

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 8930 - L2 Version 3
Chandra X-Ray Center

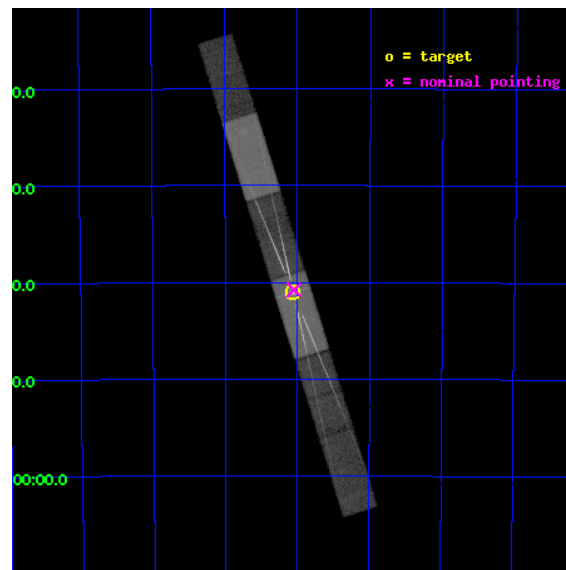
L2 Processing Date : May 29 2012

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1 Front

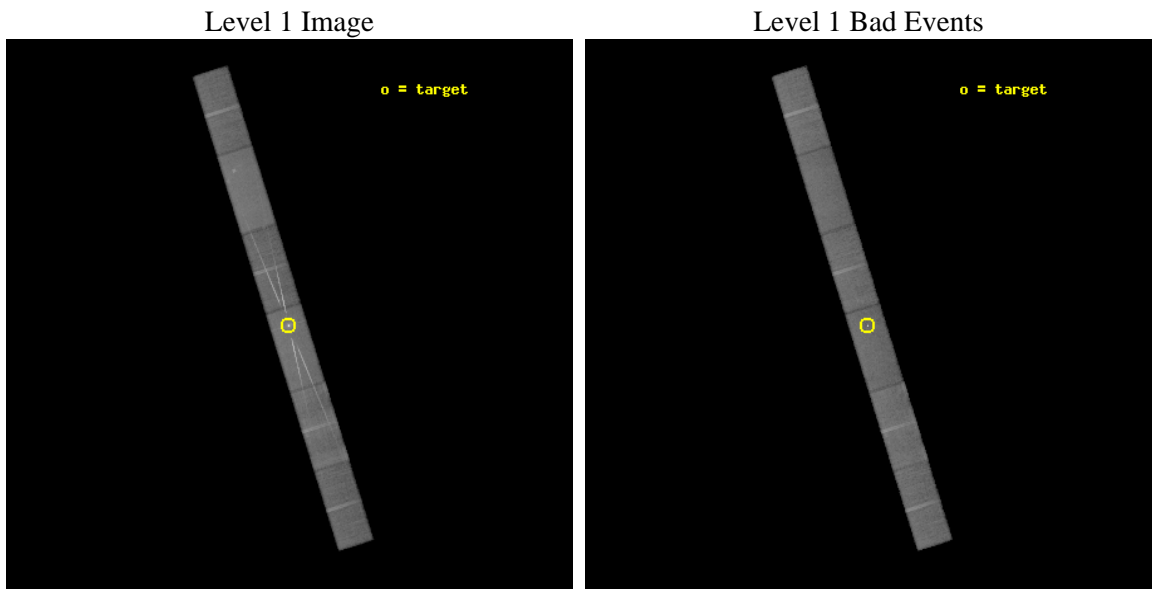
seq_num	200511	Sequence number
obs_id	8930	Observation id
title	Shock Dynamics in Eta Carinae Approaching the 2009 Periastron Passage: A Twisted Tail	Proposal title
observer	Dr Michael Corcoran	Principal investigator
object	Eta Car	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	161.265	Observer's specified target RA [deg]
dec_targ	-59.684528	Observer's specified target Dec [deg]
ra_nom	161.2626144795	Nominal RA [deg]
dec_nom	-59.679850383695	Nominal Dec [deg]
roll_nom	72.654565244665	Nominal Roll [deg]
revision	3	Processing version of data
ontime	30457.5	Sum of GTIs [s]
livetime	29646.375175206	Livetime [s]
ontime4	30457.5	Sum of GTIs [s]
ontime5	30457.5	Sum of GTIs [s]
ontime6	30454.41795969	Sum of GTIs [s]
ontime7	30457.5	Sum of GTIs [s]
ontime8	30457.5	Sum of GTIs [s]
ontime9	30457.5	Sum of GTIs [s]
l2events	361897	Number of level 2 events



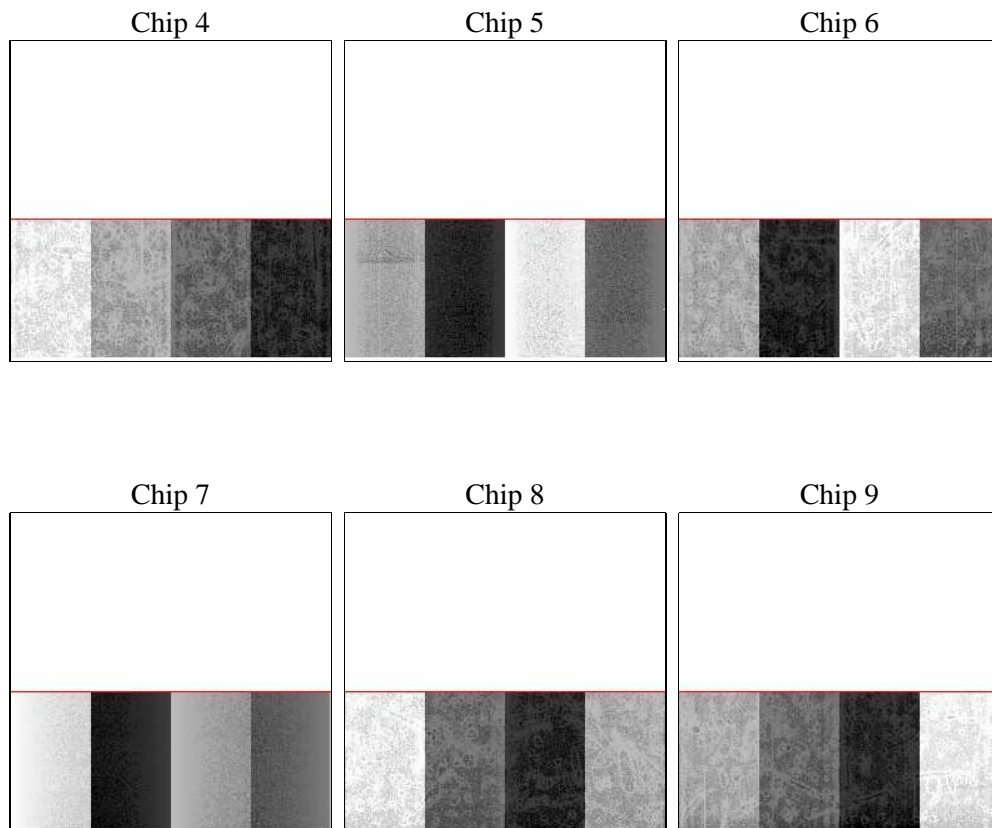
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30305.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	30457.5	Sum of GTIs [s]
caldsver	4.4.9	 	ontime4	30457.5	Sum of GTIs [s]
date	2012-05-25T21:12:19	Date and time of file creation	ontime5	30457.5	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	30454.41795969	Sum of GTIs [s]
			ontime7	30457.5	Sum of GTIs [s]
			ontime8	30457.5	Sum of GTIs [s]
			ontime9	30457.5	Sum of GTIs [s]
			l1events	1172082	Number of level 1 events

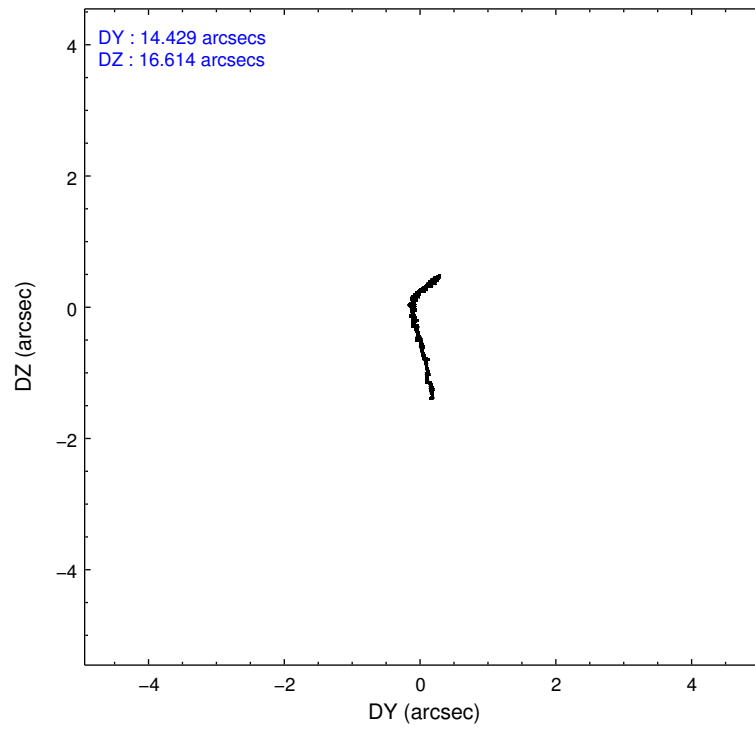
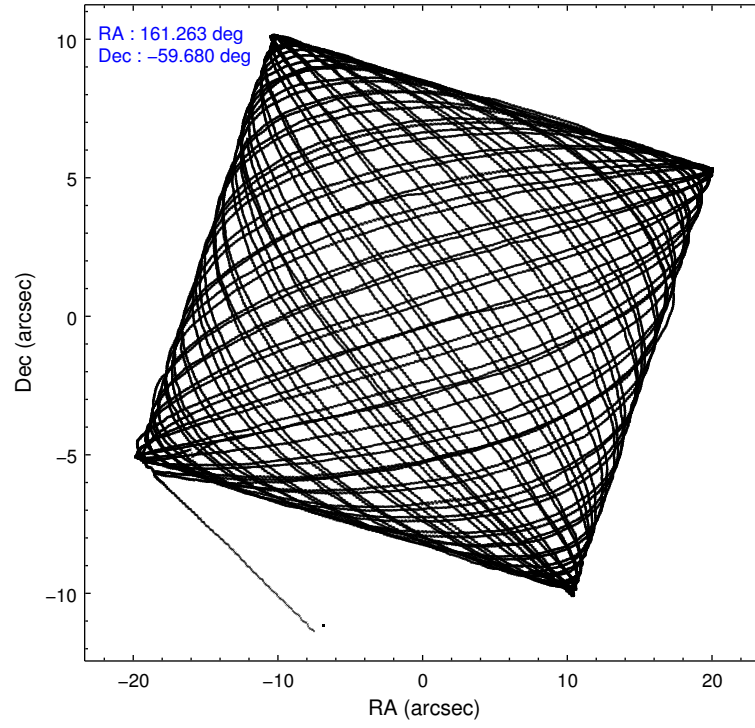
2.1.4 Events

