The 15th International Symposium on Origin of Matter and Evolution of Galaxies (OMEG15)

July 2—5, 2019

Panasonic Hall, Yukawa Institute for Theoretical Physics, Kyoto University

Scientific Program

Tuesday, 2 July

	Program No.	Speaker	Title
8:50	Registration		
9:25	Welcome		
	Session 1: Nuclear Structure and Reaction for Astrophysics I (Chair: S. Kubono)		
9:45	1-1	S. Cherubini (INFN)	Trojan Horse Method: basics and recent applications
10:10	1-2	R. G. Pizzone (INFN)	Fluorine burning in stars studied with Trojan Horse Method
10:30	1-3	T. Ahn (University of Notre Dame)	Precision measurements of the ^{24}Mg(α,pγ)^{27}Al cross section and ^{27}Al(p,αγ) ^{24}Mg cross sections
10:50	1-4	J. Glorius (GSI)	Cooled ions and explosive nucleosynthesis: The proton-capture campaign at the GSI storage rings
11:10	Coffee Break		
	Session 2: Astronomical Observations with Light X-Ray Gamma-Ray and Cosmic-Ray (Chair: K. Maeda)		
11:40	2-1	H. Yamaguchi (Institute of Space and Astronautical Science)	Probing the stellar nucleosynthesis and explosion with X-ray observations of supernova remnants
12:05	2-2	W. Wang (Wuhan University)	Detections of ^{44}Ti signals in young supernova remnants
12:25	2-3	R. Diehl (Max Planck Institut für extraterrestrische Physik)	Cosmicradioactivity: Gamma-ray line observations with the INTEGRAL Satellite
12:50	2-4	T. Takemura (Kyoto University)	SMILE-2+: Balloon observation of electron-positron annihilation line gamma-ray in the galactic center region
13:10	Lunch		

	Session 3: Nucleosynthesis in Neutron Star Mergers (Chair: G. Mathews)		
14:40	3-1	S. Wanajo (Max Planck Institute for Gravitational Physics)	r-process and kilonovae
15:05	3-2	C. Ishizuka (Tokyo Institute of Technology)	Influence of fission-fragment yields on r-process nucleosynthesis
15:30	3-3	S. Fujimoto (National Institute of Technology, Kumamoto College)	Impacts of isomers on a light curve of a kilonova associated with newtron star mergers
15:50	3-4	N. Nishimura (YITP, Kyoto University)	Observational signatures of magneto-rotational supernovae associated with r-process jets
16:10	Coffee Break		
	Session 4: First Generation Stars and Galactic Chemical Evolution (Chair: N. Nishimura)		
16:35	4-1	I. U. Roederer (University of Michigan)	The environment of the r-process: New advances enabled by the study of the orbits of r-process-enhanced stars
17:00	4-2	Q. Xing (National Astronomical Observatories, Chinese Academy of Sciences)	Evidence for the accretion origin of halo stars with an extreme r-process enhancement
17:20	4-3	Y. Hirai (RIKEN)	Enrichment of heavy elements in chemodynamical evolution models
17:40	4-4	A. Choplin (Konan University)	The early generations of rotating massive stars and the abundances of extremely metal-poor stars
18:00	4-5	M. Kusakabe (Beihang University)	Modern results for the cosmic ray nucleosynthesis of p-nuclei
18:20	Move to poster session		
18:40	Poster session		
20:10	End of poster session		

