SEMPARIS – Séminaires en région parisienne

http ://string.lpthe.jussieu.fr/semparis/

Seminar of the theory group of APC

Mardi 26 Juin 2018, 14 :00
APC, 483 A - Malevitch
Domaines : hep-th

Titre : *Stochastic inflation in a general field space*

Orateur : **Yuichiro Tada (Nagoya University)**

Résumé : *Inflationary models in non-trivial field spaces encoded by their non-canonical kinetic terms have attracted attentions recently. We have then extended the so-called stochastic formalism to such a general case. This formalism investigates the fluctuation of inflatons treating them as Brownian motions. This work highlights the involved problem of this formalism, related with the mathematical uncertainty of the definition of noise integral. Comparing the correlation functions in the stochastic formalism and quantum field theory, we clarify that this uncertainty cannot be removed but rather the smallness of this would be a new criterion of the validity for the application of this formalism. We also check that it does not affect the observable curvature perturbations so much at least in a single-field case. Practical application prescriptions of this formalism may be also mentioned.*