

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 705 - L2 Version 5
Chandra X-Ray Center

L2 Processing Date : Aug 24 2012

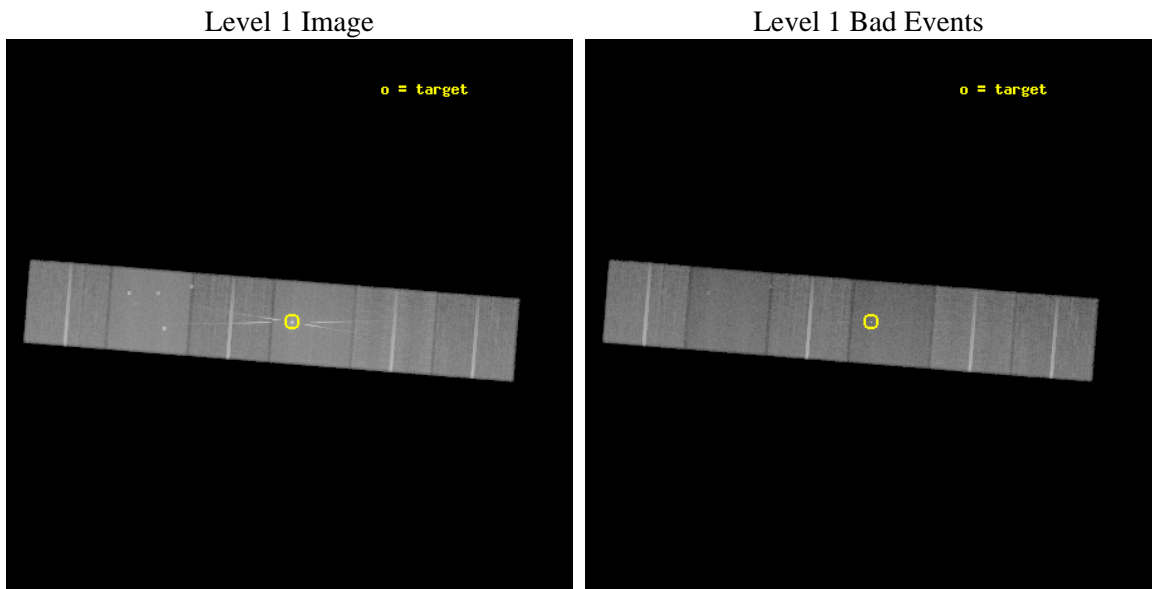
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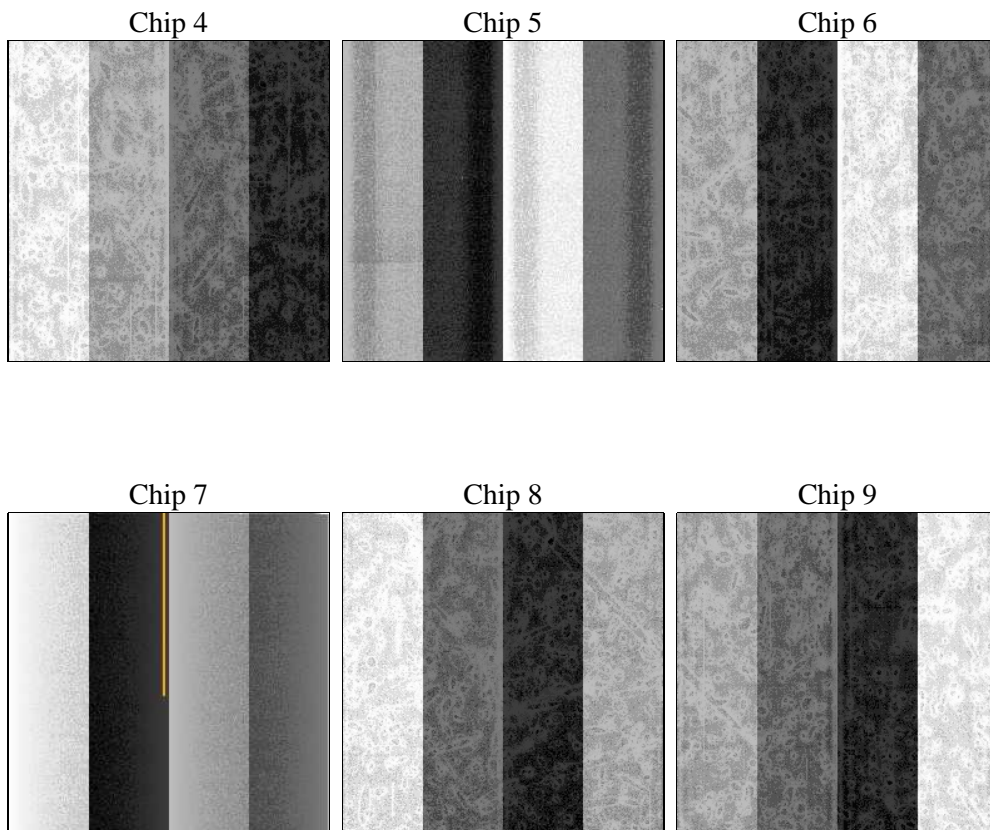
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	40000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	39685.218131259	Sum of GTIs [s]
caldbver	4.5.1.1	 	ontime4	39678.777220875	Sum of GTIs [s]
date	2012-08-24T04:54:27	Date and time of file creation	ontime5	39685.177091256	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	39678.65410088	Sum of GTIs [s]
			ontime7	39685.218131259	Sum of GTIs [s]
			ontime8	39678.612931252	Sum of GTIs [s]
			ontime9	39681.813011035	Sum of GTIs [s]
			l1events	2066250	Number of level 1 events

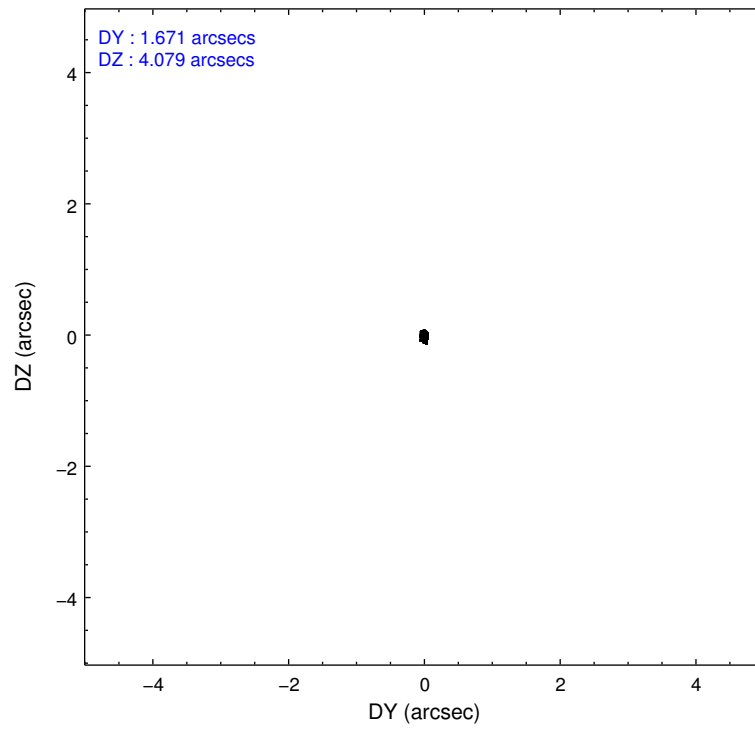
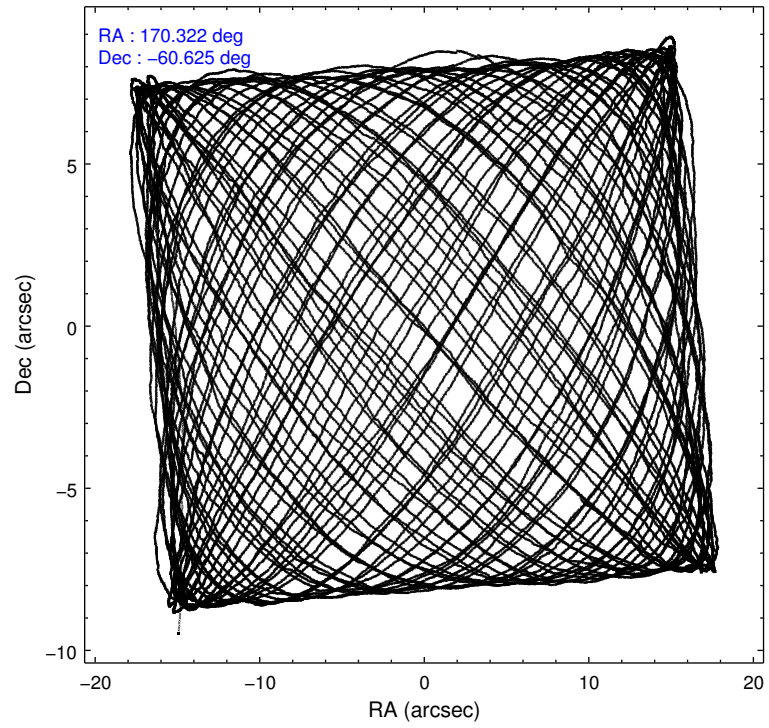
2.1.4 Events

