

# **Kashiwa-no-ha Dark Matter and Cosmology Symposium (Satellite workshop of COSMO 2024)**



## **Report of Contributions**

Contribution ID: 59 Contribution code: **Plenary-01**Type: **not specified**

## **Multifield inflation attractors, and detractors (IPMU APEC seminar)**

*Monday 28 October 2024 09:00 (30 minutes)*

Inflation remains the favoured explanation for the origin of the primordial density fluctuations that seeded all large-scale structures in the universe. A precise connection between inflation and particle physics (and quantum gravity) would give a unique observational window into physics at the highest energies. After a general introduction to multifield scenarios, I will discuss recent progress on novel inflationary attractors, and how to find them.

**Presenter:** ACHUCARRO, Ana (Leiden University)

**Session Classification:** Early Universe Cosmology

**Track Classification:** Early Universe Cosmology

Contribution ID: **60** Contribution code: **Plenary-02**

Type: **not specified**

## **Regularizing infrared divergences in de Sitter spacetime**

*Monday 28 October 2024 09:30 (30 minutes)*

**Presenter:** PALMA, Gonzalo (Universidad de Chile)

**Session Classification:** Early Universe Cosmology

**Track Classification:** Early Universe Cosmology

Contribution ID: **61** Contribution code: **Plenary-05**

Type: **not specified**

## **Fast Radio Bursts : Novel Probes of Dark Matter**

*Monday 28 October 2024 11:30 (30 minutes)*

**Presenter:** WELTMAN, Amanda (University of Cape Town)

**Session Classification:** Modified Gravity & Dark Energy

**Track Classification:** Modified Gravity & Dark Energy

Contribution ID: 62 Contribution code: **Plenary-04**

Type: **not specified**

## **Extending EFT of inflation/dark energy to arbitrary background with timelike scalar profile**

*Monday 28 October 2024 11:00 (30 minutes)*

**Presenter:** MUKOHYAMA, Shinji (Yukawa Institute for Theoretical Physics, Kyoto University)

**Session Classification:** Modified Gravity & Dark Energy

**Track Classification:** Modified Gravity & Dark Energy

Contribution ID: **63** Contribution code: **Plenary-03**

Type: **not specified**

## **Recent developments in BSM searches from the LHC**

*Monday 28 October 2024 10:30 (30 minutes)*

**Presenter:** JEANTY, Laura (University of Oregon)

**Session Classification:** Dark Matter Experiments

**Track Classification:** Dark Matter Experiments

Contribution ID: **64** Contribution code: **Plenary-06**

Type: **not specified**

## **TBD (cancelled)**

*Monday 28 October 2024 14:00 (30 minutes)*

**Presenter:** SATO-POLITO, Gabriela (Institute for Advanced Study)

**Session Classification:** Gravitational Waves

**Track Classification:** Gravitational Waves

Contribution ID: 65 Contribution code: **Plenary-07**

Type: **not specified**

## **Gravitational Wave Probes of Parity Violation**

*Monday 28 October 2024 14:30 (30 minutes)*

**Presenter:** JENKS, Leah (University of Chicago)

**Session Classification:** Gravitational Waves

**Track Classification:** Gravitational Waves



Contribution ID: 66 Contribution code: **Plenary-08**

Type: **not specified**

## **Backreaction and Cosmic Butterflies: what simulations can tell us about inflation**

*Monday 28 October 2024 15:30 (30 minutes)*

**Presenter:** CARAVANO, Angelo (Institut d'Astrophysique de Paris (IAP))

**Session Classification:** Numerical Cosmology

**Track Classification:** Numerical Cosmology

Contribution ID: 67 Contribution code: **Plenary-09**

Type: **not specified**

## **Can we see extragalactic carbon monoxide in the CMB?**

*Monday 28 October 2024 16:00 (30 minutes)*

**Presenter:** KOKRON, Nickolas (Institute for Advanced Study)

**Session Classification:** Numerical Cosmology

**Track Classification:** Numerical Cosmology

Contribution ID: **68** Contribution code: **Plenary-10**

Type: **not specified**

## **New physics about EDE from the Cosmic Birefringence**

*Tuesday 29 October 2024 09:00 (30 minutes)*

**Presenter:** YIN, Lu (Shanghai Univeristy/ APCTP)

**Session Classification:** Large Scale Structure

**Track Classification:** Large Scale Structure

Contribution ID: **69** Contribution code: **Plenary-11**

Type: **not specified**

## **Anisotropy of Pulsar Timing Arrays and its correlation with Galaxy Surveys**

*Tuesday 29 October 2024 09:30 (30 minutes)*

**Presenter:** LIN, Meng-Xiang (University of Pennsylvania)

**Session Classification:** Large Scale Structure

**Track Classification:** Large Scale Structure

Contribution ID: 70 Contribution code: **Plenary-12**

Type: **not specified**

## **Likelihood-free inference with HSC weak lensing**

*Tuesday 29 October 2024 10:30 (30 minutes)*

**Presenter:** PAIVA NOVAES, Camila (National Institute for Space Research)

**Session Classification:** Observational Cosmology

**Track Classification:** Observational Cosmology

Contribution ID: 71 Contribution code: **Plenary-13**

Type: **not specified**

## **Foreground removal in 21cm future experiments**

*Tuesday 29 October 2024 11:00 (30 minutes)*

**Presenter:** SANTOS, Larissa (Yangzhou University)

**Session Classification:** Observational Cosmology

**Track Classification:** Observational Cosmology

Contribution ID: 72 Contribution code: **Plenary-14**

Type: **not specified**

## **Dipoles and Dark Sectors: Fundamental Physics with the Secondary CMB**

*Tuesday 29 October 2024 11:30 (30 minutes)*

**Presenter:** JOHNSON, Matthew (York University and Perimeter Institute)

**Session Classification:** Observational Cosmology

**Track Classification:** Observational Cosmology

Contribution ID: 73 Contribution code: **Plenary-19**

Type: **not specified**

## **Searching for ultralight axion-like dark matter from birefringence**

*Wednesday 30 October 2024 11:30 (30 minutes)*

**Presenter:** URAKAWA, Yuko (KEK)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory



Contribution ID: 74 Contribution code: **Plenary-18**

Type: **not specified**

## **Axion Relic Pockets – A new theory of dark matter**

*Wednesday 30 October 2024 11:00 (30 minutes)*

**Presenter:** MARSH, David (Stockholm University)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: 75 Contribution code: **Plenary-16**

