

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 10926 - L2 Version 2
Chandra X-Ray Center

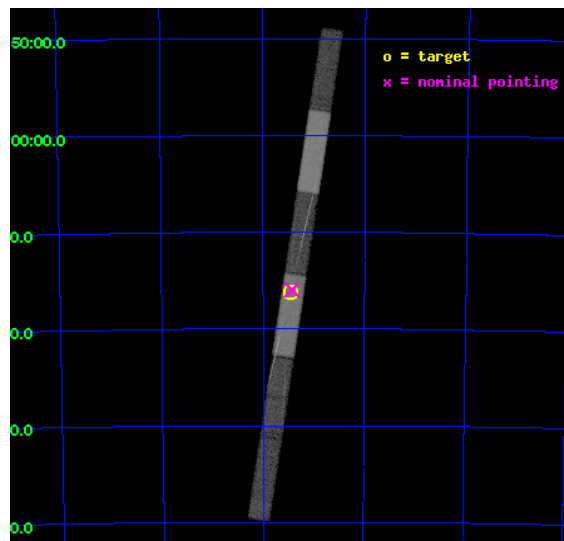
L2 Processing Date : Jun 13 2012

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1 Front

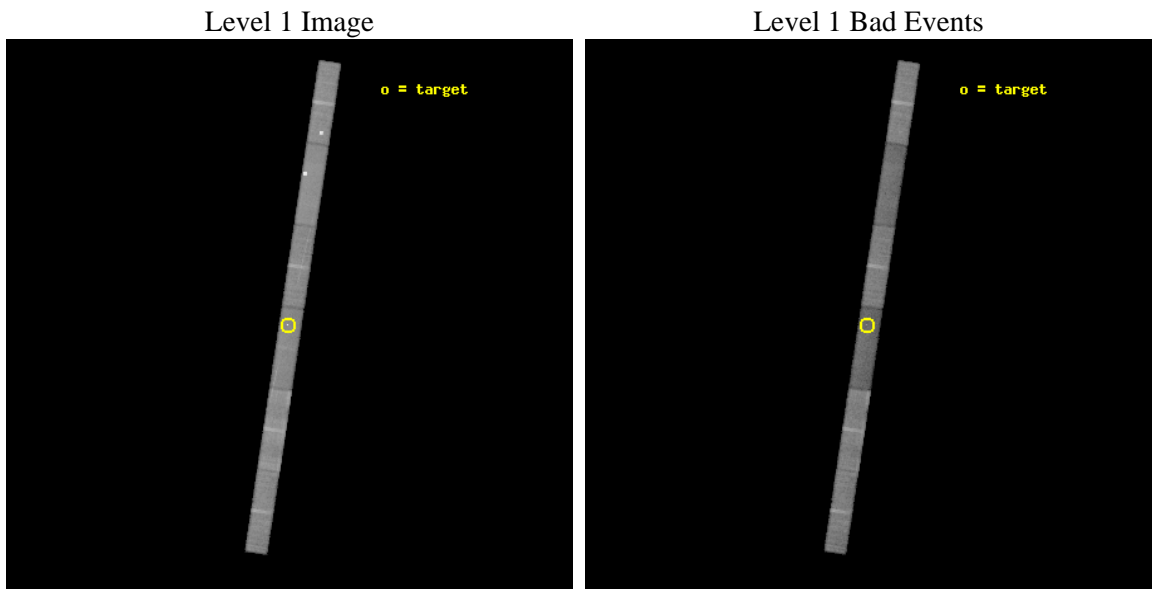
seq_num	501149	Sequence number
obs_id	10926	Observation id
title	Chandra Cycle 10 Spatial and Spectral Monitoring of SNR 1987A	Prop
observer	Prof. David Burrows	Principal investigator
object	SNR 1987A	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.866667	Observer's specified target RA [deg]
dec_targ	-69.26975	Observer's specified target Dec [deg]
ra_nom	83.857812740564	Nominal RA [deg]
dec_nom	-69.266074081645	Nominal Dec [deg]
roll_nom	98.634180002534	Nominal Roll [deg]
revision	2	Processing version of data
ontime	35094.333041906	Sum of GTIs [s]
livetime	33832.088573667	Livetime [s]
ontime4	35094.37408191	Sum of GTIs [s]
ontime5	35094.292001903	Sum of GTIs [s]
ontime6	35094.2509619	Sum of GTIs [s]
ontime7	35094.333041906	Sum of GTIs [s]
ontime8	35094.209921896	Sum of GTIs [s]
ontime9	35094.168881893	Sum of GTIs [s]
l2events	127178	Number of level 2 events



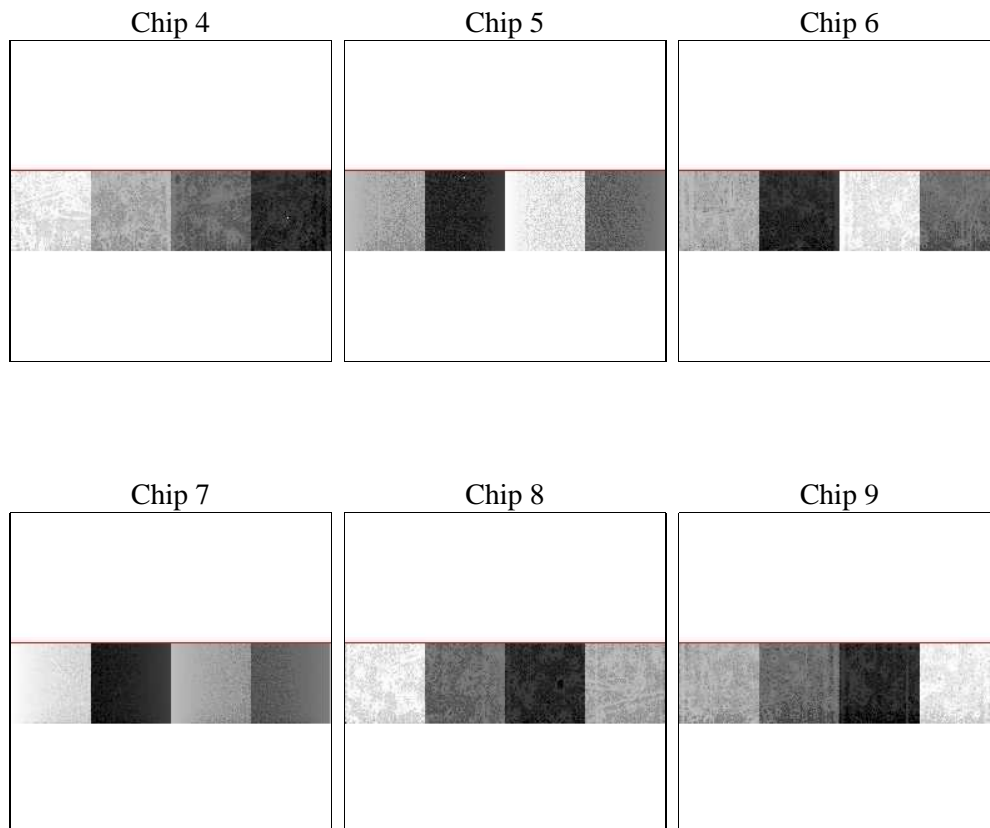
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	35000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	35094.333041906	Sum of GTIs [s]
caldbver	4.4.10	 	ontime4	35094.37408191	Sum of GTIs [s]
date	2012-06-13T03:52:36	Date and time of file creation	ontime5	35094.292001903	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	35094.2509619	Sum of GTIs [s]
			ontime7	35094.333041906	Sum of GTIs [s]
			ontime8	35094.209921896	Sum of GTIs [s]
			ontime9	35094.168881893	Sum of GTIs [s]
			l1events	605580	Number of level 1 events

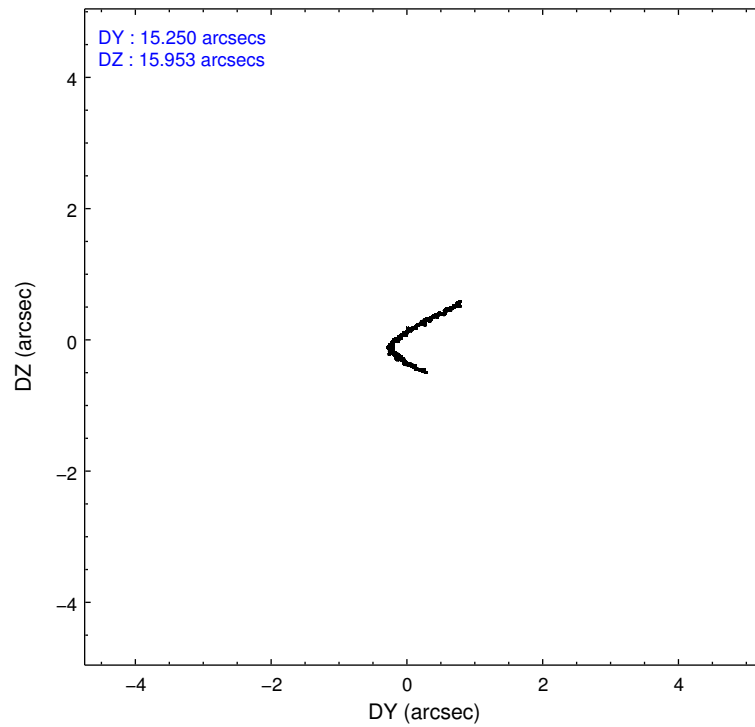
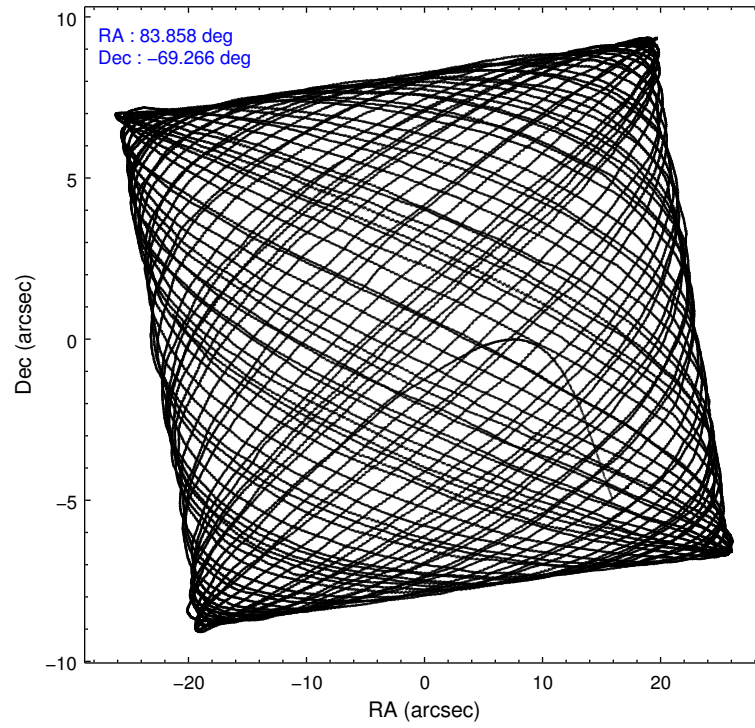
2.1.4 Events

