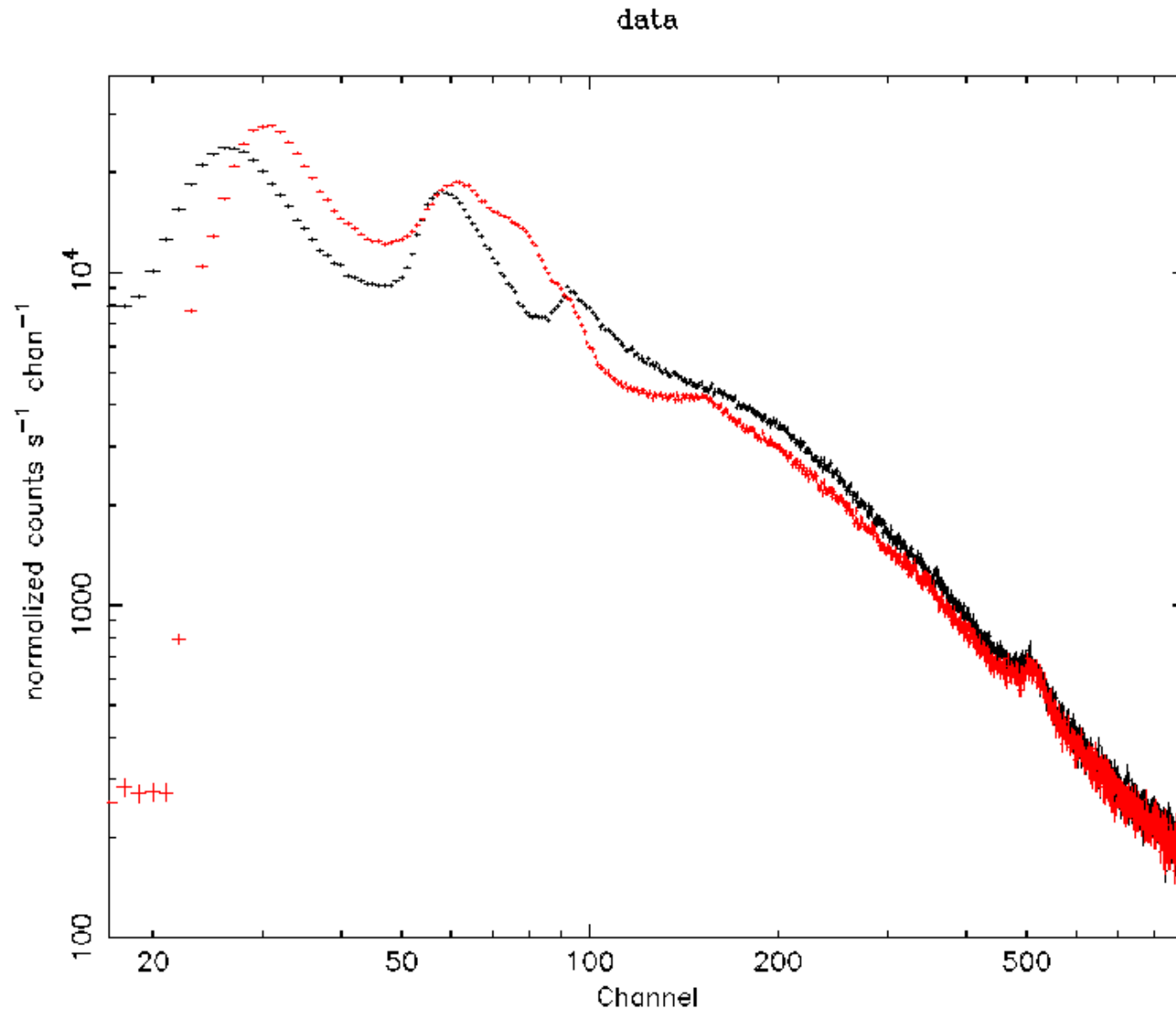


OSA 11

tests at IKI

with R.Krivonos, S.Molkov, I.Mereminsky

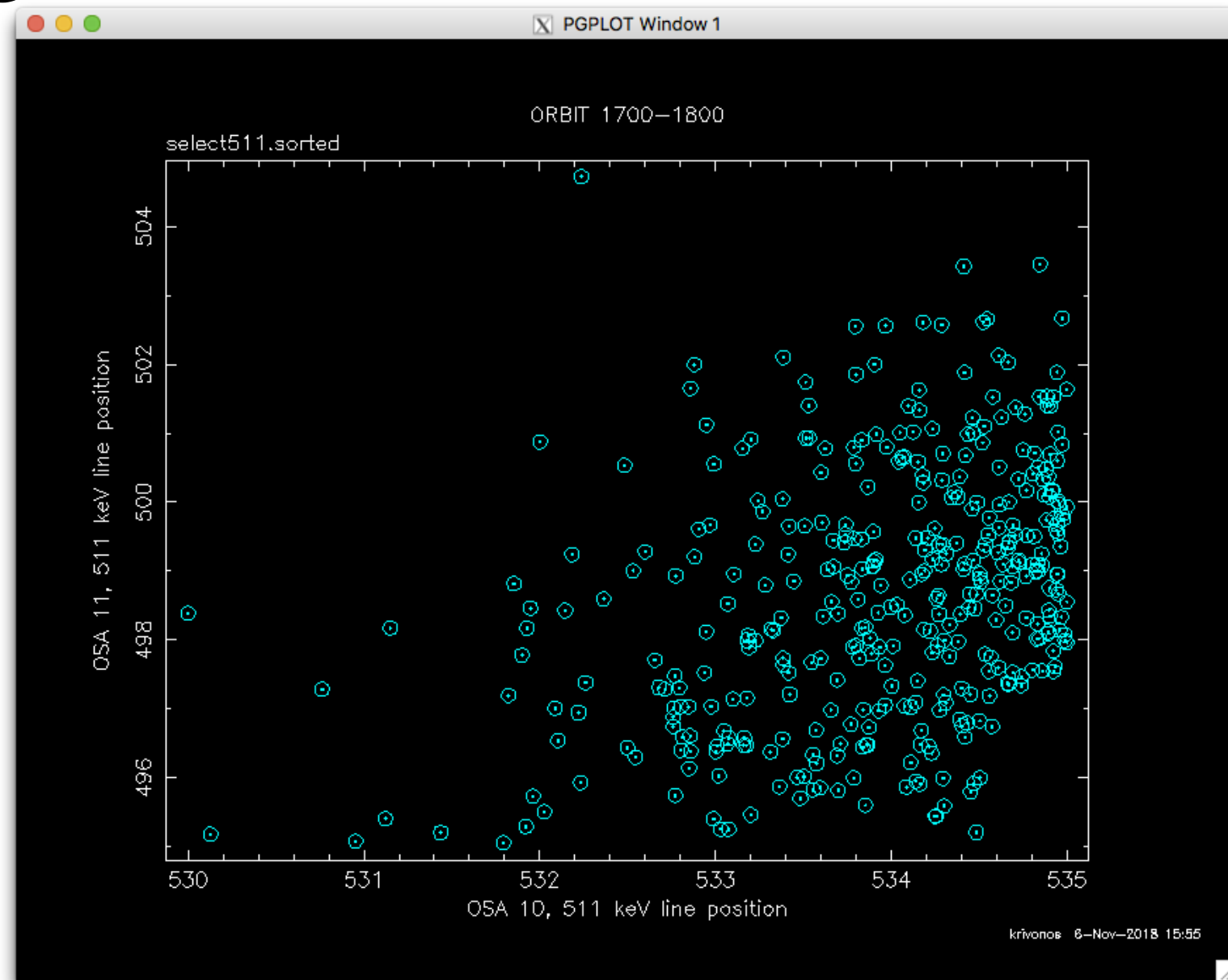
