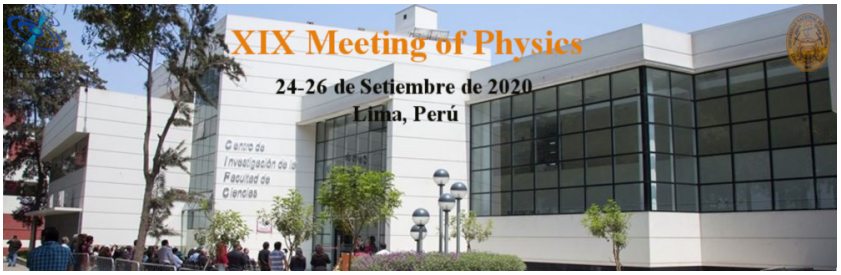

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κ-Exponential Inflation

Saturday, 26 September 2020 08:20 (20)

We investigate a possible inflationary scenario where the expantion is driven by a slow evolution homogeneous single scalar field, whose potential V(φ) is given by a generalized exponential function taken from the κ-deformed theories. Within the *slow-roll* approximation, we obtained some the main predictions of the model, as scalar spectral index (*ns*), tensor to scalar ratio (*r*), number of *e-folds* (*N*) and the local non-Gaussian parameter (*fNL*). We confront these parameters with the current data of the last mission of Planck satellite, whose results were analysed and published by the *Planck Collaboration.* We show that this model supports a set of solutions with an exponential approach wider than usual and that its theoretical predictions are compatible with observational data. In particular, it was possible to relieve the tension on *r* between the value predicted by the usual exponential model from Ratra and Peebles and the value measured by the Planck.

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