

Babylonians used geometry to track Jupiter 1400 years before Europeans

Astronomers discovered how to calculate Jupiter's position with geometry between 350 and 50 BC, predating work of European scholars by 14 centuries

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Babylonian astronomers calculated the position of Jupiter using geometry 1,400 years before the technique was previously believed to have been developed, according to an expert.

The finding, published in the journal *Science*, is based on analysis of ancient Babylonian tablets, believed to have been written between 350 and 50 BC.

They depict two intervals from when Jupiter first appears along the horizon, calculating the planet's position at 60 and 120 days.

Previously, it was thought that Babylonian astronomers operated exclusively with arithmetical concepts, but the texts contain geometrical calculations based on a trapezoid's area and its "long" and "short" sides, writes Mathieu Ossendrijver.

Ossendrijver, professor of history of ancient science at the Humboldt-Universität zu Berlin, says the ancient astronomers also computed the time when Jupiter covers half of the 60-day distance by partitioning the trapezoid into two smaller ones of equal area.

European scholars in Oxford and Paris were previously credited with developing such calculation in the 14th century, but Ossendrijver suggests they were far behind their ancient Babylonian counterparts.

"These computations predate the use of similar techniques by medieval European scholars by at least 14 centuries," he writes.

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