

Japan Geoscience Union Meeting 2011

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

©2011. Japan Geoscience Union. All Rights Reserved.



SCG065-14

Room:301B

Time:May 23 18:00-18:30

The 300 Ma mantle convection history is interpreted by the surface geology

Shigenori Maruyama^{1*}

¹Tokyo Institute of Technology

Traditionally mantle convection has been considered to be the process of internal heat loss from the Earth's interior. Recently the presence of second continents 10 times bigger than the surface total continental mass is proposed to be present on the bottom of the upper mantle (Kawai et al., 2009; Senshu et al., 2009). If this is correct, mantle convection can be predicted by the surface geology which records the subduction and tectonic erosion history to transport the TTG materials into mantle through time back to 300Ma. By the paleogeographic reconstruction of continents, past subduction zones and sites of tectonic erosion, the history of mantle convection was reconstructed to suggest the second continents controlled the past mantle convection.