

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 7445 - L2 Version 2
Chandra X-Ray Center

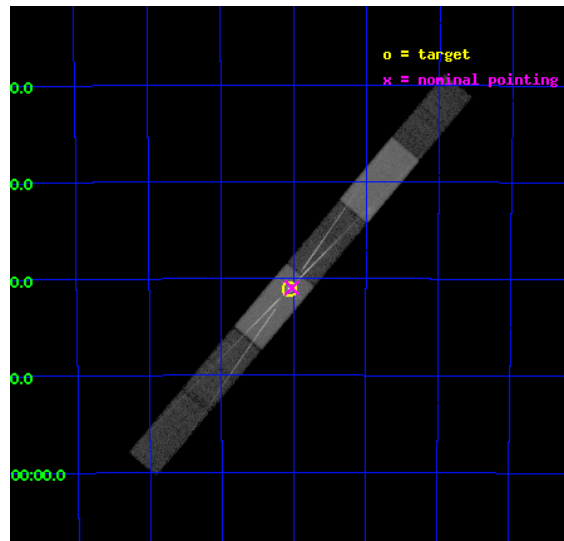
L2 Processing Date : May 23 2012

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1 Front

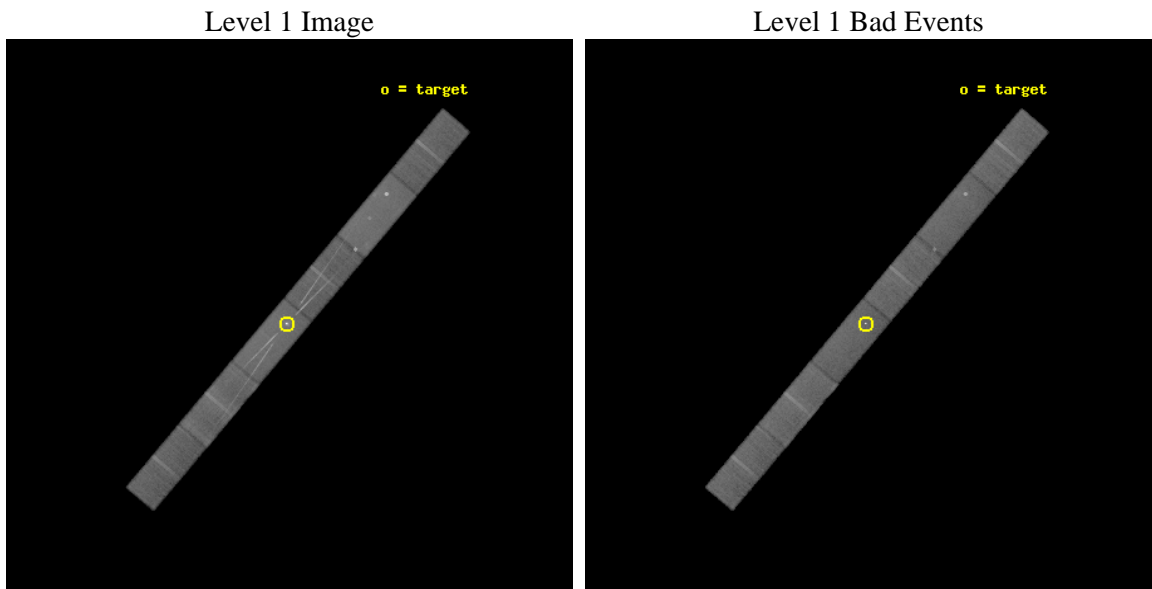
seq_num	200455	Sequence number
obs_id	7445	Observation id
title	Colliding Wind Geometry and Dynamics in Eta Carinae: A New Cycle	P
observer	Dr Michael Corcoran	Principal investigator
object	Eta Car	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	161.265	Observer's specified target RA [deg]
dec_targ	-59.684528	Observer's specified target Dec [deg]
ra_nom	161.25589344404	Nominal RA [deg]
dec_nom	-59.683006894656	Nominal Dec [deg]
roll_nom	130.14876561683	Nominal Roll [deg]
revision	2	Processing version of data
ontime	26088.0	Sum of GTIs [s]
livetime	25393.240928204	Livetime [s]
ontime4	26088.0	Sum of GTIs [s]
ontime5	26088.0	Sum of GTIs [s]
ontime6	26088.0	Sum of GTIs [s]
ontime7	26088.0	Sum of GTIs [s]
ontime8	26088.0	Sum of GTIs [s]
ontime9	26086.458979845	Sum of GTIs [s]
l2events	278390	Number of level 2 events



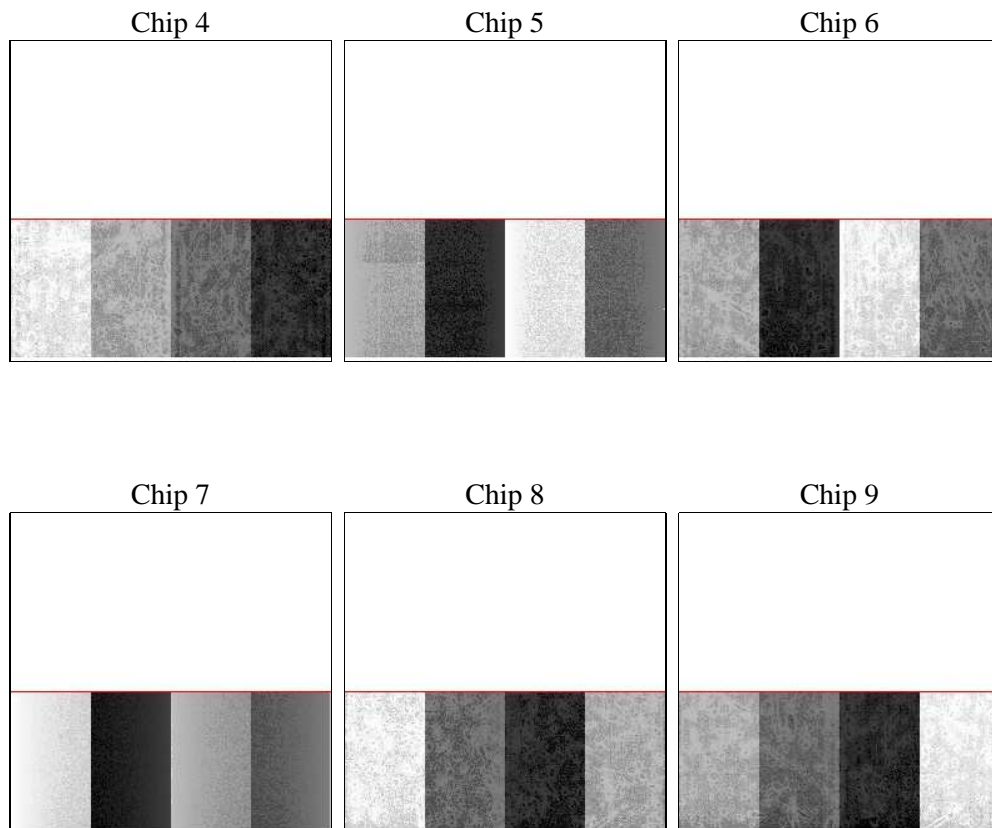
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	26000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	26088.0	Sum of GTIs [s]
caldsver	4.4.9	 	ontime4	26088.0	Sum of GTIs [s]
date	2012-05-22T22:28:21	Date and time of file creation	ontime5	26088.0	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	26088.0	Sum of GTIs [s]
			ontime7	26088.0	Sum of GTIs [s]
			ontime8	26088.0	Sum of GTIs [s]
			ontime9	26086.458979845	Sum of GTIs [s]
			l1events	958150	Number of level 1 events

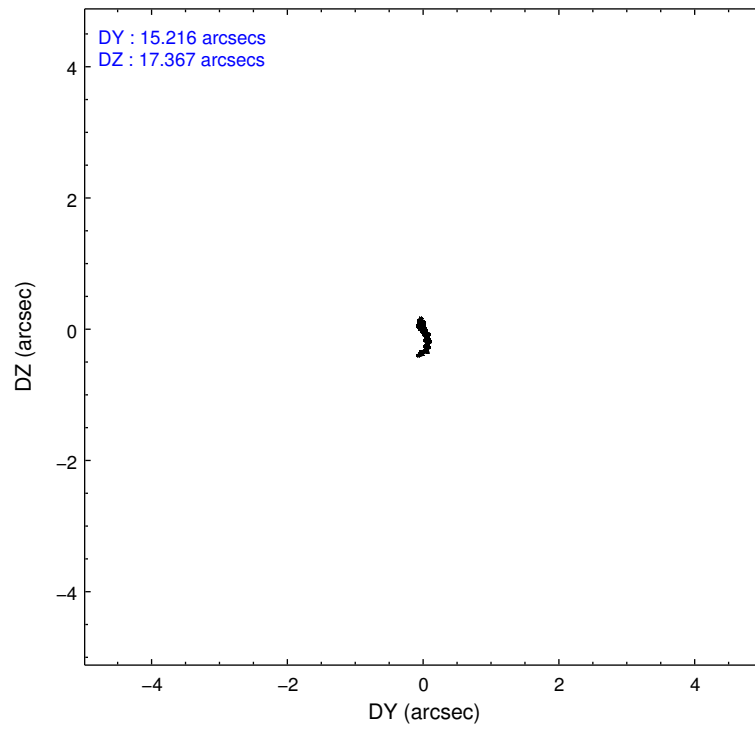
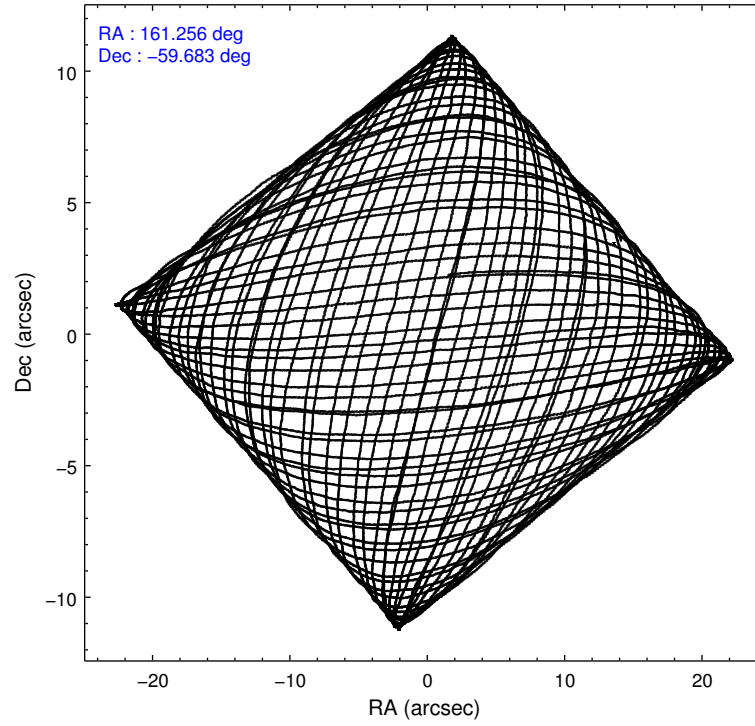
2.1.4 Events

