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# Lorentzian Quintessential Inflation

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**Abstract:** From the assumption that the slow roll parameter \epsilon 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. The form satisfies the condition to climb from small values of \epsilon to 1 at the end of the inflationary epoch. At the late universe \epsilon becomes small again and this leads to the Dark Energy epoch. The observables that the models predicts fits with the latest Planck data: r ~ 10−3 , ns ≈ 0.965. Naturally a large dimensionless factor that exponentially amplifies the inflationary scale and exponentially suppresses the dark energy scale appears, producing a sort of cosmological see saw mechanism. We find the corresponding scalar Quintessential Inflationary potential with two flat regions - one inflationary and one as a dark energy with slow roll behavior. 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.

**Keywords:** quintessential inflation;

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