 1 15 1 25 1 35 1 45 1 55 2 2 2 14 2 24 2 34 2 44 2 52 3 3 3 13 3 22 3 32 3 42 3 52 38	39	0 0 0 16 0 26 0 36 0 46 0 56 1 6 1 15 1 25 1 35 1 45 1 55 2 2 2 14 2 24 2 34 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 39	40	0 0 0 17 0 26 0 36 0 46 0 56 1 6 1 16 1 25 1 35 1 45 1 55 2 2 2 15 2 24 2 34 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 40	41	0 0 0 17 0 26 0 36 0 46 0 56 1 6 1 16 1 26 1 35 1 45 1 55 2 2 2 15 2 25 2 35 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 41	42	0 0 0 17 0 27 0 36 0 46 0 56 1 6 1 16 1 26 1 36 1 45 1 55 2 2 2 15 2 25 2 35 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 42	43	0 0 0 17 0 27 0 37 0 46 0 56 1 6 1 16 1 26 1 36 1 46 1 55 2 2 2 15 2 25 2 35 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 43	44	0 0 0 17 0 27 0 37 0 47 0 57 1 6 1 16 1 26 1 36 1 46 1 55 2 2 2 15 2 25 2 35 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 44	45	0 0 0 17 0 27 0 37 0 47 0 57 1 7 1 16 1 26 1 36 1 46 1 55 2 2 2 15 2 25 2 35 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 45	46	0 0 0 17 0 27 0 37 0 47 0 57 1 7 1 17 1 26 1 36 1 46 1 55 2 2 2 16 2 26 2 35 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 46	47	0 0 0 18 0 27 0 37 0 47 0 57 1 7 1 17 1 27 1 36 1 46 1 55 2 2 2 16 2 26 2 35 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 47	48	0 0 0 18 0 28 0 37 0 47 0 57 1 7 1 17 1 27 1 36 1 46 1 55 2 2 2 16 2 26 2 35 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 48	49	0 0 0 18 0 28 0 38 0 47 0 57 1 7 1 17 1 27 1 36 1 47 1 55 2 2 2 16 2 26 2 35 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 49	50	0 0 0 18 0 28 0 38 0 48 0 57 1 7 1 17 1 27 1 36 1 47 1 55 2 2 2 16 2 26 2 35 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 50	51	0 0 0 18 0 28 0 38 0 48 0 58 1 8 1 17 1 27 1 37 1 47 1 55 2 2 2 17 2 26 2 36 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 51	52	0 0 0 18 0 28 0 38 0 48 0 58 1 8 1 17 1 27 1 37 1 47 1 55 2 2 2 17 2 26 2 36 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 52	53	0 0 0 19 0 28 0 38 0 48 0 58 1 8 1 18 1 28 1 37 1 47 1 55 2 2 2 17 2 26 2 36 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 53	54	0 0 0 19 0 28 0 38 0 48 0 58 1 8 1 18 1 28 1 37 1 47 1 55 2 2 2 17 2 26 2 36 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 54	55	0 0 0 19 0 29 0 39 0 48 0 58 1 8 1 18 1 28 1 37 1 48 1 55 2 2 2 17 2 26 2 36 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 55	56	0 0 0 19 0 29 0 39 0 49 0 58 1 8 1 18 1 28 1 38 1 48 1 56 2 2 2 17 2 26 2 36 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 56	57	0 0 0 19 0 29 0 39 0 49 0 59 1 9 1 18 1 28 1 38 1 48 1 56 2 2 2 17 2 26 2 36 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 57	58	0 0 0 19 0 29 0 39 0 49 0 59 1 9 1 19 1 28 1 38 1 48 1 56 2 2 2 17 2 26 2 36 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 58	59	0 0 0 19 0 29 0 39 0 49 0 59 1 9 1 19 1 29 1 38 1 48 1 56 2 2 2 17 2 26 2 36 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 59	60	0 0 0 19 0 29 0 39 0 49 0 59 1 9 1 19 1 29 1 39 1 48 1 56 2 2 2 17 2 26 2 36 2 44 2 52 3 3 3 13 3 23 3 32 3 42 3 52 60

### Time Correction for Longitude

DEGREES						MINUTES					
*	h	m	*	h	m	*	h	m	*	h	m
1	0	4	61	4	4	121	8	4	1	0	4
2	0	8	62	4	8	122	8	8	2	0	8
3	0	12	63	4	12	123	8	12	3	0	12
4	0	16	64	4	16	124	8	16	4	0	16
5	0	20	65	4	20	125	8	20	5	0	20
6	0	24	66	4	24	126	8	24	6	0	24
7	0	28	67	4	28	127	8	28	7	0	28
8	0	32	68	4	32	128	8	32	8	0	32
9	0	36	69	4	36	129	8	36	9	0	36
10	0	40	70	4	40	130	8	40	10	0	40
11	0	44	71	4	44	131	8	44	11	0	44
12	0	48	72	4	48	132	8	48	12	0	48
13	0	52	73	4	52	133	8	52	13	0	52
14	0	56	74	4	56	134	8	56	14	0	56
15	1	0	75	5	0	135	9	0	15	1	0
16	1	4	76	5	4	136	9	4	16	1	4
17	1	8	77	5	8	137	9	8	17	1	8
18	1	12	78	5	12	138	9	12	18	1	12
19	1	16	79	5	16	139	9	16	19	1	16
20	1	20	80	5	20	140	9	20	20	1	20
21	1	24	81	5	24	141	9	24	21	1	24
22	1	28	82	5	28	142	9	28	22	1	28
23	1	32	83	5	32	143	9	32	23	1	32
24	1	36	84	5	36	144	9	36	24	1	36
25	1	40	85	5	40	145	9	40	25	1	40
26	1	44	86	5	44	146	9	44	26	1	44
27	1	48	87	5	48	147	9	48	27	1	48
28	1	52	88	5	52	148	9	52	28	1	52
29	1	56	89	5	56	149	9	56	29	1	56
30	2	0	90	6	0	150	10	0	30	2	0
31	2	4	91	6	4	151	10	4	31	2	4
32	2	8	92	6	8	152	10	8	32	2	8
33	2	12	93	6	12	153	10	12	33	2	12
34	2	16	94	6	16	154	10	16	34	2	16
35	2	20	95	6	20	155	10	20	35	2	20
36	2	24	96	6	24	156	10	24	36	2	24
37	2	28	97	6	28	157	10	28	37	2	28
38	2	32	98	6	32	158	10	32	38	2	32
39	2	36	99	6	36	159	10	36	39	2	36
40	2	40	100	6	40	160	10	40	40	2	40
41	2	44	101	6	44	161	10	44	41	2	44
42	2	48	102	6	48	162	10	48	42	2	48
43	2	52	103	6	52	163	10	52	43	2	52
44	2	56	104	6	56	164	10	56	44	2	56
45	3	0	105	7	0	165	11	0	45	3	0
46	3	4	106	7	4	166	11	4	46	3	4
47	3	8	107	7	8	167	11	8	47	3	8
48	3	12	108	7	12	168	11	12	48	3	12
49	3	16	109	7	16	169	11	16	49	3	16
50	3	20	110	7	20	170	11	20	50	3	20
51	3	24	111	7	24	171	11	24	51	3	24
52	3	28	112	7	28	172	11	28	52	3	28
53	3	32	113	7	32	173	11	32	53	3	32
54	3	36	114	7	36	174	11	36	54	3	36
55	3	40	115	7	40	175	11	40	55	3	40
56	3	44	116	7	44	176	11	44	56	3	44
57	3	48	117	7	48	177	11	48	57	3	48
58	3	52	118	7	52	178	11	52	58	3	52
59	3	56	119	7	56	179	11	56	59	3	56
60	4	0	120	8	0	180	12	0	60	4	0

### Universal to Ephemeris Time Correction ( $\Delta T$ )

ADD TO UNIVERSAL TIME ENTRIES FOR JULY 1st			
YEAR	SECONDS	YEAR	SECONDS
1860	3	1921	21
1861	3	1922	22
1862	3	1923	22
1863	3	1924	22
1864	2	1925	23
1865	2	1926	23
1866	1	1927	23
1867	1	1928	23
1868	0	1929	23
1869	-1	1930	23
1870	-2	1931	23
1871	-3	1932	24
1872	-5	1933	24
1873	-6	1934	24
1874	-7	1935	24
1875	-7	1936	24
1876	-8	1937	24
1877	-8	1938	24
1878	-8	1939	24
1879	-8	1940	24
1880	-8	1941	25
1881	-8	1942	25
1882	-8	1943	25
1883	-8	1944	26
1884	-8	1945	27
1885	-8	1946	27
1886	-8	1947	28
1887	-8	1948	28
1888	-8	1949	29
1889	-8	1950	29
1890	-8	1951	30
1891	-8	1952	30
1892	-8	1953	31
1893	-8	1954	31
1894	-8	1955	31
1895	-8	1956	32
1896	-7	1957	32
1897	-7	1958	32
1898	-6	1959	33
1899	-5	1960	33
1900	-4	1961	34
1901	-3	1962	34
1902	-1	1963	35
1903	0	1964	35
1904	2	1965	36
1905	3	1966	37
1906	5	1967	38
1907	6	1968	39
1908	8	1969	40
1909	9	1970	41
1910	10	1971	42
1911	12	1972	43
1912	13	1973	44
1913	14	1974	45
1914	15	1975	46
1915	16	1976	47*
1916	17	1977	48*
1917	18	1978	?
1918	19	1979	?
1919	20	1980	?
1920	21	1981	?

\*ESTIMATE

1978 48  
1979 50  
1980 51  
1981 52  
1982 53  
1983 54  
1984 55  
1985 55  
1986 56  
1987 57  
1988 56

Future year values may be obtained from the AFA Mundane Data

Wormhole of technology  
(TA) notice no. 0001

Wormhole of technology unit

Wormhole ID	Wormhole Type	Wormhole Status	Wormhole Last Update
Wormhole 1	Standard	Active	2023-01-01 00:00:00
Wormhole 2	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 3	Experimental	Active	2023-01-01 00:00:00
Wormhole 4	Standard	Active	2023-01-01 00:00:00
Wormhole 5	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 6	Experimental	Active	2023-01-01 00:00:00
Wormhole 7	Standard	Active	2023-01-01 00:00:00
Wormhole 8	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 9	Experimental	Active	2023-01-01 00:00:00
Wormhole 10	Standard	Active	2023-01-01 00:00:00
Wormhole 11	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 12	Experimental	Active	2023-01-01 00:00:00
Wormhole 13	Standard	Active	2023-01-01 00:00:00
Wormhole 14	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 15	Experimental	Active	2023-01-01 00:00:00
Wormhole 16	Standard	Active	2023-01-01 00:00:00
Wormhole 17	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 18	Experimental	Active	2023-01-01 00:00:00
Wormhole 19	Standard	Active	2023-01-01 00:00:00
Wormhole 20	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 21	Experimental	Active	2023-01-01 00:00:00
Wormhole 22	Standard	Active	2023-01-01 00:00:00
Wormhole 23	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 24	Experimental	Active	2023-01-01 00:00:00
Wormhole 25	Standard	Active	2023-01-01 00:00:00
Wormhole 26	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 27	Experimental	Active	2023-01-01 00:00:00
Wormhole 28	Standard	Active	2023-01-01 00:00:00
Wormhole 29	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 30	Experimental	Active	2023-01-01 00:00:00

## SECTION FIVE

### AN ACCURATE METHOD OF CALCULATING PLANETS UNUNIFORM IN MOTION

Wormhole ID	Wormhole Type	Wormhole Status	Wormhole Last Update
Wormhole 1	Standard	Active	2023-01-01 00:00:00
Wormhole 2	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 3	Experimental	Active	2023-01-01 00:00:00
Wormhole 4	Standard	Active	2023-01-01 00:00:00
Wormhole 5	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 6	Experimental	Active	2023-01-01 00:00:00
Wormhole 7	Standard	Active	2023-01-01 00:00:00
Wormhole 8	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 9	Experimental	Active	2023-01-01 00:00:00
Wormhole 10	Standard	Active	2023-01-01 00:00:00
Wormhole 11	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 12	Experimental	Active	2023-01-01 00:00:00
Wormhole 13	Standard	Active	2023-01-01 00:00:00
Wormhole 14	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 15	Experimental	Active	2023-01-01 00:00:00
Wormhole 16	Standard	Active	2023-01-01 00:00:00
Wormhole 17	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 18	Experimental	Active	2023-01-01 00:00:00
Wormhole 19	Standard	Active	2023-01-01 00:00:00
Wormhole 20	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 21	Experimental	Active	2023-01-01 00:00:00
Wormhole 22	Standard	Active	2023-01-01 00:00:00
Wormhole 23	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 24	Experimental	Active	2023-01-01 00:00:00
Wormhole 25	Standard	Active	2023-01-01 00:00:00
Wormhole 26	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 27	Experimental	Active	2023-01-01 00:00:00
Wormhole 28	Standard	Active	2023-01-01 00:00:00
Wormhole 29	Advanced	Inactive	2023-01-01 00:00:00
Wormhole 30	Experimental	Active	2023-01-01 00:00:00

## INTERPOLATION COEFFICIENTS

## 1st AND 2nd ORDER

S	S1	S2	S	S1	S2	S	S1	S2
.00	.00000	.00000						
.01	.00495	.00328	.36	.11520	.06298	.71	.10295	.04427
.02	.00980	.00647	.37	.11655	.06333	.72	.10080	.04301
.03	.01455	.00955	.38	.11780	.06361	.73	.09855	.04172
.04	.01920	.01254	.39	.11895	.06384	.74	.09620	.04040
.05	.02375	.01544	.40	.12000	.06400	.75	.09375	.03906
.06	.02820	.01824	.41	.12095	.06410	.76	.09120	.03770
.07	.03255	.02094	.42	.12180	.06415	.77	.08855	.03631
.08	.03680	.02355	.43	.12255	.06413	.78	.08580	.03489
.09	.04095	.02607	.44	.12320	.06406	.79	.08295	.03346
.10	.04500	.02850	.45	.12375	.06394	.80	.08000	.03200
.11	.04895	.03084	.46	.12420	.06376	.81	.07695	.03052
.12	.05280	.03309	.47	.12455	.06352	.82	.07380	.02903
.13	.05655	.03525	.48	.12480	.06323	.83	.07055	.02751
.14	.06020	.03732	.49	.12495	.06289	.84	.06720	.02598
.15	.06375	.03931	.50	.12500	.06250	.85	.06375	.02444
.16	.06720	.04122	.51	.12495	.06206	.86	.06020	.02288
.17	.07055	.04304	.52	.12480	.06157	.87	.05655	.02130
.18	.07380	.04477	.53	.12455	.06103	.88	.05280	.01971
.19	.07695	.04643	.54	.12420	.06044	.89	.04895	.01811
.20	.08000	.04800	.55	.12375	.05981	.90	.04500	.01650
.21	.08295	.04949	.56	.12320	.05914	.91	.04095	.01488
.22	.08580	.05091	.57	.12255	.05842	.92	.03680	.01325
.23	.08855	.05224	.58	.12180	.05765	.93	.03255	.01161
.24	.09120	.05350	.59	.12095	.05685	.94	.02820	.00996
.25	.09375	.05469	.60	.12000	.05600	.95	.02375	.00831
.26	.09620	.05580	.61	.11895	.05511	.96	.01920	.00666
.27	.09855	.05683	.62	.11780	.05419	.97	.01455	.00500
.28	.10080	.05779	.63	.11655	.05322	.98	.00980	.00333
.29	.10295	.05868	.64	.11520	.05222	.99	.00495	.00167
.30	.10500	.05950	.65	.11375	.05119	1.00	.00000	.00000
.31	.10695	.06025	.66	.11220	.05012			
.32	.10880	.06093	.67	.11055	.04901			
.33	.11055	.06154	.68	.10880	.04787			
.34	.11220	.06208	.69	.10695	.04670			
.35	.11375	.06256	.70	.10500	.04550			

## AN ACCURATE METHOD OF CALCULATING

## PLANETS PLACES WHEN THEY ARE UNUNIFORM IN MOTION

The use of a modern hand held calculator containing degrees, minutes and seconds plus the interpolation coefficients from Newton's Binomial Interpolation Formula will allow today's astrologer to calculate the Moon especially and other planets very accurately when their motion is ununiform. That is when then they are speeding up or slowing down. An extra convenience in calculating is to use the diurnal motions given in Raphael's Ephemeris.

The technique is to solve for the planets place in the customary manner but then to take the first difference in diurnal motion and multiply by the first coefficient and add that value if the planet is slowing down or subtract if the planet is speeding up. Next we take the second diurnal difference and multiply by the second coefficient and do the opposite. If we added in the first instance we now subtract or if we subtracted in the first case we now add as the exact equation alternates in sign.

## EXAMPLE ONE

from Raphael's Ephemeris for 1980 calculate the Moon's exact position at midnight Jan. 10th, when its diurnal motion is increasing. The exact value of 25Lib29' 04'' is given in the ephemeris.

Jan.	Moon	D0	D1	D2
10	19Lib28' 06''			
11	31Lib33' 27''	12° 05' 21"		
12	43Lib54' 46''	12° 21' 19"	15' 58''	
13	56Lib36' 20''	12° 41' 34''	20' 15''	4' 17''

Calculating in the usual manner

$$[(31lib33' 27'' - 19Lib28' 06'') \times 0.5] + 19Lib28' 16'' = 25Lib30' 46.5''$$

gives results that are in error by 1' 42.5''

## In The Coefficiency Table, page 53

S = E.G.M.T.I.  
 S1 = 1st coefficient  
 S2 = 2nd coefficient

To make the necessary corrections take the first difference in diurnal motion (S1),  $15' 58''$  and multiply by the value corresponding to the E.G.M.T.I. ( $0.125$ ).  $15' 58'' \times 0.125 = 2' 00''$ . Because the Moon is speeding up and our value has overshot we must subtract. Then  $25\text{Lib}30' 46'' - 2' 00'' = 25\text{Lib}28' 46''$ . Only off by  $17''$ . To make a further correction take the 2nd coefficient corresponding to the E.G.M.T.I. =  $0.0625$  and multiply by the second diurnal difference.  $4' 17'' \times 0.0625 = 16''$ . Now we add as the factor always alternates in sign.  $25\text{Lib}28' 46'' + 16'' = 25\text{Lib}29' 02.0''$ . Final figure off by  $1''$ .

## EXAMPLE TWO

From Raphael's Ephemeris for 1980 calculate the Moon's exact position at midnight Jan. 1st, where it is slowing down in motion. The exact value  $6\text{Can}14' 44''$  is given in the ephemeris.

Jan.	Moon	D0	D1	D2
1	29Gem43' 43''			
2	42Gem41' 54''	$12^\circ 58' 11''$		
3	55Gem24' 24''	$12^\circ 42' 30''$	$15' 41''$	
4	67Gem51' 22''	$12^\circ 26' 58''$	$15' 32''$	$9''$

## Calculating In The Customary manner

$$[(42\text{Gem}41' 54'' - 29\text{Gem}43' 43'') \times 0.51 + 29\text{Gem}43' 43''] = 6\text{Can}12' 49''$$

in error by  $1' 55''$

Again the E.G.M.T.I. =  $0.125$  so,  $15' 41'' \times 0.125 = 1' 58''$ . Then as the Moon is slowing down we add  $1' 58'' + 6\text{Can}12' 49'' = 6\text{Can}14' 47''$ . Only off by  $3''$ . taking the next difference of  $9''$  and multiplying by  $0.0625$  we get  $0.6''$ . So subtracting  $1''$  we get  $6\text{Can}14' 46''$  or only off by  $2''$ .

## EXAMPLE THREE

From the ZERO HOUR (midnight) AMERICAN EPHEMERIS for 1980 calculate the Moon's exact position at noon Feb. 7th, where it is speeding up or increasing in motion. The exact value in the ephemeris is  $27\text{Lib}36' 49''$ .

Feb.	Moon	D0	D1	D2
7	21Lib38' 46"			
8	33Lib37' 16"	11° 58' 30"		
9	45Lib47' 42"	12° 10' 26"	11' 56"	
10	58Lib14' 43"	12° 27' 01"	16' 35"	4' 39"

Calculating in the usual manner

$$[(33Lib37' 16") - 21Lib38' 46"] \times 0.51 + 21Lib38' 46" = 27Lib38' 01"$$

In error by 1' 12"

Again, the coefficienty table gives an E.G.M.T.I. of 0.5 = 0.125, then  
 $11' 56" \times 0.125 = 1' 30"$ . So 27Lib38' 01" minus 1' 30" = 27Lib36' 31".  
 Only off by 18". To make a further correction we take 4' 39"  $\times 0.0625 =$   
 17" and now add, giving 27Lib36' 48". Only off by 1".

#### EXAMPLE FOUR

From the zero hour American Ephemeris for 1980 calculate the Moon's exact position at noon Feb. 18th where it is slowing down. The exact value of 28Pis55' 29" is given in the ephemeris.

Feb.	Moon	D0	D1	D2
18	21Pis24' 35"			
19	36Pis23' 59"	14° 58' 24"		
20	51Pis10' 10"	14° 46' 11"	13' 13"	
21	65Pis37' 23"	14° 27' 13"	18' 58"	5' 45"

Calculating in the usual manner

$$[(36Pis23' 59") - 21Pis24' 35"] \times 0.51 + 21Pis24' 35" = 28Pis54' 17"$$

In error by 1' 12"

The correction then is 13' 13"  $\times 0.125 = 1' 39"$  which is to be added.  
 $28Pis54' 17" + 1' 39" = 28Pis55' 56"$ . Only in error by 27". Correcting  
 again 5' 45"  $\times 0.0625 = 22"$  which is to be subtracted giving 28Pis55'  
 34". Only off by 5".

#### EXAMPLE FIVE

From Raphael's Ephemeris calculate the position of Mercury at midnight on Feb. 14th when it is decreasing in velocity.

Feb	Mercury	D0	D1	D2
13	10Pis16'			
14	11Pis47' 1° 31'			
15	13Pis14' 1° 27' 4"			
16	14Pis45' 1° 21' 6" 2"			

Calculating in the usual manner

$$[(11^{\circ}\text{Pis}47' - 10^{\circ}\text{Pis}16') \times 0.5] + 11^{\circ} 47' = 11^{\circ} 01' 30''$$

Then  $4' \times 0.125 = 30''$  to be added. So  $11^{\circ} 01' 30'' + 30'' = 11\text{Pis}02' 00''$ . Correcting,  $2 \times 0.0625 = 7.5''$ .  $11\text{Pis}02' 00'' - 7.5'' = 11\text{Pis}01' 52.5''$ .

### EXAMPLE SIX

CHART "A"

April	Moon	D0	D1	D2
19	25Can47' 43''			
20	39Can49' 12''	14° 01' 29''		
21	54Can07' 53''	14° 18' 41''	17' 12''	
22	68Can41' 12''	14° 33' 19''	14' 38''	2' 34''

$$[(39\text{Can}49' 12'' - 25\text{Can}47' 43'') \times 0.2576505] + 25^{\circ} 47' 43'' = 29^{\circ} 24' 32''$$

To correct this initial calculation we need to interpolate in Newton's values for the one corresponding to the exact E.G.M.T.I.

$$0.2600000 = 0.09620$$

$$0.2576505 =$$

$$\underline{0.2500000 = 0.09375}$$

$$\underline{0.0076505 \times 0.00245 = 0.0018744}$$

$$0.0100000$$

$$0.09375 + 0.0018744 = 0.0956244$$

So  $17' 12'' \times 0.0956244 = 1' 39''$  ans since the Moon is speeding up we must subtract.

$$29\text{Can}24' 32'' - 0^{\circ} 01' 39'' = 29\text{Can}22' 53''$$

the next order of correction is

$$0.2600000 = 0.05580$$

$$0.2576505 =$$

$$\underline{0.2500000 = 0.05469}$$

$$\underline{0.0076506 \times 0.00111 = 0.0008492}$$

$$0.0100000$$

$$0.05469 + 0.0008492 = 0.0555392$$

So  $2^{\circ} 34' \times 0.0555392 = 24'$  then we must add

$$29\text{Can}22' 23'' + 24'' = 29\text{Can}22' 47''$$

a much more accurate position for the Moon

#### CHART "A" 12 HOUR POSITIONS

April	Moon	D0	D1	D2
19	25Can47' 43''			
noon	32Can46' 14''	6° 58' 32''		
20	39Can49' 12''	7° 02' 58''	4' 26''	
noon	46Can56' 31''	7° 07' 19''	4' 21''	5''

$$[(32\text{Can}46' 14'') - 25\text{Can}47' 43'')] \times 0.5153009 + 25^{\circ} 47' 43'' = 29^{\circ} 23' 23''$$

$$0.5200000 = 0.12480$$

$$0.5153009 =$$

$$\underline{0.5100000 = 0.12945}$$

$$\underline{0.0053009 \times 0.00015 = 0.0000795}$$

$$0.0100000$$

$$\text{So } 0.12495 + 0.0000795 = 0.1250295 \text{ and } 0.1250295 \times 4' 26'' = 33''$$

$$29\text{Can}23' 23'' - 33'' = 29\text{Can}22' 50''$$

Since the answer is only 5 seconds off the 2nd order correction would be far too small to bother with.

#### PLEASE NOTE:

In calculating the 12 hour figures the E.G.M.T.I. is double the 24 hour figure, or can be calculated on the original chart as 12 hours. However since you already have the 24 hour figure you might as well just double it. If the E.G.M.T.I. goes over 12 hours then you must subtract 12 and use the second section of the day in the ephemeris. A little tricky but not that difficult.

## SECTION SIX

## CALCULATING ASTROLOGICAL LONGITUDE

## FROM THE RIGHT ASCENSION AND DECLINATION

It now remains to demonstrate how some proof can be given for the previous material. Therefore an accurate method of calculating astrological longitude from the right ascension and declination as given in the American Ephemeris and Nautical Almanac, 1980, is illustrated. Also values for the obliquity of the ecliptic every ten years from 1920 to 1970 are given and every year from 1974 onwards.

Where            R.A.     = RIGHT ASCENSION  
                  o.ε.     = OBLIQUITY OF THE ECLIPTIC  
                  Dec.     = DECLINATION  
                  Tan.r    = INVERSE TANGENT  
                  Cos.     = COSINE  
                  Sin.     = SINE

The necessary formula for longitude is,

$$\text{Long.} = \text{Tan.r} [\text{Tan.R.A.} \times \text{Cos.}\omega + \frac{\text{Tan.Dec.} \times \text{Sin.}\omega}{\text{Cos.R.A.}}]$$

A trigonometric formula easily solved on today's hand calculators.

Using the American Ephemeris and Nautical Almanac, Jan. 1, 1980, given at zero hour (midnight).

Moon's right ascension (R.A.) = 5h 31' 11.364''  
 Moon's declination (Dec.) = 18° 33' 10.21''  
 Obliquity of the Ecliptic = 23° 26' 30.78''

Where Tan. R.A. = 7.9128717  
 Cos. o.ε. = 0.9174641  
 Tan. Dec. = 0.3356210  
 Sin. o.ε. = 0.3978187  
 Cos. R.A. = 0.1253791

Calculate the Moon's celestial longitude in the given formula

$$\text{Long.} = \text{Tan.r.} [\text{Tan.R.A.} \times \text{Cos.o.ε.} + \frac{\text{Tan.Dec.} \times \text{Sin.o.ε.}}{\text{Cos.R.A.}}]$$

$$\text{Long.} = \text{Tan.r.} [7.9128717 \times 0.9174641 + \frac{0.335621 \times 0.3978187}{0.12537910}]$$

$$\text{Long.} = \text{Tan.r.} [7.9128717 + 1.06490081]$$

$$\text{Long.} = \text{Tan.r.} [8.3246765]$$

$$\text{Long.} = 83.150178$$

$$\text{Long.} = 83.150178 (\text{INV. 2nd. DMS-DD}) = 83.090064$$

$$\text{Long.} = (\text{minus } 60) 23^\circ 09' 01'' = 23\text{Gem}09' 01''$$

NOTE: given R.A. 5h 31' 11.364''  
 first convert to 's, 's, and ''s. = 5.5198233  
 then multiply by 15 = 82.797350  
 then convert to Tan. = 7.9128717  
 and Cos. = 0.1253791

Using the American Ephemeris and Nautical Almanac Jan. 1, 1980

Given at Noon:

Moon's right ascension (R.A.) = 5h 58' 51.343''  
 Moon's declination (Dec.) = 18° 58' 47.61''  
 Obliquity of the ecliptic (o.ε.) = 23° 26' 30.78''

Where Tan. R.A. = 200.28360  
 Cos. o.ε. = 0.9174641  
 Tan. Dec. = 0.3439351  
 Sin. o.ε. = 0.3978187  
 Cos. R.A. = 0.0049929

Calculate the Moon's celestial longitude in the given formula

$$\text{Long.} = \text{Tan.r.} [\text{Tan R.A.} \times \text{Cos.o.ε.} + \frac{\text{Tan.dec.} \times \text{Sin.o.ε.}}{\text{Cos.R.A.}}]$$

$$\text{Long.} = \text{Tan.r.} [200.28363 \times 0.9174641 + \frac{0.3439351 \times 0.3978187}{0.0049929}]$$

$$\text{Long.} = \text{Tan.r.} [183.75304 + 27.4036761]$$

$$\text{Long.} = \text{Tan.r.} [211.156721]$$

$$\text{Long.} = 89.72866 \text{ (INV. 2nd. DMS-DD)} = 89.434318$$

$$\text{Long.} = (\text{minus } 60) 29^\circ 43' 43'' = 29\text{Gem}43' 43''$$

NOTE: given R.A. = 5h 58' 51.343''

first convert to 's, 's, and ''s = 5.9809286  
 then multiply by 15 = 89.713929  
 then convert to Tan. = 200.28360  
 and Cos. = 0.0049929

Up to six hours of right ascension, equal to ninety degrees or the classic right triangle, there is no problem. However beyond that value negative values will be encountered in the second quadrant and also in the third. Therefore after calculating longitude in the given formula, two additional rules should be followed.

RULE 1: If the Cos. R.A. is negative calculate as usual but when arriving at the answer add 180° to the longitude.

