

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 4375 - L2 Version 4
Chandra X-Ray Center

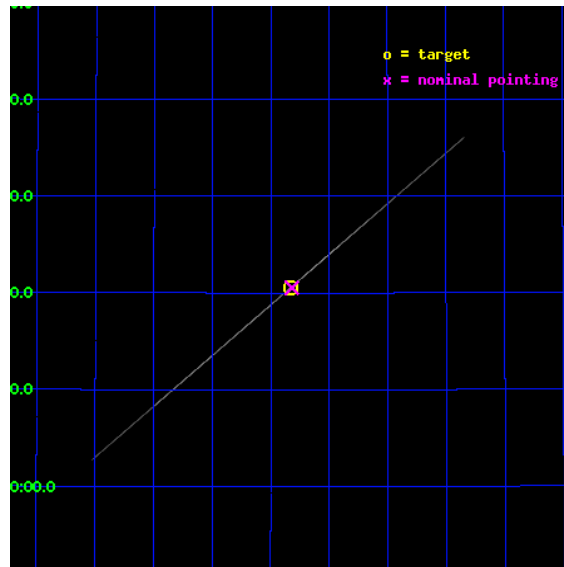
L2 Processing Date : Oct 17 2012

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1 Front

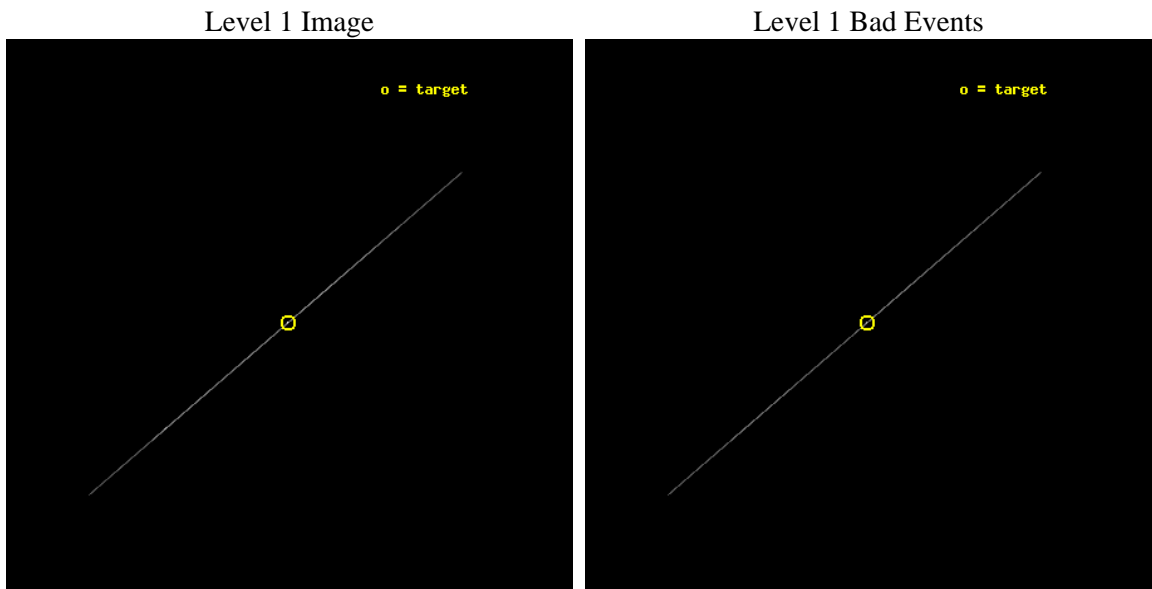
seq_num	400317	Sequence number
obs_id	4375	Observation id
title	HIGH RESOLUTION SPECTROSCOPY OF HERCULES X-1	Proposal title
observer	Dr. Daniel Scott	Principal investigator
object	HER X-1 SHORT HI	Source name
ra_targ	254.4575	Observer's specified target RA [deg]
dec_targ	35.342472	Observer's specified target Dec [deg]
ra_nom	254.45475477302	Nominal RA [deg]
dec_nom	35.342165511567	Nominal Dec [deg]
roll_nom	319.41883419416	Nominal Roll [deg]
revision	4	Processing version of data
ontime	20360.25	Sum of GTIs [s]
livetime	20280.717773438	Livetime [s]
ontime4	20360.25	Sum of GTIs [s]
ontime5	20358.791286558	Sum of GTIs [s]
ontime6	20360.25	Sum of GTIs [s]
ontime7	20360.25	Sum of GTIs [s]
ontime8	20360.25	Sum of GTIs [s]
ontime9	20360.25	Sum of GTIs [s]
l2events	646651	Number of level 2 events



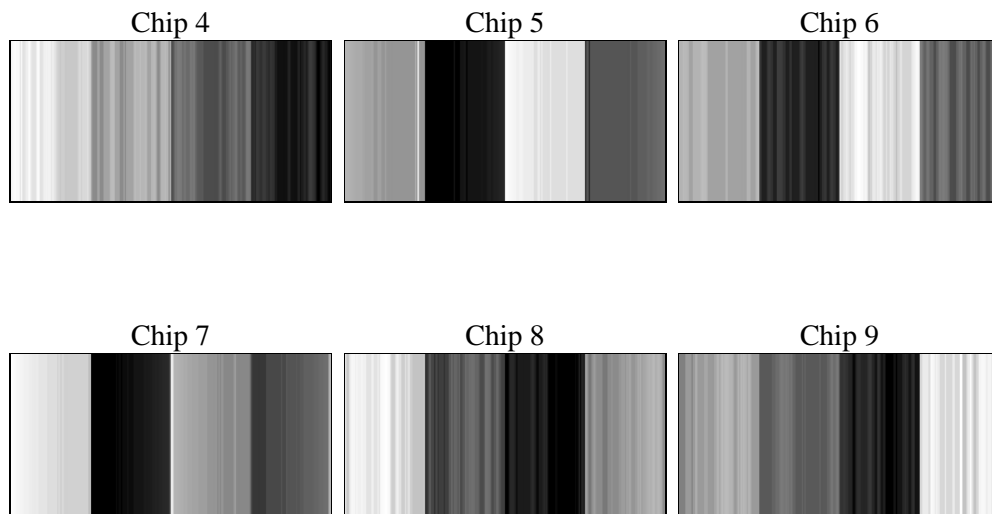
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	20360.25	Sum of GTIs [s]
caldsver	4.5.2	 	ontime4	20360.25	Sum of GTIs [s]
date	2012-10-17T00:15:47	Date and time of file creation	ontime5	20358.791286558	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	20360.25	Sum of GTIs [s]
			ontime7	20360.25	Sum of GTIs [s]
			ontime8	20360.25	Sum of GTIs [s]
			ontime9	20360.25	Sum of GTIs [s]
			l1events	793608	Number of level 1 events

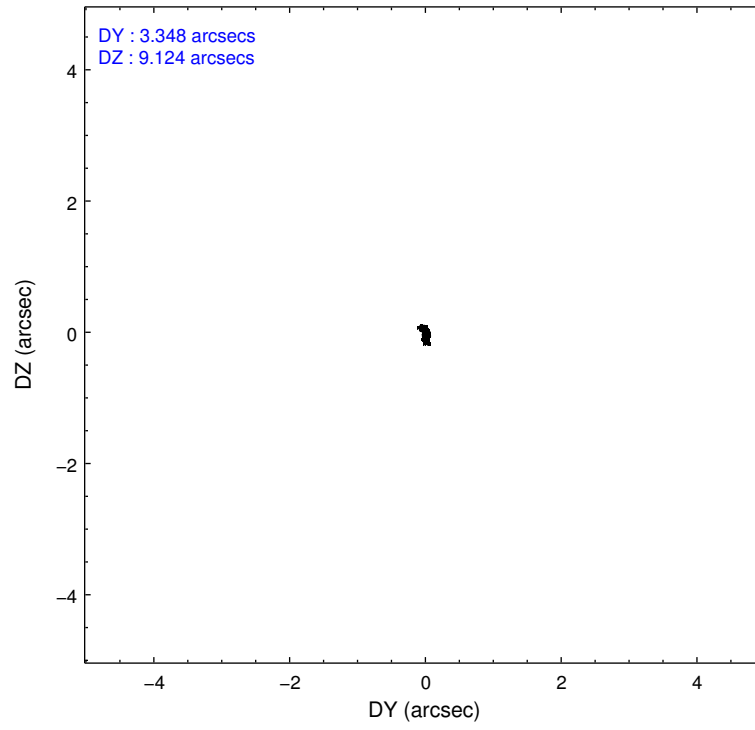
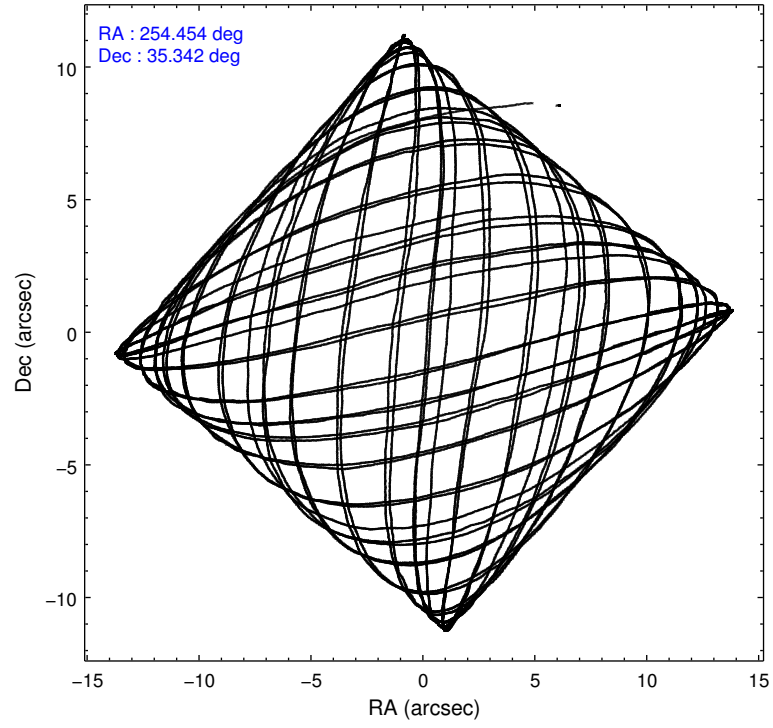
2.1.4 Events

