

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 10222 - L2 Version 2
Chandra X-Ray Center

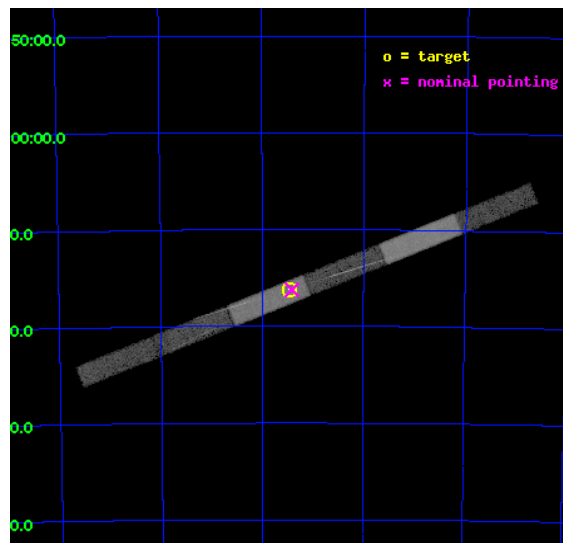
L2 Processing Date : Jun 9 2012

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1 Front

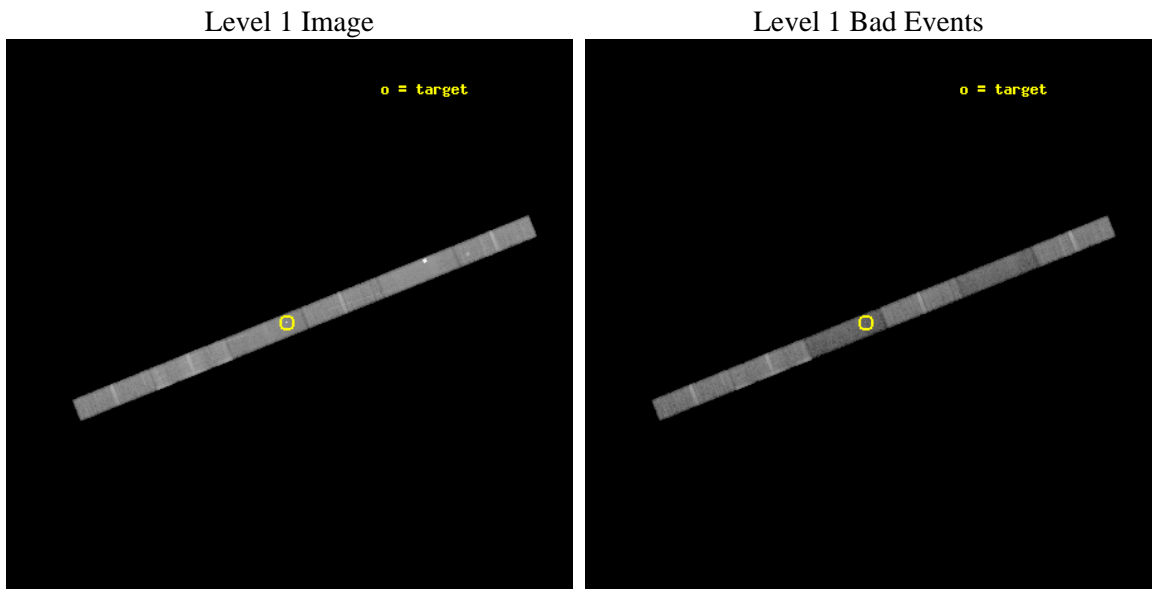
seq_num	501149	Sequence number
obs_id	10222	Observation id
title	Chandra Cycle 10 Spatial and Spectral Monitoring of SNR 1987A	Prop
observer	Prof. David Burrows	Principal investigator
object	SNR 1987A	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.866667	Observer's specified target RA [deg]
dec_targ	-69.26975	Observer's specified target Dec [deg]
ra_nom	83.853214867409	Nominal RA [deg]
dec_nom	-69.270564457145	Nominal Dec [deg]
roll_nom	158.14404437402	Nominal Roll [deg]
revision	2	Processing version of data
ontime	25274.700547814	Sum of GTIs [s]
livetime	24365.640645898	Livetime [s]
ontime4	25274.700547814	Sum of GTIs [s]
ontime5	25274.700547814	Sum of GTIs [s]
ontime6	25274.700547814	Sum of GTIs [s]
ontime7	25274.700547814	Sum of GTIs [s]
ontime8	25274.700547814	Sum of GTIs [s]
ontime9	25274.692753136	Sum of GTIs [s]
l2events	91997	Number of level 2 events



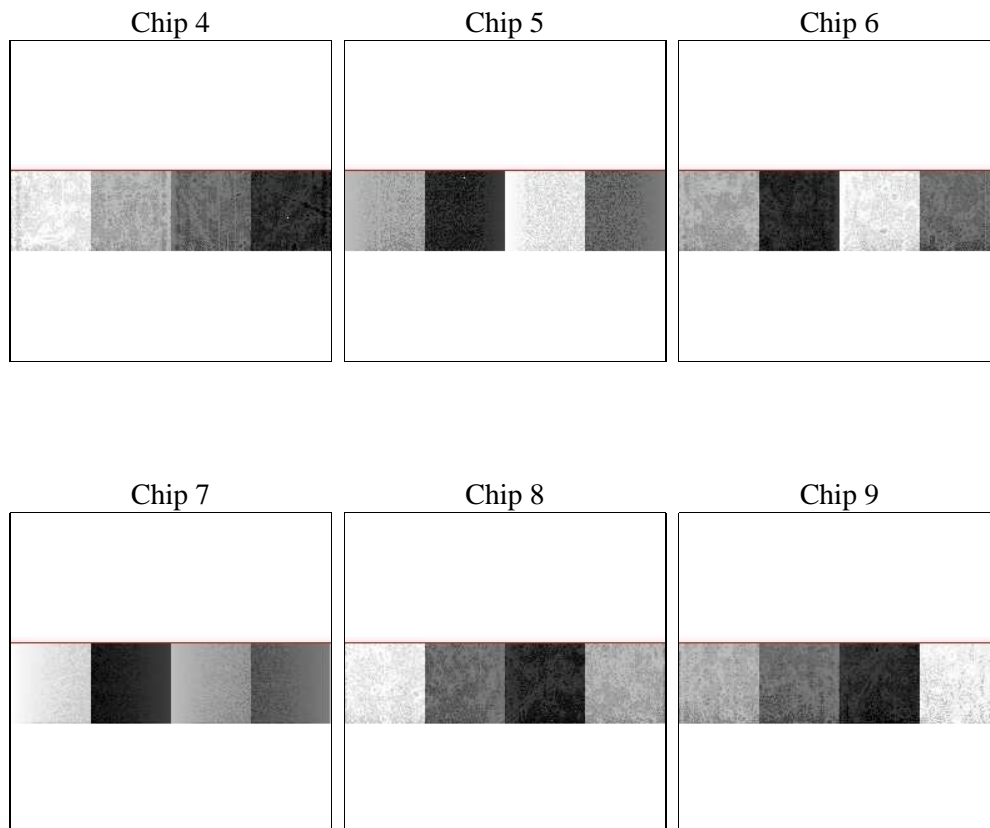
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	25000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	25274.700547814	Sum of GTIs [s]
caldbver	4.4.10	 	ontime4	25274.700547814	Sum of GTIs [s]
date	2012-06-09T22:47:31	Date and time of file creation	ontime5	25274.700547814	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	25274.700547814	Sum of GTIs [s]
			ontime7	25274.700547814	Sum of GTIs [s]
			ontime8	25274.700547814	Sum of GTIs [s]
			ontime9	25274.692753136	Sum of GTIs [s]
			l1events	428423	Number of level 1 events

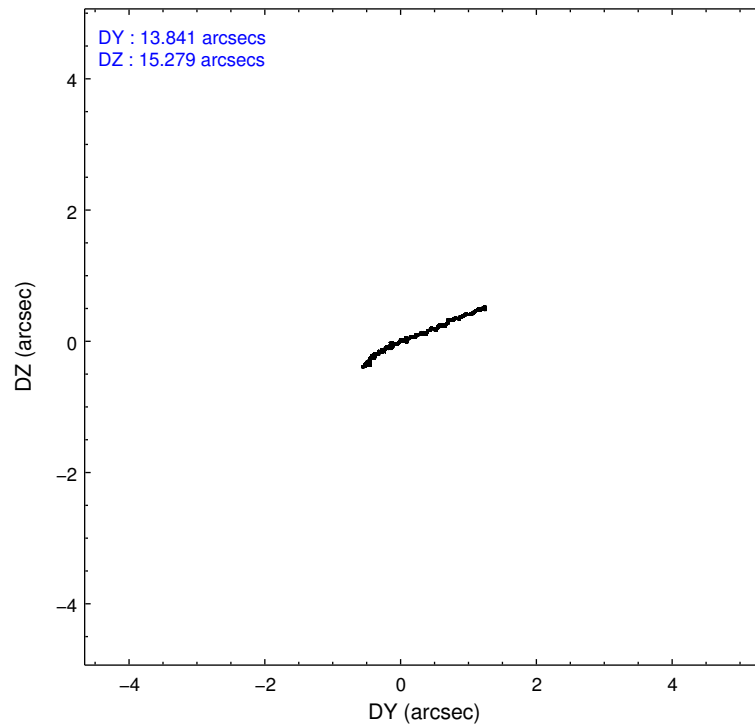
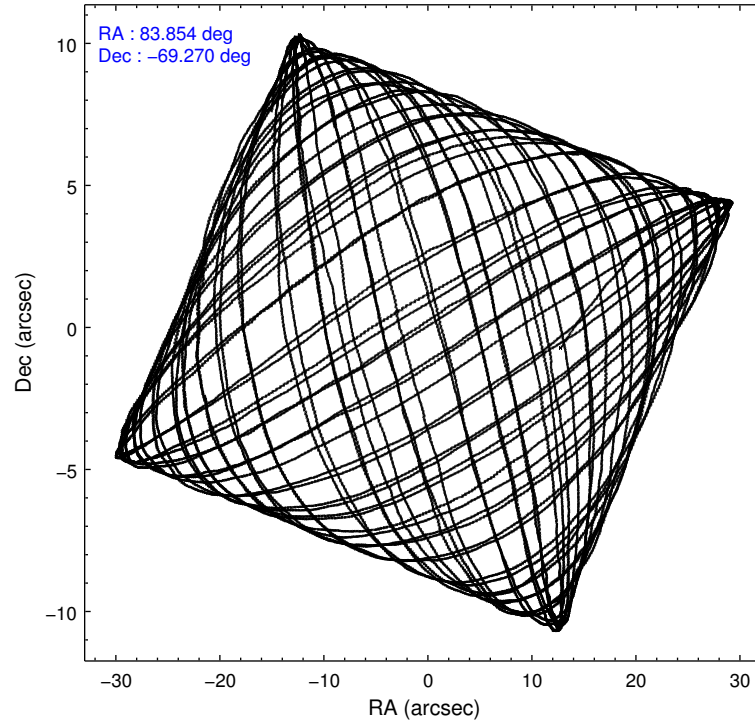
2.1.4 Events

