

2025



PLASMA 2025

INTERNATIONAL CONFERENCE ON RESEARCH
& APPLICATION OF PLASMAS

15 – 19 SEPTEMBER 2025

WARSAW | POLAND

AGENDA



MONDAY, 15 SEPTEMBER 2025

8:00	CONFERENCE REGISTRATION			
9:00	CONFERENCE OPENING CEREMONY			
	M. Kubkowska, Institute of Plasma Physics and Laser Microfusion (IPPLM)			
SESSION 1 9:10 - 10:40 CHAIRPERSON: M. KUBKOWSKA, IPPLM				
9:10	I1	T. RAVENSBERGEN	ITER Organization	Overview of the ITER re-baseline and Research Plan and its impact on the Plasma Control challenge
9:45	I2	A. CHOMICZEWSKA	IPPLM	Impurity source and control across experiments in H, D, T, and DT plasmas at JET-ILW
10:20	O2.4	E. SARTORI	Consorzio RFX	Plasma Properties in the Negative ion beam sources for fusion and recent results in view of ITER
10:40	11:10	COFFEE BREAK		
SESSION 2 11:10 – 12:30 CHAIRPERSON: T. RAVENSBERGEN, ITER ORGANIZATION				
11:10	O2.1	K. MIZERSKI	Institute of Geophysics PAS	Tuning of the current drive in tokamaks with phase-shifted beating waves
11:30	O2.2	I. IVANOVA-STANIK	IPPLM	Integrated numerical analysis of the neon seeded JET-ITER baseline scenario in deuterium plasma plasmas
11:50	O2.3	M. PORADZIŃSKI	IPPLM	Modeling Gallium Impurity Sources in a Liquid Metal Divertor: Comparison with Tin
12:10	O2.6	B. ZAMORSKI	University of Szczecin	The Use of Reduced-Order Models in Divertor Heat Flux Analysis
12:30	14:10	LUNCH		
SESSION 3 14:10 – 16:00 CHAIRPERSON: I. GARKUSHA, NSC KIPT				
14:10	I3	M. HRON	Institute of Plasma Physics CAS	Overview of COMPASS Upgrade: status and plans
14:45	I4	I. JEPU	United Kingdom Atomic Energy Authority (UKAEA)	Operational experience of residual gas analysis in JET in the HD, TT, HT, DTE2, and DTE3 campaigns
15:20	O5.1	R. MEHRARA	Institute of Nuclear Physics PAS (IFJ PAN)	Assessment of the Radiation Environment and Shielding Performance of the Radial Gamma Ray Spectrometer (RGRS) in ITER Equatorial Port #01
15:40	O5.3	R. KWIATKOWSKI	National Centre for Nuclear Research	Runaway Electrons recorded by means of Cherenkov probe on TCV tokamak
16:00	16:20	COFFEE BREAK		
SESSION 4 16:20 – 18:00 CHAIRPERSON: M. HRON, IPP CAS				
16:20	O2.5	Y. GAO	IPP Greifswald	Observation and control of 3D heat flux on the plasma-facing component in Wendelstein 7-X
16:40	O2.7	Ł. SYROCKI	IPPLM	Study of the SXR emission resulting from the TESPEL injection at W7-X observed by the PHA system
17:00	O2.8	A. BUZÁS	HUN-REN Centre for Energy Research	A multi-diagnostic study of filament activity on the Wendelstein 7-X stellarator
17:20	O2.10	E. AYMERICH	University of Cagliari	Investigating Physics-Informed Neural Networks for Heat Flux Estimation: Sensitivity Analysis at Wendelstein 7-X
17:40	O5.11	P. Veis	Comenius University Bratislava	Strategies to Enhance Depth Resolution and Plasma Diagnostics in Tungsten Using Picosecond LIBS
18:10	21:00	WELCOME RECEPTION		

**TUESDAY, 16 SEPTEMBER 2025****8:40 SPONSOR - EUROTEK****SESSION 1 | 9:00 - 10:30 | CHAIRPERSON: T. PISARCZYK, IPPLM**

9:00	I5	S. VANKOVA	University of Bordeaux	<i>Temperature estimation of a titanium wire heated by laser-accelerated electrons using radiographic diagnostics</i>
9:35	I6	P. CIRRONE	National Institute for Nuclear Physics (INFN)	<i>Proton-11Boron fusion at nanosecond laser systems</i>
10:10	O4.1	A. BARTNIK	Military University of Technology (WAT)	<i>Laser produced plasmas and soft X-ray and extreme ultraviolet sources in studies on laboratory astrochemistry</i>
10:30	11:00	COFFEE BREAK		