Detector spectra



Energy of 511 keV line

Revs 1700-1800

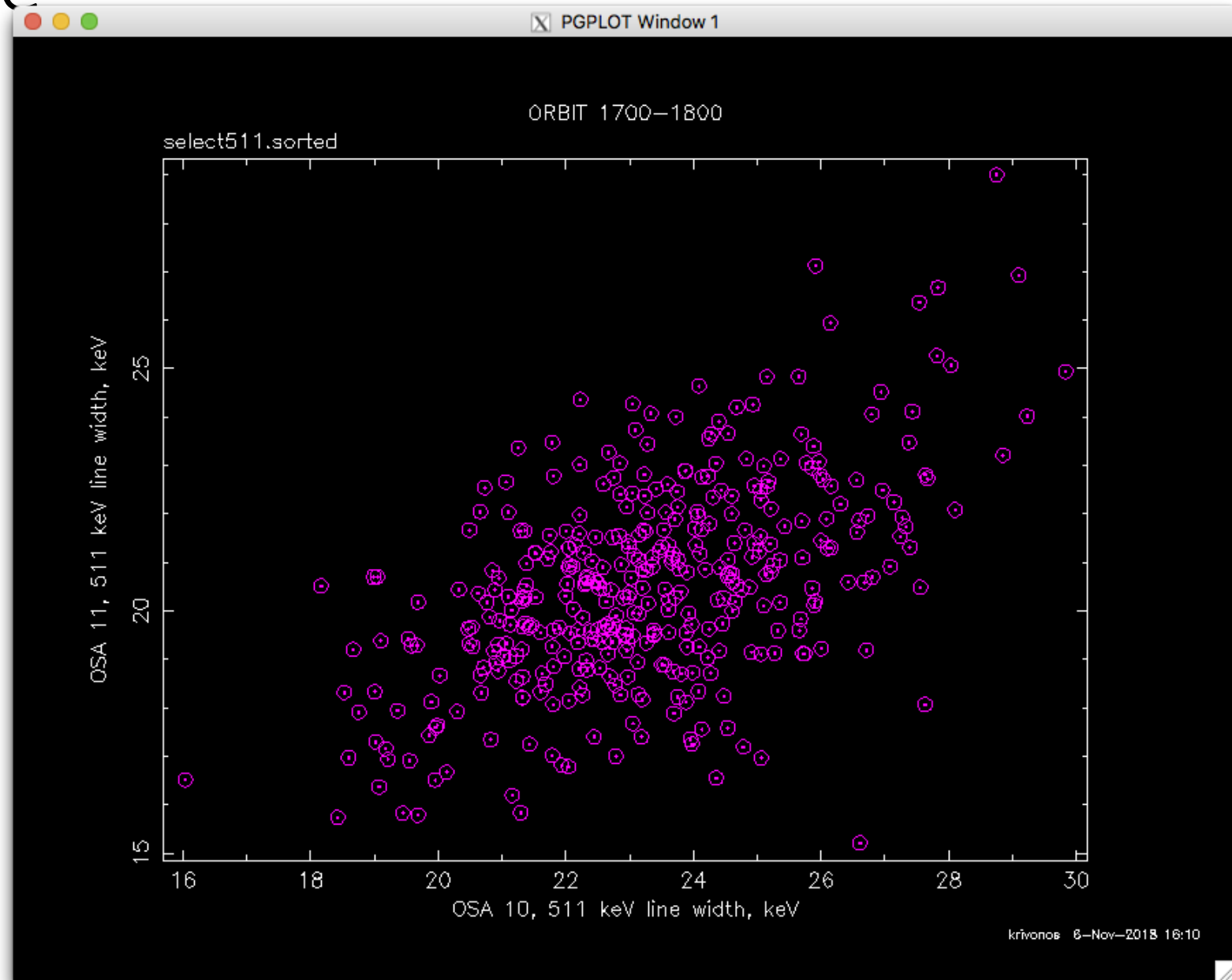
Position of the 511 line is lower that it was before



