

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 8525 - L2 Version 3
Chandra X-Ray Center

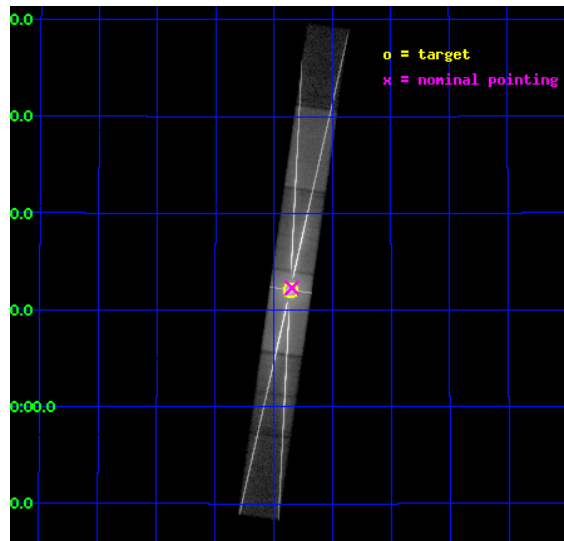
L2 Processing Date : May 14 2012

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1 Front

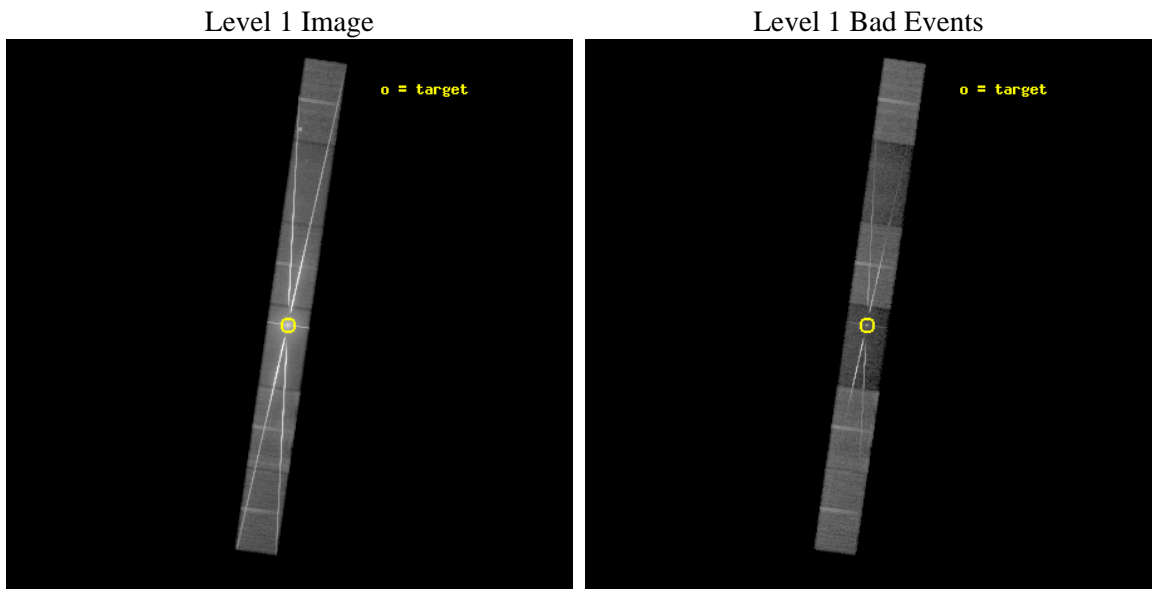
seq_num	400681	Sequence number
obs_id	8525	Observation id
title	Joint XMM-Newton/Chandra/RXTE Observations of Dips in Cyg X-1	Prop
observer	Dr. Joern Wilms	Principal investigator
object	Cyg X-1	Source name
dtycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	299.590417	Observer's specified target RA [deg]
dec_targ	35.201472	Observer's specified target Dec [deg]
ra_nom	299.58662444258	Nominal RA [deg]
dec_nom	35.205197668763	Nominal Dec [deg]
roll_nom	98.158821074715	Nominal Roll [deg]
revision	3	Processing version of data
ontime	30137.599788725	Sum of GTIs [s]
livetime	29427.192735855	Livetime [s]
ontime4	30137.599788725	Sum of GTIs [s]
ontime5	30137.599788725	Sum of GTIs [s]
ontime6	30137.599788725	Sum of GTIs [s]
ontime7	30137.599788725	Sum of GTIs [s]
ontime8	30137.599788725	Sum of GTIs [s]
ontime9	30137.599788725	Sum of GTIs [s]
l2events	2714238	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	30000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	30137.599788725	Sum of GTIs [s]
caldbver	4.4.9	 	ontime4	30137.599788725	Sum of GTIs [s]
date	2012-05-13T02:18:28	Date and time of file creation	ontime5	30137.599788725	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	30137.599788725	Sum of GTIs [s]
			ontime7	30137.599788725	Sum of GTIs [s]
			ontime8	30137.599788725	Sum of GTIs [s]
			ontime9	30137.599788725	Sum of GTIs [s]
			l1events	3494185	Number of level 1 events

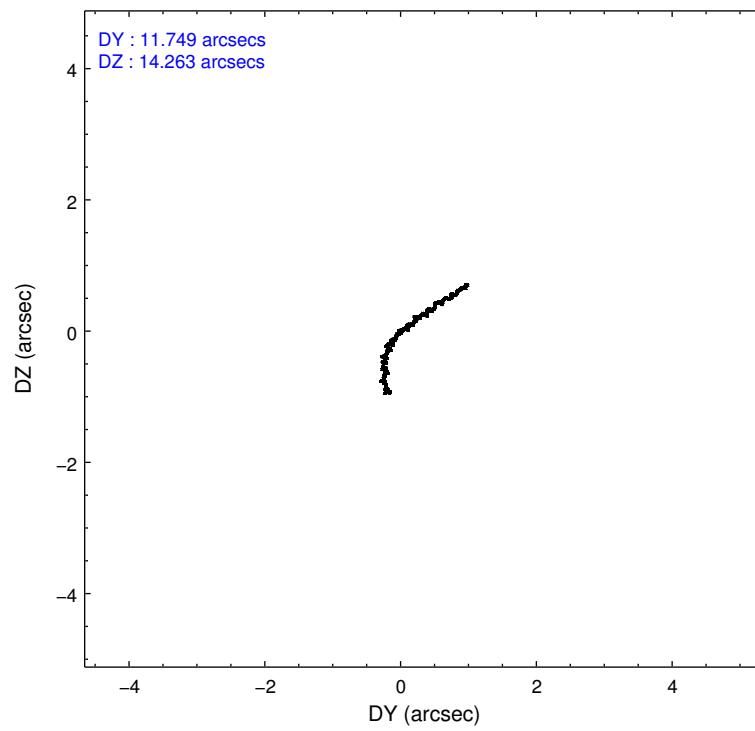
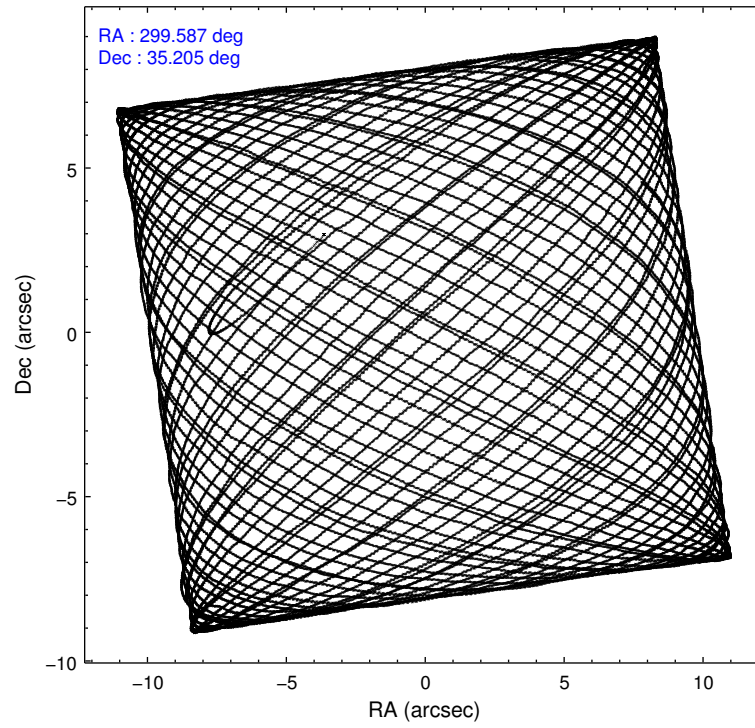
2.1.3 Events

