

V&V Reference Report

L2 ASCDS Version : 7.6.10

Observation 2567 - L2 Version 002
Chandra X-Ray Center

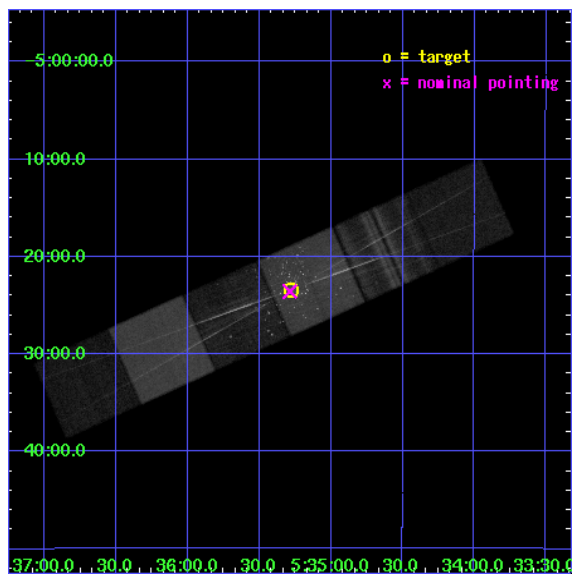
L2 Processing Date : Jan 17 2007

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1 Front

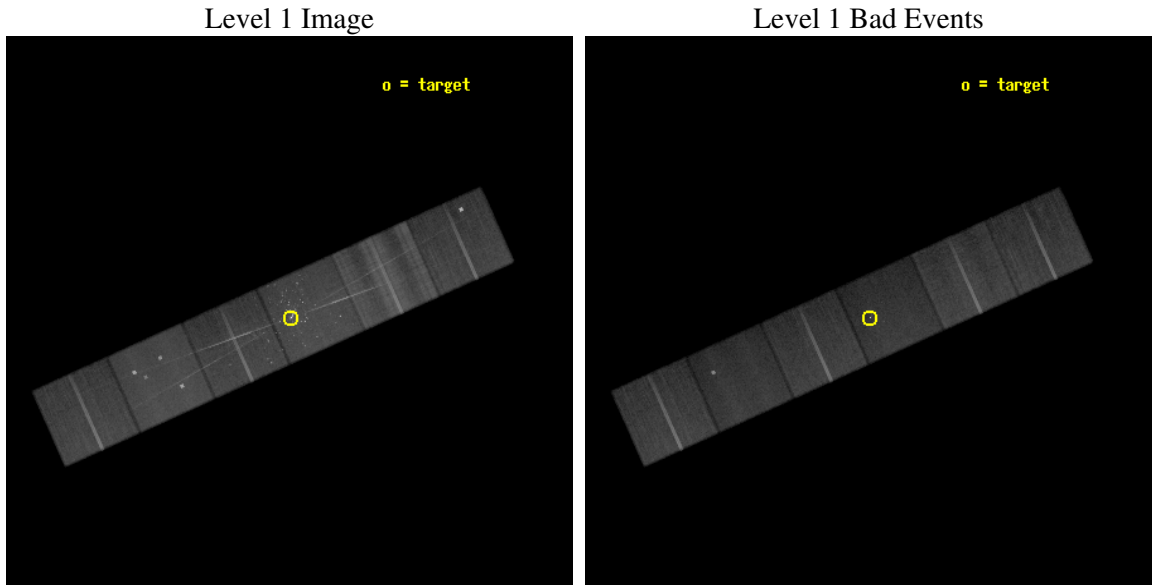
seq_num	200175
obs_id	2567
title	PHASE-RESOLVED SPECTROSCOPY OF THETA-1 ORIONIS C (O7 V)
observer	Marc Gagne
object	HD 37022
dtcycle	0
cycle	P
ra_targ	83.81875
dec_targ	-5.38975
ra_nom	83.821764274288
dec_nom	-5.3929652901081
roll_nom	335.74910284965
revision	3
ontime	46950.359093413
livetime	46355.84537646
ontime4	46950.359143138
ontime5	46953.600043729
ontime6	46953.600043729
ontime7	46950.359093413
ontime8	46953.600043729
ontime9	46947.118093222
l2events	808069



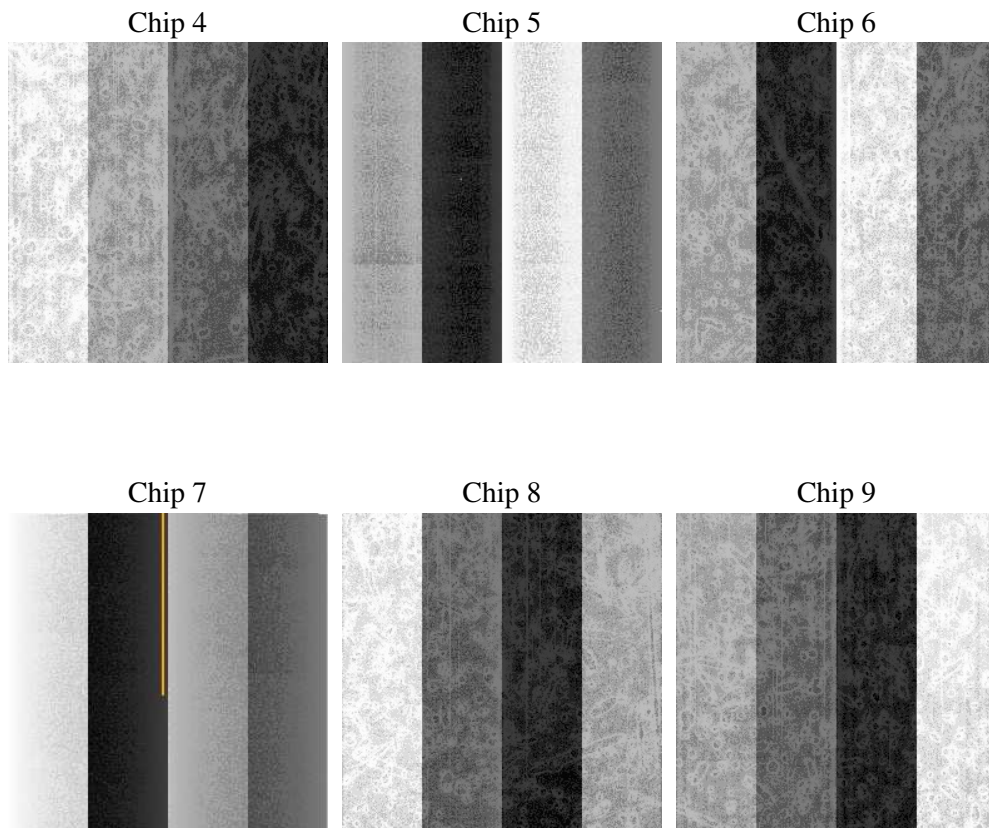
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1
ascdsver	7.6.10
caldbver	3.3.0
date	2007-01-17T03:14:47
revision	3

sched_exp_time	47000.000000
ontime	46950.359093413
ontime4	46950.359143138
ontime5	46953.600043729
ontime6	46953.600043729
ontime7	46950.359093413
ontime8	46953.600043729
ontime9	46947.118093222
l1events	2801493

2.1.4 Events

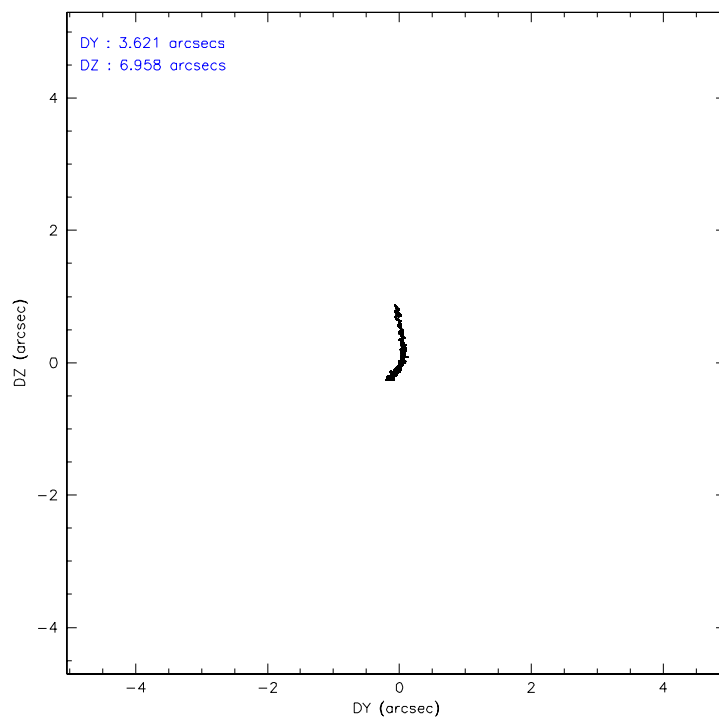
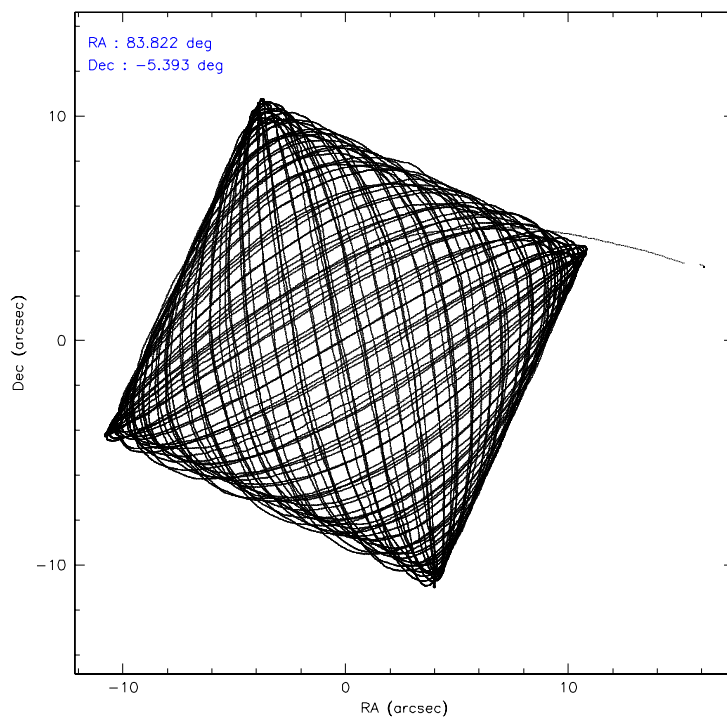
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	402899	498237	416319	520555	585467	378016
rejected events	336873	254366	310727	247073	348306	301480
rejected %	83%	51%	74%	47%	59%	79%

