

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 2749 - L2 Version 3
Chandra X-Ray Center

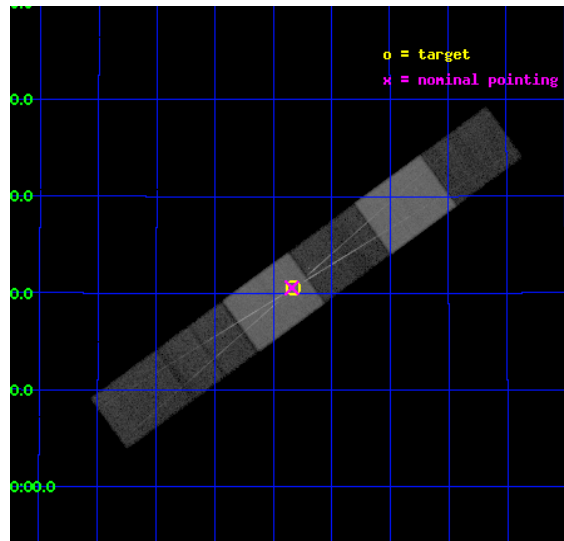
L2 Processing Date : Oct 7 2012

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1 Front

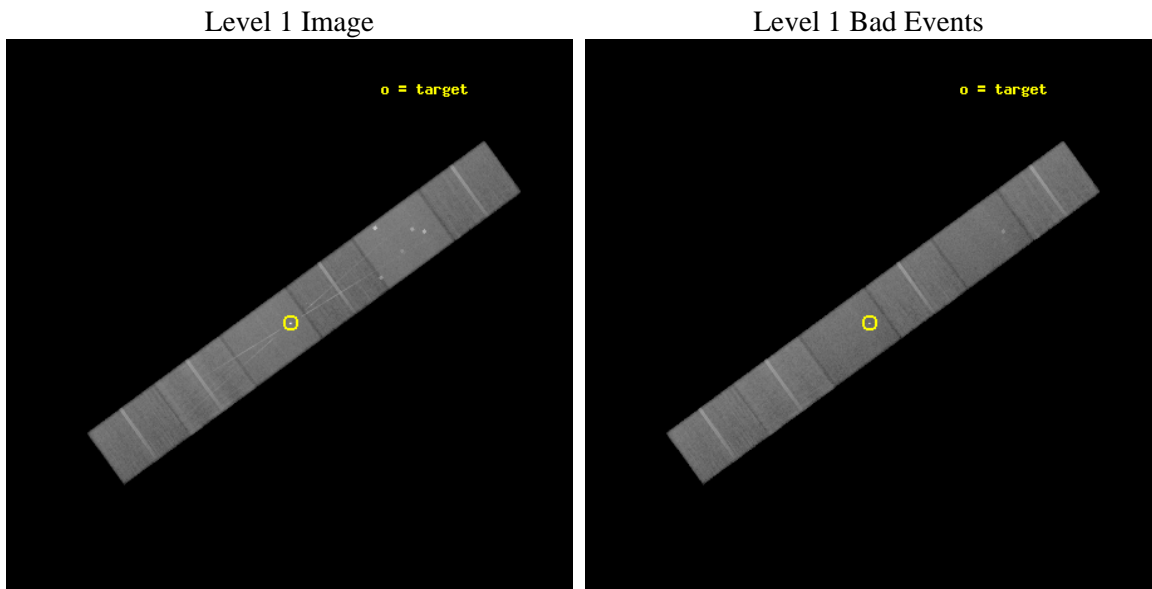
seq_num	400229	Sequence number
obs_id	2749	Observation id
title	SPECTRAL SIGNATURES OF A PRECESSING ACCRETION DISK IN HER X-1	Prop
observer	Professor Charles Hailey	Principal investigator
object	HER X-1	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	254.4575	Observer's specified target RA [deg]
dec_targ	35.342389	Observer's specified target Dec [deg]
ra_nom	254.46014948438	Nominal RA [deg]
dec_nom	35.3428986995	Nominal Dec [deg]
roll_nom	143.91136740041	Nominal Roll [deg]
revision	3	Processing version of data
ontime	50175.0	Sum of GTIs [s]
livetime	49364.630230142	Livetime [s]
ontime4	50175.0	Sum of GTIs [s]
ontime5	50175.0	Sum of GTIs [s]
ontime6	50175.0	Sum of GTIs [s]
ontime7	50175.0	Sum of GTIs [s]
ontime8	50172.459009826	Sum of GTIs [s]
ontime9	50175.0	Sum of GTIs [s]
l2events	428302	Number of level 2 events



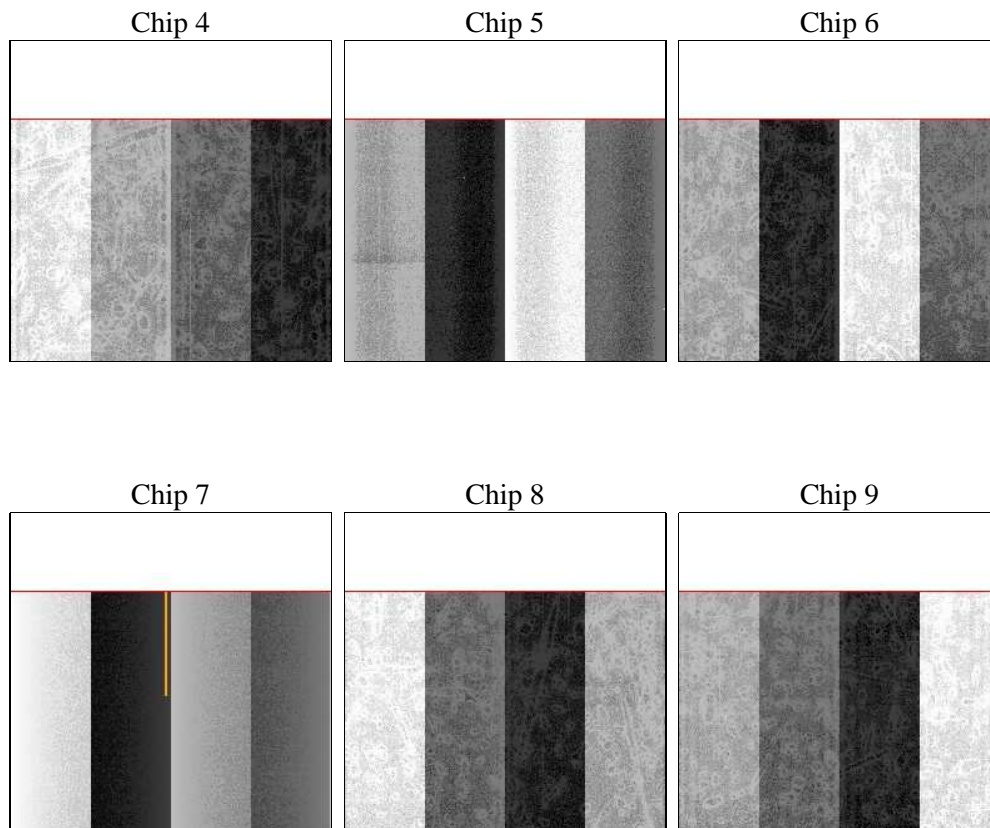
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	50000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	50175.0	Sum of GTIs [s]
caldbver	4.5.2	 	ontime4	50175.0	Sum of GTIs [s]
date	2012-10-07T10:14:27	Date and time of file creation	ontime5	50175.0	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	50175.0	Sum of GTIs [s]
			ontime7	50175.0	Sum of GTIs [s]
			ontime8	50172.459009826	Sum of GTIs [s]
			ontime9	50175.0	Sum of GTIs [s]
			l1events	1873005	Number of level 1 events

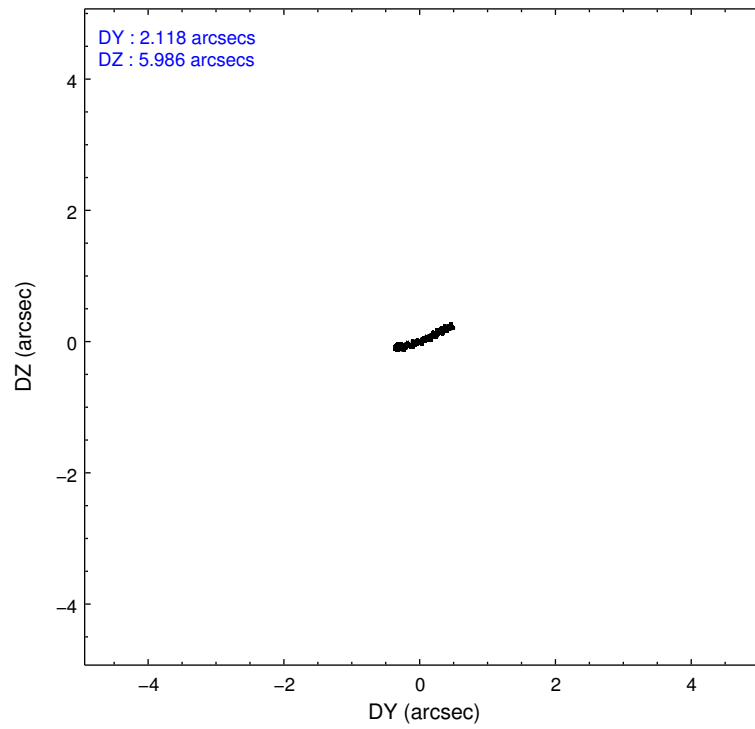
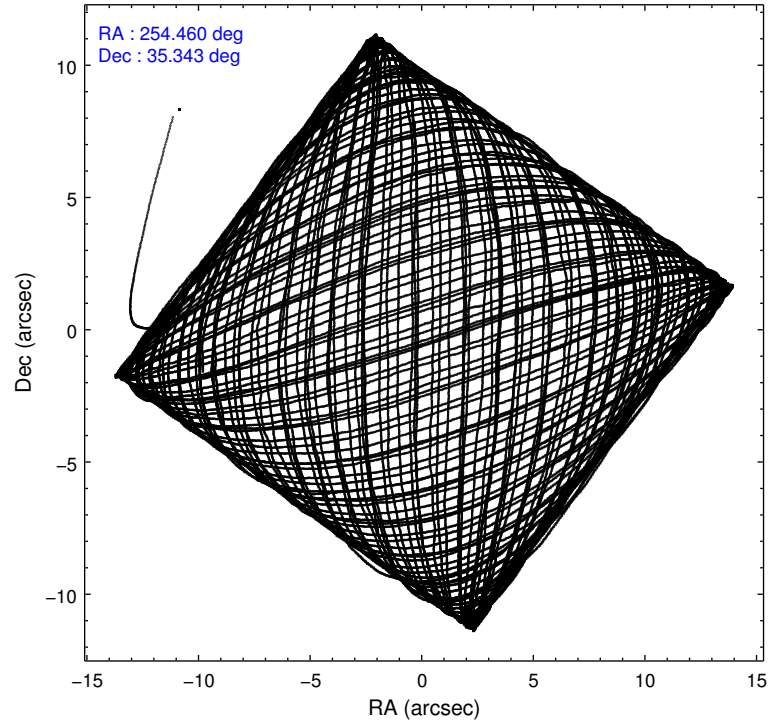
2.1.4 Events

