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Signum Draco Magno Scilicet, or, Eärendel and the Dragon: Heavenly Warfare in Medieval European and Tolkienian Annals

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Signum Draco Magno Scilicet, or, Eärendel and the Dragon: Heavenly Warfare in Medieval European and Tolkienian Annals

INTRODUCTION: HEAVENLY BATTLES AND MEDIEVAL ANNALS

The reliable daily rising and setting of the sun and predicable cycles of the moon's phases are visible signs of the comforting order of the natural world. But there are less common heavenly events, interpreted by our ancestors as the result of the forces of chaos that threatened to upset the vital balance of nature. Eclipses, aurora (the Northern Lights), meteors, and their parents, ghostly comets, are leading examples of these dreaded astronomical interlopers. So notable are these transitory events that countless artists, poets, and novelists have incorporated them into their works. J.R.R. Tolkien is no exception.

The December 21, 1927 edition of Tolkien's charming "Father Christmas Letters" explains that the North Pole was so uncharacteristically dark that year due to an absence of the Northern Lights that Father Christmas had "hired a comet to do my packing by" (*FC* 21). The lack of aurora was due to the mischief of the North Polar Bear, who had the previous year set off two years' worth of aurora in one display, leading to no aurora until 1928 (*FC* 16). Christina Scull and Wayne Hammond (2017, 148) note in their *Chronology* that Tolkien's reference to unusually high auroral activity in 1926 derives from the Primary World's enhanced solar activity that year creating spectacular auroral displays. For example, on March 9, 1926, a red aurora seen in Salzburg, Austria was so vivid that the fire department was called by concerned citizens ("Salzburg," 1926, 1). As for comets, they were certainly in the news in 1927, with the discovery of nine between January and November. Among the most famous was Comet Skjellerup-Maristany, discovered with the unaided eye and so bright that it could be seen in broad daylight on December 18 (Yeomans, 2007). It is therefore quite reasonable for Tolkien to have included the comet reference in his tale.

Lunar eclipses also appear in the same 1927 Father Christmas letter; the moon goes "out" when the Man in the Moon falls asleep during a visit to Father Christmas (*FC* 22). The Christmas holidays of 1927 also marked the first complete manuscript of the adventures of the mischievous dog Roverandom, written in honor of son Michael's beloved metal dog that had been lost on a family vacation. During his adventures on the moon, Roverandom and the moon-dog awaken the Great White Dragon responsible for occasionally turning "the whole moon red," and the Man-in-the-Moon saves the canines by throwing a "dark, black spell that looked like jellified tar and honey" at the dragon, causing him to neglect his duties and making the next eclipse "a failure" (*Rov* 35-6). Christina Scull and Wayne Hammond (*Rov*. xiii) argue that both of these incidences are references to the December 8, 1927, lunar eclipse, which they note was reported by the *Times* of London to have been obscured by clouds.¹ During the dogs' escapades with the dragon, a warning rocket is set off, "seen all over the moon like a golden umbrella bursting into a thousand silver tassels, and it caused an unpredicted fall of shooting stars on the world not long after" (*Rov* 35). This last event could be a reference to the unexpectedly strong June 1927 apparition of the June Boötid meteor shower (Arlt et al., 1999, 887).

In the etiological mythology of Middle-earth, heavenly battles routinely invoke such astronomical events, including them as mighty weapons within Melkor's arsenal of destruction. Eclipses of both the sun and moon appear, explained as the results of chaos in Arda Marred and intentional attacks of Morgoth waged against the sun and moon. For example, solar eclipses are caused by the unrequited infatuation of Tilion, the driver of the moon, for the radiant Arien, resulting in his deviating from the path and speed commanded by Varda. Because of this, "at times it will chance that he comes so nigh that his shadow cuts off her brightness and there is a darkness amid the day" (*Sil* 101). Lunar eclipses are caused by Morgoth's

¹ There was also a more famous failed total solar eclipse in England earlier that year, on June 29, 1927, also thwarted by the typical cloudy English weather along most of the path of totality (Marriott, 1999, 138). Perhaps Tolkien was doubly frustrated by losing out on two eclipses within a single year.