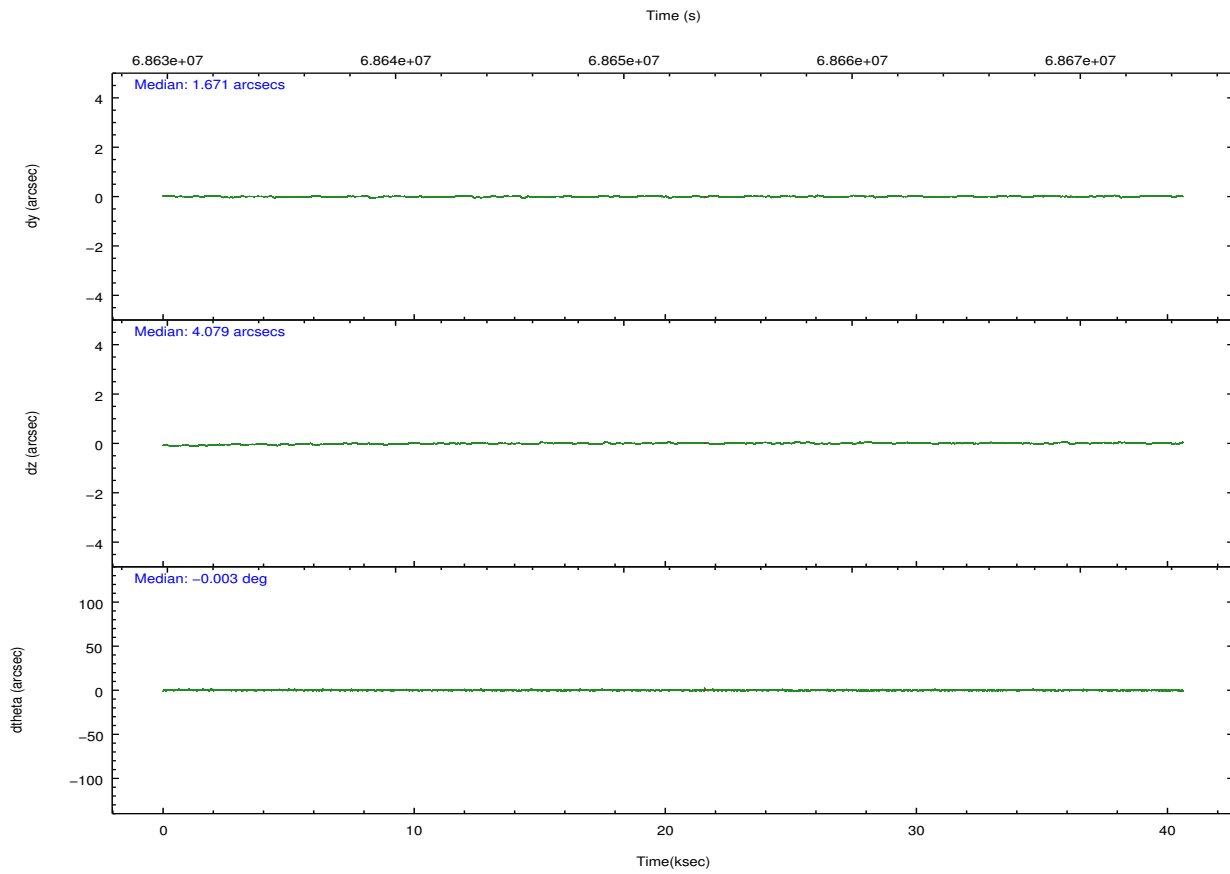
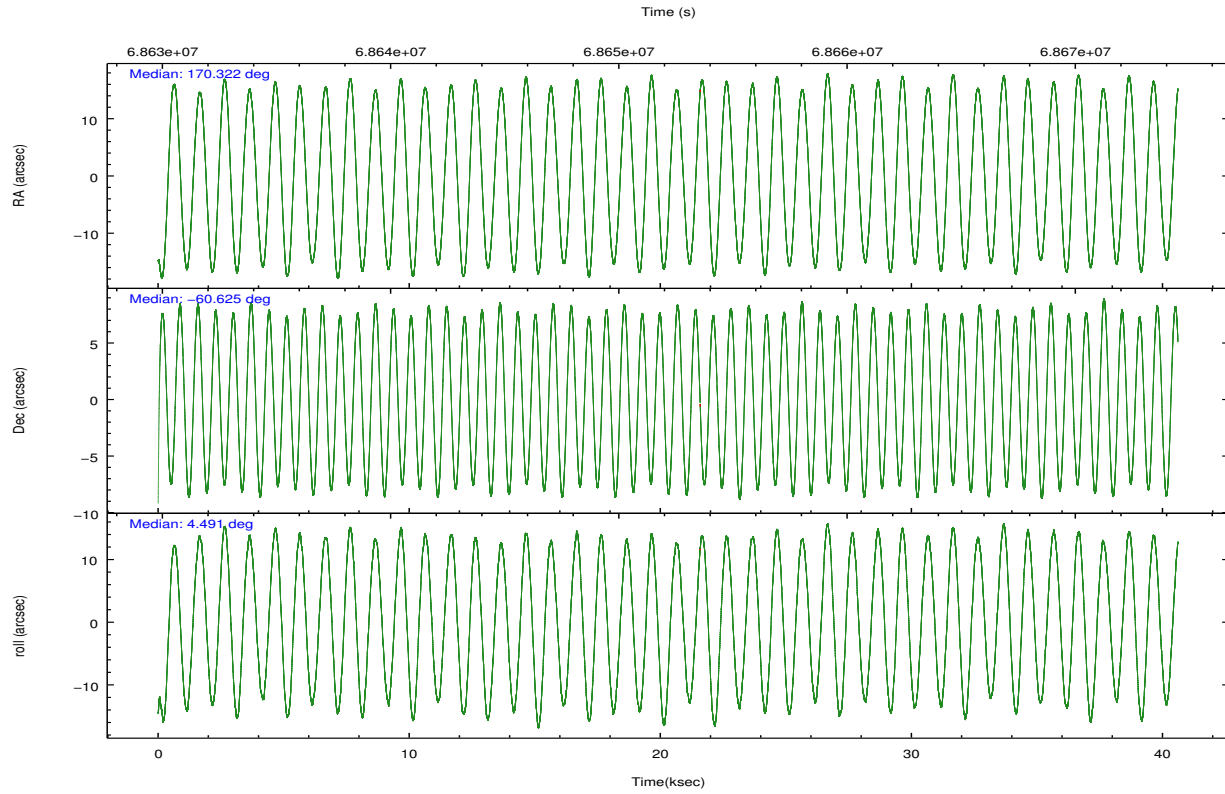
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	328952	374011	317173	385783	372183	288148	grade 0 events	13533	18661	25961	24194	25235	13229
rejected events	296674	200531	265599	196190	299244	256108		4%	4%	8%	6%	6%	4%
rejected %	90%	53%	83%	50%	80%	88%	grade 1 events	154	559	245	520	238	153
								0%	0%	0%	0%	0%	0%
							grade 2 events	7407	50434	8949	39177	15070	6303
								2%	13%	2%	10%	4%	2%
							grade 3 events	3161	7952	4275	18162	7833	3334
								0%	2%	1%	4%	2%	1%
							grade 4 events	2942	7506	4301	17857	7224	3195
								0%	2%	1%	4%	1%	1%
							grade 5 events	9125	29122	10948	33500	13421	10717
								2%	7%	3%	8%	3%	3%
							grade 6 events	5241	88953	8096	90228	17608	5983
								1%	23%	2%	23%	4%	2%
							grade 7 events	287389	170824	254398	162145	285554	245234
								87%	45%	80%	42%	76%	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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	170.276436	170.3225189175161	Subarray requested	NONE	NONE
[deg] Pointing Dec	-60.640421	-60.62482312943399	Alternating exposures requested	N	N
[deg] Pointing Roll	4.300731	4.497523609118721	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
Phase constraints	Y	Y			
[d] Phase period	2.087138	2.087138			
[d] Phase epoch (MJD)	49162.500410	49162.500410			
Phase start	0.890000	0.890000			
Phase end	0.110000	0.110000			
Phase start error	0.020000	0.020000			
Phase end error	0.020000	0.020000			
[s] Observation start time (MET)	68632319.184000	68631014.941613			
Observation start date	2000-03-05T08:30:55	2000-03-05T08:10:14			
[s] Observation end time (MET)	68672319.184000	68673258.780655			
Observation end date	2000-03-05T19:37:35	2000-03-05T19:54:18			
Read mode	TIMED	TIMED			

2.3 Aspect



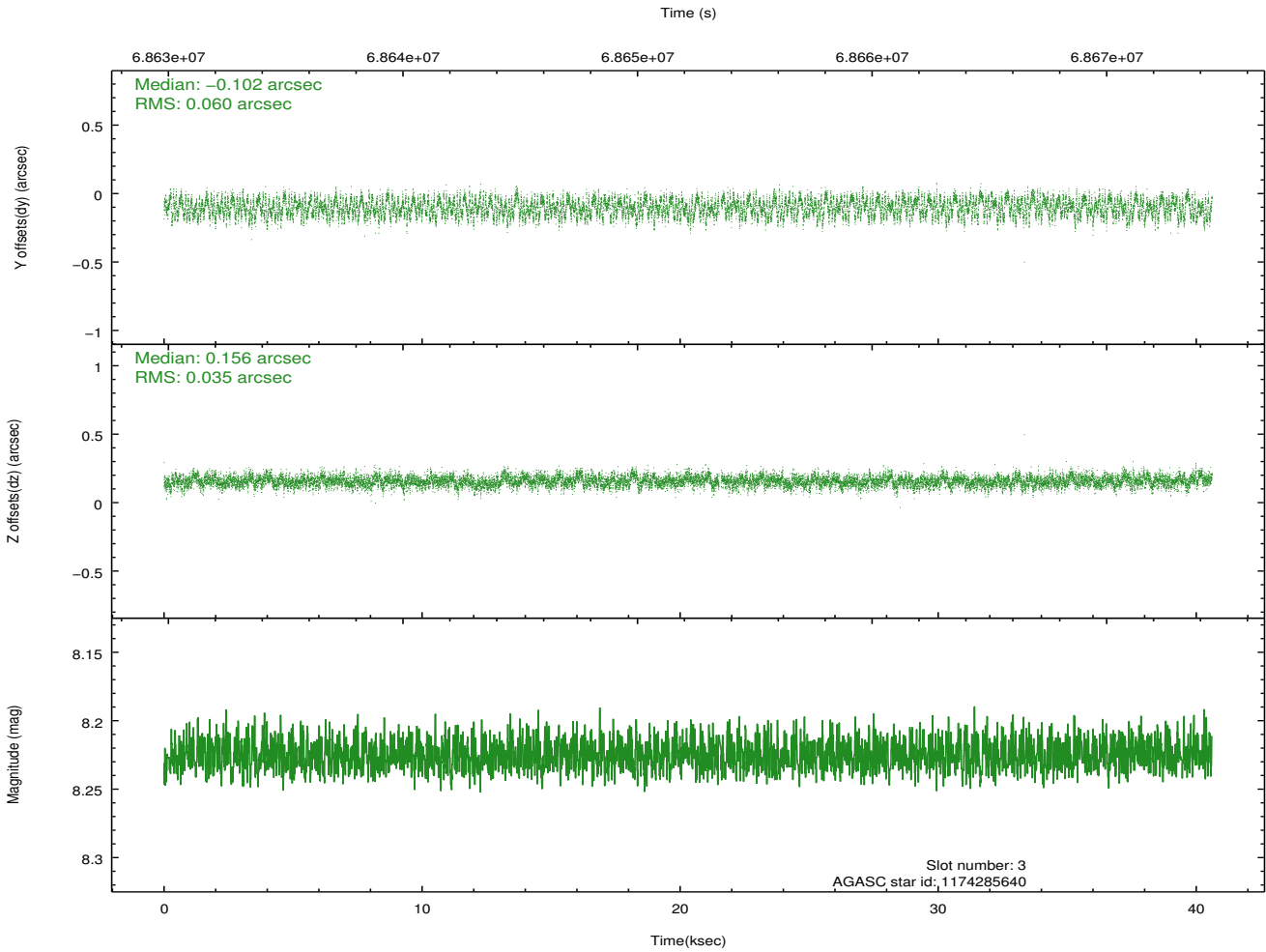
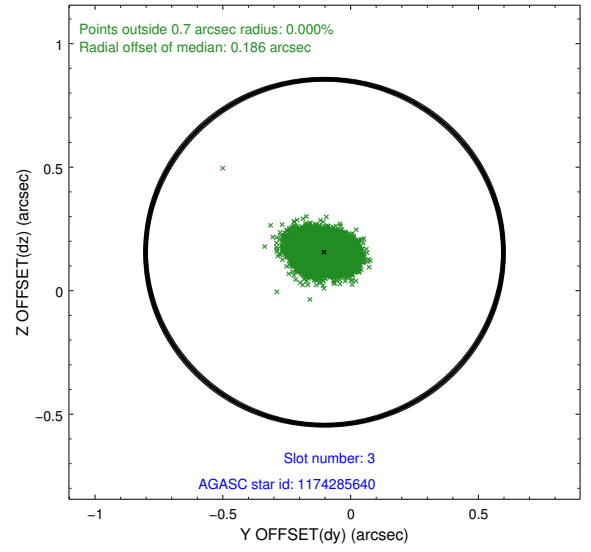
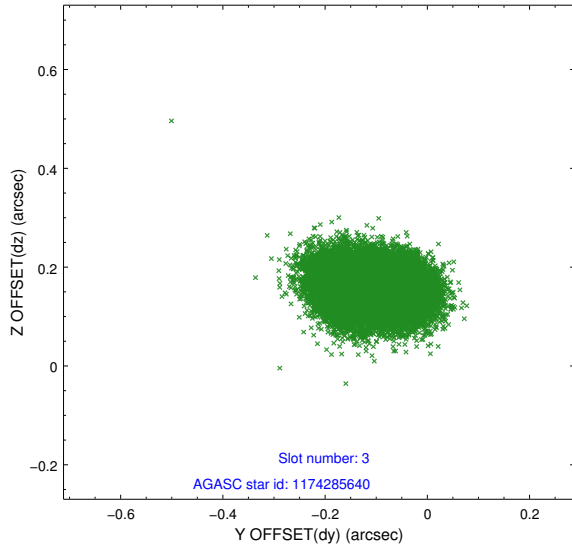