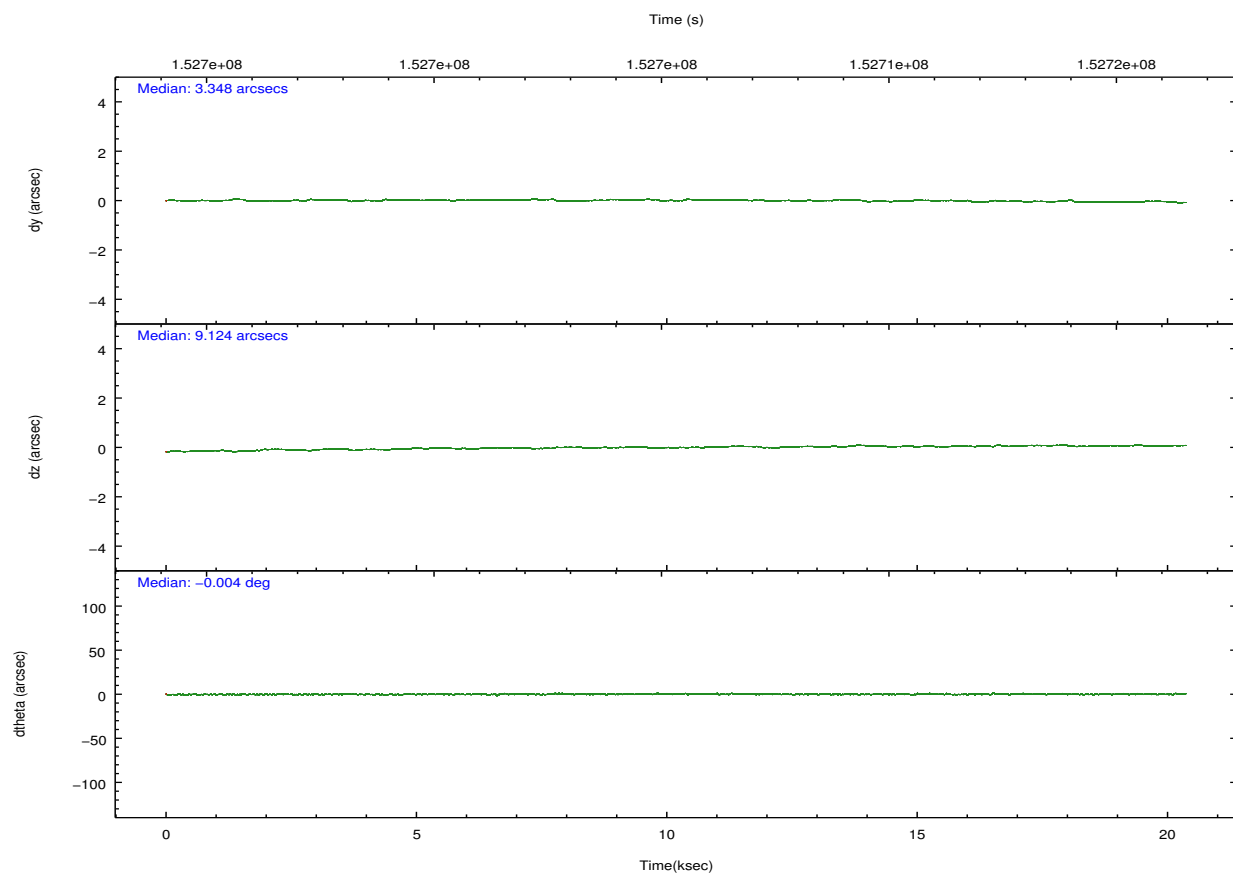
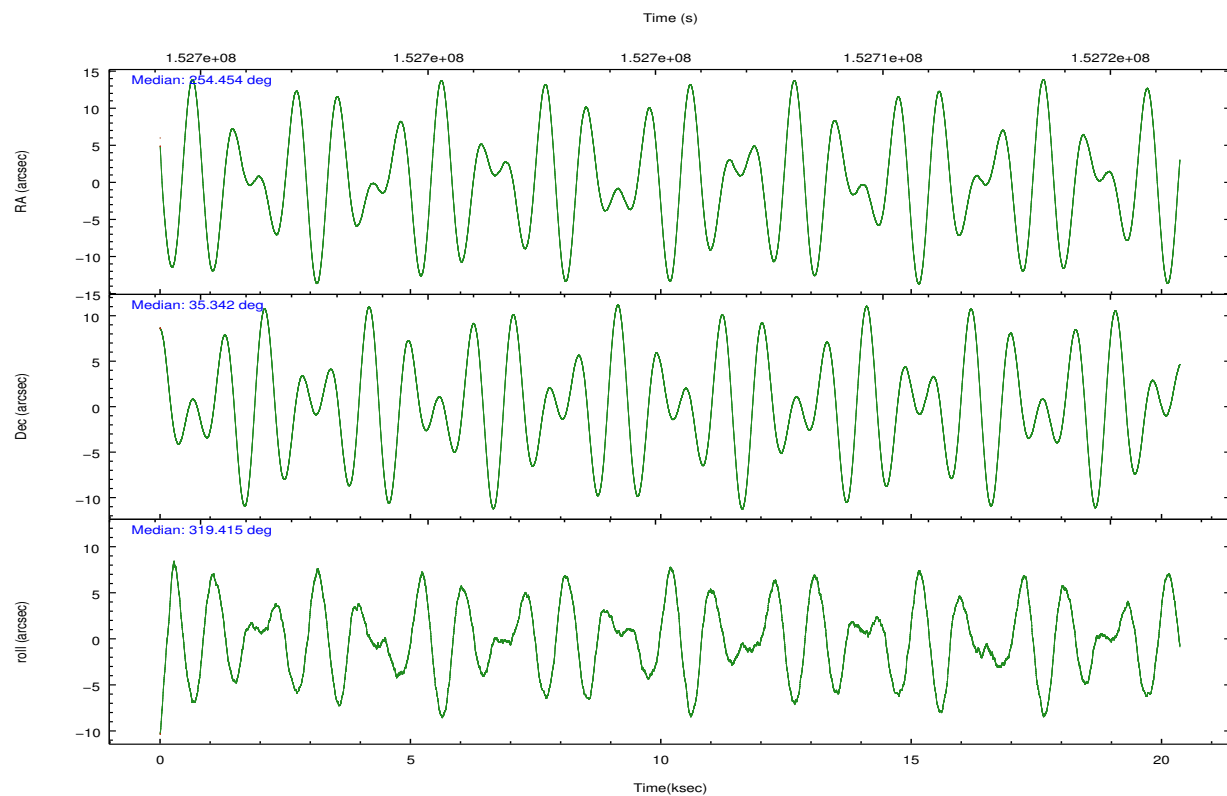
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	33067	148109	107125	374102	93984	37221	grade 0 events	5327	34762	12960	80590	28655	7150
rejected events	5566	15521	6960	22868	9596	6479		16%	23%	12%	21%	30%	19%
rejected %	16%	10%	6%	6%	10%	17%	grade 1 events	120	177	122	1046	239	120
								0%	0%	0%	0%	0%	0%
							grade 2 events	11630	39585	68902	89551	30994	12307
								35%	26%	64%	23%	32%	33%
							grade 3 events	3238	4493	3335	34919	6884	3016
								9%	3%	3%	9%	7%	8%
							grade 4 events	3419	4401	3354	34366	6574	3311
								10%	2%	3%	9%	6%	8%
							grade 5 events	4673	11544	5564	17615	7281	5463
								14%	7%	5%	4%	7%	14%
							grade 6 events	4660	53147	12888	116015	13357	5854
								14%	35%	12%	31%	14%	15%
							grade 7 events	0	0	0	0	0	0
								0%	0%	0%	0%	0%	0%

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_FAINT	CC33_FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	254.421892	254.4547547730186	Subarray requested	NONE	NONE
[deg] Pointing Dec	35.346810	35.34216551156698	Alternating exposures requested	N	N
[deg] Pointing Roll	319.281224	319.4188341941614	[s] Primary exposure time	0.000000	0
[s] Window start time (MET)	152537104.184000	152537104.184000			
[s] Window stop time (MET)	153164284.184000	153164284.184000			
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-186.132523	-186.1397904050899			
[mm] SIM translation stage offset	-4	-3.992732177917873			
Phase constraints	Y	Y			
[d] Phase period	34.853430	34.853430			
[d] Phase epoch (MJD)	52489.316000	52489.316000			
Phase start	0.600000	0.600000			
Phase end	0.700000	0.700000			
Phase start error	0.001000	0.001000			
Phase end error	0.001000	0.001000			
[s] Observation start time (MET)	152695504.184000	152694454.44337			
Observation start date	2002-11-03T07:24:00	2002-11-03T07:07:34			
[s] Observation end time (MET)	152715504.184000	152715746.76926			

