

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 10695 - L2 Version 3
Chandra X-Ray Center

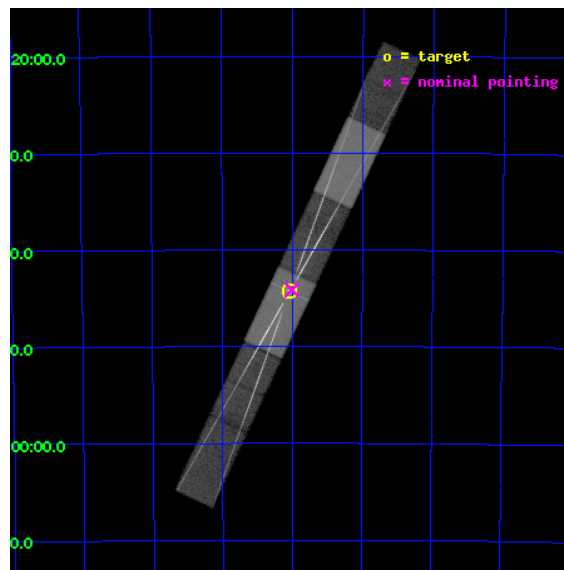
L2 Processing Date : May 29 2012

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1 Front

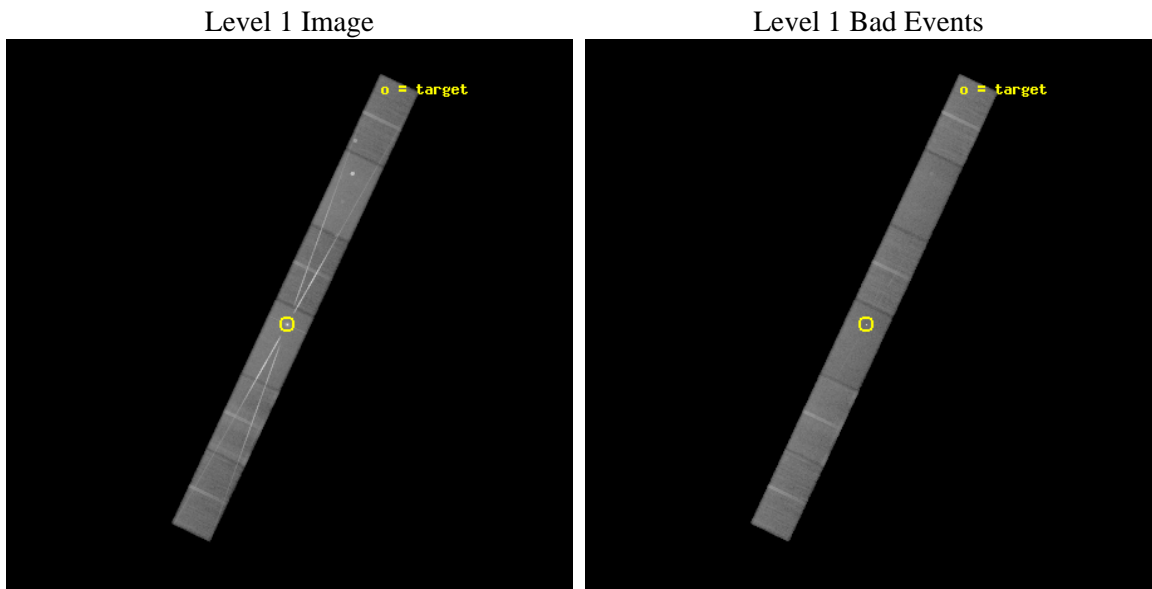
seq_num	401062	Sequence number
obs_id	10695	Observation id
title	Chandra Observations of the Low Mass X-ray Binary 4U 1556-60	Propo
observer	Prof Claude Canizares	Principal investigator
object	4U1556-60	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	240.259583	Observer's specified target RA [deg]
dec_targ	-60.738333	Observer's specified target Dec [deg]
ra_nom	240.25127245215	Nominal RA [deg]
dec_nom	-60.735692194849	Nominal Dec [deg]
roll_nom	115.15433818132	Nominal Roll [deg]
revision	3	Processing version of data
ontime	38700.49972868	Sum of GTIs [s]
livetime	37788.24698959	Livetime [s]
ontime4	38698.758738458	Sum of GTIs [s]
ontime5	38700.49972868	Sum of GTIs [s]
ontime6	38700.49972868	Sum of GTIs [s]
ontime7	38700.49972868	Sum of GTIs [s]
ontime8	38700.49972868	Sum of GTIs [s]
ontime9	38700.49972868	Sum of GTIs [s]
l2events	665150	Number of level 2 events



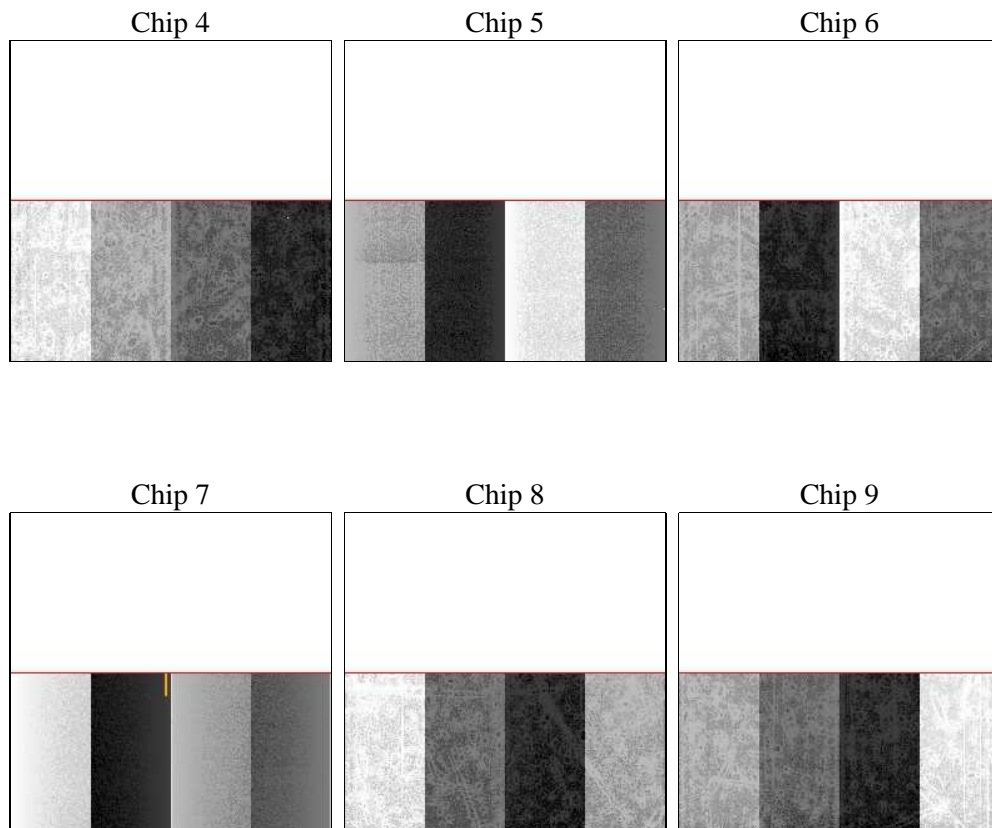
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	38517.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	38700.49972868	Sum of GTIs [s]
caldbver	4.4.9	 	ontime4	38698.758738458	Sum of GTIs [s]
date	2012-05-28T13:59:18	Date and time of file creation	ontime5	38700.49972868	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	38700.49972868	Sum of GTIs [s]
			ontime7	38700.49972868	Sum of GTIs [s]
			ontime8	38700.49972868	Sum of GTIs [s]
			ontime9	38700.49972868	Sum of GTIs [s]
			l1events	1843807	Number of level 1 events

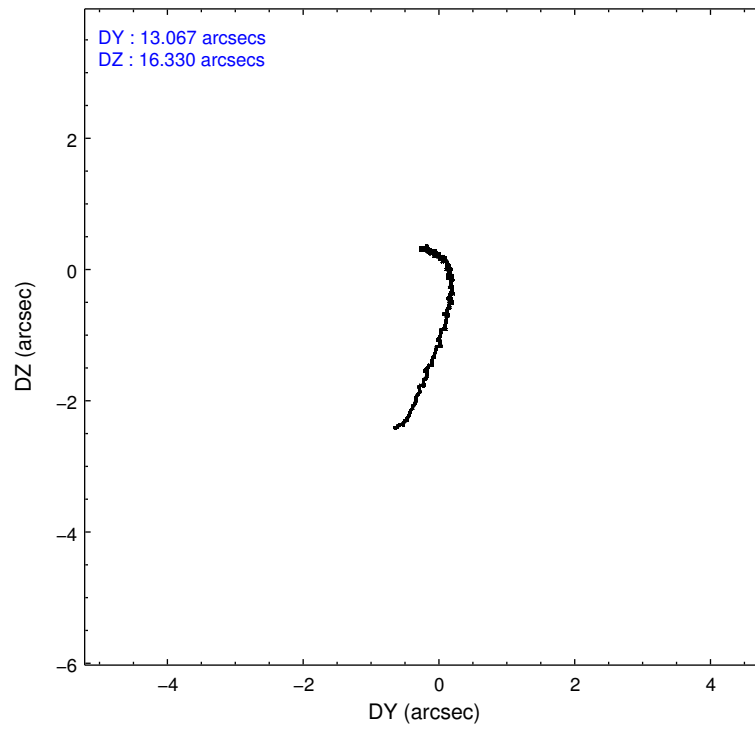
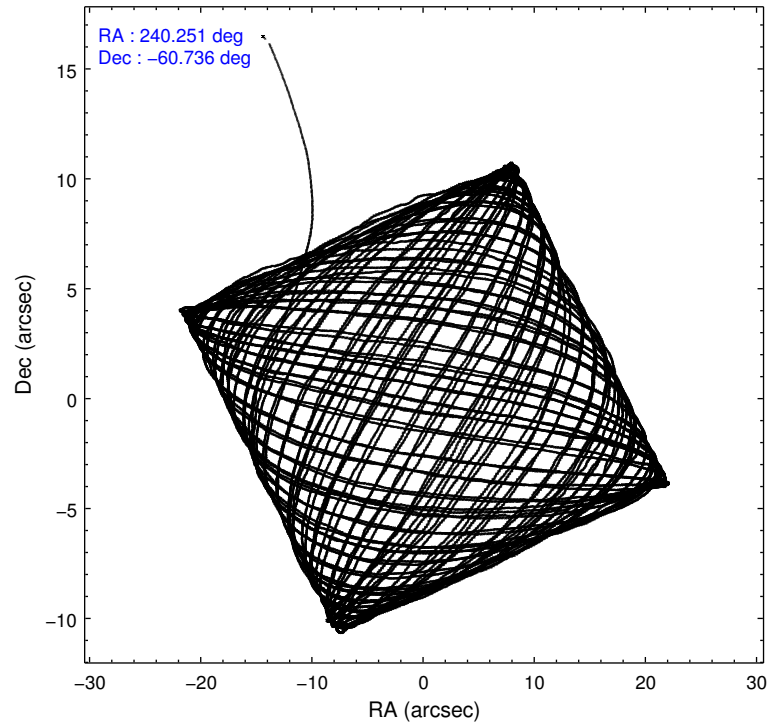
2.1.4 Events