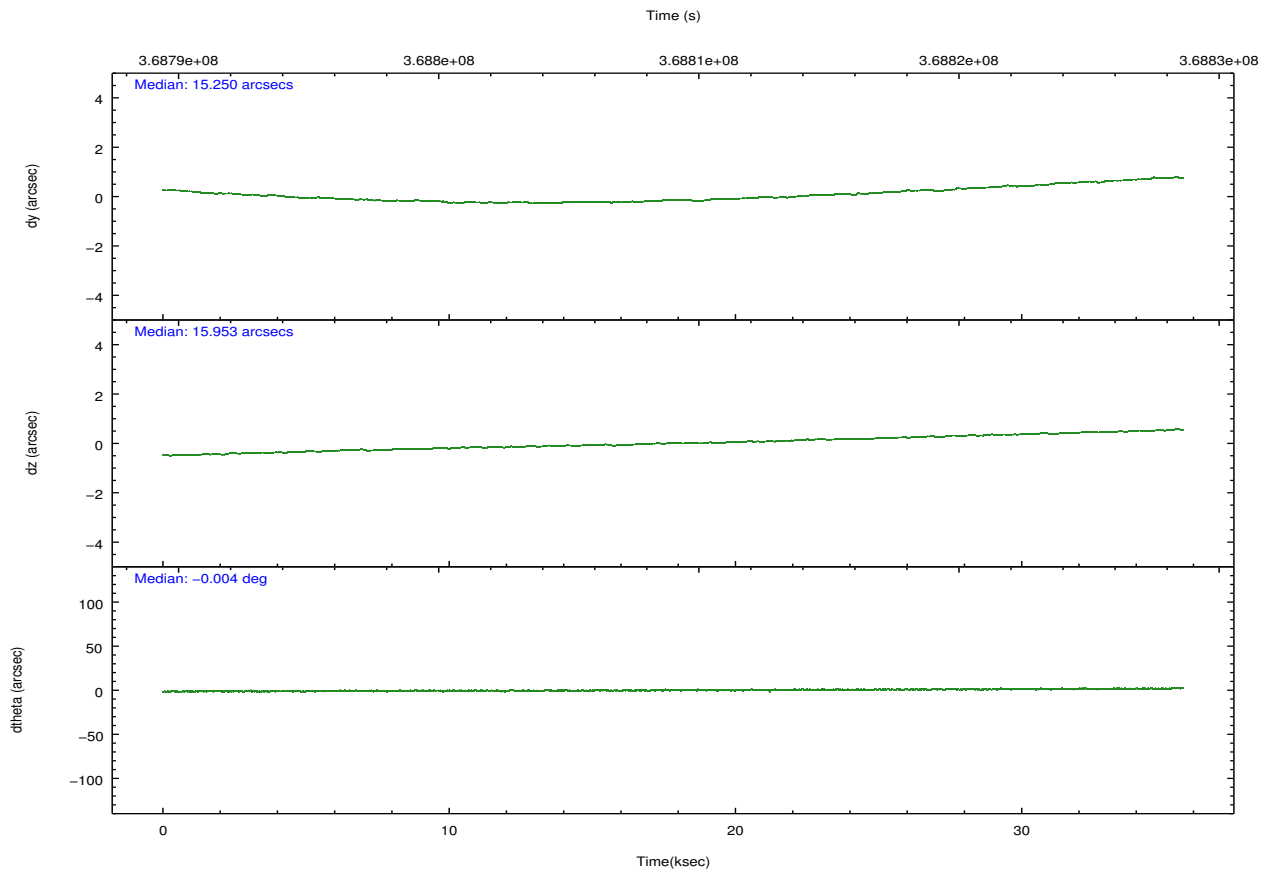
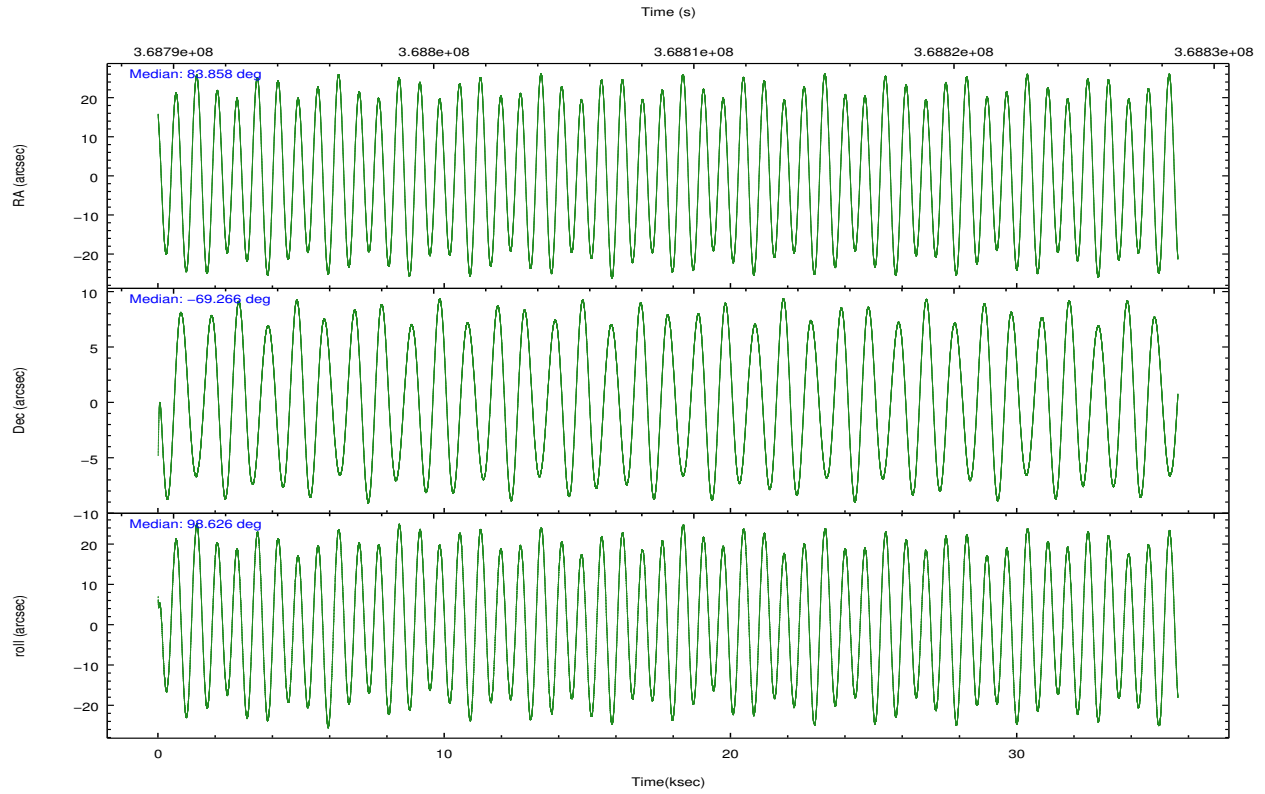
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	114581	120745	88530	83493	115948	82283	grade 0 events	16734	27203	4900	6256	7754	2818
rejected events	91235	46066	77010	37597	87989	73464		14%	22%	5%	7%	6%	3%
rejected %	79%	38%	86%	45%	75%	89%	grade 1 events	110	310	42	137	56	29
								0%	0%	0%	0%	0%	0%
							grade 2 events	2236	15993	2129	10380	6189	1737
								1%	13%	2%	12%	5%	2%
							grade 3 events	1471	3531	1404	5208	3054	1364
								1%	2%	1%	6%	2%	1%
							grade 4 events	1384	3461	1412	5094	2866	1344
								1%	2%	1%	6%	2%	1%
							grade 5 events	2819	9094	2643	8279	3962	2867
								2%	7%	2%	9%	3%	3%
							grade 6 events	1522	24494	1675	18960	8096	1556
								1%	20%	1%	22%	6%	1%
							grade 7 events	88305	36659	74325	29179	83971	70568
								77%	30%	83%	34%	72%	85%

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	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	83.906911	83.85781274056392	CCD I2 on	N	N
[deg] Pointing Dec	-69.287169	-69.26607408164531	CCD I3 on	N	N
[deg] Pointing Roll	98.523481	98.63418000253395	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	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	Y	Y
[s] Observation start time (MET)	368791832.184000	368790356.75043	CCD S5 on	Y	Y
Observation start date	2009-09-08T10:09:26	2009-09-08T09:45:56	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	368826832.184000	368827577.5773	On-chip summing requested	N	N
Observation end date	2009-09-08T19:52:46	2009-09-08T20:06:17	Subarray requested	CUSTOM	1/4
Read mode	TIMED	TIMED	Subarray start row	355	355
			Subarray row count	256	256
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.1