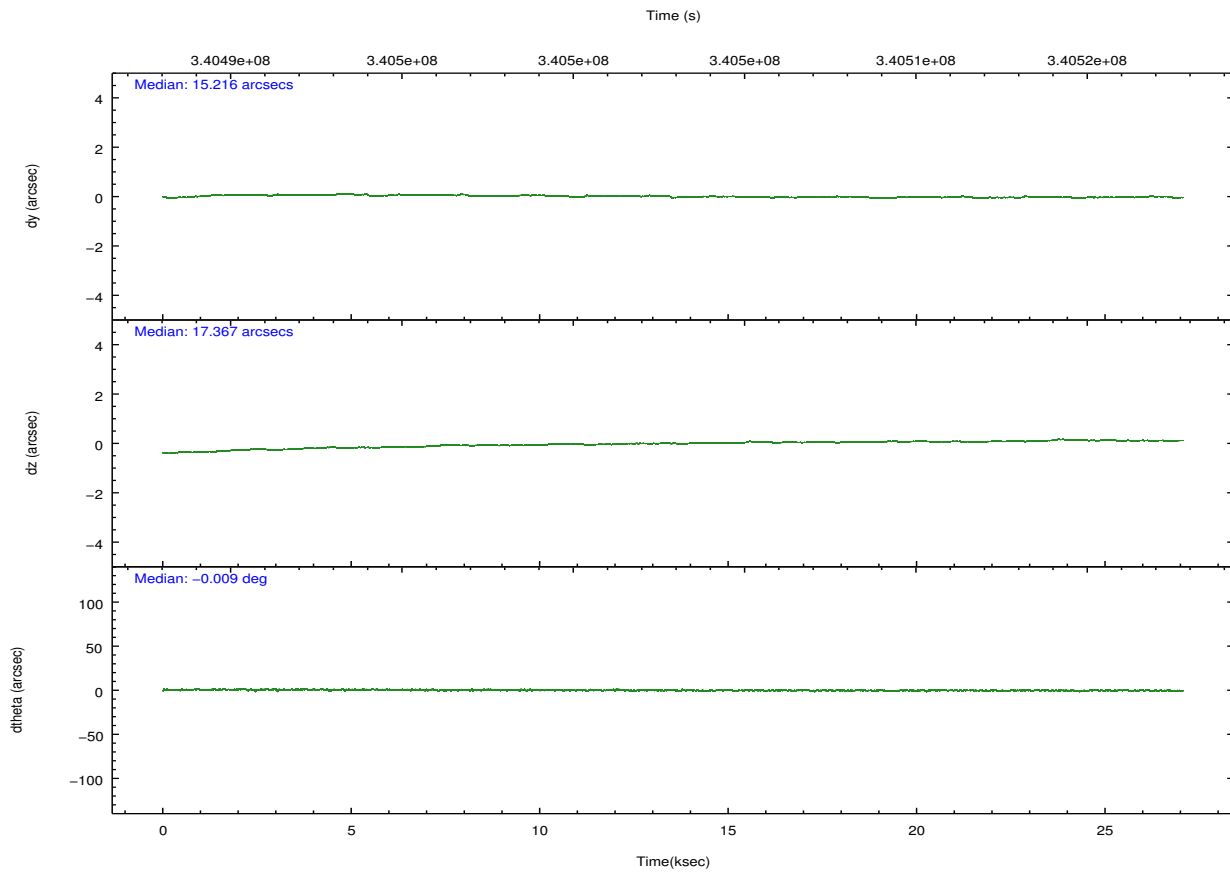
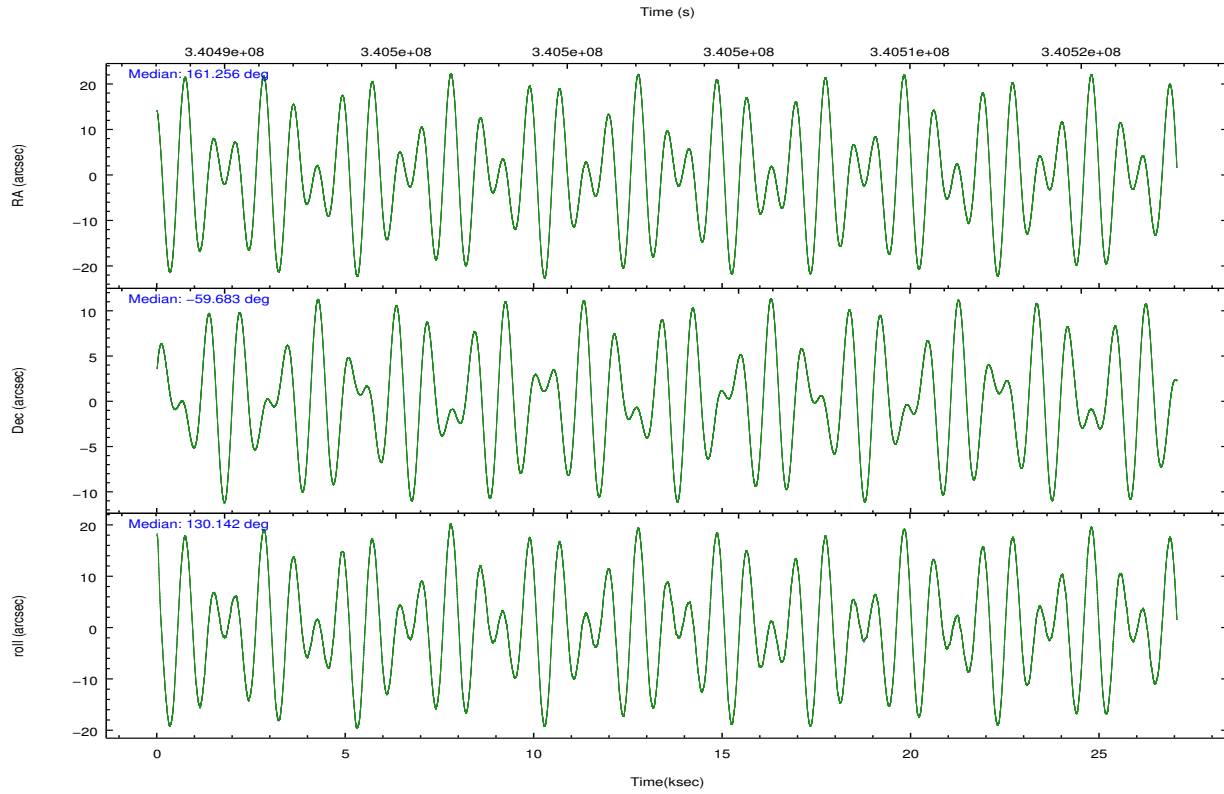
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	130382	199277	143235	209195	160299	115762	grade 0 events	7490	14753	22847	13829	15679	7242
rejected events	113042	99866	104576	98135	117799	98722		5%	7%	15%	6%	9%	6%
rejected %	86%	50%	73%	46%	73%	85%	grade 1 events	70	2028	111	593	98	43
								0%	1%	0%	0%	0%	0%
							grade 2 events	3597	30016	6175	23787	8603	3259
								2%	15%	4%	11%	5%	2%
							grade 3 events	1857	5488	2718	10744	4318	1905
								1%	2%	1%	5%	2%	1%
							grade 4 events	1693	5510	2664	10488	4114	1713
								1%	2%	1%	5%	2%	1%
							grade 5 events	5042	16019	5404	16758	7116	5496
								3%	8%	3%	8%	4%	4%
							grade 6 events	2706	43648	4260	52225	9789	2922
								2%	21%	2%	24%	6%	2%
							grade 7 events	107927	81815	99056	80771	110582	93182
								82%	41%	69%	38%	68%	80%

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	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	161.307077	161.2558934440417	CCD I2 on	N	N
[deg] Pointing Dec	-59.691930	-59.68300689465591	CCD I3 on	N	N
[deg] Pointing Roll	130.036329	130.1487656168327	CCD S0 on	O1	Y
[s] Window start time (MET)	339206465.184000	339206465.184000	CCD S1 on	Y	Y
[s] Window stop time (MET)	344476865.184000	344476865.184000	CCD S2 on	Y	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S3 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S4 on	Y	Y
[mm] SIM translation stage pos	-183.332523	-183.3237572673427	CCD S5 on	O2	Y
[mm] SIM translation stage offset	-6.8	-6.808765315665084	Number of optional ACIS chips dropped	0	0
[s] Observation start time (MET)	340490443.184000	340489121.85604	On-chip summing requested	N	N
Observation start date	2008-10-15T20:39:38	2008-10-15T20:18:41	Subarray requested	CUSTOM	CUSTOM
[s] Observation end time (MET)	340516443.184000	340517410.83243	Subarray start row	15	15
Observation end date	2008-10-16T03:52:58	2008-10-16T04:10:10	Subarray row count	440	440
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.5

