

IGR J16318-484

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K. Pottschmidt, M. Hanke, F. Fuerst,
V. Gringberg, M. A. Nowak, R. Walter,
J. A. Tomsick*

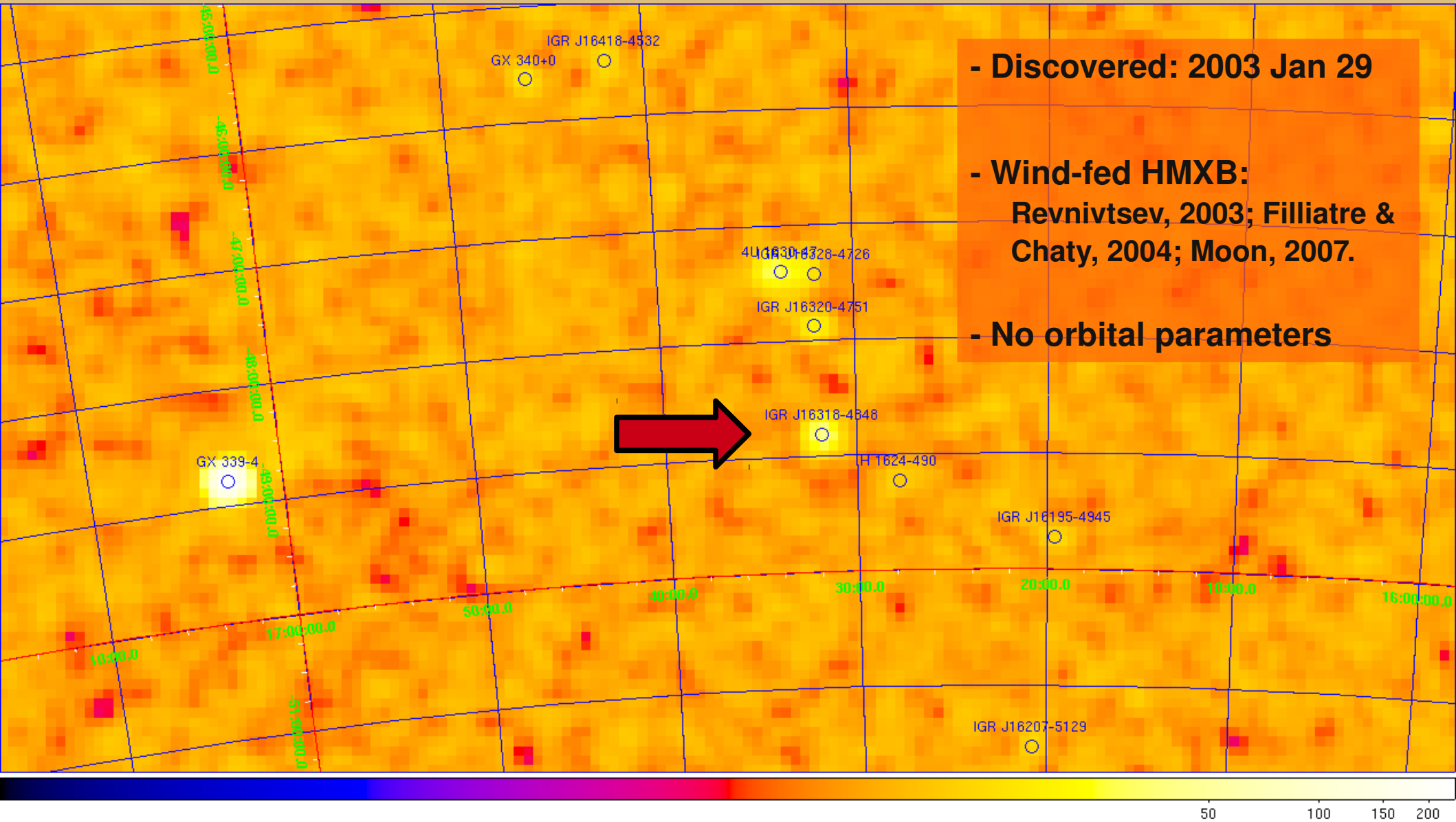


ERLANGEN CENTRE
FOR ASTROPARTICLE
PHYSICS

**Friedrich-Alexander-Universität
Erlangen-Nürnberg**



IGR J16318-4848

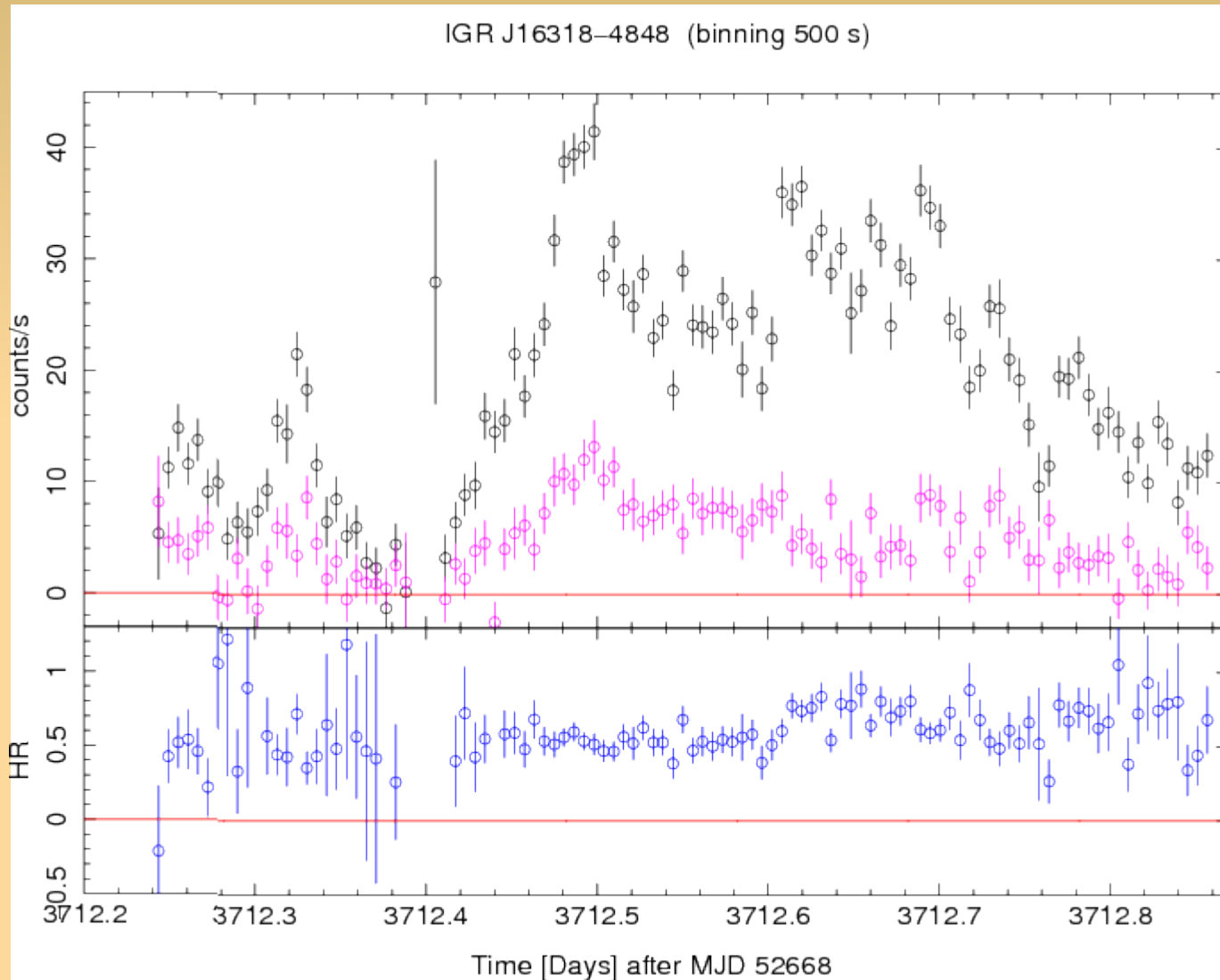


- Discovered: 2003 Jan 29

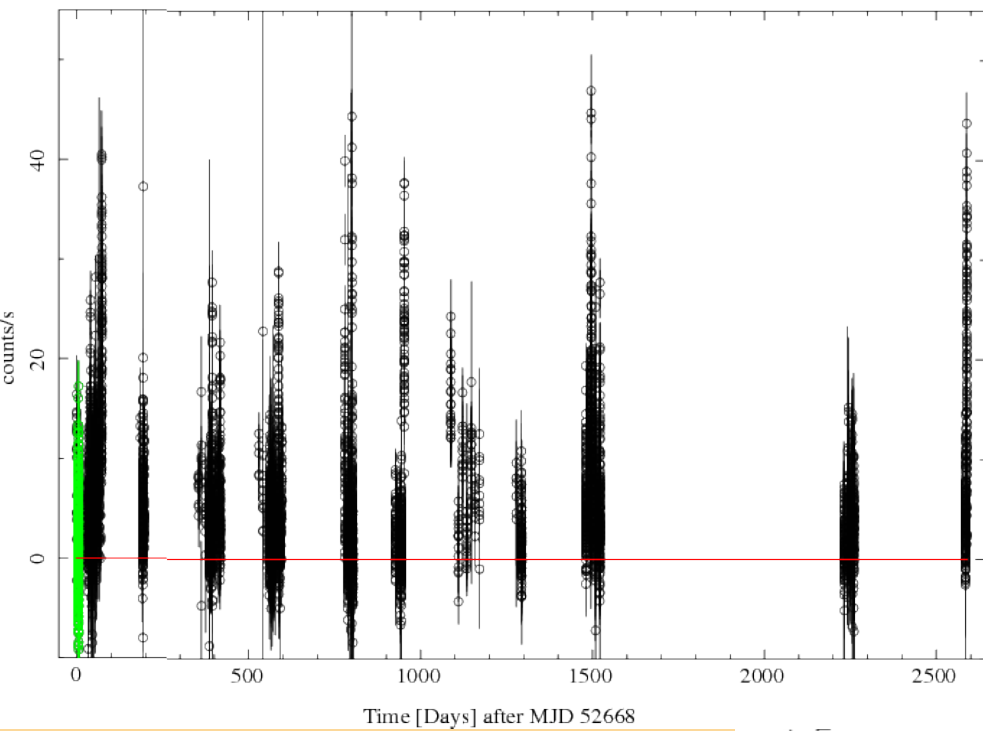
- Wind-fed HMXB:
Revnivtsev, 2003; Filliatre &
Chaty, 2004; Moon, 2007.

