

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 1020 - L2 Version 3
Chandra X-Ray Center

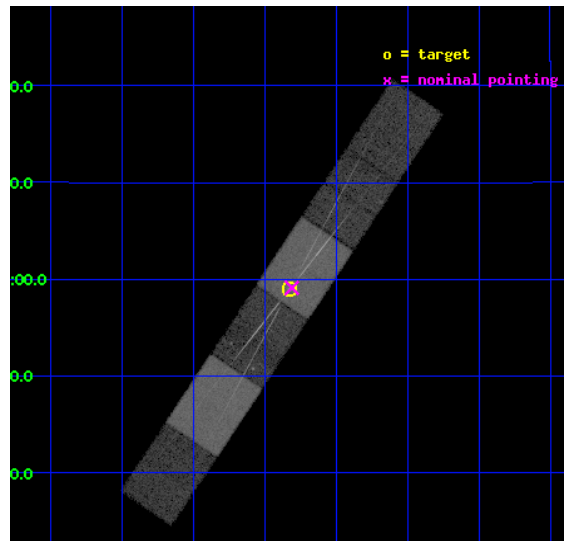
L2 Processing Date : Sep 4 2012

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
3	Gratings	17
3.1	HEG Arm	17
3.2	MEG Arm	19
A	Summary	21
A.1	Status	21
A.2	Comments	21

1 Front

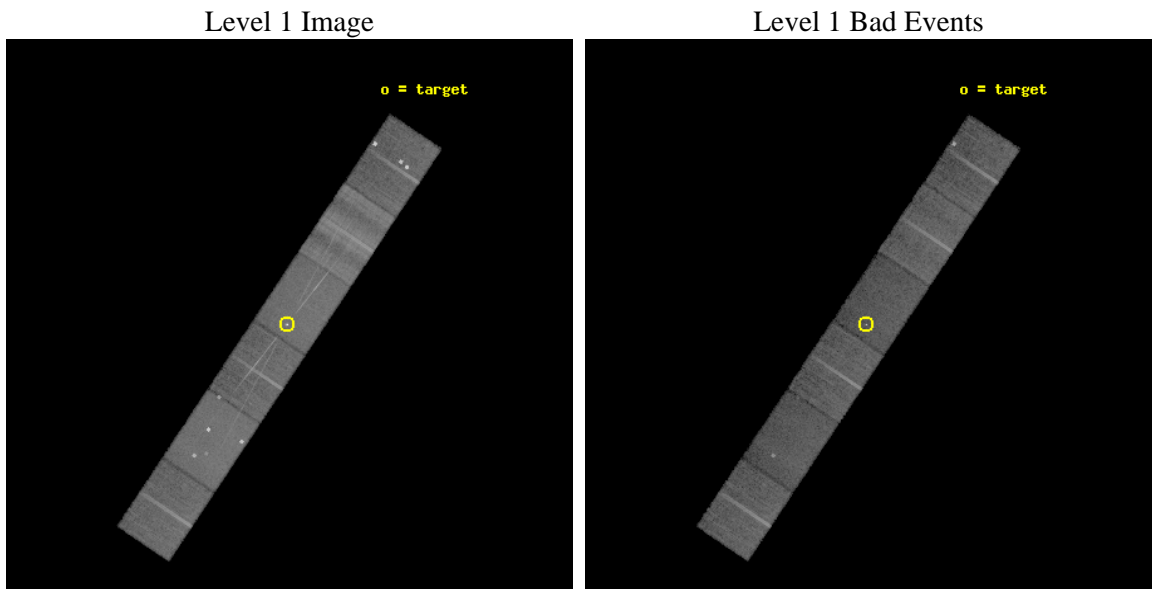
seq_num	400098	Sequence number
obs_id	1020	Observation id
title	HIGH RESOLUTION X-RAY SPECTROSCOPY OF THE PRECESSING JET IN SS 433 (PART II)	Proposal title
observer	Prof Claude Canizares	Principal investigator
object	SS 433	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	287.95625	Observer's specified target RA [deg]
dec_targ	4.982778	Observer's specified target Dec [deg]
ra_nom	287.952488401	Nominal RA [deg]
dec_nom	4.9852437893123	Nominal Dec [deg]
roll_nom	303.74329696179	Nominal Roll [deg]
revision	3	Processing version of data
ontime	23050.0	Sum of GTIs [s]
livetime	22677.72250732	Livetime [s]
ontime4	23047.459009841	Sum of GTIs [s]
ontime5	23050.0	Sum of GTIs [s]
ontime6	23050.0	Sum of GTIs [s]
ontime7	23050.0	Sum of GTIs [s]
ontime8	23050.0	Sum of GTIs [s]
ontime9	23050.0	Sum of GTIs [s]
l2events	223136	Number of level 2 events



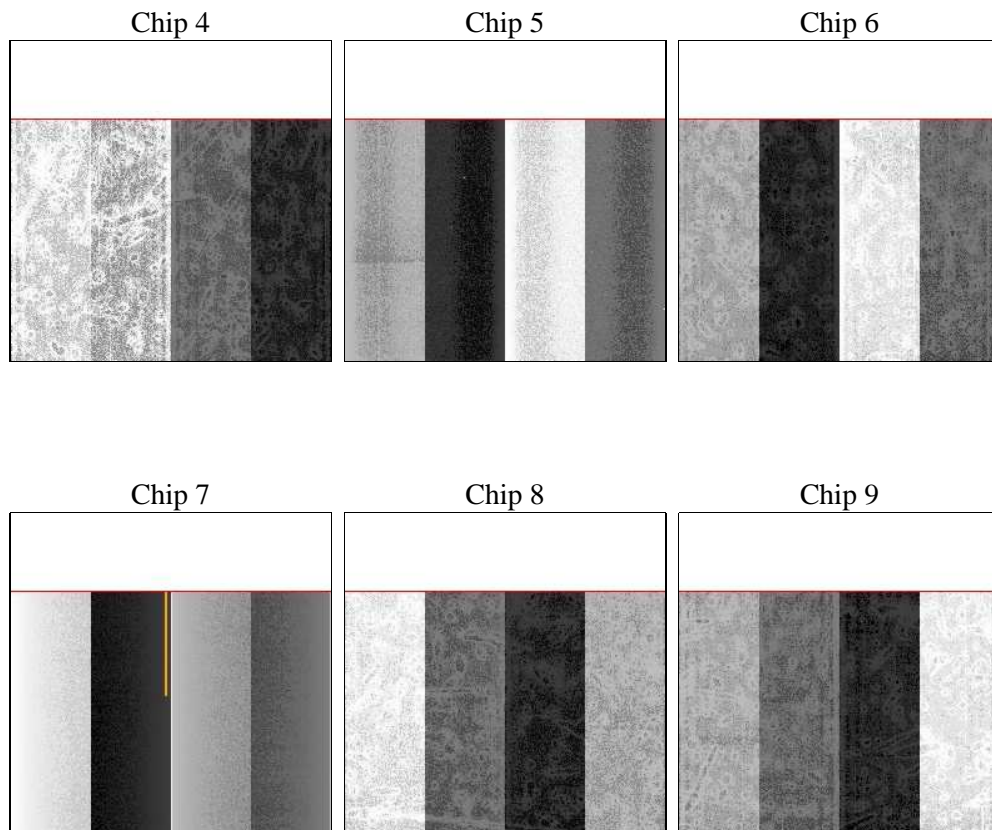
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	22896.262000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	23050.0	Sum of GTIs [s]
caldsver	4.5.1.1	 	ontime4	23047.459009841	Sum of GTIs [s]
date	2012-09-04T04:32:36	Date and time of file creation	ontime5	23050.0	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	23050.0	Sum of GTIs [s]
			ontime7	23050.0	Sum of GTIs [s]
			ontime8	23050.0	Sum of GTIs [s]
			ontime9	23050.0	Sum of GTIs [s]
			l1events	882157	Number of level 1 events

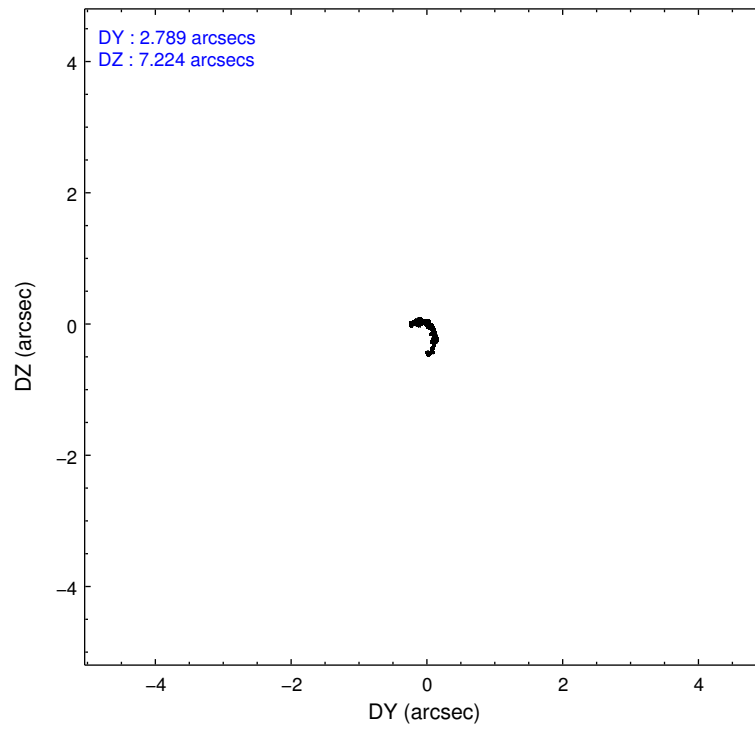
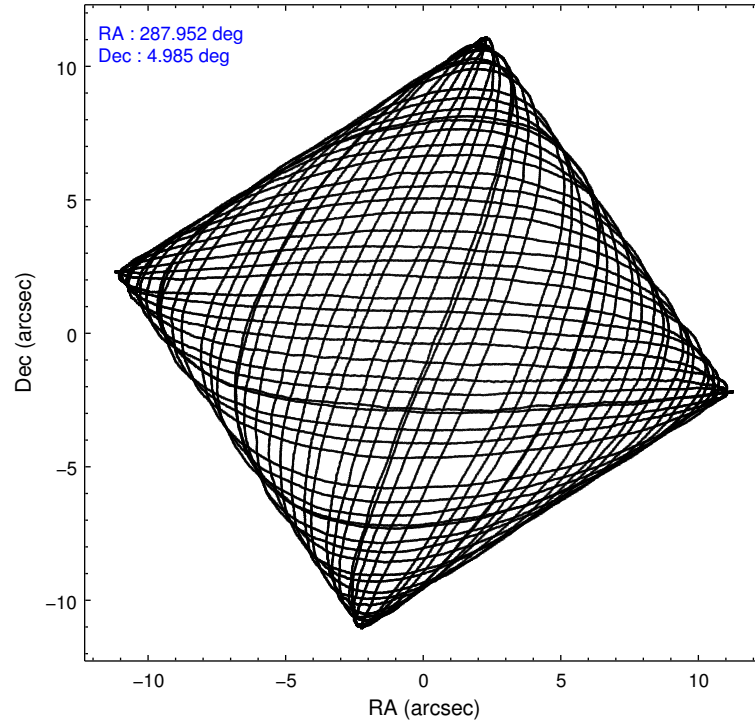
2.1.4 Events