RULE 2: If the longitude is outside the range of 0° to 360° or negative, add or subtract 360° to bring the longitude between 0° and 360°. This rule must still be used even if Cos.R.A. is positive since rule 1 and 2 are independent of each other.

These rules assume your calculator calculates the inverse tangent in the range of -90° to +90° which the TI-55 or TI 55-111 and TI-60 does and most calculators do. If a calculator returns inverse Tan. between 0° and 90° and between 270° and 360° the preceeding rules still apply. However some calculators calculate the inverse tangent between 0° and 180°. For these calculators the above rules have to be modified.

#### SECOND QUADRANT

Calculate the longitude of the Moon at Noon Jan. 7, 1980. Where

$$\text{Moon's right ascension (R.A.)} = 11^{\text{h}} 02' 48.368'' = 165.7015$$

$$\text{Moon's declination (Dec.)} = 7^\circ 28' 06.44''$$

$$\text{Obliquity of the ecliptic } (\text{o.}\epsilon\text{.}) = 23^\circ 26' 30.78''$$

$$\text{Tan.R.A.} = (-0.2548689)$$

$$\text{Cos.o.}\epsilon\text{.} = 0.9174641$$

$$\text{Tan.Dec.} = 0.1310924$$

$$\text{Sin.o.}\epsilon\text{.} = 0.3978187$$

$$\text{Cos.R.A.} = (-0.9690222)$$

$$\text{Long.} = \text{Tan.r} [(-0.2548689) (0.9174641) + \frac{0.1310924 \times 0.3978187}{(-0.9690222)}]$$

$$\text{Long.} = \text{Tan.r} (-0.2338331) + (-0.0538182)$$

$$\text{Long.} = \text{Tan.r} (-0.2876513)$$

$$\text{Long.} = (16.04795) + 180^\circ$$

$$\text{Long.} = 163.95205 = 163^\circ 57' 07'' = 13\text{Vir}57' 07''$$

SECOND QUADRANT (SECOND EXAMPLE)  
Calculate the longitude of the Moon on Jan. 4, 1980 where

Moon's right ascension (R.A.) = 8h 38' 59.450''  
2nd DMS-DD X 15 = 129.74771.

Moon's declination (Dec.) =  $16^{\circ} 25' 15.77''$   
Obliquity of the ecliptic ( $\omega.e.$ ) =  $23^{\circ} 26' 30.78''$

Tan. R.A. = -1.2024671  
 Cos. o. e. = 0.9174641  
 Tan. Dec. = 0.2947152  
 Sin. o. e. = 0.3978187  
 Cos. R.A. = -0.6394082

$$\text{Long.} = \text{Tan.r} [(-1.2024671) (0.9174641) + \underline{\underline{0.2947152}} \times \underline{\underline{0.3978187}} - 0.6394082]$$

Long. (-52.143759) Since Cos. R.A. is negative add 180°

Long.  $\equiv$  127.856241°  $\equiv$  127° 51' 22.2"  $\equiv$  7Lep51' 22.5"

### THIRD QUADRANT

Calculate the Moon's longitude at noon Jan. 12, 1980 where

Moon's right ascension (R.A.) = 14h 51' 52.567''  
Moon's declination (Dec.) = - 11° 14' 53.19''  
Obliquity of the ecliptic (o.ε.) = 23° 26' 30.78''

Tan. R.A. = 0.9315040  
 Cos. o.ε. = 0.9174641  
 Tan. Dec. = -0.1988780  
 Sin. o.ε. = 0.3978187  
 Cos. R.A. = -0.7317226

$$\text{Long.} = \text{Tan. r } [0.9315041 \times 0.9174641 - \underline{0.198878 \times 0.3978187}] = 0.7317226$$

Long. = Tan. r ( $0.8546216 + 0.1081248$ )

Long. = Tan. r( 0.9627464)

Long. = 43° 912637 (+180) = 223° 91264 - 210° = 13Sext54' 45" 55"

## FOURTH QUADRANT

Calculate the longitude of the Moon at noon Jan. 18, 1980 where

$$\text{Moon's right ascension} = 20^\circ 30' 33.772'' = 307.64071^\circ$$

$$\text{Moon's declination} = -16^\circ 46' 53.47'' = -16.781519^\circ$$

$$\text{Obliquity of the ecliptic} = 23^\circ 26' 30.78'' = 23.441883^\circ$$

$$\text{Tan. R.A.} = -1.2966197$$

$$\text{Cos. o.}\epsilon. = 0.9174641$$

$$\text{Tan. Dec.} = -0.3015659$$

$$\text{Sin. o.}\epsilon. = 0.3978187$$

$$\text{Cos. R.A.} = 0.6107079$$

$$\text{Long.} = \text{Tan. r} [(-1.29666197) \times (0.9174641) + \frac{(-0.3015659) \times 0.3978187}{0.6107079}]$$

$$\text{Long.} = \text{Tan. r} [(-1.189602) + (0.1964418)]$$

$$\text{Long.} = \text{Tan. r} (-1.3860438)$$

$$\text{Long.} = -54.190383 + 360^\circ = 305.80962^\circ$$

$$\text{Long.} = 305^\circ 48' 34.6'' = 5\text{Aqu}48' 34.6''$$

SIGN	DEGREES	HOURS
ARIES	0 to 30	0 to 2
TAURUS	30 to 60	2 to 4
GEMINI	60 to 90	4 to 6
CANCER	90 to 120	6 to 8
LEO	120 to 150	8 to 10
VIRGO	150 to 180	10 to 12
LIBRA	180 to 210	12 to 14
SCORPIO	210 to 240	14 to 16
SAGITTARIUS	240 to 270	16 to 18
CAPRICORN	270 to 300	18 to 20
AQUARIUS	300 to 330	20 to 22
PISCES	330 to 360	22 to 24

## THE OBLIQUITY OF THE ECLIPTIC

		$\Delta\epsilon$
1920	23° 26' 58.89''	
1930	23° 26' 54.21''	4.68
1940	23° 26' 49.52''	4.69
1950	23° 26' 44.84''	4.68
1960	23° 26' 40.15''	4.69
1970	23° 26' 35.47''	4.68
1974	23° 26' 33.59''	1.88
1975	23° 26' 33.12''	0.47
1976	23° 26' 32.66''	0.46
1977	23° 26' 32.19''	0.47
1978	23° 26' 31.72''	0.47
1979	23° 26' 31.25''	0.47
1980	23° 26' 30.78''	0.47
1981	23° 26' 30.31''	0.47
1982	23° 26' 29.84''	0.47
1983	23° 26' 29.37''	0.47
1984	23° 26' 28.90''	0.47
1985	23° 26' 28.43''	0.46
1986	23° 26' 27.96''	0.47
1987	23° 26' 27.49''	0.45
1988	23° 26' 27.04''	0.45

The formula for calculating the obliquity of the ecliptic is given by

$$\epsilon = 23^\circ 27' 8.26'' - 46.837''T - 0.0085''T^2 + 0.0017''T^3$$

Where T is the fraction of a 100th for the particular year. Thus T for 1988 would be 0.88 and T squared would be 0.7744 and T cubed would be 0.681472.

$$\begin{array}{r}
 23^\circ 26' 68.62'' \\
 - \quad \quad \quad 41.21656 \\
 - \quad \quad \quad 0.0065824 \\
 + \quad \quad \quad \underline{0.0011789} \\
 \hline
 23^\circ 26' 27.038''
 \end{array}$$

## SECTION SEVEN

if more by collectors has not made it difficult to secure any of the  
best or rare Isotria **THREE ADDITIONAL PRACTICE CHARTS** available at present  
but if you can't afford this or other species it is better to practice on  
the **WILDFLOWERS** of the **WILDFLOWER CHART** or **WILDFLOWER CARD** which  
will cost little added to your material with no need of collectors' general use as  
they are not so easily obtained.

## CHART "B"

Given a birth time of 3:25:48 a.m. Pacific Daylight Time; Aug. 21, 1970; at Thrail Ca. with a latitude of 41N54 and a longitude of 122W29. The Atlas gives a Mean Time correction of - 0:09:56 and hours to Greenwich to be 8:09:56.

Then to correct the latitude  $54 \div 60 = 0.9$  and that correction we store in memory 0. In Michaelson's American Book of Tables for the sidereal time we find a correction of  $1' 11'' \div 4' = 0.2958333$  which we will store in memory 1. The E.G.M.T.I.  $\div 24$  hours = 0.4350579 which we will store in memory 2.

The house cusp correction based on the American Book of Tables will look like the following.

$$41N54 \text{ corr. } 54 \div 60 = 0.9$$

11	12	1	2	3	10
----	----	---	---	---	----

0:16:00 = 11Tau06.9 = 19Gem51.8 = 22can53.3 = 12Leo14.1 = 5Vir05.4 = 4Ari22					
0:13:11 = 10Tau19.0 = 19Gem10.3 = 22can18.9 = 11Leo38.8 = 4Vir25.3 = 3Ari35.5					
0:12:00 = 9Tau58.9 = 18Gem52.8 = 22Can04.4 = 11Leo24.1 = 4Vir08.4 = 3Ari16					

$$\underline{1:11} = 0.2958333$$

4:00

To correct the Sun

Aug. 22 Sun = 28:29:29 press 2nd, DMS-DD, = 28.491389 STO 5					
Aug. 21 Sun = 27:31:42 press 2nd, DMS-DD, = 27.528333 STO 4					

$$\text{RCL 5} - \text{RCL 4} = 0.963056$$

$$0.963056 \times \text{RCL 2} = 0.4189849$$

$$0.4189846 + \text{RCL 4} = 27.947318$$

$$\text{INV, 2nd, DMS-DD} = 27.565035$$

$$\text{Sun} = 27\text{Leo}56' 50''$$

To correct the Moon

Aug 22 Moon = 35:20:43 press 2nd, DMS-DD, = 35.345278 STO 5					
Aug 21 Moon = 21:18:27 press 2nd, DMS-DD, = 21.3075 STO 4					

$$\text{RCL 5} - \text{RCL 4} = 14.037778$$

$$14.037778 \times \text{RCL 2} = 6.1072457$$

$$6.1072457 - \text{RCL 4} = 27.414746$$

$$\text{INV 2nd DMS-DD} = 27.245308$$

$$\text{Moon} = 27\text{Ari}24' 53''$$

The Moon  
 $\text{DO} = 09^{\circ}15'45.0''$   
 1st order correction

Aug	Moon	DO	D1	D2
21	21Ari18' 27'			
22	35Ari20' 43''	14° 02' 16''		
23	48Ari56' 53''	13° 36' 10''	26' 06''	
24	62Ari08' 05''	13° 11' 12''	24' 58''	1' 08''

The Moon is slowing down so taking Newton's value for the E.G.M.T.I.  
 10:26:29

$$0.4400000 = 0.12320$$

$$0.4350579 = (0.1228788)$$

$$\underline{0.4300000 = 0.12255}$$

$$\underline{0.0050579} \times 0.00065 = 0.0003288$$

$$0.0100000$$

$$26' 06'' \times 0.1228788 = 3' 12'' \text{ to be added}$$

$$27Ari24' 53'' + 3' 12'' = 27Ari28' 05''$$

### The Moon

#### 2nd order correction

$$10:26:29 = \underline{0.0050579} = 0.50579$$

$$0.0100000$$

$$0.06413$$

$$\underline{0.06406}$$

$$0.00007 \times 0.50579 = 0.0000354$$

$$0.0000354 + 0.06406 = 0.0641$$

$$0.0641 \times 1' 08'' = 7'' \text{ to be subtracted}$$

$$27Ari28' 05'' - 07'' = 27Ari27' 58'' \text{ best value for the moon}$$

Mercury	Aug 22	25Vir04' = 24° 64'
	Aug 21	24Vir22' = 24° 22'

$$42'$$

$$42' \times 0.4350579 = 18.272431$$

$$18' + 22' = 24Vir40$$

Mercury's declination, by inspection there is a difference of  $26'$ .  
 So  $26' \times 0.4350579 = 11.311505$   
 $11'$  added =  $0S24$

Venus Aug. 22 = 14Lib18 = 13Lib78  
 Aug. 21 = 13Lib16  
 62

Then  $62 \times 0.4350579 = 26.973588$   
 $27' + 13' = 13lib43$

Venus, declination by inspection there is a difference of  $29'$   
 So  $29 \times 0.4350579 = 12.61678$   
 $21 + 13 = 34$  6S34

Remember you are supposed to be using RCL 2

Aug. 22 Mars = 22Leo14 = 21Leo74  
 Aug. 21 Mars = 21Leo36  
 38

Then  $38' \times \text{RCL } 2 = 16.532199$   
 $36' + 17' = 21\text{Le}o55$

Mars, declination by inspection a difference of  $12'$

$12 \times \text{RCL } 2 = 5.2206944$   
 $24 - 5 = 15N19$

Aug. 22 Jupiter = 0Sco54  
 Aug. 21 Jupiter = 0Sco45

$9 \times \text{RCL } 2 = 3.9155208$   
 $45 + 4 = 0Sco49$

Jupiter's declination, there is a difference of only three

$3 \times \text{RCL } 2 = 1.3051736$   
 $45 + 1 = 10S46$

Saturn There is only a difference of 1'  
 $1 \times RCL\ 2 = 0.4350579$   
 so no correction is made  
 22Tau26'

in the declination there is only a difference of 1'  
 so no correction is made  
 16N07

---

Uranus There is a difference of 4'  
 $4 \times RCL\ 2 = 1.7402315$   
 adding 2 = 6Lib40'

There is a difference of 5' for 4 days in the declination  
 $5 \div 4 = 1.25$

Aug 21 = 2S01  
 Aug 22 = 2S02.25  
 Aug 23 = 2S03.50  
 Aug 24 = 2S04.75  
 Aug 25 = 2S06

$1.25 \times RCL\ 2 = 0.5438223$   
 so adding 1 = 2S02

---

Neptune There is a difference of only 1'  
 so no correction is made  
 28Sco09

no difference at all so 18S07

---

Pluto There is a difference of 2'  
 $2 \times RCL\ 2 = 0.8701157$   
 adding 1 = 26Vir08

in declination there is a difference of 4' for 4 days  
 $1' \times RCL\ 2 = 0.4350579$  so no correction is made.  
 15N40

---

The Sun Aug. 22 declination = 12N20  
 Aug. 21 declination = 12N00  
 $20 \times RCL\ 2 = 8.7011574$   
 $20 - 9 = 11$   
 $12N11$

---

The Moon Aug. 22 declination = 11N59  
 Aug. 21 declination = 17N44

$$\begin{aligned} & 17.44 \text{ 2nd DMS-DD STO 5} \\ & 11.59 \text{ 2nd DMS-DD STO 4} \\ & RCL 5 - RCL 4 = 5.75 \\ & 5.75 \times RCL 2 = 2.5015828 \\ & + RCL 4 = 14.484916 \\ & INV 2nd DMS-DD = 14N29 \end{aligned}$$


---

For the M.C. and The Asc. use the tables provided on pages 48 and 49.

$$\begin{aligned} M.C. = 3Ari36 & 3Ari40 = 1N28 \\ & 3Ari36 = ? \\ & \underline{3Ari30 = 1N24} \end{aligned}$$

$$\begin{array}{r} 6 \times 4 = 2.4 \\ 10 \end{array}$$

$$24 + 2 = 26 \quad 1N26$$


---

$$\begin{aligned} Asc. = 22Can19 & 22Can 20 = 21N35 \\ & 22Can 19 = ? \\ & \underline{22Can 10 = 21N37} \end{aligned}$$

$$\begin{array}{r} 9 \times 2 = 1.8 \\ 10 \end{array}$$

$$37 - 2 35 = 21N 35$$


---

73

### Placidus Table of Houses for Latitudes 0° to 60° North

0h 0m 0s					0° 0' 0"					0h 4m 0s					1° 0' 0"					0h 8m 0s					2° 0' 0"					0h 12m 0s					3° 0' 0"					
0 T 0			ASC		2		3		1 T 5			ASC		2		3		2 T 11			ASC		2		3		3 T 16			ASC		2		3						
11	12								11	12								11	12								11	12												
2511	25	05	08	0	27	55	55	27	49	3813	32	05	08	28	52	28	52	0	4816	42	0	18	50	29	54	29	54	5818	43	57	25	45	03	47	08	57				
234	318	20	29	6	28	11	10	29	29	37	4	16	2	55	09	3	29	13	40	14	16	5	14	3	50	09	15	6	11	4	44	1	57	1	18					
258	434	4	1	08	16	28	34	10	29	37	5	32	4	56	1	13	29	35	10	55	17	51	7	54	3	19	0	36	6	45	3	13	1	38						
323	553	6	5	1	28	28	56	10	29	37	5	52	7	0	2	23	29	57	10	51	11	49	6	14	3	19	0	58	6	48	4	14	1	59						
349	719	8	14	2	40	29	19	10	31	36	8	18	9	8	3	35	08	19	20	6	5	17	10	2	40	1	19	1	19	7	42	1	22	6	39	2	24			
355	737	8	41	2	55	29	24	11	30	35	8	54	9	36	3	50	0	24	21	6	11	9	53	10	55	4	59	1	28	7	16	10	34	11	48	5	54	2	28	
41	755	9	8	3	10	29	29	12	30	35	8	54	9	13	10	29	42	0	29	22	6	17	10	12	11	22	5	14	1	33	7	22	11	30	12	42	6	23	2	37
47	614	9	35	3	23	29	34	13	10	35	8	54	9	13	10	56	4	35	24	6	24	10	31	11	49	5	29	1	37	7	35	11	50	13	10	6	38	2	42	
413	833	10	3	3	41	29	38	13	10	35	8	52	9	13	10	56	0	43	25	6	23	10	51	12	17	5	44	1	42	7	42	12	10	13	38	6	53	2	46	
419	852	10	31	3	56	29	43	13	10	35	8	52	11	24	4	50	0	43	25	6	23	10	51	12	17	5	44	1	42	7	49	12	30	14	6	7	8	2	31	
425	912	10	59	4	12	29	48	12	20	35	8	52	11	52	5	5	0	48	26	6	13	11	31	13	13	6	15	1	52	6	43	12	38	6	53	2	46			
432	933	11	28	4	27	29	53	12	20	35	8	52	11	53	5	57	0	57	28	6	13	11	31	13	13	6	15	1	52	6	43	13	38	6	53	2	46			
438	953	11	57	4	43	29	59	12	20	35	8	52	11	54	5	57	1	57	29	6	13	11	31	13	13	6	15	1	52	6	43	14	38	6	53	2	46			
445	1015	12	26	5	0	08	4	13	20	35	8	52	11	55	1	57	1	7	30	6	13	11	31	13	13	6	15	1	52	6	43	15	38	6	53	2	46			
452	1037	12	56	5	16	0	9	13	20	35	8	52	11	56	5	57	1	7	30	6	13	11	31	13	13	6	15	1	52	6	43	16	38	6	53	2	46			
459	1059	13	27	5	33	0	14	13	20	35	8	52	11	57	5	57	0	48	26	6	13	11	31	13	13	6	15	1	52	6	43	17	38	6	53	2	46			
511	1122	13	58	5	50	0	20	13	20	35	8	52	11	58	5	57	0	48	26	6	13	11	31	13	13	6	15	1	52	6	43	18	38	6	53	2	46			
514	1146	14	29	6	7	0	25	13	20	35	8	52	11	59	5	57	1	7	30	6	13	11	31	13	13	6	15	1	52	6	43	19	38	6	53	2	46			
521	1210	15	1	1	26	0	31	13	20	35	8	52	11	60	5	57	1	7	30	6	13	11	31	13	13	6	15	1	52	6	43	20	38	6	53	2	46			
529	1236	15	34	6	42	0	37	13	20	35	8	52	11	61	5	57	1	7	30	6	13	11	31	13	13	6	15	1	52	6	43	21	38	6	53	2	46			
538	132	16	7	0	08	42	48	13	20	35	8	52	11	62	5	57	1	7	30	6	13	11	31	13	13	6	15	1	52	6	43	22	38	6	53	2	46			
546	1328	16	41	7	18	0	48	13	20	35	8	52	11	63	5	57	1	7	30	6	13	11	31	13	13	6	15	1	52	6	43	23	38	6	53	2	46			
553	1356	17	16	7	37	0	54	13	20	35	8	52	11	64	5	57	1	7	30	6	13	11	31	13	13	6	15	1	52	6	43	24	38	6	53	2	46			
613	1455	18	28	8	15	1	7	13	20	35	8	52	11	65	9	6	2	4	40	6	13	11	31	13	13	6	15	1	52	6	43	25	38	6	53	2	46			
623	1526	19	5	8	35	1	13	20	35	8	52	11	66	9	6	2	4	40	6	13	11	31	13	13	6	15	1	52	6	43	26	38	6	53	2	46				
634	1558	19	43	6	10	5	20	21	20	35	8	52	11	67	9	6	2	4	40	6	13	11	31	13	13	6	15	1	52	6	43	27	38	6	53	2	46			
644	1631	20	21	9	17	1	27	20	21	35	8	52	11	68	9	6	2	4	40	6	13	11	31	13	13	6	15	1	52	6	43	28	38	6	53	2	46			
655	1717	6	21	9	38	1	34	20	21	35	8	52	11	69	9	6	2	4	40	6	13	11	31	13	13	6	15	1	52	6	43	29	38	6	53	2	46			
7	7	17	17	21	42	10	0	41	20	35	8	52	11	70	9	6	2	4	40	6	13	11	31	13	13	6	15	1	52	6	43	30	38	6	53	2	46			
719	1820	18	22	24	10	22	1	48	20	35	8	52	11	71	9	6	2	4	40	6	13	11	31	13	13	6	15	1	52	6	43	31	38	6	53	2	46			
732	1919	19	23	6	10	22	1	48	20	35	8	52	11	72	9	6	2	4	40	6	13	11	31	13	13	6	15	1	52	6	43	32	38	6	53	2	46			
746	1942	19	23	50	11	9	2	47	20	35	8	52	11	73	9	6	2	4	40	6	13	11	31	13	13	6	15	1	52	6	43	33	38	6	53	2	46			
756	1957	19	23	55	12	16	5	26	20	35	8	52	11	74	9	6	2	4	40	6	13	11	31	13	13	6	15	1	52	6	43	34	38	6	53	2	46			
763	1958	19	23	55	12	16	5	26	20	35	8	52	11	75	9	6	2	4	40	6	13	11	31	13	13	6	15	1	52	6	43	35	38	6	53	2	46			
772	1959	19	23	55	12	16	5	26	20	35	8	52	11	76	9	6	2	4	40	6	13	11	31	13	13	6	15	1	52	6	43	36	38	6	53	2	46			
782	1960	19	23	55	12	16	5	26	20	35	8	52	11	77	9	6	2	4	40	6	13	11	31	13	13	6	15	1	52	6	43	37	38	6	53	2	46			
792	1961	19	23																																					

AUGUST 1970

LONGITUDE

Day	Sid. Time	○	D	D 12 Hour	Mean ♈	True ♈	♉	♀	♂	♃	♄	♅	♆	♇	♈	♉
1	20 36 45	8Q 20 19	24S 38 47	0Q 37 30	4X 4	2X 54R	1Q 11	21Q 55	8Q 49	28Q 12	21Q 35	5Q 42	28Q 9R	25Q 30		
2	20 40 42	9 17 45	6Q 34 37	12 30 24	4 0	2 51	2 40	23 1	9 27	28 18	21 38	5 45	28 6	25 32		
3	20 44 38	10 15 11	18 25 6	24 18 59	3 57	2 49	4 8	24 7	10 6	28 25	21 42	5 47	28 6	25 34		
4	20 48 35	11 12 38	0Q 12 21	6Q 5 31	3 54	2 49D	3 33	25 12	10 44	28 32	21 45	5 50	28 6	25 35		
5	20 52 32	12 10 6	11 58 50	17 52 41	3 51	2 49	6 57	26 18	11 23	28 38	21 48	5 52	28 6	25 37		
6	20 56 28	13 7 36	23 47 26	29 43 34	3 48	2 50	8 19	27 23	12 1	28 45	21 51	5 53	28 6	25 39		
7	21 0 25	14 5 5	8Q 41 30	11Q 41 44	3 44	2 51	9 40	28 26	12 39	28 52	21 54	5 58	28 6	25 40		
8	21 4 21	15 2 36	17 44 47	23 51 10	3 41	2 53	10 58	29 33	13 18	29 0	21 57	6 0	28 7	25 42		
9	21 8 18	16 0 7	0Q 1 26	6Q 16 7	3 38	2 54	12 14	0Q 38	13 56	29 7	22 22	6 3	28 7	25 44		
10	21 12 14	16 57 40	12 35 43	19 0 45	3 35	2 54R	13 28	1 42	14 34	29 15	22 22	6 6	28 7D	25 46		
11	21 16 11	17 55 13	25 31 40	2d 8 51	3 32	2 54	14 40	2 47	15 13	29 22	22 5	6 9	28 7	25 48		
12	21 20 7	18 52 47	8Q 52 38	15 43 12	3 29	2 53	15 50	3 81	15 51	29 30	22 8	6 11	28 7	25 50		
13	21 24 4	19 50 22	22 40 38	29 44 53	3 25	2 52	16 57	4 84	16 29	29 38	22 10	6 14	28 7	25 51		
14	21 28 1	20 47 58	6Q 55 43	14Q 12 44	3 22	2 51	18 3	5 58	17 8	29 46	22 12	6 17	28 7	25 53		
15	21 31 57	21 45 35	21 55 21	29 2 49	3 19	2 49	19 5	7 1	17 46	29 54	22 15	6 20	28 8	25 53		
16	21 35 54	22 43 13	6Q 34 12	14Q 8 27	3 16	2 48	20 5	8 16	24 24	0Q 08	22 17	6 23	28 8	25 57		
17	21 39 50	23 40 52	21 44 27	29 20 58	3 13	2 48D	21 3	9 8	19 3	0 10	22 19	6 26	28 8	25 57		
18	21 43 47	24 38 33	6Q 36 48	14Q 30 45	3 10	2 48	21 57	10 10	19 41	0 20	27 23	6 32	28 9	26 1		
19	21 47 43	25 36 15	22 1 44	29 28 45	3 6	2 48	22 49	11 13	20 19	0 20	27 23	6 35	28 9	26 3		
20	21 51 40	26 33 58	6T 50 59	14T 7 43	3 3	2 49	23 37	12 18	20 57	0 36	22 24	6 38	28 9	26 5		
21	21 55 36	27 31 42	21 18 27	28 22 51	3 0	2 49	24 22	13 16	21 36	0 45	22 27	6 42	28 10	26 9		
22	21 59 33	28 29 29	8Q 20 43	12Q 12 2 2	2 57	2 49	25 4	14 18	22 0	0 84	22 27	6 42	28 10	26 9		
23	22 3 30	29 27 17	18 56 53	25 35 28	2 54	2 49R	25 41	15 19	22 52	1 3	22 29	6 45	28 10	26 11		
24	22 7 26	0Q 25 7	2X 8 5	8Q 35 5	2 50	2 49	26 15	20 23	30 1	22 30	6 51	28 10	26 13			
25	22 11 23	1 22 59	14 56 32	21 13 54	2 47	2 49	26 45	17 21	24 8	1 21	22 31	6 54	28 11	26 15		
26	22 15 19	2 20 52	27 26 37	3Q 35 31	2 44	2 49D	27 10	19 21	24 47	1 30	23 32	6 58	28 11	26 17		
27	22 19 16	3 18 48	9Q 41 2	15 43 39	2 41	2 49	27 30	19 21	25 25	1 40	22 33	6 58	28 12	26 19		
28	22 23 12	4 16 45	21 43 47	27 41 53	2 38	2 49	27 46	20 21	26 3	1 49	22 34	7 1	28 13	26 21		
29	22 27 9	5 14 43	3Q 38 20	9Q 33 30	2 35	2 50	27 56	21 20	26 41	1 59	22 35	7 4	28 13	26 24		
30	22 31 5	6 12 44	15 27 46	21 21 28	2 31	2 50	28 0R	22 19	27 9	2 22	36 7	8	28 14	26 26		
31	22 35 8	7Q 10 46	27Q 14 53	3Q 8 21	2H 28	2M 50R	23Q 17	27Q 58	28Q 19	2 22	36 7	8	28 14	26 28		

