

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 3824 - L2 Version 3
Chandra X-Ray Center

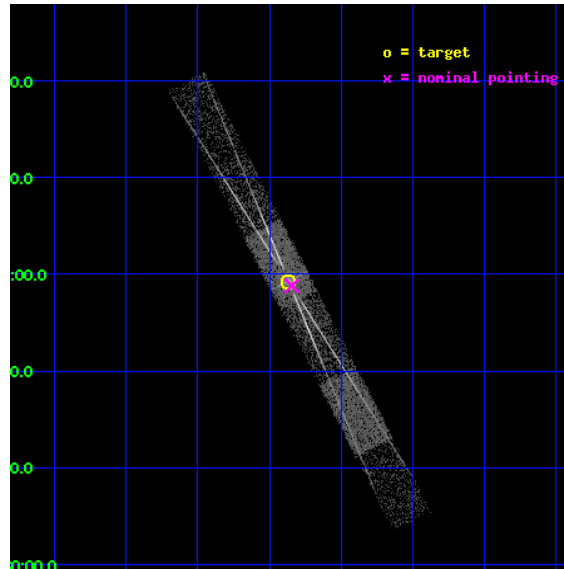
L2 Processing Date : Nov 5 2012

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1 Front

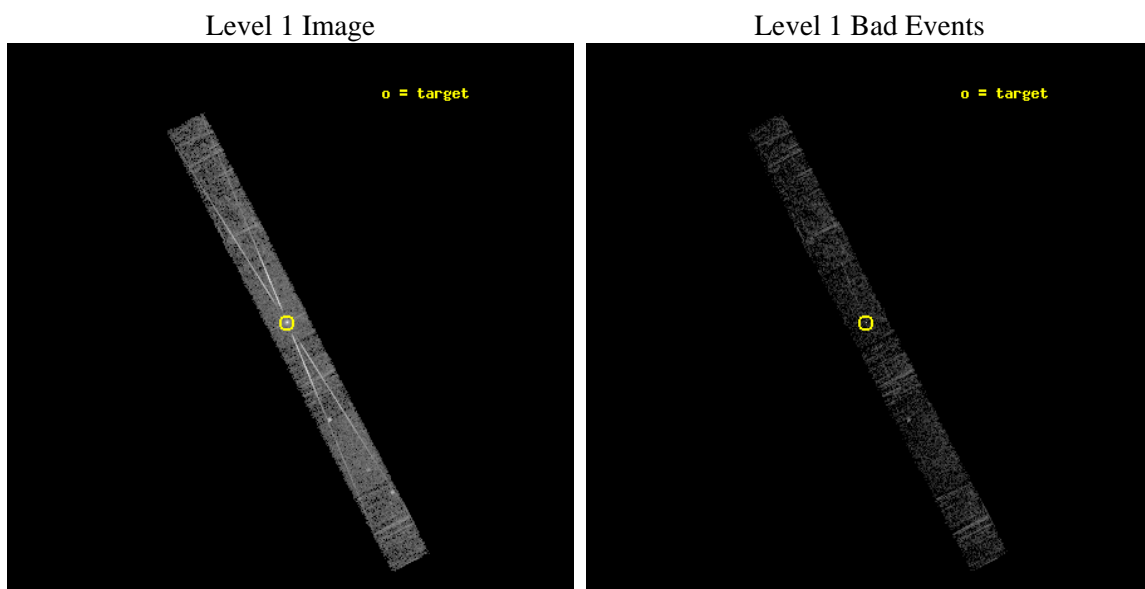
seq_num	400311	Sequence number
obs_id	3824	Observation id
title	SNAPSHOT SURVEY OF FOUR LMXBS	Proposal title
observer	Prof. Deepto Chakrabarty	Principal investigator
object	4U 1822-000	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	276.342083	Observer's specified target RA [deg]
dec_targ	-0.012167	Observer's specified target Dec [deg]
ra_nom	276.33603654374	Nominal RA [deg]
dec_nom	-0.019850348877318	Nominal Dec [deg]
roll_nom	242.62903230909	Nominal Roll [deg]
revision	3	Processing version of data
ontime	2272.795129627	Sum of GTIs [s]
livetime	2219.2205350629	Livetime [s]
ontime4	2272.8361696303	Sum of GTIs [s]
ontime5	2272.7540896237	Sum of GTIs [s]
ontime6	2272.7130496204	Sum of GTIs [s]
ontime7	2272.795129627	Sum of GTIs [s]
ontime8	2272.6720096171	Sum of GTIs [s]
ontime9	2272.6309696436	Sum of GTIs [s]
l2events	46685	Number of level 2 events



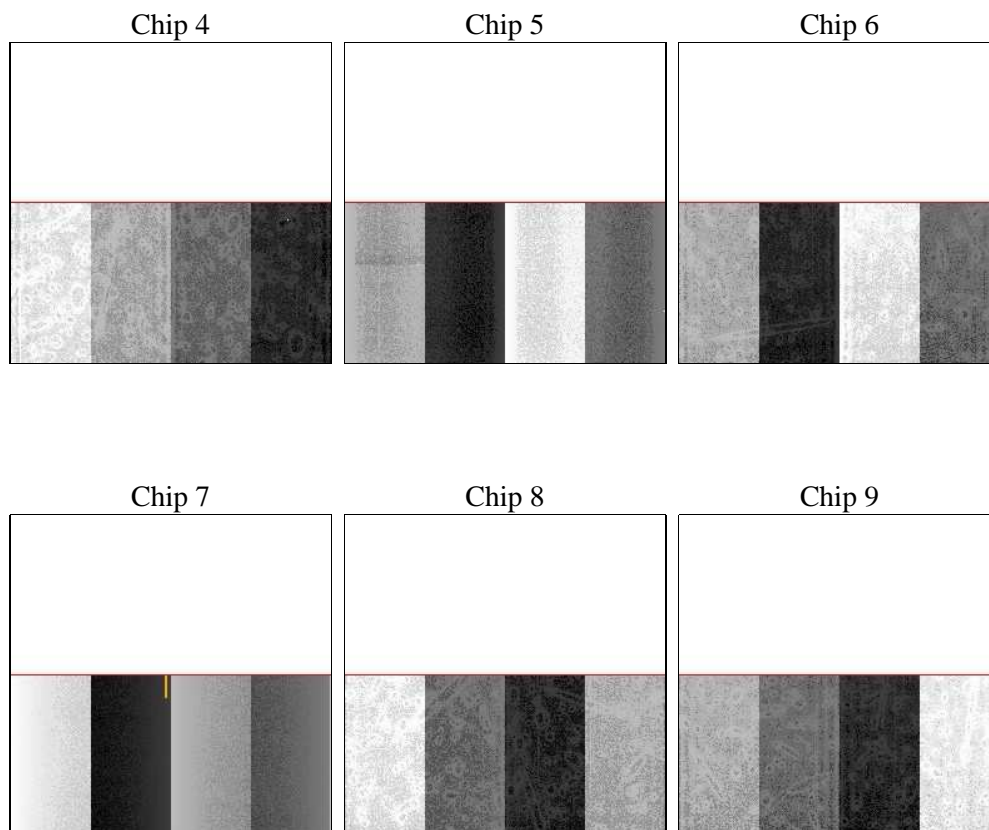
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	2000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	2272.795129627	Sum of GTIs [s]
caldsver	4.5.2	 	ontime4	2272.8361696303	Sum of GTIs [s]
date	2012-11-01T10:33:48	Date and time of file creation	ontime5	2272.7540896237	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	2272.7130496204	Sum of GTIs [s]
			ontime7	2272.795129627	Sum of GTIs [s]
			ontime8	2272.6720096171	Sum of GTIs [s]
			ontime9	2272.6309696436	Sum of GTIs [s]
			l1events	92516	Number of level 1 events

2.1.4 Events

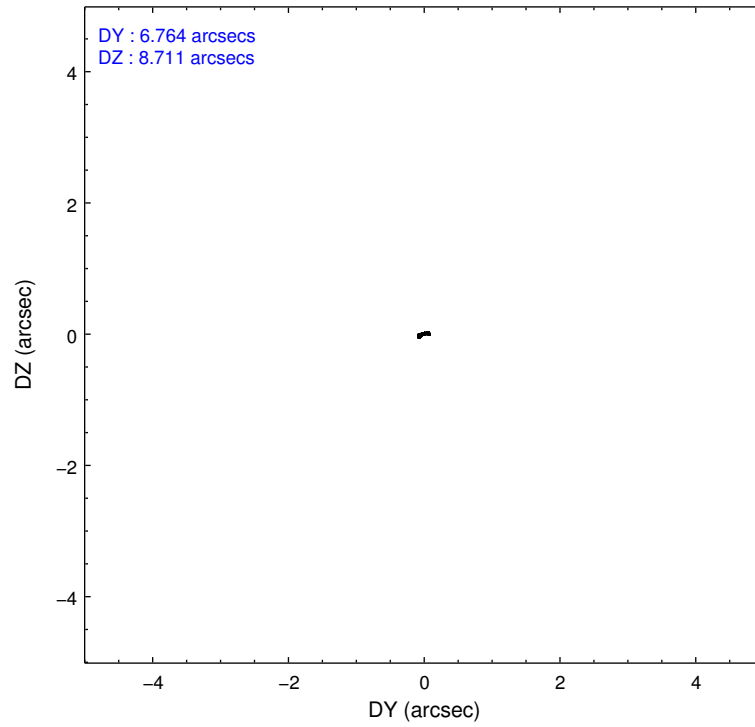
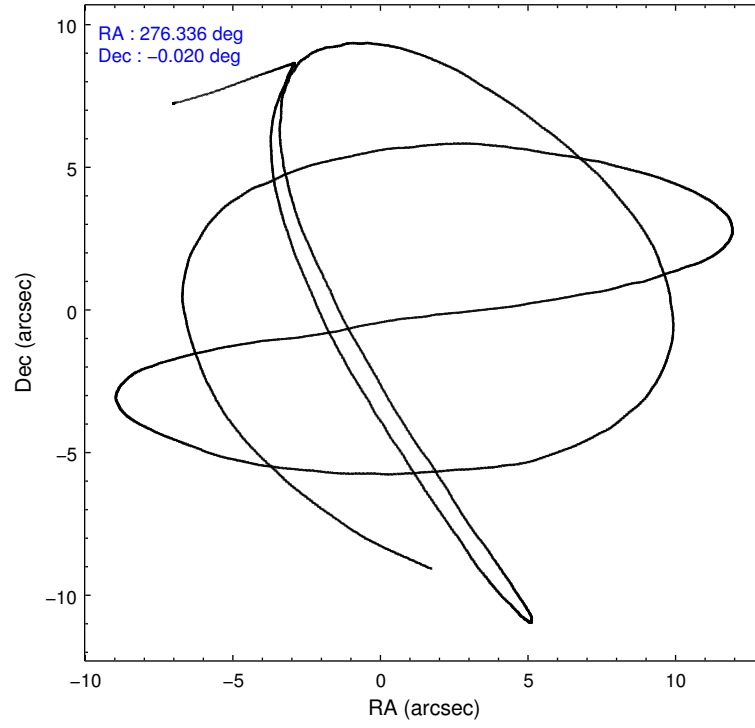
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	9586	13643	20923	25466	14715	8183
rejected events	7984	6000	7416	6048	7619	6425
rejected %	83%	43%	35%	23%	51%	78%

