

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 12126 - L2 Version 2
Chandra X-Ray Center

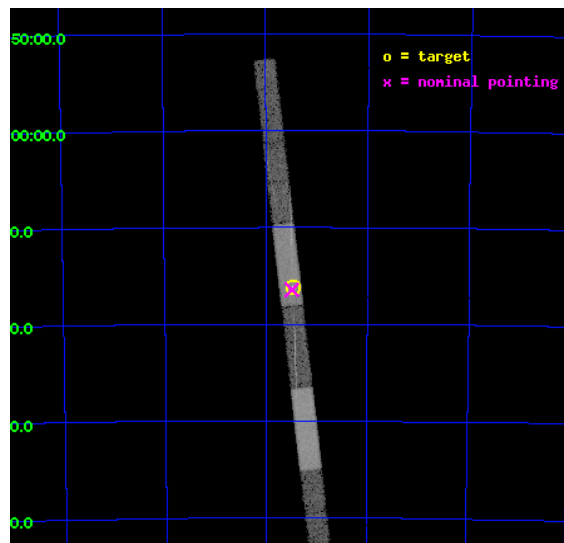
L2 Processing Date : Jun 22 2012

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1 Front

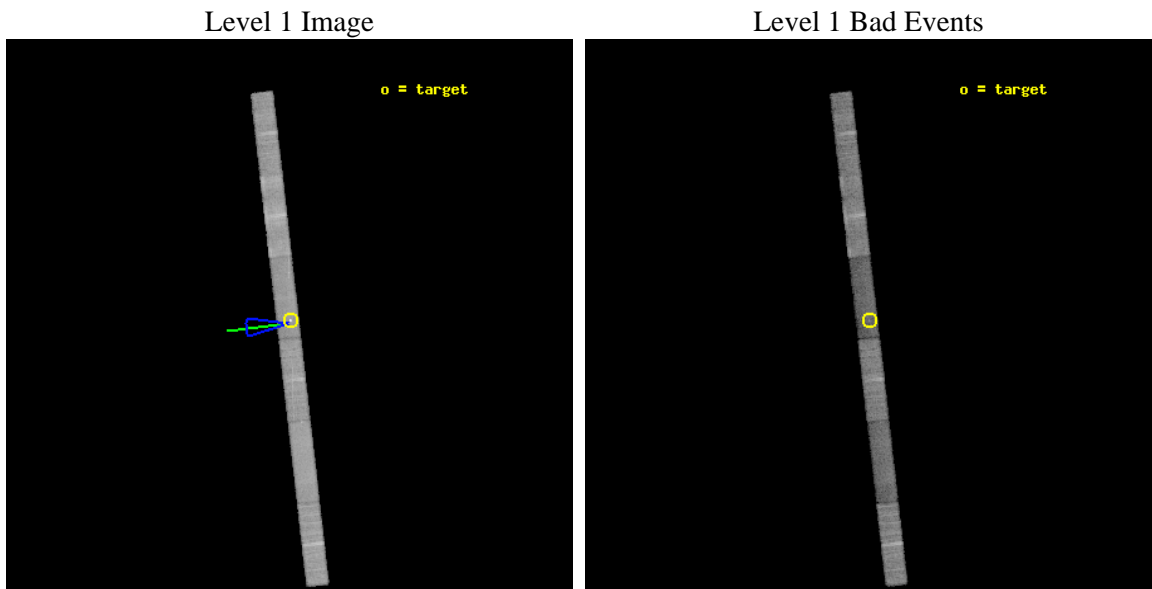
seq_num	501180	Sequence number
obs_id	12126	Observation id
title	CHANDRA CYCLE 11 SPATIAL AND SPECTRAL MONITORING OF SNR1987A	Propo
observer	Prof. David Burrows	Principal investigator
object	SNR 1987A	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.866667	Observer's specified target RA [deg]
dec_targ	-69.26975	Observer's specified target Dec [deg]
ra_nom	83.872494659908	Nominal RA [deg]
dec_nom	-69.27411770442	Nominal Dec [deg]
roll_nom	263.41206815275	Nominal Roll [deg]
revision	2	Processing version of data
ontime	22069.0	Sum of GTIs [s]
livetime	21198.993314378	Livetime [s]
ontime4	22069.0	Sum of GTIs [s]
ontime5	22069.0	Sum of GTIs [s]
ontime6	22069.0	Sum of GTIs [s]
ontime7	22069.0	Sum of GTIs [s]
ontime8	22069.0	Sum of GTIs [s]
ontime9	22069.0	Sum of GTIs [s]
l2events	73239	Number of level 2 events



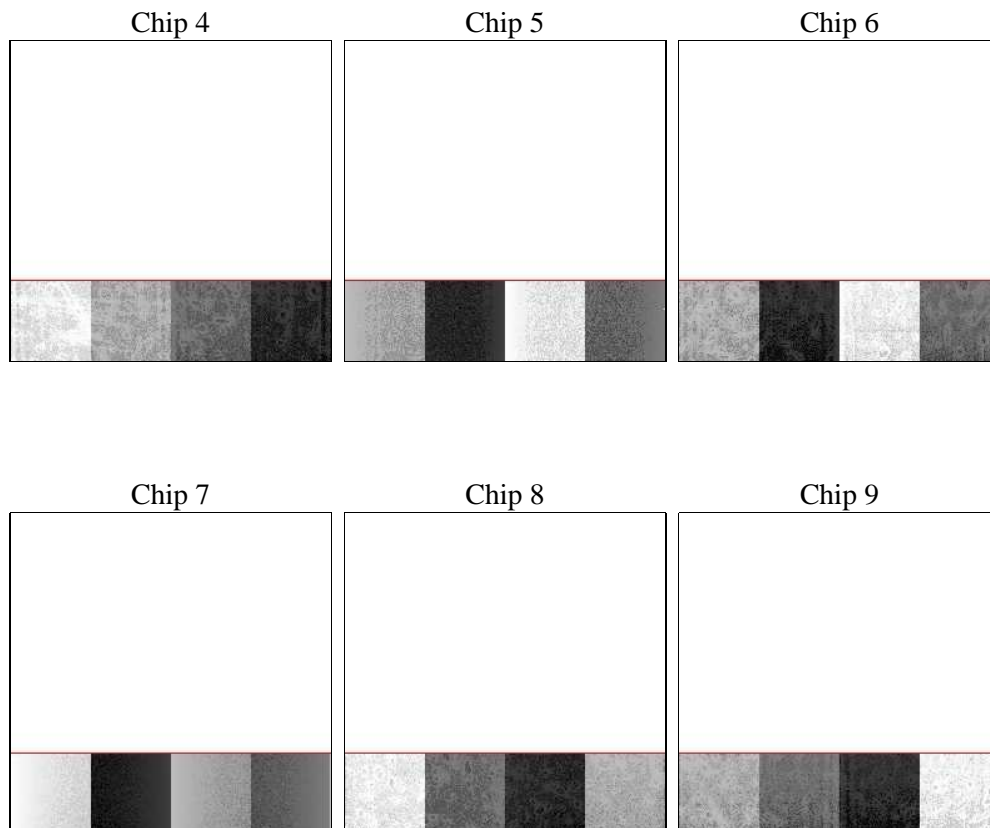
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	22000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	22069.0	Sum of GTIs [s]
caldbver	4.4.10	 	ontime4	22069.0	Sum of GTIs [s]
date	2012-06-22T17:41:12	Date and time of file creation	ontime5	22069.0	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	22069.0	Sum of GTIs [s]
			ontime7	22069.0	Sum of GTIs [s]
			ontime8	22069.0	Sum of GTIs [s]
			ontime9	22069.0	Sum of GTIs [s]
			l1events	316199	Number of level 1 events

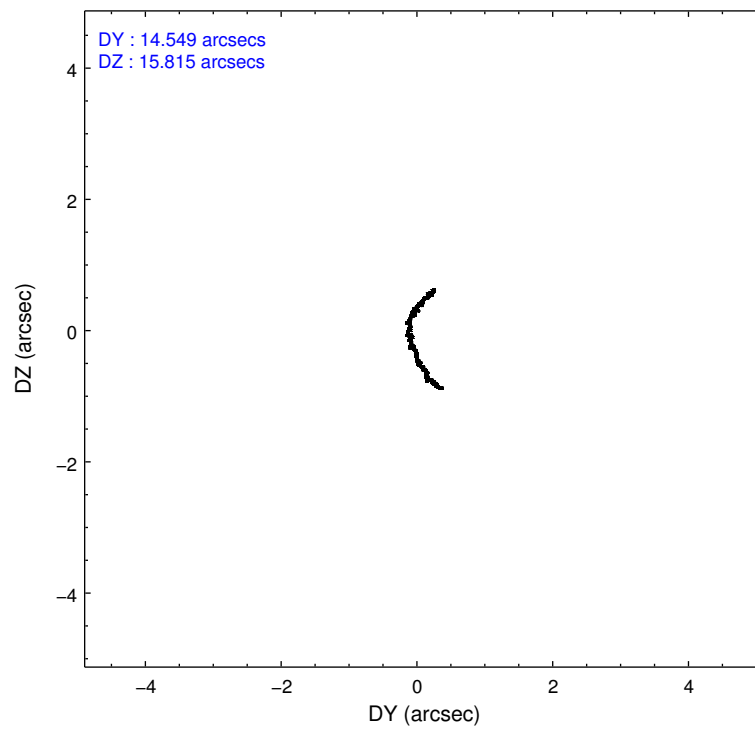
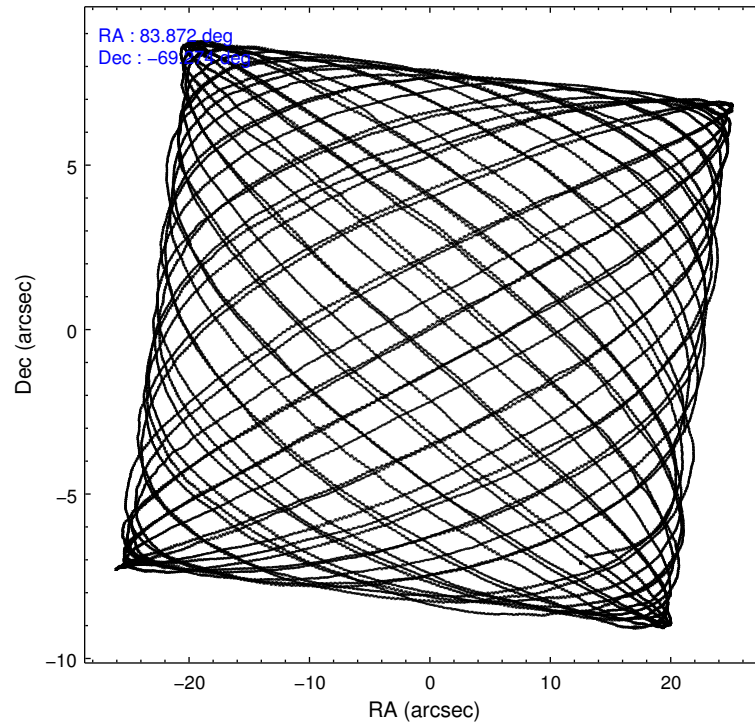
2.1.4 Events