- No orbital parameters

Flare on 1st March 2010



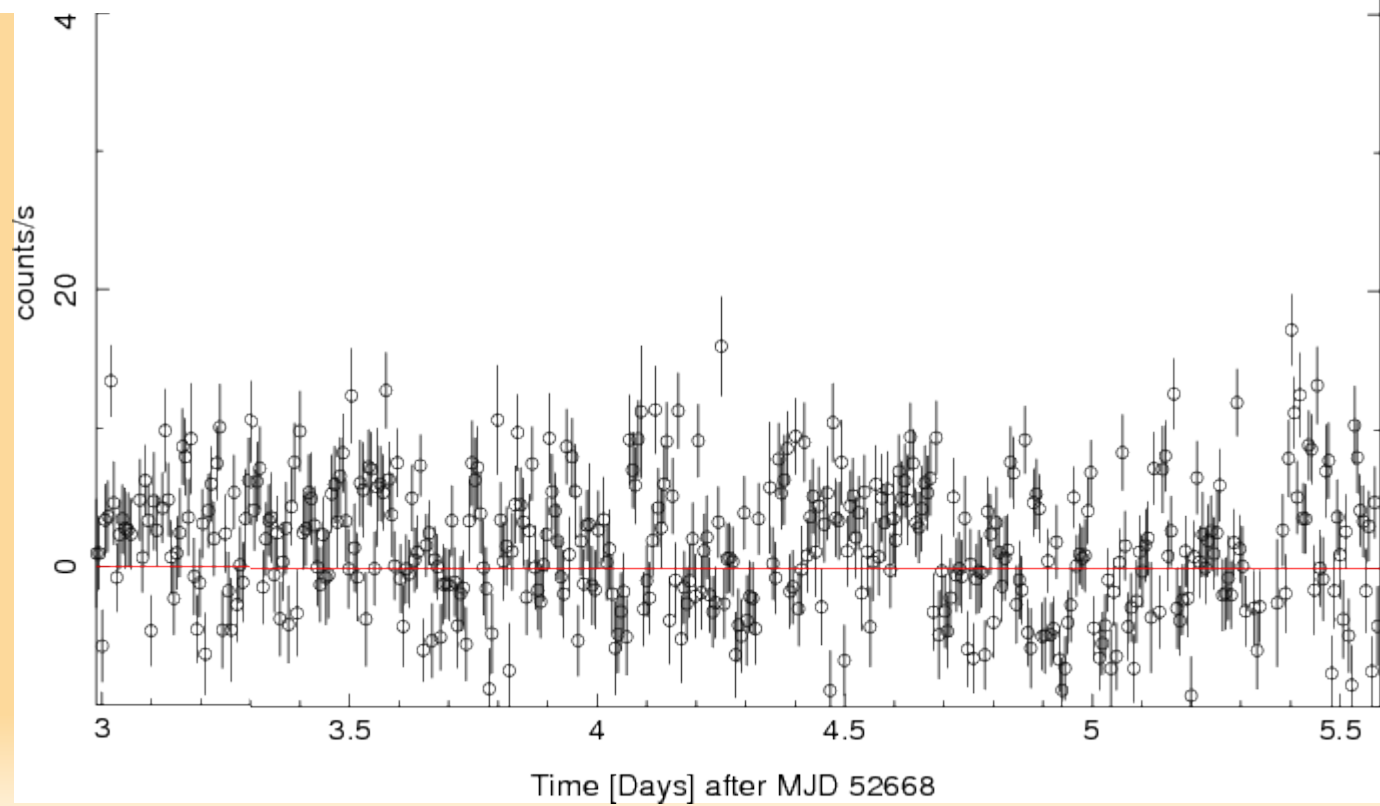
IGR J16318-4848 (binning 500 s)



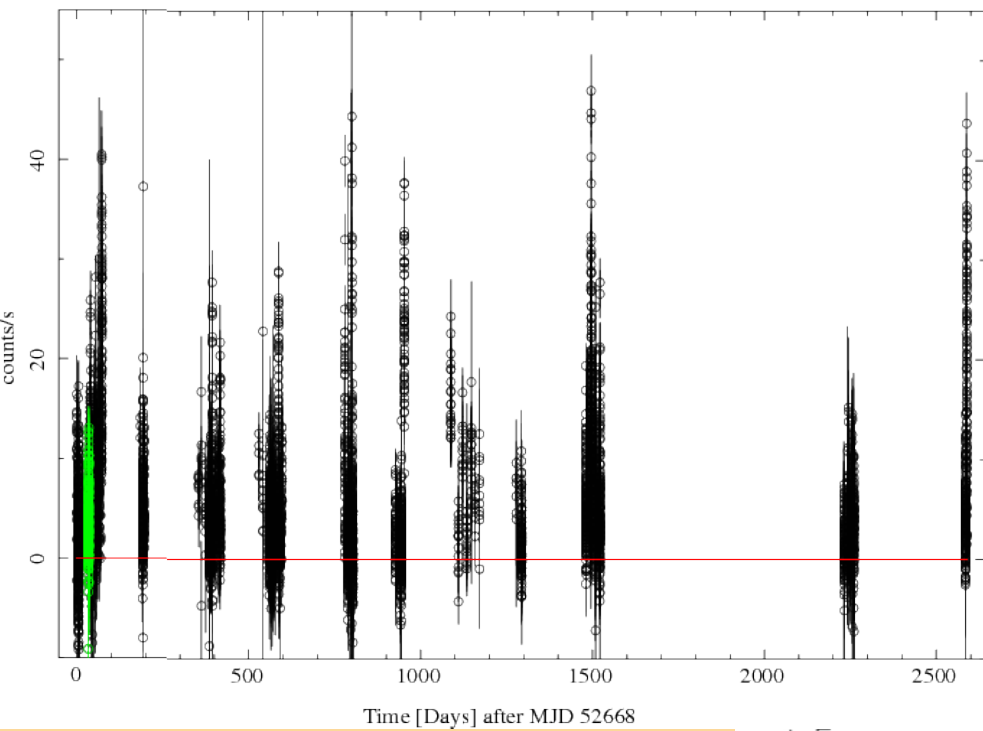
IBIS-ISGRI

(20-40 KeV)

IGR J16318-4848 (binning 500 s)

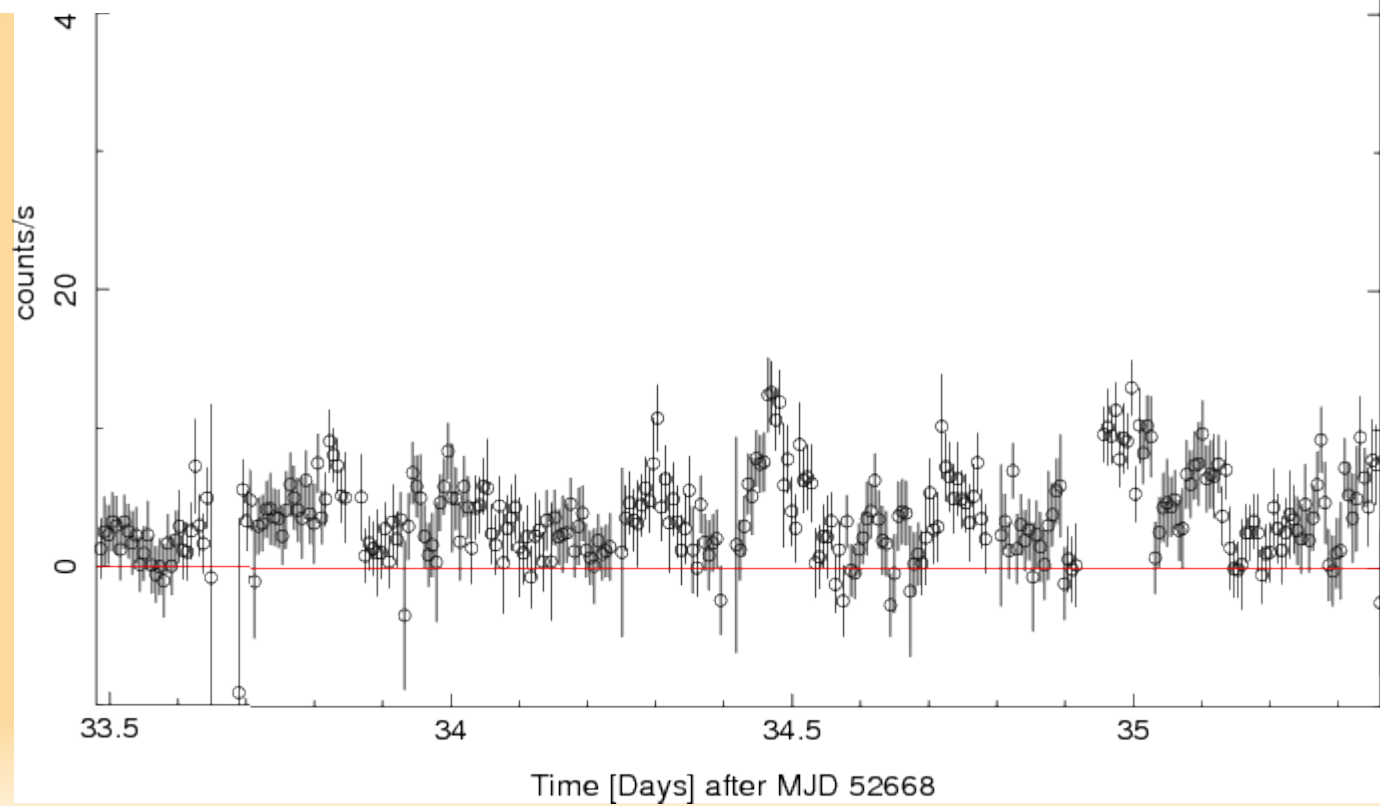


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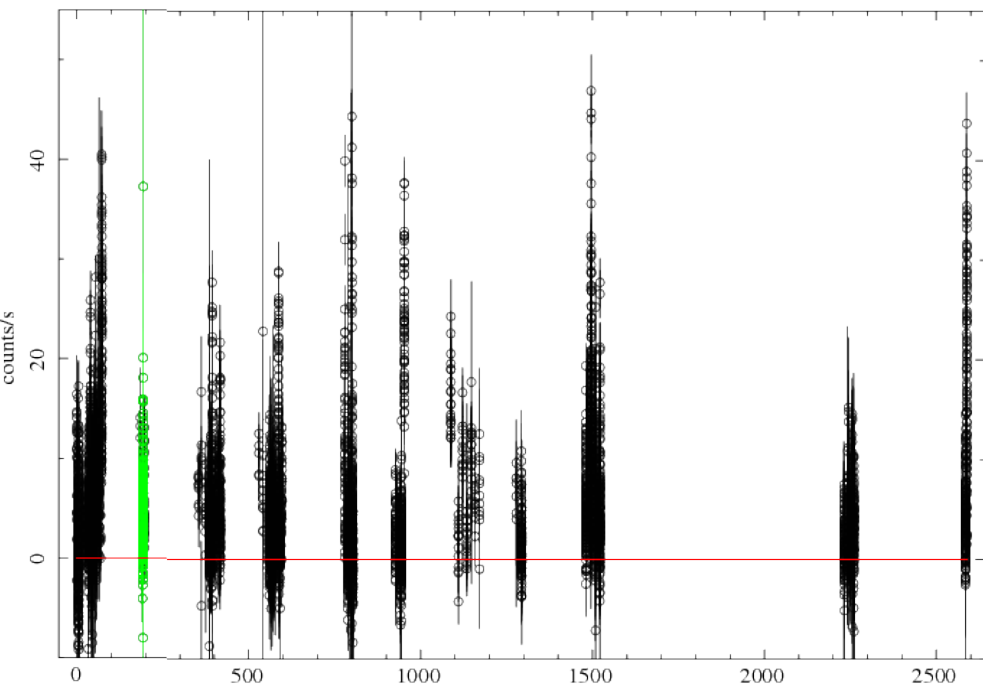


