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English translation

Twenty Characters Long Account of the Mayan Among the Constellations

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Abstract

This paper is devoted to the study of astronomical twenty characters long count calendar of the Maya and their compliance with generally accepted modern constellations and zodiac signs. The Mayan calendar was common in the historical times in the annual cycle of 360 days plus 5 additional days , called the Maya Haab but also contain other unique cycle - Tzolkin , which lasted 260 days. Link between the Haab and Tzolkin was carried out through a common unit of time Long Count - Vinal = 20 days = 20 kins . System only accounts Tzolkin was considered important by 20 periods of 13 days. The sequence of names in the 20- days -five day old Vinal maintained , ie , 13 days later began a new period , but the first day of the next period was the 14th of 20 five day old wine. Number 20 was a favorite for the Maya , probably because using it was convenient to keep score by the number of fingers on the hands and feet. Tzolkin , finally , shows the frequency of very long cycles - Five Period of creation for 5125.3559 years , equal to 25,627 years. It is also equal to one revolution of the Precession of the pole around the ecliptic pole . At this time, the Haab celebrated charakters-kins, constellations on the ecliptic, which were repeated in 20 days , watching at sunrise or approach , or at its zenith, at any time of the year , due to the fact that did not go after each other , as is customary in the old world , and through 10 charakters-kins , on the 11^{th} charakters-kins.

Keywords: Twenty of sign-Kins, Long count, Tzolkin, Haab, Precession, the Ecliptic, the pole of the World.

Interesting and mysterious to Europeans is the system of the Maya calendar accounts, ancient Mexican Indian plains in North America. They left us a calendar that still amazes scientists for its accuracy. Counting system, built into this calendar, finds no parallel in the Old

World. The Mayan calendar has a beginning calculus Fourth Epoch create 12 August 3114 BC, according to the theory of the Goodman-Martinez-Thompson - 13 August 3114 BC.

Riddle of the Mayan calendar is primarily in the fact that their calendar, despite the fact that he had, common in historical times in the annual cycle of 360 days plus 5 additional days, called the Maya Haab, and calculated on the same principle, as did his solar calendar people on the Eurasian continent, it also contains another unique cycle - Tzolkin, which lasted 260 days. Tzolkin was obtained from a combination of twenty weeks to 13 days.

Haab -year solar cycle of 365 days (18 to 20 days Vinal - kin plus 5 days - kin) was the basis of the seasonal calendar and allowed to live in harmony with the natural cycles. Tzolkin also served for the calculation of other, more long-term cycles, showing whole era of human existence.

Tzolkin and Haab calendar were related to the circle in which every 52 years through all the dates repeated: 18980 = 52 x 365 days (kin). At the end of each calendar circle 52 years waiting for the Mayan doomsday. This was a mystical relation to the Mayan end of each cycle.

Link between the 365 - five day old solar calendar Haab and Tzolkin 260- five day old was carried out through a common unit of time - 20 five day old wine (20 kin). Every day (kin) had its name. System only accounts Tzolkin some reason it was very important to consider not 13 Vinal 20 kin (day) and 20 periods of 13 kin (day). The sequence of names 20 days in Vinal maintained, i.e., after 13 kin (day) began a new period, but the first day of the next period was the 14th of 20 five day old wine. Turning counting system ended when, after the first 260 days of kin, having the name "Snake" with the image of "snake head" coincided with the first day of the first period.

This system accounts Tzolkin cannot be explained by known measures of time we created our ancestors on the Eurasian continent.

Clue, apparently, we should look at the northern starry sky 3114 BC, when the Mayan sages outside contacts with the Old World, created their own calendar system accounts.

Which cycles could be based Mayan calendar is so constant that accurately predict the time away in the future and the past? What was the measuring unit in the calculations of the Maya?

Most permanent zone in the starry sky in all known history of mankind is the pole of the ecliptic, which is in the northern starry sky near the "head" of the constellation Draco. Ecliptic pole for us is projected to a point equidistant from all points of the ecliptic - apparent annual motion of the Sun as a result of the earth's orbit around the Sun. Motion of the Moon and planets also observed near the ecliptic. Ecliptic pole is projected in the constellation Draco, while the Sun is in the modern part of our Galaxy. The solar system revolves around the

Galactic Center about 180-200 million years, that is, passes about 500 thousand years old in 1 º. For the alleged history of mankind, a maximum of 5 million years, the solar system took place in the galaxy of about 10 º. Thus, the ecliptic pole all the time projected in the area around the "head" of the constellation Draco to observers on Earth.

Interestingly, for many people, this area in the starry sky was associated with a symbol of the "head" snake or dragon, for example, the Indo-European peoples of Siberia and south-east Asia. Scientific data ancestors of American Indians came about 20 thousand years ago from Siberia across the Bering bridge connecting once Eurasia and North America. Means that already in antiquity, starry area near the ecliptic pole was designated peoples of Eurasia symbol "head" snake or dragon and duration of the year at the same time, could have been regarded to 360- 5- plus -plus days as the solar year and considered on the Eurasian continent . But after moving to the continent of America Indians introduced new enhancements to the calendar system account, in particular, added system Tzolkin 260 days (kins).

7200 Tzolkin 260 kins fit into the era of creating lasting 1,872,000 kins (days), which is based on years of power 5125.3559 years or 5125 years and 130 days. By mystical notions Maya Period of creation must end of the world. Despite the supposed end of the world, such Ages creation in the Mayan calendar five in one big loop. December 21, 2012 ended the fifth Period of creation and a new cycle of the five Ages created etc.

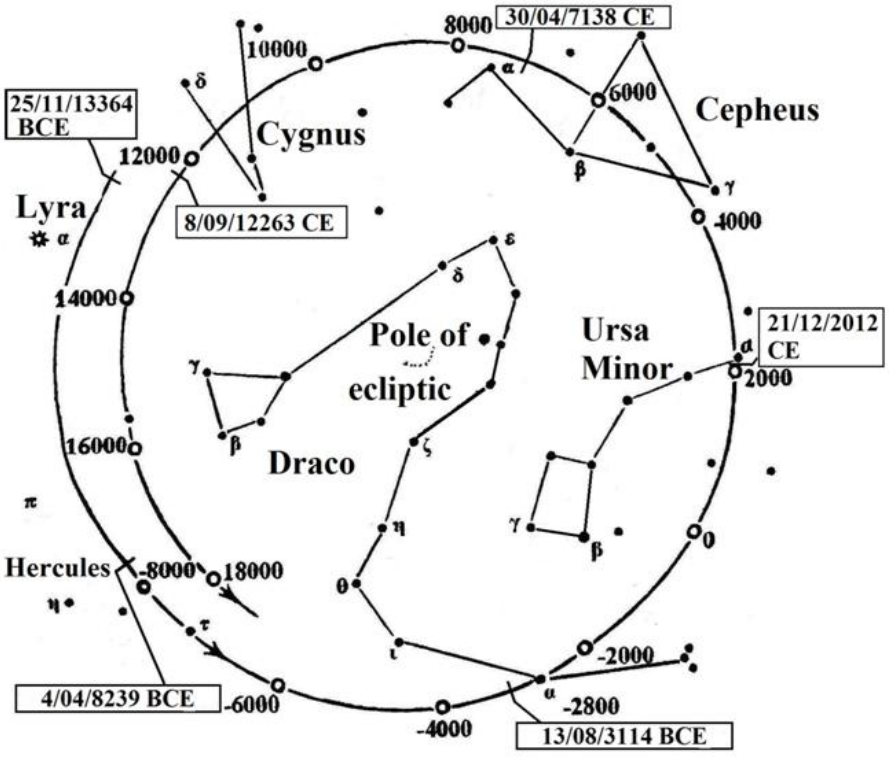

Figura 1. Precession with the imposition of the initial five dates Ages Mayan creation [4, p. 40].

Five Ages of creation fit into the pole precession cycle of about 26 thousand years. Precession of the pole describes a circle in the starry sky, in the center of which stands the ecliptic pole near the "head" of the constellation Draco (Fig. 1). Peace Pole changes its location among the stars and the ecliptic pole is observed in the same area near the "head" of the Dragon. It was convenient to take as the origin of the reference frame in the calendar [4].

Time unit of the Long Count Mayan calendar - 20 five days old "Vinal". Every day - "Kin" - has its own name, as was noted long ago, this for some constellations, like the Western "signs of the Zodiac," but still not defined line marks the star - kin groups in the sky, and such studies are ongoing [3, p. 11, 32].

Number 20 for the Mayan ancestors was a favorite, probably because using it was convenient to keep score by the number of fingers on the hands and feet. It also formed the basis of the number of all the Mayan calendar as a 20 - five day old "Vinal" of the Long Count, which allows you to combine the global calendar Tzolkin, lasting for 260 days and the civil calendar Haab duration of 365 days (360 days plus 5-6 days of additional in the days after the vernal equinox, called the days "Vayeb"). At the same time the Long Count to 20 days in the "Vinal" is not broken, the names of days invariably repeated after 20 days, "kin".

Table 1. The Mayan calendar (long count) days of 20 characters - "kin."

Symbol	Name of the day	Translation	Symbol	Name of the day	Translation
1	Imish	Sea creature – alligator	11	Chuen	Monkey
2	Ik	Air	12	Eb	Herb
3	Akbal	House	13	Ben	Reed
4	Kan	Mais - lizard	14	Hish	Jaguar
5	Chik-an	Snake	15	Men	Eagle
6	Kimi	Death	16	Kib	Hawk - owl
7	Anik	Deer	17	Kaban	Earthquake
8	Lamat	Rabbit	18	Etsnab	Blade
9	Uluk	Rain	19	Kavak	Storm
10	Ok	Dog	20	Ahau	Lord

The following are descriptions of 20 characters , " kins", presented by R. Keizer [3] taken them from the "Paris Code" [3, p. 18, 38-50] and processed with the proposed interpretation of the signs of the constellations known to us. We express our great appreciation to R. Keiser, but the study in Astroprograms, sometimes there are misunderstandings. The most interesting were the days: 7 Anik and 8 Lamat, and behind them the rest of the system lined up to 20 signs-kins Maya.

1 - Imish - Sea creature -Alligator (Dragon Head ?). In ancient texts written: "This day the Lord made the August 12 3114 BC. When the First Father sailed his canoe alligator across the void to inflate first ingle Heaven ... The moon has not been created. 0 Baktun. 0 Katun. 0 Thun. 0 Vinal. 0 Kin. "This day Alligator. As emergent monster looks of calm waters , and you keep your eyes open to see the chance that you will be presented" [3, p. 38].

Enjoying a starry sky on the specified date at an astronomical program, for example, StarCalk 5.72 [1]. In the above program dating conducted on the Gregorian calendar as in future and the past. At the same time, one day is added in a leap year every 4 years, but last time when there was no account in the Gregorian calendar does not adjust for the cancellation of one leap day in 400 years. In addition, in the Gregorian calendar accumulates amendment to repeal another leap day through 3280 years [5], which has not yet been made, because the Gregorian calendar is much younger, causing among scholars debate about the start date Mayan calendar: 12 or 13 August 3114 BC. Therefore, to calculate correctly the more ancient date, it would be better just to know the difference in days at the time of the equinox today compared to years of historical time calculated by use astronomical program. Find the program StarCalk 5.72 date day of the autumnal equinox in 3114 BC, when the sun passes the longitude and latitude 12:00 0 º - 17 October is the date, then the difference in days between the modern and the September 20 equinox equinox 3114 BC for 27 days. This difference in days will need to be taken into account for other dates 3114 BC. In our time, from August 12 to the autumnal equinox takes 40 days, so subtract 17 October 40 days - get on September 7. Other programs can get another date, here the main thing in any program to find the difference in days at the time of the equinox. Configuring coordinates, for example, Mexico City: 20,93 º N and -89,63 º W.

Please note that the images presented in this paper referred to the sky astronomers accepted tradition - the observer stands with his back to the north - facing south, so all the pictures East - left West - right.

See that on this day, August 12 (September 7), 3114 BC before sunrise "head" of the constellation Draco dropped below the horizon, the bottom star (eyes?) were already below the horizon, i.e. above the surface waters of the world symbolic denoting the starry sky and the constellation Orion in that time came up to the zenith - almost over the head of the observer (Fig. 2). Sign on Imish Ecliptic probably coincides with the boundary of the constellations Gemini and Taurus constellation Orion (Fig. 22) - elsewhere in the description of the third sign - kin Akbal, Fireplace Hearth Heaven called Orion. Perhaps "Alligator", swim up to the surface waters - Dragon constellation, swim to the horizon "to inflate first ingle Heaven" before

sunrise. In addition, on the border signs Gemini - Taurus is Galactic node - crossing the Galactic Equator Ecliptic - important point on the Ecliptic, deemed worthy of the beginning of the calendar account. The moon had not yet been established, it is obvious in the sense that it has not yet been initiated by her detailed account of the new calendar until it was time of the new moon - the specified date was 14 lunar day before the new moon had 16 days.