2.3 Aspect





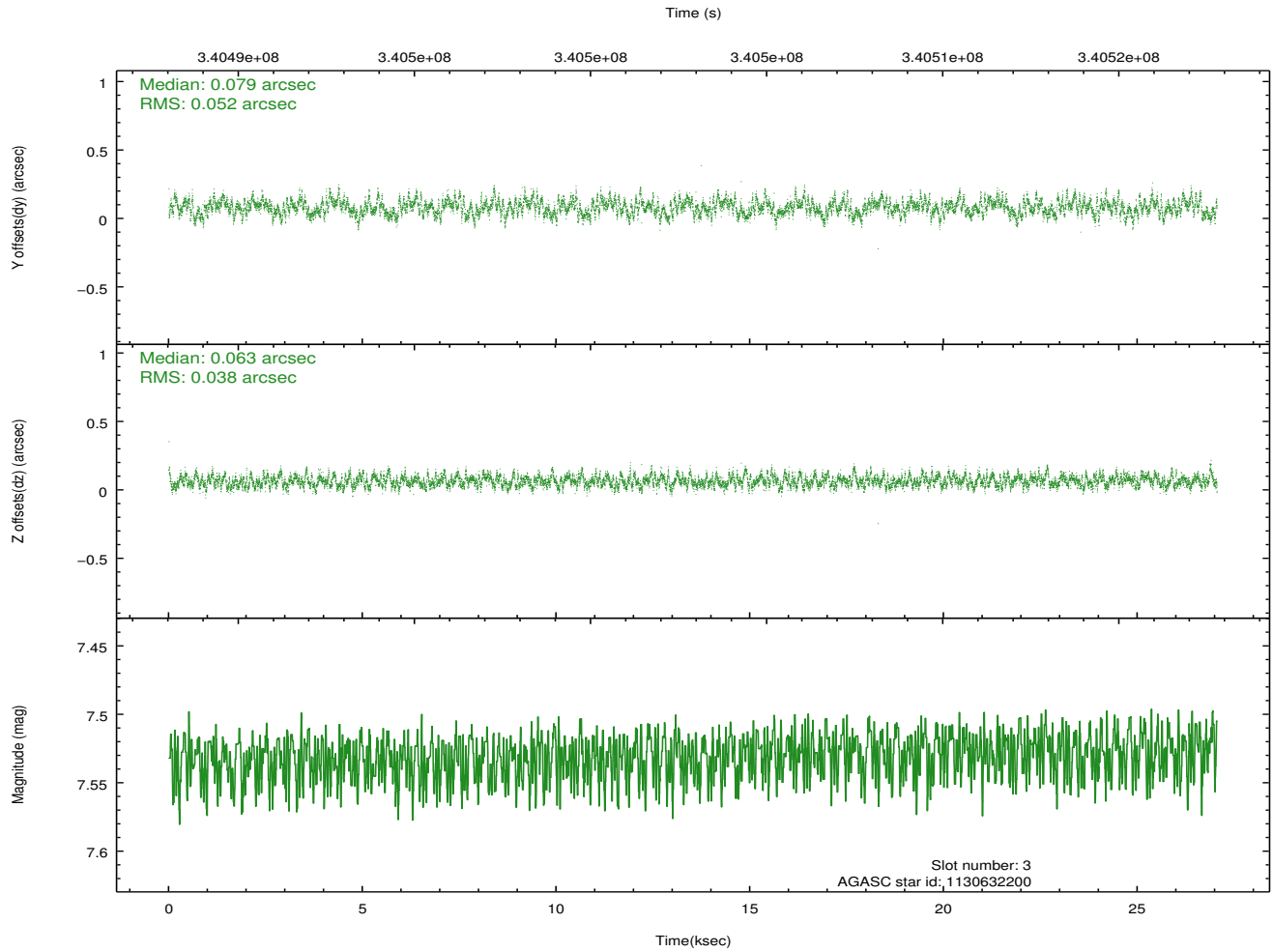
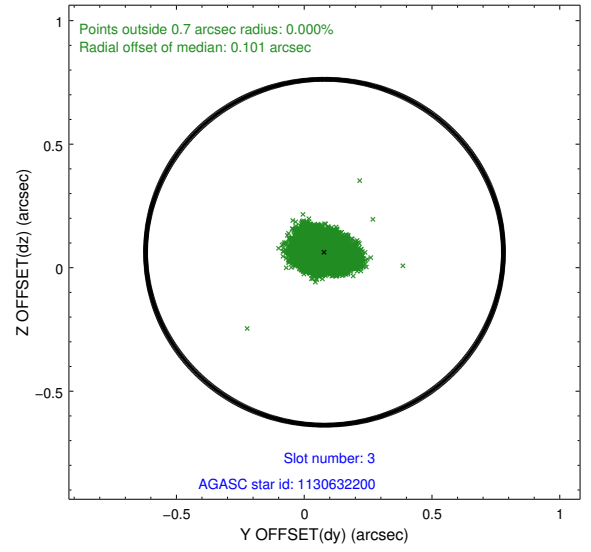
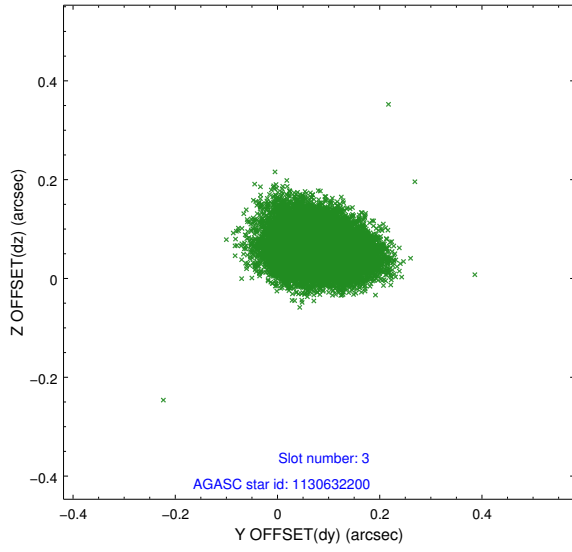
Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.94	6599	0.113	0.075	0.006	0.011	0.000000	0.000000	928.54	-1874.59
1	FID	ACIS-S-2	6.86	6598	-0.141	-0.169	0.008	0.014	0.000000	0.000000	-767.56	-1879.60
2	FID	ACIS-S-5	6.99	6599	0.003	0.098	0.007	0.014	0.000000	0.000000	-1820.87	22.71
3	GUIDE	1130632200	7.53	13197	0.079	0.063	0.069	0.111	161.433843	-59.407820	633.88	-835.33
4	GUIDE	1130642000	7.97	13195	-0.020	0.132	0.065	0.100	162.836255	-59.743891	-1951.45	-1982.74
5	GUIDE	1130643264	6.65	13199	-0.099	-0.049	0.081	0.139	160.322990	-59.676912	1181.56	1343.26
6	GUIDE	1174012960	7.14	13194	0.008	-0.113	0.050	0.078	160.855674	-60.332270	-1249.68	2100.50
7	GUIDE	1174021440	8.42	13192	0.024	-0.039	0.085	0.133	160.869011	-60.314711	-1215.93	2042.05

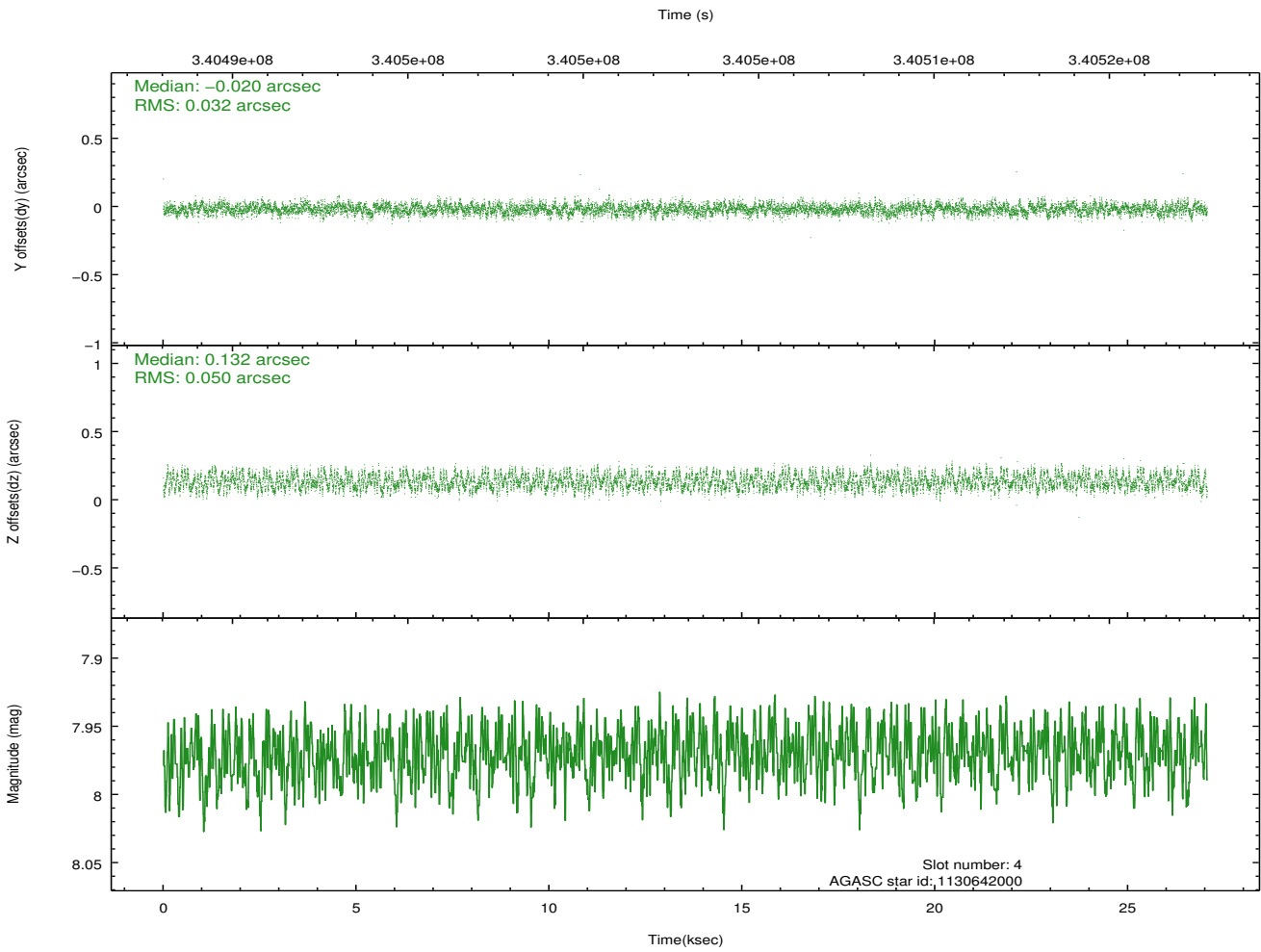
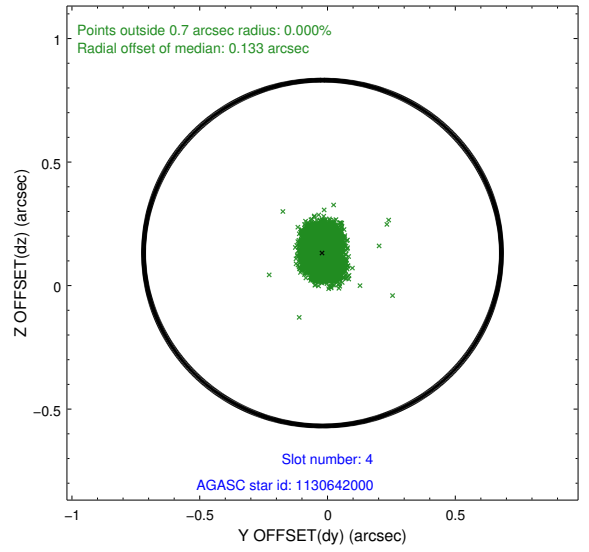
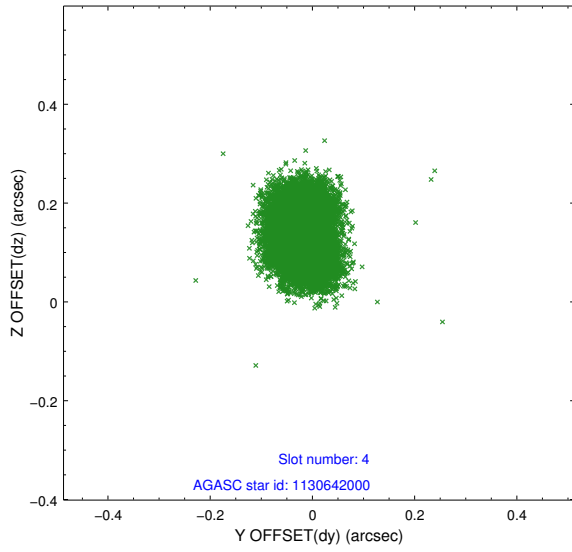
∞