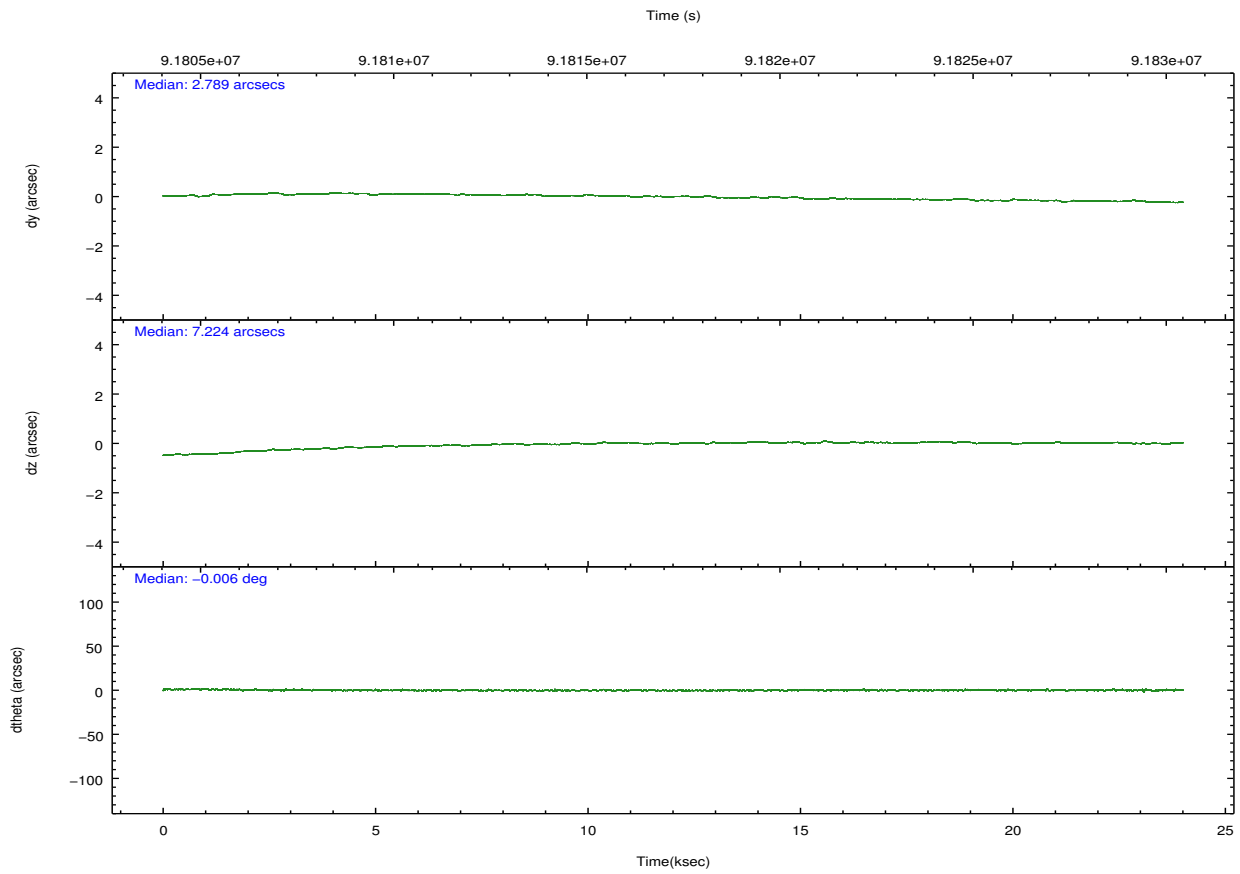
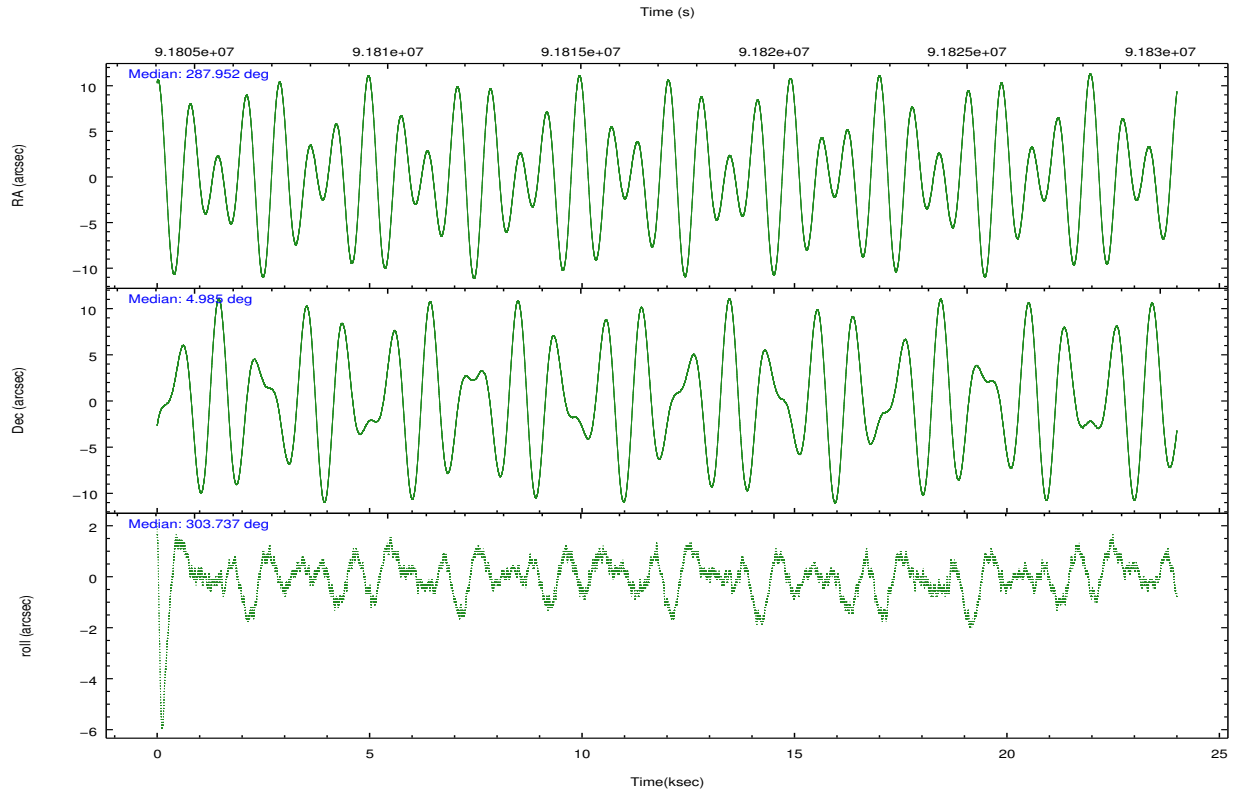
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	120772	167777	122143	153759	188751	128955	grade 0 events	9252	23469	13748	9799	23683	29025
rejected events	100339	73710	96678	72875	109732	89811		7%	13%	11%	6%	12%	22%
rejected %	83%	43%	79%	47%	58%	69%	grade 1 events	74	220	83	270	152	2073
								0%	0%	0%	0%	0%	1%
							grade 2 events	5326	25131	4739	17349	12842	3688
								4%	14%	3%	11%	6%	2%
							grade 3 events	1455	4491	1725	8225	12098	1448
								1%	2%	1%	5%	6%	1%
							grade 4 events	1363	4042	1685	7788	10642	1761
								1%	2%	1%	5%	5%	1%
							grade 5 events	3267	11213	3820	12651	5663	3954
								2%	6%	3%	8%	3%	3%
							grade 6 events	3040	36958	3571	37737	19759	3225
								2%	22%	2%	24%	10%	2%
							grade 7 events	96995	62253	92772	59940	103912	83781
								80%	37%	75%	38%	55%	64%

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	287.927783	287.952488401004	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	4.997163	4.985243789312264	Subarray start row	1	1
[deg] Pointing Roll	303.588824	303.7432969617905	Subarray row count	774	774
[s] Window start time (MET)	90860464.184000	90860464.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	92264464.184000	92264464.184000	[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	13.082000	13.082000			
[d] Phase epoch (MJD)	49595.700000	49595.700000			
Phase start	0.200000	0.200000			
Phase end	0.800000	0.800000			
Phase start error	0.050000	0.050000			
Phase end error	0.050000	0.050000			
[s] Observation start time (MET)	91806337.184000	91804914.85328899			
Observation start date	2000-11-28T13:44:33	2000-11-28T13:21:54			
[s] Observation end time (MET)	91829234.184000	91829548.16673			