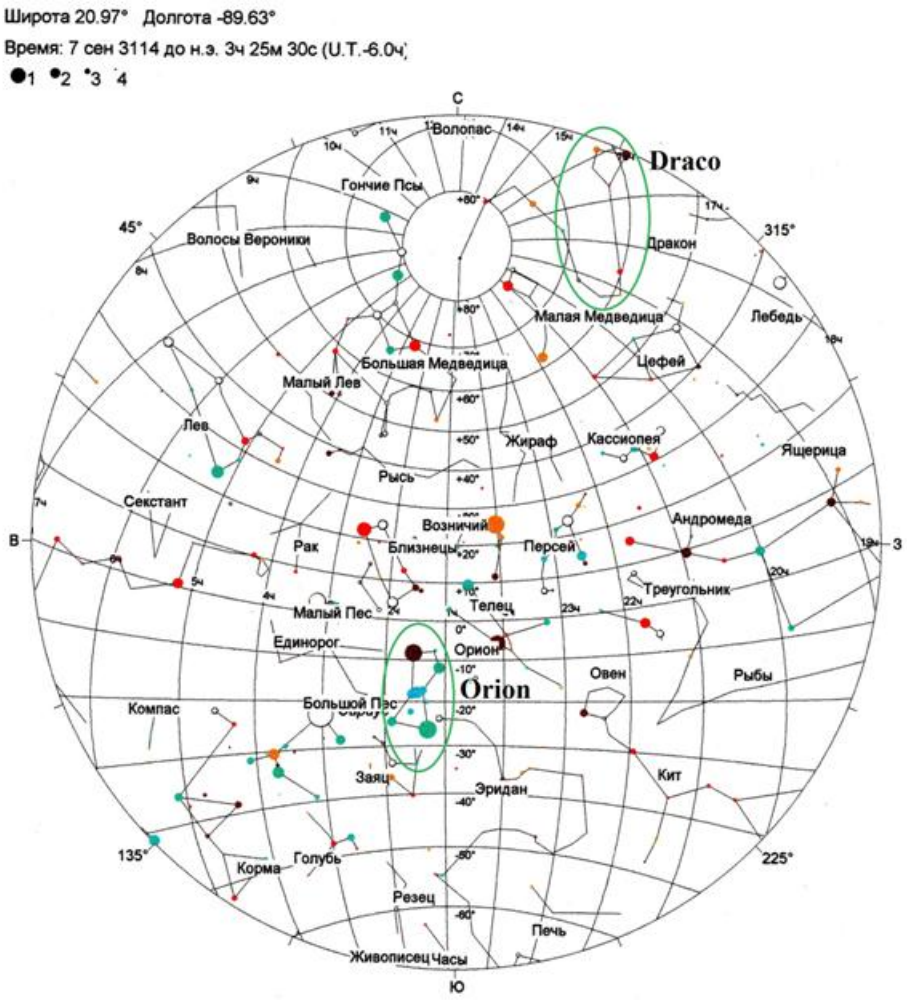

Figura 2. Starry Sky 12 (13) August, 3114 BC. Sign **1 - Imish - Sea creature - Alligator** on the Ecliptic probably coincides with the boundary of the constellations Gemini and Taurus constellation Orion. When these constellations at the zenith to the horizon fit the "head" of the constellation Draco, as if ready to emerge from the stellar ocean waters of the world.

2 - Ik - Air. "This day the Lord made the 9 February, 3113 BC, when the First Father raised Rai, raised the sky and put the Milky Way in its tail" [3, p. 38].

Ik - sign Maya, probably located at the intersection of the Milky Way and the ecliptic, where the Galactic Center is projected in the constellation Sagittarius (Fig. 22). On the ancient Eurasian symbolic images of the sky in this place Ecliptic "head Snake biting its tail". Apparently Maya here also started the "tail" of the Milky Way and rising sign Eek the impression that the Milky Way is on the "tail": the constellations of the Milky Way - Sagittarius, Scorpio, Centaur, pump, compass - were almost perpendicular to the horizon (Fig. 3).

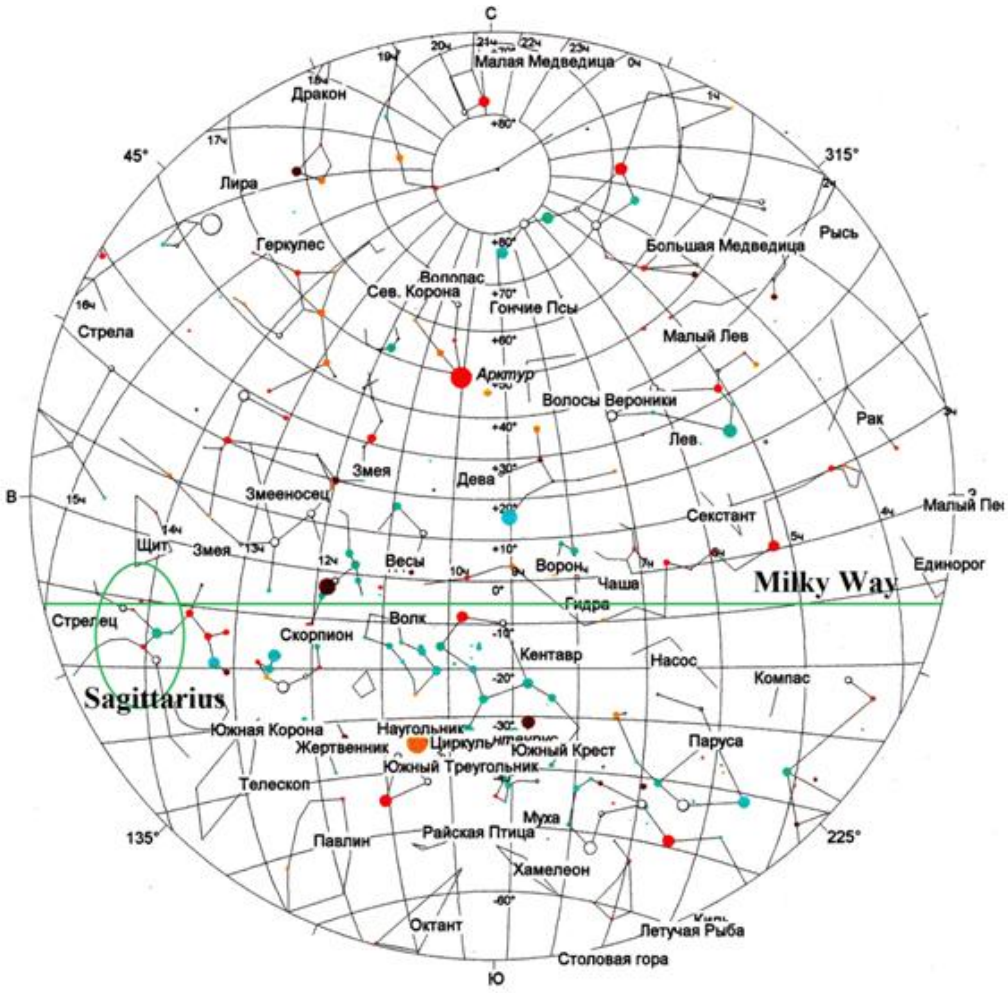

Figura 3. Starry Sky 9 February, 3113 BC. Sign **2 - Ik - Air**, Maya is probably located at the intersection of the Milky Way and the zodiacal circle, where the Galactic Center is projected in the constellation Sagittarius. When the sign goes Eek the impression that the Milky Way as it stands at the "tail" is almost perpendicular to the horizon.

3 - Akbal - House. "This day occurred after 542 days after the First Father lit fire in the hearth of Orion when he rose to create your North house - great void in the center of the universe " [3, p. 39].

Sign Akbal probably worth close to the famous constellation Cancer us (Fig. 22), which is February 6, 3113 BC stood at the zenith after sunset . Description Akbal coincides with a picture of the line of sight from the constellation Cancer at its zenith in the polar region of the world to the North Pole, near the north which in that era was the Pole Star Alpha Draconis - perhaps in the form of the Northern House, Great void in the center of the universe (Fig. 4).

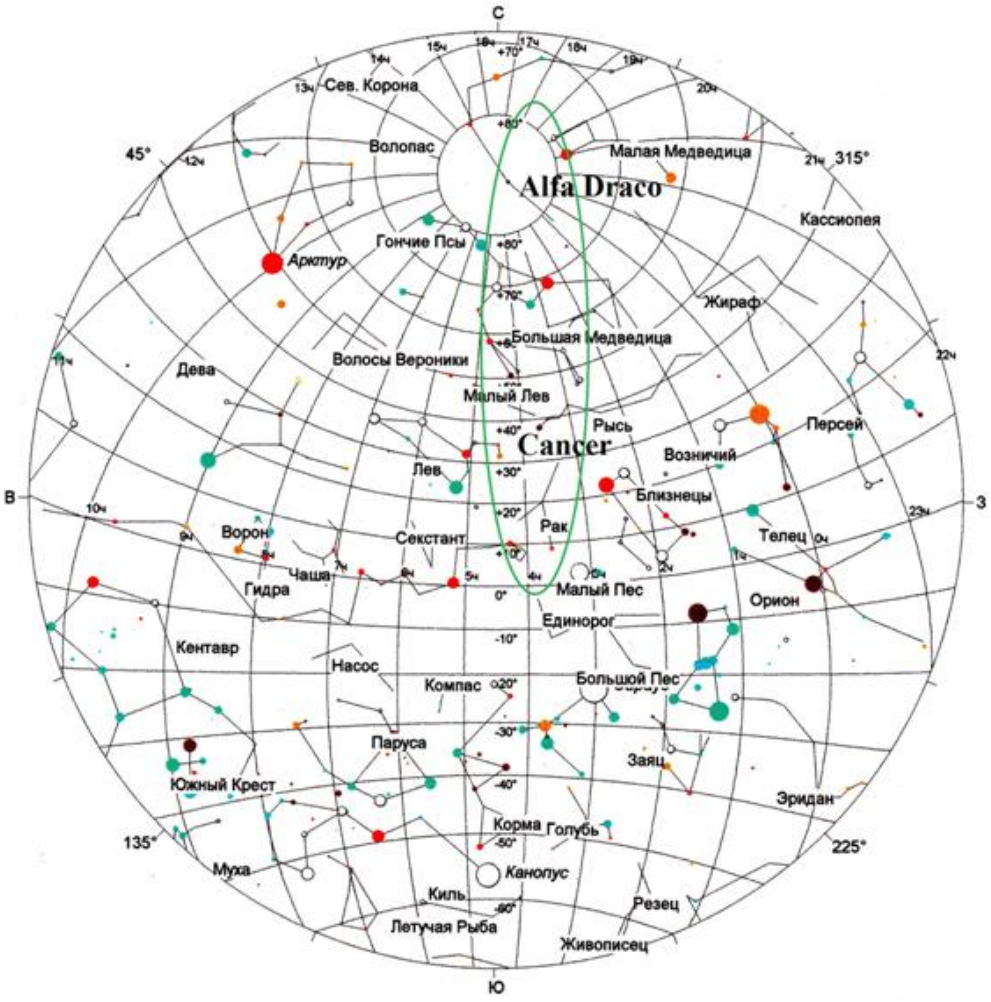

Figura 4. Sign **3 - Akbal - House** probably worth close to the famous constellation Cancer us that on February 6, 3113 BC stood at the zenith after sunset. Great emptiness and Nordic House could designate polar region near the North Star Alpha Draconis.

4 - Kan - Mais - Lizard. "This day the Lord made. It was August 12, 3114 BC, when the first fire was inflated and lit up for the first time the Orion Nebula. Of ash and smoke arose Maize God. He rose up from the cracked shell turtles, amphibians from the back. Itsamna - Heavenly Lizard watched his revival of " [3, p. 40].

Sign Kan may corresponds to the known constellation Capricorn us (Fig. 21), which is 12 (13) August, 3114 BC stood at the zenith after sunset. Outlines the constellation Capricorn may resemble amphibian - back turtles. At the same time, above the constellation Capricorn at its zenith was the "head" of the constellation Draco, which is like "watching" the birth of God Mais (Fig. 5). That is, Heavenly Lizard, it is likely we know constellation Dragon (aka Alligator?). Orion Nebula in the day could be seen later, when the constellation of Orion and rose before sunrise rose to the zenith.

