

Session Program

7-11 Jul 2025

Dark Side of the Universe 2025

Parallel 3

Monday 7 July

13:30

Parallel 3: DM models I

Session | **Location:** A1502, except B1007 on Monday | **Convener:** Keith A. Olive

13:30–13:50

Renormalisation group improvement of dynamical symmetry breaking by dark matter

Speaker

Kristjan Muursepp

13:50–14:10

Electroweak Multiplets as Dark Matter candidates: a brief review

Speaker

Dr Paolo Panci

14:10–14:30

Higgs-portal vector dark matter at a low reheating temperature

Speaker

Dr Jongkuk Kim

14:30–14:50

Unveiling Imprints from Dark Symmetries: Signatures of Axion Portal to Scalar Dark Matter

Speaker

Tommaso Sassi

14:50–15:10

What we believe to be known in direct Dark Matter detection physics might be incorrect

Speaker

Dr Chung-Lin SHAN

15:10

15:40

Parallel 3: Dark energy I

Session | **Location:** A1502, except B1007 on Monday | **Convener:** Urjit Yajnik

15:40–16:00

Could the Universe Endure a NEC Fracture?

Speaker

Dr Jerome Quintin

16:00–16:20

Do Observations Prefer Thawing Quintessence?

Speaker

Guillaume Payeur

16:20–16:40

Why the DESI results should not be a surprise

Speaker

ROBERT Brandenberger

16:40–17:00

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

Speaker

Patrick Adolf

17:00–17:20

FAT alternative dynamics to standard cosmology

Speaker

Pierros Ntelis

17:20

Tuesday 8 July

13:30

Parallel 3: Indirect detection

Session | Location: A1502, except B1007 on Monday | Convener: Marianne Moore

13:30–13:50 Jovian neutrino signatures of annihilating dark matter

Speaker
Sandra Robles

13:50–14:10
Capture, thermalisation and annihilation of Dark Matter in Compact Objects

Speaker
Giorgio Busoni

14:10–14:30 DREAMS of Dark Matter Annihilation Signals

Speaker
Alex Garcia

14:30–14:50 Searching for dark matter in Antarctica: the GAPS experiment.

Speaker
Riccardo Munini

15:10

15:40

Parallel 3: Gravitational waves / phase transitions I

Session | Location: A1502, except B1007 on Monday | Convener: Dr Sergey Sibiryakov

15:40–16:00 From symmetries to gravitational waves

Speaker
Csaba Balazs

16:00–16:20 Holographic phase transitions via thermally-assisted tunneling

Speaker
Andrey Shkerin

16:20–16:40
Gravitational wave symphony from (light) scalar fields in the early universe

Speaker
Prof. Yanou Cui

16:40–17:00
Phase Transition and Gravitational Wave in Strongly Coupled Dark Sectors

Speaker
ZHIWEI WANG

17:20

Wednesday 9 July

11:00

Parallel 3: Terrestrial DM searches

Session | **Location:** A1502 | **Convener:** Miriam Diamond

11:00–11:20

Dark matter at the high mass frontier

Speaker

Joseph Bramante

11:20–11:40

Atomic Dark Matter Capture in the Earth

Speaker

Keegan Humphrey

11:40–12:00

Composite dark matter disassembly in the Earth

Speaker

Yilda Boukhtouchen

12:00–12:20

The SuperCDMS Experiment at SNOLAB

Speaker

Dr Matthew Stukel

12:40

Thursday 10 July

13:30

Parallel 3: DM in halos II

Session | **Location:** A1502, except B1007 on Monday | **Convener:** Liliya Williams

13:30–13:50

Direct Collapse Supermassive Black Holes from Ultralight Dark Matter

Speaker

Hao Jiao

13:50–14:10

Searching For Heavy Dark Matter with LMC Modeling

Speaker

Andrew Buchanan

14:10–14:30

The Universality of Dark Matter Density Profiles for Milky Way Analog Galaxies

Speaker

Maria Clara Cavalcante Siviero

14:30–14:50

An effective theory for violent relaxation in cold dark matter halos: origin of the universal halo profiles

Speaker

Dr Uddipan Banik

15:10

15:40

Parallel 3: Axions

Session | **Location:** A1502, except B1007 on Monday | **Convener:** Dr SungWoo Youn

15:40–16:00

From supernovae to neutron stars: a systematic approach to axion production at finite density

Speaker

Michael Stadlbauer

16:00–16:20

Flipped rotating axion non-minimally coupled to gravity: Baryogenesis and Dark Matter

Speaker

Suruj Jyoti Das

16:20–16:40

Axions from magnetized plasma: effects of plasma dispersion

Speaker

Nirmalya Brahma

16:40–17:00

Searching for Light Axions from the High Arctic

Speaker

Prof. Jon Sievers

17:20

Friday 11 July

11:10

Parallel 3: Sub-GeV and ultralight DM

Session | Location: A1502, except B1007 on Monday | Convener: Patrick Foldenauer

11:10–11:30 Spin-dependent scattering of sub-GeV dark matter in crystal targets

Speaker
Pankaj Munbodh

11:30–11:50
Light scalar dark matter stabilized by Pauli blocking in fermion background

Speaker
Osamu Seto

11:50–12:10 Ultralight Dark Matter and Magnetic Fields on Cosmological Scales

Speaker
Robert Brandenberger

12:10–12:30 Wave Interference in Self-Interacting Fuzzy Dark Matter

Speaker
Christian Capanelli

12:50