

## Composition and eruption mechanism of deep source magma derived by analyses of lunar Dark Mantle Deposit using Kaguya MI

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We investigated the pyroclastic beads to estimate the mantle composition. Pyroclastic beads are important because they are estimated to be formed from the magma source deeper in the mantle than that of the basaltic magma. In this study, we used the spectral data acquired by SELENE Multi-band Imager (MI) to analyze DMD. From our results we confirmed that pyroclastic beads are deposited and are not dominant material in the DMD regions. Also, we found that Apollo 17 site and Taurus-Littrow region contain high-Ti beads, while Apollo 15 site and Schroedinger basin DMD contain low-Ti beads. The composition of the Schroedinger basin DMD possibly indicates that the composition of the magma of lunar far-side was low-Ti. The type of eruption at Schroedinger basin DMD appears to be a Fire-fountain type from estimated volume fraction within the DMD.

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