

Lesson Four Part 2

Remind yourself again that *declination* is the celestial counterpart of terrestrial latitude; and that longitudinal and Zodiacal are synonymous terms to the astrologer.

There are few technicalities to master for the purposes of this course. Those that are, are all contained within the Appendix of this lesson, and are connected with calculating with precision the degree of the point overhead or the Overhead Point (OP). With Lesson Five we go up a gear and begin the process of preparing ourselves to tune in to stellar energy.

As a general statement it may be said that, in terms of the Zodiac: **In the spring and winter months, OP will be more advanced into the Zodiac than the MC; and in the summer and autumn months when the Sun is higher in the sky, it will be less advanced. This is the case in both hemispheres.**

But earlier in the course we drew attention to the fact that the ecliptic does not go overhead except for those living very near the equator. How then can we assign it a Zodiacal degree? This is done as astronomers and astrologers have ever done it by the use of trigonometry to establish the longitudinal degree that OP would meet were a line to be drawn from that point to the plane of the ecliptic. **Properly, this degree is called the Zodiacal equivalent of OP.**

The Short Cut Version

The trigonometric formula for calculating OP with precision is given, as noted above, at the end of this lesson in Appendix 1.

To use the short cut version which requires just simple arithmetical addition and subtraction, add or subtract the given number of degrees to the longitude of the Sun at noon to find the Zodiacal equivalent of OP. *This method can give only an approximate result as within each hemisphere, latitude is of crucial importance to the creation of the angular relationship between MC and OP. Moreover, in reality the differentials shown in the table change gradually as one month merges into another, and do not, of course, proceed by the sharp steps implied by the tabular presentation. But such are the limitations of short cuts.*

Longitudinal placement of Sun at noon in sign of:	+/- degrees to find OP Northern Hemisphere	+/- degrees to find OP Southern Hemisphere
Aries	+ 21 degrees	-32 degrees
Taurus	+12 degrees	-32 degrees
Gemini	+ 3 degrees	- 13 degrees
Cancer	-6 degrees	+ 24 degrees
Leo	- 15 degrees	+ 32 degrees
Virgo	-23 degrees	+ 29 degrees
Libra	-32 degrees	+21 degrees
Scorpio	-32 degrees	+ 12 degrees
Sagittarius	-13 degrees	+ 3 degree
Capricorn	+24 degrees	-6 degrees
Aquarius	+ 32 degrees	-15 degrees
Pisces	+ 29 degrees	-23 degrees

It will be evident from studying the data given above how the southern hemisphere mirrors the north.

Examples:

- 1. If a baby is born in London, UK (51 degrees 32N) on April 10th, then using the Sun Tables it can be seen that on that day the Sun's longitude at midday is Aries 20 degrees (declination 8 degrees N). Consulting the differentials chart above we see that OP is 21 degrees advanced on this, at Taurus 11 degrees.**
- 2. A birth on the same day in Sydney, Australia (32 degrees 52S) would have an OP 32 degrees behind the Sun's noontime position, and therefore at Pisces 18 degrees.**

We would then consult the Star Tables and see what stars are close to these points in the Heavens, and use judgment to assess what truly is the closest star.

But before we do this, we will introduce the idea of the 'personal pole' which extends the area of sky in which we can search for our Guiding Star.

The Personal Polar Region

The planetary poles are areas of the Earth which are within 25 degrees of the North and South Poles. To the esotericist, what happens within these areas is considered to be of paramount importance for what enters (Arctic Circle) and leaves (Antarctic Circle) our planetary system.

This same situation exists in the celestial regions at which our planet's poles point. (Indeed, their relationship to the terrestrial zones bearing the same names may be considered causal.)

The circumpolar stars at which Earth's North Pole points, never rise nor set for any place with a latitude of more than 25 degrees North, the area of the planet which contains much of the developed world. They are known to be influential in the creation of the Spirit of the Age, with the Pole Star itself serving as curser on a screen registering the typically slow movement of the planet round its own pole. In 2012 that curser will move quickly and significantly as a result of force exerted from the stellar worlds, and Earth will find itself with a new pole star (Kochab) and at the dawn of a new Era.

There are fewer stars of significance in the celestial Antarctic circle although around its belt (57S -62S) some of the brightest and best of the stars of the Southern hemisphere are to be found.

OP is our personal North Pole, and if we take up the idea that the area surrounding OP is of particular importance to what enters our world, and look at what falls within a few degrees of declination either side of OP, then by means of simple proportional arithmetic we create our own personal polar region.

