

## **Session Program**

**24-30 Aug 2025**

# **The XIX International Conference on Topics in Astroparticle and Underground Physics (TAUP2025)**

## ***Dark Matter and Its Detection***

Xichang Qionghai Hotel  
Xichang, Sichuan, China

# Monday 25 August

14:00

## Dark Matter and Its Detection: parallel session 1A

**Session** | **Location:** Conference Room F2-R1 | **Convener:** Ning Zhou

**14:00-14:20** **WIMP results from XENONnT with 3.1 tonne  $\times$  year of exposure**

**Speaker**

Maxime Pierre

**14:20-14:40** **Results from and Status of the LUX-ZEPLIN Experiment**

**Speaker**

Amy Cottle

**14:40-15:00** **Search for light dark matter with PandaX-4T**

**Speaker**

minzhen zhang

**15:00-15:20** **XLZD status**

**Speaker**

Masaki Yamashita

**15:20-15:40** **Science prospects of the XLZD experiment**

**Speaker**

Knut Dundas Morå

15:40

14:00

## Dark Matter and Its Detection: parallel session 1B

**Session** | **Location:** Conference Room F2-R2

**14:00-14:20** **Dark Photon Dark Matter Detection with Radio Telescopes**

**Speaker**

Jia Liu

**14:20-14:40** **Searching for Axion-Like Particles with X-ray Observations of Alpha Centauri**

**Speaker**

Yue-Lin Sming Tsai

**14:40-15:00** **Dark photons and axion-like particles at the Electron-Ion Collider**

**Speaker**

Teng Ma

**15:00-15:20** **Getting the most on SN axions**

**Speaker**

Alessandro Lella

**15:20-15:40** **Beyond the simplest strongly interacting dark matter**

**Speaker**

xiaoyong chu

15:40

16:00

**Dark Matter and Its Detection: parallel session 2A****Session** | **Location:** Conference Room F2-R1 | **Convener:** Roberto Santorelli**16:00–16:20****General overview of the DarkSide-20k experiemnt at LNGS: status and goals****Speaker**

Walter Bonivento

**16:20–16:40****Dark Matter Search in DEAP-3600: Recent Results and Future Prospects****Speaker**

Shawn Westerdale

**16:40–17:00****ALETHEIA: Hunting for low-mass dark matter with liquid helium-filled TPCs****Speaker**

Liao Junhui

**17:00–17:20****The SABRE South Experiment at the Stawell Underground Physics Laboratory****Speaker**

Suerfu Burkhant

**17:20–17:40****The SABRE North project at Gran Sasso Laboratory****Speaker**

Aldo Ianni

**17:40–18:00****Recent Results from the COSINE-100 Experiment****Speaker**

Insoo Lee

**18:00–18:20****Strong Constraints on the DAMA/LIBRA Modulation Signal from ANAIS-112****Speaker**

Maria Martinez

18:20

16:00

**Dark Matter and Its Detection: parallel session 2B****Session** | **Location:** Conference Room F2-R2 | **Convener:** wei chao**16:00–16:20****Constraints on Strongly-Interacting Dark Matter from the James Webb Space Telescope****Speaker**

