



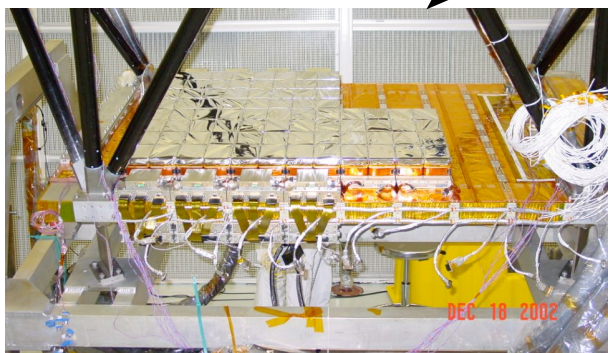
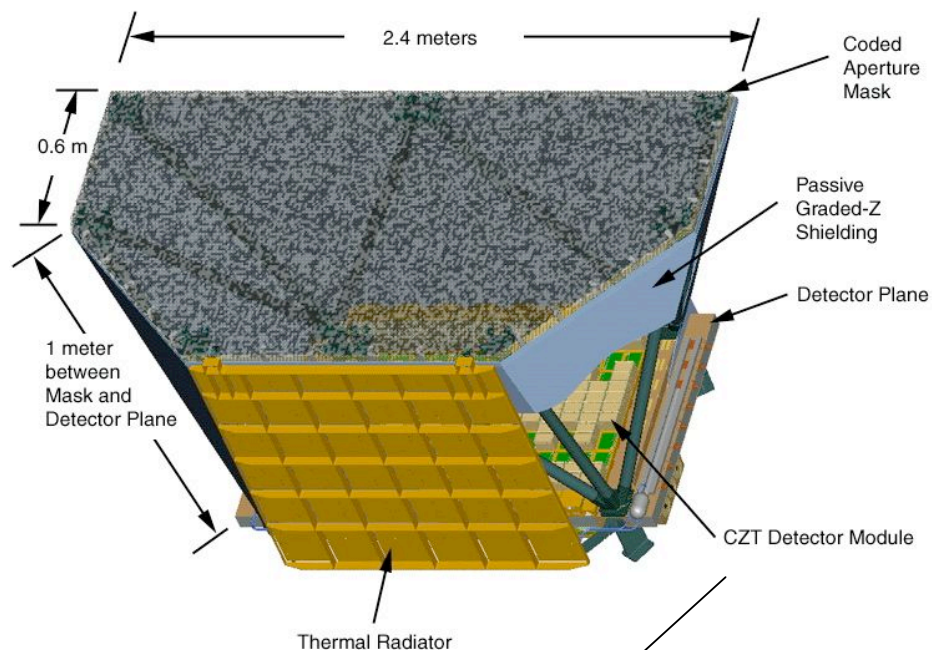
Swift Calibration Status

1. BAT status
2. XRT status
3. XRT-BAT cross-calibration

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Burst Alert Telescope (BAT)



