on the far left, just like the male figure that accompanies Venus in the Greater Zodiac of Esna, as well as the Long Zodiac of Dendera. The second wayfarer with a staff that looks very much alike must stand for Jupiter, according to the Greater Zodiac. Indeed, in the Greater Zodiac Jupiter was accompanied by a similar wayfarer with a leonine head - just like the one that accompanies Venus.

Let us now consider the central row and the bottom row in this part of the Lesser Zodiac.

In the central row we see a spring equinox symbol over a snake (or transposed) in between Capricorn and Sagittarius, qv in Chron3, Chapter 15:6. This makes perfect sense - spring equinox point is elsewhere, a lot further to the left (in Pisces). Therefore, its symbol is out of place - transposed, which is indicated accordingly. The meaning is easy to understand - the spring equinox symbol transposed towards Sagittarius is most likely to mean that the area of the spring equinox horoscope begins right here, to the left of Sagittarius. Otherwise, this zodiacal area would be occupied by the secondary horoscope of winter solstice. Thus, the secondary horoscope of spring equinox would cross the boundary of it's neighbour's area, having chased it away from this place in the central row. To the right of Sagittarius the destroyed part of the zodiac begins.

Now let us study the bottom row. It contains no secondary horoscope symbols whatsoever, which is reflected in the absence of blue highlighting from the corresponding parts of the horoscope's coloured version.

Let us sum up.
In the secondary horoscope of winter solstice Mercury must have been in Sagittarius or close nearby, as well as Venus and another planet - most likely, Jupiter. Apart from that, some planets may have been in Scorpio or Sagittarius, on the side of Scorpio. However, this part of the zodiac has been destroyed.

### 6.5.3. The horoscope of vernal equinox and the additional scene between Aquarius and Capricorn in the EM zodiac

On the day of vernal equinox the Sun in every Egyptian Zodiac was shown in Pisces, qv in Chron3, Chapter 15:8.3. Therefore, the secondary horoscope area includes Pisces and the neighbouring constellations of Aries and Aquarius. However, as we already
mentioned, we find said area occupied by this horoscope in the central row is stretched up until the figure of Sagittarius, qv in figs. 17.47 and 17.48 , as well as the coloured version of the zodiac in figs. C8 and C9.

We shall once again begin with the top row. All we see in the immediate vicinity of the spring equinox symbol (a crossed-out dais with a naked figure on top) is the minimal secondary horoscope symbolism, or the figures and signs of Mars and Venus, qv in fig. 17.47 as well as the coloured zodiac in fig. C8. We shall therefore find nothing useful for decision verification. The presence of Mercury and Venus near the Sun tells us nothing, since these planets are never too far away from the Sun in their celestial motion.

We see a great many figures in the area of this secondary horoscope in the central row. There is a twofaced man with a vertical snake in his hand in between Pisces and Aquarius; he possesses all the attributes of Mercury, qv in Chron3, Chapter 15:4.9-10. Therefore, Mercury was in Pisces or Aquarius on the day of the spring equinox.

In between Aquarius and Capricorn we see a whole collection of planetary figures on snakes or in boats six of them altogether. They're highlighted green in the coloured zodiac, being most likely to represent an auxiliary astronomical scene. There are too many planets here for a single secondary horoscope; finally, the most important consideration is that the secondary horoscope planets are drawn without transposition symbols in the central row, since the primary horoscope's planets are absent from it, and there is no danger of confusing them. However, all the figures on the scene have got transposition symbols (snakes or boats), except for one tiny figure at the very bottom.

In the upper part of this auxiliary scene we see three figures over a single snake. The figure in front has the head of a jackal. It is in motion, likewise the one that follows it, with a circle instead of its head. Finally, the third figure is sitting. The scene is most likely to represent half of Mercury's loop around the Sun. Mercury had been visible initially; this was followed by its disappearance behind the Sun (circle instead of head); then it headed forwards and stopped (sat down) before turning back towards the Sun. This is how Mercury moves across the celestial sphere.

In front of this snake we see a large figure of a man riding a snake in a direction perpendicular to the
zodiacal strip. On its right we see a tiny figure of a female in a boat - possibly Venus. Further to the right and downward we see a male figure with the head of a lion (or a cat), facing the opposite direction, or the left of the zodiacal field. Therefore, we see three more planets taking part in the additional scene, one of them being Venus.

We therefore see four planets in the additional scene, Venus and Mercury included in their number. Since the entire scene is located at the cusp of Aquarius and Capricorn, there were four planets in conjunction with the Sun in Aquarius or Capricorn (in January or February). This entire scene from the Lesser Zodiac is very close to the figure of Aquarius, as well as the "Aquarian parentheses" in the bottom row depicting decapitation scenes. As we mentioned in Chron3, Chapter 15:1.11, Aquarius was likely to symbolise John the Baptist in Egyptian zodiacs. In particular, one of the key Christian feasts falls on 6 January, and it is related to John the Baptist immediately - The Feast of the Epiphany. It would therefore be especially interesting to take this feast into account in our verification of solutions, and see whether it is indeed true that a total of 4 planets gathered near the Sun on this day. Below we shall allocate a separate verification table column to this.

