

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 10070 - L2 Version 2
Chandra X-Ray Center

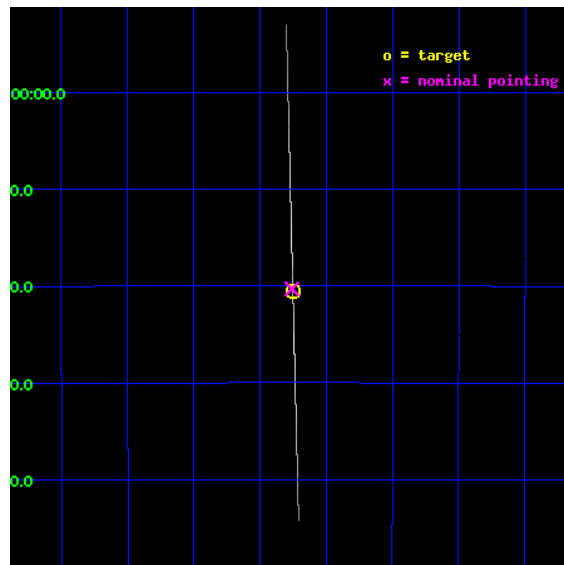
L2 Processing Date : Jun 22 2012

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1 Front

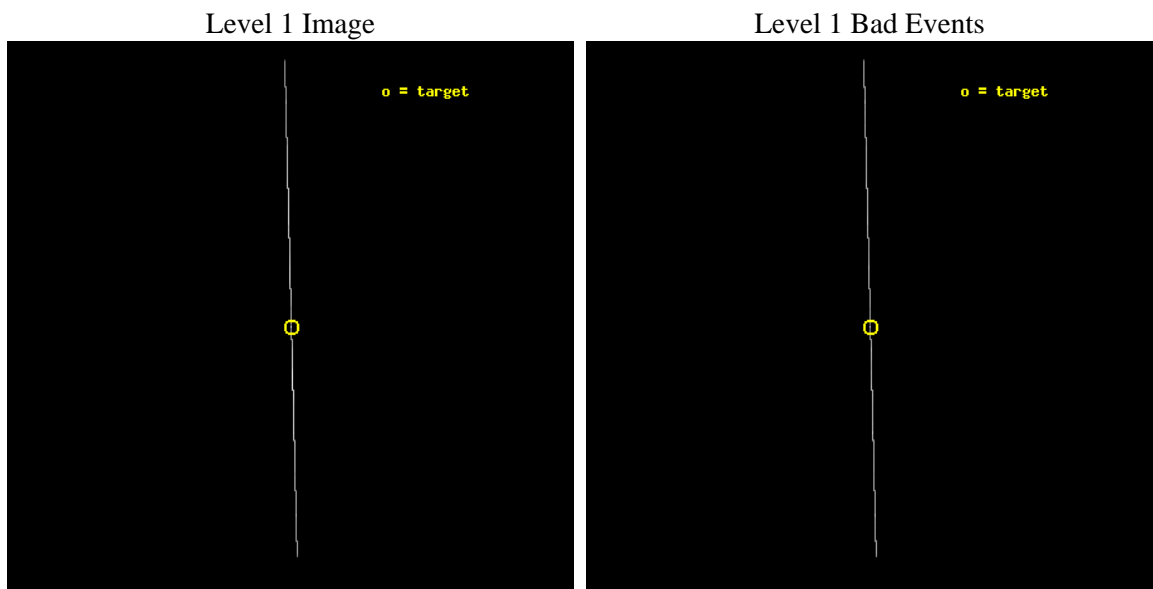
seq_num	401034	Sequence number
obs_id	10070	Observation id
title	High Resolution Spectroscopy of a Black Hole Transient	Proposal ti
observer	Dr Jon Miller	Principal investigator
object	XTE J1752-223	Source name
ra_targ	268.062875	Observer's specified target RA [deg]
dec_targ	-22.342333	Observer's specified target Dec [deg]
ra_nom	268.06473822641	Nominal RA [deg]
dec_nom	-22.338280204995	Nominal Dec [deg]
roll_nom	88.523911377014	Nominal Roll [deg]
revision	2	Processing version of data
ontime	18803.106321573	Sum of GTIs [s]
livetime	18729.656687505	Livetime [s]
ontime4	22535.131859183	Sum of GTIs [s]
ontime5	29644.25	Sum of GTIs [s]
ontime6	14702.3455742	Sum of GTIs [s]
ontime7	18803.106321573	Sum of GTIs [s]
ontime8	18847.83155936	Sum of GTIs [s]
ontime9	23822.676814675	Sum of GTIs [s]
l2events	8667652	Number of level 2 events



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	29500.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	18803.106321573	Sum of GTIs [s]
caldsver	4.4.10	 	ontime4	22535.131859183	Sum of GTIs [s]
date	2012-06-21T03:00:18	Date and time of file creation	ontime5	29644.25	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	14702.3455742	Sum of GTIs [s]
			ontime7	18803.106321573	Sum of GTIs [s]
			ontime8	18847.83155936	Sum of GTIs [s]
			ontime9	23822.676814675	Sum of GTIs [s]
			l1events	11296746	Number of level 1 events

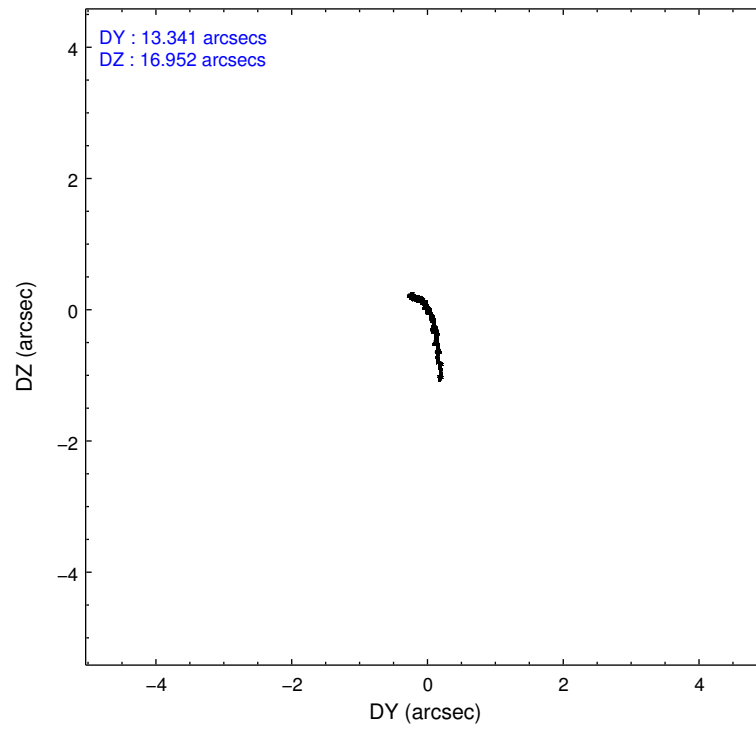
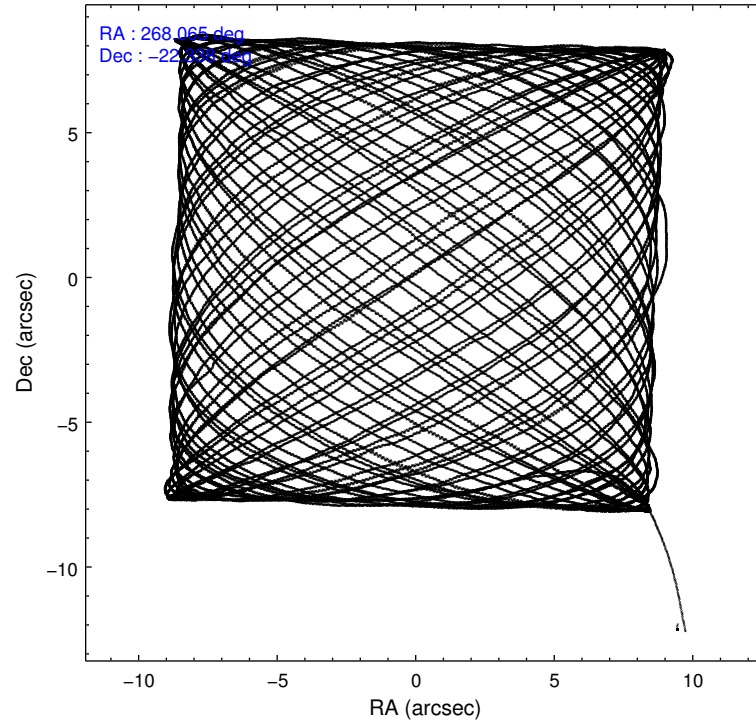
2.1.3 Events