Slot Statistics

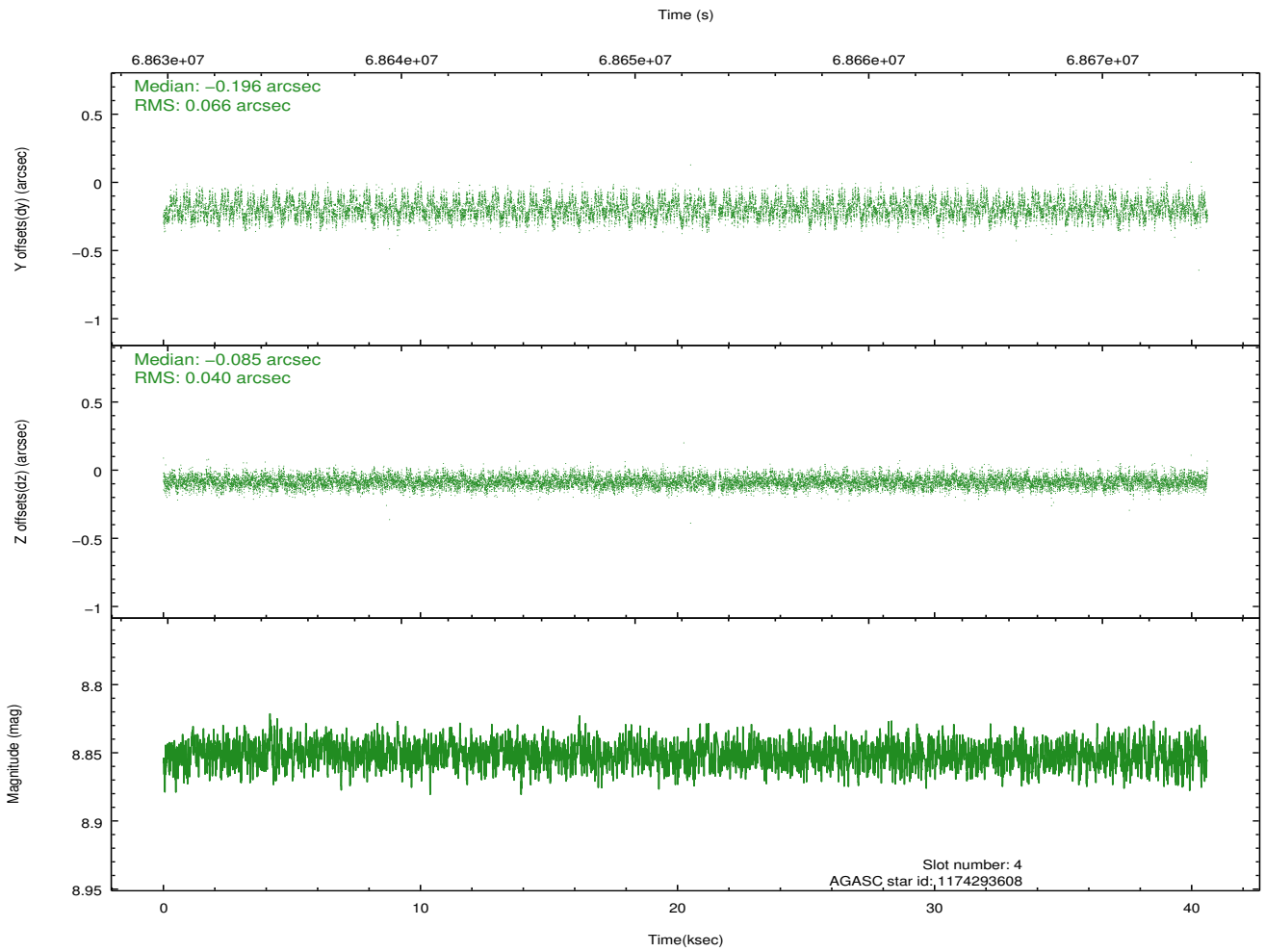
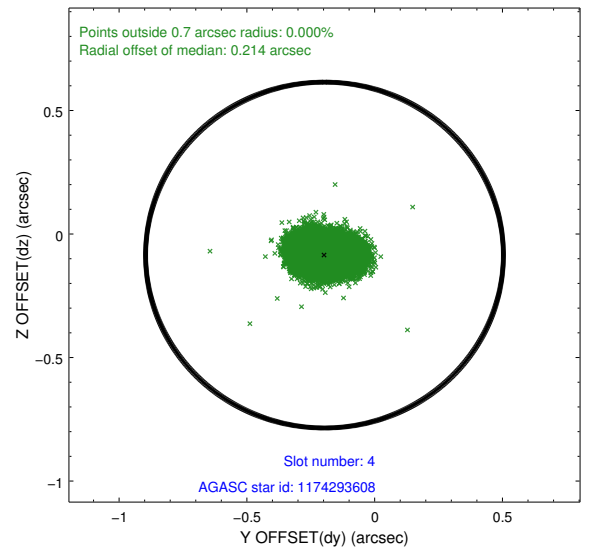
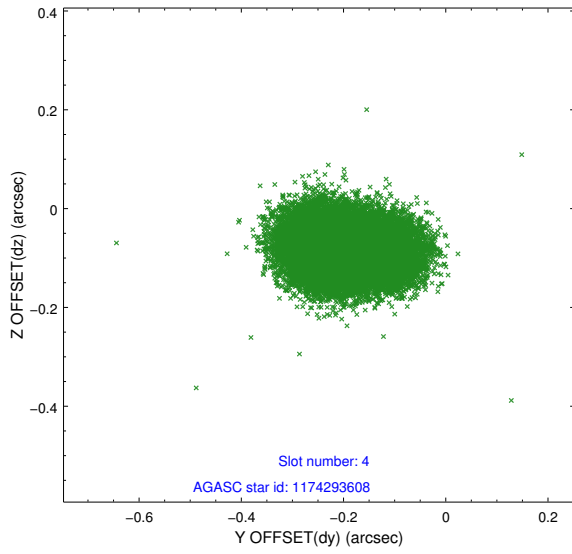
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	9884	-0.015	-0.019	0.007	0.012	0.000000	0.000000	-754.32	-1725.16
1	FID	ACIS-S-4	7.21	9883	0.007	0.013	0.006	0.010	0.000000	0.000000	2159.01	183.29
2	FID	ACIS-S-5	7.23	9885	-0.023	0.016	0.007	0.012	0.000000	0.000000	-1807.12	177.04
3	GUIDE	1174285640	8.23	19760	-0.102	0.156	0.075	0.116	171.226538	-61.280786	1465.66	-2433.85
4	GUIDE	1174293608	8.85	19758	-0.196	-0.085	0.083	0.131	171.337887	-60.017603	2071.17	2077.20
5	GUIDE	1174292200	8.63	19762	0.065	-0.065	0.069	0.113	169.118665	-60.567864	-2023.58	395.72
6	GUIDE	1174294800	9.24	19752	-0.026	0.066	0.080	0.130	170.985101	-61.091089	1108.03	-1716.95
7	GUIDE	1174291168	9.78	19751	0.257	-0.071	0.133	0.222	168.936492	-60.148278	-2262.83	1921.89

