Lunar Atmosphere and Dust Environment Explorer 
Integration and Test

Michael Wright, NASA Goddard Space Flight Center
John McCormick, NASA Ames Research Center

The Lunar Atmosphere and Dust Environment Explorer (LADEE) is a NASA collaborative flight project to explore the lunar exosphere. It is being developed through a unique partnership between NASA's Ames Research Center (ARC) and Goddard Space Flight Center (GSFC). Each center brings its own experience and flight systems heritage to the task of integrating and testing the LADEE subsystems, instruments, and spacecraft. As an "in-house" flight project being implemented at low-cost and moderate risk, LADEE relies on single-string subsystems and protolight hardware to accomplish its mission.

Integration and test (I&T) of the LADEE spacecraft with the instruments will be performed at GSFC, and includes assembly, integration, functional testing, and flight qualification and acceptance testing. Due to the nature of the LADEE mission, I&T requirements include strict contamination control measures and instrument calibration procedures. Environmental testing will include electromagnetic compatibility (EMC), vibro-acoustic testing, and thermal-balance/vacuum.

Upon successful completion of spacecraft I&T, LADEE will be launched from NASA's Wallops Flight Facility. Launch of the LADEE spacecraft is currently scheduled for December 2012.