

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 335 - L2 Version 4
Chandra X-Ray Center

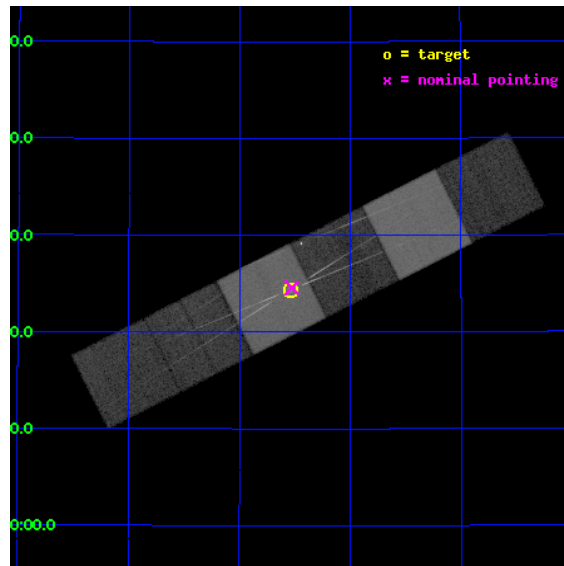
L2 Processing Date : Aug 24 2012

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
3	Gratings	17
3.1	HEG Arm	17
3.2	MEG Arm	19
A	Summary	21
A.1	Status	21
A.2	Comments	21

1 Front

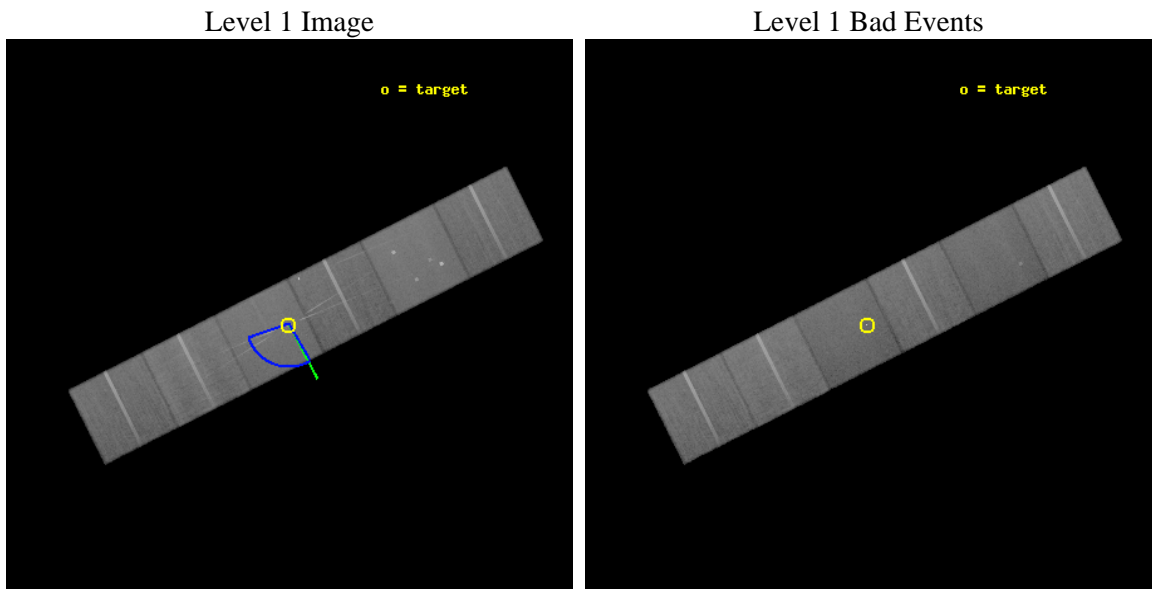
seq_num	700007	Sequence number
obs_id	335	Observation id
title	HETG OBSERVATIONS OF VARIOUS ACTIVE GALACTIC NUCLEI	Proposal title
observer	Prof Claude Canizares	Principal investigator
object	NGC 4151	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	182.635833	Observer's specified target RA [deg]
dec_targ	39.405833	Observer's specified target Dec [deg]
ra_nom	182.63181165428	Nominal RA [deg]
dec_nom	39.409425307115	Nominal Dec [deg]
roll_nom	153.1714397309	Nominal Roll [deg]
revision	4	Processing version of data
ontime	48044.80004473	Sum of GTIs [s]
livetime	47436.427857459	Livetime [s]
ontime4	48041.559074491	Sum of GTIs [s]
ontime5	48044.80004473	Sum of GTIs [s]
ontime6	48044.80004473	Sum of GTIs [s]
ontime7	48044.80004473	Sum of GTIs [s]
ontime8	48044.80004473	Sum of GTIs [s]
ontime9	48044.80004473	Sum of GTIs [s]
l2events	536228	Number of level 2 events



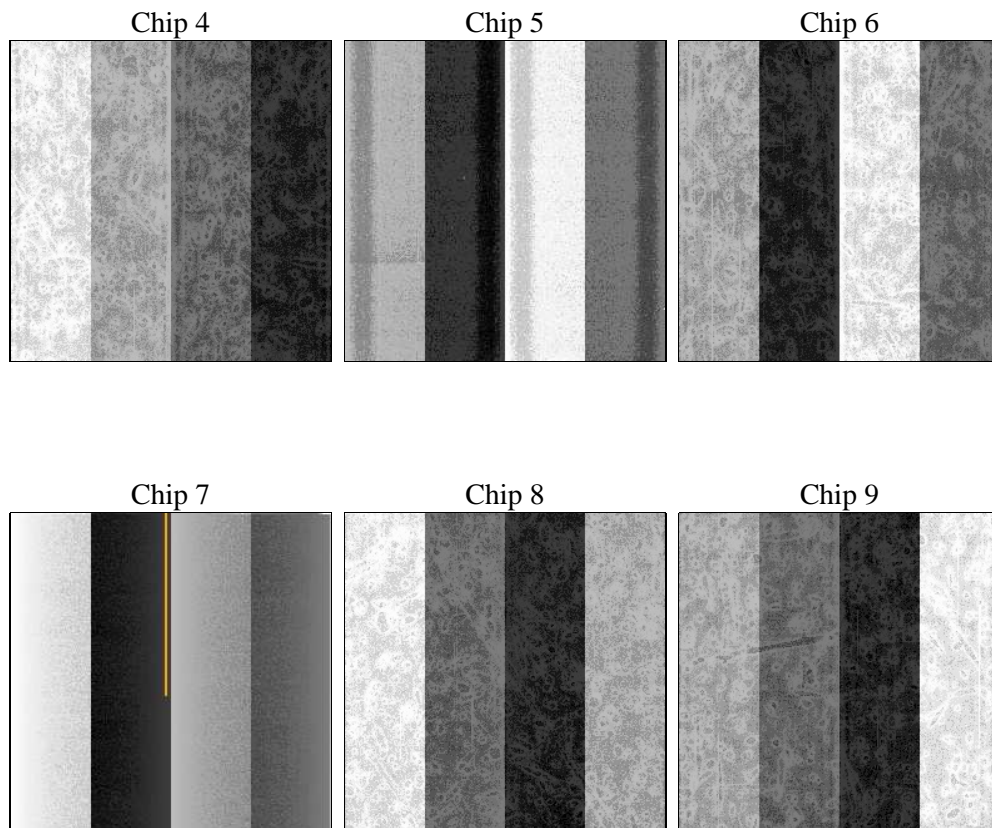
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	49000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	48044.80004473	Sum of GTIs [s]
caldbver	4.5.1.1	 	ontime4	48041.559074491	Sum of GTIs [s]
date	2012-08-24T12:31:45	Date and time of file creation	ontime5	48044.80004473	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	48044.80004473	Sum of GTIs [s]
			ontime7	48044.80004473	Sum of GTIs [s]
			ontime8	48044.80004473	Sum of GTIs [s]
			ontime9	48044.80004473	Sum of GTIs [s]
			l1events	2466436	Number of level 1 events

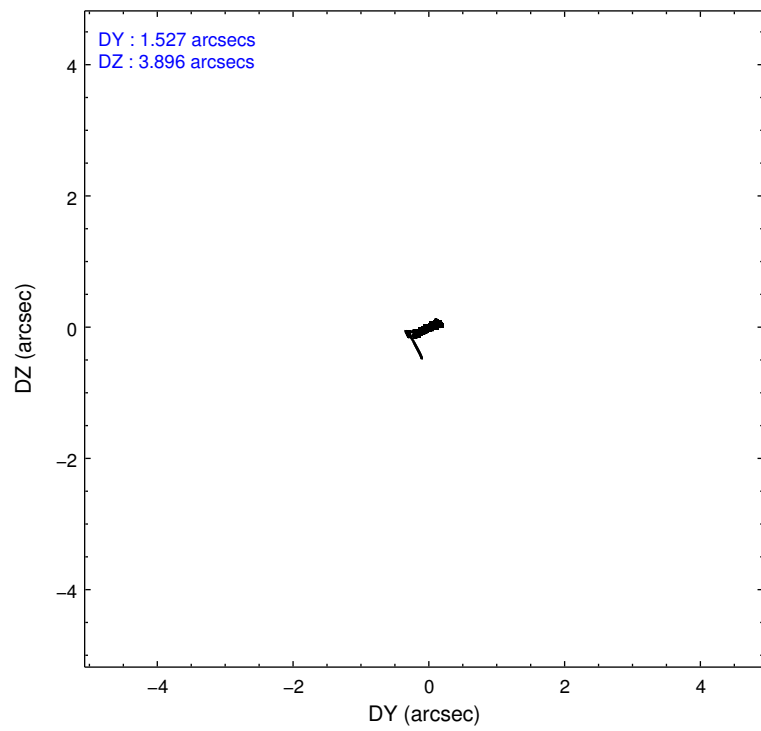
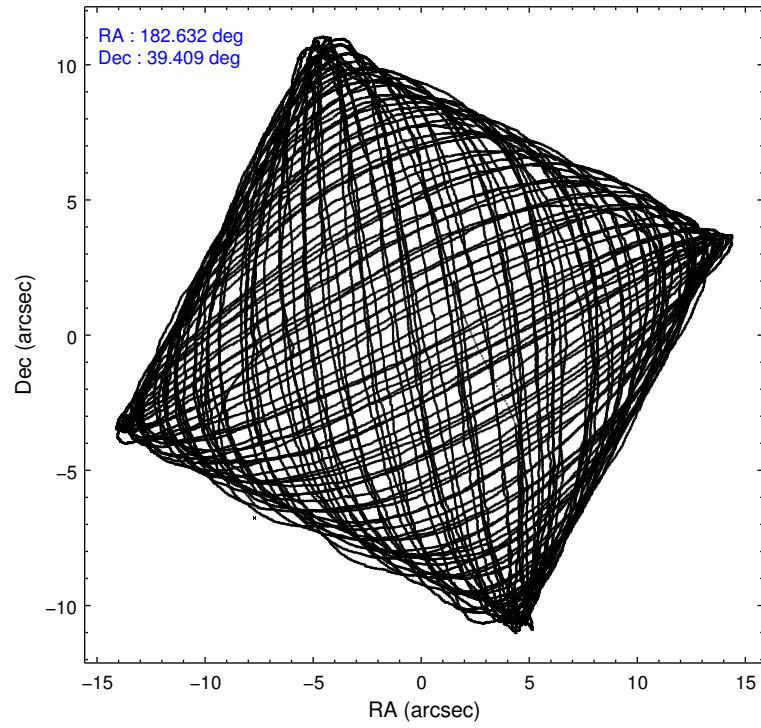
2.1.4 Events