Width of the 511 line

Revs 1700-1800

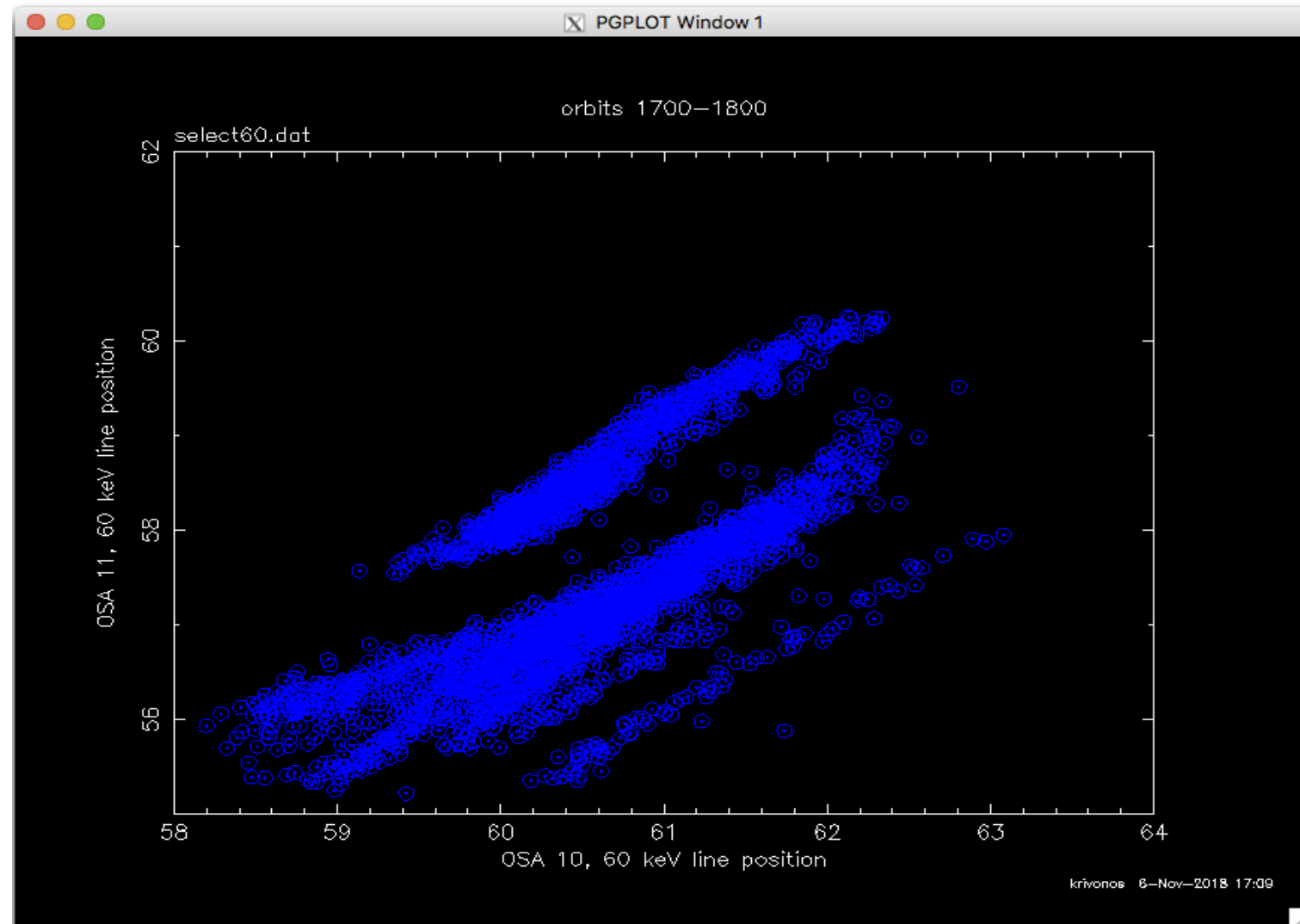
Width of the 511 line is lower than it was before (OSA 10)



Position of the 60 keV (59.6) calibration line

Separate tracks show an evolution of the line energy during one revolution (probably due-to the polarization effect, which is restored after the switch-off-on of the instrument).
Data from the COR level

