

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 11090 - L2 Version 2
Chandra X-Ray Center

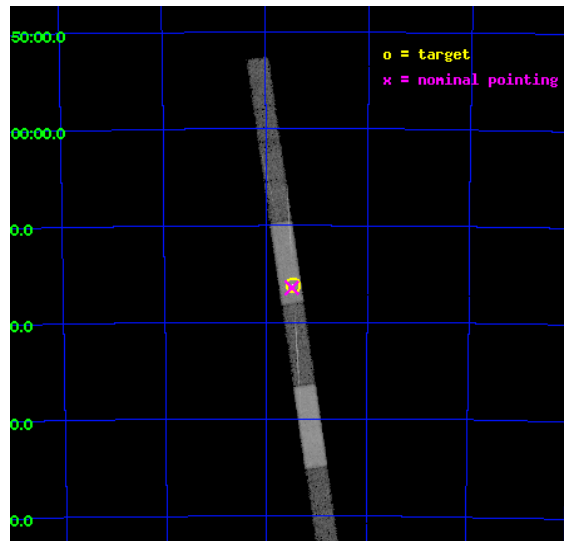
L2 Processing Date : Jun 23 2012

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1 Front

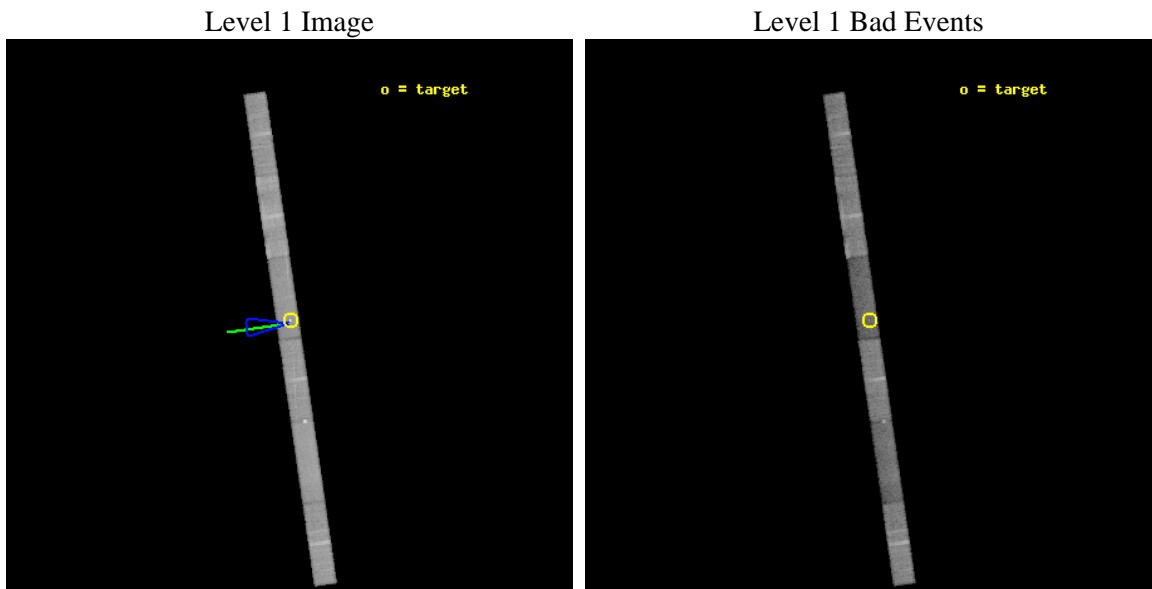
seq_num	501180	Sequence number
obs_id	11090	Observation id
title	CHANDRA CYCLE 11 SPATIAL AND SPECTRAL MONITORING OF SNR1987A	Propo
observer	Prof. David Burrows	Principal investigator
object	SNR 1987A	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.866667	Observer's specified target RA [deg]
dec_targ	-69.26975	Observer's specified target Dec [deg]
ra_nom	83.872074684625	Nominal RA [deg]
dec_nom	-69.274194435911	Nominal Dec [deg]
roll_nom	261.66166768238	Nominal Roll [deg]
revision	2	Processing version of data
ontime	25569.612732172	Sum of GTIs [s]
livetime	24561.604484143	Livetime [s]
ontime4	25569.653772175	Sum of GTIs [s]
ontime5	25569.571692169	Sum of GTIs [s]
ontime6	25569.530652165	Sum of GTIs [s]
ontime7	25569.612732172	Sum of GTIs [s]
ontime8	25569.489612162	Sum of GTIs [s]
ontime9	25569.448572159	Sum of GTIs [s]
l2events	85078	Number of level 2 events



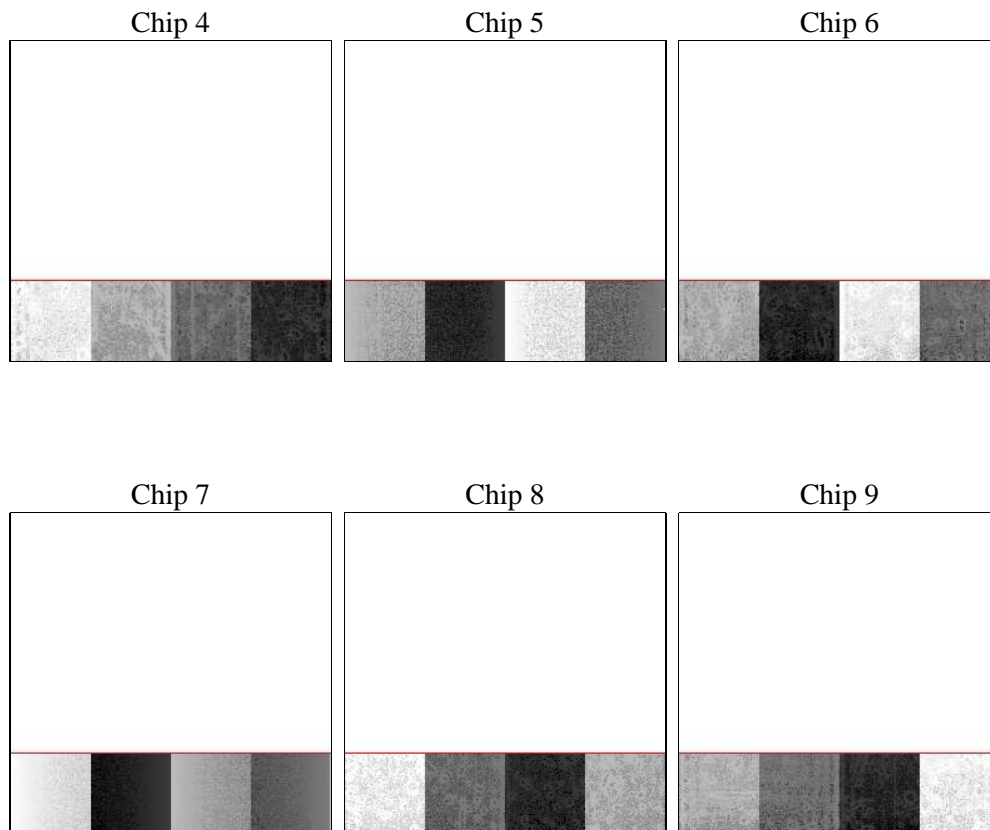
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	25500.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	25569.612732172	Sum of GTIs [s]
caldbver	4.4.10	 	ontime4	25569.653772175	Sum of GTIs [s]
date	2012-06-23T06:30:00	Date and time of file creation	ontime5	25569.571692169	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	25569.530652165	Sum of GTIs [s]
			ontime7	25569.612732172	Sum of GTIs [s]
			ontime8	25569.489612162	Sum of GTIs [s]
			ontime9	25569.448572159	Sum of GTIs [s]
			l1events	371168	Number of level 1 events

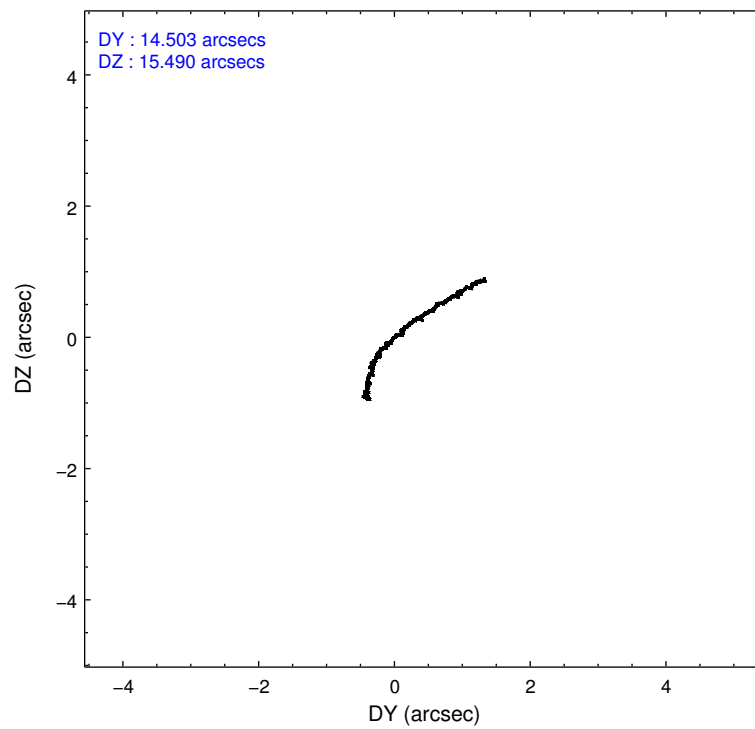
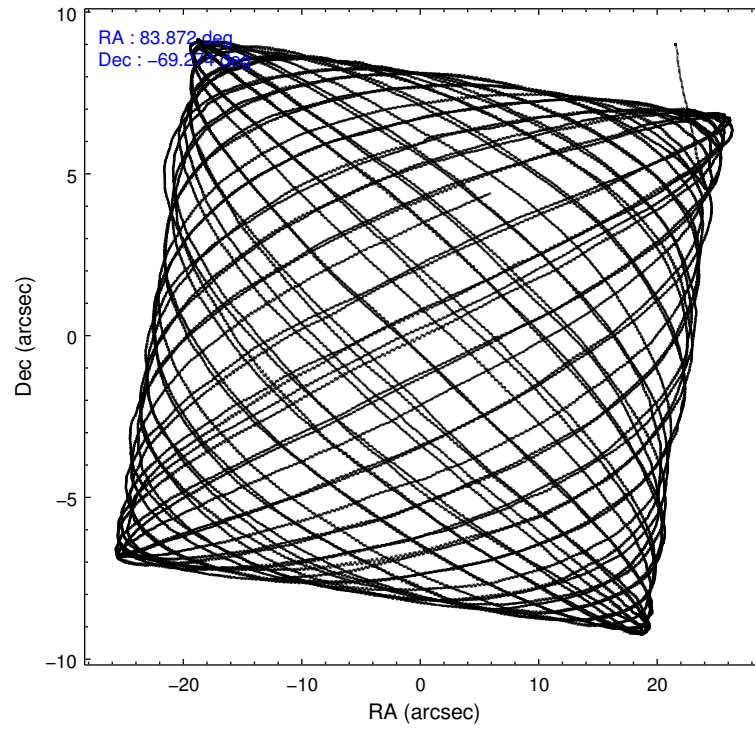
2.1.4 Events

