

22nd International Conference on Atomic Processes in Plasmas
1st NIFS Conference on Atomic and Molecular Processes in Plasmas
PROGRAM

July 21 (Mon)

16:00-18:00 Registration and Reception
(International Center, Tokyo Metropolitan University)

July 22 (Tue)

08:30 Registration

09:30 Opening
Nobuyuki Nakamura (Chair, UEC)
Hiroshi Yamada (Director of General, NIFS)
Takaya Ohashi (President, Tokyo Metro. Univ.)

09:50 [I-01] Motoshi Goto (NIFS)
(invited) Spectroscopic studies in LHD focusing on atomic processes

10:20 [I-02] Andreas Langenberg (IPP)
(invited) Tungsten Spectroscopy at W7-X: Diagnostics, Models, and Applications

10:50 Coffee

11:10 [M-01] Martin O'Mullane (U. Strathclyde)
(memorial) Approaching complexity for atomic data and models

11:40 [I-03] Tomoko Kawate (QST)
(invited) Electron collision processes for BH and BH⁺ molecules

12:10 [O-01] Ritu Dey (IITT)
Simulating the Low Charge State Emissions from Tungsten for Fusion Applications

12:30 [O-02] Ibtissem Hannachi (U. Batna 1)
Hydrogen Stark broadening revisited for magnetic fusion plasma diagnostics

12:50 Lunch

14:10 [I-04] Conor Perks (MIT)
(invited) High-resolution laboratory measurements of tungsten M-shell x-ray spectra for burning plasma diagnostics in SPARC and ITER

14:40 [I-05] Masahiro Kobayashi (NIFS)
(invited) Thermal Instability in Magnetically Confined Toroidal Plasmas Induced by Radiative Emission of Highly Charged Ions

15:10 [O-03] Yuki Hayashi (NIFS)
Dynamic response of atomic processes in recombining helium plasmas to high-density pulse in Magnum-PSI

- 15:30 Coffee
- 15:50 [I-06] Ulises Losada (Auburn U.)
(invited) Advances in Tungsten Ultraviolet Spectroscopy via Improved Atomic Physics Calculations for Erosion Diagnostics in Fusion Plasmas
- 16:20 [O-04] Tsunehiro Morita (Kyoto U.)
A numerical study on the feasibility of the recombination front measurements by analyzing the Zeeman effect on the chord integrated deuterium Paschen α line spectrum in JT-60SA
- 16:40 [O-05] Keisuke Fujii (ORNL)
Analytic Scaling of Neutral Transport in High-Temperature Plasma Edges through Repetitive Charge Exchange Collisions
- 17:00-19:00 Poster Session B

July 23 (Wed)

- 09:30 [I-07] Yuri Ralchenko (NIST)
(invited) Till 120! Triumph and Twilight of Atomic Spectroscopy at NIST
- 10:00 [O-06] Jianmin Yuan (Jilin U.)
Influences on the continuum atomic processes in hot and dense plasmas due to IPD and changes of continuum electron wavefunctions
- 10:20 [O-07] Shivam Gupta (NCKU)
Theoretical Investigation of Electron Impact Excitation and Radiative Processes in Highly Charged Tin Ions Using a Collisional-Radiative Model
- 10:40 Coffee
- 11:00 [M-02] John Sheil (ARCNL)
(memorial) Howard Scott: The scientist, the colleague, the mentor
- 11:30 [I-08] Shinsuke Fujioka (ILE)
(invited) X-ray Spectroscopy of High Energy Density Plasma for Inertial Fusion Energy Development
- 12:00 [O-08] Patrick Renaudin (CEA/DAM)
Cooling and recombination dynamics of an Al plasma in AlTi or AlAu mixtures heated by an ultraintense laser pulse
- 12:20 [O-09] Xing Wang (Xi'an Jiaotong U.)
Enhanced x-ray absorption and heating in medium-Z-doped CHO foams under laser-driven hohlraum radiation
- 12:40 Lunch
- 14:00 [I-09] Evgeny Stambulchik (WIS)
(invited) Fast evaluation of complex line shapes in plasma
- 14:30 [I-10] Marc-Andre Schaeuble (SNL)
(invited) Using deep learning to develop a fast, versatile NLTE spectral model for application to HED systems