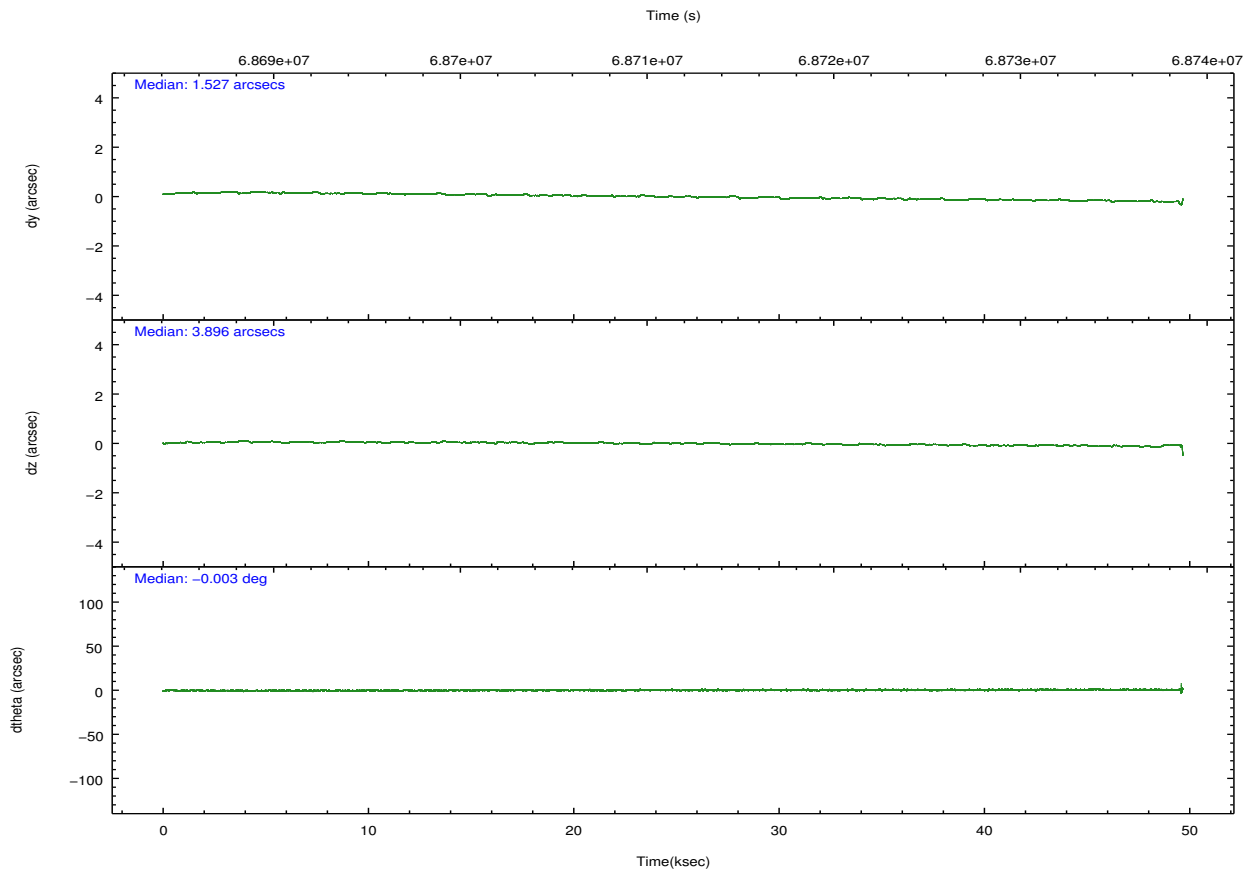
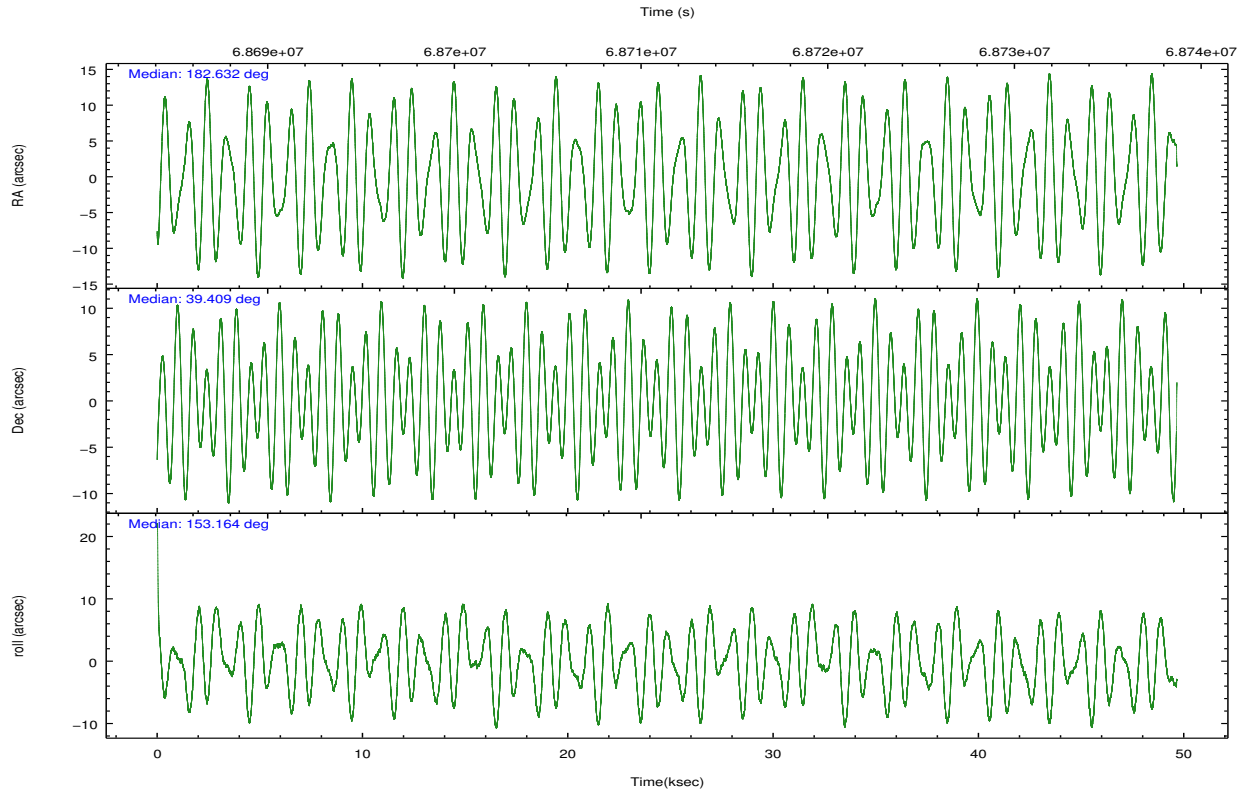
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	396339	455664	373367	436854	452566	351646	grade 0 events	15817	27121	25930	20848	28208	15594
rejected events	357710	241252	321180	240628	367541	313587		3%	5%	6%	4%	6%	4%
rejected %	90%	52%	86%	55%	81%	89%	grade 1 events	191	1132	214	705	303	177
								0%	0%	0%	0%	0%	0%
							grade 2 events	9001	60533	9143	38983	17793	7470
								2%	13%	2%	8%	3%	2%
							grade 3 events	3713	9841	4529	18268	9288	3895
								0%	2%	1%	4%	2%	1%
							grade 4 events	3630	9465	4421	18247	8608	3719
								0%	2%	1%	4%	1%	1%
							grade 5 events	10897	34959	13340	41218	16883	13160
								2%	7%	3%	9%	3%	3%
							grade 6 events	6474	107491	8172	99913	21135	7388
								1%	23%	2%	22%	4%	2%
							grade 7 events	346616	205122	307618	198672	350348	300243
								87%	45%	82%	45%	77%	85%

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	182.667306	182.6318116542845	Subarray requested	NONE	NONE
[deg] Pointing Dec	39.410986	39.40942530711519	Alternating exposures requested	N	N
[deg] Pointing Roll	152.992273	153.1714397309017	[s] Primary exposure time	0.000000	3.2
[deg] Roll angle	200.000000	200.000000			
[deg] Roll tolerance	50.000000	50.000000			
Roll constraint allows 180D rotation	N	N			
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-187.132523	-190.1400660498719			
[mm] SIM translation stage offset	-3	0.00754346686406393			
[s] Observation start time (MET)	68687049.184000	68685551.606104			
Observation start date	2000-03-05T23:43:05	2000-03-05T23:19:11			
[s] Observation end time (MET)	68736049.184000	68736230.170454			
Observation end date	2000-03-06T13:19:45	2000-03-06T13:23:50			
Read mode	TIMED	TIMED			