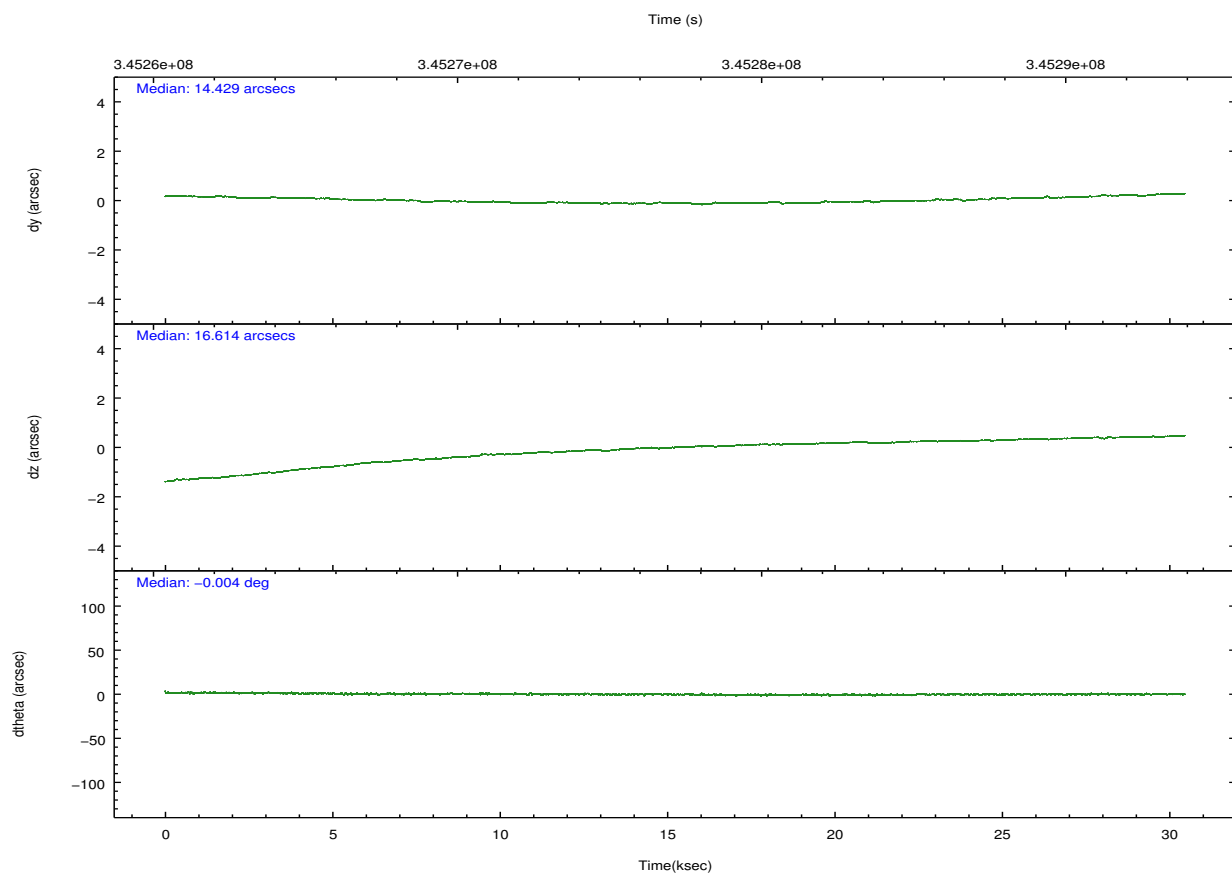
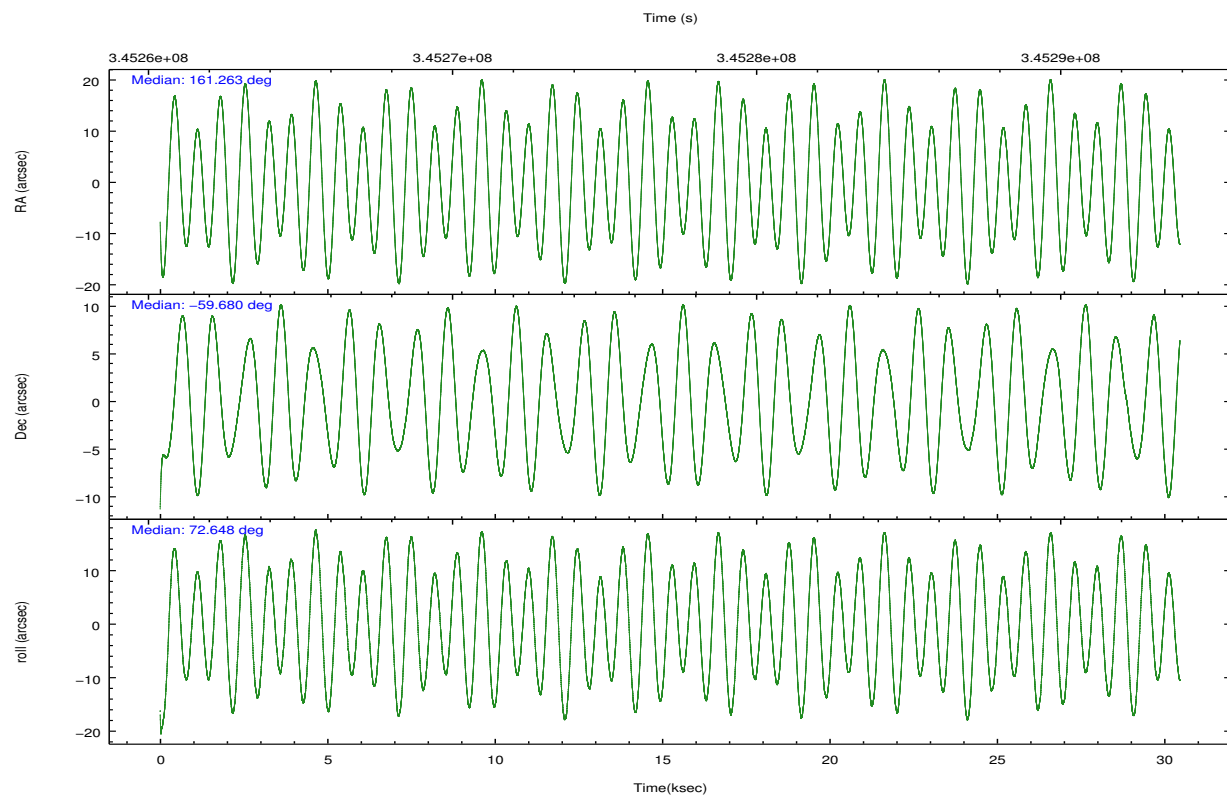
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	158354	217848	186767	270599	196878	141636	grade 0 events	8756	10848	36404	20509	21410	9416
rejected events	138294	114426	127539	121059	142533	120931		5%	4%	19%	7%	10%	6%
rejected %	87%	52%	68%	44%	72%	85%	grade 1 events	100	344	186	678	138	67
								0%	0%	0%	0%	0%	0%
							grade 2 events	4226	30271	9231	32886	10831	3886
								2%	13%	4%	12%	5%	2%
							grade 3 events	2234	6159	3899	14666	5498	2166
								1%	2%	2%	5%	2%	1%
							grade 4 events	2070	5991	3977	14655	5103	2112
								1%	2%	2%	5%	2%	1%
							grade 5 events	6157	17095	6382	20209	8382	6784
								3%	7%	3%	7%	4%	4%
							grade 6 events	3095	52024	6246	68577	12327	3492
								1%	23%	3%	25%	6%	2%
							grade 7 events	131716	95116	120442	98419	133189	113713
								83%	43%	64%	36%	67%	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	161.275211	161.2626144795042	CCD I2 on	N	N
[deg] Pointing Dec	-59.706423	-59.67985038369482	CCD I3 on	N	N
[deg] Pointing Roll	72.508816	72.65456524466509	CCD S0 on	O1	Y
[s] Window start time (MET)	344476865.184000	344476865.184000	CCD S1 on	Y	Y
[s] Window stop time (MET)	347155266.184000	347155266.184000	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	-183.3212429520412	CCD S5 on	O2	Y
[mm] SIM translation stage offset	-6.8	-6.811279630966652	Number of optional ACIS chips dropped	0	0
[s] Observation start time (MET)	345262065.184000	345260942.45401	On-chip summing requested	N	N
Observation start date	2008-12-10T02:06:40	2008-12-10T01:49:02	Subarray requested	CUSTOM	CUSTOM
[s] Observation end time (MET)	345292370.184000	345292954.23059	Subarray start row	15	15
Observation end date	2008-12-10T10:31:45	2008-12-10T10:42:34	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