2.4 Star Slots

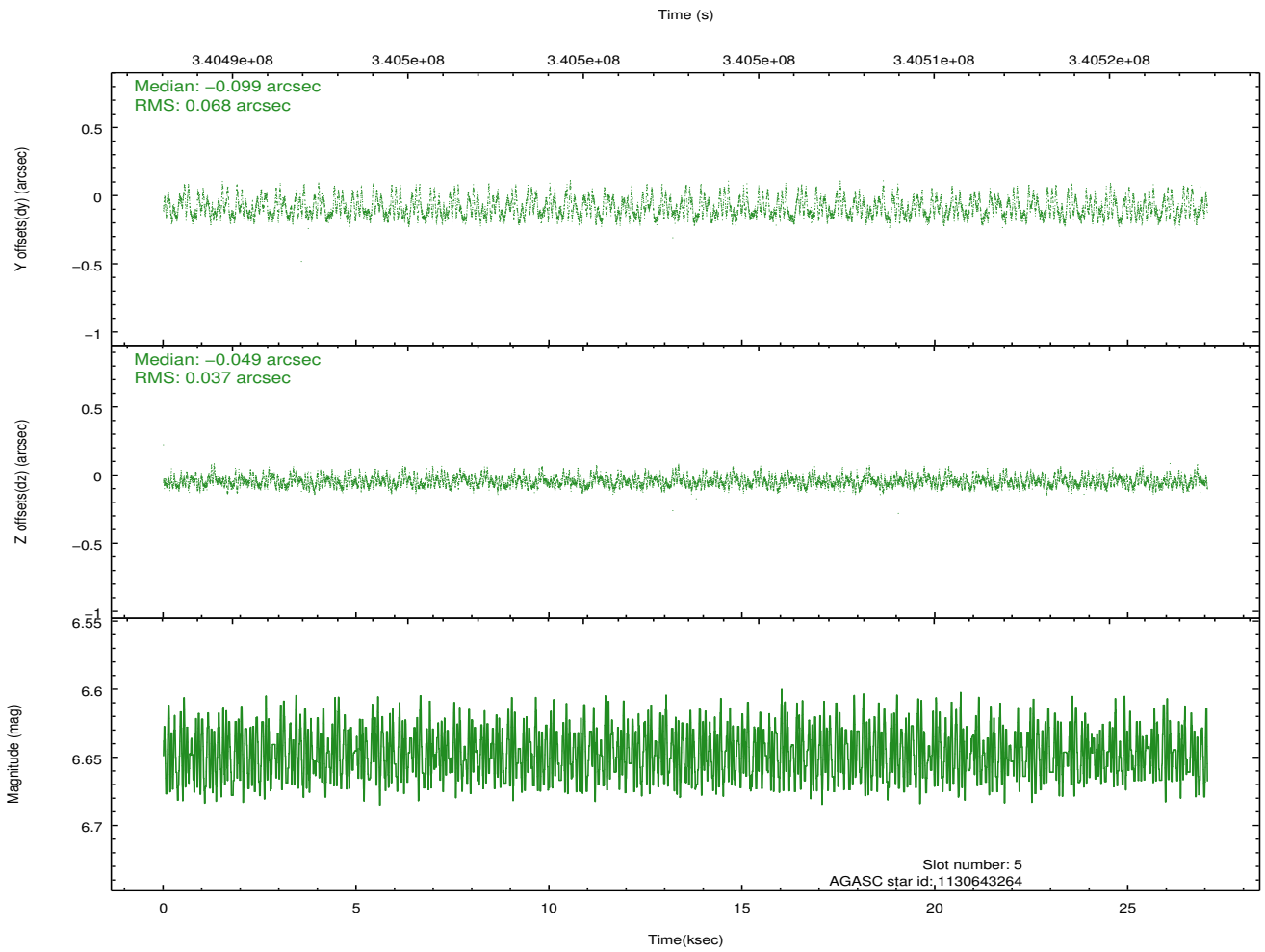
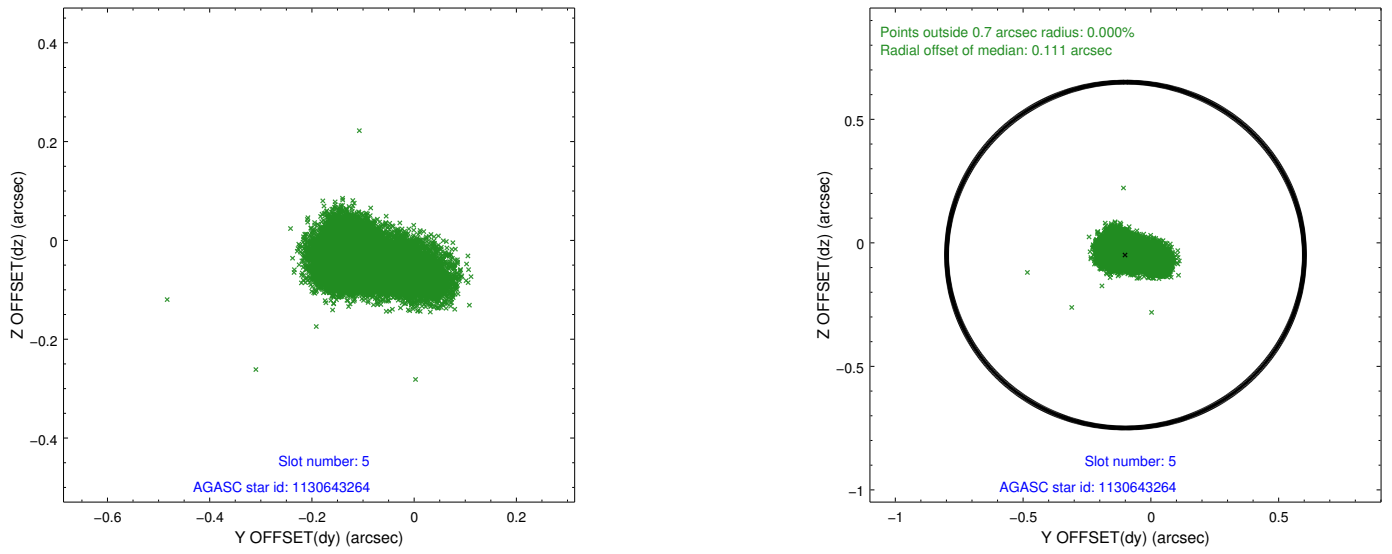
2.4.1 Slot 3