2.3 Aspect



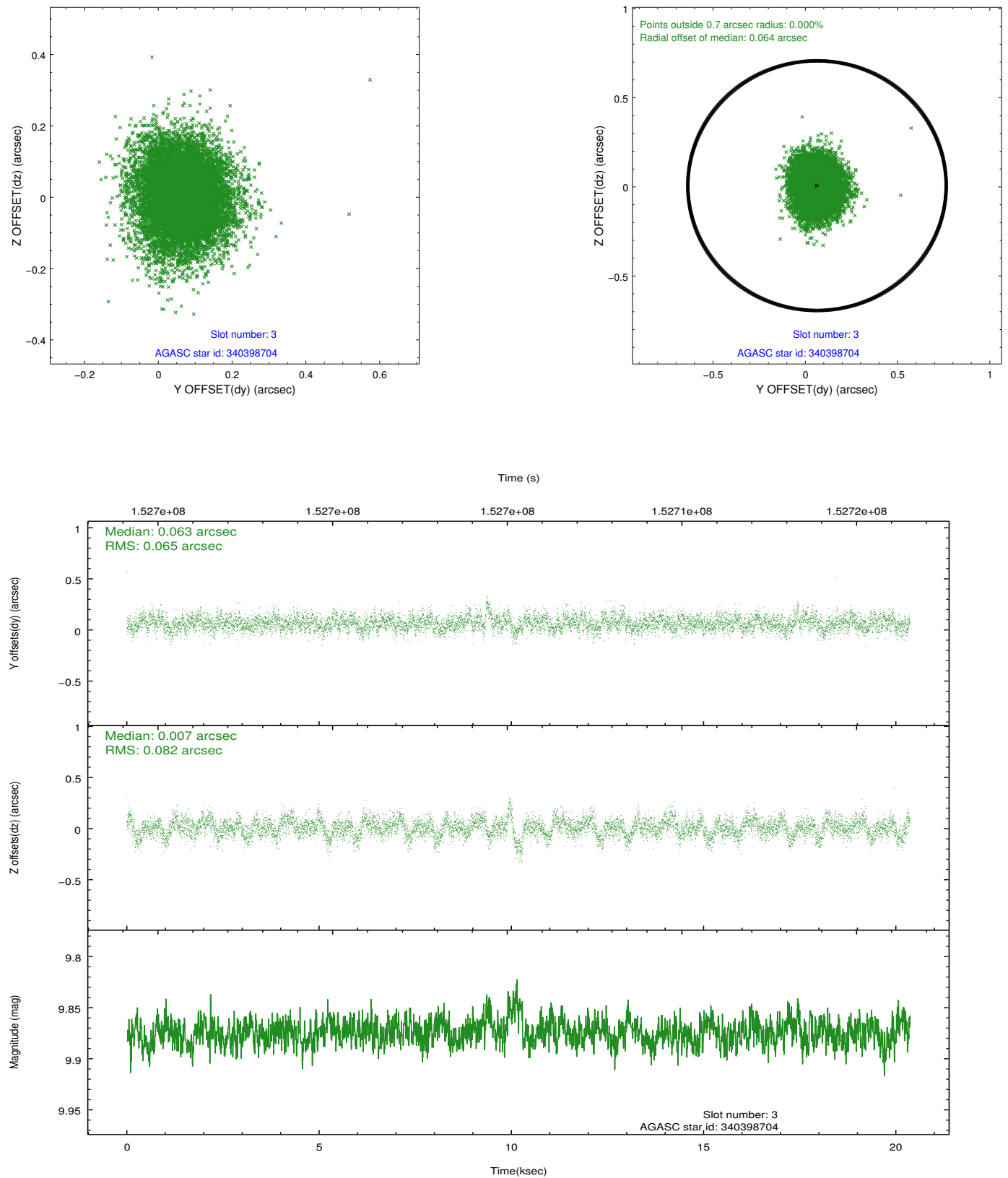


Slot Statistics

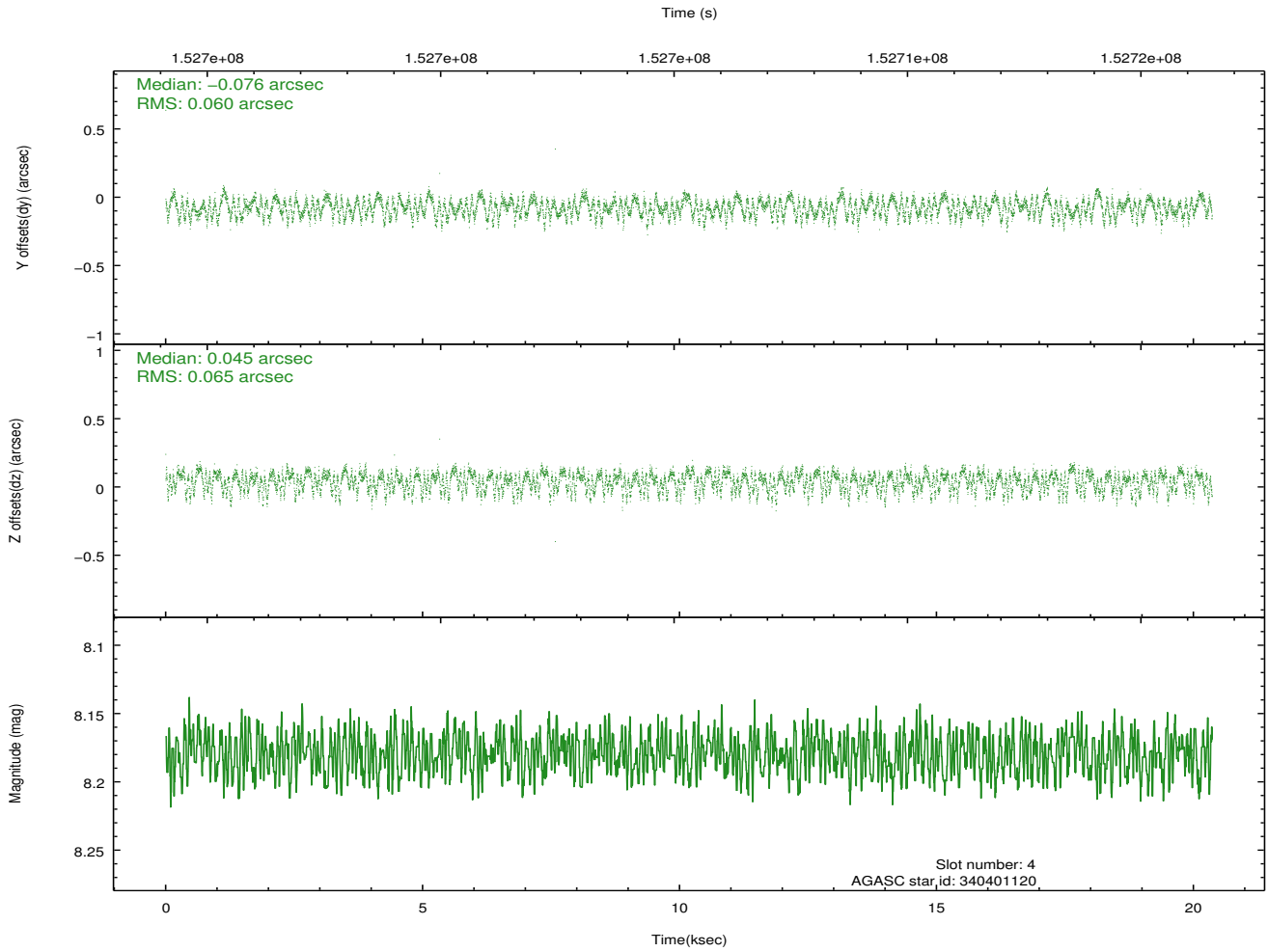
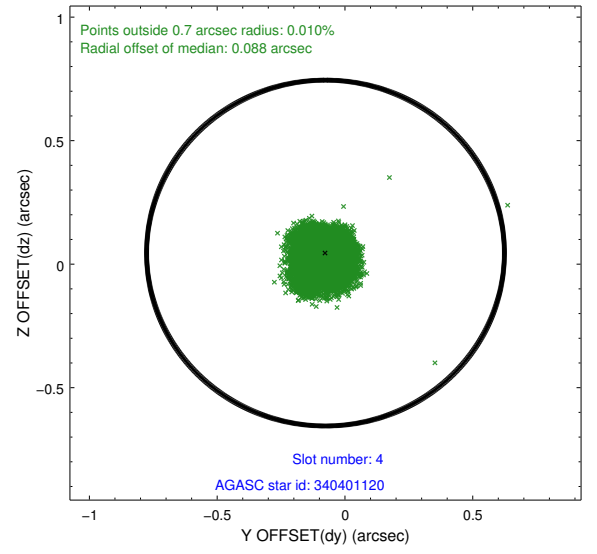
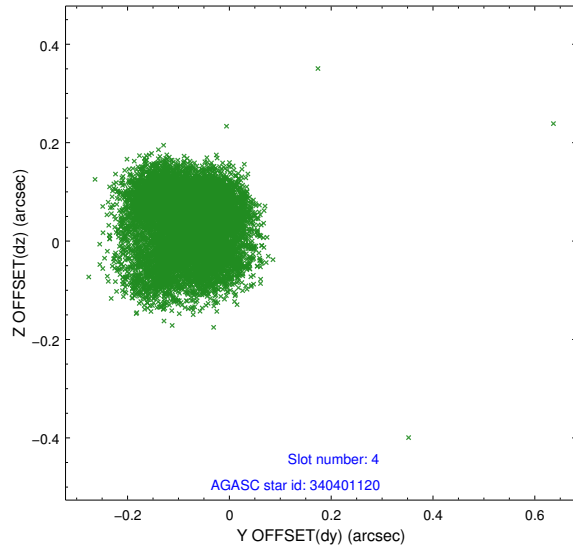
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	4968	-0.023	-0.043	0.007	0.011	0.000000	0.000000	-755.74	-1812.75
1	FID	ACIS-S-4	7.18	4967	0.010	0.023	0.006	0.012	0.000000	0.000000	2157.48	95.59
2	FID	ACIS-S-5	7.23	4967	-0.019	0.029	0.007	0.011	0.000000	0.000000	-1808.35	89.46
3	GUIDE	340398704	9.87	9925	0.063	0.007	0.109	0.182	253.783062	35.459063	-1685.97	-911.02
4	GUIDE	340401120	8.18	9934	-0.076	0.045	0.095	0.147	253.574895	35.128140	-1382.33	-2215.33
5	GUIDE	340533352	8.46	9933	0.063	0.062	0.061	0.099	254.563691	34.717962	1795.94	-1441.76
6	GUIDE	340534896	8.58	9933	-0.099	-0.101	0.075	0.115	255.288450	35.541682	1460.20	2196.19
7	GUIDE	340534080	8.83	9929	0.050	-0.000	0.071	0.112	255.228954	35.471551	1495.51	1891.84

