

INTEGRAL observations of Her X-1

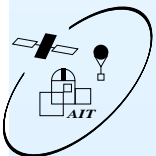
D. Klochkov

klochkov@astro.uni-tuebingen.de

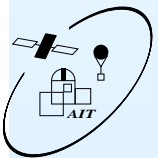
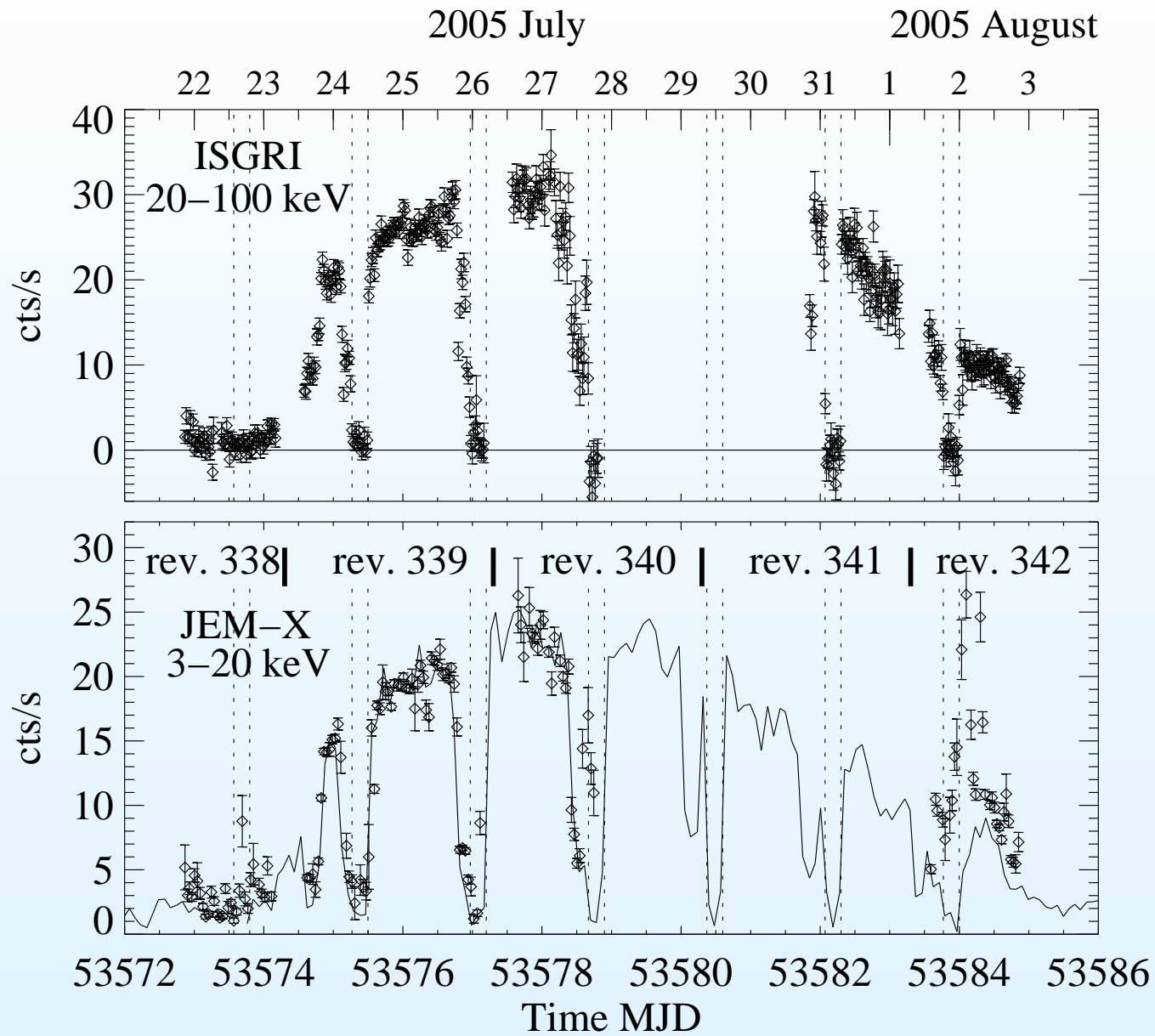
IAAT

Tübingen: R. Staubert, A. Santangelo, J. Wilms, I. Kreykenbohm

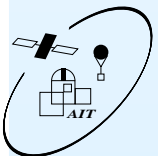
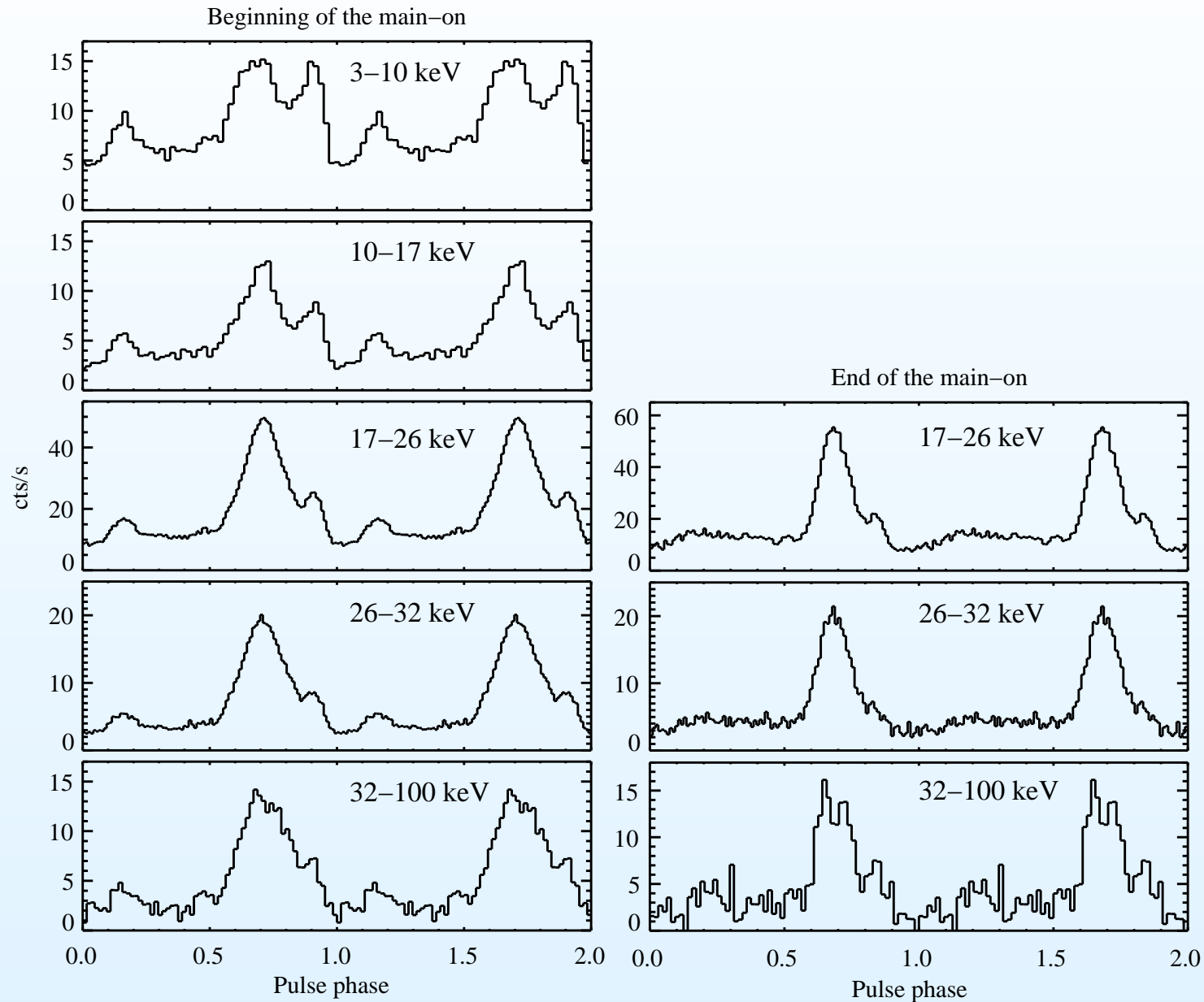
Moscow: N. Shakura, K. Postnov, V. Doroshenko