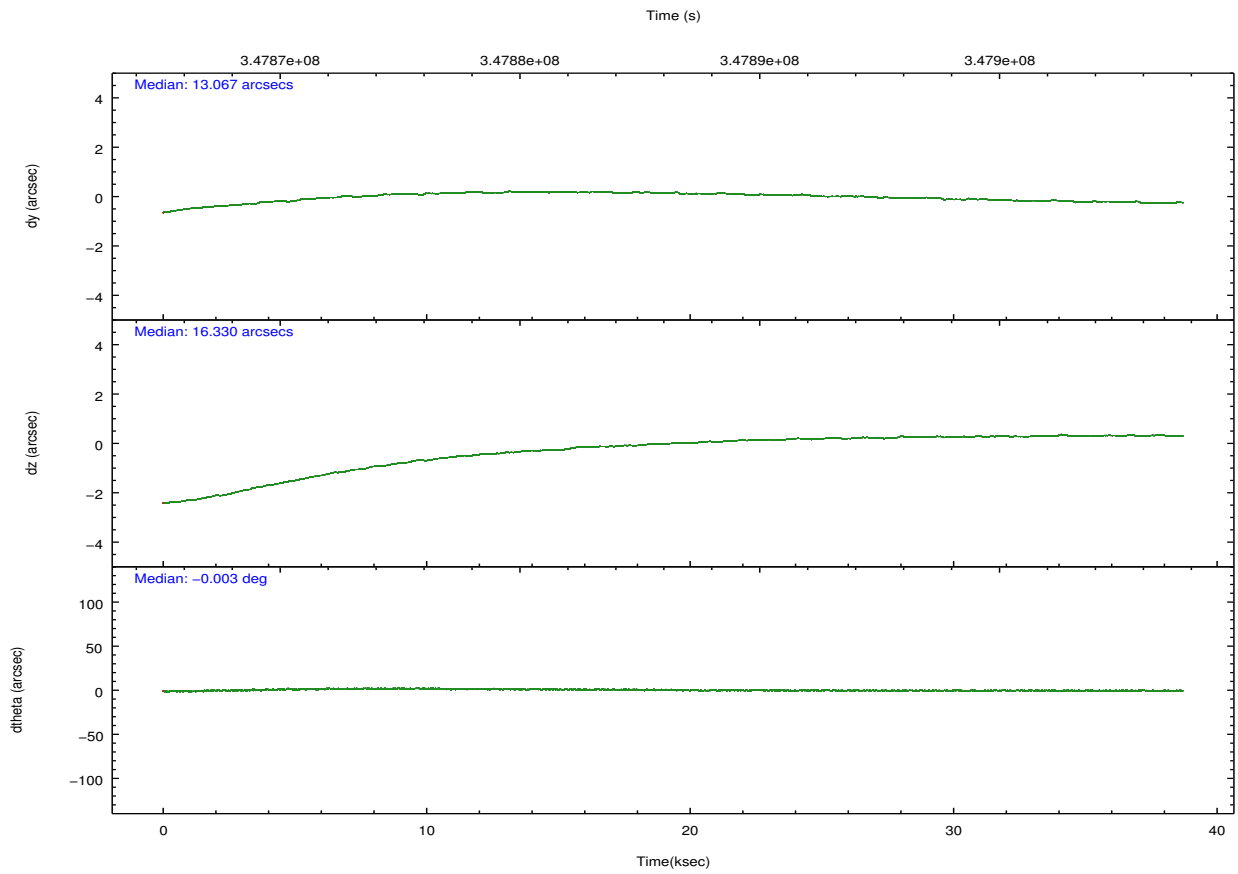
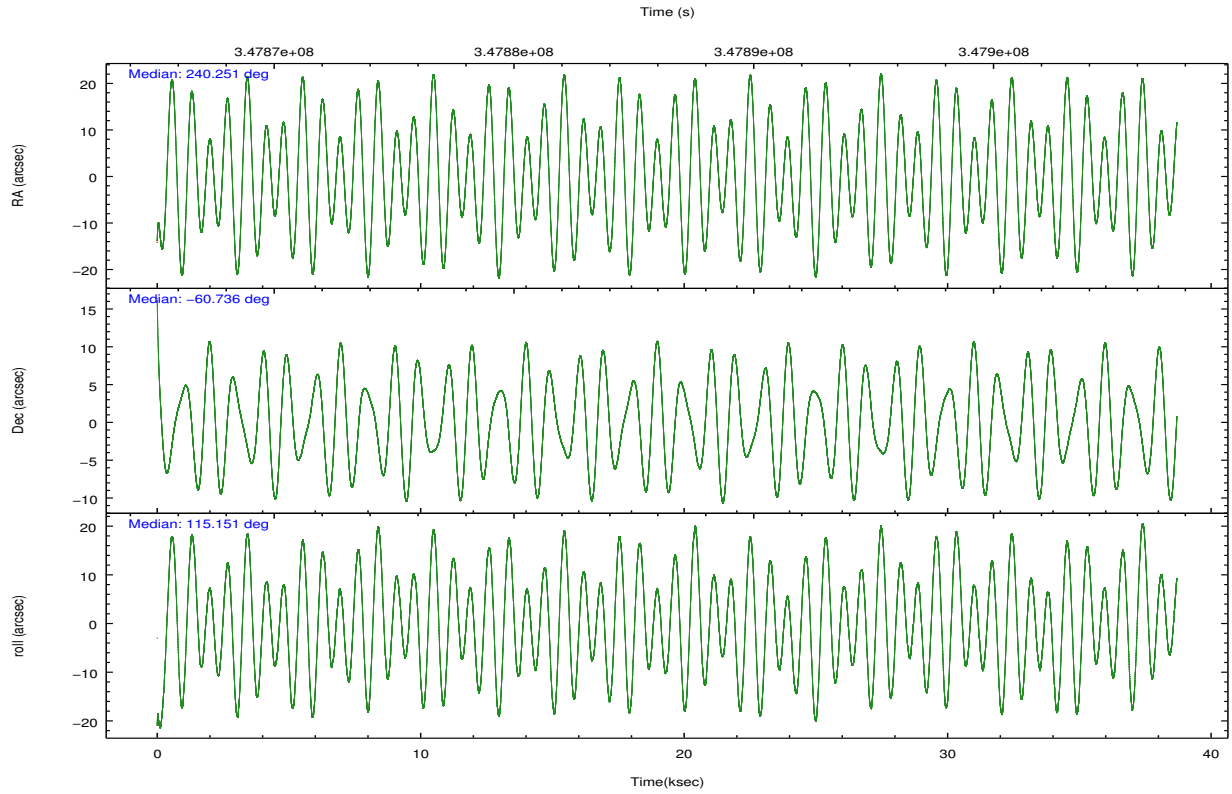
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	231366	348410	323101	418509	314020	208401	grade 0 events	18016	25978	98936	38365	55783	17254
rejected events	195879	166797	180794	166672	204649	173494		7%	7%	30%	9%	17%	8%
rejected %	84%	47%	55%	39%	65%	83%	grade 1 events	224	866	554	786	300	111
								0%	0%	0%	0%	0%	0%
							grade 2 events	6736	57558	19483	57175	18551	6273
								2%	16%	6%	13%	5%	3%
							grade 3 events	3160	9976	7334	25517	8529	3137
								1%	2%	2%	6%	2%	1%
							grade 4 events	3016	9460	7237	25112	7988	3076
								1%	2%	2%	6%	2%	1%
							grade 5 events	8738	24636	9778	28458	12463	9846
								3%	7%	3%	6%	3%	4%
							grade 6 events	4596	78854	9476	105937	18649	5201
								1%	22%	2%	25%	5%	2%
							grade 7 events	186880	141082	170303	137159	191757	163503
								80%	40%	52%	32%	61%	78%

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	240.297649	240.2512724521504	CCD I2 on	N	N
[deg] Pointing Dec	-60.750985	-60.73569219484897	CCD I3 on	N	N
[deg] Pointing Roll	115.038167	115.1543381813177	CCD S0 on	O1	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-183.992523	-183.9875365069546	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-6.14	-6.144986076053243	CCD S4 on	Y	Y
[s] Observation start time (MET)	347867227.184000	347866210.19534	CCD S5 on	Y	Y
Observation start date	2009-01-09T05:46:01	2009-01-09T05:30:10	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	347905744.184000	347906688.98484	On-chip summing requested	N	N
Observation end date	2009-01-09T16:27:58	2009-01-09T16:44:48	Subarray requested	CUSTOM	1/2
Read mode	TIMED	TIMED	Subarray start row	1	1
			Subarray row count	512	512
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.7