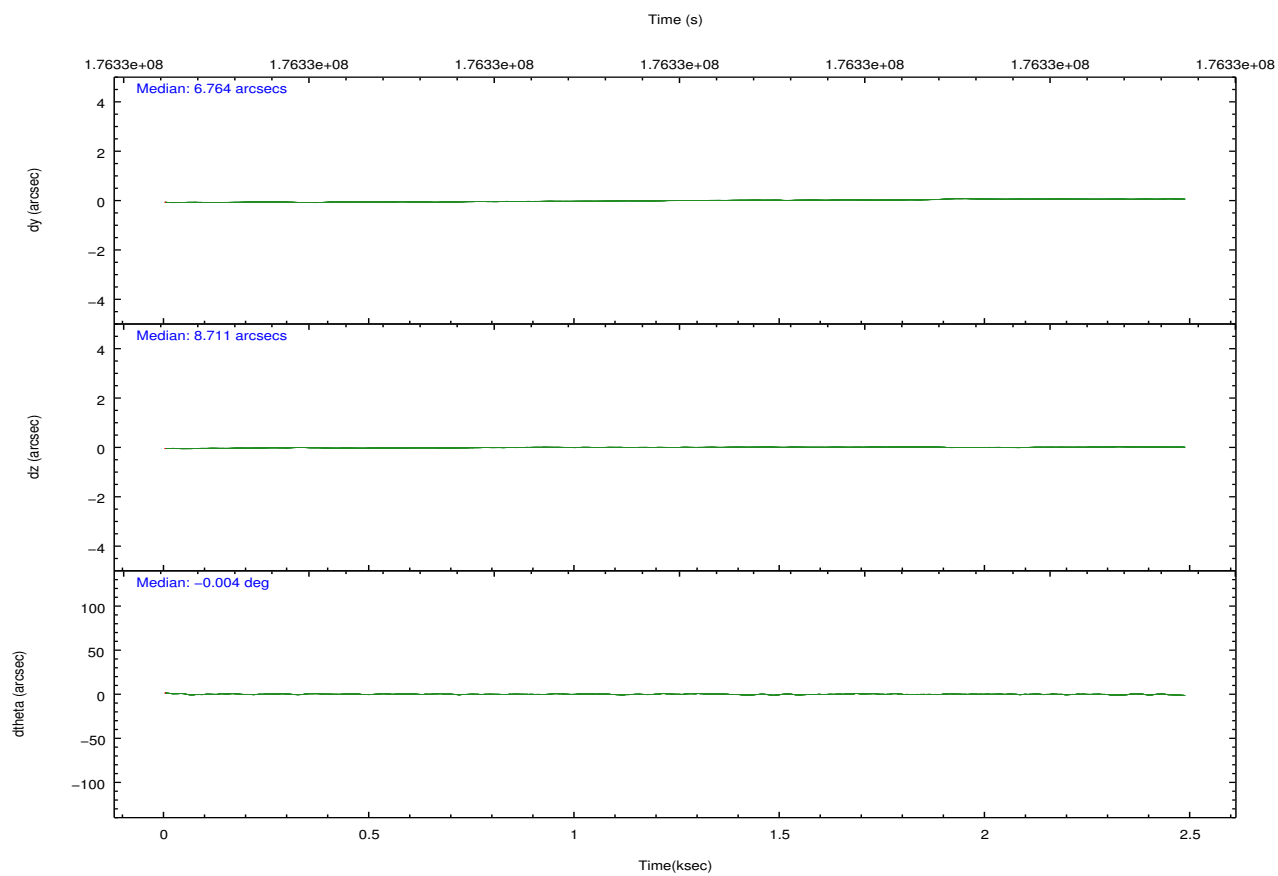
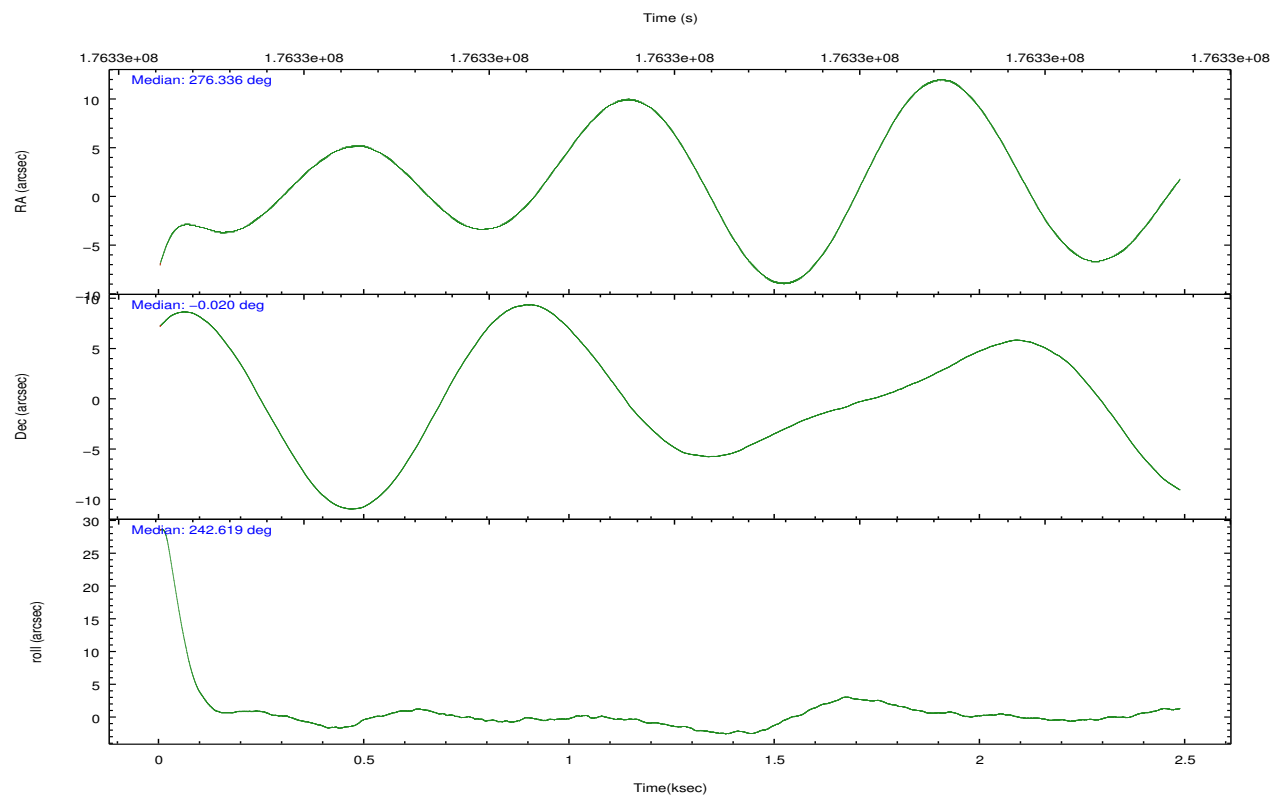
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	993	1657	9968	3566	4775	1001
	10%	12%	47%	14%	32%	12%
grade 1 events	11	120	52	60	26	5
	0%	0%	0%	0%	0%	0%
grade 2 events	237	1999	1666	4643	934	265
	2%	14%	7%	18%	6%	3%
grade 3 events	119	600	640	2108	400	162
	1%	4%	3%	8%	2%	1%
grade 4 events	107	557	595	2044	356	151
	1%	4%	2%	8%	2%	1%
grade 5 events	279	941	351	1126	401	348
	2%	6%	1%	4%	2%	4%
grade 6 events	149	2840	658	7090	638	183
	1%	20%	3%	27%	4%	2%
grade 7 events	7691	4929	6993	4829	7185	6068
	80%	36%	33%	18%	48%	74%

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	276.334580	276.3360365437368	Subarray requested	CUSTOM	1/2
[deg] Pointing Dec	0.007339	-0.01985034887731798	Subarray start row	1	1
[deg] Pointing Roll	242.472256	242.6290323090932	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	-184.032523	-184.0277655517795			
[mm] SIM translation stage offset	-6.1	-6.104757031228274			
[s] Observation start time (MET)	176326728.184000	176325605.45133			
Observation start date	2003-08-03T19:37:44	2003-08-03T19:20:05			
[s] Observation end time (MET)	176328728.184000	176329619.3515			
Observation end date	2003-08-03T20:11:04	2003-08-03T20:26:59			
Read mode	TIMED	TIMED			