2.4 Star Slots

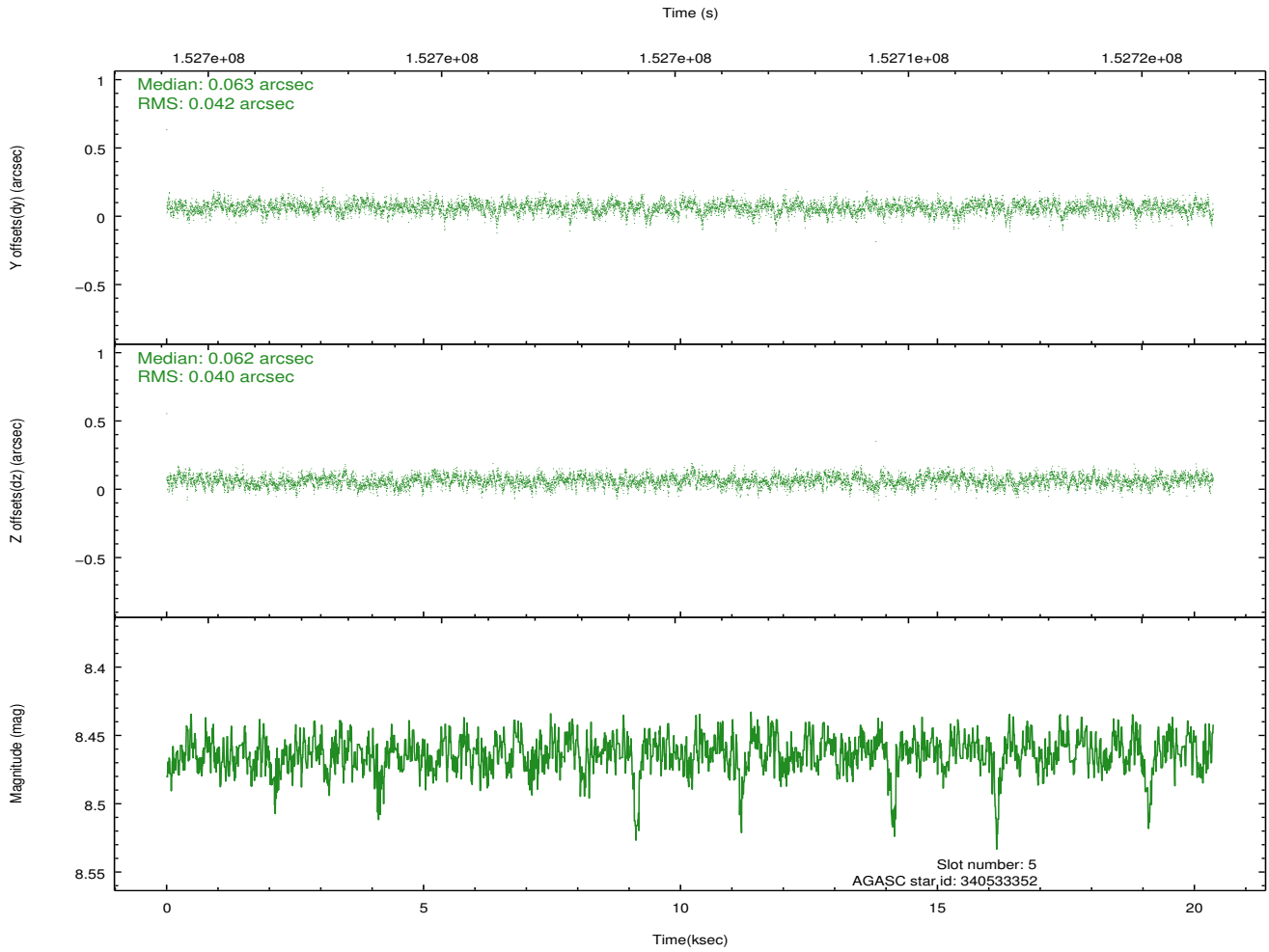
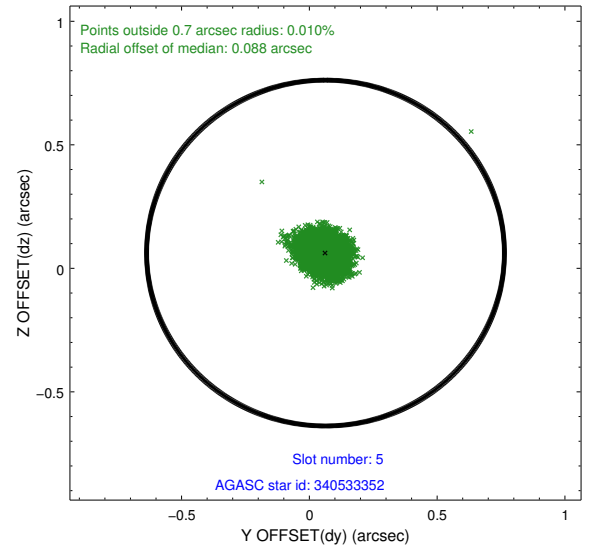
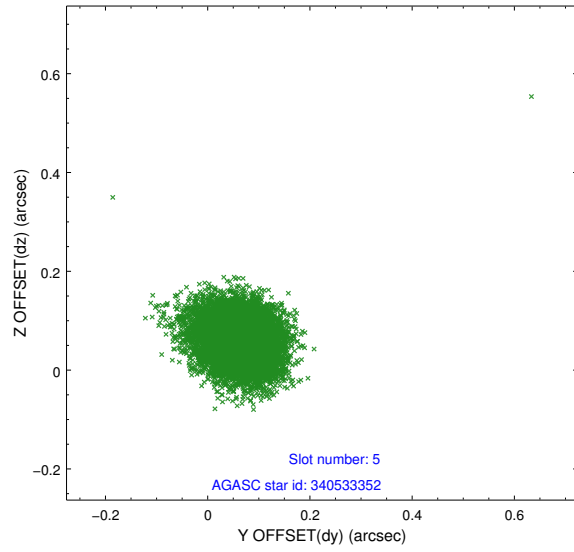
2.4.1 Slot 3



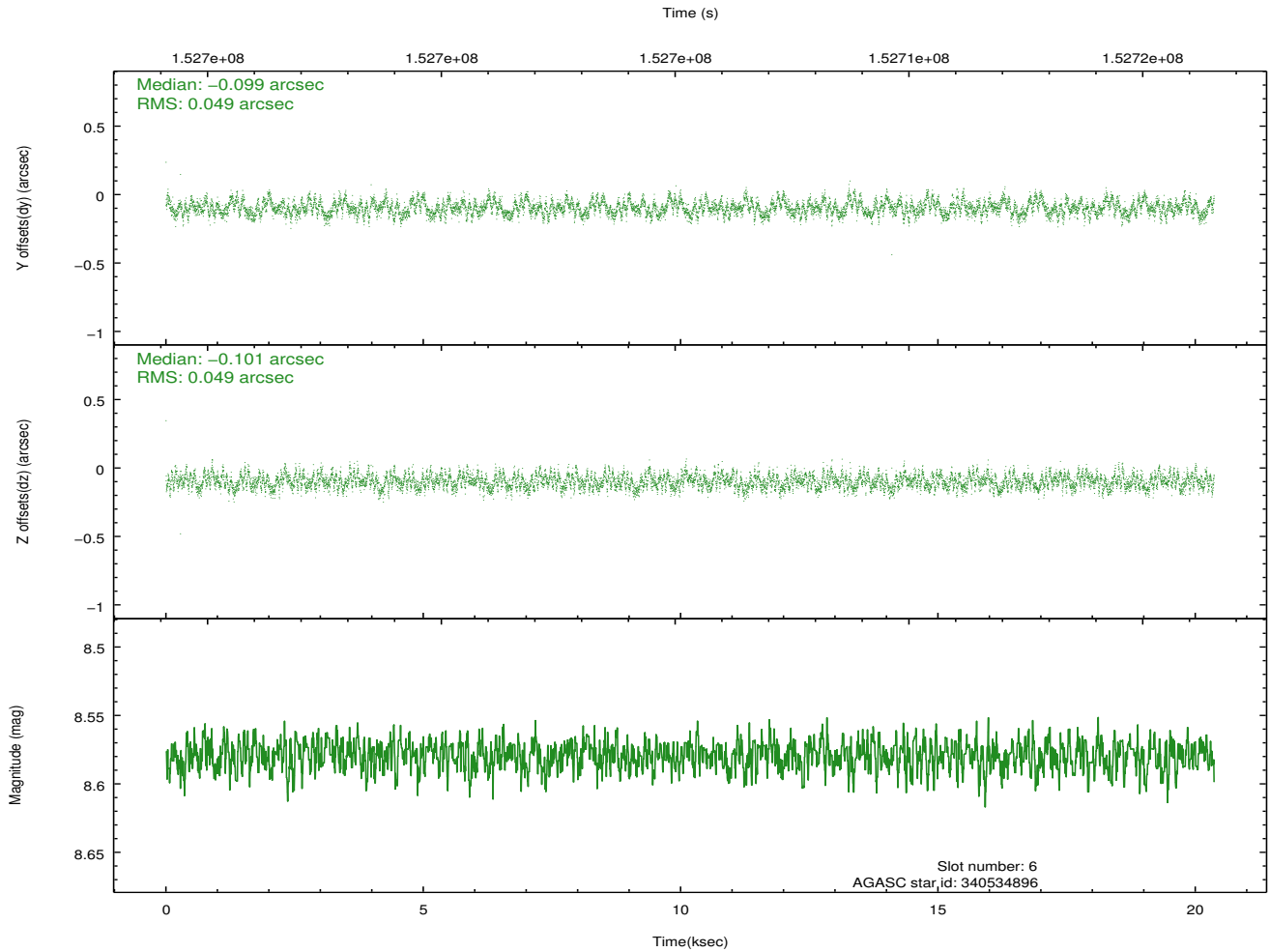
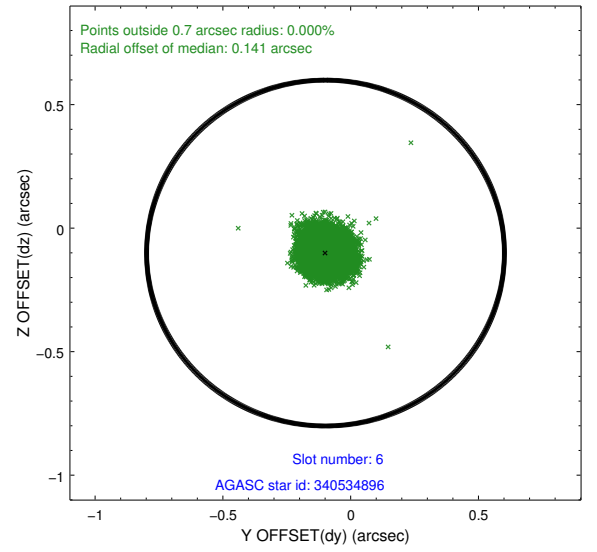
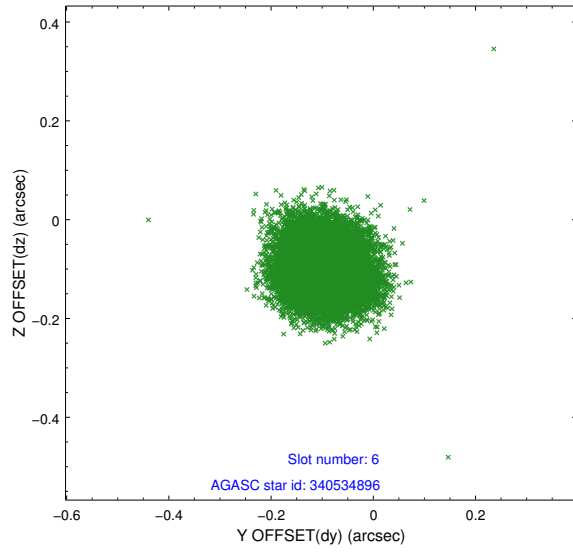
2.4.2 Slot 4