IBIS-ISGRI (20-40 KeV)

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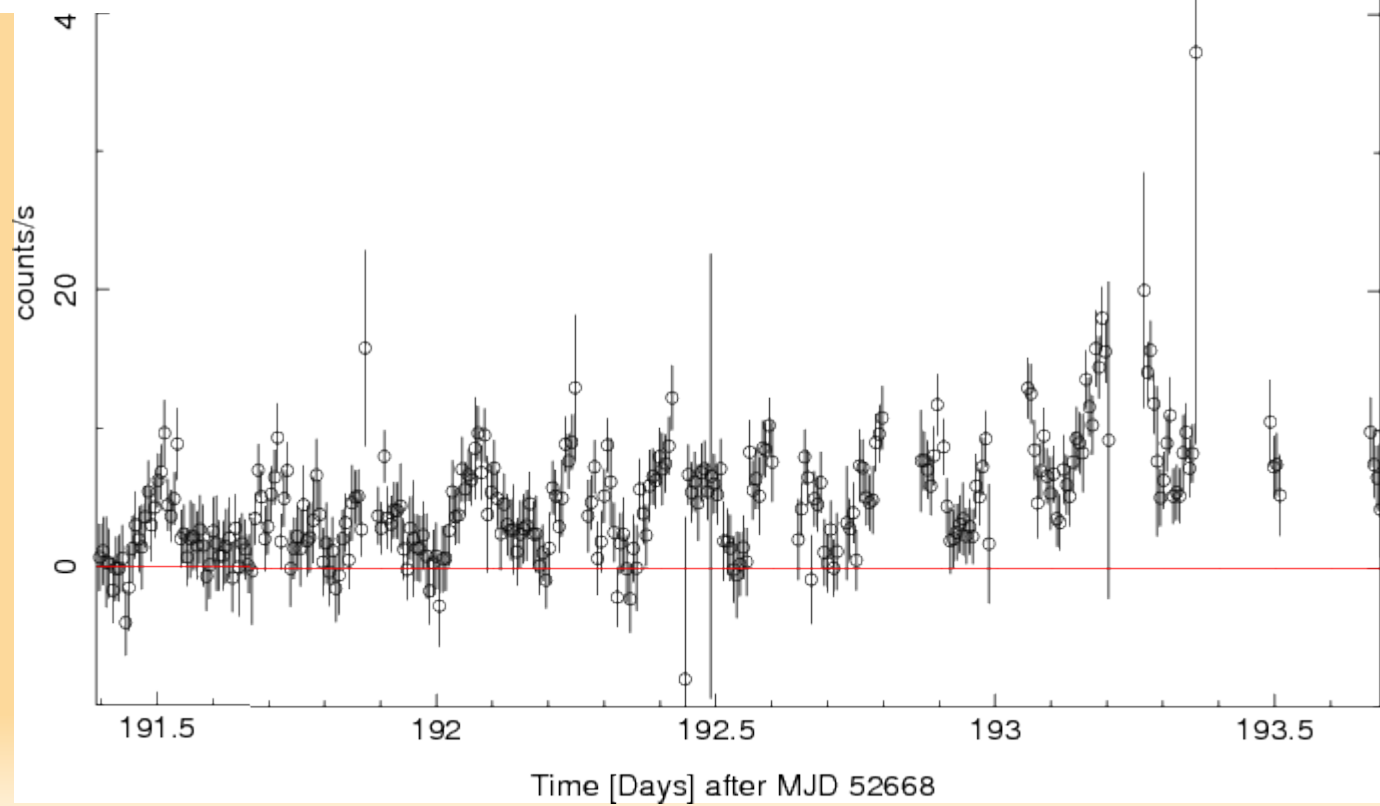
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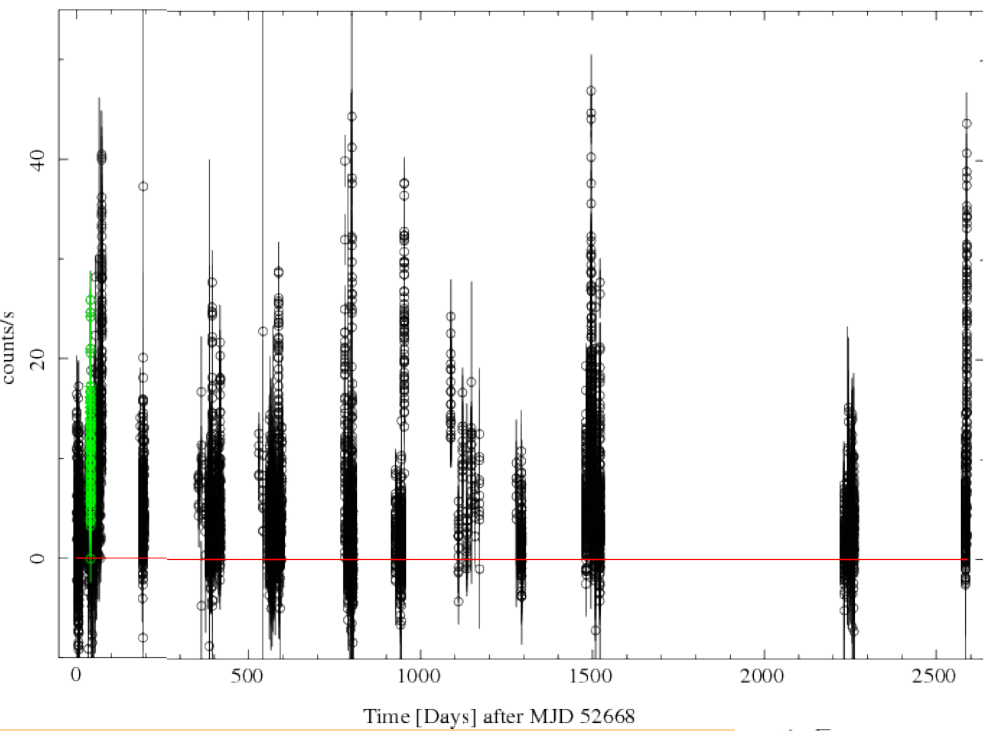
Time [Days] after MJD 52668

IBIS-ISGRI (20-40 KeV)

IGR J16318-4848 (binning 500 s)



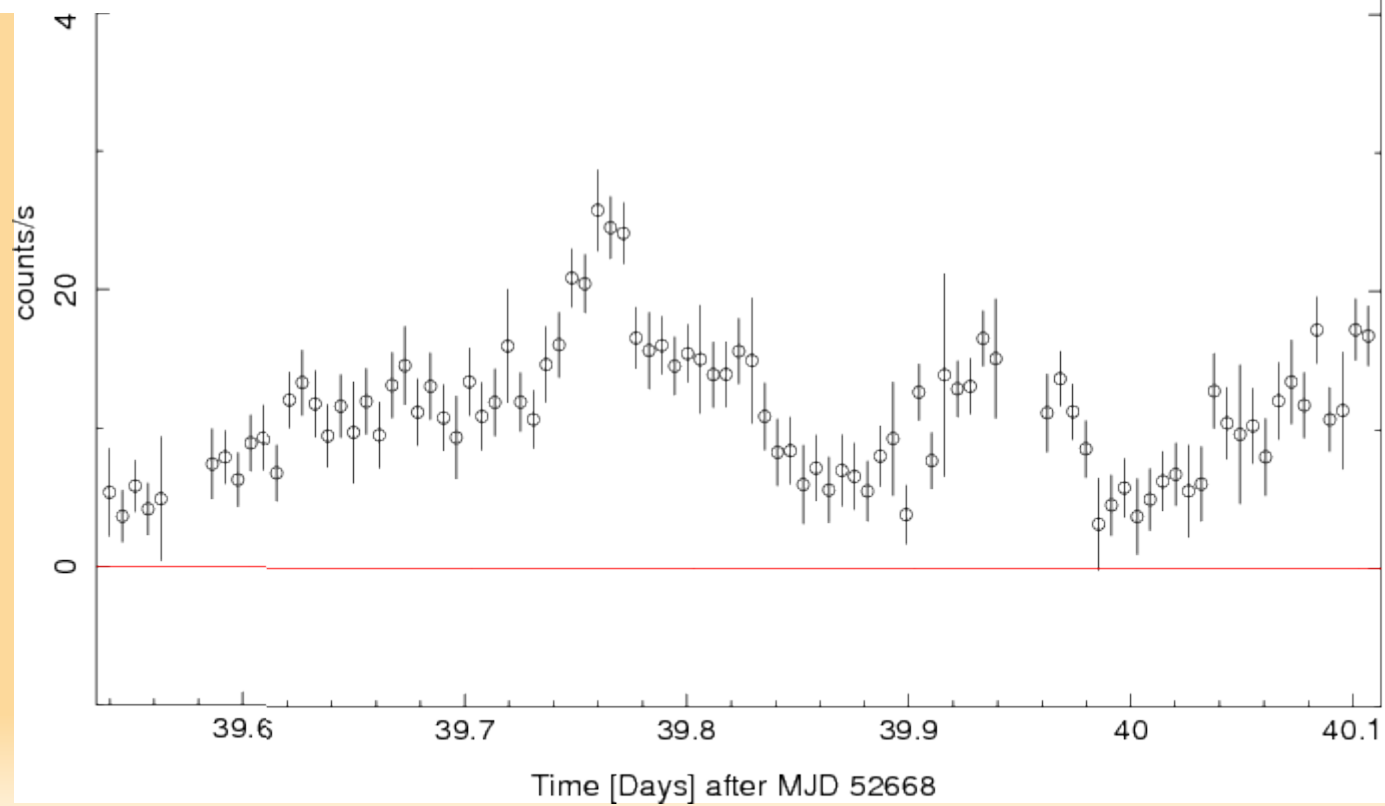
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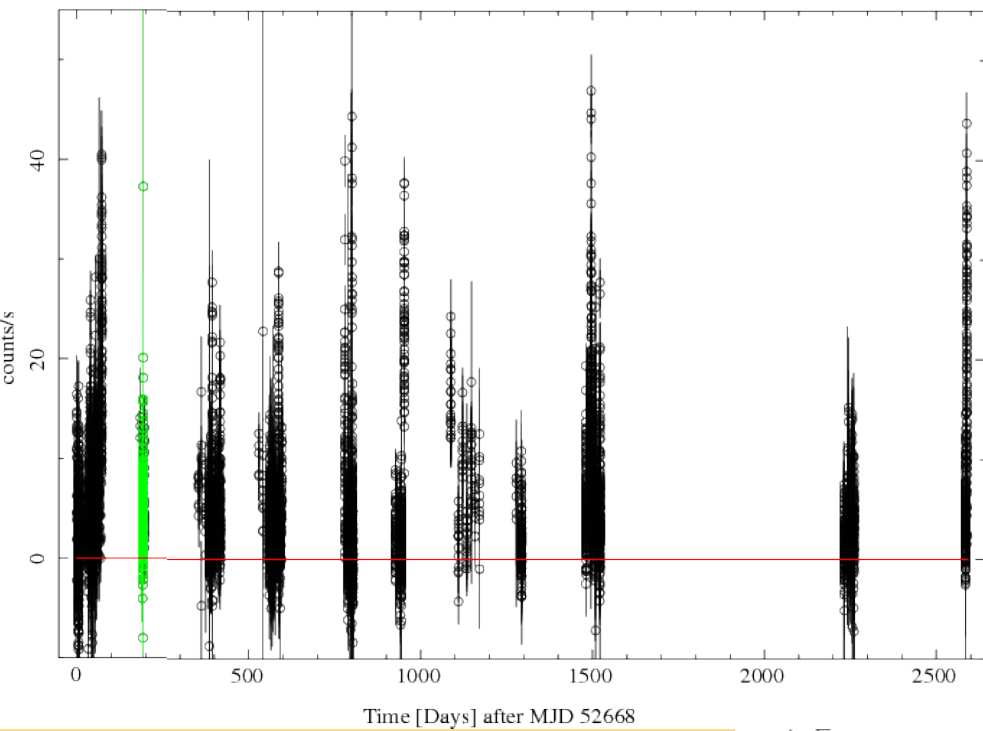
IBIS-ISGRI