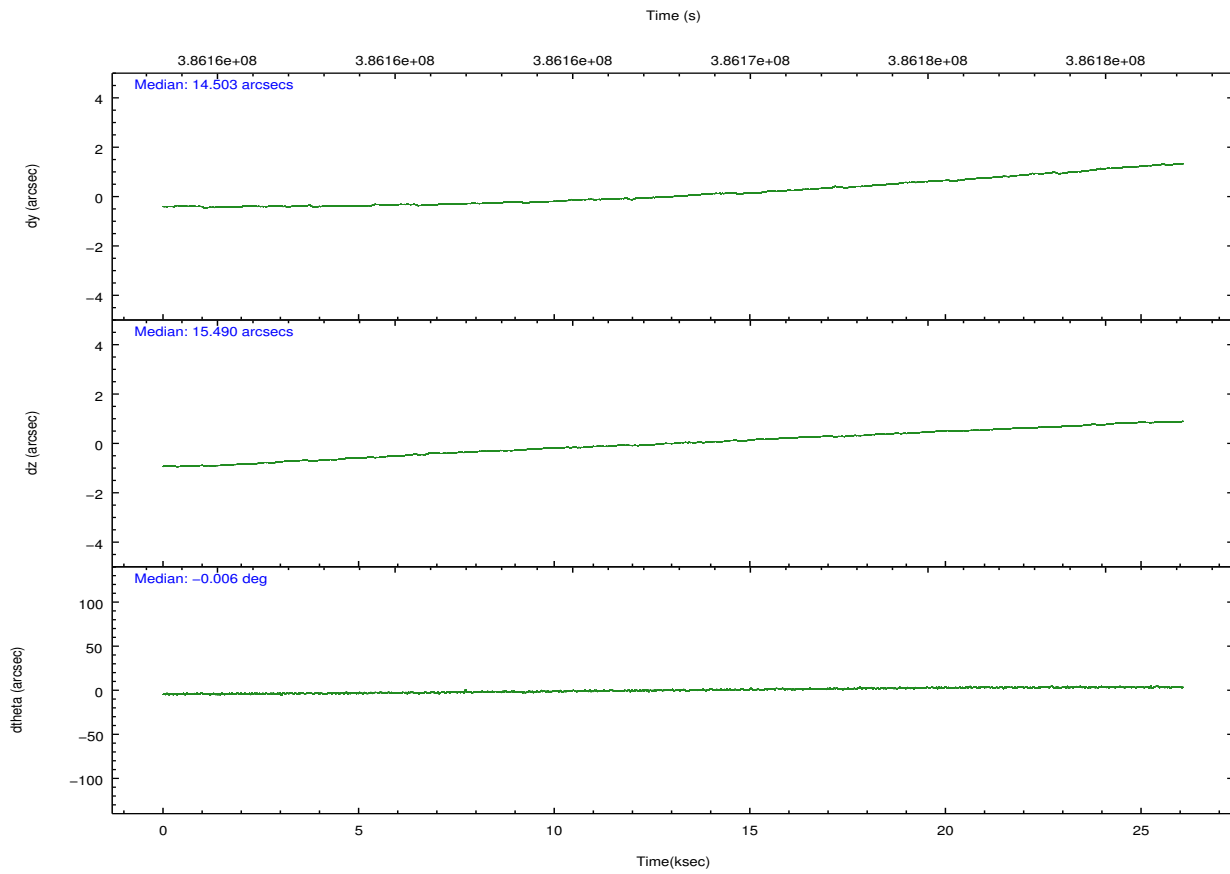
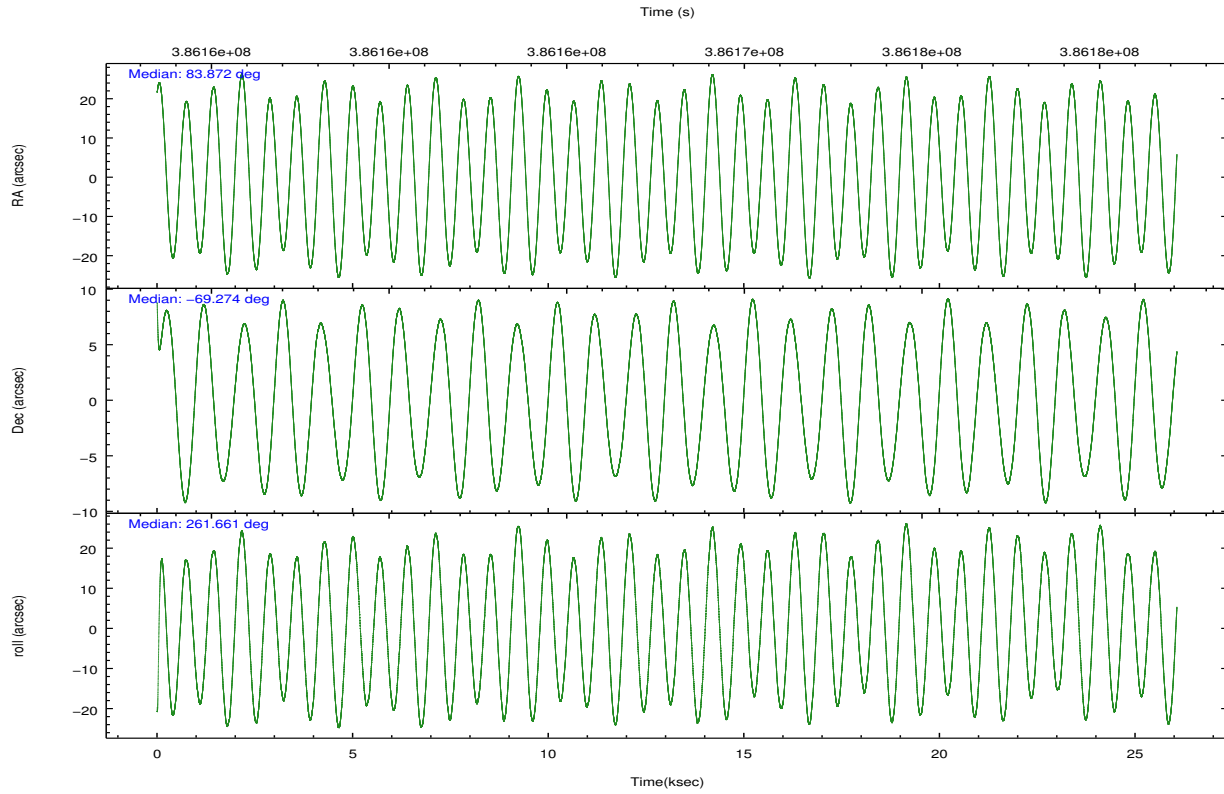
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	63110	66392	59112	53611	77486	51457	grade 0 events	2066	4922	3435	3738	5945	1809
rejected events	56657	29262	51123	23806	56274	45518		3%	7%	5%	6%	7%	3%
rejected %	89%	44%	86%	44%	72%	88%	grade 1 events	18	625	19	89	33	16
								0%	0%	0%	0%	0%	0%
							grade 2 events	1592	9802	1391	6689	4416	1165
								2%	14%	2%	12%	5%	2%
							grade 3 events	935	3056	1001	3374	2580	954
								1%	4%	1%	6%	3%	1%
							grade 4 events	848	2925	1026	3275	2380	935
								1%	4%	1%	6%	3%	1%
							grade 5 events	1589	6312	1624	5069	2427	1739
								2%	9%	2%	9%	3%	3%
							grade 6 events	1012	16425	1136	12732	5893	1077
								1%	24%	1%	23%	7%	2%
							grade 7 events	55050	22325	49480	18645	53812	43762
								87%	33%	83%	34%	69%	85%

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	83.842630	83.87207468462483	CCD I2 on	N	N
[deg] Pointing Dec	-69.248948	-69.27419443591066	CCD I3 on	N	N
[deg] Pointing Roll	261.477530	261.6616676823765	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)	386155354.184000	386153899.13989	Subarray row count	256	256
Observation start date	2010-03-28T09:21:28	2010-03-28T08:58:19	Alternating exposures requested	N	N
[s] Observation end time (MET)	386180854.184000	386181501.36629	[s] Primary exposure time	0.000000	1
Observation end date	2010-03-28T16:26:28	2010-03-28T16:38:21			
Read mode	TIMED	TIMED			

2.3 Aspect



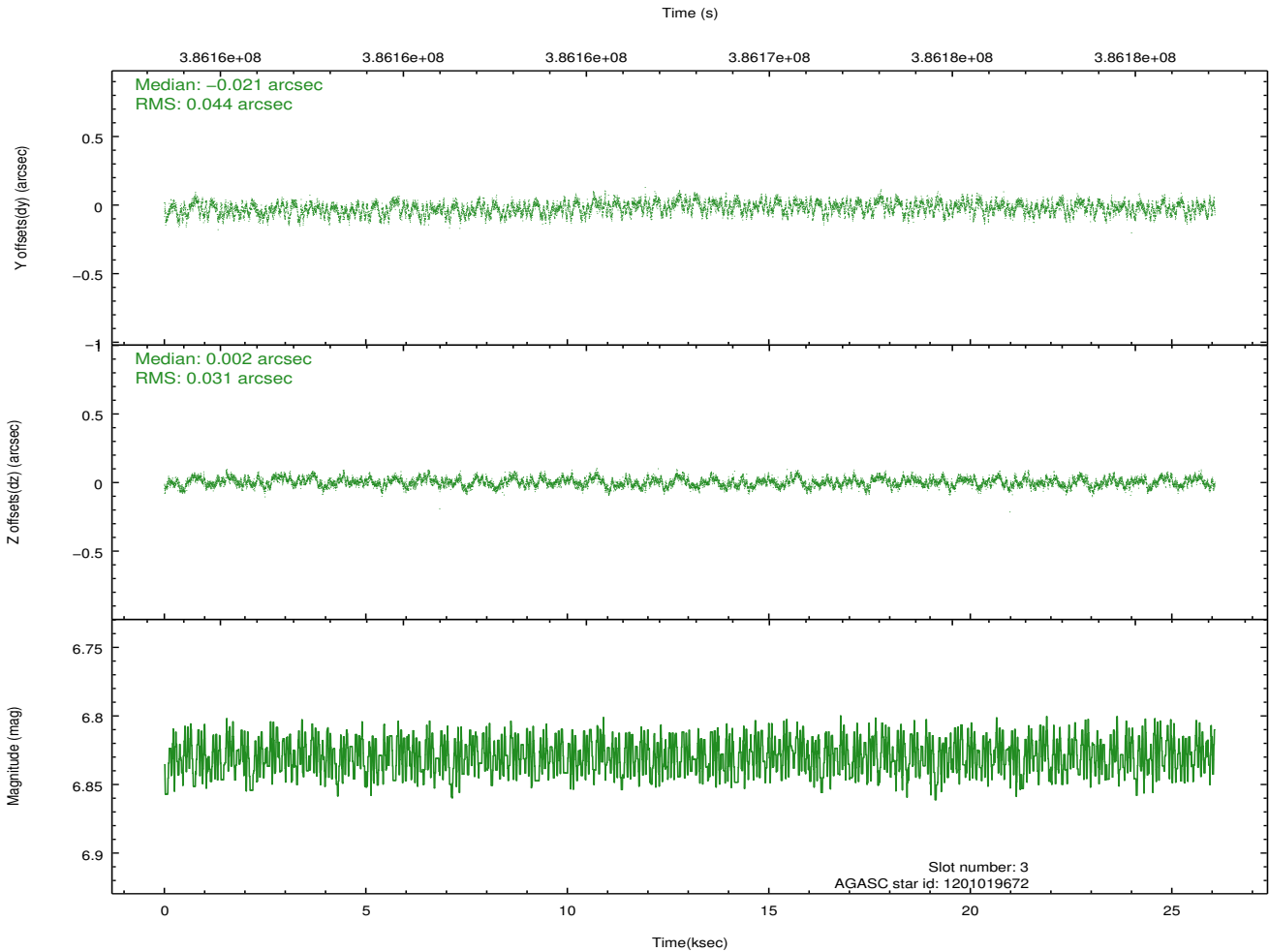
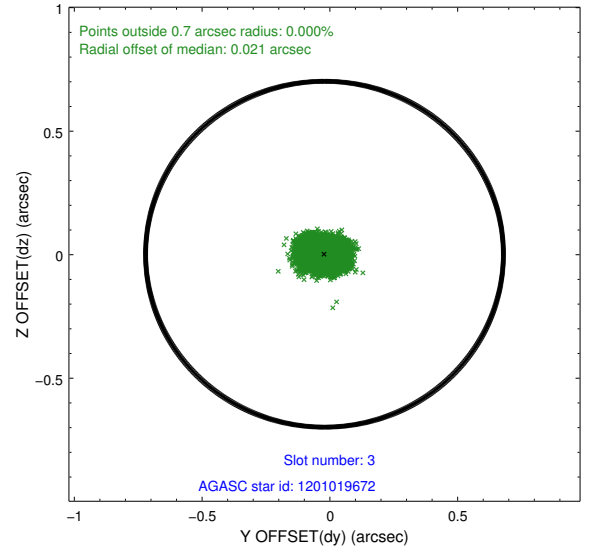
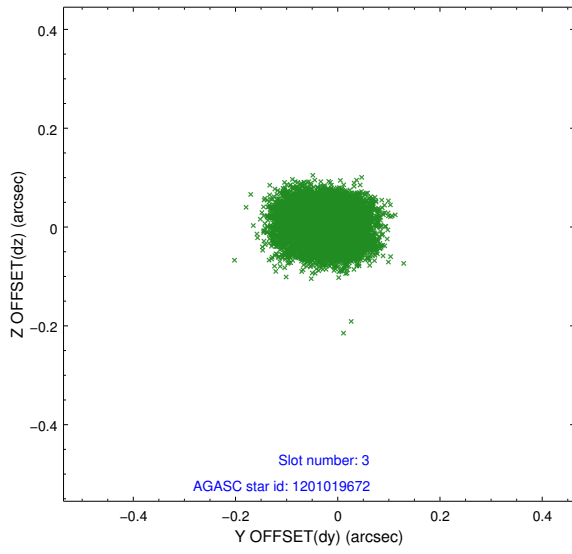


