

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 831 - L2 Version 3
Chandra X-Ray Center

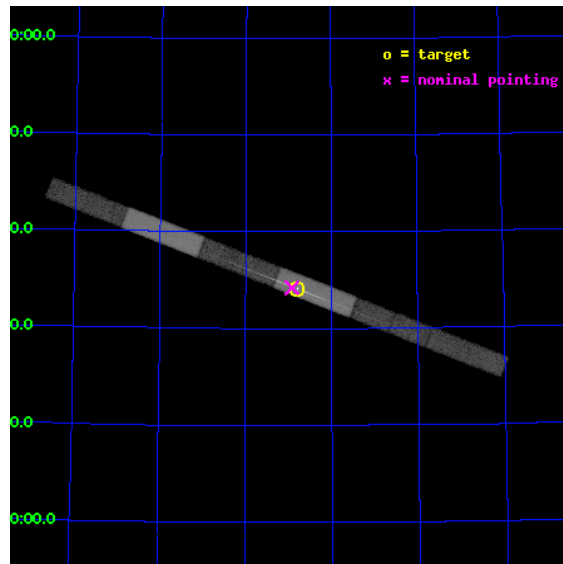
L2 Processing Date : Sep 5 2012

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1 Front

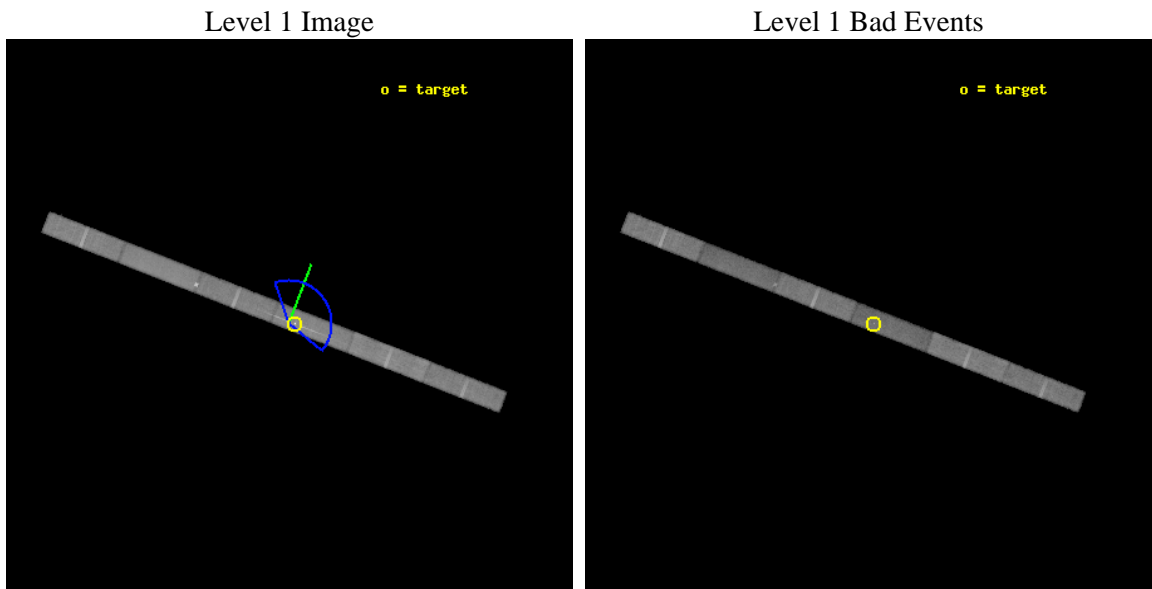
seq_num	700136	Sequence number
obs_id	831	Observation id
title	EMISSION-LINE SPECTROSCOPY OF NGC 3516	Proposal title
observer	Prof. Hagai Netzer	Principal investigator
object	NGC 3516	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	166.697876	Observer's specified target RA [deg]
dec_targ	72.568577	Observer's specified target Dec [deg]
ra_nom	166.73038438804	Nominal RA [deg]
dec_nom	72.570446282174	Nominal Dec [deg]
roll_nom	21.264404919307	Nominal Roll [deg]
revision	3	Processing version of data
ontime	45272.617674679	Sum of GTIs [s]
livetime	43644.288931279	Livetime [s]
ontime4	45272.617674679	Sum of GTIs [s]
ontime5	45272.617674679	Sum of GTIs [s]
ontime6	45271.476654604	Sum of GTIs [s]
ontime7	45272.617674679	Sum of GTIs [s]
ontime8	45271.476654589	Sum of GTIs [s]
ontime9	45272.617674679	Sum of GTIs [s]
l2events	143209	Number of level 2 events



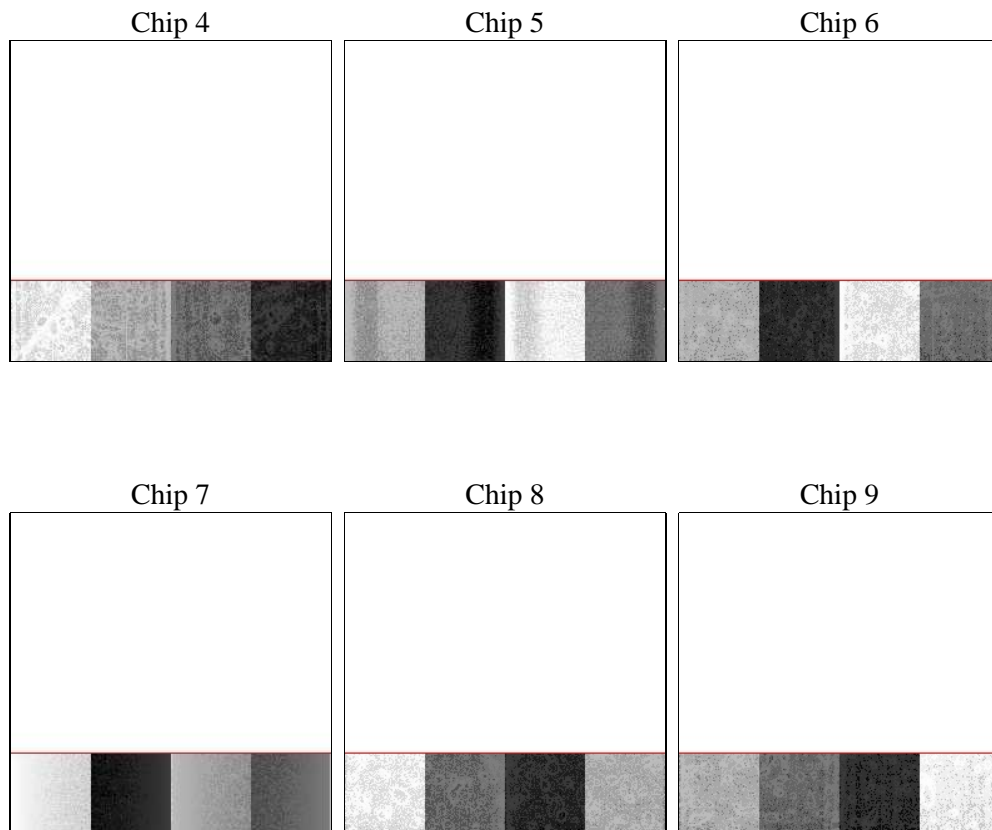
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	45000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	45272.617674679	Sum of GTIs [s]
caldbver	4.5.1.1	 	ontime4	45272.617674679	Sum of GTIs [s]
date	2012-09-05T16:42:25	Date and time of file creation	ontime5	45272.617674679	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	45271.476654604	Sum of GTIs [s]
			ontime7	45272.617674679	Sum of GTIs [s]
			ontime8	45271.476654589	Sum of GTIs [s]
			ontime9	45272.617674679	Sum of GTIs [s]
			l1events	582998	Number of level 1 events

