



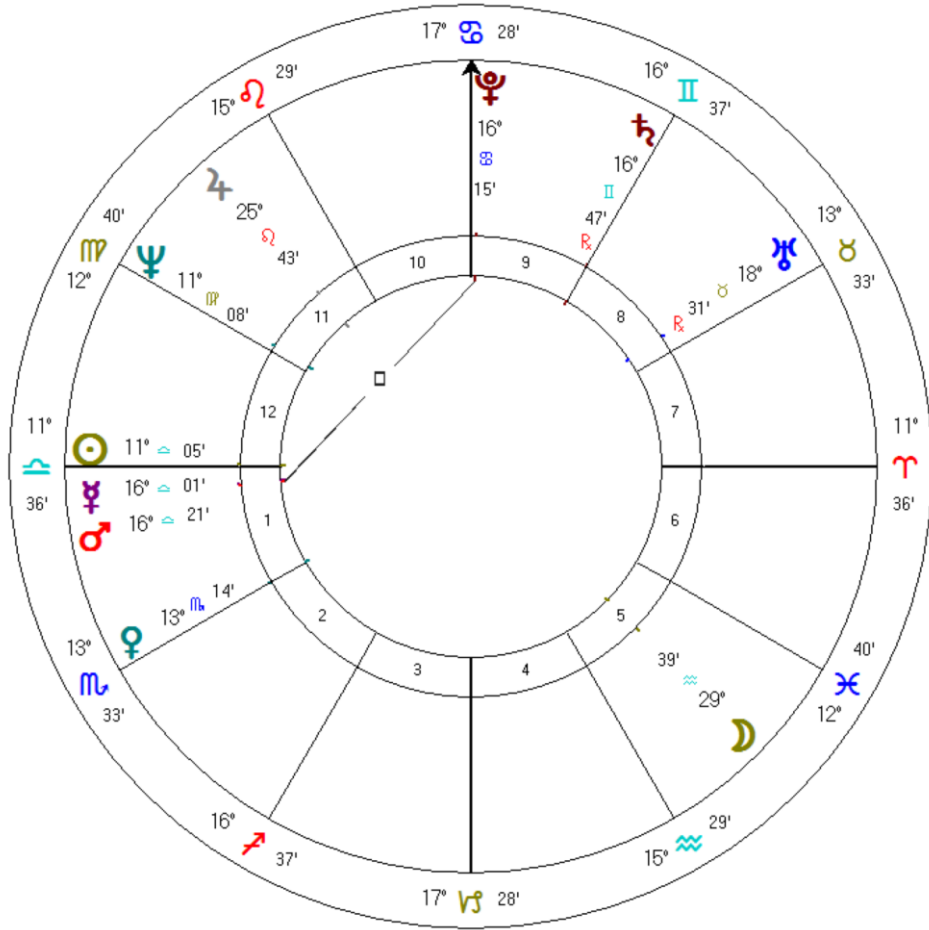
**B**ert W. Fannin has been a practicing Western Sidereal Astrologer for 38 years. He started his studies 42 years ago in Boston MA, as a Tropical Astrologer. Shortly thereafter, he was introduced to the San Francisco School of Sidereal Astrology and studied under Hugh Jeffcoate and John Mazurak. After completing the course and exam at the school, he studied advanced technical astrology, under Siderealist Paul Schure (pen name, Rosco Hope). After studying with Schure, he went in to research and private practice, where he developed and refined, the Location and Timing techniques, to show clients, where they should be and when they should be there. His research is now published on his web page at [www.tastrology.com](http://www.tastrology.com). He has also published papers in American Astrology Magazine and The Mountain Astrologer.. You can contact him by email at [tastrology@yahoo.com](mailto:tastrology@yahoo.com)

## *Determining the Date, Time & Place of a Horoscope*

By  
**Bert Fannin, USA**

**I**t occasionally occurs that the astrologer will come across a chart, without any date time or place indicated on the document. How is he or she to obtain this information? Fortunately, it is not too difficult, requiring first a bit of searching and then a bit of spherical trigonometry. For the sake of simplicity, we will assume that the horoscope was calculated in the Sidereal Zodiac. Let us use the example horoscope below. What are the date, time and place of the chart? What is its longitude and latitude?

To begin with, one must start at the very end of the solar system. When did Pluto have the Sidereal Longitude of  $16^{\circ}$  Cancer? For simplicity I am using the search feature in Solar Fire. Failing this, it would be necessary to check the Sidereal Ephemeris, between 1933 and 1950, when Pluto was in Sidereal Cancer.