If we assume that 1 degree of longitude represents 2.5 degree (i.e., 2 degrees 30 mins) of declination, then, marking two points one each side of OP and 5 degrees of longitude away from it, we create a celestial zone that spans 25 degrees of declination and corresponds to the Earth's polar regions. We talk in terms of declination, not latitude because we are dealing with the Heavens, and not Earth's surface.

Using the two examples given above:

1. Birth in London (51 degrees 32N) on April 10th:

- **Sun at longitude Aries 20 / declination 8 degrees N**
- **OP as established above: Taurus 11 degrees.**
- **Establishing points 5 degrees of longitude either side of OP gives us a 10 degree zone which extends from Taurus 6 degrees to Taurus 16 degrees.**
- **Multiplying 10 by 2.5 degrees we find that this zone spans 25 degrees of declination, from 39.5 degrees (52 degrees - 12.5 degrees) to 64.5 degrees N (52 degrees + 12.5 degrees)**

Personal Polar region

Longitude: Taurus 6 degrees - Taurus 16 degrees

Declination: 39.5 degrees N – 64.5 degrees

This zone will encompass all stars with comparable longitudes and declinations.

2. Birth in Sydney (33 degrees 52S) on April 10th:

- **Sun at longitude Aries 20 / declination 8 degrees N**
- **OP as established above: Pisces 18 degrees.**
- **Establishing points 5 degrees of longitude either side of OP gives us a 10 degree zone which extends from Pisces 13 degrees to Pisces 23 degrees.**
- **Multiplying 10 by 2.5 mins, we find that this zone spans 25 degrees of declination, from 21.5 degrees (34 degrees S – 12.5 degrees) to 46.5 degrees 22 S (34 degrees+ 12.5 degrees)**

Personal Polar region

Longitude: Pisces 3 degrees – Pisces 23 degrees

Declination: 21.5 degrees S – 46.5 degrees S

This zone will encompass all stars with comparable longitudes and declinations.

The ratio 2.5 degrees of declination to 1 degree of longitude is, in fact an average; it may be more or less, depending upon time of year and location. This exercise can be done with precision still using only proportional arithmetic. This method is shown in Appendix 2, and should most certainly be used if the OP has been calculated with precision.

In some cases, the Sun will fall within the personal polar region but may well hold a different degree of declination than the star closest to OP in all but locations close to the Equator, and so it does not follow that the Befriending Star and Guiding Star will be the same. But these are matters for judgment and the various considerations that are of relevance to this matter are given below.

Identifying the Guiding Star

The essential feature of the Guiding Star is that it is the most elevated celestial body in our personal space, and in the same way that the circumpolar stars are known to shape the Spirit of the Age, so the celestial bodies within our personal polar region will be influential upon us, or at least, upon that part of us which is interested in possibility.

For those living near the Equator (in either the northern or southern hemispheres), certain planets, as well as stars, may occupy this personal polar region for awhile, but this will not be the case for those living above 23 degrees North or South. In any event, our concern in this course is stars not planets.

In the process of identifying the star that guides us, we have to be mindful of declination because it is this which determines the elevation of the star. This may be a good place to remind ourselves that declination is the celestial counterpart of terrestrial latitude and, therefore, interchangeable with it when we are looking at the Heavens.

At all latitudes, we are looking to find a star:

- the declination of which is close to that of the latitude of the location because this will place it within the personal polar region.
- that is of a longitude that is close to that of the OP.

An example of these criteria being met is a birth in Sydney Australia on January 9th.

The latitude of Sydney is 33 degrees S52.

Using the short cut method we find that on that day the Sun's noontime position will be at Capricorn 18 degrees (declination 22S). Consulting the table of differentials, we see that in the southern hemisphere the MC is behind this point by 6 degrees. If we deduct this from the MC's position we arrive at 12 degrees Capricorn for the OP.

The personal polar region will therefore extend for 5 degrees either side of this, from Capricorn 7 degrees to Capricorn 17 degrees, and involves declinations 21S – 46S.

Consulting the star tables we find the star Ascella at Capricorn 12 degrees 31 (declination of 29 degrees S), which not only falls within the declinations encompassed by the personal polar region, but, in terms of longitude, is within 1 degree of OP itself.

As the Sun on the day of birth is at Capricorn 18 degrees S it falls just outside the personal polar region and its declination of 22 degrees S would recommend Manubrium or Terebellum as the Befriending Star. Of the two, Manubrium is the larger star and is also the closer at the level of declination.

There will be situations when even the extension of OP into the personal polar region fails to capture any named stars. This is particularly likely to be the case in births in

the northern hemisphere when the Sun is in Scorpio and Sagittarius, and in the southern hemisphere when the Sun is in Leo and Cancer.

The intuitive and unidentified astrologer will learn much about stellar influence and, indeed about these signs, from their 'disconnectedness' from the stellar level when expressing themselves in one or the other hemisphere.