2.3 Aspect



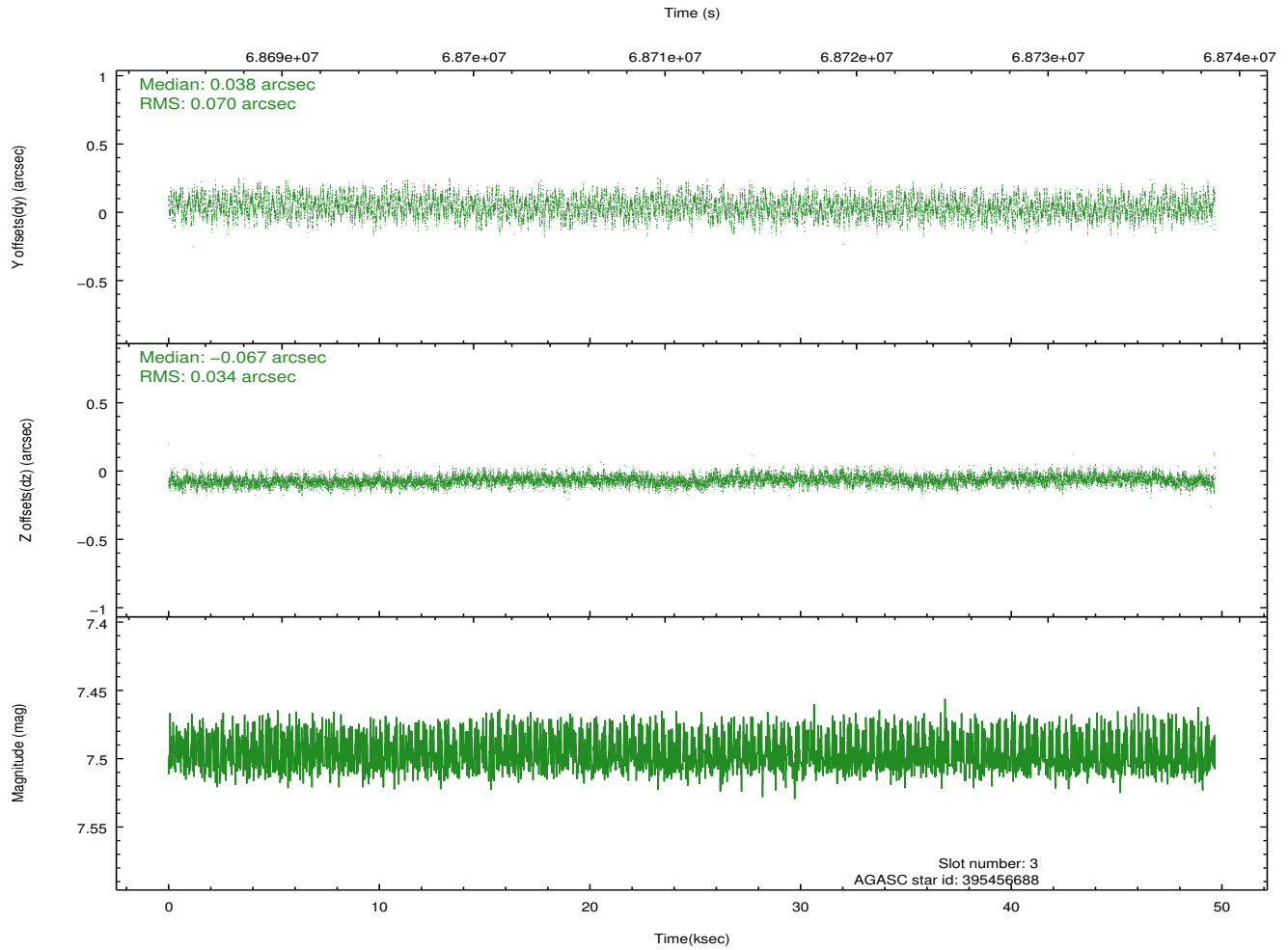
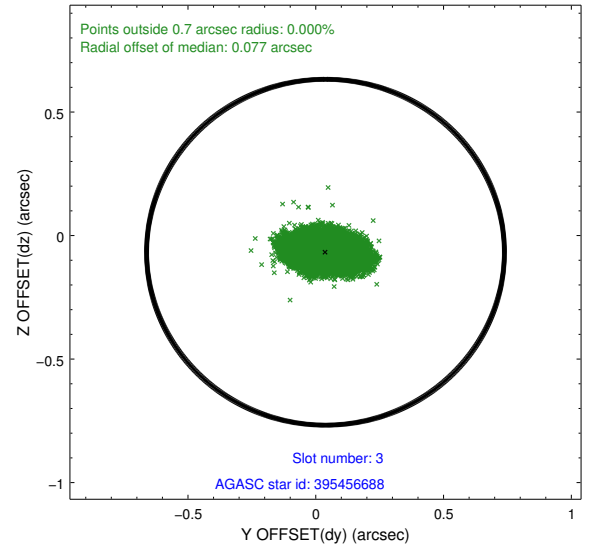
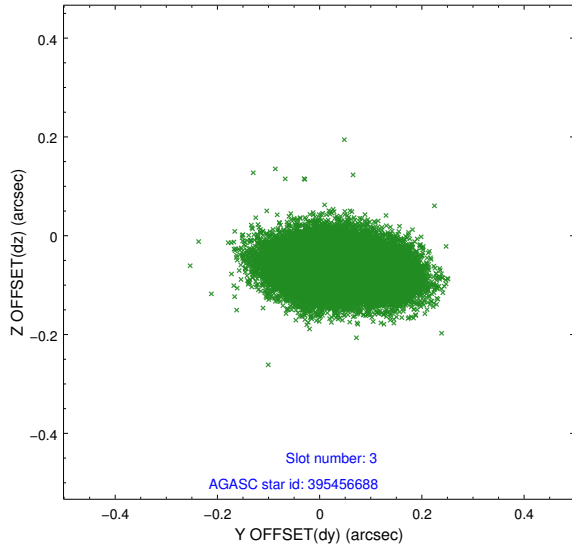


Slot Statistics

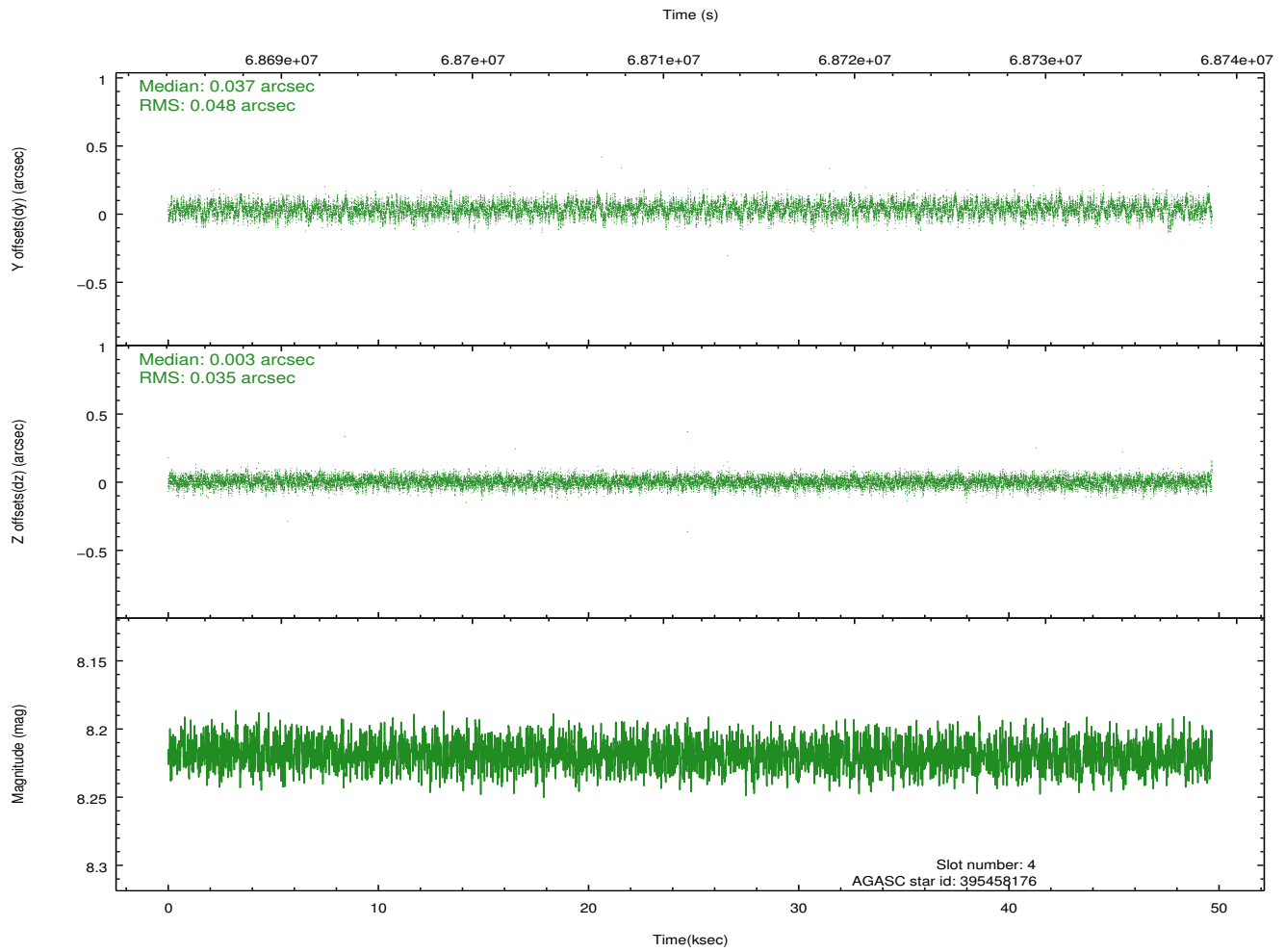
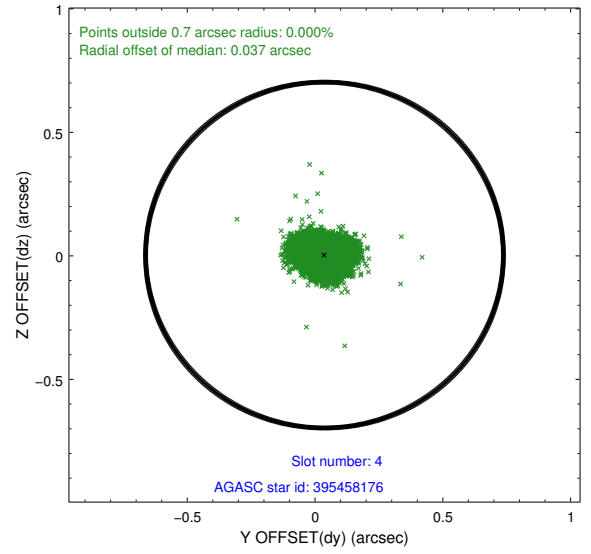
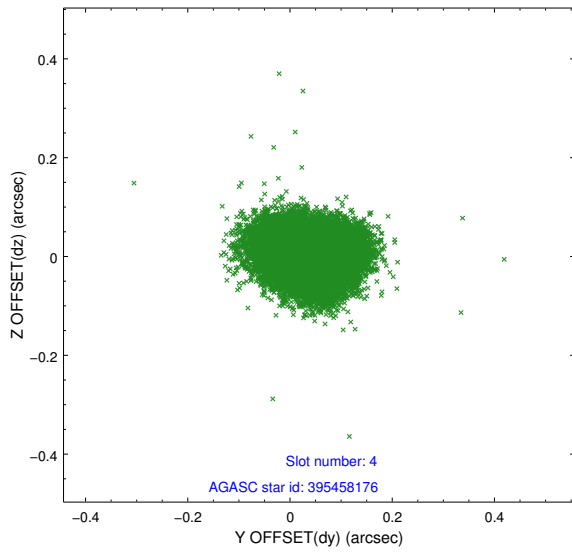
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	12102	-0.011	-0.021	0.006	0.011	0.000000	0.000000	-754.17	-1724.97
1	FID	ACIS-S-4	7.21	12102	0.006	0.011	0.005	0.010	0.000000	0.000000	2159.17	183.50
2	FID	ACIS-S-5	7.24	12103	-0.026	0.019	0.006	0.011	0.000000	0.000000	-1807.01	177.25
3	GUIDE	395456688	7.50	24221	0.038	-0.067	0.082	0.136	182.405236	40.252056	2018.13	-2371.01
4	GUIDE	395458176	8.22	24220	0.037	0.003	0.063	0.102	182.790485	39.130199	-764.70	744.45
5	GUIDE	395460552	8.97	24144	-0.066	0.064	0.068	0.110	183.182835	39.403608	-1287.23	-630.80
6	GUIDE	395459952	9.40	24213	-0.121	0.020	0.079	0.127	181.854255	39.210518	1697.82	1664.47
7	GUIDE	395458552	9.79	24210	0.110	-0.018	0.102	0.167	182.833984	39.179797	-791.37	530.33