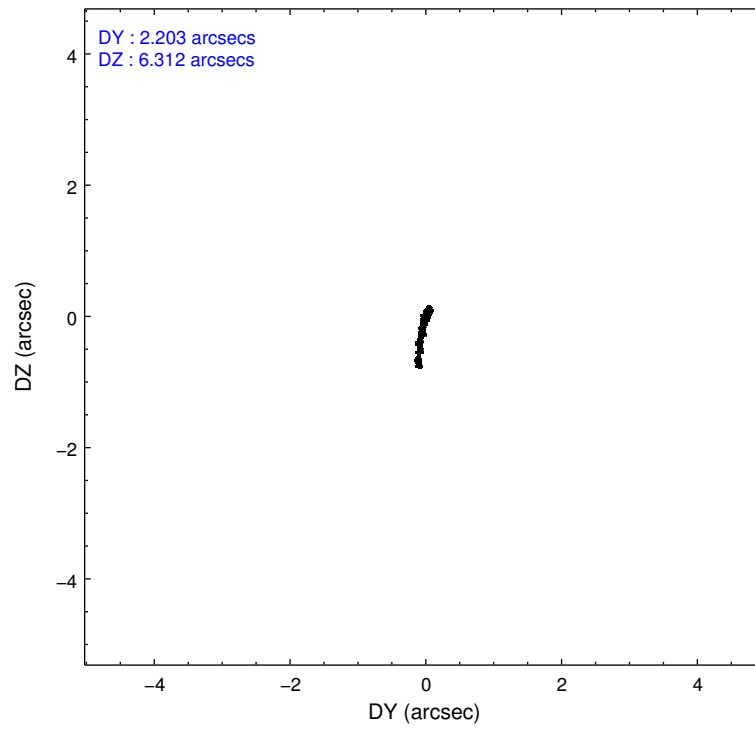
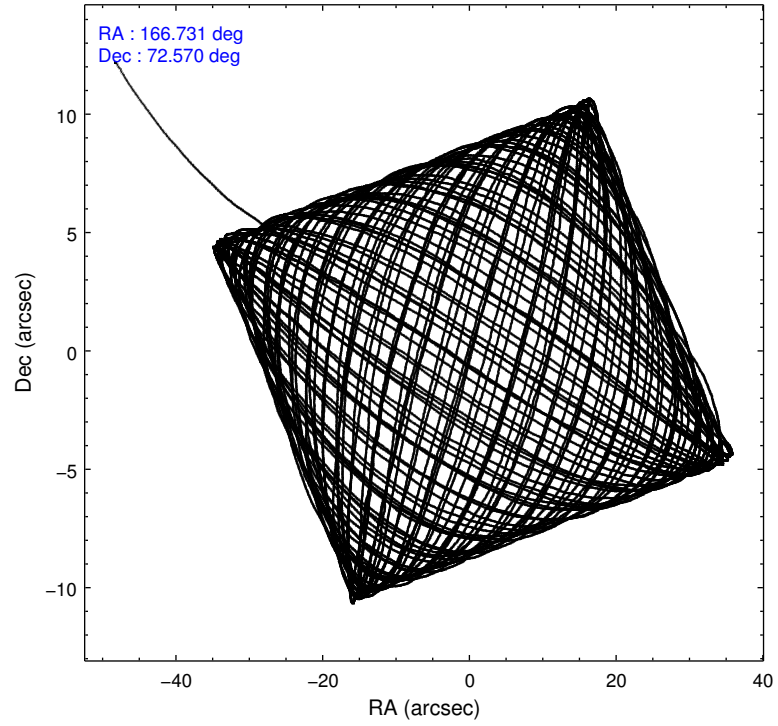
2.1.4 Events

