

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 14344 - L2 Version 2
Chandra X-Ray Center

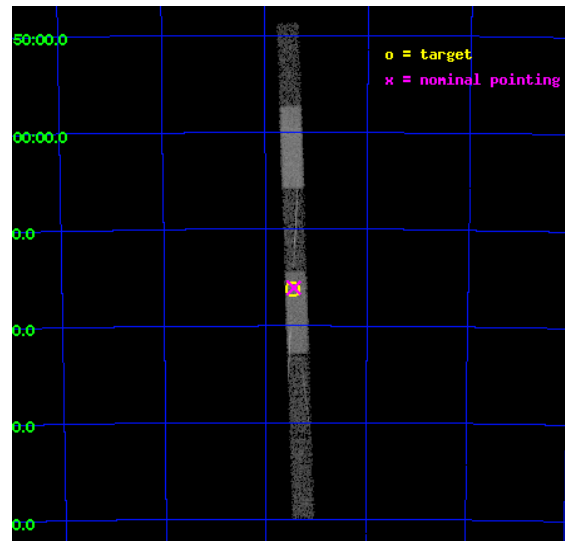
L2 Processing Date : Feb 23 2012

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1 Front

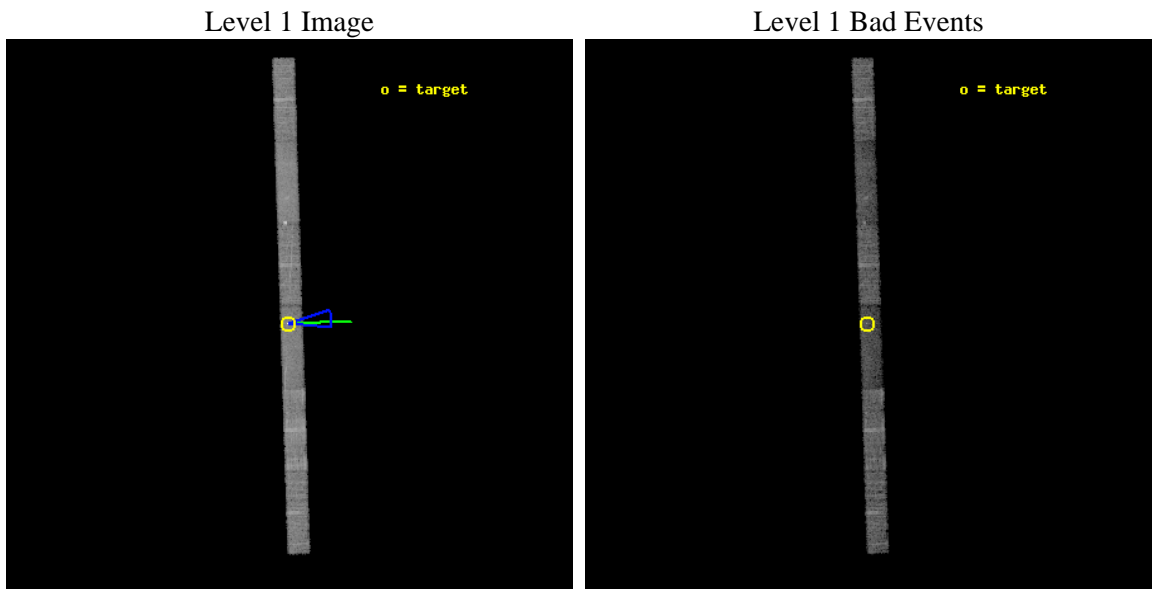
seq_num	501373	Sequence number
obs_id	14344	Observation id
title	Chandra Cycle 12 Spatial and Spectral Monitoring of SNR 1987A	Prop
observer	Prof. David Burrows	Principal investigator
object	SNR 1987A	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.866667	Observer's specified target RA [deg]
dec_targ	-69.26975	Observer's specified target Dec [deg]
ra_nom	83.859572826704	Nominal RA [deg]
dec_nom	-69.268062887157	Nominal Dec [deg]
roll_nom	88.149988451788	Nominal Roll [deg]
revision	2	Processing version of data
ontime	12068.910267711	Sum of GTIs [s]
livetime	11593.128282977	Livetime [s]
ontime4	12068.951307714	Sum of GTIs [s]
ontime5	12068.869227707	Sum of GTIs [s]
ontime6	12068.828187704	Sum of GTIs [s]
ontime7	12068.910267711	Sum of GTIs [s]
ontime8	12068.787147701	Sum of GTIs [s]
ontime9	12068.746107697	Sum of GTIs [s]
l2events	35375	Number of level 2 events



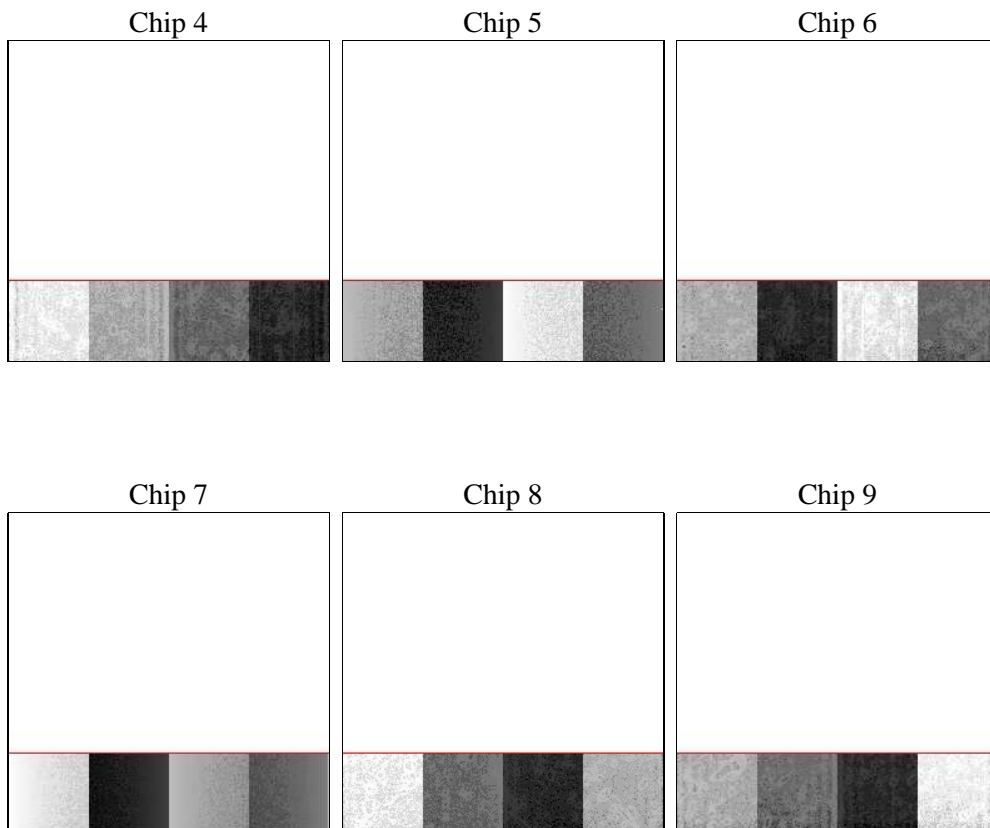
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	12000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	12068.910267711	Sum of GTIs [s]
caldsver	4.4.8	 	ontime4	12068.951307714	Sum of GTIs [s]
date	2012-02-23T14:38:09	Date and time of file creation	ontime5	12068.869227707	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	12068.828187704	Sum of GTIs [s]
			ontime7	12068.910267711	Sum of GTIs [s]
			ontime8	12068.787147701	Sum of GTIs [s]
			ontime9	12068.746107697	Sum of GTIs [s]
			l1events	148508	Number of level 1 events

2.1.4 Events

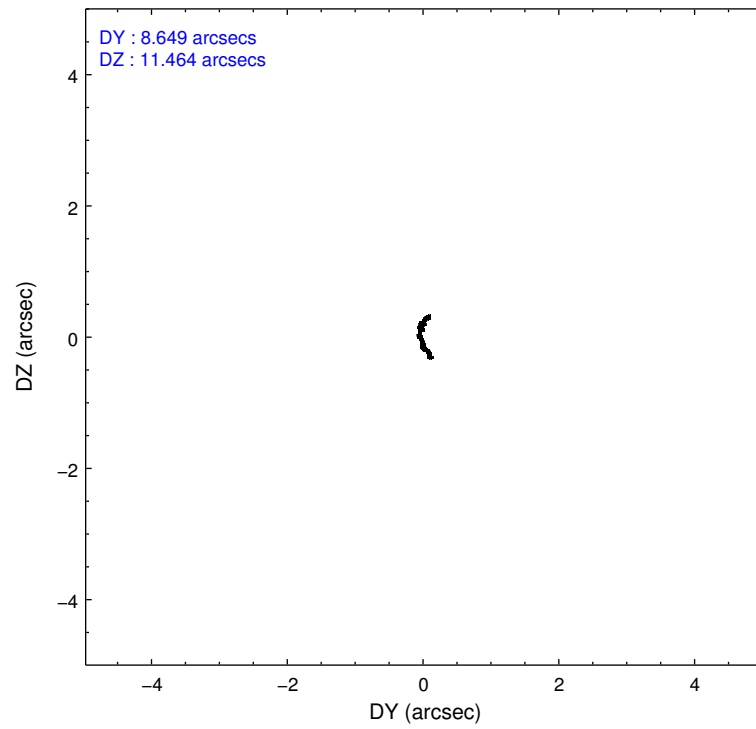
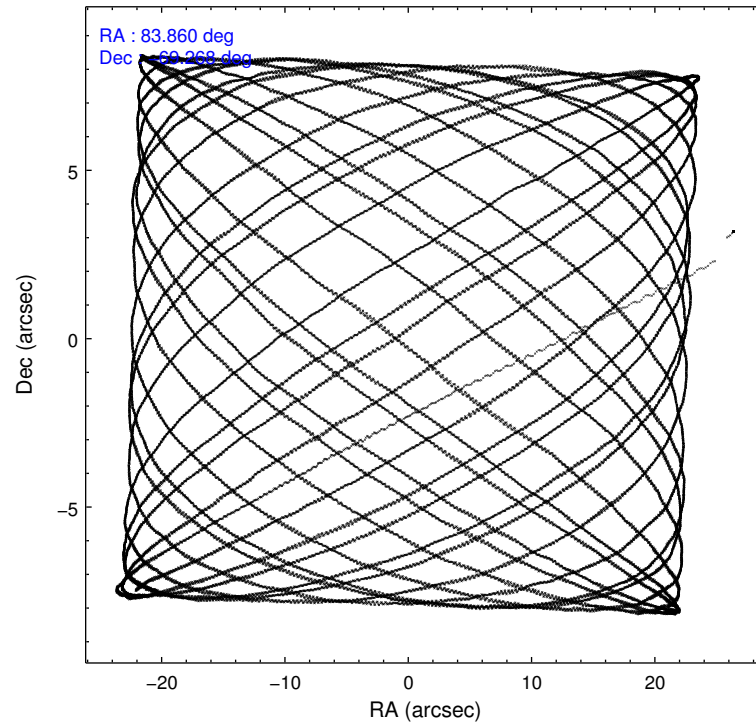
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	24315	27704	22011	22770	30866	20842
rejected events	21744	12398	18480	10099	22079	18358
rejected %	89%	44%	83%	44%	71%	88%