Slot Statistics

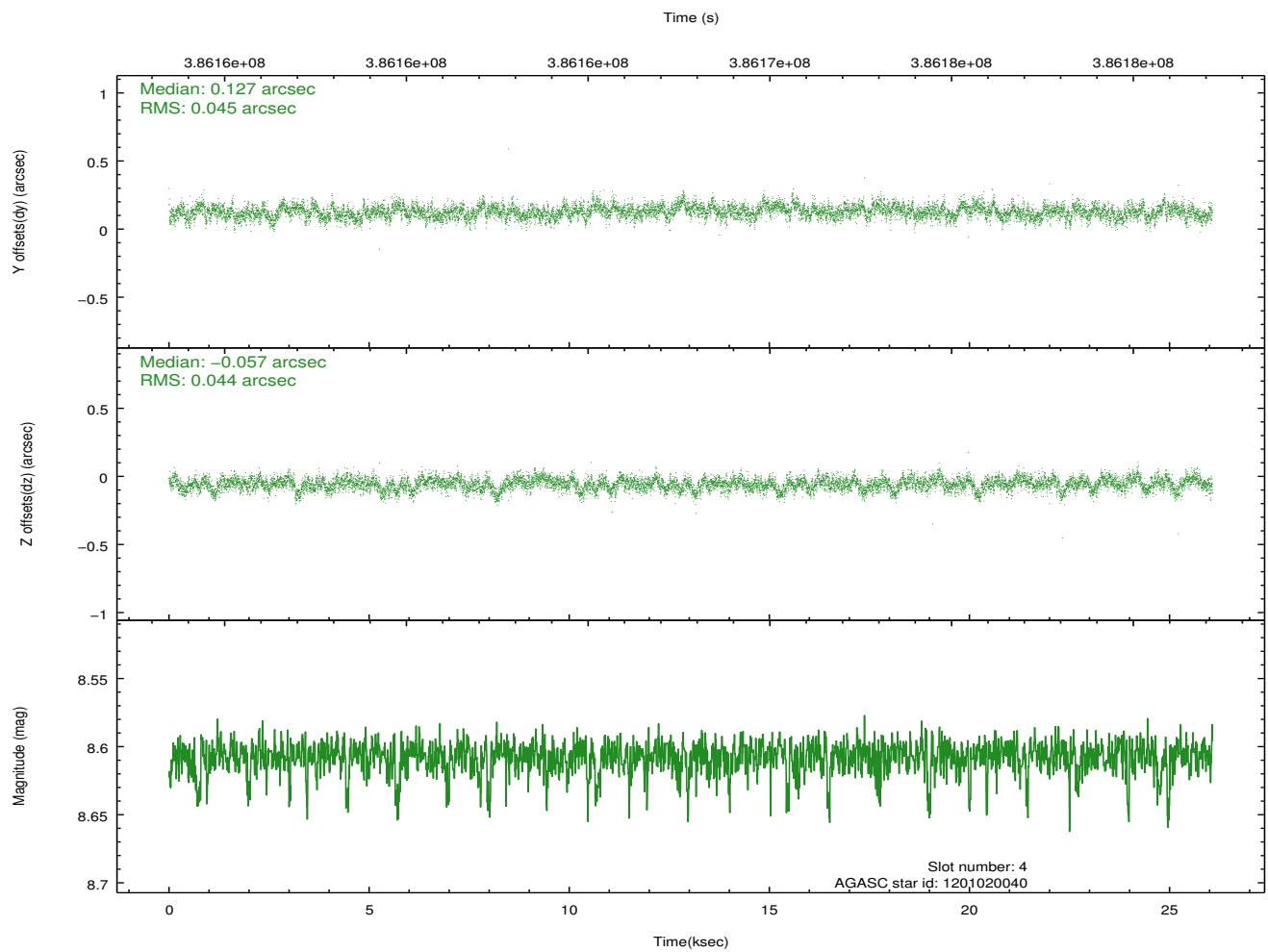
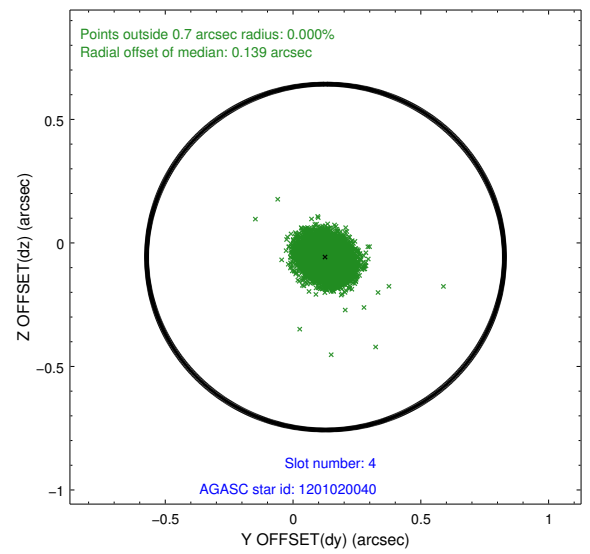
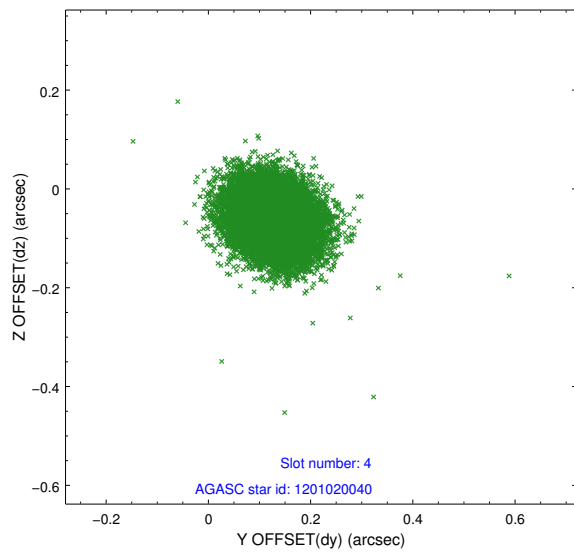
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.93	6357	0.098	0.154	0.016	0.029	0.000000	0.000000	929.14	-1905.78
1	FID	ACIS-S-2	6.85	6359	-0.184	-0.088	0.012	0.020	0.000000	0.000000	-766.98	-1910.74
2	FID	ACIS-S-6	7.15	6358	0.064	-0.067	0.014	0.027	0.000000	0.000000	394.68	635.18
3	GUIDE	1201019672	6.83	12717	-0.021	0.002	0.058	0.091	85.312192	-68.770187	-1965.67	1642.64
4	GUIDE	1201020040	8.61	12708	0.127	-0.057	0.067	0.108	85.379163	-68.879396	-1586.34	1777.84
5	GUIDE	1201540776	9.57	12700	0.009	-0.019	0.113	0.183	85.107945	-69.858480	1953.71	1879.10
6	GUIDE	1201410616	9.32	12670	-0.053	0.130	0.115	0.181	82.516808	-69.784406	2168.66	-1342.23
7	GUIDE	1201542672	8.20	12712	-0.058	-0.056	0.065	0.103	84.492488	-69.957531	2406.55	1172.01