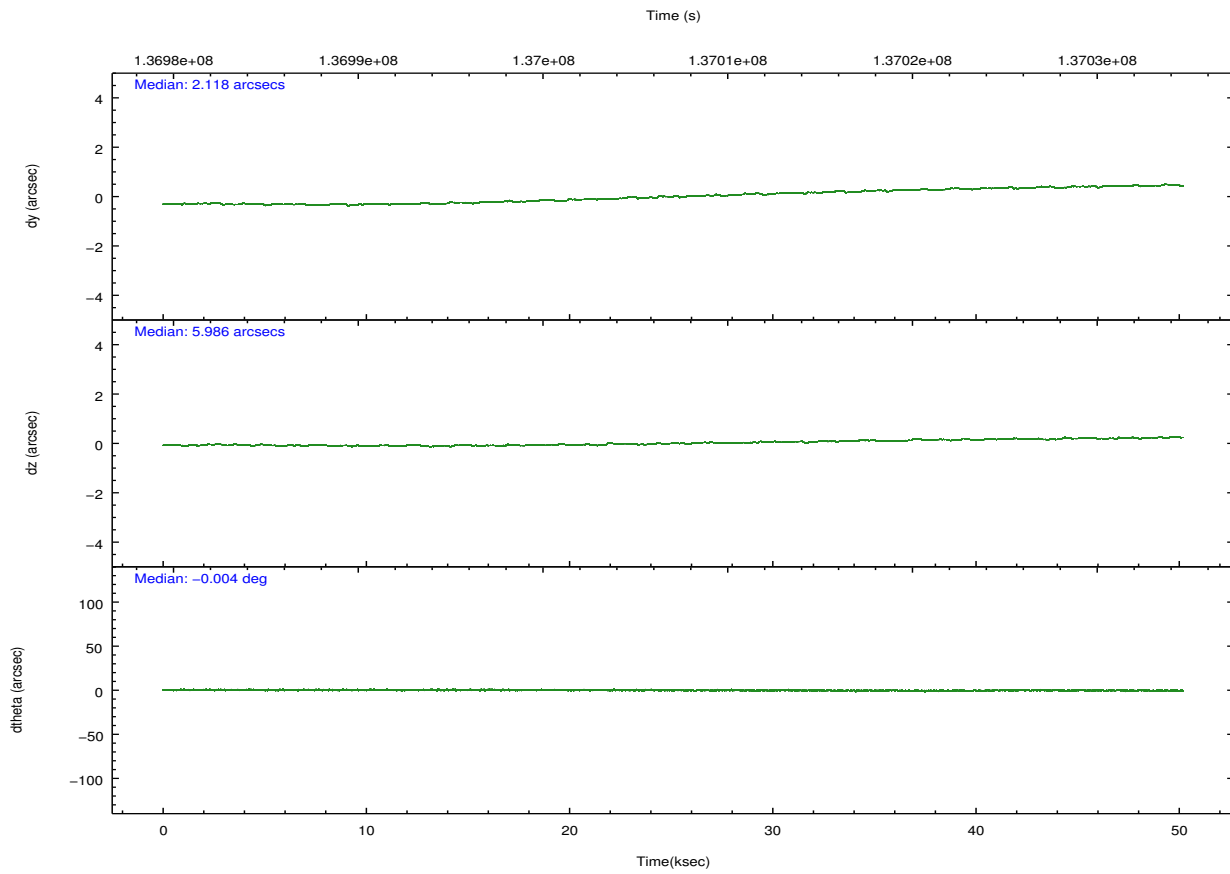
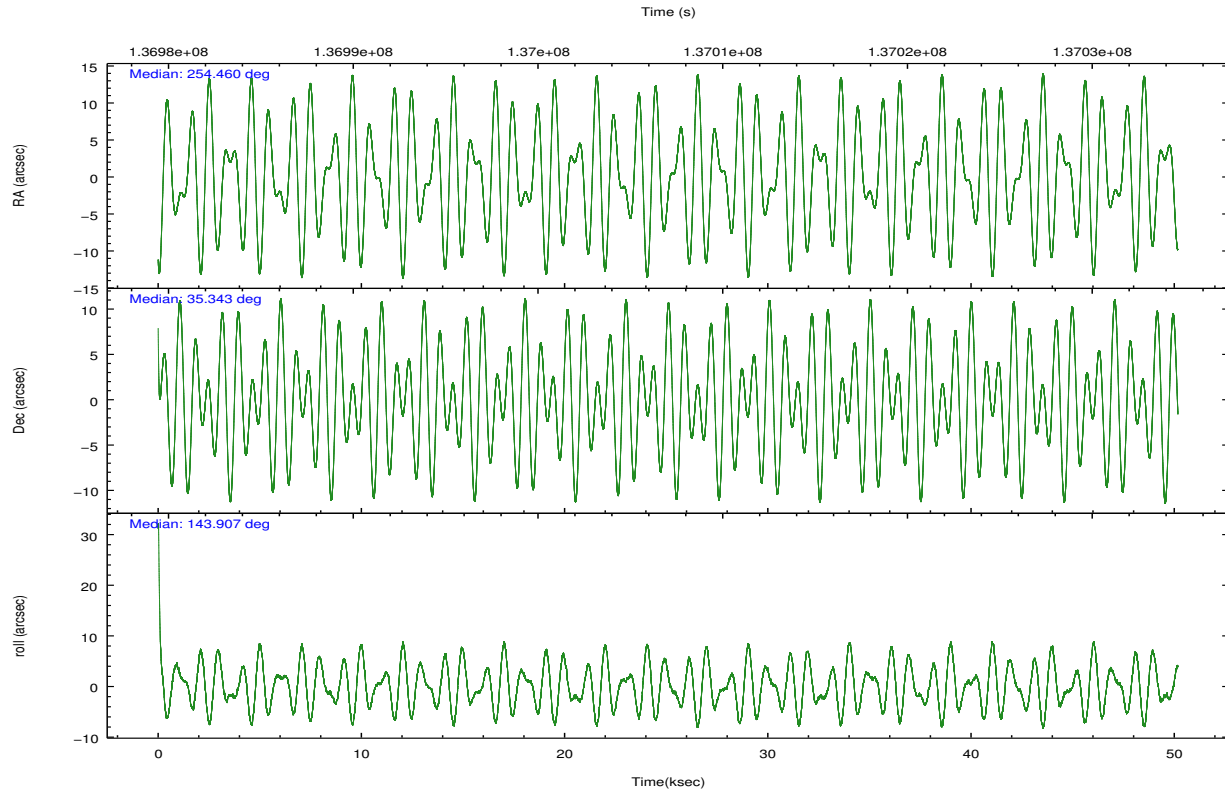
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	278440	379418	267088	354775	334215	259069	grade 0 events	12454	34486	18104	17160	23474	12281
rejected events	247085	197954	228291	195891	263101	228258		4%	9%	6%	4%	7%	4%
rejected %	88%	52%	85%	55%	78%	88%	grade 1 events	112	1506	114	568	172	99
								0%	0%	0%	0%	0%	0%
							grade 2 events	7582	46799	7327	32937	14980	6347
								2%	12%	2%	9%	4%	2%
							grade 3 events	3136	8336	3603	14792	8035	3247
								1%	2%	1%	4%	2%	1%
							grade 4 events	2938	8082	3484	14748	7317	3068
								1%	2%	1%	4%	2%	1%
							grade 5 events	9144	28297	10609	32532	13907	11211
								3%	7%	3%	9%	4%	4%
							grade 6 events	5463	85429	6523	80505	17864	6071
								1%	22%	2%	22%	5%	2%
							grade 7 events	237611	166483	217324	161533	248466	216745
								85%	43%	81%	45%	74%	83%

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	254.493416	254.4601494843791	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	35.340339	35.34289869950035	Subarray start row	1	1
[deg] Pointing Roll	143.735496	143.9113674004111	Subarray row count	774	774
[s] Window start time (MET)	136961884.184000	136961884.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	137064724.184000	137064724.184000	[s] Primary exposure time	0.000000	2.5
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-187.132523	-187.1254020033014			
[mm] SIM translation stage offset	-3	-3.007120579706367			
Phase constraints	Y	Y			
[d] Phase period	1.700167	1.700167			
[d] Phase epoch (MJD)	50290.659249	50290.659249			
Phase start	0.200000	0.200000			
Phase end	0.900000	0.900000			
Phase start error	0.050000	0.050000			
Phase end error	0.010000	0.010000			
[s] Observation start time (MET)	136982133.184000	136980953.18425			
Observation start date	2002-05-05T10:34:29	2002-05-05T10:15:53			
[s] Observation end time (MET)	137032133.184000	137033199.99888			

