



THE 17TH INTERNATIONAL SYMPOSIUM ON ORIGIN OF MATTER AND EVOLUTION OF GALAXIES

Chengdu, China
8-13 Sep. 2024



-----Notes at the beginning-----

About Locations:

(1) Main venue: Rose Banquet Hall—玫瑰宴会厅@6F

(2) Breakfast and lunch: Provence Western Restaurant—普罗旺斯西餐厅@1F

(3) Reception (September 7): Provence Western Restaurant—普罗旺斯西餐厅@1F

(4) The IAC meeting (September 9): Peony—牡丹@3F

(5) Banquet (September 10): Taoyuan Ballroom D—桃源厅D@1F

Saturday, September 7, 2024

10:00-20:00	Registration
18:30-22:00	Reception (Provence Western Restaurant—普罗旺斯西餐厅@1F)

Sunday, September 8, 2024

9:00-9:20	Local host opening	LIU, Weiping
Session 1 Chair: KAJINO, Toshitaka		
9:20-9:45	<i>s</i> -process related measurements at the deep underground Gran Sasso National Laboratory	BEST, Andreas
9:45-10:10	Progress of underground nuclear astrophysics JUNA experiments	LIU, Weiping
10:10-10:35	New results from the LUNA collaboration at the Bellotti Ion Beam Facility	COMPAGNUCCI, Alessandro
10:35-11:10	Group Photo (Beside the fountain at the hotel entrance) & Break	
Session 2 Chair: HAHN, Kevin Insik		
11:10-11:35	Origin of <i>r</i> - and <i>nu</i> -process elements in cosmic evolution and nuclear physics	KAJINO, Toshitaka
11:35-12:00	Relativistic density functional theory and the origin of the elements	MENG, Jie
12:00-12:15	Reduction of ^{146}Sm - ^{142}Nd chronology in the early solar system	QIAN, Yibin
12:15-13:30	Lunch	
Session 3 Chair: HEGER, Alexander		
13:30-13:55	Jiangmen Underground Neutrino Observatory	XU, Benda
13:55-14:20	Underground nuclear astrophysics experiments: Status and Future	CIANI, Giovanni Francesco
14:20-14:45	Mystery of Calcium production in the first generation stars	HE, Jianjun
14:45-15:00	Measurement of the $^{18}\text{O}(\alpha,\gamma)^{22}\text{Ne}$ reaction rate at JUNA	SU, Jun
15:00-15:15	Deep underground measurement of the $^{12}\text{C}(\alpha,\gamma)^{16}\text{O}$ reaction at JUNA	SHEN, Yangping
15:15-15:30	PandaX Dark Matter and Neutrino Physics Program	HAN, Ke
Session 4 Chair: WU, Mengru		
15:30-15:45	Deep learning for nuclear masses in deformed relativistic Hartree-Bogoliubov theory in continuum	CHOI, Soonchul
15:45-16:00	High Energy Neutrinos from Binary Neutron Star Mergers and Rare Core-Collapse Supernovae	GUO, Gang
16:00-16:20	Break	
Session 5 Chair: MENG, Jie		
16:20-16:45	Equation of state of dense matter from multi-messenger observations of neutron stars	LI, Ang
16:45-17:10	Pulsars Discovered by FAST	HAN, JinLin
17:10-17:25	Nuclear β -decay half-life and its impact on <i>r</i> -process nucleosynthesis	NIU, Yifei
17:25-17:40	Theoretical descriptions of nuclear masses and β -decay half-lives in the <i>r</i> -process studies	NIU, Zhongming
17:40-17:55	Effective lifetime of potential waiting-point ^{68}Se in <i>rp</i> -process	XU, Xing
17:55-18:10	Conceptual design of a neutron detector for (α,n) cross section Measurement	CHEN, Jianqi
18:10-18:25	Direct reaction studies and opportunities in astrophysics	CHEN, Jie

