Session Program

Jul 7 – 11, 2025

Dark Side of the Universe 2025

Parallel 3

Mon, July 7

1:30 PM

Parallel 3: DM models I

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

1:30 – 1:50 PM

Renormalisation group improvement of dynamical symmetry breaking by dark matter

Speaker
Kristjan Muursepp

1:50 – 2:10 PM

Electroweak Multiplets as Dark Matter candidates: a brief review

Speaker
Dr Paolo Panci

2:10 – 2:30 PM

Higgs-portal vector dark matter at a low reheating temperature

Speaker
Dr Jongkuk Kim

2:30 – 2:50 PM

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

Speaker
Tommaso Sassi

2:50 – 3:10 PM

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

Speaker
Dr Chung-Lin SHAN

3:10 PM

3:40 PM

Parallel 3: Dark energy I

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

3:40 – 4:00 PM

Could the Universe Endure a NEC Fracture?

Speaker
Dr Jerome Quintin

4:00 – 4:20 PM

Do Observations Prefer Thawing Quintessence?

Speaker
Guillaume Payeur

4:20 – 4:40 PM

Why the DESI results should not be a surprise

Speaker
ROBERT Brandenberger

4:40 – 5:00 PM

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

Speaker
Patrick Adolf

5:00 – 5:20 PM **FAT alternative dynamics to standard cosmology**

Speaker
Pierros Ntelis

5:20 PM

Tue, July 8

1:30 PM

Parallel 3: Indirect detection

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

1:30 – 1:50 PM **Jovian neutrino signatures of annihilating dark matter**

Speaker
Sandra Robles

1:50 – 2:10 PM
Capture, thermalisation and annihilation of Dark Matter in Compact Objects

Speaker
Giorgio Busoni

2:10 – 2:30 PM **DREAMS of Dark Matter Annihilation Signals**

Speaker
Alex Garcia

2:30 – 2:50 PM **Searching for dark matter in Antarctica: the GAPS experiment.**

Speaker
Riccardo Munini

3:10 PM

3:40 PM

Parallel 3: Gravitational waves / phase transitions I

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

3:40 – 4:00 PM **From symmetries to gravitational waves**

Speaker
Csaba Balazs

4:00 – 4:20 PM **Holographic phase transitions via thermally-assisted tunneling**

Speaker
Andrey Shkerin

4:20 – 4:40 PM
Gravitational wave symphony from (light) scalar fields in the early universe

Speaker
Prof. Yanou Cui

4:40 – 5:00 PM
Phase Transition and Gravitational Wave in Strongly Coupled Dark Sectors

Speaker
ZHIWEI WANG

5:20 PM

Wed, July 9

11:00 AM

Parallel 3: Terrestrial DM searches

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

11:00 – 11:20 AM **Dark matter at the high mass frontier**

Speaker
Joseph Bramante

11:20 – 11:40 AM **Atomic Dark Matter Capture in the Earth**

Speaker
Keegan Humphrey

11:40 AM – 12:00 PM **Composite dark matter disassembly in the Earth**

Speaker
Yilda Boukhtouchen

12:00 – 12:20 PM **The SuperCDMS Experiment at SNOLAB**

Speaker
Dr Matthew Stukel

12:40 PM

Thu, July 10

1:30 PM

Parallel 3: DM in halos II

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

1:30 – 1:50 PM

Direct Collapse Supermassive Black Holes from Ultralight Dark Matter

Speaker
Hao Jiao

1:50 – 2:10 PM

Searching For Heavy Dark Matter with LMC Modeling

Speaker
Andrew Buchanan

2:10 – 2:30 PM

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

Speaker
Maria Clara Cavalcante Siviero

2:30 – 2:50 PM

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

Speaker
Dr Uddipan Banik

3:10 PM

3:40 PM

Parallel 3: Axions

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

3:40 – 4:00 PM

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

Speaker
Michael Stadlbauer

4:00 – 4:20 PM

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

Speaker
Suruj Jyoti Das

4:20 – 4:40 PM

Axions from magnetized plasma: effects of plasma dispersion

Speaker
Nirmalya Brahma

4:40 – 5:00 PM

Searching for Light Axions from the High Arctic

Speaker
Prof. Jon Sievers

5:20 PM

Fri, July 11

11:10 AM

Parallel 3: Sub-GeV and ultralight DM

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

11:10 – 11:30 AM

Spin-dependent scattering of sub-GeV dark matter in crystal targets

Speaker
Pankaj Munbodh

11:30 – 11:50 AM

Light scalar dark matter stabilized by Pauli blocking in fermion background

Speaker
Osamu Seto

11:50 AM – 12:10 PM

Ultralight Dark Matter and Magnetic Fields on Cosmological Scales

Speaker
Robert Brandenberger

12:10 – 12:30 PM

Wave Interference in Self-Interacting Fuzzy Dark Matter

Speaker
Christian Capanelli

12:50 PM