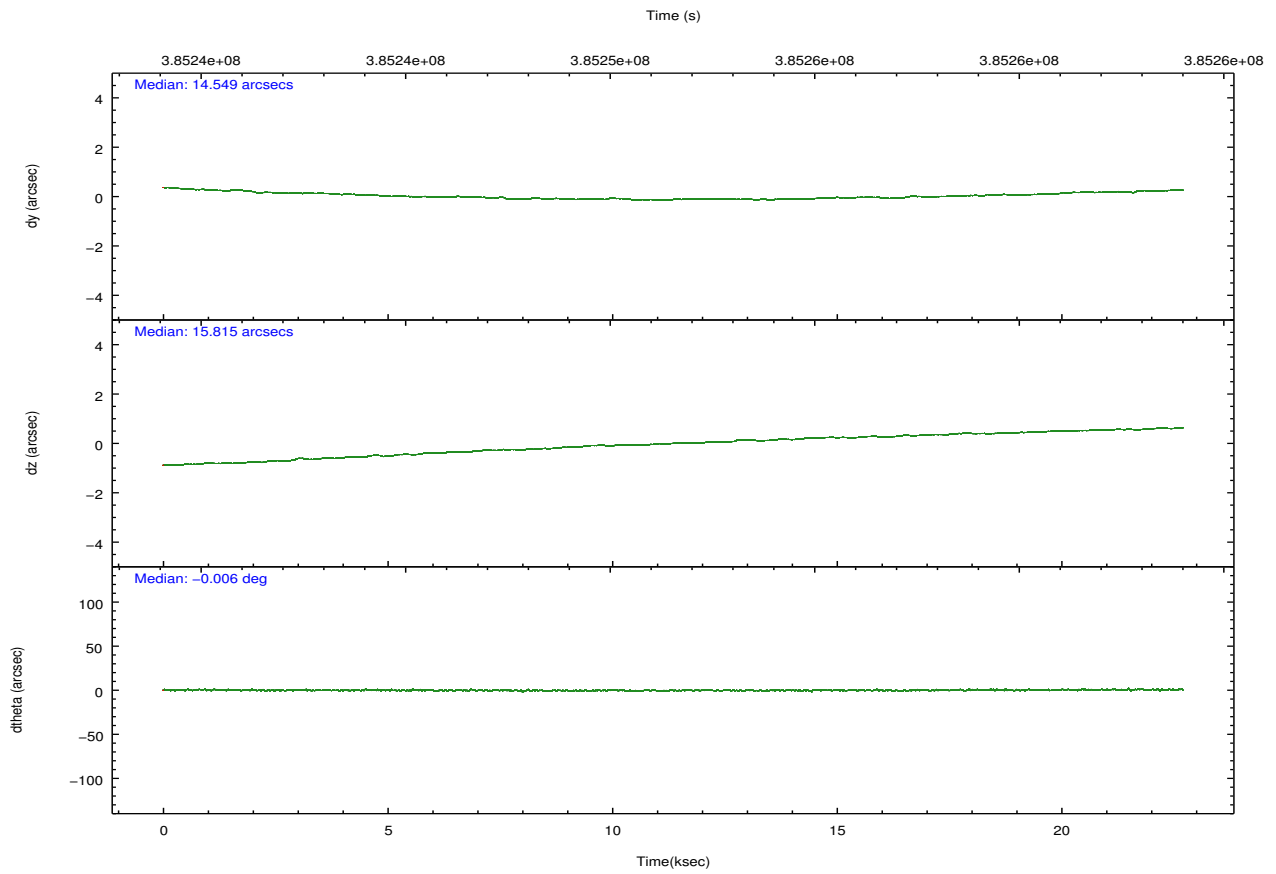
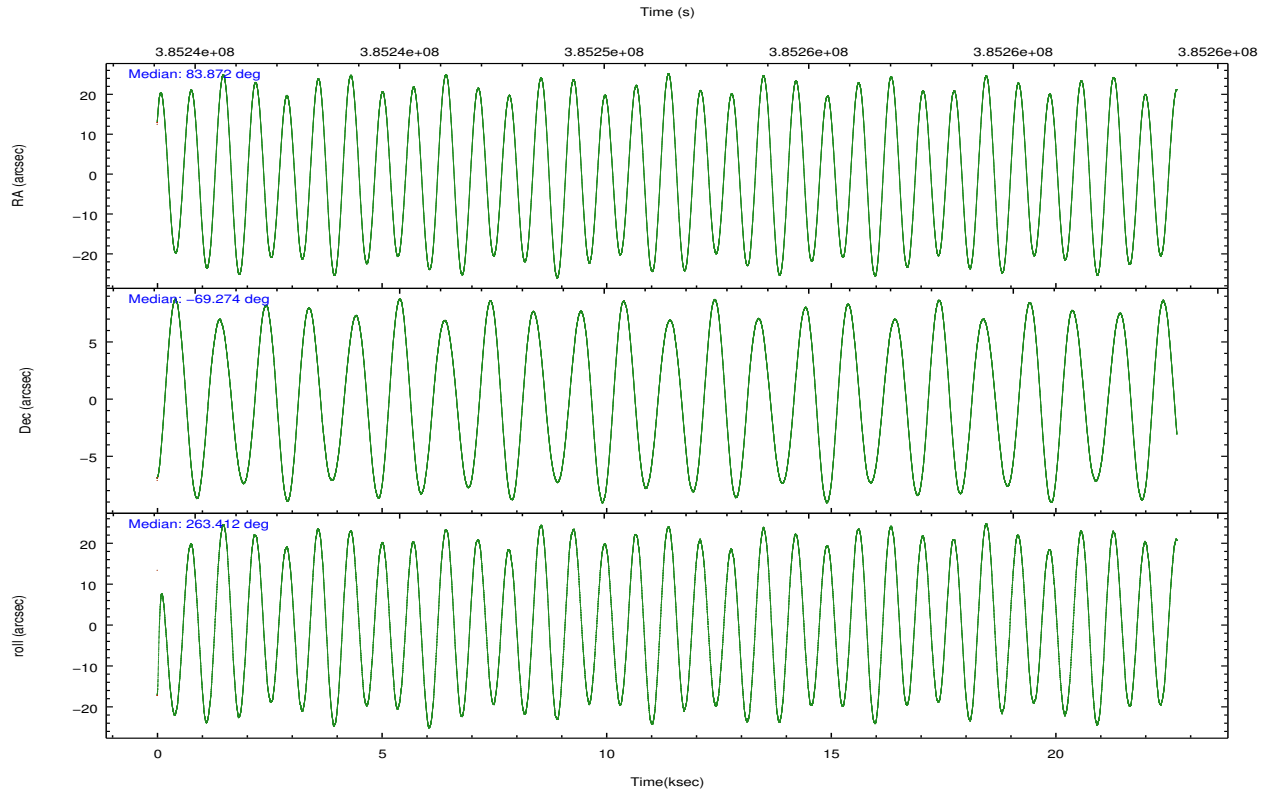
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	55110	55301	50505	45976	65560	43747	grade 0 events	1791	3173	2900	3300	4956	1616
rejected events	49445	25031	43660	20438	48170	38572		3%	5%	5%	7%	7%	3%
rejected %	89%	45%	86%	44%	73%	88%	grade 1 events	21	161	18	72	31	15
								0%	0%	0%	0%	0%	0%
							grade 2 events	1382	8276	1233	5807	3695	971
								2%	14%	2%	12%	5%	2%
							grade 3 events	813	2403	901	2935	2093	810
								1%	4%	1%	6%	3%	1%
							grade 4 events	779	2311	798	2788	1887	823
								1%	4%	1%	6%	2%	1%
							grade 5 events	1357	4875	1301	4372	2153	1528
								2%	8%	2%	9%	3%	3%
							grade 6 events	900	14109	1014	10711	4759	955
								1%	25%	2%	23%	7%	2%
							grade 7 events	48067	19993	42340	15991	45986	37029
								87%	36%	83%	34%	70%	84%

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	83.840854	83.87249465990777	CCD I2 on	N	N
[deg] Pointing Dec	-69.249209	-69.27411770442021	CCD I3 on	N	N
[deg] Pointing Roll	263.225861	263.4120681527536	CCD S0 on	O1	Y
[deg] Roll angle	264.000000	264.000000	CCD S1 on	Y	Y
[deg] Roll tolerance	12.000000	12.000000	CCD S2 on	Y	Y
Roll constraint allows 180D rotation	N	N	CCD S3 on	Y	Y
[s] Window start time (MET)	384480066.184000	384480066.184000	CCD S4 on	Y	Y
[s] Window stop time (MET)	386553606.184000	386553606.184000	CCD S5 on	Y	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Number of optional ACIS chips dropped	0	0
[mm] SIM defocus	0	0.001444936568705701	On-chip summing requested	N	N
[mm] SIM translation stage pos	-181.712523	-181.7120811590428	Subarray requested	CUSTOM	1/4
[mm] SIM translation stage offset	-8.42	-8.420441423965059	Subarray start row	1	1
[s] Observation start time (MET)	385240888.184000	385239299.79345	Subarray row count	256	256
Observation start date	2010-03-17T19:20:22	2010-03-17T18:54:59	Alternating exposures requested	N	N
[s] Observation end time (MET)	385262888.184000	385263545.65718	[s] Primary exposure time	0.000000	1
Observation end date	2010-03-18T01:27:02	2010-03-18T01:39:05			
Read mode	TIMED	TIMED			

