

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 7452 - L2 Version 4
Chandra X-Ray Center

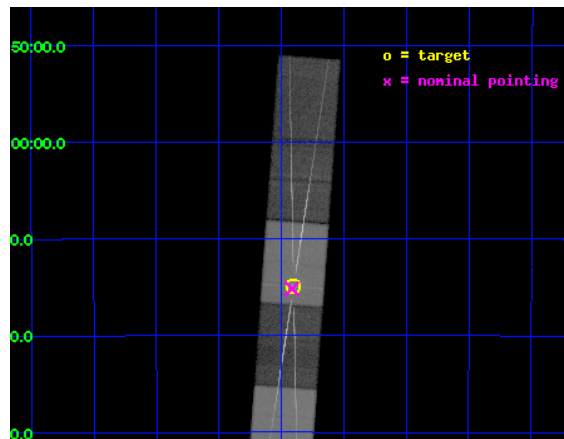
L2 Processing Date : Apr 25 2012

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1 Front

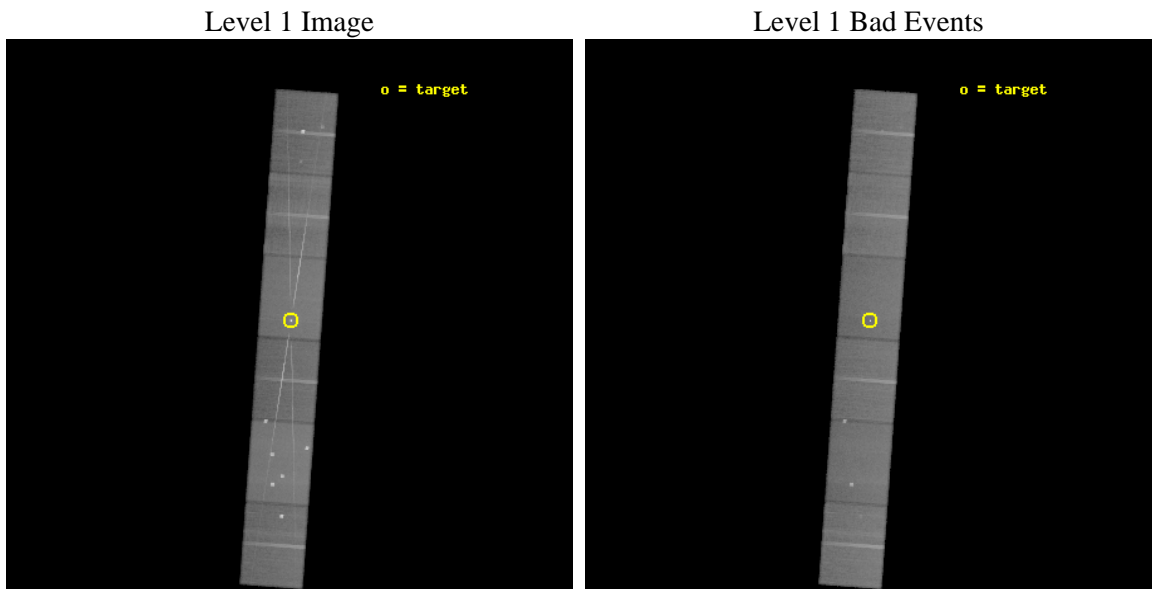
seq_num	300186	Sequence number
obs_id	7452	Observation id
title	Testing the Physics of Magnetic Accretion: EX Hydrae from the Shock to the White Dwarf Surface	Proposal title
observer	Dr. Nancy Brickhouse	Principal investigator
object	EXHYA	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	193.100833	Observer's specified target RA [deg]
dec_targ	-29.249083	Observer's specified target Dec [deg]
ra_nom	193.10407518509	Nominal RA [deg]
dec_nom	-29.253006358874	Nominal Dec [deg]
roll_nom	274.15821474072	Nominal Roll [deg]
revision	4	Processing version of data
ontime	49175.0	Sum of GTIs [s]
livetime	48380.781097503	Livetime [s]
ontime4	49175.0	Sum of GTIs [s]
ontime5	49175.0	Sum of GTIs [s]
ontime6	49172.458969831	Sum of GTIs [s]
ontime7	49175.0	Sum of GTIs [s]
ontime8	49175.0	Sum of GTIs [s]
ontime9	49175.0	Sum of GTIs [s]
l2events	763096	Number of level 2 events



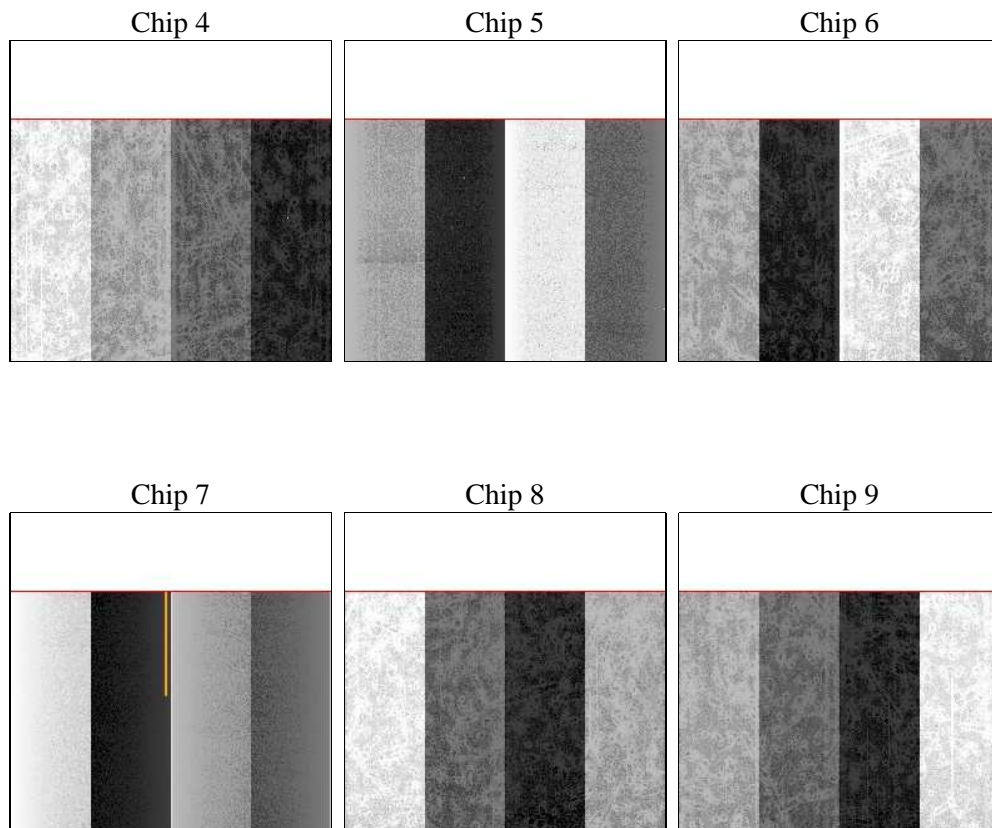
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	49000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	49175.0	Sum of GTIs [s]
caldbver	4.4.9	 	ontime4	49175.0	Sum of GTIs [s]
date	2012-04-24T22:04:24	Date and time of file creation	ontime5	49175.0	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	49172.458969831	Sum of GTIs [s]
			ontime7	49175.0	Sum of GTIs [s]
			ontime8	49175.0	Sum of GTIs [s]
			ontime9	49175.0	Sum of GTIs [s]
			l1events	2987903	Number of level 1 events

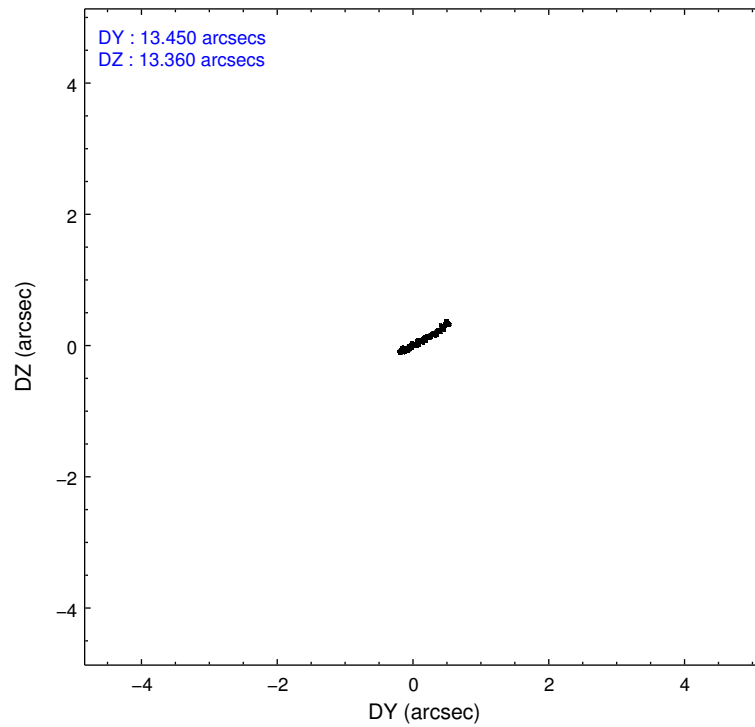
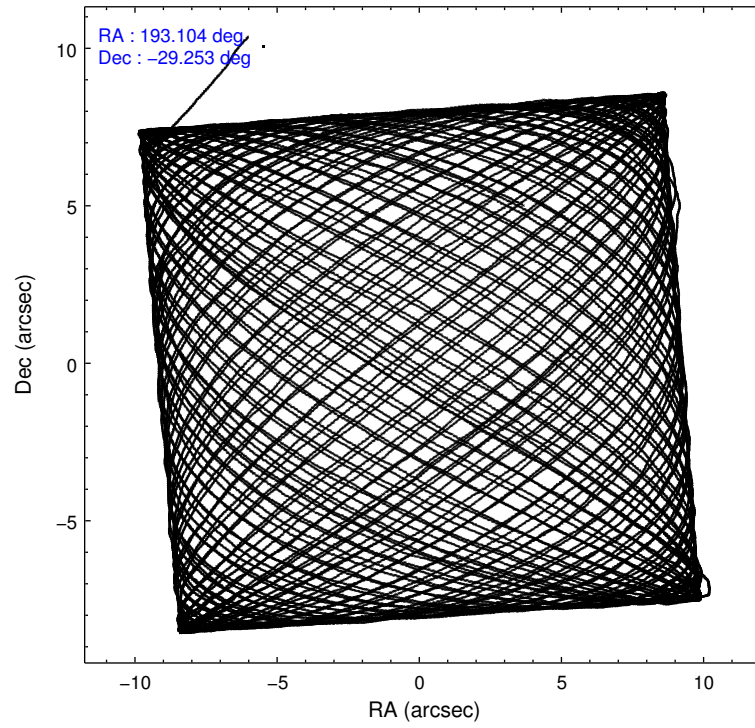
2.1.4 Events

