star to be able to be followed to that point, it must end up being overhead. Before that though, it would be in front of you and therefore unable to move to be overhead without changing its own position in space at a very high speed. Once you reach the point which you are being lead to, the star can no longer be ahead of you but has to be above you. How could it make such a high speed move? There is an explanation, which is that the star was very close to the earth. This would have serious consequences because it would have to be so close that if it was at all a fairly normal star of normal star mass it would be closer than the sun and would be seen by all, would light up the sky possibly as brightly as the sun and would exert a large gravitational effect on us. God could manage all these things easily of course. It does seem to ask a lot of extraordinary convoluting of the laws of physics, though.

The solution?

A few years ago I was thinking about this problem and musing to the Lord that it seemed somehow unsatisfactory to have to be manipulating so many variables to make it work that it seemed incongruous. Suddenly in one of those amazing moments a thought crossed my mind—what if the star was an angel? It would neatly meet all the criteria without the drawbacks.

How could it work?

The angel could have been simply noticed by the wise men and aroused their curiosity or even announced to them the coming event to give them the idea to go to Jerusalem, which was a well-known city anyway. In this respect they had seen the 'star' while in the east. The wise men then would have referred to their scrolls or knowledge of the Jewish prophecies to ascertain that indeed the event was prophesied in Jewish scripture. This would explain the implied lack of surprise when the angel possibly reappeared to them in a dream to warn them in verse 12. Preparations and a journey from the east of several months then followed. Verse 9 is where the angel takes the lead again but high enough up to look like a pinpoint of starlight for them to follow. However, being an angel it can move easily to a position low enough to be clearly over the exact location. It is also now recognisable to them as the angel, hence "When they saw the star, they rejoiced with exceeding great joy." This could mean they had not seen the angel for a while but were now pleased to be following him visibly again. An angel would not be accompanied by any gravitational effects and so could move about in the sky without affecting the earth in any way, yet having the appearance of a star. It is interesting to reread the verses and substitute the word star with angel. It may be that what I have said seems to go against a literal view of Scripture. I think there are enough precedents and allusions in Scripture to help bear out the angel idea, though.

Support from Scripture

Angelic appearances surround the birth of Jesus. Angels appeared to Zacharias, Mary, Joseph and the shepherds. Why not the Magi too? There is a connection between stars and spirits in the sky, the clearest being Rev. 12:4, often taken as meaning Satan, taking angels as demons to Earth with him as he was cast down. Perhaps most conclusive are the verses in Revelation directly linking stars with angels. Examples occur in chapters 1–3, but Rev. 1:20 is very clear, "The seven stars are the angels of the seven churches". Angels can be seen or not depending on who is meant to see them. This is demonstrated in 2 Kings 6:17 to Elisha's servant. It also explains why the kings could see the star and others couldn't when it was low enough to be recognised as an angel. In the New Testament the word 'aster' is used for star and simply means luminous or bright object in the sky. This is an apt description for an angel reflecting God's glory and light. We might ask why the star is only mentioned in Matthew. Matthew was written very much from a Jewish perspective where appearances of angels were not unexpected, e.g. Acts 12:15 and Matthew 4:11 and 18:10.

Why does it matter?

Ultimately I can accept fully that if it was a star, God could have used it as described in the Bible. All we really know is that the Star must have been miraculous and non-natural. However, I am an inquisitive seeker of the truth in the spirit of Proverbs 25:2. I know this suggestion is a little unusual, but it seems to be a possible way of accounting for the phenomena described in the Bible.

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1. DeYoung, D., What was the Star of Bethlehem?; in: *Astrology and the Bible*, 2nd ed., Baker Books, Grand Rapids, MI, 2000; creation.com/what-was-the-star-of-bethlehem.
2. Fruchtenbaum, A., How Did the Wise Men Know? Or is Astrology Valid?, www.ariel.org.ffruit.htm, 4 January 2010.

The search for earth-like planets

I would like to comment on the intriguing and excellent report by Wayne Spencer (The search for Earth-like planets, *J. Creation* **24**(1):72–76, 2010) concerning exoplanets. While it may appear that exoplanet research is trending towards lower mass bodies that could be Earth-like, I would caveat this issue for creationists. A question needs to be asked concerning the current population of exoplanets claimed. My database is tracking 443 exoplanets as of this letter to the editors and the URL provides a list of 442 exoplanets at 'exoplanet.eu/catalog.php' as of this letter.

