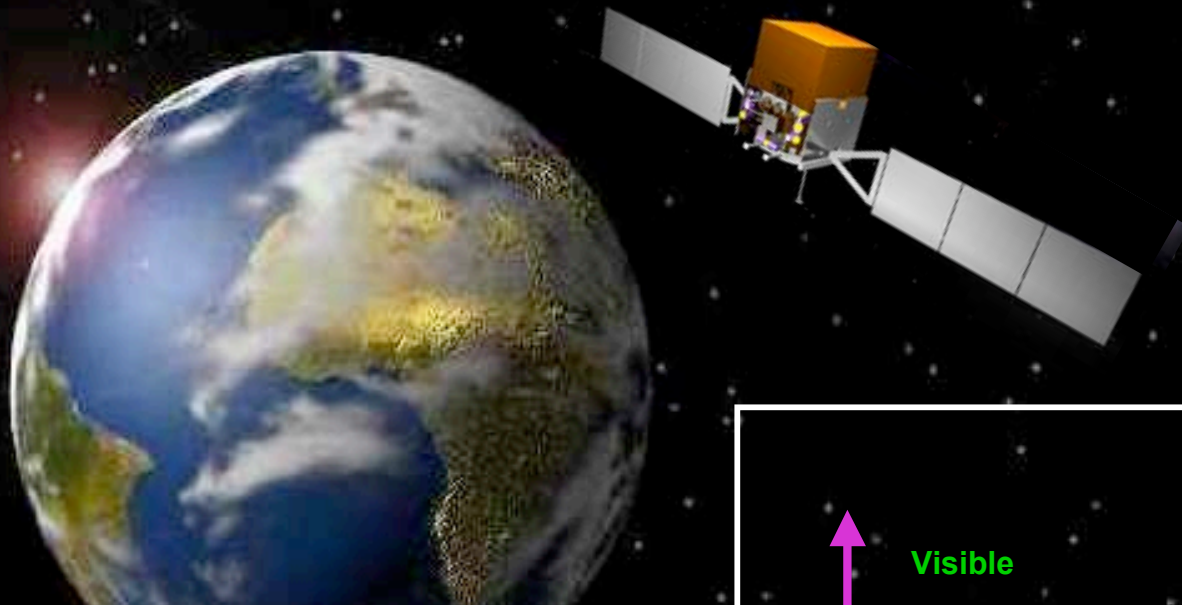
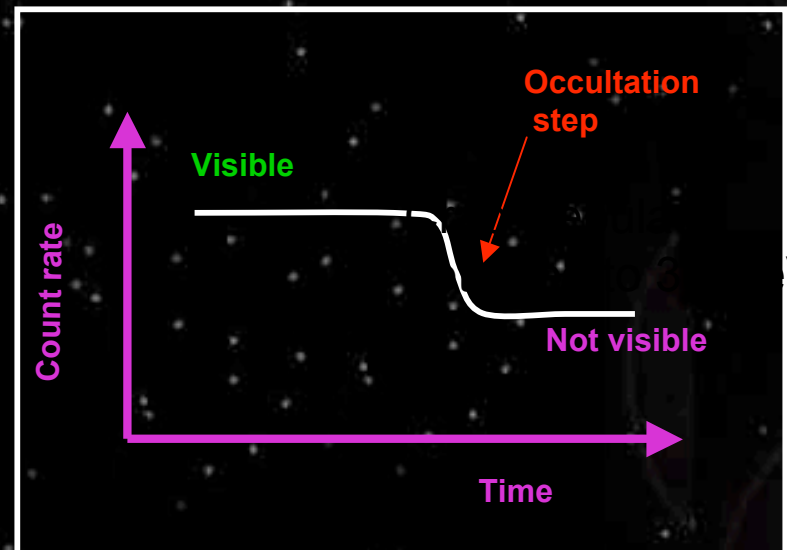