2.3 Aspect



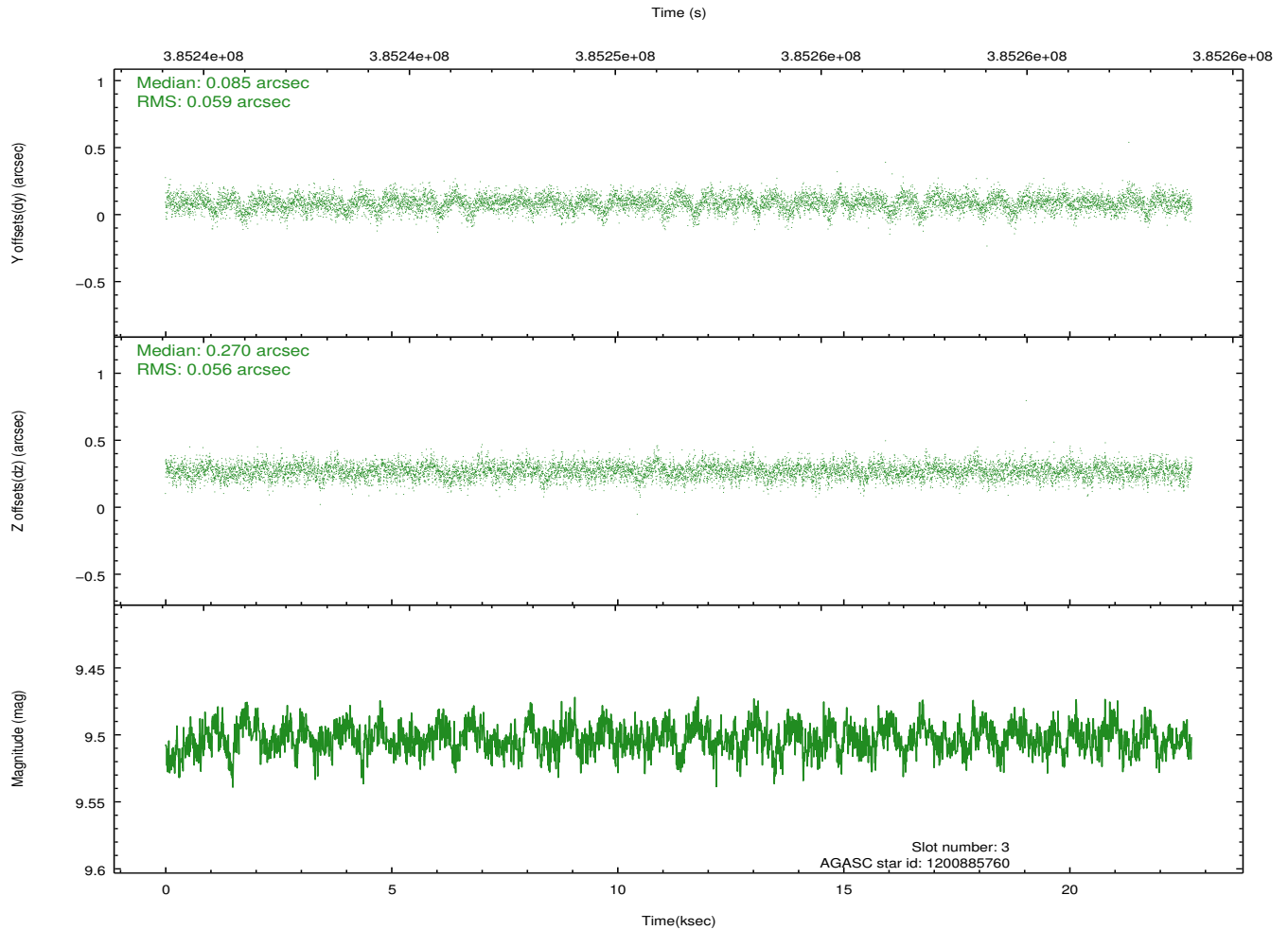
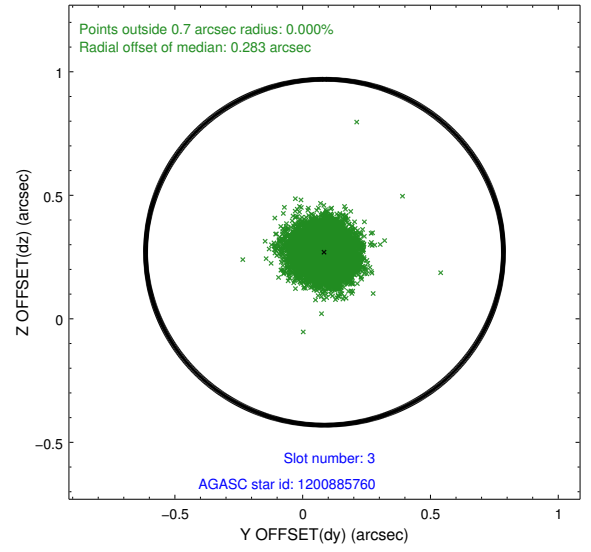
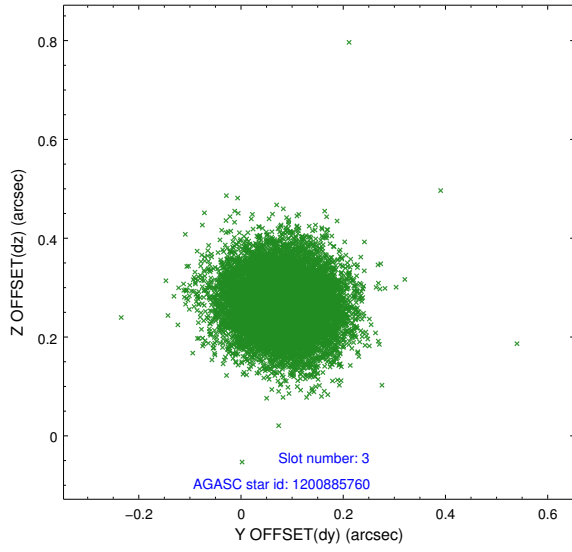


Slot Statistics

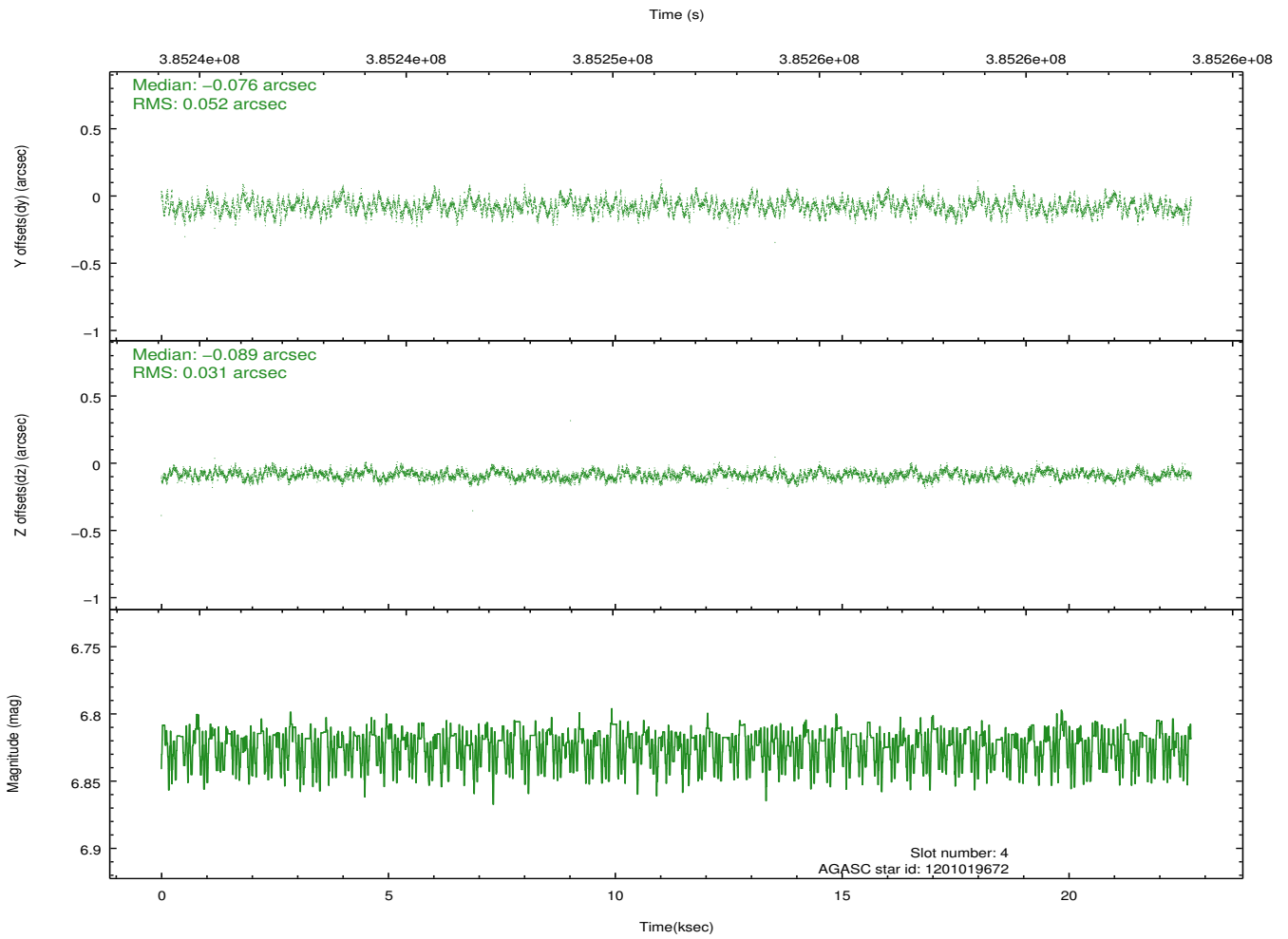
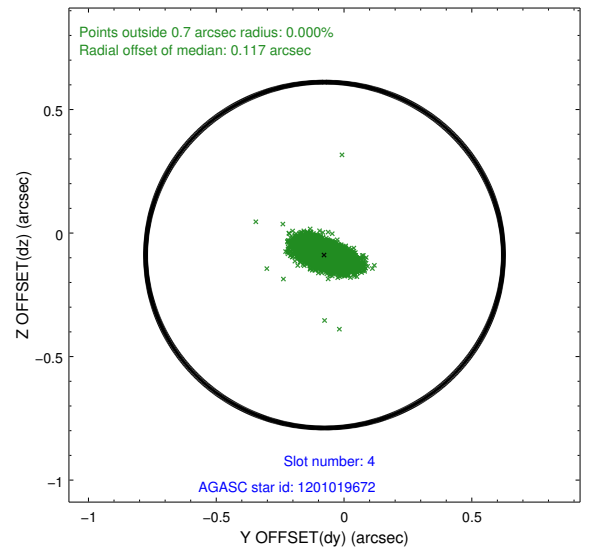
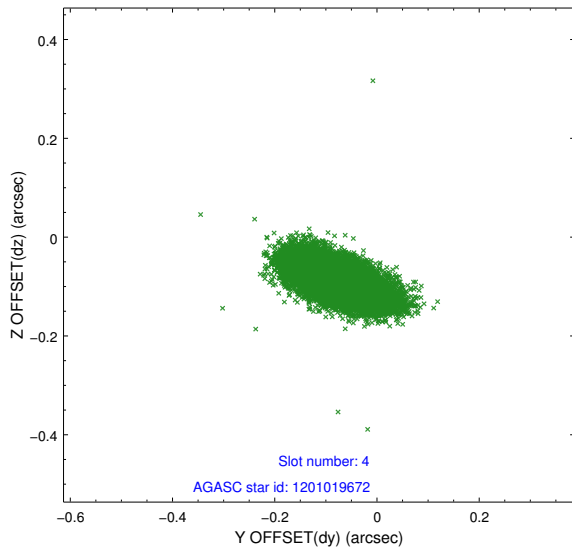
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.98	5538	0.117	0.125	0.015	0.038	0.000000	0.000000	929.25	-1906.10
1	FID	ACIS-S-2	6.89	5537	-0.199	-0.095	0.010	0.021	0.000000	0.000000	-766.89	-1911.08
2	FID	ACIS-S-6	7.19	5538	0.062	-0.031	0.018	0.028	0.000000	0.000000	394.75	634.87
3	GUIDE	1200885760	9.50	11068	0.085	0.270	0.085	0.139	83.723637	-68.777667	-1667.10	-351.42
4	GUIDE	1201019672	6.82	11075	-0.076	-0.089	0.062	0.110	85.312192	-68.770187	-1915.88	1703.83
5	GUIDE	1201020040	8.61	11066	0.116	-0.189	0.079	0.131	85.379163	-68.879396	-1532.42	1827.40
6	GUIDE	1201410616	9.33	11062	-0.033	0.092	0.102	0.166	82.516808	-69.784406	2125.32	-1405.78
7	GUIDE	1201542672	8.19	11072	-0.093	-0.081	0.072	0.111	84.492488	-69.957531	2440.15	1100.01