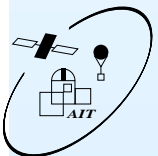
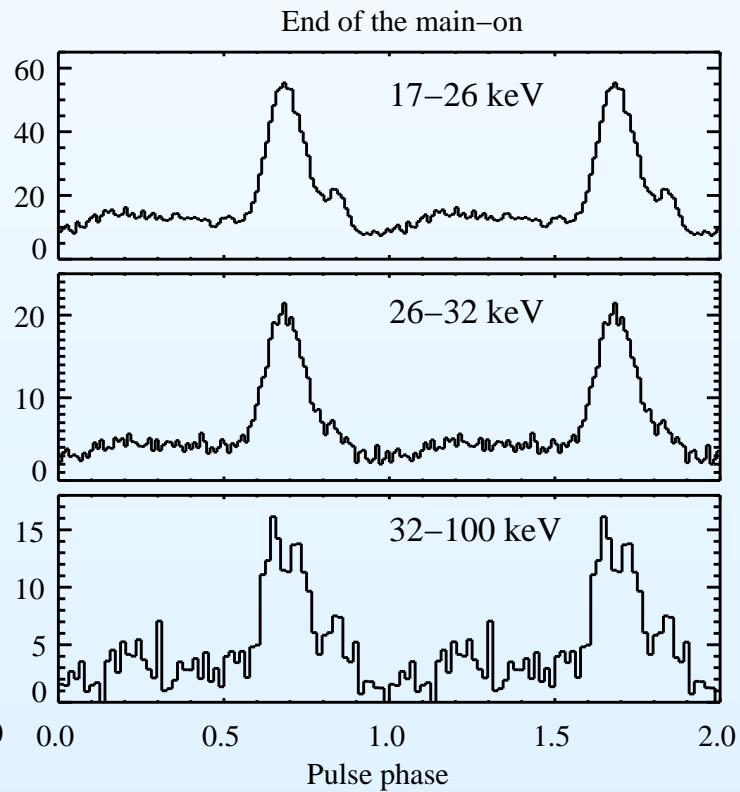
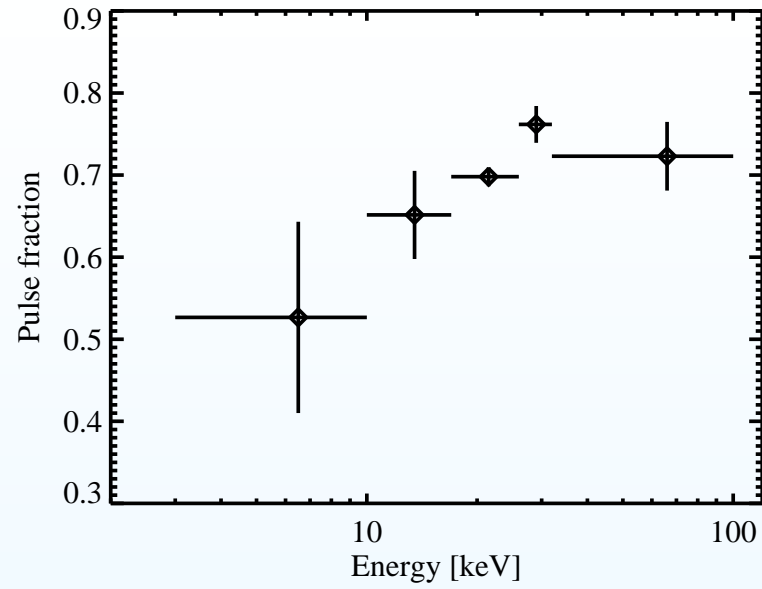
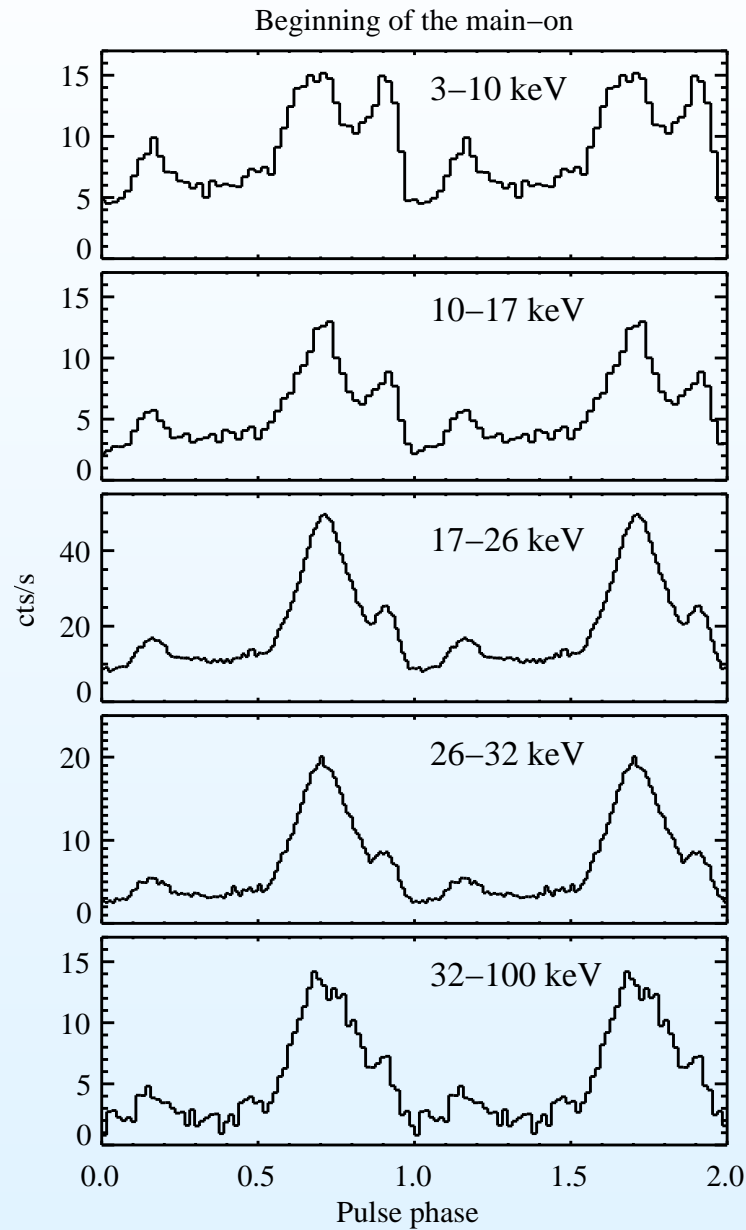
Introduction