open hatred for the great heavenly lights; thus he “assailed Tilion, sending spirits of shadow against him” (*Sil* 101). Likewise, in an early version of his cosmology, Tolkien blames meteors on the hatred of Melkor for all sources of light that he cannot control: “Melko[r] stalks high above the air seeking ever to do hurt to the Sun and Moon and stars (eclipses, meteors).” He then adds that “Varda immediately replaces any stars that Melko[r] loosens and casts down” (*BOLT II* 281). In this circumstance, Tolkien appears to take the concept of “falling stars” quite literally. Interestingly, in the first iteration of the mythology it is prophesized that Melkor will one day “contrive a quarrel between Moon and Sun,” resulting in the death of the Sun maiden (there called Urwendi) (*BOLT I* 219). In a later rejected conclusion of the same myth it is said that after Urwendi’s death, the ship of the Sun “fell near the ground, scorching regions of the Earth,” reminiscent of the fall of a large meteorite (*BOLT II* 281).²

Another of Middle-earth’s Primary World connections is its position as a written history of events in the distant past. Tolkien was not only well-versed in the medieval traditions of annals, chronicles, and histories,³ but actively adopts these stylistic forms, especially in his writings concerning the First Age of Middle-earth, developing a fictional medieval historiography (Cristofari, 2012, 176).⁴ For example, he often works in parallel on brief annals (such as *Annals of Valinor* and the *Annals of Beleriand*) while crafting the more complete narrative histories, such as the *Quenta*, although his *Annals* sometimes grew to become important independent works in their own right (*LR* 124). As Christopher Tolkien notes, his father even invokes the traditional style of the entries of the *Anglo-Saxon Chronicle* in some versions, using the format of a date followed by ‘Here such and such happened’ (*LR* 124). In addition, Tolkien follows the common medieval convention of attributing many of his earlier *Annals* to specific authors (Cristofari, 2012, 181), although the authors’ identities shift over time (*WOJ* 343).⁵ It should therefore not surprise us to find descriptions of heavenly battles described in the annals and histories of Middle-earth as stylistically similar to such descriptions in Primary World works. This paper focuses on three such events (two featuring dragons), battles pitting Melkor against either the Valar, the Elves, or the united forces of both groups.⁶

FIRES IN THE NORTH: AURORAS, KUIVIÉENEN AND GONDOLIN

² The parallel to the Greek myth of Phaethon is obvious, with Jesuit priest and polymath Franz Xaver Kugler proposing that the myth of Phaethon was based on the historical fall of a large meteorite circa 1500 B.C. (1927, 39). Although unfortunately used interchangeably (especially in the popular press), the terms “meteor” and “meteorite” refer to related but technically distinct phenomena. In modern usage, when a piece of rock, metal, or dust from space (called a *meteoroid*) enters the earth’s atmosphere, it burns up due to friction, generating a streak of light referred to as a *meteor*. A piece that survives to hit the ground becomes known as a *meteorite*.

³ I am largely avoiding the debate (e.g. Burgess and Kulikowski, 2013; Davenport, 2004; Vanderputten, 2001) amongst medieval scholars concerning the differences between these three forms. Here shorter works will be called *annals* or *chronicles* interchangeably and longer, more detailed narratives *histories*.

⁴ The narrative structure of the published 1977 *Silmarillion* has been discussed at length elsewhere (e.g. Cristofari, 2012; Lewis, 1996; Nagy, 2004; Wise, 2016). This paper focuses on the *History of Middle-earth (HoMe)* volumes.

⁵ In his later writings (e.g. *MR* 370, 373) Tolkien came to think of the record of events in the First Age as largely filtered through the lenses of Men (specifically the Númenóreans), and thus “two stages removed from a true record” (*MR* 401). This change was largely motivated by his increasing discomfort with his cosmology, specifically the creation of the sun and moon from the Two Trees.

⁶ Mention should be made of one “heavenly battle” that does not involve Melkor, the apparent stalking of Eärendel the Mariner by the “Ship of the Moon” as described in the early poem “The Shores of Faëry” and the outline of “The Tale of Eärendel” (*BOLT II* 255, 262, 268-9). As described in Larsen, 2019, Tolkien is here describing the well-regulated real-world apparent motion of the moon and Venus in the sky along the ecliptic (the moon appearing to approach, or stalk, Venus for a few days each month), and as such cannot be considered in the same vein as unusual events such as eclipses, meteors, comets, and aurora. An echo of this metaphor remains in the writings of the 1930s, in which meteors are explained as stars that are pursued by Tilion, the wayward and unruly driver of the moon. Upon taking refuge in the “roots of the earth,” the stars were once more faced with Tilion, and “flee before him into the upper air,” a rather strange visual of meteors rising up into the air rather than falling down through it (*LR* 240-2).

