

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 14417 - L2 Version 1
Chandra X-Ray Center

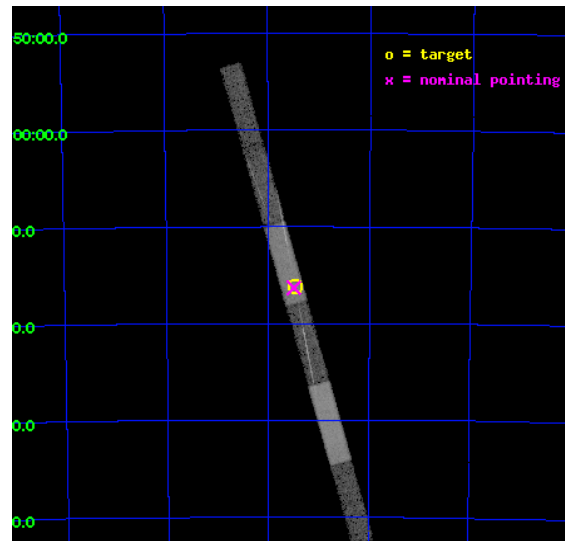
L2 Processing Date : Apr 2 2012

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1 Front

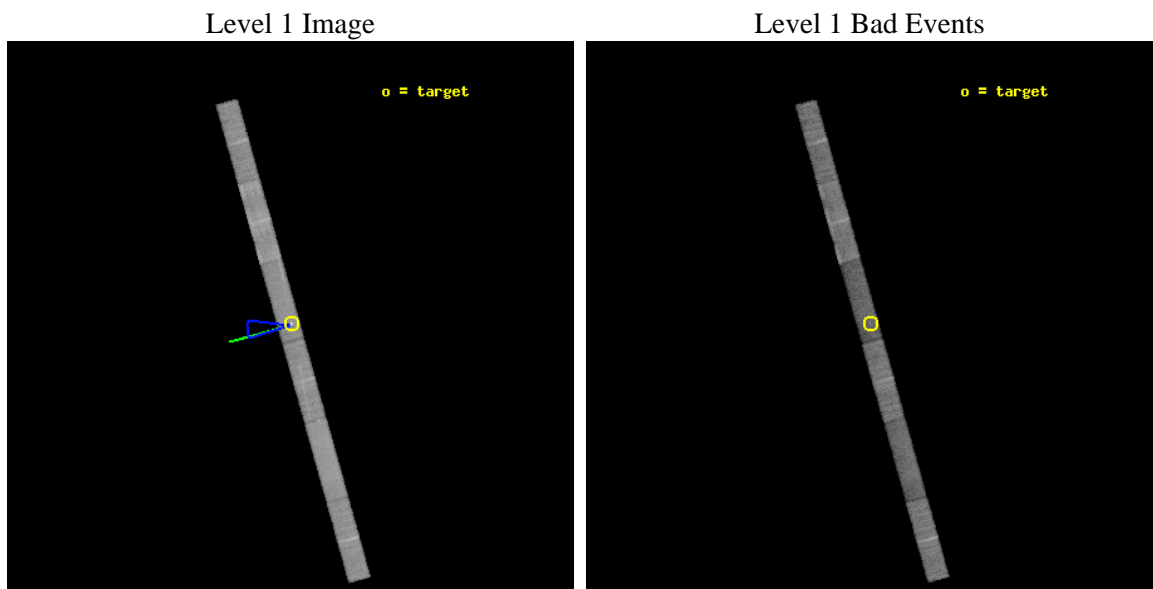
seq_num	501568	Sequence number
obs_id	14417	Observation id
title	Chandra Cycle 13 Spatial and Spectral Monitoring of SNR 1987A	Prop
observer	Prof. David Burrows	Principal investigator
object	SNR 1987A	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.866667	Observer's specified target RA [deg]
dec_targ	-69.26975	Observer's specified target Dec [deg]
ra_nom	83.872342655577	Nominal RA [deg]
dec_nom	-69.272024958279	Nominal Dec [deg]
roll_nom	254.23192184337	Nominal Roll [deg]
revision	1	Processing version of data
ontime	28041.974499941	Sum of GTIs [s]
livetime	26936.500518655	Livetime [s]
ontime4	28042.0	Sum of GTIs [s]
ontime5	28041.933459938	Sum of GTIs [s]
ontime6	28041.892419934	Sum of GTIs [s]
ontime7	28041.974499941	Sum of GTIs [s]
ontime8	28041.851379931	Sum of GTIs [s]
ontime9	28041.810339928	Sum of GTIs [s]
l2events	76395	Number of level 2 events



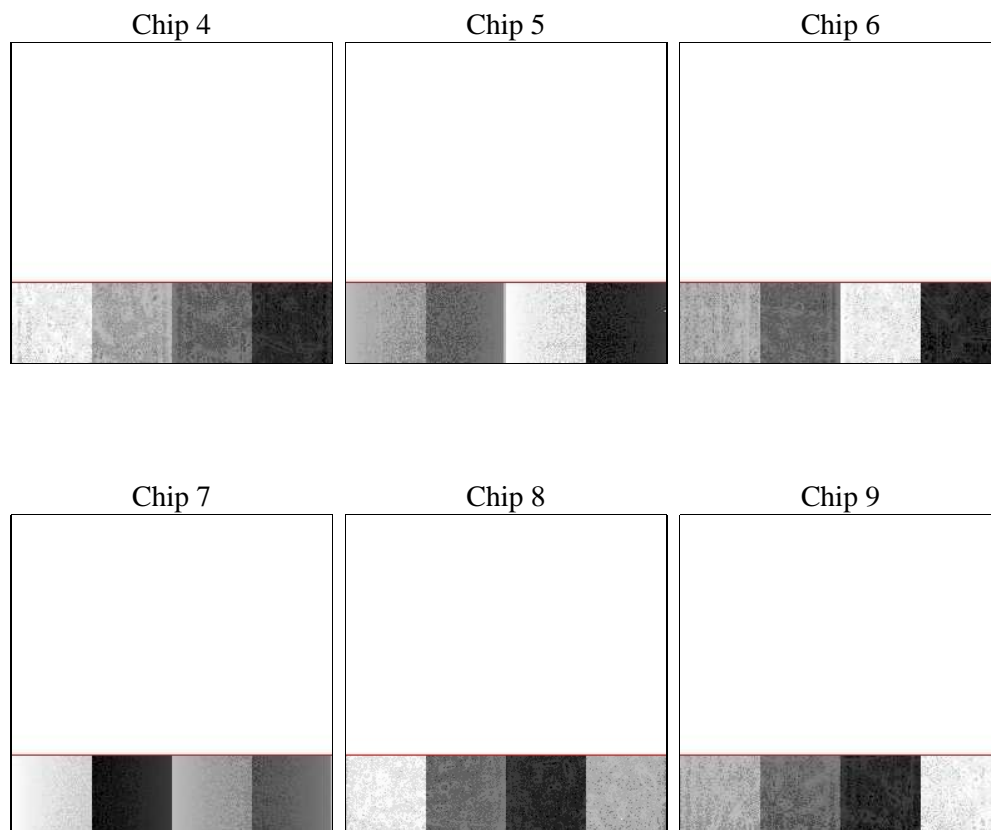
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	28000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	28041.974499941	Sum of GTIs [s]
caldsver	4.4.9	 	ontime4	28042.0	Sum of GTIs [s]
date	2012-04-02T07:06:42	Date and time of file creation	ontime5	28041.933459938	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	28041.892419934	Sum of GTIs [s]
			ontime7	28041.974499941	Sum of GTIs [s]
			ontime8	28041.851379931	Sum of GTIs [s]
			ontime9	28041.810339928	Sum of GTIs [s]
			l1events	301428	Number of level 1 events

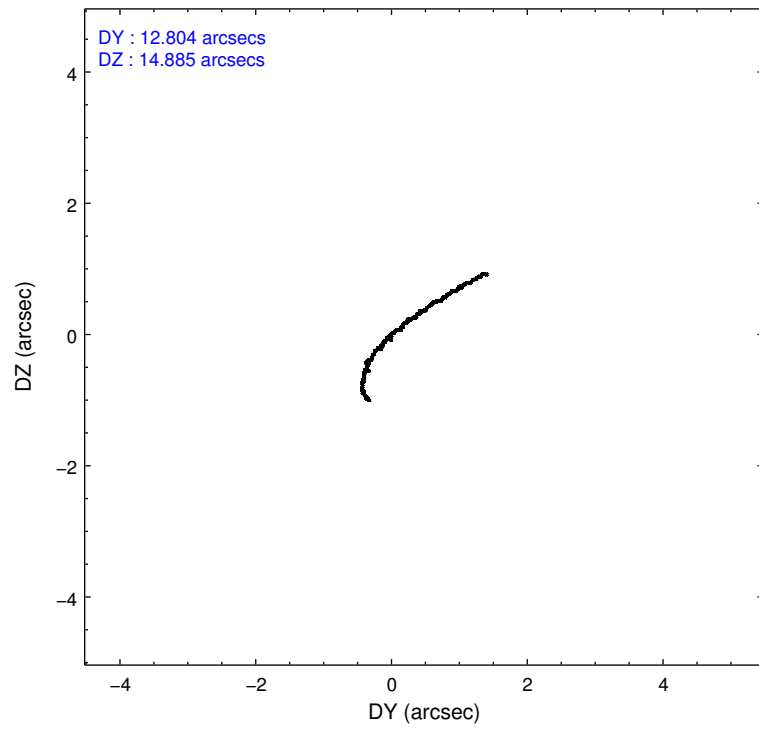
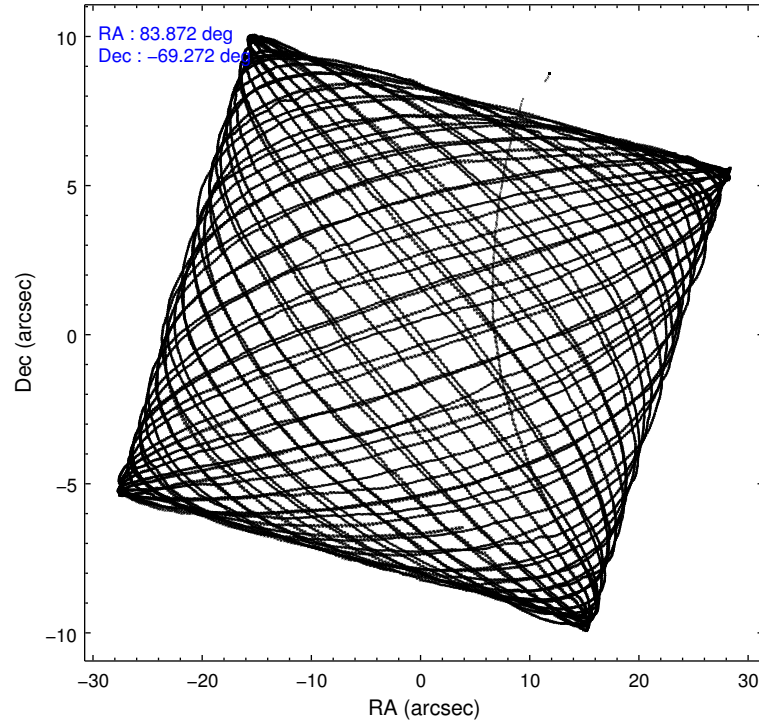
2.1.4 Events