(20-40 KeV)

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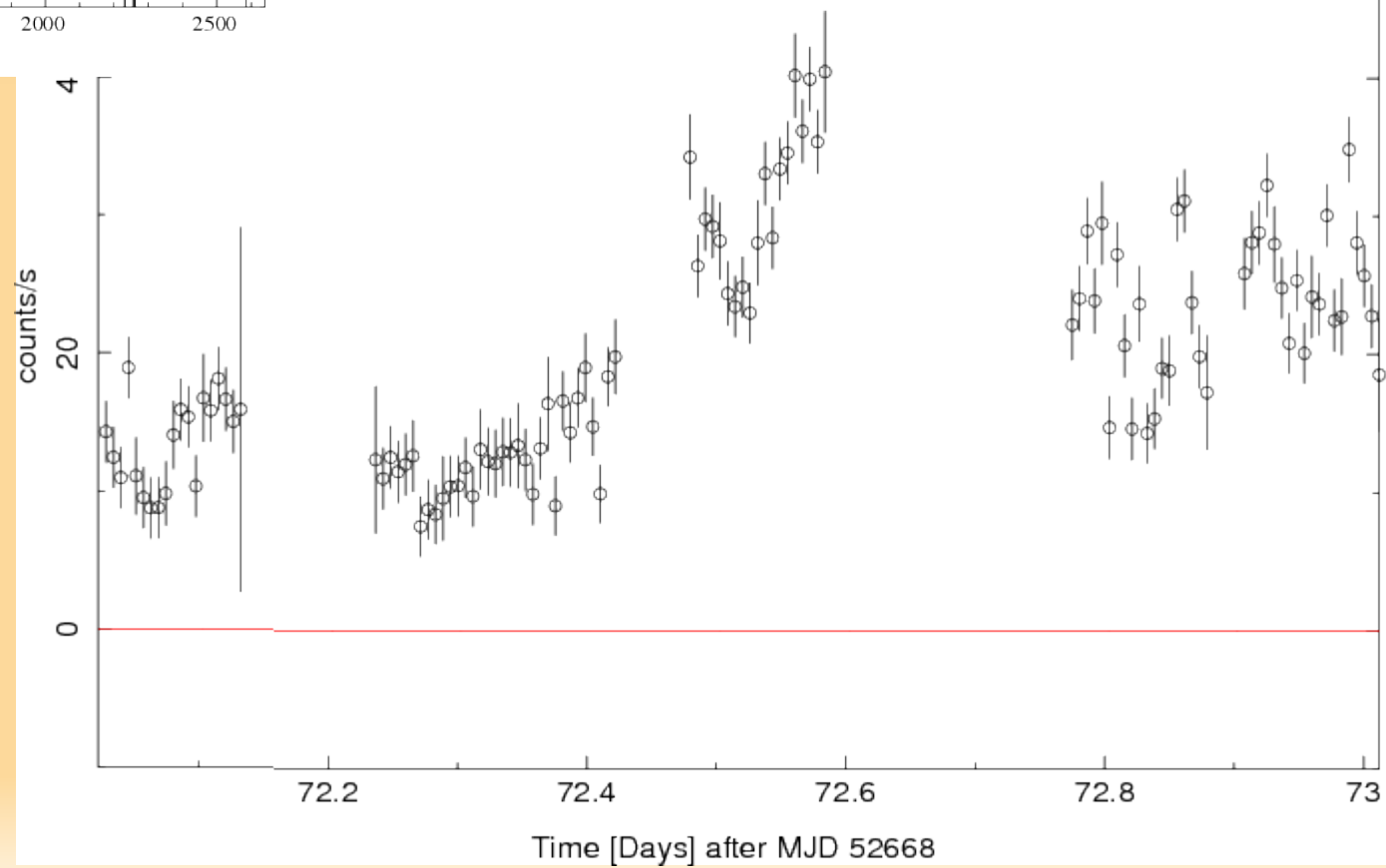


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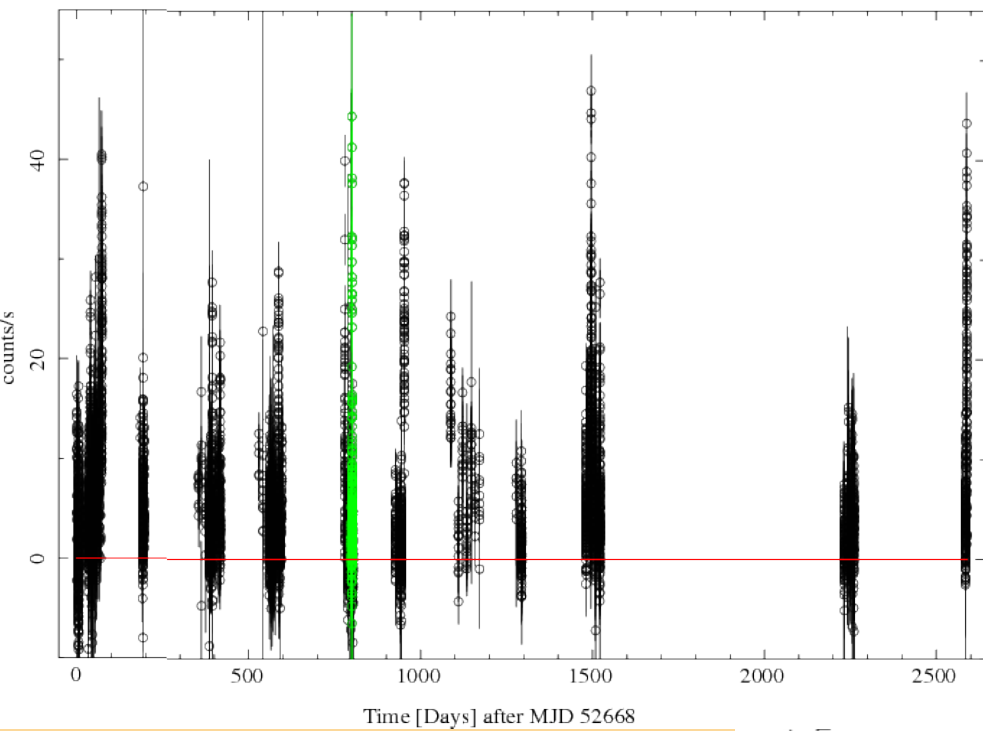


IBIS-ISGRI (20-40 KeV)

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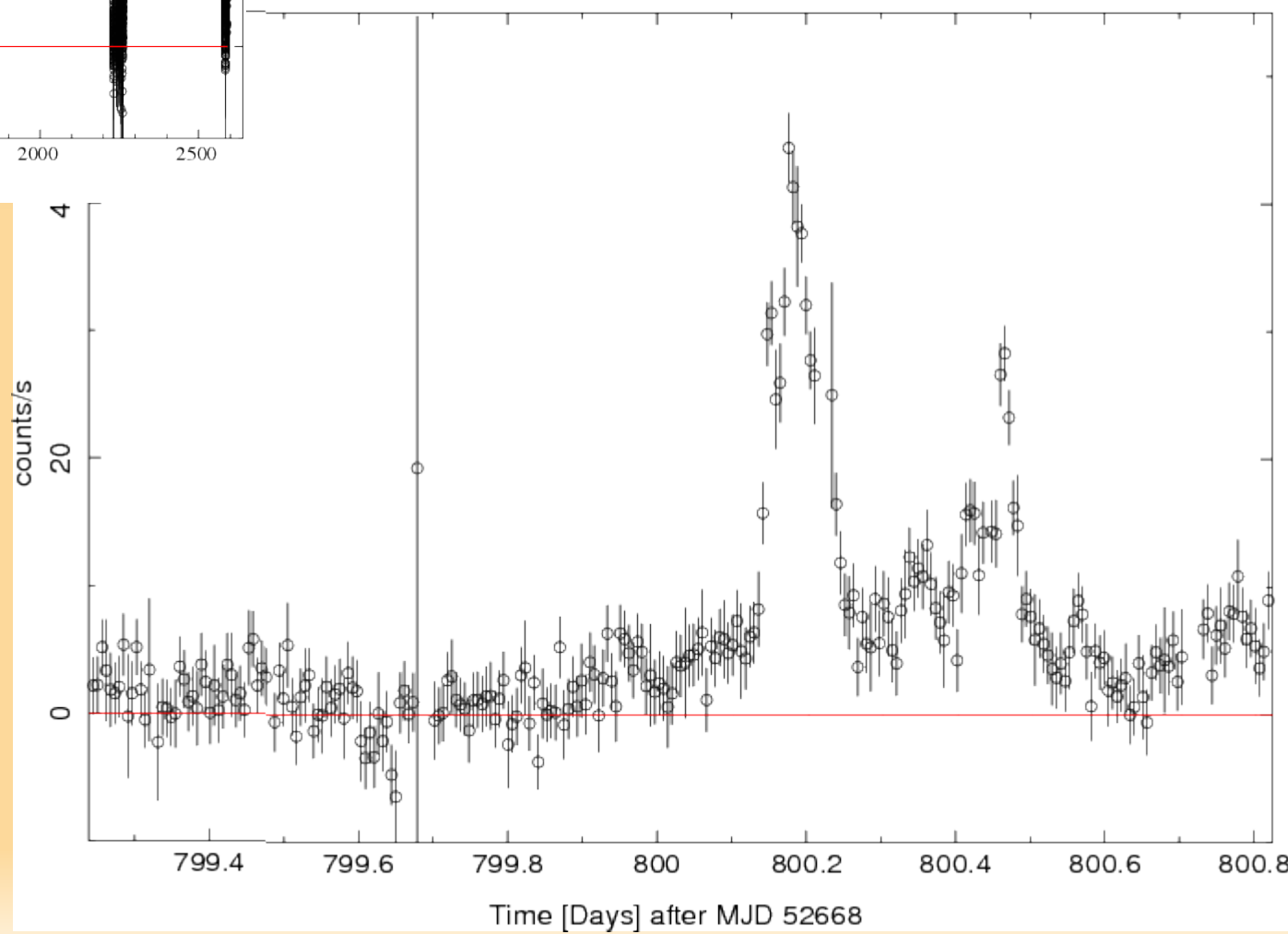


