

Japan Geoscience Union Meeting 2011

(May 22-27 2011 at Makuhari, Chiba, Japan)

©2011. Japan Geoscience Union. All Rights Reserved.



SCG065-P04

会場:コンベンションホール

時間:5月23日 10:30-13:00

マントル熱史から見た超大陸の離合集散

The superplume-supercontinent cycle from the viewpoint of thermal evolution of the mantle

千秋 博紀^{1*}, 丸山 茂徳²

Hiroki Senshu^{1*}, Shigenori Maruyama²

¹ 千葉工業大学惑星探査研究センター, ² 東京工業大学大学院理工学研究科

¹PERC/Chitech, ²Tokyo Tech

In this talk, we will review the superplume-supercontinent cycle from the viewpoint of thermal evolution of the mantle.

According to recent geological and geochemical studies, it is becoming obvious subduction erosion take place at plate boundaries all over the world. Then, the next question is what is the role of the subduction erosion on thermal evolution of the mantle. We propose a new superplume-supercontinent cycle model in which subducted granite works as an effective heat source in the mantle to invoke superplume, resulting supercontinent breakup.

Keywords: thermal evolution, superplume, supercontinent, mantle dynamics