

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 13670 - L2 Version 3
Chandra X-Ray Center

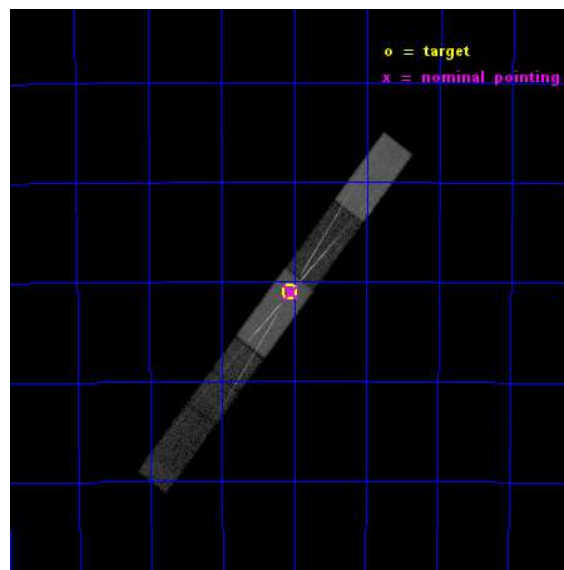
L2 Processing Date : Nov 29 2014

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1 Front

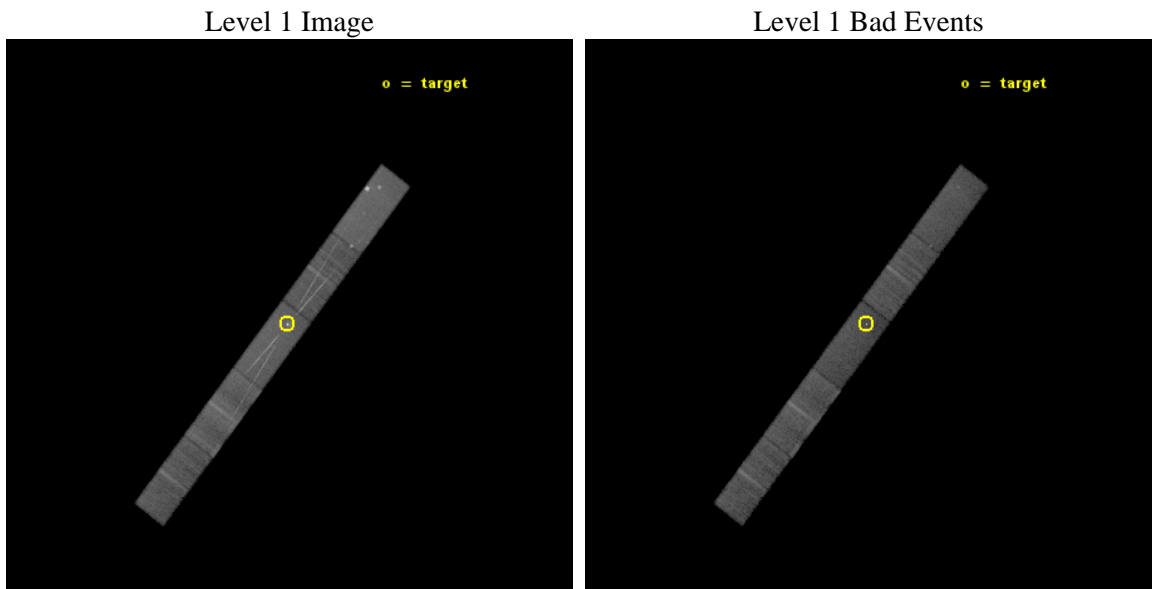
seq_num	200820	Sequence number
obs_id	13670	Observation id
title	Monitoring Dynamical Mass Loss from Eta Car with the HETG and STIS: The Rise to Maximum	Proposal title
observer	Dr Michael Corcoran	Principal investigator
object	Eta Car	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	161.265	Observer's specified target RA [deg]
dec_targ	-59.684528	Observer's specified target Dec [deg]
ra_nom	161.25903888288	Nominal RA [deg]
dec_nom	-59.68477078755	Nominal Dec [deg]
roll_nom	127.15147642111	Nominal Roll [deg]
revision	3	Processing version of data
ontime	32026.5	Sum of GTIs [s]
livetime	31173.590562218	Livetime [s]
ontime5	32026.5	Sum of GTIs [s]
ontime6	32026.5	Sum of GTIs [s]
ontime7	32026.5	Sum of GTIs [s]
ontime8	32026.5	Sum of GTIs [s]
ontime9	32024.958999753	Sum of GTIs [s]
l2events	181151	Number of level 2 events



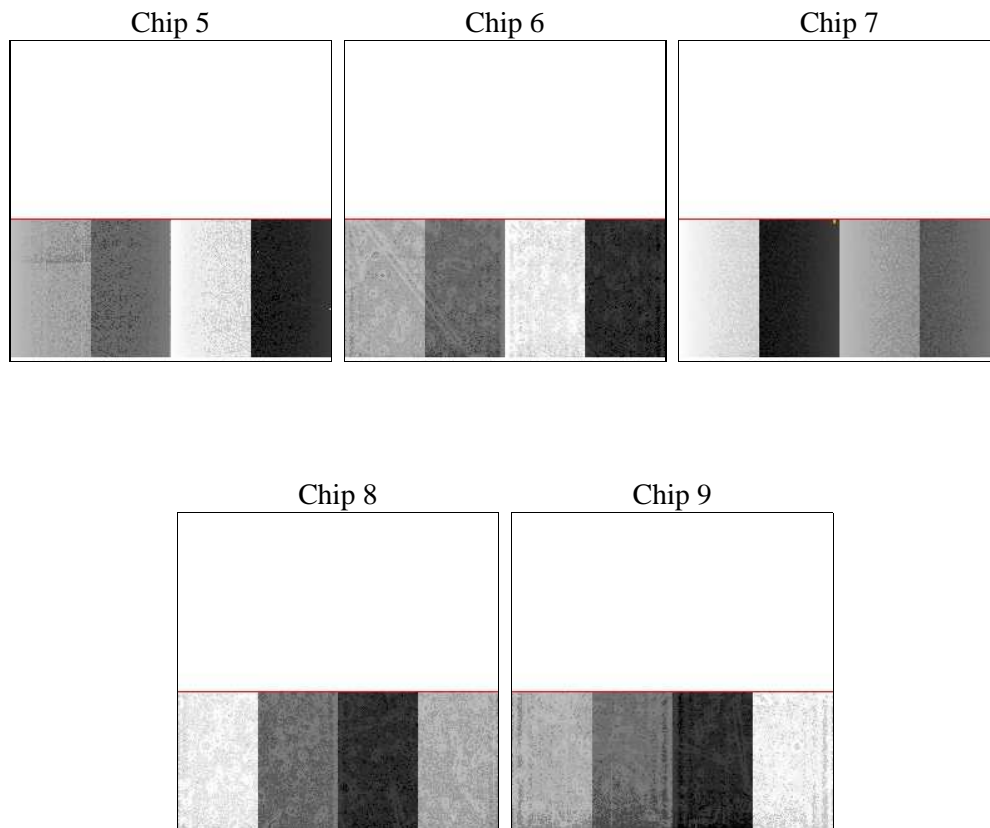
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	32000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	32026.5	Sum of GTIs [s]
caldsver	4.6.4	 	ontime5	32026.5	Sum of GTIs [s]
date	2014-11-29T00:02:37	Date and time of file creation	ontime6	32026.5	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	32026.5	Sum of GTIs [s]
			ontime8	32026.5	Sum of GTIs [s]
			ontime9	32024.958999753	Sum of GTIs [s]
			l1events	550060	Number of level 1 events
			tgmethod	FINDZO	Method used to create src1a file
			zo_pos	(4075.44, 4099.02)	src1a sky pixel position
					src1a sky pixel position via

2.1.4 Events

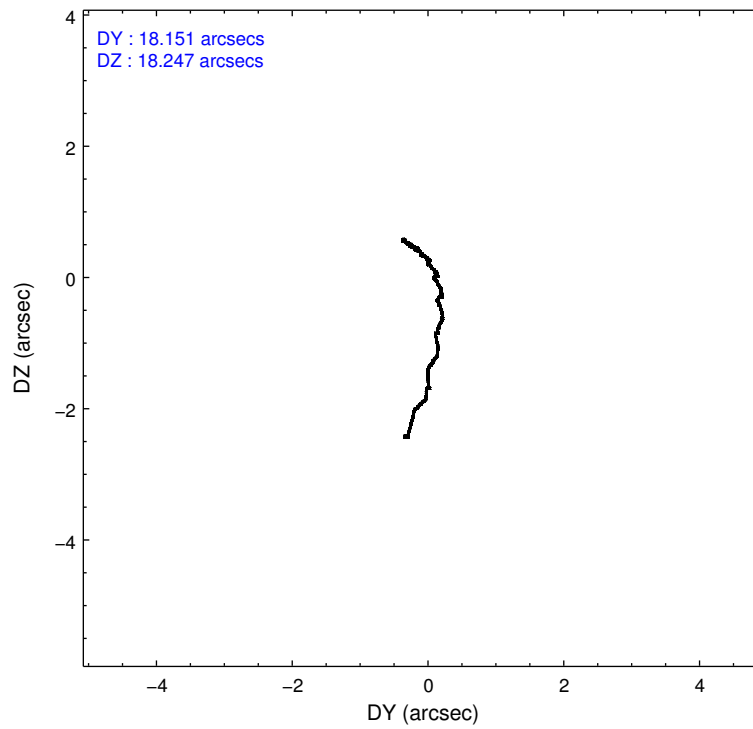
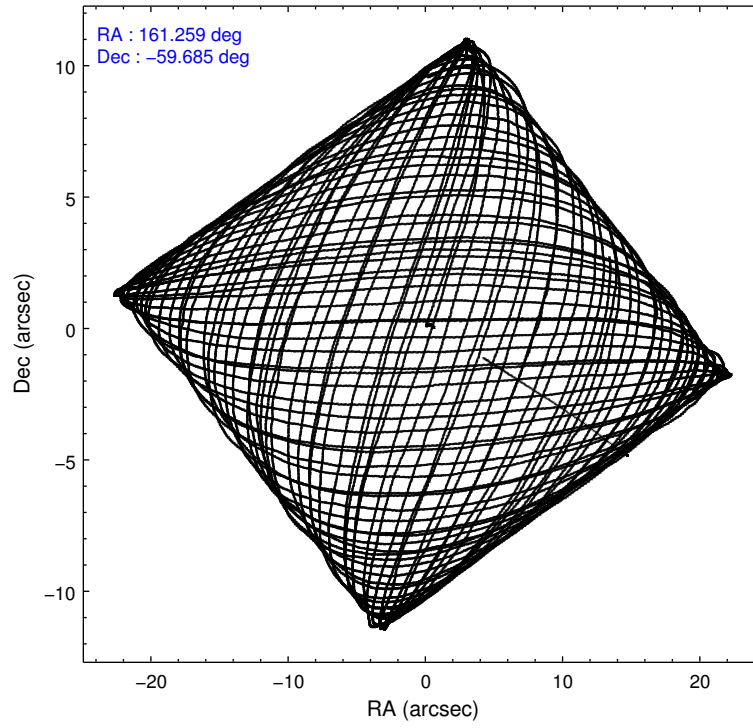
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	138396	93244	133382	110468	74570
rejected events	62152	68513	56771	77291	63377
rejected %	44%	73%	42%	69%	84%