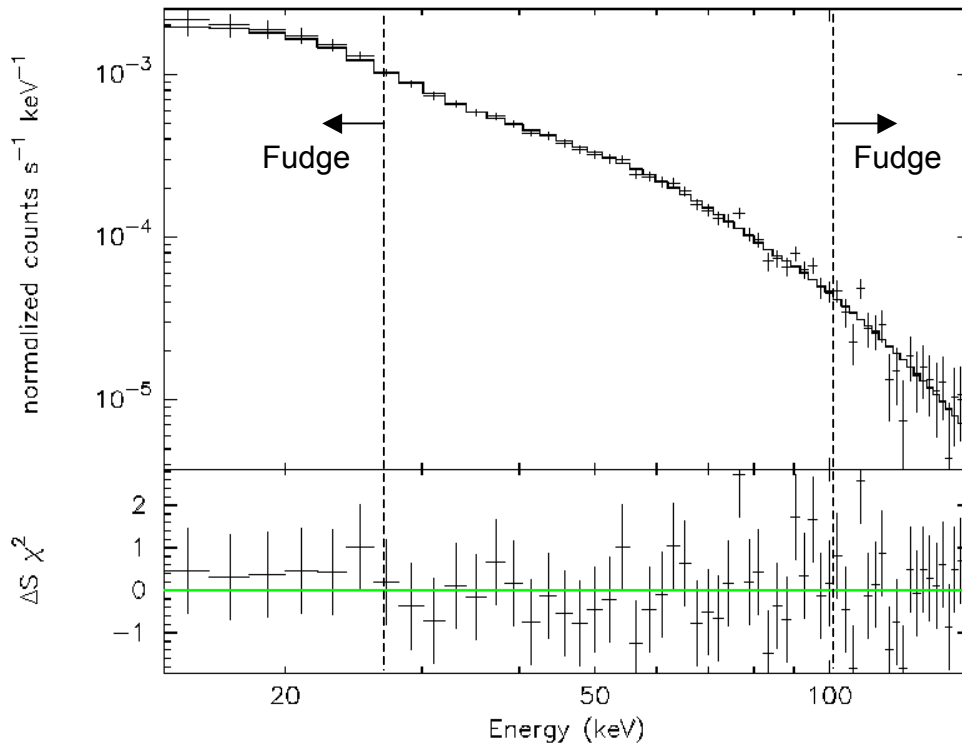
BAT Characteristics

- Energy range: 15-150 keV
- Energy resolution: ~3 keV @ 22 keV
~7 keV @ 122 keV
- Loc. accuracy: 1-4 arcmin
- PSF: 22 arcmin
- Field of view: 2 steradian
- 32K CdZnTe detectors, 5200 cm²
- Currently, ~29K detectors are working fine
(10-12 % detectors are disabled)



Crab Spectrum

Obs. ID: 0005010021 (March 20, 2007)
Exposure time: 2082.186 sec

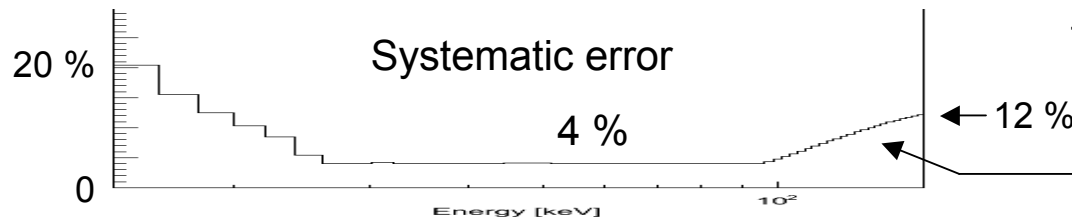


Fit results

- Photon Index = 2.13 ± 0.04
- Norm at 1 keV = $8.9 (-1.3, +1.5)$
- Flux in 15-150 keV
= $1.99 \pm 0.03 \times 10^{-8} \text{ ergs/cm}^2/\text{s}$
- $\chi^2_{\nu} = 0.80$ (58 dof)

Note on the DRM:

- Good agreement in 27-100 keV
- Discrepancies $< 27 \text{ keV}$ and $> 100 \text{ keV}$
==> Fudge the response to fit with the Crab