**Time Period to Search**

Date Time

Start Jan 1 1930 0:00 am

End 12/31/1960 0:00 am

**Location and Settings for Search**

NOWHERE, NOWHERE  
GMT +0:00

Geocentric / Fagan-Allen / Campanus

**Chart for Radix Positions**

Event 1 Transits Dec 4 2011

**List of Search Conditions**

FIND ♃ in ♋

And/Or Not (...) Delete Clear

Add from File... Save to File...

**Search Condition Selection**

In Dignity | Is Planet | Consideration | Aspect Pattern  
Coordinates | Chart Details | Chart Shape | Midpoint  
In Sign | In House | In Aspect | In Phase | At Position

Transiting Point or Cusp

♃ Pluto

In

♋ Cancer

Show Advanced Options

<- Add FIND ♃ in ♋

<- Replace

Aspect Set Hard >

Pattern Points Moon >

Quit Search

When the results have been calculated by the program, the result window looks like this:

Quit Refine... Animate... Copy Open  Preview

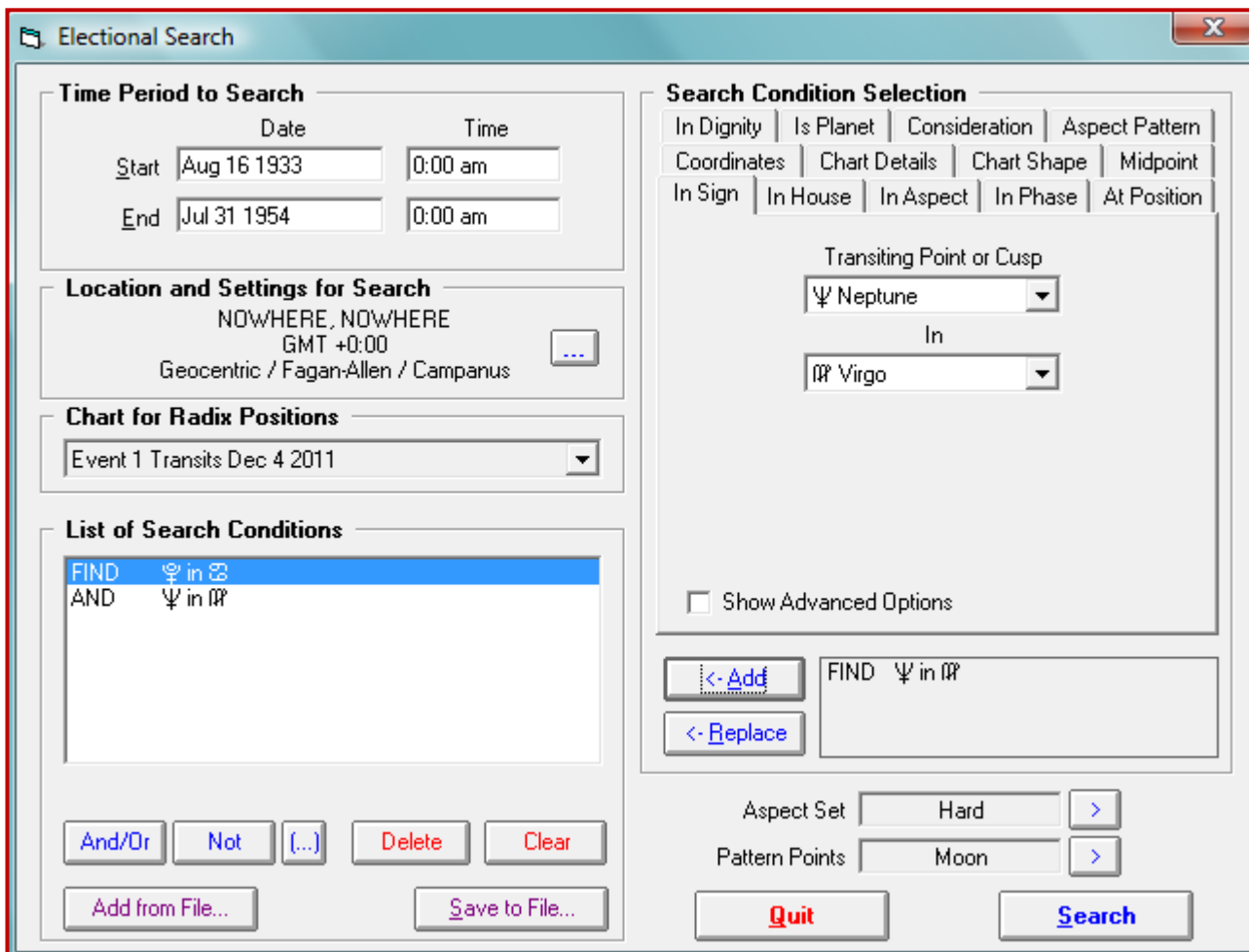
Finished - 4 matches (64.83% of period searched)

