

V&V Reference Report

L2 ASCDS Version : 8.5.1.1

Observation 2306 - L2 Version 3
Chandra X-Ray Center

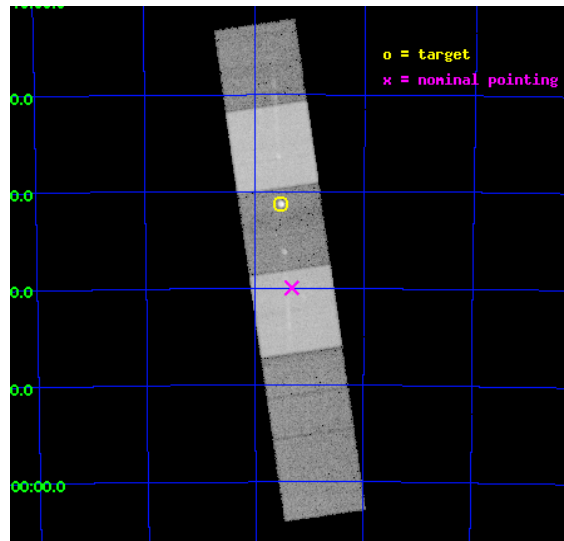
L2 Processing Date : May 18 2013

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1 Front

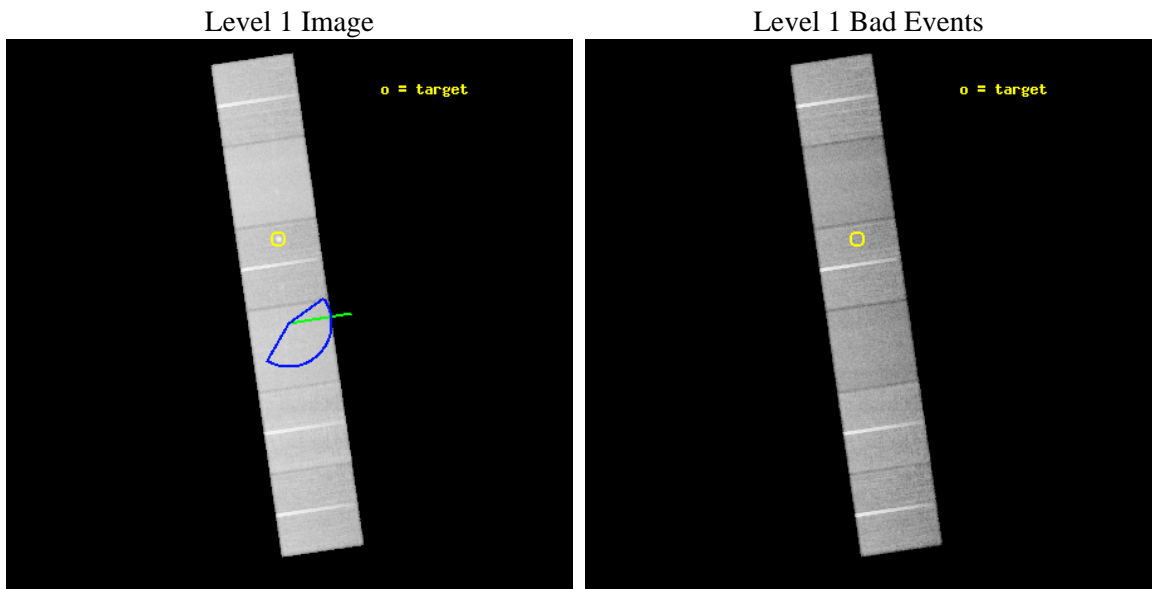
seq_num	500070	Sequence number
obs_id	2306	Observation id
title	HIGH RESOLUTION LINE SPECTROSCOPY OF THREE YOUNG SUPERNOVA REMNANTS IN THE LARGE MAGELLANIC CLOUD	Proposal title
observer	PROF. STEVEN KAHN	Principal investigator
object	0509-67.5	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	77.382917	Observer's specified target RA [deg]
dec_targ	-67.521417	Observer's specified target Dec [deg]
ra_nom	77.331180303411	Nominal RA [deg]
dec_nom	-67.665851816905	Nominal Dec [deg]
roll_nom	81.661801936625	Nominal Roll [deg]
revision	3	Processing version of data
ontime	49394.469439879	Sum of GTIs [s]
livetime	48769.006926053	Livetime [s]
ontime4	49384.621434927	Sum of GTIs [s]
ontime5	49410.633330673	Sum of GTIs [s]
ontime6	49394.469439879	Sum of GTIs [s]
ontime7	49410.956644669	Sum of GTIs [s]
ontime8	49385.743947759	Sum of GTIs [s]
ontime9	49407.513745427	Sum of GTIs [s]
l2events	411644	Number of level 2 events



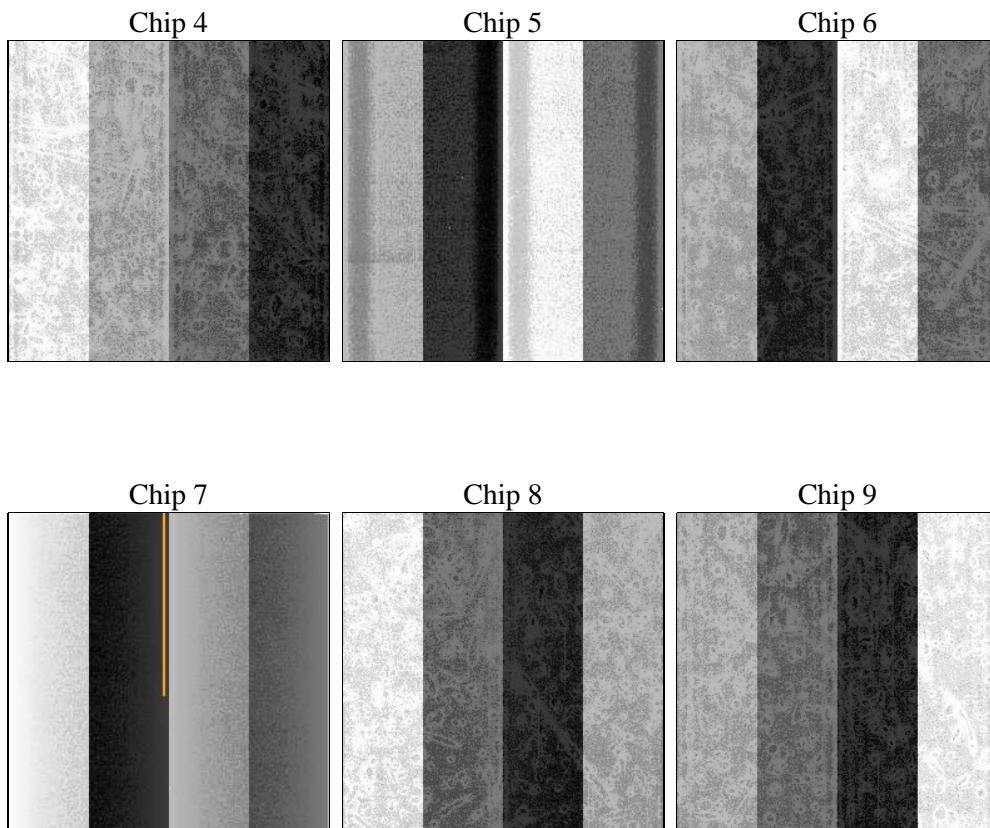
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	52000.000000	[s] Scheduled observation exposure time
ascdsver	8.5.1.1	Processing system revision	ontime	49394.469439879	Sum of GTIs [s]
caldsver	4.5.6	 	ontime4	49384.621434927	Sum of GTIs [s]
date	2013-05-17T23:31:50	Date and time of file creation	ontime5	49410.633330673	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	49394.469439879	Sum of GTIs [s]
			ontime7	49410.956644669	Sum of GTIs [s]
			ontime8	49385.743947759	Sum of GTIs [s]
			ontime9	49407.513745427	Sum of GTIs [s]
			l1events	1906539	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	304412	362732	278425	337501	351505	271964	grade 0 events	13901	11183	15401	13342	21368	13060
rejected events	271374	199733	244522	196671	282527	240204		4%	3%	5%	3%	6%	4%
rejected %	89%	55%	87%	58%	80%	88%	grade 1 events	147	419	135	319	202	103
								0%	0%	0%	0%	0%	0%
							grade 2 events	7727	48116	6321	27865	14803	6241
								2%	13%	2%	8%	4%	2%
							grade 3 events	2978	7829	3160	13086	7875	3280
								0%	2%	1%	3%	2%	1%
							grade 4 events	2920	7479	3059	13015	7074	3021
								0%	2%	1%	3%	2%	1%
							grade 5 events	9376	28393	11285	32572	14395	11265
								3%	7%	4%	9%	4%	4%
							grade 6 events	5572	88691	6026	73754	17973	6212
								1%	24%	2%	21%	5%	2%
							grade 7 events	261791	170622	233038	163548	267815	228782
								85%	47%	83%	48%	76%	84%