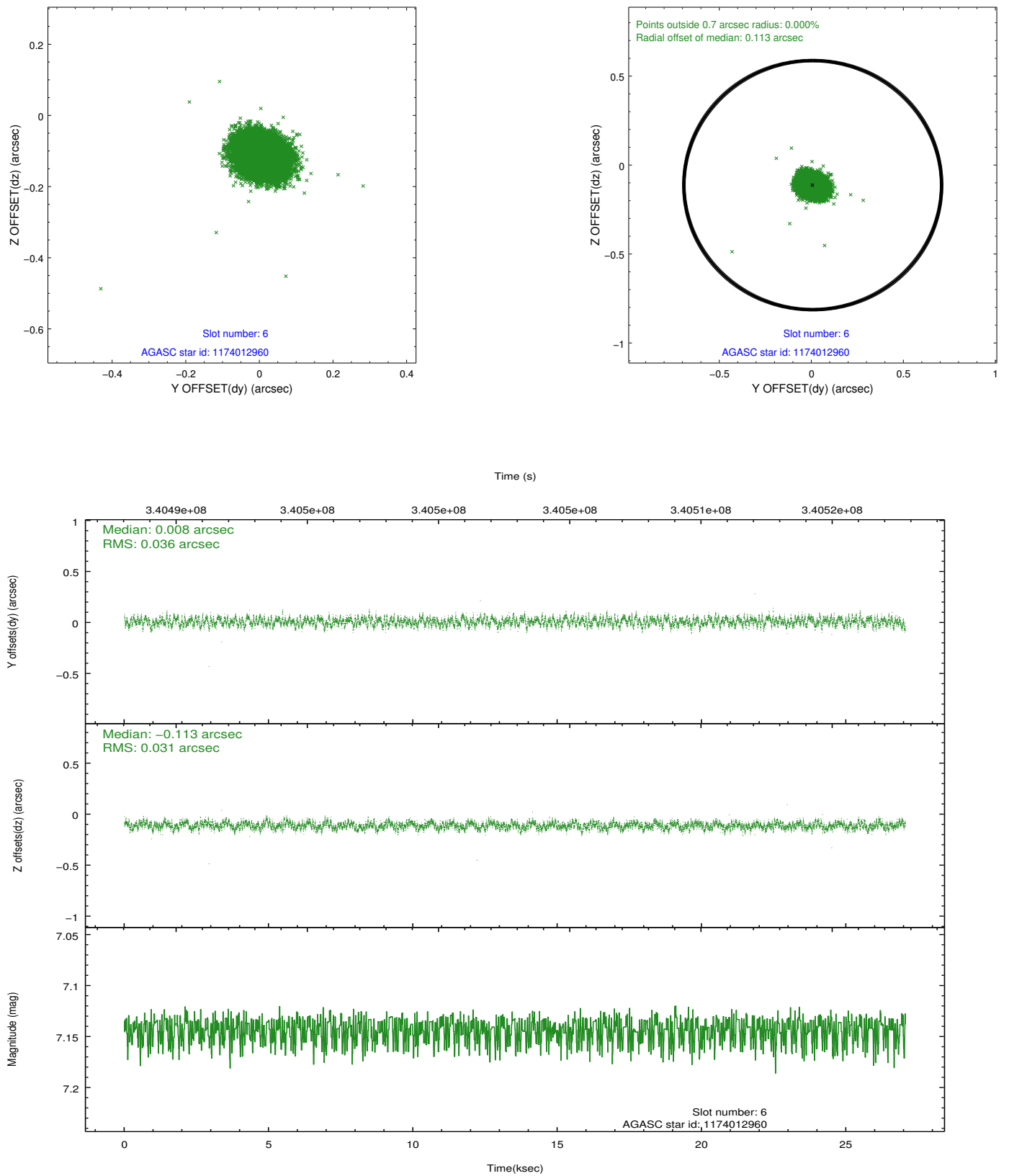
2.4.2 Slot 4



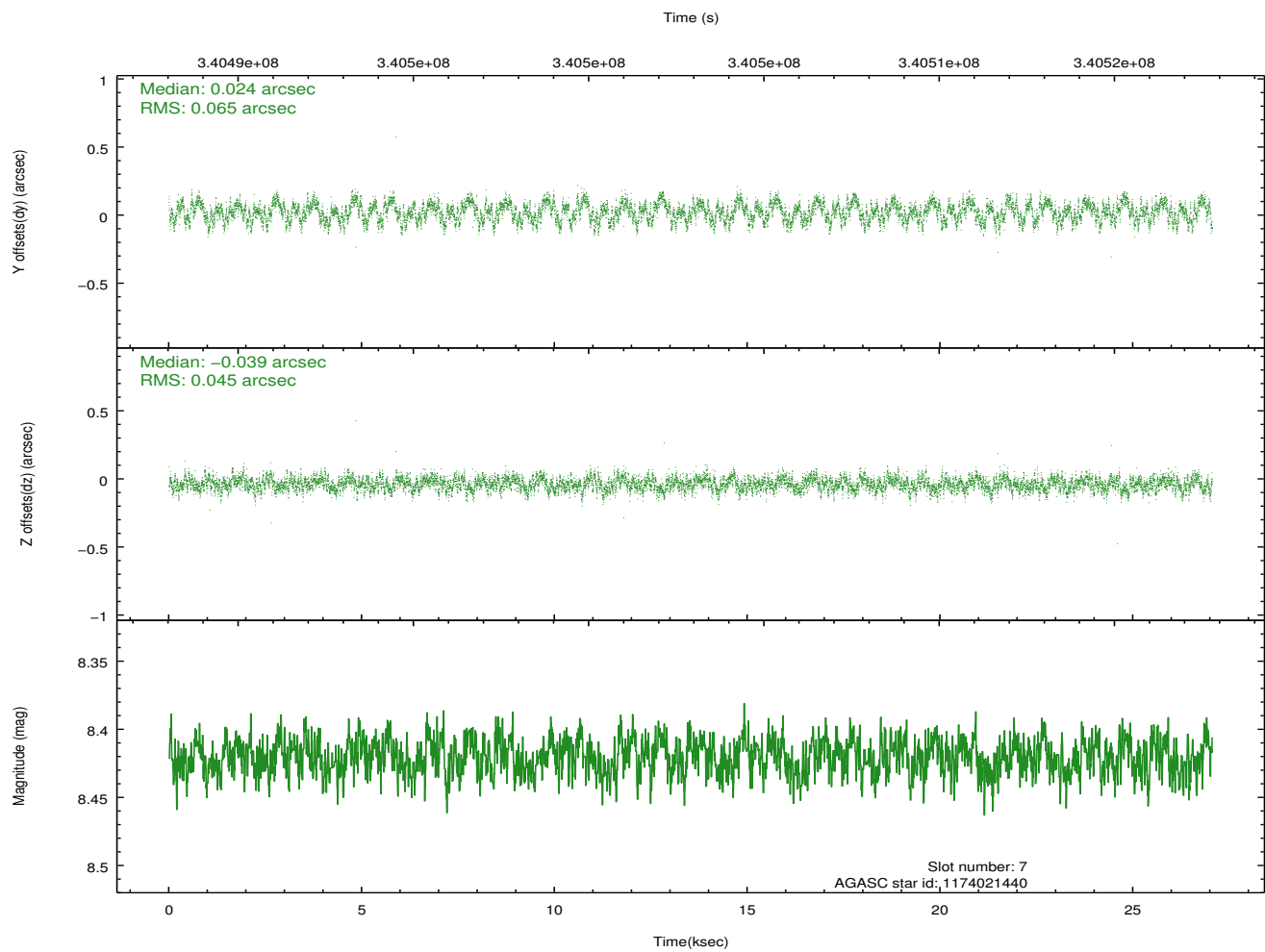
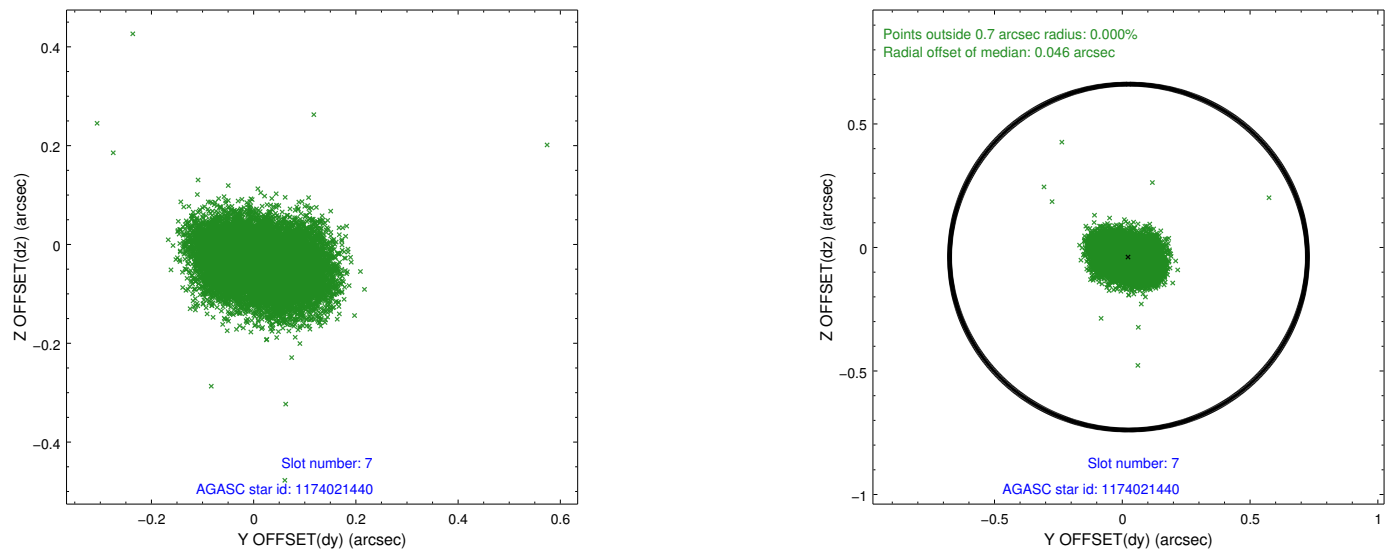
2.4.3 Slot 5



2.4.4 Slot 6

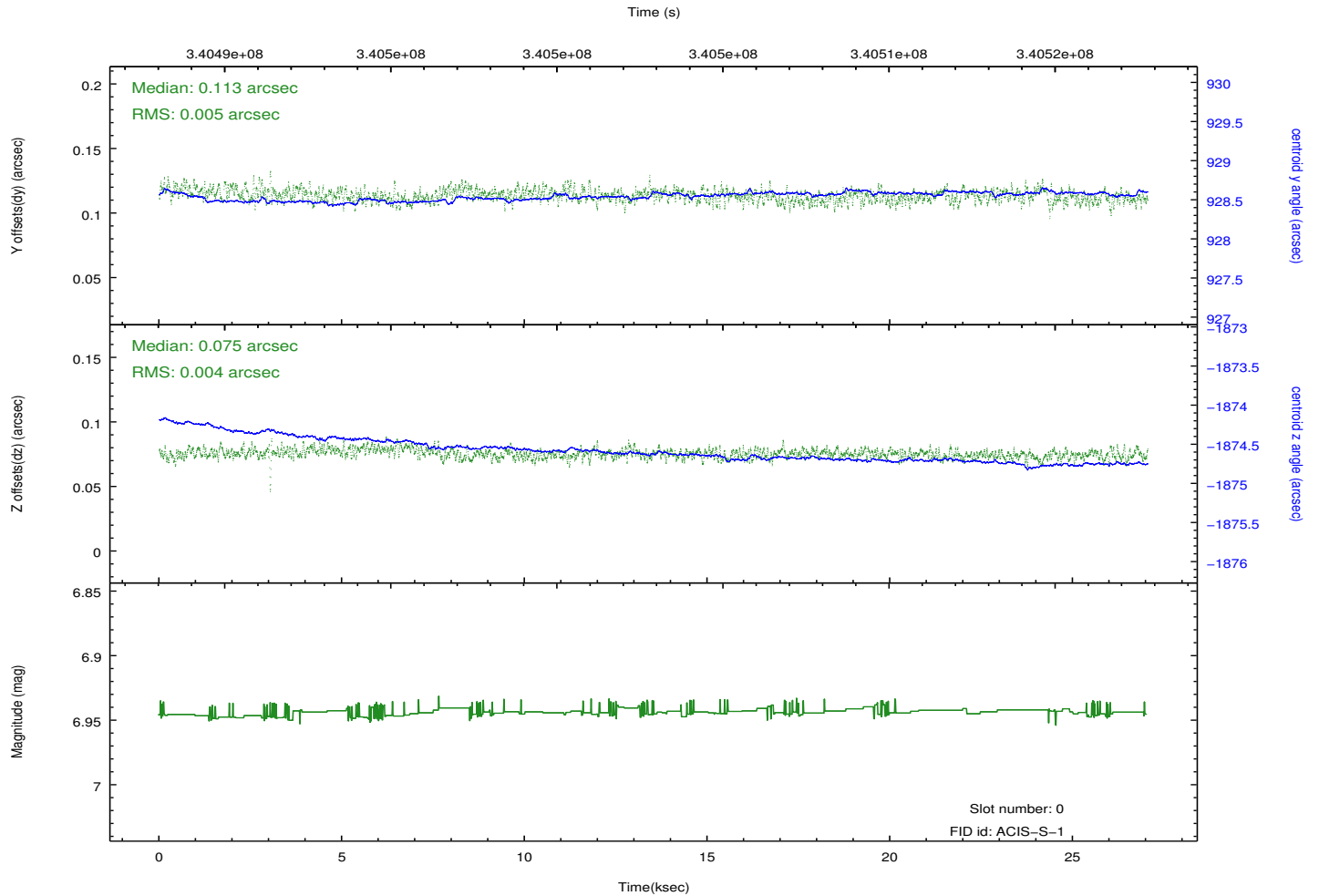
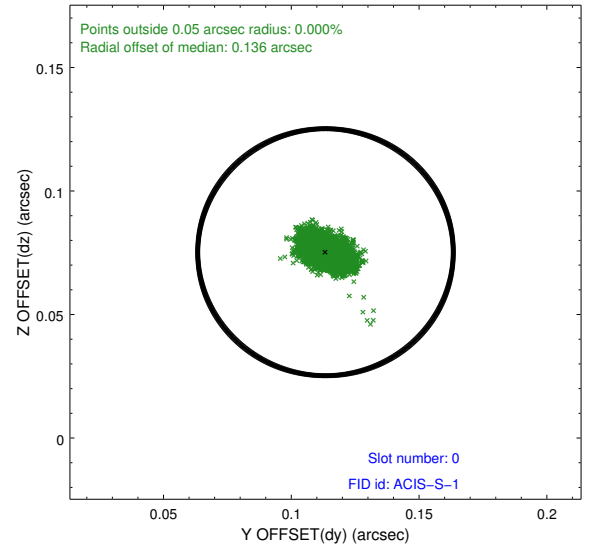
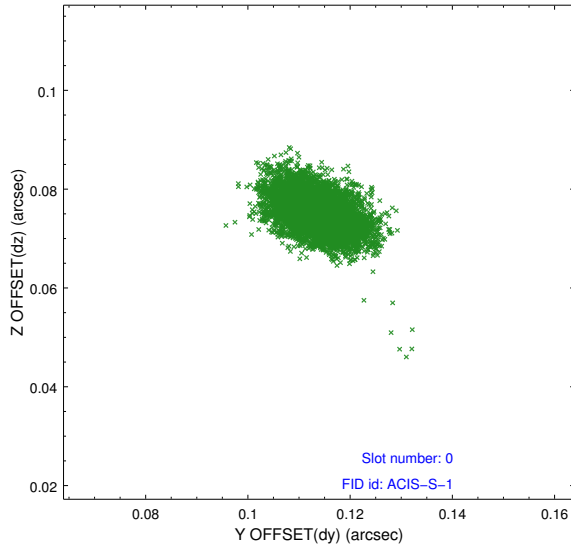