2.4 Star Slots

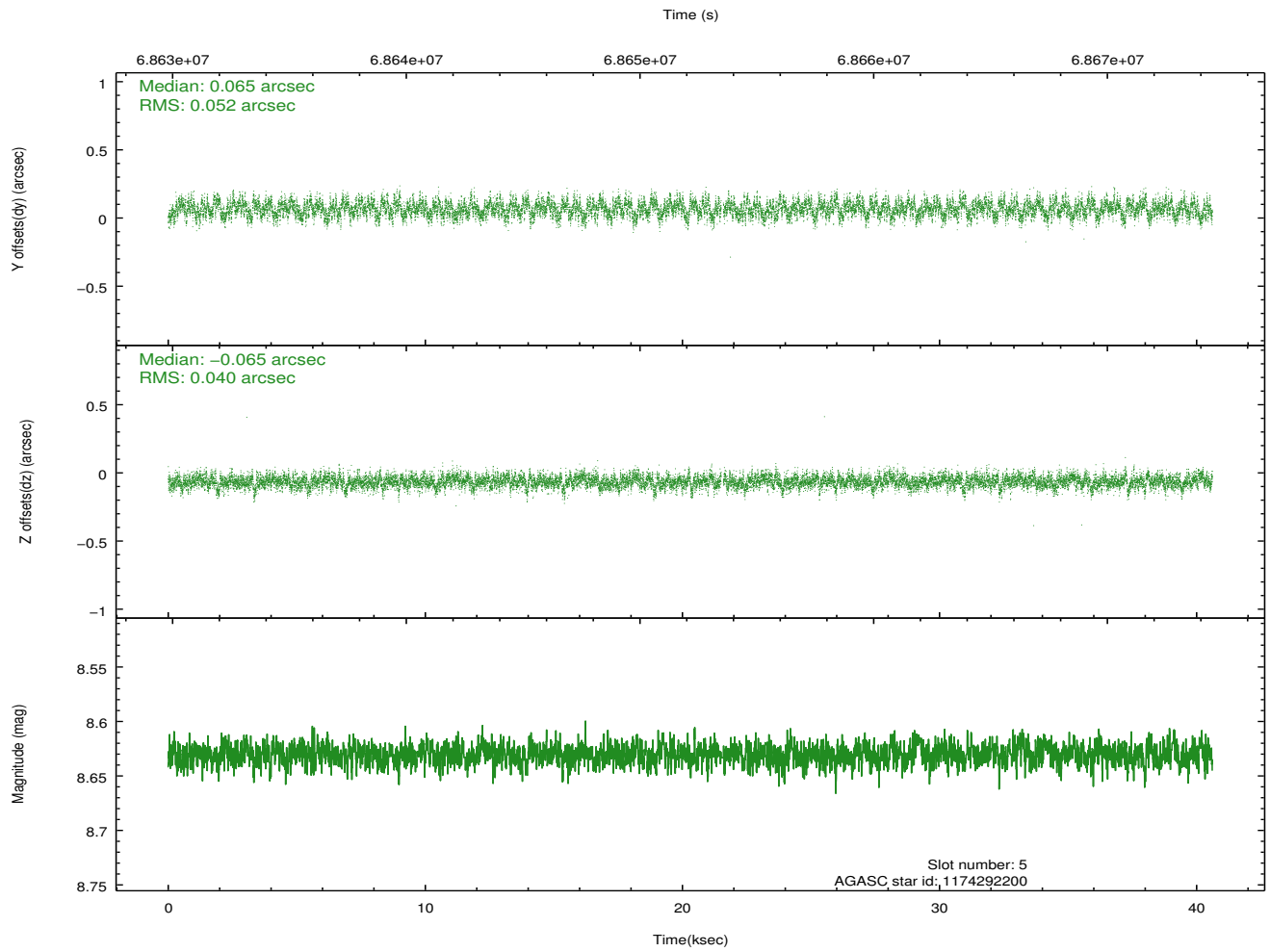
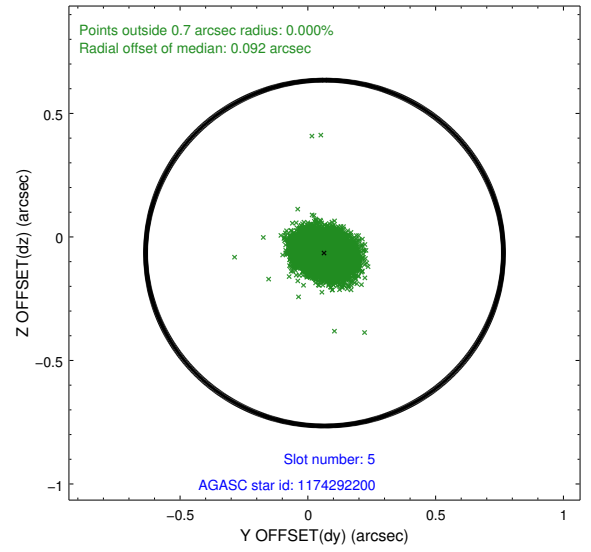
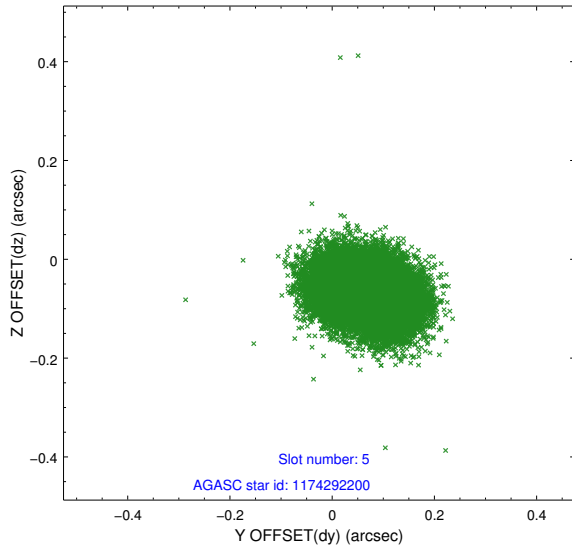
2.4.1 Slot 3



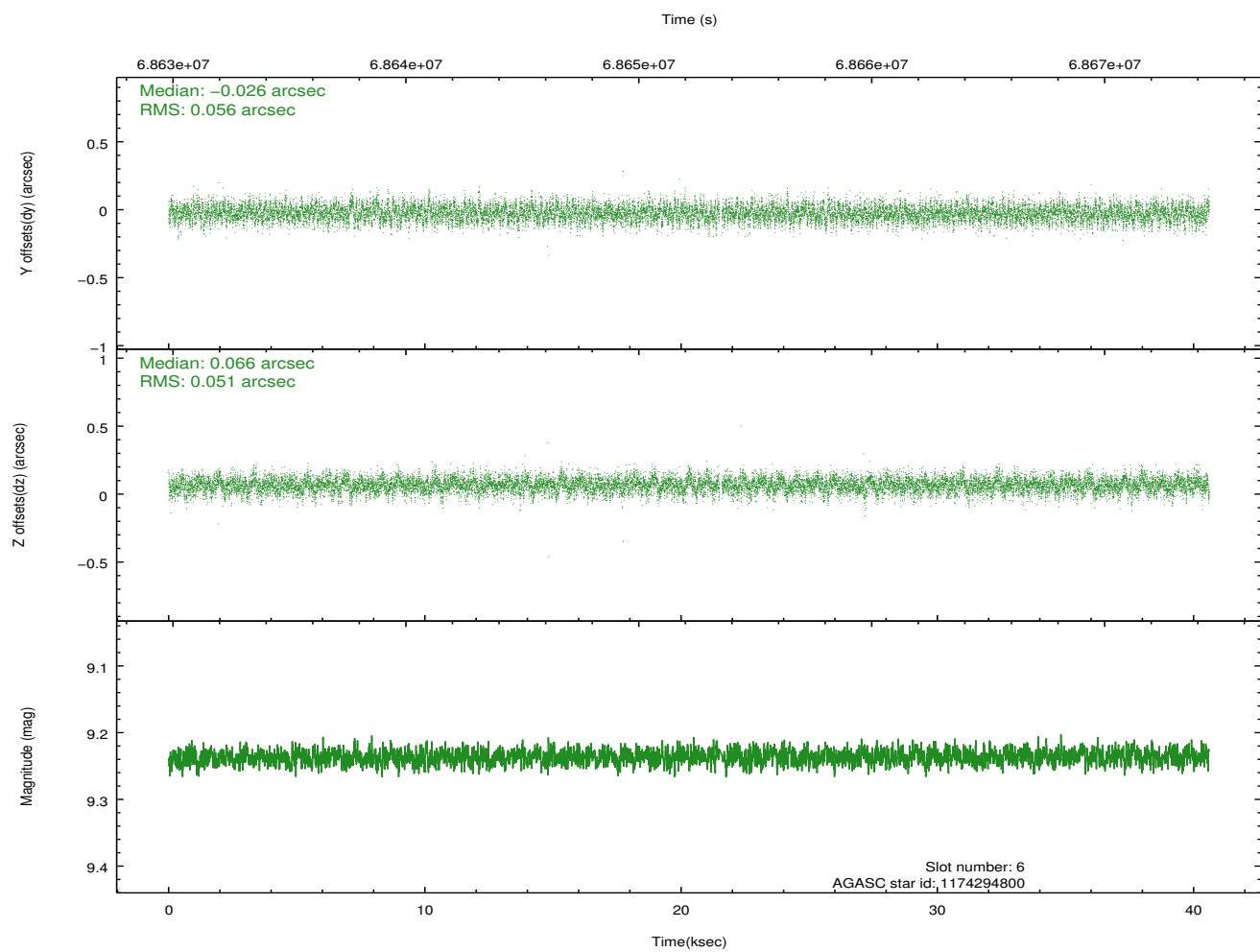
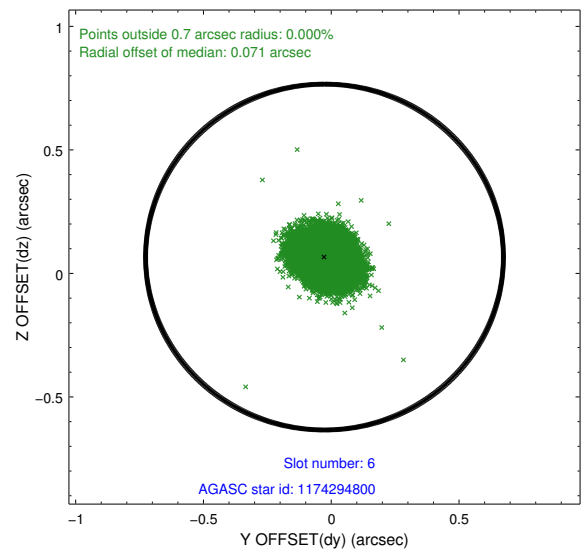
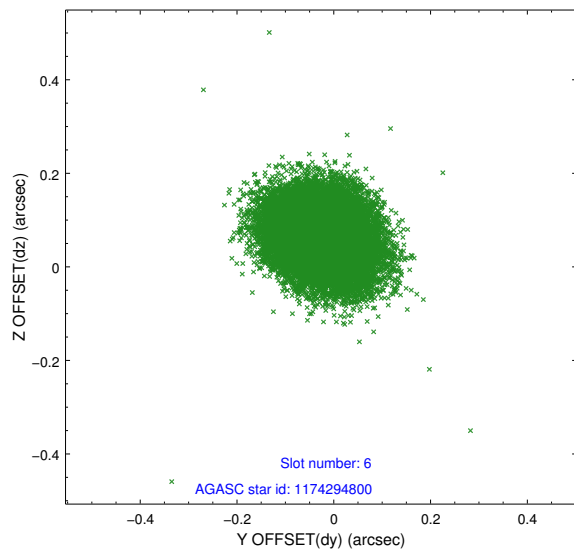
2.4.2 Slot 4