2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-456789	ACIS-456789
Grating	HETG	HETG
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	77.358213	77.33118030341113
[deg] Pointing Dec	-67.691203	-67.66585181690468
[deg] Pointing Roll	81.530182	81.66180193662528
[deg] Roll angle	133.000000	133.000000
[deg] Roll tolerance	78.000000	78.000000
Roll constraint allows 180D rotation	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1400660498719
[mm] SIM translation stage offset	0	0.00754346686406393
[s] Observation start time (MET)	85774206.184000	85773065.862444
Observation start date	2000-09-19T18:09:02	2000-09-19T17:51:05
[s] Observation end time (MET)	85826206.184000	85827105.401977
Observation end date	2000-09-20T08:35:42	2000-09-20T08:51:45
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.2

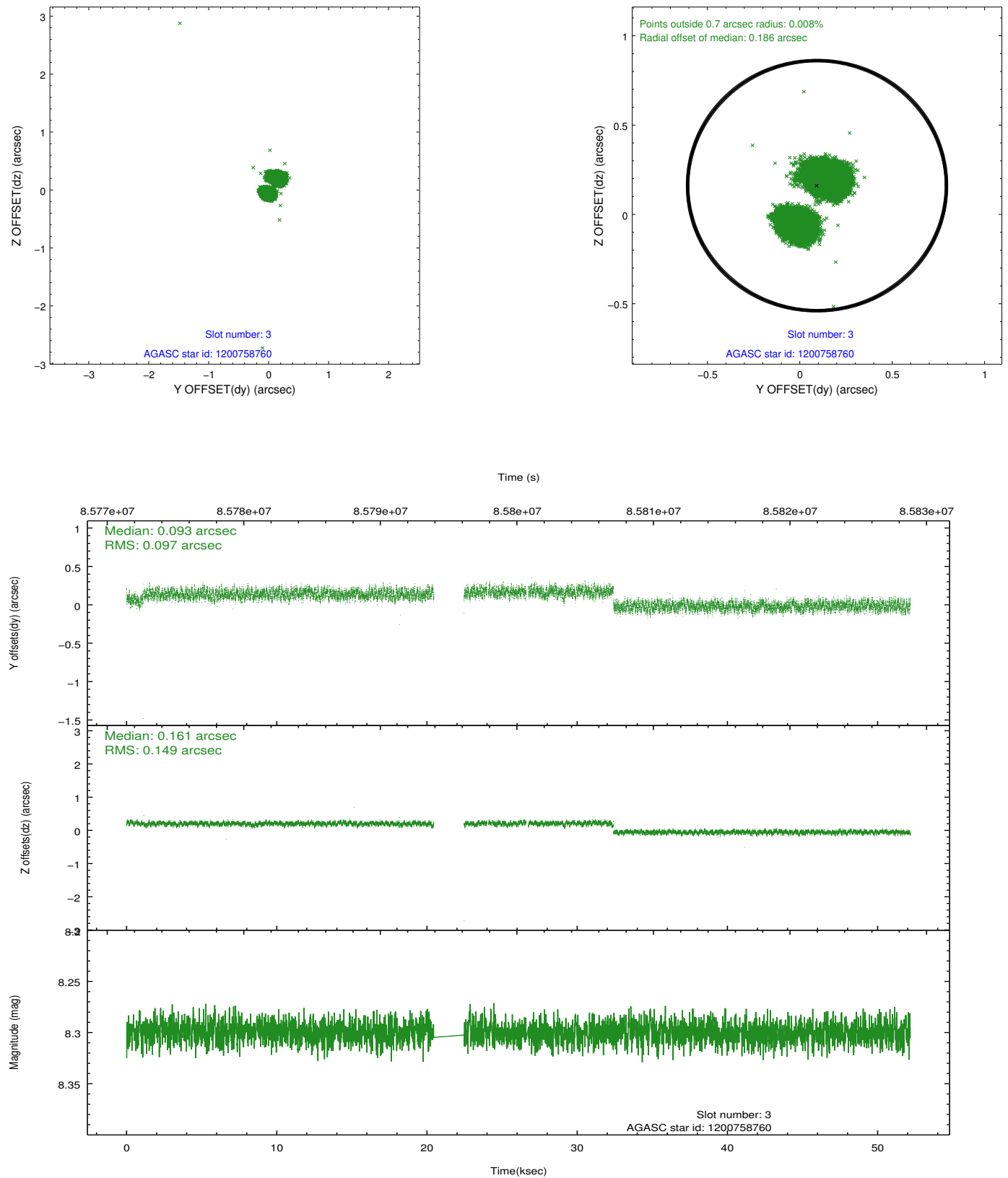
2.3 Aspect

Slot Statistics

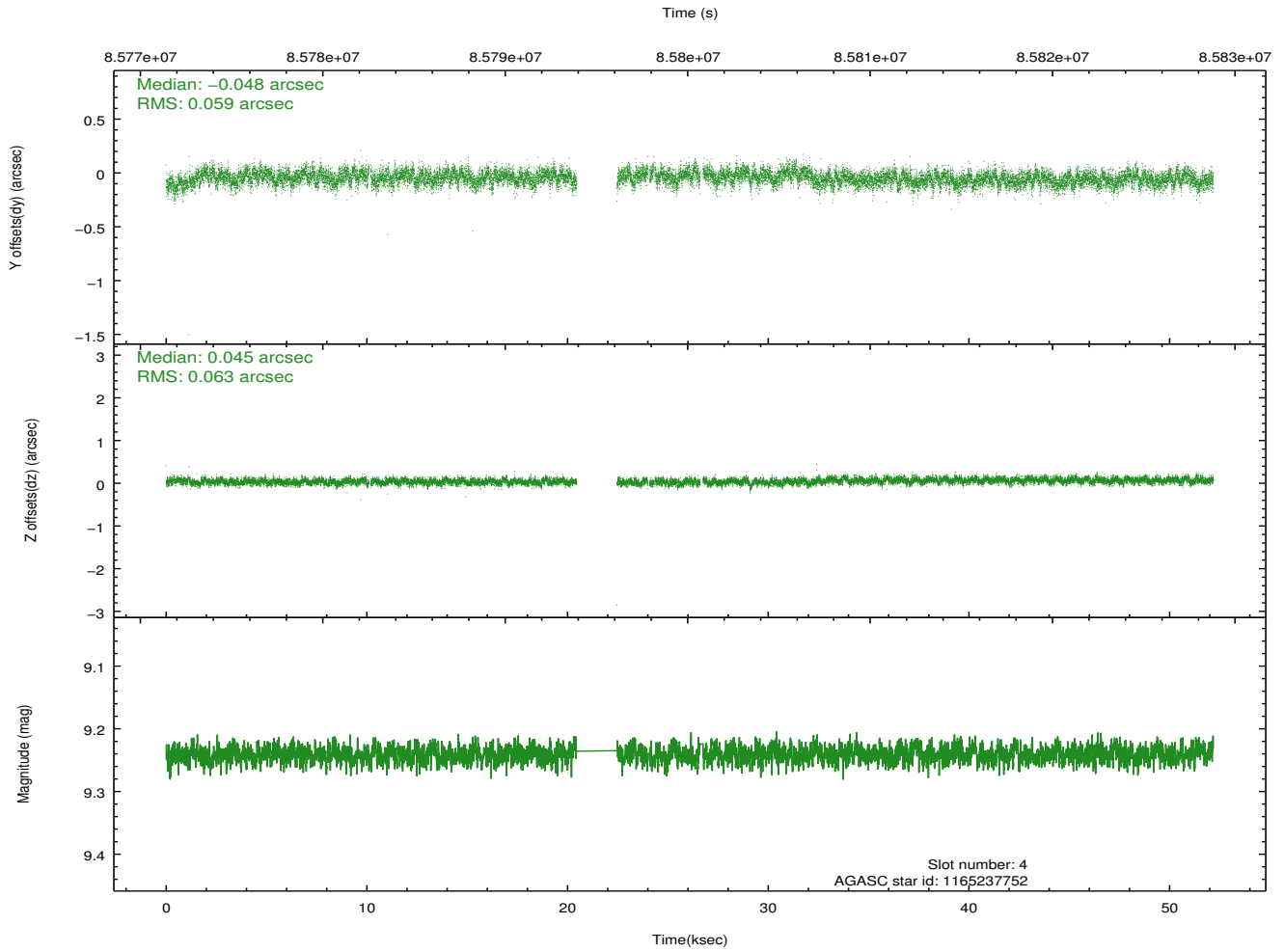
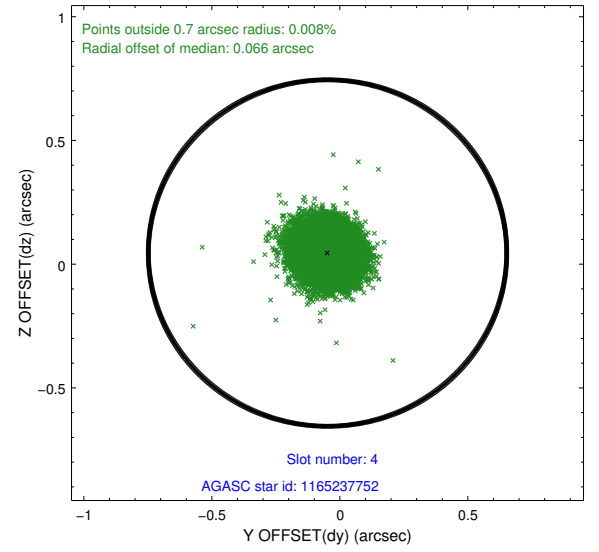
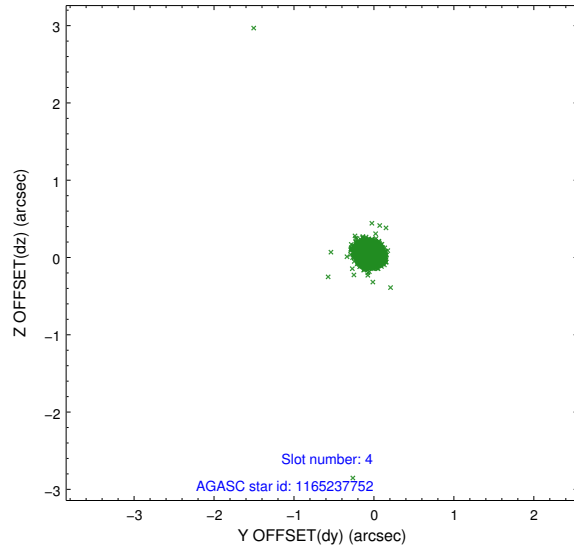
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	12152	-0.046	-0.007	0.007	0.012	0.000000	0.000000	-755.10	-1727.10
1	FID	ACIS-S-4	7.20	12148	0.009	0.024	0.006	0.011	0.000000	0.000000	2158.21	181.48
2	FID	ACIS-S-5	7.24	12151	0.006	-0.008	0.006	0.011	0.000000	0.000000	-1807.95	175.04
3	GUIDE	1200758760	8.30	24287	0.093	0.161	0.219	0.293	76.277764	-68.086435	-1633.39	1225.06
4	GUIDE	1165237752	9.24	24236	-0.048	0.045	0.087	0.140	78.075114	-67.094879	2265.73	-677.34
5	GUIDE	1200883632	9.13	24279	-0.122	0.056	0.113	0.190	79.186141	-67.543567	859.55	-2412.31
6	GUIDE	1165101864	10.36	24194	0.214	0.040	0.173	0.274	76.577750	-67.383636	929.77	1231.42
7	GUIDE	1200759696	10.34	23292	0.124	0.172	0.250	0.381	76.376940	-68.256077	-2214.26	994.37