2.3 Aspect





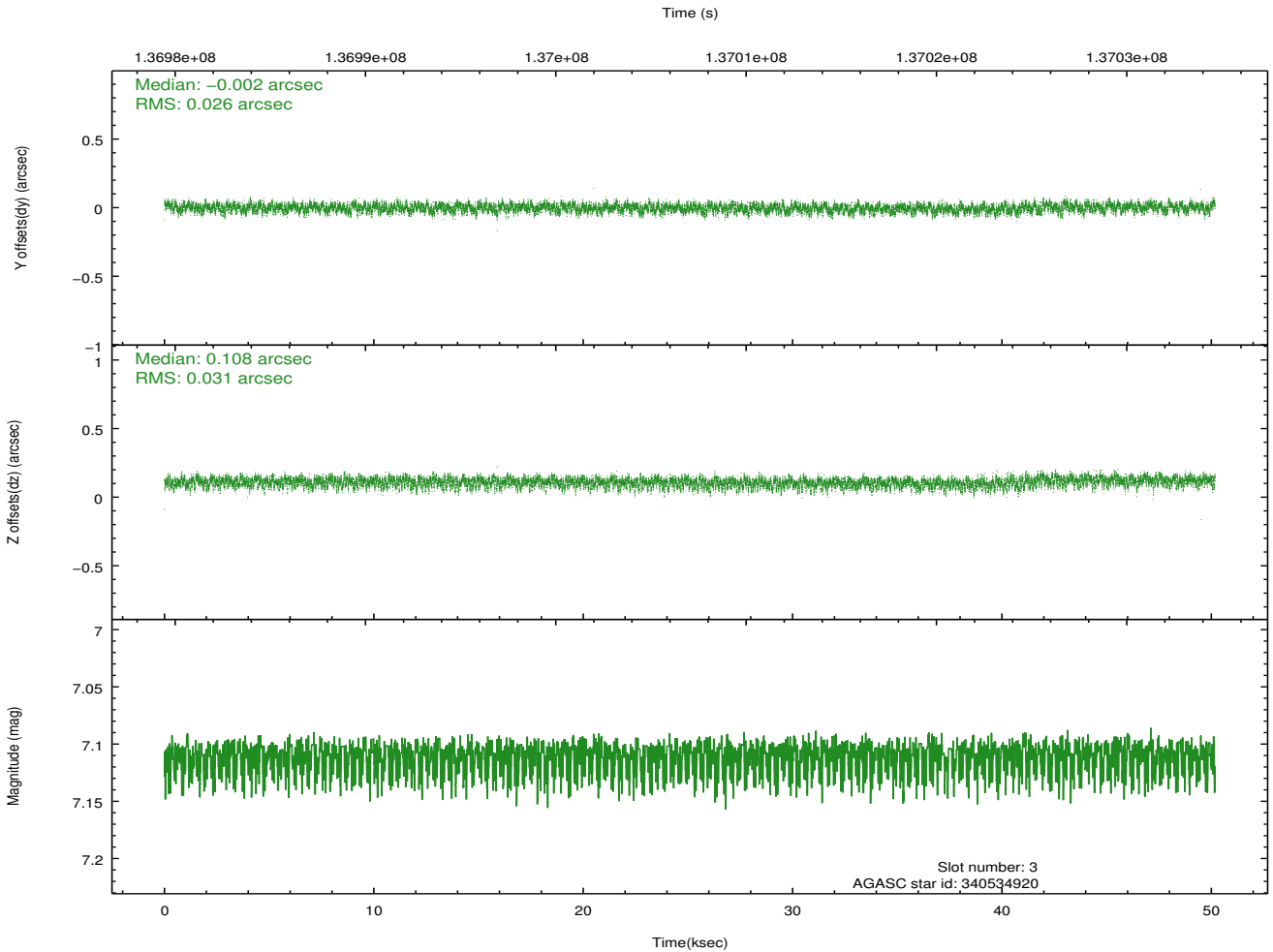
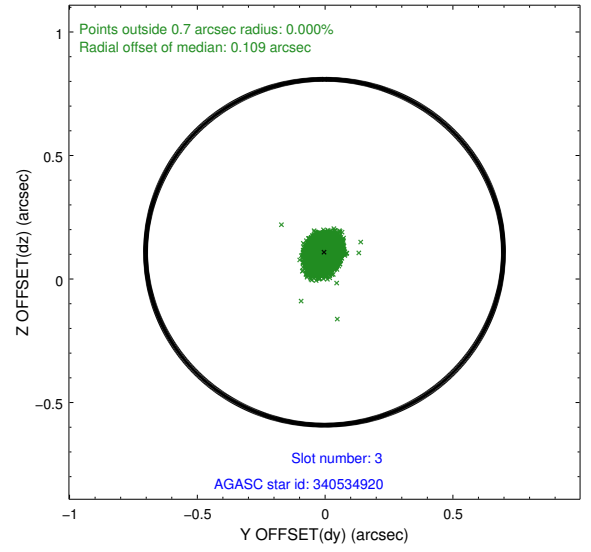
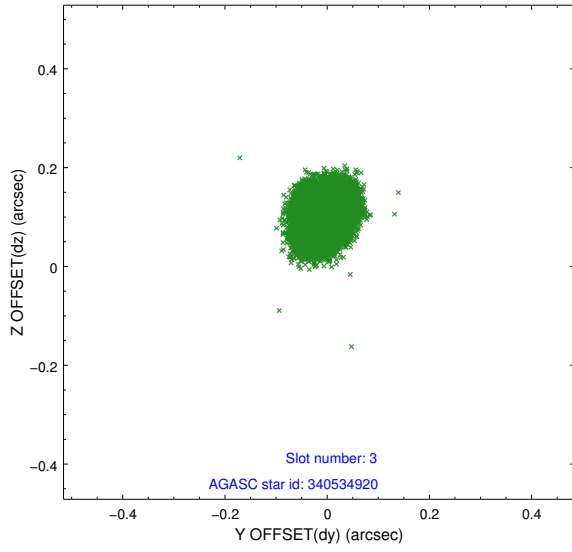
Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	12238	-0.035	-0.066	0.009	0.021	0.000000	0.000000	-754.59	-1789.30
1	FID	ACIS-S-4	7.19	12237	0.002	0.034	0.008	0.026	0.000000	0.000000	2158.74	119.27
2	FID	ACIS-S-5	7.23	12237	0.003	0.039	0.008	0.015	0.000000	0.000000	-1807.41	112.95
3	GUIDE	340534920	7.11	24473	-0.002	0.108	0.043	0.069	255.403139	35.543291	-1709.55	-2175.10
4	GUIDE	340536192	7.71	24471	-0.033	-0.088	0.050	0.080	254.294567	35.286536	356.28	501.39
5	GUIDE	340401120	8.18	24473	-0.054	-0.037	0.070	0.112	253.574895	35.128140	1735.35	2205.90
6	GUIDE	340534896	8.60	24476	0.092	0.125	0.074	0.117	255.288450	35.541682	-1443.69	-1969.27
7	GUIDE	340533352	8.46	24477	-0.001	-0.102	0.079	0.127	254.563691	34.717962	-1493.66	1683.48

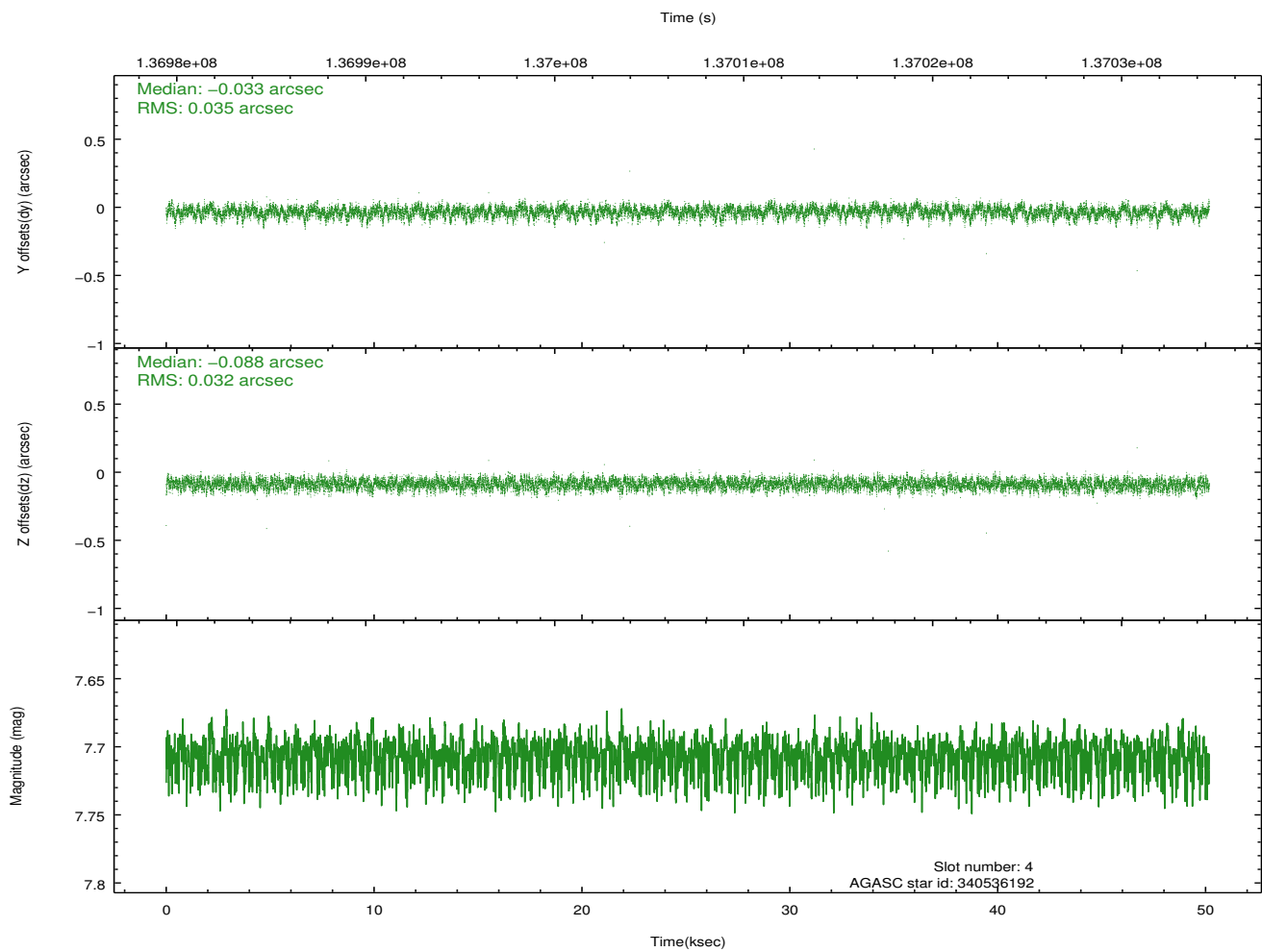
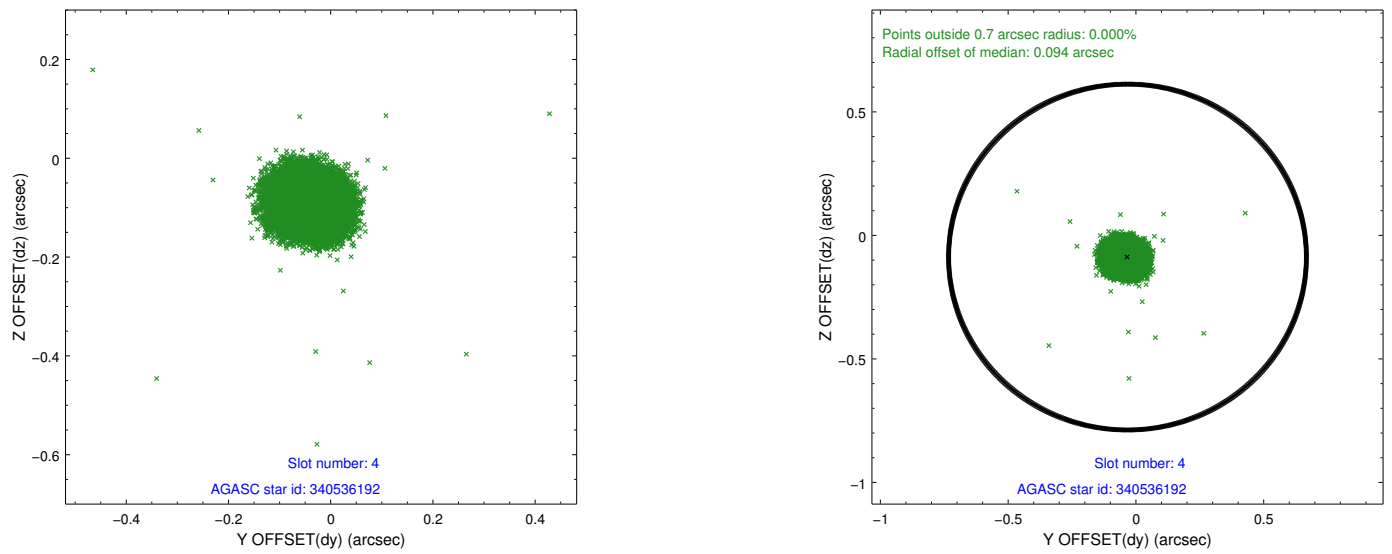
∞