Let us however return to the secondary horoscope of vernal equinox. There is one figure left in the central row that we haven't mentioned as to yet - the man with a rod in his hand and a tall headdress. To his right we see the transposed vernal equinox symbol, which marks the border of the secondary horoscope under study. Thus, we see yet another planet in Capricorn or, possibly, in between Capricorn and Sagittarius. There are no secondary horoscope symbols in the lower row in this part of the zodiac. As for the secondary horoscope of spring equinox, apart from the minimal horoscope of Mercury and Venus we see another planet in Capricorn or at the cusp of Capricorn and Sagittarius. Apart from that, we learn more about the position of Mercury, which was in either Pisces or Aquarius.

### 6.5.4. Summer solstice horoscope in the EM zodiac

The Sun is shown in Gemini on the day of summer solstice, qv in Chron3, Chapter 15:8.4, where we find a discussion of the summer solstice point's symbolism in the Lesser Zodiac from Esna.

Let us take a closer look at this secondary horoscope of the Lesser Zodiac.

In the top row, on both sides of the summer solstice symbol (cobra on a dais) we see two sitting female figures. One of them is to the left of the solstice sign and holds a canonical planetary rod, whereas the other one is holding some sort of loop, crossed by three zigzags. The fact that both figures are female is emphasised graphically; therefore, the planet we have in front of us is doubtlessly Venus.

The next thing we see on the right is an agglomeration of symbols that resemble the ones found near the summer solstice point on the Greater zodiac, where we find something very similar to the left of the Gemini figure. If we are to mention planets, one can also point out the presence of a bicephalous snake here - apparently, a symbol of Mercury.

Therefore, the only thing we see in the top row is a minimal horoscope. No other planets are represented here except for Venus and Mercury.

In the central row we see the Egyptian solstice symbol found here the most often - a man in a boat with his arm raised into the air, qv in Chron3, Chapter 15:8.4. Nearby we find a two-headed animal and a crocodile symbolising Mercury and Venus in the minimal horoscope of the summer solstice point. However, to the left of Cancer we see the abovementioned figure of a warrior with a sword and a bunch of arrows in his hands. This must be Mars - either in this horoscope, or that of the autumn equinox.

In the bottom row, underneath Gemini, we find another familiar symbol of summer solstice - a calf in a boat and a woman firing an arrow over the calf's head. The woman isn't holding a bow, but we see the arrow over the head of the calf nevertheless, qv in Chron3, Chapter 15:8.4. Apart from that, in the "Gemini parenthesis" we see the same planet, already in a secondary horoscope, next to the first planet of the primary horoscope represented by two wayfarers with falcon heads. The boat is a transposition symbol, qv in Chron3, Chapter 15:6. The final solution identifies the planet as Mars, as we already mentioned above. Therefore, our verification of the complete solution must make it certain that Mars was in Gemini or somewhere right next to this constellation. This is in good concurrence with the symbol that resembles a warlike man holding a sword and looking ready to


Fig. 17.49. The final interpretation of the primary horoscope transcribed in the Lesser Zodiac from Esna (EM), which yielded an exhaustive solution. Groups of figures related to each planet of the primary horoscope (except for the circles above Taurus and Aries representing the Sun and the Moon) are highlighted and signed. Based on the drawn copy from [1100], A. Vol. I, Pl. 87.
strike that we see between Leo and Cancer in the central row. If this symbol relates to the horoscope as well, Mars must be in between Gemini and Cancer, since it's in Gemini in the bottom row, and right next to Cancer in the central.

We therefore come up with the following horoscope.

Apart from the minimal horoscope comprised from Venus and Mercury, we also see Mars near Gemini - either in the constellation, or (if the warlike figure next to Cancer also pertains to this horoscope) on the cusp of Gemini and Cancer.

### 6.6. The exhaustive solution of the EM zodiac: 6-8 May 1404 A.D.

The exhaustive solution of the Lesser Zodiac from Esna also proved to be unique. It falls on the interval between 6 and 8 May 1404 A.D., postdating the date
transcribed in the Greater Zodiac by a mere 10 years. Planetary positions on the celestial sphere were as follows:

Sun in Taurus, Moon in Aries (a dying crescent),
Mars in Gemini,
Venus in Gemini, close to the Taurus cusp, Mercury in Taurus, close to the Aries cusp,
Saturn in Aquarius,
Jupiter in Capricorn.
The concurrence with the primary horoscope is absolute, qv in Chron3, Chapter 17:6.4 above.

The source data for the Horos program as used for the search of a solution can be seen in Annex 4.

In fig. 17.49 we cite the exhaustive interpretation of the Lesser Zodiac that yielded a complete solution.