2.3 Aspect



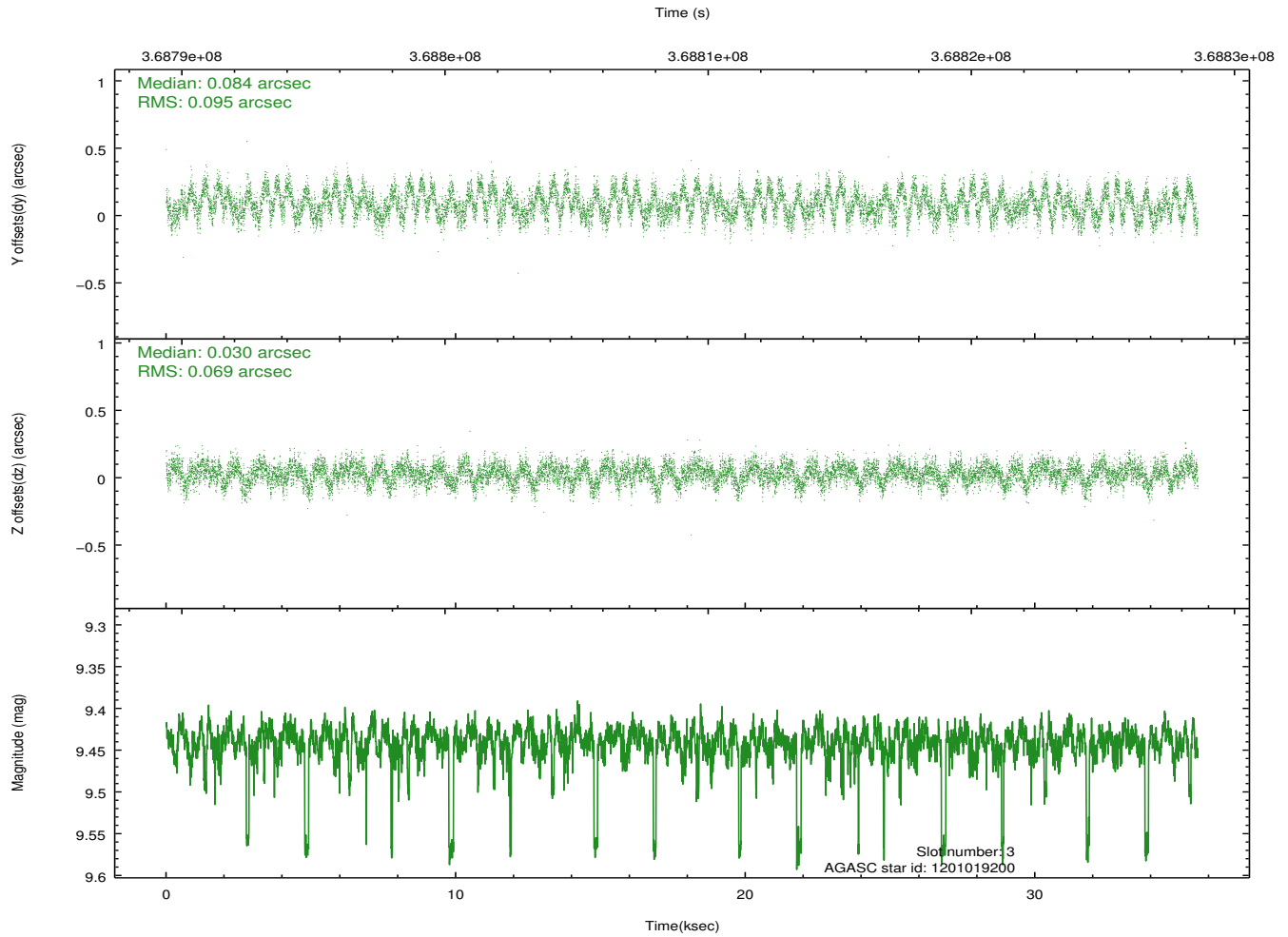
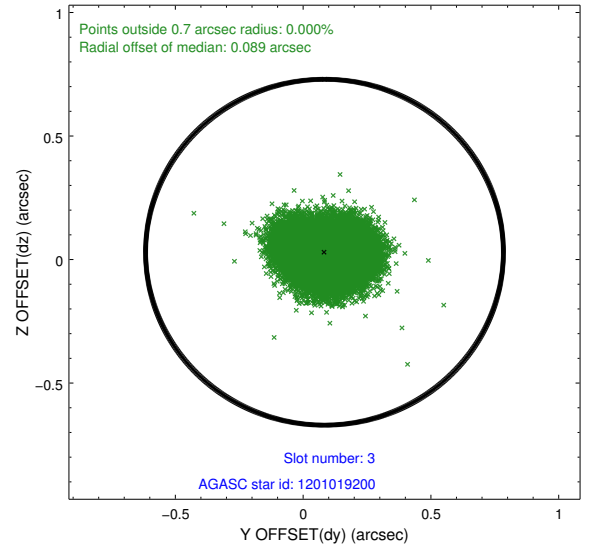
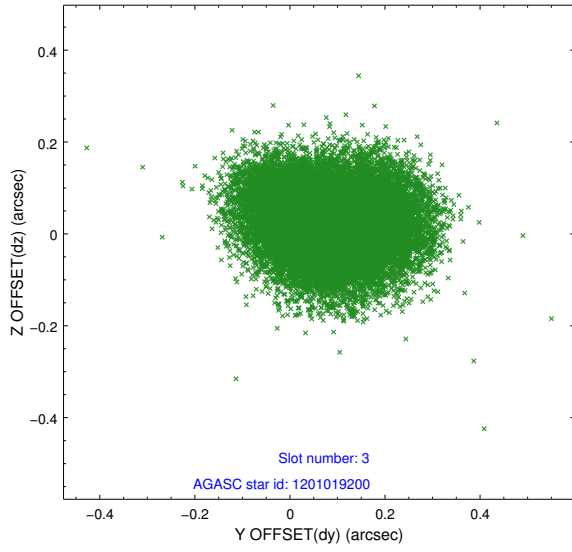


Slot Statistics

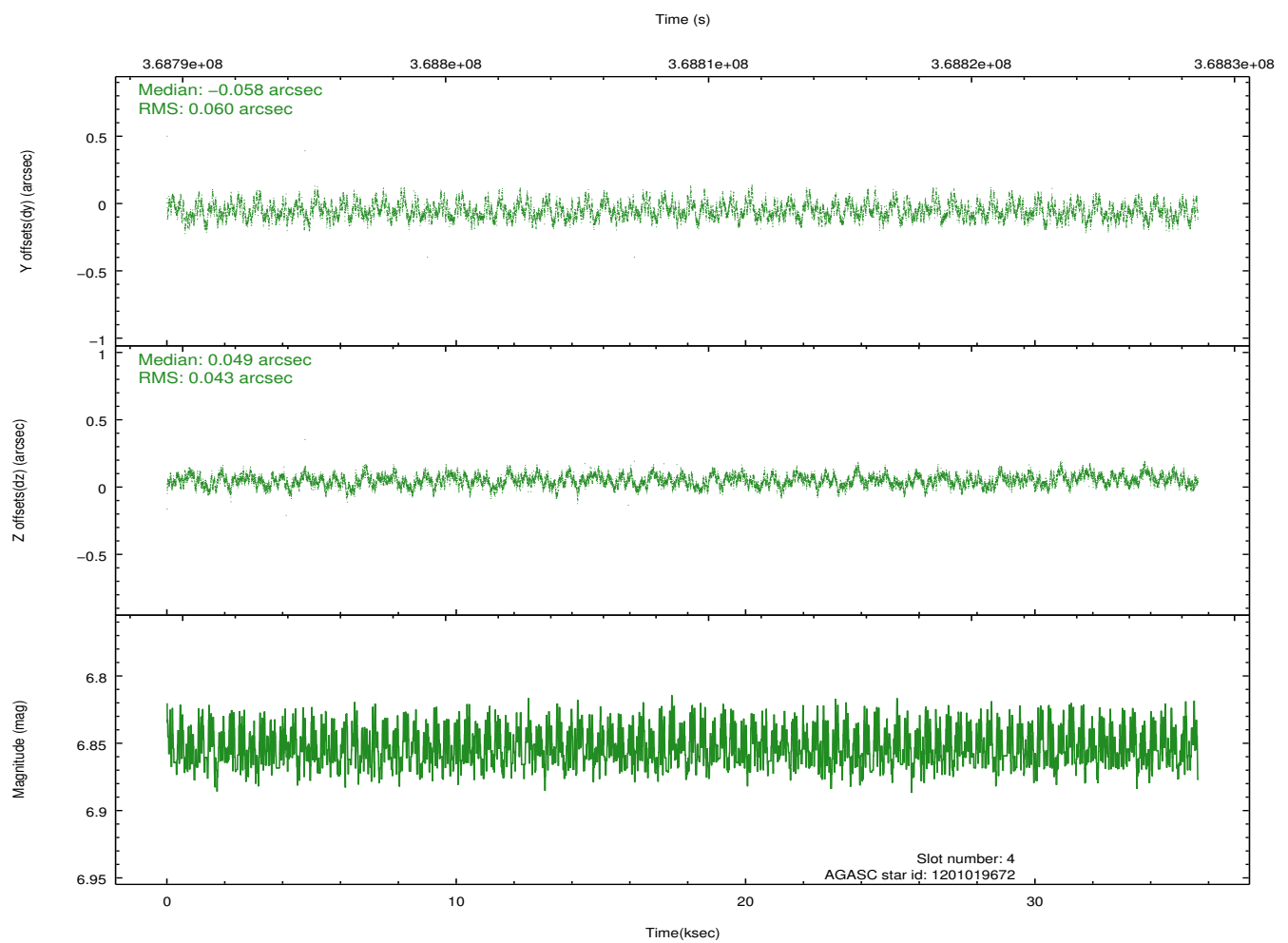
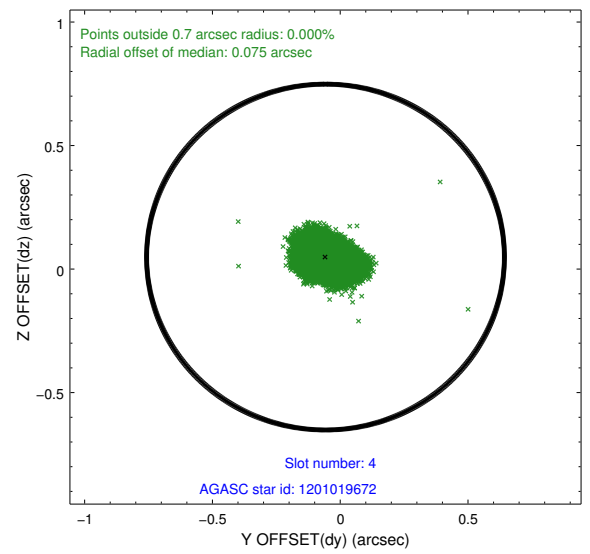
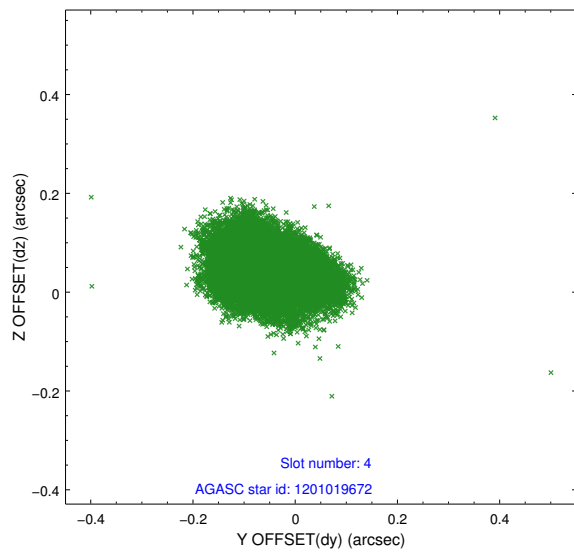
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.88	8688	-0.093	-0.019	0.010	0.018	0.000000	0.000000	-768.39	-1737.40
1	FID	ACIS-S-4	6.96	8688	0.195	0.050	0.013	0.040	0.000000	0.000000	2145.14	171.13
2	FID	ACIS-S-5	6.99	8688	-0.132	-0.023	0.011	0.027	0.000000	0.000000	-1821.23	164.75
3	GUIDE	1201019200	9.44	17313	0.084	0.030	0.127	0.196	84.213591	-68.777384	1755.17	-666.61
4	GUIDE	1201019672	6.85	17376	-0.058	0.049	0.079	0.127	85.312192	-68.770187	1548.96	-2083.86
5	GUIDE	1201020040	8.60	17359	-0.152	0.131	0.073	0.117	85.379163	-68.879396	1146.58	-2102.33
6	GUIDE	1201406184	7.92	17367	-0.137	-0.002	0.079	0.127	82.503234	-69.975517	-2213.97	2081.10
7	GUIDE	1201410616	9.32	17356	0.252	-0.206	0.115	0.187	82.516808	-69.784406	-1533.41	1978.23

