

Non-Gaussian Inflationary Signatures of Heavy Sectors and the Scale of UV Physics

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We discuss the implications of current and future CMB observations on determining the model of inflation responsible for the generation of primordial curvature perturbations. We argue that including interactions of the inflaton with heavy fields is a natural way to parametrize UV physics and show that: 1) the observables related to two- and three-point correlators are directly connected with the scale of heavy physics on which we derive constraints using recent PLANCK/BICEP results, 2) there exists a degeneracy among drastically different models of inflation as far as non-Gaussian signatures are concerned and we comment on how this degeneracy may be lifted.

References:

- [1] R. Gwyn, G.A. Palma, M. Sakellariadou and S. Sypsas, JCAP 04 (2013) 004
- [2] R. Gwyn, G.A. Palma, M. Sakellariadou and S. Sypsas, to appear soon.