Mg isotopic anomalies of two types of anorthite in CAIs

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We measured two types of anorthite in two CAIs; CAI1 (Allende meteorite) and E44 (Efremovka meteorite) by SIMS. Anorthite in CAIs are classified into primary which was formed simultaneous by at CAIs* formation and secondary anorthite which was formed by a metamorphic event according to the mineralogical features.

Calculated initial 26Al/27Al ratios from Mg isotopic anomaly of the primary anorthite(E44) range from 4.47E-5 to 8.65E-6 and tend to be higher in the center of anorthite crystal. Probably this tendency is caused by Mg diffusion.

Secondary anorthite(CAI1) also has Mg isotopic anomaly which corresponds to 1.9E-5 when converted to the initial 26Al/27Al ratio. This means that the metamorphic event of CAIs occurred while live 26Al still existed.