

Tycho Brahe, Danish Astronomer

Born: Denmark, Dec 14, 1546. Died: Chechoslovakia, Oct 23, 1601

Brahe was the son of a Danish nobleman of Swedish descent. He is the last, and possibly the greatest, naked-eye astronomer. He entered the University of Copenhagen at age 13 and studied law and philosophy. He originally planned to go into politics, but after observing an eclipse of the sun, he switched to studying astronomy and mathematics. He, later, went to Germany to continue his studies.

Tycho dabbled in Astrology and Alchemy as well, but he made his mark in 1572 when he witnessed the flaring out of a new star. It grew to be brighter than Venus before flaring out in about a year and a half. The King of Denmark hired Brahe to give lectures and he built an observatory for him on the island of Hveen (now Ven), between Denmark and Sweden. The observatory, a state of the art at that time, was completed in 1580.

A comet, in 1577, was observed and plotted by Brahe. Parallax studies showed that this was further away than the moon, and thus Brahe laid to rest Aristotle's view of an unchanging universe. Brahe went to great lengths, against his own evidence, to work out how the planets, except Earth, went around the sun, and then the sun, with these planets went around the Earth. At this time in history, you did not cross the views of the church.

Brahe's great contribution was his detailed star maps accurate to two minutes of arc, which is about the theoretical limit for naked-eye observations. He corrected almost every important astronomical measurement and left a legacy of tables for future astronomers to use. His measurement of the length of the year to within a second, was an important step to the reform of the calendar under Pop Gregory XIII. The "Gregorian Calendar", the one we presently use, brought in changes to realign the calendar with the seasons.

Brahe's failings included his arrogance and snobbishness (he was Danish nobility after all). In 1565 he got into a duel over some point in mathematics (he was 19 at the time), and he his nose was cut off. He wore metal nose for the rest of his life. Fredrick II died in 1588 and his successor, Christian IV, could not take this argumentative person and cut off his funds. He went to Germany in 1597 at the invitation of Emperor Rudolf II. There, one of his assistants was Johan Kepler.

Brahe died in 1601, after a short illness involving the bladder. Now, the information for this short biography is from Isaac Asimov's *Biographical Encyclopedia of Science & Technology*. I received it in 1976 and it was printed in 1972. Recently, a book has come on the market that puts forth the theory that Kepler killed, or had killed, Brahe. I will leave it to the reader to see what they think about this. Below is an excerpt from Wikipedia about this:

"Recent investigations have suggested that Tycho did not die from urinary problems but instead from [mercury poisoning](#): extremely toxic levels of it have been found in his hair and hair-roots. Tycho may have poisoned himself by imbibing some medicine containing unintentional [mercuric chloride](#) impurities, or may have been poisoned.

One theory proposed in a 2005 book by Joshua Gilder and Anne-Lee Gilder, suggests that there is circumstantial evidence that Kepler murdered Tycho; they argue that Kepler had the means, motive, and opportunity, and stole Tycho's data on his death. According to the Gilders, they find it "unlikely" Tycho could have poisoned himself since he was an alchemist known to be familiar with the toxicity of different mercury compounds.

Another theory is proposed by Peter Andersen, professor of German Studies at the [University of Strasbourg](#). Andersen discovered the 600-page diary of Count Erik Brahe, a distant Swedish cousin of Tycho. He suggests Erik murdered Tycho, by order of King [Christian IV of Denmark](#), who suspected that Tycho had had an affair with his mother [Sophie](#). In 2009, a group of conservators, chemists and physicians plan to open the vault and perform a forensic analysis on the body."