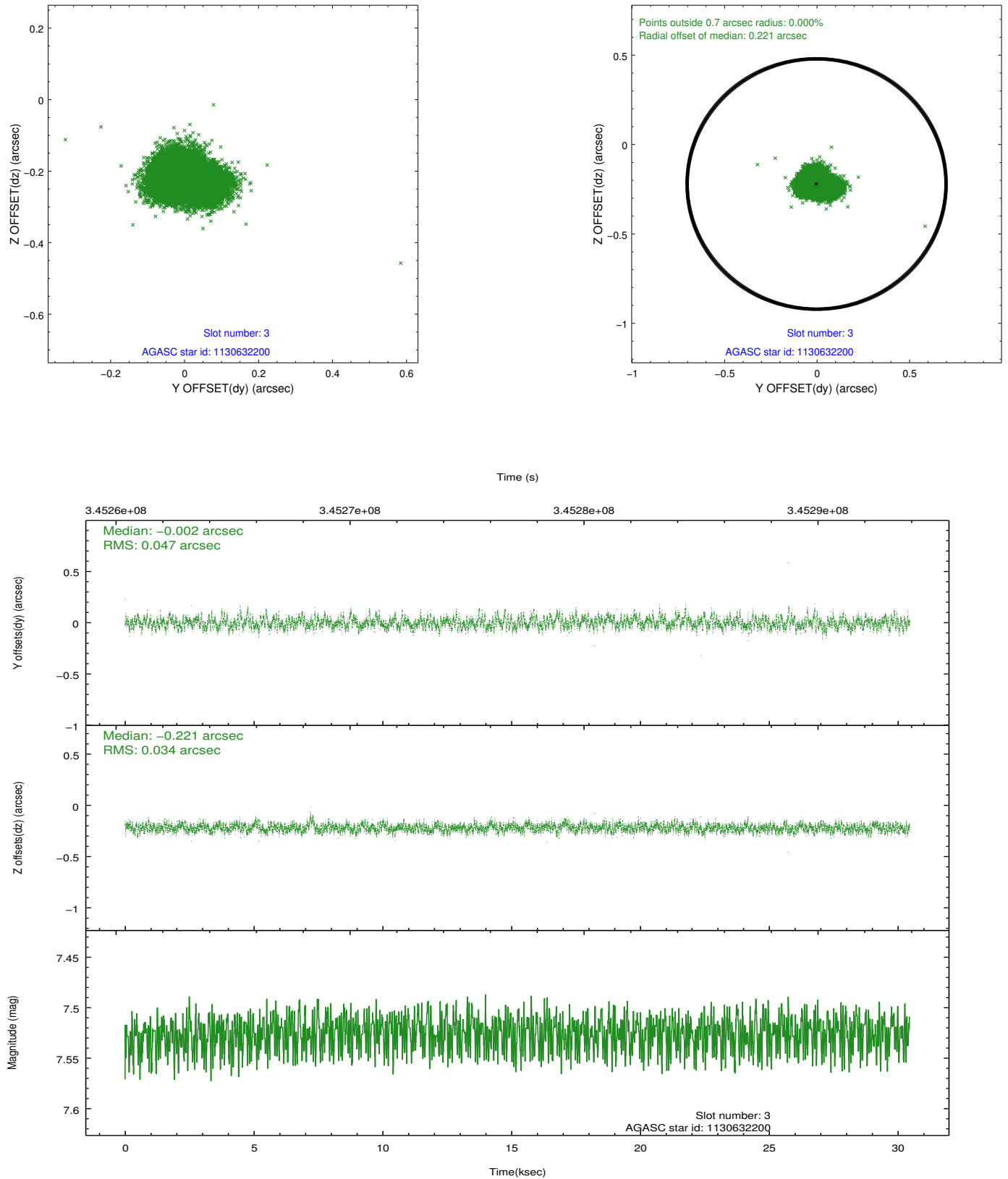


Slot Statistics

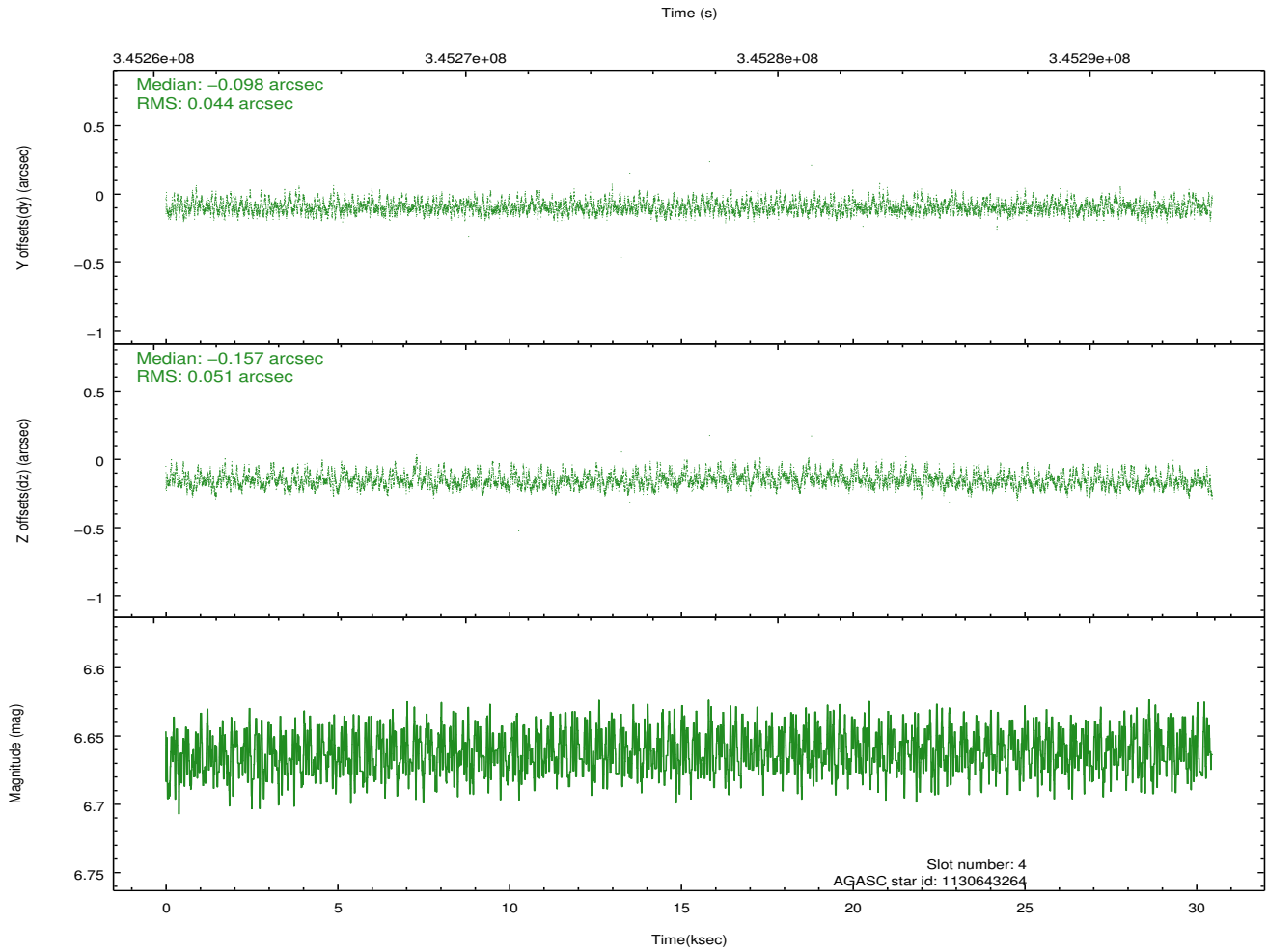
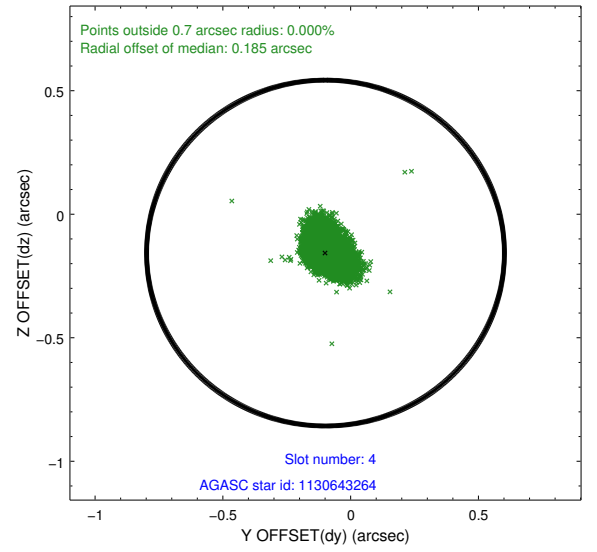
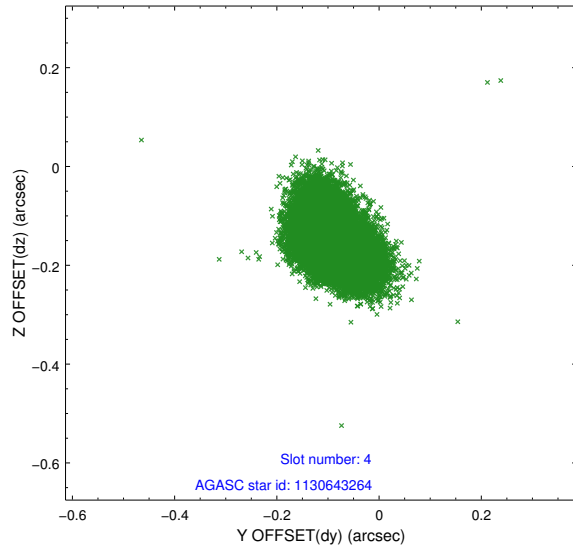
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.96	7429	0.061	0.190	0.019	0.069	0.000000	0.000000	929.14	-1873.70
1	FID	ACIS-S-2	6.87	7430	-0.211	-0.172	0.014	0.036	0.000000	0.000000	-767.00	-1878.65
2	FID	ACIS-S-4	6.94	7430	0.125	-0.012	0.013	0.034	0.000000	0.000000	2146.45	30.15
3	GUIDE	1130632200	7.53	14858	-0.002	-0.221	0.061	0.100	161.433843	-59.407820	1112.64	46.00
4	GUIDE	1130643264	6.66	14859	-0.098	-0.157	0.072	0.117	160.322990	-59.676912	-430.54	1678.94
5	GUIDE	1130640672	8.28	14852	-0.037	0.100	0.065	0.106	162.096044	-59.540805	1010.47	-1251.63
6	GUIDE	1174012960	7.14	14859	0.058	-0.047	0.058	0.091	160.855674	-60.332270	-2375.35	35.04
7	GUIDE	1174033752	8.45	14784	0.072	0.324	0.076	0.120	162.418977	-60.164599	-973.89	-2454.28

