

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 9042 - L2 Version 2
Chandra X-Ray Center

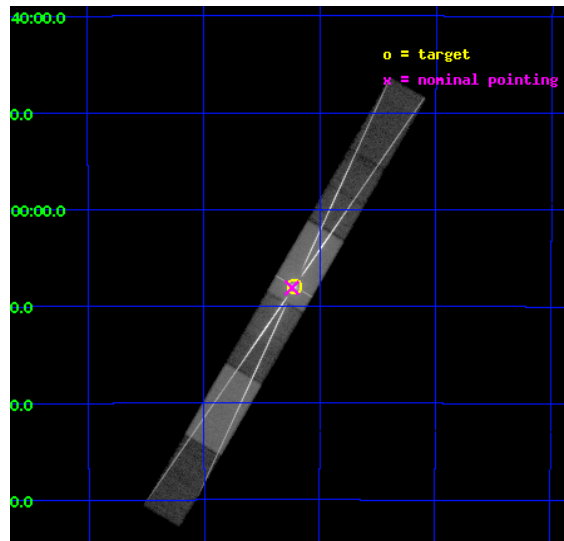
L2 Processing Date : May 18 2012

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1 Front

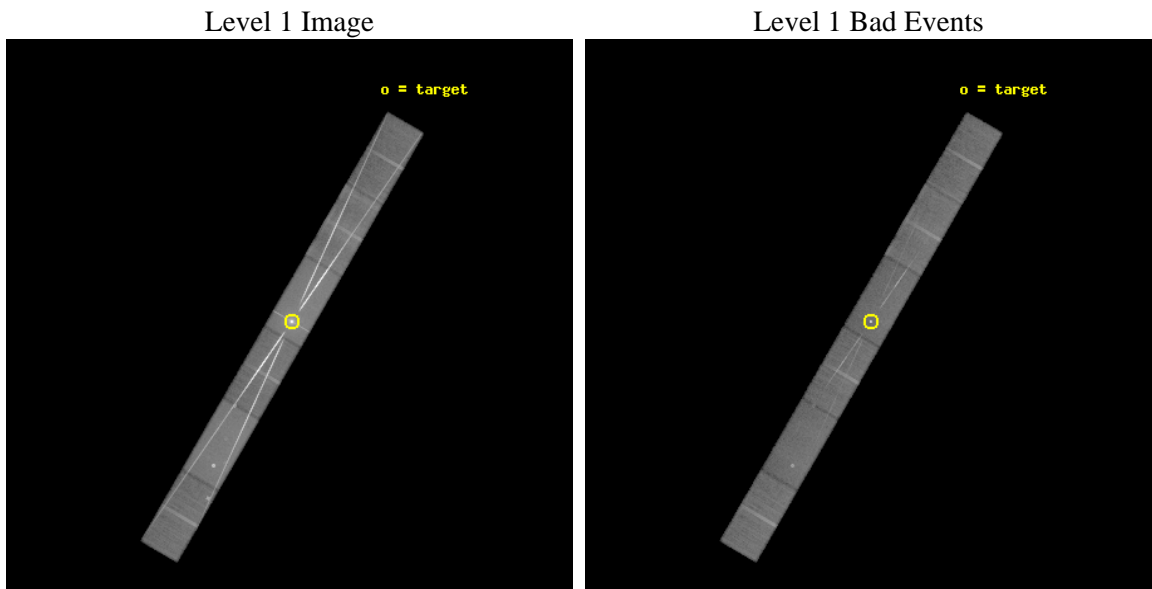
seq_num	400893	Sequence number
obs_id	9042	Observation id
title	Understanding the nature of high inclination low mass X-ray binaries: broad-band and line spectra from A1744-361	Proposal title
observer	Dr. Tod Strohmayer	Principal investigator
object	A1744-361	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	267.054583	Observer's specified target RA [deg]
dec_targ	-36.132833	Observer's specified target Dec [deg]
ra_nom	267.05987738201	Nominal RA [deg]
dec_nom	-36.135125785661	Nominal Dec [deg]
roll_nom	300.15974891033	Nominal Roll [deg]
revision	2	Processing version of data
ontime	31149.099781632	Sum of GTIs [s]
livetime	30414.84953176	Livetime [s]
ontime4	31149.099781632	Sum of GTIs [s]
ontime5	31149.099781632	Sum of GTIs [s]
ontime6	31149.099781632	Sum of GTIs [s]
ontime7	31149.099781632	Sum of GTIs [s]
ontime8	31147.358781457	Sum of GTIs [s]
ontime9	31149.099781632	Sum of GTIs [s]
l2events	1410717	Number of level 2 events



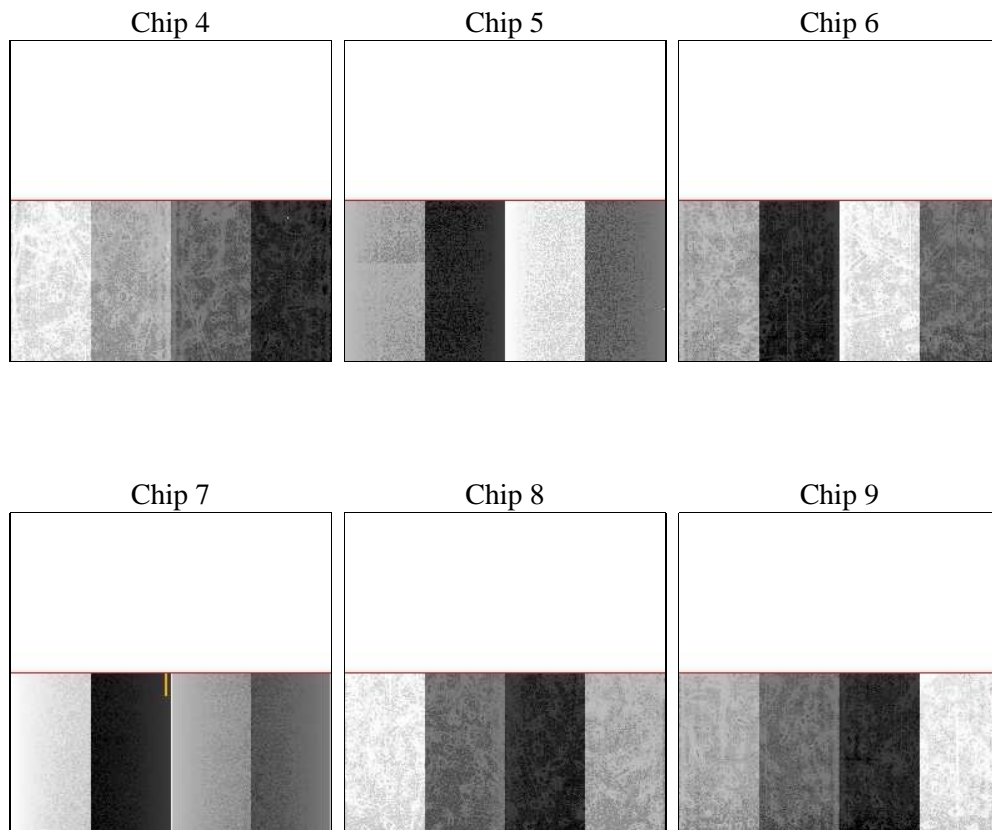
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	31000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	31149.099781632	Sum of GTIs [s]
caldbver	4.4.9	 	ontime4	31149.099781632	Sum of GTIs [s]
date	2012-05-17T17:21:41	Date and time of file creation	ontime5	31149.099781632	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	31149.099781632	Sum of GTIs [s]
			ontime7	31149.099781632	Sum of GTIs [s]
			ontime8	31147.358781457	Sum of GTIs [s]
			ontime9	31149.099781632	Sum of GTIs [s]
			l1events	2413181	Number of level 1 events

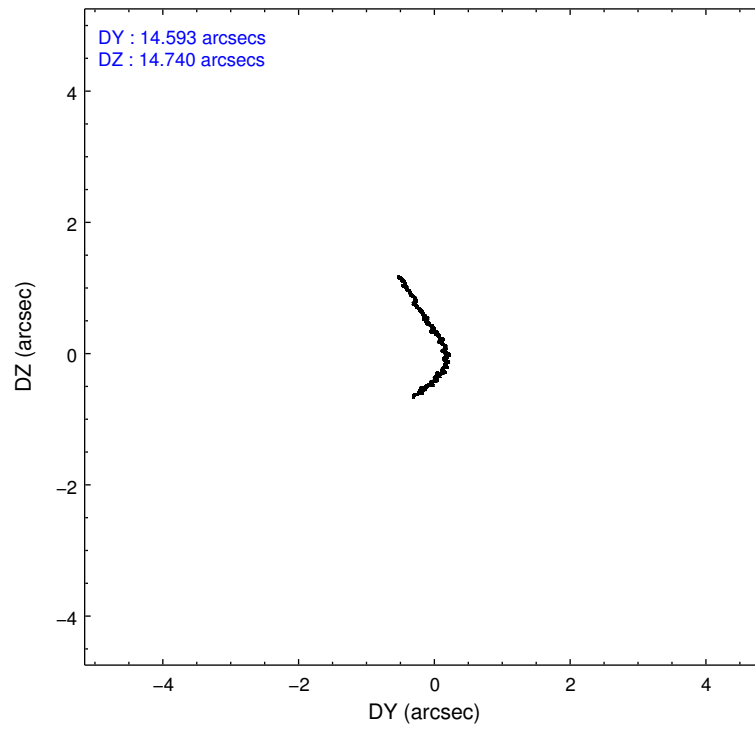
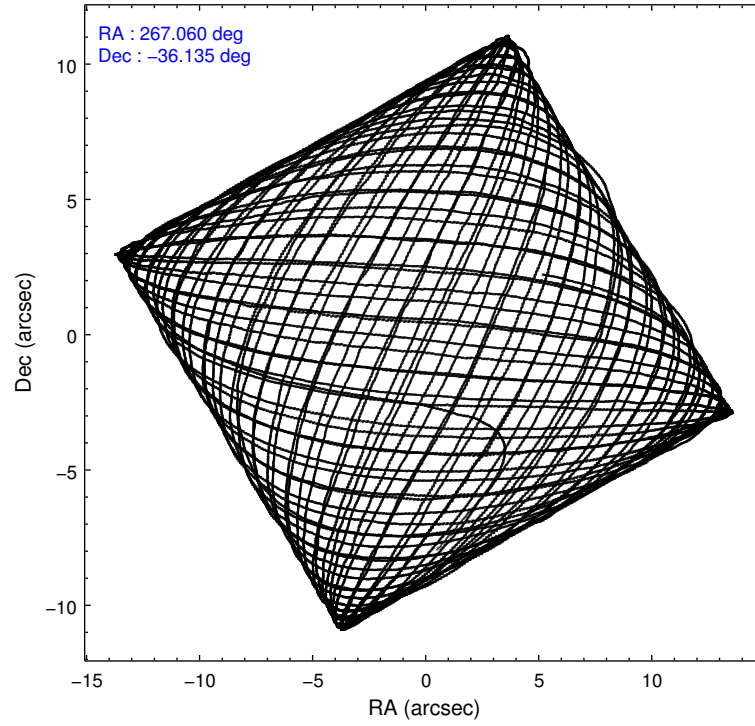
2.1.4 Events

