



# The Fourth International Conference on Axion Physics and Experiment (Axion 2025)

## Monday 28 July 2025

### Afternoon Session: I - 玄武厅 (14:00-15:30)

-Conveners: Huaike Guo

| time  | [id] title  | presenter              |
|-------|---|------------------------|
| 14:00 | [11] Small Instantons and the Post-Inflationary QCD Axion in a Special Product GUT                                    | Prof. Yuichiro Nakai   |
| 14:30 | [22] Observation of quantum entanglement in $\Lambda\bar{\Lambda}$ pair production via electron-positron annihilation | Dr Junle Pei           |
| 15:00 | [13] Probing Heavy Axion-like Particles from Massive Stars with X-rays and Gamma Rays                                 | Prof. P. S. Bhupal Dev |

### Afternoon Session: II - 玄武厅 (16:00-18:30)

-Conveners: Yun Jiang

| time  | [id] title  | presenter         |
|-------|---|-------------------|
| 16:00 | [18] Probe CP Structure of Axion-Like Particles at Future Lepton Collider | Dr Muyuan Song    |
| 16:25 | [8] The cosmological consequences of preferred axion models               | Andrew Cheek      |
| 16:50 | [32] Recent Dark “Matter/Photon/Higgs” search results from ATLAS          | Ngoc Khanh Vu     |
| 17:15 | [7] Superradiant dark matter production from primordial black holes       | Mr Nayun Jia      |
| 17:40 | [19] Recent Progress of DarkSHINE R&D                                     | Dr Haidar Alfanda |
| 18:05 | [36] Searching for dark matter with high-energy galactic observations     | Shyam Balaji      |

# Tuesday 29 July 2025

## Afternoon Session: III - 玄武厅 (14:00-15:40)

-Conveners: Wei Chao

| time  | [id] title   | presenter                 |
|-------|--|---------------------------|
| 14:00 | [21] Distinguishing Light Scalars via CP: Dilaton and Axion at Belle II                            | Dr Sudhakantha Girmohanta |
| 14:25 | [1] The Superconducting Heterodyne Approach to Axion Detection                                     | Mr Kevin Zhou             |
| 14:50 | [17] QCD axion dark matter with Peccei-Quinn symmetry breaking by a light scalar field             | Shota Nakagawa            |
| 15:15 | [25] Mesonic contributions to axion thermalization below the QCD crossover in the KSVZ axion model | Jinbao Wang               |

## Afternoon Session: IV - 玄武厅 (16:00-18:15)

-Conveners: Tianjun Li

| time  | [id] title   | presenter           |
|-------|--|---------------------|
| 16:00 | [31] Finite temperature effective theory for Electroweak phase transition                              | Renhui Qin          |
| 16:25 | [4] Black hole superradiance as a source of high-energy cosmic rays                                    | Mr Yinda Guo        |
| 16:50 | [6] Simulations of Fuzzy Dark Matter   | Mr Yu-Ming Yang     |
| 17:15 | [26] Superconducting cavities as detectors of ultralight bosons and high frequency gravitational waves | Yanjie Zeng         |
| 17:40 | [12] Composite dark matter axion-like particles: Glueball-ALPs   | Dr Pierluca Carenza |
| 18:05 | [34] Introduction of the Axion 2026 Conference   | Hong Zhang          |