Wednesday, 3 July

	Program No.	Speaker	Title
	Session 5: Nuclear Data for Astrophysics and Related Topics/ Underground Nuclear Astrophysics (Chair: T. Rauscher)		
9:00	5-1	H. Miyatake (KEK)	Recent progress of researches with KISS and MRTOF
9:25	5-2	V. H. Phong (University of Science, Hanoi)	Beta-decay measurements of very neutron-rich isotopes around mass A=130 within the BRIKEN project at RIBF
9:45	5-3	N. Imai (CNS, University of Tokyo)	Evaluation of the neutron capture reaction on ^{79}Se via a surrogate reaction of d(^{79}Se, p) reaction at OEDO
10:05	5-4	W. P. Liu (China Institute of Atomic Energy)	Progress of nuclear astrophysics, neutrino and dark matter experiments in China
10:30	5-5	M. Sakuda (Okayama University)	Estimation of gamma rays from neutral-current neutrino-carbon and -oxygen inelastic reactions from supernova neutrinos
10:50	11-3	X. Fang (Sun Yat-sen University)	Mapping the resonances of ^{12}C+^{12}C fusion at stellar energiesusing an efficient thick target method
11:10	Coffee Break		
	Session 6: Meteorite Analysis and Isotopic Abundance (Chair: K. Terada)		
11:40	6-1	A. Takigawa (Kyoto University)	Dust formation and wind acceleration around Al_2O_3 dust-rich AGB stars
12:05	6-2	S. Palmerini (University of Perugia)	Isotopic abundances in presolar SiC grains accounted by s-processing from MHD-induced mixing in low mass AGB stars
12:25	6-3	B. S. Meyer (Clemson University)	Neutron-Burst nucleosynthesis and its importance for meteoritic presolar grains and extinct radioactivities
12:45	6-4	R. Fukai (Tokyo Institute of Technology)	Isotopic anomalies of trans-iron elements observed in meteorites: Constraint for nucleosynthesis
13:05	Free afternoon		

Thursday, 4 July

	Program No.	Speaker	Title
	Session 7: Nuclear Structure and Reaction for Astrophysics II (Chair: T. Motobayashi)		
9:00	7-1	T. Kawabata (Osaka University)	Nuclear experimental approach to cluster correlation and nucleosynthesis in the universe
9:25	7-2	M. Ito (Kansai University)	Application of absorbing boundary condition to few-body cluster dynamics
9:50	7-3	Z. Yang (RCNP, Osaka University)	Alpha-clustering in heavy nuclei $^{112\text{-}124}$Sn probed with (p,pα) reaction
10:10	7-4	Y. Taniguchi (National Institute of Technology, Kagawa College)	Low-lying ^{12}C + ^{16}O Molecular Resonance Band in ^{28}Si
10:30	7-5	M. Sasano (RIKEN)	Gamow-Teller giant resonance in ^{132}Sn
10:55	Coffee Break		
	Session 8: Nuclear Matter and Neutron Stars (Chair: A. Ohnishi)		
11:20	8-1	J. Lattimer (Stony Brook)	Equation of state from neutron star mass and radius measurements
11:45	8-2	H. Togashi (Kyushu University)	Nuclear equation of state based on the many-body calculation with realistic nuclear forces
12:10	8-3	M. Kurata-Nishimura (RIKEN)	Experimental study of nuclear equation of state using heavy ion collisions at RIKEN-RIBF
12:30	8-4	T. Okihashi (Niigata University)	Proximity effect of pair correlation in the inner crust of neutron stars with Hartree-Fock-Bogoliubov theory
12:50	Lunch		
	Session 9: Special session: Gravitational Wave and Nulceosynthesis (Chair: J. Lattimer)		
14:20	9-1	M. Ando (University of Tokyo)	Gravitational-wave observation - Recent results and prospects -
14:55	9-2	M. Shibata (Max Planck Institute for Gravitational Physics)	Merger of neutron-star binaries as a laboratory of neutron-star matter and nucleosynthesis
15:30	Coffee Break		

	Session 10: Explosive Stellar Objects and Nuclear Physics (Chair: R. Diehl)		
16:00	10-1	T. Takiwaki (National Astronomical Observatory of Japan)	Explosion mechanism of core-collapse supernovae and recent progress in nuclear physics
16:25	10-2	A. Harada (ICRR, University of Tokyo)	Stellar core-collapse simulations with the Boltzmann-radiation-hydrodynamics code under axisymmetry
16:45	10-3	T. Rauscher (University of Basel)	Impact of uncertainties in nuclear reaction cross sections on nucleosynthesis beyond iron
17:10	10-4	M. Cheoun (Soongsil University)	Neutrino self-interaction, MSW and shock effects on the neutrino-process for supernovae
17:35	10-5	T. Hayakawa (National Institutes for Quantum and Radiological Science and Techonology)	Nuclear cosmochronometer for supernova neutrino process
17:55	10-6	M. Ono (RIKEN)	Three-dimensional simulation from supernovae to their supernova remnants: the dynamical and chemical evolution of SN 1987A
18:15	Move to banquet		
18:30	Banquet		
20:30	End of Banquet		