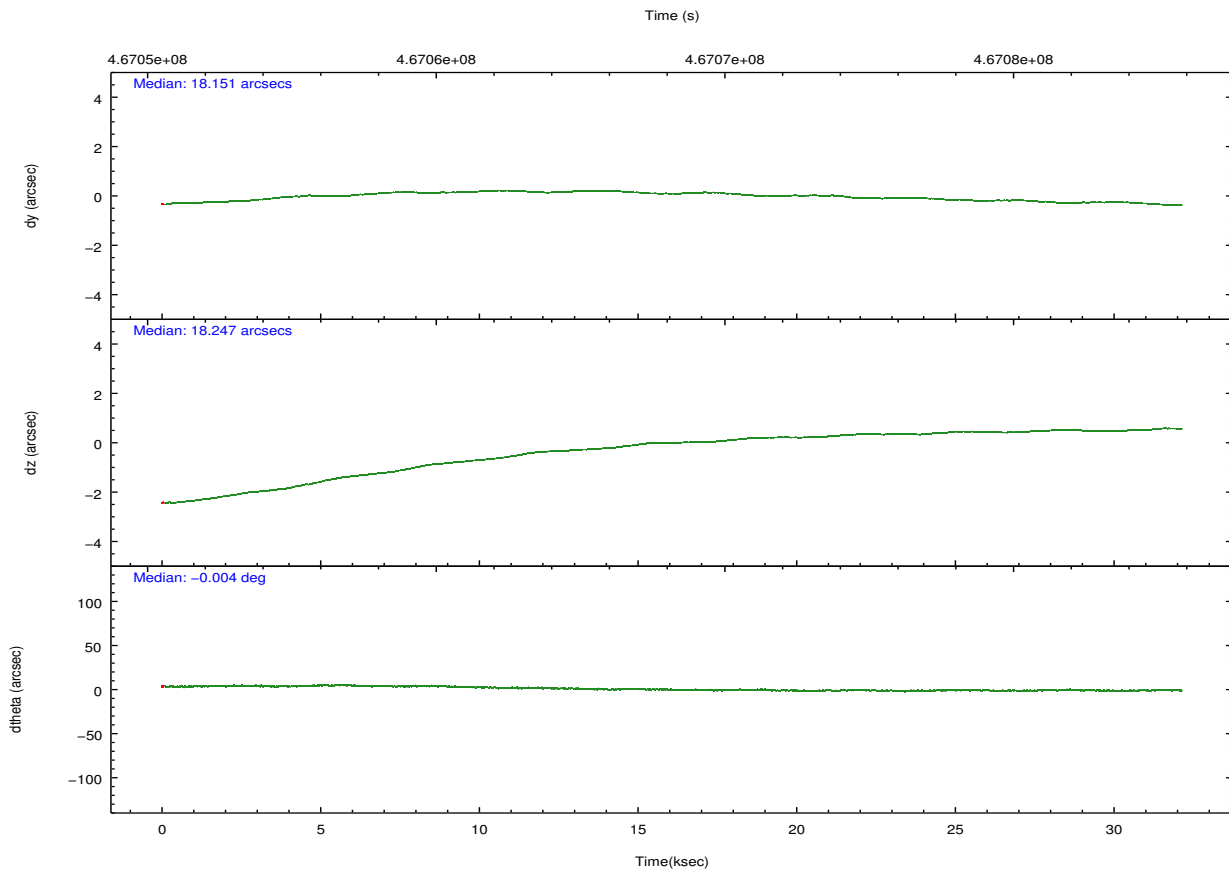
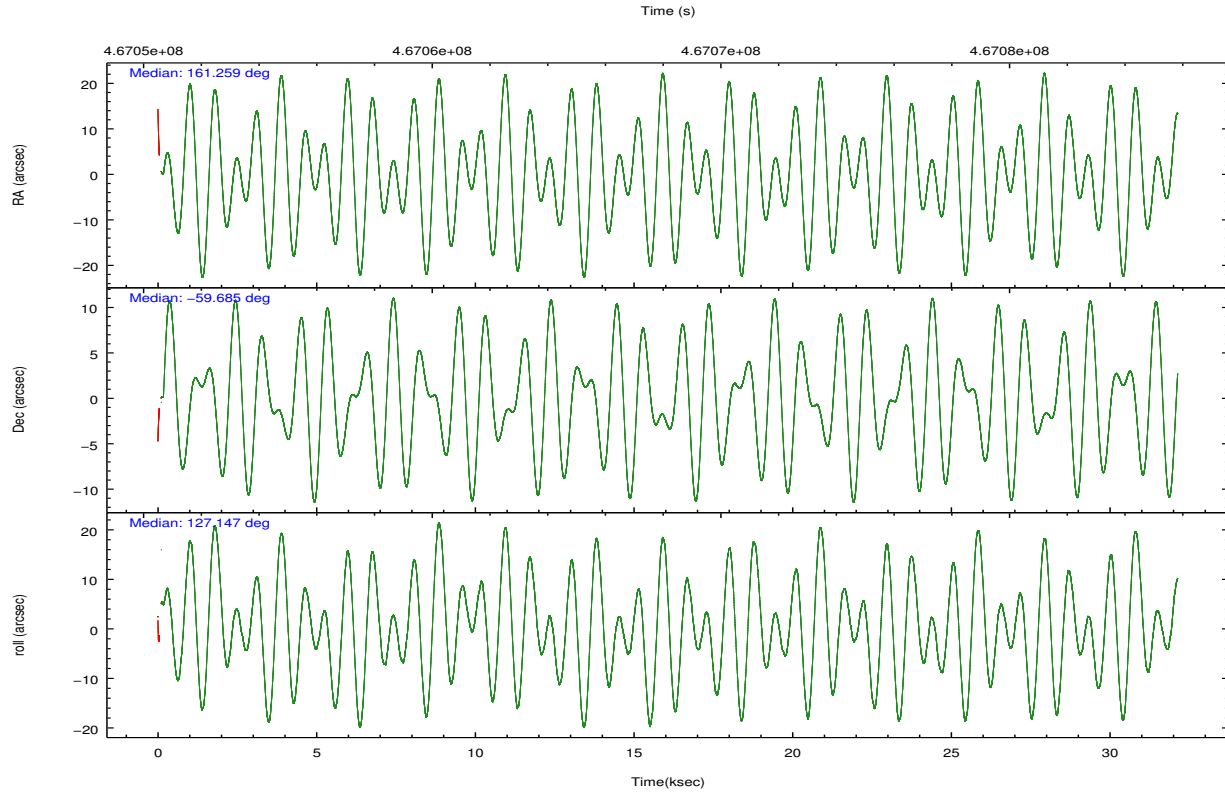
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	21096	14496	10177	12023	4564
	15%	15%	7%	10%	6%
grade 1 events	460	62	310	76	27
	0%	0%	0%	0%	0%
grade 2 events	17611	4133	16952	6957	2295
	12%	4%	12%	6%	3%
grade 3 events	3977	1744	7714	3416	1250
	2%	1%	5%	3%	1%
grade 4 events	3949	1818	7517	3176	1181
	2%	1%	5%	2%	1%
grade 5 events	10361	3649	11524	5005	3857
	7%	3%	8%	4%	5%
grade 6 events	30693	2780	35070	7931	2041
	22%	2%	26%	7%	2%
grade 7 events	50249	64562	44118	71884	59355
	36%	69%	33%	65%	79%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-56789	ACIS-56789	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	161.309233	161.2590388828777	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-59.695040	-59.6847707875496	Subarray start row	15	15
[deg] Pointing Roll	127.038190	127.1514764211079	Subarray row count	440	440
[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	1.5
[mm] SIM translation stage pos	-183.332523	-183.3237572673427			
[mm] SIM translation stage offset	-6.8	-6.808765315665084			
[s] Observation start time (MET)	467052227.184000	467051108.35057			
Observation start date	2012-10-19T16:42:40	2012-10-19T16:25:08			
[s] Observation end time (MET)	467084227.184000	467085217.78991			
Observation end date	2012-10-20T01:36:00	2012-10-20T01:53:37			
Read mode	TIMED	TIMED			

