## Shakespeare's Comets

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ost authorities agree that contemporary events frequently inspired passages in Shakespeare's plays. Scholars call such passages "topical allusions." These allusions cover a wide variety of subjects: from the success of rival acting companies in Hamlet, "These are now the fashion..." (2.2.341-342) to Essex's 1599 military venture to Ireland in Henry V, "bringing rebellion broached on his sword" (5.Chor.32).1 Do the plays allude to astronomical events of Shakespeare's day? Some believe so. For example in King Lear (1605) Gloucester says, "These late eclipses in the sun and moon portend no good to us" (1.2.103-104). G.B. Harrison writes: "Gloucester's observations on 'these late eclipses in the sun and moon' probably refer to notable eclipses that occurred on September 27 and October 2, 1605."2 Similarly, Shakespeare may have alluded to the four comets that appeared during his career. They arrived in 1590, 1593, 1596, and what today we call Halley's Comet in 1607. (Edmond Halley saw it on its next return in 1682.) Each time one of these comets was visible, Shakespeare alluded to comets in a play he was writing: I Henry VI, The Taming of the Shrew, I Henry IV, and Pericles. The proposed dates for these plays in The Riverside Shakespeare, for example, and the dating of these apparitions in Vsehsvyatskii's Physical Characteristics of Comets exactly match. This suggests a connection between these comets and allusions. The connection is that Shakespeare saw these comets, and they aroused his interest. Then, with comets on his mind, he spontaneously alluded to one in the play he was writing. These comets inspired these allusions.

Why does this interest us? Why do we care if these comets inspired these allusions? There are three reasons. First, we are dealing here with some of the most popular and most performed of Shakespeare's plays. As Paracelsus said, "The more knowledge is inherent in a thing the greater the love...." When we hear Petruchio say in *The Taming of the Shrew*, "Gentiles methinks you frown, and wherefore gaze this goodly company, as if they saw some wondrous monument, some comet or unusual prodigy?"

(3.2.93-96), it adds to our delight in the play knowing, when Shakespeare wrote that, a comet was being gazed on. Again in *I Henry IV* the king says, "By being seldom seen I could not stir but like a comet I was wondered at..." (3.2.46-47). When Shakespeare was writing these words, a comet was wondered at. This adds

interest to the play.

Also consider that the last of the four comets was Halley's. Halley's Comet is a touchstone of our experience on Earth. It comes around every seventy-six years or so, roughly the life span of modern people. So there is a good possibility most of us will experience Halley's. And this is an experience we share with past and future generations. For example the famed Bayeux Tapestry portrays Halley's Comet foreboding misfortune to Harold the Second in the Battle of Hastings in 1066. Also Giotto of the Renaissance painted a scene of the Nativity called The Adoration of the Magi with a comet as the Star of Bethlehem. Since Halley's appeared in 1301, near the time he was painting that, it has been suggested that this comet was his inspiration. In fact Halley's did appear near the birth of Christ-11 B.C. Some, therefore, have looked into the idea that it actually was the Star of Bethlehem. Reliable observations of Halley's have been found at least as far back as 240 B.C. Halley's Comet is indeed an experience mankind has shared throughout its history. If we accept that Shakespeare himself alluded to Halley's Comet, that will add a new wonder to it for future generations. It will next appear in 2061.

Finally there is a third, important, practical reason for studying these comets. Shakespeare did not leave us a chronology of his plays. We do not know the exact dates he wrote them. We do know the exact dates the comets arrived. If we accept that these comets inspired these allusions, then these plays could not have been written before the dates the comets appeared. This study

provides important data for dating these plays.

Shakespeare's works, however, also mention comets at least two times when records do not report any. Julius Caesar has, "When beggars die there are no comets seen; / The heavens themselves blaze forth the death of princes" (2.2.30-31). But here, in writing about the death of Caesar, Shakespeare is referring to a specific historical comet associated with Caesar's death. In June of 44 B.C., three months after his assassination, a comet appeared. To the Romans it was a sign of Caesar's ascension into heaven. Also The Two Noble Kinsmen contains the phrase, "Comets prewarn" (5.1.51). John Fletcher, a writer in Shakespeare's theatrical company, wrote parts of this play. Although some believe Shakespeare wrote

Act 5 and possibly this phrase, the word "prewarn" argues against that interpretation, for it is not a common Shakespearian word. Indeed, it is found nowhere else in all his writings. However that may be, with these few exceptions, every time Shakespeare's works allude to comets one graced the skies around the world.