All-Sky Earth Occultation Observations with the Fermi Gamma-ray Burst Monitor

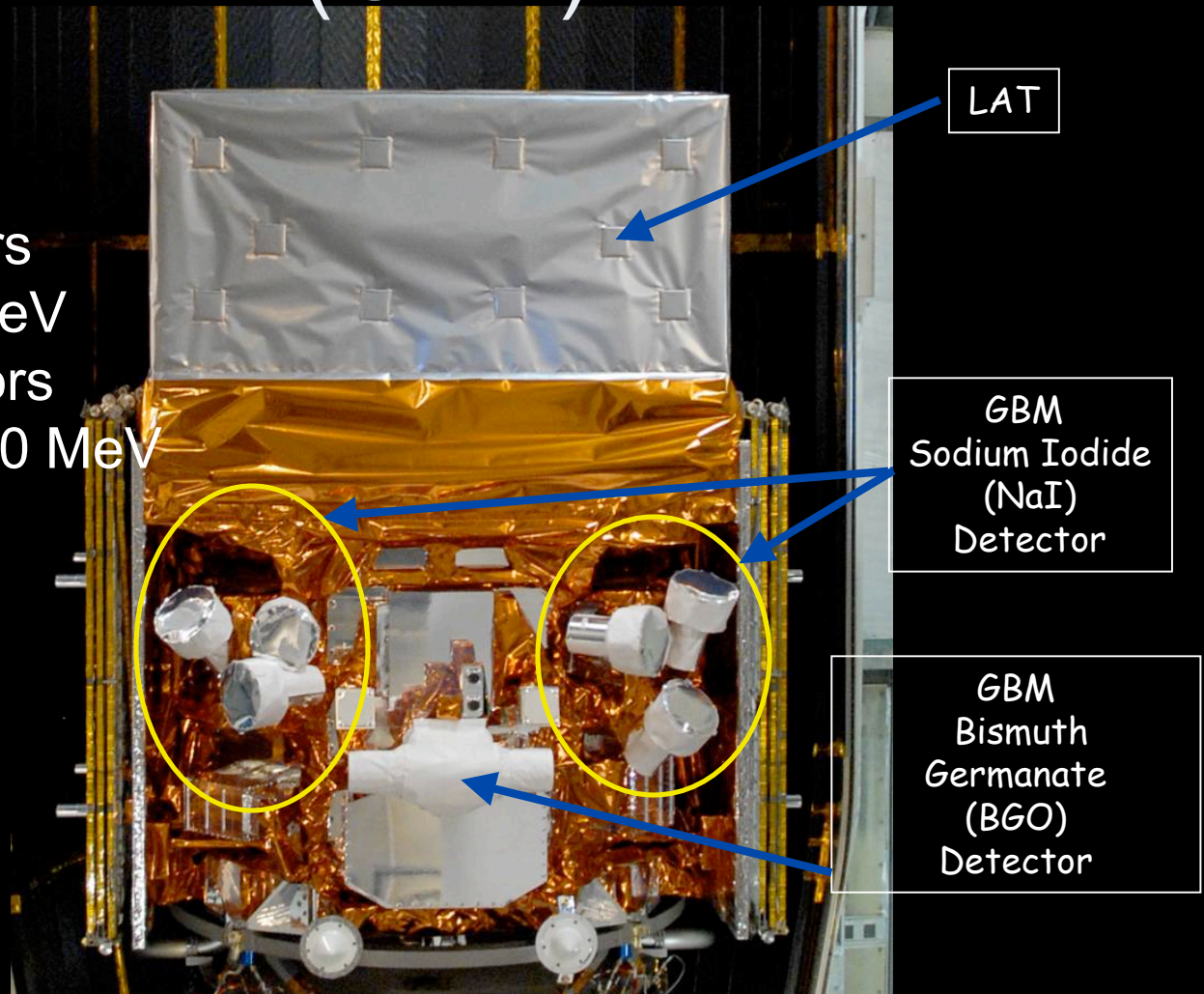


C.A. Wilson-Hodge (NASA/MSFC),
G. Case, M. Cherry, J. Rodi (LSU), M.
Finger, P. Jenke (USRA), A. Camero-Arranz
(NSSTC), V. Chaplin, V. Connaughton, P.N.
Bhat, M. Briggs (UAH), E. Beklen (METU),
R.H. Haynes (NASA Academy) for the GBM
Earth Occultation Team