2.4 Star Slots

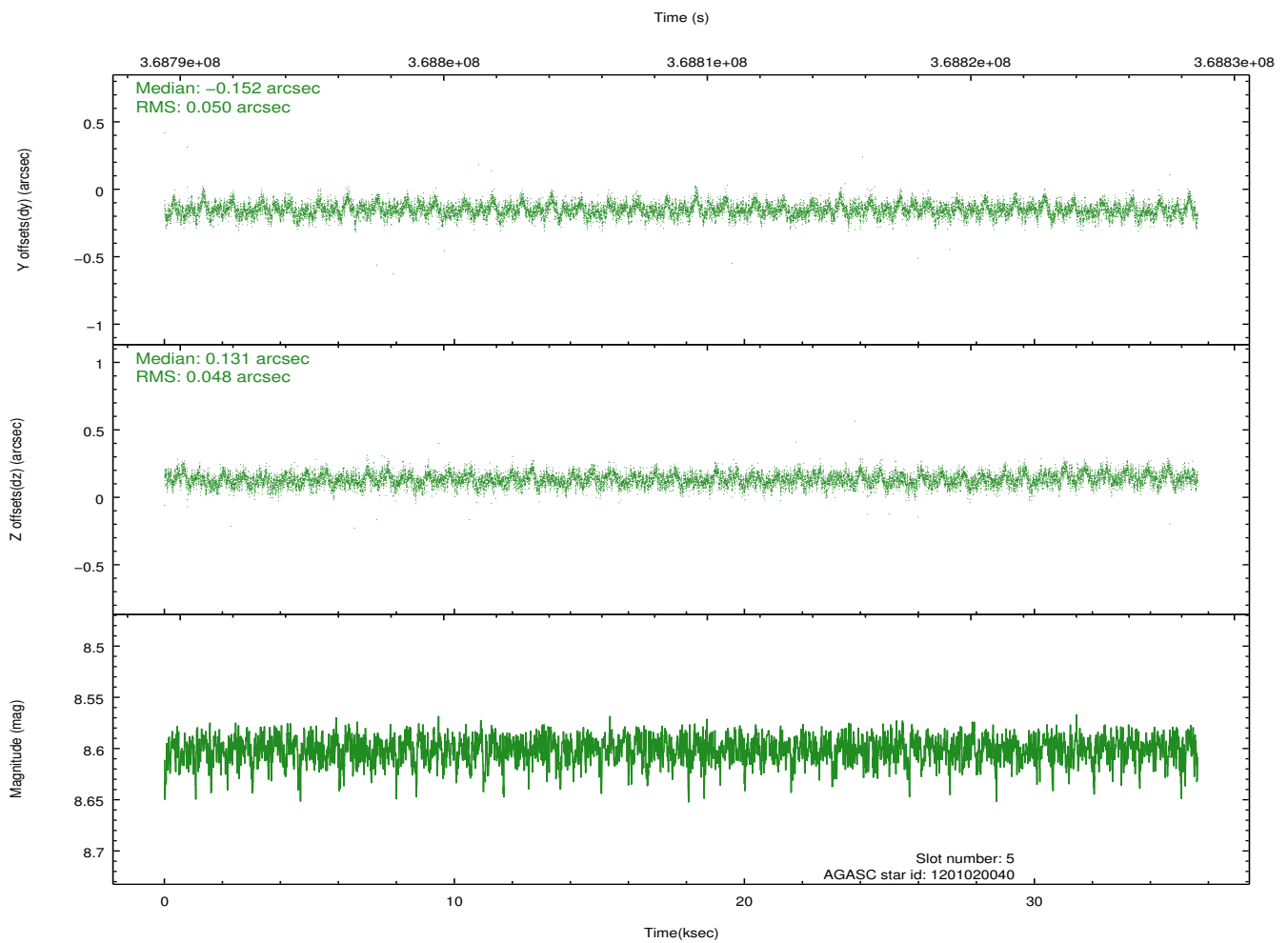
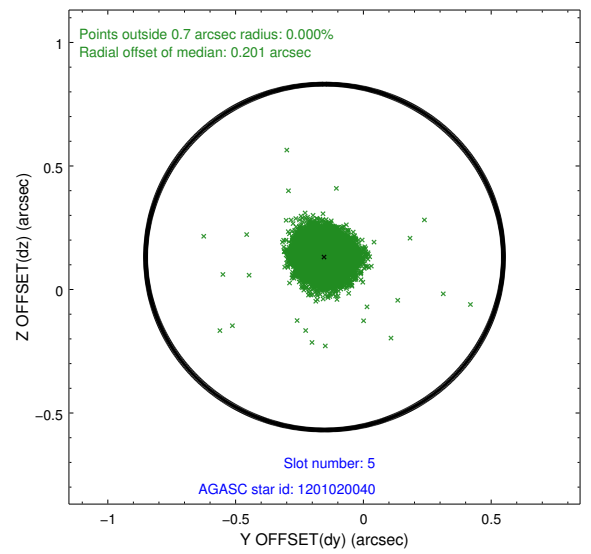
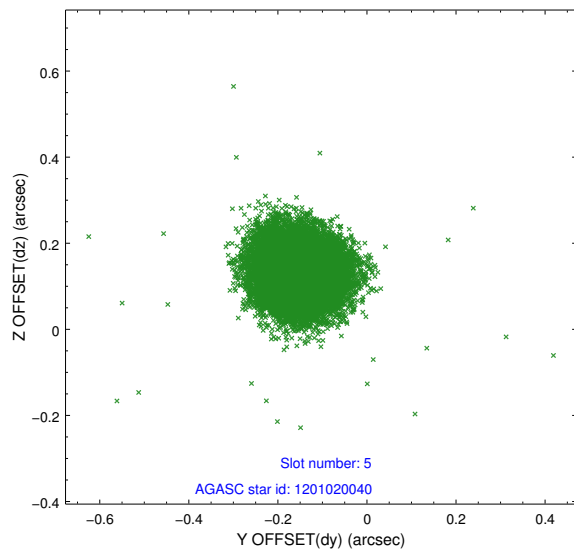
2.4.1 Slot 3



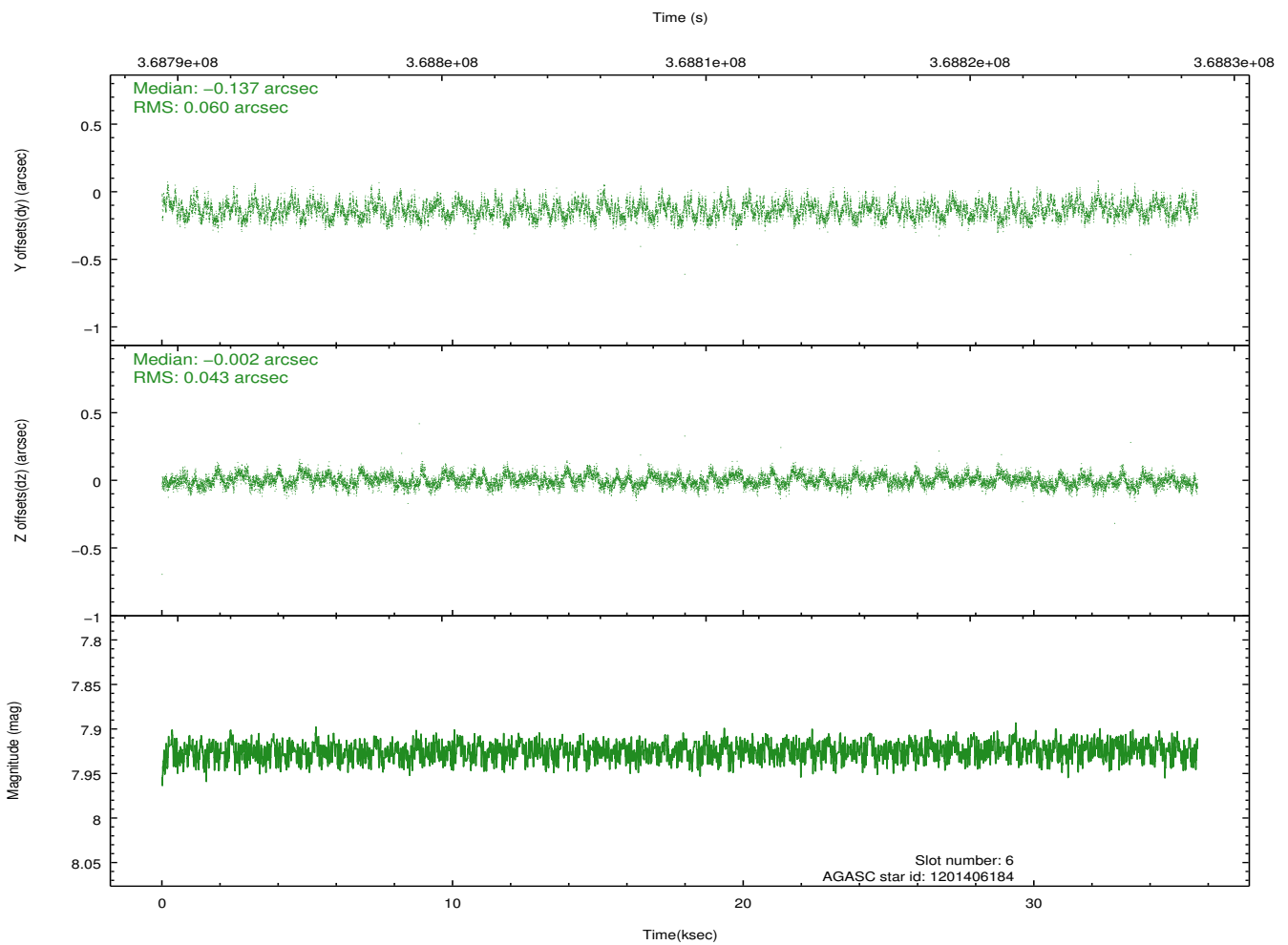
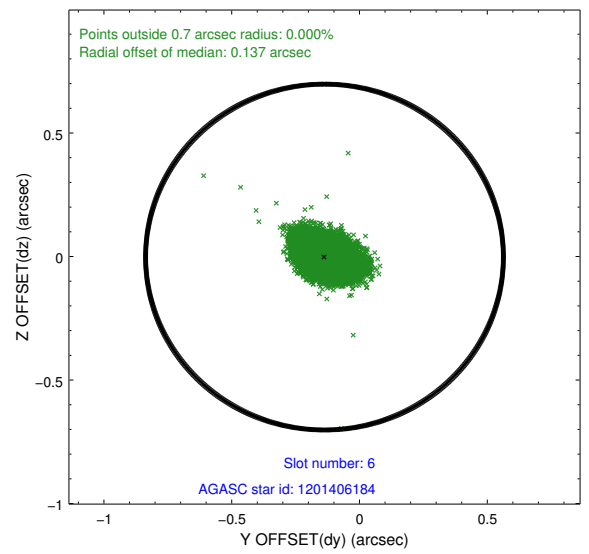
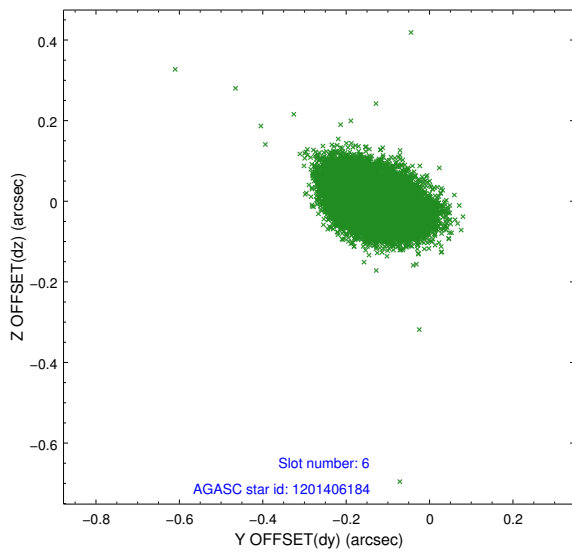
2.4.2 Slot 4