Peizhi Du

**16:20–16:40****Illuminating Very Heavy Dark Matter in the Earth with Tau Neutrinos****Speaker**

Qinrui Liu

**16:40–17:00****Boosted dark matter from semi-annihilations in the galactic center****Speaker**

Takashi Toma

17:00-17:20

**Probing MeV Dark Matter Via Solar Reflection****Speaker**

Mr Haoming Nie

17:20-17:40

**Boosted Dark Matter Directionality in Large Liquid Scintillators****Speaker**

Samuel S.H. Tse

17:40-18:00

**Many-body atomic response functions for sub-GeV dark matter-electron interactions****Speaker**

Prof. Cheng-Pang Liu

18:00

## Tuesday 26 August

14:00

### Dark Matter and Its Detection: parallel session 3A

**Session** | **Location:** Conference Room F2-R1 | **Convener:** Ziqing Hong

**14:00-14:20 The SuperCDMS SNOLAB experiment**

**Speaker**

Dr Emanuele Michielin

**14:20-14:40 Towards the deployment of DAMIC-M: status and latest results**

**Speaker**

Michelangelo Traina

**14:40-15:00 Search for light dark matter with CRESST-III**

**Speaker**

Paolo Gorla

**15:00-15:20**

**Scientific Prospects and Technical Innovations in the CDEX-50 Experiment**

**Speaker**

Shin Ted Lin

**15:20-15:40**

**The Direct Search Experiment for Light Dark Matter (DELIGHT): Overview and Perspectives**

**Speaker**

Melih Solmaz

15:40

14:00

### Dark Matter and Its Detection: parallel session 3B

**Session** | **Location:** Conference Room F2-R2 | **Convener:** Yongcheng Wu

**14:00-14:20 SUSY Dark Matter at the LHC?!**

**Speaker**

Sven Heinemeyer

**14:20-14:40**

**A Unified Framework for Dwarf Galaxy Cores and Cluster Substructure Cusps via Self-Interacting Dark Matter with Mass Segregation**

**Speaker**

Daneng Yang

**14:40-15:00**

**Lensing signatures of self-interacting dark matter halos: an analytic approach**

**Speaker**

Siyuan Hou

**15:00-15:20**

**3-Dimensional WIMP Effective Velocity Distribution**

**Speaker**

Chung-Lin SHAN

15:40

15:20-15:40

**Charged lepton flavor violating light Dark Matter and muonium invisible decay****Speaker**

Sahabub Jahedi

16:00

**Dark Matter and Its Detection: parallel session 4A****Session** | **Location:** Conference Room F2-R1 | **Convener:** Shin Ted Lin

16:00-16:20

**Search of light Dark Matter with TESSERACT experiment at Laboratoire Souterrain de Modane****Speaker**

Paul Vittaz

16:20-16:40

**The PICO-40L Dark Matter Search****Speaker**

William Woodley

16:40-17:00

**The CYGNO experiment, a Gaseous TPC for directional Dark Matter searches****Speaker**

Davide Fiorina

17:00-17:20

**Overview of the Axion Dark Matter eXperiment****Speaker**

Dan Zhang

17:20-17:40

**The MADMAX experiment: First dark matter constraints and the road ahead****Speaker**

Juan Pablo Arcila Maldonado

17:40-18:00

**Background simulation for the dark matter search experiment CRESST****Speaker**

Valentyna Mokina

18:00-18:20

**Investigating Ultra-Low Energy Ionization Yield from Nuclear Recoils in Semiconductor Detectors via Molecular Dynamics Simulations****Speaker**