2.4 Star Slots

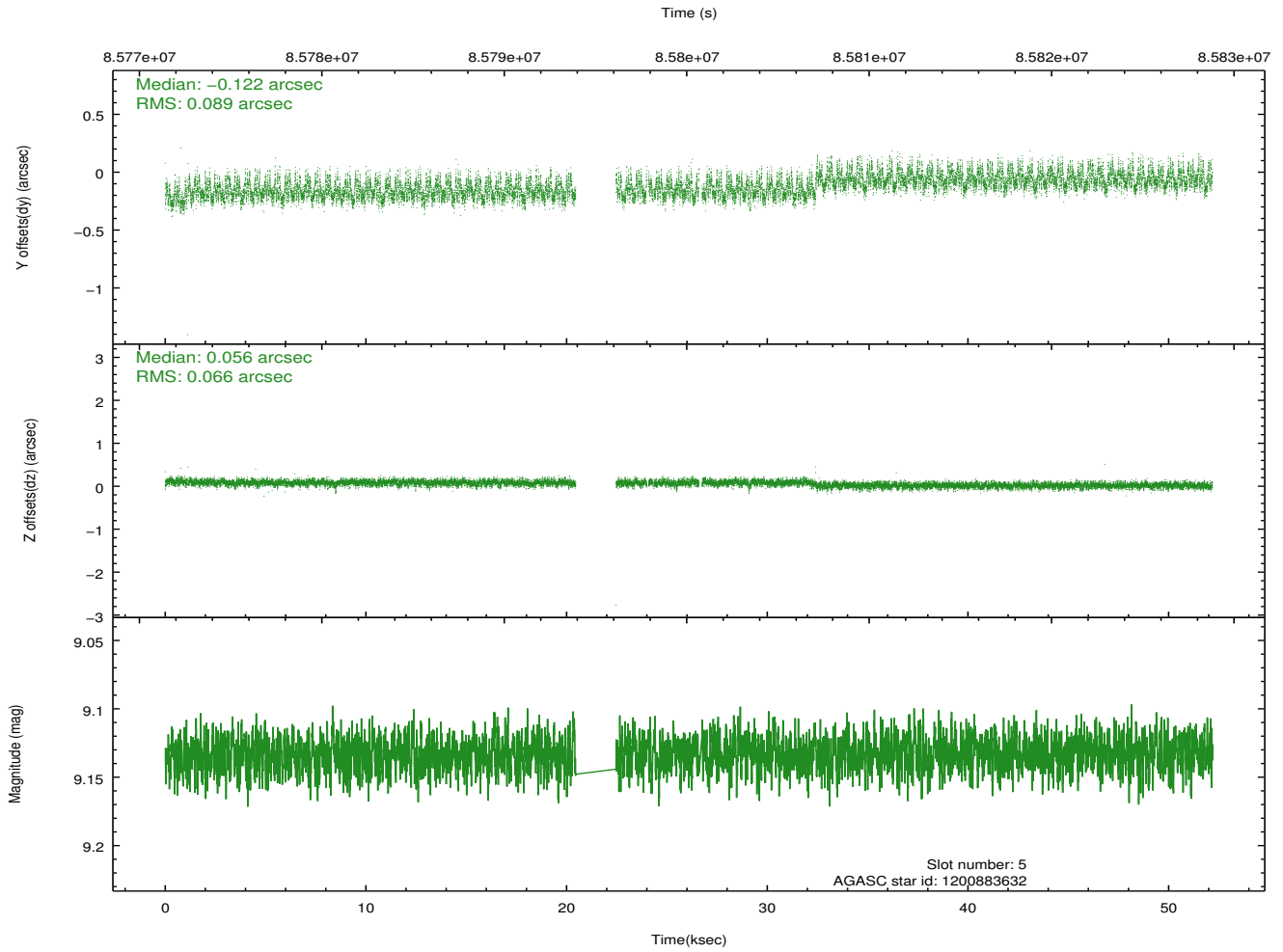
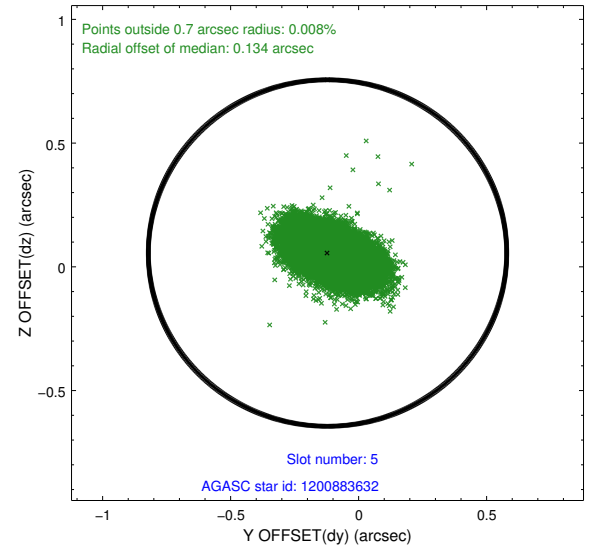
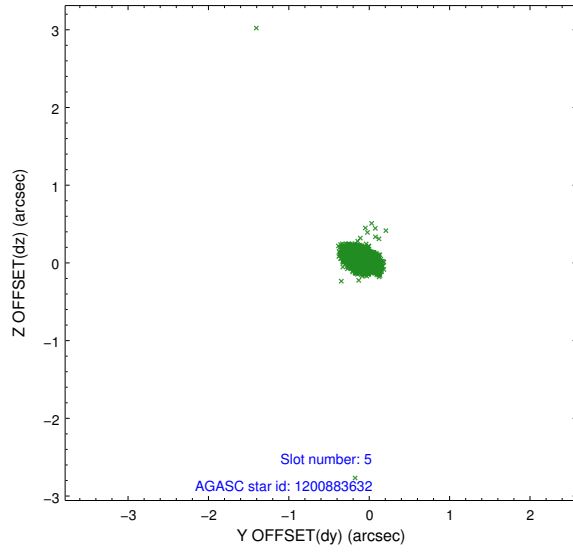
2.4.1 Slot 3