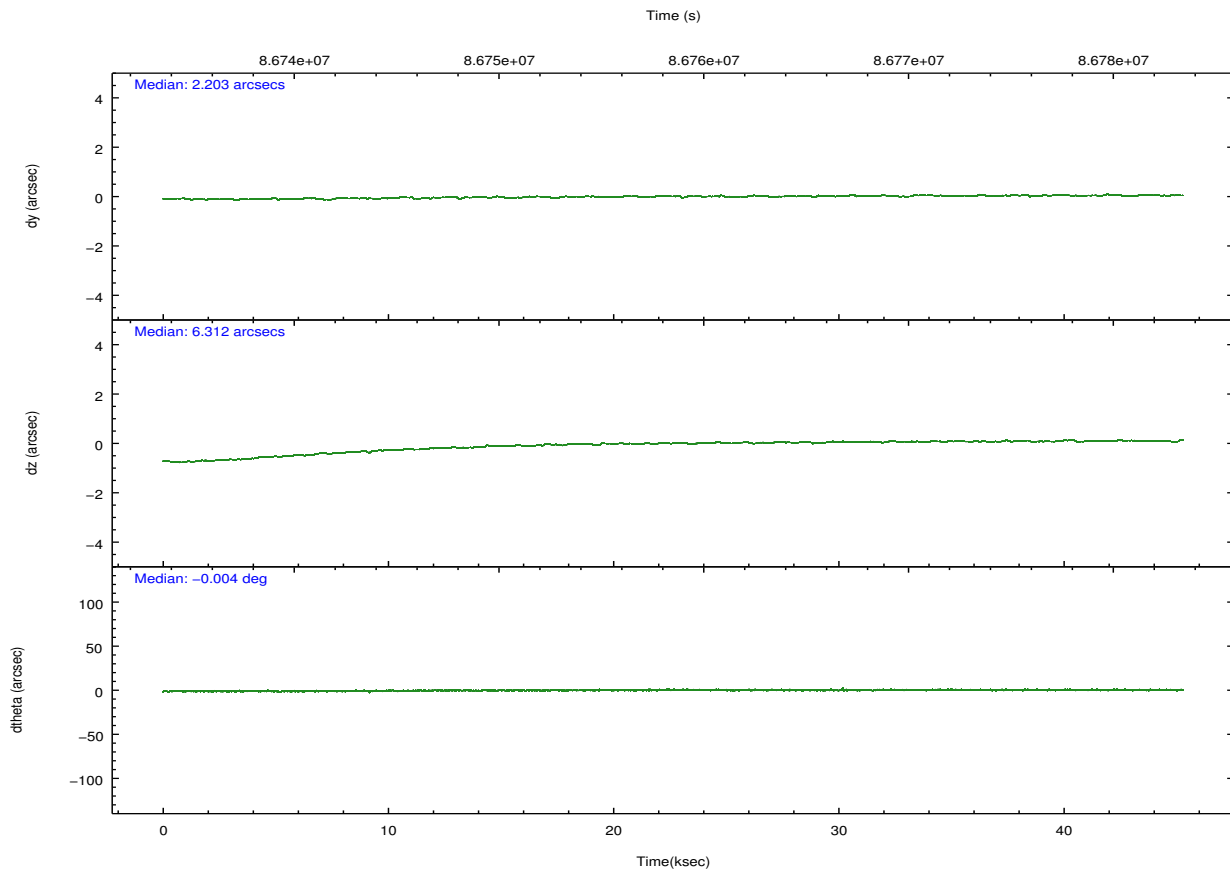
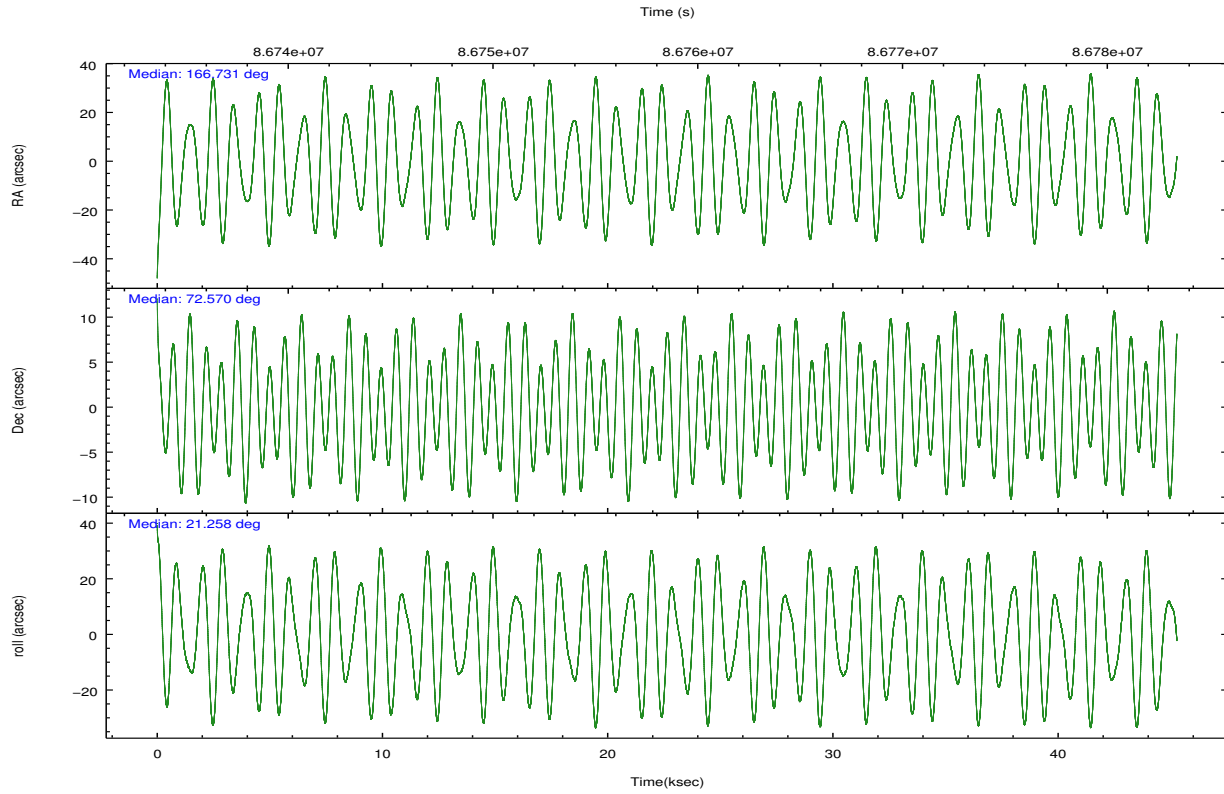
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	95877	104594	86297	109191	107074	79965	grade 0 events	3836	8640	4832	8391	6069	4056
rejected events	85895	49162	75394	47520	87479	70085		4%	8%	5%	7%	5%	5%
rejected %	89%	47%	87%	43%	81%	87%	grade 1 events	24	551	25	112	35	19
								0%	0%	0%	0%	0%	0%
							grade 2 events	1969	14078	1774	12755	3781	1696
								2%	13%	2%	11%	3%	2%
							grade 3 events	1377	3966	1386	6544	2390	1310
								1%	3%	1%	5%	2%	1%
							grade 4 events	1310	4403	1361	6162	2284	1290
								1%	4%	1%	5%	2%	1%
							grade 5 events	2182	8444	2489	7905	3321	2532
								2%	8%	2%	7%	3%	3%
							grade 6 events	1546	24732	1600	28075	5200	1585
								1%	23%	1%	25%	4%	1%
							grade 7 events	83633	39780	72830	39247	83994	67477
								87%	38%	84%	35%	78%	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	LETG	LETG	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	166.673700	166.7303843880392	Subarray requested	CUSTOM	1/4
[deg] Pointing Dec	72.548971	72.57044628217406	Subarray start row	1	1
[deg] Pointing Roll	21.161829	21.26440491930717	Subarray row count	256	256
[deg] Roll angle	55.000000	55.000000	Alternating exposures requested	N	N
[deg] Roll tolerance	75.000000	75.000000	[s] Primary exposure time	0.000000	1.1
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	-182.132523	-182.1344861297048			
[mm] SIM translation stage offset	-8	-7.998036453302973			
[s] Observation start time (MET)	86736138.184000	86735122.69867601			
Observation start date	2000-09-30T21:21:14	2000-09-30T21:05:22			
[s] Observation end time (MET)	86781138.184000	86782136.375449			
Observation end date	2000-10-01T09:51:14	2000-10-01T10:08:56			
Read mode	TIMED	TIMED			