2.3 Aspect



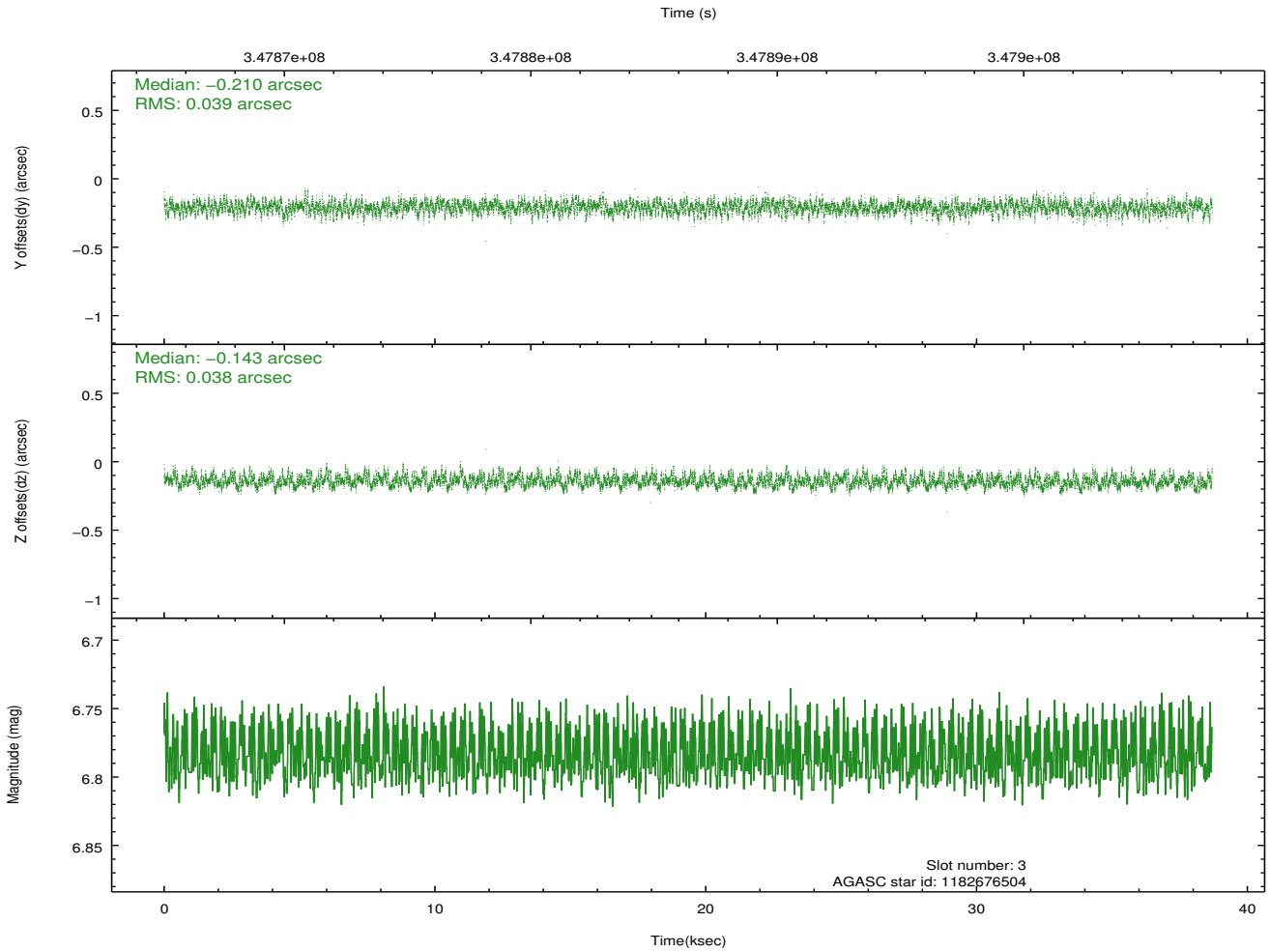
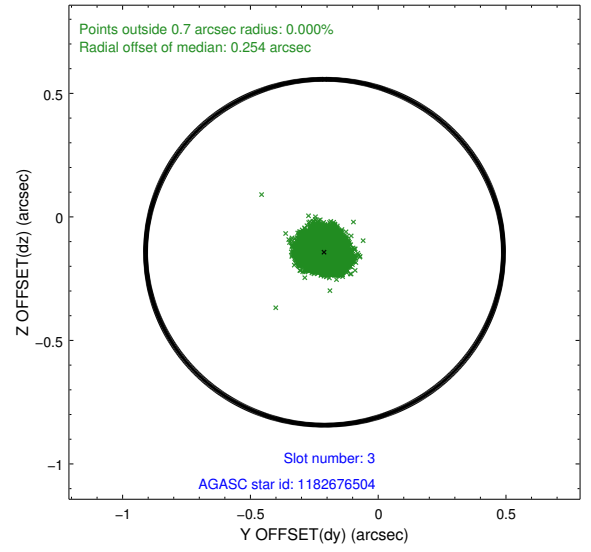
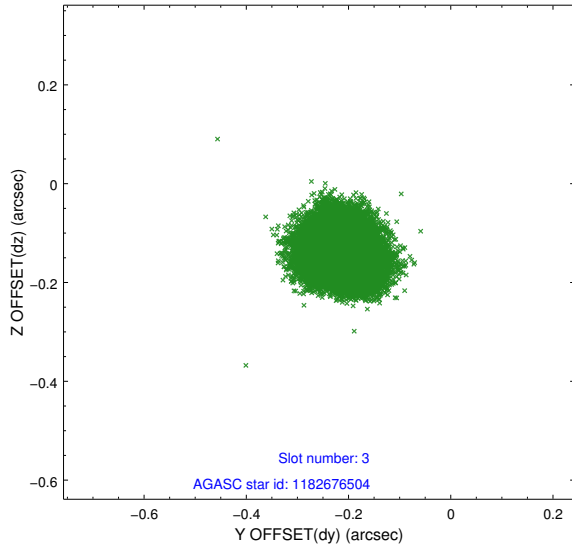


Slot Statistics

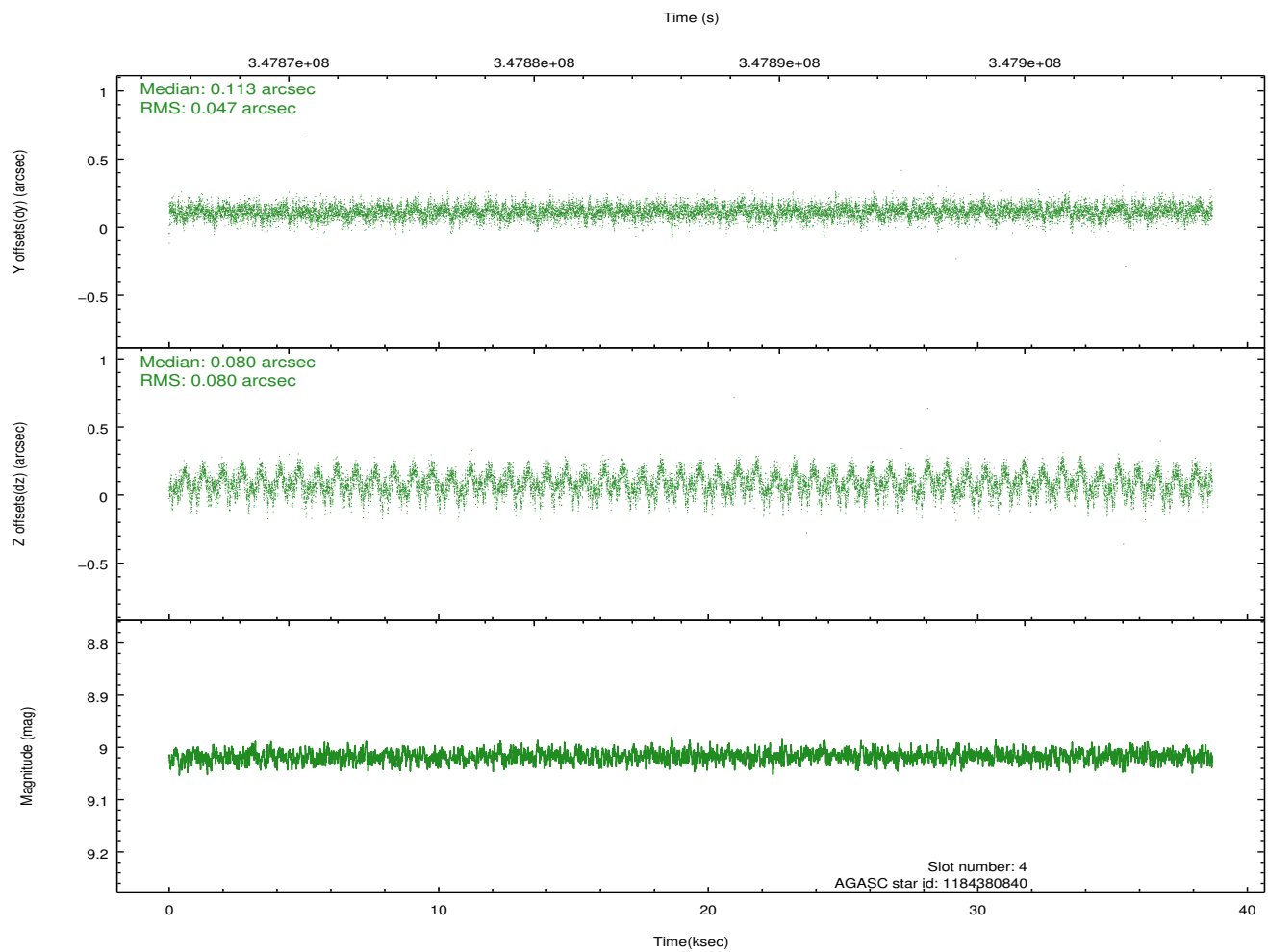
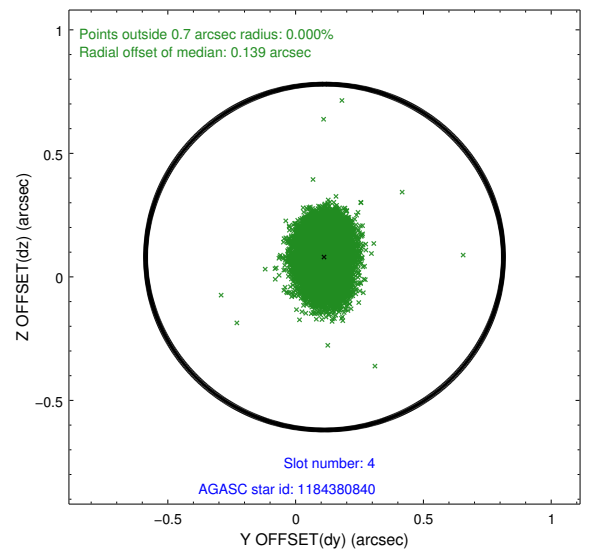
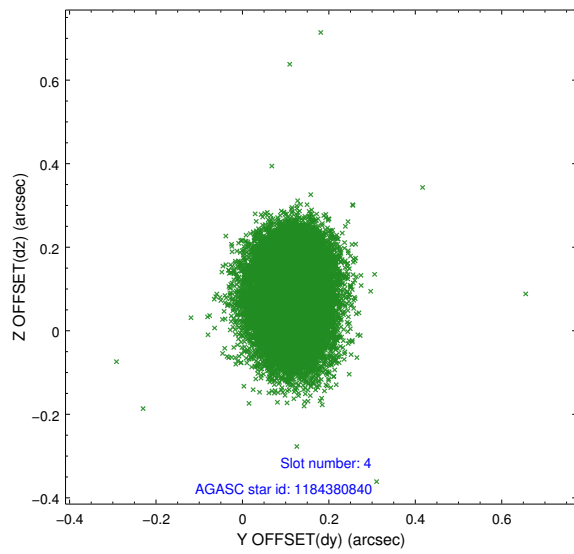
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.90	9440	-0.070	-0.106	0.017	0.031	0.000000	0.000000	-765.61	-1864.14
1	FID	ACIS-S-4	6.97	9441	0.143	0.063	0.009	0.020	0.000000	0.000000	2147.90	44.42
2	FID	ACIS-S-5	7.03	9439	-0.104	0.052	0.019	0.030	0.000000	0.000000	-1818.43	38.17
3	GUIDE	1182676504	6.78	18880	-0.210	-0.143	0.059	0.091	239.682783	-60.707331	596.25	916.93
4	GUIDE	1184380840	9.02	18868	0.113	0.080	0.099	0.161	241.482880	-61.030594	-1803.08	-1438.06
5	GUIDE	1184391336	7.99	18878	0.138	-0.030	0.067	0.104	240.972802	-60.728755	-435.89	-1107.20
6	GUIDE	1184395816	8.71	18868	0.046	0.015	0.073	0.117	240.721532	-60.336234	1031.33	-1314.74
7	GUIDE	1184373640	8.96	18875	-0.084	0.077	0.099	0.159	241.981565	-61.085651	-2365.64	-2129.53

