Contribution ID: **26** Type: **Long talk (20 mins)**

Non-Gaussianity from preheating of non-minimally coupled inflaton

Friday, 16 December 2022 10:10 (30 minutes)

Full non-linear simulations of massless preheating model have revealed a large non-Gaussianity can be generated. We study a more observationally viable model consisting of inflaton non-minimally coupled to gravity that decays into a massless scalar spectator during preheating.

Including the scale-dependence of Hubble rate places tight constraints on the 'cosmic variance', the values which the mean spectator field value can take. A negligible cosmic variance forces mean close to zero, and symmetry of many inflation potentials around zero dictates leading order non-perturbative treatment shall fail. Thus, we calculate sub-leading order term in the non-perturbative delta N formalism. As this calculation also needs to be performed keeping in mind the scale dependence, we show a scale-invariant way of solving momentum integrals is insufficient to yield the correct non-Gaussianity from preheating.

Type of presentation

20 minute talk

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Cosmology

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Session Classification: Full Length Talks