DECLINATION and LATITUDE

Day	○	D	D 12 Hr.	♉	♀	♂	♃	♄	♅	♆	♇	♈	♉	Day	℞	℞	℞
1	18N11	24R24	3N15 22R45	11N37	0N36	3N38	0N27	19N 9	1R 8	15N58	2S16	1	18S8	0N41	18S 5	1R42	15N60 15N31
2	17 86	20 53	2 20 18 48	10 58 0	28	3 8 0	23	15 59 1	8 9 49	1 7 15 59	2 16	9	1 47	0 41	18 5	1 42	15 56 15 30
3	17 41	16 33	1 19 14 9	10 18 0	19	2 38 0	19	18 48 1	8 9 51	1 7 15 60	2 16	13	1 51	0 41	18 6	1 41	15 48 15 28
4	17 25	11 38	0 14 8 60	9 39 0	11	2 8 0	18	18 38 1	8 9 52	1 7 15 60	2 16	17	1 56	0 41	18 6	1 41	15 44 15 27
5	17 19	6 17	0S50 3 32	8 59 0	10	1 38 0	10	18 28 1	8 9 53	1 7 16	2 16	17	1 57	0 40	18 7	1 41	15 40 15 26
6	16 53	0 44	1 53 25 56	8 20 0	9	1 7 0 5	18	17 59 1	8 9 60	1 7 16	2 16	21	2 1	0 40	18 7	1 41	15 36 15 25
7	16 36	45S4	2 52 7 41	7 42 0	17	0 37 0	18	16 59 1	8 10 5	1 7 16	2 16	22	2 1	0 40	18 7	1 41	15 36 15 25
8	16 20	10 23	3 44 13 4	7 3 0	26	0 7 09 4	17	15 55 1	8 10 5	1 6 16	2 16	29	2S12	0R40	18S 8	1R40	15N33 15R25
9	16 3	15 38	4 26 18 4	6 25 30	36	0S23 0	9	17 44 1	8 10 8	1 6 16	3 22	17					
10	15 45	20 20	4 57 22 24	5 48 0	46	0 53 0	13	17 33 1	8 10 11	1 6 16	4 22	18					
11	15 28	24 14	5 14 25 46	5 11 0	56	1 23 0	18	17 22 1	9 10 14	1 5 16	4 22	18					
12	15 10	26 58	5 15 27 40	4 34 1	6	1 53 0	23	17 11 1	9 10 17	1 5 16	5 22	18					
13	14 52	28 12	4 58 28 9	3 59 1	17	2 23 0	29	16 59 1	9 10 20	1 5 16	5 22	18					
14	14 34	27 38	4 23 26 38	3 24 1	27	2 53 0	34	16 48 1	9 10 23	1 5 16	6 22	19					
15	14 15	25 9	3 29 23 14	2 49 1	37	3 23 0	39	16 36 1	9 10 26	1 5 16	6 22	19					
16	13 57	20 54	2 21 16 13	2 16 1	48	3 53 0	44	16 24 1	9 10 29	1 4 16	6 22	19					
17	13 38	15 13	1 12 0	1 44 1	59	4 23 0	50	16 12 1	9 10 32	1 4 16	7 22	19					
18	13 19	8 36	0R23 5 6	1 13 2	39	4 52 0	55	16 1 1	9 10 35	1 4 16	7 22	20					
19	12 59	1 33	1 45 1R59	0 43 2	20	5 32 1	52	15 58 1	9 10 38	1 4 16	7 22	20					
20	12 40	5R27	2 58 4 48	0 14 2	30	5 31 1	51	16 36 1	9 10 42	1 4 16	7 22	20					
21	12 20	11 39	3 58 23 37	2 21 2	38	9 14 2	58	15 42 1	9 10 45	1 3 16	7 22	20					
22	12 0	17 44	4 42 20 13	0 39 2	51	8 50 1	18	15 12 1	9 10 48	1 3 16	8 2 20	21					
23	11 40	22 24	5 9 26 16	1 31 1	7	19 1	23	14 59 1	9 10 51	1 3 16	8 2 22	20					
24	11 20	25 47	5 18 26 56	1 26 3	11	7 48 1	29	14 47 1	9 10 55	1 3 16	8 2 22	21					
25	10 59	27 44	5 11 28 10	1 46 3	20	8 17 1	35	14 34 1	9 10 58	1 3 16	8 2 22	21					
26	10 38	28 14	4 49 27 57	2 5 3 30	8	8 45 1	41	14 21 1	9 11 2	2 21	8 2 22	21					
27	10 18	27 19	4 15 26 22	2 21 2	38	9 14 2	47	14 8 1	9 11 5	2 21	8 2 22	21					
28	9 57	25 8	3 29 23 37	2 34 3	47	8 42 1	53	13 56 1	9 11 8	2 21	8 2 22	21					
29	9 35	21 52	3 35 19 53	2 46 3	54	10 10 1	59	13 43 1	9 11 12	1 2	16 8 2 22	21					
30	9 14	17 43	1 35 15 23	2 54 4	1	10 38 2	5	13 29 1	9 11 15	1 2	16 8 2 22	21					
31	9 14	12N53	0R31 10N20	2S59 48 8	5	11 8 2	51	13N16 1	11 18 1	1 2	16 8 2 22	21					

DAILY ASPECTARIAN

1	1m43	T	1m 7	49	10 49	5 14	12pm51	6 43	9 33	19 19	1 34	4 43	1 19


<tbl\_r cells="15" ix="2" maxcspan="1" maxrspan="

## CHART "B"

1 (Name) AUG 21 1970  
 2 (Month) (Day) (Year)  
 3 Place THRAIL CA.  
 4 Latitude 41N 54  
 5 Longitude 122W 39

## DOMINANT FACTOR

6 Time of Birth 3:25:48 a.m.  
 Correction for (Daylight Saving) -1:00:00  
 7 Standard Time 2:25:48  
 8 Time of Birth 2:25:48  
 Correction for (Standard Time) -0:09:56  
 9 Mean Time 2:15:52  
 10 Local Mean Time of Birth, A.M or P.M. 2:15:52

## FIRST KEY PROBLEM

11 Noon 12:00  
 12 Local Mean Time  
 13 L.M.T. Interval (+) 2:15:52  
 14 Sidereal Time 21:55:36  
 15 (4 Noon) ZERO HOUR AMER. EPH.  
 16 24:11:28  
 17 L.M.T. Interval  
 18 S.T. (Uncorrected) 0:11:28  
 Correction, 9.86s per h. so (+) 0:01:43  
 19 E.G.M.T. Int.  
 20 Sidereal Time 0:13:11  
 (Of Birth)

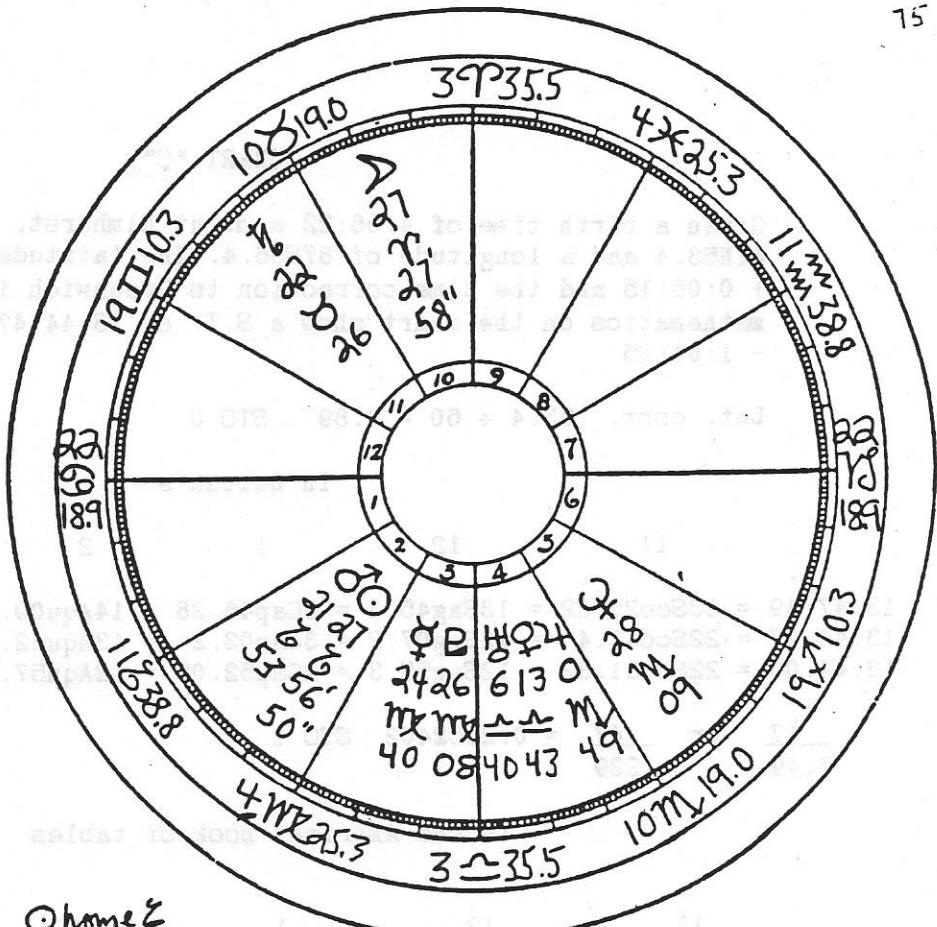
## SECOND KEY PROBLEM

Standard L.M.T. 2:15:52  
 21 Time of Birth  
 Hrs. E. or 8:09:56  
 22 W. of Greenwich  
 23 E.G.M.T. 10:25:48

24 Noon 12:00  
 25 E.G.M.T.  
 26 E.G.M.T. Interval (+) 10:25:48  
 (Indicate plus or minus)  
 (+)  $\Delta T = (+) 10:26:29$

## ADDITIONAL FACTORS

27 Constant Log  
 28 Limiting Date MAR. 14, 1970  
 (Including year)  
 AMER. BOOK OF TABLES



MOV.	FIX.	MUT.	FIRE	EARTH	AIR	WATER	ANG.	SUC.	CAD.
3	5	2	3	3	2	2	4	4	2
MC ASC			NC						
PER.	COMP.	PUB.	LIFE	WEALTH	ASSOC.	PSY.	ABOVE	EAST	RET.
4	4	2	1	3	3	3	2	6	0

Declinations EMAN 12 28 3-0 ASPECTS

	○	□	♀	♂	△	≤	×	□	∨	MC	ASC	MR.
12N 11	○	△	·	≤	○	×	□	·	□	∨	·	·
14N 29	○	×	○	○	△	○	○	·	×	×	·	□
05A 4	□	·	·	·	·	·	△	○	○	○	○	×
6S 33	♀	·	·	·	·	○	≤	·	○	○	○	○
15N 19	♂	·	·	·	·	○	○	·	○	○	○	○
10S 46	△	·	·	·	·	○	○	·	○	○	○	○
16N 07	b	·	·	·	·	○	○	·	○	○	○	○
25O 2	HI	·	·	·	·	○	○	·	○	○	○	○
18S 07	Ψ	·	·	·	·	○	○	·	○	○	○	○
15N 40	P	·	·	·	·	○	○	·	○	○	○	○
1N 26	MC	·	·	·	·	○	○	·	○	○	○	○
21N 35	ASC	·	·	·	·	○	○	·	○	○	○	○

Dominant Best Worst Planet

Sign

House

## CHART "C"

Given a birth time of 4:56:22 a.m. at Elmhurst, Ill. with a latitude of 41°N53.4 and a longitude of 87°W56.4. The latitude correction is + 0:08:15 and the time correction to Greenwich is 5:51:45. The mathematics on the chart show a S.T. of 13:44:47 and an E.G.M.T.I. of - 1:04:25

$$\text{Lat. corr. } 53.4 \div 60 = 0.89 \text{ STO 0}$$

In Dalton's

11	12	1	2	3	10
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13:47:49 = 23Sco25.32 = 13Sag45.3 = 3Cap46.28 = 14Aqu09.3 = 26Pis12 = 29Lib00  
 13:44:47 = 22Sco42.4 = 13Sag07.2 = 3Cap03.2 = 13Aqu12.1 = 25Pis14.8 = 28Lib12.3  
 13:44:00 = 22Sco31.32 = 12Sag57.3 = 2Cap52.07 = 12Aqu57.3 = 25Pis00 = 28Lib00

$$\frac{47}{3:49} \text{ or } \frac{47}{229} = 0.2052402 \text{ STO 1}$$

In the American Book of tables

11	12	1	2	3	10
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13:48:00 = 23Sco30.32 = 13Sag50.97 = 3Cap48.18 = 14Aqu12.97 = 26Pis15.11 = 29Lib03  
 13:44:47 = 22Sco44.9 = 13Sag10.0 = 3Cap03.1 = 13Aqu13.5 = 25Pis14.1 = 28Lib12.3  
 13:44:00 = 22Sco36.32 = 12Sag59.97 = 2Cap52.07 = 12Aqu58.08 = 24Pis59.22 = 28Lib00

$$\frac{47}{4:00} \text{ or } \frac{47}{240} = 0.1958333$$

American Astrology

11	12	1	2	3
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13:48:00 = 23Sco30.754 = 13Sag51.103 = 3Cap48.625 = 14Aqu12.803 = 26Pis14.632  
 13:44:47 = 22Sco45.2 = 13Sag09.7 = 3Cap03.1 = 13Aqu13.0 = 25Pis14.3  
 13:44:00 = 22Sco36.543 = 12Sag59.67 = 2Cap52.003 = 12Aqu58.447 = 24Pis59.576

$$\frac{47}{4:00} \text{ or } \frac{47}{240} = 0.1958333$$

10

29Lib02' 48''  
 28Lib12' 07''  
 27Lib59' 46'' (28Lib12.1)

In Raphael's  
(1975)

Sun Jan. 31 = 10:59:02 2nd DMS-DD = 10.983889 STO 5  
Sun Jan. 30 = 9:58:07 2nd DMS-DD = 9.9686111 STO 4

RCL 5 - RCL 4 = 1.0152778  
1.015278 X RCL 2 = 0.0454172 STO 6  
RCL 5 - RCL 6 = 10.938472  
10.938472 INV 2nd DMS-DD = 10.56185

Sun = 10Aqu56' 19"

Sun's δ Jan 31 = 17S29  
Sun's δ Jan 30 = 17S45

16 X RCL 2 = 0.7157407 δ = 17S30

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The Moon Jan. 31 = 35:19:58 2nd DMS-DD = 35.332778 STO 5  
The Moon Jan. 30 = 20:36:36 2nd DMS-DD = 20.61 STO 4

RCL 5 - RCL 4 = 14.722778  
14.722778 X RCL 2 = 0.6586057 STO 6  
RCL 5 - RCL 6 = 34.674172  
INV 2nd DMS-DD = 34.402702

Moon = 4Lib40' 27"

Correction for ununiform or non-linear motion

	D0	D1	D2
Jan. 31	14° 18' 01"		
Feb. 1	13° 50' 46"	27' 15"	
Feb. 2	13° 24' 28"	26' 18"	57"

1st order correction

0.0500000 = 0.02375  
0.0447338 = 0.0213539  
0.0400000 = 0.01920

0.0047338 X 0.00455 = 0.0021539  
0.0100000

0.0213539 X 27' 15" = 0° 00' 35"  
4° 40' 27" + 35" = 4° 41' 02"

## 2nd order correction

$$\begin{aligned}0.0500000 &= 0.01254 \\0.0447338 &= 0.0168128 \\0.0400000 &= 0.01544\end{aligned}$$

$$\begin{aligned}\underline{0.0047338} \times 0.0029 &= 0.0013728 \\0.0100000 &\end{aligned}$$

$$\begin{aligned}0.0168128 \times 57'' &= 0.00002662 \\0.00002662 \text{ INV } 2\text{nd DMS-DD} &= 0.0000958 \\4^\circ 41' 02'' - 01'' &= 4^\circ 41' 01'' \\ \text{Moon} &= 4\text{Lib}41 01\end{aligned}$$

Moon's declination ( $\delta$ )

$$\begin{aligned}\text{Jan 31} &= 6S15 2\text{nd DMS-DD} = 6.25 \text{ STO 5} \\ \text{Jan 30} &= 0S50 2\text{nd DMS-DD} = 0.8333333 = \text{STO 4} \\ \text{RCL 5} - \text{RCL 4} &= 5.4166667 \\ 5.4166667 \times \text{RCL 2} &= 0.2423081 \\ 0.2423081 \text{ INV } 2\text{nd DMS-DD} &= 0.1432309 \\ 6S15 - 14 &= 6S01\end{aligned}$$

$$\begin{aligned}\text{Mercury Jan 31} &= 25^\circ 20' \\ \text{Jan 30} &= \underline{25^\circ 27'} \\ &\quad 07\end{aligned}$$

$$7' \times \text{RCL 2} = 0.3131366 \text{ no correction Mercury} = 25\text{Aqu}20R$$

Mercury's declination shows a motion of only 14'

$$\begin{aligned}14 \times \text{RCL 2} &= 0.6262731 \\ 11S12 + 1 &= 11S13\end{aligned}$$

$$\begin{aligned}\text{Venus Jan 31} &= 1^\circ 33' \\ \text{Jan 30} &= \underline{0^\circ 18'} \\ &\quad 1^\circ 15'\end{aligned}$$

$$\begin{aligned}1^\circ 15' 2\text{nd DMS-DD} &= 1.25 \\ 1.25 \times \text{RCL 2} &= 0.0559172 \\ 0.0559172 \text{ INV } 2\text{nd DMS-DD} &= 0^\circ 03' \\ 1^\circ 33' - 3' &= 1\text{Pis}30\end{aligned}$$

$$\begin{aligned}\text{Declination Jan 31} &= 12S21 \\ \text{Jan 30} &= \underline{12S49}\end{aligned}$$

$$28 \times \text{RCL 2} = 1.25254631 \quad 12S21 - 1 = 12S20$$

Mars Jan 31 7Cap07  
 Jan 30 6Cap23  
 44

7Cap07 10 sec. east  
 6Cap23 10 sec  
 00

$$44 \times RCL 2 = 1.968287 \text{ sec} \quad 7Cap07 - 2 = 7Cap05$$

Jan 31 23S48  
 Jan 30 23S50  
 02

23S48 10 sec  
 23S50 10 sec

$$2 \times RCL 2 = 0.0894676 \text{ no correction } 23S48$$

Jupiter Jan 31 19Pis14  
 Jan 30 19Pis01  
 13

$$13 \times RCL 2 = 0.5815394$$

19Pis13

Jan 31 5S17  
 Jan 29 5S27

$$10 \quad 10 \div 2 = 5$$

Jan 31 5S17  
 Jan 30 5S22  
 5

$$5 \times RCL 2 = 0.223669 \text{ no correction } 5S17$$

Saturn Jan 31 13Can29  
 Jan 30 13Can33  
 4

$$4 \times RCL 2 = 0.1789352 \text{ no correction } 13Can29$$

Jan 31 22N25  
 Jan 29 22N24 obviously no correction 22N25

Uranus Jan 31 2Sco28  
 Jan 30 2Sco27  
 01 obviously no correction

no change in declination for several days 11S49

Neptune Jan 31 11Sag19  
 Jan 30 11Sag17  
 02

10g-07 10 ast. not  
28g-06 00 ast.  
 00

$2 \times RCL 2 = 0.0894676$  no correction 11Sag19 = 2 30E X 54

Jan 31 1N32  
 Jan 29 1N32 no correction 1N32

1N32 10 ast.  
28g-06 00 ast.  
 00

Pluto page 39 Jan 31 9Lib09R  
 Jan 21 9Lib14R

$$5 \quad 5 \div 10 = 0.5$$

obviously no correction 9Lib09R ~~9Lib14R~~ 00 ast.

Jan 31 12N02  
 Jan 21 11N55  
 07

$$7 \div 10 = 0.7$$

obviously no correction 12N02

1N32 10 ast.  
28g-06 00 ast.

From the declination tables page 36,37

M.C. 28Lib20 = 10S53  
 28Lib12 = ?  
28Lib10 = 10S49

~~10S53 - 10S49 = 4~~ 4 = 0.8

$$\frac{2}{10} \times 4 = 0.8$$

28Lib12 = 10S50

10S50 10 ast. ~~not~~  
28g-06 00 ast.

ASC. 4Cap00 = 23S23  
 3Cap03 = ?  
3Cap00 = 23S24

01

23S24 not ~~not~~ 23S24 00 ast.  
 obviously no correction 23S24

23S24 10 ast. ~~not~~  
3Cap03 00 ast.  
 00

23S24 ~~not~~ 23S24 00 ast. ~~not~~

## UPPER MERIDIAN, CUSP OF 10th H.

H. M. A. SID. T. 18 28 52 AEC 202° 18'.0								H. M. A. 18 32 38 203° 9'.8								H. M. A. 18 36 25 204° 6'.8								H. M. A. 18 40 18 205° 3'.2								H. M. A. 18 44 0 206° 0'.1								H. M. A. 18 47 49 206° 57'.2							
24°				25°				26°				27°				28°				29°																											
H.	11	12	1	2	8	11	12	1	2	8	11	12	1	2	8	11	12	1	2	8	11	12	1	2	8	11	12	1	2	8	11	12	1	2	8												
22	16.8	11.22	15.2	21.0	23.0	17.7	12.16	16.3	22.1	23.9	18.5	13.11	17.3	23.2	24.7	19.4	14.6	18.4	24.3	25.6	20.3	15.15	21.9	19.4	25.4	26.5	21.1	15.56	20.5	26.5																	
23	21.9	5.10	53	0	0	22.8	4.11	47	0	1	7	2.12	42	1	2	6	1.13	37	1	3	5	0.14	33	2	4	4	20.8	15.29	3	5																	
24	8	2.10	23	14.7	20.9	7	1.11	18	15.8	1	6	17.9	12.12	16.8	1	5	18.8	13.7	17.9	2	4	19.6	14.3	18.9	4	3	5.14	59	0	5																	
25	7	15.9	9.53	4	9	6.16.8	10.47	5	0	5	6.11	14.2	6	1	4	5.12	37	6	2	2	3	13	33	7	4	1	2.14	29	19.8	4																	
26	6	6.6	9.22	2	9	4	5.10	17	2	0	23.3	3.11	11	3	1	2	2.12	6	4	2	1	0.13	2	4	3	0.19.9	13.58	5	4																		
27	21.4	3.8	51	13.9	9.22.3	1.9	45	0	0	2	0.10	40	0	23.1	1.17.8	11.35	1.24.2	0.18.7	12.31	2	2.25	3	25.9	5.13	26	3	26.4																				
28	3	0.8	19	6	8	2.15.8	9.13	14.7	21.9	1.16.7	10.8	15.7	1.23.9	5.11	3.16.8	2.24.8	4.11	15.8	17.9	3	7	2.12	54	0	4																						
29	2.14.6	7.46	3.20.8	0	5	8.40	4	9.22.9	3.9	35	4	0	8	2.10	30	5	1	7	0.11	25	6	3	6.18.9	12.21	18.7	4																					
30	0	3.7	12	0	8.21.9	2.8	7	1	9	8	0.9	1	1	0	7.16.8	9.56	2	1	5.17.7	10.51	3	3	4	5.11	47	4	4																				
31	20.9	0.6	3.6	8	14.8	7.32	13.8	8	6.15.7	8.27	14.8	0	5	5.9	22.15.9	24.1	4	3.10	17	0.25.2	25.3	2.11	13	1	4																						
32	7.13.6	6.3	3	3	7	6	5.6	57	4	8	5	3.7	51	5.22.9	23.4	1.8	46	6	1.24.3	0.9	41	16.7	2	1.17.8	10.37	17.8	26.4																				
33	6	3.5	27	0	6	5	1.6	21	1.21.8	22.4	14.9	7.15	2	9	2.15.8	8.10	3	1	1.16.6	9.5	4	2	0	4.10	1	5	3																				
34	4.12.9	4.50	11.7	20.6	21.3	13.8	5.44	12.8	7	2	6	6.38	13.9	9	1	4.7	33	0	0	0	2.8	28	1	2.24.8	1.9	23	2	3																			
35	20.3	6.4	13	3	6	2	4.5	6	4	7	.1	2.6	0	5	8.22.9	0.655	14.6	24.0	23.8	15.9	7.49	15.7	25.2	7.16.7	8.45	16.8	3																				
36	1	2.3	34	10.9	5	0	0	4.27	0	7.21.9	13.8	5.21	1	8	8.14.6	6.16	2	0	6	5.7	10	3	1	5	3.8	5	5	3																			
37	0.11.8	2.54	5	5.20.9	12.6	3.47	11.6	6	7	4.4	41	12.7	22.8	6	2.5	35	13.8	0	5	1.6	30	0	1	3.15.9	7.25	1	26.3																				
38	19.8	4.2	13	1	4	7	2.3	6	2.21.6	6	0.4	0	3	7	4.13.8	4.54	4	0	3.14.7	5.48	14.6	1	2	5.6	43	15.7	3																				
39	7	0.1	31	9.6	20.4	5.11.8	2.24	10.8	5	4.12.6	3.17	11.9	7	2	4.4	11	0.23.9	1	2	5.5	22.51	0	1	5.59	4	2																					
40	5.10.6	0.48	2	4	4	4	1.40	4	5	2	2.2	33	5	7	1	0.3	27	12.6	9.22.9	13.8	4.20	13.8	0	23.8	14.6	5.15	0	2																			
41	3	1.0	3	8.7	4	3.10.9	0.55	9.9	4	0.11.7	1.48	0	6.21.9	12.5	2.41	1	9	7	4.3	35	4	0	6	2.4	29	14.6	2																				
42	1	9.7	29	17	2	3	1	5.0	9	4	4.20.8	3	1	1.10.5	22.6	7	1	1.15	11.6	9	5.12.9	2.48	12.9	0	4.13.7	3.41	1	26.2																			
43	18.9	2.28	30	7.7	3.19.9	0.29	21	8.9	21.3	6.10.8	0.13	0	5	5.11.6	1.5	1	8	3	4.159	4.24.9	2	3.25	2	13.6	2																						
44	7	8.7	27	41	1.20.2	7	9.5	28	32	4	3	4	3.29	23	9.5	5	3	1.0	15	10.6	23.8	1.11.9	1.8	11.9	9	0.12.8	2	1	1																		
45	5	3.26	50	6.5	1	5	1.27	41	7.8	2	2	9.8	28	32	8.9	5	1.10.6	29	24	1	8.21.9	4.0	16	4	9.22.8	3	1.9	12.6	1																		
46	3	7.8	25	58	0	1	3	8.6	26	48	2	2	0	3.27	39	3	4.20.8	1.28	30	9.5	7	7.10.9	29	22	10.8	8	6.11.8	0.14	0	1																	
47	1	3.25	4	5.4	0	1	0.25	54	6.6	21.1	19.8	8.8	26	44	7.7	22.4	6	9.6	27	34	8.9	7	6	4.28	26	2	8	4	2.29	18	11.4	26.1															
48	17.9	6.8	24	8	4.7	19.9	18.9	7.5	24	57	5.9	1	6	3.25	47	1	4	4	1.26	37	3.23.6	4	9.9	27	28	9.6	24.8	2	10.7	28	19	10.8	0														
49	7	3.2	3	10	0	9	7	6.9	23	58	2	0	4	7.8	24	48	6.4	3	2	8.6	25	37	7.6	6	2	3.26	27	8.9	7	21.9	1	27	18	1	0												
50	5	5.5	7.2	10	3.3	8	4	4.22	58	4.5	0	2	2.23	46	5.7	3	0	0.24	35	6.9	5.20.9	8.7	25	25	2	7	7	9.5	26	14	9.4	0															
51	2	1.21	7	2.5	7	2	5.8	21	55	3.7	20.9	18.9	6.6	22	42	4.9	22.2	19.7	7.4	23	31	1	5	6	1.24	20	7.4	6	4	8.9	25	9	8.7	25.9													
52	0	4.5	20	2	1.6	19.6	17.9	2.20	49	2.8	9	7	0.21	36	1	1	4	6.8	22	24	5.3	23.4	3	7.5	23	12	6.6	24.6	1	3.24	0	7.9	9														
53	16.8	3.9	18	55	0.7	5	6	4.6	19	41	1.9	8	5	5.4	20	27	3.2	1	2	1.21	14	4.4	3	1	6.8	22	1	5.7	5	20.9	7.6	22	49	0	9												
54	5	2.17	45	29.7	4	3	3.9	18	30	0.9	7	2	4.7	19	16	2.2	0	0	5.4	20	1	3.4	3	19.8	1.20	48	4.7	5	6	6.9	21	35	6.0	8													
55	2	2.5	16	32	28.6	3	0	2.17	17	29.8	6	17.9	0.18	1	1.1	21.9	18.7	4.7	18	46	2.3	2	5	5.4	19	31	3.6	5	3	2.20	17	4.9	8														
56	15.9	1.8	15	17	27.4	2	16.7	2.5	16	0.28	6	4	5	3.3	16	43	29.9	8	3	0.17	27	1.1	1	1	4.7	18	12	2.4	4	0	5.4	18	56	3.7	8												

