

V&V Reference Report

L2 ASCDS Version : 7.6.9

Observation 2708 - L2 Version 001
Chandra X-Ray Center

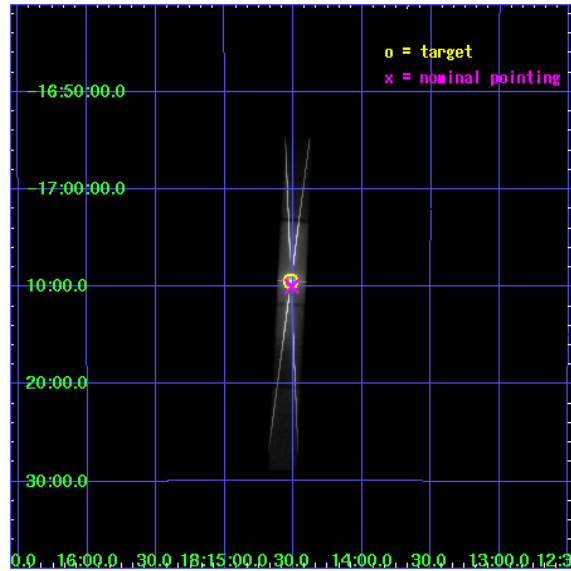
L2 Processing Date : Dec 8 2006

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1 Front

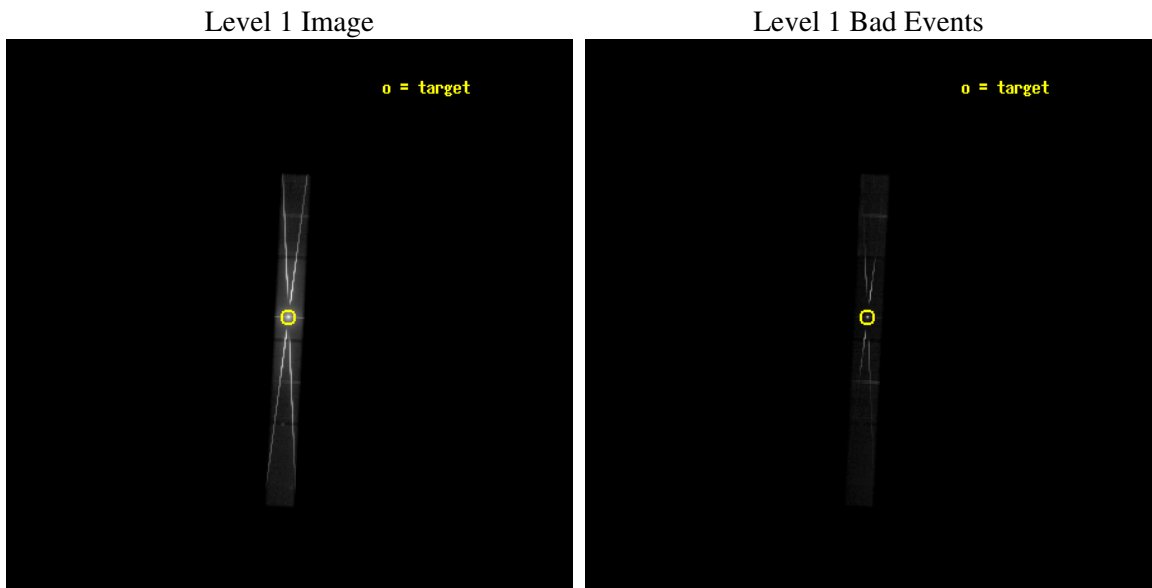
seq_num	400188
obs_id	2708
title	RESOLVING IRON K-ABSORPTION LINE FEATURES IN THE X-RAY SPECTRA OF THE LOW MASS X-RAY BINARY GX 13+1
observer	Dr Yoshihiro Ueda
object	GX 13+1
dtcycle	0
cycle	P
ra_targ	273.629167
dec_targ	-17.157222
ra_nom	273.62788273337
dec_nom	-17.166806322914
roll_nom	272.87074880524
revision	2
ontime	30357.599698424
livetime	29353.703053978
ontime5	30357.599698424
ontime6	30357.599698424
ontime7	30357.599698424
ontime8	30357.599698424
l2events	3247127



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	0
ascdsver	7.6.9
caldbver	3.2.3
date	2006-10-06T00:13:30
revision	2

sched_exp_time	30200.000000
ontime	30904.00551036
ontime5	30904.00551036
ontime6	30851.881800443
ontime7	30904.00551036
ontime8	30875.46159035
l1events	3777617

2.1.3 Events

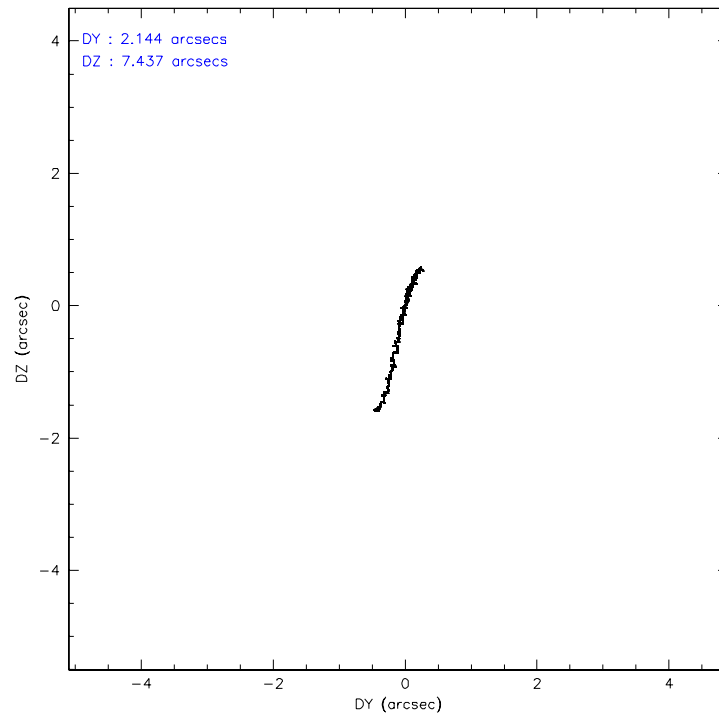
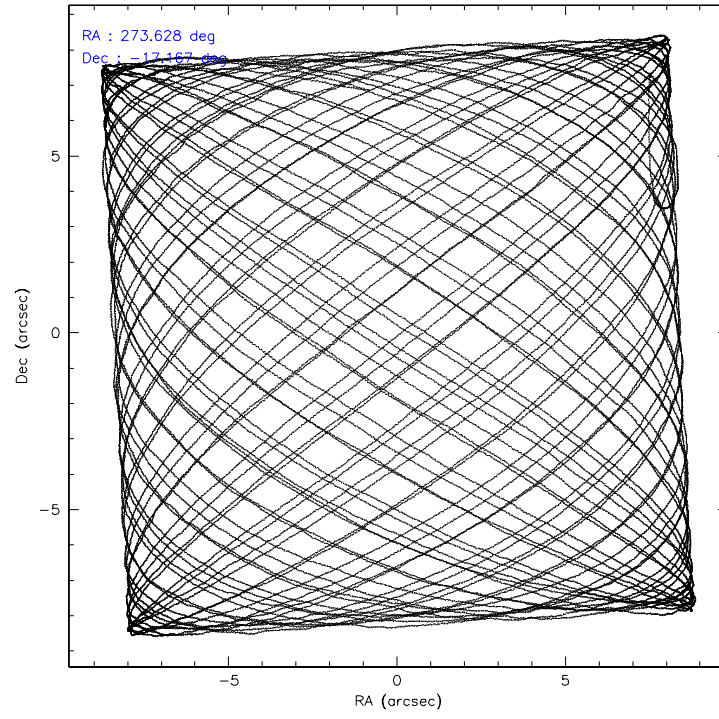
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	183104	1142484	2053946	398083
rejected events	59849	103826	171675	88675
rejected %	32%	9%	8%	22%