2.4 Star Slots

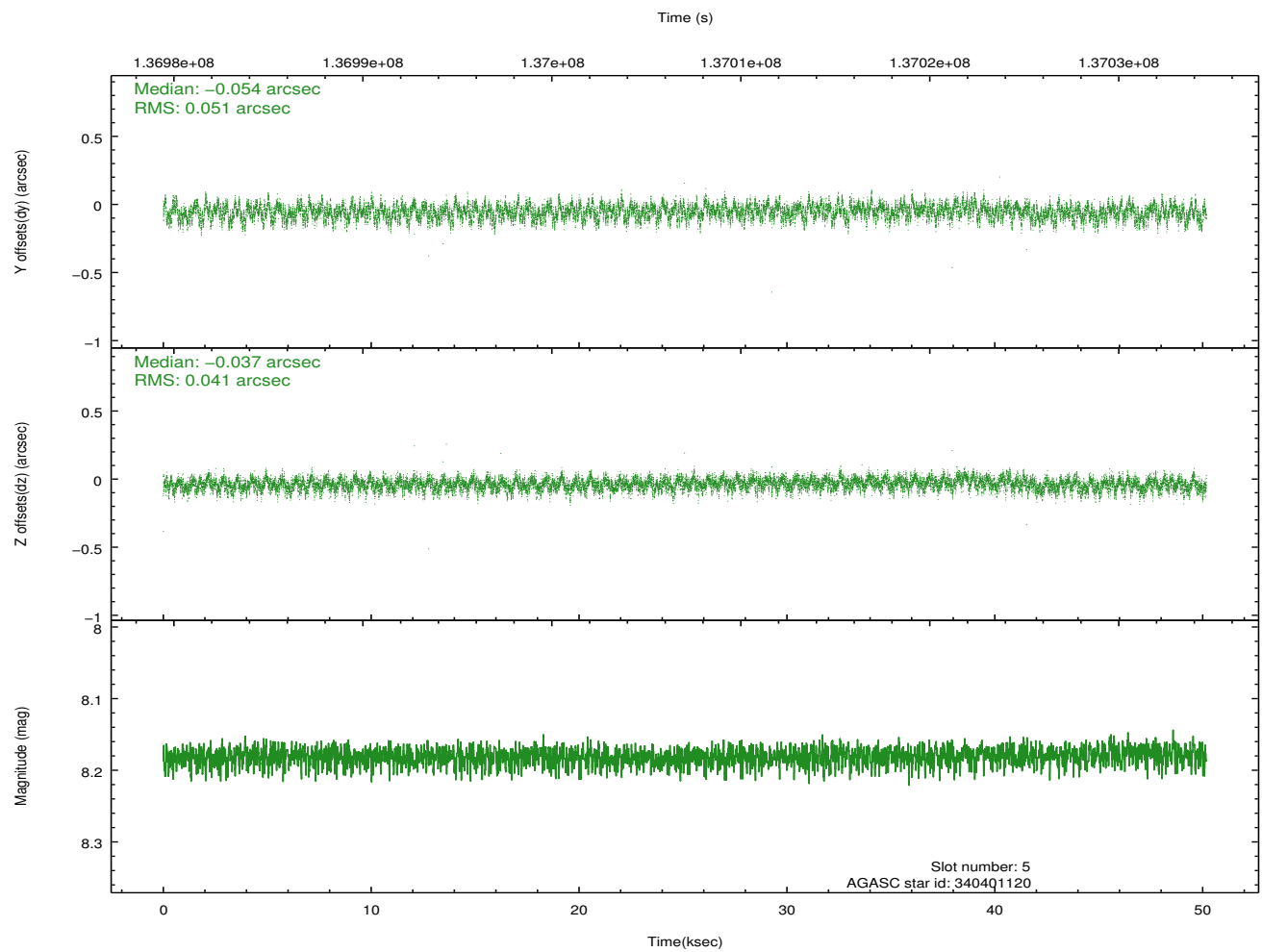
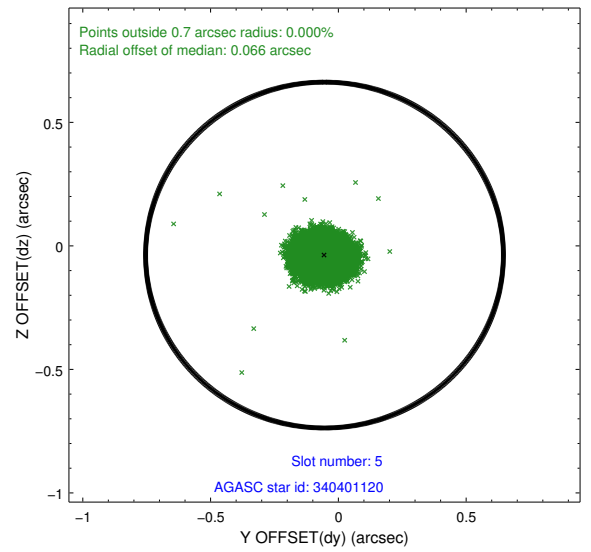
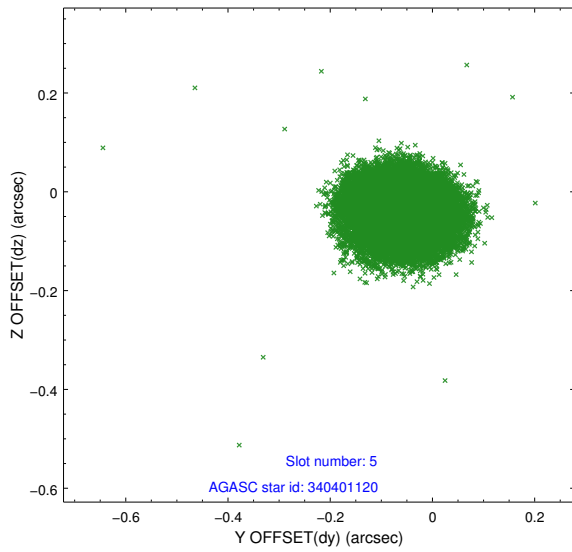
2.4.1 Slot 3



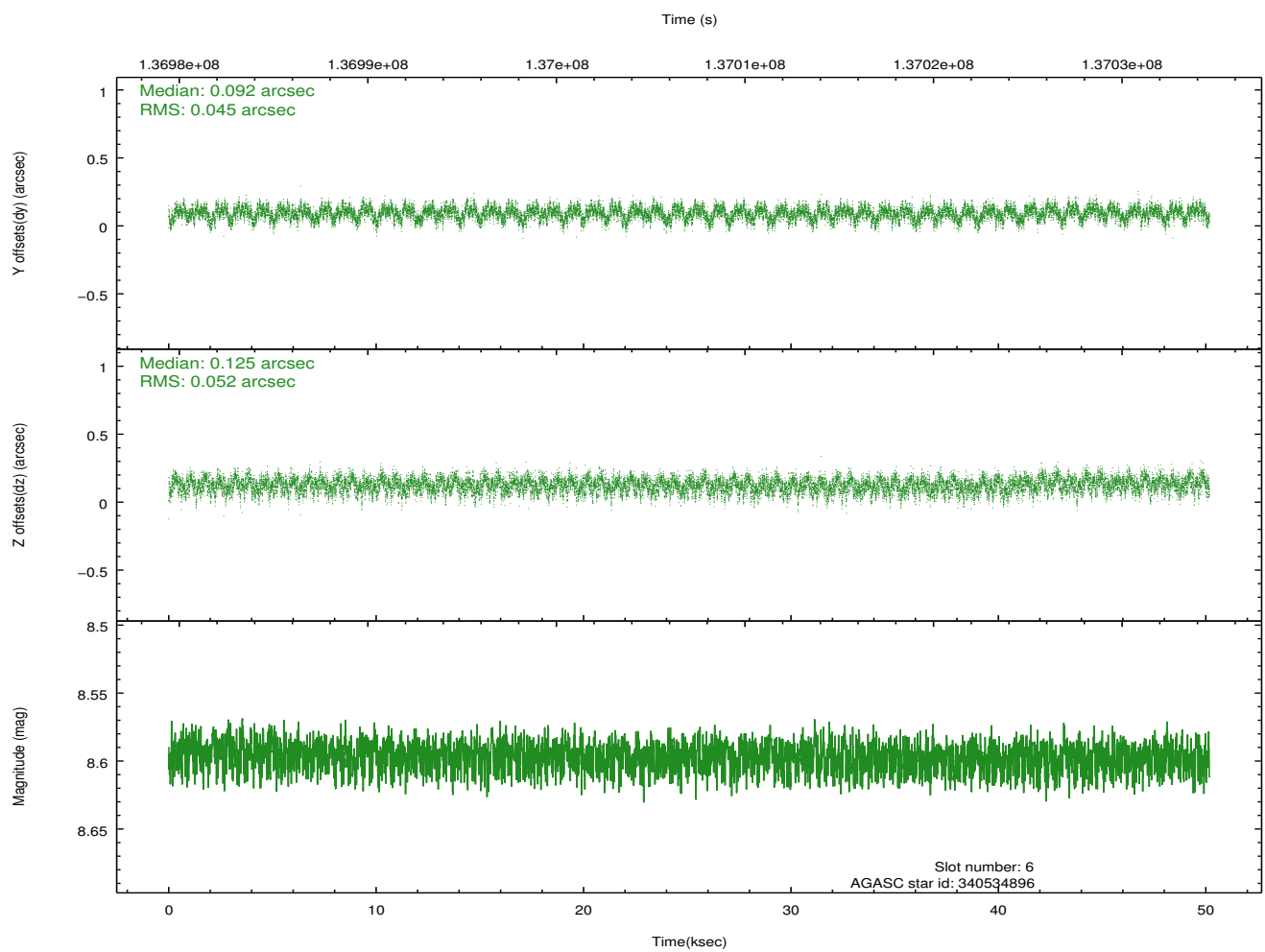
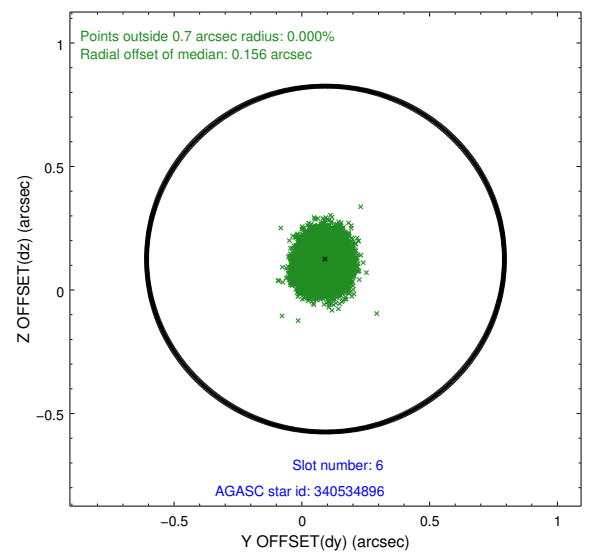
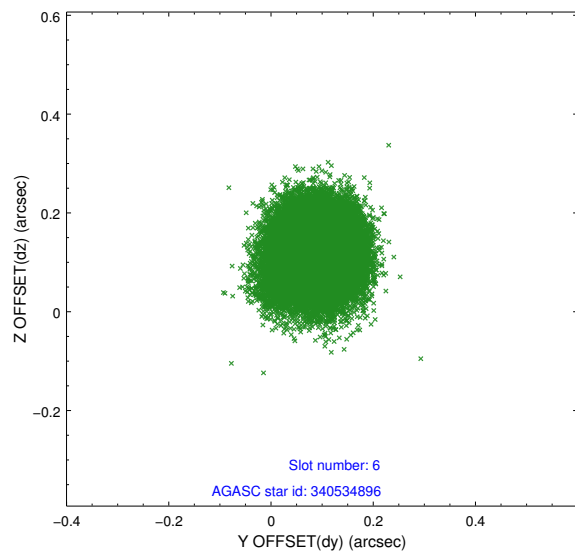
2.4.2 Slot 4