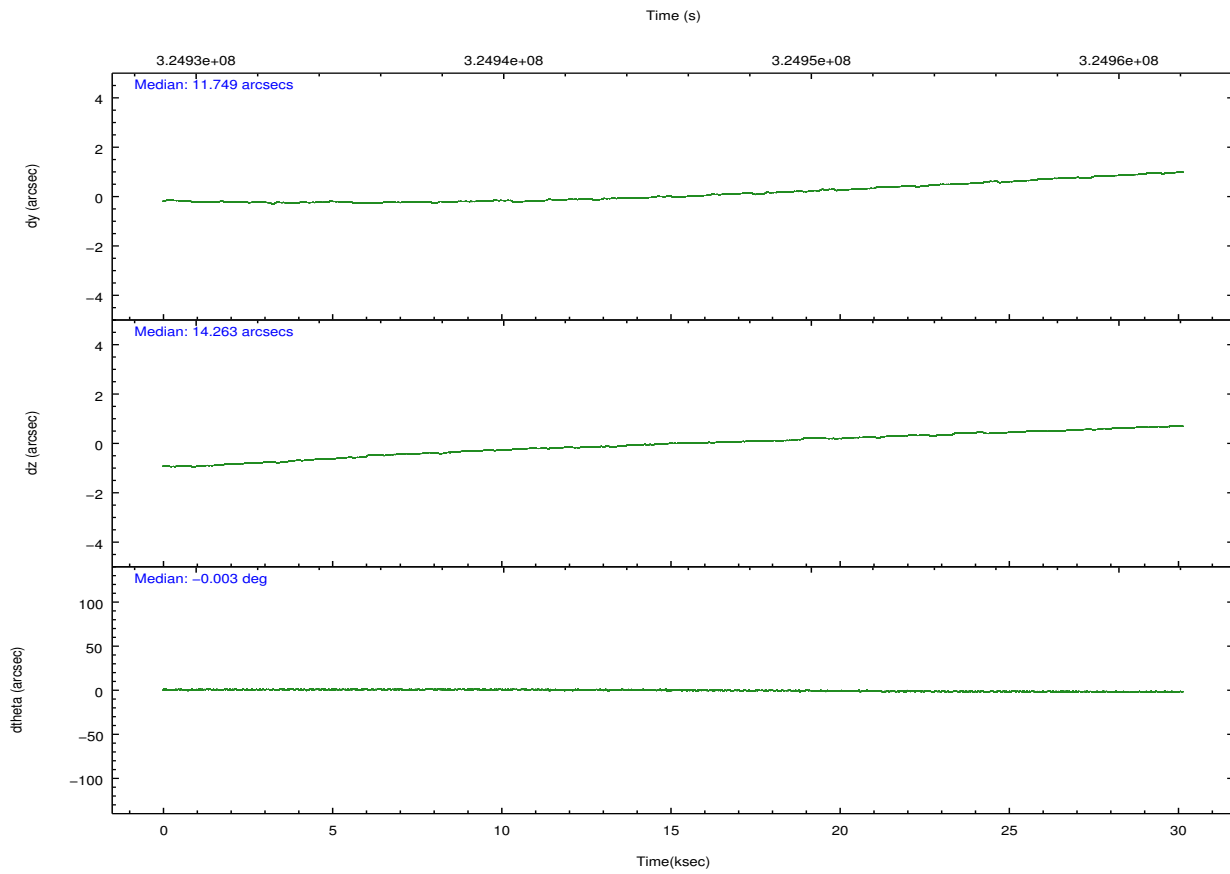
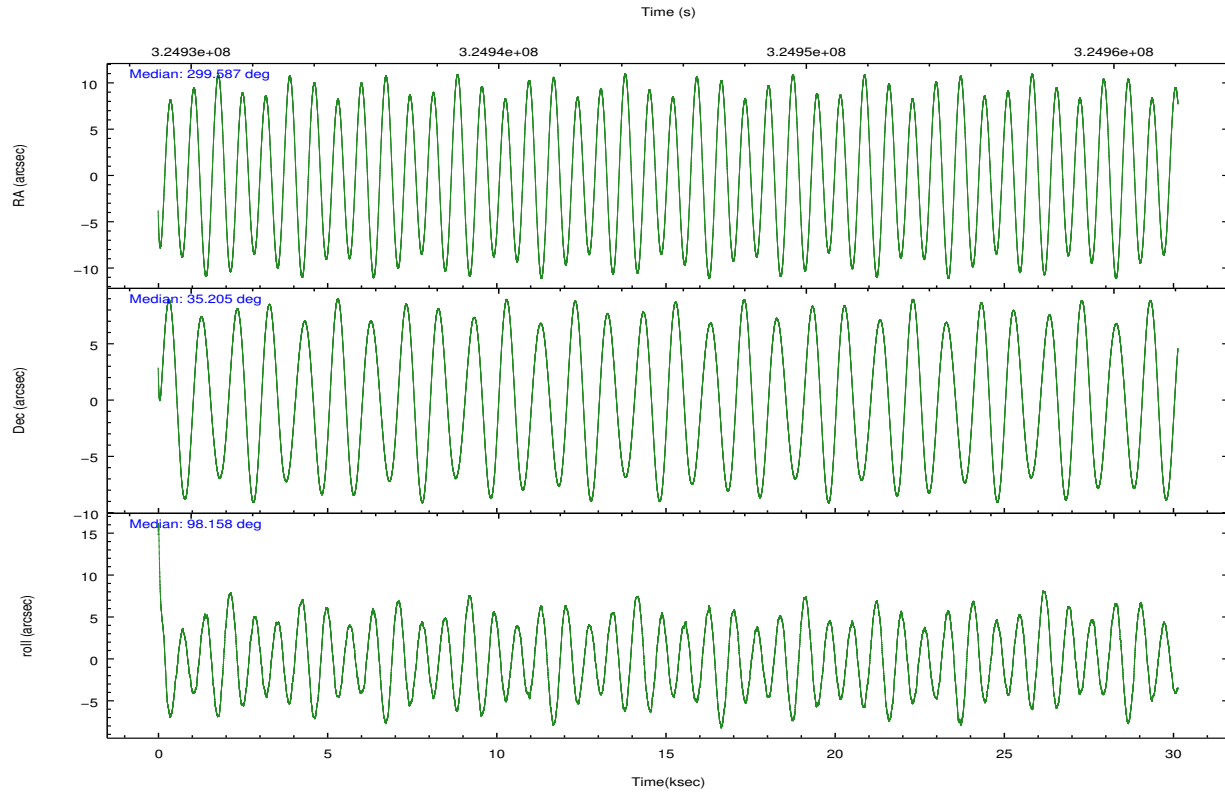
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	164256	278613	1129611	1258429	489844	173432	grade 0 events	31800	55452	708423	210783	279778	54812
rejected events	119448	47600	151382	104868	117825	99049		19%	19%	62%	16%	57%	31%
rejected %	72%	17%	13%	8%	24%	57%	grade 1 events	149	387	16568	4803	2828	207
								0%	0%	1%	0%	0%	0%
							grade 2 events	6715	83196	133463	316012	45328	9862
								4%	29%	11%	25%	9%	5%
							grade 3 events	2340	17411	45557	113623	15836	3550
								1%	6%	4%	9%	3%	2%
							grade 4 events	2257	17020	44953	113446	15678	3494
								1%	6%	3%	9%	3%	2%
							grade 5 events	1949	8356	14376	30857	5019	2439
								1%	2%	1%	2%	1%	1%
							grade 6 events	2382	60749	53002	408491	18944	3452
								1%	21%	4%	32%	3%	1%
							grade 7 events	116664	36042	113269	60414	106433	95616
								71%	12%	10%	4%	21%	55%

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	GRADED	GRADED	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	299.607644	299.5866244425847	CCD I2 on	N	N
[deg] Pointing Dec	35.183928	35.20519766876299	CCD I3 on	N	N
[deg] Pointing Roll	97.990073	98.15882107471455	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	-183.985022191653	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-6.14	-6.147500391354811	CCD S4 on	Y	Y
Phase constraints	Y	Y	CCD S5 on	Y	Y
[d] Phase period	5.599829	5.599829	Number of optional ACIS chips dropped	0	0
[d] Phase epoch (MJD)	54137.875470	54137.875470	On-chip summing requested	N	N
Phase start	0.950000	0.950000	Subarray requested	CUSTOM	1/2
Phase end	0.050000	0.050000	Subarray start row	1	1
Phase start error	0.050000	0.050000	Subarray row count	512	512
Phase end error	0.050000	0.050000	Alternating exposures requested	N	N
[s] Observation start time (MET)	324930563.184000	324929388.64674	[s] Primary exposure time	0.000000	1.7
Observation start date	2008-04-18T18:28:18	2008-04-18T18:09:48			
[s] Observation end time (MET)	324960563.184000	324961198.49829			
Observation end date	2008-04-19T02:48:18	2008-04-19T02:59:58			
Read mode	TIMED	TIMED			

2.3 Aspect



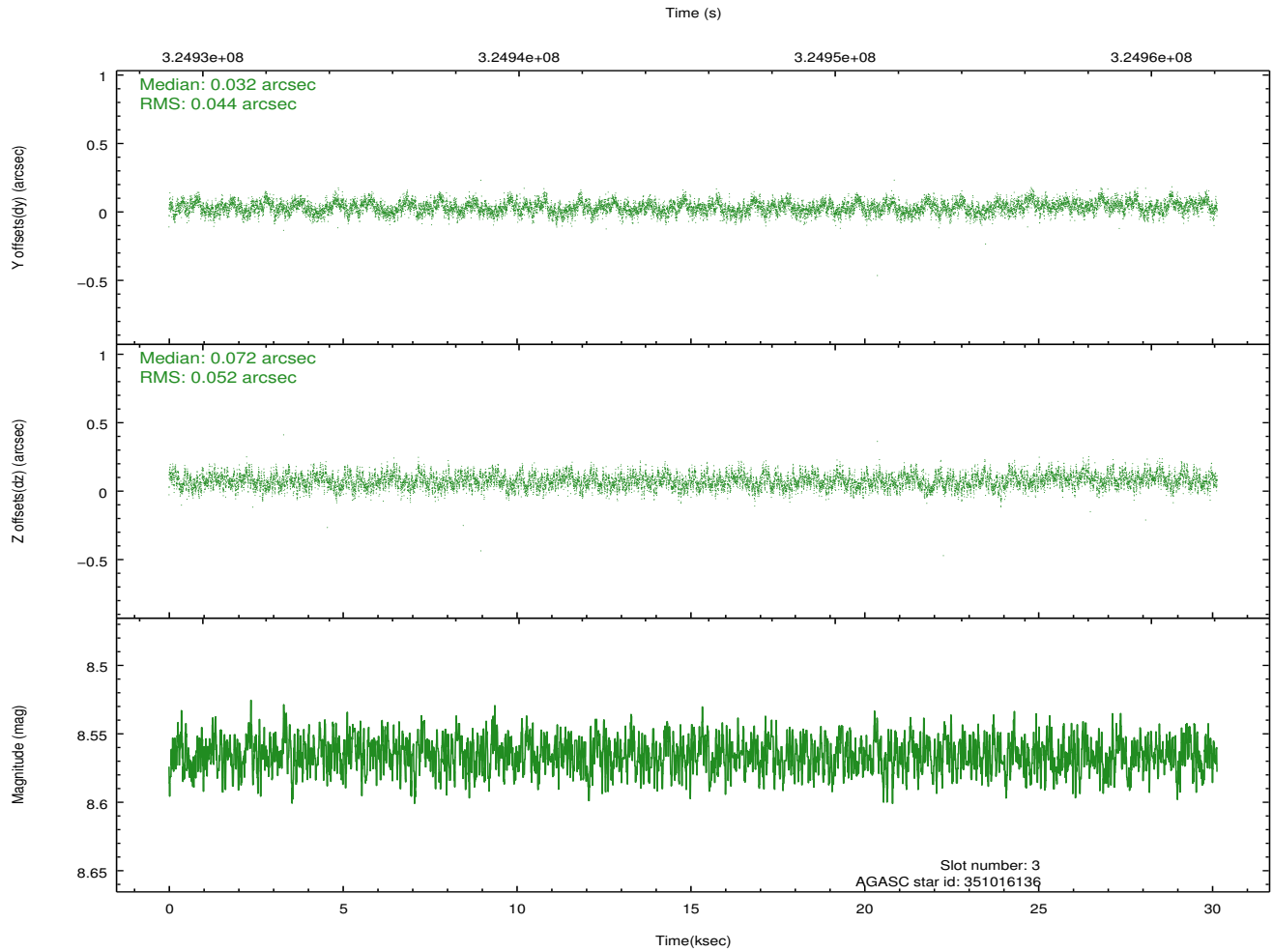
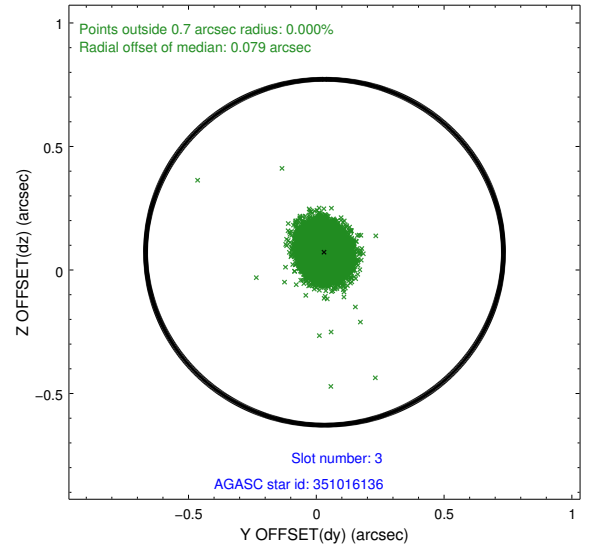
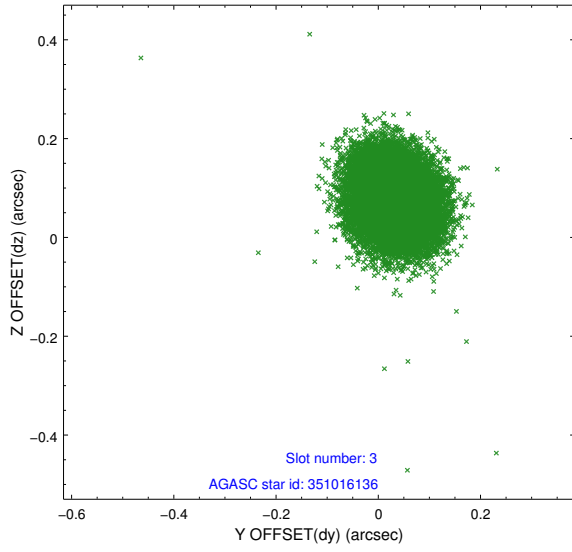