2.4 Star Slots

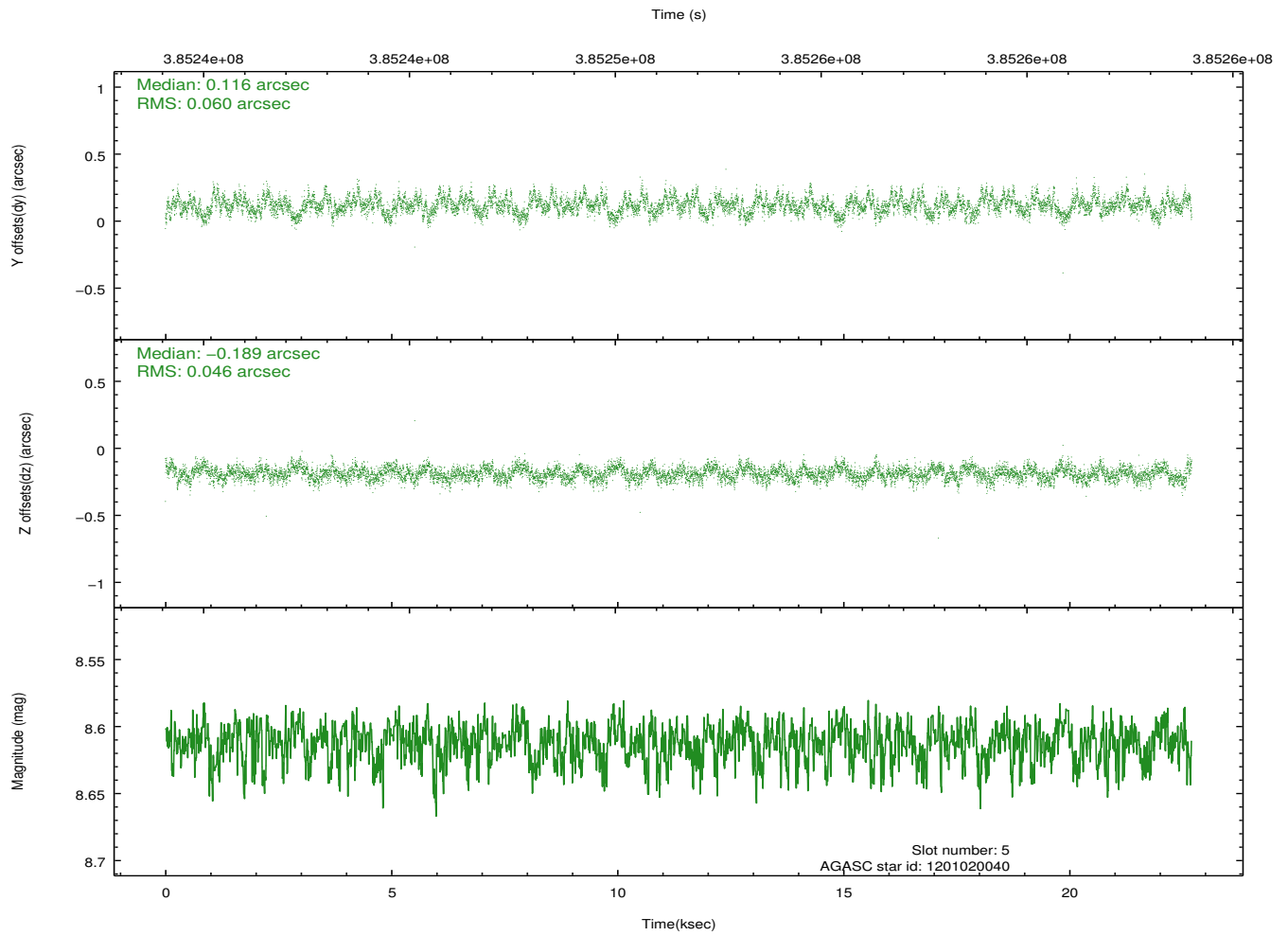
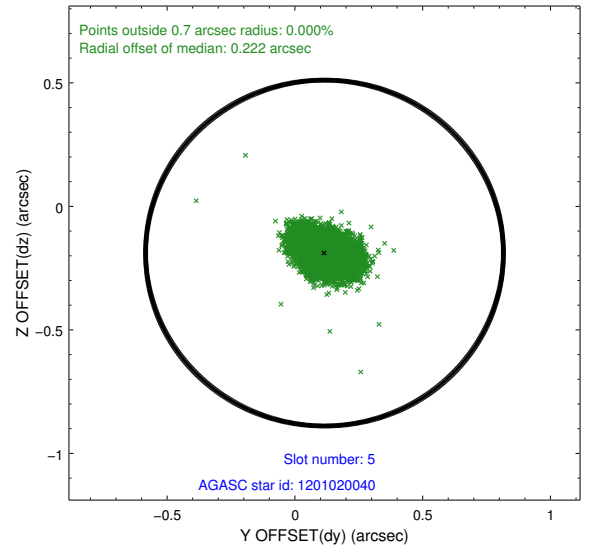
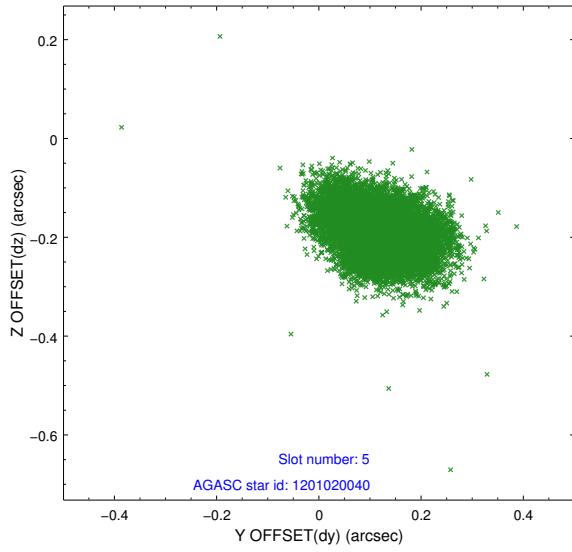
2.4.1 Slot 3



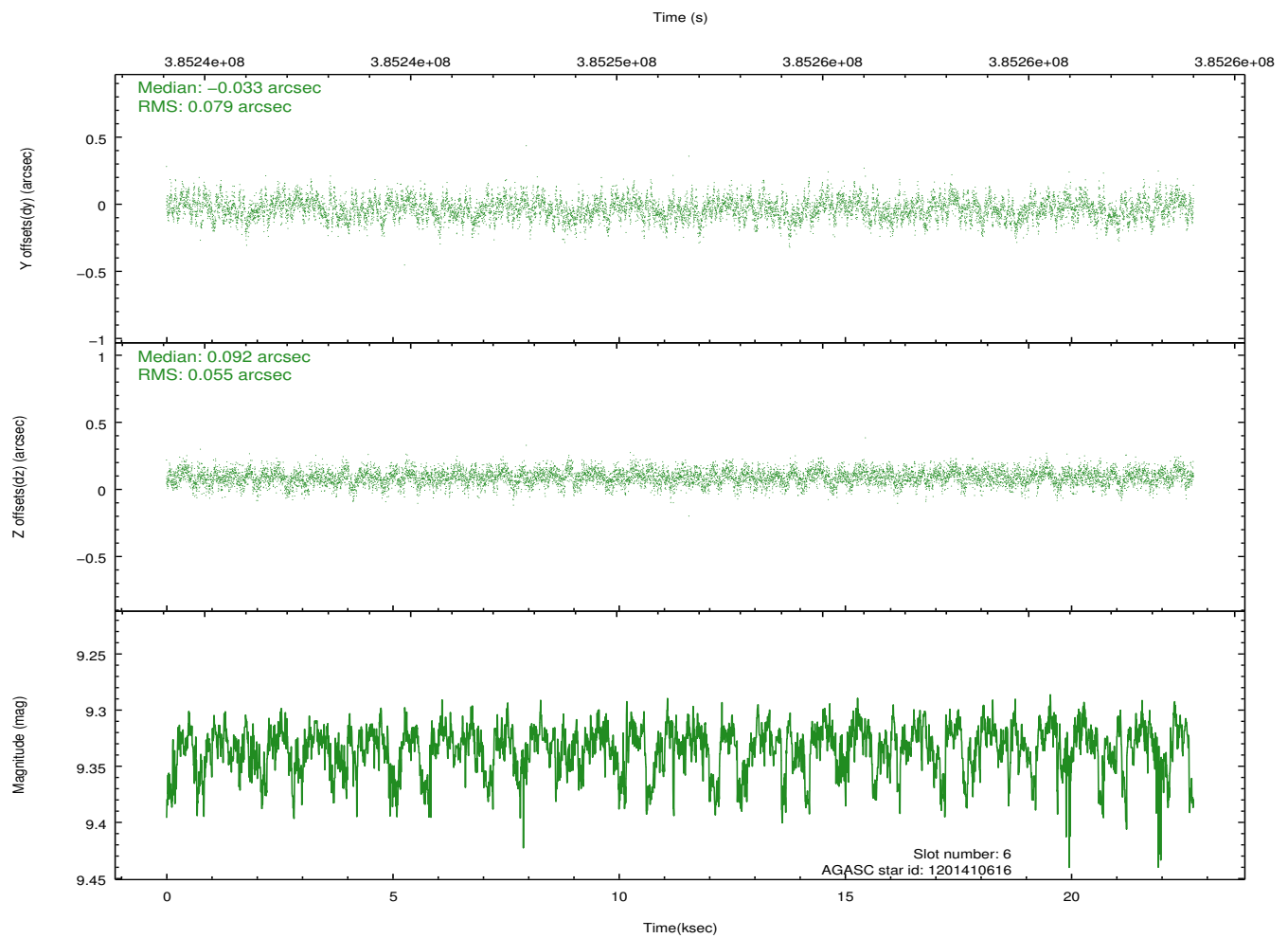
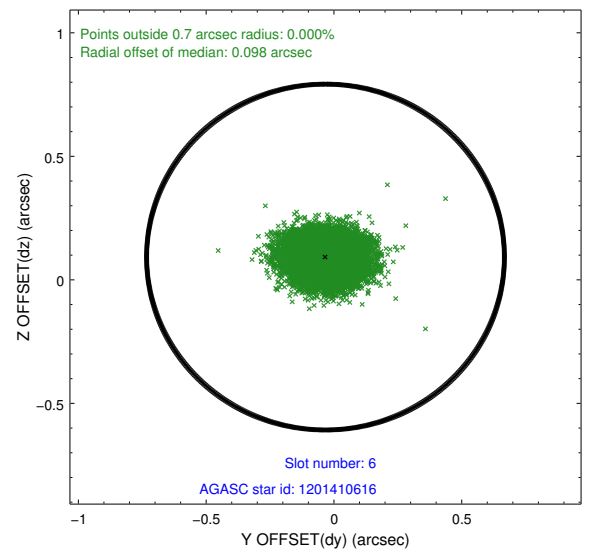
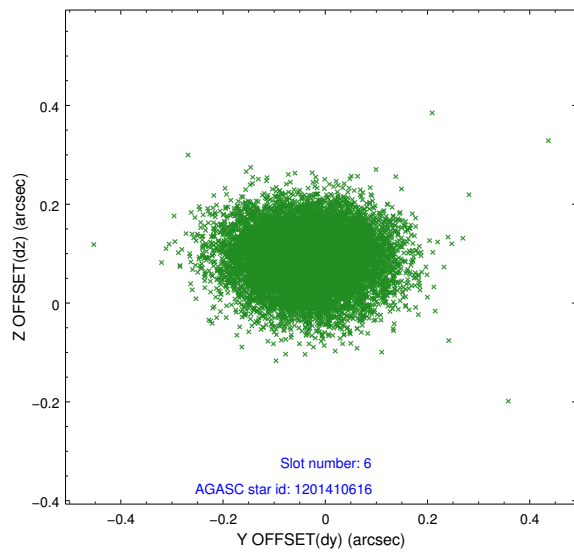
2.4.2 Slot 4