2.4 Star Slots

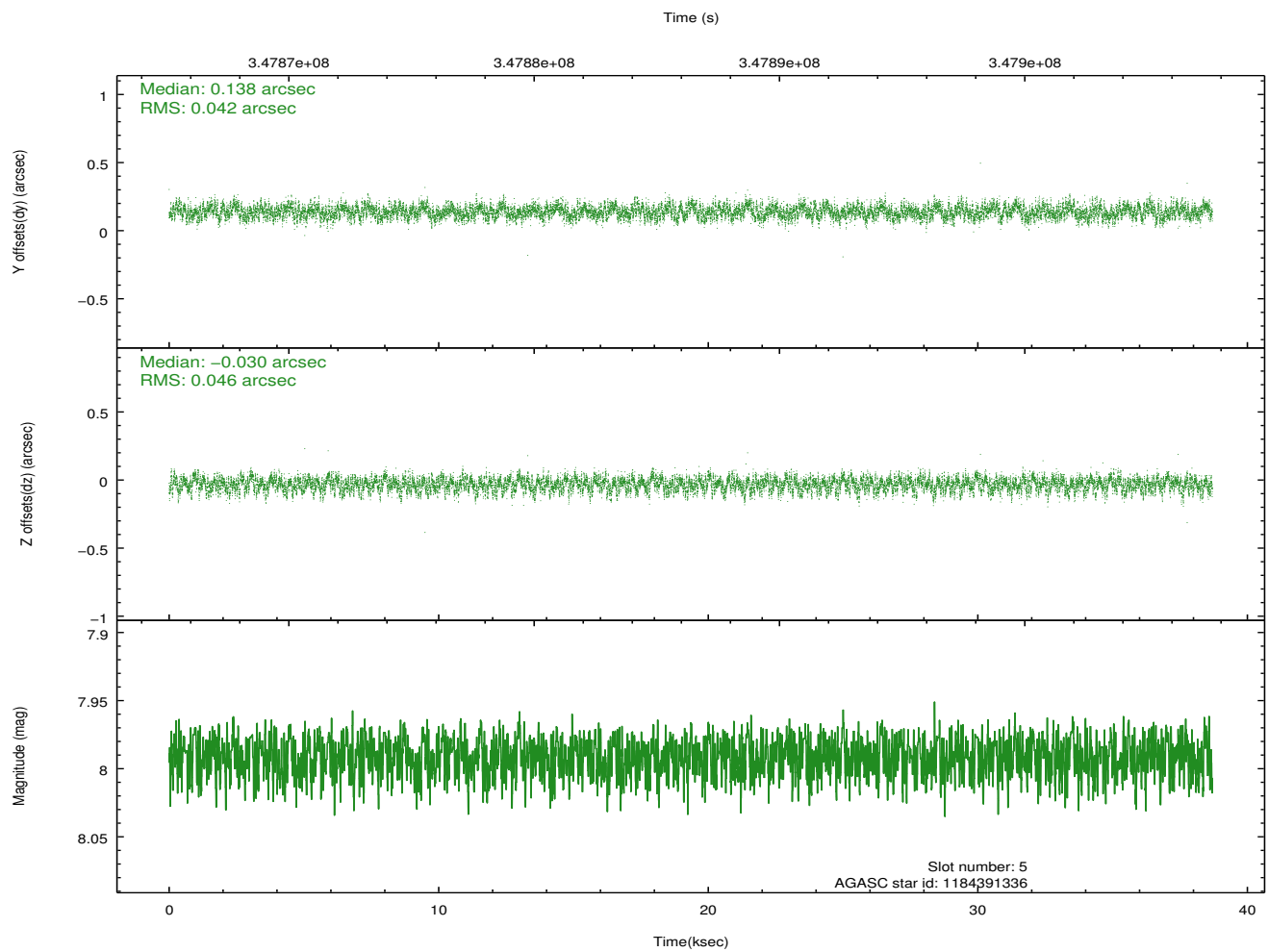
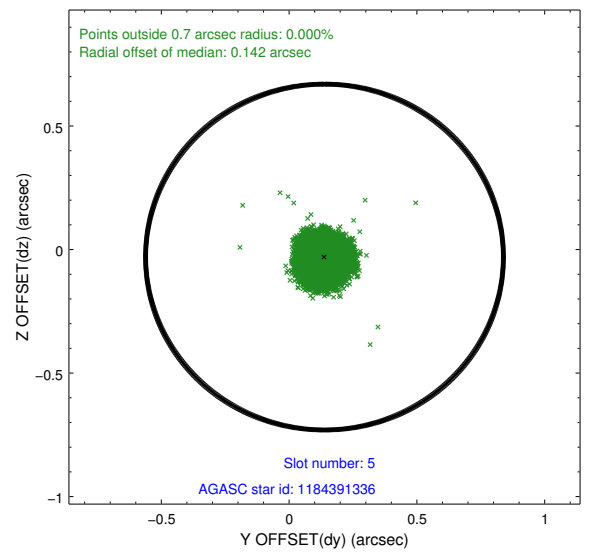
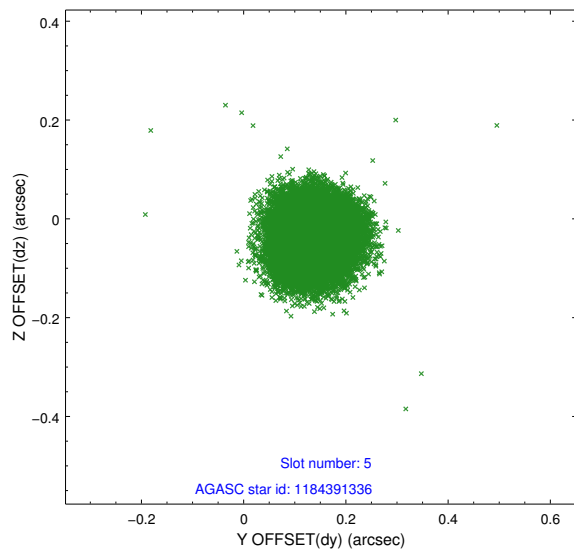
2.4.1 Slot 3



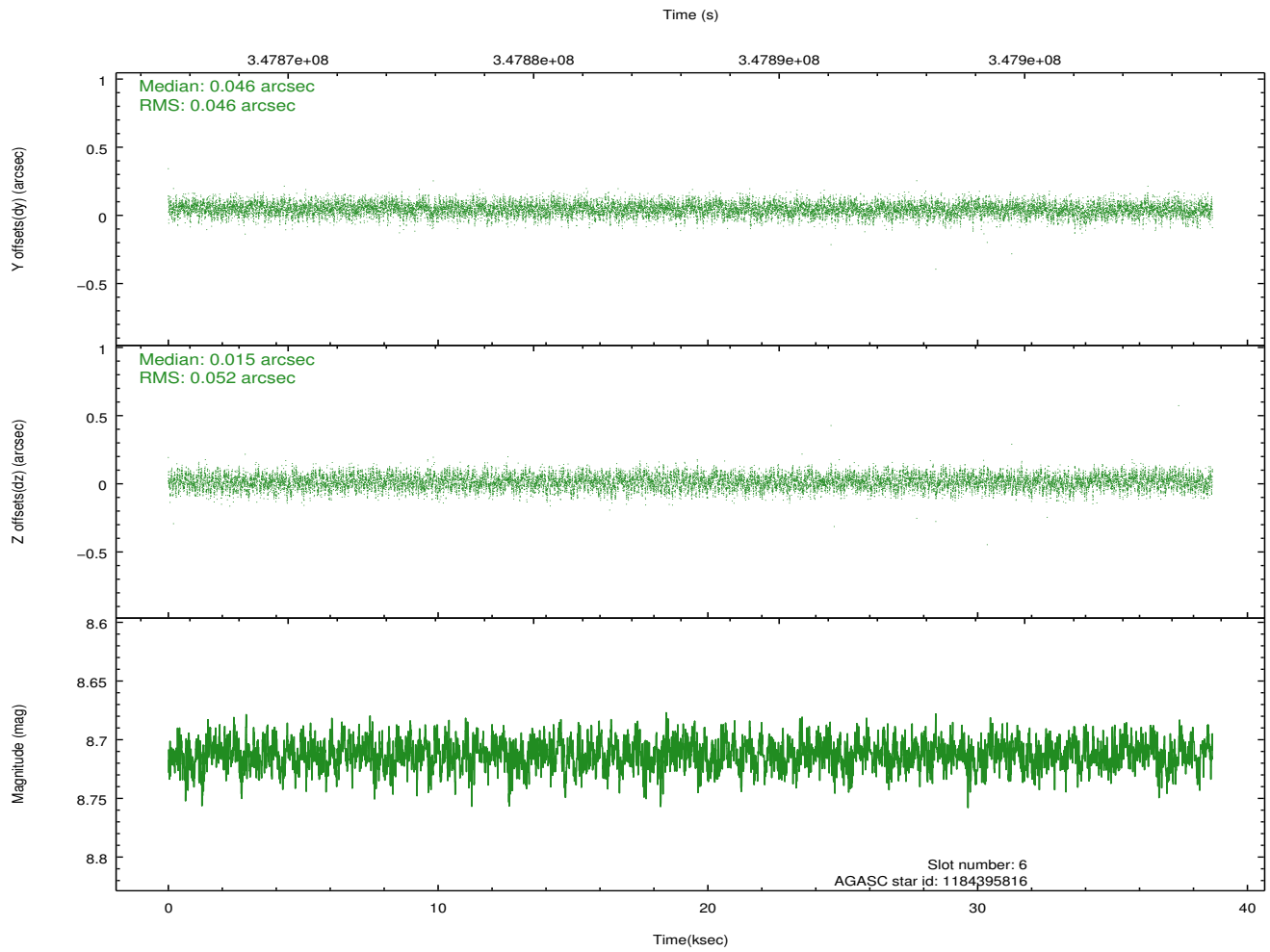
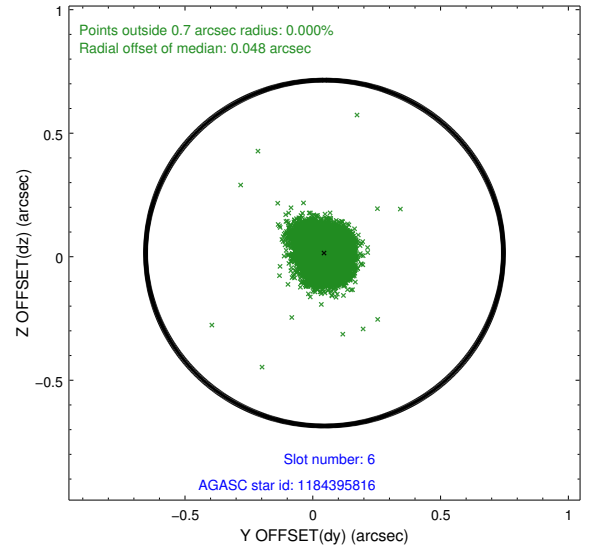
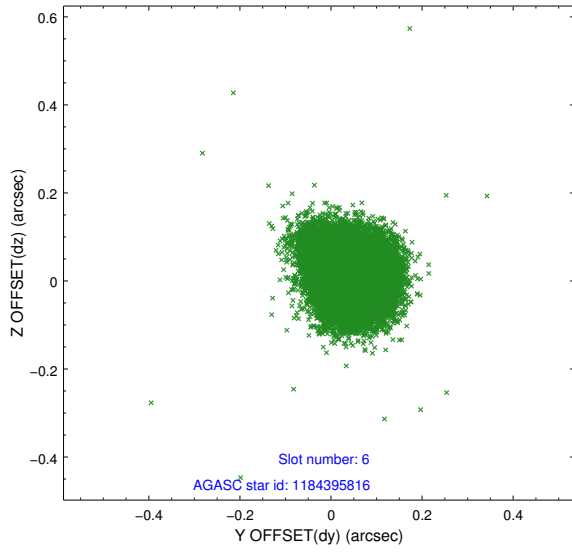
2.4.2 Slot 4