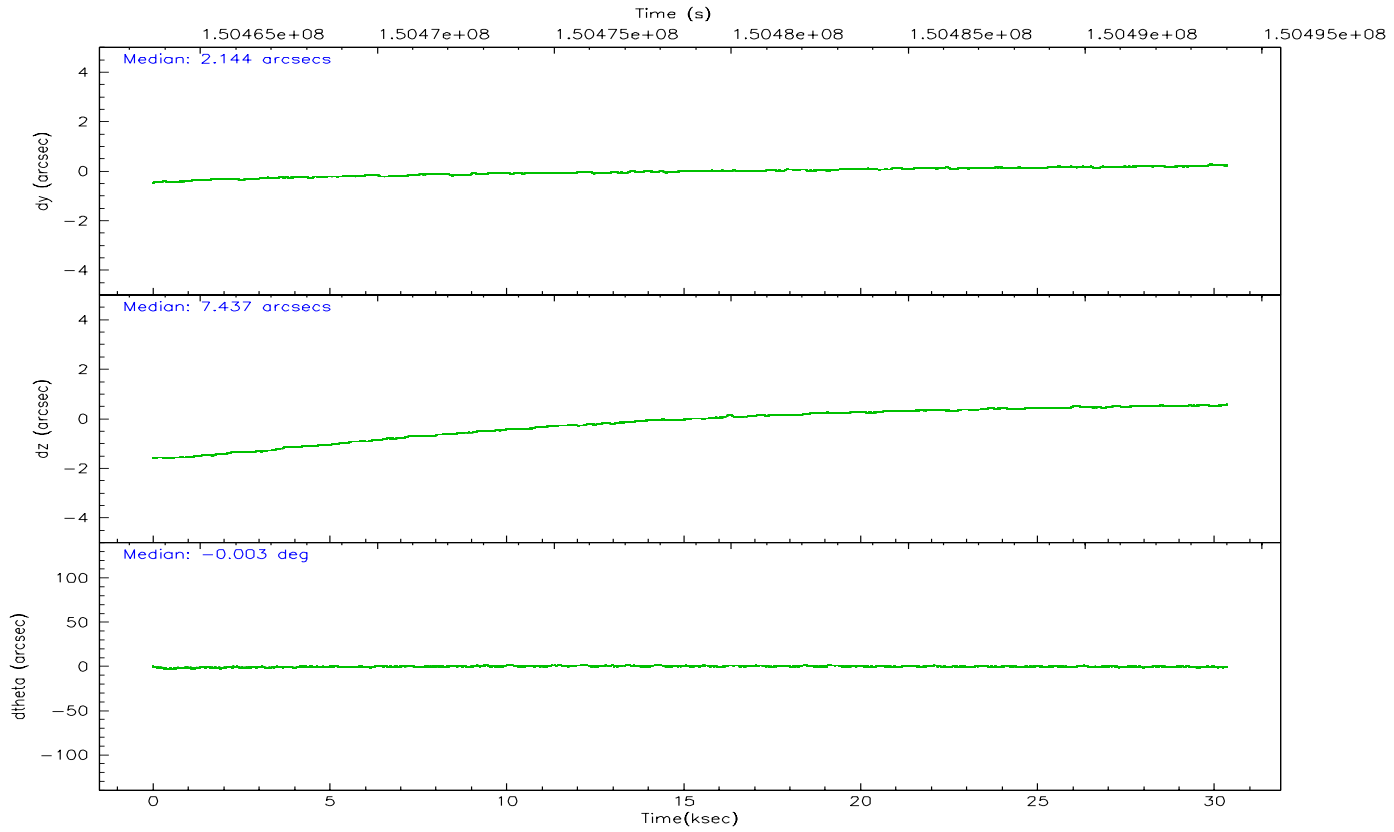
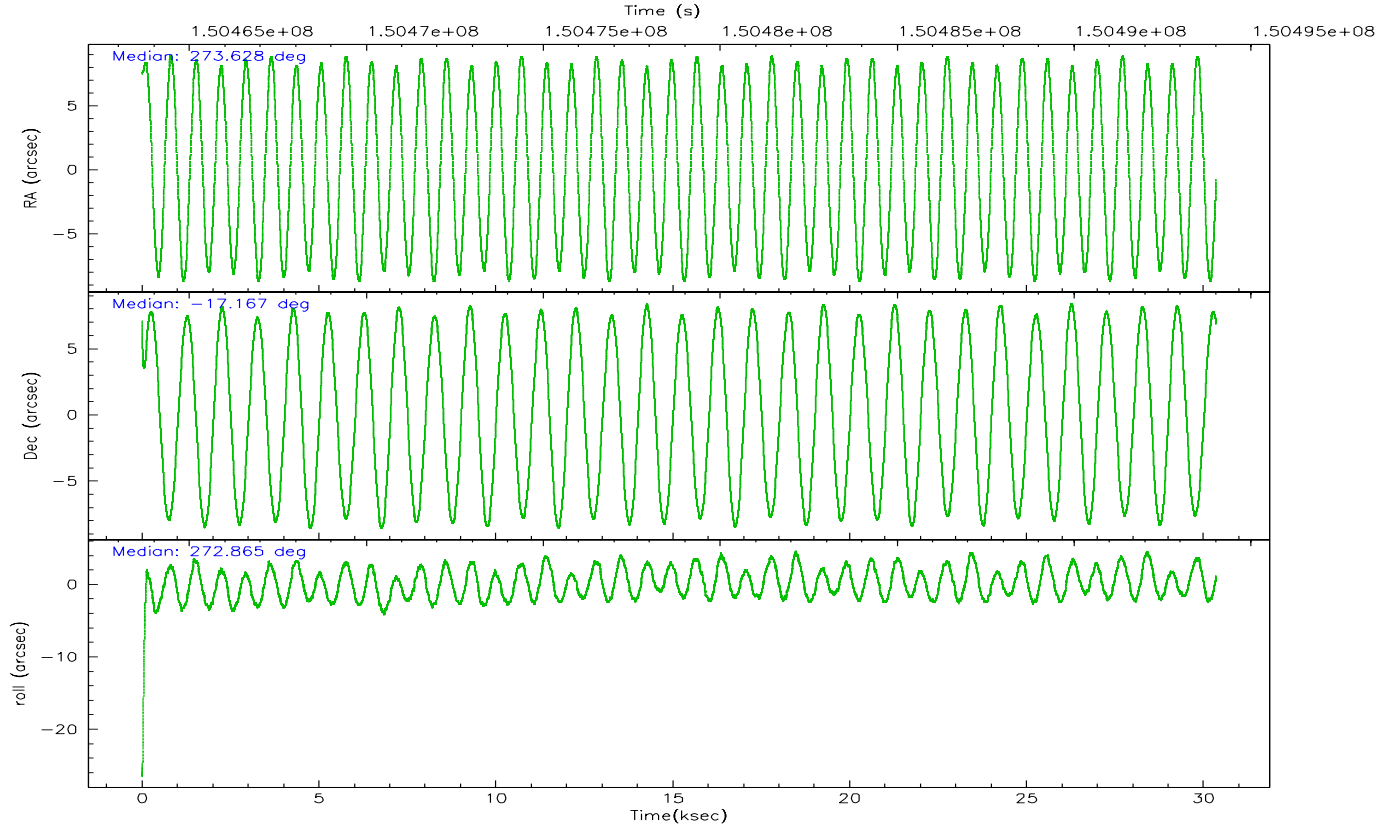
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	21854	743185	310631	229731
	11%	65%	15%	57%
grade 1 events	246	11006	6818	1155
	0%	0%	0%	0%
grade 2 events	41534	140895	472853	38593
	22%	12%	23%	9%
grade 3 events	8422	48815	187484	13522
	4%	4%	9%	3%
grade 4 events	8343	48380	183400	13280
	4%	4%	8%	3%
grade 5 events	6800	12448	43549	4511
	3%	1%	2%	1%
grade 6 events	44521	61234	736873	15577
	24%	5%	35%	3%
grade 7 events	51384	76521	112338	81714
	28%	6%	5%	20%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-5678	ACIS-5678	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	GRADED	GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	273.612107	273.6278827333683	Subarray requested	CUSTOM	CUSTOM
Pointing Dec	-17.144140	-17.1668063229144	Subarray start row	1	1
Pointing Roll	272.709481	272.8707488052421	Subarray row count	350	350
SIM focus pos (mm)	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
SIM defocus (mm)	0	0.001444936568705701	Primary exposure time	0.000000	1.2
SIM translation stage pos (mm)	-182.132523	-182.1370004450064			
SIM translation stage offset (mm)	-8	-7.995522138001405			
Observation start time	150463824.184000	150462840.23823			
Observation start date	2002-10-08T11:29:20	2002-10-08T11:14:00			
Observation end time	150494024.184000	150494680.83955			
Observation end date	2002-10-08T19:52:40	2002-10-08T20:04:40			
Read mode	TIMED	TIMED			