# Placidus Table of Houses for Latitudes 0° to 60° North

13h 20m 0s			200° 0' 0"			13h 24m 0s			201° 0' 0"			13h 28m 0s			202° 0' 0"			13h 32m 0s			203° 0' 0"			
11	12	ASC	2	3	11	12	ASC	2	3	11	12	ASC	2	3	11	12	ASC	2	3	11	12	ASC	2	3
22 <sup>02</sup> 25	20 <sup>49</sup> 19	18 <sup>52</sup> 28	17 <sup>53</sup> 33	19 <sup>07</sup>	23 <sup>02</sup> 23	21 <sup>44</sup> 44	19 <sup>02</sup> 44	18 <sup>53</sup> 34	20 <sup>04</sup> 12	0	24 <sup>02</sup> 22	22 <sup>03</sup> 39	20 <sup>04</sup> 20	19 <sup>05</sup> 35	21 <sup>04</sup> 17	25 <sup>02</sup> 21	23 <sup>03</sup> 44	21 <sup>03</sup> 17	20 <sup>04</sup> 36	22 <sup>02</sup> 23				
21 52	19 30	16 32	16 36	18 59	22 51	20 25	17 29	17 37	20 5	5	23 49	21 20	18 23	18 39	21 11	24 47	22 15	19 22	19 42	22 17				
21 20	18 11	14 32	15 35	18 50	22 18	19 6	15 29	16 38	19 57	10	23 16	20 20	16 26	17 41	21 4	24 13	20 55	17 23	18 44	22 11				
20 47	16 50	12 26	14 30	18 41	21 44	17 44	13 23	15 34	19 49	15	22 42	18 39	14 21	16 38	20 57	23 39	19 33	15 18	17 43	22 4				
20 12	15 26	10 12	13 19	18 31	21 10	16 20	11 9	14 24	19 40	20	22 7	17 14	12 6	15 29	20 49	23 4	18 8	13 4	16 35	21 57				
20 5	15 8	9 44	13 4	18 29	21 2	16 2	10 41	14 9	19 38	21	21 59	16 56	11 38	15 20	47	22 56	17 50	12 36	16 21	21 56				
19 58	14 51	9 15	12 49	18 27	20 55	15 49	13 54	19 36	22	21 52	16 39	11 10	15 0	20 45	22 49	17 33	12 7	16 21	21 54					
19 51	14 33	8 46	12 33	18 25	20 48	15 27	9 43	13 39	19 34	23	21 45	16 21	10 41	14 45	20 43	22 41	17 15	11 38	15 51	21 53				
19 44	14 15	8 16	12 17	18 23	20 41	15 9	9 14	13 23	19 32	24	21 37	16 2	10 11	14 29	20 42	22 34	16 56	11 9	15 36	21 51				
19 36	13 57	7 7	9 46	12 0	20 33	14 50	8 43	13 6	19 30	25	21 30	15 44	9 41	14 13	20 40	22 26	16 38	10 38	15 20	21 50				
19 29	13 38	7 16	11 43	18 18	20 26	14 32	8 13	12 50	19 28	26	21 22	15 25	9 10	13 56	20 38	21 38	14 40	7 23	13 35	21 39				
19 21	13 19	6 44	11 26	18 16	20 18	14 13	7 41	12 33	19 26	27	21 14	15 6	8 39	14 40	20 36	21 29	14 19	6 48	13 16	21 37				
19 14	13 0	6 13	11 8	18 13	20 10	13 54	7 9	12 15	19 24	28	21 6	14 47	8 7	13 22	20 34	21 21	13 38	6 12	12 56	21 35				
19 6	12 41	5 40	10 50	18 11	20 2	13 34	6 37	11 57	19 22	29	20 58	14 27	7 34	13 4	20 32	21 53	15 21	8 31	14 12	21 43				
18 58	12 21	5 7	10 31	18 8	19 54	13 14	11 38	19 19	30	20 50	14 7	7 0	12 46	20 30	21 44	15 1	7 58	13 54	21 41					
18 50	12 1	4 33	10 11	18 6	19 46	12 54	5 29	11 19	19 17	31	20 42	13 47	6 26	12 27	20 28	21 38	14 40	7 23	13 35	21 39				
18 42	11 41	3 58	9 51	18 3	19 38	12 34	4 54	10 59	19 14	32	20 34	13 26	5 51	12 7	20 26	21 29	14 19	6 48	13 16	21 37				
18 33	11 20	3 22	9 30	18 0	19 29	12 13	4 19	10 38	19 12	33	20 25	13 5	5 15	11 47	20 24	21 21	13 38	6 12	12 56	21 35				
18 25	10 59	2 46	9 8	17 57	19 21	11 51	3 42	10 17	19 9	34	20 16	12 44	4 39	11 26	20 21	21 12	13 36	5 35	12 35	21 33				
18 16	10 37	2 9	8 46	17 55	19 12	11 29	3 6	9 55	19 7	35	20 7	12 22	4 1	11 4	20 19	21 3	13 14	4 58	12 13	21 31				
18 7	10 15	1 30	8 23	17 51	19 3	11 7	2 26	9 32	19 4	36	19 58	11 59	3 22	10 41	20 17	20 53	12 51	4 19	11 51	21 29				
17 58	9 52	1 57	7 58	17 48	18 53	10 44	1 47	9 8	19 1	37	19 49	11 36	2 42	10 18	20 14	20 44	12 28	3 39	11 28	21 27				
17 49	9 29	0 11	7 33	17 45	18 44	10 21	1 6	8 43	18 58	38	19 39	11 13	2 2	9 53	20 11	19 42	12 4	2 58	11 4	21 25				
17 39	9 5	29 <sup>29</sup>	7 7	17 42	18 34	9 57	0 24	8 17	18 55	39	19 29	10 48	1 20	9 27	20 9	19 30	9 28	2 40	11 40	20 22				
17 30	8 41	28 47	6 40	17 38	18 24	9 32	29 <sup>41</sup>	7 50	18 52	40	19 19	10 24	0 36	9 1	20 6	20 14	11 15	1 32	10 12	21 20				
17 20	8 16	28 3	6 11	17 34	18 14	9 7	28 57	7 22	18 49	41	19 9	9 58	29 <sup>52</sup>	8 33	20 3	20 3	3 10	49	0 47	9 45	21 17			
17 9	7 50	27 17	5 42	17 31	18 4	8 41	28 12	6 52	18 45	42	18 58	9 32	6 8	20 0	20 13	19 53	10 23	1 9	16 16	21 15				
16 59	7 24	26 31	5 10	17 27	17 53	8 14	27 25	6 21	18 42	43	18 47	9 5	28 19	7 33	19 57	19 42	9 56	29 <sup>13</sup>	8 45	21 12				
16 48	6 57	25 43	4 38	17 23	17 42	7 47	2 46	23 36	3 49	18 38	44	18 36	8 37	27 30	7 1	19 53	19 30	9 28	28 24	8 14	21 9			
16 36	6 29	24 53	4 3	17 18	17 30	7 19	25 46	5 15	18 34	45	18 24	8 9	26 39	6 27	19 50	19 18	8 59	27 33	7 40	21 6				
16 25	6 0	24 2	3 27	17 14	17 19	6 50	24 54	4 39	18 30	46	18 12	7 40	25 47	5 51	19 46	19 6	8 29	26 40	7 5	21 3				
16 13	5 30	23 9	2 48	17 9	17 7	5 26	23 56	4 23	18 21	48	17 47	6 38	23 57	4 33	19 38	18 54	7 59	25 46	6 27	20 59				
16 1	5 0	22 14	2 7	17 4	16 54	5 49	23	6 30	18 21	49	17 34	6 5	22 59	3 51	19 34	18 41	7 27	24 49	5 48	20 56				
15 34	4 8	21 18	1 24	16 59	16 27	4 43	19 9	1 51	18 11	50	17 20	5 32	21 59	3 5	19 29	18 13	6 20	22 50	4 20	19 48				
15 21	3 21	19 18	29 <sup>04</sup>	16 47	16 13	4 9	20 7	1 2	18 6	51	17 6	4 57	20 57	2 17	19 25	17 59	5 45	21 47	3 32	20 44				
15 6	2 45	18 15	28 56	16 41	15 59	3 33	19 3	0 10	18 0	52	16 51	4 20	19 52	1 25	19 20	17 43	5 8	20 42	2 41	20 39				
14 51	2 19	17 9	2 98	16 2	15 34	2 56	17 57	29 <sup>61</sup>	17 54	53	16 36	3 43	18 43	0 29	19 14	17 28	4 30	19 34	1 45	20 35				
14 36	1 31	16 2	26 59	16 27	15 28	2 17	16 48	28 13	17 48	54	16 19	3 4	17 36	29 <sup>52</sup>	19 9	17 11	3 50	18 23	0 45	20 30				
14 19	0 51	14 51	25 53	16 19	15 11	1 37	15 37	27 7	17 41	55	16 3	2 23	16 23	28 23	19 2	16 54	3 9	17 10	29 <sup>40</sup>	20 24				
14 2	0	9 13	13 38	24 41	16 11	14 54	0 55	14 22	25 56	56	15 45	1 40	15 8	27 12	18 56	16 36	2 26	15 53	28 29	20 19				
13 45	29 <sup>26</sup>	12 21	23 22	16 2	14 36	0 11	4 23	15 37	17 26	57	15 26	0 35	13 49	25 53	19 53	15 37	0 53	13 11	25 45	20 6				
13 26	28 41	11 21	21 22	15 53	14 16	2 25	11 45	23 11	17 17	58	15 7	0 9	12 28	24 27	18 41	15 57	0 53	13 11	25 45	20 6				
13 2	6 27	23 53	9 39	20 20	15 43	13 56	28 37	10 21	21 35	7 8	59	14 47	29 <sup>20</sup>	11 2	22 51	18 33	15 37	0 4	11 44	24 26				
12 <sup>46</sup>	7 4	27 <sup>4</sup>	8 54	22 34	13 56	2 57	24 33	6 53	23 25	50	20 51	4 25	9 34	21 3	18 4	16 24	22 <sup>15</sup>	10 <sup>14</sup>	22 <sup>122</sup>	19 <sup>651</sup>				
20 0	9 19	27 34	8 19	22 19	20 53	10 10	28 28	9 34	23 36	46	21 47	11 0	29 <sup>22</sup>	10 49	24 53	22 40	11 50	0 17	12 6	26 9				
19 47	8 48	26 39	7 42	22 16	20 40	9 38	27 32	8 57	23 33	47	21 34	10 28	28 26	10 13	24 51	22 27	11 18	29 <sup>21</sup>	11 30	26 8				
19 34	8 16	25 42	7 3	22 13	20 27	9 6	26 35	8 18	23 31	48	21 20	9 55	27 28	9 35	24 49	22 18	13 20	2 55	22 58	26 13				
19 20	7 43	24 43	6 21	22 10	20 13	8 32	25 35	7 37	23 28	49	21 6	9 22	26 28	8 34	24 46	21 59	10 11	27 21	10 12	26 5				
19 6	7 9	23 41	5 36	22 7	19 59	7 57	24 33	6 53	23 25	50	20 51	8 46	25 23	8 10	24 44	21 44	9 35	26 18	9 29	26 3				
18 51	6 33	22 38	4 49	22 3	19 44	7 21	23 29	6 6	23 22	51	20 36	8 10	24											

Midheaven (M.C. or 10th Cusp)					NORTH Geographic Latitude	Midheaven (M.C. or 10th Cusp)					
Sidereal Time			13 <sup>h</sup> 44 <sup>m</sup> 0 <sup>s</sup>	Sidereal Time			13 <sup>h</sup> 48 <sup>m</sup> 0 <sup>s</sup>				
Right Ascension			206° 0' 0"	Right Ascension			207° 0' 0"				
Geocentric Longitude			≈ 27° 59' 46"	Geocentric Longitude			≈ 29° 2' 48"				
11	12	Ascendant	2	3		11	12	Ascendant	2	3	
♏ 0	♑ 0	♒ 0	♓ 0	♑ 0	0	♏ 0	♑ 0	♒ 0	♓ 0	♑ 0	
22 57.5	13 50.0	4 20.9	13 49.4	25 2.4	40	23 51.9	14 41.9	5 18.0	15 3.0	26 16.8	
22 46.6	13 23.7	3 35.2	13 23.1	25 1.0	41	23 40.9	14 15.4	4 32.0	14 37.1	26 15.7	
22 35.3	12 56.7	2 47.9	12 55.4	24 59.4	42	23 29.5	13 48.1	3 44.5	14 9.8	26 14.5	
22 23.8	12 28.8	1 59.2	12 26.3	24 57.8	43	23 17.8	13 20.0	2 55.4	13 41.2	26 13.3	
22 11.8	12 0.1	1 8.8	11 55.7	24 56.1	44	23 5.6	12 51.1	2 4.6	13 11.1	26 12.0	
21 59.5	11 30.5	0 16.6	11 23.5	24 54.4	45	22 53.2	12 21.1	1 12.0	12 39.4	26 10.7	
21 46.8	10 59.9	29 22.4	10 49.4	24 52.6	46	22 40.2	11 50.2	0 17.4	12 5.7	26 9.4	
21 33.6	10 28.2	28 26.5	10 13.3	24 50.6	47	22 26.9	11 18.3	29 20.9	11 30.2	26 7.9	
21 20.0	9 55.5	27 28.3	9 35.0	24 48.5	48	22 13.0	10 45.2	28 22.2	10 52.4	26 6.4	
21 5.9	9 21.6	26 28.0	8 54.1	24 46.4	49	21 58.7	10 11.0	27 21.2	10 12.1	26 4.7	
20 51.2	8 46.4	25 25.3	8 10.6	24 44.2	50	21 43.9	9 35.4	26 17.9	9 29.0	26 3.1	
20 36.0	8 9.8	24 20.2	7 23.9	24 41.8	51	21 28.4	8 58.4	25 12.1	8 42.9	26 1.3	
20 20.2	7 31.8	23 12.5	6 33.8	24 39.2	52	21 12.3	8 20.0	24 3.5	7 53.4	25 59.3	
20 3.6	6 52.3	22 1.9	5 39.6	24 36.5	53	20 55.5	7 40.0	22 52.1	6 59.9	25 57.3	
19 46.4	6 11.0	20 48.6	4 41.1	24 33.7	54	20 37.9	6 58.2	21 37.8	6 1.9	25 55.2	
19 28.3	5 28.0	19 32.1	3 37.4	24 30.6	55	20 19.6	6 14.6	20 20.3	4 58.9	25 52.9	
19 9.3	4 43.0	18 12.4	2 27.8	24 27.3	56	20 0.2	5 29.0	18 59.5	3 49.9	25 50.4	
18 49.4	3 55.9	16 49.2	1 11.2	24 23.8	57	19 40.0	4 41.2	17 35.1	2 34.0	25 47.8	
18 28.4	3 6.4	15 22.6	29 46.5	24 19.9	58	19 18.7	3 51.1	16 7.1	1 9.8	25 44.9	
18 6.4	2 14.6	13 52.1	28 12.0	24 15.8	59	18 56.2	2 58.6	14 35.2	29 36.0	25 41.8	
17 43.0	1 20.1	12 17.7	26 25.6	24 11.3	60	18 32.5	2 3.2	12 59.3	27 50.1	25 38.4	
5	6	Descendant	8	9	SOUTH Geographic Latitude	5	6	Descendant	8	9	
Midheaven (M.C. or 10th Cusp)						Midheaven (M.C. or 10th Cusp)					
Sidereal Time			1 <sup>h</sup> 44 <sup>m</sup> 0 <sup>s</sup>	Sidereal Time			1 <sup>h</sup> 48 <sup>m</sup> 0 <sup>s</sup>				
Right Ascension			26° 0' 0"	Right Ascension			27° 0' 0"				
Geocentric Longitude			♑ 27° 59' 46"	Geocentric Longitude			♑ 29° 2' 48"				

New Moon—January 12, 10h. 20m. a.m.

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ANNUAL REPORT

**Full Moon—January 27, 3h. 9m. P.m.**

JANUARY 1975

Saturn Jupiter Mars

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38 DISTANCES APART OF ALL d's AND g's. IN 1975.  
Note: The Distances Apart are in Declination  $\delta$  = Pluto

Note: The Distances Apart are in Declination.  $\varrho =$  Pluto

DISTANCES APART OF ALL  $\delta$ 'S AND  $\delta^2$ 'S IN 1975.  
 NOTE: The Distances Apart are in Declination.  $\delta$  = Pluto

**Note:** The Distances Apart are in Declination.  $L = \text{Pluto}$

## THE POSITION OF PLUTO (L) IN 1975.

THE POSITION OF PLUTO (P) IN 1975.											
Date	Long.	Lat.	Dec.	Date	Long.	Lat.	Dec.	Date	Long.	Lat.	Dec.
Jan.	-9° 16' 46"	16° 51' N	54° May	-9° 15' 16"	16° 52' N	51°	54°	-9° 14' 55"	17° 51' N	53° Sept.	54°
	11	9	15	16	52	51	50	11	6° 40'	17	9° 13' N
	21	9	14	16	57	11	55	21	3° 31'	17	9° 13' N
	31	9	13	17	51	12	52	31	6° 30'	16	9° 13' N
Feb.	10	9	12	17	51	12	50	20	6° 29'	16	9° 12' N
	20	8	16	49	51	12	48	30	6° 28'	15	9° 12' N
Mar.	22	8	36	17	16	12	35	20	6° 38'	16	9° 12' N
	22	8	21	17	16	12	35	20	6° 47'	16	9° 12' N
	22	8	51	17	20	12	42	30	7° 0'	16	9° 12' N
	22	8	51	17	20	12	42	30	7° 0'	16	9° 12' N
Apr.	11	7	48	17	20	12	48	Aug.	9° 9'	14	9° 12' N
	21	7	32	17	20	12	55	19	7° 32'	16	9° 12' N
	21	7	16	17	18	13	0	29	7° 51'	16	9° 12' N
May	7	7	17	17	18	13	0	19	8° 21'	16	9° 12' N

Date \_\_\_\_\_ Date \_\_\_\_\_ Date \_\_\_\_\_ Date \_\_\_\_\_

## CHART "C"

1 (Name) JAN 31 1975  
 2 (Month) (Day) (Year)  
 3 Place ELMHURST IL.  
 4 Latitude 41°N 53.4  
 5 Longitude 87°W 56.4

## DOMINANT FACTOR

6 Time of Birth (Daylight Saving)  
 Correction for Standard Time  
 7 4:56:23  
 8 Time of Birth (Standard Time)  
 Correction for Mean Time (+) 0:08:15  
 Local Mean Time of 5:04:37  
 10 Birth. A.M or P.M.

## FIRST KEY PROBLEM

11 Noon 11:59:60 12:00  
 12 Local Mean Time 5:04:37  
 13 L.M.T. Interval (-) 6:55:23  
 14 Sidereal Time 20:40:21  
 15 (Noon) RAPHAEL'S

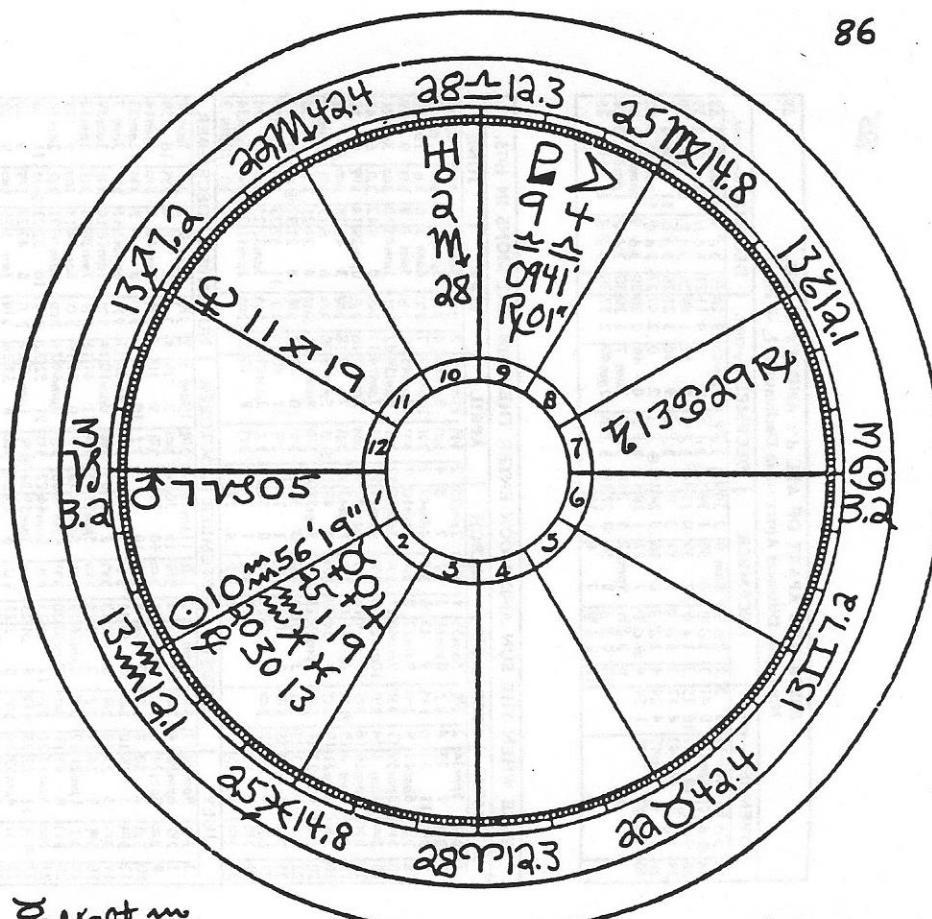
16 \_\_\_\_\_  
 17 L.M.T. Interval \_\_\_\_\_  
 18 S. T. (Uncorrected) 13:44:58  
 Correction, 9.86s per h. for (-) 0:00:11  
 19 E.G.M.T. Int. \_\_\_\_\_  
 20 Sidereal Time 13:44:47  
 (Of Birth)

## SECOND KEY PROBLEM

Standard L.M. 5:04:37  
 21 Time of Birth 5:04:37  
 Hrs. E. or 5:51:45  
 22 W. of Greenwich \_\_\_\_\_  
 23 E.G.M.T. 10:56:22  
 24 Noon 11:59:60 12:00  
 25 E.G.M.T. 10:56:22  
 26 E.G.M.T. Interval (-) 1:03:38  
 (+ΔT) = (-) 1:04:25

## ADDITIONAL FACTORS

27 Constant Log \_\_\_\_\_  
 28 Limiting Date Feb. 16, 1975  
 (Including year)  
 DALTON'S T. of H.



Declinations		EMAN 1.1 2.3 3.6 ASPECTS																
		○	□	⊗	♀	♂	☿	♃	♄	♅	♆	♇	♈	♉	♊	MC	ASC	M.R.
17530	○		△	♂	•	☽	•	⊟	□	*△	•	•	•	•	•	MC	ASC	M.R.
6501	□				•	•	□	P.	□	☽	•	♂	•	□	□	□	□	□
11513	⊗				♂	↙	•	⊟	□	P	•	P	•	P	□	P	□	□
12520	♀					*	•	⊟	P	△	•	P	•	P	△	*		
23548	♂						•	♂	*	•	□	•	□	•	□	P	□	□
5517	⊟							•	□	□	•	•	•	•	•	•	•	•
22025	b								•	⊟	•	•	•	•	•	P	○	○
11549	☿									•	•	•	•	•	•	•	•	•
20537	♃										•	•	•	•	•	*	□	□
12002	□															•	•	•
10550	MC															Sign		
23524	ASC															House		

## CHART "D"

Given a birth time of 10:43:58 B.S.T. June 22, 1970 London, England and using St. Paul's Cathedral coordinates, latitude 51N31 and longitude 0W06 will give a mean time correction of - 24'' and a time correction to Greenwich of 24''. British Standard Time requires a one hour minus correction.

Great care needs to be exercised with British charts as there were many changes in time especially during war when Double Standard Time was used and there has been many changes in the standard meridian back and forth from 15W to 0W. 1970 was probably a 15W year. Other parts of the British Isles also differ from England.

American Astrology Tables of Houses  
Rice

$$51N31 \quad 31 \div 60 = 0.5166667$$

11	12	1	2	3	10
3:48:00 = 7Can15.64	= 10Leo17.87	= 6Vir47.24	= 27Vir36.12	= 24Lib44.07	= 29Tau12 48
3:44:13 = 6Can24.85	= 9Leo33.61	= 6Vir 7.25	= 26Vir50.78	= 23Lib52.71	= 28Tau18 07
3:44:00 = 6Can21.95	= 9Leo31.07	= 6Vir 5.25	= 26Vir48.18	= 23Lib49.77	= 28Tau14 59

$$13 \div 4:00 \text{ or } 13 \div 240 = 0.0541667$$

The American Book of Tables  
Michaelsen's

11	12	1	2	3	10
3:48:00 = 7Can15.4	= 10Leo17.5	= 6Vir47.3	= 27Vir36	= 24Lib43.9	= 29Tau13
3:44:13 = 6can24.8	= 9Leo33.5	= 6Vir 7.6	= 26Vir51	= 23Lib52.8	= 28Tau18.1
3:44:00 = 6Can21.9	= 9Leo31.0	= 6Vir 5.3	= 26Vir48	= 23Lib49.9	= 28Tau15

$$13 \div 4:00 \text{ or } 13 \div 240 = 0.0541667$$

Spherical Basis of Astrology  
Dalton's

11	12	1	2	3	10
3:47:06 = 7Can00	= 10Leo 9.5	= 6Vir38.3	= 27Vir24	= 24Lib32.9	= 29Tau00
3:44:13 = 6Can22.5	= 9Leo36.2	= 6Vir 7.7	= 26Vir50.7	= 23Lib55.4	= 28Tau18.3
3:42:57 = 6Can06.0	= 9Leo21.5	= 5Vir54.3	= 26Vir36	= 23Lib38.9	= 28Tau00

$$1:16 \div 4:09 \text{ or } 76 \div 249 = 0.3052209$$

Chart "D" con't

## Michaelsen's American Ephemeris

E.G.M.T.I. 9:44:39 2nd DMS-DD = 9.7441667 ÷ 24 = 0.4060069 STO 2

Sun June 23 = 1Can07 26 2nd DMs-DD = 1.1238889 STO 5

Sun June 22 = 0Can10 12 2nd DMS-DD = 0.17 STO 4

$$RCI\_5 = RCI\_4 \equiv 0.9538889$$

0.9538889 X RCI2 = 0.3872855

$$0.3872855 \pm \text{RCI: 4} \equiv 0.5572855$$

INV 2nd DMS-DD = 0.3326228

Sun = 0Cap 33 26

SUN - 0000 35 20

Sun's declination changes by only one minute, no correction = 23N27

Moon June 23 = 18Aqu58 21 2nd DMS-DD = 18.9725 STO 5

Moon June 22 = 4Aqu17 24 2nd DMS-DD = 4.29 STO 4

RCI. 5 = RCI. 4 ≡ 14.6825

14 6825 X RCL 2 = 5.961197

$5.961197 \pm \text{RCI, 4} = 10.251197$

INV 2nd DMS-DD = 10.150431

Moon = 10Aug15 04

### 1st order correction

June 22 Moon = 4:17:24

June 23 Moon = 18:58:21 14:40:57

June 24 Moon = 33:29:17 14:30:56 0.10:01

June 25 Moon = 47:46:39 14:17:22 0.13:34 0:03:33

The Moon is slowing down in motion

$$0.4100000 = 0.12095$$

$$0.4060069 = 0.1205707$$

$$0.4000000 = 0.12000$$

$$0.0060069 \times 0.00095 = 0.0005707$$

0.0100000

0.1205707 X  $90^\circ$   $10'$   $01''$  =  $90^\circ$   $01'$   $13''$

1° 13' added to the Moon = 10 Aug 16° 17'

## Chart "D" con't

## 2nd order correction

$$0.4100000 = 0.06110$$

$$0.4060069 = 0.061098$$

$$0.4000000 = 0.06400$$

$$\underline{0.0060069} \times 0.00290 = 0.062258$$

$$0.0100000$$

$$0.062258 \times 0^\circ 03' 33'' = 0^\circ 00' 13''$$

13'' subtracted from the new moon position = 10Aqu16 04

Moon's declination June 23 = 16S27

June 22 = 21S42

5 15

$$5^\circ 15' 2nd DMS-DD = 5.25 \times RCL 2 = 2.1315365 \text{ inv } 2nd DMS-DD = 2^\circ 08'$$

$$21S42 - 2^\circ 08' = 19S34$$

And now for something new, a correction for the declination

June 22 21S42

June 23 16S27 5° 15'

June 24 10S20 6° 07' 52'

June 25 3S46 6° 34' 27' 25'

$$0.1205707 \times 0^\circ 52' = 6' 16''$$

added to 19S42 = 19S48' 16''

The 2nd order correction only gives two seconds to be subtracted.

$$0.4100000 = 0.06410$$

$$0.4060069 = 0.06400601$$

$$\underline{0.4000000} = \underline{0.06400}$$

$$\underline{0.0060069} \times 0.00010 = 0.0000601$$

$$0.0100000$$

$$25'' 2nd DMS-DD = 0.0069444 \times 0.06400601 = 0.0004445$$

$$\text{INV } 2nd DMS-DD = 0^\circ 00' 02''$$

$$\text{Moon's declination} = 19S48' 14''$$

As you can see most times a 2nd order correction is unnecessary.

## Chart "D" con't

Mercury June 23 = 15Gem28  
 June 22 = 13Gem38  
 1 50

110 X RCL 2 = 44.660764  
 $13\text{Gem}38 + 45 = 14\text{Gem}23$

decl. June 23 = 21N43  
 June 22 = 21N19  
 24

24 X RCL 2 = 9.7441667  
 $10 + 21\text{N}19 = 21\text{N}29$

Venus June 23 = 7Leo22  
 June 22 = 6Leo11  
 1 11

71 X RCL 2 = 28.826493  
 $6\text{Leo}11 + 29 = 6\text{Leo}40$

decl. June 23 = 20N17  
 June 22 = 20N35  
 18

18 X RCL 2 = 7.308125  
 $20\text{N}35 - 7 = 20\text{N}28$

Mars June 23 = 13Can37 = 12Can97  
 June 22 = 12Can58  
 39

39 x RCL 2 = 15.83471      16 + 58 = 74      13Can14

decl. June 23 = 23N46  
 June 22 = 23N49  
 03

3 X RCL 2 = 1.2180208  
 $23\text{N}49 - 1 = 23\text{N}48$

Jupiter June 23 = 26Lib04  
 June 22 = 26Lib04      no correction necessary      26Lib04R

Jupiter's decl. June 23 = 8S52  
 June 22 = 8S51  
 1

8S52 = 8S 52' 00.00'  
 8S51 = 8S 51' 00.00'  
 10

1 X RCL 2 = 0.4060069 no correction necessary 8S51

Saturn June 23 = 18Tau18  
 June 22 = 18Tau11  
 07

18Tau11 = 18 51' 00.00'

7 X RCL 2 = 2.8420486  
 $3 + 18Tau11 = 18Tau14$

2.8420486 = 2 40S 20.00'  
 18Tau14 = 18 40' 00.00'

decl June 23 = 15N12  
 decl June 22 = 15N10  
 02

15N12 = 15N 12' 00.00'  
 15N10 = 15N 10' 00.00'

2 X RCL 2 = 0.8120139  
 $1 + 15N10 = 15N11$

15N11 = 15N 11' 00.00'

Uranus June 23 = 4Lib42  
 June 22 = 4Lib42 no correction necessary 4Lib42

decl. June 25 = 1S14  
June 21 = 1S13  
 4 = 01 0.25' per day

June 23 = 1S13.5  
June 22 = 1S13.25  
 .25 no correction necessary

Neptune June 23 = 28Vir41R  
 June 22 = 28Vir43R  
 02

2 X RCL 2 = 0.8120139  
 $28Vir43R - 1 = 28Vir42R$

decl. June 25 = 18S10  
June 21 = 18S11  
 4 = 01

as in Uranus no correction necessary

Pluto June 23 = 24Vir46  
 June 22 = 24Vir45  
 01

24Vir = 28 east. Local sidereal  
 24Vir = 28 east

1 X RCL2 = 0.4060069 no correction necessary 24Vir45 00.0 = 24Vir45

decl. June 25 = 16N30

June 21 = 16N33

4 03 0.75 per day 28Tau01 = 28 east aries  
 28Tau01 = 28 east

June 23 = 16N31.5

June 22 = 16N33.75  
 2.25

28Tau03.5 = 28 east Taurus  
 28Tau03.5 = 28 east

2.25 X RCL 2 = 0.9135156

16N33.75 - 0.9 = 32.85 16N33

28Tau01 = 28 east local  
 28Tau01 = 28 east local

From page 36,37 declination Tables

The M.C. (28Tau18)

28Tau20 = 19N48

28Tau18 = ?

28Tau10 = 19N46

8 X 02 = 1.6 28Tau1 = 28 east Libra  
10 28Tau1 = 28 east

19N46 + 2 = 19N48

28Tau1 = 28 east  
 28Tau1 = 28 east

The Asc. (6Vir05)

6Vir00 = 9N19

6Vir05 = ?