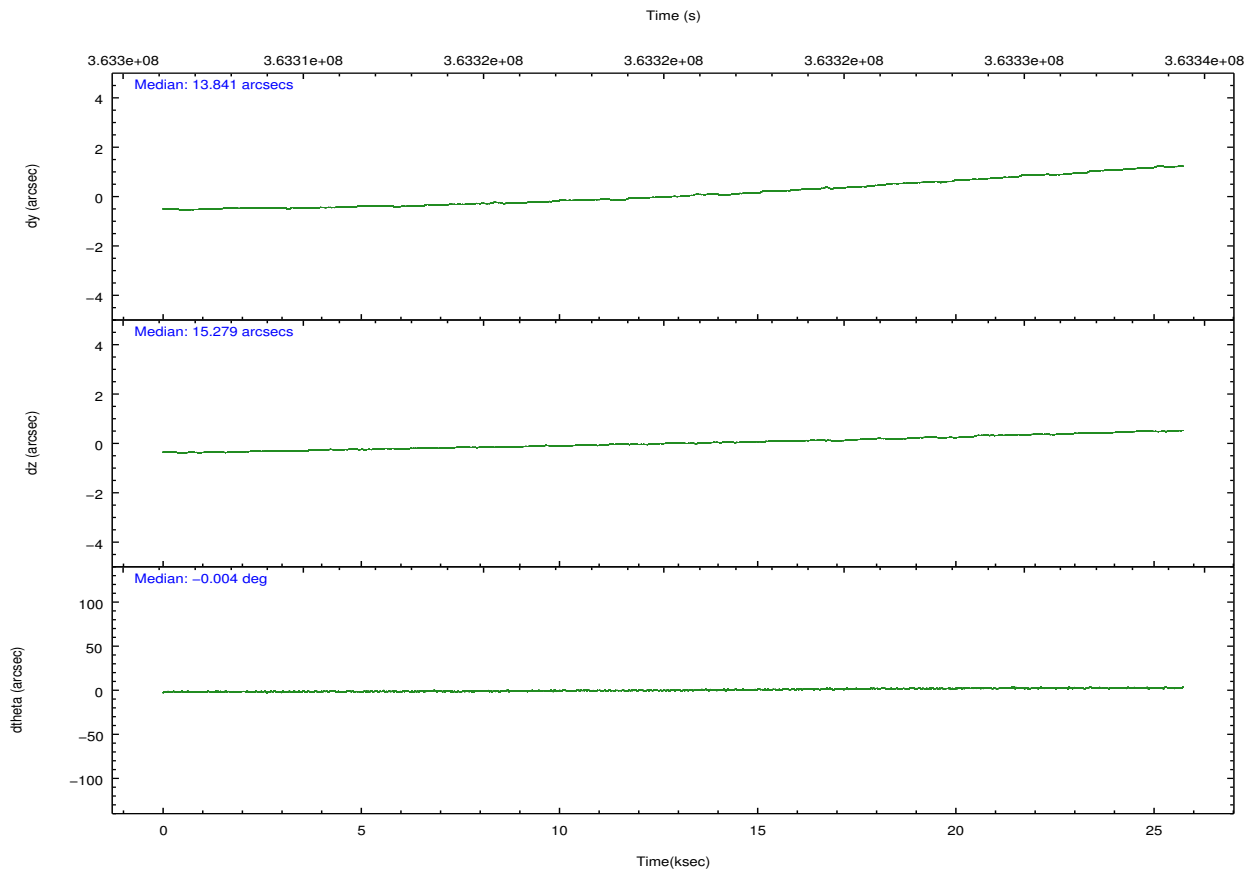
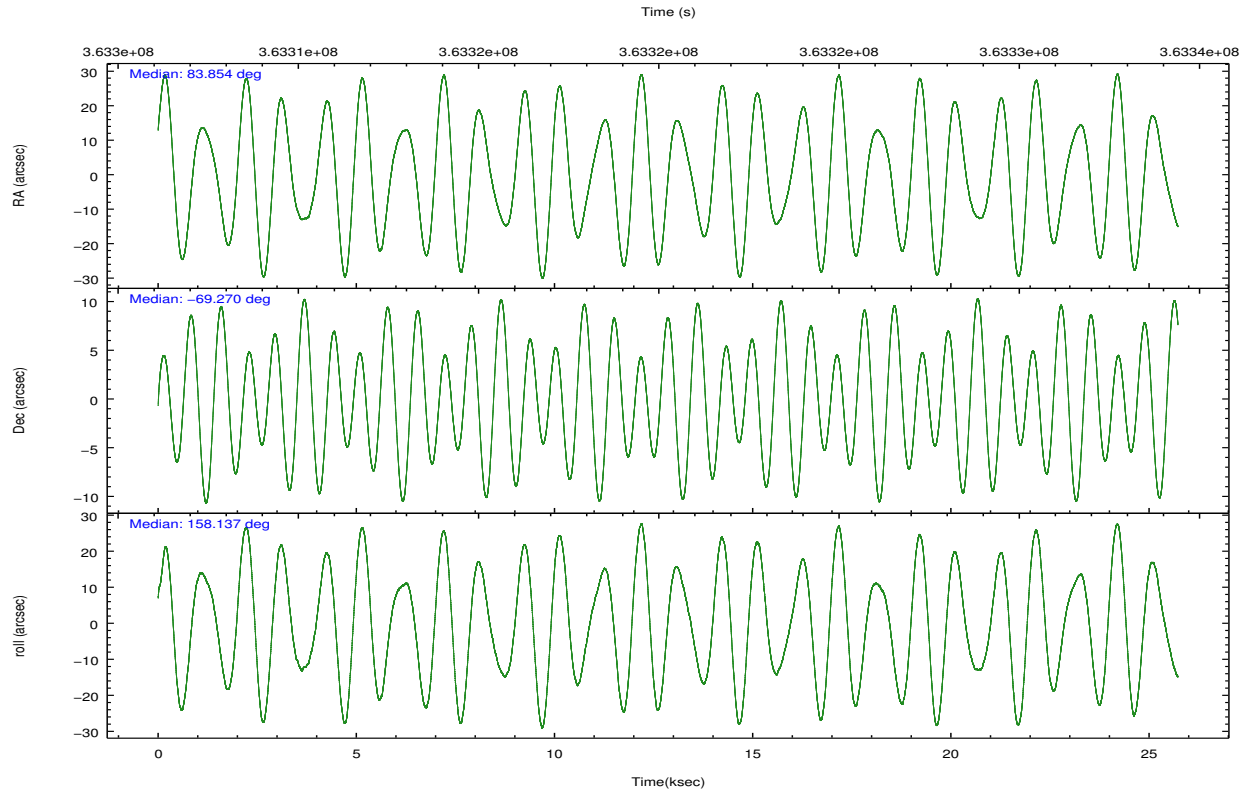
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	71968	90496	64372	59694	84055	57838	grade 0 events	3083	23205	3612	4482	5844	2190
rejected events	64105	32438	55955	26525	63585	51361		4%	25%	5%	7%	6%	3%
rejected %	89%	35%	86%	44%	75%	88%	grade 1 events	68	194	28	116	49	26
								0%	0%	0%	0%	0%	0%
							grade 2 events	1556	12054	1480	7597	4463	1217
								2%	13%	2%	12%	5%	2%
							grade 3 events	1112	2667	1077	3758	2323	1019
								1%	2%	1%	6%	2%	1%
							grade 4 events	1001	2575	1054	3693	2235	969
								1%	2%	1%	6%	2%	1%
							grade 5 events	1916	6424	1884	5990	2809	2044
								2%	7%	2%	10%	3%	3%
							grade 6 events	1111	17559	1195	13642	5606	1082
								1%	19%	1%	22%	6%	1%
							grade 7 events	62121	25818	54042	20416	60726	49291
								86%	28%	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	83.929482	83.85321486740941	CCD I2 on	N	N
[deg] Pointing Dec	-69.266324	-69.27056445714486	CCD I3 on	N	N
[deg] Pointing Roll	158.058751	158.1440443740213	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)	363307940.184000	363306558.81332	CCD S5 on	Y	Y
Observation start date	2009-07-06T22:51:14	2009-07-06T22:29:18	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	363332940.184000	363334410.11471	On-chip summing requested	N	N
Observation end date	2009-07-07T05:47:54	2009-07-07T06:13:30	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



