

V&V Reference Report

L2 ASCDS Version : 7.6.10

Observation 104 - L2 Version 3
Chandra X-Ray Center

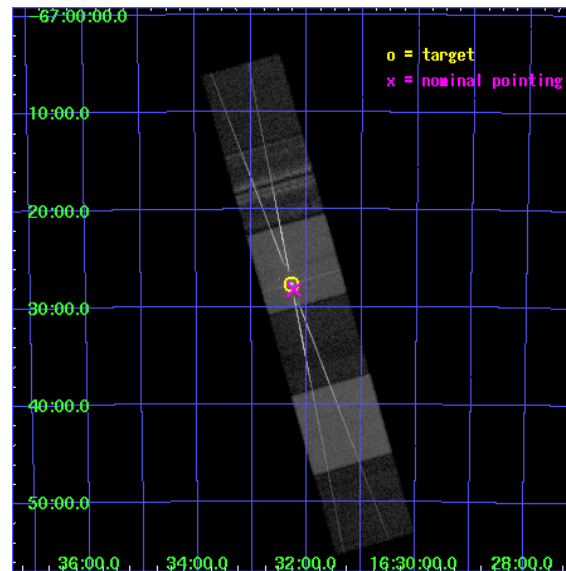
L2 Processing Date : Jul 30 2007

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1 Front

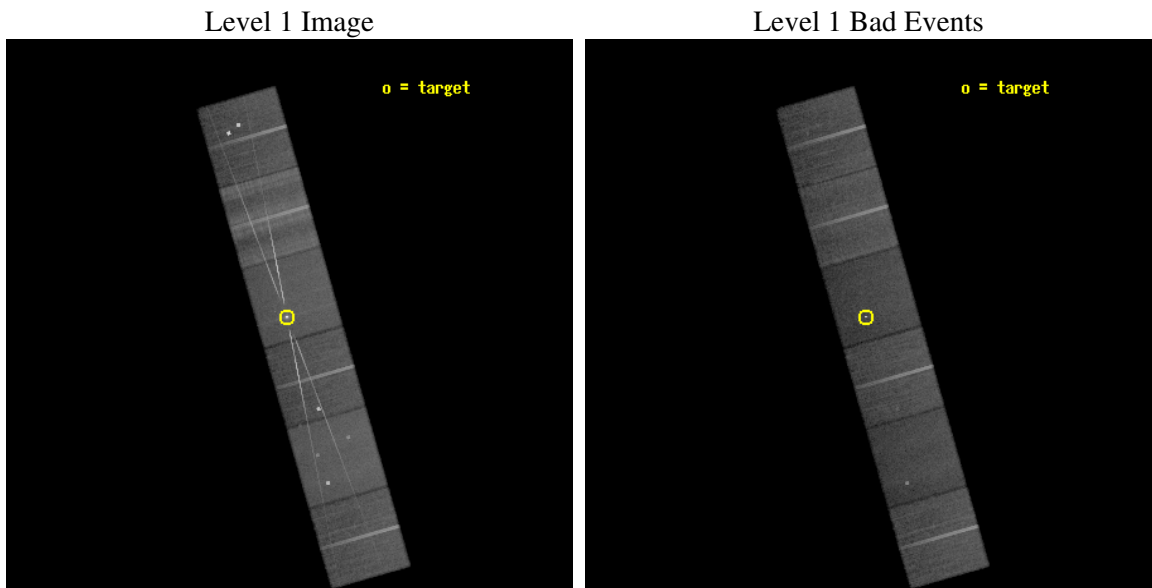
seq_num	400017
obs_id	104
title	HETG OBSERVATIONS OF X-RAY BINARIES
observer	Prof. Claude Canizares
object	4U 1626-67
dtcycle	0
cycle	P
ra_targ	248.069583
dec_targ	-67.461667
ra_nom	248.05811359432
dec_nom	-67.470534526425
roll_nom	254.04933469594
revision	3
ontime	39984.000037238
livetime	39477.698553292
ontime4	39980.759216622
ontime5	39984.000037238
ontime6	39980.759076998
ontime7	39984.000037238
ontime8	39984.000037238
ontime9	39984.000037238
l2events	508157



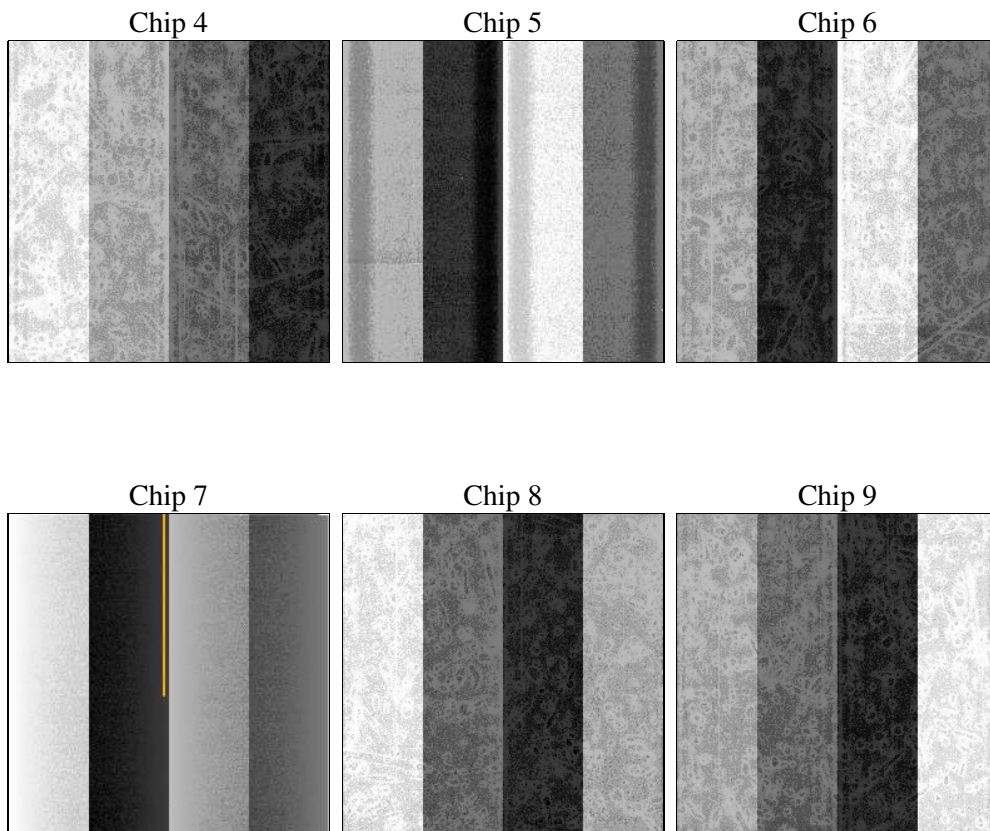
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	2
ascdsver	7.6.10
caldsver	3.4.0
date	2007-06-08T07:32:22
revision	2

sched_exp_time	40000.000000
ontime	39984.000037238
ontime4	39980.759216622
ontime5	39984.000037238
ontime6	39980.759076998
ontime7	39984.000037238
ontime8	39984.000037238
ontime9	39984.000037238
l1events	1951441

2.1.4 Events

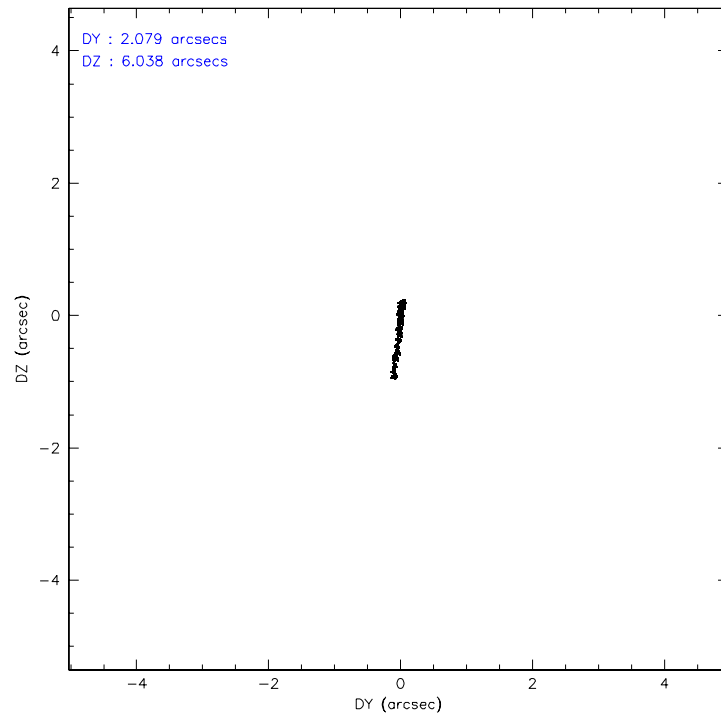
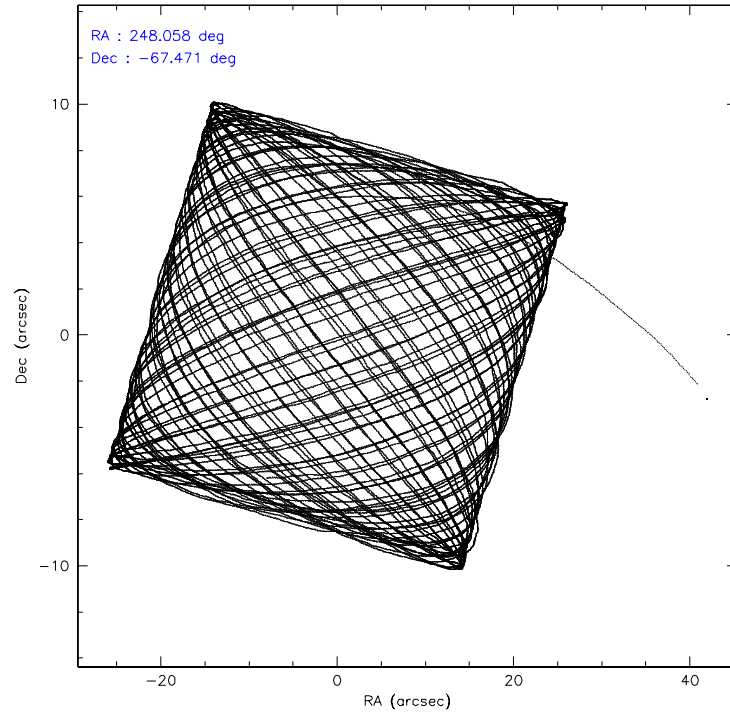
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	285113	332477	312131	348897	400291	272532
rejected events	249140	174524	230168	172392	253519	214827
rejected %	87%	52%	73%	49%	63%	78%

