

Symposium on Nuclear Structure, Reaction, and Astrophysics (NuSRAP2026)

Report of Contributions

Contribution ID : 1

Type : not specified

Update on RAON

Monday, 13 July 2026 09:40 (25)

Primary author(s) : SHIN, Taeksu (IRIS)

Presenter(s) : SHIN, Taeksu (IRIS)

Session Classification : Session 1

Contribution ID : 2

Type : not specified

CENS research activities on excited-state lifetime measurements

Monday, 13 July 2026 10:05 (25)

Primary author(s) : WATANABE, Hiroshi (IBS)

Presenter(s) : WATANABE, Hiroshi (IBS)

Session Classification : Session 1

Contribution ID : 3

Type : not specified

Sensitivity of collective flow to the symmetry potential in Xe+Sn at 100 MeV/u

Monday, 13 July 2026 10:30 (25)

Primary author(s) : HONG, Byungsik (Korea University)

Presenter(s) : HONG, Byungsik (Korea University)

Session Classification : Session 1

Contribution ID : 4

Type : not specified

Probing Nuclear Astrophysics with a Silicon Detector Array

Monday, 13 July 2026 11:15 (25)

Primary author(s) : KIM, Dahee (Ewha Womans University)

Presenter(s) : KIM, Dahee (Ewha Womans University)

Session Classification : Session 2

Contribution ID : 5

Type : not specified

XiNN three-baryon forces studied through deuteron–Xi scattering

Monday, 13 July 2026 11:40 (25)

Primary author(s) : FUKUI, Tokuro (Kyushu University)

Presenter(s) : FUKUI, Tokuro (Kyushu University)

Session Classification : Session 2

Contribution ID : 6

Type : not specified

Low-energy dynamics of heavy-ion reactions

Monday, 13 July 2026 12:05 (25)

Primary author(s) : HAGINO, Kouichi (Kyoto University)

Presenter(s) : HAGINO, Kouichi (Kyoto University)

Session Classification : Session 2

Contribution ID : 7

Type : not specified

Cold Atomic Analogues of Subatomic Matter

Monday, 13 July 2026 14:00 (25)

Primary author(s) : TAJIMA, Hiroyuki (The University of Tokyo)

Presenter(s) : TAJIMA, Hiroyuki (The University of Tokyo)

Session Classification : Session 3

Contribution ID : 8

Type : not specified

Effective field theories for nuclear reactions at low energies

Monday, 13 July 2026 14:25 (20)

Primary author(s) : ANDO, Shung-Ichi (Sunmoon University)

Presenter(s) : ANDO, Shung-Ichi (Sunmoon University)

Session Classification : Session 3

Contribution ID : 9

Type : not specified

Spin-Dependent Nucleon–Nucleus Interactions Constrained by Neutron Observables and Their Impact on Near-Barrier Proton Fusion

Monday, 13 July 2026 14:45 (20)

Primary author(s) : HEO, Kyoungsu (Soongsil Univ.)

Presenter(s) : HEO, Kyoungsu (Soongsil Univ.)

Session Classification : Session 3

Contribution ID : 10

Type : not specified

Toward matter-radius and skin thickness measurements in the Pb region at RIKEN-RIBF

Monday, 13 July 2026 15:25 (20)

Primary author(s) : KUMAR PRAJAPAT, Rinku (Tokyo City University)

Presenter(s) : KUMAR PRAJAPAT, Rinku (Tokyo City University)

Session Classification : Session 4

Contribution ID : 11

Type : not specified

Constraining theoretical corrections to Gamow-Teller transition rates

Monday, 13 July 2026 15:45 (20)

Primary author(s) : XAYAVONG, Latsamy (Yonsei University)

Presenter(s) : XAYAVONG, Latsamy (Yonsei University)

Session Classification : Session 4

Contribution ID : 12

Type : not specified

Challenge to Stellar Explosive Hydrogen and Helium Burning - Experiments and Observation

Monday, 13 July 2026 16:05 (20)

Primary author(s) : KUBONO, Shigeru (RIKEN)

Presenter(s) : KUBONO, Shigeru (RIKEN)

Session Classification : Session 4

Contribution ID : 13

Type : not specified

Quasiparticle finite amplitude method on the deformed relativistic Hartree-Bogoliubov theory in continuum: beta-decay half-life

