

# The 1st IReNA-Ukakuren Joint Workshop “Advancing Professional Development in Nuclear Astrophysics and Beyond”

## Monday 28 August 2023

**Reception** - Large Conference Room (12:00-13:30)

**Opening: Opening** - Large Conference Room (13:30-14:00)

**Heavy Nuclei: Afternoon - 1** - Large Conference Room (14:00-15:10)

time	[id] title	presenter
14:00	[59] Exploring the neutron-rich actinide region via ion-trap techniques for nuclear astrophysics applications	ITO, Yuta
14:40	[27] Exploring Shell Structure at N=32, 34: Mass Measurements of Sc, Ti, and V Isotopes	IIMURA, Shun

**Coffee Break** - Large Conference Room (15:10-15:40)

**Heavy Nuclei: Afternoon - 2** - Large Conference Room (15:40-16:50)

time	[id] title	presenter
15:40	[42] To be announced	JAIN, Rahul
16:20	[24] Bayesian approach to fission products yields of <sup>235</sup> U by data augmentation	CHEN, Jingde

**Welcome Dinner** (17:30-19:30)

## Tuesday 29 August 2023

### **Light Nuclei: Morning - 1 - Large Conference Room (09:30-10:40)**

time	[id] title	presenter
09:30	[41] Study of the contribution of the $7\text{Be}(d, p)$ reaction to the $7\text{Li}$ problem in the Big-Bang Nucleosynthesis	INOUE, Azusa
10:10	[9] Feasibility study for measuring the gamma-decay probability of the 3-1 state in $^{12}\text{C}$ with deuteron inelastic scattering	HONDA, Yuya

### **Coffee Break - Large Conference Room (10:40-11:00)**

### **Heavy Nuclei: Morning - 2 - Large Conference Room (11:00-12:10)**

time	[id] title	presenter
11:00	[56] Impact of the isospin symmetry breaking on the nuclear equation of state	NAITO, Tomoya
11:40	[17] Prompt decay calculation using primary fission yield and TKE obtained from 4-D Langevin model	FUJIO, Kazuki

### **Lunch (12:10-14:10)**

### **Multi-Messenger Astronomy and Astrophysics: Afternoon - 1 - Large Conference Room (14:10-15:50)**

time	[id] title	presenter
14:10	[57] Signatures of r-process elements in optical-infrared spectra of neutron star mergers	DOMOTO, Nanae
14:50	[8] Light curve of electron capture and Fe core collapse supernova: The diagnostic method of electron capture supernova	SATO, Masato
15:20	[26] Supernova neutrino signals as indicators of neutrino mass ordering	SAEZ, Maria Manuela

## Wednesday 30 August 2023

### **Nuclear Matter: Morning - 1 - Large Conference Room (09:30-11:10)**

time	[id] title	presenter
09:30	[5] Kaons in nuclei: theoretical calculations of the anti-kaon-nucleus interaction and the implications	YAMAGATA-SEKIHARA, Junko
10:10	[23] Self-Consistent Superfluid Band Calculations for Neutron Star Inner Crust	KENTA, Yoshimura
10:40	[58] Dark matter effect on the neutron star equation of state	PARK, Jubin

### **Coffee Break - Large Conference Room (11:10-11:30)**

### **Accreting Neutron Stars: Morning - 2 - Large Conference Room (11:30-12:30)**

time	[id] title	presenter
11:30	[19] The Impact of Nuclear Physics Uncertainties on X-ray Superbursts	DOHI, Akira
12:00	[10] Do Accreting Neutron Stars All Have Identical Crusts?	GRACE, Justin

### **Mentoring lunch - Small Conference Room (12:30-14:30)**

### **Career Development Session: Afternoon - 1 - Large Conference Room (14:30-16:00)**

time	[id] title	presenter
14:30	[48] Academia: Thinking outside the tenure-track box	BECERRIL-REYES, Ana
15:00	[47] To be announced	ESTRADE, Alfredo
15:30	[49] To be announced	FREBEL, Ana

### **Coffee Break - Large Conference Room (16:00-16:20)**

### **Chemical Evolution and SNR: Afternoon - 2 - Large Conference Room (16:20-17:30)**

time	[id] title	presenter
16:20	[39] To be announced	HIRAI, Yutaka
17:00	[13] Molecule formation in core-collapse supernova ejecta: the impact of effective matter mixing based on 3D hydrodynamical models of SN 1987A	ONO, Masaomi