Let us cite exact positions of the planets on the ecliptic on the days covered in our solution. The indications are just as they have been all along - the first
row of numbers under the names of planets refers to the longitudes of planets on the J2000 ecliptic in degrees, and in the next row we find planetary positions on the "constellation scale", qv in Chron3, Chapter 16:10.

## THE EXHAUSTIVE SOLUTION OF THE LESSER ZODIAC

FROM ESNA (EM) - PRIMARY HOROSCOPE

Julian day $(J D)=2233995.00<$ The Moon is 26 days old $>$ Year/month/date $=1404 / 5 / 6$

| Sun | Moon | Saturn | Jupiter | Mars | Venus | Mercury |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 62.4 | 24.4 | 331.7 | 324.4 | 97.6 | 85.2 | 57.8 |
|  |  |  |  | (longitude) |  |  |
| 1.29 | 11.95 | 10.13 | 9.81 | 2.28 | 1.88 | 1.16 |
| Taurus | Pisc/Ari | Aquar. | Capr. Gemini | Taurus | Taurus |  |

Average deviation from "best points": 10.2 degrees.
Julian day $(J D)=2233996.00<$ The Moon is 27 days old $>$ Year/month/date $=1404 / 5 / 7$

| Sun | Moon | Saturn | Jupiter | Mars | Venus | Mercury |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 63.4 | 38.5 | 331.7 | 324.4 | 98.2 | 86.4 | 57.3 |
|  |  |  |  | (longitude) |  |  |
| 1.31 | 0.48 | 10.13 | 9.82 | 2.30 | 1.92 | 1.15 |
| Taurus | Pisc/Ari | Aquar. | Capr. Gemini | Taurus | Taurus |  |

Average deviation from "best points": 8.1 degrees (local minimum).

Julian day $(J D)=2233997.00<$ The Moon is 28 days old $>$
Year/month/date $=1404 / 5 / 8$

| Sun | Moon | Saturn | Jupiter | Mars | Venus | Mercury |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 64.3 | 52.4 | 331.8 | 324.5 | 98.9 | 87.6 | 56.8 |
|  |  |  |  | (longitude) |  |  |
| 1.34 | 1.02 | 10.13 | 9.82 | 2.32 | 1.95 | 1.14 |
| Taurus | Pisc/Ari | Aquar. | Capr. Gemini | Taurus | Taurus |  |

Average deviation from "best points": 9.9 degrees.
The best correspondence with the Lesser Zodiac was achieved on 7 May 1404, when the dying moon could be seen in Aries as a narrow crescent. Average deviation from "best points" only equalled 8 degrees
on that day - a quarter of a constellation's average length on the ecliptic. As we already mentioned, even a deviation twice this size (circa 15 degrees) already implies good correspondence between calculated planetary positions and the indications of a zodiac. The concurrence here is nothing short of ideal.

### 6.7. The verification table for the exhaustive solution of the EM zodiac

We shall relate the verification results for the exhaustive solution of the Lesser Zodiac that we came up with (6-8 May 1404), satisfying to the conditions specified by secondary horoscopes and planetary visibility indicators. A verification table for this solution is presented in fig. 17.50.

Bear in mind that by an exhaustive solution we understand one that has got a plus sign in every column of the verification table. In other words, an exhaustive solution is one that corresponds to the source zodiac to the minor detail, qv in Chron3, Chapter 16:14.

As for planetary visibility symbols, they have to be checked for Mercury, Venus and Mars - the only planets that can be rendered invisible by proximity to the Sun. Other planets in the Lesser Zodiac are at too great a distance from the Sun and were visible a priori. Visibility indicators of the planets located far away from the Sun would often be omitted from Egyptian zodiacs due to their being extraneous.

The first column refers to planetary visibility.
The visibility of Venus. According to what we see in the Lesser Zodiac, Venus should have been visible. Indeed, our solution indicates that it was in perfect vespertine visibility, rising in Cairo at the solar submersion rate of 20 degrees on 7 may 1404 A.D. - in utter darkness. The luminosity of Venus was very high, as usual, equalling -3.5 .

The visibility of Mercury. According to the Lesser Zodiac, Mercury was invisible. This is confirmed in our solution - Mercury rose in Cairo at the solar submersion rate of 2 degrees on 7 May 1404, and its luminosity was extremely low, equalling +3.6 , which made the planet resemble a dim star. It could therefore neither be seen from Cairo nor from Luxor.

The visibility of Mars. According to the Lesser Zodiac, Mars was visible. This is confirmed in our solution. Its luminosity was rather high -+1.8 , which


Fig. 17.50. The verification table for the complete solution of the Lesser Zodiac from Esna (EM) - 6-8 May 1404 A.D. Abbreviations used: S. S. - solar submersion rate transcribed in arc degrees (see CHRON3, Chapter 16:7, Step 3-B); M - planetary luminosity; a fraction between 0 and 12 in parentheses is the calculated position of a planet on the "constellation scale", qv in CHRON3, Chapter 16:10. Bottom right - the result of comparing the solution with the zodiac as well as the average distance between planets and their "best points", qv in CHRON3, Chapter 16:11 and 16:14.
corresponds to the luminosity of the stars of the second magnitude. On 7 May 1404 Mars was in Gemini, 10 degrees further away from the Sun than Venus, Mars set under the horizon when the solar submersion rate equalled circa 30 degrees, at night, that is, and therefore visible perfectly well.