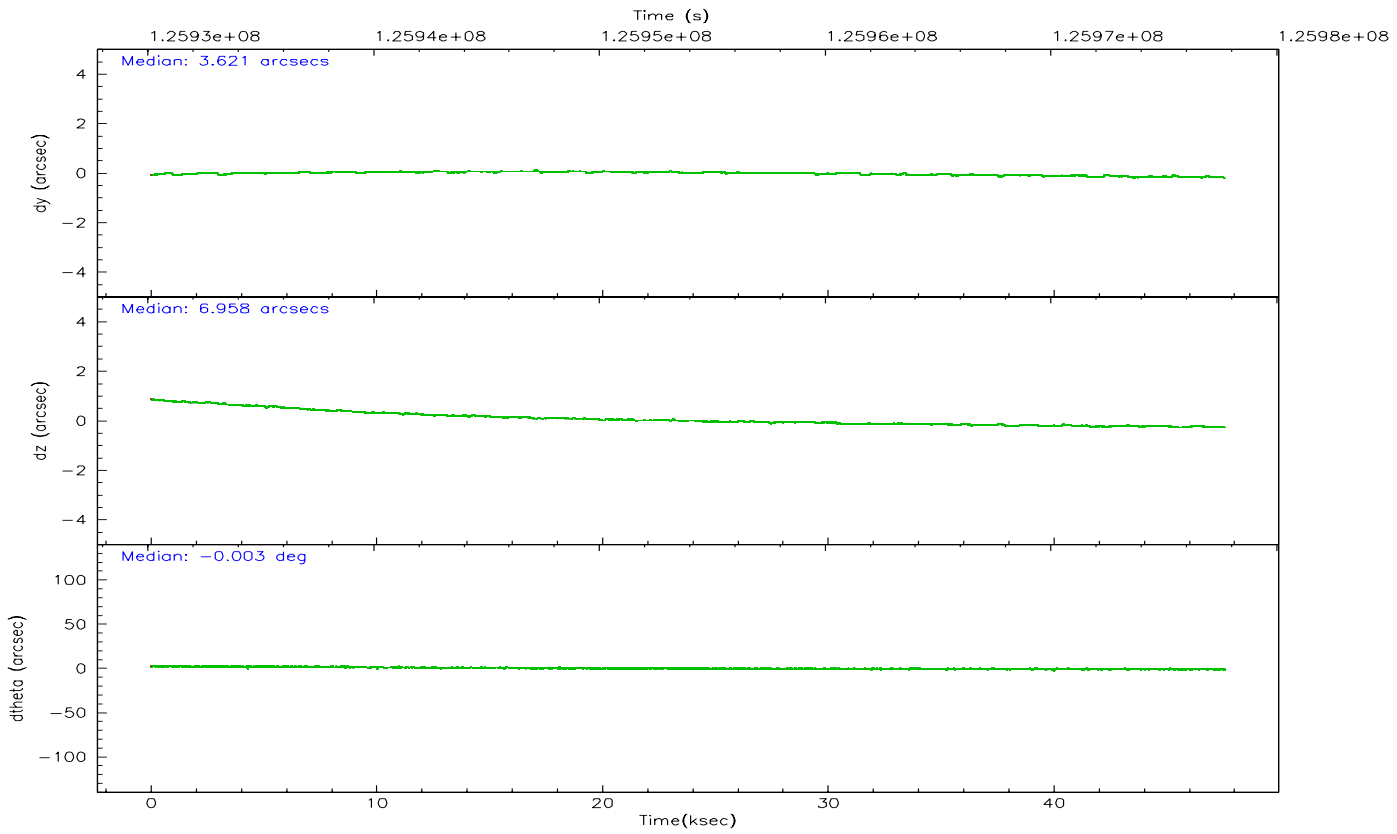
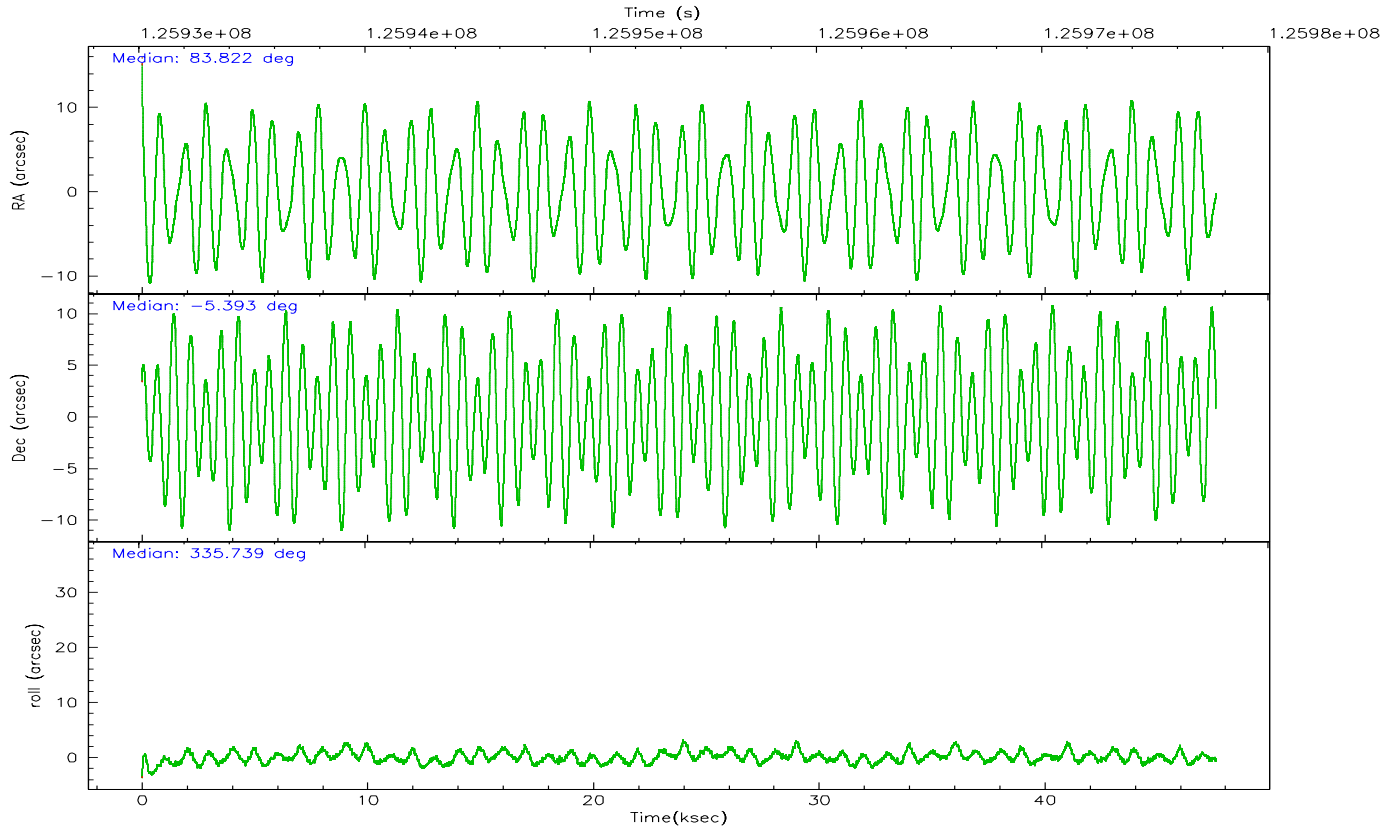
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	27662	37521	60441	39343	90277	39962
	6%	7%	14%	7%	15%	10%
grade 1 events	267	611	378	818	659	280
	0%	0%	0%	0%	0%	0%
grade 2 events	16351	71958	17449	59606	35752	13180
	4%	14%	4%	11%	6%	3%
grade 3 events	4650	11659	6140	26788	34142	4734
	1%	2%	1%	5%	5%	1%
grade 4 events	4658	10684	6048	26400	30087	4710
	1%	2%	1%	5%	5%	1%
grade 5 events	11697	36716	13724	41960	18744	13825
	2%	7%	3%	8%	3%	3%
grade 6 events	12709	112064	15520	121362	46984	13960
	3%	22%	3%	23%	8%	3%
grade 7 events	324905	217024	296619	204278	328822	287365
	80%	43%	71%	39%	56%	76%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	83.794563	83.8217642742882	Subarray requested	NONE	NONE
Pointing Dec	-5.396028	-5.3929652901081	Alternating exposures requested	N	N
Pointing Roll	335.589916	335.7491028496547	Primary exposure time	0.000000	3.2
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-190.132523	-190.1400660498719			
SIM translation stage offset (mm)	0	0.00754346686406393			
Phase constraints	Y	Y			
Phase period	15.422000	15.422000			
Phase epoch	51392.550000	51392.550000			
Phase start	0.979000	0.979000			
Phase end	0.021000	0.021000			
Phase start error	0.030000	0.030000			
Phase end error	0.030000	0.030000			
Observation start time	125930720.184000	125929556.99976			
Observation start date	2001-12-28T12:44:16	2001-12-28T12:25:56			
Observation end time	125977720.184000	125978453.08922			
Observation end date	2001-12-29T01:47:36	2001-12-29T02:00:53			
Read mode	TIMED	TIMED			