2.3 Aspect



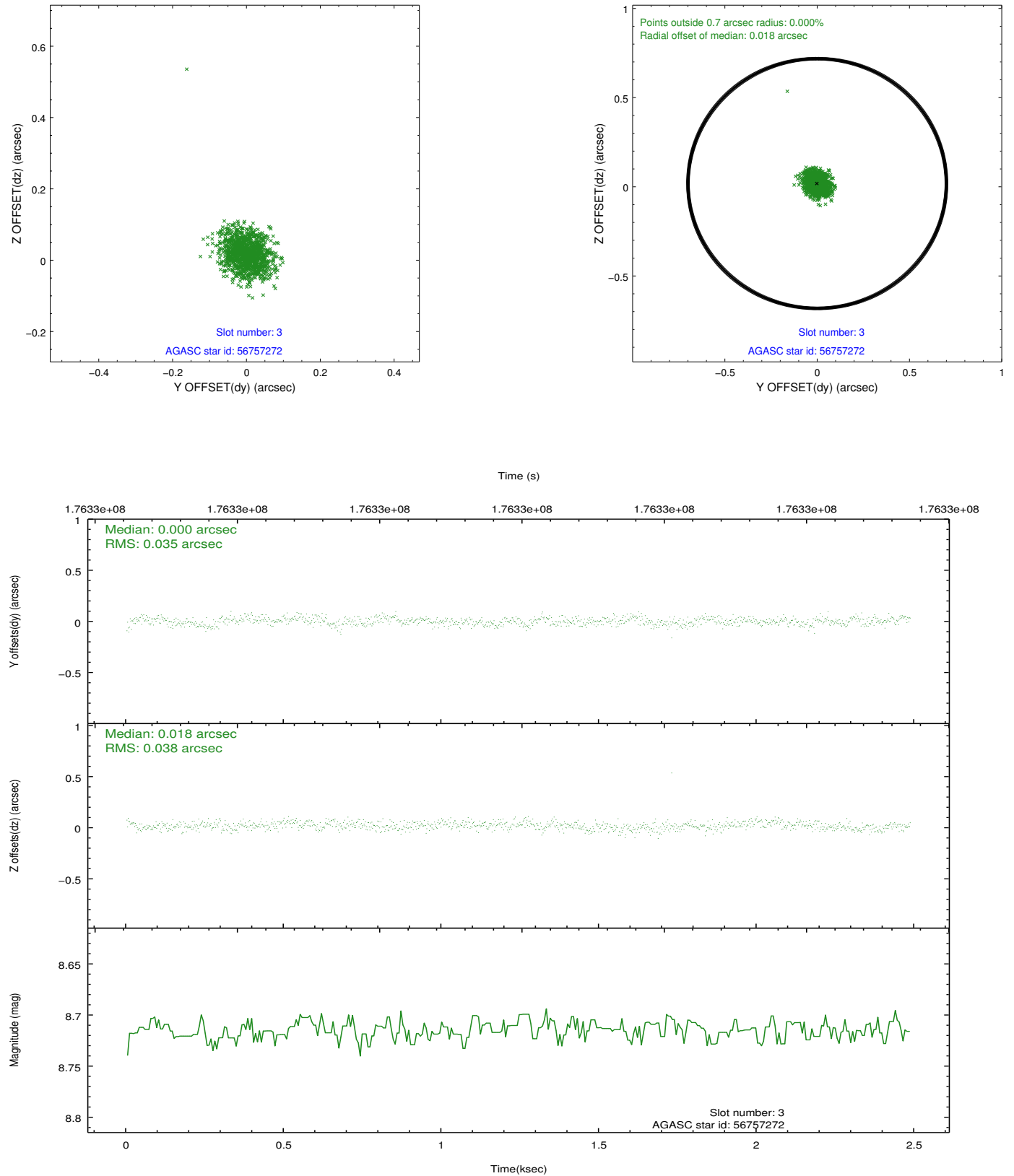


Slot Statistics

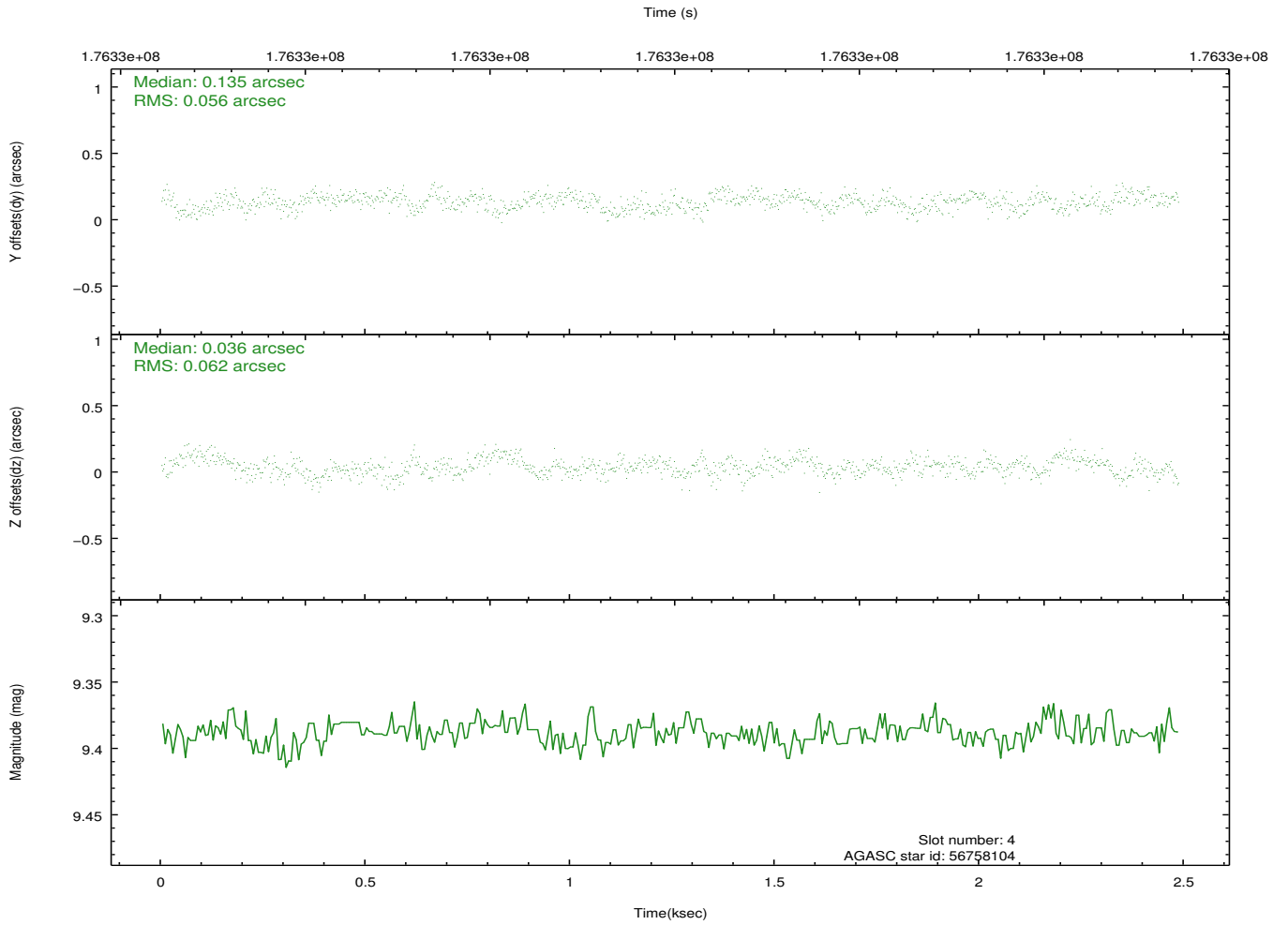
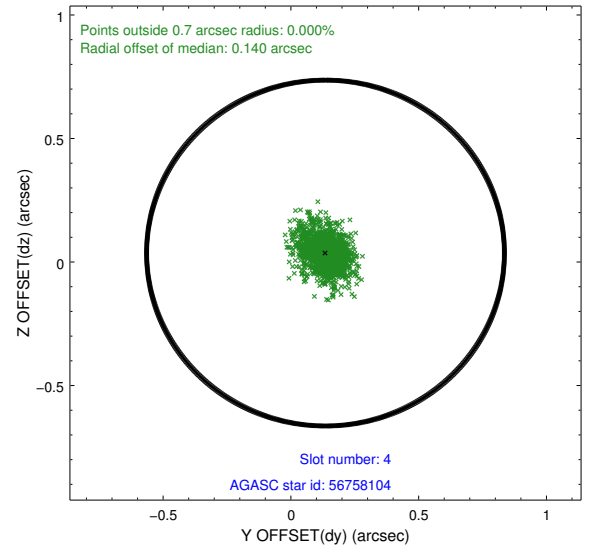
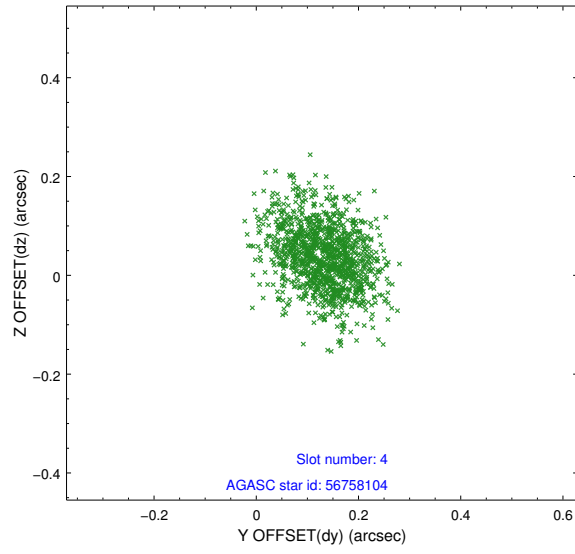
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.08	607	-0.084	-0.073	0.006	0.010	0.000000	0.000000	-759.15	-1855.82
1	FID	ACIS-S-4	7.18	607	0.112	0.060	0.005	0.010	0.000000	0.000000	2153.14	49.90
2	FID	ACIS-S-5	7.22	606	-0.061	0.021	0.006	0.012	0.000000	0.000000	-1808.62	46.48
3	GUIDE	56757272	8.71	1213	0.000	0.018	0.053	0.087	276.765161	0.091539	-985.36	1235.09
4	GUIDE	56758104	9.39	1213	0.135	0.036	0.088	0.146	276.128380	0.025973	283.12	-687.42
5	GUIDE	56758480	8.15	1212	-0.037	0.089	0.065	0.109	276.957748	0.199973	-1651.87	1668.91
6	GUIDE	56754304	8.70	1213	-0.163	-0.155	0.078	0.123	275.983332	0.807376	-1970.84	-2450.86
7	GUIDE	668339136	9.00	1212	0.062	0.003	0.092	0.146	275.625930	-0.267867	2056.63	-1805.40

