

Theory Seminar

Monday, November 15, 2010 2:10 PM 831 Pupin Hall



"Effective field theory analysis of axion monodromy inflation"

We develop a four-dimensional model of "axion monodromy inflation", in which an axion with sub-Planckian decay constant can wind many times, eventually travelling super-Planckian distances, drawing energy from a four-form field strength. We analyze potential corrections to this model from the standpoint of 4d effective field theory, and show how it evades the typical problems with realizing chaotic inflation with super-Planckian field ranges. We discuss the constraints on this scenario arising from the coupling to light states such as moduli. (Based on work in progress with Nemanja Kaloper and Lorenzo Sorbo).



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