2.3 Aspect



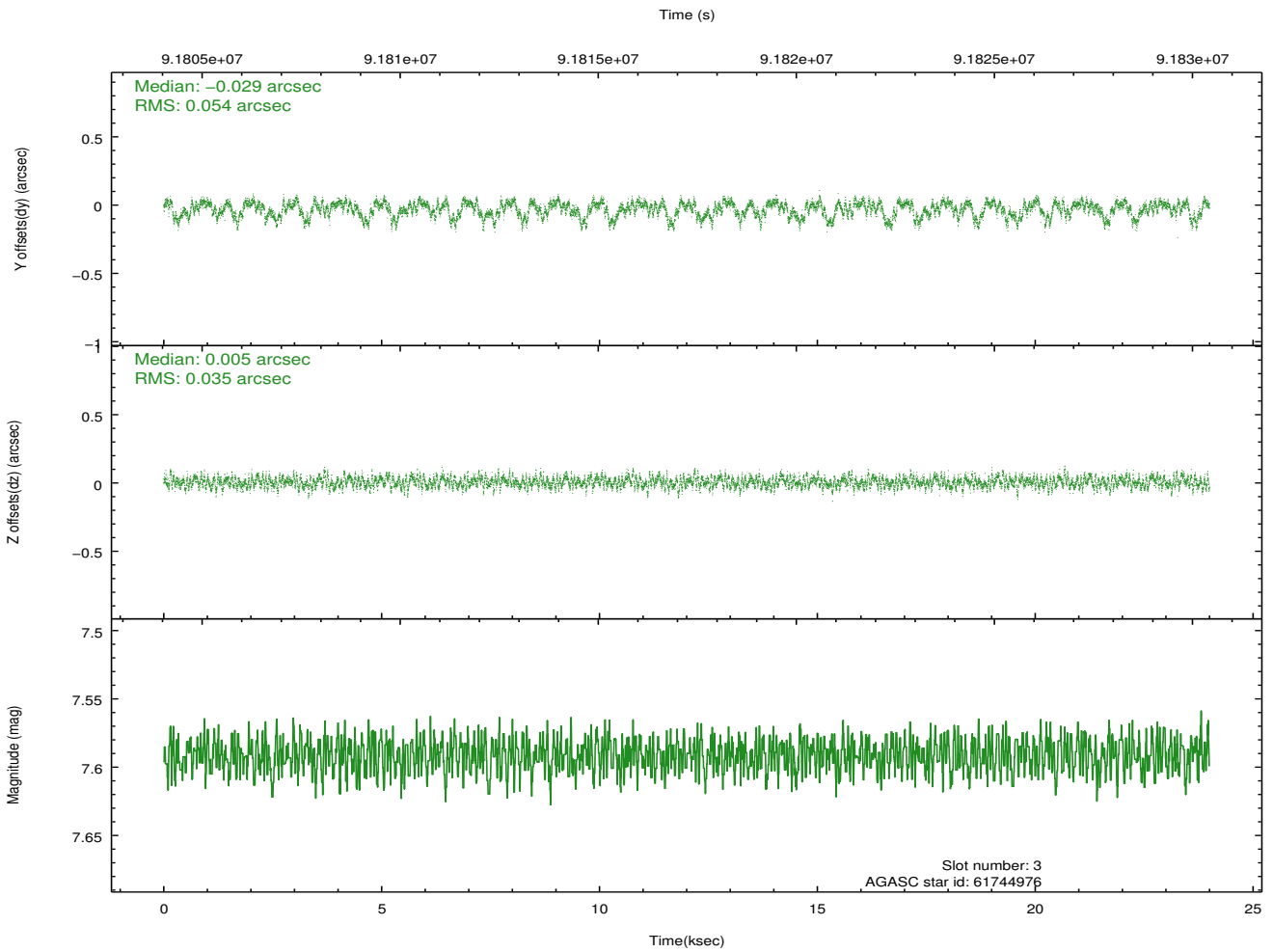
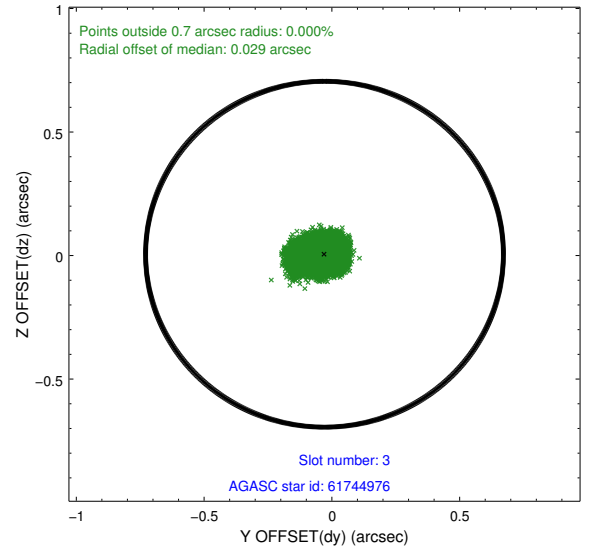
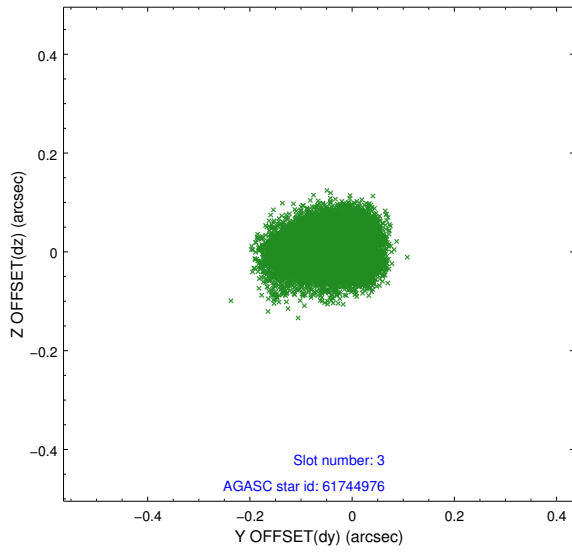


Slot Statistics

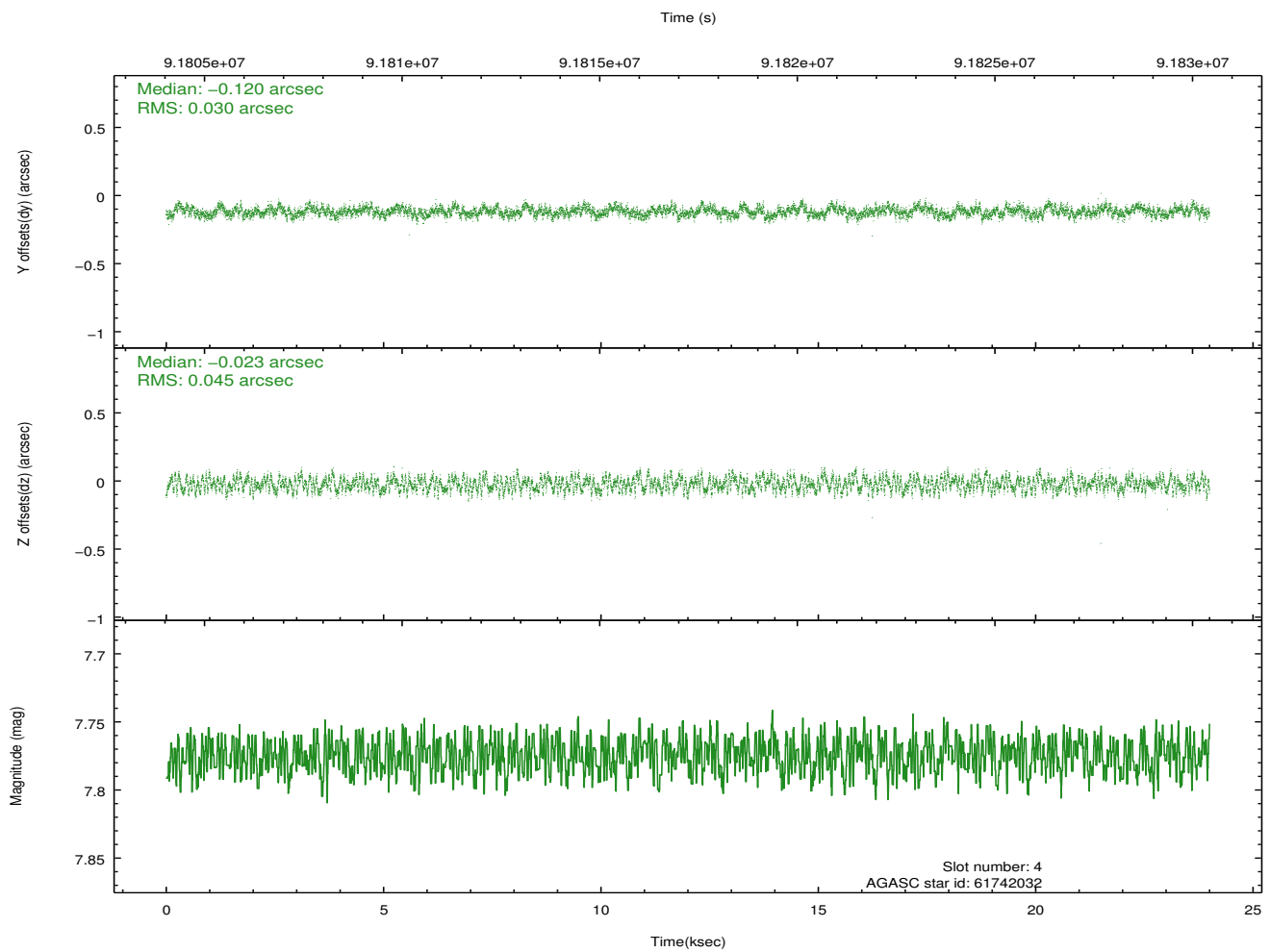
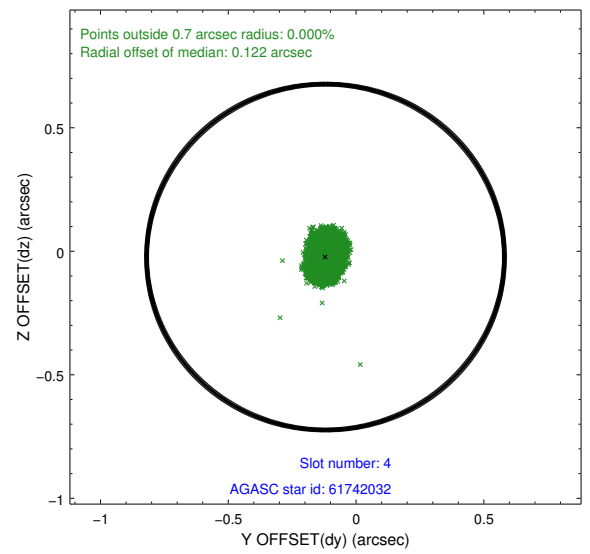
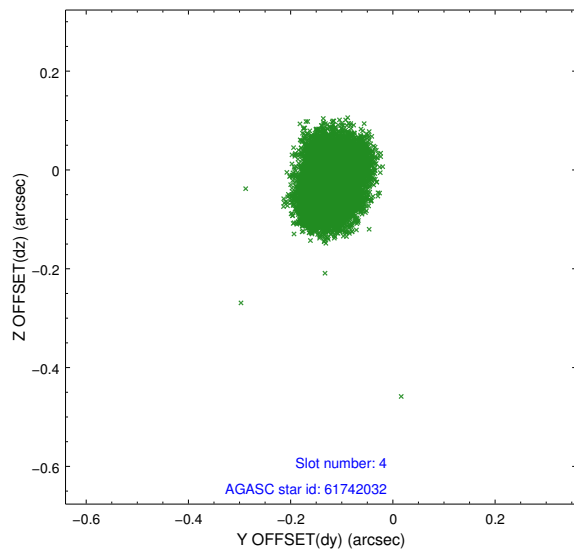
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.19	5854	-0.007	0.037	0.008	0.014	0.000000	0.000000	940.85	-1786.00
1	FID	ACIS-S-5	7.24	5855	0.004	0.014	0.010	0.018	0.000000	0.000000	-1808.07	111.37
2	FID	ACIS-S-6	7.37	5854	-0.018	-0.039	0.008	0.015	0.000000	0.000000	406.24	755.43
3	GUIDE	61744976	7.59	11709	-0.029	0.005	0.067	0.113	288.430364	5.306675	68.50	2117.71
4	GUIDE	61742032	7.78	11709	-0.120	-0.023	0.058	0.090	287.149645	5.118464	-1907.77	-2081.75
5	GUIDE	61743800	7.47	11708	-0.002	-0.106	0.058	0.092	287.776811	5.274666	-1130.95	101.61
6	GUIDE	61738240	7.25	11708	0.112	0.002	0.055	0.088	287.996556	4.354861	2063.82	-1073.21
7	GUIDE	61745024	7.59	11708	0.046	0.125	0.050	0.080	288.156168	5.297362	-446.51	1280.07