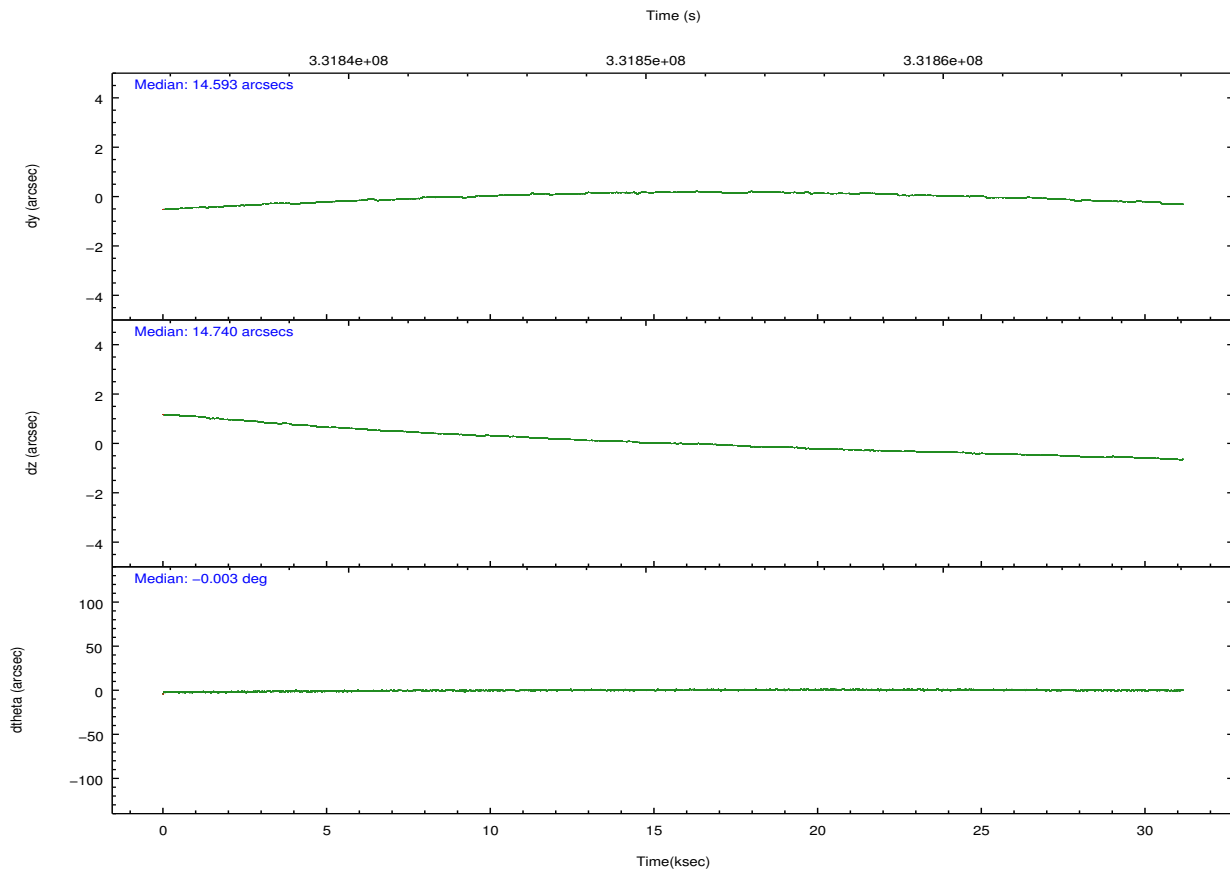
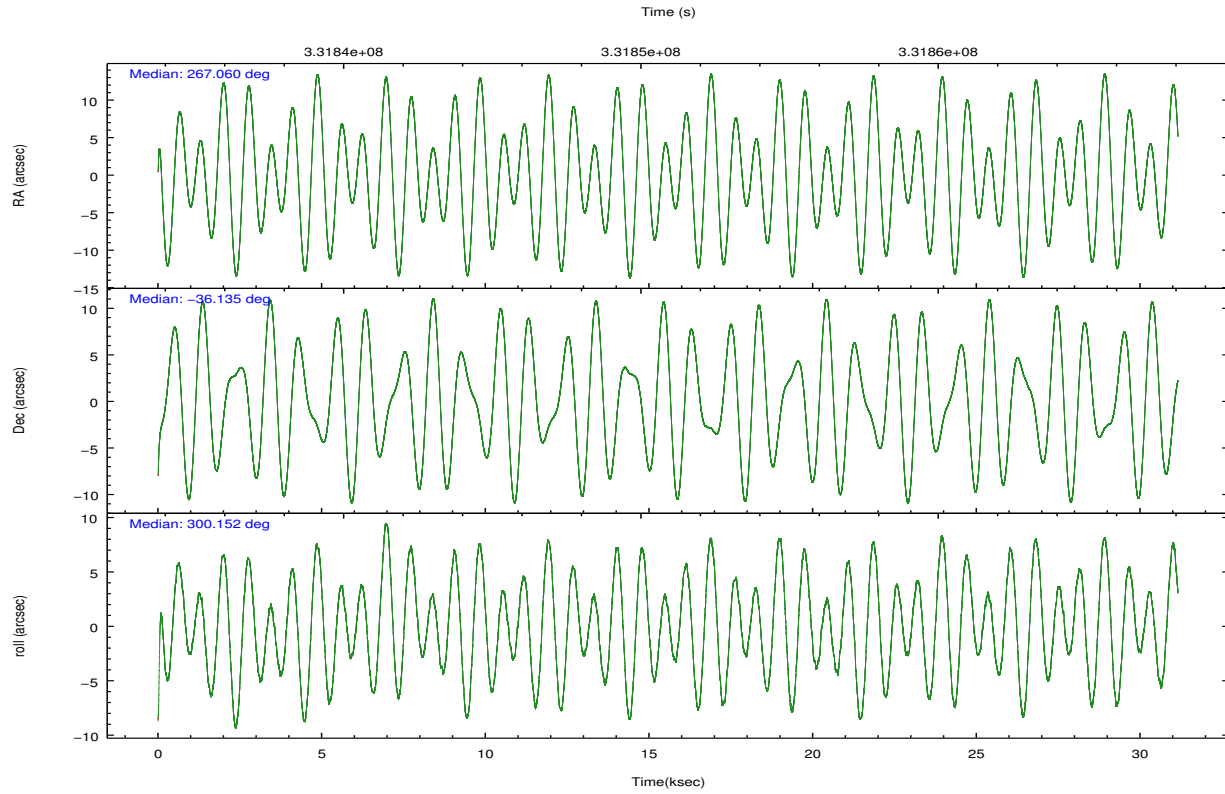
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	195785	347336	597954	698687	382386	191033	grade 0 events	24447	45453	330673	108654	152029	34552
rejected events	155913	135896	155452	148075	165158	137870		12%	13%	55%	15%	39%	18%
rejected %	79%	39%	25%	21%	43%	72%	grade 1 events	167	613	3796	2035	946	148
								0%	0%	0%	0%	0%	0%
							grade 2 events	6306	65239	55396	134512	28192	7596
								3%	18%	9%	19%	7%	3%
							grade 3 events	2839	15137	19292	59631	10819	3448
								1%	4%	3%	8%	2%	1%
							grade 4 events	2727	14800	19385	59566	10624	3274
								1%	4%	3%	8%	2%	1%
							grade 5 events	6932	20499	10084	28745	10245	7831
								3%	5%	1%	4%	2%	4%
							grade 6 events	3874	72599	20065	191359	16915	4634
								1%	20%	3%	27%	4%	2%
							grade 7 events	148493	112996	139263	114185	152616	129550
								75%	32%	23%	16%	39%	67%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
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
[deg] Pointing RA	267.030290	267.0598773820055	Subarray requested	CUSTOM	1/2
[deg] Pointing Dec	-36.121835	-36.13512578566055	Subarray start row	1	1
[deg] Pointing Roll	299.985674	300.1597489103342	Subarray row count	512	512
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	1.7
[mm] SIM translation stage pos	-183.992523	-183.9900508222561			
[mm] SIM translation stage offset	-6.14	-6.142471760751675			
[s] Observation start time (MET)	331835488.184000	331834351.70882			
Observation start date	2008-07-07T16:30:23	2008-07-07T16:12:31			
[s] Observation end time (MET)	331866488.184000	331866860.09791			
Observation end date	2008-07-08T01:07:03	2008-07-08T01:14:20			
Read mode	TIMED	TIMED			

2.3 Aspect



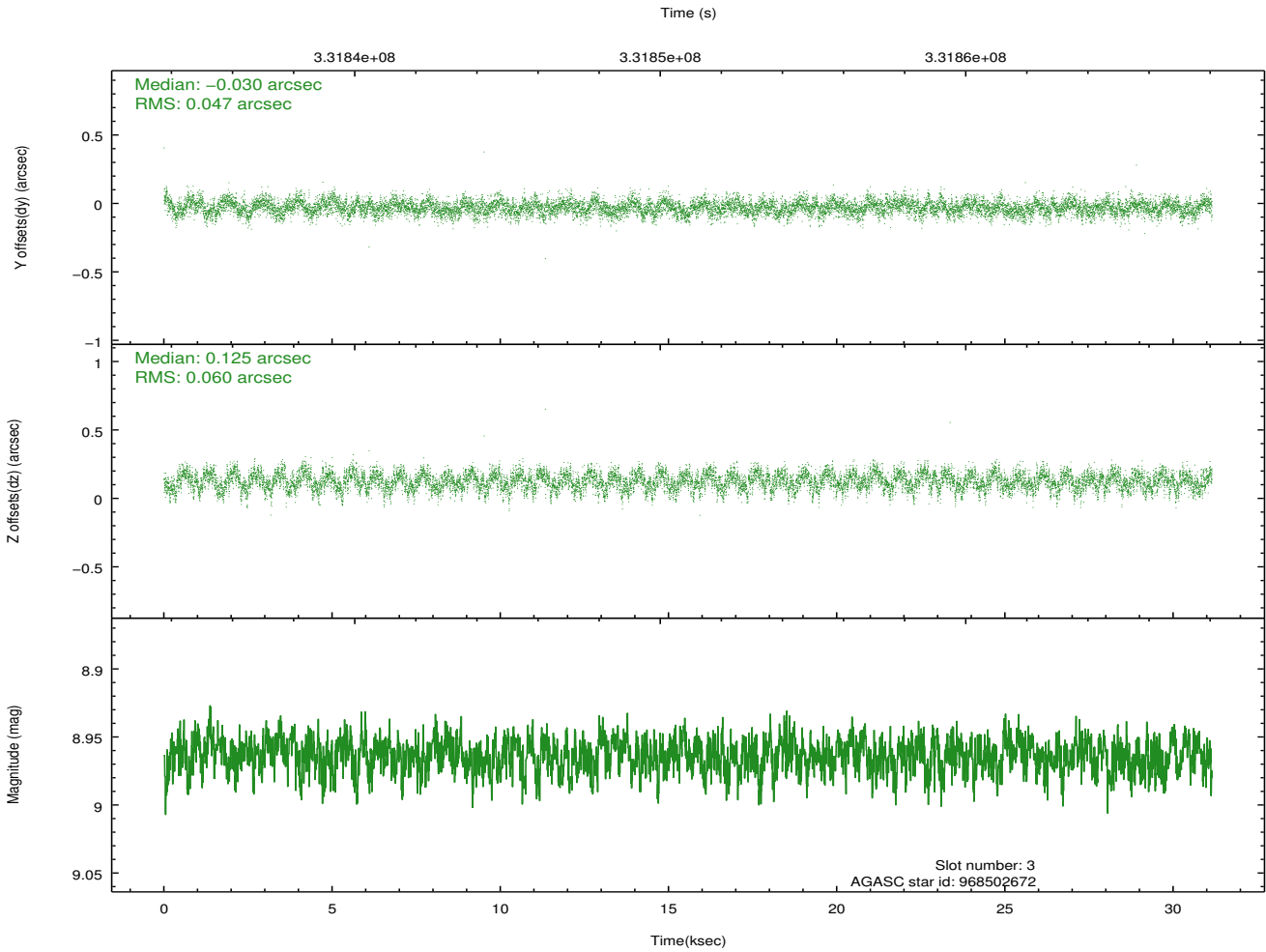
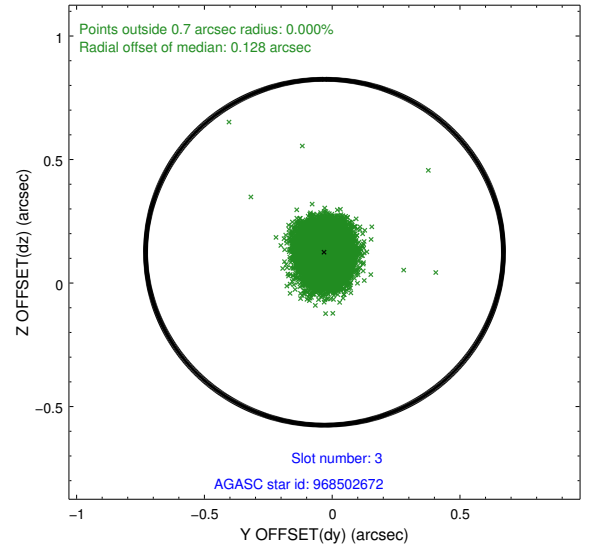
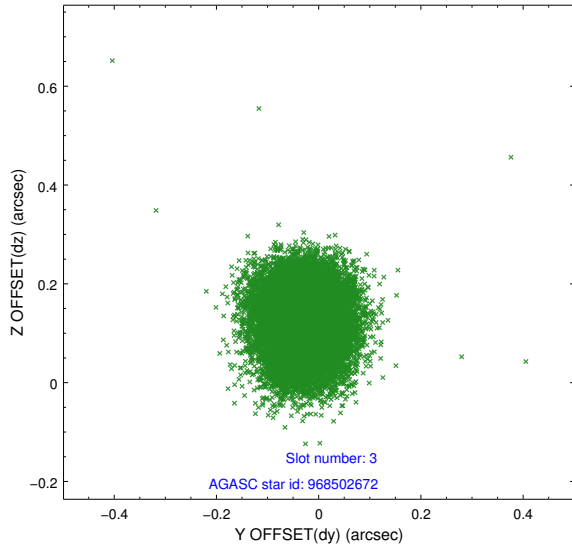