Slot Statistics

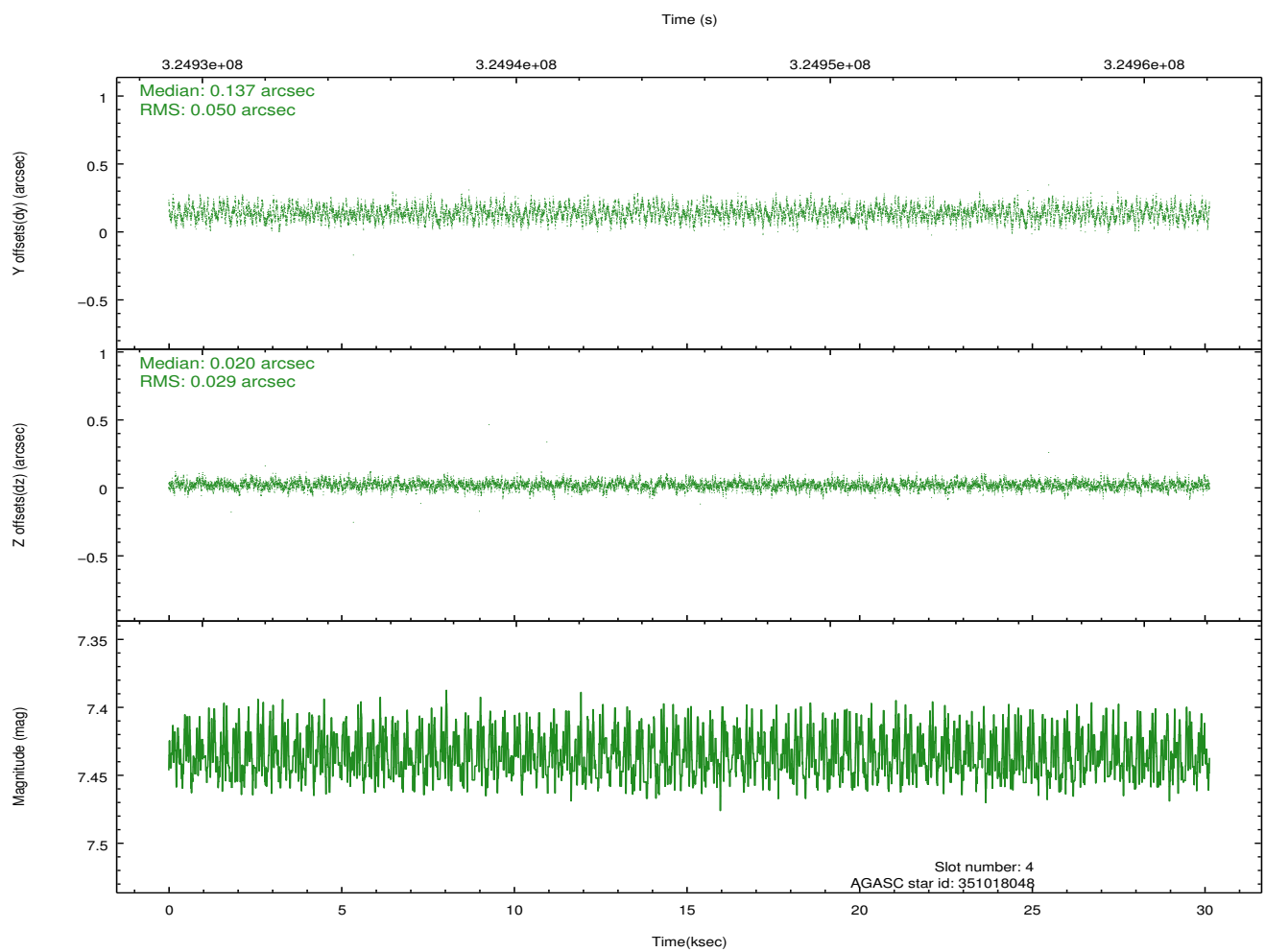
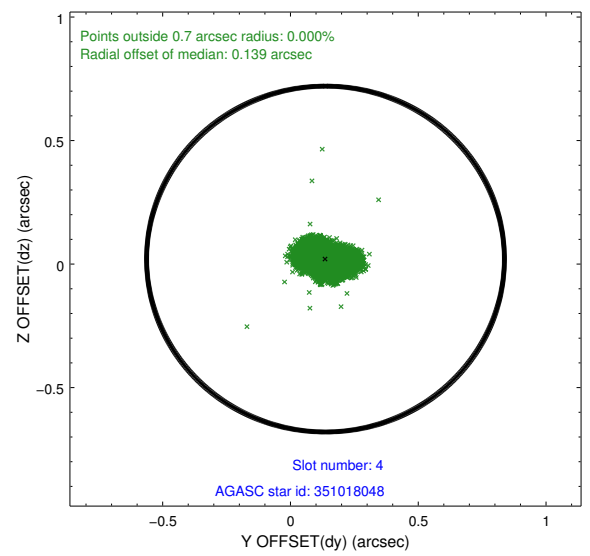
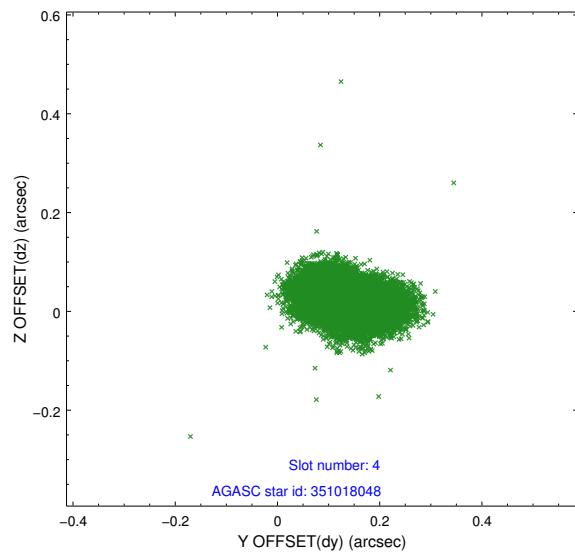
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.82	7352	-0.112	-0.071	0.011	0.022	0.000000	0.000000	-764.48	-1862.33
1	FID	ACIS-S-4	6.90	7352	0.077	0.076	0.013	0.025	0.000000	0.000000	2148.98	46.15
2	FID	ACIS-S-6	7.10	7352	0.007	0.006	0.019	0.026	0.000000	0.000000	397.75	683.59
3	GUIDE	351016136	8.57	14689	0.032	0.072	0.072	0.115	300.302636	34.786391	-1695.64	-1836.68
4	GUIDE	351018048	7.44	14703	0.137	0.020	0.062	0.101	299.715174	35.497760	1075.41	-469.25
5	GUIDE	351023656	8.18	14699	0.241	0.085	0.065	0.105	299.727900	34.661972	-1909.63	-91.18
6	GUIDE	351406096	8.89	14693	-0.222	-0.054	0.064	0.104	299.076637	35.711249	2099.62	1272.92
7	GUIDE	351406432	8.83	14691	-0.188	-0.125	0.074	0.119	299.163921	35.698316	2017.06	1027.20