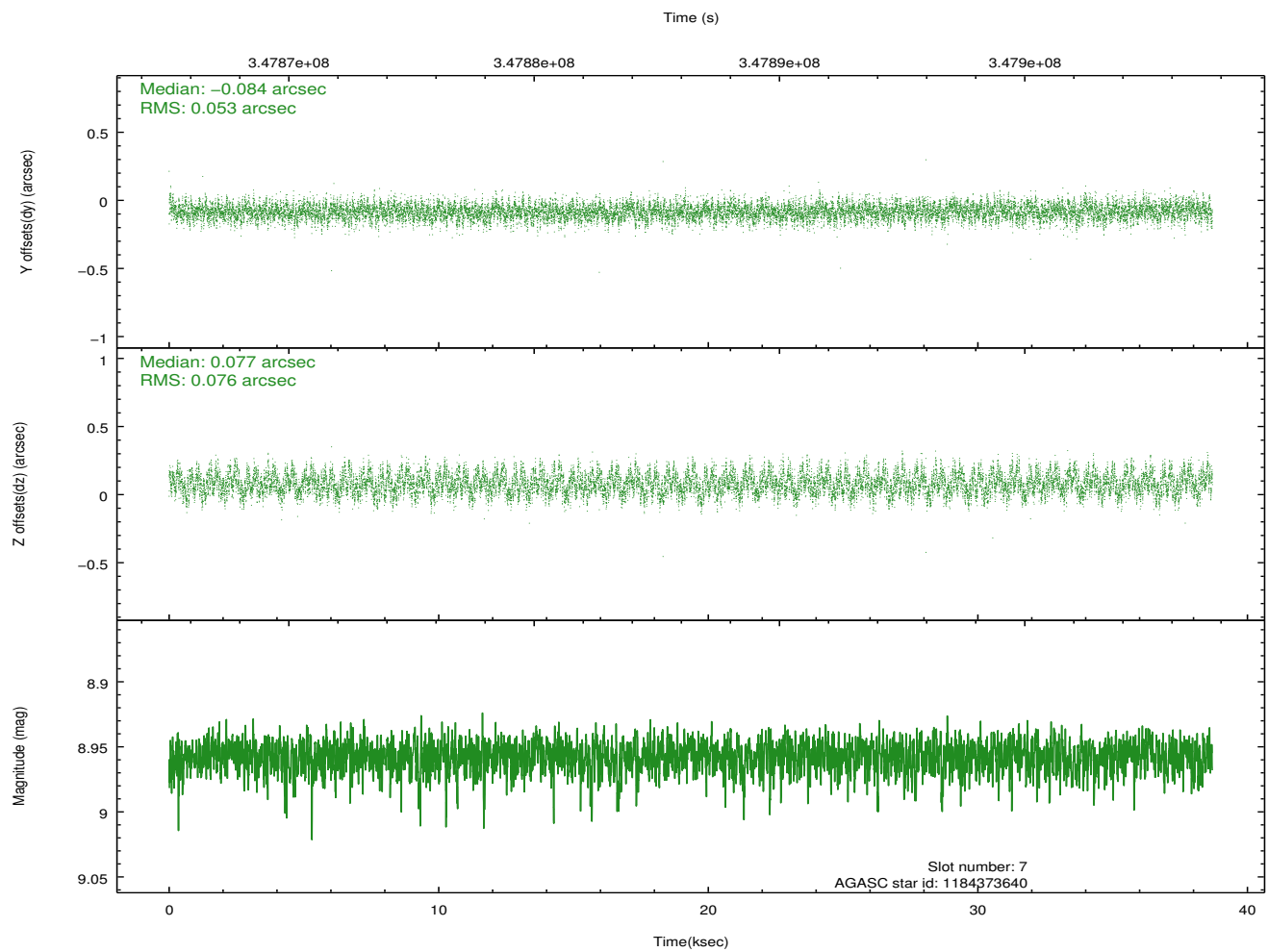
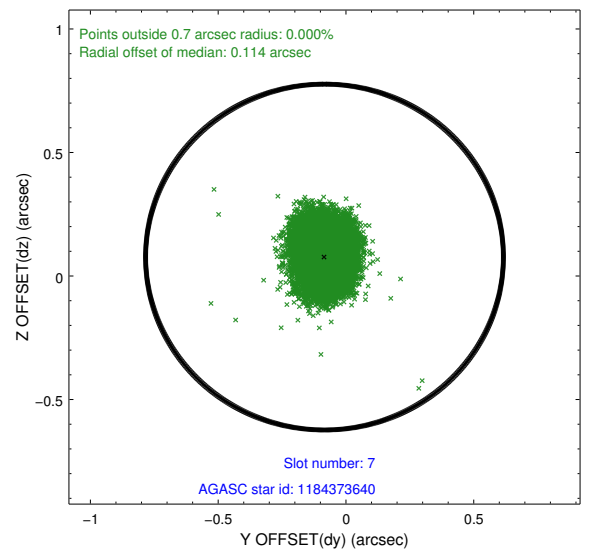
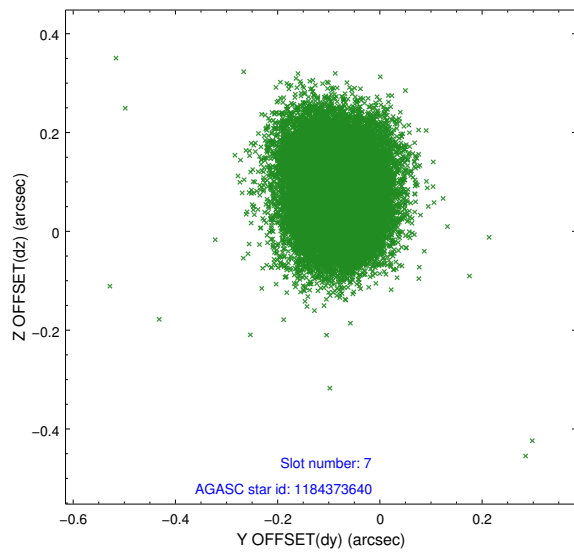
2.4.3 Slot 5