2.3 Aspect



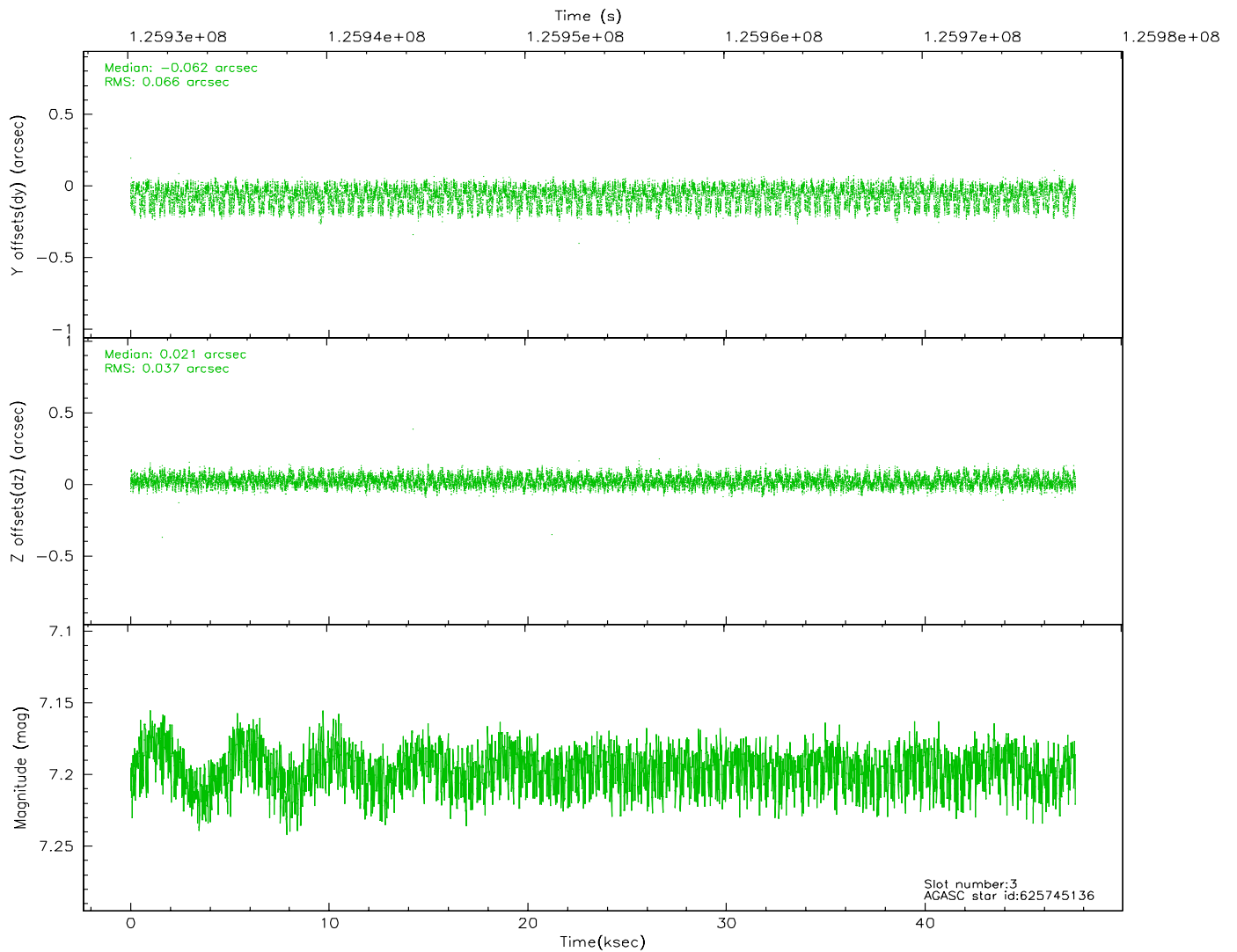
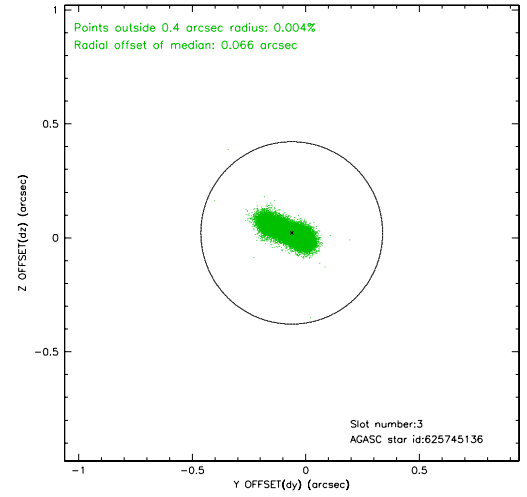
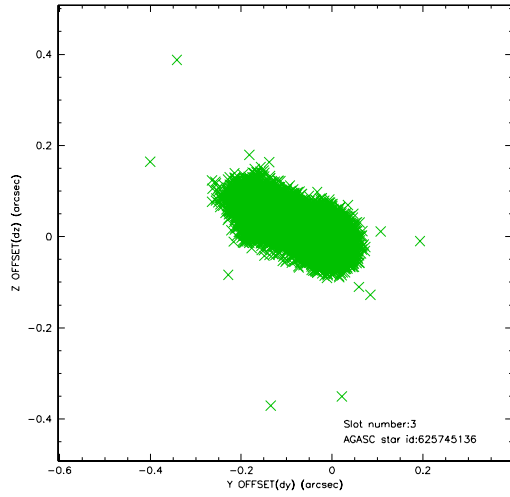


Slot Statistics

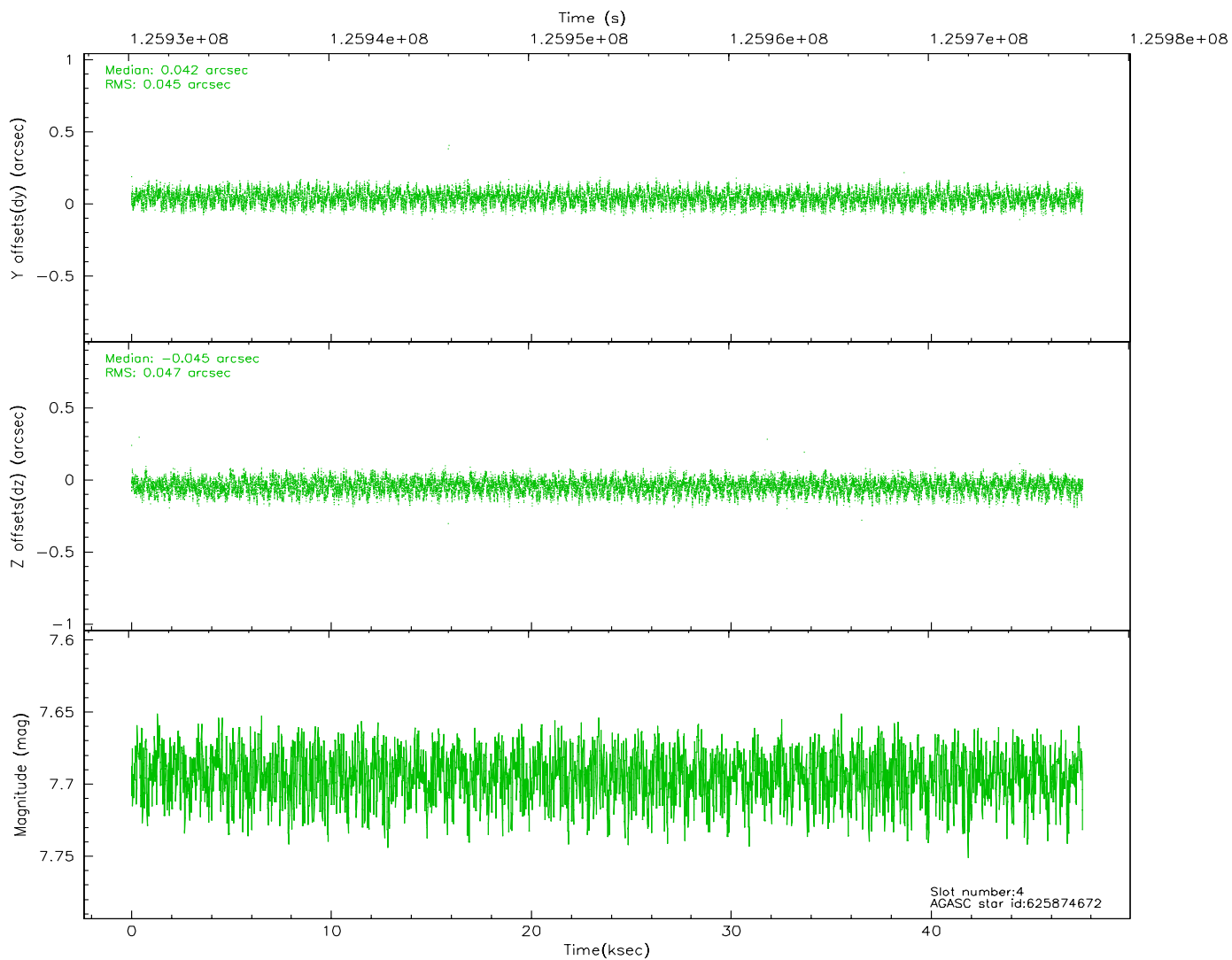
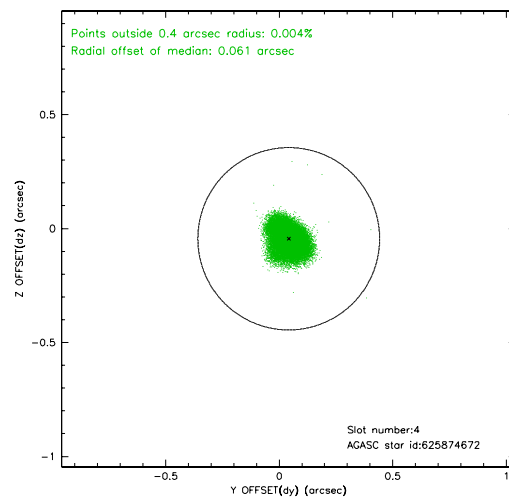
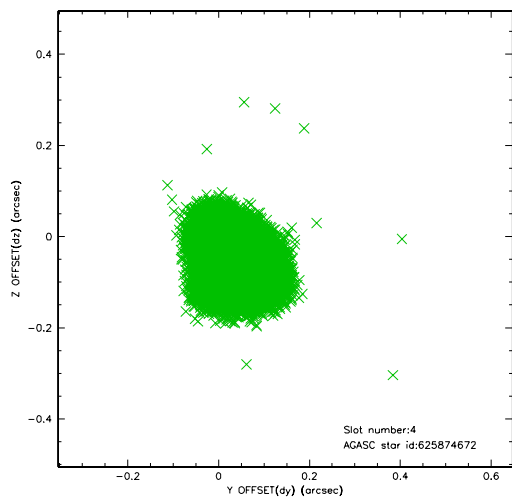
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-3	7.36	11605	-0.083	-0.068	0.011	0.027	0.000000	0.000000	56.83	-1857.34
1	FID	ACIS-S-4	7.20	11603	-0.009	0.077	0.008	0.022	0.000000	0.000000	2157.08	180.32
2	FID	ACIS-S-5	7.24	11605	0.065	0.001	0.008	0.013	0.000000	0.000000	-1809.05	173.96
3	GUIDE	625745136	7.20	23207	-0.062	0.021	0.080	0.135	83.600341	-4.804339	-1515.34	1651.69
4	GUIDE	625874672	7.69	23208	0.042	-0.045	0.071	0.109	84.403143	-4.934124	1300.28	2415.86
5	GUIDE	625745128	7.81	23208	-0.004	-0.012	0.073	0.121	83.769930	-4.731835	-1069.23	2141.00
6	GUIDE	626272880	7.68	23209	-0.022	0.035	0.070	0.109	83.815609	-6.032748	1015.98	-2055.62
7	GUIDE	626272976	7.95	23209	0.045	0.003	0.062	0.102	83.795875	-5.926912	794.27	-1738.11