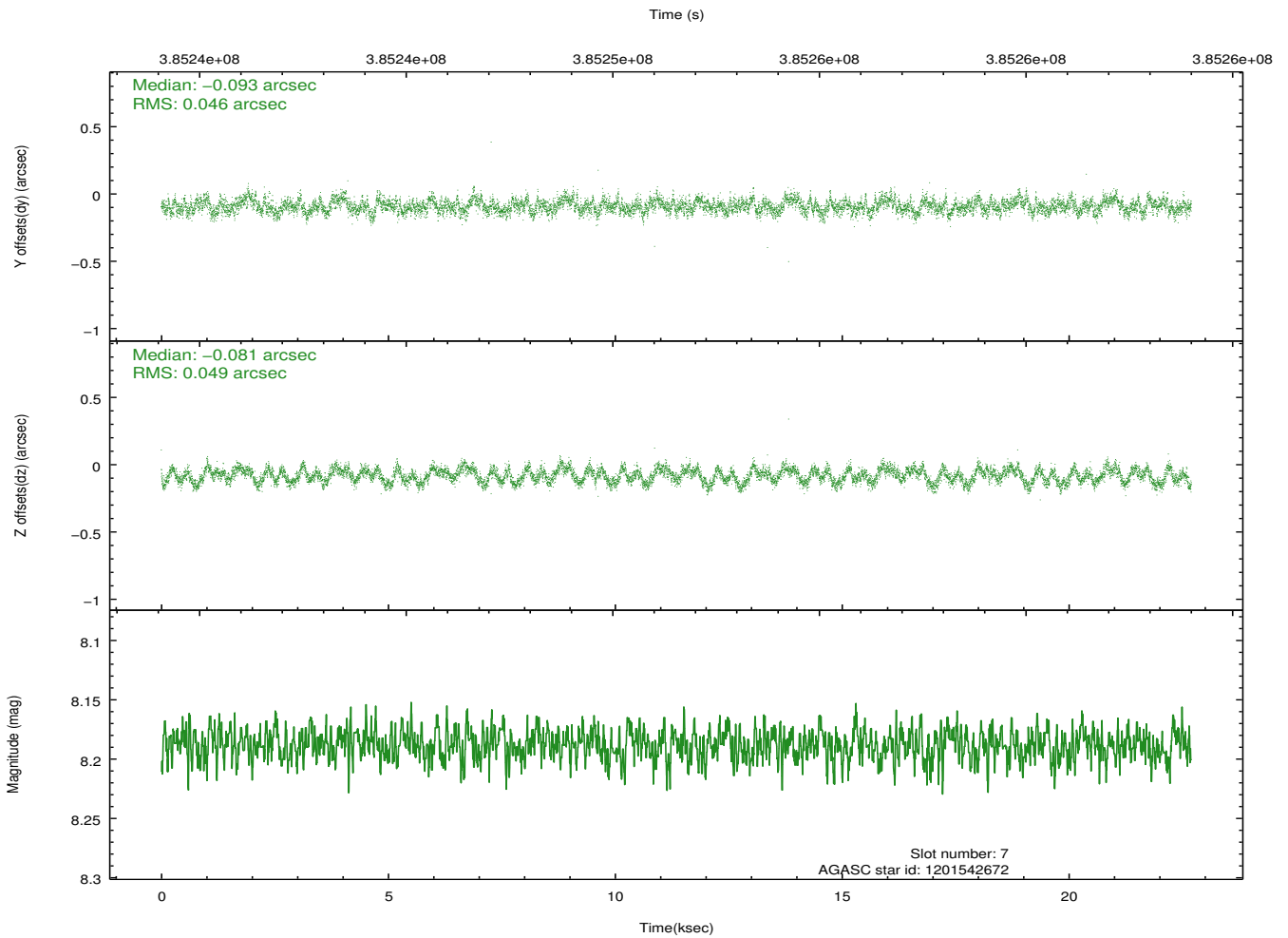
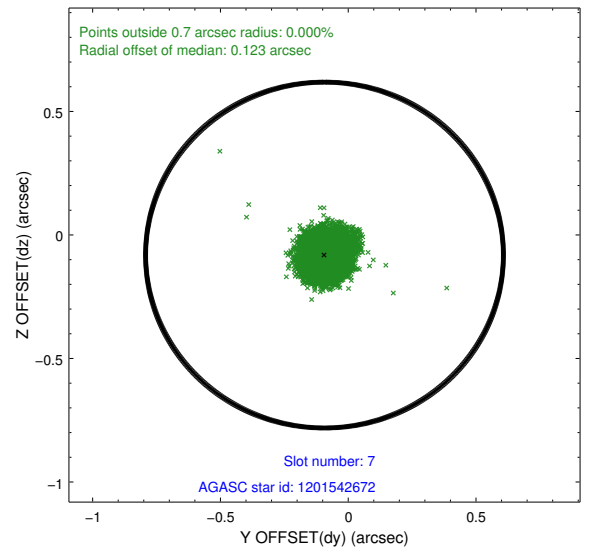
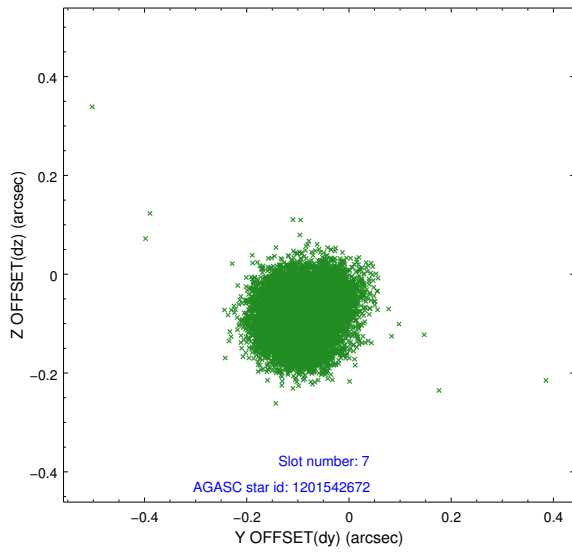
2.4.3 Slot 5



2.4.4 Slot 6

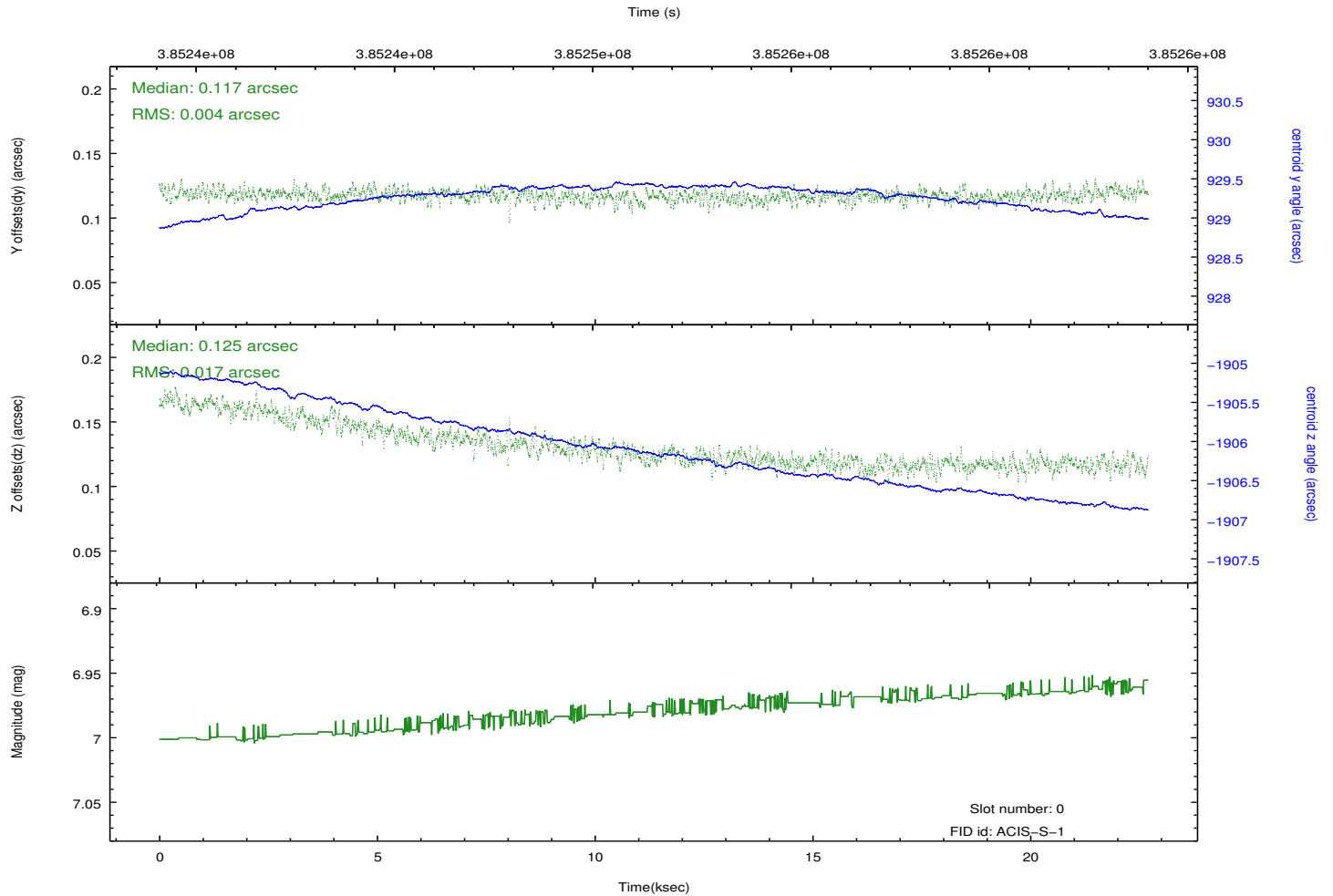
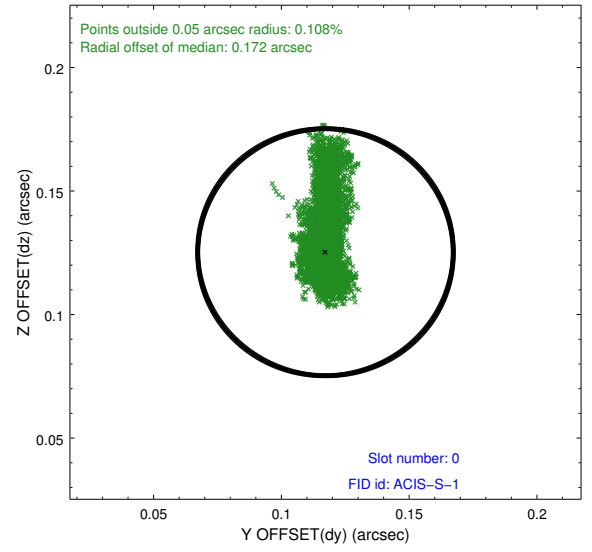
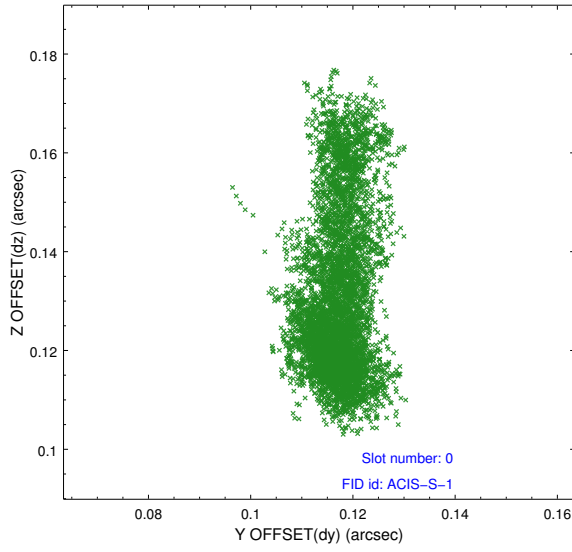