2.4.4 Slot 6

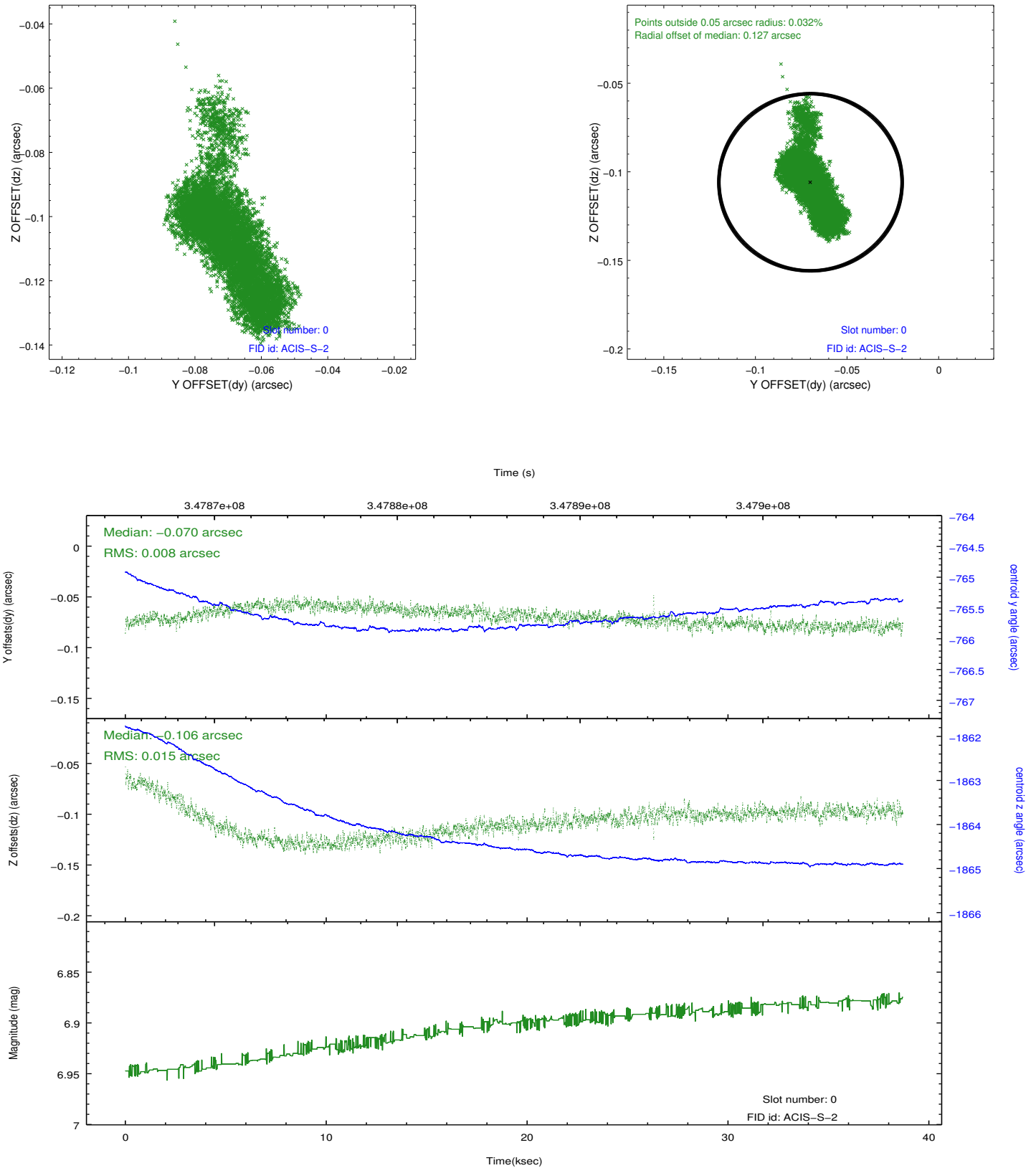


2.4.5 Slot 7

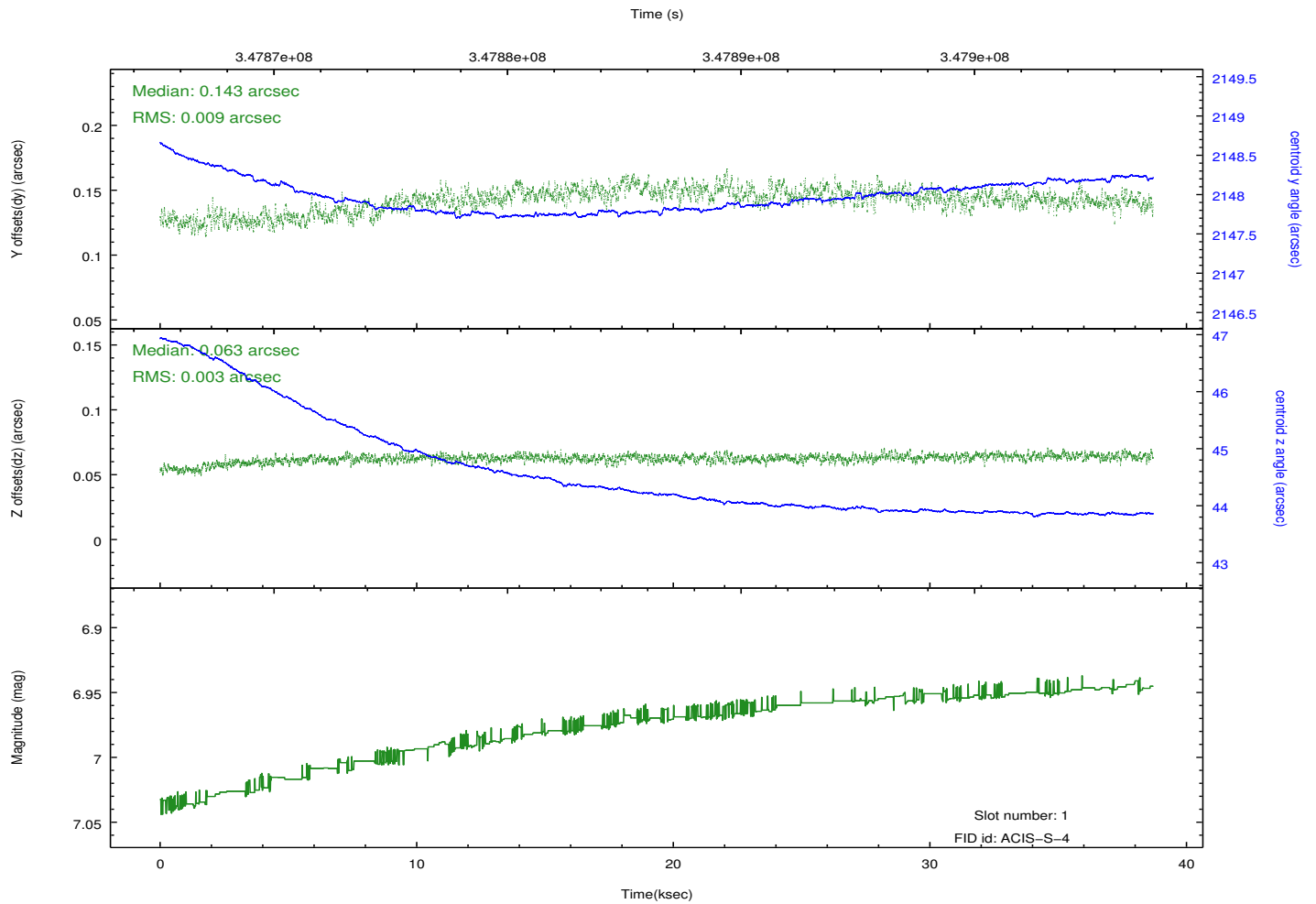
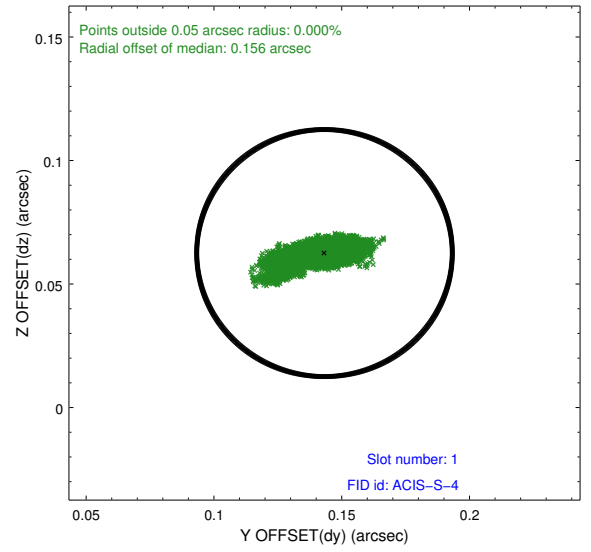
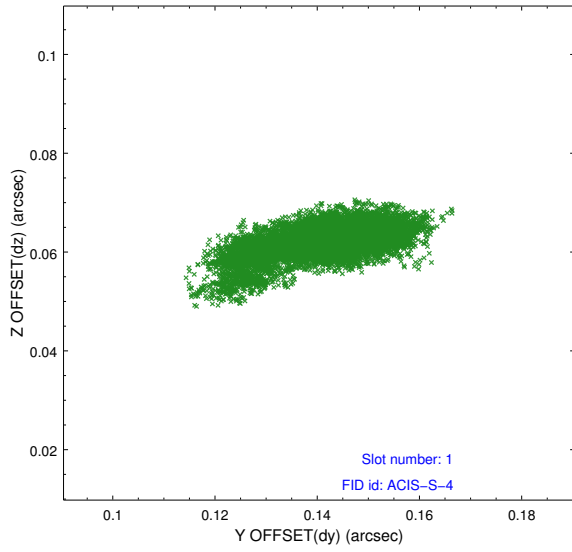


2.5 FID Slots

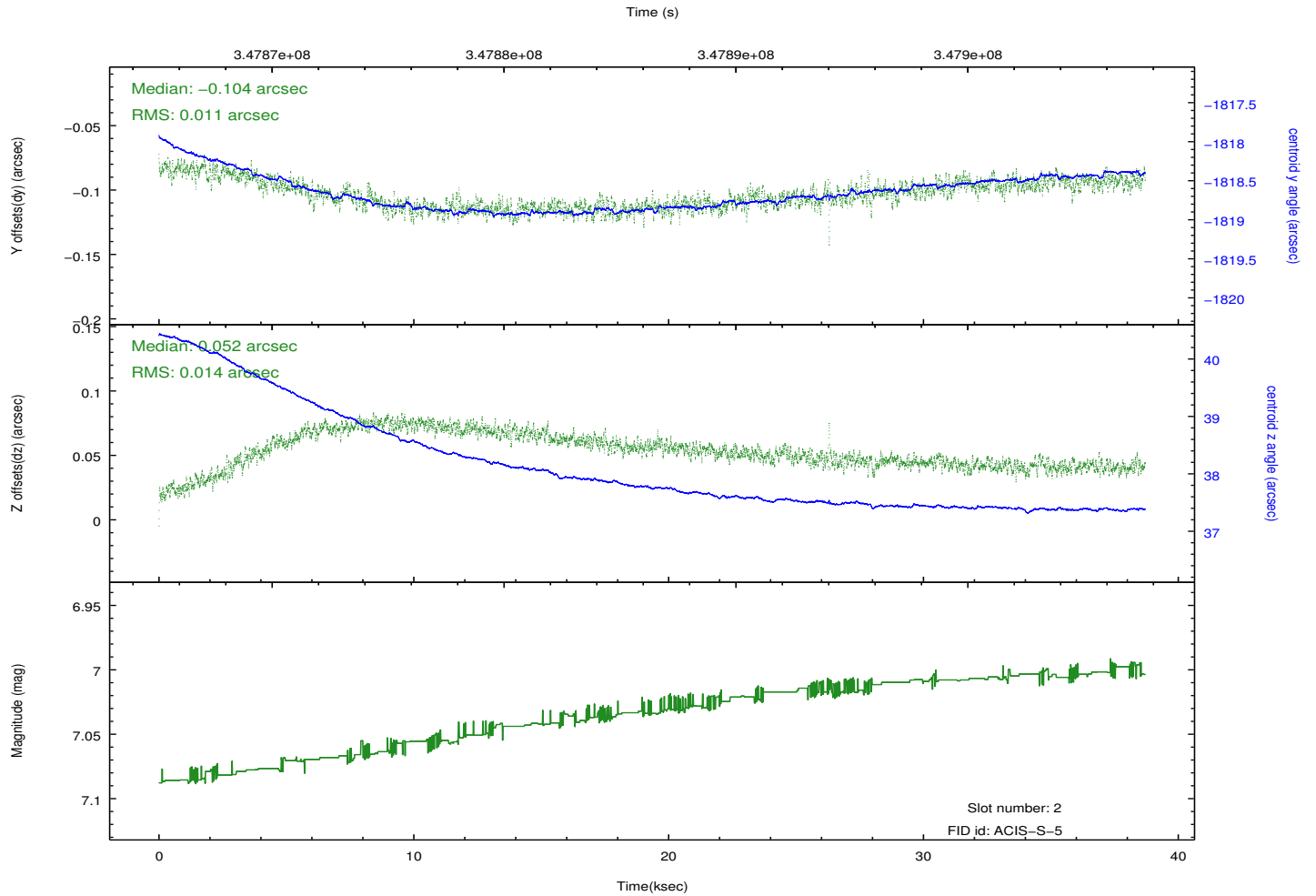
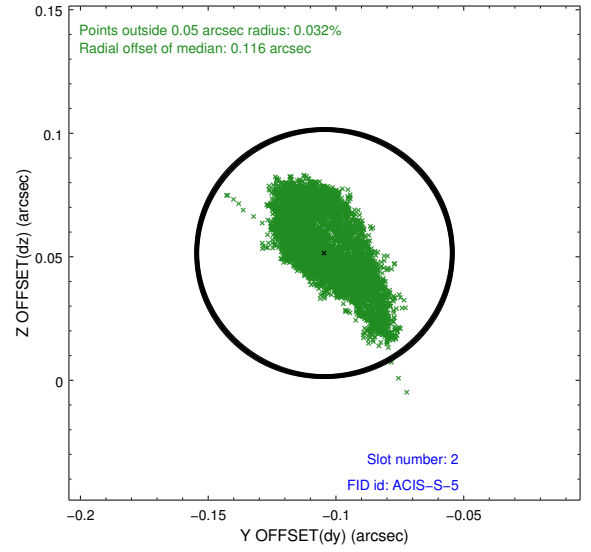
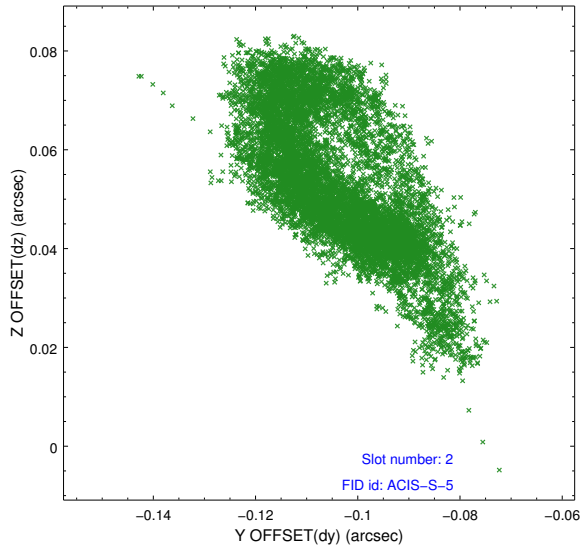
2.5.1 Slot 0