Famed seventeenth century astronomer Galileo Galilei gave the name *boreale aurora*, or northern dawn, to the interaction between the Earth's atmosphere and the solar wind (an outrushing of high energy particles from the sun). The name derives from the reddish-pink appearance of the aurora as seen from lower latitudes, evocative of the dawn sky (Jago, 2001, 18-9). Aurora can appear as a glow or arc in the sky, or in the form of ever-changing bands, rays, or flickering curtains. They can take on nearly any color of the rainbow, with different colors produced at different altitudes in the atmosphere.

As expected, there is a rich treasury of myth and legend surrounding aurora, especially in the northern cultures whose languages Tolkien well knew. For example, Finnish lore explains the phenomenon as the torches of warring angels, and a proverb from Norway warns that when the "Blood Lights" appear, "it is an omen of coming war" (Brekke and Egelund, 1983, 2-6). *The King's Mirror*, a Norse work dating from the thirteenth century, compares the appearance of aurora to that of a "vast flame viewed from a great distance" and as appearing to "blaze like a living flame" (Brekke and Egelund, 1983, 35-6). The relative rarity of aurora farther from the Arctic Circle, and their commonly reddish appearance at the same locations, led to a widespread belief in Southern Europe that the aurora were fires in the North.⁷

References to aurora can be found in *The Anglo-Saxon Chronicle* and other medieval annals, often attached to unfortunate events. For example, in the year 926 "fiery lights" were seen "in the northern quarter of the sky, and Sihtric died, and King Athelstan succeeded to the kingdom of the Northumbrians" (Whitelock, 1961, 68). In 979 "a bloody cloud was often seen in the likeness of fire" that disappeared from sight near dawn (Whitelock, 1961, 80). Before Michaelmas in 1098 "the sky looked as if it were burning nearly all night. This was a very oppressive year because of all sorts of excessive taxes, and great rains that did not cease throughout the year" (Whitelock, 1961, 175). An entry for the year 1131 notes that on January 11 "the sky in the north was all as if it was a burning fire, so that all who saw it were afraid as they had never been before. In the course of this same year, there was such a great cattle plague all over England as had never been before in the memory of man" (Whitelock, 1961, 197).

As noted in the introduction, the fiery appearance of red aurora has led to historical instances of mistaken identity. On September 15, 1839, a magnificent display of red aurora in London led to a general panic and the large-scale dispatching of the city's fire-fighting resources to the North (Brekke and Egelund, 1983, 7). Another display viewed from London on January 25, 1938, was described by the press as leading "many to think half the city was on fire. The Windsor fire department was called out in the belief that Windsor Castle was afire" (Eather, 1980, 92).

Two instances of such heavenly fires appear in the *Annals of Middle-earth*. After the Elves awaken on the shores of Kuiviénen, the Valar deem Melkor a significant threat to the then innocent Firstborn Children of Ilúvatar. In the post-LOTR work *Annals of Aman* we read that in the Year of the Trees 1090 "the Valar marched over Middle-earth, and they set a guard over Kuiviénen; and thereafter the Quendi knew naught of the Great War of the Gods, save that the Earth shook and groaned beneath them, and the waters were moved; and in the North there were lights as of mighty fires" (MR 74-5).

The earliest version of the *Annals of Beleriand* (circa 1930s) explains that in the Year of the Sun "207 Here Morgoth loosed a host of dragons over the mountains from the North and Gondolin's vale was taken and the city besieged. The Orcs sacked Gondolin and destroyed the king and most of his people" (SOME 307). Note the usage of the phrasing "Here Morgoth loosed," paralleling the *Anglo-Saxon Chronicle*. This annalistic entry summarizes a much larger history of the event found in the earlier work *Tuor and the Exiles of Gondolin* (circa 1916-7). In this history we read that at the time of the "great feast Tarnin Austa or the Gates of Summer" the citizens of Gondolin "very gladly and eagerly" awaited the rising of the sun in the East. But instead,

⁷ Red emissions due to oxygen occur above 250 km, more than twice as high in the atmosphere as the common green oxygen emissions and therefore can be seen from lower latitudes than green aurora (Blanc and Mäkinen, 1994, 599-601).

a new light suddenly began, and a glow there was, but it was beyond the northward heights, and men marvelled.... Then wonder grew to doubt as that light waxed and became yet redder, and doubt to dread as men saw the snow upon the mountains dyed as it were with blood. And thus it was that the fire-serpents of Melko came upon Gondolin.

