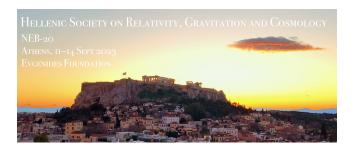Contribution ID: **57**　　　　　　　　　　　　　　　　　　Type: **not specified**

Cosmic inflation with inhomogeneous initial conditions

Tuesday, 12 September 2023 12:00 (20 minutes)

We investigate the robustness of inflation models to inhomogeneous initial conditions. In the simplest case inflation is described by a single scalar field ϕ minimally coupled to gravity with homogeneous initial value $\phi_0 and canonical momentum \Pi_0 = 0. However, there is no fundamental reason to reckon that inflation started with such homoge 1 decomposition to study fast-roll initial conditions i.e., nontrivial \phi_0 and \Pi_0 for-attractor (small-field model) and Starobinsky (large-field). We find that for small field inflation, with initial inhomogeneous scalar field prof inflating bubbles while for non-homogeneous 0 evolution depends on the relative phase between initial scalar field profile and init (ϕ_0) confirming previous results that large field model is more robust than small field one.

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