Contribution ID: **30**   Type: **not specified**

Cosmological correlators in slow-roll violating inflation

Tuesday 29 October 2024 09:15 (45 minutes)

We present correlation functions of the curvature perturbation in single-field inflation model with violation of SR approximation up to second-order expansion of the in-in perturbation theory. We show that the soft limit of trispectrum is proportional to running of the bispectrum, which is a generalization of Maldacena's theorem. With the same cubic and quartic couplings that yields consistent trispectrum, we compute one-loop correction to the large-scale power spectrum. While we have used field redefinition approach to remove the total time derivative interactions, we show that (carefully) deriving correlation functions by accommodating the total time derivative interactions yields the same result. It means that we show equivalence between correlation function obtained by field redefinition approach and direct calculation with total time derivative interactions at second-order expansion of the in-in perturbation theory. We also discuss some issues related to one-point function of the curvature perturbation and its implication to non-1PI one-loop diagrams.

Author: KRISTIANO, Jason

Presenter: KRISTIANO, Jason