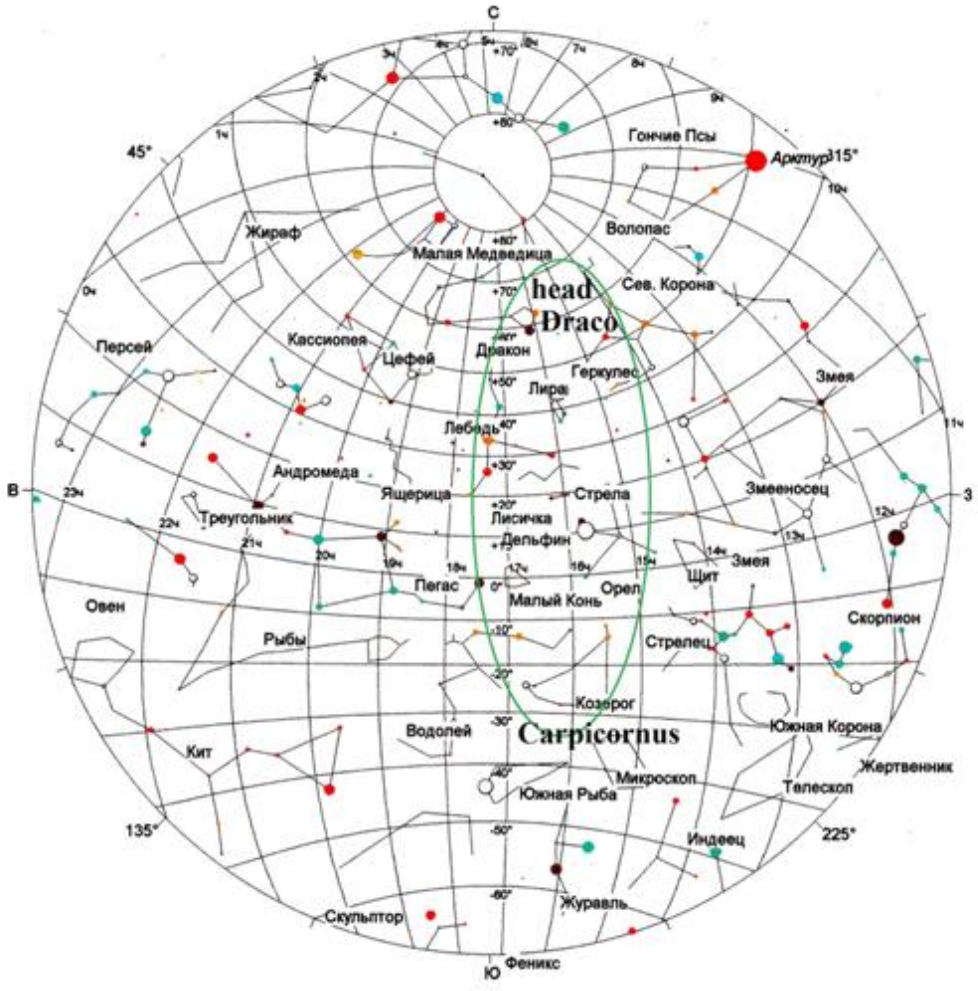

Figura 5**. Sign 4 - Caen - Mais - Lizard** possibly corresponds to the known constellation Capricorn us that 12 (13) August 3114 BC stood at the zenith after sunset. At the same time, the "head" of the constellation Draco was at its zenith, as if Heavenly Lizard watched the birth of Mais.

5 - Chik -an - Snake. "This day the Lord made. And it was August 12 3114 BC, when God was born of basalts Mais Orion. Two wild pigs Gemini immediately began to copulate. 180 days later, there were the other signs of the zodiac, suddenly stretched out over a huge back biceps Snakes " [3, p. 40].

Sign Chik -an, perhaps corresponds to the lower part of the constellation Leo is known to us, together with the constellation Hydra located below (Fig. 22), which rises in the east before sunrise 12 (13) August, 3114 BC, at the same time Gemini constellation is at its zenith (Fig. 6). On the border of the constellations Taurus and Gemini is one of the two Galactic nodes in which occur crossing the Galactic Equator with the Ecliptic (two-headed snake - Ecliptic?). At this time, half were visible signs of the Ecliptic. Accordingly, the second node is visible through the Galactic 180 days in February, with the whole set of other constellations of the Ecliptic, which are not visible in the summer, but can be seen in the winter, the night sky.

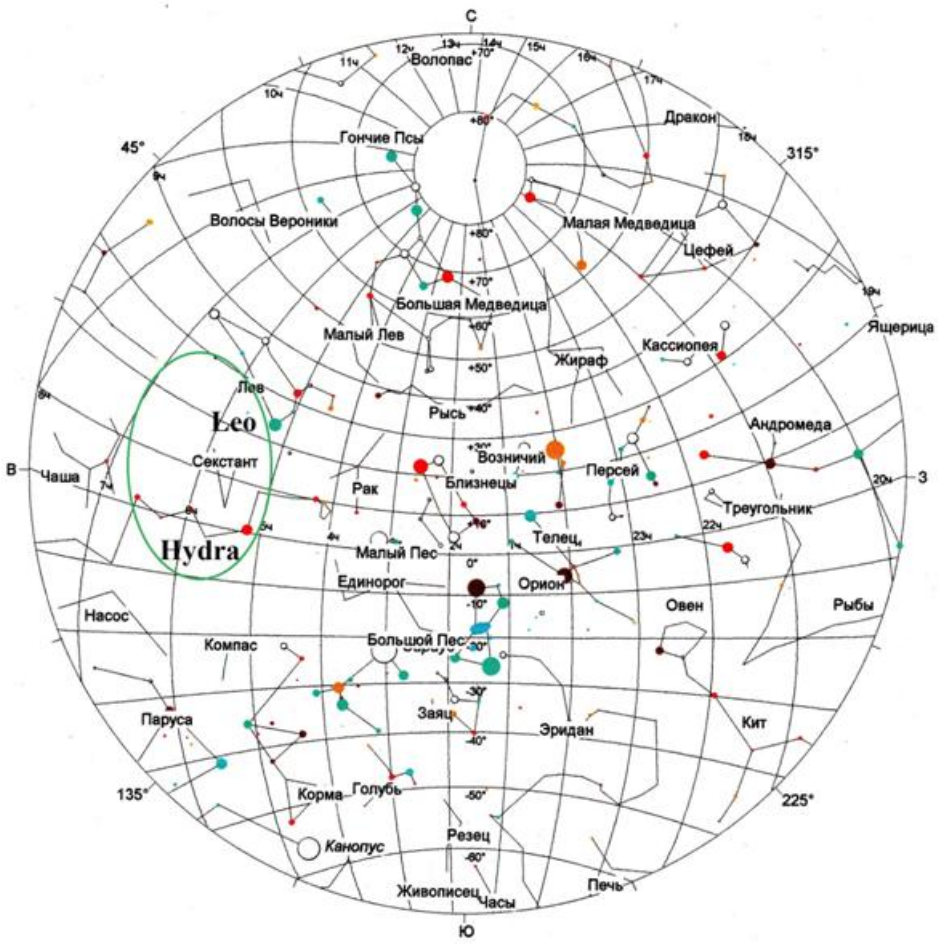

Figura 6. **Sign 5 - Chik-an - Snake** possibly corresponds to the lower part of the constellation Leo is known to us, together with the constellation Hydra located below, which rises in the east before sunrise 12 (13) August, 3114 BC.

6 - Kimi - Death. "This day the Lord made. And it was August 12 3114 BC, when the First Father laid out in the void of the Black Sky dreamland. His canoe crossed this huge void on the river, which we call White snake bone, to his place of rebirth, just finished Thirteen cycles" [3, p. 41].

Kimi - sign may correspond to known constellations Aquarius us or Pegasus (Fig. 22) that 12 (13) August 3114 BC is at its zenith after sunset (Fig. 7). It is the completion of the thirteenth cycle at a specified date, i.e. likely that the previous cycle duration in the Tzolkin 13x20 = 260 days ended and a new cycle of the Tzolkin. The Mayas, usually beginning of the cycle is indicated last date of the previous cycle. White snake bone obviously symbolizes the Ecliptic and all 20 signs - kins to her.

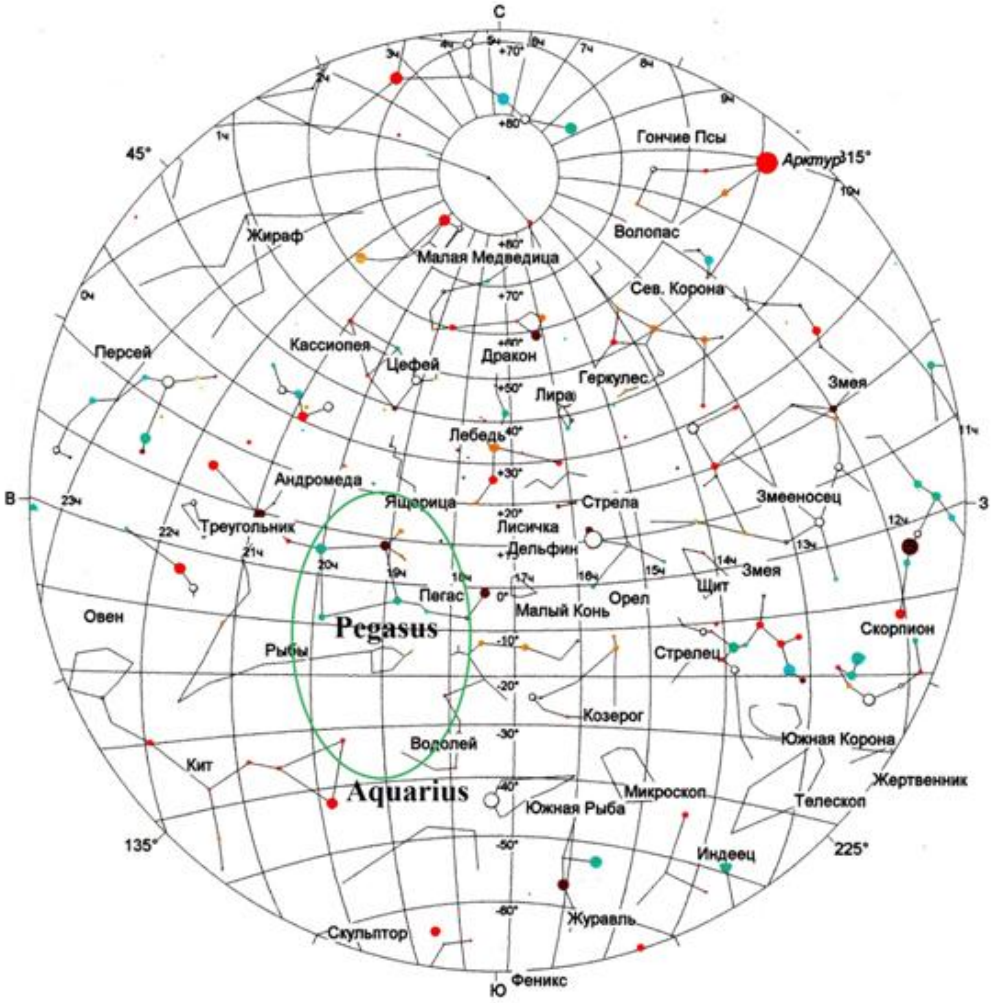

Figura 7. Sign **6 - Kimi - Death** may correspond to known to us or Pegasus constellation Aquarius, which 12 (13) August, 3114 BC is at its zenith after sunset.

7 - Anik - Deer. "This day the Lord made . And it was on February 9, 3113 BC, when the First Father has set in motion Zodiac as his last action in creation. When the stars are in motion, antlered deer (Aquarius or it was Pegasus?) First rose from the East and led the. On his heels followed a high full moon" [3, p. 42].

High for this date full moon after sunset rising in the east after the constellation Virgo, which is the location of their major stars like animal with a high neck (Fig. 8). Constellation Aquarius and Pegasus at the time were not yet visible - they rose in the east at dawn the next day, when the full moon and the constellation Virgo is willing to go below the horizon in the west.