2.3 Aspect



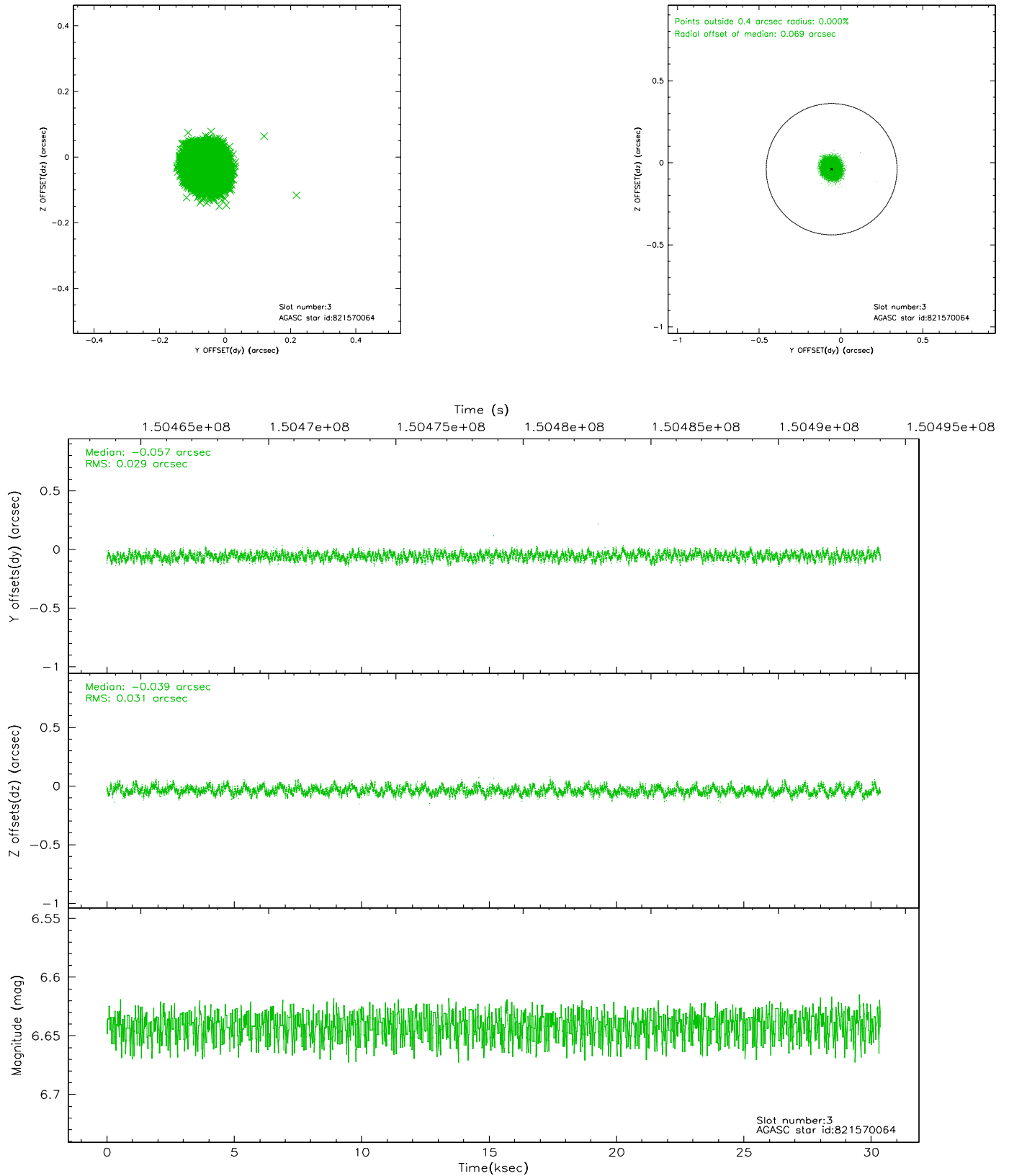


Slot Statistics

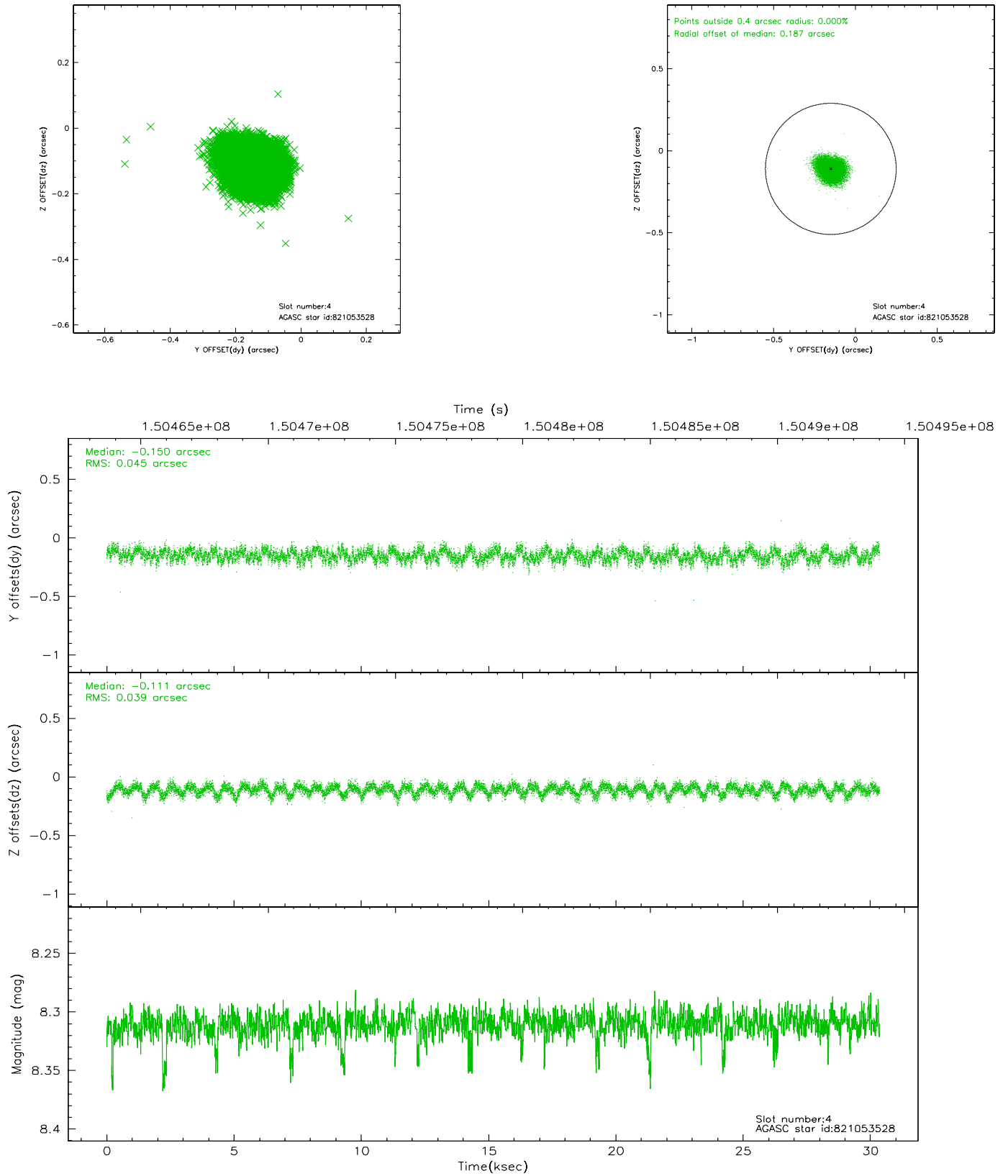
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	7405	-0.034	-0.121	0.013	0.050	0.000000	0.000000	-754.22	-1893.22
1	FID	ACIS-S-4	7.17	7405	0.031	0.048	0.009	0.020	0.000000	0.000000	2159.12	15.28
2	FID	ACIS-S-5	7.23	7405	-0.027	0.081	0.011	0.044	0.000000	0.000000	-1806.94	9.11
3	GUIDE	821570064	6.64	14810	-0.057	-0.039	0.046	0.071	273.185111	-17.414521	905.38	-1510.47
4	GUIDE	821053528	8.31	14805	-0.150	-0.111	0.064	0.100	273.625019	-16.498449	-2319.13	154.61
5	GUIDE	821561440	7.92	14803	0.222	0.086	0.105	0.151	273.991252	-17.607934	1731.25	1221.50
6	GUIDE	821568752	8.28	14809	0.097	-0.076	0.065	0.106	273.050073	-17.733446	2032.03	-2024.67
7	GUIDE	821183504	8.38	14809	-0.104	0.148	0.079	0.128	274.206900	-16.517860	-2151.48	2157.63

