

The 17th Global-COE International Frontier Seminar

March 19th, 2010, from 13:00, at the room#486 meeting room 4F

The Role of Mineral Physics in Modelling Geodynamics of The Lower Mantle

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Lower mantle dynamics is influenced a great deal by the pressure-dependence of material properties, such as viscosity, thermal expansivity, thermal conductivity and other pressure induced effects, like phase transitions. Today we will discuss the combined role of all of these components in an exploratory 2-D study with a finite-volume 2-D code cast in OpenMP and using a direct-solver PARADISO. A semi-Lagrangian method has been used to solve the temperature equation. Our goal is to find the proper mineral physical ingredients to stabilize mantle upwellings in the lower mantle in view of the strongly exothermic character of the post-perovskite phase transition discovered by Titech 6 years ago.

19 March 2010 13:00-14:00
Room486, meeting room 4F
Science Research Bldg
Ehime University



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