An examination of this matter is beyond the scope of this course, but the serious astrologer should ponder it.

The more immediate concern is what to do about this state of affairs. The answer is to find the most elevated star closest to OP, even if it is outside the personal polar region. **Most important of all, it should be visible from the given location.** In this situation people may find themselves selecting the star which most appeals. And why not, if careful computation does not disclose a star?

This freedom to choose may tell you something else about these signs.

Finally, in this lesson, we will work through the example given in Part 1, of the birth on August 7th in Brighton.

Collecting the data:

Brighton: 50 degrees N 50

August 7th: Sun at Leo 14 / Declination 16N

As we have noted already, this placement of the Sun recommends Acubens as the choice of Befriending Star, and Cancer is the constellation that holds.

To find the Guiding Star, using the short-cut method, we deduct 15 degrees from the placement of the Sun at noon, to arrive at Leo 1 degree as OP.

To place it overhead in Brighton, a star should be close to this point, and have a declination close to 51 degrees North.

Consulting the Star Tables we find three contenders:

Kochab at Leo 12 degrees / 73N

Dubhe at Leo 14 / 61N

Merkab at Leo 19/ 55N

When we create the Personal Pole it extends from:

- **by longitude:** Leo 6 to Cancer 26
- **by declination:** from 34.5 degrees N to 63.5 degrees N

Kochab at 73N is outside this zone and so the contest is between Dubhe and Merkab. Although Merkab is closer in terms of declination, it is further away in terms of longitude, and it is of a lesser magnitude. Therefore Dubhe (*alpha* Ursa Major) is to be preferred.

The calculation is made with precision in the Appendix, and these findings may be compared with those achieved by the short-cut method.

Lesson IV Part 2 - Appendices

Appendix 1

Finding the Longitudinal correspondent of the Overhead Point (OP)

R.A. is Right Ascension and is given for each longitudinal degree in the Tables entitled: **Midheaven and Right Ascension.**

N & S are, of course, North and South

Part 1

Log. *sine* R.A. from Aries or Libra 0 degrees (or log *cosine* R.A. from Cancer or Capricorn 0 degrees).

+ Log. *cotangent* latitude of location

= Log *tangent* angle A

Part 2

If R.A. is less than 180 degrees call it N, and if more than 180 degrees call it S.

1. If R.A. and latitude are the same name (i.e., both S or both N), the difference between A and the obliquity of the ecliptic (23 degrees 27 mins) = B.
2. R.A. and latitude are different names (i.e., one N and the other S), the difference between A and the obliquity of the ecliptic (23 degrees 27 mins) = B.

If B exceeds 90 use the *sine* of its excess in Part 3.

Part 3 (and see Note)

Log. *sine* A (arithmetical comp.)*

+ Log. *sine* B

+ Log. *tangent* R.A., from Aries or Libra 0 degrees (or log. *cotangent* R.A. from Cancer or Capricorn 0 degrees).

= Log. *tangent* longitude from Aries or Libra 0 (or *cotangent* longitude from Cancer or Capricorn 0).

Note

1. In all cases where R.A. and latitude are of the same names, but A is greater than obliquity, the longitude is obtained directly from Part 3.
2. In those cases where R.A. and latitude are of different names, but A is less than the obliquity, the numerical result in degrees and minutes obtained in Part 3 must be applied as follows instead of as there shown:
 - a. If R.A. was measured from Aries or Libra 0 degrees subtract result from Aries 0 or Libra 0 respectively.
 - b. If R.A. was measured from Cancer or Capricorn 0 degrees subtract result from 90 degrees and add the remainder to Libra 0 or Aries 0 respectively.

The arithmetical complement of a log. is the number obtained by subtracting the log. from 1.0000, e.g., arithmetical complement of *sine* A when A = 37 degrees 26 mins:

Log *sine* A = 0.7835; arithmetical complement = 0.2165.

Working through the example of the birth on August 7th in Brighton:

Collecting the data:

Position of the Sun on August 7th = Leo 14 degrees / declination 16N

Latitude 50 degrees 50 N

The Sun at Leo 14 degrees has a Right Ascension of 136 degrees 28 mins. Cancer (R.A. 90 degrees) is therefore the nearest cardinal point, and deducting 90 degrees from 136 degrees 28 mins, we find that in terms of Right Ascension, the Sun is 46 degrees 28 mins away from this point.

OP is on the same meridian as the Sun at noon, but is of a higher declination.

As we are using Cancer as the point of reference, the calculation to find Angle A (angle created by OP, location and the equator) is as follows:

Log. *cosine* R.A.

