



Fig. 15.58. Fragment of the perimeter strip with figures from the Upper Zodiac of Athribis (AV). Here we see a star in a boat next to the planetary symbol with a rod. The boat is formed by the curve of a serpent's body. The most probable meaning of the symbol is that the figure in question (Mercury) isn't drawn in the primary horoscope; this must be exactly why we see a star next to the planet – the same planet in a boat. Boats served as “transposition symbols” in Egyptian zodiacs. Fragment of a drawn copy from [1340:1]. Taken from [544], Vol. 6, page 730.

for the first time by T. N. Fomenko in her recent publication on the interpretation and the dating of the zodiacs from Dendera and Esna ([912:3]). Earlier researchers of the Egyptian zodiacs didn't ascribe any astronomical meaning to these symbols whatsoever.

7.

VISIBILITY INDICATORS OF THE PRIMARY HOROSCOPE'S PLANETS

When the Sun is shining in the sky, sunlight renders the stars and the planets invisible. We can only see bright stars when the Sun is some 10 arc degrees below the horizon, naturally counted in the direction perpendicular to the horizon and not the visible trajectory of the Sun. In the moderate latitudes the stars and the planets become visible about one hour after sunset, and cease to be visible when there's about the same amount of time left until the edge of the Sun emerges from beyond the horizon. The further to the south, the less this period of time. It roughly equals 40 minutes near the Equator, which is the time it takes the Sun to cover a ten-degree arc in the course of its movement along the ecliptic. The reason is that in the South the angle between the Sun and the horizon is closer to 90 degrees, which is why dusk and dawn come quicker than in the north.

While the Sun remains within the limits of ten degrees below the horizon, it is daytime or a bright

enough twilight. We see no stars or planets, excepting the Moon. Venus and some of the brighter stars can also be an exception. They are visible when the Sun hasn't set all that far below the horizon – however, it has to be some 7-8 degrees below the horizon for us to see any planets at all. Let us also point out that the luminosity of planets alters significantly over the course of time due to the fact that they reflect the light of the Sun, and their luminosity as observed from the Earth is determined by how much their illuminated part is turned towards the Earth, among other things. This is the case with the Moon; however, due to the smaller size of the planets, we can't always tell that they look like crescents when we observe them with the naked eye. The fastest and most observable luminosity shifts are characteristic for the inner planets, Mercury and Venus.

Therefore, if one planet or another gets too close to the Sun in its visible motion, it disappears from sight. This can take place in the following manner: day after day, the planet rises closer to the dawn, then only appears for a few brief moments before sunrise, and, finally, disappears from sight altogether. A few days later it re-appears at dusk. The reverse sequence is also possible, when a planet disappears from sight at dusk and becomes visible again at dawn.

External planets (Jupiter, Saturn and Mars), whose orbital radiuses are greater than that of the Earth, disappear from sight relatively rarely, *qv* in fig. 14.20, for instance, where we use a randomly-chosen year to illustrate the motion of the Sun and the planets as seen from the Earth. Unlike the external planets, Venus and Mercury disappear from sight several times each year, which would often make them invisible in the primary horoscope of a given Egyptian zodiac. This was pointed out by N. A. Morozov, who had discovered that the visibility or invisibility of a given planet would be meticulously indicated in the Egyptian zodiacs. For instance, in the zodiacs of Dendera, such indicators are drawn as stars near the heads of the planetary figures ([544], Volume 6, pages 675, 678 and 679).

We have verified this hypothesis of N. A. Morozov, and it turned out to be perfectly true. The visibility or invisibility of a given planet would indeed be indicated in the Egyptian zodiacs, all the more meticulously for the planets which are close to the Sun (let us remind the reader that only such planets could be

