



Detailed Scientific Program

Monday, 4th June (Afternoon)

13:00 – 13:30 : Faïçal Azaïez, director of IPN Orsay
Welcome

Session 1

chair: Patrice Camy

13:30 – 14:10 : Agnes Pailloux (35'+5') **I1**
Trace gas measurement by Cavity Ring Down Spectroscopy for nuclear applications

14:10 – 14:35 : Patrick Ehlers (20'+5') **O1**
NICE-OHMS – A Laser-based Spectroscopic Technique for Ultrasensitive Detection of Gases

14:35 – 15:00 : Sven Richter (20'+5') **O2**
First On-line Application of the Laser Ion Source and Trap (LIST) and resulting Implications

15:00 – 15:30 : *Coffee Break*

Session 2

chair: Paul Campbell

15:30 – 16:10 : Mark Huyse (35'+5') **I2**
Nuclear Spectroscopy & Production using laser gas cells and jets

16:10 – 16:35 : Andrea Teigelhoefer (20'+5') **O3**
Off-Line Excitation Scheme Development for Resonant Ionization Laser Ion Sources

16:35 – 17:00 : Sebastian Raeder (20'+5') **O4**
Resonance Ionization Spectroscopy on Neutral Actinium

17:00 – 17:25 : Volker Sonnenschein (20'+5') **O5**
Resonance Ionization Spectroscopy of the ground-state hyperfine structure of neutral ²²⁹Th

17:25 – 17:50 : Thomas Cocolios (20'+5') **O6**
Investigating shape coexistence in the lead region with in-source laser spectroscopy at ISOLDE-RILIS

18:00 *Welcome Cocktail*



Tuesday, 5th June (Morning)

Session 3

chair: Wolfgang Husinsky

- 9:00 – 9:40 : Dino Jaroszynski (35'+5') **I12**
The development of laser-driven plasma accelerators: progress and outlook
- 9:40 – 10:05 : Kazuhiro Yabana (20'+5') **O7**
Ab-initio theory for intense laser pulses in solids
- 10:05 – 10:30 : Yasushi Shinohara (20'+5') **O8**
First-principles calculation for coherent phonon generation in solids
- 10:30 – 11:00 : *Coffee Break*

Session 4

chair: Dino Jaroszynski

- 11:00 – 11:40 : Lukas Gallmann (35'+5') **I4**
All-optical ultrafast spectroscopy in the attosecond domain
- 11:40 – 12:05 : Wolfgang Husinsky (20'+5') **O9**
Femtosecond laser-induced subwavelength structures on metals, dielectrics and semiconductors
- 12:05 – 14:30 : *Lunch Break*



Tuesday, 5th June (Afternoon)

Session 5

chair: Mark Huyse

- 14:30 – 15:10 : Wei Jiang (35'+5') **I5**
Ar-39 Detection at the 10^{-16} Isotopic Abundance Level with atom trap trace analysis
- 15:10 – 15:35 : Amin Hakimi (20'+5') **O10**
High-Resolution Resonance Ionization Mass Spectrometry on Uranium Isotopes for Ultra-Trace Analysis
- 15:35 – 16:00 : Takaaki Takatsuka (20'+5') **O11**
Development of Gas-jet Atomic Source for Trace Analysis of ^{93m}Nb by Resonance Ionization Mass Spectrometry
- 16:00 – 16:25 : Pascal Schönberg (20'+5') **O12**
Application of RIMS for Ultratrace Analysis of ^{99}Tc
- 16:30 – 18:30 : *Coffee Break and Poster Session*



Wednesday, 6th June (Morning)

Session 6

chair: Thomas Cocolios

- 9:00 – 9:40 : Haruka Maeda (35'+5') **I6**
Coherent control of rydberg atoms (Nondispersing Bohr wave packets)
- 9:40 – 10:05 : Thomas Godin (20'+5') **O13**
Highly sensitive laser probing of weak optical nonlinearities
- 10:05 – 10:30 : Shuichi Hasegawa (20'+5') **O14**
Laser cooling spectroscopy of trapped ions injected from Inductively Coupled Plasma Mass Spectrometer
- 10:30 – 11:00 : *Coffee Break*

Session 7

chair: Valentine Fedosseev

- 11:00 – 11:40 : Masaki Hori (35'+5') **I7**
Determining the antiproton-to-electron mass ratio by sub-Doppler two-photon laser spectroscopy of antiprotonic helium
- 11:40 – 12:05 : Jonas Westberg (20'+5') **O15**
Quantum cascade laser-based Faraday rotation spectrometer with sub-second response time
- 12:05 – 14:30 : *Lunch Break*



Wednesday, 6th June (Afternoon)