2.4 Star Slots

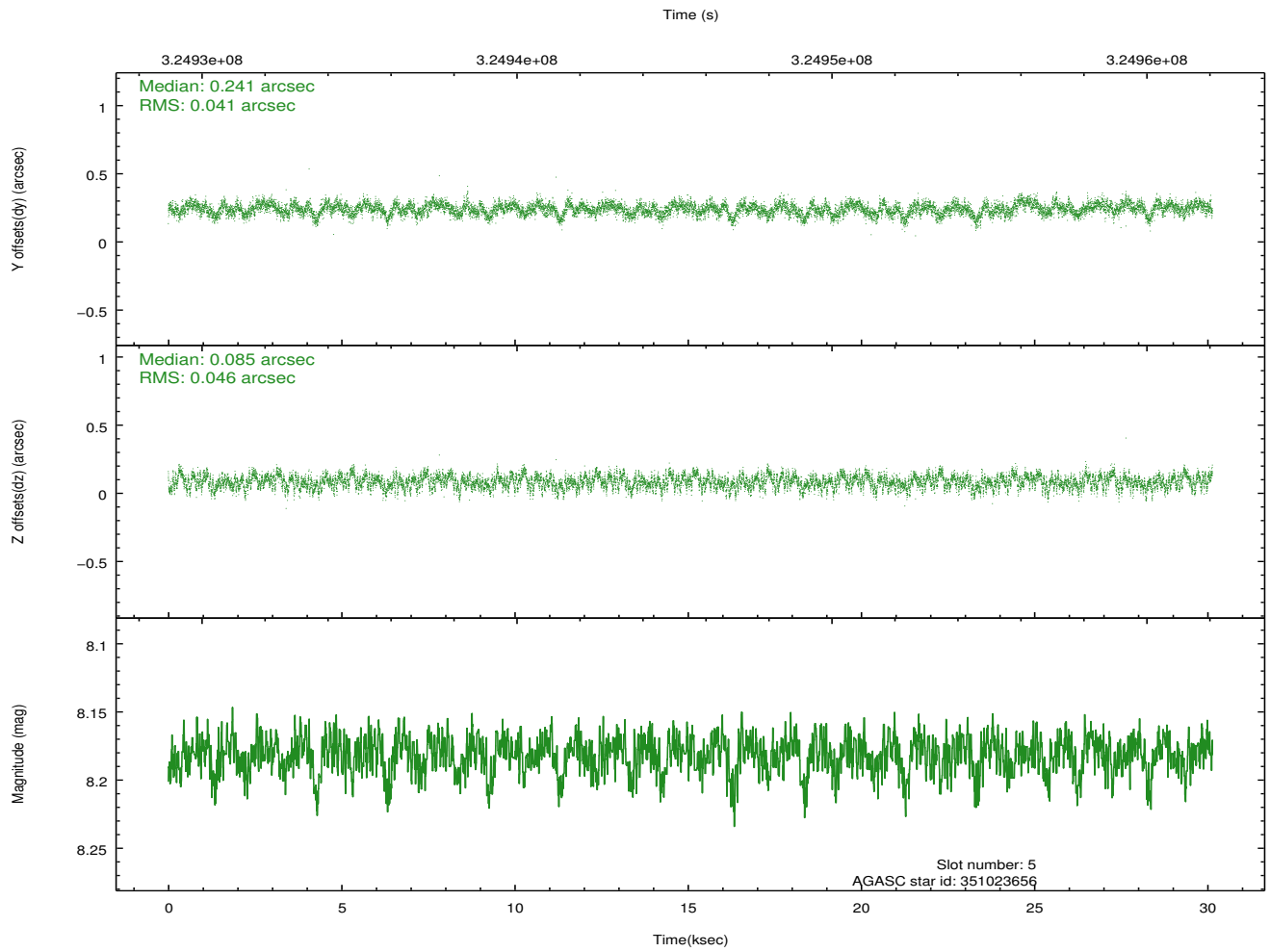
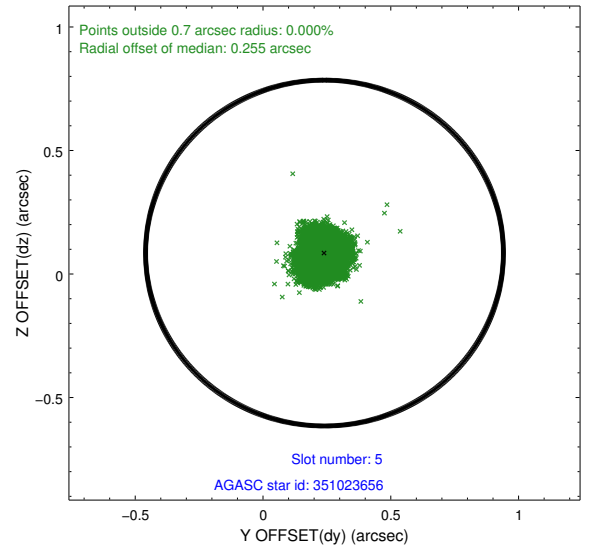
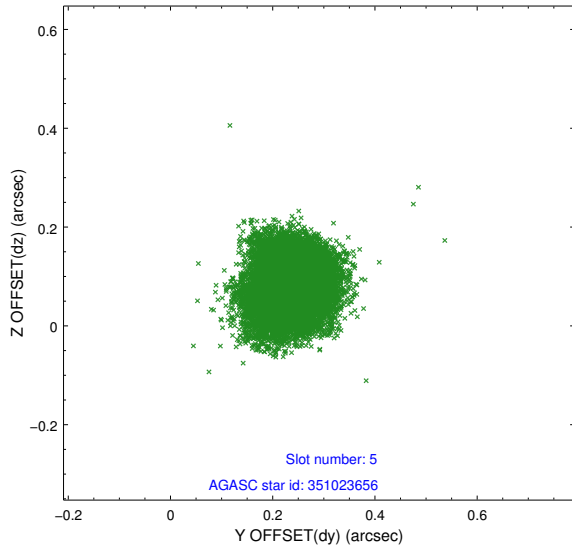
2.4.1 Slot 3



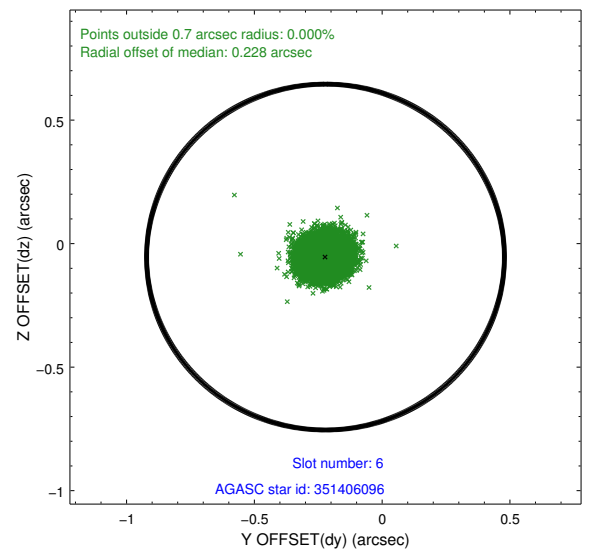
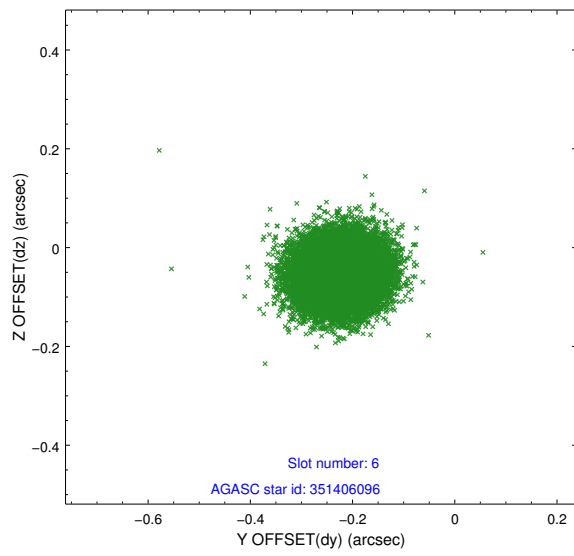
2.4.2 Slot 4