2.3 Aspect



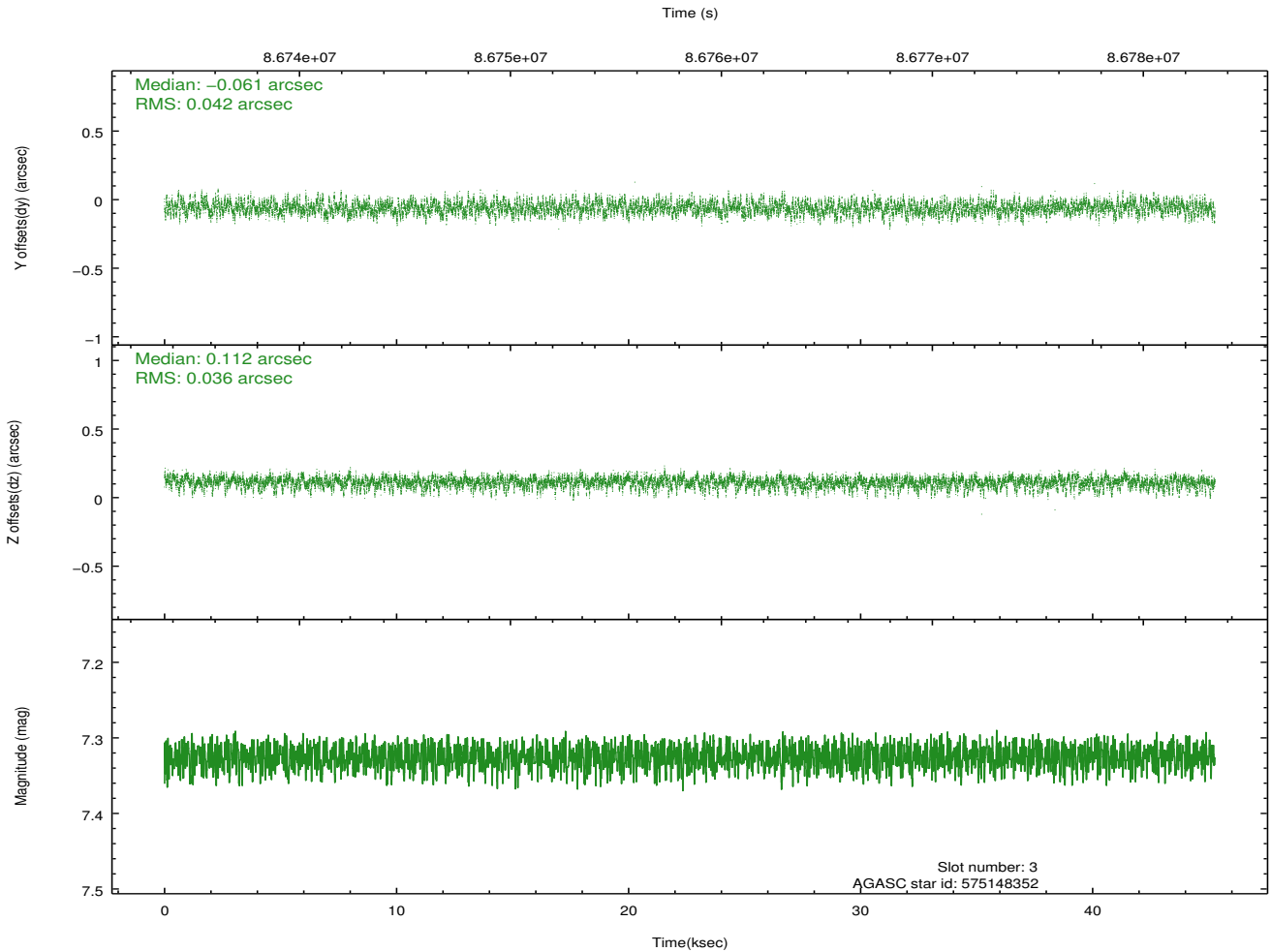
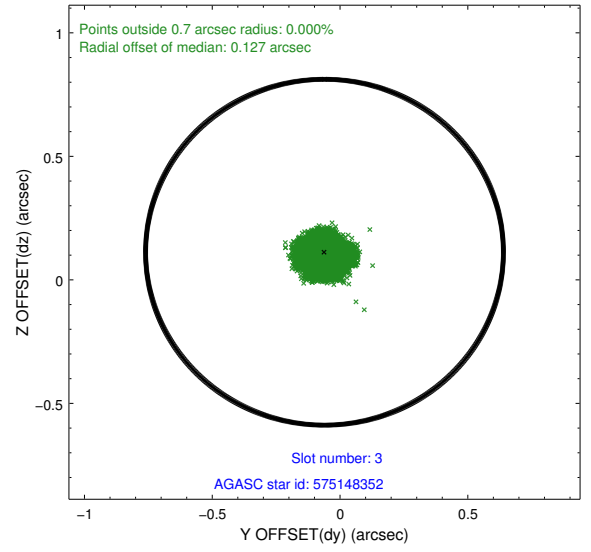
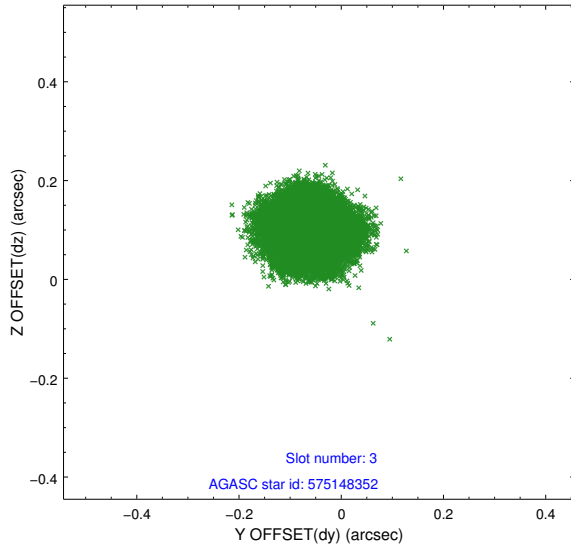