Slot Statistics

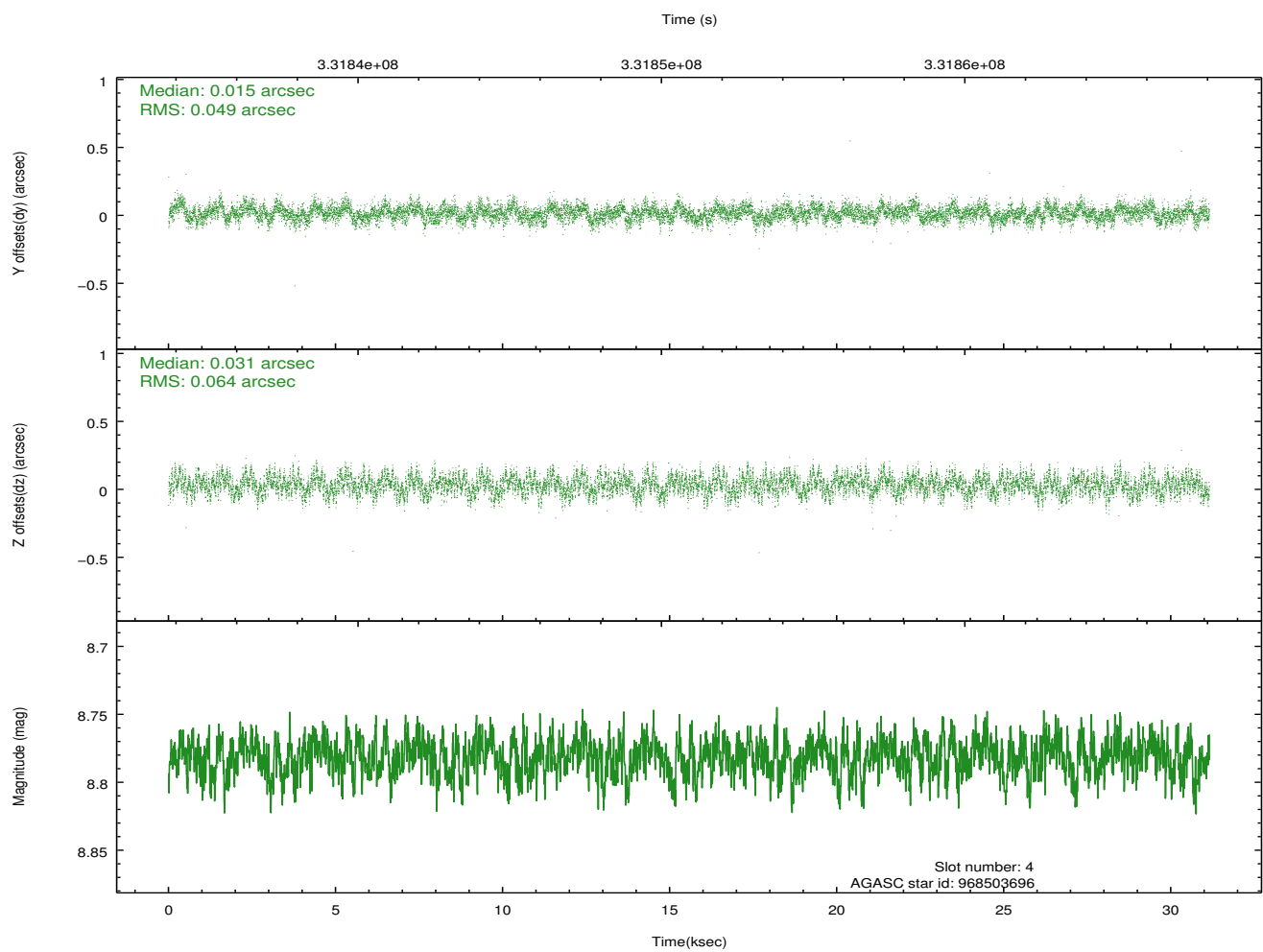
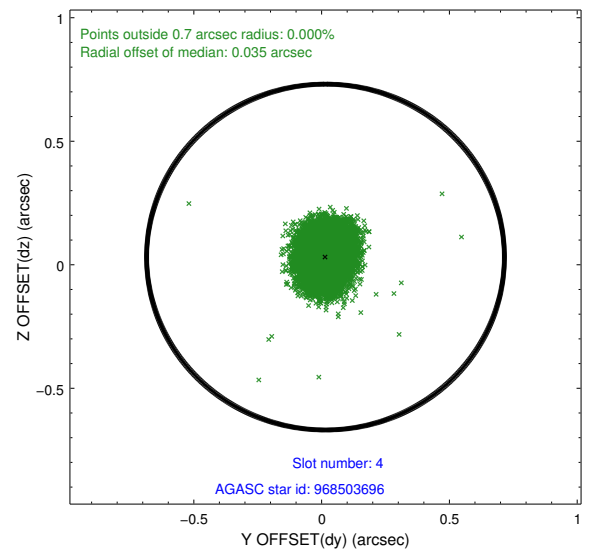
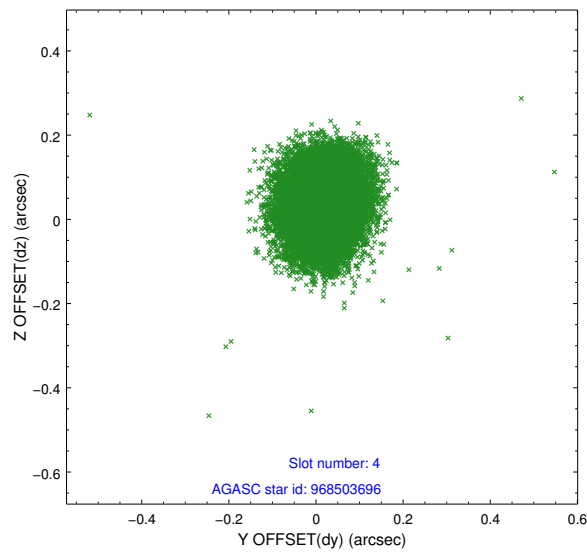
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.87	7598	-0.127	-0.095	0.010	0.018	0.000000	0.000000	-767.24	-1862.88
1	FID	ACIS-S-4	6.95	7598	0.098	0.076	0.008	0.014	0.000000	0.000000	2146.27	45.62
2	FID	ACIS-S-6	7.15	7598	0.002	0.026	0.012	0.019	0.000000	0.000000	395.01	683.08
3	GUIDE	968502672	8.96	15185	-0.030	0.125	0.082	0.129	266.858331	-35.977361	-700.31	-174.14
4	GUIDE	968503696	8.78	15185	0.015	0.031	0.086	0.137	266.913804	-35.806902	-1151.68	271.86
5	GUIDE	968494256	7.74	15189	0.096	-0.081	0.072	0.124	266.804762	-36.985927	2371.44	-2116.77
6	GUIDE	968639336	8.64	15187	-0.013	-0.083	0.094	0.140	267.813813	-35.890844	429.89	2389.98
7	GUIDE	968641112	7.16	15194	-0.073	0.010	0.067	0.105	267.924934	-36.467732	2383.39	1615.53