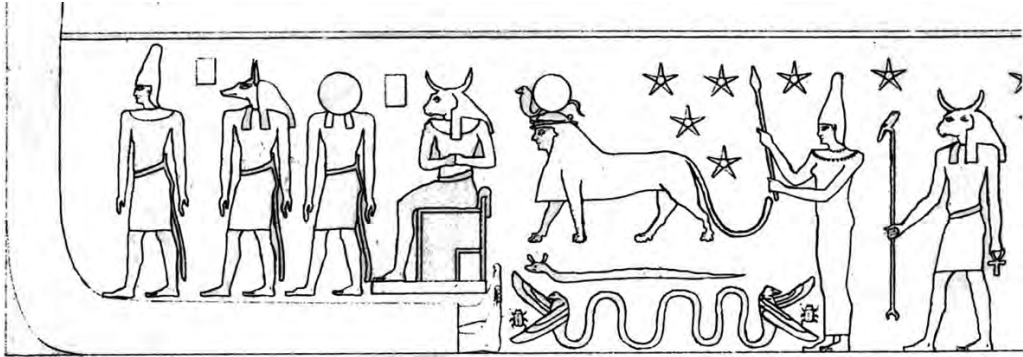


Fig. 15.59. Planetary visibility/invisibility indicators in the EB zodiac from the Greater Temple of Esna. We see a fragment of the zodiac with Virgo and its vicinity. In particular, one sees the secondary horoscope of autumn equinox here (planetary figures have no staves in this horoscope). In the left of the picture one sees three male figures. One of them has got a circle instead of a head, which symbolises the solar disc that “obscured” the planet in question, making it invisible. The other two planets were visible. The other solar disc over the head of the lion with a human face (Venus in a secondary horoscope) also refers to the invisibility of a planet caused by bright sunshine. Taken from [1100], A. Vol. I, Pl. 79.

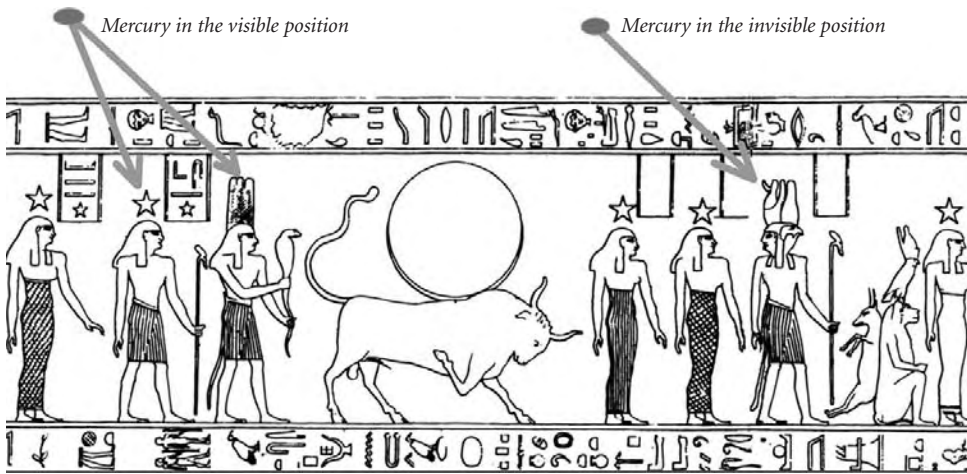


Fig. 15.60. Fragment of the Long Zodiac (DL) depicting Taurus and the surrounding area. We see a figure of Mercury on either side of the constellation symbol, represented in two positions – visible and invisible. The visible position of Mercury is marked by a visibility indicator, namely, the star over the head of the figure on the left. The invisible position of Mercury is at great temporal proximity, so it also entered the primary horoscope as the two-faced planetary figure without any star. Taken from [1100], A. Vol. IV, Pl. 20.

invisible). These indicators could become omitted for the planets at a distance from the Sun, since their very position in relation to the solar would make them visible by default. Nevertheless, visibility indicators are given for the planets located at a greater distance from the Sun as well.

These visibility indicators would most often attain the shape of stars near the heads of the plane-

tary figures, which is the case with the Zodiacs of Dendera. However, in some cases other indicators were also used. In the EB zodiac from the Greater Temple of Esna, for instance, we find invisibility indicators instead – namely, the figures of the invisible planets would have a solar disc over their heads or instead of them. The symbolism is perfectly clear – the planet is invisible because the Sun “obscures its face”.