Pulse profiles

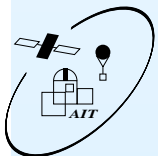
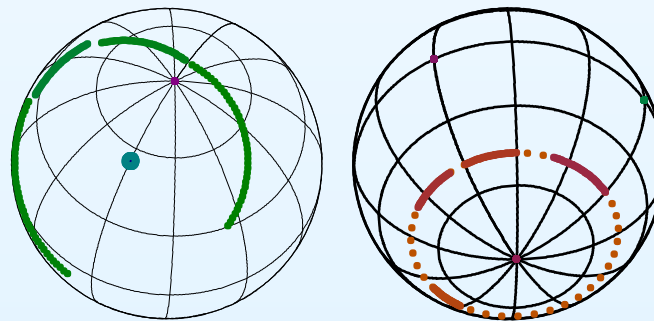
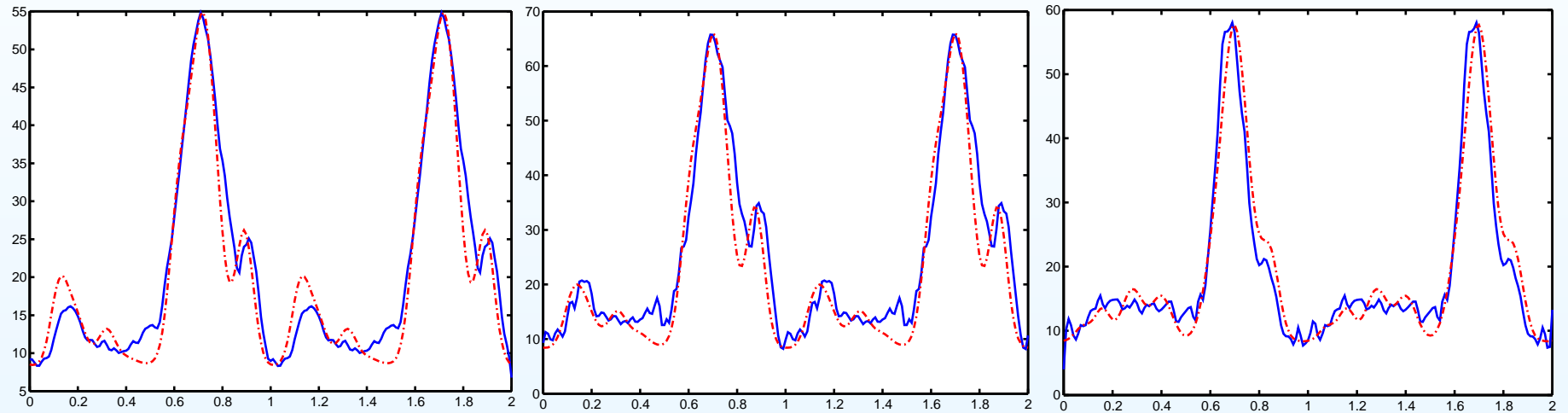


Pulse profiles

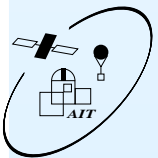
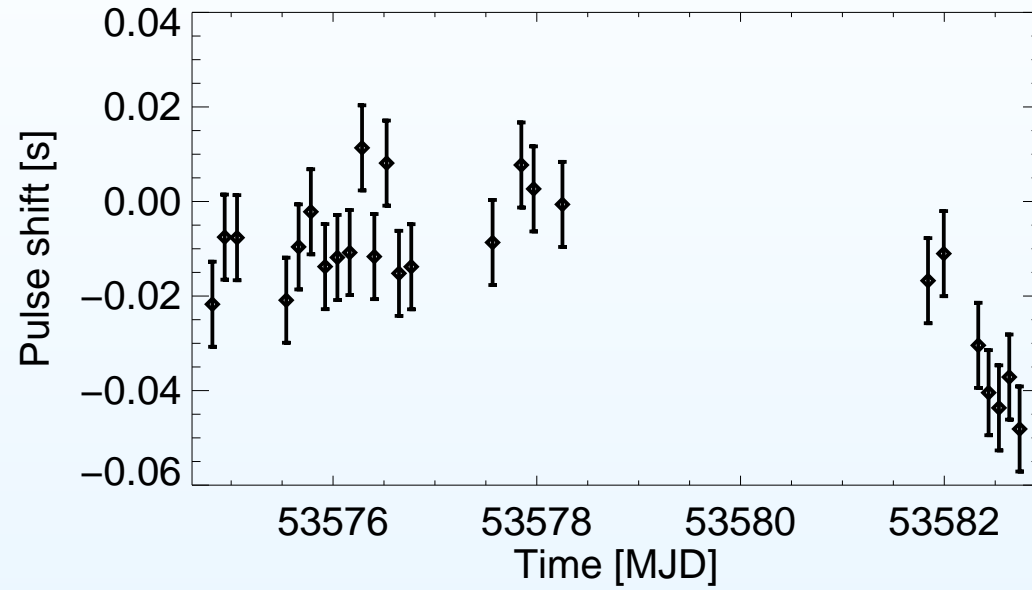


Modeling of pulse profiles

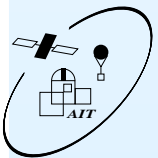
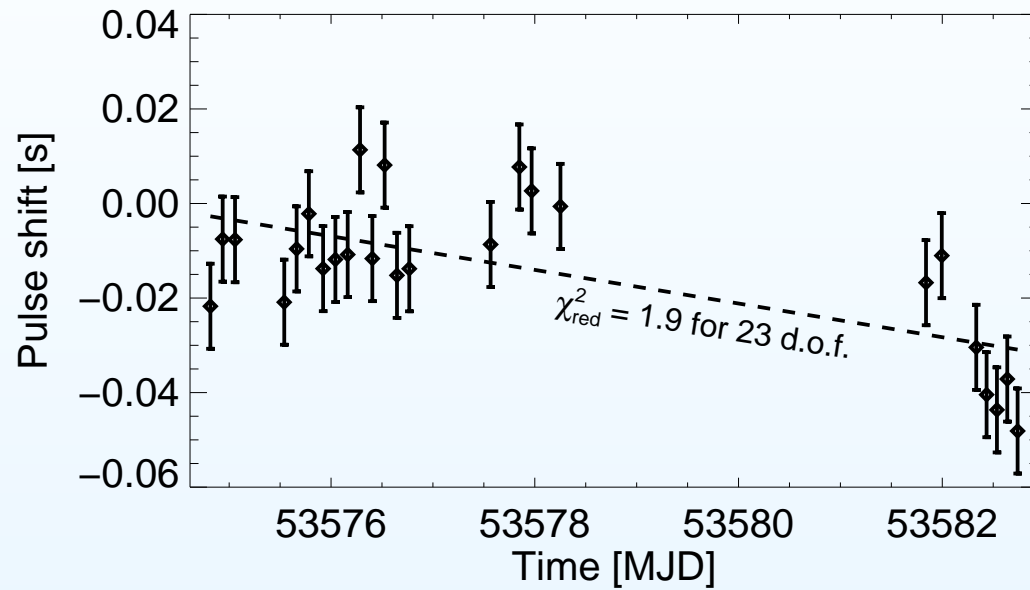
(V. Doroshenko, K. Postnov)