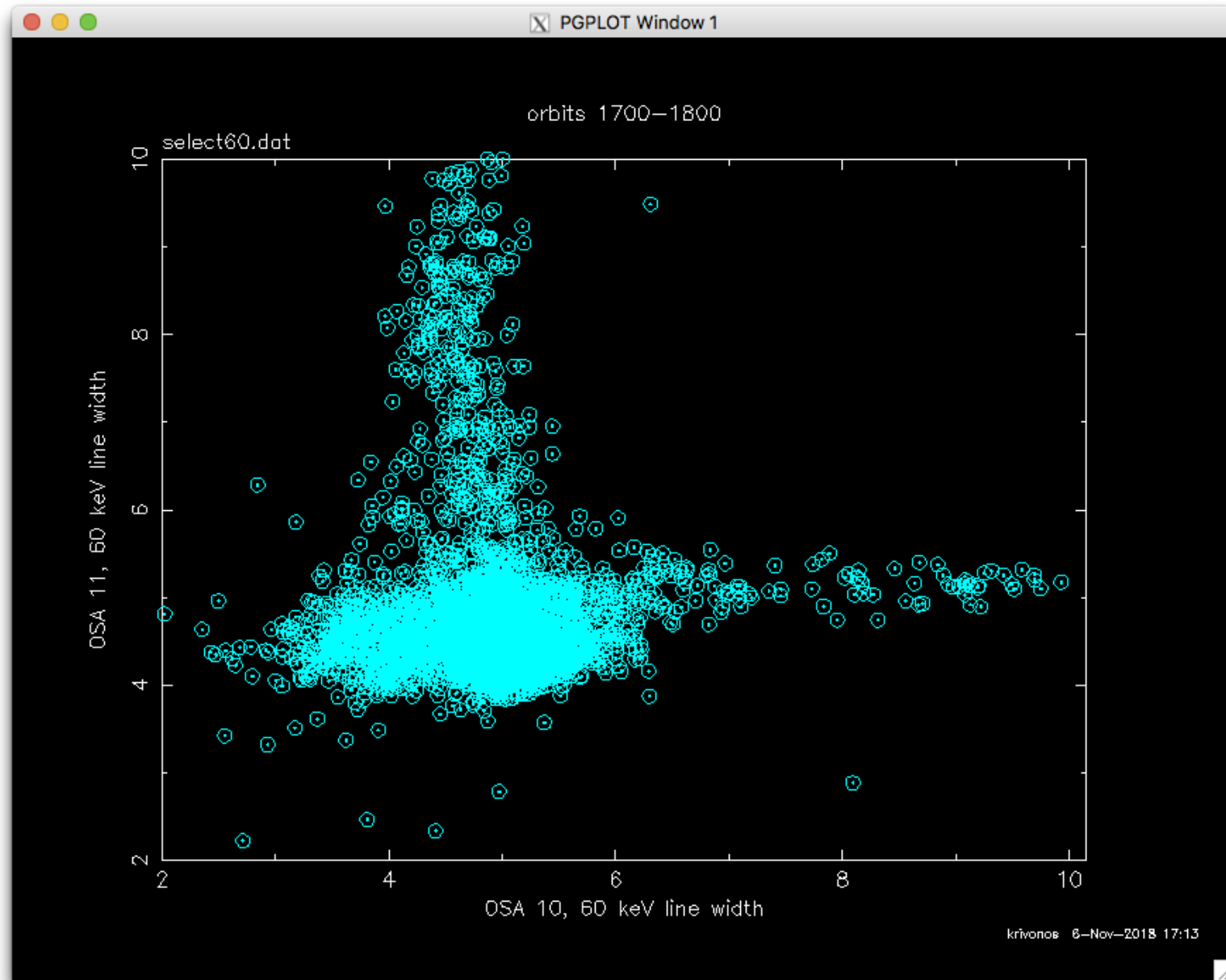
In general, OSA 11 give a lower energy of the line



5. Since 2016, ISGRI occasionally experiences particularly rapid and unpredictable changes in the detector response, at the scale of up to 5%, which are not corrected in the energy reconstruction and response computation.

Width of the 60 keV calibration line

Energy resolution is improved for the most of revolutions/scws (width of the clump is lower for OSA 11 in a comparison with OSA 10), but there are “tails” which are needed to study



NULL values in ISGRI_ENERGY (COR level)

Was not recognized in OSA 10.2

fv: Binary Table of isgri_cor_events.fits.gz[1] in /Users/krivonos/Downloads/

File Edit Tools Help

■ ISGRI_PI ■ ISGRI_ENERGY ■ SELECT_FLAG

Select
■ All

Invert Modify Modify Modify

	1B	1E keV	1B
120	53	2.778039E+02	0
121	35	5.353204E+01	0
122	59	1.329967E+02	0
123	44	4.517300E+01	0
124	78	3.437446E+01	0
125	108	6.835747E+01	0
126	50	1.494846E+02	0
127	34	2.387291E+02	0
128	79	9.638413E+01	0
129	125	3.774440E+01	1
130	57	4.284449E+02	0
131	214	NULL	0
132	50	6.388139E+01	0
133	46	2.248508E+02	0
134	85	7.729246E+01	0
135	29	2.653504E+02	0
136	62	7.477869E+01	0
137	77	5.954778E+01	0
138	125	1.610783E+02	0

