

Mesogenesis

Wednesday 22 September 2021 16:55 (25 minutes)

I will introduce a class of new mechanisms for low-scale baryogenesis and dark matter production that utilize the CP violation within Standard Model meson systems. Mesogenesis mechanisms operate at MeV scales and such, remarkably, are experimentally testable. I will first give an overview of B-Mesogenesis; in which baryogenesis proceeds through the oscillation and subsequent decay into a dark sector of neutral B mesons. B-Mesogenesis is testable at current hadron colliders and B-factories, and I will present results of recent studies that pave the way towards constraining (or discovering) this mechanism. Finally, I will present a recent proposal for D-Mesogenesis which relies on the CP violation of charged D mesons.

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