

# Geodynamics Seminar

## 第337回ジオダイナミクスセミナー

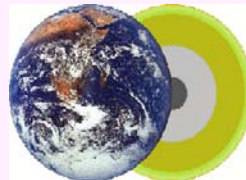
### Towards Neutron imaging experiment in BL-11 “PLANET” beamline, J-PARC

**Dr. Toru Inoue (Professor, GRC)**

主催: 愛媛大学地球深部ダイナミクス研究センター

日時: 10/5(金) 午後 4時30分～

場所: 総合研究棟 4F 会議室



#### Abstract

New high pressure Neutron beamline “PLANET” has constructed in J-PARC, which is the intense pulsed neutron facility in Japan, and 6-axis high pressure apparatus and neutron camera were introduced recently. Our targets are to clarify the effect of water on minerals and magmas in the Earth and planetary interiors by using the neutron character that is sensitive to hydrogen.

I specially introduced new neutron camera which uses concentration boron B-10 for an input side as a reaction film, and CsI fluorescent substance is used to emit light by  $\alpha$ -ray occurred by  $^{10}\text{B}(n,\alpha)$  reaction.

In this talk, I will present the outline of the neutron camera, and report the result of the preliminary experiments conducted in J-PARC BL-11

“PLANET” beamline. By introduction of this camera, it becomes possible to observe the various sample images under high pressure and high temperature using large-volume high pressure apparatus. Especially neutron has an advantage to detect hydrogen and water in samples, which is much different from X-ray. So our target is to see hydrogen-bearing sample by this camera.