We draw a plus sign in the first column of the verification table.

The second column is the secondary horoscope of autumn equinox.

As above, we shall select a September year that corresponds to our solution; it is the one that began in September 1403 A.D. and ended in August 1404 A.D. The autumn equinox day fell on 10 September 1403 A.D., qv in Annex 5. However, discrepancy rates of 5-6 days were normal for the estimation of solstice and equinox days in mediaeval astronomy, qv above.

Let us cite planetary positions on the ecliptic for 10 September 1403.

The first row of figures refers to degrees of longitude on the ecliptic J2000, whereas the second row indicates the position of the planet on the "constellation scale", qv in Chron3, Chapter 16:10.

Julian day $(J D)=2233756.00$
Year/month/date $=1403 / 9 / 10$

| Sun | Moon | Saturn | Jupiter | Mars | Venus | Mercury |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 183.7 | 114.8 | 313.9 | 281.2 | 319.2 | 148.5 | 204.2 |
| 5.22 | 2.87 | 9.44 | 8.42 | 9.63 | 4.16 | 5.72 |
| Virgo | Gemini | Capricorn | Sagitt. Capricorn | Leo | Virgo |  |

Thus, the Sun was in Virgo, with no other planets but Venus and Mercury anywhere near.

Let us now recollect the secondary horoscope of autumn equinox in the Lesser Zodiac, and the corollary that this horoscope had led us to.

The only planets we can see in the surviving part of the autumn equinox horoscope in the Lesser Zodiac are Mercury and Venus. Mars is in between Cancer and Leo, and also can be part of this secondary horoscope. However, it may just as well relate to the secondary horoscope of summer solstice. Some bright planet was in Leo on the day of autumn equinox. The part of the horoscope from the constellations of Virgo and Libra has not survived; it may have included some planets.

Indeed, according to our solution, Venus was in Leo on the day of autumn equinox and shone the brightest. The correlation will be complete if Mars winds up in Cancer or close thereto in the secondary horoscope of summer solstice - we shall witness this to be the case below.

Therefore, we must draw a plus sign in the second column as well.

The third column corresponds to the secondary horoscope of winter solstice.

The winter solstice day would fall over 10 December 1403 in that epoch, qv in Annex 5. One should account for the possible discrepancy of 5-6 days, qv above.

Let us cite the planetary positions on the ecliptic for 10 December 1403. The indications are as above.

Julian day $(J D)=2233847.00$
Year $/$ month $/$ date $=1403 / 12 / 10$

| Sun | Moon | Saturn | Jupiter | Mars | Venus | Mercury |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 275.1 | 224.5 | 317.3 | 296.2 | 362.3 | 261.2 | 290.9 |
| 8.25 | 6.43 | 9.56 | 8.85 | 11.39 | 7.82 | 8.69 |
| Sagitt. | Libra | Capricorn | Sagitt. | Pisces | Scorpio | Sagitt. |

The Sun was in Sagittarius, in conjunction with Mercury and Jupiter (both planets were in vespertine visibility). Venus was on the other side of the sun, in matutinal visibility. It was located in the neighbouring constellation of Scorpio, just 5 degrees away from the boundary between the two constellations. All three planets were visible that day. Also, Saturn was in the nearby constellation of Capricorn; however, the distance between the planet and the Sun was considerable - 42 degrees. Jupiter and Mercury ended up on the same side of the Sun, two times closer to the luminary - at the distance of 21 and 15 degrees on the ecliptic, respectively. All the other planets were even further away from the Sun than Saturn. Therefore, one could find three planets near the Sun that day - Venus, Mercury and Jupiter.

Let us now remind the readers of the corollary we made after analysing the secondary horoscope of winter solstice from the Lesser Zodiac.

Mercury, Venus and another planet (most likely, Jupiter) should be in Sagittarius or close nearby in the secondary horoscope of winter solstice. Also, some
planets may have been in Scorpio, or Sagittarius on the side of Scorpio - sadly, this part of the zodiac is destroyed.

The correspondence between the solution and the secondary horoscope is complete; we shall therefore draw a plus sign in the third column as well.

The fourth column refers to the secondary horoscope of spring equinox.

Vernal equinox fell on 12 March in 1404 A.D., qv in Annex 5. We should also allow for a possible error in the estimation of the vernal equinox date - some 5-6 days.

Let us specify the planetary positions on the ecliptic for 12 March 1404. The indications remain as above.