Go to: 120 Edit cell: NULL

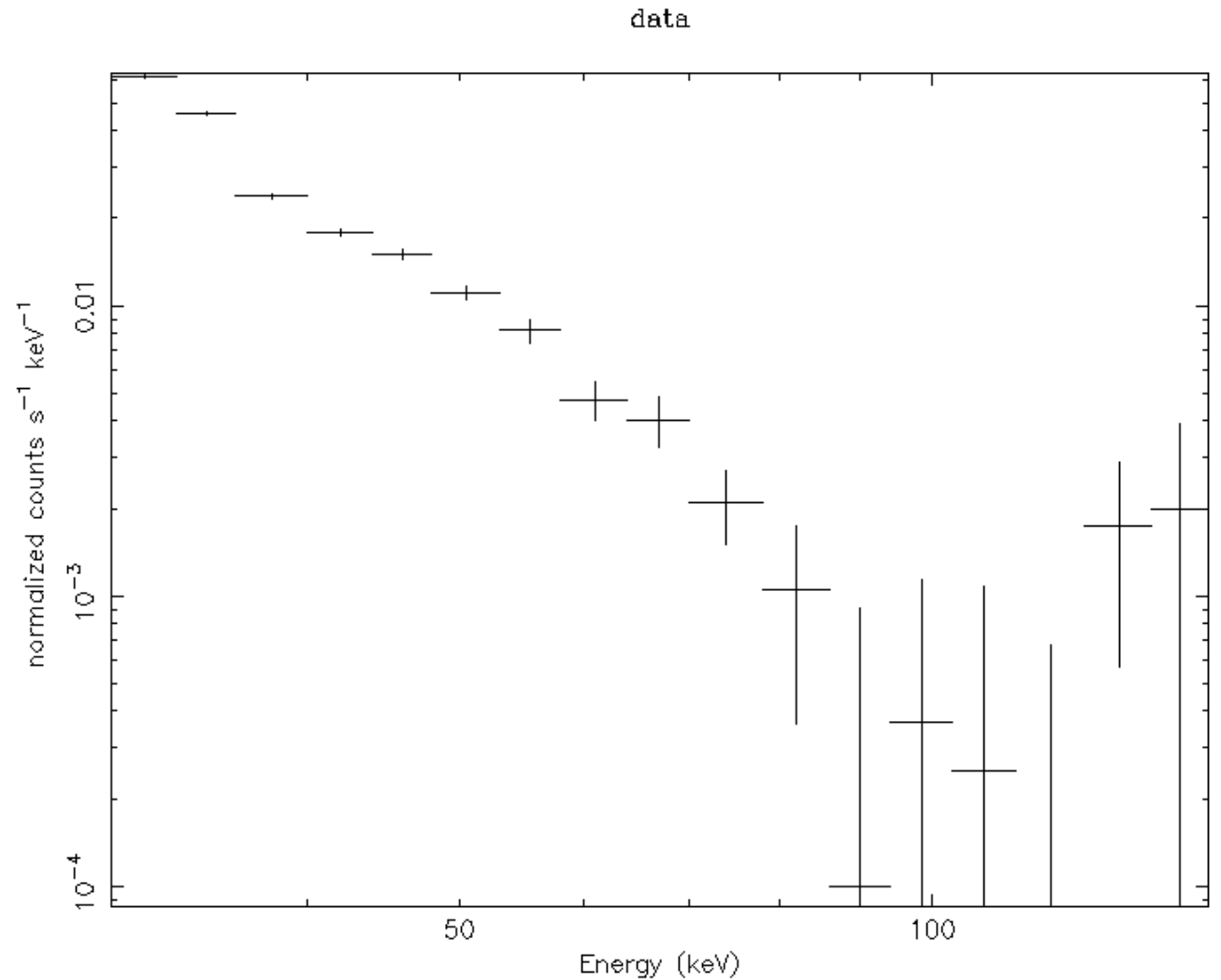
MAXIJ1820+070

- 1) Spectra with OSA 11 are much better than with OSA 10.2.
- 2) An agreement between ISGRI and SPI is about 5% on the normalization, shape is in agreement as well.
- 3) Problems with the extraction of the spectrum from JEM-X data in the normal way (and quality is not so good)