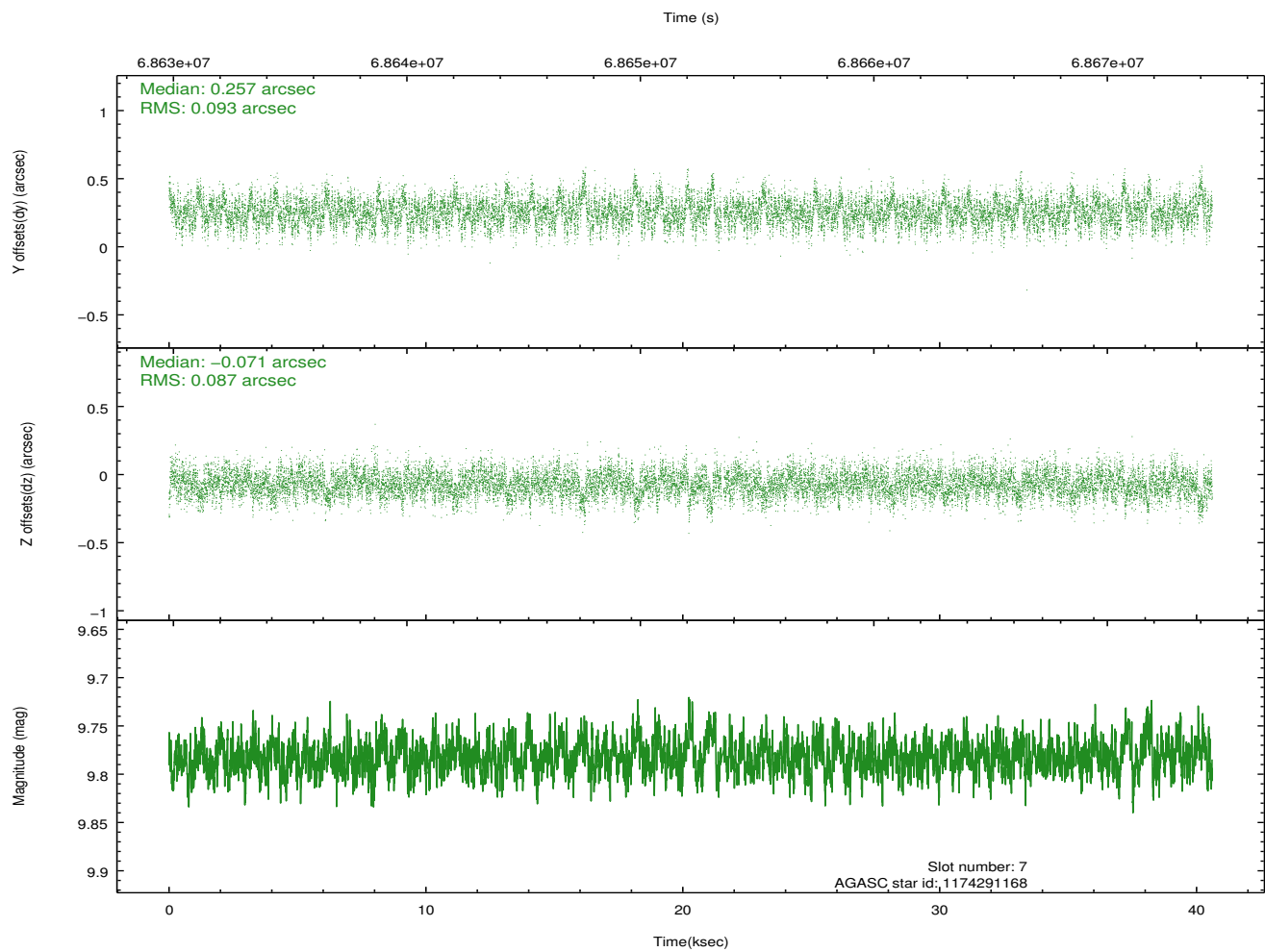
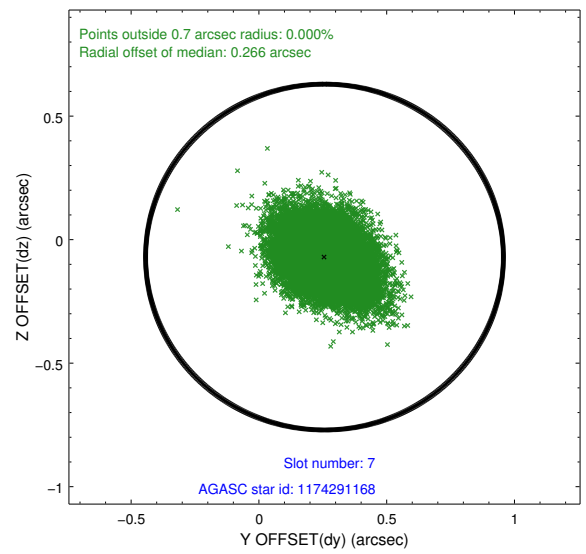
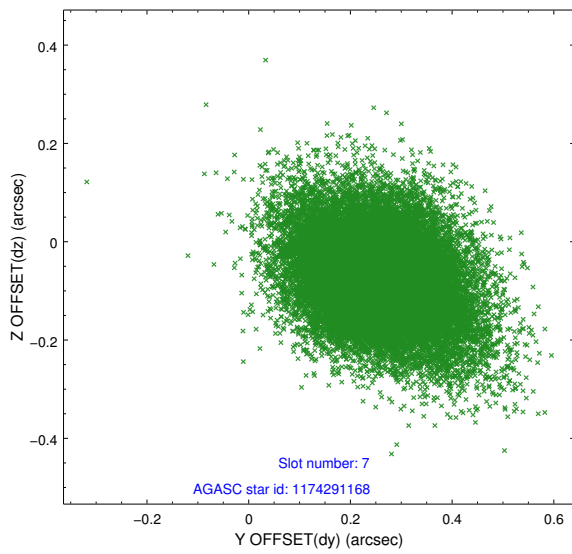
2.4.3 Slot 5



2.4.4 Slot 6

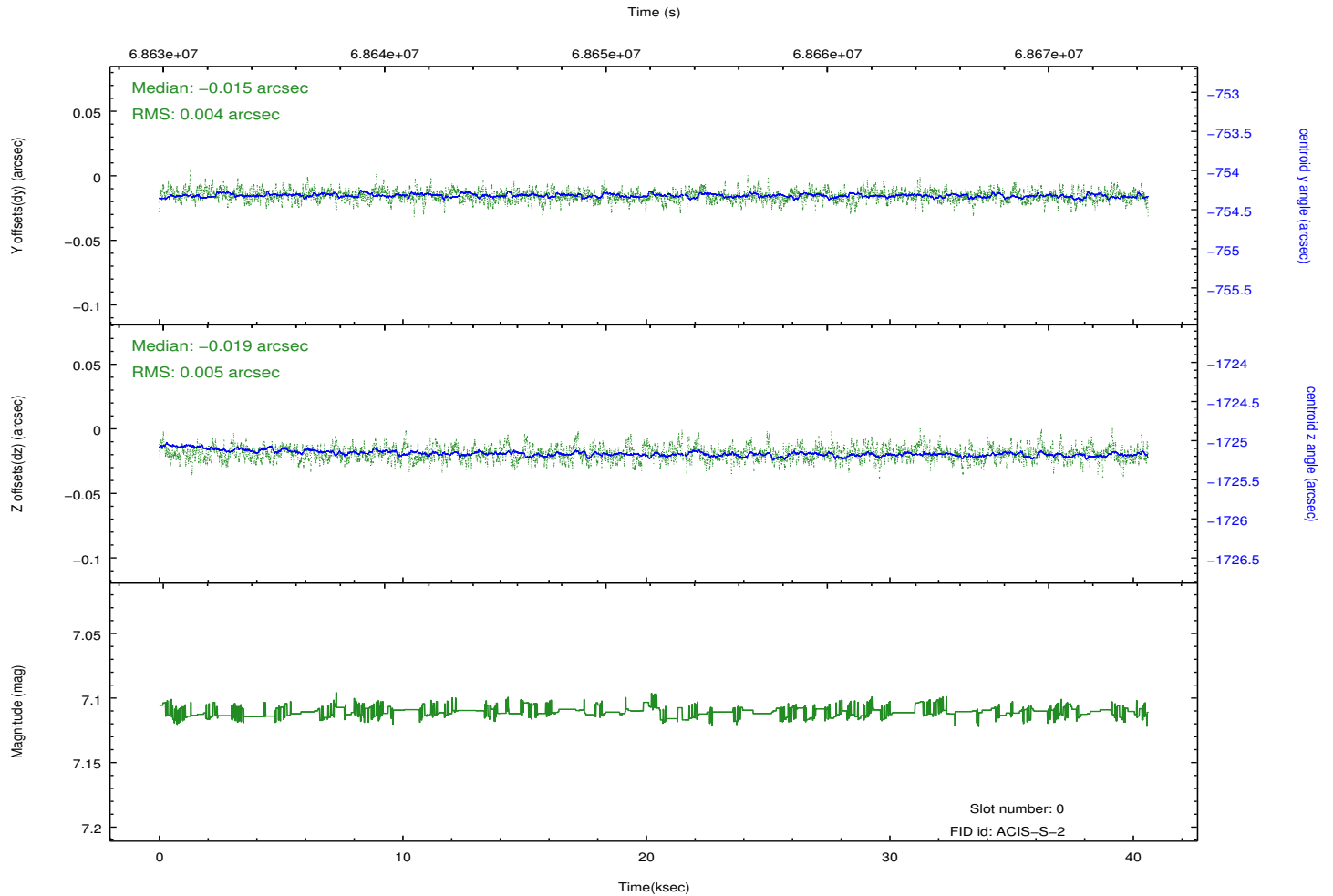
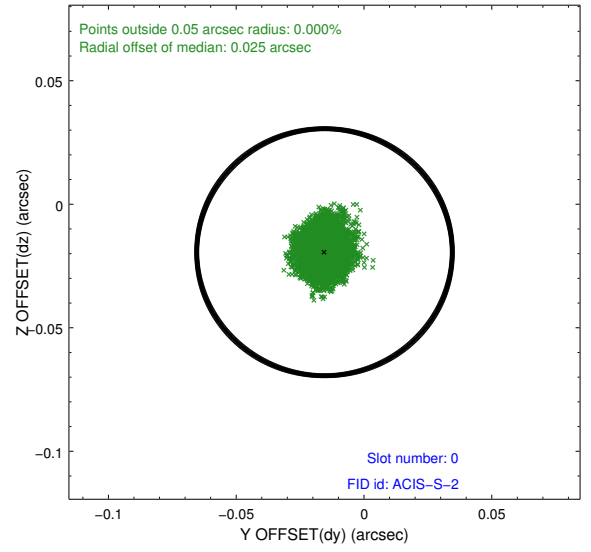
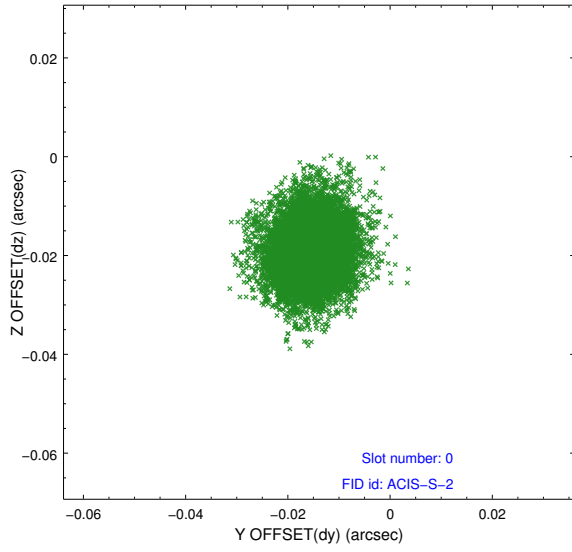