2.4 Star Slots

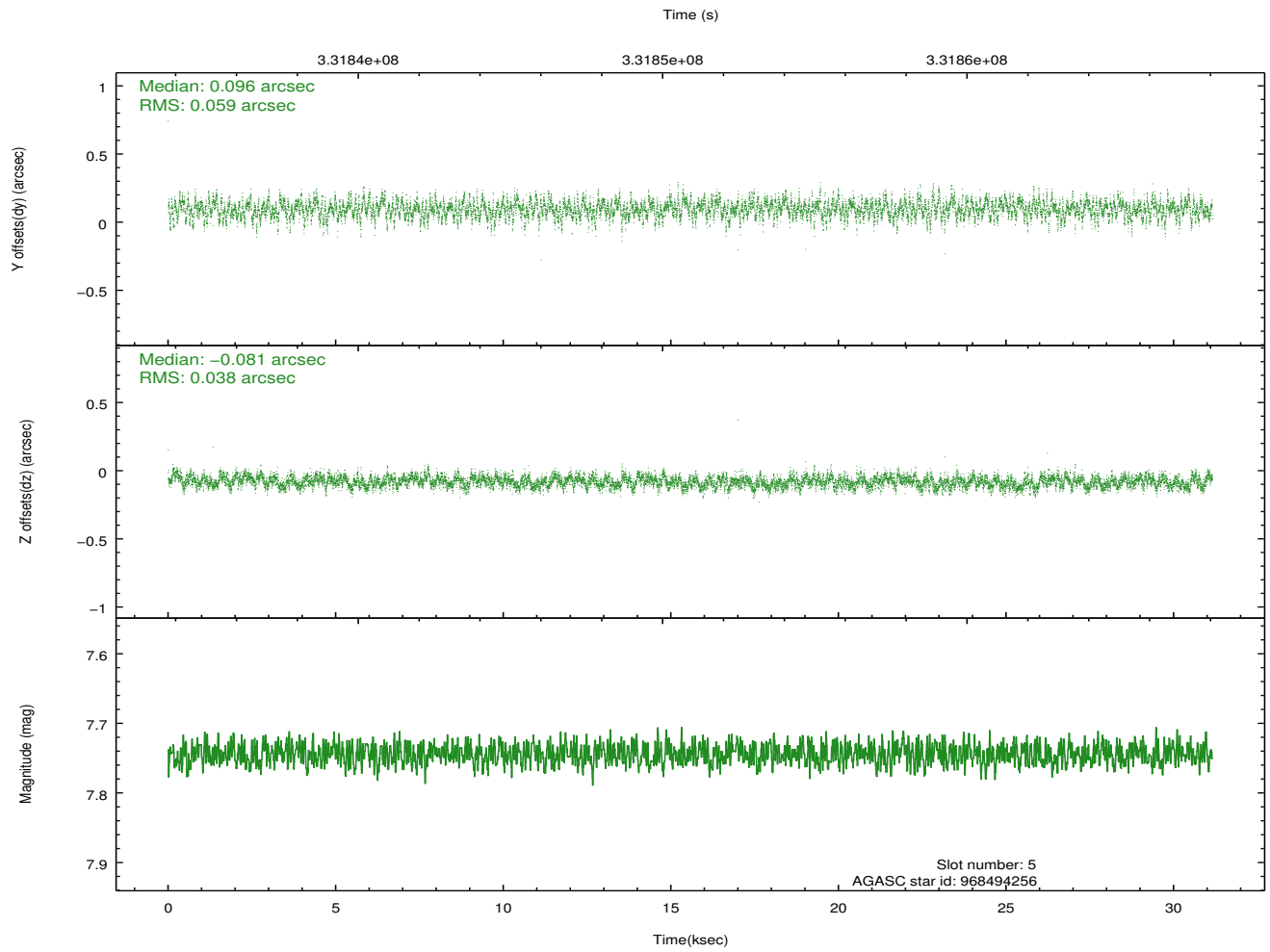
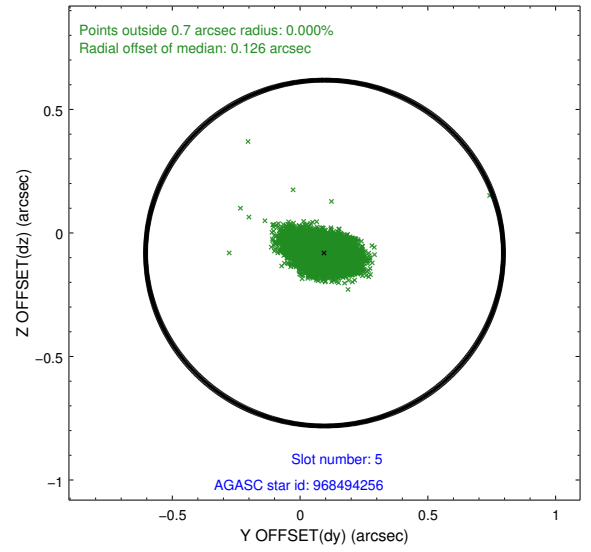
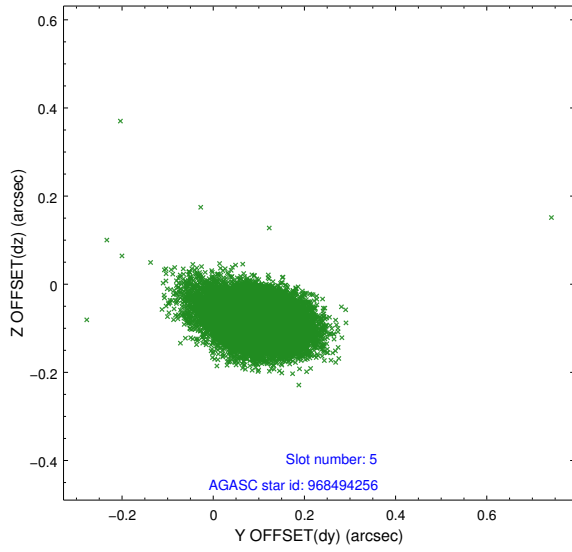
2.4.1 Slot 3



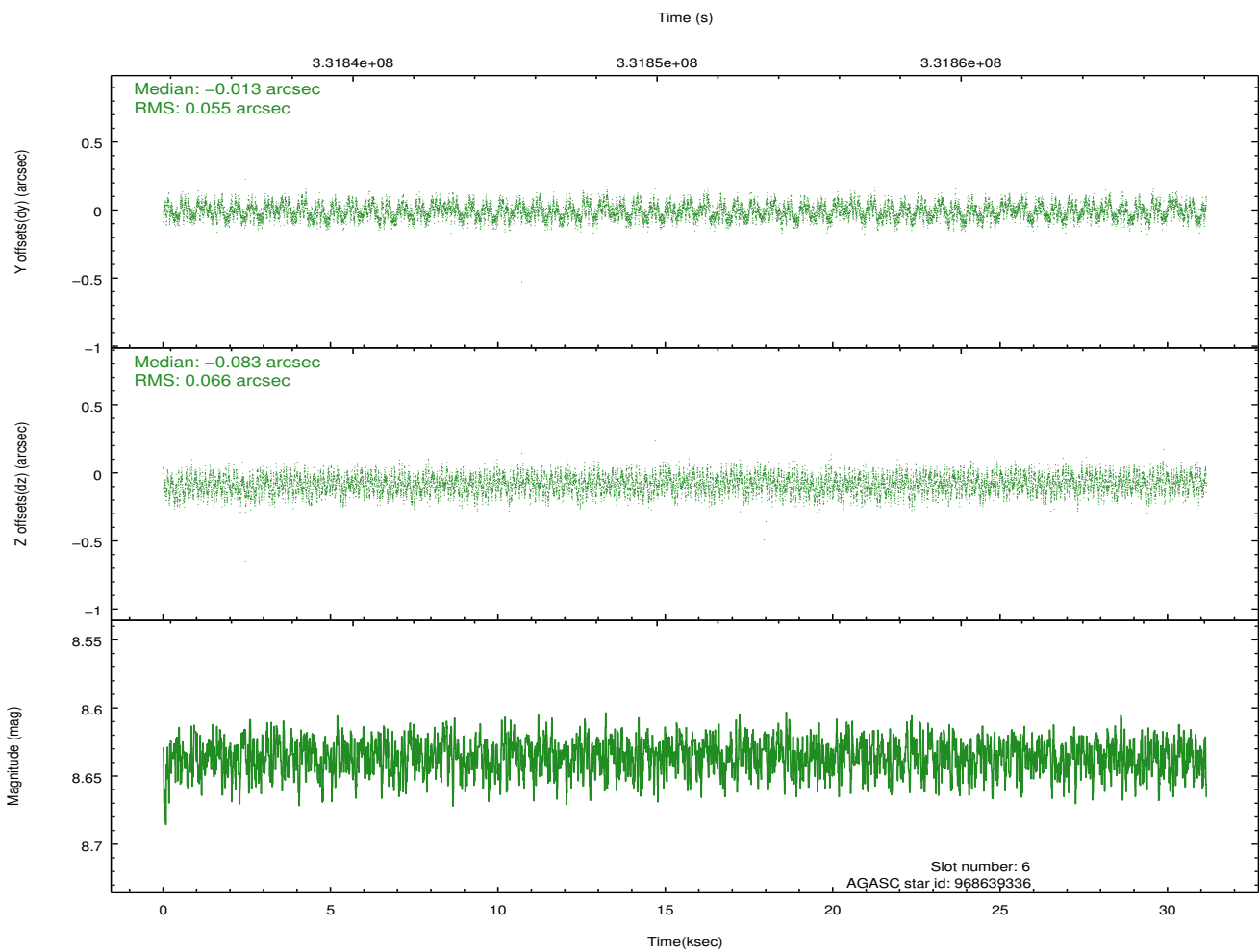
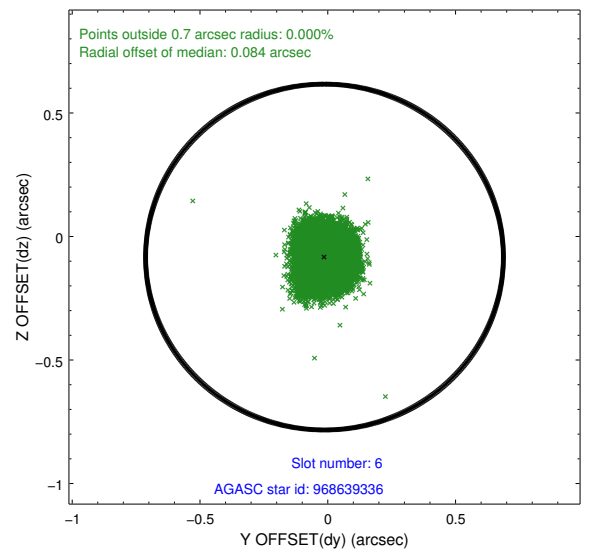
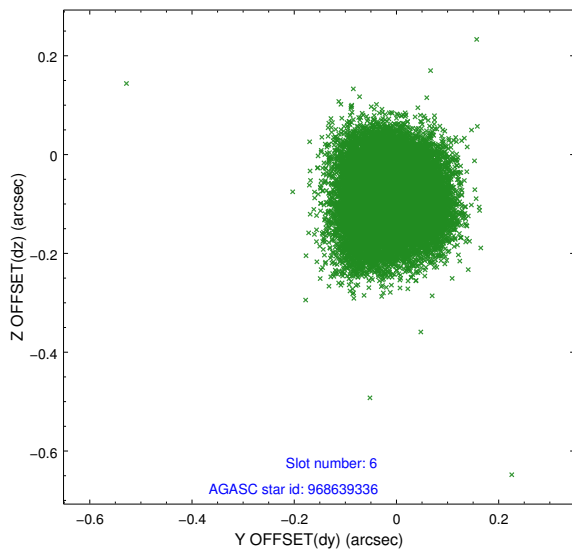
2.4.2 Slot 4



