



Contribution ID: 143

Type: **not specified**

M. Zhu: Primordial black holes from bouncing cosmology

Tuesday 20 December 2022 14:45 (15 minutes)

The non-singular bouncing cosmology is an alternative paradigm to inflation, where the background energy density vanishes at the bounce point in the context of Einstein's gravity. Therefore, the non-linear effects in the evolution of density fluctuations ($\delta\rho$) may be strong in the bounce phase, which potentially provides a mechanism to enhance the abundance of primordial black holes (PBHs). We present a comprehensive illustration for PBH enhancement in the bounce phase and find that the bounce phase can potentially enhance the PBH abundance sufficiently.

Session Classification: Session 7 A