I021-022 Room: International Conference Room Time: May 29 11:30-11:45

Phase transitions and densities of high-pressure minerals in the lower mantle

Shigeaki Ono[1]

[1] IFREE, JAMSTEC

Mineral chemistry of KLB-1 peridotite was investigated under pressures of up to 102 GPa and temperatures of 2600 K by a laser-heated diamond anvil cell experiment, with an angle-dispersive X-ray diffraction using synchrotron radiation source (SPring-8, Japan). I observed the phase transition of Ca-perovskite from cubic to tetragonal phase. In the case of Al-bearing Mg-perovskite, I did not observe the phase transition and dissociation up to 102 GPa. Therefore, the incorporation of Al2O3 causes to expand the stability field of Mg-perovskite.