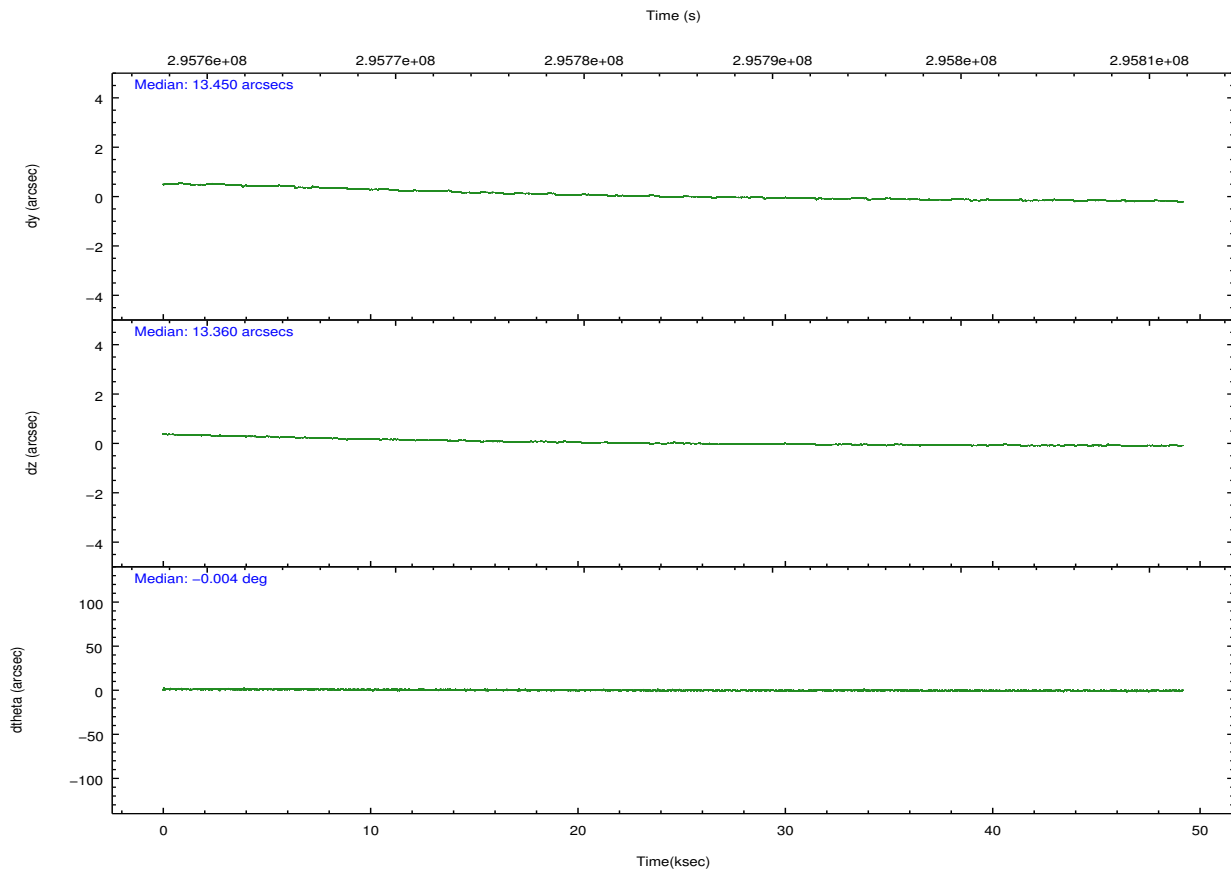
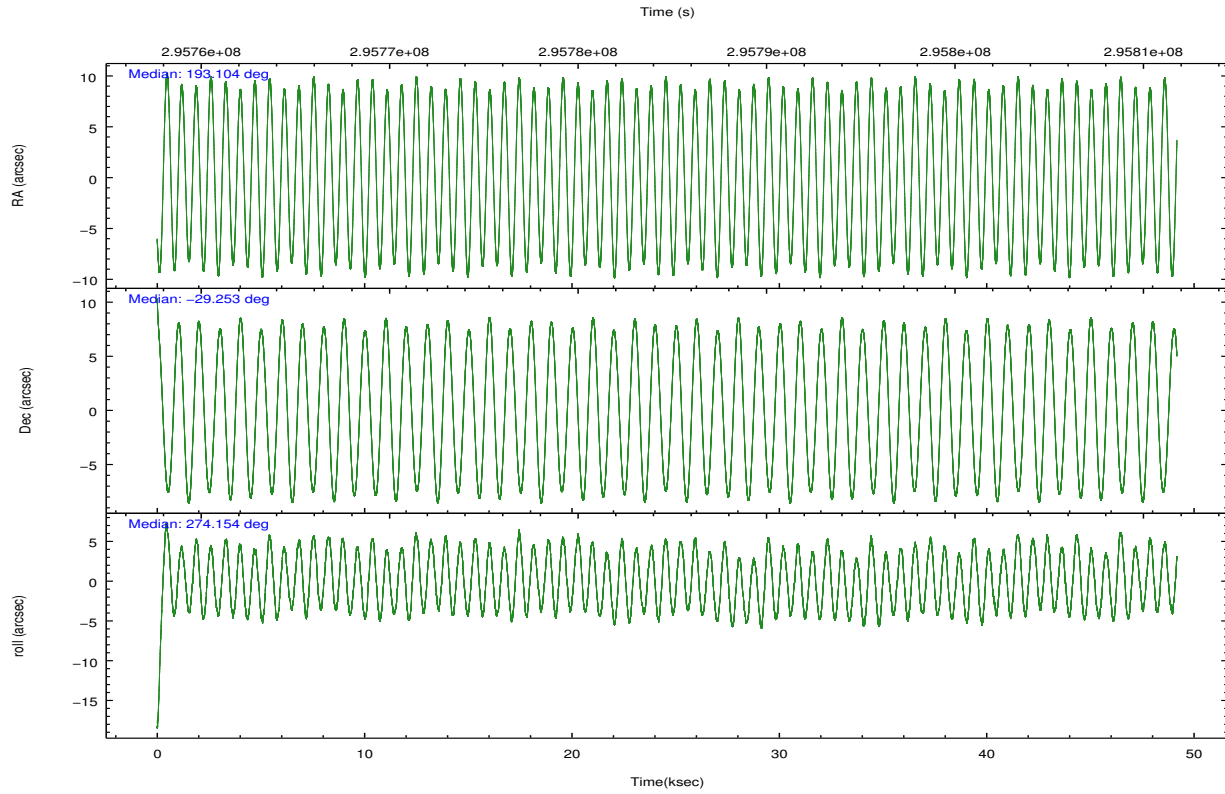
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	438721	637654	427220	576999	508203	399106	grade 0 events	41568	65378	57011	30222	55132	44033
rejected events	369651	318759	332333	309484	374103	327353		9%	10%	13%	5%	10%	11%
rejected %	84%	49%	77%	53%	73%	82%	grade 1 events	486	2996	405	922	446	547
								0%	0%	0%	0%	0%	0%
							grade 2 events	10799	91172	15289	57100	26857	9734
								2%	14%	3%	9%	5%	2%
							grade 3 events	5169	13352	6367	24838	12618	4958
								1%	2%	1%	4%	2%	1%
							grade 4 events	4825	12445	6224	24947	11628	4906
								1%	1%	1%	4%	2%	1%
							grade 5 events	16368	45444	17456	50031	22994	18459
								3%	7%	4%	8%	4%	4%
							grade 6 events	7694	140783	10793	133775	29443	9176
								1%	22%	2%	23%	5%	2%
							grade 7 events	351812	266084	313675	255164	349085	307293
								80%	41%	73%	44%	68%	76%

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	193.086136	193.1040751850912	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-29.230597	-29.25300635887431	Subarray start row	1	1
[deg] Pointing Roll	273.992826	274.1582147407169	Subarray row count	774	774
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	2.5
[mm] SIM translation stage pos	-187.132523	-187.127916318603			
[mm] SIM translation stage offset	-3	-3.004606264404799			
[s] Observation start time (MET)	295760302.184000	295758823.06447			
Observation start date	2007-05-17T03:37:17	2007-05-17T03:13:43			
[s] Observation end time (MET)	295809302.184000	295810293.44193			
Observation end date	2007-05-17T17:13:57	2007-05-17T17:31:33			
Read mode	TIMED	TIMED			