Monday, September 9, 2024

Session 1 Chair: HE, Jianjun		
9:00-9:25	Explosive Nucleosynthesis in Core-collapse Type II Supernovae: Constraints from isotopic compositions of presolar supernova grains	LIU, Nan
9:25-9:50	Recent advances in the modeling and nucleosynthesis of classical novae and X-ray bursts	JOSE, Jordi
9:50-10:15	${}^7\text{Be}$ electron and proton capture in astrophysical conditions	GIALANELLA, Lucio
10:15-10:40	The ${}^{12}\text{C}+{}^{12}\text{C}$ fusion reaction at stellar energies	TANG, Xiaodong
10:40-11:00	Break	
Session 2 Chair: LI, Di		
11:00-11:25	Cosmic radioactivities and gas dynamics in the Milky Way	DIEHL, Roland
11:25-11:50	Radio observations of fast variations in microquasars	WANG, Wei
11:50-12:05	Half-life of the one-proton emitter ${}^{149}\text{Lu}$ with microscopic description of nuclear deformation	ZHANG, Shisheng
12:05-13:30	Lunch	
Session 3 Chair: NIU, Yifei		
13:30-13:55	Neutrino Oscillations and Nucleosynthesis of Heavy Elements	WU, Mengru
13:55-14:10	Improved proton capture reaction rates in the rp -process	HOU, Suqing
14:10-14:25	Stellar weak-interaction rates of nuclei by angular-momentum projection theory	WANG, Longjun
14:25-14:40	r -process Nucleosynthesis in the Common Envelop Jet Supernovae	JIN, Shilun
14:40-14:55	Radiative α capture on ${}^{12}\text{C}$ in cluster effective field theory	ANDO, Shung-Ichi
Session 4 Chair: JOSE, Jordi		
14:55-15:10	Calibrated Atomic Data and 3D Radiative Transfer Modelling of Kilonova	FLOERS, Andreas
15:10-15:25	The impact of supernova ejecta on their companion stars and pollution of the synthesized elements at the companion surface	LIU, Zhengwei
15:25-15:40	Two-flavor color superconducting quark stars may not exist	YUAN, Wenli
15:40-15:55	An approach to constrain neutron-star structure from Clocked bursters	DOHI, Akira
Session 5 Chair: DIEHL, Roland		
15:55-16:20	Dynamic Universe: from FAST to Cosmic Antennae (CA)	LI, Di
16:20-16:45	Lithium Evolution of Giant Stars Observed by LAMOST and Kepler	SHI, Jianrong
16:45-17:10	Exploring the Milky Way with LAMOST Survey	LI, Haining
17:10-17:25	Astrophysical studies with JUNO	LI, Yufeng
Session 6 (poster presentation) Chair: TANG, Xiaodong		
17:25-17:26	Thermonuclear ${}^{28}\text{P}(p,\gamma){}^{29}\text{S}$ reaction rate and astrophysical implication in ONe nova explosion	LIU, Jinbo
17:26-17:27	Thermonuclear reaction rate of ${}^{57}\text{Cu}(p,\gamma){}^{58}\text{Zn}$ in rp -process	ZHANG, Min
17:27-17:28	Neutron-capture elements in open clusters	FUA, Sugimura
17:28-17:29	Observations of r -process elements including thorium in the galactic disk and halo stars	FURUTSUKA, Kurumi
17:29-17:30	A new strong Urca pair ${}^{63}\text{Fe}$ - ${}^{63}\text{Mn}$ and its impact on the thermal evolution and superburst ignition of neutron star	HUANG, Hao
17:30-17:31	Data analysis of the ${}^{26}\text{Si}(\alpha,p){}^{29}\text{P}$ reaction for the nucleosynthesis in the X-ray bursts	OKAWA, Kodai