2.4 Star Slots

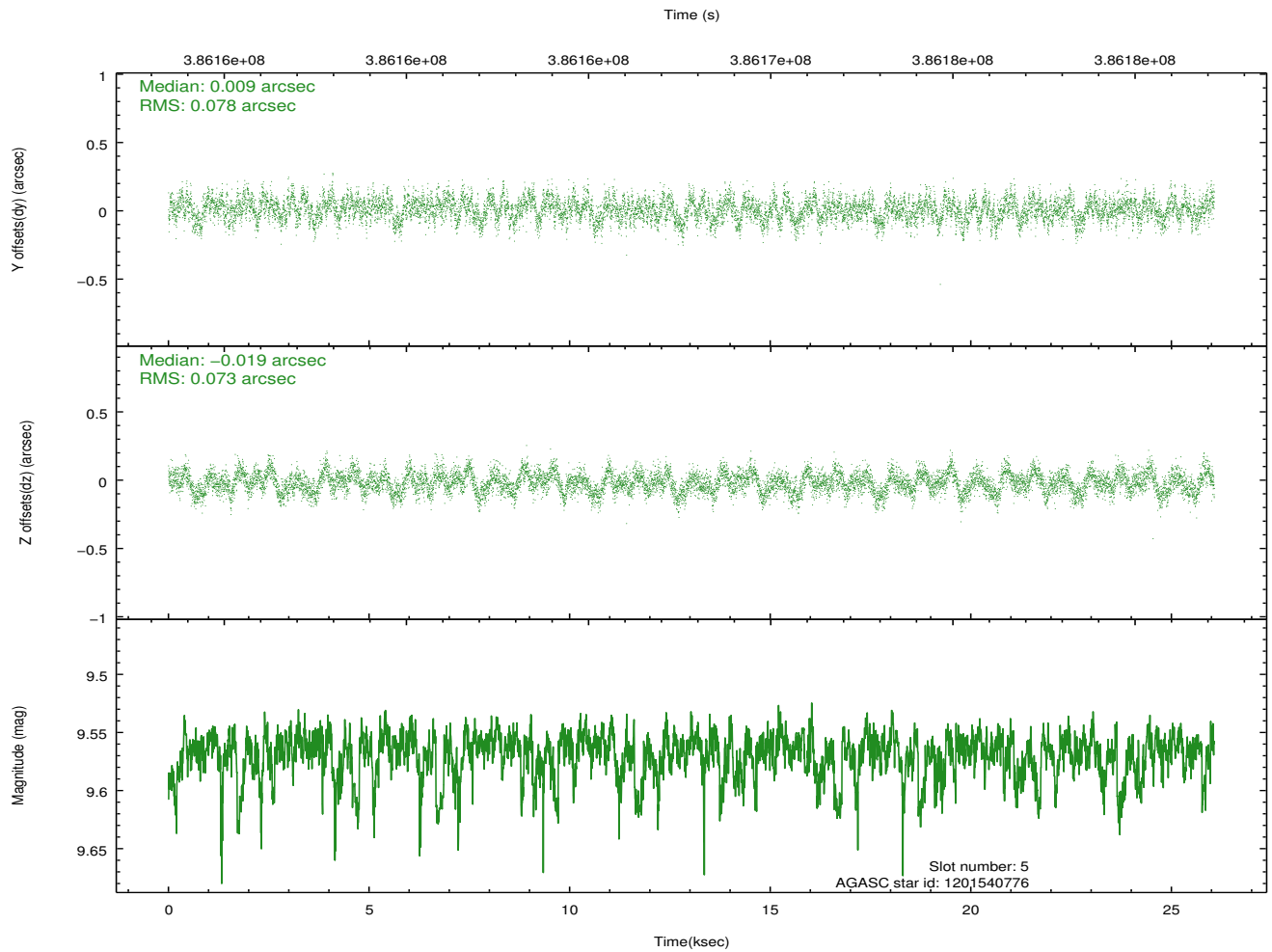
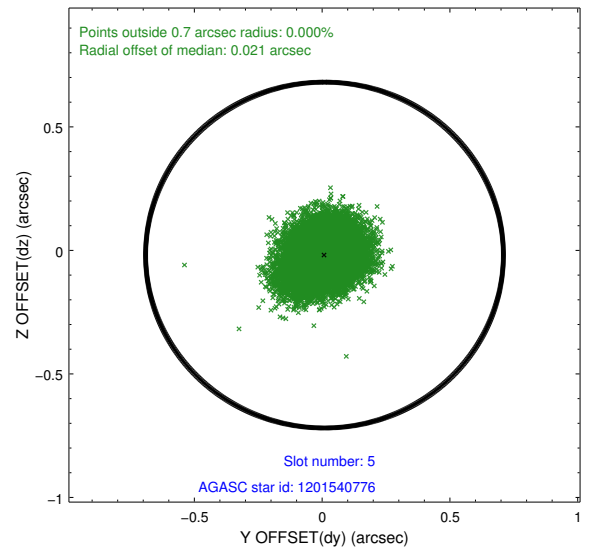
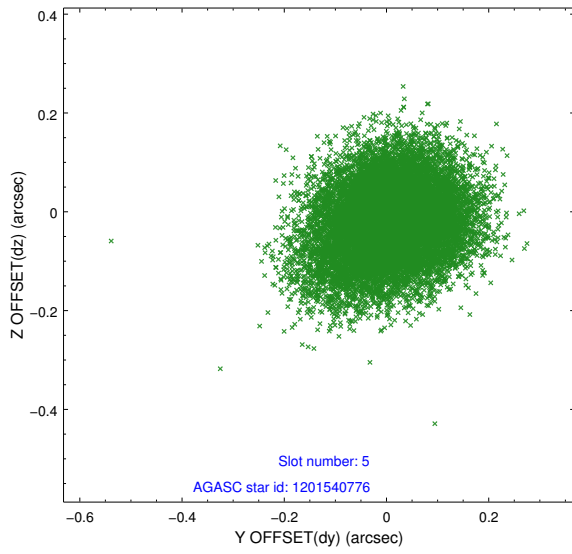
2.4.1 Slot 3



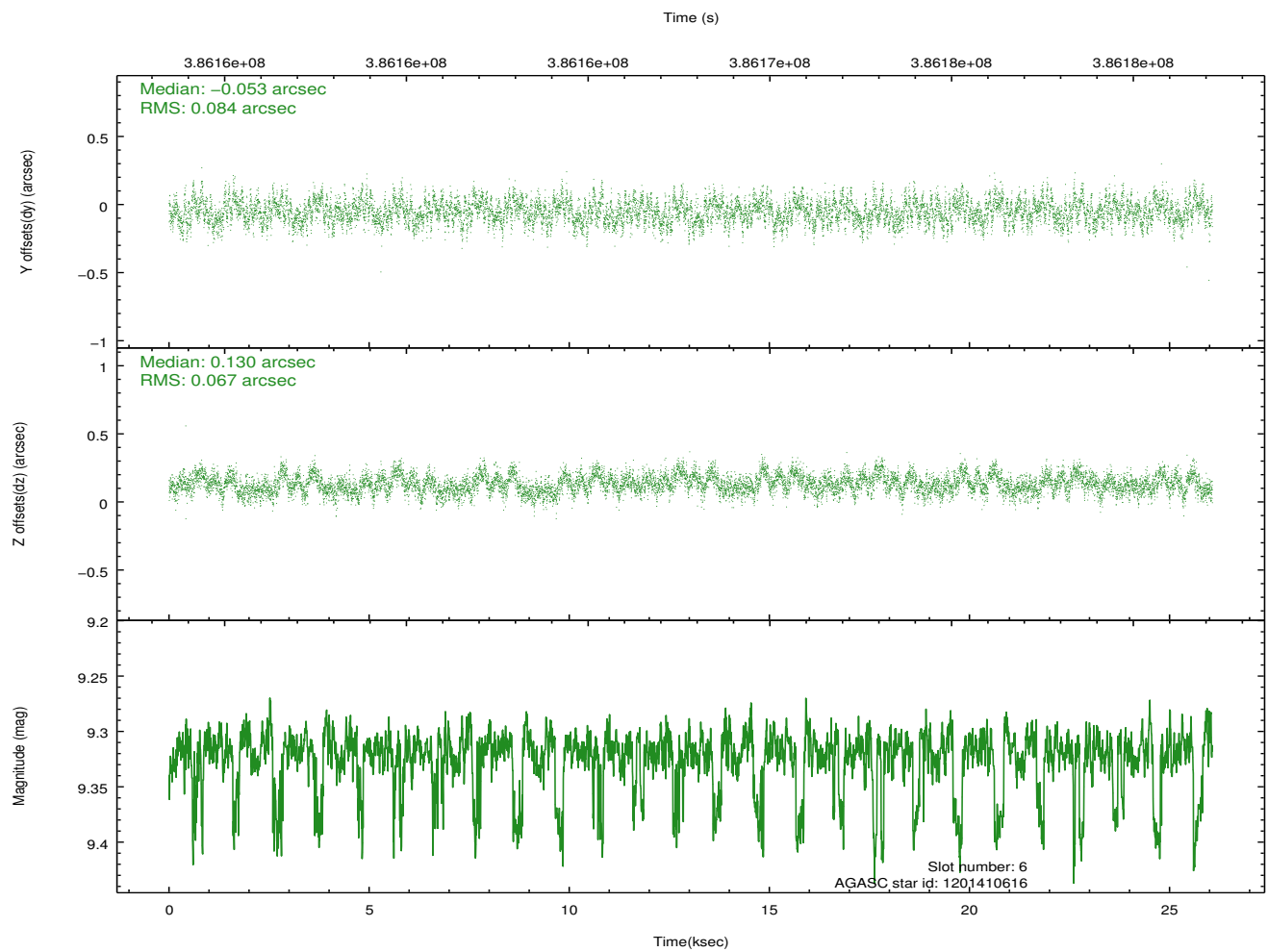
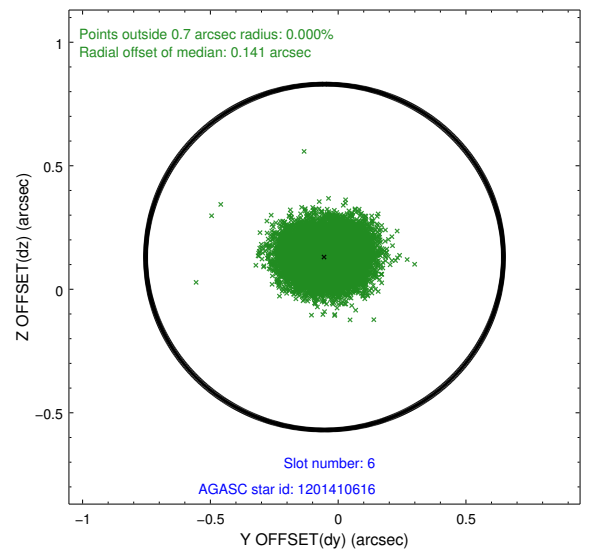
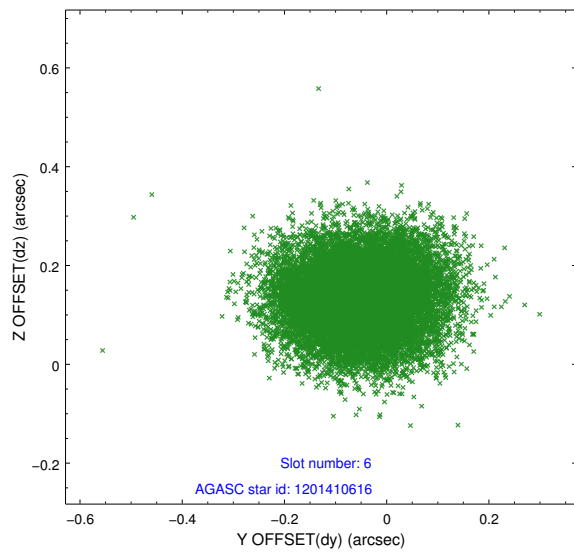
2.4.2 Slot 4



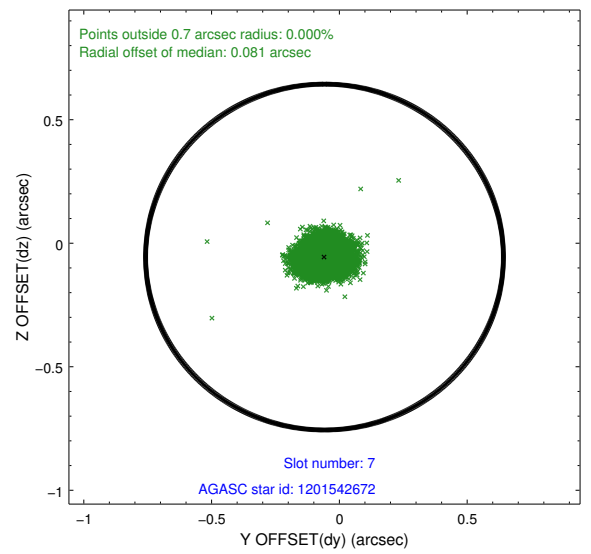
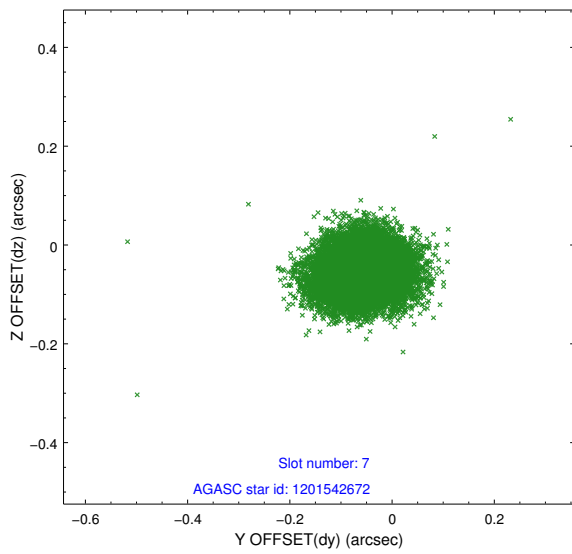
2.4.3 Slot 5



