

Geologic study of lunar maria by using Clementine UVVIS data

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Mare basalts on the eastern near side moon were examined with Clementine UVVIS multi spectral data. Firstly, distribution of FeO and TiO₂ contents of each mare basin was mapped. Mare basalts were classified by composition based upon these chemical distribution maps and albedo images. Then, they were investigated geologically, and stratigraphic relationship was studied. The relation between eruption sequence and locations at where magma emplacement had occurred suggests that volcanism in this region had occurred at Mare Tranquillitatis first, and spread to around Mare Tranquillitatis. Relation between chemical composition of mare basalt and its distribution was also discussed. It is speculated that the distribution of chemical composition of the lunar mantle had been diverse laterally.