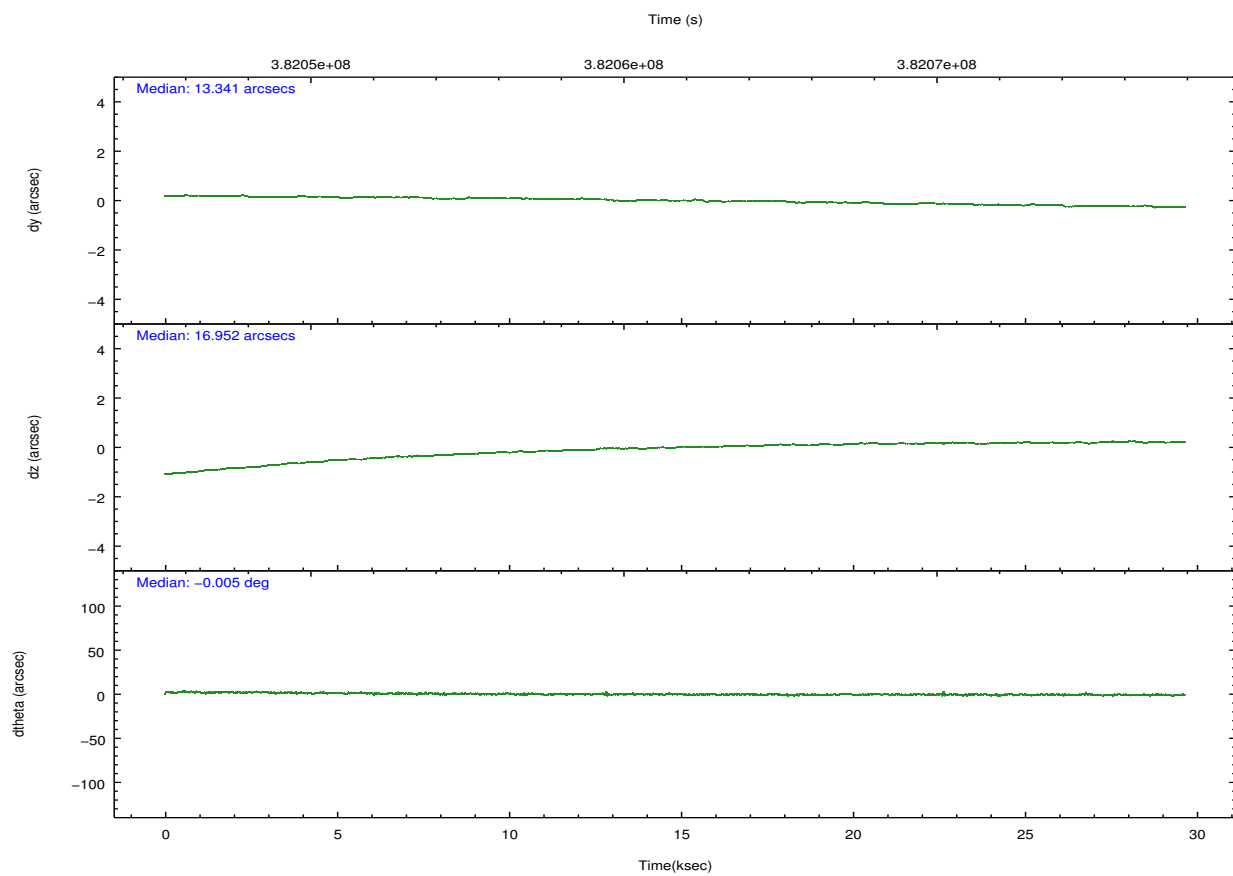
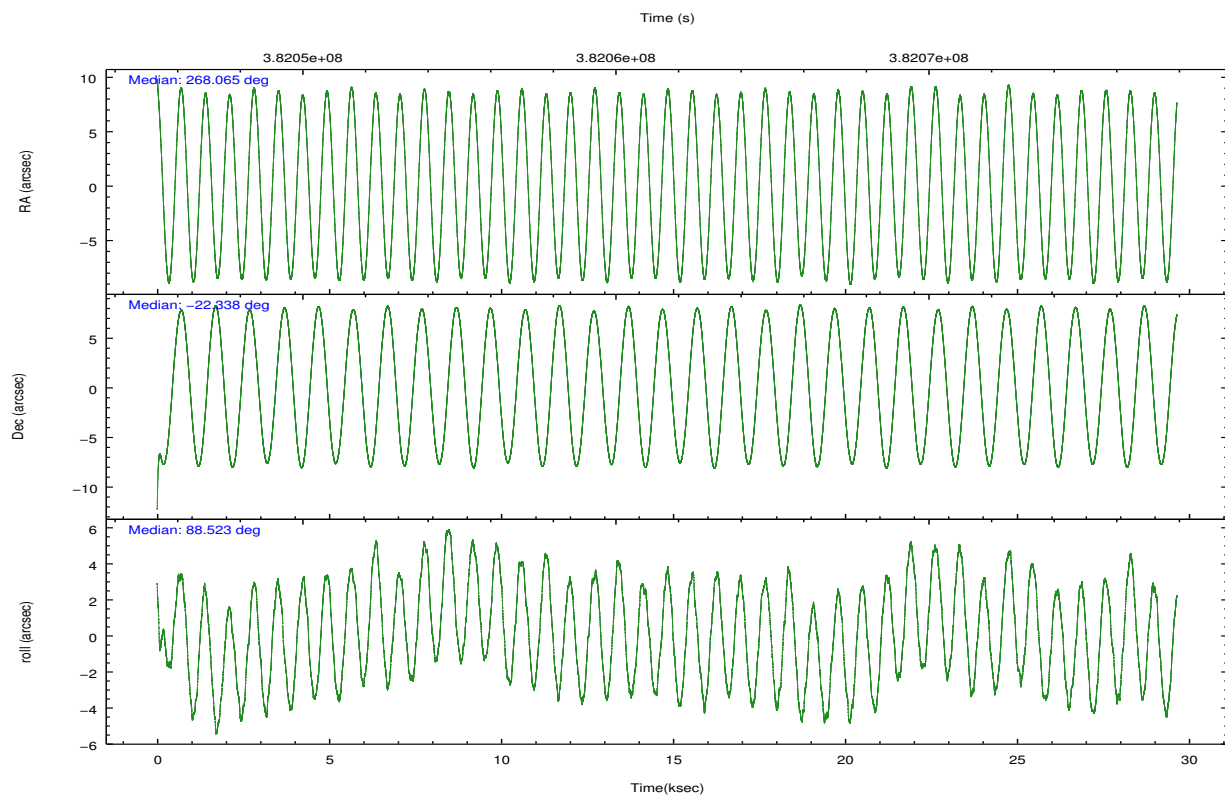
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	509595	1891565	2821815	3293585	2094166	686020	grade 0 events	51663	237872	647983	546067	1096249	96604
rejected events	293216	343036	338692	383933	377423	308268		10%	12%	22%	16%	52%	14%
rejected %	57%	18%	12%	11%	18%	44%	grade 1 events	284	370	2343	5621	3222	523
								0%	0%	0%	0%	0%	0%
							grade 2 events	140848	775783	1646867	956984	502611	253821
								27%	41%	58%	29%	24%	36%
							grade 3 events	6569	71666	33030	268370	46612	7266
								1%	3%	1%	8%	2%	1%
							grade 4 events	6653	71360	33079	264399	45820	7664
								1%	3%	1%	8%	2%	1%
							grade 5 events	4967	31861	18565	53559	12946	6957
								0%	1%	0%	1%	0%	1%
							grade 6 events	13407	405842	147489	909242	52936	23612
								2%	21%	5%	27%	2%	3%
							grade 7 events	285204	296811	292459	289343	333770	289573
								55%	15%	10%	8%	15%	42%

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	CC33_GRADED	CC33_GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	268.079218	268.0647382264062	Subarray requested	NONE	NONE
[deg] Pointing Dec	-22.362106	-22.33828020499485	Alternating exposures requested	N	N
[deg] Pointing Roll	88.372796	88.52391137701426	[s] Primary exposure time	0.000000	0
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-183.992523	-183.9875365069546			
[mm] SIM translation stage offset	-6.14	-6.144986076053243			
[s] Observation start time (MET)	382046951.184000	382045696.88149			
Observation start date	2010-02-08T20:08:05	2010-02-08T19:48:16			
[s] Observation end time (MET)	382076451.184000	382077395.0081			
Observation end date	2010-02-09T04:19:45	2010-02-09T04:36:35			
Read mode	CONTINUOUS	CONTINUOUS			

