Nuclear Physics in Astrophysics XI

Monday 16 September 2024

Plenary Session: A: Neutron capture processes (1). & The early Universe (1). - Schönfeld-Hörsaal BAR/SCHÖ/E (09:30 - 10:50)

-Conveners: Eliana Masha

time	[id] title	presenter
09:30	[204] Finding metal-poor r-process stars to understand heavy element nucleosynthesis	Prof. FREBEL, Anna
09:55	[72] The intermediate neutron capture process in AGB stars	CHOPLIN, Arthur
10:20	[147] Stellar investigation at ultra iron-poor regime	CAFFAU, Elisabetta
10:35	[34] Nitrogen and Fluorine production in the early Universe	TSIATSIOU, Sophie

Plenary Session: B: Neutron capture processes (2). & Neutron stars (1). - Schönfeld-Hörsaal BAR/SCHÖ/E (11:35 - 12:40)

-Conveners: Cristina Chiappini

time	[id] title	presenter
11:35	[83] Neutron-capture measurements for s-process nucleosynthesis	DOMINGO PARDO, Cesar
12:00	[6] Latest news and future prospects on measurements of neutron star masses and radii	GUILLOT, Sebastien
12:25	[30] Nucleosynthesis of ^{60}Fe via indirect neutron-capture reaction studies	SPYROU, Artemis

Plenary Session: C: Hydrostatic stellar burning (1). - Schönfeld-Hörsaal BAR/SCHÖ/E (14:10 - 15:40)

-Conveners: Alessandra Fantoni

time	[id] title	presenter
14:10	[201] Nucleosynthesis and wind yields of Very Massive Stars	Dr HIGGINS, Erin
14:35	[17] Stellar abundances with 3D model atmospheres	AMARSI, Anish
15:00	[15] Nuclear astrophysics at LUNA and LUNA-MV	RAPAGNANI, David
15:25	[14] New results on proton captures on neon isotopes at LUNA	CACIOLLI, Antonio

Plenary Session: D: Dense matter (1). & New tools and techniques (1). - Schönfeld-Hörsaal BAR/SCHÖ/E (16:25 - 18:10)

-Conveners: Alison Laird

time	[id] title	presenter
16:25	[42] Nuclear physics constraints on the equation of state of dense matter	FANTINA, Anthea
16:50	[120] Constraints on Nucleosynthesis Processes through Measurements in the Nuclear Quasi-Continuum	WIEDEKING, Mathis
17:15	[175] Trojan Horse method for nuclear astrophysics	SPARTÀ, Roberta

17:40	[44] The effect of dark matter on compact stars and constraints we put on strongly interacting matter at high densities	SAGUN, Violetta
17:55	[18] Influence of Density Dependence of Symmetry Energy on Astrophysical S-Factor in Heavy-Ion Fusion Reactions	SAXENA, G.

Tuesday 17 September 2024

Plenary Session: E: Explosive processes (1). - Schönfeld-Hörsaal BAR/SCHÖ/E (09:00 - 10:40)

-Conveners: Anton Wallner

time	[id] title	presenter
09:00	[85] Stellar nucleosynthesis in explosive environments	JAYATISSA, Heshani
09:25	[47] Insight to the Explosion Mechanism of Core Collapse Supernovae Through γ-ray Spectroscopy of ^{46}Cr	COUSINS, Chris
09:40	[89] Electron-capture supernovae - Thermonuclear explosion or gravitational collapse? - The fate of sAGB stars on a knife's edge	HOLAS, Alexander
09:55	[99] Unraveling the Influence of Magnetic Fields on the Nucleosynthesis in Magnetorotational Supernovae	REICHERT, Moritz
10:10	[105] Uncertainties in explosive nucleosynthesis in core-collapse supernovae from Monte Carlo variation of reaction rates	NISHIMURA, Nobuya
10:25	[109] Simulations of thermonuclear astrophysical transients	ROEPKE, Friedrich

Plenary Session: F: New tools and techniques (2). & Big Bang Nucleosynthesis (1). - Schönfeld-Hörsaal BAR/SCHÖ/E (11:20 - 13:05)

-Conveners: David Blaschke

time	[id] title	presenter
11:20	[60] The Compton Spectrometer and Imager: Science Goals and Mission Status	TOMSICK, John
11:45	[199] The German Center for Astrophysics (DZA)	Prof. HASINGER, Günther
12:10	[10] Reactions with stored nuclei with CARME@CRYRING	BRUNO, Carlo
12:35	[127] The study of the ^{7}Li(γ,α)^{3}H reaction at energies below 6 MeV at HIγS	Ms KUNCSER, Ioana
12:50	[141] Measurement of the ^{3}He(α,γ)^{7}Be γ-ray angular distribution	Dr TURKAT, Steffen