Let us now look at the specifics of this idea. To see if these comets inspired these allusions we will ask three questions, the same three questions, of all four comets. The first is was Shakespeare working on these plays when the comets appeared? What evidence do we have for that? The second question is did Shakespeare see these comets? The third question concerns the allusions themselves. Do they have any qualities that suggest these comets inspired them?

## The Comet of 1590

"During the 18th year of Wan-Li reign-period," a Chinese record for 1590 says, "a comet was seen in the SE. After more than 10 days it disappeared."3 This comet may have inspired allusions in I Henry VI. Our first question asks what evidence do we have that Shakespeare was working on I Henry VI in 1590? Dating a play such as this is a two step process. One begins by attempting to find the earliest possible date the play could have been written. Internal evidence of the play is now studied for clues to, among other things, the sources Shakespeare may have used. One of the sources for I Henry VI was the second edition of Holinshed's Chronicles. The second edition was published in 1587. So this play was written after 1587. Next let us try to determine the latest possible date. Now external evidence is studied such as contemporary documents that refer to the completed work. Philip Henslow was the manager of the Rose Theater. He kept a diary. He recorded on March 3, 1592 that the Lord Strange's Men, Shakespeare's company in the early 1590's, presented a new play called "Harey the Sixth." So I Henry VI was probably written sometime between 1587 and 1592-a span of five years. You see now how imprecise dating these plays can be. If this comet did inspire these allusions, we can narrow the dates between March 5, 1590 and March 3, 1592—a span of two years. Modern opinion narrows it even more. G.B. Evans, the editor of the Riverside Shakespeare, writes, "it is tempting to believe, with A. S. Cairncross, that I Henry VI...preceded Parts 2 and 3 in point of composition, that all three plays were written about 1590...."4

Now let us ask our second question. How likely is it that the authors of I Henry VI (it is almost certainly a collaborative work)

saw this comet? Consider how different viewing the night sky must have been before the Industrial Age with little air pollution or city lights to drown out the stars. The skies must have been close to pristine. Tycho Brahe, the great Danish astronomer, was observing the comet form his observatory on the island of Haveen between Denmark and Sweden. On March 5, he recorded that it was as bright as a first magnitude star. The next night Tycho watched as the tail grew 10 degrees long. Like the Chinese, he continued to observe it for eleven nights, up to March 16.<sup>5</sup> Is it unreasonable to believe that the authors of *I Henry VI* could also see this comet?

Finally our third question asks do these allusions have any qualities that suggest this comet inspired them? Consider this. In the first act, in the first scene, in the very first lines of the play the authors wrote: "Comets, importing change of times and states, / Brandish your crystal tresses in the sky, / And with them scourge the bad revolting stars / That have consented onto Henry's death..." (1.1.2-5). Something at this time was arousing their interest in comets, for in the third act they alluded to one again: "Now shine it like a comet of revenge, / A prophet to the fall of all our foes!" (3.2.31-32).

## The Comet of 1593

A Korean record for 1593 states, "On a jen-hsu day in the seventh month of the 26th year of Sonjo [6th August] a (hui) comet appeared outside the Tzu-Wei (Enclosure). When it reached Chhuan-Sho it began to appear smaller. It went out of sight on a ping-wu day in the eighth month [19th September]." The least bright of the four apparitions, third magnitude, it nevertheless was observed in Europe the longest, over a month—July 30 to September 3. This comet may have inspired the allusion in The Taming of the Shrew.