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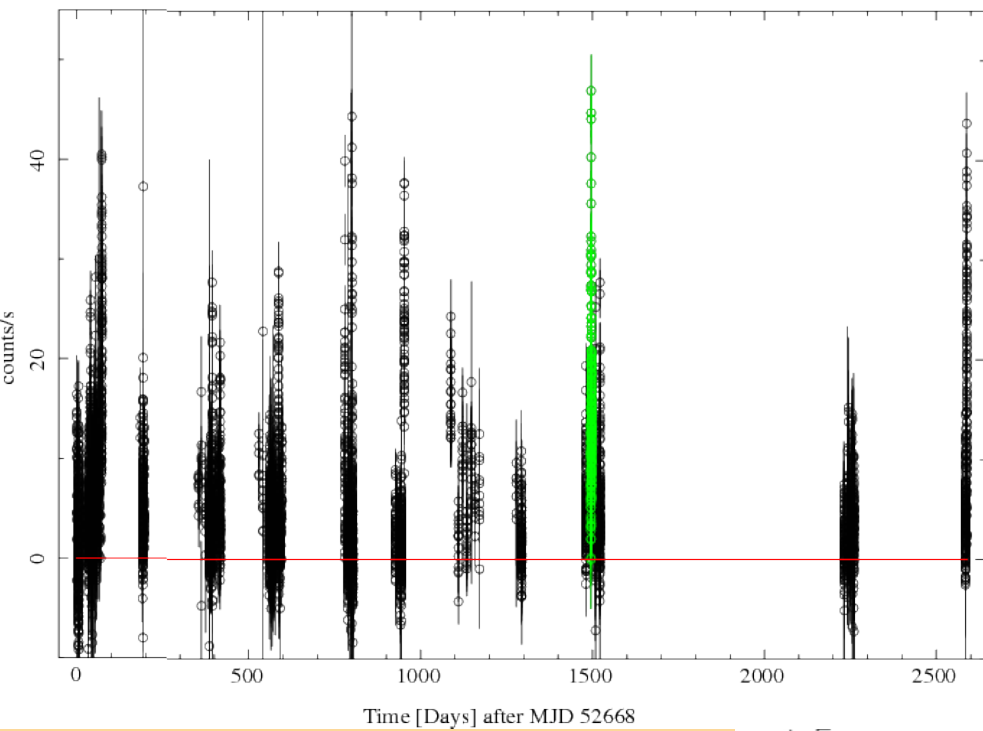


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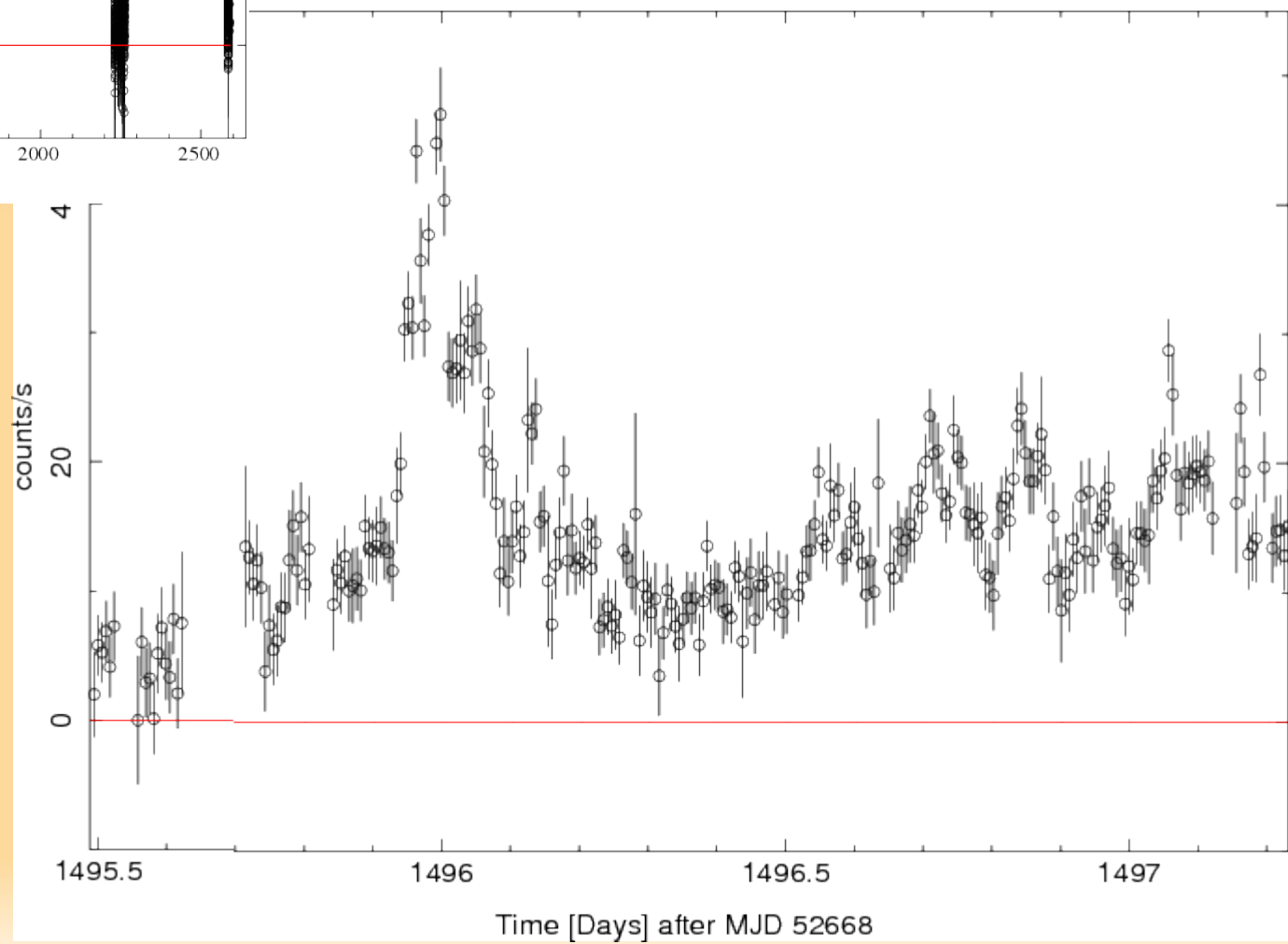


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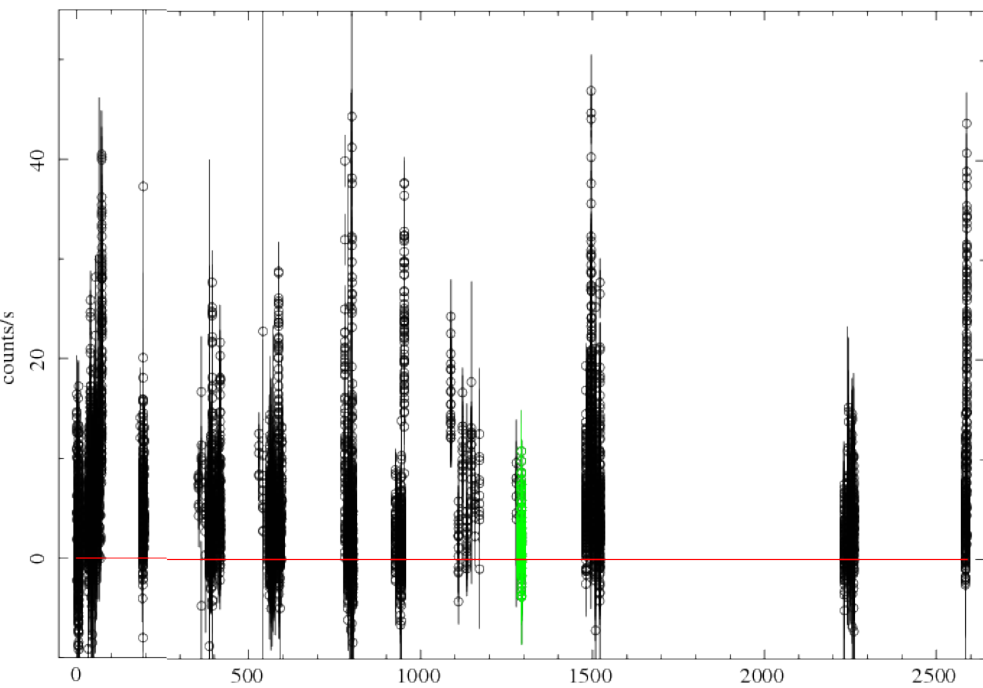


IBIS-ISGRI (20-40 KeV)

IGR J16318-4848 (binning 500 s)



IGR J16318-4848 (binning 500 s)



Time [Days] after MJD 52668

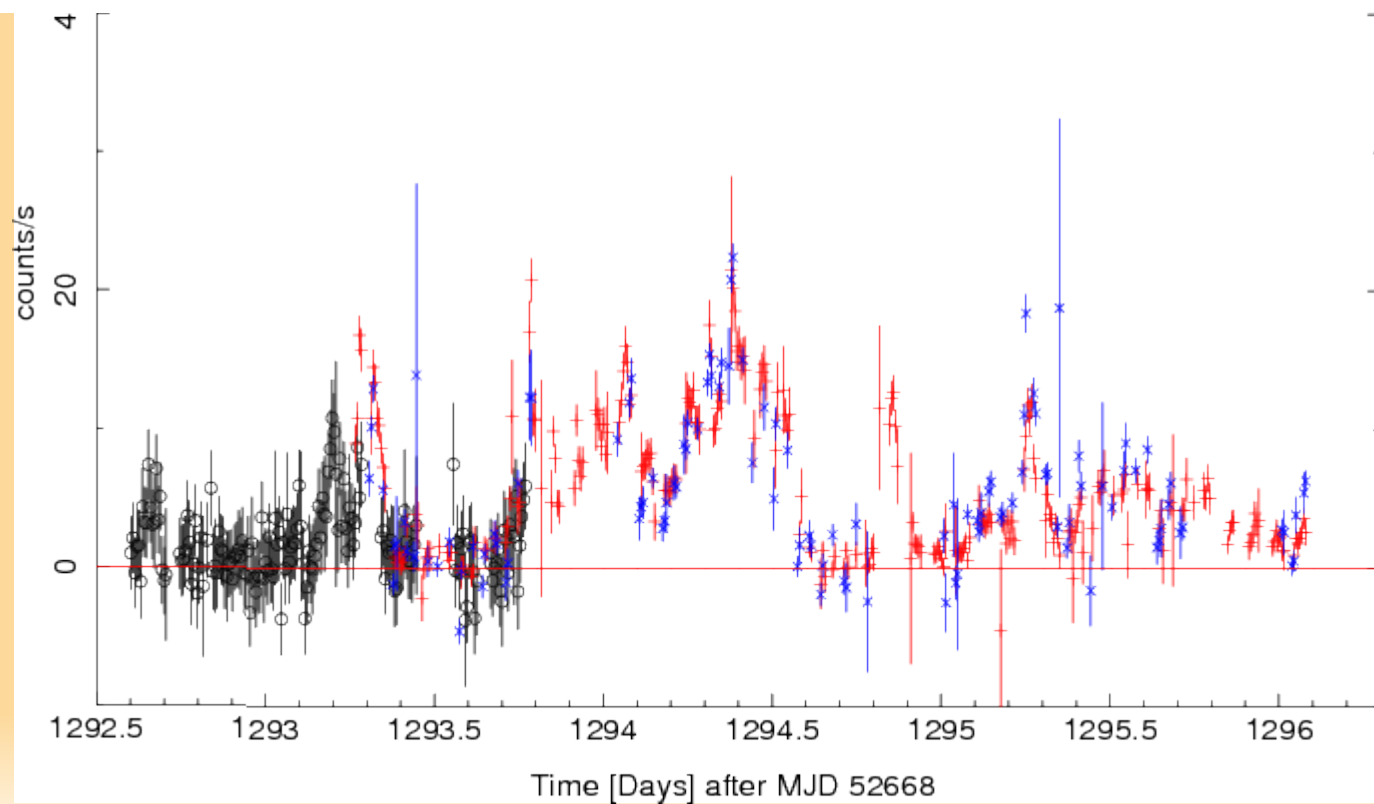
IBIS-ISGRI (20-40 KeV)

