
OU Libraries

Tower of Pisa light sculpture (Engineering)

- *Bringing worlds together: How does the story of Galileo exhibit the story of OU?*

Galileo and Universities (Great Reading Room)

- *How do universities foster communities of learning, preserve knowledge, and fuel innovation?*

Galileo in Popular Culture (Main floor)

- *What does Galileo mean today?*

History of Science Collections

Music of the Spheres

- *What was it like to be a mathematician in an era when music and astronomy were sister sciences?*

Galileo's Compass

- *What was it like to be an engineer in an era of mathematical discovery?*

Galileo and China

- *How did European and Chinese astronomers collaborate in the generation of Galileo?*

Controversy over the Comets

- *What does it mean to say mathematics is the language of nature?*

The Galileo Affair

- *What went wrong? Does the Galileo affair represent an inevitable conflict between science and religion?*

A New Physics

- *How are Galileo's two new sciences connected with other disciplines?*

Bird Library, OU Health Sciences Campus

Galileo and Medicine

- *How might a friend of Galileo's have practiced medicine?*

Schusterman Library, OU Tulsa

Galileo and the Scientific Revolution

- *What is nature? How is nature known?*

National Weather Center

Galileo and Experiment

- *How did new instruments extend sensory perception, facilitate new experiments, and promote quantitative methods?*

Galileo and Kepler

- *Who was Kepler, and why was a telescope named after him?*

Copernicus and Meteorology

- *How has meteorology facilitated discovery in other disciplines?*

Galileo and Space Science

- *What was it like, following Kepler and Galileo, to explore the heavens?*

Oklahomans and Aerospace

- *How has the science of Galileo shaped the story of Oklahoma?*

Sam Noble Oklahoma Museum of Natural History

Eyes of the Lynx: Galileo, Natural History and the Americas

- *What was it like to explore the living world?*
- *What was it like to explore the Americas?*

Eyes of the Lynx: Galileo and the Microscope

- *What was it like to reveal the mysteries of the very small?*

Fred Jones, Jr., Museum of Art

The Eyes of Galileo: Renaissance Art and the Telescope

- *What was it like to be an astronomer in an era when art and mathematics were intertwined?*

The Sky at Night

- *What is the human, artistic and scientific heritage of the sky at night?*

Headington Hall, Athletic Department

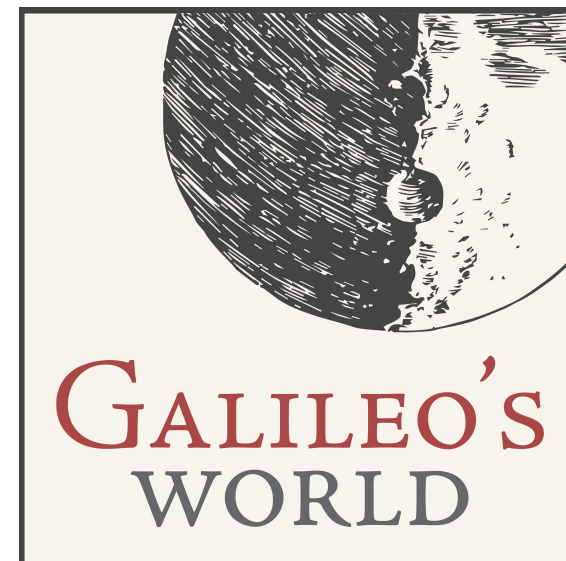
Galileo and Sports

- *What would Coach Galileo say?*

2-minute stories from

Galileo's World: Bringing Worlds Together

Galileo's World, an "Exhibition without Walls" at the University of Oklahoma in 2015-2017, will bring worlds together. *Galileo's World* will launch in 21 galleries at 7 locations across OU's three campuses. The 2-minute stories contained in this brochure are among the hundreds that will be explored in *Galileo's World*, disclosing connections between Galileo's world and the world of OU during OU's 125th anniversary.



