Contribution ID: **25** Type: **not specified**

Curvature Perturbations Protected Against One Loop

Tuesday 29 October 2024 11:50 (20 minutes)

We examine one-loop corrections from small-scale curvature perturbations to the superhorizon-limit ones in single-field inflation models, which have recently caused controversy. We consider the case where the Universe experiences transitions of slow-roll (SR) ⟶ intermediate period ⟶ SR. The intermediate period can be an ultra-slow-roll period or a resonant amplification period, either of which enhances small-scale curvature perturbations. We assume that the superhorizon curvature perturbations are conserved at least during each of the SR periods. Within this framework, we show that the superhorizon curvature perturbations during the first and the second SR periods coincide
at one-loop level in the slow-roll limit.

Primary author: INOMATA, Keisuke (Jonhs Hopkins University)

Presenter: INOMATA, Keisuke (Jonhs Hopkins University)