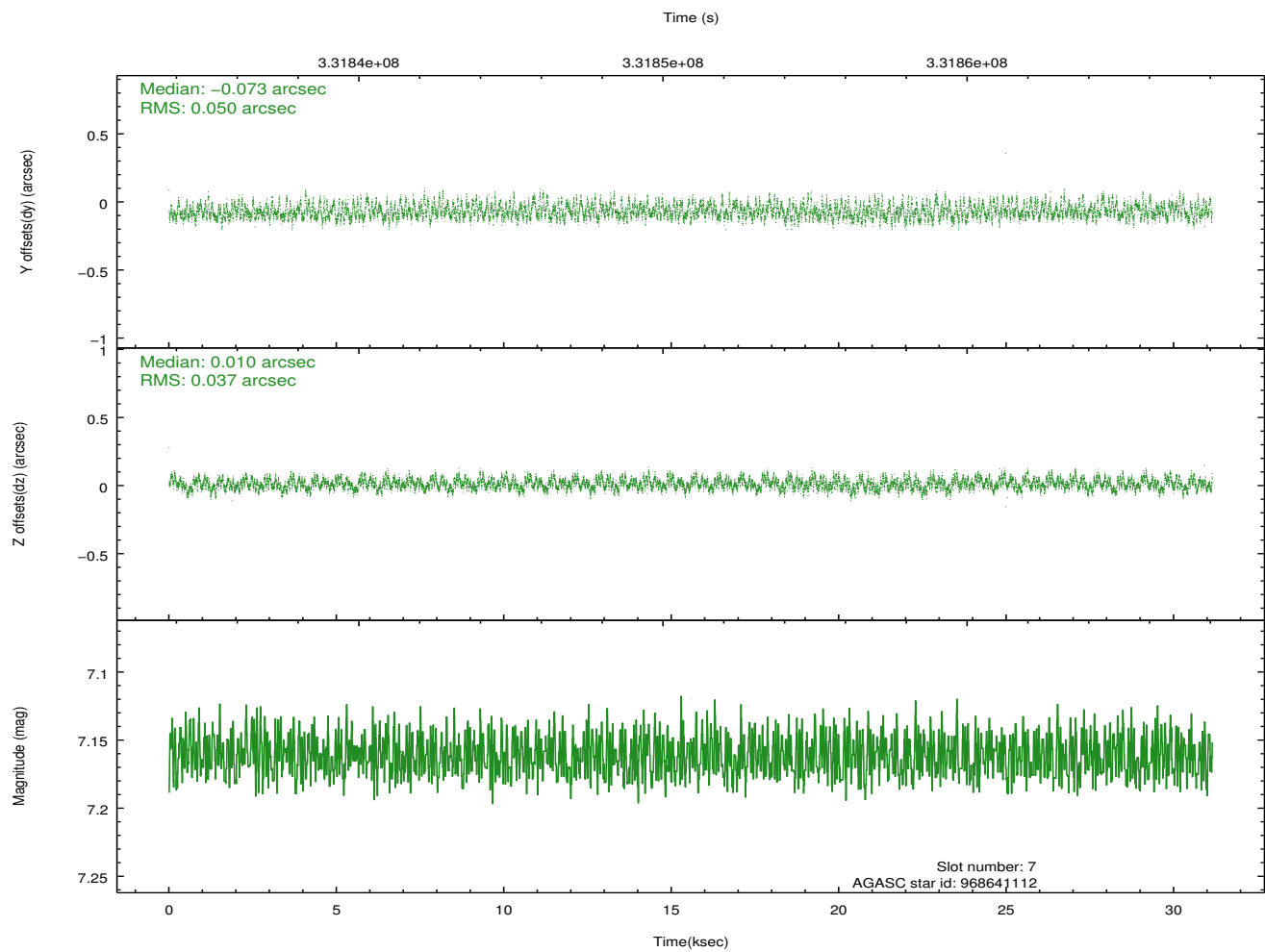
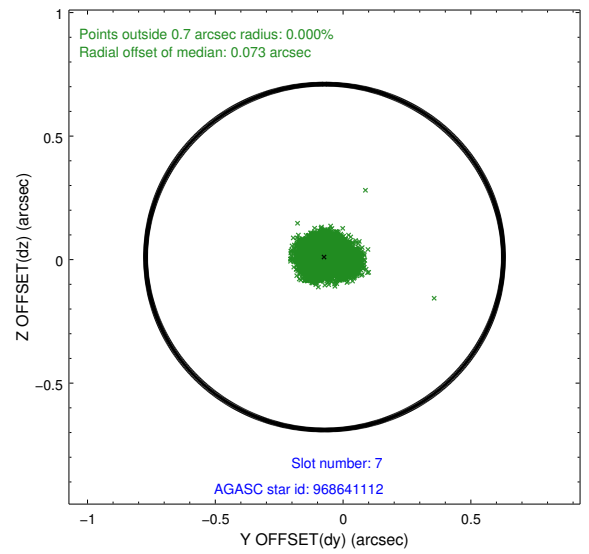
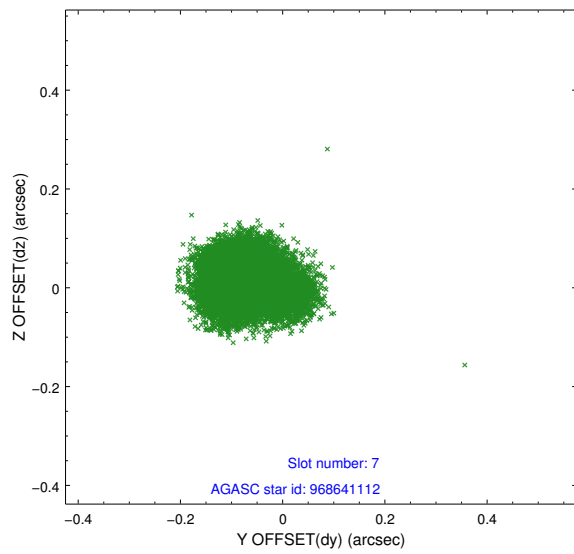
2.4.3 Slot 5



2.4.4 Slot 6

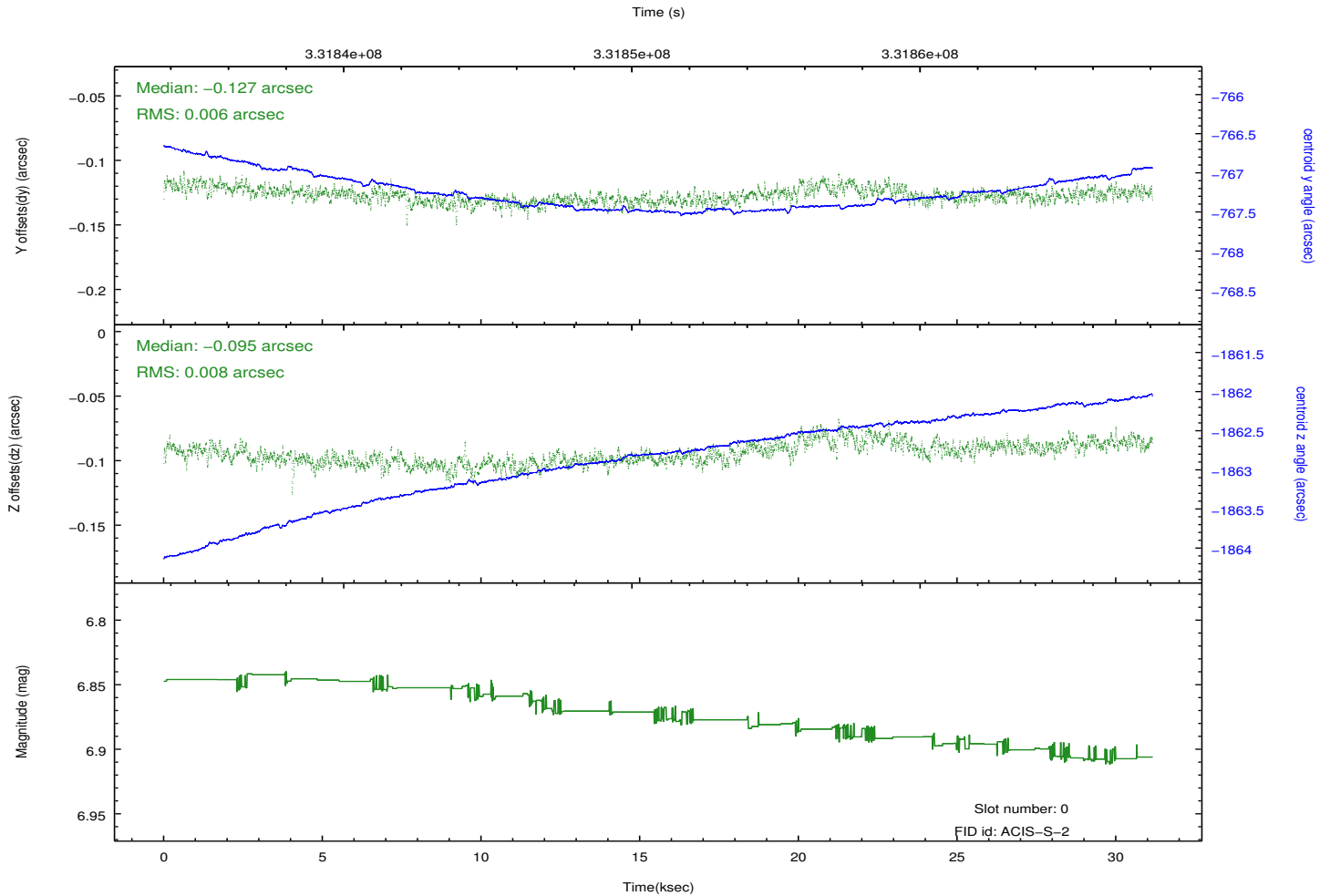
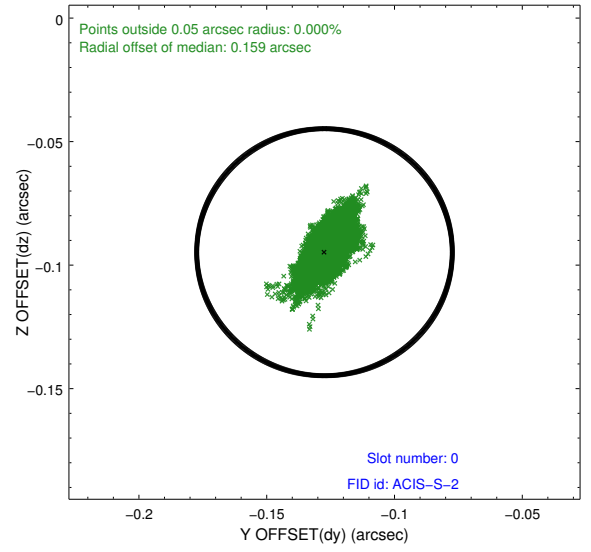
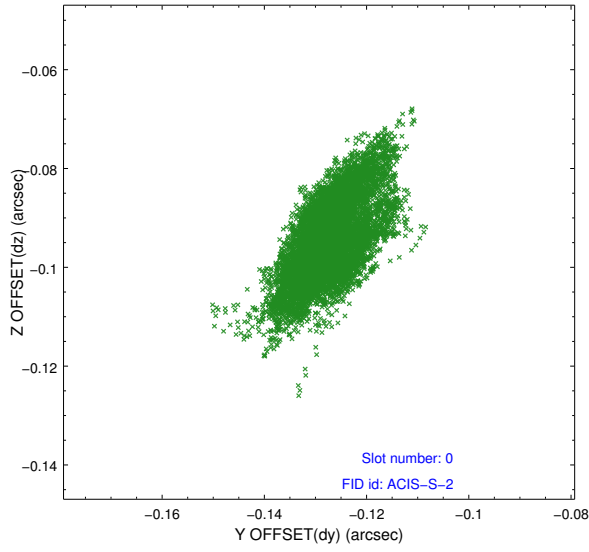