6Vir10 = 9N16

28Tau14 = 28 east aries  
 28Tau14 = 28 east

5 X 03 = 1.5  
10

9N19 - 1.5 = 9N17.5

28Tau16.0 = 28 east Taurus  
 28Tau16.0 = 28 east  
 28Tau1 = 28 east local  
 28Tau1 = 28 east local

Midheaven (M.C. or 10th Cusp)					NORTH Geographic Latitude	Midheaven (M.C. or 10th Cusp)				
Sidereal Time			3 <sup>h</sup>	44 <sup>m</sup>	0 <sup>s</sup>	Sidereal Time			3 <sup>h</sup>	
Right Ascension			56°	0'	0"	Right Ascension			48 <sup>m</sup>	
Geocentric Longitude			♈ 28°	14'	59"	Geocentric Longitude			0 <sup>s</sup>	
11	12	Ascendant	2	3	11	12	Ascendant	2	3	11
0	0	0	0	0	0	0	0	0	0	0
2 50.8	4 52.8	2 56.1	26 29.5	25 5.4	40	3 45.4	5 43.5	3 43.6	27 22.1	26 2.5
3 5.5	5 13.9	3 11.3	26 31.0	24 59.8	41	4 0.1	6 4.2	3 58.3	27 23.2	25 56.6
3 20.7	5 35.3	3 26.6	26 32.5	24 53.9	42	4 15.2	6 25.4	4 13.2	27 24.4	25 50.5
3 36.5	5 57.3	3 42.2	26 34.0	24 48.0	43	4 31.0	6 47.2	4 28.3	27 25.4	25 44.4
3 52.9	6 19.9	3 58.0	26 35.5	24 41.8	44	4 47.3	7 9.4	4 43.7	27 26.6	25 38.0
4 9.9	6 43.0	4 14.0	26 37.1	24 35.6	45	5 4.3	7 32.2	4 59.2	27 27.8	25 31.6
4 27.7	7 6.8	4 30.2	26 38.7	24 29.1	46	5 22.0	7 55.7	5 15.0	27 29.0	25 24.8
4 46.2	7 31.2	4 46.8	26 40.3	24 22.4	47	5 40.4	8 19.7	5 31.1	27 30.2	25 18.0
5 5.6	7 56.3	5 3.6	26 41.9	24 15.7	48	5 59.7	8 44.5	5 47.4	27 31.4	25 10.9
5 25.9	8 22.2	5 20.6	26 43.7	24 8.6	49	6 19.9	9 10.0	6 4.0	27 32.8	25 3.6
5 47.2	8 48.8	5 38.1	26 45.5	24 1.3	50	6 41.1	9 36.3	6 20.9	27 34.1	24 56.0
6 9.7	9 16.4	5 55.9	26 47.2	23 53.8	51	7 3.5	10 3.4	6 38.2	27 35.4	24 48.2
6 33.4	9 44.8	6 14.0	26 49.1	23 46.0	52	7 27.0	10 31.4	6 55.7	27 36.8	24 40.2
6 58.4	10 14.2	6 32.5	26 50.9	23 38.0	53	7 51.9	11 0.2	7 13.7	27 38.2	24 31.9
7 25.0	10 44.5	6 51.3	26 52.9	23 29.6	54	8 18.2	11 30.2	7 32.0	27 39.7	24 23.2
7 53.3	11 16.0	7 10.6	26 54.8	23 21.0	55	8 46.3	12 1.1	7 50.7	27 41.2	24 14.2
8 23.5	11 48.7	7 30.4	26 56.9	23 11.9	56	9 16.3	12 33.3	8 9.9	27 42.7	24 4.8
8 55.9	12 22.6	7 50.6	26 59.0	23 2.5	57	9 48.5	13 6.6	8 29.5	27 44.2	23 55.0
9 30.8	12 57.8	8 11.3	27 1.2	22 52.7	58	10 23.1	13 41.3	8 49.6	27 45.9	23 44.9
10 8.6	13 34.6	8 32.6	27 3.4	22 42.5	59	11 0.5	14 17.3	9 10.3	27 47.5	23 34.3
10 49.7	14 12.8	8 54.5	27 5.7	22 31.7	60	11 41.2	14 54.9	9 31.4	27 49.3	23 23.1
5	6	Descendant	8	9	SOUTH Geographic Latitude	5	6	Descendant	8	9
Midheaven (M.C. or 10th Cusp)						Midheaven (M.C. or 10th Cusp)				
Sidereal Time			15 <sup>h</sup>	44 <sup>m</sup>	0 <sup>s</sup>	Sidereal Time			15 <sup>h</sup>	48 <sup>m</sup>
Right Ascension			236°	0'	0"	Right Ascension			237°	0'
Geocentric Longitude			♏ 28°	14'	59"	Geocentric Longitude			♏ 29°	12'

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**Placidus Table of Houses for Latitudes 0° to 60° North**

3h 44m 0s 56° 0' 0"					3h 48m 0s 57° 0' 0"					3h 52m 0s 58° 0' 0"					3h 56m 0s 59° 0' 0"						
28 5 15					29 5 13					0 5 11					1 5 8						
11	12	ASC	2	3	11	12	ASC	2	3	11	12	ASC	2	3	11	12	ASC	2	3		
26 <sup>II</sup> 20	24 <sup>S</sup> 6	23 <sup>Q</sup> 41	25 <sup>Q</sup> 36	25 <sup>Q</sup> 0	27 <sup>III</sup> 15	25 <sup>S</sup> 3	24 <sup>Q</sup> 42	26 <sup>Q</sup> 44	29 <sup>Q</sup> 3	0	28 <sup>II</sup> 10	26 <sup>S</sup> 0	25 <sup>Q</sup> 44	27 <sup>Q</sup> 49	0 <sup>Q</sup> 6	29 <sup>II</sup> 5	26 <sup>Q</sup> 57	26 <sup>Q</sup> 47	26 <sup>Q</sup> 55	1 <sup>Q</sup> 8	
27 0	25 20	24 53	25 45	27 40	27 55	26 15	25 54	26 49	28 42	5	28 30	27 12	26 54	27 52	29 <sup>Q</sup> 45	29 45	28 9	27 34	28 56	0 47	
27 40	26 33	25 26	3 25	51 27 20	28 35	27 28	26 26	53 28	22	10	29 30	28 24	28 26	27 56	29 24	0 <sup>Q</sup> 25	29 20	28 59	28 58	0 25	
28 22	27 46	27 11	25 57	27 0	29 17	28 42	28 8	26 58	28 1	15	08 <sup>II</sup> 12	29 37	29 5	27 59	29 2	1 7	0 <sup>Q</sup> 32	08 2	28 59	0 3	
29 6	29 2	28 18	26 3	26 40	0 28	29 56	29 13	27 3	27 40	20	0 57	0 <sup>Q</sup> 51	08 8	28 2	28 41	1 52	1 46	1 3	29 1	29 241	
29 16	29 17	28 31	26 5	26 36	0 11	0 <sup>Q</sup> 12	29 26	27 3	27 36	21	1 6	1 6	0 21	28 28	26 36	2 1	2 1	1 16	29 1	29 36	
29 25	29 33	28 45	26 6	26 32	0 20	0 27	29 39	27 4	27 32	22	1 15	1 22	0 33	28 28	26 32	2 10	2 16	1 28	29 1	29 31	
29 34	29 49	28 53	26 7	26 27	0 29	0 43	29 52	27 5	27 27	23	1 24	1 37	0 46	28 4	28 27	2 19	2 31	1 40	29 2	29 27	
29 44	0 0	29 11	26 8	26 23	0 39	0 59	0 <sup>Q</sup> 5	27	6 27	24	1 34	1 53	0 59	28 4	28 23	2 29	2 47	1 52	29 2	29 22	
29 54	0 21	29 23	26 10	26 19	0 49	1 15	0 18	27	7 27 18	25	1 44	2 8	1 11	28 5	28 18	2 39	3 2	2 5	29 2	29 17	
08 4	0 37	29 38	26 11	26 14	0 59	1 31	0 31	27	8 27 14	26	1 84	2 24	1 24	28 5	28 13	2 49	3 18	2 17	29 3	29 12	
0 14	0 54	29 52	26 12	26 10	1 9	1 47	27 44	27	9 27 9	27	2 4	2 40	1 37	28 6	28 8	2 59	3 34	2 30	29 3	29 8	
0 24	1 10	0 <sup>Q</sup> 6	26 13	26 5	1 19	2 4	0 58	27	10 27 5	28	2 14	2 57	1 50	28 7	28 4	3 9	3 50	2 42	29 3	29 3	
0 35	1 27	0 19	26 15	26 1	1 30	2 20	1 11	27	0 29	29	2 25	3 13	2 3	28 7	27 59	3 20	4 6	3 55	29 4	28 58	
0 46	1 44	0 33	26 16	26 56	1 41	2 37	1 24	27	12 26 55	30	2 36	3 30	2 16	28 8	27 54	3 30	4 23	3 7	29 4	28 53	
0 57	2 2	0 47	26 17	26 52	1 52	2 54	1 38	27	13 26 50	31	2 47	3 47	2 29	28 9	27 49	3 41	4 40	3 20	29 4	28 47	
1 8	2 19	1 12	26 18	26 47	2 15	3 12	1 51	27	14 26 45	32	2 58	4 4	2 42	28 6	27 44	3 53	4 57	3 33	29 5	28 42	
1 20	2 37	1 15	26 20	26 42	2 15	3 30	2 5	27	15 26 40	33	3 10	4 22	2 55	28 10	27 39	4 4	5 14	3 46	29 5	28 37	
1 32	2 56	1 29	26 21	26 37	2 27	3 48	2 19	27	16 26 35	34	3 21	4 40	3 8	28 11	27 33	4 16	5 32	3 58	29 5	28 31	
1 44	3 14	1 43	26 22	26 32	2 39	4 6	3 32	27	17 26 30	35	3 34	4 58	3 22	28 11	27 28	4 28	5 50	4 11	29 6	28 26	
1 57	3 33	1 57	26 24	26 27	2 51	4 25	2 46	27	18 25	36	3 46	5 16	3 35	28 12	27 22	4 41	6 8	4 25	29 6	28 20	
2 10	3 52	2 12	26 25	26 22	3 4	4 44	3 0	27	19 26	37	3 59	5 35	3 49	28 13	27 17	4 54	6 27	4 38	29 6	28 14	
2 23	4 12	2 24	26 26	26 25	3 18	5 55	3 15	27	20 26	38	4 12	5 55	4 3	28 11	27 11	5 7	6 46	4 51	29 7	28 9	
2 37	4 32	2 41	26 28	26 25	3 31	5 53	3 29	27	21 26	39	4 26	6 14	4 17	28 14	27 5	5 20	7 5	5 5	29 7	28 3	
2 51	4 53	2 58	26 29	26 25	3 45	5 43	3 44	27	22 26	30	4 40	6 34	4 31	28 15	26 59	5 34	7 25	6 19	29 7	27 56	
3 5	5 14	3 11	26 31	25 0	4 0	6 4	3 58	27	23 25	41	4 35	6 85	4 45	28 15	26 53	5 49	7 45	5 32	29 8	27 50	
3 21	5 35	3 27	26 32	25 44	4 15	6 25	4 13	27	24 25	42	5 10	7 16	5 0	28 16	26 47	6 4	8 6	5 46	29 8	27 44	
3 36	5 55	3 42	26 34	24 48	4 31	6 42	5 14	27	25 25	43	5 25	7 37	5 15	28 17	26 41	6 20	8 27	6 1	29 8	27 37	
3 53	6 20	3 20	26 36	26 34	4 47	7	9	4 44	27	25	44	5 42	7 89	5 29	28 16	26 34	6 36	8 48	6 15	29 7	27 30
4 10	6 43	4 14	26 37	24 36	5 4	7 32	4 59	27	28 25	45	5 58	8 21	5 44	28 19	26 28	6 53	9 11	6 30	29 9	27 23	
4 28	7 7	4 30	26 39	24 29	5 22	7 56	5 15	27	29 25	46	6 16	8 45	6 0	28 19	26 21	7 10	9 33	6 45	29 10	27 16	
4 46	7 31	4 47	26 40	24 23	5 40	8 23	5 31	27	30 25	47	6 34	9 8	6 15	28 20	26 13	7 28	9 57	7 0	29 10	27 9	
5 6	7 56	5 4	26 42	24 16	6 0	8 45	5 47	27	31 25	48	6 56	9 33	6 31	28 21	26 6	7 48	10 21	7 15	29 10	27 1	
5 26	8 22	5 21	26 44	24 9	6 20	9 10	6 4	27	33 25	49	7 14	9 58	6 47	28 22	25 59	8 8	10 46	7 31	29 11	26 53	
5 47	8 49	5 38	26 45	24 1	6 41	9 36	6 21	27	34 24	50	7 35	10 24	7 4	28 23	25 51	8 28	11 11	7 47	29 11	26 45	
6 10	9 16	5 56	26 47	23 54	7 3	10 3	6 38	27	35 24	51	7 57	10 50	7 20	28 24	25 43	8 51	11 37	8 3	29 12	26 37	
6 33	9 45	6 14	26 49	23 46	7 27	10 31	6 56	27	37 24	52	8 20	11 18	7 38	28 25	25 34	9 14	12 4	8 19	29 12	26 28	
6 58	10 14	6 32	26 51	23 38	7 52	11 0	7 14	27	38 24	53	8 45	11 46	7 55	28 25	25 26	9 38	12 32	8 36	29 13	26 19	
7 25	10 45	6 51	26 53	23 30	8 18	11 30	7 32	27	40 24	54	9 11	12 16	8 13	28 25	25 17	10 4	13 1	8 53	29 13	26 10	
7 53	11 16	7 11	26 55	23 21	8 46	12 1	7 31	27	41 24	55	9 39	12 46	8 31	28 27	25 7	10 32	13 31	9 11	29 14	26 0	
8 24	11 49	7 30	26 57	23 12	9 16	12 33	8 10	27	43 24	56	10 9	13 18	8 49	28 28	24 58	11 2	14 3	9 29	29 14	25 50	
8 56	12 23	7 51	26 59	23 3	9 49	13 7	8 30	27	44 23	57	10 41	13 51	9 8	28 29	24 48	11 33	14 35	9 47	29 15	25 40	
9 31	12 58	8 11	27 1	22 53	10 23	13 41	8 50	27	46 23	58	11 15	14 25	9 28	28 31	24 37	12 7	13 8	10 6	29 15	25 29	
10 9	13 35	8 33	27 3	22 42	11 1	14 17	9 10	27	48 23	59	11 52	15 0	9 48	28 32	24 26	12 44	15 43	10 26	29 16	25 18	
10 <sup>50</sup>	14 <sup>Q</sup> 13	8 <sup>Q</sup> 64	27 <sup>Q</sup> 6	22 <sup>Q</sup> 32	11 <sup>Q</sup> 61	14 <sup>Q</sup> 55	9 <sup>Q</sup> 31	27 <sup>Q</sup> 49	23 <sup>Q</sup> 23	60	12 <sup>Q</sup> 32	15 <sup>Q</sup> 37	10 <sup>Q</sup> 8	28 <sup>Q</sup> 33	24 <sup>Q</sup> 14	13 <sup>Q</sup> 23	16 <sup>Q</sup> 19	10 <sup>Q</sup> 46	29 <sup>Q</sup> 16	25 <sup>Q</sup> 6	

4h 0m 0s 60° 0' 0"					4h 4m 0s 61° 0' 0"					4h 8m 0s 62° 0' 0"					4h 12m 0s 63° 0' 0"				
2 5 5					3 3 3					4 0 0					4 4 57				
11	12	ASC	2	3	11	12													

H. M. S. SID. T. 8 30 35} 8 ABC 52° 38' 8"} 25°								H. M. S. 3 34 42} 8 26° 53° 40' 5"} 26°								H. M. S. 3 38 49} 8 27° 54° 42' 3"} 27°								H. M. S. 3 42 57} 8 28° 55° 44' 4"} 28°								H. M. S. 3 47 6} 8 29° 56° 46' 6"} 29°								H. M. S. 3 51 18} II 0° 57° 48' 9"} 0°																					
H.	11	12	1	2	3	H.	11	12	1	2	3	H.	11	12	1	2	3	H.	11	12	1	2	3	H.	11	12	1	2	3	H.	11	12	1	2	3																										
22	26.3	26.5	25.43	22.8	23.1	27.3	27.5	26.39	23.7	24.1	28.2	28.4	27.35	24.8	25.1	29.2	29.4	28.31	25.7	26.2	0.1	0.3	29.27	26.8	27.3	1.1	1.2	0.23	27.8	28.3	22	26.3	26.5	25.43	22.8	23.1	27.3	27.5	26.39	23.7	24.1	28.2	28.4	27.35	24.8	25.1	29.2	29.4	28.31	25.7	26.2	0.1	0.3	29.27	26.8	27.3	1.1	1.2	0.23	27.8	28.3
23	5	8 25 58	8 0	4	7 26 53	8 0	4	7 27 48	8 1	3	6 28 44	8 1	3	5 29 40	8 2	2	5 0 36	8 3	23	5	8 25 58	8 0	4	7 26 53	8 0	4	7 27 48	8 1	3	6 28 44	8 1	3	5 29 40	8 2	2	5 0 36	8 3																								
24	6 27.1	26 12	8 22.9	6 28.0	27 7	8 0	5	9 28 2	8 0	5	9 28 58	8 1	4	8 29 53	8 1	4	8 29 53	8 2	24	6 27.1	26 12	8 22.9	6 28.0	27 7	8 0	5	9 28 2	8 0	5	9 28 58	8 1	4	8 29 53	8 1	4	8 29 53	8 2																								
25	8	4 26 27	9 9	8	3 27 21	9 23.9	7 29.2	28 16	8 24.9	7	0.2 29 11	8 0	6	1.1 0 6	8 1	6	2.0 1 2	8 1	25	8	4 26 27	9 9	8	3 27 21	9 23.9	7 29.2	28 16	8 24.9	7	0.2 29 11	8 0	6	1.1 0 6	8 1	6	2.0 1 2	8 1																								
26	27.0	6 26 42	9 8	9	6 27 36	9 8	9	5 28 30	24.9	9	8 4 29 25	8 25.9	8	3 0 19 26.8	0	7	3 1 15 8 0	0	26	27.0	6 26 42	9 8	9	6 27 36	9 8	9	5 28 30	24.9	9	8 4 29 25	8 25.9	8	3 0 19 26.8	0	7	3 1 15 8 0																									
27	2	9 26 56	23.0	7 28.1	8 27 50	9	8 29.0	8 28 44	9	8 25	7 29 38	25.9	9	1.0 6 0 33	9 26.9	9	5 1 27 27.8	27.9	27	2	9 26 56	23.0	7 28.1	8 27 50	9	8 29.0	8 28 44	9	8 25	7 29 38	25.9	9	1.0 6 0 33	9 26.9	9	5 1 27 27.8	27.9																								
28	3 28.2	27 11	0 7	3 29.1	28 5	24.0	7 2	2 28 58	9 7	0.2 1.0 29 52	9 8	1	9 0 46	9 8	2.1	8 1 40 8 9	9	28	3 28.2	27 11	0 7	3 29.1	28 5	24.0	7 2	2 28 58	9 7	0.2 1.0 29 52	9 8	1	9 0 46	9 8	2.1	8 1 40 8 9	9																										
29	5	5 27 26	0 22.6	5	4 28 19	0 6	4	0.3 29 12	25.0	7 4	3 0 6	9 7	3 2.1	0 59	9 7	2 3 1 53 9 8	9	29	5	5 27 26	0 22.6	5	4 28 19	0 6	4	0.3 29 12	25.0	7 4	3 0 6	9 7	3 2.1	0 59	9 7	2 3 1 53 9 8	9																										
30	7	8 27 41	1 5	6	7 28 34	0 23.6	6	6 29 26	0 24.6	5 5	0 20	9 25.6	5 4	1 13 26.9	7 4	4 2 6 9 7	7	30	7	8 27 41	1 5	6	7 28 34	0 23.6	6	6 29 26	0 24.6	5 5	0 20	9 25.6	5 4	1 13 26.9	7 4	4 2 6 9 7	7																										
31	9 29.1	27 56	1 5	8	Q 28 48	1 5	8	9 29 41	0 5	7	8 0 33 26.0	5 7	7 7 1 26	9 26.6	6 6 2 19 9 27.6	9	31	9 29.1	27 56	1 5	8	Q 28 48	1 5	8	9 29 41	0 5	7	8 0 33 26.0	5 7	7 7 1 26	9 26.6	6 6 2 19 9 27.6	9																												
32	28.1	4 28 11	23.2	4 29.0	0 3 29 3	1 4	2 25	1 2 29 55	0 4	9 2.1	0 47	0 5	9 3.0 1 40	9 5	8 9 2 33 27.9	5	32	28.1	4 28 11	23.2	4 29.0	0 3 29 3	1 4	2 25	1 2 29 55	0 4	9 2.1	0 47	0 5	9 3.0 1 40	9 5	8 9 2 33 27.9	5																												
33	3	7 28 26	2 3	2	6 29 18	24.1	3 0.2	5 0 9	1 3	1 1.1	4 1 1	0 4	2.1	3 1 54 27.0	4	3 0 4.2 246 9 4	4	33	3	7 28 26	2 3	2	6 29 18	24.1	3 0.2	5 0 9	1 3	1 1.1	4 1 1	0 4	2.1	3 1 54 27.0	4	3 0 4.2 246 9 4	4																										
34	5	Q 28 42	2 22.2	4	9 29 33	2 23.2	3	8 0 24	25.1	24.3	3 7	1 1.16	0 25.3	2	6 2 7 0 3	2	5 2 5 259 9 3	3	34	5	Q 28 42	2 22.2	4	9 29 33	2 23.2	3	8 0 24	25.1	24.3	3 7	1 1.16	0 25.3	2	6 2 7 0 3	2	5 2 5 259 9 3	3																								
35	7	0.4 28 57	3 2	6	1.2 29 48	2 2	5 2.1	0 39	1 2	5 3.0	1 30	1 2	4 4 9 221	0 26.2	4 8 3 13 9 27.2	2	35	7	0.4 28 57	3 2	6	1.2 29 48	2 2	5 2.1	0 39	1 2	5 3.0	1 30	1 2	4 4 9 221	0 26.2	4 8 3 13 9 27.2	2																												
36	9	7 29 13	3 1	8	6 0 3	2 1	7 5 0 54	2 1	7 4	1 4 4 26.1	1 1	6 4.2 2 36	0 1	6 5.1 3 26 28.0	2	36	9	7 29 13	3 1	8	6 0 3	2 1	7 5 0 54	2 1	7 4	1 4 4 26.1	1 1	6 4.2 2 36	0 1	6 5.1 3 26 28.0	2																														
37	29.1	1.0 29 29	23.4	0 25	9 0 19	3 0	1.0 8 1 9	2 0	9 7	1 1.59	1 0	9 6 2 50	0 0	0 8 4 340 0 1	1	37	29.1	1.0 29 29	23.4	0 25	9 0 19	3 0	1.0 8 1 9	2 0	9 7	1 1.59	1 0	9 6 2 50	0 0	0 8 4 340 0 1	1																														
38	3	4 29 45	4 21.9	0 2	2.2 0 34	24.3	22.9	2 3.1	1 24	2 23.9	2.1 4.0	2 14	1 24.9	3.1	9 3 4 27.1	0 4.0	7 3 5 4 354 0 0	0	38	3	4 29 45	4 21.9	0 2	2.2 0 34	24.3	22.9	2 3.1	1 24	2 23.9	2.1 4.0	2 14	1 24.9	3.1	9 3 4 27.1	0 4.0	7 3 5 4 354 0 0	0																								
39	5	7 0 1	5 8	5 5	0 50	4 8	4 5 1 39	25.3	8 4	4 4 2 29	2 8	3 5.2	3 18	1 25.9	3 6.0 4 8	0 26.9	9	39	5	7 0 1	5 8	5 5	0 50	4 8	4 5 1 39	25.3	8 4	4 4 2 29	2 8	3 5.2	3 18	1 25.9	3 6.0 4 8	0 26.9	9																										
40	8	2.1 0 17	5 8	7	9 1 6	4 8	6 8	8 1 55	3 8	6 7	2 4 4 26.2	7 5	6 3 3 33	1 8 5 348	1 7 7 8 4 37 28.0	7	40	8	2.1 0 17	5 8	7	9 1 6	4 8	6 8	8 1 55	3 8	6 7	2 4 4 26.2	7 5	6 3 3 33	1 8 5 348	1 7 7 8 4 37 28.0	7																												
41	55	5 0 34	23.6	7	1.0 3.2	1 22	5 7	9 4.2	2 11	3 7	8 5.1	2 59	2 6	8 9 3 48	1 7 7 8 4 37 28.0	7	41	55	5 0 34	23.6	7	1.0 3.2	1 22	5 7	9 4.2	2 11	3 7	8 5.1	2 59	2 6	8 9 3 48	1 7 7 8 4 37 28.0	7																												
42	0.3	9 0 51	6 6	2 2	6 1 38	5 22.6	2.2 6	2 226	4 23.6	3.1 5	3 15	3 24.5	4.1 6.3	4 3 2	6 5.0 7.1 4 51	1 6	42	0.3	9 0 51	6 6	2 2	6 1 38	5 22.6	2.2 6	2 226	4 23.6	3.1 5	3 15	3 24.5	4.1 6.3	4 3 2	6 5.0 7.1 4 51	1 6																												
43	5	3.3 1 8	7 21.5	5 4.0	1 55	24.6	5 4	5.0 2 43	25.4	5 4	8 3 30	3 4	3 7	4 1 18 27.2	4 5 5 6	1 5	43	5	3.3 1 8	7 21.5	5 4.0	1 55	24.6	5 4	8 3 30	3 4	3 7	4 1 18 27.2	4 5 5 6	1 5																															
44	8	7 1 25	7 5	8 4	2 12	6 4	7 4 2 59	5 4	7 6.2	3 46	26.3	4 6	7.0 4 34	2 25.3	6 9 5 21	1 26.4	44	8	7 1 25	7 5	8 4	2 12	6 4	7 4 2 59	5 4	7 6.2	3 46	26.3	4 6	7.0 4 34	2 25.3	6 9 5 21	1 26.4																												
45	1.1	4.1 1 43	23.8	4 2.1	8 2 29	6 3	3 3.0	7 3 16	5 4	9 5 4 2	4 3	9 4 4 49	2 3 8 8.3 5 36	1 3	45	1.1	4.1 1 43	23.8	4 2.1	8 2 29	6 3	3 3.0	7 3 16	5 4	9 5 4 2	4 3	9 4 4 49	2 3 8 8.3 5 36	1 3																																
46	4	4 4 2 0	8 3	4 5.2	2 46	7 2 23	3 6.1	3 3.3	5 2 3.3	4.2 9	4 1 19	4 24.2	5.2 8 5 5	3 2 6.1	7 5 5 52 28.1	2	46	4	4 4 2 0	8 3	4 5.2	2 46	7 2 23	3 6.1	3 3.3	5 2 3.3	4.2 9	4 1 19	4 24.2	5.2 8 5 5	3 2 6.1	7 5 5 52 28.1	2																												
47	7	8 2 18	9 2 12	7 7	3 4	7 2	6 5	3 50	25.6	1 6	7.3 4 35	4 1	5 8.2 5 21	3 1	4 9.1 6 7	2 1	47	7	8 2 18	9 2 12	7 7	3 4	7 2	6 5	3 50	25.6	1 6	7.3 4 35	4 1	5 8.2 5 21	3 1	4 9.1 6 7	2 1																												
48	2.1	5.3 2 37	9 1	3 3.0	6.1	3 2 2 24.8	1 9	9 4 7	6 0	9 7	4 52	26.5	0 8 6 5 38	2 7.3	0 8 5 6 23	2 0	48	2.1	5.3 2 37	9 1	3 3.0	6.1	3 2 2 24.8	1 9	9 4 7	6 0	9 7	4 52	26.5	0 8 6 5 38	2 7.3	0 8 5 6 23	2 0																												
49	4	7 2 56	24.0	1 3	6 3 40	8 0	4 3	7 3 4 25	7 2 2.9	5.2 8.1	5 10	5 23.9	6.1 9.0 5 55	3 24.8	7.1 9 6 39	2 25.9	49	4	7 2																																										