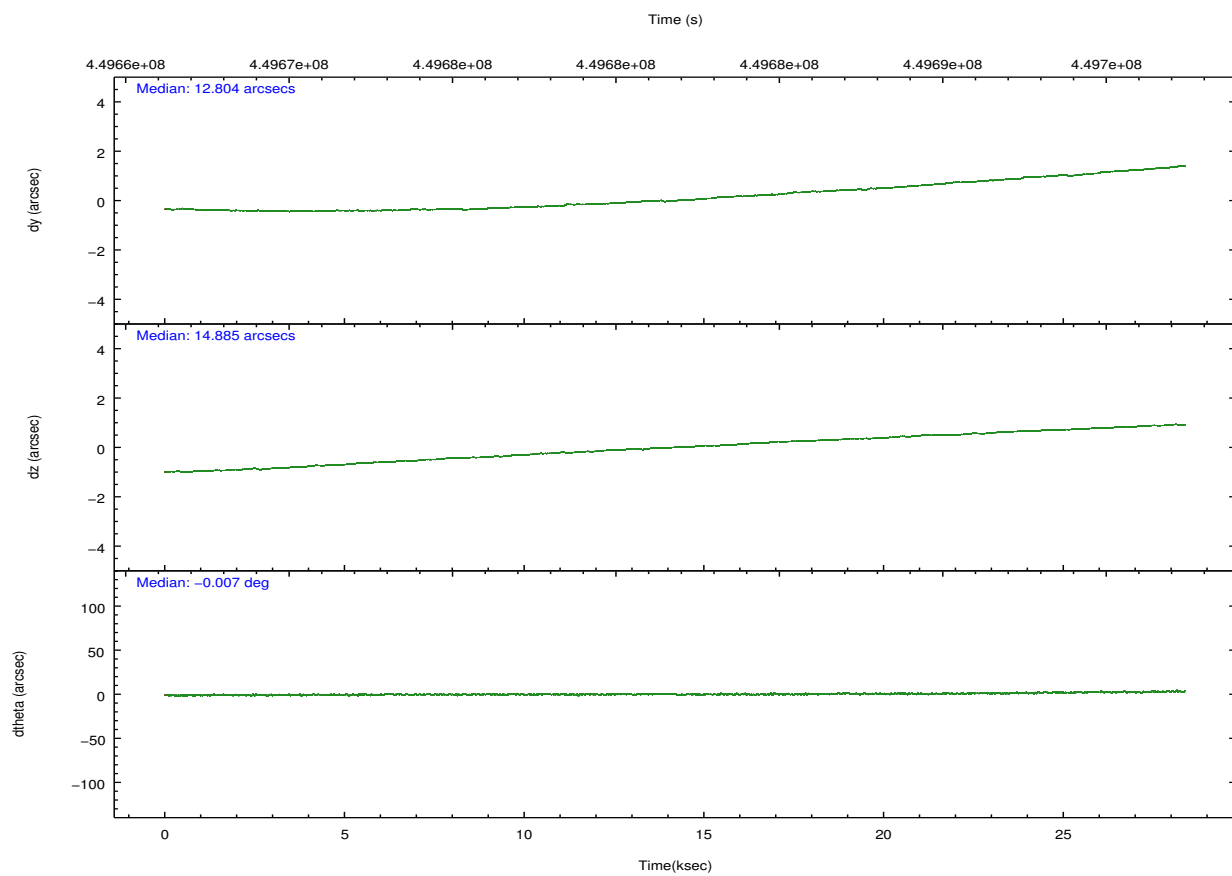
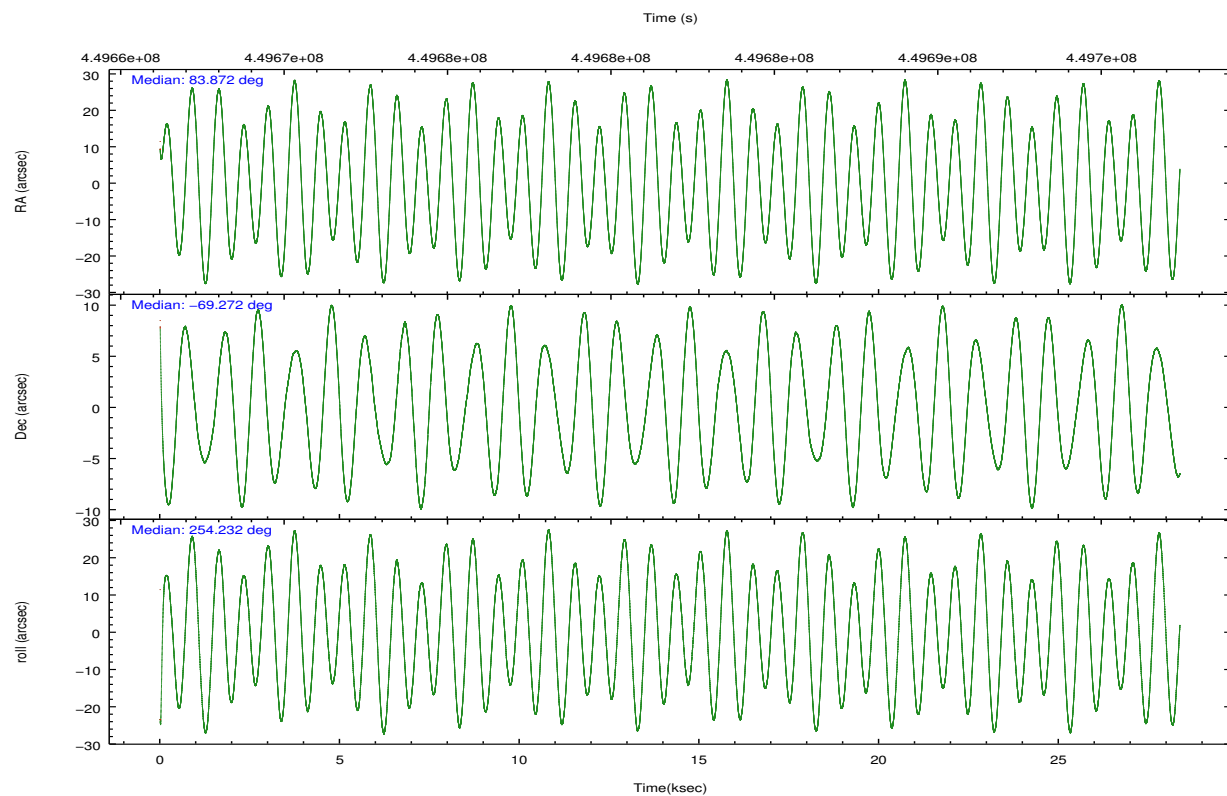
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	47697	55807	46895	48837	62464	39728	grade 0 events	1741	2981	3634	3673	5334	1519
rejected events	42124	25812	39281	21195	44401	34763		3%	5%	7%	7%	8%	3%
rejected %	88%	46%	83%	43%	71%	87%	grade 1 events	15	120	19	80	37	15
								0%	0%	0%	0%	0%	0%
							grade 2 events	1389	8221	1253	6232	3562	1006
								2%	14%	2%	12%	5%	2%
							grade 3 events	773	2278	884	3048	2303	715
								1%	4%	1%	6%	3%	1%
							grade 4 events	688	2258	858	2998	2141	792
								1%	4%	1%	6%	3%	1%
							grade 5 events	1409	5147	1392	4504	2213	1582
								2%	9%	2%	9%	3%	3%
							grade 6 events	982	14258	985	11692	4723	934
								2%	25%	2%	23%	7%	2%
							grade 7 events	40700	20544	37870	16610	42151	33165
								85%	36%	80%	34%	67%	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	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	83.852381	83.87234265557709	CCD I2 on	N	N
[deg] Pointing Dec	-69.245596	-69.27202495827889	CCD I3 on	N	N
[deg] Pointing Roll	254.056648	254.2319218433711	CCD S0 on	O1	Y
[deg] Roll angle	264.000000	264.000000	CCD S1 on	Y	Y
[deg] Roll tolerance	12.000000	12.000000	CCD S2 on	Y	Y
Roll constraint allows 180D rotation	N	N	CCD S3 on	Y	Y
[s] Window start time (MET)	447638466.184000	447638466.184000	CCD S4 on	Y	Y
[s] Window stop time (MET)	449712006.184000	449712006.184000	CCD S5 on	Y	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Number of optional ACIS chips dropped	0	0
[mm] SIM defocus	0	0.001444936568705701	On-chip summing requested	N	N
[mm] SIM translation stage pos	-181.712523	-181.7120811590428	Subarray requested	CUSTOM	1/4
[mm] SIM translation stage offset	-8.42	-8.420441423965059	Subarray start row	1	1
[s] Observation start time (MET)	449668001.184000	449666757.38921	Subarray row count	256	256
Observation start date	2012-04-01T11:45:35	2012-04-01T11:25:57	Alternating exposures requested	N	N
[s] Observation end time (MET)	449696001.184000	449696819.6158	[s] Primary exposure time	0.000000	1
Observation end date	2012-04-01T19:32:15	2012-04-01T19:46:59			
Read mode	TIMED	TIMED			