2.4 Star Slots

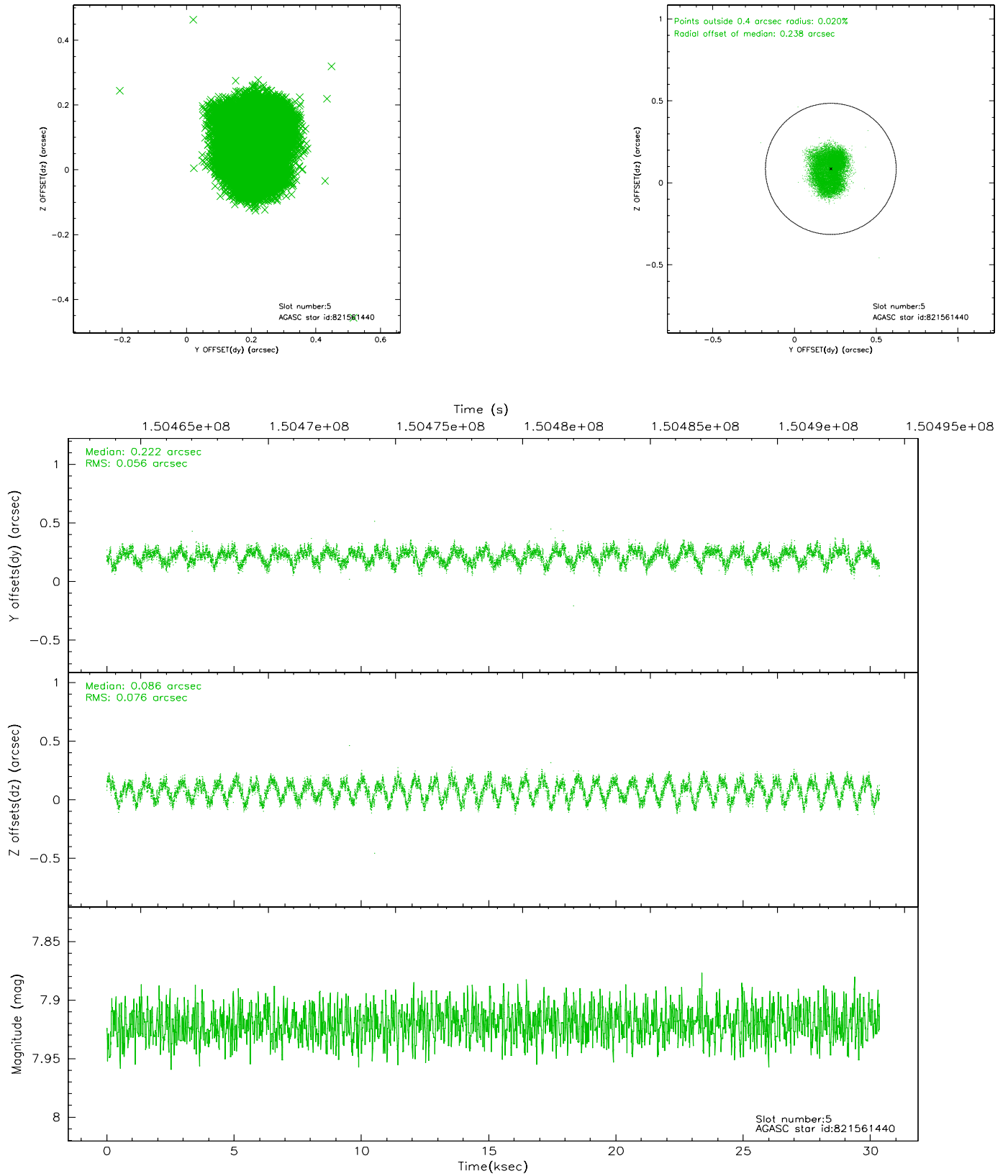
2.4.1 Slot 3



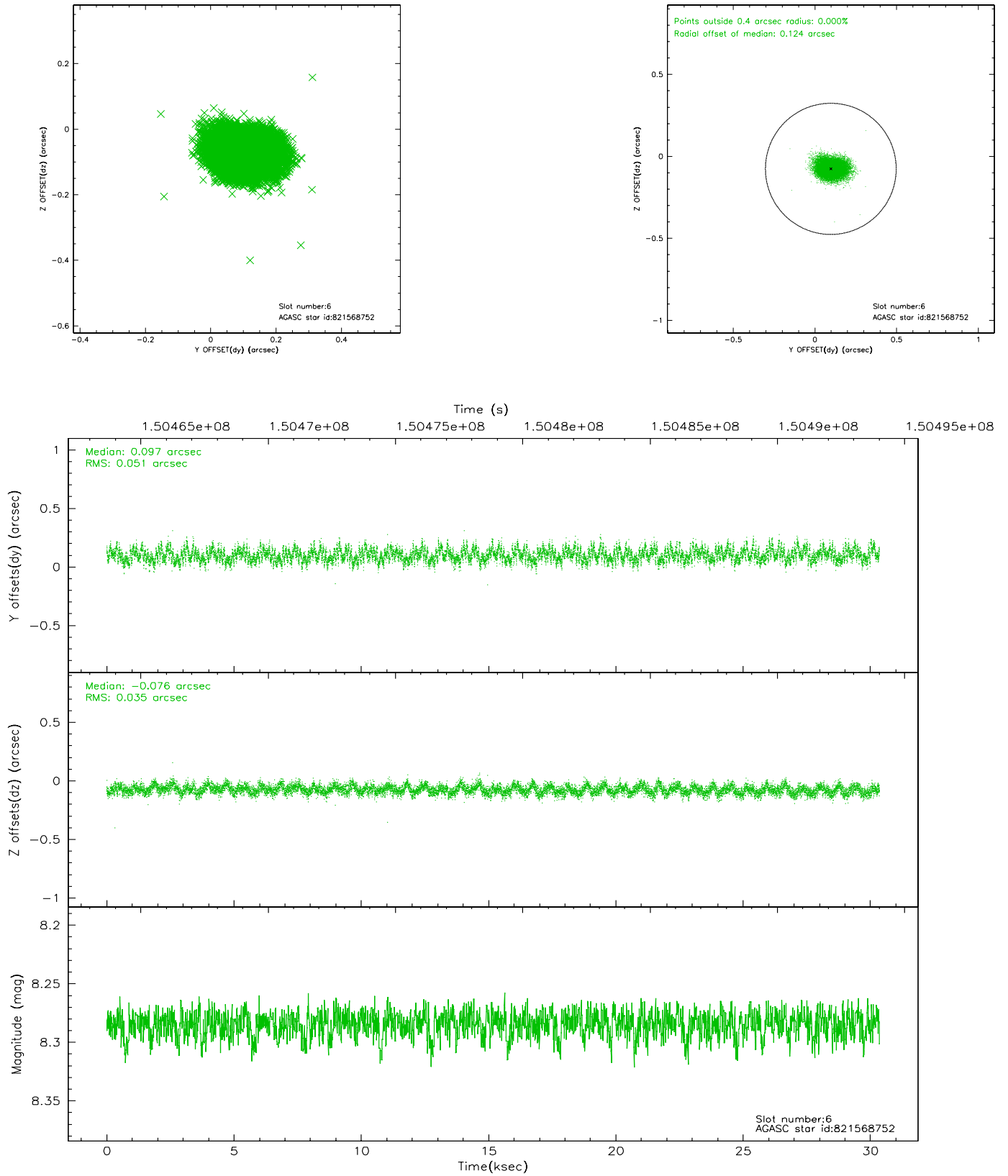
2.4.2 Slot 4