2.4 Star Slots

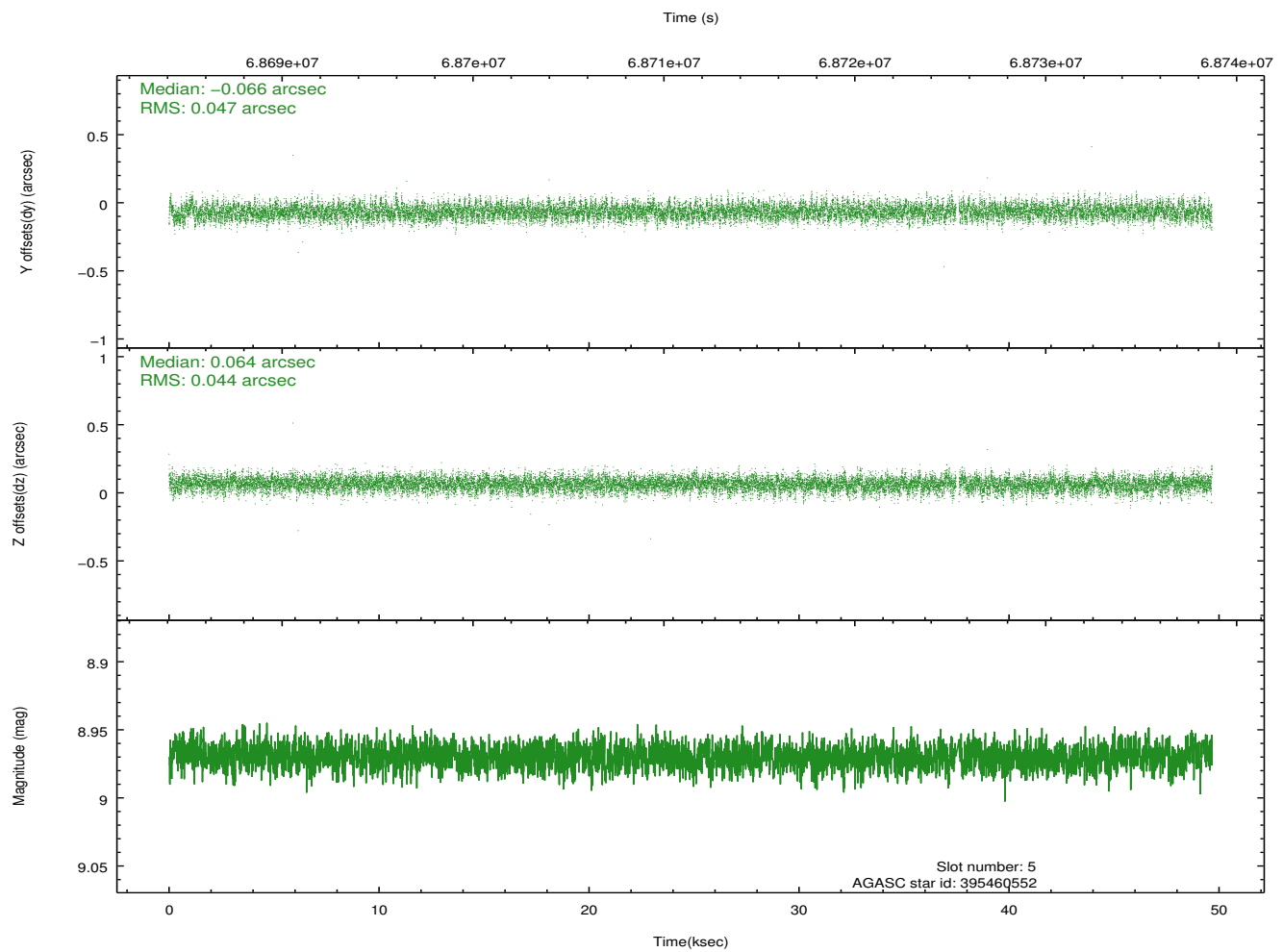
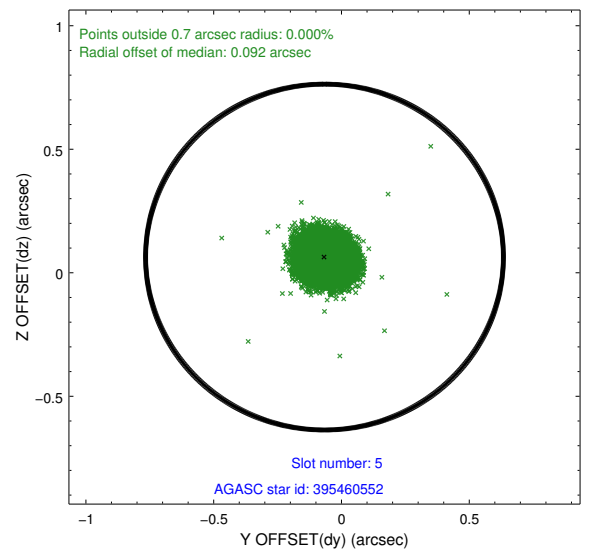
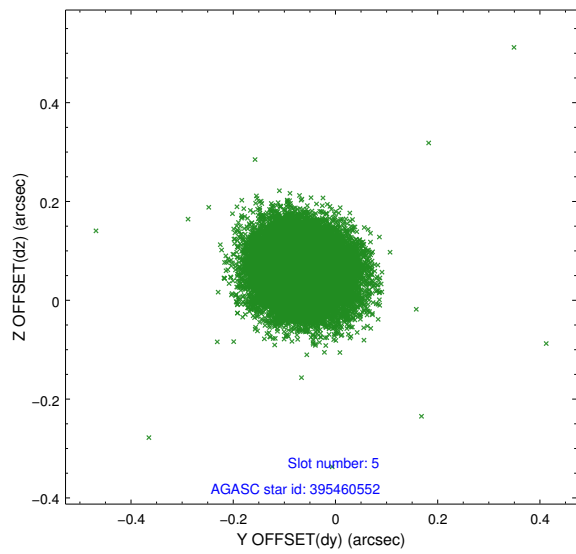
2.4.1 Slot 3



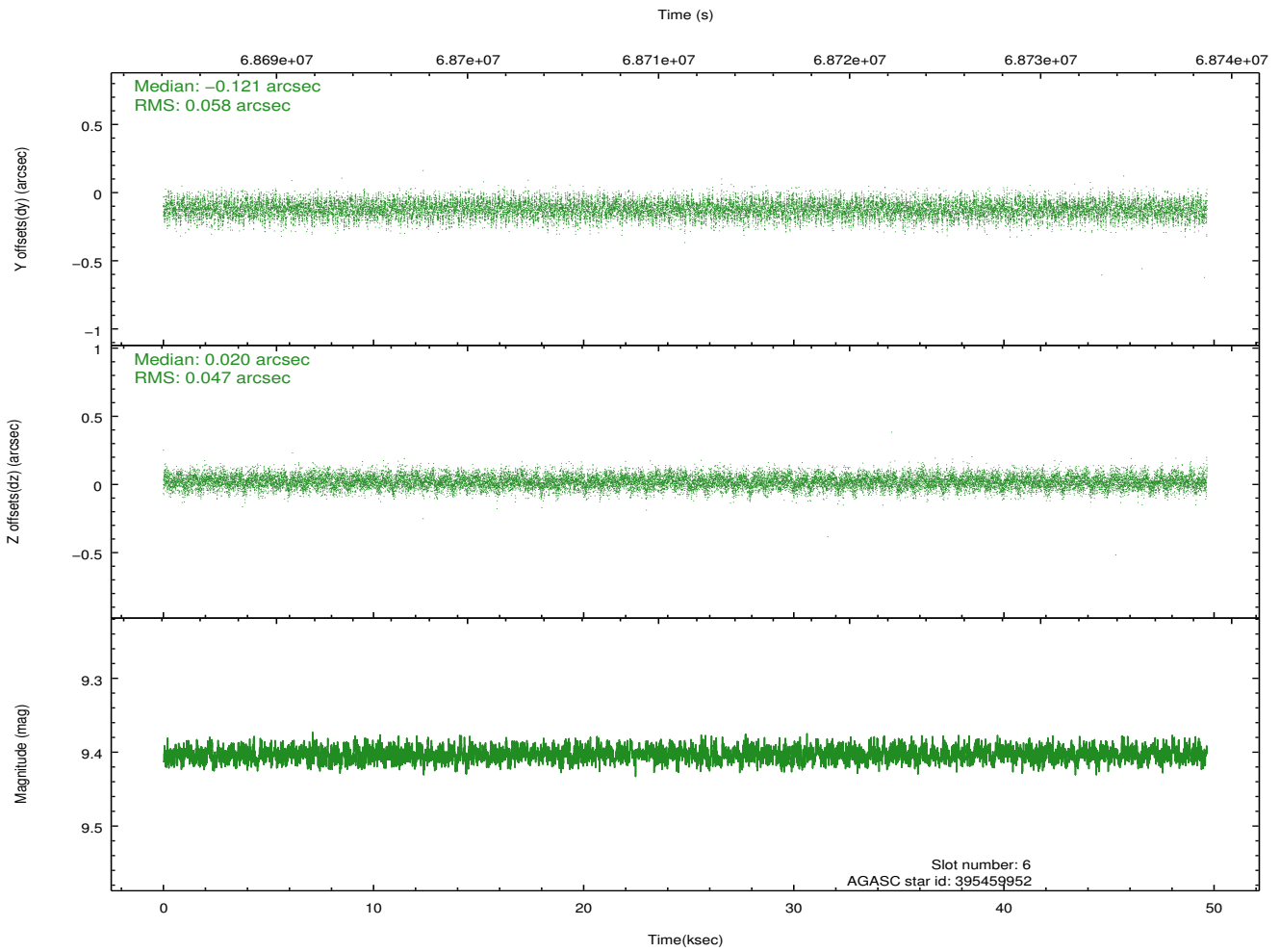
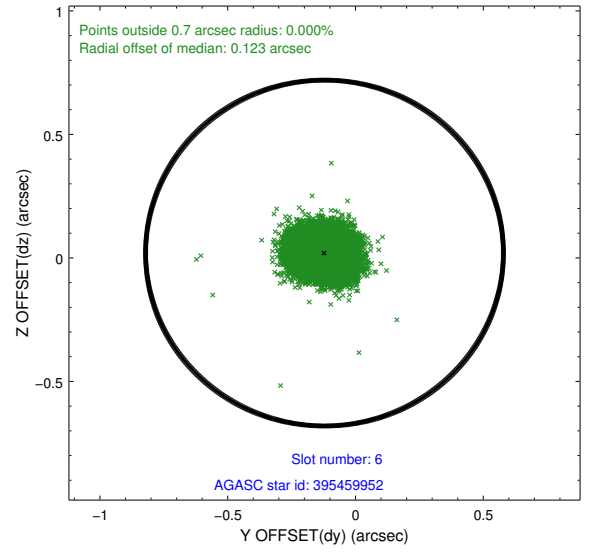
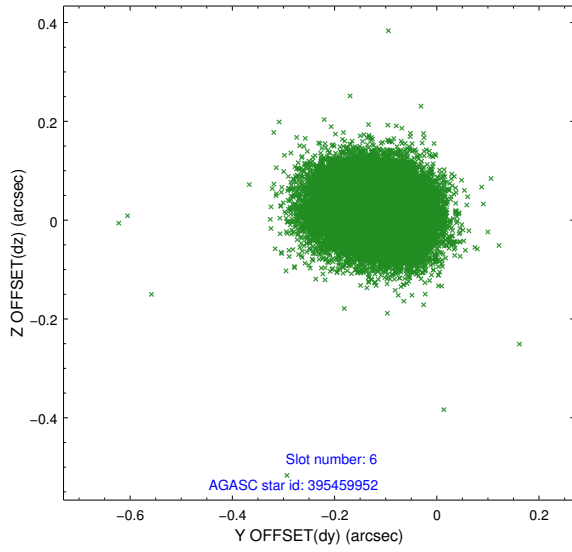
2.4.2 Slot 4



