Contribution ID: **433** Type: **Talk**

【701】SwissFEL: The New Femto Second X-ray Laser Source at PSI

Wednesday 23 August 2017 14:00 (30 minutes)

The new X-Ray Free Electron Laser (SwissFEL) facility at PSI has produced its first FEL light at 4.1 nm and will deliver 20 fsec pulses of coherent x-rays in the wavelength range 0.1 to 7 nm, with extremely high peak brightness. These characteristics will provide opportunities for new experiments in chemistry, solid state physics, biology and materials science. The Aramis hard x-ray FEL branch will begin normal user operation in 2018 with two dedicated end-stations. The Alvra end-station is focused on using time resolved x-ray spectroscopy (XAS/XES) to investigate femtosecond chemical processes and time-resolved x-ray diffraction for serial femtosecond crystallography (SFX) experiments on proteins. The Bernina end-station is designed for femtosecond time-resolved pump-probe hard x-ray diffraction and scattering experiments in condensed matter systems. The Athos soft x-ray FEL branch is in the early phase of construction and should provide its first FEL light for experiments in 2020. After a brief status report, the presentation will focus on novel applications, the description of the fundamental aspects of the planned facility with an emphasis on the photonics part of the project.

Author: Dr PATTHEY, Luc (Paul-Scherrer Institute)

Presenter: Dr PATTHEY, Luc (Paul-Scherrer Institute)

Session Classification: Scientific Opportunities with SwissFEL

Track Classification: Scientific Opportunities with SwissFEL