2.4 Star Slots

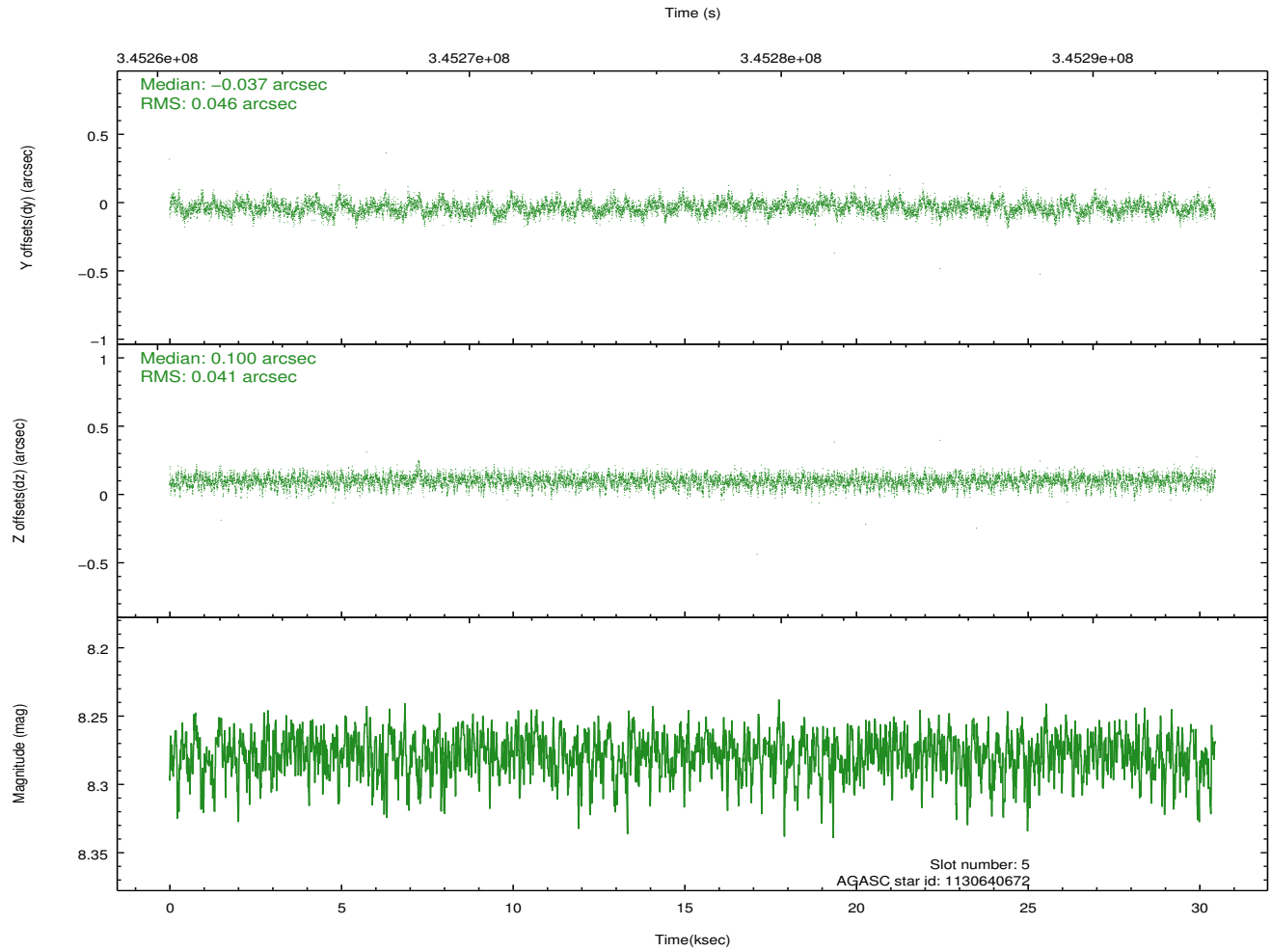
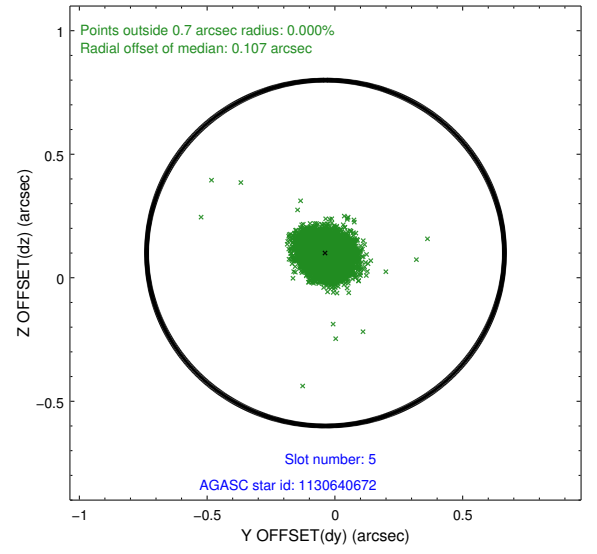
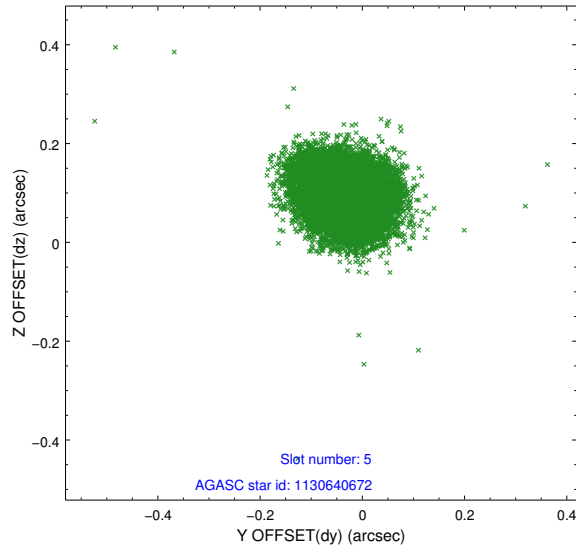
2.4.1 Slot 3



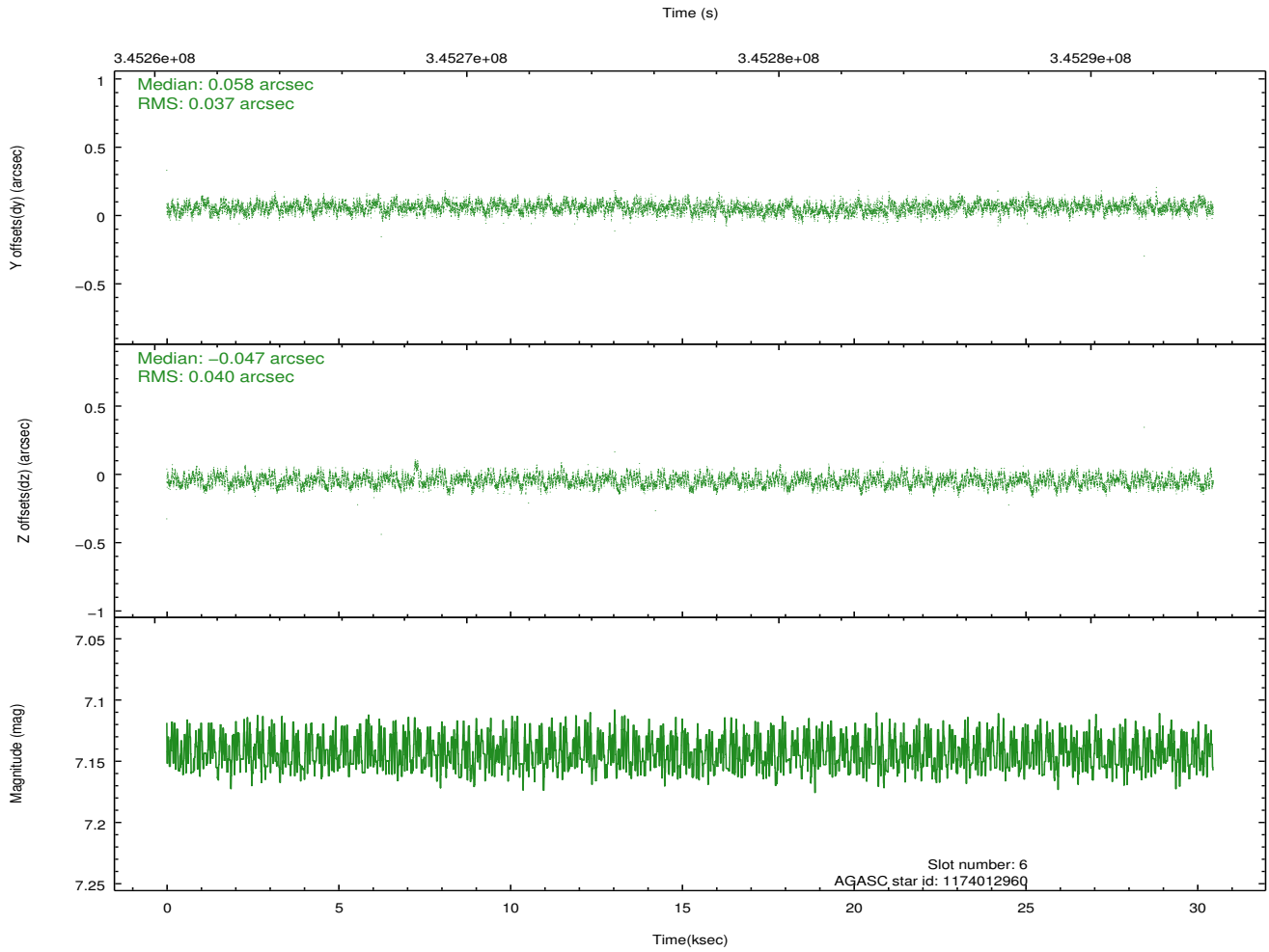
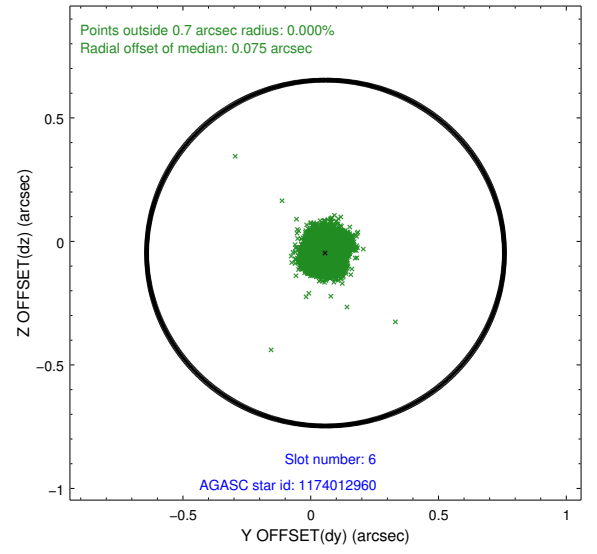
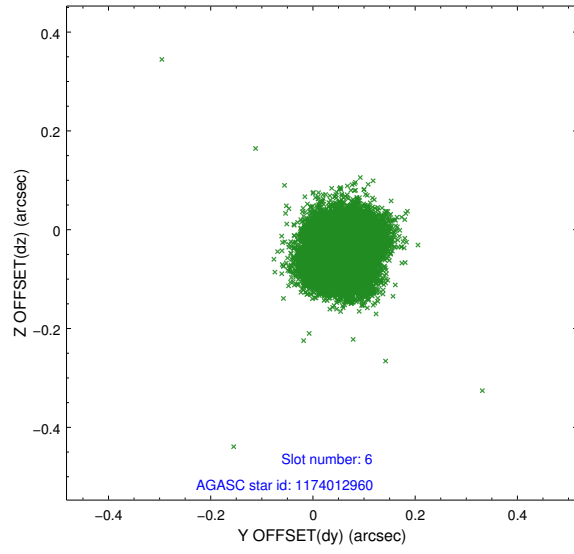
2.4.2 Slot 4



