



www.laserlab-europe.eu

<http://www.pals.cas.cz/>

LASERLAB Users Meeting Research Frontiers for Laserlab-Europe

PALS, Prague, Czech Republic, 29-30 September 2014

Venue

Main building of the Institute of Plasma Physics, Za Slovankou 3, Prague 8

Local Organizing Committee

Co-chairs: Oldrich Renner, Committee of User Representatives, ASCR Institute of Physics & ELI-Beamlines, Prague, CR
Jiri Ullschmied, ASCR Institute of Plasma Physics & PALS Facility, Prague, CR

Technical support: Alena Hanzlová (accommodation, catering), Martina Toufarová (registration, master database)

Draft programme

Monday 29/09

- 9:00 –9:30 Registration
- 9:30 –9:40 Opening addresses (Petr Krenek, director of IPP, and Karel Jungwirth, PALS Facility)

Session 1: Keynote presentations: ELI Beamlines and ICF Shock Ignition (Chair Oldrich Renner)

- 9:40 - 10:20 ELI Beamlines Status and Perspectives
Bedrich Rus, IoP & ELI Beamlines, Prague, Czech Republic
- 10:20 - 11:00 Investigation of laser-target coupling in the intensity regime relevant to shock ignition (PALS),
Petra Köster, INO Pisa, Italy

11:00 – 11:15 coffee break

Session 2: Laser and instrumentation development (Chair Istvan Foeldes)

- 11:15 - 11:35 Fiber-seeded, 10-ps, 2050-nm, multi-mJ, cryogenic Ho:YLF CPA (ICFO),
Vaclav Kubecek, CTU Prague, Czech Republic
- 11:35 - 11:55 13-TW-E3 magnetic field induction via Biermann battery effect for laboratory cluster blast wave (LULI),
Alberto Marocchino, Universita di Roma la Sapienza, Italy
- 11:55 - 12:15 THG of ZnO nanorods for efficient third order interferometric FROG (MBI),
Enda McGlynn, Dublin City University, Dublin, Ireland
- 12:15 - 12:20 Refraction compensation in a two-stage seed-amplifier XRL (GSI)
Swen Künzel, Instituto Superior Técnico, Lisboa, Portugal

12:20 – 14:15 lunch at Ladvi restaurant

Session 3: Ultraintense laser-induced phenomena (Chair Karel Rohlena)

- 14:15 – 14:35 Polarisation gating of harmonic emission from relativistically oscillating plasmas (HIJ),
Brendan Dromey, Queens University, Belfast, UK
- 14:35 – 14:55 Inverse-Compton Scattering (ICS) from LWFA Electrons: A preview of the next intensity frontier (CLF),
Christopher Murphy, University of York, York, UK
- 14:55 – 15:15 Photoluminescence dynamics in silicon quantum pillars (LLC),
Seref Kalem, TUBITAK-BILGEM, Kocaeli, Turkey
- 15:15 – 15:35 Surface wave excitation on grating targets at SLIC (SLIC),
Andrea Sgattoni, Politecnico di Milano, Milano, Italy

- 15:35 – 15:55 Gamma spectroscopy of short lived nuclear states produced by laser-driven high-energy ion sources (LULI), *Florin Negoita, IFIN-HH, Bucharest-Magurele, Romania*
- 15:55 – 16:15 Recent results on laser-plasma interactions under conditions relevant for shock ignition (PALS) *Piotr Raczka, Institute of Plasma Physics and Laser Microfusion, Warsaw, Poland*

16:15 – 16:30 coffee break

Session 4: Advanced Applications in Material Research (Chair Sandro de Silvestri)

- 16:30 - 16:50 Investigation of graphene as saturable absorber for mode-locking of solid-state bulk lasers (MBI), *Xavier Mateos, University Rovira i Virgili, Tarragona, Spain*
- 16:50 - 17:10 Nano-LIFT assisted fabrication of SERS substrates (LP3), *Kamal Kaur, Centre for Microsystems Technology, Gent, Belgium*
- 17:10 - 17:30 Singular micro-optical elements from direct femtosecond laser photopolymerization (VULRC), *Etienne Brasselet, LOMA, Université de Bordeaux, Talence, France*
- 17:30 - 17:50 Picosecond and sub-picosecond pulsed laser deposition of copper thin films (ULF-FORTH), *Francisco José Gontad Fariña, Dpt of Mathematics and Physics, University of Salento, Lecce, Italy*
- 17:50 - 18:05 Ultrafast laser-induced spin dynamics at the edge of the Brillouin zone in the antiferromagnet KNiF₃ (CUSBO), *Davide Bossini, Radboud Universiteit*

o 18:00-18:30 Visit to the PALS-U facility (TW iodine laser with a synchronized Ti:Sa laser)

18:30 Depart for Brezineves

- 19:00 - 21:30 Working dinner at the Golem restaurant Březineves
Welcome K. Jungwirth, after-dinner talk (HiLASE - PALS spin-off new Laserlab partner T. Mocek)

21:45 Depart from Brezineves

Tuesday 30/09

9:00- 10:25 Roundtable discussion (Chair Jouko Korppi-Tommola)

Introduction: Status of the LLE Access Programme, Didier Normand, CEA, Iramis, Saclay, France

Some topics suggested for discussion:

- What do users expect from LASERLAB IV, if it will get green light ?
- What should be changed/modified for Laserlab IV for the users ?
- What new type of facilities and instrumentation would be of interest for Laserlab IV ?
- Is there any need of training schools ?
- At which level ? (e.g., basic for the people working on biology, specific for high energy physics etc.)
- Is the approach to LASERLAB sections Publicity (National Contact Points etc), Access (how easy is applying), Post-access (feedback to UR, users questionnaires etc) adequate ?
- Gender issues: How women participate as PI and as members of research groups ?
- Do the users know about the existence/role of User Representatives and User Meetings ?
- Are we useful enough for the users ?
- Do you feel that LASERLAB is publicized enough within their own countries, in conferences and scientific events ?

10:25 – 10:40 coffee break

Session 5: Advanced Applications in Material Research II (Chair Karel Jungwirth)

- 10:40 - 11:00 Advanced targets to increase the electric field of on driven acceleration in TNSA regime at PALS (PALS), *Lorenzo Torrisi, Physics Department, Messina University, Messina, Italy*
- 11:00 - 11:20 Frustrated proton transfer in liquid water probed with time resolved VUV photoelectron spectroscopy (CLF), *Christopher Arrell, EPFL SB ISIC LSU CH H1, Lausanne, Switzerland*
- 11:20 - 11:40 Lasers and sustainable energy from bacteria: SERS spectroscopy of biofilms in microbial fuel cells (LLAMS), *Alois Bonifacio, University of Trieste, Trieste, Italy*
- 11:40 - 12:00 Ultrafast Electron Dynamics in Amino Acids Initiated by Attosecond Pulses (CUSBO), *Jason Greenwood, Queen's University, Belfast, UK*

12:00 – 13:15 lunch at Ladvi restaurant

13:30 Depart for Dolni Brezany

o 14:15 – 17:00 Guided tour to the HiLASE Research Centre and
Guided tour to the ELI-Beamlines construction site

17:15 Return to Prague