

Title: The viability of chaotic inflation in a generalized Galileon scenario

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We study chaotic quadratic and quartic inflation with a Galileon-like nonlinear self interaction $G(X)\square\phi$, where $G(x) \propto X^n$. General conditions required for successful inflation are deduced and discussed from the background and cosmological perturbations under slow-roll approximation in the regime where the Galileon term is dominant. Furthermore, we find the allowed range in the space of parameters characterizing the models by considering the current observational data of Planck from the $n_s - r$ plane. In particular, it is found that the tensor-to-scalar ratio is suppressed by the power n of the nonlinear self interaction through $1/\sqrt{n}$, which is fundamental in order to the theoretical predictions enter inside the allowed contours at the 68 and 95 % C.L. from the latest Planck data, resurrecting chaotic inflation. Finally, we will discuss the issue if the Galileon term is dominant by the end of inflation, the field oscillation during reheating can be affected.