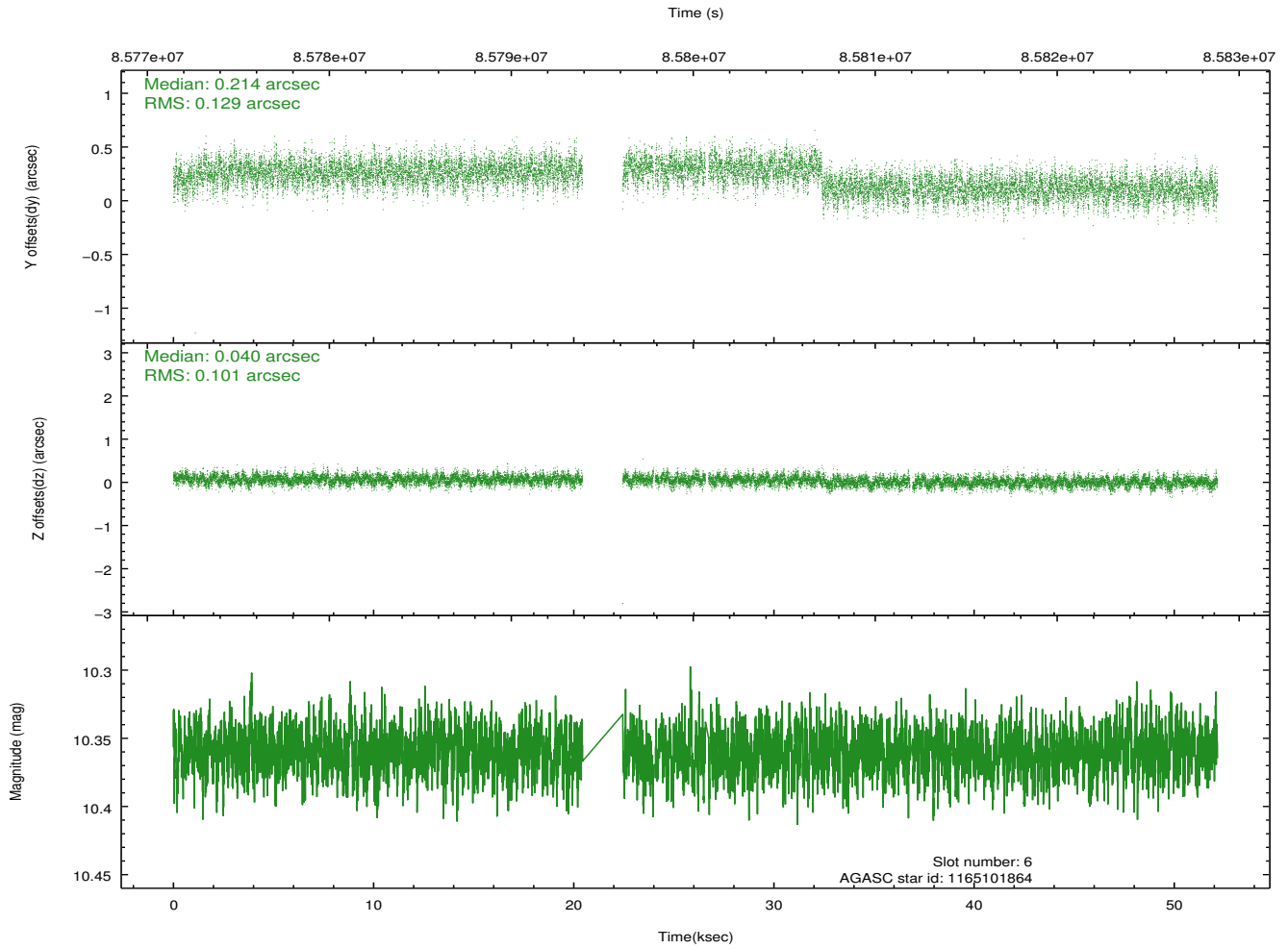
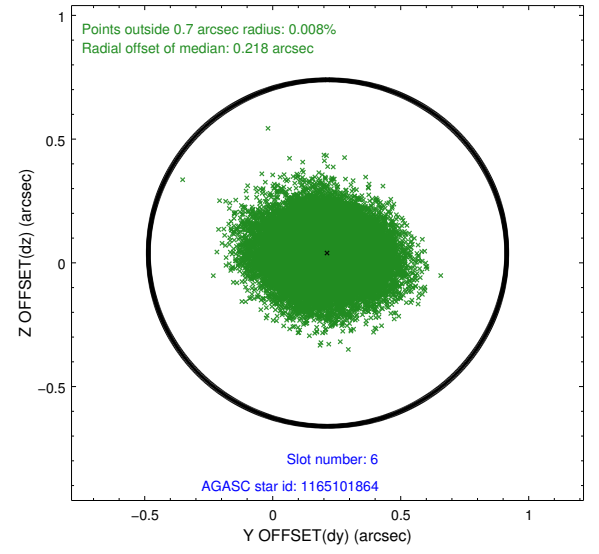
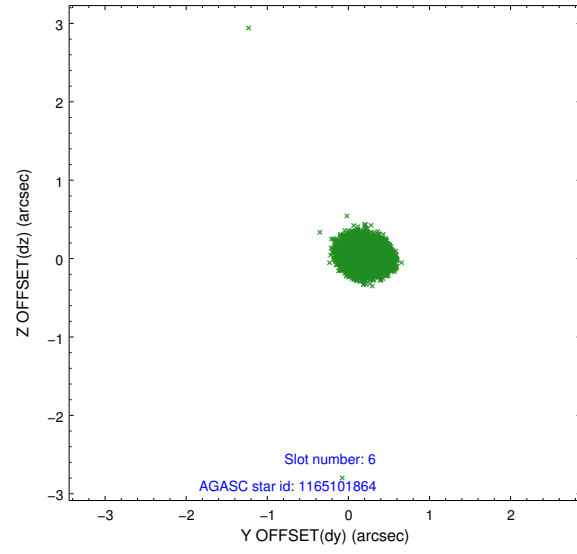
2.4.2 Slot 4



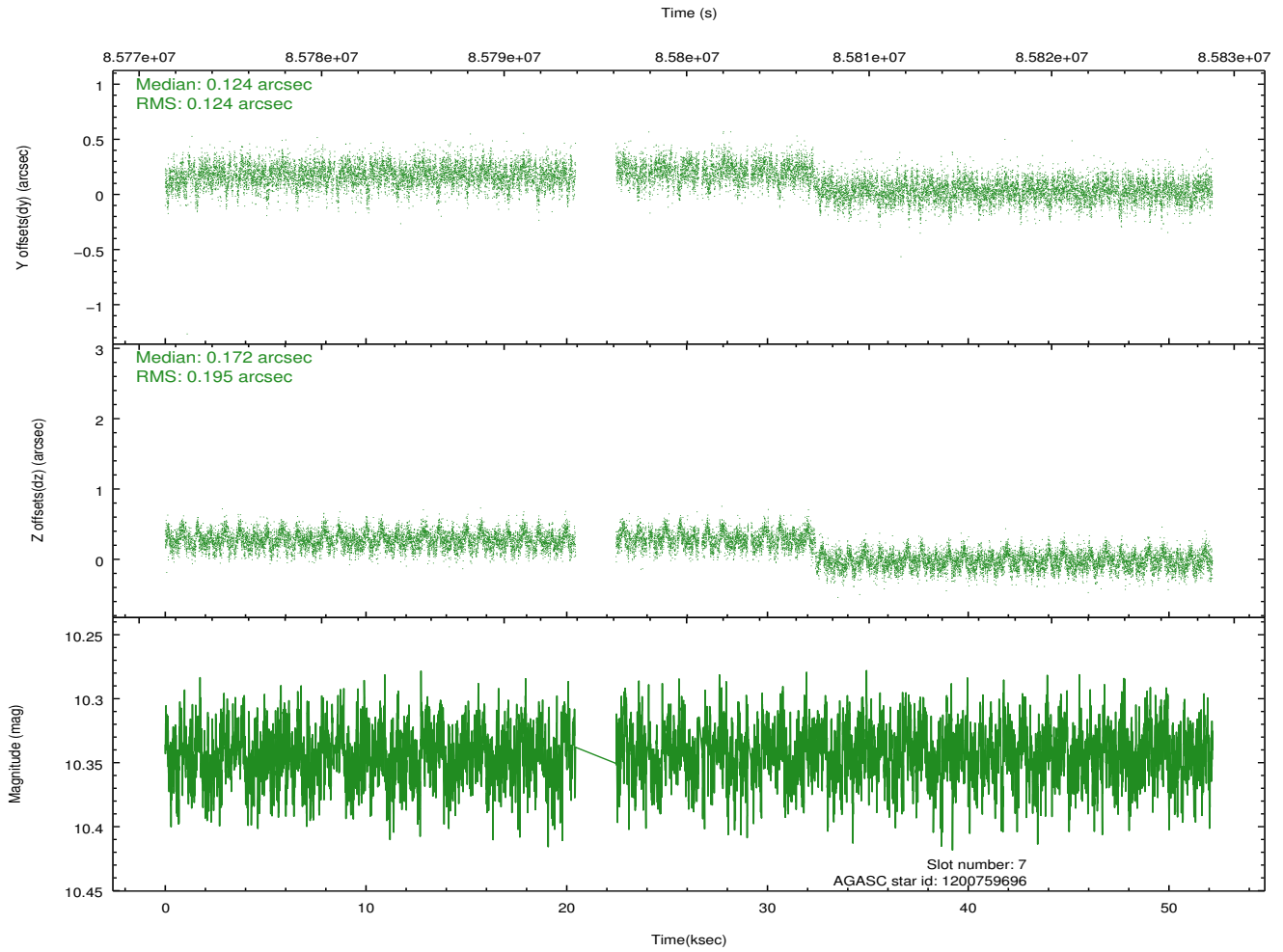
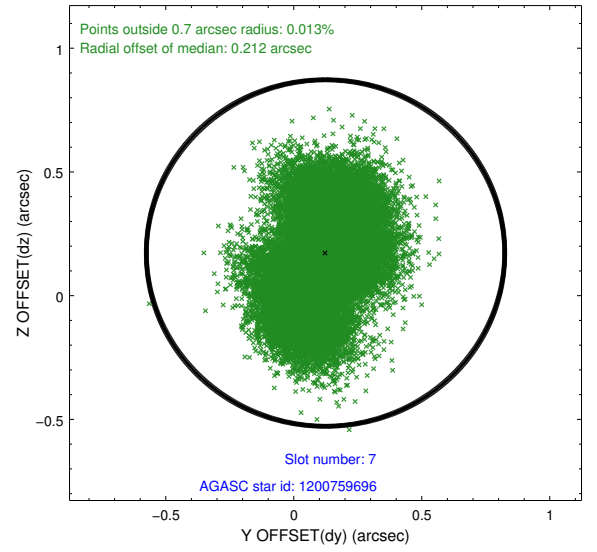
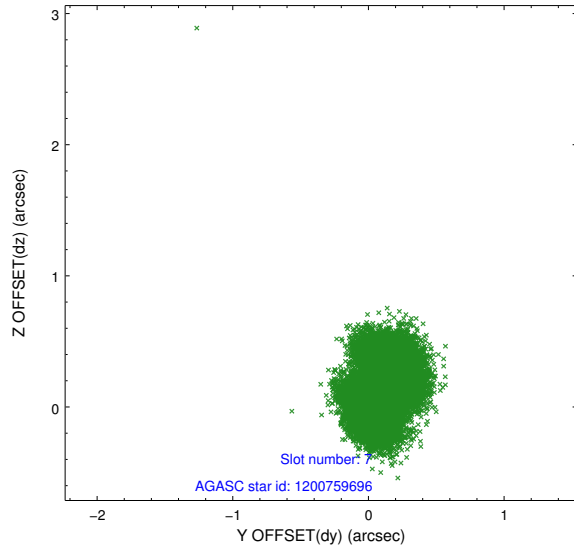
2.4.3 Slot 5