Let us point out that the use of such symbolism indicates good understanding of the true nature of the process and its mechanism.

Visibility and invisibility indicators are usually just found in the primary horoscopes of the Egyptian zodiacs – however, one occasionally finds them in the secondary zodiacs as well. This is the case with the “Greater Zodiac of Esna” (EB), for instance. We can see a fragment of this zodiac in fig. 15.59 with the secondary horoscope of the autumn equinox. There are three male figures on the left of the picture, and they stand for the planets of the secondary horoscope in question (we must point out that the planetary figures have no rods in the EB zodiac). One of the three figures has a solar disc instead of its head, which means that the planet in question was invisible.

As we have already mentioned, Mercury could occasionally assume both positions over the course of time ciphered in a given zodiac, which could be an interval of several days. In such cases it could be drawn twice – once in the visible position, and once more in the invisible. This is the situation with the Long Zodiac of Dendera, qv in fig. 15.60.

In our research we accounted for planetary visibility indicators as well as the secondary horoscopes. It turns out that there is a precise astronomical solution for each of the Egyptian zodiacs that we studied, one that satisfies to the specifications set by the primary horoscope as well as secondary horoscopes and visibility indicators. This is why we claim Morozov’s hypothesis about the visibility indicators to have been confirmed completely. Had the opposite been the case, we wouldn’t have been able to find such solutions for each horoscope that we studied, without exception.

8. EQUINOX AND SOLSTICE SYMBOLS

Equinox and solstice points are represented by means of special symbols in Egyptian zodiacs. We have deciphered the solstice and equinox symbolism in the course of our analysis of Egyptian zodiac. This symbolism is characterized by very high stability: it is encountered in different kinds of zodiacs without alterations. Therefore, the equinox and solstice symbols can be classified as the most easily legible sym-

bols of the Egyptian zodiacs. There are usually no problems of any sort with their decipherment.

Equinox and solstice symbols are of paramount importance for astronomical dating. They mark the locations of secondary horoscopes in Egyptian zodiacs. Therefore, the correct interpretation of symbols is still vital for the astronomical analysis of zodiacs. It has to be said that some of these symbols are still interpreted completely erroneously in Egyptologist literature. We shall cite a few examples of such interpretations shortly.

Above we have already mentioned some of the equinox and solstice symbols as found in Egyptian zodiacs. We shall now consider them in greater depth.

8.1. Autumn equinox symbols in Virgo

In fig. 15.61 we see Egyptian signs and figures that relate to the autumn equinox point. These symbols are always drawn in the same place of any Egyptian zodiac – the vicinity of Virgo, which is where the autumn equinox point is located. Some of them may also refer to the symmetrical vernal equinox point, and, consequently, turn up in the region of Pisces.

Let us provide a list of said symbols.

1) Human figure holding a small child in one hand and making a benediction gesture with the other. This symbol is found in the autumn equinox point on both Dendera zodiacs – the Round and the Long, qv in fig. 15.61 (DR and DL). The meaning of these symbols becomes clear if we are to remember that the Egyptian year started in September, around the day of autumn equinox ([544], Volume 6, page 641). It is possibly that the infant figure symbolises the New Year – very young, “newly born”, as it were.

2) Rectangular tablet with some semblance of lettering. In reality, there is no lettering; however, there are wavy lines on the tablet that appear to stand for inscriptions. Two such tablets are present in the Round Zodiac of Dendera – in the points of autumn and spring equinox. A leonine figure reclines against the tablet that marks the point of autumn equinox – this might be a reference to the constellation of Leo, whence the Sun comes to the point of autumn equinox. In general, equinox symbols in Egyptian zodiacs would sometimes include drawings of neighbouring constellations – Leo for autumn equinox and