2.4.5 Slot 7

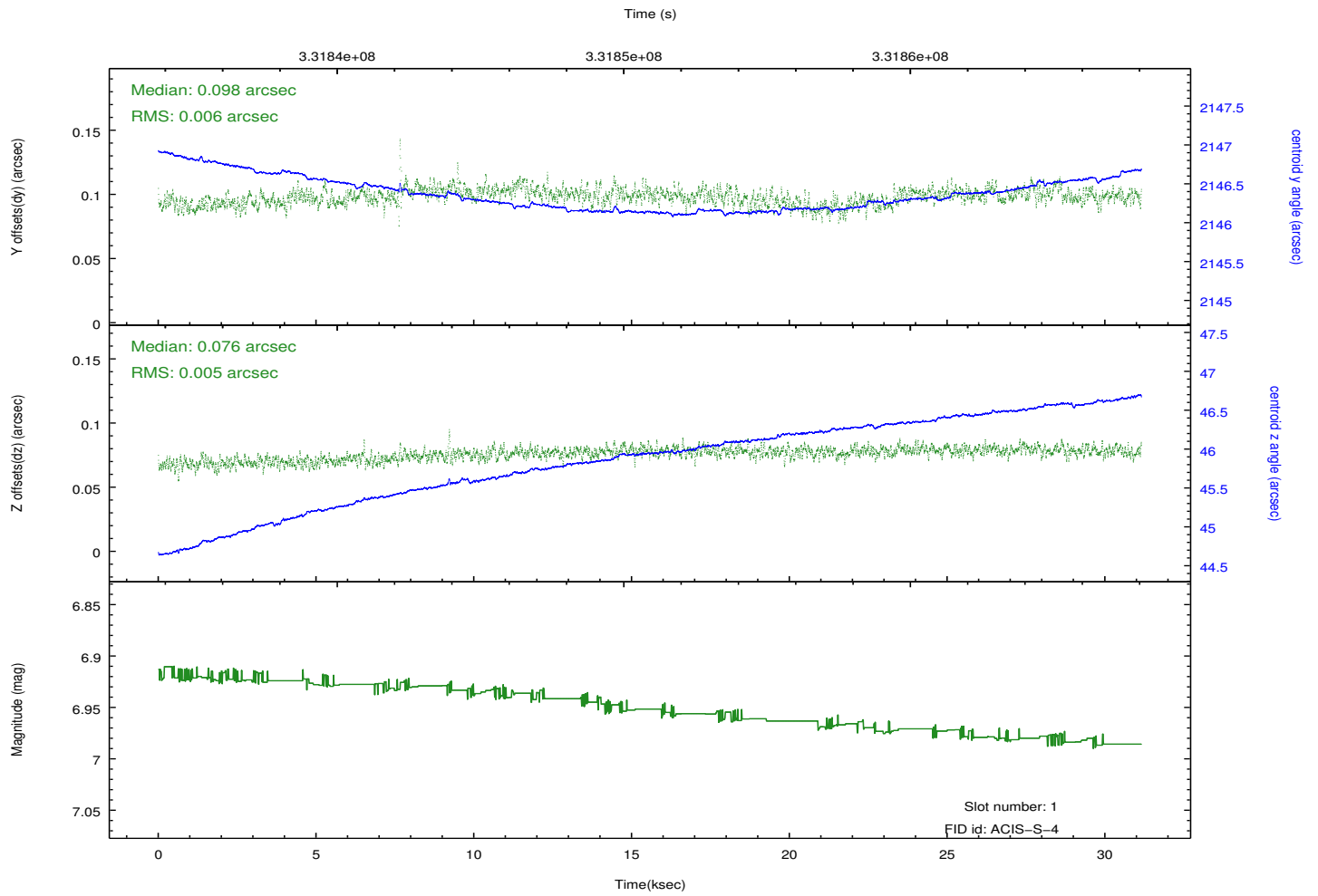
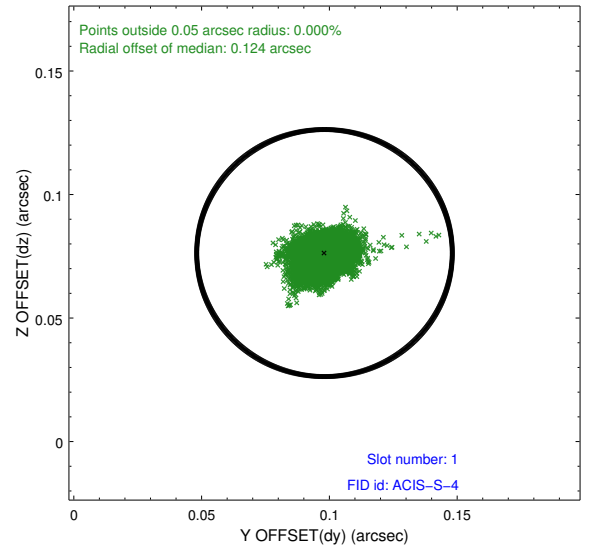
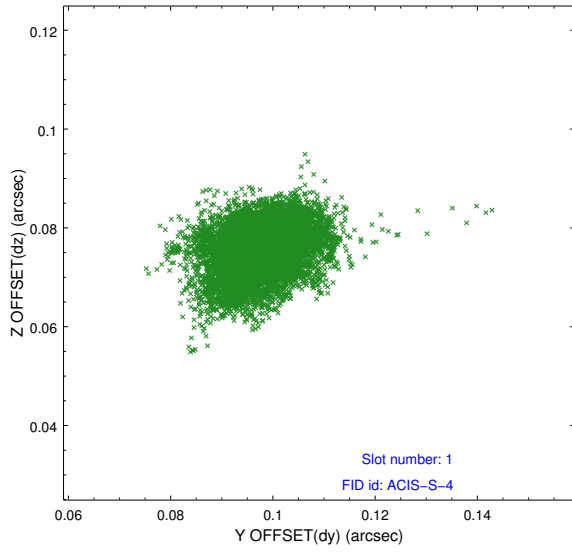


