

Nuclear physics across energy scales

Report of Contributions

Contribution ID: 1

Type: **not specified**

Surprises and challenges in the QCD phase diagram

Friday, 19 September 2025 09:30 (30 minutes)

Presenter: Prof. FUKUSHIMA, Kenji (The University of Tokyo)

Session Classification: Morning Session

Contribution ID: 2

Type: **not specified**

Investigating nuclear structure with LHCb and SMOG2

Friday, 19 September 2025 10:00 (30 minutes)

Primary author: Prof. GRAZIANI, Giacomo (INFN, Sezione di Firenze)

Presenter: Prof. GRAZIANI, Giacomo (INFN, Sezione di Firenze)

Session Classification: Morning Session

Contribution ID: 3

Type: **not specified**

Diffusion models for lattice field theory

Friday, 19 September 2025 11:00 (30 minutes)

Primary author: Prof. AATS, Gert

Presenter: Prof. AATS, Gert

Session Classification: Morning Session

Contribution ID: 4

Type: **not specified**

An improved formula for spin polarization at local thermodynamic equilibrium

Friday, 19 September 2025 11:30 (30 minutes)

Primary author: Prof. BECATTINI, Francesco

Presenter: Prof. BECATTINI, Francesco

Session Classification: Morning Session

Contribution ID: 5

Type: **not specified**

Overview for AMPT and nuclear structure

Friday, 19 September 2025 12:00 (30 minutes)

Primary author: Prof. LIN, Zi-Wei (East Carolina University)

Presenter: Prof. LIN, Zi-Wei (East Carolina University)

Session Classification: Morning Session

Contribution ID: 6

Type: **not specified**

Essentials of nuclear imaging at high-energy colliders

Friday, 19 September 2025 14:00 (30 minutes)

Primary author: Prof. GIACALONE, Giuliano

Presenter: Prof. GIACALONE, Giuliano

Session Classification: Afternoon Session

Contribution ID: 7

Type: **not specified**

Sign-problem-free quantum Monte Carlo simulation towards heavy nuclei

Friday, 19 September 2025 14:30 (30 minutes)

Primary author: Prof. LU, Bingnan (Institute of theoretical physics, Chinese Academy of Sciences)

Presenter: Prof. LU, Bingnan (Institute of theoretical physics, Chinese Academy of Sciences)

Session Classification: Afternoon Session

Contribution ID: 8

Type: **not specified**

Emergent Cluster Structures in Light Nuclei

Friday, 19 September 2025 16:30 (30 minutes)

Primary author: Prof. ZHOU, Bo (复旦大学)

Presenter: Prof. ZHOU, Bo (复旦大学)

Session Classification: Afternoon Session

Contribution ID: 9

Type: **not specified**

Can the strong interactions between hadrons be determined using femtoscopy?

Friday, 19 September 2025 16:00 (30 minutes)

Primary author: Prof. EPELBAUM, Evgeny (Ruhr University Bochum)

Presenter: Prof. EPELBAUM, Evgeny (Ruhr University Bochum)

Session Classification: Afternoon Session

Contribution ID: **10**

Type: **not specified**

Understanding Xe isotopes near $A=130$ from the prolate-oblate shape phase transition

Saturday, 20 September 2025 09:00 (30 minutes)

Primary author: Prof. ZHANG, Yu

Presenter: Prof. ZHANG, Yu

Session Classification: Morning Session

Contribution ID: 11

Type: **not specified**

Mystery of Calcium production in the first generation stars

Saturday, 20 September 2025 09:30 (30 minutes)

Primary author: Prof. HE, JianJun

Presenter: Prof. HE, JianJun

Session Classification: Morning Session

Contribution ID: 12

Type: **not specified**

Light nuclei structure by lattice effective field theory

Saturday, 20 September 2025 10:30 (30 minutes)

Primary author: Prof. SHEN, Shihang (Beihang University)

Presenter: Prof. SHEN, Shihang (Beihang University)

Session Classification: Morning Session

Contribution ID: 13

Type: **not specified**

Imaging shapes of atomic nuclei from large to small via high-energy nuclear collisions

Saturday, 20 September 2025 11:00 (30 minutes)

Presenter: Prof. ZHANG, Chunjian (Fudan University)

Session Classification: Morning Session

Contribution ID: 14

Type: **not specified**

Probe the nuclear shape with relativistic heavy ion collisions

Saturday, 20 September 2025 11:30 (30 minutes)

Primary author: Prof. ZHAO, ShuJun

Presenter: Prof. ZHAO, ShuJun

Session Classification: Morning Session

Contribution ID: 15

Type: **not specified**

Probing QGP in light-ion collisions with ATLAS

Saturday, 20 September 2025 14:00 (30 minutes)