17:31-17:32	Sensitivity study on the final abundance pattern of the r -process due to fission barrier uncertainties	JIANG, Bowen
17:32-17:33	In situ measurement method of positron annihilation in nuclear astrophysical experiments	LIN, Shen
17:33-17:34	Direct measurement of the $^{15}\text{N}(p,\gamma)^{16}\text{O}$ cross sections at low energy	WANG, Lin
17:34-17:35	Research on deuterium-deuterium reaction in laser-driven plasma environment below 100 keV	XI, Xiaofeng
17:35-17:36	Studying subthreshold resonance using the Trojan Horse Method	WANG, Xuejian
17:36-17:37	Measurement of ^{12}C neutron inelastic scattering cross section using MAIKo + active target Time Projection Chamber	LIN, Yifan
17:37-17:38	The origin of extremely metal-poor star with weak r -process signature	OKADA, Hiroko
17:38-17:39	Synthesis of Sc, Ti, and V in core-collapse supernovae toward constraining the explosion mechanism	HATAMI, Ryota
17:39-17:40	Revised reaction rate for the astrophysical reaction $^{18}\text{O}(p,\alpha)^{15}\text{N}$ via a global R -matrix analysis	LI, Yiyang
17:40-17:41	Nuclear mass predictions with machine-learning and impacts on r -process	WU, Xinhui
17:41-17:42	The study of single-particle strength quenching effect and nuclear astrophysical $^{14}\text{C}(n,\gamma)^{15}\text{C}$ reaction using single-neutron-removal transfer reactions of ^{15}C	JIANG, Yuchen
17:42-17:43	Studying the $^{12}\text{C}+^{12}\text{C}$ fusion reaction at astrophysical energies using HOPG target	WANG, Shuo
17:43-17:44	Development of the pulsing beam technique to suppress the natural background in China JinPing underground Laboratory	FAN, Yihua
17:44-17:45	Direct measurement of the $^{12}\text{C}(^{12}\text{C},\alpha_0)^{20}\text{Ne}$ cross section at stellar energies	LI, Yunzhen
17:45-17:46	Development of enriched ^{12}C CVD diamond targets for astrophysical $^{12}\text{C}(\alpha,\gamma)^{16}\text{O}$ reaction measurements	DONG, Jingyu
17:46-17:47	Influence of neutrino-nuclear reactions on the abundance of ^{74}Se	SONG, Na
17:47-17:48	Electron screening potential calculated by a new theoretical model	LI, Jiayinghao
17:48-17:49	Study of the structural properties of atomic nuclei and neutron stars using elastic scattering angular distributions	ZHANG, Zhicheng
17:49-17:50	Average lifetime of nuclei in stellar and effects on the abundance of elements	DONG, Chao
17:50-17:51	New maxwell distribution neutron source	HOU, Jianglin
17:51-17:52	Impact parameter in single proton transfer reaction $^{56,58}\text{Fe}(^{18}\text{O},^{17}\text{N})^{57,59}\text{Co}$	LIU, Runlong
17:52-17:53	Half-Life measurement of ^{146}Eu	GUO, Changxin
17:53-17:54	Fabrication of ^{17}O isotope reaction targets	TIAN, Tao
17:54-17:55	Stepped-up development of AMS for the detection of ^{60}Fe with the HI-13 tandem accelerator	ZHANG, Yang
17:55-17:56	A conceptual design of neutron detector for the (α,n) cross section measurement	GONG, Yongce
17:56-19:30	Poster Session	
IAC meeting		
20:30-21:30	(Peony—牡丹@3F)	

Tuesday, September 10, 2024

Session 1 Chair: LIU, Nan		
9:00-9:25	The $^{13}\text{C}(\alpha,n)^{16}\text{O}$ reaction rate	DEBOER, Richard James
9:25-9:50	The Role of Carbon-Oxygen Shell Interactions in the Nucleosynthesis and Final Fate of Massive Stars	ROBERTI, Lorenzo
9:50-10:15	Dynamics and nucleosynthesis of neutron star mergers and collapsars	FUJIBAYASHI, Sho
10:15-10:40	Neutrino and Heavy-element Nucleosynthesis in Supernovae	WANG, Xilu
10:40-11:00	Break	
Session 2 Chair: TRACHE, Livius		
11:00-11:25	Studying astrophysical reactions with low-energy RI beams – the projects at CRIB	YAMAGUCHI, Hidetoshi
11:25-11:50	Measurement of the γ Decay Probability of the Hoyle State	SAKANASHI, Kosuke
11:50-12:00	Nuclear Science and Techniques: A trustworthy Springer top journal for publishing high-quality nuclear related research	LI, Yongping
12:00-13:30	Lunch	
Session 3 Chair: TANG, Xiaodong		
13:30-13:55	Impact of precise nuclear input for stellar evolution	HEGER, Alexander
13:55-14:20	Binary Star Evolution	GE, Hongwei
14:20-14:35	Measurements of stellar neutron source reactions at JUNA	GAO, Bingshui
14:35-14:50	The Effect of Reaction Rate on the Pre-supernovae Core Structure and Nucleosynthesis	XIN, Wenyu
Session 4 Chair: LIU, Weiping		
14:50-15:15	Transfer reaction measurements using proton beams for astrophysical reaction rates and proton branching ratios	CHAE, Kyungyuk
15:15-15:40	Role of neutron-rich nuclei in r -process nucleosynthesis	NISHIMURA, Shunji
15:40-15:55	Study of $^{22,23}\text{Na}+p$ resonance scattering via thick-target inverse kinematics method	WANG, Youbao
15:55-16:15	Break	
Session 5 Chair: KUBONO, Shigeru		
16:15-16:40	Studies of nuclear properties involved in nucleosynthesis at CENS	AHN, Sunghoon (Tony)
16:40-17:05	Non destructive lifetime measurement of isomeric states in heavy ion storage rings	SANJARI, Shahab
17:05-17:30	$B\rho$ -defined isochronous mass spectrometry at CSRe-Lanzhou	WANG, Meng
17:30-17:45	Construction of active target TPC in CENS	CHA, Soomi
17:45-18:10	Indirect measurement in CIAE	GUO, Bing
Banquet (Taoyuan Ballroom D—桃源厅D@1F)		
19:00-22:00		