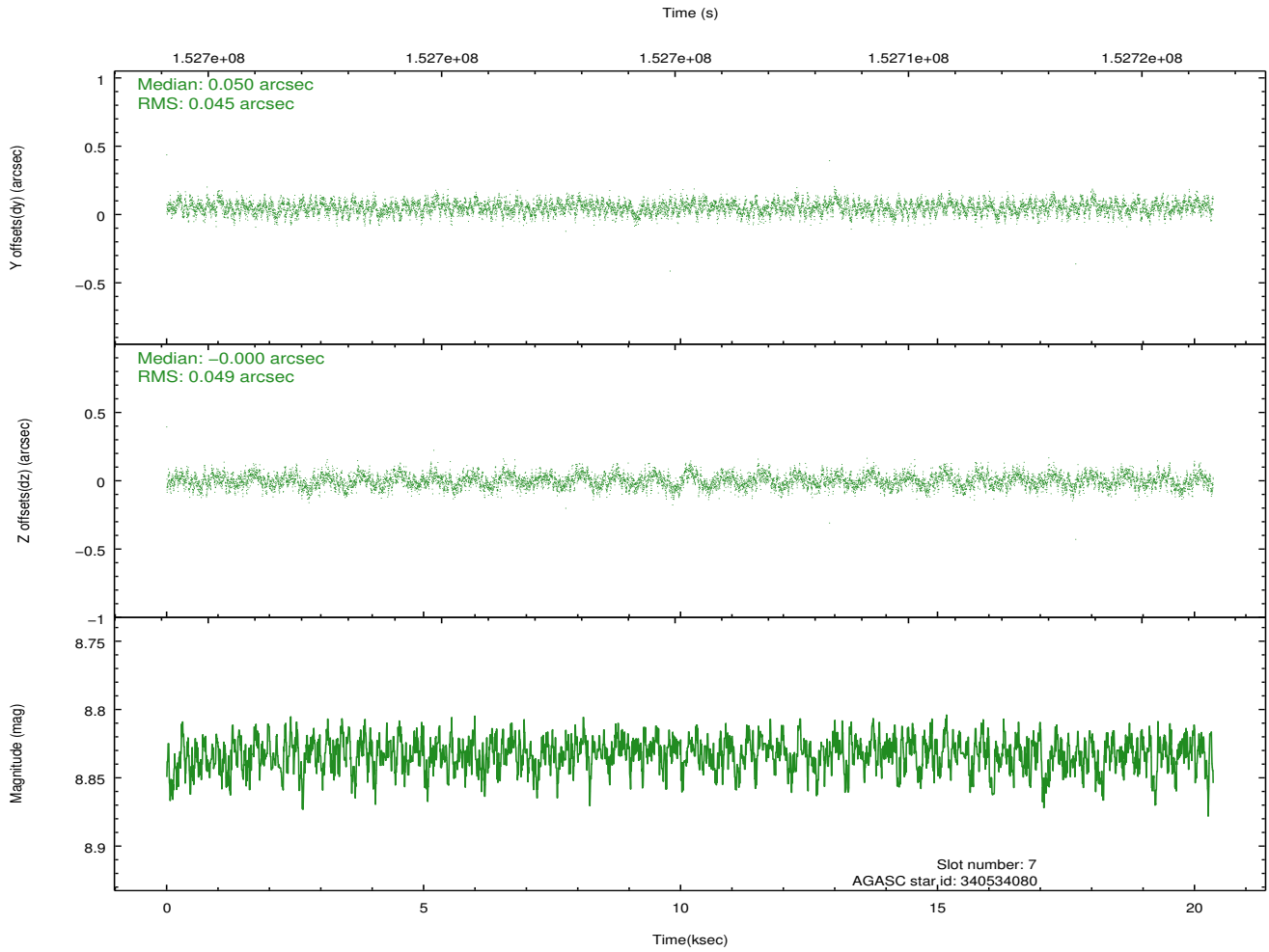
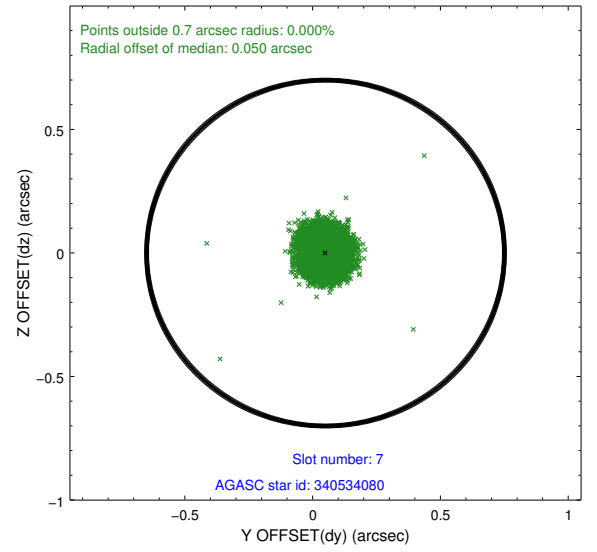
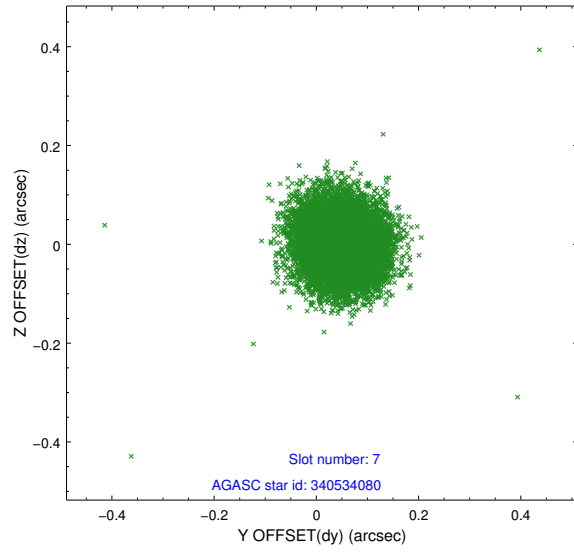
2.4.3 Slot 5



