



Irfu

Institut de recherche
sur les lois fondamentales
de l'Univers

**Séminaire
SPP**

Lundi 25/01/2016, 11h00

CEA-Saclay Bat 141, salle André Berthelot

Detecting gravitational waves with a future space-based interferometer

EDWARD PORTER

APC, Paris

ESA has recently chosen "The Gravitational Wave Universe" as the theme for the L3 Cosmic Vision mission. In preparation of this future mission, the technology demonstration package, LISA-Pathfinder, was launched at the beginning of December. In this presentation, I will give an overview of the status of LISA-Pathfinder, and discuss the main types of GW sources expected for a space-based interferometer. In particular, I will focus on the methods of detection and parameter estimation for massive black hole binaries. While the final configuration of the mission is still under discussion, I will demonstrate that even in its most basic configuration, a future mission will be able to probe the merger of massive black holes to redshifts of $z \sim 13$ and beyond.

Le café sera servi 10 minutes avant.

NB : La présentation d'une pièce d'identité est exigée à l'entrée du centre. Tous les auditeurs extérieurs sont priés de prévenir à l'avance Martine Oger, tél. 01 69 08 23 50, e-mail : martine.oger@cea.fr. (U.E. : délai de 24 h, hors U.E. : délai de 4 jours).