Now let us ask our three questions of this comet. First, was Shakespeare working on The Taming of the Shrew in 1593? Why do authorities propose this date? Although The Taming of the Shrew is a difficult play to date, a reasonable estimate is possible. On May 2, 1594 a play called The Taming of (a) Shrew was recorded in the Stationers' Register. (The Stationers' Company was a printers and booksellers guild.) A Shrew is either a play Shakespeare used as a source to write The Shrew, or A Shrew is a poorly printed version of Shakespeare's play (The Shrew). G.B. Evans believes: "If the second view is accepted, a view that has steadily gained support in recent years, Shakespeare's play (The Shrew) would have to be dated not

later than 1593." Elsewhere Evans states: "The Taming of the Shrew must have been written between 1590 and 1594." This is a span of four years. If we accept that this comet inspired this allusion, we narrow the date between July 30, 1593 and May 2, 1594—a span of less than a year. Of all the plays we are looking at, this comet data helps us most with dating The Taming of the Shrew.

Our second question asks did Shakespeare see this comet? Because of the curvature of the Earth, comet apparitions are more clearly seen in different parts of the world. Much depends on the latitude of one's location. Ripensis, an assistant of Tycho Brahe, first saw this comet on August 1. On August 4 it had a tail 4.5 degrees long. On August 23 he recorded that it matched a Cephei, a pulsating star, in "light, size and color." He continued to observe it up to September 3.9 Repensis made his observations from Zerbest in Germany. The latitude of Zerbest is 51.59 degrees north, only 33 miles north of the latitude of London, 51.30 degrees north. In London Shakespeare was writing at this time in *The Taming of the Shrew:* "Gentles, methinks you frown, / And wherefore gaze this goodly company, / As if they saw some wondrous monument, / Some comet or unusual prodigy?" (3.2.93-96).

## The Comet of 1596

Japanese documents for 1596 record, "Between the fifth and the seventh month of the first year of the Keicho reign-period [May-August, 1596] a (hui) comet appeared at 10.00 to 21.00 hr at the NW. Some said that this happened during the last ten days of the sixth month. On the seventh day of the seventh month (the comet) was still visible." This comet may have inspired an allusion in I Henry IV. Astronomers made detailed observations throughout the Far East: Japan, Korea, China. Also European astronomers, Moestlin, Rothmann, Snellius, carefully recorded the comet. Tycho Brahe first saw it on July 24 while in Copenhagen. That night he wrote that its head matched a star of second magnitude, and it had a tail seven degrees long. He quickly returned to Haveen and observed the comet there until August 6.11

Again the first of our three questions asks what evidence do we have that Shakespeare was working on I Henry IV when this comet was visible? One of the play's probable sources is Civil Wars by Daniel. Civil Wars was published in 1595. Consequently, I Henry IV probably was not written before 1595. The completed work was entered in the Stationers' Register on February 25, 1598. So what does this tell us? This play probably was written between

1595 and February of 1598—a span of three years. If this comet inspired this allusion then *I Henry IV* was written between July 24, 1596 and February 25, 1598—a span of nineteen months.

Question two asks did Shakespeare see this comet? Remember this was before the invention of the telescope. Galileo made his first telescope in the summer of 1609 two years after the last of these comets appeared. So unlike much of today's astronomy, these comets were not remote astronomical events seen only with the aid of telescopes and spacecraft. All the astronomers we have been quoting made their observations with the naked eye. If they could see these comets with the naked eye, is it not reasonable to believe that Shakespeare could?

Now let us ask our third question. Does this allusion have any qualities that suggest this comet inspired it? Consider when this allusion was written. Again Shakespeare writes about comets when one appeared. If this comet did not inspire this allusion, the only other explanation for their occurring at the same time is that it was a coincidence. When the infrequency of comet apparitions is considered, can one accept this as being a coincidence? At the time this comet was moving across the skies of Europe Shakespeare was writing in *I Henry IV*, "By being seldom seen, I could not stir/ But like a comet I was wond' red at..." (3.2.46-47).

## Halley's Comet of 1607

A Chinese record for 1607 states, "On a Hsin-yu day in the eighth month of the 35th year, a (hui) comet appeared at the Tung-Ching (22nd lunar mansion) with its tail pointing SW. It was of a pale colour, measuring about 2 feet and moving slowly towards the SW. On a ting-ch'ou day (7th October), it passed the Fang (fourth lunar mansion)." This was Halley's Comet, the most spectacular of Shakespeare's career. It may have inspired an allusion in Pericles.

