The Lunar Reconnaissance Orbiter Exhibit at the NASA Goddard Visitor Center

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Since its launch in 2009, LRO has:

• Made over 6 billion topographic measurements
• Travelled in lunar orbit over 200 million km, more than the distance to the Sun
• Produced 434 Terabytes of data that are publicly available through the Planetary Data System
• Been in space for over 1460 days
• Orbited the Moon approx 18,000 times
LRO Overview, cont.

**LRO’s instrument payload:**

- Cosmic Ray Telescope for the Effects of Radiation (CRaTER)
- Lunar Orbiter Laser Altimeter (LOLA)
- LRO Cameras (LROC): Wide Angle (WAC) and Narrow Angle (NACs)
- Lyman-alpha Mapping Project (LAMP)
- Diviner Lunar Radiometer Experiment (Diviner)
- Lunar Exploration Neutron Detector (LEND)
- Miniature Radio Frequency System (Mini-RF)

LRO is returning:

- Global day/night temperature maps
- Global high accuracy geodetic grid- High resolution imaging
- High resolution local topography
- Global far ultraviolet albedo map
- Polar observations in shadowed and illuminated areas
- Ionizing radiation measurements
LRO and NASA Goddard

Ties to NASA Goddard:
• Spacecraft integrated and tested at Goddard
• Laser altimeter built at Goddard
• Laser ranging from Goddard
• Mission operations, Project Science, and education and outreach led by Goddard

Goddard receives over 50,000 visitors annually. The LRO exhibit exposes them to the NASA mission lifecycle and the many people involved in the process.
Developing the Exhibit

Collaboration between LRO project science team, engineers who built LRO, LRO education team, Visitor Center staff, and exhibit vendor (RGI)

Highlights LRO’s Structural Verification Unit (SVU):

- SVU was is mechanical prototype used to test the loads that the spacecraft would experience during launch and flight
- Outfitted to look like the spacecraft, including instrument models and real thermal blankets
- Installed in Visitor Center in September, 2012
LRO at the Goddard Visitor Center

SVU and surrounding interpretive materials after installation

LROC WAC mosaic on windows is visible to visitors inside and outside
LRO at the Goddard Visitor Center

Interactive touch screens and graphic panels tell the LRO story
• Building and Testing LRO
• LRO Data Reveal a New Moon
• LRO Paves the Way for Future Exploration
• The People of LRO

New multimedia can be added easily. Directional speakers help visitors focus on the sounds in front of them.
Tour the Moon Kiosk

Standalone kiosk highlights LRO and Apollo images and movies.

Users choose which areas of the Moon they want to explore via touchscreen and maps of the near and far sides.
Apollo 14 Moon Rock

Pre-existing Apollo 14 Moon rock case was moved from previous position to the LRO exhibit area to be near the “exploration” graphic panel around the SVU.

LROC image of Apollo 14 landing site.
Credit: NASA/GSFC/ASU
Visit Goddard and See the LRO Exhibit!

The Goddard Visitor Center is free and open to the public. It is closed on Mondays, Christmas Day, and New Year’s Day.

Hours:
September-June:
Tues-Fri: 10:00am-3:00pm
Sat-Sun: 12:00 – 4:00 pm

July-August:
Tues-Fri: 10:00am-5:00pm
Sat-Sun: 12:00-4:00 pm

Directions:
NASA Goddard is located at 8800 Greenbelt Rd. in Greenbelt, MD. The Visitor Center is located off ICESat Road.
Map: http://www.nasa.gov/centers/goddard/visitor/directions/index.html#UdwbWxbVRRc

New additions to the LRO exhibit are currently being planned, including a cast of an Apollo boot print, tactile and Braille elements to increase accessibility for persons with disabilities, and teacher and student guides!