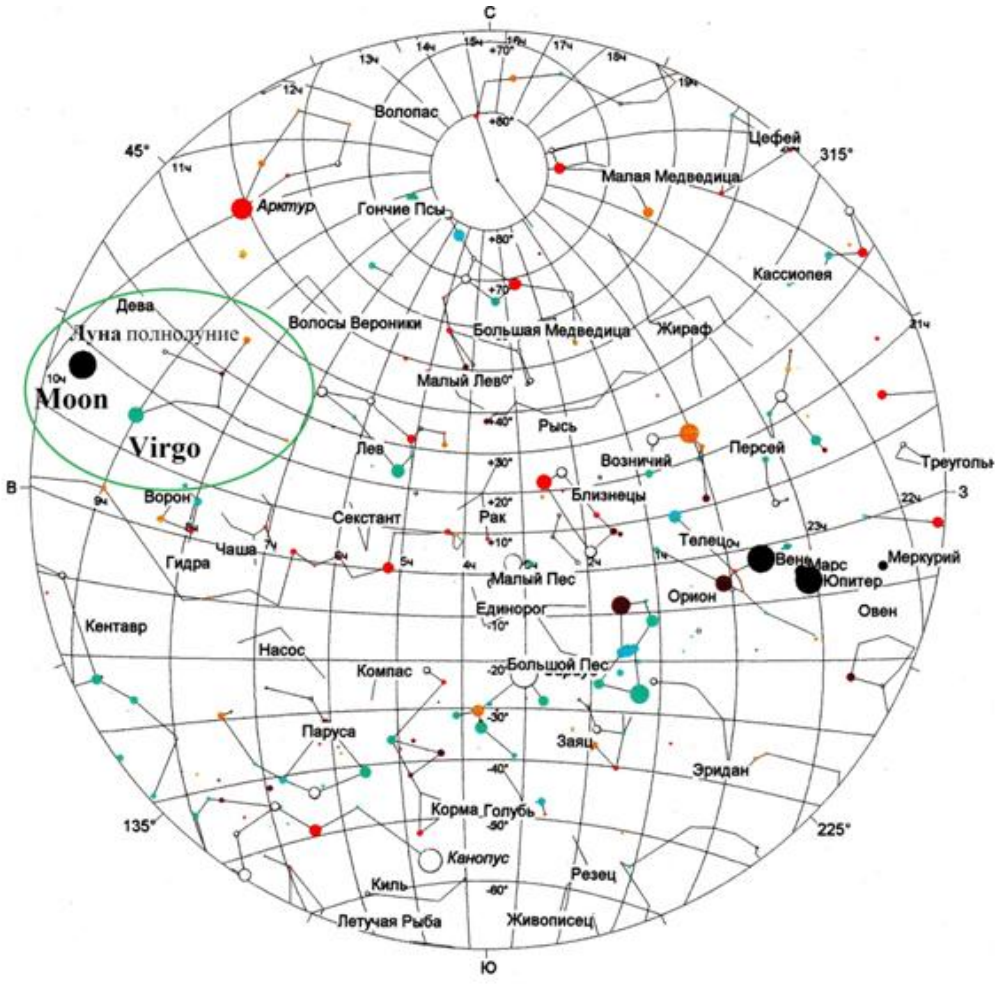

Figura 8. Sign **7 - Anik - Deer** manifested when a specified date, February 9, 3113 BC, high full moon after sunset rising in the east after the constellation Virgo, which is the location of their major stars like a deer - an animal with high neck.

8 - Lamat - Rabbit. "This day the Lord made. And it was through the 360 days after the revival of God Maisa. It was 360 days after the start of his Fifth Creation. It was August 7, 3113 BC, when the stars of the Rabbit (our constellation Leo?) Rose in the east at sunset to mark the completion of the first 5200 years. Moon could not be seen anywhere else" [3, p. 42].

For this date, August 7, 3113 BC, in the east at sunset near ascended two constellations - Aries and Triangle. The outlines of the two constellations, indeed, like a rabbit: Aries - body and legs running Rabbit Triangle - ears (Fig. 9). The moon was not visible because it was rising two hours after. Sign Leo ascended much later - in the morning, before sunrise.

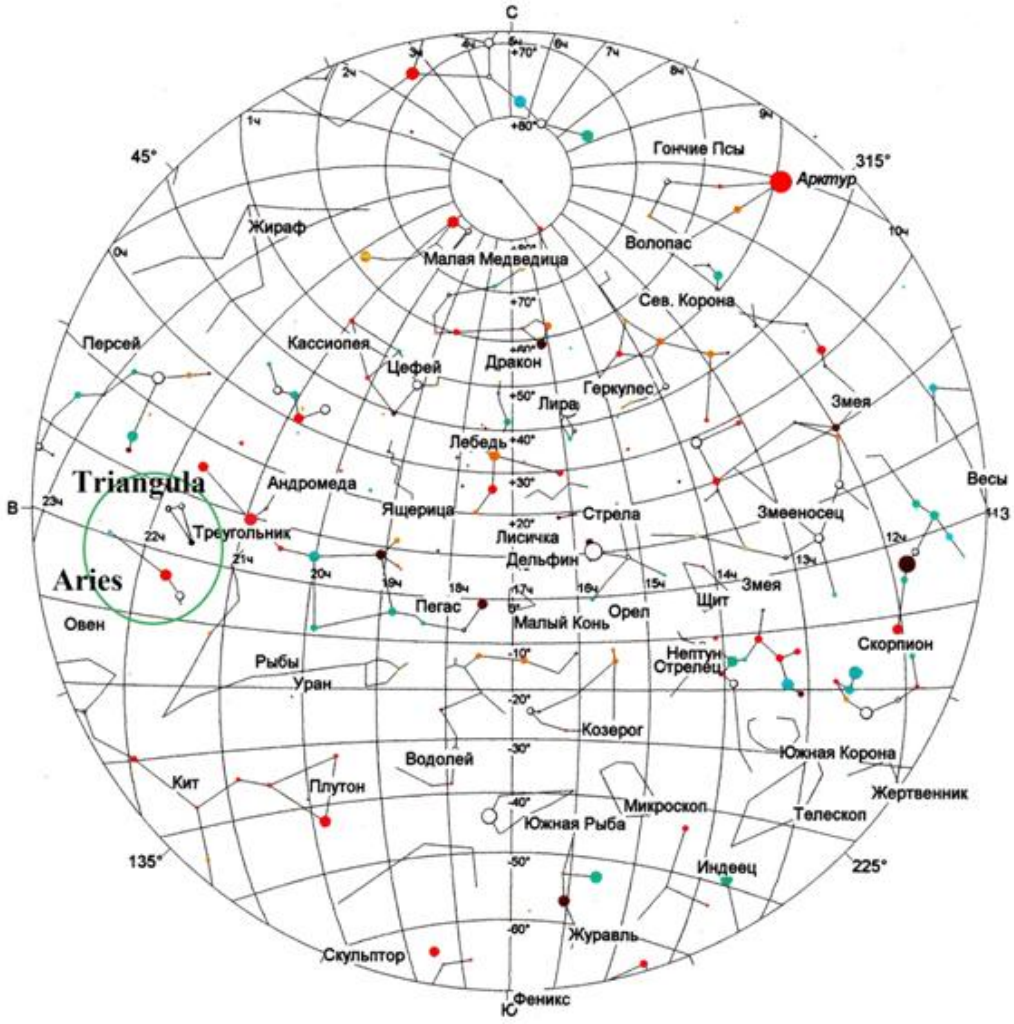

Figura 9. Sign **8 - Lamat - Rabbit** manifested when a specified date, August 7, 3113 BC, in the east at sunset near ascended two constellations - Aries and Triangle. The outlines of the two constellations, indeed, like a rabbit: Aries - body and legs running Rabbit Triangle - ears.

9 - Uluk - Rain. "This day the Lord made. And it was July 25 3113 BC. It was a day when the rain stopped creating for the first time and the first time the rain gods rested. When the sky was clear of clouds, Zodiac stretched above his head at right angles to the Milky Way, forming a cross. This is called cross - Uakakh Chan - The Tree of Life. A first quarter moon" [3, p. 43].

Sign Uluk possibly corresponds to the known constellation Libra us (Fig. 22). For this date, July 25, 3113 BC. Uluk became visible in the west after sunset , the Moon was in the first quarter. At the same time zodiac (ecliptic constellations as a 20- character - long count of kin) in the west was established perpendicular to the Milky Way, forming a cross - the Tree of Life (Fig. 10).

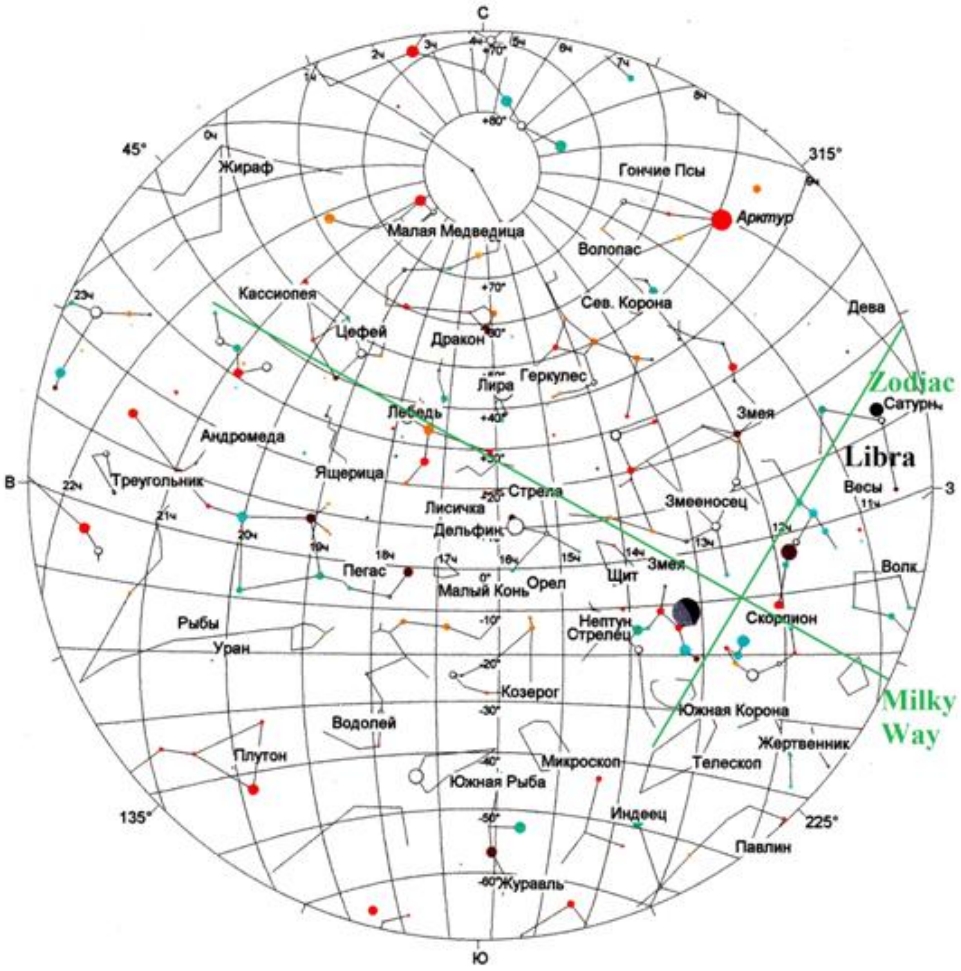

Figura 10. Sign **9 - Uluk - Rain** - The Tree of Life, perhaps consistent with the known constellation Libra us. For this date, July 25, 3113 BC Uluk, became visible in the west after sunset, the Moon was in the first quarter. At the same time zodiac (ecliptic constellations as 20 characters long count) in the west was established perpendicular to the Milky Way, forming a cross - the Tree of Life.

10 - Ok - Dog. "This day the Lord made . And it was September 6 3113 BC, when the Dog Star - the constellation Virgo (?) Ascended to the sky for the first time and after a period of clear sky rains returned. Moon again entered a new phase" [3, p. 44].

In the east, after sunset, September 6, 3113 BC almost completely unknown to us rose constellation Taurus. Perhaps some star sign Taurus showed Dogs Maya representations (Fig. 22, 11). Moon entered the third phase and has risen 1.5 hours after sunrise sign Ok - Dogs. Virgo constellation then rose in the morning, before sunrise.