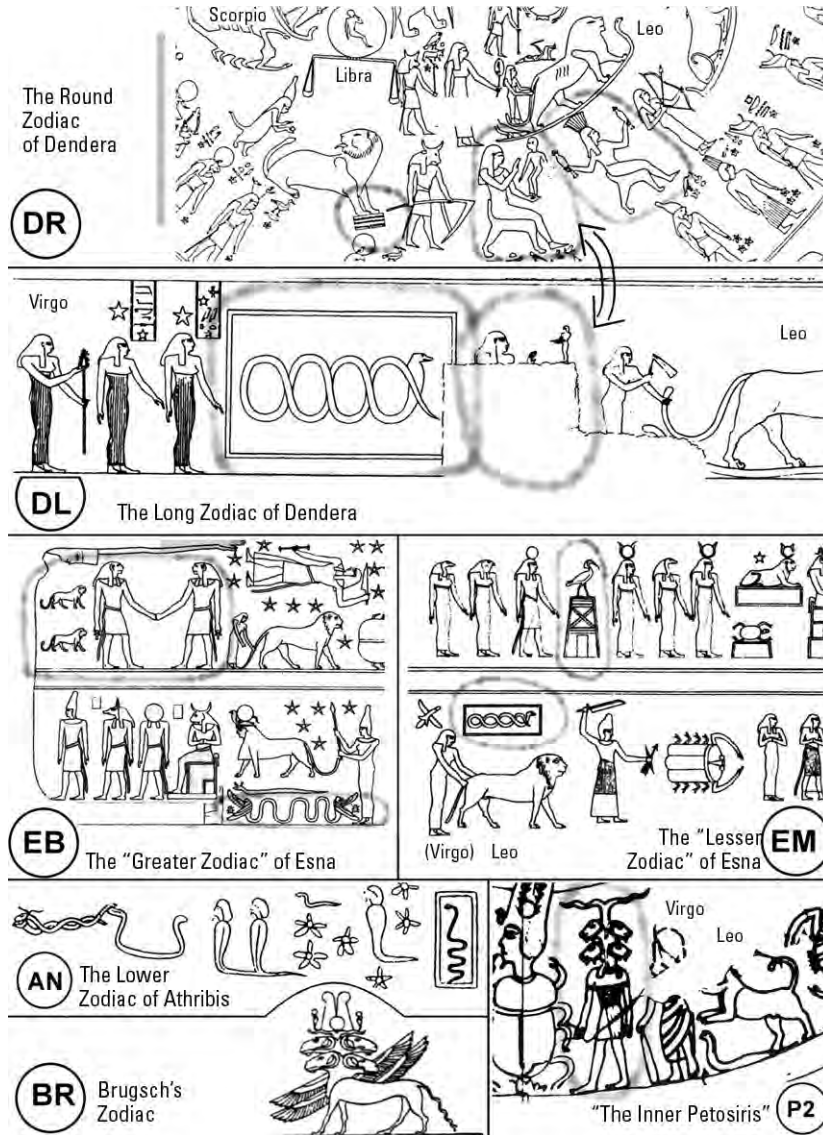


Fig. 15.61. Autumn equinox symbols in various Egyptian zodiacs. Taken from [1100], [1062] and [544], Volume 6.

Aries for vernal equinox (see zodiacs DR, EB and EM, for instance).

These tablets were pointed out by N. A. Morozov, who was perfectly right to point out that they mark the equinox points on the Round Zodiac ([544], Volume 6, page 658). See fig. 15.61 (DR and DL).

3) Crowned human figure sitting on a chair, symmetrically holding two identical sceptres or vessels in

both hands (see fig 15.61 – DR). Apparently, the symbol refers to the equality of day and night. The figure appears to be weighing two jugs (or sceptres), finding them to be of equal weight – they symbolise the equal durations of day and night. We have only encountered this symbol once – in the Round Zodiac of Dendera, *qv* in fig. 15.61 (DR).

4) The snake whose body is woven into a double

figure of eight. The symbol can be seen on several zodiacs, always right in the point of the autumn equinox. Out of the zodiacs that we have studied, it can be seen in the Long Zodiac of Dendera (DL), the Lesser Zodiac of Esna (EM) and the Lower Zodiac of Athribis (AN, fig. 15.61 – DL, EM and AN).

