Sixteenth Marcel Grossmann Meeting



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Quintessential Inflation from Lorentzian Slow Roll

Wednesday, 7 July 2021 11:05 (25 minutes)

From the assumption that the slow roll parameter

 ϵ has a Lorentzian form as a function of the e-folds number N, a successful model of a quintessential inflation is obtained. The form corresponds

to the vacuum energy both in the inflationary and in the

dark energy epochs and satisfies the condition to climb from

small values of ϵ to 1 at the end of the inflationary epoch.

We find the corresponding scalar Quintessential Inflationary

potential with two flat regions. Moreover, a reheating mechanism is suggested with numerical estimation for the homogeneous evolution of the universe. The suggested mechanism is consistent with the BBN bound

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