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2. CRs at Earth and planets (GEO)

Lunar Gamma-Rays and Neutrons Measured by Kaguya Gamma-ray Spectrometer

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Kaguya Gamma-Ray Spectrometer (KGRS) which was carried on the large-scale lunar polar orbiter, consists of a HPGe detector as a main detector with BGO and plastic scintillators as anticoincidence counters. It successfully observed gamma rays and neutrons emitted from elements constituting lunar surface material as well as primary cosmic ray counts. Improved maps of major elements and trace elements in the surface material were globally created with the KGRS data. Moreover, global distribution of fast neutrons emitted from the lunar surface was firstly derived on the basis of data analysis of "saw-tooth" peaks in the energy spectrum observed by the KGRS, which shows a good agreement with the past observation by Neutron Spectrometer aboard Lunar Prospector. In addition, counting rates of particles observed by plastic scintillator in the KGRS are globally mapped. These results are presented and discussed.