### **Nuclear Physics in Astrophysics XI**

# Monday 16 September 2024

#### Poster Flashes: A - Schönfeld-Hörsaal BAR/SCHÖ/E (10:50 - 11:05)

time	[id] title	presenter
10:50	[212] Emulator for the r-process and its energy generation in neutron-star merger remnants	XIONG, Zewei
10:51	[218] Nuclear pasta in neutron stars	SHCHECHILIN, Nikolai
10:52	[219] A novel numerical library for neutrino-matter interaction rates in binary neutron star mergers	CHIESA, Leonardo
10:53	[220] CERES survey: chemical abundances of neutron capture elements up to Eu	LOMBARDO, Linda
10:54	[221] The SHADES Project: Underground Measurement of the Low Energy \${}^{22}\$Ne(\$\alpha\$,n)\${}^{25}\$Mg Cross Section	CHILLERY, Thomas
10:55	[222] The New Deep-underground Direct Measurement of \${}^{22}\mathrm{Ne}(\alpha,\gamma){}^{26}\mathrm{Mg}\$ with EAS\$\gamma\$: a feasibility study	MERCOGLIANO, Daniela
10:56	[223] Complete r-Process Survey	KUSKE, Jan
10:57	[224] Experimental study of the \${}^{29}\$Si(p,\$\gamma\$)\${}^{30}\$P reaction for classical nova nucleosynthesis	MÁTYUS, Zsolt
10:58	[226] Nucleosynthesis and Kilonova in Neutron Star Mergers: Impact of Nuclear Matter Properties	RICIGLIANO, Giacomo
10:59	[227] Low energy measurement of the \${}^{96}\$Zr(\$\alpha\$,n)\${}^{99}\$Mo, \${}^{100}\$Mo(\$\alpha\$,n)\${}^{103}\$Ru and \${}^{86}\$Kr(\$\alpha\$,n)\${}^{89}\$Sr reactions for studying the weak r-process nucleosynthesis	KOVÁCS, Sándor
11:00	[230] Constraining the \${}^{69}\$Zn Neutron Capture Cross-Section via the Beta-Oslo Method	RONNING, Eleanor
11:01	[231] Core-collapse supernova yields in galactic chemical evolution	JOST, Finia
11:02	[248] Measurement of neutron capture cross section of \$^{30}\$Si at n_TOF	SPELTA, Michele
11:03	[249] Measurement of neutron capture cross section of \$^{64}\$Ni at n_TOF	SPELTA, Michele
11:04	[297] Using slow ions in accelerator mass spectrometry for experimental nuclear astrophysics	WIESER, Alexander

#### Poster Flashes: B - Schönfeld-Hörsaal BAR/SCHÖ/E (12:40 - 12:55)

time	[id] title	presenter
	[254] Repairing \$^{205}\$Pb as an early Solar System chronometer by measuring the bound-state beta decay of \$^{205}\$Tl	Dr DILLMANN, Iris
	[250] Weak rates determining the production of the \$^{205}\$Pb cosmochronometer in AGB stars	NEFF, Thomas
12:42	[235] Bayesian study of quasi-universal relations for neutron stars normal modes	MONTEFUSCO, Gabriele

12:43	[236] Alpha induced reactions on \$^{124}\$Xe for the astrophysical p-process	TÓTH, Ákos
12:44	[238] Late time behaviour of the kilonova light curves	Dr ROJAS-GAMBOA, Diego Ferney
12:45	[290] Incorporating thermal effects into alpha decay half-life calculations for nucleosynthesis investigations	ROJAS GAMBOA, Diego Ferney
12:46	[239] Contribution of individual astrophysical events to chemical evolution of dwarf galaxies	FUKAGAWA, Nao
12:47	[241] What is the Final Fate of Intermediate Mass Stars: Thermonuclear or Core-Collapse Supernova?	CHRISTIANS, Paul
12:48	[243] Experimental cross section of the \$^3\$He(\$\alpha\$,\$\gamma\$)\$^7\$Be reaction around \$E_\mathrm{cm}=3\mathrm{MeV}\$	Dr SZÜCS, Tamás
12:49	[246] Half-life and $\beta$ -delayed neutron measurements of neutron-rich nuclei near N=126 at RIBF	YEUNG, Tik Tsun
12:50	[251] Shedding light on the brightest supernovae	FIORE, Achille
12:51	[255] Microscopic fission collective inertias for astrophysical applications	Mr COVALAM VIJAYAKUMAR, Nithish Kumar
12:52	[256] The SOCIAL project: measurement of the \${}^{14}\mathrm{N}(p,\gamma){}^{15}\mathrm{O}\$ cross section	Dr GOSTA, Giulia
12:53	[265] The deep underground "Bellotti Ion Beam Facility" at the Gran Sasso National Laboratories	JUNKER, Matthias Bernhard
12:54	[311] Development of the Charge-Exchange Oslo Method and Application Towards Constraining Reaction Rates for Nucleosynthesis of Cosmochronometer \${}^{92}\mathrm{Nb}\$	PATHIRANA, Neshad D.