2.3 Aspect



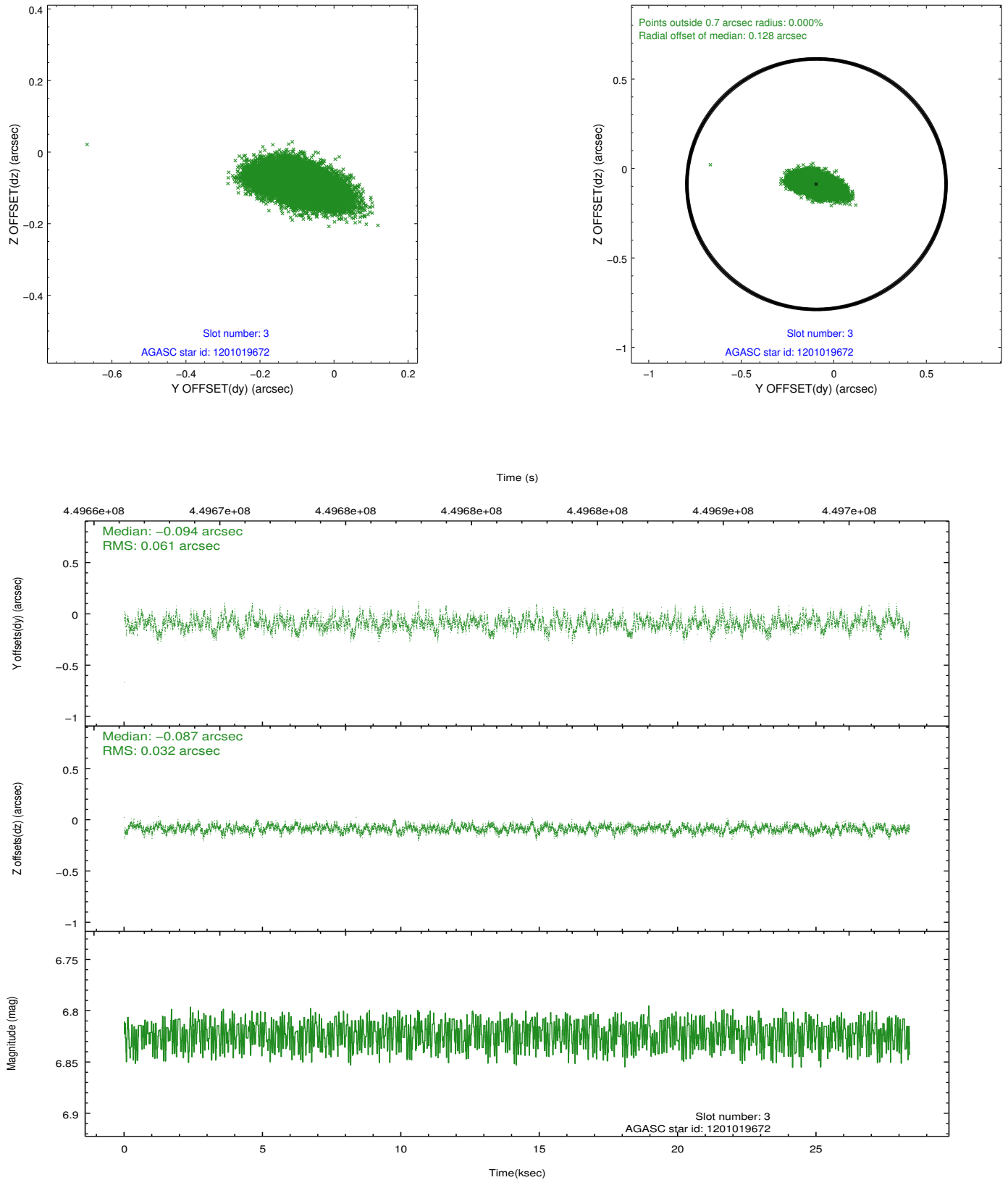


Slot Statistics

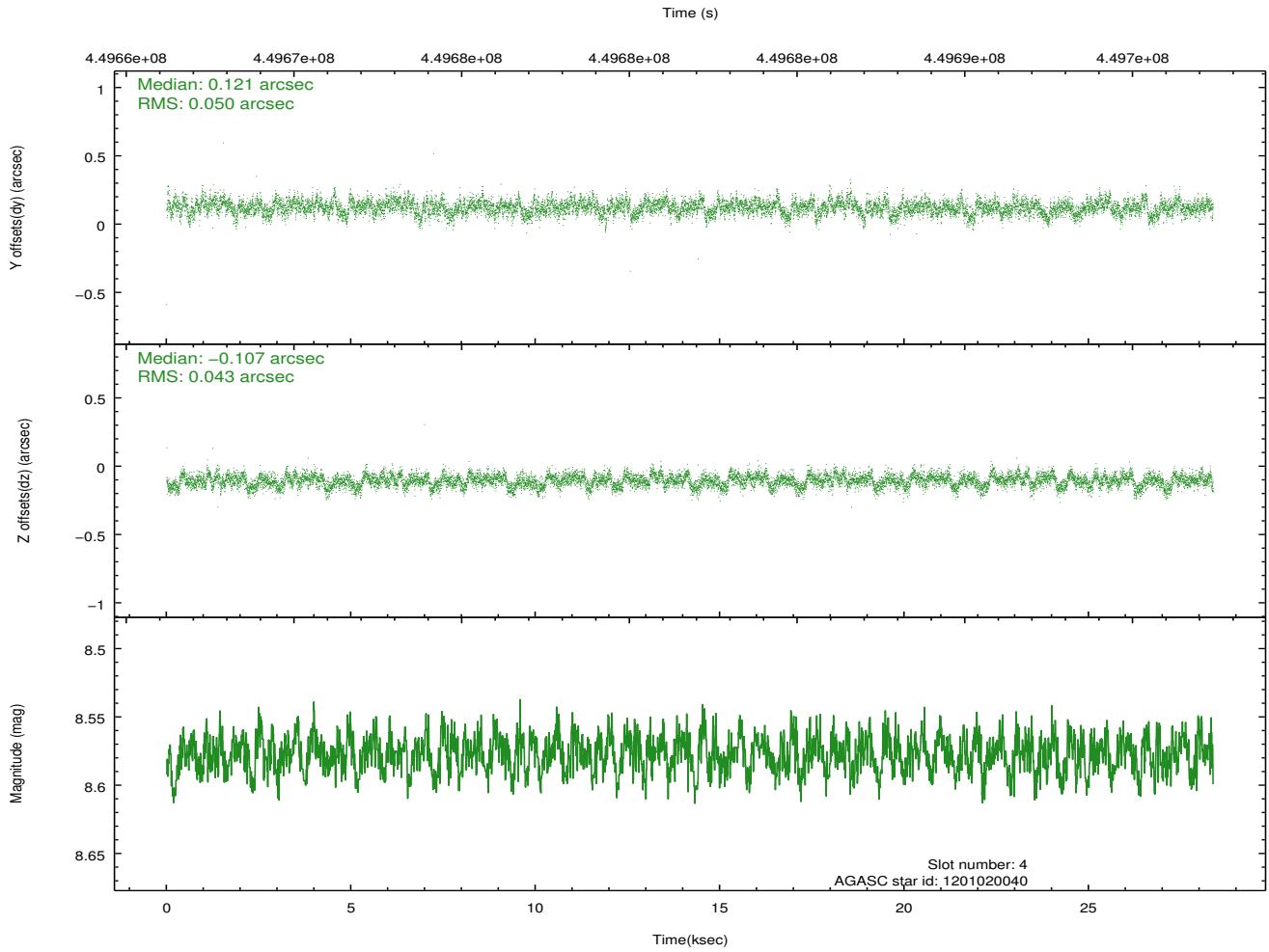
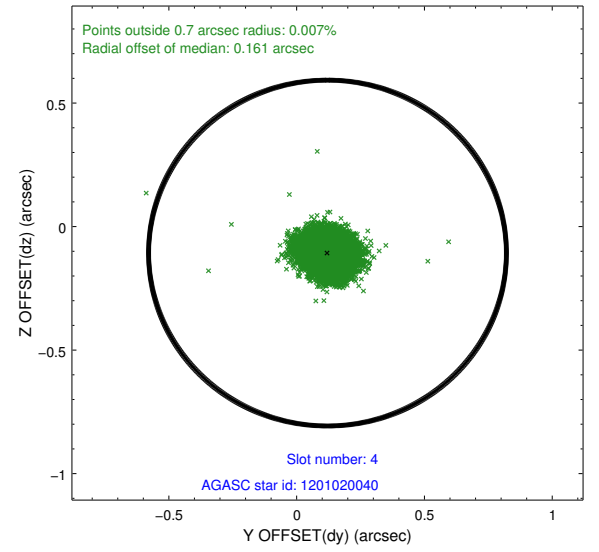
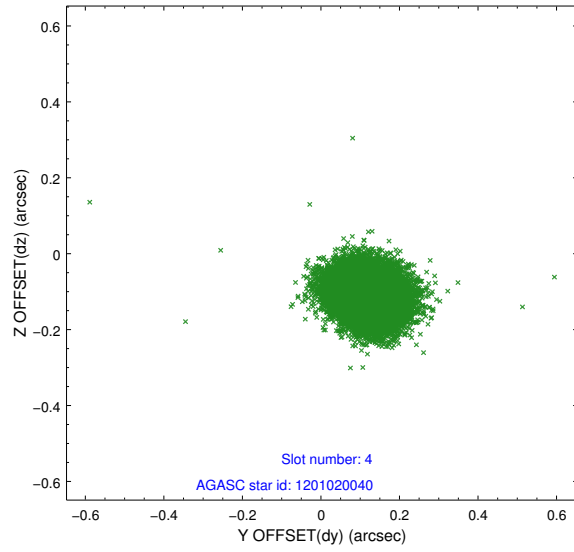
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.01	6921	0.076	0.154	0.033	0.045	0.000000	0.000000	930.87	-1905.15
1	FID	ACIS-S-2	6.91	6921	-0.170	-0.095	0.022	0.037	0.000000	0.000000	-765.24	-1910.10
2	FID	ACIS-S-6	7.22	6921	0.067	-0.050	0.018	0.025	0.000000	0.000000	396.42	635.85
3	GUIDE	1201019672	6.82	13841	-0.094	-0.087	0.070	0.128	85.312192	-68.770187	-2146.65	1365.83
4	GUIDE	1201020040	8.58	13840	0.121	-0.107	0.070	0.113	85.379163	-68.879396	-1787.92	1548.96
5	GUIDE	1201542672	8.19	13837	-0.127	-0.142	0.065	0.105	84.492488	-69.957531	2249.05	1464.78
6	GUIDE	1200884248	9.45	13819	0.217	0.211	0.110	0.176	83.880915	-68.565170	-2365.55	-636.09
7	GUIDE	1201410616	9.32	13821	-0.124	0.129	0.128	0.215	82.516808	-69.784406	2338.64	-1059.46