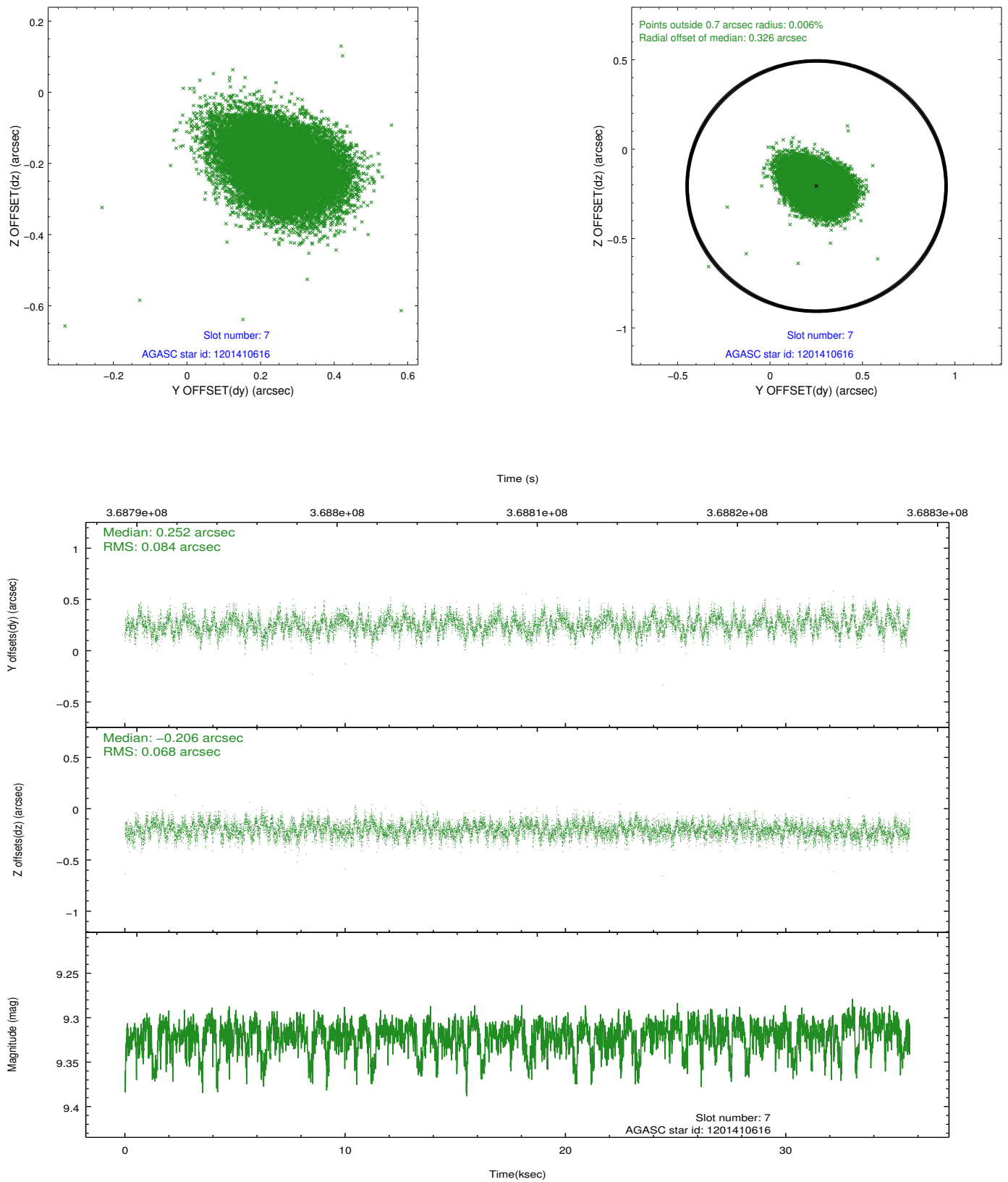
2.4.3 Slot 5



2.4.4 Slot 6

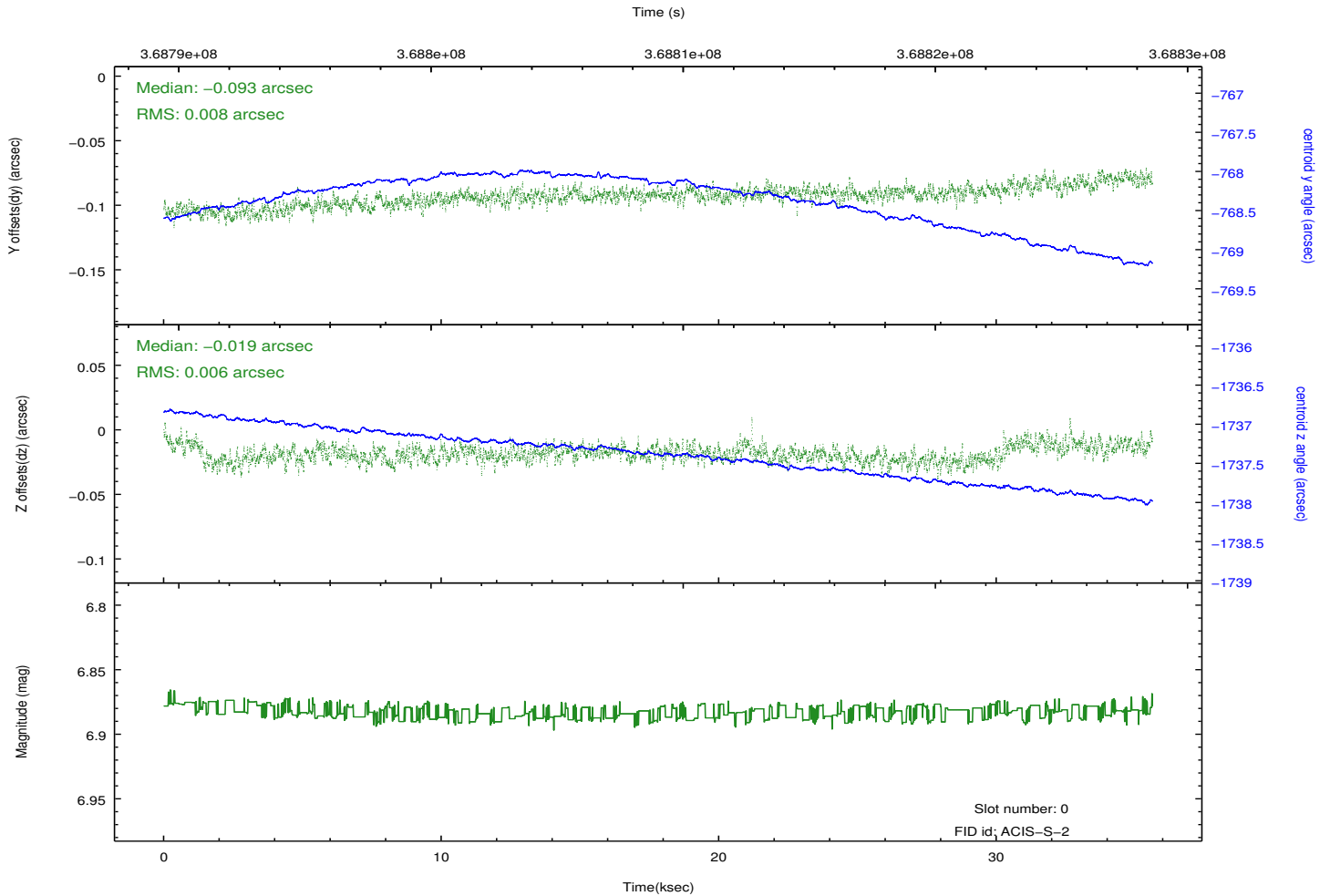
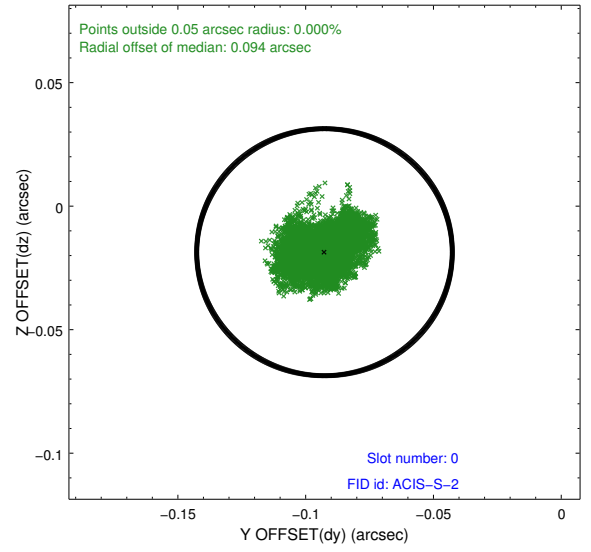
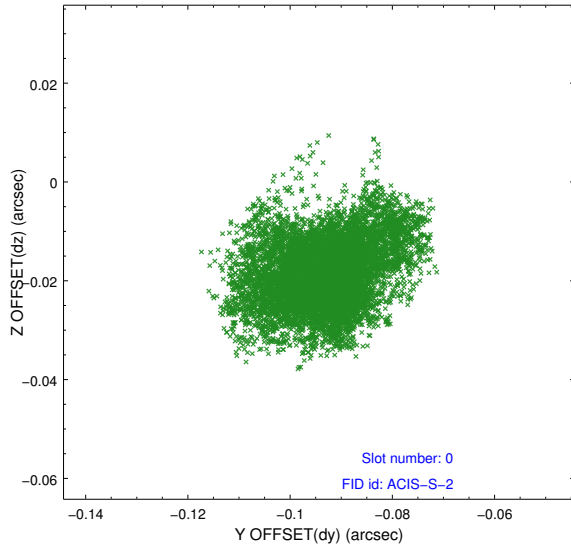