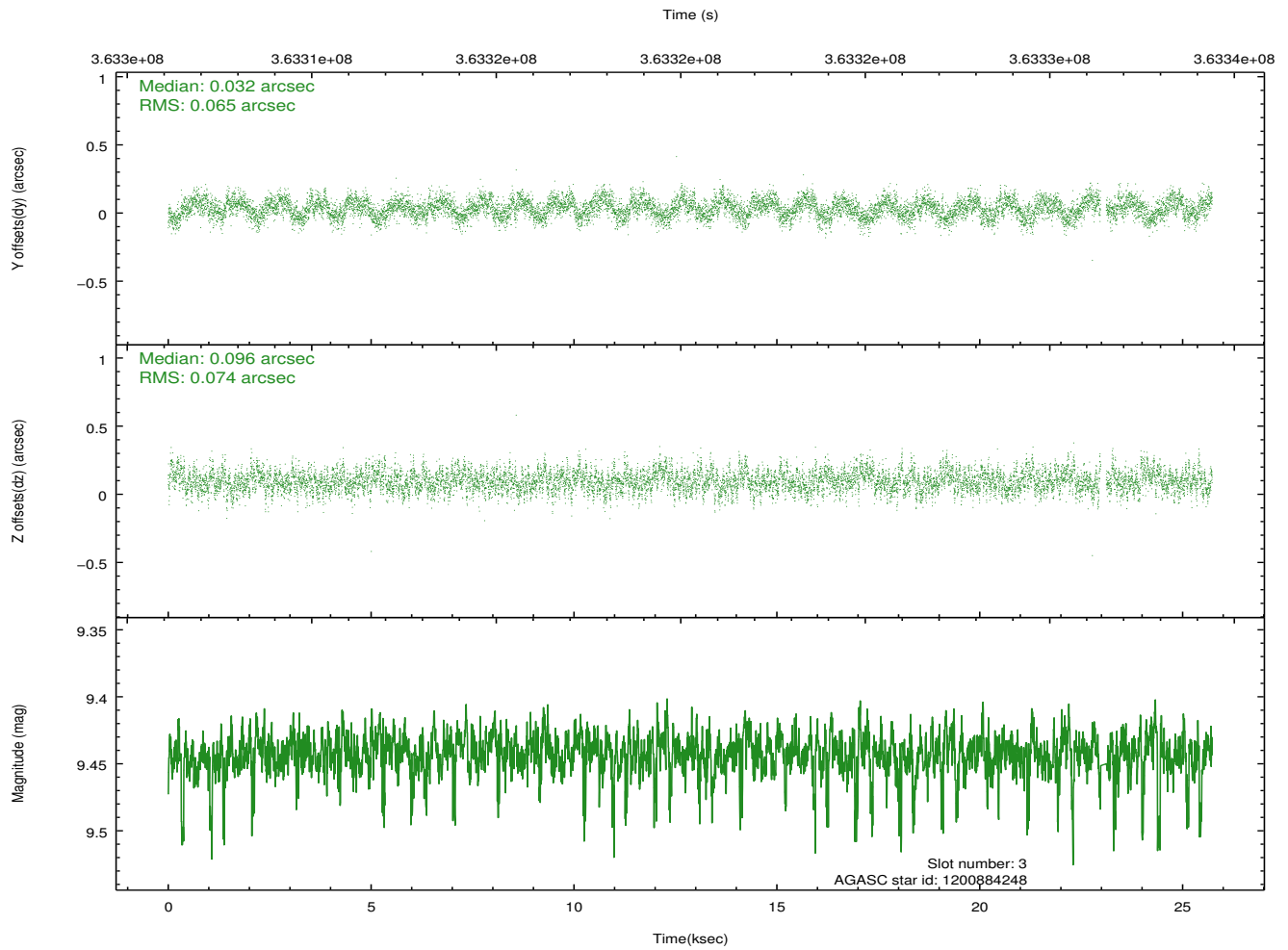
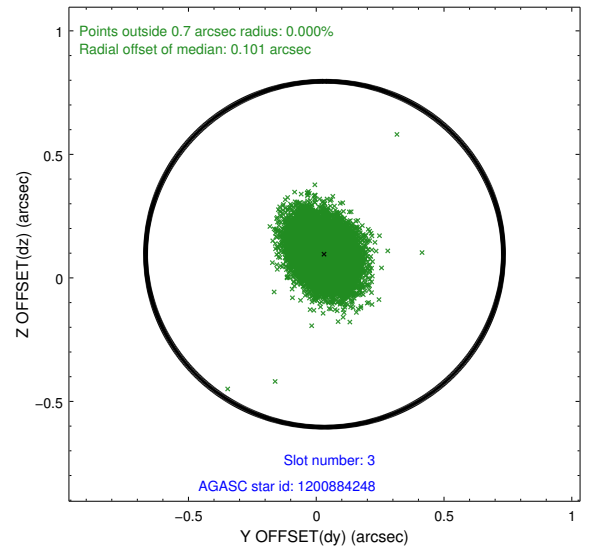
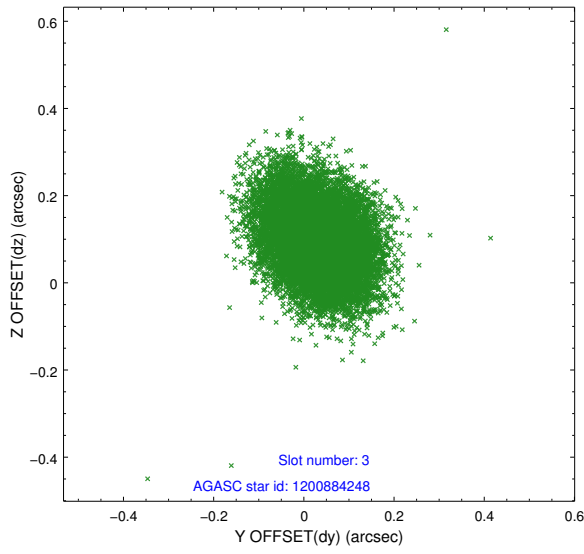


Slot Statistics

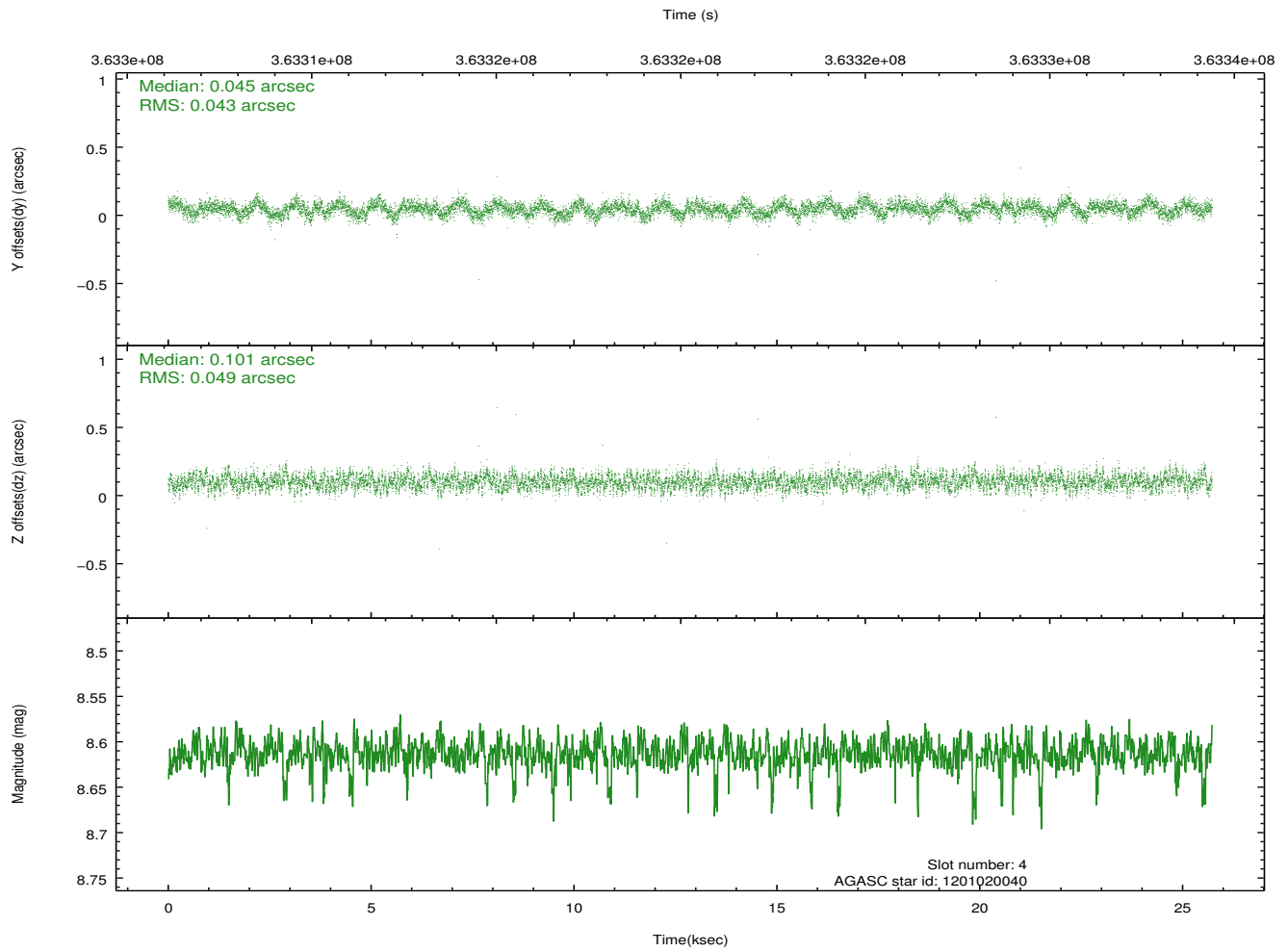
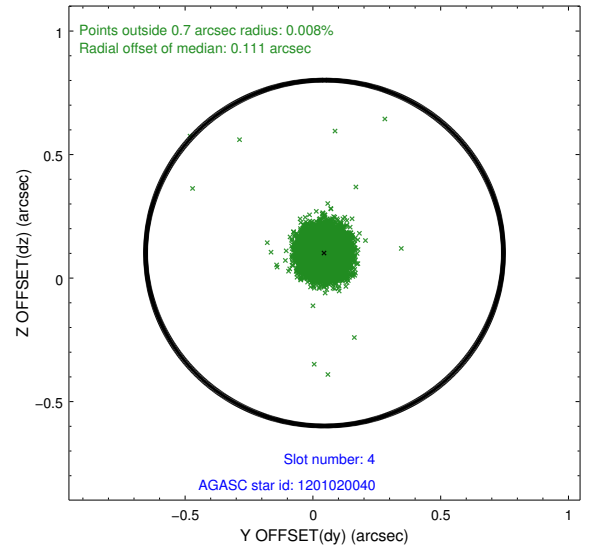
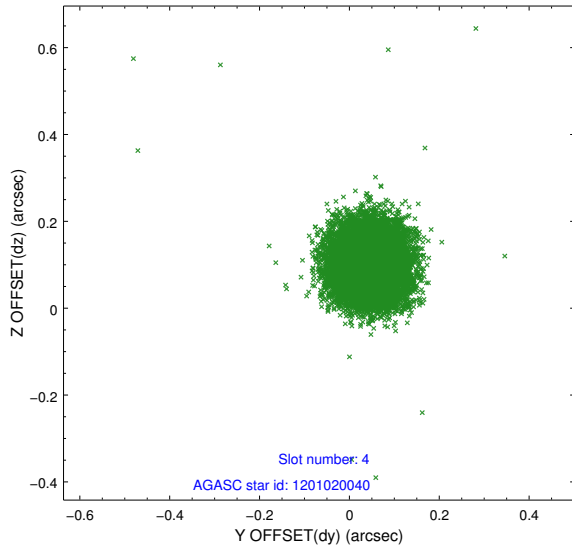
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.86	6274	-0.089	-0.050	0.012	0.019	0.000000	0.000000	-767.02	-1736.73
1	FID	ACIS-S-4	6.95	6275	0.097	0.049	0.010	0.015	0.000000	0.000000	2146.41	171.71
2	FID	ACIS-S-6	7.08	6275	-0.036	0.009	0.009	0.013	0.000000	0.000000	395.18	809.21
3	GUIDE	1200884248	9.44	12467	0.032	0.096	0.105	0.170	83.880915	-68.565170	1002.97	-2317.00
4	GUIDE	1201020040	8.61	12538	0.045	0.101	0.068	0.109	85.379163	-68.879396	-1231.27	-1973.83
5	GUIDE	1201542672	8.19	12540	0.064	-0.190	0.067	0.110	84.492488	-69.957531	-1575.17	2049.80
6	GUIDE	1200885760	9.45	12537	-0.050	-0.011	0.099	0.162	83.723637	-68.777667	906.26	-1530.27
7	GUIDE	1201019672	6.83	12550	-0.088	0.002	0.048	0.078	85.312192	-68.770187	-1011.41	-2311.13