Then came over the plain riders who bore breathless tidings from those who kept vigil on the peaks; they told of the fiery hosts and the shapes like dragons.... (*BOLT I* 172)

Note that the fires appear as a northern dawn, hearkening back to Galileo's original etymology for *aurora* and *Anglo-Saxon Chronicle* descriptions of aurora. The sight of the distant unworldly fires is interpreted as a sign of vague impending doom. It is only with the eyewitness accounts of the sentries that we get an explanation of the phenomenon – literally dragons.

Similarly we later read that “It was now four hours still from middle night, and the sky was red in the north⁸ and in the east and west; and those serpents of iron had reached the levels of Tumladin, and those fiery ones were among the lowest slopes of the hills” (*BOLT II* 174). A similar association between auroras and a great battle can be found in the tradition of Ragnarök, the Norse myth of the Twilight of the Gods. The final battle is said to begin with Loki leading an army containing dragons and flame giants to attack the gods' home of Asgard. It is prophesized that “suddenly the skies were rent asunder, and through the fiery breach rode [the flame giant] Surtr with this flaming sword, and his sons,” what I posit is a reference to a red auroral display (Guerber 333).

The connection between aurora and dragons can also be found in the *Anglo-Saxon Chronicle* entry for year 793 concerning the sacking of the Lindisfarne monastery by Vikings:

In this year dire portents appeared over Northumbria and sorely frightened the people. They consisted of immense whirlwinds and flashes of lightning, and fiery dragons were seen flying in the air. A great famine immediately followed those signs.... (Whitelock 36)

One of the child survivors of the dragon attack on Gondolin faced down the beasts as an adult, playing a central role in our third heavenly battle: Eärendel.⁹

DRAGONS AND FIREBALLS: THE BATTLE OF EÄRENDEL AND ANCALAGON

The connection between dragons and meteors in legend is well established, and points to the latter as a very probable source of many myths of the former (Burke, 1986, 217-8; McBeath, 2003, 189; Warner, 2003, 195). McBeath (2003, 189) opines that an important source of many such beliefs is the New Testament text *The Apocalypse of St. John (Revelation)*. Indeed, there are at least four identifiable meteoric descriptions in this text, two of which are directly connected with dragons:

- “And the stars from heaven fell upon the earth, as the fig tree casteth its green figs when it is shaken by a great wind” [6:13].

⁸ A third example of Tolkien's use of auroral allusions is in the Mannish name of the Big Dipper as the Burning Briar. See Larsen, 2005, for more information. This, too, references a battle between Melkor and the Valar, the one “that shall be at the end of days,” as the Big Dipper/Valacirca is purposefully set in the north by Varda as a “sign of doom” – Melkor's (*Sil* 48). It is worth noting that all three mentions of aurora appear in the northern sky, which is appropriate for events occurring in the northern hemisphere of a spherical world (although on a spherical world there would also be “southern lights” visible above the southern horizon for locations south of the equator). Given that Arda is flat in the First Age, the most logical explanation for all the lights viewed in the north would be a symbolic/metaphorical one (i.e. tying it to Morgoth and the location of his stronghold in the north).

⁹ Tolkien changed the spelling of this character's name throughout the decades. I will be consistently using this spelling except where quotations dictate something different.

- “And the third angel sounded the trumpet, and a great star fell from heaven, burning as it were a torch, and it fell on the third part of the rivers, and upon the fountains of waters” [8:10].
- “And there was seen another sign in heaven: and behold a great red dragon, having seven heads, and ten horns: and on his heads seven diadems:
And his tail drew the third part of the stars of heaven, and cast them to the earth: and the dragon stood before the woman who was ready to be delivered; that, when she should be delivered, he might devour her son” [12: 3-4].
- “And there was a great battle in heaven, Michael and his angels fought with the dragon, and the dragon fought and his angels:
And they prevailed not, neither was their place found any more in heaven.
And that great dragon was cast out, that old serpent, who is called the devil and Satan, who seduceth the whole world; and he was cast unto the earth, and his angels were thrown down with him” [12: 7-9].

McBeath also argues for another root cause for the dragon-meteor connection, “through the draconic ‘windsock’ style of military standard, which the ancient Romans called the *draco*” (2003, 189).