2.5 FID Slots

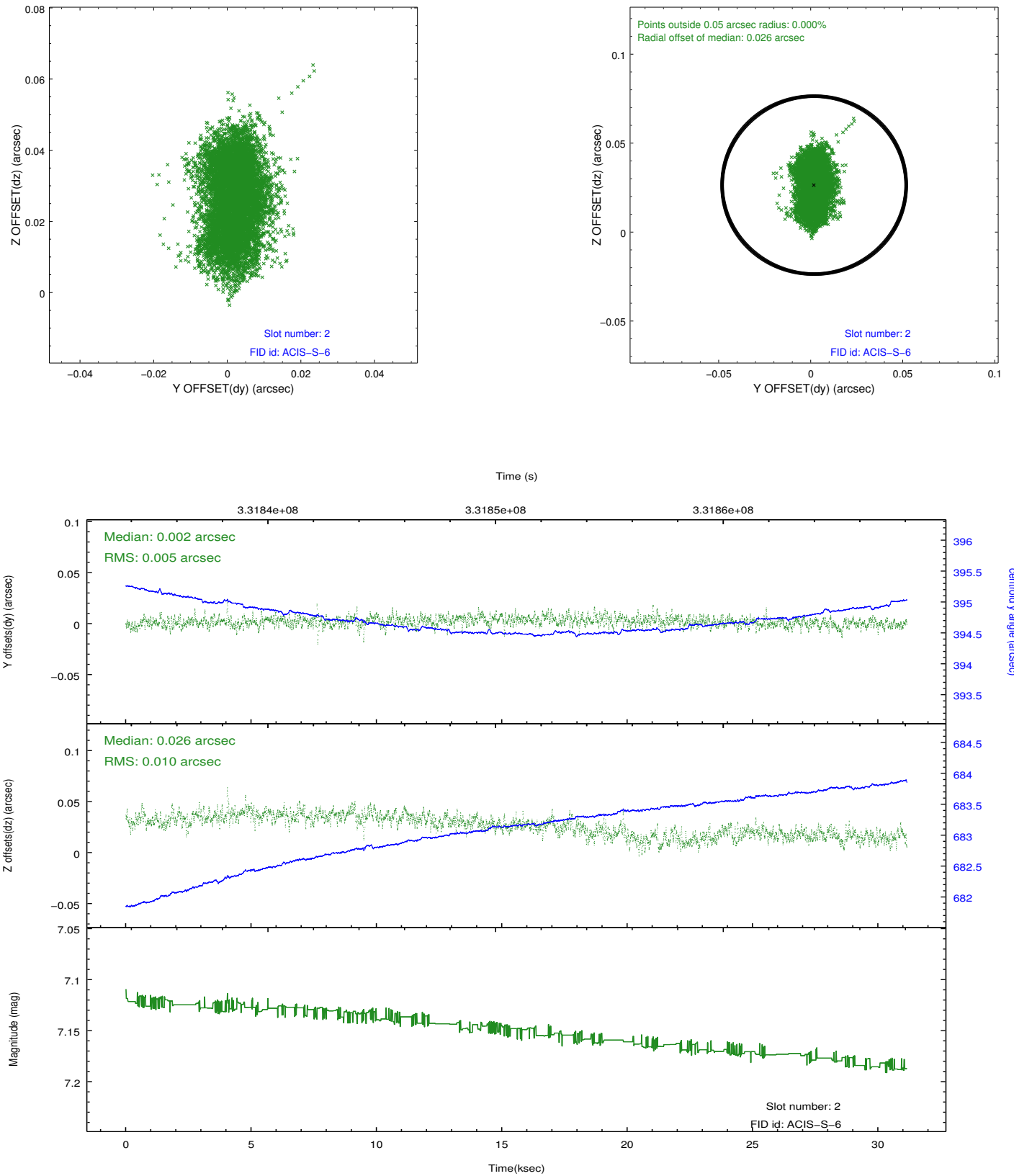
2.5.1 Slot 0



2.5.2 Slot 1

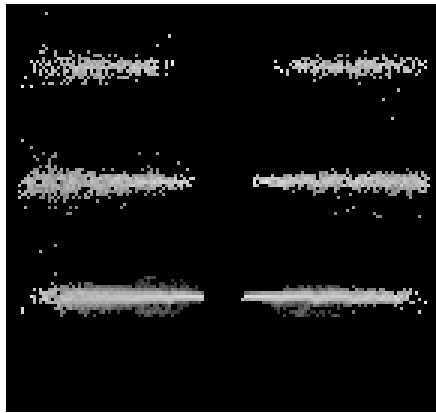


2.5.3 Slot 2

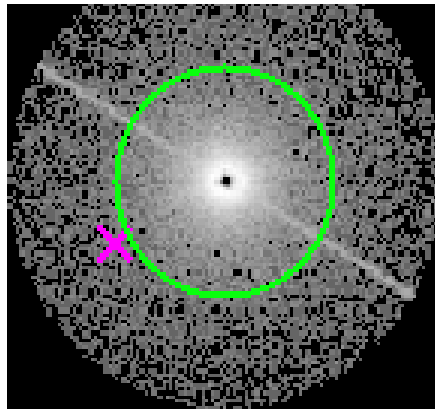


3 Gratings

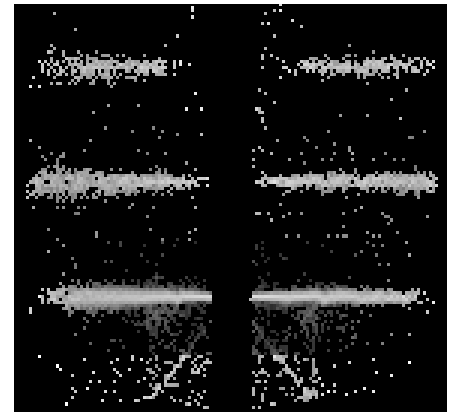
3.1 HEG Arm



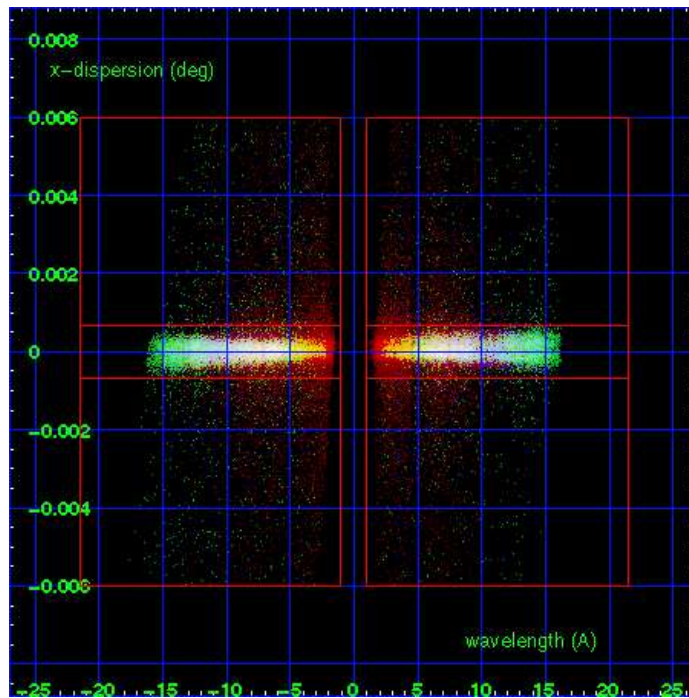
HEG Order Sort 123



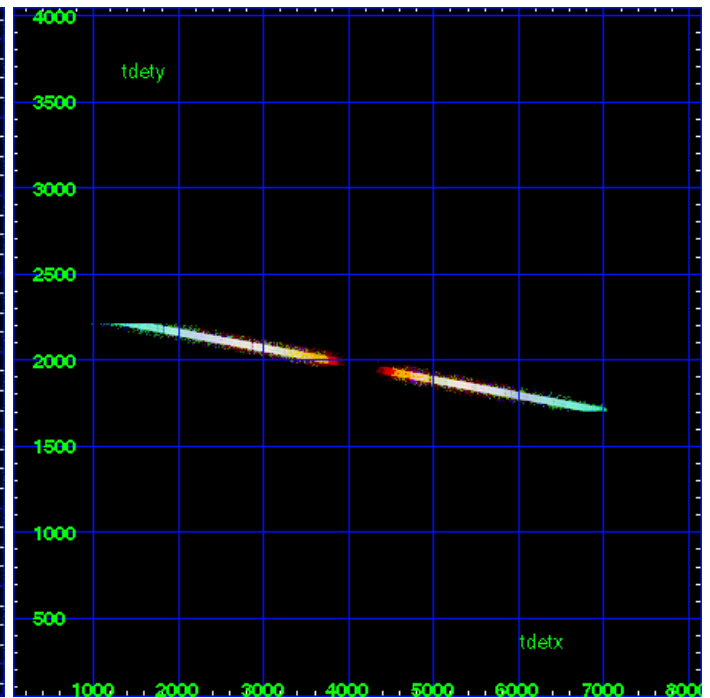
HEG Zero Order



HEG Order Sort ALL

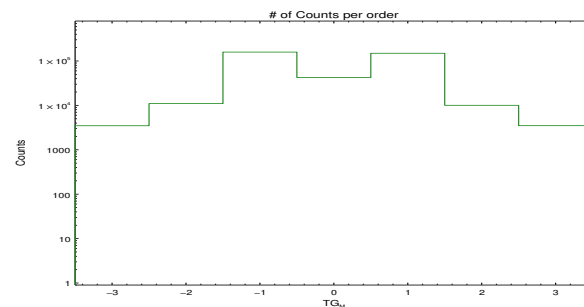


Spot Image HEG

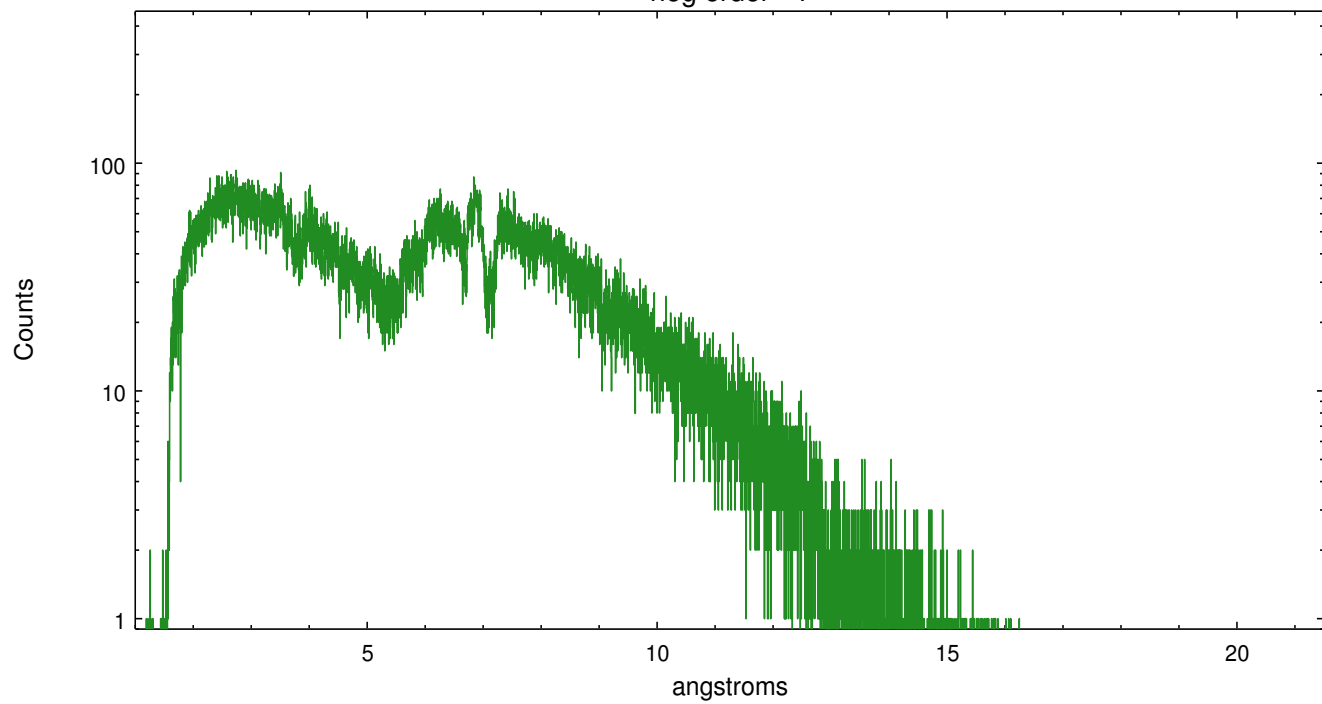


Full Detector HEG

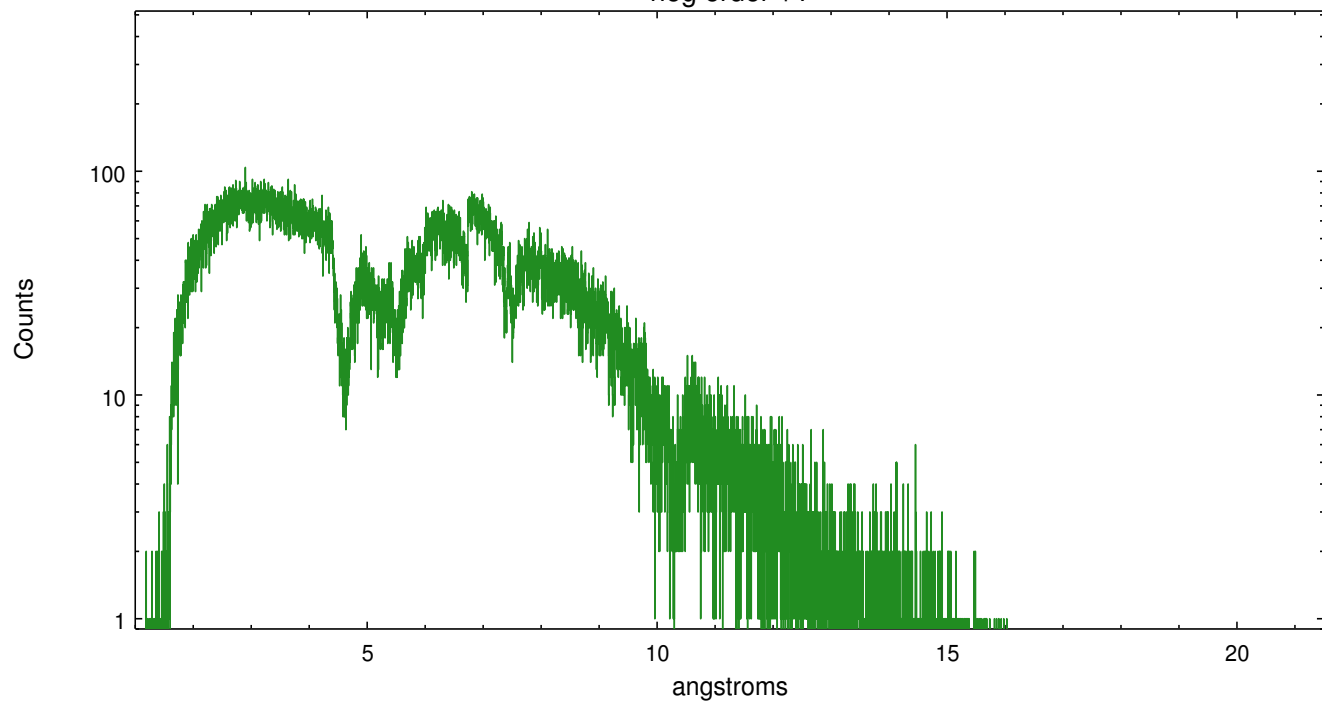
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	3481	10973	158581	42274	149069	10033	3494



