

SIT036-P06

会場:コンベンションホール

時間: 5月24日17:15-18:45

高温高圧下における水とMORBの反応関係

MORB-H₂O reaction at high temperature and high pressure

石尾 恵朋^{1*}, 近藤 忠¹, 亀卦川卓美², 石田 雄¹

Keihou Ishio^{1*}, Tadashi Kondo¹, Takumi Kikegawa², Yuh Ishida¹

¹大阪大学大学院理学研究科, ²物質構造科学研究所

¹Graduate School of Science, Osaka Univ, ²IMSS KEK

Estimating the distribution of the mantle is very important for understanding of earth's structure and evolution. The phase relations of MORB(Mid Ocean Ridge Basalt) have been studied to the lower most mantle conditions in dry system. However, sufficient experimental data has not been available for wet system.

Therefore we investigated water-saturated MORB systems using LH DAC(Laser-heated Diamond Anvil Cell) up to 50 GPa. In-situ X-ray diffraction study was performed by angle dispersive method with an imaging plate at KEK:AR-NE1, Tsukuba, Japan. Compositions of the starting material are SiO₂-50.39%, TiO₂-0.57%, Al₂O₃-16.08%, FeO-7.68%, MgO-10.49%, CaO-13.05%, Na₂O-1.87%.

Pressure were measured using a EOS of Au and Ice VII. Most intensive diffraction lines were explained by the phase assemblage observed in the dry system. However, some minor lines were not identified, which were originated from hydrous phases or new phase, we will present the detail of X-ray diffraction study and also analysis of the quenched sample.

キーワード:ダイヤモンドアンビルセル,中央海嶺玄武岩,高圧高圧,高エネルギー加速器研究機構

Keywords: LHDAC, MORB, high pressure, high temperature, KEK