IGR J16318-4848 (binning 500 s)

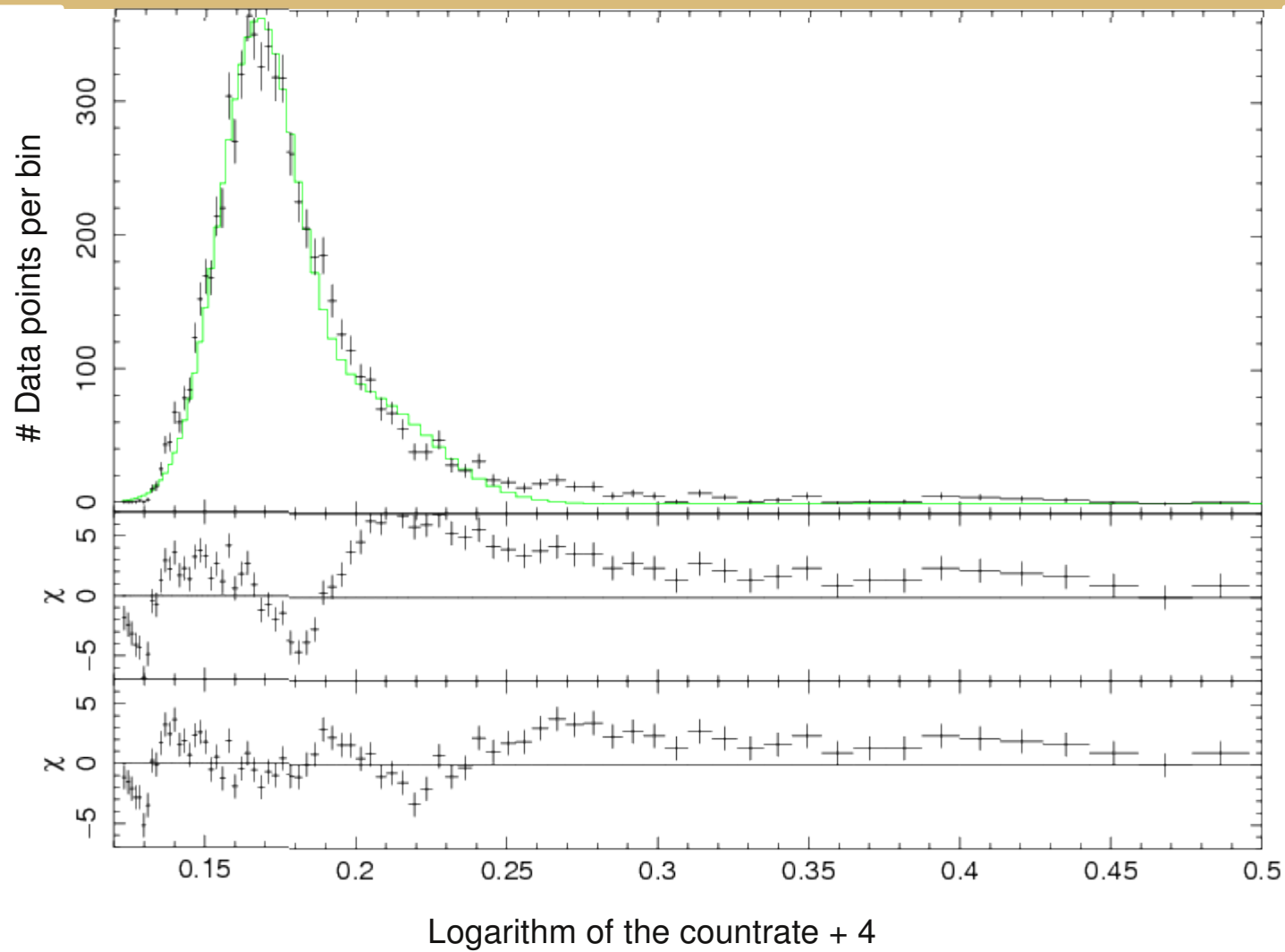
IBIS-ISGRI (20-40 KeV)