5) Symmetrical convoluted body of a snake with two identical cobra heads, one on each end. Sometimes the “symmetrical snake” would also have two identical pairs of wings with a tiny beetle in between, the symmetry of the symbol remaining intact.

Such symbols can be found in points of autumn and vernal equinox. The autumnal variety can be seen in Zodiac EB, fig 15.61 (EB). This symbol also appears to convey the idea of day and night being symmetrical, or equal.

6) Crossed-out dais with a figure (of either a bird or a human in known zodiacs) upon it. This symbol could stand for either equinox, qv in fig. 15.61 (EM).

It also needs to be pointed out that if the dais isn’t crossed out, the symbol in question is one of solstice and not equinox. In this case, the dais usually supports a cobra with its head raised, qv below. The crossing-out must have also expressed the idea of symmetry.

7) A figure with four heads, which can also stand for either equinox (see below). In Brugsch’s zodiac the equinox and solstice symbols are located in corners, and the autumn equinox symbol is on the side of autumnal constellations. It looks like a winged animal with an equine body and four ovine heads, two facing either way (see fig. 15.61 – BR). In the inner zodiac of Petosiris the autumn equinox symbol is right next to Virgo; it looks like a male figure with four heads as described above, qv in fig. 15.61 (P2).

8.2. Symbols of the winter solstice point in Sagittarius. The “astronomical hieroglyph” of Sagittarius with a minimal horoscope

Symbols that stand for the winter solstice point in the constellation of Sagittarius can be seen in fig. 15.62. Let us list them.

1) In nearly every single Egyptian zodiac the winter solstice point with a minimal horoscope (Sun, Mercury and Venus) is part of the Sagittarian symbol, since the point in question is located in Sagittarius (fig. 15.62). Therefore, the Egyptian portrayal of Sag-

ittarius was a complex compound symbol, uniting the actual figure of Sagittarius (as a centaur wielding a bow) and the symbols of the Sun, Mercury and Venus – planets that were in Sagittarius on the day of winter solstice. Let us cite a drawing that will make it clearer how Egyptian artists managed to combine all these assorted pieces of information into a single symbol, or, rather, an “astronomical hieroglyph” (see fig. 15.63).

It has to be said that the Sun, Venus and Mercury comprise a “minimal” (or “trivial”) secondary horoscope. Indeed, the Sun is part of any secondary horoscope by definition. But the same is true about Venus and Mercury, since they never travel too far away from the Sun. As for other planets – their presence in secondary horoscope is a matter of chance. Therefore, the minimal secondary horoscope consists of the Sun, Mercury and Venus.

Let us now diverge from the astronomical topic for a while. Pay attention to the fact that Sagittarius was often depicted holding a composite bow, which is obvious by its characteristic reverse curve (fig. 15.63). The figure of Sagittarius is holding one of these (see zodiacs DR, EB and EM, for instance). However, it is known to us from the history of armaments that composite bows with a reverse curve have only been introduced in the XI century A.D. ([1181]). They were considered an expensive weapon even towards the end of the Middle Ages, since their manufacture was an extremely complex task in the days of yore. It suffices to say that such bows have only been used by sportsmen since the middle of the XX century and the invention of special synthetic materials. Prior to that, simple bows were used in sports ([1118:1]). It has to be remarked that the shooting range of a composite bow with a reverse curve is only limited by the strength of an archer’s hands and may exceed that of a crossbow. It is believed that Mongolian (or Russian, according to our reconstruction) troops were armed by such bows ([1118:1]), likewise the Turkish janisaries ([1118:1]). Russian bows were of this sort, which is evident from the shape of the surviving quivers as well as ancient artwork that depicts Russian warriors – illustrations to the famous “Notes on the Affairs of the Muscovites” by Sigismund Herberstein, for instance ([161]).