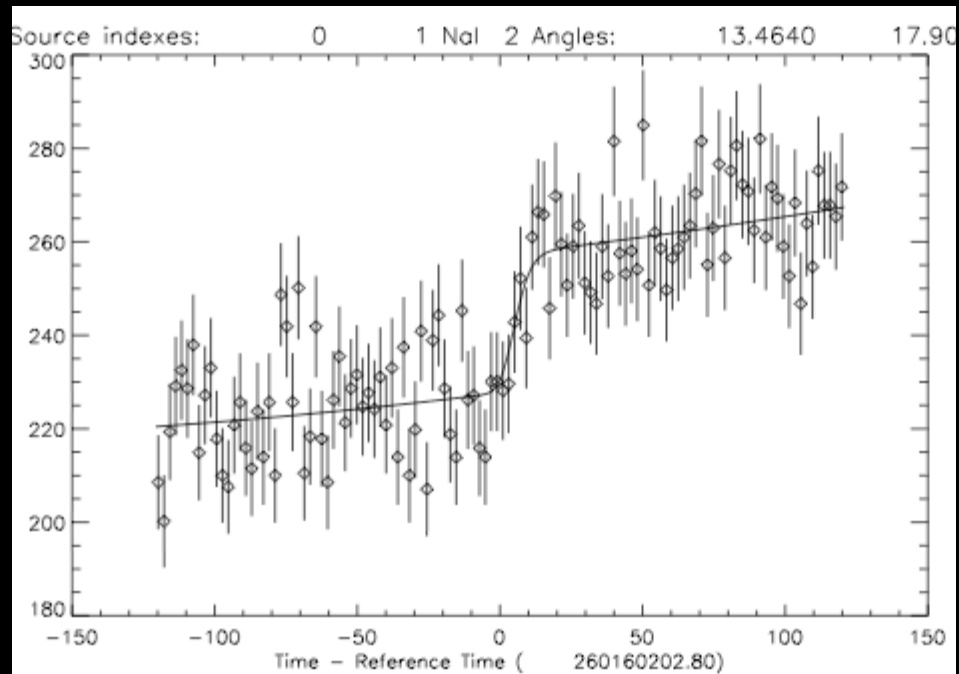
Fermi Gamma Ray Burst Monitor (GBM)

- GBM
 - 12 NaI detectors
 - 8keV - 1 MeV
 - 2 BGO detectors
 - 150 keV - 40 MeV



Earth Occultation Step Fitting

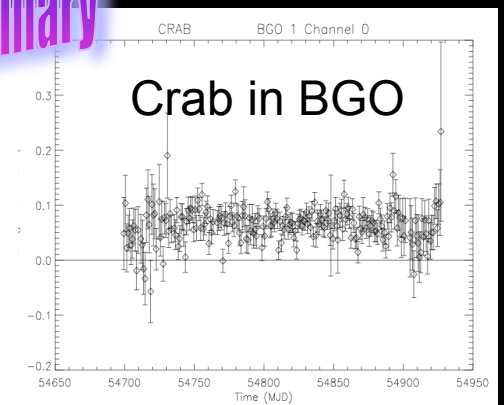
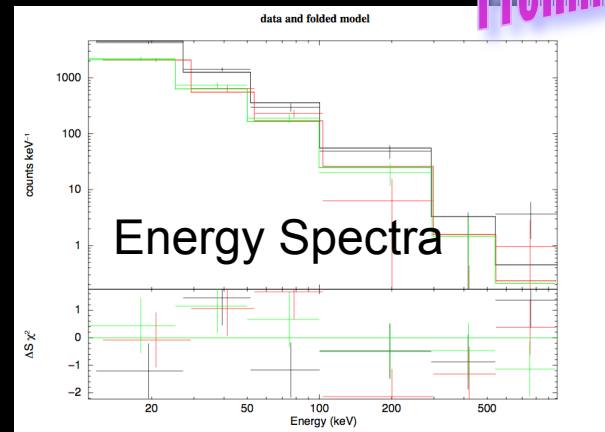
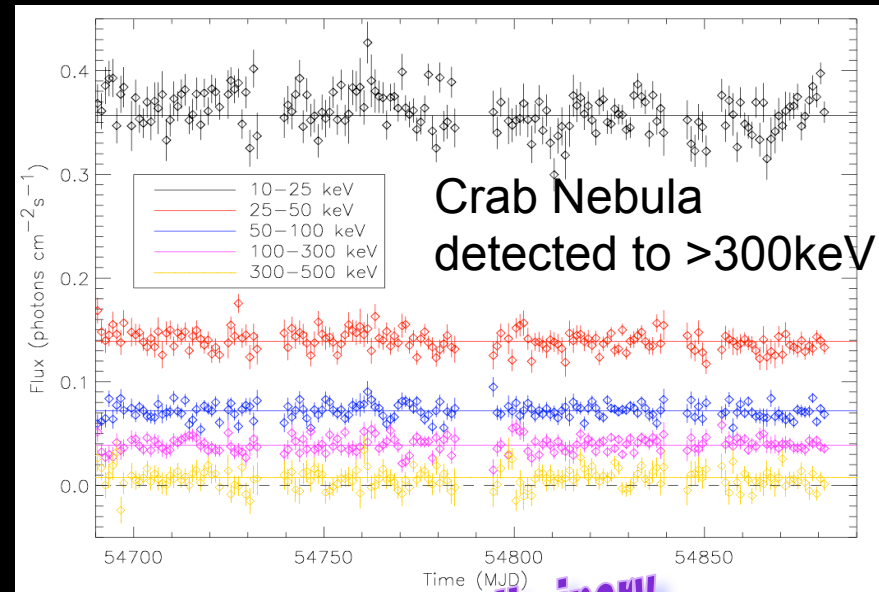
- Predict occultation times
- Determine detectors viewing source of interest
- Fit to each detector and energy channel
 - Background model
 - Model count rates for each source
 - Detector responses
 - Assumed energy spectrum
 - Atmospheric transmission
- Compute best scale factor for all detectors to estimate fluxes.