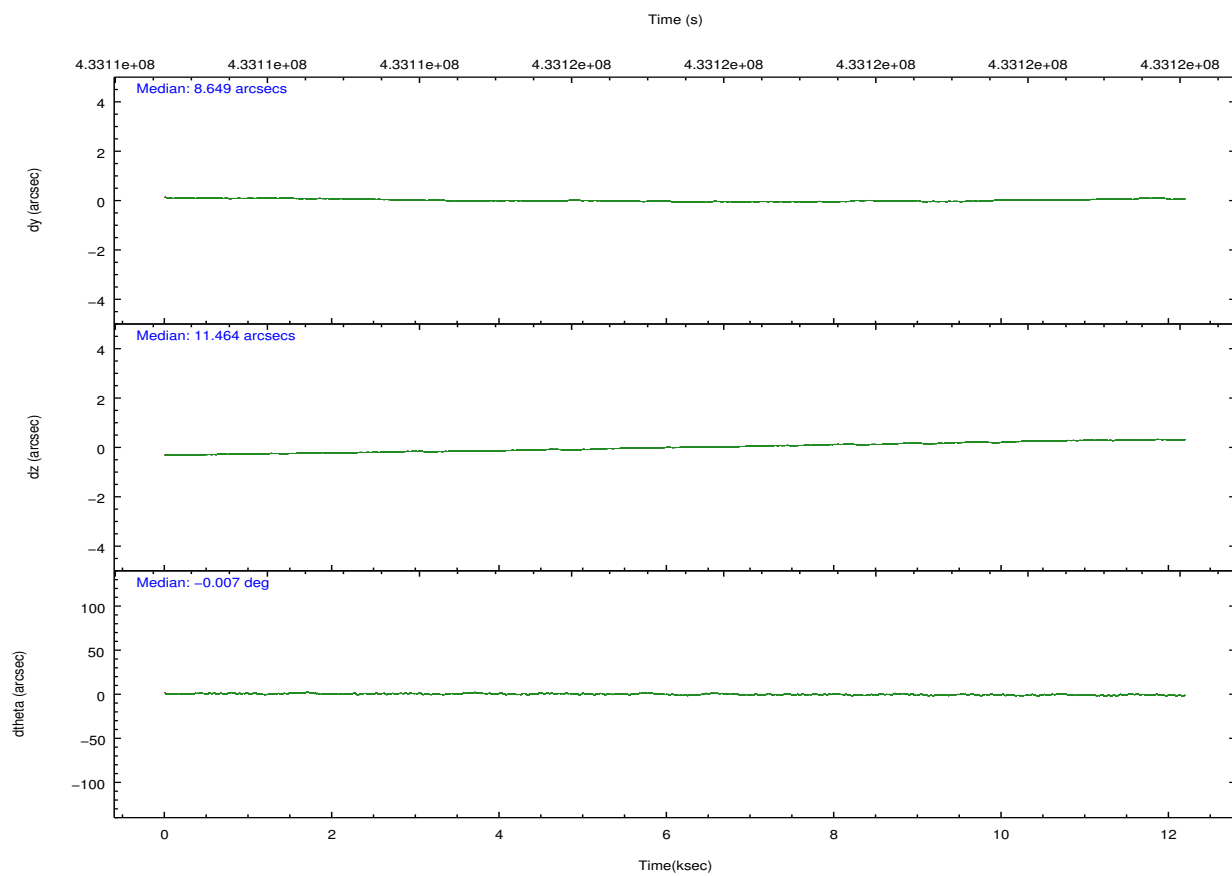
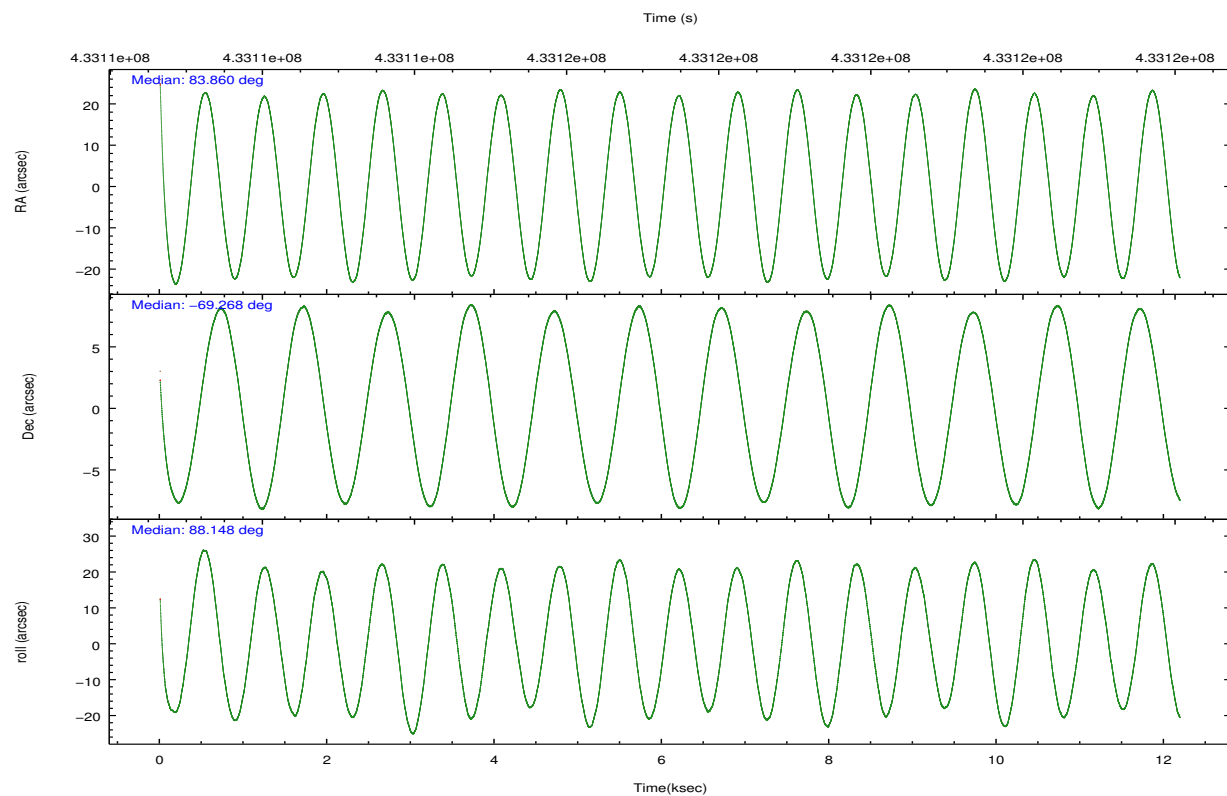
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	815	2063	1662	1611	2379	752
	3%	7%	7%	7%	7%	3%
grade 1 events	5	216	11	53	7	8
	0%	0%	0%	0%	0%	0%
grade 2 events	587	4042	621	2741	1987	492
	2%	14%	2%	12%	6%	2%
grade 3 events	379	1182	393	1481	992	394
	1%	4%	1%	6%	3%	1%
grade 4 events	330	1194	405	1460	915	391
	1%	4%	1%	6%	2%	1%
grade 5 events	631	2451	613	2126	1037	757
	2%	8%	2%	9%	3%	3%
grade 6 events	460	6830	452	5382	2514	456
	1%	24%	2%	23%	8%	2%
grade 7 events	21108	9726	17854	7916	21035	17592
	86%	35%	81%	34%	68%	84%

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	83.897011	83.85957282670401	CCD I2 on	N	N
[deg] Pointing Dec	-69.291967	-69.26806288715656	CCD I3 on	N	N
[deg] Pointing Roll	88.028388	88.1499884517881	CCD S0 on	O1	Y
[deg] Roll angle	84.000000	84.000000	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)	432086466.184000	432086466.184000	CCD S4 on	Y	Y
[s] Window stop time (MET)	434160066.184000	434160066.184000	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	-181.7145954743443	Subarray requested	CUSTOM	1/4
[mm] SIM translation stage offset	-8.42	-8.417927108663491	Subarray start row	1	1
[s] Observation start time (MET)	433111462.184000	433110458.57804	Subarray row count	256	256
Observation start date	2011-09-22T20:43:16	2011-09-22T20:27:38	Alternating exposures requested	N	N
[s] Observation end time (MET)	433123462.184000	433124223.81627	[s] Primary exposure time	0.000000	1
Observation end date	2011-09-23T00:03:16	2011-09-23T00:17:03			
Read mode	TIMED	TIMED			

