

36th International Workshop on High Energy Density Physics with Intense Ion and Laser Beams

January 31 - February 5, 2016

Waldemar-Petersen-Haus, Hirschegg, Austria



Program

Monday, 2016.02.01

Chair: J.J. Honrubia			
09:00	J.J. Honrubia	(10 min)	Opening
09:10	B. Sharkov	(20+5 min)	FAIR
09:35	P. Spiller	(25+5 min)	Status of SIS 18 upgrade and Beam Intensities
10:05	S. Glenzer	(20+5 min)	High Energy Density science with an ultra-bright x-ray laser
10:30–11:00			Coffee break
Chair: J. Meyer-ter-Vehn			
11:00	B. Canaud	(20+5 min)	Direct-drive fusion on LMJ: status and prospect
11:25	B. G. Logan	(20+5 min)	Closing NIF's "Ignition Gap" with applied Bz
11:50	K. Mima	(20+5 min)	Ion acceleration with kJ picosecond laser LFEX
12:15–17:00			Lunch break
Chair: P. Mulser			
17:00	A. Pukhov	(20+5 min)	Laser absorption in plasmas: from nano-targets to near-QED regime
17:25	B. Liu	(20+5 min)	All-optical synchrotron-like X/gamma-ray radiation in near critical density plasma
17:50	A. Savel'ev	(15+5 min)	Electron acceleration control under relativistic laser-plasma interaction with tailored targets
18:10	B. Afeyan	(15+5 min)	The prospects of Controlling Nonlinear Optical Processes in High Energy Density Plasmas Using Spike Trains of Uneven Duration and Delay (STUD Pulses)
18:30	L. Yi	(15+5 min)	Bright X-ray source from a laser-driven micro-plasma-waveguide
18:50	V. Kharin	(15+5 min)	Temporal laser pulse shape effects in nonlinear Thomson scattering
19:10	Dinner		

Tuesday, 2016.02.02

Chair: K. Mima			
08:30	S. Neff	(20+5 min)	Experimental facilities for plasma physics experiments at FAIR
08:55	V. Bagnoud	(20+5 min)	Current status and upgrades of the PHELIX facility
09:20	N. A. Tahir	(15+5 min)	Challenges of the Future Circular Collider at CERN
09:40	I. Hofmann	(15+5 min)	Germany's way out of the nuclear age
10:00–10:30			Coffee break
Chair: G. Logan			
10:30	M. Murakami	(20+5 min)	Neutron Production via Coulomb Explosion using Nanotubes and Spherical Clusters
10:55	B. Dromey	(15+5 min)	Temporal characterization of picosecond bursts of laser-driven ions in SiO ₂
11:15	V. Pauw	(15+5 min)	PIC Simulations of Proton Acceleration of Mass Limited Targets in 2D and 3D plasmas(H,He,Ar,N ₂ ,Xe)
11:35	C. Deutsch	(15+5 min)	PW-Laser produced protons stopped in WDM
11:55	A. Ulrich	(15+5 min)	Optical beam diagnostics for intense ion beams. Concept for a BMBF project
12:15–17:00			Lunch break
Chair: B. Canaud			
17:00	A.R. Piriz	(20+5 min)	Hydrodynamic growth and decay of planar shock waves
17:25	J. Helfrich	(15+5 min)	Phase change of Carbon between 100-200 GPa in the warm dense matter regime
17:45	A. Debayle	(15+5 min)	Modeling crossed-beam energy transfer for radiative hydrodynamic codes
18:05	S. Bouquet	(15+5 min)	New Results on the Vishniac Instability in Astrophysics and Laboratory Astrophysics
18:25	F. Cobos	(15+5 min)	Richtmyer-Meshkov like flows: analytical expressions of the asymptotic velocities in different physical limits
18:45	Y. Sun	(15+5 min)	Rayleigh-Taylor instability in solid plates at the early stage of acceleration
19:05			Dinner
20:15			HEDgeHOB Meeting

Wednesday, 2016.02.03

Chair: N. Tahir			
08:30	J.C. Fernandez	(20+5 min)	Demonstration & Application of Laser – Driven Ion Beams with Narrow-Energy Spread
08:55	M. Roth	(20+5 min)	Isochoric heating of compressed matter and the progress of proton fast ignition
09:20	A. Kleinschmidt	(20+5 min)	Maximum proton energy above 85 MeV from the relativistic interaction of laser pulses with micrometer thick CH ₂ targets (F. Wagner) and Moderation of neutrons generated by a laser-driven neutron source (A. Kleinschmidt)
09:45	P. Sperling	(20+5 min)	Free-electron x-ray laser measurements in isochorically heated warm dense matter
10:10–10:30			Coffee break
Chair: C. Deutsch			
10:30	P. Mulser	(15+5 min)	Landau damping for pedestrians: the physics behind
10:50	M.E. Dieckmann	(15+5 min)	A thin-shell instability in collisionless plasma
11:10	A. Bret	(15+5 min)	Theory of the formation of a collisionless shock
11:30	M. Veysman	(15+5 min)	Reflectivity of dense plasmas in wide frequency range
11:50	F. García-Rubio	(15+5 min)	Plasma Expansion into Vacuum with an Arbitrarily Oriented External Magnetic Field
12:10	P. Bischoff	(15+5 min)	Generalized ponderomotive force from Poincaré-Cartan invariant
12:30–16:00			Lunch break
16:00-16:30		Conference Business Meeting	
16:00–17:45		Poster session	
20:00			Conference dinner at Hotel Birkenhöhe