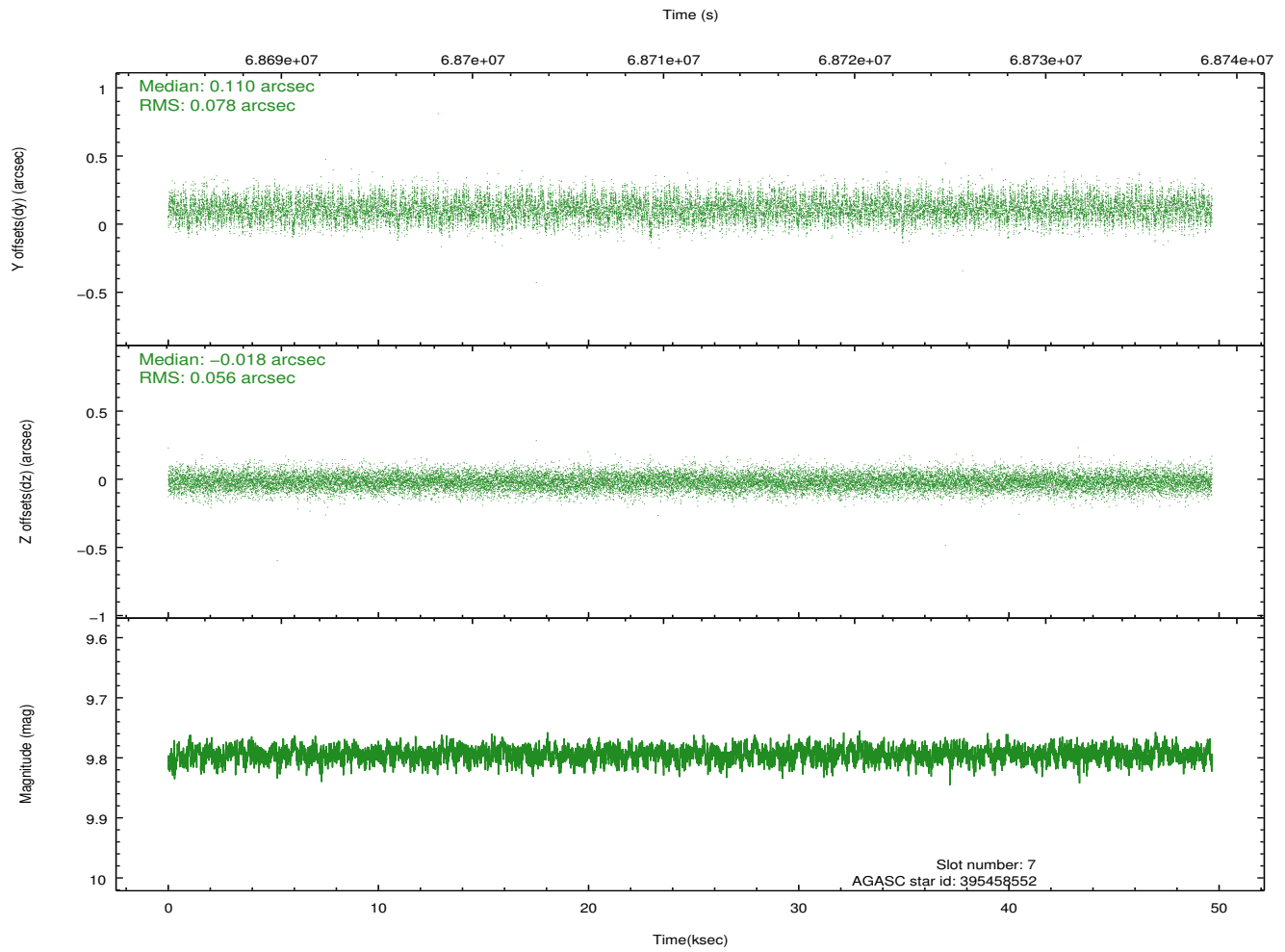
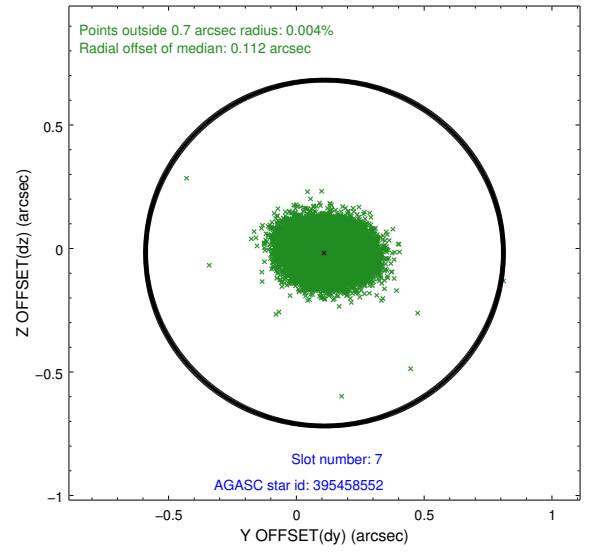
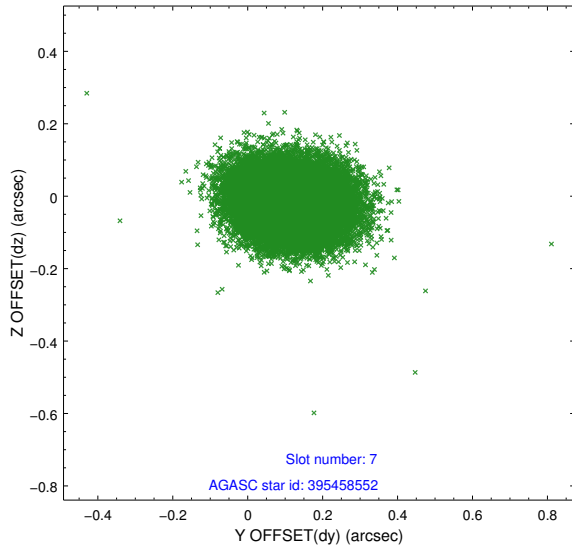
2.4.3 Slot 5



2.4.4 Slot 6

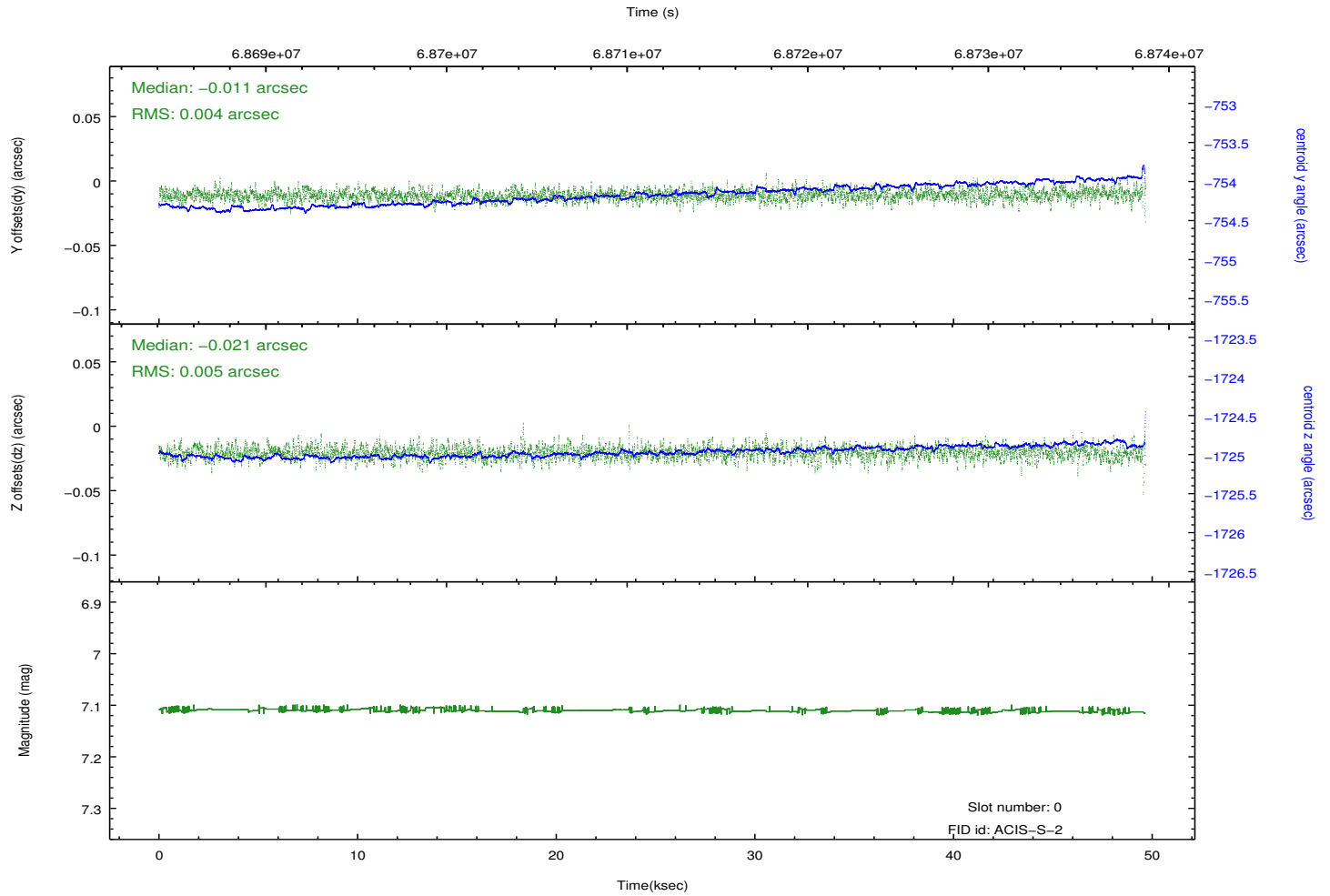
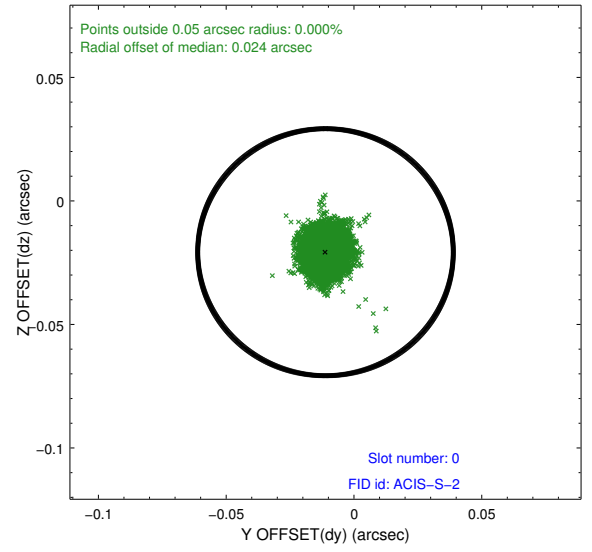
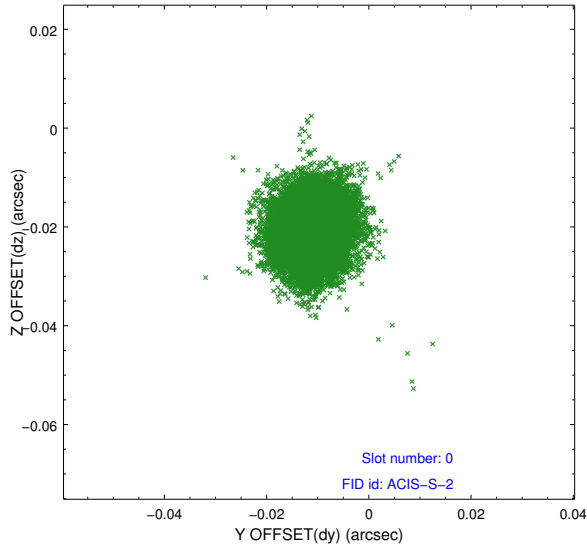


