



Contribution ID: 182

Type: Talk

Probing the small-scale physics of warm inflation from primordial black holes

Tuesday 13 December 2022 15:45 (15 minutes)

We explore the role of dissipative effects during warm inflation leading to the features in the primordial curvature power spectrum at the small-scales. In our study, we consider different models of warm inflation and discuss the formation of primordial black holes (PBH) from them. In particular, we focus on generating PBHs with mass in the range $(10^{17} - 10^{23})$ g, that can explain the full dark matter abundance. Further, we calculate the scalar induced gravitational waves (SIGW) spectrum associated with the PBH formation, and explore their signatures in the gravitational wave detectors. This is crucial for understanding the physics of inflation, dark matter phenomenology and gravitational waves observations.

Session

Astroparticle Physics and Cosmology

Primary author: ARYA, Richa

Co-authors: Dr MISHRA, Arvind Kumar (IISER Pune); Dr JAIN, Rajeev Kumar (Indian Institute of Science, Bangalore)

Presenter: ARYA, Richa

Session Classification: WG1-Astroparticle Physics and Cosmology