2.3 Aspect





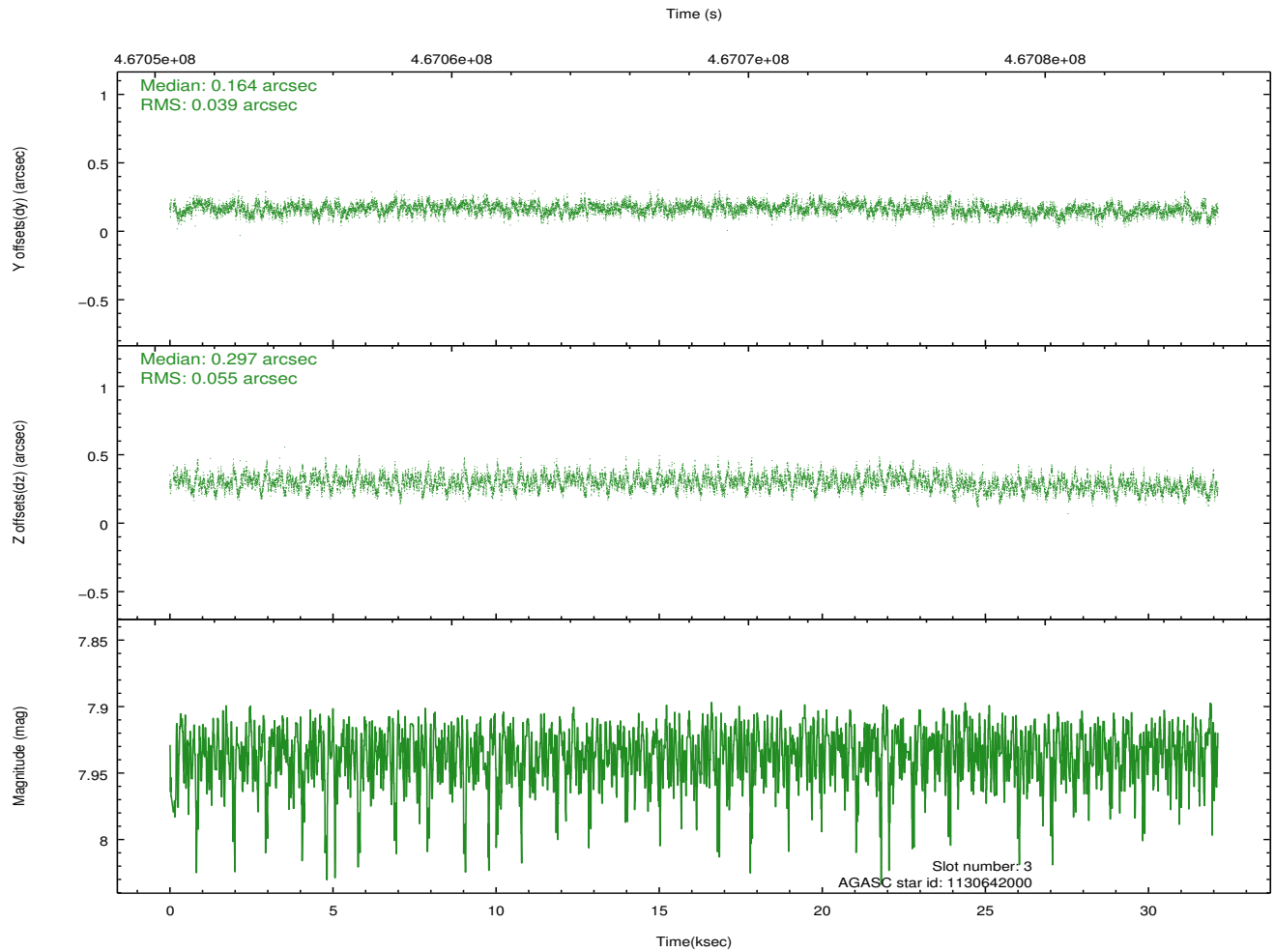
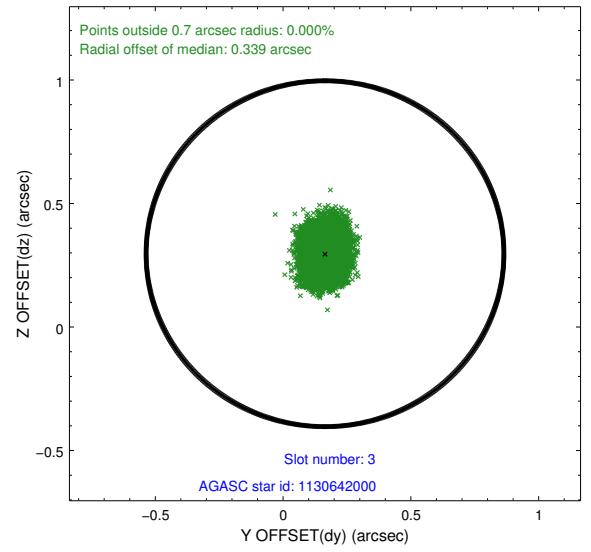
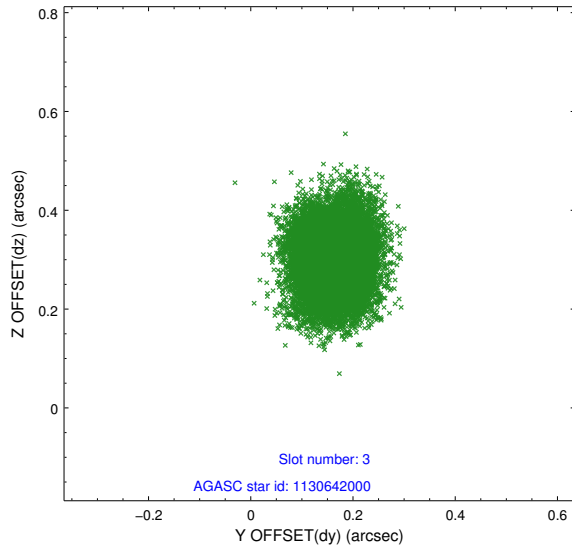
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.96	7823	-0.115	-0.066	0.034	0.062	0.000000	0.000000	-770.80	-1879.72
1	FID		ACIS-S-4	7.03	7823	0.255	0.076	0.009	0.016	0.000000	0.000000	2142.82	28.83
2	FID		ACIS-S-5	7.08	7825	-0.172	-0.000	0.030	0.052	0.000000	0.000000	-1823.62	22.50
3	GUIDE	used	1130642000	7.94	15643	0.164	0.297	0.071	0.119	162.836255	-59.743891	-1833.72	-2085.46
4	GUIDE	used	1130643264	6.63	15647	-0.148	-0.109	0.081	0.123	160.322990	-59.676912	1120.92	1399.54
5	GUIDE	used	1130647960	8.65	15640	0.020	-0.050	0.077	0.121	160.287471	-59.247776	2406.79	540.54
6	GUIDE	used	1174021440	8.42	15641	-0.038	-0.138	0.074	0.123	160.869011	-60.314711	-1309.41	1971.88
7	MONITOR	unused		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00

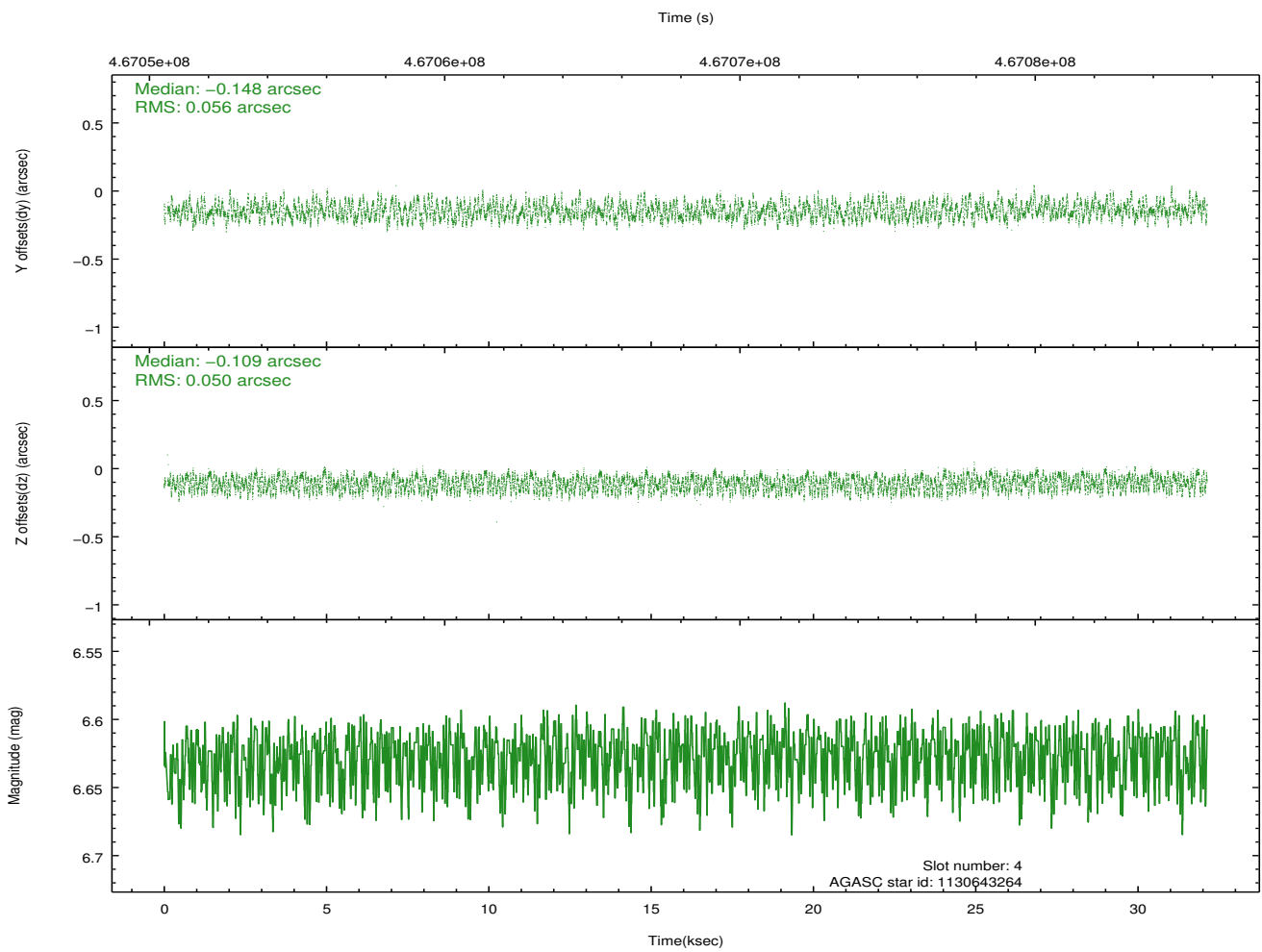
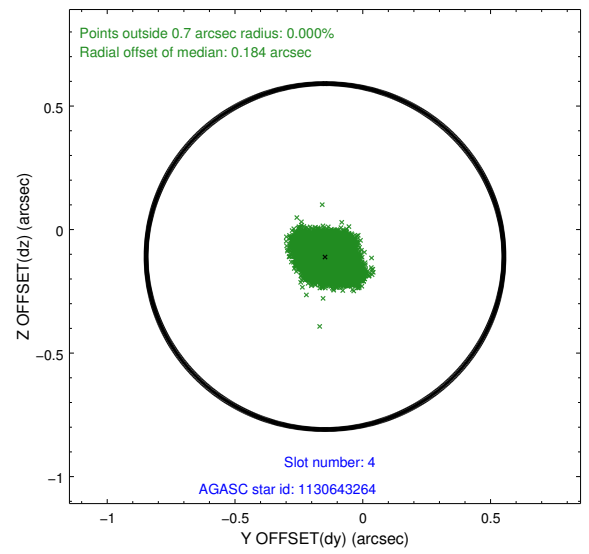
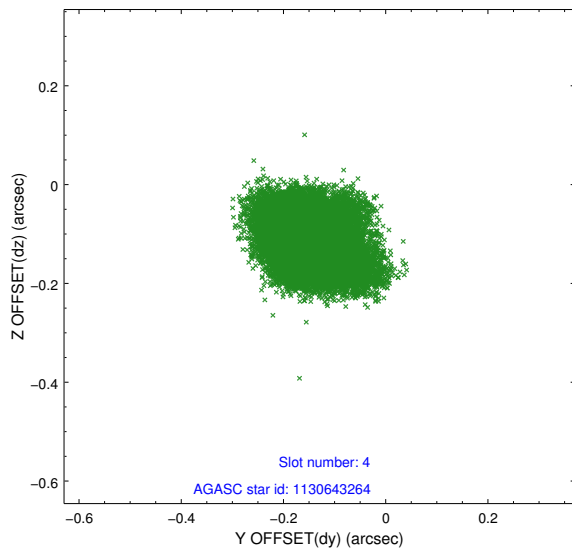
∞

