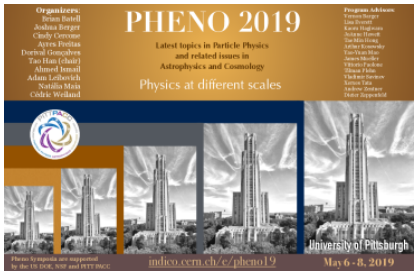

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Dynamical Analysis of Attractor Behavior in Constant Roll Inflation

Monday 6 May 2019 17:45 (15 minutes)

There has been considerable recent interest in a new class of non-slow roll inflationary solutions known as constant roll inflation. Constant roll solutions are a generalization of the ultra-slow roll (USR) solution, where the first Hubble slow roll parameter ϵ is small, but the second Hubble slow roll parameter η is not. While it is known that the USR solutions represent dynamical transients, there has been some disagreement in literature about whether or not large-η constant roll solutions are attractors or are also a class of transient solutions. In this paper we show that the large-η constant roll solutions do in fact represent transient solutions by performing stability analysis on the exact analytic (large-η) constant roll solutions.

Summary

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