2.4.5 Slot 7

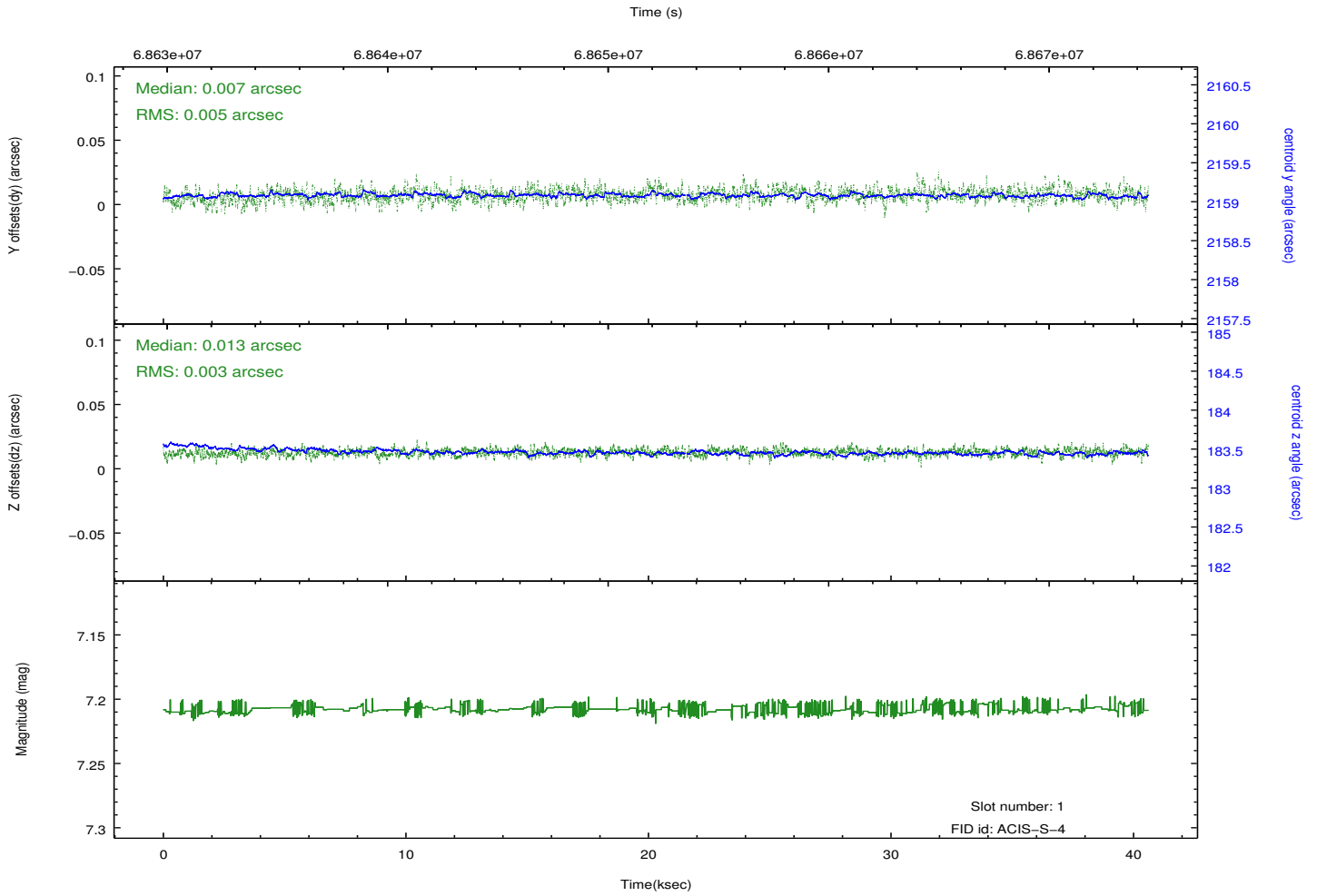
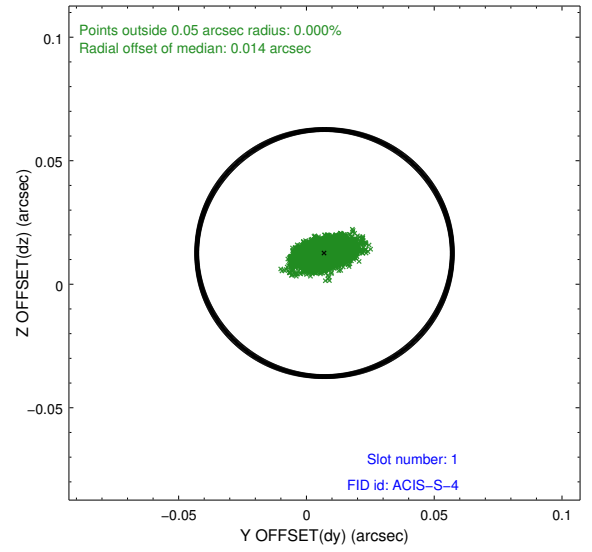
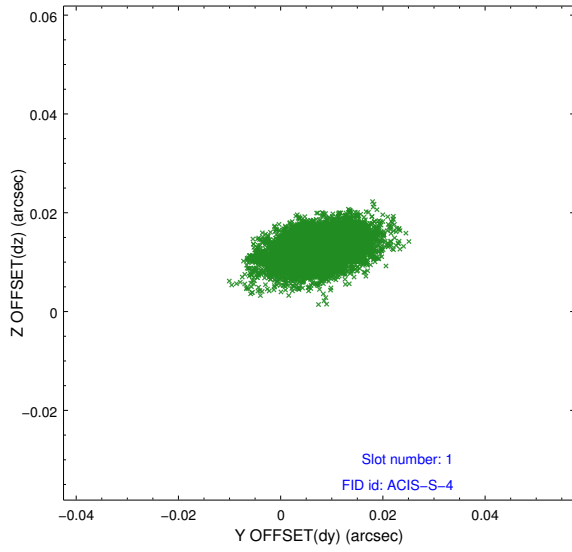


2.5 FID Slots

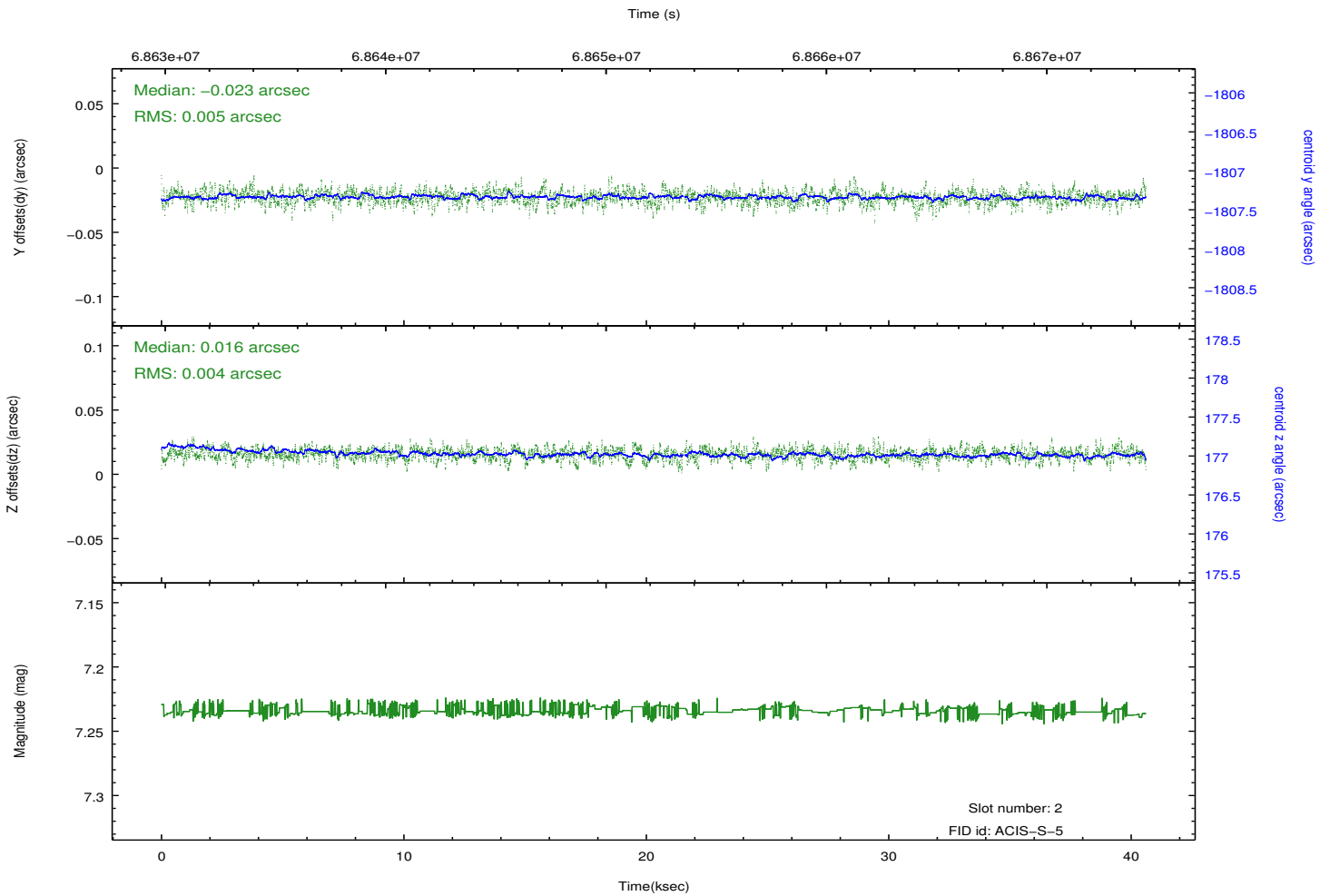
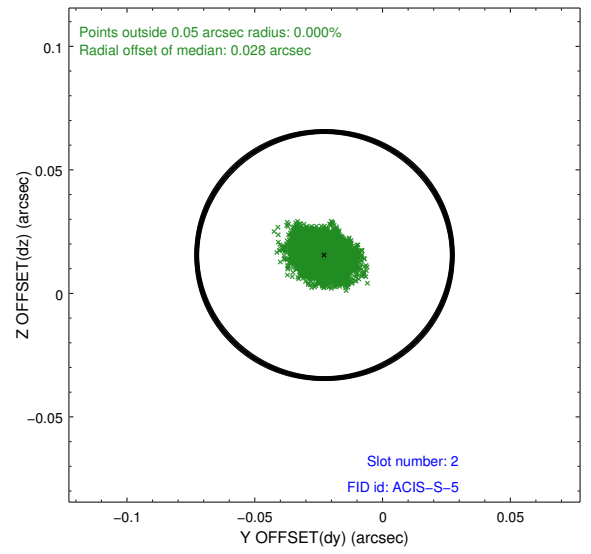
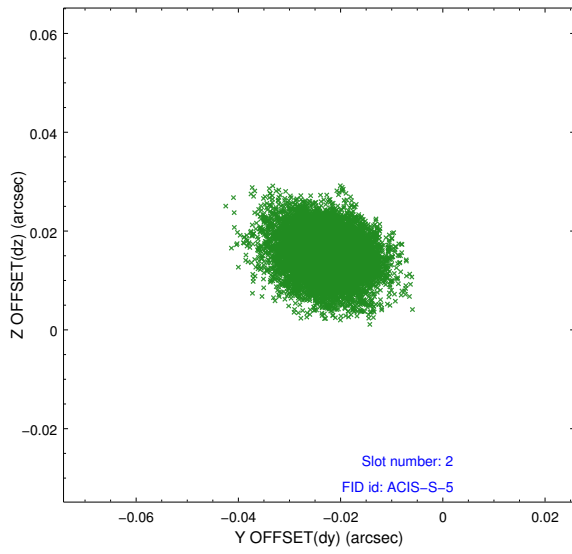
2.5.1 Slot 0



