

Distributions of O isotopes in a Type B2 CAI from the Vigarano meteorite

Miwa Yoshitake[1], Yoshiyuki Koide[2], Hisayoshi Yurimoto[3]

[1] Earth and Planetary Sci., TiTech, [2] Kanagawa Pref. Mus. Nat. Hist., [3] Earth & Planet. Sci., TiTech

<http://www.geo.titech.ac.jp/yurimotolab/>

O isotopic composition of individual minerals in a type-B2 CAI from the Vigarano meteorite has been measured by SIMS. O isotopic compositions in the minerals are classified into two groups, i.e. ^{16}O -rich (-4% relative to SMOW) and ^{16}O -poor (similar to terrestrial value). Spinel and fassite belong to ^{16}O -rich group. Melilite is ^{16}O -poor. Anorthite crystals belong to the both group.

The minerals having ^{16}O -rich composition are relict grains of CAI precursor. Solar nebula gas having ^{16}O poor composition was incorporated into the ^{16}O -rich CAI precursor when the CAI precursor was partially melted.