2.4 Star Slots

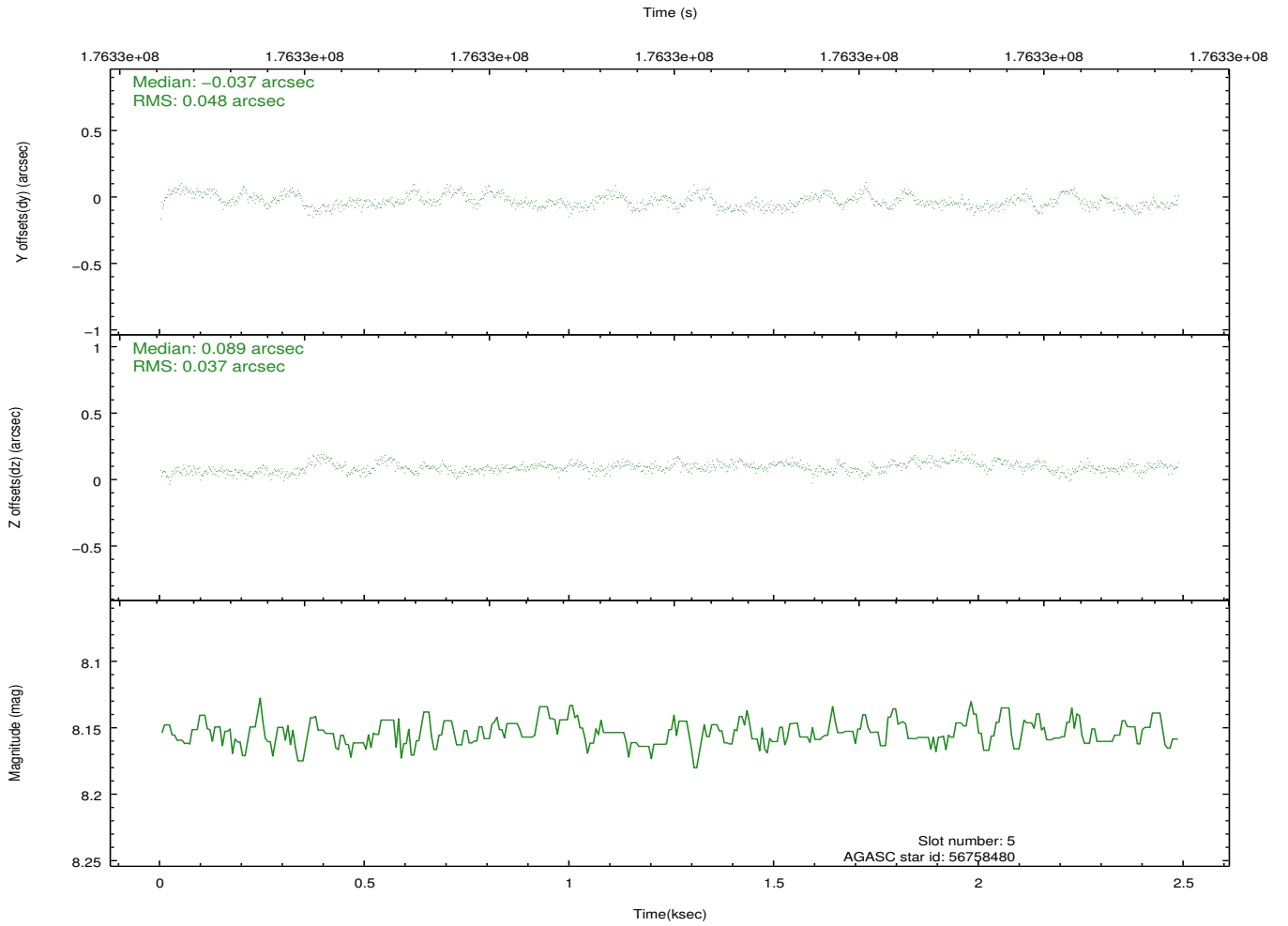
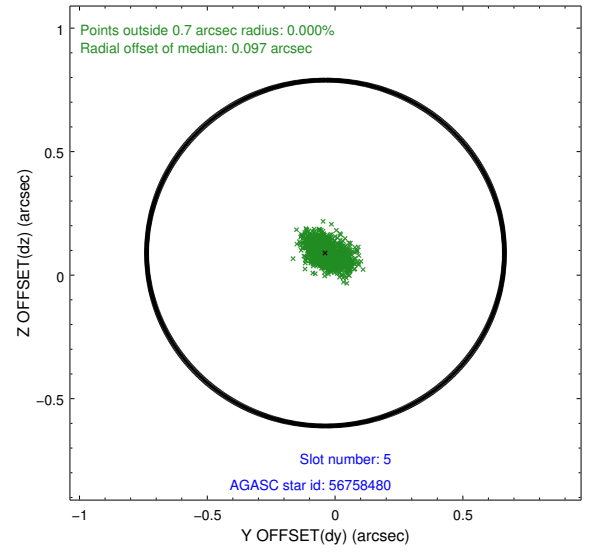
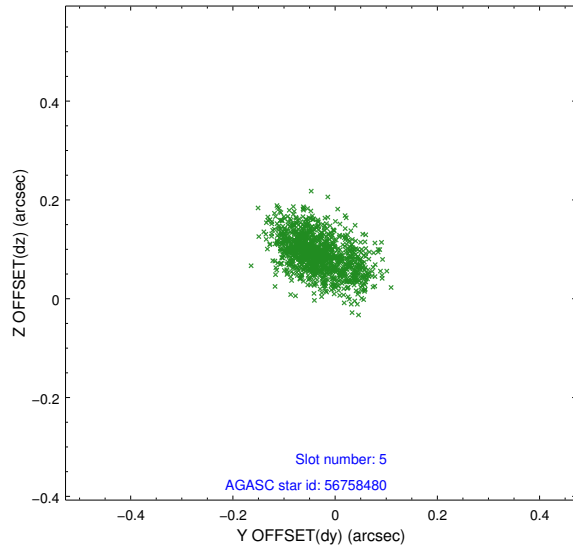
2.4.1 Slot 3



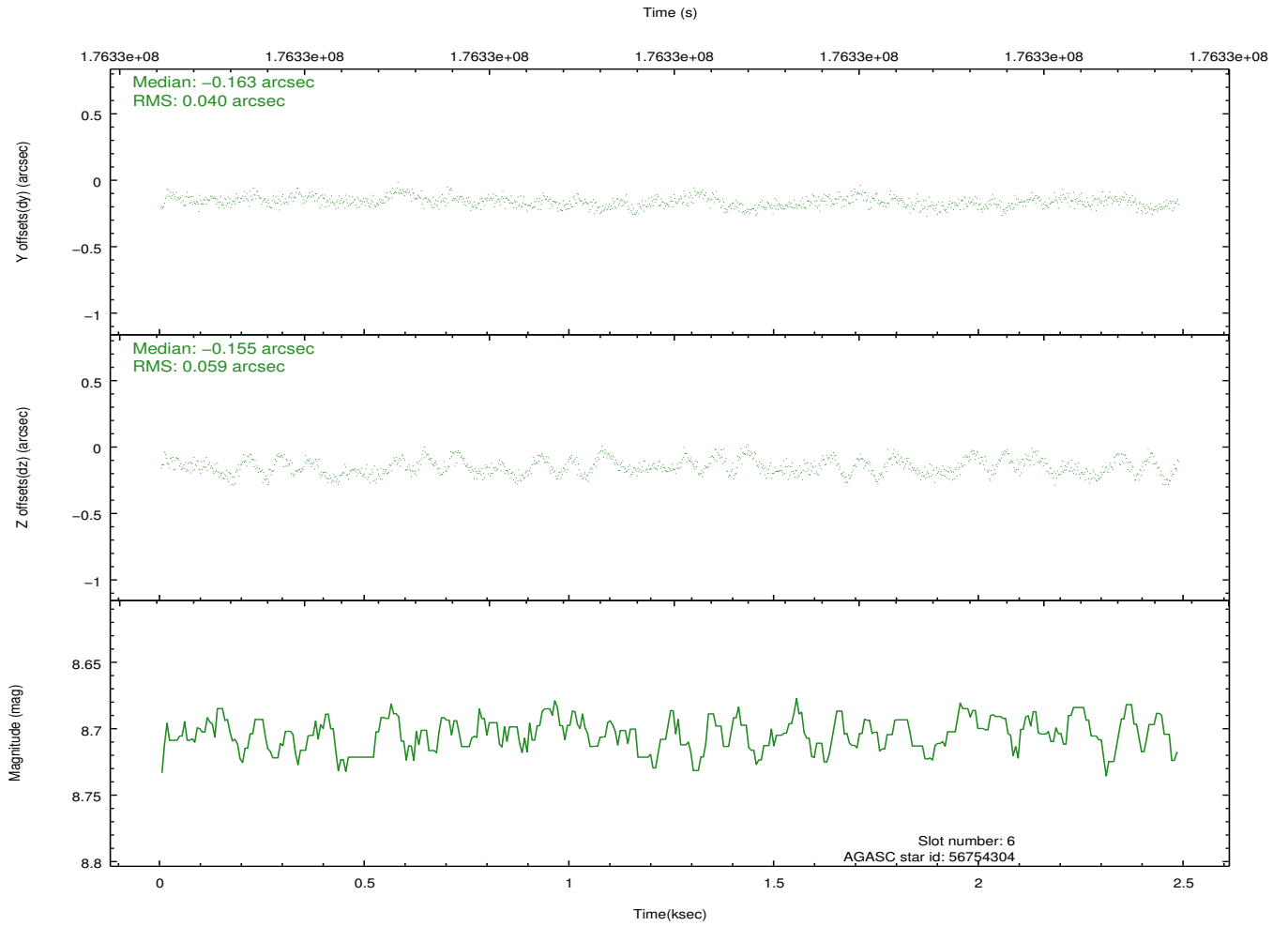
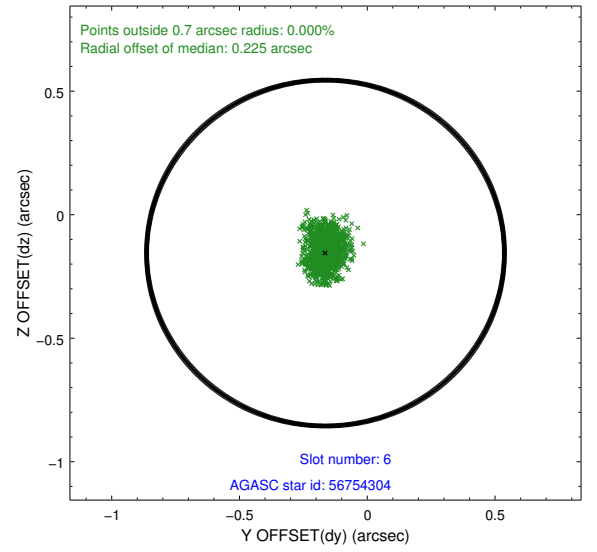
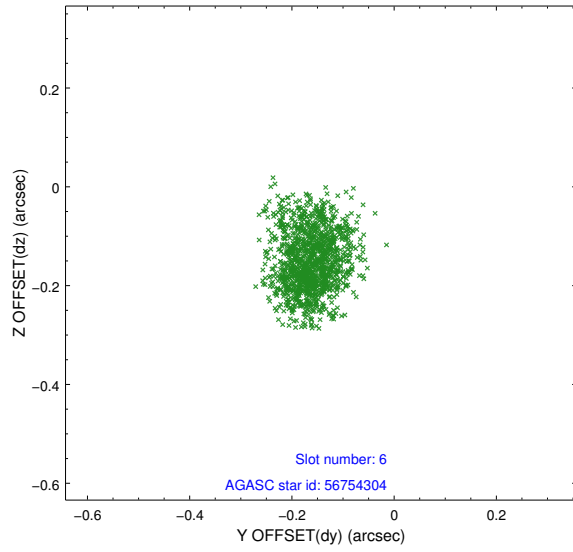
2.4.2 Slot 4