2.3 Aspect



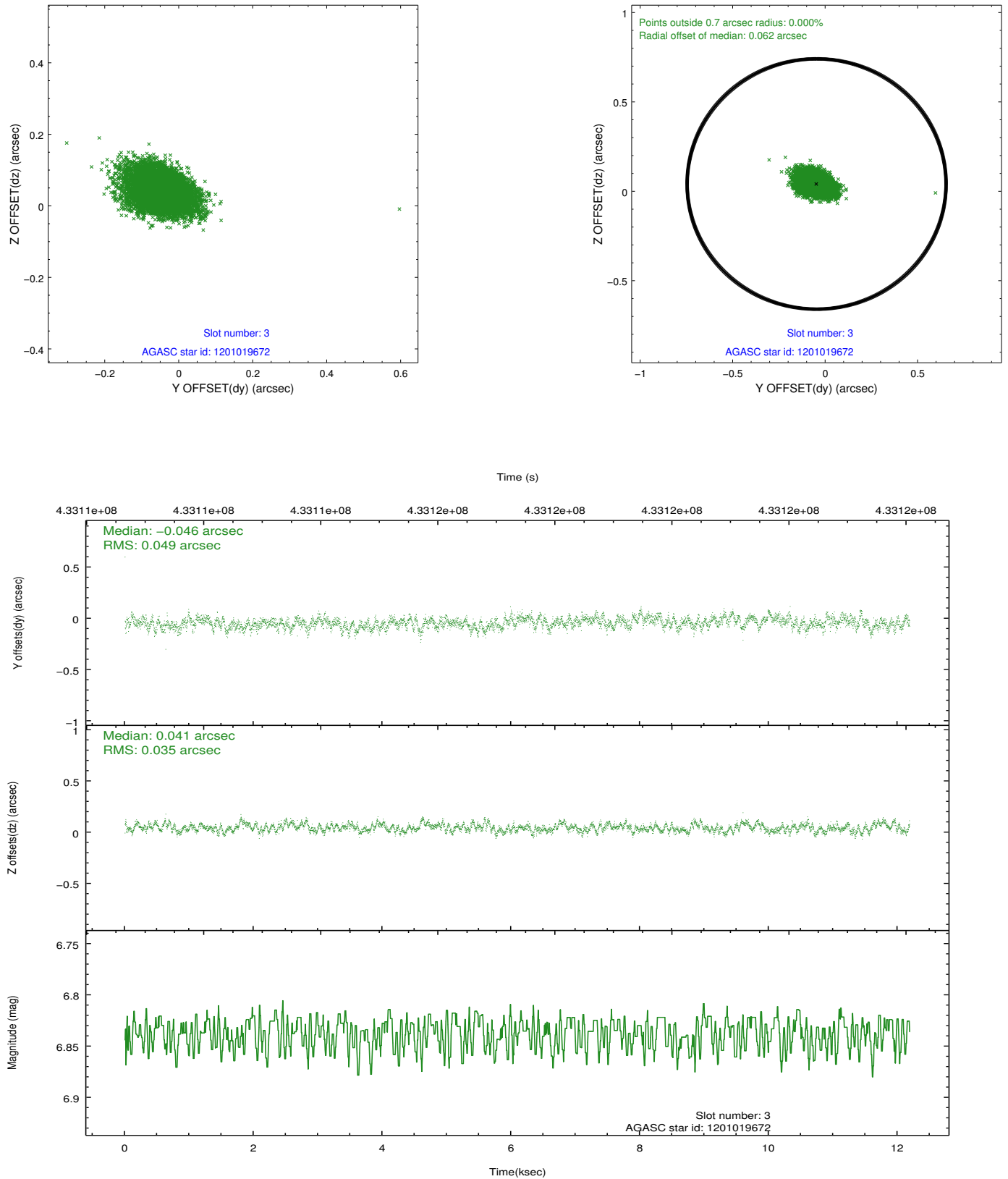


Slot Statistics

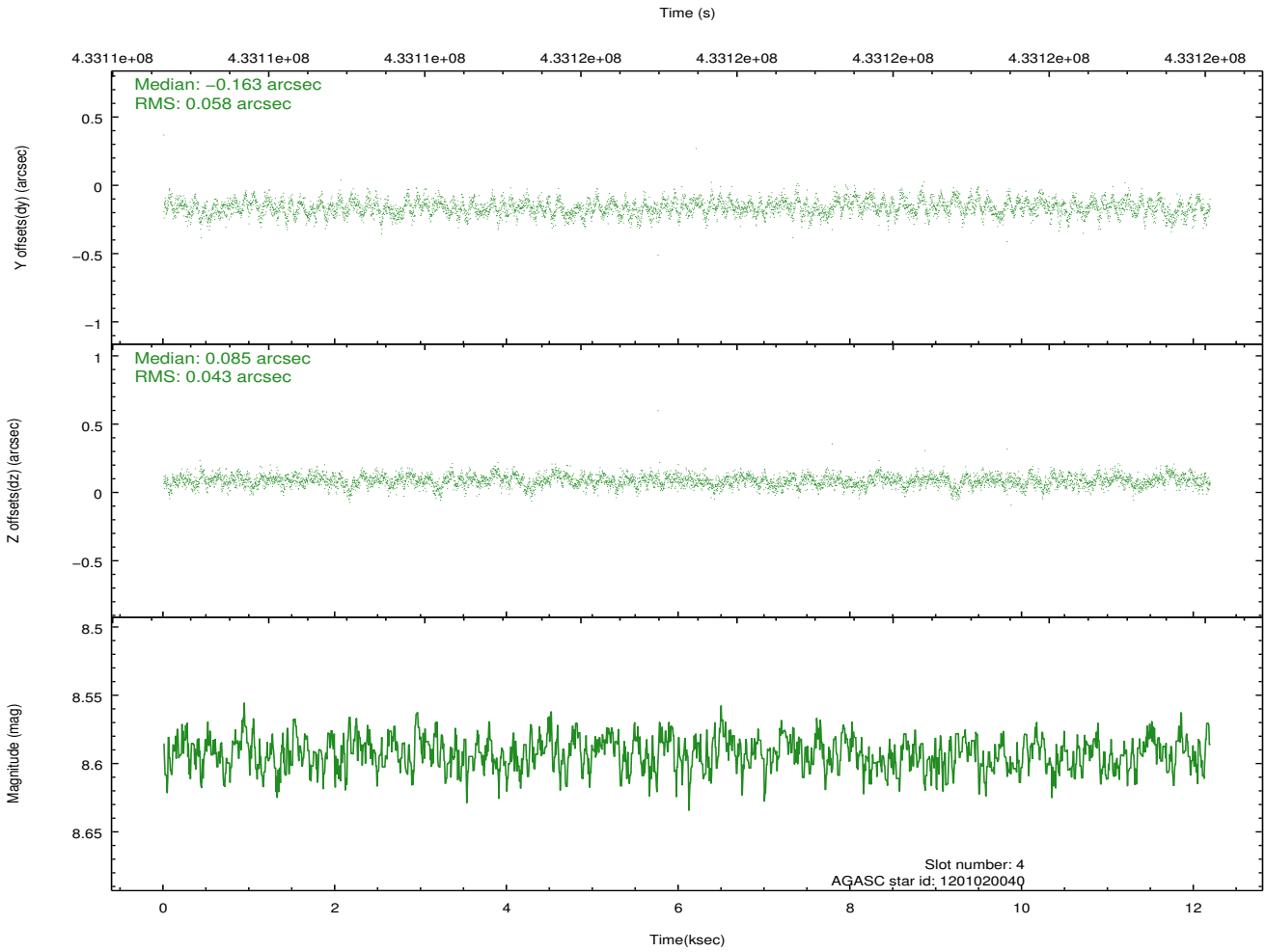
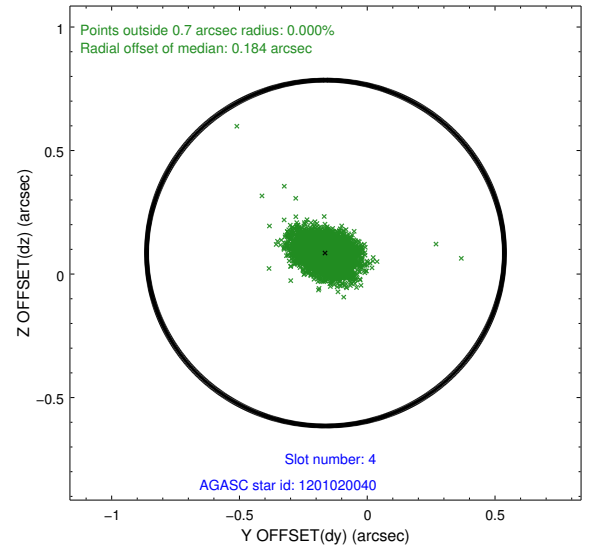
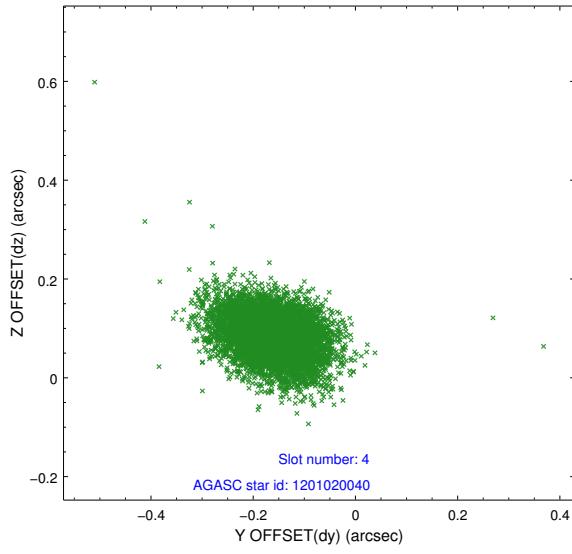
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.06	2973	0.093	0.096	0.010	0.016	0.000000	0.000000	935.32	-1901.66
1	FID	ACIS-S-2	6.97	2973	-0.161	-0.077	0.012	0.018	0.000000	0.000000	-760.61	-1906.90
2	FID	ACIS-S-6	7.27	2973	0.047	-0.016	0.017	0.025	0.000000	0.000000	400.70	639.06
3	GUIDE	1201019672	6.84	5946	-0.046	0.041	0.063	0.106	85.312192	-68.770187	1919.98	-1779.28
4	GUIDE	1201020040	8.59	5941	-0.163	0.085	0.074	0.124	85.379163	-68.879396	1527.99	-1870.87
5	GUIDE	1201410616	9.30	5943	0.118	-0.139	0.148	0.233	82.516808	-69.784406	-1849.45	1654.04
6	GUIDE	1201542672	8.16	5944	0.002	0.022	0.083	0.132	84.492488	-69.957531	-2370.78	-816.88
7	GUIDE	1201540776	9.56	5941	0.089	-0.013	0.150	0.240	85.107945	-69.858480	-2001.30	-1570.74