2.4.5 Slot 7

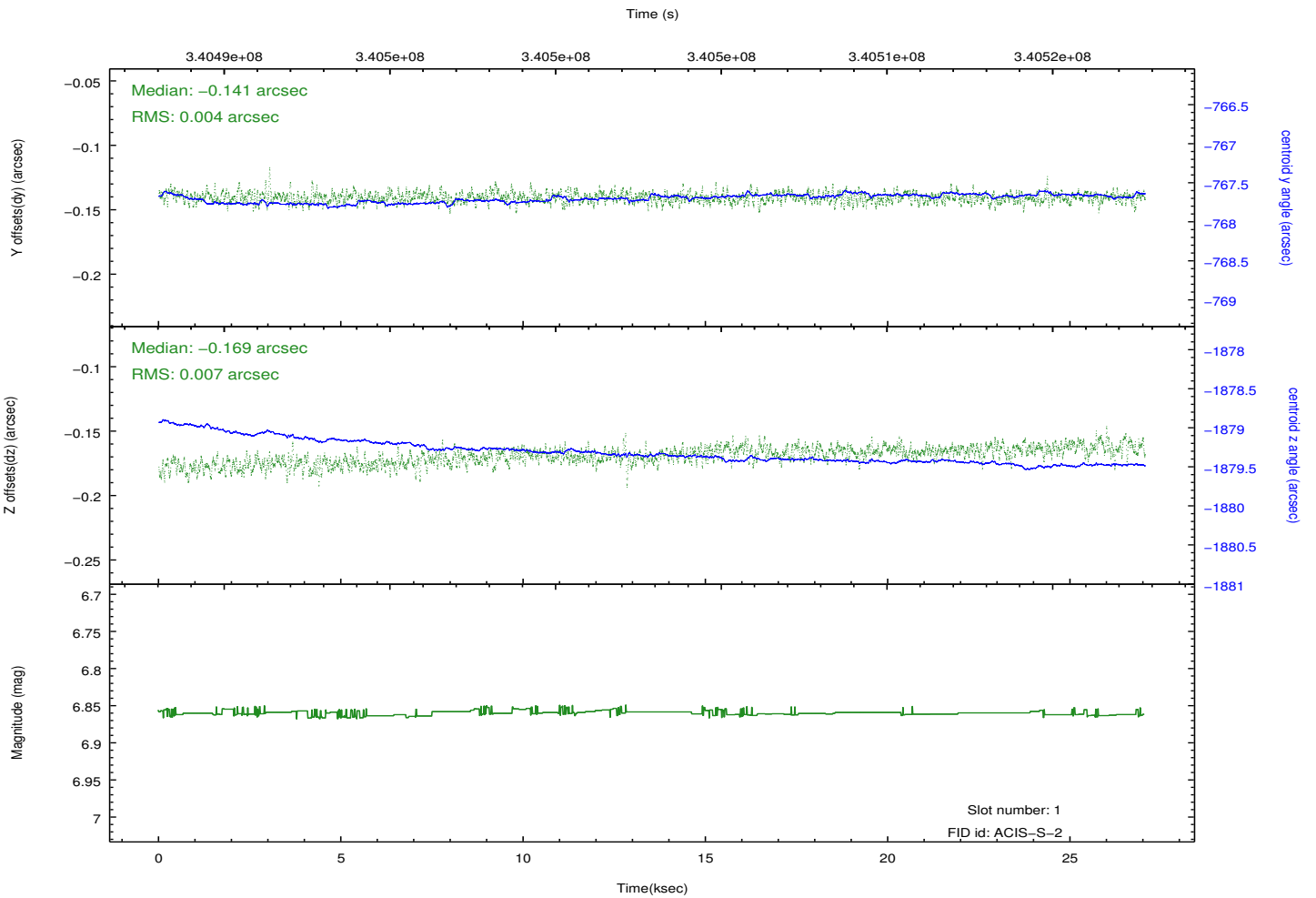
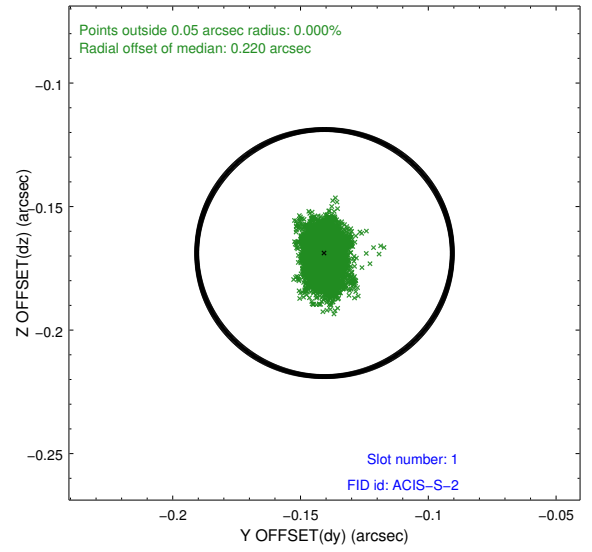
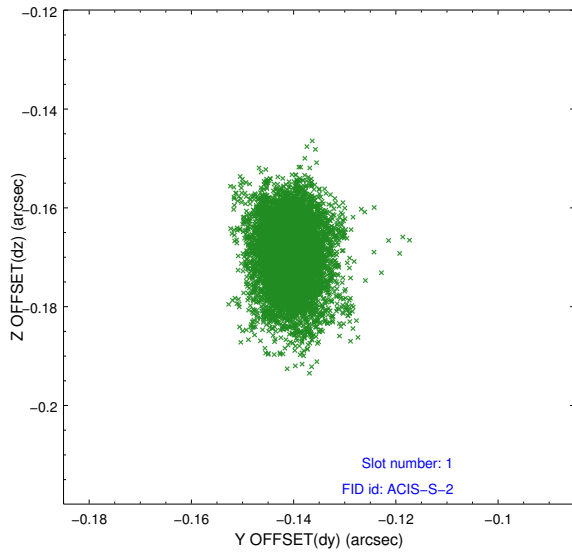