JUNE 1970

## LONGITUDE

Day	Sid. Time	○	D	D 12 Hour	Mean ♈	True ♈	♉	♀	♂	♃	♄	♅	♆	♇	♈	♉
1	16 36 15	10H	5 41	28 12 56	85 56 16	7M 17	7M 16R	16S 41	11S 17	29K 9	26G 49R	15G 47	4G 43R	29K 14R	24G 41R	
2	16 40 12	11	3 11	15 36 52	22 14 30	7 14	7 7	17 24	12 29	29 49	26 45	15 54	4 42	29 12	24 41	
3	16 44 8	12	0 41	26 49 0	5K 20 11	7 11	6 55	18 12	13 40	0E 28	26 41	16 1	4 42	29 11	24 41	
4	16 48 5	12	58 11	11K 47 52	18 11 57	7 8	6 42	19 3	14 52	1 8	26 38	16 9	4 41	29 9	24 41	
5	16 52 1	13	55 39	24 32 21	0G 49 3	7 5	6 30	19 58	16 4	1 48	26 35	16 16	4 41	29 7	24 41D	
6	16 56 58	14	53 6	7S 2 6	13 11 57	7 1	6 18	20 56	17 15	2 27	26 31	16 23	4 40	29 6	24 41	
7	16 59 55	15	50 32	19 17 47	25 20 53	6 58	6 9	21 58	18 27	3 7	26 28	16 30	4 40	29 5	24 41	
8	17 0 51	16	47 57	1Q 21 14	7Q 19 14	6 55	6 2	23 3	19 38	3 47	26 25	16 37	4 40	29 3	24 41	
9	17 7 48	17	45 21	13 15 21	10 16	5 52	5 57	24 11	20 49	4 26	26 23	16 44	4 40	29 1	24 41	
10	17 11 44	18	42 44	25 4 2	0G 57 46	6 49	6 55	25 22	22 1	5 6	26 20	16 51	4 39	29 0	24 41	
11	17 15 41	19	40 6	68 51 56	12 47 12	6 46	5 55D	26 37	23 12	5 45	26 18	16 58	4 39	28 58	24 41	
12	17 19 37	20	37 28	18 44 14	24 43 45	6 42	5 55R	27 55	24 23	6 25	26 16	17 5	4 39D	28 57	24 41	
13	17 23 34	21	34 47	0G 46 25	6S 82 54	6 39	5 56	29 16	25 84	7 4	26 14	17 12	4 39	28 55	24 42	
14	17 27 31	22	32 6	13 8 49	19 19 45	6 36	5 53	0K 40	26 45	7 43	26 12	17 19	4 39	28 64	24 42	
15	17 31 27	23	29 24	25 41 13	28 9 39	6 33	5 49	22 7	27 56	7 23	26 11	17 25	4 40	28 52	24 42	
16	17 35 24	24	26 42	28 42 22	15 22 33	6 30	5 43	3 37	29 7	9 2	26 9	17 32	4 40	28 51	24 42	
17	17 39 20	25	23 58	22 9 15	29 2 23	6 27	5 34	6 9	0G 18	9 41	26 8	17 39	4 40	28 50	24 43	
18	17 43 17	26	21 14	6r 1 39	13r 6 39	6 23	5 24	6 45	1 29	10 21	26 7	17 45	4 40	28 48	24 43	
19	17 47 13	27	18 29	20 16 44	27 31 13	6 20	5 14	6 24	2 40	11 0	26 6	17 52	4 41	28 47	24 44	
20	17 51 10	28	15 44	18 49 13	12G 9 48	6 17	5 4	10 6	3 80	11 39	26 5	17 58	4 41	28 46	24 44	
21	17 55 6	29	12 58	19 32 0	26 54 51	6 14	4 56	11 50	5 1	12 18	26 5	18 5	4 41	28 44	24 45	
22	17 59 3	0G 20	17 24	11r 38 49	6 11	4 51	13 38	6 11	12 58	26 24	18 11	4 42	28 43	24 45		
23	18 3 0	1	7 26	18 58 21	26 18 0	6 7	4 47	15 28	7 22	13 37	26 4D	18 18	4 42	28 41	24 46	
24	18 6 56	2	4 39	3K 29 17	10K 39 48	6 4	4 47D	17 21	5 32	14 16	26 4	18 24	4 43	28 39	24 47	
25	18 10 53	3	1 52	17 46 39	24 49 39	6 1	4 47	19 16	9 43	14 55	26 5	18 30	4 44	28 38	24 48	
26	18 14 49	3	59 5	1T 48 45	6T 43 57	5 58	4 48R	21 14	10 53	15 34	26 5	18 36	4 44	28 36	24 48	
27	18 18 46	4	86 19	15 55 19	22 22 54	5 58	4 47	23 14	12 5	13 26	5 18 43	4 45	28 35	24 48		
28	18 22 42	5	53 32	29 6 51	8G 47 15	6 82	4 45	25 16	13 13	16 52	26 6	18 49	4 46	28 35	24 49	
29	18 26 39	6	50 45	12G 16 13	18 57 51	5 48	4 40	27 20	14 23	17 31	26 7	18 55	4 47	28 34	24 50	
30	18 30 35	7S 47 59	25 28 15	1K 55 27	5K 45	4K 34	29K 26	15G 33	16G 10	26G 8	19G 1	4G 48	28G 33	24G 50		

## DECLINATION and LATITUDE

Day	○		D		D 12 Hr.		♉		♀		♂		♃		♄		♅		♆		♇		♈		♉						
	Decl.	Deci.	Lat.	Decl.	Deci.	Lat.	Decl.	Lat.																							
1	21R58	16N 6	4R 7	18N40	13N14	3845	24N40	1N43	24R22	0N55	9G 2	1R24	14N32	26 8	1	15G12	0R44	18G17	1R45	16N42	15N56										
2	22	6	20	58	40	23	13	3 44	24 35	1 44	20 56	9 1	1 23	14 34	2 8	5	1 12	0 43	18 16	1 44	16 41	15 55									
3	22	14	24	44	45	27	6	13	42	2 42	24 29	1 45	24 22	0 56	9 0	1 23	14 36	2 8	9	1 12	0 43	18 15	1 44	16 37	15 51						
4	22	22	27	9	59	27 48	13	59	3 39	24 23	1 46	24 22	0 56	8 59	1 23	14 38	2 8	13	1 12	0 43	18 12	1 44	16 35	15 49							
5	22	29	28	5	44	28 0	14	17 3	35	24 15	1 48	24 22	0 56	8 58	1 23	14 40	2 8	17	1 12	0 43	18 10	1 44	16 33	15 47							
6	22	33	27	34	4 19	26 47	14	36 3	31	1 49	24 22	0 57	8 57	1 22	14 42	2 8	29	1 12	0 43	18 8	1 44	16 32	15 46								
7	22	41	25	41	3 40	24 18	14	57	3 26	23 59	1 50	24 21	0 57	8 56	1 22	14 43	2 8														
8	22	47	22	40	2 52	20 47	15	19 3	20	23 50	1 51	24 21	0 57	8 56	1 22	14 45	2 8														
9	22	53	18	43	1 57	16 28	15	42	3 13	23 40	1 51	24 20	0 58	8 55	1 22	14 47	2 8														
10	22	58	14	46	0 57	11 33	16	5 3	6	23 29	1 52	24 19	0 58	8 54	1 21	14 49	2 8														
11	23	2	23	8	55	0 5	16 12	16	50 2	23 59	1 53	24 17	0 58	8 54	1 21	14 51	2 8														
12	23	7	3 25	1	8 25	0 35	16	55 2	23 51	1 54	24 16	0 58	8 53	1 21	14 53	2 9															
13	23	11	28 16	2	8 38	38 8	17	21 2	42	22 54	1 54	24 14	0 59	8 53	1 21	14 55	2 9														
14	23	14	7 59	3 4	10 47	17 48	2 33	22 41	1 55	24 12	0 59	8 52	1 20	14 57	2 9																
15	23	17	13 32	2	16 10	T	2 7	23 44	1 55	24 10	0 59	8 52	1 20	14 58	2 9																
16	23	20	18 40	4 30	20 58	18 41	2 14	22 13	1 55	24 9	0 59	8 52	1 20	15 0	2 9																
17	23	22	23	3	24 55	24 50	19	8 2	4	21 58	1 56	24 5	0 60	8 51	1 20	15 2	2 9														
18	23	24	26 17	5	7 27	20 19	19 35	21 53	1 53	21 43	1 56	24 2	0 60	8 50	1 20	15 4	2 9														
19	23	25	27 57	4	52 28	5 3	20 22	19 35	1 54	21 38	1 57	24 1	0 60	8 49	1 20	15 5	2 9														
20	23	26	27 44	4	23 26	26 54	20	1 31	21 10	1 56	23 56	1 56	20 27	0 60	8 47	1 20	15 7	2 9													
21	23	26	25 35	3 37	23 80	20 54	1 20	20 53	1 56	23 53	1 57	20 28	0 60	8 46	1 20	15 9	2 9														
22	23	27	21 42	1 23	19 13	21 19	1 5	20 35	1 55	23 49	1 58	20 27	0 60	8 45	1 20	15 10	2 9														
23	23	26	16 27	1 23	13 29	21 43	0 57	20 17	1 55	23 46	1 59	20 26	0 60	8 44	1 20	15 12	2 9														
24	23	26	10 20	0	7 29	22 27	0 53	19 39	1 54	23 38	1 61	20 25	0 60	8 43	1 20	15 14	2 9														
25	23	24	3 46	1 27																											

CHART "D"

2 JUNE 22 1970  
 (Month) (Day) (Year)  
3 Place LONDON, ENGLAND  
 (Place)  
4 Latitude 51N31  
5 Longitude 0W06  
ST. PAUL'S CATHEDRAL

**DOMINANT FACTOR**

6 Time of Birth 10:43:58  
 (Daylight Saving)  
Correction for (-) 1:00:00  
7 Standard Time 9:43:58  
8 Time of Birth 9:43:58  
 (Standard Time)  
Correction for (-) 0:00:24  
9 Mean Time 9:43:34  
Local Mean Time of 9:43:34  
10 Birth, A.M or P.M.

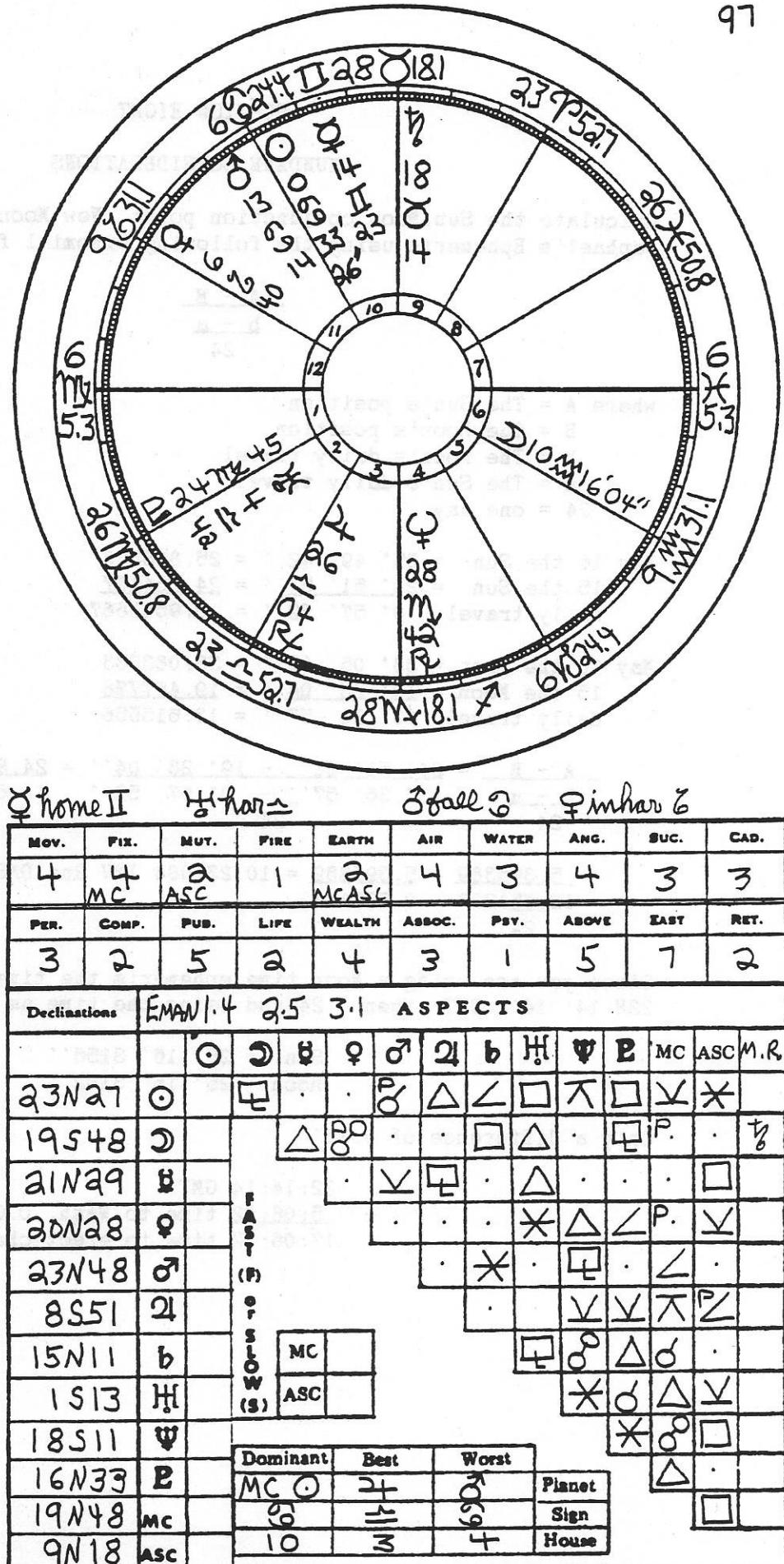
**FIRST KEY PROBLEM**

11 Noon 12:00  
12 Local Mean Time 9:43:34  
13 L.M.T. Interval (+) 9:43:34  
14 Sidereal Time 17:59:03  
 (Non-ZERO HOUR)  
15 AMER. EPH. 26:102:37  
16 26:102:37  
17 L.M.T. Interval 3:42:37  
18 S. T. (Uncorrected) 3:42:37  
Correction, 9.86s per h. for (+) 0:01:36  
19 E.G.M.T. Int. 3:44:13  
 (Or Birth)

**SECOND KEY PROBLEM**  
Standard L.M. 9:43:34  
21 Time of Birth 9:43:34  
Hrs. E. or (+) 0:00:24  
22 W. of Greenwich 9:43:58  
23 E.G.M.T. 9:43:58  
24 Noon 12:00  
25 E.G.M.T. (+) 9:43:58  
(+)  $\Delta T = (+) 9:44:39$

**ADDITIONAL FACTORS**

27 Constant Log JAN. 26, 1970  
28 Limiting Date (Including year)  
AMER. ASTA. T. of H. (Rice)



## SECTION EIGHT

## MUNDANE CONSIDERATIONS

Calculate the Sun, Moon conjunction point (New Moon) on May 15th, 1988 from Raphael's Ephemeris using the following binomial formula.

$$\frac{A - B}{b - a}$$

where A = The Sun's position  
B = The Moon's position  
b = The Moon's daily travel  
a = The Sun's daily travel  
24 = one day

May 16 the Sun =  $25^{\circ} 49' 42''$  = 25.828333  
 15 the Sun =  $24^{\circ} 51' 51''$  = 24.864167  
 daily travel  $0^{\circ} 57' 52''$  = 0.9641667

May 16 the Moon =  $33^{\circ} 05' 00''$  = 33.083333  
 15 the Moon =  $19^{\circ} 28' 04''$  = 19.467778  
 daily travel  $13^{\circ} 36' 57''$  = 13.615556

$$\begin{array}{rcl}
 \underline{A - B} & = & 24^\circ 51' 51'' - 19^\circ 28' 04'' = 24.864167 - 19.467778 \\
 b - a & & 13^\circ 36' 57'' - 0^\circ 57' 52'' = 13.615556 - 0.9641667 \\
 24 & & 24 \\
 & & 24 \\
 \\ 
 = & \underline{5.396389} & = 5.396389 = 10.237084 \text{ INV 2nd DMS-DD} = 10h 14' 14'' \\
 & 12.651389 & 0.5271412 \\
 & 24 &
 \end{array}$$

Since you are using a Noon time ephemeris the time is 10:14:14 p.m. or 22H 14' 14'' GMT. When  $\div$  24 and using the time as a E.G.M.T.I. we get,

Sun =  $25^{\circ} 16' 3156''$   
Moon =  $25^{\circ} 16' 3182''$

Only a difference of 0.26°

22:14:14 GMT  
- 5:08:02 time to Wash. D.C.  
17:06:12 time to erect char

Calculate the Sun, Moon conjunction point (New Moon) on July 13, 1988 using the zero hour American Ephemeris.

$$\underline{A - B}$$

$$\underline{b-a}$$

$$24$$

where A = Sun's position

B = Moon's position

b = Moon's daily travel

a = Sun's daily travel

24 = one day

$$\text{July 14 the Sun} = 21^\circ 46' 24'' = 21.773333$$

$$13 \text{ the Sun} = 20^\circ 49' 09'' = 20.819167$$

$$\text{daily travel } 0^\circ 57' 15'' = 0.9541667$$

$$\text{July 14 the Moon} = 22^\circ 45' 56'' = 22.765556$$

$$13 \text{ the Moon} = 10^\circ 23' 15'' = 10.3875$$

$$\text{daily travel } 12^\circ 22' 41'' = 12.378056$$

$$\underline{A - B} = 20^\circ 49' 09'' - 10^\circ 23' 15'' = 20.819167 - 10.3875$$

$$\underline{b-a} \quad 12^\circ 22' 41'' - 0^\circ 57' 15'' = 12.378056 - 0.9541667$$

$$24$$

$$= \frac{10.431667}{11.423889} = \frac{10.431667}{0.4759954} = 21.915479 \text{ INV 2nd DMS-DD} = 21h 54' 56'' \text{ GMT}$$

$$11.423889 \quad 0.4759954$$

$$24$$

21:54:56 GMT

5:08:02 time to Wash. D.C.

16:46:54 Wash. D.C. LMT to erect the chart

In calculating Cycle Charts for Mundane Astrology; it is necessary to make reference to what is now called the Astronomical Almanac, and interpolate between stated declinations to determine the time to erect the chart. The calculation of the Jupiter Cycle Chart for Mar. 13, 1987 is given.

$$\text{Mar. 15} = + 0^\circ 09' 56.76''$$

$$\text{Mar. 14} = + 0^\circ 04' 11.43''$$

$$\text{Mar. 13} = - 0^\circ 01' 33.74''$$

$$\text{Mar. 12} = - 0^\circ 07' 18.72''$$

$$\text{Mar. 14} + 0^\circ 04' 11.43'' = \text{? hours}$$

$$\text{we need} \pm 0^\circ 00' 00.00'' = \text{? hours}$$

$$\text{Mar. 13} - 0^\circ 01' 33.74'' = \text{0 hours}$$

$$\frac{1}{5} 33.74 \times 24 \text{ hours} = 6.5178318 = 6:31:04 \text{ GMT}$$

6:31:04 GMT  
5:08:02 time to Wash. D.C.  
 1:23:02 time to erect the chart Wash. D.C. LMT

---

Mars Nov. 19, 1988 + 0° 13' 35.63''  
 18 + 0° 04' 41.64''  
 17 - 0° 04' 01.64''  
 16 - 0° 12' 33.88''

Nov. 18 + 0° 04' 41.64'' = 0 hours  
 we need ± 0° 00' 00.00'' = ? hours  
 Nov. 17 - 0° 04' 01.64'' = 0 hours  
 $\frac{4}{8} \underline{01.64}$  X 24 = 11.082709 = 11:04:58 GMT  
 $\underline{43.28}$

11:04:53 = 10:64:58 GMT  
5:08:02 time to Wash. D.C.  
 5:56:56 time to erect the chart Wash. D.C. LMT

---

#### THE SOLAR INGRESS, THE VERNAL EQUINOX, 1st POINT OF ARIES, SPRING 1988

Mar. 22 + 0° 37' 53.0''  
 21 + 0° 14' 10.8''  
 20 - 0° 09' 32.4''  
 19 - 0° 33' 16.4''

Mar. 21 + 0° 14' 10.8'' = 0 hours  
 we need ± 0° 00' 00.0'' = ? hours  
 Mar. 20 - 0° 09' 32.4'' = 0 hours  
 $\frac{9}{23} \underline{32.4}$  X 24 hours = 9.6526138 = 9:39:09  
 $\underline{43.2}$

9:39:09 GMT  
5:08:02 time to Wash. D.C.  
 4:31:07 time to erect the chart Wash. D.C. LMT

---

**MUNDANE CHART CALCULATIONS**

THE CHURCH OF LIGHT  
MUNDANE CALCULATIONS

In all astrological calculations relating to chart erection there is only one system used and that is the one of interpolating between two columns of figures. The interpolation is performed in either a table of Houses, an Ephemeris or the Astronomical Almanac. I am simply repeating what has been said and amply demonstrated in previous pages. The same applies to Mundane calculations. After the interpolation is set up any mathematical means may be used to solve for the unknown. And again the most expeditious method is to use the hand calculator. Here use is made of a hand held calculator that presents the capability of calculating in degrees, minutes and seconds, and rendering previously very difficult calculations to simplicity itself.

The declinations necessary are obtained before 1980 in the American Ephemeris and Nautical Almanac and since 1980 in the Astronomical Almanac, both being U.S. Government publications and obtainable through the U.S. Government Printing Office or any large library.

## SOLAR INGRESS 1988

0 hours DYNAMICAL TIME

Mar. 22	= + 0° 37' 53.0"
Mar. 21	= + 0° 14' 10.8"
Mar. 20	= - 0° 09' 32.4"
Mar. 19	= - 0° 33' 16.4"

$$\begin{array}{rcl}
 \text{Mar. 21,} & + 0^\circ 14' 10.8'' & = 0 \text{ hours} \\
 \text{we need,} & \pm 0^\circ 00' 00.0'' & = ? \\
 \text{Mar. 20,} & - 0^\circ 09' 32.4'' & = 0 \text{ hours} \\
 & \underline{9 \ 32.4} & \times \ 24 \\
 & 23 \ 43.2 &
 \end{array}$$

= 9.6526138 hrs. = 9h 39' 09.41'' A.M. G.M.T.

Subtracting the time to Wash. D.C.

9:39:09
<u>5:08:02</u>
4:31:07

Mar. 20 4:31:07 A.M. L.M.T. Wash. D.C.

## SOLAR INGRESS

2 MAR. 20 1988  
(Name)  
(Month      (Day)      (Year))  
3 Place WASH. D.C.  
4 Latitude. 38°N 53.3  
5 Longitude. 77°W 0.6

## **DOMINANT FACTOR**

**6 Time of Birth** \_\_\_\_\_  
(Daylight Saving)  
**Correction for**  
**7 Standard Time** \_\_\_\_\_

**8 Time of Birth** \_\_\_\_\_  
(Standard Time)  
**Correction for**  
**9 Mean Time** \_\_\_\_\_

**Local Mean Time of** 4:31:07  
**10 Birth, A.M or P.M.**

## FIRST KEY PROBLEM

11 Noon \_\_\_\_\_ 12:00  
12 Local Mean Time \_\_\_\_\_  
13 L.M.T. Interval (H) 4:31:07  
14 Sidereal Time 11:50:58  
15 (Noon) ZERO HOUR  
15 AMER. EPH.

17 L.M.T. Interval \_\_\_\_\_  
18 S. T. (Uncorrected) 16:22:05  
Correction, 9.86s per h. for (+) 0:01:35  
19 E.G.M.T. Int. \_\_\_\_\_  
20 Sidereal Time 16:23:40  
(Of Birth)

## **SECOND KEY PROBLEM**

**Standard**  
**21 Time of Birth**  
**Hrs. E. or**  
**22 W. of Greenwich**

**23 E.G.M.T.** —

24 Nov 12:00

25 EGM

28EGMT Interval +49:34:04

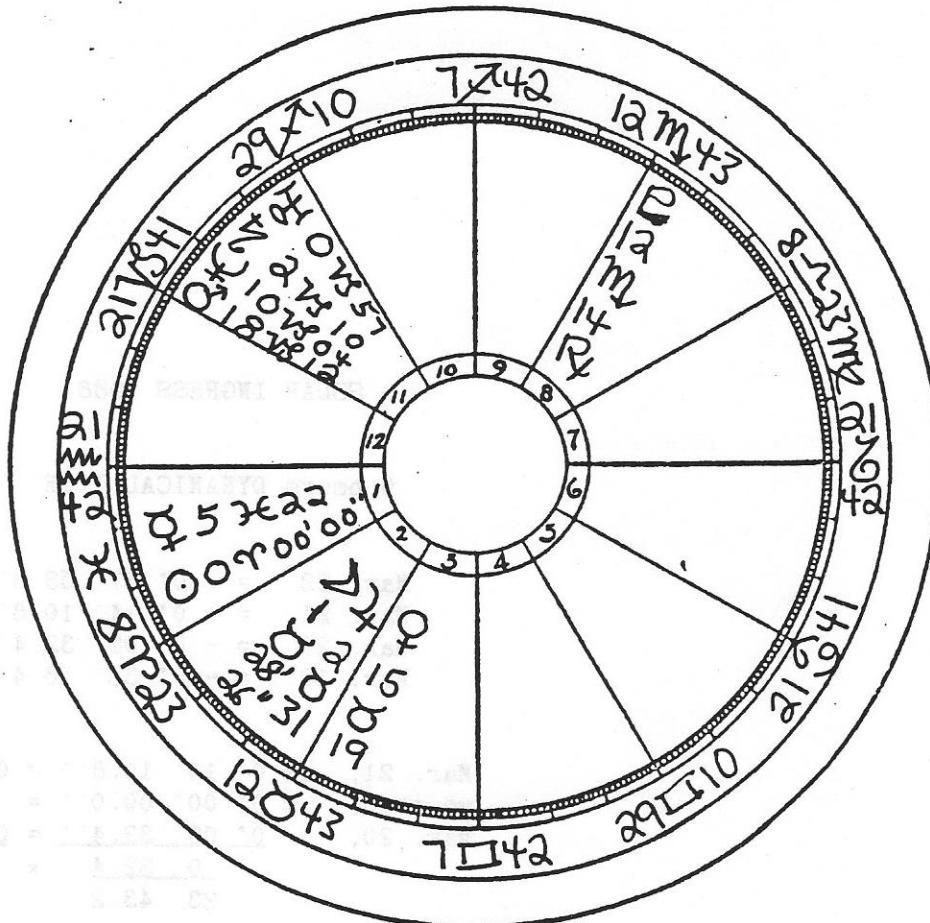
**(Indicate plus or minus)**

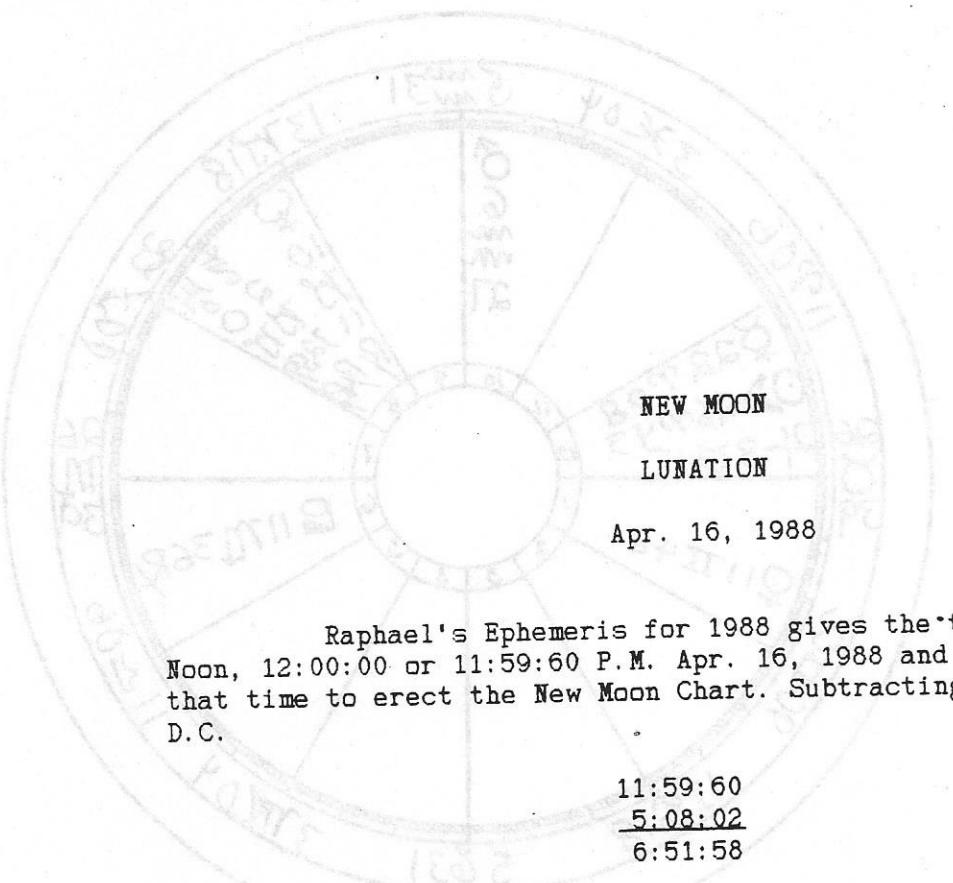
$$(+)\Delta T = (+) 9:40:05$$

## **ADDITIONAL FACTORS**

## 27 Constant Log

**28 Limiting Date** \_\_\_\_\_  
(including year)





## NEW MOON

## LUNATION

Apr. 16, 1988

Raphael's Ephemeris for 1988 gives the time of New Moon as Noon, 12:00:00 or 11:59:60 P.M. Apr. 16, 1988 and as is customary I use that time to erect the New Moon Chart. Subtracting the time to Wash. D.C.

11:59:60  
5:08:02  
6:51:58

gives 6:51:58 as the L.M.T. Wash. D.C. to calculate the planets places.

An interesting observation is that if one calculates the Sun at 12:00:56 in the 24 hour row the answer is  $26^{\circ} 42' 38.82''$  and if one calculates the Moon in the 12 hour row at 0:00:56 the answer is  $26^{\circ} 42' 39.3''$ , which is about as accurate an answer one can expect. The question of ununiform motion in the Moon is ignored.

An interesting observation is that if one calculates in the 24 hour row the answer is  $26^{\circ} 42' 38.82''$  the Moon in the 12 hour row at 0:00:56 the answer which is about as accurate an answer one can expect from uniform motion in the Moon is ignored.



In 1987 the declinations for a portion of Mars are given at 0h Dynamic Time as follows:

Jan. 11	=	+ 0° 27' 19.59"
Jan. 10	=	+ 0° 29' 32.37"
Jan. 9	=	- 0° 08' 15.74"
Jan. 8	=	- 0° 26' 04.59"

Since we need to know the time when the planet is at 0° 00' 00.00" declination the interpolation is as follows.

$$\begin{array}{rcl}
 \text{Jan. 10} & + 0^\circ 09' 32.37'' & = 0 \text{ hours} \\
 \text{we need} & \pm 0^\circ 00' 00.00'' & = ? \\
 \text{Jan. 9} & - 0^\circ 08' 15.74'' & = \underline{0 \text{ hours}} \\
 & \underline{\underline{8 \quad 15.74}} & \times 24 \text{ hours} \\
 & 17 \quad 48.11 &
 \end{array}$$

$$= 11.139077 \text{ hours} = 11\text{h } 08' 20.68'' \text{ G.M.T.}$$

Subtracting the time to Wash. D.C. gives.

$$\begin{array}{r}
 11 \ 08 \ 20.68 \\
 5 \ 08 \ 02.00 \\
 \hline
 6 \ 00 \ 18.68
 \end{array}$$

Jan. 9 = 6h 00' 19'' L.M.T. Wash D.C.