Friday, 5 July

	Program No.	Speaker	Title
	Session 11: Galactic Chemical Evolution/ Stellar Evolutions and Hydrostatic Burning Processes (Chair: S. Wanajo)		
9:20	11-1	K. Takahashi (Max Planck Institute for Gravitational Physics)	Uncertain stellar evolution: convection, rotation, magnetic field, and binarity
9:45	11-2	C. Kobayashi (University of Hertfordshire)	State-of-the-art of chemodynamical simulations: The origin of elements and their evolution in galaxies
10:10	11-4	T. Suda (RESCEU, University of Tokyo)	s-process Nucleosynthesis in AGB Stars at Low-Metallicity
10:30	Coffee Break		
	Session 12: Big Bang Cosmology and Primordial Nucleosynthesis (Chair: L. H. Khiem)		
11:00	12-1	G. Mathews (University of Notre Dame)	Cosmological solutions to the lithium problem
11:25	12-2	A. Coc (CNRS, Orsay)	Precision big bang nucleosynthesis with the new code PRIMAT
11:45	12-3	K. Mori (University of Tokyo/NAOJ)	Big bang nucleosynthesis with time-dependent quark mass
12:05	12-4	S. Hayakawa (CNS, University of Tokyo)	Experimental study on study on the $^{7}Be(n,p)^{7}Li$ and the $^{7}Be(n,\alpha)^{4}He$ reactions for cosmological lithium problem
12:30	12-5	S. Ishikawa (Tohoku University)	Experimental study of the $^{7}Be(n,p_1)^{7}Li^{*}$ reaction for the cosmological lithium problem
12:45	Lunch		
	Session 13: Next generation Facilities for Nuclear Astrophysics (Chair: T. Hayakawa)		
14:30	13-1	X. D. Tang (IMP, Chinese Academy of Sciences)	Nuclear astrophysics program at HIAF
14:55	13-2	T. Shin (RISP, Institute for Basic Science)	Status of RAON in Korea
15:20	13-3	C. Wrede (Michigan State University)	Nuclear astrophysics at FRIB: Present status and future opportunities
15:45	13-4	W. Aoki (National Astronomical Observatory of Japan)	Nuclear astrophysics with the next generation extremely large telescope TMT
16:10	13-5	T. Motobayashi (RIKEN)	Concluding Remarks
16:25	Closing		
16:45	End of symposium		

Poster Session

P-1. An updated constraints on the variations of the fine-structure constant from an analysis of white-dwarf spectra
Le Duc Thong (Institute for Computational Science)

P-2. Nuclera weak rates for astrophysical processes in stars
Toshio Suzuki (Department of Physics, Nihon University)

P-3. α inelastic scattering cross sections on ^{12}C with microscopic coupled-channel calculation
Yoshiko Kanada-En'yo (Department of Physics, Kyoto University)

P-4. Progress for the measurement of $^{14}N(p,\gamma)^{15}O$ reaction in JUNA
Shuo WANG (School of Space Science and Physics, Shandong University)

P-5. Stability of f(R) gravity with dynamical system analysis
Parth Mukeshbhai Shah (BITS Pilani, K K Birla Goa Campus, India)

P-6. Primordial magnetic field and its impact on BBN
Yudong Luo (National Astronomical Observatory of Japan/ University of Tokyo)

P-7. Gravitational waves from big bang till binary mergers in acceleration universe
Rajesh Kumar Dubey (Lovely Professional University)