2.4.4 Slot 6

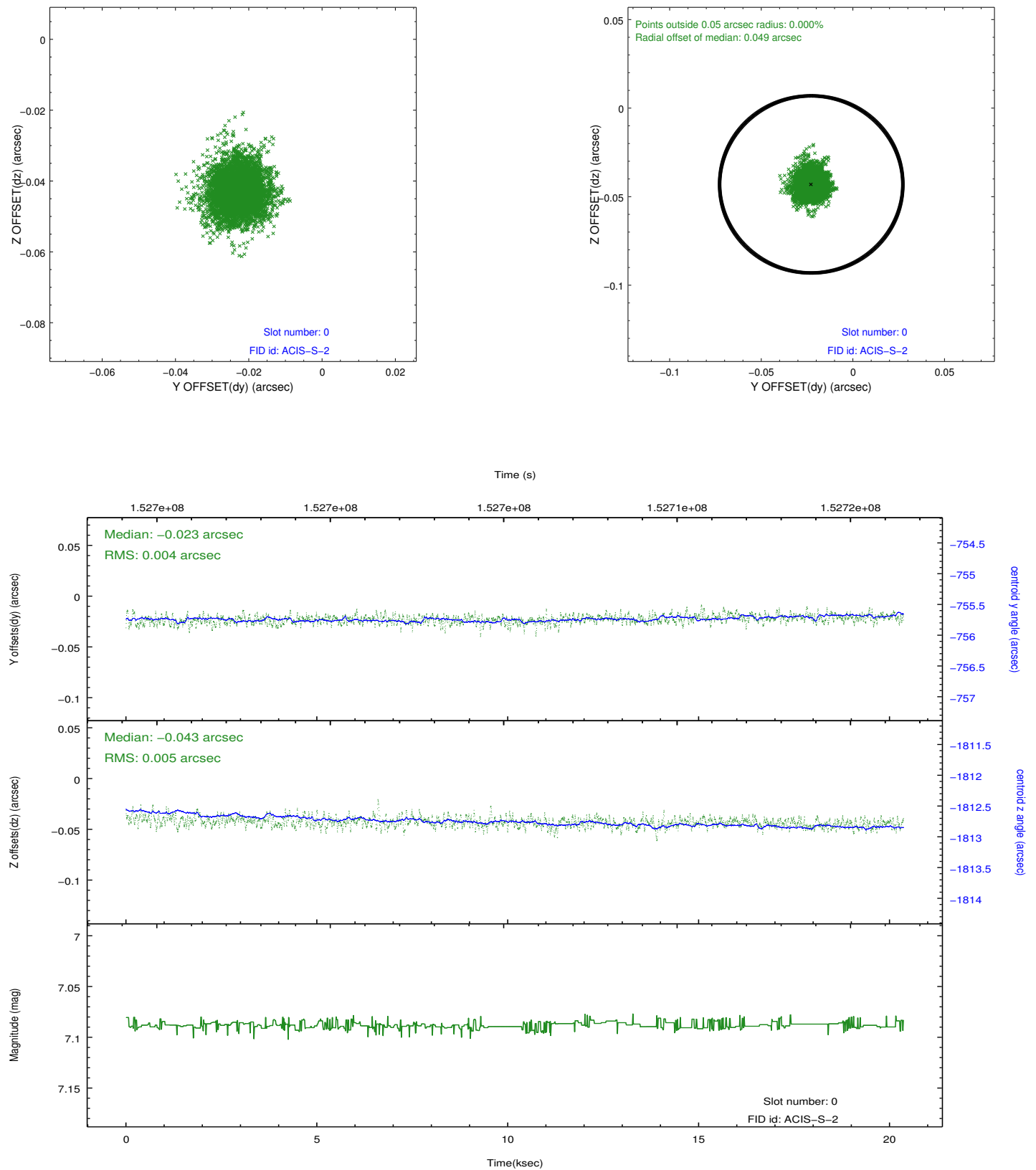


2.4.5 Slot 7

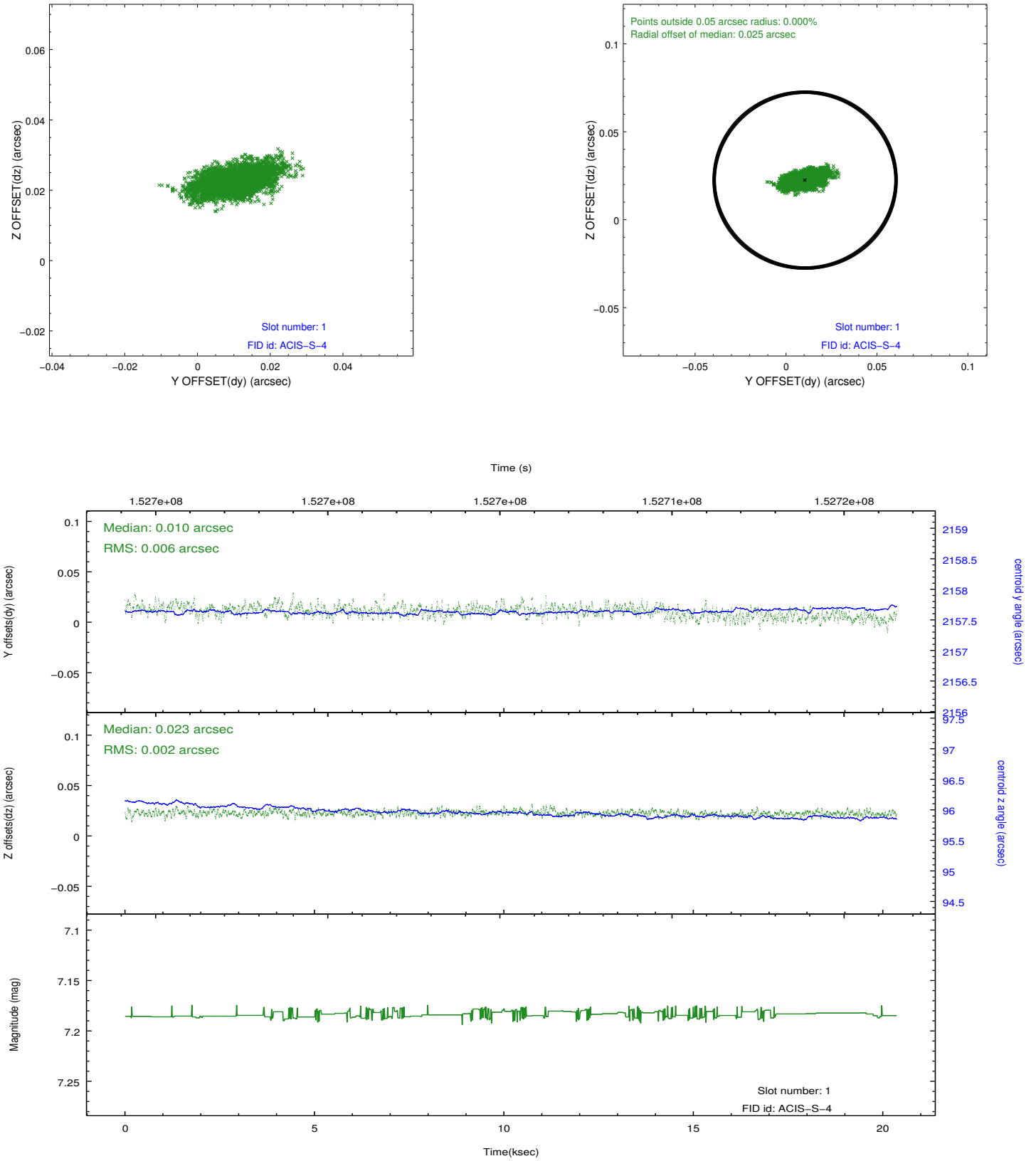


2.5 FID Slots

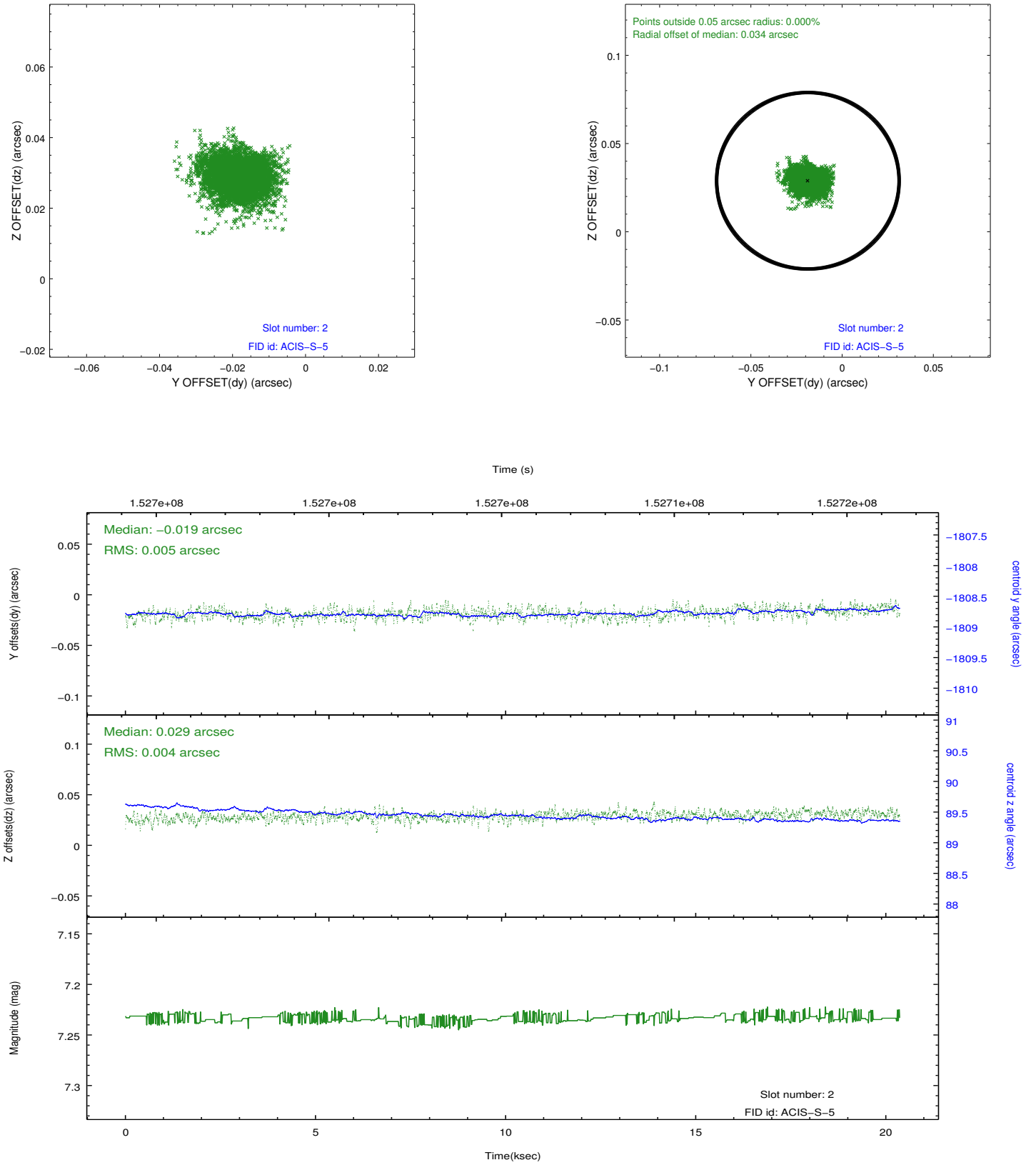
2.5.1 Slot 0



2.5.2 Slot 1

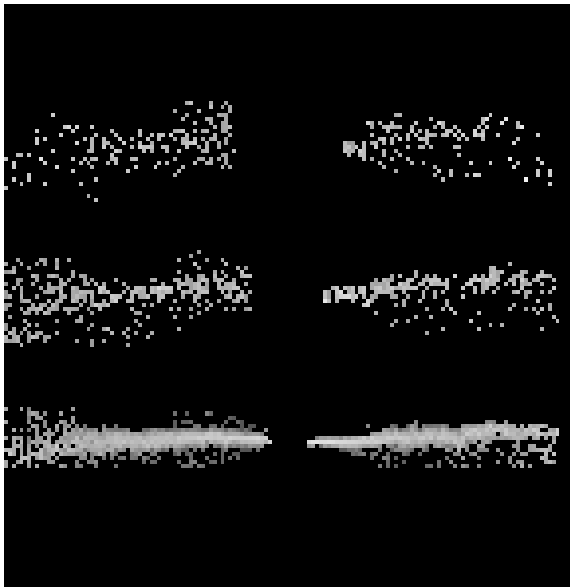


2.5.3 Slot 2

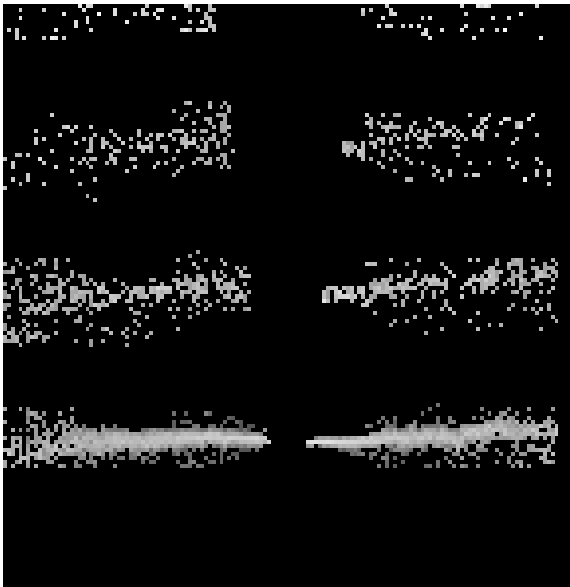


3 Gratings

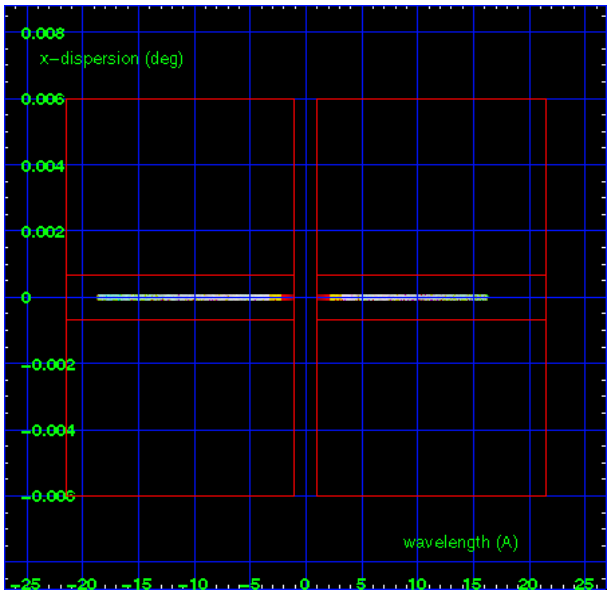
3.1 HEG Arm



