European XFEL GmbH
Holzkoppel 4
22869 Schenefeld
Germany

Tackling Some Inertial Fusion Energy Challenges at the European XFEL

11-12 June 2024

Holzkoppel 4, 22869 Schenefeld

Tuesday, 11 June 2024

Time	Topic	Speaker
10:00	Registration Starts	
11:30	Tour of HED/HIBEF	
12:30	**Lunch**	
14:00	Welcome	Thomas Feurer (Managing Director EuXFEL) & Armin Haase (BMBF)
14:10	Opening	Sakura Pascarelli (EuXFEL) Justin Wark (Uni. Oxford) Paul Loubeyre (CEA)
14:30	New light on fusion; exploring micro to macro physics of fusion with XFELs	Rip Collins (U. Rochester) – by ZOOM
15:00	Opportunities to advance fusion energy physics with XFELs	Sam Vinko (Oxford) by ZOOM
15:30	The Shock Ignition approach and its challenges	Sebastien Le Pape (LULI) by ZOOM
16:00	Proton fast ignition with boron fuel - HB11 Energy approach to commercial sustainable fusion energy	Sergey Pikuz (HB11, Australia)
16:30	**Break – Group Picture**	
17:00	Ignition in indirect drive experiments at the National Ignition Facility and XFEL collaborations	Omar Hurricane (LLNL) by ZOOM
17:30	Opportunities for IFE science and technology at MEC and MEC-U	Alain Fry (SLAC) by ZOOM
18:00	How X-rays will pave the way towards fusion energy	Sigfried Glenzer (U. Stanford)
18:30	**Cocktail with Posters in Foyer**	
19:30	**Dinner at BeamStop**	
21:00	**After Dinner Event**	

Wednesday, 12 June 2024

Time	Topic	Speaker
9:00	The BMBF Program “Fusion 2040” and funding opportunities	Christian Flüchter (VDI) – by ZOOM
9:30	Facility roadmap for IFE	Prav Patel (Focused Energy) – by ZOOM
10:00	Direct heating of advanced fuels with nano-accelerators.	Hartmut Ruhl (Marvel)
10:30	Inertial Fusion Energy at First Light Fusion	Francisco Suzuki-Vidal (First Light Fusion)
11:00	**Break**	
11:30	Full-scale and sub-scale IFE plasmas creation by a petawatt laser light	Yasuhiko Sentoku (U. Osaka) – by ZOOM
12:00	Academic Fusion Research - Current Status in Germany and Future Potential	Matt Zepf (U. Jena) – by ZOOM
12:30	Fusion research opportunities at GSI and FAIR	Vincent Bagnoud (GSI) – by ZOOM
13:00	**Lunch**	
14:30	Perspective on the contribution of a future IFE-Research instrument to ICF research	Charlotte Palmer (QUB)
15:00	Electron thermal conduction and hydrodynamic instabilities in ICF related plasmas	Pascal Loiseau (CEA)
15:30	**Break**	
16:00	**Round Table on Partner Consortium** -Concept of Partner Consortium -Building a Science Case for IFE-RI -Laser Technologies: **DESY**: Cryogenic Yb-Lasers for Fusion - *Franz Kärtner* **Marvel Fusion**: Efficient, high peak-power, short pulse lasers: a universal platform for fusion applications **-** *Georg Korn, Hartmut Ruhl* **STFC UKRI**: The CLF’s DiPOLE architecture: a high energy, high average power concept towards an IFE laser driver - *Thomas Butcher* **Amplitude**: Petawatt-class and Kilojoule-class laser solutions for IFE-RI at EuXFEL - *Pierre Mary Paul, Antoine Courjaud*	Discussion Leaders: Tom Cowan, Dominik Kraus
18:00	Wrap-up, next steps and closing words	Dominik Kraus (Uni Rostock) & Ulf Zastrau (EuXFEL) Tom Cowan (HZDR) Sakura Pascarelli (EuXFEL)
18:30	**Dinner at BeamStop**	