2.3 Aspect





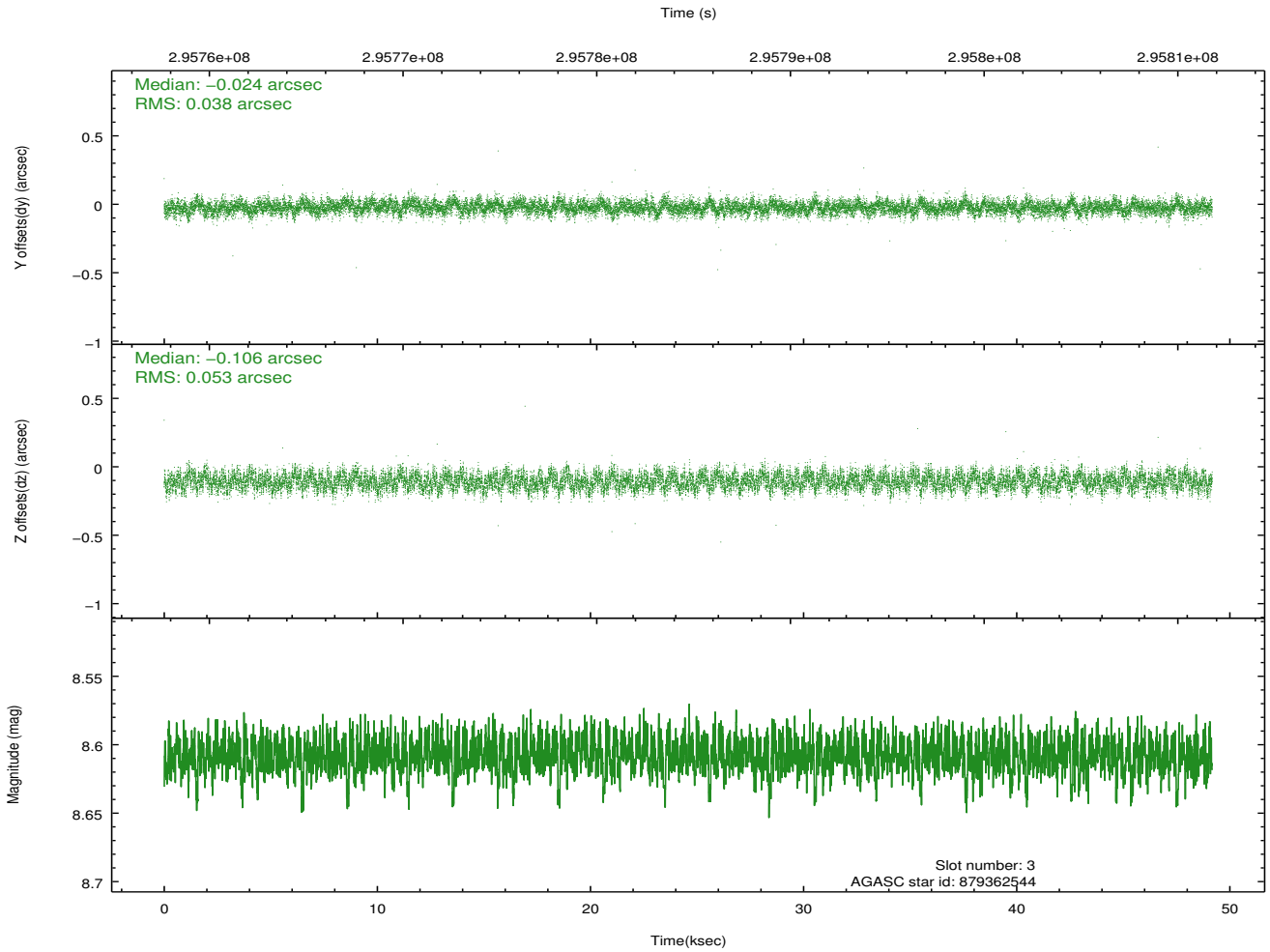
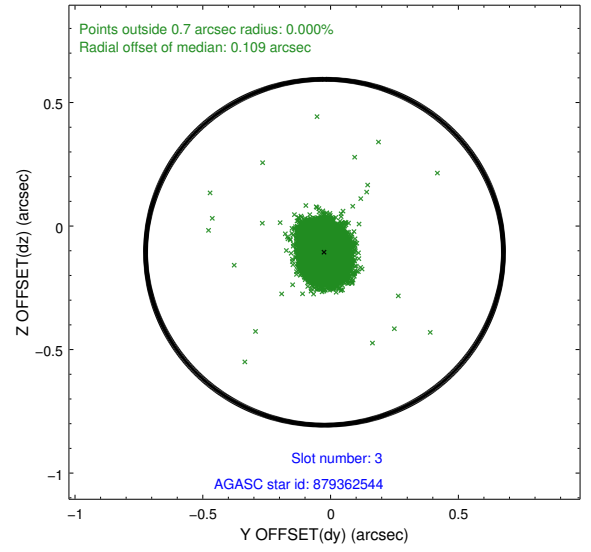
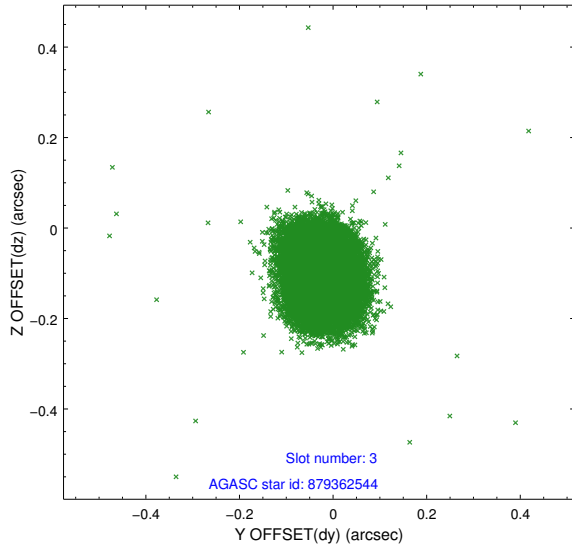
Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	11995	-0.103	-0.075	0.007	0.013	0.000000	0.000000	-766.34	-1796.86
1	FID	ACIS-S-4	7.19	11992	0.244	0.070	0.011	0.019	0.000000	0.000000	2147.28	111.79
2	FID	ACIS-S-5	7.23	11993	-0.173	0.014	0.010	0.017	0.000000	0.000000	-1819.28	105.37
3	GUIDE	879362544	8.61	23971	-0.024	-0.106	0.069	0.110	193.151674	-29.493997	960.66	138.89
4	GUIDE	879362896	8.89	23957	-0.084	0.171	0.106	0.165	193.646324	-29.438064	871.77	1700.15
5	GUIDE	879363368	8.94	23976	-0.098	0.104	0.073	0.119	193.355088	-29.318430	375.46	820.33
6	GUIDE	879365872	8.48	23981	0.372	0.049	0.066	0.105	193.169843	-28.709125	-1853.54	394.53
7	GUIDE	877662224	8.67	23976	-0.167	-0.214	0.087	0.138	192.294404	-28.855188	-1513.46	-2396.94

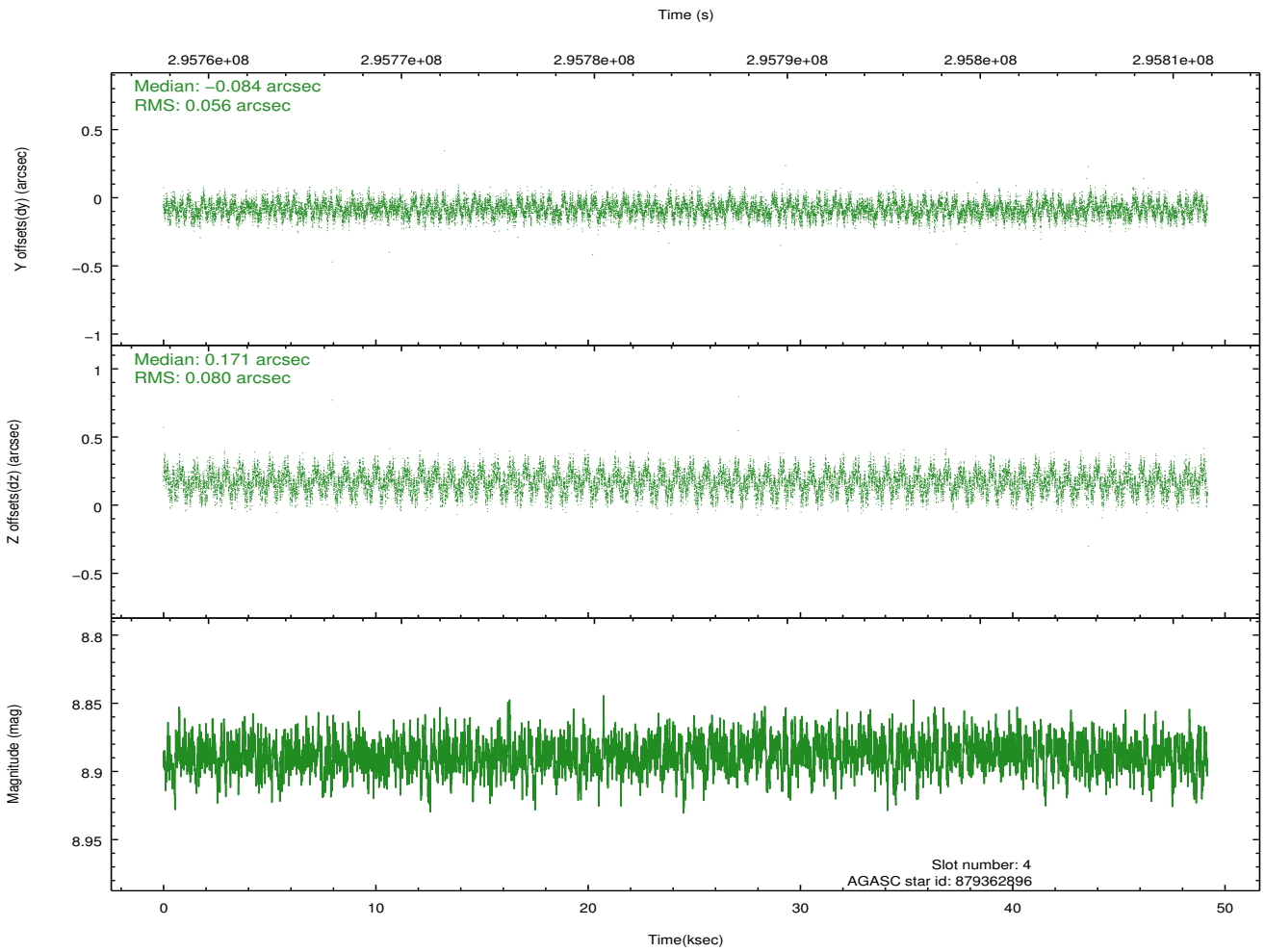
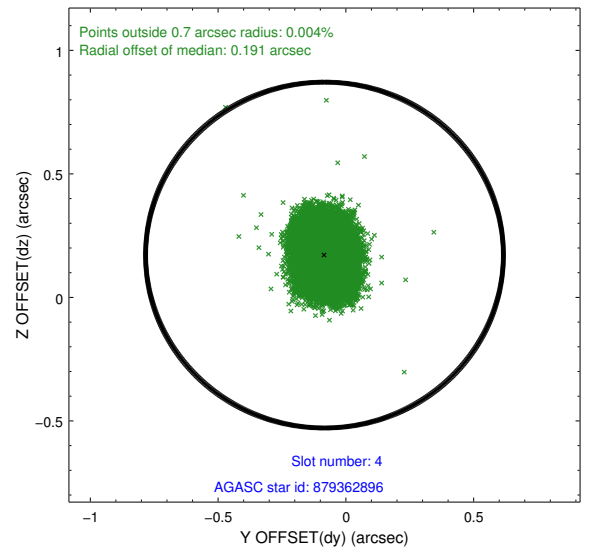
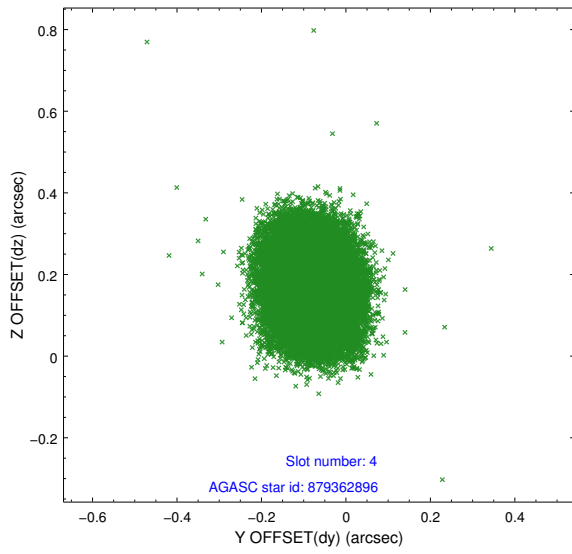
∞