2.4.5 Slot 7

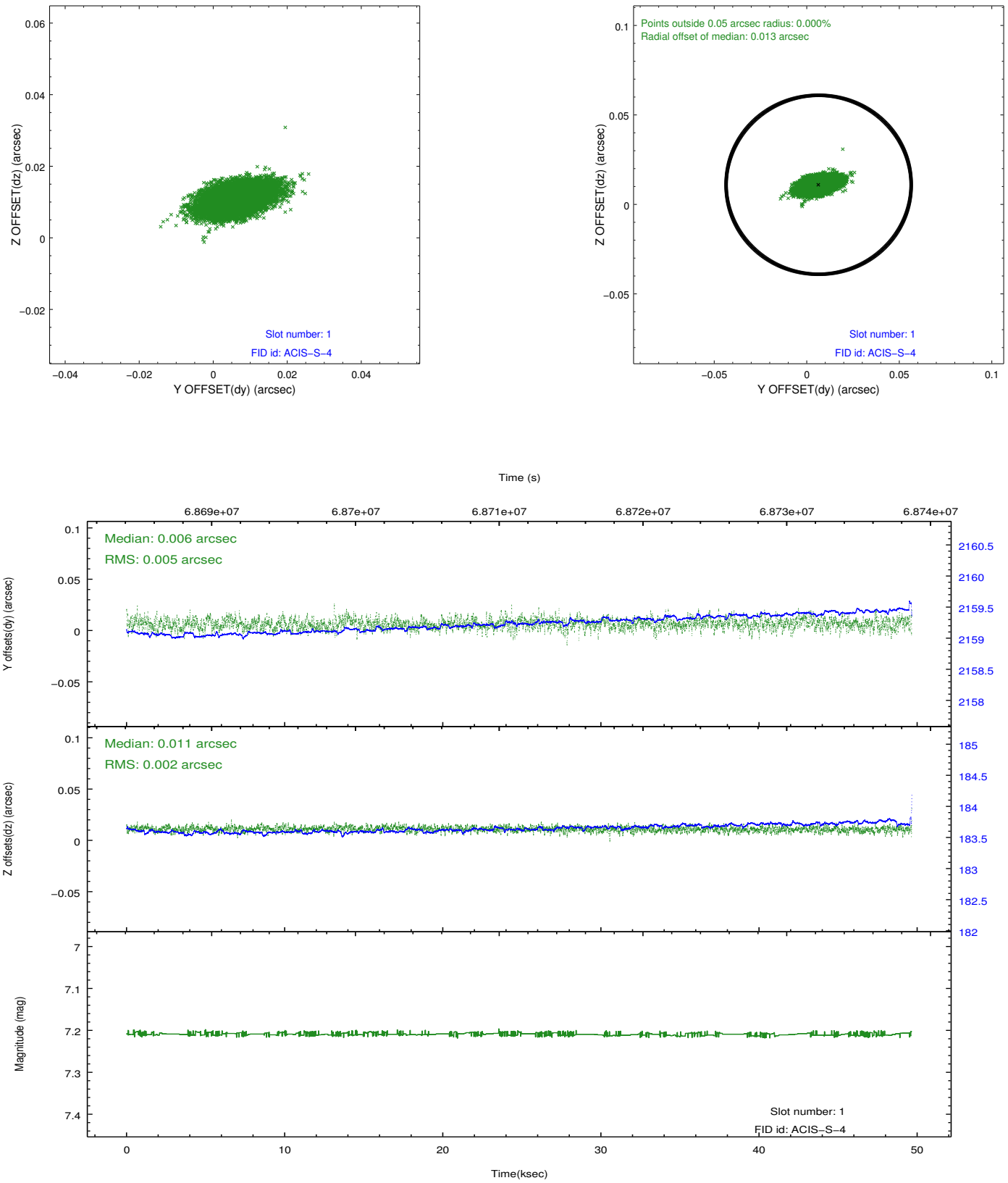


2.5 FID Slots

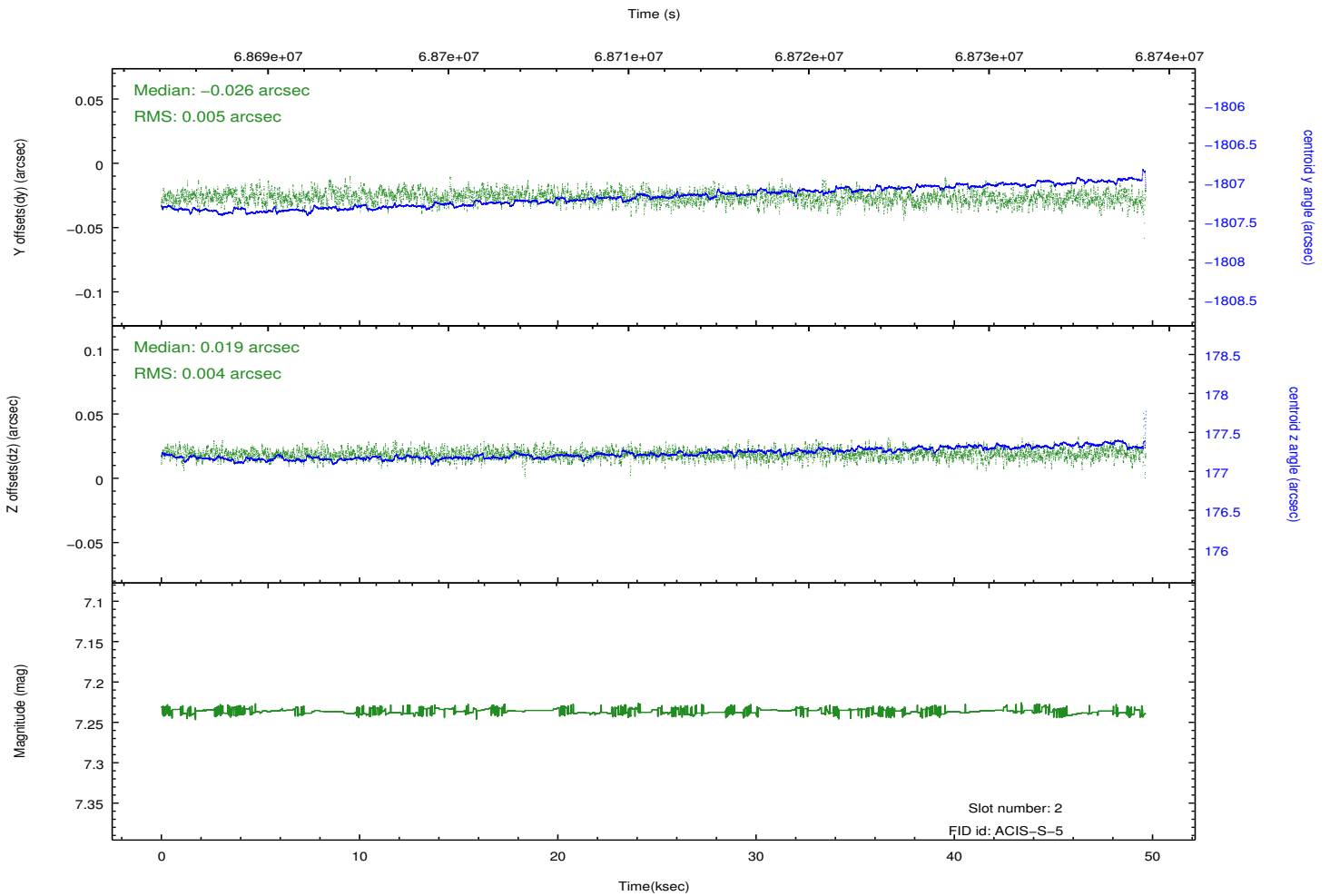
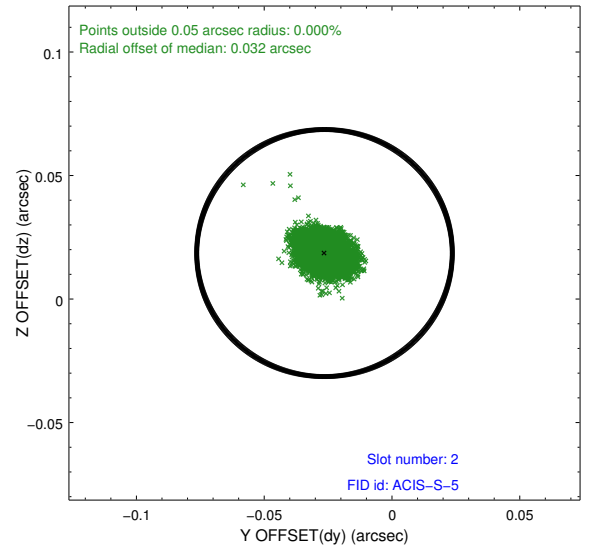
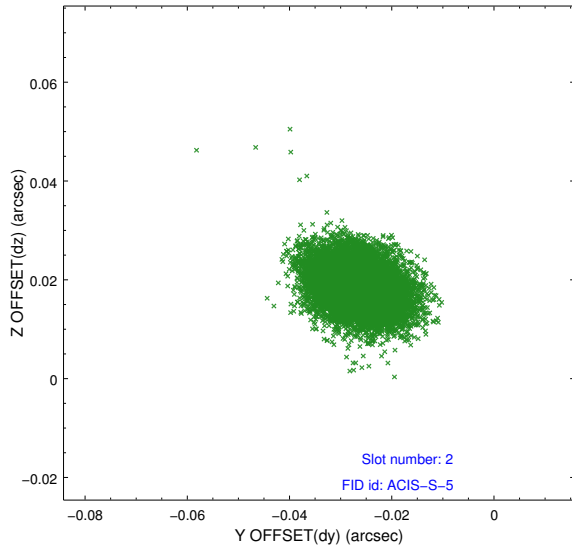
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