Type: **not specified**

## **Direct dark matter detection experiments: status, results and future plans**

*Wednesday 30 October 2024 09:30 (30 minutes)*

**Presenter:** BAUDIS, Laura (University of Zurich)

**Session Classification:** Dark Matter Experiments

**Track Classification:** Dark Matter Experiments

Contribution ID: 76 Contribution code: **Plenary-15**

Type: **not specified**

# TeV-scale Dark Matter Searches with High-Energy Gamma Rays

*Wednesday 30 October 2024 09:00 (30 minutes)*

**Presenter:** INADA, Tomohiro (CERN)

**Session Classification:** Dark Matter Experiments

**Track Classification:** Dark Matter Experiments

Contribution ID: 77 Contribution code: **Plenary-17**

Type: **not specified**

## **Solar axion search utilizing TES microcalorimeter with $^{57}\text{Fe}$ absorbers**

*Wednesday 30 October 2024 10:30 (30 minutes)*

**Presenter:** YAMASAKI, Noriko (ISAS/JAXA)

**Session Classification:** Dark Matter Experiments

**Track Classification:** Dark Matter Experiments

Contribution ID: 78 Contribution code: **Plenary-20**Type: **not specified**

# Ultralight Dark Matter Search: unconventional techniques and their theoretical challenges

*Thursday 31 October 2024 09:00 (30 minutes)*

In recent years, ultralight dark matter models have gained significant attention as a novel paradigm in dark matter research. These models produce signals distinct from the conventional WIMP dark matter, prompting the development of unconventional detection methods. In this talk, I will review several proposed and ongoing searches, with a particular focus on research conducted in Japan. Additionally, I will discuss the theoretical challenges that arise in these approaches, highlighting areas that require further exploration.

**Presenter:** FUJITA, Tomohiro (Ochanomizu University)**Session Classification:** Dark Matter Theory**Track Classification:** Dark Matter Theory

Contribution ID: 79 Contribution code: **Plenary-21**

Type: **not specified**

## **Dark matter in the form of primordial black holes: how they could be produced and how they can be detected**

*Thursday 31 October 2024 09:30 (30 minutes)*

**Presenter:** KUSENKO, Alexander (UCLA and Kavli IPMU)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: **80** Contribution code: **Plenary-22**Type: **not specified**

## Axion inflation with non-Abelian gauge fields

*Thursday 31 October 2024 10:30 (30 minutes)*

Currently, the search for primordial gravitational waves is largely focused on detecting the parity-odd polarization pattern in the Cosmic Microwave Background—the B-modes. Accurately interpreting B-mode measurements depends heavily on understanding their production mechanisms. A particularly compelling scenario involves gravitational wave generation through the interaction of axion with gauge fields. I will discuss recent advances in axion inflation incorporating non-Abelian gauge fields, highlighting primordial gravitational wave background signatures and implications for primordial magnetogenesis.