2.4 Star Slots

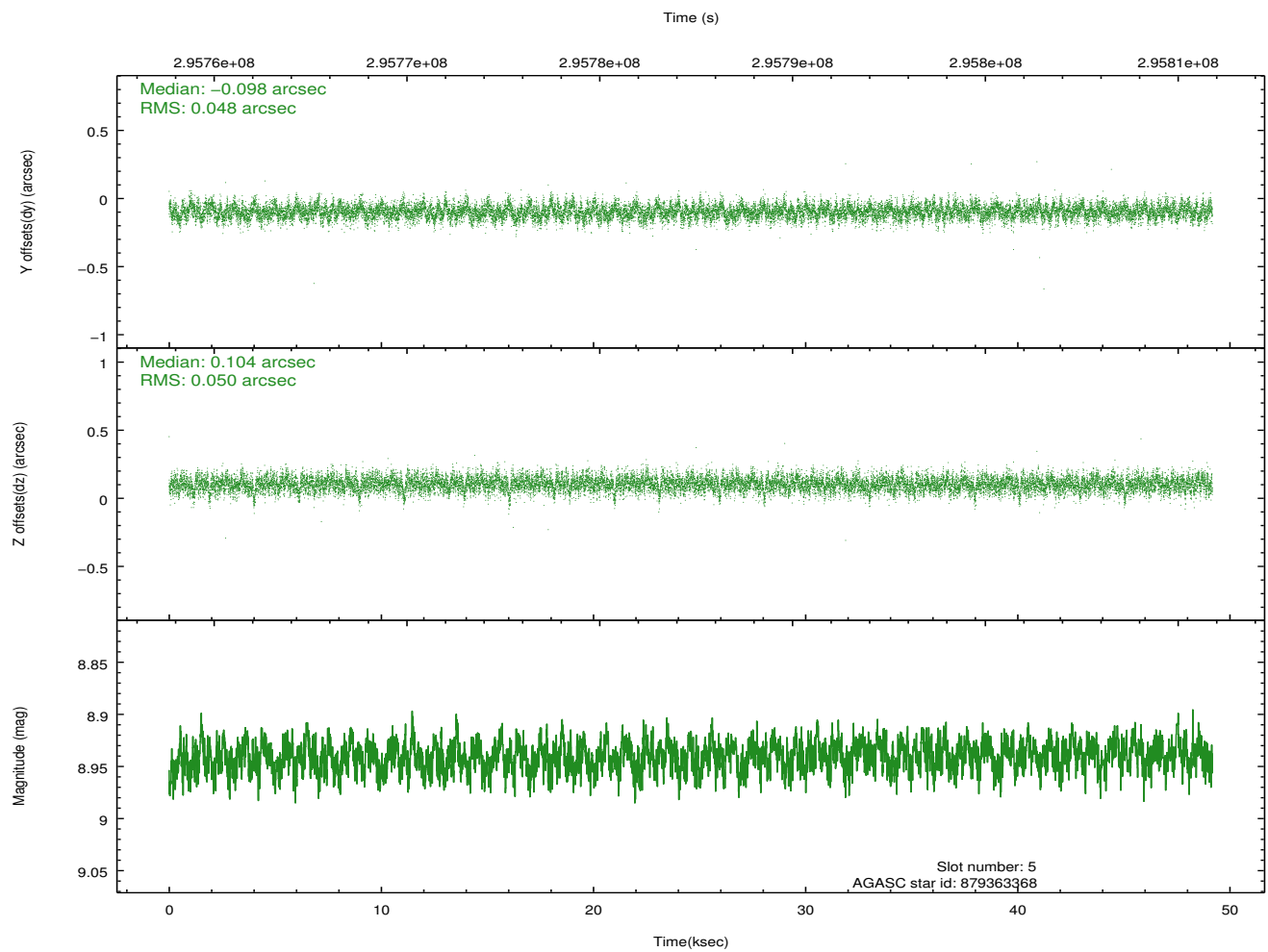
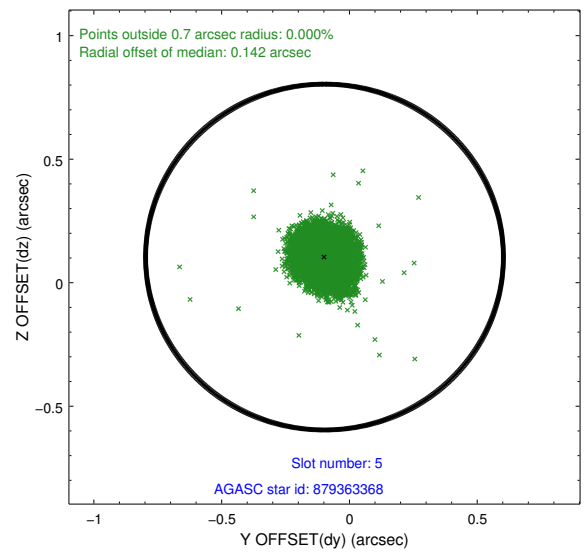
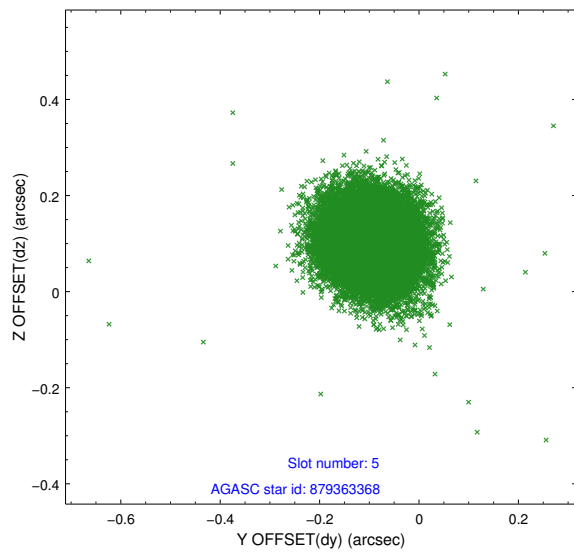
2.4.1 Slot 3



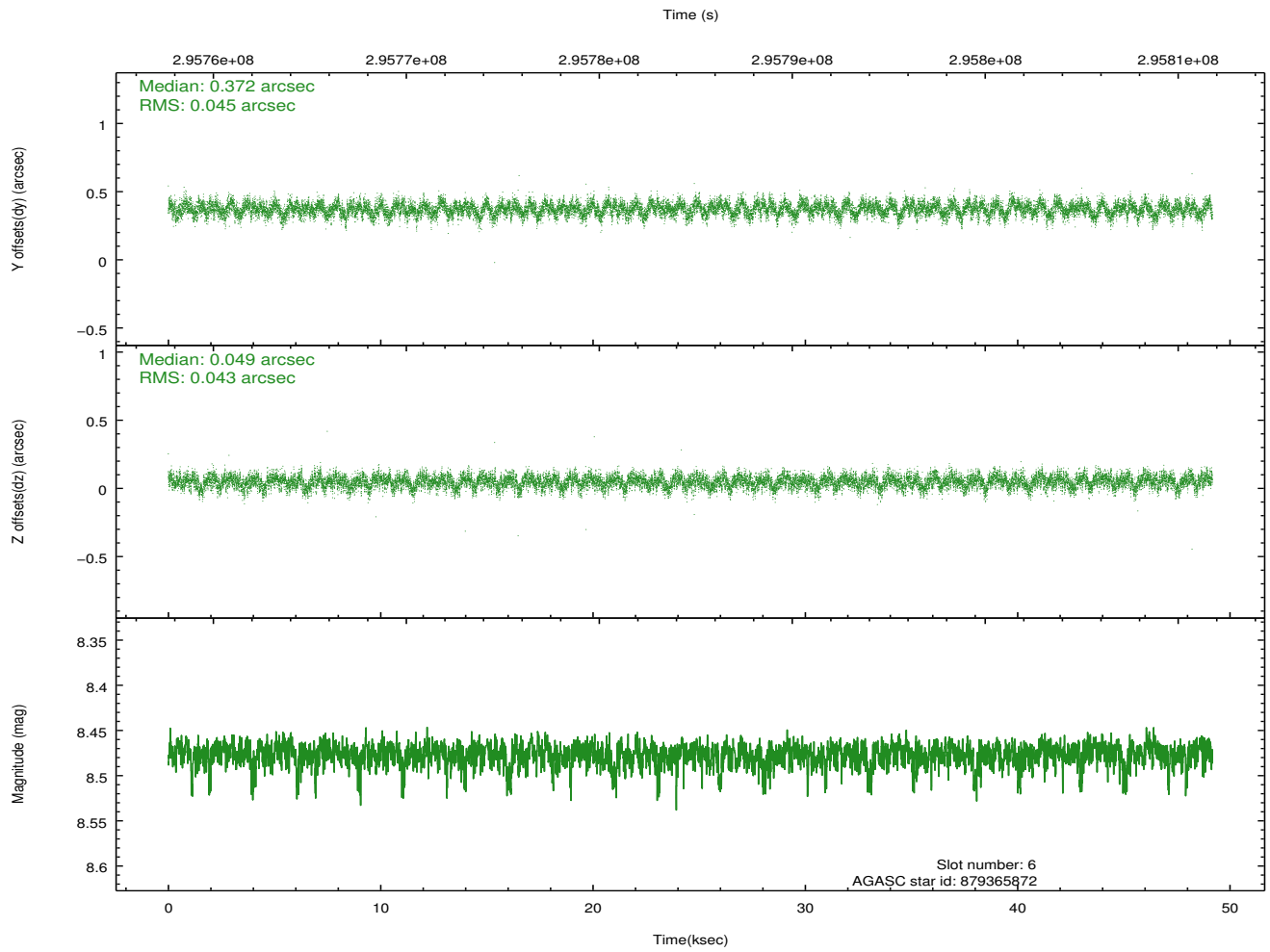
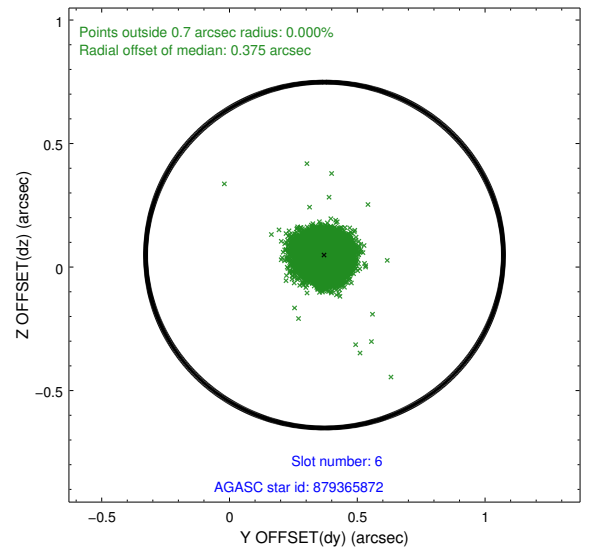
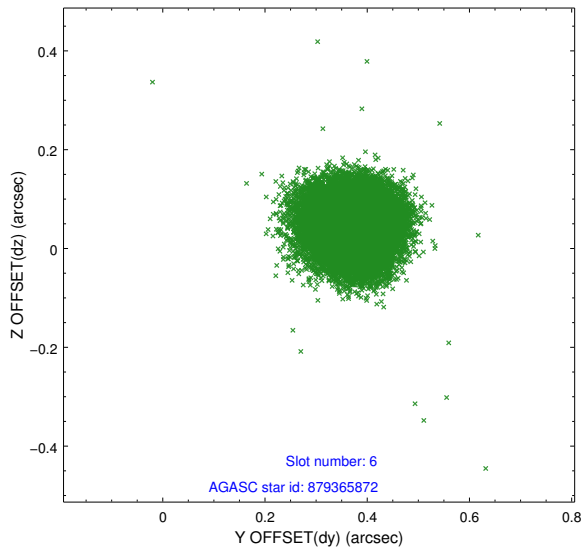
2.4.2 Slot 4



