

Scientific Programme

Mon. 08/06

08:15 - Registration

08:45 - Welcome: **A. Dodaro (Director of the Nuclear Department – ENEA)**

08:55 – Opening: **The Chairs (S. Atzeni, Focused Energy – F. Consoli, ENEA)**

Session A1 – Chair: **S. Atzeni (Focused Energy)**

09:00 – Invited Oral: **R. Betti (Univ. Rochester)**

Hydrodynamically-scaled ignition of DT fuel on the OMEGA laser and pathways to high gains

09:35 – Oral: **W. Cayzac (CEA)**

Polar Direct Drive implosions in the compressive regime on the Laser MegaJoule

09:55 – Oral: **R. Shah (LLE)**

Acceleration Phase Mix Width in Direct Drive

10:15 – Oral: **M. Bailly-Grandvaux (CELIA)**

From proton heating to integrated proton fast ignition experiments on the OMEGA laser facility

10:35 – Coffee Break

Session A2 – Chair: **F. Consoli (ENEA)**

11:05 – Invited Oral: **P. Zhu (SIOM)**

Recent Research Progress in National Laboratory on High Power Laser and Physics

11:40 – Oral: **Y. Gu (SILP)**

Recent Research Progress in Direct-Drive ICF at SILP

12:00 – Oral: **S. Lafitte (CEA)**

The Indirect-Drive ICF program on LMJ

12:20 – Oral: **M. Roth (Focused Energy)**

The new center for IFE in Germany – Biblis

12:40 – Oral: **R. Scott (STFC)**

UPLiFT: Update

13:00 – Lunch

Session A3 – Chair: **J. Honrubia (Focused Energy)**

14:30 – Invited Oral: **O. Rosmej (GSI)**

Ultra-intense sources of MeV particles and radiation using foams irradiated by PW kJ-lasers at near relativistic intensity and large focal spot

15:05 – Oral: **M. Cipriani (ENEA)**

High-power laser irradiation of 3D-printed foams for inertial confinement fusion research

15:25 – Oral: **M. Lunzer (UpNano)**

Adaptive Resolution two-photon polymerization as enabling technology for polymer laser targets in high-energy-density experiments

15:45 – Oral: **F. Mirani (PoliMi)**

Numerical and experimental activities on nanostructured carbon foams for Inertial Confinement Fusion at Politecnico di Milano

16:05 – Coffee BreakSession A3 – Chair: P. Koester (CNR-INO)**16:35 – Oral: A. Bordon (Univ. Las Palmas de Gran Canaria)***Simultaneous measurement of Ar and Kr K-shell emission in double-doped exploding pusher implosions at the OMEGA Laser Facility***16:55 – Oral: X. Xie (SIOM)***Mapping of plasma critical surface with chirped laser pulses***17:15 – Oral: X. Zhao (Univ. York)***Phase and absorption based X-ray imaging of laser-driven shocks – a platform for laser imprint studies***17:35 – Oral: R. C. Saputit (Univ. York)***Characterisation of implosion core and shell conditions using the multi-monochromatic X-ray imager***Tue. 09/06**Session B1 – Chair: R. Scott (STFC)**09:00 – Invited Oral: J.J. Santos (CELIA)***Experimental studies of plasma transport processes in magnetized HED plasmas relevant for ICF***09:35 – Oral: V. Rosciano (Univ. Polit cnica de Madrid)***Hot Electron Transport in Magnetized Targets***09:55 – Oral: M. Lourmande (CEA)***High-gain Direct-Drive inertial confinement fusion of solid fuel target at room temperature***10:15 – Oral: F. Abubaker (INFN-LNS)***Sub-Nanosecond Laser-Driven Proton Acceleration and Proton–Boron Fusion Studies for Advanced Direct-Drive Inertial Fusion Concepts***10:35 – Coffee Break**Session B2 – Chair: R. Betti (Univ. Rochester)**11:05 – Oral: M. Murakami (Univ. Osaka)***Scaling Laws of Multi-Shock Implosions toward the Quasi-Isentropic Limit***11:25 – Oral: S. O’Neill (Univ. York)***Benchmarking non-local models of heat flow in direct drive laser-ablation simulations***11:45 – Oral: P. Moloney (Imperial College London)***Impact of Cross-Beam Energy Transfer and Beam-Mode Asymmetries on OMEGA Direct-Drive Implosion Performance***12:05 – Oral: D. Tank (Univ. York)***Kinetic modelling of non-local preheat in direct-drive ICF using coupled VFP-hydrodynamic simulations***12:25 – Oral: M. Luo (Univ. Oxford)***Resolution-independent machine-learning heat flux closure for ICF plasmas***12:45 – Lunch**Session B3 – Chair: J. J. Santos (CELIA)**14:15 – Invited Oral: P. Koester (CNR-INO)***Experimental studies on laser-plasma coupling in interaction regime relevant to Shock Ignition*

14:50 – Oral: **V. Tikhonchuk (CELIA, Univ. Bordeaux, ELI-Beamlines)**
Stimulated scattering of a spectrally broadened laser beam in inhomogeneous plasma

15:10 – Oral: **F. Wasser (Focused Energy)**
Recent results on laser plasma instabilities with broadband laser pulses at PHELIX

15:30 – Oral: **W. Wang (SIOM)**
Broadband Laser Absorption Study Based on Radiochromic Film Combined with Fiber-Optic Probes at the Low-Coherence Kunwu Laser Facility

15:50 – Coffee Break

Session B4 – Chair: O. Klimo (Czech Technical Univ.)