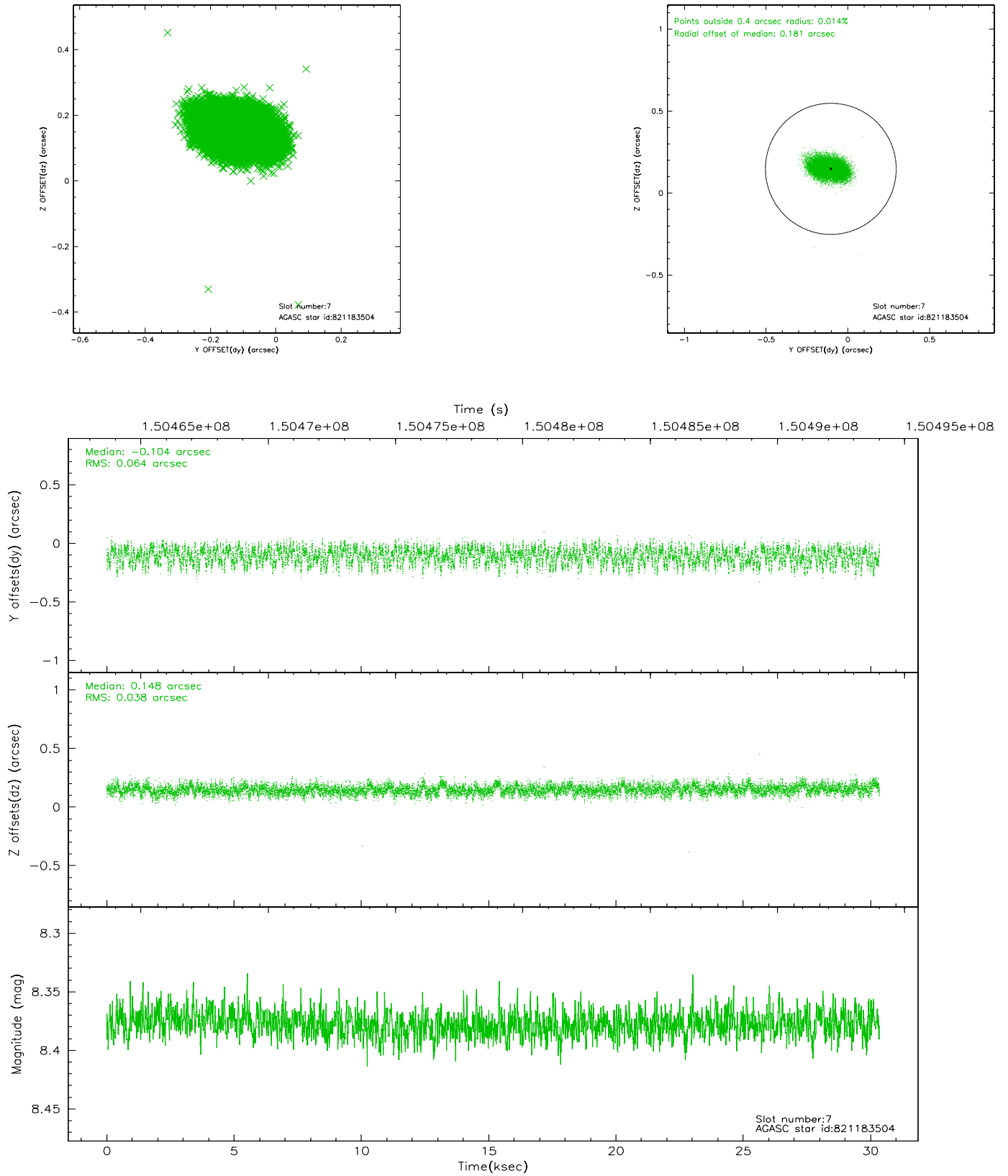
2.4.3 Slot 5



2.4.4 Slot 6

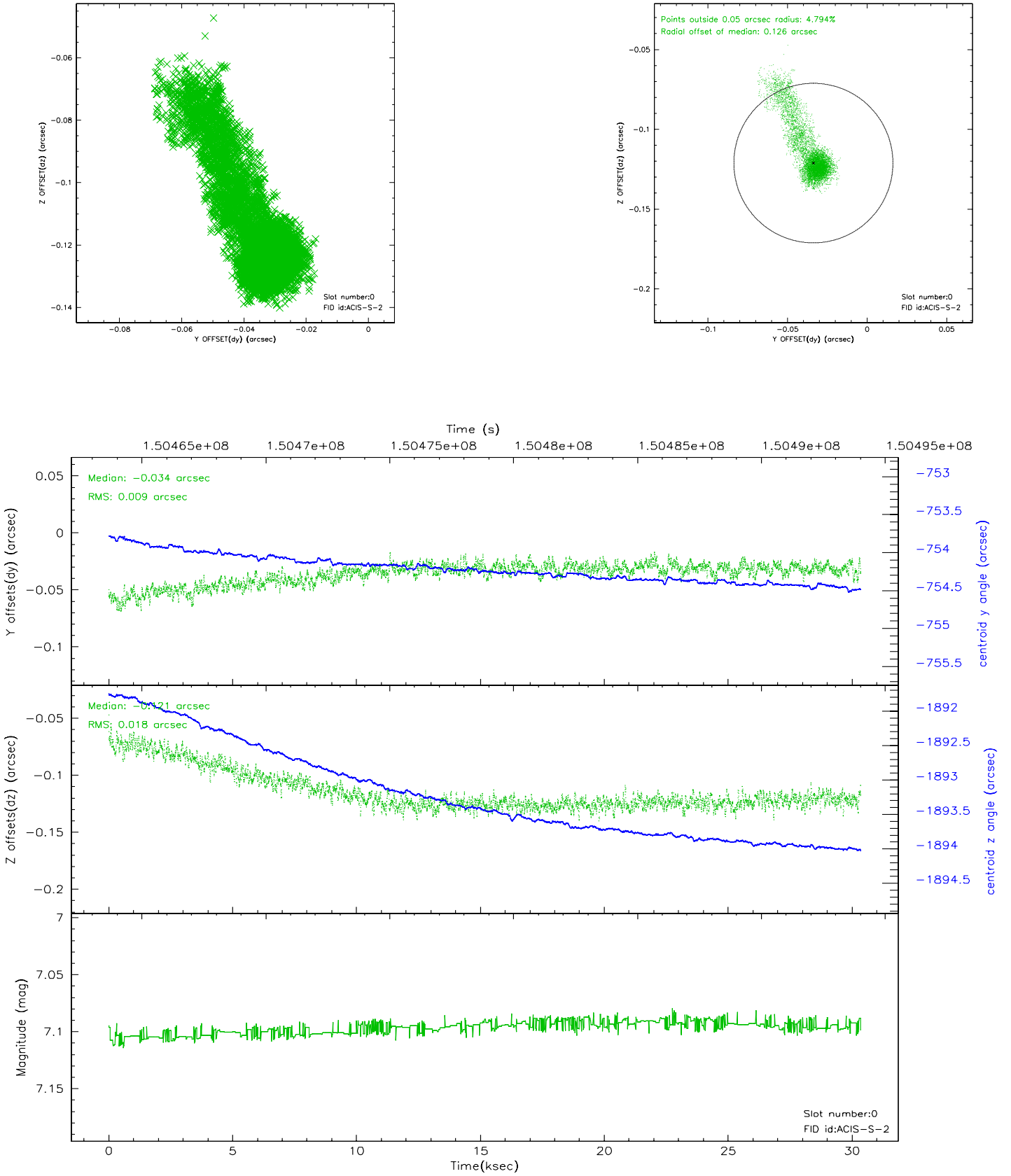


2.4.5 Slot 7

