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Lunar iron and titanium abundance algorithms based on Kaguya Multi-band Imager VIS-NIR images

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Analysis of mare basalt derived from the mantle is important, since it provides mineral and chemical information about the lunar interior and gives as well as constraints on the thermal evolution of the Moon. Lucey et al.(2000) and Le Mouelic et al.(2002) determined TiO2 and FeO distribution of soils using the algorithms for correcting the effects of space weathering on the Clementine spectral images.
High spatial resolution spectral images obtained by Multi-band Imager(MI) onboard Kaguya satellite have enabled us to analyze small-scale geological features such as basalt flows and ejecta material. Results of having applied the above two methods to MI image data are presented.

Keywords: Kaguya, Multi-band Imager, Iron content, Titanium content