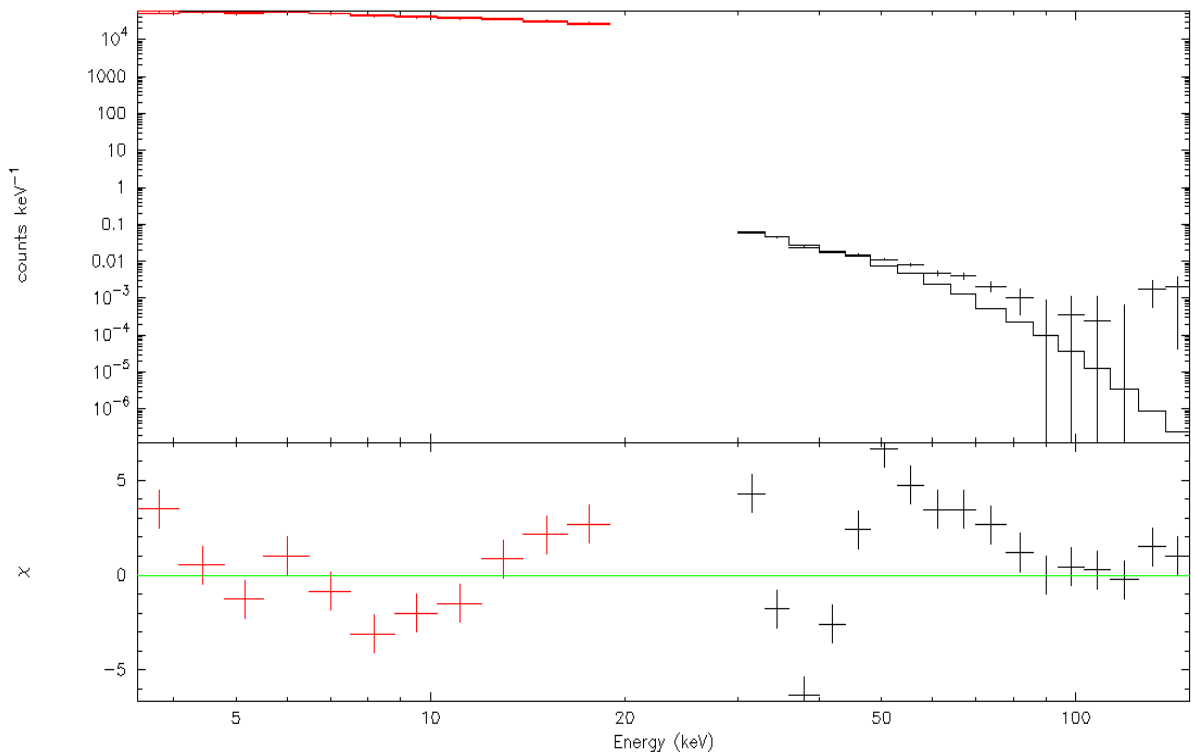
But there are no peculiarities

Her X-1

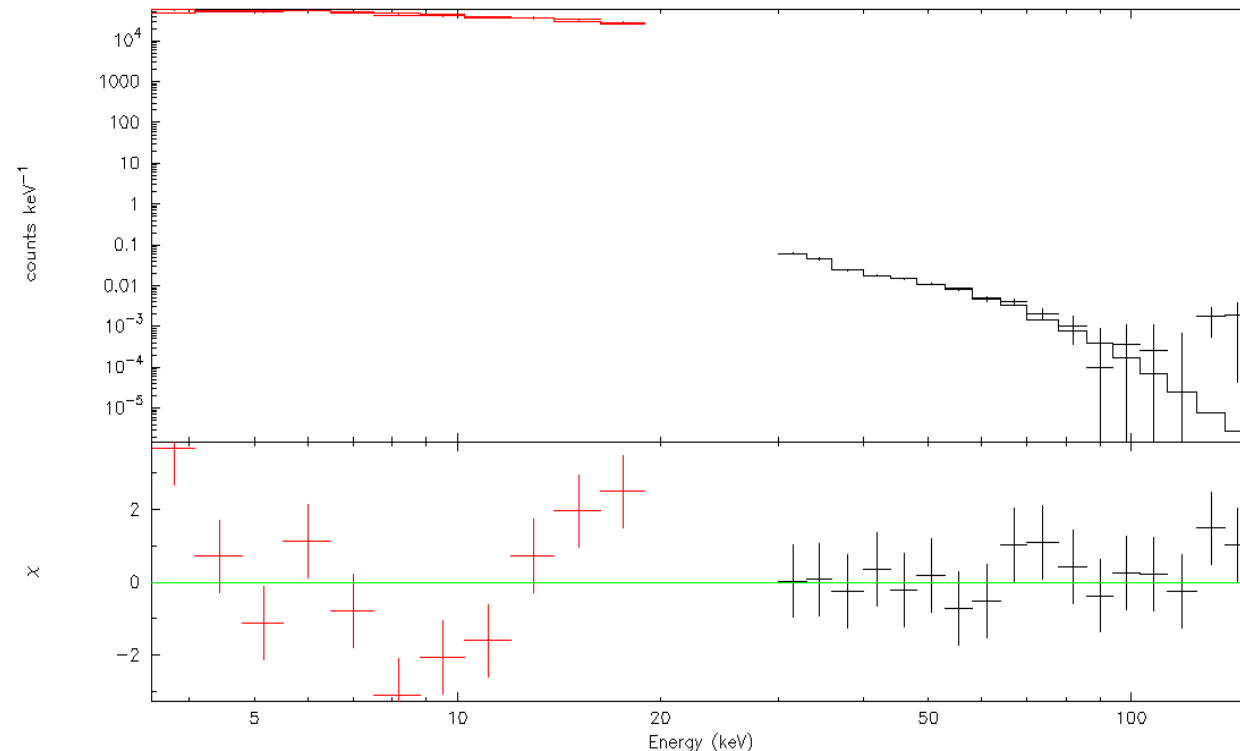
(1975, 1976 revs)