2.3 Aspect



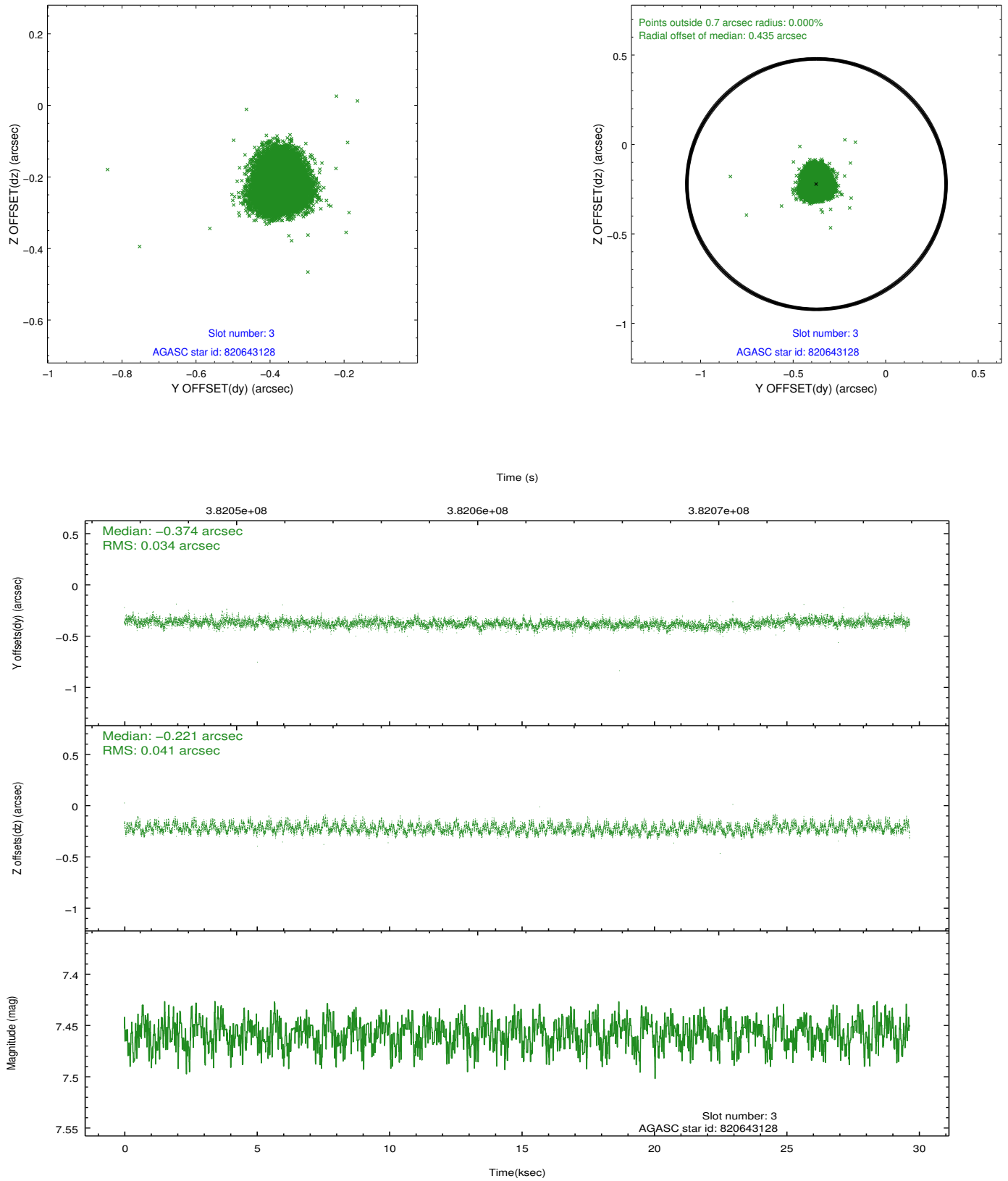


Slot Statistics

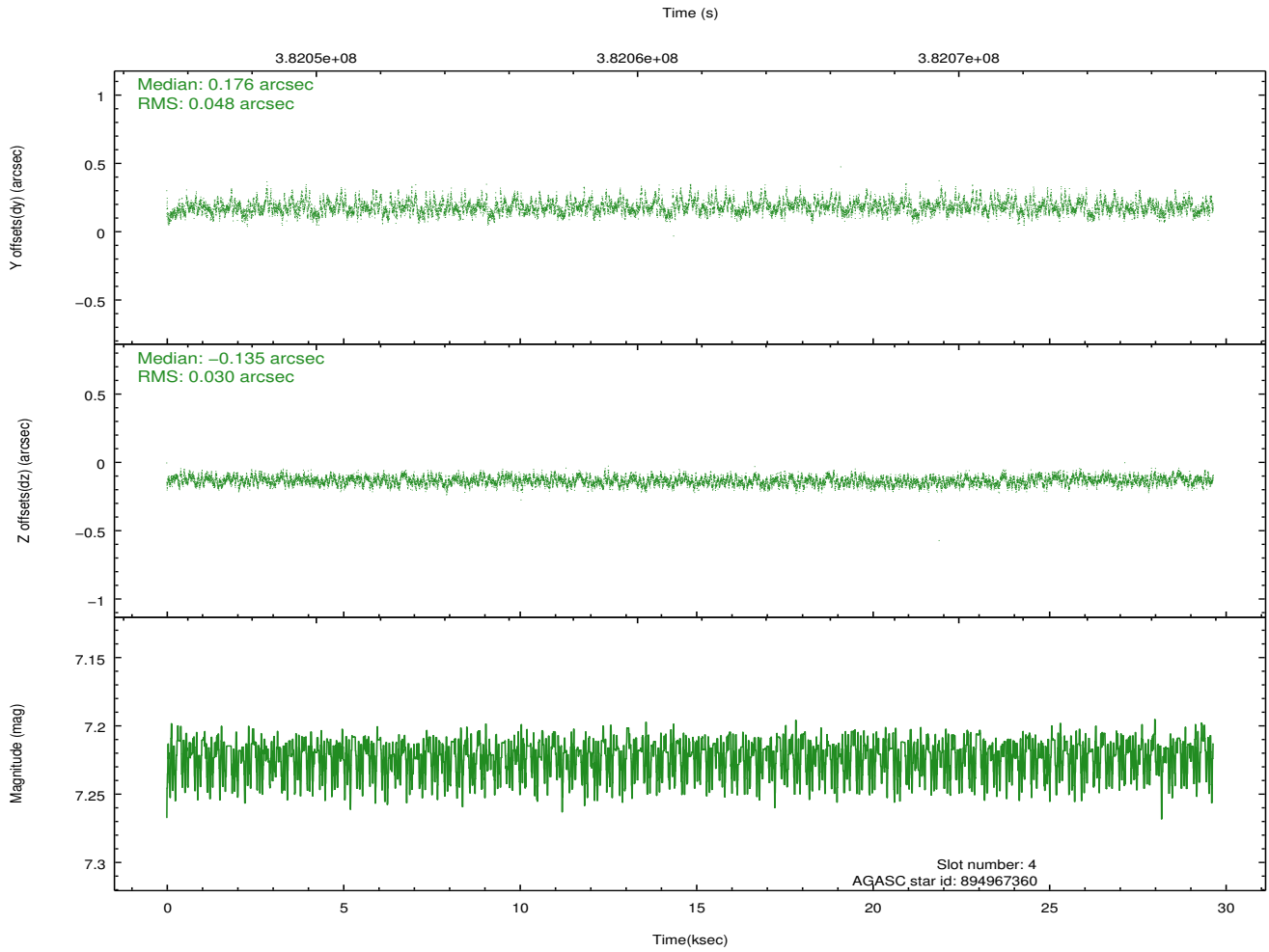
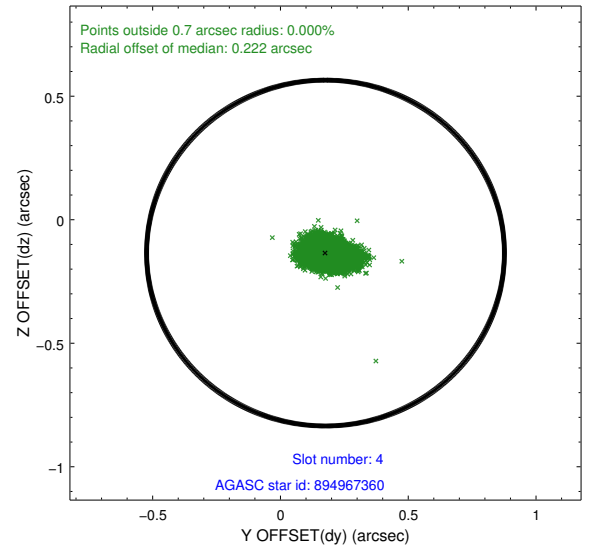
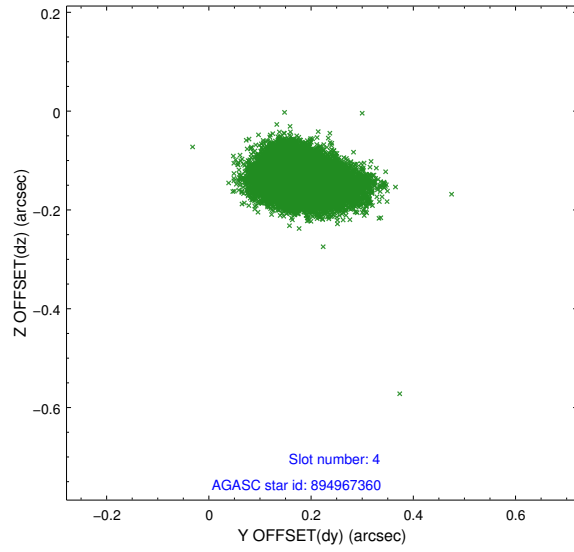
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.94	7231	0.010	0.134	0.019	0.033	0.000000	0.000000	930.23	-1860.40
1	FID	ACIS-S-4	6.93	7232	0.043	-0.074	0.013	0.022	0.000000	0.000000	2147.70	43.45
2	FID	ACIS-S-6	7.14	7226	-0.076	-0.048	0.011	0.021	0.000000	0.000000	396.17	680.92
3	GUIDE	820643128	7.46	14463	-0.374	-0.221	0.056	0.090	267.699048	-21.791174	2016.68	1328.65
4	GUIDE	894967360	7.22	14462	0.176	-0.135	0.058	0.101	267.782247	-22.921004	-2040.43	926.71
5	GUIDE	896671000	8.63	14454	0.158	0.229	0.081	0.130	268.750839	-22.981137	-2169.25	-2288.18
6	GUIDE	896671704	7.89	14461	0.142	0.056	0.067	0.103	268.307622	-22.536738	-607.24	-776.99
7	GUIDE	896672784	9.27	14457	-0.103	0.072	0.101	0.166	268.139856	-22.666371	-1089.18	-232.32

