

16th RAP Seminar

The 16th Seminar on RIKEN Center for Advanced Photonics

Language: Japanese

Date : Oct.17 (Fri), 2014, 16:00 -17:00

Location : Cooperation Center, 3F, W319, Wako Campus, RIKEN
(理研 和光キャンパス 研究交流棟3階会議室 W319)

Title: **Present Status of SACLA**
X線自由電子レーザー-SACLAの現状

Speaker : **Dr. Tetsuya ISHIKAWA**
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SPring-8 Angstrom Compact Laser (SACLA) has been operating for users since 2012. As one of only two hard X-ray free-electron lasers in operation around the world, SACLA is welcoming users from both domestic and abroad. After the initial successful operation in Self-Amplified Spontaneous Emission (SASE) mode, self-seeding operation and two-color SASE operation were tested to strengthen the potential of wider applications. Ultrafast x-ray pulse with ~10 fs duration led to ultrafast X-ray absorption spectroscopy and ultrafast X-ray photoemission spectroscopy. The short pulse also contributed to development of the 'diffract before destroy' scheme widely applied to serial femtosecond crystallography. The focusing system developed for SACLA could make 50 nm focal spot with 10^{20} W/cm² power density. This high power density is now opening the door of X-ray nonlinear optics.



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