2.4.5 Slot 7

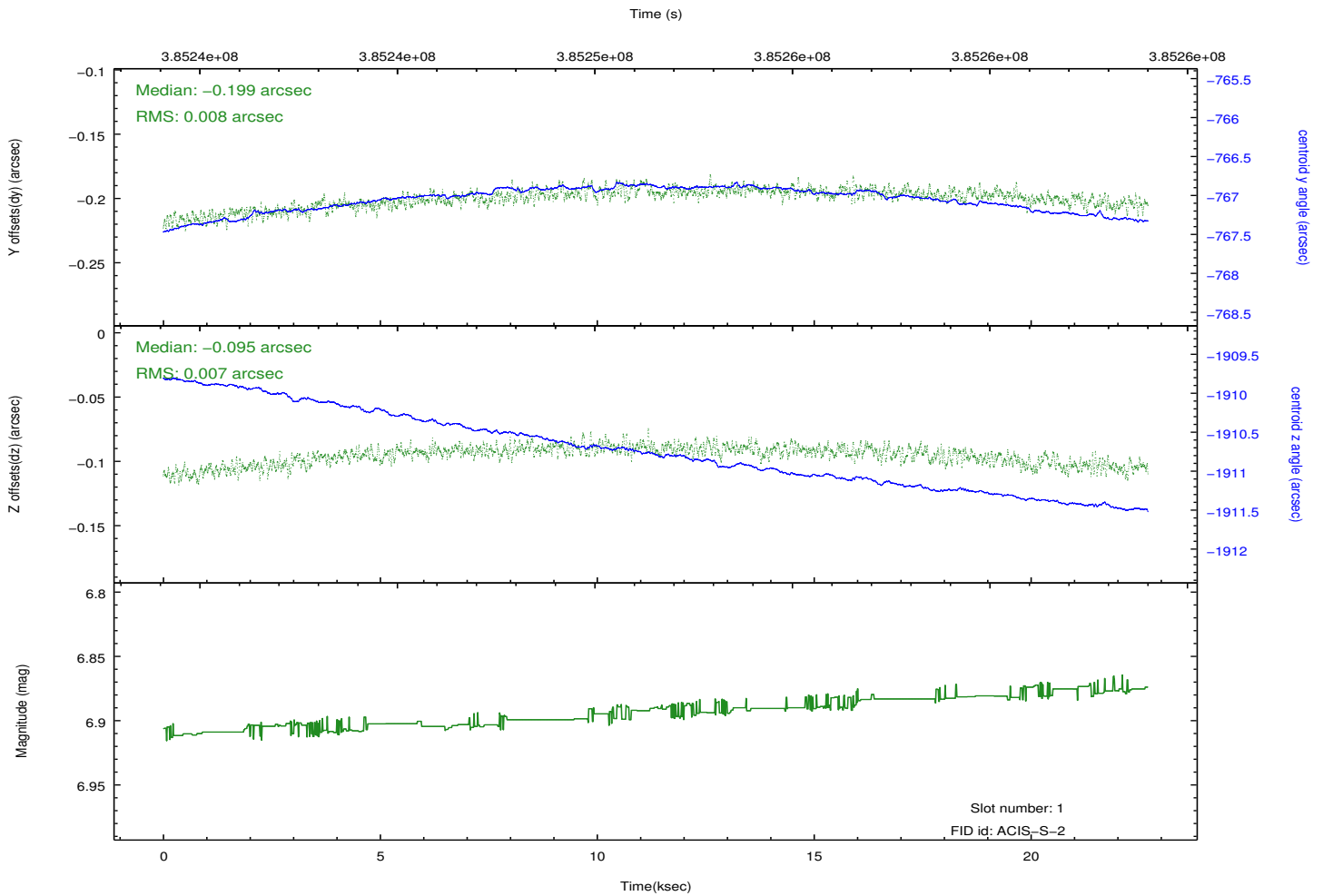
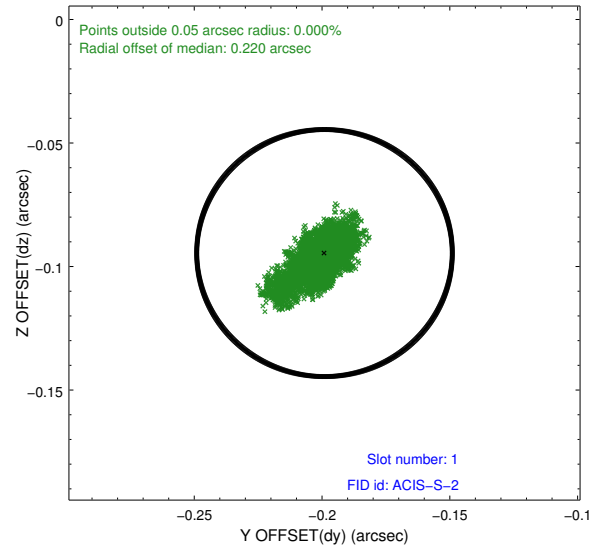
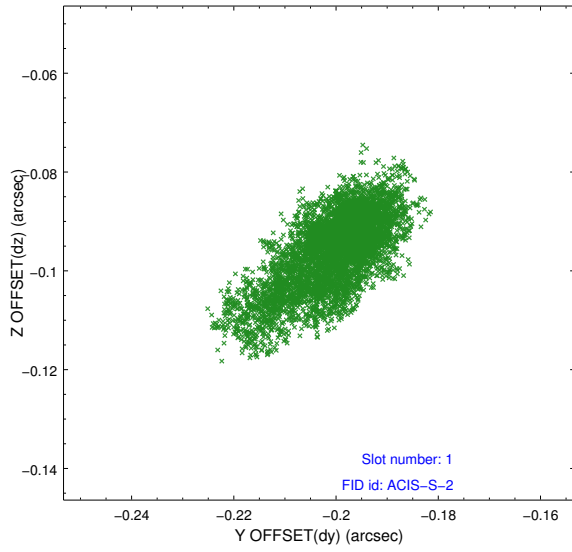


2.5 FID Slots

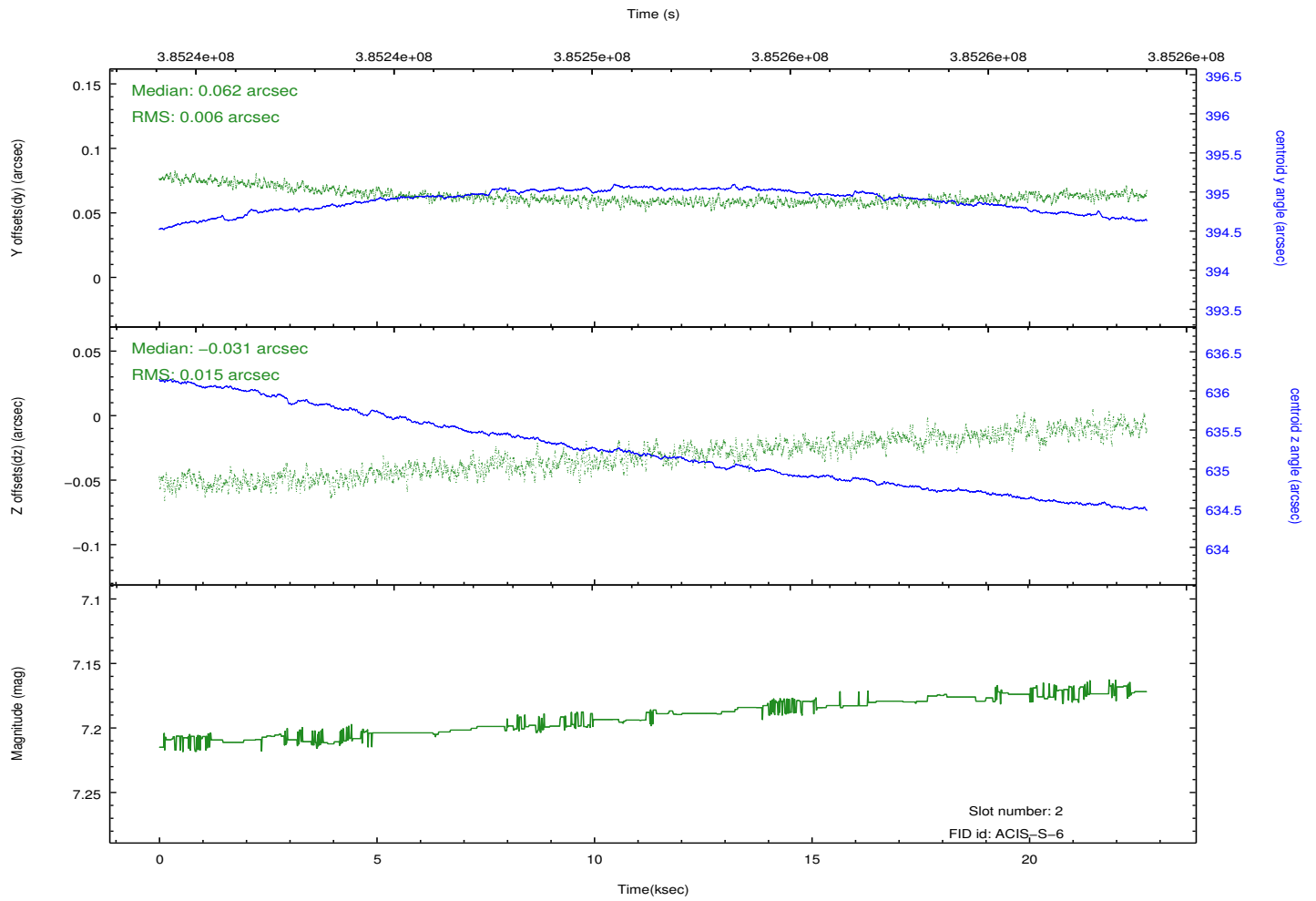
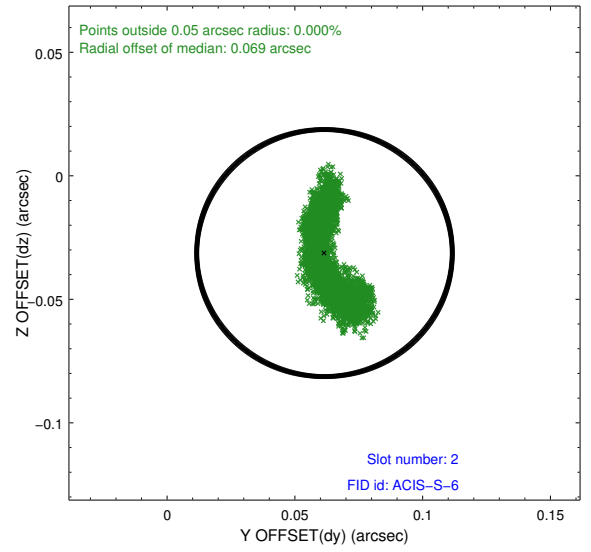
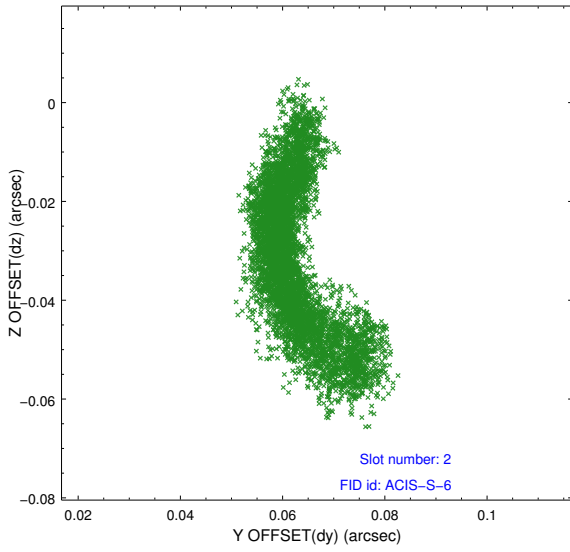
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

