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Universidad del País Vasco
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Seminarios de Física Teórica
Fisika Teorikoa: Hitzaldiak

Non-Gaussianity in two-field inflation

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Abstract In this talk, I will discuss the level of bispectral non-Gaussianity produced in two-field inflation models with standard kinetic terms. Even though the Planck satellite has so far not detected any primordial non-Gaussianity, it has tightened the constraints significantly, and it is important to better understand what regions of inflation model space have been ruled out, as well as prepare for the next generation of experiments that might reach the important milestone of $\Delta f_{\mathrm{NL}}^{\mathrm{local}} = 1$.

I will begin by a short review about non-Gaussianity of the bispectral type, both from the theoretical and observational points of view. I will also present our results on the non-Gaussianity parameter f_{NL} in the case of sum potentials and show that it is very difficult to satisfy simultaneously the conditions for a large f_{NL} and the observational constraints on the spectral index n_s in the slow-roll approximation. I will then discuss the case of monomial potentials and show explicitly the small region of parameter space in which this is possible. Finally, I will show that these results can be extended beyond the slow-roll approximation.

Prof. A. Chamorro Seminar Room, Dept. of Theoretical Physics, Corridor 4.-2.
Friday, Oct. 5th, 2018
Time:**11:40 am**