Mr Chang-Hao Fang

18:20

## Wednesday 27 August

14:00

### Dark Matter and Its Detection: parallel session 5A

**Session** | **Location:** Conference Room F2-R1 | **Convener:** Yi Wang

14:00-14:20

#### Searches for Light Dark Matter with DarkSide-20k and DarkSide-LowMass

**Speaker**

Masayuki Wada

14:20-14:40

#### BULLKID-DM: searching for light WIMP with monolithic arrays of detectors

**Speaker**

Matteo Folcarelli

14:40-15:00

#### DarQ experiment - Wave-like dark matter searches using superconducting qubits

**Speaker**

Shion Chen

15:00-15:20

#### DAREDEVIL

**Speaker**

andrea Melchiorre

15:20-15:40

#### Search for Dark Sector Particles at a Nuclear Reactor from the NEON Experiment

**Speaker**

Hyunsu Lee

15:40

14:00

### Dark Matter and Its Detection: parallel session 5B

**Session** | **Location:** Conference Room F2-R2 | **Convener:** Xiaojun Bi

14:00-14:20

#### IceCube's Sensitivity Prospects to MeV-Scale Axion-Like Particles from Core-Collapse Supernovae

**Speaker**

Nora Valtonen-Mattila

14:20-14:40

#### WISP Searches on a Fiber Interferometer under Strong Magnetic Field

**Speaker**

Josep Maria Batllori Berenguer

14:40-15:00

#### Search for Dark Matter spectral lines around the Galactic Centre with CTAO LST-1

**Speaker**

Tomohiro Inada

15:00-15:20

#### Understanding the Origin of Cosmic-Ray Electrons and Positrons

**Speaker**  
Shanglin Li

15:20-15:40

### Search for Cosmic-Ray Antinuclei from Dark Matter with the GAPS Antarctic Balloon Mission

**Speaker**  
Prof. Mengjiao Xiao

15:40

16:00

## Dark Matter and Its Detection: parallel session 6A

**Session** | **Location:** Conference Room F2-R1 | **Convener:** Masaki Yamashita

16:00-16:20

### Search for Light Dark Matter with XENONnT

**Speaker**  
Shenyang Shi

16:20-16:40

### Sub-keV dark photon search with S2-only data in PandaX4T

**Speaker**  
Dr Shuaijie Li

16:40-17:00

### Search for new physics in low energy electron recoil signals in LZ WS2022+2024 combined dataset

**Speaker**  
YONGHENG XU

17:00-17:20

### Searching for MeV-scale Axion-like Particles and Dark Photons with PandaX-4T

**Speaker**  
Tao Li

17:20-17:40

### Search for axions and other new physics signals with PandaX-4T

**Speaker**  
xiaopeng Zhou

17:40-18:00

### First Search for Ultralight Dark Matter Using a Magnetically Levitated Particle

**Speaker**  
Chris Tunnell

18:00-18:20

### Search for Dark Matter with Levitated Ferromagnetic Spin Sensor

**Speaker**  
Wei Ji

18:20

16:00

## Dark Matter and Its Detection: parallel session 6B

**Session** | **Location:** Conference Room F2-R2

16:00-16:20

### Progress of the COSINE-100U experiment

**Speaker**  
Doohyeok Lee



16:20–16:40

**Advanced NaI detectors for Dark Matter search and other applications: the ANAIS+ project****Speaker**

Maria Martinez

16:40–17:00

**Dark matter annual modulation analysis with combined nuclear and electron recoil channels****Speaker**

Dr Manoj Kumar Singh

17:00–17:20

**First cryogenic SiPM readout of a NaI(Tl)-based dark matter detector with the ASTAROTH project****Speaker**

Davide D'Angelo

17:20–17:40

**Pulse Shape Discrimination Measurement of CsI(Tl) Scintillator with Green-Extended Photocathode PMTs****Speaker**

Sedong Park

17:40–18:00

**Scintillation Characteristics of an Undoped CsI Crystal with SiPM Readout for Dark Matter Detection****Speaker**

Wonkyung Kim

18:00–18:20

**The event discrimination in the bulk region of the point-contact germanium detector****Speaker**

Renmingjie Li

18:20

## Thursday 28 August

14:00

### Dark Matter and Its Detection: parallel session 7B

**Session** | **Location:** Conference Room F2-R2 | **Convener:** Masayuki Wada

**14:00-14:20** **First Direct Observation of Migdal Effect in Neutral Projectiles**

**Speaker**

Difan Yi

**14:20-14:40** **Characterization of argon recoils at the keV scale with ReD and ReD+**

**Speaker**

Luciano Pandola

**14:40-15:00**

**Determination of the sensitivity of the DEAP-3600 experiment to supermassive charged gravitinos**

**Speaker**

Michal Olszewski

**15:00-15:20** **Electronic Recoils in Xenon Detectors Induced by Solar Neutrinos**

**Speaker**

CHIH-PAN WU

**15:20-15:40**

**First observation of positron emission decay of Xe-125 in a noble liquid detector from the LUX-ZEPLIN Experiment**

**Speaker**

Miguel Hernandez

15:40

16:00

### Dark Matter and Its Detection: parallel session 8B

**Session** | **Location:** Conference Room F2-R2 | **Convener:** Junhui Liao

**16:00-16:20**

**Search for Dark Matter ALPs Through Photon Couplings in Atomic Systems**

**Speaker**

Ms Greeshma Chandrabhanu

**16:20-16:40**

**Cryogenic Underground Test facility at SNOLAB: Infrastructure and Latest Results**

**Speaker**

Ziqing Hong

**16:40-17:00**

**Status and Prospects of Kamioka Cryolab**

**Speaker**

Suerfu Burkhant

**17:00-17:20**

**A Tonne-scale Demonstrator of The DarkSide-20k Inner Detector**

**Speaker**

Ako Jamil

17:20-17:40

**Veto Development for the PandaX Experiment****Speaker**

Junting Huang

17:40-18:00

**Spectral Features of Argon Light Emission for Next-Generation Rare Event Detectors****Speaker**

Roberto Santorelli

18:00-18:20

**Low-energy Yttrium-Beryllium calibration in XENONnT****Speaker**

Shengchao Li

18:20