BIOGRAPHY

TYCHO BRAHE

BIG HISTORY PROJECT
TYCHO BRAHE

THE LAST GREAT NAKED-EYE ASTRONOMER

By Cynthia Stokes Brown, adapted by Newsela

Born
December 14, 1546
Knutstorp Castle,
Scania, Denmark

Died
October 24, 1601
Prague, Bohemia
(now the Czech Republic)
Tycho Brahe was the last great naked-eye astronomer. He devoted his life to recording the location and movement of everything in the night sky with greater accuracy than anyone before him. He produced an accurate star chart and proved that the heavens are not fixed.
At the time of Brahe's birth in 1546, it was thought that the Sun, Moon, and five planets rotated around the Earth attached to crystal spheres. In this model, the stars did not change. All of the star charts of that time were based on this geocentric (Earth-centered) system.

Only 16, Brahe arrived at the University of Leipzig and discovered an error in existing star charts. At this time, people navigated using sextants and the stars, so any error in star charts was significant.

Brahe then dedicated his life to tracking the position and movement of all stars and planets with great accuracy.

The heavens had changed

After nearly 10 years of studying and recording the night sky, using instruments and techniques he had developed himself, Brahe looked up one night and saw a bright star where none had been before. He was stunned.

Using his own techniques, Brahe was able to prove that the new star was beyond the Moon, in the celestial realm — the supposedly unchanging backdrop of stars. The heavens had changed, and he had observed and recorded it for science.

This discovery brought Brahe fame among astronomers around the world, and greatly impressed the Danish king. With help from the king, he built one of the first real astronomical research institutes and the most advanced observatory in the world, called Uraniborg (Fortress of the Sky), on an island in Copenhagen Sound.

Soon after starting work there, he observed a comet moving beyond the “sphere” of the Moon. By proving that the comet was not in our atmosphere, he shattered the theory that the planets were nested around the Earth on crystalline spheres.

This laid the foundation for our modern understanding of an evolving cosmos. Brahe’s influence extended to one of his most famous students, Johannes Kepler, who used Brahe’s detailed observations to develop his own Laws of Planetary Motion.
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