Slot Statistics

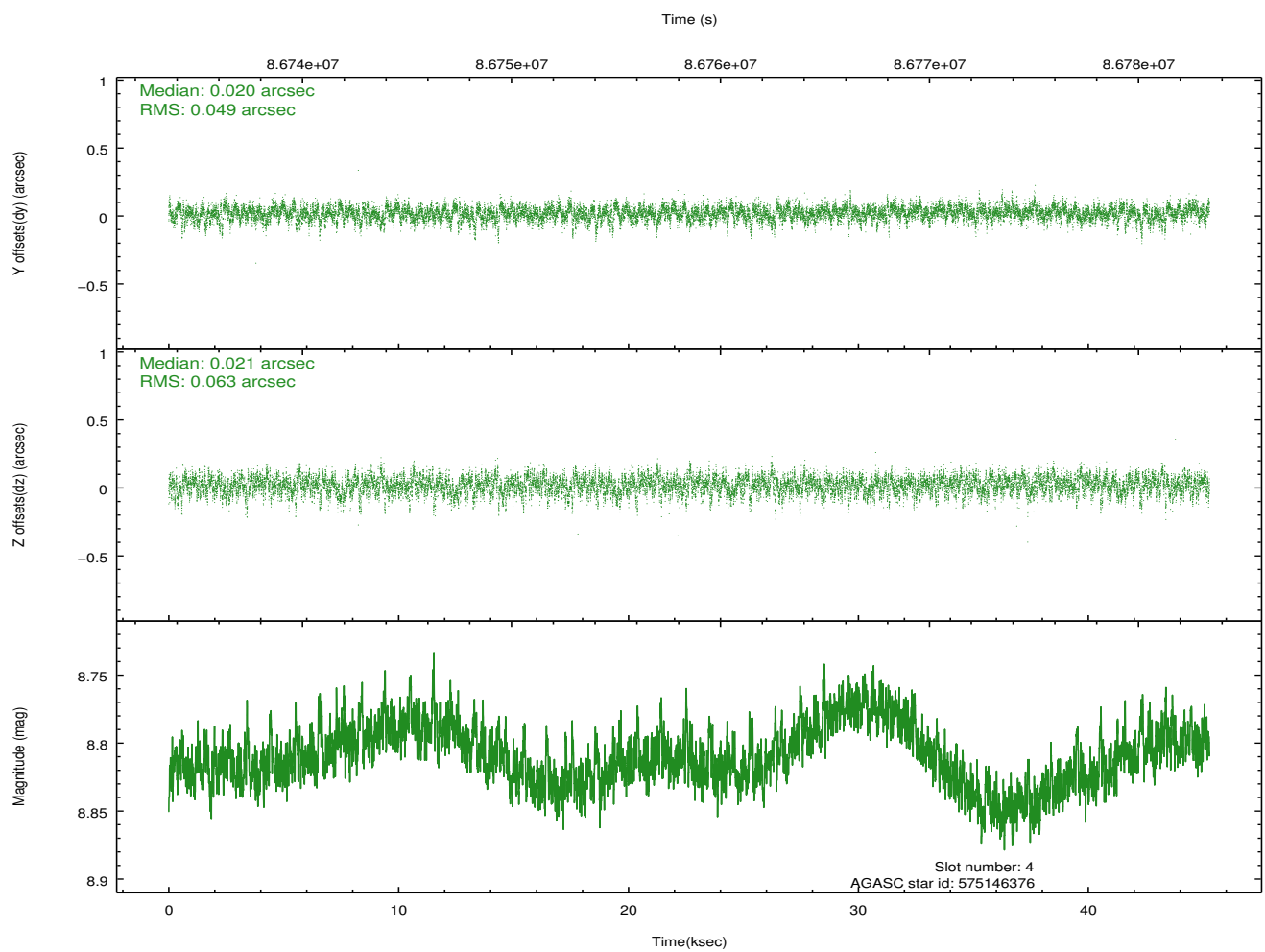
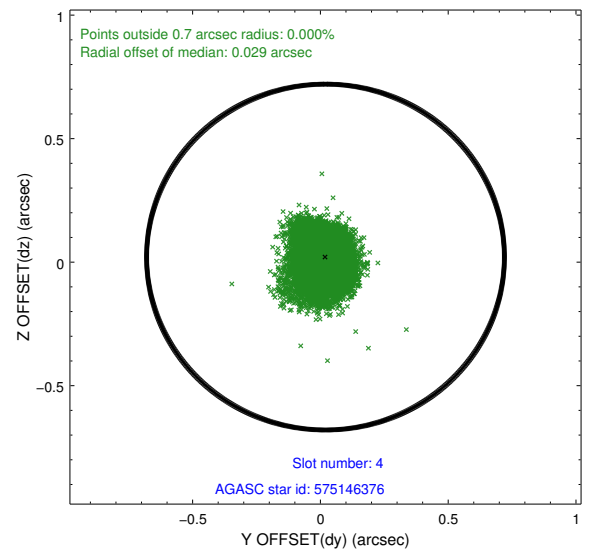
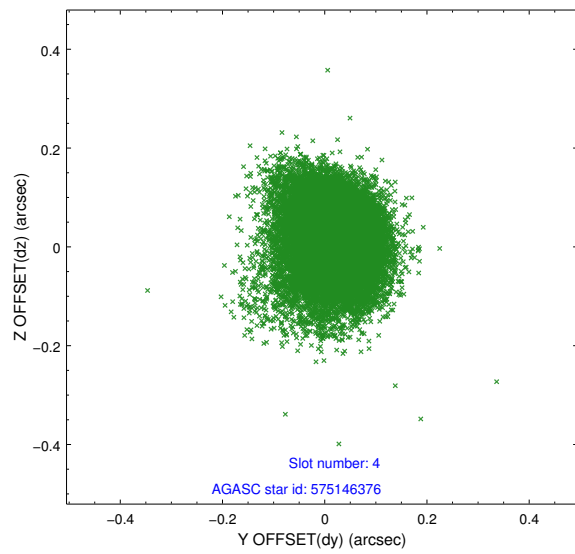
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	11041	-0.046	-0.096	0.011	0.023	0.000000	0.000000	-754.30	-1892.19
1	FID	ACIS-S-4	7.18	11041	0.033	0.048	0.007	0.015	0.000000	0.000000	2159.08	16.38
2	FID	ACIS-S-5	7.23	11041	-0.018	0.057	0.010	0.022	0.000000	0.000000	-1807.10	10.09
3	GUIDE	575148352	7.32	22080	-0.061	0.112	0.060	0.095	167.090916	71.958979	-332.37	-2146.71
4	GUIDE	575146376	8.81	21983	0.020	0.021	0.082	0.142	166.888472	72.124920	-329.60	-1508.65
5	GUIDE	575541080	8.93	22079	-0.155	0.024	0.066	0.108	167.870403	73.115273	1906.89	1461.75
6	GUIDE	575543720	9.35	22070	0.162	-0.080	0.084	0.137	164.695945	72.631615	-1861.70	1077.42
7	GUIDE	575541344	9.37	22073	0.036	-0.072	0.090	0.152	166.947366	72.953762	795.33	1255.79

2.4 Star Slots

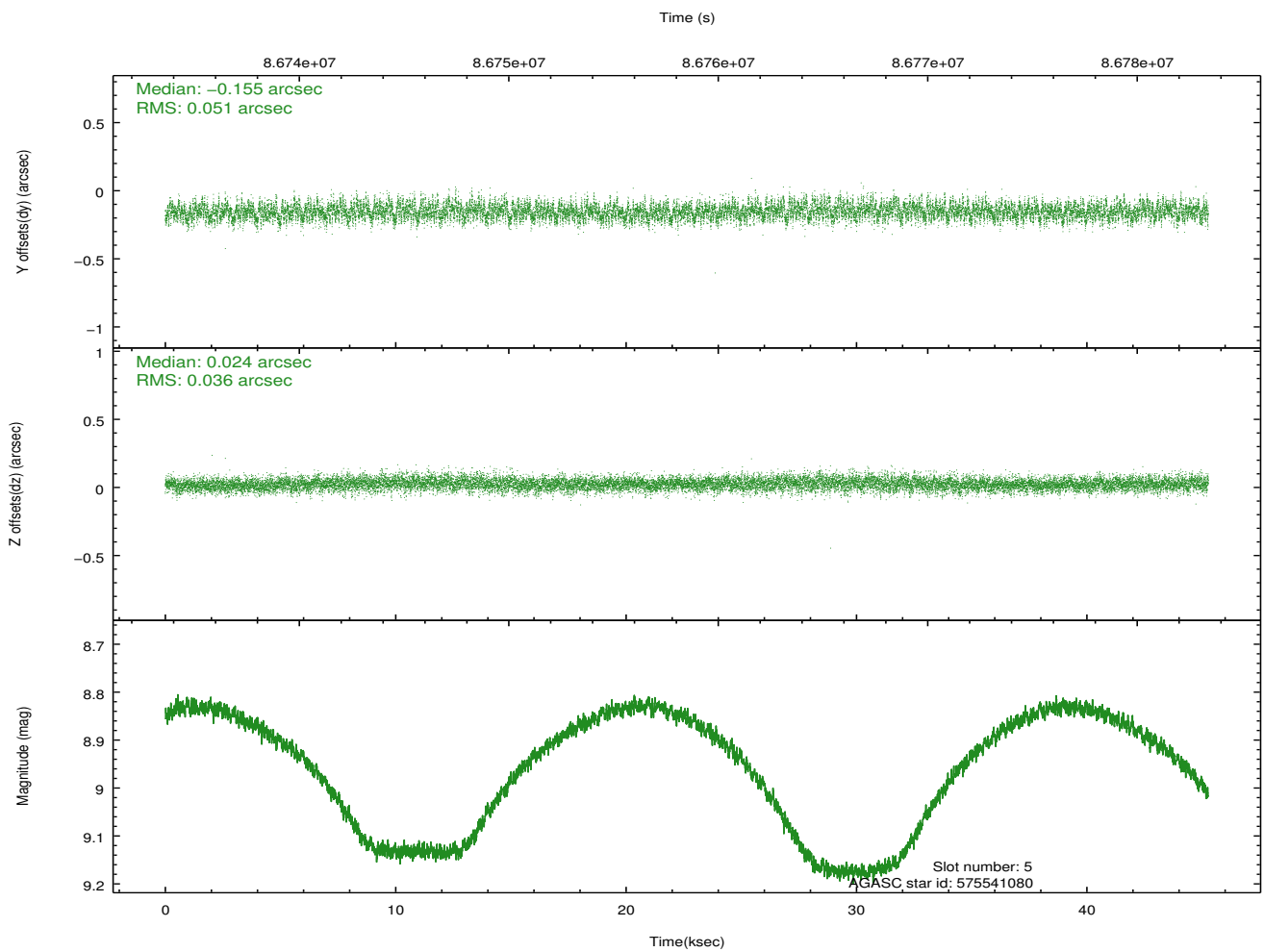
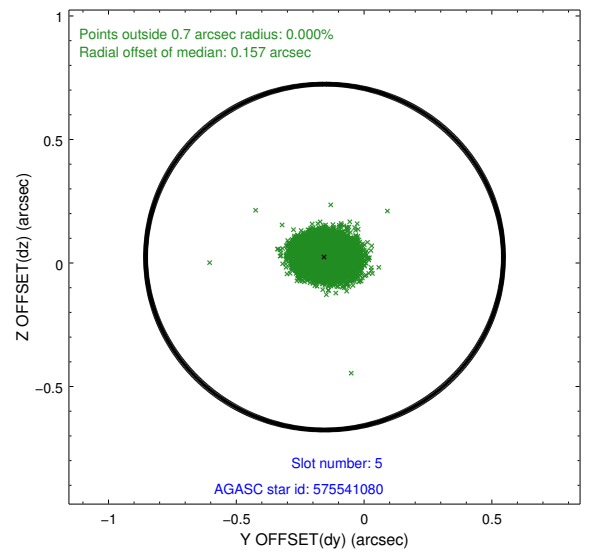
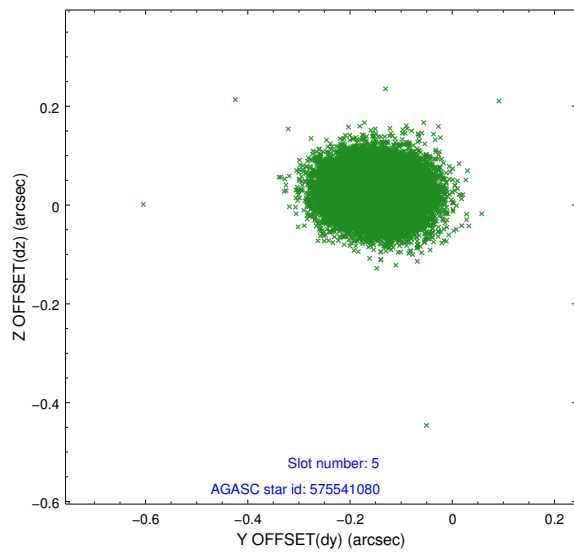
2.4.1 Slot 3



