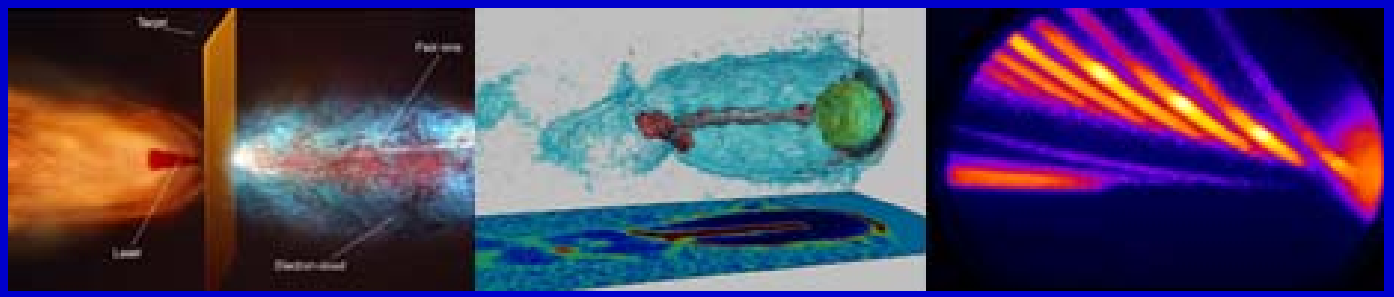
ExtreMe Matter Institute EMMI

High energy density plasma diagnostic at FAIR:
Novel laser based photon and particle sources



GSI Darmstadt, Germany

September 30 – October 2, 2013

WELCOME!

Novel laser based photon and particle sources at FAIR:

80 Participants from 23 Research Centres and 6 Countries

30 Young scientists

Novel laser based photon and particle sources at FAIR

At the Facility for Antiproton and Ion Research (FAIR), the HEDM-states will be created by intense heavy ion beams, which are capable to heat large-volume targets of any element uniformly and quasi-isochorically.

A macroscopic size (1mm^3) of WDM- samples of high Z elements defines the requirements on the laser produced sources of photons and particles used for diagnostics:

- Radiation sources with photon energies above 1 MeV
- Electron beams with energies above 20 MeV
- Proton beams with energies above 50 - 100 MeV
- Highly brilliant pulsed neutron beam sources
- Detectors for high fluxes of energetic photons and particles

High energy density plasma diagnostic at FAIR: Novel laser based photon and particle sources

09.20 – 9.40 **Opening: Olga Rosmej, Boris Sharkov** *GSI and FAIR Darmstadt (BofA 42)*
FAIR and prospects of High Energy Density Physics

09.40 – 11.10 **Plasma Physics with Intense Heavy Ion and Laser Beams at FAIR**

09.40 – 10.10 **Dmitry Varentsov** *GSI Darmstadt (BofA 46 /Book of Abstracts page 46)*
High energy density experiments with intense heavy ion and proton beams at FAIR.

10.10 – 10.40 **Vincent Bagnoud** *GSI Darmstadt (BofA 7)*
Status of the Helmholtz Beamline at FAIR and PHELIX-laser.

10.40 – 11.10 **Thomas Kühl** *GSI Darmstadt (BofA 29)*
X-ray laser for FAIR.

Coffee Break (1): 11.10 – 11.30