2.4 Star Slots

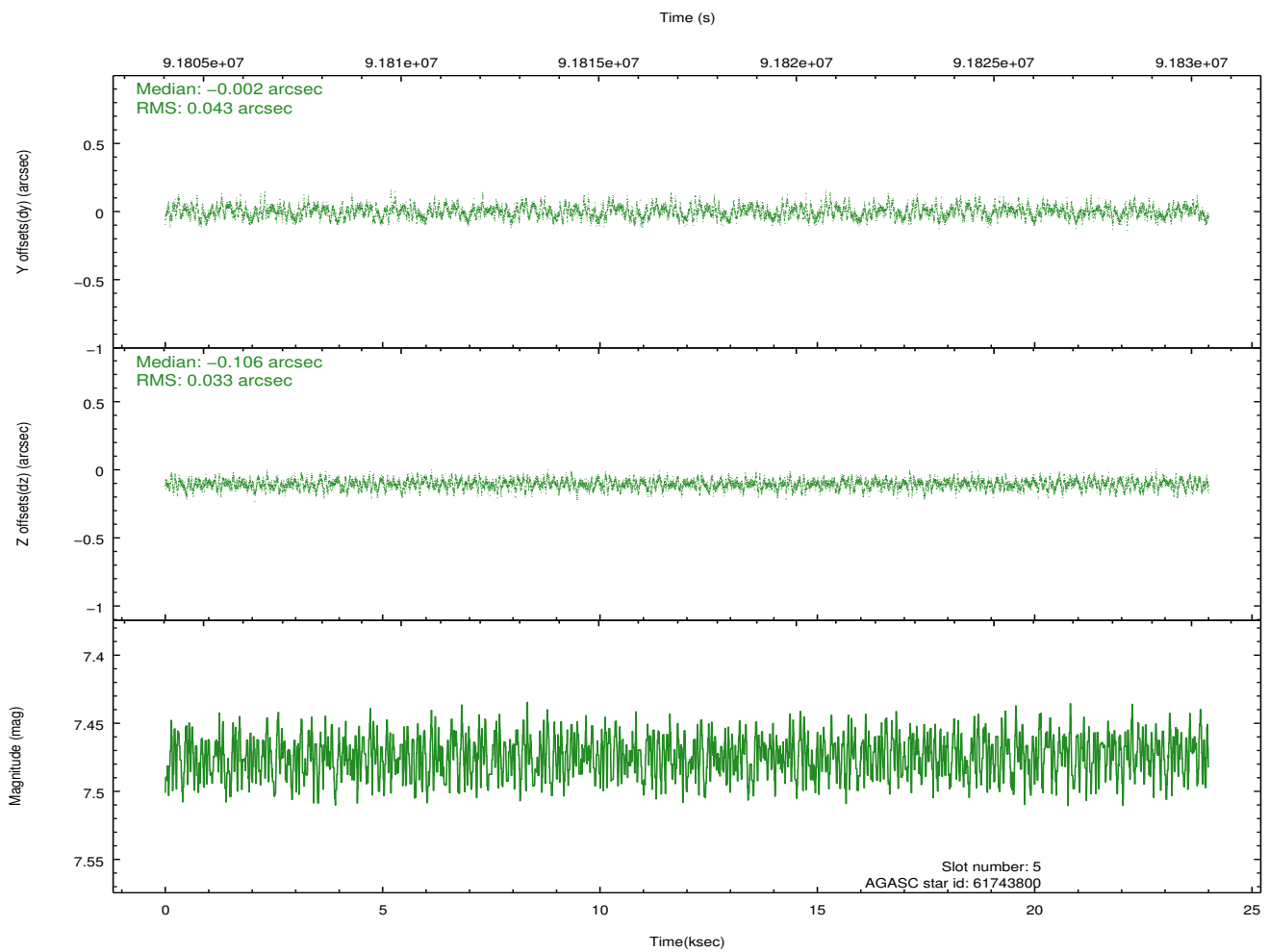
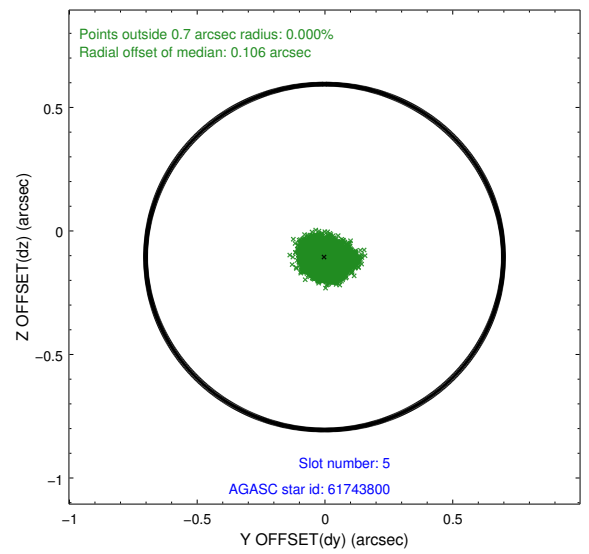
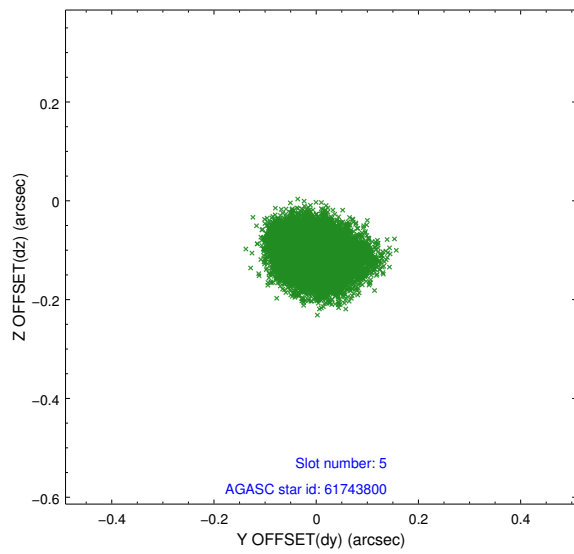
2.4.1 Slot 3



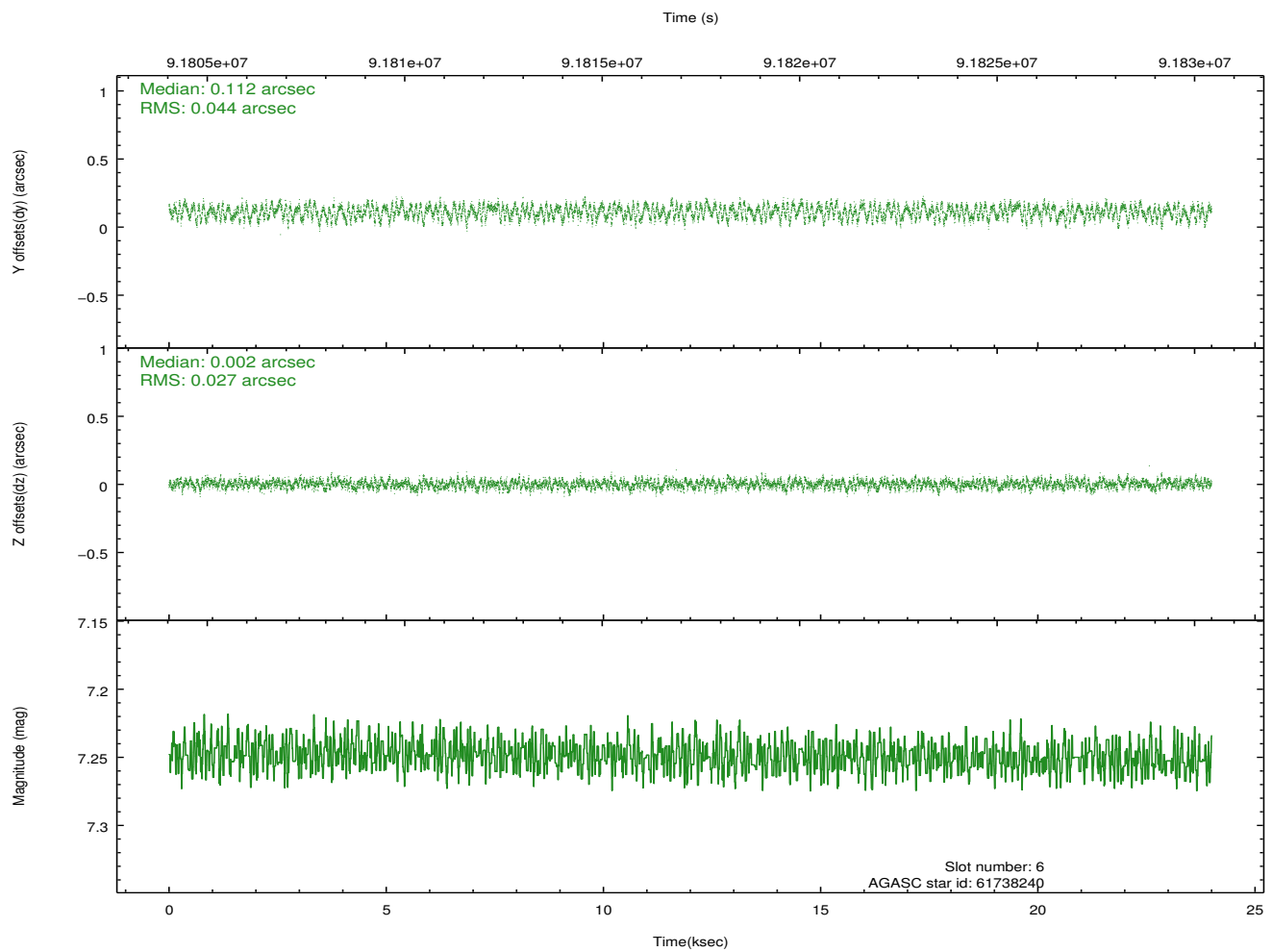
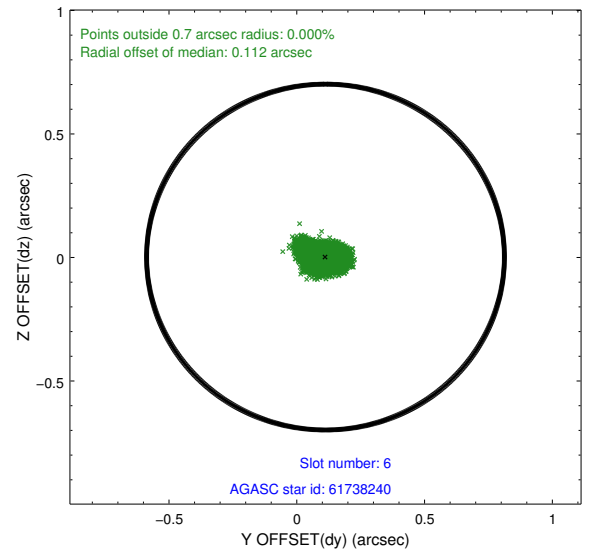
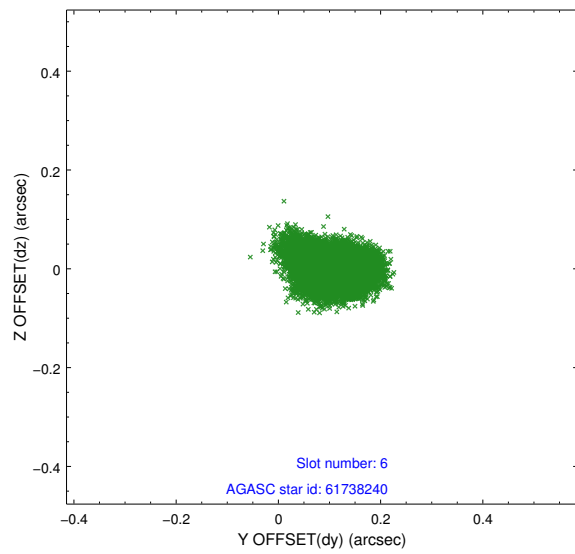
2.4.2 Slot 4