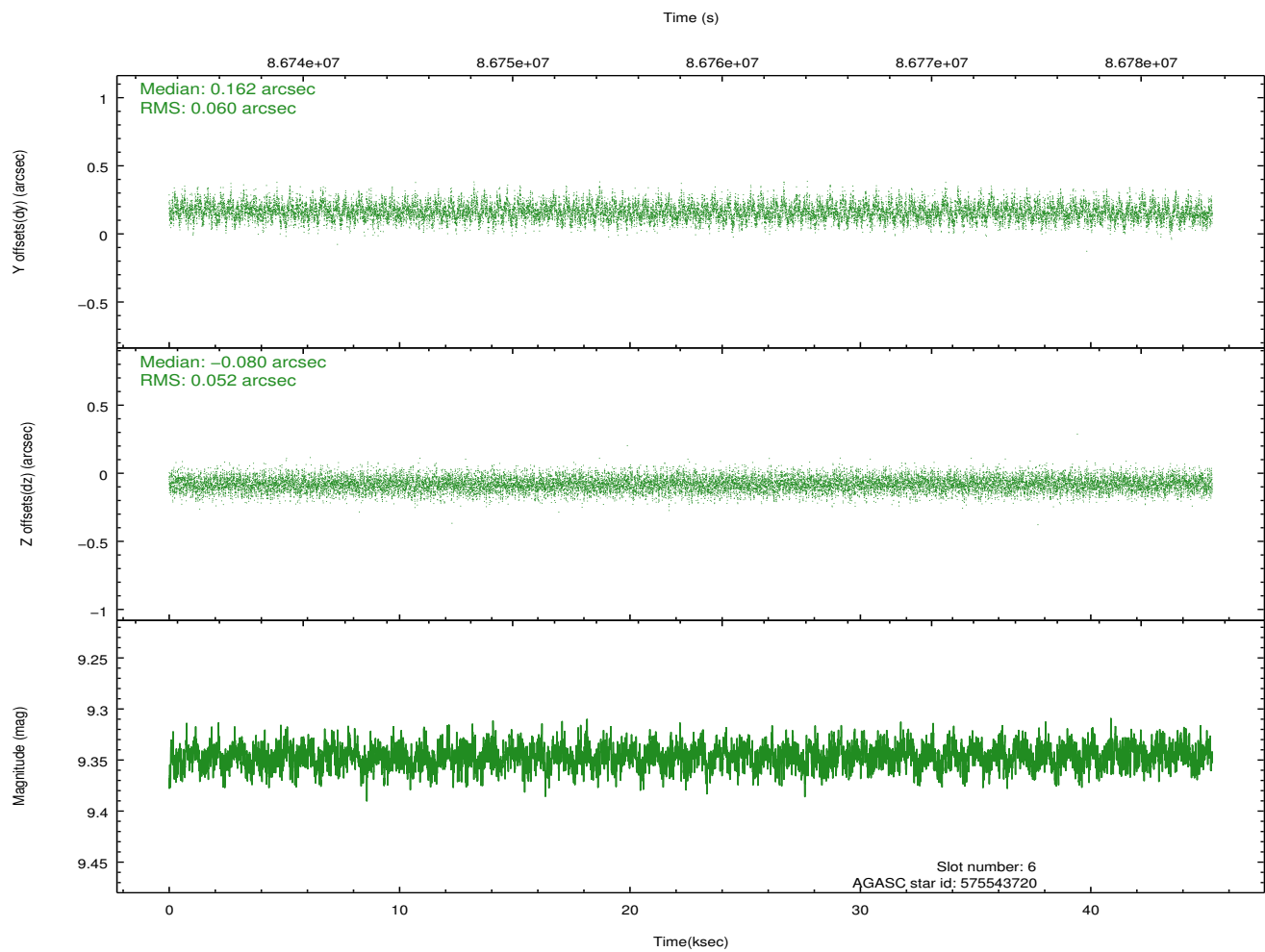
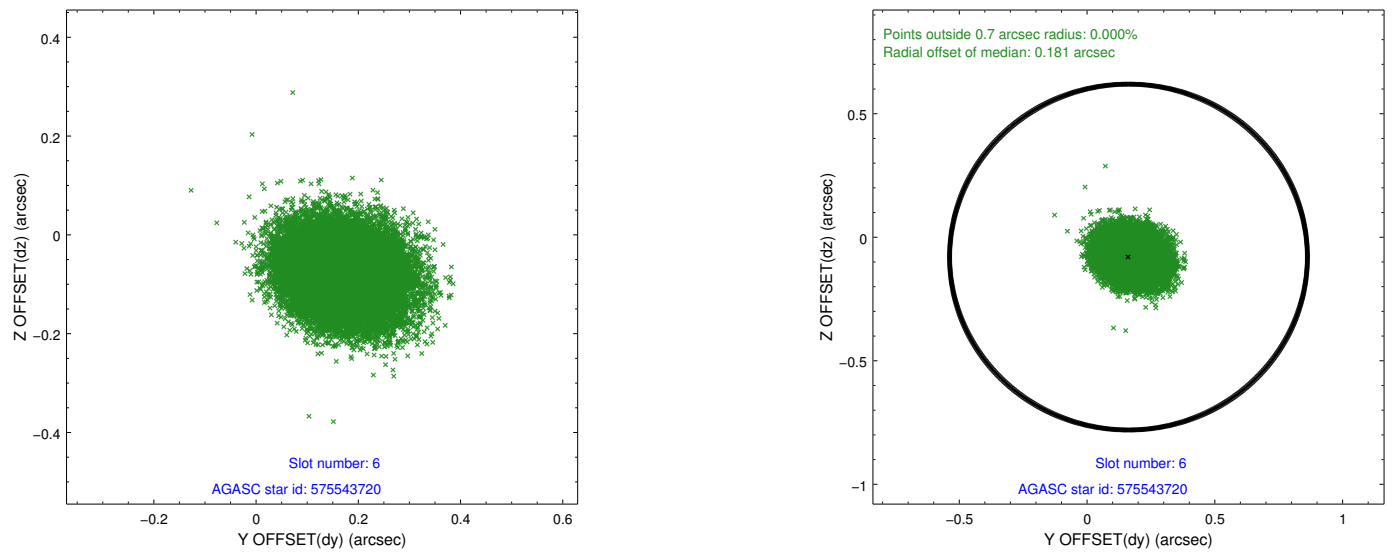
2.4.2 Slot 4