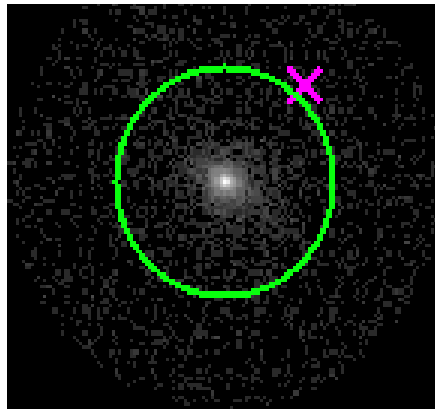


3 Gratings

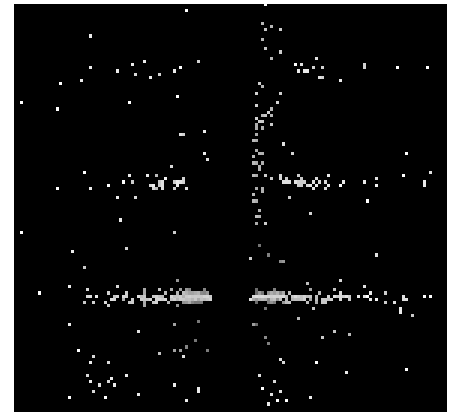
3.1 HEG Arm



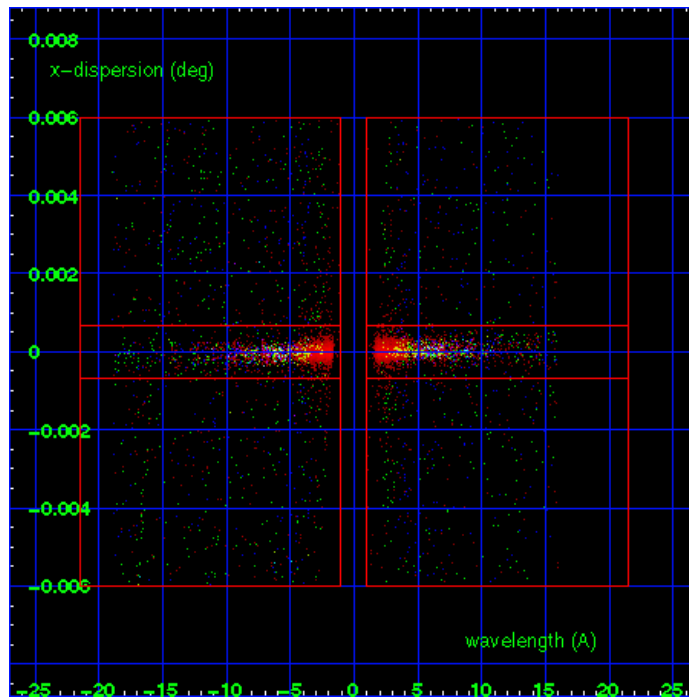
HEG Order Sort 123



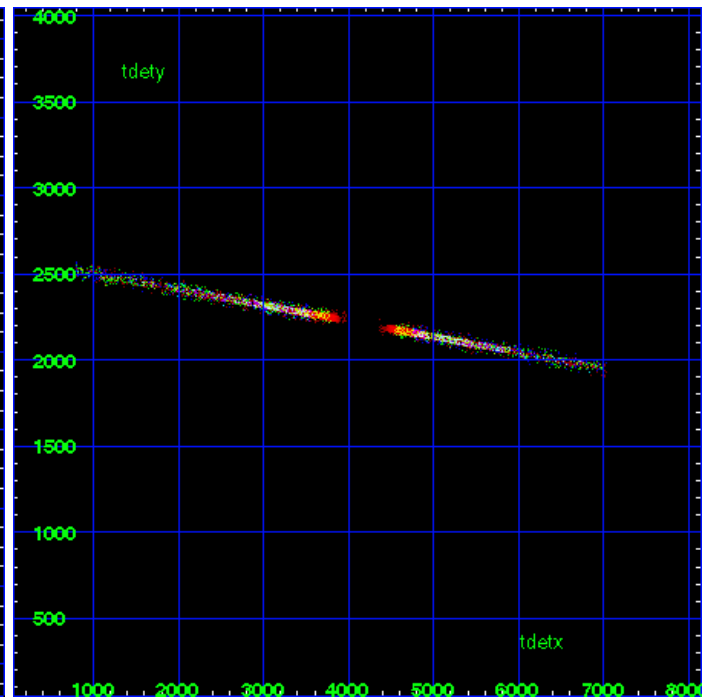
HEG Zero Order



HEG Order Sort ALL

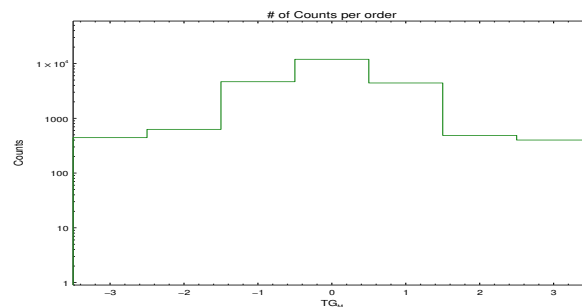


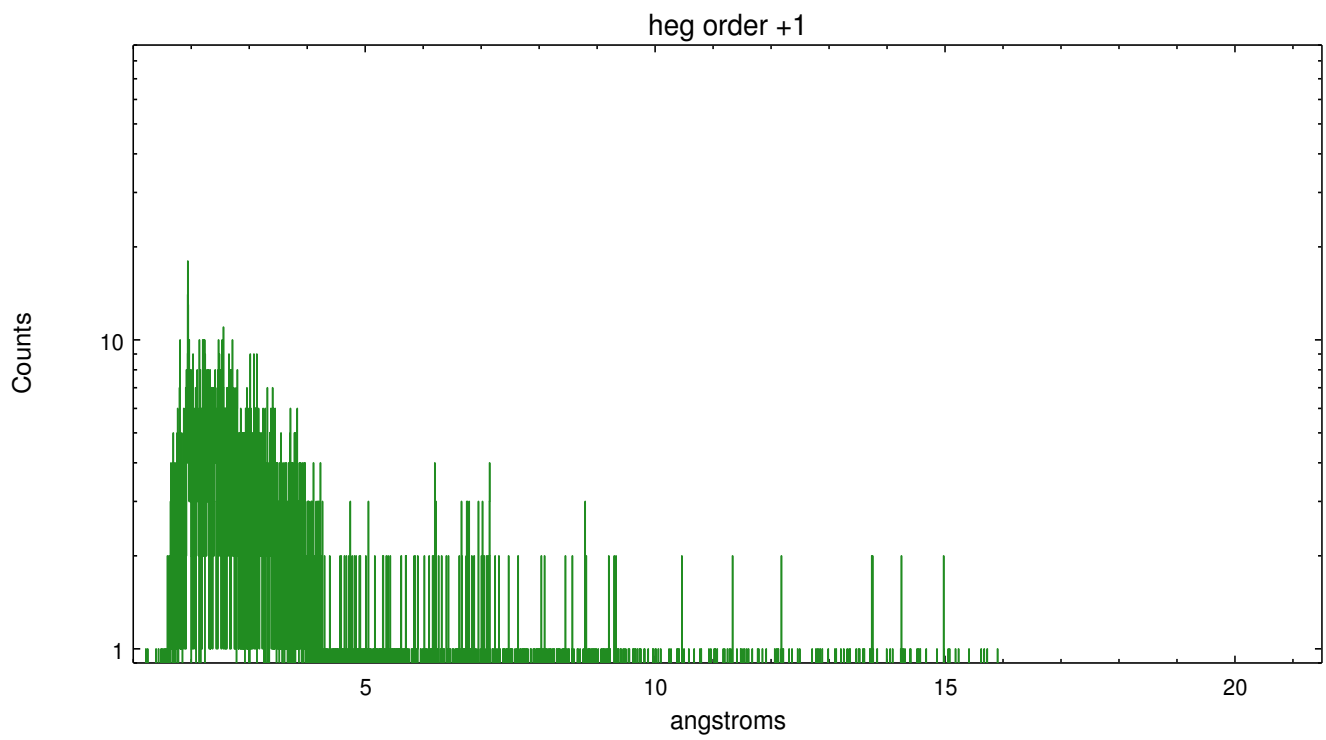
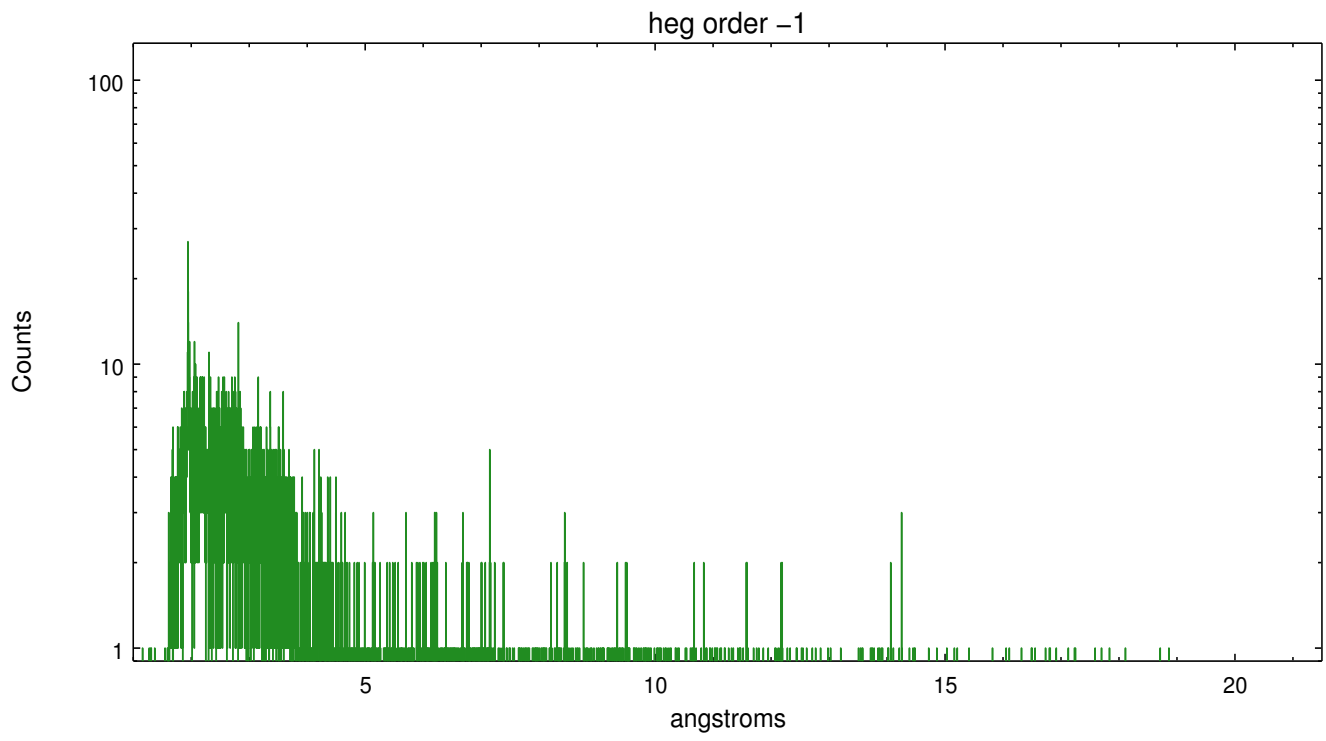
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	444	628	4667	11969	4423	487	401