## MARS CYCLE CHART

2 JAN 9 1987  
(Month) (Day) (Year)  
3 Place WASH. D.C.  
4 Latitude 38N 53.3  
5 Longitude 77W 0.6

## **DOMINANT FACTOR**

**6 Time of Birth** \_\_\_\_\_  
(Daylight Saving)  
**Correction for**  
**7 Standard Time** \_\_\_\_\_

**8 Time of Birth** \_\_\_\_\_  
(Standard Time)  
**Correction for**  
**9 Mean Time** \_\_\_\_\_  
Local Mean Time of  
**10 Birth, A.M or P.M.** 6:00:19

## FIRST KEY PROBLEM

11 Noon \_\_\_\_\_ 12:00  
12 Local Mean Time \_\_\_\_\_  
13 L.M.T. Interval (+) 6:00:19  
14 Sidereal Time 7:12:00  
(Moon) ZERO HOUR  
15 AMPR. EPH.

17 L.M.T. Interval \_\_\_\_\_  
18 S. T. (Uncorrected) 13:12:19  
Correction, 9.86s per h. for +0:01:50  
19 E.G.M.T. Int. \_\_\_\_\_  
20 Sidereal Time 13:14:09  
(Of Birth)

## SECOND KEY PROBLEM

**Standard**  
**21 Time of Birth** \_\_\_\_\_  
**Hrs. E. or**  
**22 W. of Greenwich** \_\_\_\_\_

23 E.G.M.T.

**24 Noon** \_\_\_\_\_ **12:00**

**25 E.G.M.T.** \_\_\_\_\_

28 ECGMT Interval (4) (1.08.2)

(+)  $\Delta T = (+) 11^{\circ} 09' 18''$

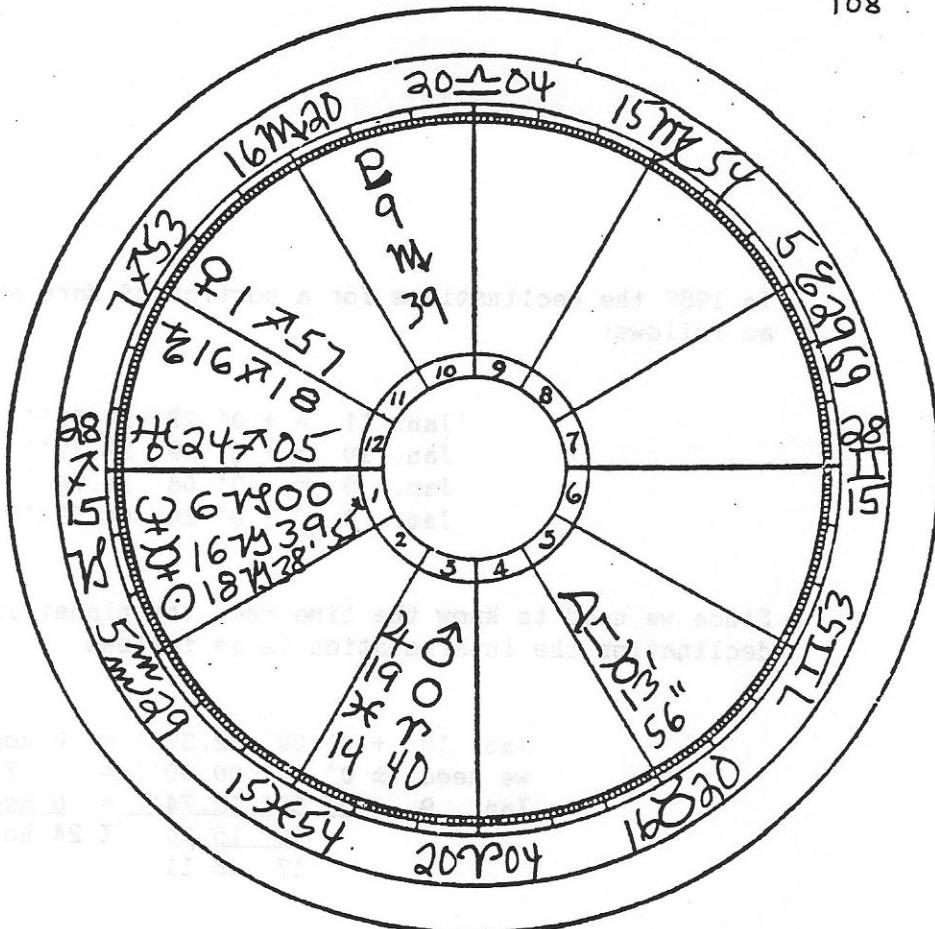
#### **ADDITIONAL FACTORS**

### 27 Constant Log

**28 Limiting Date** \_\_\_\_\_

(Including year)

**AMERICAN BOOK OF TABLES**



## MARS 1988

Nov. 19, = + 0° 13' 35.63''  
 Nov. 18, = + 0° 04' 41.64''  
 Nov. 17, = - 0° 04' 01.64''  
 Nov. 16, = - 0° 12' 33.88''

$$\begin{array}{rcl}
 \text{Nov. 17} & + 0^\circ 04' 41.64'' & = 0 \text{ hours} \\
 \text{we need} & \pm 0^\circ 00' 00.00'' & = ? \\
 \text{Nov. 16} & - 0^\circ 04' 01.64'' & = \underline{0 \text{ hours}} \\
 & \underline{4} \underline{01.64} & \times \quad 24 \\
 & 8 \quad 43.28 &
 \end{array}$$

$$= 11.082709 \text{ hours} = 11h 04' 57.75'' \text{ G.M.T.}$$

Subtracting the time to Wash. D.C.

$$\begin{array}{r}
 11 \ 04 \ 57.75 = 10 \ 64 \ 57.75 \\
 \underline{5} \ 08 \ 02 \\
 \underline{5} \ 56 \ 55.75
 \end{array}$$

Nov. 17, 5h 56' 56''

## MARS CYCLE CHART

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2 NOV. 17 1988  
(Month) (Day) (Year)  
3 Place WASH. D.C.  
4 Latitude 38N53.3  
5 Longitude 77W00.6

## **DOMINANT FACTOR**

**6 Time of Birth** \_\_\_\_\_  
(Daylight Saving)  
Correction for  
**7 Standard Time** \_\_\_\_\_

**8 Time of Birth** \_\_\_\_\_  
(Standard Time)  
Correction for  
**9 Mean Time** \_\_\_\_\_

**Local Mean Time of** 5:56:56  
**10 Birth, A.M or P.M.**

## FIRST KEY PROBLEM

11 Noon \_\_\_\_\_ 12:00  
12 Local Mean Time \_\_\_\_\_  
13 L.M.T. Interval (+) 5:56:56  
14 Sidereal Time 3:45:05  
(Noon) ZERO HOUR

17 L.M.T. Interval \_\_\_\_\_  
18 S. T. (Uncorrected) 9'42'.01  
Correction. 9.86s per h. for (+) 0'01'.49  
19 E.G.M.T. Int. \_\_\_\_\_  
20 Sidereal Time 9:43:50  
(Of Birth)

## **SECOND KEY PROBLEM**

**Standard**  
**21 Time of Birth** \_\_\_\_\_  
**22 Hrs. E. or**  
**22 W. of Greenwich.**

**23 E.G.M.T.** \_\_\_\_\_

**24** Noon \_\_\_\_\_ 12:00

**25 E.G.M.T.** \_\_\_\_\_

26 E.G.M.T. Interval 111.04.5g

(Indicate plus or minus)

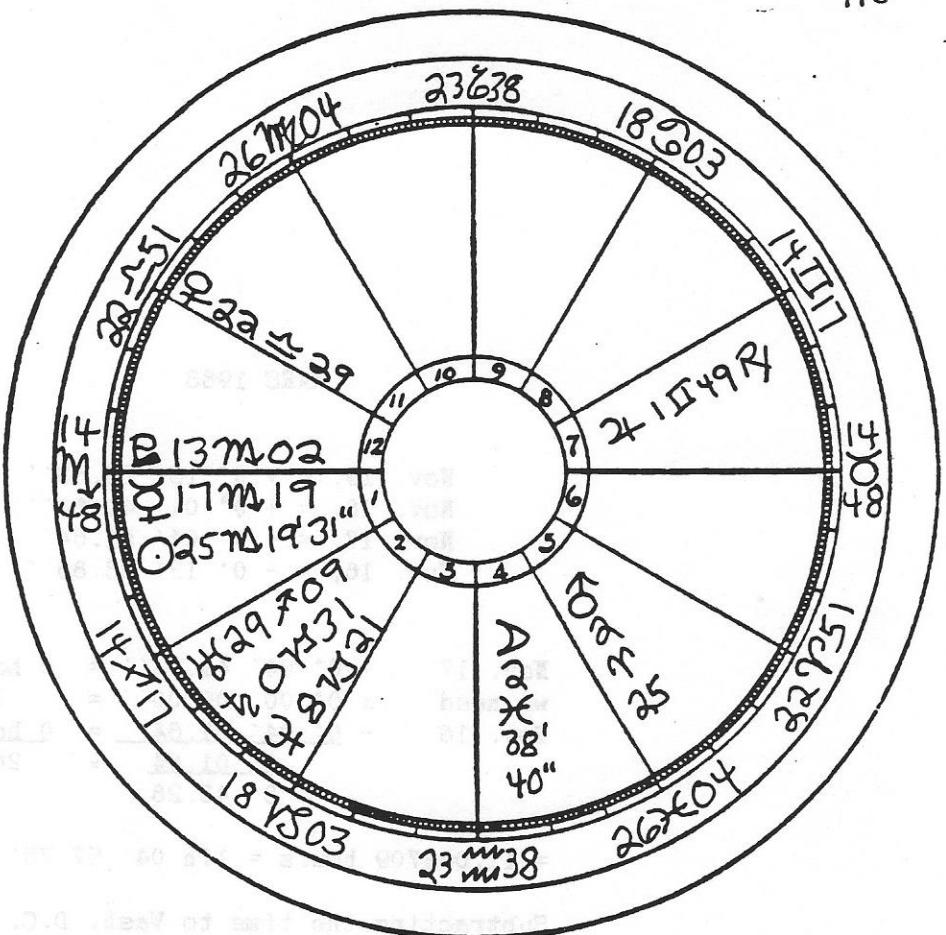
(+)  $\Delta T = (+) 11:05:54$

#### **ADDITIONAL FACTORS**

#### **ADDITIONAL FACTORS**

## 27 Constant Log

**28 Limiting Date** \_\_\_\_\_  
(including year)



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JUPITER 1987

Mar. 15	=	+ 0° 09'	56.76'
Mar. 14	=	+ 0° 04'	11.43'
Mar. 13	=	- 0° 01'	33.74'
Mar. 12	=	- 0° 07'	18.72'

Mar. 14	+ 0° 04'	11.43''	= 0 hours
we need	$\pm$ 0° 00'	00.00''	= ?
Mar. 13	- 0° 01'	<u>33.74''</u>	= 0 hours
	1	<u>33.74</u>	x 24 hours
	5	45.17	

= 6.5178318 hours = 6h 31' 04.19'' G.M.T.

Subtracting the time to Wash. D.C.

6 31 04.19  
5 08 02.00  
1 23 02.19

Mar. 13, 1h 23' 02" L.M.T. Wash. D.C.

Jupiter Cyche Chart

2 MAR <sup>(Name)</sup> 13 1987  
 (Month) (Day) (Year)  
 3 Place WASH D.C.  
 4 Latitude 38N 53.3  
 5 Longitude 77W 00.6

## DOMINANT FACTOR

6 Time of Birth \_\_\_\_\_  
 (Daylight Saving)  
 Correction for  
 7 Standard Time \_\_\_\_\_

8 Time of Birth \_\_\_\_\_  
 (Standard Time)  
 Correction for  
 9 Mean Time \_\_\_\_\_

Local Mean Time of  
 10 Birth, A.M or P.M. 1:23:02

## FIRST KEY PROBLEM

11 Noon 12:00

12 Local Mean Time \_\_\_\_\_

13 L.M.T. Interval (+) 1:23:02

14 Sidereal Time 11:20:23

<sup>(Noon) ZERO HOUR</sup>  
 15 AMER. EPM.

16 \_\_\_\_\_

17 L.M.T. Interval \_\_\_\_\_

18 S. T. (Uncorrected) 12:43:25

Correction, 9.86s per h. for (+) 0:01:04

19 E.G.M.T. Int. \_\_\_\_\_

20 Sidereal Time 12:44:29  
 (Of Birth)

## SECOND KEY PROBLEM

Standard

21 Time of Birth \_\_\_\_\_

Hrs. E. or

22 W. of Greenwich \_\_\_\_\_

23 E.G.M.T. \_\_\_\_\_

24 Noon 12:00

25 E.G.M.T. \_\_\_\_\_

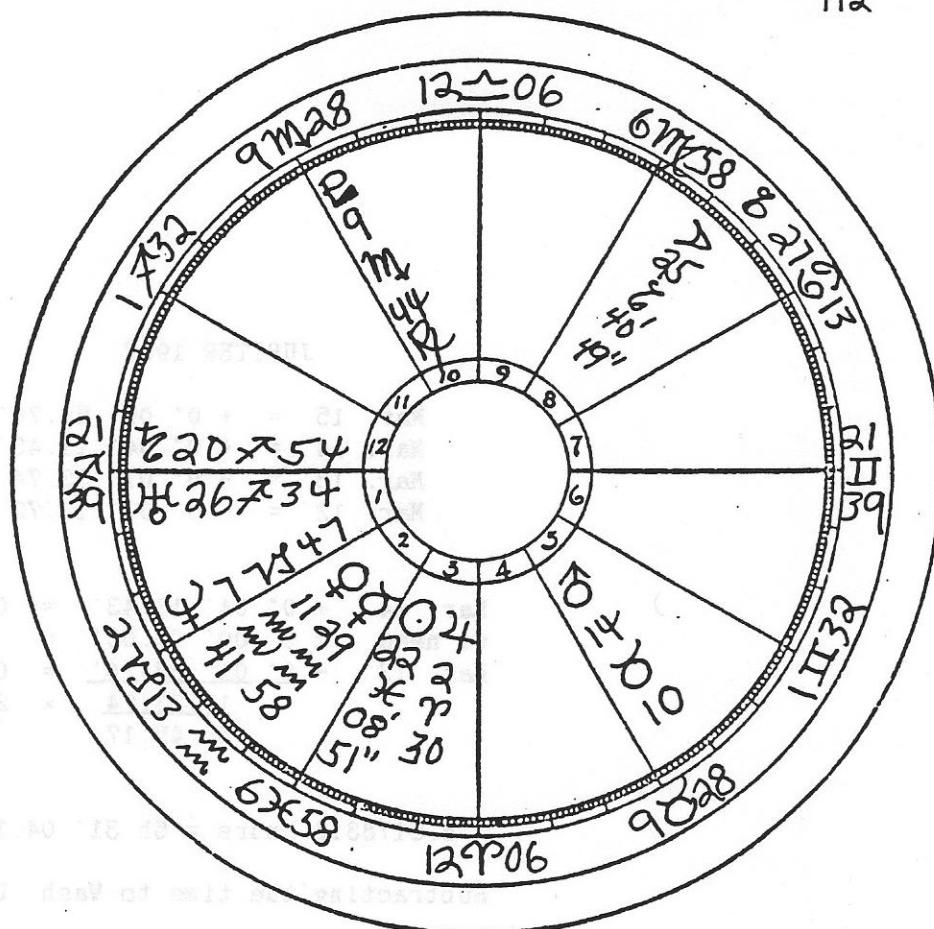
26 E.G.M.T. Interval (+) 6:31:04  
 (Indicate plus or minus)

(+)  $\Delta T = (+) 6:32:01$

## ADDITIONAL FACTORS

27 Constant Log. \_\_\_\_\_

28 Limiting Date  
 (Including year) \_\_\_\_\_



MOV.	FIX.	MUT.	FIRE	EARTH	AIR	WATER	ANG.	SUC.	CAD.
PER.	COMP.	PUB.	LIFE	WEALTH	ASSOC.	PSY.	ABOVE	EAST	RET.
Declinations		ASPECTS							
			○	◎	♀	♂	2	b	H
			○						
			◎						
			♀						
			♂						
			2						
			b						
			H						
			Ψ						
			E						
Dominant		Best		Worst		Planet			
MC						Sign			
ASC						House			

## SATURN 1981 0h Ephemeris Time

Apr. 1	+ 0° 01' 53.31''
Mar. 31	+ 0° 00' 02.14''
Mar. 30	- 0° 01' 49.53''
Mar. 29	- 0° 03' 41.65''

$$\begin{array}{rcl}
 \text{Mar. 31} & + 0^\circ 00' 02.14'' & = 0 \text{ hours} \\
 \text{we need} & \pm 0^\circ 00' 00.00'' & = ? \\
 \text{Mar. 30} & - 0^\circ 01' 49.53'' & = 0 \text{ hours} \\
 & \underline{1 \ 49.53} & \times 24 \\
 & 1 \ 51.67 &
 \end{array}$$

= 23.540073 hours = 23h 32' 24.26'' G.M.T.

Subtracting the time to Wash. D.C.

$$\begin{array}{r}
 23h 32' 24.26'' \\
 5 \ 08 \ 02 \\
 \hline
 18 \ 24 \ 22.26
 \end{array}$$

Mar. 30, 18:24:22 L.M.T. Wash. D.C. (6:24:22 P.M.)

1 SATURN CYCLE CHART  
2 MAR 30 1981  
(Name)  
(Month) (Day) (Year)  
3 Place WASH D.C.  
4 Latitude 38 N 53.3  
5 Longitude 77 W 0.6

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## **DOMINANT FACTOR**

**6** Time of Birth \_\_\_\_\_  
(Daylight Saving)  
**Correction for**  
**7** Standard Time \_\_\_\_\_

**8 Time of Birth** \_\_\_\_\_  
(Standard Time)  
**Correction for**  
**9 Mean Time** \_\_\_\_\_

Local Mean Time of  
10 Birth, ~~A.M.~~ or P.M. 6:24:22

## FIRST KEY PROBLEM

11 Noon 12:00:00 12:00  
6-24-22

12 Local Mean Time 6.24.22

13 L.M.T. Interval (+) 18:24:22

14 Sidereal Time 12:24  
15 (Noon) ZERO HOUR  
AMER. E.P.T.

16 \_\_\_\_\_

17 L.M.T. Interval \_\_\_\_\_  
CUT 3137

18 S. T. (Uncorrected) 6:53:33  
Correction. 9.86s per h. for ~~(H)~~ <sup>(J)</sup> ~~(K)~~ <sup>(L)</sup>

19 E.G.M.T. Int. 10.05.50

## SECOND KEY PROBLEM

**SECOND KEY PROBLEM**

Hrs. E. or  
22W. of Greenwich

**23 E.G.M.T.** \_\_\_\_\_

**24 Noon** \_\_\_\_\_ **12:00**

**25 E.G.M.T.** —

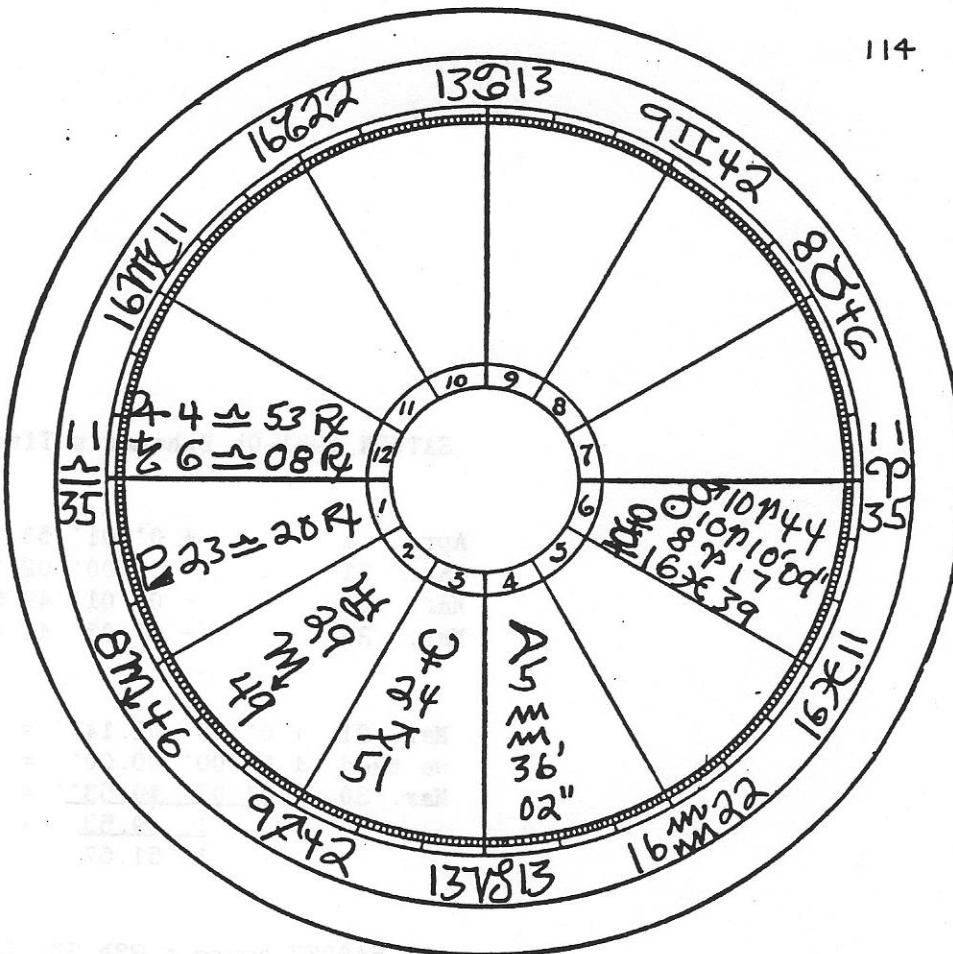
**26 E.G.M.T. Interval** ~~423:32:24~~  
(Indicate plus or minus)

$$(+)\Delta T = (+) 23:33:16$$

**ADDITIONAL FACTORS  
AMER BOOK OF TABLES**

## **27 Constant Log**

**28 Limiting Date** \_\_\_\_\_  
(Including year)



## URANUS 1969 0h EPHEMERIS TIME

Mar. 28 = + 0° 01' 03.21'  
 Mar. 27 = + 0° 00' 01.69'  
 Mar. 26 = - 0° 01' 00.00'  
 Mar. 25 = - 0° 02' 01.82'

$$\begin{array}{rcl}
 \text{Mar. 27} & + 0^\circ 00' 01.69'' & = 0 \text{ hours} \\
 \text{we need} & \pm 0^\circ 00' 00.00'' & = ? \\
 \text{Mar. 26} & - \underline{0^\circ 01' 00.00''} & = \underline{0 \text{ hours}} \\
 & \underline{1^\circ 00.00} & \times 24 \\
 & 1^\circ 01.69 &
 \end{array}$$

$$= 23.342519 \text{ hours} = 23h 20' 33.07''$$

$$= 11.342519 \text{ P.M.} = 11:20:33.07 \text{ P.M. G.M.T.}$$

Subtracting the time to Wash. D.C.

	11:20:33	
	5:08:02	
Mar. 26	6:12:31	P.M. L.M.T. Wash. D.C.

URANUS CYCLE CHART

1 (Name) MAR. 26 1969  
 2 (Month) (Day) (Year)  
 3 Place WASH. D.C.  
 4 Latitude 38N 53.3  
 5 Longitude 77W 0.6

**DOMINANT FACTOR**

6 Time of Birth (Daylight Saving)  
 Correction for Standard Time  
 7  
 8 Time of Birth (Standard Time)  
 Correction for Mean Time  
 9 Local Mean Time of 6:12:31  
 10 Birth, AM or PM.

**FIRST KEY PROBLEM**

11 Noon 12:00:00 12:00  
 12 Local Mean Time (+) 6:12:31  
 13 L.M.T. Interval (+) 18:12:31  
 14 Sidereal Time 12:13:03  
 15 (Noon) ZERO HOUR AMER. EPH.

16 \_\_\_\_\_  
 17 L.M.T. Interval 6:25:34  
 18 S. T. (Uncorrected) 6:25:34  
 Correction, 9.86s per h. for (+) 10:03:50  
 19 E.G.M.T. Int. \_\_\_\_\_  
 20 Sidereal Time 6:29:24  
 (Of Birth)

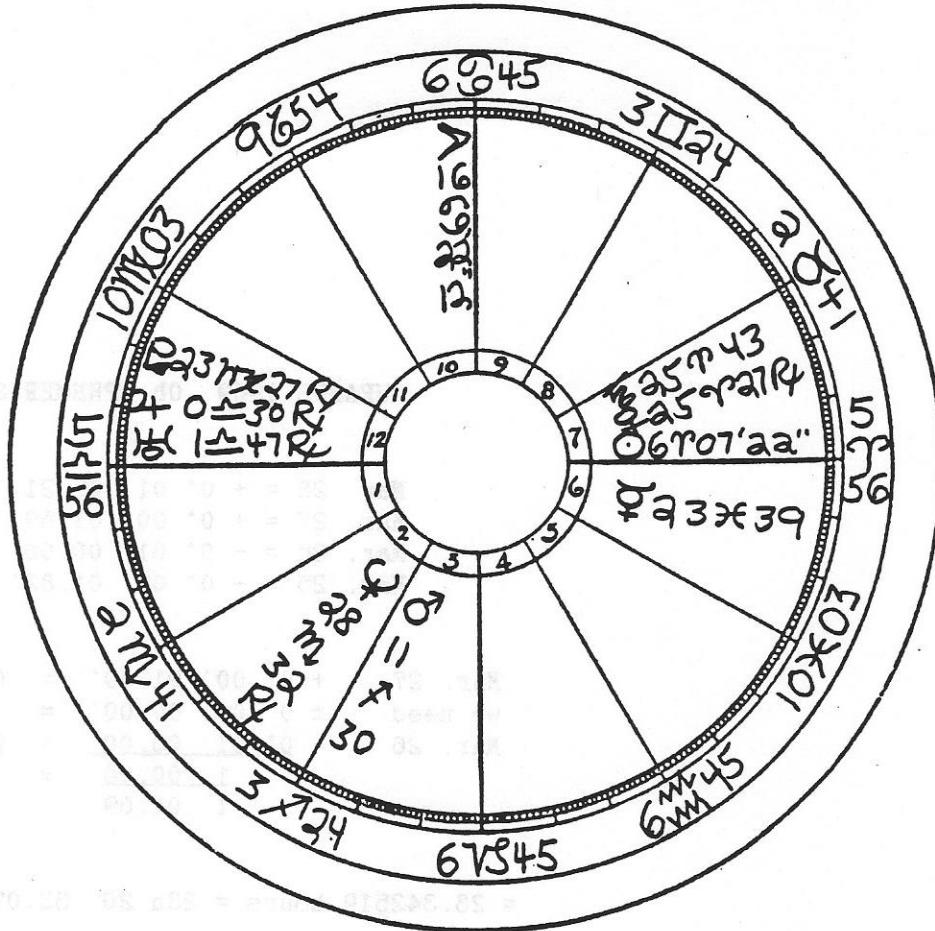
**SECOND KEY PROBLEM**

Standard  
 21 Time of Birth \_\_\_\_\_  
 Hrs. E. or  
 22 W. of Greenwich \_\_\_\_\_

23 E.G.M.T. \_\_\_\_\_  
 24 Noon 12:00  
 25 E.G.M.T. \_\_\_\_\_  
 26 E.G.M.T. Interval (+) 23:20:33  
 (Indicate plus or minus)  
 (+) ΔT = (+) 23:21:13

**ADDITIONAL FACTORS**

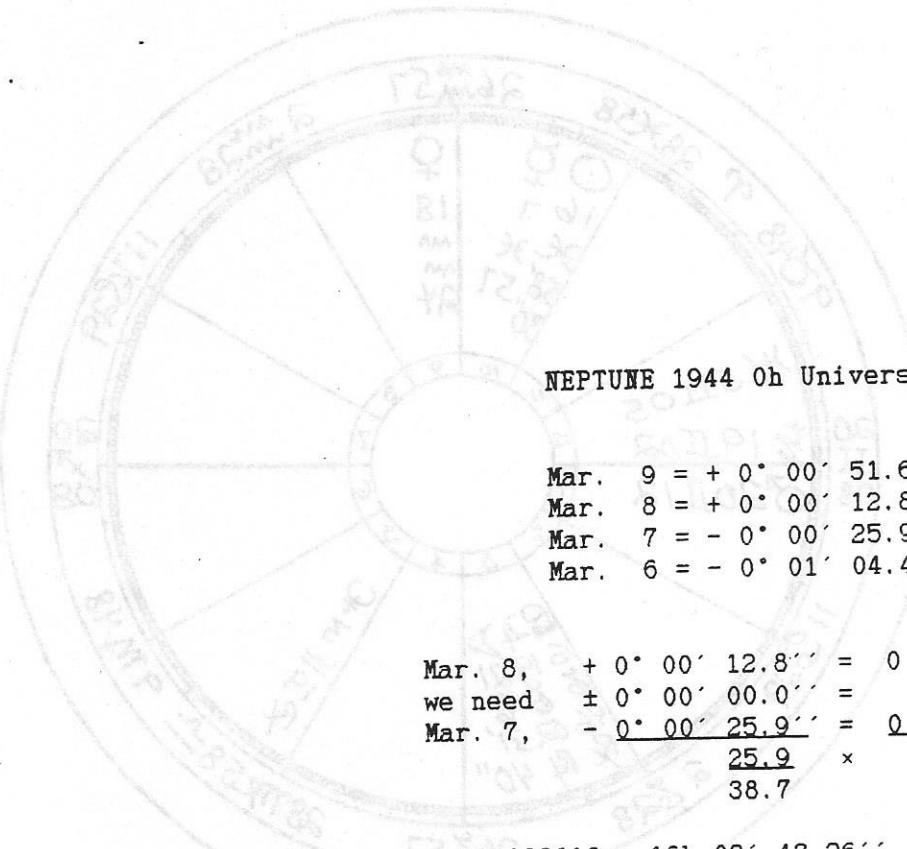
27 Constant Log \_\_\_\_\_  
 28 Limiting Date \_\_\_\_\_  
 (Including year)



Mov.	Fix.	Mut.	Fire	Earth	Air	Water	Ang.	Suc.	Cad.
Per.	Comp.	Pub.	Life	Wealth	Assoc.	Psy.	Above	East	Ret.