An early reference to a bright meteor (termed a fireball) as a dragon in medieval chronicles is seen in an entry in the *Annals of Ulster* for the year 735: “A huge dragon was seen, with great thunder after it, at the end of autumn” (McBeath, 2003, 189). *Annales Floriacenses* notes for June 956 “Signum draco magno scilicet.... Very bright meteor reported as a dragon without head” (Dall’Olmo, 1978, 128). Slavic *Chronicles* have similar entries; for example, in 1028 “A dragon-shaped sign appeared in the heavens, visible to the whole earth” and in 1144 as seen near Kiev “There flew from the sky to earth something resembling a fiery circle, which left in its wake a sign in the shape of a great dragon” (Warner, 2003, 196).

Such connections have been carried down into recent centuries. In his 1741 account of several meteors, Thomas Short describes an October 22, 1739 observation of a “frightful fiery Dragon, seen over all England” (1741, 629) and an August 1733 “frightful Glade of Fire, or ‘Draco Volans’” (1741, 627). November and December of 1793 brought observations in Aberdeen of “very uncommon phenomena in the air (which they call dragons) of a red fiery colour, appearing in the north, and flying rapidly towards the east...” (Ingersoll, 1928, 114). Mid-nineteenth century Slavic folklore still speaks of common beliefs of “falling stars and meteors to be dragons” (Warner, 2003, 195), while in December 1917 citizens of several Scottish towns were amazed at “a startling flash and a series of thunder-like detonations” caused by the fall of three meteorite fragments, an event that Tolkien might well have known about from the popular press (Denning, 1918, 129). It is no wonder that meteors are still among the significant causes of modern UFO reports, the planet Venus being another.¹⁰

Medieval annalists habitually combined discussions of aurora, meteors, and comets, and it often takes a careful reading of an individual entry to discern exactly which type of astronomical apparition is being described. Like meteors and aurora, comets – fossilized miles-wide mixtures of rock and ice left over from the earliest era of our solar system – are widely seen as “harbingers of unwanted change, ill fortune, evil” (Sagan and Druyan, 1985, 15). Unlike aurora and meteors, a given comet can be viewed night after night for weeks or more, although their appearance changes thanks to fluctuations in the solar wind and increased liberation of particulate matter as the comet nears the sun in its orbit. The resulting changes in the comets’ tails certainly explain much of the mythological connection between comets and living beings, including fiery dragons. Bede’s *Ecclesiastical History* notes of the year 679 “there appeared in the month of August the star which is called a comet; and continuing for three months it rose in the morning, sending out, as it were, a tall pillar of shining flame” (Kronk, 1999, 676).

¹⁰ For more information on identifying UFOs, see https://nightsky.jpl.nasa.gov/news-display.cfm?News_ID=597.

But the most famous medieval comet observations are without a doubt those associated with the 1066 apparition of Halley's Comet, as memorialized in the Bayeux Tapestry (Genuth, 1997, 27-8). The comet returned during Tolkien's lifetime, the 1910 apparition generating all manner of modern-day mythology and misconceptions when scientists announced the unexpected discovery of deadly cyanogen in the comet's tail – a tail that the earth would pass through. Astronomers' subsequent assurances that the comet's tail was far too ethereal to pose a threat did little to calm fears, much to the delight and financial gain of charlatans who sold "comet pills," the modern equivalent of various medieval potions (Kronk, 2011). It is no wonder, then, that in the early chapters of E.R. Eddison's classic 1922 fantasy novel *The Worm Ouroboros* Lord Gro's prescient dream of doom features various "fiery signs" in the night sky, especially a "bearded star" – a comet (2008, 27; 32). Even today, writers of medievalist fantasy frequently invoke comets as celestial harbingers of warfare and bloodshed, including George R.R. Martin and Andrzej Sapkowski (Larsen, 2020).

Our final example is the battle between Eärendel and the dragon Ancalagon. While Tolkien does not mention comets by name in the legendarium, the astronomical ambiguities and vagaries found in medieval annals concerning these astronomical objects provide us with some room for creative interpretation. The *Annals of Beleriand* note of this event "Here Fionwë fought the last battle of the ancient world, the Great or Terrible Battle" (LR 144). After the defeat of his ground troops, Morgoth retreats to his stronghold of Angband, and then "loosed the winged dragons, which had not before been seen; and Fionwë was beaten back upon Dor-na-Fauglith. But Eärendel came in the sky and overthrew Ancalagon the Black Dragon, and in his fall Thangorodrim was broken (LR 144).

