

## Session Program

7-11 Aug 2017



## TeV Particle Astrophysics 2017 (TeVPA 2017)

### *Dark matter*

Columbus, Ohio, USA

Hosted by the Center for Cosmology and AstroParticle Physics (CCAPP), The Ohio State University

# Sunday 6 August

14:00

## Dark matter

**Session** | **Location:** The Athenaeum, Small Theater | **Convener:** Lina Necib

**14:00-14:15** **Diverse Galactic Rotation Curves and Self-Interacting Dark Matter**

**Speaker**

Hai-Bo Yu

**14:15-14:30**

**Can Self-interacting Dark Matter Solve the 'Diversity Problem' in Galactic Rotation Curves?**

**Speaker**

Anna Kwa

**14:30-14:45**

**Constraining Self-Interacting Dark Matter through Equal Mass Galaxy Cluster Mergers**

**Speaker**

Stacy Kim

**14:45-15:00**

**SIMPs with Vector Mediators**

**Speaker**

Alexander Natale

**15:00-15:15**

**Enabling Forbidden Dark Matter**

**Speaker**

Hongwan Liu

**15:15-15:30**

**Chiral Effective Theory of Dark Matter Direct Detection**

**Speaker**

Joachim Brod

15:30

16:00

## Dark matter

**Session** | **Location:** The Athenaeum, Athenian Room | **Convener:** dan hooper

**16:00-16:15**

**Flavoured Dark Matter in Dark Minimal Flavour Violation**

**Speaker**

Simon Kast

**16:15-16:30**

**Enhancing Dark Matter Annihilation Rates with Dark Bremsstrahlung**

**Speaker**

Nicole Bell

**16:30-16:45**

**Dark Forces in the Sky: Signals from Z' and the Dark Higgs**

**Speaker**

Nicole Bell

**16:45-17:00**

**Dark Matter Models for the Galactic Center Excess**

**Speaker**  
Miguel Escudero

17:00-17:15

**Sharp spectral features from light dark matter decay via gravity portals**

**Speaker**  
Sebastian Ingehütt

17:15-17:30

**Cooling sterile neutrino dark matter**

**Speaker**  
Dr Stefan Vogl

17:30-17:45

**Phase Method for the evaluation of Sommerfeld Enhancement**

**Speaker**  
Dr Hiren Patel

17:45-18:00

**Au Genesis From Cogenesis: Heavy Asymmetric Dark Matter Makes Gold**

**Speaker**  
Joseph Andrew Bramante

18:00

16:00

**Dark matter**

**Session** | **Location:** The Athenaeum, Small Theater | **Convener:** C Eric Dahl

16:00-16:15

**Measurement of low energy ionization signals from Compton scattering in a CCD dark matter detector**

**Speaker**  
Karthik Ramanathan

16:15-16:30

**The LDMX Experiment**

**Speaker**  
Joshua Hiltbrand

16:30-16:45

**The DAMIC experiment at SNOLAB**

**Speaker**  
Ryan Thomas

16:45-17:00

**Recent Results and Current Status of SuperCDMS**

**Speaker**  
Dr Tsuguo Aramaki

17:00-17:15

**MiniBooNE Dark Matter Search**

**Speaker**  
Ranjan Dharmapalan

17:15-17:30

**Scintillating Bubble Chamber for Dark Matter and CEvNS Detection**

**Speaker**  
Jianjie Zhang

17:30-17:45

**Recent results from the MAJORANA DEMONSTRATOR**

**Speaker**

Dr Jordan Myslik

17:45-18:00

**Free**

18:00

# Monday 7 August

14:00