2.5.2 Slot 1

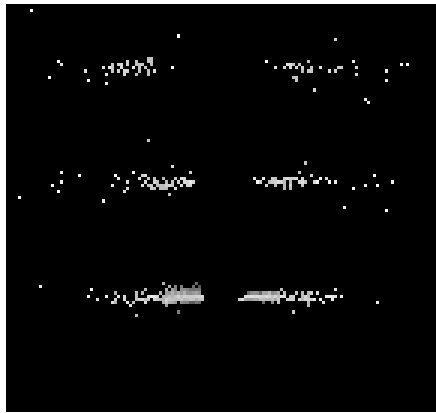


2.5.3 Slot 2

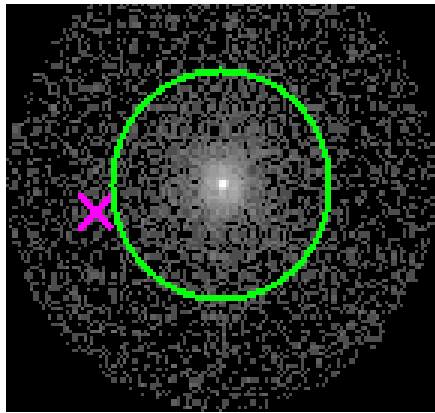


3 Gratings

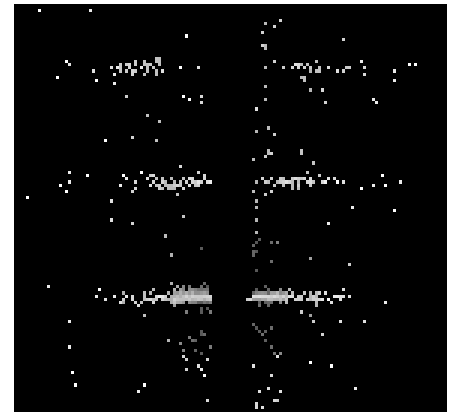
3.1 HEG Arm



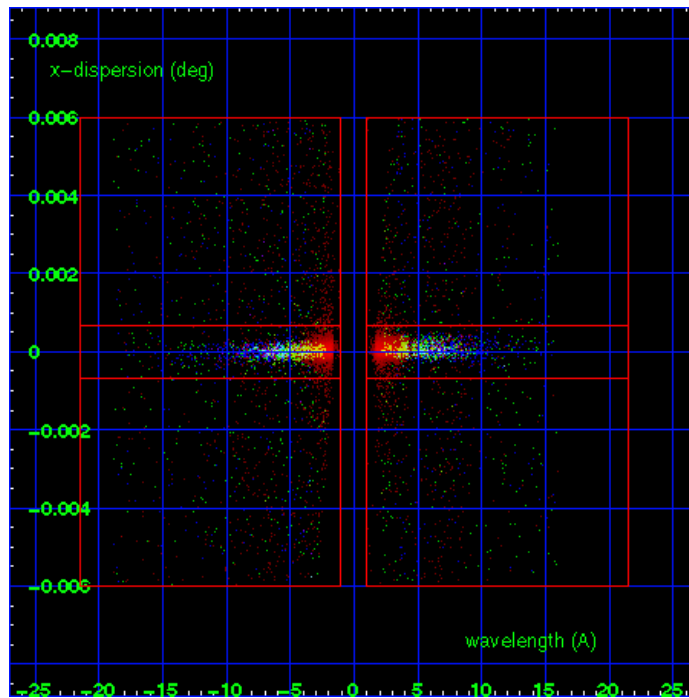
HEG Order Sort 123



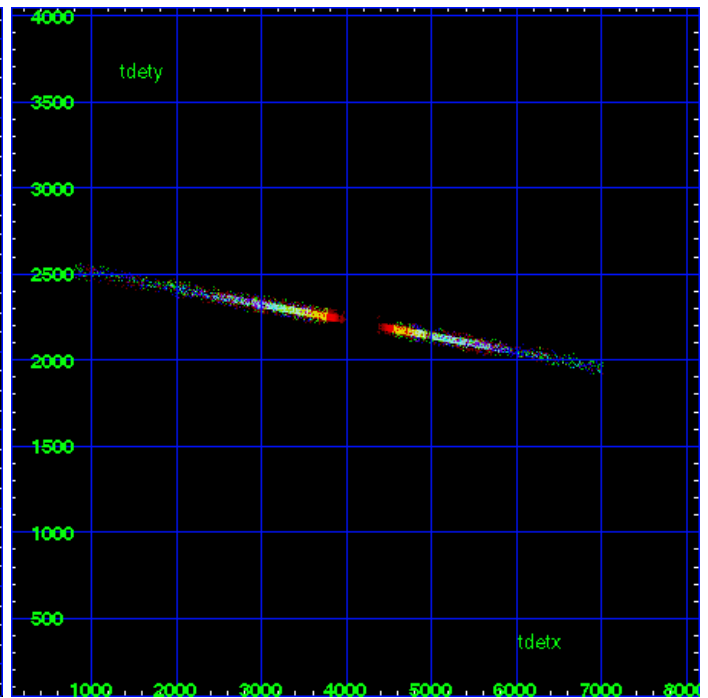
HEG Zero Order



HEG Order Sort ALL

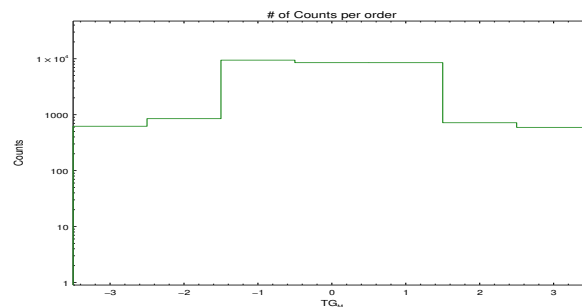


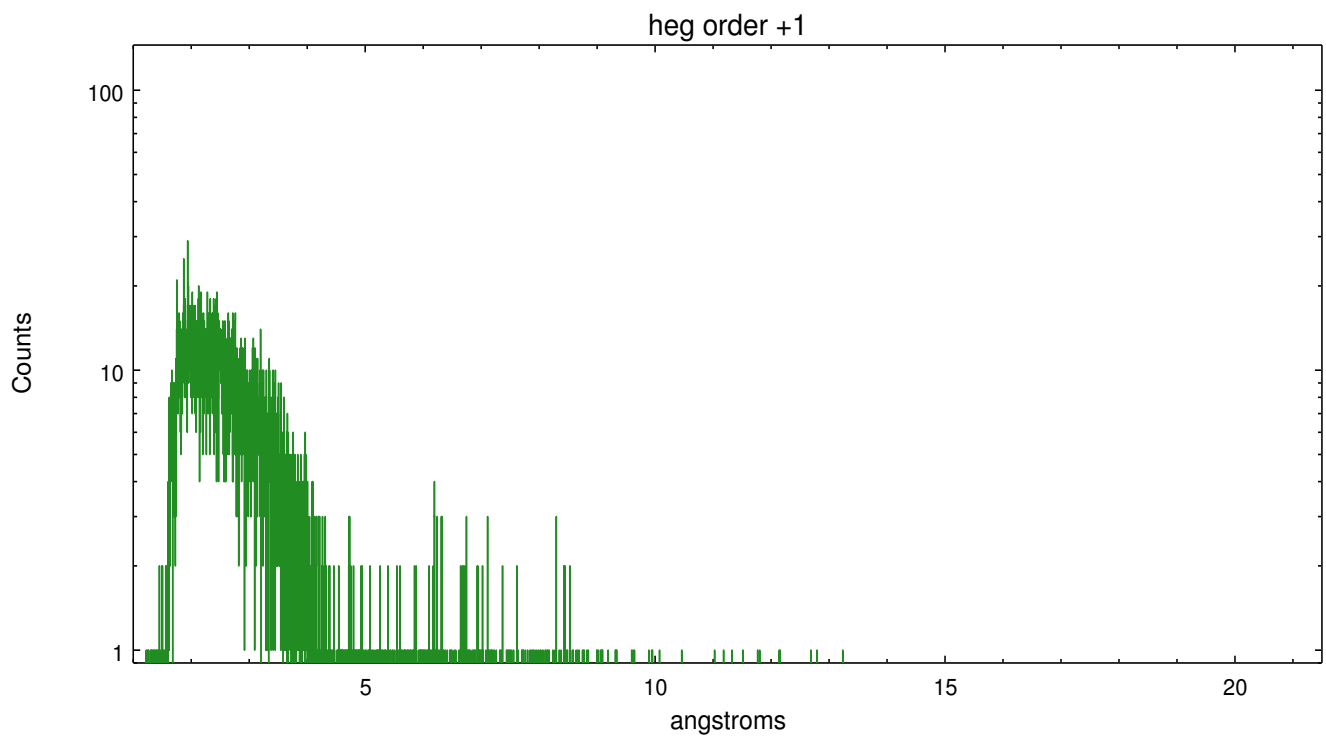
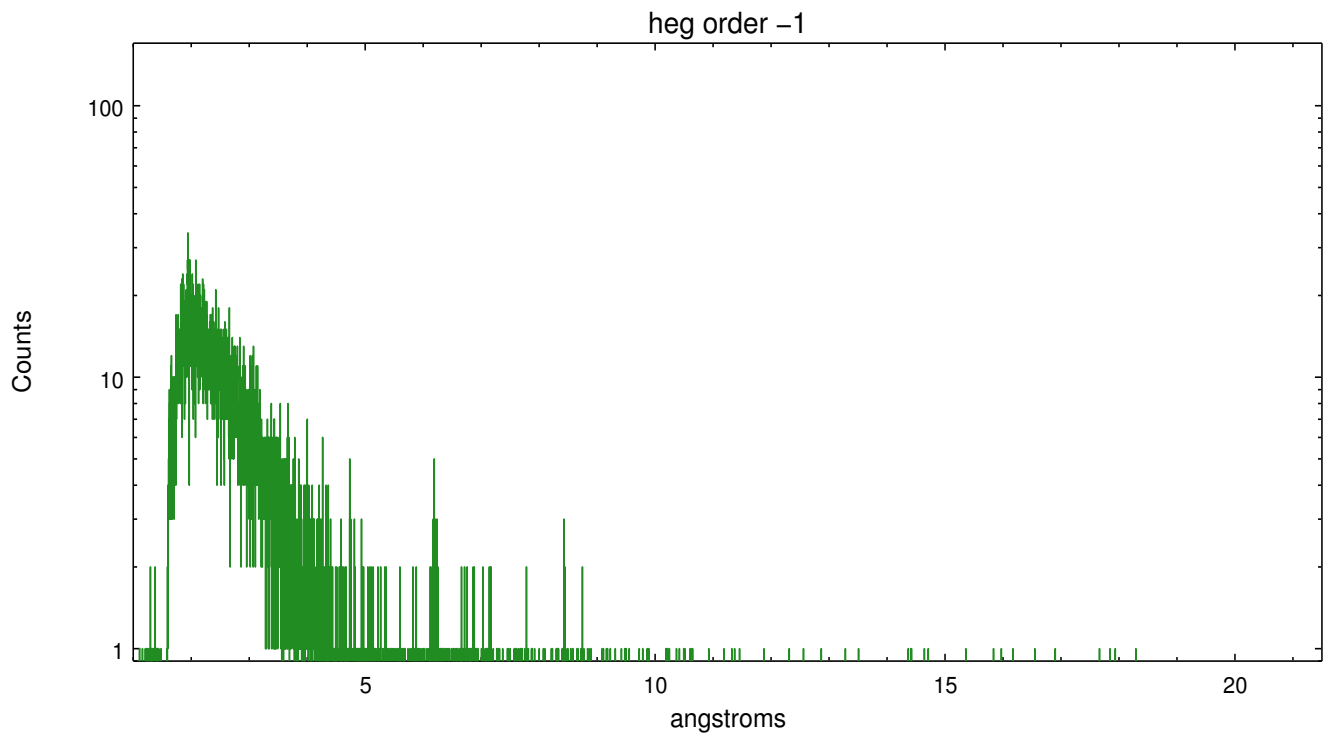
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	621	849	9442	8512	8510	718	593