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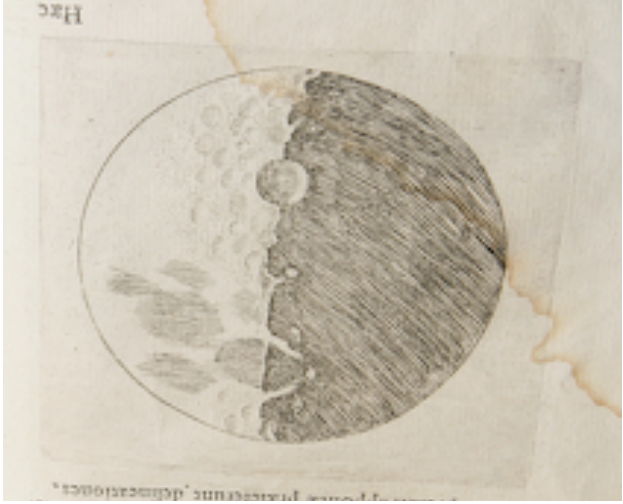
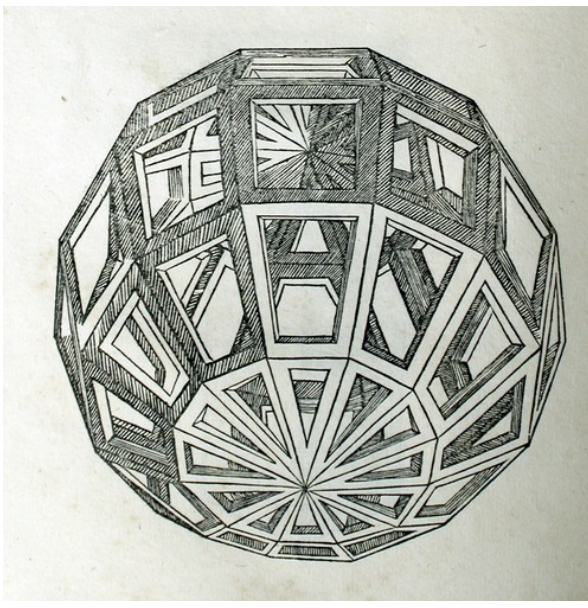
#galileosworld

oulynx.org

Leonardo da Vinci, in Luca Paciolli, *Divina proportione* (1519)

Galileo's telescopic discoveries would have been impossible were it not for Galileo's training and experience in Renaissance art. Consider this geometrical drawing, portrayed with true perspective and a mastery of light and shadow. It comes from a treatise on art and mathematics by Luca Paciolli, printed in 1509. Yet it was drawn by Paciolli's friend Leonardo; this and other similar drawings were the only materials ever put in print by Leonardo during his lifetime.

Had there been no artistic tradition, there would have been no telescopic discoveries in 1610. When Galileo peered through his telescope and discovered mountains on the Moon, he did so only because he was seeing with the eyes of an artist. Contemporaries without artistic training were not able to see what Galileo saw; they were able to look but not to see.



Galileo Galilei, *Sidereus nuncius* (Venice, 1610)

Galileo's "Starry Messenger" was the first published report of observations made with a telescope. In it, Galileo reported his discovery of four satellites of Jupiter and mountains on the Moon. The book made Galileo an international celebrity almost overnight.



The OU copy was inscribed by Galileo to Gabriele Chiabrera, a poet in the Medici court.

Johannes Hevelius, *Uranographia* (Gdansk, 1690)

The *Uranographia* of Hevelius was the 2nd of the four most important early modern star atlases, all of which display a fusion between art and science and will be displayed in *Galileo's World*. This work contains 54 beautiful engraved plates of 73 constellations. Unique among the major star atlases, Hevelius depicted the constellations from the outside looking in, which made this work an important model for the production of celestial globes.

Hevelius' observatory in Gdansk was for many years the best in Europe. Inspired by Tycho, he constructed several large telescopes, including one that was 150 feet long! Twelve constellations depicted in this atlas were created by Hevelius himself; seven are still recognized today, including the Lynx, Sextans, Canes Venatici, Leo Minor, and Lacerta the Lizard.





Johann Kepler, *Harmonices mundi* (1619)

As with Galileo, so with Kepler, the connections between astronomy and music were significant. This is the work where Kepler explained his 3rd law, which still describes how planets and stars and satellites and galaxies revolve around one another in space. Kepler achieved a synthesis of his new astronomy with recent polyphonic musical theory by demonstrating that the motions of the planets according to his 3rd law employed precisely the same numerical ratios as the most harmonious musical scales. The story of science reveals creative leaps across disciplinary boundaries; in this case, bringing together music and astronomy.

OU music student Jonathan Annis has composed a suite for harp, flute and oboe, a cosmic dance entirely comprised of musical themes from Kepler's *Harmonices mundi*, which will be performed during *Galileo's World*.

