Phenomenology 2025 Symposium



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Gravitational Particle Production as a Mechanism for Generating Dark Matter

Monday 19 May 2025 14:30 (15 minutes)

The lack of direct detections for weakly interacting massive particles has led theorists to think about more exotic scenarios for producing DM in the early Universe. One viable alternative is gravitational particle production i.e. the creation of particles through due to the presence of a sufficiently strong gravitational field. In this talk, I will go over how this mechanism can be used to produce a viable free scalar field dark matter candidate and how these results can be extended to a self-interacting scalar field.

Mini Symposia (Invited Talks Only)

Plenary (Invited talks only)

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Track Classification: Dark Matter Theory and Detection