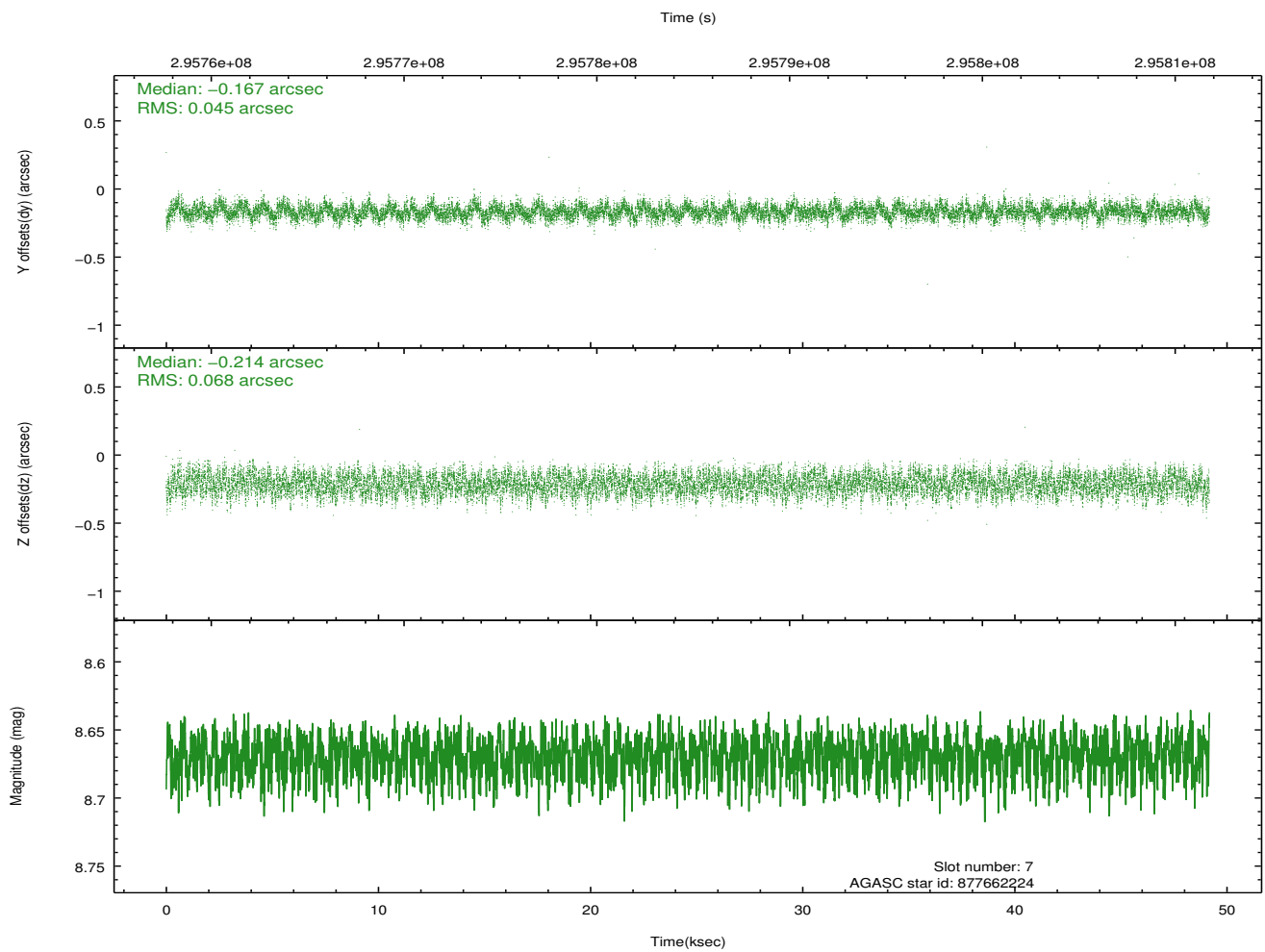
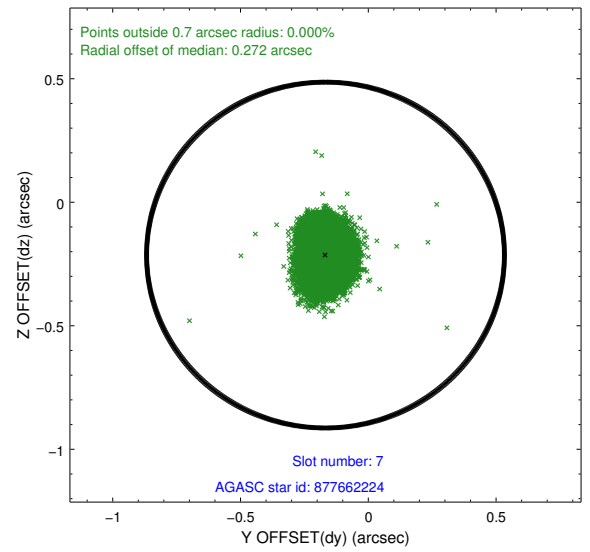
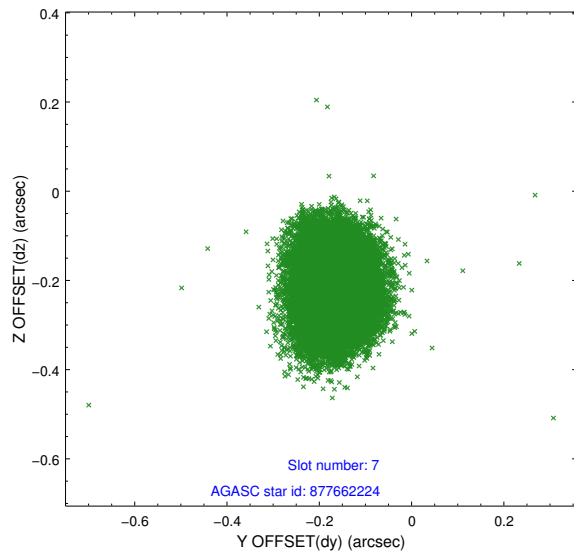
2.4.3 Slot 5