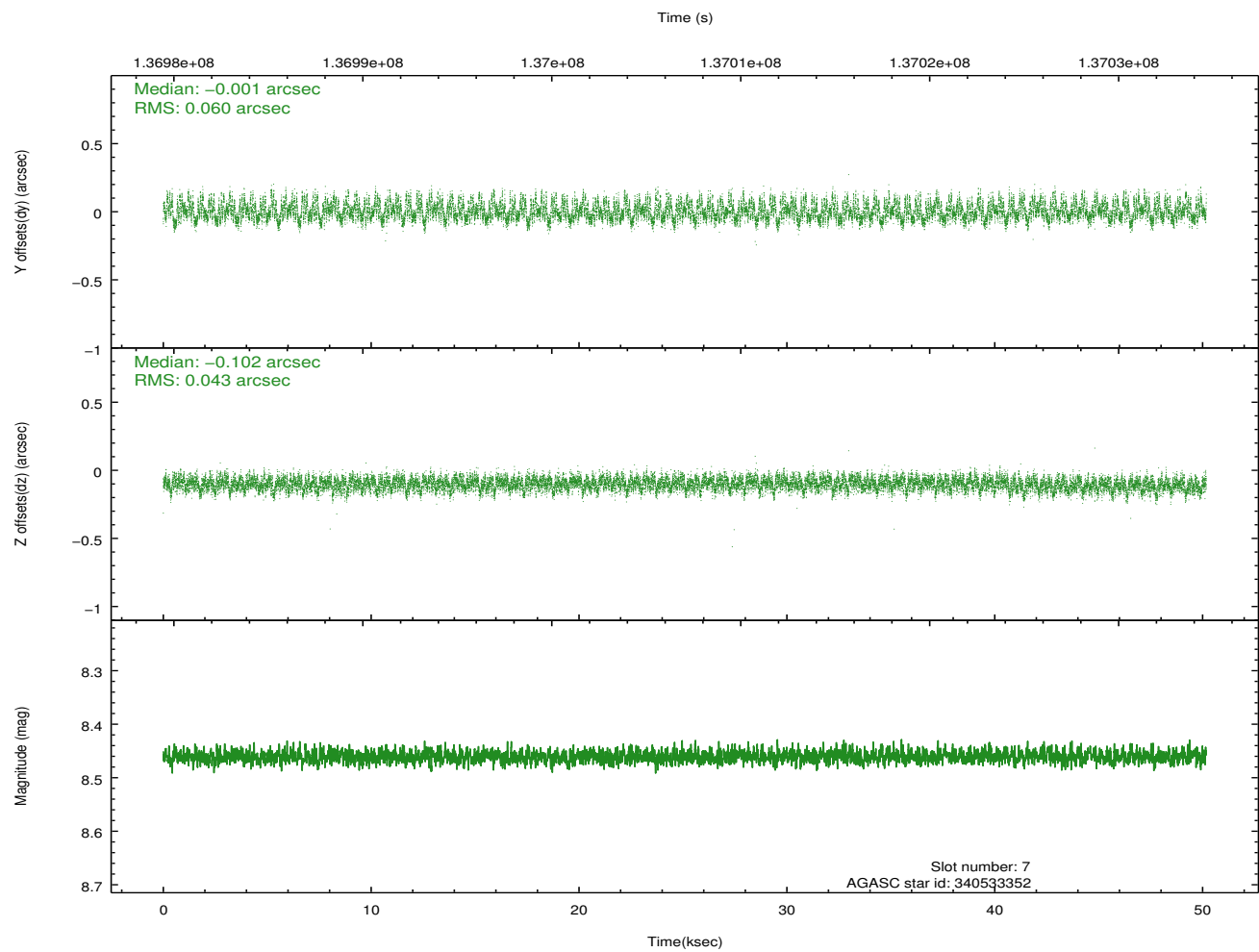
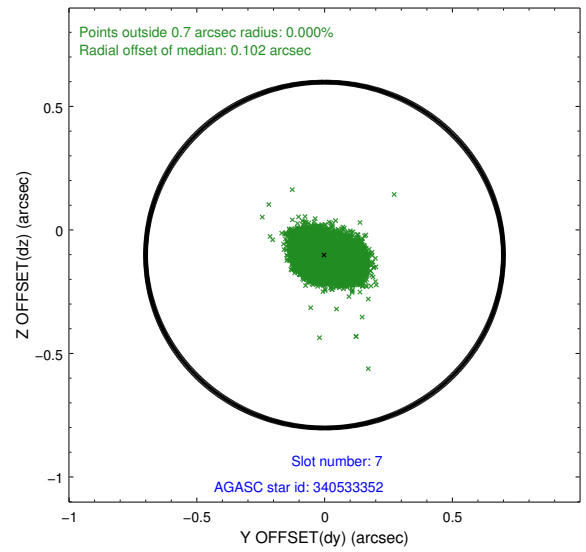
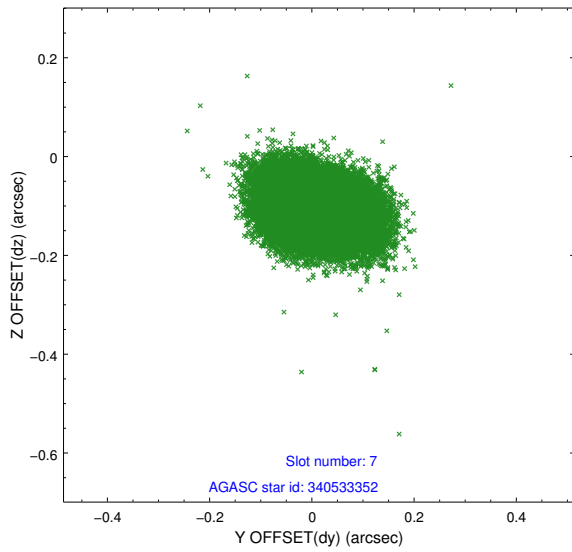
2.4.3 Slot 5