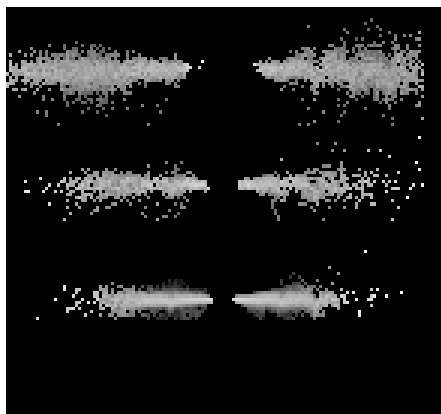
heg order -1



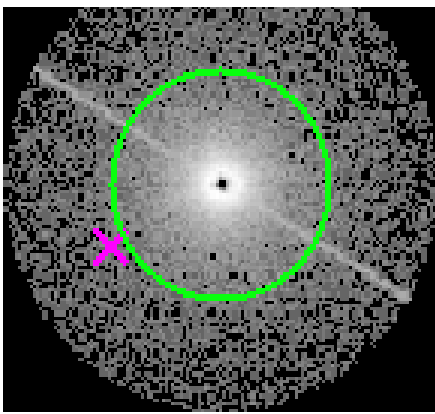
heg order +1



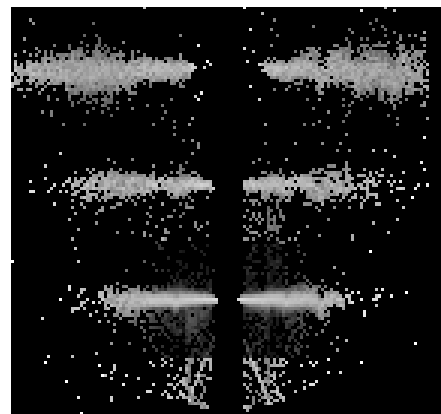
3.2 MEG Arm



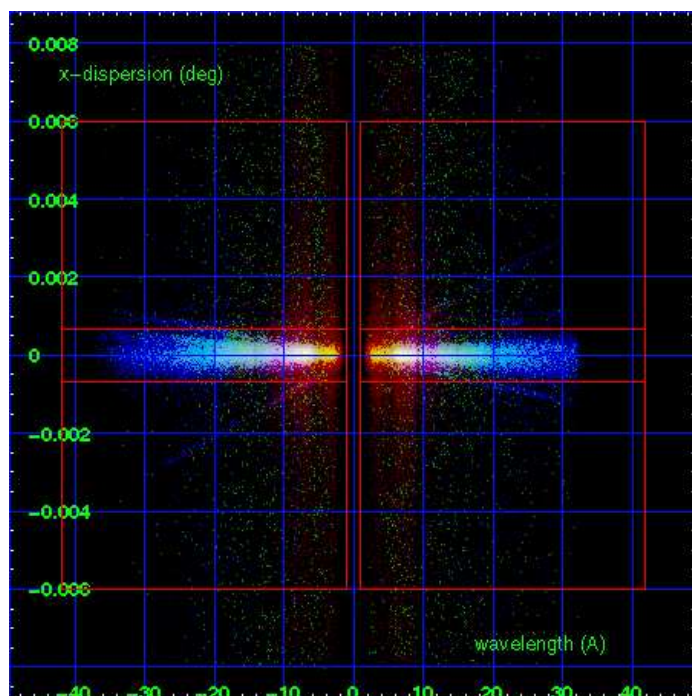
MEG Order Sort 123



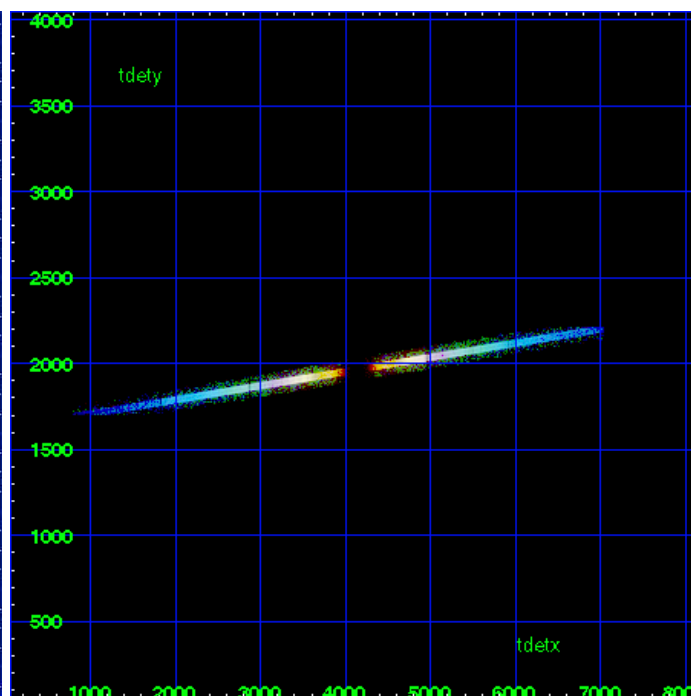
MEG Zero Order



MEG Order Sort ALL

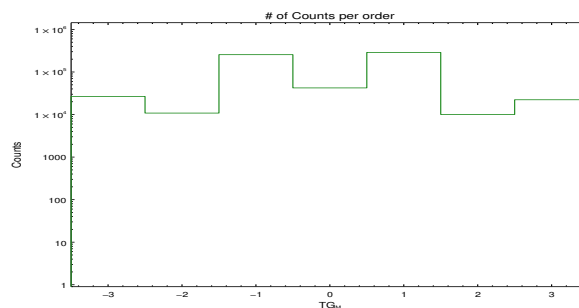


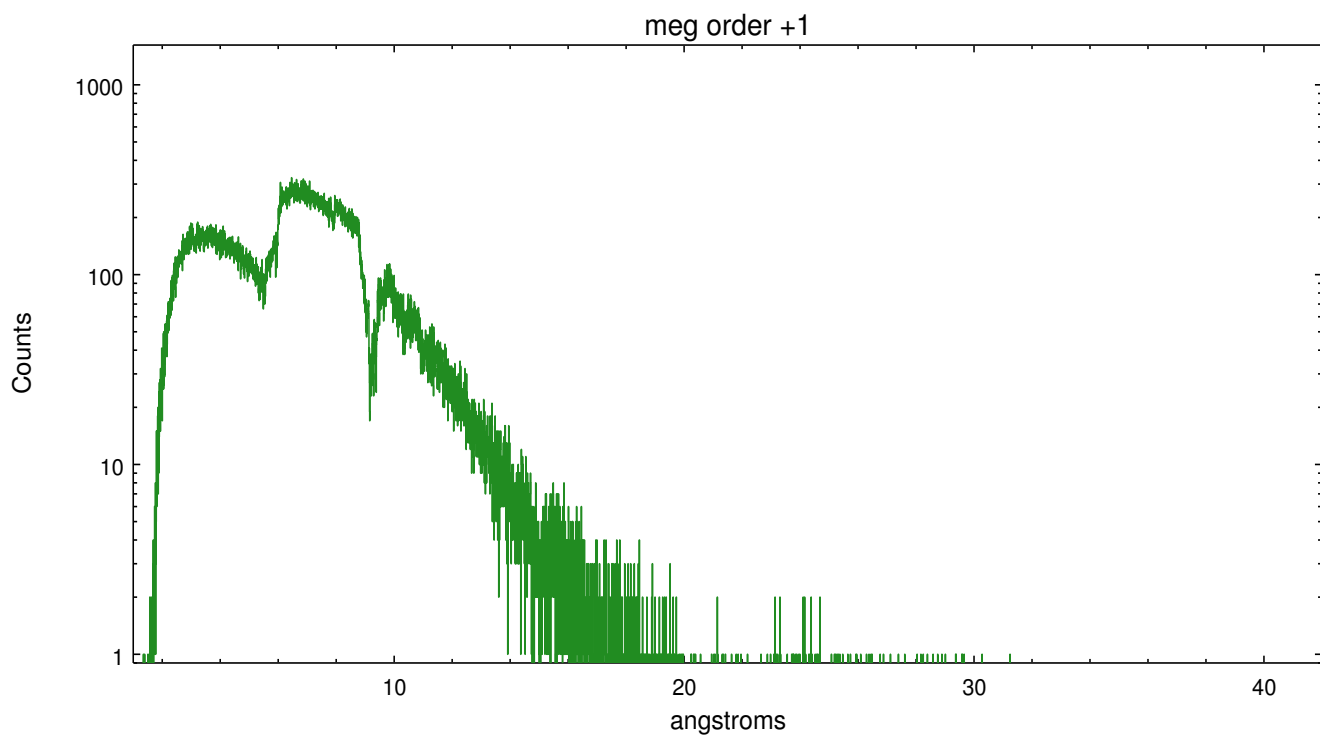
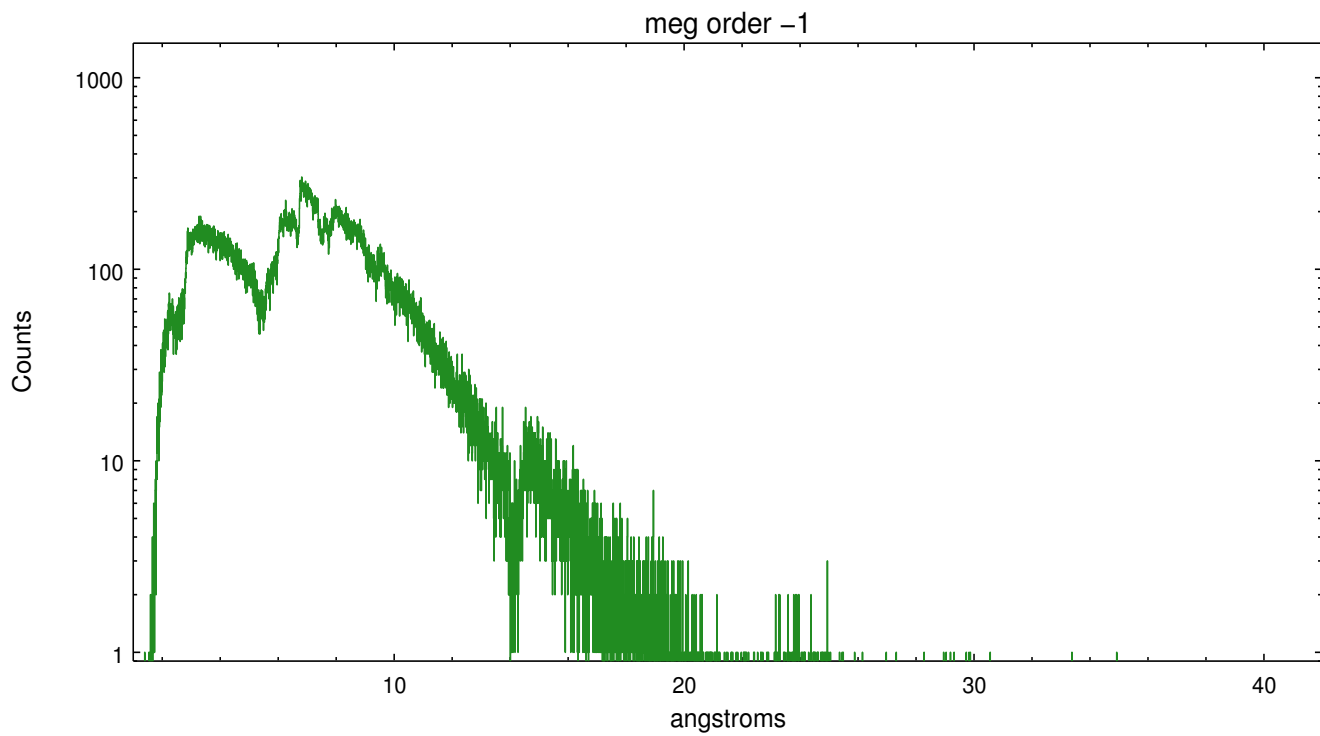
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	26657	10817	255588	42274	288286	10044	22266





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.05.21
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	31.1490997

A.2 Comments

Zeroth order piled up. Standard data processing software did not correctly locate the zeroth order due to pileup. Manual intervention was used to input the correct sky coordinates (x=4127.11, y=4113.1) into the *src1a.fits file table. These corrected coordinates were determined using a software tool developed by CXC called findzero, which is expected to be released in CIAO (currently in ISIS). The tool calculates the point of intersection of the readout streak and the meg arm (preferred position), or the readout streak and the heg arm. The zeroth order source position determined by the standard pipeline processing using the tool tgdetect was not used in this processing. The newly determined zeroth order coordinates have been placed in the *src1a.fits file, replacing the coordinates determined by tgdetect. Note that these corrected coordinates of the zeroth order cannot be reproduced by running tgdetect on the data.