Primary author: Prof. HU, Qipeng (University of Science and Technology of China)

Presenter: Prof. HU, Qipeng (University of Science and Technology of China)

Session Classification: Afternoon Session

Contribution ID: **16**

Type: **not specified**

Small scale fluctuations and flow correlations

Saturday, 20 September 2025 14:30 (30 minutes)

Primary author: Prof. BOŹEK, Piotr

Presenter: Prof. BOŹEK, Piotr

Session Classification: Afternoon Session

Contribution ID: 17

Type: **not specified**

Resolving the PREX-CREX puzzle in nuclear density functional theory

Saturday, 20 September 2025 15:30 (30 minutes)

Primary author: Prof. ZHANG, Zhen

Presenter: Prof. ZHANG, Zhen

Session Classification: Afternoon Session

Contribution ID: **18**

Type: **not specified**

Octupole correlations in super-deformed bands in ^{56}Ni

Saturday, 20 September 2025 16:00 (30 minutes)

Primary author: Prof. SAGAWA, Hiroyuki

Presenter: Prof. SAGAWA, Hiroyuki

Session Classification: Afternoon Session

Contribution ID: **19**

Type: **not specified**

SRC study with multiple probes

Sunday, 21 September 2025 09:00 (30 minutes)

Primary author: Prof. YE, Zhihong (Tsinghua University)

Presenter: Prof. YE, Zhihong (Tsinghua University)

Session Classification: Morning Session

Contribution ID: 20

Type: **not specified**

Engineering shape of QGP droplets by comparing flow in small symmetric-asymmetric collisions

Sunday, 21 September 2025 09:30 (30 minutes)

Primary author: Prof. JIA, Jiangyong (Stony Brook University)

Presenter: Prof. JIA, Jiangyong (Stony Brook University)

Session Classification: Morning Session

Contribution ID: 21

Type: **not specified**

Machine learning density functional theory for atomic nuclei

Sunday, 21 September 2025 10:30 (30 minutes)

Primary author: Prof. ZHAO, Pengwei (Peking University)

Presenter: Prof. ZHAO, Pengwei (Peking University)

Session Classification: Morning Session

Contribution ID: 22

Type: **not specified**

Probing nuclear structure in heavy-ion reactions: similarities between subbarrier fusion and relativistic HIC

Sunday, 21 September 2025 11:00 (30 minutes)

Primary author: Prof. HAGINO, Kouichi

Presenter: Prof. HAGINO, Kouichi

Session Classification: Morning Session

Contribution ID: 23

Type: **not specified**

Alpha Cluster Formation and Decay in Nuclei

Sunday, 21 September 2025 11:30 (30 minutes)

Primary author: Prof. XU, Chang

Presenter: Prof. XU, Chang

Session Classification: Morning Session

Contribution ID: 24

Type: **not specified**

Measuring neutron skin by relativistic isobaric collisions

Primary author: Prof. XU, Haojie (Huzhou University)

Presenter: Prof. XU, Haojie (Huzhou University)

Session Classification: Afternoon Session

Contribution ID: 25

Type: **not specified**

Fermi operator expansion method for nuclei and inhomogeneous nuclear matter at finite temperature

Sunday, 21 September 2025 14:00 (30 minutes)

Primary author: Prof. NAKATSUKASA, Takashi

Presenter: Prof. NAKATSUKASA, Takashi

Session Classification: Afternoon Session

Contribution ID: 26

Type: **not specified**

A theory discussion on new results from oxygen and neon collisions at the LHC

Sunday, 21 September 2025 14:30 (30 minutes)

Primary author: Prof. VAN DER SCHEE, Wilke (CERN / Utrecht University)

Presenter: Prof. VAN DER SCHEE, Wilke (CERN / Utrecht University)

Session Classification: Afternoon Session

Contribution ID: 27

Type: **not specified**

Exploring dense nuclear matter in relativistic heavy-ion collisions

Friday, 19 September 2025 15:30 (30 minutes)

Primary author: Prof. KITAZAWA, Masakiyo (Yukawa Institute for Theoretical Physics, Kyoto University)

Presenter: Prof. KITAZAWA, Masakiyo (Yukawa Institute for Theoretical Physics, Kyoto University)

Session Classification: Afternoon Session

Contribution ID: **28**

Type: **not specified**

Opening address

Friday, 19 September 2025 09:00 (10 minutes)

Presenter: Prof. PENG, ShuangJie

Session Classification: Opening Ceremony + Group Photo