**Presenter:** IARYGINA, Oksana (Nordic Institute for Theoretical Physics, Stockholm University)

**Session Classification:** Early Universe Cosmology

**Track Classification:** Early Universe Cosmology

Contribution ID: **81** Contribution code: **Plenary-23**

Type: **not specified**

## **Toward large signals at the cosmological collider**

*Thursday 31 October 2024 11:00 (30 minutes)*

**Presenter:** TONG, Xi (DAMTP, University of Cambridge)

**Session Classification:** Early Universe Cosmology

**Track Classification:** Early Universe Cosmology



Contribution ID: **82** Contribution code: **Plenary-24**

Type: **not specified**

## **Cosmological Scattering Amplitudes**

*Thursday 31 October 2024 11:30 (30 minutes)*

**Presenter:** MELVILLE, Scott (Queen Mary University of London)

**Session Classification:** Early Universe Cosmology

**Track Classification:** Early Universe Cosmology

Contribution ID: 83 Contribution code: **Plenary-25**

Type: **not specified**

# **The chemodynamical evolution of the outer Milky Way with Prime Focus Spectrograph**

*Friday 1 November 2024 09:00 (30 minutes)*

**Presenter:** ISHIGAKI, Miho (NAOJ)

**Session Classification:** Near Field Cosmology

**Track Classification:** Near Field Cosmology

Contribution ID: **84** Contribution code: **Parallel-A1**

Type: **not specified**

## **A visual tool for assessing tension-resolving models in the $H_0$ - $\sigma_8$ plane**

*Tuesday 29 October 2024 14:00 (15 minutes)*

**Presenter:** GRAEF, Leila (Universidade Federal Fluminense)

**Session Classification:** Observational Cosmology

**Track Classification:** Observational Cosmology

Contribution ID: 85 Contribution code: **Parallel-A2**

Type: **not specified**

## **Describing the evolution of the Large Scale Structure with Evolution Mapping**

*Tuesday 29 October 2024 14:15 (15 minutes)*

**Presenter:** PEZZOTTA, Andrea (Max Planck Institut für Extraterrestrische Physik (MPE-Garching))

**Session Classification:** Observational Cosmology

**Track Classification:** Observational Cosmology

Contribution ID: **86** Contribution code: **Parallel-A3**

Type: **not specified**

## Early Results from the Simons Observatory SATs

*Tuesday 29 October 2024 14:30 (15 minutes)*

**Presenter:** AZZONI, Susanna (Princeton University)

**Session Classification:** Observational Cosmology

**Track Classification:** Observational Cosmology

Contribution ID: 87 Contribution code: **Parallel-A4**

Type: **not specified**

## **Cosmological Constraints from the Void Size Function**

*Tuesday 29 October 2024 14:45 (15 minutes)*

**Presenter:** CONTARINI, Sofia (Max Planck Institute for Extraterrestrial Physics)

**Session Classification:** Observational Cosmology

**Track Classification:** Observational Cosmology

Contribution ID: **88** Contribution code: **Parallel-B1**

Type: **not specified**

## **From White Dwarfs to Fast Radio Bursts: Unveiling the Impact of Energy Scale on Fundamental Constants**

*Tuesday 29 October 2024 14:00 (15 minutes)*

**Presenter:** KALITA, Surajit (University of Cape Town, South Africa)

**Session Classification:** Modified Gravity / Gravitational Waves

**Track Classification:** Modified Gravity & Dark Energy

Contribution ID: 89 Contribution code: **Parallel-B2**

Type: **not specified**

# Testing the Gaussianity of a stochastic gravitational wave background

*Tuesday 29 October 2024 14:15 (15 minutes)*

**Presenter:** BERNARDO, Reginald Christian (APCTP)

**Session Classification:** Modified Gravity / Gravitational Waves

**Track Classification:** Gravitational Waves



Contribution ID: **90** Contribution code: **Parallel-B3**

Type: **not specified**

# Probing Ultralight Dark Matter with Gravitational Waves

*Tuesday 29 October 2024 14:30 (15 minutes)*

**Presenter:** YANG, Xing-Yu (Korea Institute for Advanced Study)

**Session Classification:** Modified Gravity / Gravitational Waves

**Track Classification:** Gravitational Waves

Contribution ID: **91** Contribution code: **Parallel-B4**

Type: **not specified**

## **Memory signal from GRB jets and soft-graviton theorem results**

*Tuesday 29 October 2024 14:45 (15 minutes)*

**Presenter:** MOHANTY, Subhendra (Indian Institute of Technology, Kanpur)

**Session Classification:** Modified Gravity / Gravitational Waves

**Track Classification:** Gravitational Waves

Contribution ID: 92 Contribution code: **Parallel-C1**

Type: **not specified**

## **The interplay of massive neutrinos and dark matter in large-scale structure**

*Tuesday 29 October 2024 15:30 (15 minutes)*

**Presenter:** BAYER, Adrian (Princeton University / Simons Foundation)

**Session Classification:** Numerical Cosmology

**Track Classification:** Numerical Cosmology

Contribution ID: 93 Contribution code: **Parallel-C2**

Type: **not specified**

## **Structure formation in spin-1 and spin-2 ULDM**

*Tuesday 29 October 2024 15:45 (15 minutes)*

**Presenter:** LOPEZ SANCHEZ, Jessica Nayely (Central European Institute for Cosmology and Fundamental Physics-FZU)

**Session Classification:** Numerical Cosmology

**Track Classification:** Numerical Cosmology

Contribution ID: 94 Contribution code: **Parallel-C3**

Type: **not specified**

## **Smashing spin 2 ultra-light dark matter solitons**

*Tuesday 29 October 2024 16:00 (15 minutes)*

**Presenter:** URBAN, Federico (Central European Institute for Cosmology and Fundamental Physics)

**Session Classification:** Numerical Cosmology

**Track Classification:** Numerical Cosmology

Contribution ID: 95 Contribution code: **Parallel-C4**

Type: **not specified**

# **Simulations of Non-Spherical Primordial Black Hole formation**

*Tuesday 29 October 2024 16:15 (15 minutes)*

**Presenter:** ESCRIVA, Albert (Nagoya University)

**Session Classification:** Numerical Cosmology

**Track Classification:** Numerical Cosmology

Contribution ID: 96 Contribution code: **Parallel-D1**

Type: **not specified**

## **Memory burden effects and new mass ranges of PBH dark matter**

*Tuesday 29 October 2024 15:30 (15 minutes)*

**Presenter:** KOHRI, Kazunori (NAOJ / KEK)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: 97 Contribution code: **Parallel-D2**

Type: **not specified**

# **Tidal Evolution of Subhalos in a Fuzzy Dark Matter Milky Way halo**

*Tuesday 29 October 2024 15:45 (15 minutes)*

**Presenter:** ROBLES, Victor (Rensselaer Polytechnic Institute)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory



Contribution ID: **98** Contribution code: **Parallel-D3**

Type: **not specified**

## **Cosmological simulations with Ultra-light dark Matter**

*Tuesday 29 October 2024 16:00 (15 minutes)*

**Presenter:** MUNIVE VILLA, Erick (CEICO-FZU)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: 99 Contribution code: **Parallel-E2**

Type: **not specified**

## **Searching for Planck-scale Mass Dark Matter with Large Liquid Scintillator Experiments like SNO+**

*Wednesday 30 October 2024 14:15 (15 minutes)*

**Presenter:** LUO, Meng (University of Pennsylvania)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: **100** Contribution code: **Parallel-E1**

Type: **not specified**

## **Revisiting Q-ball dark matter: closer look at interaction with ordinary matter**

*Wednesday 30 October 2024 14:00 (15 minutes)*

**Presenter:** KAMADA, Ayuki (University of Warsaw)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: **101** Contribution code: **Parallel-E4**

Type: **not specified**

## **Light Thermal Dark Matter and MeV Gamma-ray Detection**

*Wednesday 30 October 2024 14:45 (15 minutes)*

**Presenter:** WATANABE, Yu (IPMU)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: **102** Contribution code: **Parallel-E3**

Type: **not specified**

## **Nucleon Consumption and Mass-Energy Conversion Induced by Dark Matter**

*Wednesday 30 October 2024 14:30 (15 minutes)*

**Presenter:** Prof. GE, Shao-Feng (TDLI/SJTU)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: **103** Contribution code: **Parallel-D4**

Type: **not specified**

## **Sub-GeV Dark Sink Dark Matter**

*Tuesday 29 October 2024 16:15 (15 minutes)*

**Presenter:** MCGEHEE, Robert (University of Minnesota)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: **104** Contribution code: **Parallel-F1**