Plenary Session: G: Cosmochemistry and Galactic Chemical Evolution (1). - Schönfeld-Hörsaal BAR/SCHÖ/E (14:15 - 15:35)

-Conveners: Günther Hasinger

time	[id] title	presenter
14:15	[98] Signatures of stellar nucleosynthesis in meteorites	TRAPPITSCH, Reto
14:40	[205] Impact of Stellar Yields on Galactic Chemical Evolution	PIGNATARI, Marco
15:05	[65] Galactic chemical Evolution with short lived radioactive isotopes	WEHMEYER, Benjamin
15:20	[148] Search for neutron stars from the supernovae that delivered 60-Fe to Earth to constrain supernova nucleosynthesis	Mr MICHEL, Kai-Uwe

Plenary Session: H: Neutron capture processes (3). - Schönfeld-Hörsaal BAR/SCHÖ/E (16:15 - 17:50)

-Conveners: Raphael Hirschi

time	[id] title	presenter

16:15	[92] Nuclear Model and Parameter Uncertainties on Nucleosynthesis: Insights into the i-Process in Early AGB Stars and r-Process in Neutron Star Mergers	MARTINET, Sébastien
16:40	[61] Origin of the heavy elements	ARCONES, Almudena
17:05	[20] The R-Process Alliance: Hunting for Gold (or, maybe just, uranium)	HANSEN, Terese
17:20	[57] New half-lives measurements for r-process in A$\sim$225 Po-Fr nuclei	POLETTINI, Marta
17:35	[171] The astrophysical ^{140}Ce(n,γ)^{141}Ce reaction: present and future	FRIEDMAN, Moshe

Wednesday 18 September 2024

Plenary Session: I: Neutron capture processes (4). & New tools and techniques (3). - Schönfeld-Hörsaal BAR/SCHÖ/E (09:00 - 10:50)

-Conveners: Beatriz Jurado

time	[id] title	presenter
09:00	[59] Neutron Sources in Stars	DEBOER, Richard
09:25	[68] 2D chemical evolution model of ^{26}Al and ^{60}Fe	VASINI, Arianna
09:40	[79] Neutron capture and total cross-section measurements on ^{94,95,96}Mo at n$_$TOF and GELINA	MUCCIOLA, Riccardo
09:55	[180] The new grid of CO5BOLD 3D hydrodynamical red giant model atmospheres and its application to globular cluster abundance estimates	KLEVAS, Jonas
10:10	[22] Indirect experimental approaches to charged particle reactions in astrophysics	ADSLEY, Philip
10:35	[19] ELI Silicon Strip Array (ELISSA) at ELI-NP	PAI, Haridas

Plenary Session: J: New tools and techniques (4). - Schönfeld-Hörsaal BAR/SCHÖ/E (11:20 - 12:55)

-Conveners: Almudena Arcones

time	[id] title	presenter
11:20	[53] Surrogate reactions in inverse kinematics at heavy-ion storage rings	JURADO APRUZZESE, Beatriz
11:45	[169] Detection of time-resolved influxes of supernova-produced ^{60}Fe and r-process ^{244}Pu onto Earth over the last 10$\,$Myr	Dr KOLL, Dominik
12:10	[43] BETAFLOWNET: A Practical Nuclear Network Geared Towards Coupling with Hydrodynamics Simulations	GUERCILENA, Federico Maria
12:25	[162] Development of the COREA detector system for the measurement of the ^{12}C$(\alpha,\gamma)^{16}$O reactions	AHN, Jung Keun
12:40	[197] Nuclear Astrophysics Masterclasses - Fingerprints of the Stars	NITSCHE, Hannes

Thursday 19 September 2024

Plenary Session: K: Cosmochemistry and Galactic Chemical Evolution (2). & Gravitational waves (1). - Schönfeld-Hörsaal BAR/SCHÖ/E (09:00 - 10:50)

-Conveners: Artemis Spyrou

time	[id] title	presenter
09:00	[7] Chemically pristine stars in the Milky Way	STARKENBURG, Else
09:25	[203] Probing high density physics in the gravitational wave astronomy era	HASKELL, Bryn
09:50	[54] Chemical evolution of neutron-capture elements across the Milky Way	MOLERO, Marta
10:05	[64] The contribution of massive stars to the chemical evolution of the Galaxy	RIZZUTI, Federico
10:20	[126] Nuclear Astrophysics meets Asteroseismology	BRINKMAN, Hannah
10:35	[142] A recipe for using binary stellar yields in galactic chemical evolution calculations	KEMP, Alex