2.4 Star Slots

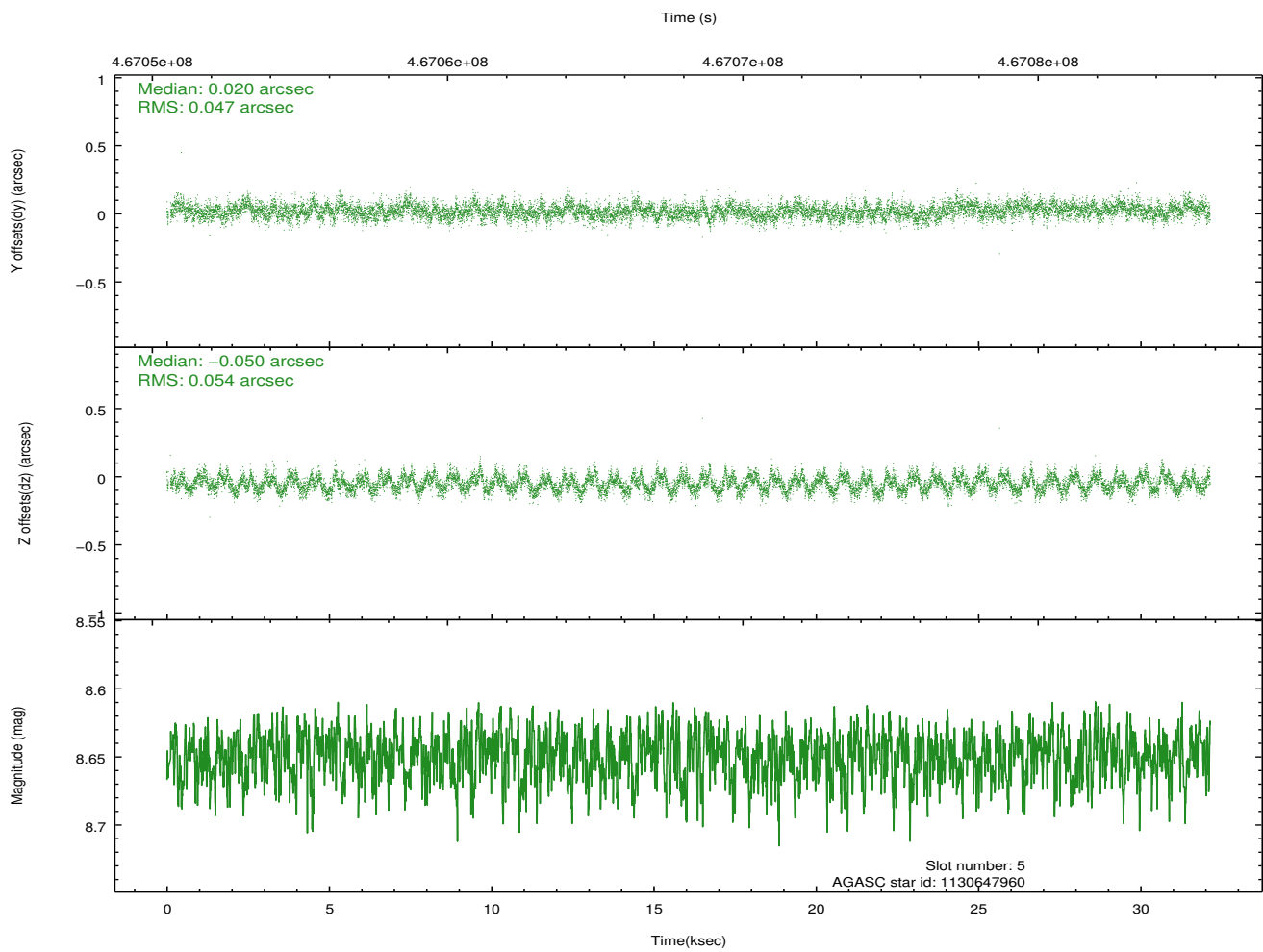
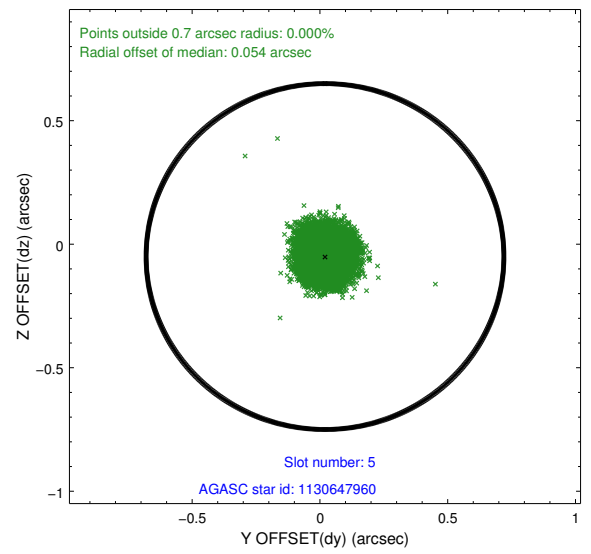
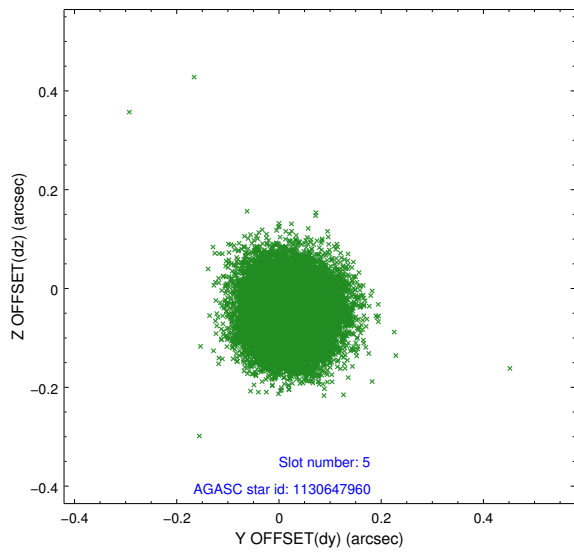
2.4.1 Slot 3



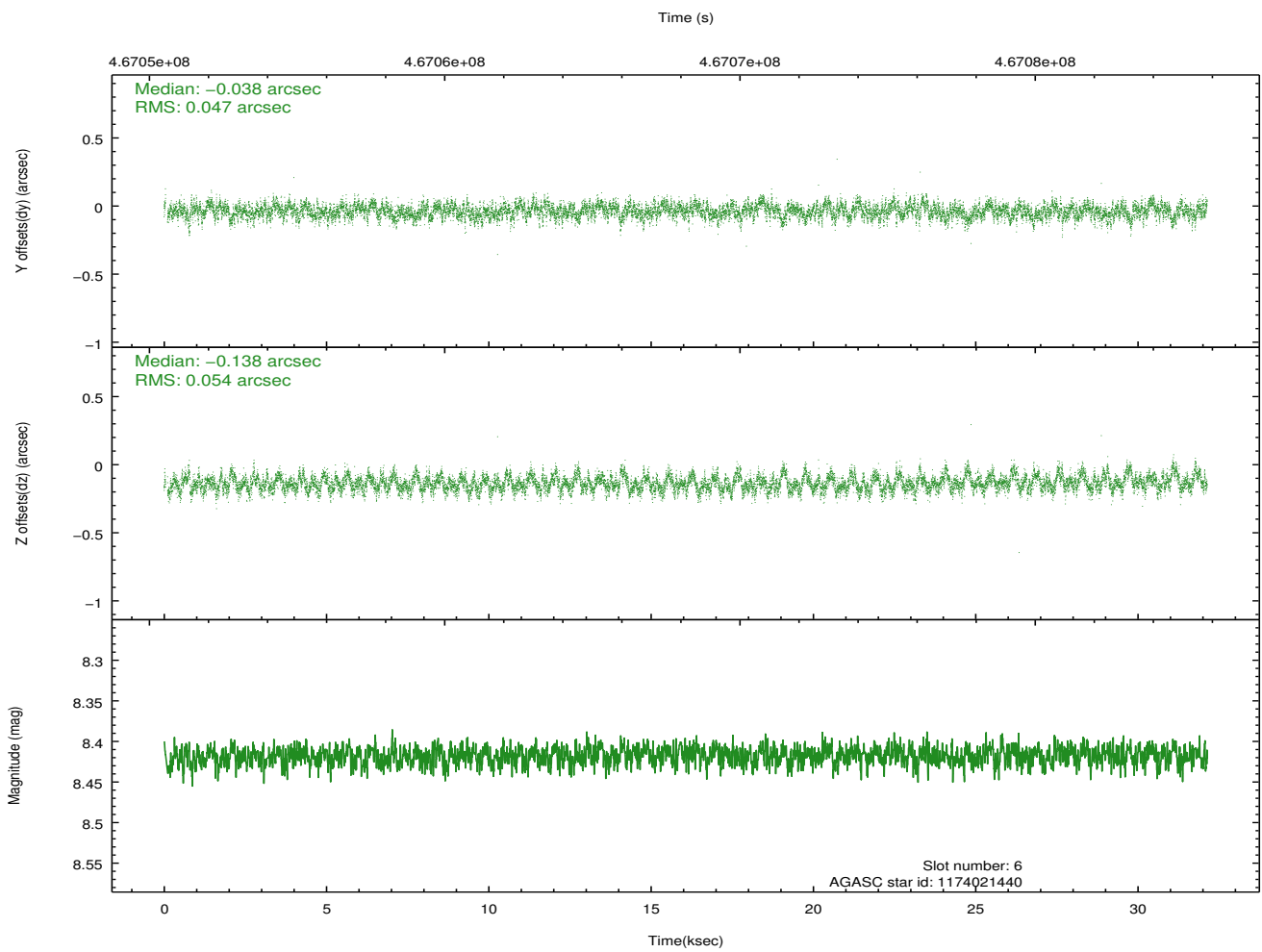
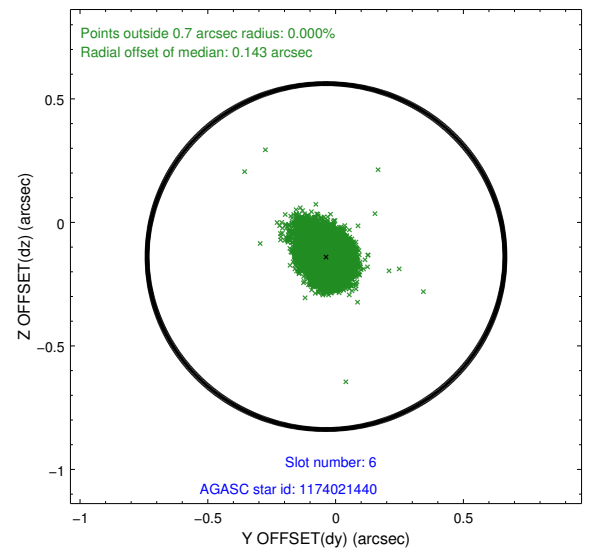
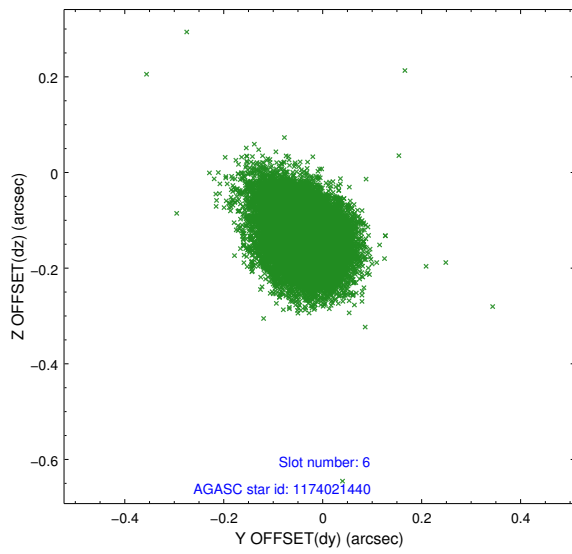
2.4.2 Slot 4



