

# **Current status of X-ray spectrometer development in SELENE project**

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X-ray spectroscopy for lunar surface will be performed in SELENE project. The main architecture of the X-ray spectrometer onboard SELENE spacecraft, SELENE XRS, is based on HAYABUSA X-ray spectrometer that used X-ray CCDs as X-ray detector and observed X-rays from both an asteroid and the standard sample on HAYABUSA for comparative analysis. SELENE XRS is composed of three sensors: XRF-A, SOL-B, and SOL-C.

XRF-A is main sensor with 16 X-ray CCDs to the X-ray detection from the lunar surface. The total detection area of XRF-A is about  $100 \text{ cm}^2$  and field of view is 12 degree. Be foil of  $5 \mu\text{m}$  in thickness is attached to avoid from visible light detection.

SOL-B is solar X-ray monitor and the sensor is not X-ray CCD but PIN photo-diode. SOL-B observes X-rays from the Sun directory, and does not require the wide effective area as X-ray CCD.

SOL-C observes X-rays from the standard sample on SELENE. The elemental composition of the standard sample is determined to perform comparative X-ray fluorescence analysis.

SELENE XRS has been developed and examined for several years, and the development is in final stage ready for the launch on 2007. We will report the current status of each component of SELENE XRS.