2.4 Star Slots

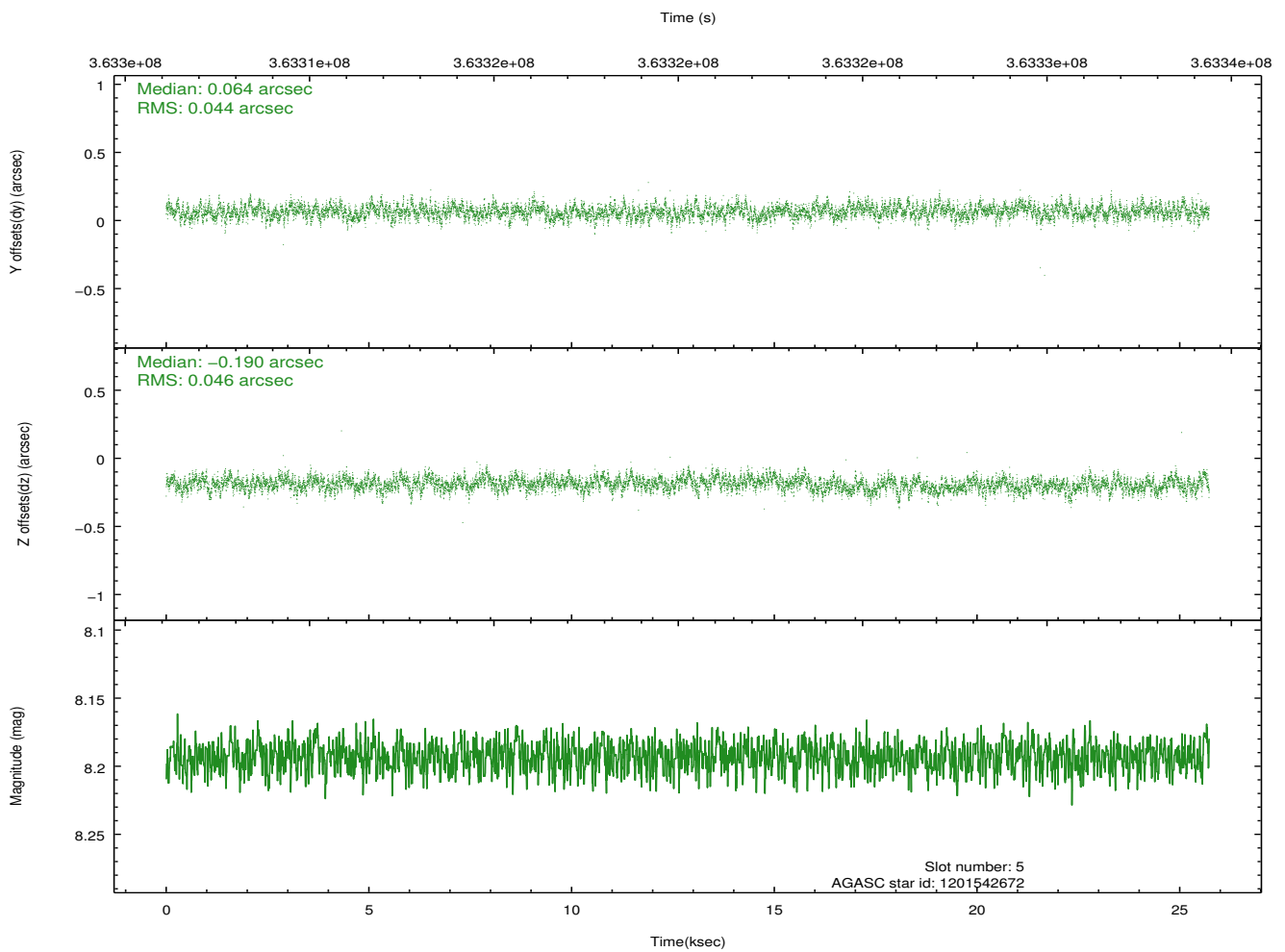
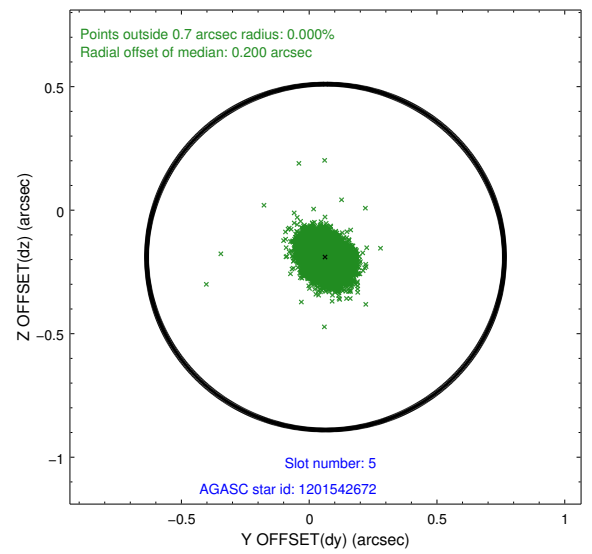
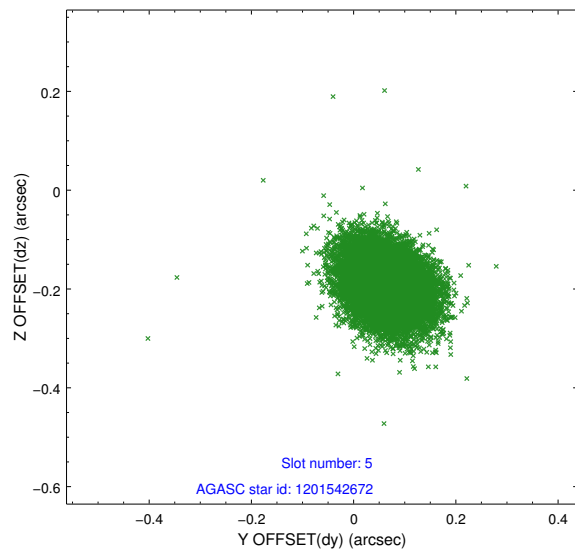
2.4.1 Slot 3



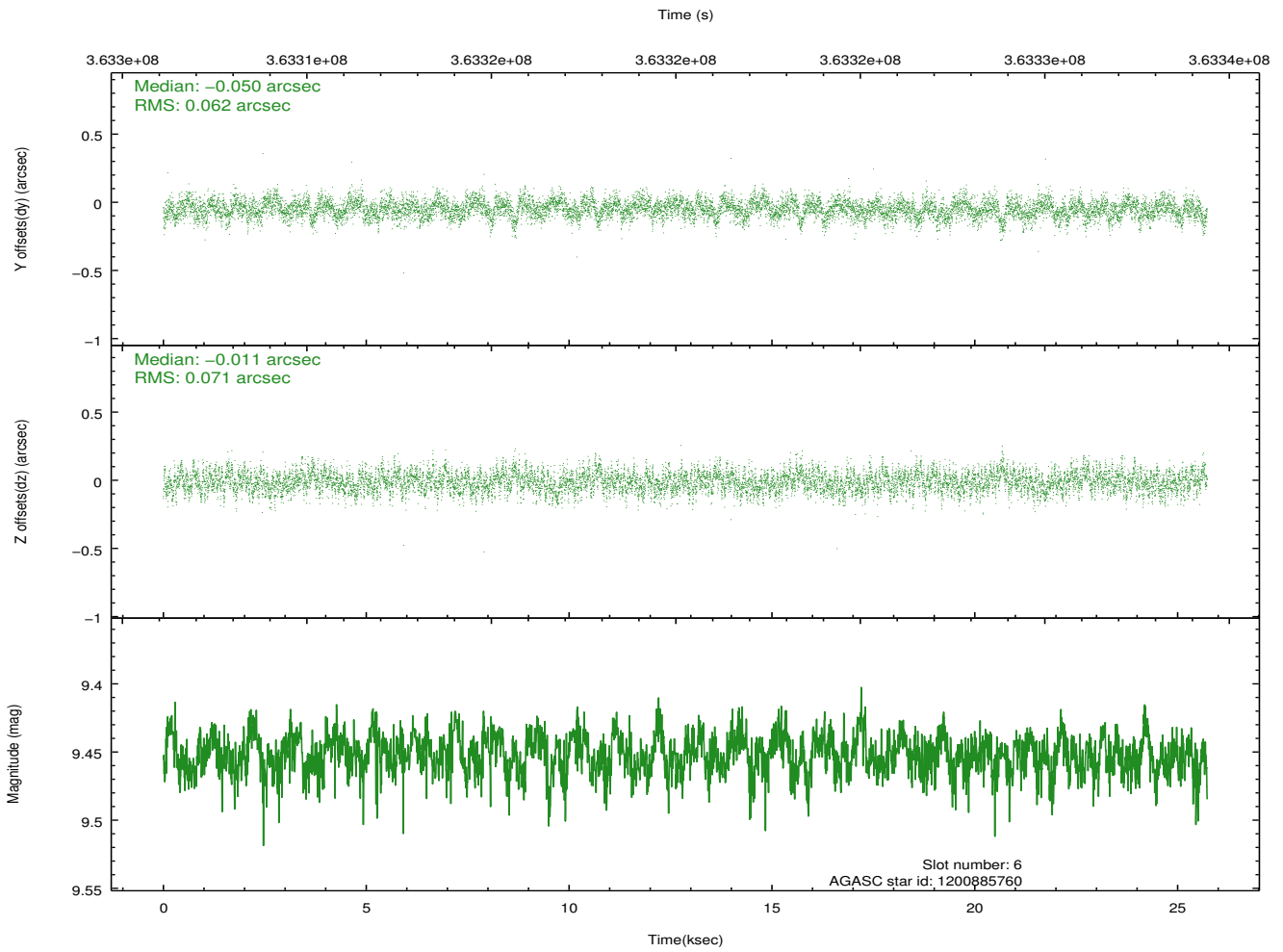
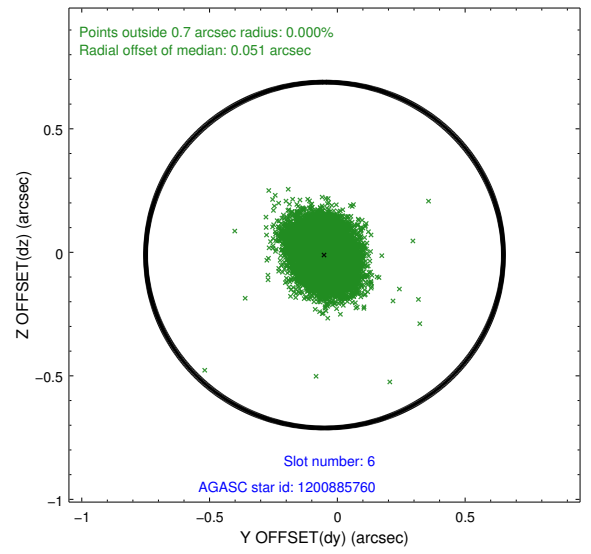
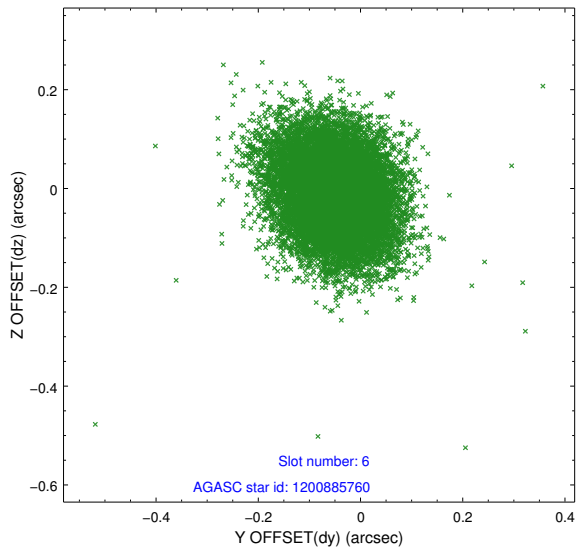
2.4.2 Slot 4



