ABSTRACT: The opening scene of William Shakespeare’s play *All’s Well that Ends Well* contains a reference to a “bright particular star.” This we identify with Kepler’s Supernova, which was first observed on 9 October, 1604. The identification is supported by a reference in the same scene to the retrograde motion of Mars, as well as independent evidence that the play was written sometime in the interval 1603 –1605.

A so-called “new star” appeared in the sky in evening twilight of 9 October 1604 above the southwestern horizon (Figure 1). It was first observed in Italy and was a source of much wonder as it lay “in dramatic array” (Christianson 368) with planets Jupiter and Mars, then near conjunction, and with Saturn. The phenomenon engendered much discussion since, according to contemporary doctrine, the heavens were supposed to be unchanging and perfect, and this sudden apparition, like the new star of 1572, was a powerful argument for the mutability of the heavens.

Both “new stars” belong to the class of objects known as supernovae (SN). The two objects, named SN1572 and SN1604 for the years of discovery, are known popularly as Tycho’s and Kepler’s supernovae, the former after Tycho Brahe (1546–1601) and the latter after Johannes Kepler (1571–1630), both of whom made extensive studies of the respective outbursts. Tycho published his research on SN1572 in *De Stella Nova* of 1573, and in 1604, Kepler wrote two pamphlets on SN1604 (Berry 182), and went on to write a treatise entitled *De stella nova in pede Serpentarii* (“On the new star in the foot of the constellation the Serpent”), which was published in Prague in 1606.

Both of these phenomena occurred during the lifetime of William Shakespeare (1564–1616), but only Tycho’s supernova has been identified in the Shakespearean canon, as the star in *Hamlet* “that’s westward from the pole” (Olson, Olson and Doescher). In this paper, we suggest that SN1604 is the bright particular star to which Helen refers in Shakespeare’s *All’s Well that Ends Well*. 
All’s Well opens in the French province of Roussillon. In the first scene, the heroine Helen bemoans her lot, which is that she loves the nobleman Bertram, but as the child of a commoner, she can never hope to wed him. She expresses her discontent in celestial conceits.

HELEN        ‘Twere all one
That I should love a bright particular star
And think to wed it, he is so far above me.
In his bright radiance and collateral light
Must I be comforted, not in his sphere. (1.1.87–1.1.91)

Commentators agree that this passage alludes to the ancient Earth-centered cosmology of the Greco-Egyptian astronomer Claudius Ptolemy (AD 90–168): “In Ptolemaic astronomy, the spheres in which heavenly bodies were set, revolved collaterally, in parallel [i.e. with concentric] motion. From her lower level, Helen can see the luminary Bertram and follow his trajectory, but her sphere will never touch his” (Snyder 1.1.90–1n). By this account, Helen identifies herself with a parallel (“collateral”) sphere, which is lower than that to which she says Bertram belongs, and she can take comfort only by gazing upon Bertram’s brilliance from afar.

SN1604 fits the description of a “bright particular star.” It is “bright” because it reached apparent magnitude –2½, which is 2½ times brighter than the brightest star in the sky (Sirius); and it is “particular” because in 1604, it attracted a great deal of attention (Drake 104–5). And it is a “star,” because, like SN1572, it was starlike in appearance and appeared fixed among the stars on the celestial sphere (Drake 105).

In All’s Well, Helen’s fixation on SN1604 plays out for the duration of the play, just as the Ghost in Hamlet that appears from the direction of SN1572 is central to the structure of that plot. The identification of SN1572 is confirmed by subsequent events in Hamlet (Usher 100–
so we expect that the present identification of SN1604 will be validated by ensuing developments in All’s Well. In fact, 12 lines after Helen invoked the bright particular star, the script delivers the necessary confirmation.

Immediately after Helen has finished analogizing Bertram to a bright particular star, a soldier Paroles enters, whom Helen defines as foolish, mendacious and cowardly. Paroles is decked out in outlandish garb, and he talks a good line. His appearance is comedic, as is his choice of a conversational topic. He is not supposed to have overheard Helen’s soliloquy, yet straightaway he asks Helen whether she is meditating on virginity. This obsession with Helen’s virginity “has puzzled commentators” (Hunter p. xli). The subsequent badinage is amusing, but in reality it masks a confirmation of the mooted identification of SN1604.

When it comes time for Paroles to leave, his farewell is patronizing. “If I can remember thee, I will think of thee at court” (1.1.190–1), he tells Helen. But she is equal to the challenge, and her rejoinder only seems complimentary. “Monsieur Paroles, you were born under a charitable star” (1.1.192–3), she says. Paroles takes the bait, and the pusillanimous warrior cannot resist adding that he was born “Under Mars” (1.1.194), which is a reference to the Roman god of War. Helen seizes the opening. “I especially think under Mars,” she says, emphasizing the word under (1.1.195). The emphasis puzzles Paroles. “Why under Mars?” he asks, to which Helen explains: “The wars hath so kept you under that you must needs be born under Mars” (1.1.197–1.1.198). Once again, Paroles’ addiction to self-aggrandizement gets the better of him: “When [Mars] was predominant,” he says, but Helen’s rejoinder scores the equalizer: “When he was retrograde, I think rather, [because you] go so much backward when you fight” (1.1.200, 1.1.202).