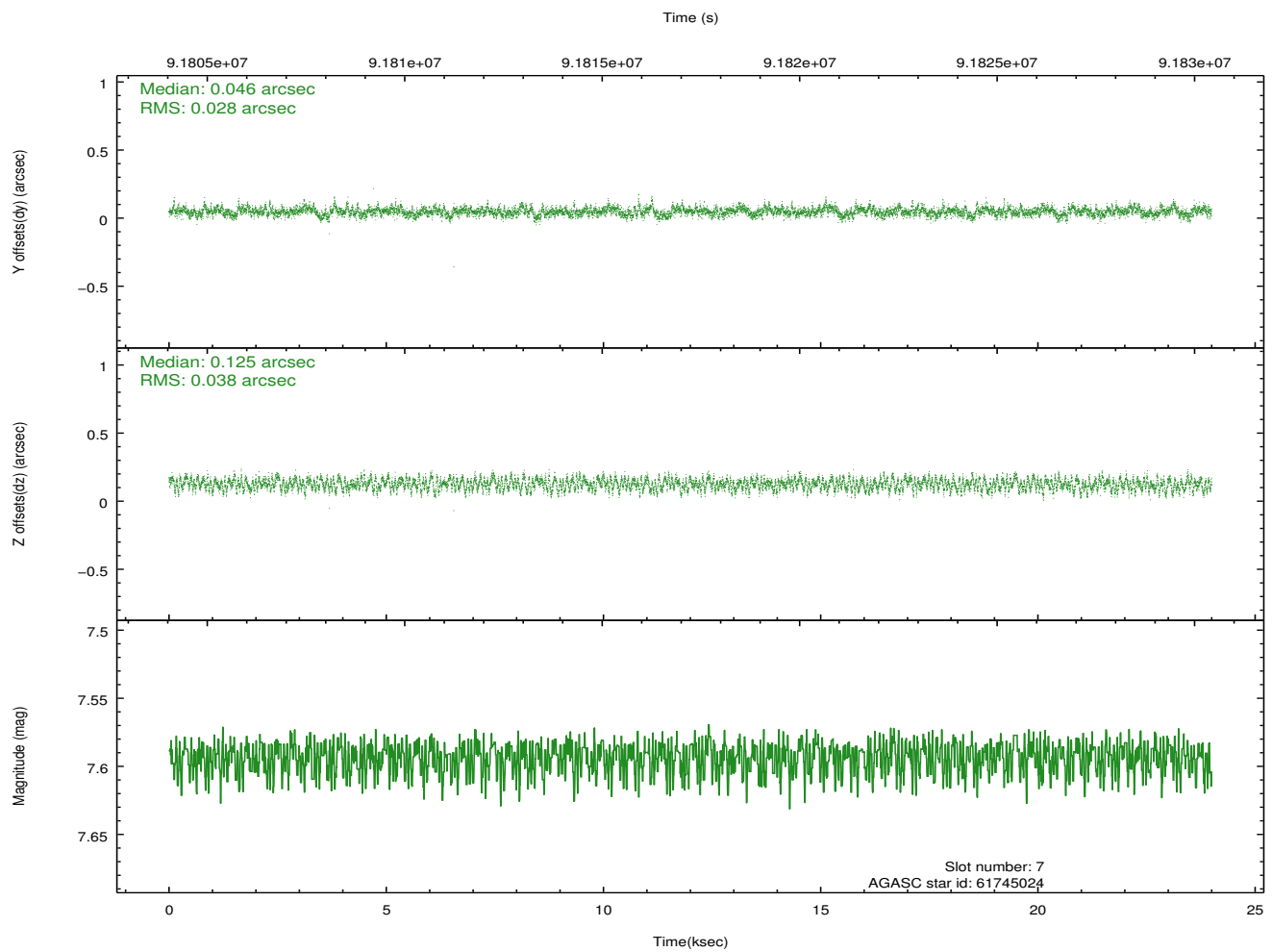
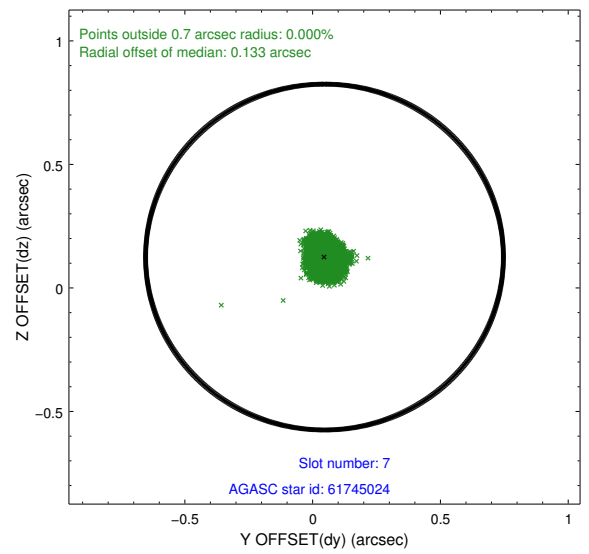
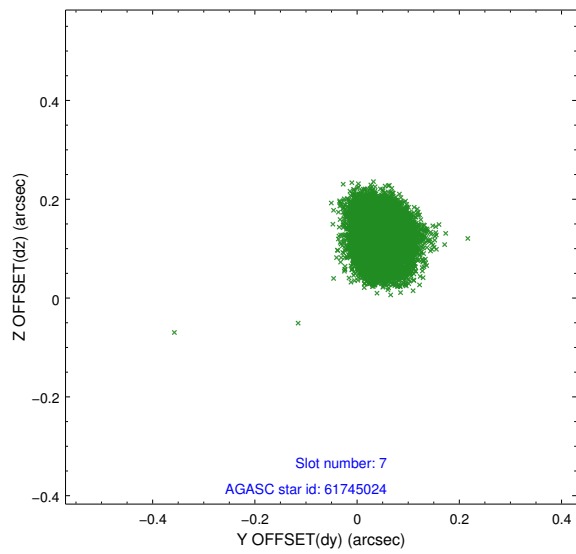
2.4.3 Slot 5



