

Session Program

5-9 Dec 2022

The Dark Side of the Universe DSU2022

Early Universe

Monday 5 December

14:00

Early Universe

Session | **Location:** Old Main Building, 149 | **Convener:** Sachiko Kuroyanagi

14:00–14:20 **CP-violating inflation**

Speaker

Venus Keus

14:20–14:40 **Type II Seesaw Leptogenesis**

Speaker

Neil Barrie

14:40–15:00 **Universe with a large lepton asymmetry**

Speaker

Masahiro Kawasaki

15:00–15:20

Constraining Phase Transitions in Grand Unified Theories with Gravitational Waves

Speaker

Matthew Pearce

15:20–15:40

Gravitational production during reheating phase: the possibility of purely Gravitational reheating

Speaker

MD RIAJUL Haque

15:40

16:10

Early Universe

Session | **Location:** Old Main Building, 149 | **Convener:** Alexander Vikman

16:10–16:30

Analyzing the Hubble tension through hidden sector dynamics in the early universe

Speaker

Michael Klasen

16:30–16:50 **De Sitter space as coherent state of gravitons**

Speaker

Dr Otari Sakhelashvili

16:50–17:10 **Massive neutrino self-interactions and inflation**

Speaker

Shouvik Roychoudhury

17:10–17:30 **(The) Wiggles going non-linear**

Speaker

Nathan Cohen

17:50

17:30-17:50

Signatures of Light Massive Relics on nonlinear structure formation

Speaker

Ravi Kumar Sharma

Tuesday 6 December

14:00

Early Universe

Session | **Location:** Old Main Building, 149 | **Convener:** Jan Hamann

14:00–14:20

Constraining primordial tensor features with the anisotropies of the Cosmic Microwave Background

Speaker

Ameek Malhotra

14:20–14:40

Non-Gaussianity in CMB lensing

Speaker

Yuqi Kang

14:40–15:00

Enhancing Bispectrum Estimators for Photometric Galaxy Redshift Survey with Velocities

Speaker

Mr Julius Wons

15:00–15:20

GPry: Fast Bayesian inference using Gaussian Processes

Speaker

Jonas El Gammal

15:20–15:40

Connecting the dark Universe and artificial intelligence

Speaker

Andreas Nygaard

15:40

16:10

Early Universe

Session | **Location:** Old Main Building, 149 | **Convener:** Jinn-Ouk Gong

16:10–16:30

Constraining astrophysics and cosmology via the kinematic Sunyaev-Zel'dovich effect using SPT and DES data

Speaker

Eduardo Schiappucci

16:30–16:50

High-resolution SZ observations for cluster cosmology with NIKA2

Speaker

Mr Corentin Hanser

16:50–17:10

Probing dark matter microphysics with gravitational waves and 21cm emission

Speaker

Markus Rasmussen Mosbech

17:10-17:30

Constraints on decaying dark matter from lensing and magnification of cosmic voids

Speaker

Earl Lester

17:30-17:50

Discovering a new well: Decaying dark matter with profile likelihoods

Speaker

Emil Brinch Holm

17:50