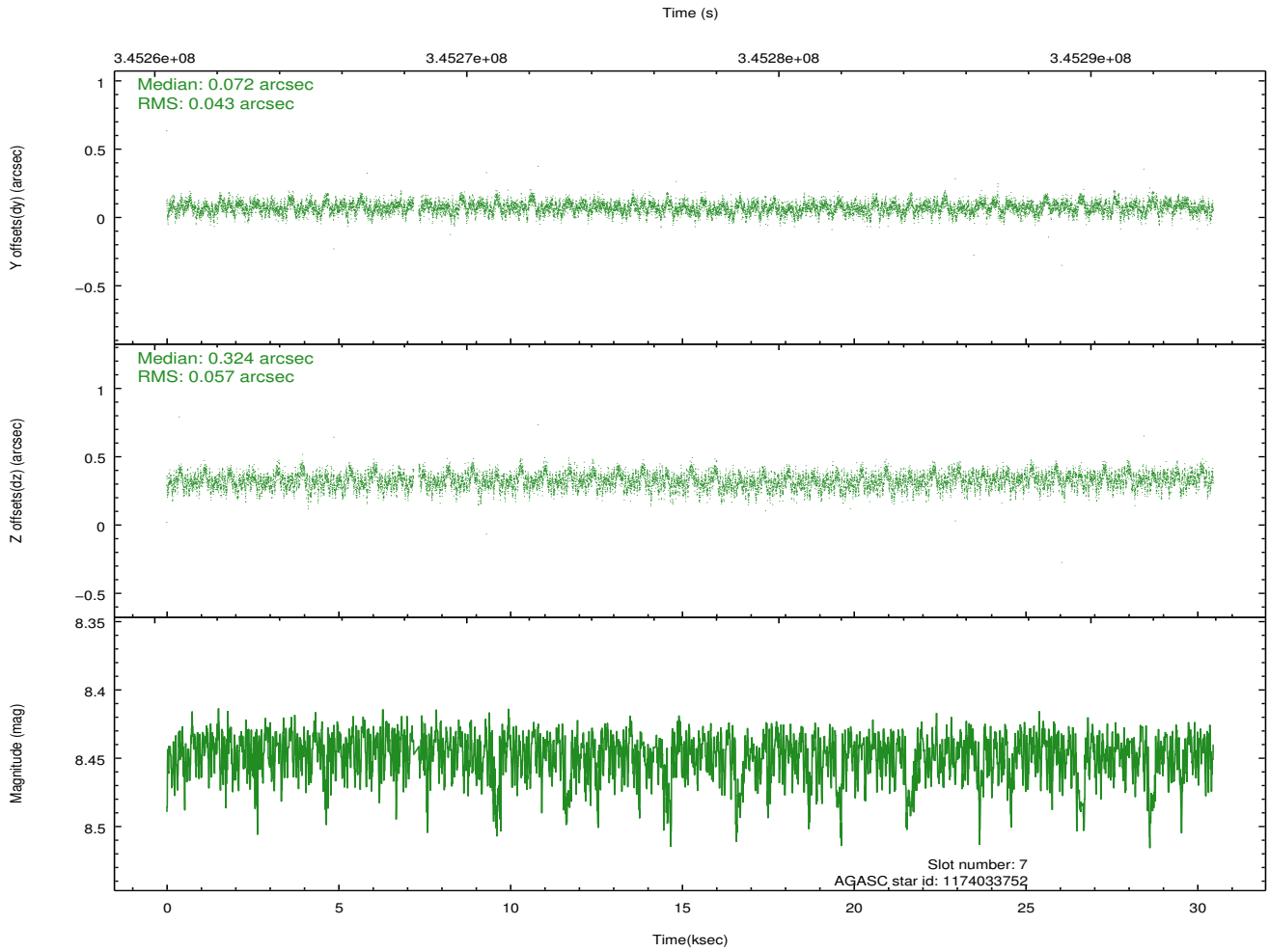
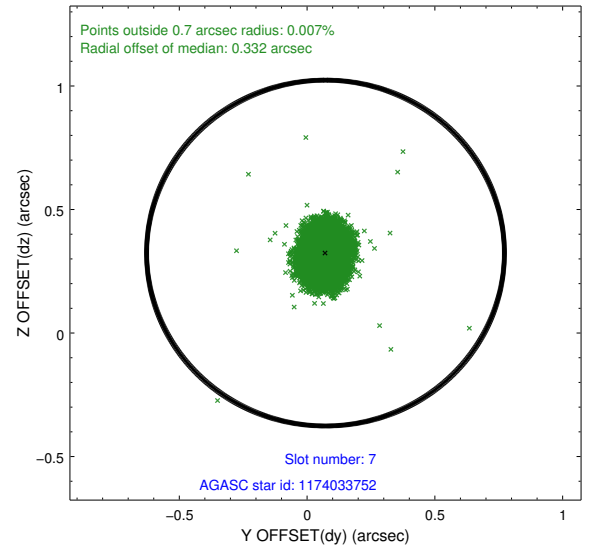
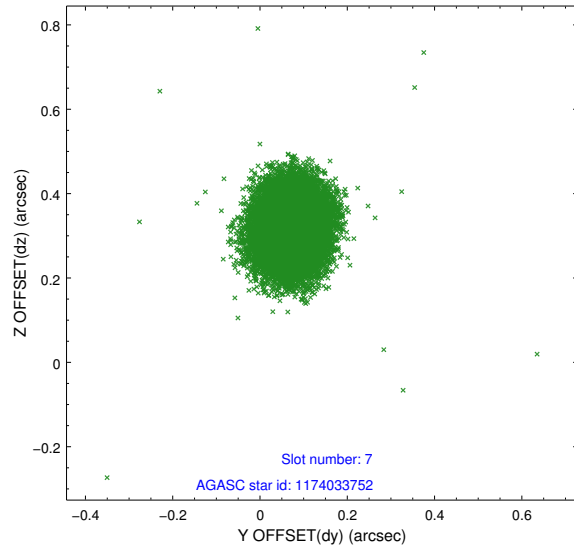
2.4.3 Slot 5



