

## Agenda

### Future detectors for the European XFEL workshop

#### 18 – 19 September 2023

### Monday, September 18

*EuXFEL, Seminar Room E1.173, Building XHQ*

09:00 – 10:00	<b>Welcome Coffee (Foyer)</b>		[60']
10:00 – 11:00	<b>Welcome and introduction (EuXFEL)</b>		[60']
10:00	Welcome and Goals of the Workshop	M. Turcato	(10')
10:10	EuXFEL Facility Development Plans	T. Tschentscher	(25')
10:35	Scientific Requirements on Detectors from EuXFEL Instruments	R. Bean	(25')
11:00 – 11:20	<b>Coffee Break (Foyer)</b>		[20']
11:20 – 13:00	<b>Towards the New Generation of Detectors for the EuXFEL</b>		[100']
11:20	Operational Experience and Lessons Learned with Existing Detectors:		
	• Hardware Issues, Interlocks, Calibration	J. Sztuk-Dambietz	(25')
	• Control, DAQ, Operability	C. Danilevski, A. Parenti	(25')
12:10	Data Volume Management: Challenges and Solutions	K. Wrona	(25')
12:35	New Generation Detectors: Requirements, Strategy and First Steps	M. Turcato	(25')
13:00 – 14:00	<b>Working Lunch (Foyer)</b>		[60']
14:00 – 15:40	<b>Front-End Detector Developments I</b>		[100']
14:00	DESY FS-DS: Ongoing Development and Future Directions	H. Graafsma	(25')
14:25	Overview of Jungfrau Improvements in the Short and Long Term: a EXFEL perspective	A. Mozzanica	(25')
14:50	Gotthard for CW Operation and Low/High Energy Sensor Development	J. Zhang	(25')
15:15	New X-ray Detectors for ESRF: XIDyn/XIDER/Dynamix	P. Busca	(25')
15:40 – 16:00	<b>Coffee Break (Foyer)</b>		[20']
16:00 – 17:40	<b>Front- End Detector Developments II</b>		[100']
16:00	From DSSC to the Next Generation of Soft X-Ray Detectors	M. Porro	(25')
16:25	Polimi Experience Towards Development of New Front-End Solutions for Next Generation of EuXFEL Detectors	C. Fiorini	(25')
16:50	Front-End Electronics and IP Blocks in 65 nm CMOS Technology for Pixel Detectors in X-Ray Imaging Applications	L. Gaioni	(25')
17:15	Development of Front-End Electronics in 28 nm CMOS Technology	L. Gaioni	(25')
17:45 – 18:10	<b>DAQ and Firmware development</b>		
	ESRF's RASHPA: High Performance DAQ Platform	P. Fajardo	(25')
19:00	<b>Dinner at BeamStop</b>		

## Tuesday, September 19

*EuXFEL, Seminar Room E1.173, Building XHQ*

08:30 – 09:00	<b>Welcome Coffee (Foyer)</b>		
09:00 - 10:30	<b>Sensor developments I</b>		[75']
09:00	Current and Future Developments for Soft X-Ray Detectors at MPG HLL	J. Ninkovic	(25')
09:25	The Future of DePFETs (and other devices) for XFELs and Synchrotrons	L. Strüder	(25')
09:50	Characteristics of ARCADIA Fully Depleted MAPS and Perspectives for X-Ray Imaging at X-FELs	L. Pancheri	(25')
10:15 – 10:45	<b>Coffee Break (Foyer)</b>		[30']
10:45 – 12:00	<b>Sensor developments II</b>		[75']
10:45	Overview of Silicon Sensor Development and SDDs for X-ray Spectroscopy at FBK	G. Pepponi	(25')
11:10	Development of LGADs and Pixel Sensors for Soft X-rays at FBK	M. Centis Vignali	(25')
11:35	Characterisation of High-Z Sensor Materials for Imaging at Extreme Fluxes	M. Veale	(25')
12:00 – 13:00	<b>Working Lunch (Foyer)</b>		[60']
13:00 – 14:00	<b>DAQ and Firmware development</b>		[60']
13:00	Latest Developments in Detector Microelectronics and DAQ at STFC	M. Hart	(30')
13:30	Enabling Modular and Programmable DAQ at High Frame- Rate and 4 Mega Pixel-Count Imaging for XFEL 2030+: A Competence Driven Assessment	N. Lusardi	(30')
14:00 – 14:30	<b>Coffee Break (Foyer)</b>		
14:30 – 16:10	<b>Industry presentations</b>		[100']
14:30	DECTRIS: Next Generation MHz Detectors with High Dynamic Range	M. Rissi	(25')
14:55	High Speed X-Ray Detectors by X-Spectrum	J. Schmer	(25')
15:20	High-Z GaAs Development by ADVAFAB	J. Kalliopushka	(25')
15:45	CdZnTe Detector Technology for Emerging applications in advanced X-Ray sources	G. Wu	(25')
16:10 – 17:00	<b>Discussion and Conclusion, Next Steps</b>		[50']
17:00	End of the Workshop		