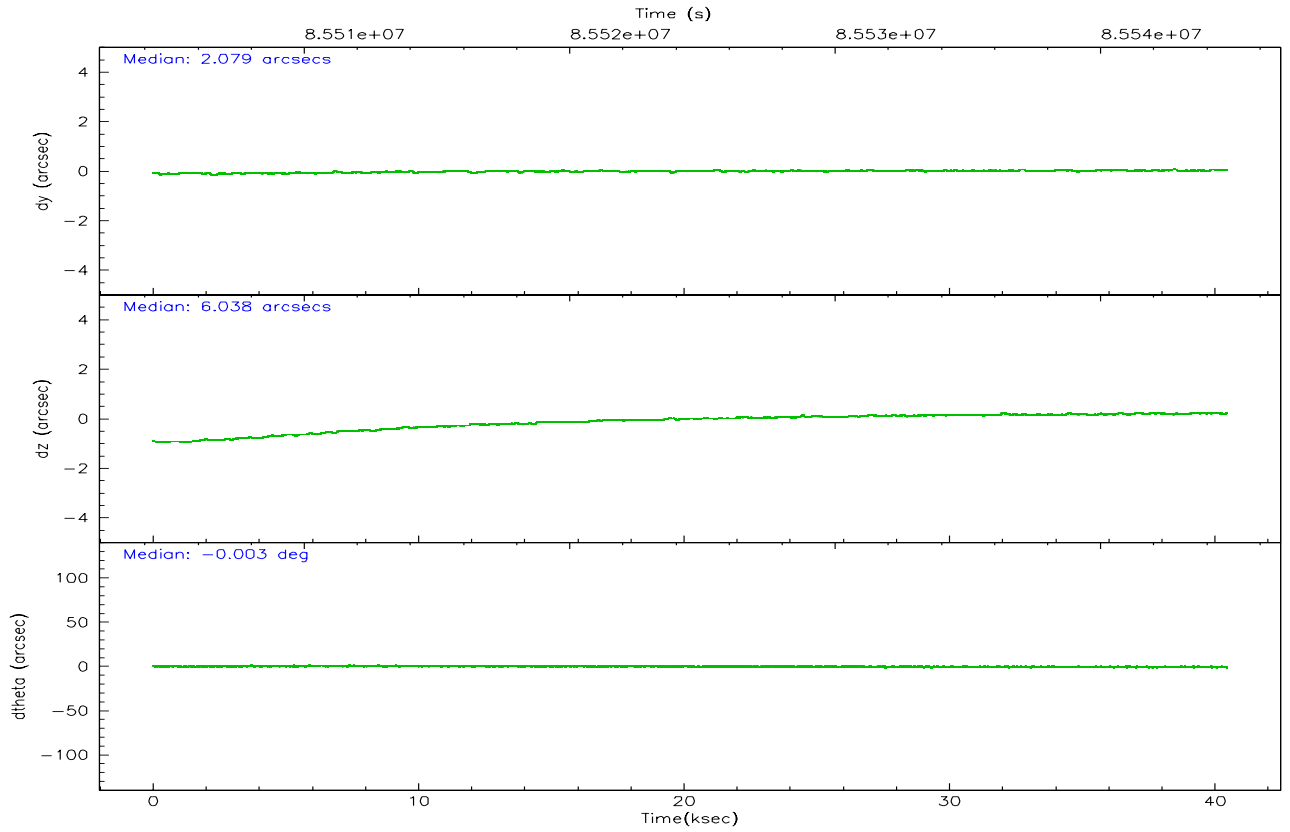
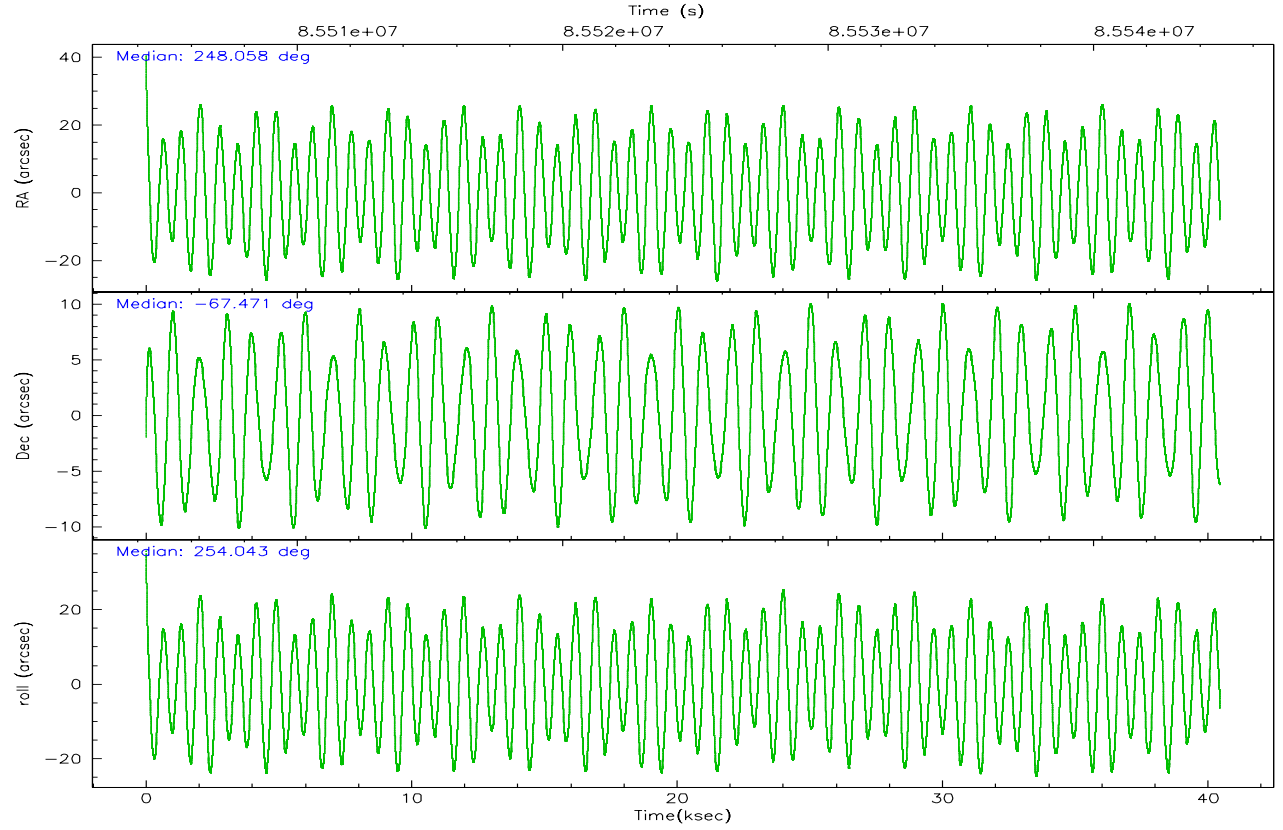
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	15817	21302	53585	23412	55920	39140
	5%	6%	17%	6%	13%	14%
grade 1 events	145	1858	318	596	419	236
	0%	0%	0%	0%	0%	0%
grade 2 events	8989	43828	11904	37203	23175	6917
	3%	13%	3%	10%	5%	2%
grade 3 events	2816	7932	4417	16951	19825	2834
	0%	2%	1%	4%	4%	1%
grade 4 events	2766	8503	4407	17107	17916	2841
	0%	2%	1%	4%	4%	1%
grade 5 events	8136	24547	9544	28994	13029	9598
	2%	7%	3%	8%	3%	3%
grade 6 events	5589	76420	7659	81854	29955	5984
	1%	22%	2%	23%	7%	2%
grade 7 events	240855	148087	220297	142780	240052	204982
	84%	44%	70%	40%	59%	75%

