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Cosmology with Goldstone bosons: compact and non-compact cosets

Monday 24 April 2017 17:00 (15 minutes)

I will discuss the appeal of pseudo-Goldstone bosons (pGBs) for the generation of scales in Early Universe cosmology. In particular, I will show how Goldstone Inflation addresses the inflationary hierarchy problem (the tension between the Lyth bound and the scale of inflation as preferred by CMB anisotropies), while avoiding the problems with trans-Planckian scales that are typically associated with related models.
I will explore compact models based on the coset SO(n+1)/SO(n) and non-compact models based on a SO(n,1)/SO(n). I will show how both setups can give rise to inflation compatible with the current data, and discuss different scenarios for reheating in both setups.

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Session Classification: Afternoon session