2.4.3 Slot 5

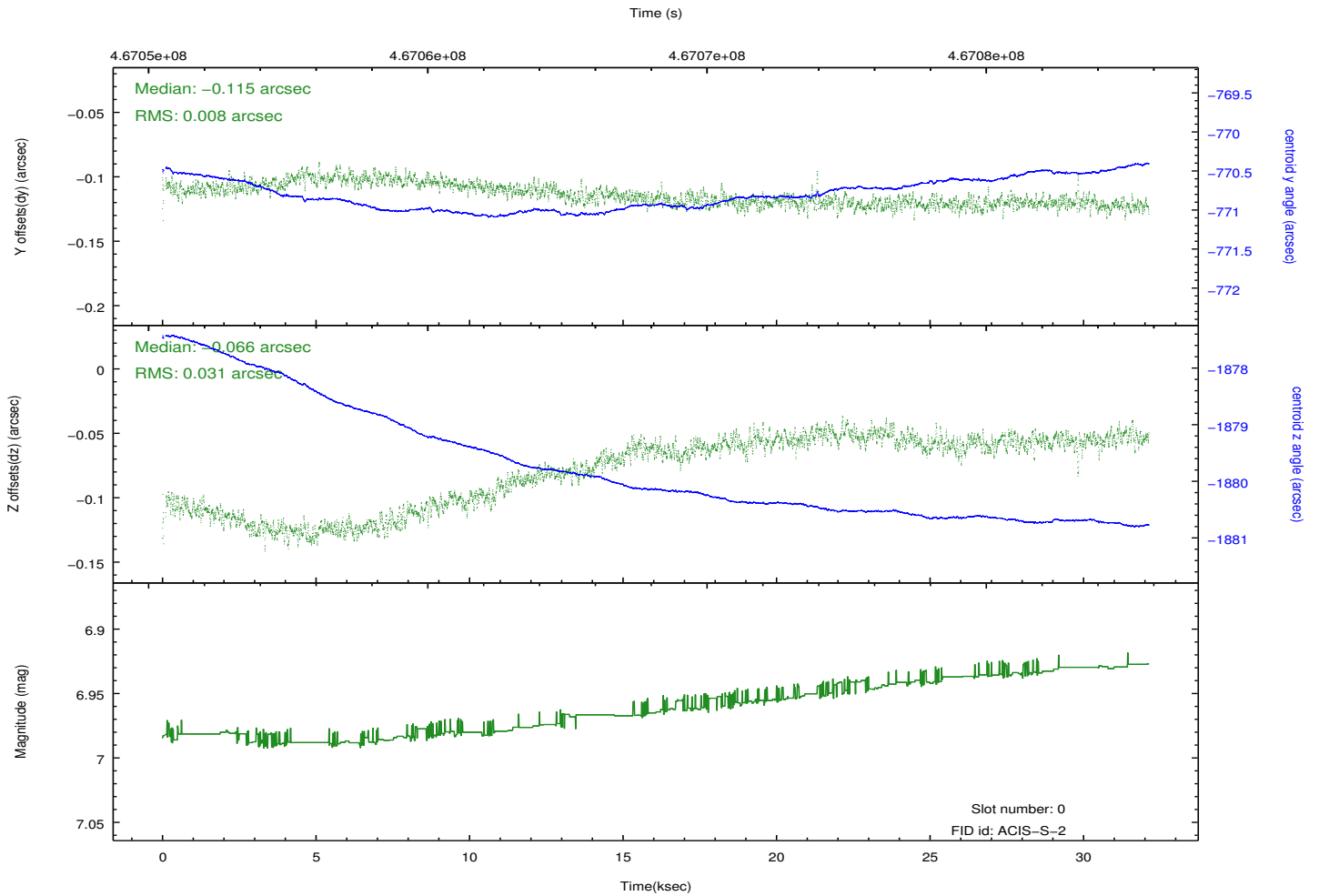
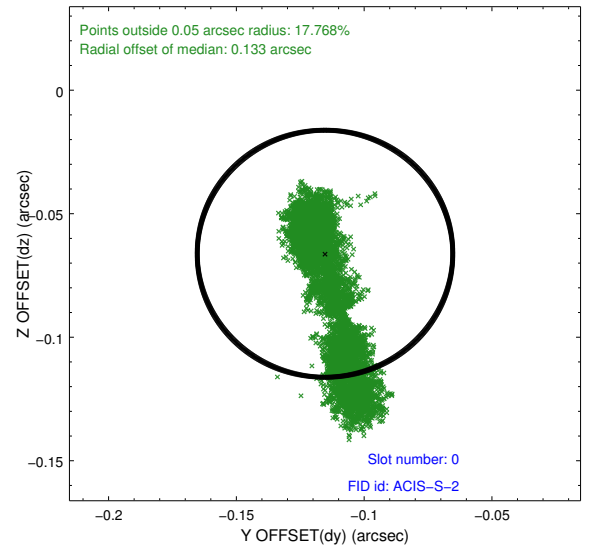
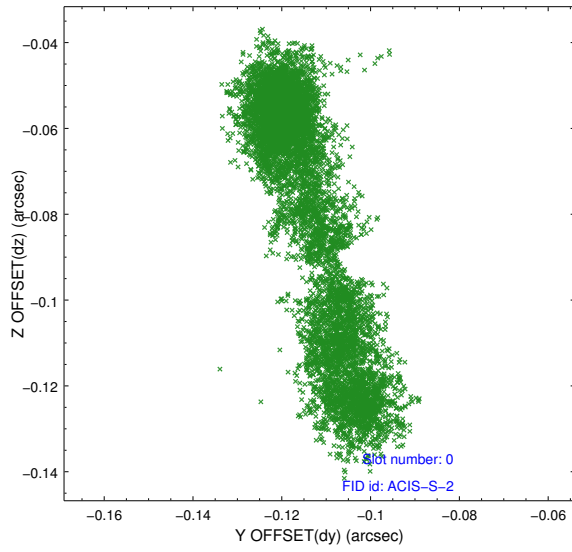