2.4.4 Slot 6

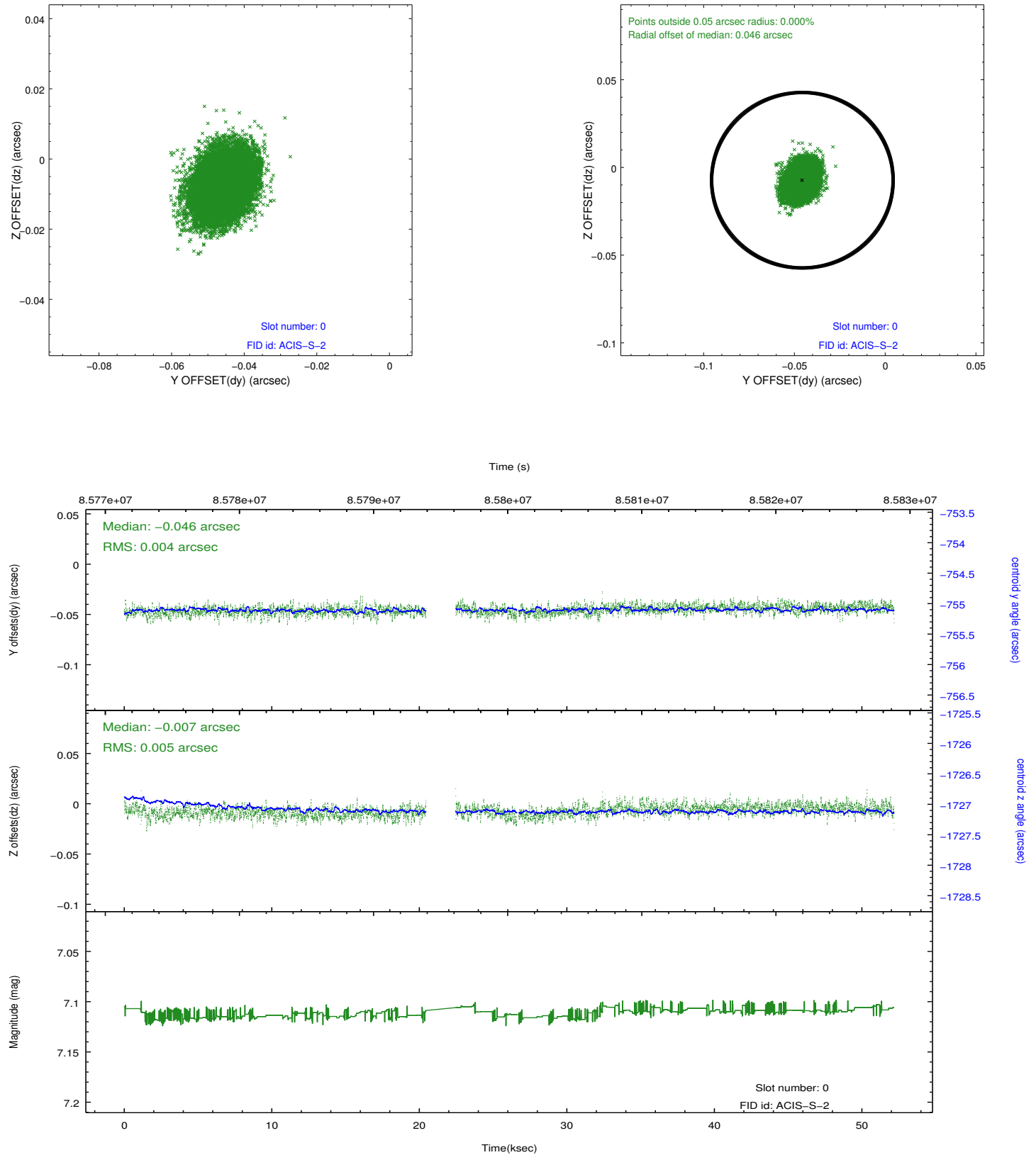


2.4.5 Slot 7

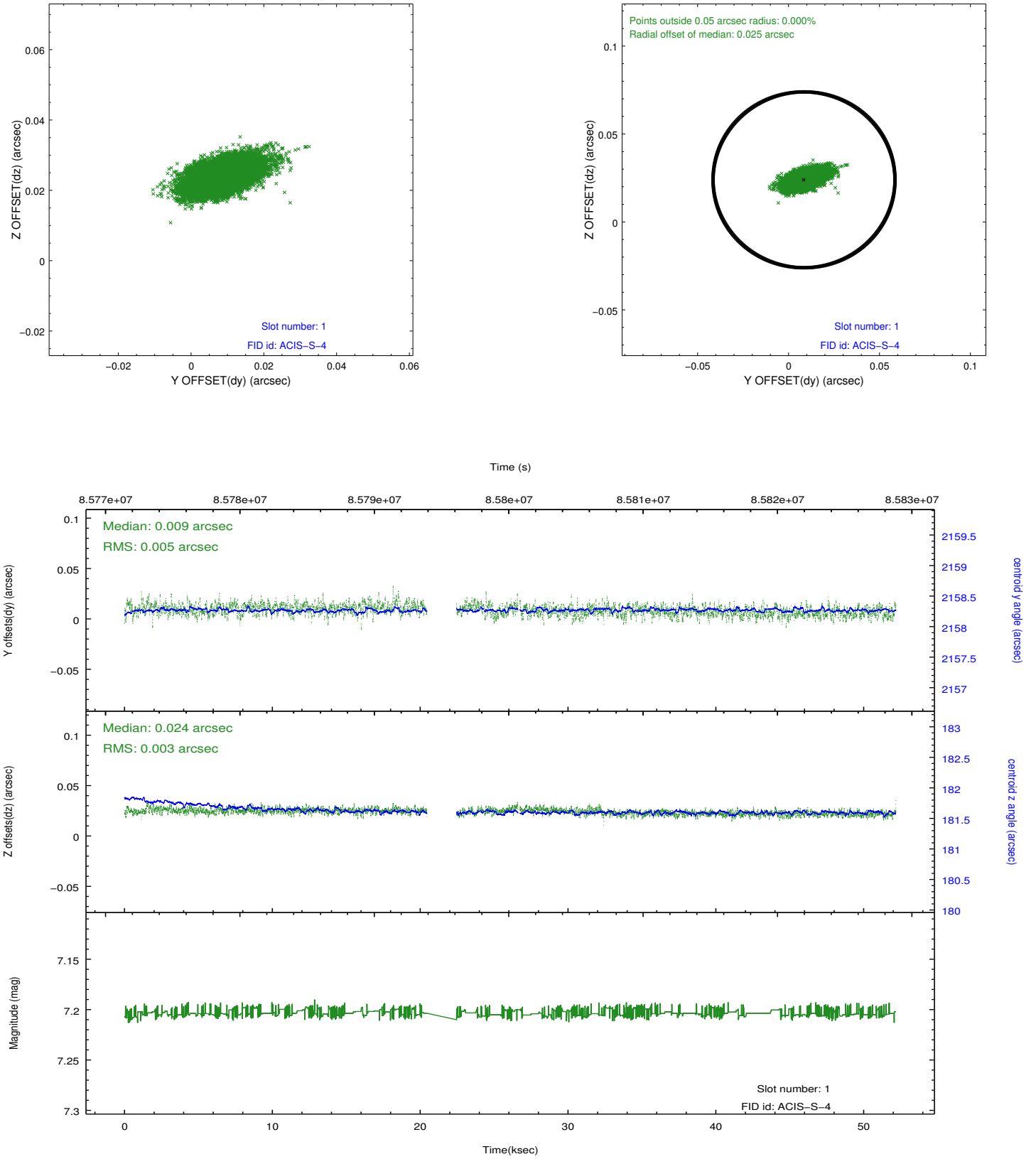


2.5 FID Slots

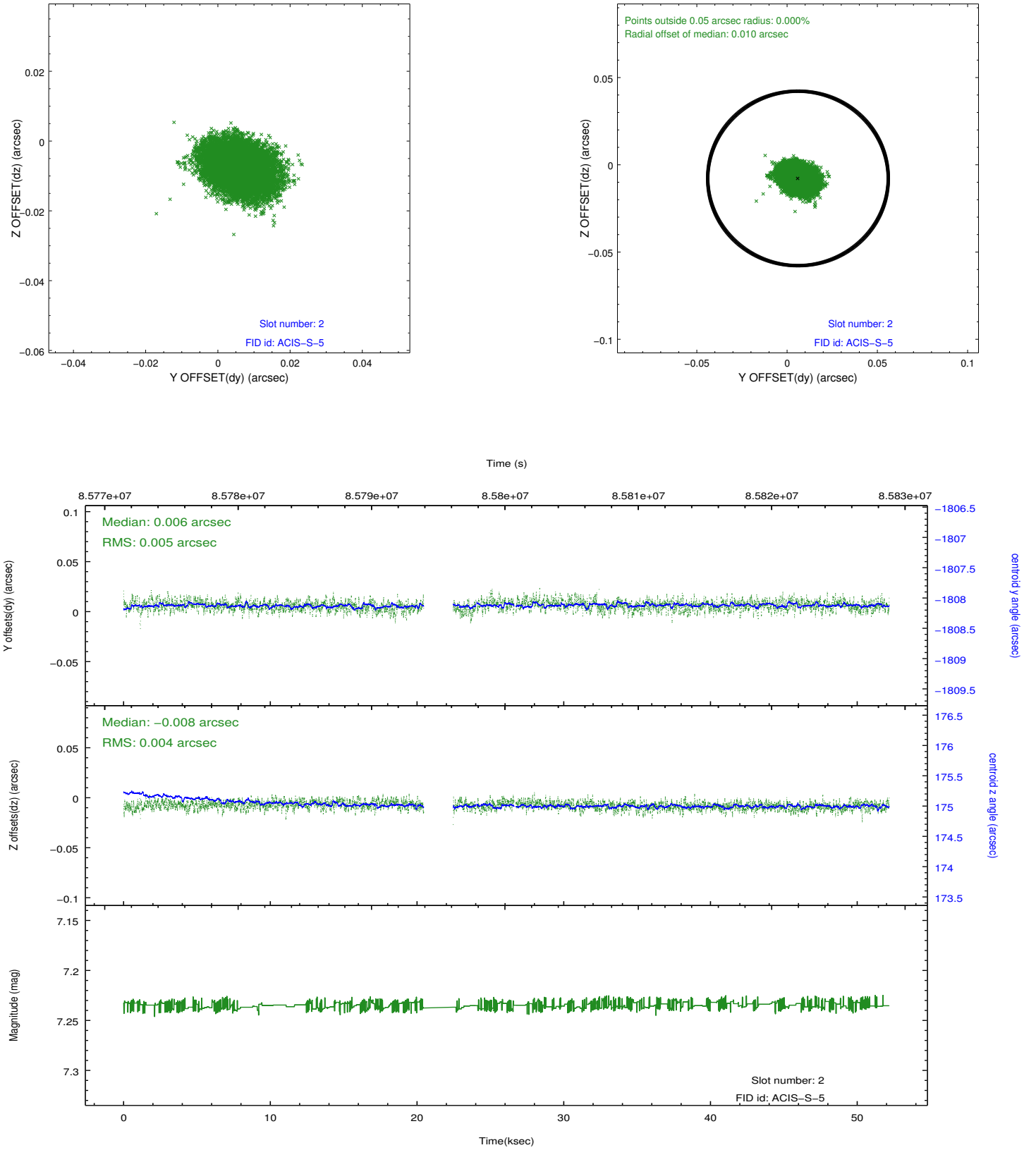
2.5.1 Slot 0



2.5.2 Slot 1

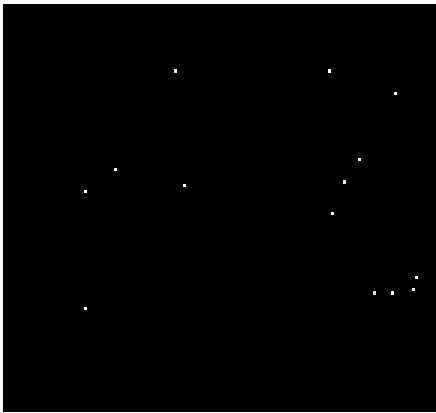