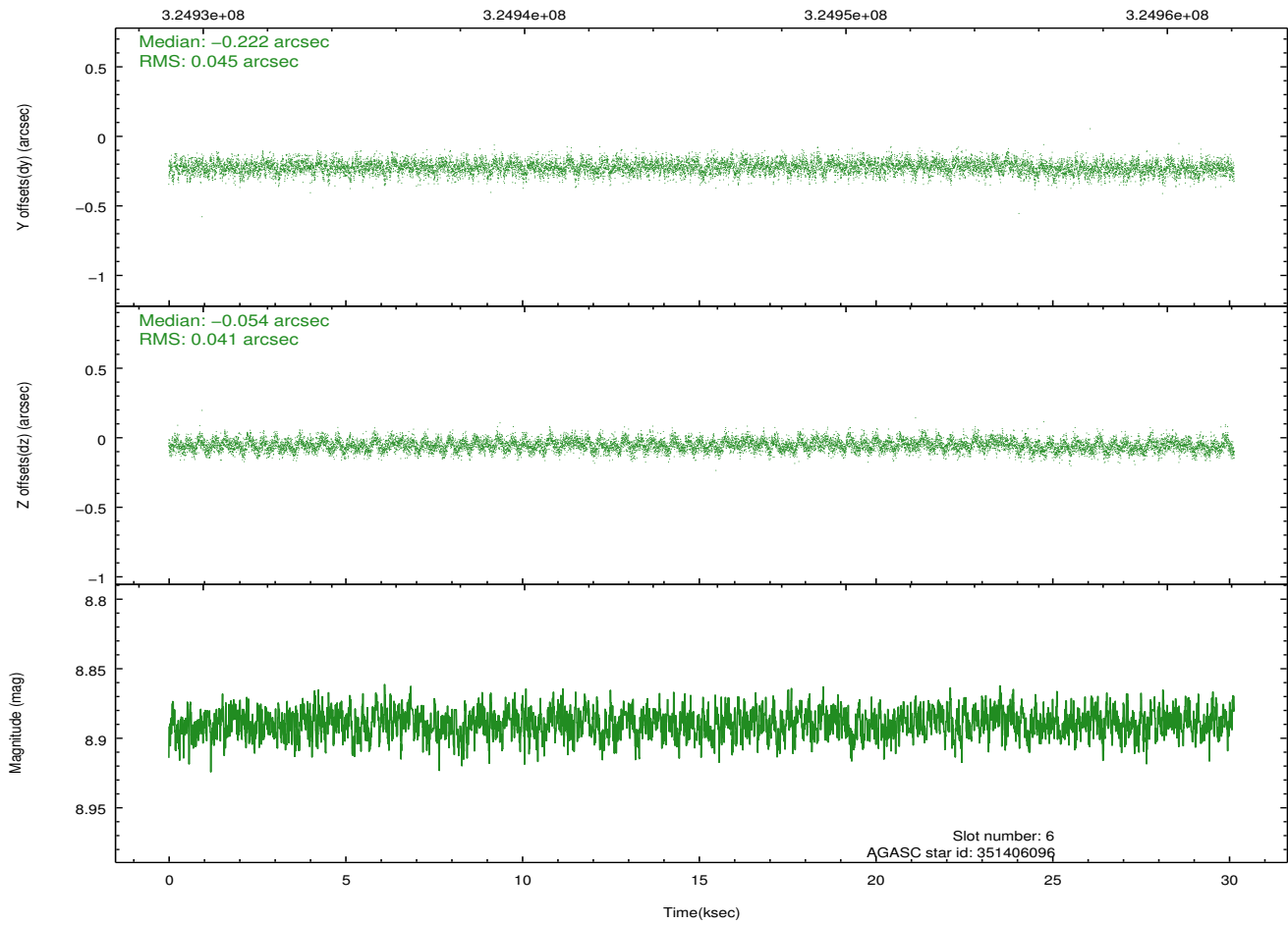
2.4.3 Slot 5



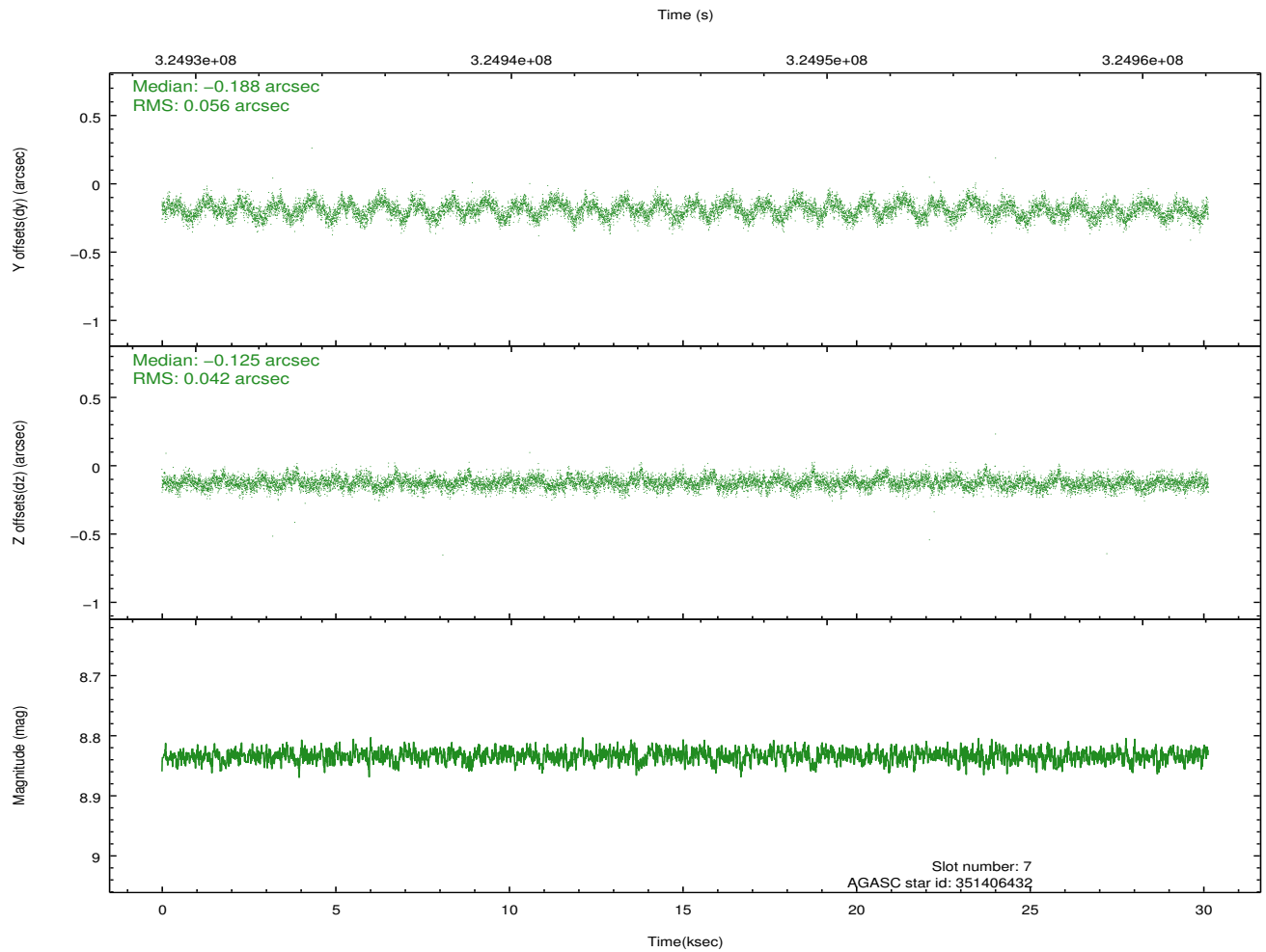
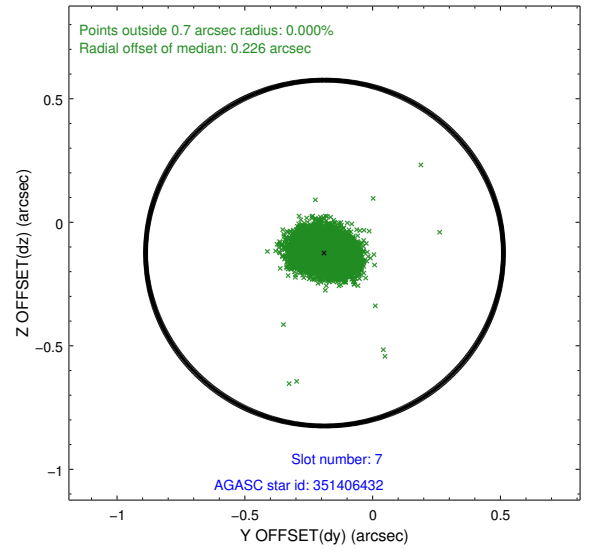
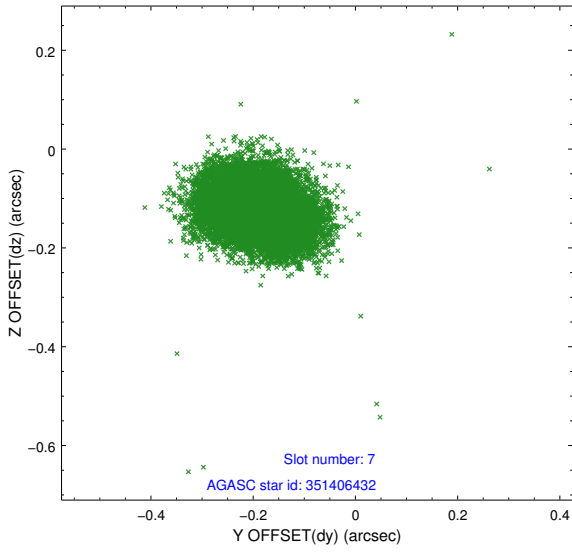
2.4.4 Slot 6



Time (s)

