



# 61st RAP Seminar

The 61st Seminar on RIKEN Center for Advanced Photonics

Language: Japanese

Date: **February 15(Fri) 16:00 - 17:00, 2019**

Location: **W319, 3F, Cooperation Center, Wako Campus, RIKEN**

(理研 和光キャンパス 研究交流棟 3階会議室 W319)

Title: **Neutron diffraction under high pressure  
at PLANET in J-PARC and implications  
for Earth science**

J-PARC PLANETにおける超高圧中性子回折実験と地球科学への適用

Speaker: **Dr. Asami SANO-FURUKAWA**

J-PARC Center, Japan Atomic Energy Agency

佐野 亜沙美

日本原子力研究開発機構 研究副主幹

Hydrogen is the most ubiquitous component in the solar system and plays an important role in the chemical and physical evolution of the Earth. To understand the effect of hydrogen on properties of mineral and rocks, neutron diffraction that can locate hydrogen atom in the structure is a powerful tool. High-pressure diffractometer PLANET in J-PARC is a unique beamline that has a 6-axis multi anvil press to simulate the condition of Earth's interior up to 10 GPa and 2000 K. It has been exploited to investigate hydrogen in the Earth's core and symmetrization of hydrogen bond in a hydrous mineral. In this talk I will introduce the beamline PLANET with some implications for Earth science.