FIND (♃ in ♋)

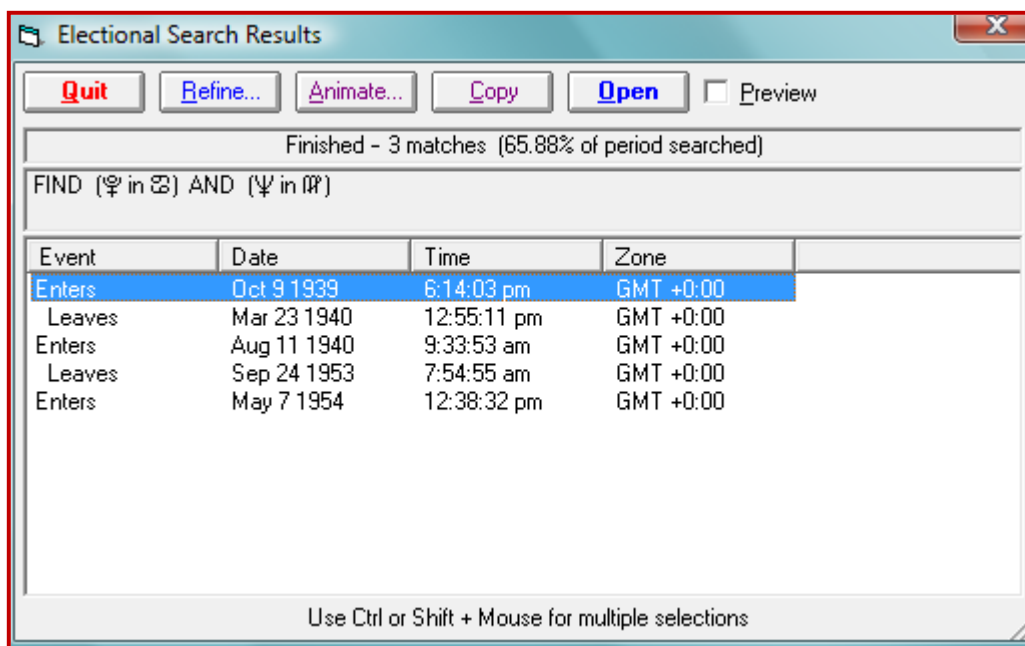
Event	Date	Time	Zone
Enters	Aug 16 1933	6:19:15 pm	GMT +0:00
Leaves	Jan 6 1934	7:07:45 pm	GMT +0:00
Enters	Jun 29 1934	9:20:02 pm	GMT +0:00
Leaves	Apr 2 1935	1:59:13 pm	GMT +0:00
Enters	Apr 12 1935	7:20 am	GMT +0:00
Leaves	Sep 24 1953	7:54:55 am	GMT +0:00
Enters	Jan 31 1954	10:41:50 am	GMT +0:00
Leaves	Jul 31 1954	2:32:09 am	GMT +0:00

