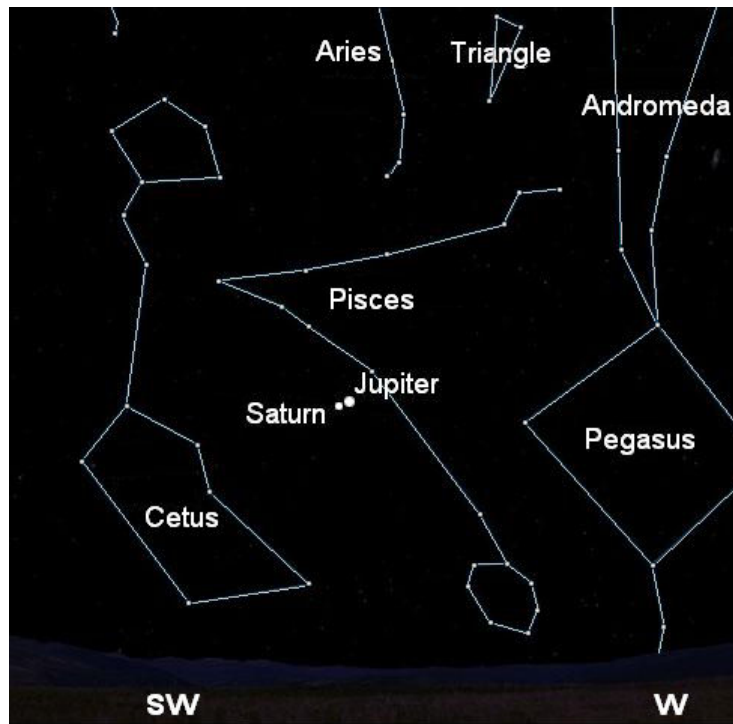


# Birth of Jesus and the Star of Betlehem



The sky above Jerusalem on September 29, year -7

## Christmas greetings from Allan Emrén

**Jesus was not born in the year 1. He was not born in December. Joseph and Mary were poor when Jesus was born, but then they became incredibly rich. The wise men never came to the stables. They were scholars, probably sent by king of the Parthian Empire. They knew that the earth is a sphere. And they knew that the earth's size is some 13,000 km. They were able to compute events in the firmament years in advance. Among the scholars of Babylon one discussed whether the earth moves around the sun or vice versa.**

Christmas is misplaced, and our years numbered wrongly. But does that matter? The year is just a number. And we need a feast when the year is darkest. Originally Christmas was placed in late December to neutralize the Roman pagan celebration of the winter solstice. It suited well even in Scandinavia, where Christmas replaced the midwinter sacrifice. One kept the habits that are not directly contrary to Christianity. E.g. Christmas tree. But now Christmas celebrates that the True Light, Jesus, arrived into the world.

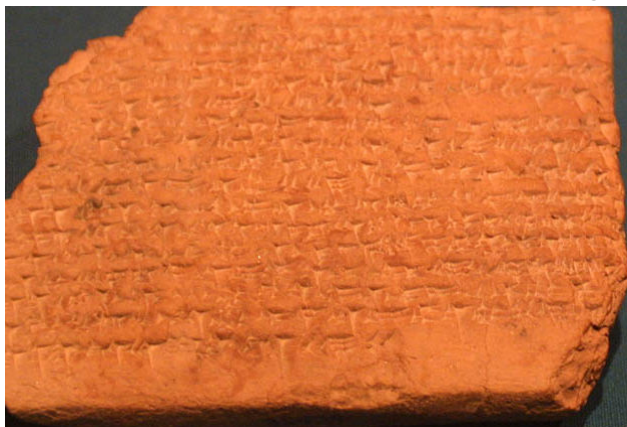
Obviously, Jesus was not born in year one, as Herod died four years earlier. The true year could be found from the story of the star. Among theories for what it might have been, a comet or a supernova (a giant star exploding) has been suggested. Such one is bright enough to be visible even at midday. But despite searches, one has not found any shining near BC. The most reasonable explanation is rather the combination of Jupiter and Saturn. They pass close to each other at slightly irregular time intervals. Such passage is named a conjunction. The conjunction during year -7 was unusual. It was known as a big conjunction. Then, the two planets meet three times during a number of months. It happens roughly every 900 years.

