

Crustal materials around Mare Imbrium: result of Kaguya data integration science

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In order to understand lithological distribution and geological structure of the lunar crust, it is important to conduct analysis of spectral images with high spatial resolution considering 3D geological structure by using high-spatial resolution topographic map. In this presentation, lithological distribution and its relationship with geological structure around Mare Imbrium will be discussed by using the Kaguya data acquired by MI, TC, KGRS and LALT. As well known, Imbrium basin is situated in Procellarum KREEP Terrane (PKT). Therefore this investigation would contribute to understand lithological structure of the PKT and influence of Imbrium basin formation on the PKT evolution. In addition to discussion on crustal materials around the PKT, implication for origin of high-Th (i.e. KREEPy) crustal materials will be discussed.

Keywords: The Moon, Lunar crust, Kaguya/SELENE, Procellarum KREEP Terrane, Magma ocean, Early evolution