2.4.4 Slot 6

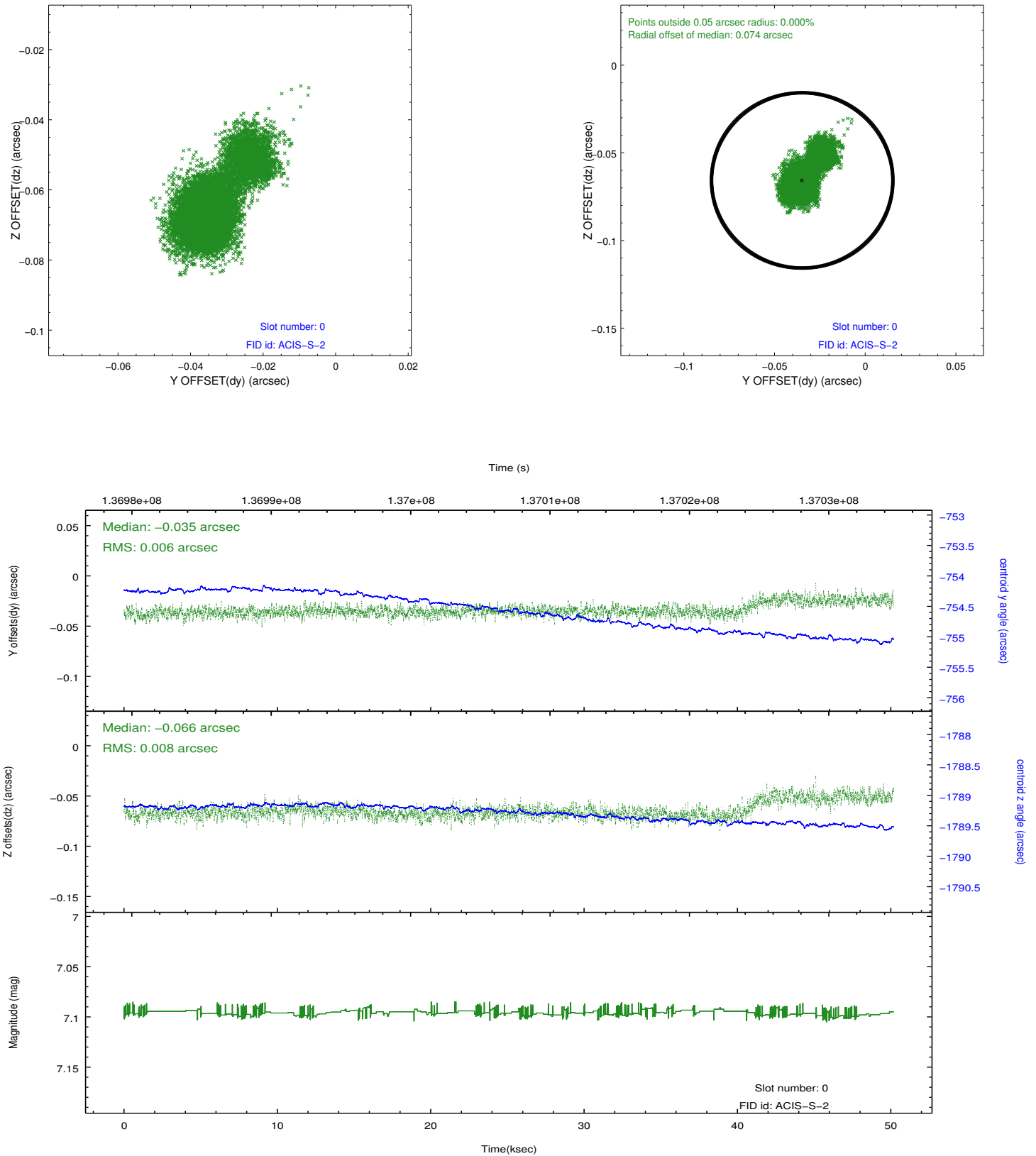


2.4.5 Slot 7

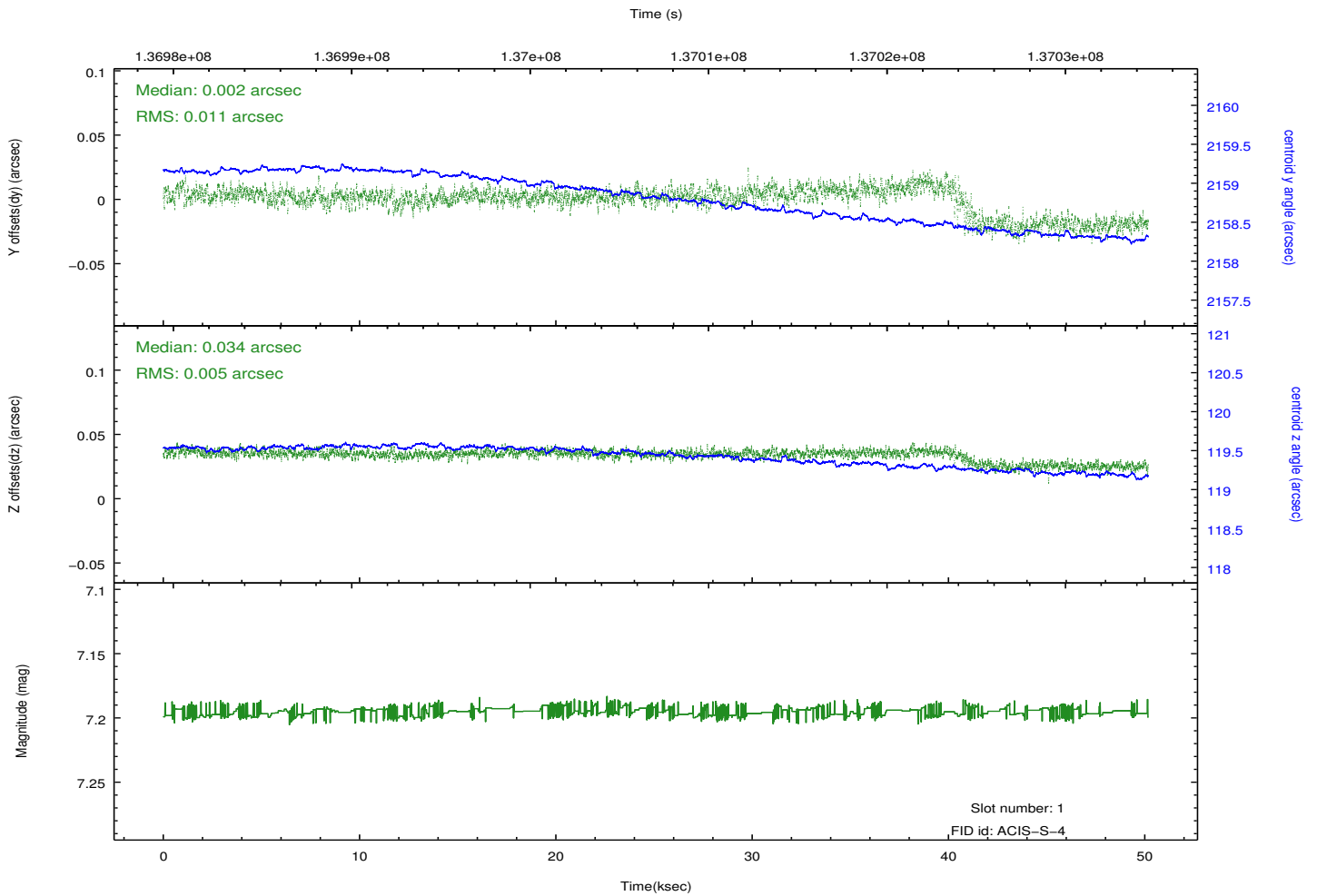
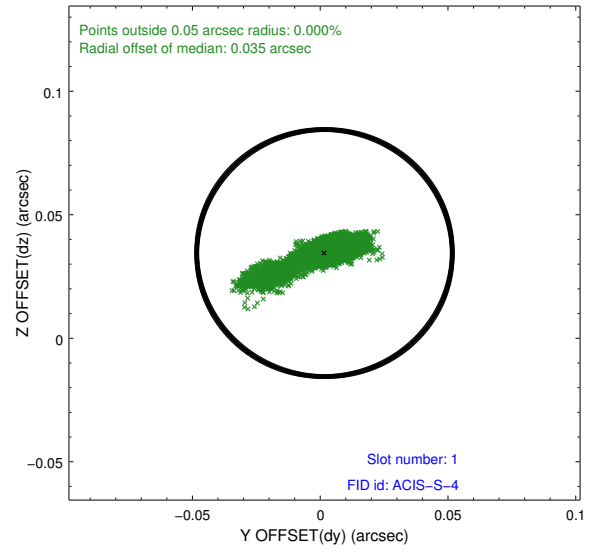
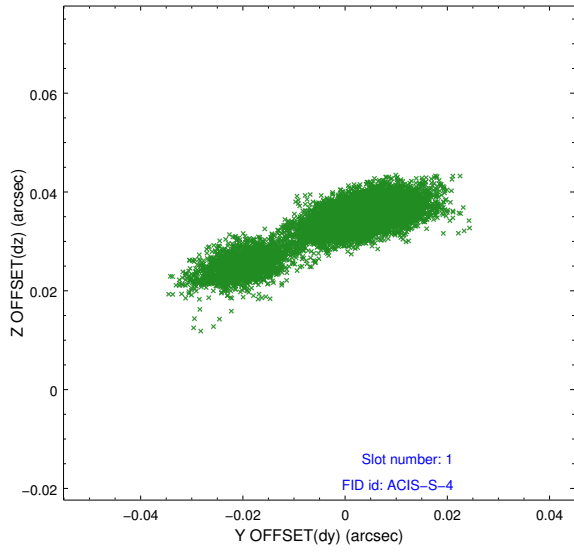


2.5 FID Slots

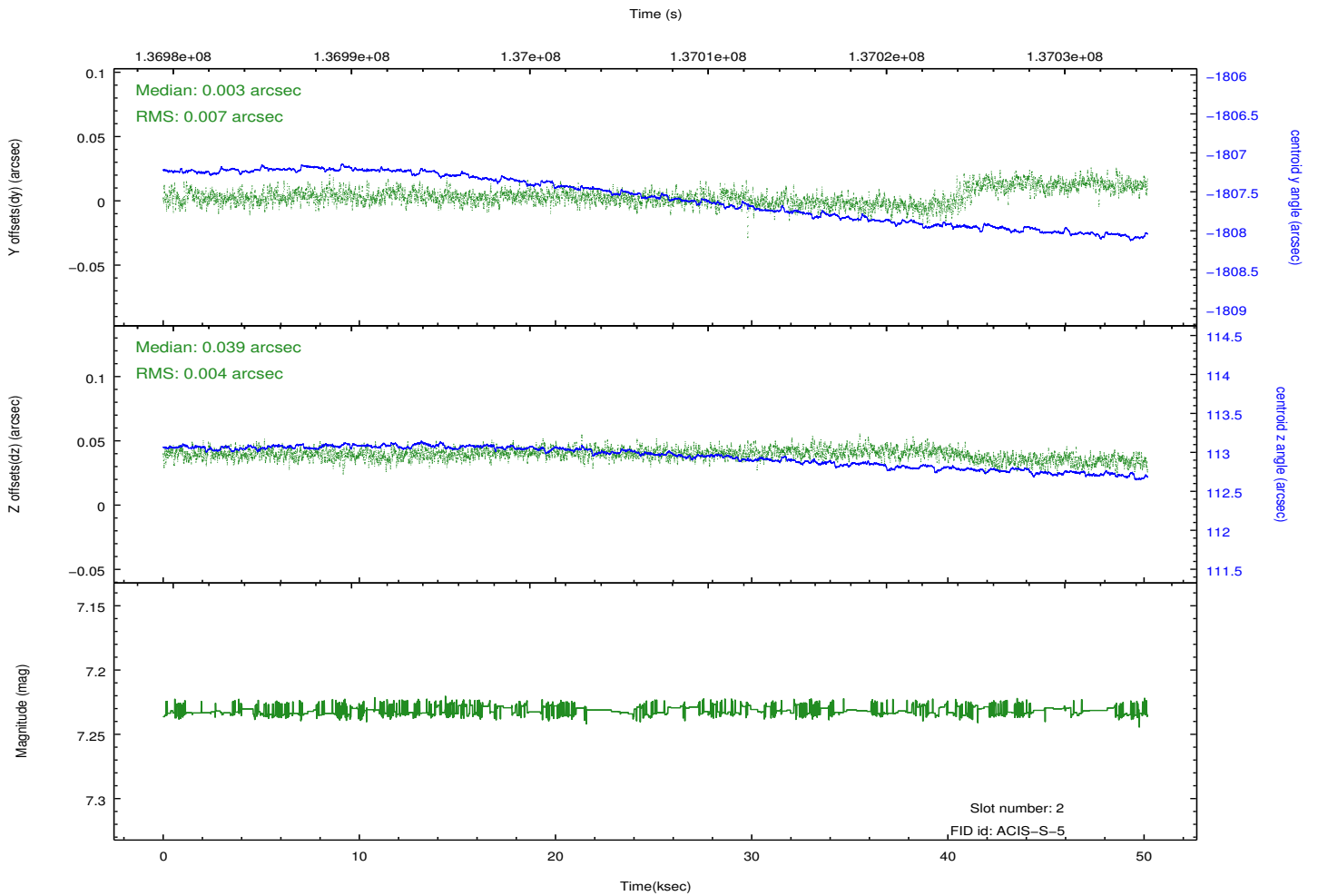
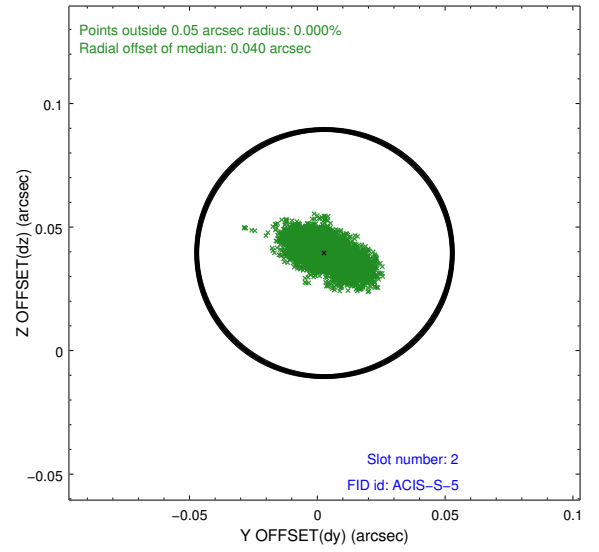
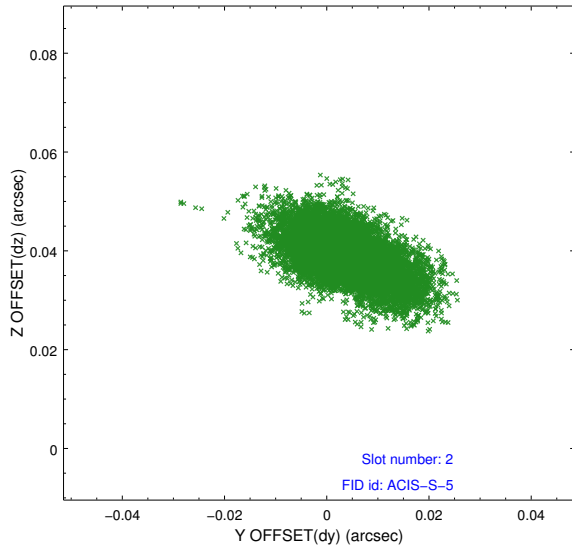
2.5.1 Slot 0