This makes us wonder about just how this elite mediaeval weapon ended up in the “extremely an-

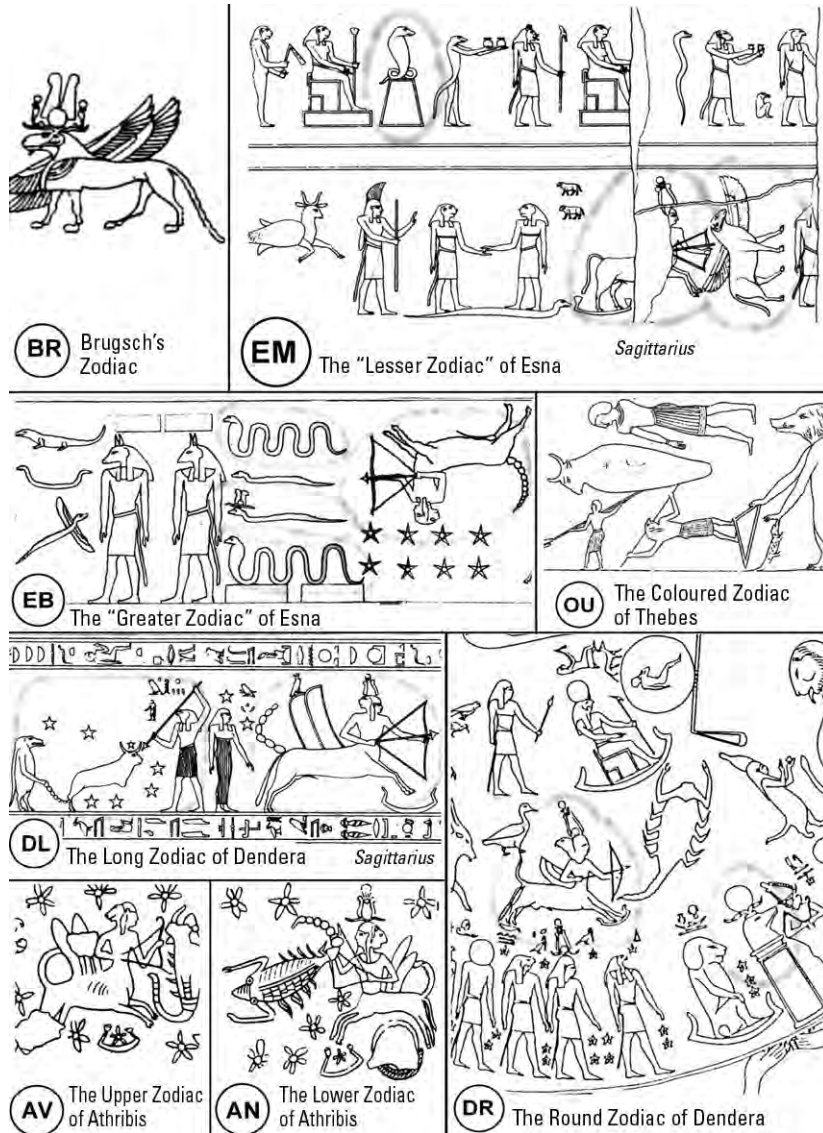


Fig. 15.62. Winter solstice symbols in various Egyptian zodiacs. Taken from [1100] and [544], Volume 6.

cient” Egyptian zodiacs. Incidentally, this is one of history’s “mysteries” spawned by the erroneous chronology of Scaliger and Petavius. Namely, it is presumed that artful representations of composite bows with a reversed curve came into existence 30 centuries before our era, no less ([1118:1]). However, they have only been in use since the XI century A.D. What do we come up with as a result? An interval of

four millennia, no less, between the invention of the bow and its introduction into military practice? This is impossible – the entire history of armaments tells us that new weapons are immediately tested in action.