2.4.4 Slot 6

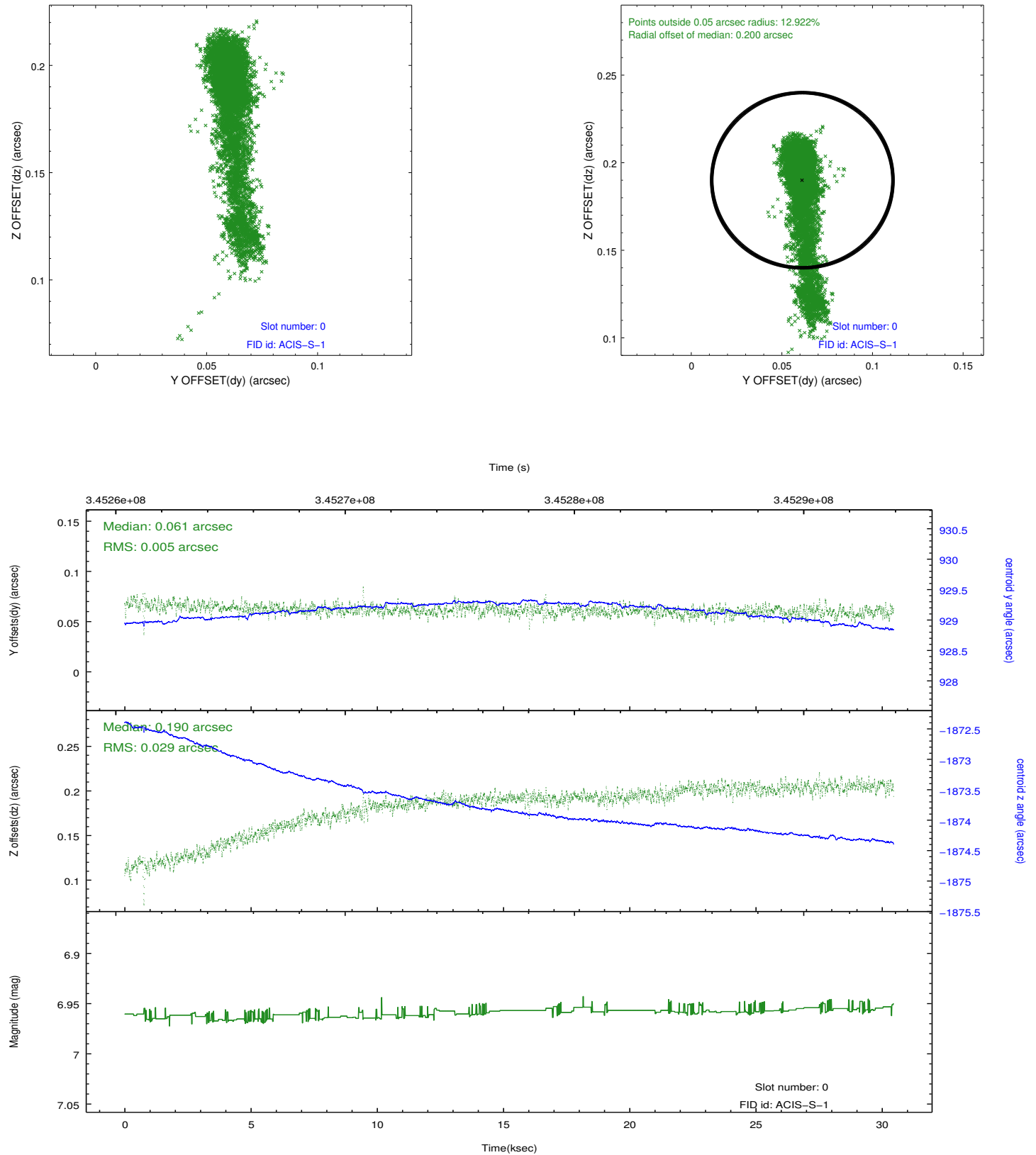


2.4.5 Slot 7

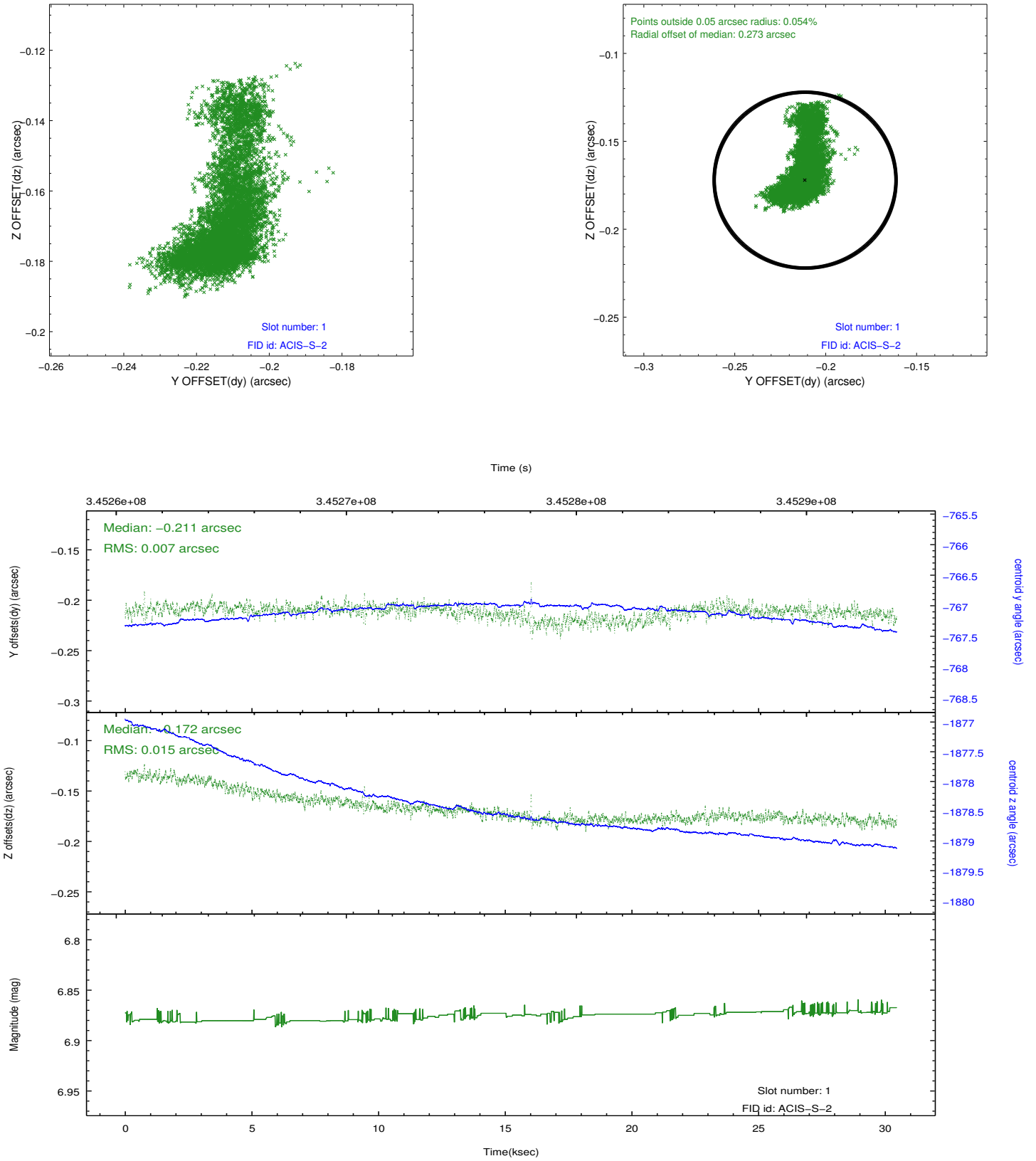


2.5 FID Slots

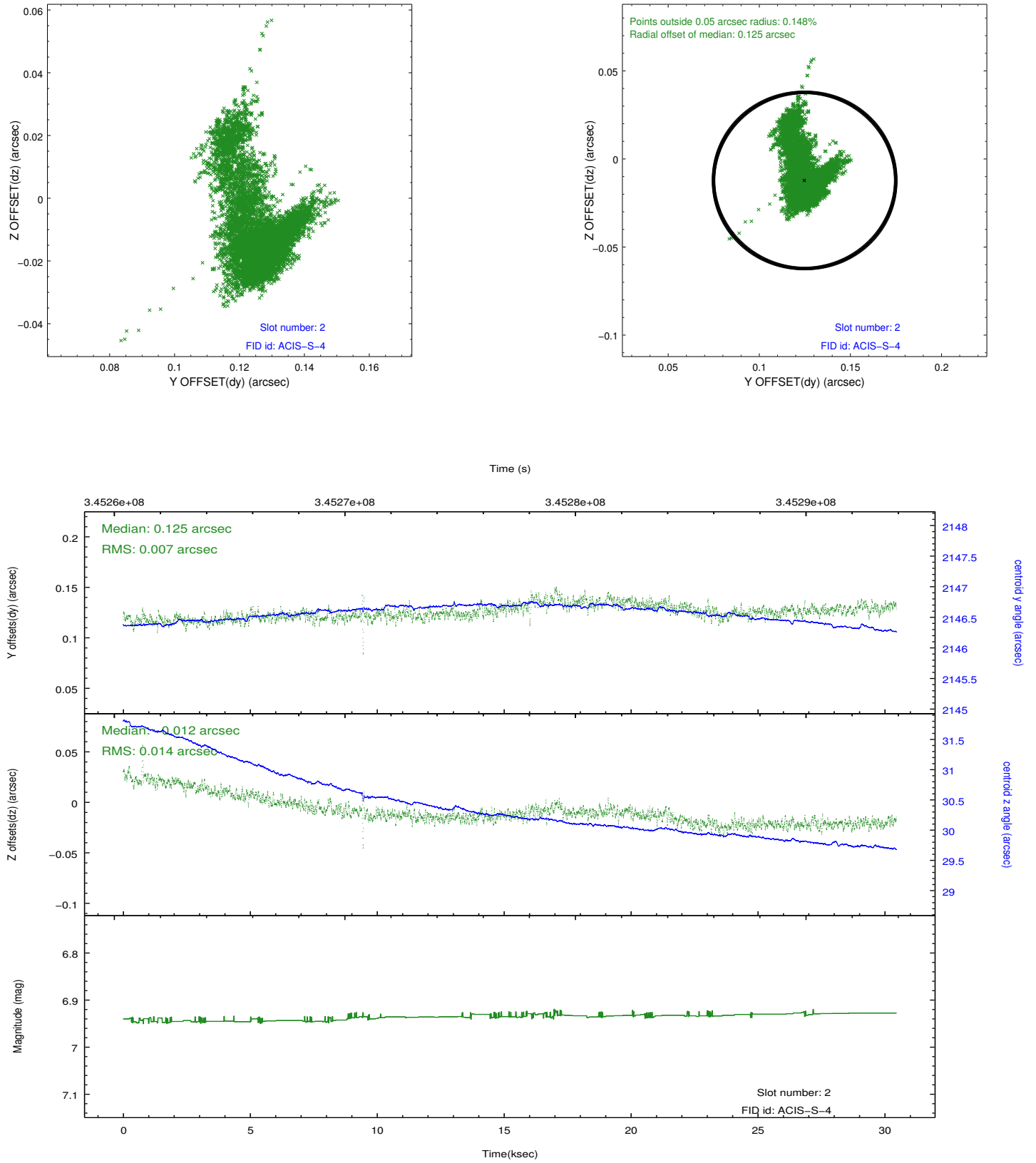
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