## Dark matter

**Session** | **Location:** The Athenaeum, Small Theater | **Convener:** Francesca Calore

**14:00-14:15** **Testing Cold Dark Matter with Strong Gravitational Lensing of AGN**

**Speaker**

Anna Nierenberg

**14:15-14:30** **Searching for dark disks using Gaia**

**Speaker**

KATELIN SCHUTZ

**14:30-14:45**

**Dwarf Galaxy Population of a Nearby Star-Forming Galaxy and Implications for Dark Matter**

**Speaker**

Alexandra Davis

**14:45-15:00**

**Searching for ultra-faint galaxies in three years of data from the Dark Energy Survey**

**Speaker**

Keith Bechtol

**15:00-15:15**

**Black Mergers, Quiet Kilonovae, and r-Process Afterglow Donuts From Dark Matter**

**Speaker**

Yu-Dai Tsai

**15:15-15:30**

**Dark Fires in the Sky: Model-Independent Dark Matter Detection via Kinetic Heating of Neutron Stars**

**Speaker**

Nirmal Raj

15:30

16:00

## Dark matter

**Session** | **Location:** The Athenaeum, Small Theater | **Convener:** C Eric Dahl

**16:00-16:15** **LUX, and the Combatting of the WIMP Lamppost Effect**

**Speaker**

Prof. Matthew Szydagis

**16:15-16:30** **The Next-Generation Dark Matter Project, LUX-ZEPLIN**

**Speaker**

Prof. Matthew Szydagis

**16:30-16:45** **First result of XENON1T**

**Speaker**

Dr Lin Qing

16:45-17:00

**Dark matter search results from the PandaX-II experiment**

**Speaker**

Prof. Yong Yang

17:00-17:15

**Direct dark matter search with the CRESST-III experiment**

**Speaker**

Andrea Münster

17:15-17:45

**Dark matter searches with the PICO bubble chambers**

**Speaker**

Scott Fallows

17:45-18:00

**Search for hidden-photon Dark Matter with FUNK**

**Speaker**

Ralph Richard Engel

18:15

# Tuesday 8 August

14:00

<b>Dark matter</b>	
<b>Session</b>	<b>Location:</b> The Athenaeum, Small Theater   <b>Convener:</b> Kerstin Perez
14:00-14:15	<b>Improving the search for extragalactic dark matter using N-body simulations</b>  <b>Speaker</b> Nicholas Rodd
14:15-14:30	<b>A search for dark matter annihilation in nearby galaxy groups</b>  <b>Speaker</b> Siddharth Mishra Sharma
14:30-14:45	<b>Searching for Dark Matter Annihilation in Milky Way Satellite Galaxies</b>  <b>Speakers</b> Alex Drlica-Wagner, Keith Bechtol, Andrea Albert
14:45-15:00	<b>Sommerfeld-Enhanced J-Factors For Dwarf Spheroidal Galaxies</b>  <b>Speaker</b> Kimberly Boddy
15:00-15:15	<b>Investigating what the Milky Way's dwarfs have to tell us about the Galactic Center extended excess</b>  <b>Speaker</b> Ryan Keeley
15:15-15:30	<b>Searching for dark matter annihilation in Galactic substructure with photon statistics</b>  <b>Speaker</b> Laura Chang

15:30

16:00

<b>Dark matter</b>	
<b>Session</b>	<b>Location:</b> The Athenaeum, Small Theater   <b>Convener:</b> Benjamin Safdi
16:00-16:15	<b>LD2DM scenario as an explanation of the AMS-02 positron excess</b>  <b>Speaker</b> Jatan Buch
16:15-16:30	<b>Zero-Range Effective Field Theory for Resonant Wino Dark Matter</b>  <b>Speaker</b> Evan Johnson
16:30-16:45	<b>Thermal Dark Matter Below an MeV</b>  <b>Speaker</b> Asher Berlin