2.4 Star Slots

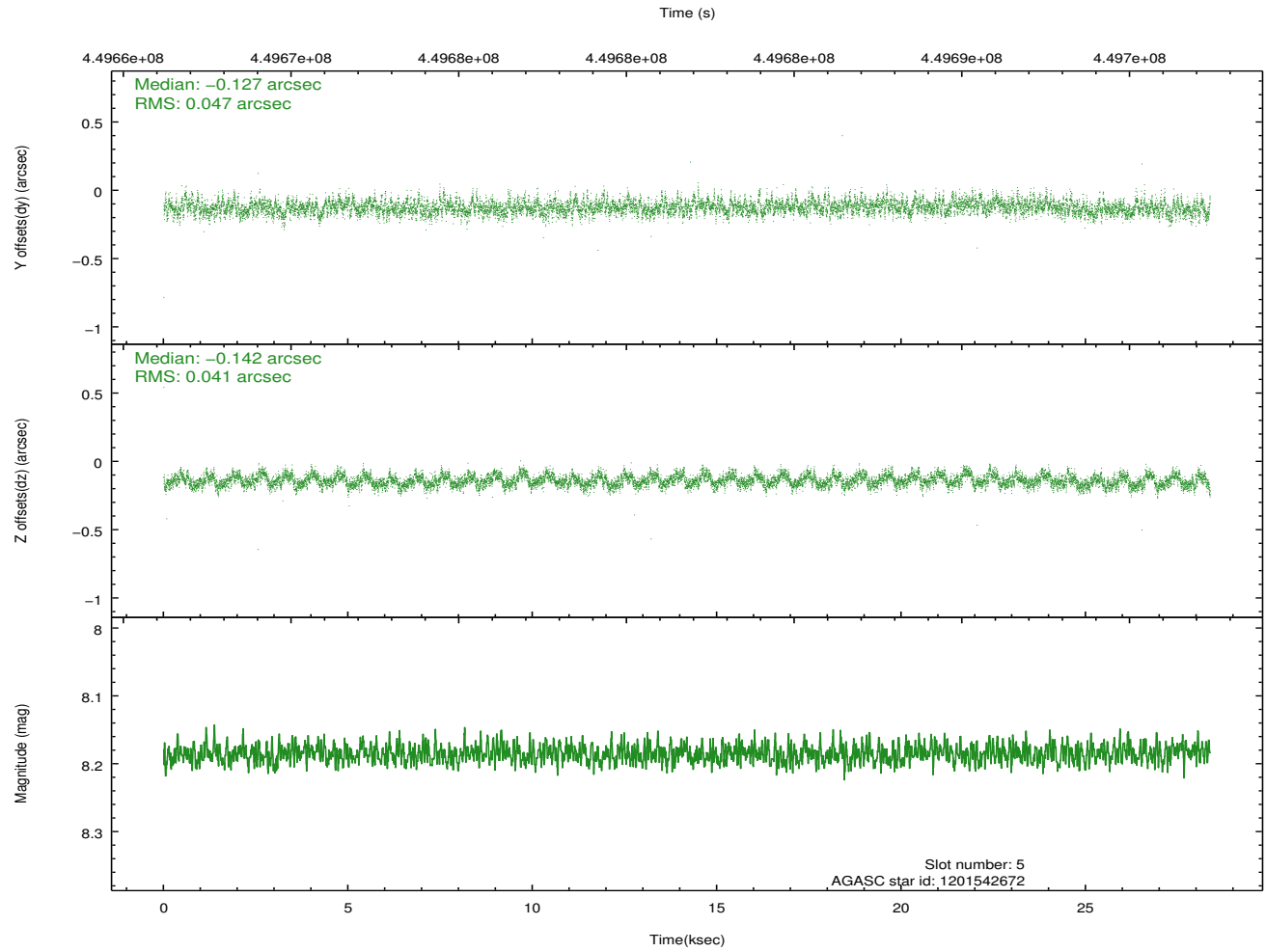
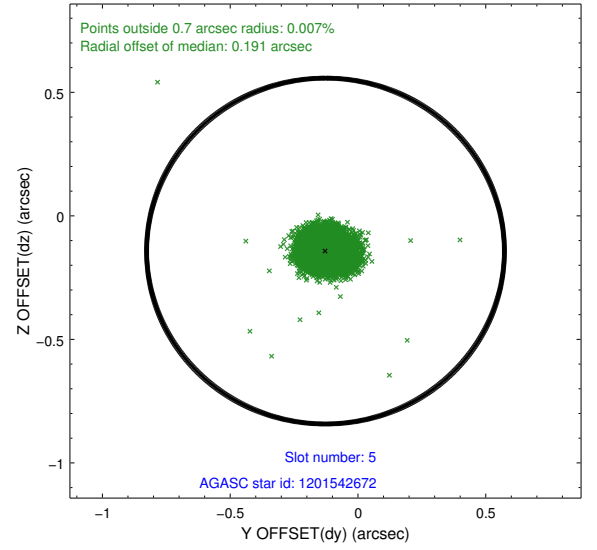
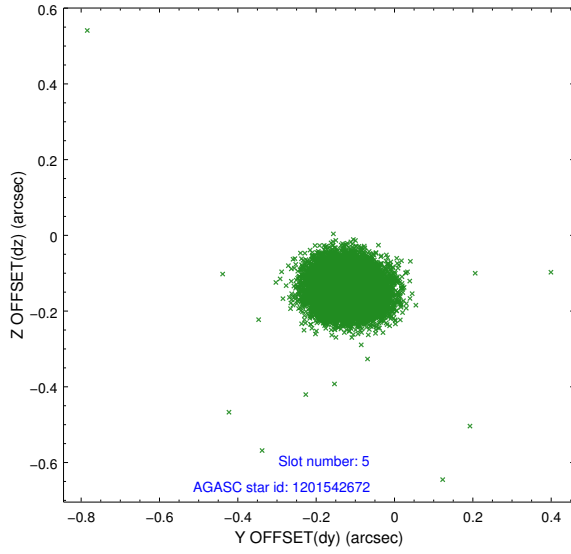
2.4.1 Slot 3



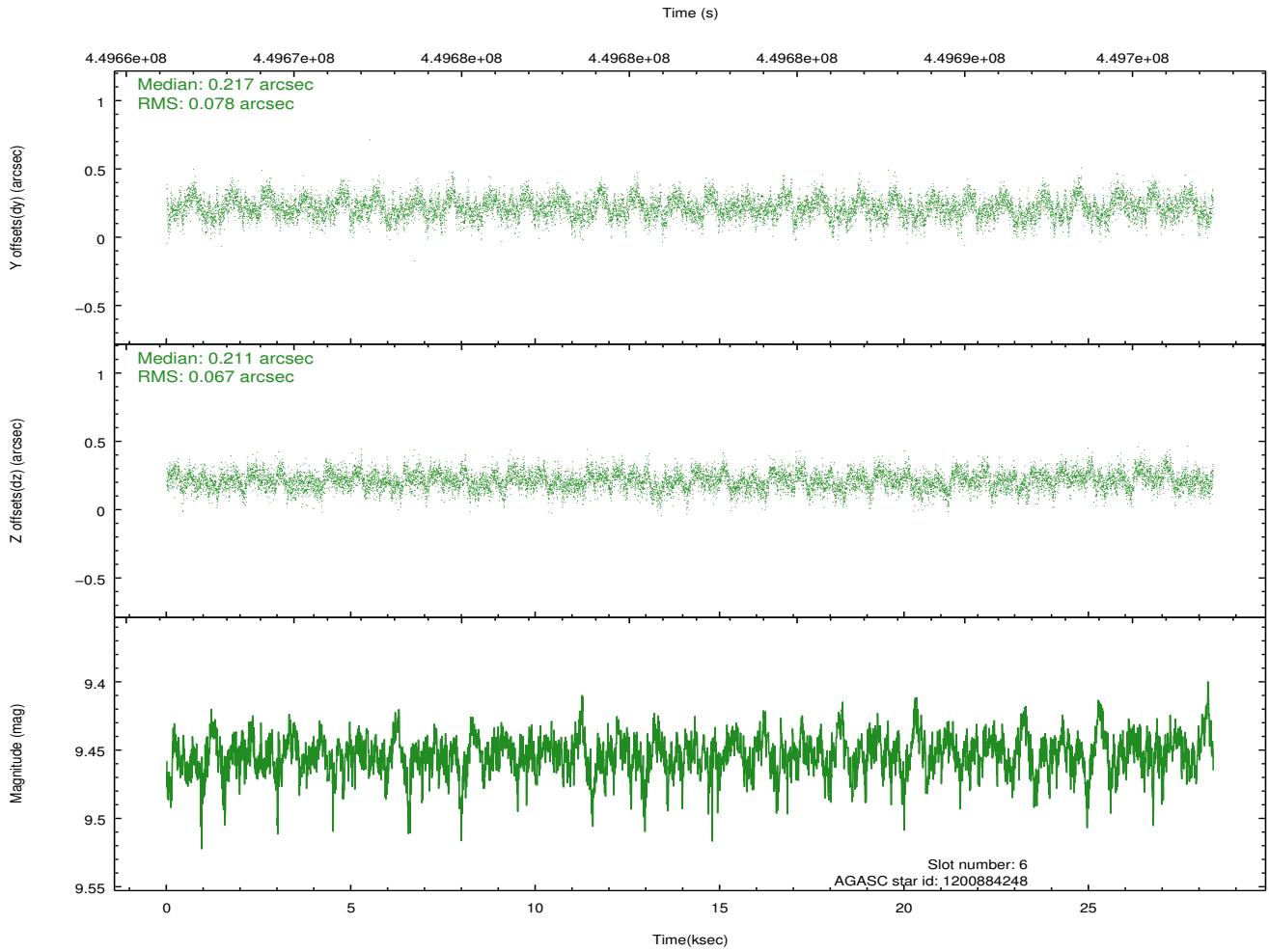
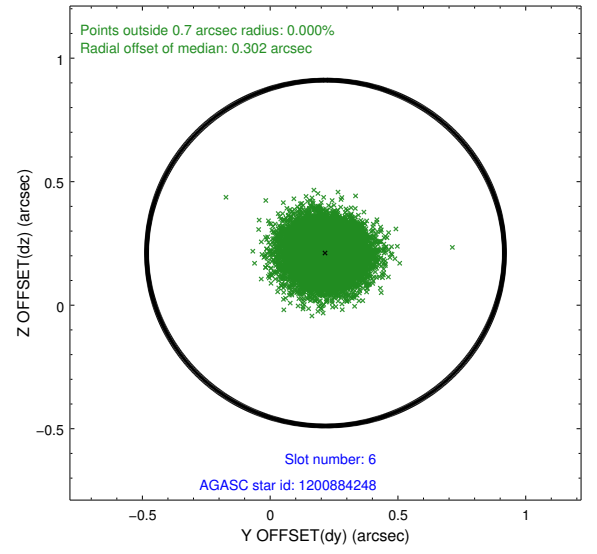
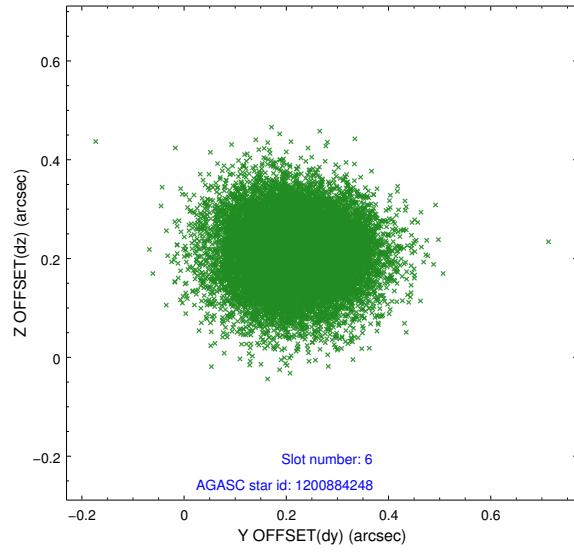
2.4.2 Slot 4