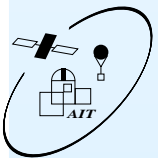
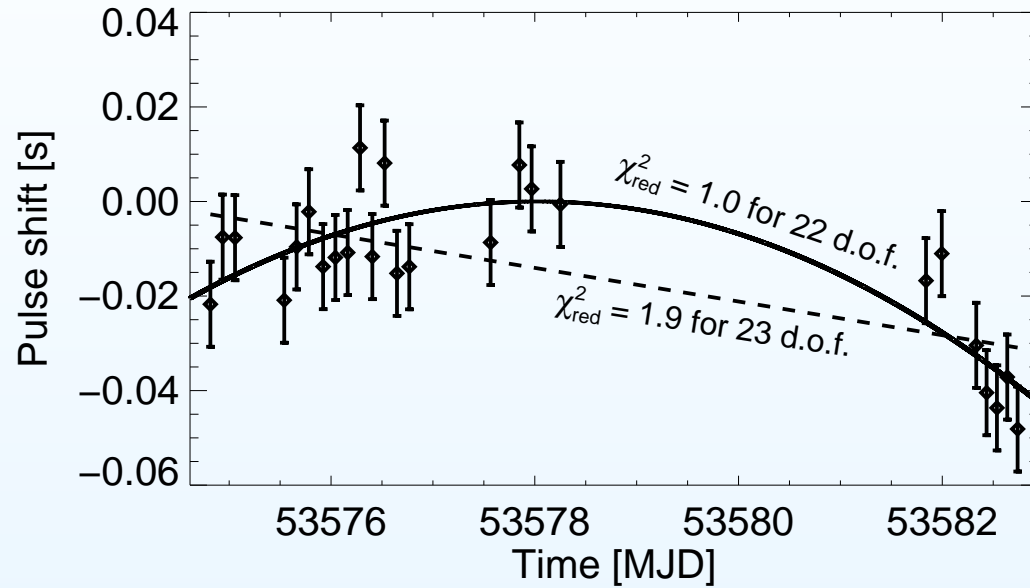
Pulse period behavior



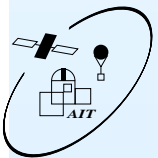
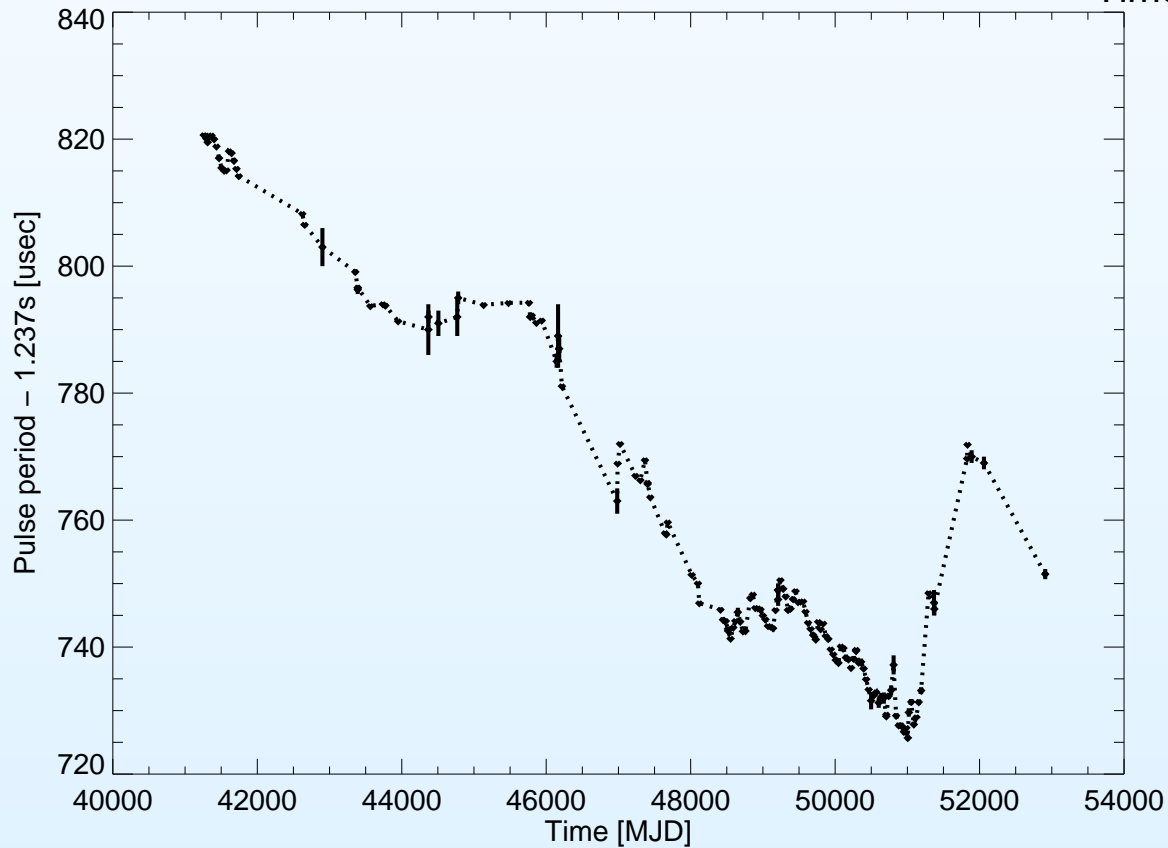
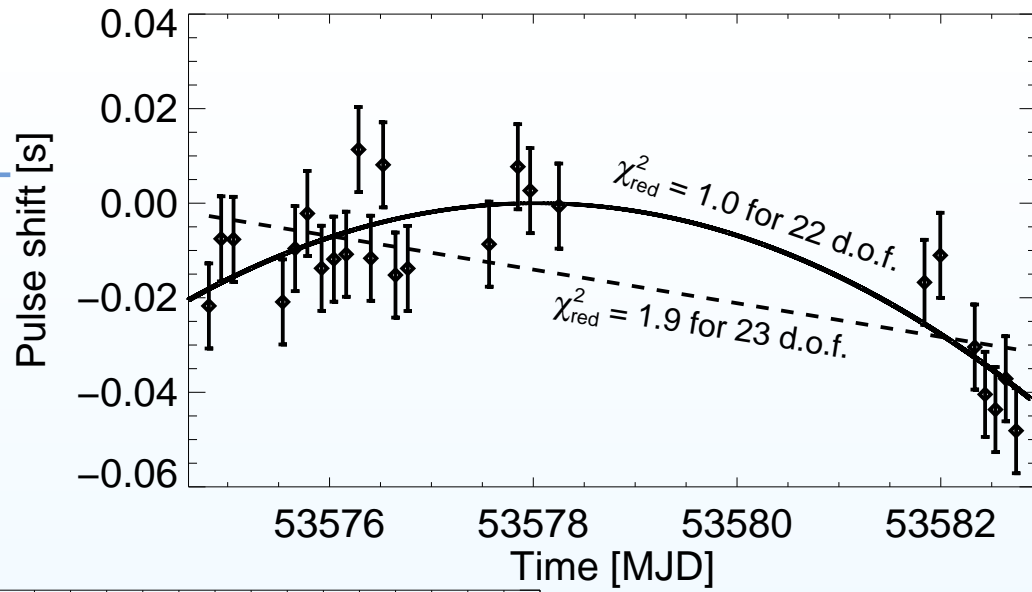
Pulse period behavior