Type: **not specified**

## **The Universe is Not Isotropic. Why?**

*Wednesday 30 October 2024 14:00 (15 minutes)*

**Presenter:** STARKMAN, Glenn (Case Western Reserve University)

**Session Classification:** Topology / Statistical Isotropy

**Track Classification:** Observational Cosmology

Contribution ID: **105** Contribution code: **Parallel-F2**

Type: **not specified**

## **Almanac: Bayesian cosmology on the sphere**

*Wednesday 30 October 2024 14:15 (15 minutes)*

**Presenter:** JAFFE, Andrew (Imperial College London/KEK (visitor))

**Session Classification:** Topology / Statistical Isotropy

**Track Classification:** Observational Cosmology



Contribution ID: **106** Contribution code: **Parallel-F3**

Type: **not specified**

## **Can the Topology of the Universe Affect the CMB?**

*Wednesday 30 October 2024 14:30 (15 minutes)*

**Presenter:** CARRÓN DUQUE, Javier (Instituto de Física Teórica (IFT-CSIC))

**Session Classification:** Topology / Statistical Isotropy

**Track Classification:** Observational Cosmology

Contribution ID: **107** Contribution code: **Parallel-F4**

Type: **not specified**

## **Constraining the shape of the Universe using Circle Searches**

*Wednesday 30 October 2024 14:45 (15 minutes)*

**Presenter:** MIHAYLOV, Deyan (Case Western Reserve University)

**Session Classification:** Topology / Statistical Isotropy

**Track Classification:** Numerical Cosmology

Contribution ID: **108** Contribution code: **Parallel-G1**

Type: **not specified**

## **Inflationary Models in Perturbative LVS**

*Thursday 31 October 2024 14:00 (15 minutes)*

**Presenter:** CHAKRABORTY, Dibya (Indian Institute of Technology Madras)

**Session Classification:** Early Universe Cosmology

**Track Classification:** Early Universe Cosmology

Contribution ID: **109** Contribution code: **Parallel-G2**

Type: **not specified**

## **A minimal solution to the axion isocurvature problem from a non-minimal coupling**

*Thursday 31 October 2024 14:15 (15 minutes)*

**Presenter:** BERBIG, Maximilian (IFIC & University of Valencia)

**Session Classification:** Early Universe Cosmology

**Track Classification:** Early Universe Cosmology

Contribution ID: **110** Contribution code: **Parallel-G3**

Type: **not specified**

## **Steepest Growth in the Primordial Power Spectrum from Excited States at a Sudden Transition**

*Thursday 31 October 2024 14:30 (15 minutes)*

**Presenter:** CIELO, Mattia (University of Naples & INFN & IFT - UAM, Madrid)

**Session Classification:** Early Universe Cosmology

**Track Classification:** Early Universe Cosmology

Contribution ID: 111 Contribution code: **Parallel-G4**

Type: **not specified**

## **Dissipation and thermal corrections in warm chromoinflation**

*Thursday 31 October 2024 14:45 (15 minutes)*

**Presenter:** RAMOS, Rudnei (Rio de Janeiro State University)

**Session Classification:** Early Universe Cosmology

**Track Classification:** Early Universe Cosmology

Contribution ID: 112 Contribution code: **Parallel-H1**

Type: **not specified**

## **PandaX-4T Experiment and its Recent Progress**

*Thursday 31 October 2024 14:00 (15 minutes)*

**Presenter:** LIN, Qing (University of Science and Technology of China)

**Session Classification:** Dark Matter Experiments

**Track Classification:** Dark Matter Experiments

Contribution ID: 113 Contribution code: **Parallel-H2**

Type: **not specified**

## **The SABRE South Experiment at the Stawell Underground Physics Laboratory**

*Thursday 31 October 2024 14:15 (15 minutes)*

**Presenter:** RULE, Kieran (The University of Melbourne)

**Session Classification:** Dark Matter Experiments

**Track Classification:** Dark Matter Experiments



Contribution ID: 114 Contribution code: **Parallel-H3**

Type: **not specified**

## **DMICA: exploring Dark Matter in natural muscovite MICA**

*Thursday 31 October 2024 14:30 (15 minutes)*

**Presenter:** HIROSE, Shigenobu (JAMSTEC)

**Session Classification:** Dark Matter Experiments

**Track Classification:** Dark Matter Experiments

Contribution ID: 115 Contribution code: **Parallel-H4**

Type: **not specified**

# **The Compton Spectrometer and Imager as a dark matter probe**

*Thursday 31 October 2024 14:45 (15 minutes)*

**Presenter:** ANTHONY-PETERSEN, Robin (University of California, Berkeley)

**Session Classification:** Dark Matter Experiments

**Track Classification:** Dark Matter Experiments

Contribution ID: **116** Contribution code: **Parallel-11**

Type: **not specified**

# **Black Holes as Probes for Ultralight Dark Matter**

*Thursday 31 October 2024 15:30 (15 minutes)*

**Presenter:** BUCCIOTTI, Bruno (Scuola Normale Superiore, Pisa)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: 117 Contribution code: **Parallel-I2**

Type: **not specified**

## **Constraints on the Fraction of Fuzzy dark Matter from Halo Dynamics**

*Thursday 31 October 2024 15:45 (15 minutes)*

**Presenter:** MANITA, Yusuke (Perimeter Institute)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: **118** Contribution code: **Parallel-I3**

Type: **not specified**

## **Primordial Black Holes, Charge, and Dark Matter: Rethinking Evaporation Limits**

*Thursday 31 October 2024 16:00 (15 minutes)*

**Presenter:** SANTIAGO, Jessica (National Taiwan University)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: **119** Contribution code: **Parallel-I4**

Type: **not specified**

**TBA**

*Thursday 31 October 2024 16:15 (15 minutes)*

**Presenter:** ZAGORAC, Luna (Perimeter Institute for Theoretical Physics)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: **120** Contribution code: **Parallel-J1**

