



**Séminaire organisé par**

**AIM & Le service d'Astrophysique  
CEA/DSM/Irfu**



**Irfu**

**Gamma-ray Bursts from the Swift Burst Alert Telescope:  
Probing intrinsic distributions with trigger simulations**

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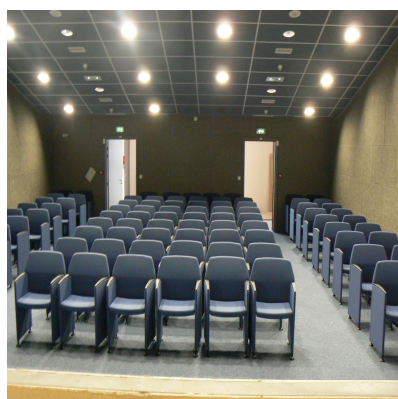
Gamma-ray bursts (GRBs) are one of the most energetic explosions in the universe, and can be observed across a wide range of wavelengths (from radio to GeV). Therefore, GRBs provide a rich environment to study astrophysics and offer a unique probe of cosmology, particularly the early universe.

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.

**15 septembre 2015**

**10h00 Salle Galilée bât 713 - Orme des Merisiers**



**Le petit-déjeuner précèdera le séminaire**

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