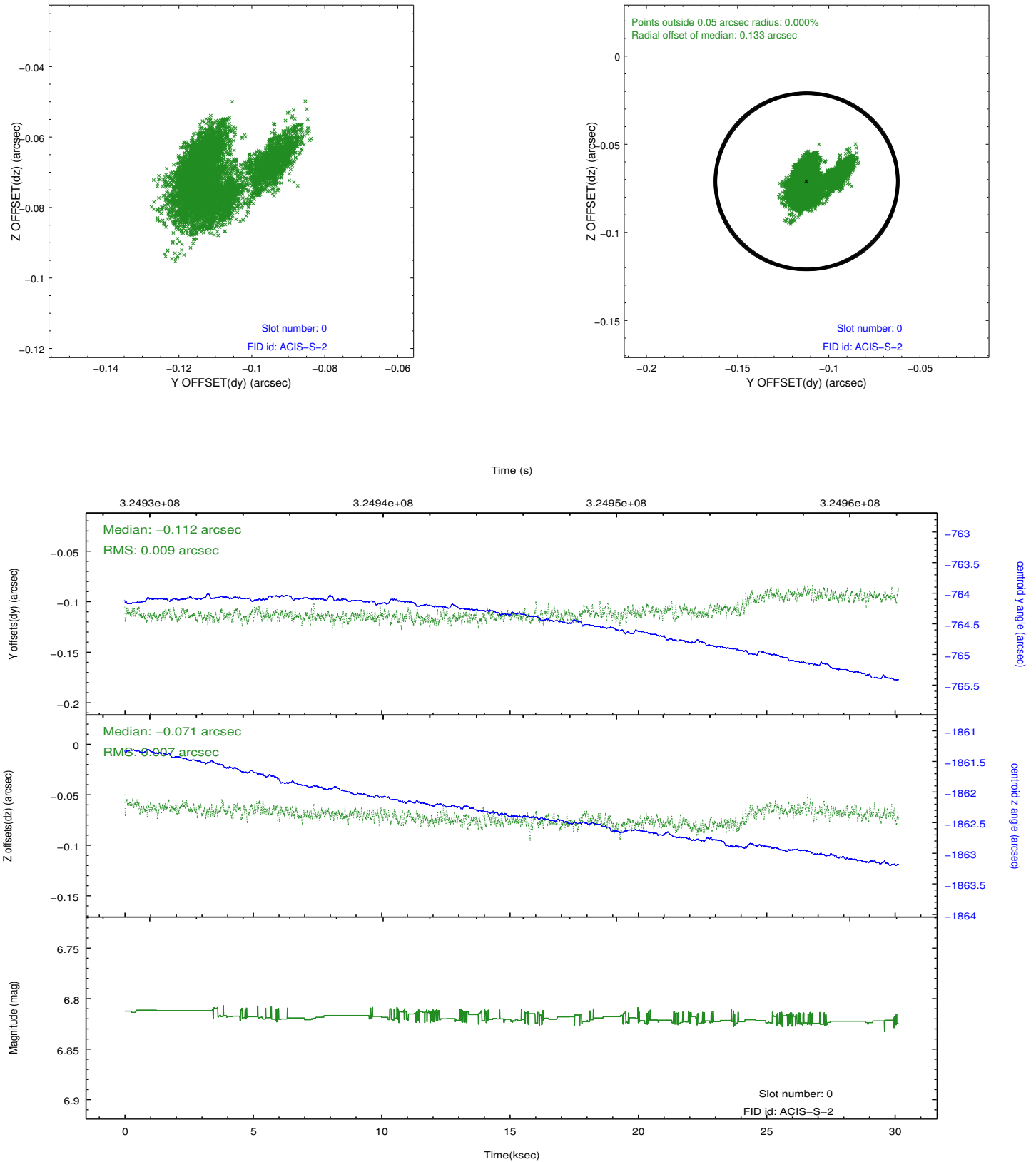


2.4.5 Slot 7

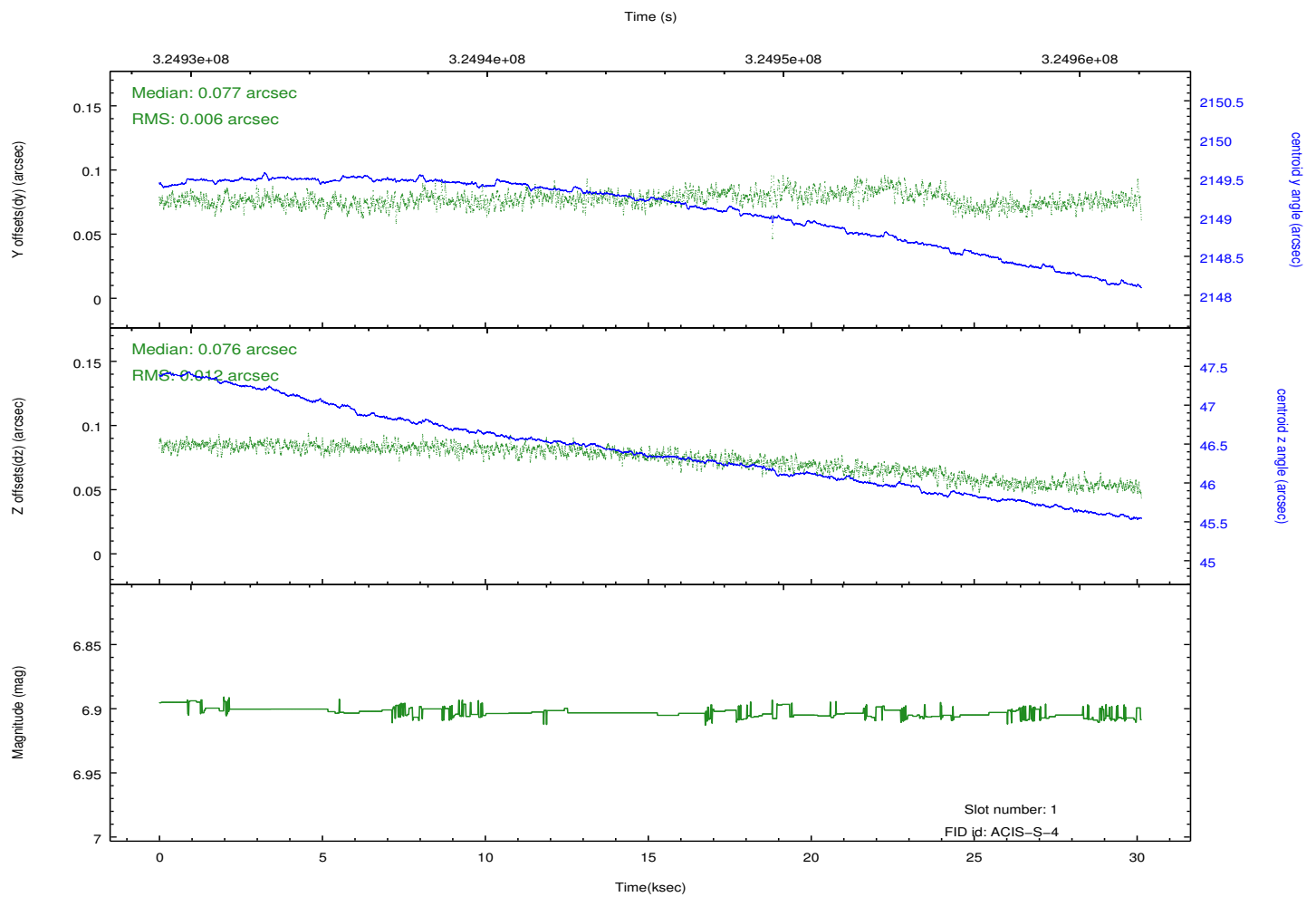
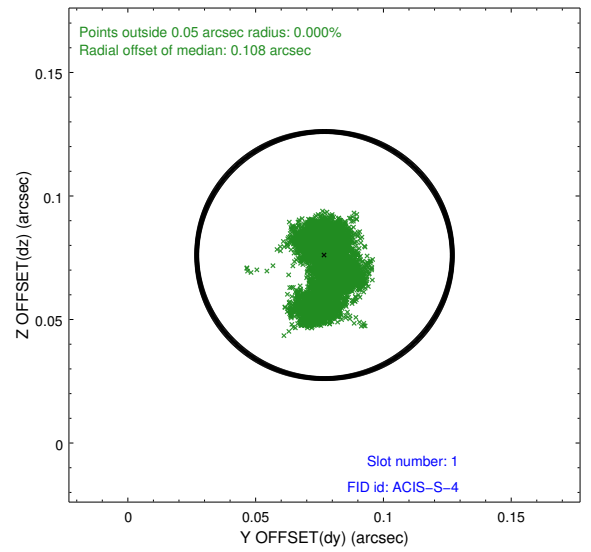
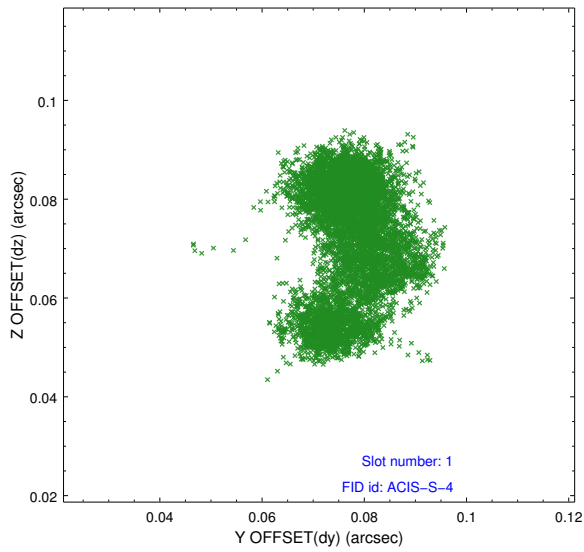


2.5 FID Slots

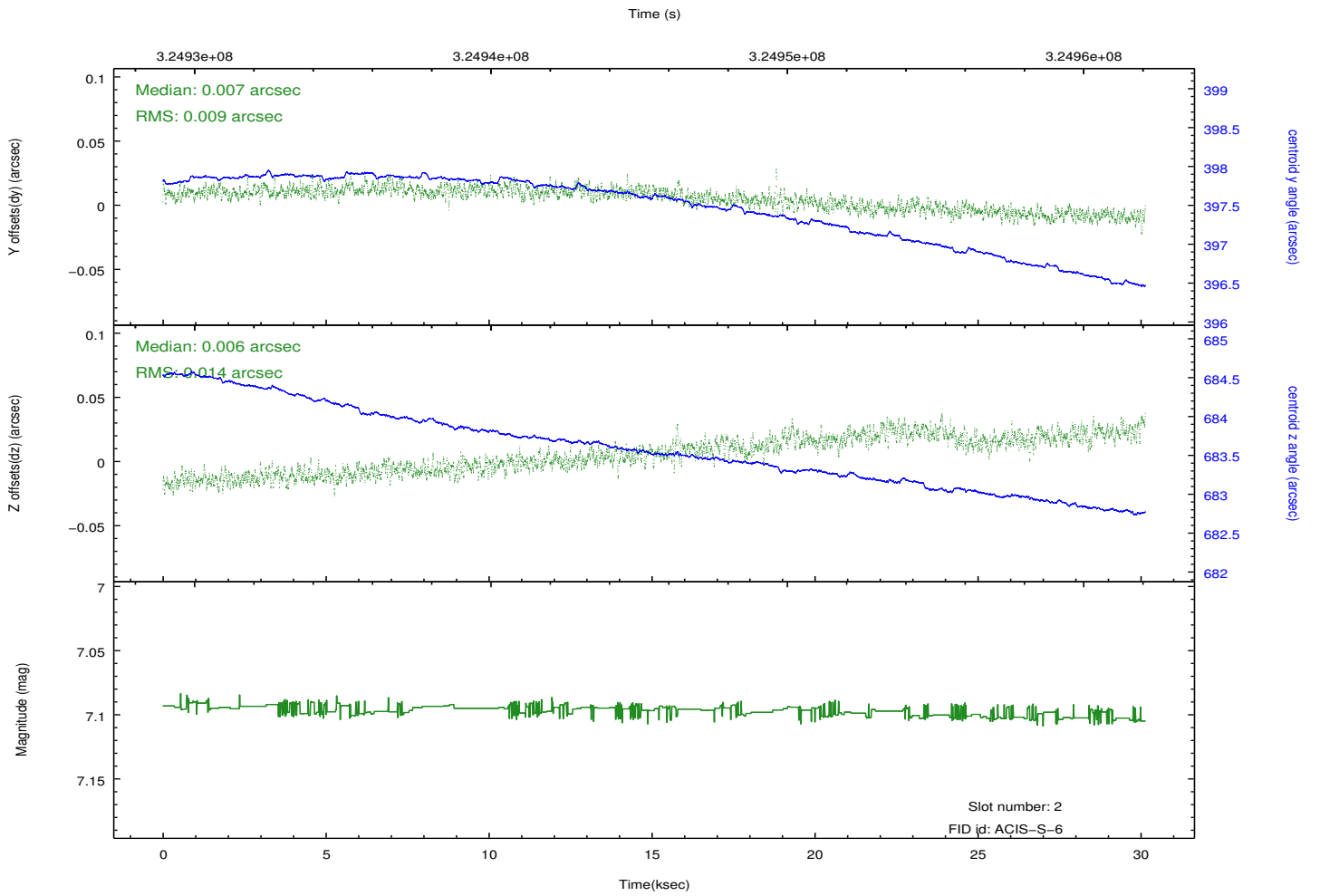
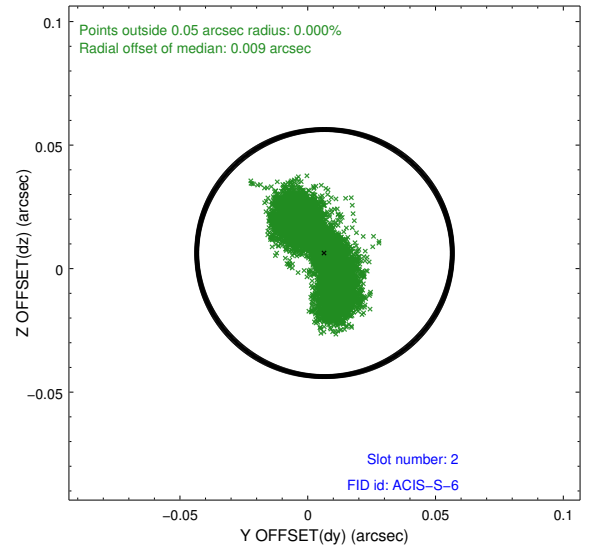
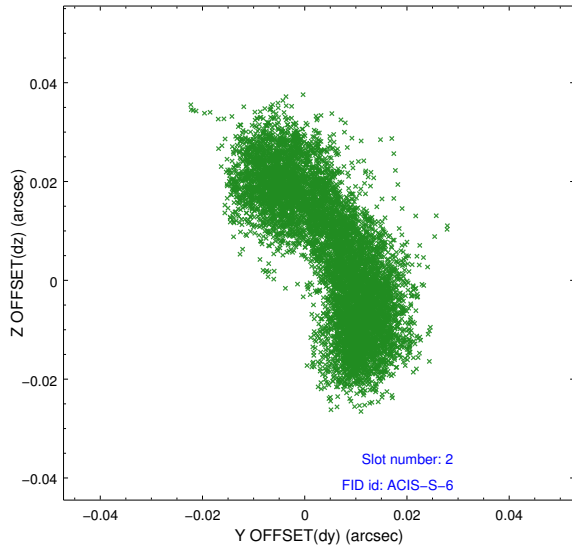
2.5.1 Slot 0