2.4 Star Slots

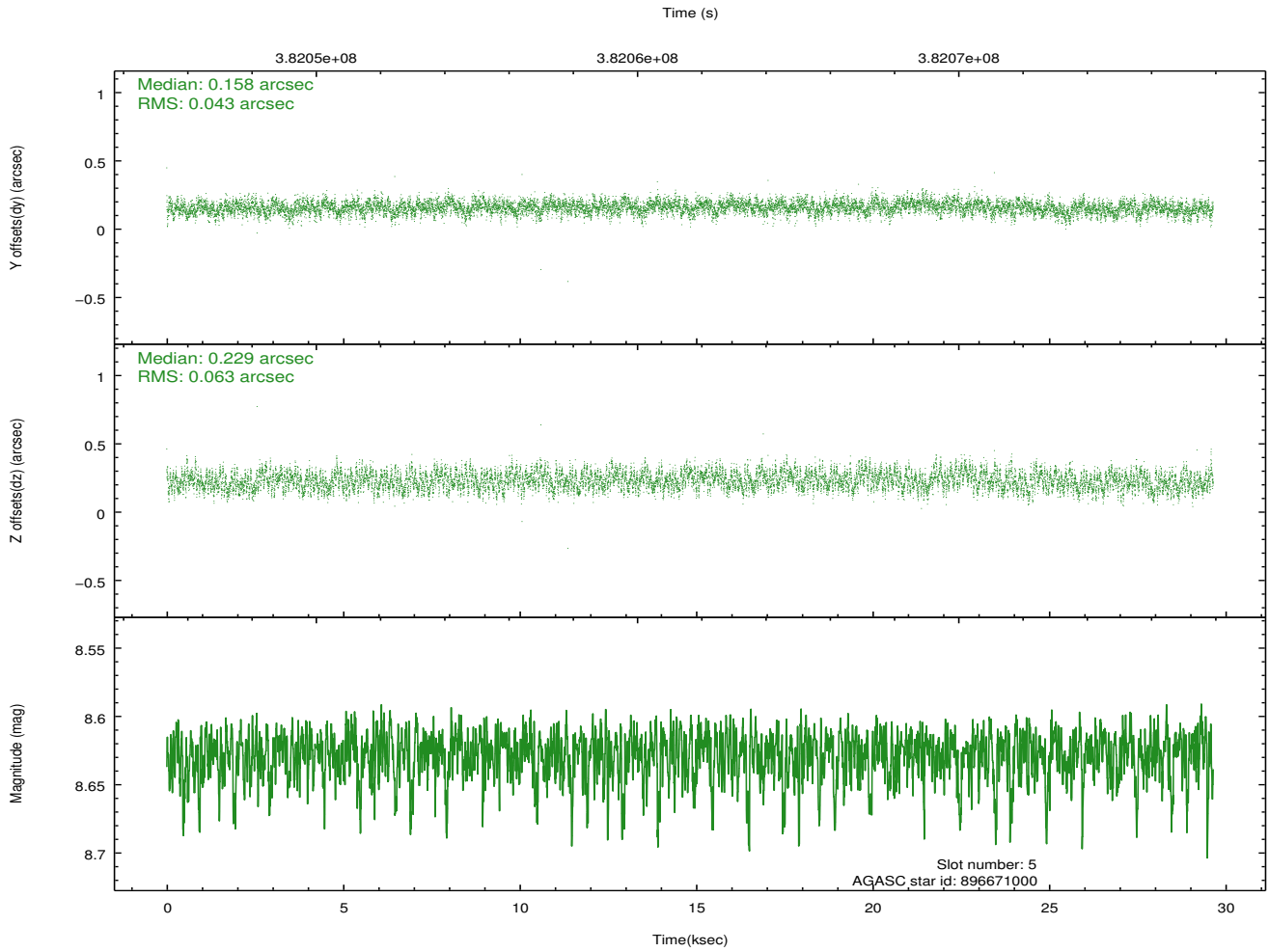
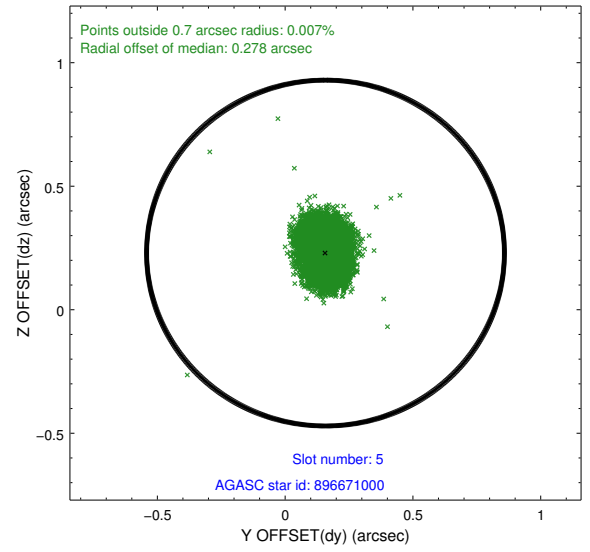
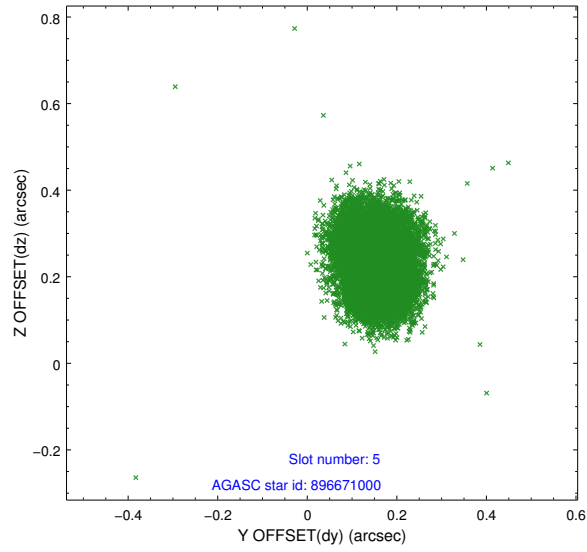
2.4.1 Slot 3



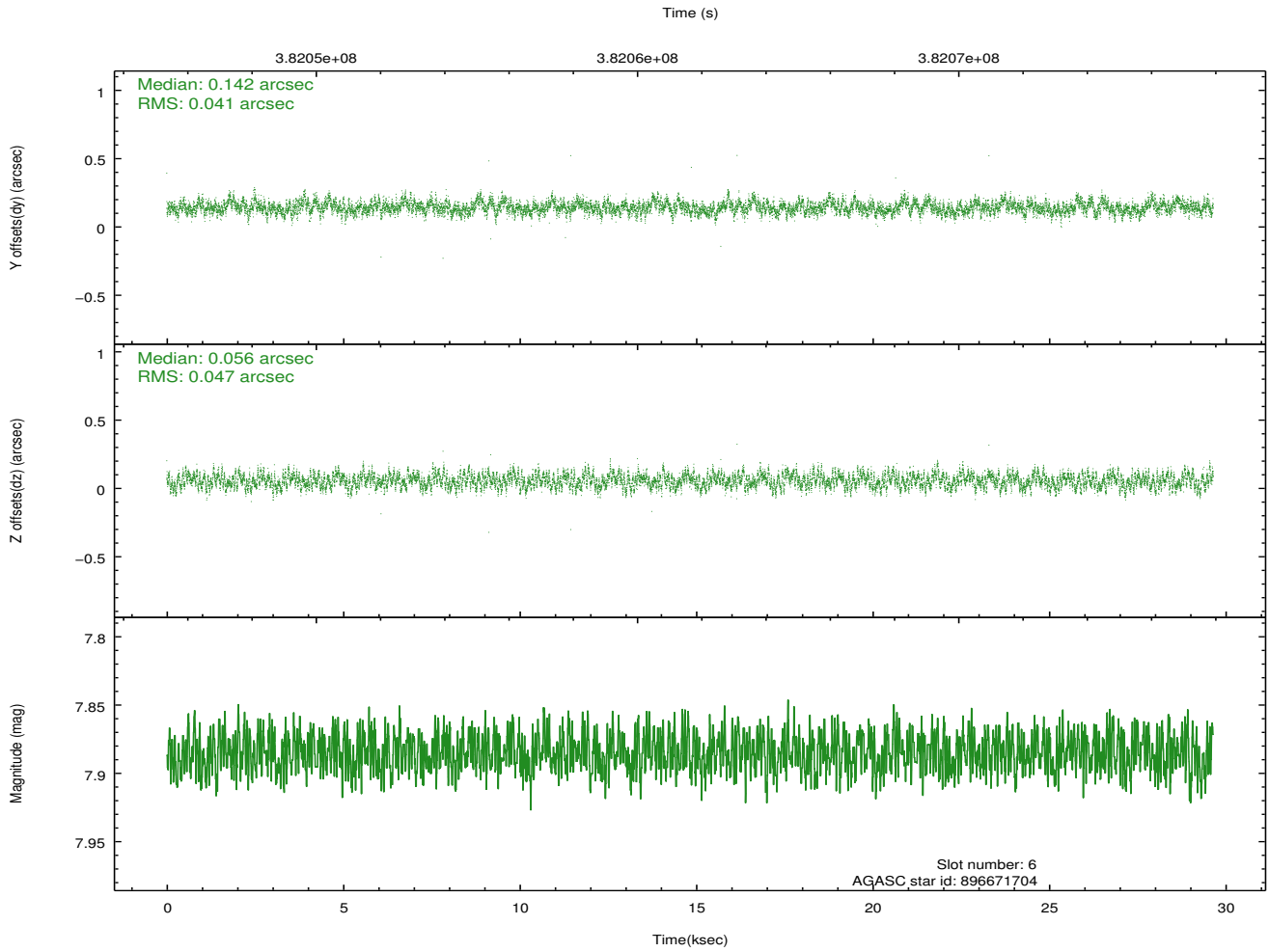
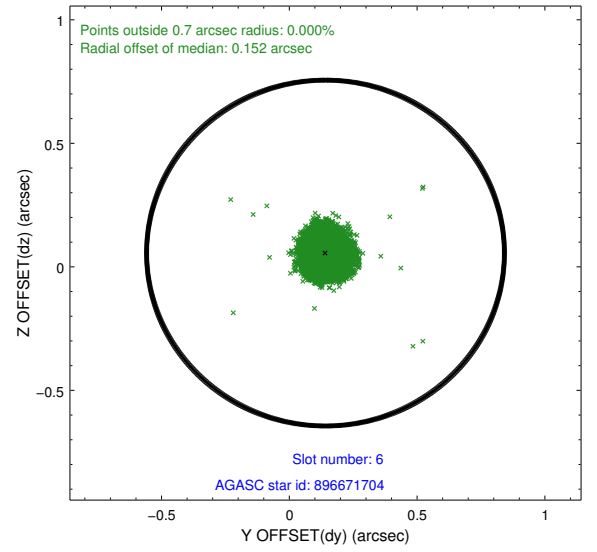
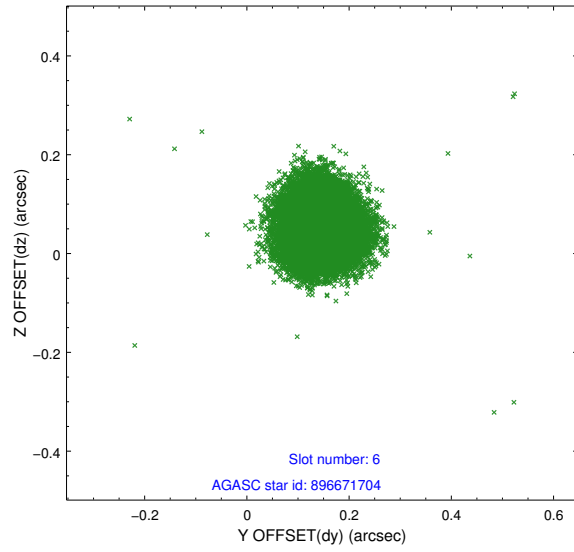
2.4.2 Slot 4