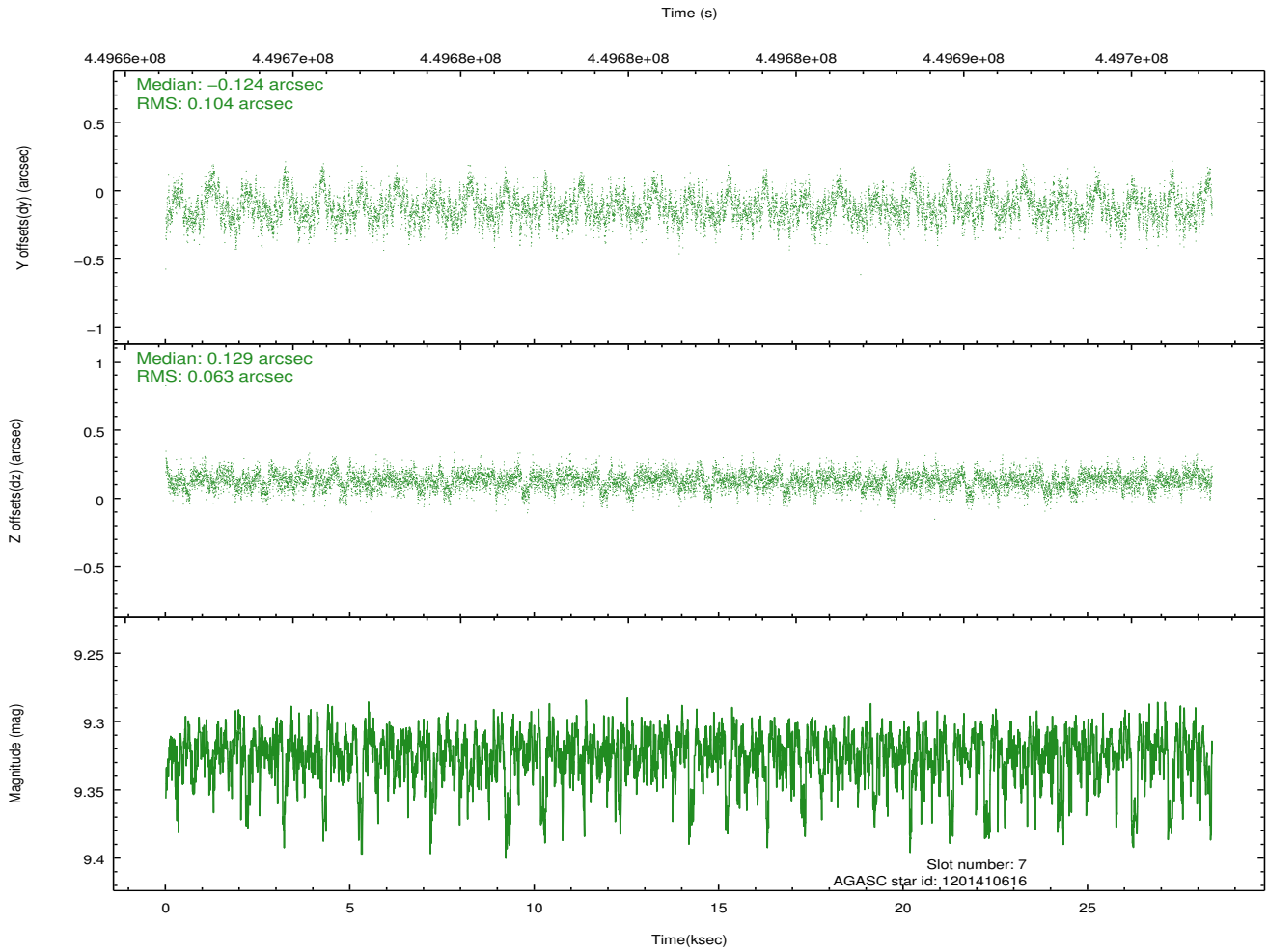
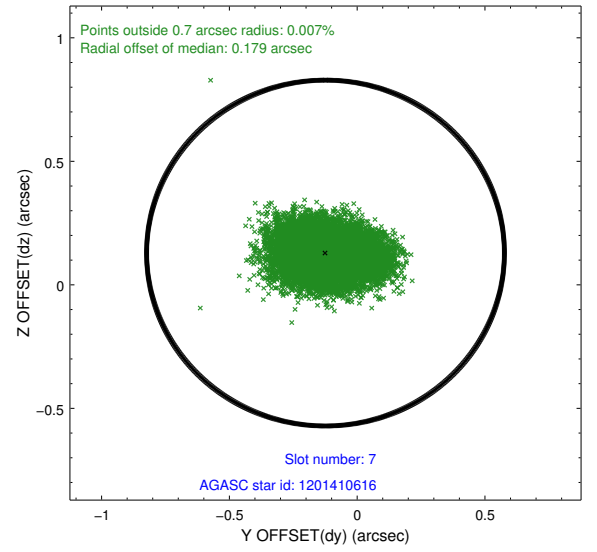
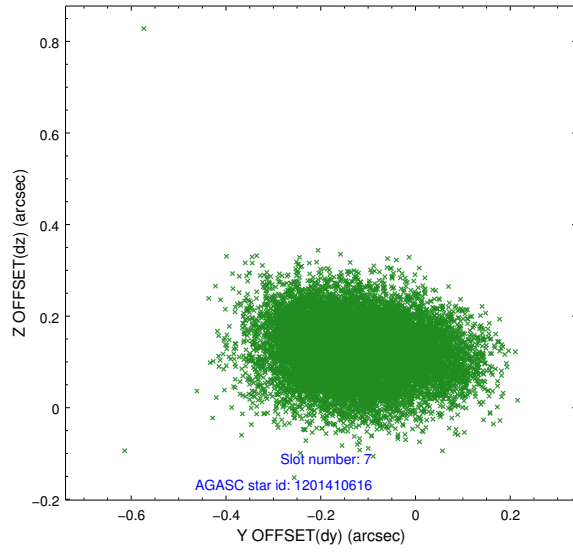
2.4.3 Slot 5