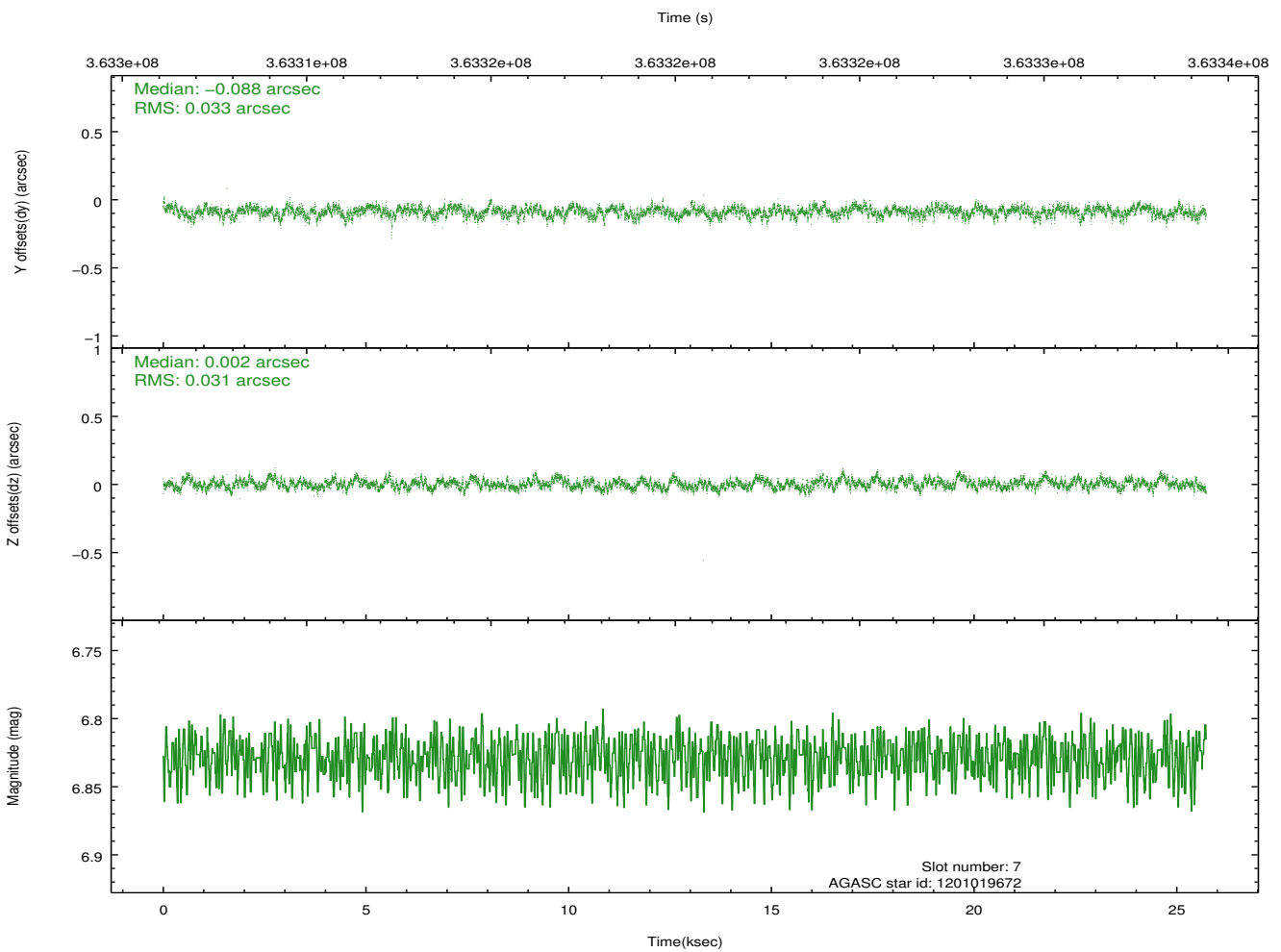
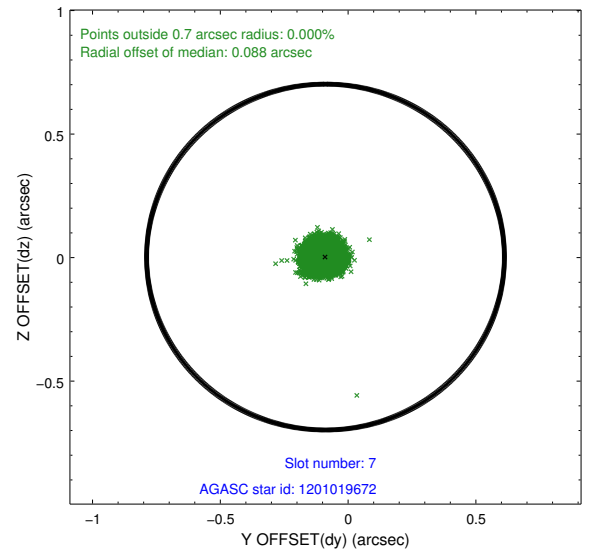
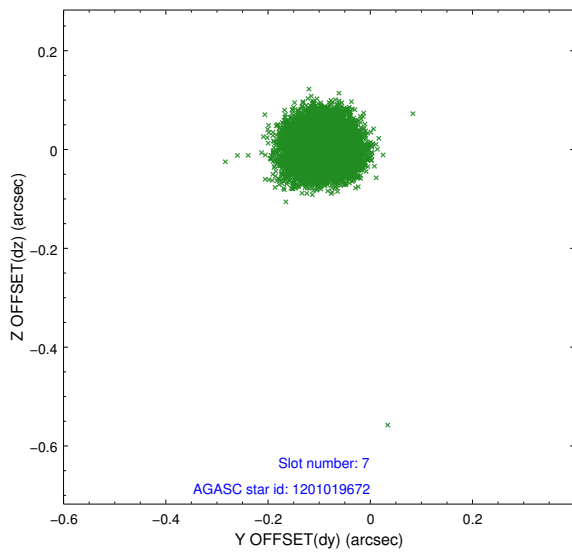
2.4.3 Slot 5