SESSION 2 | 11:00 – 12:20 | CHAIRPERSON: E. FILIPPOV, ELI-NP

11:00	O3.1	A. KULIŃSKA	Institute of Nuclear Physics PAS (IFJ PAN)	<i>Conditions for carrying out a proton-boron nuclear reaction in the Plasma-Focus device</i>
11:20	O3.2	J. CIKHARDT	Czech Technical University in Prague	<i>Study of electromagnetic pulses with frequencies exceeding 10 GHz at the kilojoule sub-nanosecond laser facility PALS</i>
11:40	O3.5	H. MARCHENKO	IPPLM	<i>Equation of state measurements of boron nitride under laser-driven compression at the PALS facility</i>
12:00	O3.6	S. ARJMAND	National Institute for Nuclear Physics (INFN)	<i>Diagnostics of Low-Temperature Plasma in Gas-Filled Capillaries Used for Laser Wakefield Acceleration</i>
12:20	14:00	LUNCH		

SESSION 3 | 14:00 – 16:10 | CHAIRPERSON: P. CIRRONE, INFN

14:00	I7	O. TURIANSKA	University of Bordeaux	<i>Laser-driven shock waves propagating in foam targets: time-resolved X-ray radiography and 2D hydrodynamic simulations</i>
14:35	I8	E. FILIPPOV	Extreme Light Infrastructure - Nuclear Physics (ELI-NP)	<i>Enhancement of ion flux generated by ultra-relativistic laser-induced plasma using high-repetition rate detectors</i>
15:10	O5.10	D. PACELLA	ENEA – Nuclear Department C.R. Frascati	<i>Single and quad silicon Timepix3 detectors to detect neutrons and charged particles in laser plasma experiments</i>
15:30	O3.4	P. TCHÓRZ	IPPLM	<i>Application of Cavity Pressure Acceleration in laser-induced fusion reactions</i>
15:50	O3.3	P. RĄCZKA	IPPLM	<i>Production of neutron bunches for damage and activation studies using high power laser interactions with low density foam targets</i>
16:10	16:30	COFFEE BREAK		
16:30	17:45	POSTER SESSION 1		

WEDNESDAY, 17 SEPTEMBER 2025

8:40	SPONSOR - TESPOL			
SESSION 1 9:00 – 10:30 CHAIRPERSON: E. PAWELEC, UNIVERSITY OF OPOLE				
9:00	I9	P. Puglia	CEA – Institute for Magnetic Fusion Research	Review of WEST Diagnostics
9:35	I10	M. Zlobinski	Institute of Fusion Energy and Nuclear Waste Management (IFN)	In situ plasma-wall interaction studies in JET by laser-induced desorption and ablation
10:10	O5.8	A. PIMAZZONI	Consorzio RFX	Benchmark between IBSimu and thermographic data from a MeV class beam
10:30	11:00	COFFEE BREAK		
SESSION 2 11:00 – 12:20 CHAIRPERSON: P. Gąsior, IPPLM				
11:00	O5.2	R. Doron	Weizmann Institute of Science	Addressing the Challenge of the Magnetic-field Vector Determination in Cylindrically Imploding Magnetized Plasma
11:20	O5.7	I. Mario	Consorzio RFX	Effect of the magneto-static shield and driver design to the plasma properties in negative ion sources for fusion applications
11:40	SPONSOR - TECHNOSYSTEM			
12:00	SPONSOR - LTB			
12:20	14:00	LUNCH		
SESSION 3 14:00 – 16:10 CHAIRPERSON: M. ZLOBINSKI, IFN				
14:00	I12	F.P. ORSITTO	ENEA – Nuclear Department C.R. Frascati	Physics basis of discrepancies between temperature measurements by ECE and Thomson scattering in high performance plasmas
14:35	I11	U. WIĄCEK	Institute of Nuclear Physics PAS (IFJ PAN)	Computer modeling and simulations for the development of neutron measurements
15:10	O5.5	T. CIUK	Łukasiewicz – Institute of Microelectronics and Photonics	Low dimensionality - key enabling factor to overcome limitations in magnetic diagnostics for modern fusion reactors
15:30	O5.6	J. JAGIEŁŁO	Łukasiewicz – Institute of Microelectronics and Photonics	Dosimetric platform and a genuine Raman protocol for passive estimation of fast-neutron fluence in irradiated SiC and epitaxial graphene on SiC

