

**New observational windows
on the high-scale origin of
matter-antimatter asymmetry**

Report of Contributions

Contribution ID: 1

Type: **not specified**

High-temperature electroweak symmetry non-restoration and implications for baryogenesis

Monday, 10 January 2022 20:00 (1 hour)

Presenter: SERVANT, Geraldine

Contribution ID: 2

Type: **not specified**

Baryogenesis via relativistic bubble expansion

Monday, 10 January 2022 21:00 (1 hour)

Presenter: BALDES, Iason

Contribution ID: 3

Type: **not specified**

GWs from metastable cosmic strings

Monday, 10 January 2022 22:30 (1 hour)

Presenter: DOMCKE, Valerie

Contribution ID: 4

Type: **not specified**

Gravitational Wave Gastronomy

Monday, 10 January 2022 23:30 (1 hour)

Presenter: DUNSKY, David

Contribution ID: 5

Type: **not specified**

Inflation in String theory and Supergravity

Tuesday, 11 January 2022 00:30 (1 hour)

Presenter: KALLOSH, Renata

Contribution ID: 6

Type: **not specified**

Confronting GUTs with Proton Decay and Gravitational Waves

Tuesday, 11 January 2022 20:00 (1 hour)

Presenter: TURNER, Jessica

Contribution ID: 7

Type: **not specified**

Neutrinoless double beta decay and leptogenesis

Tuesday, 11 January 2022 21:00 (1 hour)

Presenter: PASCOLI, Silvia

Contribution ID: 8

Type: **not specified**

Probing Baryogenesis

Tuesday, 11 January 2022 22:30 (1 hour)

Presenter: JULIA, Harz

Contribution ID: 9

Type: **not specified**

SO(10)-inspired leptogenesis

Tuesday, 11 January 2022 23:30 (1 hour)

Presenter: DI BARI, Pasquale

Contribution ID: **10**

Type: **not specified**

Aspects of High Scale Leptogenesis with Low Energy CP Violation (Recent Results)

Wednesday, 12 January 2022 00:30 (1 hour)

Presenter: PETCOV, Serguey

Contribution ID: 11

Type: **not specified**

Field space geometry and Affleck-Dine Baryogenesis (cancelled)

Wednesday, 12 January 2022 20:00 (1 hour)

Presenter: MARSH, David

Contribution ID: 12

Type: **not specified**

Affleck-Dine Leptogenesis from Higgs Inflation

Wednesday, 12 January 2022 21:00 (1 hour)

Presenter: BARRIE, Neil

Contribution ID: 13

Type: **not specified**

PBH clustering in AD baryogenesis

Wednesday, 12 January 2022 22:30 (1 hour)

Presenter: KAWASAKI

Contribution ID: 14

Type: **not specified**

Gravitational Wave Signals of Affleck-Dine Baryogenesis

Wednesday, 12 January 2022 23:30 (1 hour)

Presenter: PEARCE, Lauren

Contribution ID: 15

Type: **not specified**

Affleck-Dine Baryogenesis with Observable Neutron-Anti-Neutron Oscillation

Thursday, 13 January 2022 00:30 (1 hour)

Presenter: OKADA, Nobuchika

Contribution ID: 16

Type: **not specified**

Predicting the PBH mass spectrum

Thursday, 13 January 2022 20:00 (1 hour)

Presenter: SASAKI, Misao

Contribution ID: 17

Type: **not specified**

The poltergeist mechanism

Thursday, 13 January 2022 21:00 (1 hour)

Presenter: KOHRI, Kaz

Contribution ID: **18**

Type: **not specified**

Was There an Electroweak Phase Transition? (Cancelled)

Thursday, 13 January 2022 22:30 (1 hour)

Presenter: RAMSEY-MUSOLF, Michael

Contribution ID: 19

Type: **not specified**

Fermion asymmetries and dark matter in the form of primordial black holes

Thursday, 13 January 2022 23:30 (1 hour)

Presenter: FLORES, Marcos M.

Contribution ID: 20

Type: **not specified**

Gravitational Wave Probes of Axion Rotations Responsible for Dark Matter and Baryon Asymmetry

Friday, 14 January 2022 00:30 (1 hour)

We established a paradigm where the (QCD) axion's novel cosmological evolution, a rotation in the field space, gives rise to dark matter and the baryon asymmetry. The axion rotations also provide a natural origin for a kination era, where the total energy density is dominated by the kinetic term of the axion field, preceded by an early era of matter domination. We investigate the effects of this cosmological scenario on the spectrum of possible primordial gravitational waves from inflation or cosmic strings and find that the spectrum features a triangular peak. As a result, future gravitational wave observations can probe the viable parameter space of kination, including regions that produce axion dark matter by the kinetic misalignment mechanism or the baryon asymmetry by axiogenesis.

Presenter: CO, Raymond

Contribution ID: 21

Type: **not specified**

Baryogenesis from $SU(2)_R$ phase transition

Friday, 14 January 2022 01:30 (1 hour)

Presenter: WANG, Isaac

Contribution ID: 22

Type: **not specified**

The cosmological collider as a probe of leptogenesis

Thursday, 13 January 2022 01:30 (1 hour)

Presenter: CUI, Yanou

Contribution ID: 23

Type: **not specified**

Leptoflavorgenesis: baryon asymmetry of the Universe from lepton flavor violation

Thursday, 13 January 2022 19:00 (1 hour)

Charged-lepton flavor violation (CLFV) is a smoking-gun signature of physics beyond the Standard Model. The discovery of CLFV in upcoming experiments would indicate that CLFV processes must have been efficient in the early Universe at relatively low temperatures. We have pointed out that such efficient CLFV interactions open up new ways of creating the baryon asymmetry of the Universe. In this talk, I will describe two scenarios of what we call leptoflavorgenesis, where efficient CLFV processes are responsible for the generation of primordial lepton flavor asymmetries that are subsequently converted to a baryon asymmetry by weak sphaleron processes.

Presenter: YAMADA, Masaki