Plenary Session: L: Neutron stars (2). & Explosive processes (2). - Schönfeld-Hörsaal BAR/SCHÖ/E (11:20 - 13:10)

-Conveners: Jenny Feige

time	[id] title	presenter
11:20	[51] Atomic cascade computations for astrophysics	FRITZSCHE, Stephan
11:45	[9] Combining nuclear physics and multi-messenger observations	DIETRICH, Tim
12:10	[28] Production of p-nuclei from r-process seeds: the νr-process	XIONG, Zewei
12:25	[62] Rare nuclei production in core-collapse supernovae: the γ-process nucleosynthesis	ROBERTI, Lorenzo
12:40	[74] Collective neutrino oscillations and the heavy-element nucleosynthesis in supernova	WANG, Xilu
12:55	[95] Study of the alpha-nucleus optical potential in the mass range relevant to the gamma-process nucleosynthesis	GYÜRKY, György

Plenary Session: M: Neutron star (3). & New tools and techniques (5). - Schönfeld-Hörsaal BAR/SCHÖ/E (14:10 - 15:30)

-Conveners: François de Oliveira

time	[id] title	presenter
14:10	[187] Neutron star mergers and their nucleosynthesis	Prof. ROSSWOG, Stephan
14:35	[196] Recent Studies of Astrophysical Reactions at the TRIUMF-ISAC Facility	Dr WILLIAMS, Matthew
15:00	[101] Nuclear physics inputs for neutron stars and nucleosynthesis simulations	GRAMS, Guilherme
15:15	[117] Elements formation in radiation-hydrodynamics simulations of kilonovae	MAGISTRELLI, Fabio

Plenary Session: N: Neutron stars (4). & Explosive processes (3). - Schönfeld-Hörsaal BAR/SCHÖ/E (16:00 - 17:50)

-Conveners: Zsolt Podolyák

time	[id] title	presenter

16:00	[206] Interferometric gravitational wave detection - a (quantum) metrological challenge	HEURS, Michèle
16:25	[188] Neutron-star merger simulations including all phases of matter ejection	JUST, Oliver
16:40	[124] Multi-dimensional kilonova radiative transfer simulations	COLLINS, Christine
16:55	[195] Studying Explosive Binary Systems with Nuclear Spectroscopy	LOTAY, Gavin
17:20	[159] Experimental study of the ^{15}O(α,γ)^{19}Ne reaction for understanding type I X-ray bursts	DE SÉRÉVILLE, Nicolas
17:35	[182] The ^{16}O(p,α)^{13}N reaction in type 1a supernovae	LAIRD, Alison

Friday 20 September 2024

Plenary Session: O: Hydrostatic stellar burning (2). - Schönfeld-Hörsaal BAR/SCHÖ/E (09:00 - 10:50)

-Conveners: Alba Formicola

time	[id] title	presenter
09:00	[198] Unraveling the mysteries of Carbon-Enriched Metal-Poor (CEMP) stars	Prof. VAN ECK, Sophie
09:25	[192] Recent results for the ^{12,13}C(p,γ)^{13,14}N reaction cross section in a wide energy range at LUNA and at Felsenkeller laboratory	PIATTI, Denise
09:50	[119] Coincidence measurements of fusion reactions involving carbon and oxygen with the high-precision STELlar LAboratory (STELLA)	BONHOMME, Aurelie
10:05	[134] Lifetime measurement of astrophysically relevant 6.793 MeV state ^{15}O	PILOTTO, Elia
10:20	[179] Remeasuring of the γ-decay branching ratio of the Hoyle State	PAULSEN, Wanja
10:35	[154] Jet and Extended Gas Target System for the Felsenkeller Underground Laboratory	YADAV, Anup

Plenary Session: P: Explosive processes (4). & Neutron Capture processes (5). - Schönfeld-Hörsaal BAR/SCHÖ/E (11:20 - 13:00)

-Conveners: György Gyürky

time	[id] title	presenter
11:20	[39] Proton-Induced Reactions at the ESR Storage Ring	GLORIUS, Jan
11:45	[110] Weak rp-process nucleosynthesis in primordial novae explosions	PSALTIS, Thanassis
12:00	[97] Lifetime measurement of the dominant ^{22}Na (p, γ) ^{23}Mg resonance in novae	Dr WAGNER, Louis
12:15	[33] Magnetic mixing in AGB stars and branchings in the s-process	VESCOVI, Diego
12:30	[136] Probing the third r-process peak with high-resolution spectra	ALENCASTRO PULS, Arthur
12:45	[165] Numerical simulations of dynamic i-process nucleosynthesis in stars constrained by nuclear physics experiments and astrophysical observations	HERWIG, Falk