+ Log. *cotangent* Declination

= Log. *tangent* angle A

= 29 degrees 18 mins.

As the R.A. (136 degrees 28 mins) is less than 180 degrees, this area of the equator is designated N, and has therefore the same name as the declination.

Thus Angle B (angle created by OP, location, and the ecliptic) = Angle A + obliquity of the ecliptic (23 degrees 27 mins)

= 52 degrees 45 mins.

Then Log. *sine* A (arithmetic complement)

+ Log. *sine* B

+ Log. *cotangent* R.A. from 0 degrees Cancer (46 degrees 28 mins)

= Log. *cotangent* Longitude from Cancer 0 degrees = 33 degrees 16 mins

= **Leo 3 degrees**

For the precise calculation of the personal pole, see Appendix 2,3.

Appendix 2

Converting distance measured in longitude into degrees of declination

This method is not suitable as a universally applicable way of converting longitudinal distance into degrees of declination, because the obliquity of the ecliptic creates irregularity, but it is perfectly serviceable for use within the small area that we are calling the personal polar region and upon the meridian occupied by the Sun at noon.

1.) In the case of the birth on January 9th in Sydney (33 degrees 52S) we have the following data:

- Sun = Capricorn 18 degrees (declination 22S)
- OP = Capricorn 12 degrees

We know that the distance between the Sun and OP is 6 degrees in terms of longitude and 12 degrees in terms of declination. (For the purposes of this exercise, as no minutes have been recorded for declination, as is commonly the case, round up 33 degrees 52 S and make it 34 degrees so that we are comparing like with like. Then find the difference between 34 degrees S and 22S.) The result is 12 degrees.

This means that every degree of longitude represents 2 degrees of declination.

To establish a personal polar region we simply mark two points, each 6 degrees each side of OP and establish a zone of 12 degrees of longitude which spans 24 degrees of declination.

In this case the personal polar region encompasses:
By longitude: Capricorn 6 degrees – Capricorn 18 degrees
By declination: 22 degrees S – 46 degrees S

2.) The situation will look quite different if the same date is used in London, UK (51 degrees 32 N):

- Sun = Capricorn 18 degrees (declination 22S)
- OP = Aquarius 12 degrees (*from* Capricorn 18 degrees +24 degrees)

In this case, the distance between OP at 51 degrees 32N (52 degrees) and the Sun at 22S is a substantial 74 degrees (*from* 52 + 22 degrees because Sun is S).

This means that each degree of longitude represents very nearly 2.5 degrees of declination (*from* 74 degrees divided by 24).

Mark out the personal polar region by marking two points 5 degrees away from OP and this creates a zone of 10 degrees longitude covering 25 degrees of declination.

In this case the personal polar region encompasses:
Longitude: Aquarius 7 degrees – Aquarius 17 degrees
Declination: 39.5 degrees N – 63.5 degrees N

3.) Creating the personal pole for Sun at birth August 7th Brighton:

Declination of Sun on August 7th is 16 degrees

OP at 50 degrees 50N = Leo 3 degrees

Therefore 13 degrees of longitude cover 35 degrees of declination, which means that each degree of longitude represents 3 degrees of declination.

Establishing two points either side of OP, each of 4 degrees we create a zone which spans 24 degrees of declination:

By longitude: Leo 4 degrees to Cancer 29 degrees
By declination: 39 degrees N to 63 degrees N

In this case, the three contenders for the Guiding Star, based on the degree of OP and the latitude of Brighton are Dubhe and Merkab.

The creation of the personal pole recommends for consideration: Praesaepe and the Ascelli (North & South Ascellus): but their declinations place them too low in the sky, as is the case with Acubens.

Kochab, by contrast, is too high at 73N.

Of the two, Merkab is closest in terms of declination, but further away in terms of longitude, and it is a lesser star in terms of visual magnitude.

Dubhe is 7 degrees outside the personal pole by longitude, but its declination places it within it, and as a star with a visual magnitude of 1.95 it is to be considered the best candidate for the Guiding Star.

Appendix 3

Converting Distance into Time.

This is done quite simply by multiplying the longitude by 4, and adding the result when the longitude is East and subtracting it when West.

For example, Sydney Australia has a longitude of 151 degrees 13 mins. E. Multiplying this by 4 to turn distance into time we find that time in Sydney is 604 minutes 52 seconds advanced on UK time, which = 10 hrs 4 mins 15 secs. (10 04 PM).

Noon in Australia being nearly 14 hours on from this time, then the position of the Sun on the day *after* that given against the date in tables should be used. So in the case of the birth in Sydney on January 9th, to be more precise we should use the longitude and declination given for January 10th.

This adjustment should be made when the longitude of the location exceeds 120 degrees East.