The narrative history found in the *Quenta Silmarillion* (written at about the same time) offers us additional details of the battle; for example, "the coming of the dragons was like a great roar of thunder, and a tempest of fire, and their wings were of steel" (LR 329). Eärendel is described as

shining with white flame, and about Vingelot were gathered all the great birds of heaven, and Thorondor was their captain, and there was battle in the air all the day and through a dark night of doubt. And ere the rising of the sun Eärendel slew Ancalagon the Black, the mightiest of the dragon-host, and he cast him from the sky, and in his fall the towers of Thangorodrim were thrown down. Then the sun rose, and the Children of the Valar prevailed, and all the dragons were destroyed, save two alone; and they fled into the east. (LR 329)

Of interest here is the association of the end of the battle – the falling of the defeated dragon to the Earth – with the rising of the sun, an interesting subversion of the story of Urwendi, the sun maiden, falling from the sky due to Morgoth's attack.

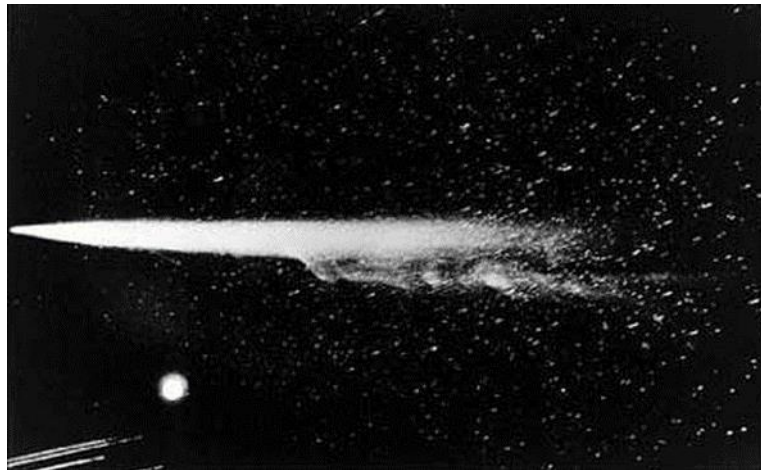
Martinez (2003, 398) ponders how this battle would have appeared to observers on the ground, seen from some distance away. He deduces that Eärendel would appear as "a shining spot in the sky, but his opponent would have rained fire around him." Might this be interpreted as a meteor shower seen to radiate from the location of Venus in the sky? Recall the previously noted Biblical battle of Michael and the angels against the dragon in *Revelation 12: 7-9*. Such an astronomical apparition might also explain an entry for July 24, 1239 in Michael Paris's *History of the English*:

On the eve of St. James, however, at dusk, the stars not yet being visible, when the sky was at its clearest, there appeared, in the guise of Lucifer, a very great star, like a torch, which was throwing itself through the airy territory, like a flaming arrow, brightest at its head, leaving fire and smoke after itself when it moved. It appeared thus several times and was considered to be either the serpent or a comet (Gigliotti, translated from Madden, 1866, 424).¹¹

¹¹ Many thanks to my colleague Gilbert Gigliotti for the unbiased translation of this entry from the original Latin.

But the aforementioned 1910 apparition of Halley's Comet also featured a close encounter between the comet and Venus, as memorialized in a famous May 13, 1910 photograph taken at the Lowell Observatory in Flagstaff, Arizona (Figure 1). Noted popularizer of astronomy Mary Proctor describes witnessing a particularly eerie sight a week earlier, on the morning of May 6, 1910, with Venus and the comet both appearing an unnatural bloody red in the predawn sky as viewed through humid air. Her attention was then caught by

what seemed to be a curving tongue of flame. For a moment I thought it was a fire, until I remembered that the moon should be rising at that time. As it was crescent-shaped, it resembled a red simitar [sic], glowing through the mist. To the imaginative spectator it would have suggested an ill omen in the sky, for it was an awe-inspiring spectacle until it rose above the mist and shone like burnished silver ("Comet's Red Glare," 1910).



[Figure 1: Halley's Comet and Venus photographed over Flagstaff, Arizona. Public Domain image]

While I have not seen evidence that Tolkien himself ever viewed Halley's Comet from cloudy England, the fear invoked by the bloody appearance of the comet as seen in Bermuda on the night of King Edward VII's death was reported in the press ("Comet's Red Glare," 1910).