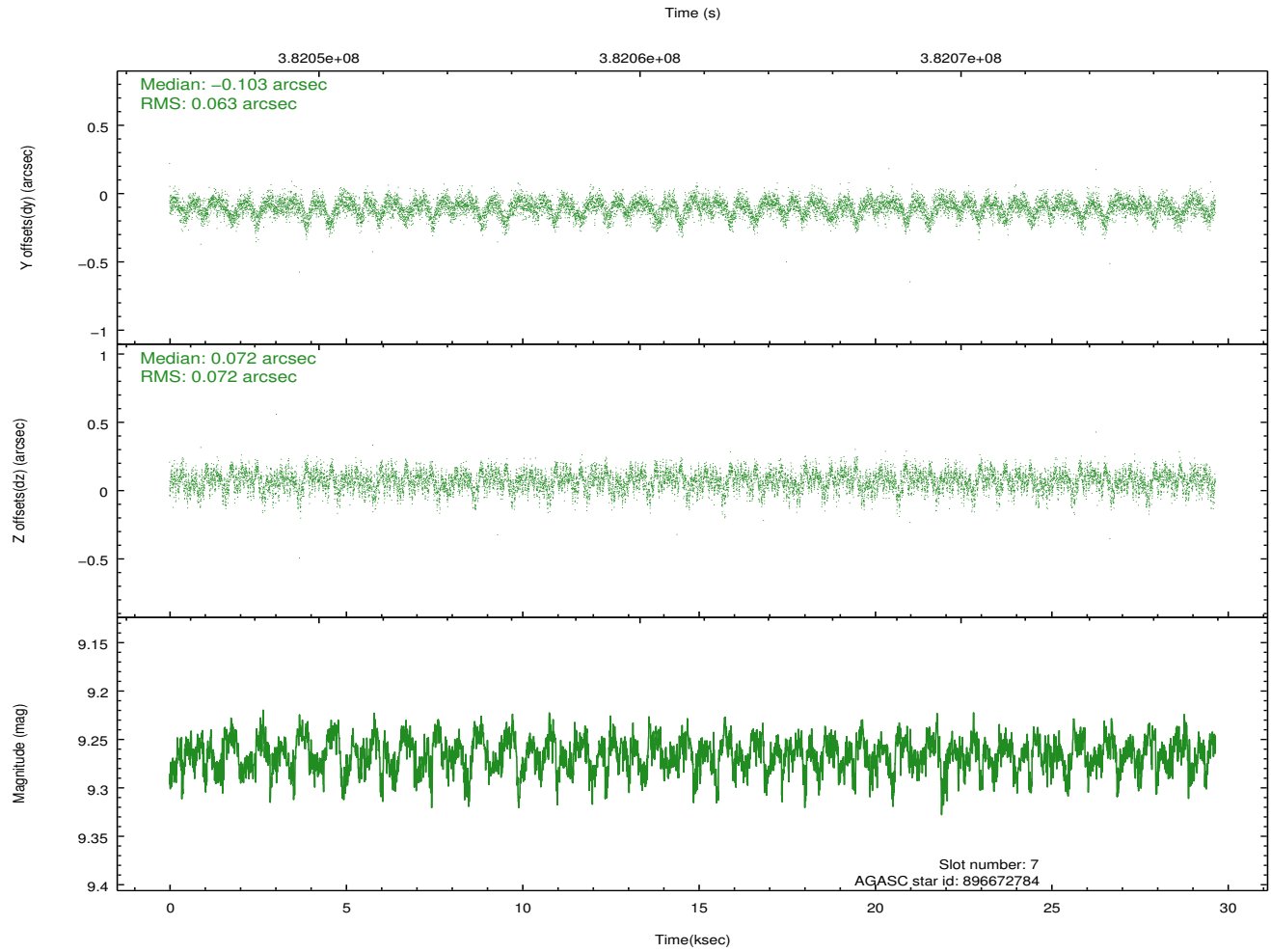
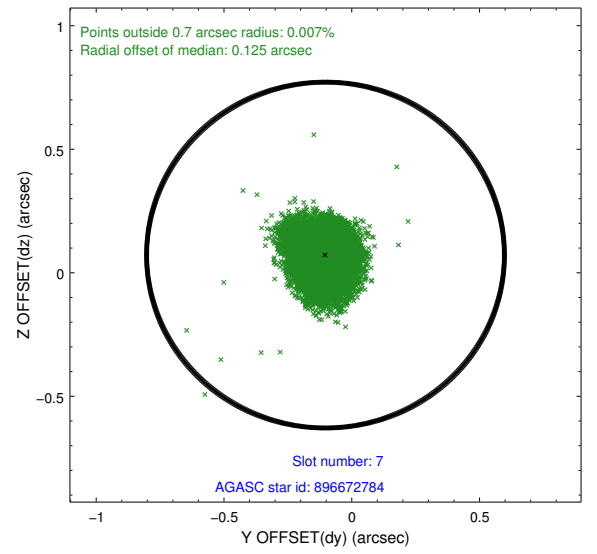
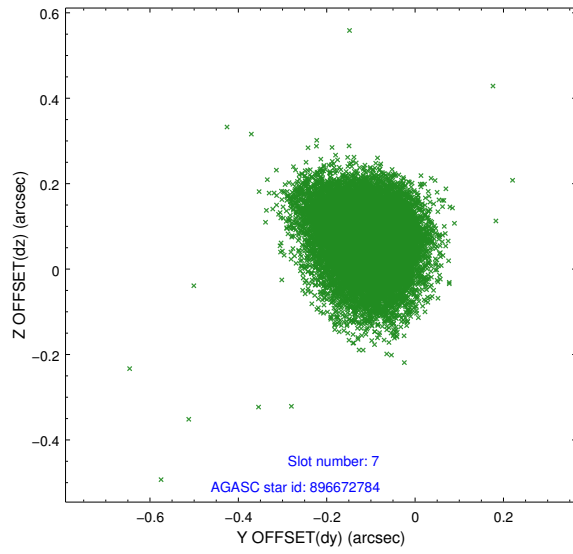
2.4.3 Slot 5