data and folded model



data and folded model



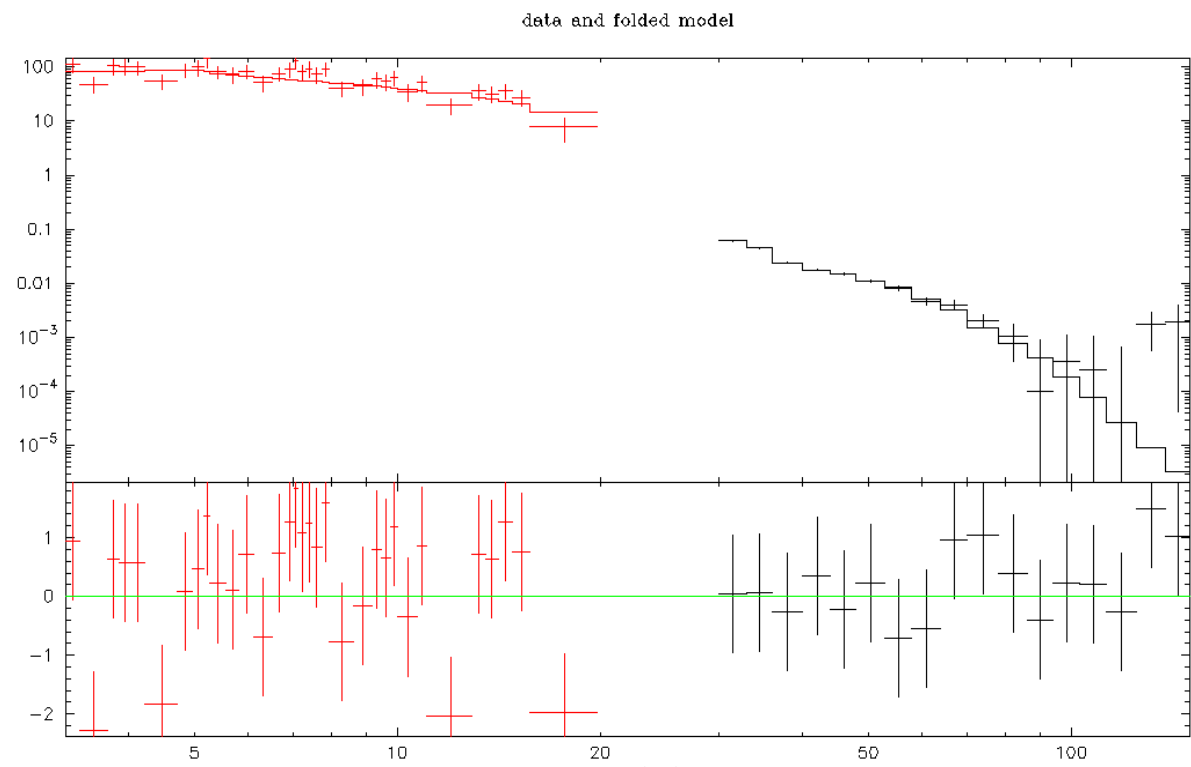
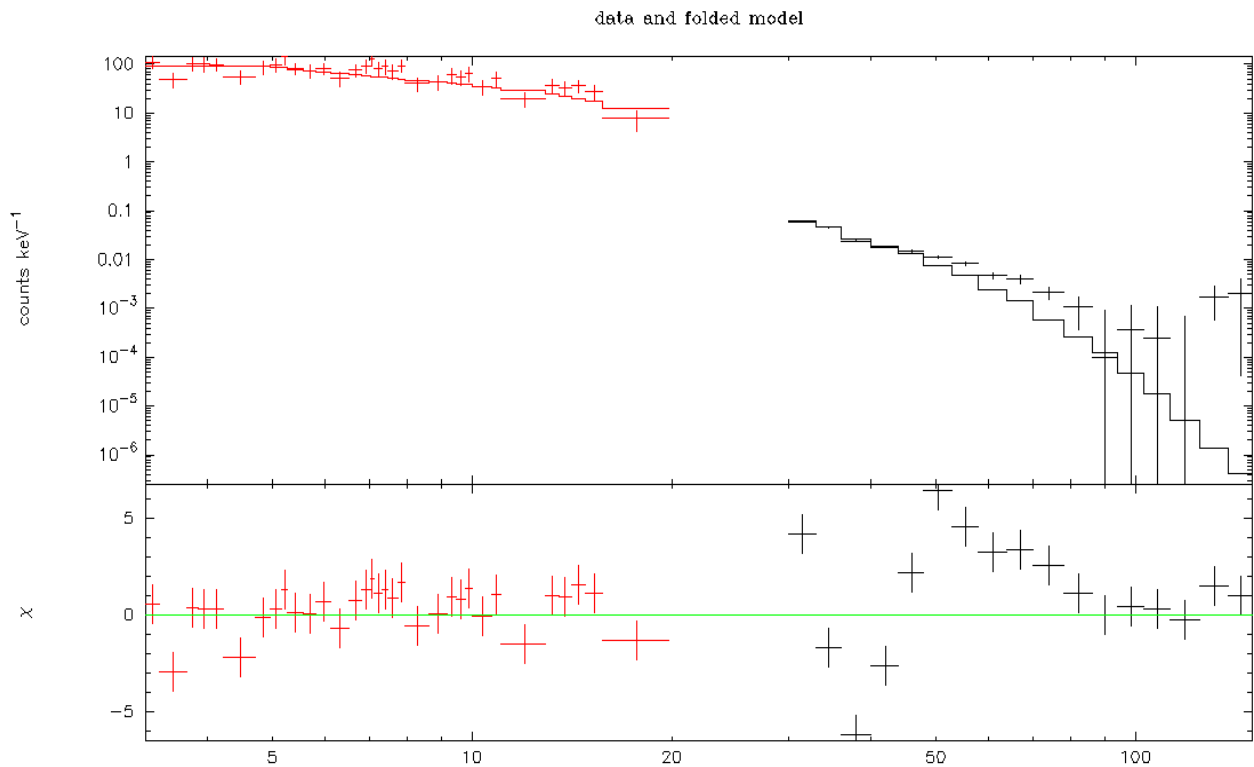
=====
 Model constant<1>*powerlaw<2>*highcut<3>*gabs<4> Source No.: 1 Active/On

