Geophysical Research Abstracts
Vol. 19, EGU2017-3097-1, 2017
EGU General Assembly 2017

Experimental determination of magnetic characteristics of Kunashak L3 Chondrite

Hanul Kim (1), Yongjae Yu (1), and Seung Ryeol Lee (2)

(1) Department of Astronomy, Space Science, and Geology, Chungnam National University, Daejeon, Korea (hanulkim@cnu.ac.kr), (2) Planetary Geology Department, Korea Institute of Geoscience and Mineral Resource, Korea

A systematic alternating-field (AF) demagnetization on mutually oriented fragments of Kunashak L3 Chondrite was carried out. AF demagnetization spectra for natural remanent magnetization (NRM), anhysteretic remanent magnetization (ARM), and saturation isothermal remanent magnetization (SIRM) were compared. We found that NRM, ARM, and SIRM are controlled by two dominant coercivity fractions, one being in the order of < 10 mT and the other in the order > 100 mT, were identified. Higher coercivity fraction was stable whose remanence appears to be carried by Fe-Ni alloys. It is apparent that softer coercivity fraction was governed by the metal-sulfur meting produced by shock metamorphism. Directions of NRM were consistent in mm-scale, implying that brecciation process is responsible for the consistent NRM direction of Kunashak L3 Chondrite.