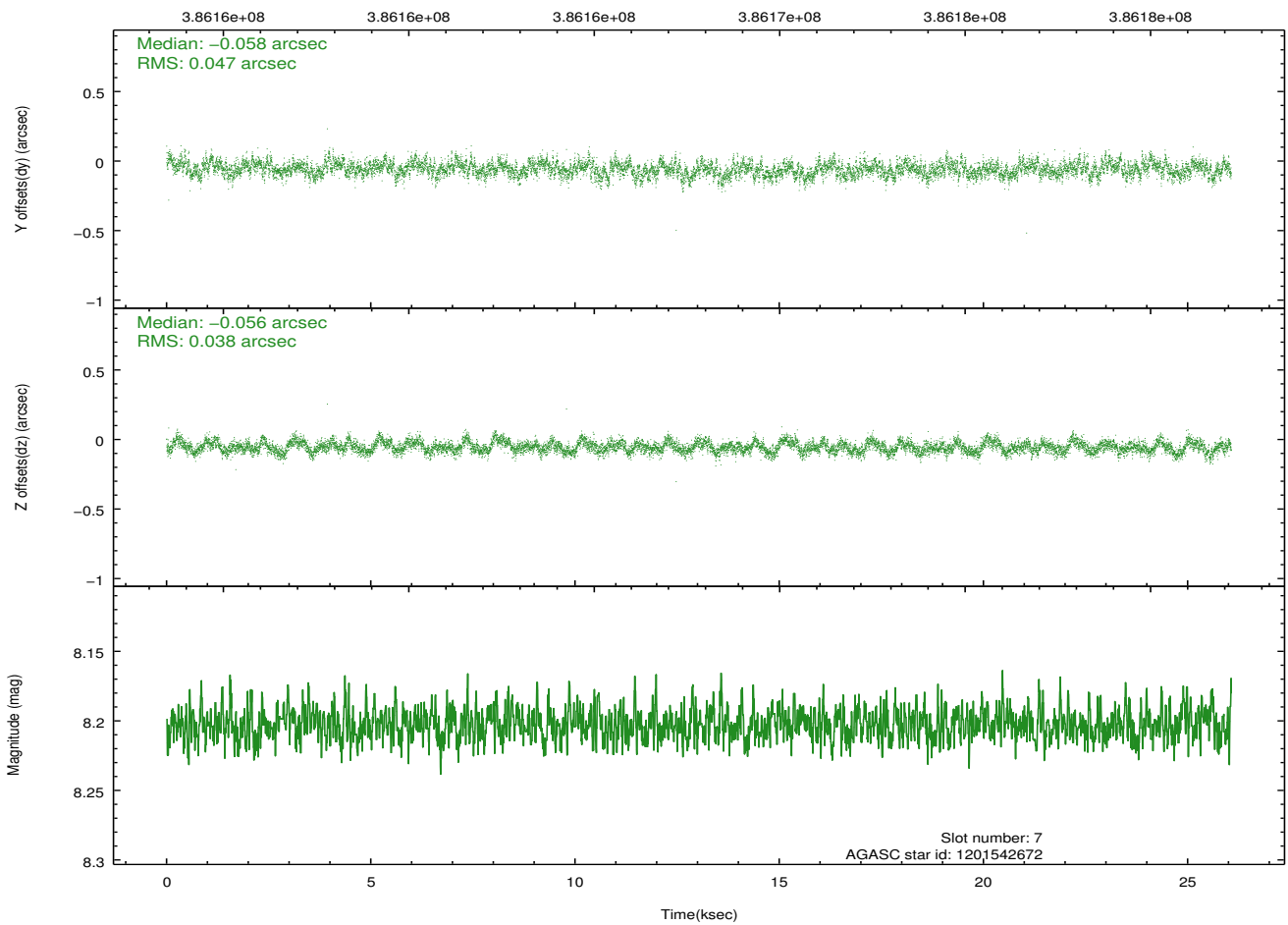
2.4.4 Slot 6



2.4.5 Slot 7

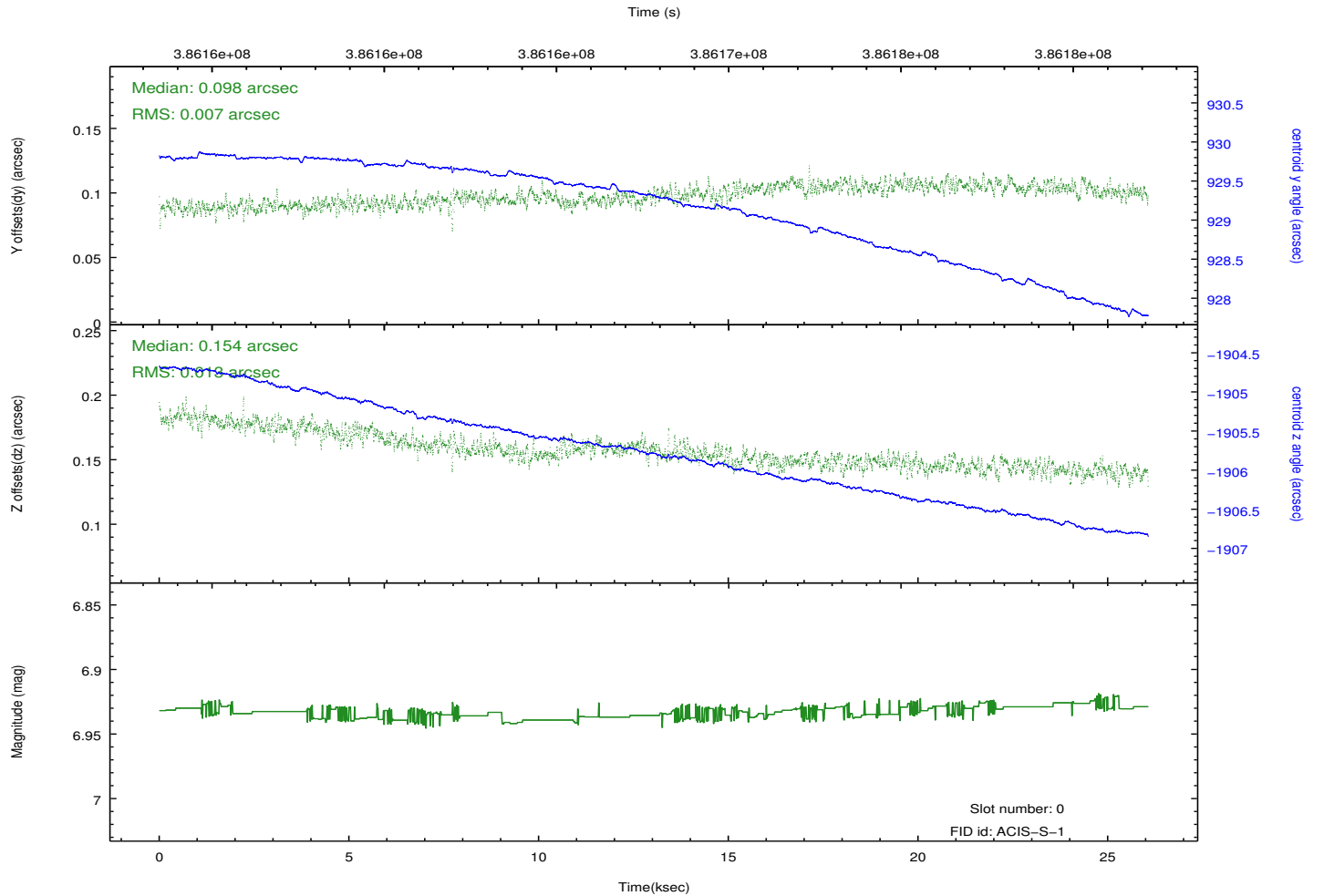
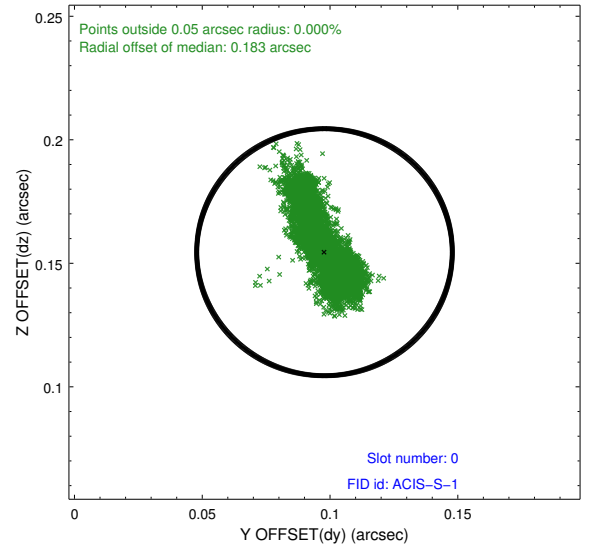
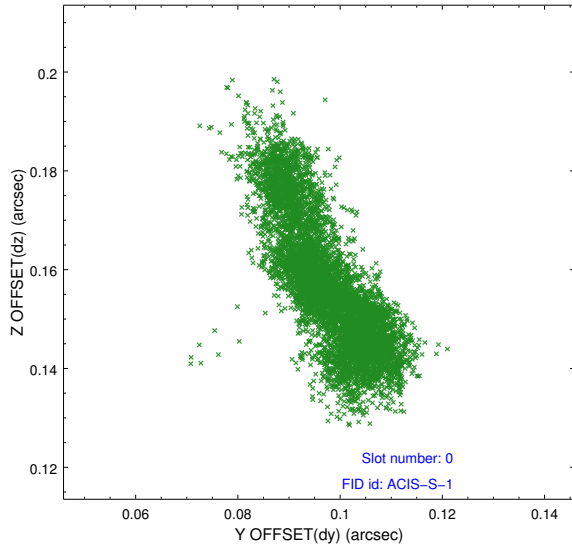


Time (s)