2.4.4 Slot 6

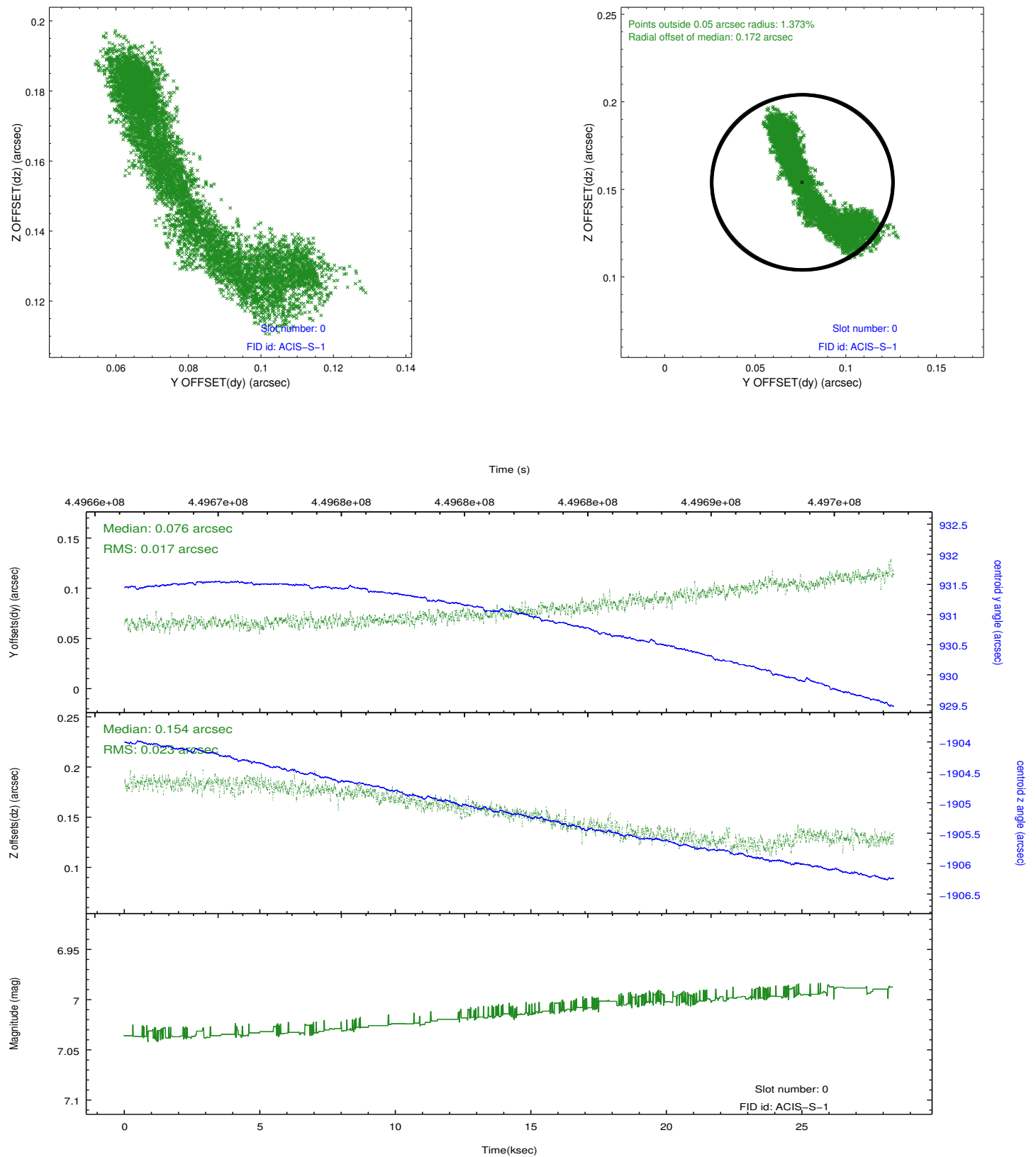


2.4.5 Slot 7

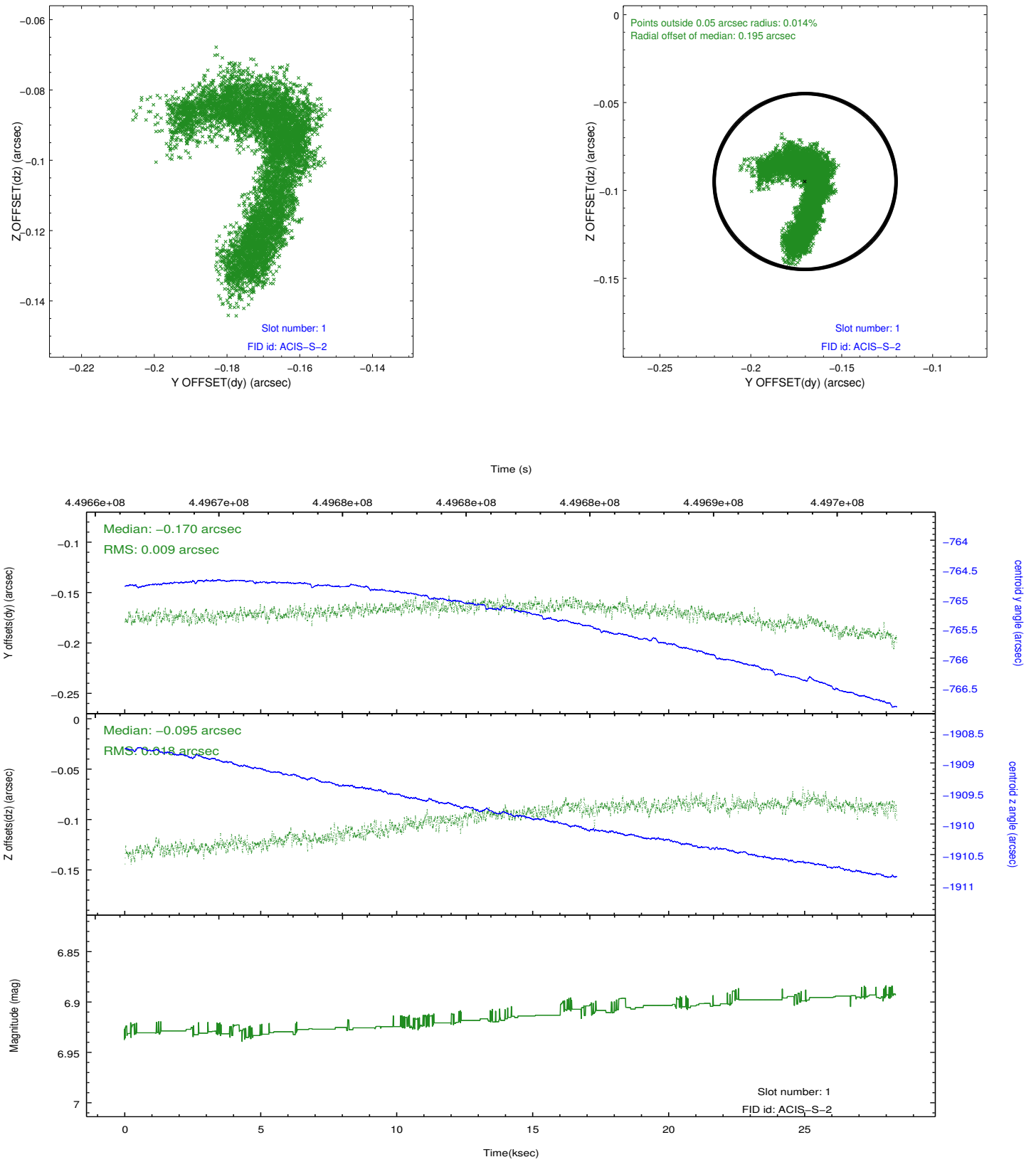


2.5 FID Slots

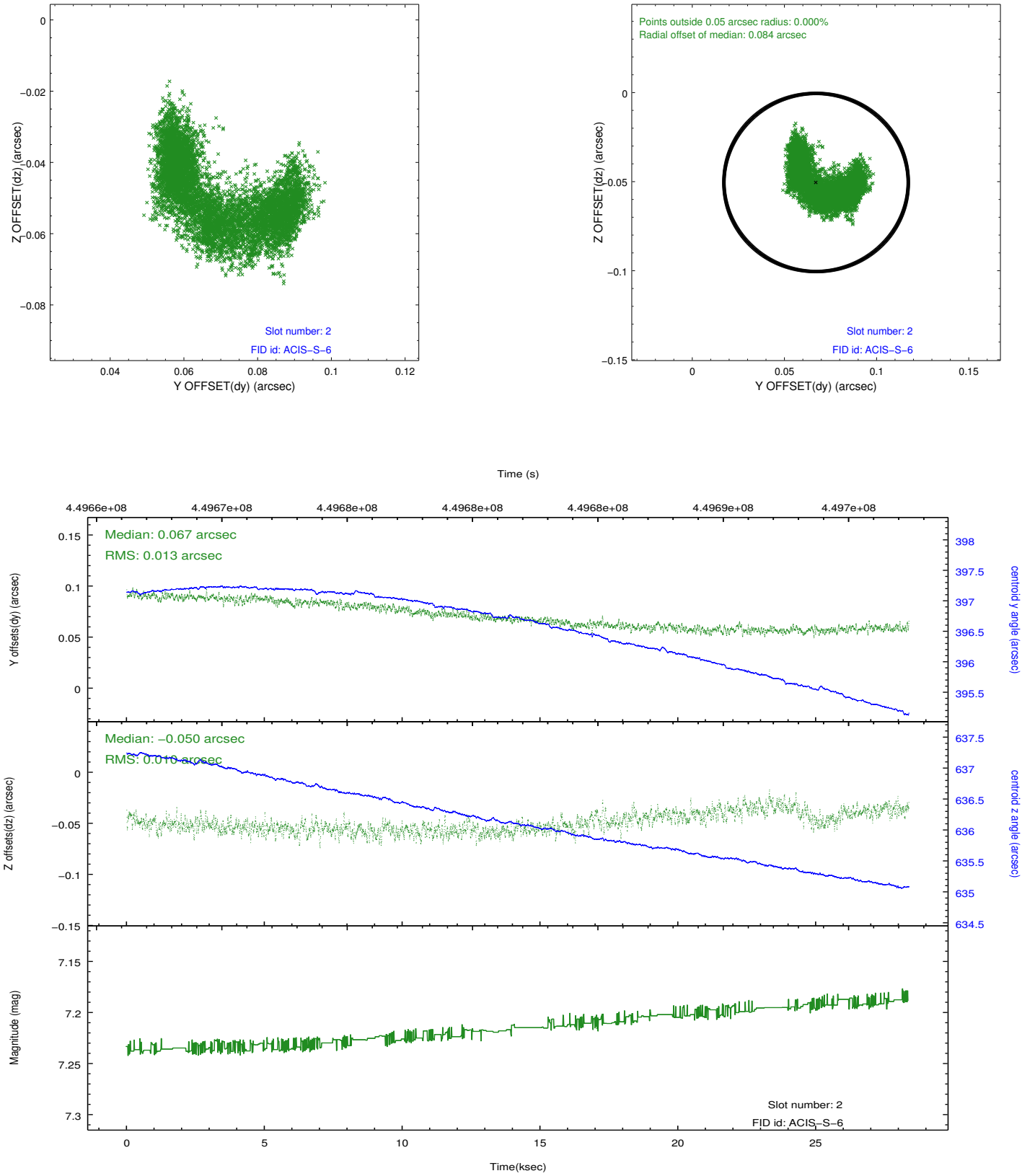
2.5.1 Slot 0



2.5.2 Slot 1

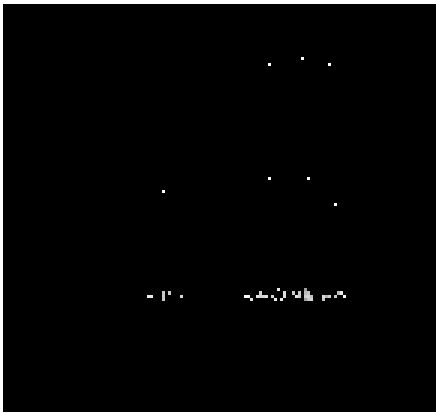


2.5.3 Slot 2

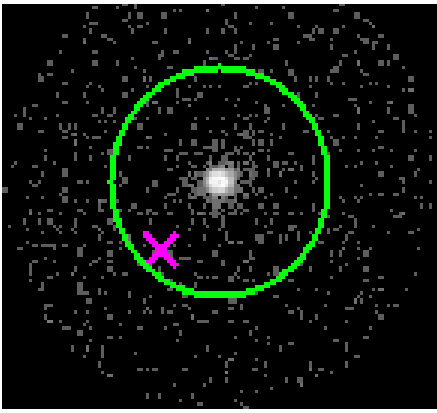


3 Gratings

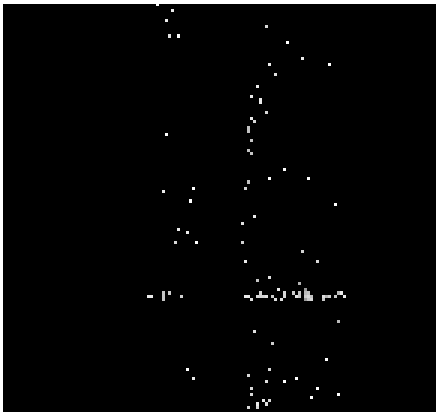