Wednesday, September 11, 2024

Session 1		
Chair: DEBOER, Richard James		
9:00-9:25	Effect of coherent neutrino elastic scattering off many atoms to core-collapse supernova explosions	SHIMA, Tatsushi
9:25-9:50	"Other" Indirect Methods in Nuclear Astrophysics	TRACHE, Livius
9:50-10:15	Experimental studies of key resonances for explosive hydrogen and helium burning	WREDE, Christopher
10:15-10:35	Break	
Session 2		
Chair: LIU, Weiping		
10:35-10:50	Measurement of $^{58}\text{Ni}(^3\text{He},n)^{60}\text{Zn}$ reaction to investigate X-ray burst light curve	FURUNO, Tatsuya
10:50-11:05	Operation and Experiment Introduction of the CSNS Back-n White Neutron Facility	FAN, Ruirui
11:05-11:20	Electron scattering for online-produced unstable nucleus at the RIKEN SCRIT facility	SUDA, Toshimi
11:20-11:35	Measurement of the $^{159}\text{Tb}(n,\gamma)$ cross section at the CSNS Back-n facility	ZHANG, SuYaLaTu
11:35-13:30	Lunch	
Session 3		
Chair: KAJINO, Toshitaka		
13:30-13:45	Direct measurement of the cross section for $^{102}\text{Pd}(p,\gamma)^{103}\text{Ag}$ reaction in the p -process	LIU, Fulong
13:45-14:00	Study of vp -process nucleosynthesis in core collapse supernovae via $^{56}\text{Ni}(d,p)$ reaction	LI, Jiatai
14:00-14:25	Narrow-band metal-poor star surveys with Subaru/Hyper Suprime Cam and Tomo-e Gozen Camera	TOMINAGA, Nozomu
14:25-14:40	Exploring the Early Galactic Formation through Chemodynamics of Very Metal-poor Stars	ZHANG, Ruizhi
14:40-14:55	Uncovering the origin of Galactic ancient accretion relics	XIE, Renjing
14:55-15:10	Origin and evolution of the satellite system of Milky-Way-like galaxies	TANG, Guobao
15:10-15:25	The evolution low metallicity of very massive single stars	YUSOF, Norhasliza
15:25-15:45	Break	
Session 4		
Chair: WREDE, Christopher		
15:45-16:00	The impact of stellar helium content and recent measurement effort	JIAN, Mingjie
16:00-16:15	Li-enriched low mass giants: Single star evolution vs binary interaction	SINGH, Raghubar
16:15-16:30	Heavy Sterile Neutrinos from Core-collapse Supernovae	MORI, Kanji
16:30-16:45	Impacts of the $^{12}\text{C}(\alpha,\gamma)^{16}\text{O}$ reaction rate on ^{56}Ni nucleosynthesis in pair-instability supernovae	KAWASHIMO, Hiroki
16:45-17:00	Strong magnetic field impact on the neutrino transportation inside the core-collapse supernova	LUO, Yudong
17:00-17:15	The impacts of nuclear reaction uncertainties on explosive nucleosynthesis of core-collapse supernovae	NISHIMURA, Nobuya
17:15-17:40	Conclusion Remark	
		KAJINO, Toshitaka

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