2.4.5 Slot 7

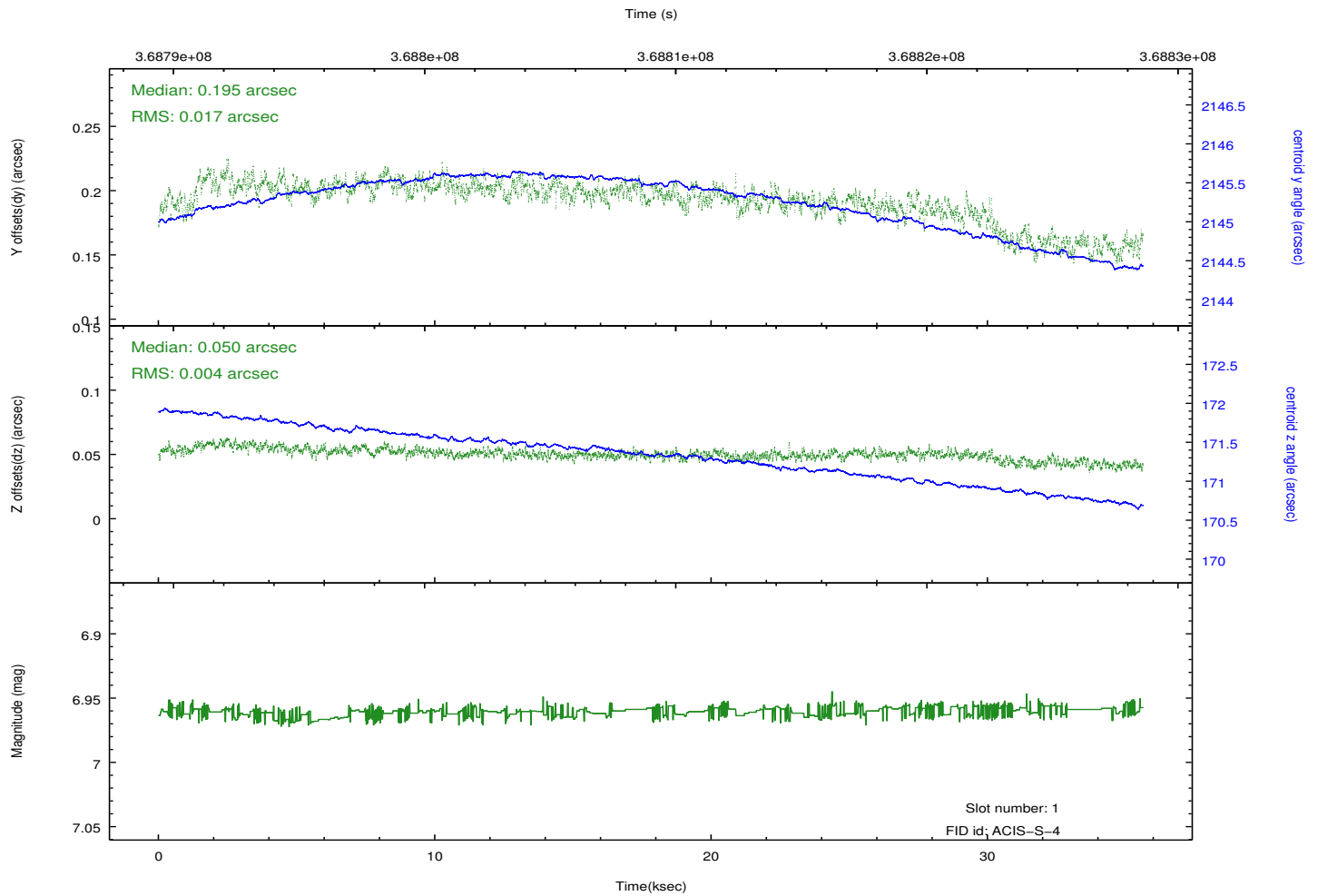
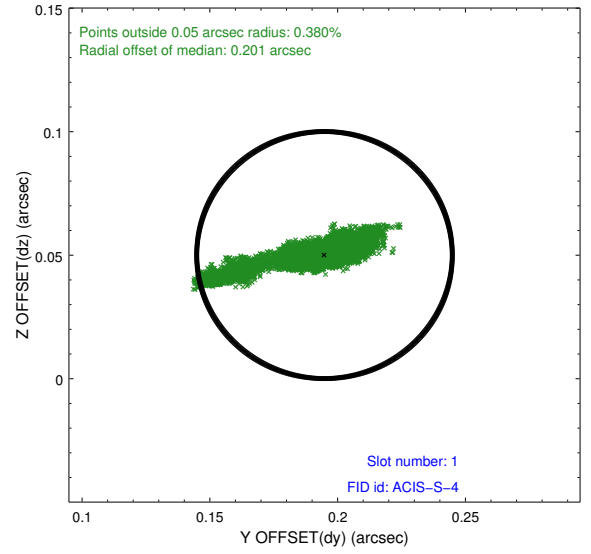
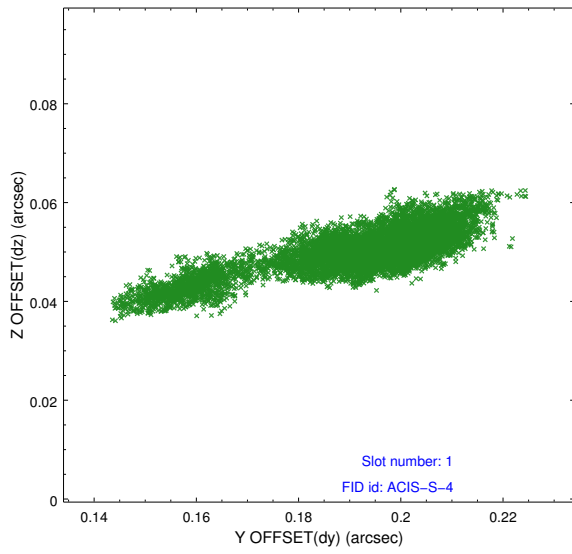


2.5 FID Slots

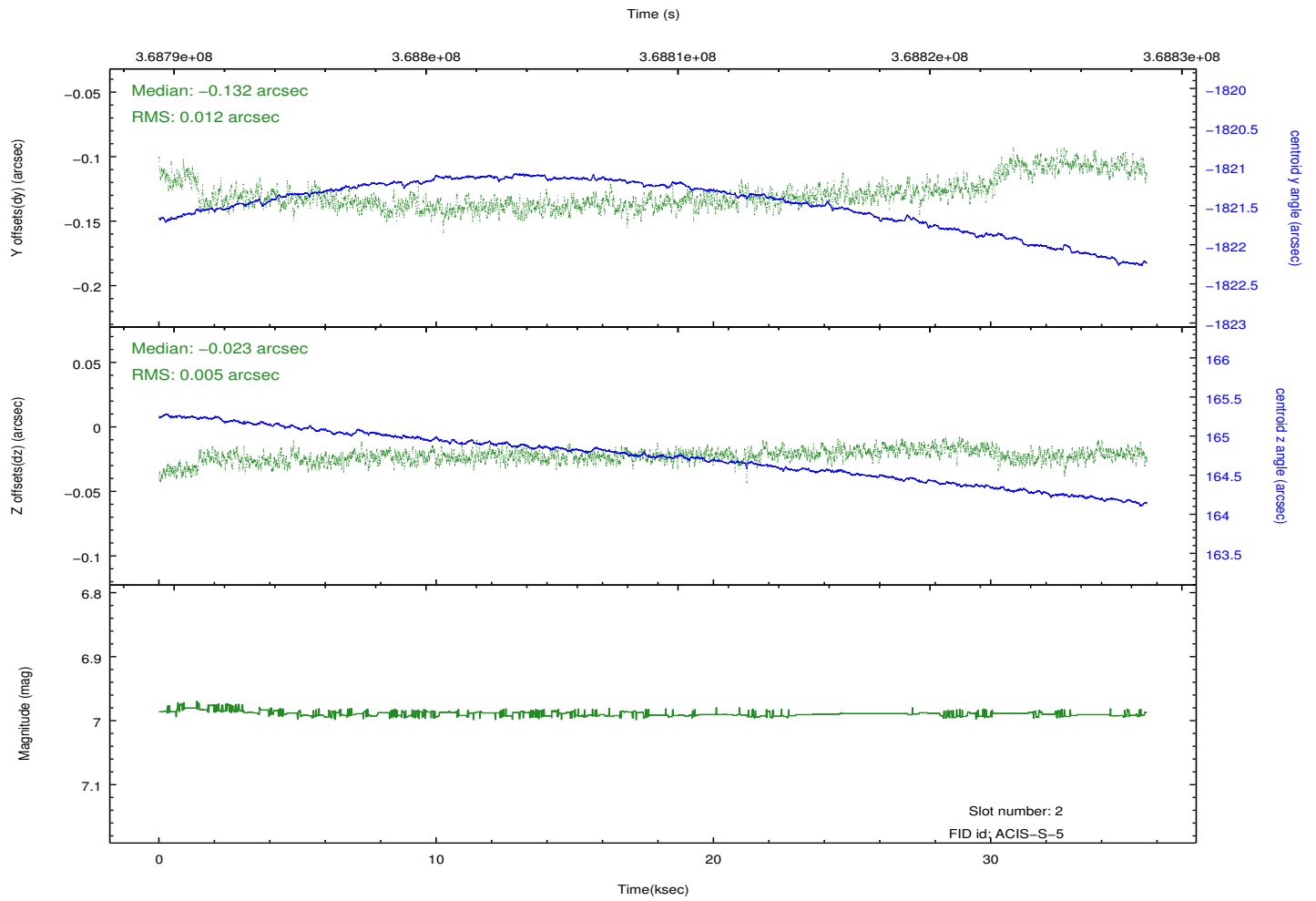
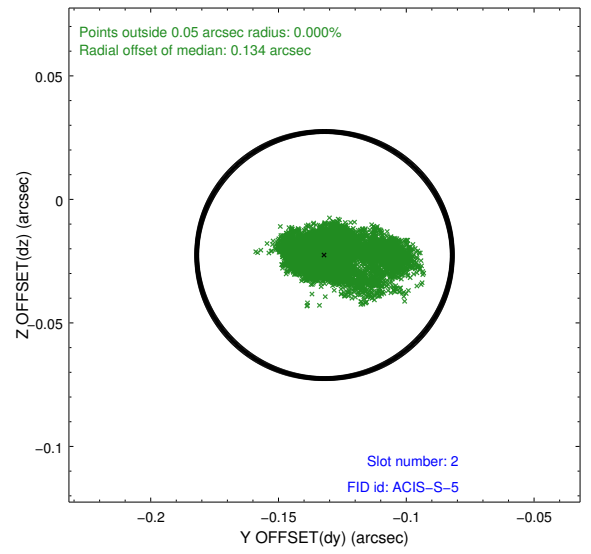
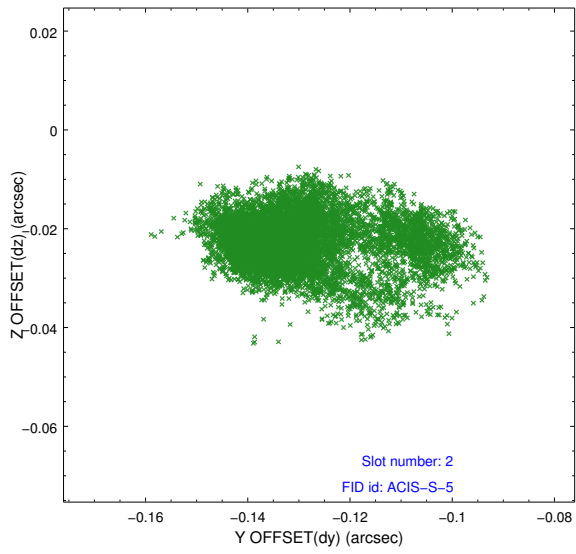
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