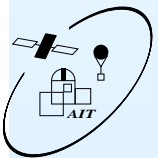
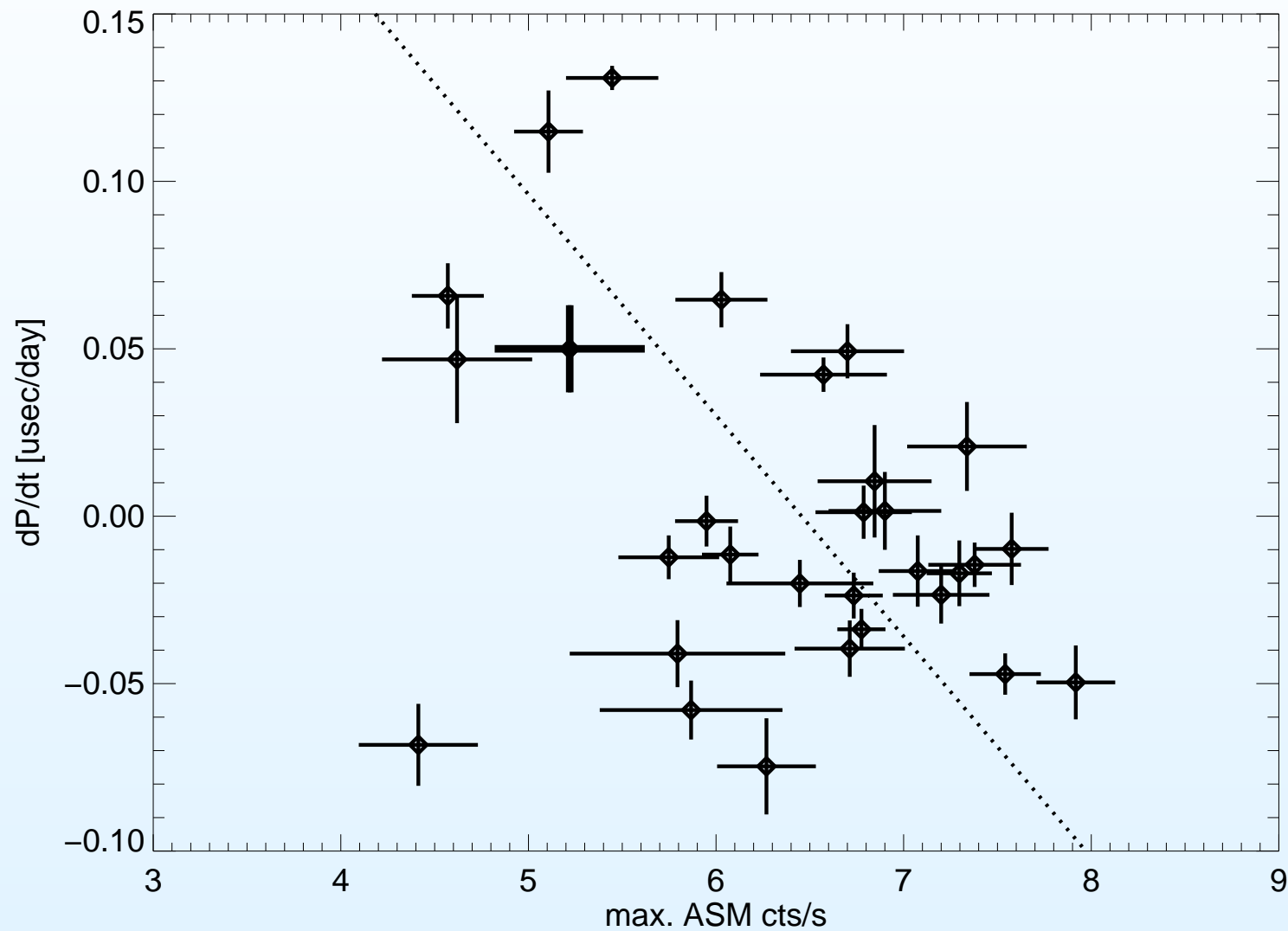
Pulse period behavior



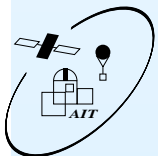
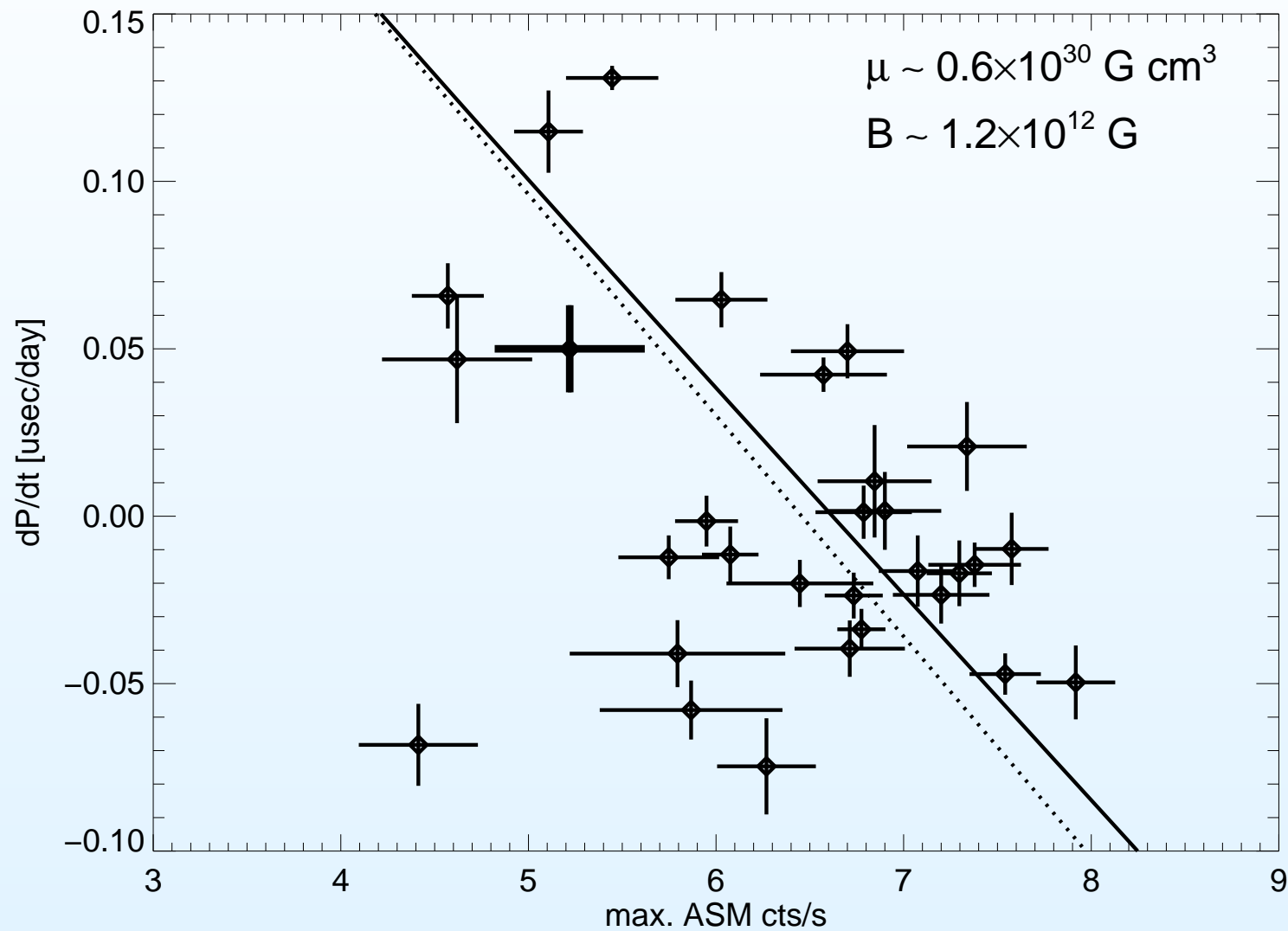
Pulse period behavior