2.4.4 Slot 6

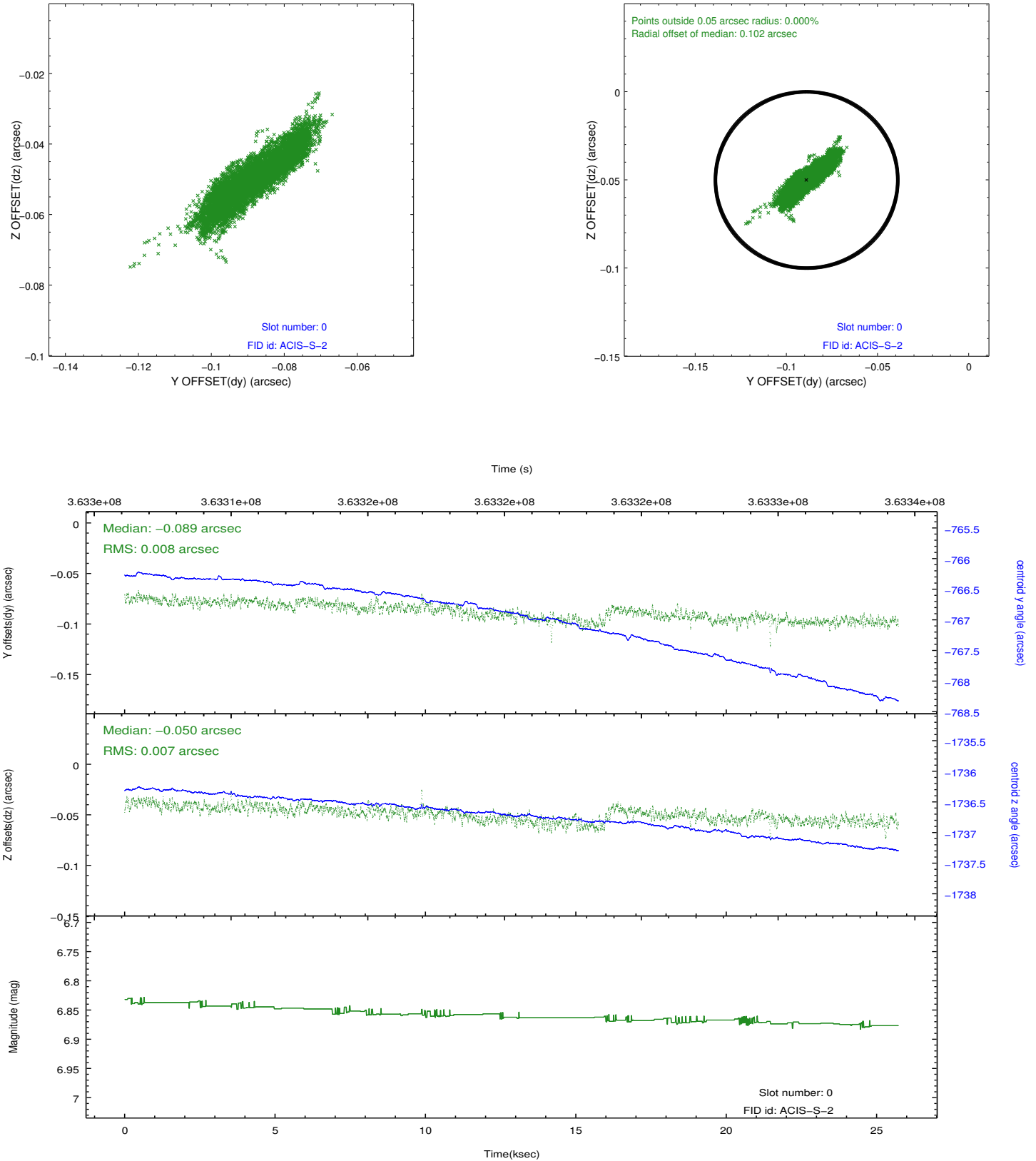


2.4.5 Slot 7

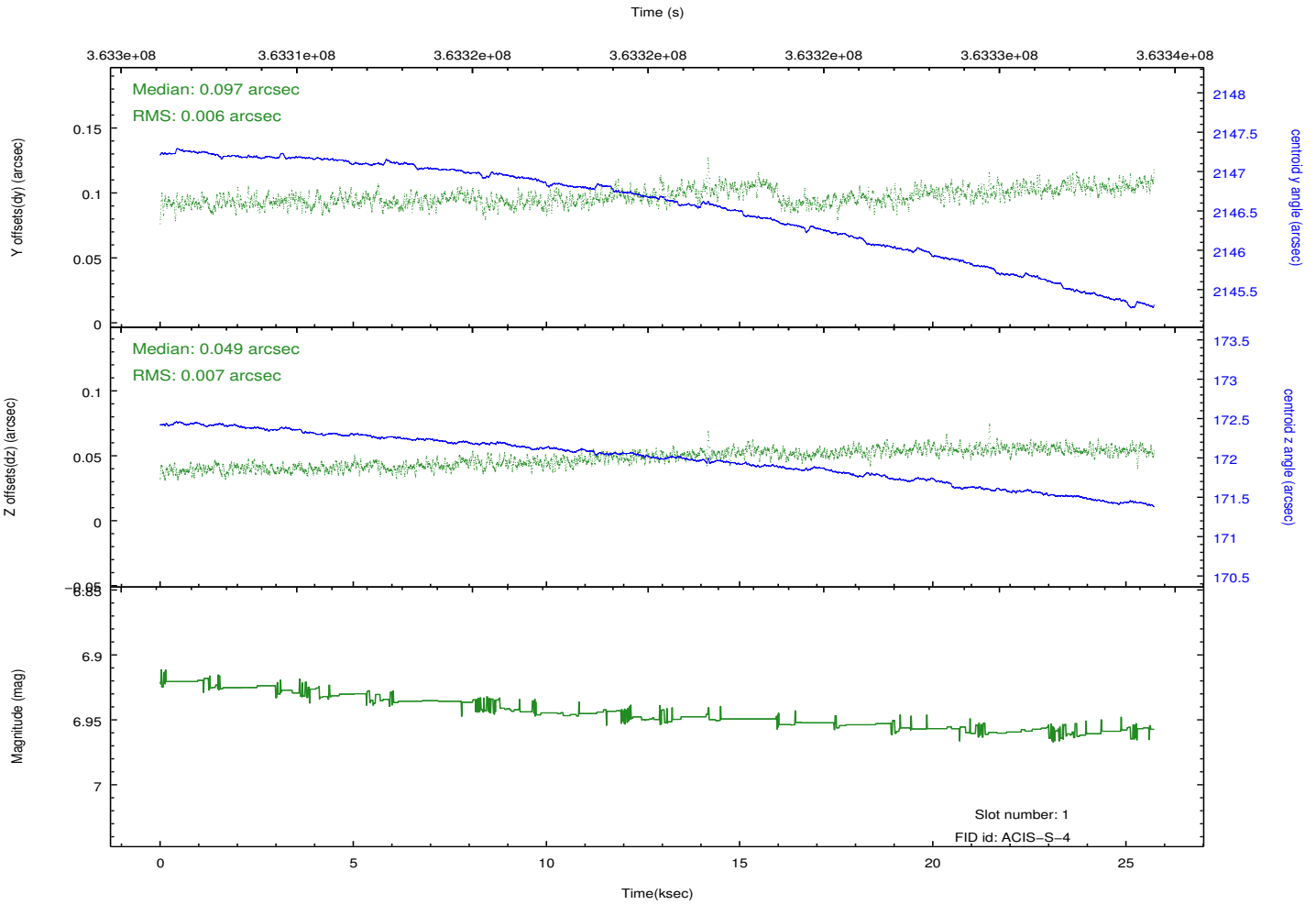
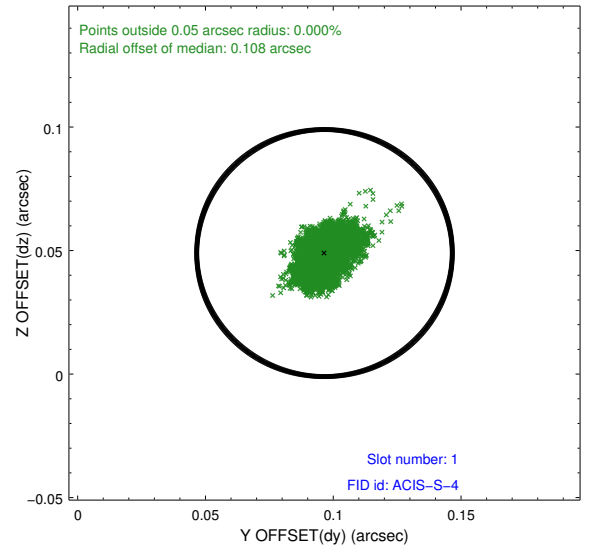
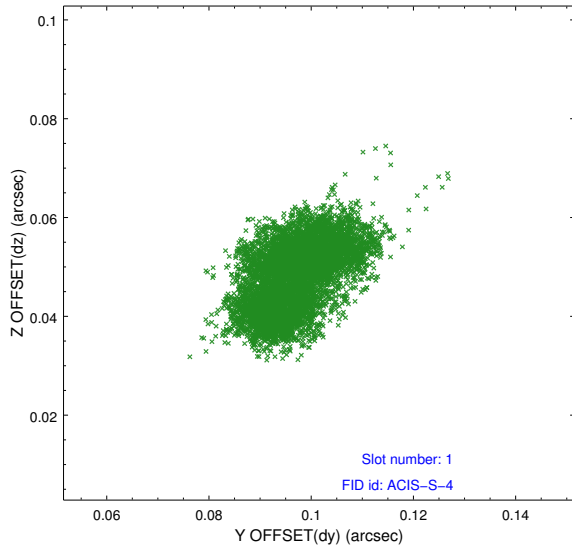


2.5 FID Slots

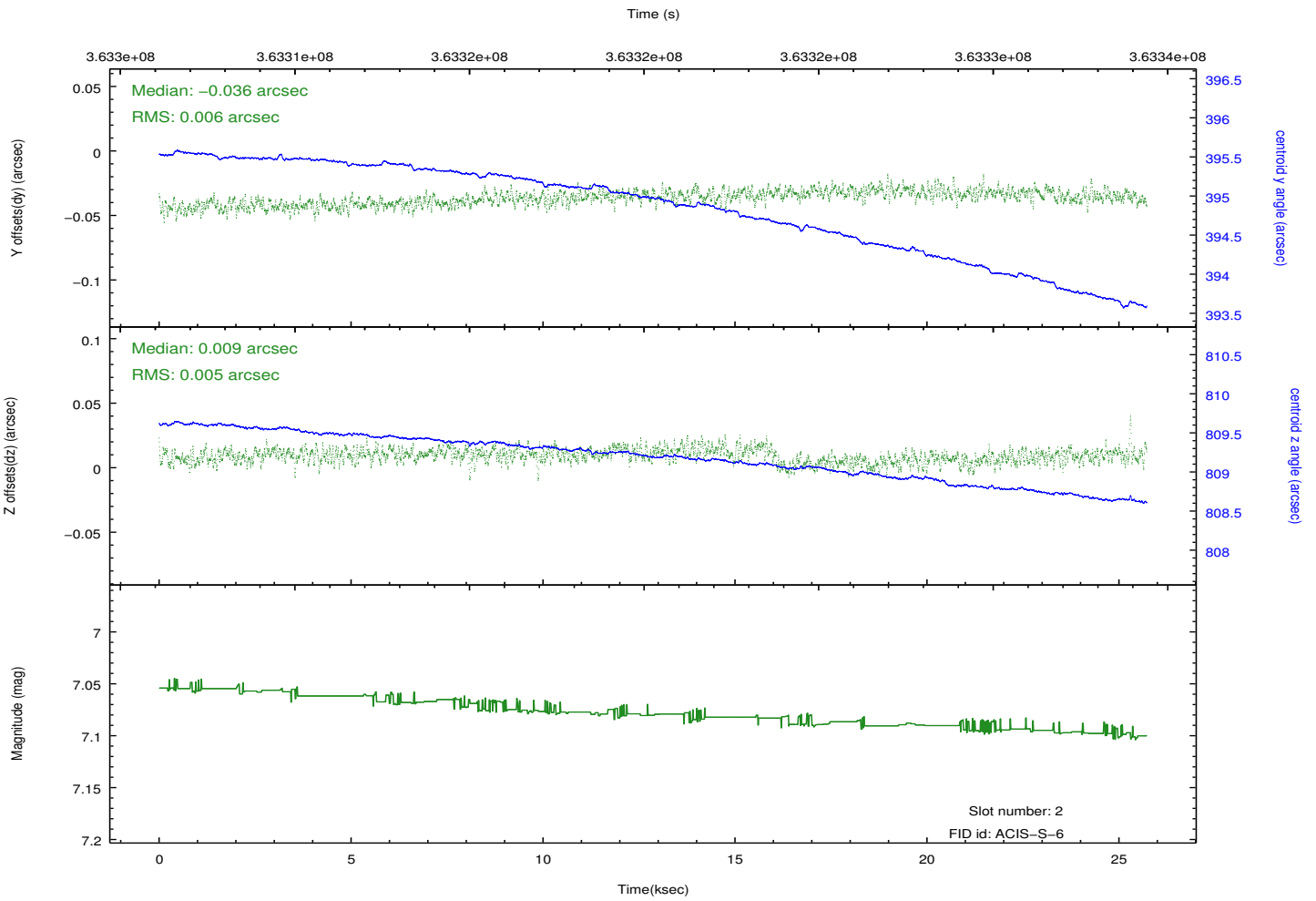
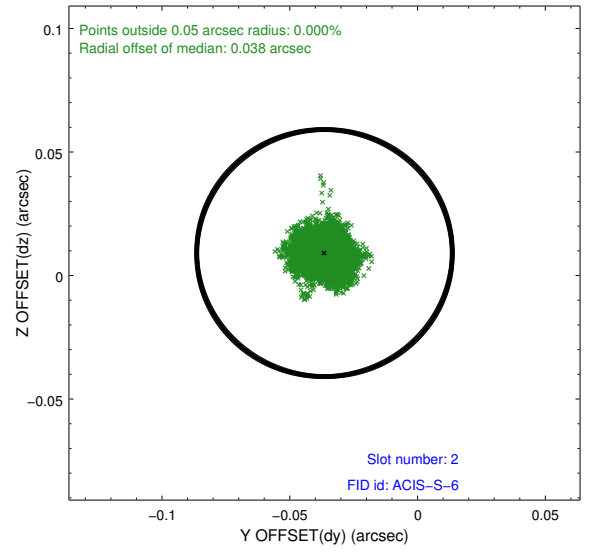
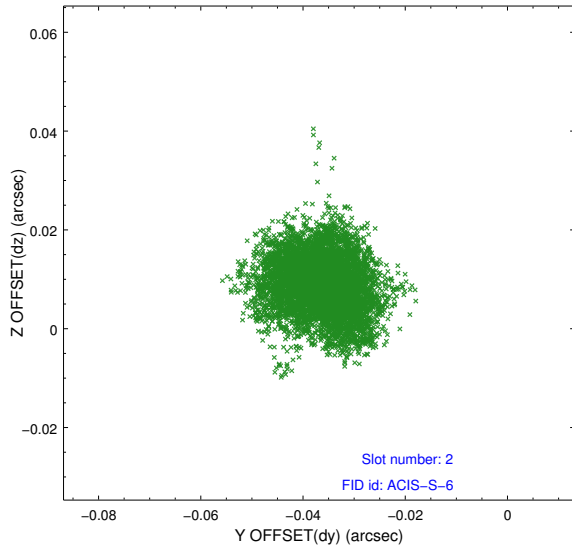
2.5.1 Slot 0