2.5.3 Slot 2

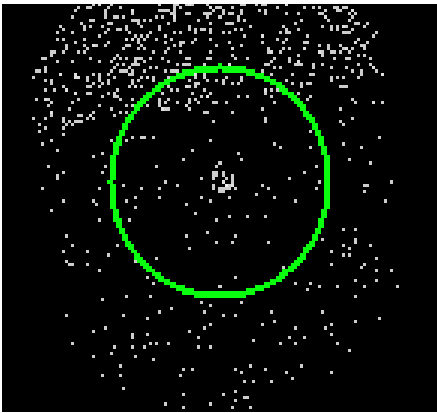


3 Gratings

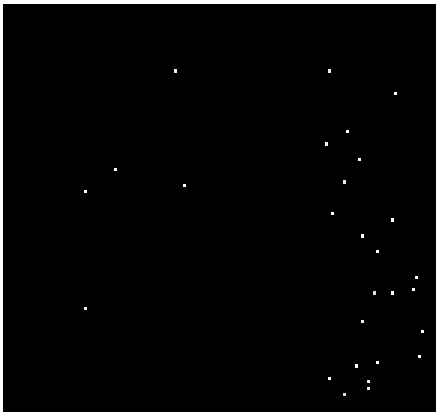
3.1 HEG Arm



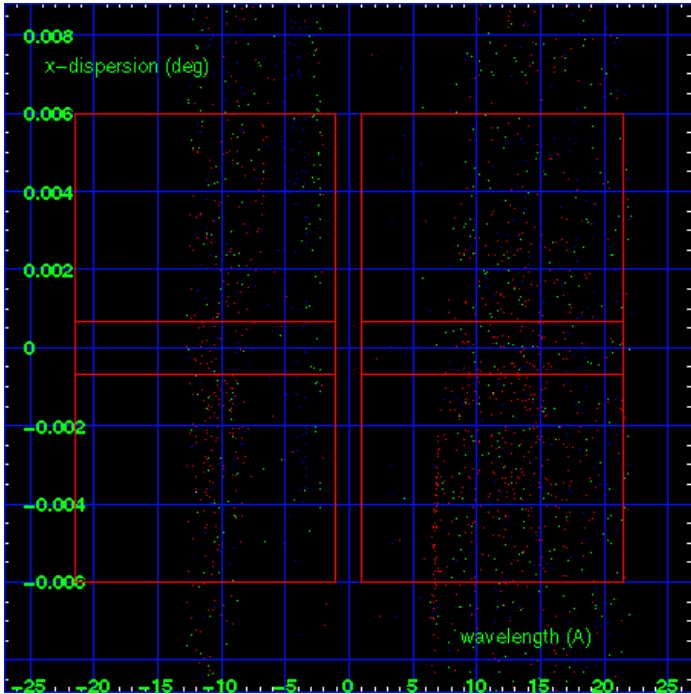
HEG Order Sort 123



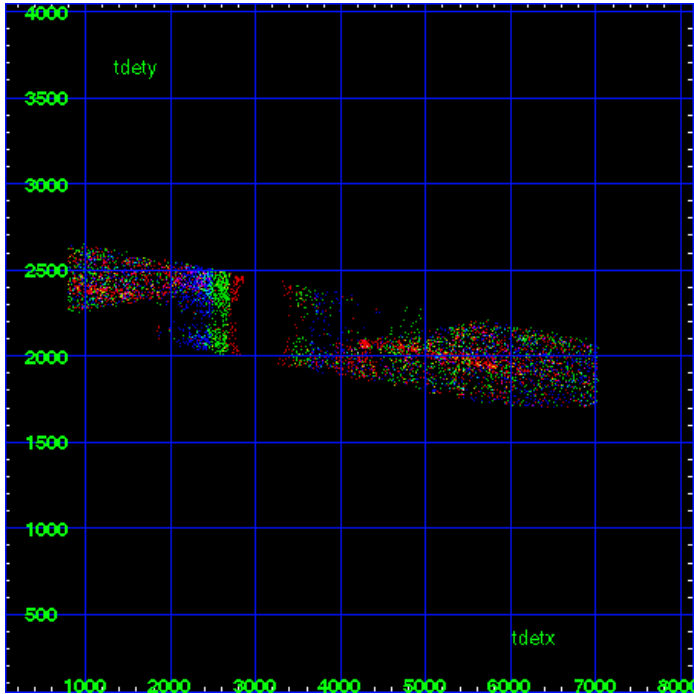