2.5 FID Slots

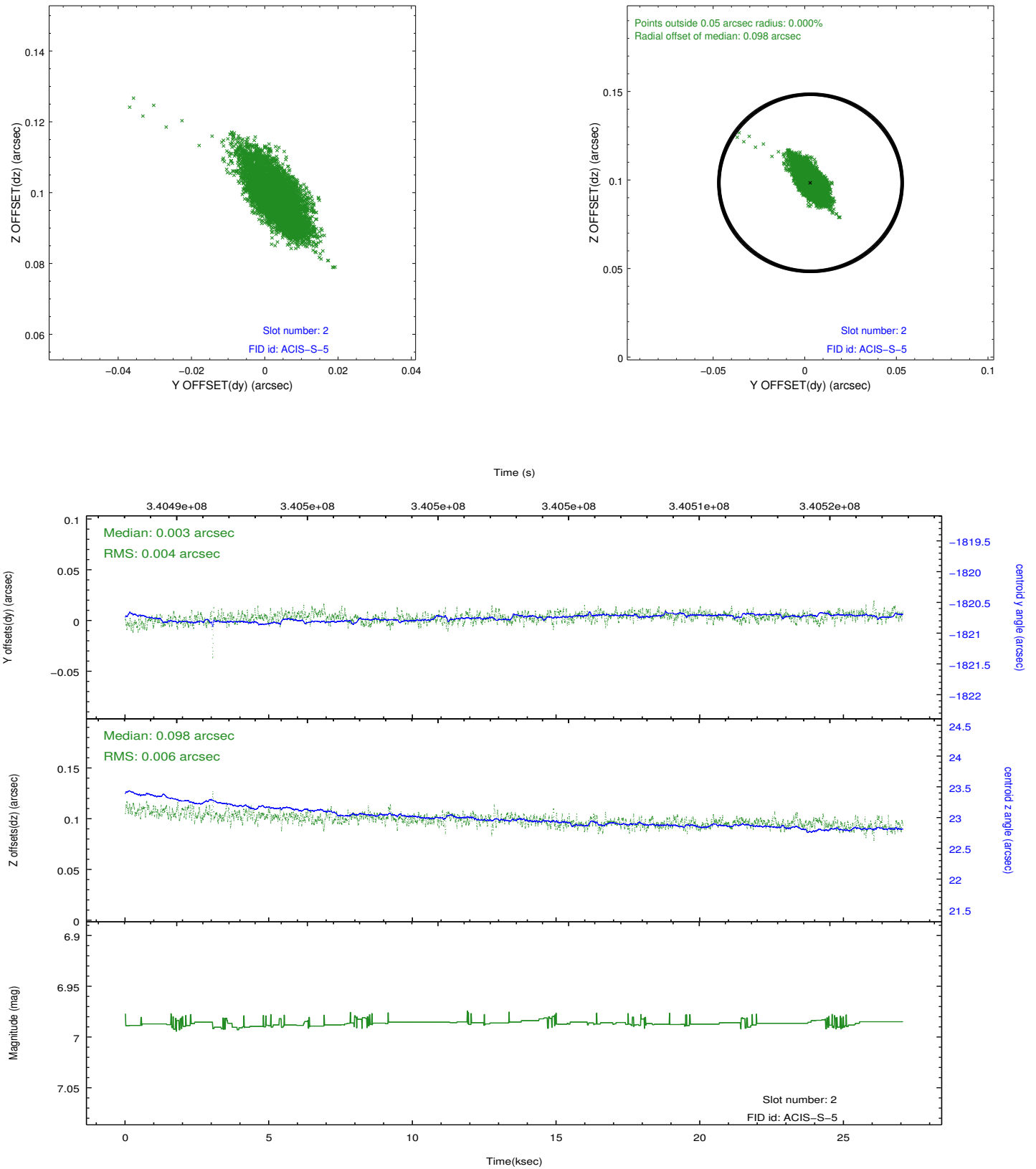
2.5.1 Slot 0



2.5.2 Slot 1

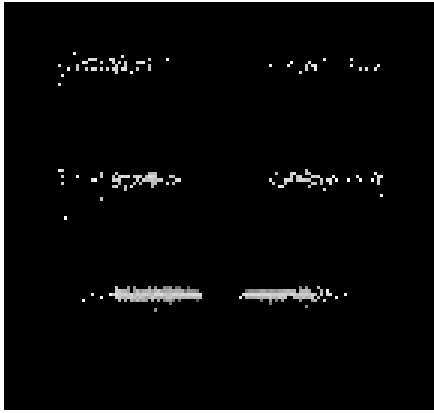


2.5.3 Slot 2

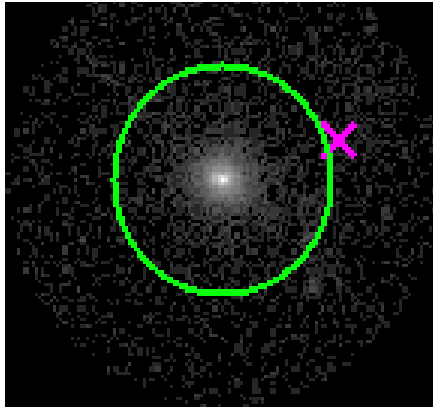


3 Gratings

3.1 HEG Arm



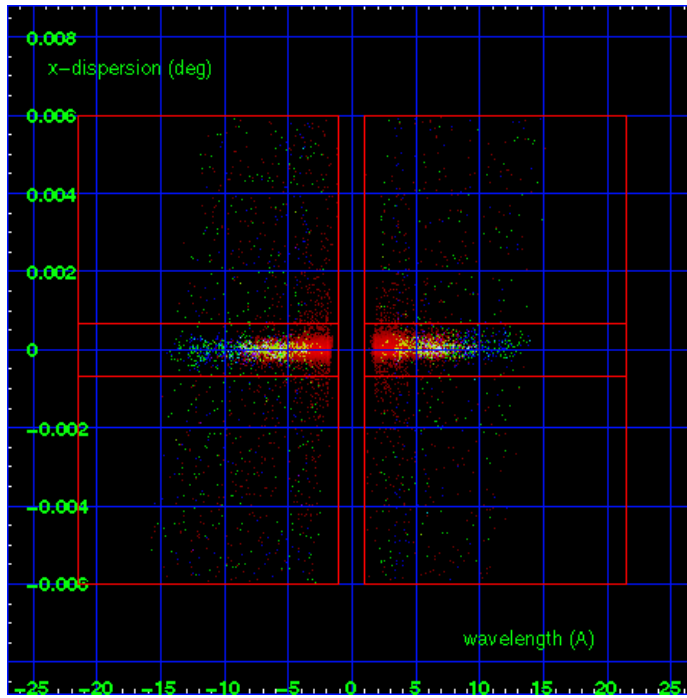
HEG Order Sort 123



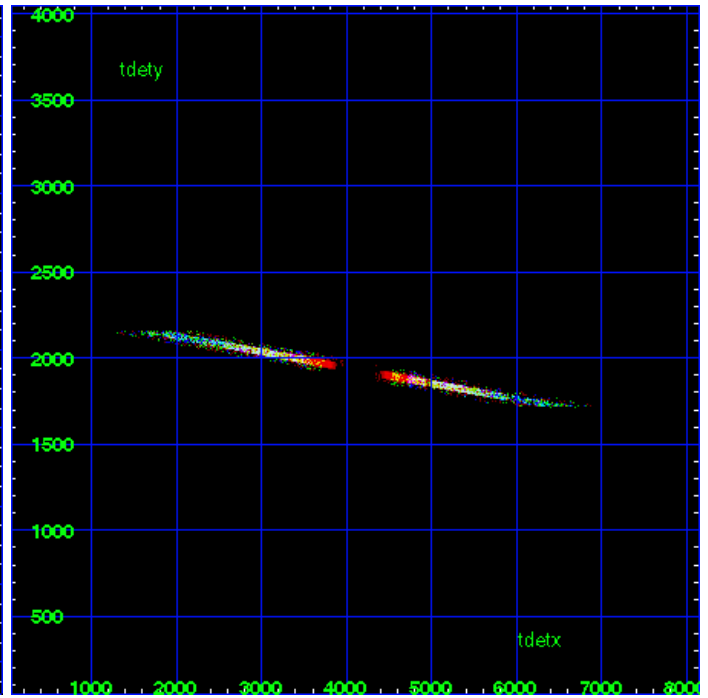
HEG Zero Order



HEG Order Sort ALL

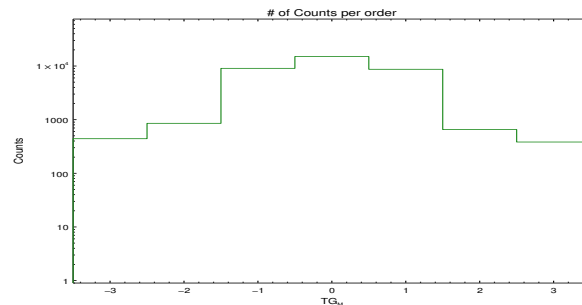


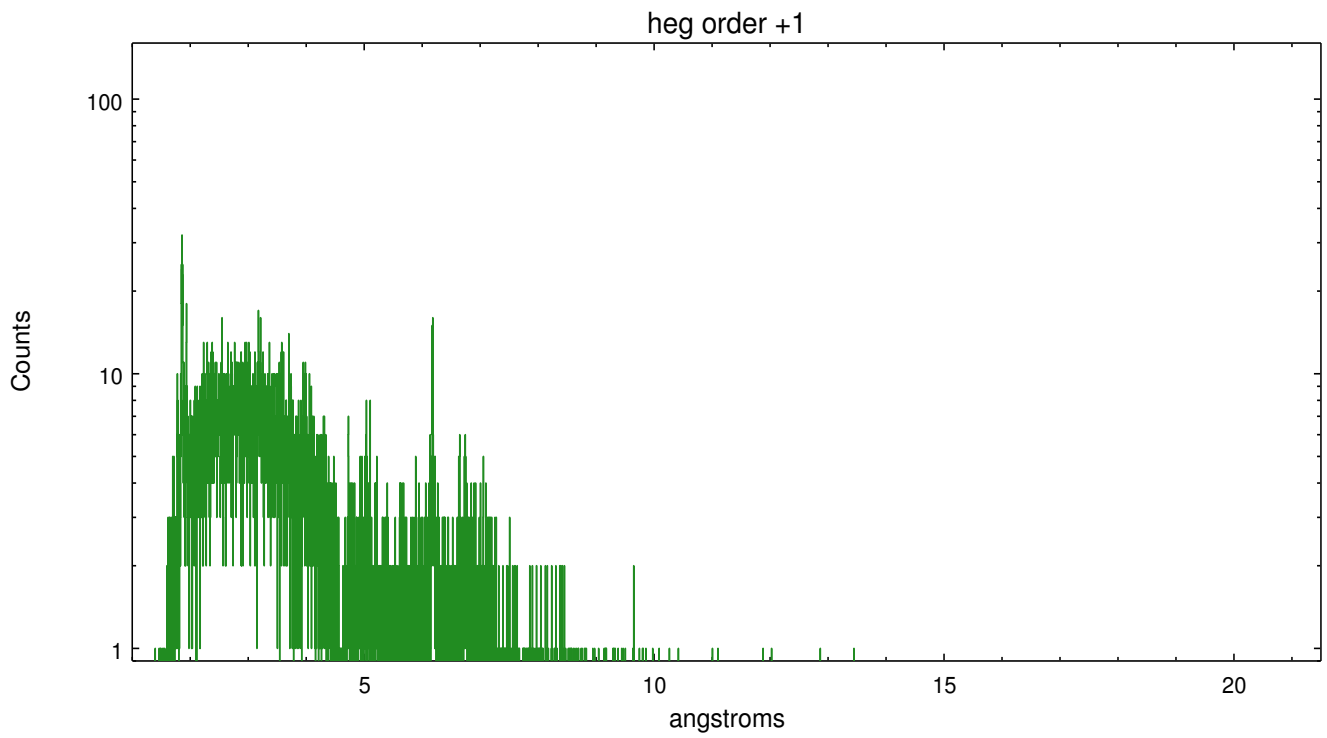
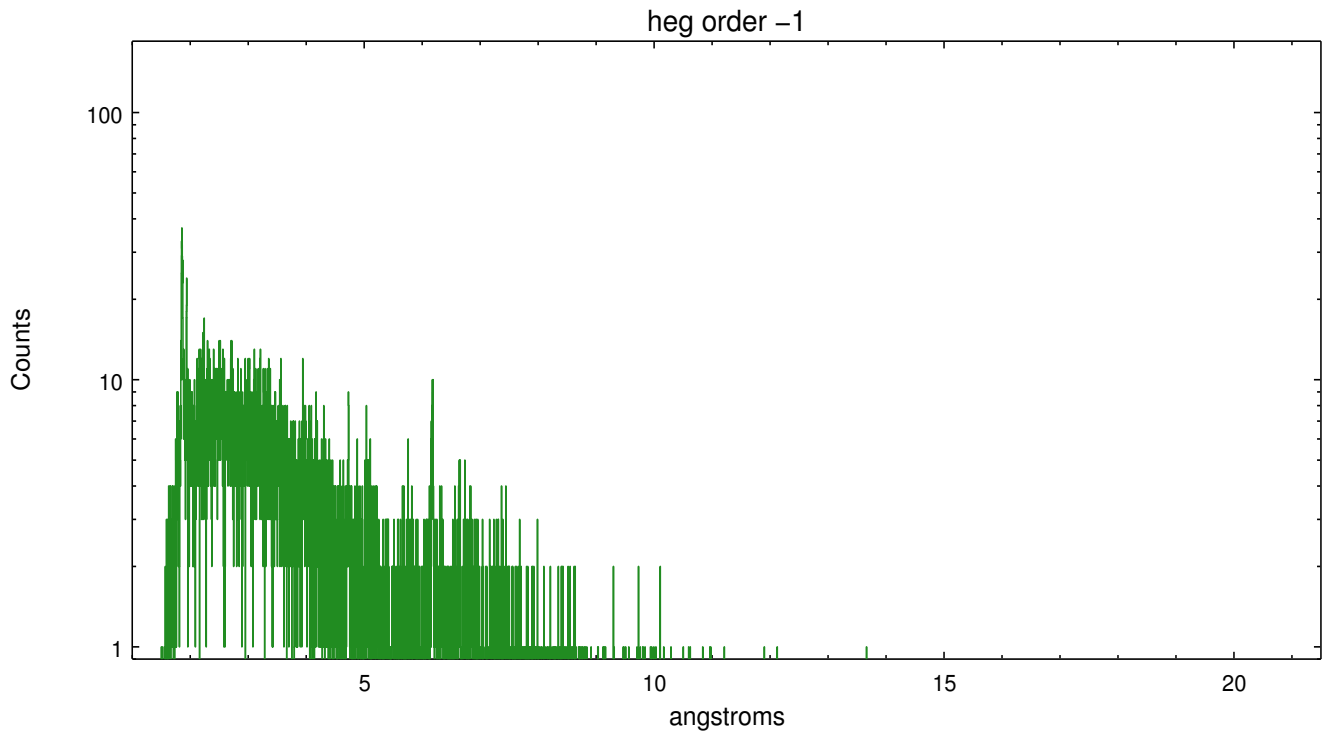
Spot Image HEG



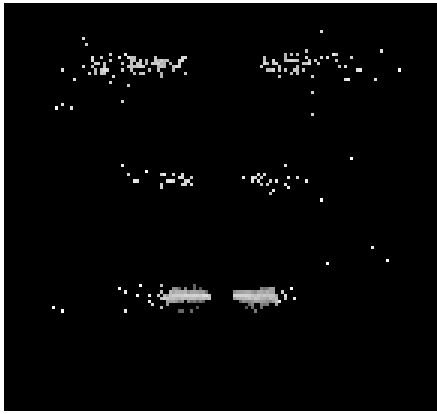
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	442	854	9045	15024	8686	654	383

