

X-ray diffraction and spectroscopy in very high magnetic fields at the Helmholtz International Beamline for Extreme Fields

Satellite meeting at the DESY/XFEL users meeting 22.01.18

The HIBEF consortium plans to contribute pulsed magnets with peak fields of 60 T and different coil geometries to the HED instrument at the European XFEL. This will offer the possibility to perform x-ray diffraction and spectroscopy experiments under the highest magnetic fields available at any x-ray source in the world. The aim of the workshop is to present the planned infrastructure and discuss new scientific opportunities and early user experiments.

Organizing committee: C. Strohm, M. von Zimmermann, T. Herrmannsdörfer & C. Baetz.

Location: European XFEL room E.1.173

Programme:

Monday January 22nd 2018		
9h15 – 10h00	Coffee, get together, registration	
Opening Session: Setting the stage. Chair: S. Molodtsov		
10h00 – 10h10 (10 min)	Welcome	S. Molodtsov
10h10 – 11h00 (40+10min)	Keynote: Recent progress in high magnetic field science at SR and XFEL sources	H. Nojiri
11h00 – 11h20 (15+5 min)	The HED instrument	U. Zastrau
11h20 – 11h40 (15+5 min)	Opportunities at XFEL	C. Strohm
11h40 – 12h00 (15+5 min)	Pulsed fields at HIBEF	S. Yamamoto
12h00 – 13h00 (60 min)	Lunch break: buffet lunch in the XFEL entrance hall	
Session I: Diffraction Experiments Chair: Z. Islam		
13h00 – 13h25 (20+5 min)	HT SC diffraction	S. Gerber
13h25– 13h45 (15+5 min)	Split coil exps. diffraction	O. Portugall
13h45 – 14h05 (15+5 min)	Day 1 experiments	J. Chang
Session II: Diffraction Experiments. Chair: S. Gerber		
14h05 – 14h30 (20+5 min)	Pulsed fields at APS	Z. Islam
14h30 – 14h50 (15+5 min)	Neutrons exps. in Berlin	O. Prokhnenko
14h50 – 15h10 (15+5 min)	Day 1 experiments	J. Geck
15h10 – 16h10 (60 min)	Coffee	
Session III: Spectroscopy and coherent methods. Chair O. Portugall		
16h10 – 16h30 (15+5 min)	XMCD at ESRF	S. Pascarelli
16h30 – 16h50 (15+5 min)	HT SC XAS	W. Tabis
16h50 – 17h10 (15+5 min)	Coherent methods	C. Gutt
17h10 – 17h45 (35 min)	Round table: early user experiments. Chair: organizers	
Session IV: MegaGauss and beyond - brainstorming session. Chair: H. Nojiri		
17h45 – 18h05 (15+5 min)	Single turn coils	O. Portugall
18h05 – 18h25 (15+5 min)	Plasma exps. in pulsed fields	G. Revet
18h25 – 18h45 (15+5 min)	Laser driven field generation	T.Toncian