2.5.2 Slot 1

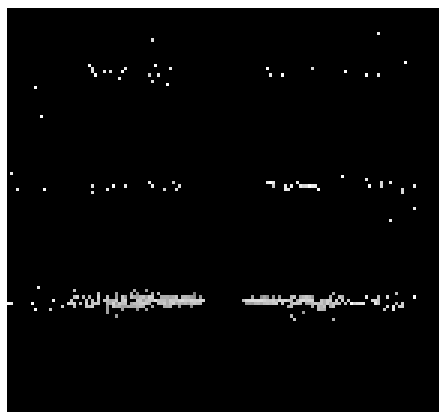


2.5.3 Slot 2

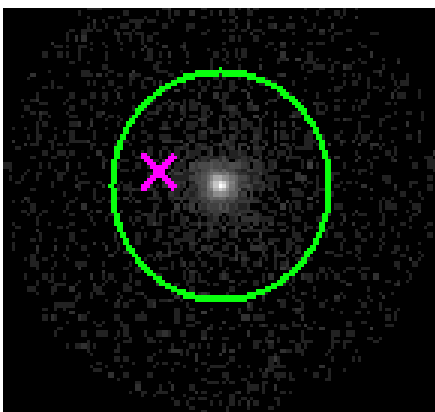


3 Gratings

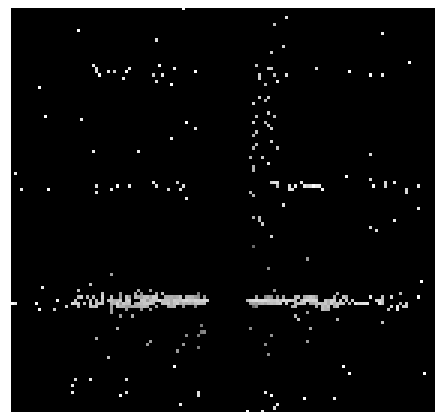
3.1 HEG Arm



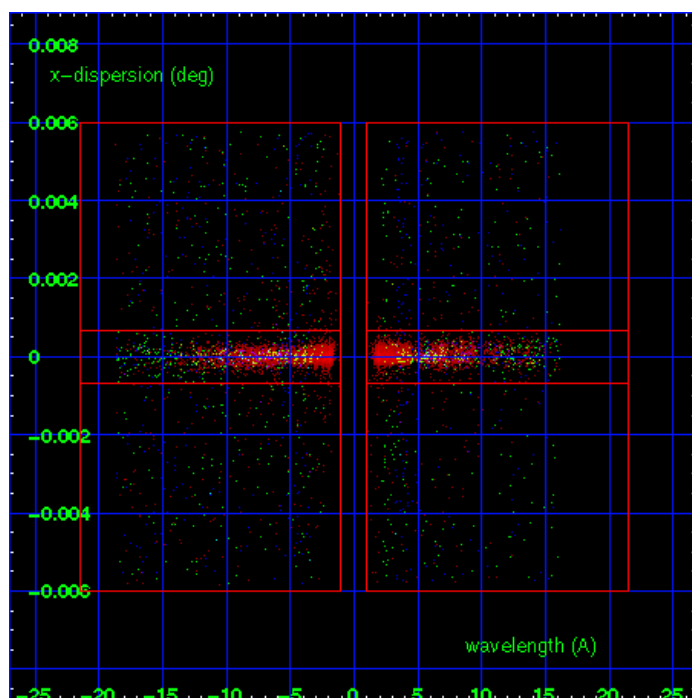
HEG Order Sort 123



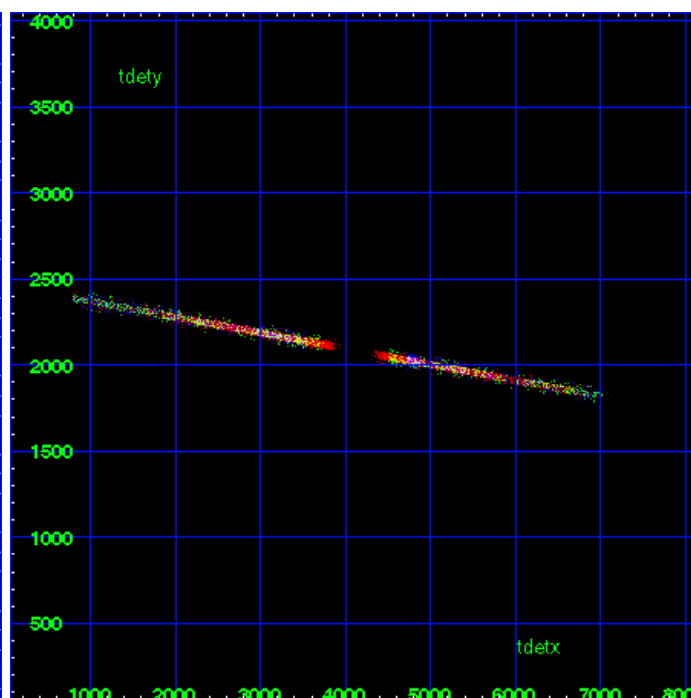
HEG Zero Order



HEG Order Sort ALL

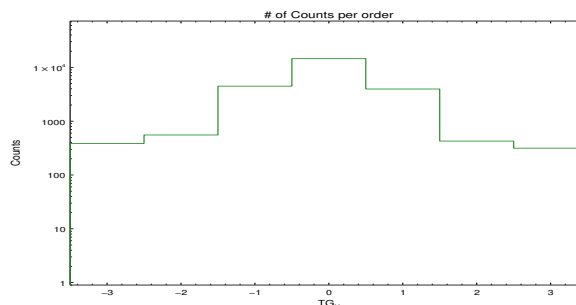


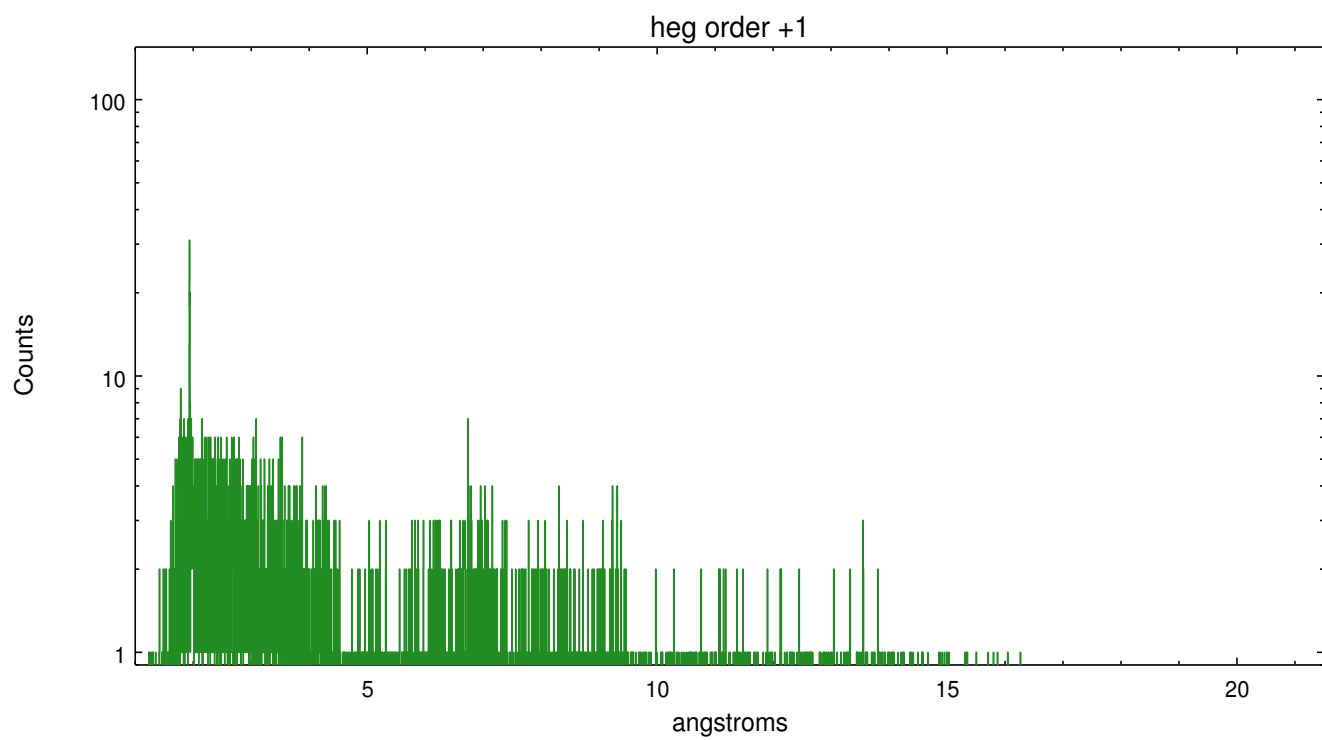
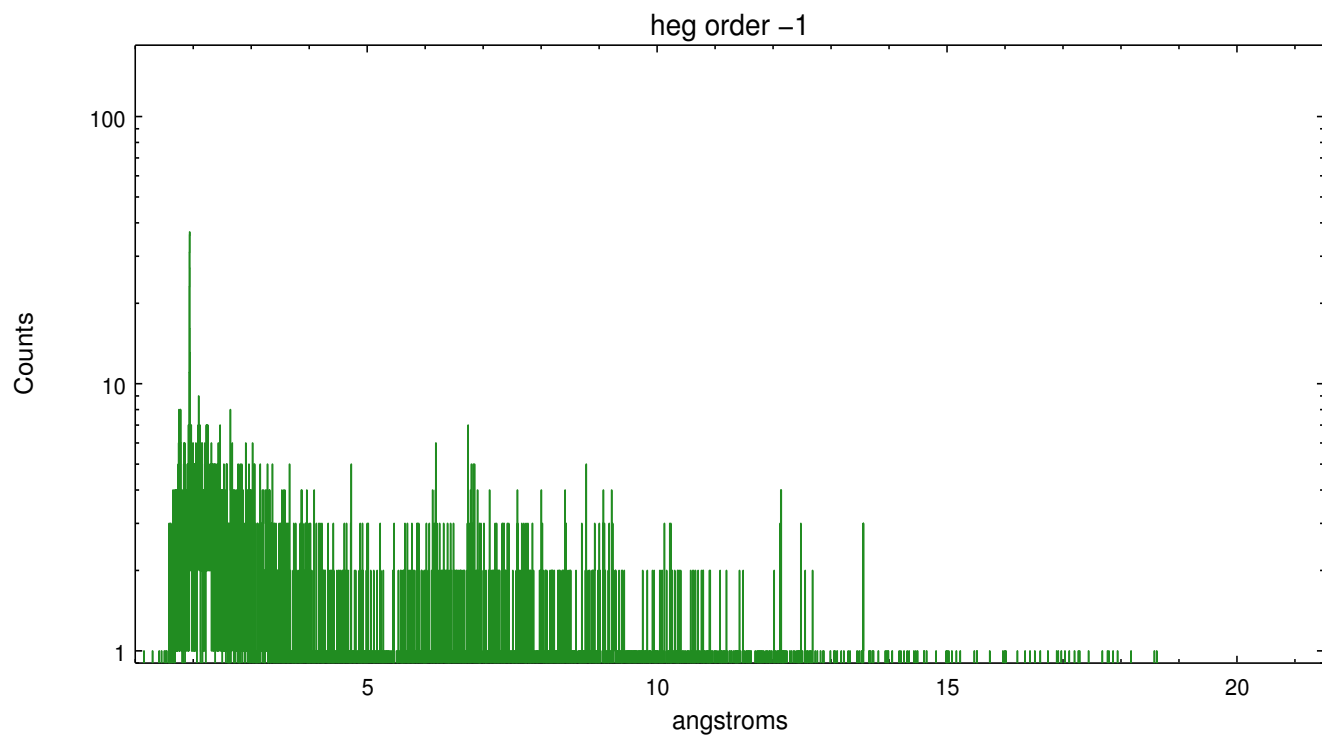
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	386	554	4477	14534	3961	427	315