Session 8

chair: Iain Moore

- 14:30 – 15:10 : Paul Campbell (35'+5') **I8**
 Review on laser spectroscopy experiments
- 15:10 – 15:35 : Mustapha Laatiaoui (20'+5') **O16**
 Towards laser spectroscopy of trans-fermium elements
- 15:35 – 16:00 : Rafael Ferrer (20'+5') **O17**
 Laser Spectroscopy experiments with the Leuven gas cell-based Laser Ion Source
- 16:00 – 16:30 : *Coffee Break*

Session 9

chair: Klaus Wendt

- 16:30 – 16:55 : Mikael Reponen (20'+5') **O18**
 Resonance Ionization Spectroscopy at FURIOS
- 16:55 – 17:20 : Anatoly Barzakh (20'+5') **O19**
 New laser setup at the IRIS facility. Magnetic moments, hyperfine structure anomaly and mean squared charge radii of neutron deficient Tl isotopes
- 17:20 – 17:45 : Kara Lynch (20'+5') **O20**
 Laser assisted decay spectroscopy at the CRIS beam line at ISOLDE
- 17:45 – 18:10 : Kei Minamisono (20'+5') **O21**
 Collinear laser spectroscopy studies at BECOLA facility at NSCL

Evening: IAS Closed Meeting



Thursday, 7th June (Morning)

Session 10

chair: Michael Savina

- 9:00 – 9:40 : Rick Russo (35'+5') **I9**
Laser ablation molecular isotopic spectrometry
- 9:40 – 10:05 : Liliana Radu (20'+5') **O22**
Spectroscopic study of laser irradiated chromatin
- 10:05 – 10:30 : Jose Alonso (20'+5') **O23**
Probing Biomolecules by Laser Ablation and Molecular Beam Fourier Transform Microwave Spectroscopy.
- 10:30 – 11:00 : *Coffee Break*

Session 11

chair: Rick Russo

- 11:00 – 11:40 : Patrice Camy (35'+5') **I10**
Yb:CaF₂ - a material for the new generation of High Power Lasers
- 11:40 – 12:05 : Yoshihiro Iwata (20'+5') **O24**
Reliability Evaluation for Failed Fuel Identification Using Resonance Ionization Mass Spectrometry
- 12:05 – 14:30 : *Lunch Break*



Thursday, 7th June (Afternoon)

Session 12

chair: Suishi Hasegawa

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| 14:30 – 15:10 : Eric Gloaguen (35'+5') | I11 |
| Laser probing of isolated biomolecules | |
| 15:10 – 15:35 : Seung Min Park (20'+5') | O25 |
| Photodissociation of hydrogen-bonded aniline cluster ions | |
| 15:35 – 16:00 : Richard Holt (20'+5') | O26 |
| Fast-ion-beam laser probing of ion-source energy distributions and atomic structure | |
| 16:00 – 16:30 : <i>Coffee Break</i> | |

Session 13

chair: Agnès Pailloux

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| 16:30 – 16:55 : Anton Lindahl (20'+5') | O27 |
| Partial photodetachment cross sections in negative ions probed using resonance ionization | |
| 16:55 – 17:20 : Sangkyu Kim (20'+5') | O28 |
| Role of conical intersection in the photodissociation dynamics | |
| 17:20 – 17:45 : Yasuhiro Miyake (20'+5') | O29 |
| Ultra Slow Muon Microscopy by Laser Resonant Ionization at J-PARC, MUSE | |
| 19:00 : <i>Visit and Dinner at the Orsay Museum</i> | |





Friday, 8th June (Morning)

Session 14

chair: Yuri Kudryavtsev

- 9:00 – 9:25 : Serge Franchoo (20'+5') **O30**
Status of the Alto laser ion source
- 9:25 – 9:50 : Tetsu Sonoda (20'+5') **O31**
The development of the gas cell-based Laser Ion Source for RIKEN PALIS
- 9:50 – 10:15 : Valentin Fedosseev (20'+5') **O32**
New development stage of the laser ion source at the ISOLDE on-line isotope separation facility: Dual dye - Ti:Sa RILIS
- 10:15 – 10:45 : *Coffee Break*

Session 15

chair: François Le Blanc

- 10:45 – 11:10 : Marica Sjödin (20'+5') **O33**
GISELE - A Resonant Ionisation Laser Ion Source for the production of radioactive ions at GANIL
- 11:10 – 11:35 : Sergey Zemlyanoy (20'+5') **O34**
Production and study of heavy neutron rich nuclei formed in multi-nucleon transfer reactions
- 11:35 – 12:00 : Rob Ashworth
Young scientist award announcement
- 12h00 -12:20 **Closing remarks and end of the conference**