XIS (5-12 KeV) *50

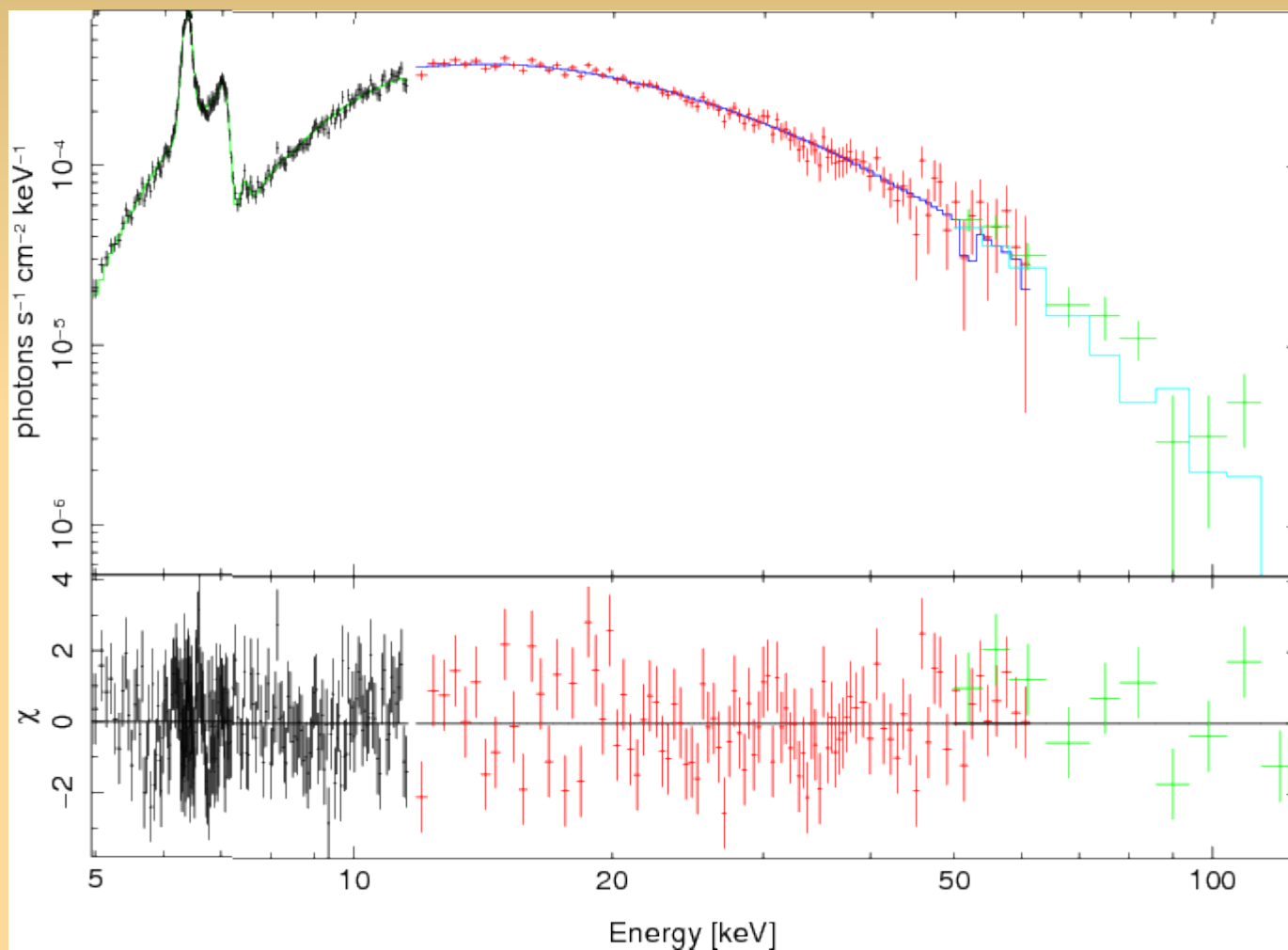
PIN (12-60 KeV) *10



Log-normal distribution



Broadband spectrum

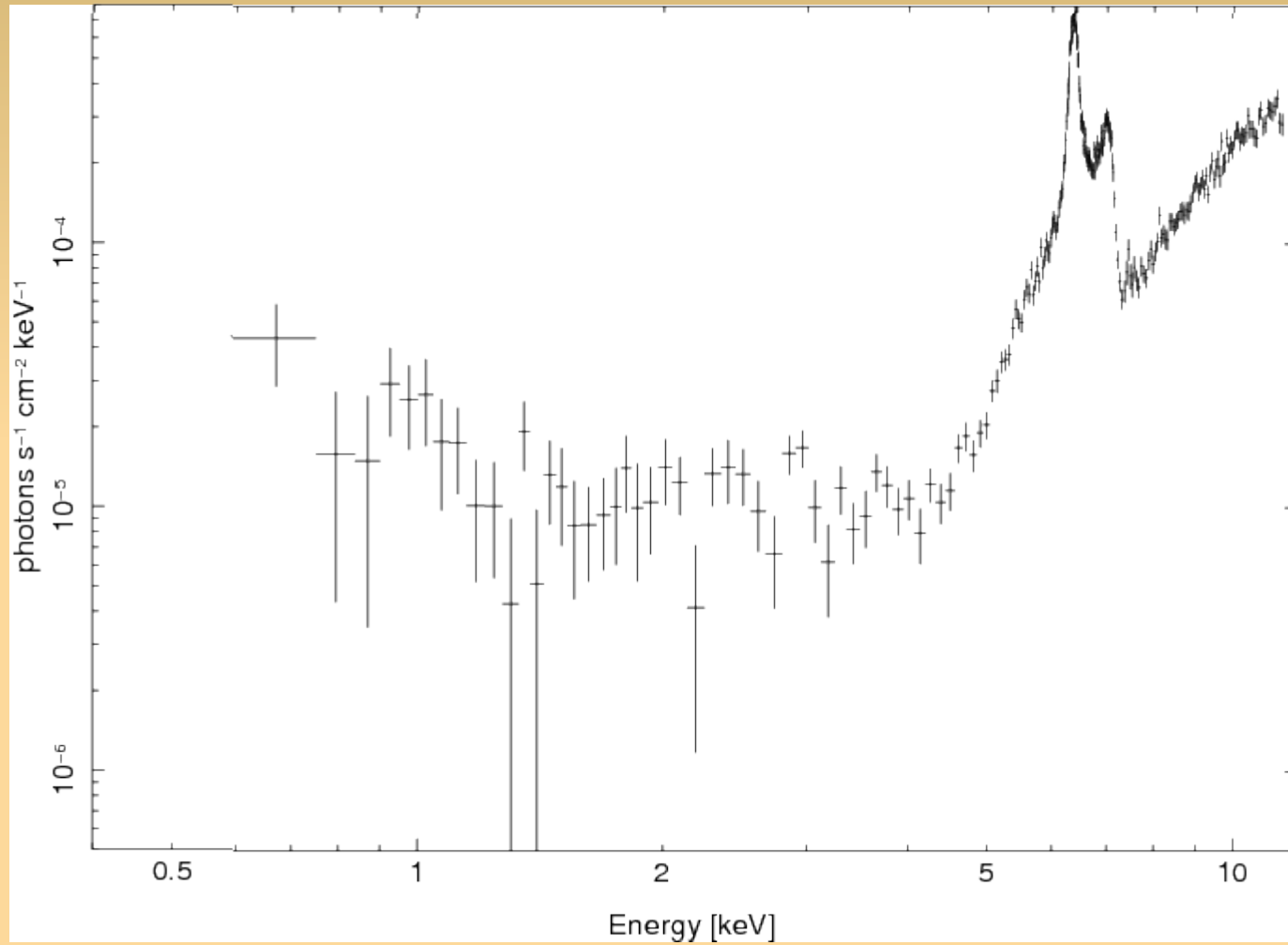


$$N_{\text{H}} = 195(3) \, 10^{22} \, \text{cm}^{-2}$$

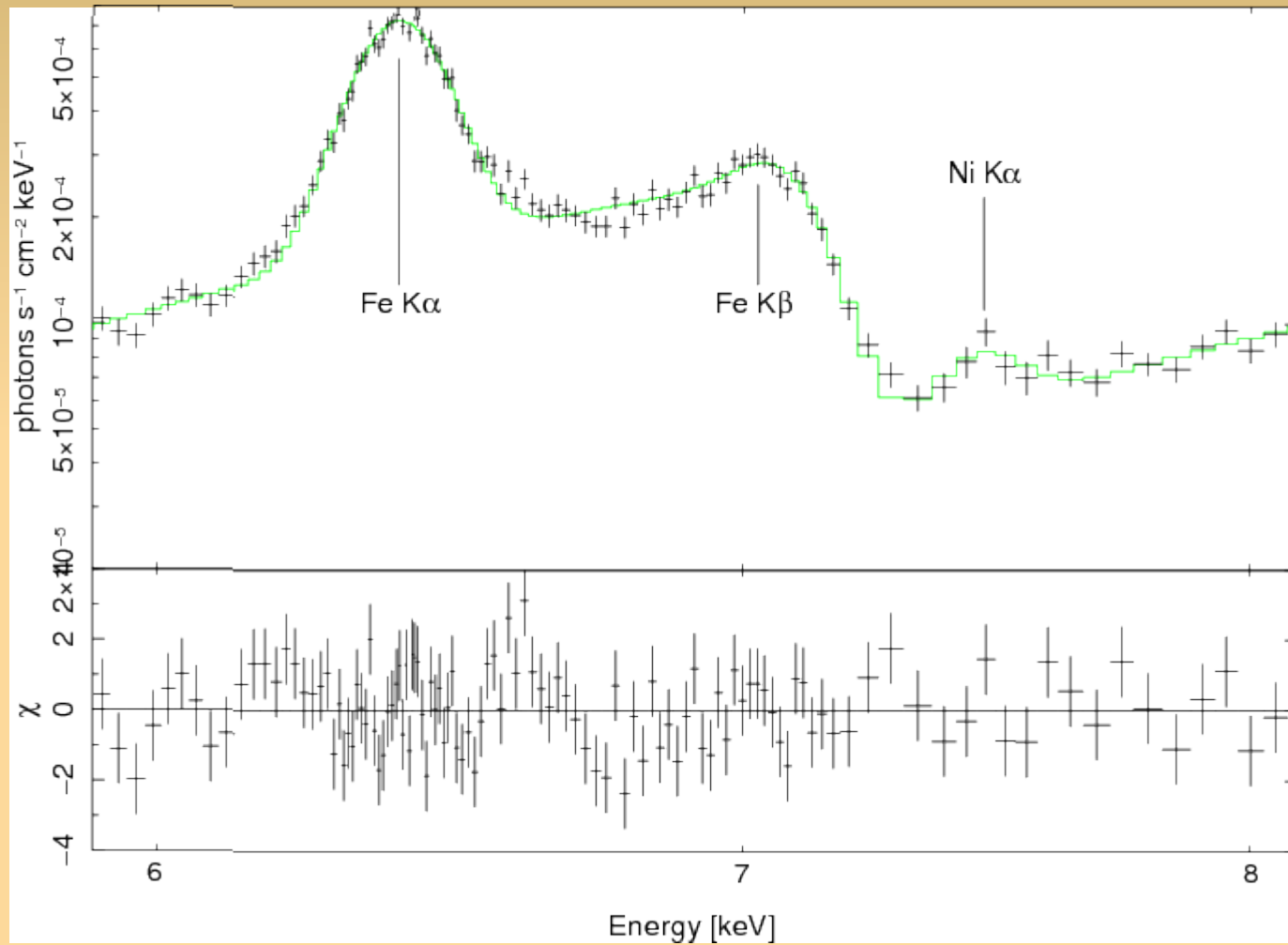
$$\Gamma = 0.68(4)$$

$$E_{\text{cut}} = 20.5(6) \, \text{keV}$$

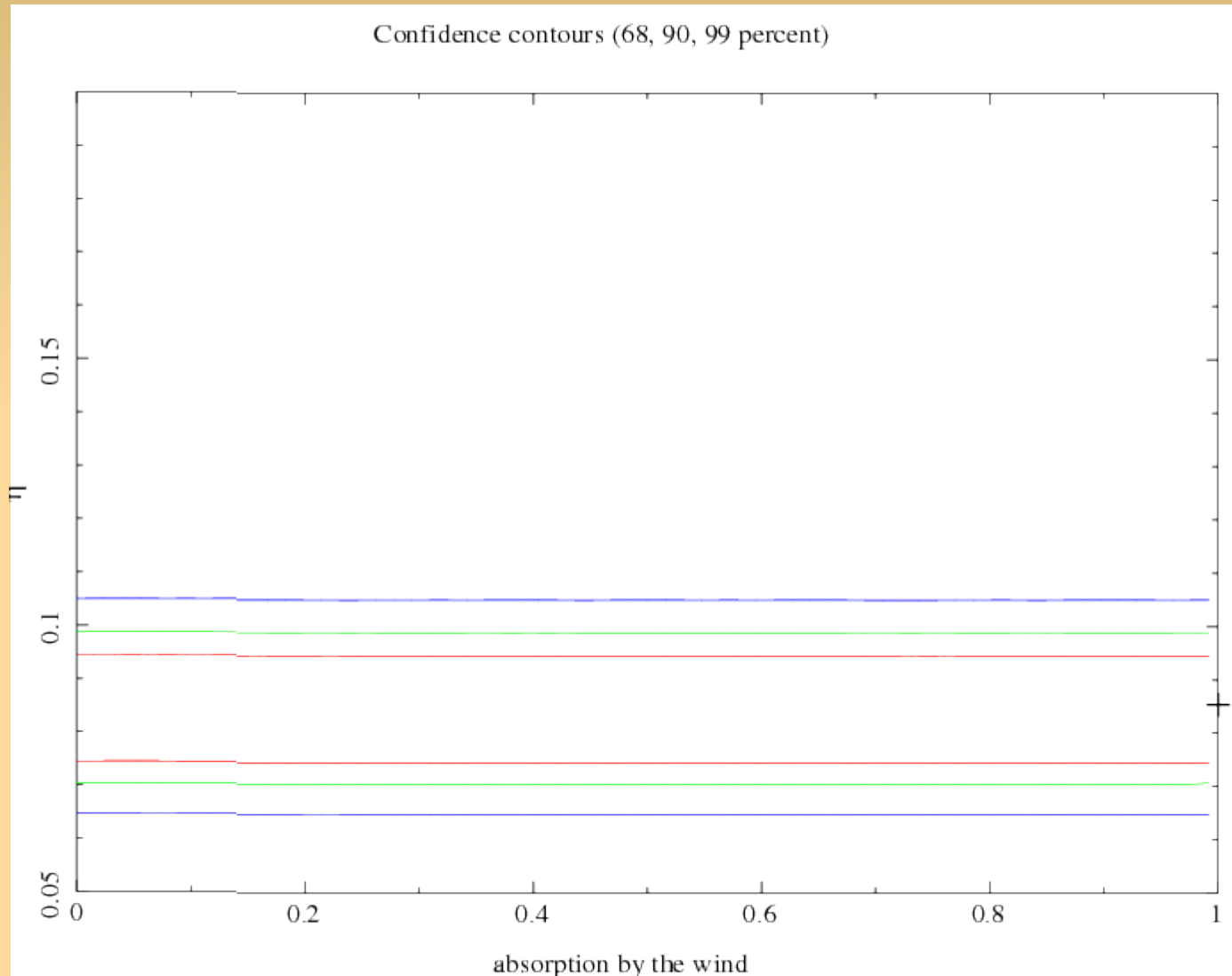
Soft excess



Fluorescence lines

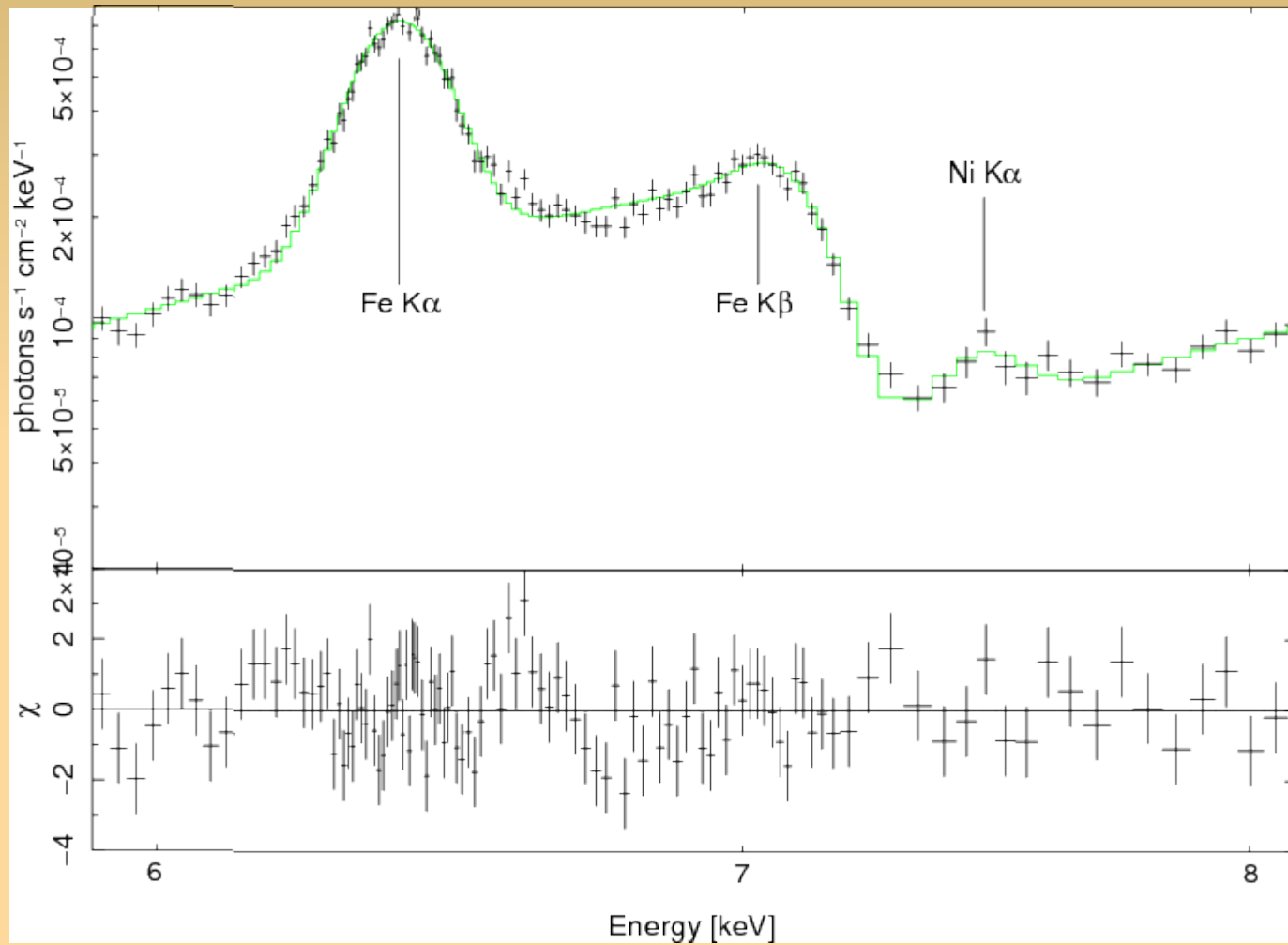