2.4 Star Slots

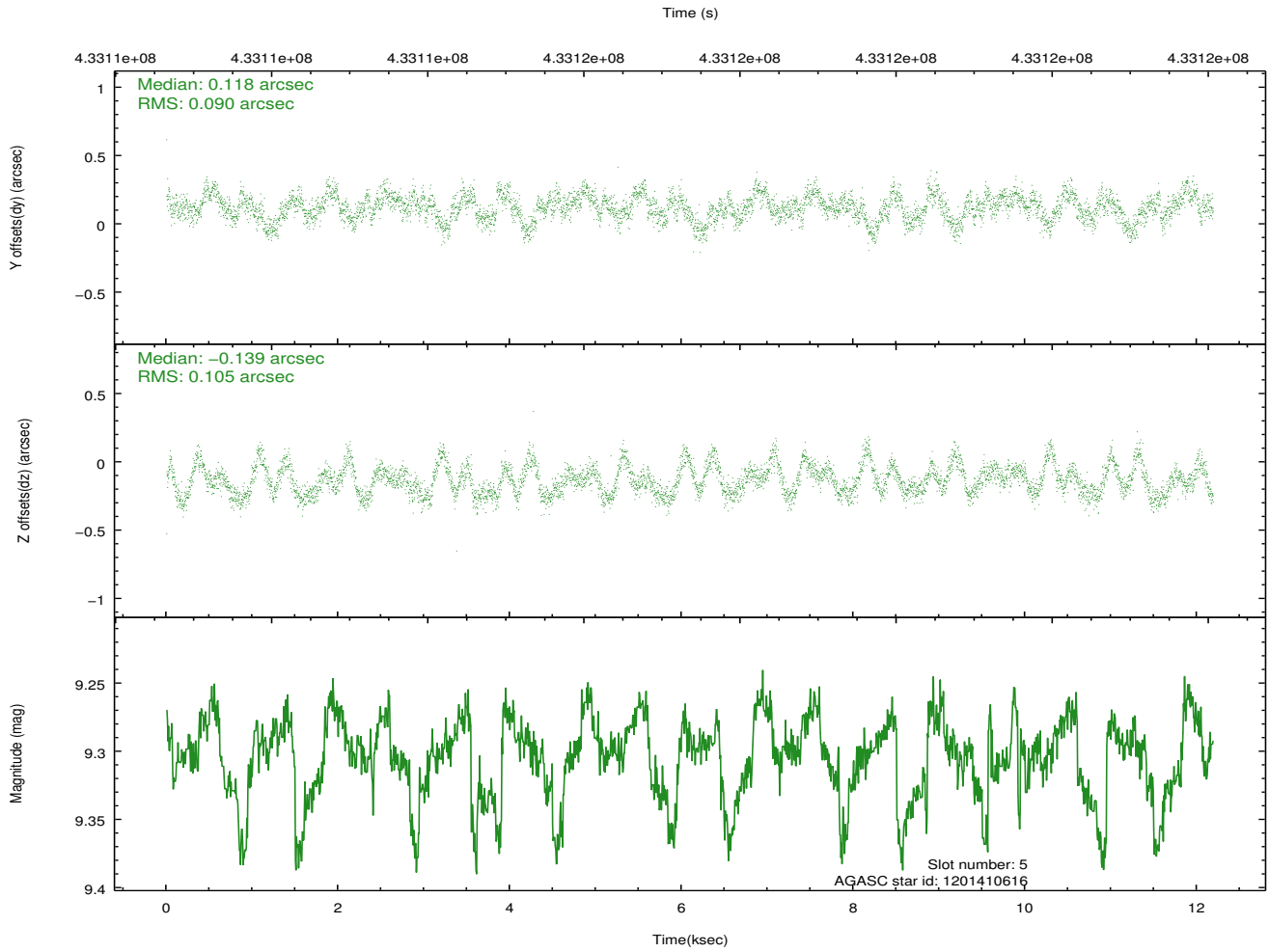
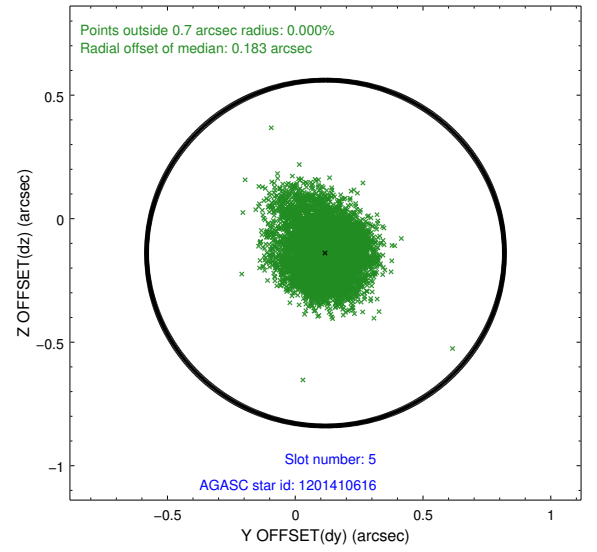
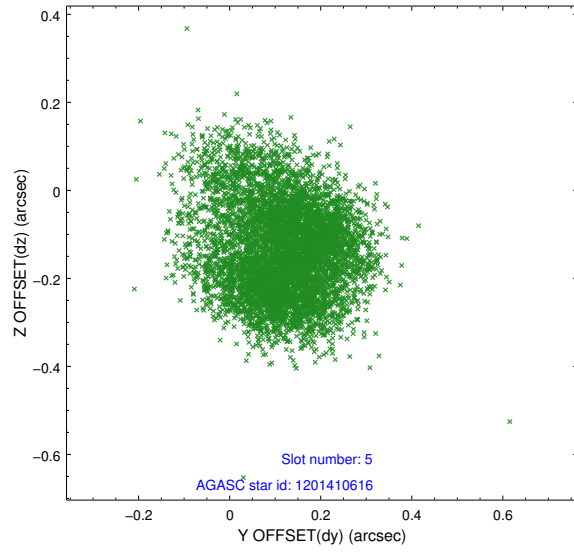
2.4.1 Slot 3



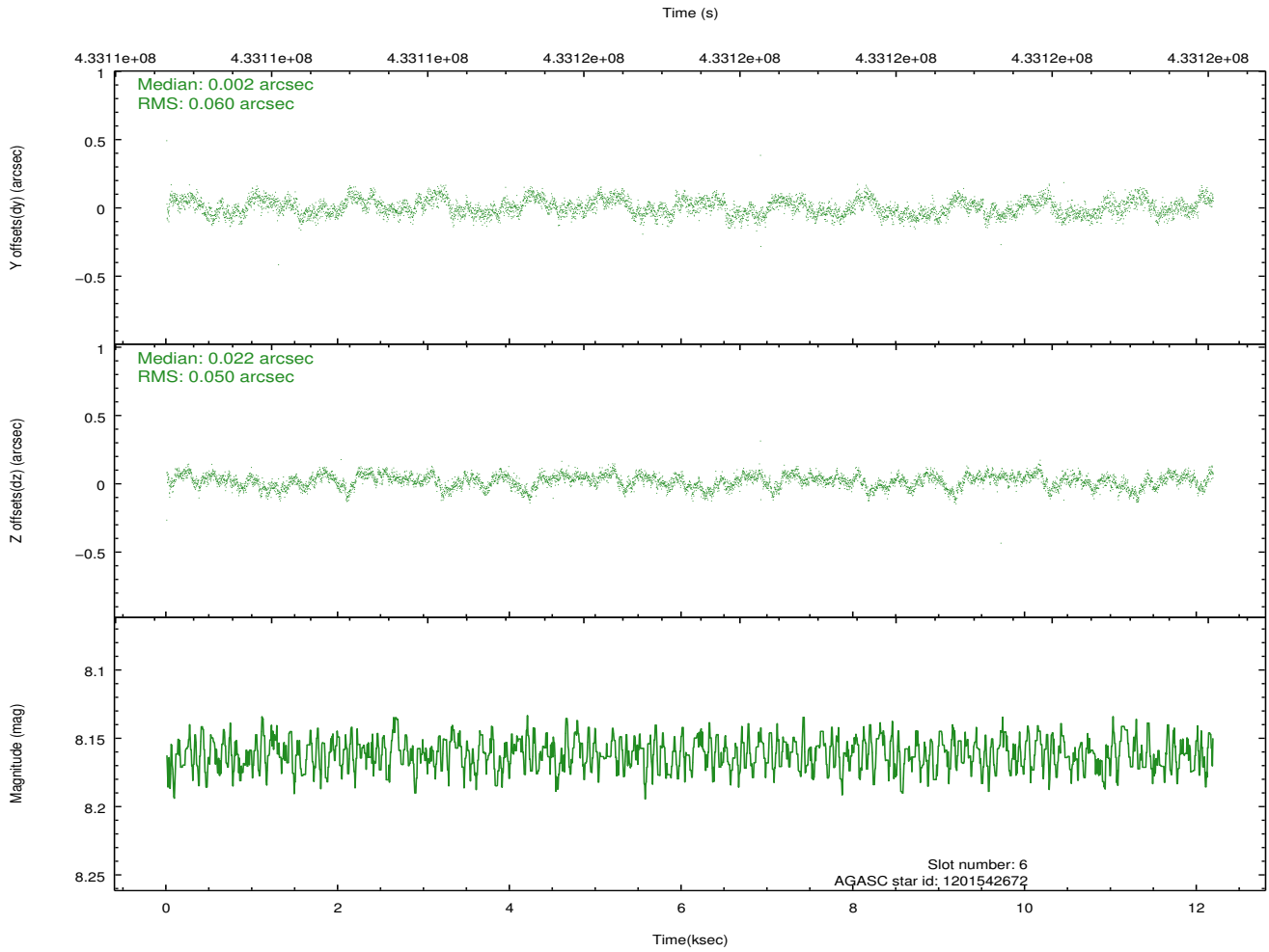
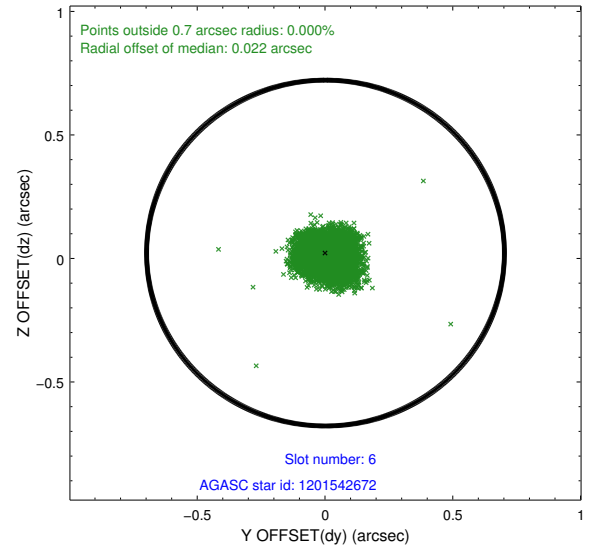
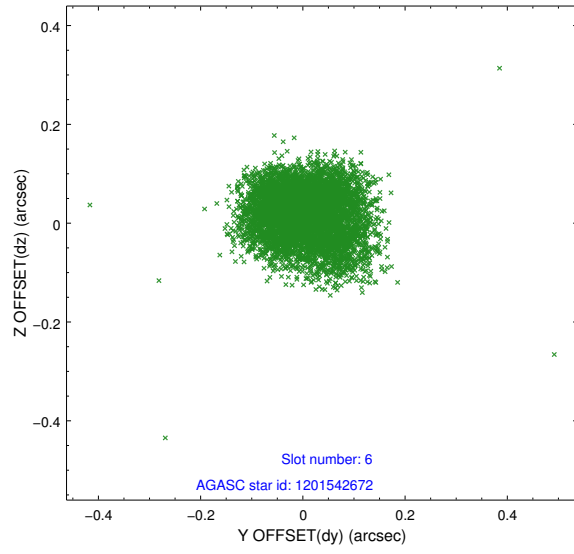
2.4.2 Slot 4