2.4 Star Slots

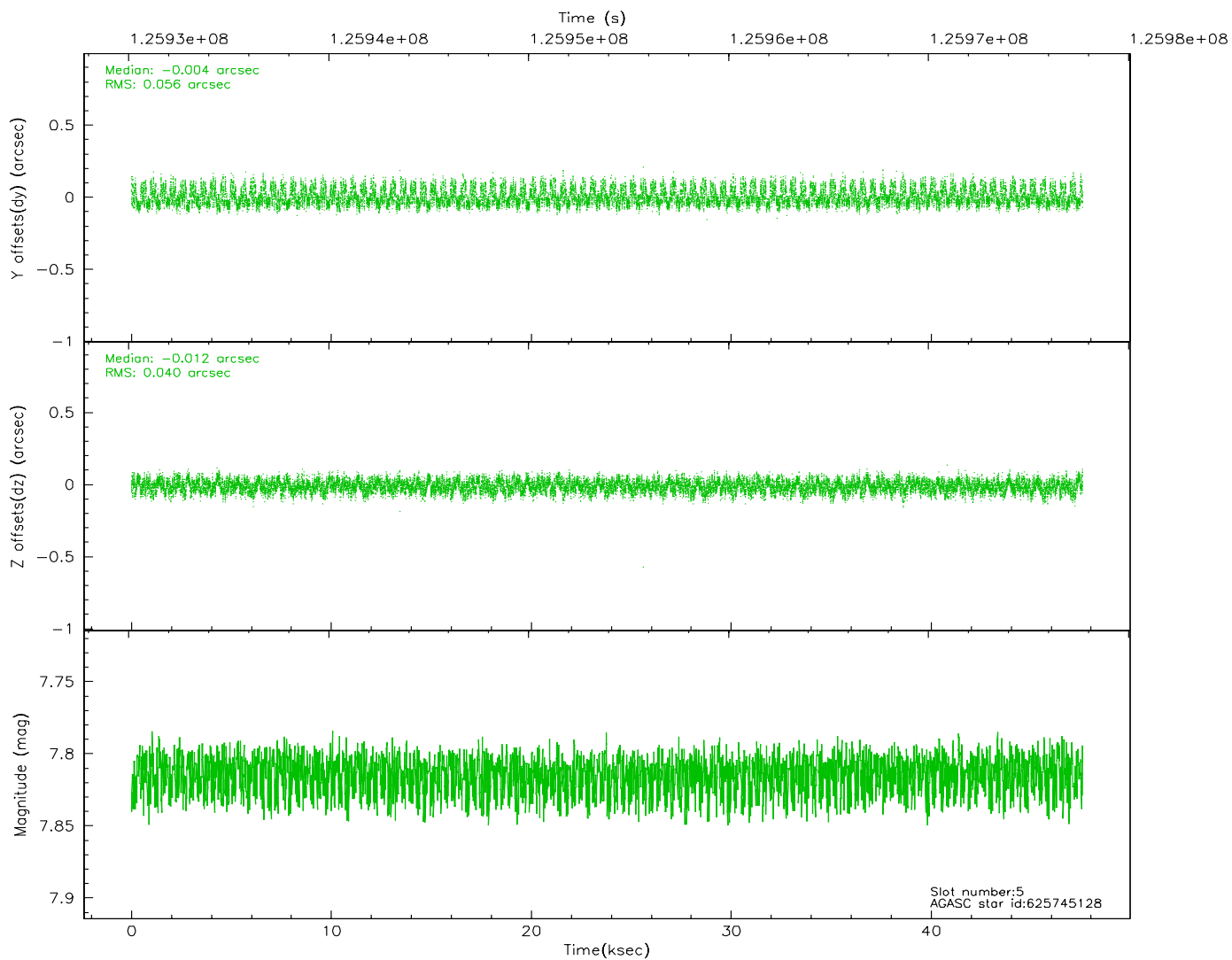
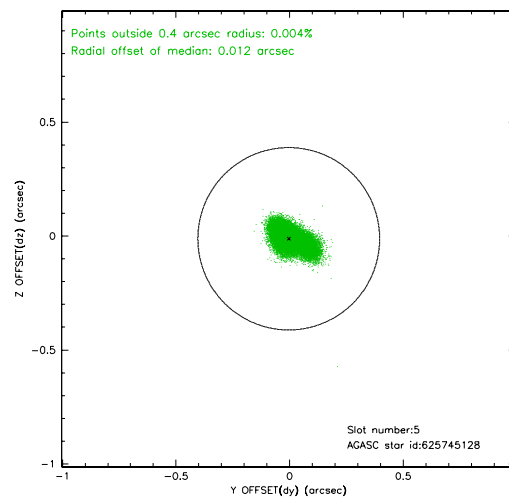
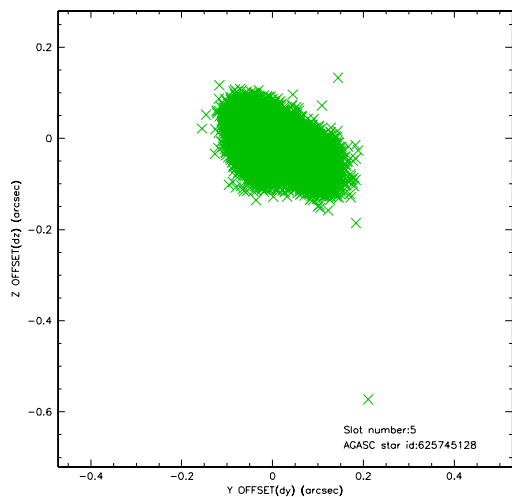
2.4.1 Slot 3



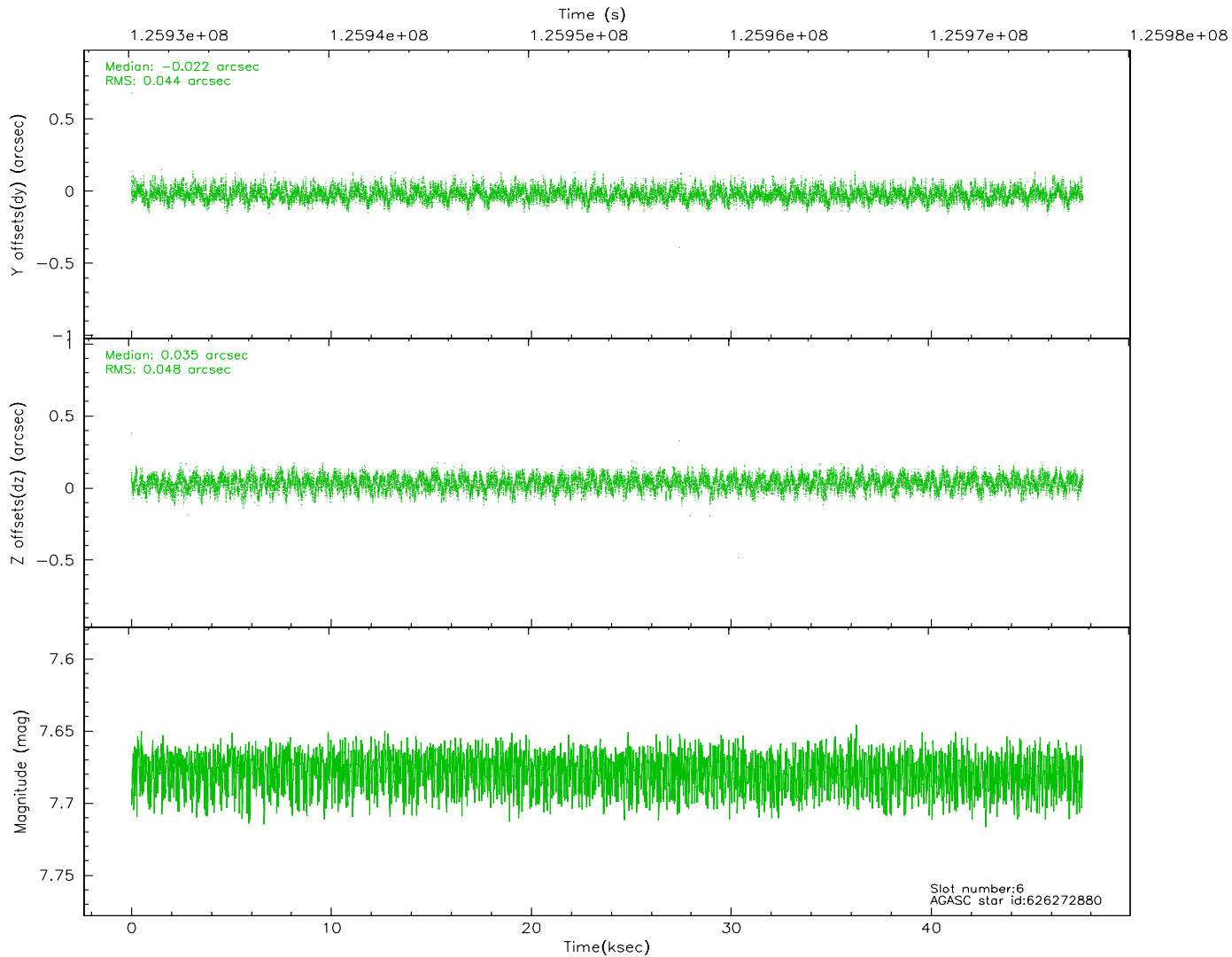
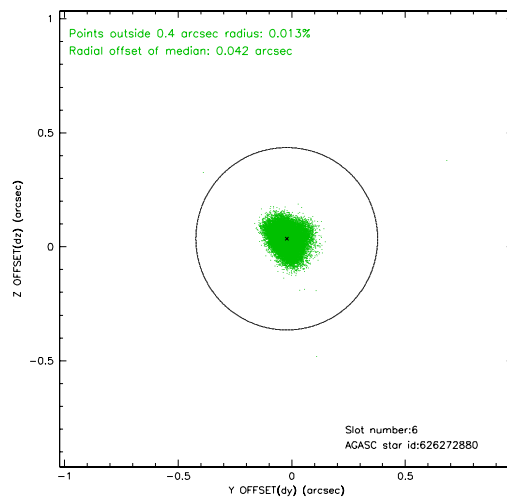
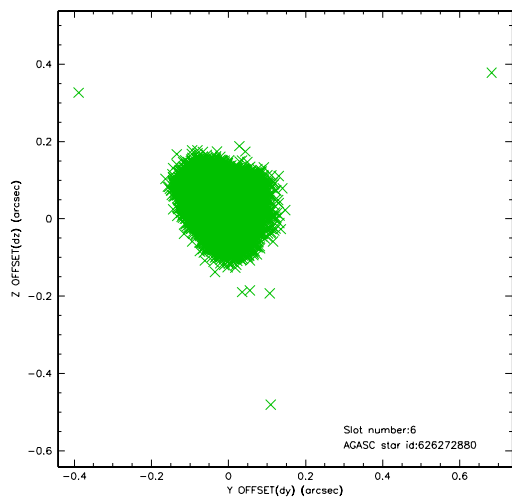
2.4.2 Slot 4



