

Dark Interactions 2024

Vancouver, Oct. 16-18



Contribution ID: 53

Type: **not specified**

Building Dark Structure Before Big Bang Nucleosynthesis

Wednesday, 16 October 2024 16:30 (20 minutes)

I present a novel mechanism for creating primordial black holes and MACHOs via a self interacting dark matter. A heavy dissipative dark sector can come to dominate the universe, creating an early matter dominated era prior to Big Bang Nucleosynthesis (BBN). At this time the dark matter can form halos which persist after the phase transition back to radiation domination, and slowly collapse at late times. This leads to the late time formation of MACHOs and subsolar mass primordial black holes.

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Session Classification: Dark Sectors

Track Classification: Contributed Talks