STS-99

radar-mapping the Earth

Shuttle Radar Topography Mission

Mission Patch

Mission Highlights

Mission:	Shuttle Radar Topography Mission
Shuttle:	Endeavour
Launch Pad:	39-A
Launch:	Feb. 11, 2000 11:44 a.m. CST
Window:	2 hours 2 minutes
Mast Deploy:	Feb. 11, 2000 5:27 p.m. - 5:44 p.m. CST
Mapping Start:	Feb. 11, 2000 11:31 p.m. CST
Mapping End:	Feb. 21, 2000 5:54 a.m. CST
Mast Retract:	Feb. 21, 2000 7:17 a.m. - 7:35 a.m. CST
Landing:	Feb. 22, 2000 5:22 p.m. CST
Duration:	11 days, 5 hours, 38 minutes
Orbit Altitude:	126 nautical miles
Orbit Inclination:	57 degrees

Related Links

STS-99 Crew Works in Shifts to Complete Mapping Mission

Endeavour's international crew of seven spent 11 days in orbit during February 2000 mapping the Earth's surface with radar instruments.

Commander Kevin Kregel, Pilot Dom Gorie and Mission Specialists Janice Voss, Janet Kavandi, Gerhardt Thiele and Mamoru Mohri split their schedule into two shifts to support round-the-clock operations. Thiele -- a native of Germany -- represented the European Space Agency, and Mohri represented Japan's space agency, NASDA.

Imagery

From the Gallery: Mission Specialist Mamoru Mohri represented the Japanese Space Agency, NASDA, during STS-99.

Jan. 22, 2004 -- New NASA Data-Release Invites You To Explore Two Vast Continents

July 11, 2002 -- Seeing Clearly Now: Sharp New NASA Maps to Improve Lives Everywhere

Jan. 22, 2002 -- Pictures from the Real Edge: NASA Posts U.S. Topography Data

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- STS-99 Press Kit
- Mission Status Reports
- How Does SRTM Work?
- Preflight Videos
- SRTM Benefits

Space Shuttle Endeavour Maps the World in Three Dimensions

The main objective of STS-99 was to obtain the most complete high-resolution digital topographic database of the Earth.

The Shuttle Radar Topography Mission, or SRTM, was an international project spearheaded by the National Imagery and Mapping Agency and NASA, with participation of the German Aerospace Center, DLR. SRTM consisted of a specially modified radar system that

Radar Imaging

This X-SAR/SRTM digital

- MCC Status Reports
- STS Upgrades Fact Sheet (pdf)
- STS-99 Imagery
- STS-99 Videos
- STS-99 Wake-up Calls
- The Crew Answers Internet Questions
- MCC Answers Internet Questions

flew onboard the space shuttle during STS-99. This radar system gathered data that produced unrivaled 3-D images of the Earth's surface.

elevation model shows Mount Cotopaxi in Equador -- the highest active volcano in the world.

Related Web sites:
SRTM Imagery
Space Place
Seeing Earth's Surface in 3-D

Deployed on Flight Day 1, the imaging radar was able to capture landscapes that have been sculpted through the millennia. This new imaging system orbited at 233 kilometers (145 miles) above Earth withits two radar antennas mounted in Endeavour's payload bay and extended on a 60-meter-long (200-foot) mast. The radar created images of vast, barren deserts, frozen tundra and deep valleys carved by glaciers, such as those found in Alaska, the Andes and Himalayan mountains. SRTM mapped the vestiges of ancient human settlements such as the eighth century Khmer civilization of Angkor, Cambodia, and the habitats of endangered species like the mountain gorillas of central Africa.

The 11,793-kilogram (13-ton) radar system collected highly accurate, high-resolution images of Earth's crust between 60 degrees north latitude and 56 degrees south latitude. The regions mapped are home to about 95 percent of the world's population and were captured with an accuracy of better than 30 meters (100 feet). When the radar was retracted, more than 222 hours of around-the-clock radar mapping operations had been completed. This extremely large amount of information is enough to fill more than 20,000 CDs.

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