

Session Program

7-11 Jul 2025

Dark Side of the Universe 2025

Parallel 1

Monday 7 July

13:30

Parallel 1: Direct detection I

Session

13:30–13:50 **Status and results from the XENONnT Dark Matter experiment**

Speaker

Ran Budnik

13:50–14:00 **Shining Light on Dark Matter With LZ**

Speaker

Prof. Matthew Szydagis

14:00–14:20 **Searches for dark sector particles at Belle and Belle II**

Speaker

Daniel Marcantonio

14:20–14:30 **Status of CRESST**

Speaker

Colin James Moore

14:30–14:50

COSINUS - A NaI cryogenic calorimeter to resolve the long standing DAMA/LIBRA dark matter claim.

Speaker

Dr Matthew Stukel

15:10

15:40

Parallel 1: DM in halos I

Session

15:40–16:00 **Dark Stars, a possible solution to two recent astronomical puzzles**

Speaker

Cosmin Ilie

16:00–16:20

Cold collisionless dark matter halos are consistent with observations of galaxies

Speaker

Liliya Williams

16:20–16:40

Probing long-range dark matter-baryon interactions in compact stellar systems

Speaker

Zihui Wang

16:40–17:00

MUSE-DARK: Dark matter halo properties of intermediate-z star-forming galaxies

Speaker

Bianca-Iulia Ciocan

17:00-17:20

Dark plasmas in the nonlinear regime: constraints from particle-in-cell simulations

Speaker

Pierce Giffin

17:20

Tuesday 8 July

13:30

Parallel 1: Direct detection II

Session

13:30–13:50

The SABRE South Experiment at the Stawell Underground Physics Laboratory

Speaker

Yi Yi Zhong

13:50–14:10

Searches for Dark Matter with the ATLAS Experiment at the LHC

Speaker

Nikolina Ilic

14:10–14:30

Dark matter direct detection and constraints on non-relativistic effective operators

Speaker

Niklas Zimmermann

14:30–14:50

Refining the sensitivity of new physics searches with ancient minerals

Speaker

Audrey Fung

14:50–15:10

Dark-Matter Mass from Angular Scanning

Speaker

Prof. Jong-Chul Park

15:10

15:40

Parallel 1: Dark energy II

Session

15:40–16:00

Fitting the DESI BAO Data with Dark Energy Driven by the Cohen--Kaplan--Nelson Bound

Speaker

Patrick Adolf

16:20–16:40

Is dark energy dependent on cosmological curvature?

Speaker

Claia Bryja

16:40–17:00

Observational scalings testing modified gravity

Speaker

Armine Amekhyan

17:00–17:20

Simple quintessence models in light of DESI-BAO observations

Speaker

Varun Muralidharan

17:20

Wednesday 9 July

11:00

Parallel 1: Black holes / remnants II

Session

11:00–11:20

Reconstructing PTA measurements via early seeding of supermassive black holes

Speaker

Sohan Ghodla

11:20–11:40

CMB signatures of dark matter interactions beyond the power spectrum

Speaker

Yacine Ali-Haïmoud

11:40–12:00

New dynamical probes of primordial black holes

Speaker

Benjamin Lehmann

12:00–12:20

Probing Primordial Black Hole and Dark Matter Energy Injection Using the 21-cm Power Spectrum

Speaker

Yitian Sun

12:40

Thursday 10 July

13:30

Parallel 1: Supernovae

Session

13:30–13:50

Study of cosmic expansion anisotropy with type Ia supernovae from Zwicky Transient Facility

Speaker

Chloé Barjou-Delayre

13:50–14:10

Heating the dark matter halo with dark radiation from supernovae

Speaker

Stefan Vogl

14:10–14:30

The second Type I Supernova data release of the Zwicky Transient Facility

Speaker

Philippe ROSNET

14:30–14:50

Measuring Dark Energy parameters with Type Ia Supernovae in LSST

Speaker

Philippe Gris

14:50–15:10

Supernova Bounds on Neutrinophilic Dark Matter

Speaker

Christopher Cappiello

15:10

15:40

Parallel 1: Astrophysical / cosmological DM probes I

Session

15:40–16:00

Dimming Starlight with Dark Compact Objects

Speaker

Leo Kim

16:00–16:20

Dark Kinetic Heating of Exoplanets and Brown Dwarfs

Speaker

Aidan Reilly

16:20–16:40

Picolensing as a probe of compact dark matter

Speaker

Dr Sergey Sibiryakov

16:40–17:00

Probing dark matter annihilation through planetary airglow and internal heat flow

Speaker

Marianne Moore

17:00-17:20

Constraining Dark Acoustic Oscillations with the High-Redshift UV Luminosity Function

Speaker

Jared Barron

17:20

Friday 11 July

11:00

Parallel 1: Gravitational waves / phase transitions II

Session

11:00–11:20

What happens when supercooling is terminated by curvature flipping?

Speaker

Tomasz Dutka

11:20–11:40

Mapping the Gravitational Wave Sky from Primordial Black Holes

Speaker

Cassandra Moats

11:40–12:00

RG Improvement of the Scalar Effective Potential in Finite Temperature Quantum Field Theory

Speaker

Andrija Rasovic

12:00–12:20

Estimation of the Hubble parameter from compact object catalogues without threshold

Speaker

Reiko Harada

12:40