First, however, *Pericles* also presents the problem of dual authorship. If, as is widely believed, others worked on this play, did Shakespeare write the act containing the comet allusion? Some have studied the different styles of the play to find Shakespeare's contribution. Harrison writes, "There is little trace of his hand in any passage before Act III. With the third act the style changes and much of the remainder of the play may well be Shakespeare's writing..." The comet allusion is in Act 5.

Again let us ask our three questions. Was Shakespeare working on *Pericles* when this comet appeared? Fortunately, *Pericles* is one of the easier plays to date. Shakespeare got part of the plot from Lawrence Twine's *The Pattern of Painful Adventures*... First published

in 1576, Twine's work was reprinted in 1607. If Shakespeare used this reprint, then *Pericles* was not written before 1607. Also it was entered in the Stationers' Register on May 20, 1608. This play, therefore, was probably written in 1607-1608.

On October 4, 1607 Johannes Kepler wrote to a friend, "Your letter is prophetic. You write how one has to measure the parallax of a comet. And behold, there appears a comet. I saw it for the first time on the 26th of September (others on the 25th of September)." Our second question asks did not only astronomers such as Kepler see this comet, but more important, did Shakespeare see it? He probably did for several reasons.

To begin, unlike 1986, this apparition of Halley's was spectacular, as in 1910. Indeed people, not just astronomers, saw it as far off as North America. In 1607 a small group of settlers was building Fort St. George at the mouth of the Kennebec River in Maine. On the morning of September 25 they sighted "a blasing starre in the noreast of them." Astronomers, of course, also recorded the impressive qualities of this comet. Longomontanus first saw it on September 28. He wrote that it "equaled Jupiter in size and Saturn in brightness." Kepler recorded on October 5 that its tail was 10 degrees long. He continued to observe it for a full month. On October 26 he reported that it matched a star in Ophiuchus' spear. 16

Another reason Shakespeare may have seen this comet is that recorded sightings of it were made in Great Britain, some quite near him. At least two British astronomers left records. William Lower saw the comet when he was on a ship in Carmarthen Bay west of Britain. In 1607 Great Britain still used the Julian Calendar. It listed dates ten days earlier than continental Europe's Gregorian Calendar. Lower, therefore, recorded for September 17, "Passing over the sea into Wales about midnighte going abord I saw a Comete."17 (Although Kepler reported seeing it on September 26, and Lower on September 17, in reality they saw it one night apart.) When he landed, Lower recorded the comet until October 6. He sent his observations to the second British astronomer, "his especiall good friend Mr. Thomas Harriotte att Sion neere London." Harriot lived at Sion House, the mansion of the Earl of Northumberland. Sion is just outside London on the banks of the Thames, between Isleworth and Brentford. Harriot recorded observations there for over a month. As late as October 22, only ten miles west of the Globe Theater, he wrote, "It a was reasonable clear enough to have sene the comet, but for the light of the mone, and for the hauzines of the horizontal ayre."18 Only a few miles

away, Shakespeare was writing at this time in *Pericles*: "I am a maid,/ My lord, that ne'er before invited eyes, / But have been gaz'd on like a comet" (5.1.84-86).

Finally our last question asks does this allusion have any qualities that suggest Halley's Comet inspired it? Close examination shows that it does. For example here Shakespeare repeats for the third time, when a comet appeared, the same thought or analogy about comets. The thought is that someone is wondered at the way a comet is wondered at. In 1593 Shakespeare wrote, "you...gaze this goodly company, as if they saw...some comet...." Three years passed, and in 1596 this thought occurred to him again, "like a comet I was wondered at...." Eleven years passed, and here again he repeats this unusual analogy, "I...have been gaz'd on like a comet."

Another quality the allusion in *Pericles* has suggesting a connection with Halley's Comet is that this is now the fourth time Shakespeare alluded to comets when one appeared. It is difficult to accept that could happen even one time by coincidence. How much more difficult is it to accept that that could have happened four times in a row by coincidence?