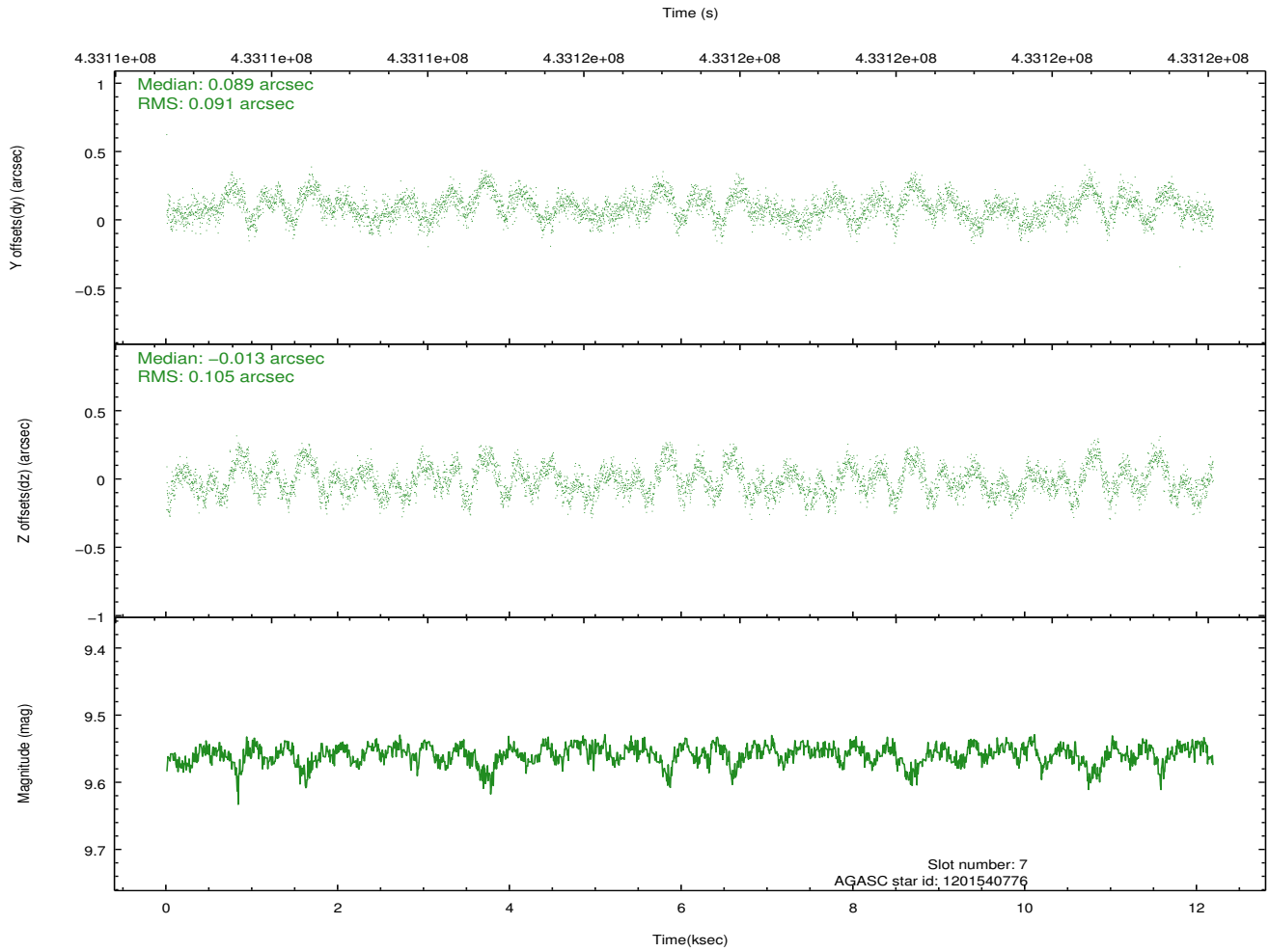
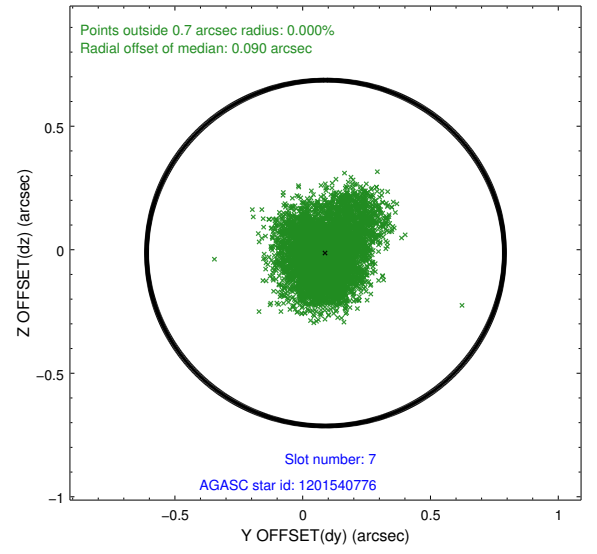
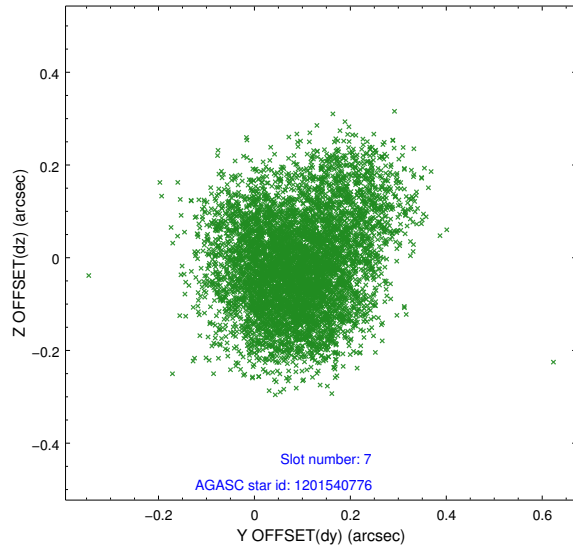
2.4.3 Slot 5



