

Space Studies of the Earth-Moon System, Planets, and Small Bodies of the Solar System (B)  
Lunar Science and Exploration (B0.1)

## RECENT RESULTS FROM THE LUNAR RECONNAISSANCE ORBITER MISSION AND PLANS FOR THE EXTENDED MISSION

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The Lunar Reconnaissance Orbiter spacecraft (LRO), launched on June 18, 2009, began with the goal of seeking safe landing sites for future robotic missions or the return of humans to the Moon as part of NASA's Exploration Systems Mission Directorate (ESMD). In addition, LRO's objectives included the search for surface resources and to investigate the Lunar radiation environment. After spacecraft commissioning, this phase of the mission began on September 15, 2009, completed on September 15, 2010 when operational responsibility for LRO was transferred to NASA's Science Mission Directorate (SMD). The SMD mission is scheduled for 2 years and will be completed in 2012 with an opportunity for an extended mission beyond 2012. Under SMD, the mission focuses on a new set of goals related to understanding the geologic history of the Moon, its current state, and what it can tell us about the evolution of the Solar System.

Having marked the two year anniversary will review here the major results from the LRO mission for both exploration and science and discuss plans and objectives going forward including a proposed 2-year extended mission. These objectives include: 1) understanding the bombardment history of the Moon, 2) interpreting Lunar geologic processes, 3) mapping the global Lunar regolith, 4) identifying volatiles on the Moon, and 5) measuring the Lunar atmosphere and radiation environment.