



Workshop

“Shaping the Future of the European XFEL: Options for the SASE4/5 Tunnels”

06 December – 07 December 2018

Venue: Room E1.173 - European XFEL/Schenefeld

Scope of the Workshop: Analysis and discussion of existing technical possibilities for mid-term upgrades of the two empty tunnels of the European XFEL (SASE4/5)

Scientific Committee

Chair:

Serguei Molodtsov (European XFEL)

Gianluca Geloni (European XFEL)

Members:

Evgeny Schneidmiller (DESY)

Winfried Decking (DESY)

Bart Faatz (DESY)

Joachim Pflüger (European XFEL)

Svitozar Serkez (European XFEL)

Harald Sinn (European XFEL)

Mikhail Yurkov (DESY)

06 December 2018

Registration:

08:30 – 09:00 European XFEL Foyer

Session I: Introduction – Facility Description – Scientific Trends

Chair: Massimo Altarelli, MPI for Structure & Dynamics of Matter

09:00 – 09:30 Serguei Molodtsov (European XFEL)
“Introduction and Scientific Trends for Different Photon Energies”

09:30 – 10:00 Winfried Decking (DESY)
“SASE4/5 Geometry - Optics”

10:00 – 10:30 Coffee Break

10:30 – 11:00 Igor Zagorodnov (DESY)
“SASE4/5 Beam Dynamics”



- 11:00 – 11:45 Discussion
11:45 – 12:30 Lunch (XTOB)

Session II: Hard X-rays

Chair: Jochen Schneider, DESY

- 12:30 – 13:00 Evgeni Schneidmiller, Mikhail Yurkov (DESY)
“A Hard (7 keV – 25 keV) and Ultra Hard X-ray Source (25 keV – 100 keV) for the European XFEL”
- 13:00 – 13:30 Svitozar Serkez, Gianluca Geloni (European XFEL)
“Super-X: Simulations for the Super-Hard X-ray Generation with Short Period Undulators for the European XFEL”
- 13:30 – 14:00 Bo Liu (Shanghai Synchrotron Radiation Facility)
“Hard X-ray Generation at SHINE”
- 14:00 – 14:45 Discussion
- 15:00 – 15:30 Guided Tour of the European XFEL Experimental Hall
- From 15:30** **You are all cordially invited to the European XFEL Christmas Party, including plenty of entertainment and food**
- 19:00** **First bus transfer to local hotels**
- Stops include: Hotel Klövensteen, Hotel Blankenese, Mercure Hotel am Volkspark, DESY Main Entrance, S-Bahn station and taxi stand in Othmarschen, NH Hotel Hamburg-Altona**
- 21:00** **Second bus transfer to local hotels**

07 December 2018

Session III: Soft X-rays

Chair: Alexei Erko, Institut für angewandte Photonik (IAP)

- 09:00 – 09:30 Evgeni Schneidmiller, Mikhail Yurkov (DESY)
“A Soft X-ray Beamline for Generating Pulses between 1nm and a few 10s nm for the European XFEL”
- 09:30 – 10:00 Takanori Tanikawa (European XFEL)



“External Seeding Possibilities at the European XFEL (EEHG and HGHG) and THz Addition”

- 10:00 – 10:30 Eduard Prat (PSI)
“Superradiance for Soft X-ray Production”
- 10:30 – 11:00 Coffee Break
- 11:00 – 12:00 Discussion
- 12:00 – 13:00 Lunch (XFEL Foyer)

Session IV: Other Concepts

Chair: Edgar Weckert, DESY

- 13:00 – 13:30 Jörg Rossbach (DESY)
“XFEL0”
- 13:30 – 14:00 Gianluca Geloni (European XFEL)
“Self-seeding: Energy-Range Limits and Possibilities”
- 14:00 – 14:30 Mikhail Krasilnikov (DESY Zeuthen)
“A THz Facility for the European XFEL”
- 14:30 – 15:15 Discussion
- 15:15 – 15:45 Coffee Break

Session V: Technological Aspects

Chair: Joachim Pflüger, European XFEL

- 15:45 – 16:15 Efim Gluskin (APS)
“Superconducting Undulator Technology”
- 16:15 – 16:45 Thomas Schmidt (PSI)
“Practical Experience with Short Period Undulator Systems”
- 16:45 – 17:15 Yuhui Li (European XFEL)
“Hardware Feasibility Studies”
- 17:15 – 18:00 Discussion
- 18:00 – 18:15 Conclusions