

Dark matter and early Universe

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Big-Bang nucleosynthesis (BBN) represents one of the earliest phenomena which can lead to observational constraints on the early Universe properties. Yet, it is well-known that many important mechanisms and phase transitions occurred before BBN. During this talk, I will discuss the possibility to gain insight about the primordial Universe through studies of dark matter in cosmology, astroparticle physics and colliders. For this purpose, we consider that dark matter is a thermal relic, and show that combining collider searches with dark matter observables can lead to strong constraints on the freeze-out period.

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