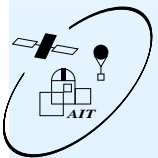
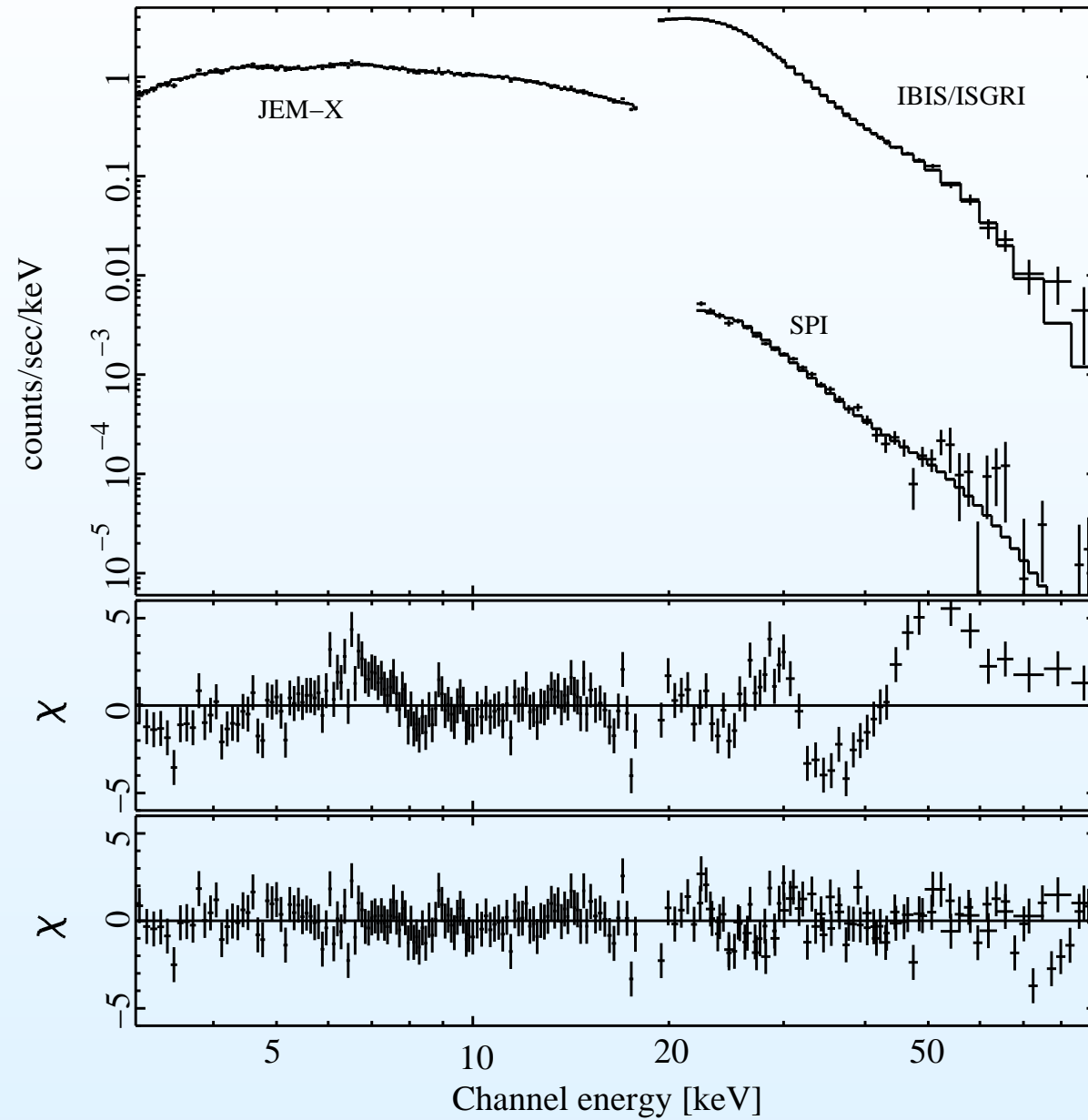
Correlation between L_X and \dot{P}



