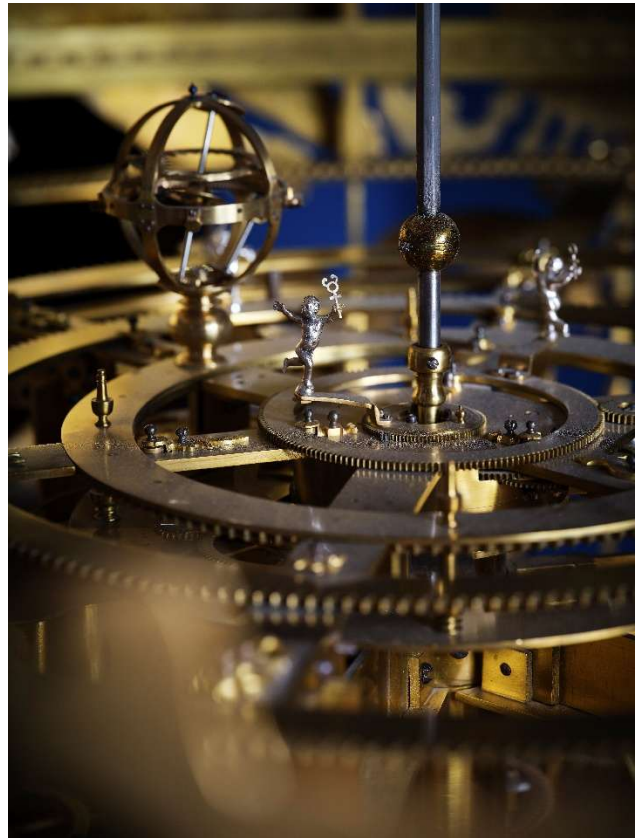




Detail: Zodiac signs — Gemini, Cancer, Leo — on the exterior of the Gottorp Globe.



Interior of the globe.

400-Year-Old Celestial Globe Restored: Reframing Our Place in the Universe

The monumental Gottorp Globe at Frederiksborg Castle in Denmark has been restored and once again depicts the heliocentric model with the planets orbiting the Sun. The globe, one of the museum's greatest treasures, invites visitors to rediscover the wonder and precision of early astronomy.

One of Frederiksborg's most impressive objects, the Gottorp Globe, has been restored so its refined mechanics are functioning again and the planetary deities inside the great sphere once more travel around the Sun. Crafted in brass, steel, silver and oak, the globe is a vivid representation of the heliocentric worldview that gained ground in the 16th–17th centuries — namely that the Sun, not the Earth, is the centre of the universe. The restoration was carried out by master watchmaker Rune Bakkendorff, who is affiliated with Frederiksborg as horologist for the museum's extensive clock collection.

On the outer surface of the globe, the zodiac constellations — such as Gemini, Leo and Cancer — are fixed upon the vault of the heavens. At the core, the Sun stands as an unmoving brass sphere.



The Earth and the planets then known move around the Sun at approximately their real orbital periods; for example, it takes around 29½ years for Saturn to complete its orbit. At the very top, a small terrestrial globe evokes the older worldview that saw the Earth as the centre of the universe. The entire display is powered by an intricate clockwork mechanism — now brought back to life.

According to Frederiksborg's Director, Ulla Tofte, the globe captures a turning point in human understanding:

"The Gottorp Globe is not only one of Frederiksborg's most beautiful and spectacular objects. It is a vital testament to how science shapes our understanding of the world. The globe embodies a new worldview — one in which the Earth was no longer the centre, but merely one of many planets orbiting the Sun. Suddenly, humanity was no longer at the centre of the universe — imagine what that realisation meant. With the Gottorp Globe, we understood that the world is far greater than ourselves."

The globe originally formed part of the Duchy of Gottorp's library and cabinet of curiosities, established by Duke Frederick III to position his court as a cultural centre in competition with, among others, Denmark. The globe later came to Denmark as war booty. In 1879, brewer J. C. Jacobsen purchased it for his new museum of national history at Frederiksborg.