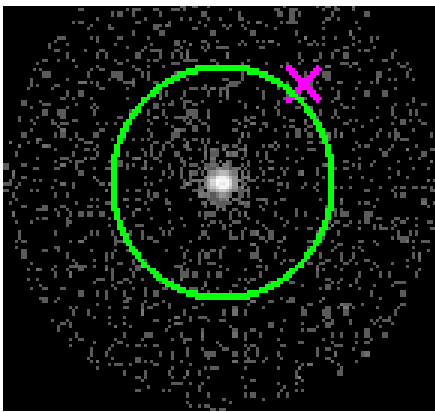


3 Gratings

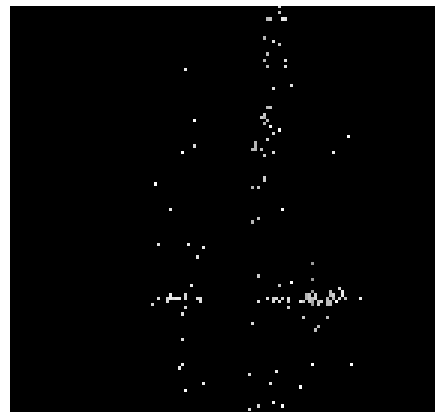
3.1 HEG Arm



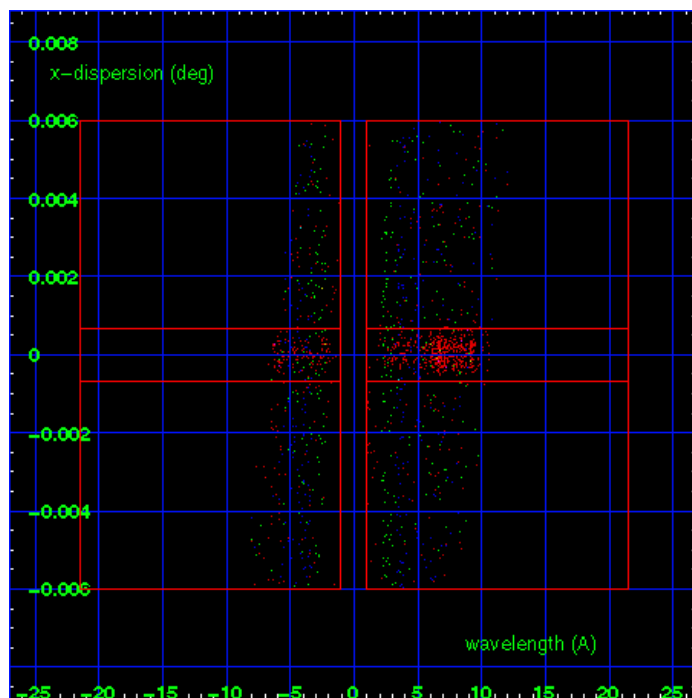
HEG Order Sort 123



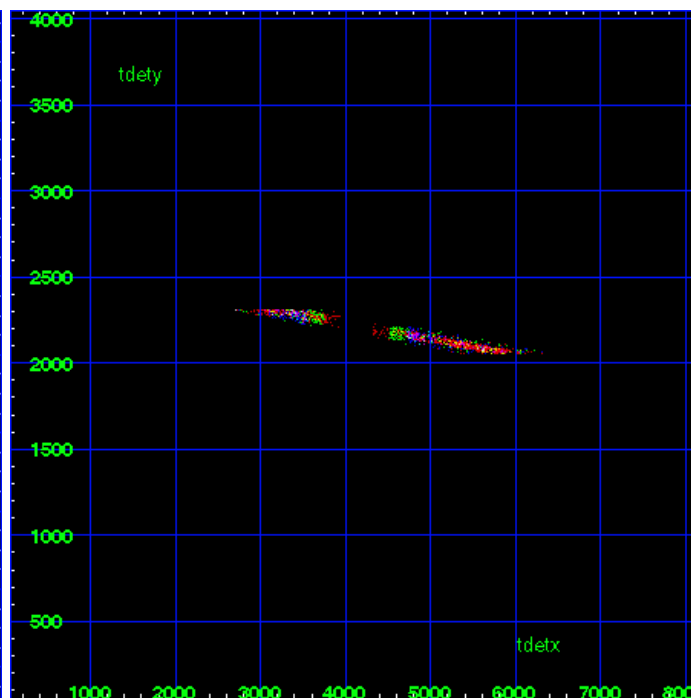
HEG Zero Order



HEG Order Sort ALL

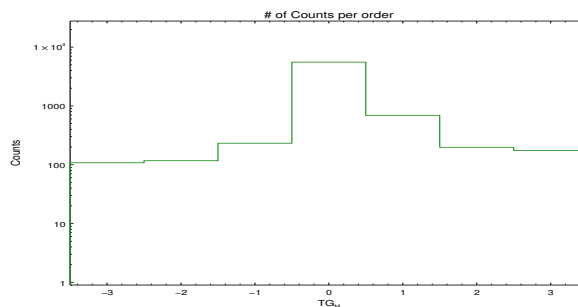


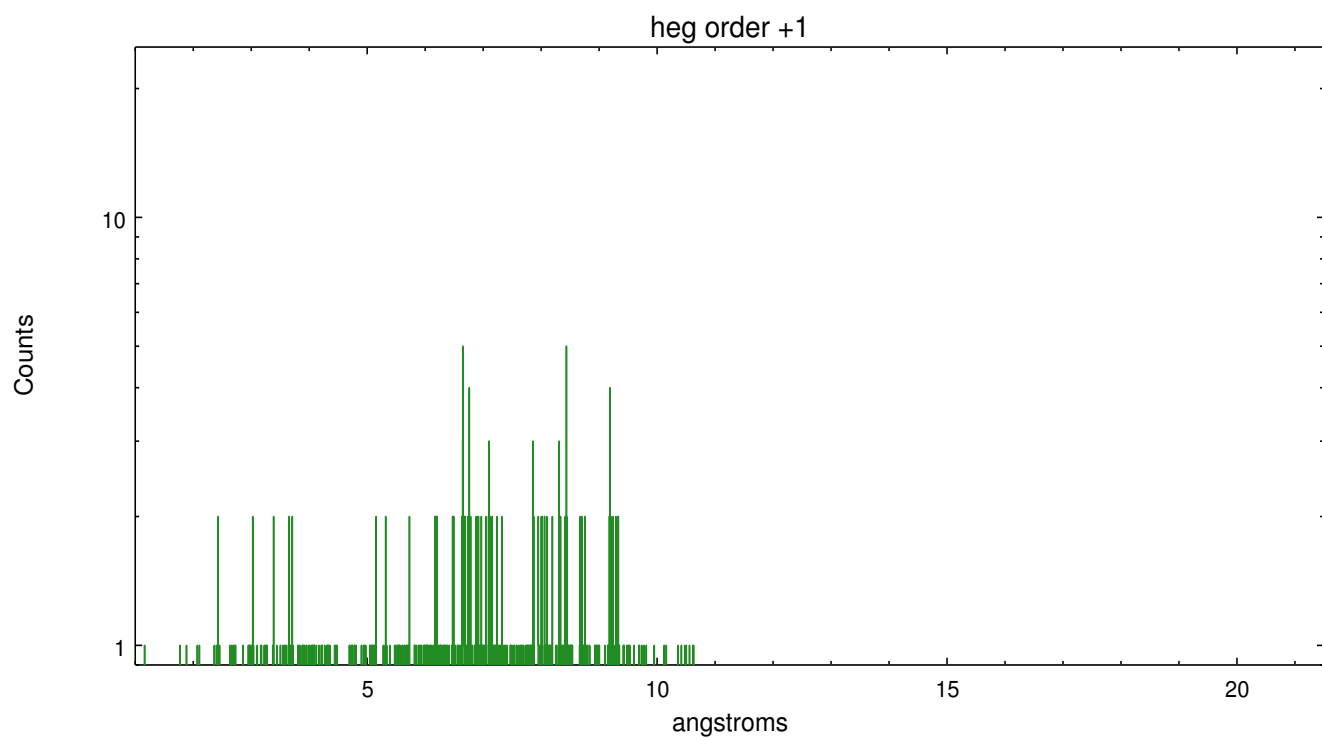
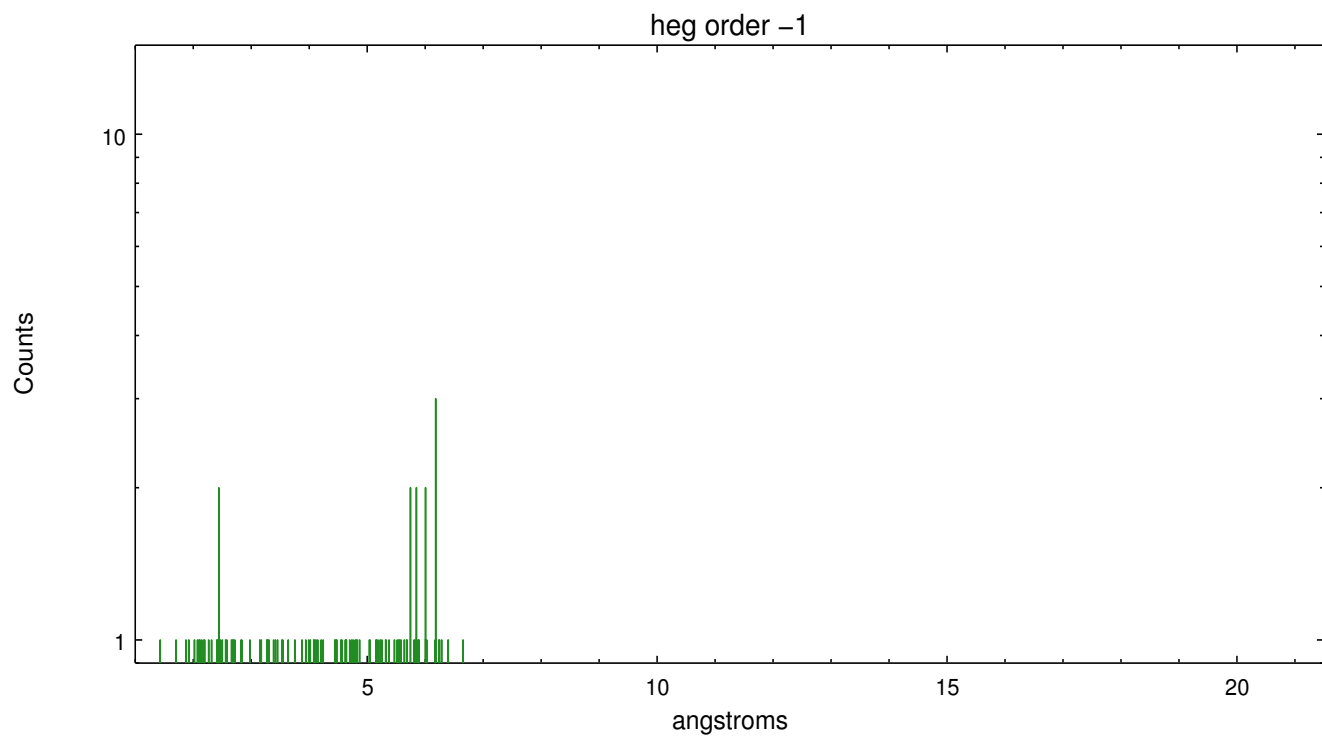
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	108	117	232	5547	691	198	175

