#### Vela X-1



- Data from long Vela field observations in revolutions 81ff.
- Pulse phase resolved spectra for JEM-X and ISGRI via user GTIs (Barycenter & orbit corrected).
- Finely resolved spectra summed into six broad phase intervals. Remaining period drift (imperfect orbital ephemeris) corrected manually in choice of summed spectra.
- Spectra fitted systematically with consistent model.
- Paper being written, expect to submit in October.

## Vela X-1







Cyclotron lines

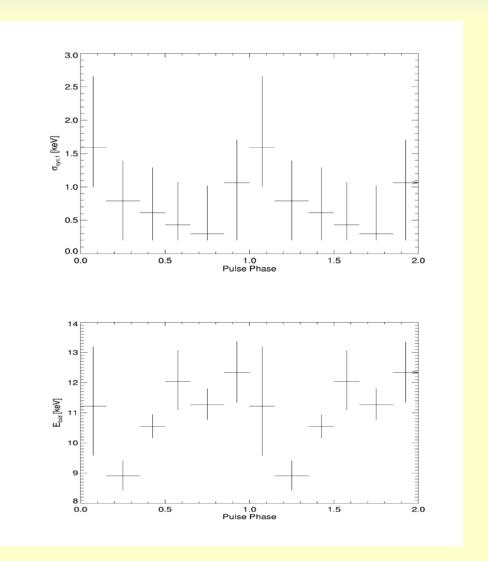
Peter Kretschmar, Integral European Space Astronomy Center Page 2

### Vela X-1

 Variations in spectral parameters both for continuum and lines.







#### A0535+26

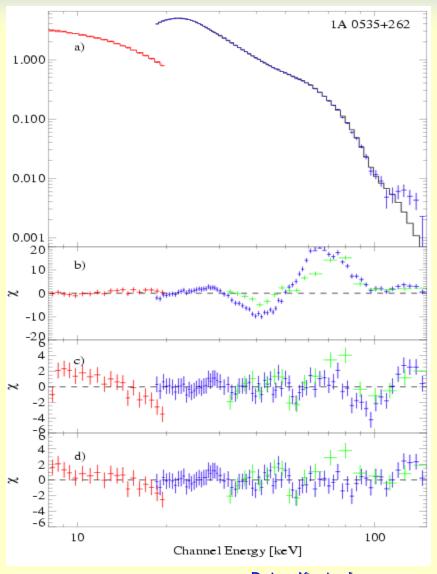


- (1A 0535+262), famous Be/X-ray binary
- Detected in 1976 in giant outburst (several Crab), showed normal and giant outbursts.
- Quiescent since giant outburst in 1994 (and two weaker following events)
  - ⇒ 10 years of repeated accepted TOO proposals without observations.
- Giant outburst in May/June behind the Sun!
- Normal outburst starting end August
   ⇒ triggered Integral & RXTE TOO obs.

#### A0535+26

- Joint fit of Integral spectra clearly shows line feature at <50 keV and weak feature ~100 keV.
- Results confirmed by analysis of RXTE spectra – also by independent group (Finger et al.).