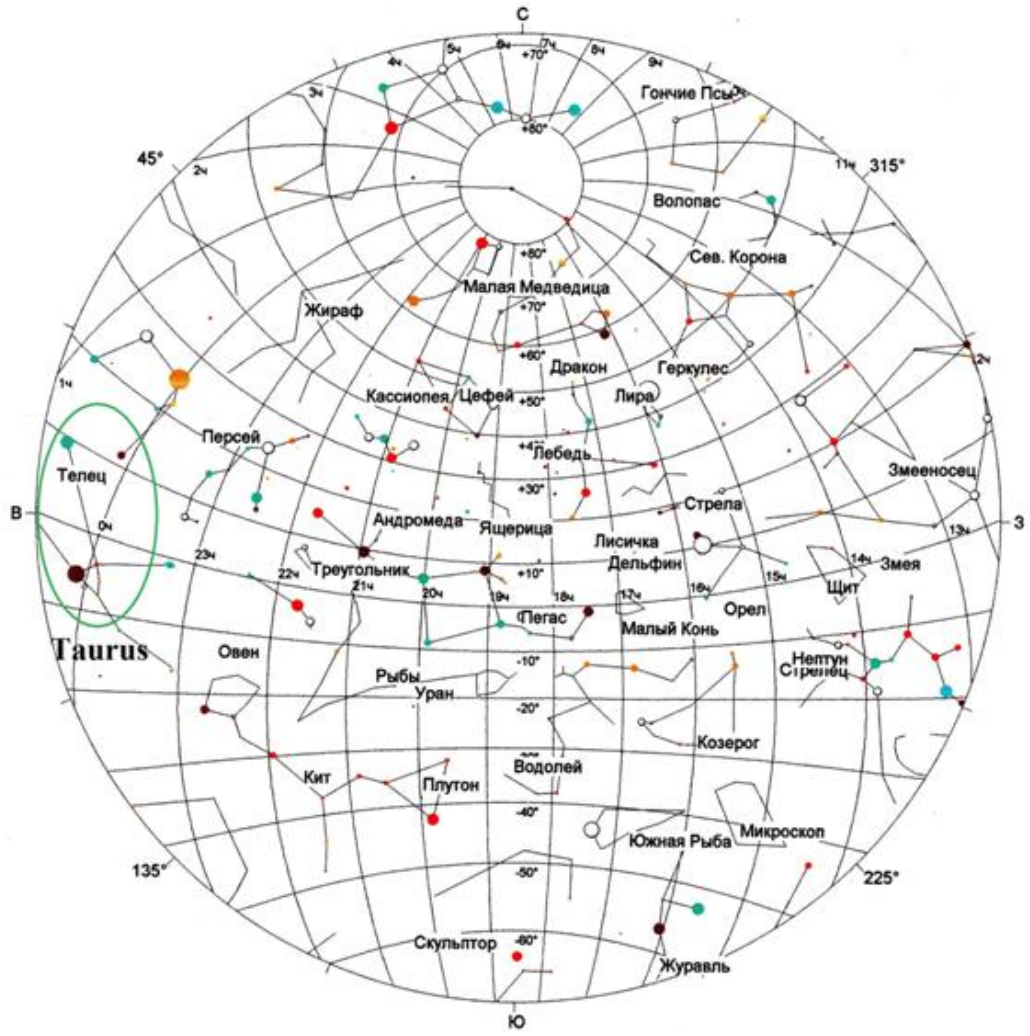

Figura 11. Sign **10 - Ok - Dog** manifested when in the east after sunset, September 6, 3113 BC almost completely risen constellation Taurus. Perhaps some star sign Taurus showed Dogs representations Maya.

11 - Chuen - Monkey. "This day the Lord made. It was a very, very long time - during the Second Period of creation, when the gods made a prediction. It was long, very long before August 12, 3114 BC, when the gods have predicted that open secret how to create beings who can call them by name. These are the people they create from the ashes. Cracked wooden people. Gods sent giant streams to wash their mistakes. But Wooden people swam and survived to this day in the form of the Apes" [3, p. 44].

Second Period of creation lasted from April 4, 18489 BC until November 25, 13364 BC [4, 5]. It actually was a very long and approximately when the expected settling of America, possibly floating on rafts people. Sign Chuen probably located on the border of the constellations Sagittarius and Scorpio, where the Centre is located in the Milky Way Galaxy (Fig. 22, 12).

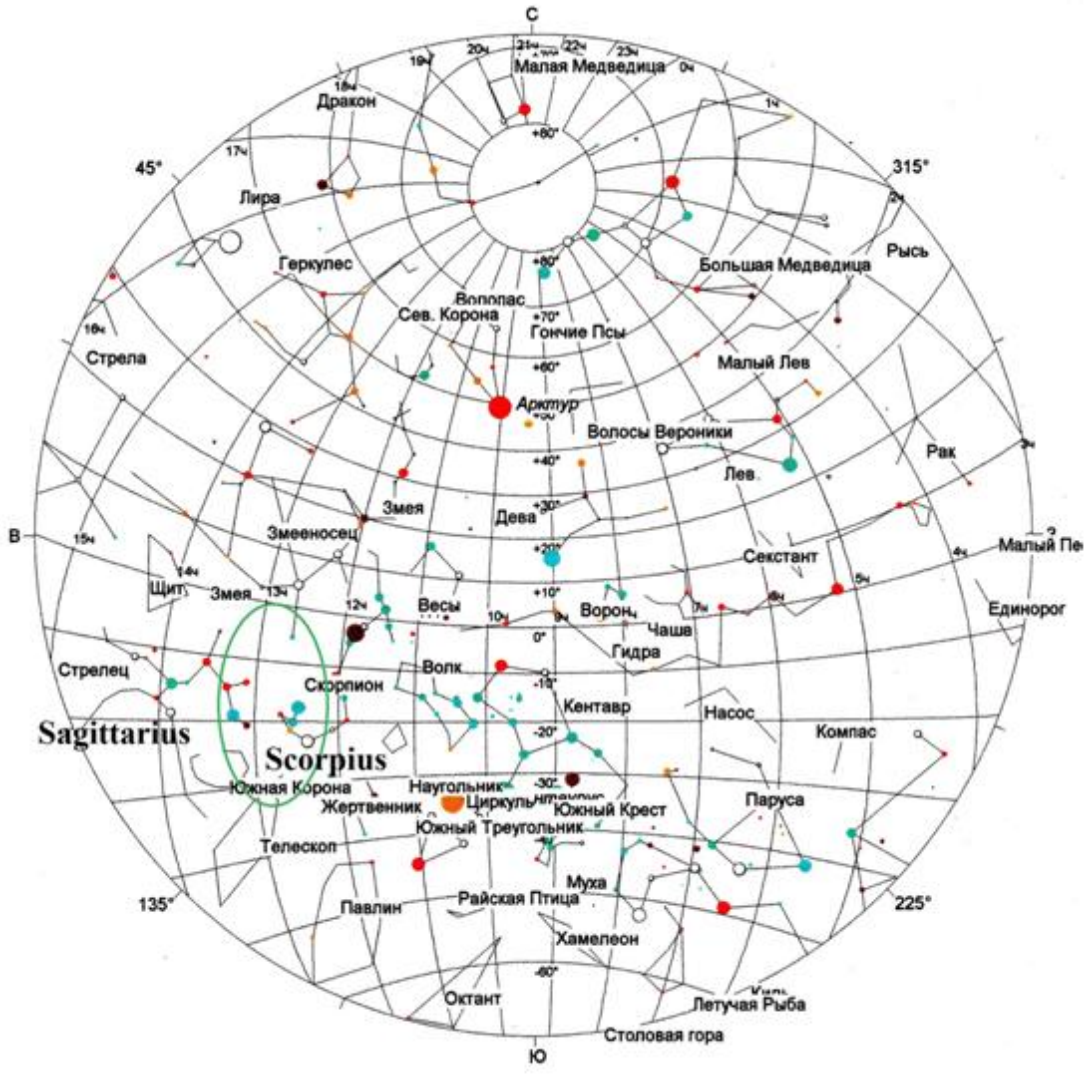

Figura 12. Sign **11 - Chuen - Monkey** is probably on the border of the constellations Sagittarius and Scorpio, where the Centre is located in the Milky Way Galaxy.

12 - Eb - Herb. "This day the Lord made. And it was February 8, 3113 BC, on the day when the sky turned up" [3, p. 45].

Ab sign may correspond to the Ecliptic constellation Gemini, which is one of the Galactic nodes. Here is projected constellation Canis Major with one of the brightest stars in the sky - Sirius, near Orion, about which in Maya texts spoken of as the Hearth Heaven (Fig. 22, 13).

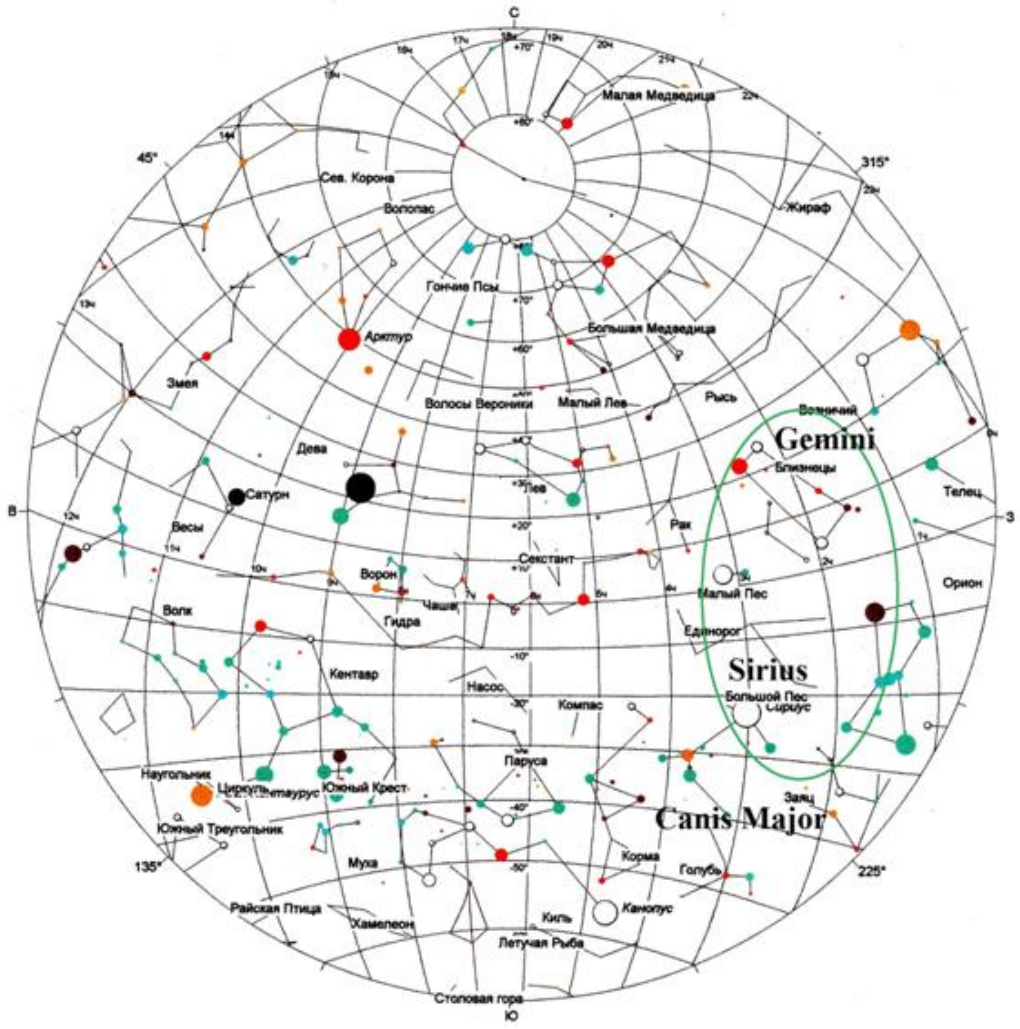

Figura 13. Sign **12 - Eb - Herb** possibly corresponds to the boundary of the constellations Gemini and Taurus, where one of the Galactic nodes. Here is projected constellation Canis Major with one of the brightest stars in the sky - Sirius, near Orion, about which in Maya texts spoken of as the Hearth Heaven.

13 - Ben - Reed. "This day the Lord made. It was August 12, 3114 BC, when the gods of the Aztecs created the sun, moon and stars. Reeds was named the first year "[3, p. 46].

Sign Ben possibly corresponds to the boundary of the constellations Sagittarius and Capricorn (Fig. 22, 14). In a sign of the specified date Ben was at the zenith after sunset, before the sign 4 - Kan. Aztec gods created the sun, moon and stars 12 (13) August, 3114 BC - Likely began to celebrate their movement through the newly established calendar account.