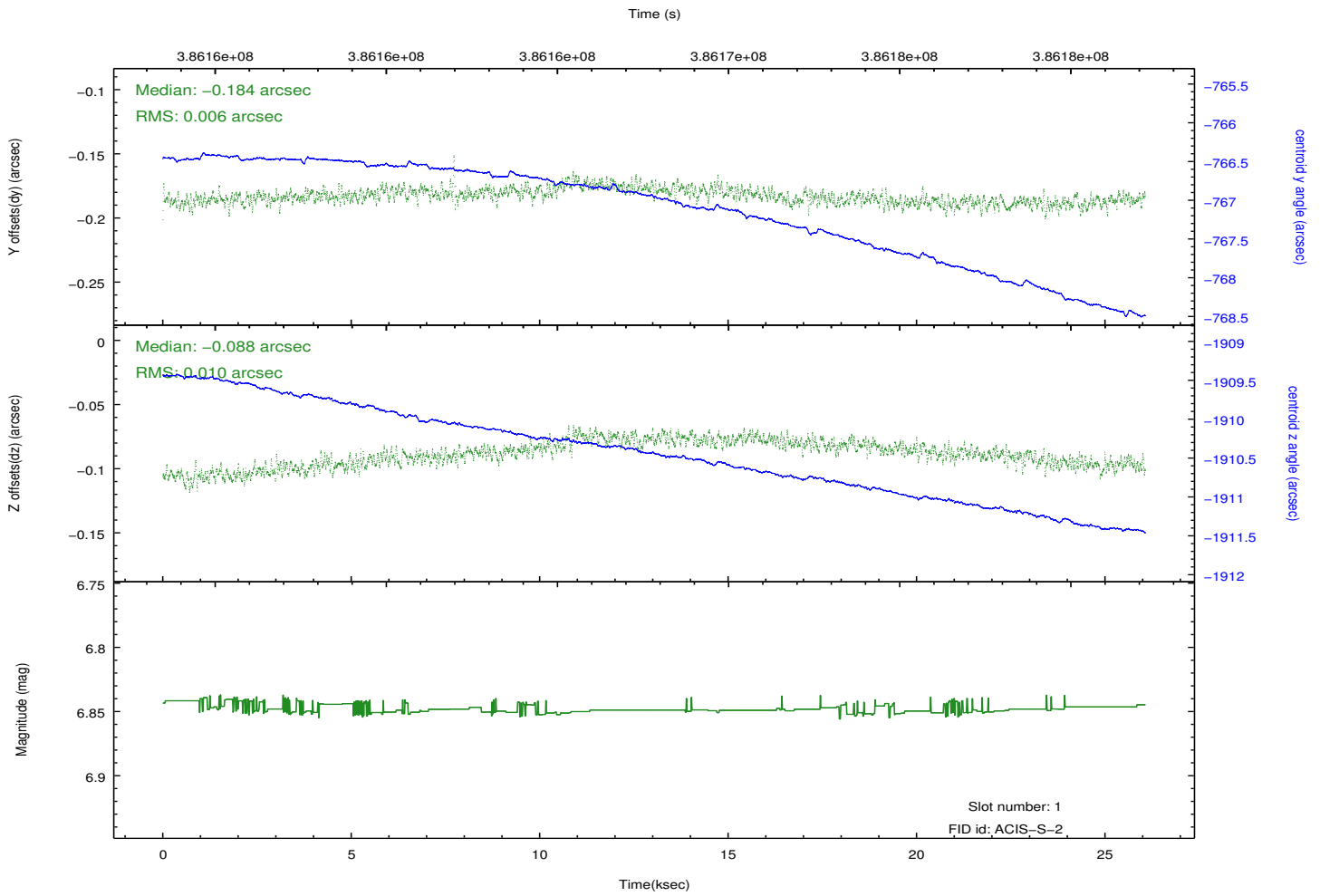
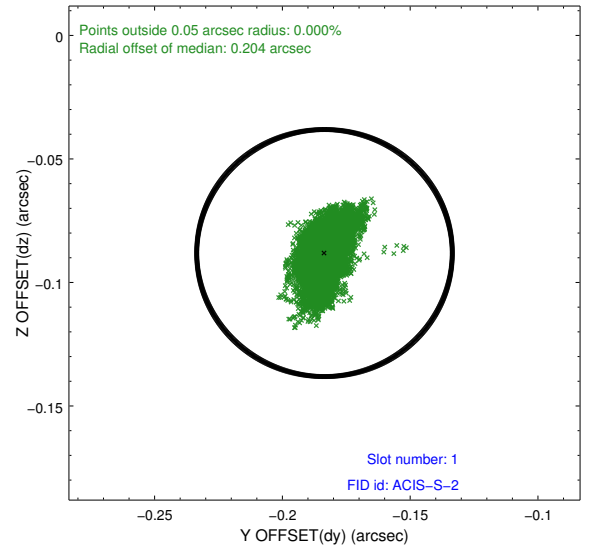
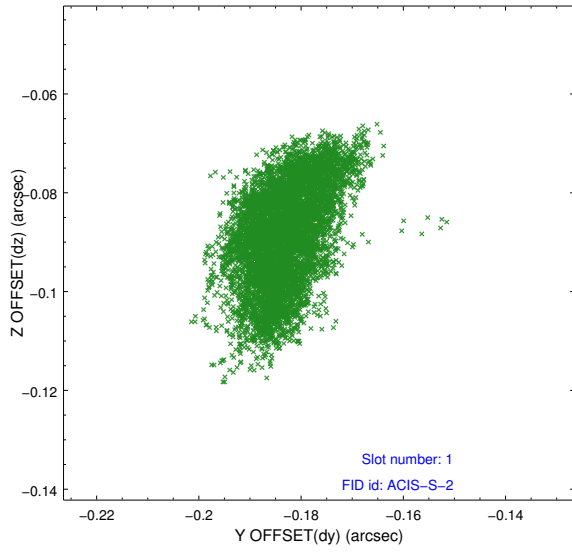


2.5 FID Slots

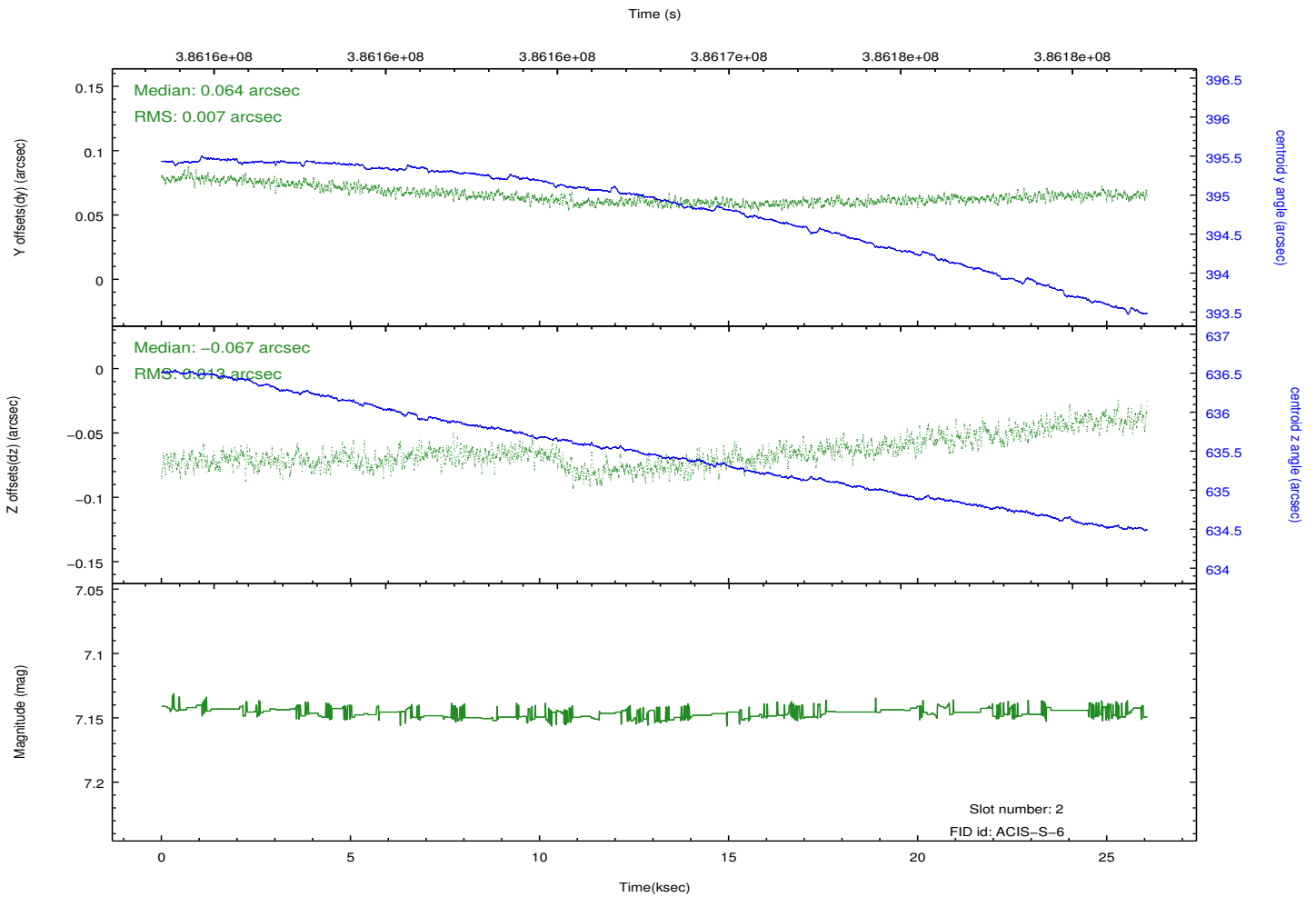
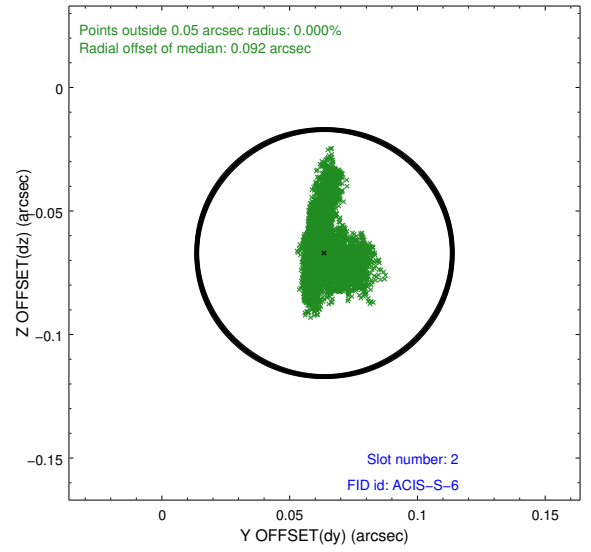
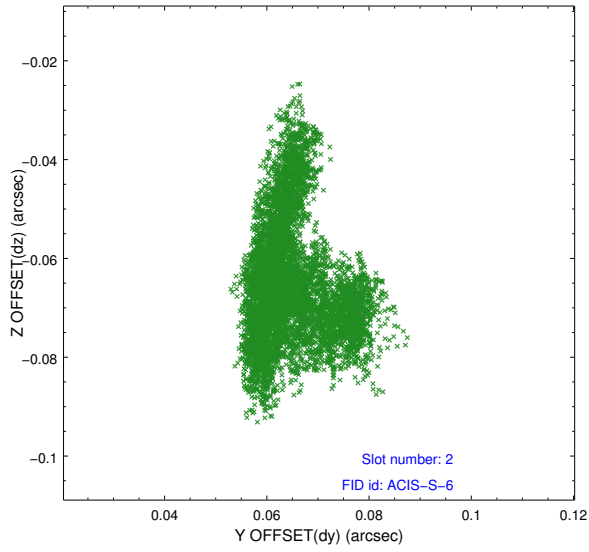
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