P-8. Nucleosynthesis constraints on the energy growth timescale of a core-collapse supernova explosion
Ryo Sawada (Department of Astronomy, Kyoto University)

P-9. Aluminium-26 from massive binary stars
Hannah Elisabeth Brinkman (Konkoly Observatory, Research Centre for Astronomy and Earth Sciences, Hungarian Academy of Sciences)

P-10. GRMHD simulation of binary neutron star merger and the mixing of kilonova ejecta
Chia-Hui Lin (Department of Physics, National Taiwan University)

P-11. Progress in microscopic description of nucleon-nucleus elastic scattering at low-energy
Nguyen Hoang Tung (Institute of Fundamental and Applied Sciences, Duy Tan University)

P-12. Effects of the metallicity on Li and B production in supernova neutrino process
Motohiko Kusakabe (School of Physics, Beihang University)

P-13. Early impacts of the first stars
Tzu-Hsiang Chao (Institute of Astronomy and Astrophysics, Academia Sinica/ Department of Physics, National Taiwan University)

P-14. Identification of gamma-ray vorticies with compton scattering and their emissions in strong magnetic field
Takehito Hayakawa (National Institutes for Quantum and Radiological Science and Techonology)

P-15. Millimeter emission from supernovae in the very early phase: implications on the dynamical mass loss of massive stars
Tomoki Matsuoka (Department of Astronomy, Kyoto University)

P-16. The S_{E1} factor of radiative alpha capture on carbon-12 in effective field theory
Shung-Ichi Ando (Sunmoon University)

P-17. Dependence of neutron star cooling on the equation of state with a possible exotic particle
Akira Dohi (Department of Physics, Faculty of Science, Kyushu University)

P-18. Constraining massive star activities in the final years through properties of supernovae and their progenitors
Ryoma Ouchi (Department of astrophysics, Kyoto University)

P-19. Measurement of ^{4}He photodisintegration in the giant dipole resonance energy region
Motoki Murata (Research Center for Nuclear Physics, Osaka University)

P-20. Particle identification by pulse-shape analysis with neural network
Yuto Hijikata (Department of Physics, Kyoto University)

P-21. Star formation and gas flow history of a dwarf irregular galaxy traced by gas-phase and stellar abundances
Nao Fukagawa (Graduate University for Advanced Studies/Tohoku University)

P-22. Neutron skins of heavy nuclei and tidal polarizability of neutron star
Bharat Kumar (Department of Physics, University of Tsukuba)

P-23. GW170817 constraints on the properties of a neutron star in the presence of WIMP dark matter
Abdul Quddus (Department of Physics, Aligarh Muslim University, Aligarh, India)

P-24. Measurement of γ rays from the giant resonances in ^{12}C and ^{16}O
Mandeep Singh Reen (Okayama University)

P-25. Pionic atoms spectroscopy at RCNP with the (p,^{2}He) reaction
Akane Sakaue (Department of Physics, Kyoto University)

P-26. GRBs as probes of cold gas and dust in the diffuse interstellar medium and the nature of high-redshift damped Lyman-α systems
Jan Bolmer (Max-Planck-Institut für extraterrestrische Physik)

P-27. Investigating the enrichment of the early solar system using core collapse supernova
Thomas Vincent Lawson (E.A. Milne Centre for Astrophysics, University of Hull)

P-28. Mass measurement of neutron-rich ^{122}Rh, ^{123,124}Pd and ^{125}Ag nuclides with Rare RI Ring at RIBF in RIKEN
Hongfu Li (RIKEN, Japan; Institute of Modern Physics, Chinese Academy of Sciences, China)

P-29. Comparisons of isotopic distributions from a range of type Ia models
James Douglas Keegans (E. A. Milne Center, University of Hull)

P-30. The s process in rotating low-mass AGB stars: Nucleosynthesis calculations in models matching asteroseismic constraints
Jacqueline den Hartogh (Konkoly Observatory, MTA CSFK, Hungary)

P-31. Measurement of the ^{27}Al(p,α)^{24}Mg reaction at astrophysical energies via the Trojan Horse Method
Sara Palmerini (University of Perugia and INFN Perugia, Italy)

