Fr. Philip Lastimosa

Our Lady of Dallas

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In the early 17th century, Johannes Kepler developed his three laws of planetary motion. After years of agonizing work pouring over data, after over 900 pages of calculations, Kepler was finally able to accomplish what the ancients and the medieval could never do. He discovered how the heavenly bodies moved through the skies.

According to the science books, Kepler was motivated to discover the secrets of the skies due to an overwhelming thirst for scientific truth and to fulfill the dying wish of Tycho Brahe, his good friend and fellow astronomer.

However, I recently discovered another one of Kepler's motivations. Kepler studied the secrets of the skies because he wanted to find the Star of Bethlehem. He wanted to see what it was that Magi saw. He wanted to know what was so amazing about sky that made the Magi leave their home in the east and travel to Jerusalem. He wanted to understand how a star could precede the Magi as they traveled and lead them to Bethlehem. He wanted to figure out how a star could stop over the place where Jesus and Mary were.

And so using all the data that his friend Tycho Braho collected before his untimely death, Kepler tried to reconstruct what the skies looked like at the time of Jesus' birth. And Kepler concluded that the Star of Bethlehem was the planet Jupiter.

As you should recall, the ancients called Venus, Mars, and Jupiter wandering stars. Our English word planet comes from the Greek word for wanderer. Unlike the rest of the stars in the sky which circulate around the Earth in obvious patterns and in the same direction. The wanderings stars go back and forth across the sky, changing directions. Contemporary astronomers call this retrograde motion. If we follow the retrograde motion of Jupiter during the time of Herod and Jesus, we might discover what the Magi saw in their sky.

The 2007 documentary *The Star of Bethlehem* chronicles the work of some contemporary Evangelical Christians who have revised and reassessed Kepler's four-hundred-year-old work. Aided with databases of measurements more extensive than Tycho Brahe's and helped by computers that do Kepler's calculations in mere seconds, we now have software that can create simulations of the night sky. This software can reconstruct the night sky from any location on earth on any day in human history. Approximately.

Using this software, a computer can create a digital image of the night sky in Babylon every day in the year 2 B.C. Chaining together these digital images, you can create animations simulating how the stars moved as the days and weeks and months passed by.

If you watch Jupiter move through the skies in September, October and November during that year, you would see Jupiter's retrograde motion rising up in the east and circling around another star named

Regulus. If you look up the date when this circling motion began, you would find that it started on Rosh Hashanah, the Jewish New Year.

The Magi tracking the stars would have seen the king planet (Jupiter) circle around the king star (Regulus) three times starting on the Jewish New Year. That exceptional pattern at that particular time of the year could have inspired the Magi leave their home and look for the newborn king of the Jews.

Using this software, a computer can reconstruct the night sky in Jerusalem every day in December of that year. And in that simulated sky, if you look to the south where Bethlehem was, you would see that Jupiter moved to the east and conjoined with Venus. The king planet and the brightest planet came together in the southern Jerusalem sky to form the biggest and brightest star you would have ever seen.

Tracking the retrograde motion of Jupiter, it slowly moved east throughout early December but then stopped and turned around and started moving west. And in that retrograde motion moving east then west, Jupiter stopped directly above Bethlehem before turning around. It stopped directly above Bethlehem on December 25, 2 B.C.

it is truly astonishing to think about what the movement of Jupiter might mean, assuming these computer simulations are as accurate as they claim to be.

The movement of Jupiter circling around Regulus then conjoining with Venus and then stopping above Bethlehem isn't a miracle. It is not like the Burning Bush. It is not like the parting of the Red Sea. It is not like the warning the Magi received in a dream. The retrograde motion of Jupiter follows Kepler's laws of planetary motion, three simple laws, which I have taught many times to 15-year-olds.

Jupiter's retrograde motion follows a pattern. A complicated one. But it is a calculable pattern. Same with Regulus', same Venus'. But for all those patterns to line up the way they did required God's foreknowledge. God's Divine Providence uses the natural order to proclaim His message. From the beginning of time, from the creation of the planets and the stars, God always knew that they would line up in the exact way they did on the exact day that they did so that Magi would visit Jesus and pay Him homage.

With this in mind, I would like to make two conclusions about Divine Providence. First off, like the Magi before us, we need to look for God's providential care in the natural signs in front of us. We don't need to look for miracles for God to lead us. God can lead us to Jesus. He can lead us to Mary. He can lead us to the Holy Family in Bethlehem by natural means. God's signs are all around us if we look carefully enough. We can find them in good conversations from family, friends, and teachers. In the sights we see. In the stories we hear. In the subtle movements of the heart.

Second off, and perhaps more importantly, we need to recognize God's Providence on the cosmic level. God's providential care is not limited just to our personal lives. God's providential care works on an enormous scale. When God created Jupiter and set it in motion 4.6 billion years ago, He always had a plan for that wandering star to announce the fullness of time. He always had a plan for the King Planet to reveal the birth of His Son, the Savior of our world. The hugeness of God's cosmic plan is awe inspiring. It is breath taking. And our only response to the vastness of that cosmic plan is humble prayer and humble silence.