Vincenzo Galilei, *Dialogo della Musica Antica et della Moderna* (Florence, 1581)

Galileo's father, Vincenzo Galilei, published a *Dialogue on Music, Ancient and Modern*. Vincenzo was one of those responsible for the invention of Italian opera. In the father's *Dialogue* we may discern many of the features of Galileo's works, including an emphasis on experimental methods of discovery and an ability to communicate research results in an engaging literary genre.

The OU copy was acquired in Fall 2014 with assistance from the Athletics Department.

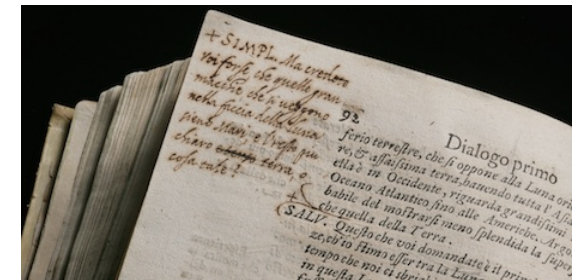
Eugene Enrico, Ruth Verne Davis Reaugh Professor of Music, is a noted expert on Vincenzo Galilei. During *Galileo's World*, Prof. Enrico will conduct a performance of Vincenzo's music by the classical ensemble *Accademia Filarmonica*.



Galileo Galilei, trans. Thomas Salusbury, *Mathematical Collections* (London, 1661)

This book contains the first English translations of any of Galileo's works, including Galileo's *Dialogue on the Two Chief Systems of the World*, the book for which he was put on trial. Also collected in this volume are several discussions of principles for interpreting Scripture and science, including Galileo's *Letter to the Grand Duchess Christina*; an essay by Kepler; and a defense of Galileo by Foscarini, a Carmelite monk.

Many copies perished in the Great Fire of London. The Oklahoma copy is charred and blackened around the edges, perhaps from that fire.



Above: OU's copy of the original Italian edition of Galileo's *Dialogue* contains his own handwriting in marginal notes.

Johann Hevelius, *Selenographia* (Gdansk, 1647)

This massive book was the first comprehensive lunar atlas, published less than 40 years after Galileo's telescopic discoveries. On the frontispiece, Hevelius celebrates not the triumph of a European "scientific revolution," but a much

broader heritage. On the left is Ibn al-Haytham, a leading

medieval Islamic astronomer and optical theorist. On the

right, holding a telescope, is Galileo. Who would have

guessed that one of the most impressive works of the

"scientific revolution" would portray Galileo in Middle

Eastern dress as a tribute to the tradition of medieval

Islamic optics?

This book was acquired to celebrate the investiture of

David L. Boren as the 13th University president on

September 15, 1995.



With the three examples of Schreck, Hernandez and the *Selenographia*, one sees that Galileo's *World* brings together worlds as far removed as Asia, America and the Middle East. To celebrate OU's 125th anniversary, the *Galileo's World* exhibition will connect stories like these across time and space. The story of Galileo is part of every student's & researcher's experience at OU.



Francisco Hernandez, *Rerum medicarum Novae Hispaniae* (Rome, 1650)

In the late 16th century, Francisco Hernandez lived among the Aztecs in central Mexico and collected their knowledge of plants and medicine, preserving the Aztec names. The result was this monumental natural history of the new world, incorporating approximately 800 woodcut illustrations. Federigo Cesi and the *Accademia dei Lincei* issued a few

preliminary copies in 1628. Widely anticipated as a guide to the "fountain of youth," Francesco Stelluti finally printed a revised version in 1650.

How many OU students know that Galileo had something important to do with natural history in the New World? The New World and the world of Galileo were brought together. How many Native American and Hispanic students know that European progress in the life sciences during the scientific revolution directly depended upon the natural knowledge of the natives of central Mexico? The Oklahoma copy consists of the original sheets of the 1628 printing preceded by five leaves from 1650.

Johann Schreck, *Ensei kiki zusetu rokusai* (*Wonderful Machines of the Far West*, 1830)

Johann Schreck was a friend of Galileo's who assisted him during his telescopic observations. Schreck accompanied Galileo when he presented him to Rome to show the telescope there. Schreck was inducted into the *Accademia dei Lincei* only about a week after Galileo himself. A few years later, Schreck joined the Jesuits and went to China, where he wrote this work on engineering in Chinese. How many people know Galileo had a friend in China?

First printed in China as *Qi qi tu shuo* in 1627; this is the first edition printed in Japan. This Sino-Japanese edition throws light not only on European and Chinese scientific collaboration in the age of Galileo, but also on the circulation of knowledge throughout Asia.

