December 09, 2014

09:30
WELCOME:
V. Fortov, Th. Stöhlker, D. Hoffmann

15 min=12+3; 20 min=17+3; 25 min=21+4

10:00 - 11:35
SECTION 1.
FUNDAMENTALS OF HEAVY-ION AND LASER INTERACTION WITH PLASMA:
STATUS OF HIGH ENERGY DENSITY RESEARCH

1. **25 min** Stoehlker Th. APPA at FAIR
2. **25 min** Hoffmann D. High energy density physics with intense ion- and laser beams at GSI and FAIR in Darmstadt
3. **25 min** Mintsev V.B. HED physics and proton radiography of non-ideal plasmas
4. **20 min** Neff S. Plasma physics at FAIR – status

coffee break 11:35 - 12:00

12:00 - 13:20
SECTION 2.
DAY ONE EXPERIMENTS WITH FIRST HEAVY ION BEAM PARAMETERS AT FAIR 2018-2022:
FUNDAMENTAL PHYSICS OF EXTREME STATES OF MATTER
AND DIAGNOSTICS OF RELEVANT PROCESSES

5. **20 min** Lomonosov I.V. Numerical modeling FAIR one day experiments
6. **20 min** Iosilevskiy I.L., Gryaznov V.K. Problem of high-temperature phase diagram and critical point parameters in silica as perspective material for experiment-1 at FAIR
7. **20 min** Ternovoi V.Ya. Study of near-critical states of refractory materials by intense heavy ion beams
8. **20 min** Nikolaev D.N., Ternovoi V.Ya. Proton radiographic studies of phase transitions in compressed planetary liquids

lunch break 13:20 - 15:00

15:00 - 16:40
SECTION 3.
PLASMA PHYSICS EXPERIMENTAL AREA:
REVIEW OF TECHNICAL DESIGN REPORTS and DIAGNOSTICS of HEDI

9. **20 min** Koresheva E.R., Aleksandrova I.V., Nikitenko A.I., Timasheva T.P., Tolokonnikov S.M. Cryogenic targets for the LAPLAS experiments: fabrication, manipulation and survival study
10. **20 min** Borisenko N.G. Structured targets fabrication
11. **20 min** Kuehl T.K. High field physics possibilities at the HESR
12. **20 min** Rienecker T. Target chamber design for HED-experiments with heavy ion and laser beams
13. **20 min** Shilkin N.S. Debris protection of vacuum target chamber for plasma experiments at FAIR

coffee break 16:40 - 17:10

17:10 - 18:25

14. **20 min** Gubskiy K, Kuznetsov A., Koshkin D. VISAR system

15. **20 min** Sitnikov A.L., Kulevoy T.V., Golubev A.A. The rf system for hollow heavy ions beam formation

16. **20 min** Kantsyrev A.V., Golubev A.A., Bakhmutova A.V., Bogdanov, A.V., Panyushkin V.A., Skachkov Vl.S., Markov N.V., Semennikov A.I., Varentsov D.V., Rodionova M.E., Shestov, L.M., Weyrich K., Lang P., Udrea S., Zubareva A.N., Mariam F., Marrill F., Wilde C., Krasik Y., Efimov S., Antonov O. PRIOR proton microscope (development and commissioning)

17. **15 min** Endres M., Udrea S., Hoffmann D.H.H. A light gas driver for matter properties studies at FAIR

19:00

DISCUSSIONS OF THE CONCLUDING REMARKS AND RECOMMENDATIONS

==========

December 10, 2014

10:00 - 11:50
SECTION 1.
FUNDAMENTALS OF HEAVY-ION AND LASER INTERACTION WITH PLASMA:
STATUS OF HIGH ENERGY DENSITY RESEARCH

18. **20 min** Sharkov B. FAIR

19. **20 min** Bagnoud V. Current plans for high-energy laser instrumentations at FAIR

20. **20 min** Khishchenko K.V. Study of phase transitions in substances under intense heavy ion and laser influences

21. **15 min** Zhilyaev V.V., Stegailov V.V. Pressure in metals with hot electrons

22. **20 min** Norman G.E., Saitov I.M., Stegailov V.V. Plasma phase transition in the warm dense hydrogen

23. **15 min** Saitov I.M. Reflectivity, plasma frequency and conductivity of warm dense matter

coffee break 11:50 12:20

12:20 - 13:35
SECTION 4.
PHYSICS of JOINT FAIR RELEVANT EXPERIMENTS 2015-2018 AT THE PHELIX-LASER, GSI

24. **20 min** Wagner F.W. Status of the PHEDLIX facility and recent developments on temporal contrast control

25. **20 min** Rosmej O.N. Russian contribution into FAIR-relevant laser experiments