2.5.2 Slot 1

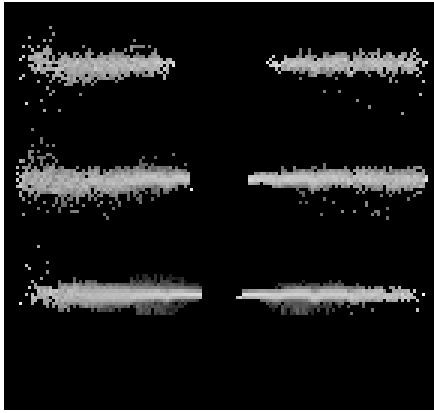


2.5.3 Slot 2

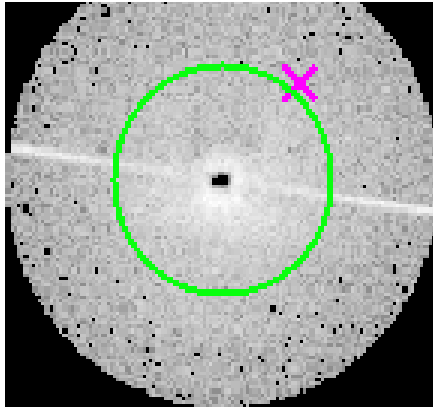


3 Gratings

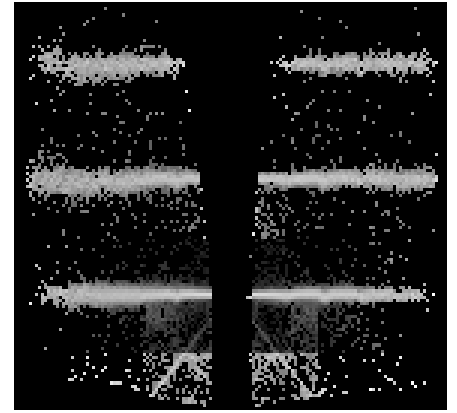
3.1 HEG Arm



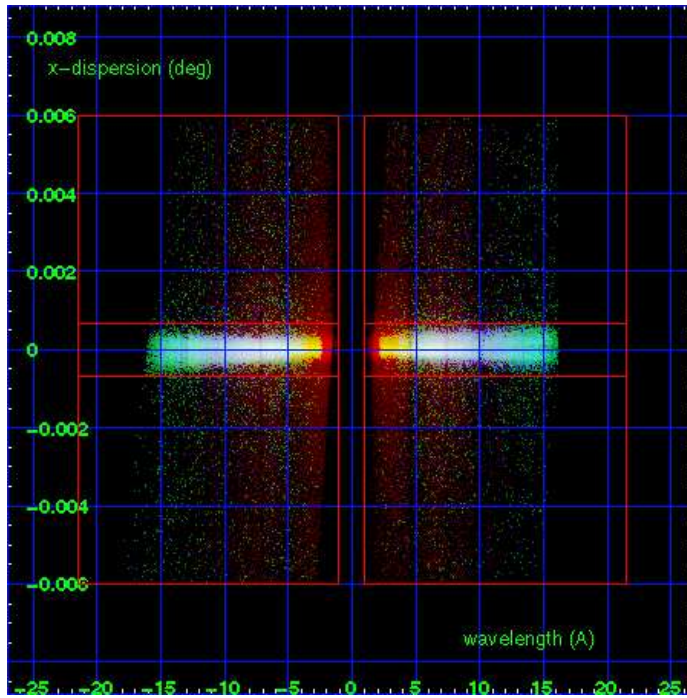
HEG Order Sort 123



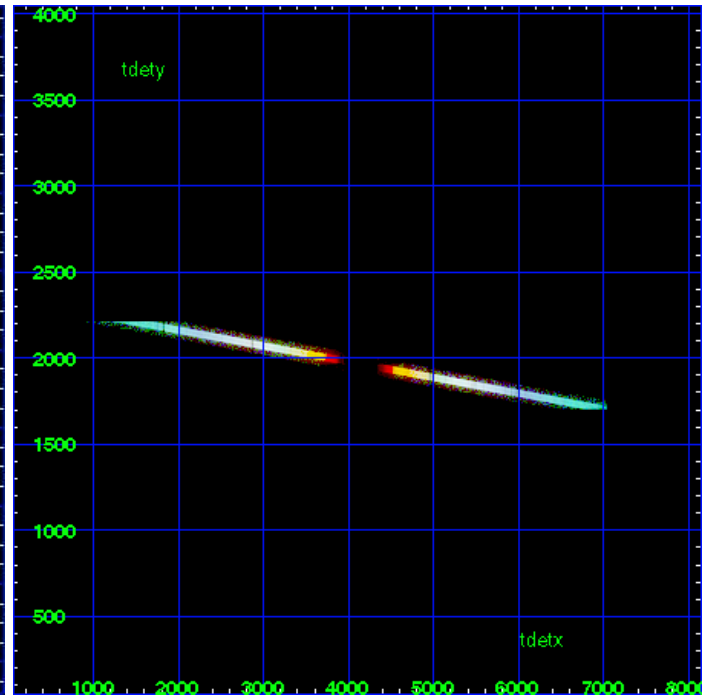
HEG Zero Order



HEG Order Sort ALL

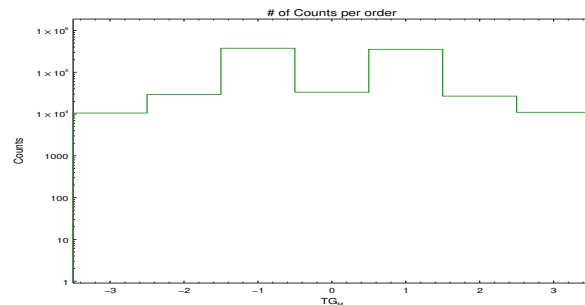


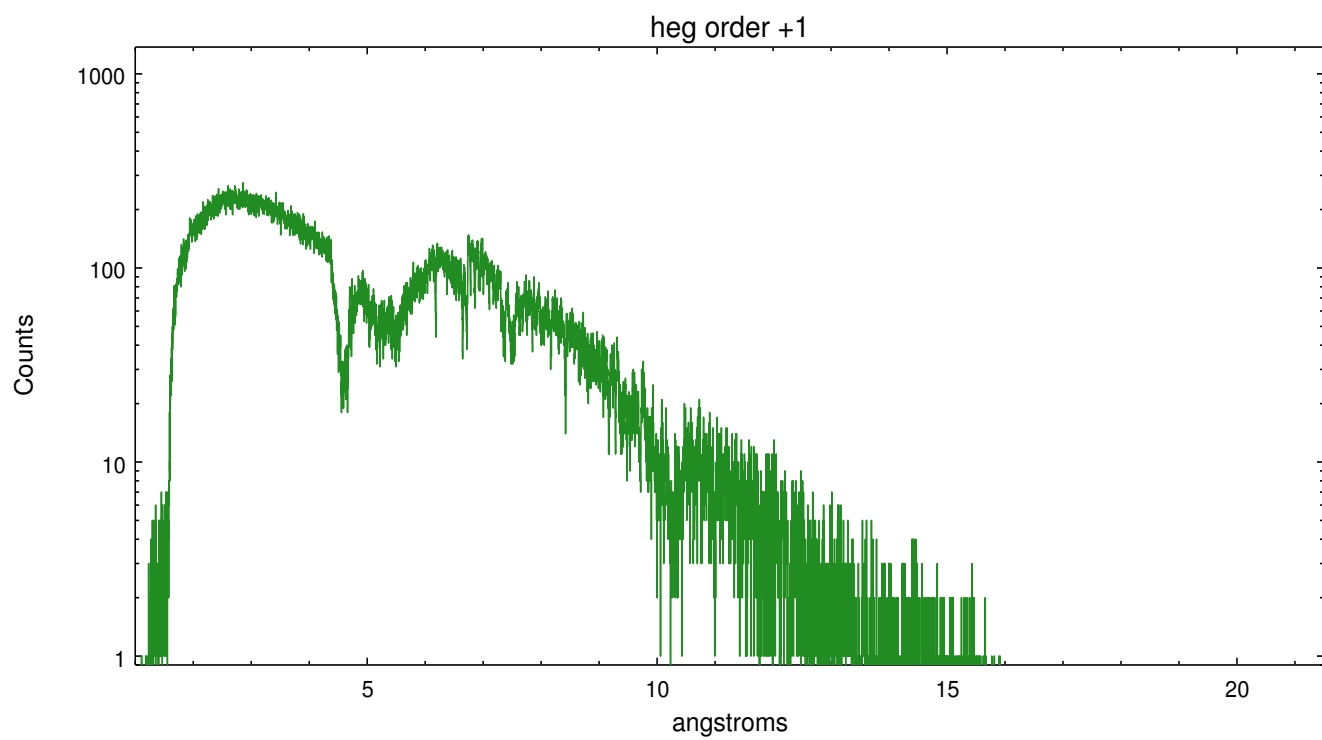
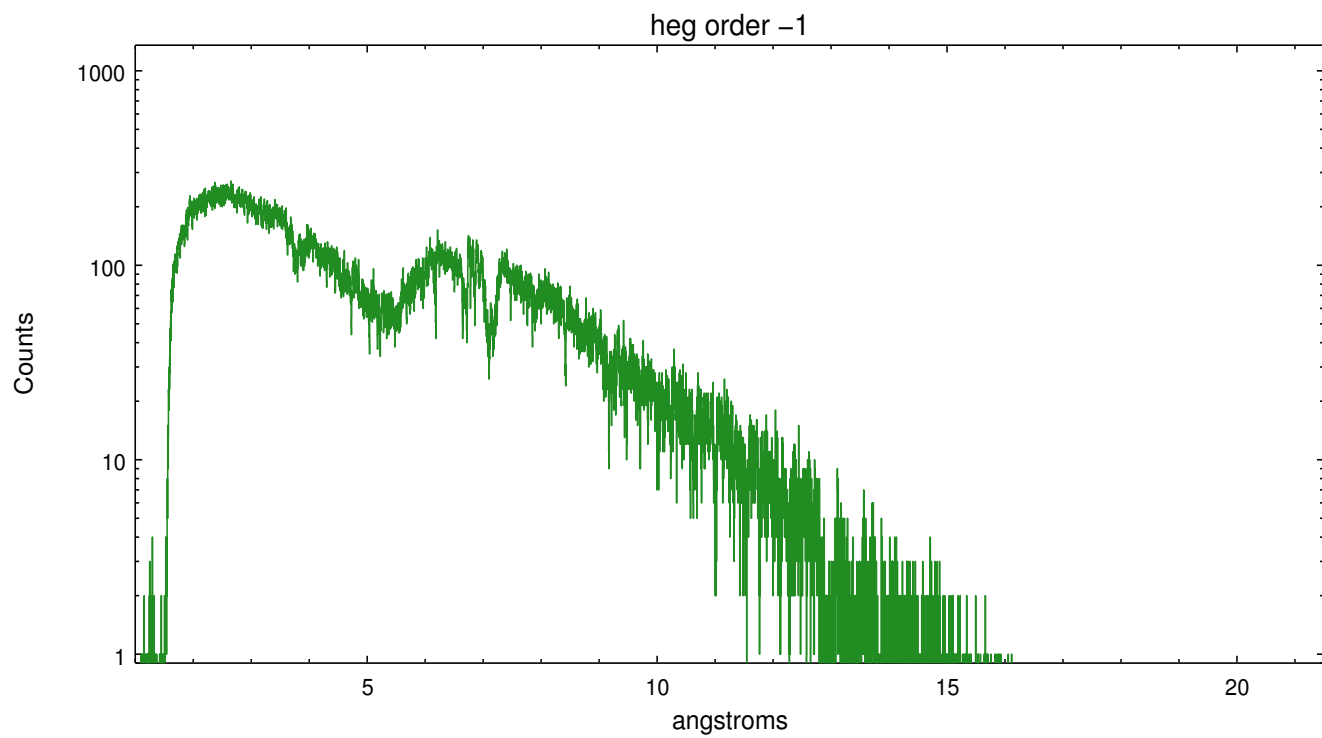
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	10584	29492	376717	33337	354540	26896	11024