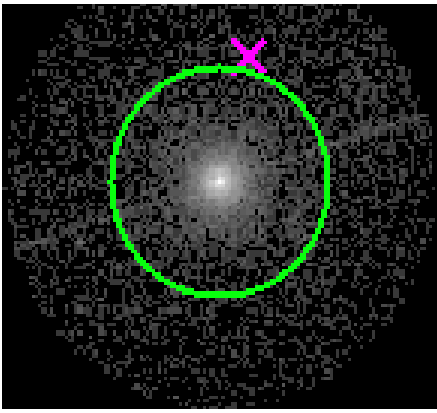


3 Gratings

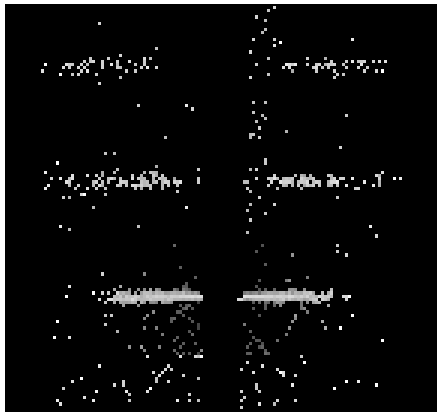
3.1 HEG Arm



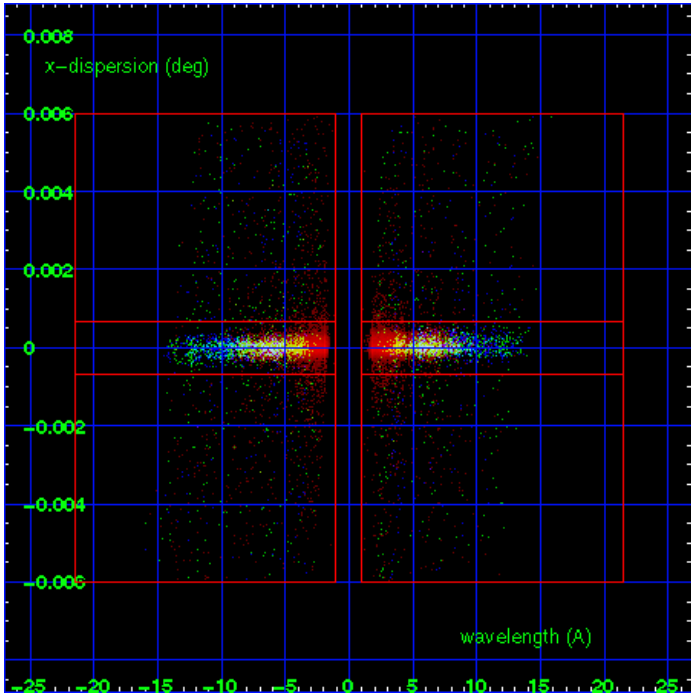
HEG Order Sort 123



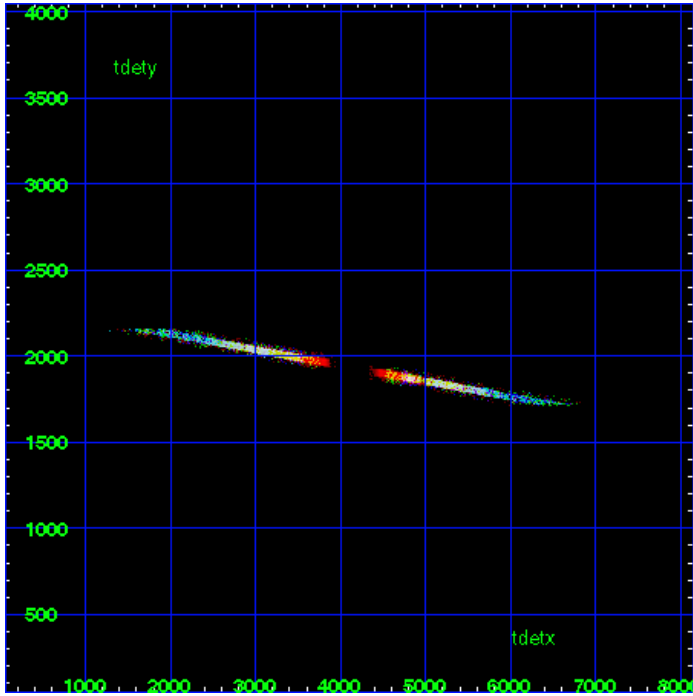
HEG Zero Order



HEG Order Sort ALL

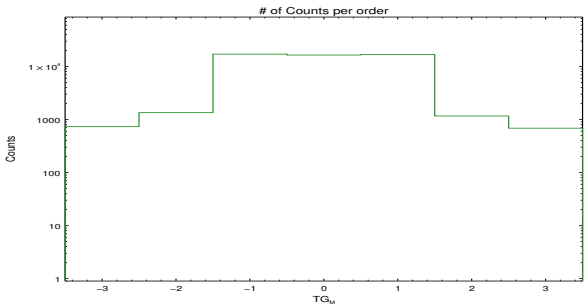


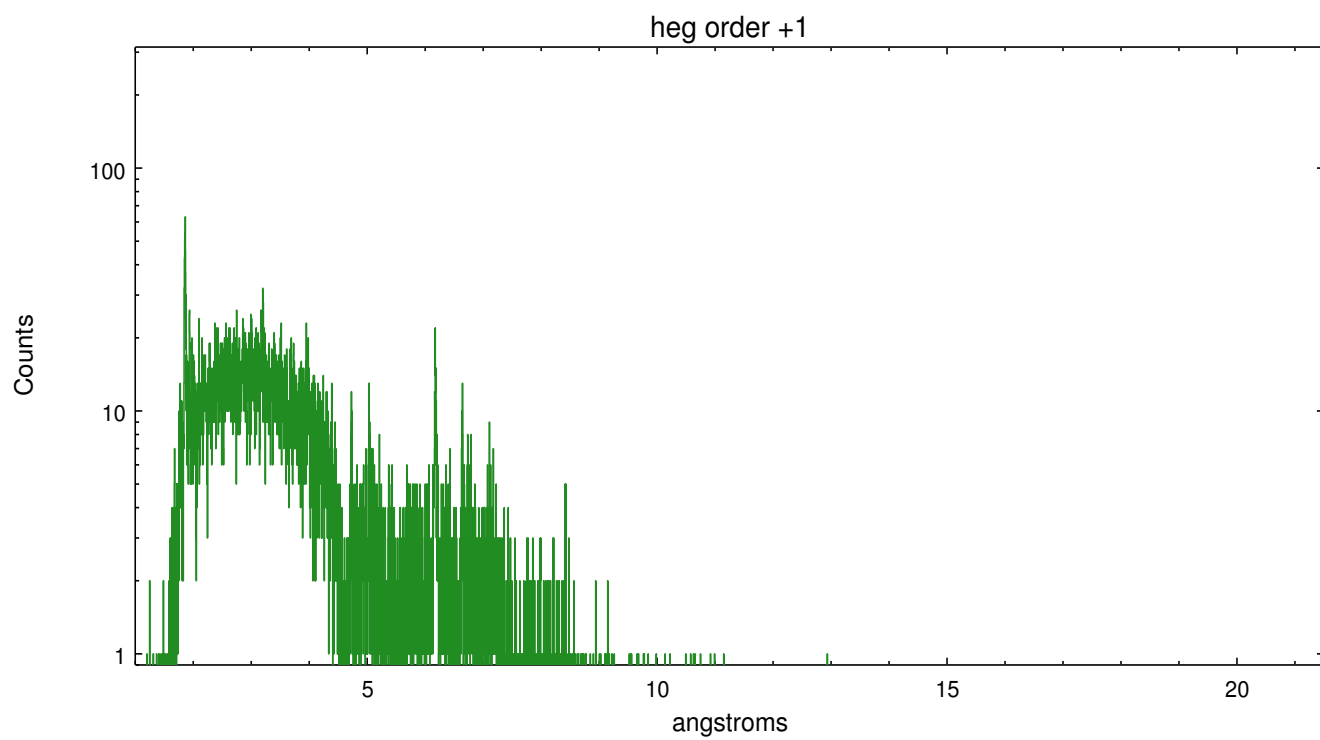
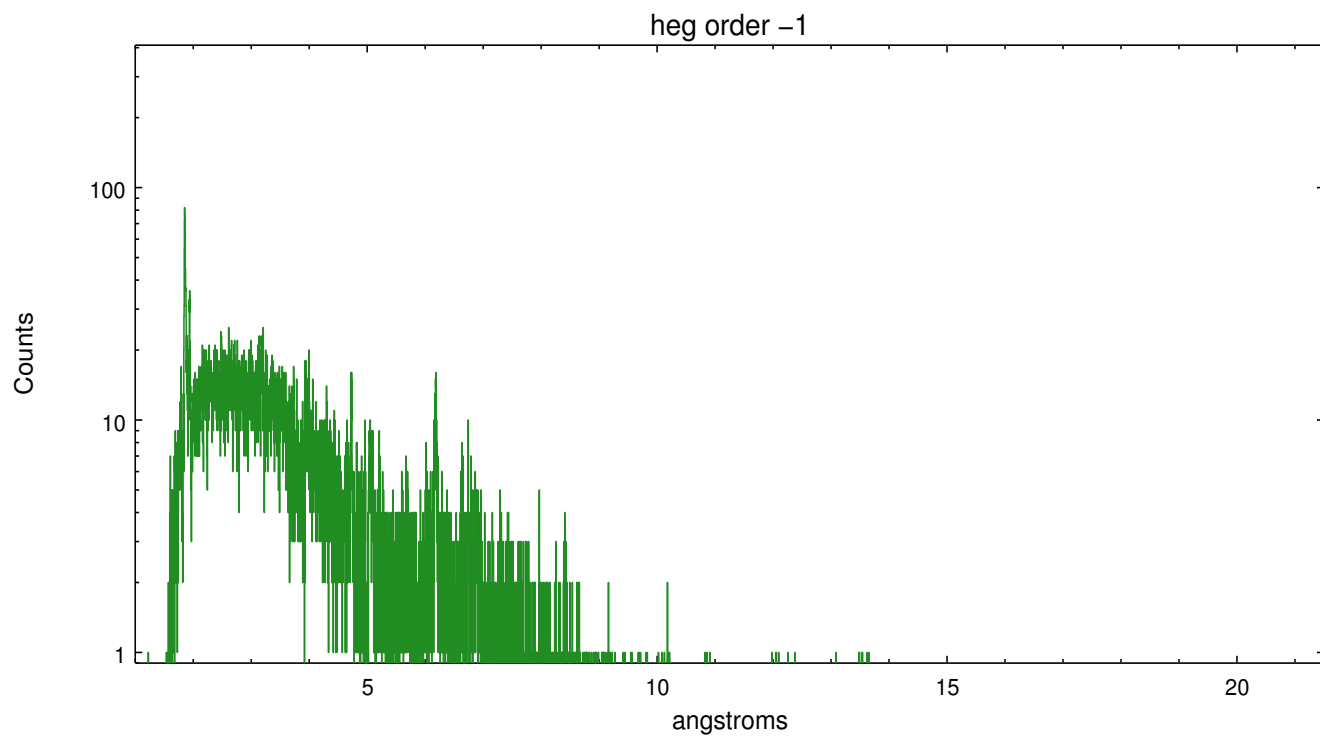
Spot Image HEG



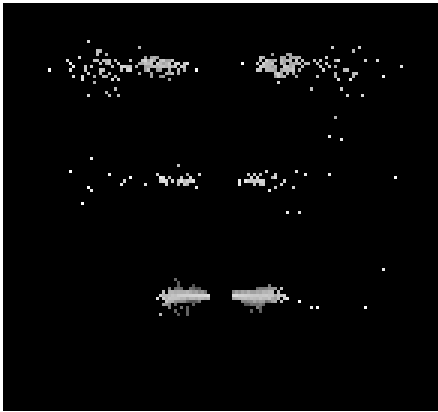
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	733	1347	17091	16406	16766	1165	686