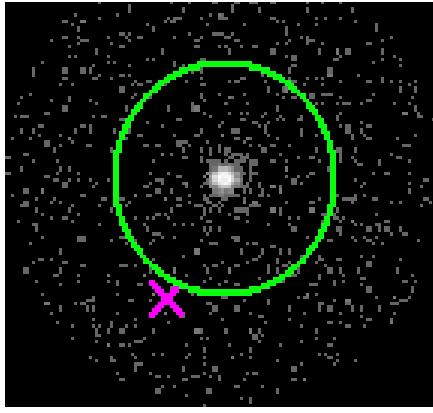


3 Gratings

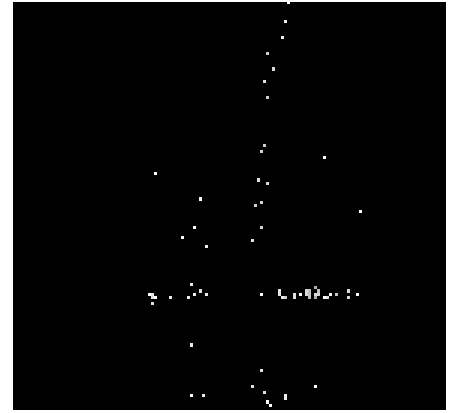
3.1 HEG Arm



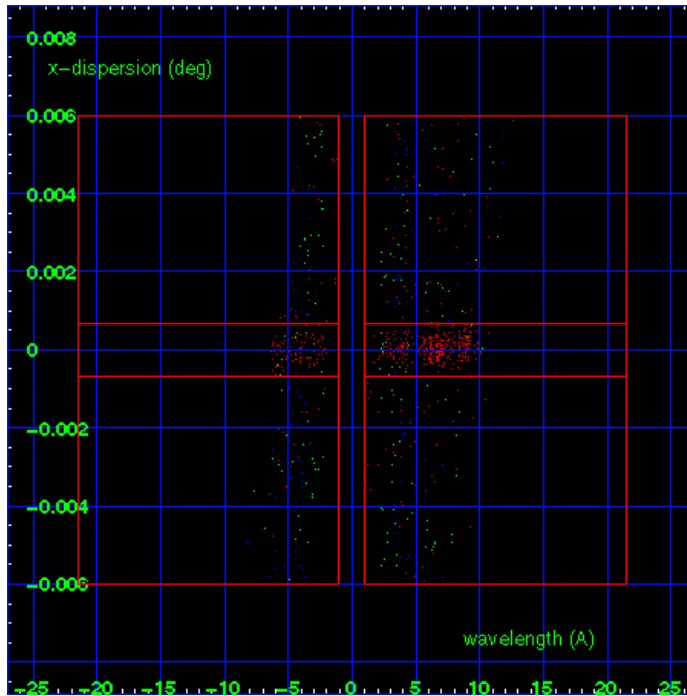
HEG Order Sort 123



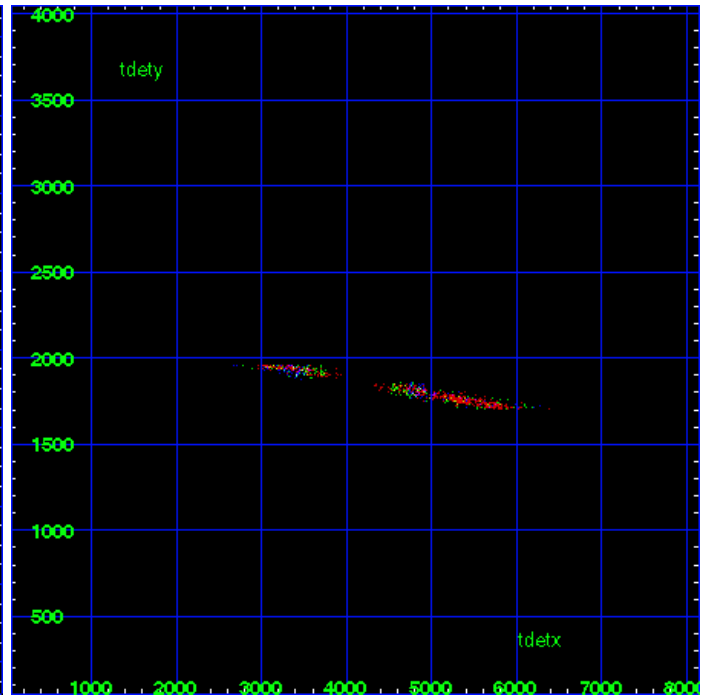
HEG Zero Order



HEG Order Sort ALL

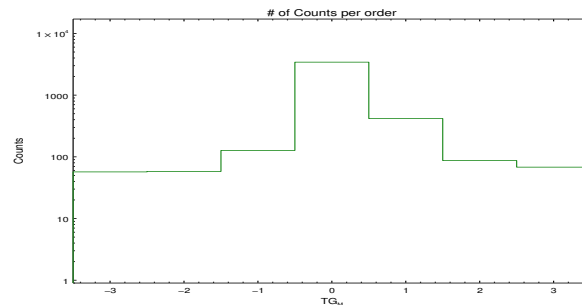


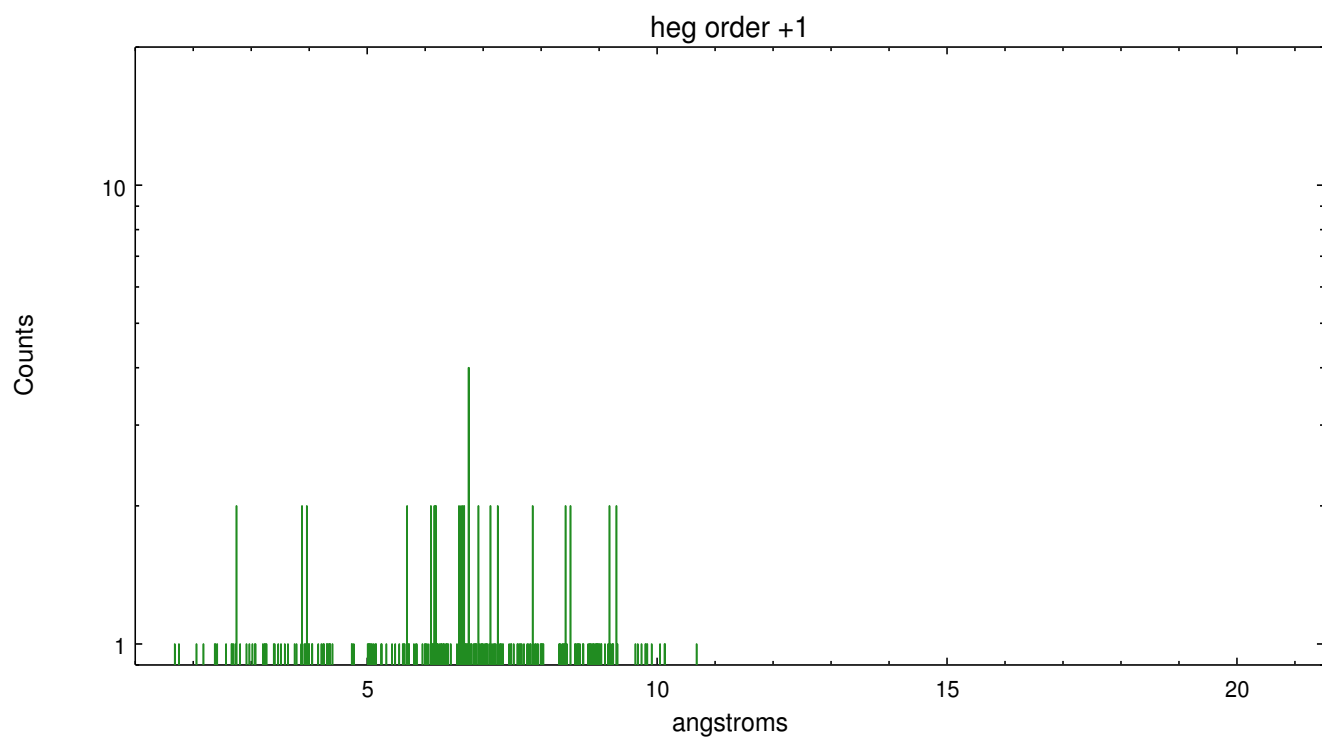
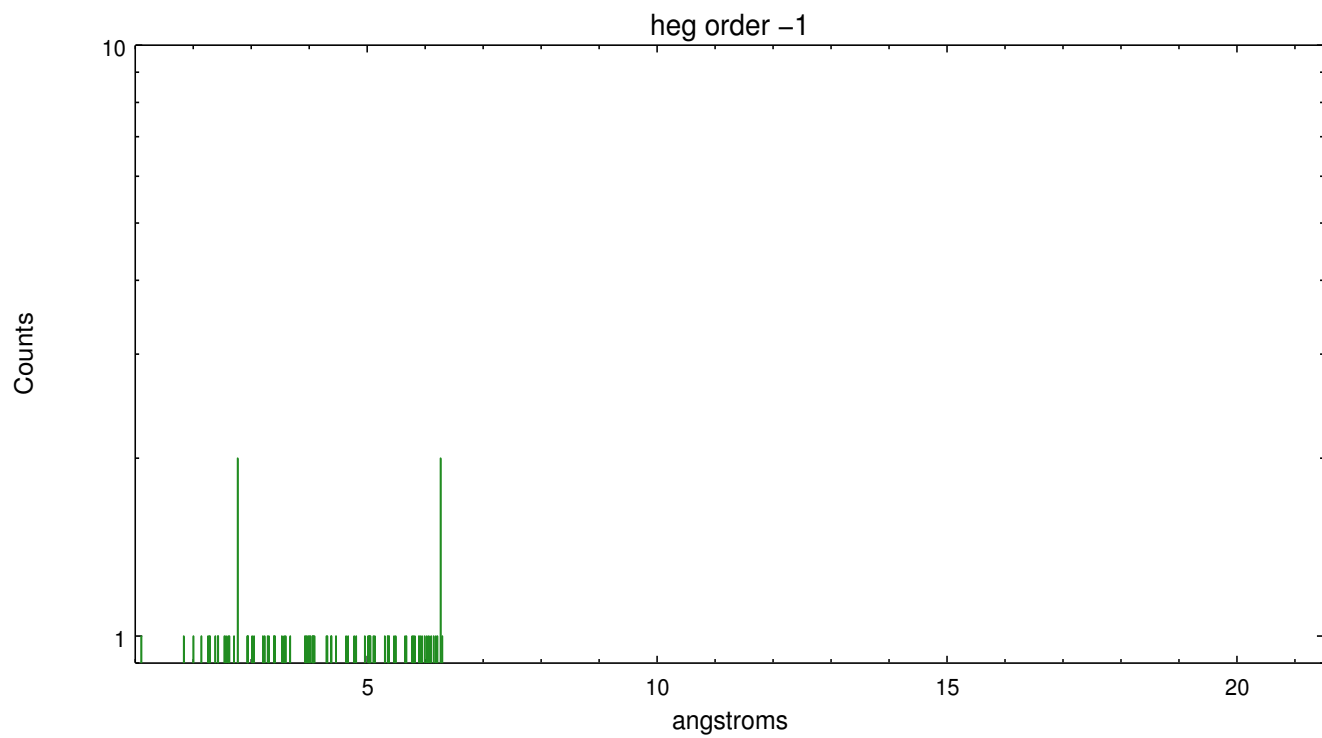
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	57	58	127	3423	417	87	68