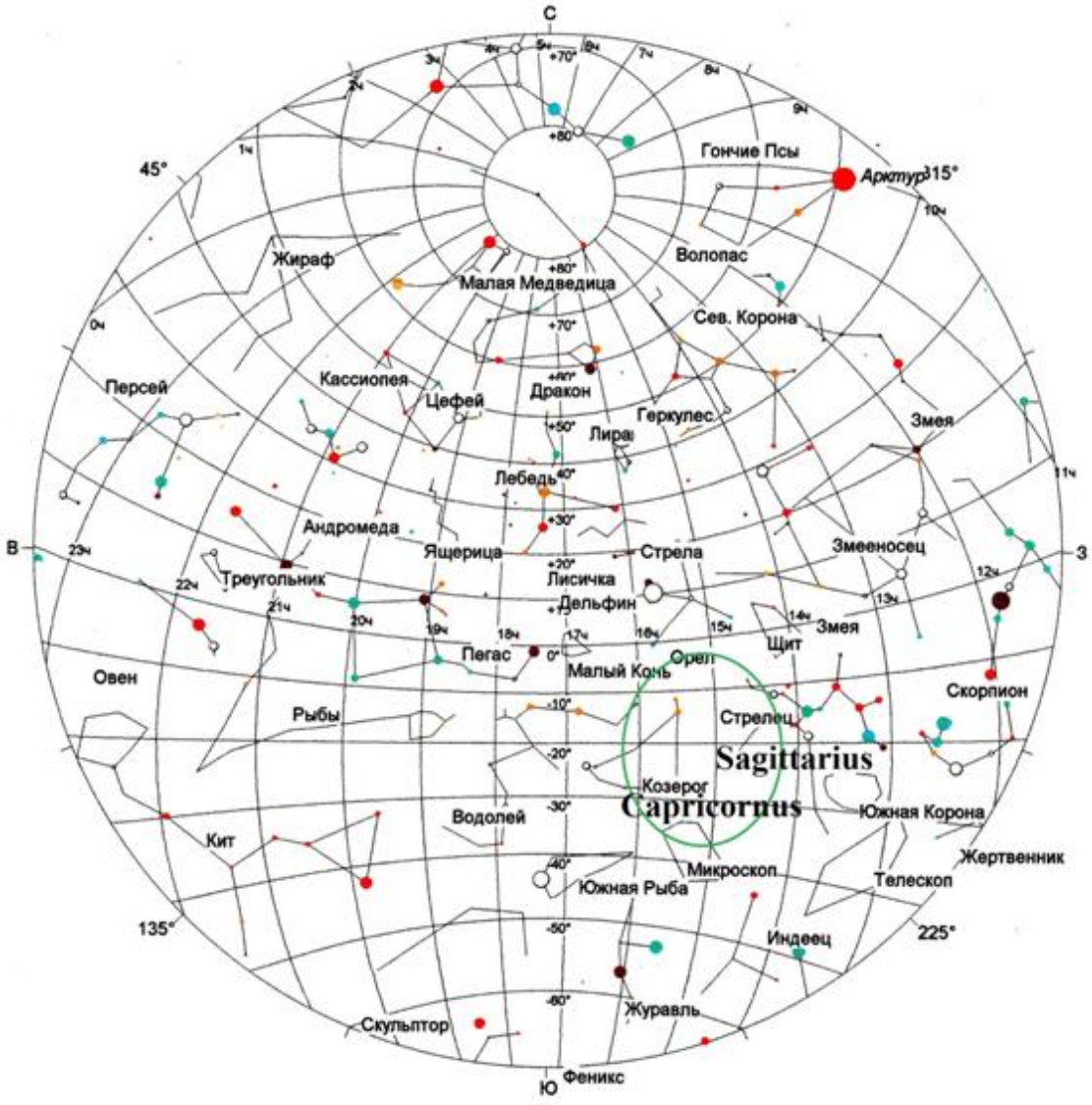

Figura 14. Sign **13 - Ben - Reed** possibly corresponds to the boundary of the constellations Sagittarius and Capricorn. In a sign of the specified date Ben was almost at its zenith after sunset.

14 - Hish - Jaguar. "This day the Lord made. And it was August 12, 3114 BC, when the three crossed by canoe from Alligator dark skies to light the hearth of Orion. It was the first day of creation, when the three crossed the sky. Itzamna - first shama, ramp and Jaguar - that's who laid the first three stones" [3, p. 46].

Hish sign projected on the "head" of the constellation Leo (Fig. 22, 15). In the specified date 12 (13) August, 3114 BC "Three crossed the dark sky", most likely the night sky to ignite before sunrise Hearth Heaven. This was already mentioned in the information for the sign Kan when born Mais God and Heavenly Itsamna pangolin ("head" of the Dragon) watched his birth. But there were Itsamna Kan and at its zenith after sunset, and here before sunrise, Hish (constellation Leo) rises in the east, Itsamna ("head" of the Dragon) comes under the horizon in the north, while Pisces and Andromeda sets in the west. Perhaps Scat projected somewhere in the constellations Pisces and Andromeda.

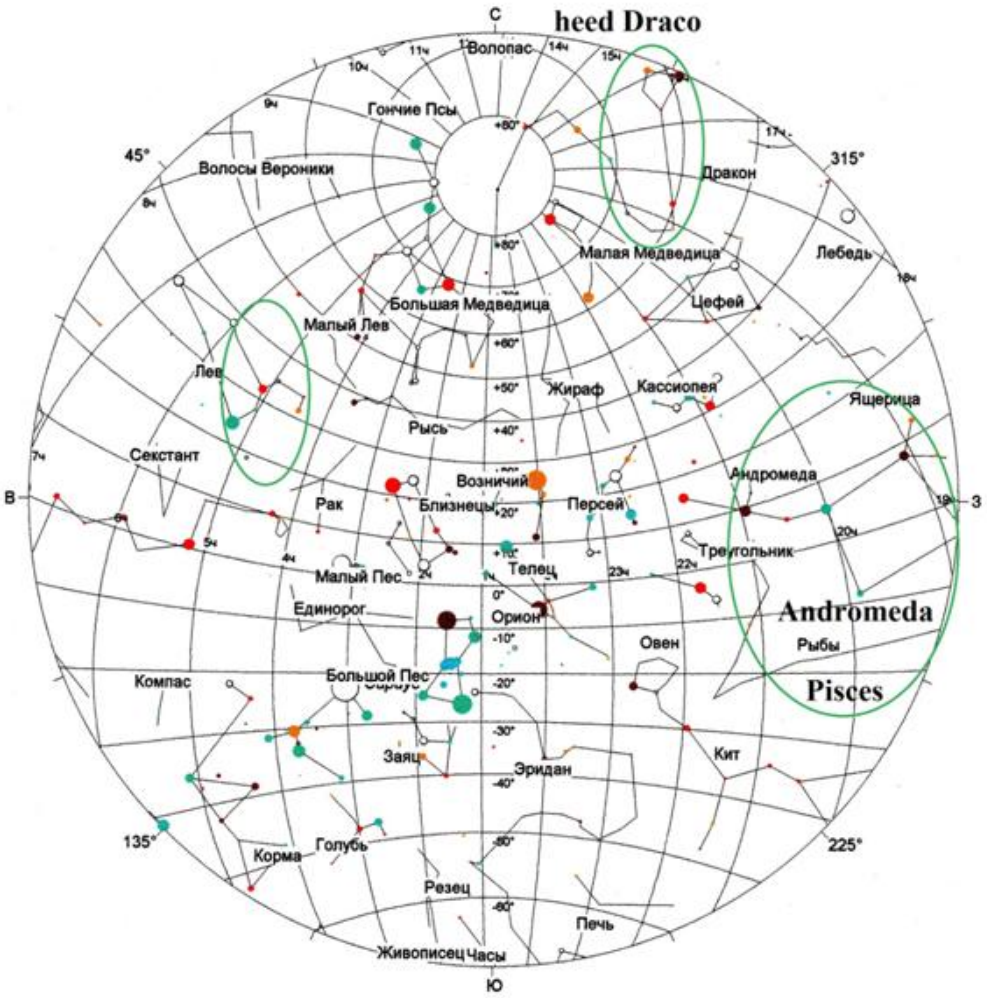

Fig. 15. Sign **14 - Hish - Jaguar** projected on the "head" of the constellation Leo. 12 (13) August, 3114 BC "Three crossed the dark sky" before sunrise: Hish (constellation Leo) rises in the east, Itsamna ("head" of the Dragon) comes under the horizon in the north, and Stingray (possibly constellation Pisces or Andromeda) visit the West.

15 - Men - Eagle. "This day the Lord made. It was August 12 3114 BC, when the Aztecs left Atslan and set off in search of a sign that their gods had promised to give them at the appropriate time and in an appropriate location. 4439 years later, they saw this sign: eagle sitting on a cactus devouring a snake. It happened in 1325 BC in the swamp, overgrown with reeds. And this place was built the city of Tenochtitlan "[3, p. 47].

Men sign is projected onto the constellation Aquarius, next to the sign 4 - Kan (Fig. 22, 16).

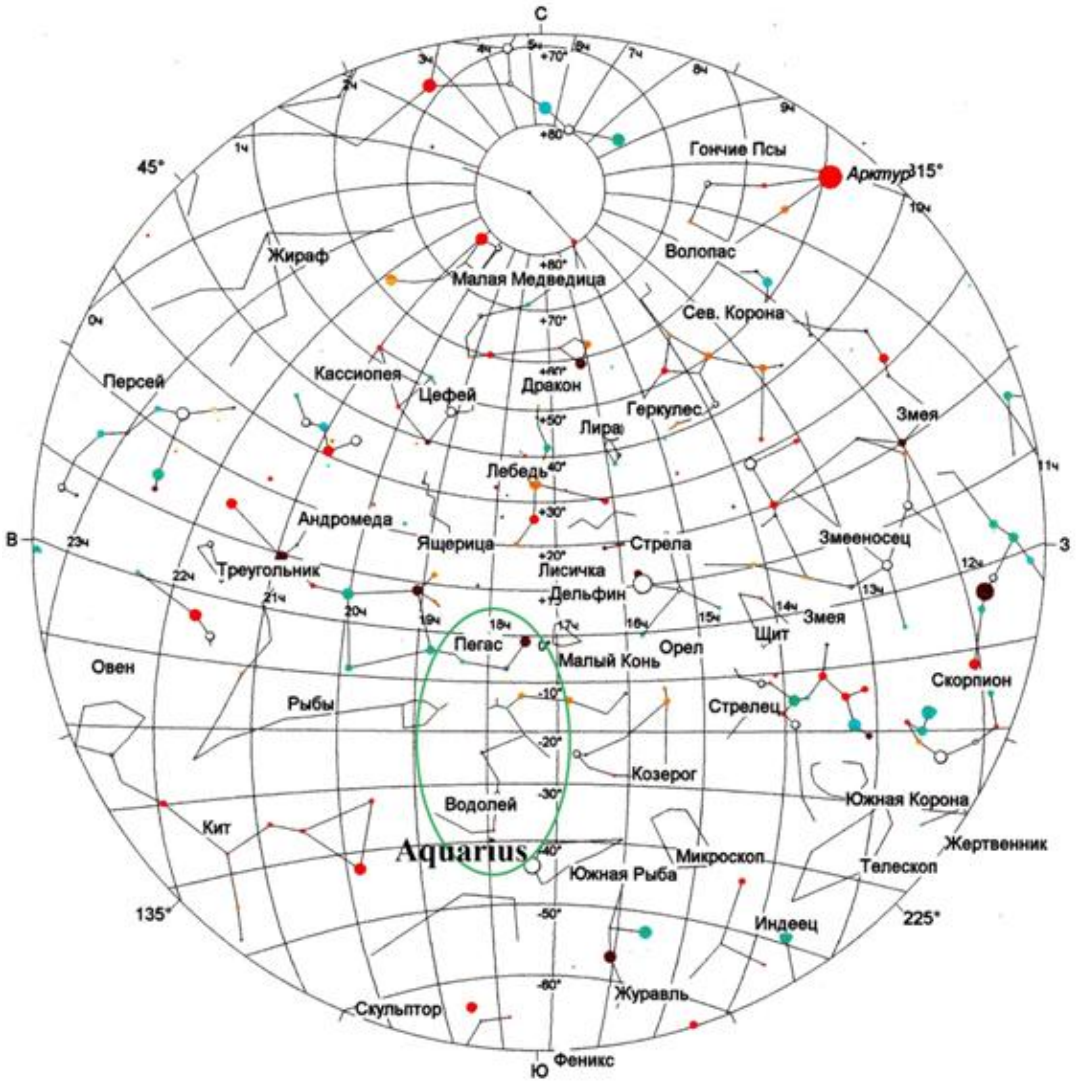

Figura 16. Sign **15 - Men - Eagle** projected onto the constellation Aquarius, next to the sign 4 - Kan.

16 - Kib - Hawk - Owl. This day the Lord made the August 15, 3114 BC, when the rules Owl pierced by an arrow. She was the third Lord of the Night. Three days later, after the establishment of rules Owl night for the first time and first served as an omen. She said: "144,000 times in 13." She said: "1872000 Days." "This is 2012 AD, - she said. - That era is over. Hawk will come. "Three days after the end of the predicted creation Owl Creation" [3, p. 48].

Kib sign projected on the border of the constellations Leo and Virgo, the constellation of the Raven (Fig. 22). In the specified date 15 August, 3114 BC Kib (or Hawk, or Owl) rules the night for the first time - stood in the East after sunset (Fig. 17).

