Multiple heating events deduced from distribution of O and Mg isotopes in an Efremovka CAI

# Hajime Hiyagon [1], Takayuki Ushikubo [2], Naoji Sugiura [3], Alexander Ulyanov [4]


Distribution of O and Mg isotopes in an Efremovka CAI (type-B1) was studied using SIMS. Anorthite as well as spinel and fassaite showed large O isotopic anomalies with delta-17 and -18 values around -45 permil, while melilite showed delta-18 values from -10 to +10 permil. The initial Al-26/Al-27 values in anorthite calculated from the observed excess Mg-26 varied from a canonical value for CAIs (5E-5) to its 1/5 depending on the analyzed position. Based on diffusion data for O and Mg, it is shown that there were two different events, one reset the O isotopic signature in melilite and the other disturbed the Mg isotopic signature in anorthite.