

Smooth Hybrid Inflation and Non-Thermal Type II Leptogenesis

Thursday 27 September 2012 16:10 (20 minutes)

We consider a smooth hybrid inflation scenario based on a supersymmetric $SU(2)_L \times SU(2)_R \times U(1)_{(B-L)}$ model. The Higgs triplets involved in the model play a key role in inflation as well as in explaining the observed baryon asymmetry of the universe. We show that the baryon asymmetry can originate via non-thermal triplet leptogenesis from the decay of $SU(2)_{(B-L)}$ triplets, whose tiny vacuum expectation values also provide masses for the light neutrinos.

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Session Classification: Parallel Session 2: Cosmology & Astroparticle Physics

Track Classification: Cosmology & Astroparticle Physics