2.4.4 Slot 6

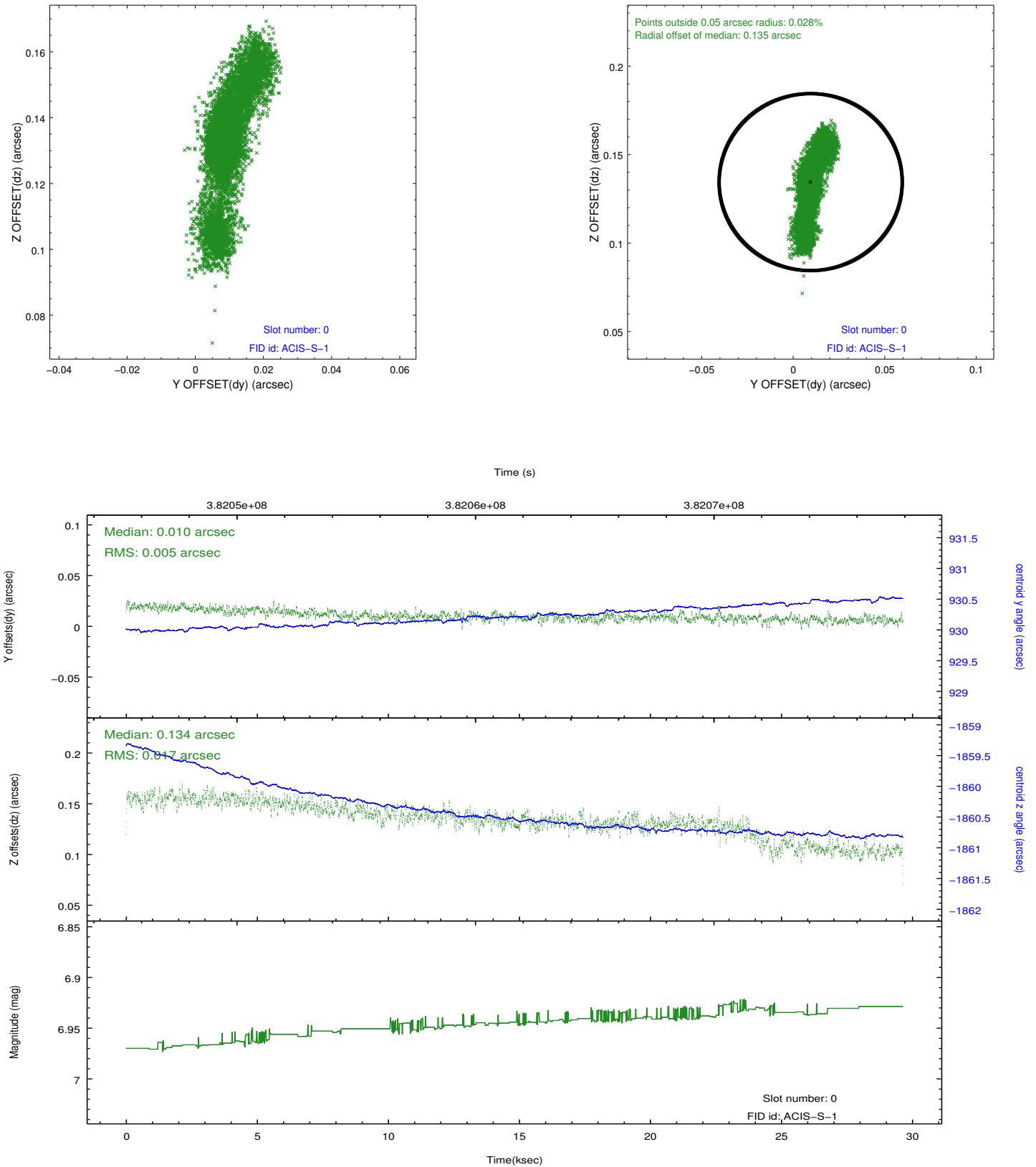


2.4.5 Slot 7

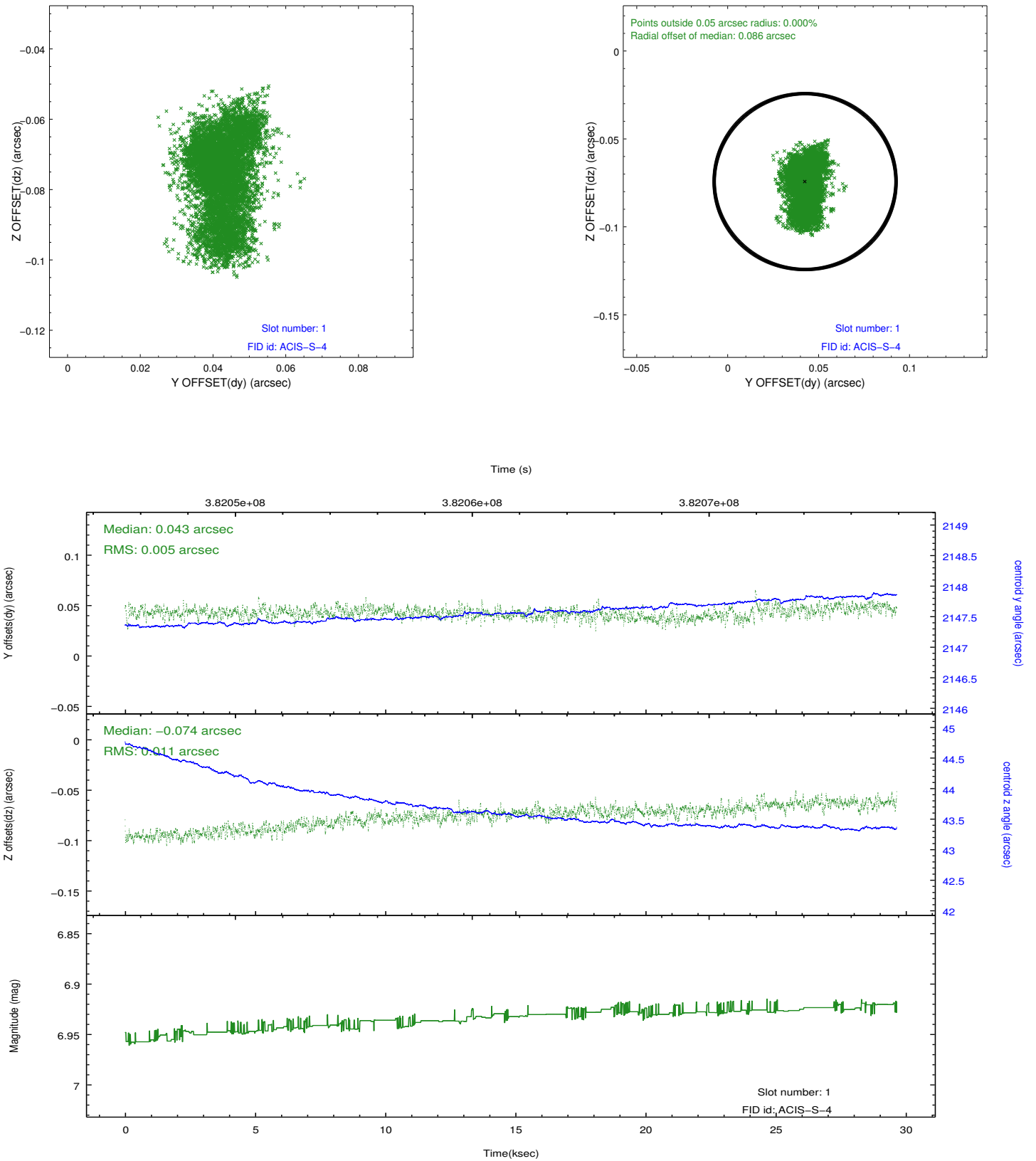


2.5 FID Slots

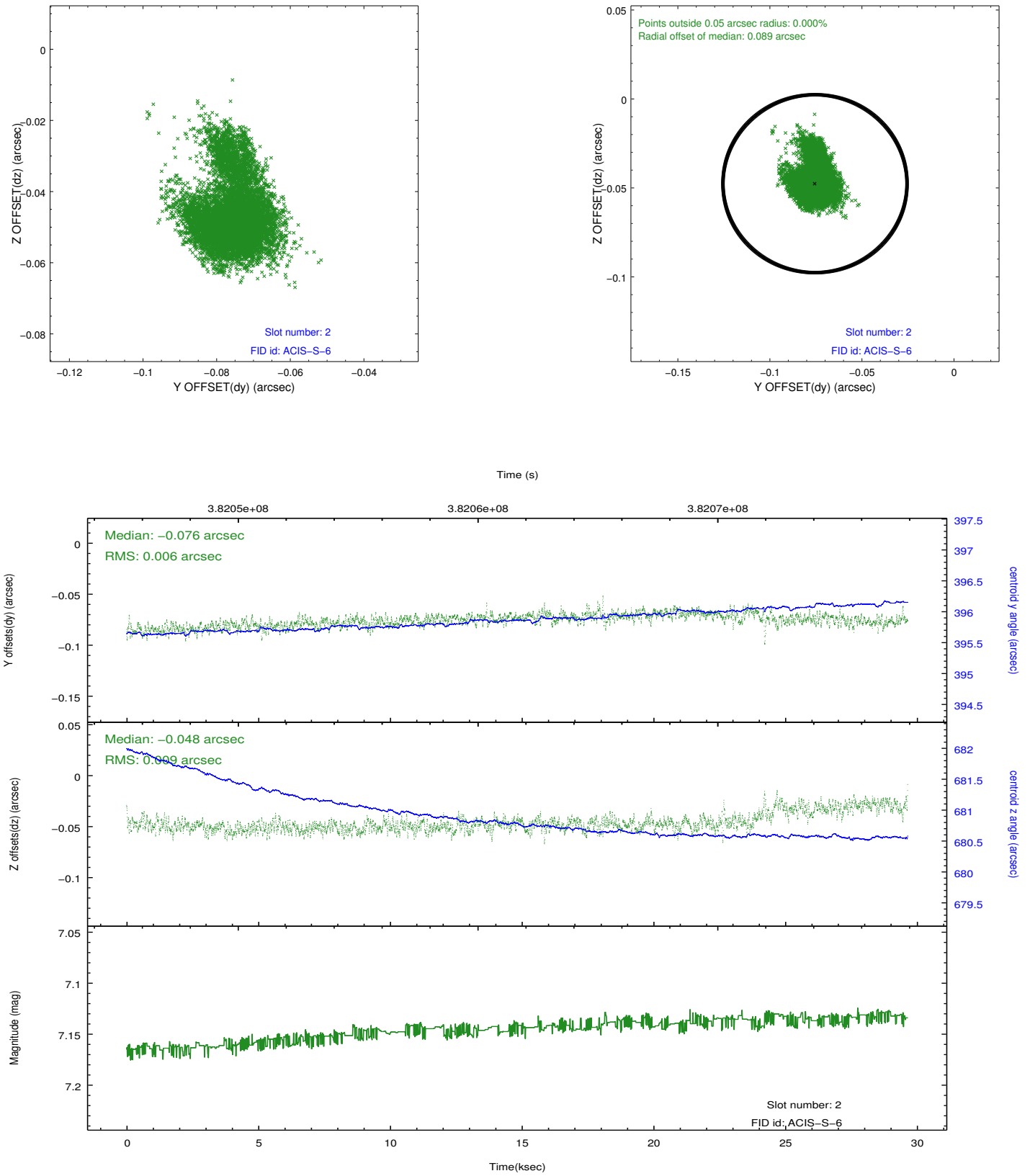
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