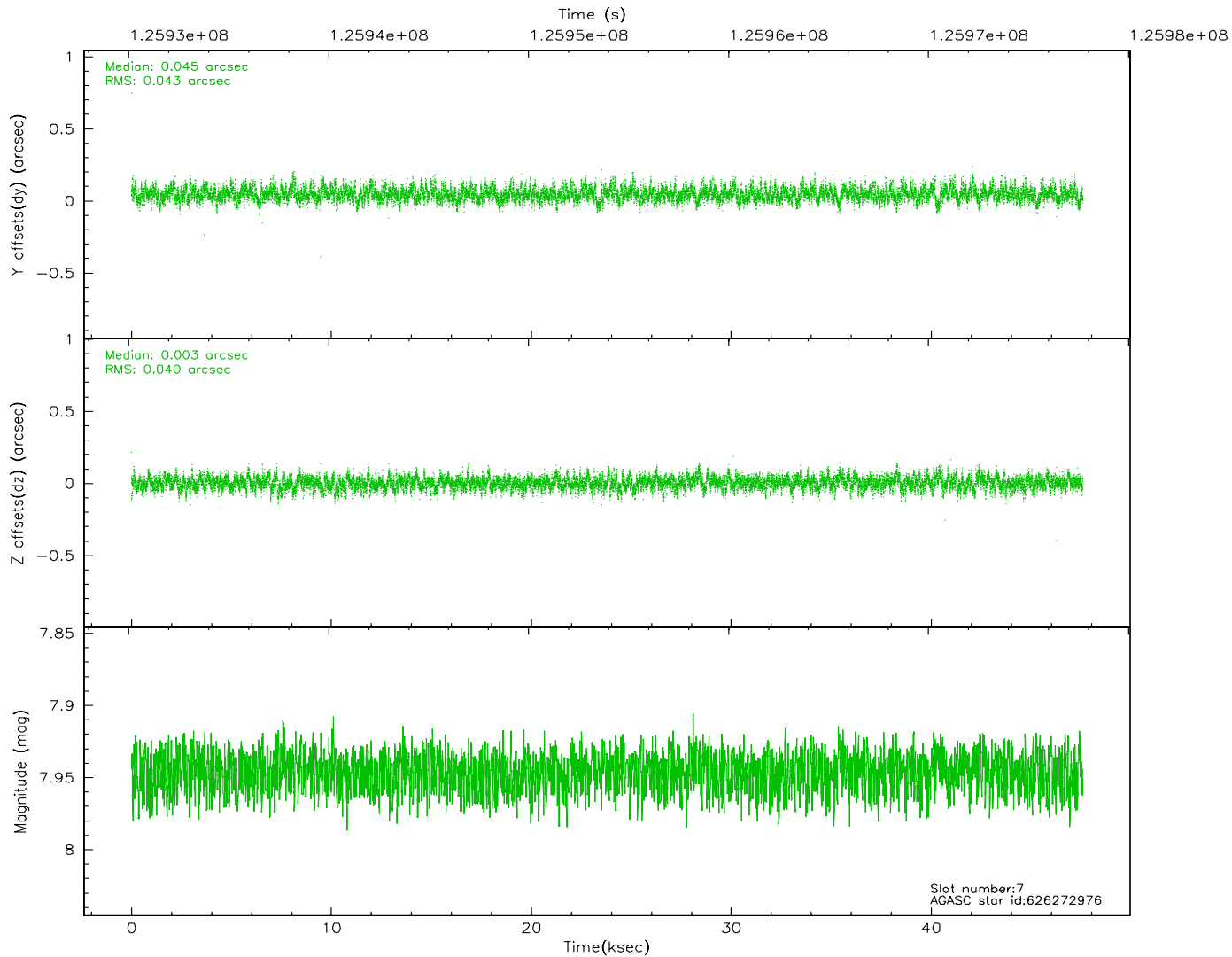
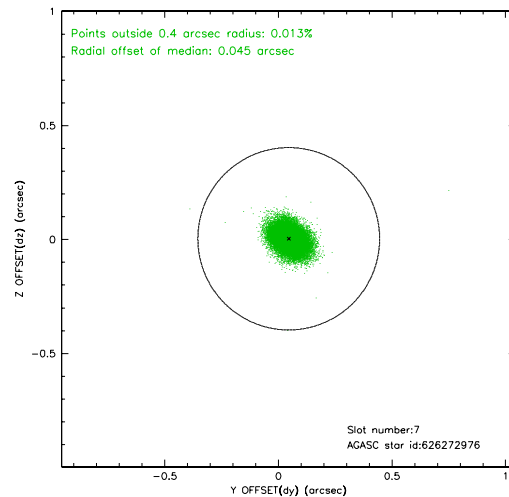
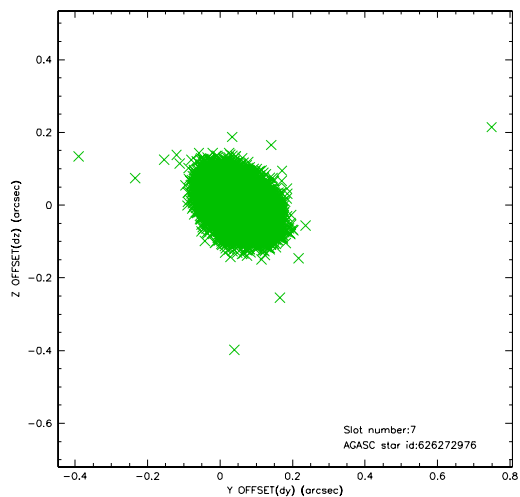
2.4.3 Slot 5



2.4.4 Slot 6

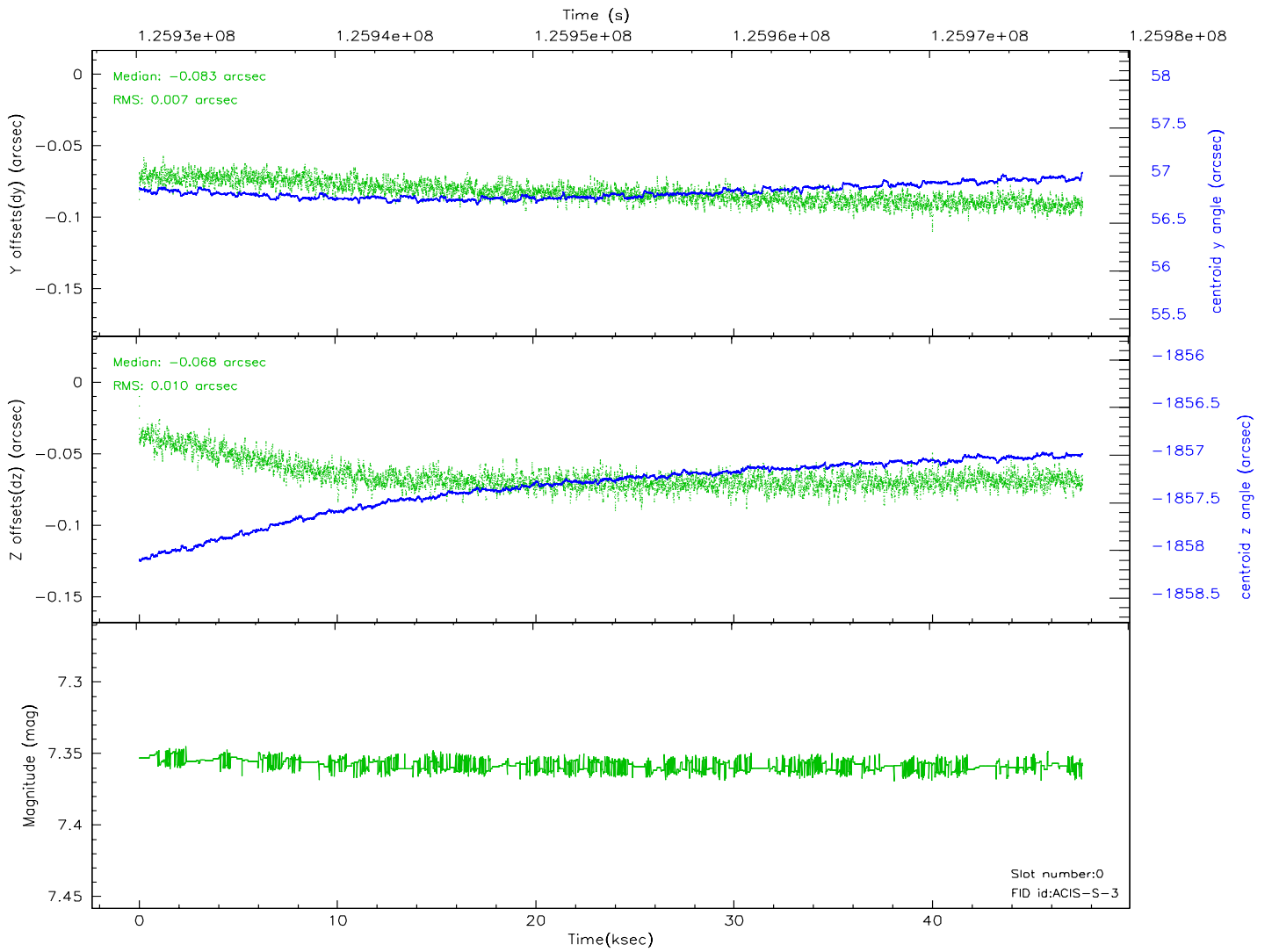
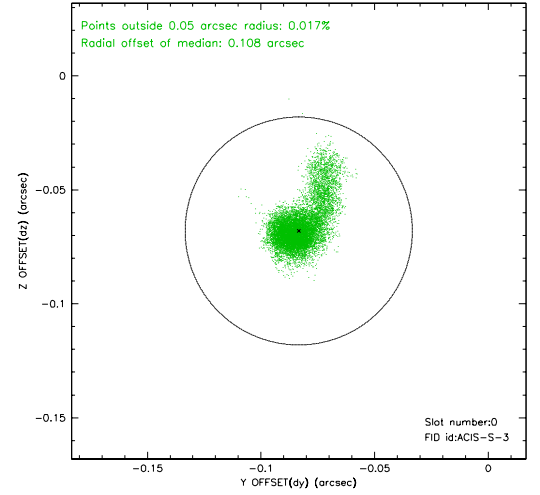
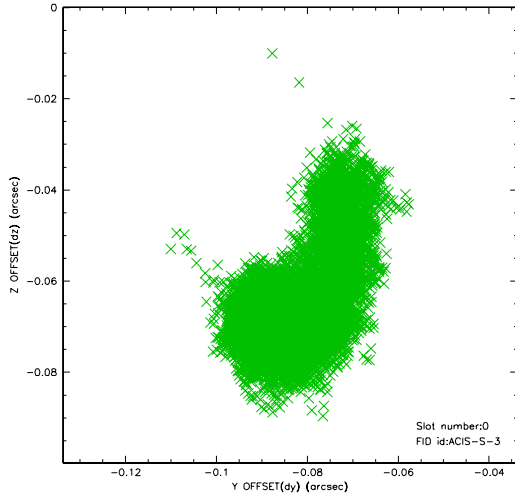


