OMEG11 Program

Nov. 14 (Mon.)

Opening Session (chair: Hayakawa)

9:00 OTSUKA, Takaharu (the director of CNS) 0:15
KUBONO, Shigeru (symposium chair)

Session 1. Explosive Stellar Objects and Nuclear Physics (1) (chair: K. Nomoto)

9:15 BURROWS, Adam (Princeton University) 0:30
Mechanisms for Core-Collapse Supernova Explosions

9:45 TAKIWAKI, Tomoya (National Astronomical Observatory of Japan) 0:20
Three-dimensional Hydrodynamic Core-Collapse Supernova Simulations for an 11.2 M_s Star with Spectral Neutrino Transport

10:05 WANG, Youbao (China Institute of Atomic Energy, Beijing, China) 0:20
Indirect measurements of reactions in the hot p-p chain and CNO cycle

10:25 DAM, Binh (Institute of Physics) 0:20
Measurement of the 21Na(α,p)24Mg Stellar Reaction Cross Sections Using a 21Na RI beam

10:45 coffee break 0:20

(chair: Y-Z. Qian)

11:05 HATSUDA, Tetsuo (University of Tokyo / RIKEN) 0:30
QCD Structure of Matter

11:35 SUMIYOSHI, Kohsuke (Numazu College of Technology) 0:20
Progress of the equation of state table for supernova simulations and its influence

11:55 OTSUKA, Takaharu (CNS, University of Tokyo) 0:30
Nuclear Forces, Exotic nuclei and Stellar Evolution

12:25 lunch 1:35

Session 2. Meteorite Analysis and Isotopic Abundance (chair: K. Terada)

14:00 NITTLER, Larry (Carnegie Institution of Washington) 0:30
Presolar Supernova and Nova Dust in the Solar System

14:30 LIU, Ming-chang (Institute of Astronomy and Astrophysics, Academia Sinica) 0:20
A Heterogeneous Solar Nebula as Sampled by CM Hibonite Grains

14:50 AMARI, Sachiko (Washington University) 0:20
Presolar graphite from low-metallicity stars

15:10 BISHOP, Shawn (Fakultät für Physik, Technische Universität München) 0:20
Search for Supernova 60Fe in the Earth's Microfossil Record

15:30 coffee break 0:20

Session 3. Nuclear data for astrophysics and Related Topics (L.H. Kheim)

15:50 CYBURT, Richard (JINA/MSU) 0:30
Putting it all together: Nuclear Data as input for Nuclear Astrophysics

16:20 BLAUM, Klaus (Max-Planck-Institut für Kernphysik) 0:30
High-precision mass measurements for nuclear astrophysics

16:50 RAUSCHER, Thomas (Department of Physics, University of Basel) 0:20
Dependence of proton-rich abundances on nuclear physics

17:10 WANG, Meng (CSNSM-IN2P3, Orsay, France) 0:20
Atomic mass evaluation

17:30 IGASHIRA, Masayuki (Tokyo Institute of Technology) 0:25
Neutron capture cross section measurement at the beam line 04 of J-PARC/MLF

Poster session (chair: K. Nakamura)

17:55 3 min. talks by poster presenters (ID: 3-46) 0:45

18:40 Poster viewing with refreshment 1:00

19:40 **End of the 1st. day**

Nov. 15
(Tue.)

Session 4. First Generation Stars and Galactic Chemical Evolution (chair: T. Shima)

9:00	ASPLUND, Martin (Australian National University) Lithium isotopic abundances in the first stars	0:30
9:30	KOBAYASHI, Chiaki (University of Hertfordshire) Inhomogeneous Chemical Enrichment of the Universe	0:25
9:55	HONDA, Satoshi (Kyoto University, Kwasan Observatory) Heavy elements in globular clusters and dwarf galaxies as probes of the origin of r-process elements	0:20
10:15	BOYD, Richard (Lawrence Livermore National Laboratory) Truncating the r-Process in Metal Poor Stars via black Hole formation	0:20
10:35	LUGARO, Maria (Monash University) Slow neutron captures in low metallicity asymptotic giant branch stars and the composition of carbon-enhanced metal-poor stars	0:20
10:55	coffee break	0:20

Session 5. Neutrino-induced Nuclear Reactions (chair: T. Uesaka)

11:15	CHEOUN, Myung-ki (Soongsil University) Charge Exchange Reactions and Applications to Astrophysics	0:30
11:45	HAYAKAWA, Takehito (Japan Atomic Energy Agency) Neutrino-induced nucleosynthesis in supernovae	0:25
12:10	lunch	1:20