Type: **not specified**

## **Ultra-light Axions in the Halo Bias**

*Thursday 31 October 2024 15:30 (15 minutes)*

**Presenter:** DEPORZIO, Nicholas (Boston University)

**Session Classification:** Large Scale Structure

**Track Classification:** Large Scale Structure

Contribution ID: 121 Contribution code: **Parallel-J2**

Type: **not specified**

## **Phenomenology of Axion-Gauge interactions in the early universe**

*Thursday 31 October 2024 15:45 (15 minutes)*

**Presenter:** PAPAGEORGIU, Alexandros (IFT Madrid)

**Session Classification:** Large Scale Structure

**Track Classification:** Large Scale Structure



Contribution ID: 122 Contribution code: **Parallel-J3**

Type: **not specified**

## **Reconstruction of cosmological initial conditions with mean-field simulation-based inference**

*Thursday 31 October 2024 16:00 (15 minutes)*

**Presenter:** SAVCHENKO, Oleg (GRAPPA, University of Amsterdam)

**Session Classification:** Large Scale Structure

**Track Classification:** Large Scale Structure

Contribution ID: **123** Contribution code: **Parallel-J4**

Type: **not specified**

## **Non-linear evolution of primordial parity violation**

*Thursday 31 October 2024 16:15 (15 minutes)*

**Presenter:** AZYZY, Sha (Max Planck Institute for Astrophysics)

**Session Classification:** Large Scale Structure

**Track Classification:** Large Scale Structure

Contribution ID: 124 Contribution code: **Parallel-K1**

Type: **not specified**

## Scalars remember the hot big bang

*Friday 1 November 2024 09:30 (15 minutes)*

**Presenter:** CYNYNATES, David (University of Washington, Seattle)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: 125 Contribution code: **Parallel-K2**

Type: **not specified**

# Imprints of energy injection by compact dark stars during reionization

*Friday 1 November 2024 09:45 (15 minutes)*

**Presenter:** BETANCOURT KAMENETSKAIA, Boris (Technical University of Munich)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: 126 Contribution code: **Parallel-L1**

Type: **not specified**

## **From SuperMAG to SNIPE Hunt: Using the Earth to search for ultralight dark matter**

*Friday 1 November 2024 09:30 (15 minutes)*

**Presenter:** KALIA, Saarik (University of Minnesota)

**Session Classification:** Dark Matter Experiments

**Track Classification:** Dark Matter Experiments

Contribution ID: 127 Contribution code: **Parallel-L2**

Type: **not specified**

## **Venturing into the Neutrino Fog: First Measurement of Solar CEvNS with XENONnT**

*Friday 1 November 2024 09:45 (15 minutes)*

**Presenter:** HAMMANN, Robert (Max-Planck-Institut für Kernphysik (MPIK))

**Session Classification:** Dark Matter Experiments

**Track Classification:** Dark Matter Experiments

Contribution ID: 128 Contribution code: **Parallel-M1**

Type: **not specified**

## **Constraining dark matter models using dwarf galaxy properties**

*Friday 1 November 2024 10:30 (15 minutes)*

**Presenter:** DEKKER, Ariane (KICP, University of Chicago)

**Session Classification:** Near Field Cosmology

**Track Classification:** Near Field Cosmology

Contribution ID: **129** Contribution code: **Parallel-M2**

Type: **not specified**

## **Formation of parallel stellar streams by an interaction with a dark matter subhalo**

*Friday 1 November 2024 10:45 (15 minutes)*

**Presenter:** KANEDA, Yuka (University of Tsukuba)

**Session Classification:** Near Field Cosmology

**Track Classification:** Near Field Cosmology



Contribution ID: 130 Contribution code: **Parallel-M3**

Type: **not specified**

# **Confronting the Diversity Problem: The Limits of Galaxy Rotation Curves as a Probe of Dark Matter**

*Friday 1 November 2024 11:00 (15 minutes)*

**Presenter:** SANDS, Isabel (Caltech)

**Session Classification:** Near Field Cosmology

**Track Classification:** Near Field Cosmology

Contribution ID: **131** Contribution code: **Parallel-M4**

Type: **not specified**

## **A search for dark matter annihilation from the Sagittarius Dwarf and Stream**

*Friday 1 November 2024 11:15 (15 minutes)*

**Presenter:** VENVILLE, Thomas (Research School of Astronomy and Astrophysics, Australian National University)

**Session Classification:** Near Field Cosmology

**Track Classification:** Near Field Cosmology

Contribution ID: 132 Contribution code: **Parallel-N1**Type: **not specified**

## Decoherence of cosmological perturbations: boundary terms and the WKB wave functional

*Friday 1 November 2024 10:30 (15 minutes)*

We revisit the decoherence of primordial scalar curvature and tensor perturbations in minimal single-field inflation, by considering the slow-roll unsuppressed non-Gaussian phase in their wave functional. The phase can be seen either from boundary (total time-derivative) terms in the action, produced by the usual integration-by-parts procedure, or the WKB approximation of the Wheeler-DeWitt equation. By tracing out unobserved degree of freedom which interacts with observed modes, such a phase can cause much faster cosmic decoherence, compared to those by bulk interactions. We thus provide a better estimation of the decoherence effect to some recent proposals probing the quantum nature of primordial perturbations such as the cosmological Bell test, showing a possible window of around 5 e-folds.

Related papers: JHEP 06 (2023) 101 (arXiv:2305.08071), JHEP 04 (2023) 092 (arXiv:2207.04435), arXiv:2405.07141”

**Presenter:** SOU, Chon Man (Tsinghua University)

**Session Classification:** Early Universe Cosmology

**Track Classification:** Early Universe Cosmology

Contribution ID: 133 Contribution code: **Parallel-N2**

Type: **not specified**

# Emergent Cosmology from Quantum Gravity

*Friday 1 November 2024 10:45 (15 minutes)*

**Presenter:** MARCHETTI, Luca (University of New Brunswick)

**Session Classification:** Early Universe Cosmology

**Track Classification:** Early Universe Cosmology

Contribution ID: 134 Contribution code: **Parallel-N3**

Type: **not specified**

## **Bouncing cosmology in $\Lambda$ CDM: from construction to observational constraints**

*Friday 1 November 2024 11:00 (15 minutes)*

**Presenter:** MARTENS, Paul (Chinese University of Hong Kong (CUHK))

**Session Classification:** Early Universe Cosmology

**Track Classification:** Early Universe Cosmology

Contribution ID: 135 Contribution code: **Parallel-N4**

Type: **not specified**

## **Cosmology in an extended parameter space: new constraints with DESI BAO**

*Friday 1 November 2024 11:15 (15 minutes)*

**Presenter:** ROY CHOUDHURY, Shouvik (Academia Sinica Institute of Astronomy and Astrophysics)

**Session Classification:** Early Universe Cosmology

**Track Classification:** Early Universe Cosmology

Contribution ID: 136 Contribution code: **Parallel-O1**

Type: **not specified**

## **Towards robust predictions for thermal production of multicomponent dark matter**

*Friday 1 November 2024 11:30 (15 minutes)*

**Presenter:** HRYCZUK, Andrzej (National Centre for Nuclear Research, Poland)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: 137 Contribution code: **Parallel-O2**

