

2nd EMMI Workshop on Plasma Physics with Intense Laser and Heavy Ion Beams, 14-15 May 2009, Moscow, Russia

Program: Thursday, 14 May 2009

Presidium of the Russian Academy of Sciences, Leninskiy Avenue 32a, Beige Hall

9⁰⁰ – 9¹⁵

Registration

9¹⁵ – 9³⁰

Welcome by Vladimir E. Fortov, Director of JIHT RAS, Moscow
Introductory remarks to the workshop by Thomas Stöhlker, GSI, Darmstadt

Session 1. Fundamental processes under the action of intense laser and ion beams
Chairman Vladimir E. Fortov / JIHT RAS

9³⁰ – 10⁰⁰

Thomas Stöhlker / GSI

Overview of plasma physics and atomic physics activities at GSI

10⁰⁰ – 10³⁰

Vladimir S. Filinov / JIHT RAS

EOS of strongly coupled quark-gluon plasma. Path-integral Monte Carlo simulations

10³⁰ – 11⁰⁰

Konstantin V. Khishchenko / JIHT RAS

Investigation of equations of state and phase transitions of substances at high energy densities with PHELIX

11⁰⁰ – 11³⁰

Nikolay E. Andreev / JIHT RAS

Secondary sources generated by short intense laser pulses: high energy particles and radiation

11³⁰ – 11⁴⁵

Coffee break

Session 2. Current scientific programs at EMMI, JIHT and GSI
Chairman Thomas Stöhlker / GSI

11⁴⁵ – 12¹⁵

Vincent Bagnoud / GSI

Current performance of the PHELIX facility and experimental outlook for 2009-2010

12¹⁵ – 12²⁵

Andreas Tauschwitz / GSI

Beam time situation at GSI

12²⁵ – 12⁴⁵

Anna Tauschwitz / EMMI, Frankfurt University

Hydrodynamic simulations for plasma physics experiments at GSI

12⁴⁵ – 13¹⁵

Dmitriy S. Sitnikov / JIHT RAS

Strength properties of matter under ultrafast-rate loading conditions: Investigation of the dynamics of rear side spallation in metallic foils by PHELIX

13¹⁵ – 14³⁰

Lunch

Session 3. Current scientific programs at JIHT, ITEP and GSI
Chairman Mikhail B. Agranat / JIHT RAS

14³⁰ – 15⁰⁰

Igor K. Krasnyuk / GPI, JIHT RAS

Determination of the shock-wave characteristics by temperature measurements of dense plasma in unloading wave

15⁰⁰ – 15³⁰

Boris Sharkov / ITEP

ITEP activities in physics of intense ion and laser beams

15³⁰ – 16⁰⁰

Olga Rosmej / GSI

Experiments with nanostructures irradiated by nanosecond and femtosecond laser pulses at PHELIX

16⁰⁰ – 16³⁰

Igor Yu. Skobelev / JIHT RAS

Investigation of warm dense plasma with PHELIX

16³⁰ – 16⁴⁵

Coffee Break

Session 4. Current scientific programs at JIHT and EMMI

Chairman Oleg F. Kostenko / JIHT RAS

16⁴⁵ – 17¹⁵

Paul Neumayer / EMMI, GSI

X-ray diagnostics of laser produced warm-dense plasmas

17¹⁵ – 17⁴⁵

Nikolay Yu. Orlov / JIHT RAS

Investigation of gas dynamics, photon transport processes, equation of state and radiative opacity of substances at high energy densities for PHELIX experiments

17⁴⁵ – 18¹⁵

Igor Yu. Skobelev / JIHT RAS

Investigation of fast ions generated in laser-produced plasma heated by PHELIX and their interaction with solids and aerogel targets

Program: Friday, 15 May 2009

Joint Institute for High Temperatures RAS, Krasnokazarmennaya Street 17a

10⁰⁰ – 11⁰⁰

Laboratory Visit: Laser Centre of JIHT RAS

Session 5. Fundamental processes under the action of intense laser and ion beams

Chairman Olga Rosmej / GSI

11⁰⁰ – 11³⁰

Igor L. Iosilevskiy / JIHT RAS

HIB heating of porous samples for study of HED matter thermophysics

11³⁰ – 12⁰⁰

Nataliya G. Borisenko / LPI RAS

Target aspects in plasma experiments with laser and heavy ion beams

12⁰⁰ – 12³⁰

David B. Blaschke / JINR, Dubna

Experimental test of pair production in subcritical high intensity laser fields

12³⁰ – 13⁰⁰

Karen Z. Hatsagortsyan / Max-Planck Institute, Heidelberg, Germany

Laser driven collider and laser induced vacuum polarization effects

13⁰⁰ – 14²⁰

Lunch

Session 6. Current activities in intense laser and ion beams interaction with matter

Chairman Igor Yu. Skobelev / JIHT

14²⁰ – 14⁴⁰

Oleg F. Kostenko / JIHT RAS

Generation of X-rays and fast particles under the action of intense laser pulses upon the nanostructures

14⁴⁰ – 15⁰⁰

Evgeny D. Kazakov / Kurcharov Research Center

The results of first experiments on PHELIX laser beam interaction with nanostructure targets

15⁰⁰ – 15²⁰

Mikhail E. Povarnitsyn / JIHT RAS

Multiphase code development for the simulation of PHELIX experiments

15²⁰ – 15⁴⁰

Yury V. Petrov / ITP RAS

Femtosecond ablation: theory and experiment

15⁴⁰ – 15⁵⁰

Coffee Break

15⁵⁰ – 16⁵⁰

Round table discussion of the experimental proposals applied by the JIHT RAS in the frame of the EMMI-collaboration

Chairmen Nikolay E. Andreev / JIHT RAS, Vincent Bagnoud / GSI

16⁵⁰

Concluding Remarks