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	248.040330	248.0581135943223	Subarray requested	NONE	NONE
Pointing Dec	-67.444025	-67.47053452642525	Alternating exposures requested	N	N
Pointing Roll	253.876285	254.0493346959362	Primary exposure time	3.200000	3.2
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-187.132523	-187.1228876879999			
SIM translation stage offset (mm)	-3	-3.009634895007935			
Observation start time	85504495.184000	85503518.014805			
Observation start date	2000-09-16T15:13:51	2000-09-16T14:58:38			
Observation end time	85544495.184000	85545371.841379			
Observation end date	2000-09-17T02:20:31	2000-09-17T02:36:11			
Read mode	TIMED	TIMED			

2.3 Aspect



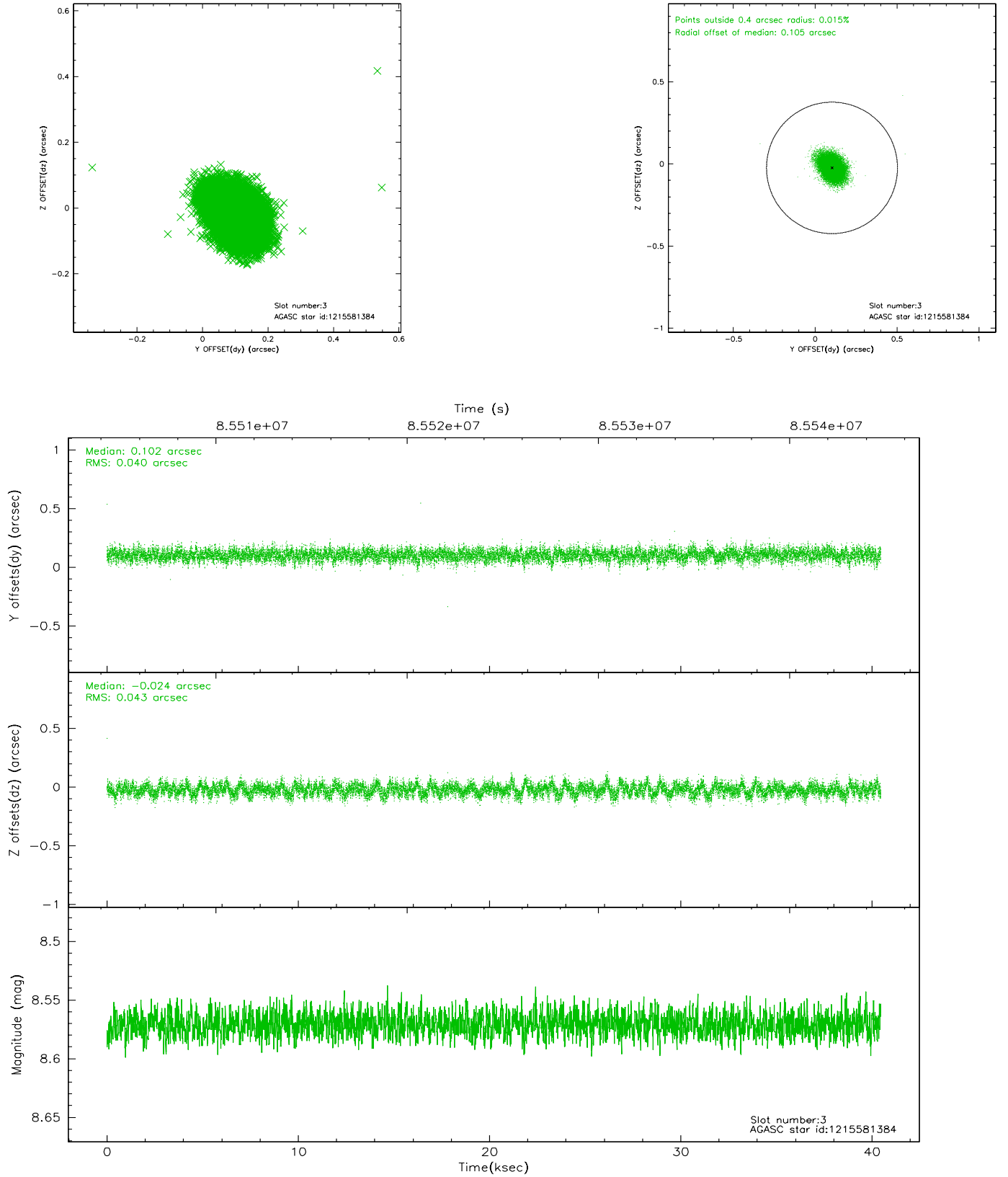


Slot Statistics

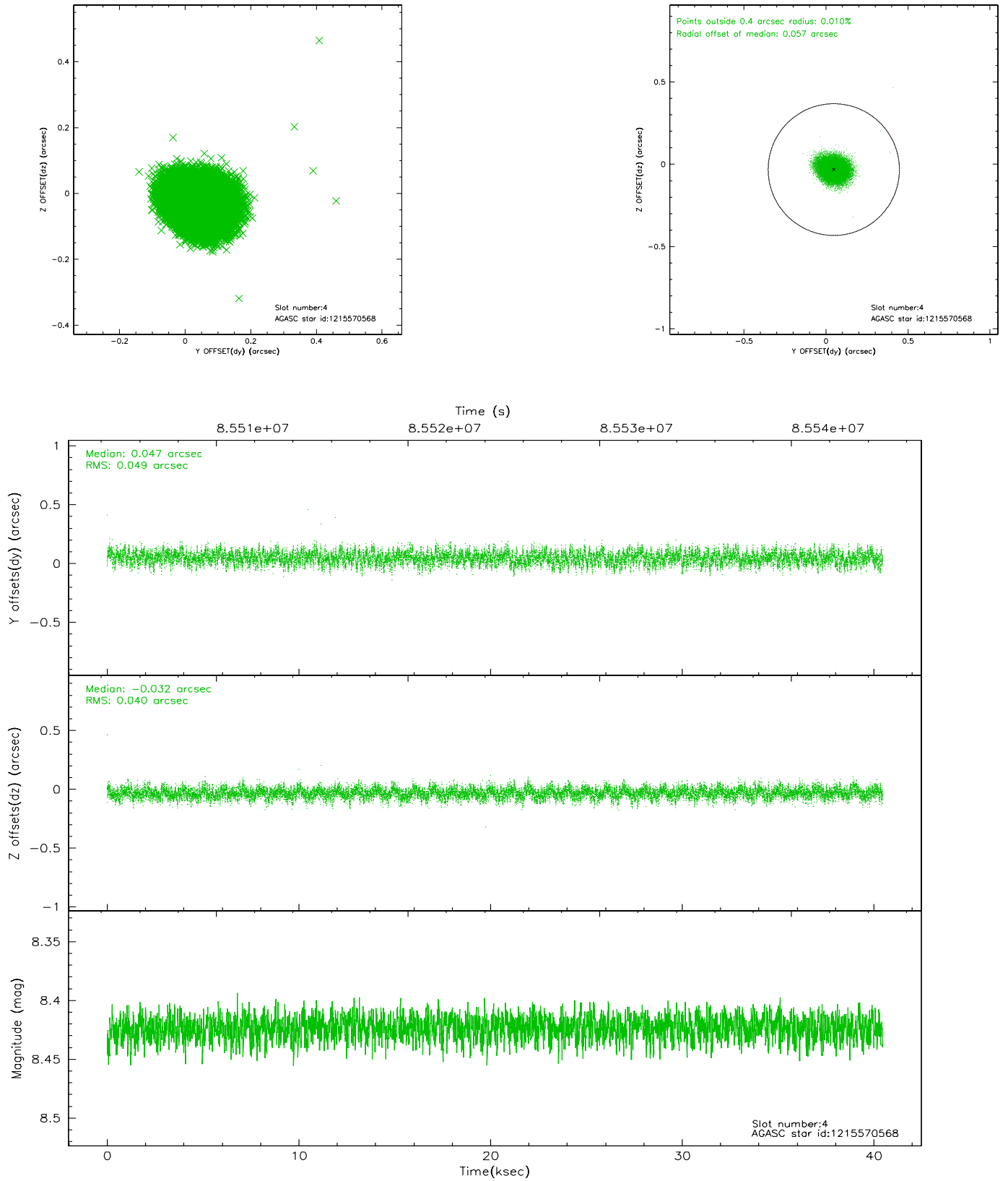
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	9868	-0.016	-0.038	0.007	0.013	0.000000	0.000000	-754.52	-1789.20
1	FID	ACIS-S-4	7.19	9867	-0.055	0.018	0.005	0.009	0.000000	0.000000	2158.74	119.27
2	FID	ACIS-S-5	7.23	9869	0.040	0.029	0.007	0.012	0.000000	0.000000	-1807.26	113.02
3	GUIDE	1215581384	8.57	19734	0.102	-0.024	0.062	0.102	247.338409	-67.766444	1385.55	-593.97
4	GUIDE	1215570568	8.42	19734	0.047	-0.032	0.068	0.108	246.859352	-67.889721	2000.32	-1086.69
5	GUIDE	1186072296	9.38	19721	-0.106	0.036	0.087	0.138	247.909553	-67.035246	-1362.84	-584.67
6	GUIDE	1215569992	9.28	19732	-0.016	0.074	0.097	0.152	249.398538	-67.627995	138.37	1977.94
7	GUIDE	1186080152	10.05	19728	-0.026	-0.048	0.155	0.246	247.523943	-66.875569	-1760.57	-1268.41