3 Gratings

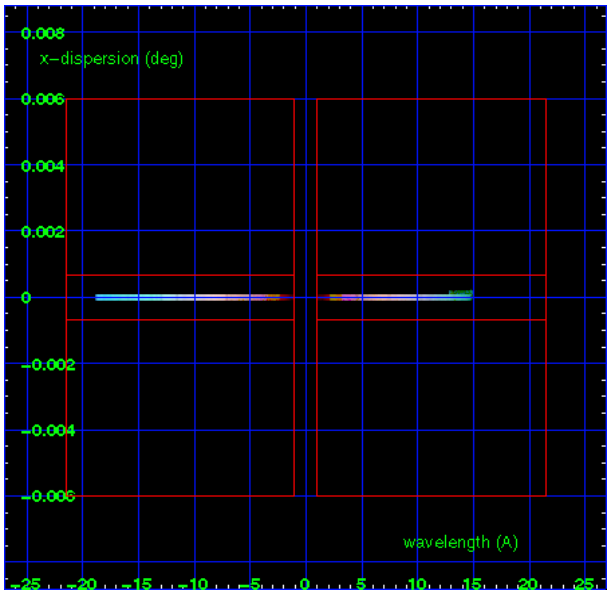
3.1 HEG Arm



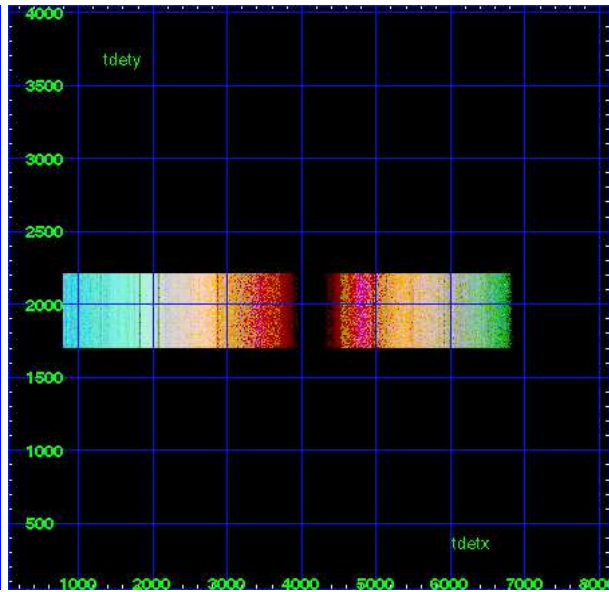
HEG Order Sort 123



HEG Order Sort ALL

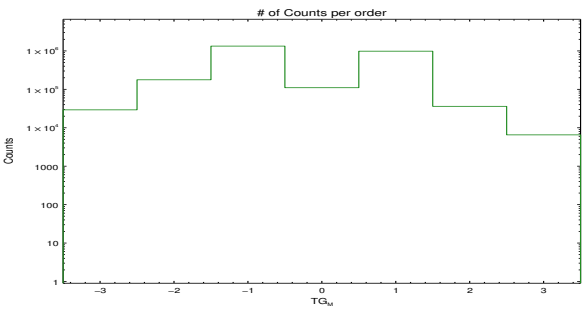


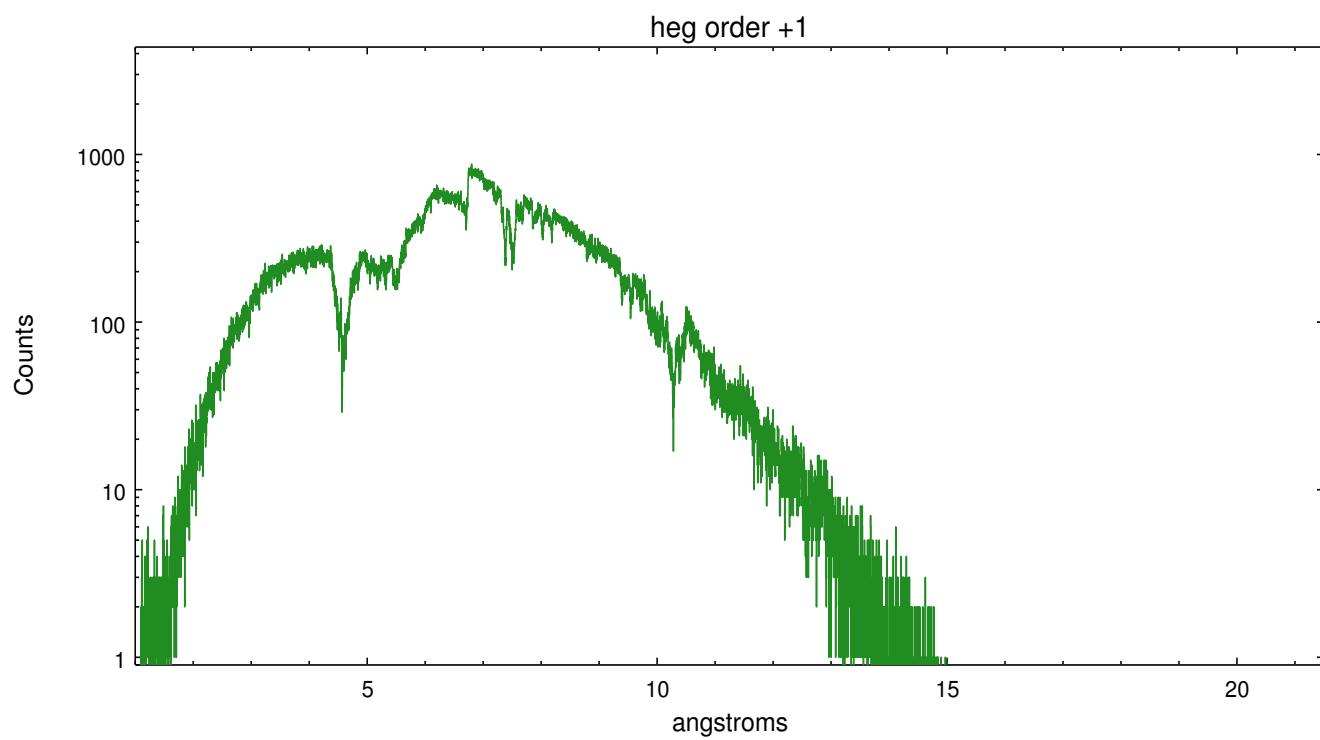
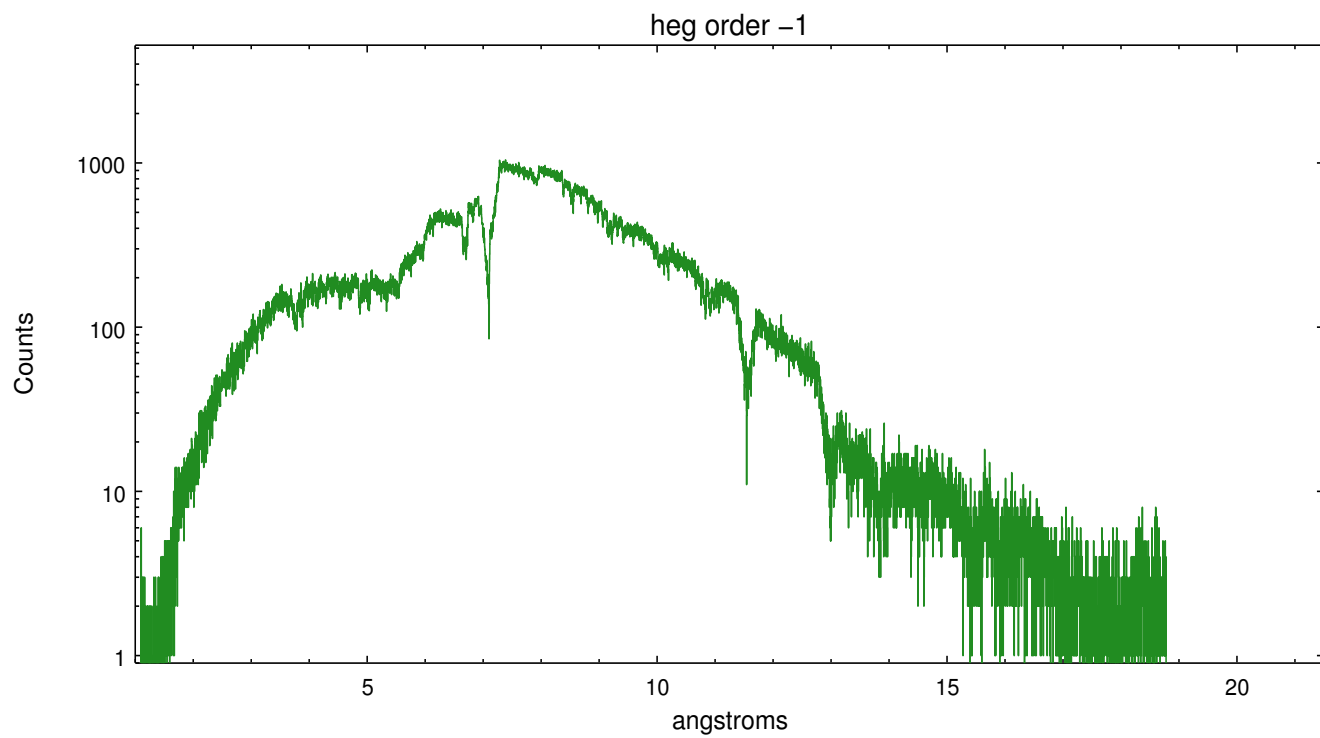
Spot Image HEG



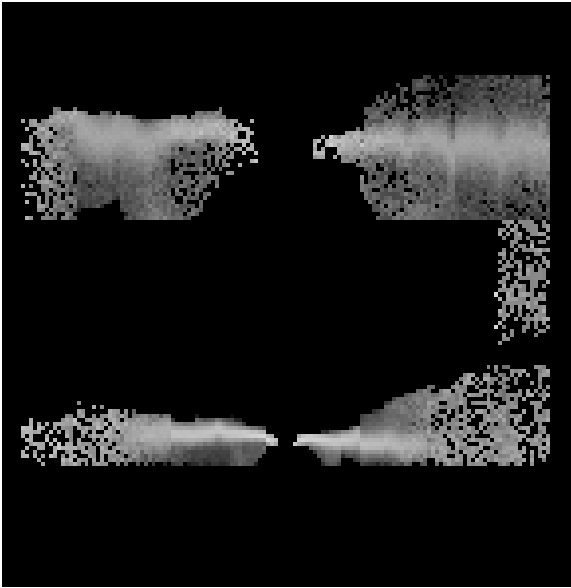
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	29278	177344	1333705	110366	983197	36091	6540