Now we go back a few decades. In the region, there were two empires, the Roman Empire in the west, and Parthian Empire in the east. The latter comprised present Iran, Iraq, Kuwait, Qatar and parts of Syria. Around year -45 Herod had been inserted as ruler of Judea, while his brother got Galilee. About five years later the Parthian army invaded Judea and put Antigonus on the throne in Jerusalem. Herod was besieged in Masada, but was able to escape to Petra. From there, he traveled to Rome, and by the Senate, in the year -40, he was appointed "King of the Jews". Aided by the Roman army, Herod could expel Antigonus, and throw the Parthian troops out from Judea in -37, and after that, he was the king until his death in year -4.

In the Parthian empire, Babylon was a center of knowledge. The scholars who worked at the university there were not like nowadays, specialists in some narrow field, but would basically know all science. The specialization did not start until the 1800<sup>th</sup> century, when the amount of knowledge exploded, so that no one could be an expert in all areas. So the scholars of Babylon were mathematicians, physicists, philosophers, astronomers, theologians and much more. Since several hundred years, they had a very good idea of the earth sphere. Since 600 years they had known that the Earth's diameter is about 13,000 km. There, one disputed whether the earth moves in an orbit around the sun or vice versa. This was 1,500 years before Copernicus!

Thus, they were skilled astronomers and mathematicians. One of their duties was to predict events in the sky. The purpose was twofold. First, rulers would get advice on appropriate occasions to conduct operations, such as a war. Furthermore, it would give proper dates for celebrations of various types. The calculation results were recorded on clay tablets, a kind of calendars. This was work that was taken very seriously. In ancient China, a court astronomer was executed because he had failed to predict a solar eclipse.

During excavations in Babylon, one has found a clay tablet where the Star of Bethlehem, that is the great conjunction of Jupiter and Saturn in year -7 is described. Is it a coincidence that this one is among those found?



According to Babylonian astrology a conjunction between Jupiter and Saturn signified the birth of an emperor. A big conjunction meant that a ruler of the entire world was born. The planets move through the twelve constellations, each of which represented a geographic area. This time it would happen in the constellation Pisces (Fishes) which represented Palestine! Such an event happens at most once in 1000 years.

It must have been the shock of his life, when it dawned upon Parthian emperor that a world ruler would be born in Judea. This king certainly would be a descendant of Herod and conquer the Romans as well as the Parthians. And one can easily figure out what would happen to that king's enemies by conquest. Not least given that Herod was notorious for his cruelty. So no pity from that family was to count upon.

Thus, the king of the Parthians had to become on good terms with the new ruler from the outset. That way he could hope to remain alive, and maybe even get a position as governor of the eastern part of the empire. Therefore, he organised an expedition, the purpose of which was to establish friendly ties with the Jewish royal family. Given that the corresponding astrological knowledge was not present in Jerusalem, maybe he could even get extra goodwill by telling what the stars had said.

With camels, the journey from Babylon to Jerusalem requires about one month, but preparations certainly were extensive. They organized the timing so that the expedition would arrive in Jerusalem when the new king was fairly newborn. There were three dates to choose from: May 29, September 29, and December 4 during the year -7. Most likely date for birth should have been regarded as the central conjunction, which was the main event. To avoid the risk of coming too soon, one probably decided on December 4.

Now, let us leave the wise men for a while. Are there other facts pointing in the same direction? Yes, there actually are. To begin with, the shepherds were in the fields with their sheep during night time. This was not common in December, because it was too cold. But additional information is available. The evangelist Luke tells us that the priest Zacharias served in the Temple, and there met an angel who told him that he and his aged wife would have a son (John the Baptist). Zacharias belonged Avia's department (Luke 1:5). The priests who served in the temple were subdivided into 24 departments, so each department was serving in the temple about two weeks each year.

