Nuclear Astrophysics with Ion Storage Rings

British-German WE-Heraeus-Seminar

29 January - 02 February 2024
at the

Physikzentrum, Bad Honnef, Germany

WILHELM UND ELSE
HERAEUS-STIFTUNG

Program

Sunday, 28 January 2024

17:00 – 21:00	Registration	
From 18:00	*BUFFET SUPPER and WELCOME*	**Ragandeep Singh Sidhu and Jan Glorius**

Monday, 29 January 2024

08:00 – 08:45	*BREAKFAST*	
08:45 – 09:00		**Welcome Yuri A. Litvinov and Ragandeep Singh Sidhu**
09:00 – 10:00	Michael Wiescher	**The Challenge of Low Temperature Reaction Rates**
10:00 – 11:00	Gabriel Martinez-Pinedo	**Probing heavy element nucleosynthesis through electromagnetic observations**
11:00 – 11:30	*COFFEE BREAK*	
11:30 – 12:30	Jan Glorius	**Proton-Induced Reaction Cross Sections Measured using Stored Heavy Ion Beams**
12:30 – 14:00	*LUNCH*	
14:00 – 15:00	Beatriz Jurado	**Surrogate reactions at heavy-ion storage rings**

Program

Monday, 29 January 2024

15:00 – 16:00	Carlo Bruno	**The CARME@CRYRING project - future scientific aims**
16:00 – 16:30	*COFFEE BREAK & CONFERENCE PHOTO*	
16:30 – 17:00	Oliver Forstner	**Towards the measurement of the astrophysically relevant alpha-capture reaction rate 44Ti(α,p)47V at CRYRING@ESR**
17:00 – 18:30	POSTER FLASHES	
18:30	*DINNER*	

Program

Tuesday, 30 January 2024

08:00 – 09:00	*BREAKFAST*	
09:00 – 10:00	Alexandre Gumberidze	**Atomic physics with highly-charged ions at storage rings**
10:00 – 11:00	René Reifarth	**Nuclear fusion experiments in rings**
11:00 – 11:30	*COFFEE BREAK*	
11:30 – 12:00	Michele Sguazzin	**First NECTAR experiment and future use of solar cells as heavy-ion detectors in storage rings**
12:00-12:30	Camille Berthelot	**Detailed simulations for the next surrogate reaction experiment at the ESR storage ring**
12:30 – 14:00	*LUNCH*	
14:00 – 15:00	Claudia Lederer-Woods (online)	**Neutron Reactions in Stellar Nucleosynthesis**
15:00 – 16:00	Aaron Couture	**First Steps Towards Neutron-Induced Reactions in Inverse Kinematics**
16:00 – 16:30	*COFFEE BREAK*	
16:30 – 18:30	POSTER SESSION	
18:30	*DINNER*	

Program

Wednesday, 31 January 2024

08:00 – 09:00	*BREAKFAST*	
09:00 – 10:00	Holger Kreckel	**Molecular Astrophysics at the Cryogenic Storage Ring**
10:00 – 11:00	Sarah Naimi	**Advancing Precision Mass Measurements for Nuclear Astrophysics Experiments at RIKEN with the Rare-RI Ring**
11:00 – 11:30	*COFFEE BREAK*	
11:30 – 12:00	Zhuang Ge	**Mass measurements of N=Z nuclei and the vicinity with Rare-RI Ring in RIKEN for the study rp- and νp processes**
12:00 – 12:30	Andrew Ratkiewicz	**Indirect Constraints of Neutron-Induced Reactions**
12:30 – 14:00	*LUNCH*	
14:00 – 16:30	NucAR Session	
16:30 – 17:00	COFFEE BREAK	
17:00 – 18:00	Meng Wang	**Mass measurements of short-lived nuclides at CSRe**
18:00	*HERAEUS DINNER*	*(social event with cold & warm buffet and complimentary drinks)*

Program

Thursday, 01 February 2024

08:00 – 09:00	*BREAKFAST*	
09:00 – 10:00	Iris Dillmann	**The TRIUMF Storage Ring Project**
10:00 – 11:00	Daniel Bemmerer	**Underground nuclear astrophysics**
11:00 – 11:30	*COFFEE BREAK*	
11:30 – 12:00	Eliana Masha	**New direct measurements to constrain Big Bang Nucleosynthesis**
12:00 – 12:30	Konrad Schmidt	**Scientific opportunities of experiments with gas targets**
12:30 – 14:00	*LUNCH*	
14:00 – 15:00	Almudena Arcones	**Nucleosynthesis in core-collapse supernovae and neutron star mergers**
15:00 – 16:00	Manoel Couder	**The St. George and SECAR recoil separators**
16:00 – 16:30	COFFEE BREAK	
16:30 – 17:30	Thomas Davinson	**New charged particle detector systems for storage rings**
17:30 – 18:00	Bogusław Włoch	**Detector developments and technical aspects of the second NECTAR experiment**
18:00 – 18:30	David Leimbach	**Laser spectroscopy of negative ions at DESIREE**
18:30	*DINNER*	

Program

Friday, 02 February 2024

08:00 – 09:00	*BREAKFAST*	
09:00 – 10:00	Zsolt Podolyak	**Isomers in storage rings**
10:00– 11:00	Rudrajyoti Palit	**Reactions involving weakly bound stable isotopes using a hybrid gamma array at PLF and future possibilities**
11:00 – 11:30	*COFFEE BREAK*	
11:30 – 12:00	Timilehin Ogunbeku	**Total Absorption Spectroscopy at the FRIB Decay Station Initiator (FDSi)**
12:00 – 12:30	Heinrich Wilsenach	**Trap System for Measuring Neutron Capture Cross Section of Short-lived Isotopes**
12:30 – 13:00	**Closing and Discussion**	
13:00 – 14:00	*LUNCH*	

End of the seminar and departure