

## **Ballerina - A small Gamma Ray Burst Mission**

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The cosmological origin of gamma ray bursts has now been established with certainty. Many more bursts will need to be studied establish the typical distance scale, and to map out the large variability in properties which have been indicated by the first handfuls of events.

We are proposing Ballerina, a small satellite to provide new data on the gamma burst phenomenon and accurate positions at a rate an order of magnitude larger than obtained from Beppo-SAX.

Ballerina will be capable of detecting and studying about 70 burst per year, providing real time positions with an accuracy better than 30 arc seconds. Ballerina payload will consist of an all-sky monitor covering  $4\pi$  steradian, and a unique combination of a grazing incidence X-ray telescope and a collimated telescope. By quick reorientation of the spacecraft in response to a gamma burst detection, Ballerina will provide important spectral information on the early phase of the X-ray afterglow.