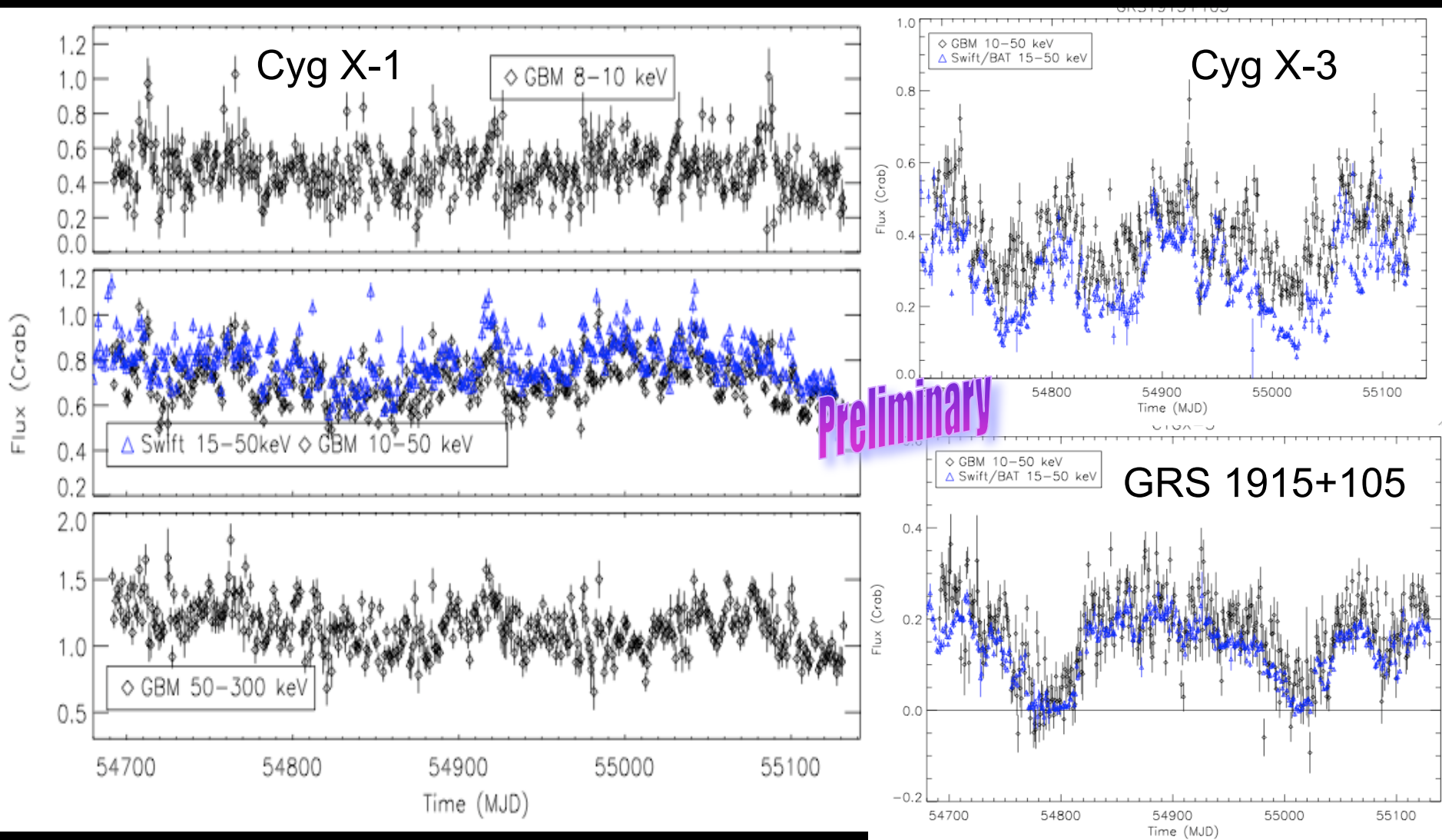
- Fermi/CGRO differences
 - Fermi rocks to +/-50 deg from Zenith every orbit
 - Detector blockages
 - Low/High energy coverage