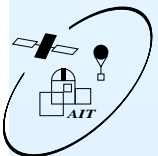
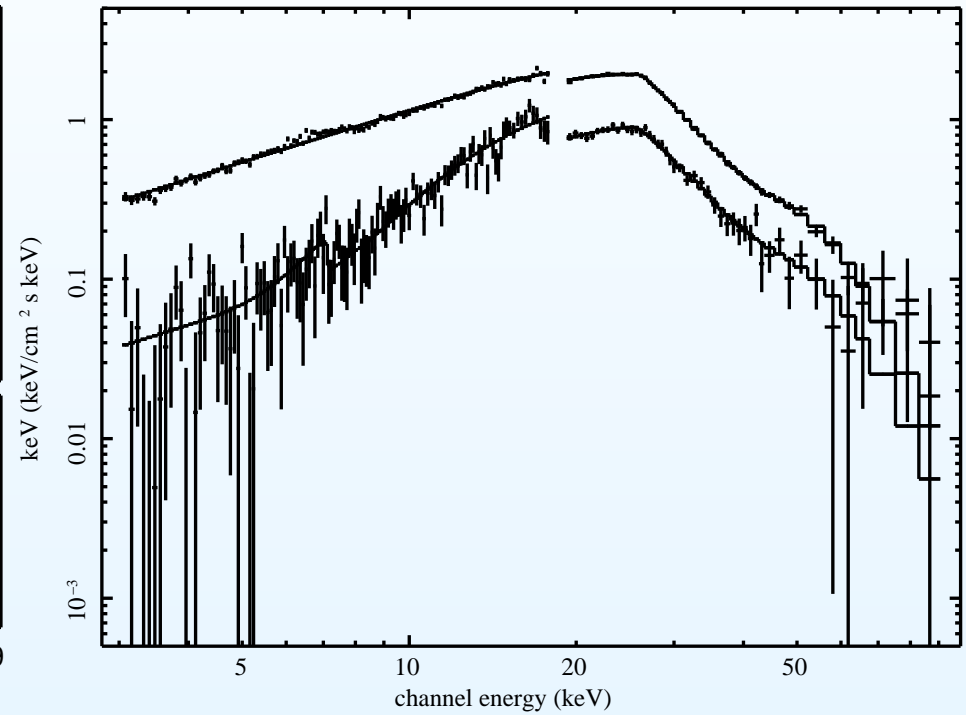
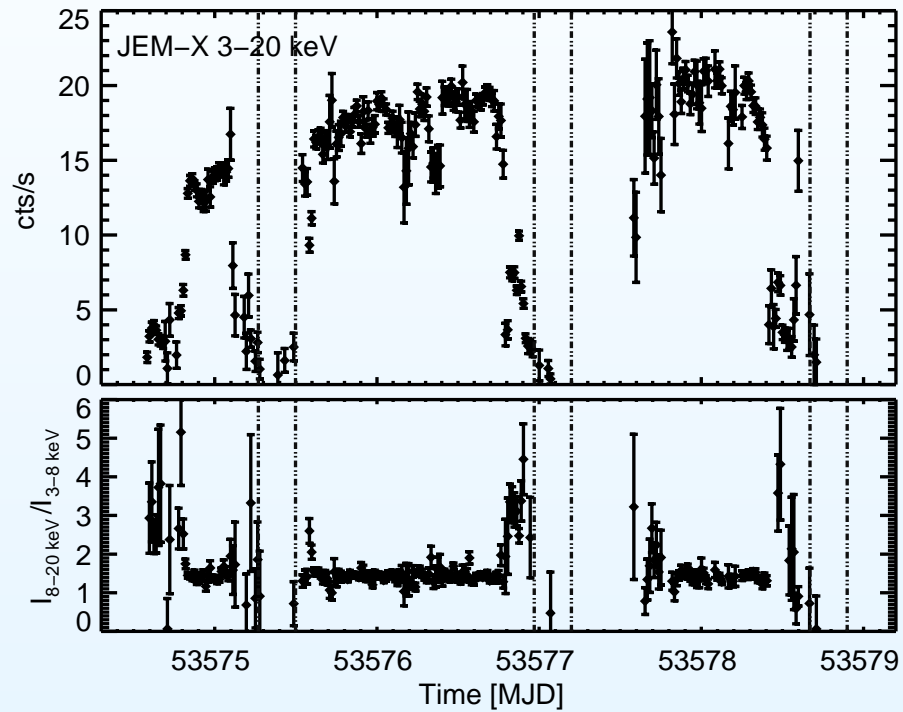
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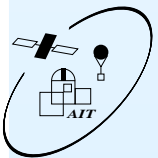
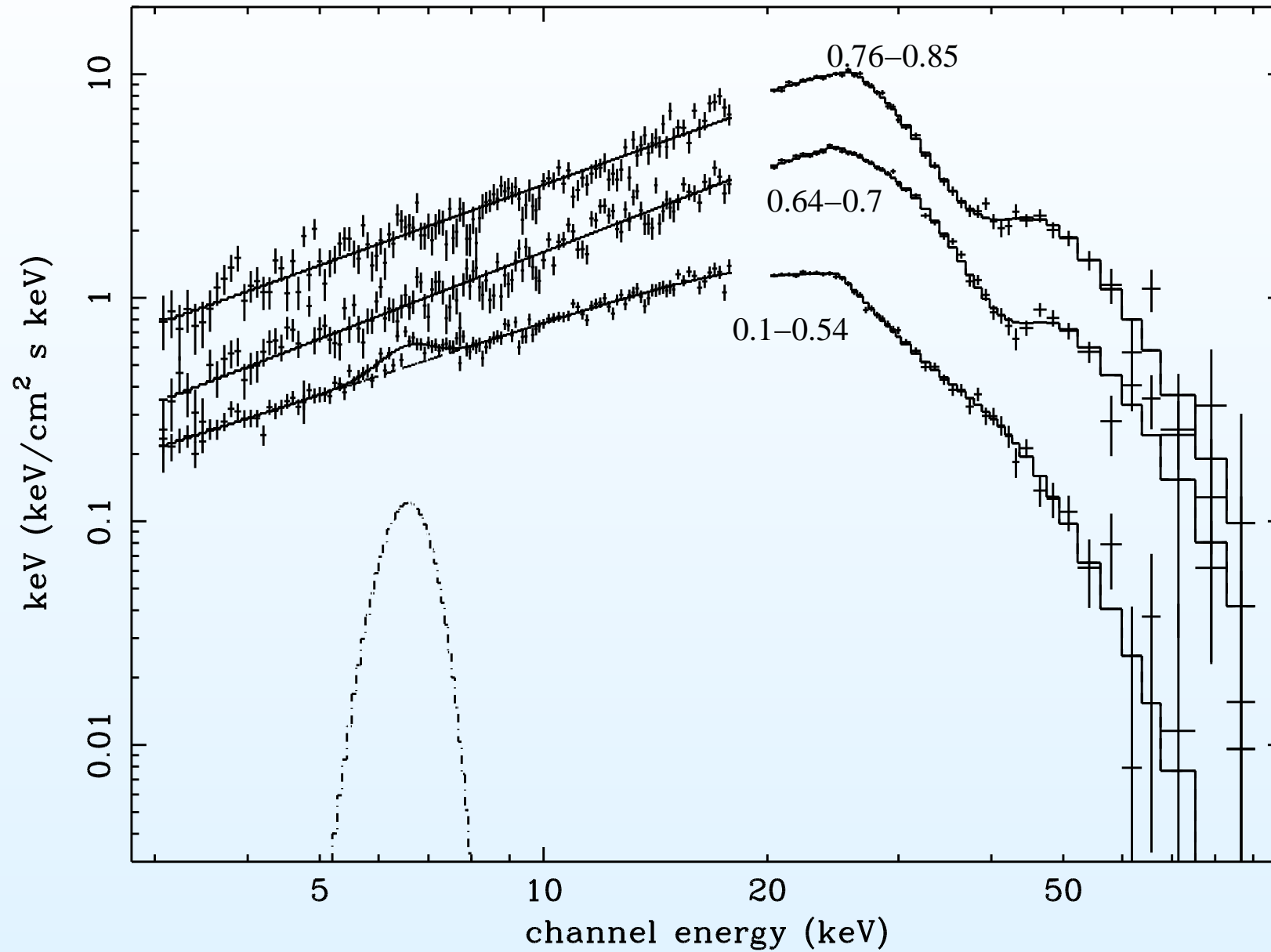
Pulse-averaged spectrum



