REVISITING THE ELEMENTAL COMPOSITION OF THE ENSTATITE CHONDRITES.
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Introduction: Enstatite chondrites have often been cited as model precursors for the Earth, based primarily upon stable isotope considerations (1,2). On the other hand, it has proven difficult to reconcile their bulk elemental abundances with those of the Earth.

In order to explore any compositional link that the enstatite meteorites may have with other planetary bodies, a good understanding of the range of their compositions is required. Previous work has used a variety of methods to examine the the minor and trace element composition of these materials, with individual work often focusing upon either a restricted range of elements and/or a restricted number of meteorite samples. In addition, the highly reduced nature of the meteorites and the chemical reactivity of some of the meteorite components implies that only samples from falls should be considered for analysis. This, inevitably, makes drawing any conclusions from their bulk compositions somewhat difficult.

Here we present data from a comprehensive range of EH and EL falls, using a quadrupole ICP-MS technique for minor and trace element analysis, together with ICP–AES for the major and minor elements. The aim is to provide an internally consistent data set of compositions for a wide range of elements. In addition, we also present high resolution C, N and noble gas isotopic analysis of the bulk materials. Both data sets should allow better constraints to be placed upon both the models of enstatite chondrite formation, and their genetic relationship with other planetary bodies.