

WILLIAM H. PICKERING LECTURE



Gravity Recovery And Interior Laboratory (GRAIL)

Wednesday, 12 September 2012

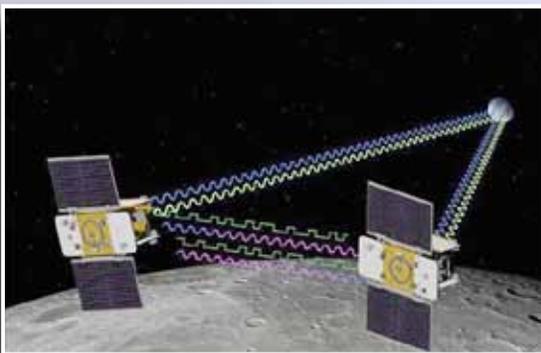
1800–1930 hrs, Ballroom D–E

Pasadena Convention Center
Pasadena, California

Open to the Public; Light Dessert Refreshments Served

“GRAIL: MAPPING THE LUNAR INTERIOR FROM CRUST TO CORE”

The Gravity Recovery And Interior Laboratory (GRAIL) mission was developed to map the structure of the lunar interior from crust to core. This objective is accomplished by producing a detailed map of the lunar gravity field that enables scientists to explore a planetary interior at unprecedented resolution. The improved understanding of the lunar interior will be used to study the evolution of the Moon and other terrestrial planets as well. After its successful launch on 10 September 2011, twin GRAIL orbiters were placed into a polar orbit on 31 December 2011 and 1 January 2012. After a succession of 19 maneuvers the two orbiters settled into a precision formation to begin science operations on 1 March 2012 with an average altitude of 55 km. The primary mission was completed on time and within budget on 29 May 2012 and the mission is currently in extended mission operations through 31 December 2012. Each GRAIL orbiter contains a Lunar Gravity Ranging System (LGRS) instrument that collects dual-one-way ranging measurements to precisely measure the relative motion between them. Minute changes in the distance between the dual spacecraft are used to develop the lunar gravity field map. Each orbiter carries an Education/Public Outreach (E/PO) payload, called MoonKAM, in which middle school students target images for subsequent analysis in the classroom.



Speakers:

Maria T. Zuber, GRAIL Principal Investigator
David H. Lehman, GRAIL Project Manager

The William H. Pickering Lecture is named for the former NASA Jet Propulsion Laboratory Director to honor his initiation and leadership of America's unmanned scientific space program, from Explorer I in 1958 through the development of the Viking orbiters and Voyager outer planet and interstellar missions. The lecture is open to all attendees and the general public. A light dessert reception will be held prior to the lecture.