2.4.4 Slot 6

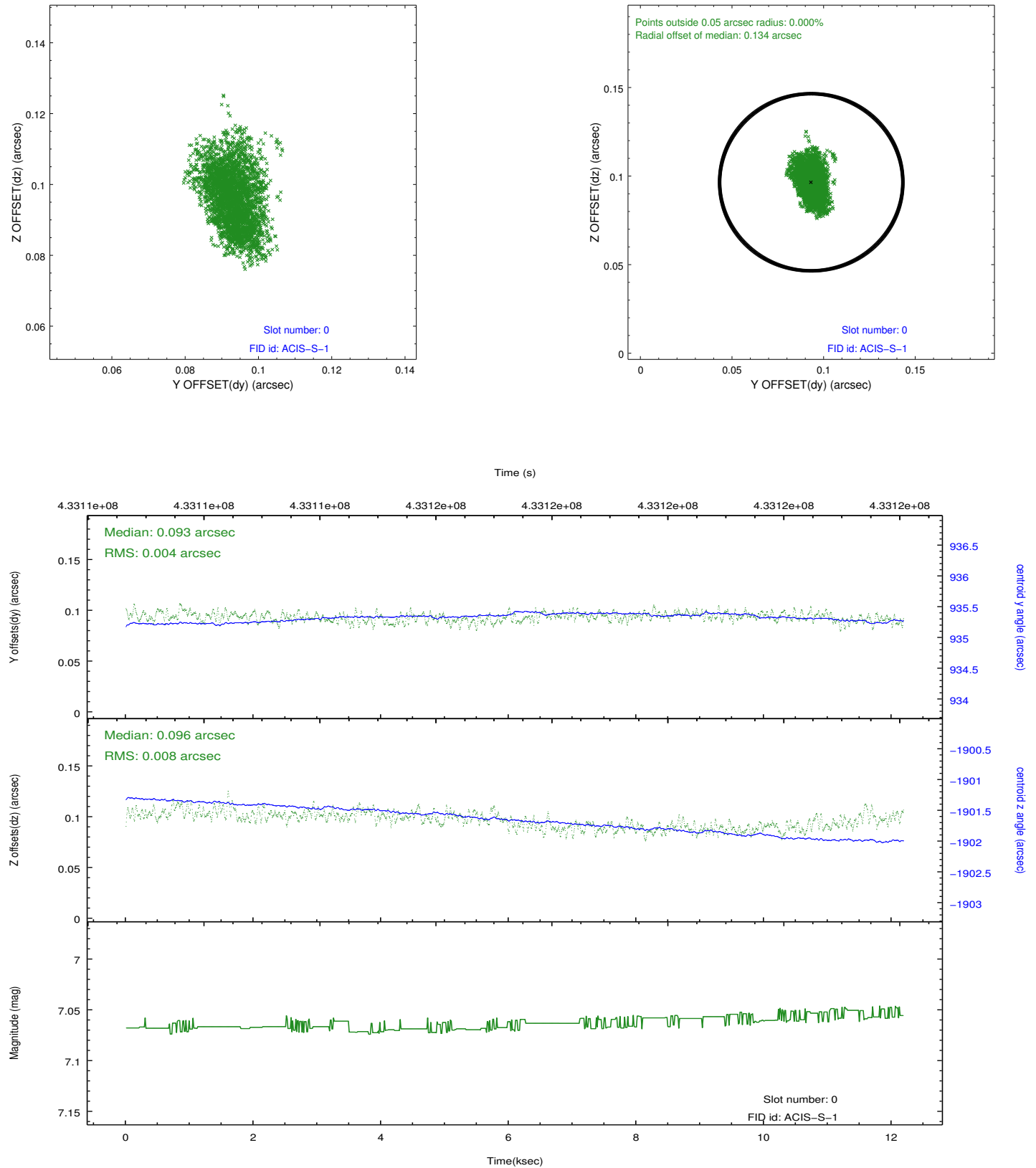


2.4.5 Slot 7

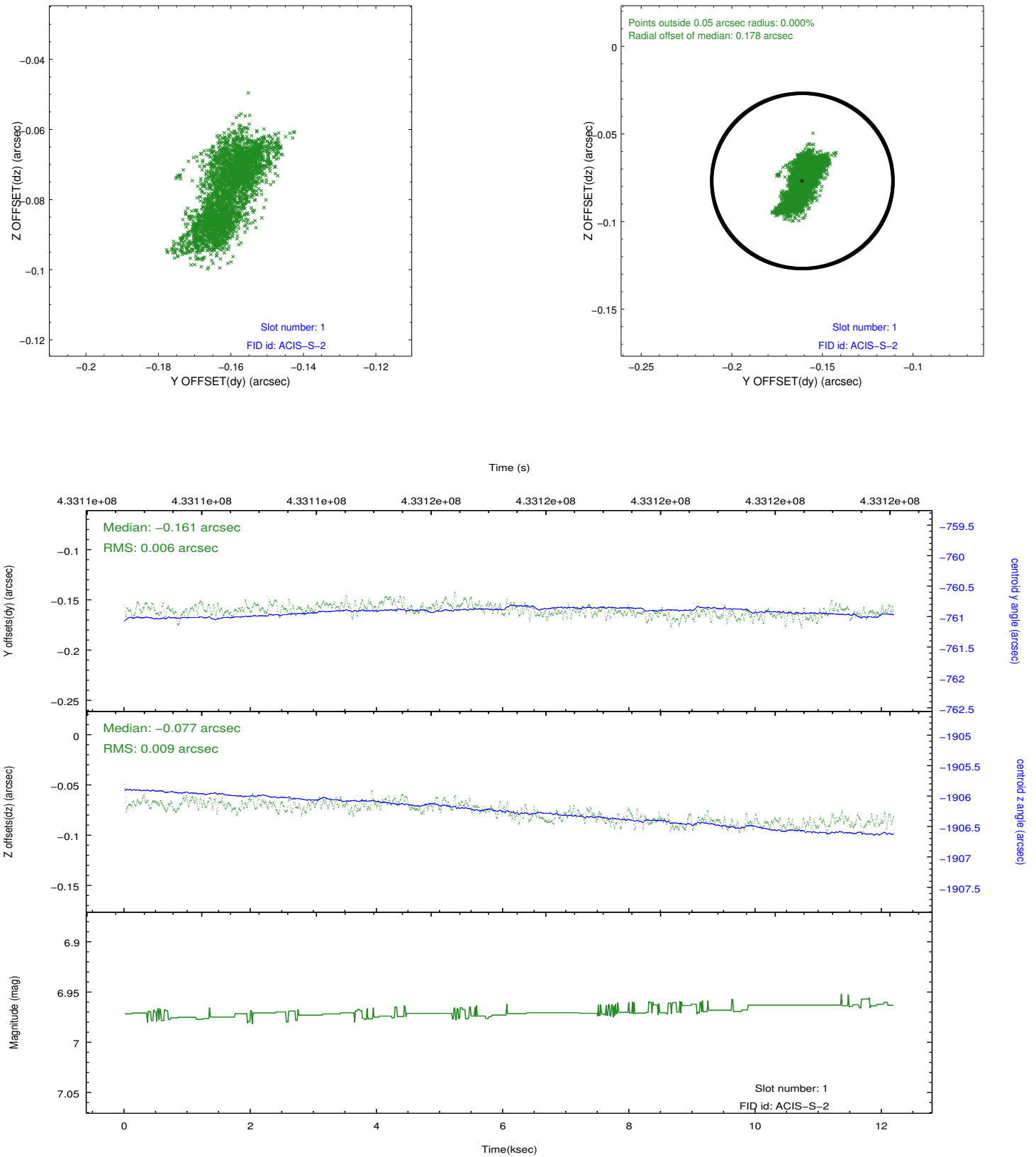


2.5 FID Slots

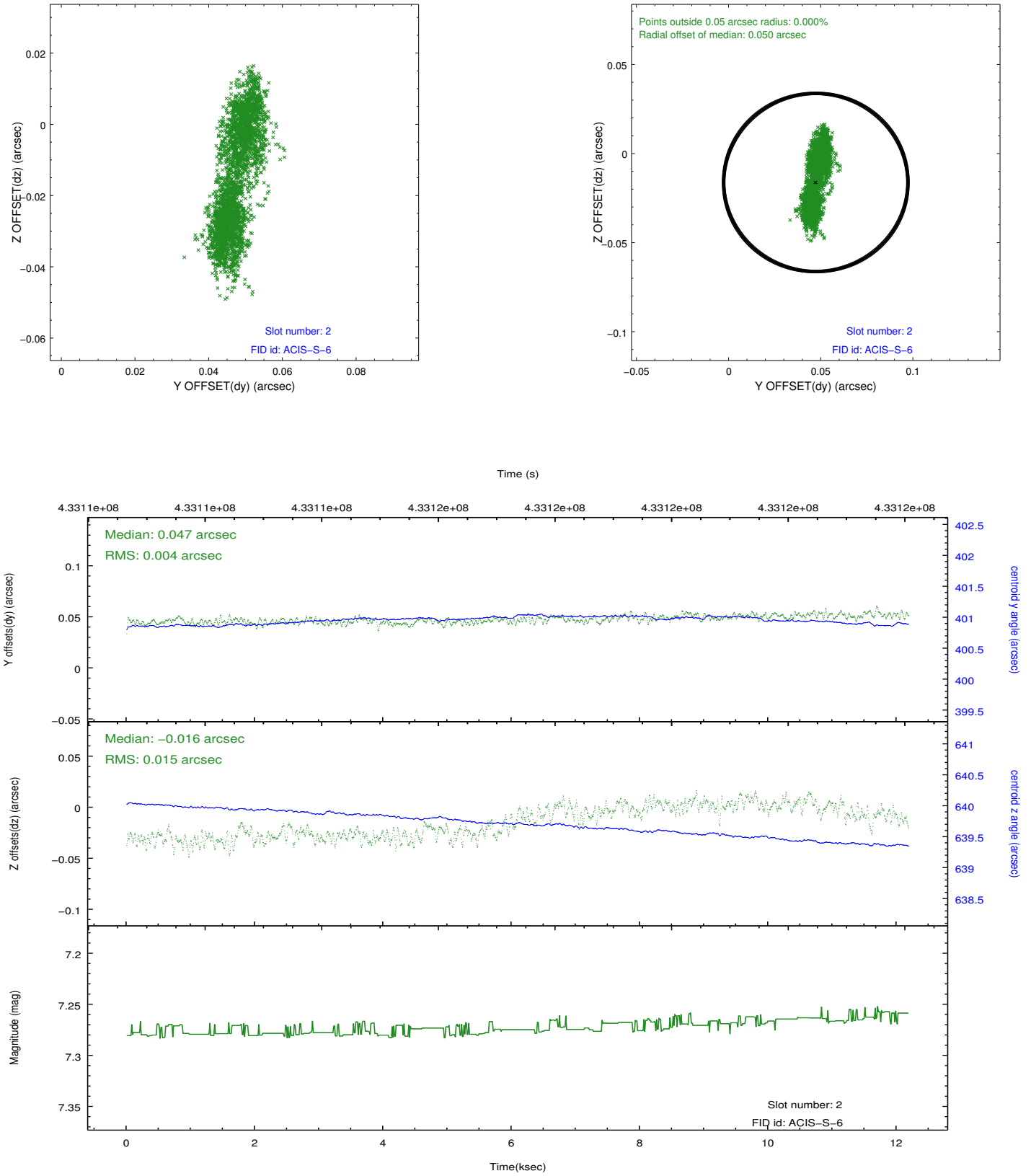
2.5.1 Slot 0



2.5.2 Slot 1

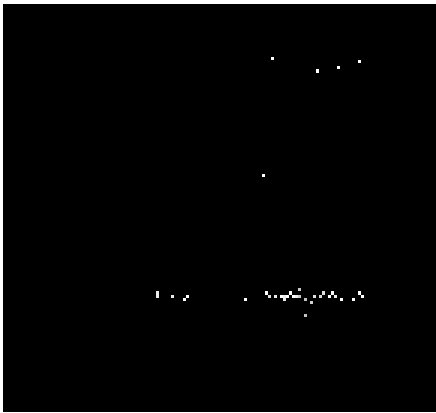


2.5.3 Slot 2

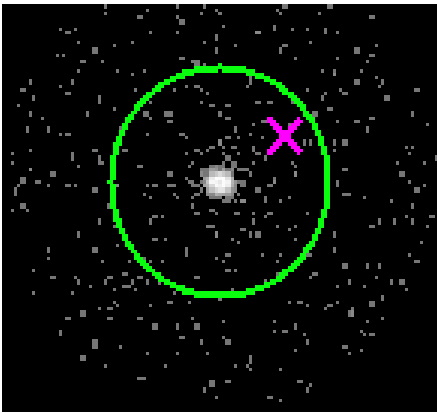


3 Gratings

3.1 HEG Arm



