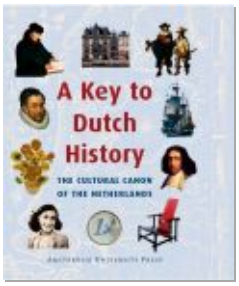
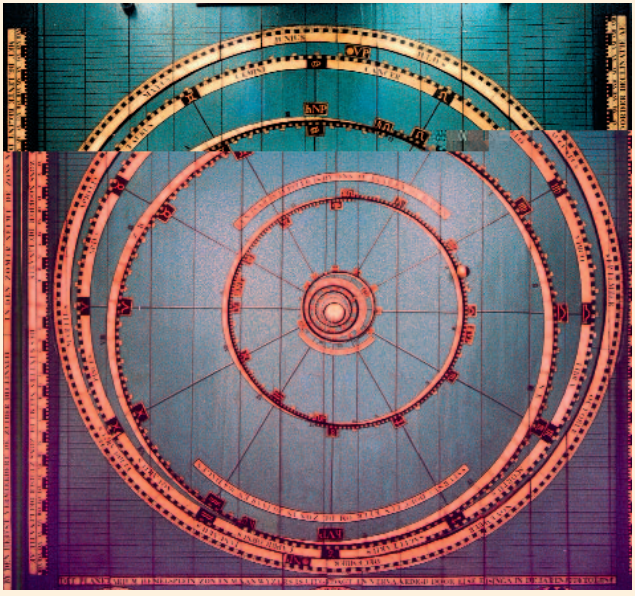
Eise Eisinga





1744 - 1828

Eise Eisinga

The Enlightenment in the Netherlands

Eise Eisinga was an amateur astronomer who built a planetarium in his own home in Franeker (Friesland). Today this planetarium is recognised as the oldest in the world.

The highly gifted Eisinga was not allowed to attend the Latin School because he was expected to become a woolcomber like his father before him. All on his own, he immersed himself in the study of the principles of maths and astronomy. The fact that the Franeker Academy was close by suited him well.

In 1774, a booklet was published in which it was forecast that the earth would be thrown out of its orbit by a collision between the moon and a number of other planets. This prediction caused a great deal of panic in Friesland. To demonstrate that there was no need for panic, Eisinga decided to build a scale model of the solar system on the ceiling of his living room. In 1781 his planetarium was completed.

Just like many other men of his time, Eisinga was inspired by the Enlightenment. These men were convinced that knowledge could improve both mankind and society. Enlightenment thinkers in the Netherlands were different in nature to those in France. Living in a country with no all-powerful church or absolute ruler meant that few Dutch citizens were sympathetic to the radical and anti-clerical views of some French *philosophes*. Rather, they believed that God wanted the best for the world: He was leading all things towards a friendly, harmonious society. They therefore immersed themselves in enjoyable social interaction. Together with other responsible citizens, they conducted

experiments in physics, they examined fossils, discussed solutions for social problems and studied heavenly bodies.

Even today, Eisinga's planetarium shows the current position of the planets, because the planets of the model take the same time to move around the sun as do the real planets: Mercury takes 88 days for its orbit, Earth 365 days and Saturn over 29 years.

All this is kept in motion by an impressive gear mechanism of wooden rings and discs with ten thousand hand-forged nails as cog teeth. A pendulum clock and nine weights drive the gear mechanism.

When King William I came to Friesland in 1818 to visit the planetarium, he was so impressed that he subsequently bought it for the Dutch state. Ten years later, in 1828, Eisinga died aged 84.

Sub-topics

Primary education sector
Boerhaave and medical science
The space voyages of André Kuipers and Wubbo Ockels
Seeing is knowing: gaining knowledge through one's own observations

Secondary education sector
The Enlightenment in the Netherlands and France
Electrostatic machine
Astrology, astronomy, the Big Bang
Science in society
Lorentz and other Dutch Nobel prize winners

Past and Present
Recent scientific findings
Science and space exploration

In the Treasure Chest
Modern map of the skies

References

Places to Go
Franeker: Friesland Planetarium
Amsterdam: Artis Planetarium
Amsterdam: Nemo
Haarlem: Teylers Museum
The Hague: Omniversum
Leiden: Boerhaave Museum
Museums at universities

Books for young people
Piter Terpstra, *Wolken en stjerren: roman oer Eise Eisinga*

Background literature
H. Nieuwenhuis, *Het Eise Eisinga Planetarium,* Franeker 1988
Joost Kloek en Wijnand Mijnhardt, *1800 Blauwdrukken voor een samenleving,* The Hague 2001

Websites
www.planetarium-friesland.nl
www.sterrenkunde.nl
www.allesoversterrenkunde.nl
www.proefjes.nl (brings children into contact with empirical science in a fun way)