2.4.5 Slot 7

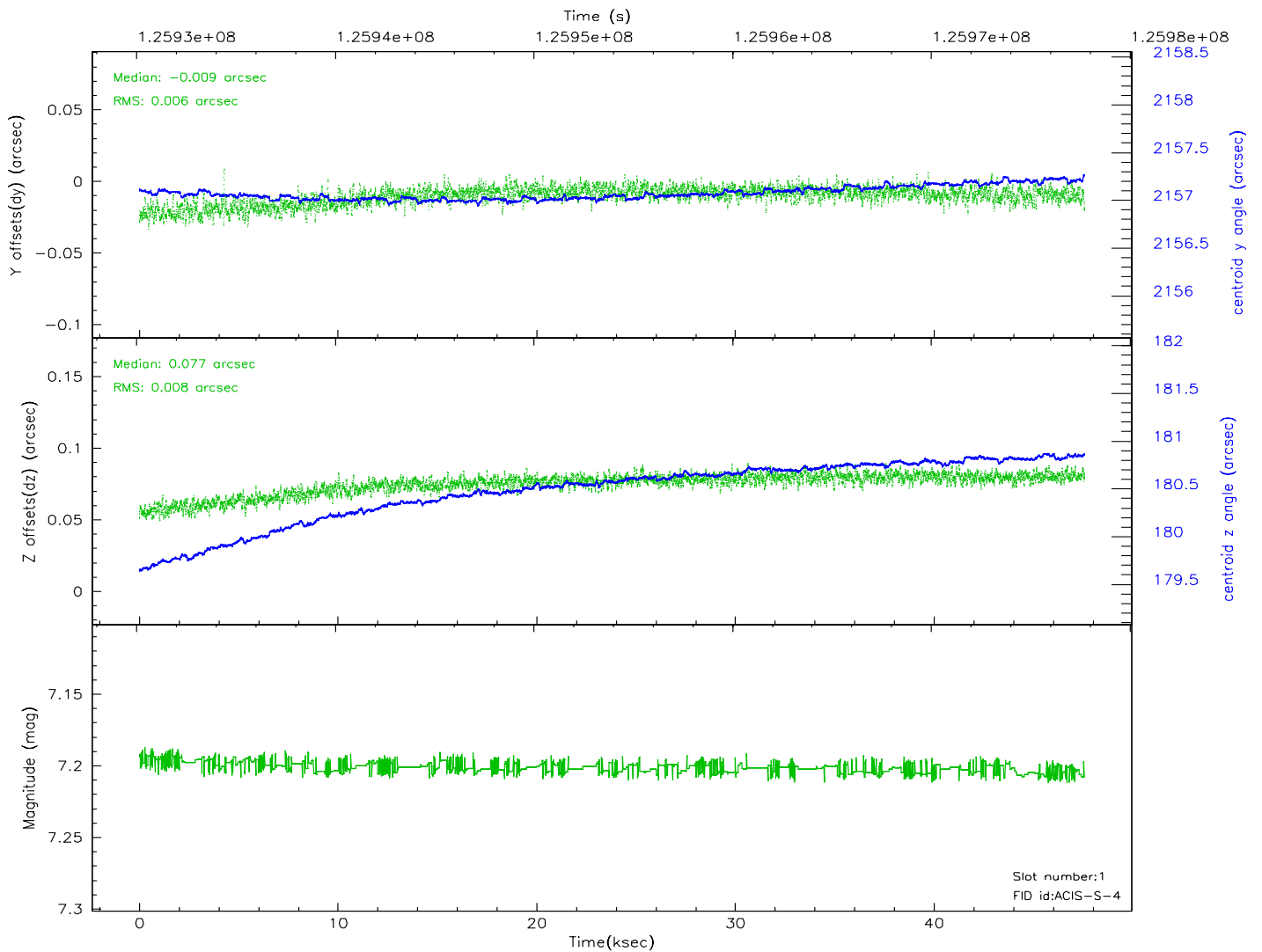
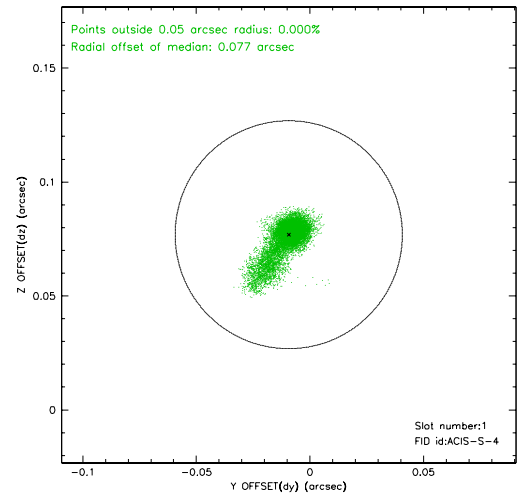
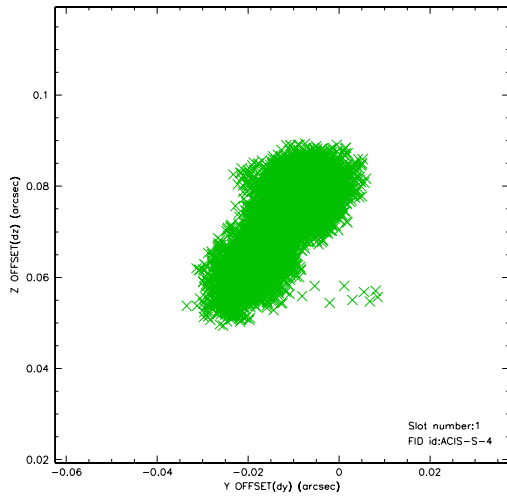


2.5 FID Slots

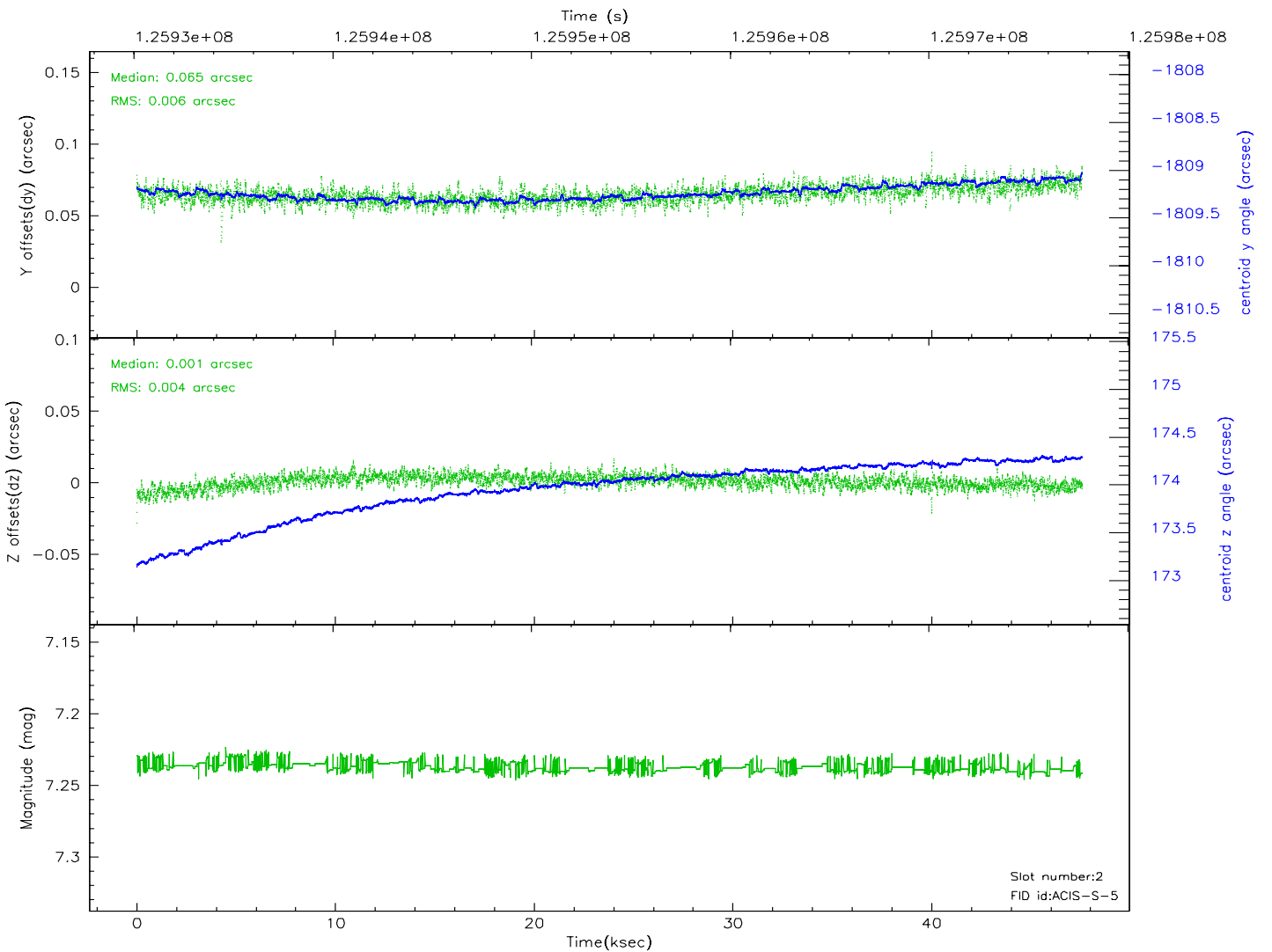
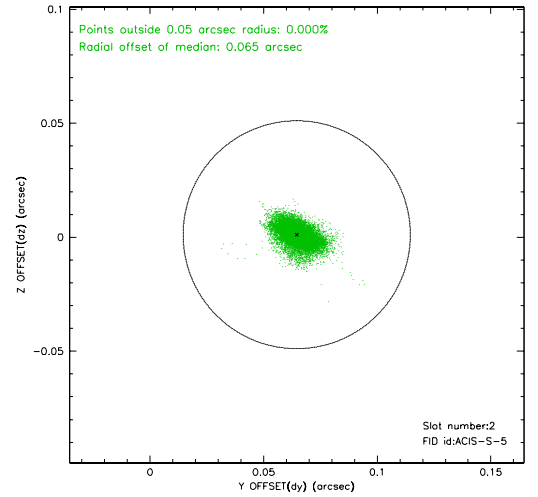
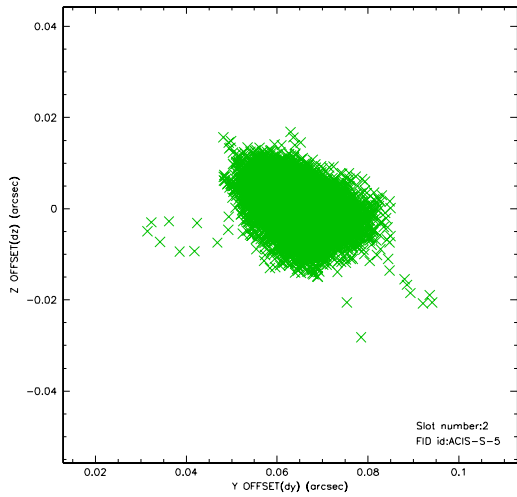
2.5.1 Slot 0



