

Exploring the mystery of the 'Christmas Star'

LOOK TO THE southwest, shortly after sunset in December, and you cannot fail to see a brilliant "star." It's actually not a star at all; it's the planet Venus.

It dominates the sky whenever it is visible. Only the sun and moon are brighter. When seen before sunrise, a planet might be called the "morning star," seen after sunset it's the "evening star."

When seen in December it is often given another name: the "Christmas Star," and that makes people wonder about a special "Star" that appeared 2,000 years ago. What was the "star" that guided the wise men to Bethlehem? That question has puzzled people for centuries.

To try and determine the nature of the Christmas Star, we must look back in time.

WE CAN ALMOST be certain the birth of Jesus did not occur on Dec. 25. A clue (Luke 2:8) tells us there were shepherds tending their flock by night when they learned of the birth. Shepherds only watch the flock at night when lambs are being born in spring and the flock is vulnerable to being attacked by predators. If the birth occurred in spring, why is it celebrated in December? For safety.

In order to avoid Roman persecution, early Christians had to practice their religion in secret. The best time to have a Christian celebration chose to celebrate an event, such as the birth of Jesus, during the same time, they would not be noticed.

IT WASN'T UNTIL over 400 years later that Dec. 25 was made the official date, and that date may have been chosen only because, after 400 years, it would have become a major tradition. So let us consider the spring of 7 B.C. and see if anything spectacular was occurring in the sky that might have been interpreted as the star.

Could the "star" the wise men saw have been what we call a "falling" star? Probably not. "Falling" stars are not stars at all; they are bits of rock and dust that fall into our atmosphere from space. As they fall they heat up because of friction and burn, producing streaks of light.

Most falling stars, more commonly called meteors, are not very spectacular. At certain times of the year there are meteor showers when dozens of "falling" stars can be seen, but only if you are a patient observer.

Most meteor showers do not attract much attention, although in 1833 one shower produced an estimated 10,000 meteors in a single minute. Sometimes a large meteor, called a fireball, falls into our atmosphere and it may explode in the air.

That would be a startling sight, but only for a few seconds and meteor showers last only a few days at best. That would not be enough time to guide anyone on a long journey.

A "hairy" star, or comet, would last long enough. Comets can appear in any part of the sky, at any time of the year, and last for several weeks.



skywatch
Raymond E. Bullock

They were called "hairy" stars because the comet's tail looked like a wispy beard.

IN THE YEAR 1054 A.D., Chinese and American Indian skywatchers noticed a "new" star blaze into view where there had been no star before. This is called a nova, which actually means "new" star, and one can appear at any time and remain visible for weeks.

A supernova can be bright enough to be seen even during the day. A nova is really not a "new" star. It's a very old star going through a violent death. The star collapses, which causes its internal temperature to increase. The star becomes very unstable and explodes.

A supernova is easily visible to anyone who looks up. But not everyone saw the "star." There is no record that King Herod ever saw it, nor did any of his advisers, nor did the shepherds.

In the year 1604, astronomer Johann Kepler saw a supernova and this made him wonder about the identity of the Christmas Star. He knew of no written records which mentioned the appearance of a nova in 7 B.C., so the "star" is, there are only four references to it in the en-

tire Bible, all within four verses in Matthew Chapter 2, and never with any explanation:

"For we have seen his star in the east..." (Matthew 2:2)

THEN HEROD, when he had privily called the wise men, enquired of them diligently what time the star appeared (Matthew 2:7).

"When they heard the king, they departed; and, lo, the star, which they saw in the east, went before them..." (Matthew 2:9)

"When they saw the star, they rejoiced with exceeding great joy (Matthew 2:10)."

Kepler also knew that everything in the sky was called a "star" at that time, we have considered "falling" stars, "hairy" stars, and "new" stars. There were also objects called "wandering" stars, the planets.

To the early skywatchers, the planets were mysterious wandering lights, or stars. They had no idea what the planets really were, but it was assumed that the planets must be very important objects because they moved.

ASTROLOGERS BELIEVED that life was influenced by the location of the planets amongst the stars and

they devised complex interpretations of their movements.

Kepler calculated the positions of the planets far back in time and found that Jupiter and Saturn appeared close together in the early evening sky in 7 B.C., that they would soon be in conjunction.

A conjunction (close grouping) of planets is not very spectacular; not everyone would notice it. But astrologers would consider it as being something special, and it is believed that the wise men were astrologers.

Because Jupiter orbits around the sun faster than Saturn, it would be seen (over the course of weeks) to slowly catch up to Saturn. Jupiter passed Saturn on May 29, 7 B.C. But then both planets appeared to stop and go backward! Jupiter passed Saturn a second time, on Sept. 29, 7 B.C.

Planets do not actually reverse direction and move backward. They always orbit counterclockwise around the sun, appearing to drift from west to east through the constellations. Retrograde (backward) motion is an optical illusion.

It's caused when the earth, orbiting faster than Jupiter or Saturn, catches up and moves between those planets and the sun. Earth passes them and the slower moving planets appear to be drifting backward (westward). After a period of time, retrograde motion ends and the planets return to their eastward motion through the stars.

A THIRD CONJUNCTION between Jupiter and Saturn occurred on Dec. 4, 7 B.C. In Feb. 6 B.C., the

planet Mars joined Jupiter and Saturn, forming a triangle in Pisces, creating a magnificent symbol for astrologers.

The wise men probably would not have started their long journey when the first conjunction occurred in May.

They would have seen the second conjunction in September and then, perhaps, began their journey. By the time the third conjunction occurred the planets would be seen in the west, as if leading that direction.

A conjunction such as this is very rare. Kepler used multiples of Jupiter-Saturn conjunctions to claim that special events in history occurred every 800 years. This same gathering would have occurred around the year 1600 B.C., about the time of the birth of another great leader, Moses. Could the early astrologers have known that?

Was the Jupiter-Saturn conjunction the "Star of Bethlehem?"

No one can really be certain. Perhaps the Christmas Star was a special one-time-only event, never to happen again. But is it, after all, important to know just what the Christmas Star was? The important fact is that a man named Jesus was born, that he lived for a time on earth and his teachings altered the history of the world.

Raymond Bullock is the former coordinator of the observatory and planetarium at the Cranbrook Institute of Science. He now works for a Troy-based company specializing in laser displays and effects.

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