Julian day $(J D)=2233940.00$
Year/month/date $=1404 / 3 / 12$

| Sun | Moon | Saturn | Jupiter | Mars | Venus | Mercury |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 368.9 | 380.8 | 327.9 | 317.0 | 62.4 | 377.6 | 365.7 |
| 11.56 | 11.86 | 9.94 | 9.55 | 1.28 | 11.78 | 11.48 |
| Pisces | Pisces | Capr/Aqua | Capr. | Taurus | Pisces | Pisces |

The Sun was in Pisces on the date in question, with no other planets nearby except for Venus and Mercury (as well as the Moon, which is absent from secondary horoscopes of the Lesser Zodiac).

Let us now consider the secondary horoscope of spring equinox in the Lesser Zodiac and reiterate our corollary in re this horoscope.

Apart from Mercury and Venus, we see another planet in Capricorn (or at the cusp of Capricorn and Sagittarius). The position of Mercury is specified in either Pisces or Aquarius.

We see a good correspondence with our solution. Mercury was indeed in Pisces, and there was a very bright planet in Capricorn those days - Jupiter. There were no other planets but Mercury and Venus near the Sun.

The only thing that strikes us as odd is the absence of Saturn from this secondary horoscope, seeing as how Jupiter is present, and it was further away from Pisces. But the very artwork of the Lesser Zodiac makes it clear that the author had his own reasons to specify just a single extra planet in the secondary horoscope of vernal equinox in Capricorn. It is Jupiter in our so-
lution. The author of the Lesser Zodiac had to draw a symbol of spring equinox equipped with a transposition symbol in between Capricorn and Sagittarius in order to make it feasible. We know nothing of the author's motivation; the situation is really a peculiar one, and we see nothing of the kind in any other Egyptian zodiac. We are therefore unlikely to learn why the author would include Jupiter in this horoscope and not Saturn. At any rate, Saturn had been far enough from Pisces, and its absence of the secondary horoscope gives us no reason to discard the solution.

We shall therefore draw a plus sign in the fourth column as well.

The fifth column refers to the secondary horoscope of summer solstice.

Summer solstice fell on 11 June in 1404. Planetary positions on the ecliptic were as follows:

Julian day $(J D)=2234031.00$
Year/month/date $=1404 / 6 / 11$

| Sun | Moon | Saturn | Jupiter | Mars | Venus | Mercury |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 96.8 | 137.6 | 331.8 | 324.7 | 120.4 | 128.6 | 78.8 |
| 2.25 | 3.76 | 10.13 | 9.83 | 3.07 | 3.40 | 1.72 |
| Gemini | Cancer | Aqua | Capr. | Can/Gem | Gemini | Taurus |

The Sun was in Gemini, accompanied by its usual entourage of Venus in Gemini and Mercury in the nearby Taurus. Apart from that, we find Mars at the cusp of Gemini and Cancer. There were no other planets on the celestial sphere. We don't count the Moon, since its symbols are altogether absent from the secondary zodiacs of the Lesser Horoscope.

Let us now remind the reader of the secondary horoscope of summer solstice in the Lesser Zodiac.

Apart from the minimal horoscope of Venus and Mercury, we see Mars in the vicinity of Gemini - either in the constellation, or at the cusp of Gemini and Cancer, if the nearby warrior with a sword also comes from this horoscope.

As we witnessed above, the warrior with the sword wasn't included in the secondary horoscope of autumn equinox; it must therefore pertain to the secondary horoscope of summer solstice. Therefore, Mars in this horoscope should indeed be at the cusp of Gemini and Cancer.

We see ideal correspondence with our solution;
we shall therefore draw a plus sign in the fifth column of the verification table.

The sixth column represents the symbolic reference to Easter and the Passover Full Moon. Both enjoy a great deal of attention in the Lesser Zodiac. We discuss this in detail above, see Chron3, Chapter 15:9.1. Let us emphasise that the Lesser Zodiac describes the feast of Passover as a resurrection celebration, which concurs with the Christian concept of Easter.

The symbolic description of the Passover full moon and the Christian Easter feast is concentrated in the bottom row of the Lesser Zodiac, underneath the figures of Aries and Taurus from the central row - right where one would expect to find Easter, which is a vernal feast celebrated when the Sun is in Aries or close nearby.

In the coloured version of the Lesser Zodiac the scene that symbolises Easter is highlighted green. It includes references to the birth of the Passover moon and the fact that it attains fullness on the 15th day, as well as the symbol of the dead Osiris (apparently, Christ) in coffin before resurrection, and, finally, the symbol of the weeklong resurrection feast. This symbolic scene was studied in detail, qv in Chron3, Chapter 15:9.1.

The first astronomical vernal full moon of 1404 as calculated by Gaussian formulae fell on 27 March. However, according to the Paschalia, the first calendar full moon fell on 29 March that spring - the day that coincided with the Judaic Passover according to the Christian Paschalia, qv in [BR]:1, while the actual Easter day fell on the 30 March. Therefore, 8 May 1404, which is the day of our solution, had been the fortieth day after the Christian Easter, whereas 7 May 1404, another date covered by our solution, is the fortieth day after the Judaic Passover as defined by the Christian Paschalia.

