

Séminaire LAL

Vincent Vennin
(APC Paris)

Mardi 15 octobre 2019 à 11h00

Primordial Black Holes from Quantum Diffusion during Cosmic Inflation

Inflation is a phase of accelerated expansion that takes place at very high energy in the early universe. During this epoch, vacuum quantum fluctuations are amplified to seed the large-scale structure of our universe. When inhomogeneities are produced with sufficiently large amplitude, they may subsequently collapse into primordial black holes. I will explain why the effect of quantum diffusion during inflation needs to be taken into account in such a case, and how the abundance of primordial black holes can be predicted while consistently accounting for such effects. I will show that the result can vastly differ from standard calculations, and discuss consequences for inflation and for primordial black holes.

Salle 101 - Bât. 200, Orsay

Organisation :

Joao Coelho - Thibaud Louis - Aurélien Martens - Dimitris Varouchas (LAL) - seminaires@lal.in2p3.fr

LAL web : <http://www.lal.in2p3.fr>

Indico: <https://indico.lal.in2p3.fr/category/31/>