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When the Evaporation of Primordial Black Holes Messes Up with Dark Matter Production

Thursday 5 May 2022 11:10 (20 minutes)

In this talk, I will present the phenomenology of dark-matter production in the case where it is both produced by thermal processes and by the evaporation of primordial black holes. I will show how the evaporation of primordial black holes may dramatically affect the production of dark-matter particles as well as its phase-space distribution. I will also show that the population of DM particles produced by evaporation may be warm enough to re-thermalize with the pre-existing DM relic abundance, leading to non-trivial imprints on the value of the relic abundance at a later time.

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