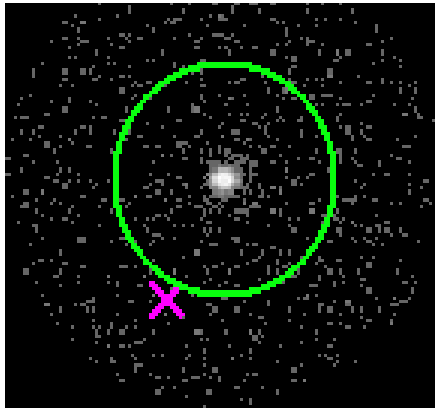




3.2 MEG Arm



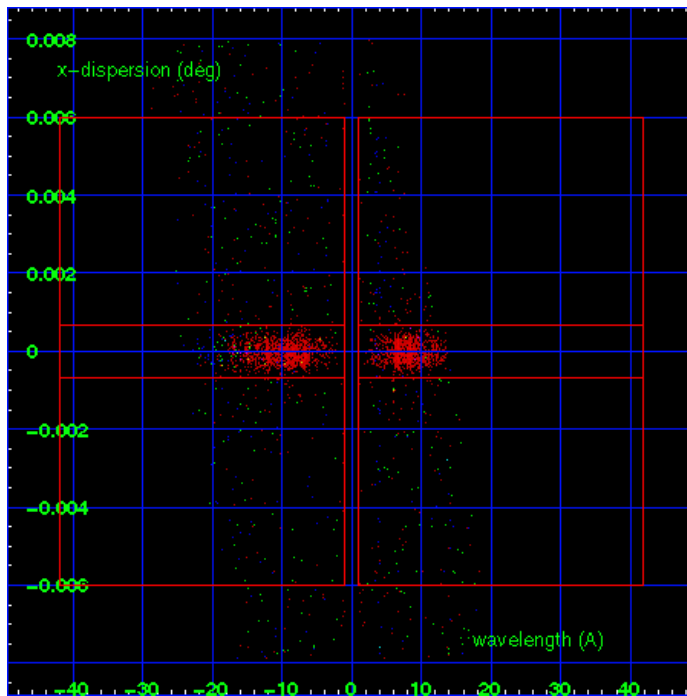
MEG Order Sort 123



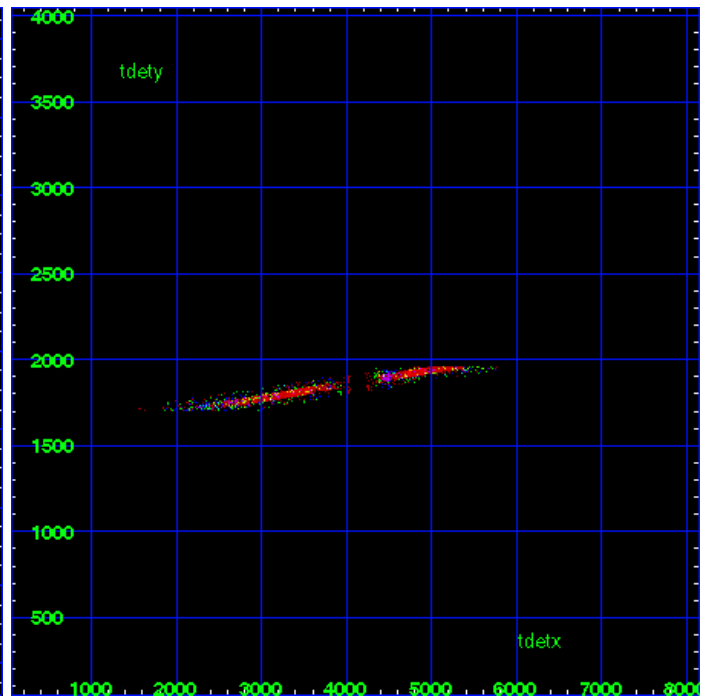
MEG Zero Order



MEG Order Sort ALL

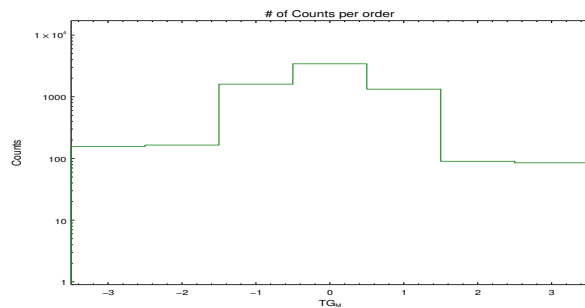


Spot Image MEG

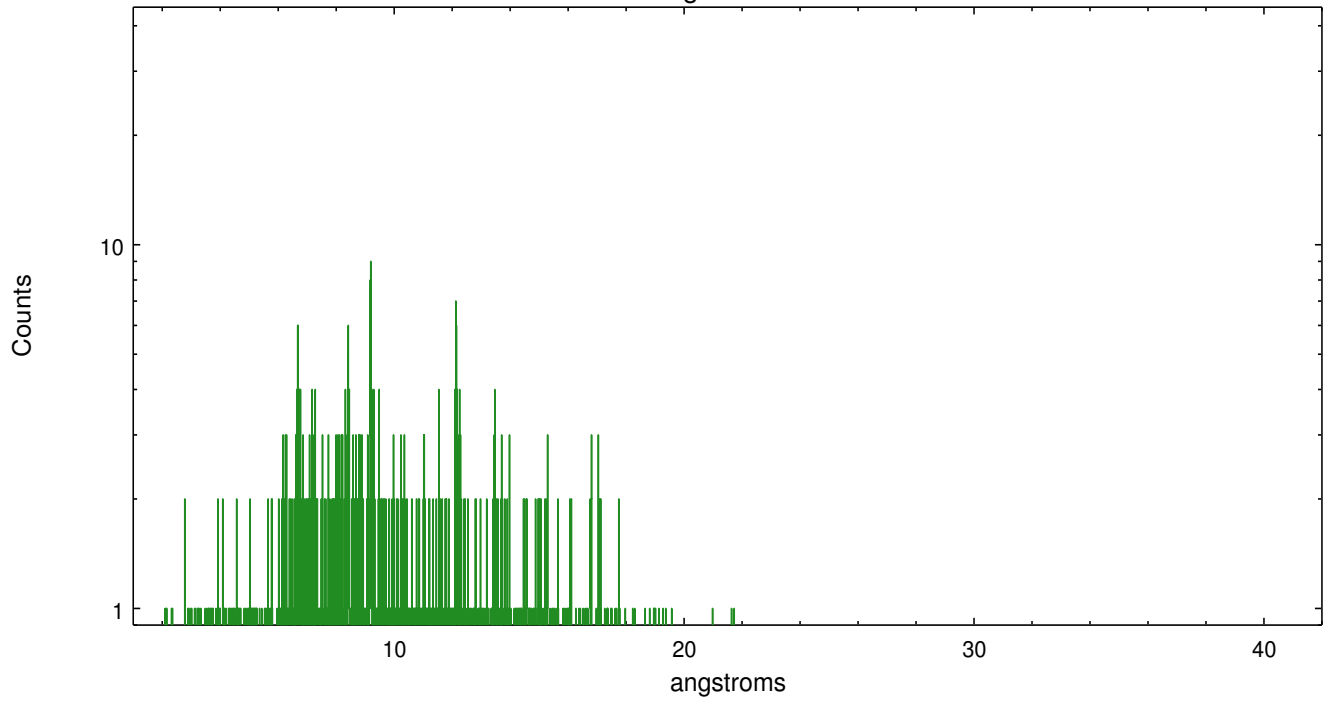


Full Detector MEG

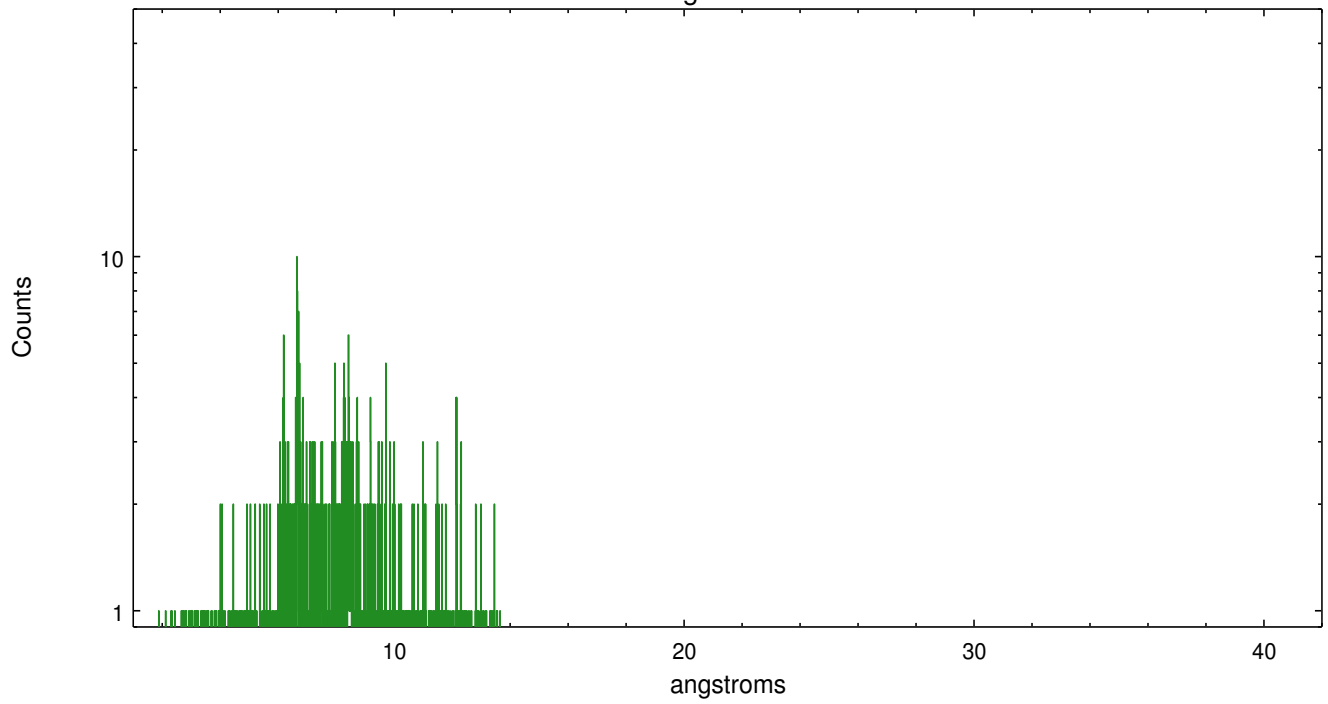
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	157	165	1601	3423	1328	90	85



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.06.25
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	22.069

A.2 Comments

Time constraint met. Roll constraint met. Target slightly offset in subarray in order to include 0 VIII lines in MEG minus order. ===
WARNING::Zeroth order selected by pipeline tools is well-centered in the SNR but is not necessarily at the position of brightest emission. The user may want to select a region or source of interest, then use software tools such as CIAO to specify the coordinates of the zeroth order source of interest before running the tools to resolve the dispersed events. ===

The spatial flux distribution of the zeroth order is slightly asymmetric. Possibly extended source: the wavelength solution is pertinent only to the zeroth order position determined by the tool `tgdetect`. For extended sources, there is no unique mapping from position to wavelength.

WARNING: there are no standard ciao tools for analysis of grating spectra from extended sources. The shape of an emission 'line' will be the shape of the zero order spatial structure convolved with the instrumental LSF. Grating extractions can be used, but need to be combined with custom spatial-spectral analysis, since wavelength is multi-valued at any particular diffraction angle.