16:20 – Oral: **C. Simon-Boisson (Thales)**
Laser technology for Taranis IFE project

16:40 – Oral: **Pertot / Golinelli (Amplitude)**
Versatile kJ-class laser based on OPA front-end for inertial fusion research

17:00 – Oral: **L. Manzoni (Univ. Roma La Sapienza, ENEA)**
Laser-Driven Electromagnetic Pulses for the Manipulation of Charged Beams

17:20 – Oral: **B. Grau (Univ. Roma Tor Vergata, ENEA)**
Improved low-noise Electro-Optical probing for transient electromagnetic field measurement emitted in a kilojoule-class laser facility

17:40 – Oral: **A. M. Raso (Univ. Roma Tor Vergata)**
Ion Discrimination Methodology in Laser-Plasma Experiments via Synthetic Time-of-Flight Signal Modeling

Wed. 10/06

Session C1 – Chair: V. Tikhonchuk (CELIA, Univ. Bordeaux, ELI-Beamlines)

09:00 – Invited Oral: **A. Crilly (Imperial College London)**
Automated simulation-based design via multi-fidelity active learning and optimization for laser direct drive implosions

09:35 – Oral: **S. Atzeni (Focused Energy)**
Direct-drive target studies for a Fusion Pilot Plant

09:55 – Oral: **A. Maiolo (CELIA)**
Design of ICF targets for energy production – TARANIS Project

10:15 – Oral: **M. Khan (STFC)**
Target Survival in Inertial Fusion Energy Reactors

10:35 – Coffee Break

Session C2 – Chair: M. Murakami (Univ. Osaka)

11:05 – Oral: **P.-E. Masson-Laborde (CEA)**
Influence of Spectral Bandwidth on the Nonlinear Kinetic Regime of Stimulated Raman Scattering for Spatially Smoothed Laser Beams

11:25 – Oral: **E. Hume (Univ. York)**
Parametric studies of back- and side-scattered light generated by LPI

11:45 – Oral: **R. Capdessus (CEA)**
Kinetic Modeling of Stimulated Brillouin Scattering in Laser-Driven Plasmas: Comparing Single-Species and Multi-Species Collisional Plasmas

12:05 – Oral: **K. L. Nguyen (Focused Energy)**

Mitigation study of laser plasma interactions with broadband lasers at Focused Energy

12:25 – Oral: **C. Ruyer (CEA)**

Advanced Models for Laser-Plasma Interaction in Radiative Hydrodynamic Simulations

12:45 – Lunch

Session C3 – Chair: **O. Rosmej (GSI)**

14:15 – Invited Oral: **L. Hudec (ELI-Beamlines)**

Hydrodynamic simulations of shock propagation in closed-pore hollow-sphere SiO₂ foams

14:50 – Oral: **D. Macelli (CELIA)**

Study of proton stopping power in warm dense matter using low-density foams at the XGIII laser facility

15:10 – Oral: **A. Zurzolo (PoliTo)**

Ion thermalization mechanisms in laser-irradiated low-density foams

15:30 – Oral: **O. Turianska (LULI)**

Laser-driven shock propagation in low-density foam targets investigated by time-resolved X-ray radiography and hydrodynamic simulations

15:50 – Coffee Break

16:20 – Poster Session

20:30 – Social Dinner

Thu. 11/06

Session D1 – Chair: **P. Zhu (SIOM)**

09:00 – Invited Oral: **H. Marchenko (IPPLM)**

Experiments on the EoS of boron nitride, possible alternative ablator to diamond, performed in direct-drive experiments at the PALS and GEKKO laser facilities

09:35 – Oral: **A. Forte (LULI)**

Direct observation of the dynamics of solid-solid phase transitions in quartz and fused silica

09:55 – Oral: **B. Fisher (Univ. York)**

Investigation of shock propagation in ablators using x-ray phase contrast imaging

10:15 – Oral: **R. Paddock (STFC)**

Measuring laser imprint and subsequent Rayleigh- Taylor growth on a new platform at OMEGA for UPLiFT

10:35 – Coffee Break

Session D2 – Chair: **J. Chittenden (Imperial College London)**

11:05 – Oral: **D. Barlow (LULI)**

Illumination design for inertial fusion energy

11:25 – Oral: **P. Cardenas Ayala (CEA, LULI)**

Numerical study of laser beam geometry effects on propagation instabilities in inertial confinement fusion plasmas

11:45 – Oral: **C. Clarke (Queens Belfast Univ.)**

Multi-Objective Bayesian Optimisation of Laser Pulse Shape in 1D Direct-Drive ICF Simulations



12:05 – Oral: **E. Robinet (CEA)**

Modeling optically smoothed laser fields with thick rays

12:25 – Concluding Remarks

14:30 – Meeting HiPER+