1 Introduction

At 11:16:10 UT on 2012-09-18, the Swift Burst Alert Telescope (BAT) triggered and located GRB 120918A (trigger=534015). Swift could not slew to the burst due to a Sun observing constraint lasting until 2012-11-15. Consequently, there are no XRT or UVOT data for this burst. No ground-based optical or infrared observations have been reported.

The best Swift position (1.1’ uncertainty) is the BAT position from Barthelmy et al. (GCN Circ. 13784):

RA (J2000) = 12h 04m 10.1s
Dec (J2000) = -32° 45′ 43.5″

2 BAT Observation and Analysis

At 11:16:10 UT on 2012-09-18, the Swift Burst Alert Telescope (BAT) triggered and located GRB 120918A (trigger=534015; Barlow et al., GCN Circ. 13779). Using the data set from T−239 s to T+963 s, the BAT ground-calculated position is RA, Dec = 181.042, -32.762 deg which is

RA(J2000) = 12h 04m 10.1s
Dec(J2000) = -32° 45′ 43.5″

with an uncertainty of 1.1 arcmin (radius, sys+stat, 90% containment). The partial coding was 15% (Krimm et al. GCN Circ. 13634).

The mask-weighted light curve, shown in Figure 1, exhibits several overlapping peaks starting at ∼T−5 s, peaking at ∼T+1 s, and ending at ∼T+40 s. T90 (15-350 keV) is 25.1 ± 2.5 s (estimated error including systematics).

The time-averaged spectrum from T−2.86 s to T+23.90 s is best fit by a power law with an exponential cutoff. This fit gives a photon index 1.00 ± 0.39, and Epeak of 85.5 ± 36.3 keV (\(\chi^2=55.6\) for 56 d.o.f.). For this model the total fluence in the 15-150 keV band is \((3.7 \pm 0.6) \times 10^{-6}\) erg cm\(^{-2}\) and the 1-s peak flux measured from T-0.28 s in the 15-150 keV band is \(4.5 \pm 0.5\) ph cm\(^{-2}\) s\(^{-1}\). A fit to a simple power law gives a photon index of 1.60 ± 0.09 (\(\chi^2=63.5\) for 57 d.o.f.). All quoted errors are at the 90% confidence level.
The results of the batgrbproduct analysis are available at http://gcn.gsfc.nasa.gov/notices/534015/BA/

Figure 1: The mask–weighted BAT light curve of GRB 120918A in the 4 individual plus total energy bands.