13:30	***OMEG Public Session (chair: S. Kubono)** YURIMOTO, Hisayoshi (Hokkaido Univeristy) Characteristics of asteroid Itokawa from Hayabusa return samples	1:00
14:30	coffee break	0:20

(chair: R. Kruecken)

14:50	SHIMOURA, Susumu (CNS, the University of Tokyo) Spin-Isospin Responses via Charge Exchange Reactions of RI beams at SHARAQ	0:25
15:15	SASANO, Masaki (National Superconducting Cyclotron Laboratory, MSU) Measurement of Gamow-Teller transitions from 56Ni	0:20

Session 6. Heavy Element Synthesis (chair: R. Kruecken)

15:35	NAKATSUKASA, Takashi (RIKEN Nishina Center) Recent developements in linear response calculations with the time-dependent density functional theory	0:25
16:00	UTSUNOMIYA, Hiroaki (Konan University) Determination of radiative neutron capture cross sections for unstable nuclei by the gamma-ray strength function method	0:25

Poster session (H. Yamaguchi)

16:25	3 min. talks by poster presenters (ID: 47-112)	1:30
17:55	Poster viewing with refreshment	1:05
19:00	**End of the 2nd. day**	

Nov. 16
(Wed.)

Session 7. Astronomical Observations with Light, X-Ray, Gamma-Ray, and Cosmic-Ray (chair: A. Coc)

9:00	MAKISHIMA, Kazuo (University of Tokyo) What are being discovered by the forefront cosmic X-ray observations?	0:30
9:30	TOMINAGA, Nozomu (Konan University) Nucleosynthetic constraints on gamma-ray bursts and supernovae	0:20
9:50	AOKI, Wako (NAOJ) Neutron-capture elements in extremely metal-poor stars	0:30
10:20	COTTRELL, Peter (University of Canterbury) C, N and s-process abundances in large samples of Globular Cluster stars	0:20
10:40	KONAMI, Saori (RIKEN) A comparison of metal abundance patterns of inter-stellar medium in starburst and non-starburst galaxies	0:20
11:00	coffee break	0:20

Special session. Radioactive Beams for Astrophysics (chair: T. Motobayashi)

11:20	KUBONO, Shigeru (CNS, University of Tokyo) Nuclear Physics Problems for Explosive Nucleosynthesis	0:25
11:45	KRUECKEN, Reiner (TRIUMF) Nuclear Astrophysics Program at TRIUMF	0:30
12:15	lunch	1:15

(chair: G.J. Mathews)

13:30	QIAN, Yong-zhong (University of Minnesota) Neutrino-induced r-process nucleosynthesis in supernova He shells	0:30
14:00	NISHIMURA, Shunji (RIKEN) Decay Spectroscopy relevant to the r-Process nucleosynthesis	0:25
14:25	WANAJO, Shinya (TUM/MPA) Physical conditions for the r-process	0:25
14:50	YAMAGUCHI, Hidetoshi (Center for Nucler Study, University of Tokyo) Alpha-induced reaction studies using low-energy RI beams at CRIB	0:25
15:15	Frohlich, Carla (North Carolina State University) Nu-p-Process Contributions to the Heavy Elements Ge to Ba	0:25
15:40	coffee break	0:20

(chair: H. Sakurai)

16:00	HE, J. J. (Institute of Modern Physics, CAS) Study of the resonant elastic/inelastic scattering of 21Na+p relevant to the astrophysical 18Ne(a,p)21Na reaction	0:20
16:20	YONEDA, Ken-ichiro (RIKEN) Nuclear Astrophysics Studies by SAMURAI Spectrometer in RIKEN RIBF	0:25
16:45	SUMIKAMA, Toshiyuki (Tokyo University of Science) Search for spin-orbit-force reduction at 106,108Zr around r-process path	0:20
17:05	coffee break and poster viewing	0:55
18:00	**Banquet (chair: S. Nishimura)**	2:00
20:00	**End of the 3rd. day**	

Nov. 17
(Th.)