2.5.2 Slot 1

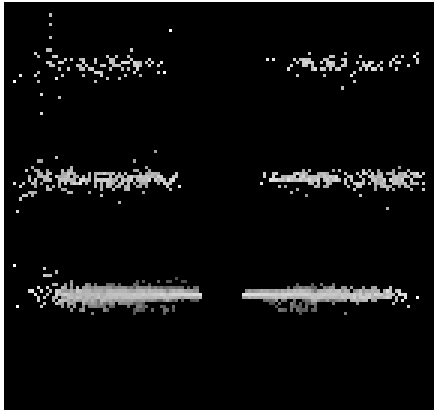


2.5.3 Slot 2

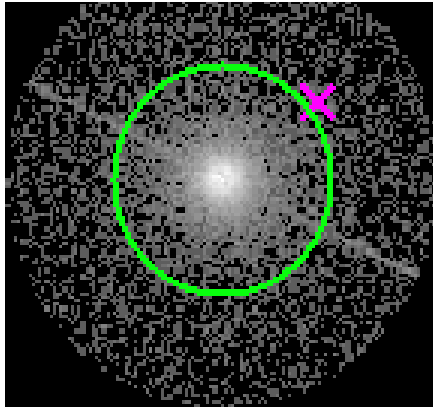


3 Gratings

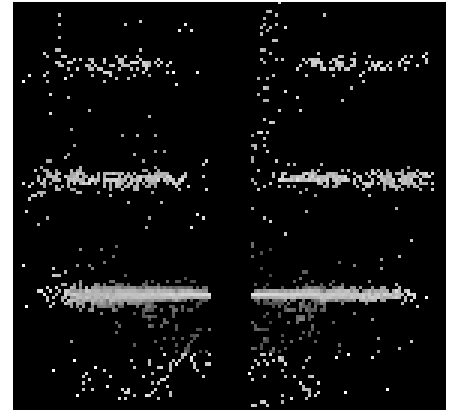
3.1 HEG Arm



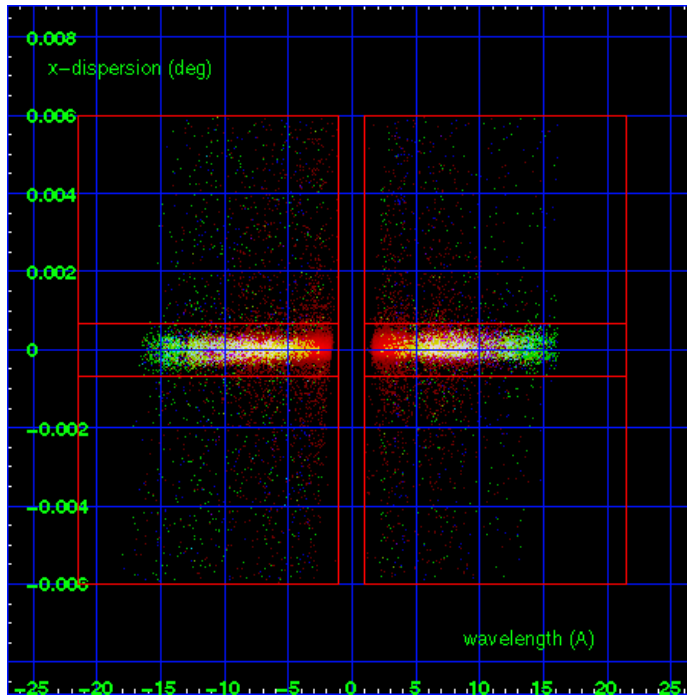
HEG Order Sort 123



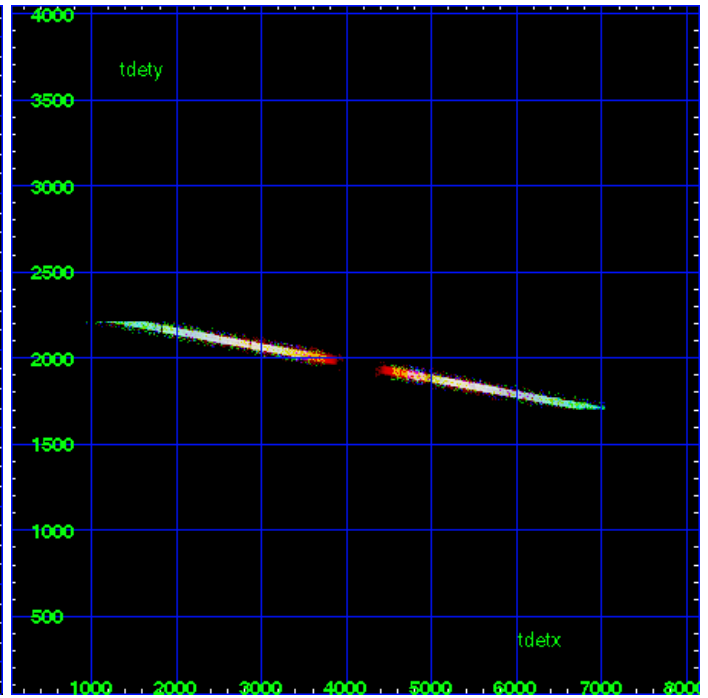
HEG Zero Order



HEG Order Sort ALL

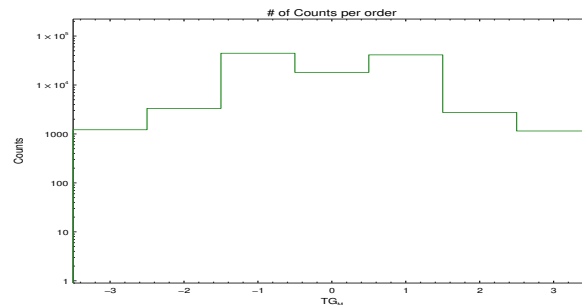


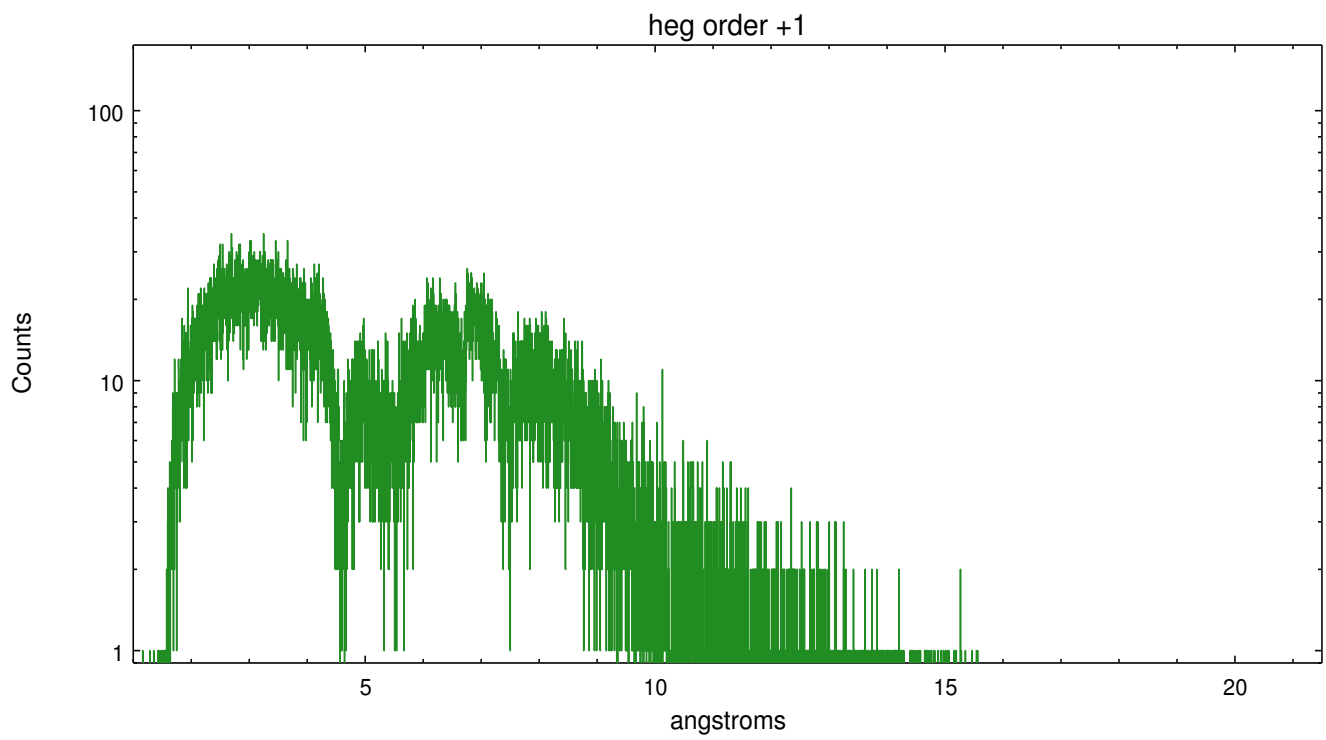
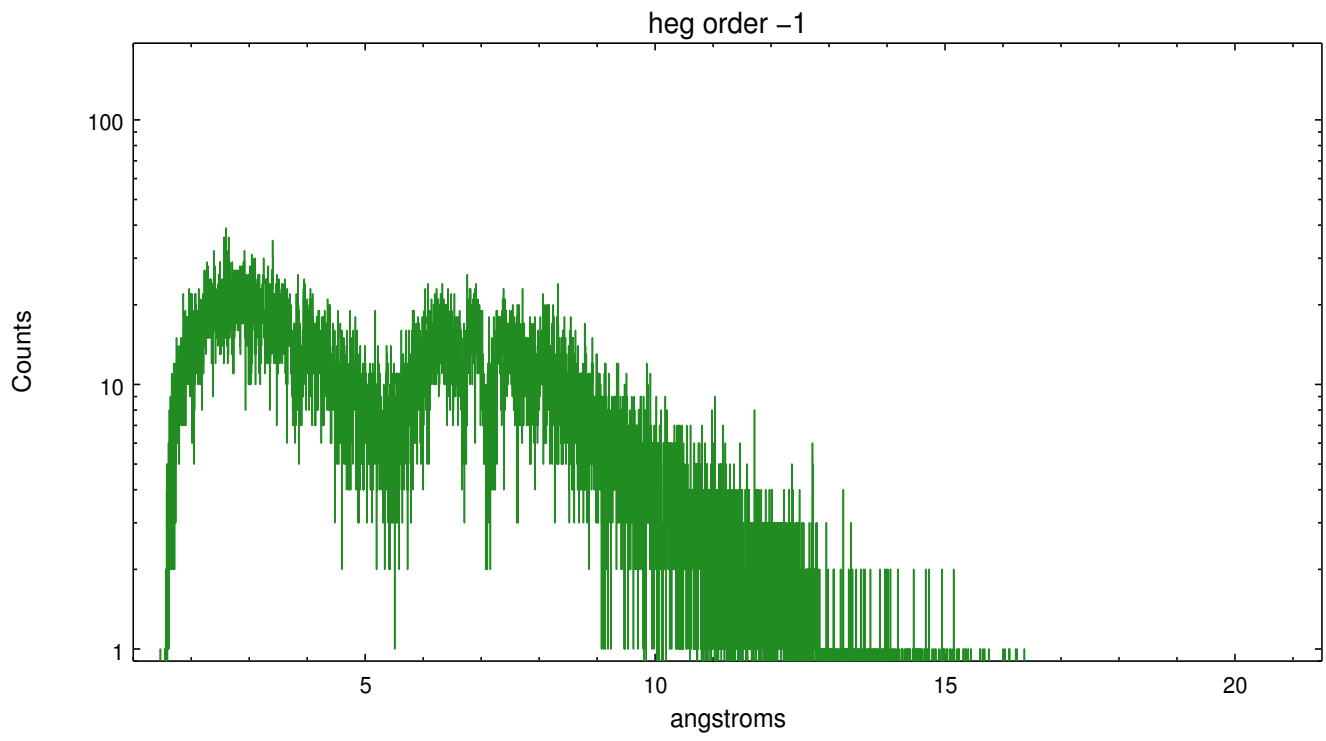
Spot Image HEG



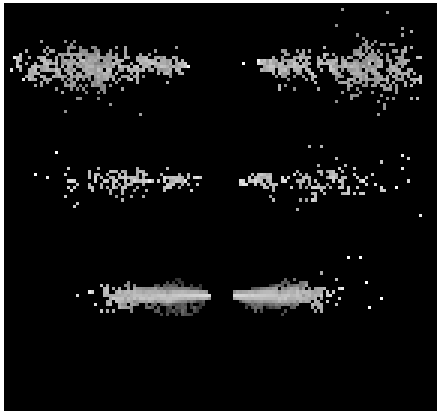
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1219	3322	44479	18100	41260	2752	1149