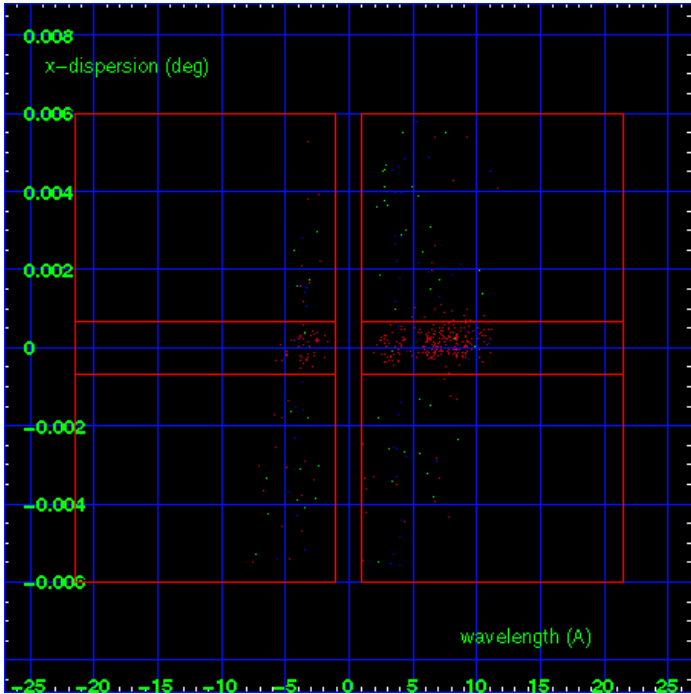
HEG Order Sort 123



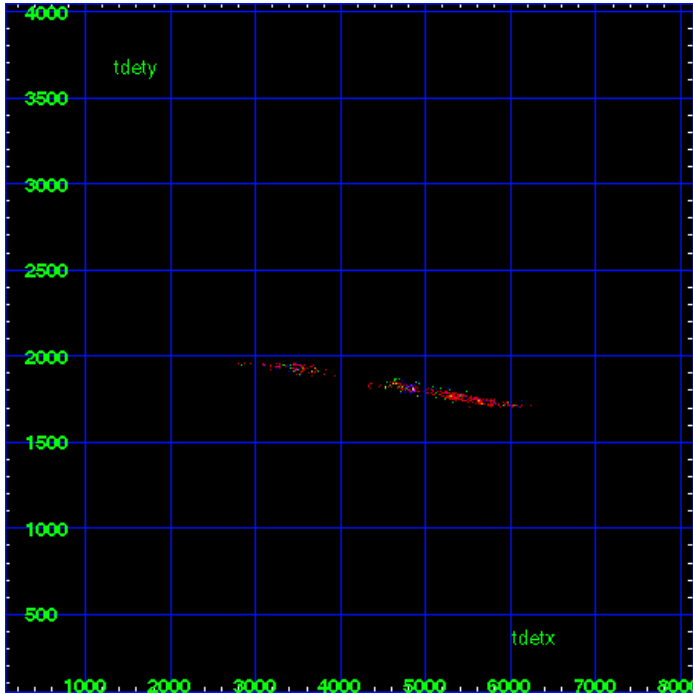
HEG Zero Order



HEG Order Sort ALL

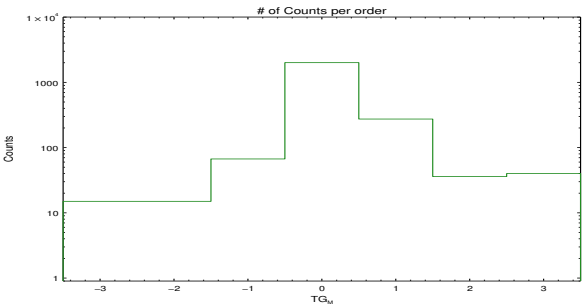


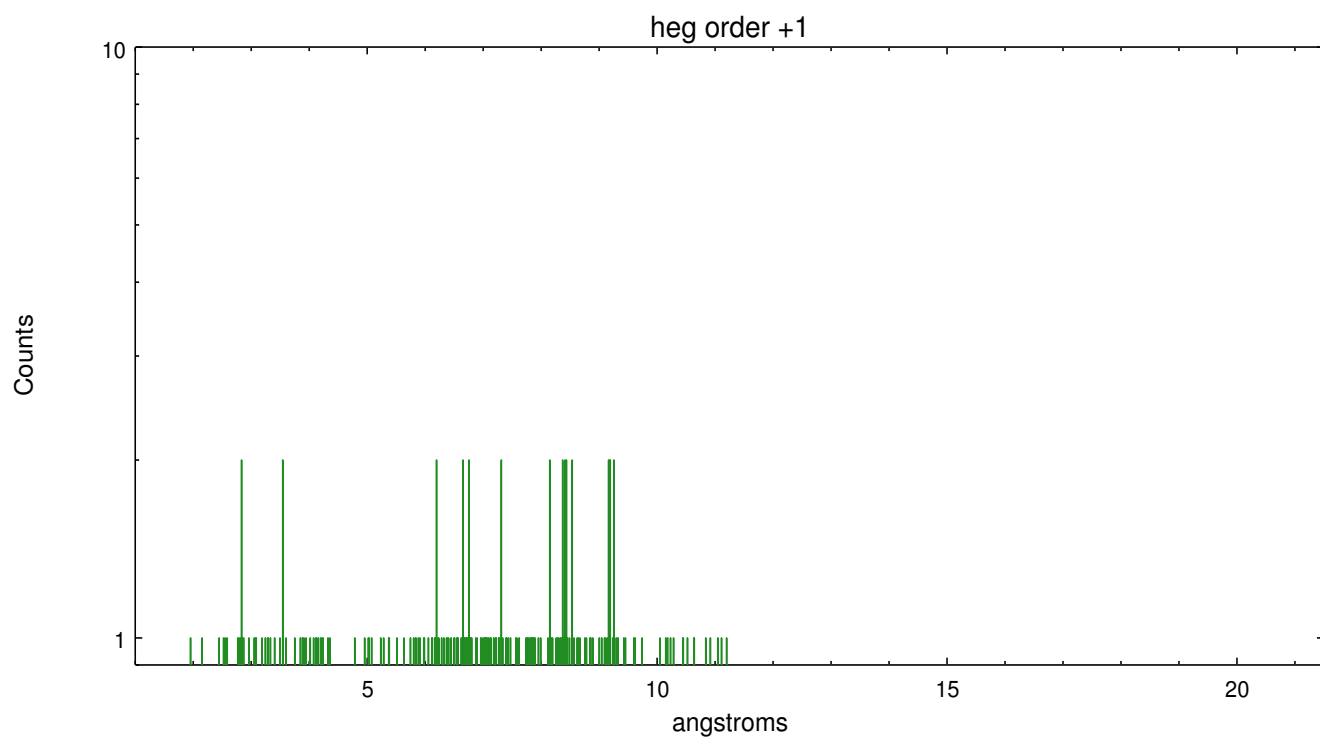
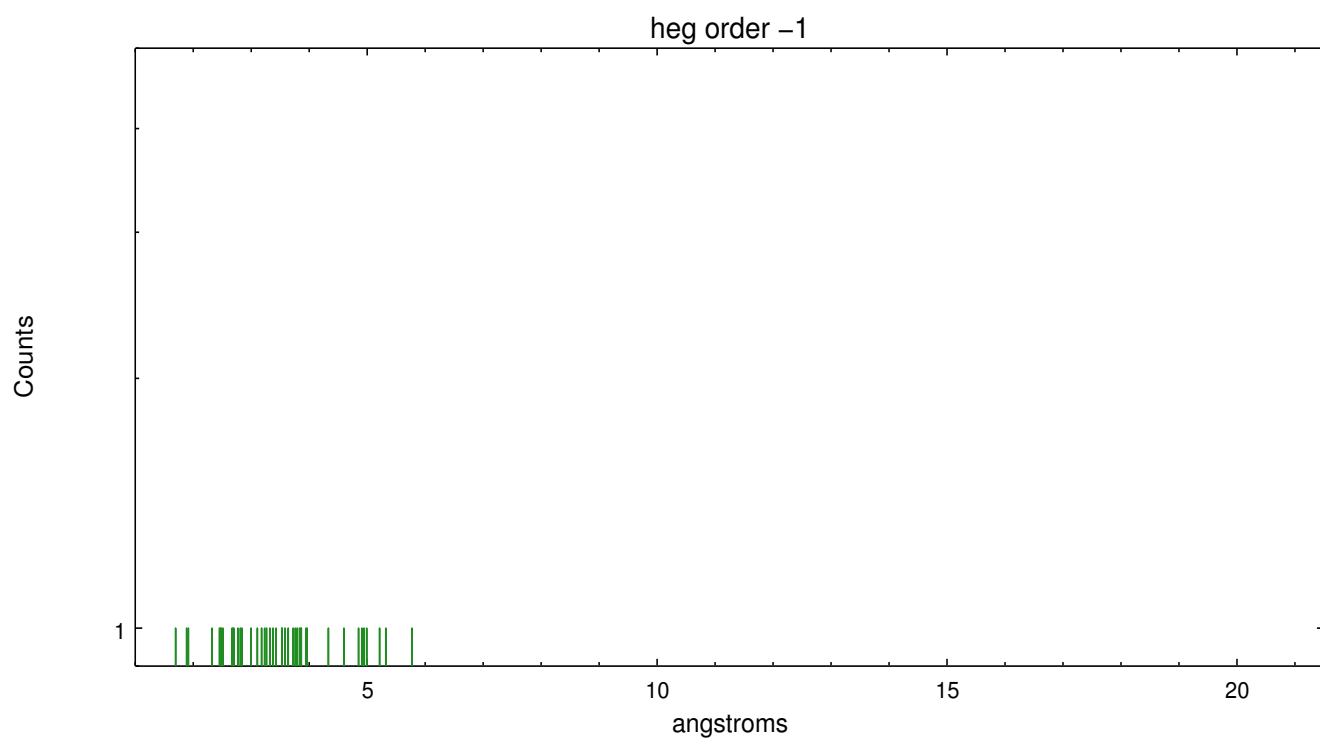
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	15	15	67	2007	274	36	40