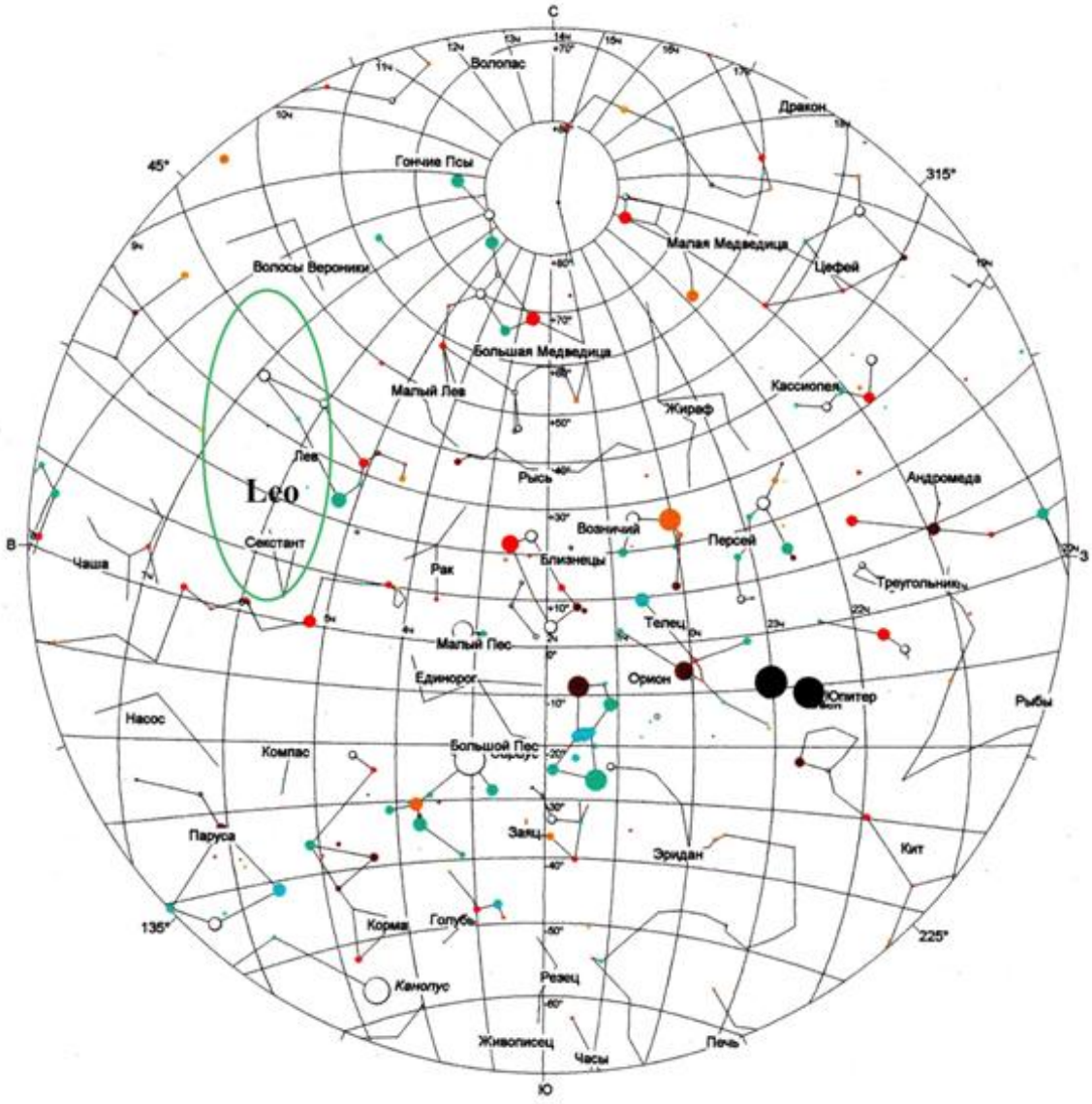

Figura 17. Sign **16 - Kib – Hawk - Owl** projected on the border of the constellations Leo and Virgo constellation over Raven. In the specified date 15 August, 3114 BC Kib (or Hawk, or Owl) rules the night for the first time - stood in the East after sunset.

17 - Kaban - Earthquake. "This day the Lord made. And it was December 21, 2012 AD. It was (144000h13) Days after the Creation. It was 1872000 Days after been folded three-stone hearth and began Fifth Era. Then all cycles back again reversed" [3, p. 48].

Kaban sign projected on the border of the constellations Pisces and Aries, as well as the constellation of the Whale (Fig. 22). For this date December 21, 2012 AD Kaban sign stands at the zenith after sunset (Fig. 18).

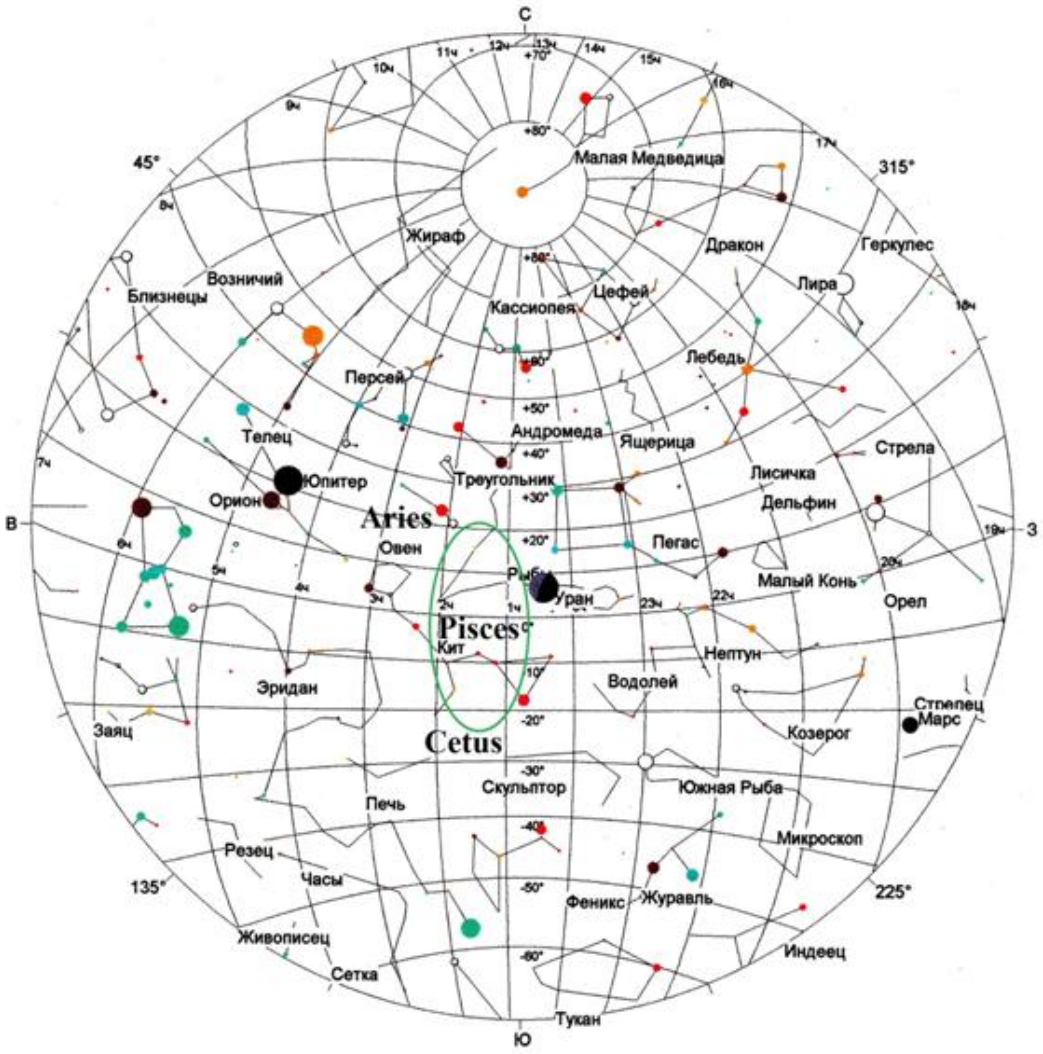

Figura 18. Sign **17 - Kaban - Earthquake** projected on the border of the constellations Pisces and Aries, as well as the constellation of the Whale. In a sign of the specified date Kaban stands at the zenith after sunset.

18 - Etsnab - Blade. "This day the Lord made. And it was December 21, 2012 AD, when it came the new millennium and the earth began to rumble. The Day incense Priest entered the Black Obsidian Glass island in the bedchamber that would pierce your skin, see visions and predict the nature of the new Creation: 5200 big cycles completed and started again" [3, p. 49].

Sign Etsnab projected on the border of the constellations Virgo and Libra (Fig. 22). For this date December 21, 2012 AD Etsnab sign rises in the east before sunrise (Fig. 19).

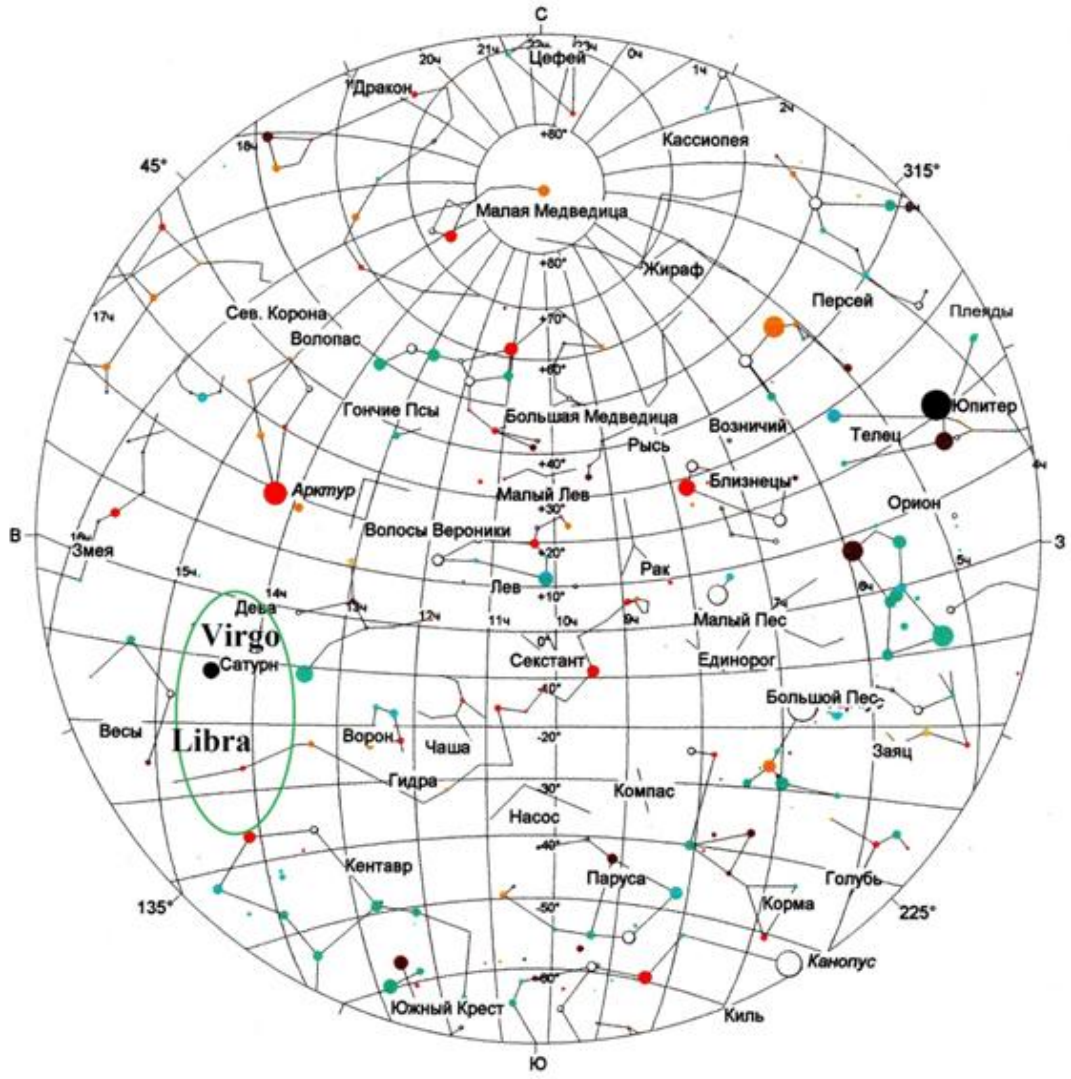

Figura 19. Sign **18 - Etsnab - Blade** projected on the border of the constellations Virgo and Libra. For this date December 21, 2012 AD Etsnab sign rises in the east just before sunrise.

19 - Kavak - Storm. "This day the Lord made. And it was December 22, 2012 AD, when I started to unwind Sixth Period of creation. This is the next day after 0 Baktuns, 0 Katuns, 0 Vinals, 0 Kins. All the night before Earth rumbled and volcanoes belched. Now and the sky began to turn. Winds began to howl. And the rains came" [3, p. 50].

Sign Kavak projected onto the constellation Taurus, the Pleiades in the area (Fig. 22). For this date December 22, 2012 sign Kavak (Pleiades) is observed on the western horizon just before sunrise (Fig. 20).