**THURSDAY, 18 SEPTEMBER 2025****8:40 SPONSOR - HUMAMATSU****SESSION 1 | 9:00 – 10:45 | CHAIRPERSON: M. RUBEL, KTH**

9:00	I13	E. NTEMOU	Uppsala University	<i>Reassessing electronic excitation processes during energy deposition by keV ions</i>
9:35	I14	I. DENYSENKO	V. N. Karazin Kharkiv National University (KhNU)	<i>Effects of external conditions on properties of the ionization region of a magnetron plasma</i>
10:10	I15	J. VEGA	CIEMAT	<i>Signal anomaly recognition as precursor of off-normal plasma behaviours</i>

10:45 11:15 COFFEE BREAK**SESSION 2 | 11:15 – 12:35 | CHAIRPERSON: I. DENYSENKO, KhNU**

11:15	O5.4	M. RUBEL	KTH Royal Institute of Technology	<i>Determination of H isotopes and seeded edge cooling gases in wall materials of a fusion reactor</i>
11:35	O6.2	I. GARKUSHA	National Science Center Kharkiv Institute of Physics and Technology	<i>Cold atmospheric plasma for medical applications</i>
11:55	O6.4	B. POGODZIŃSKI	Poznan Supercomputing and Networking Center	<i>Harnessing HPC and Containerised Computing Environments for Fusion Related Research</i>
12:15	O6.5	M.K. OWSIAK	Poznan Supercomputing and Networking Center	<i>Enhancing Reproducibility in Fusion Related Research by Enabling Gathering, Comparing and Sharing Metadata of Experimental Results</i>

12:35 14:15 LUNCH**SESSION 3 | 14:15 – 16:05 | CHAIRPERSON: J. VEGA, CIEMAT**

14:15	I16	M. O'MULLANE	University of Strathclyde	<i>Atomic and molecular data and models for plasma physics</i>
14:50	I17	G.M. GRITANI	ELI ERIC ELI Beamlines Facility	<i>Electron Wakefield Acceleration</i>
15:25	O1.1	G. SOTNIKOV	National Science Center Kharkiv Institute of Physics and Technology	<i>Wakefield acceleration in layered plasma waveguide</i>
15:45	O6.1	K. NOWAKOWSKA-LANGIER	National Centre for Nuclear Research	<i>An Innovative Approach to the Synthesis of Metastable Ge-Sn Alloys Using High-Energy Pulsed Plasma Generated in the RPI-IBIS System</i>

16:05 16:25 COFFEE BREAK**16:25 17:40 POSTER SESSION 2****19:00 23:00 GALA DINNER**

FRIDAY, 19 SEPTEMBER 2025

8:30		REGISTRATION	
9:00		Opening	M. Kubkowska, IPPLM
CHAIRPERSON: M. KUBKOWSKA, IPPLM			
9:15		T. Donné	FEInn <i>European fusion programme over the past 20 years</i>
9:35		R. Zagórski	National Centre for Nuclear Research (NCBJ) <i>Polish involvement into the EUROfusion programme</i>
9:55	10:30	COFFEE BREAK	
CHAIRPERSON: M. KUBKOWSKA, IPPLM			
10:30		G. Federici	EUROfusion <i>European strategy for DEMO</i>
10:50		M. Jakubowski	Max Planck Institute for Plasma Physics <i>W7-X project</i>
11:10		M. Rosiński	IPPLM <i>Polish involvement in inertial confinement fusion projects</i>
11:30	12:00	COFFEE BREAK	
CHAIRPERSON: P. GAŚSIOR, IPPLM			
12:00	PANEL DISCUSSION I		
	<i>Polish Contributions to Fusion Research: Achievements and International Collaborations</i>		
	J. Rządkiwicz, National Centre for Nuclear Research (NCBJ)		
	Ł. Ciupiński, Warsaw Univeristy of Technology (WUT)		
	T. Ciuk, Łukasiewicz Research Network – Institute of Microelectronics and Photonics		
	M. Kubkowska, Institute of Plasma Physics and Laser Microfusion (IPPLM)		
12:50	PANEL DISCUSSION II		
	<i>The Future of Fusion Research: Key Milestones, Breakthrough Innovations, and Industry Collaboration</i>		
	T. Donné, FEInn		
	G. Federici, EUROfusion		
	F. Rimini, United Kingdom Atomic Energy Authority (UKAEA)		
	W. Królas, Institute of Nuclear Physics Polish Academy of Sciences (IFJ PAN)		
13:40		CLOSING CEREMONY	
13:50	16:00	CEREMONIAL LUNCH	

