ID de Contribution: **278** Type: **Non spécifié**

Polynomial Inflation

jeudi 2 juin 2022 16:30 (20 minutes)

Monomial inflationary models have been ruled out by latest B-mode experiments. In this talk, I will show that a simple and well motivated polynomial of degree four can nevertheless fit comfortably well current CMB data. The model predicts a running of the spectral index $\alpha \sim -10^{-3}$, which is testable by next generation CMB experiments. A full model parameter space was obtained by considering BBN constraint on reheating temperature and radiative stability. The inflationary scale can be as low as Hinf ~ 1 MeV, or as high as ~ 10^{10} GeV. Similarly, the reheating temperature can lie between its lower bound of ~ 4 MeV and about 4 × 10^8 (10^{11}) GeV for fermionic (bosonic) inflaton decays. The model is renormalizable and very simple, which can be easily extended for post-inflationary production of dark matter and leptogenesis.

Orateur: XU, Yong (Bethe Center for Theoretical Physics, Universität Bonn)

Classification de Session: Parallel session 2