2.5.2 Slot 1

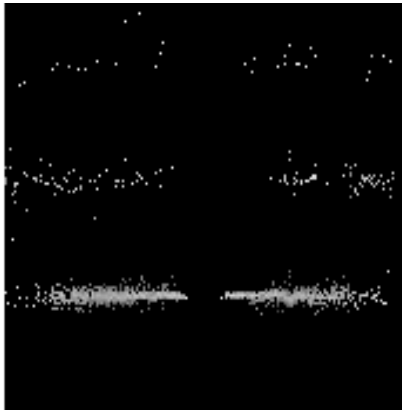


2.5.3 Slot 2

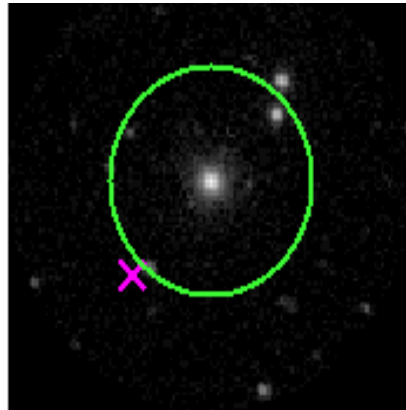


3 Gratings

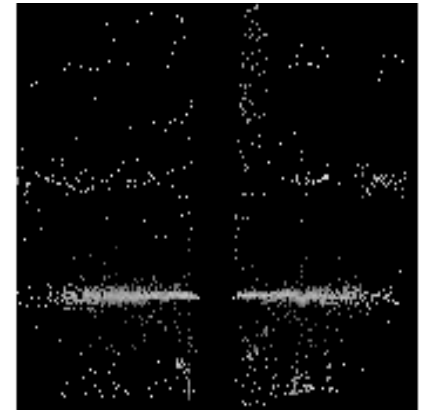
3.1 HEG Arm



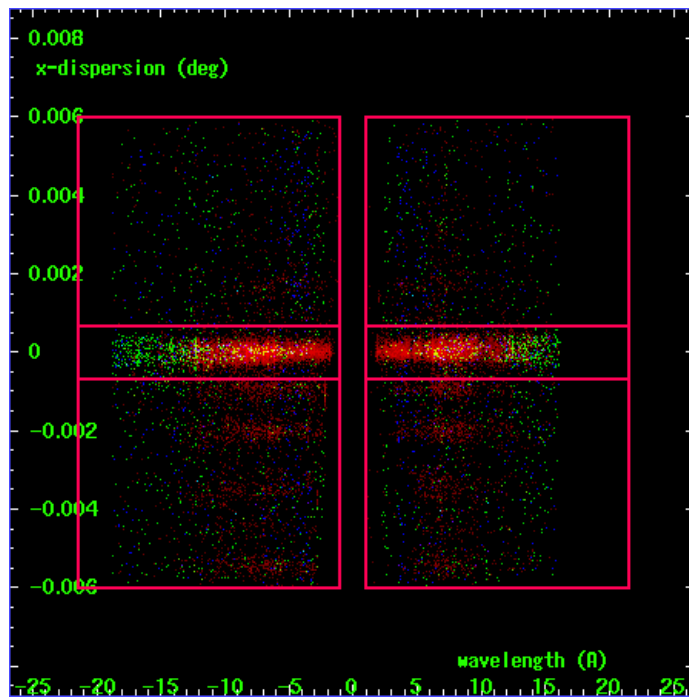
HEG Order Sort 123



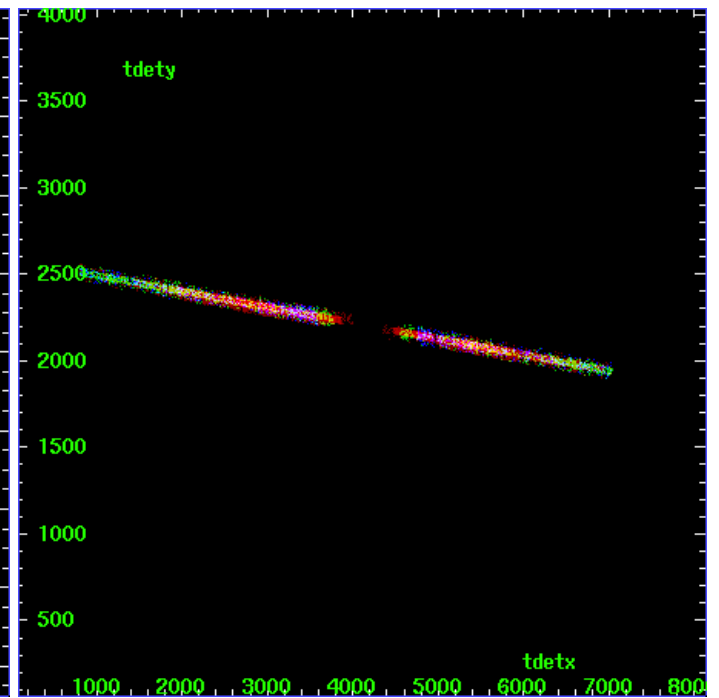
HEG Zero Order



HEG Order Sort ALL

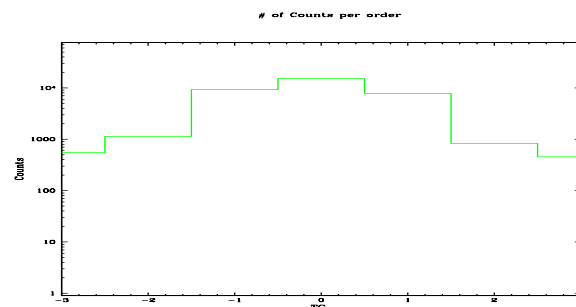


Spot Image HEG

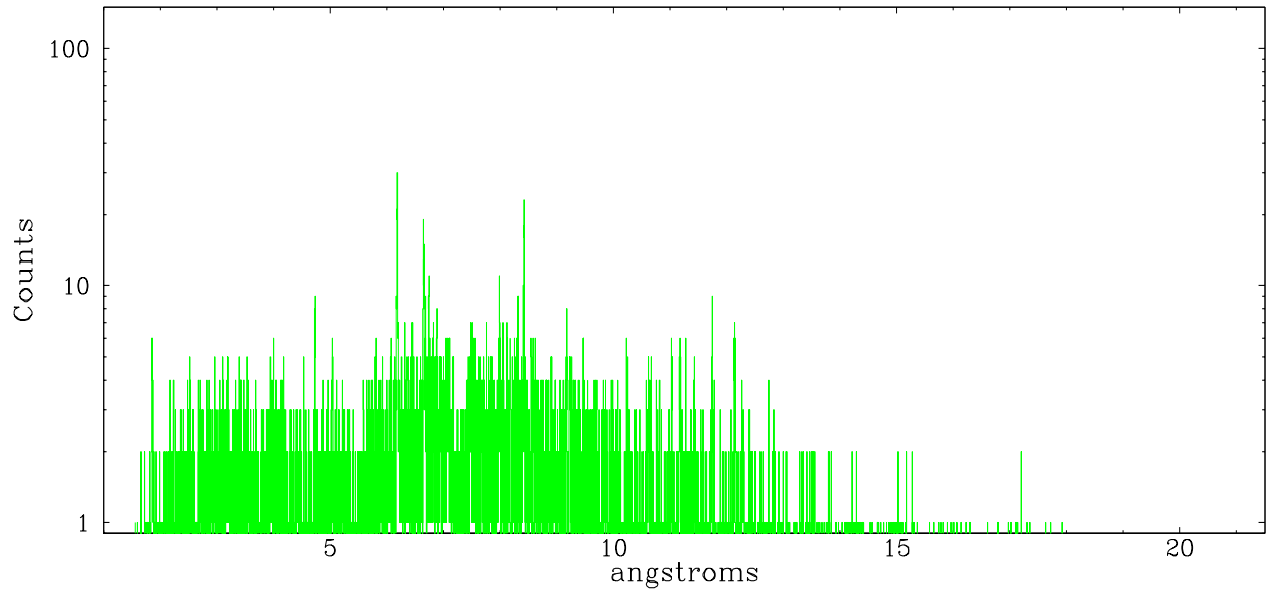


Full Detector HEG

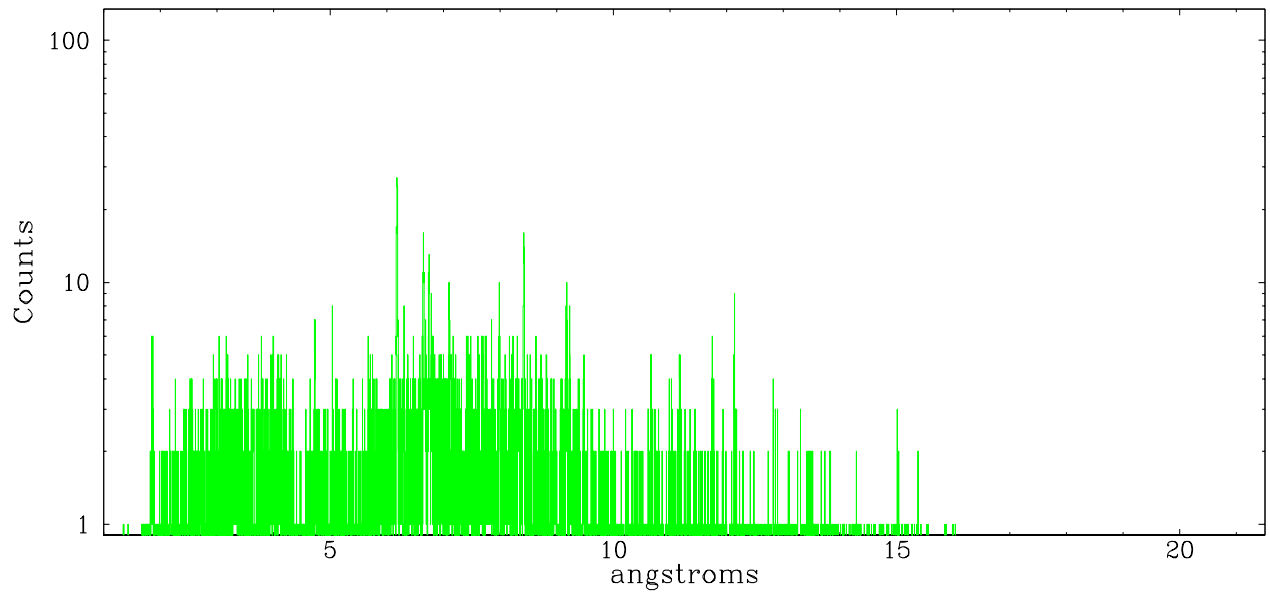
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	549	1134	9223	15205	7820	831	455