However, we instantly recollect that the Orthodox Church celebrates Easter on the 40th day after Passover; therefore, the date transcribed in the Lesser Zodiac refers to Passover in 1404. It becomes perfectly clear why there is so much Easter symbolism in the Lesser Zodiac.

And so, we draw another plus sign in the 6th column of the verification table, since the date that we come up with corresponds to the description of Easter that we see in the Lesser Zodiac ideally. However, the


Fig. 17.51. The conjunction of four planets (Saturn, Mercury, Jupiter and Venus) as well as the Sun in Capricorn on 6 January 1404, on the Christian feast of the Baptism, which is in close relation with the figure of John the Baptist. Nearby we find the Aquarius constellation; it apparently used to be a symbol of John the Baptist in Egyptian zodiacs. Saturn was in good vespertine visibility. The visibility of Venus is unlikely, since it had risen at the solar submersion rate of a mere 6 degrees. Jupiter and Mercury were completely lost due to bright sunshine therefore, the only planet out of four whose visibility was good had been Saturn. Calculated in Turbo-Sky.
abovementioned suspicion that the auxiliary scene with four planets in Capricorn next to the Sun in the central row of the Lesser Zodiac is related to one of the holiest days in the Christian calendar - the Epiphany, a feast that falls on 6 January in the Julian calendar, when the Sun is in Capricorn. The neighbouring constellation of Aquarius is more likely to symbolise John the Baptist in Egyptian zodiacs, as we have already mentioned above. The feast of Epiphany is directly linked to the name of John the Baptist, since it commemorates the baptism of Jesus Christ.

Let us consider the situation in Capricorn on 6 January 1404 (the Epiphany feast). Do we find four planets right next to the Sun? The answer is in the positive.

The seventh column contains the auxiliary scene between Aquarius and Capricorn.

The celestial sphere in the vicinity of Capricorn on 6 January 1404 is represented schematically in fig. 17.51. We see a total of four planets in Capricorn that day, right next to the Sun - Saturn, Venus, Mercury and Jupiter; a total of four. The remaining planets were at a considerable distance from Capricorn that day - Mars in Pisces and the Moon in Virgo.

The only planet of four found in Capricorn had
been in good visibility - Saturn. It had set on 6 January 1404 when the solar submersion rate in Cairo equalled 16 degrees - in complete darkness, that is. Bear in mind that the brightest of stars can be seen when the Sun sets by 7-8 degrees. The night begins when the Sun sets by 18 degrees ([393], page 16). The luminosity of Saturn equalled 1.1 on the date under study, making it as bright as stars of the first magnitude. Saturn was therefore visible perfectly well at dusk and early in the night.

Other planets in Capricorn (Mercury, Jupiter and Venus) were obscured by the nearby Sun, qv in fig. 17.51. Jupiter was right next to the Sun, likewise Mercury, which also possessed a very low luminosity that day -+3.4 . The visibility of either planet is therefore out of the question. Venus is unlikely to have been visible, save for a few moments before the very sunrise, perhaps, at the solar submersion rate of 6 degrees. The sky was too bright for any star to be visible. The luminosity of Venus had been exceptionally high ( -3.4 ), which means one could observe it, but only for a very brief period of time.

This scene concurs perfectly to the "scene with snakes and boats" between Aquarius and Capricorn, where all three planets, including the "group of Mercury" and Venus, are drawn as tiny figures, whilst the fourth one is exceptionally large - this should represent the fact that three of the planets were obscured by the Sun, with only Saturn visible well. See the coloured version of the Lesser Zodiac, where the entire "scene with snakes" between Aquarius and Capricorn in the central row is highlighted green. An analysis of its symbolism can be seen above, in Chron3, Chapter 17:6.5.3.

Let us cite exact positions of the planets on the ecliptic for 5-7 January 1404. We shall consider three consecutive days covering the actual date of the Epiphany (6 January) in order to make the directions of planetary motion visible.

Julian day $(J D)=2233873.00$
Year/month/date $=1404 / 1 / 5$

| Sun | Moon | Saturn | Jupiter | Mars | Venus | Mercury |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 301.6 | 206.9 | 320.2 | 302.2 | 378.9 | 293.9 | 303.0 |
| 9.00 | 5.79 | 9.66 | 9.02 | 11.81 | 8.78 | 9.05 |
| Capr. | Virgo | Capr. Capricorn | Pisces | Sagitt. | Capr. |  |

Julian day $(J D)=2233874.00<$ Feast of the Epiphany $>$
Year $/$ month $/$ date $=1404 / 1 / 6$

| Sun | Moon | Saturn | Jupiter | Mars | Venus | Mercury |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 302.7 | 219.6 | 320.3 | 302.5 | 379.5 | 295.1 | 301.8 |
| 9.04 | 6.19 | 9.67 | 9.03 | 11.82 | 8.82 | 9.01 |
| Capr. | Libra | Capr. Capricorn | Pisces | Sag/Cap | Capr. |  |

