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Executive Summary

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Presenter's Title: LRO Project Scientist
Presenter's Organization/Company: NASA GSFC

Presentation Title Overview of the LRO Mission

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Key Ideas

The Lunar Reconnaissance Orbiter (LRO) was implemented to facilitate scientific and engineering-driven mapping of the lunar surface, identify safe landing sites, search for in situ resources, and measure the space radiation environment.

After launch on June 18, 2009, the LRO spacecraft and instruments were activated and calibrated in an eccentric polar lunar orbit until September 15, when LRO was moved to a circular polar orbit with a mean altitude of 50 km.

LRO will operate for at least one year to support the goals of NASA's Exploration Systems Mission Directorate (ESMD), and for at least two years of extended operations for additional lunar science measurements supported by NASA's Science Mission Directorate (SMD).

LRO carries six instruments with associated science and exploration investigations, and a telecommunications technology demonstration. The LRO instruments are: Cosmic Ray Telescope for the Effects of Radiation (CRaTER), Diviner Lunar Radiometer Exploration Experiment (DLRE), Lyman-Alpha Mapping Project (LAMP), Lunar Exploration Neutron Detector (LEND), Lunar Orbiter Laser Altimeter (LOLA), and Lunar Reconnaissance Orbiter Camera (LROC). The technology demonstration is a compact, dual-frequency, hybrid polarity synthetic aperture radar system (Mini-RF).

LRO observations also support the Lunar Crater Observation and Sensing Satellite (LCROSS), the lunar impact mission that was co-manifested with LRO on the Atlas V (401) launch vehicle.

Supporting Information

www.nasa.gov/lro