X-ray dips

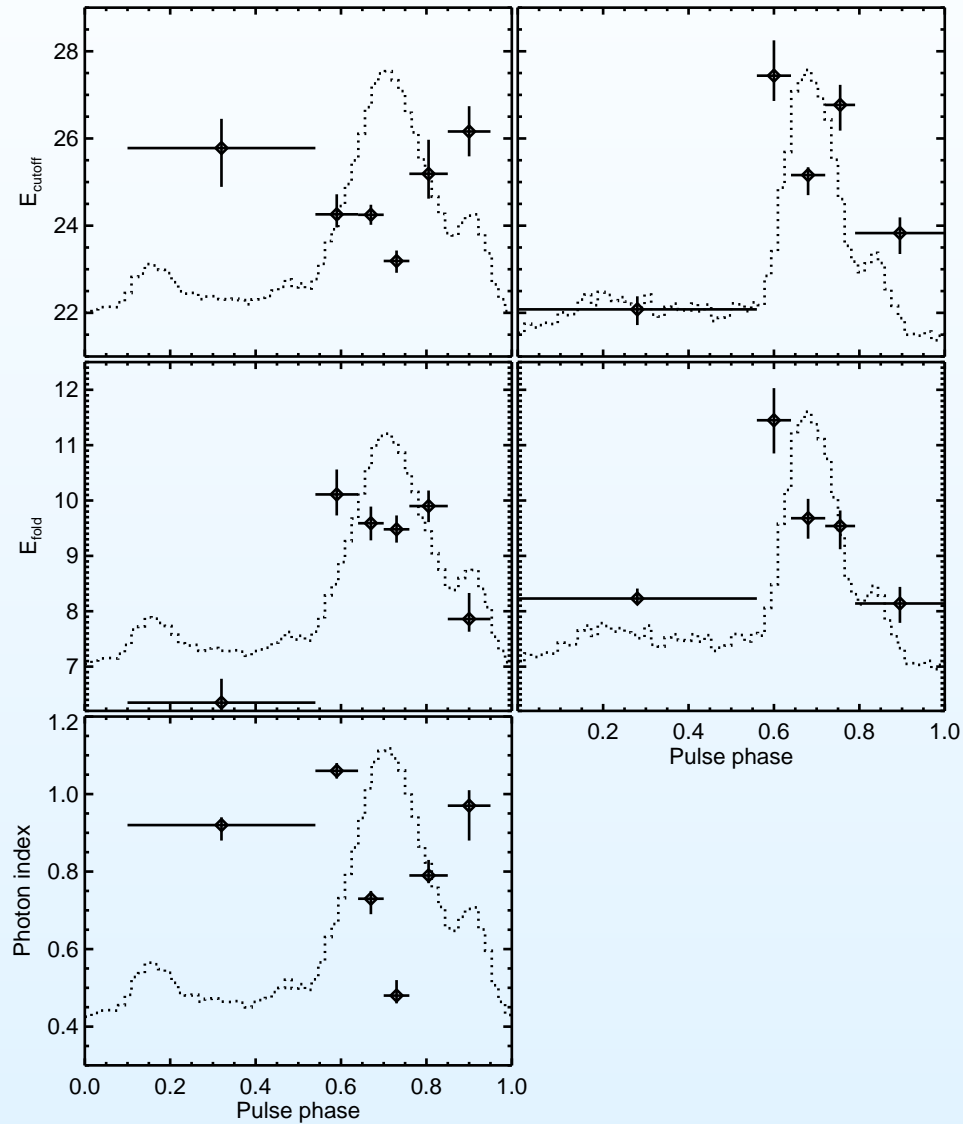


Pulse-resolved analysis

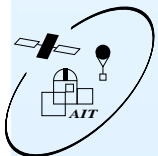
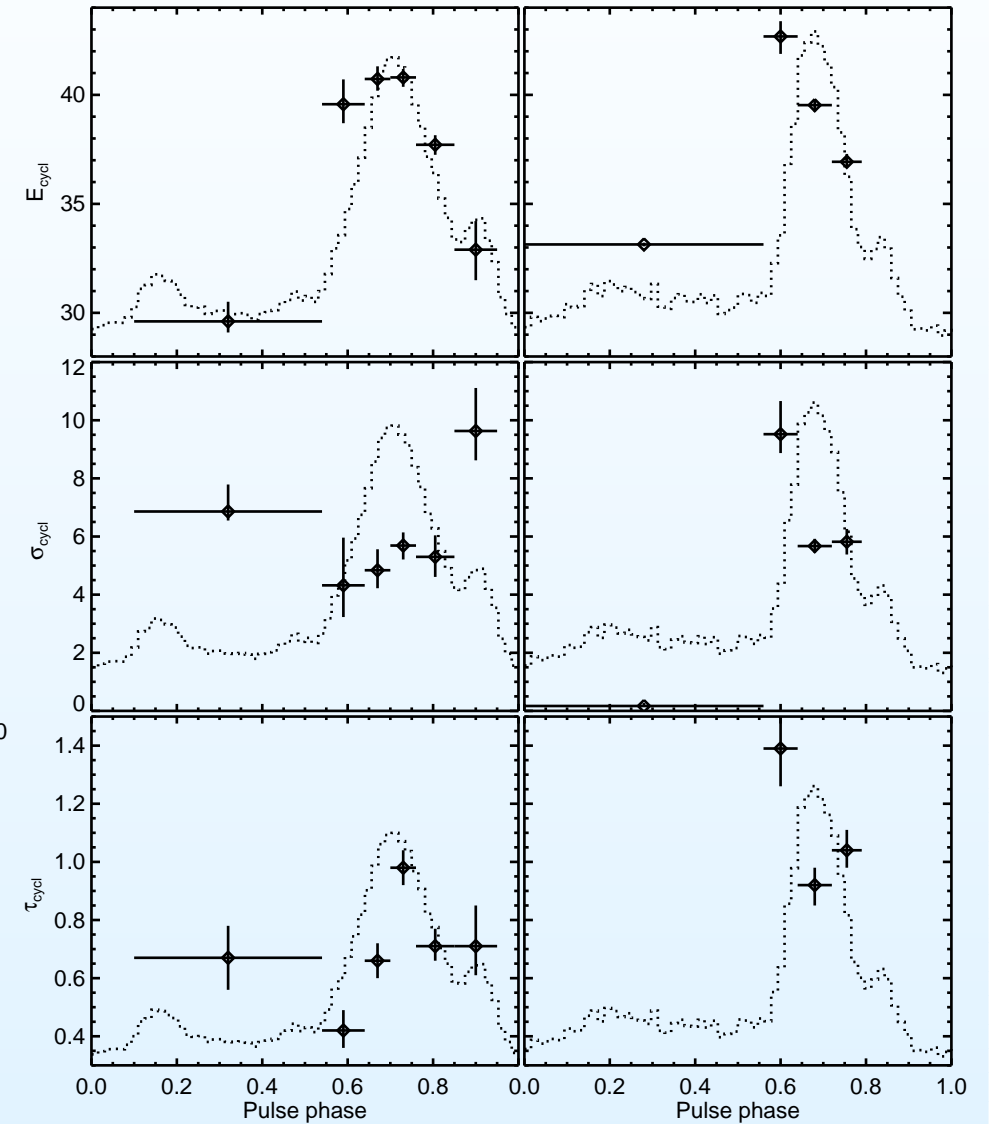


Pulse-resolved analysis

Continuum parameters:



Cyclotron line parameters:



Conclusions

INTEGRAL observations of Her X-1 combined with other X-ray observations of the source:

- fit to our model of the system (*Shakura et al. 1999, Ketsaris et al. 2000, Wilms et al. 2003, Klochkov et al. 2006*);
- provide further constraints on it (modeling of pulse profiles);
- provide additional information such as an independent estimation of the magnetic field strength on the surface of the NS.