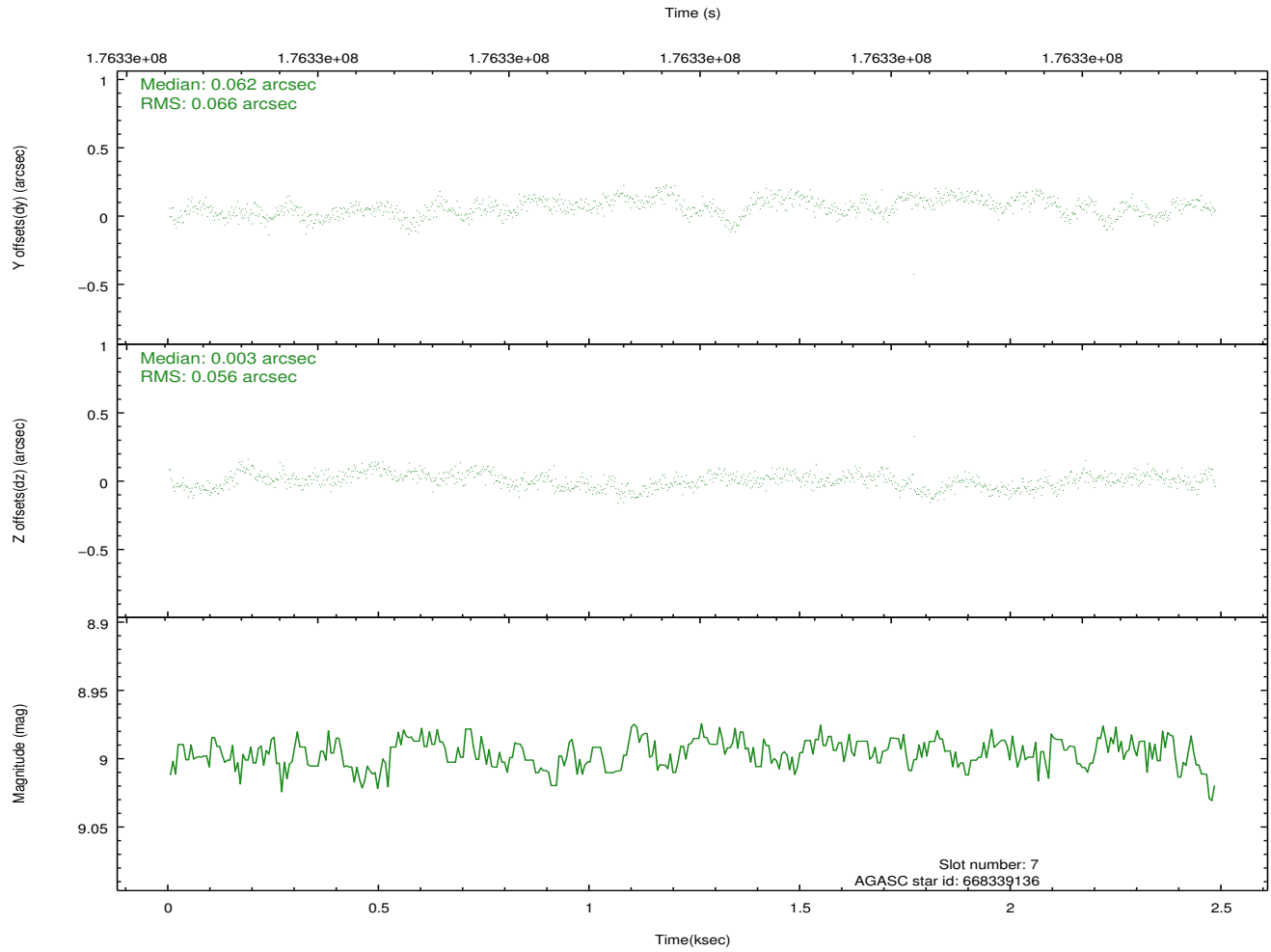
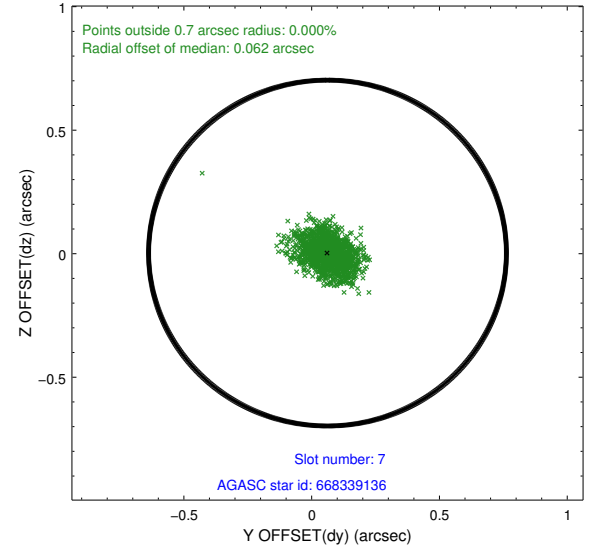
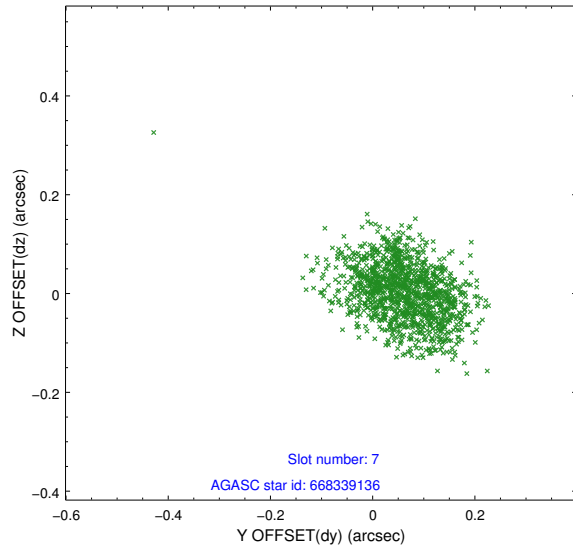
2.4.3 Slot 5