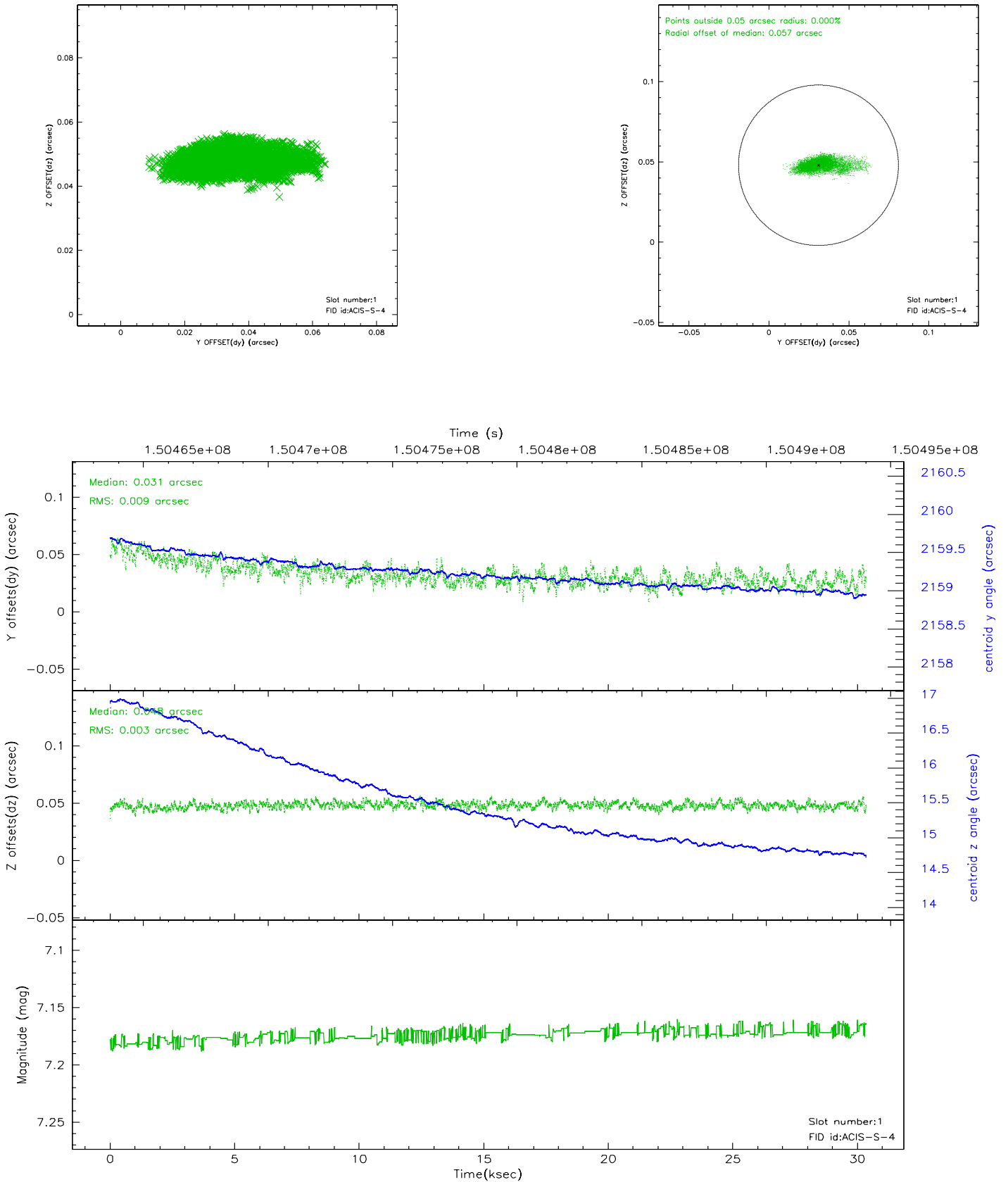


2.5 FID Slots

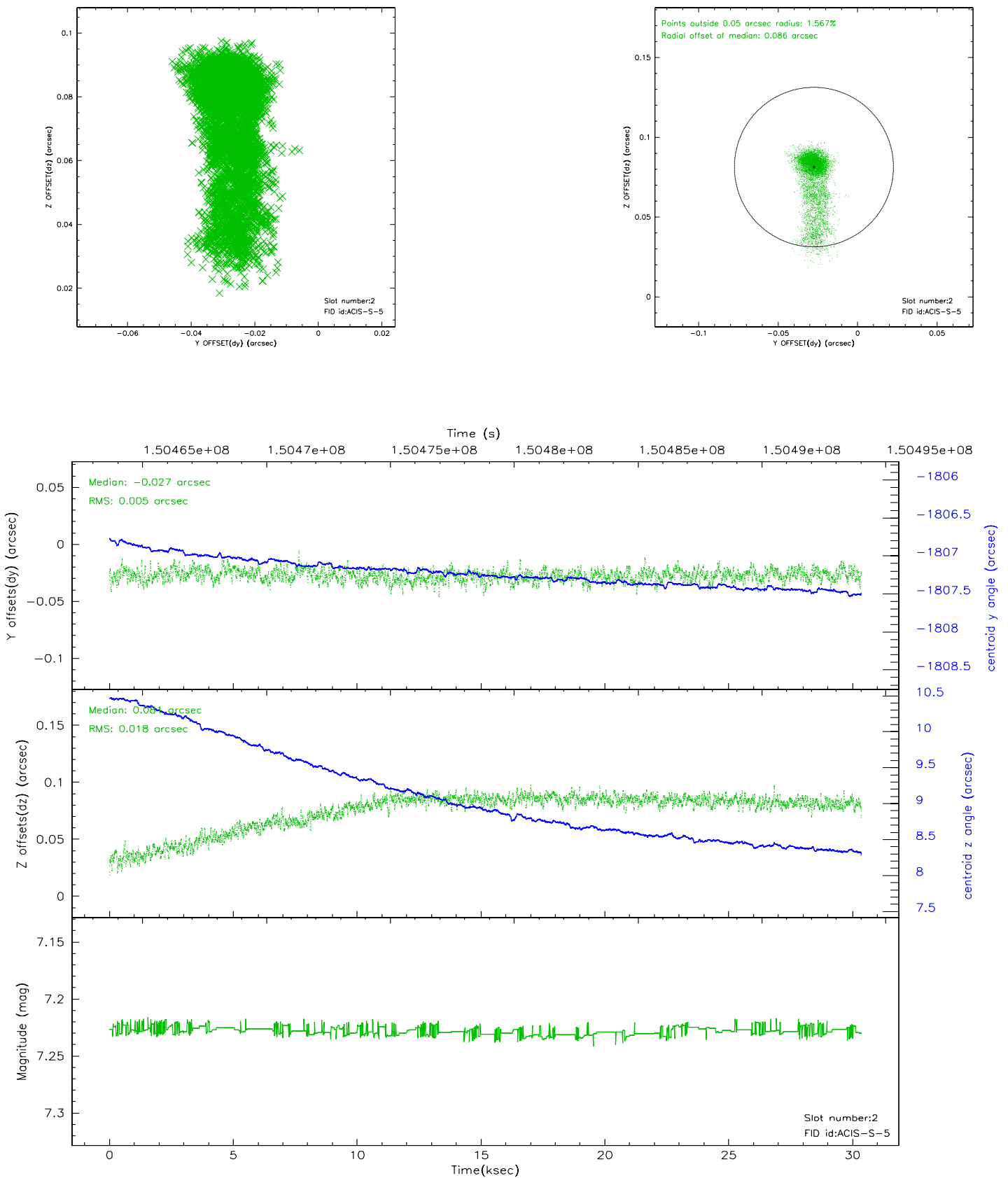
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