- 15:00 [O-10] Hai P Le (LLNL)
Impact of super-Gaussian electron distributions on plasma K-shell emission
- 15:20 Coffee
- 15:40 [I-11] Bob Nagler (SLAC)
(invited) Direct measurement of ion temperature and electron-ion equilibration in warm dense matter
- 16:10 [I-12] Oliver Humphries (EuXFEL)
(invited) Ionization dynamics and electronic structure of x-ray heated plasmas
- 16:40 [O-11] Moto Togawa (EuXFEL)
Nonlinear response of highly charged ions to ultraintense XFEL radiation
- 17:00 [O-12] Hae Ja Lee (SLAC)
Understanding of hot dense plasmas isochorically heated by XFEL using X-ray emission spectroscopy
- 17:20 Break
- 17:35 [I-13] Canelia Miron (Nagoya U.)
(invited) Cold atmospheric pressure plasma-treated liquids and formulations for cancer treatment
- 18:05 [I-14] Marc Sackers (FZ Jülich)
(invited) On the line shape of sputtered atoms in low-temperature magnetized plasmas
- 18:35 [O-13] Mi-Yong Song (KIFE)
Development of Ar and N₂ Plasma Spectroscopy Reference Data for Plasma Characterization using Collision-Radiation Models and Machine Learning
- 18:55 End

July 24 (Thu)

- 09:30 [I-15] Thomas Gawne (CASUS)
(invited) M-shell Rebinding in Hot, Solid-density Mg and Al
- 10:00 [O-14] Pedro Velarde (IFN, UPM)
Probing dense plasmas with high harmonics
- 10:20 [O-15] Lucas Ansia Fernandez (GoLP, IST)
Shake-off in XFEL Heated Solid-Density Plasma
- 10:40 Coffee
- 11:10 [I-16] Maria Teresa Belmonte Sainz-Ezquerria (U. Valladolid)
(invited) Experimental Plasma Spectroscopy: meeting data needs for astrophysics
- 11:40 [I-17] Hiroya Yamaguchi (ISAS/JAXA)
(invited) High-Resolution X-Ray Spectroscopy of Astrophysical Plasmas with XRISM

- 12:10 [O-16] Yuki Amano (ISAS/JAXA)
A Laboratory plasma experiment for X-ray astronomy using a compact electron beam ion trap (EBIT)
- 12:30 [O-17] Masahiro Tsujimoto (ISAS/JAXA)
X-ray Microcalorimeter Spectroscopy and Radiative Transfer Modeling of Astrophysical Plasmas around Neutron Stars and Black Holes
- 12:50 Lunch (IPC meeting)
- 14:10 [I-18] Ryoko Ishikawa (NAOJ)
(invited) Exploring the Sun with Ultraviolet SpectroPolarimetry: The CLASP Sounding Rocket Series
- 14:40 [O-18] Roi Avraham Rahin (NASA)
The structure of the AGN narrow-line region as probed by emission line ratios
- 15:00-17:00 Poster Session A
- 18:30 Banquet (Royal Garden Palace Hachioji Nihonkaku)

July 25 (Fri)

- 09:30 [I-19] Patricial Cho (LLNL)
(invited) Testing High Density XSTAR Models with Fe Photoionized Plasma Experiments on the Z Machine
- 10:00 [I-20] Jerome Deprince (U. Mons)
(invited) Large scale computation of atomic data in heavy elements for kilonova modeling
- 10:30 [O-19] Chunyu Zhang (U. Strathclyde)
Dielectronic Recombination of Fe 3d^k Ions
- 10:50 [O-20] Hiroaki Nakamura (NIFS)
Molecular Dynamics Study of Amino Acid Precursor Formation under Space-like Conditions
- 11:10 Coffee
- 11:40 [O-21] Kirsten Dowd (UCD)
Visible-Near Infrared Photo-absorption in Zirconium Plasmas for Kilonova Studies
- 12:00 [O-22] Mourad Telmini (UTM)
Mapping Rydberg states of H₂ with the Halfium R-matrix method
- 12:20 [O-23] Ayushi Agrawal (IIT Roorkee)
Detailed Collisional-Radiative Analysis of Iodine Plasma for Plasma Diagnostics
- 12:40 Closing