

IS COMET P/HALLEY OF A.D. 684 RECORDED IN THE NUREMBERG CHRONICLE?

ROBERTA J.M. OLSON, Wheaton College, and
JAY M. PASACHOFF, Williams College

One of the most famous historic comet images is the woodblock print from the *Nuremberg chronicle*, often reputed to represent Halley's Comet in its A.D. 684 passage (Figures 1(a) and 2(a)). This graphic illustration has led us to an interesting investigation¹ in which we have not only found the same woodblock used for four other historical comets, but we have also noticed three other different comet depictions used in the various editions/manuscripts of the *Nuremberg chronicle* to represent a comet of this date.

The *Nuremberg chronicle*, first published in Latin on 12 July 1493, is one of the earliest lavishly printed books. This incunabulum was expected to be so much in demand that a popularized, German edition appeared later the same year (23 December 1493). Both were published by Anton Koberger in Nuremberg. Subsequently, Hans Schönsperger published in Augsburg pirated editions in German (1496 and 1500) and in Latin (1497).

On folio CLVIIr of the first Latin edition, the author, Hartmann Schedel, reported a comet in the time interval indicated in the subheadings as 684–693. He describes the apparition thus: “A hairy star, which the Greeks call Comet, portended complete and such great calamity because it appeared for three continuous months.”² However, the year 684 is not directly associated with either the description or its image. Neither have we been able to narrow the interval or pinpoint the year by using external events—sequences of popes, emperors or other rulers—recorded in the adjacent text of the *Nuremberg chronicle*. In the previous paragraph, Schedel had referred to the death of Agatbo (Pope from 678) in 681, a date outside the assigned interval, a common occurrence in this and other chronicles. Neither is the evidence from Schedel's report in the paragraph following the comet description of both a solar eclipse and a lunar eclipse definitive. Partial phases of solar eclipses would have been visible, weather permitting, in 685, 686, 688, 692, and 693, but no partial lunar eclipses would have been visible in 684 or 685.³ Schedel, of course, was writing over 800 years later and was drawing on various earlier chronicles and sources,⁴ so we cannot rule out that the spectacular comet reported was a different comet.⁵ The only sure spectacular comet for the period in question, although others are recorded, is Comet P/Halley in 684, so that by default we assign a tentative date of 684 to the illustration.

Neither is the woodblock illustration linked any more closely to the year 684. All the woodblocks of comets used to illustrate comet apparitions in the *Chronicle* were designed and made in the years immediately preceding 1493 by Michael Wolgemut, Hans Pleydenwurff, and their shop. There is no evidence



FIG. 1. (a) Detail of folio CLVIIr, Latin book. (b) Detail of folio CLVIIr, Latin Exemplar. (Photographs by Jay M. Pasachoff.)