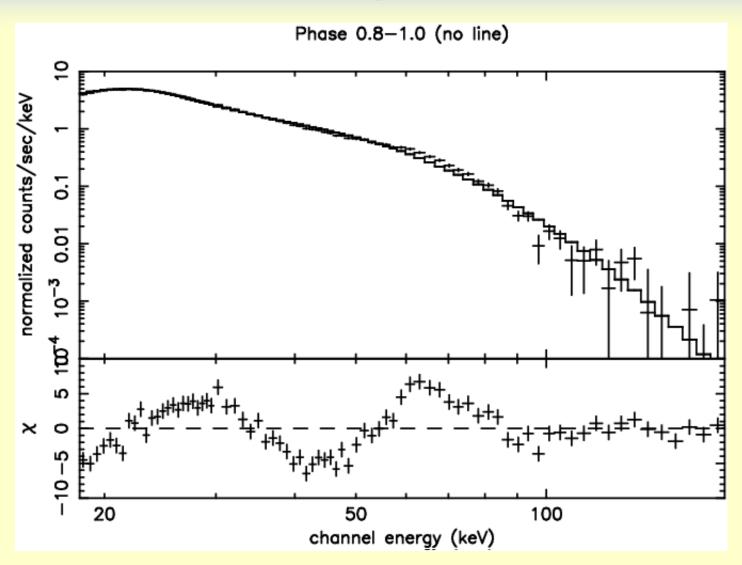








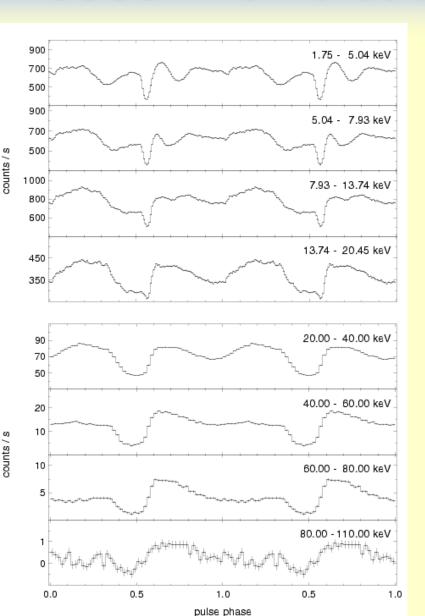
# A0535+26, ISGRI Spectra



### A0535+26 Pulsations







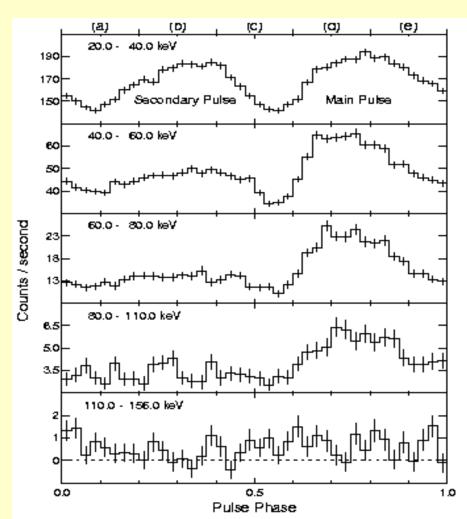
- Current observations show pulse profile
   <15 keV for first time since 1976 and full range 2-100 keV for first time ever.
- Profile more complex at low energies (frequent pattern).