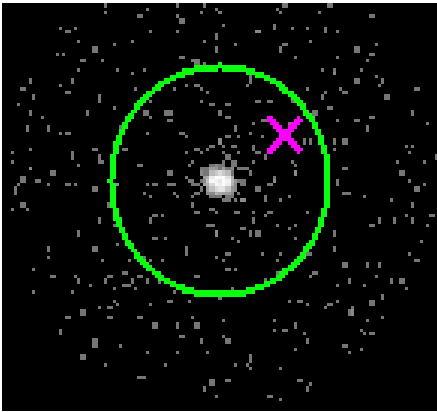




3.2 MEG Arm



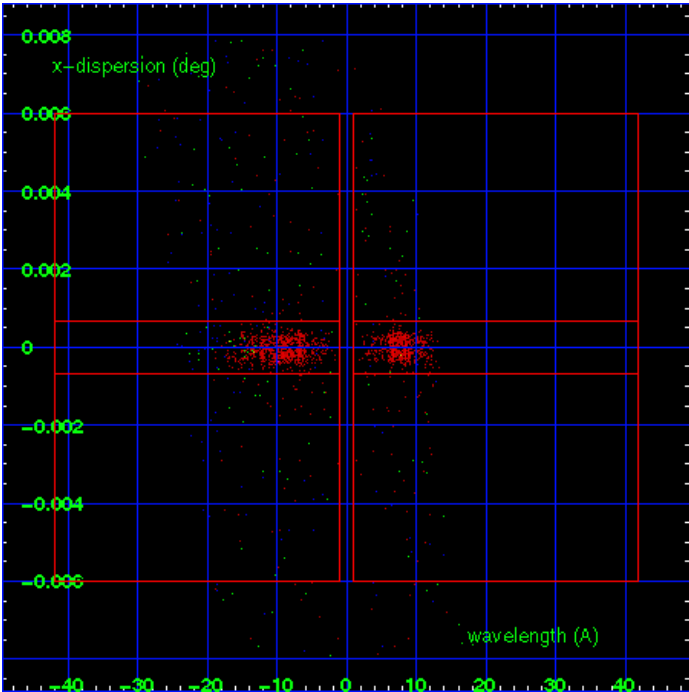
MEG Order Sort 123



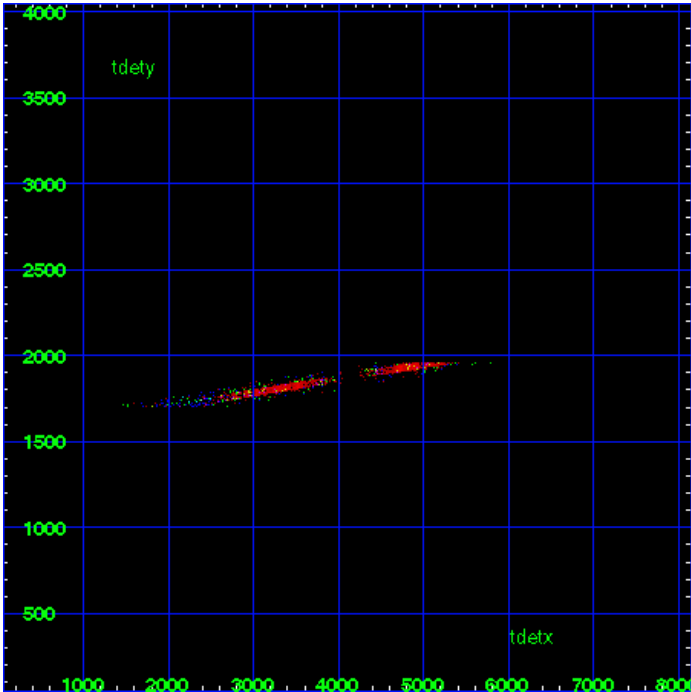
MEG Zero Order



MEG Order Sort ALL

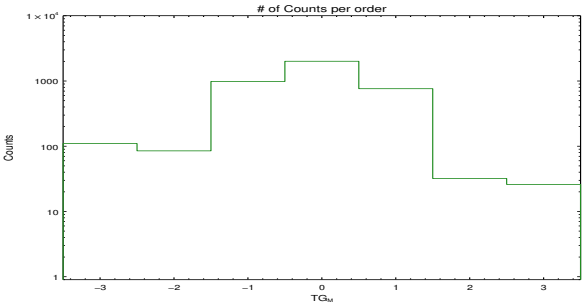


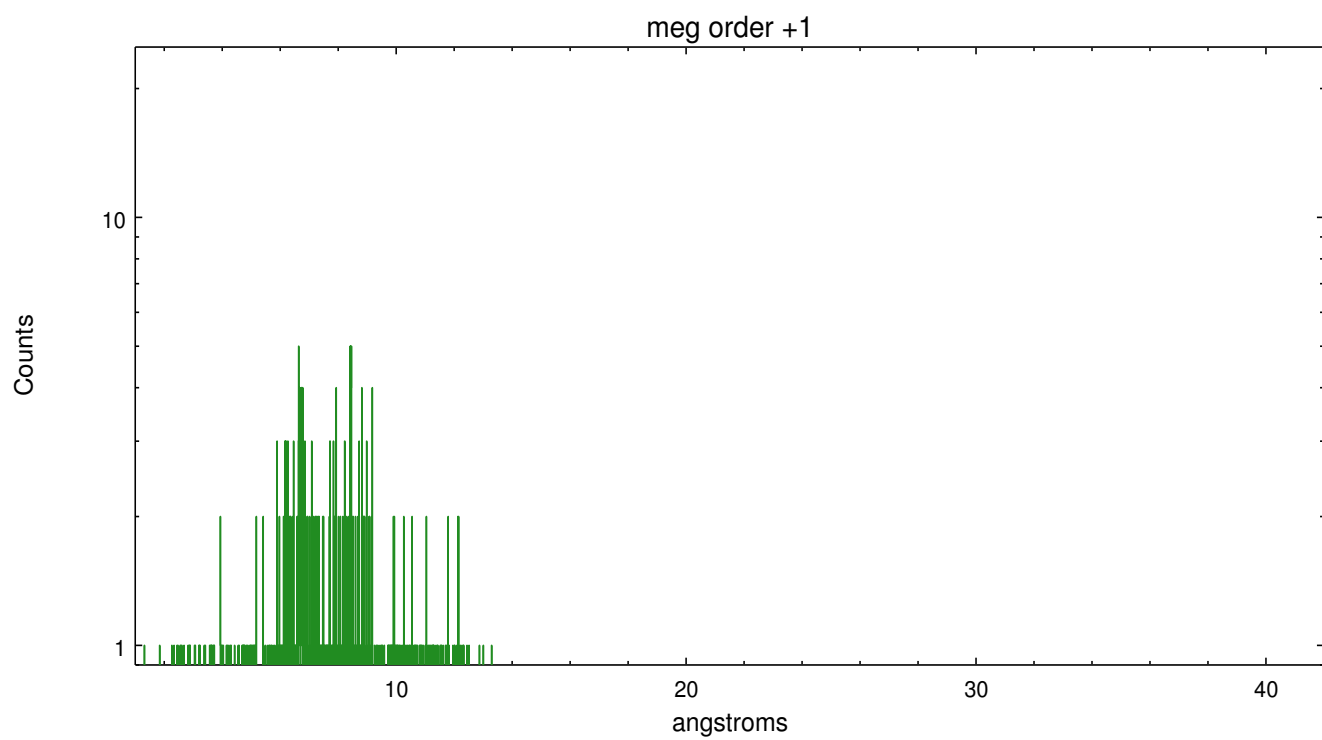
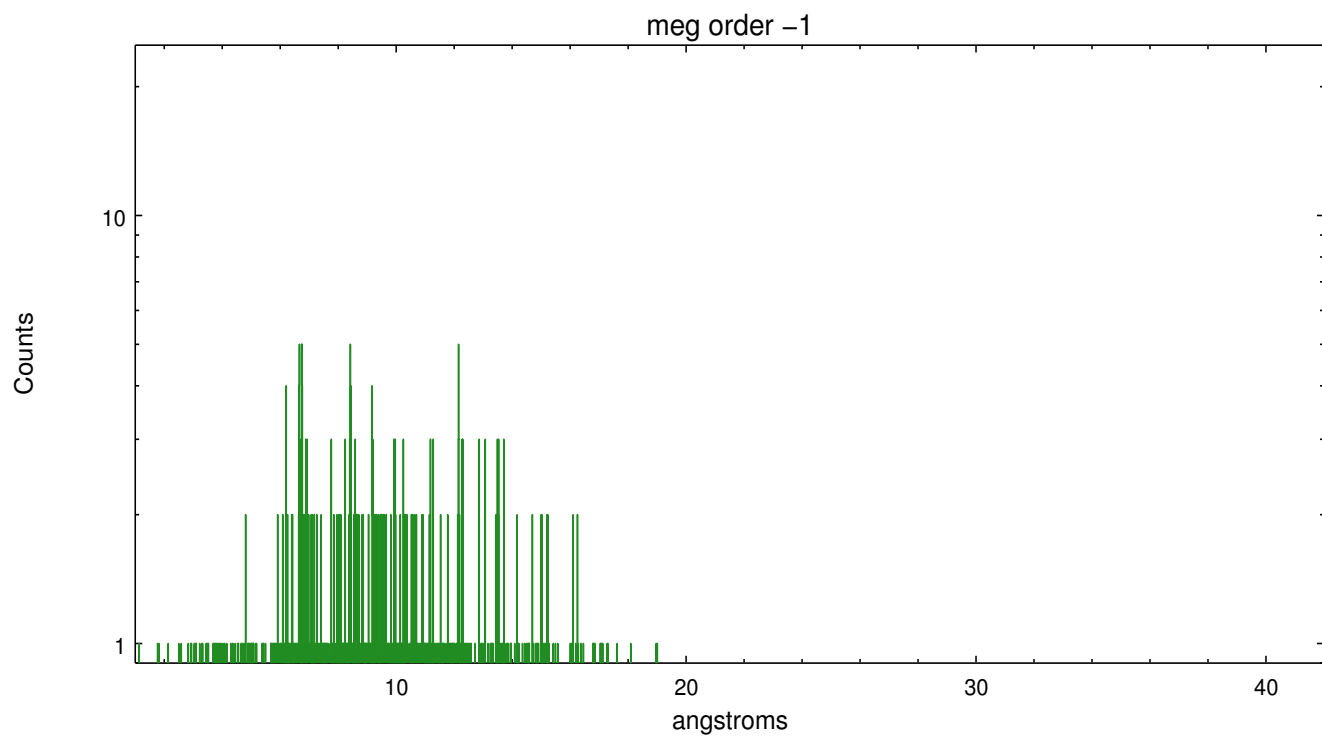
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	110	85	984	2007	763	32	26





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.03.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	12.068910266757

A.2 Comments

Source is extended and asymmetric. Zeroth order is near the center of the supernova remnant emission, but may not be the position of interest. Users should verify that the zeroth order position is correct for their analysis. 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.