2.4.4 Slot 6

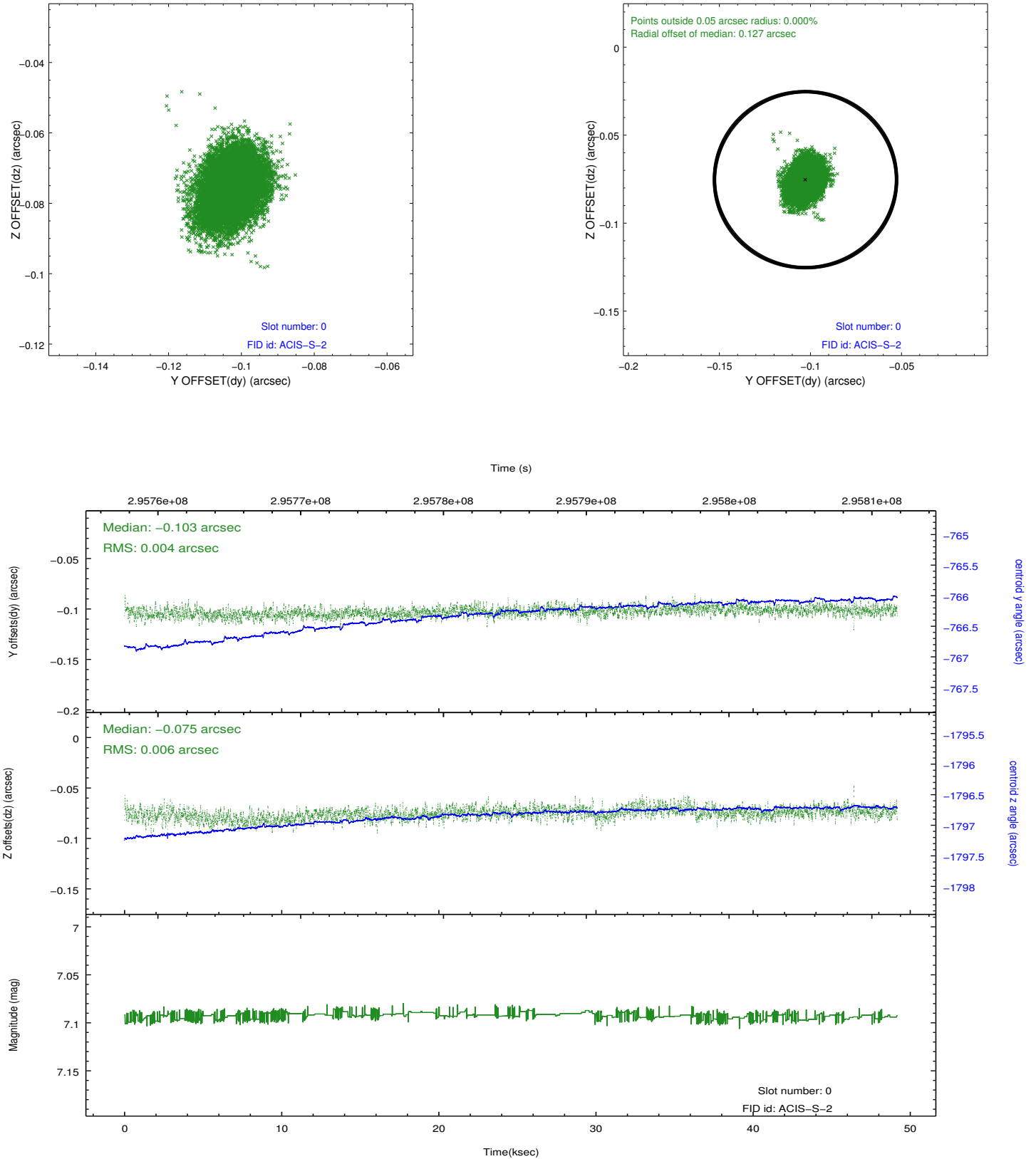


2.4.5 Slot 7

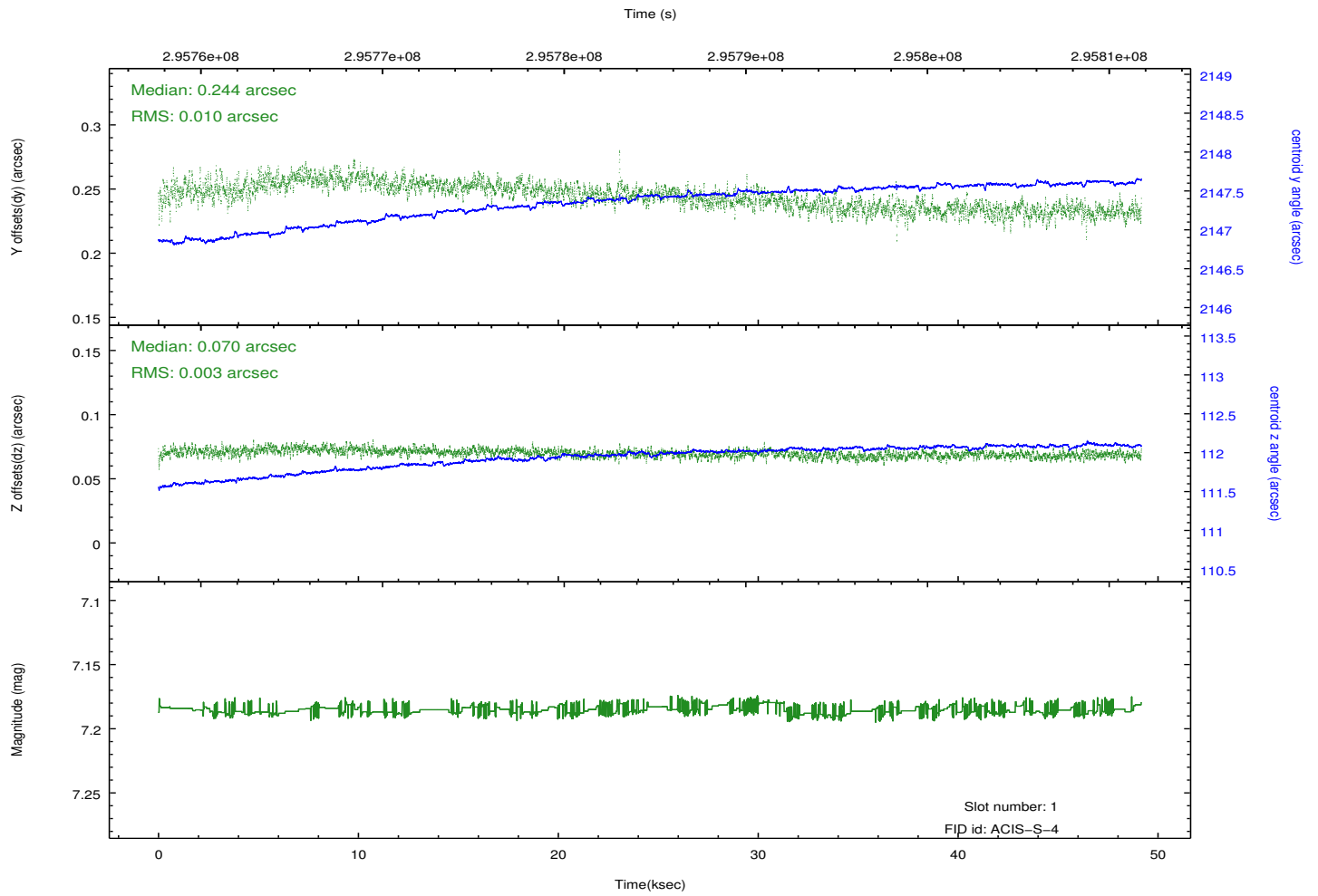
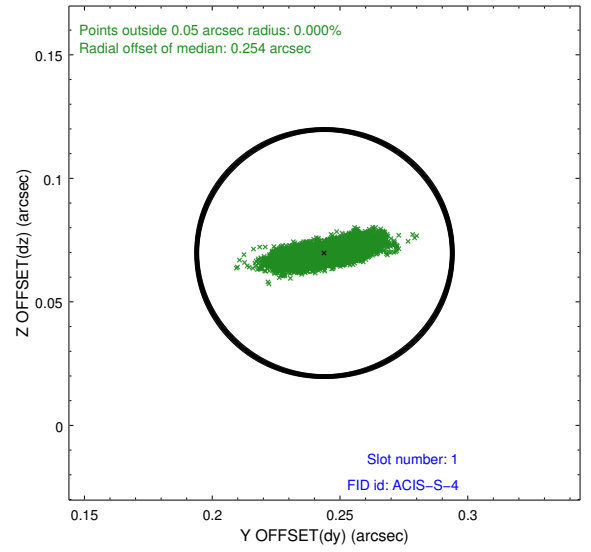
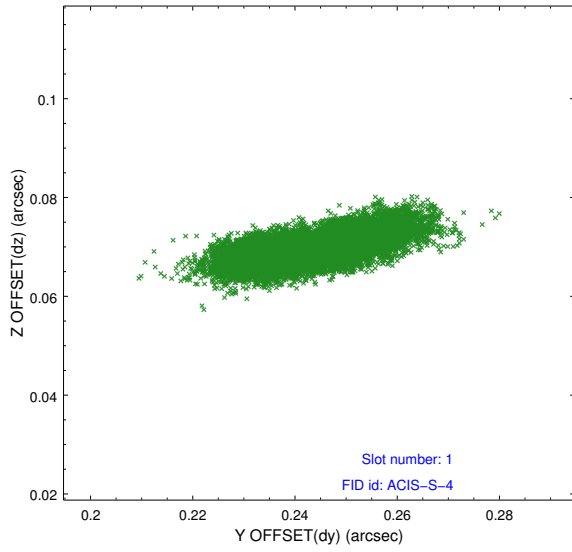


2.5 FID Slots

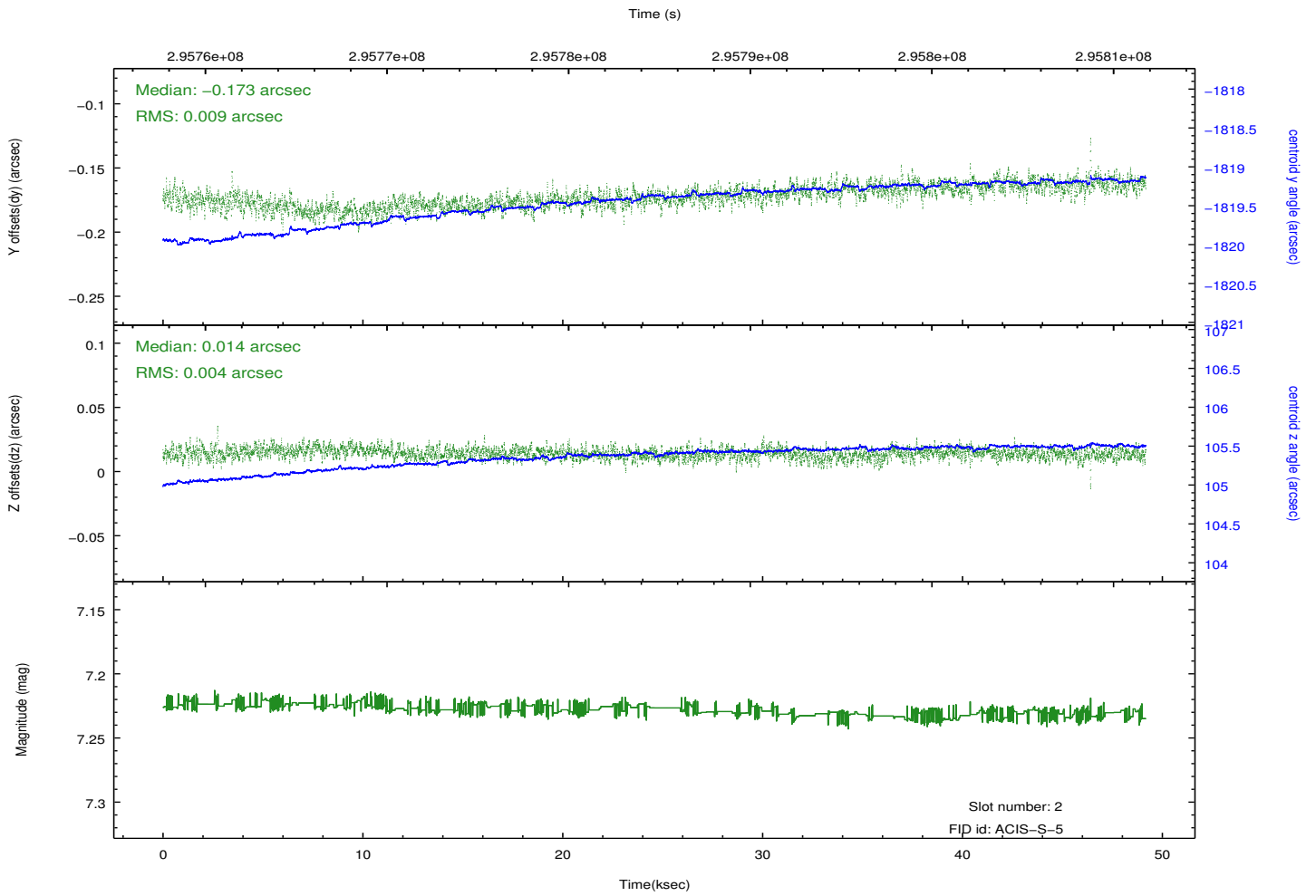
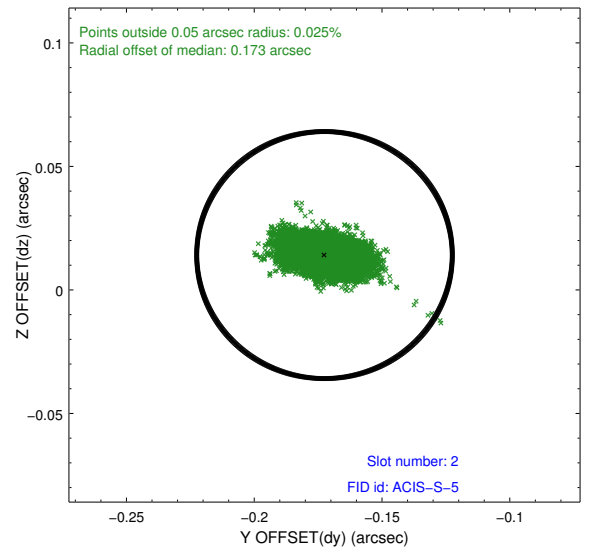
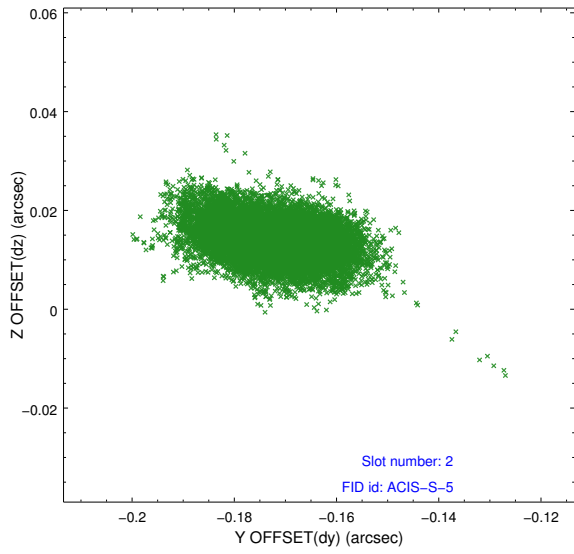
2.5.1 Slot 0