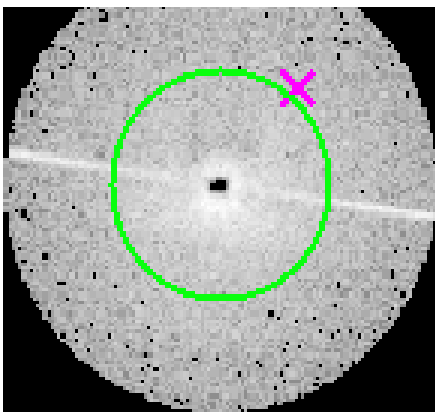




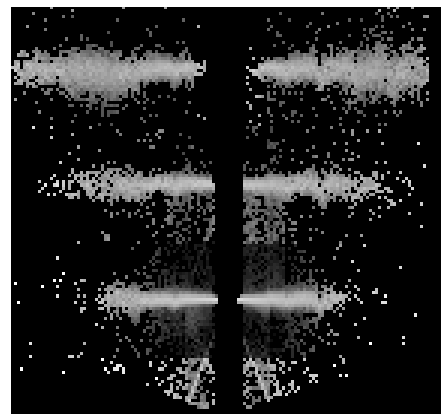
3.2 MEG Arm



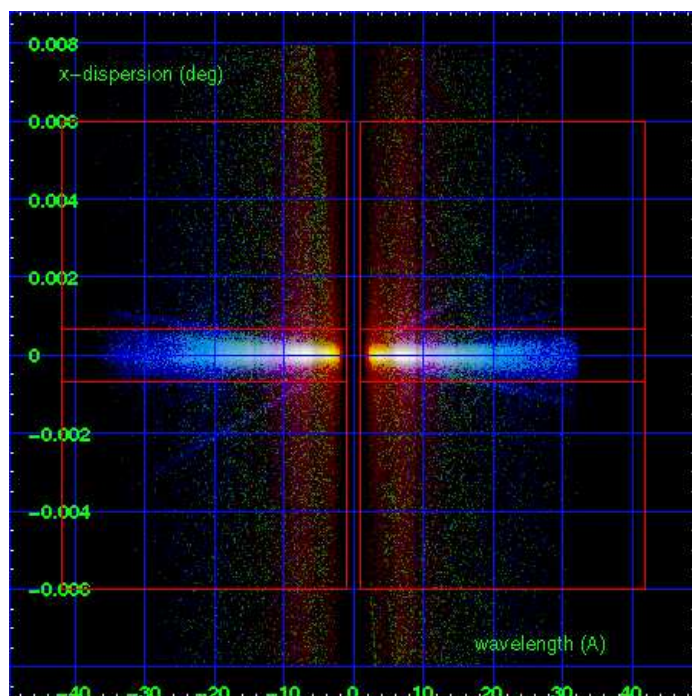
MEG Order Sort 123



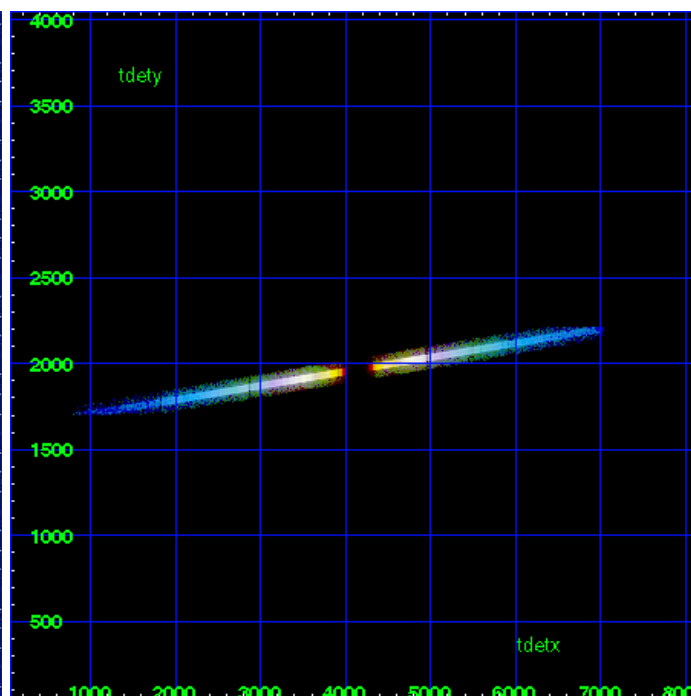
MEG Zero Order



MEG Order Sort ALL

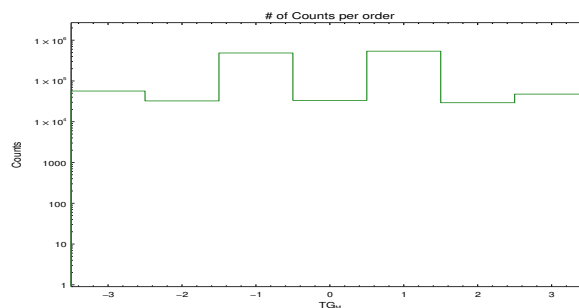


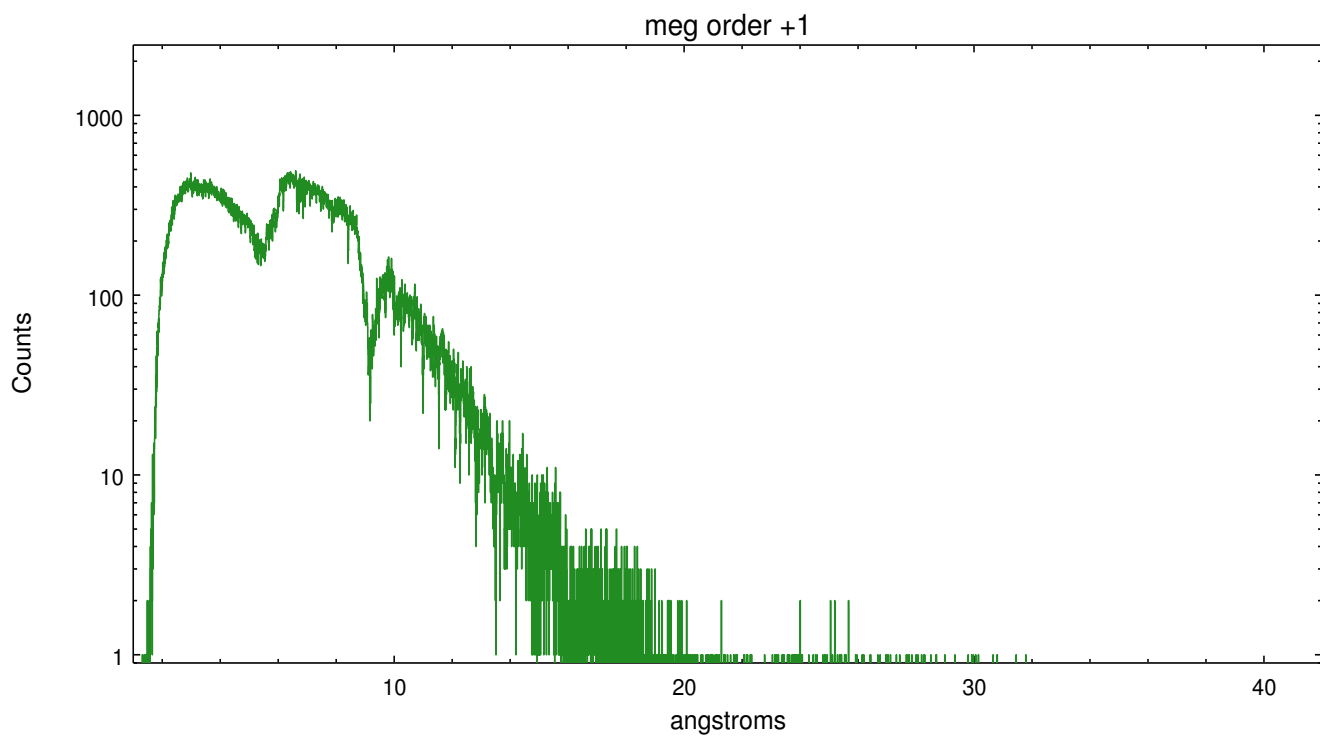
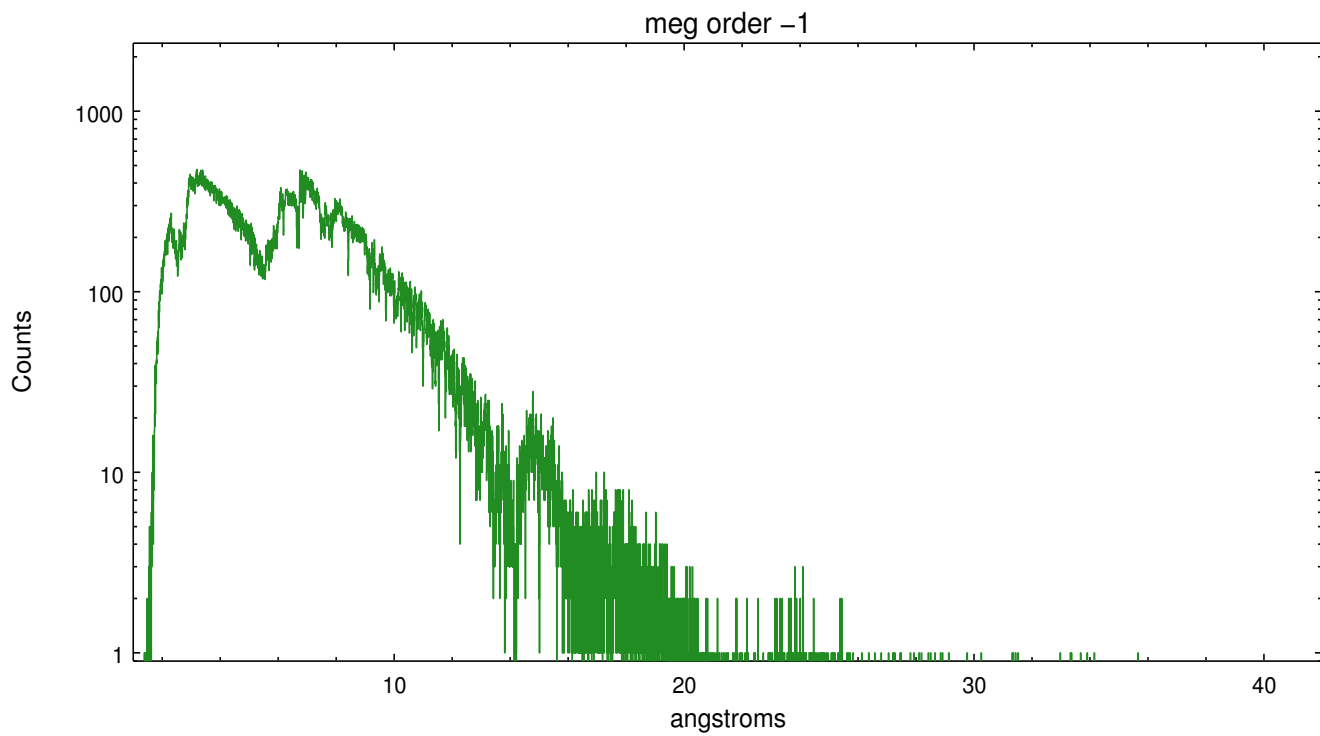
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	56563	32401	485131	33337	537138	29279	47566





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.05.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.1375997

A.2 Comments

Coordinated with XMM and RXTE. ===== Standard data processing software did not correctly locate the zeroth order because a spatial exclusion window was used to sample 1/10 of the zeroth order counts. Manual intervention was used in the processing to input the correct sky coordinates (x=4074.34,y=4070.82) 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.===== Zeroth order and spectral arms are piled up.