2.4 Star Slots

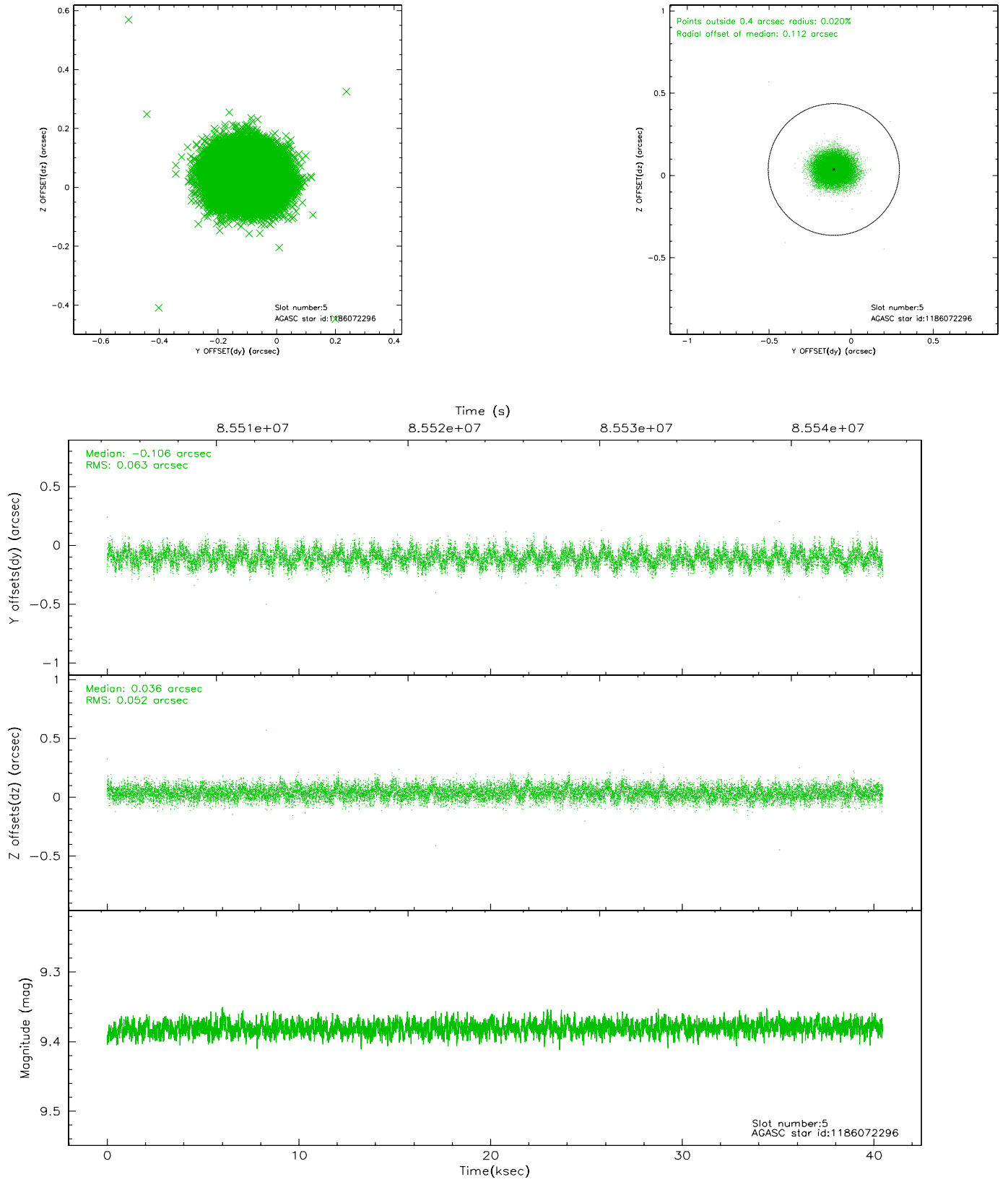
2.4.1 Slot 3



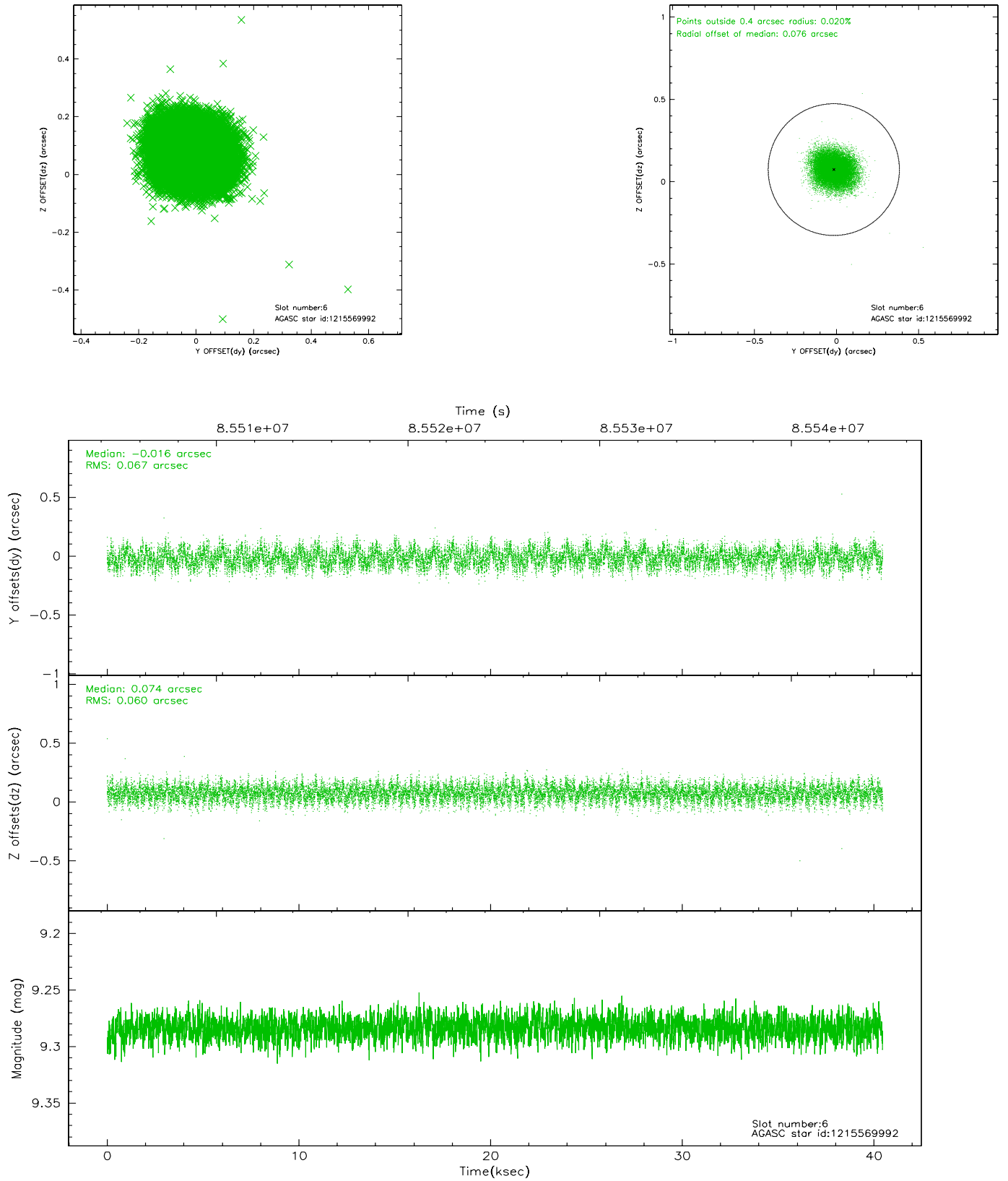
2.4.2 Slot 4



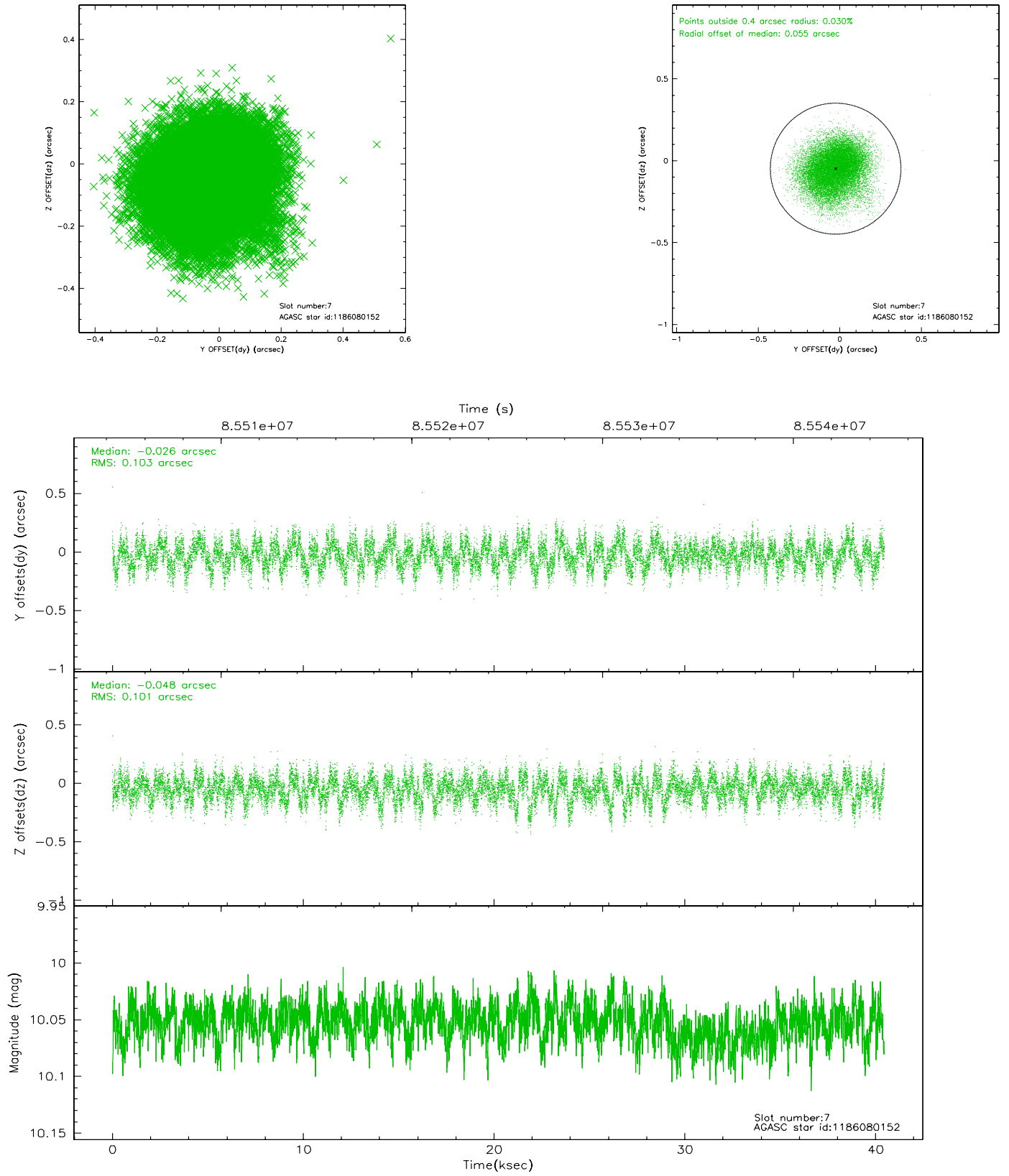
