

Session Program

13-17 May 2024



DPF - PHENO 2024

Cosmology & Dark Energy

University of Pittsburgh / Carnegie Mellon University

Monday 13 May

14:00

Cosmology & Dark Energy: BAO review, Dark Radiation, Millicharge

Session | Location: University of Pittsburgh, Barco Law Building 107 | Convener: Fazlollah Hajkarim

14:00-14:30 **Can we use Baryon Acoustic Oscillations distances?**

Speaker
Stefano Anselmi

14:30-14:45 -

14:45-15:00 **Cosmological Probes of Dark Radiation from Neutrino Mixing**

Speaker
Dr Itamar Allali

15:00-15:15 **Dark Radiation Isocurvature from Cosmological Phase Transitions**

Speaker
Mitchell Weikert

15:15-15:30 **Cosmic Millicharge Background and Reheating Probes**

Speaker
Xucheng Gan

15:30

16:00

Cosmology & Dark Energy: Anomalies and Baryogenesis

Session | Location: University of Pittsburgh, Barco Law Building 107 | Convener: Michael Shamma

16:00-16:15 **$w = -1.73$ solves the Hubble tension, but destroys the universe**

Speaker
David Lindsay

16:15-16:30 **A Ratio-Preserving Approach to Concordance Cosmology**

Speaker
Kylar Greene

16:30-16:45 **Dark Acoustic Oscillation Faces the Cosmological Tensions**

Speaker
Dr Taewook Youn

16:45-17:00

Baryogenesis and Gravitational Wave Production in Simple Left-Right Model

Speaker
Matthew Knauss

17:00-17:15

Baryon asymmetry from dark matter decay in the vicinity of a phase transition

Speaker
Indrajit Saha

17:15-17:30

Cosmological implications of gauged $U(1)_{B-L}$ on ΔN_{eff} in the CMB and BBN

Speaker

Haidar Esseili

17:30

Tuesday 14 May

16:00

Cosmology & Dark Energy: Eary Universe and Stasis

Session | **Location:** University of Pittsburgh, Barco Law Building 107 | **Convener:** Dr Taewook Youn

16:00-16:15 **Cosmological Stasis from Dynamical Scalars**

Speaker

Prof. Brooks Thomas

16:15-16:30 **Cosmological Stasis and the Growth of Density Perturbations**

Speaker

Ms Anna Paulsen

16:30-16:45 **Cosmological Stasis in a Thermal Environment**

Speaker

Mr Jonah Barber

16:45-17:00 **Supersymmetric Grand Unification at the Cosmological Collider**

Speaker

Edward Broadberry

17:00-17:15 **Domain walls of string theory axions**

Speaker

Saurav Das

17:15-17:30 **Solving the strong CP problem with massless grand-color quarks**

Speaker

Ravneet Bedi

17:30

Wednesday 15 May

14:00

Cosmology & Dark Energy: CMB and other observations

Session | **Location:** University of Pittsburgh, Barco Law Building 107 | **Convener:** Keisuke Inomata

14:00-14:15 -

14:15-14:30 **Cosmological Parameter Forecasts for a CMB-HD Survey**

Speaker

Amanda Macinnis

14:30-14:45

Peculiar Velocity Improvements of Multi-Messenger Standard Siren Measurements

Speaker

Ariel Amsellem

14:45-15:00

Amplifying CMB phase shift with dark matter-radiation interactions

Speaker

Daven Wei Ren Ho

15:00-15:15

Results and progress of CMB lensing measurements using SPT-3G data

Speaker

W.L. Kimmy Wu

15:15-15:30

Producing cosmic birefringence through CP-violating axions

Speaker

Anubhav Mathur

15:30

16:00

Cosmology & Dark Energy: Early Universe

Session | **Location:** University of Pittsburgh, Barco Law Building 107 | **Convener:** Dr Subhajit Ghosh

16:00-16:15

Early Dark Energy During Big Bang Nucleosynthesis

Speaker

Affif Omar

16:15-16:30

Correlated scalar perturbations and gravitational waves from axion inflation

Speaker

Sofia Corbà

16:30-16:45

Emergent particles of a de Sitter universe: Thermal interpretation of the stochastic formalism and beyond

Speaker

Dr TaeHun Kim

16:45-17:00

Transient Cosmological Quasiparticles

Speaker

He Li

17:00-17:15

Runaway Mergers from Clustering in a Primordial Black Hole Dominated Universe

Speaker

Ian Holst

17:15-17:30

Curvature Perturbations Protected Against One Loop

Speaker

Keisuke Inomata

17:30