P-32. On the stability of giant nuclei in supernova matter with respect to deconfinement
Kei Iida (Kochi University)

P-33. Constraints on the nuclear saturation properties using experimental data and astrophysical observations
Soonchul Choi (Department of Physics, Soongsil University)

P-34. Towards background-free studies of capture reactions in a heavy-ion storage ring
Jan Glorius (GSI Helmholtzzentrum für Schwerionenforschung)

P-35. Cosmic evolution of r-process abundance pattern: Contribution from supernovae and neutron star mergers
Yuta Yamazaki (Graduate School of Science, University of Tokyo/ National Astronomical Observatory of Japan)

P-36. Physics of muons as a cosmic rays Particle
Eak Raj Paudel (Tribhuvan University , NEPAL)

P-37. Canceled

P-38. Conversion between the formal and observed parameters in R-matrix theory
Masahiko Katsuma (Osaka City University)

P-39. The importance of AGB stars as gas and dust polluters of the universe

Marcella Di Criscienzo (Istituto Nazionale di Astrofisica-Osservatorio Astronomico di Roma)

P-40. Search for α-condensed state in ^{20}Ne
Yuki Fujikawa (Department of physics, Kyoto University)

P-41. Inhomogeneous galactic chemical evolution of r-process elements
Benjamin Wehmeyer (Konkoly Observatory, Budapest, Hungary/ University of Hertfordshire, UK)

P-42. ^{12}C + ^{12}C cluster states in sub-Coulomb barrier region
Yohei Chiba (Department of Physics, Osaka City University)

P-43. New analysis method of TPC data using neural network
Takanobu Doi (Department of Physics, Kyoto University)

P-44. Development of a secondary neutral mass spectrometer for submicron Imaging mass spectrometry
Yosuke Kawai (Graduate School of Science, Osaka University)

P-45. ^{7}Li production in inhomogeneous Big-Bang nucleosynthesis
Riou Nakamura (Kurume Institute of Technology)

P-46. Ground states of odd-mass nuclei in nuclear density-functional theory under a time-odd external field
Haruki Kasuya (Yukawa Institute for Theoretical Physics, Kyoto University)

P-47. Investigations of fast-pairwise collective neutrino oscillations in core-collapse supernovae based on the results of the Boltzmann simulations in 3D
Milad Delfan Azari (Waseda University)

P-48. Building-up Pop III IMF in the Milky Way-like galaxies
Shingo Hirano (Department of Earth and Planetary Sciences, Kyushu University)

P-49. Search for alpha-cluster states in ^{13}C using alpha inelastic scattering
Kento Inaba (Department of Physics, Kyoto University)

P-50. Effect of interstellar objects on metallicity of population III survivors formed in a cosmological model
Takanobu Kirihara (Institute of Management and Information Technologies, Chiba University)

P-51. A new semi-analytic model of Pop III formation with ultralarge cosmological N-body simulations
Tomoaki Ishiyama (Chiba University)

P-52. Thermal evolution of compact stars with quark superconductivity
Tsuneo Noda (Kurume Institute of Technology)

P-53. Alpha clustering near the proton drip line: the case of ^{14}O
Shintaro Okamoto (Department of Physics, Kyoto University)

P-54. Study on $^{26m}Al(p,\gamma)$ reaction at the SNe temperature
Hideki Shimizu (Center for Nuclear Study, University of Tokyo)

P-55. Quantitative analysis from stigmatic isotope imaging of SIMS
Takashi Sugou (Department of Earth and Planetary Science, Kyoto University)

P-56. Petrographic study of a compact type A CAIs with partial melting process
Akimasa Suzumura (Department of Earth and Planetary Sciences, Kyoto University)

P-57. Search for the α-condensed state by measuring the inelastic resonance scattering $^{12}C(^{12}C,^{12}C[0^{+}_{2}])^{12}C[0^{+}_{2}]$
Kosuke Sakanashi (Department of Physics, Osaka University)