ZEISS UNIVIEW™

Real-time Astronomical Visualizations and Simulations

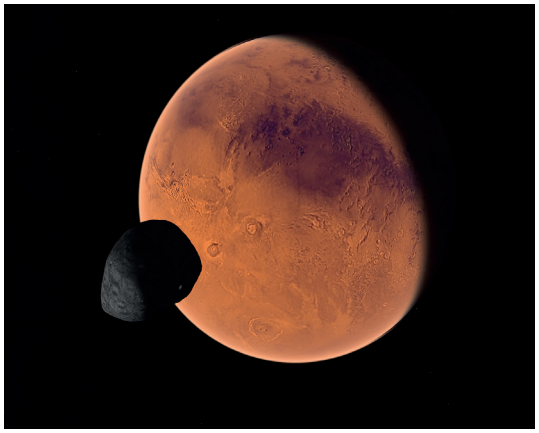
Uniview is the visualization software aimed at presenting and teaching astronomy, astrophysics and other sciences in the easiest way and in real time. It provides a seamless visualization of the entire known universe. To reveal it, all you need is a mouse.

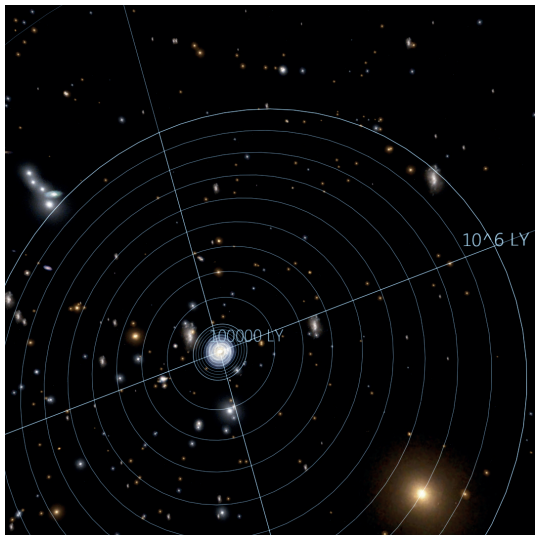
Navigate easily through the universe
Uniview is the world's best and most efficient software for interactive live operations in planetariums. It is also ideal for beginners as its operation is quite intuitive and easy to learn. Whereas other planetarium software is based on the need to learn script programming, Uniview provides easy mechanisms for live control. The scope of available data for visualization extends over 30 orders of magnitude, from e.g., surface details of planets to the large-scale structure of the observable universe.

Integrate your own external data
Uniview is the only planetarium software, from one of the leading planetarium manufacturers, to offer an open interface that allows for the expansion of functionality by its users. You can create and add your own modules, integrate individual objects or include map data (WMS) from online sources. Uniview can be supplemented with further astronomical and non-astronomical databases.

Connect to other planetariums worldwide
The Domecasting function in Uniview lets you share presentations in live sessions with other venues. One party thereby assumes control of the system and all other members present in the session see the same content replicated on their own dome.

Become part of the Univew User Community
Every customer gets free access to the Uniview User Community Site provided by ZEISS. This platform is used to exchange content and to discuss issues and best practices with other users.





ZEISS UNIVIEW™ – Specification (selection)

Uniview features "Digital Universe", the world's most comprehensive astronomical database, compiled by the American Museum of Natural History (New York) with collaboration from the National Aeronautics and Space Administration (NASA).

Earth and Moon
Earth and Moon with high-resolution texture and surface relief, Earth atmosphere
Representation of the shadow of the moon on the Earth's surface
Night view of the Earth
Clouds: shadows and bumpmapping
Rainbow, polar lights, earthquakes
Large number of Earth-orbiting satellites

Constellations, scales, markers and grids
88 classical constellations (historical representation and stick figures), approx. 20 asterisms
Ecliptic coordinate sphere, galactic coordinates sphere, cartesian grid, radial grid
Zenith Point, Meridian, cardinal points, pole points, Ecliptic, Equator, precession circle

Solar system
All planets and various dwarf planets; all major moons
Orbit trails for planets, moons and satellites
Coordinate grid, rotation axis and equator for planets and moons
Sun representation: halo and glare effect; both to be disabled
Shadow casting moon on Earth and Earth on moon for the demonstration of solar and lunar eclipses
Transits: calculation of positions with high accuracy
Large number of asteroids incl. near-Earth objects and potentially hazardous asteroids

Milky Way galaxy
Hipparcos star catalog: >25,000 brightest stars in 3D space
Sloan stars: 1,000,000 stars in a portion of the Milky Way
SLMP stars: 7,000 within 100 ly from the Sun
Deep-sky Objects including 65 labeled messier objects as images accurately positioned in space
Volumetric shader model and image of Milky Way
Celestial coordinate sphere ("Radio Sphere") - radius = 70 ly
More than 600 exoplanets, accurately labeled and positioned in space
Gliese 581 system with planets and star
Open star clusters, OB associations, globular clusters, pulsars, planetary nebulae, HII regions, supernova remnants

Extragalactic space
Local Group: local group of galaxies with representations as points and images
Tully Galaxies: Tully database with approx. 20,000 galaxies as points and images
Abell Clusters: database of more than 2,000 galaxy clusters
Sloan Galaxy Survey: almost 800,000 galaxies from the Sloan survey
Cosmic microwave background, etc.

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