

GRAPH THAT!**by Jack Weyland**

At this time of year we often read about the Star of Bethlehem as recorded in the Book of Matthew in the New Testament. A recent article by Michael E. Bakich in the January 2010 issue of Astronomy Magazine is entitled, “What was the Star of Bethlehem?” I will be quoting at length from this article.

1. During what time of year was Jesus Christ born?

Not in December. According to Bakich, “The story of the shepherds

watching their flocks by night gives us a strong clue about the time Jesus was born. Since earliest times, December and January have been rainy and cold in Bethlehem, a time when all sheep are in corrals. Only in February, March, and April, when spring lambs are born, do the shepherds watch their flocks by night. In December, the shepherds were more likely to be sitting home by their fires.”

2. In what year was Jesus born?

In Luke, Chapter 2, we learn why Joseph and Mary were in Bethlehem. “And it came to pass in those days, that there went out a decree from Caesar Augustus that all the world should be taxed. (And this taxing was first made when Cyrenius was governor of Syria.) And all went to be taxed, everyone into his own city. And Joseph also went up from Galilee, out of the city of Nazareth, into Judea, unto the city of David, which is called Bethlehem; (because he was of the house and lineage of David). To be taxed with Mary, his espoused wife, being great with child.” (Luke 2:1-5)

Bakich observes, “In 1923, archaeologists digging near Ankara, Turkey, discovered the ruins of an old Roman temple on whose wall they found an inscription describing three empire-wide tax collections, one of which occurred in 8 B.C....In those days, word of the taxation traveled by couriers. It may have taken several years for word to reach the distant parts of the empire.”

Apparently the best we can do from historical records is to say that “...Jesus must have been born after the taxation order of 8 B.C. and before Herod’s death, perhaps as late as 1 B.C.”

3. What was the Star of Bethlehem?

The Book of Matthew is the only New Testament record that even mentions a star: “Now when Jesus was born in Bethlehem of Judea in the days of Herod the king, behold, there came wise men from the east to Jerusalem, Saying, Where is he that is born King of the Jews? for we have seen his star in the east, and are come to worship him. When Herod the King had heard these things, he was troubled, and all Jerusalem with him.” (Matthew 2:1-3)

It’s tempting to suggest that this new star might have been a supernova. A supernova shines brightly for a time and then its light fades away. According to Bakich, “In 1054, a supernova became visible near one of the horns of the constellation Taurus the Bull. For three weeks around its maximum brightness, the supernova was visible during the daytime.”

Bakich notes, however, that when the Wise Men spoke to Herod about the star, “neither Herod nor his scholars knew what they were talking about. No other Bible verse or secular writing mentions the star.” In other words, if it had been a supernova, they would have said something like , “Oh, yeah, that was amazing, wasn’t it? We all saw it.”

Based solely on Biblical accounts, we may be able to rule out something as spectacular as a supernova, which would have been visible and recorded throughout the world. Also, since Chinese astrologers make no mention of a new star suddenly appearing about that time, we conclude that what led the Wise Men to Bethlehem probably was not a supernova.

What are some other possibilities? Some suggest that the star of Bethlehem might have been what astronomers call a conjunction. It's a big word but easily understood.

Suppose you're at the beach at night and you see the lights from three passenger ships as they pass by you. One of them is closer to the shore, the other two are farther away. The lights from these ships appear to be converging, and at some point, instead of three separate lights, you see only one big blob of light. That lasts for only a moment and then the ships continue their separate paths and you again see the individual lights from each ship.

When this happens to us standing on the earth and we're looking at planets, we call it the conjunction of planets. It's not that the planets are ever physically close to each other. Some are closer to the Earth, others farther away. But from our point of view it looks like all the light is coming from one place. (Add to this that the Earth is also in orbit around the Sun, and things get a little complicated.)

Why would three planets in conjunction be of any interest to the Wise Men? Bakich suggests that it is likely these men were astrologers who believed that the positions of the Sun, Moon, and planets controlled the world's fate.

"The ancients thought Jupiter was a lucky object and a royal star, named as it is after the king of the gods. Saturn had special significance as a protector of the people living in the eastern Mediterranean region. And astrologers believed celestial events occurring in the constellation Pisces foretold important

events occurring in the land of the Hebrews.

“The Biblical passage says the star was in the east. The Greek word used has a specific meaning—that of the morning appearance of a star. The God’s Word Translation says, ‘We saw his star rising and have come to worship him.’

“So when Jupiter and Saturn first met in Pisces in the eastern morning sky, the magi might have considered a journey to Jerusalem. But summer in the Middle East is not a time for difficult journeys.

“After several weeks, Jupiter and Saturn stopped moving forward and moved backward. Today we know this effect happens when Earth, in its orbit, passes any outer planet.

“Because Jupiter lies closer to Earth, it moved faster and appeared to pass Saturn a second time in late September. If the magi regarded this sign to begin their pilgrimage, they may have arrived in Jerusalem in late November after several months on a well-traveled caravan route.

“There they might have asked King Herod where they might find the child who was born to be king of the Jews. The conversation led them to Bethlehem, and, in early December, Jupiter and Saturn came close together in Pisces for the third time. As the Magi traveled south on the road from Jerusalem to Bethlehem, the two planets would have appeared directly ahead of them in the sky.”

This would explain what we read in Matthew, Chapter 2, verse 9:

“When they had heard the king, they departed; and, lo, the star, which they saw in the east, went before them...”

Several questions, however, remain. For example, what is meant in Matthew when it indicates the star “came and stood over where the young child was”?

Even though we don’t know how that happened, we might ask ourselves this question: What is harder, to have a multitude of the heavenly host appearing to a group of shepherds and saying, “Glory to God in the highest, and on earth, peace, good will toward men.” (Luke 2: 14) – Or to have what appears to be a star, apparently seen only by the Wise Men, standing above the house where Jesus is staying with his family? If God can do one, he can probably do the other, even though we’re not sure how He did it.

Let’s conclude with the last paragraph of the Astronomy Magazine article: “Discussions of the Star of Bethlehem have existed for hundreds of years. But no matter what it may have been, the sign that appeared in the sky to the magi that first Christmas will always have deep meaning to billions of people. For with it came a promise of peace on Earth. As we gaze toward the sky this holiday season with naked eyes, binoculars, or a telescope, that’s a good thought to have.”

Merry Christmas!

Note: Next time we’ll examine the Book of Mormon account of the spectacular light-show in the New World associated with the birth of Jesus.

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