

Service d'Astrophysique
SÉMINAIRE

Mardi 15/09/2015, 10h00-11h00

CEA Saclay, Orme des Merisiers Bat 713, salle de séminaires Galilée

**Gamma-ray Bursts from the Swift Burst Alert Telescope:
Probing Intrinsic Distributions with Trigger Simulation**

Amy Yarleen Lien

Goddard Space Center, USA

Gamma-ray bursts (GRBs) are one of the most energetic explosions in the universe, and can be observed across a wide range of wavelengths (from radio to GeV). Therefore, GRBs provide a rich environment to study astrophysics and offer a unique probe of cosmology, particularly the early universe.

Swift, a multi-wavelength telescope dedicated to GRB study, marks its 10-year anniversary on Nov. 20, 2014. To date, the Burst Alert Telescope (BAT) onboard Swift has detected 1000 gamma-ray bursts (GRBs), within which 330 GRBs have redshift measurements, ranging from $z=0.03$ to $z=9.38$.

In this talk, I will present summaries of the GRB observations from the Swift/BAT and discuss potential selection effects from the instrument and the trigger algorithm. Furthermore, I will present our study on the GRB rate with simulations of the BAT trigger algorithm, and discuss its implications for the high-redshift star-formation history.

Le cafe sera servi 10 minutes avant

Contact : pascale.chavegrand@cea.fr - Tel : +33 1 69 08 78 27
http://irfu.cea.fr/Phocea/Vie_des_labos/Seminaires/index.php