

Phenomenology 2025 Symposium



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Light in the Shadows: Primordial Black Holes Making Dark Matter Shine

Tuesday 20 May 2025 15:00 (15 minutes)

While dark matter does not interact strongly with the standard model, for some models, this darkness can be attributed to a low population of a critical participant of a standard model active interaction. This ultimately leads to the formation of a bottleneck which prevents a discernible signal from being produced. On the other hand, small black holes produce all particles, whether in the standard model or a dark sector, through Hawking radiation. In this work, we consider primordial black holes (PBHs) producing this missing ingredient. This activates the otherwise inert ambient dark matter to produce a measurable signal which can then be used to gain information about both the dark matter and the PBHs. Finally, we investigate the capabilities of future gamma-ray detectors measuring this signal as well as distinguishing between different models.

Mini Symposia (Invited Talks Only)

Plenary (Invited talks only)

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