Monday, 13 July 2026 16:45 (20)

Primary author(s) : LI, Zhengzheng (University of Tsukuba)

Presenter(s) : LI, Zhengzheng (University of Tsukuba)

Session Classification : Session 5

Contribution ID : 14

Type : not specified

Multi-configuration time-dependent Hartree-Fock method towards nuclear reaction

Monday, 13 July 2026 17:05 (20)

Primary author(s) : SATO, Takeshi (The University of Tokyo)

Presenter(s) : SATO, Takeshi (The University of Tokyo)

Session Classification : Session 5

Contribution ID : 15

Type : not specified

Light nuclei under magnetic field and the lithium problem

Monday, 13 July 2026 17:25 (20)

Primary author(s) : YAMANAKA, Nodoka (Riken)

Presenter(s) : YAMANAKA, Nodoka (Riken)

Session Classification : Session 5

Contribution ID : 16

Type : not specified

Configurations of ^{28}F and ^{11}Li halos, and why ^{33}F is unbound.

Tuesday, 14 July 2026 09:30 (25)

Primary author(s) : TANIHATA, Isao (RCNP)

Presenter(s) : TANIHATA, Isao (RCNP)

Session Classification : Session 6

Contribution ID : 17

Type : not specified

Electron-capture rates in medium-mass nuclei within deformed quasiparticle random-phase approximation(QRPA)

Tuesday, 14 July 2026 10:20 (25)

Primary author(s) : HA, Eun Ja (Hanyang University)

Presenter(s) : HA, Eun Ja (Hanyang University)

Session Classification : Session 6

Contribution ID : 18

Type : not specified

Low-Energy Electron Scattering for Nuclear Physics

Tuesday, 14 July 2026 09:55 (25)

Primary author(s) : SUDA, Toshimi (Tohoku University)

Presenter(s) : SUDA, Toshimi (Tohoku University)

Session Classification : Session 6

Contribution ID : 19

Type : not specified

Impacts of updated nuclear reaction rates on rp-process nucleosynthesis

Tuesday, 14 July 2026 11:05 (20)

Primary author(s) : NISHIMURA, Nobuya (Kogakuin University)

Presenter(s) : NISHIMURA, Nobuya (Kogakuin University)

Session Classification : Session 7

Contribution ID : 20

Type : not specified

Triple-alpha reaction by an exact three-body model and its applications

Tuesday, 14 July 2026 11:25 (20)

Primary author(s) : KATSUMA, Masahiko (Osaka City University & Universite Libre de Bruxelles)

Presenter(s) : KATSUMA, Masahiko (Osaka City University & Universite Libre de Bruxelles)

Session Classification : Session 7

Contribution ID : 21

Type : not specified

Constitution of cold-catalyzed nuclear matter below saturation density

Tuesday, 14 July 2026 11:45 (20)

Primary author(s) : SHCHECHILIN, Nikolai (Institute of Science Tokyo)

Presenter(s) : SHCHECHILIN, Nikolai (Institute of Science Tokyo)

Session Classification : Session 7

Contribution ID : 22

Type : not specified

Constraining the $\Lambda\Lambda$ interaction with terrestrial and astronomical data

Tuesday, 14 July 2026 12:05 (20)

Primary author(s) : TANIMURA, Yusuke (Soongsil University)

Presenter(s) : TANIMURA, Yusuke (Soongsil University)

Session Classification : Session 7

Contribution ID : 23

Type : not specified

Deep subthreshold pion production in nuclear collisions

Tuesday, 14 July 2026 13:55 (25)

Primary author(s) : AHN, Jung Keun (Korea University)

Presenter(s) : AHN, Jung Keun (Korea University)

Session Classification : Session 8

Contribution ID : 24

Type : not specified

The real part of interaction potential from Skyrme density functional using KIDS model

Tuesday, 14 July 2026 14:20 (25)

Primary author(s) : KIM, Kyungsik (Korea Aerospace University)

Presenter(s) : KIM, Kyungsik (Korea Aerospace University)

Session Classification : Session 8

Contribution ID : 25

Type : not specified

TBA

Tuesday, 14 July 2026 14:45 (25)

Primary author(s) : NAITO, Tomoya (The University of Tokyo)

