Contribution ID: **568** Type: **Parallel Talk**

Tachyonic preheating and its observational signatures

Thursday, 7 July 2022 09:00 (15 minutes)

'Preheating' refers to non-perturbative particle production at the end of cosmic inflation. In many modern inflationary models, this process is predominantly or partly tachyonic, that is, proceeds through a tachyonic instability where the mass-squared of the inflaton field is negative. An example of such a model is Higgs inflation, where the Standard Model Higgs field is the inflaton, formulated in Palatini gravity. The violent dynamics of such a strong instability can lead to strong production of gravitational waves and supermassive dark matter. I discuss the phenomenology of such models and the related CMB predictions.

In-person participation

Yes

Primary author: TOMBERG, Eemeli

Presenter: TOMBERG, Eemeli

Session Classification: Astroparticle Physics and Cosmology

Track Classification: Astroparticle Physics and Cosmology