2.5.2 Slot 1

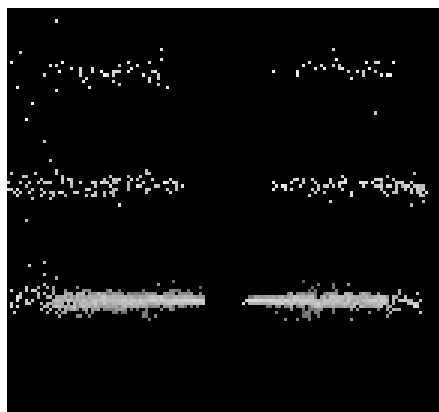


2.5.3 Slot 2

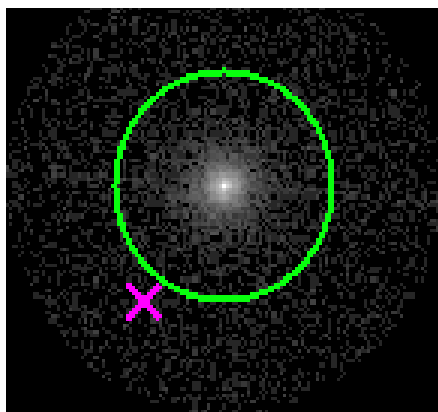


3 Gratings

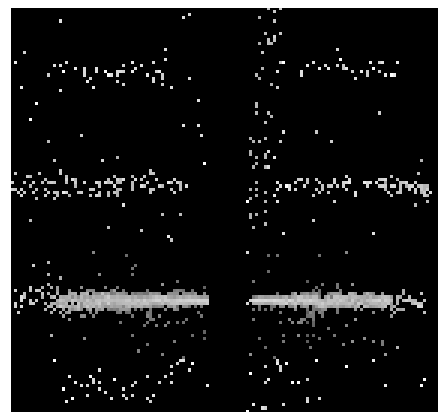
3.1 HEG Arm



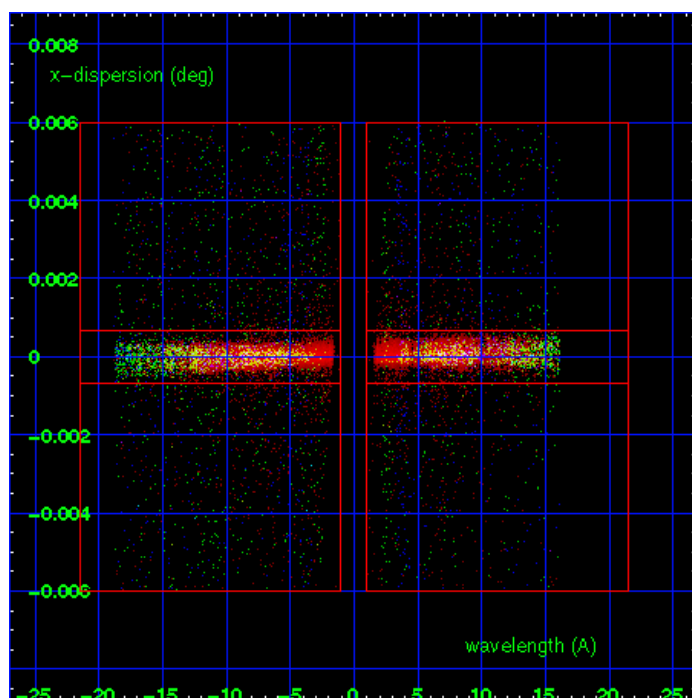
HEG Order Sort 123



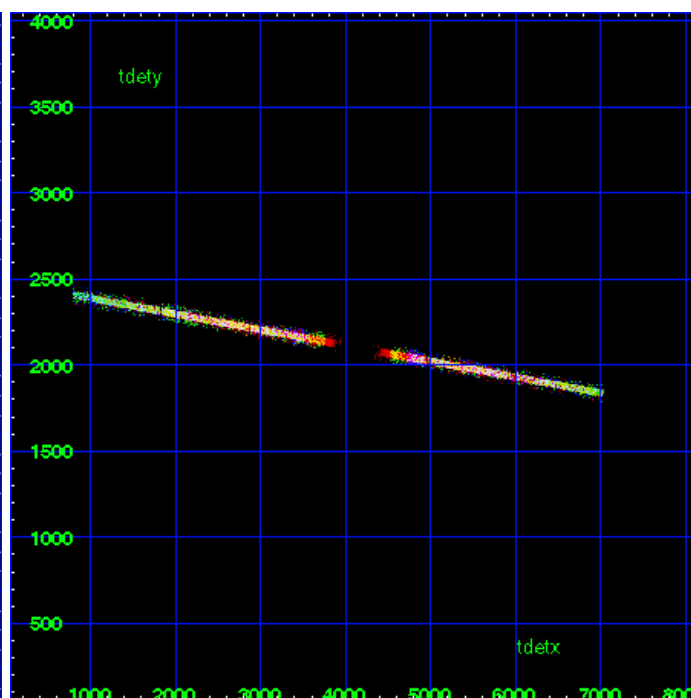
HEG Zero Order



HEG Order Sort ALL

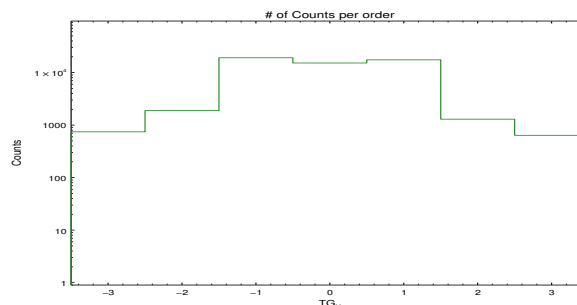


Spot Image HEG

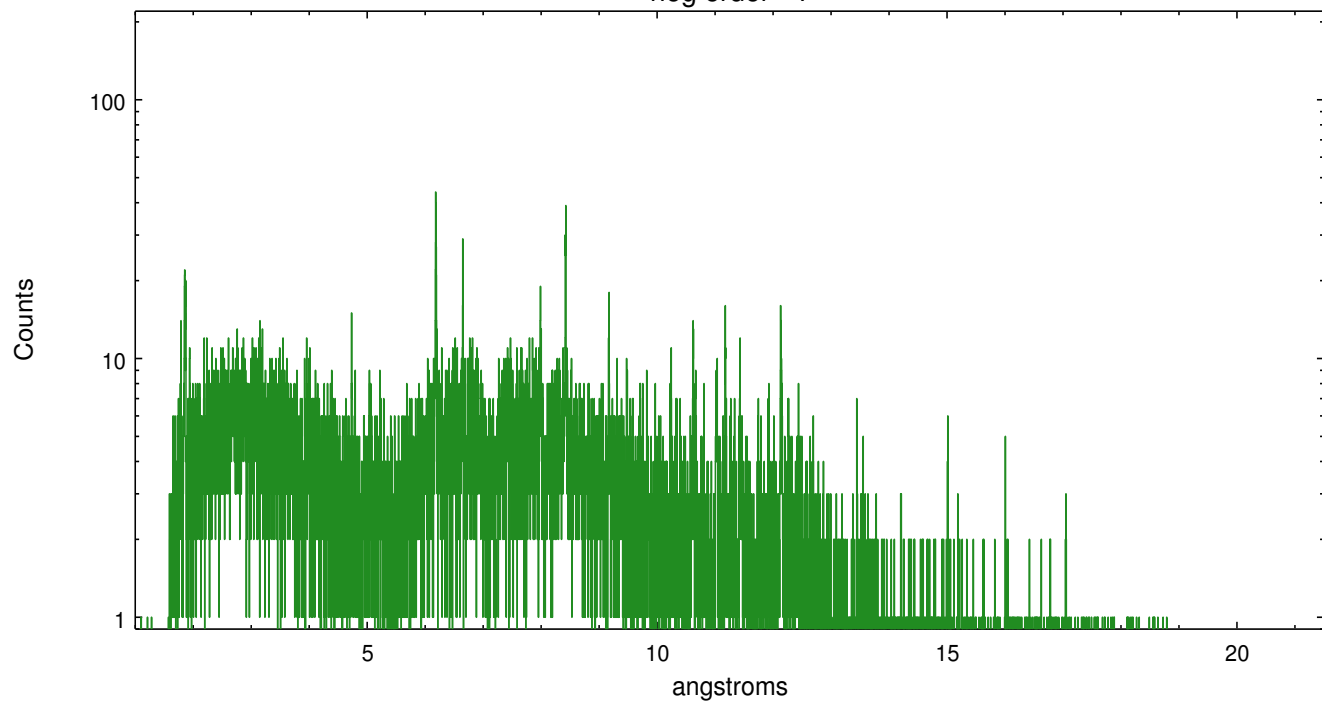


Full Detector HEG

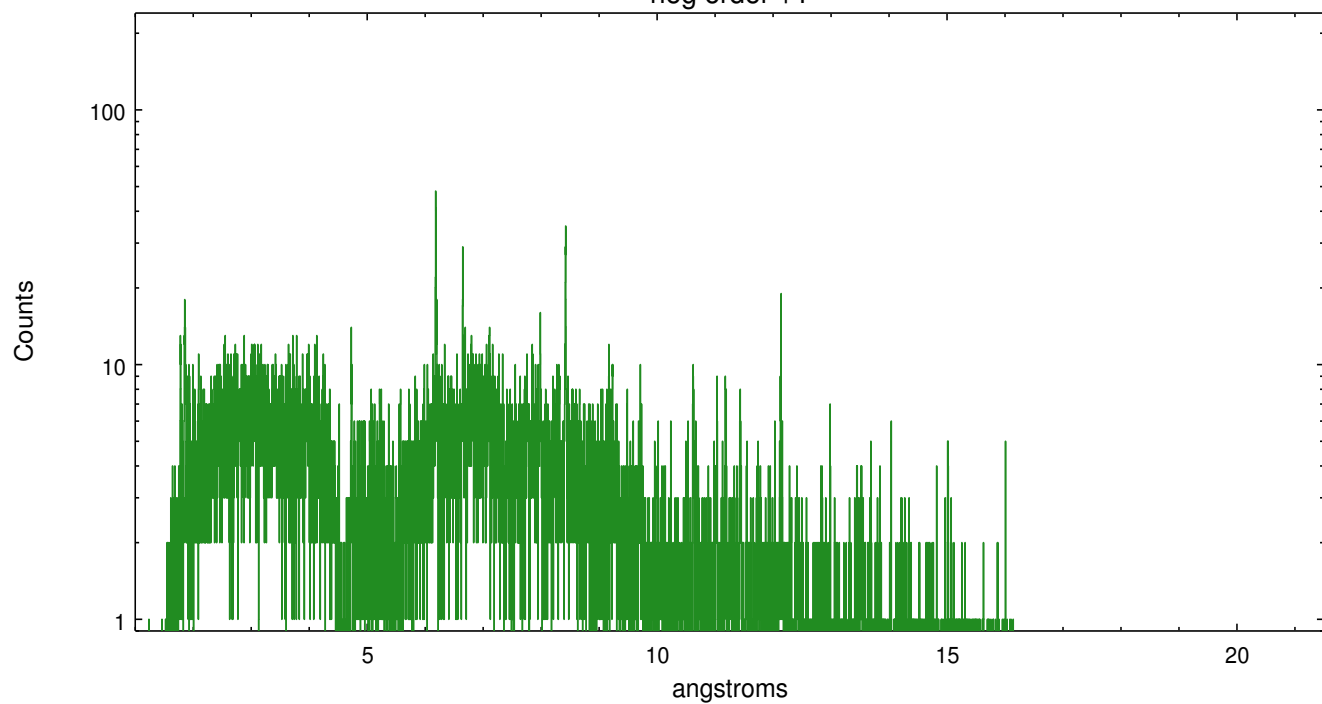
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	745	1889	19178	15235	17490	1297	639