Type: **not specified**

## **A Slightly Oblate Dark Matter Halo with a Core-like Inner Density Profile Revealed by Fine-Stratified Stellar Populations from Gaia DR3**

*Friday 1 November 2024 11:45 (15 minutes)*

**Presenter:** MA, Hai-Xia (Division of Particle and Astrophysical Science, Nagoya University)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory



Contribution ID: 138 Contribution code: **Parallel-O3**

Type: **not specified**

# Weak Lensing Constraints on Dark Acoustic Oscillation

*Friday 1 November 2024 12:00 (15 minutes)*

**Presenter:** TSAI, Yue-Lin Sming (Purple Mountain Observatory)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: 139 Contribution code: **Parallel-O4**

Type: **not specified**

## **Robustness of the Galactic Center Excess Morphology Against Masking**

*Friday 1 November 2024 12:15 (15 minutes)*

**Presenter:** ZHONG, Yiming (City University of Hong Kong)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: 140 Contribution code: **Parallel-O5**

Type: **not specified**

## **Phenomenology of bubble size distributions in a first-order phase transition**

*Friday 1 November 2024 12:30 (15 minutes)*

**Presenter:** TSENG, Po-Yen (National Tsing Hua University)

**Session Classification:** Dark Matter Theory

**Track Classification:** Dark Matter Theory

Contribution ID: 141 Contribution code: **Parallel-P1**

Type: **not specified**

## **Impact of HWP systematics on the measured CMB polarization**

*Friday 1 November 2024 11:30 (15 minutes)*

**Presenter:** MONELLI, Marta (Kavli IPMU)

**Session Classification:** Observational Cosmology

**Track Classification:** Observational Cosmology

Contribution ID: 142 Contribution code: **Parallel-P2**

Type: **not specified**

## **Dark matter physics with quadruply-imaged quasars**

*Friday 1 November 2024 11:45 (15 minutes)*

**Presenter:** GILMAN, Daniel (University of Chicago)

**Session Classification:** Observational Cosmology

**Track Classification:** Observational Cosmology

Contribution ID: 143 Contribution code: **Parallel-P3**

Type: **not specified**

## **Constraining Ultralight ALP Dark Matter in Light of Cosmic Birefringence**

*Friday 1 November 2024 12:00 (15 minutes)*

**Presenter:** ZHANG, Dongdong (University of Science and Technology of China)

**Session Classification:** Observational Cosmology

**Track Classification:** Observational Cosmology

Contribution ID: 144 Contribution code: **Parallel-P4**

Type: **not specified**

## **Identification and Study of Possible Dark Matter Deficient Dwarf Galaxies in SPARC and LITTLE THINGS catalogs**

*Friday 1 November 2024 12:15 (15 minutes)*

**Presenter:** WULANDARI, Hesti (Institut Teknologi Bandung)

**Session Classification:** Observational Cosmology

**Track Classification:** Observational Cosmology

Contribution ID: 145 Contribution code: **Parallel-P5**

Type: **not specified**

## **Cosmic shear with Einstein rings**

*Friday 1 November 2024 12:30 (15 minutes)*

**Presenter:** FLEURY, Pierre (CNRS, LUPM)

**Session Classification:** Observational Cosmology

**Track Classification:** Observational Cosmology



Contribution ID: 146 Contribution code: **Colloquium**Type: **not specified**

## **The Copernican Revolution, and how it almost became unnoticed and forgotten (IPMU Colloquium)**

*Wednesday 30 October 2024 15:30 (1h 30m)*

The Copernican Revolution 8212; the heliocentric model of the Universe introduced by Nicolaus Copernicus 8212; is considered as one of the most significant achievements in the history of science. And yet, as it comes out, it luckily happened despite many obstacles and even then it could have become unnoticed and forgotten. The year 2023 marked the 550th anniversary of the birth of Nicolaus Copernicus which gave us additional motivation to have a closer look at his highly extraordinary life and achievement.

[https://research.ipmu.jp/seminar/?seminar\\_id=3185](https://research.ipmu.jp/seminar/?seminar_id=3185)

**Presenter:** ROSZKOWSKI, Leszek ((Particle Astrophysics Science and Technology Centre, Warsaw))

Contribution ID: **148**

Type: **not specified**

## Registration

Contribution ID: **149**

Type: **not specified**

## Opening Remark

Contribution ID: 150

Type: **not specified**

## **Phenomenology of compact objects from a first order phase transition in the dark sector**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** ACUÑA, Jan Tristram (National Tsing Hua University)

**Session Classification:** Poster 1

Contribution ID: 151

Type: **not specified**

## **Clockwork inspired extra dimension models at future lepton colliders, beam dumps, and SN1987**

*Tuesday 29 October 2024 17:30 (20 minutes)*

**Presenter:** JODLOWSKI, Krzysztof (IBS CTPU-PTC)

**Session Classification:** Poster 1

Contribution ID: 152

Type: **not specified**

## **A Novel Non-Fourier Framework to Address Lightcone Effects in 21cm Observations**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** BLAMART, Mattéo (McGill University)

**Session Classification:** Poster 1

Contribution ID: 153

Type: **not specified**

## **On the impact of lensing on standard sirens measurements**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** CANEVAROLO, Sofia (Utrecht University)

**Session Classification:** Poster 1

Contribution ID: 154

Type: **not specified**

## **Constraining Ultra-Light Dark Matter using Astrophysical Surveys**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** LIMA MATOS, Fernanda (Universidade de São Paulo)

**Session Classification:** Poster 1



Contribution ID: 155

Type: **not specified**

## **Study of Rotation Curves Diversity Problem with SPARC and LITTLE THINGS in 3D Catalogs**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** DANTE, Azriel (Bandung Institute of Technology)

