

## Session Program

19-21 May 2025



## Phenomenology 2025 Symposium

### *Astro-particle*

University of Pittsburgh

Monday 19 May

14:15

Astro-particle: Axion, Black Holes

Session | Location: David Lawrence Hall 104, University of Pittsburgh

14:15–14:30 Axion dark radiation in a neutron star magnetosphere

Speaker  
Andrew Long

14:30–14:45 Blue Loops, Cepheids, and Forays into Axions

Speaker  
Thomas Gehrman

14:45–15:00 Axions from magnetized plasma: effects of plasma dispersion

Speaker  
Nirmalya Brahma

15:00–15:15 Too Fast Less Furious: Three-Body Interaction with Fast Low-Mass PBHs

Speaker  
Badal Bhalla

15:15–15:30 Supermassive black hole formation in the initial collapse of axion dark matter

Speaker  
Yuxin Zhao

15:30–15:45 Could We Observe an Exploding Black Hole in the Near Future?

Speaker  
Aidan Symons

15:45–16:00 Twin Peak Dark Matter and Gravitational Wave Signal

Speaker  
Brenda Gomez Cortes

16:00

16:30

Astro-particle: Neutrino, Cosmic Rays

Session | Location: David Lawrence Hall 104, University of Pittsburgh

16:30–17:00 Mini-Review: Novel Astrophysical Probes of the Dark Universe

Speaker  
Hongwan Liu

17:00–17:15 Predicting the Diffuse Supernova Neutrino Background

Speaker  
Andrew Caruso

17:15–17:30 A  $\nu$  look at the Sun: Probing the conditions of the solar core using  $^8\text{B}$  neutrinos

**Speaker**

Melanie Zaidel

17:30-17:45

**High-Energy Neutrinos from Scalar Decays in Primordial Black Hole Evaporation****Speaker**

Mr SUJAY SHIL

17:45-18:00

**A Search for Cosmic Ray Signatures in the RNO-G Experiment****Speaker**

Dr Alisa Nozdrina

18:00-18:15

**Multi-messenger Astronomy with Quenched Superradiance****Speaker**

Soumya Bonthu

18:15-18:30

**Testability of Dynamical Inflection Point Inflation at Collider Experiments****Speaker**

Francis Burk

18:30