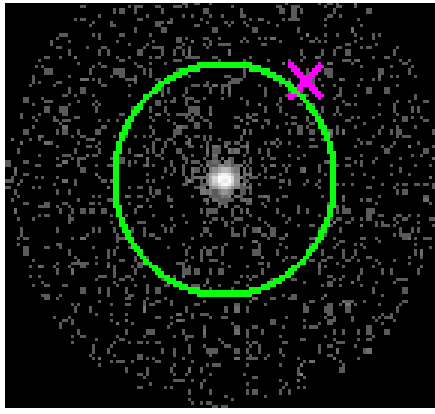




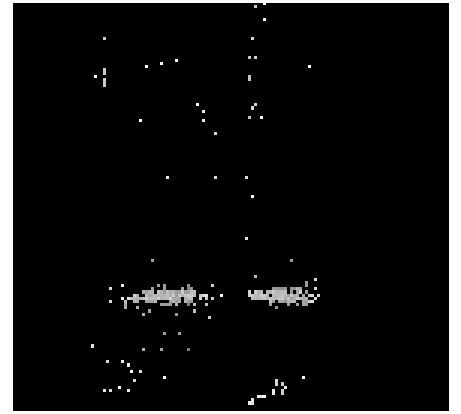
3.2 MEG Arm



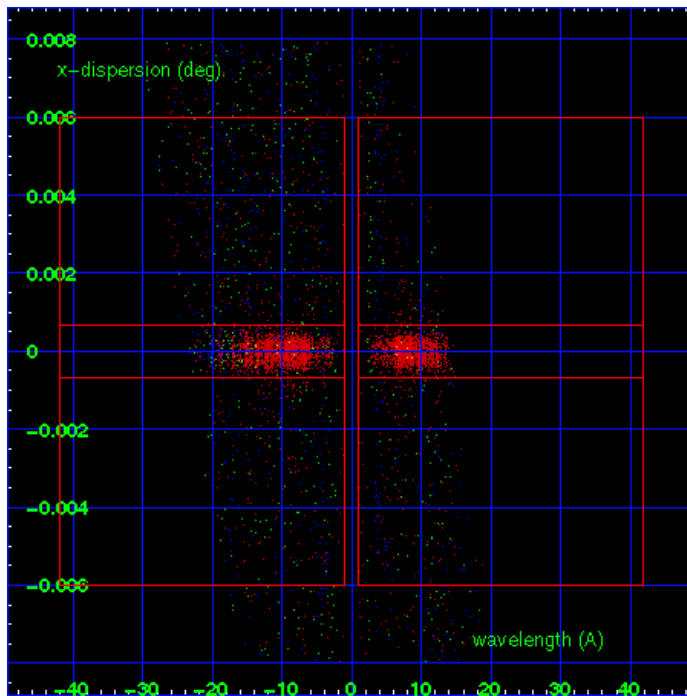
MEG Order Sort 123



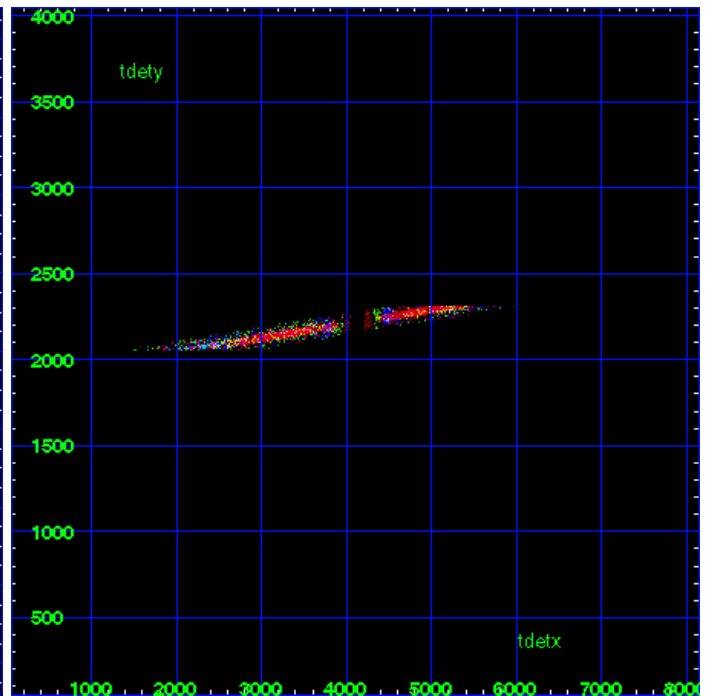
MEG Zero Order



MEG Order Sort ALL

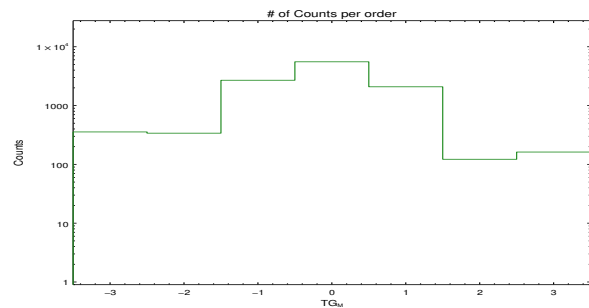


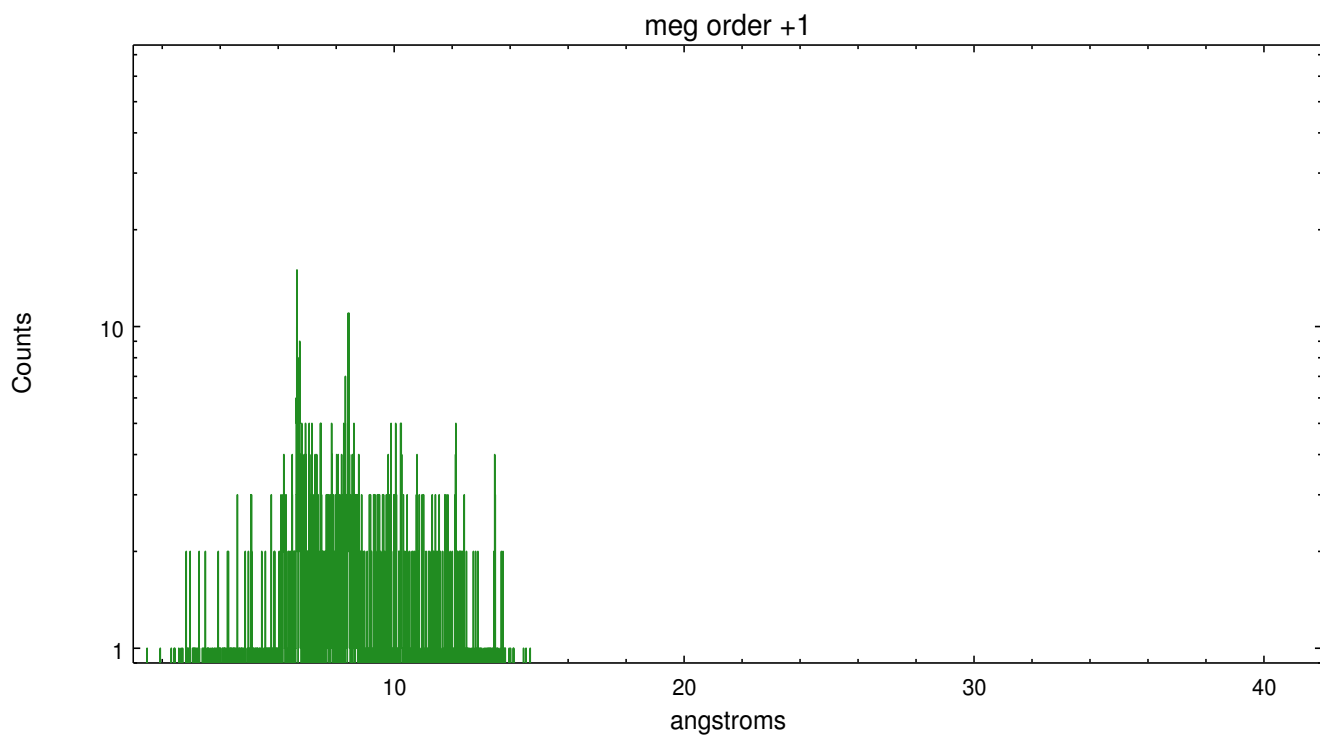
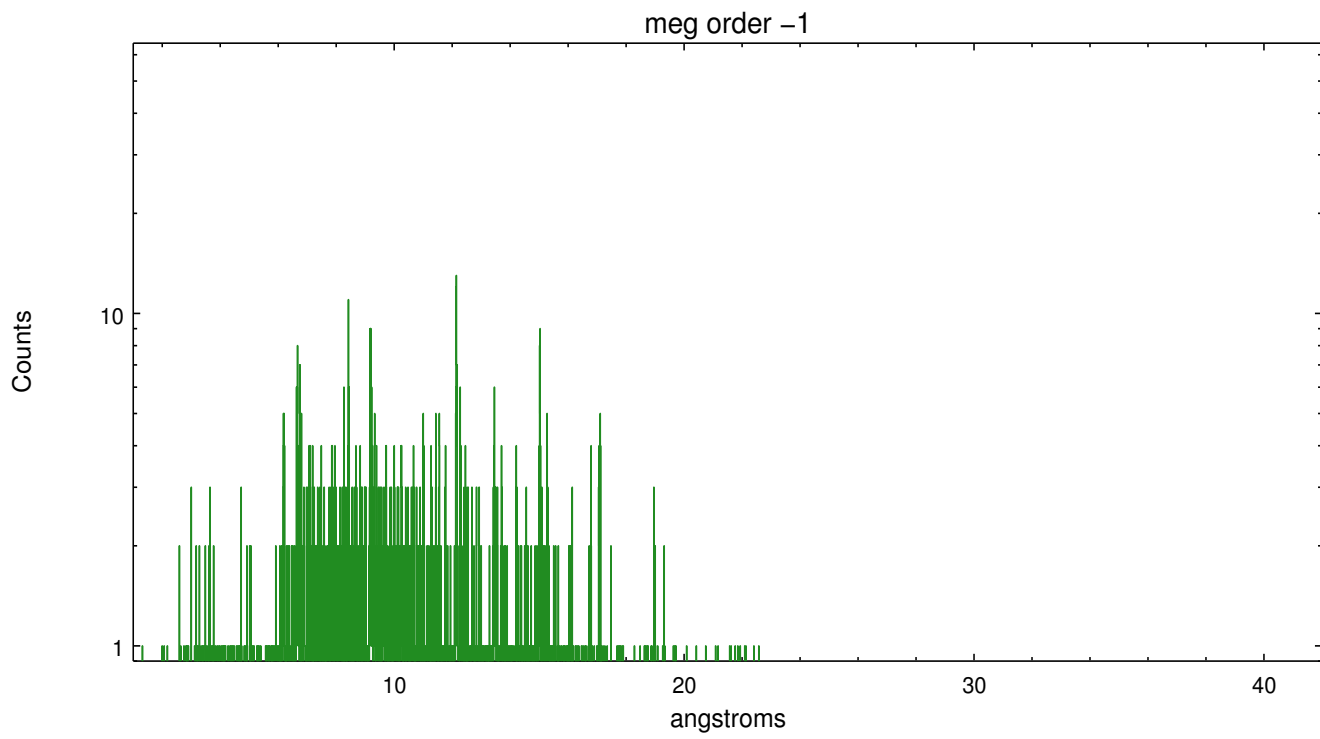
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	356	339	2692	5547	2085	122	162





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.06.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	35.094333044887

A.2 Comments

Source is extended with structure. The zeroth order used for extracting the spectral data in this processing is located at the centroid of the SNR, but is not located at the position of the brightest X-ray emission in the supernova remnant. WARNING: there are no standard ciao tools for analysis of grating spectra from extended sources. The shape of an emission 'line' will be the shape of the zero order spatial structure convolved with the instrumental LSF. Grating extractions can be used, but need to be combined with custom spatial-spectral analysis, since wavelength is multi-valued at any particular diffraction angle. == The sub-array configuration chosen eliminates counts from the soft ends of the spectral arms for both HEG (>9A) and MEG (>19A).