2.4.4 Slot 6

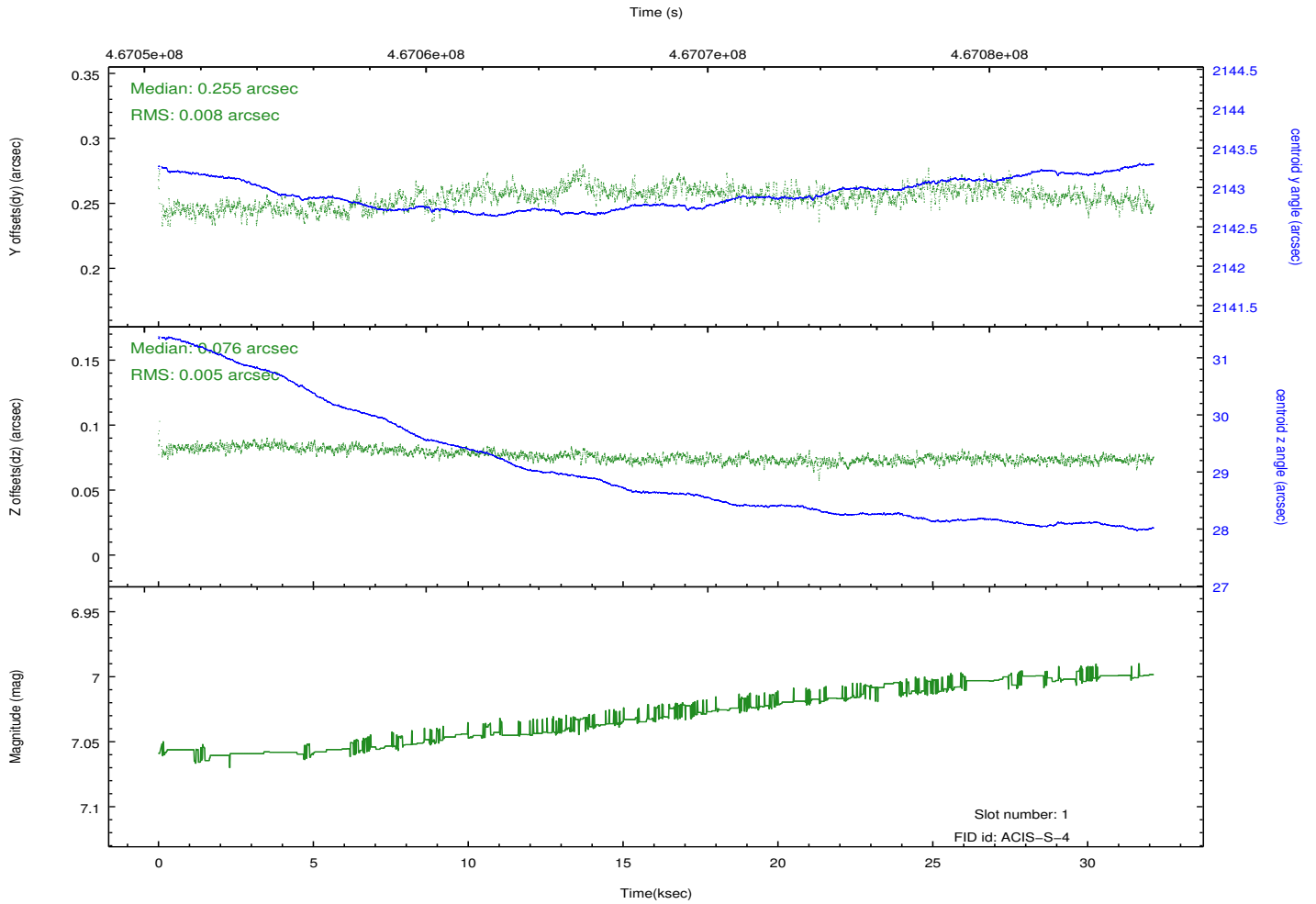
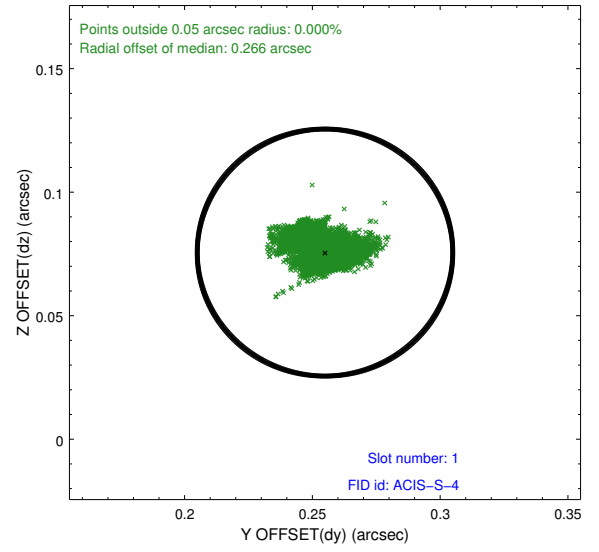
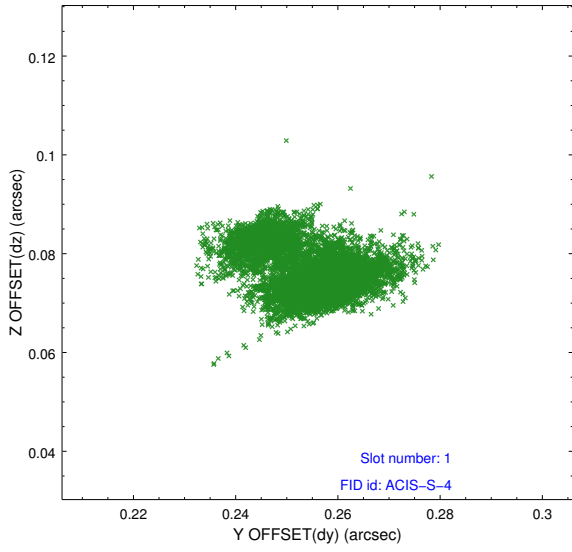


2.5 FID Slots

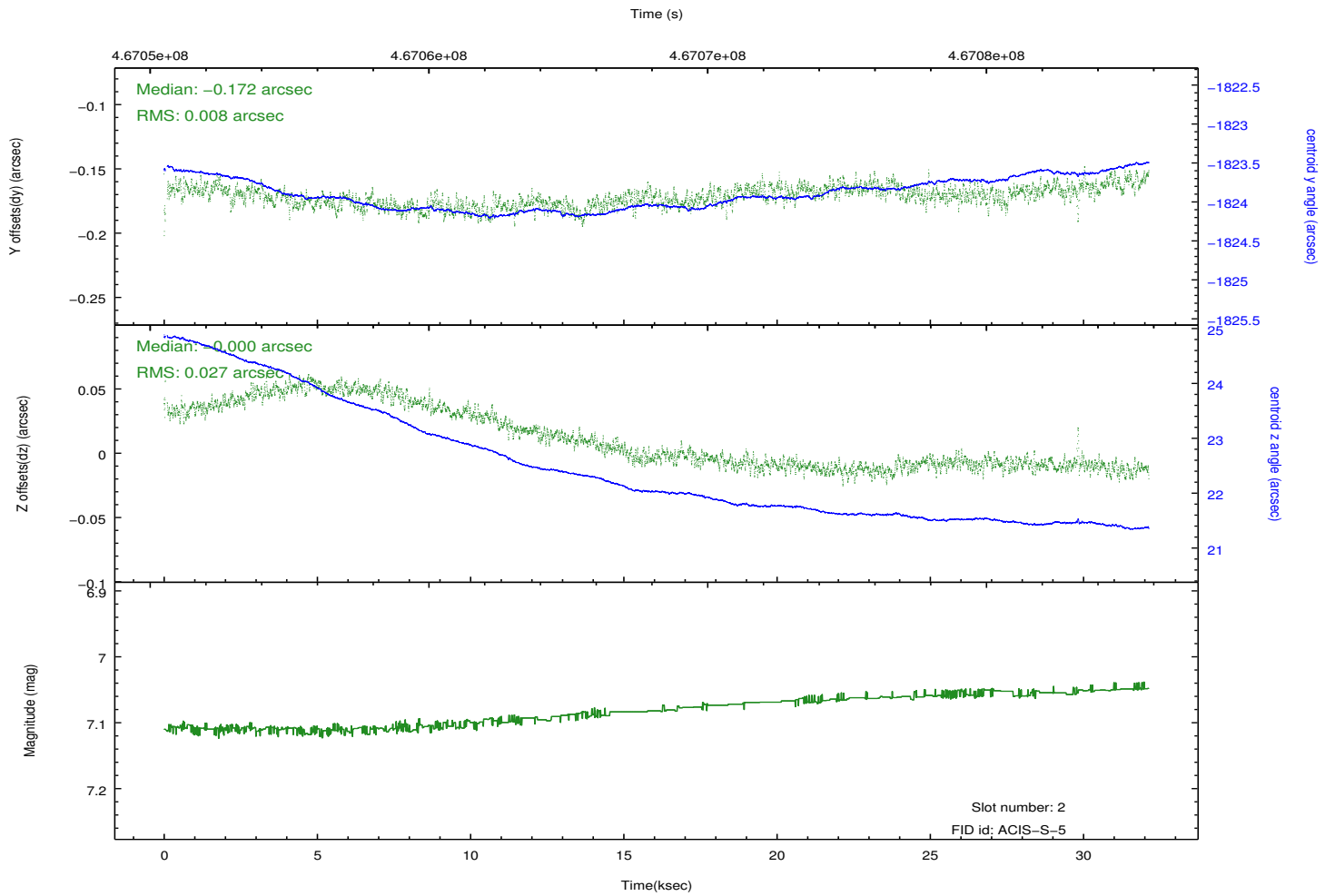
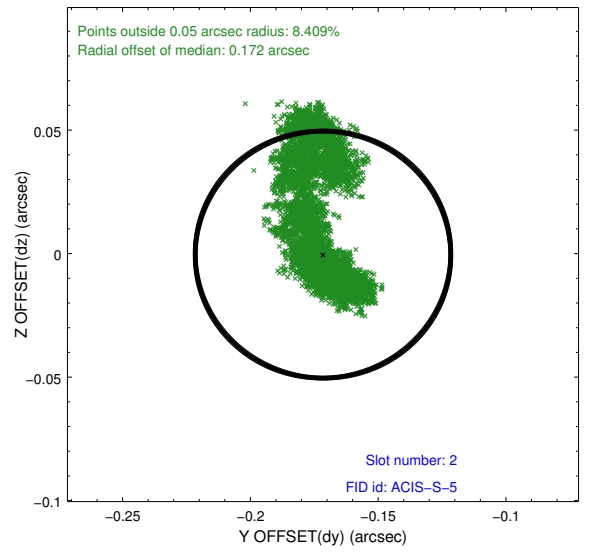
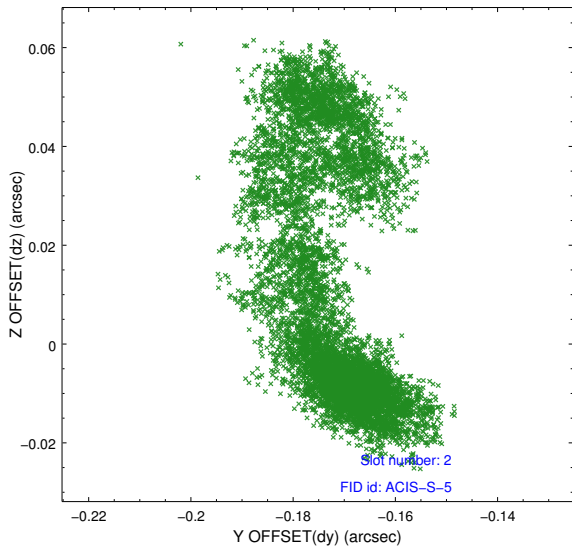
2.5.1 Slot 0



