

15th Topical Workshop of the Stored Particles Atomic Physics Research Collaboration University NOVA of Lisbon, Portugal

Program

Friday, September 7th

Time			Duration
Opening / Welcome and Status Session			
15h00	Registration		30`
15h30	Welcome	Jose Paulo Santos UNL	10+5`
15h45	GSI/FAIR	Thomas Stöhlker HI Jena, GSI, Univ. Jena	15+5`
16h05	SPARC	Reinhold Schuch Univ. Stockholm / GSI	15+5`
16h25	Status of the ESR	Markus Steck GSI	20`+5`
16h50	Status of the CRYRING	Michael Lestinsky GSI	20`+5`
17h15	Status of the HITRAP	Wolfgang Quint GSI	20`+5`
17h40	Status of APPA-Cave	Angela Bräuning-Demian GSI/FAIR, Darmstadt	15`+5`
18h00	Reception		

Saturday, September 8th

Time			Duration
Status of GSI and FAIR Facilities			
9h30	Status of the SIS100 / Laser cooling	Danyal Winters GSI, Darmstadt	15`+5`
9h50	Status of the EBITs	Serge Trotsenko GSI /HI Jena	15`+5`
10h10	Status of the HESR	Anton Kalinin GSI, Darmstadt	15`+5`
10h30	Discussion concerning the Physics Book for the HESR	Th. Stöhlker, Y. Litvinov	15`+5`
10h50	Coffee Break		
SPARC Instrumentation / recently submitted TDRs			
11h20	CRYRING Internal Jet Target	Nikolaos Petridis GSI Darmstadt	15`+5`
11h40	In-ring Spectrometer for Nuclear Reaction Studies at CRYRING	Carlo Bruno Univ. of Edinburgh	15`+5`
12h00	Cold Target Recoil Ion Momentum Spectrometer for CRYRING	Markus Schöffler Univ. of Frankfurt	15`+5`
12h20	Lunch		
International Landscape: Atomic Physics Activities Related to SPARC			
14h00	Hyperfine splitting in simple ions for the search of the variation of fundamental constants	Natalia Oreshkina MPI-K Heidelberg	15`+5`
14h20	Hyperfine structure of doubly charged 229Th and the excitation of its nuclear clock isomer	Robert Müller PTB	15`+5`
14h40	Towards VUV optical clocks with highly charged ions	José Crespo López-Urrutia MPI-K Heidelberg	15`+5`
15h00	Results Of The Gamma Factory Test Runs With Highly Charged Xe And Pb Ions in the SPS and LHC Accelerator Rings At CERN	Simon Hirlander CERN	15`+5`
15h20	Coffee Break		
International Landscape: Atomic Physics Activities Related to SPARC			
15h50	Atomic physics at XFEL	Michael Meyer European XFEL	15`+5`
16h10	Results from the Heidelberg Cryogenic Storage Ring	Oldřich Novotný MPI-K Heidelberg	15`+5`
16h30	Merged Ion Beams in Cryogenic Storage Rings	Henning Schmidt Stockholm	15`+5`
16h50	Review of the recent AP activities at IMP	Xinwen Ma IMP Lanzhou	15`+5`
Collaboration Meeting			
17h10	Topics: Funding Situation: International and National, Common Funds, Status Reports, APPA R&D "BMBF Verbundforschung"	Angela Bräuning-Demian Reinhold Schuch, Stefan Schippers	80`

18h30	SPARC Board Meeting		60'
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Sunday, September 9th