2.4.4 Slot 6

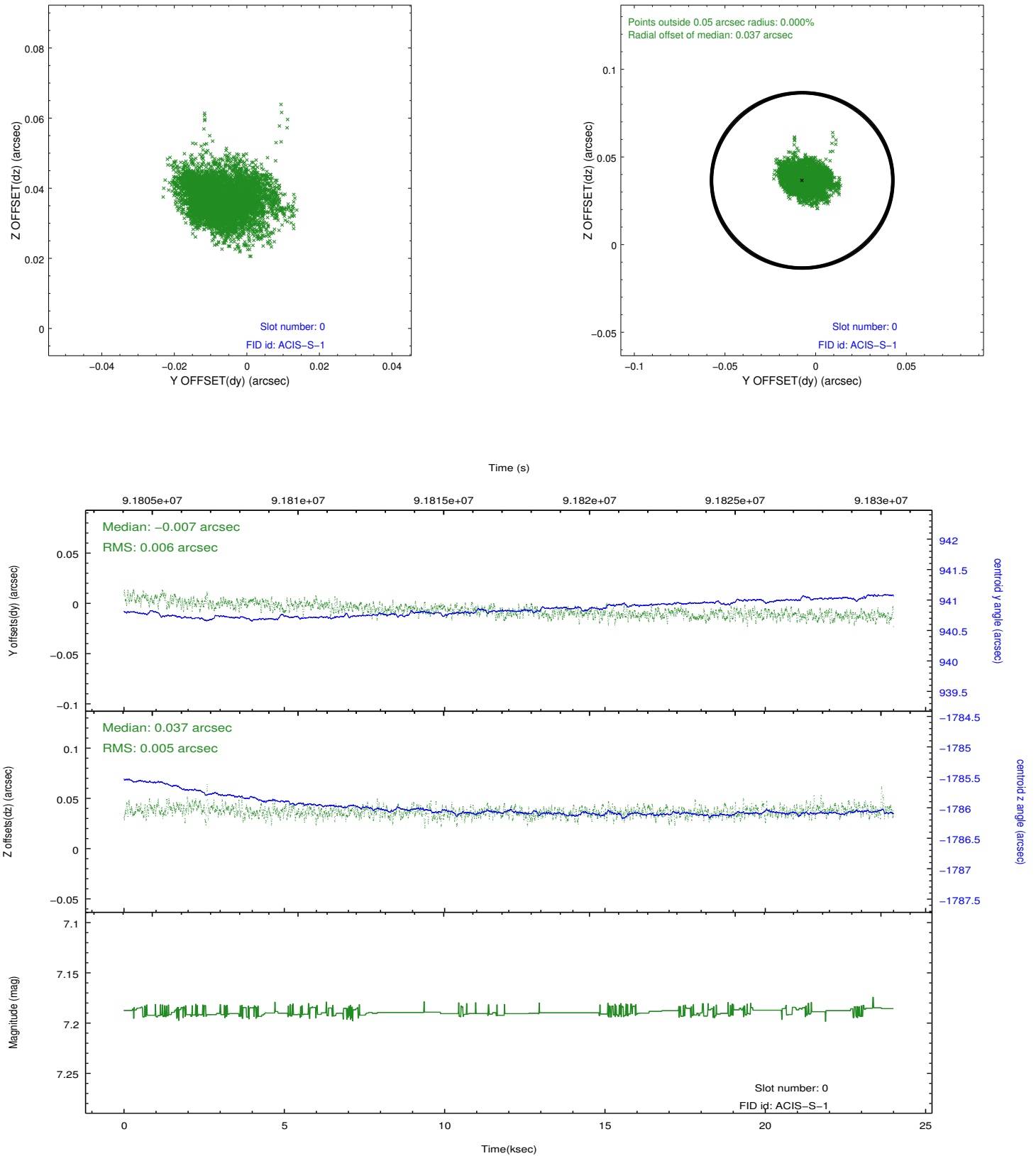


2.4.5 Slot 7

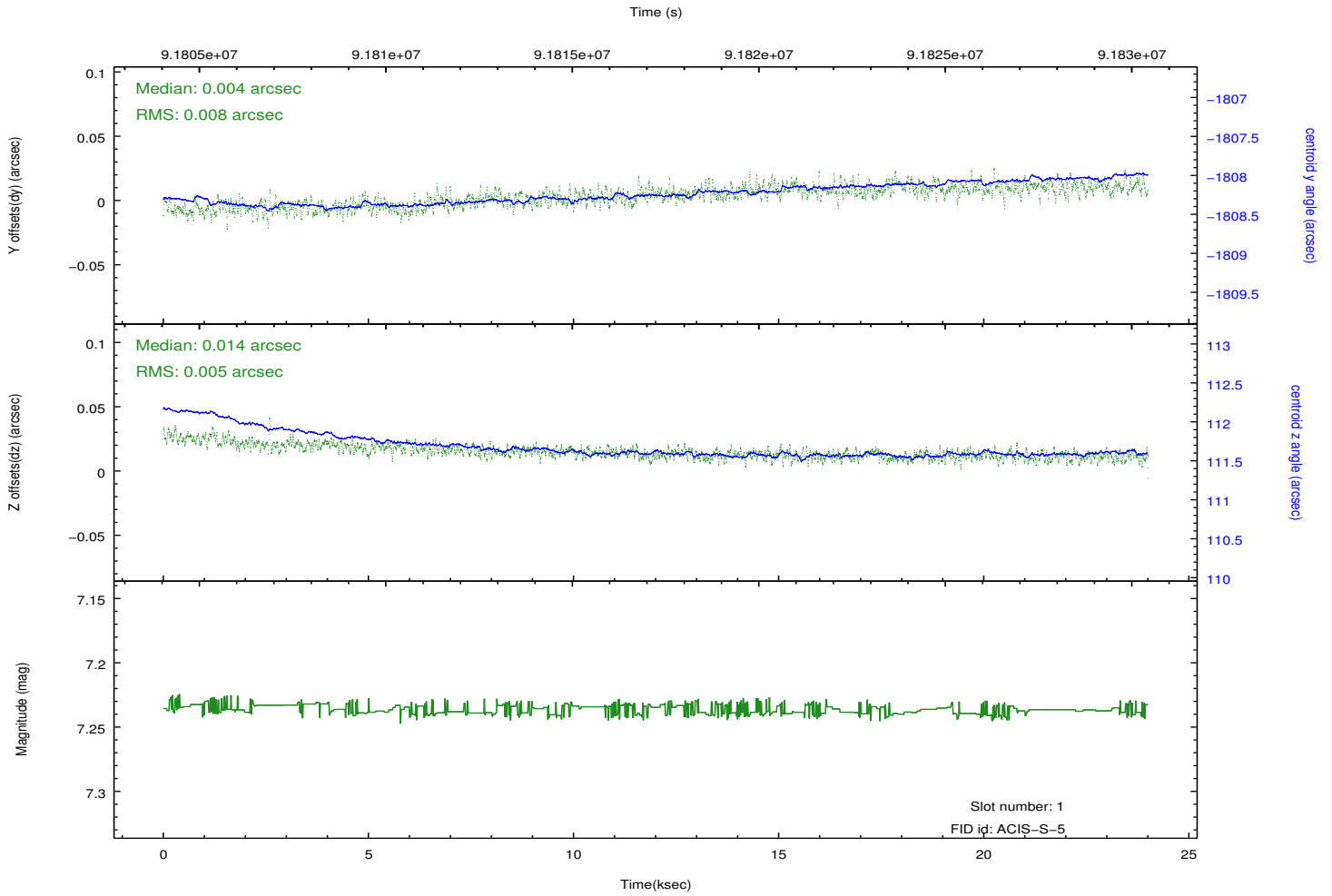
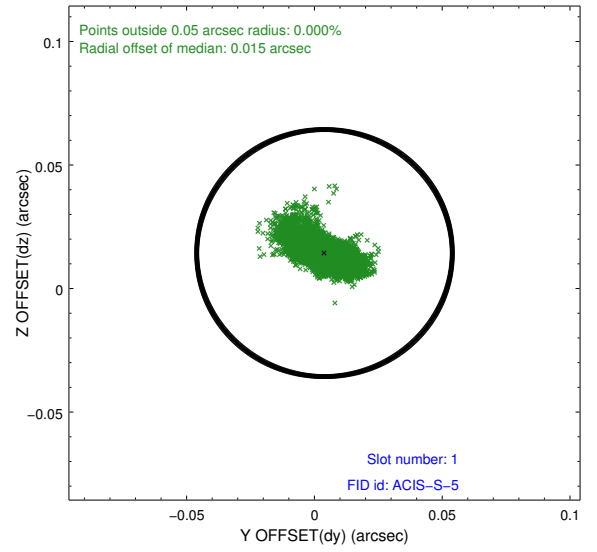
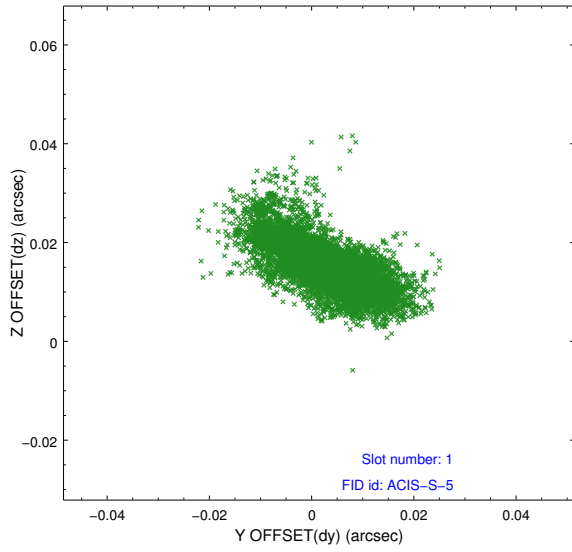


2.5 FID Slots

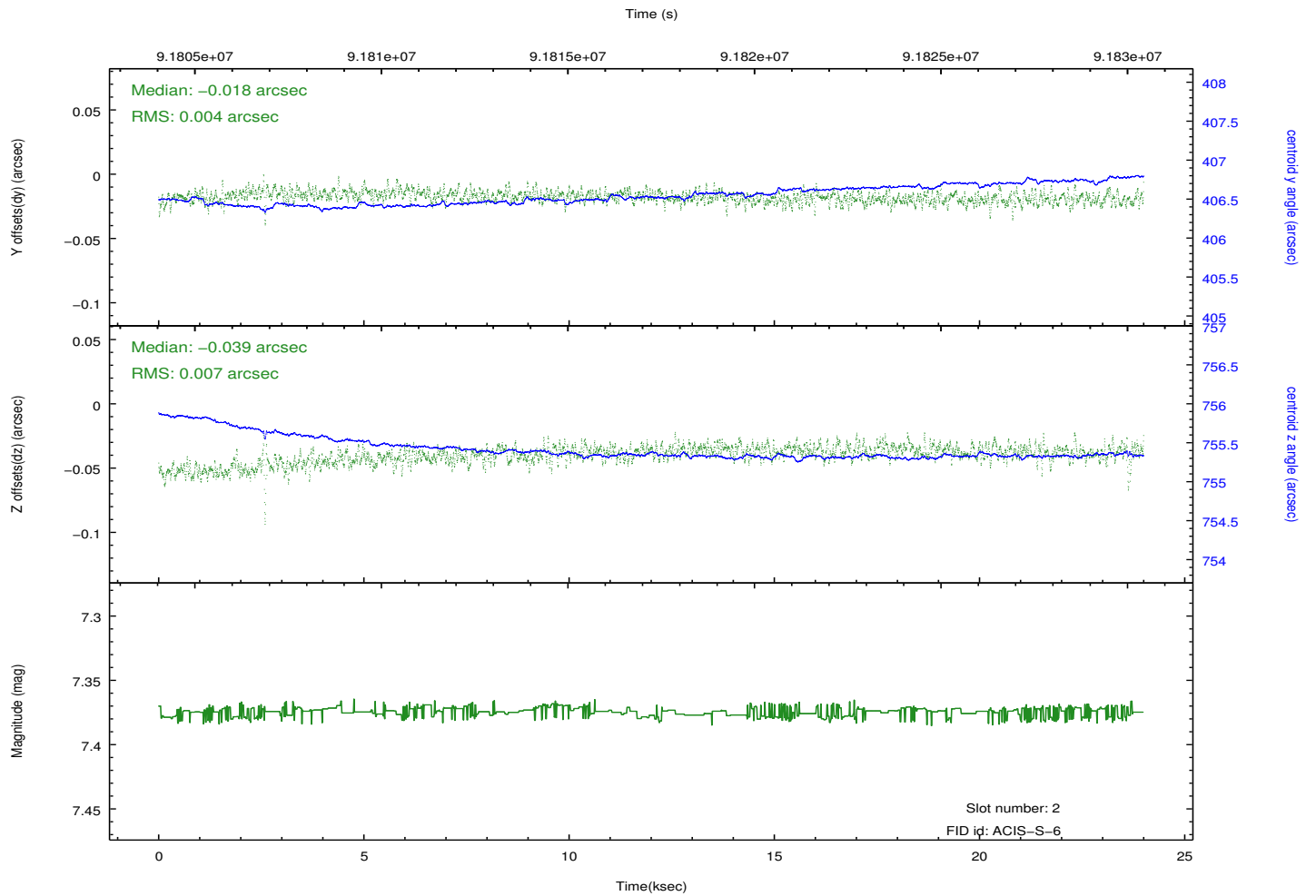
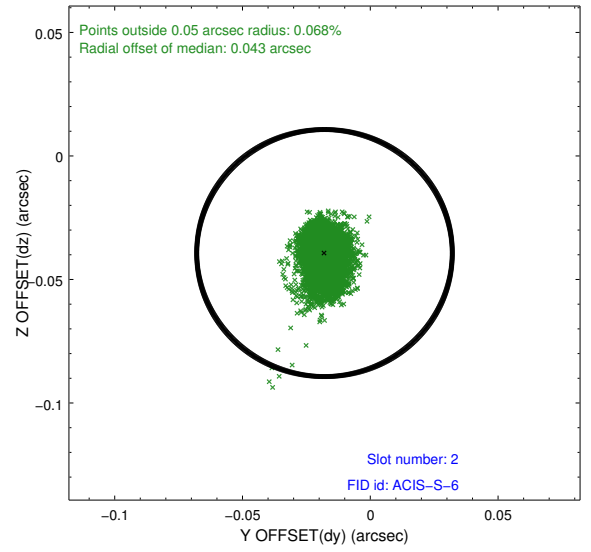
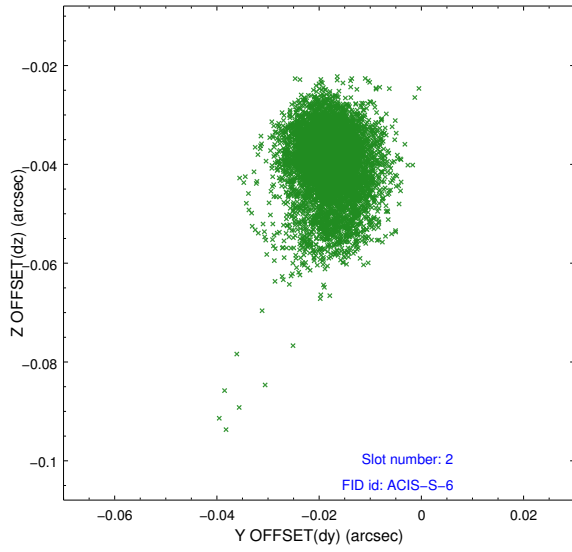
2.5.1 Slot 0



