

Inhomogeneous segregation of partial melts of chondritic source materials with reference to distribution of materials on Eros.

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Eucrites from 4 Vesta contain calcic plagioclase. We have reported a gabbroic area rich in albite and diopside in a silicate inclusions in a IAB iron (Takeda et al., 2000). Takeda and Kato (1999) pointed out that this material is a magnesian andesite. Wasserburg et al. (1968) reported a sanidine-rich surface inclusion in Colomera IIE iron and we studied silicate inclusions consisting of albite, diopside and Na-,Si-rich glass. Their average bulk compositions plot near the peritectic point of the Ol-Qtz-Plag diagram of Longhi. We proposed a model of inhomogeneous segregation of partial melt by Marangoni convection of two partial melts. This mechanism may explain the inhomogeneous distribution surface materials of Eros observed by the NEAR space craft.