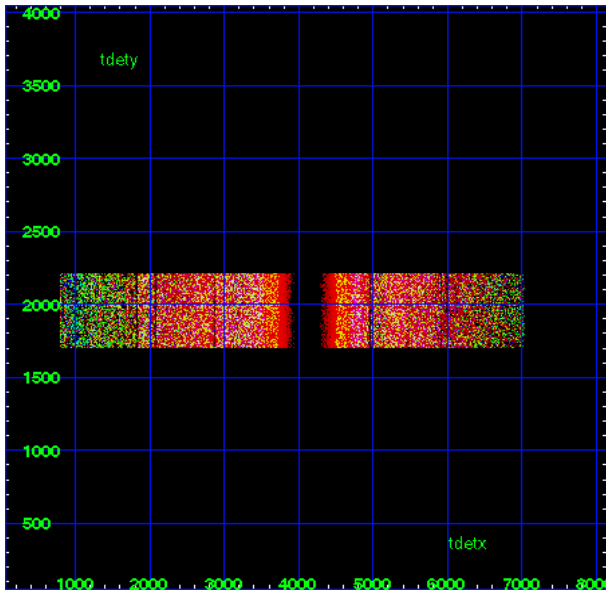
HEG Order Sort 123



HEG Order Sort ALL

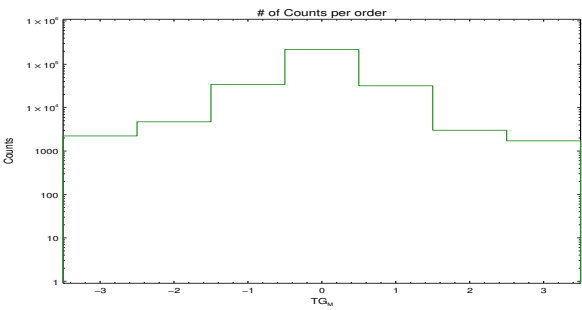


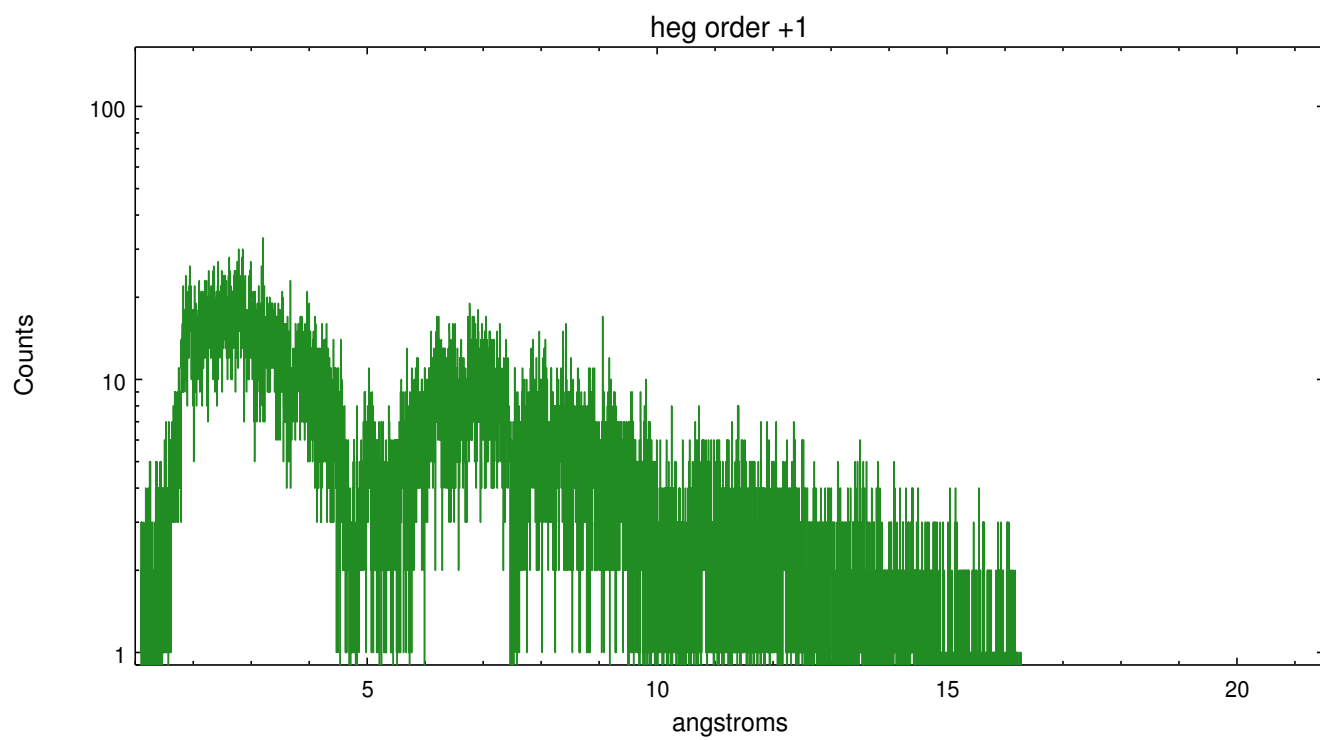
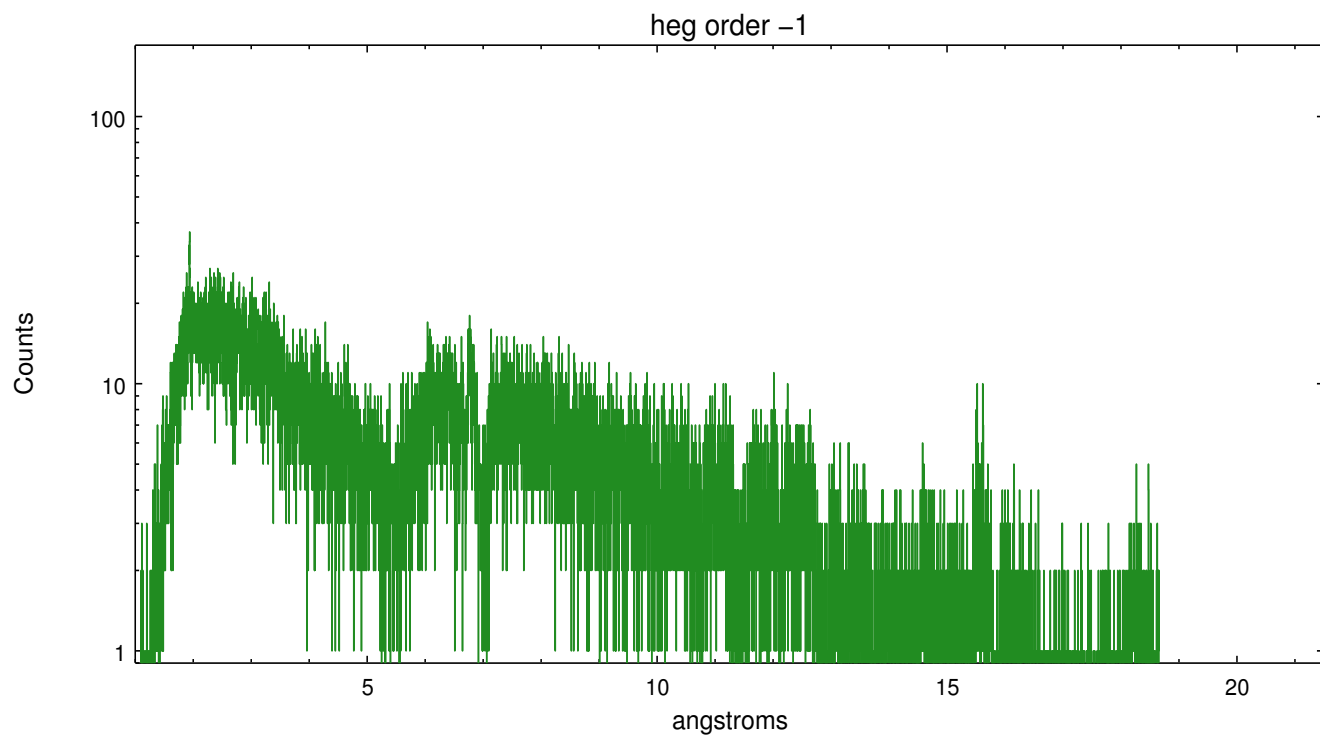
Spot Image HEG



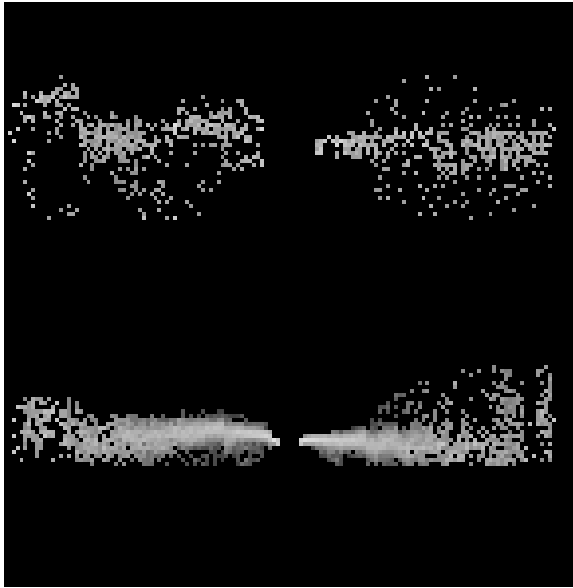
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2233	4722	34394	218061	31939	3019	1721