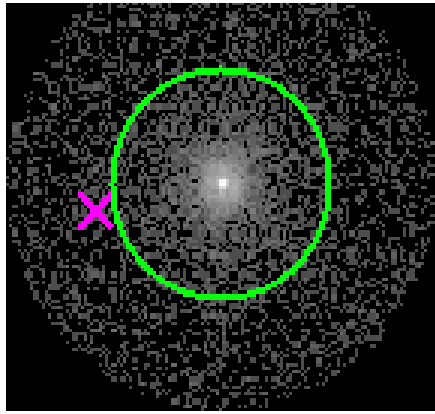




3.2 MEG Arm



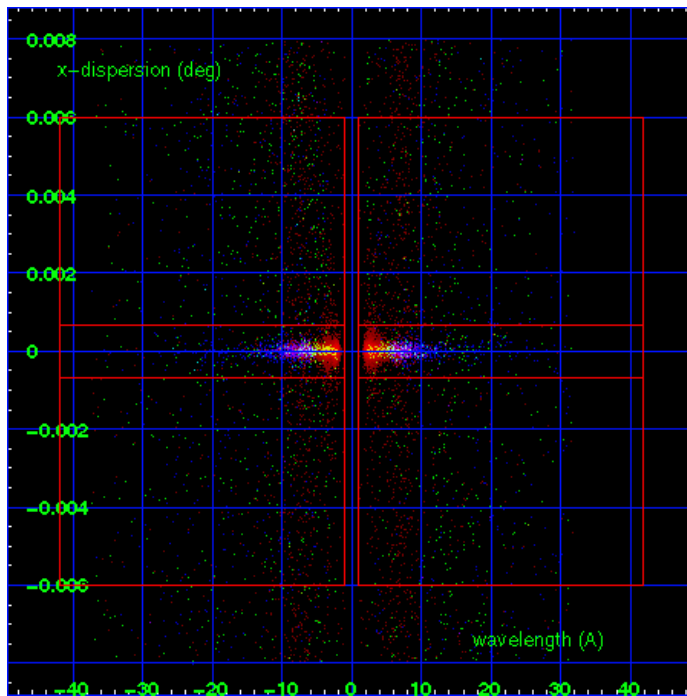
MEG Order Sort 123



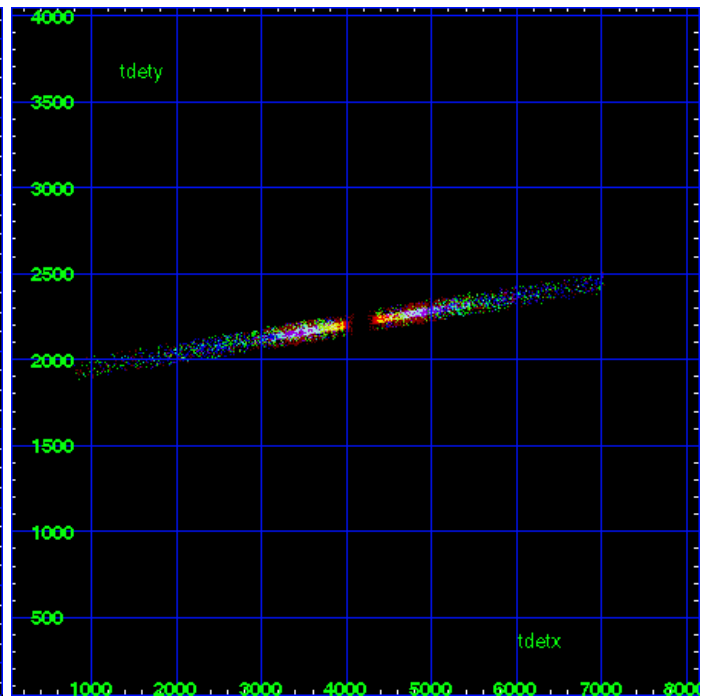
MEG Zero Order



MEG Order Sort ALL

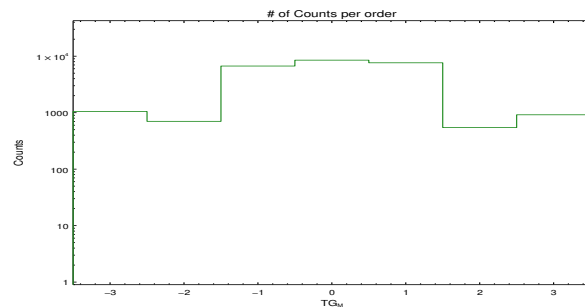


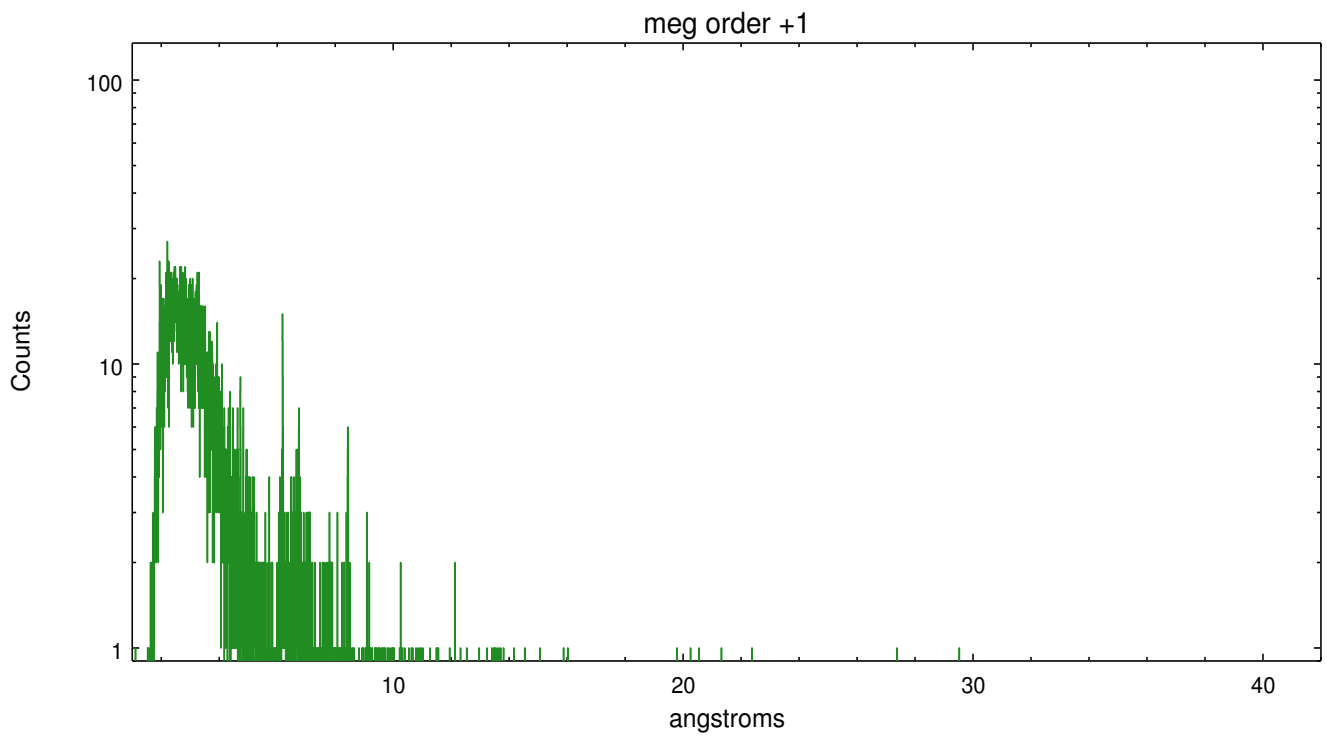
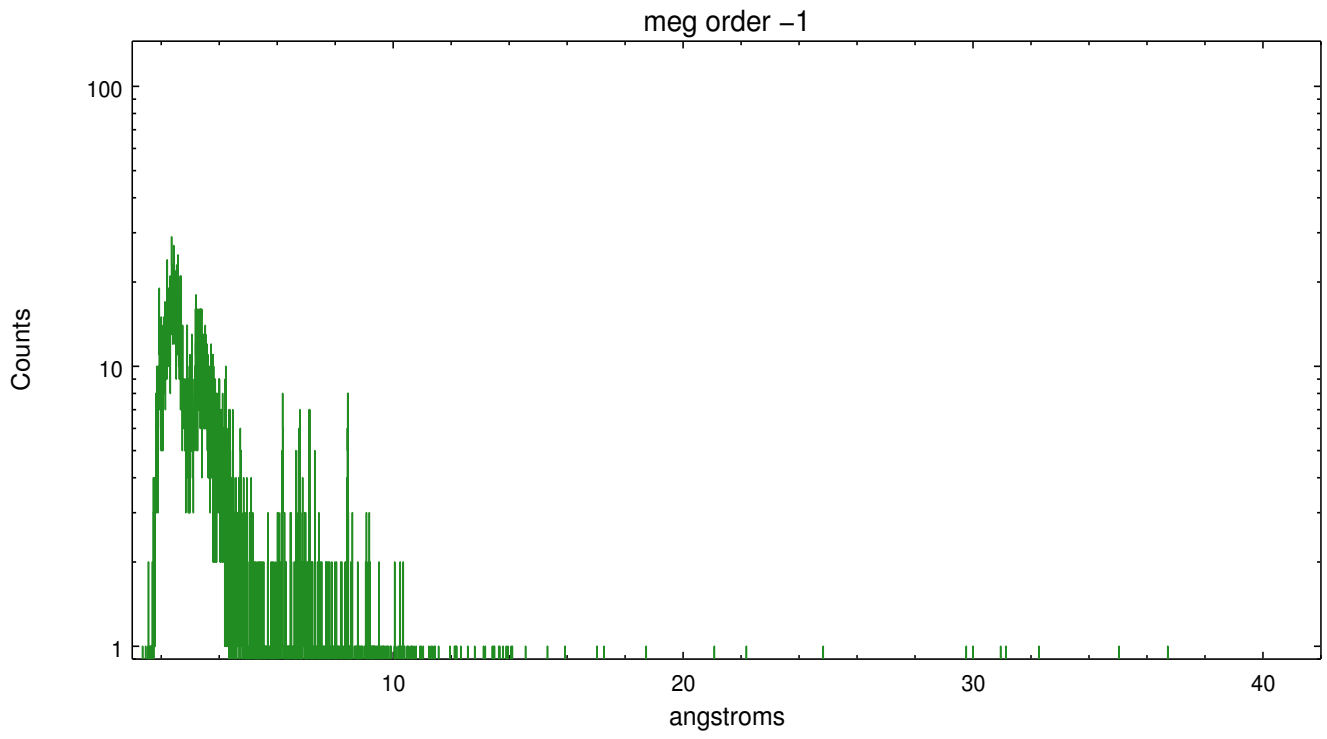
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1049	702	6697	8512	7648	545	918





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.08.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	39.635

A.2 Comments

Phase-constrained observation. Target observed during eclipse of X-ray source by companion. ===

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=4131.26, y=4103.98) 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.

===

Charge time for this ObsId remains at previous value of 39.635 ks, although with the current processing the charge time would be 39.685 ks.