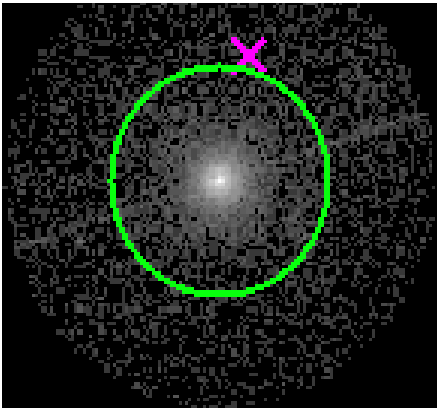




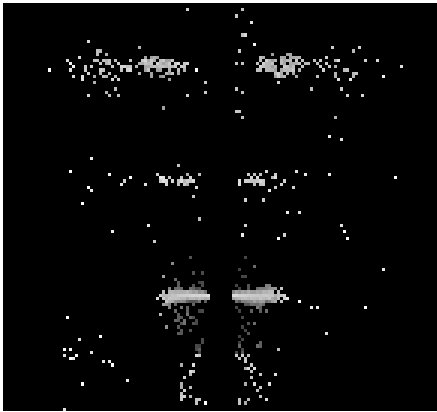
3.2 MEG Arm



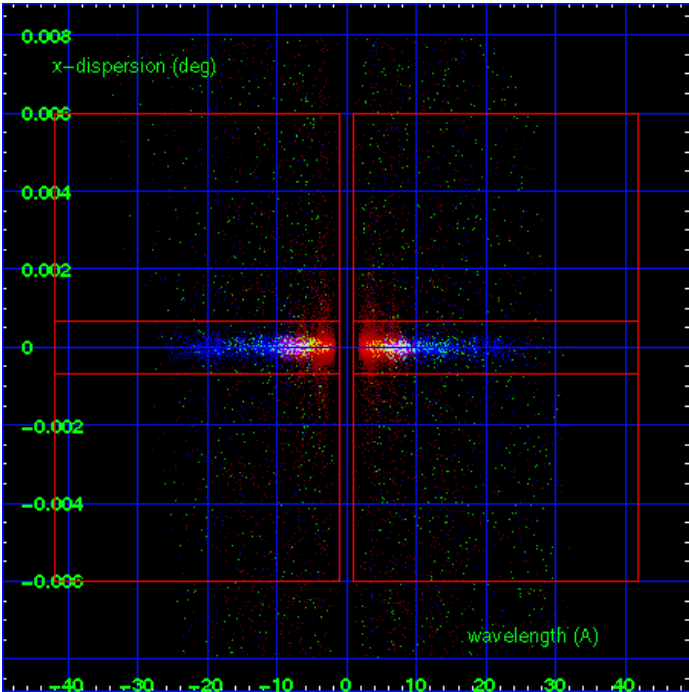
MEG Order Sort 123



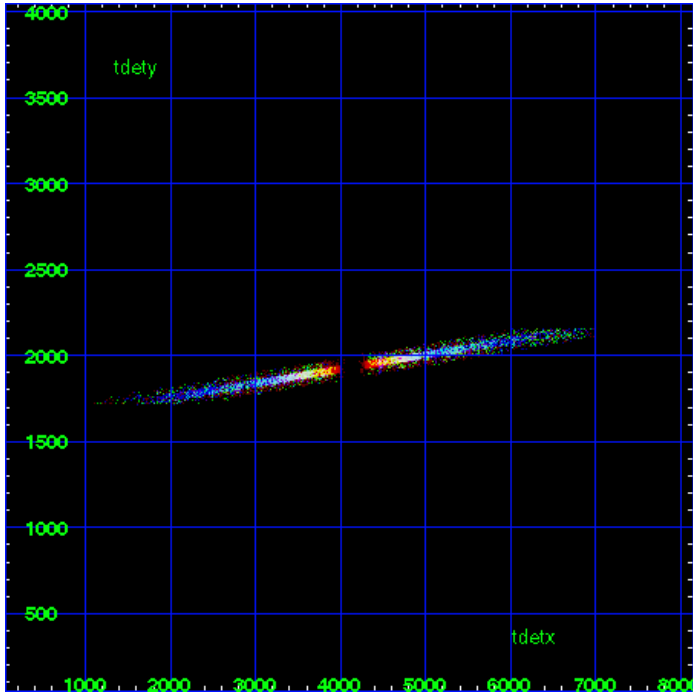
MEG Zero Order



MEG Order Sort ALL

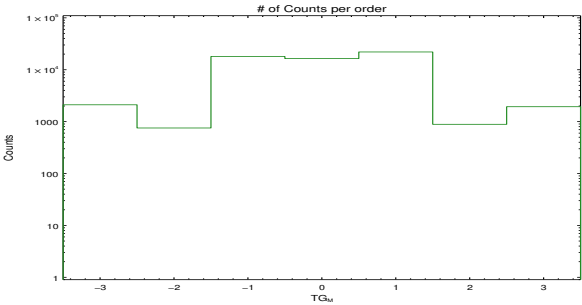


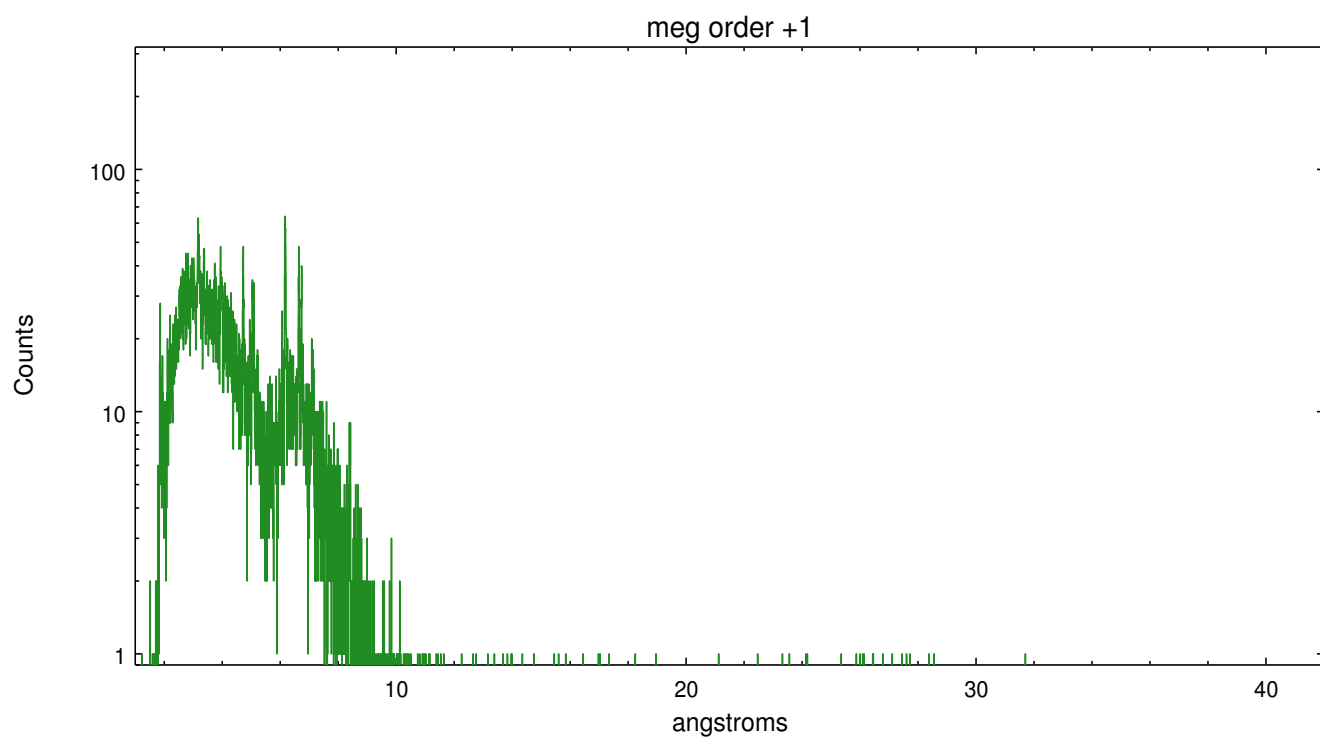
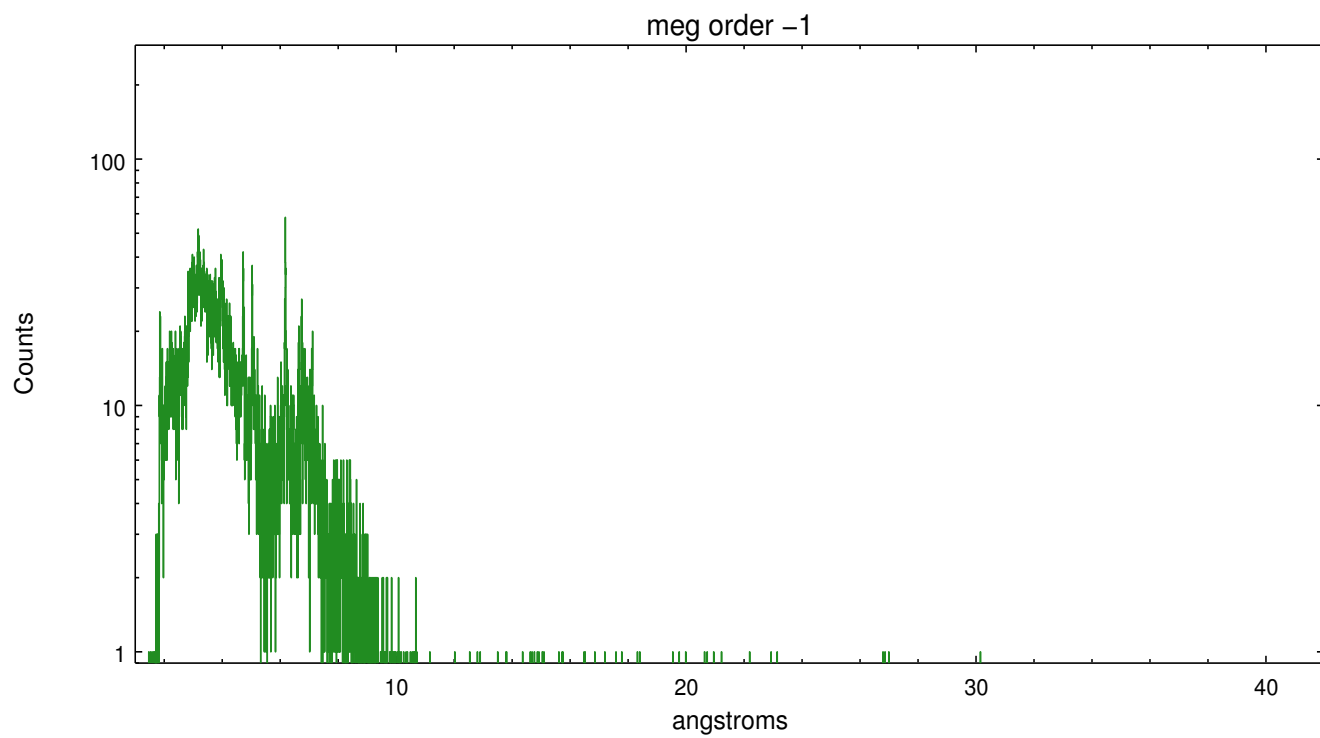
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2111	754	17983	16406	21997	887	1939





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.05.30
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.4575

A.2 Comments

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=4088.46, y=4062.95) into the *srcla.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. 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 *srcla.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.