2.5.2 Slot 1

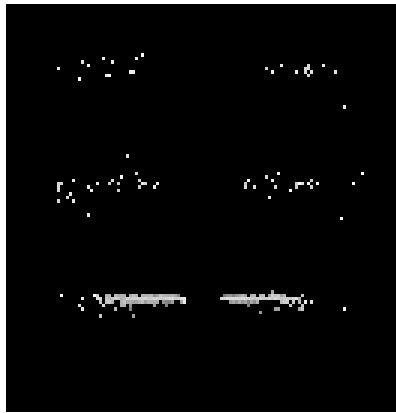


2.5.3 Slot 2

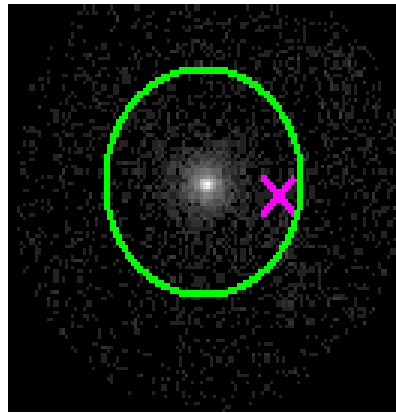


3 Gratings

3.1 HEG Arm



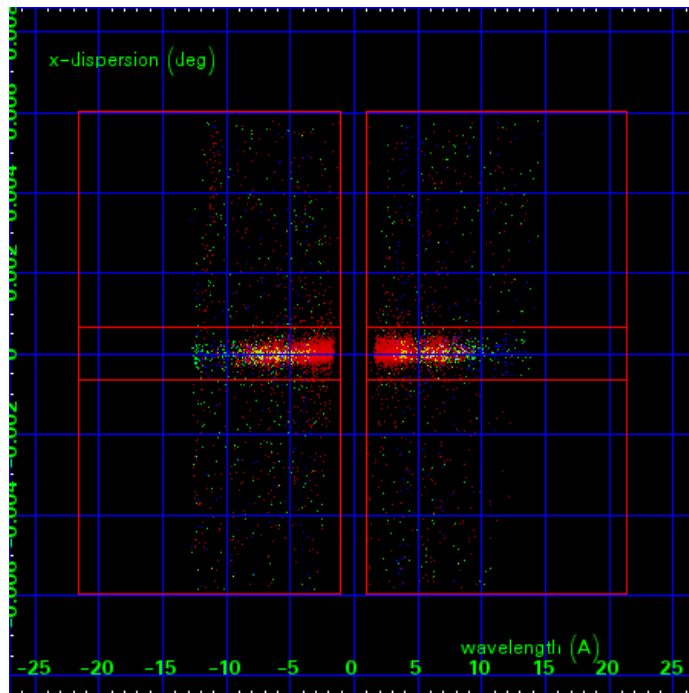
HEG Order Sort 123



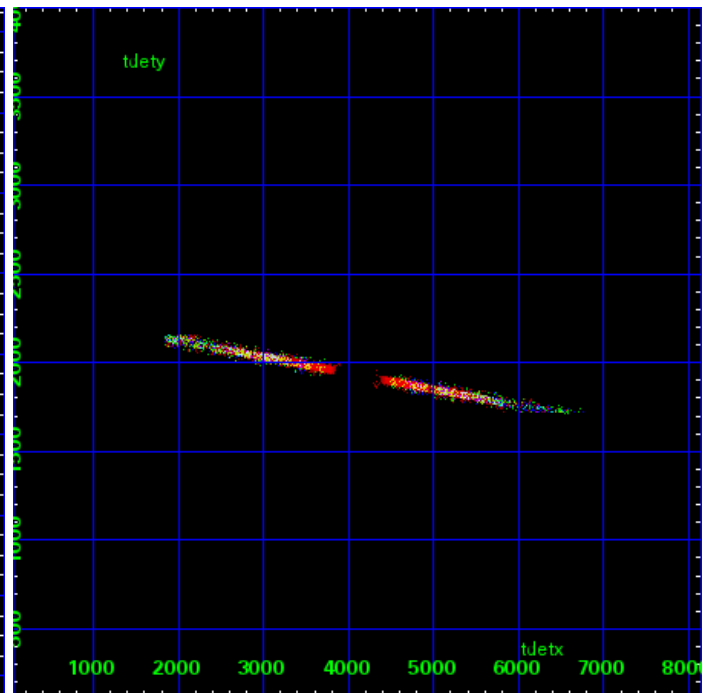
HEG Zero Order



HEG Order Sort ALL

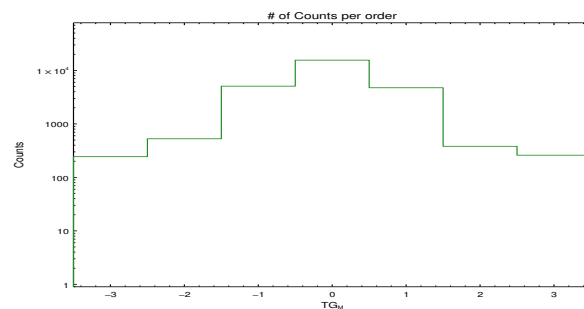


Spot Image HEG

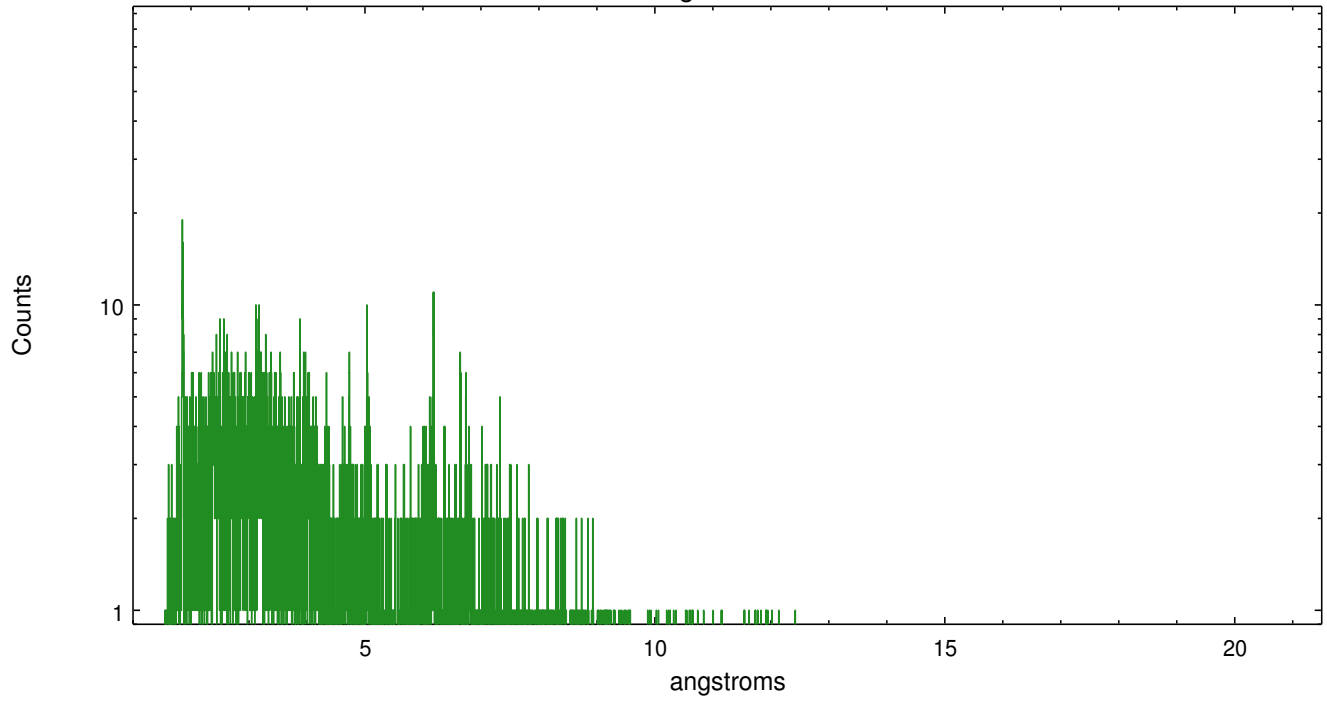


Full Detector HEG

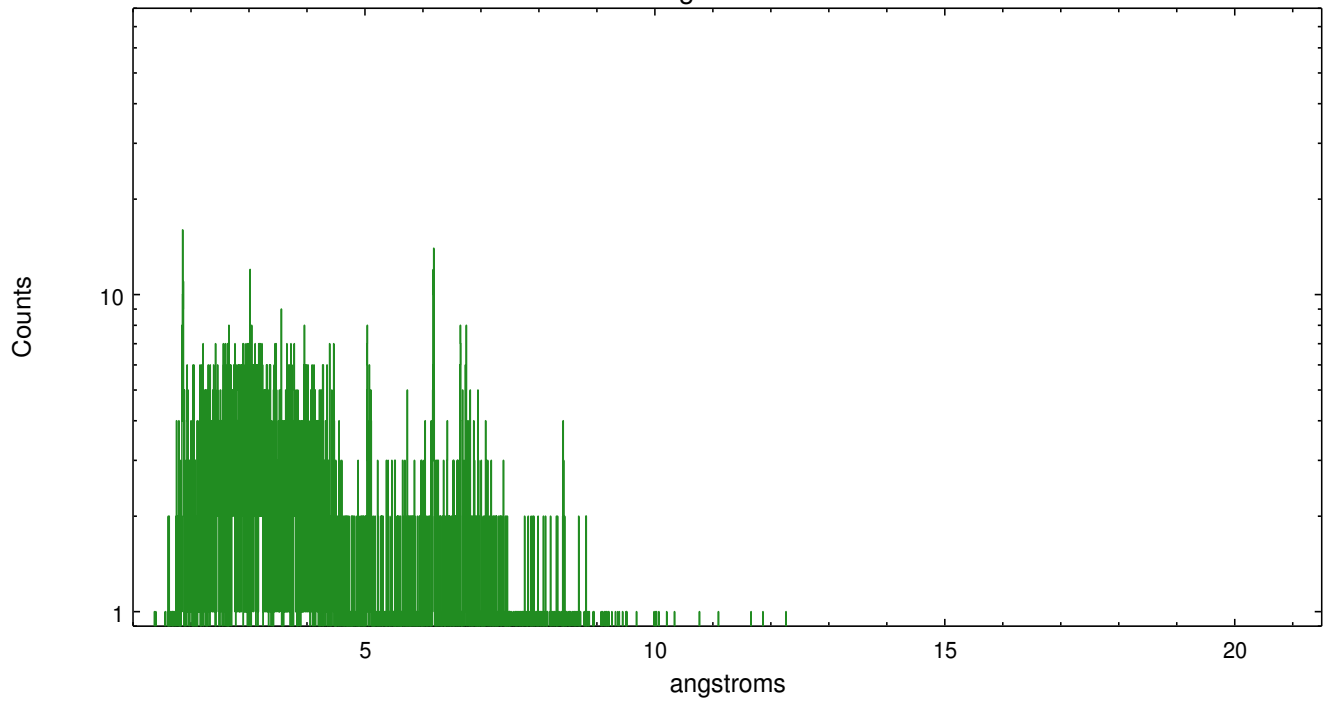
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	244	527	5076	15552	4742	381	260