2.5.2 Slot 1

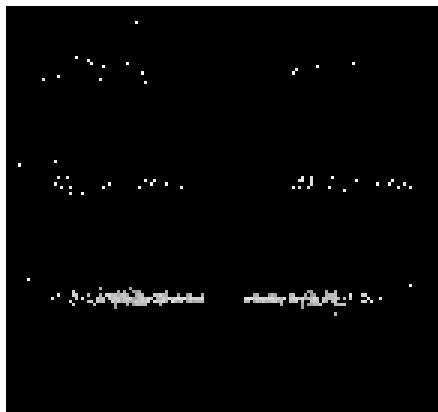


2.5.3 Slot 2

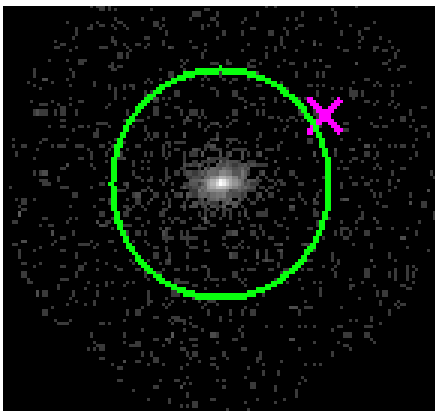


3 Gratings

3.1 HEG Arm



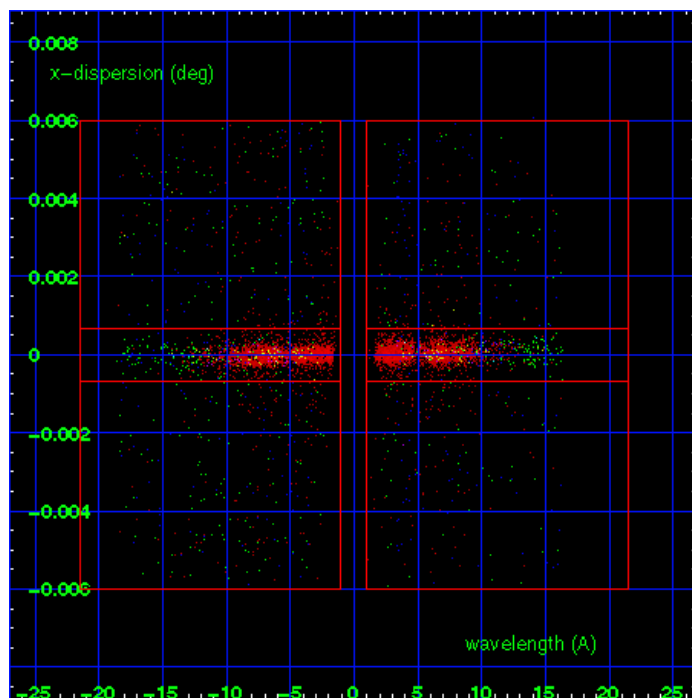
HEG Order Sort 123



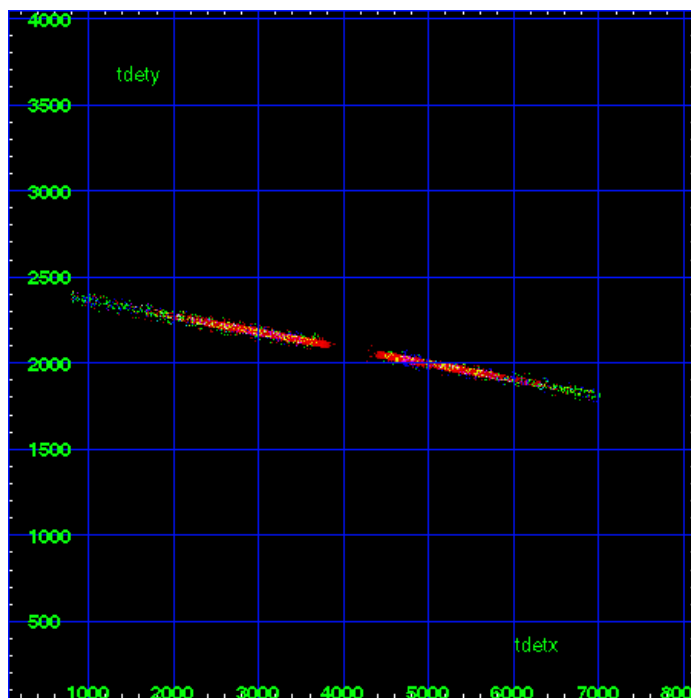
HEG Zero Order



HEG Order Sort ALL

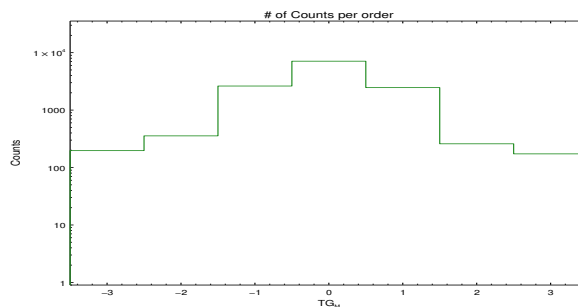


Spot Image HEG

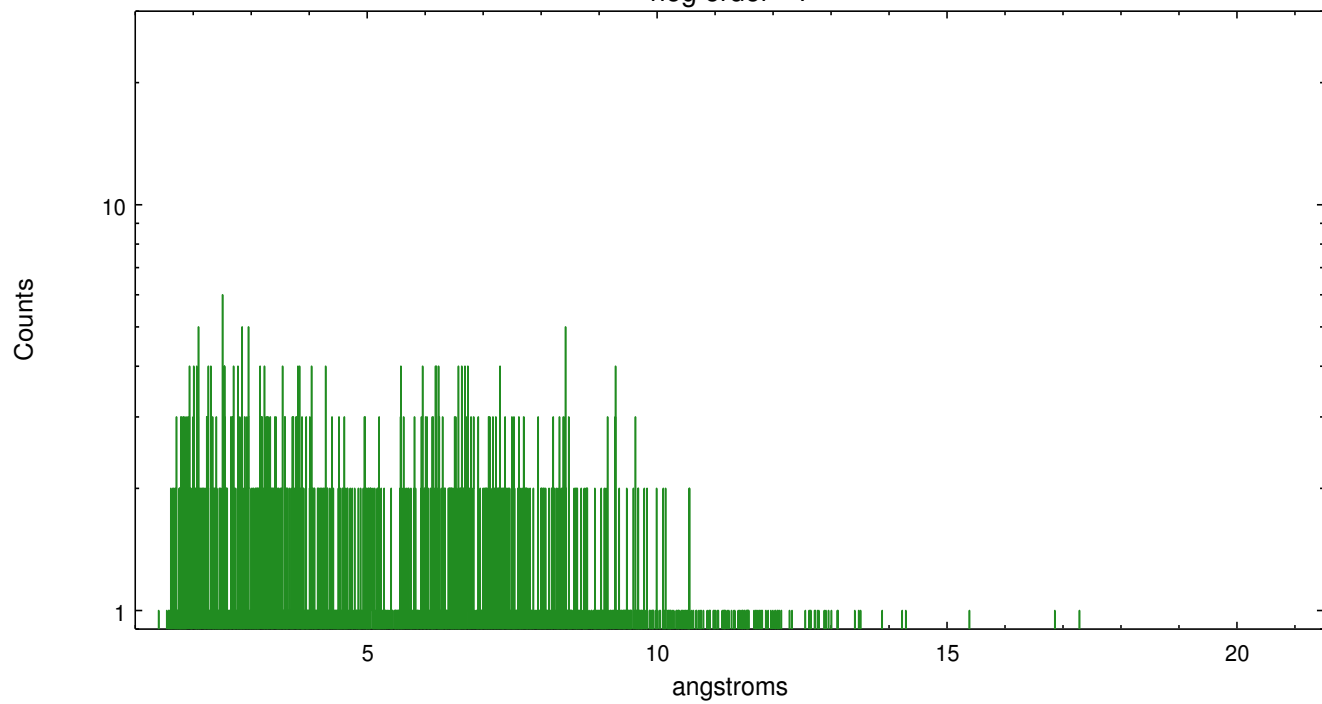


Full Detector HEG

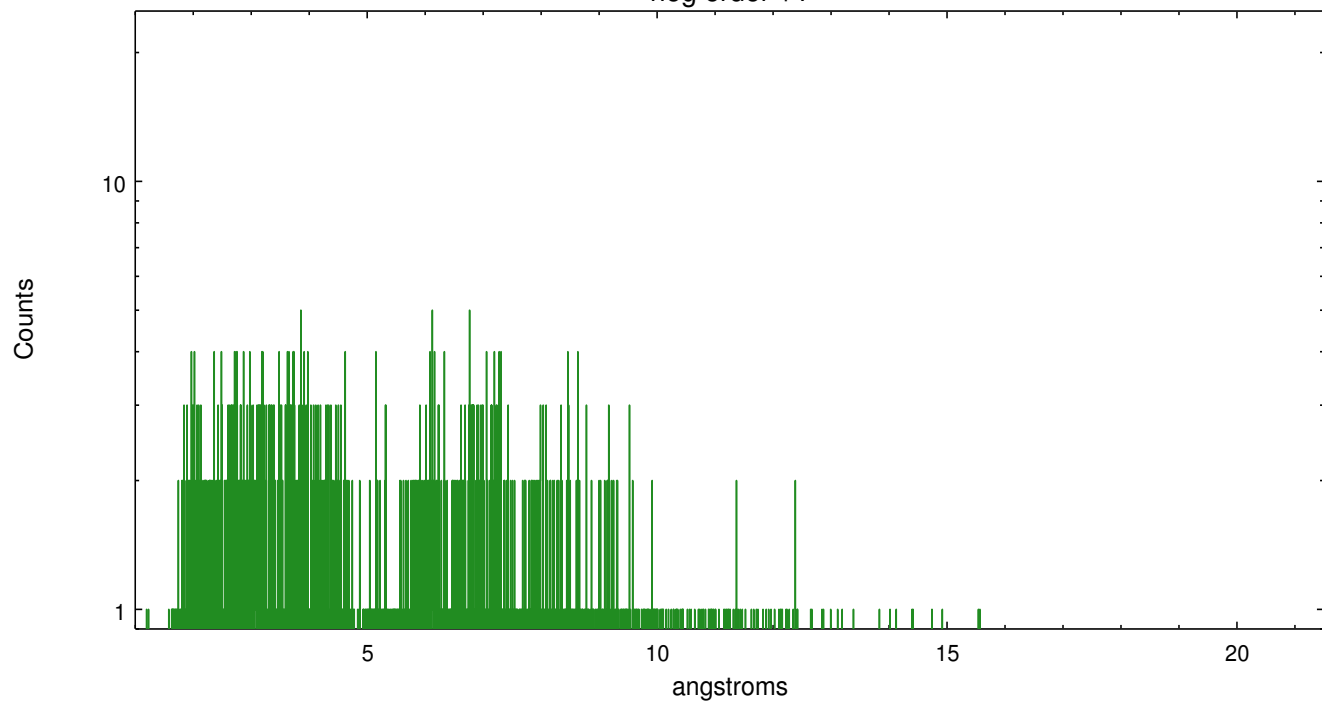
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	197	356	2624	7100	2463	259	173