Thursday, 2016.02.04

Chair: A.R. Piriz			
08:30	J. Thomas	(15+5 min)	Theory of electron acceleration in tailored plasmas
08:50	C. Roedel	(15+5 min)	Weibel instabilities in relativistic laser plasma interactions in solid-density hydrogen jets
09:10	P. Thanh Luu	(15+5 min)	Electron acceleration in periodic structures
09:30	D. Jahn	(15+5 min)	Generation of intense sub-nanosecond proton bunches with the laser-driven LIGHT beamline
09:50	Y. Maron	(15+5 min)	Zeeman Effect Induced by Intense Laser Light
10:10–10:30			Coffee break
Chair: K. Schönberg			
10:30	J. Meyer-ter-Vehn	(15+5 min)	On Coulomb scattering in plasma. Request for high-precision ion beam stopping experiments.
10:50	W.A. Cayzac	(15+5 min)	Energy loss of light ions at the maximum of the stopping power in a laser-generated plasma
11:10	B. Rethfeld	(15+5 min)	Time-resolved modeling of ultrafast laser-excited semiconductors and dielectrics
11:30	K. Khishchenko	(15+5 min)	Multiphase equation of state for silica at high energy densities
11:50	N. Medvedev	(15+5 min)	Tracing thermal and non-thermal phase transitions in solids with pump-probe scheme
12:10–17:00			Lunch break
Chair: Y. Maron			
17:00	I. Iosilevskiy	(20+5 min)	Peculiarities of retrograde adiabatic WDM expansion via non-congruent phase transition area
17:25	A. Schönlein	(15+5 min)	Generation and characterization of Warm Dense Matter isochorically heated by laser-induced relativistic electrons in a wire target
17:45	D. Casas	(15+5 min)	Laser-accelerated protons for Warm Dense Matter studies
18:05	C.V. Meister	(15+5 min)	Structure factors in Warm Dense Matter and their influence on transport coefficients
18:25	V. Kaymak	(15+5 min)	Strong Pinch Generation in Nanowires
18:45	M. Goughlan	(15+5 min)	Observing interactions of Laser-driven Ion bursts with crystals and glasses.
19:05			Dinner
21:00			Young Scientist Award

Friday, 2016.02.05

Chair: I. Iosilevskiy			
08:30	V. Efremov	(20+5 min)	Evolution of damages in silicon dioxide under intense laser action
08:55	M. Taylor	(15+5 min)	Ultrafast laser driven proton damage in condensed matter
09:15	R. Baggott	(15+5 min)	Modifications of Bound States in Dense Plasmas
09:35	C. Lin	(15+5 min)	Quantum master equation approach for spectral line profiles in a plasma
10:55–10:10			Coffee break
Chair: S. Bouquet			
10:10	S. Rykovanov	(15+5 min)	Towards Compact Compton Sources
10:30	D. Seipt	(15+5 min)	Laser-assisted x-ray Compton scattering
11:50	S. Kuschel	(15+5 min)	Background-free ionization injection in LWFA
11:10	D. Hollatz	(15+5 min)	Passive plasma lensing of LWFA electrons
11:30	G. Marrero	(15+5 min)	A Single Beam Optical Levitation Trap for Liquid, Micron-Sized Droplets
11:50	S. Tietze	(15+5 min)	Generating isolated XUV pulses from surface harmonics using few-cycle carrier envelope phase controlled laser pulses
12:10	Concluding remarks		

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Poster Session

01	Afeyan, Bedros	Kinetic electrostatic electron nonlinear (KEEN) waves and their interactions in Vlasov Plasmas including pair plasma KEEPn waves
02	Andreev, Nikolay	Secondary sources of high energy particles and X-rays in the laser-matter interactions
03	Barriga-Carrasco, Manuel	Calculations on charge state and energy loss of argon ions in carbon plasmas
04	Bogdanov, Anton	Numerical simulation of 247 MeV proton microscope
05	Coughlan, Mark	Dynamics of Lithium Niobate irradiated by ultrafast Proton pulses
06	Debayle, Arnaud	Self-consistent model of high order harmonic generation by plasma mirror
07	Donnelly, Hannah	High Harmonic Generation from Solid Targets
08	Ehret, Michael	Proton beam transport in intense magnetic fields in fusion plasmas
09	Faik, Steffen	New laser energy deposition algorithm for the radiation hydrodynamics code RALEF-2D
10	Ruhl, Helmut	Photon-photon interaction below the Schwinger field
11	Herzing, Christian	Radiative Molecular Dynamics Simulations
12	Hilbert, Vinzenz	Ultrafast electron kinetics in short pulse laser-driven dense hydrogen
13	Lei, Bifeng	Betatron x-ray source from laser-plasma interaction
14	Panyushkin, Vsevolod	Remagnetization of PMQ lenses for PRIOR and PUMA facilities
15	Rosmej, Olga	WDM created by laser interaction with mass limited and structured targets
16	Rosmej, Sebastian	Transport phenomena in warm dense matter including T matrix effects
17	Schanz, Victor	Third Order Autocorrelator for Temporal Contrast Measurement at Laser system PHELIX
18	Shutko, Yulia	Beam Induced Fluorescence (BIF) monitor development

19	Stroev, Nikita	The research of noncongruent phase transitions in Coulomb systems based on the modified model of the binary ionic mixture
20	Sugita, Kei	Alternative High Field sc Magnets for a Final Focusing System with Large Aperture High Gradient Quadrupoles
21	Weih, Simon	Pepperpot emittance measurements for LIGHT beam characterization
22	Wünsche, Martin	Development of a long-term operating XUV source from relativistic surface high-harmonic generation