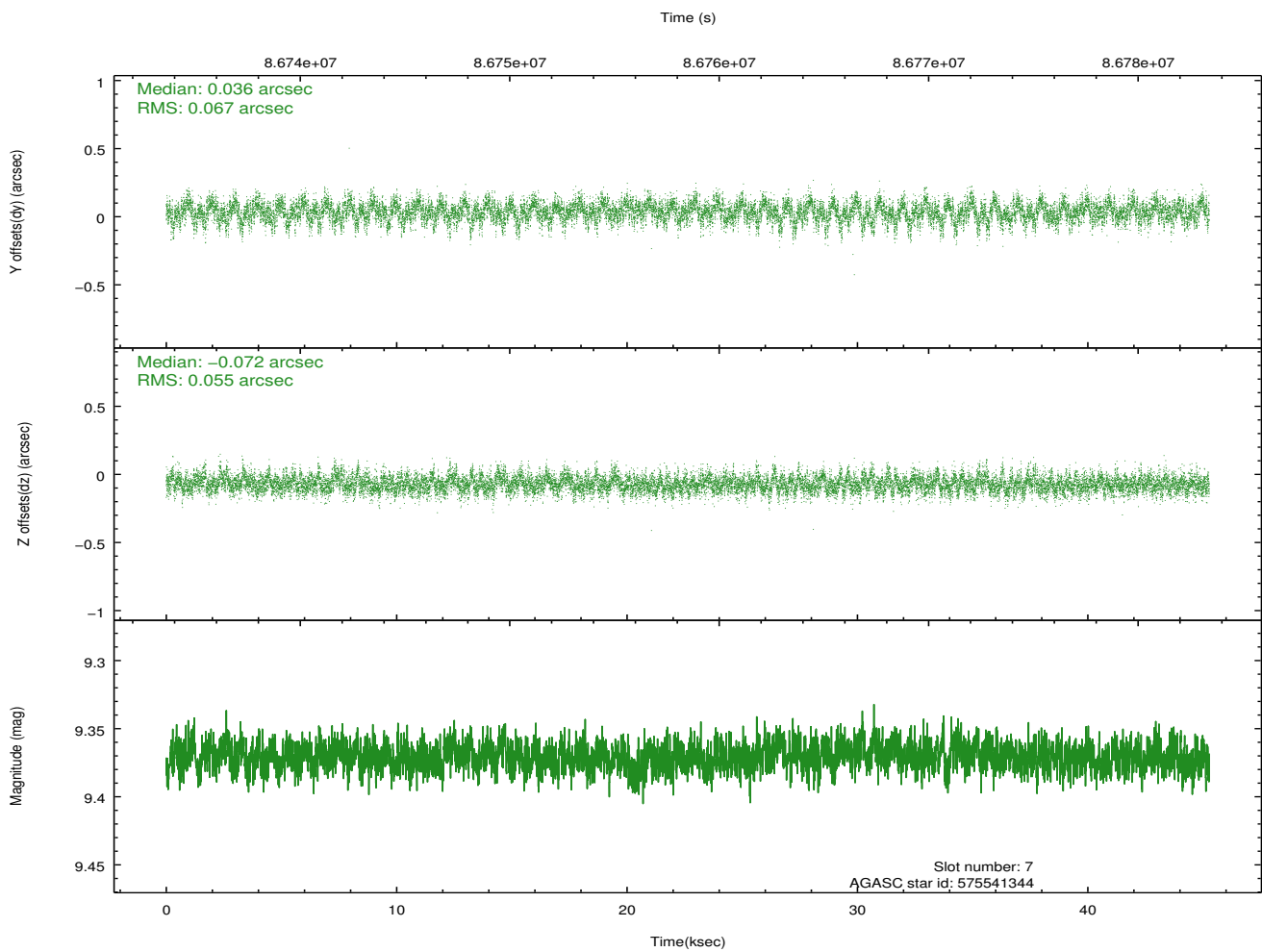
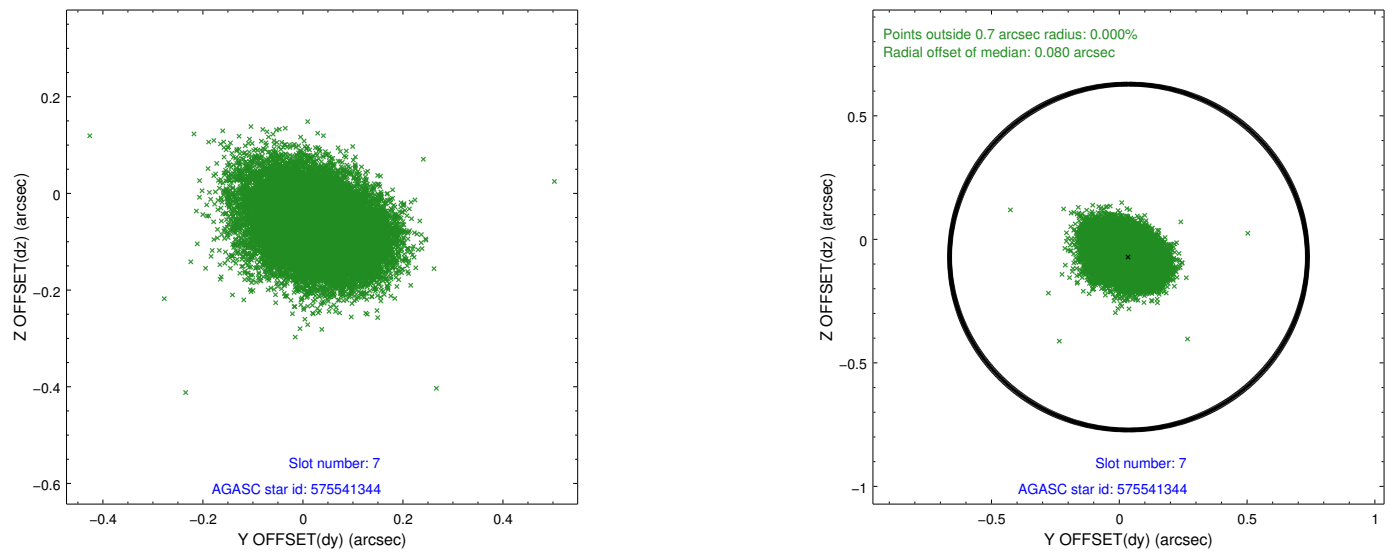
2.4.3 Slot 5