The Jewish year started at Easter (Exodus 12:1), and according to my calculations, Passover occurred on March 27 in the year -8. In such calculations one has to take into account that the year zero was forgotten in the sixth century, and that each year is 20 minutes shorter than the time our Earth requires for one full turn around the sun. That is because the Earth's axis changes its direction as a wobbly spin. One also has to remember that the earth moves while the moon makes one revolution around the Earth. To be really careful, one also has to take into account the gravity of other planets, which I have done as an average only. An error analysis suggests that the real date may have been one day earlier or later.

The Jews made use of a lunar calendar, the only remnant of which nowadays, is that Easter does not occur on any given date. Avias department was number seven (1 Chron 24:10), so Zacharias served probably in the period July 7 to 20. A Jewish month's duration was 29.5 days. Therefore Elisabeth should have entered her sixth month of pregnancy one of the last days of December year -8. This suggests that the Angel Gabriel came to Mary sometime during first week of January -7. Jesus was born some 40 weeks later, i.e. at the end of September. This fits well with the main conjunction of Jupiter and Saturn on September 29 that year.

When Jesus was born, Joseph and Mary were poor. When he was 8 +33 days old, they went to Jerusalem (two - three hours away from Bethlehem) and sacrificed two pigeons, as poor people should do (Leviticus 12:4, 6-8). Meanwhile, they had found a better housing than the stable (Matt. 2:11, Greek *οικία* = house). That's where the wise men came after visiting Herod in Jerusalem, and there, they handed over their gifts of gold, frankincense, and myrrh.

The quantities were in no way symbolic. To appease an emperor who might be hostile, impressive quantities are required. When the Queen of Sheba visited Solomon she brought about 4 tons of gold. (Swedish gold reserve is approximately 125 tons, so the figure is reasonable.) The intention of the wise men's visit probably was to obtain invitation for a state visit, during which the great gifts would be given. But they still had to bring enough not to seem greedy, so a reasonable guess is 10 - 100 kg of gold. This also explains a few hints in the Gospels that Jesus' family was quite wealthy. Perhaps Joseph had invested in real estate after returning from Egypt where the family fled. Anyway, they were rich, which should have facilitated the escape.

One example of places telling that Jesus was wealthy is seen in Marc. chapter 6. After Jesus had been preaching for many hours to 5000 persons, the disciples asked him to send the people away to buy food in the villages. Jesus told the disciples to give food to the people, and then they asked if he wanted them to go and buy food for 200 denars. We know the continuation.

200 denars correspond to something in the range 10 000 - 30 000 USD. This amount

means about 4 USD per person. The same order of magnitude as the price of a hamburger, so they made a reasonable calculation. This means that they carried at least that amount of cash along during their journeys.

When Jesus was upon the cross, he said to John: Behold, your mother. And to Mary: Behold your son. The significance is that in front of several witnesses, he inserted John as main heir of the family fortune. As the first born, Jesus was formal owner of the fortune. Of course, this also meant that John was responsible for taking care of Mary when she grew old.

In a dream, the wise men were ordered not to return to Herod, so they travelled home a different way. It probably confirmed fears that they should have had, as in the beginning of February -6, the planet Mars (god of war) went in between Jupiter and Saturn. This should have been about the time when Herod sent soldiers to Bethlehem to kill babies.

Does all this mean that we should take astrology seriously?

NO!

But when God wants to communicate with people, He would surely be stupid if he did not do it in a language we understand. And at that time, astrology was the theory on how the universe works, and where to get the best knowledge.

Finally, I will end with a mystery: According to the Jewish historian Josephus, the taxing took place during the year +6. But then Herod was dead since 10 years. Neither do the other time records in the Gospels fit with the year +6. The mystery has a solution, but I will leave it to yourself to figure out the correct answer.

*A Meery Christmas and a Happy New Year wishes Allan*

<http://kunskapomgud.se/en/default.htm>  
(God and the Universe, version in English)