Remember to apply **batphasyserr** to your PHA files

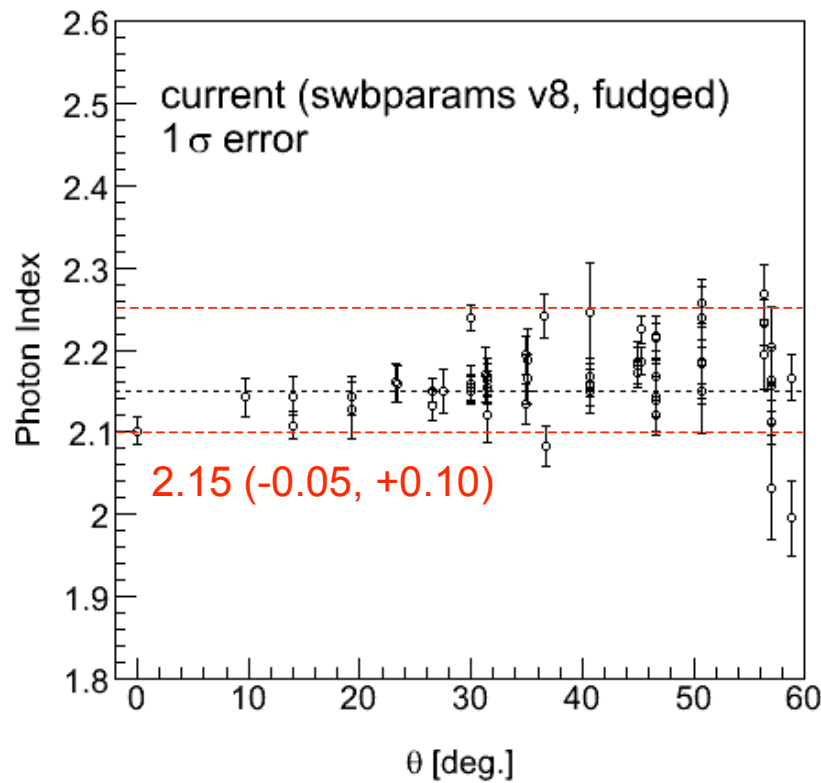
This part will be reduced in the next software release



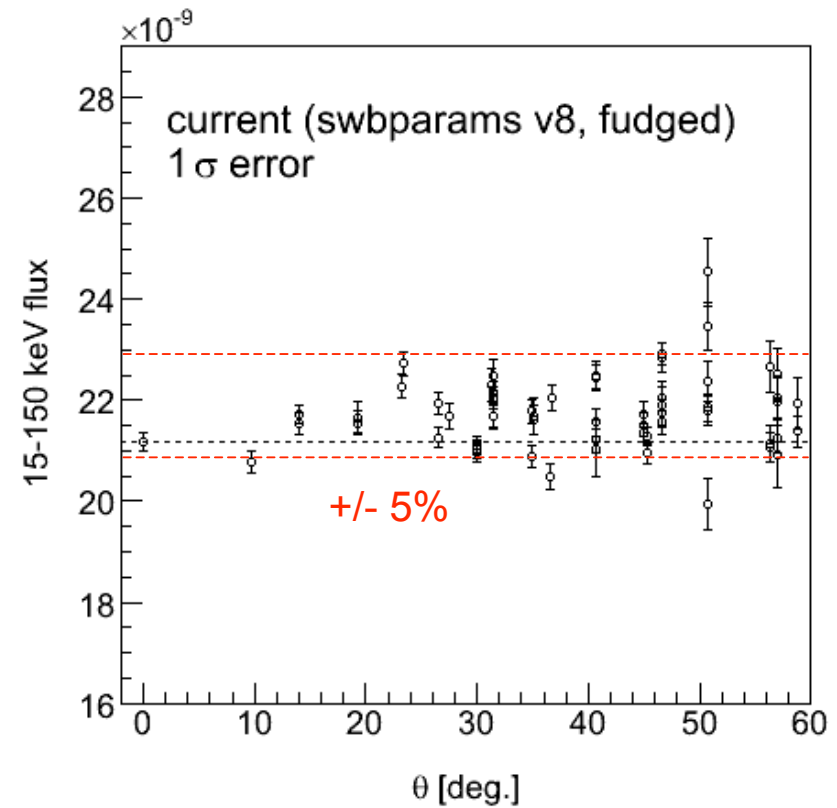
Angular dependence

Crab Grid observations (2004/2005)