2.5.2 Slot 1

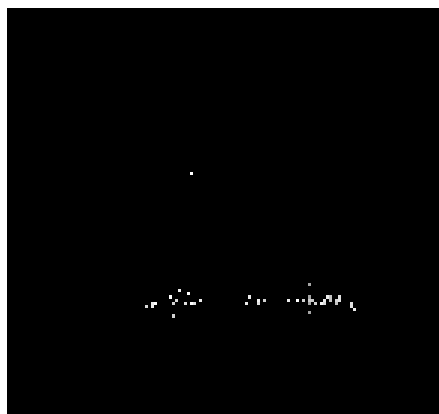


2.5.3 Slot 2

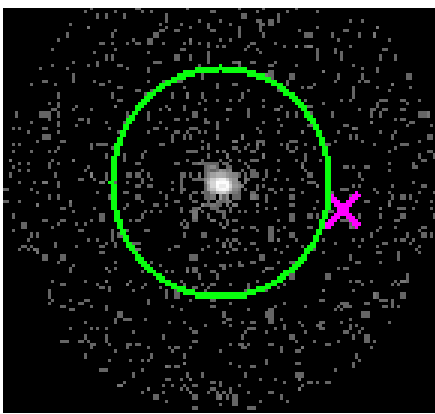


3 Gratings

3.1 HEG Arm



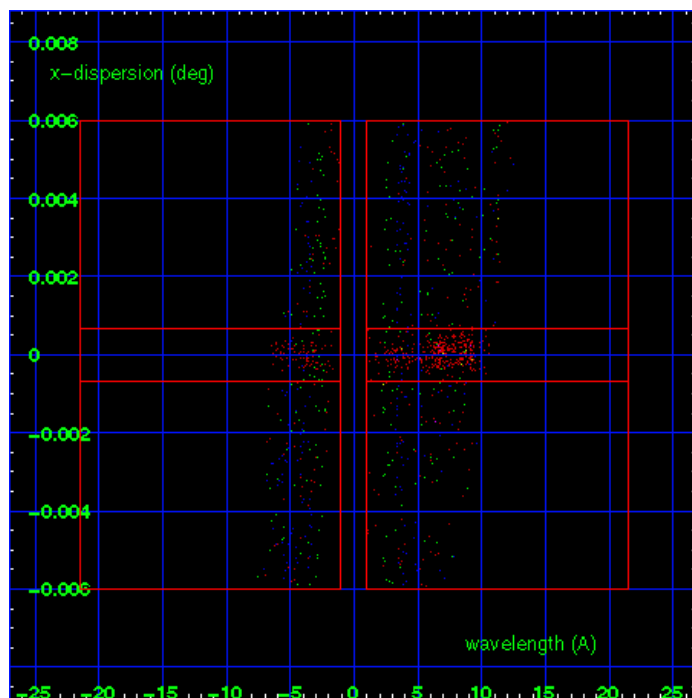
HEG Order Sort 123



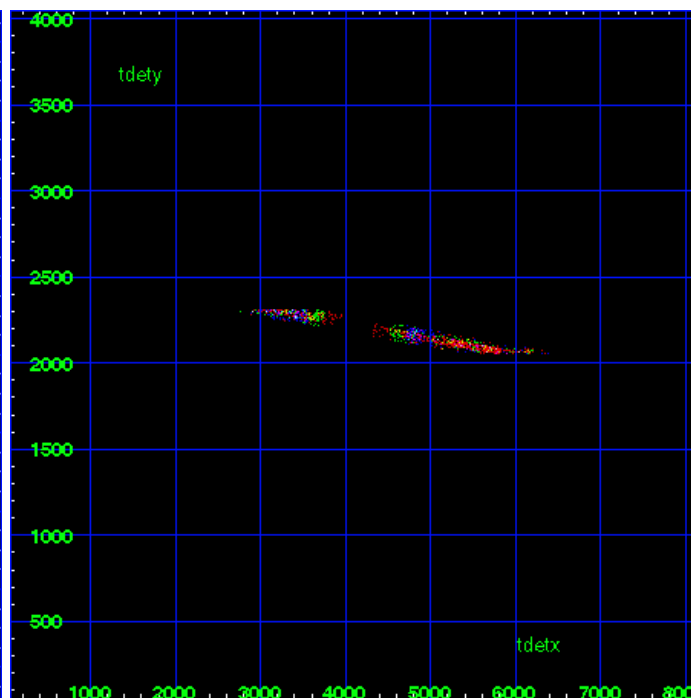
HEG Zero Order



HEG Order Sort ALL

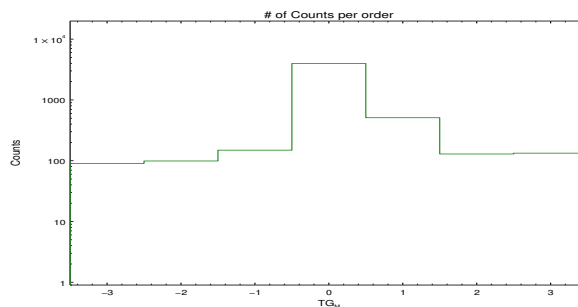


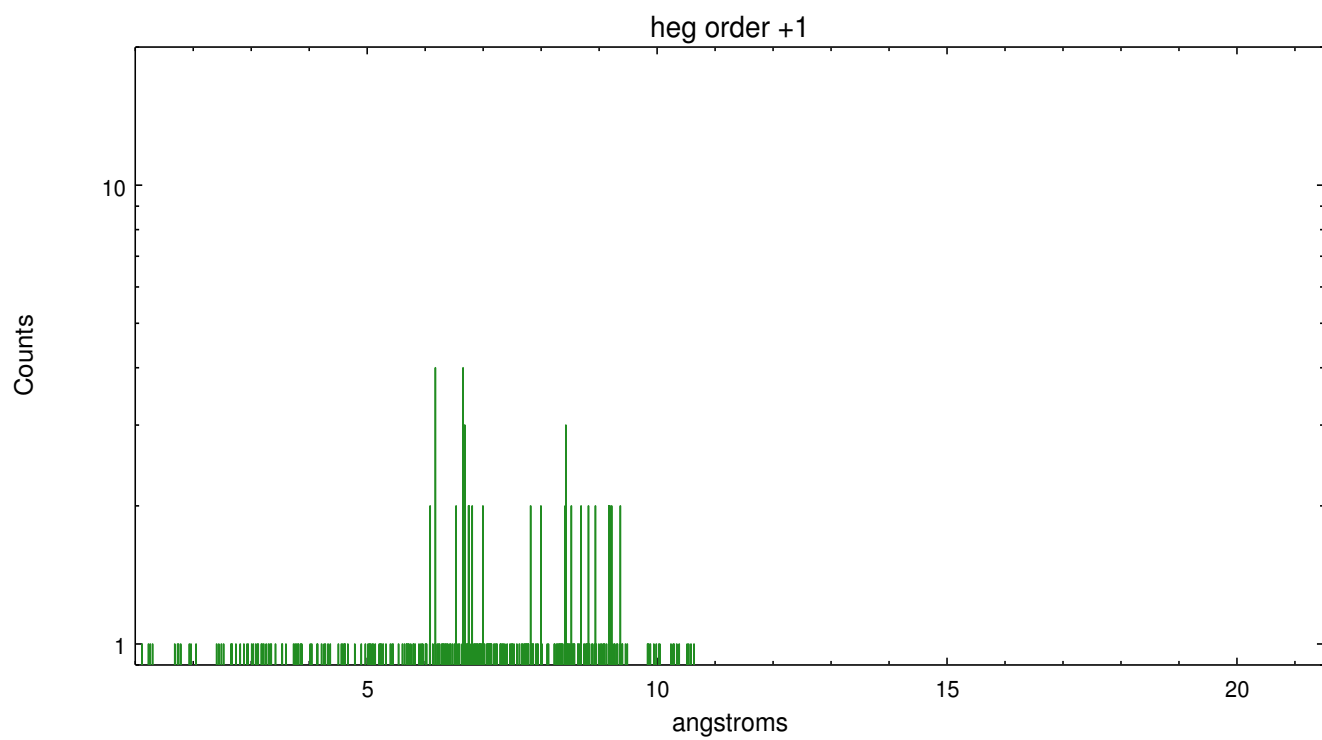
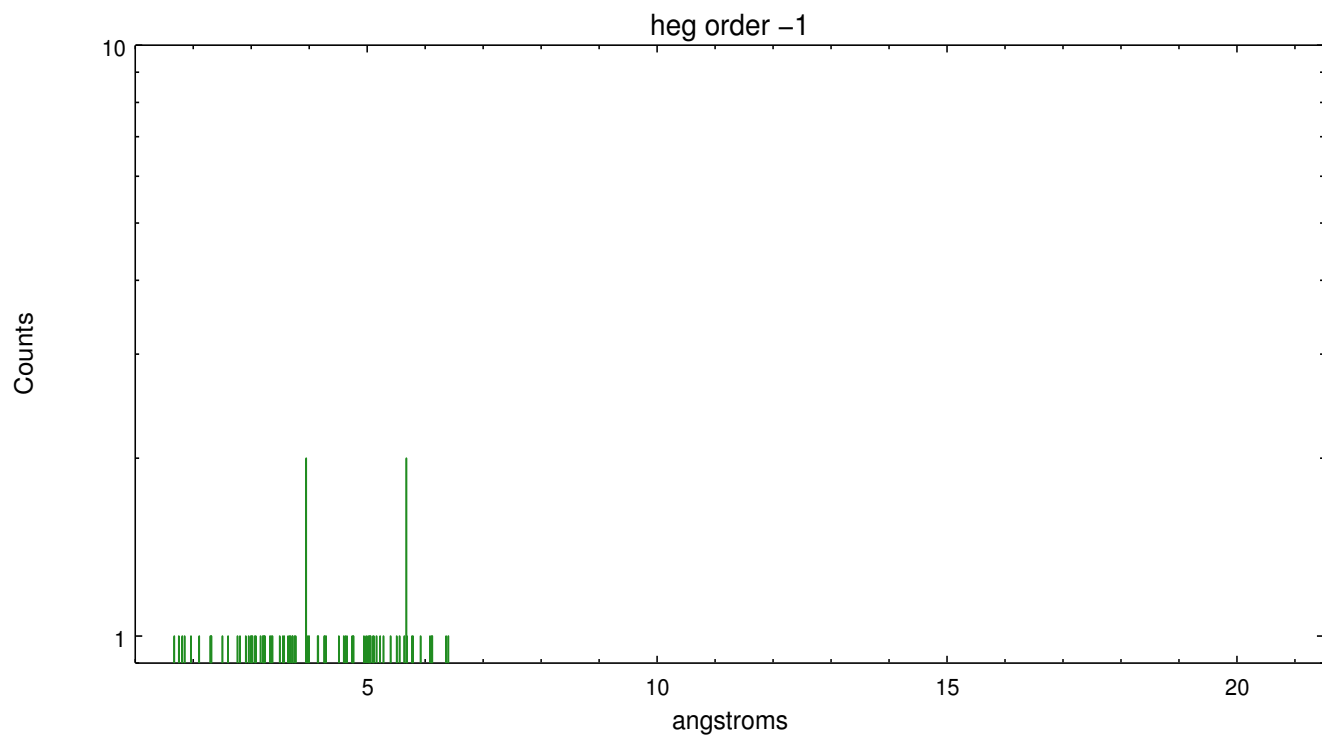
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	90	99	149	3970	510	129	133