26. **15 min** Andreev N.E. Theoretical support of laser experiments

27. **20 min** Povarnitsyn M.E. Wide-range models for hydrodynamic simulation of laser experiments: current status and perspectives

lunch break 13:35 - 15:00

15:00 - 16:25
SECTION 4.
PHYSICS of JOINT FAIR RELEVANT EXPERIMENTS 2015-2018 AT THE PHELIX-LASER, GSI

28. **20 min** Savel'ev A., Ivanov K., Shulyapov S., Tsymbalov I., Ksenofontov, P., Brantov A., Bychenkov V. Pre pulse controlled electron acceleration from tenuous plasma by relativistic laser pulse

29. **15 min** Knyazev D.V., Levashov P.R. Thermodynamic, transport and optical properties of plastics, used for the contrast improvement of intense laser pulses

30. **20 min** Neumayer P. X-ray Radiography of Warm Dense Matter

31. **15 min** Faenov A., Pikuz T., Fukuda Y., Colgan J., Abdallah J., Oks, E., Dalimier E., Kotaki H., Pirozhkov A., Hayashi Y., Sko belev I., Pikuz S., Kawachi T., Kando M., Kondo K., Kodama R. High-resolution x-ray spectromicroscopy diagnostics of plasma produced by high contrast femtosecond laser pulse irradiation of submicron clusters

32. **15 min** Kostenko O.F. Generation of K_α x-rays in the interaction of femtosecond laser pulses with the nanostructures

coffee break 16:25 - 16:50

16:50 - 17:45

33. **20 min** Orlov N.Yu., Denisov O.B., Vergunova G.A., Rosmej O.N. Theoretical and experimental studies of radiative and gas dynamic properties of substances at high energy density in matter

34. **20 min** Chashechkin A.Yu. Agreed mathematical and laboratory modeling of matter and energy transport in heterogeneous media

35. **15 min** Krasyuk I.K., Semenov A.Yu., Stuchebryukhov I.A., Belikov R.S., Khishchenko K.V., Rosmej O., Riencker T., Tomut M. Study the dynamic tensile strength of graphite in stress produced by nanosecond and picosecond laser actions

17:45 - 18:05
DISCUSSION, CONCLUDING REMARKS AND RECOMMENDATIONS

18:05 - 18:15
Information on Springer publishing house

==========

POSTER SESSION: 09 - 10 DECEMBER (WHOLE TWO DAYS)

36. Martynova I.A., Iosilevskiy I.L. Dusty and colloidal plasmas. phase diagrams and additional splittings of melting curves

37. Pikuz T.A., Faenov A.Ya., Matsuoka T., Ozaki N., Inubashi Y., Yabashi M., Sato Y., Yumoto H., Ohashi H., Matsuyama S., Yamauchi K., Ishikawa T., Grum-Grzhimailo A., Pikuz S.A., Kodama R. Using LiF crystals for 3D visualization of SACLA XFEL beam focusing properties

38. Stroev N.E., Iosilevskiy I.L. The research of non-congruent phase transition properties in coulomb systems based on the model of the binary ionic mixture

39. Inogamov N.A., Zhakhovsky V.V., Anisimov S.I., Agranat M.B., Ashitkov S.I., Faenov A.Y., Pikuz T.A., Khokhlov V.A.,Petrov Y.V., Ilnitsky D.K., Shepelev V.V., Hasegawa N., Nishikino M., Yamagiwa M., Ishino M., Takayoshi S., Tomita T., Kawachi T. Femtosecond laser ablation: three-dimensional effects

40. Pisarev V.V., Starikov S.V. A two-temperature model for atomistic simulations of laser ablation and ion tracks

41. Korneev Ph., Tikhonchuk V., D'Humifieres E. Laser-assisted generation of giga-gauss scale quasistatic magnetic field

42. Medin S.A., Basko M.M., Orlov Yu.N., Suslin V.M. Target explosion and reactor chamber response for fast ignition heavy ion fusion

43. Pinchuk M.E., Bogomaz A.A., Budin A.V., Rutberg Ph.G. High current discharge in high density gas

44. Konyukhov A.V., Likhachev A.P. Numerical analysis of anomalous wave processes at quark-hadron phase transition

45. Veysman M.E., Reinholz H., Roepke G., Wierling A., Winkel M. Optical properties of hot aluminum plasmas in wide frequency range

46. Rykovanov S.G., Seipt D., Geddes C.G.R., Schroeder C.B., Esarey E., Leemans W.P. Controlling the spectral shape of nonlinear Thomson scattering with proper laser chirping

47. Rozanov V.B., Vergunova G.A. 1D model for indirect target compression under conditions close to the NIF laser facility

48. Zubareva A.N., Utkin A.V., Mochalova V.M., Lapin S.M. Experimental investigation of material properties in shock waves loading by light gas gun

49. Efremov V.P., Frolov A.A., Fortov V.E. Hydrodynamic motion in quartz optical fiber under intense laser action