

研究報告書

RESEARCH REPORT

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5. 研究機関 Collaboration Research Period: June 28 ~ July 12, 2005
6. 研究題目 Research Title: Oxygen isotope measurements on NWA539 ordinary chondrite and Allende CV3 chondrite
7. 研究成果報告 Research implementation / report:

As continuing efforts to measure oxygen isotopic compositions of NWA539, LL3.5 ordinary chondrite after the measurements of Feb.2005 at ISEI, another three chondrules and bulk sample were measured using Laser-fluorination technique at Prof. Kusakabe's laboratory. All measurements of NWA539 fall in the range that occupied by previously measured oxygen isotopic compositions of ordinary chondrites and chondrule data fall along a slope 1 line (Fig. 1). Four bulk fall on or close to this mixing line and in the range of LL chondrites. Oxygen isotopic compositions of fine-grained clasts are similar but not exactly agree with chondrules and bulk.

Four chondrules and 5 fragments of Allende were measured for oxygen isotopes (Fig. 2). Data of 5 fragments (broken chips of Allende having matrix and small chondrules) fall along the carbonaceous chondrites anhydrous mineral line (CCAM), while chondrule data fall slight above the line.

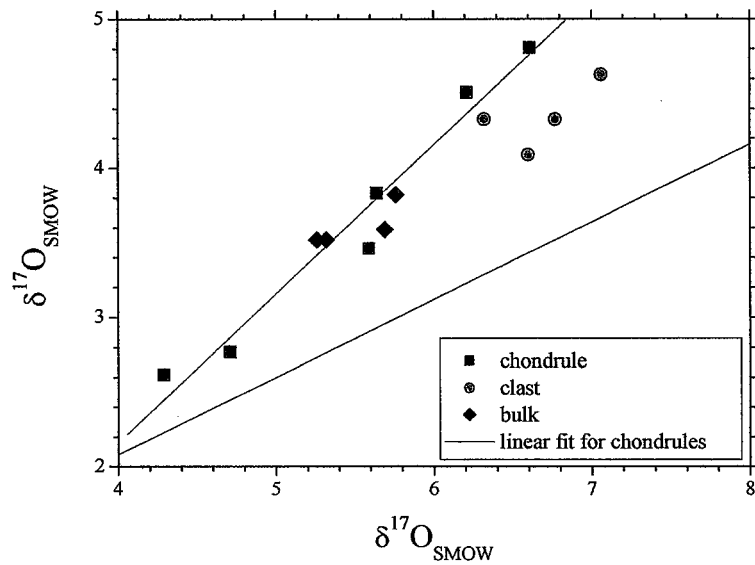


Fig. 1. Oxygen isotopic composition of NWA539. Chondrule data fall along a mixing line of slope 1.

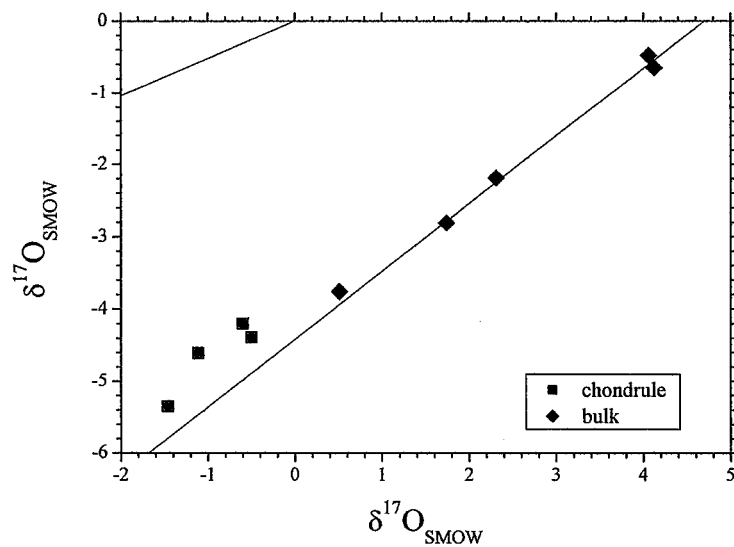


Fig. 2 Oxygen isotopic compositions of chondrules and bulk (2mg chips) of Allende. There are large variations on the bulk samples, because of small sample size. However they all fall along the CCAM line.