

PPS003-P35

Room: Convention Hall

Time: May 24 17:15-18:45

Development of gamma-ray and neutron spectrometer for in-situ observations of elemental composition for SELENE-2

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For in-situ elemental analysis of lunar surface, we are developing gamma-ray and neutron spectrometer (GNS) for SELENE-2 project.

In view of operation on the lunar surface during lunar day, thermal feasibility of the instruments is important. Therefore we decided to use three sensors which can be used in high temperature environment; CdTe semiconductor for low energy gamma-ray measurements (< MeV), LaBr₃ scintillator for higher energy (< 3 MeV), Si combined with neutron converter for thermal to epithermal neutron.

Here we report science goals of GNS, expected sensitivity and current status of GNS development.

Keywords: Lunar exploration, gamma-ray, SELENE-2