**Session Classification:** Poster 1

Contribution ID: 156

Type: **not specified**

## **Matter bounce scenario in modified $f(R,T)$ gravity**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** DAS, PRASANTA (BITS Pilani, K K Birla Goa Campus)

**Session Classification:** Poster 1

Contribution ID: 157

Type: **not specified**

# Gravitational Leptogenesis and Primordial Gravitational Waves during PBH-induced reheating

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** DAS, Suruj Jyoti (Institute for Basic Science, CTPU-PTC)

**Session Classification:** Poster 1

Contribution ID: 158

Type: **not specified**

## **The dynamics and detection possibility of a pseudo FIMP in presence of a thermal Dark Matter**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** PRADHAN, Dipankar (IIT Guwahati)

**Session Classification:** Poster 1

Contribution ID: 159

Type: **not specified**

# Hunting Primordial Black Hole Dark Matter in Lyman-alpha forest

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** SINGH, Abhijeet (Indian Institute of Science)

**Session Classification:** Poster 1

Contribution ID: 160

Type: **not specified**

## **A Hubble diagram from the cross-correlations of galaxies and dark sirens**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** FERRI, João (Institute of Physics, University of São Paulo)

**Session Classification:** Poster 1

Contribution ID: 161

Type: **not specified**

## **Testing the consistency between SDSS and DESI BAO measurements**

*Tuesday 29 October 2024 17:10 (20 minutes)*

**Presenter:** GHOSH, Basundhara (Indian Institute of Science)

**Session Classification:** Poster 1

Contribution ID: **162**

Type: **not specified**

## **Probing non-standard cosmology through sub-earth halos**

*Tuesday 29 October 2024 16:30 (20 minutes)*

**Presenter:** HAIT, Arpan (Indian Institute of Technology Kanpur)

**Session Classification:** Poster 1



Contribution ID: 163

Type: **not specified**

## **Mediator Decay through mixing with Degenerate Spectrum**

*Tuesday 29 October 2024 16:50 (20 minutes)*

**Presenter:** WATANABE, Yuki (The University of Tokyo)

**Session Classification:** Poster 1

Contribution ID: 164

Type: **not specified**

## **Generation of Ultrashort Laser Pulse using Optical Parametric Amplification toward ALP Searches via Stimulated Resonant Photon-Photon Scattering**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** KODAMA, Airi (Hiroshima University)

**Session Classification:** Poster 1

Contribution ID: 165

Type: **not specified**

# Deep Neural Networks Hunting Ultralight Dark Matter

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** KUS, Pavel (Institute of Physics of the Czech Academy of Sciences, Prague)

**Session Classification:** Poster 1

Contribution ID: 166

Type: **not specified**

## **Refining cosmological measurements using black-hole recoils in active galactic nuclei disks**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** LEONG, Samson (The Chinese University of Hong Kong)

**Session Classification:** Poster 1

Contribution ID: 167

Type: **not specified**

## **Memory Burden Effect: A new window for light primordial black holes as dark matter**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** ZANTEDESCHI, Michael (Tsung-Dao Lee Institute)

**Session Classification:** Poster 1

Contribution ID: 168

Type: **not specified**

## **Theory of gravity with nonminimal matter-nonmetricity coupling and the de-Sitter swampland conjectures**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** MANDAL, Sanjay (Fukushima University)

**Session Classification:** Poster 1

Contribution ID: 169

Type: **not specified**

## **Thermal leptogenesis, dark matter and gravitational waves from an extended canonical seesaw**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** PAUL, Partha Kumar (Indian Institute of Technology Hyderabad)

**Session Classification:** Poster 1

Contribution ID: 170

Type: **not specified**

## **Self Interacting Dark Matter and Dirac neutrinos via Lepton Quarticity**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** SAHOO, Sujit Kumar (Indian Institute of Technology Hyderabad)

**Session Classification:** Poster 1



Contribution ID: 171

Type: **not specified**

## **From Axion Searches to Direct Detection: TES Technology at DESY**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** SCHWEMMBAUER, Christina (Deutsches Elektronen Synchrotron DESY)

**Session Classification:** Poster 1

Contribution ID: 172

Type: **not specified**

## **Towards a possible solution to the Hubble tension with Horndeski gravity**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** TIWARI, Yashi (Indian Institute of Science, Bangalore)

**Session Classification:** Poster 1

Contribution ID: 173

Type: **not specified**

## **A Bayesian estimator for non-linear regression with errors in variables in cosmology**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** UPADHYAY, Ujjwal Kumar (Indian Institute of Science, Bangalore)

**Session Classification:** Poster 1

Contribution ID: 174

Type: **not specified**

## **BINGO radio telescope**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** VICENTE DE MELLO, Alcides (Universidade de São Paulo)

**Session Classification:** Poster 1

Contribution ID: 175

Type: **not specified**

## **Describing statistics of the non-linear cosmic velocity field with evolution mapping**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** ESPOSITO, Matteo (Max Planck Institute for Extraterrestrial Physics)

**Session Classification:** Poster 1

Contribution ID: 176

Type: **not specified**

## **Boosted Dark Matter in White Dwarfs**

*Tuesday 29 October 2024 17:40 (20 minutes)*

**Presenter:** HOR, Shihwen (The University of Tokyo)

**Session Classification:** Poster 1

Contribution ID: 177

Type: **not specified**

## **Measuring lensing convergence dispersion using auto-correlation of gravitational wave sources and cross-correlation between gravitational wave sources and galaxies**

*Thursday 31 October 2024 17:10 (20 minutes)*

**Presenter:** CHUMAN, Fumihiro (Department of Physics, Graduate School of Science, Chiba University)

**Session Classification:** Poster 2

Contribution ID: 178

Type: **not specified**

## **Discovery Potential for Decaying Dark Matter and Faint X-ray Sources with XRISM**

*Thursday 31 October 2024 16:30 (20 minutes)*

**Presenter:** ZHOU, Yu (KEK)

**Session Classification:** Poster 2



Contribution ID: 179

Type: **not specified**

## **Perturbations in O(D,D) string cosmology from double field theory**

*Thursday 31 October 2024 17:30 (20 minutes)*

**Presenter:** ANGUS, Stephen (CQUeST, Sogang University)

**Session Classification:** Poster 2

Contribution ID: **180**

Type: **not specified**

## **Characterisation of the power spectrum of acoustically generated gravitational waves with a soft equation of state**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** GIOMBI, Lorenzo (University of Helsinki)