2.4.3 Slot 5



2.4.4 Slot 6

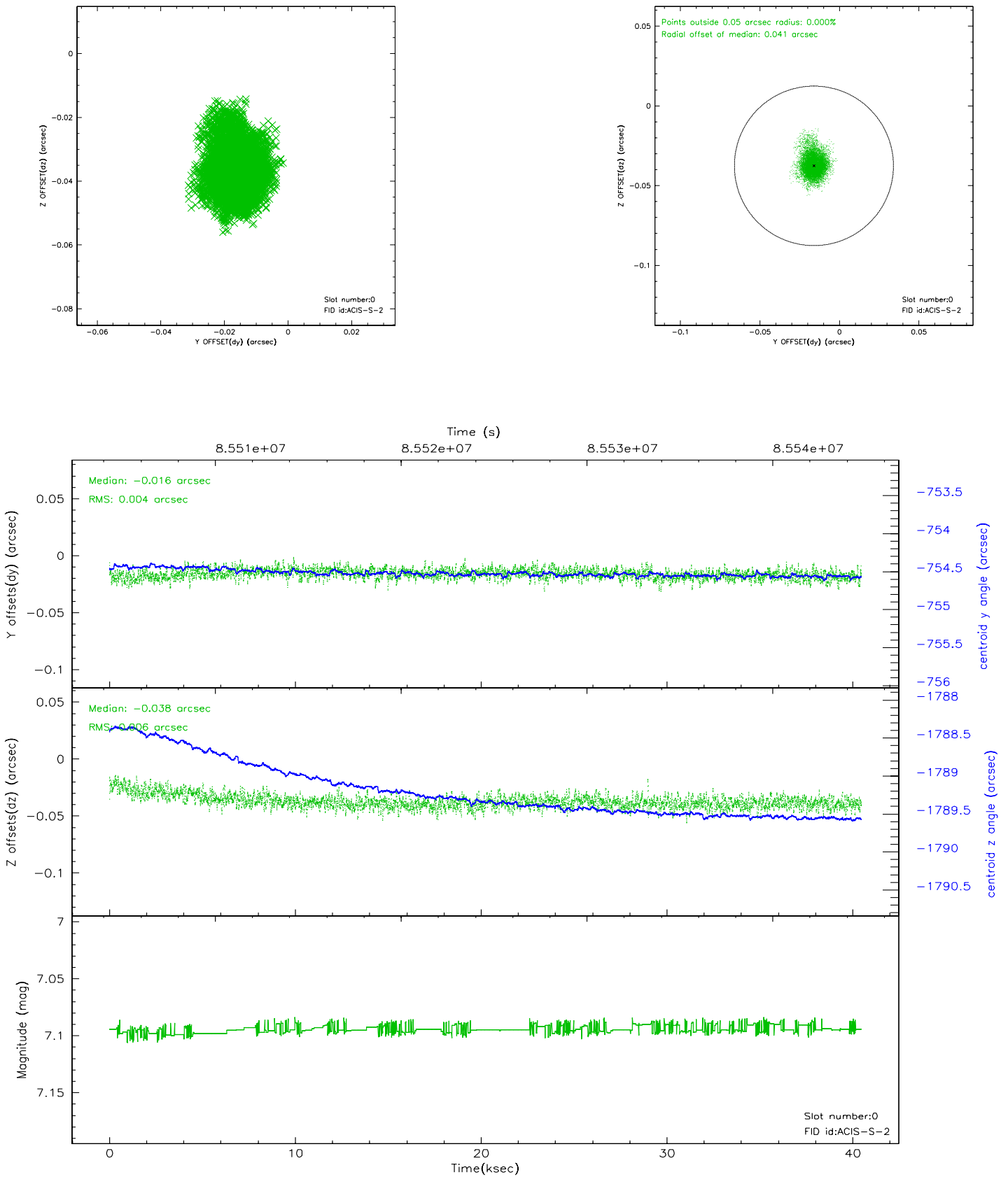


2.4.5 Slot 7

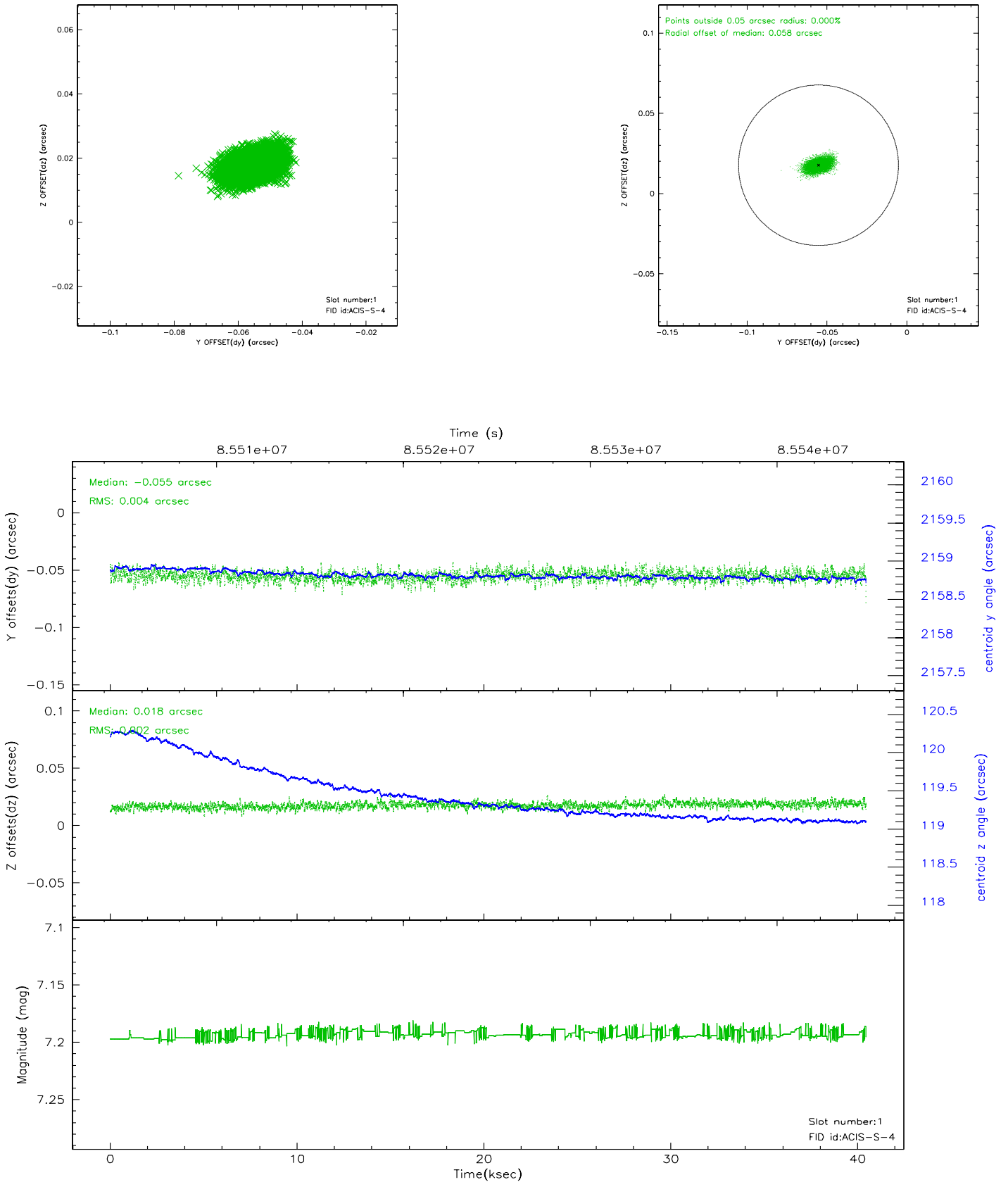