3.1 HEG Arm



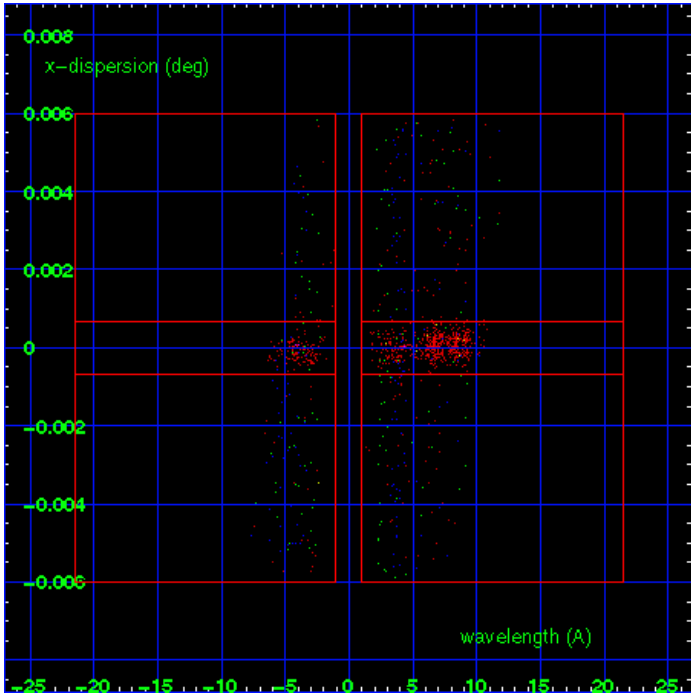
HEG Order Sort 123



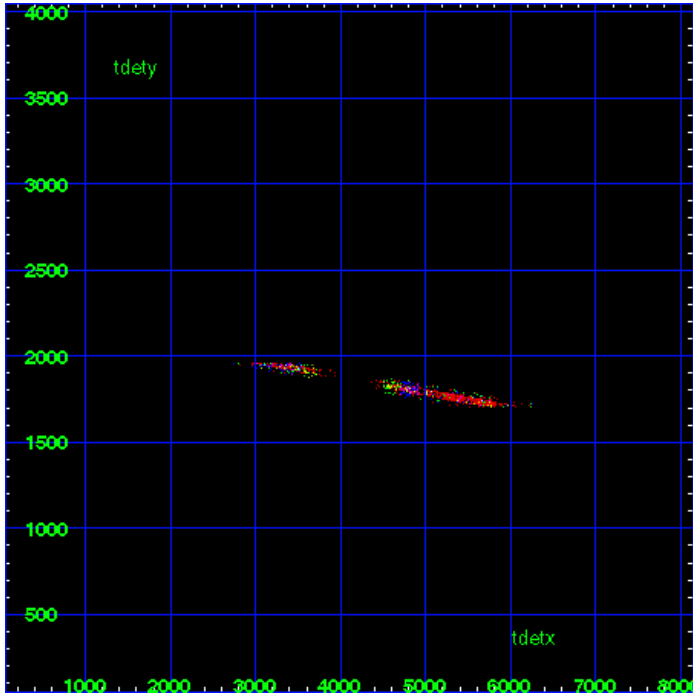
HEG Zero Order



HEG Order Sort ALL

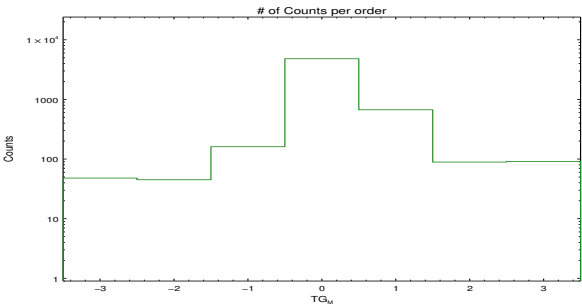


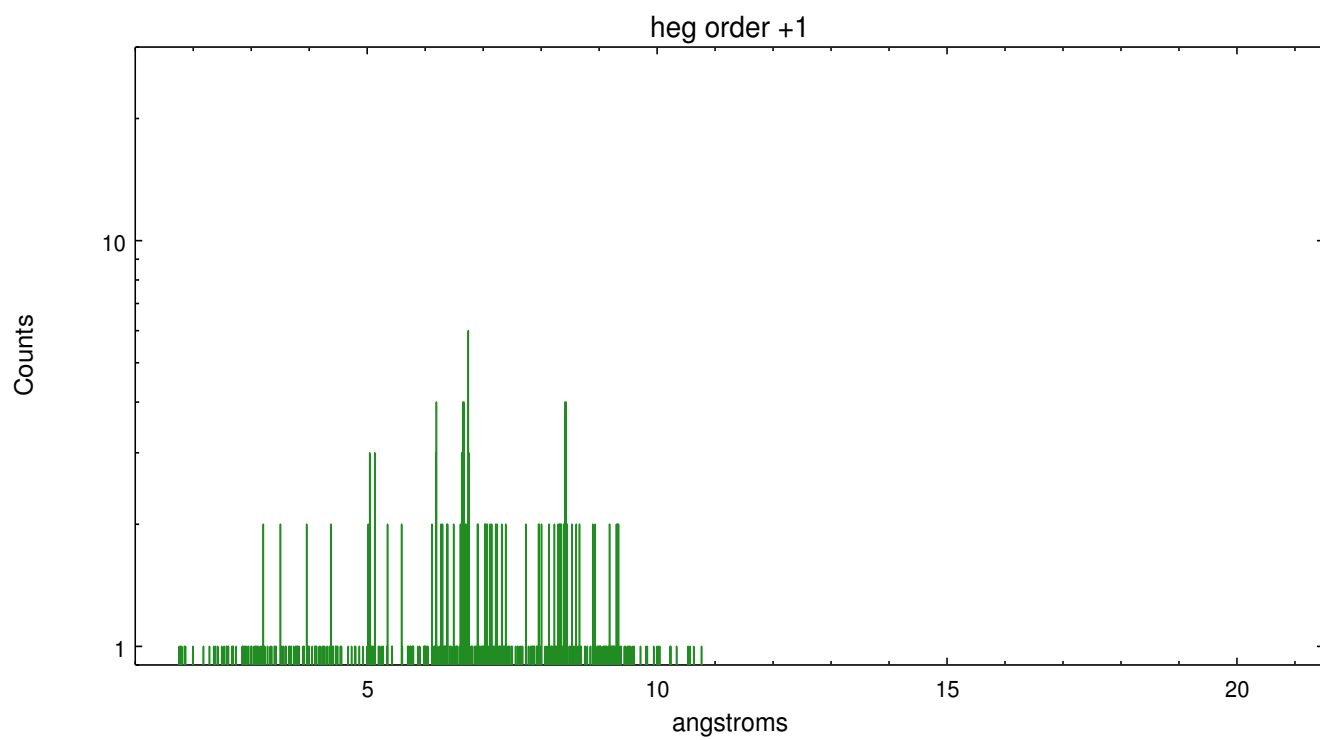
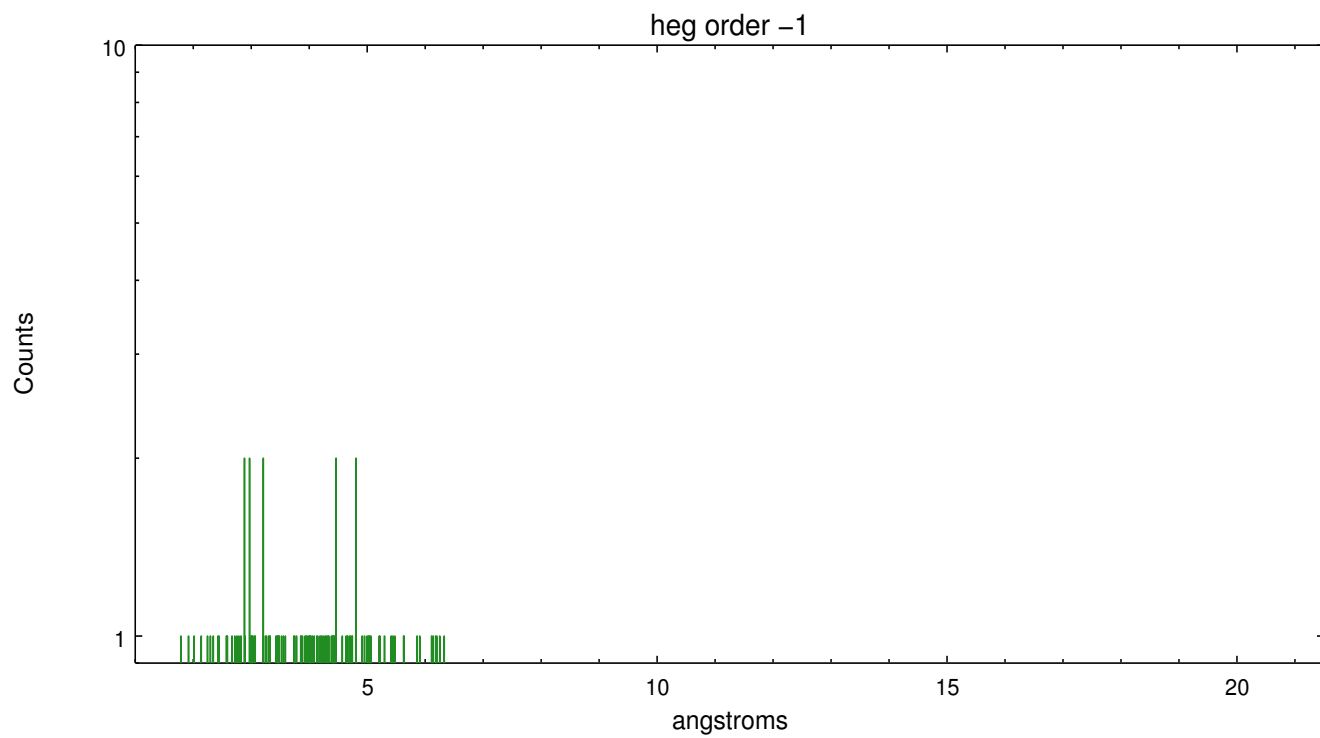
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	48	45	161	4812	670	89	91

