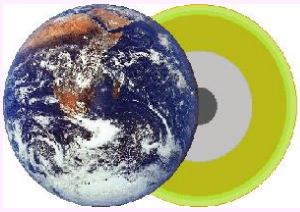
The 381th Geodynamics Seminar

Grand challenges in TMP 2014

Dr. Taku Tsuchiya (Professor, GRC)

Date: 04.11.2014 (Fri) 16:30 ~
Venu: Meeting Room #486, Science Research Bldg 1, Ehime Univ.

日時: 2014年4月11日（金）16:30 ~
場所: 愛媛大学 総合研究棟 I 4階共通会議室



EHIME UNIVERSITY GRC GEODYNAMICS RESEARCH CENTER

Abstract

Recent progress in theoretical mineral physics (TMP) based on the density functional quantum mechanical computation method has been dramatic in conjunction with the rapid advancement of computer technologies. It is now possible to predict finite-temperature equation of state and phase stability of complex minerals quantitatively with uncertainties that are comparable to or even smaller than those attached in experimental data. Our next grand challenges include new technical developments for high-P,T thermoelasticity and transport property of iron-bearing phases and also liquid phases. Thermoelasticity, which is a key to clarifying chemical compositions of the lower mantle and core through converting seismological information, and transport property including thermal and electrical conductivities, atomic diffusivity, and viscosity, which are keys to understanding dynamics and therefore evolution of the Earth's interior, are now set to major research targets. In this talk I will report current situations of these grand challenges in TMP and also discuss future perspectives.

詳細は当センターホームページ： http://www.ehime-u.ac.jp/~grc/をご覧ください
問い合わせ先： 出倉 春彦（TEL:089-927-8408,e-mail:dekura@sci.ehime-u.ac.jp）