GBM Earth occultation monitoring

- Initial catalog of 47 sources
 - X-ray binaries
 - Crab
 - Cen A
- Developing software
 - Energy spectra
 - Source monitoring using BGOs
 - Imaging (Poster P5.209 Case et al.)

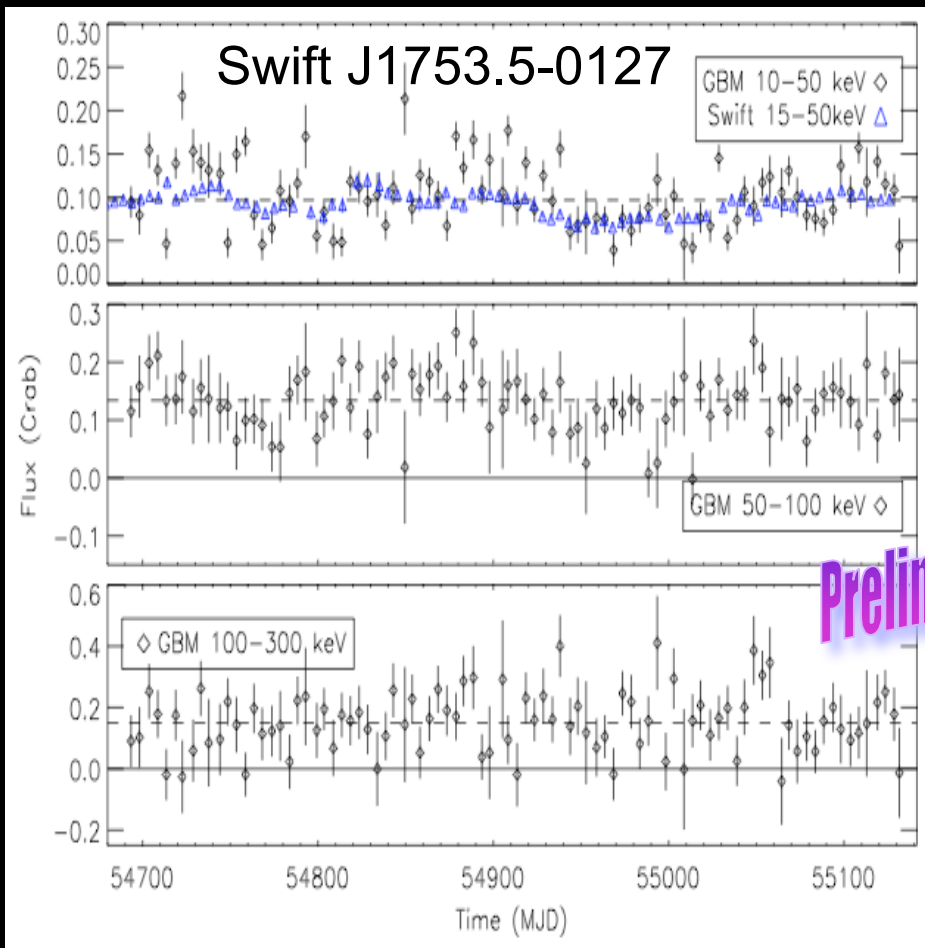


Black Hole Binaries with GBM and Swift/BAT

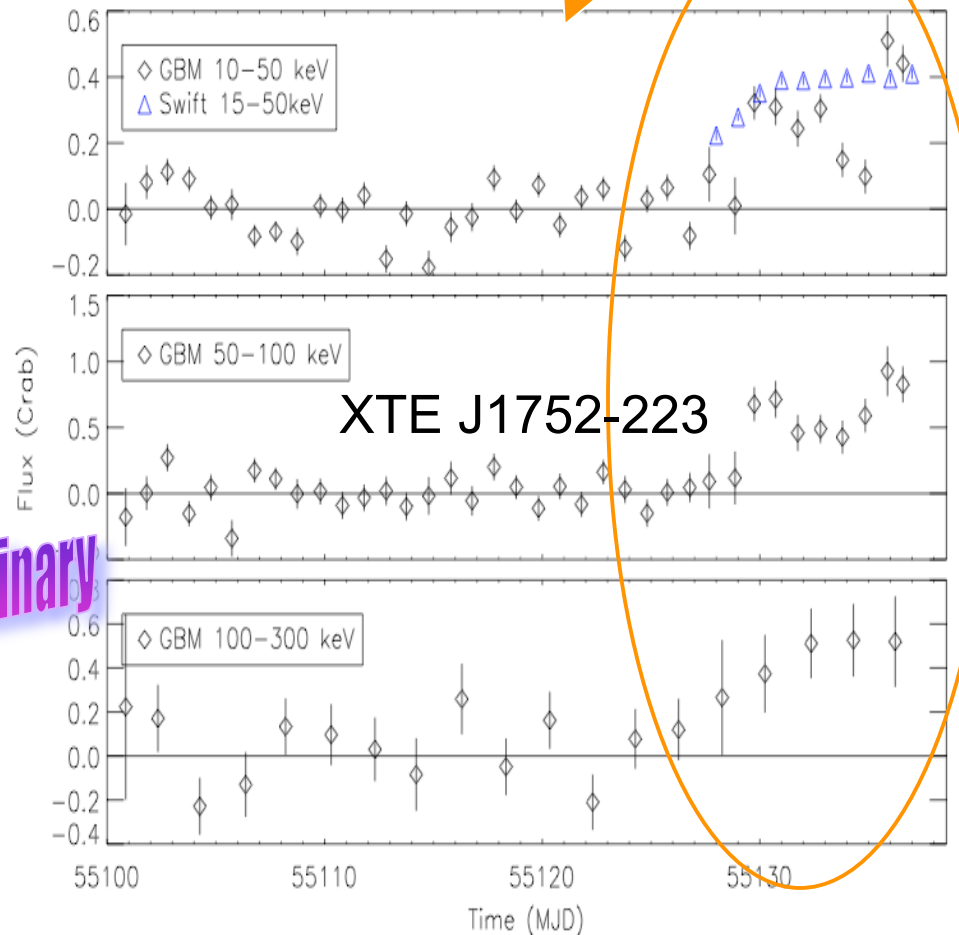


More Black Hole Binaries

New BH
Transient!