HEG Zero Order



HEG Order Sort ALL

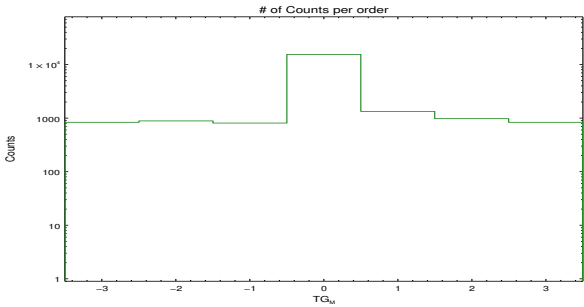


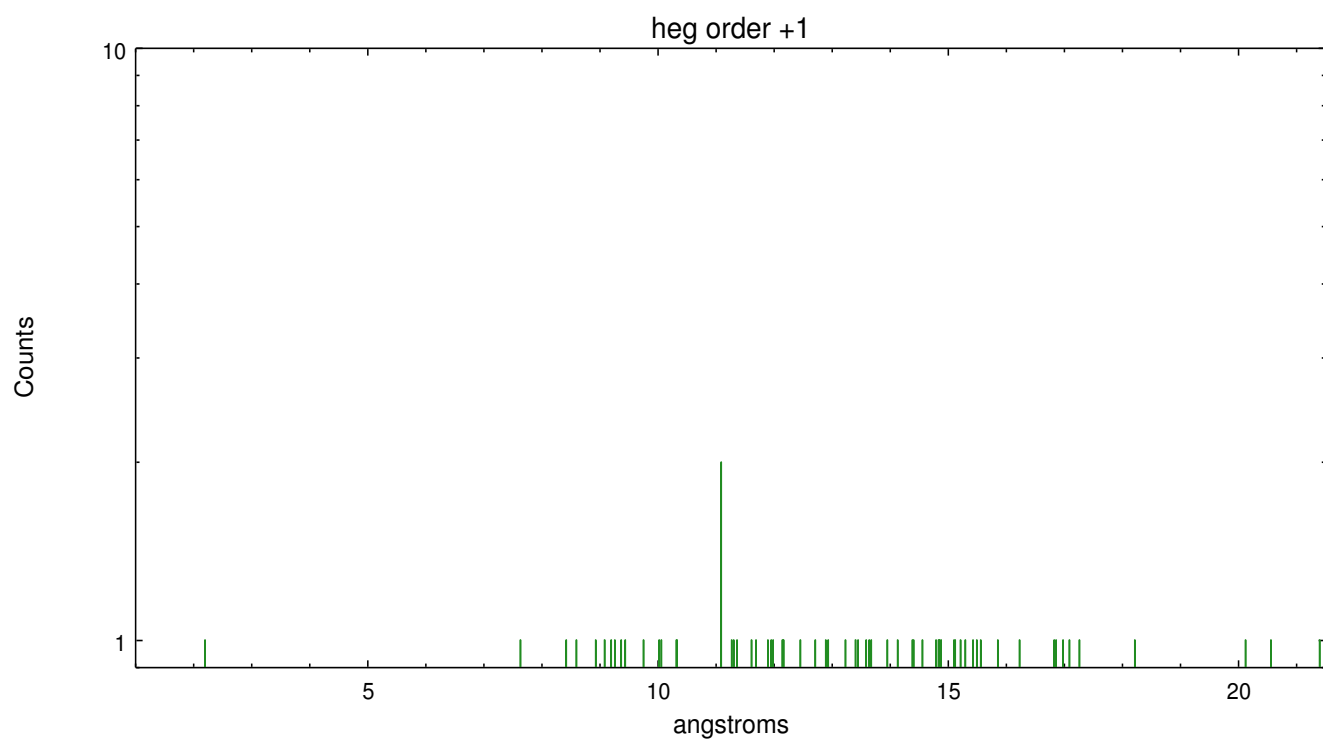
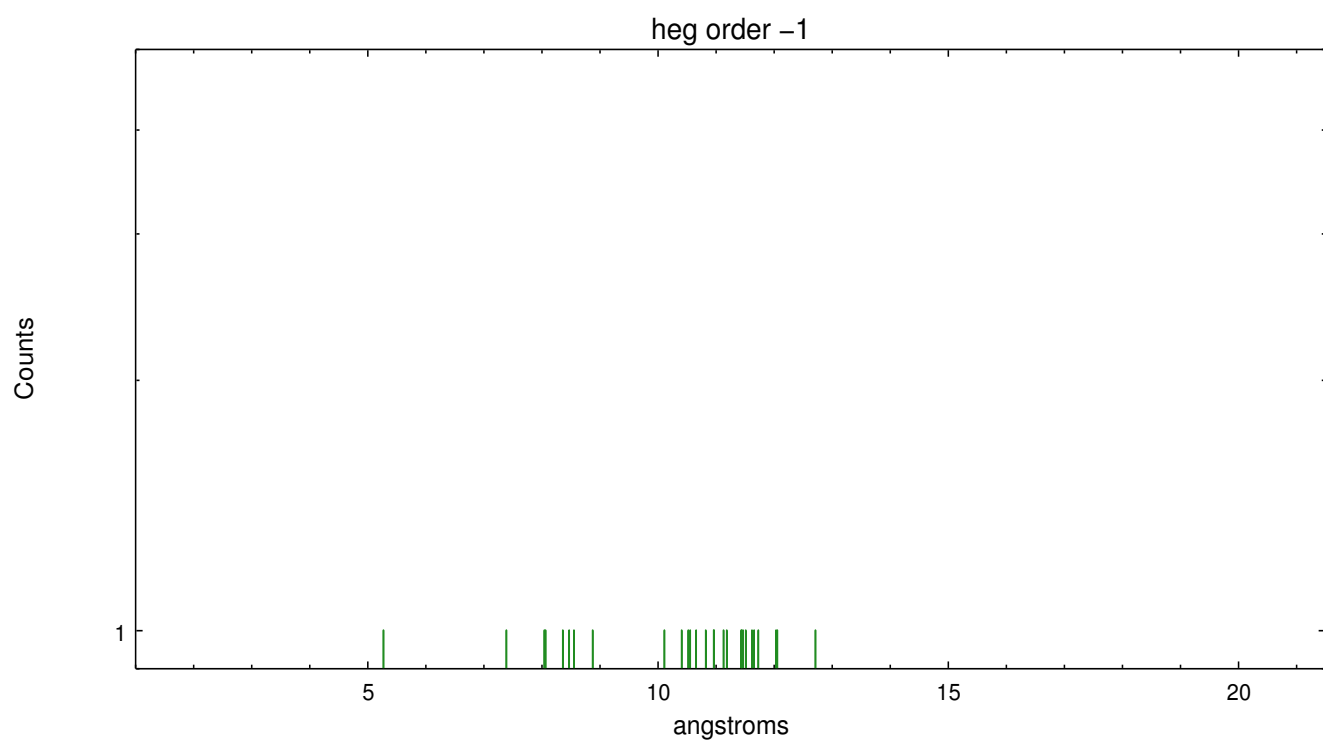
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	838	890	811	15589	1340	981	837