2.4.4 Slot 6

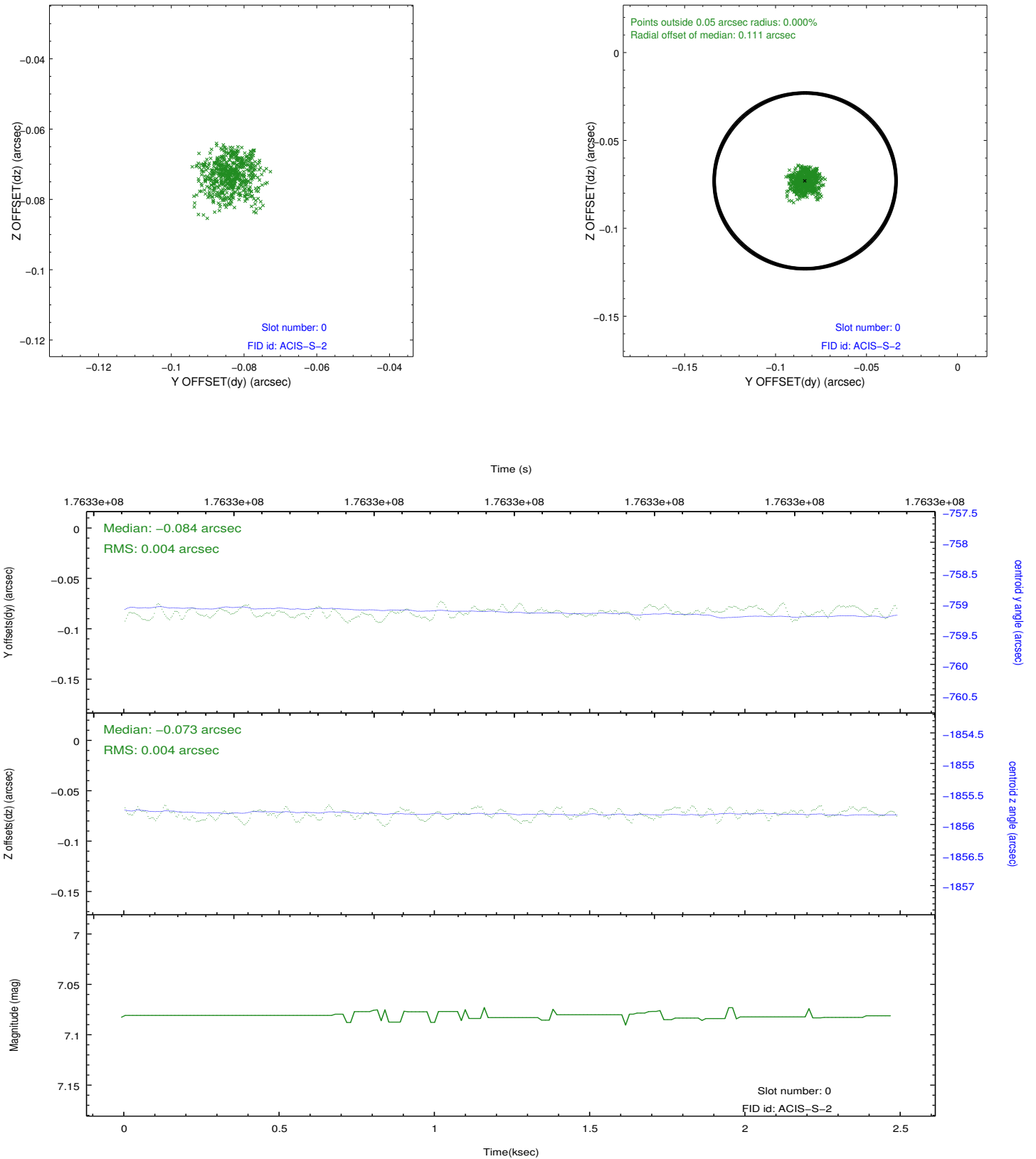


2.4.5 Slot 7

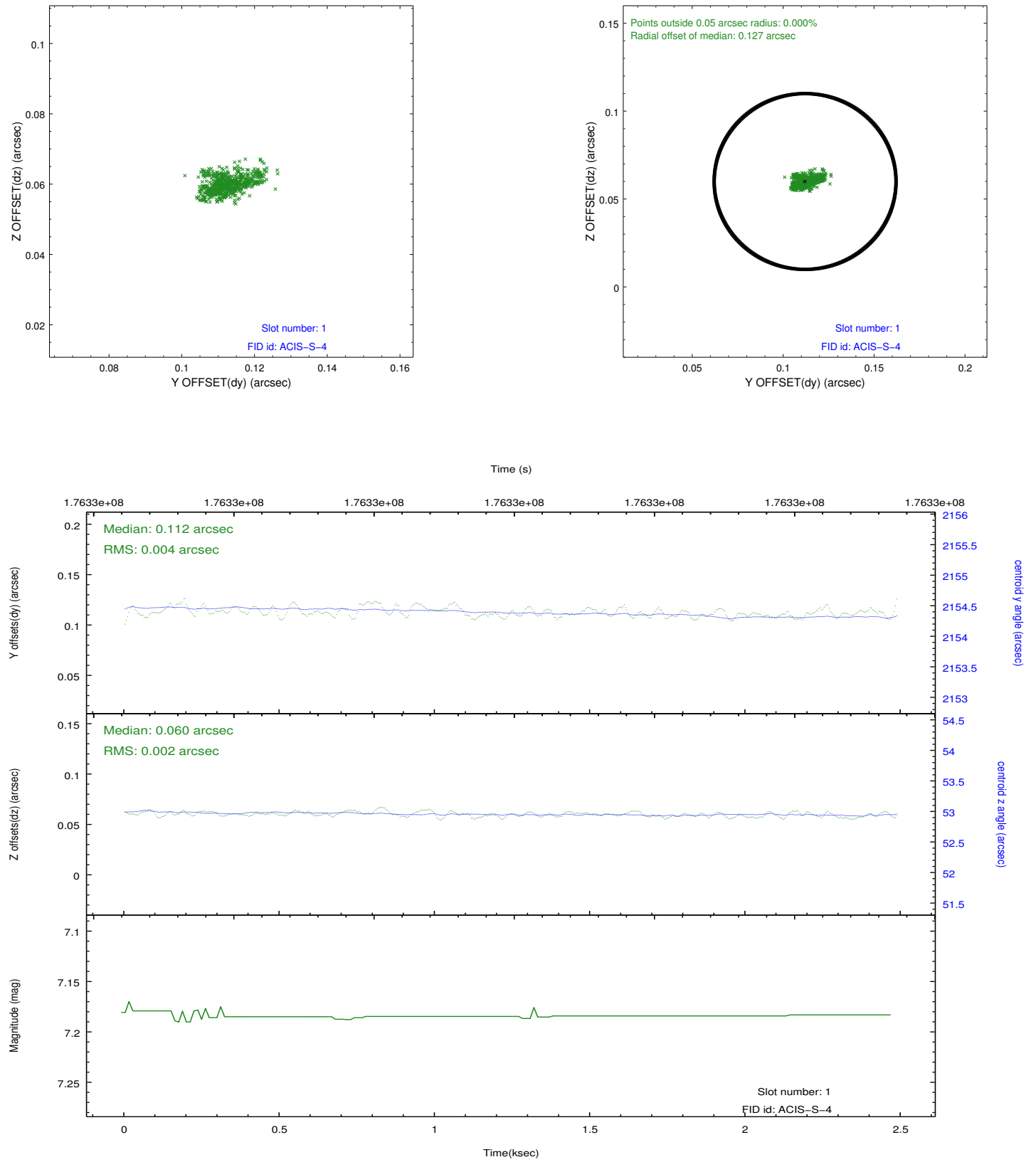


2.5 FID Slots

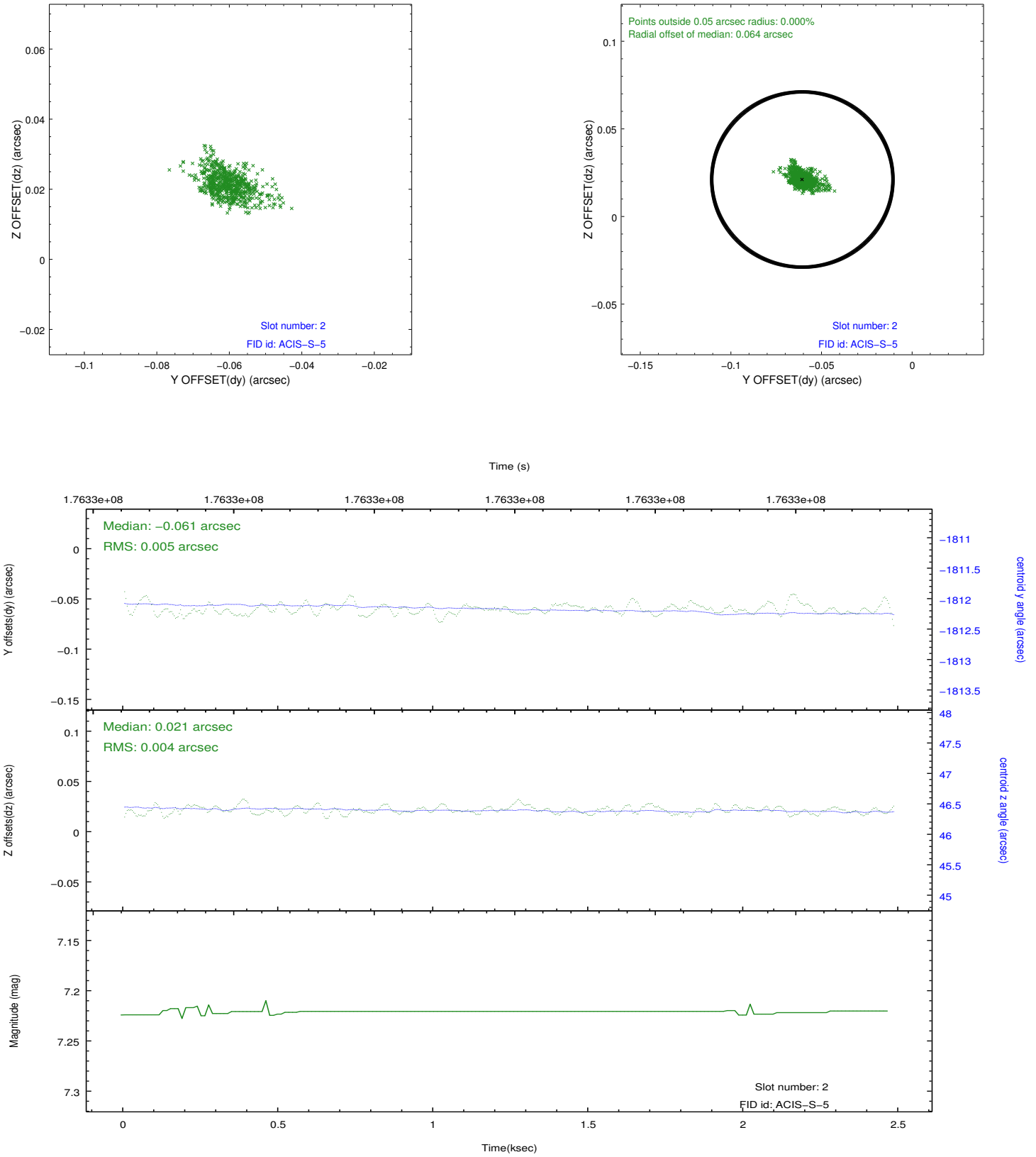
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