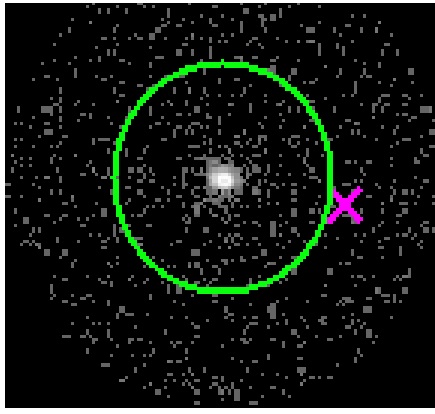




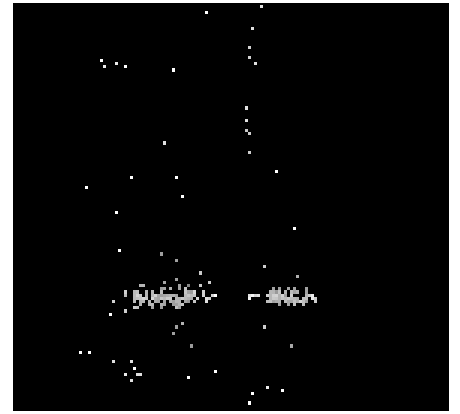
3.2 MEG Arm



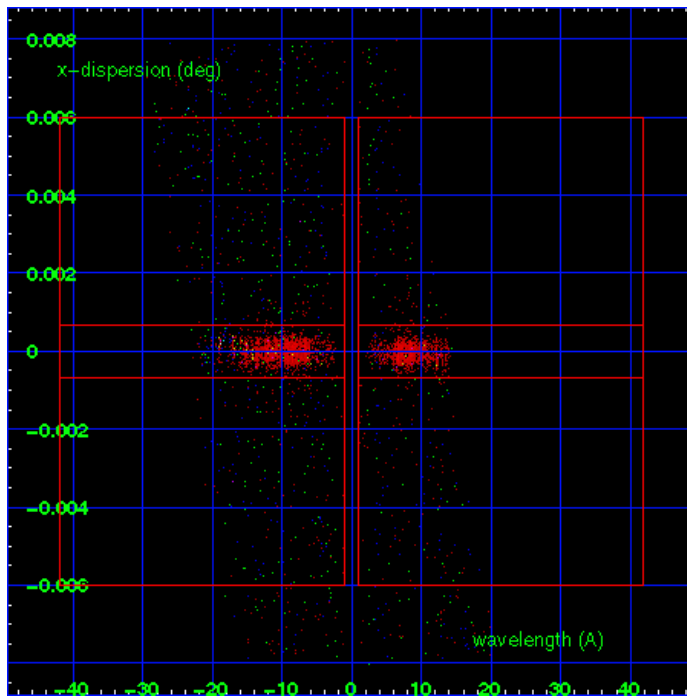
MEG Order Sort 123



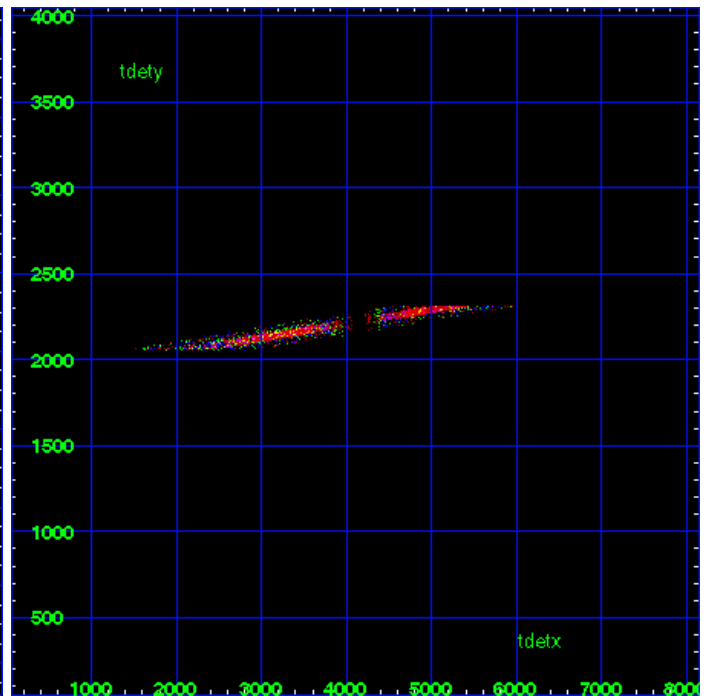
MEG Zero Order



MEG Order Sort ALL

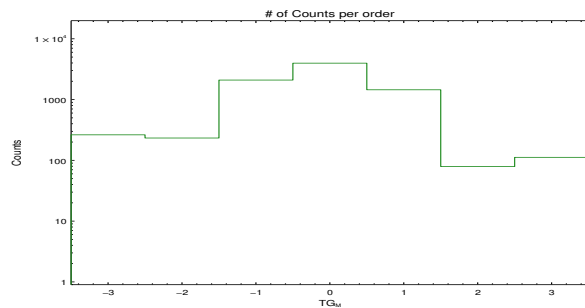


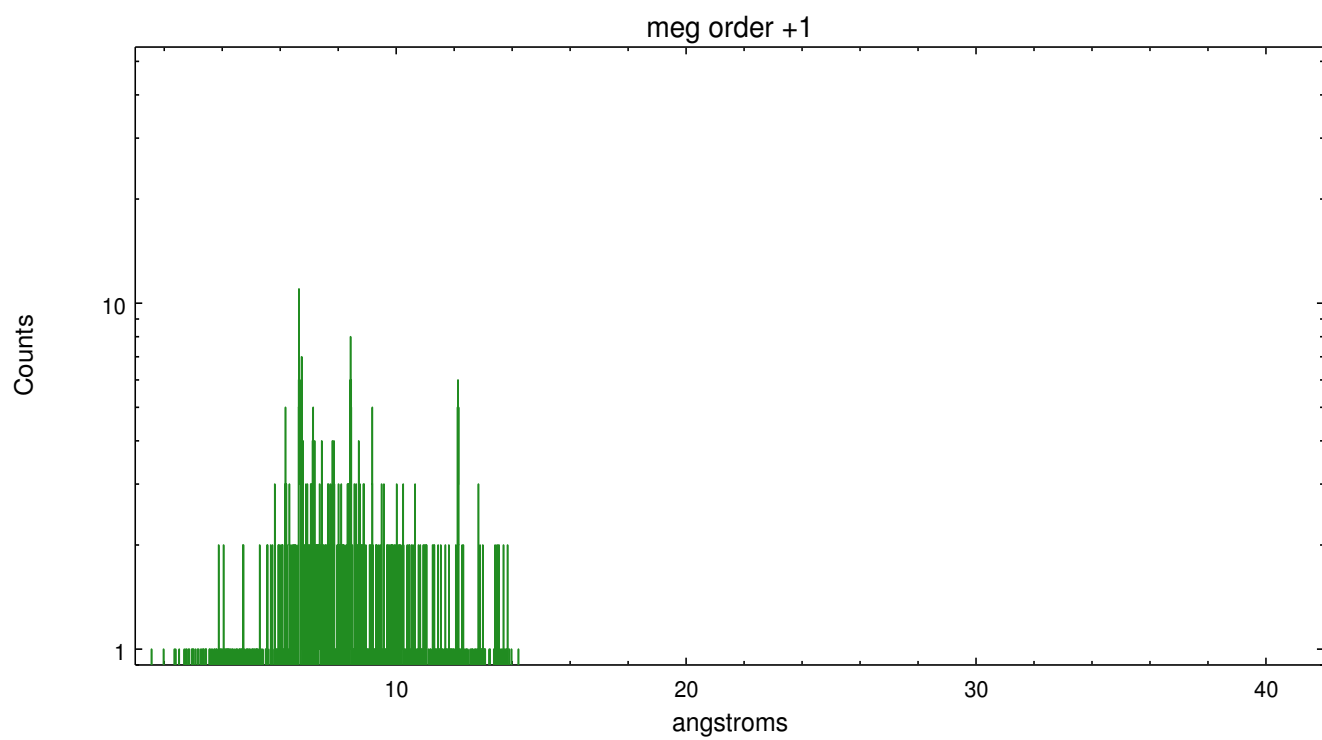
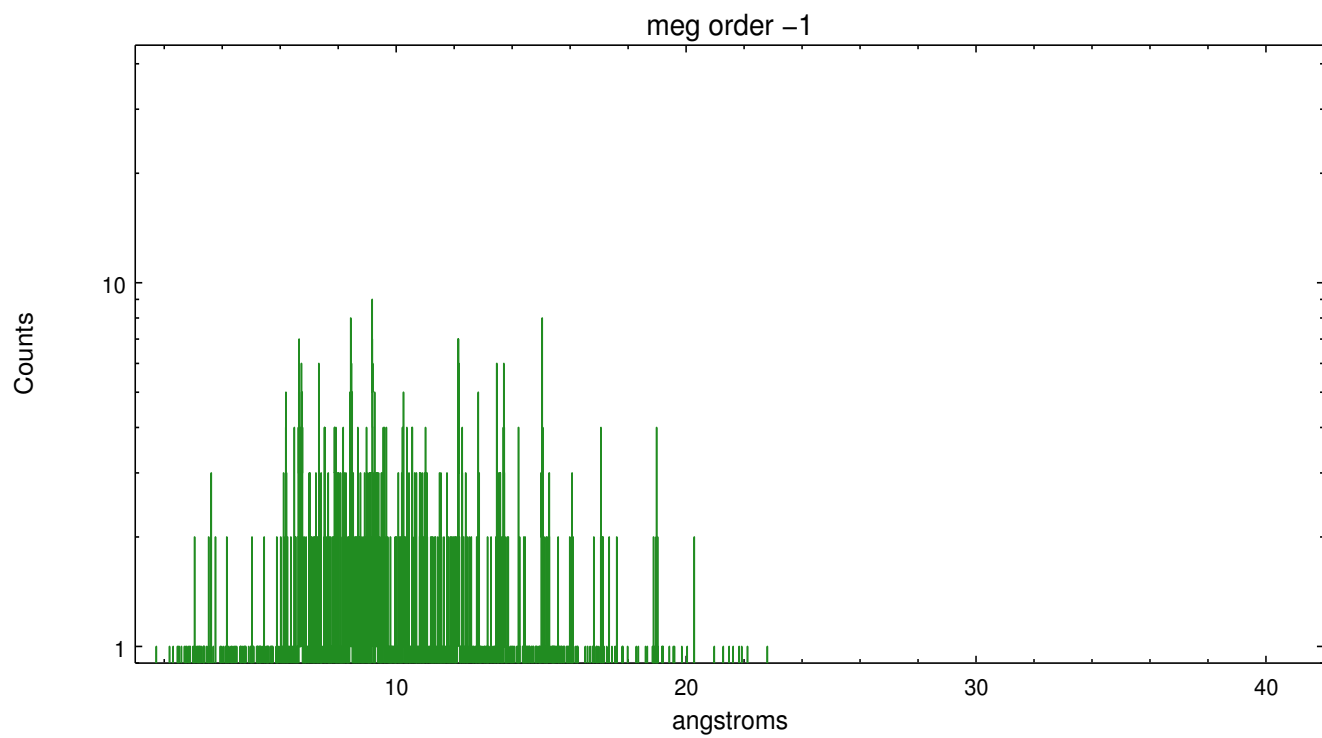
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	263	233	2093	3970	1449	79	112





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	25.274700547814

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).