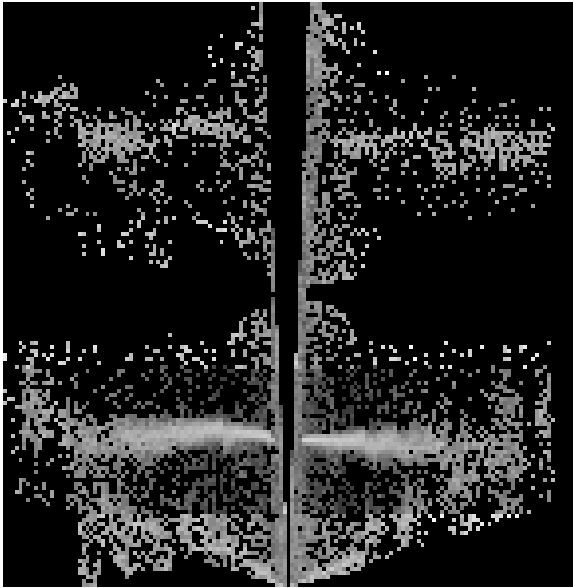




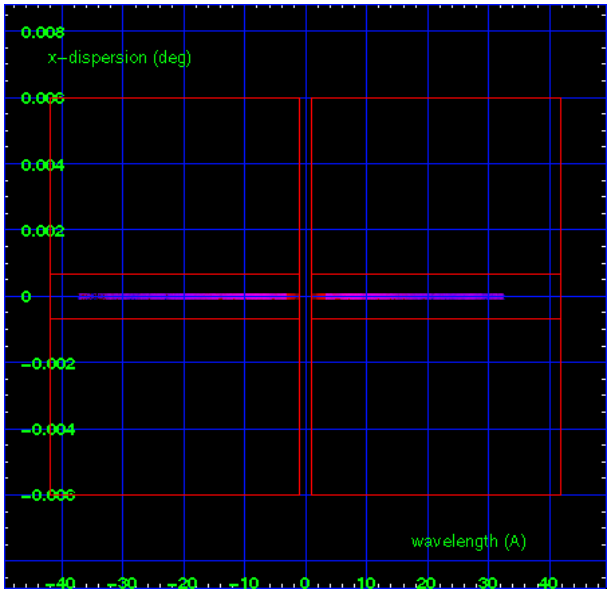
3.2 MEG Arm



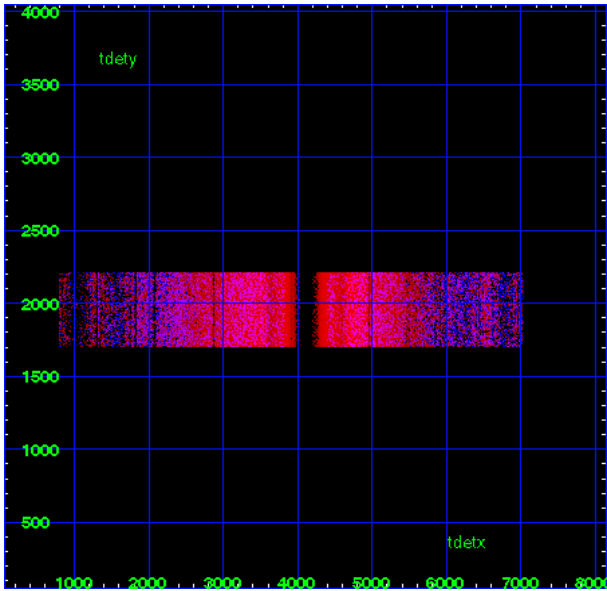
MEG Order Sort 123



MEG Order Sort ALL

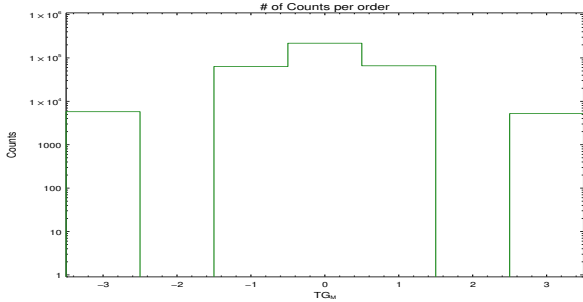


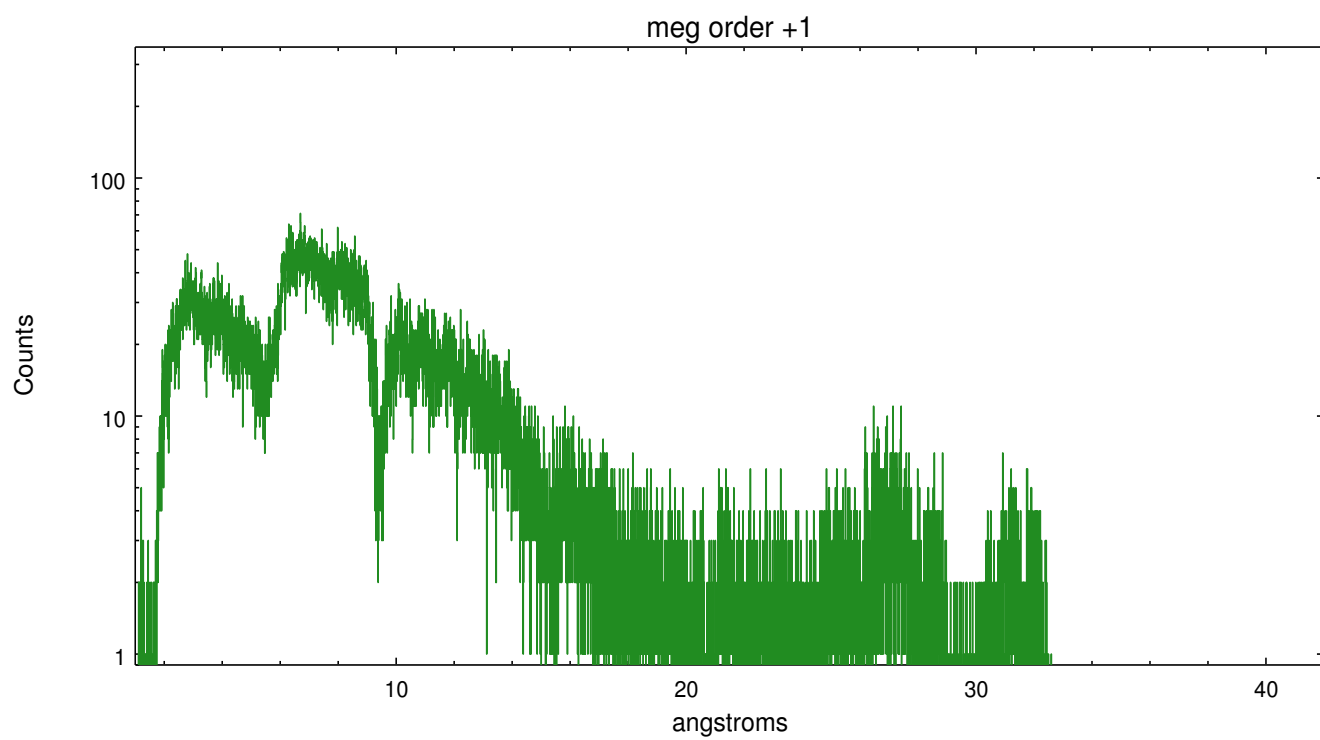
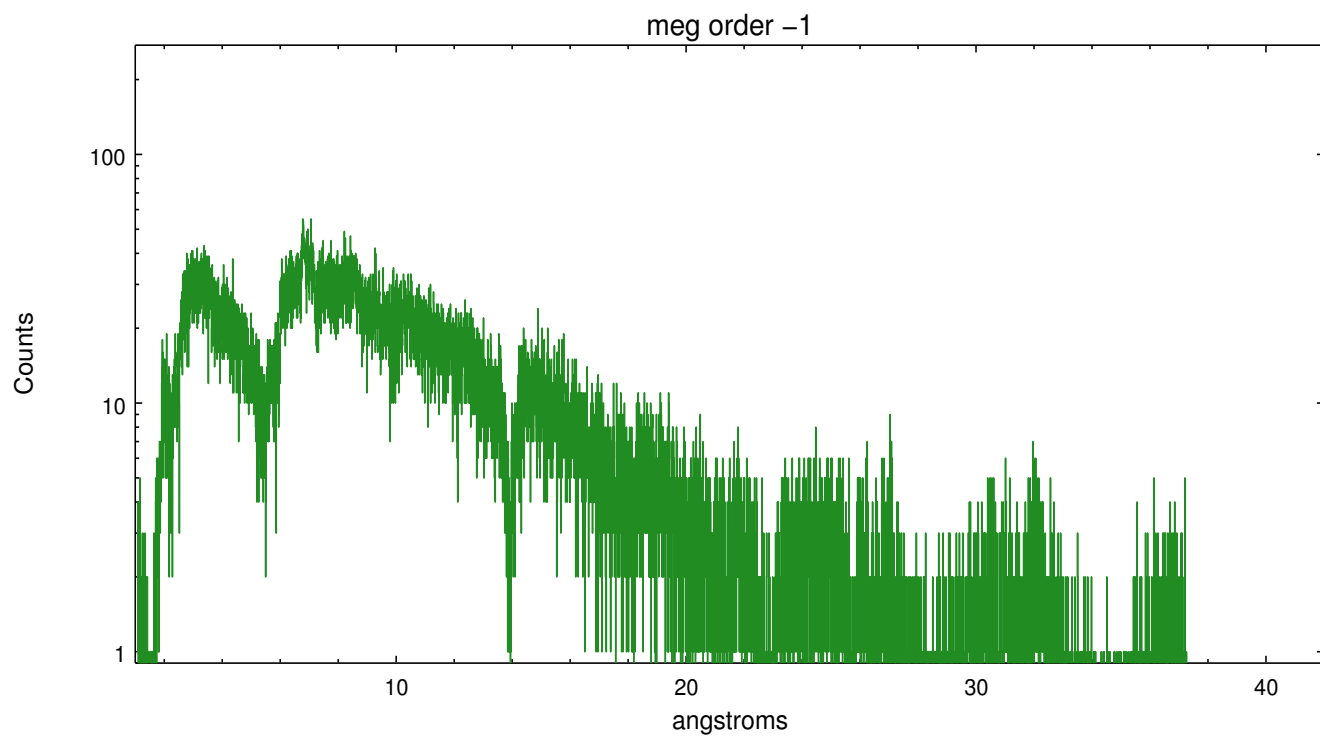
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	5769	0	63375	218061	65871	0	5209





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.11.14
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.365

A.2 Comments

time/phase constraint met.