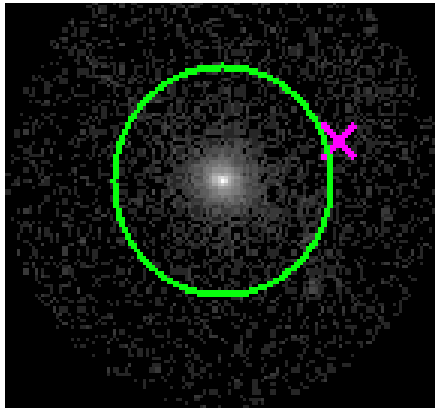




3.2 MEG Arm



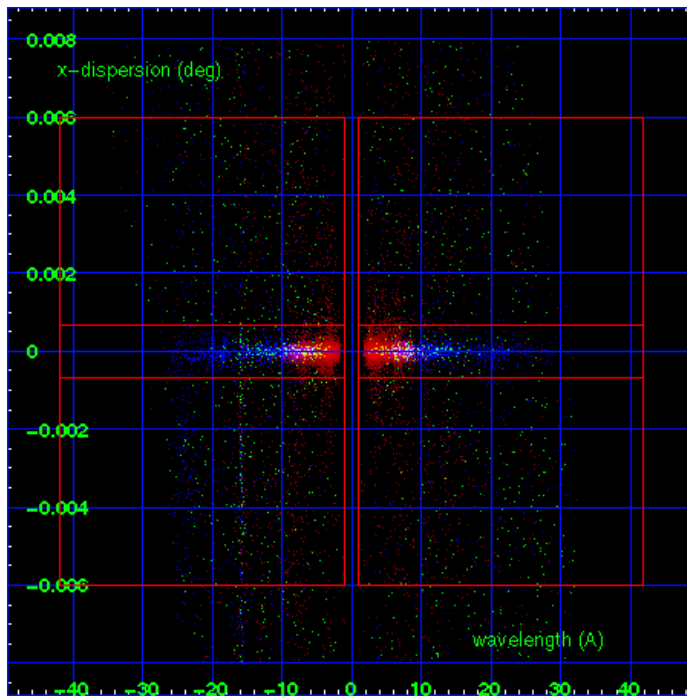
MEG Order Sort 123



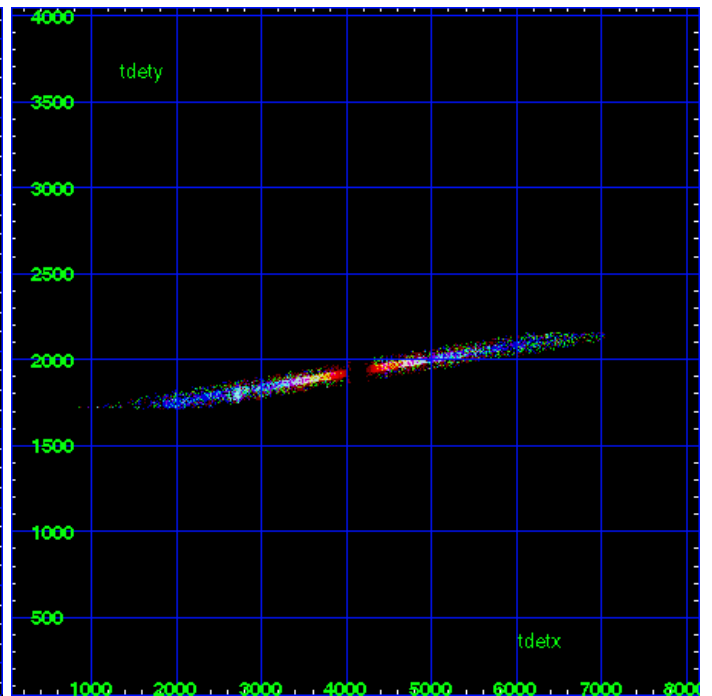
MEG Zero Order



MEG Order Sort ALL

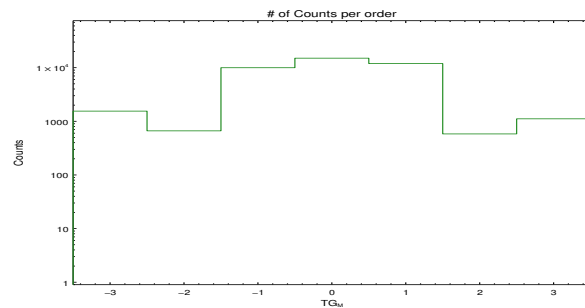


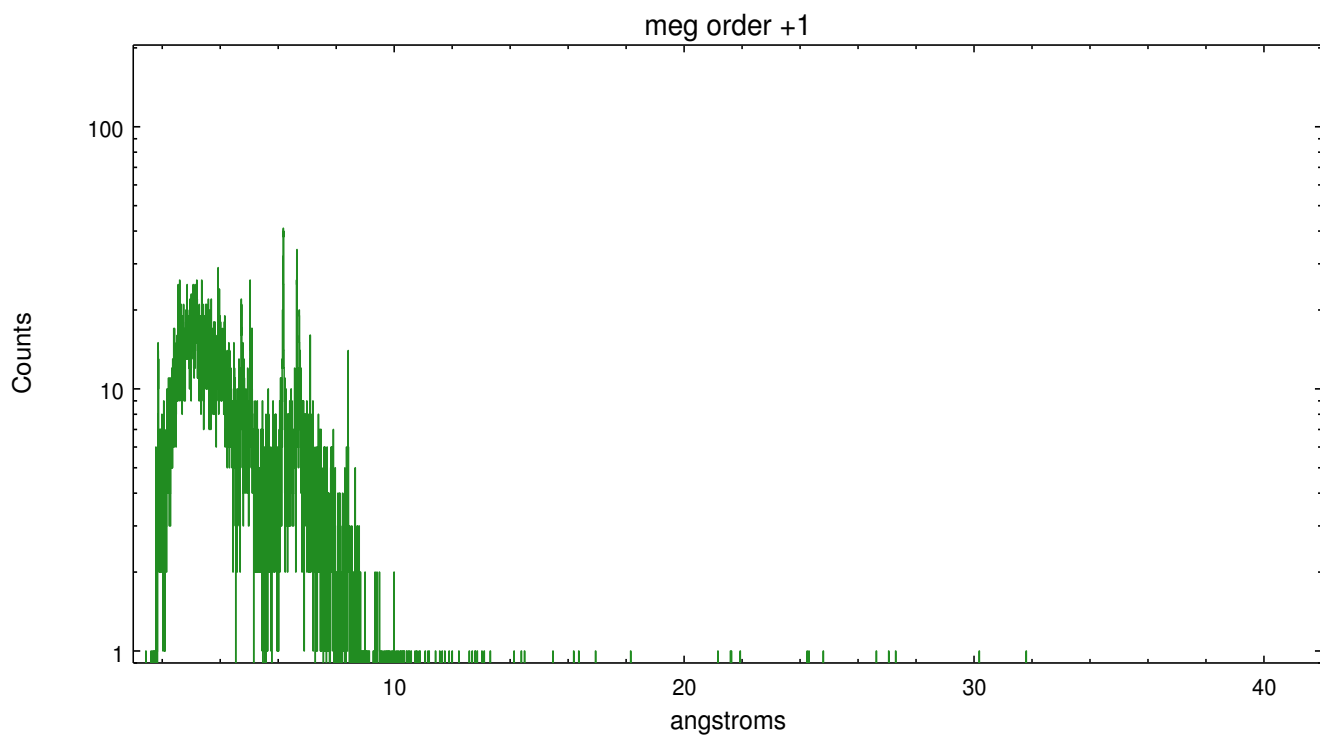
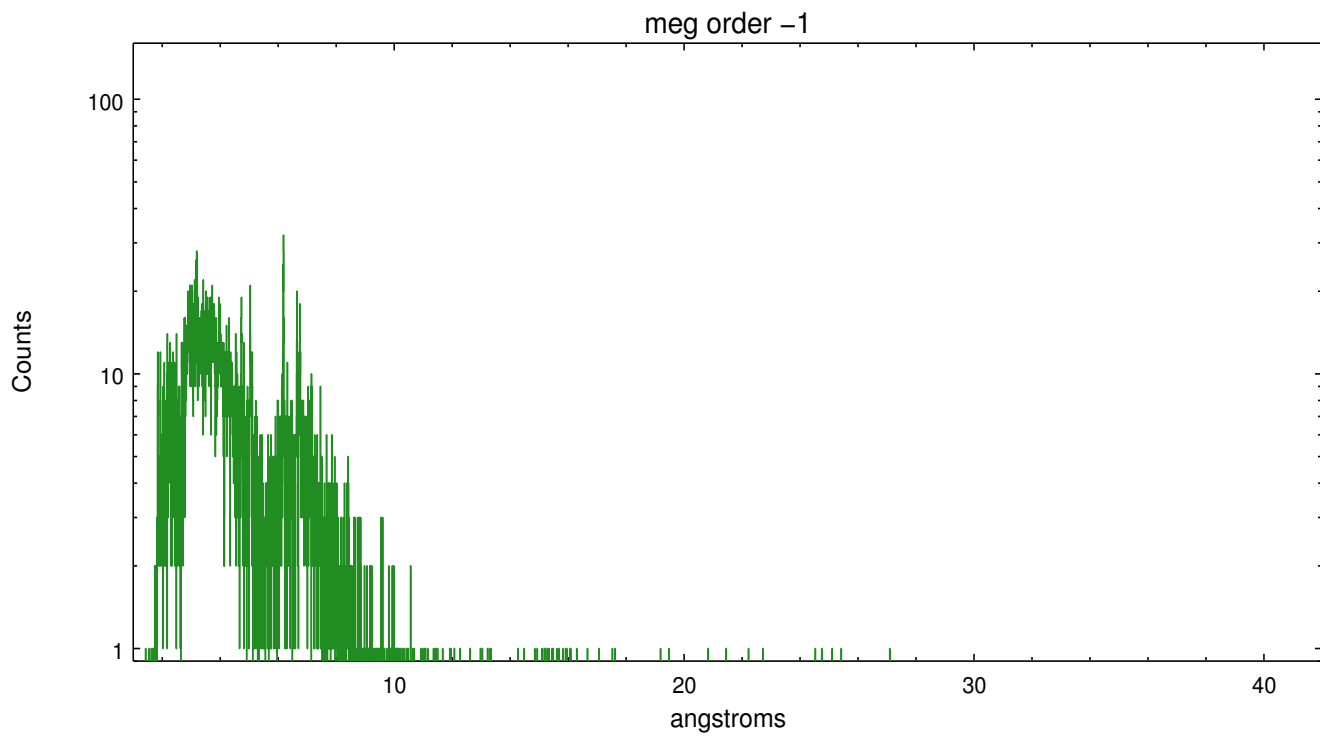
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1548	664	9980	15024	11915	582	1113





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.05.23
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	26.088

A.2 Comments

Zeroth order moderately 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 ($x=4063.66$, $y=4085.71$) 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.