Julian day $(J D)=2233875.00$
Year/month/date $=1404 / 1 / 7$

| Sun | Moon | Saturn | Jupiter | Mars | Venus | Mercury |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 303.7 | 232.7 | 320.4 | 302.7 | 380.2 | 296.4 | 300.5 |
| 9.08 | 6.81 | 9.67 | 9.04 | 11.84 | 8.85 | 8.97 |
| Capr. | Libra | Capr. Capricorn | Pisces | Sag/Cap Sag/Cap |  |  |

And so, we draw a plus sign in the seventh column of the verification table as well, thus making it complete, with a plus sign in every column, qv in fig. 17.50. The solution is therefore an exhaustive one.

We haven't managed to find any other exhaustive solutions for any interpretation of the primary horoscope from the Lesser Zodiac of Esna.

## Corollary:

The Lesser Zodiac of Esna contains the date of 68 May 1404 A.D. - the Easter Day. The best correspondence with the Zodiac was reached on 7 May 1404.

## 7. <br> THE CORRELATION BETWEEN THE SOLUTION DATES AND THE NEW CHRONOLOGY AS WELL AS OUR RECONSTRUCTION OF HISTORY

We have thus demonstrated that the dates transcribed in the monumental zodiacs from the Egyptian temples near the "Bight of the Kings" carved in stone by the allegedly ancient Egyptians are mediaeval, namely:

1) 22-26 April 1168 A.D. in the Long Zodiac of Dendera;
2) morning of 20 March 1185 A.D. in the Round Zodiac of Dendera;
3) 31 March - 3 April 1394 A.D. in the zodiac from the Greater Temple of Esna;
4) 6-8 May 1404 A.D. in the Zodiac from the Lesser Temple of Esna. The day coincides with the Easter cel-
ebrations, which must be the reason why we find so many Easter symbols in the Lesser Zodiac of Esna.

Thus, the temples of Dendera were consecrated to events that took place at the end of the XII century a.D. The temples of Esna commemorate more recent events dating to the late XIV - early XV century of the new era.

The actual temples are therefore more recent than the dates found in the zodiacs. We are of the opinion that their builders were the Mamelukes, or the keepers of the royal cemetery of the Great Empire. They were the ancient Christian (or Judeo-Christian) temples of "Hellenistic epoch", or the epoch of the Great $=$ "Mongolian" conquest of the XIV and the foundation of the Great = "Mongolian" Empire, whose central part was located between the two great rivers Volga and Oka, or the Russia of Vladimir and Suzdal ([REC]).

The temples may have been built shortly before the Ottoman conquest of Egypt and the loss of Egypt and the decline of the Mameluke rule, which took place in the XVI century of the New Era.

Let us illustrate in brief. We relate this topic in greater detail in Volumes 5-7 of "Chronology", as well as our books entitled A Reconstruction of Global History and Russia and Rome.

The Ottoman conquest of the XV-XVI century which, according to our reconstruction, originated in the centre of the Great Empire, or the Russia of Vladimir and Suzdal, likewise the Great = "Mongolian" conquest that had preceded it. These events reflected a major crisis in the Empire ([REC]). The life of the Great Empire must have undergone some radical shift. The old religion of the Empire, or the initially monolith Christianity, began to transform and fell prey to numerous schisms around this time ([REC]). Nowadays we refer to these events as to the "baptism" of nations, which isn't quite correct.

The Scaligerian version of chronology misdates the baptism of nations to the IV century A.D. and makes it look as though the imperial authorities had abandoned "paganism", or "Hellenism", which was allegedly completely unlike Christianity. According to the New Chronology and our reconstruction of history, this doesn't appear to be the case. First and foremost, the events in question don't date to the IV century of the new era, but rather the XV-XVI century. It is also ab-
solutely crucial that we bear in mind the Christian identity of the hypothetical "Hellenism" or "paganism" of the first Imperial rulers. They revered Christ and celebrated the primary Christian feasts - Easter, Christmas, Annunciation and several others. However, many of the rites dating to the epoch in question that had managed to coexist with Christianity peacefully up until the XV-XVI century were abolished, and, moreover, became subject to severe persecution and utter eradication. They became declared "pagan" and "non-Christian". The possible reasons for a change this drastic were outlined in our work ([REC]). One of the reasons - possibly even the primary reason, may have been the monstrous outbreak of epidemic diseases that wiped out most of the Empire's population at the end of the XIV - beginning of the XV century A.D. As a result, the morals became a lot more austere, with many limitations imposed upon the populace. The limitations were enforced by the Christian church of the Empire, reformed in accordance with what the epoch demanded.

