

Performance and Observation plan of the Multiband Imager for the SELENE Mission

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The Lunar Imager/SpectroMeter (LISM) is an instrument being developed for the SELENE project that will be launched in 2005. LISM consists of the three subsystems, the Terrain Camera (TC), Multiband Imager (MI), and Spectral Profiler (SP). Those systems share some components and electronics. MI is a high-resolution multiband imaging instrument consisting of two visible and near infrared sensors. MI will obtain the lunar global mapping of mineral distribution in nine bands to understand the origin and evolution of the Moon.

Manufacturing and integration of MI flight model have been completed. Measurements of MTF, viewing vector, stray light and electrical noise level were carried out after the integration. Measured data indicate that MI will provide sufficient MTF, low noise and low stray light spectral imaging data just as estimated in the MI designing phase.

One cycle of MI's observation is 27.5 days. MI will take images of one of the low latitude, middle latitude and high latitude area during 3, 2 and 1 observation cycle(s) respectively. The reasons of this observation plan are that field of view of MI is 11 degree for both visible and near infrared sensors and also MI can only observe one thirds of the moon's dayside during one orbit because of the constraint of data downlink. In this presentation we are going to introduce the scientific objectives and the performance of recently developed flight model of the MI instrument with the plan of MI observation.