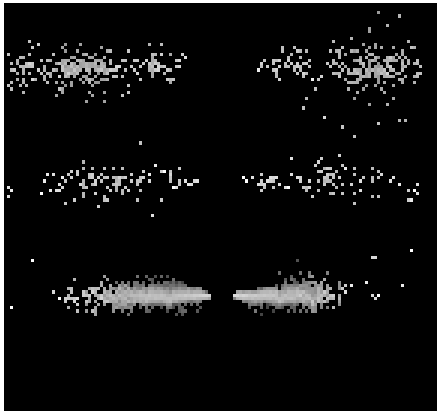
heg order -1



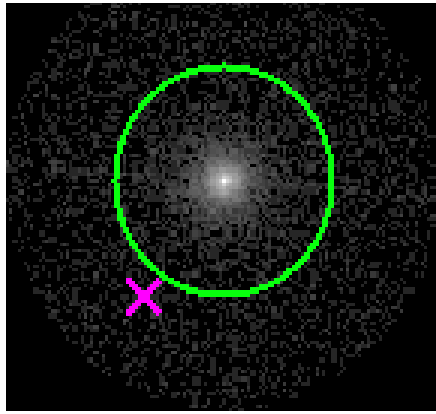
heg order +1



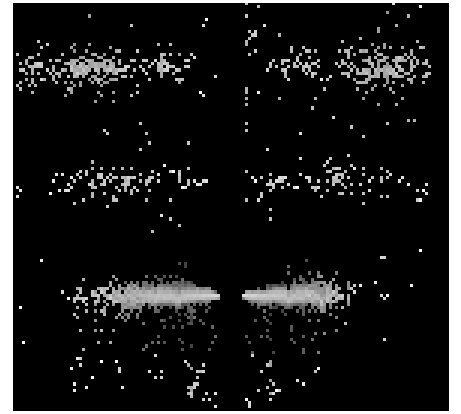
3.2 MEG Arm



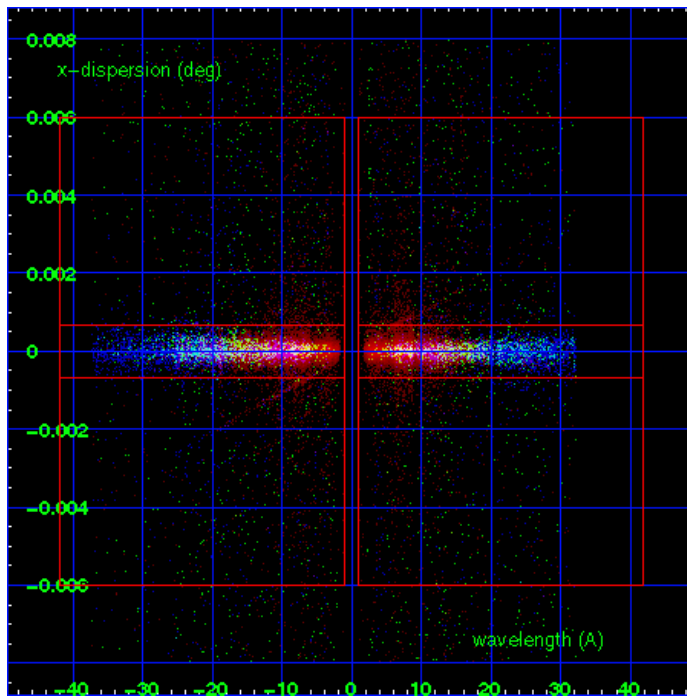
MEG Order Sort 123



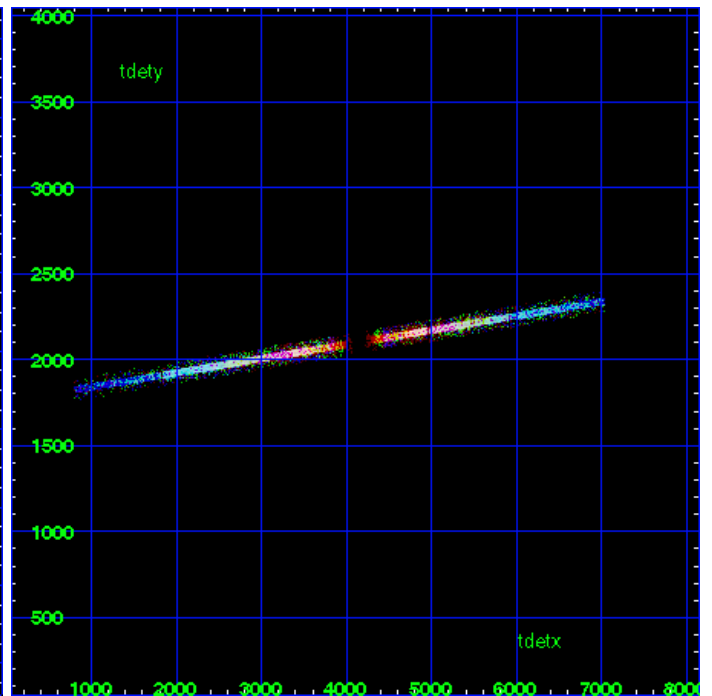
MEG Zero Order



MEG Order Sort ALL

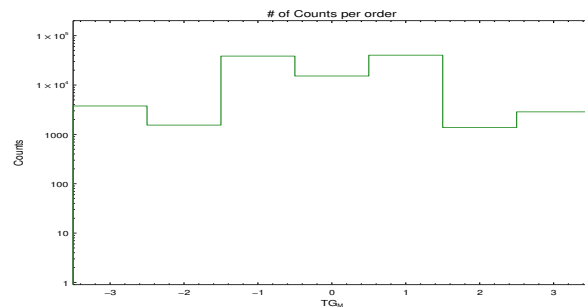


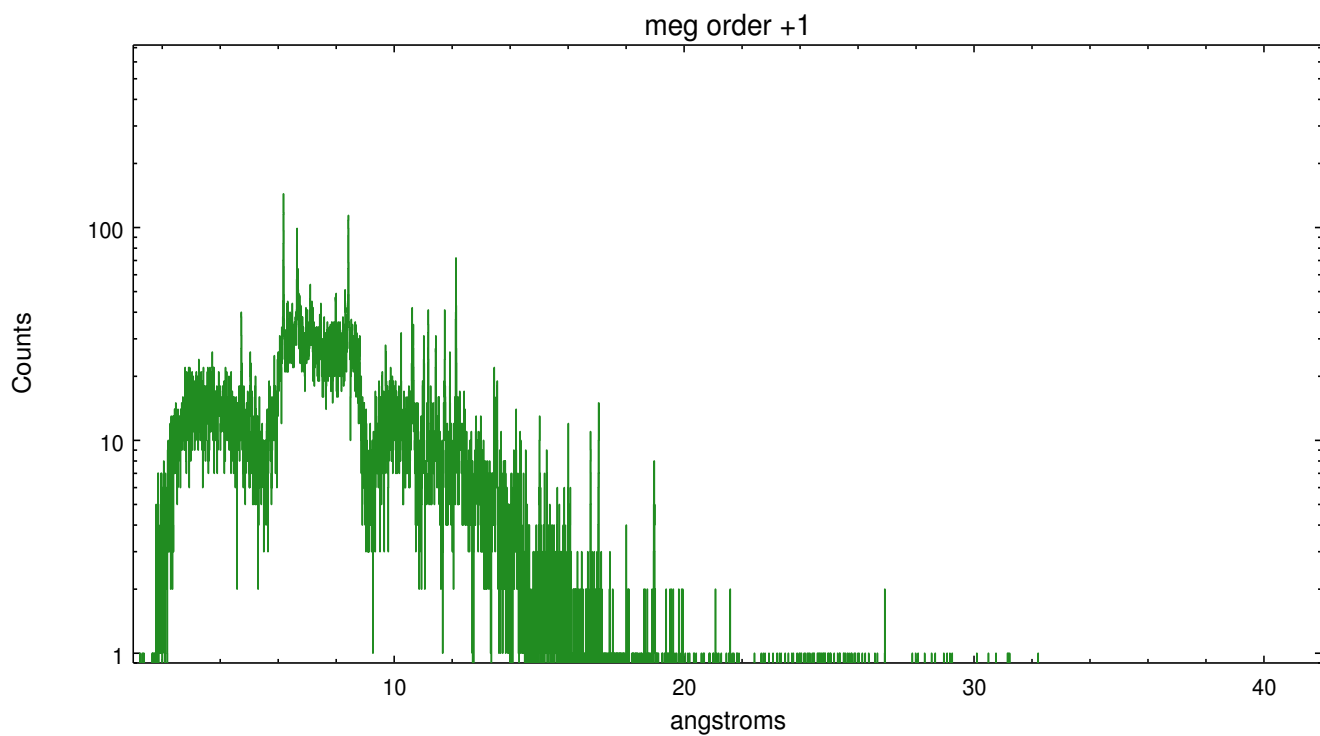
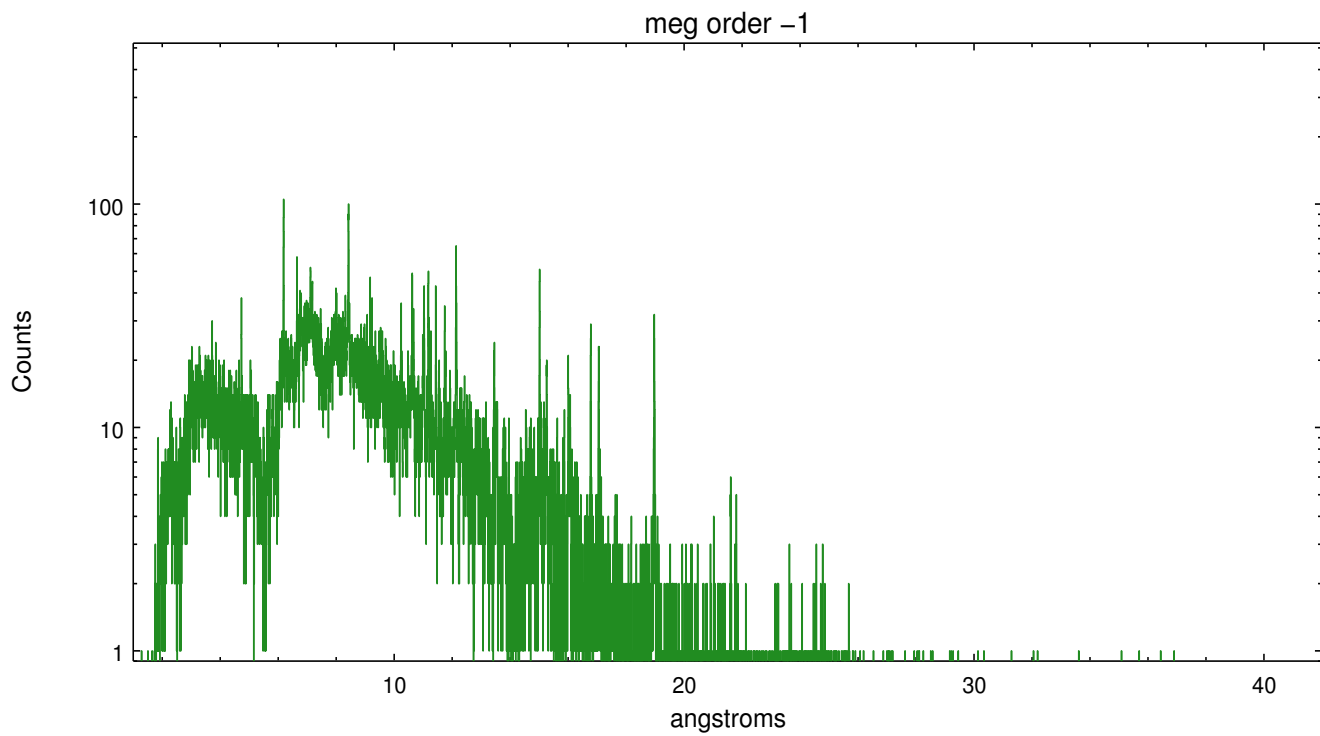
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	3762	1541	38553	15235	40247	1372	2860





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.04.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	49.175

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=4118.22, y=4127.11) 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.