

ASTRONOMY

Bethlehem star once unified astronomy and astrology

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I am often reminded during the holiday season of a program I saw at a planetarium about the star of Bethlehem. This was perhaps my first introduction to how astronomy and astrology had a common beginning.

Today, most people do not confuse the two. But 2,000 years ago, the ability to predict the motion of the planets was intimately linked to predictions of the future.

Historians often place the birth of Jesus in the range between 6 B.C. and 2 B.C. In the years of 3 B.C. and 2 B.C., an amazing number of astronomical events occurred. Two stand out.

On Aug. 12, 3 B.C., Jupiter came in conjunction with Venus in the constellation Cancer, the "end" of the zodiac. Ten months later, on June 17, 2 B.C., Jupiter again lined up with Venus, close enough to appear as one "star" in the constellation Leo, the "head" of the zodiac.

To astrologers of the time, these events held great significance. One interpretation was the end of an era and the beginning of another. In Rome, this supported the rule of Augustus and the supremacy of the Roman Empire. To the Magi, the astrologers of the East, these occurrences, along with other astronomical events, foretold the birth of a new Jewish king.

I find it fascinating that we know the exact dates and proximity of these conjunctions. It is a testament to the power of science that we can project the orbits of the planets backward in time by more than 2,000 years, thanks to Newton's Law of Gravity.

This is difficult even with modernday computers because each planet influences the orbit of every other planet. Imagine playing a game of billiards in which the balls are magnetized, so that the motion of each ball affects the direction of other nearby balls. Try calculating that on your home computer!

Astronomy and astrology have taken divergent paths, yet every year during the holiday season, I am reminded of their common ancestry. It shows the powerful influence that stars have had on humanity as man questions what lies beyond Earth.

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