heg order -1



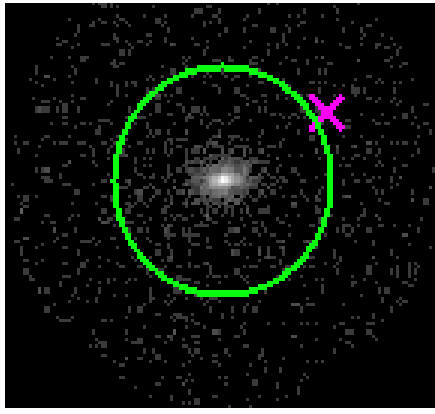
heg order +1



3.2 MEG Arm



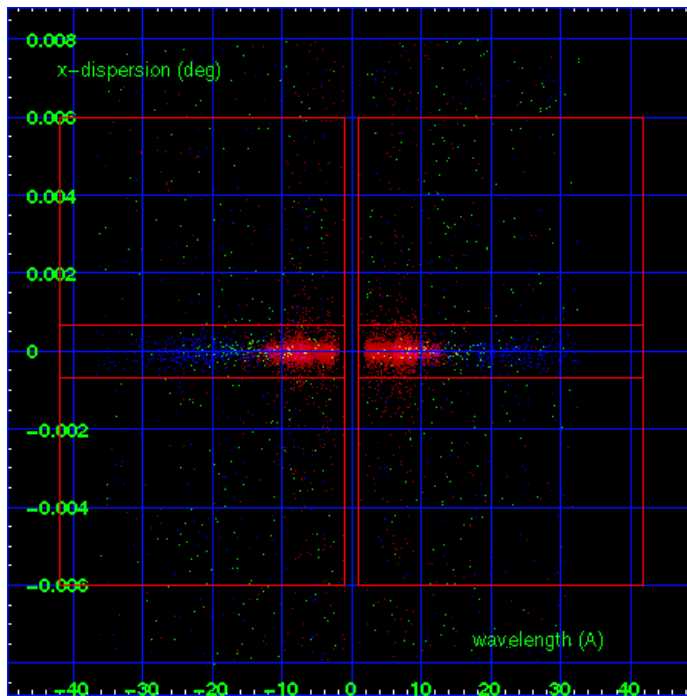
MEG Order Sort 123



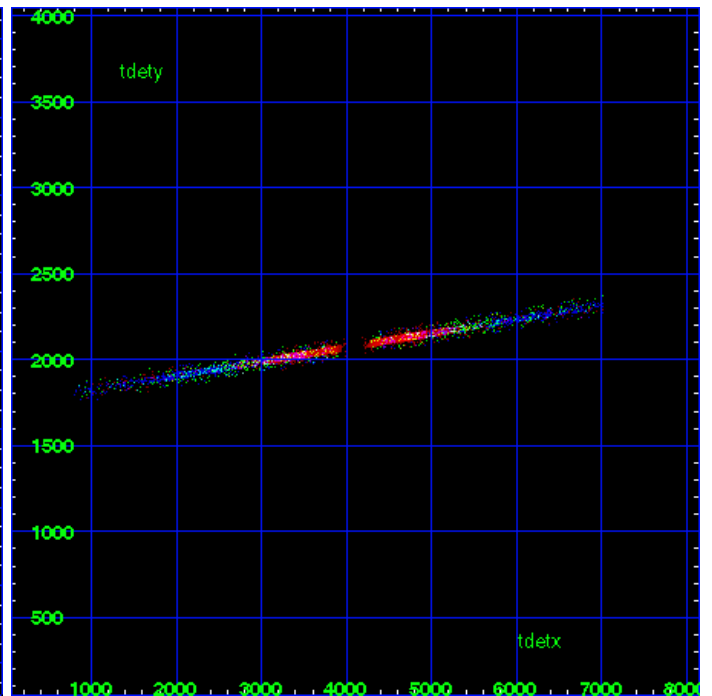
MEG Zero Order



MEG Order Sort ALL

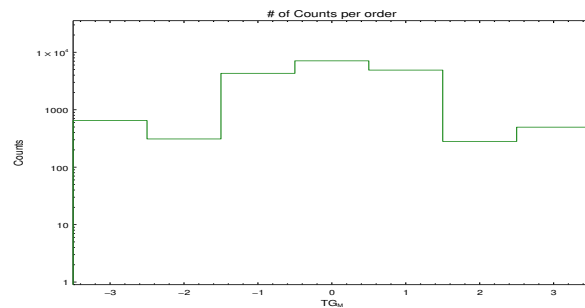


Spot Image MEG

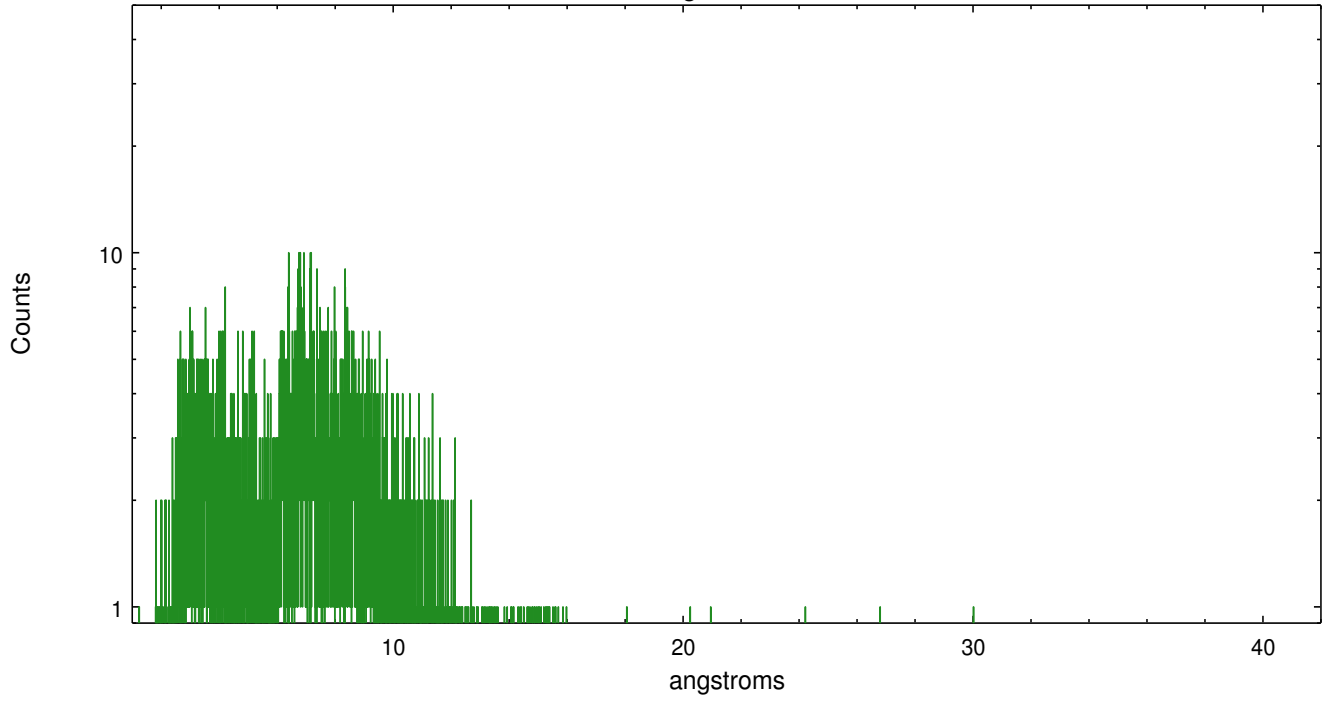


Full Detector MEG

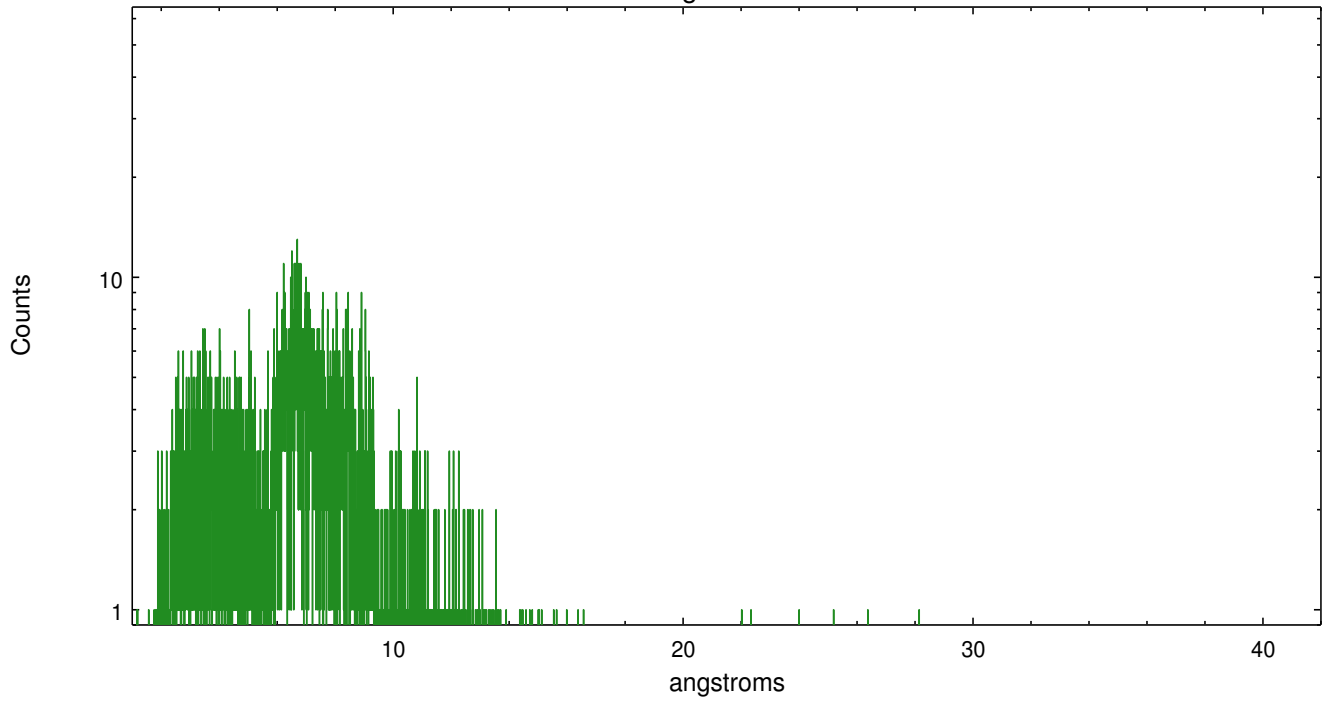
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	648	310	4300	7100	4896	281	497



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.09.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	23.052

A.2 Comments