In particular, this manifested as the destruction of the old Christian temples adorned with abolished symbols, forbidden and persecuted by the new authorities. A more ascetic symbolism was introduced; its most extreme form - absolute ban on all graphical representations of people and animals in houses of prayer (mosques) still exists in Islam.

This policy would naturally be introduced with military assistance as well as peacefully. The Ottomans have burnt and pillaged their way through the entire South of the Empire, destroying the old "pagan" temples that they have grown to hate. The ancient imperial rites must have survived the longest where the old imperial graveyard had remained out of everybody's reach until the XVI century, which is when the Ottomans invaded Egypt. This is when the gigantic funereal temples and other constructions of the "Bight of the Kings" on the Nile were destroyed.

However, it is most likely that the Ottomans didn't touch the actual royal sepulchres - furthermore, it is possible that the kings of Russia (Horde) and their kin had been buried on the same graveyard up until the XVII century. The Mamelukes, despite having lost power in Egypt to the Ottomans, continued to protect the royal sepulchres up until the advent of the Europeans at the end of the XVIII century, when the
actual royal cemetery became pillaged. The mummies of the Horde's kings that were hidden in haste by the last keepers of the cemetery were eventually found by the Europeans and taken to the museum of Cairo ([370]). This happened as recently as the second part of the XIX century.

According to our reconstruction, Egypt had been one of the primary religious centres of both ancient Romea (Byzantium) of the X-XIII century and its successor, or the Great = Mongolian Empire of the XIV-XVI century, whose centres were located around Vladimir and Suzdal in Russia, as well as in Istanbul (Constantinople). The cult of the dead Czars (or Khans) was rooted in Egypt.

This may have started with the observation made by the ancients that a corpse doesn't rot in hot sand around these parts due to the hot climate and the ex-
tremely low humidity. This makes the valley of the Nile an ideal place for burials.

However, there may have been other reasons. Egypt might turn out the historical homeland of the predecessors of the Great Empire's royal dynasty that had reigned in the XIV-XVI century a.d. The kings would still be buried in the land of their ancestors, even when the capital of the Empire had already been far away from Egypt - first in the Czar-Grad on the Bosporus, and then around Vladimir and Suzdal in Russia.

One way or another, the valley of the Nile was chosen as the optimal site for the royal cemetery in the epoch of the Great Empire. According to our reconstruction, this explains the domination of the funereal theme in the artwork found on many Egyptian monuments.


Fig. C1. The Long Zodiac of Dendera (DL) coloured by the authors. The colours are represented by the following codes: $R$ for red, $J$ for yellow, $B$ for blue, $G$ for green and $B R$ for brown. Zodiacal constellations are coloured red (letter $R$ ). Yellow (letter $J$ ) marks the planets of the primary horoscope. The colour blue (letter $B$ ) refers to secondary horoscopes (symbols of equinoxes and solstices). Green (letter $G$ ) is the colour of the "procession figures" of the primary horoscope's planets, as well as the additional astronomical symbols and scenes. Circles with two colours (yellow and blue) indicate symbols that can be ascribed to primary and secondary horoscopes simultaneously. Blue parts of red figures are the symbols from secondary horoscopes integrated into the constellation figures or the ten-degree symbols. The latter are painted brown, qv in Chron3, Chapter 15:2. Ten-degree symbols of each constellation are numbered 1-3. The actual constellation symbol also serves as one of its own three ten-degree symbols. Based on the drawn copy from [1100], A. Vol. IV, Pl. 20. First part of the drawing, qv in Chron3, Chapter 16:8.


Fig. C2. The coloured version of the Long Zodiac from Dendera (DL). See Chron3, Chapter 16:8. Second part of the drawing.


Fig. C3. The coloured version of the Long Zodiac from Dendera (DL). See Chron3, Chapter 16:8. Third part of the drawing.


Fig. C4. The coloured version of the Long Zodiac from Dendera (DL). See Chron3, Chapter 16:8. Fourth part of the drawing.


Fig. C5. The coloured version of the Round Zodiac from Dendera (DR). See Chron3, Chapter 16:8. The zodiacal belt is circumscribed by the red line. Outside of the belt one can clearly see the blue belt of secondary horoscope that spans half of the zodiac from one of the sides. Based on the drawn copy from [1062], page 71.


Fig. C6. The coloured version of the Greater Zodiac from Esna (EB). The "doubles" of the primary horoscope's planets are coloured green, likewise the figures from their processions, qv in Chron3, Chapter 16:8. Based on the drawn copy from [1100], A. Vol. I, Pl. 79.


Fig. C7. The coloured version of the Lesser Zodiac from Esna (EM). Part one. Based on the drawn copy from [1100], A. Vol. I, Pl. 87.


Fig. C8. The coloured version of the Lesser Zodiac from Esna (EM). Part two. Based on the drawn copy from [1100], A. Vol. I, Pl. 87.


Fig. C9. The coloured version of the Lesser Zodiac from Esna (EM). Part three. Based on the drawn copy from [1100], A. Vol. I, Pl. 87.