Session 8. Stellar Evolutions and Hydrostatic Burning Processes (chair: M. Lugaro)

9:00 ISHIKAWA, Souichi (Hosei University) 0:20
Triple-alpha reaction rate studied with the Faddeev three-body formalism

9:20 SUDA, Takuma (National Astronomical Observatory of Japan) 0:20
Triple-Alpha Reaction Rate Constrained by Stellar Evolution Models

9:40 MAKII, Hiroyuki (Advanced Science Research Center, Japan Atomic Energy Agency) 0:20
Measurement of the 12C(alpha,gamma)16O reaction at TRIAC

10:00 coffee break 0:20

(chair: T. Teranishi)

10:20 BUCHER, Brian (University of Notre Dame) 0:20
Recent results from the carbon fusion project at Notre Dame

10:40 MICHELAGNOLI, Caterina (INFN and University of Padova, Italy) 0:20
Lifetime measurement of the 6.792 MeV state in 15O with the AGATA Demonstrator array

11:00 SUZUKI, Yasuyuki (Department of Physics, Niigata University) 0:20
Ab initio study of 2H(d,gamma)4He, 2H(d,p)3H, and 2H(d,n)3He reactions and the tensor force

11:20 lunch 1:40

Session 9. Explosive Stellar Objects and Nuclear Physics (2) (chair: H. Miyatake)

13:00 CHERUBINI, Silvio (università di catania and LNS - INFN, Catania, Italy) 0:25
Recent results and new development of the Trojan Horse method

13:25 NAKAMURA, Ko (National Astronomical Observatory of Japan) 0:20
Long gamma-ray burst as a production site of r-process elements

13:45 JUNG, Hyosoon (Department of Physics, Chung-Ang university) 0:20
Study of proton resonance structure in 27P via resonant elastic scattering of 26Si+p

14:05 MAEDA, Keiichi (University of Tokyo) 0:20
Nucleosynthesis in Type Ia Supernovae Driven by Asymmetric Thermonuclear Ignition

14:25 coffee break 0:20

Session 10. Neutron Star and High Density Matter (chair: T. Rauscher)

14:45 LATTIMER, James (Stony Brook University) 0:30
Astrophysical and Laboratory Constraints for the Dense Matter Equation of State

15:15 OHNISHI, Akira (Yukawa Institute for Theoretical Physics, Kyoto University) 0:20
QCD critical point sweep during black hole formation

15:35 MARUYAMA, Tomoyuki (College of Bioresource Sciences, Nihon University) 0:20
Asymmetric Neutrino Reaction and Pulsar Kick in Magnetized Proto-Neutron Stars in fully Relativisitc Approach

15:55 coffee break 0:20

Session 11. Big Bang Cosmology and Primordial Nucleosynthesis (chair: M. Asplund)

16:15 MATHEWS, Grant J. (University of Notre Dame) 0:25
Frontiers of Big Bang Cosmology and Primordial Nucleosynthesis

16:40 COC, Alain (CSNSM, Orsay) 0:20
CNO production in Big Bang Nucleosynthesis

17:00 KUSAKABE, Motohiko (Institute for Cosmic Ray Research, University of Tokyo) 0:20
Destructions of 7Be and 7Li in big bang nucleosynthesis through reactions with exotic long-lived sub-strongly interacting massive particles

Closing Session (chair: M. Asplund)

17:20 Concluding remarks by Kajino, Toshitaka (NAOJ) 0:10
Closing address by Miyatake, Hiroari (KEK)

17:30 **End of the symposium**

List of Poster Presentations

ID	Name	Title	3 min. talk
3	SOTANI, Hajime	Nonuniform nuclear structures and QPOs in giant flares	14.Nov
6	BECEIRO NOVO, Saul	Coulomb dissociation of 27P: an indirect measurement of the astrophysical 26Si(p,gamma)27P reaction	14.Nov
7	LA COGNATA	THE FLUORINE DESTRUCTION IN STARS: FIRST EXPERIMENTAL STUDY OF THE 19F(p, alpha 0)16O REACTION AT ASTROPHYSICAL ENERGIES	14.Nov
16	SUZUKI, Toshio	Beta-Decays of Waiting-Point Nuclei at N=126 and R-Process Nucleosynthesis	14.Nov
17	KWON, Y. K.	Measurement of 25Al+p resonant elastic scattering for studying the 25Al(p,gamma)26Si reaction	14.Nov
20	FURUSAWA, Shun	A NEW BARYONIC EQUATION OF STATE AT SUB-NUCLEAR DENSITIES FOR CORE-COLLAPSE SIMULATIONS	14.Nov
21	VORONCHEV, Victor	Refined scenario of standard BBN allowing for nonthermal nuclear reactions in the primordial plasma	14.Nov
28	NAKAZATO, Ken'ichiro	The influence of hyperon potential on the black-hole-forming failed supernovae	14.Nov
35	FUJITA, Yoshitaka	The Tz= +1-->0 charge exchange reaction and Tz= -1-->0 beta decay for the study of GT transitions in pf-shell nuclei	14.Nov
36	TAKANO, Masatoshi	Cluster Variational Method for Nuclear Matter with the Three-Body Force	14.Nov
41	HA, Eunja	Gamow-Teller (GT) transitions and beta decays of deformed nuclei within the deformed QRPA	14.Nov
42	MATSUO, Yasuhide	Effects of a New 3-alpha Reaction on X-ray Bursts of a Helium Accreting Neutron Star	14.Nov
44	KIKUCHI, Yukihiro	Effects of a New 3-alpha Reaction on the s-process in massive stars	14.Nov
45	OTA, Shuya	Precise measurements of projectile charge-changing cross sections for intermediate energy heavy ions using CR-39 plastic nuclear track detectors	14.Nov
46	IZUTANI, Natsuko	Recipe for Potassium	14.Nov
47	TANIKAWA, Takahiro	Measurement of radio wave reflection in rock salt and ice for detection of ultra-high-energy neutrinos	15.Nov
48	OKAMOTO, Minoru	Three-dimensional calculation of inhomegeous nuclear matter	15.Nov
49	FUJIMOTO, Shin-ichiro	Nucleosynthesis in neutrino-driven, aspherical supernovae of Population III stars	15.Nov
50	KIKUCHI, Hideto	Systematic long term simulations of spherical supernova explosions and their applications	15.Nov
53	NAKAMURA, Riou	CMB constraints on the thermal evolution with a decaying cosmological term	15.Nov
54	YOKOYAMA, Tomohiro	Nucleosynthesis in very massive Population III stars and the abundance patterns of the metal-poor stars	15.Nov
56	TAKATSUKA, Tatsuyuki	Maximum Mass of Neutron Stars with Quark Matter Core	15.Nov