# A0535+26 Pulsations

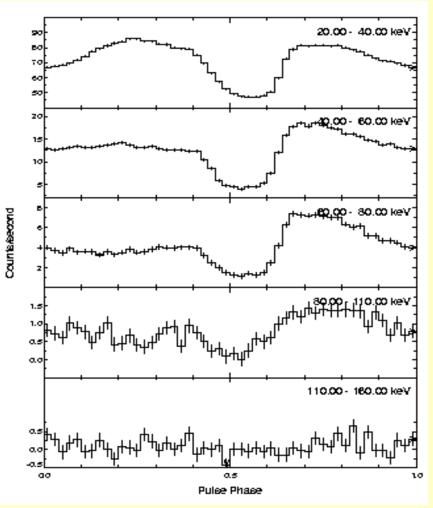








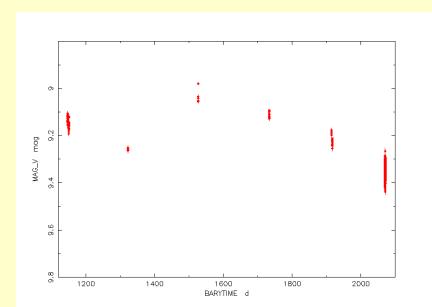
#### 2005 - ISGRI

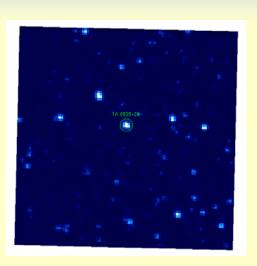


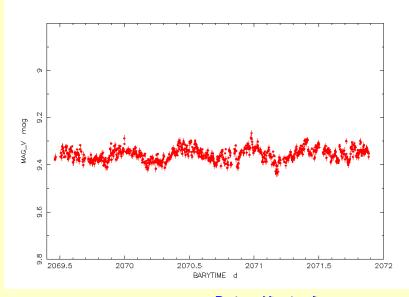
# A0535+26, OMC data



- Triggered IBAS ⇒
   'real' OMC image
- Long-term lightcurve from Crab observation
- Short term modulation of Be companion

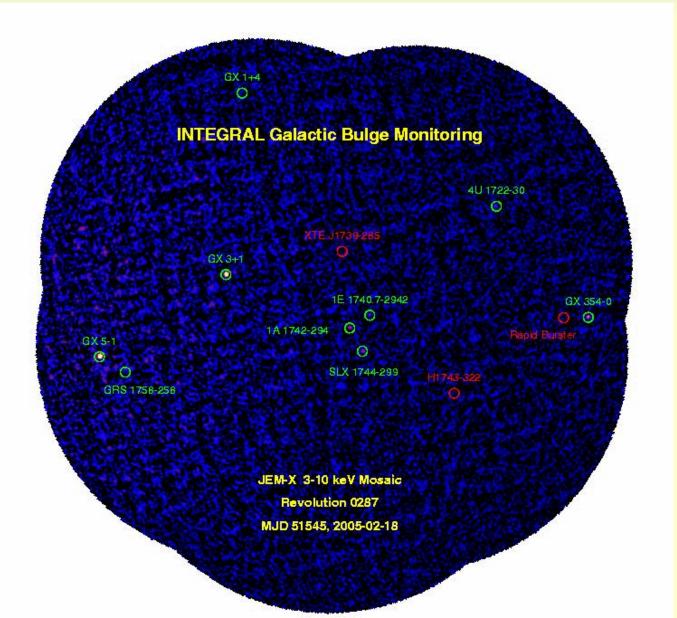






# **Gal. Bulge Monitoring**



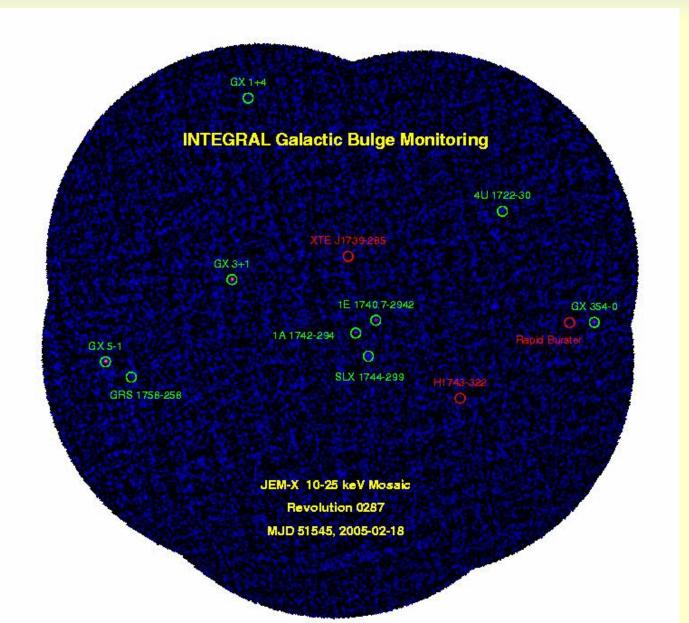


Mosaics
 built with
 OSA 5
 from all
 available
 Gal. Bulge
 data

# **Gal. Bulge Monitoring**







# BQ Cam (V0332+53)



 Results obtained by Silvia Martínez, to be published soon.