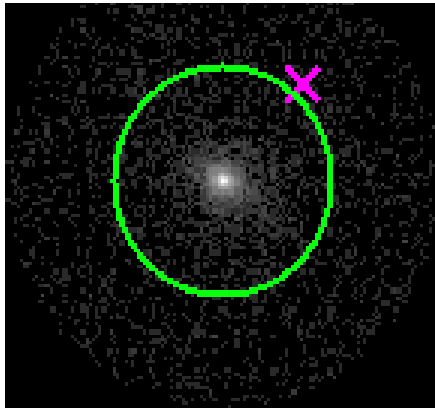




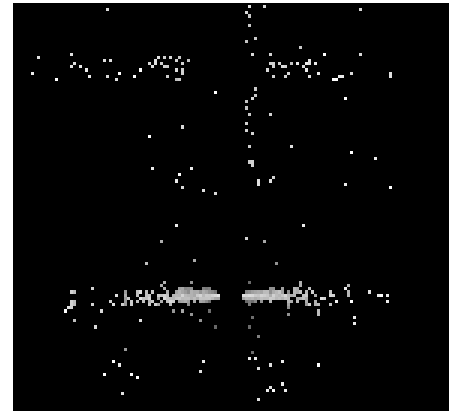
3.2 MEG Arm



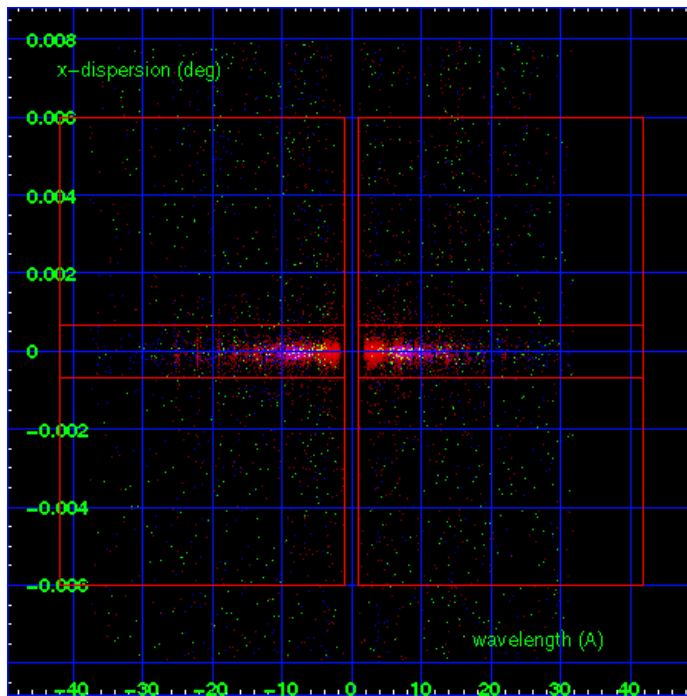
MEG Order Sort 123



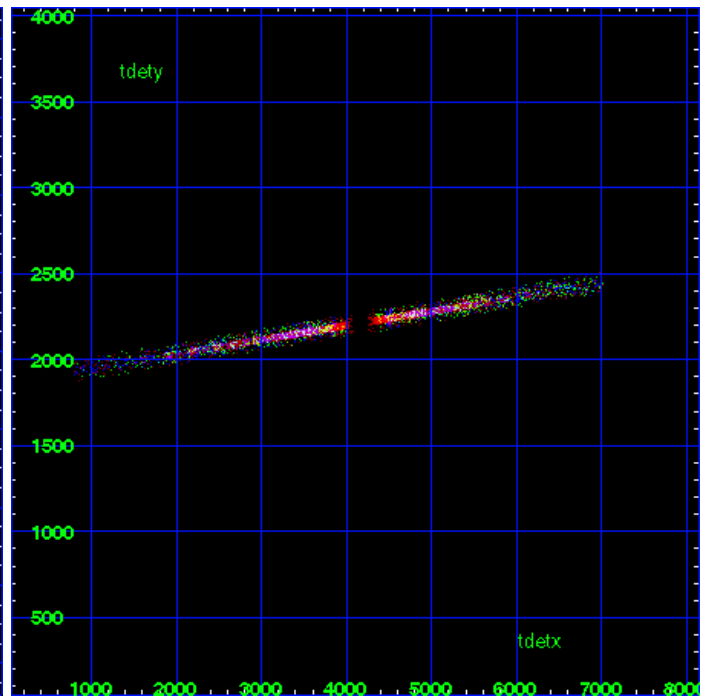
MEG Zero Order



MEG Order Sort ALL

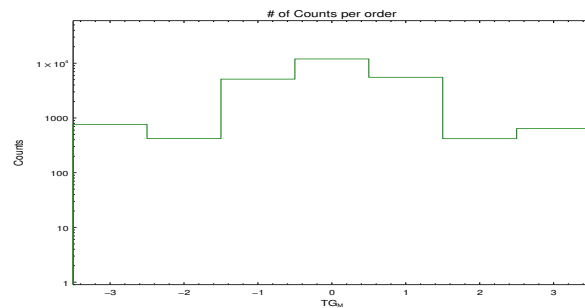


Spot Image MEG

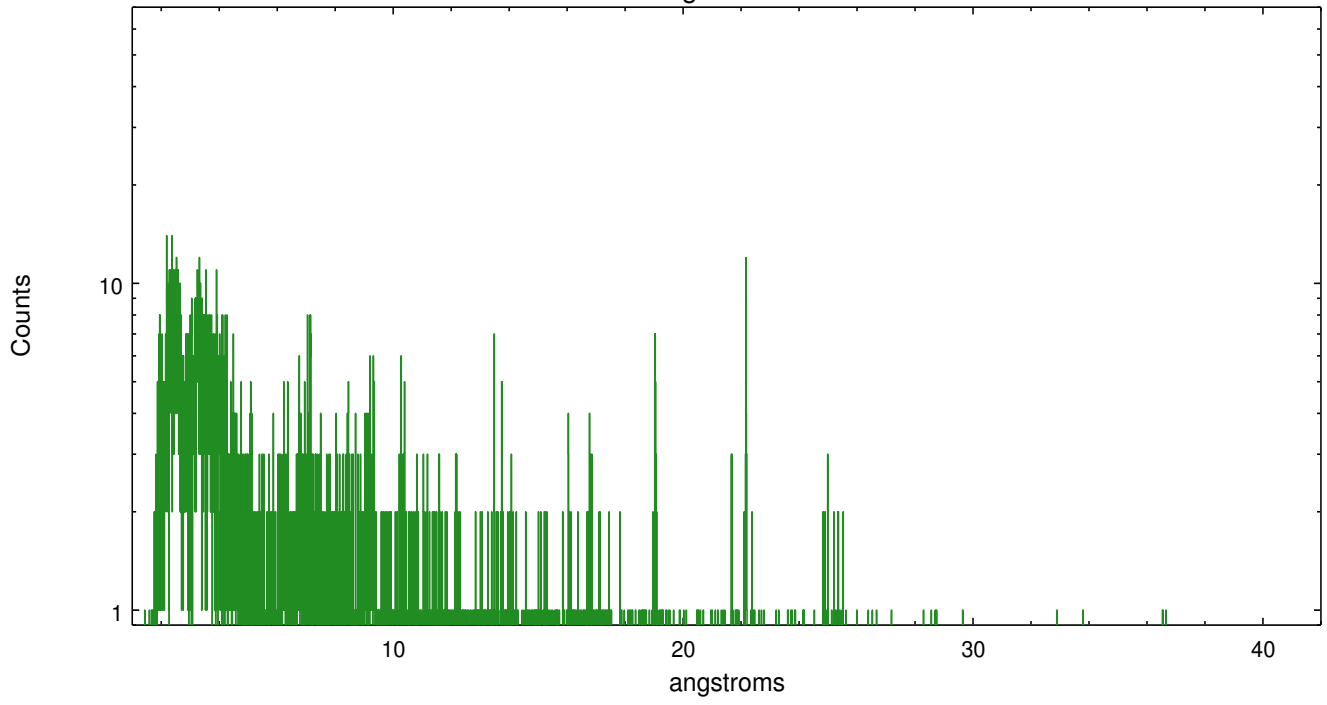


Full Detector MEG

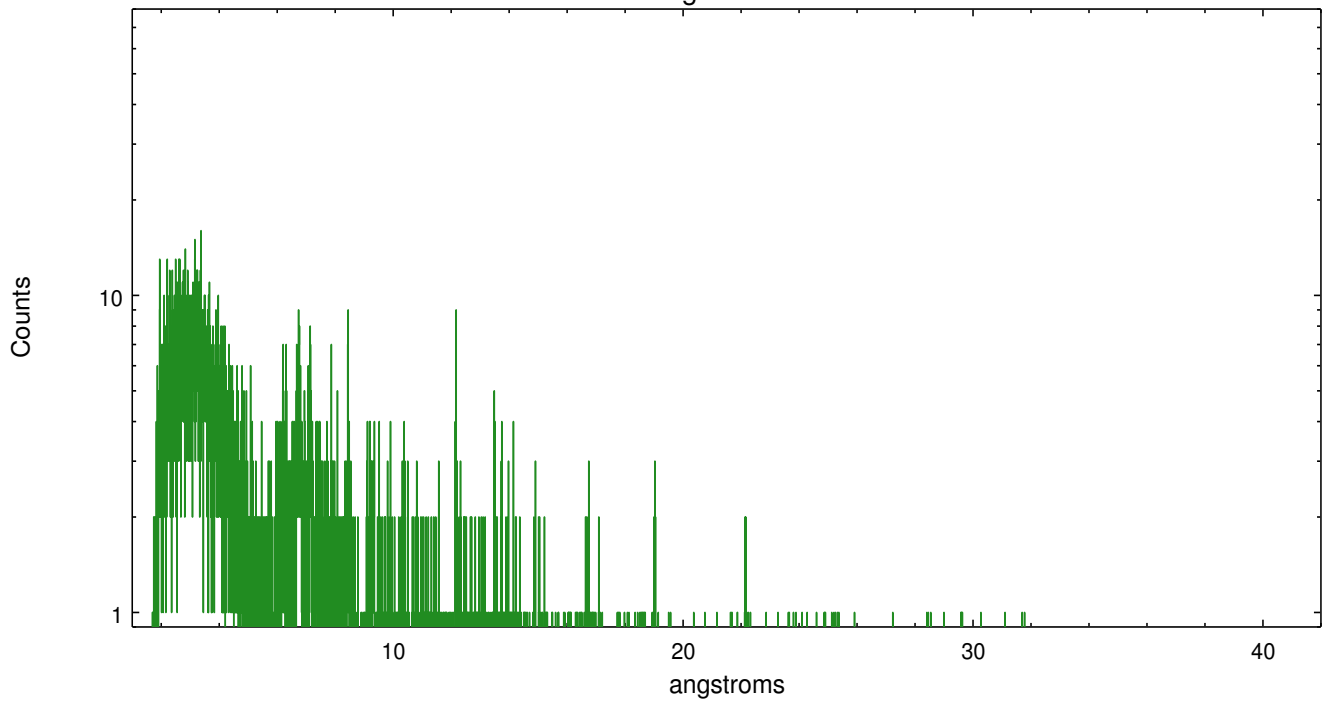
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	763	421	5119	11969	5528	419	641



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.08.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	48.032

A.2 Comments

Additional bright source in field w/ clear dispersed spectrum at x,y = 4214, 4654 == ra,dec = 12 10 26.6, 39 29 08.5 (does not overlap w/ target, except at longest wavelengths). Target spectrum well exposed: continuum, emission lines. peak counts/bin ~ 15. Roll constraint met.