Model Model Component Parameter Unit Value

par comp

Data group: 1

1	1	constant	factor		1.00000	frozen
2	2	powerlaw	PhoIndex		0.692146	+/- 2.96326E-02
3	2	powerlaw	norm		4.93775E-02	+/- 0.160533
4	3	highcut	cutoffE	keV	20.4623	+/- 32.9466
5	3	highcut	foldE	keV	10.1388	+/- 0.298129
6	4	gabs	LineE	keV	41.2466	+/- 0.538834
7	4	gabs	Sigma	keV	6.29543	+/- 1.05244
8	4	gabs	Tau		8.02494	+/- 2.29401



=====

Model constant<1>*powerlaw<2>*highcut<3>*gabs<4> Source No.: 1 Active/On

Model par	Model comp	Model Component	Parameter	Unit	Value	
Data group: 1						
1	1	constant	factor		1.00000	frozen
2	2	powerlaw	PhoIndex		0.861407	+/- 0.163012
3	2	powerlaw	norm		6.13298E-02	+/- 1.13467
4	3	highcut	cutoffE	keV	23.7971	+/- 198.340
5	3	highcut	foldE	keV	10.5886	+/- 0.543891
6	4	gabs	LineE	keV	41.2496	+/- 0.543977
7	4	gabs	Sigma	keV	6.24897	+/- 1.05766
8	4	gabs	Tau		7.76593	+/- 2.24597

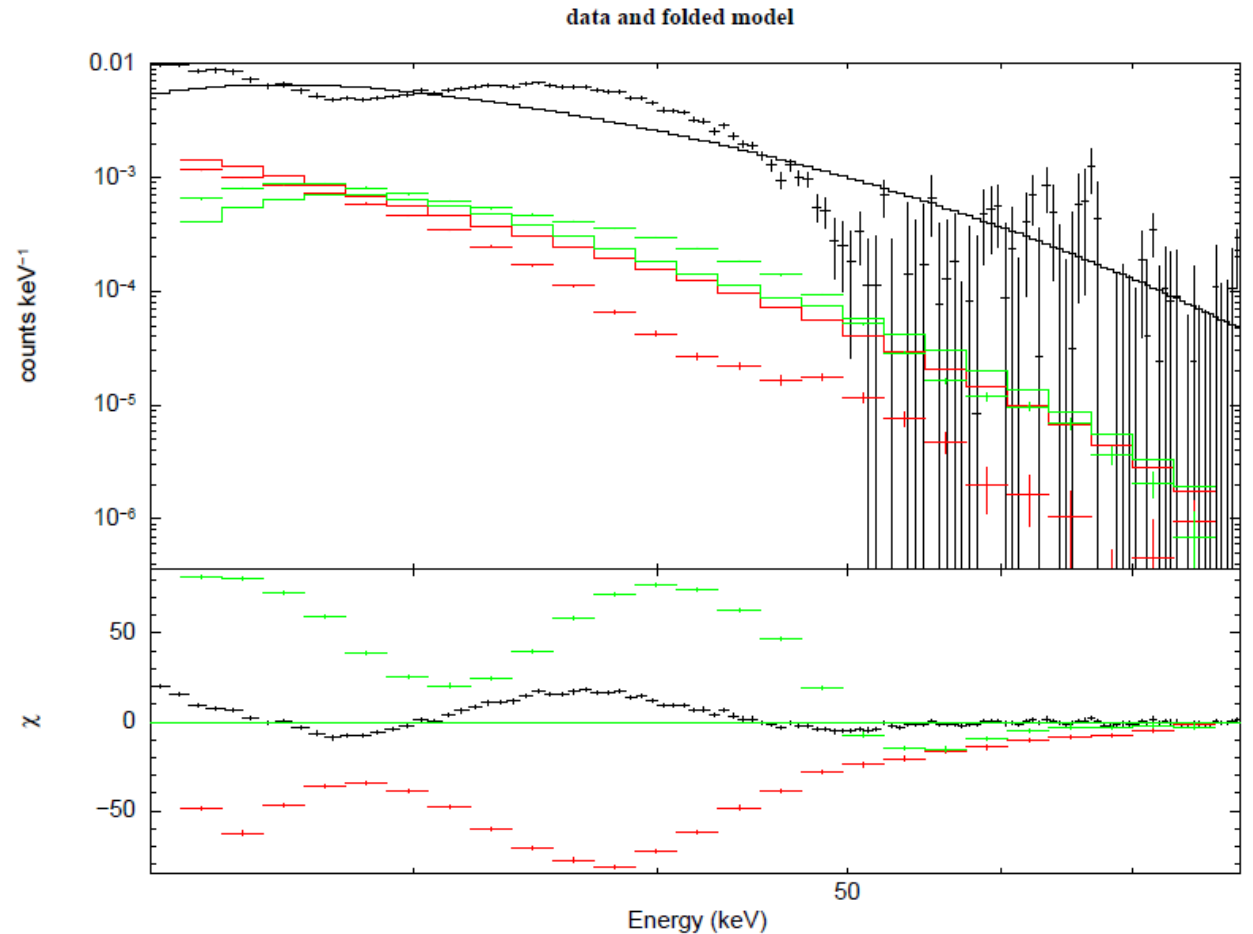
1) Tests of OSA 11

Work is in progress:
cross-test Her X-1/ISGRI spectra
with SPI (in couple of days)

2) Calibration OSA 11 till
first revolutions. Is it real?
When? **Carlo's talk**

3) PIF for JEM-X. Is it real?

4) Crab observations in 1999-2000
revs are closed. ???



1565 rev