Presenter(s) : NAITO, Tomoya (The University of Tokyo)

Session Classification : Session 8

Contribution ID : 26

Type : not specified

Nuclear Scattering, Quantum Computing, and SQD: Toward Noise-Resilient Spectral Calculations on Quantum Hardware

Tuesday, 14 July 2026 15:30 (25)

Primary author(s) : PARK, Jubin (Soongsil University)

Presenter(s) : PARK, Jubin (Soongsil University)

Session Classification : Session 9

Contribution ID : 27

Type : not specified

Collective inertia in spontaneous fission with energy density functionals

Tuesday, 14 July 2026 15:55 (20)

Primary author(s) : WASHIYAMA, Kouhei (The University of Osaka)

Presenter(s) : WASHIYAMA, Kouhei (The University of Osaka)

Session Classification : Session 9

Contribution ID : 28

Type : not specified

Recent advance in study for deformed halo

Wednesday, 15 July 2026 10:00 (25)

Primary author(s) : SAGAWA, HIROYUKI (RIKEN/UNiversiy of Aizu)

Presenter(s) : SAGAWA, HIROYUKI (RIKEN/UNiversiy of Aizu)

Session Classification : Session 10

Contribution ID : 29

Type : not specified

Interaction cross sections and the investigation of deformation effects in neutron-rich Zr isotopes.

Wednesday, 15 July 2026 10:25 (25)

Primary author(s) : TAKAYAMA, Gen (RIKEN Nishina Center for Accelerator-Based Science)

Presenter(s) : TAKAYAMA, Gen (RIKEN Nishina Center for Accelerator-Based Science)

Session Classification : Session 10

Contribution ID : 30

Type : not specified

Proton elastic scattering from ^{132}Sn at intermediate energy for deducing the density distribution

Wednesday, 15 July 2026 10:50 (25)

Primary author(s) : HIJIKATA, Yuto (RIKEN)

Presenter(s) : HIJIKATA, Yuto (RIKEN)

Session Classification : Session 10

Contribution ID : 31

Type : not specified

A New “Skin Thickness” in High-spin Isomers as a Probe for Equation of State of Spin-polarized Matter

Wednesday, 15 July 2026 11:35 (25)

Primary author(s) : TACHIBANA, Toi (Kyoto University)

Presenter(s) : TACHIBANA, Toi (Kyoto University)

Session Classification : Session 11

Contribution ID : 32

Type : not specified

Bayesian Analysis of Nuclear Energy-Density Functional from Densities

Wednesday, 15 July 2026 12:00 (20)

Primary author(s) : YU, Chengpeng (The University of Osaka)

Presenter(s) : YU, Chengpeng (The University of Osaka)

Session Classification : Session 11

Contribution ID : 33

Type : not specified

Kohn-Sham approach with realistic spin-isospin and tensor channels to nuclear magnetic moments

Wednesday, 15 July 2026 13:50 (20)

Primary author(s) : NAKADA, Hitoshi (Chiba University)

Presenter(s) : NAKADA, Hitoshi (Chiba University)

Session Classification : Session 12

Contribution ID : 34

Type : not specified

Investigation of deformation in the lowest $11/2^-$ band of odd-mass $^{99-129}\text{Cd}$ isotopes

Wednesday, 15 July 2026 14:10 (20)

Primary author(s) : PATEL, Deepak (The University of Tokyo)

Presenter(s) : PATEL, Deepak (The University of Tokyo)

Session Classification : Session 12

Contribution ID : 35

Type : not specified

Nucleon effective masses in dense matter and their astrophysical implications

Wednesday, 15 July 2026 14:30 (25)

Primary author(s) : TOGASHI, Hajime (Kyoto University)

Presenter(s) : TOGASHI, Hajime (Kyoto University)

Session Classification : Session 12

Contribution ID : 36

Type : not specified

Mapping pairing vibration strength toward the experimental determination of pairing polarizability

Wednesday, 15 July 2026 15:15 (25)

Primary author(s) : DOZONO, Masanori (Kyoto University)

Presenter(s) : DOZONO, Masanori (Kyoto University)

Session Classification : Session 13

Contribution ID : 37

Type : not specified

TBA

Wednesday, 15 July 2026 15:40 (25)

Primary author(s) : UZAWA, Kotaro (Japan Atomic Energy Agency)