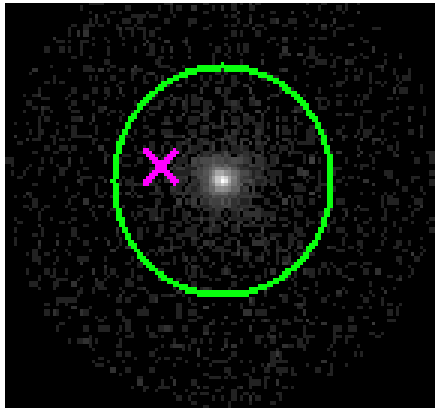




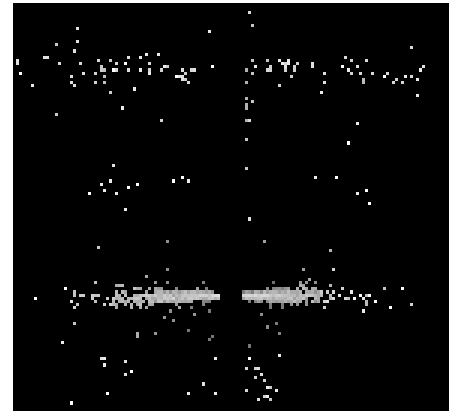
3.2 MEG Arm



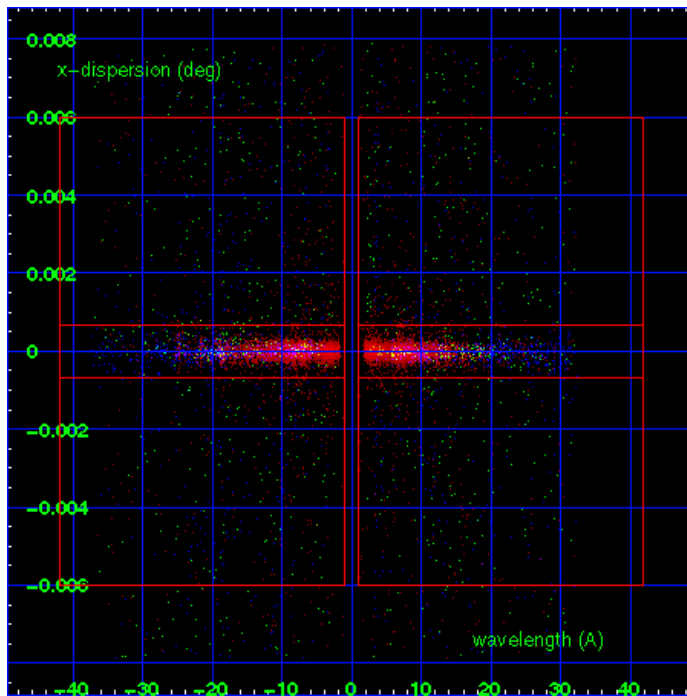
MEG Order Sort 123



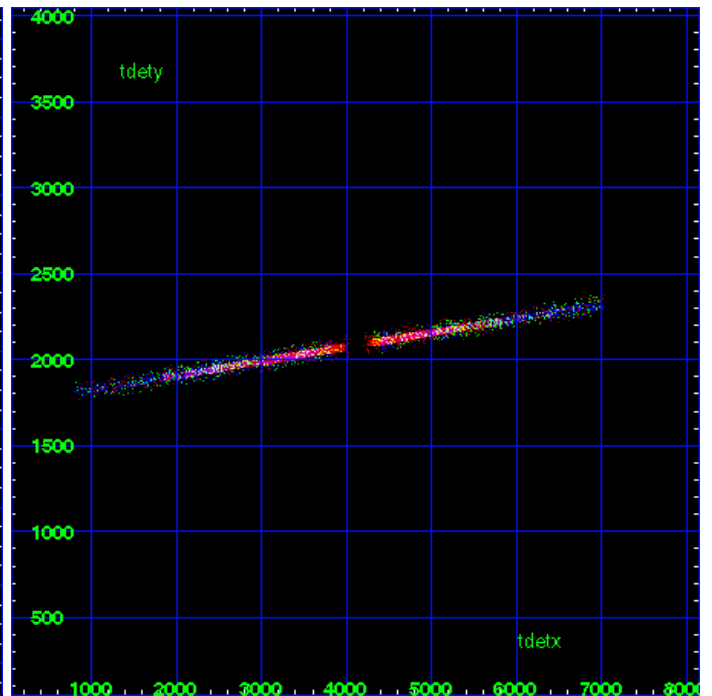
MEG Zero Order



MEG Order Sort ALL

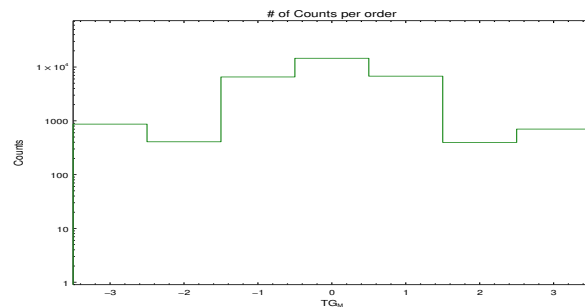


Spot Image MEG

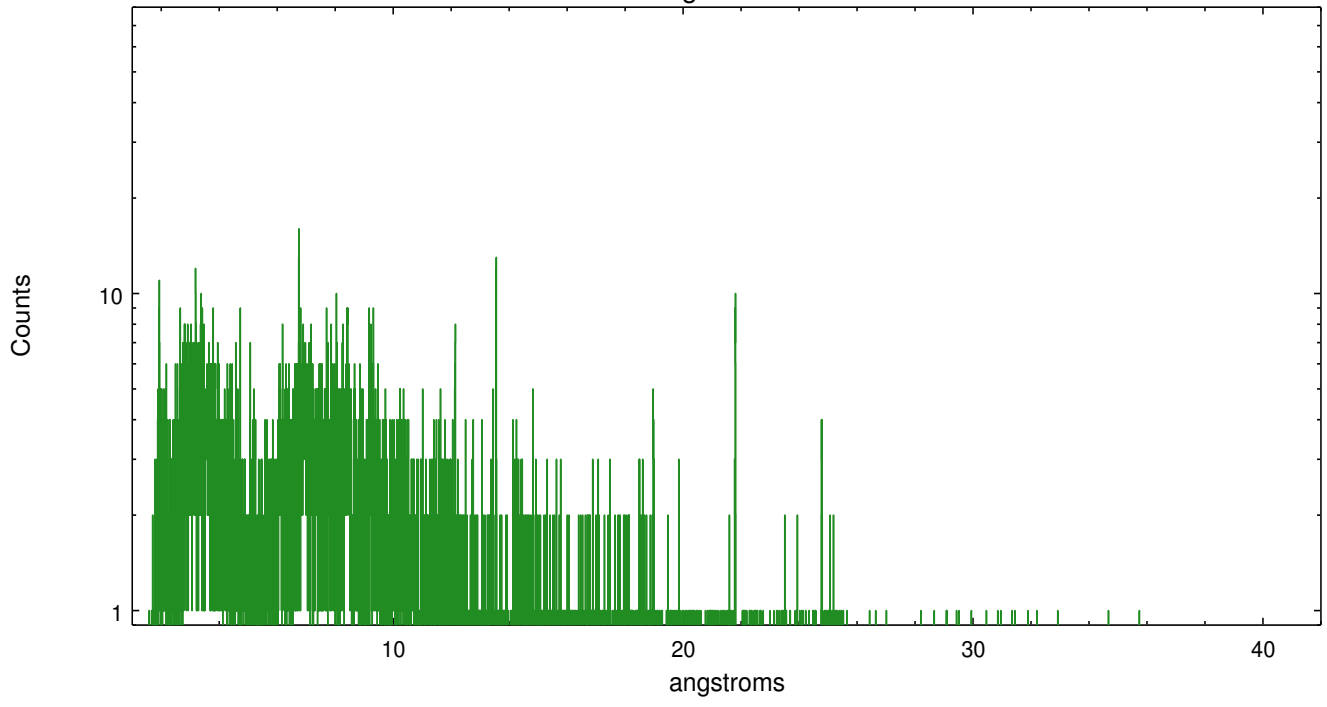


Full Detector MEG

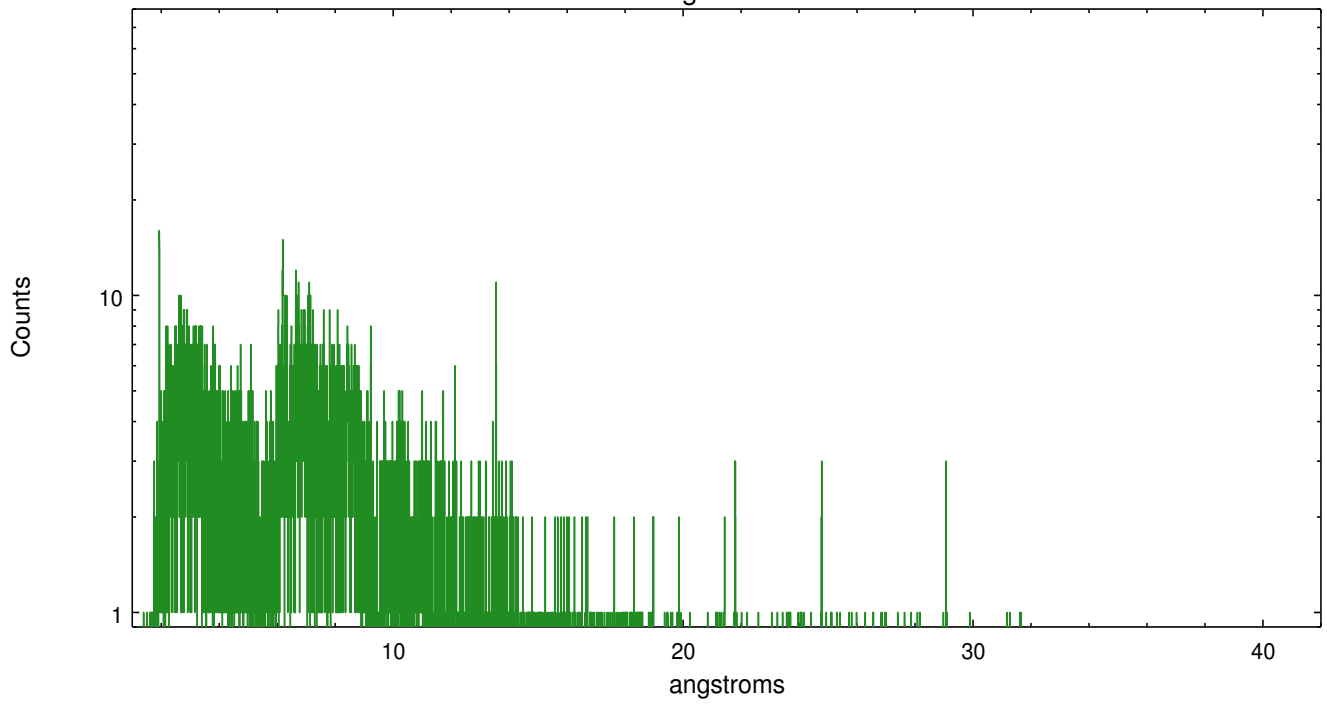
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	868	408	6538	14534	6760	397	702



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.10.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	50.175

A.2 Comments

Phase constraint met. Preferred roll angle met within 1 degree.