Photon Index



15-150 keV Flux





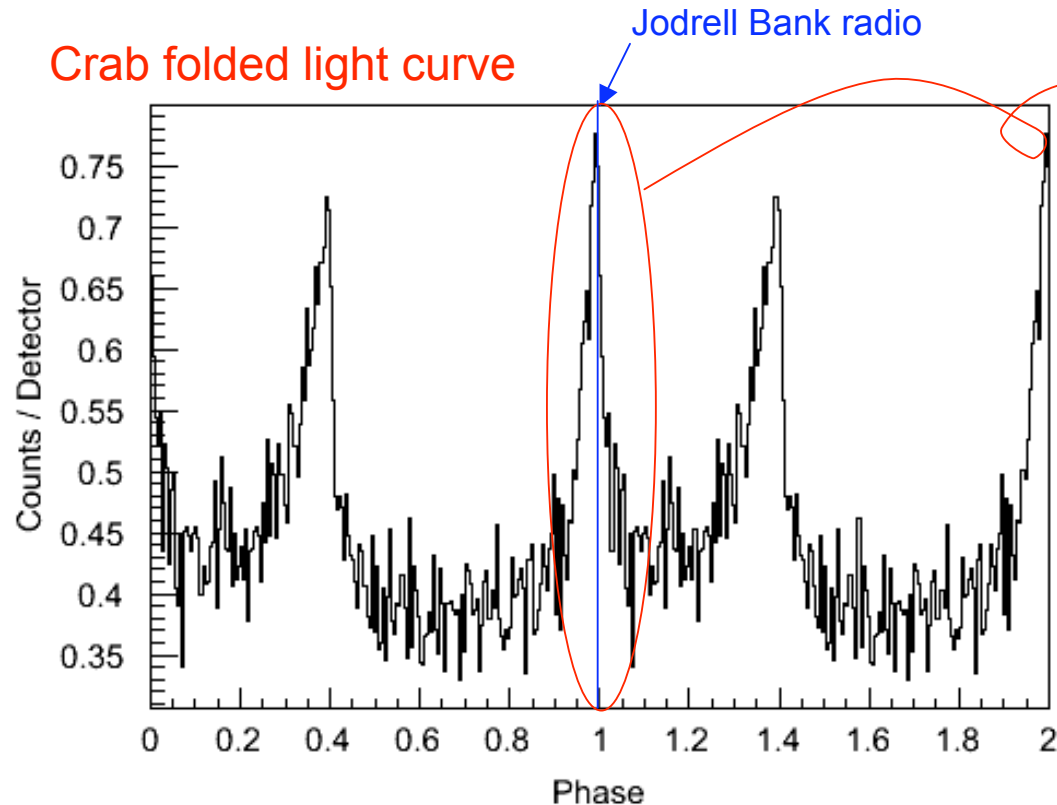
Timing Accuracy

Obs. ID: 0005010021 (March 20, 2007)

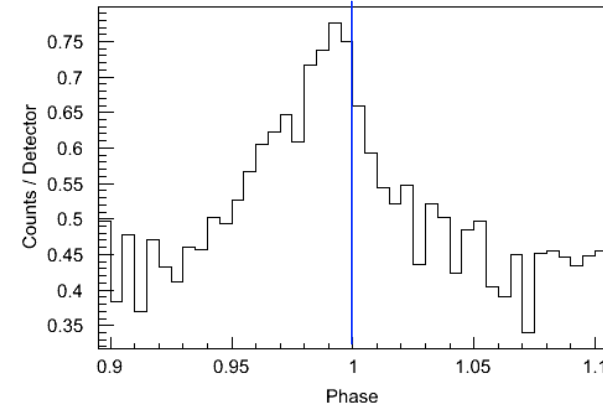
Exposure time: 2082.186 sec

BAT Time resolution: 100 μ s

Crab folded light curve



phase: ~ 0.99



The BAT data precede the Jodrell Bank radio by $\sim 300 \mu$ s