INTERNATIONAL SOLVAY INSTITUTES BRUSSELS

Solvay Colloquim

Professor Jean-Loup Puget

Institut d'Astrophysique Spatiale, Orsay

Planck mission: the large scale CMB polarisation data

The Planck mission measured the Cosmic Microwave Background anisotropies with unprecedented sensitivity and deduced the cosmological parameters of the Cold-Dark-Matter with Cosmological constant and of extensions of this model. It will be argued that we now have a first incarnation of a standard cosmological model.

The Thomson Optical depth parameter τ measuring the column density of free electrons since the first stars and galaxies form was the parameter measured with the lowest accuracy. The polarization E-modes of the CMB anisotropies at large scale allows to measure it nearly independently of the other parameters. The implications for the other parameters will be discussed.

New results on τ remove the tensions between earlier CMB measurements and observations of high redshift sources. Furthermore this measurement starts to constrain the ionising radiation from first stars and galaxies at high redshifts.

Future use of the polarisation Planck data on large scale to search for B modes signal associated with primordial gravity waves from the inflation phase will also be presented.

Tuesday 12 April 2016 at 4.00 P.M.

COFFEE AND TEA WILL BE SERVED AT 3.45 P.M. IN FRONT OF THE SOLVAY ROOM

SOLVAY ROOM
BUILDING N.O. - 5TH FLOOR
UNIVERSITÉ LIBRE DE BRUXELLES
CAMPUS PLAINE - BOULEVARD DU TRIOMPHE
ACCESS 2- 1050 BRUSSELS

ULB

ANNEE DE LA FRANCE 2015-16

Vrije Universiteit Brussel

SOLVAY

FÉDÉRATION WALLONIE-BRUXELLES

RICHTING MORGEN

www.solvayinstitutes.be