2.5 FID Slots

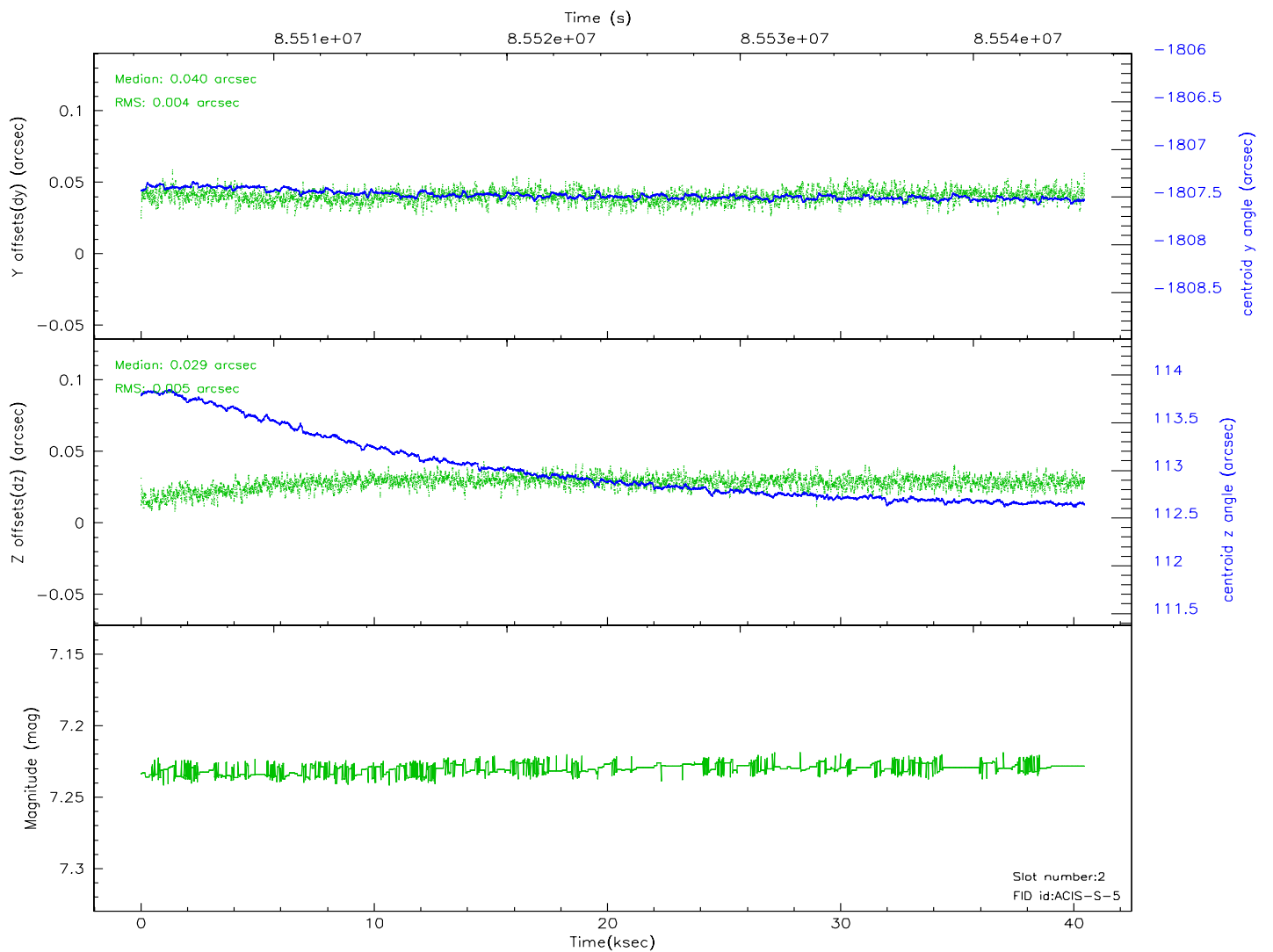
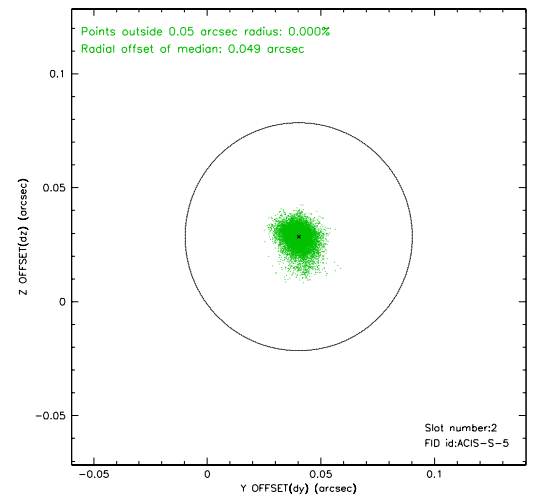
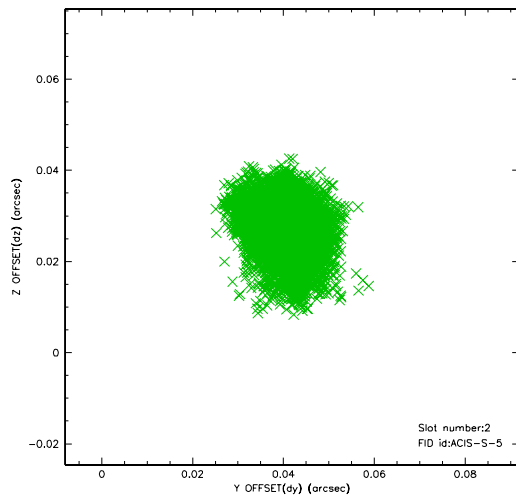
2.5.1 Slot 0



