Geophysical Research Abstracts, Vol. 7, 03870, 2005
SRef-ID: 1607-7962/gra/EGU05-A-03870

Science goals and current status of the SELENE mission

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SELENE project has started as a joint mission of ISAS and NASDA of Japan in 1998 FY. Launch target is rescheduled for 2006 FY due to delay of completion of launch vehicles, H2 and H2A. Science instruments are being carried out functional checks and calibration. An over-all integration and tests of interface, vibration, thermal-vacuum, electromagnetic interference, and end-to-end GDST will be set about in TKSC of JAXA preceding launch site operation.

Science of the Moon. XRS and GRS are employed complimentary for global mapping of surface elements considering difference of spatial resolution and detectable elements. MI and SP study lunar mineralogy with higher spatial resolution which never attained in previous observations. These data classify petrologic types of rocks composing the lunar surface. TC, LRS and LALT will provide topographic data of lunar surface by stereo images, radar echo, and laser reflection, respectively. LRS will also reveal subsurface feature for studying tectonic evolution of lunar crust. VRAD and RSAT will map the lunar gravitational field with high accuracy by determining Vstar position with error less than 1 m and tracking main orbiter in far-side through Rstar from ground station.

Science on the Moon. LMAG, PACE, CPS, and RS will study lunar magnetic field and plasma environment of the Moon by analyzing energetic particle impinging and reflecting on the Moon, and detecting delay of carrier waves arriving at the ground station.

Science from the Moon. UPI will observe terrestrial plasma-sphere from lunar orbit to study aurora phenomena.