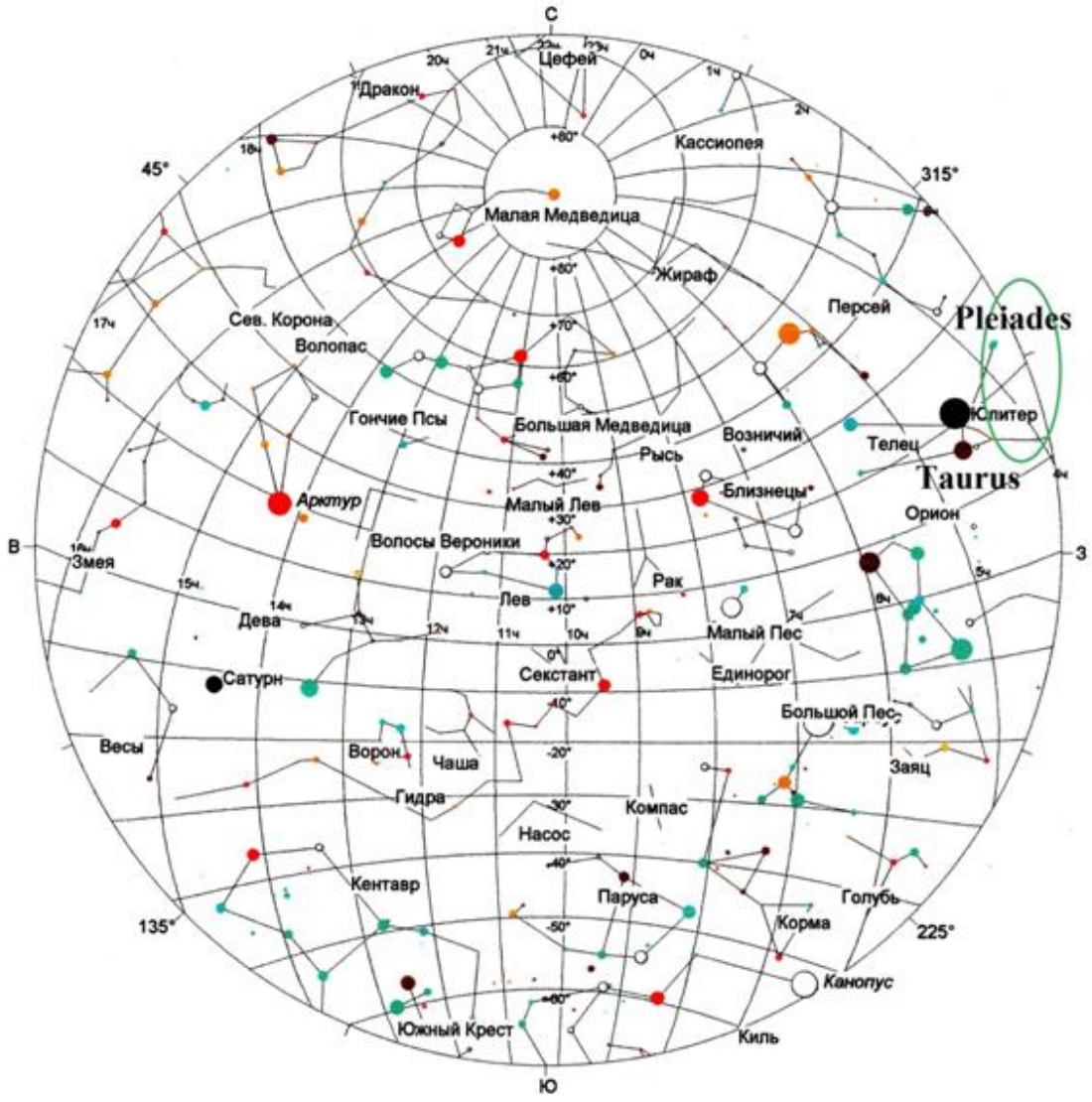

Figura 20. Sign **19 - Kavak - Storm** projected onto the constellation Taurus, the Pleiades in the area. December 22, 2012 sign Kavak (Pleiades) is observed on the western horizon before sunrise.

20 - Ahau - Lord. This day the Lord made. It was December 22, 2012 AD, when the Sixth Period of creation. This is the first day of the new era, when God put the stars of heaven and down again lifted into place by the heavens. His name was Wak Chan-Ahau" [3, p. 50].

Sign Ahau projected constellation Scorpio near its brightest star Antares (Alpha Scorpio) (Fig. 22). For this date December 22, 2012 AD Ahau sign with the star Antares rises in the East just before sunrise (Fig. 21).

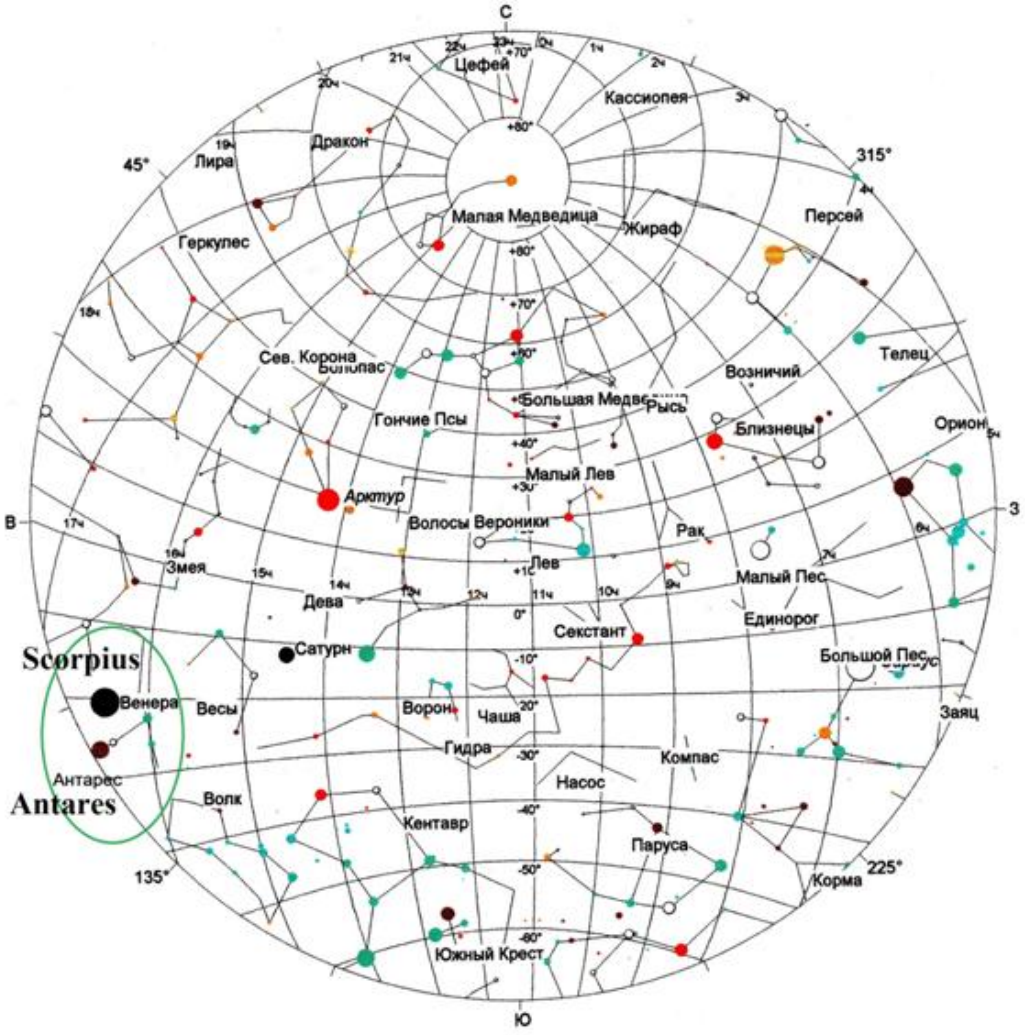

Figura 21. Sign **20 - Ahau - Lord** of the constellation Scorpio is projected near its brightest star Antares (Alpha Scorpio). December 22, 2012 AD Ahau sign with the star Antares rises in the East just before sunrise.

In the process of determining compliance signs starry - kin groups on the Ecliptic, it was discovered that they were located so that they can always be seen in the night sky with a sequence of 10 characters for the 11th. (Fig. 22). Such a sequence is obtained if one day watching a sign - kin before sunrise the next day watching the sign - kin after sunset or at the zenith. Thus the current sign - Kin Long Count is always in the observation area in the night sky regardless of the season.

For example, after the start of the sixth epoch - kin signs will appear:

December 21, 2012 - Ahau (20) before sunrise in the east,

December 22 - Imish (1) after sunset in the east,

December 23 - Ik (2) after sunset in the west,

December 24 - Akbal (3) after sunset in the east,

December 25 - Kan (4) after sunset in the west,

December 26 - Chik -an (5) before sunrise at the zenith,

December 27 - Kimi (6) after sunset at the zenith,

December 28 - Anik (7) before sunrise at the zenith,

December 29 - Lamat (8) after sunset at the zenith,

December 30 - Uluk (9) just before sunrise in the east,

December 31 - OK (10) before sunrise in the west,

January 1, 2013 - Chuen (11) after sunset in the west,

January 2 - Eb (12) after sunset in the east,

January 3 - Ben (13) after sunset in the west,

January 4 - Hish (14) after sunset in the east,

January 5 - Men (15) after sunset in the west,

January 6 - Kib (16) after sunset in the east,

January 7 - Kaban (17) after sunset at the zenith,

January 8 - Etsnab (18) before sunrise at the zenith,

January 9 - Kavak (19) after sunset at the zenith,

January 10 - Ahau (20) before sunrise in the east,

Etc.

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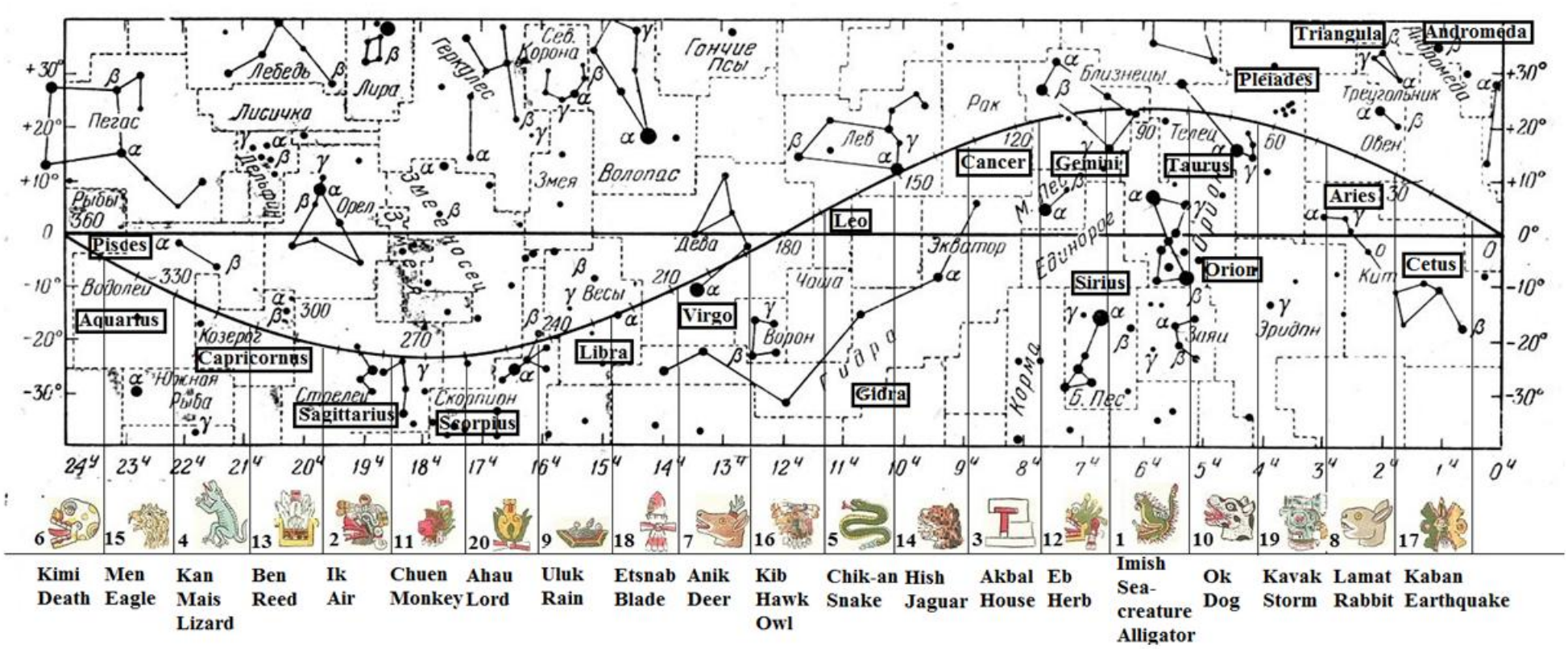

Figura 22. Distribution of 20-kin Mayan signs along the ecliptic (based on a drawing of the article Starry Sky [2]).