16:45-17:00

## Indirect Detection of Neutrino Portal Dark Matter

### Speaker

Barmak Shams Es Haghi

17:00



# Wednesday 9 August

14:00

## Dark matter

**Session** | **Location:** The Athenaeum, Small Theater | **Convener:** Francesca Calore

14:00-14:15

### Empirical Determination of Dark Matter Velocity Distribution Using Metal Poor Stars

**Speaker**

Lina Necib

14:15-14:30

### On the applicability of Eddington's inversion methods to direct dark matter searches

**Speaker**

Martin Stref

14:30-14:45

### Astrophysical distribution of dark matter and direct detection implications

**Speaker**

Nassim Bozorgnia

14:45-15:00

### Reverse Direct Detection: Cosmic Ray Tests of Light Dark Matter Elastic Scattering

**Speaker**

Mr Christopher Cappiello

15:00-15:15

### Determinations of Properties of Low-Mass WIMPs from Direct Dark Matter Detection Experiments with Non-negligible Threshold Energy

**Speaker**

Dr Chung-Lin SHAN

15:15-15:30

### Hunting for WIMPs, how low should we go?

**Speaker**

Aaron Pierce

15:30

16:00

## Dark matter

**Session** | **Location:** The Athenaeum, Small Theater | **Convener:** Kerstin Perez

16:00-16:15

### ABRACADABRA: A novel approach to detecting axion dark matter

**Speaker**

Benjamin Safdi

16:15-16:30

### The Axion Dark Matter Experiment

**Speaker**

William Wester

16:30-16:45

**Axion and ALP Dark Matter Search with the International Axion Observatory (IAXO) and mini-IAXO**

**Speaker**

Julia Katharina Vogel

16:45-17:00

**The Axion Resonant InterAction Detection Experiment (ARIADNE)**

**Speaker**

Justin Shortino

17:00-17:15

**A Fresh Look at Axions: Using NuSTAR Solar Observations in Search for Dark Matter**

**Speaker**

Jaime Ruz Armendariz

17:15-17:30

**Emission of Photons and Relativistic Axions from Axion Stars**

**Speaker**

Abhishek Mohapatra

17:30-17:45

**Signatures of dark-matter sub-structure in axion direct detection experiments**

**Speaker**

Joshua Foster

17:45-18:00

**Free**

18:00

# Thursday 10 August

14:00

## Dark matter

**Session** | **Location:** The Athenaeum, Small Theater | **Convener:** Francesca Calore

**14:00-14:15** **Full Sky Indirect Detection: Challenges and Strategies**

**Speaker**  
Sheldon Campbell

**14:15-14:30** **Searching for Dark Matter in M31 with HAWC**

**Speaker**  
Andrea Albert

**14:30-14:45** **Dark Matter Searches using Dwarf Galaxies with HAWC**

**Speaker**  
Dr Tolga Yapici

**14:45-15:00**

**Galactic Dark Matter substructure searches with the Cherenkov Telescope Array (CTA)**

**Speaker**  
Dr Moritz Hütten

**15:00-15:15**

**Multi-wavelength Approach to Indirect Dark Matter Searches with RX-DMFIT**

**Speaker**  
Alex McDaniel

**15:15-15:30**

**The GAPS Experiment for Cosmic-ray Antinuclei Signatures of Dark Matter**

**Speaker**  
Kerstin Perez

15:30

16:00

## Dark matter

**Session** | **Location:** The Athenaeum, Small Theater | **Convener:** Benjamin Safdi

**16:00-16:15**

**General Constraints on Decaying Dark Matter from the Cosmic Microwave Background**

**Speaker**  
Chih-Liang Wu

**16:15-16:30**

**Primordial Black Holes as Dark Matter: Constraints from the Milky Way**

**Speaker**  
Emma Storm

**16:30-16:45**

**Supernova 1987A Constraints on Low-Mass Hidden Sectors**

**Speaker**

Jae Hyeok Chang

16:45-17:00

**Dark matter velocity spectroscopy**

**Speaker**

Ranjan Laha

17:00-17:15

**AMEGO: Dark Matter Prospects**

**Speaker**

Manuel Meyer

17:15-17:30

**Impact of Galactic subhalos on indirect dark matter searches with cosmic-ray antiprotons**

**Speaker**

Mr Martin Stref

17:30-17:45

**Free**

17:45-18:00

**Free**

18:00