Declinations		ASPECTS													
		○	□	▢	♀	♂	♑	♒	♓	♓	♓	♓	♓	MC	ASC
○															
□															
▢															
♀															
♂															
♑															
♒															
♓															
b							MC								
H							ASC								
Ψ															
P			Dominant	Best	Worst							Planet			
MC												Sign			
ASC												House			



NEPTUNE 1944 0h Universal Time

Mar. 9 = + 0° 00' 51.6''  
 Mar. 8 = + 0° 00' 12.8''  
 Mar. 7 = - 0° 00' 25.9''  
 Mar. 6 = - 0° 01' 04.4''

$$\begin{aligned}
 \text{Mar. 8, } & + 0^\circ 00' 12.8'' = 0 \text{ hours} \\
 \text{we need } & \pm 0^\circ 00' 00.0'' = ? \\
 \text{Mar. 7, } & - 0^\circ 00' 25.9'' = \underline{0 \text{ hours}} \\
 & \underline{25.9} \times 24 \\
 & 38.7
 \end{aligned}$$

$$= 16.062016 = 16h 03' 43.26'' \text{ G.M.T.}$$

Subtracting the time to Wash. D.C.

$$\begin{aligned}
 16:03:43 & = 15:63:43 \\
 & 5:08:02 \\
 & 10:55:41
 \end{aligned}$$

Mar. 7 10:55:41 A.M. L.M.T. Wash. D.C.

1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993	2994	2995	2996	2997	2998	2999	3000	3001	3002	3003	3004	3005	3006	3007	3008	3009	3010	3011	3012	3013	3014	3015	3016	3017	3018	3019	3020	3021	3022	3023	3024	3025	3026	3027	3028	3029	3030	3031	3032	3033	3034	3035	3036	3037	3038	3039	3040	3041	3042	3043	3044	3045	3046	3047	3048	3049	3050	3051	3052	3053	3054	3055	3056	3057	3058	3059	3060	3061	3062	3063	3064	3065	3066	3067	3068	3069	3070	3071	3072	3073	3074	3075	3076	3077	3078	3079	3080	3081	3082	3083	3084	3085	3086	3087	3088	3089	3090	3091	3092	3093	3094	3095	3096	3097	3098	3099	3100	3101	3102	3103	3104	3105	3106	3107	3108	3109	3110	3111	3112	3113	3114	3115	311

## NEPTUNE CYCLE CHART

2 MAR. 7 1944  
(Month) (Day) (Year)  
3 Place WASH. D.C.  
4 Latitude 38N 53.3  
5 Longitude 77W 0.6

## **DOMINANT FACTOR**

**6 Time of Birth** \_\_\_\_\_  
(Daylight Saving)  
Correction for  
**7 Standard Time** \_\_\_\_\_

**8 Time of Birth** \_\_\_\_\_  
(Standard Time)  
Correction for  
**9 Mean Time** \_\_\_\_\_

Local Mean Time of **10:55:41**  
**10 Birth, A.M or P.M.**

## FIRST KEY PROBLEM

11 Noon \_\_\_\_\_ 12:00  
12 Local Mean Time \_\_\_\_\_  
13 L.M.T. Interval (+) 10:55:41  
14 Sidereal Time 10:58:21  
15 (Neon) ZERO HOUR  
AMER. EPH.

17 L.M.T. Interval \_\_\_\_\_  
18 S. T. (Uncorrected) 21:54:02  
Correction, 9.86s per h. for ~~10:02:38~~  
19 E.G.M.T. Int. \_\_\_\_\_  
20 Sidereal Time 21:56:40  
(Of Birth)

## **SECOND KEY PROBLEM**

**Standard**  
**21 Time of Birth** \_\_\_\_\_  
**Hrs. E. or**  
**22 W. of Greenwich** \_\_\_\_\_

**23 E.G.M.T.** \_\_\_\_\_

**24 Noon** \_\_\_\_\_ 12:00

35EGMT

**26 E.G.M.T. Interval** (+) 16:03:43  
(Indicate plus or minus)

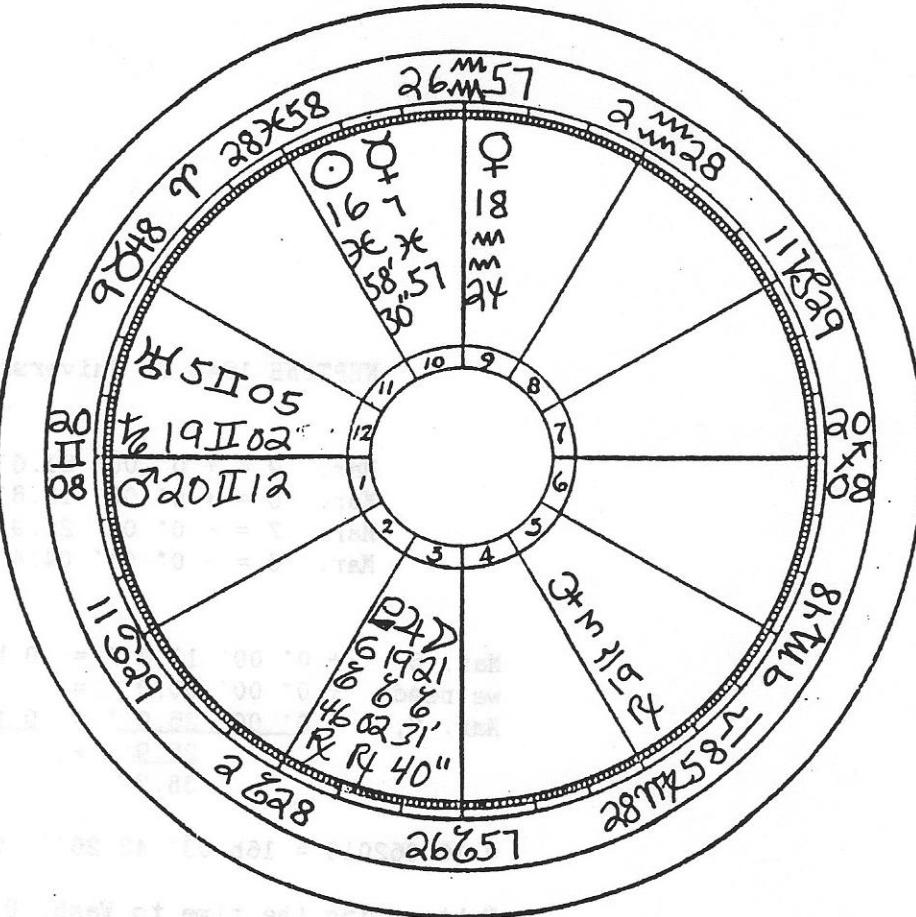
(+)  $\Delta T = (+) 16:04:09$

## **ADDITIONAL FACTORS**

## 27 Constant Log

**28 Limiting Date** \_\_\_\_\_  
(Including year)

AMER. EPH. B. OF T.



## PLUTO 1988

Mar. 10 = + 0° 04' 48.39''  
 Mar. 5 = + 0° 01' 40.39''  
 Feb. 29 = - 0° 01' 21.18''  
 Feb. 24 = - 0° 04' 14.63''

note 5 day intervals

$$\begin{array}{rcl}
 \text{Mar 5,} & + 0^\circ 01' 40.39'' & = 0 \text{ hours} \\
 \text{we need} & \pm 0^\circ 00' 00.00'' & = ? \\
 \text{Feb. 29,} & - 0^\circ 01' 21.18'' & = \underline{0 \text{ hours}} \\
 & \underline{1} \ 21.18 & \times \ 120 \\
 & 2 \ 61.57 &
 \end{array}$$

$$= 53.652035 \text{ hours} = 53h 39' 07.33''$$

$$\text{Minus 48 hours (2 days)} = 5:39:07 \text{ G.M.T.}$$

Subtracting the time to Wash. D.C.

	5:39:07	
	<u>5:08:02</u>	
Mar. 2,	0.31:05	L.M.T. Wash. D.C.

## PLUTO CYCLE

120

2 MAR. 2 1988  
(Name)  
(Month) (Day) (Year)  
3 Place WASH. D.C.  
4 Latitude 38N 53.3  
5 Longitude 77W 0.6

## **DOMINANT FACTOR**

6 Time of Birth \_\_\_\_\_  
(Daylight Saving)  
Correction for  
7 Standard Time \_\_\_\_\_

8 Time of Birth \_\_\_\_\_  
(Standard Time)  
Correction for  
9 Mean Time \_\_\_\_\_  
Local Mean Time of  
10 Birth, A.M or P.M. **0:31:05**

## FIRST KEY PROBLEM

11 Noon \_\_\_\_\_ 12:00  
12 Local Mean Time \_\_\_\_\_  
13 L.M.T. Interval (+) 0:31:05  
14 Sidereal Time 10:40:00  
15 (New) ZERO HOUR  
AMER. EPH.

17 L.M.T. Interval \_\_\_\_\_  
18 S. T. (Uncorrected) 11:11:05  
Correction. 9.86s per h. for (+)  
19 E.G.M.T. Int. 0'00:56  
20 Sidereal Time 11:12:01  
(Of Birth)

## **SECOND KEY PROBLEM**

**Standard**  
**21 Time of Birth.** \_\_\_\_\_  
**Hrs. E. or**  
**22 W. of Greenwich**

21EGMT

**24 Nov.** 12:00

25EGMT

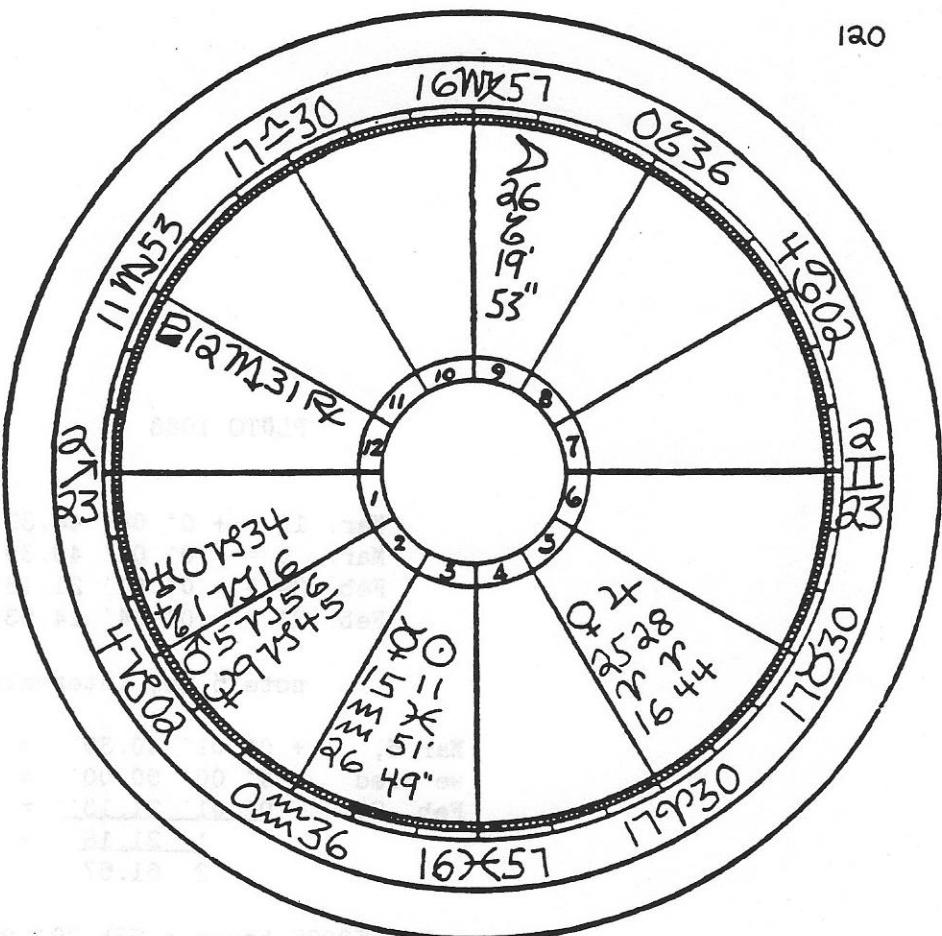
26 E.G.M.T. Interval (+15:34:07)  
(Indicate plus or minus)

$$(+)\Delta T = (+)5:40:04$$

## **ADDITIONAL FACTORS**

## 27 Constant Log

**28 Limiting Date** \_\_\_\_\_  
(including year)





1 NEPTUNE CYCLE CHART

2 MAR. 7 1944  
(Month) (Day) (Year)

3 Place WASH. D.C.

4 Latitude 38N 53.3

5 Longitude 77W 0.6

## DOMINANT FACTOR

6 Time of Birth \_\_\_\_\_  
(Daylight Saving)  
Correction for  
7 Standard Time \_\_\_\_\_

8 Time of Birth \_\_\_\_\_  
(Standard Time)  
Correction for  
9 Mean Time \_\_\_\_\_  
Local Mean Time of 10 Birth, A.M or P.M. 10:55:41

## FIRST KEY PROBLEM

11 Noon 11:59:60 12:00  
12 Local Mean Time 10:55:41  
13 L.M.T. Interval (-) 1:04:19  
14 Sidereal Time 23:00:19  
15 (Noon) RAPHAEL'S  
16 \_\_\_\_\_  
17 L.M.T. Interval \_\_\_\_\_  
18 S. T. (Uncorrected) 21:56:00  
Correction, 9.86s per h. for (+) 0:00:40  
19 E.G.M.T. Int. \_\_\_\_\_  
20 Sidereal Time 21:56:40  
(Of Birth)

## SECOND KEY PROBLEM

Standard  
21 Time of Birth \_\_\_\_\_  
Hrs. E. or  
22 W. of Greenwich \_\_\_\_\_  
23 E.G.M.T. 16:03:43  
24 Noon (-) 12:00:00 12:00  
25 E.G.M.T. 4:03:43  
26 E.G.M.T. Interval (+) 4:03:43  
(Indicate plus or minus)

1 SOLAR INGRESS

2 MAR. 20 1988  
(Month) (Day) (Year)

3 Place Wash. D.C.

4 Latitude 38N 53.3

5 Longitude 77W 0.6

## DOMINANT FACTOR

6 Time of Birth \_\_\_\_\_  
(Daylight Saving)  
Correction for  
7 Standard Time \_\_\_\_\_

8 Time of Birth \_\_\_\_\_  
(Standard Time)  
Correction for  
9 Mean Time \_\_\_\_\_  
Local Mean Time of 10 Birth, A.M or P.M. 4:31:07

## FIRST KEY PROBLEM

11 Noon 11:59:60 12:00  
12 Local Mean Time 4:31:07  
13 L.M.T. Interval (-) 7:28:53  
14 Sidereal Time 23:52:56  
15 (Noon) RAPHAEL'S  
16 \_\_\_\_\_  
17 L.M.T. Interval \_\_\_\_\_  
18 S. T. (Uncorrected) 16:24:03  
Correction, 9.86s per h. for (-) 0:00:23  
19 E.G.M.T. Int. \_\_\_\_\_  
20 Sidereal Time 16:23:40  
(Of Birth)

## SECOND KEY PROBLEM

Standard  
21 Time of Birth \_\_\_\_\_  
Hrs. E. or  
22 W. of Greenwich \_\_\_\_\_  
23 E.G.M.T. \_\_\_\_\_  
24 Noon 11:59:60 12:00  
25 E.G.M.T. (-) 9:39:09  
26 E.G.M.T. Interval (-) 2:20:51  
(Indicate plus or minus)

1 NEW MOON

2 APR. 16 1988  
(Month) (Day) (Year)

3 Place WASH. D.C.

4 Latitude 38N 53.3

5 Longitude 77W 0.6

## DOMINANT FACTOR

6 Time of Birth \_\_\_\_\_  
(Daylight Saving)  
Correction for  
7 Standard Time \_\_\_\_\_

8 Time of Birth \_\_\_\_\_  
(Standard Time)  
Correction for  
9 Mean Time \_\_\_\_\_  
Local Mean Time of 10 Birth, A.M or P.M. 6:51:58

## FIRST KEY PROBLEM

11 Noon 11:59:60 12:00  
12 Local Mean Time 6:51:58  
13 L.M.T. Interval (-) 5:08:02  
14 Sidereal Time 1:39:23  
15 (Noon) RAPHAEL'S  
S.T.+24 16 25:39:23  
17 L.M.T. Interval (-) 5:08:02  
18 S. T. (Uncorrected) 20:31:21  
Correction, 9.86s per h. for 0:00:00  
19 E.G.M.T. Int. \_\_\_\_\_  
20 Sidereal Time 20:31:21  
(Of Birth)

## SECOND KEY PROBLEM

Standard  
21 Time of Birth \_\_\_\_\_  
Hrs. E. or  
22 W. of Greenwich \_\_\_\_\_  
23 E.G.M.T. \_\_\_\_\_  
24 Noon \_\_\_\_\_ 12:00  
25 E.G.M.T. \_\_\_\_\_  
26 E.G.M.T. Interval 0:00:00  
(Indicate plus or minus)

PLUTO CYCLE CHART

1 Name \_\_\_\_\_  
 2 Mar. 2 1988  
 (Month) (Day) (Year)  
 3 Place WASH D.C.  
 4 Latitude 38N 53.3  
 5 Longitude 77W 0.6

**DOMINANT FACTOR**

6 Time of Birth \_\_\_\_\_  
 (Daylight Saving)  
 Correction for \_\_\_\_\_  
 7 Standard Time \_\_\_\_\_  
  
 8 Time of Birth \_\_\_\_\_  
 (Standard Time)  
 Correction for \_\_\_\_\_  
 9 Mean Time \_\_\_\_\_  
  
 Local Mean Time of Birth. A.M or P.M. 10 0:31:05

**FIRST KEY PROBLEM**

11 Noon 11:59:60 12:00  
 12 Local Mean Time 0:31:05  
 13 L.M.T. Interval 11:28:55  
 14 Sidereal Time 22:41:58  
 (Noon)  
 15 RAPHAEL'S  
 16 \_\_\_\_\_  
  
 17 L.M.T. Interval \_\_\_\_\_  
 18 S. T. (Uncorrected) 11:13:03  
 Correction, 9.86s per h. for (-) 0:01:02  
 19 E.G.M.T. Int. (-) 0:01:54  
 20 Sidereal Time 11:12:01  
 (Of Birth)

**SECOND KEY PROBLEM**

Standard  
 21 Time of Birth \_\_\_\_\_  
 Hrs. E. or \_\_\_\_\_  
 22 W. of Greenwich \_\_\_\_\_  
  
 23 E.G.M.T. 11:59:60 12:00  
 24 Noon 12:00:00 12:00  
 25 E.G.M.T. 5:39:07  
 26 E.G.M.T. Interval (+) 6:20:53  
 (Indicate plus or minus)

SATURN CYCLE CHART

1 Name \_\_\_\_\_  
 2 Mar. 30 1981  
 (Month) (Day) (Year)  
 3 Place WASH D.C.  
 4 Latitude 38N 53.3  
 5 Longitude 77W 0.6

**DOMINANT FACTOR**

6 Time of Birth \_\_\_\_\_  
 (Daylight Saving)  
 Correction for \_\_\_\_\_  
 7 Standard Time \_\_\_\_\_  
  
 8 Time of Birth \_\_\_\_\_  
 (Standard Time)  
 Correction for \_\_\_\_\_  
 9 Mean Time \_\_\_\_\_  
  
 Local Mean Time of Birth. A.M or P.M. 10 6:24:22

**FIRST KEY PROBLEM**

11 Noon 12:00  
 12 Local Mean Time \_\_\_\_\_  
 13 L.M.T. Interval (+) 6:24:22  
 14 Sidereal Time 0:31:09  
 (Noon)  
 15 RAPHAEL'S  
 16 \_\_\_\_\_  
  
 17 L.M.T. Interval \_\_\_\_\_  
 18 S. T. (Uncorrected) 6:55:31  
 Correction, 9.86s per h. for (+) 0:01:54  
 19 E.G.M.T. Int. (+) 0:01:54  
 20 Sidereal Time 6:57:25  
 (Of Birth)

**SECOND KEY PROBLEM**

Standard  
 21 Time of Birth \_\_\_\_\_  
 Hrs. E. or \_\_\_\_\_  
 22 W. of Greenwich \_\_\_\_\_  
  
 23 E.G.M.T. 23:32:24  
 24 Noon 12:00:00 12:00  
 25 E.G.M.T. 11:32:24  
 26 E.G.M.T. Interval (+) 11:32:24  
 (Indicate plus or minus)

URANUS CYCLE CHART

1 Name \_\_\_\_\_  
 2 Mar. 26 1969  
 (Month) (Day) (Year)  
 3 Place WASH D.C.  
 4 Latitude 38N 53.3  
 5 Longitude 77W 0.6

**DOMINANT FACTOR**

6 Time of Birth \_\_\_\_\_  
 (Daylight Saving)  
 Correction for \_\_\_\_\_  
 7 Standard Time \_\_\_\_\_  
  
 8 Time of Birth \_\_\_\_\_  
 (Standard Time)  
 Correction for \_\_\_\_\_  
 9 Mean Time \_\_\_\_\_  
  
 Local Mean Time of Birth. A.M or P.M. 10 6:12:31

**FIRST KEY PROBLEM**

11 Noon 12:00  
 12 Local Mean Time \_\_\_\_\_  
 13 L.M.T. Interval (+) 6:12:31  
 14 Sidereal Time 0:15:01  
 (Noon)  
 15 RAPHAEL'S  
 16 \_\_\_\_\_  
  
 17 L.M.T. Interval \_\_\_\_\_  
 18 S. T. (Uncorrected) 6:27:32  
 Correction, 9.86s per h. for (+) 0:01:52  
 19 E.G.M.T. Int. (+) 0:01:52  
 20 Sidereal Time 6:29:24  
 (Of Birth)

**SECOND KEY PROBLEM**

Standard  
 21 Time of Birth \_\_\_\_\_  
 Hrs. E. or \_\_\_\_\_  
 22 W. of Greenwich \_\_\_\_\_  
  
 23 E.G.M.T. 23:20:33  
 24 Noon 12:00:00 12:00  
 25 E.G.M.T. 11:20:33  
 26 E.G.M.T. Interval (+) 11:20:33  
 (Indicate plus or minus)

Mars Cycle Chart

1 Name JAN 9 1987  
 (Month) (Day) (Year)

2 Place WASH. D.C.  
 (Month) (Day) (Year)

3 Latitude 38N53.3  
 4 Longitude 77W 0.6

## DOMINANT FACTOR

6 Time of Birth \_\_\_\_\_  
 (Daylight Saving)  
 Correction for  
 7 Standard Time \_\_\_\_\_

8 Time of Birth \_\_\_\_\_  
 (Standard Time)  
 Correction for  
 9 Mean Time \_\_\_\_\_  
 Local Mean Time of 10 Birth, A.M or P.M. 6:00:19

## FIRST KEY PROBLEM

11 Noon 11:59:60 12:00  
 12 Local Mean Time 6:00:19  
 13 L.M.T. Interval (-) 5:59:41  
 14 Sidereal Time 19:13:58  
 15 (Noon) RAPHAEL'S  
 16 18:73:58  
 17 L.M.T. Interval (-) 5:59:41  
 18 S. T. (Uncorrected) 13:14:17  
 Correction, 9.86s per h. for (-) 10:00:08  
 19 E.G.M.T. Int. (-) 10:00:08  
 20 Sidereal Time 13:14:09  
 (Of Birth)

## SECOND KEY PROBLEM

Standard  
 21 Time of Birth \_\_\_\_\_  
 Hrs. E. or  
 22 W. of Greenwich \_\_\_\_\_  
 23 E.G.M.T. \_\_\_\_\_  
 24 Noon 11:59:60 12:00  
 25 E.G.M.T. 11:08:21  
 26 E.G.M.T. Interval (-) 0:51:39  
 (Indicate plus or minus)

JUPITER CYCLE CHART

1 Name MAR 13 1987  
 (Month) (Day) (Year)

2 Place WASH. D.C.  
 (Month) (Day) (Year)

3 Latitude 38N53.3  
 4 Longitude 77W 00.6

## DOMINANT FACTOR

6 Time of Birth \_\_\_\_\_  
 (Daylight Saving)  
 Correction for  
 7 Standard Time \_\_\_\_\_

8 Time of Birth \_\_\_\_\_  
 (Standard Time)  
 Correction for  
 9 Mean Time \_\_\_\_\_  
 Local Mean Time of 10 Birth, A.M or P.M. 1:23:02

## FIRST KEY PROBLEM

11 Noon 11:59:60 12:00  
 12 Local Mean Time 1:23:02  
 13 L.M.T. Interval (-) 10:36:58  
 14 Sidereal Time 23:22:21  
 15 (Noon) RAPHAEL'S  
 16 22:81:81  
 17 L.M.T. Interval (-) 10:36:58  
 18 S. T. (Uncorrected) 12:45:23  
 Correction, 9.86s per h. for (-) 10:00:08  
 19 E.G.M.T. Int. (-) 10:00:08  
 20 Sidereal Time 12:44:29  
 (Of Birth)

## SECOND KEY PROBLEM

Standard  
 21 Time of Birth \_\_\_\_\_  
 Hrs. E. or  
 22 W. of Greenwich \_\_\_\_\_  
 23 E.G.M.T. \_\_\_\_\_  
 24 Noon 11:59:60 12:00  
 25 E.G.M.T. 6:31:04  
 26 E.G.M.T. Interval (-) 5:28:56  
 (Indicate plus or minus)

MARS CYCLE CHART

1 Name NOV. 17 1988  
 (Month) (Day) (Year)

2 Place WASH. D.C.  
 (Month) (Day) (Year)

3 Latitude 38N53.3  
 4 Longitude 77W 0.6

## DOMINANT FACTOR

6 Time of Birth \_\_\_\_\_  
 (Daylight Saving)  
 Correction for  
 7 Standard Time \_\_\_\_\_

8 Time of Birth \_\_\_\_\_  
 (Standard Time)  
 Correction for  
 9 Mean Time \_\_\_\_\_  
 Local Mean Time of 10 Birth, A.M or P.M. 5:56:56

## FIRST KEY PROBLEM

11 Noon 11:59:60 12:00  
 12 Local Mean Time 5:56:56  
 13 L.M.T. Interval (-) 6:03:04  
 14 Sidereal Time 15:47:03  
 15 (Noon) RAPHAEL'S  
 16 15:46:63  
 17 L.M.T. Interval (-) 6:03:04  
 18 S. T. (Uncorrected) 9:43:59  
 Correction, 9.86s per h. for (-) 10:00:09  
 19 E.G.M.T. Int. (-) 10:00:09  
 20 Sidereal Time 9:43:50  
 (Of Birth)

## SECOND KEY PROBLEM

Standard  
 21 Time of Birth \_\_\_\_\_  
 Hrs. E. or  
 22 W. of Greenwich \_\_\_\_\_  
 23 E.G.M.T. \_\_\_\_\_  
 24 Noon 11:59:60 12:00  
 25 E.G.M.T. 11:04:58  
 26 E.G.M.T. Interval (-) 0:55:02  
 (Indicate plus or minus)

# CHURCH *of* LIGHT



## DECLARATION OF PRINCIPLES

The Church of Light is a religious, altruistic association. We consider all humanity as equal in the higher sense, and utilize our resources for the purpose of assisting each individual to fulfill his or her part in the Divine Plan. Our Hermetic Philosophy indicates that each soul is responsible for its spiritual progress. Our lessons provide the best information possible for the attainment of true spirituality and happiness on the physical plane and on each higher plane of progress.

There cannot be two orders of Truth in the Universe. Therefore, we deny that there is any antagonism between true Science and true Religion. We accept but one book as infallible in interpreting the Will of Deity. That is the Book of Nature. We worship but one Religion, which is also a Science. It is Nature's Laws.

Our members are under no obligation to accept our teachings. We encourage them to investigate all existing religious and occult organizations, and our course on Evolution of Religion gives details on how our philosophy relates to many of the religions of the world today.

We teach the family and the marriage relationship are the most powerful aid in building the spiritual body. It is through the sacrifices of the parents for the children that they give up selfishness and then transfer that love to higher planes of work. Our course, *Ancient Masonry*, gives more detail about this process, as well as the courses on *Spiritual Alchemy* and *Occultism Applied to Daily Life*.

Our view of the reason for existence upon the earth is discussed in the books, *Astrological Signatures* and *Organic Alchemy*. We know from tradition and scientific experiments that the soul and personality survive the transition called death and live on higher planes of existence. This is outlined in the book, *The Next Life*. We also have lessons on healing and alchemy.

Our philosophy is grounded in two basic studies: The **Golden Key** of Astrology and the **Silver Key** of the Sacred Tarot. Only with a thorough knowledge of these two keys may the sanctuary of Nature's Temple be opened. Astrology is the science of finding and utilizing the natural

potentialities as indicated by the planetary chart of birth. It becomes a religion when it shows the individual how these natural tendencies can be utilized for the benefit of all humanity and furtherance of the purposes of Deity. This is why we are called the Religion of the Stars.

The Sacred Tarot is the pictorial form by which the ancients recorded the facts they ascertained regarding spiritual science and universal law. It is the one standard text-book on universal symbolism, and is the esoteric presentation of the Hermetic Philosophy providing each neophyte with many sources of meditations and inspiration.

The Religion of the Stars is dedicated to the unfoldment of the Universal Plan for this Aquarian Age. A Nine Point Plan provides the framework for this work. The Nine Point Plan is:

That everyone should have:

Freedom from Want

Freedom from Fear

Freedom of Expression

Freedom of Religion

That to obtain these in proper measure, people must have the freedom to become familiar with:

Facts of Astrology

Facts of Induced Emotion

Facts of Extrasensory Perception

Facts of Directed Thinking

And that:

Instead of working to take all that he can for himself, each must learn to find pleasure in Contributing His Utmost to Universal Welfare.

The Church of Light teachings are presented in 21 courses covering 21 Branches of Occult Science. The courses have study questions in the back of each book. Upon becoming a member, you will receive a final exam for each course. After passing the final exam, a manuscript will be sent. The manuscripts contain information on the safest method of developing higher states of consciousness, as well as other information of value to the neophyte.