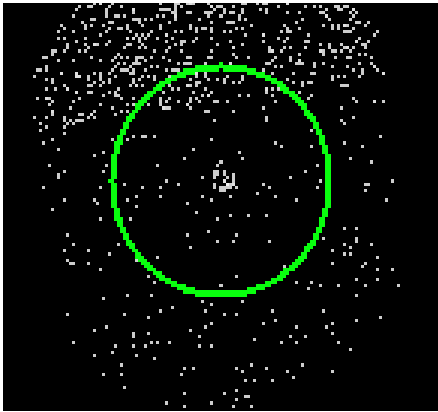




3.2 MEG Arm



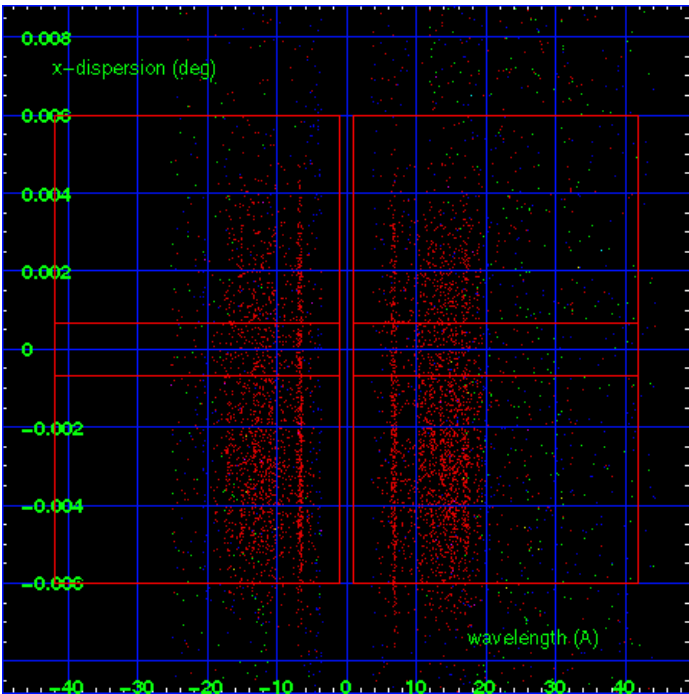
MEG Order Sort 123



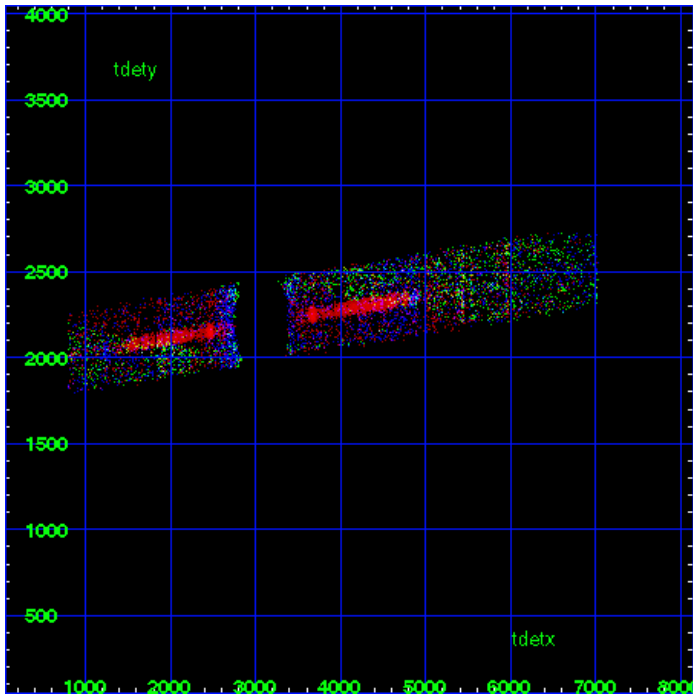
MEG Zero Order



MEG Order Sort ALL

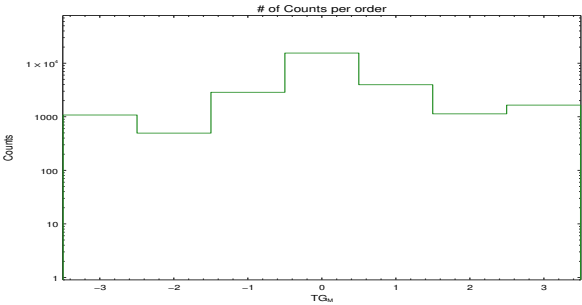


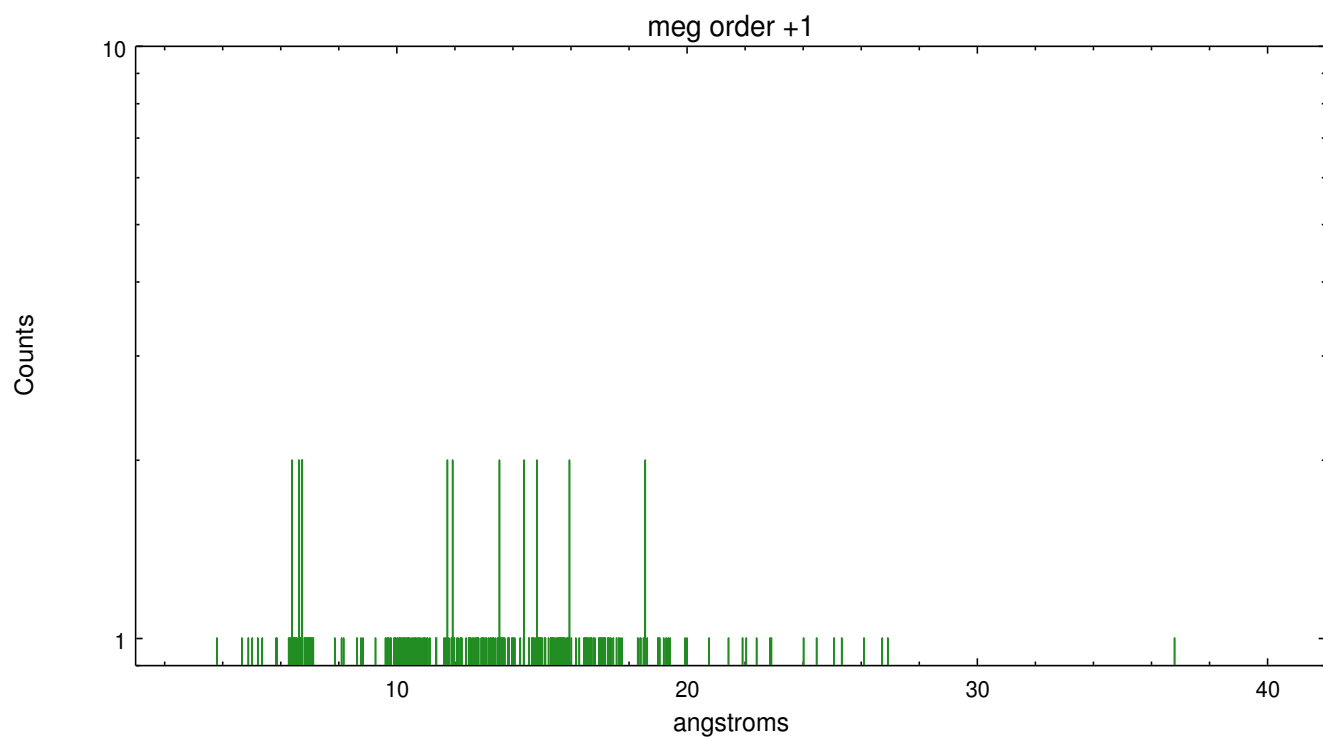
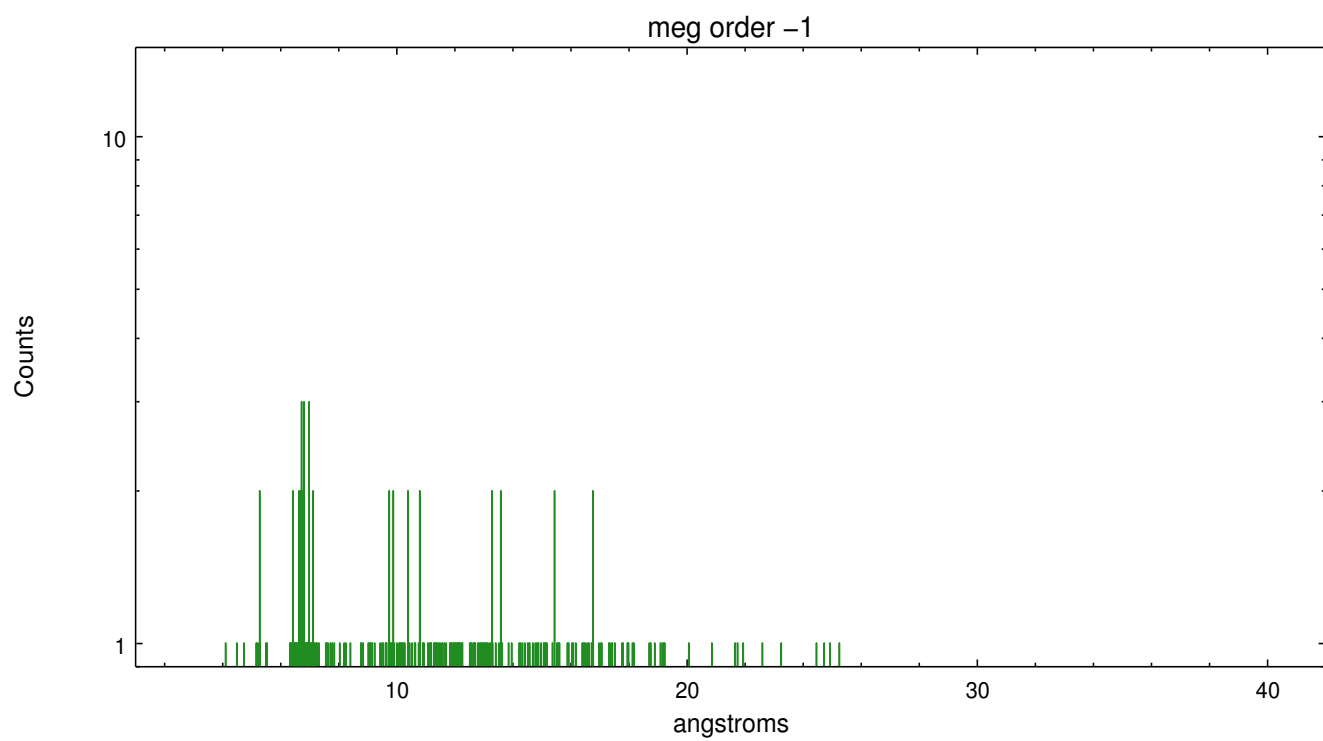
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1082	496	2878	15589	3985	1137	1657





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2013.06.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	49.403

A.2 Comments

Off-axis pointing. Extended object. Standard software processing technique using the tool tgdetect failed to determine an accurate position for the zeroth order for this observation. The source is extended and asymmetric. The processing software defaulted to the coordinates supplied by the user for the position of the zeroth order for the grating spectral extraction. For grating analysis of localized X-ray emission within the extended emission, the investigator will need to extract one or more dispersed spectra using user-defined zeroth order positions for all positions of interest.

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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.

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Removed bad aspect quality time interval from 85794487.850 to 85796488.651 seconds MET and several shorter data gaps during Level 1 processing. Spacecraft raw telemetry was gap-filled using realtime raw telemetry adding 116 VCDUs (29.7sec) of data.