



**Jérôme Martin**  
(IAP)

Bruno Mazoyer - LAL Orsay 2019

# Cosmic inflation after Planck

**mardi 14 mai 2019  
à 11h00,  
Amphithéâtre Bloch  
(IPHT)**

**Séminaire SCOPI**

Séminaire commun des départements P2I et SPU de l'Université Paris-Saclay et du LabEx P2IO

## Séminaire SCOPI Paris-Saclay

*Jérôme Martin (IAP)*

**Mardi 14 mai 2019 à 11h00**

### *Cosmic inflation after Planck*

After a short discussion of the central tenets at the basis of inflation, a review of how the most recent Cosmic Microwave Background (CMB) anisotropy measurements constrain this theory is presented.

However, cosmic inflation is not only a successful paradigm to understand the early Universe. It is also the only situation in Physics where one crucially needs General Relativity and Quantum Mechanics to derive the predictions of a theory and, where, at the same time, we have high-accuracy data to test these predictions.

Indeed, according to inflation, the large scale structures observed in our Universe (galaxies, clusters of galaxies, Cosmic Microwave Background - CMB - anisotropy . . . ) are of quantum mechanical origin: they are nothing but vacuum fluctuations, stretched to cosmological scales by the cosmic expansion and amplified by gravitational instability. This means that inflation is also a playground to investigate foundational issues and some aspects of these questions will be discussed.

**Amphithéâtre Claude Bloch, IPht**

***Le séminaire sera précédé d'un café/thé à 10h45***

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