#### Poster Flashes: C - Schönfeld-Hörsaal BAR/SCHÖ/E (15:40 - 15:55)

time	[id] title	presenter
15:40	[213] Re-visiting the role of short-range correlations on neutron star properties	VENNETI, Anagh
15:41	[214] Unraveling the global behavior of equation of state by explicit finite nuclei constraints	VENNETI, Anagh
	[244] Resolving the discrepancies in the spectroscopy of \${}^{39}\$Ca for the \$^{38}\$K(\$p\$,\$\gamma\$)\$^{39}\$Ca reaction	BINDA, Sifundo
15:44	[245] Experimental studies on the optical spectrum of the heavy r-process nuclide Cf-254 and its neighbors	Mr BERNDT, Sebastian
15:45	[257] Exploring late stages of massive stars evolution in the context of new precise nuclear reaction rates	DUMONT, Thibaut
15:46	[259] 321D modelling of the interplay between turbulence and nuclear reactions in massive stars	HIRSCHI, Raphael
15:47	[260] New half-lives and \$\beta\$-delayed neutron branchings for Ba to Nd nuclei (A\$\sim\$160) for r-process rare-earth nucleosynthesis	PALLAS I SOLIS, Max
	[262] Investigating the Effects of Convective Boundary Mixing on Massive Stars at Low Z	WHITEHEAD, Emily
15:49	[264] Multimessenger emission of Accretion-Induced Collapse events	LONGO MICCHI, Luis Felipe
15:50	[266] S-Process Nucleosynthesis in and from AGB Stars	DIMOFF, Alexander Jordan
15:51	[267] Fully calibrated lanthanide atomic data for 3D kilonova modeling	FLOERS, Andreas

	[268] The quest for detection of \$^{182}\$Hf in Earth's archives - new techniques in Accelerator Mass Spectrometry for the search of live nucleosynthesis signatures	MARTSCHINI, Martin
	[270] Results of cross-section measurements of proton-capture reactions on stable Rubidium isotopes	Ms WILDEN, Svenja
15:54	[271] Search for r-process Pu-244 in the K-Pg boundary layer	FICHTER, Sebastian

#### Poster Flashes: D - Schönfeld-Hörsaal BAR/SCHÖ/E (18:10 - 18:27)

time	[id] title	presenter
18:10	[216] First evaluation of the \$^{17}\$O(p,\$\gamma\$)\$^{18}\$F 65 keV resonance strength by direct measurement at LUNA	GESUE', Riccardo Maria
18:11	[301] The direct determination of the cross section of the 12C + 12C reaction at astrophysical energies	GESUE', Riccardo Maria
18:12	[275] Understanding 22Na cosmic abundance	DE OLIVEIRA SANTOS, Francois
18:13	[277] Stelle Sulla Terra: The advantages of making science accessible	CACIOLLI, Antonio
18:14	[278] Comparing Radiative Transfer Methods for Kilonovae	LECK, Gerrit
18:15	[281] Homogeneous analysis of 10 highly r-process enhanced stars	RACCA, Mila
18:16	[282] Measurement of \${}^{26}\mathrm{Al}(n,p)\$ and \${}^{26}\mathrm{Al}(n,\alpha)\$ Cross Sections in Supernova Temperatures	Mr GREEN, Akiva
18:17	[283] Probing the deconfinement phase transition in hybrid stars with the fastest-spinning millisecond pulsars	GARTLEIN, Christoph
18:18	[284] Cosmogenic and Interstellar Radionuclides in Lunar Soil	ZWICKEL, Sebastian
18:19	[286] Mass measurements of neutron-rich nuclides at the N=126 shell with the FRS Ion Catcher	Ms MAHAJAN, Kriti
18:20	[288] Neutron-capture in the wild: finding r-process enhanced metal-poor stars in the Milky Way and beyond	PLACCO, Vinicius
18:21	[291] \$^{12}\mathrm{C}(\alpha,\gamma)^{16}\mathrm{O}\$ cross section measurements with the ERNA separator	SANTONASTASO, Claudio
18:22	[293] Search for Supernova-produced \$^{60}\$Fe in Antarctica Tracing the Local Interstellar Cloud	ROLOFS, Annabel
18:23	[295] NG-Trap: System for Measuring Neutron Capture Cross-sections of Short-lived Fission Fragments	WILSENACH, Heinrich
18:24	[319] Impact of \${}^{56}\$Ni production in neutrino-driven winds from long-lived binary neutron star merger remnants	JACOBI, Maximilian
18:25	[237] Constraining the Astrophysical \$\gamma\$ Process: Cross Section Measurements of (p,\$\gamma\$) Reactions in Inverse Kinematics	TSANTIRI, Artemis
18:26	[253] Variety of disk wind-driven explosions in massive rotating stars	CROSATO MENEGAZZI, Ludovica

## **Tuesday 17 September 2024**

### Poster Flashes: E - Schönfeld-Hörsaal BAR/SCHÖ/E (10:40 - 10:50)

time	[id] title	presenter
10:41	[300] Dipole strength in the well-deformed nucleus \${}^{154}\$Sm in the Pygmy Resonance energy-region via \$(\gamma,\gamma^\prime)\$ reactions	Dr BENOUARET, Nadia
10:42	[294] Using Cool-Bottom Processing in RGB and AGB stars to explain Isotopic Ratios in Presolar Grains	COCKSHUTT, Maeve
10:43	[261] The \$^{140}\$Ce(n,\$\gamma\$) cross section measured at n_TOF and its astrophysical implications	Dr SAHOO, Rudra N.
10:44	[299] The i-process in AGB stars with Overshoot	REMPLE, Bryce
10:45	[302] The 12C+12C reaction at the Bellotti Ion Beam Facility - The setup development	Dr TURKAT, Steffen
10:46	[305] Exploring Supernova signatures in time-resolved records from the Atacama Desert, Chile	FEIGE, Jenny
10:47	[309] Early onset of color-superconducting quark matter in neutron stars	IVANYTSKYI, Oleksii
10:48	[315] Investigation of excited states in \$^{15}\$O at AGATA and Felsenkeller	OSSWALD, Max