**Session Classification:** Poster 2

Contribution ID: **181**

Type: **not specified**

# Implications of $f(Q)$ Gravity on Cosmological Parameters

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** KARAM, Chaymae (Mohammed V University of Rabat, Faculty of Sciences (High Energy Physics Team - Modeling and Simulation))

**Session Classification:** Poster 2

Contribution ID: **182**

Type: **not specified**

## **XLZD: A Next-Generation Liquid Xenon Observatory for Dark Matter and Neutrino Physics**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** KAZAMA, Shingo (Nagoya University)

**Session Classification:** Poster 2

Contribution ID: **183**

Type: **not specified**

## **Non-Gaussianity from primordial black holes**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** KITAJIMA, Naoya (Tohoku University)

**Session Classification:** Poster 2

Contribution ID: **184**

Type: **not specified**

# **Gravitational Wave Sourced by Decay of Massive Particle from Primordial Black Hole evaporation**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** MAHAPATRA, Satyabrata (Sungkyunkwan University)

**Session Classification:** Poster 2

Contribution ID: **185**

Type: **not specified**

## **Star-Crossed: Model-Independent Consistency of Supernova Cosmology**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** MATTHEWSON, William Luke (Korea Astronomy and Space Science Institute)

**Session Classification:** Poster 2

Contribution ID: 186

Type: **not specified**

## **A universal constraint on axion non-Abelian dynamics during inflation**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** MICHELOTTI, Martino (University of Groningen)

**Session Classification:** Poster 2



Contribution ID: 187

Type: **not specified**

# **Design of a pilot search for ALPs in the $\mu\text{eV}$ wide-mass range with a x-band pairwise-circular-polarized dual-frequency focusing collider**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** MIYAMARU, Takafumi (Hiroshima Univ.)

**Session Classification:** Poster 2

Contribution ID: **188**

Type: **not specified**

## **Studies of the selection effect of galaxies on clustering analysis in a wide-area spectroscopic survey**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** NOSE, Kanmi (Kavli IPMU)

**Session Classification:** Poster 2

Contribution ID: **189**

Type: **not specified**

## **MeV gamma-ray background from the Moon in indirect dark matter detection**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** OKUMA, Keigo (Nagoya University)

**Session Classification:** Poster 2

Contribution ID: **190**

Type: **not specified**

## **A Study of Cold, Fuzzy, and Self-Interacting Dark Matter Halos in Dwarf Galaxies**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** AL FARISY, Fahmi Muhammad (Institut Teknologi Bandung)

**Session Classification:** Poster 2

Contribution ID: 191

Type: **not specified**

## **Constraints on Extended Axion Structures from Lensing Effects of Fast Radio Burst**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** CHOU, Kuan-Yen (National Tsing Hua University)

**Session Classification:** Poster 2

Contribution ID: 192

Type: **not specified**

## **Characteristic Mass of Dark Matter Halos for the Cusp-Core Transition**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** SHINOZAKI, Michi (University of Tsukuba)

**Session Classification:** Poster 2

Contribution ID: 193

Type: **not specified**

## **MSc Dissertation Project: The Plotting and Analysis of Complex Spectral Curves from Black Holes through AdS/CFT Correspondence and Hydrodynamics**

*Thursday 31 October 2024 16:50 (20 minutes)*

**Presenter:** SHOU, Duoen (University of Edinburgh)

**Session Classification:** Poster 2

Contribution ID: 194

Type: **not specified**

## **Behaviour of Self-interacting Ultralight Bosonic Dark Matter in the Vicinity of a Black Hole**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** DENG, Jianqiao (CUHK)

**Session Classification:** Poster 2



Contribution ID: 195

Type: **not specified**

## **Velocity statistics of cosmic large-scale structure from Hamiltonian particle dynamics**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** SIPP, Marvin (Institute for Theoretical Physics, Heidelberg University)

**Session Classification:** Poster 2

Contribution ID: 196

Type: **not specified**

## **Search for dark matter decay and annihilation using observation by Tibet AS\_{\gamma} and LHAASO**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** DUBEY, ABHISHEK (Indian institute of science, Bangalore)

**Session Classification:** Poster 2

Contribution ID: 197

Type: **not specified**

## **Alleviate S8 tension by introducing scale dependence beyond power-law in the primordial power spectrum**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** TERASAWA, Ryo (Kavli IPMU)

**Session Classification:** Poster 2

Contribution ID: 198

Type: **not specified**

## **Primordial Black Hole Formation from Power Spectrum with Finite-width**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** WANG, Jianing (Institute of Theoretical Physics, Chinese Academy of Sciences)

**Session Classification:** Poster 2

Contribution ID: 199

Type: **not specified**

## **Thermal Wash-in Leptogenesis via Heavy Higgs Decay**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** WATANABE, Hidenaga (SOKENDAI/KEK)

**Session Classification:** Poster 2

Contribution ID: 200

Type: **not specified**

## **Neutrinos from the Sun can discover dark matter-electron scattering**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** SAHA, Akash Kumar (Indian Institute of Science, Bengaluru, India)

**Session Classification:** Poster 2

Contribution ID: **201**

Type: **not specified**

## **Search for heavy dark matter with Fermi LAT**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** SONG, Deheng (YITP, Kyoto U)

**Session Classification:** Poster 2

Contribution ID: 202

Type: **not specified**

# **Thermodynamic analysis of black holes with cloud of strings and quintessence via Barrow entropy**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** ZAFAR, USMAN (FUKUSHIMA University)

**Session Classification:** Poster 2



Contribution ID: 203

Type: **not specified**

## **Sommerfeld Effect in Composite Dark Matter**

*Thursday 31 October 2024 17:40 (20 minutes)*

**Presenter:** YAMANAKA, Takumu (Osaka University)

**Session Classification:** Poster 2