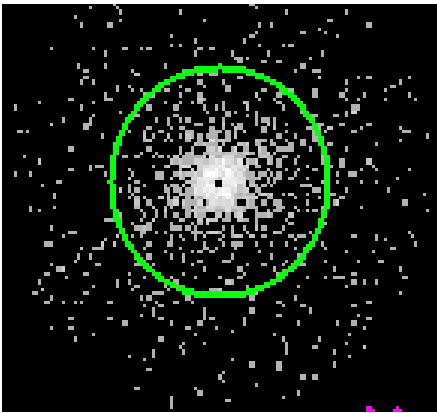


3 Gratings

3.1 HEG Arm



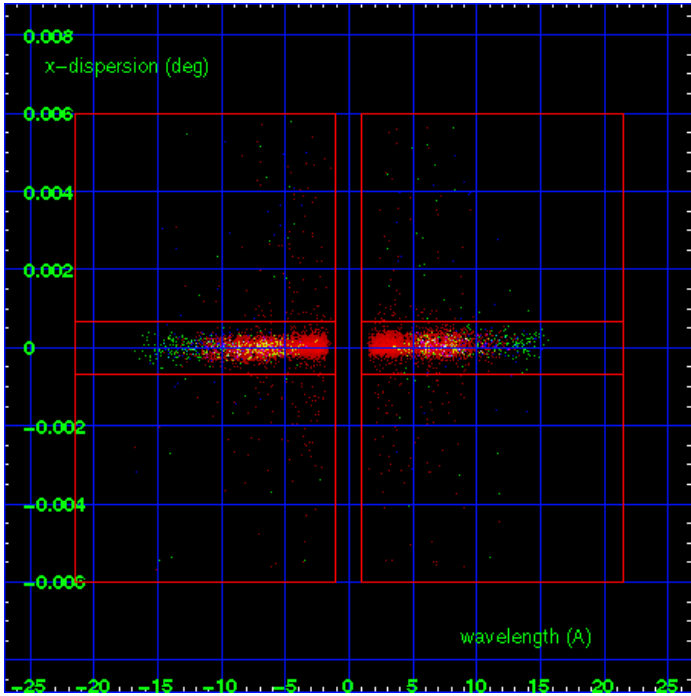
HEG Order Sort 123



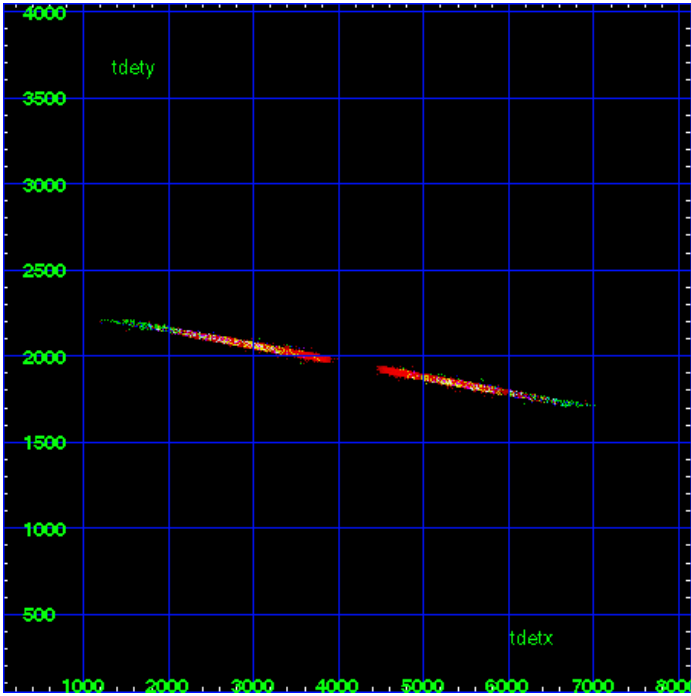
HEG Zero Order



HEG Order Sort ALL

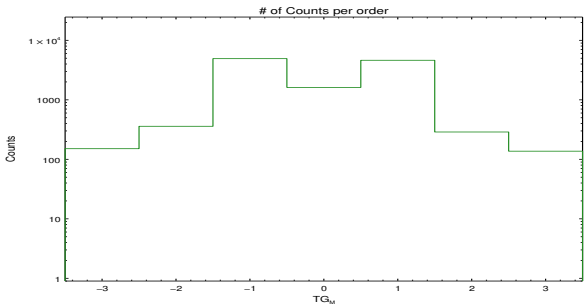


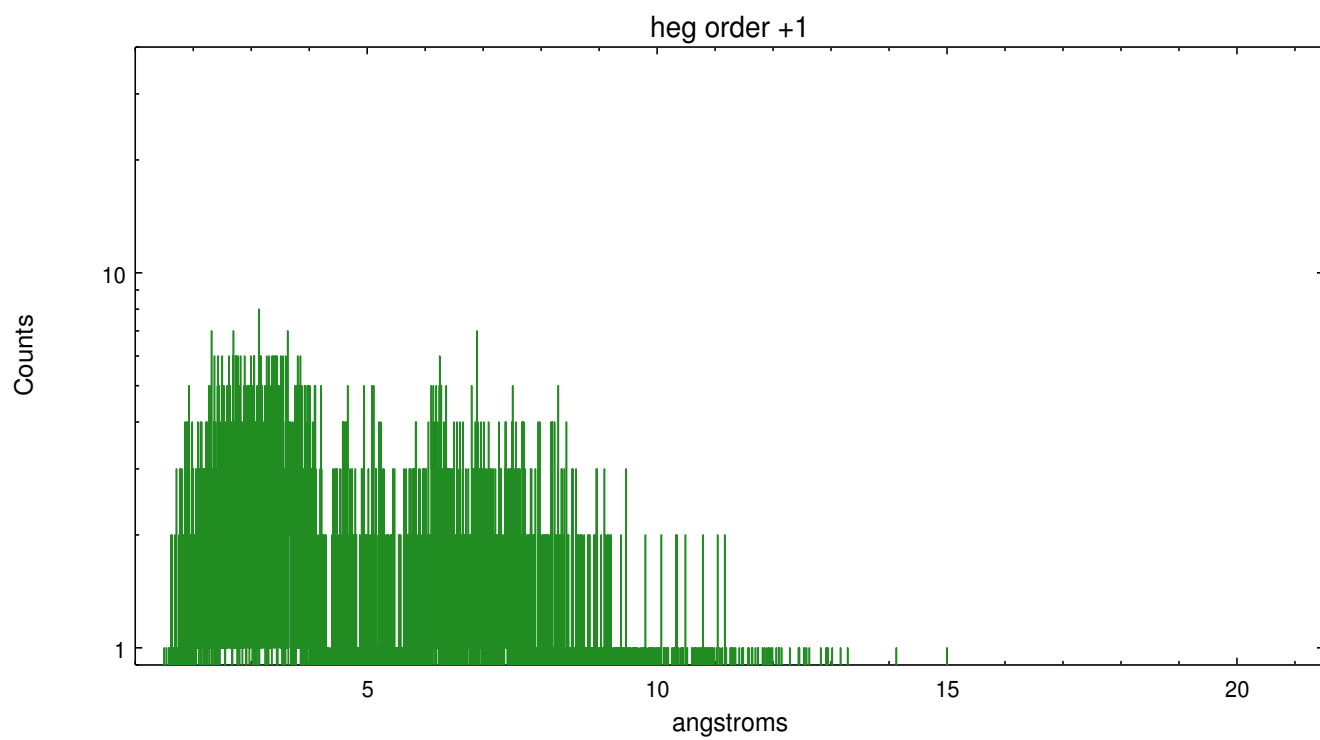
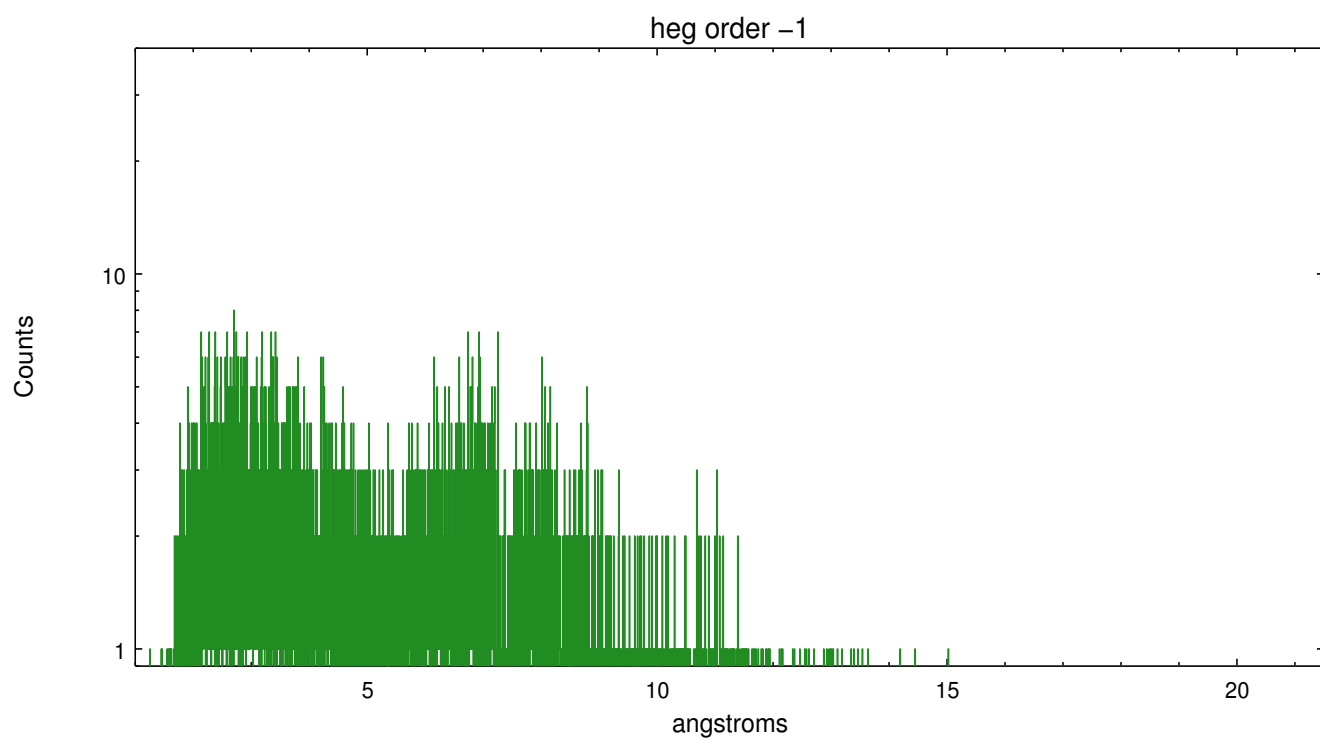
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	151	359	4925	1617	4620	288	137