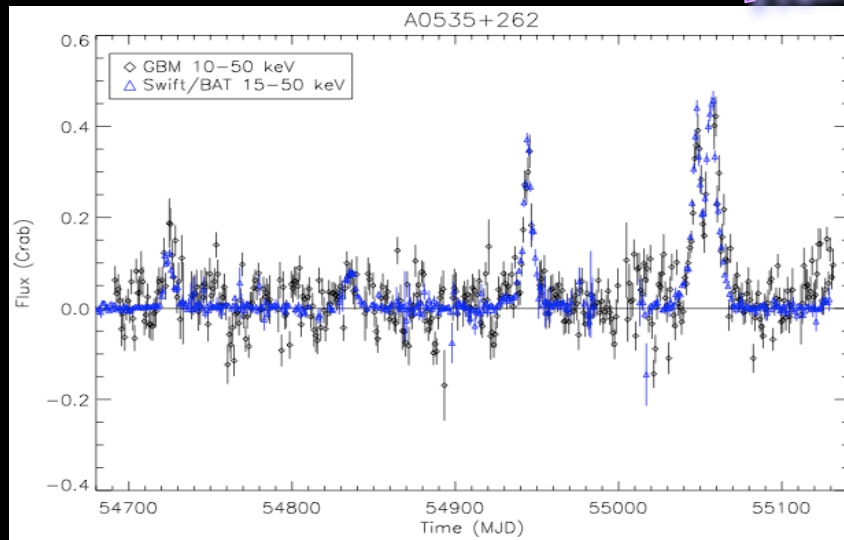
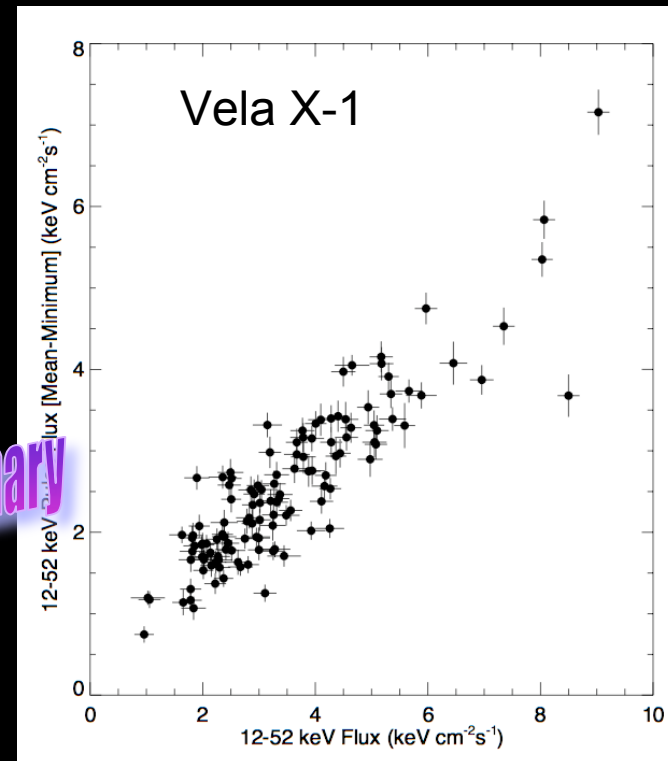
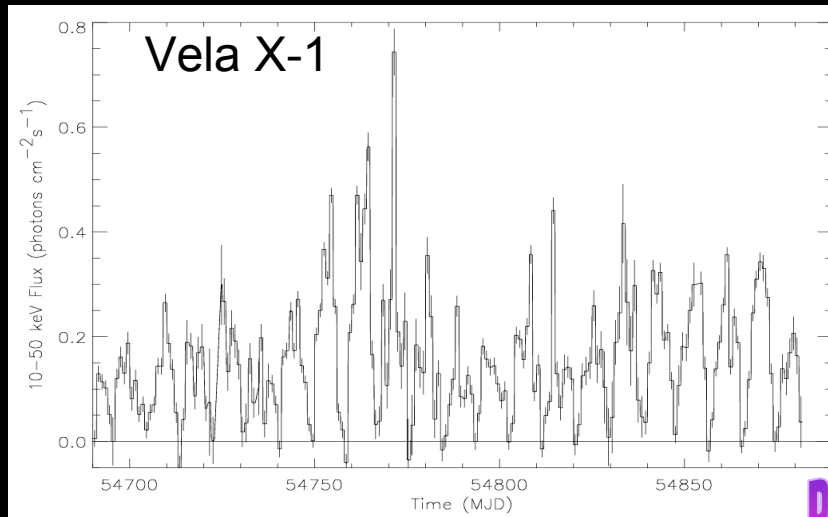