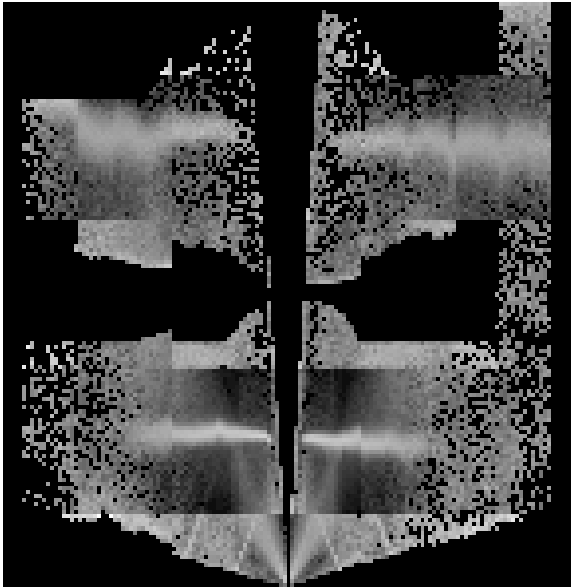




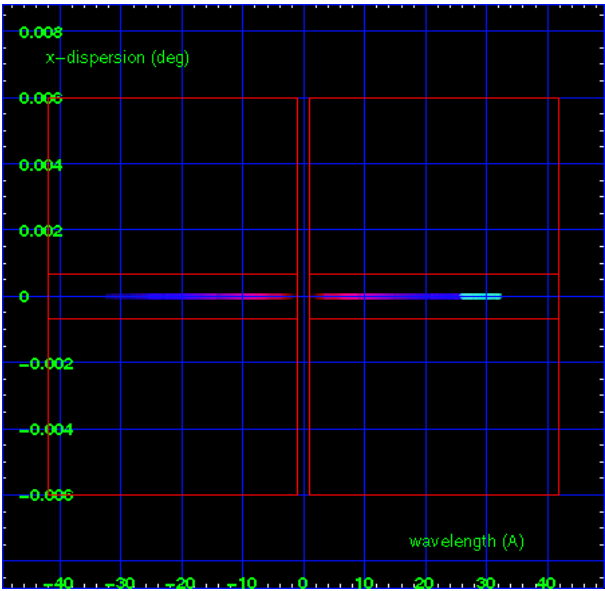
3.2 MEG Arm



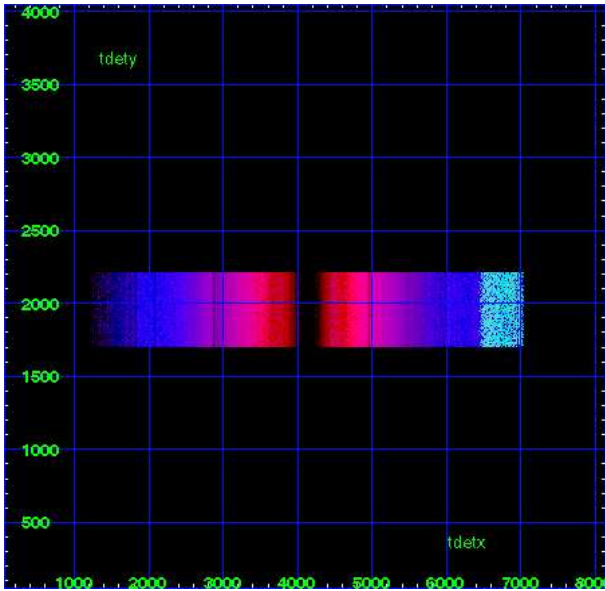
MEG Order Sort 123



MEG Order Sort ALL

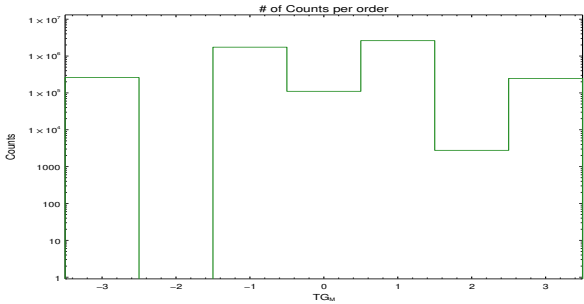


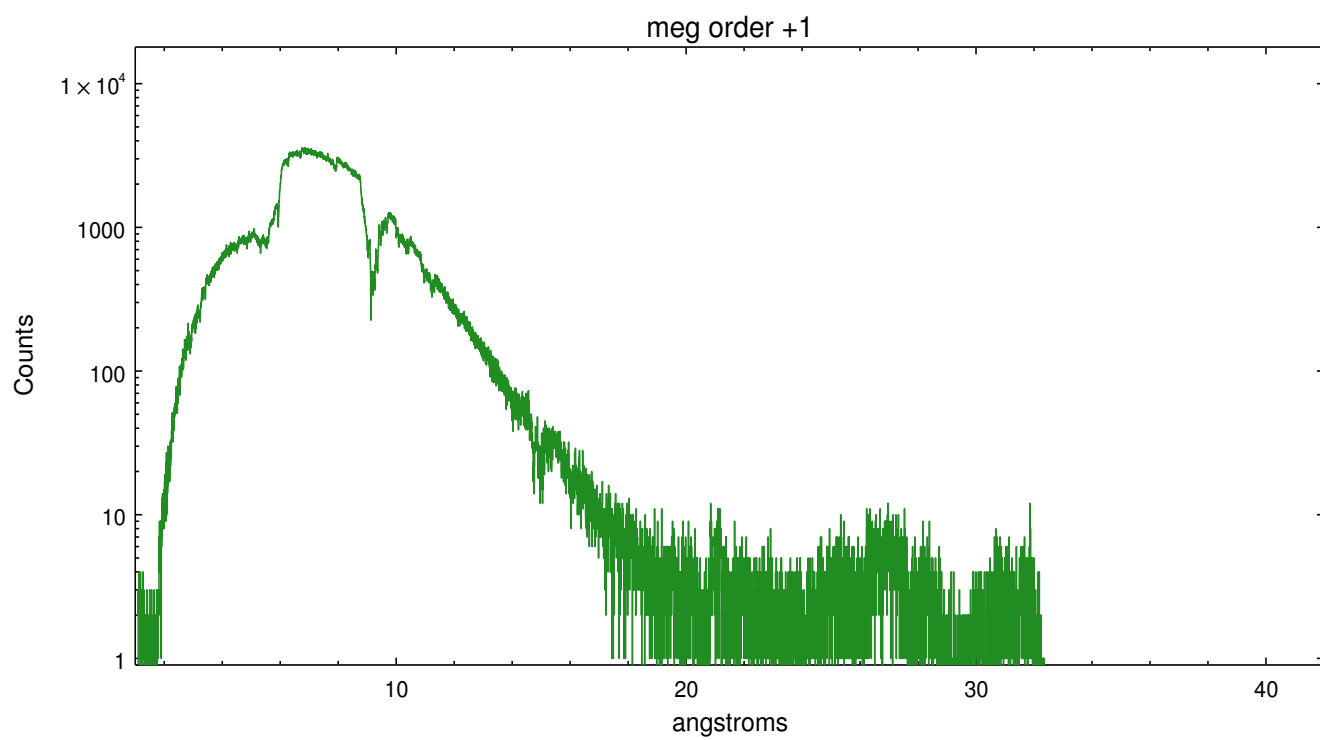
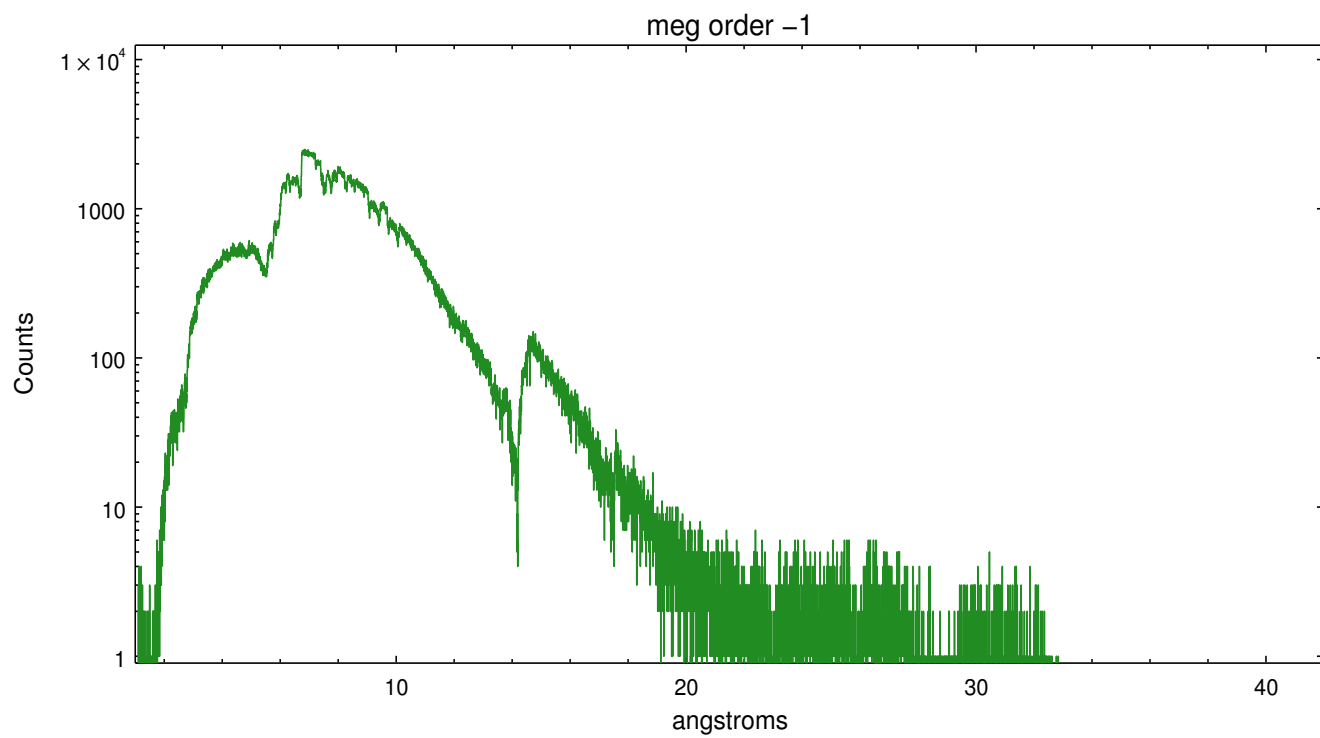
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	260682	0	1740246	110366	2617263	2764	246931





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	29.64425

A.2 Comments

The charge time is based on CCD_ID=5 (S1), which had no dropped frames and does reflect the requested exposure. Other chips have dropped frames due to telemetry saturation, and their effective exposures range from 14.7-29.6 ks. ===The zeroth order is masked with an exclusion window that only allows 1 in 10 events to be sent. === Gain and CTI correction are not well calibrated in CC-mode. Default order sorting can clip some regions, particularly in high orders. User-specified custom processing parameters may be required in tg_resolve_events (osipfile=None, osort_lo, osort_hi ~0.3) though this can allow more zeroth order background at short wavelengths.==== For ACIS/CC-mode w/ HETG, there are no MEG even order counts. MEG even orders overlap with HEG orders in energy, but MEG even order efficiencies are very low. Since HEG and MEG cannot be spatially separated, events are preferentially assigned to HEG. (MEG odd orders can be resolved.)