How does one explain such bows drawn in Egyptian zodiacs, at any rate? The astronomical datings that we have come up with give us an exhaustive answer to this question. Apparently, all these zodiacs

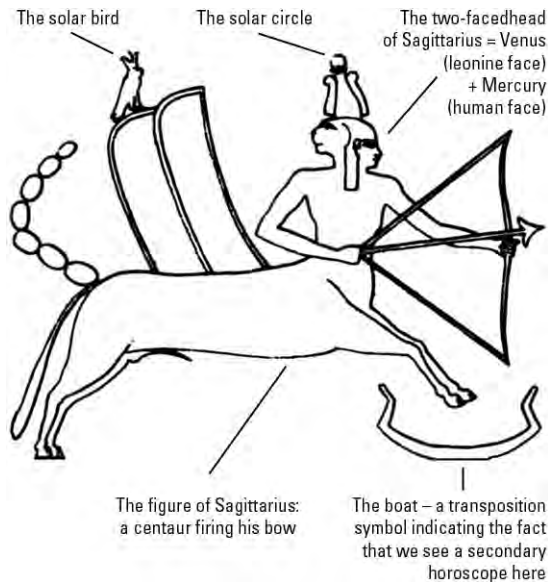


Fig. 15.63. The Egyptian “astronomical hieroglyph” that integrates the figure of Sagittarius as a centaur firing a bow together with the signs of the Sun, Mercury and Venus in Sagittarius on the day of the winter solstice using the Long Zodiac of Dendera as an example. The curious detail is the fact that Sagittarius is holding a composite bow, which is manifest in the characteristic bend this weapon has. These bows were used in the late Middle Ages, and were considered a rare and expensive piece of armament even then. One may well wonder about how a mediaeval weapon turned up in an allegedly “ancient” Egyptian zodiac. Our answer is that all these zodiacs were created in the Middle Ages or even later. The drawing is based on the drawn copy from [1100], A. Vol. IV, Pl. 20.

were created after the XI century A.D. – in the Middle Ages, that is. Therefore, there is little wonder that they depict mediaeval composite bows.

2) Cobra on a dais with its head raised and its neck stretched upwards, qv in fig. 15.62 (EM and EB). An identical or similar symbol could also indicate the summer solstice point. Other figures could be depicted here in lieu of the cobra – for instance, in the Round Zodiac of Dendera the dais in the point of winter solstice is occupied by the head of an animal with a circle between horizontal horns, qv in fig. 15.62 (DR).

It is significant that in this case the dais isn’t crossed out and that the animal upon it hasn’t got four heads. Otherwise it would be an equinox symbol, and not one of solstice.

It is possible that Egyptian artists adhered to a general idea of some sort by trying to emphasise horizontal symmetry in equinox symbolism, and vertical in case of solstice symbolism. This appears to be the case with Egyptian zodiacs in general, although there are exceptions. For instance, the sign of a symmetrical two-headed cobra was occasionally used to indicate the summer solstice point, qv below.

3) Fantasy animal that looks like a winged bull, qv in fig. 15.62 (EM and BR). It was usually depicted with an ovine head. The important detail is that there was just one head, not four – otherwise the symbol would represent an equinox and not a solstice. In the Lesser Zodiac of Esna (EM) such animals are located at solstice points and aligned vertically, perpendicular to the zodiac, qv in fig. 15.62 (EM). It may have been done in order to emphasise the vertical direction of the figures. A similar animal was used to indicate the point of summer solstice (see Zodiac EM, for instance).

4) The scene where the man with a falcon’s head kills a calf with a spear (fig. 15.62 – DL and OU). In Brugsch’s zodiac, this symbol is placed in between Cancer and Gemini, or at the point of summer solstice (see fig. 12.17). It is rather curious that in both cases the calf lacks front legs – usually just one hind leg is drawn with a rope tied thereto (fig. 15.62 – DL; also fig. 12.17). The whole meaning of the scene remains rather unclear. However, it is apparently related to solstice points in some way, since in every known case it is observed in the vicinity of these points.

8.3. Symbolism of the spring equinox point in Pisces

Symbols of the Egyptian zodiacs that stand for the point of spring equinox in Pisces are reproduced in fig. 15.64. They are as follows:

1) The tablet similar to the one found at the point of autumn equinox, as we have mentioned above. Such tablet can be found at the point of spring equinox in both Dendera zodiacs – the Long and the Round, qv in fig. 15.64.

2) Four-headed animal with two heads facing either side similar to the one depicted at the point of autumn equinox (see above). Such animal is present in the spring equinox point in the Round Zodiac of