2.5.2 Slot 1

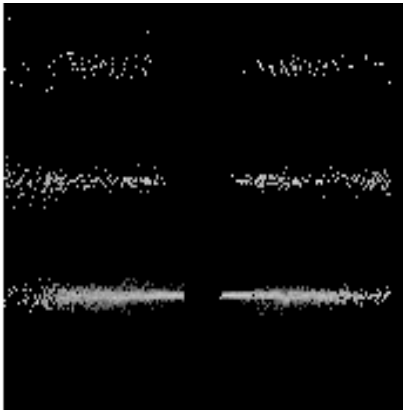


2.5.3 Slot 2

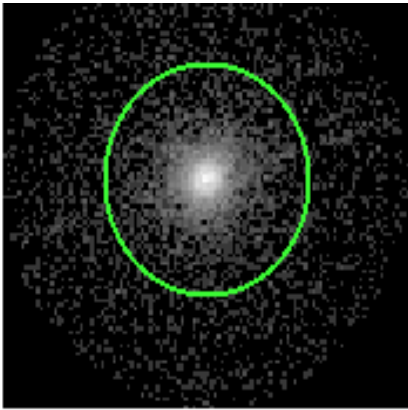


3 Gratings

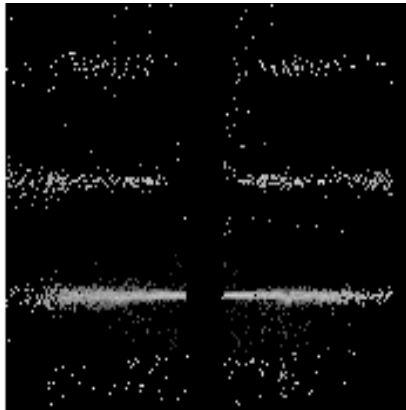
3.1 HEG Arm



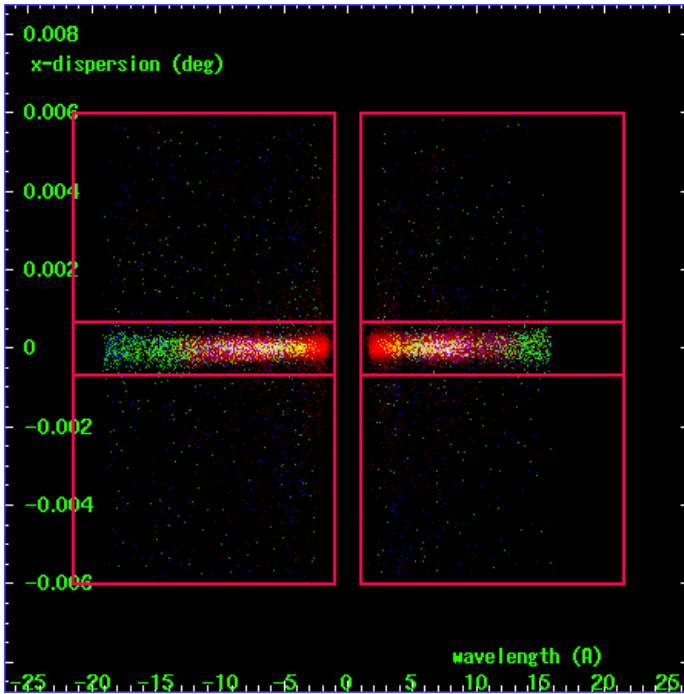
HEG Order Sort 123



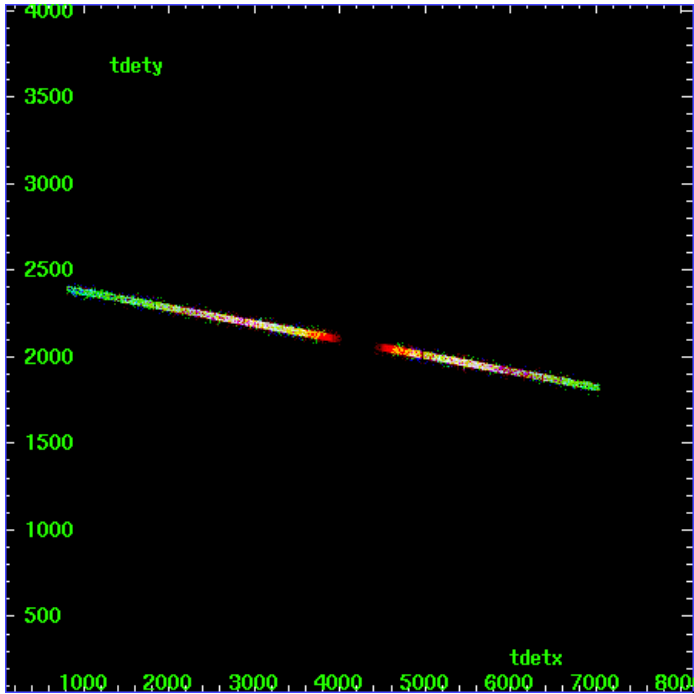
HEG Zero Order



HEG Order Sort ALL

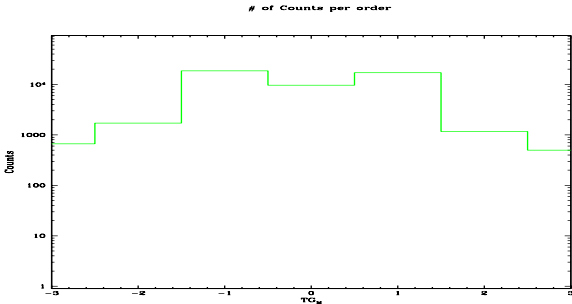


Spot Image HEG

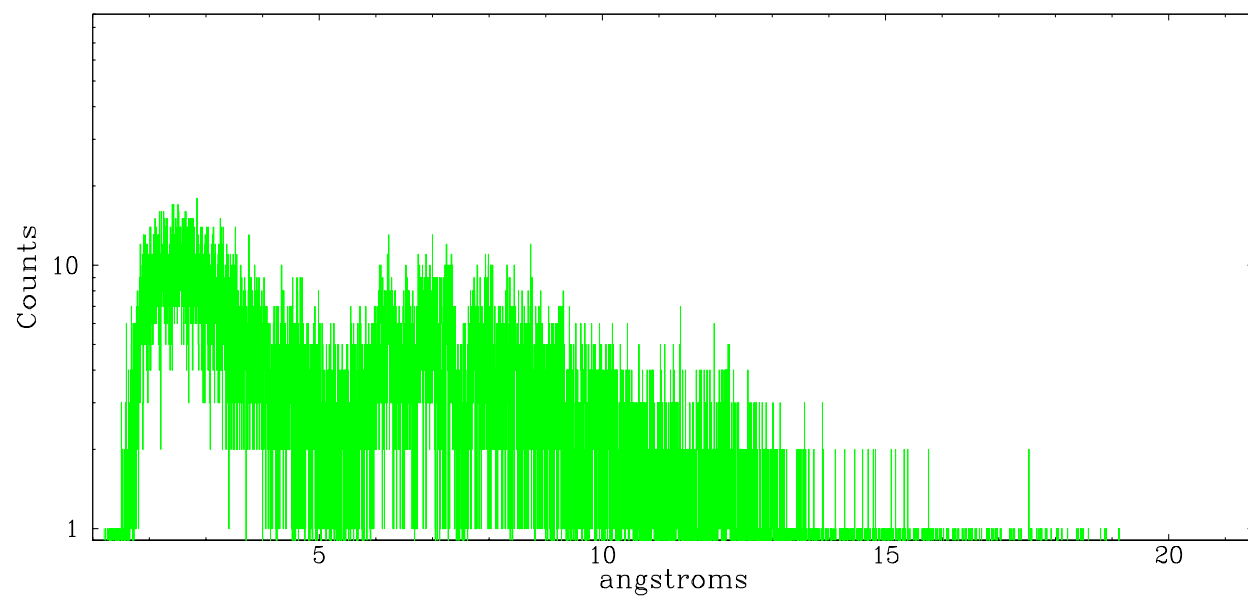


Full Detector HEG

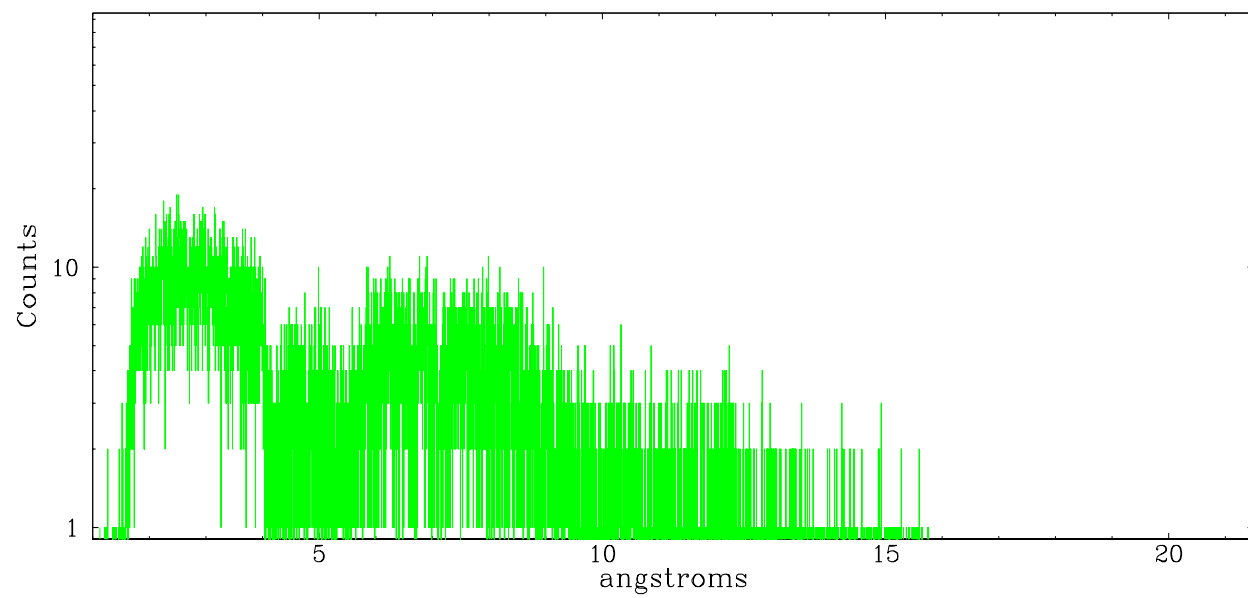
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	664	1709	18515	9633	17005	1166	498