Use Ctrl or Shift + Mouse for multiple selections

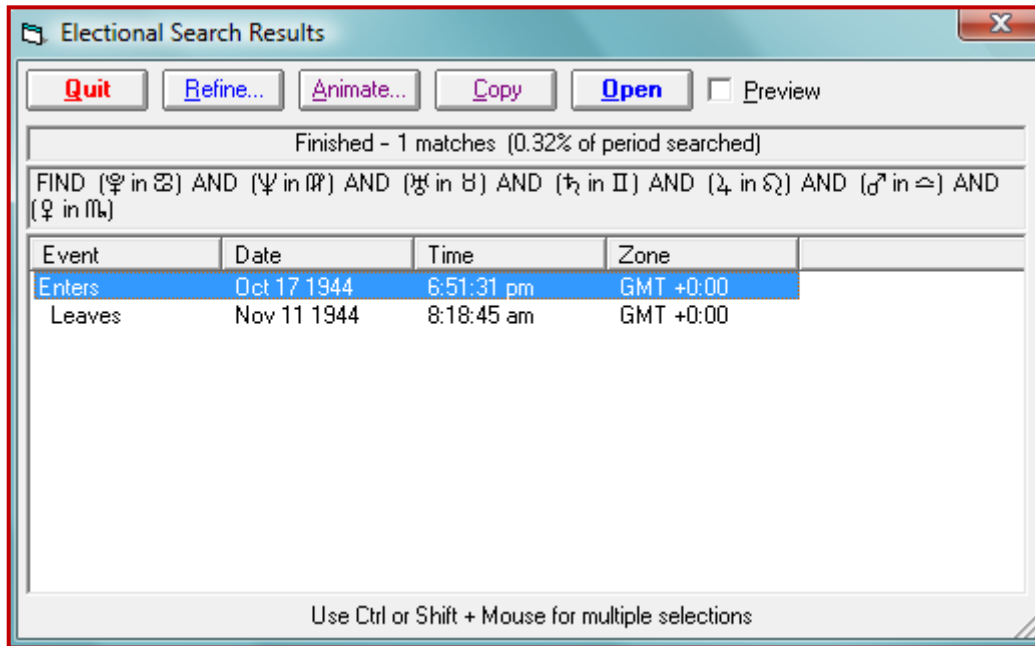
Now the results are reset to run from 16 August 1933 to 31 July 1954, with the additional search criterion of Neptune in Virgo. The reset window looks like this:



When this calculation has been run, the result panel looks like this:



We simply precede inward, revising the date range and adding a planet each time. By the time we reach Venus, we will have the date range down to the year.



We see now, that the date of the chart was for some time, between October 17<sup>th</sup> and November 11, 1944. To determine the exact date and time, one has only to calculate a Solar Return for the given longitude of the Sun, 11° Libra 06'

Using the Solar Return and Ingress Modal in Solar Fire, the results are as follows:

Date	10/28/1944
Time UT	14:38
Obliquity	23° 26' 47" 23.4464°
GM RAMC	17:05:16 17.0878
SVP	6° Pisces 02' 06" 6.0350

We will need to know the Sidereal Time at Greenwich (RAMC GM) to determine the longitude of the chart's location. The longitude is the difference between the Local Sidereal Time (RAMC) and the Sidereal Time at Greenwich, expressed in time. We can determine the Local RAMC from the degree on the Mid-heaven. But Sidereal Time is an equinoctial coordinate, so the value has to be converted to tropical longitude. (TL). Thus, MC= 17° Cancer 28' = 17.4467 + 90° = 107.4667 (SL). First determine the Ayanamsa, and then add this to the SL. The result will be the tropical longitude on the MC. 30° - 6.035 + 131.4317 TL.

Here is where the spherical trigonometry comes in. With the TL and the

Obliquity<sup>1</sup> the Right Ascension on the Mid-heaven (RAMC) is calculated for the location. For this, one uses the trigonometric formula for RA without latitude.<sup>2</sup> The formula is  $\tan TL \times \cos OE = \tan RA/15^\circ = \text{RAMC}$ . Here is the worked out example:  
 $\tan 131.4317 = (-1.1330) \times \cos (23.4464) = 0.1974 = \tan -1.0395 = \text{arc tan } -46.1085 + 180 = 133.8915$ <sup>3</sup>  
 $/15^\circ = 8.9261$ .

Thus  $\text{RAMC Greenwich} - \text{Local RAMC} = \text{Longitude Time} \times 15^\circ = \text{Local Longitude}$   
 $17.0878 - 8.9261 = 8.1617 \times 15^\circ = 122.24255$  or  $122^\circ \text{ W } 25' 32''$  Longitude of chart location.

With this calculation, we have exactly located the meridian on the earth. Lack the latitude. This is the position on the earth, above or below the equator.

For this we need the Ascendant, the degree rising on the eastern horizon of the location. The example has 11 Libra 36' rising in the SZ. This is equivalent to  $5^\circ$  Scorpio 34' in the TZ, or 215.5667.

From this Tropical Longitude rising and the obliquity, two values must be determined. First is the declination of the tropical degree rising? For this, one uses the trigonometric formula for declination without latitude. This is  $\sin d = \sin TL \times \sin OE$

Here is the worked example:

$\sin 215.5667 (-0.5817) \times \sin 23.6444 (0.4011) = \sin -0.2333$ . Arc sin =  $-13.4900$  or  $13^\circ \text{ S } 29' 24''$  declination.