My question— how do creationists and evolutionists explain the obvious lack of mass in our solar system when compared to the exoplanets documented? Our ecliptic should contain far more mass than it presently

does when looking at the trend observed in the 443. From Mercury to Pluto in the ecliptic we have a total mass close to 1.41 Jupiters. The current trend of exoplanets is very different from this. The database I have indicates 163 exoplanets (37%) orbit <= where Mercury is in our solar system with an average of 1.63 Jupiter masses. We clearly do not see any gas giants like this in our solar system. 333 exoplanets are found <=100 pc from earth with an average mass 2.76 Jupiters and average host star mass near 1.056 solar. 104 exoplanets are found > 100 pc from Earth with an average mass 3.97 Jupiters and host star average mass 1.22 solar.

Where did all the mass go in our ecliptic when the sun and planets formed or was it missing from the start so that Earth could form in a habitable orbit with our sun? Consider Isaiah 45:18.

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Wayne Spencer replies:

Rod points out that the amount of mass in the planets in our solar system is less than many others among known exoplanet systems. There is also a striking contrast with our system in the many gas giant planets being so much closer to the star in the exoplanet systems, than in our own. As a creationist, I do not believe this is an accident in our system. Rod rightly mentions Isaiah 45:18. This verse implies a purposeful creation for our benefit.

We should realize there are still limitations on what we can detect. Research on extrasolar planets proceeds at a furious pace. But for many years astronomers could not detect extrasolar planets beyond about 50 AU from Earth. Now, better technology allows detection at much greater distances. There are also limits in what the minimum planet mass is that would be detectable today. The Kepler space telescope is said to be designed to detect Earth-sized planets. Some systems with known planets could have other smaller planets we still cannot detect. More planets smaller than Saturn are likely to be discovered. Finding more planets might make the mass issue even more significant. But I think it is the distribution of mass in our solar system that is more challenging for naturalistic theories.

The distribution of mass in our system is obviously quite different from many exoplanet systems. Our system is more stable than many extrasolar systems because of the more circular planet orbits in our system and the larger planets being farther from the sun. One response to deal with this from the scientific community is a concept called the Nice Model, named after Nice, France. I discussed this model in my paper, "Migrating planets and migrating theories".[1] This model applies orbit migration theories to our solar system, proposing that Uranus and Neptune formed much nearer the sun. It is suggested that Jupiter and Saturn and the accretion disk of our system interacted with Uranus and Neptune early in the solar system, making them migrate out to their current locations. Scientists sometimes also now entertain the possibility that in some systems some planets may have formed but not survived, thus a planet could fall into the star or be ejected out of the system altogether. This could also change the total mass in the ecliptic or in planets. All naturalistic planet origins theories have various weaknesses. The significance of the study of extrasolar planets to me is that evolutionary ideas are challenged by the variety in exoplanet systems as well as by the uniqueness of our own system.

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1. Spencer, W.R., Migrating planets and migrating theories, *J. Creation* **21**(3):12–14, 2007.

Erratum

Journal of Creation **24**(2)

Clarke, P., Why Pharaoh Hatshepsut is not to be equated to the Queen of Sheba. On p. 63, the following text was inadvertently omitted:

"The author presupposes (in general agreement with many other creationist writers) that:

- The Bible is authoritative and its chronology totally accurate.
- The Conventional Egyptian (Manethian) chronology, as it presently stands, is erroneous and in need of significant revision.

However, any scheme of revision proposed must be based on sound scholarship, and be consistent with the available historical (including biblical) evidence."

Apology

Journal of Creation **24**(2)

Hodge, A., Review of William Dembski's book *The End of Christianity: Finding a Good God in an Evil World*. On p. 40, the book's author is referred to as a "Christian atheist". Our 'Instructions to Authors' (last page in each issue) states that views expressed "are those of the authors and not necessarily those of CMI." This disclaimer is appropriate for a peer-reviewed journal such as this. While *Creation Ministries International* shares the reviewer's serious concerns, even dismay, at the content of Dembski's book, we believe that the above term may come across as *ad hominem*. We therefore apologize to Dr Dembski (unsolicited).