Presenter(s) : UZAWA, Kotaro (Japan Atomic Energy Agency)

Session Classification : Session 13

Contribution ID : 38

Type : not specified

Hybrid model of neutrino transport equation

Wednesday, 15 July 2026 16:05 (25)

Primary author(s) : CHEOUN, Myung-Ki (Soongsil University)

Presenter(s) : CHEOUN, Myung-Ki (Soongsil University)

Session Classification : Session 13

Contribution ID : 39

Type : not specified

NN and 3N Tensor Force in the N=34 Shell Evolution: An Ab Initio Perspective

Wednesday, 15 July 2026 16:50 (20)

Primary author(s) : KUMAR, Anil (University of Tsukuba)

Presenter(s) : KUMAR, Anil (University of Tsukuba)

Session Classification : Session 14

Contribution ID : 40

Type : not specified

Geometry factors in many-body caculations and where to use them

Wednesday, 15 July 2026 17:10 (20)

Primary author(s) : YU, Hang (U Tsukuba)

Presenter(s) : YU, Hang (U Tsukuba)

Session Classification : Session 14

Contribution ID : 41

Type : not specified

Nuclear mass model based on KIDS density functional

Wednesday, 15 July 2026 17:30 (20)

Primary author(s) : HYUN, Chang Ho (Daegu University)

Presenter(s) : HYUN, Chang Ho (Daegu University)

Session Classification : Session 14

Contribution ID : 42

Type : not specified

01-Ab initio calculation of nuclear structure factors toward detecting dark matter-nucleus scattering

Tuesday, 14 July 2026 16:30 (90)

Primary author(s) : CHIBA, Yukiya (University of Tsukuba)

Presenter(s) : CHIBA, Yukiya (University of Tsukuba)

Session Classification : Poster session

Contribution ID : 43

Type : not specified

02-Shell-model diagonalization on quantum computer with observable dynamic mode decomposition

Tuesday, 14 July 2026 16:30 (90)

Primary author(s) : ITO, Ritsuki (The University of Tokyo)

Presenter(s) : ITO, Ritsuki (The University of Tokyo)

Session Classification : Poster session

Contribution ID : 44

Type : not specified

03-Theoretical Investigation of Superheavy-Element Synthesis near the $N = 162$ Deformed Shell Region

Tuesday, 14 July 2026 16:30 (90)

Primary author(s) : KAWAI, Kosuke (Kindai University)

Presenter(s) : KAWAI, Kosuke (Kindai University)

Session Classification : Poster session

Contribution ID : 45

Type : not specified

04-Temperature-resolved sensitivities of ^{56}Ni production to helium-burning reactions in pair-instability supernovae

Tuesday, 14 July 2026 16:30 (90)

Primary author(s) : KAWASHIMO, Hiroki (The University of Tokyo)

Presenter(s) : KAWASHIMO, Hiroki (The University of Tokyo)

Session Classification : Poster session

Contribution ID : 46

Type : not specified

05-Semi-Classical Quantization of Periodic Solutions for Imaginary Time-Dependent Hartree-Fock Theory to Describe Spontaneous Fission

Tuesday, 14 July 2026 16:30 (90)

Presenter(s) : KOGA, Kotaro (Institute of Science Tokyo)

Session Classification : Poster session

Contribution ID : 47

Type : not specified

06-Impact of hyperon mixing on neutron star structure based on Skyrme-type equations of state: Systematic analysis of Λ NN and $\Lambda\Lambda$ N three-body forces

Tuesday, 14 July 2026 16:30 (90)

Primary author(s) : LEE, Taeho (Institute of Science Tokyo)

Presenter(s) : LEE, Taeho (Institute of Science Tokyo)

Session Classification : Poster session

Contribution ID : 48

Type : not specified

07-Exploring the Island of Stability through the Superdeformation of ^{204}Rn

Tuesday, 14 July 2026 16:30 (90)

Primary author(s) : MIKAWA, Misaki (University of Tsukuba)

Presenter(s) : MIKAWA, Misaki (University of Tsukuba)

Session Classification : Poster session

Contribution ID : 49

Type : not specified

08-Functional renormalization group study on quasi-one dimensional dipolar gas

Tuesday, 14 July 2026 16:30 (90)

