

Tycho Brahe 1546 - 1601

The great Danish astronomer, Tycho Brahe, was born in 1546, in Skaane, Denmark, into a noble and wealthy family. His father, Otte Brahe, was governor of the castle of Helsingborg, which controlled the main waterway to the Baltic Sea. His mother, Beate Bille, came from an aristocratic family. Among the twelve children she had in twelve years eight survived. Tycho was about two years old when he was adopted (some say 'abducted'!) by his childless uncle Jörgen Brahe, who brought him up and financed his education.

Tycho was sent to a grammar school in his seventh year and studied there until he was about twelve. Tycho began his university education in 1559 in Copenhagen and continued in the University of Leipzig. Tycho himself acquired elementary astronomy books and pursued astronomy study with much success. He divided his time between lectures on law, in response to the wishes of his uncle, and his night-time observation of the stars.

In August 1563 he made his first recorded observation, that of a conjunction (i.e. a lining-up) of Jupiter and Saturn.

Inheriting the estates of his uncle, Tycho went to Europe. During his long travels he studied alchemy, mathematics and acquired astronomical instruments, including a 'huge quadrant'. Having returned home because of his father's illness Tycho noticed on November 11th, 1572 a **new star** that was shining **brighter than all others**. This discovery (now called the *Tycho Supernova*) and its explanation made him famous.



He acquired an astronomical instrument

When he was about two he was adopted by his childless uncle



Tycho built a great house and observatory called Uraniborg



He suddenly saw a new star (supernova) brighter than Venus



It was apparently at this time that he met the woman who became his life long companion. She was, unfortunately, a commoner and, because of their social difference, they could not be formally married; nevertheless, they had eight children.

In 1576 the King of Denmark, Frederick II, who was interested in astrology, granted him the title to the Island of Hven (where there is a small museum) together with financial support for designing a laboratory and observatory. Tycho decided to build a great house on the island which would have many functions: residence, observatory, alchemical laboratory and administrative centre. He drew up the plans, and supervised the construction of buildings and instruments himself. Uraniborg, as it was called, was ready in 1580 and Tycho with the whole household moved there. During all this time Tycho continued his investigation of comets. Measuring the position of 777 stars with great accuracy, he prepared a *star catalogue*. He was interested in everything - from alchemy and astrology to astronomy.

After the death of King Frederick II he lost royal favor and financial support. Because of difficulties in his social and private life Tycho was forced to leave Denmark in June 1597. Spectacular discoveries in lunar theory were the most remarkable result of Tycho's last years. After a short stay in Germany he settled in Prague, in 1600. He was given a castle near Prague as an observatory, but soon, in 1601, he died, leaving all his observational data to Johannes Kepler, his pupil and assistant. He was buried in the Great Cathedral of Prague. The magnificent Uraniborg was burned down during the Thirty Years War.

There are many legends about Tycho. One was that in his youth he lost his nose in a duel and he felt ashamed of its silver replacement ever after. He served the aristocrats as astrologer and perhaps, not surprisingly, he was afraid of black cats crossing the street!