



Red Comets and Red Stars: Tolkien, Martin, and the Use of Astronomy in Fantasy Series

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Abstract:

J.R.R. Tolkien's Middle-earth tales are often invoked when discussing George R. R. Martin's *A Song of Ice and Fire* series. Both are certainly based in detailed "secondary worlds" and recount the complex interactions between multiple cultures and kingdoms, and in both the natural world plays an important role (e.g. the extreme seasons of Westeros and the forests of Middle-earth). As an astronomy professor, I have spent the past decade analyzing the science of Middle-earth, especially Tolkien's masterful use of astronomy to flesh-out his subcreation as a "real" universe. Given the increasing popularity of Martin's series (due in no small part to the wildly successful HBO series *Game of Thrones*), it is logical (at least in my mind) to explore to what extent astronomical objects and observations play a role in Martin's subcreation.

As seasons have an astronomical cause in our primary world, one obvious place to begin would be the extreme and unpredictable seasons of Martin's world, and a number of astronomers have indeed written papers trying to find a reasonable scientific explanation for this phenomenon. However, given the fact that Martin has plainly stated that the seasons have a magical, rather than scientific, origin, this line of investigation is of limited interest. In contrast, there are a number of other astronomical allusions in Martin's saga, such as the Red Comet, numerous constellations, and the apparent motions of the planets, allusions which clearly mirror the real world and also resonate with Tolkien's writings. This is not surprising, since both worlds seem to reflect a geocentric, medieval cosmology (referred to as "the discarded image" by Tolkien's friend and fellow fantasy writer C.S. Lewis). This paper will compare and contrast these aspects of Martin's and Tolkien's universes, including observations of the night sky, the role of astrology and heavenly portents, constellations, the importance of planets and their apparent motions, and the nature of the sun and moon.

KRISTINE LARSEN is a Professor of Astronomy at Central Connecticut State University. Her research and teaching focus on issues of science and society, including the preparation of science educators, science outreach, and science and literature. Her publications include the books *Stephen Hawking: A Biography* and *Cosmology 101*, and two co-edited volumes, *The Mythological Dimensions of Doctor Who* and *The Mythological Dimensions of Neil Gaiman* (Recipient of the Gold Medal for Science Fiction/Fantasy in the 2012 Florida Publishing Association Awards). She is the recipient of the 2013 Walter Scott Houston award from the Northeast Region of the Astronomical League for excellence in astronomy education and outreach.