These comets, in fact, did inspire these allusions. Consider how in 1590 when Tycho Brahe was recording a comet as bright as a first magnitude star, the authors of *I Henry VI* were writing, "shine...like a comet...." And when examined closely, one sees that the last three allusions even



describe the act of viewing a comet. In 1593, Shakespeare wrote, "they saw...some comet...." And a comet was seen for all of August and longer that summer. In 1596 Shakespeare wrote, "a comet...wondered at." And again, a comet with a tail seven degrees long was wondered at that year by astronomers throughout Europe. Then, in 1607 Shakespeare wrote, "gazed on...a comet." And from America, to China, to Sion House ten miles from the Globe Theater, the renowned Halley's Comet was being gazed on. These comet passages, like the passages to eclipses King Lear, are topical allusions. Little in Shakespeare's world seemed to escape his curiosity.

# SHAKESPEARE'S COMETS

During William Shakespeare's career four comets appeared. Each time one was visible, Shakespeare alluded to comets in a play it is believed he was then working on. The dates the comets were visible and the proposed date for each play match.

## COMET ALLUSIONS

## MAXIMUM LENGTH VISTRLE DATES PROPOSED

BRIGHTNESS	1 magnitude		3 magnitude	2 magnitude	(It was brighter than a first magnitude star.)  0 magnitude
LENGIH	10 degrees		4.5 degrees	7 degrees	10 degrees
VISIBLE	March 5 to March 16 1590		July 30 to September 3 1593	July 24 to August 6 1596	(Halley's) September 26 to October 27 1607
Tive	(Revised 1594-95)	1589-90	1593-94	1596-97	1607-8
	Connets, importing change of times and states, Brandish your crystal tresses in the sky. And with them seouge the bad revoling stars That have consented unto Henry's death"  (11.2-5)	"Now shine it like a comet of revenge, A propher to the fall of all our foes!" (III.ii.131-32),	"Gentles, methinks you frown, And wherefore gaze this goodly company, As if they saw some wondrous monument, Some comet or unusual prodigg?" (III.ii.93-96).	"By being seldom seen, I could not stir But like a comet I was wondred at" (III.ii46-47).	T am a maid, My lord, that ne'er before invited eyes, But have been gaz'd on like a comet" (Vi.84-86).
	I HENRY VI		THE TAMING OF THE SHREW	I HENRY IV	PERICLES

\* All data on the plays is from The Riverside Shakespeare, pages 48-55. G. Blakemore Evans editor

All data on the comets is from Physical Characteristics of Comets, pages 112-113. S.K. Vsehsvyatskii editor

## Notes

- 1. The Riverside Shakespeare, ed. G. Blakemore Evans (Boston: Houghton, 1974). All quotations from the plays will be from this edition, 930.
- 2. Shakespeare the Complete Works, ed. G. B. Harrison (New York: Harcourt, 1968), 1136.
- 3. Ichiro Hasegawa, "Catalogue of Ancient and Naked-Eye Comets,6 Vistas in Astronomy, 24 (1980), 95.
  - 4. Evans, 588.
- 5. S. K. Vsekhsvyatskii, *Physical Characteristics of Comets* (Jerusalem: Israel Program for Scientific Translations, 1964), 112.
- 6. Ho Peng Yoke, "Ancient and Mediaeval Observations of Comets and Novae in Chinese Sources," Vistas in Astronomy, 5 (1962), 213.
  - 7. Evans, 49.
  - 8. Evans, 106.
  - 9. Vsekhsvyatskii, 112.
  - 10. Ho, 214.
  - 11. Vsekhsvyatskii, 112.
- 12. Ho Peng-Yoke and Ang Tian-se, "Chinese Astronomical Records on Comets and 'Guest Stars" Oriens Extremus 17 (December 1970): 79.
  - 13. Harrison, 1349.
- 14. Carola Baumgardt, Johannes Kepler: Life and Letters (New: Philosophical Library, 1951), 75.
- 15. Peter Broughton, "The View from Colonial America," Sky & Telescope August 1985: 126.
  - 16. Vsekhsvyatskii, 112.
- 17. James Bradley, *Miscellaneous Works and Correspondence of James Bradley*, ed. Stephen Peter Rigaud, The Sources of Science No. 97 (New York: Johnson Reprint Corporation, 1972), 513.
  - 18. Bradley, 518.