

The International Symposium on Nuclear Astrophysics (ISNA – 2023)

Manipal Academy of Higher Education, Manipal - 576104

October 30 – November 3, 2023

Venue: Sir M. V. Seminar Hall, MIT Campus, Manipal.

Tentative Program Schedule:

Arrival day : 29/10/2023

Monday, 30/10/2023		
08:30 - 09:30		Registration and Inauguration of ISNA - 2023
09:30 – 10:00	High Tea	
<i>Theme 1: Introduction to Nuclear Astrophysics</i>		
Chair: R. G. Pizzone, INFN-LNS, Italy		
<i>Time</i>	<i>Name of Speaker</i>	<i>Title</i>
10:00 – 11:00	Hendric Schatz, MSU USA	Open Questions in Nuclear Astrophysics (online)
11:00 – 12:30	F. Hammache IJClab – Orsay, France	Introduction to Experimental Nuclear Astrophysics (online)
12:30 – 13:00	Denise Piatti, Università degli Studi di Padova, Padova (Italy) & INFN, Padova	Laboratory for Underground Nuclear Astrophysics LUNA (online)
13:00 -14:00	Lunch Break	
<i>Theme 2: Big Bang and light element Nucleosynthesis</i>		
Chair : T. Sivarani, IIA, Bangalore, INDIA		
14:00 : 15:30	Carlos Bertulani, Texas A & M - Commerce, USA	Primordial Nucleosynthesis: An Overview
15:30 – 16:00	Andreas Korn, Uppsala University Sweden	The ups and downs of inferred cosmological lithium
16:00 – 16:30	Coffee/ Tea Break	
16:30 – 17:00	L. Lamia UNICT & INFN LNS, Italy	Nuclear reactions involving light elements & BBN

17:00 -18:00	M. Banibrata, IISc Bangalore, India	Nucleosynthesis in hot accretion flows around black holes
18:00 – 19:00	Evening Lecture by Prof. Amit Roy, IUAC New Delhi	Symmetry in Nature
Tuesday, 31/10/2023		
<i>Theme 3: Stellar Structure and Evolution</i>		
<i>Chair : Andreas Korn, Uppsala University, Sweden</i>		
9:00 – 9:30	Diego Vescovi, INAF, Italy	Stellar Evolution
9:30 – 10:00	T. Sivarani, IIA Bangalore, India	Stellar Archaeology in 2030s - reaching stars beyond the Milky Way
10:00 – 10:30	B. Eswar Reddy , IIA Bengaluru, India	Evolution of Light elements in Stars: A case of lithium and carbon in red giants.
10:30 – 11:00	Coffee/ Tea Break	
11:00 – 11:30	Aruna Goswami, IIA Bangalore, India	Nucleosynthesis in low-mass stars: shedding light on the cosmic origin of heavy elements
11:30 - 12:00	Benjamin Wehmeyer, University of Wroclaw, Poland	Galactic chemical Evolution with short lived radioactive isotopes
12:00 – 13:00	Young Researchers Session themes (5 slots of 12 minutes each)	Oral :1-5
13:00 - 14:00	Lunch Break	
<i>Theme 4: Observative measurements & direct experiments</i>		
<i>Chair : N. Madhavan, IUAC, New Delhi</i>		
14:00 – 14:30	D. Balabanski, ELI- NP, Romania	Waiting for gamma rays beams at ELI-NP
14:30 – 15:00	Subir Bhattacharya, BARC Mumbai, India	Importance of hadronic interactions in astrophysical environment
15:00 – 15:30	D. Bhattacharya, MAHE, Manipal	Very high energy emission from Sun and beyond
15:30 – 16:00	Coffee/ Tea Break	

16:00 – 17:00	R. J. deBoer, Notra Dame University & JINA, USA	R-matrix calculations and applications
17:00 – 18:00	Young Researchers Session themes (5 slots of 12 minutes each)	Oral: 6-10
19:00		Conference dinner (Hotel Fortune Inn Valley View)
Wednesday, 01/11/2023		
<i>Theme 5 : Explosive Nucleosynthesis and related measurement</i>		
<i>Chair : Carlos Bertulani, Texas A & M, USA</i>		
9:00 – 10:30	Jordi Jose, UPC, Spain	Explosive Nucleosynthesis: astrophysical introduction
10:30 – 11:00	Marco La Cognata INFN LNS	Introduction to Indirect Methods in Nuclear Astrophysics
11:00 – 11:30	Cofee/ Tea Break	
11:30 – 12:00	Shubhchintak, Punjabi University, Patiala, India	Theoretical applications to nuclear astrophysics
12:00 – 12:30	T. K. Jha, BITS Pilani, Goa Campus	Mass Constraints and Composition of Neutron Stars
12:30 – 13:00	Rupak Roy, MAHE	Explosive nucleosynthesis and beyond: Energy generation in supernovae from massive progenitors
13:00 - 14:00	Lunch Break	
<i>Theme 6: Explosive Nucleosynthesis and related measurement</i>		
<i>Chair : Marco la Cognata, INFN-LNS, Italy</i>		
14:00 – 14:30	Hidetoshi Yamaguchi, Univ of Tokyo, Japan	Nuclear Astrophysics with Exotic Beams
14:30 – 15:00	Bastin Beyhan, GANIL	New Judicious Experiments for Dark sectors Investigations
15:00 – 15:30	Giovanni Luca Guardo, INFN-LNS, Italy	Shedding light on $^{17}\text{O}(n,\alpha)^{14}\text{C}$ reaction at astrophysical energies with Trojan Horse Method and Asymptotic Normalization Coefficient
15:30 – 16:00	Cofee/ Tea Break	
16:00 – 17:00	Young Researchers Session themes (5	Oral: 11-15

	slots of 12 minutes each)	
17:30 – 18:30	Public Lecture by Dr. Vinod Kumar, IN-SPACe, Bengaluru	India's Space Program Journey: Past, Present and Future
Thursday, 02/11/2023		
Theme 7: Nucleosynthesis beyond iron peak		
Chair : J. Jose, UPC Barcelona, Spain		
9:00 – 9:30	Diego Vescovi, INAF, Teramo, Italy	s - Processing in stars
9:30 – 10:00	Hendric Schatz, MSU USA	Nuclear and Astrophysics of the Rapid Neutron Capture Process (online)
10:00 – 10:30	G. Tagliente, INFN, Italy	The n_TOF facility at CERN
10:30 – 11:00	Coffee/ Tea Break	
Theme 8: Nuclear Astrophysics in India: Facilities & Experiments		
Chair: S. V. Suryanarayana, MCNS, MAHE		
11:00 – 11:30	Chinmay Basu, SINP Kolkata, India	FRENA at SINP and possible physics programs, Kolkata
11:30 -12:00	S. Santra, BARC Mumbai, India	Effect of up-scattering of light particles on ^{12}C production at extreme stellar conditions
12:00 – 12:30	Gopal Mukherjee, VECC, India	Present and Upcoming Facilities for Nuclear Astrophysics Experiments at VECC
12:30 – 13:00	D. Gupta, Bose Institute, India	Nuclear Astrophysics at Bose Institute
13:00 – 14:00	Lunch Break	Poster session
14:00 – 15:00		Valedictory function

Friday, 03/11/2023

9:30 – 10:30		Open discussion (Invited) at MCNS, MAHE

Departure Day: 04/11/2023