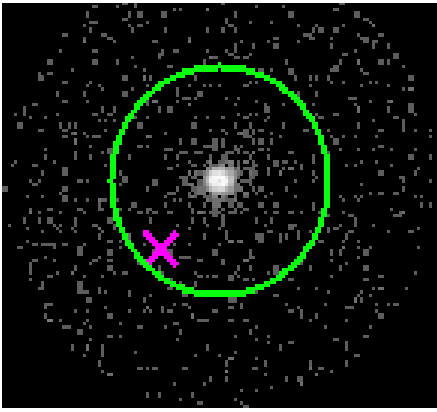




3.2 MEG Arm



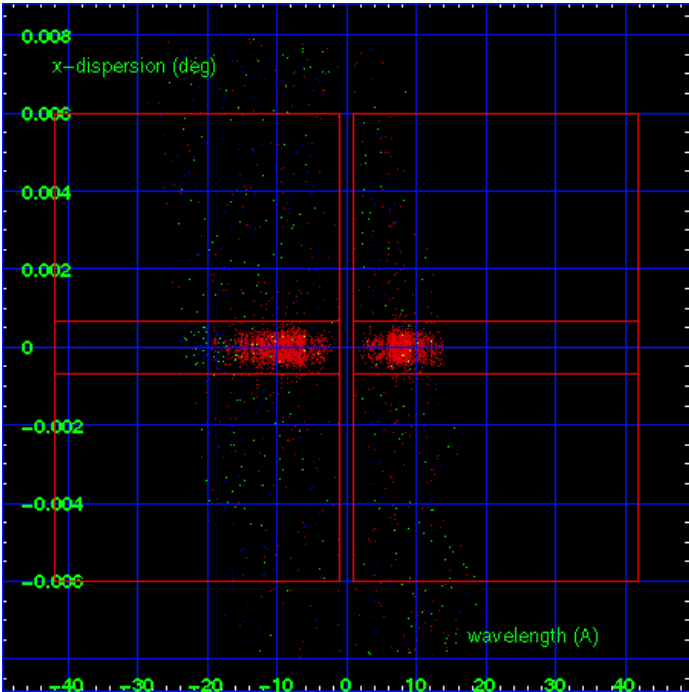
MEG Order Sort 123



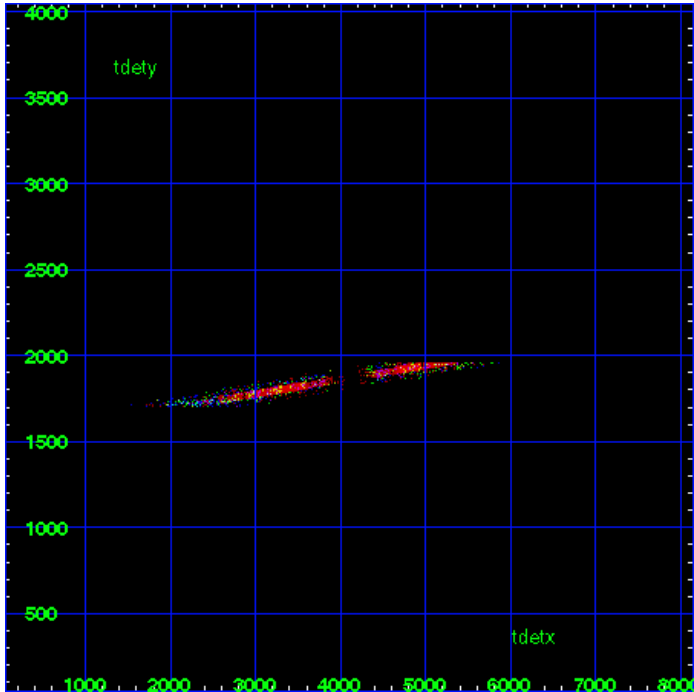
MEG Zero Order



MEG Order Sort ALL

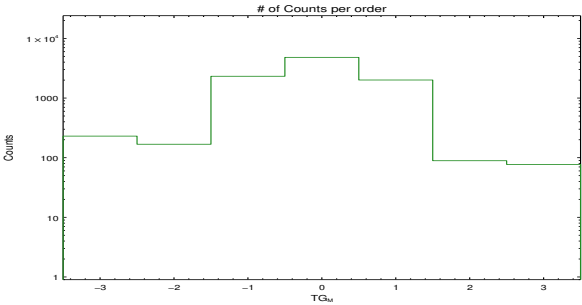


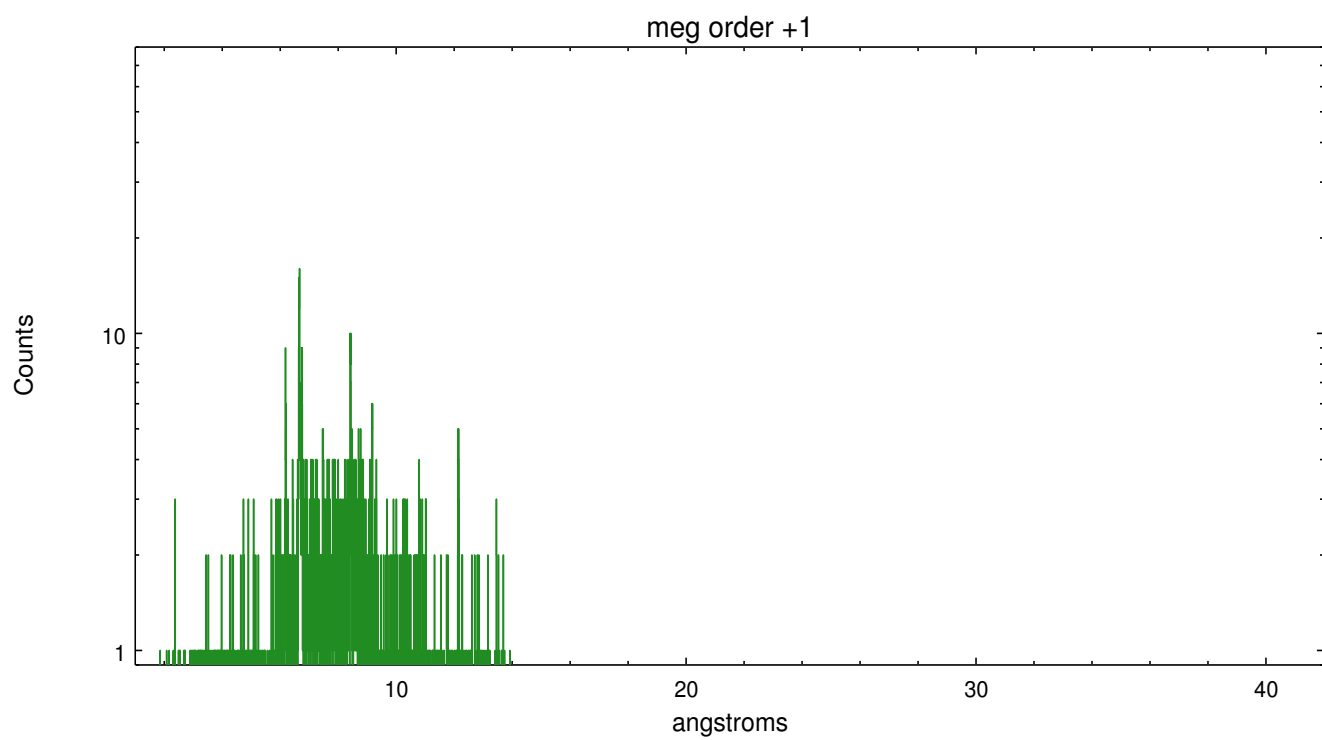
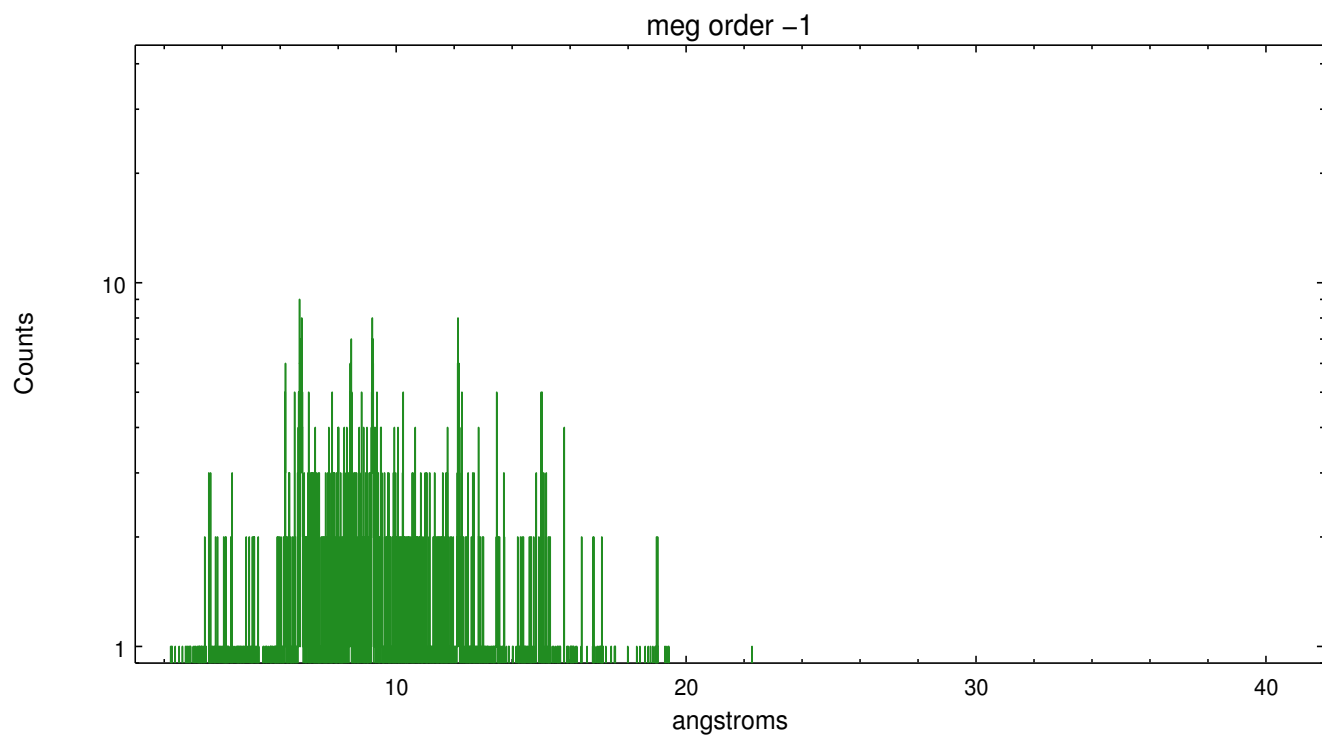
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	230	168	2319	4812	2008	89	77





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.04.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	28.041974499941

A.2 Comments

Offset in aim point is intended to put the aimpoint at row 162 in order to get the HET/MEG spectra centered in the bottom 1/4 subarray of the ACIS-S array with the OVIII line in the MEG minus spectrum onto the subarray.

===

Roll constraint met. =====

Time constraint met.

=====

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. ===== WARNING::Zeroth order selected by pipeline tools is well-centered in the supernova remnant but is not at the position(s) of brightest emission. The user may want to select a region or source of interest, then use software tools such as CIAO to specify the coordinates of the zeroth order source of interest before running the tools to resolve the dispersed events.