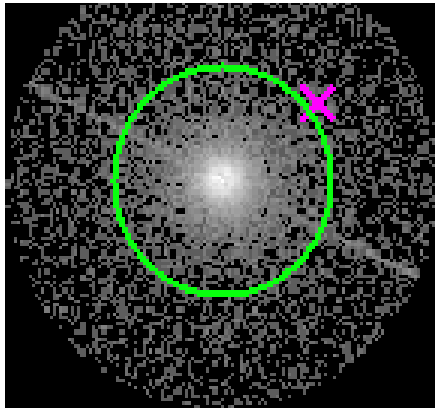




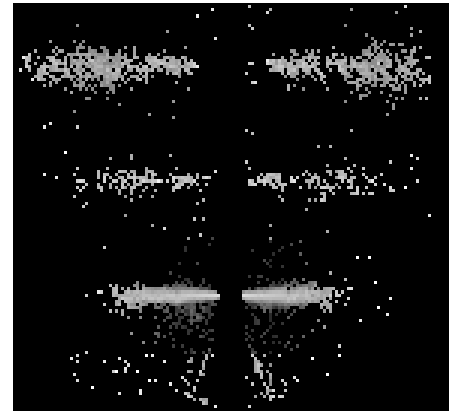
3.2 MEG Arm



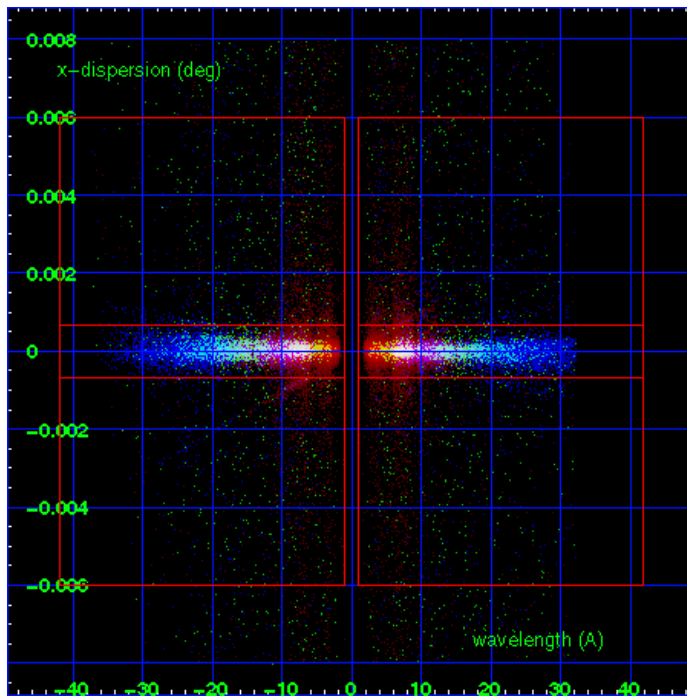
MEG Order Sort 123



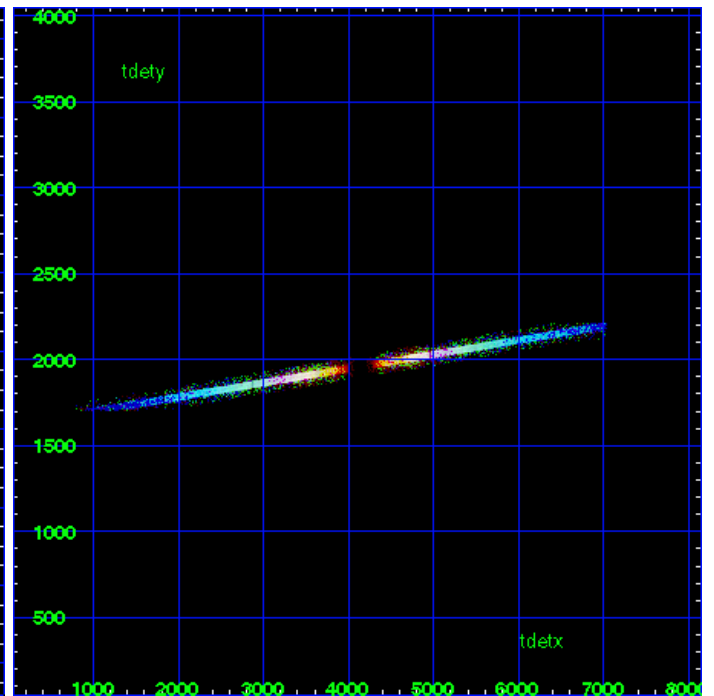
MEG Zero Order



MEG Order Sort ALL

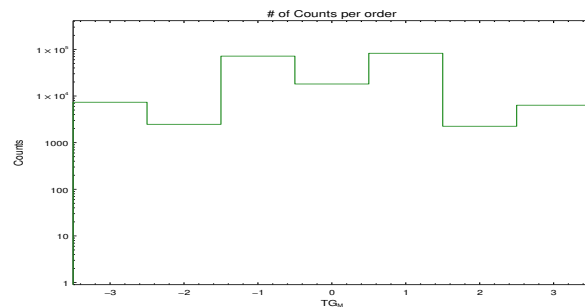


Spot Image MEG

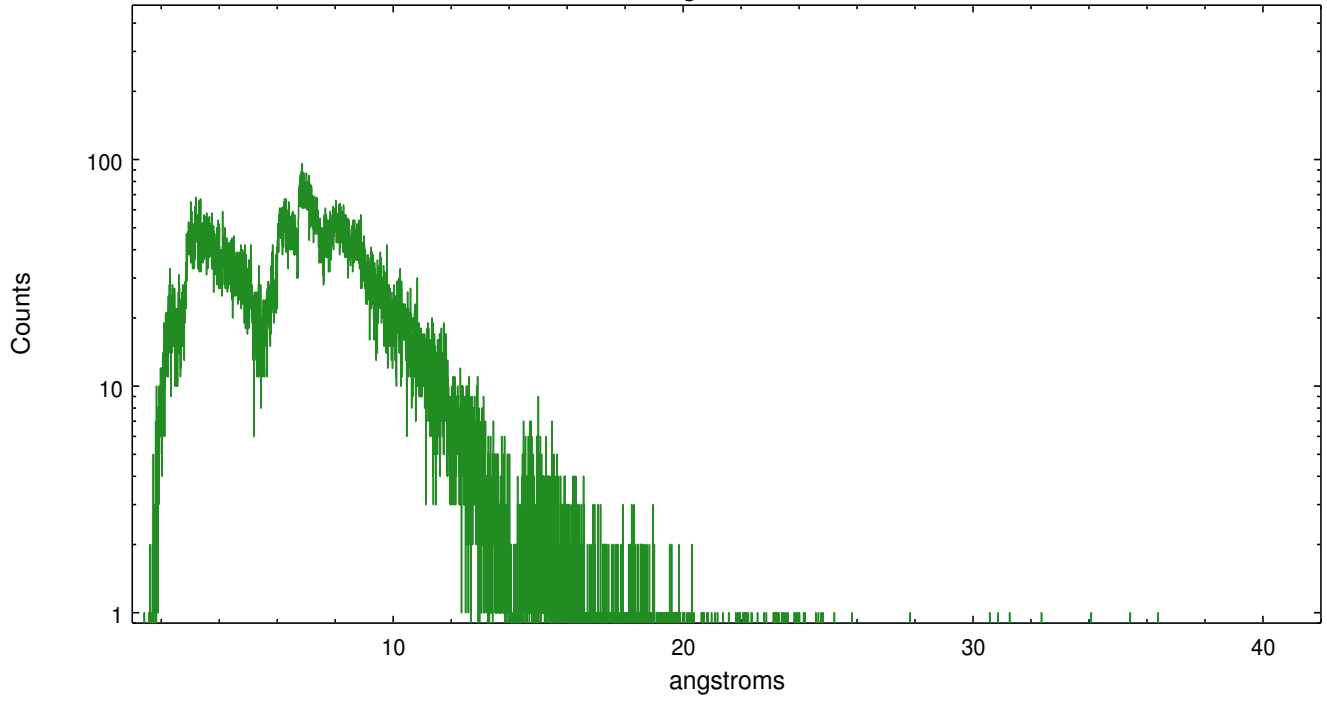


Full Detector MEG

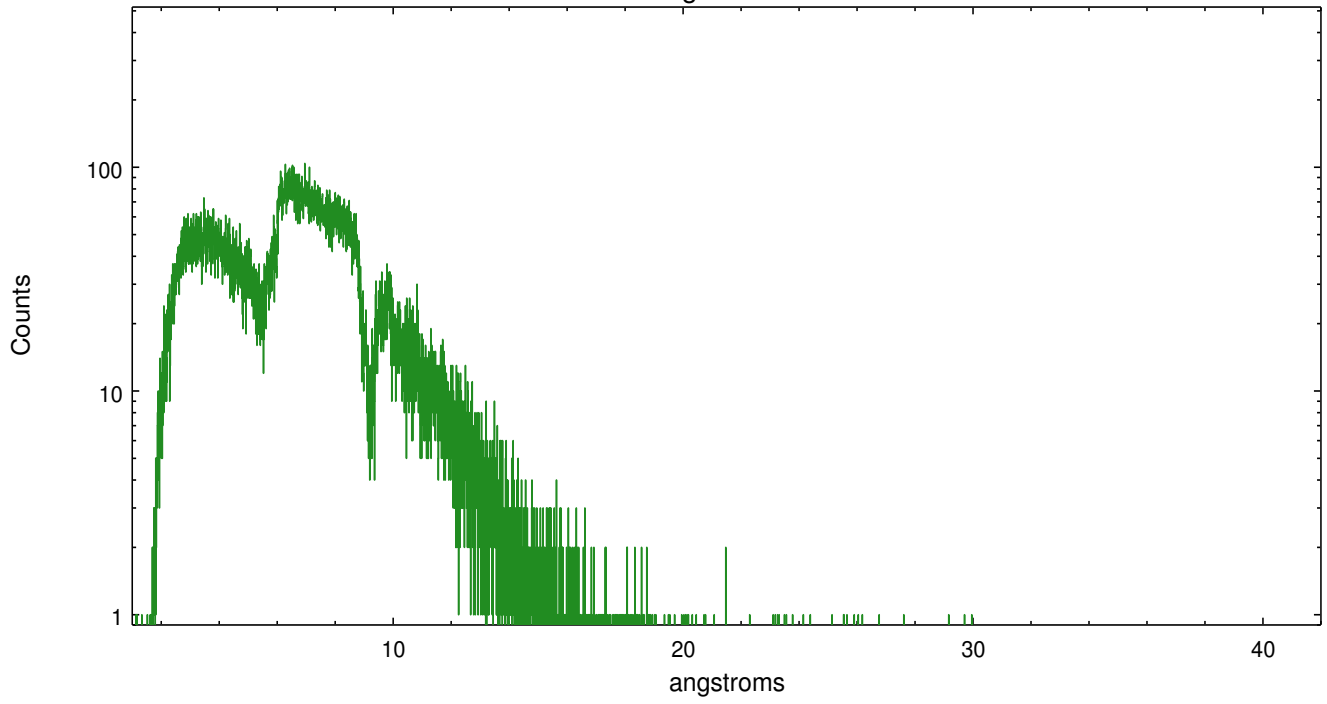
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	7351	2471	71649	18100	82459	2245	6349



meg order -1



meg order +1



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	38.7004997

A.2 Comments

Zeroth order is extended and 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 ($x=4069.51$, $y=4075.31$) 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. 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.