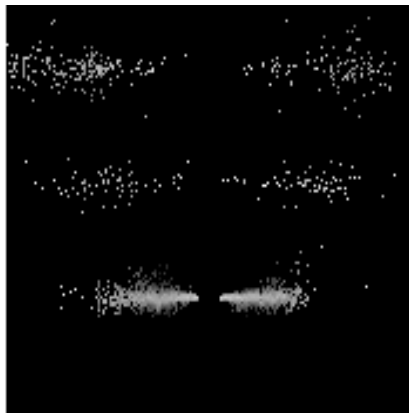
heg order -1



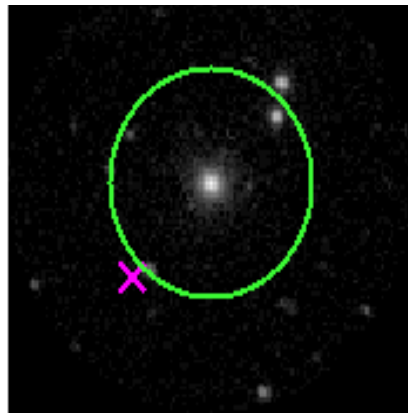
heg order +1



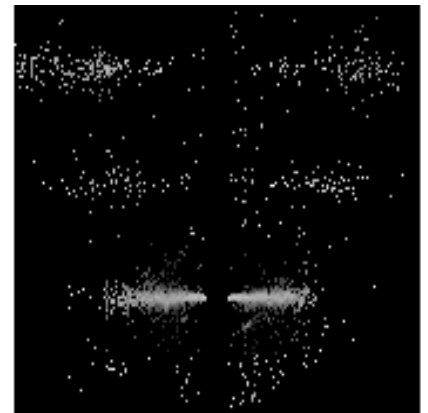
3.2 MEG Arm



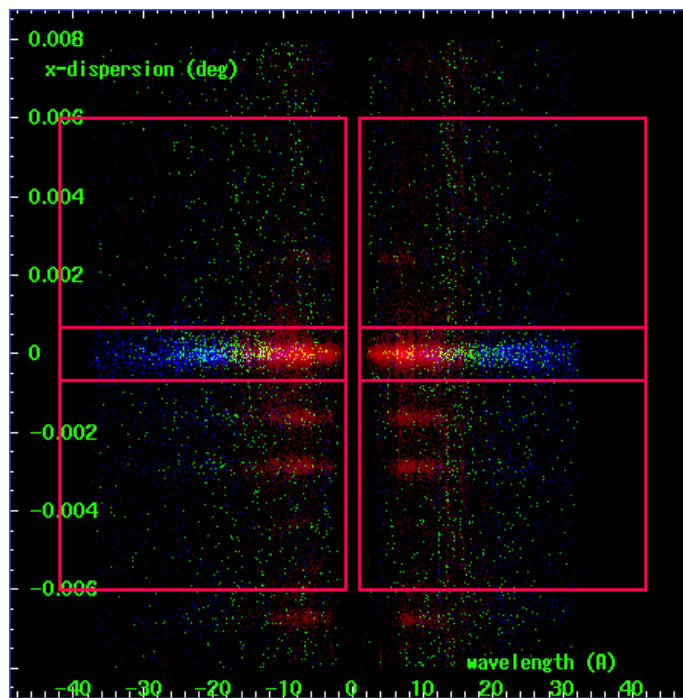
MEG Order Sort 123



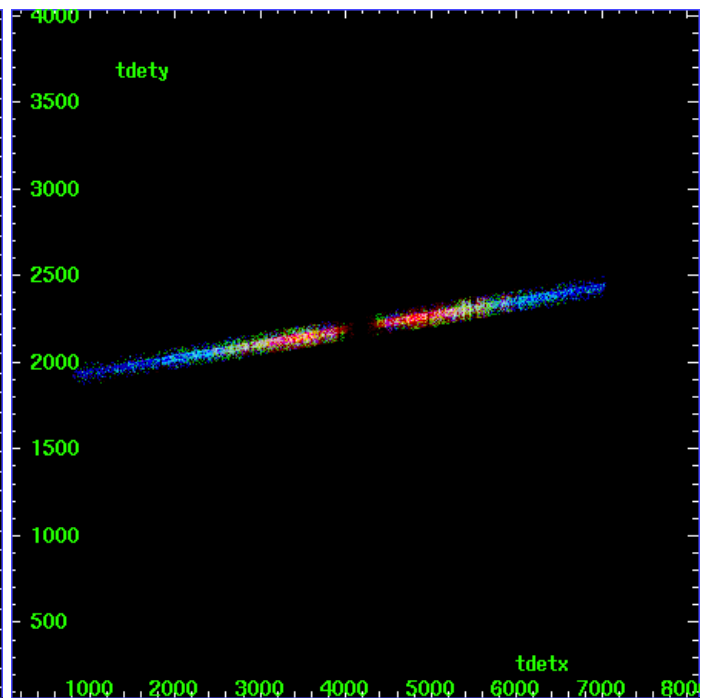
MEG Zero Order



MEG Order Sort ALL

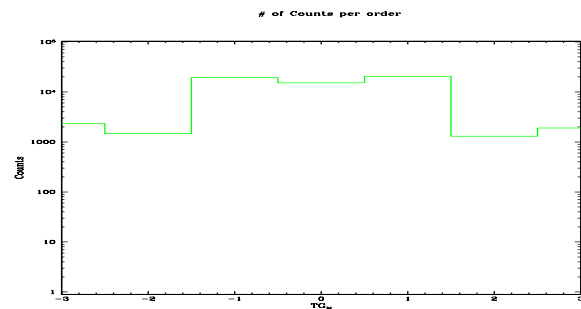


Spot Image MEG

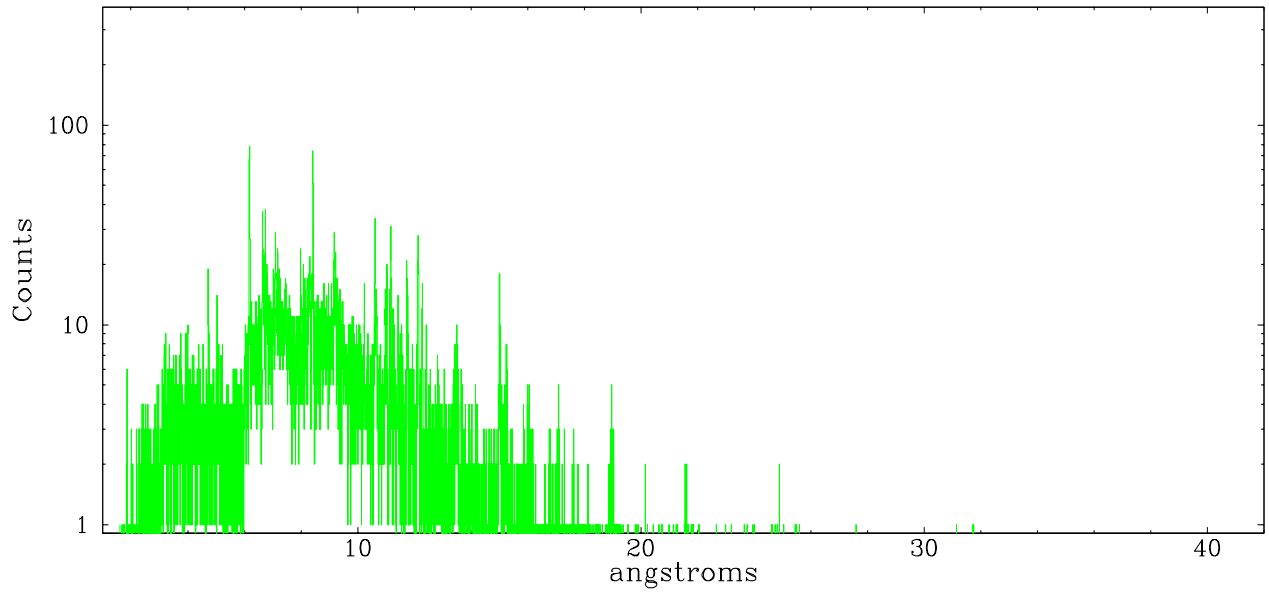


Full Detector MEG

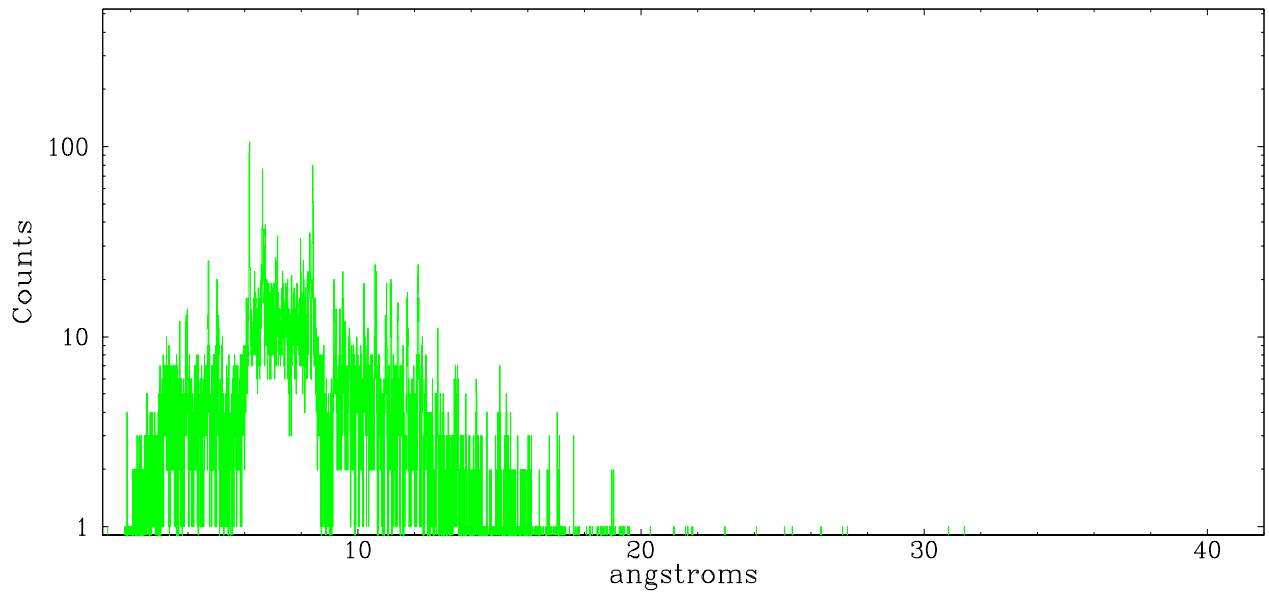
	order	order	order	order	order	order	order
	-3	-2	-1	0	1	2	3
Events	2334	1466	19349	15205	20550	1304	1890



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.03.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	46.95

A.2 Comments

This field is extremely crowded. Dispersed spectral arms from many other sources interest the spectral arms of the target. In addition, the dispersed spectral arms of the target and of several other sources are parallel to each other and separated by 3-4 pixels.

The width of the extraction region is $\pm 6.6 \times 10^{-4}$ deg, which is about 8 pixels full width. The extracted spectral data will probably include data from several sources, but if the zeroth orders for these sources are sufficiently separated spatially, order-sorting may reject neighboring spectral orders.

Custom extraction of the dispersed spectral data is critical to analysis of these data.

A period of high radiation between 26-30 ksec into this observation resulted in an elevated count rate by about 30%.