Inside one of the castle's tower rooms, where the globe invites you in, Danish experts — astrophysicist Anja Cetti Andersen, philosopher Joachim Wiewiura and master watchmaker Rune Bakkendorff — unfold the story of the universe. They explore its vastness, pose the big questions — What is space? And what is humanity's place within it? — and reveal the intricate mechanics that set the planets in motion. Composer Rasmus Zwicki has created the soundscape — all within the globe's own tower chamber.

About Frederiksborg

Located in Hillerød, just north of Copenhagen, Frederiksborg Castle is the largest Renaissance castle in the Nordic region and one of Denmark's most significant cultural landmarks. Within its grand halls, chapel and galleries, art, history and craftsmanship come together in one extraordinary setting.

Today, Frederiksborg Castle is home to Denmark's National Portrait Gallery and Museum of National History — a living institution that invites reflection on identity, on origins, belonging and direction.

The Museum at Frederiksborg Castle was established by brewer and Carlsberg founder J. C. Jacobsen as a great picture book of Danish history to restore national confidence after a turbulent 19th century. Frederiksborg's rich collection of portraits and history paintings — seen through the national-romantic lens of the 1800s — continues to shape how the nation's past is viewed.

For background on the Gottorp Globe and links to press images, see the following page.





The Gottorp Globe with detail of the constellation Scorpius. The globe measures 130 cm in diameter and 225 cm in height including the clock case.

Press materials are available on the museum's press site. For interviews and visits, please contact:
Sara Juel Andersen, Head of Communications — sja@frederiksborg.dk, +45 29 74 75 53.

Supplementary Information: The Gottorp Globe

- 1654–1667 — Constructed for Duke Frederick of Schleswig-Holstein-Gottorp; installed in the duke's renowned cabinet of curiosities at Gottorp Castle.
- 1713 — Taken as war booty during the Great Northern War.
- 1750–1824 — Kept in the King's Kunstkammer (Royal Cabinet of Curiosities) in Denmark.
- 1794 — Survives the Christiansborg fire. The globe is today not perfectly round; it is believed this damage occurred when the globe was likely forced through a window and lowered to the ground during the fire.
- 1825 — Removed from the Kunstkammer for installation at the Copenhagen Observatory as a kind of replacement for the Tyconic globe lost in the 1728 fire, considered one of Tycho Brahe's most significant results. The observatory sends the globe to Professor Smidth's Mechanical Establishment for repair. In 1854, the globe is transferred to the establishment as property when the repair is deemed too costly.
- Subsequently (likely in the course of restoration), the globe is not reassembled. Some of the original planetary deities disappear, including through theft. The globe is believed to have lain stored in an attic for a period.
- 1872 — Exhibited at the Great Nordic Art and Industry Exhibition in Copenhagen. Certain constellations are reconstructed.
- 1869 — "Watchmaker Hansen" attempts to sell the globe to the Prince of Wales.



- 1879 — Exhibited at the Great Nordic Art and Industry Exhibition. J. C. Jacobsen, the philanthropic founder of Carlsberg, takes an interest and purchases the globe as one of the first objects for a new National History Museum to open at Frederiksborg in 1882.
- 2001 — Restoration carried out. Constellations stolen from a workshop in the 19th century are recreated. Subsequently, the chain breaks.
- 2024/2025 — Restoration by master watchmaker Rune Bakkendorff:
"We have repaired impact damage caused by the drive chain, which had snapped and then damaged parts inside the clockwork beneath the globe. Imagine the chain like the string in a brush cutter whipping around inside the mechanism and striking everything, so tips and ends of components were knocked off. Master watchmaker Rune Bakkendorff has successfully recreated some elements using laser and metal wire; others have been newly manufactured. The globe's interior has then been cleaned and lubricated."

