

New Horizons in Primordial Black Hole physics (NEHOP)



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Type: Talk

Dark Matter production from evaporating black holes

Tuesday, June 20, 2023 12:00 PM (20 minutes)

Hawking evaporation of black holes is expected to copiously produce all kinds of particles, regardless of their charges. In this talk, I will discuss how Hawking evaporation provides an efficient way of creating dark matter by way of gravity only. I will then explore the interplay between Primordial Black Hole production and interacting dark matter and their potential incompatibilities. Particularly I will focus on Freeze-in dark matter models. I will discuss the public code I co-developed called FRISBHEE, which solves the system of coupled Friedmann-Boltzmann equations. This talk will be based on Phys.Rev.D 105 (2022) 1, 015022, Phys.Rev.D 105 (2022) 1, 015023, Phys.Rev.D 106 (2022) 10, 103012 and arXiv:2212.0387.

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