

PPS003-P32

Room: Convention Hall

Time: May 24 17:15-18:45

## Advanced Lunar Imaging Spectrometer (ALIS) for SELENE-2: Present Status and Science Objectives

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A future lunar landing mission SELENE-2 is being planned by Japan Aerospace Exploration Agency (JAXA). In the present design, SELENE-2 consists of a lander, a rover, and a communication relay orbiter, but de-tailed configuration - landing site(s), mission life etc. - is now under investigation. Advanced Lunar Imaging Spectrometer (ALIS) is an imaging spectrometer which we are developing for SELENE-2 lander.

Scientific objectives of ALIS are geological investigation around the landing site by VIS/NIR (Visible and Near Infra-red light) spectroscopy, making of the photometric model of the lunar surface by repeated observation with various photometric conditions, and production of an operation map for the rover to access sampling targets, for example ejecta from central peaks. ALIS is composed of a monitor camera and two spectrometers; Visible system (VIS:380-1050 nm with 5 nm resolution) and Near Infrared system (NIR:1000-2450nm with 10 nm resolution). Each spectrometer is composed of an imaging sensor and a grism unit. These spectrometers take '1-line spatial resolution' x 'wavelength resolution' image as one shot. Line images are assembled by scanning image on a slit of the spectrometer with rotating ALIS body. We conducted so far the concept design of ALIS and computed its thermal model and optical model to confirm its feasibility.

Keywords: SELENE-2, moon, lander, remotesensing