**Thursday 31 August 2023****Multi-Messenger Astronomy and Astrophysics: Morning - 1 - Large Conference Room (09:30-10:40)**

time	[id] title	presenter
09:30	[40] Heavy Element Nucleosynthesis in the Multi-Messenger Era	HOLMBECK, Erika
10:10	[15] Long term simulation of supernovae for multi-messenger astronomy	MORI, Masamitsu

**Coffee Break - Large Conference Room (10:40-11:00)****Light Nuclei: Morning - 2 - Large Conference Room (11:00-12:40)**

time	[id] title	presenter
11:00	[55] Studying the nucleosynthesis in explosive stellar environments	JAYATISSA, Heshani
11:40	[25] Cross section evaluation of the dependence of the mean field model on antisymmetrized molecular dynamics	MUKOBARA, Yuta
12:10	[32] Unraveling the role of carbon-alpha reaction rate for radioactive nickel synthesis in pair-instability supernovae	KAWASHIMO, Hiroki

**Lunch (12:40-14:00)****Poster Session: Afternoon - 1 - Large Conference Room (14:00-15:50)**

time	[id] title	presenter
14:00	[29] Feasibility studies to detect r-process nuclear emissions from the binary-neutron-star merger remnants with the HEX-P satellite	YUGO, Motogami
14:05	[28] Search for r-process nuclear gamma-rays from binary neutron-star merger remnants with the gamma-ray satellite INTEGRAL/SPI	OHSUMI, Hayato
14:10	[18] Direct measurement of the cross section for $^{102}\text{Pd}(p,g)^{103}\text{Ag}$ reaction in the p-process	LIU, Fulong
14:15	[4] Machine Learning Refinements to Metallicity-Dependent Isotopic Abundances	SUN, Haoxuan
14:20	[21] Direct measurement of the $^{26}\text{Si}(\alpha, p)^{29}\text{P}$ reaction for the nucleosynthesis in the X-ray bursts	OKAWA, Kodai
14:25	[20] Direct measurement of astrophysical $S(E)$ for the $^9\text{Be}(p,a)^6\text{Li}$ and $^9\text{Be}(p,d)^8\text{Be}$ reactions at low energy	ZHANG, Qian
14:30	[16] High-dispersion spectroscopic observations of r-process elements including thorium in solar metallicity and mildly-metal-poor stars	FURUTSUKA, Kurumi
14:35	[12] Follow-up of bright very metal-poor star candidates discovered by narrow-band survey	OKADA, Hiroko
14:40	[30] Understanding nucleosynthesis by Gamma-Ray and AntiMatter Survey (GRAMS)	ARAI, Shota
14:45	[31] Cryogenic hydrogen gas target for a measurement of neutron inelastic scattering in $^{12}\text{C}$	YAMAZAKI, Shumpei
14:50	[51] CHARGE-EXCHANGE REACTIONS IN CONJUNCTION WITH THE OSLO METHOD	DEVA PATHIRANA, Neshad
14:55	[52] An Update on the Commissioning of SECAR	SMITH, Mackenzie

15:00 [53] Open Poster Session	
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**Coffee Break - Large Conference Room (15:50-16:20)**

**Unconference: Afternoon - 2 - Large Conference Room (16:20-17:30)**

## Friday 01 September 2023

### **Core-Collapse Supernova Explosions: Morning - 1 - Large Conference Room (09:30-11:10)**

time	[id] title	presenter
09:30	[44] To be announced	KATO, Chinami
10:10	[7] Progenitor dependence of neutrino-driven supernova explosions with the aid of heavy axion-like particles	TAKATA, Tsurugi
10:40	[6] Core-collapse supernovae: 3D MHD simulations and multi-messenger signals	NAKAMURA, Ko

### **Coffee Break - Large Conference Room (11:10-11:30)**

### **High Energy Astrophysics: Morning - 2 - Large Conference Room (11:30-12:40)**

time	[id] title	presenter
11:30	[22] Nuclear reactions related to very high and ultra-high energy cosmic rays	KIDO, Eiji
12:10	[14] Performance study of the ALPACA high-density array for gamma-ray bursts	KATO, Sei

### **Poster award / Closing remarks - Large Conference Room (12:40-13:10)**