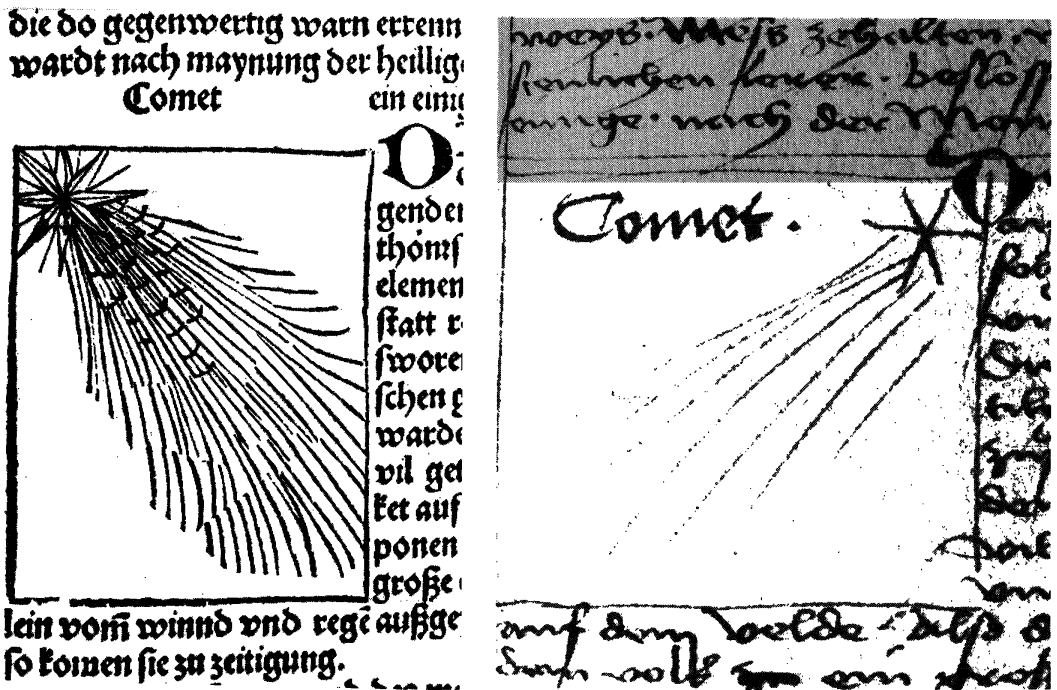


FIG. 2. (a) Detail of folio CLVIIr, German book. (b) Detail of folio CLVIIr, German Exemplar. (Photographs by J. M. Pasachoff.)

that they had any information about the appearance of the seventh-century comet. Indeed, it would be more reasonable if the artist or *formschneider* (woodcutter) had fashioned the woodblock to resemble the comet of 1472, which he may have seen. Furthermore, the same woodblock was used to illustrate two other comets in the Latin edition, those dated in the *Nuremberg chronicle* to 1351 and 1472. In the German edition, the same woodblock is used to illustrate the 684–693 comet, as well as two other comets, ones that represent the 1004–33 and 1084–94 intervals. Throughout the 1493 editions of the *Nuremberg chronicle* only four woodblocks are used to illustrate fourteen comet apparitions. The fact that the woodblocks were used cavalierly to represent other comets proves that they were meant to be stylized images of comets rather than scientifically or artistically accurate representations. The only possible suggestion of astronomical data is found in the more-or-less horizontal lines that cut across the comets' bristly tails. These resemble the rings in the tail of P/Halley, as sometimes recorded in photographs of the 1910 and 1985–86 apparitions of the comet.

Indeed, we also have evaluated for the first time the hand-drawn comet images that preceded these woodblocks. They are found in the Latin and German Exemplars, manuscript dummies or layouts, that were rediscovered in the Nuremberg Stadtbibliothek in 1965 (Cent.II.98 and Cent.II.99).⁶ These two bound volumes contain earlier versions of the text and crude sketches of the figures. The sketches for the 684–693 interval comet, which have never been published before, appear as Figures 1(b) and 2(b), respectively. Clearly there is no scientific or artistic information in these schematic drawings, which have the appearance of having been rendered hastily, without prior planning. Indeed, no care was taken to preserve any features of the sketchy pen-and-ink drawings in the final woodblock. The comet in each woodblock was printed facing in the opposite direction from the corresponding Exemplar sketch. Moreover, the printed versions are both oriented vertically, while the Exemplar versions are both oriented horizontally.

It is interesting to note that in the pirated editions all the comet woodblocks were redesigned and recut in a smaller format so that they more nearly correspond in size to the other reduced woodcuts of those editions. Moreover, only three types of comet woodblocks were used in these later editions to provide fifteen comet images (instead of the thirteen of the first two editions). The woodcut used to illustrate the 684–693 interval was also used nine additional times in the Latin pirated edition and eight additional times in the German pirated editions.

In conclusion, the image commonly reported to represent the 684 apparition of Halley's Comet is merely a generic comet image, executed over 800 years after the apparition. It is really only a stylized woodcut of a generic comet as conceptualized by a fifteenth-century German artist. It is, more precisely, merely the earliest apparition of Comet P/Halley for which a visual representation was made long ago, albeit long after the fact. Unlike the use of records of historical eclipses to determine secular changes in the Earth's rotation period, the purported 684 Halley's Comet image in the *Nuremberg chronicle* can be used neither to determine the comet's rotation period, nor to glean any scientific data.