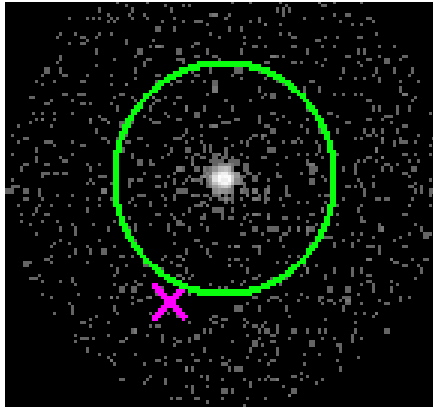


3 Gratings

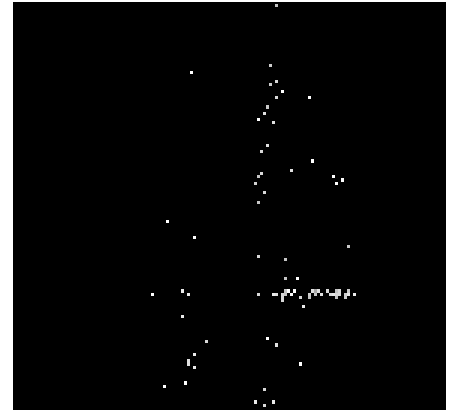
3.1 HEG Arm



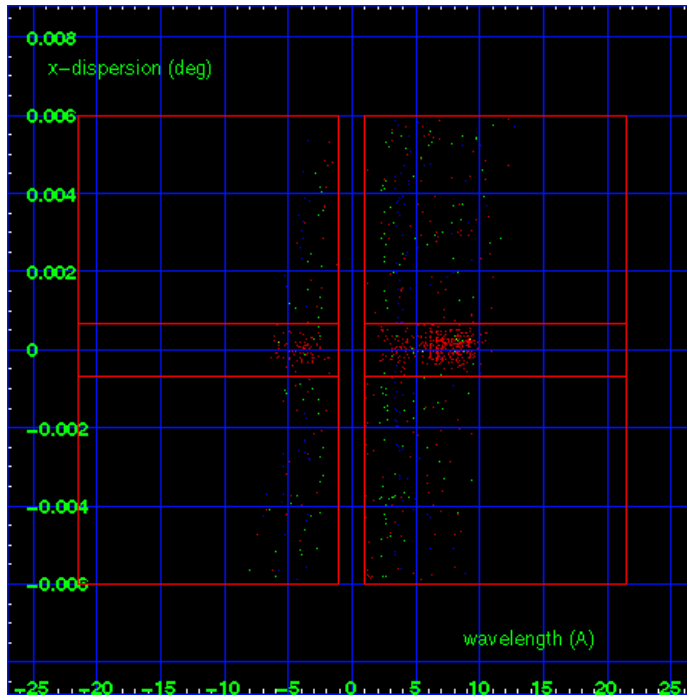
HEG Order Sort 123



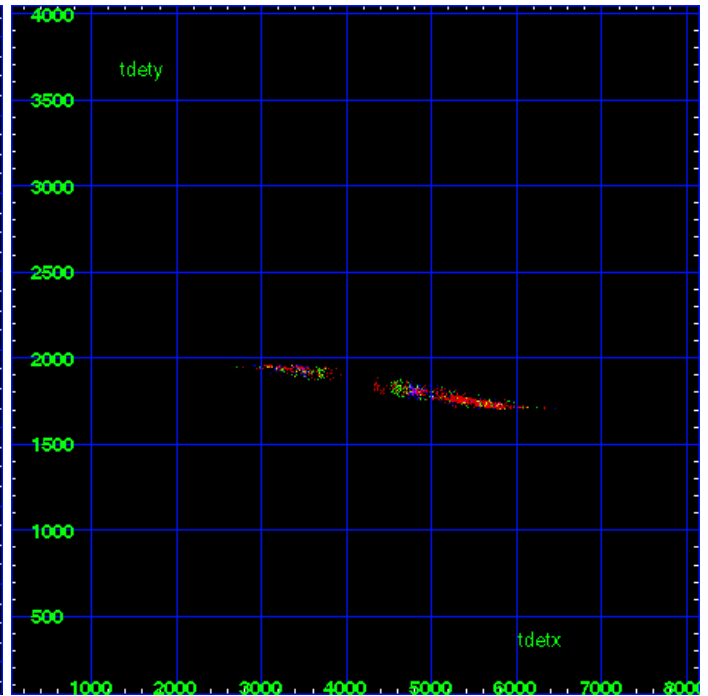
HEG Zero Order



HEG Order Sort ALL

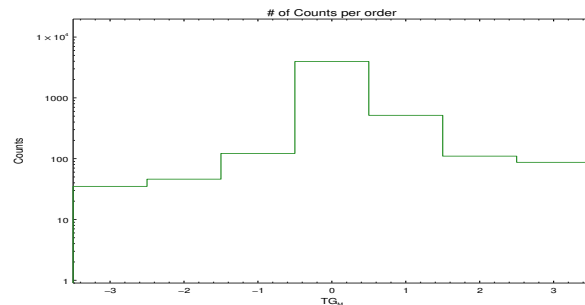


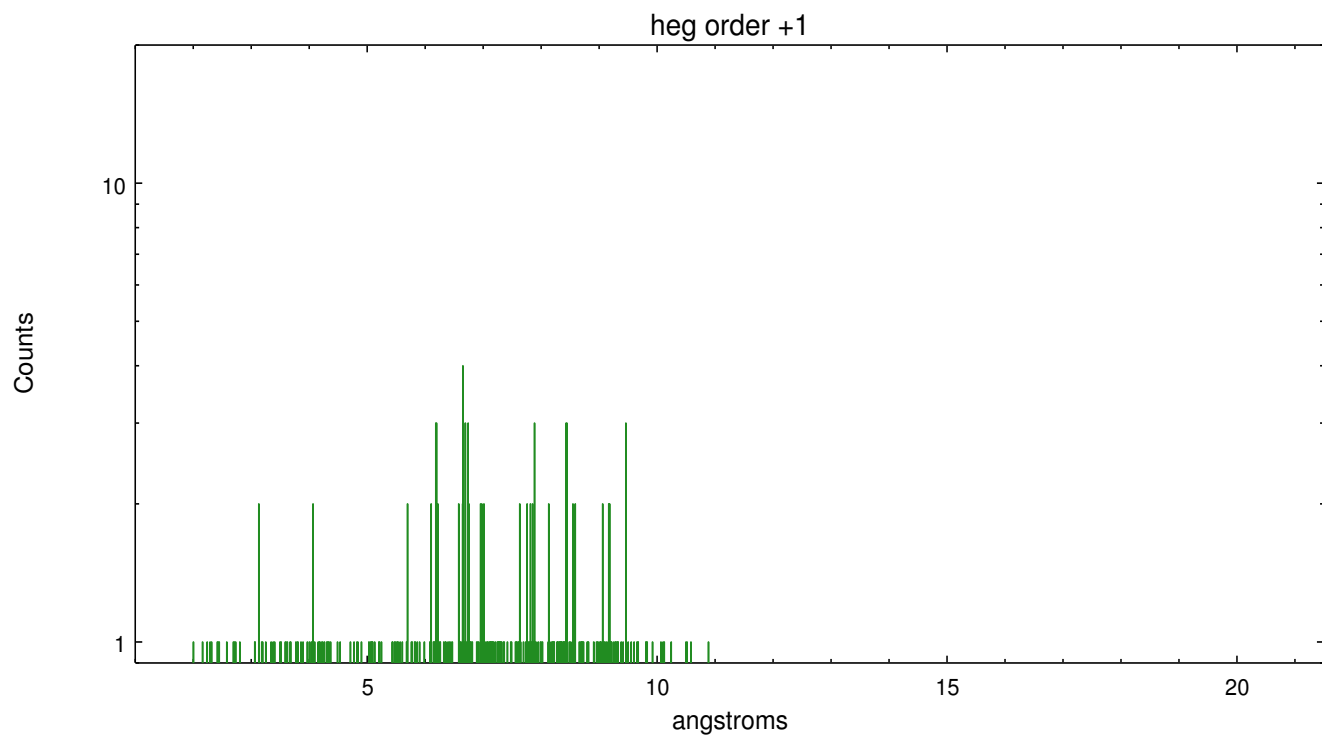
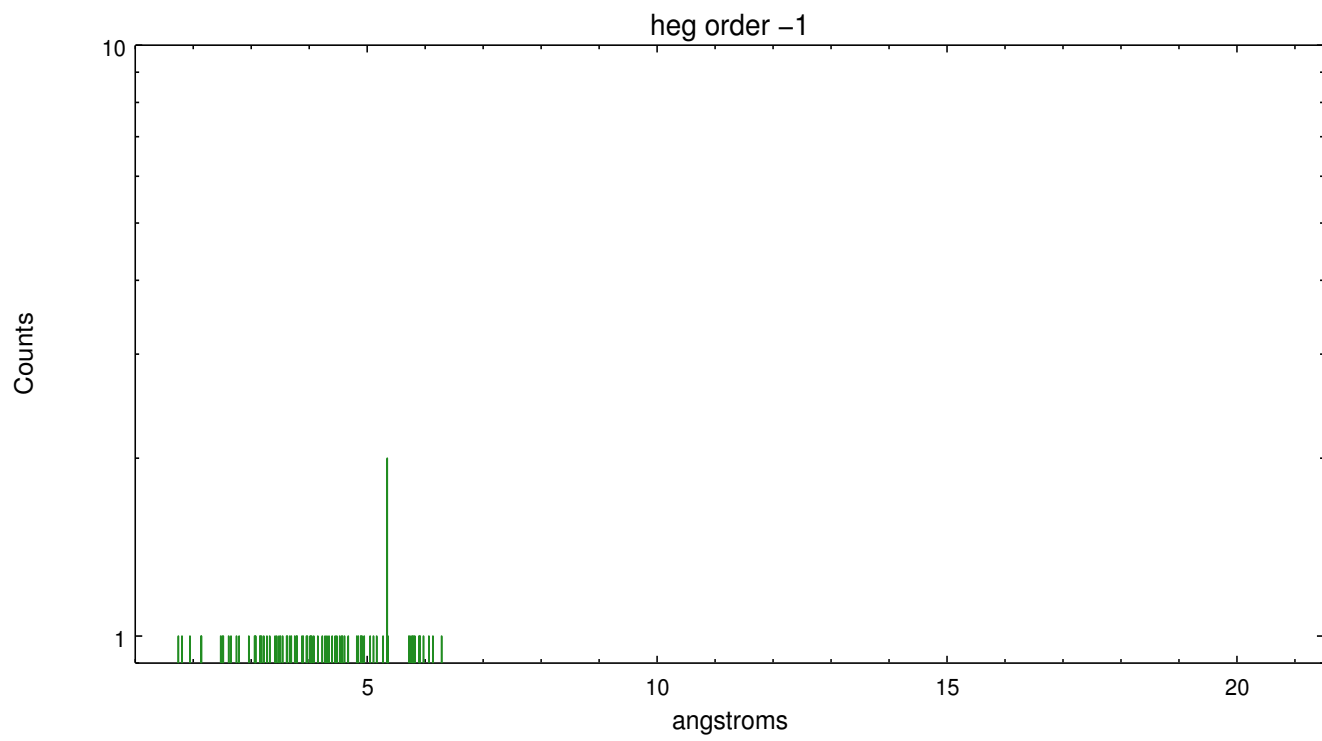
Spot Image HEG



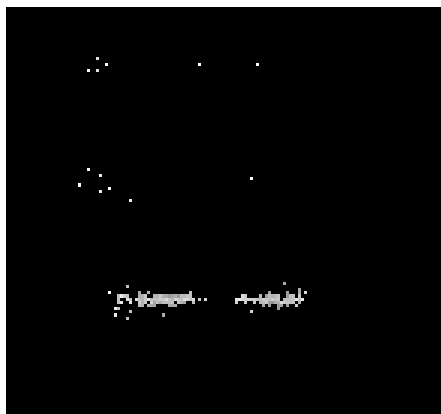
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	35	46	122	3956	516	110	87

