

Dark Matter @ Finite Temperature

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The microphysical properties of Dark Matter (DM), such as its mass and coupling strength, are typically assumed to retain their vacuum values when considering DM behaviour at a range of scales. However, DM interactions in different astrophysical and cosmological environments may be impacted by the properties of the background which in turn can substantially affect both DM production and the detection prospects for any given model. In the recent years, this has generated a lot of interest in calculating DM observables at finite temperature and density.

In this talk, I will provide an overview of what these effects are, and how they may give rise to new DM production mechanisms as well as impact observables.

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