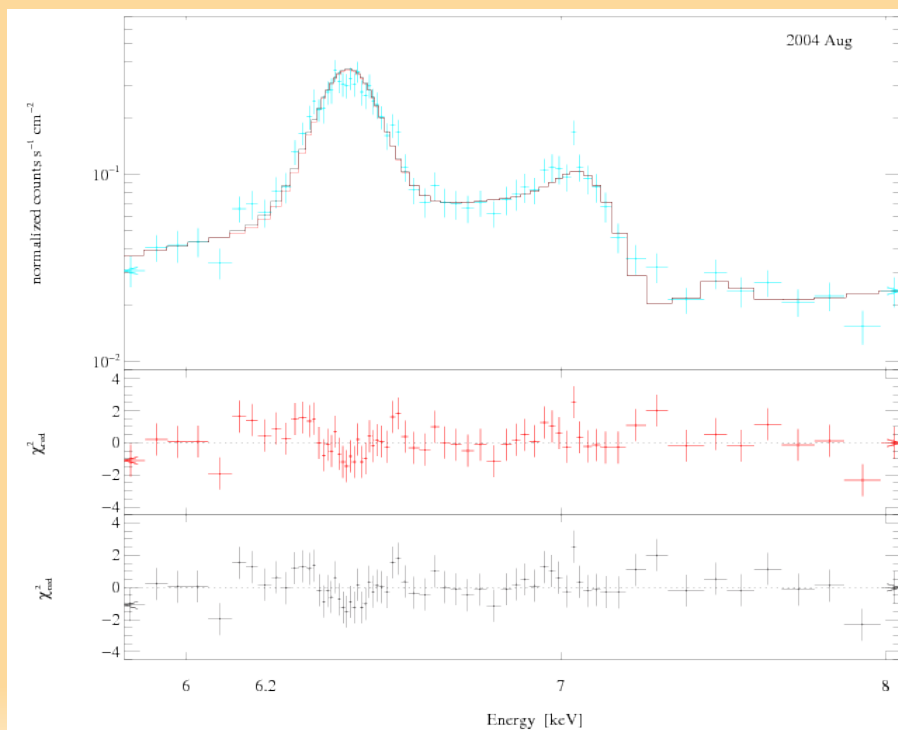
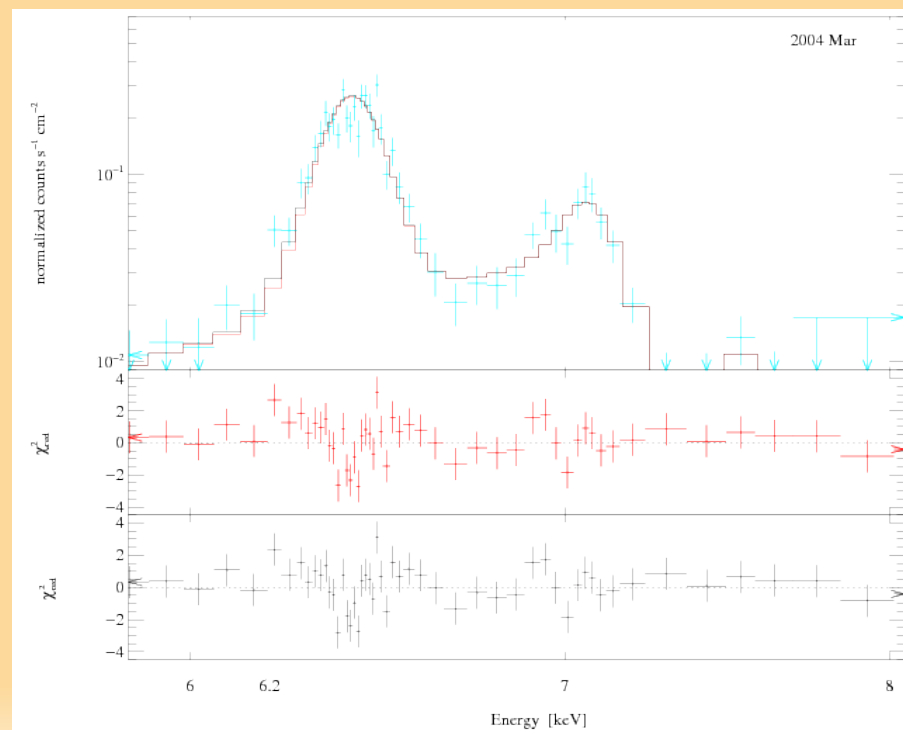
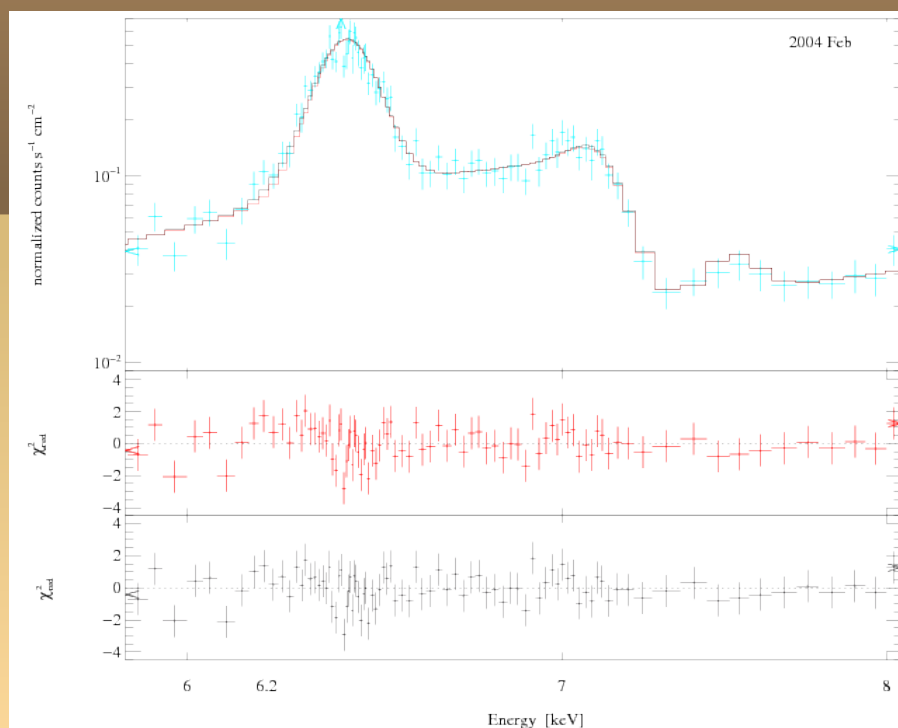
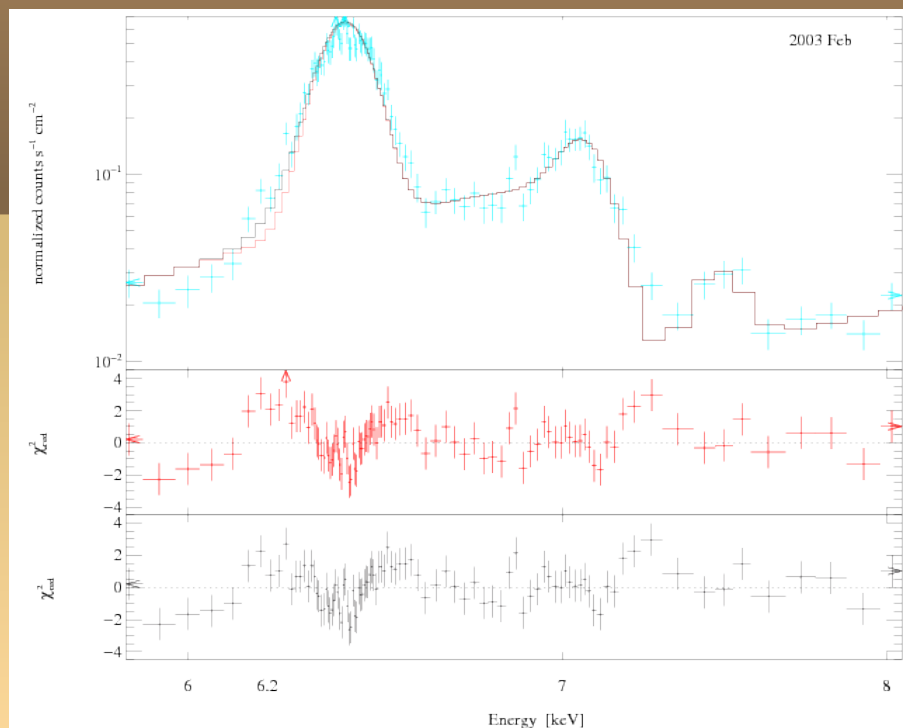
Fe Kbeta/Kalpha flux ratio



$$\eta = 0.086(8)$$

Compton shoulder





Summary

- **Extremely absorbed source**
- **No Compton shoulder: very inhomogeneous medium**
- **Neutral Fe (Flux ratio)**
- **Parameters compatible with NS**
- **... but no pulsations**
- **Flaring: wind-fed HMXB**
- **Some kind of periodicity?**