Primary author(s) : MURAKAMI, Toru (The University of Tokyo)

Presenter(s) : MURAKAMI, Toru (The University of Tokyo)

Session Classification : Poster session

Contribution ID : 50

Type : not specified

09-Comparison of low-energy $^{12}\text{C} + ^{12}\text{C}$ and $^{12}\text{C} + ^{13}\text{C}$ fusion reaction through compound-nucleus spectra

Tuesday, 14 July 2026 16:30 (90)

Primary author(s) : NAGAO, Kosei (Kyoto University)

Presenter(s) : NAGAO, Kosei (Kyoto University)

Session Classification : Poster session

Contribution ID : 51

Type : not specified

10-On 3-body cluster behaviors of weakly bound states of N=6 nuclei

Tuesday, 14 July 2026 16:30 (90)

Primary author(s) : NAKAGAWA, Kosei (Kyoto University)

Presenter(s) : NAKAGAWA, Kosei (Kyoto University)

Session Classification : Poster session

Contribution ID : 52

Type : not specified

11-Unified description of pairing collective dynamics around ^{208}Pb

Tuesday, 14 July 2026 16:30 (90)

Presenter(s) : RUIKE, Chisato (University of Tsukuba)

Session Classification : Poster session

Contribution ID : 53

Type : not specified

12-Shell-model study of the island of inversion and its shore region

Tuesday, 14 July 2026 16:30 (90)

Primary author(s) : SHOJI, Takumi (University of Tsukuba)

Presenter(s) : SHOJI, Takumi (University of Tsukuba)

Session Classification : Poster session

Contribution ID : 54

Type : not specified

13-The research on nuclear fission using the relativistic mean field theory

Tuesday, 14 July 2026 16:30 (90)

Primary author(s) : YOSHIKAWA, Shion (RCNP, The University of Osaka)

Presenter(s) : YOSHIKAWA, Shion (RCNP, The University of Osaka)

Session Classification : Poster session

Contribution ID : 55

Type : not specified

14-Phase space factors for double beta decay with Coulomb potentials from nuclear and atomic density functional theory

Tuesday, 14 July 2026 16:30 (90)

Primary author(s) : KANAI, Atsuya (University of Tsukuba)

Presenter(s) : KANAI, Atsuya (University of Tsukuba)

Session Classification : Poster session

Contribution ID : 56

Type : not specified

15-Theoretical study on the molecular electronic structure and the nuclear decay half-life of U-235m uranyl halides

Tuesday, 14 July 2026 16:30 (90)

Primary author(s) : HASHIBA, So (The University of Osaka)

Presenter(s) : HASHIBA, So (The University of Osaka)

Session Classification : Poster session

Contribution ID : 57

Type : not specified

16-Microscopic Gross-Pitaevskii Analysis of Singlet-Triplet Neutron Vortex Binding in the 1S_0 - 3P_2 Coexistence Phase near the Crust-Core Boundary of Neutron Stars

Tuesday, 14 July 2026 16:30 (90)

Primary author(s) : HATTORI, Tatsuhiko (Institute of Science Tokyo)

Presenter(s) : HATTORI, Tatsuhiko (Institute of Science Tokyo)

Session Classification : Poster session

Contribution ID : 58

Type : not specified

Welcome from the director of CCS

Monday, 13 July 2026 09:30 (10)

Primary author(s) : SHIGETA, Yasuteru (University of Tsukuba)

Presenter(s) : SHIGETA, Yasuteru (University of Tsukuba)

Session Classification : Opening session

Contribution ID : 59

Type : not specified

Opening remarks

Monday, 13 July 2026 09:20 (10)

Session Classification : Opening session

Contribution ID : 60

Type : not specified

17-Structure of nucleon-pair states in nuclei

Tuesday, 14 July 2026 16:30 (90)

Primary author(s) : OCHI, Taishi (University of Tsukuba)

Presenter(s) : OCHI, Taishi (University of Tsukuba)

Session Classification : Poster session

Contribution ID : 61

Type : not specified

18-Development of a Gogny pnFAM toward Global Calculations of Charge-Exchange Processes

Tuesday, 14 July 2026 16:30 (90)

Primary author(s) : KENTA, Akai (University of Tsukuba)

Presenter(s) : KENTA, Akai (University of Tsukuba)

Session Classification : Poster session