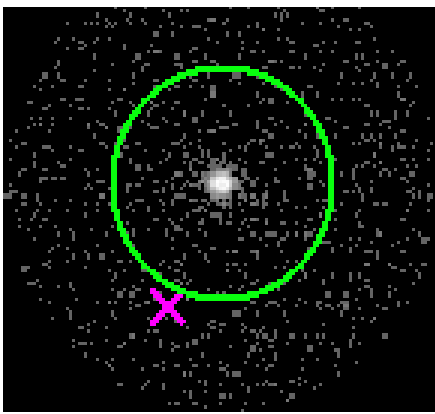




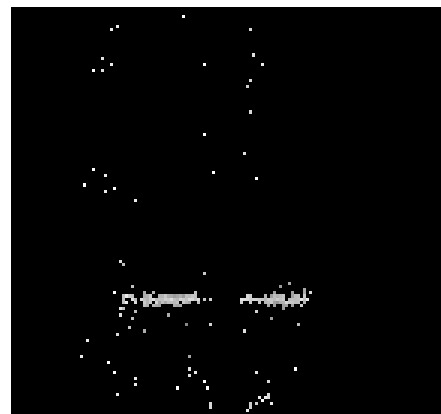
3.2 MEG Arm



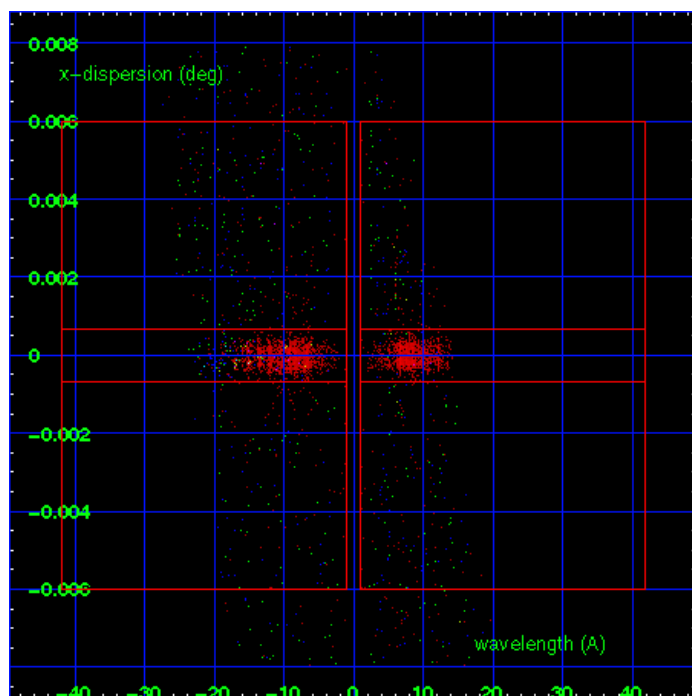
MEG Order Sort 123



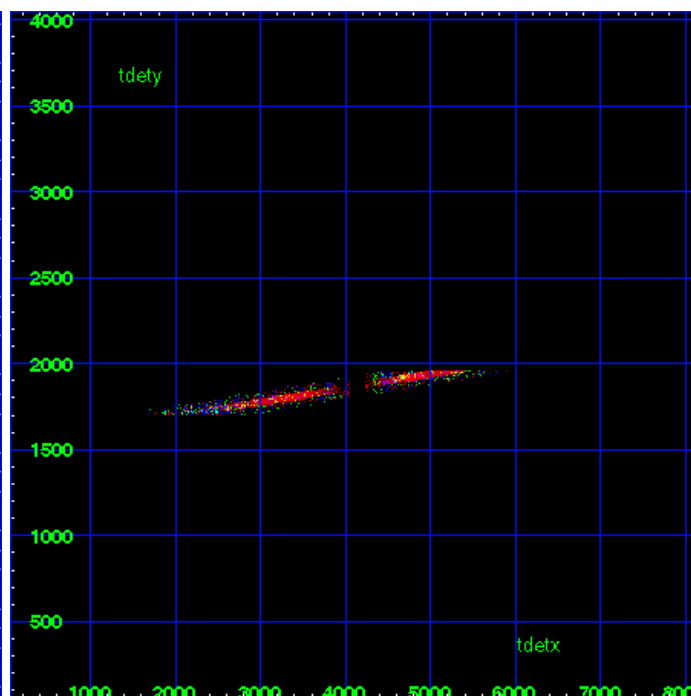
MEG Zero Order



MEG Order Sort ALL

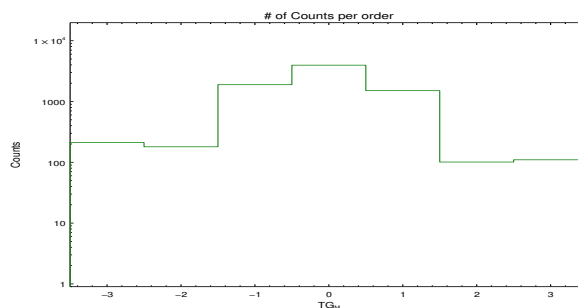


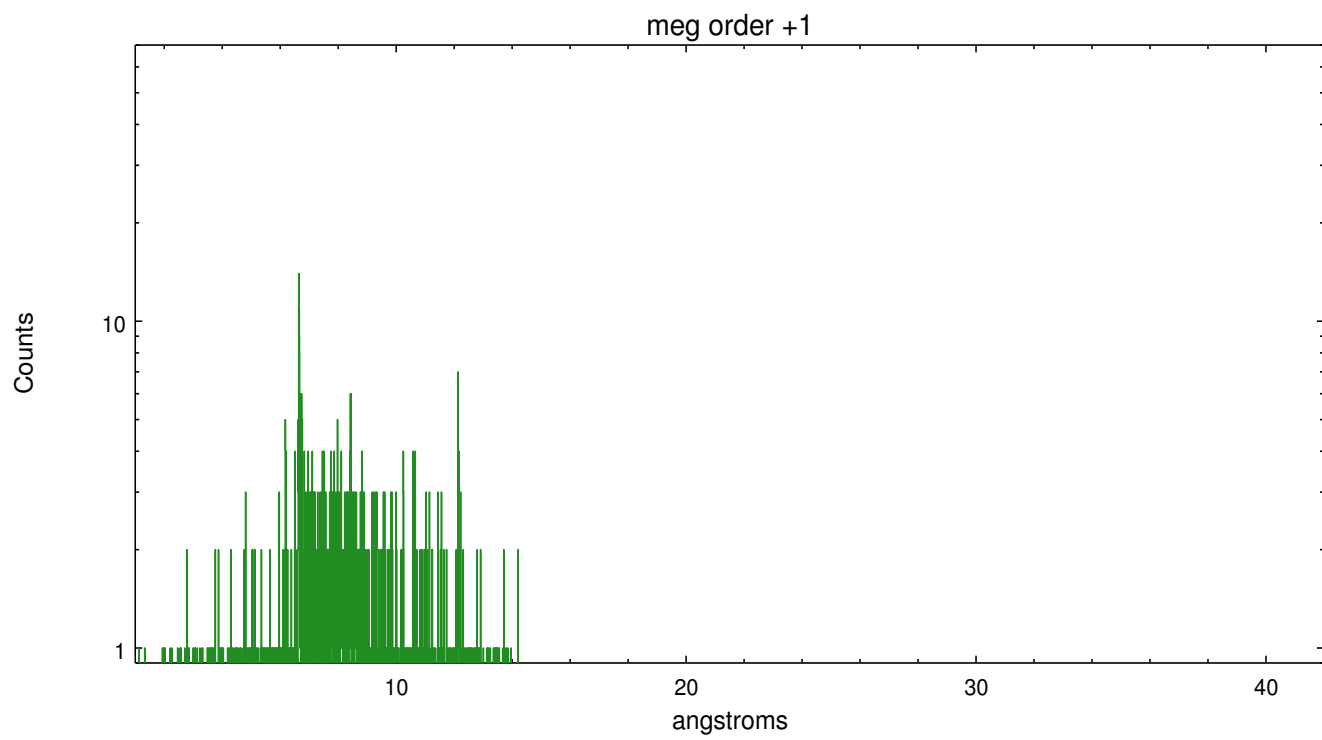
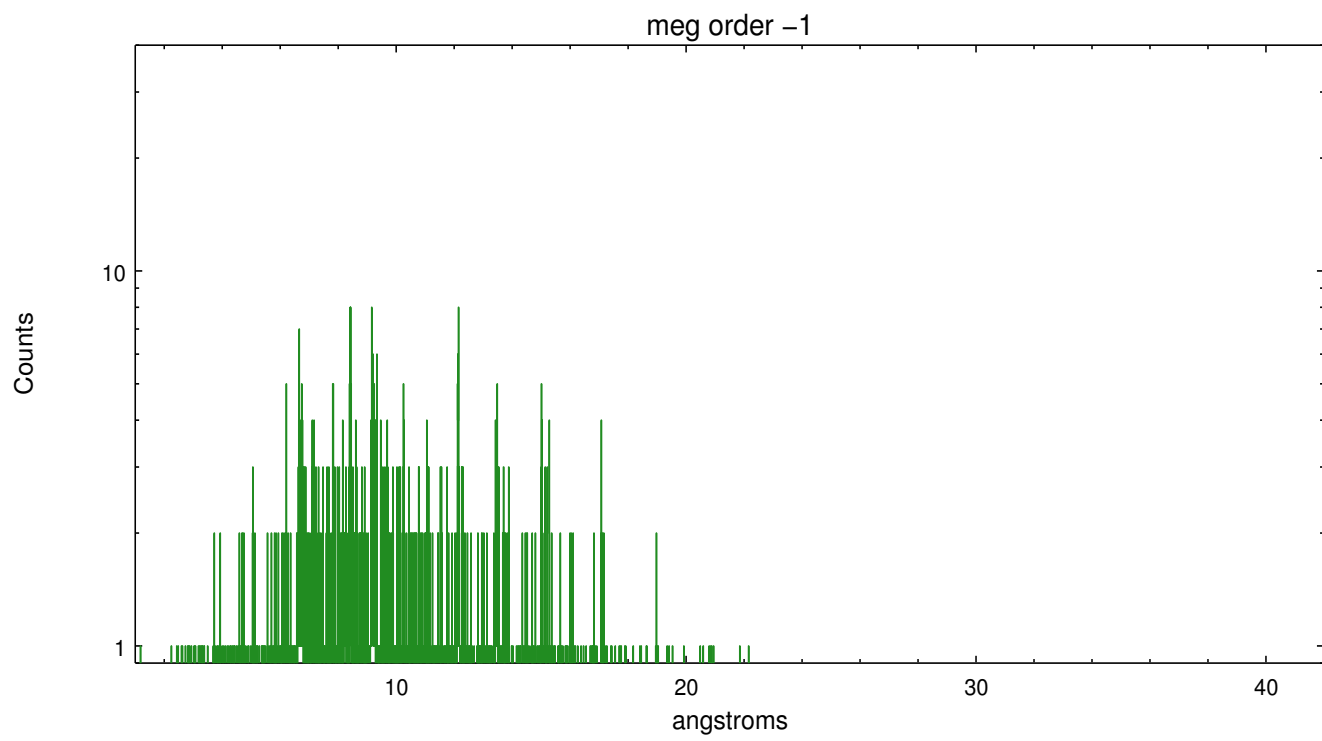
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	211	180	1893	3956	1509	101	110





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	25.569612731934

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. ====