The second value is the Right Ascension of the degree rising on the eastern horizon. Here we use the Trigonometric formula for Longitude to RA, without latitude.<sup>4</sup>  
 $\tan 215.5667 (0.7151) \times \cos 23.4464 (0.9174) = \tan 0.6560 = \text{arc tan } 33.2653 + 180 = 213.2653$ .<sup>5</sup>

The arc from the MC to the IC is  $180^\circ$ . The distance between the MC and the Ascendant is called the Semi-arc or SA. At the equator, this will always be exactly  $90^\circ$ . However, this will change, as one moves away from the equator, in either direction. The relationship between the Oblique Ascension and Right Ascension of a position is called the Ascensional Difference or AD.

The standard formula for this is  $\sin AD = \tan d \times \tan l$ .<sup>6</sup> Here, it is the latitude of the location that is the unknown, so we must do the following:

$\text{RAMC} - \text{RA of Asc.} = \text{SA}$ . Then  $\text{SA} - 90^\circ = \text{AD}$ . Then we reverse the above formula and say  $\tan l = \sin AD / \tan d$ .

In our example:

<sup>1</sup> This is the slowly changing angle between the celestial equator and the ecliptic.

<sup>2</sup> The MC is the point where the Meridian intersects the Ecliptic and does not have celestial latitude, hence the formula, without latitude.

<sup>3</sup> If the result is negative, it is added algebraically to the following quadrant, in this case  $180^\circ$

<sup>4</sup> This value is on the ecliptic and so, does not have celestial latitude.

<sup>5</sup> As the original tropical value was from the  $180^\circ$  quadrant, one must add back this value to the result.

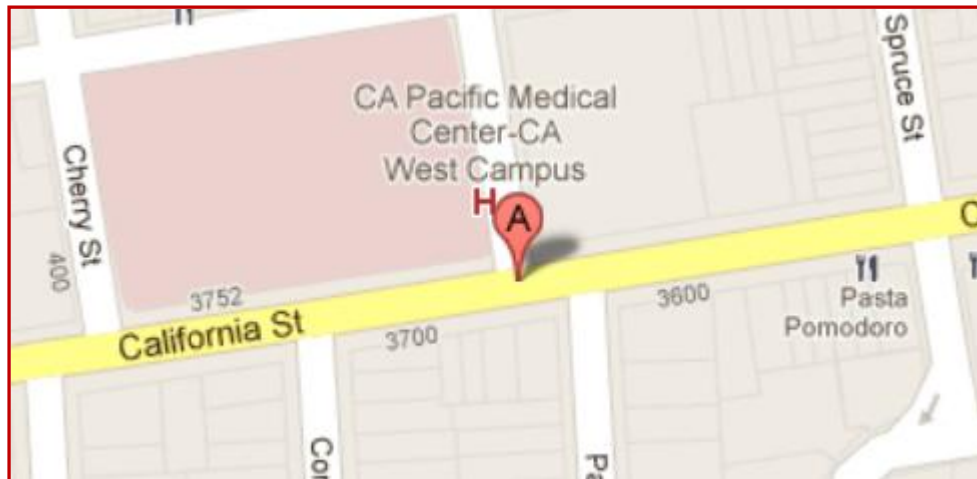
<sup>6</sup> Here l stands for terrestrial latitude of location

$14.2177 - 8.9261 = 5.2916 \times 15 = 79.3740$  SA  $-90 = -10.6260$  SA.

Then,  $\sin -10.62660(-0.1844) / \tan -13.3815(-0.2379) = \tan 0.7751 = \text{arc tan } 37.7803$  or

With this final calculation, we have the complete data on the unknown chart.

If the reader will go on line, to the Google mapping service, with the derived coordinates, he or she will see that this is in the middle of San Francisco. This is indeed was where the native was born. The place of birth was Children's Hospital (Now CMC Western Campus)<sup>7</sup>



When the two sets of values are compared, this is what one gets:

Calculated	122° W 25' 31"	37° N 45' 51"
Mapping Service	122° W 27' 26"	37° N 47' 16"

As the reader can see, this is a very close fit. The latitude of the hospital, the calculated value falls about a mile west and a mile south of the exact location, as shown by the mapping service. This slight discrepancy is no doubt due to the fact that the calculations were made with the MC, Asc. And Sun, only to the minute of arc.



<sup>7</sup> The writer is indebted to the switchboard staff at CMC for providing the exact address of the building housing the Maternity facility, 3700 California St. This in turn, allowed him to get the exact coordinates for comparison. The exact coordinates are  $-122.4571 + 37.7877$ .