Free day

Excursion

Conference dinner

Monday, September 10th

Time			Duration
International Landscape: Atomic Physics Activities Related to SPARC			
9h30	Towards an Optical Clock based on Quantum Logic Spectroscopy of Highly Charged Ions	Peter Micke PTB	15'+5'
9h50	Laboratory X-ray Astrophysics with Highly Charged Ions	Sven Bernitt Univ. Jena	15'+5'
10h10	Segmented-crystal von Hamos diffraction spectrometer for low-energy X-ray experiments at the electron cooler of CRYRING@FAIR	Pawel Jagodzinski JKU, Kielce, Poland	15'+5'
10h30	Coffee Break		
SPARC experiments for FAIR Phase-0 and related theory			
11h00	Calculations of the autoionization states of He- and Li-like ions	Ilya Tupitsyn SPSU	15'+5'
11h20	Bayesian data analysis tools for atomic physics	Martino Trassinelli INSP	15'+5'
11h40	Inner-shell transitions: fluorescence yields and auger electrons	José Marques UNL	15'+5'
12h00	The Ground-State Lamb Shift in the Heaviest Hydrogen-like Ion (U^{91+}): High Resolution X-ray Spectroscopy at the CRYRING electron cooler	Günter Weber HI Jena	15'+5'
12h20	Two-Quantum Annihilation of Positrons with K-shell Electrons	V.A. Zaytsev SPSU	15'+5'
12h40	Photoionization of C ⁺ ions at CRYRING	Jan Rothhardt HI Jena	15'+5'
13h00	Lunch		
SPARC experiments for FAIR Phase-0 and related theory			
14h30	Nuclear recoil effect on the g factor of few-electron ions	Dmitry Glazov SPSU	15'+5'
14h50	Cooling and precision spectroscopy of $^{209}\text{Bi}^{82+}$ ion ensembles with the ARTEMIS and SPECTRAP experiments at the HITRAP facility	Wolfgang Quint GSI, Darmstadt	15'+5'
15h10	Dielectronic Recombination-assisted laser spectroscopy: A new tool to investigate the hyperfine puzzle in Bi^{80+} , $^{82+}$	Rodolfo Sanchez GSI, Darmstadt	15'+5'
15h30	MCDF calculations	Jorge Sampaio UL/LIP	15'+5'
15h50	Coffee Break		
16h20	Precision collision spectroscopy of Be-like ions at the CRYRING@ESR electron cooler	Carsten Brandau Univ. of Giessen	15'+5'
16h40	Binding energies of diatomic molecular ions	Daria Mironova SPSU	15'+5'
17h00	Electron Emission following 1s Adiabatic	Siegbert Hagmann	15'+5'

	Ionization and Quasi-resonant 1s-1s Charge Transfer in Symmetric Heavy-Ion Atom Collisions	GSI, Darmstadt	
17h30	Poster session (1.5 hours)		

Tuesday, September 11th

Time			Duration
SPARC PhD-Prize			
9h30	PhD-Prize talk		15'+5'
SPARC experiments for FAIR Phase-0 and related theory			
9h50	Measurements of proton-induced reaction rates on radioactive isotopes for the astrophysical p process	René Reifarth Univ. of Frankfurt	15'+5'
10h10	Measurement of the bound-state beta decay of bare ²⁰⁵Tl ions	RuiJiu Chen GSI, Darmstadt	15'+5'
10h30	Coffee Break		
International Landscape: Atomic Physics Activities Related to SPARC			
11h00	DR measurements for astrophysics	Mike Fogle Auburn University	15'+5'
11h20	Dielectronic Recombination of Be-Like ⁴⁰Ar¹⁴⁺ at the CSRm	Zhongkui Huang IMP Lanzhou	15'+5'
11h40	A fresh computational approach to atomic structures, properties and processes relevant for basic research and applications	Stephan Fritzsche HI-Jena	15'+5'
12h00	Theoretical Description of the K-shell Ionization in Heavy Ion Collisions	Oleksandr Novak Sumy, Ukraine	15'+5'
12h20	Laser cooling of relativistic lithium-like ¹⁶O⁵⁺ ion beams at the CSRe	Weiqiang Wen IMP Lanzhou	15'+5'
12h40	Closing speech and End of the Workshop	Reinhold Schuch Univ. Stockholm	10'