59	CHIBA, Masami	An ultra-high-energy-neutrino detector using rock salt and ice as detection media for radar method	15.Nov
62	ONO, Masaomi	Nucleosynthesis in a Massive Star associated with Magnetohydrodynamical Jets from Collapsars	15.Nov
65	LIND, Karin	The iron content of the most metal-poor stars	15.Nov
67	FURUI, Sadataka	Dark matter and triality symmetry of leptons and quarks	15.Nov
68	OKITA, Shinpei	Mass and Spatial Distribution of Nickel 56 Induced by the Aspherical Explosion of Massive CO star	15.Nov
71	SMITH, Michael	Comparison of Nuclear Mass Models at nuclearmasses.org	15.Nov
74	YOSHIDA, Takashi	Progenitor for the metal-poor Type Ic supernova 2007bi	15.Nov
75	EBATA, Shuichiro	Systematic study of low-lying E1 strength using the time-dependent mean field theory	15.Nov
76	HU, Jun	Investigation of the 14O(α, p)17F stellar reaction via resonant elastic scattering of 17F+p	15.Nov
77	YOSHIDA, Tooru	Symplectic structure and transition properties of 12C	15.Nov
78	KATABUCHI, Tatsuya	Measurement of the keV-neutron capture cross section and gamma-ray spectrum of isotopes around N=82 region	15.Nov
80	NAKAMURA, Ko	Radioactive niobium-92 production via neutrino-induced nucleosynthesis	15.Nov
82	NAKAMURA, Ko	Supernova shock revival by nuclear reactions	15.Nov
83	HAYAKAWA, Seiya	Direct Measurement of the Breakout Reaction 11C(alpha, p)14N in Explosive Hydrogen-Burning Process	15.Nov
86	HIRANO, Koichi	Observational constraints on general modified gravitational theories	15.Nov
87	IZUMI, Takahiro	Development of gamma-ray detectors for O(p,p'g) and C(p,p'g) experiment	15.Nov
88	UGALDE, Claudio	The STAR bubble chamber and the 12C(a,g)16O reaction: latest results	15.Nov
89	IWASA, Naohito	The 35K(p,gamma)36Ca reaction studied using Coulomb excitation of 36Ca	15.Nov
90	YANO, Takatomi	Proposed experiment to measure gamma-rays from thermal neutron capture of Gadolinium	15.Nov
91	HASHIMOTO, Takashi	Direct measurement of the 18Ne(alpha, p)21Na reaction	15.Nov
93	FUNAKI, Yasuro	A new theoretical approach to thermonuclear radiative-capture reaction rate	15.Nov
96	FRANCOIS, Patrick	Detailed abundance in stars belonging to Ultra faint Dwarf Spheroidals	15.Nov
97	PENG, Qiu-he	Query on Cosmic Dark Energy by Error Analyses of Type Ia Supernova	15.Nov
98	PENG, Qiu-he	Relation between Fermi Energy of electron gas and magnetic field interior Neutron Star with strong magnetic field.	15.Nov
112	KAHL, Daid	TBA	15.Nov