heg order -1



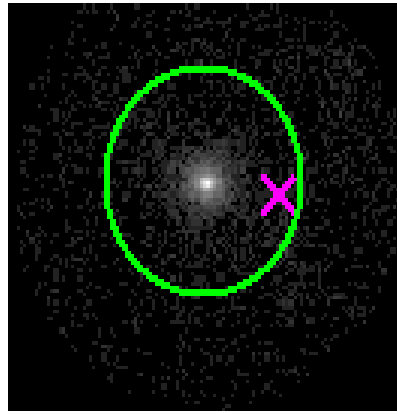
heg order +1



3.2 MEG Arm



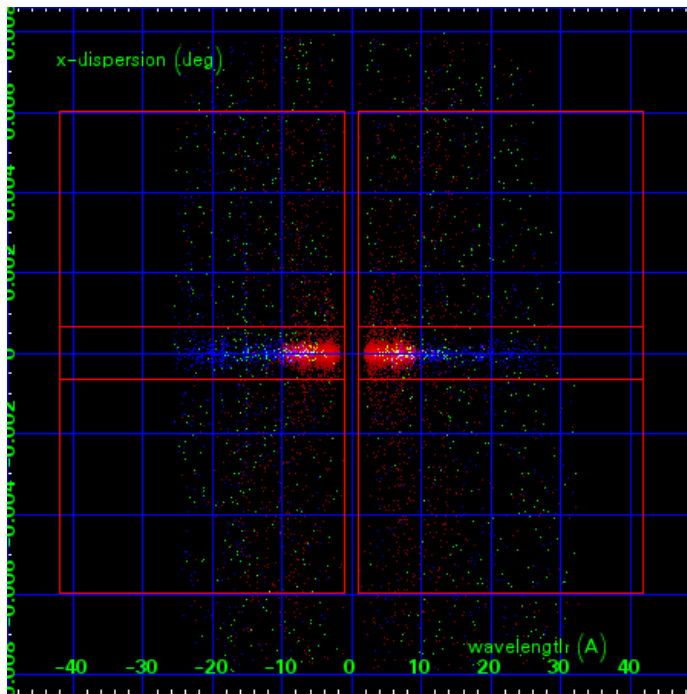
MEG Order Sort 123



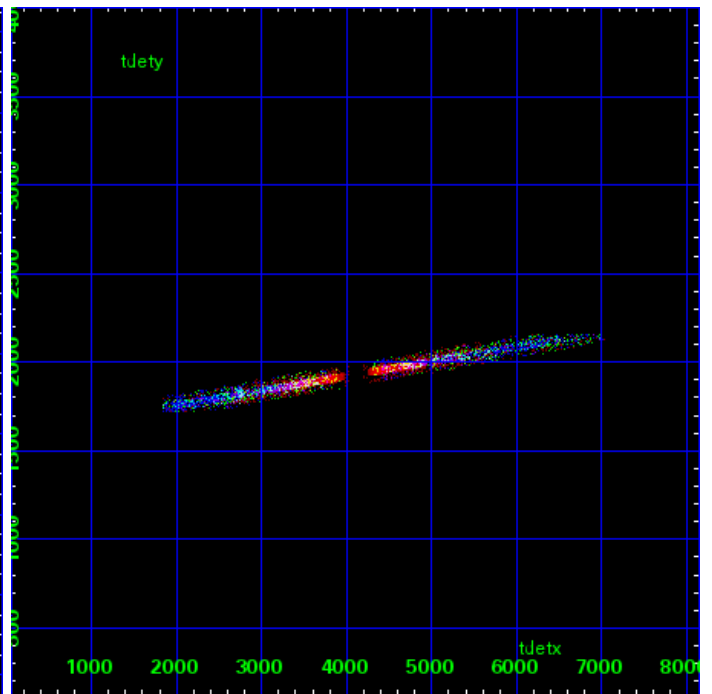
MEG Zero Order



MEG Order Sort ALL

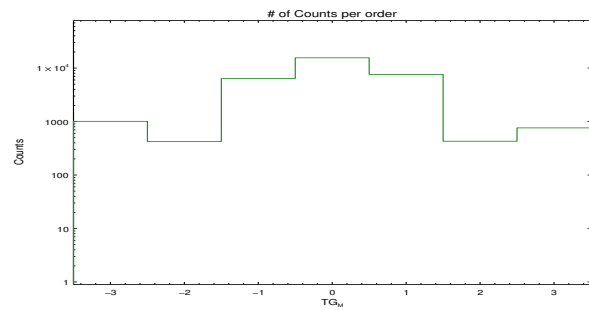


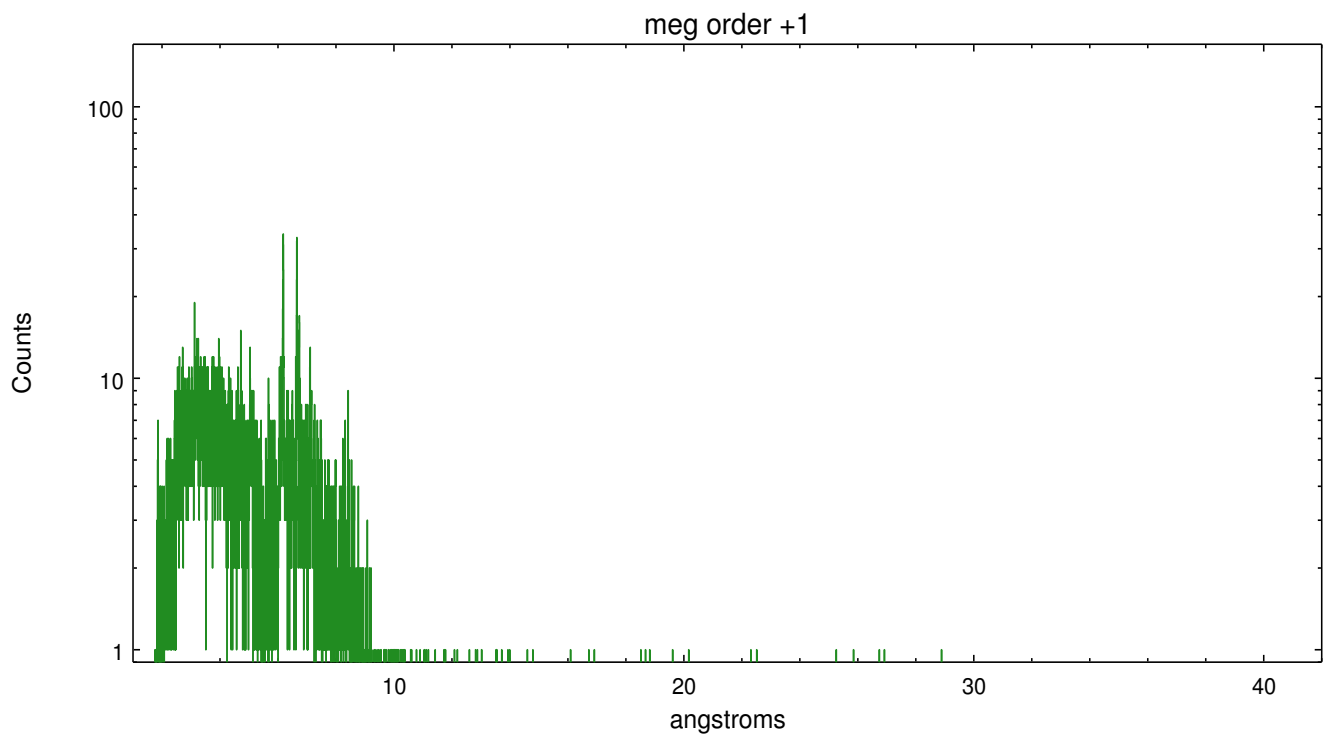
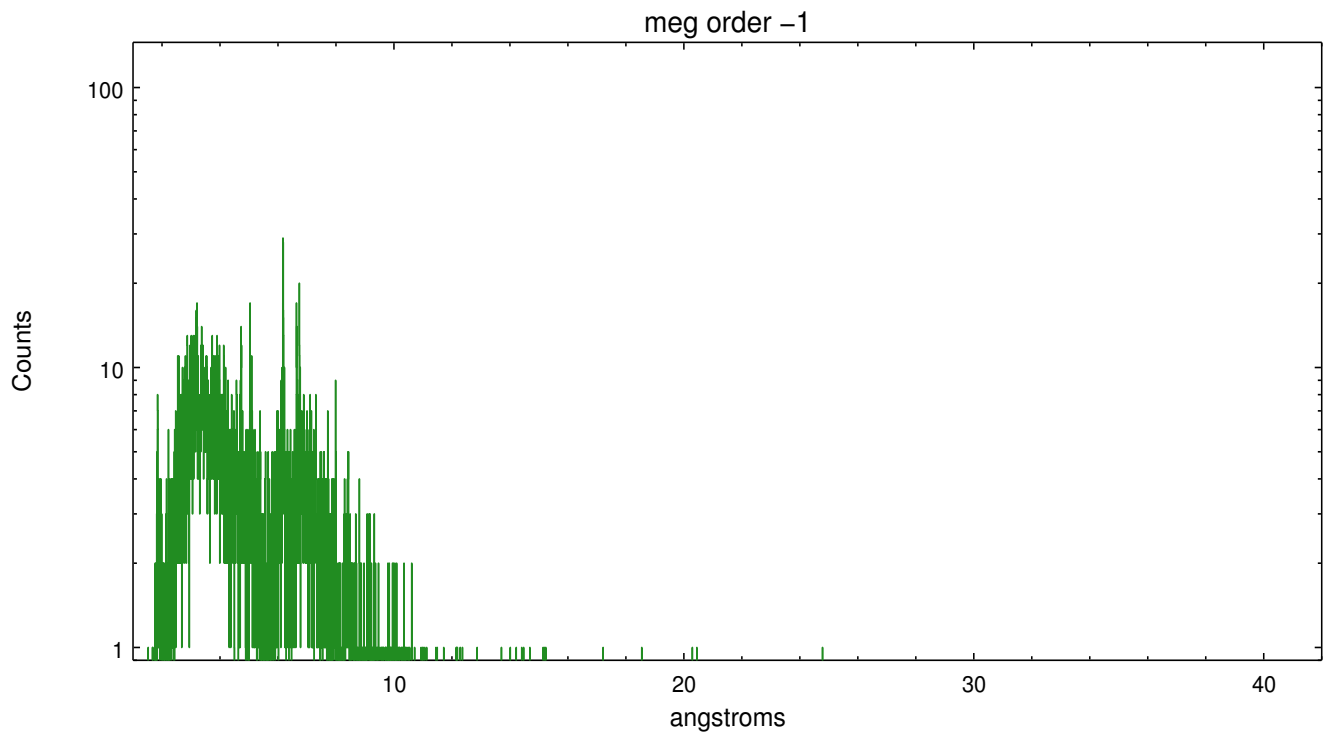
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1008	422	6383	15552	7600	428	761





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2014.12.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	32.0265

A.2 Comments

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.

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Zeroth order moderately piled up. The zeroth order sky position was determined using a software tool developed by CXC called findzero, which is available in CIAO as part of the tgdetect2 tool. The tool calculates the point of intersection of the readout streak on the ACIS CCD and the meg dispersed spectral arm, rather than using a centroid position of the source. The findzero results are more accurate than source centroid in this case.

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Target was monitored in the optical in slot 7 during the observation.