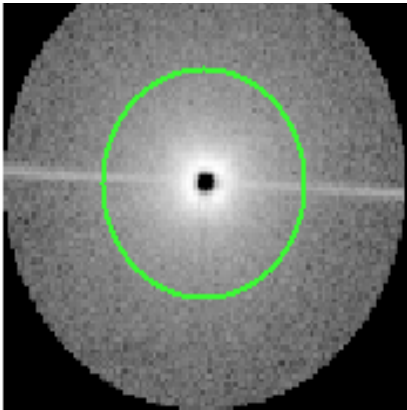


3 Gratings

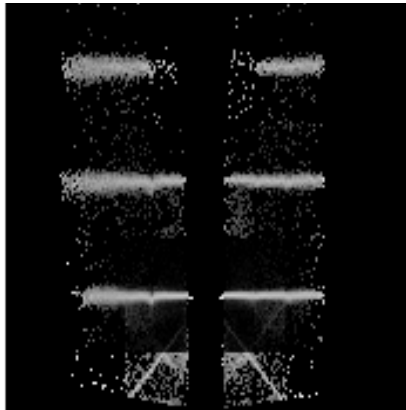
3.1 HEG Arm



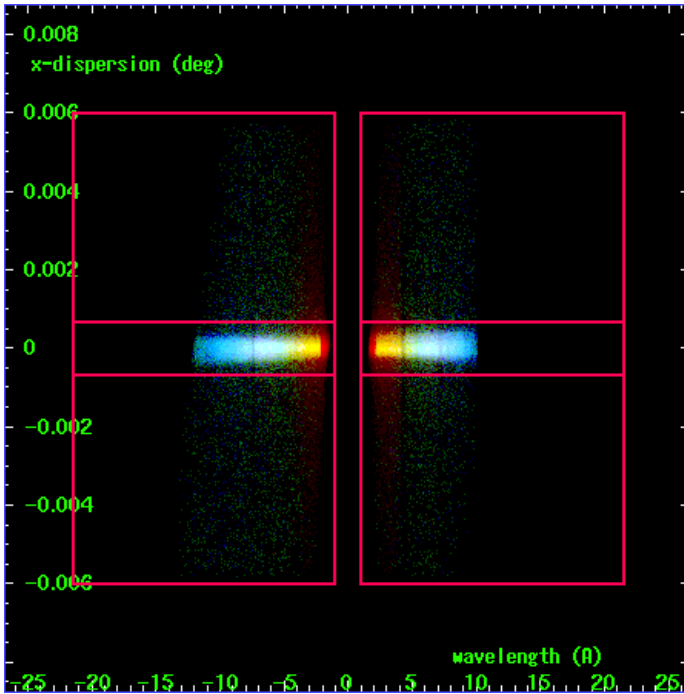
HEG Order Sort 123



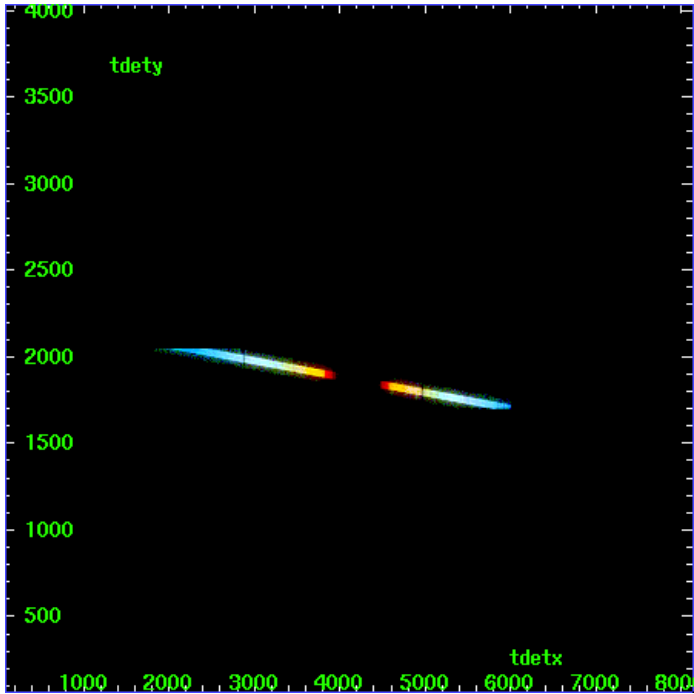
HEG Zero Order



HEG Order Sort ALL

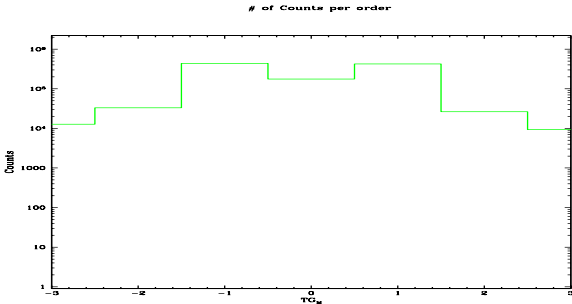


Spot Image HEG

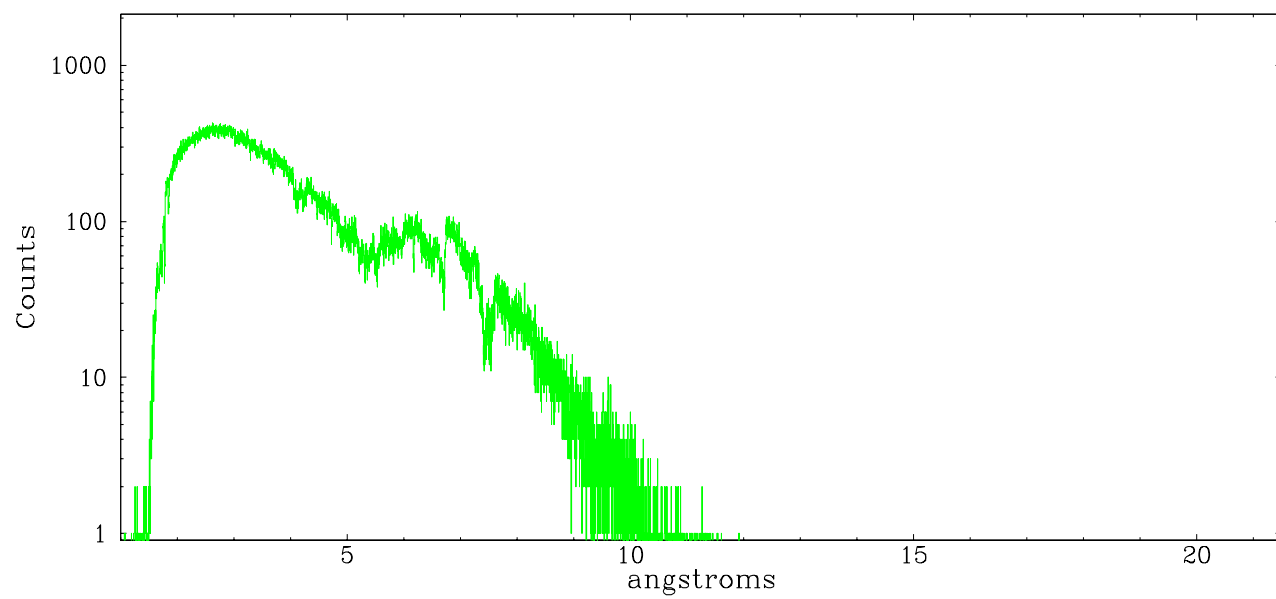


Full Detector HEG

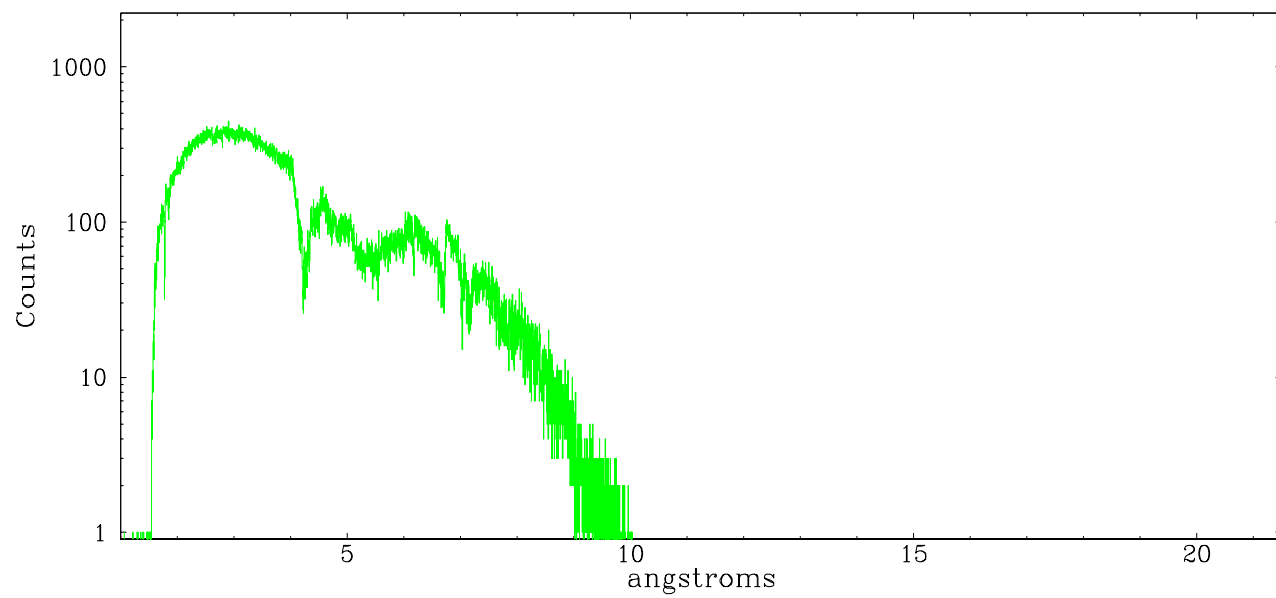
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	12697	33185	438574	176326	424016	26288	9273