STATIONARY STARS AND CREATIVE LICENSE

One of the most obvious distinctions between meteors and comets is their apparent motion. The flash associated with meteors lasts a paltry few seconds, with any smoke trail left behind dissipating in a manner of minutes. While comets move noticeably relative to the background stars, such motion is discernable only over the passage of hours (at best). Comets therefore rise and set with the stars. The motions of neither objects are therefore an obvious match with the description of the battle between Eärendel and Ancalagon, as the battle takes place over an entire day and night. Note that the viewing of celestial objects during the day is not what poses a difficulty here. Venus is sometimes visible to the keen unaided eye in broad daylight if one knows where to look, and the Great January Comet of 1910 (not to be confused with the apparition of Halley's Comet of the same year) was also briefly visible to the unaided eye, including workers at the Transvaal Premier Diamond Mine in South Africa (Schaaf, 1997, 262). Also recall that the comet referenced in the 1927 Father Christmas letter had also briefly been bright enough to see during the day. Bright meteors have also been spotted during daylight hours.

The problem arises with the combatants apparently failing to set below the horizon during an entire 24-hour period.¹² Fortunately, there is precedence for such unnatural celestial motion in the legendarium. For example, in the early work “The Tale of the Sun and Moon” in *The Book of Lost Tales*, while most of the stars are moved by the Mánir and Súruli, other stars “abode where they hung and moved not” (*BOLT I* 181-2). Two of these fixed stars are specifically named, Morwinyon, identified as Arcturus, the brightest star in our Primary World constellation Boötes, and Nielluin, the so-called Dog Star, Sirius (*BOLT I* 261; 200). Due to Boötes’s proximity to the North Star, its rising and setting differs from many constellations, its peculiar motion noted by a number of classical authors, including Aratus and Boethius. In particular, it sets in an upright position, slowly sinking over the course of eight hours with Arcturus leading the way (Larsen, 2010, 201).

A more widely known example of strange celestial motion is found in *Akallabêth*, where we read that once Númenor had been prepared by the Valar, “the Star of Eärendil shone bright in the West as a token that all was made ready, and as a guide over the sea; and men marvelled to see that silver flame in the paths of the Sun” (*Sil* 260). The passage of Venus along a similar path as the sun is not a miraculous sight in itself, as Venus and the sun (and moon) travel along the same path relative to the stars, the ecliptic. What is truly marvelous is that “the Edain set sail upon the deep waters, following the Star... for many days, and ... so bright was Rothinzil that even at morning Men could see it glimmering in the West, and in the cloudless night it shone alone, for no other star could stand beside it” (*Sil* 260). Indeed, seeing Venus in the Western sky opposite the rising sun at any time, let alone it being stationary in this position for days on end, is a violent contradiction of the orbital mechanics of our solar system. It is, however, in keeping with the autonomous nature of Eärendel the mariner and his previous actions in Middle-earth.

CONCLUSION

Astronomers have read the *Anglo-Saxon Chronicle* and other similar works with great interest, attempting to identify descriptions of various astronomical phenomenon as well as align particular annal entries with specific events, such as individual comets and meteor showers, or auroral outbreaks (e.g. Beard, 2005, 261; Eglar, 2002, 184; Mardon et al., 1992, 385). The results have sometimes led to scientific discoveries. For example, observations of an unusually dark lunar eclipse noted in the *Anglo-Saxon Chronicle* entry for May 5, 1110, have been used by researchers to date volcanic eruptions responsible for enhanced sulfate deposits in Greenland ice cores (Guillet, 2020). Likewise, observations of aurora and aurora-like apparitions in the *Anglo-Saxon Chronicle* has been used by astronomers to reconstruct unusually strong solar activity prior to the invention of the telescope and the advent of organized solar activity observations in the 17th century (Hayakawa et al., 2019; Neuhäuser and Neuhäuser, 2011). It is therefore gratifying that we can see reflected in Tolkien’s fictional medieval historiography the same type of astronomical allusions, adding yet another exquisite layer of flavor in the Cauldron of Story.

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¹² On a spherical world, this could be explained by the celestial objects in question being located near to the North Star in the sky. For example, the Big Dipper (Tolkien’s Valacirca) does not set as seen from mid- to high-northern latitudes but instead circles the North Star.

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