

## From Picoseconds to Femtosecond X-Ray Experiments

26 January 2016, DESY campus, FLASH Lecture Hall, Hamburg

Organizers: C. Bressler, A. Galler, W. Gawelda, D. Khakhulin, M. Rübhausen, F. Boscherini

Recent developments at Petra III now exploit the high X-ay photon flux available with a newly developed high repetition rate (up to 7.8 MHz) detection system, which will also be used at the FXE Instrument of the European XFEL. The high quality of X-ray signals, which can be now routinely achieved in pump-probe experiments carried out at Petra III at MHz rates, opens up new venues for studies of photophysical and photochemical processes occurring on the picosecond to sub-microsecond time scales. Some initial results will be presented during the workshop pointing towards challenging new research activities to be pursued in the next years, both at Petra III and at European XFEL.

## **Programme**

## Tuesday, 26 January 2016

08:30 - 09:45	Opening Session (jointly with DESY/European XFEL – Turkey Workshop)		
08:30 08:45 09:15	General Welcome Overview DESY Overview European XFEL	H. Dosch M. Altarelli	DESY European XFEL, Hamburg
09:45 - 10:15	Coffee Break (Split into two Sessions)		
10:15 – 11:30	MHz Time-Resolved X-Ray Sources: Petra III and European XFEL		A. Meents, DESY
10:15	Workshop Welcome  FXE Scientific Opportunities at European XFEL	C. Bressler F. Boscherini M. Rübhausen W. Gawelda	European XFEL University of Bologna CFEL European XFEL
11:00	(MHz) TR avenues at Petra III: P01, P04, P11	H. Yavas	DESY
11:30 – 13:00	(Bio)chemical Dynamics: New Observables with hard x-rays		C.Bressler, European XFEL
11:30 12:00 12:30	Transform Methods for ns-ms time resolution Primary Steps in Homogeneous Photocatalysis Bio-Inorganic compounds for TR experiments	A. Pearson S. Lochbrunner M. Rübhausen	CFEL Uni-Rostock CFEL
13:00 - 14:00	Lunch Break (Sandwiches for Registrants in Flash Lecture Hall)		
14:00 - 16:00	TR Experiments with hard X-Rays, New Sources		M. Rübhausen, CFEL
14:00	X-Ray Detection of Magnetic Resonance Using Heterodyne Approach	A. Rogalev	ESRF
14:30 15:00	Solid State Experiments at FXE Irreversible Material Dynamics Studied by	F. Boscherini	University of Bologna
15:30	Single-Pulse TR X-Ray Scattering AXSIS at DESY: Exploring Frontiers in Attosecond	K. Sokolowski-Tinten	Uni Duisburg
	Science, Imaging and Spectroscopy	F. Kärtner	CFEL
16:00-16:30	Coffee Break		
16:30 – 18:00	Introduction of FXE capabilities for the early user experiments phase (2017/2018)		
16:30	Scientific Instrument FXE: reminder	C. Bressler	European XFEL
	Discussion Round: The first Experiments at FXE	FXE Group	European XFEL
18:00	Closeout / Adjourn		
20:00 - 22:30	Dinner for Speakers/Chairs		

Registration at www.xfel.eu/2016-users-meeting

Update: 19 January 2016 www.xfel.eu