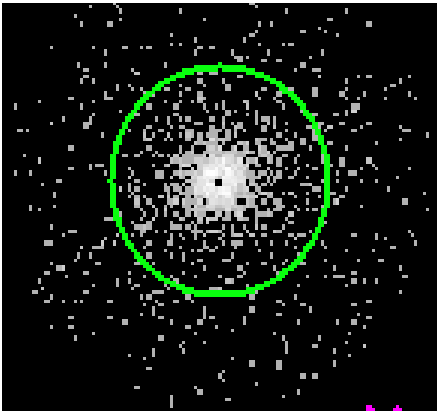




3.2 MEG Arm



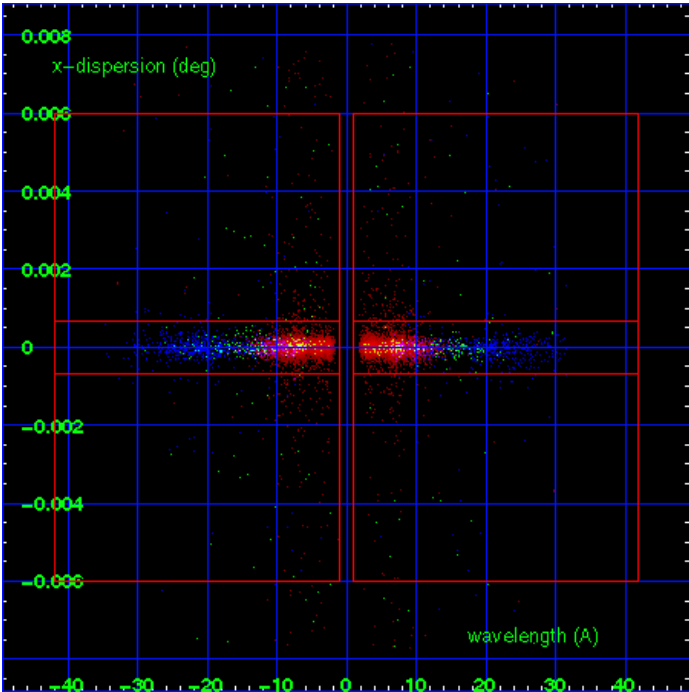
MEG Order Sort 123



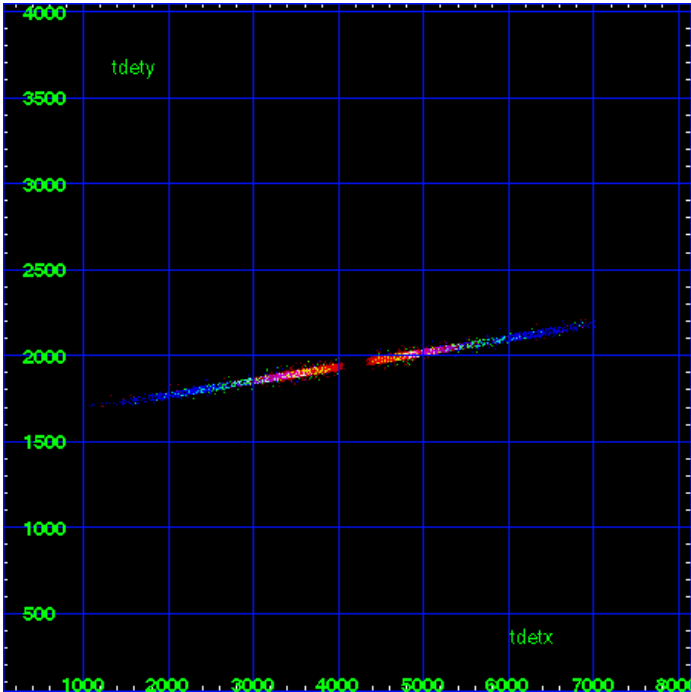
MEG Zero Order



MEG Order Sort ALL

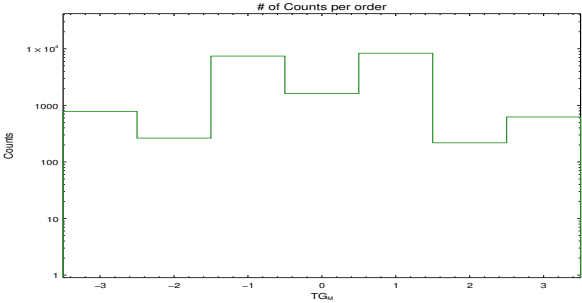


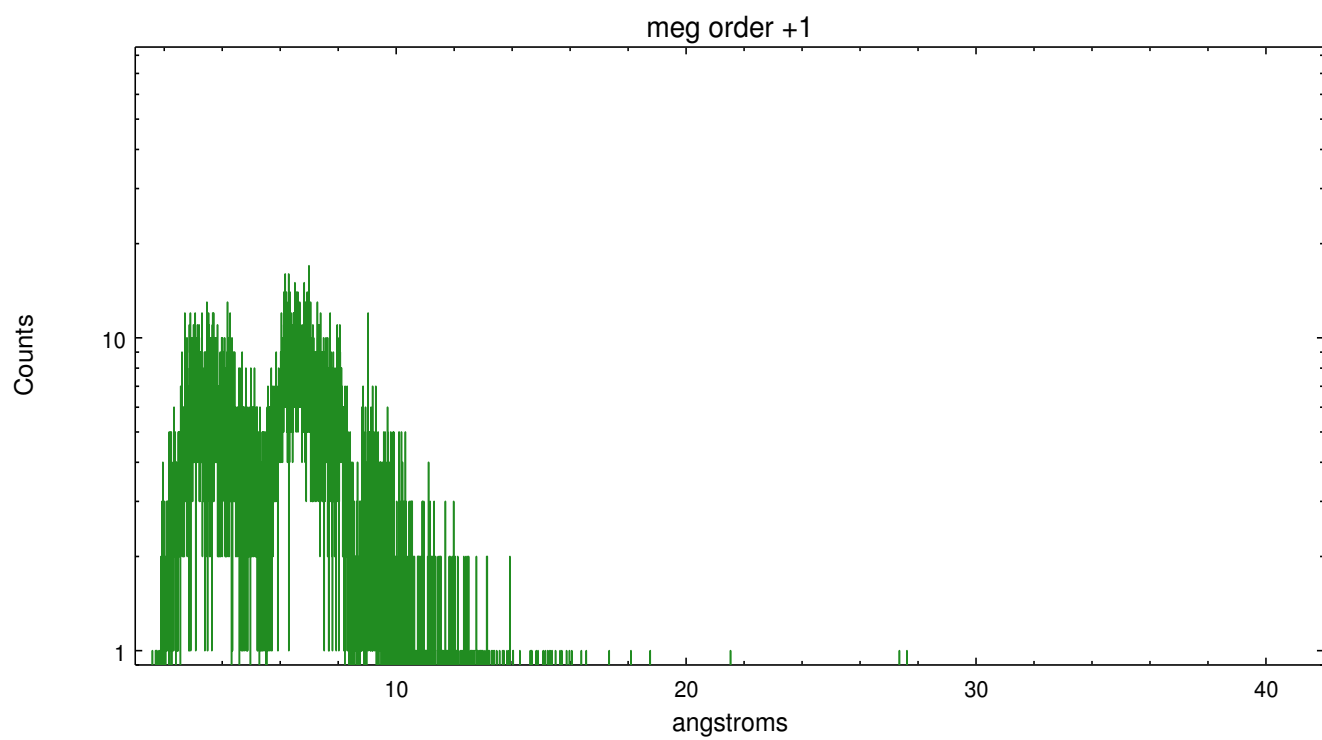
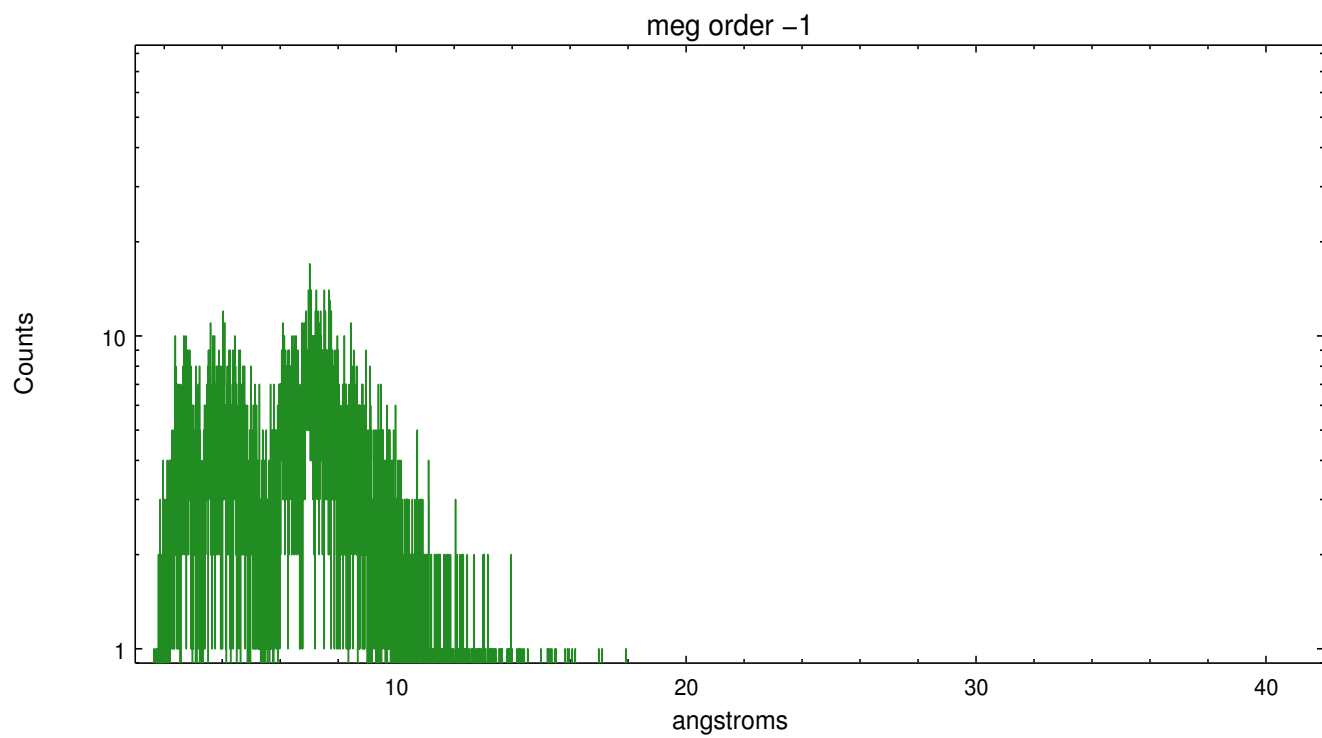
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	779	264	7430	1617	8344	218	624





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.12.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	2.272

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=4054.014, y=4154.112) into the *src1a.fits file table. These corrected coordinates were determined using a software tool developed by CXC called tg_findzo, available in CIAO. The tool calculates the point of intersection of the readout streak and the meg 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.