

HED at FAIR Annual Meeting

Final version

Wednesday, October 3rd *(Edificio Politécnico, Salón de Grados)*

8:45–9:15 Registration

9:15–9:30 Welcome address (R. Piriz)

9:30–11:00 Introduction Session – Chair: V. Bagnoud

- **International project of the Facility for Antiproton and Ion Research in Europe (FAIR) (25' + 5')**
 - Alexander Golubev, ITEP , NRC “Kurchatov institute”, Russia
 - **Experimental facilities for HED and WDM experiments at FAIR (25' + 5')**
 - Stephan Neff, GSI/FAIR, Germany
 - **Plasma physics experiments with intense heavy-ion beams in the near future? (25' + 5')**
 - Paul Neumayer, GSI, Germany
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11:00–11:30

Coffee Break

11:30–13:30 Science at HED facilities – Chair: A. R. Piriz

- **Planetary Physics Research Program at the facility for Antiprotons and Ion Research at Darmstadt (25' + 5')**
 - Naeem Ahmad Tahir, GSI, Germany
 - **Intense, pulsed ion beams for high energy density science and materials research (25' + 5')**
 - Thomas Schenkel, Lawrence Berkeley National Laboratory, USA
 - **Heavy ion beam – plasma interaction research at IMP (25' + 5')**
 - Rui, Cheng, Institute of Modern Physics, China
 - **ITEP's activity at HED@FAIR collaboration (25' + 5')**
 - Alexey Kantsyrev, ITEP, Russia
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13:30–15:00

Lunch Break

15:00–17:10 PRIOR – Chair: D. Varentsov

- **The PRIOR facility (25' + 5')**
 - Karin Weyrich, GSI, Germany
- **Development of ion-optical schemes of proton microscopes (15' + 5')**
 - A. V. Bogdanov, ITEP , NRC “Kurchatov institute”, Russia
- **The full-scale Monte-Carlo simulation of experiments at PRIOR-II (15' + 5')**
 - A. V. Skobliakov, ITEP , NRC “Kurchatov institute”, Russia
- **Reconstruction of a proton radiography images (15' + 5')**
 - D. S. Kolesnikov, ITEP , NRC “Kurchatov institute”, Russia
- **Tomographic reconstruction at proton radiography (15'+5')**
 - V. A. Panyushkin, ITEP , NRC “Kurchatov institute”, Russia

- **Shock treatment of tungsten carbide-calculation, EoS measurements and recovered samples (15'+5')**
 - Thomas Schlothauer, TU Bergakademie Freiberg, Germany

17:10–17:45

Coffee break

17:45–19:15 Technical Infrastructure Phase – Chair: P. Neumayer

- **Target Chamber for Plasma Physics Experiments at FAIR (25' + 5')**
 - Andreas Tauschwitz, GSI, Germany
- **ChASSIS - Data Acquisition and Control System for HHT and HED@FAIR Experiments (25' + 5')**
 - Dmitry Varentsov, GSI, Germany
- **A High-Energy Laser Beamline – from PHELIX to the HHT-cave at GSI (25' + 5')**
 - Zsuzsanna Major, GSI, Germany

21:00–23:00

Dinner (*Hotel Doña Carlota*)

Thursday, October 4th *(Edificio Politécnico)*

9:00–11:05 HIHEX Diagnostics – Chair: K. Schoenberg

- **Conductivity and Reflectivity Measurements at High Dynamic Pressures (20' + 5')**
 - Victor Mintsev, IPCP RAS, Russia
- **Application of X-ray Imaging Techniques for HIHEX Experiments (20' + 5')**
 - Olga Rosmej, GSI, Germany
- **HED experiments at SIS-18: the review of setups and diagnostics (20' + 5')**
 - Dmitry Nikolaev, IPCP Russia, Germany
- **Progress towards first day experiment diagnostics at FAIR (20' + 5')**
 - Markus Roth, TU Darmstadt, Germany
- **Optical diagnostics in shock wave and WDM experiments (20' + 5')**
 - Konstantin Gubskiy, National Research Nuclear University MEPhI, Russia

11:05–11:30

Coffee Break

11:30–13:00 Plasma Physics Research at other facilities – Chair: A. Golubev

- **The future for laser-driven x-ray sources in material structure determination (25' + 5')**
 - Andrew Higginbotham, University of York, UK
- **From solids to warm dense matter: modeling nonequilibrium kinetics in matter irradiated with x-rays or ions (25' + 5')**
 - Nikita Medvedev, Institute of Physics, Czech Academy of Sciences, Czech Republic
- **High energy electrons in the interaction of relativistic laser pulses with near critical plasma (25' + 5')**
 - Nikolay Andreev, JIHT RAS, Russia

13:00–15:00

Lunch Break

15:00–16:00 Panel discussion on Diagnostics – Chair: O. Rosmej

16:00–18:00 Poster session *(Instituto de Investigaciones Energéticas-INEI)*

18:00 Transfer to Almagro town and Conference Dinner

Friday, October 5th *(Edificio Politécnico)*

9:00–10:15 Theory, modelling and simulation – Chair: N. A. Tahir

- ***Suppression threshold for the Rayleigh-Taylor instability in accelerated elastic-solid slabs (20' + 5')***
 - Sofía Piriz, Universidad Castilla La Mancha, Spain
- ***Richtmyer-Meshkov Instability: comparison between Linear Theory, Hydrodynamic Simulations and Vortex Sheet Model (20' + 5')***
 - Francisco Cobos-Campos, Universidad Castilla La Mancha, Spain
- ***Stopping and transportation of ion beam in plasma (20' + 5')***
 - Jieru Ren, Xi'an Jiaotong University, China

10:15–10:45

Coffee Break

10:45–12:00 Laser Plasma Interactions – Chair: N. Andreev

- ***Density jump as a function of magnetic field strength for parallel collisionless shocks in pair plasmas (20' + 5')***
 - Antoine Bret, Universidad Castilla La Mancha, Spain
- ***Time and space-resolved thermometry using neutron resonance spectroscopy: requirements and prospects for laser-driven neutron sources (20' + 5')***
 - Juan Fernandez, Los Alamos National Laboratory, USA
- ***Particle-in-cell simulations of intense laser-solid interactions (20' + 5')***
 - Dong Wu, Shanghai Institute of Optics and Fine Mechanics, China

12.00-12.30 Conclusion and Remarks

12:30-13:30 Business Meeting