

Session Program

3-8 Jul 2016



SUSY 2016

Dark Matter and Particle Astrophysics

The University of Melbourne, Carrillo Gantner Theatre
Sidney Myer Asia Centre The University of Melbourne VIC 3010 Australia

Monday 4 July

14:00

Dark Matter and Particle Astrophysics

Session |

Location: Carillo Gantner Theatre, Carrillo Gantner Theatre, Sidney Myer Asia Centre The University of Melbourne
 Convener: Australia|Orbett

14:00-14:20

Distinguishing between Warm Dark Matter and Late Kinetic Decoupling using CMB spectral distortions.

Speaker

James Diacoumis

14:20-14:40

Relic density and baryogenesis from natural SUSY with mixed axion-higgsino dark matter

Speaker

Howard Baer

14:40-15:00

Freeze-in of light dark matter

Speaker

Rupert Coy

15:00-15:20

Nonperturbative Dynamics in Dark Matter Freezeout

Speaker

William Shepherd

15:20-15:40

Theoretical uncertainty of the supersymmetric dark matter relic density

Speaker

Julia Harz

15:40-16:00

Higgs Inflation and UV completion

Speaker

Anupam Mazumdar

16:00

16:30

Dark Matter and Particle Astrophysics

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 Convener: Australia|Mazumdar

16:30-16:50

Dark Forces in the Sky: signals from Z' and the dark Higgs

Speaker

Dr Yi Cai

16:50-17:10

Constraints on dark matter annihilation to fermions and a photon

Speaker

Debtosh Chowdhury

17:10-17:30

Indirect detection of sub-GeV dark matter

18:10

Speaker

Adam Coogan

17:30-17:50

Dark matter annihilation into right-handed neutrinos and the galactic center gamma-ray excess

Speaker

Yi-Lei Tang

Tuesday 5 July

14:00

Dark Matter and Particle Astrophysics

Session |

Location: Carillo Gantner Theatre, Carrillo Gantner Theatre, Sidney Myer Asia Centre The University of Melbourne
Convener: Australia| Gracielle Belanger

14:00-14:20 **Searching for Dark Matter with the ATLAS Detector**

Speaker

Laser Seymour Kaplan

14:20-14:40 **Searches for dark matter in hadronic final states at CMS**

Speaker

Cristian Ignacio Pena Herrera

14:40-15:00 **Searches for dark matter in non-hadronic final states at CMS**

Speaker

Bhawna Gomber

15:00-15:20 **Searches for dark matter in heavy-flavor final states at CMS**

Speaker

Douglas Ryan Berry

15:20-15:40 **Unitarity constraints for Effective Field Theories**

Speaker

Dr Giorgio Busoni

15:40-16:00

Mass-constraining variables to confront dark matter production at the LHC

Speaker

Mr Abhaya Kumar Swain

16:00

16:30

Dark Matter and Particle Astrophysics

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16:30-16:50

Exotic Prompt and Non-Prompt Leptonic Decays as a Window to the Dark Sector with ATLAS

Speaker

Miriam Deborah Joy Diamond

16:50-17:10 **Search for Dark matter with XENON1T Experiment**

Speaker

Dr Marie Cecile Piro

17:10-17:30 **The DEAP-3600 Dark Matter Direct Detection Experiment**

Speaker

Joseph Walding

18:30

17:30-17:50

Sidereal modulation searches for the direct detection of self-interacting dark matter**Speaker**

Mr Jackson Clarke

17:50-18:10

The status of KIMS-NaI experiment at Yangyang underground laboratory**Speaker**

Nam Young KIM

18:10-18:30

Reconstructing WIMP dark matter properties through signal measurements in direct detection, Fermi-LAT, and CTA**Speaker**

Enrico Maria Sessolo

Thursday 7 July

14:00

Dark Matter and Particle Astrophysics

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Location: Carillo Gantner Theatre, Carrillo Gantner Theatre, Sidney Myer Asia Centre The University of Melbourne
Convener: Genevieve Belanger
Speaker: Gianfranco Busoni

14:00-14:20 **Right-handed sneutrino dark matter**

Speaker

Genevieve Belanger

14:20-14:40 **Combined analysis of effective Higgs portal dark matter models**

Speaker

Mr Ankit Beniwal

14:40-15:00

Minimal Majoronic Dark Radiation and Dark Matter Model and its Phenomenology

Speaker

We-Fu Chang

15:00-15:20 **Top-philic Scalar DM with a Vector-like Top Partner**

Speaker

Peiwen Wu

15:20-15:40 **Semi-analytical approaches in particle cosmology**

Speaker

Graham White

15:40-16:00

Gravitationally Bound Condensates Formed by Bosons with Potential Energy

$$V(A) = (1 - \cos(A/f))$$

Speaker

Rohana Wijewardhana

16:00

16:30

Dark Matter and Particle Astrophysics

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Convener: Genevieve Belanger

16:30-16:50 **Gravitational Wave Instabilities in the Cosmic Neutrino Background**

Speaker

Neil Barrie

16:50-17:10 **Constraints on cosmological viscosity from GW150914 observation**

Speaker

Gaurav Goswami

17:10-17:30 **Layered dielectric haloscopes: a new way to detect axion dark matter**

Speaker

Alex Millar

17:30-17:50

Searches for Axion-Like Particles with NGC1275: Observation of Spectral Modulations

Speaker

Nicholas Jennings

17:50-18:10

Colour Breaking Baryogenesis

Speaker

Graham White

18:10