TUESDAY 16.09.2025
POSTER SESSION 1

Nr	Title
P.04	T. Fornal , Investigation of Radiative Power correlations using bolometry and C/O monitor in Wendelstein 7-X
P.05	L. Ryć , Replacing SiC and diamond semiconductor detectors for proton plasma diagnostics with silicon detectors
P.09	J. Domański , The influence of a transverse magnetic field on the hot electrons and ions flux generated at laser disc-double-coil target interaction
P.10	K. Mikszuta-Michalik , JET neutron emissivity reconstruction using the Minimum Fisher Information method
P.16	A. Zaraś-Szydłowska , Interaction of Laser-Driven Plasma Streams in Open-Book Target Configurations
P.18	N. Wendler , Plasma impurity analysis in high-current baseline scenario at JET across DTE2 and DTE3 experimental campaigns
P.20	R. Kwiatkowski , Preliminary measurements of alpha particles produced by proton-boron nuclear fusion reaction on Z-pinch type discharges
P.21	N. Grzybicka , Investigation of neon-induced modifications in edge plasma properties of JET baseline in DT (W+Be wall) discharges using TECXY code
P.25	I. V. Litovko , Modelling the Evaporation of Vacuum Arc Macroparticles by a Beam of Energetic Electrons
P.26	E. Pawelec , Influence Of The ICWC-Driven Isotope Exchange Pulses On The Hydrogen/Deuterium Ratio In The Boron Layer At West
P.27	D. Mazur , NSpectroscopic Study Of The Boron Hydride And Its Isotopologues As An Indication Of Chemically Assisted Physical Erosion Of Boron Layers In WEST
P.37	R. Zagórski , Effect of neutral and ion temperature in the 2D fluid model for the RF heated ion source SPIDER
P.39	I. Książek , Influence of the boronisation on the level of the signal registered by the C/O monitor for W7-X system
P.41	W. Gromelski , Impurity flux calculations in the WEST divertor for the high fluence experiment
P.42	S. Vankova , Measurement of Energy in Nanosecond-Scale Plasma

THURSDAY 18.09.2025
POSTER SESSION 2

P.01	A. Jardin , Analysis of Recurrence Plots of soft X-ray time series from tokamak plasma
P.02	S. Atikukke , Deuterium Retention in Morphologically Diverse Tungsten Coatings Studied by Dual-Pulse LIBS
P.03	O. Kravchenko , Formation and Diffusion of Metal Clusters in the Magnetron Discharge Chamber
P.08	S. Akbas , Performance Evaluation of CAD-to-MCNP Conversion Tools in Complex Fusion Systems: A Case Study of VUV Diagnostics in JT-60SA
P.13	Y. suk Yoo , Antimicrobial effects of microwave plasma-activated water with skin protective effect for novel disinfectants in pandemic era
P.22	D. López-Bruna , First 3D inductively-coupled-plasma transport calculations for the Neutral Beam Test Facility at Padua (Italy)
P.28	A. Murmantsev , Measurements of plasma parameters in synthesis of copper and molybdenum metal complexes
P.29	A. Veklich , OES measurements and data processing of non-uniform plasma with metal vapours admixtures
P.31	O. Nedybaliuk , Influence of Wide-Aperture Rotating Gliding Discharge on Microgreen Seeds Germination
P.32	B. López-Miranda , Recognition of two patterns of ion-temperature profiles in the TJ-II stellarator after the upgrade of a multichannel spectrometer
P.33	V. Katrechko , Mass-Selective Plasma Filter with a Pulsed Erosive-Type Source
P.34	S.-M. Kim , Radical-Driven Degradation of TMAH Using Pulsed Underwater Plasma for High-Purity Water Applications
P.35	J. Włodarczyk , Neutron measurements with activation foils around the JSI TRIGA water activation loop (KATANA)
P.36	G. Sotnikov , Study of the Biocidal Properties of Plasma-Chemical Treatment of Artificially Contaminated Aqueous Solutions
P40	P. Gąsior , Generative AI as a Collaborative Partner in Fusion Research: A Case Study Using IAEA CollisionDB