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SCG065-P04

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

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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