

Komatiites in the plume debate

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ABSTRACT

The existing paradigm that ocean island basalts and large igneous provinces are produced by large thermal upwellings (plumes) from the lower mantle is increasingly being challenged. Curiously, a similar debate has been taking place about the origin of Archean komatiites. While seemingly separate, the two debates are, in fact, intimately related and have significant implications for each other and for the history of the Earth. Here we review, in brief, the history and current state of knowledge about the origin of komatiites, and show how it relates to the debate about modern plumes.