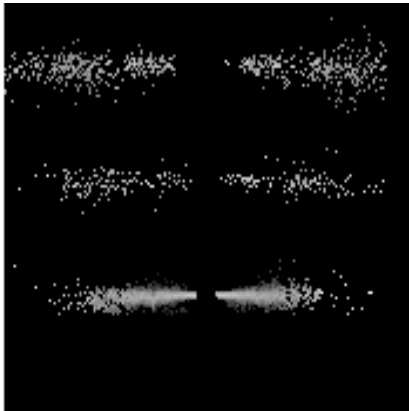
heg order -1



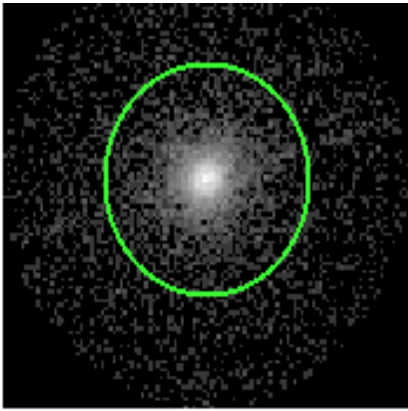
heg order +1



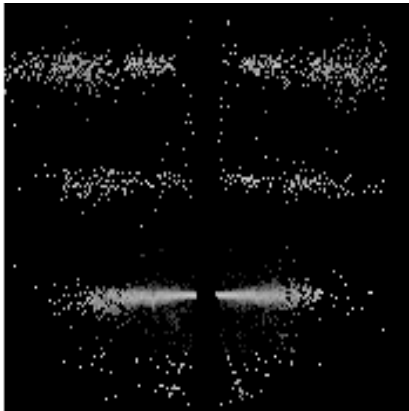
3.2 MEG Arm



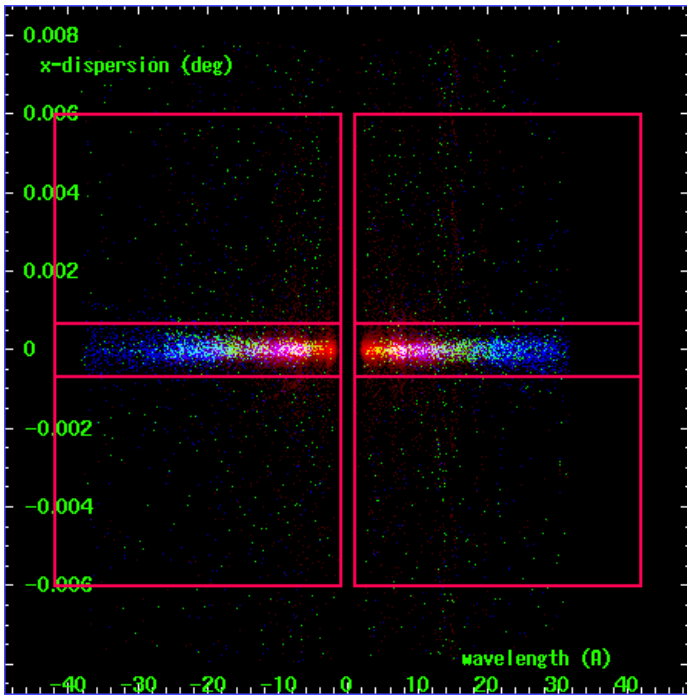
MEG Order Sort 123



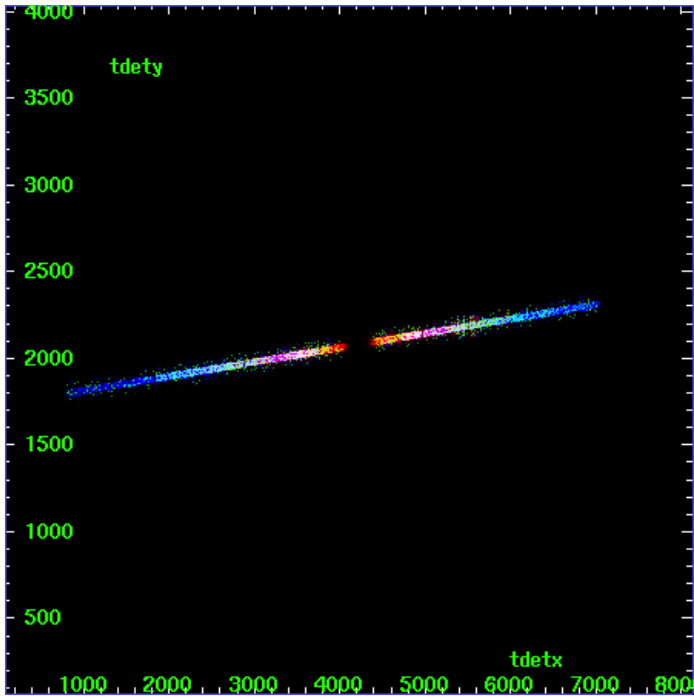
MEG Zero Order



MEG Order Sort ALL

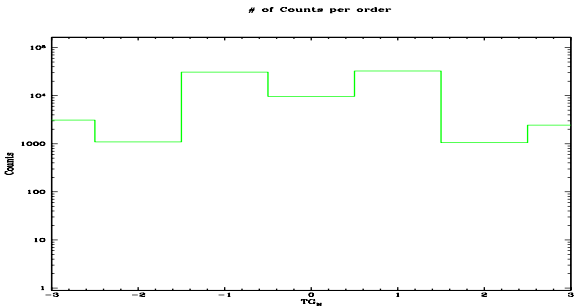


Spot Image MEG

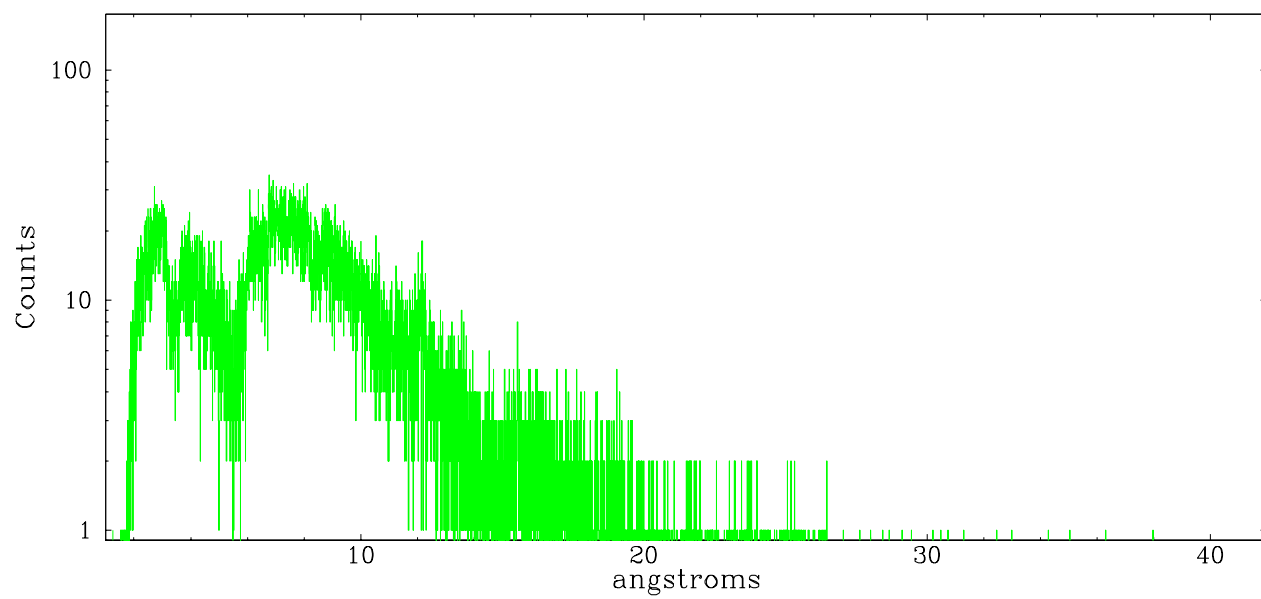


Full Detector MEG

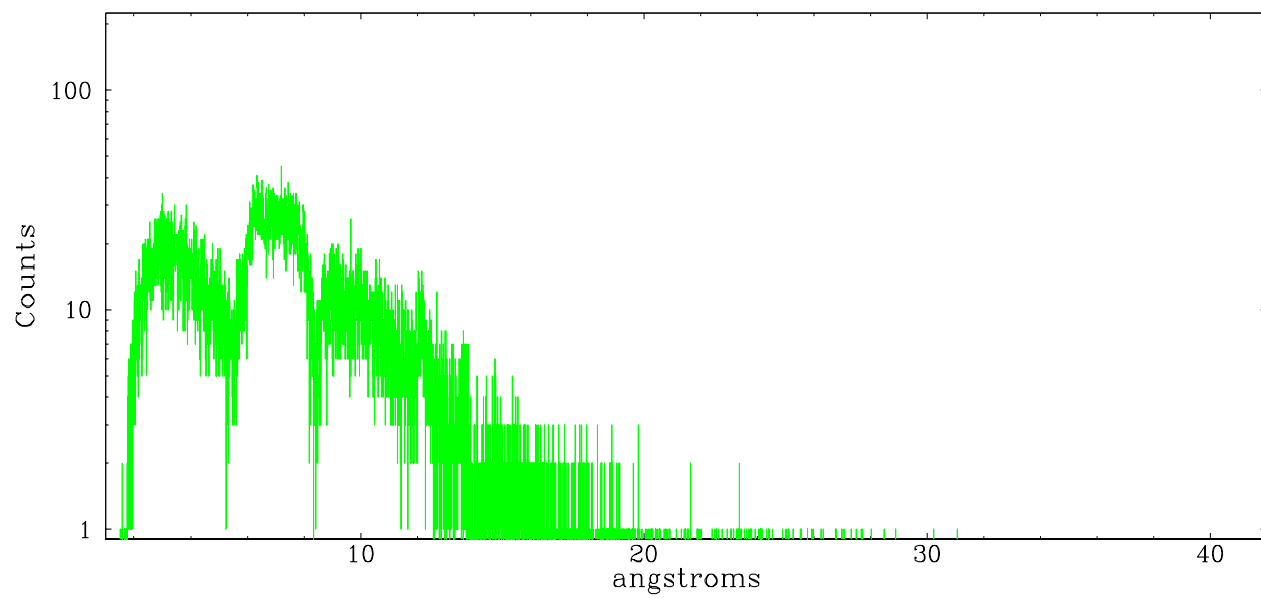
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	3120	1089	30859	9633	32693	1057	2438



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.08.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	39.987

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=4064.63, y=4164.89) 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.