Helen alludes to the retrograde motion of planet Mars, where in astronomical usage, “retrograde” refers to apparent angular motion in the opposite direction of the Sun around the ecliptic, i.e. from east to west relative to the background stars. In reality, in the heliocentric model of Nicholas Copernicus (1473–1543), the Earth overtakes Mars every 780 days (≈ 26 months) because it moves more swiftly and in a smaller orbit. Mars is then closest to Earth and at its brightest, and thus prominent in the night sky. Over a period of weeks and months, Mars appears to reverse its direction of motion, even though of course, a hypothetical observer located among the stars would see Mars continue to go around the Sun in the same sense as the Earth. This gives Shakespeare a perfect opportunity to exemplify the “dilemma most persistent in Shakespeare — that of appearance and reality” (Hunter p. xl).

Other meanings of the verb “to retrogress” listed in the Oxford English Dictionary and prevalent in the early modern age, are: “to turn back,” “to reverse,” “to retrace one’s steps,” or “to return along a former course.” The emphatic reference to Paroles (i.e. Mars) retrogressing (i.e. retracing his steps), and the fact that Helen refers to Paroles’ past endeavours, suggests that we turn the clock back and let Mars retrace its steps. The starting time of the retrogression is likely to be the date on stage at the time, which as posited, is the date of the first sighting of SN1604, October 9, 1604. Mars undergoes retrograde motion from March 1 to May 19, 1604, and remarkably, it does so across the constellation Virgo, the Virgin (Figure 2). It is not coincidental that the dialogue between Helen and Paroles that immediately precedes this is an
emphatic and lengthy discourse on virginity that is connected to previous dialogue only through a starry conceit, indicating that the identification of SN1604 and the associated temporal marker are correct.

Figure 2. Relative to the background stars, Mars moves progressively from west to east (right to left on the chart), but from March 1 to May 19, 1604, it moves retrograde from east to west before resuming its prograde motion. The looping occurs across the constellation Virgo, whose brightest star is α Virginis (Spica). The period covered on the chart is from December 24, 1603, to July 30, 1604. (Data from Voyager 4.0.6 by Carina Software © 1990–2008.)

There is additional support for the mooted identification. As posited, the present argument dates the beginning of All’s Well as the time of the first observation of SN1604, which serves as an early limit of October 9, 1604 for the time of writing of the play. This lies well within the dates 1603–5 suggested by other arguments (Bate and Rasmussen 182; Hunter pp. xviii–xxv; Leggett 10–11; Snyder 24). The prior and next intervals that Mars undergoes retrograde motion are January to April, 1602, and April to July, 1606, neither of which occurs in the foreground of Virgo, and both of which lie outside the commonly accepted range of writing.

Helen associates Bertram with SN1604 and Paroles with Mars, so the two roles are associated with celestial phenomena. The nobleman Bertram has the superior position relative to the commoner Paroles, just as a star fixed on the celestial sphere of the stars has a superior position to any foreground planet. Both Bertram (as SN1604) and Paroles (as Mars) are flawed according to the rubric of Aristotelian philosophy (and their flaws are quite evident as the play progresses) because the phenomena they represent violate the old dogma of celestial perfection, the former owing to the violation of the dictum that the sky be perfect and therefore unchanging, and the latter because retrograde motion is a flagrant violation of the dicta that celestial sources are supposed to move prograde across the celestial sphere, in perfect circles, and with constant angular speed.
Finally, in the next scene 1.2, “catastrophe” and “heel” occur in the same line (1.2.57), and in the scene after that, we find the word “serpent” (1.3.141). Shakespeare writes always to a purpose, yet these occurrences are seemingly unwarranted by context. Probably, they refer to the new star that erupted, as if catastrophically, in the heel of Ophiucus, the Serpent-Bearer, which Kepler in his treatise *De stella nova in pede Serpentarii*.

Is SN1604 the only option? Helen says that the candidate must be bright, particular, starlike, and “far above me.” In olden days, “star” meant any celestial light source, and the next best guess for an exceptionally bright object is the Sun. But in the ancient model of the universe, the Sun’s orbit lies inside the orbits of Saturn, Jupiter and Mars, and is therefore not particularly far above the Earth. Another candidate at high altitude would be Saturn, which is next highest compared to SN1604, and could be regarded as particular because it is the slowest of the planets to complete a circuit of the celestial sphere. But Saturn is not particularly bright as it reaches an apparent magnitude of only –0.5, which is fainter than the two brightest stars in the sky (Sirius and Canopus). Even then, it does so only about every 29½ years when its rings are fully open and contributing maximally to its overall brightness, which was not the case in 1604.

REFERENCES