Preliminary



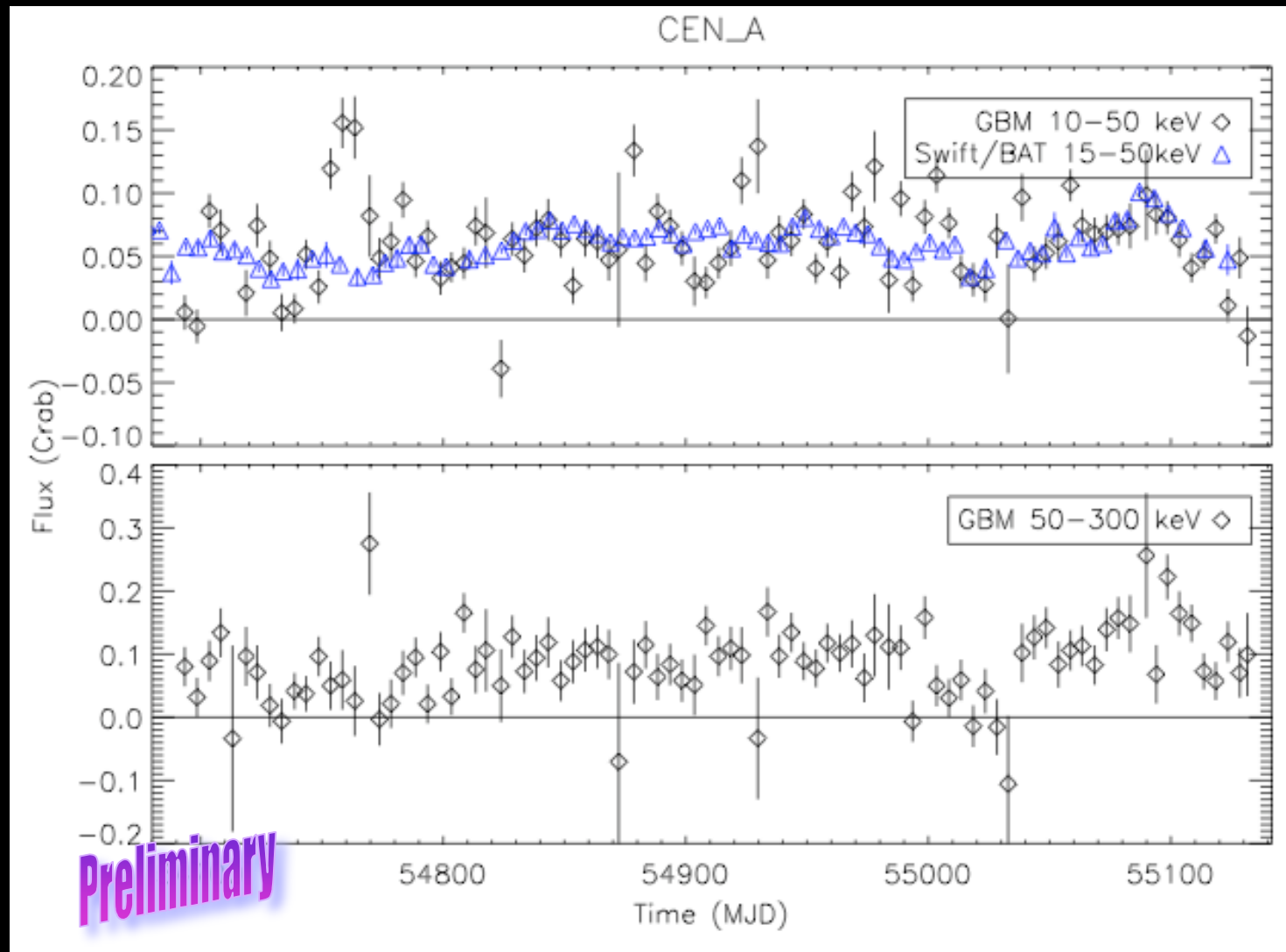
See Poster P5.195 Cherry et al. for more detections above 100 keV!

Accreting Pulsars with GBM Earth Occultation



Preliminary

AGNs with GBM Earth Occultation



Summary

- GBM Earth occultation technique is working nicely
- Agreement with Swift/BAT is good
- Source monitoring is underway for 47 sources
- 7 sources detected in the 100-300 keV band (Poster P5.195 Cherry et al.)
- Watch our website for new light curves
- <http://gammaray.nsstc.nasa.gov/gbm/science/occultation/>