

Seminar

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Asymmetric Dark Matter and Baryogenesis from Pseudoscalar Inflation

I will talk about how both the baryon asymmetry of the Universe and the dark matter abundance can be explained within a single framework that makes use of maximally helical hypermagnetic fields produced during pseudoscalar inflation and the chiral anomaly in the Standard Model. I will focus on a minimal asymmetric dark matter model free from anomalies and constraints. The observed baryon and the dark matter abundances are achieved for a wide range of inflationary parameters, and the dark matter mass ranges between 7-15 GeV. The novelty of this mechanism stems from the fact that the same source of CP violation occurring during inflation explains both baryonic and dark matter in the Universe with only two inflationary parameters, hence addressing all the initial condition problems in an economical way.

Thursday, 09.02.2017, 14:15 Uhr

Place: D6-135