

The 416th Geodynamics Seminar

Grand Challenge in Theoretical Mineral Physics: Determination of High- P,T Elasticity

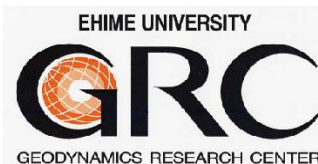
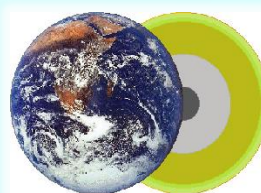
Dr. Taku Tsuchiya (Professor, ELSI-ES, GRC)

Date: 6.12.2015 (Fri) 16:30 ~

**Venu: Meeting Room #486, Science
Research Bldg 1, Ehime Univ.**

日時: 2015年6月12日(金) 16:30~

**場所: 愛媛大学 総合研究棟 I
4階 共通会議室**



Abstract

Elasticity is a key property in high- P mineral physics, since comparison of mineral elasticity with observed Earth's property is the most direct way to investigate the compositional property of the deep Earth. Experimental measurement of elasticity however still remains impractical in the deep Earth P,T condition, so that quantitative theoretical approach plays an substantial role. In order to compute elasticity in particular at high T , appropriate techniques must be selected and applied depending on target material types. Here I will show our recent achievements on the high- P,T elasticity of some major Earth forming materials, including silicates, solid and liquid iron, obtained from density functional *ab initio* computations with different techniques.