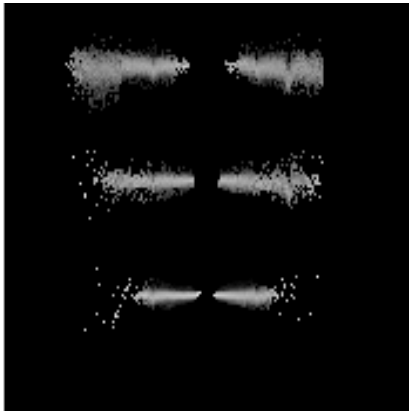
heg order -1



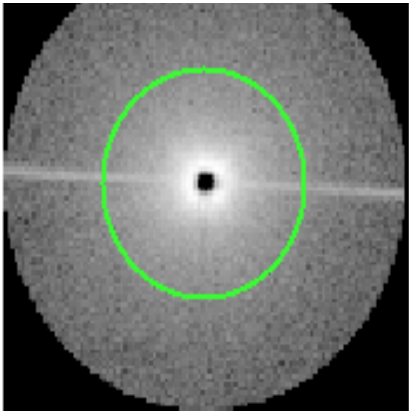
heg order +1



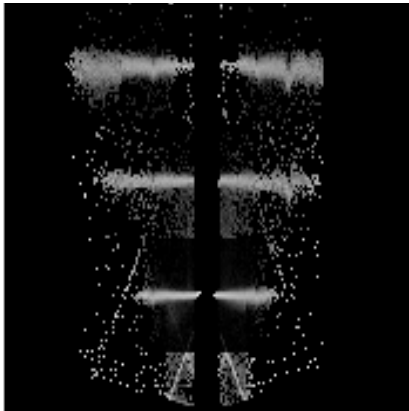
3.2 MEG Arm



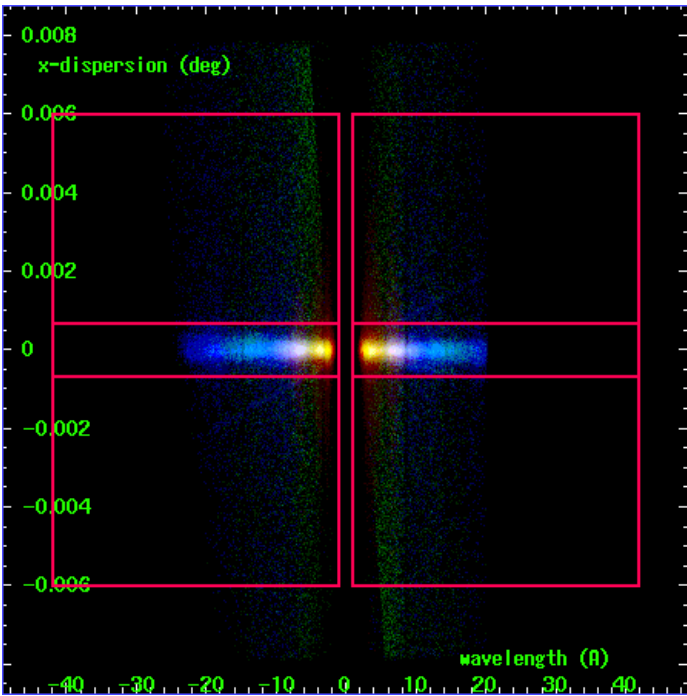
MEG Order Sort 123



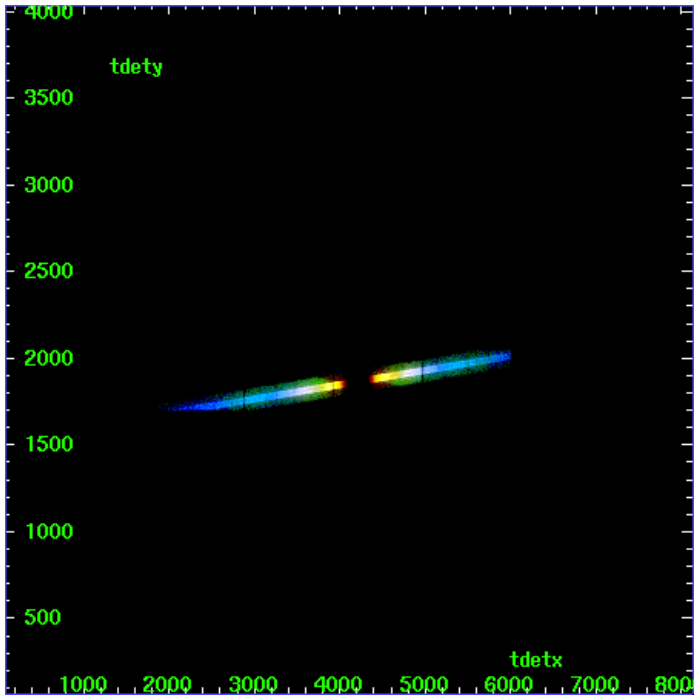
MEG Zero Order



MEG Order Sort ALL

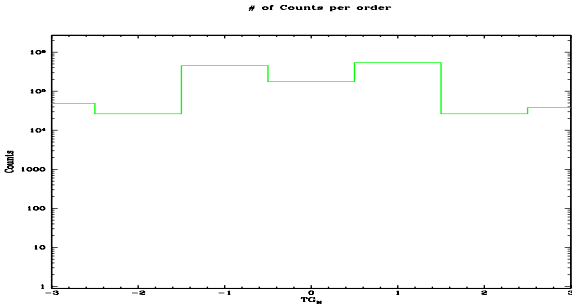


Spot Image MEG

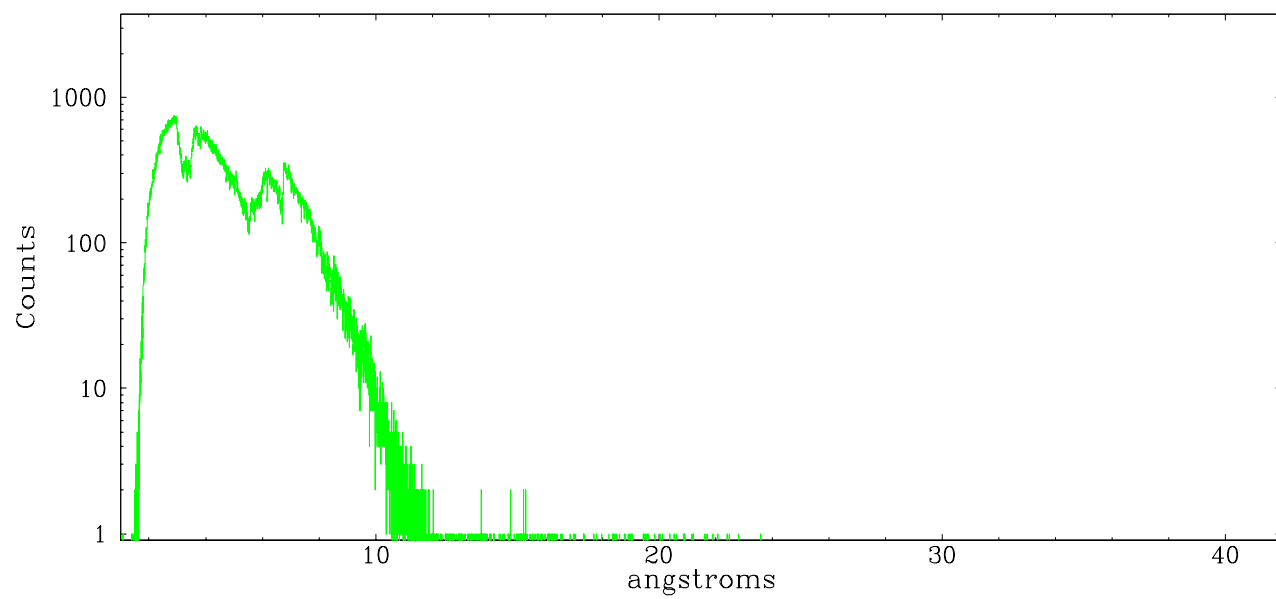


Full Detector MEG

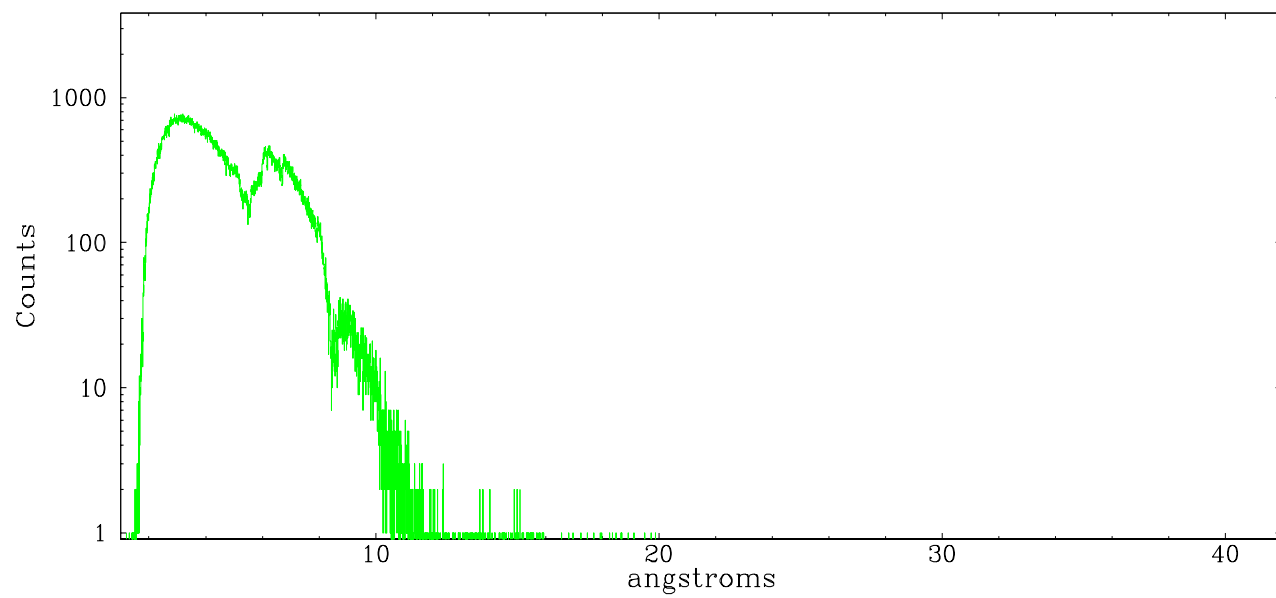
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	48792	26613	453714	176326	542741	26473	38247



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.01.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.357

A.2 Comments

Source is piled up and standard software processing technique using the tool

tgdetect did not give an accurate position for the zeroth order. Zeroth order position for this observation has been determined using the known angle between the readout streak and the meg spectral arm. The newly determined

zeroth order coordinates have been placed in the *src1a.fits file, replacing the coordinates determined by tgdetect. Zeroth order sky coordinates used in this processing of the data are x=4084.96, y=4166.29, ra=18:14:31.085, dec=-17:09:26.17.

The grating spectra show clearly in an image made from bad events. This means that the dispersed spectra are piled.