2.4.4 Slot 6

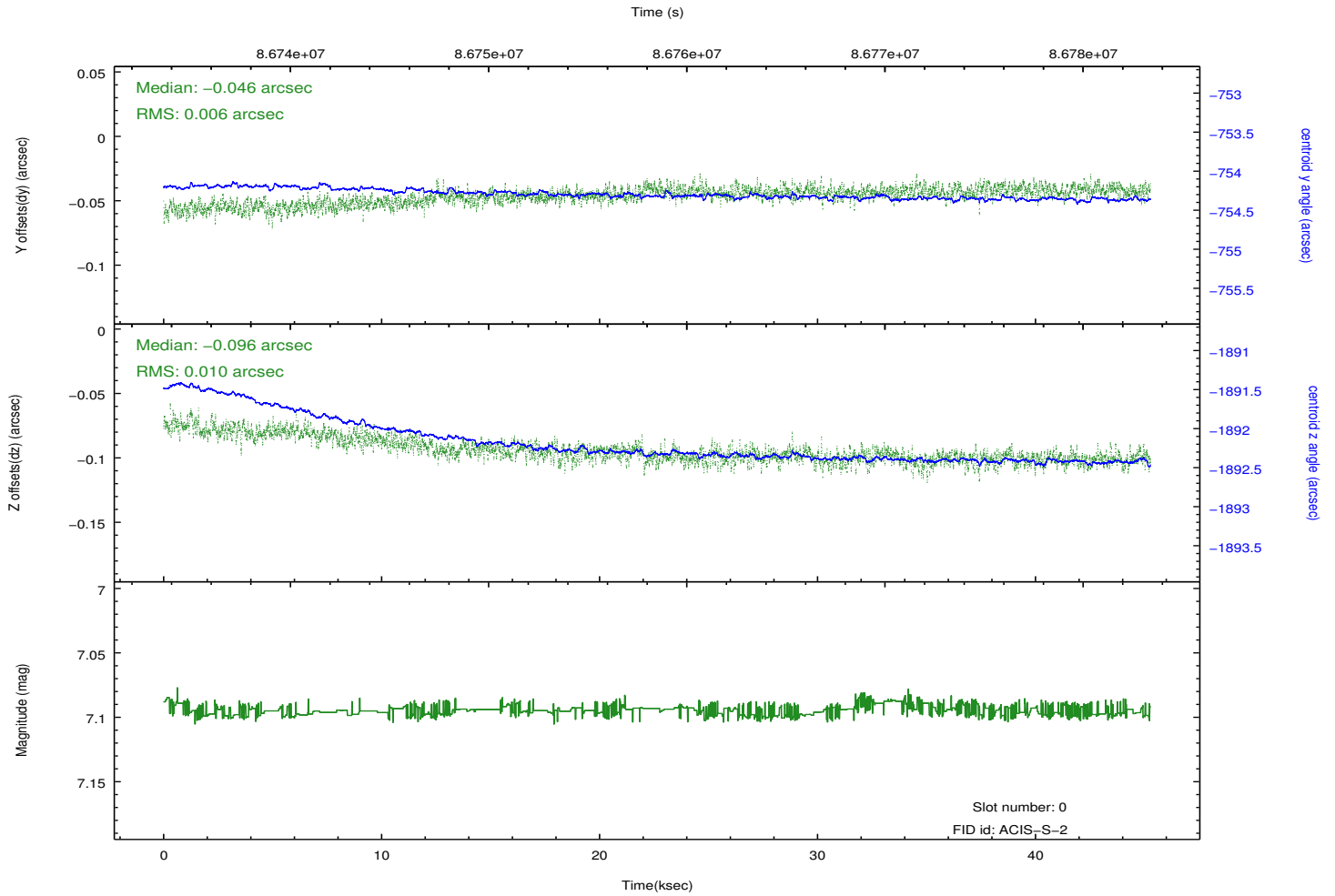
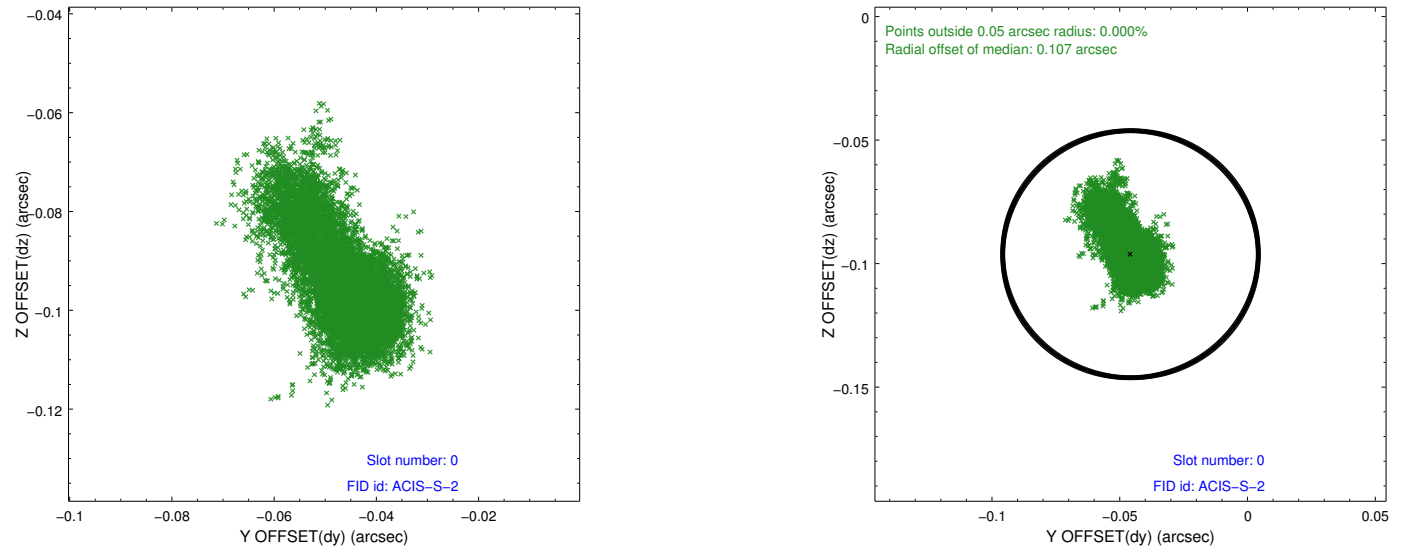


2.4.5 Slot 7

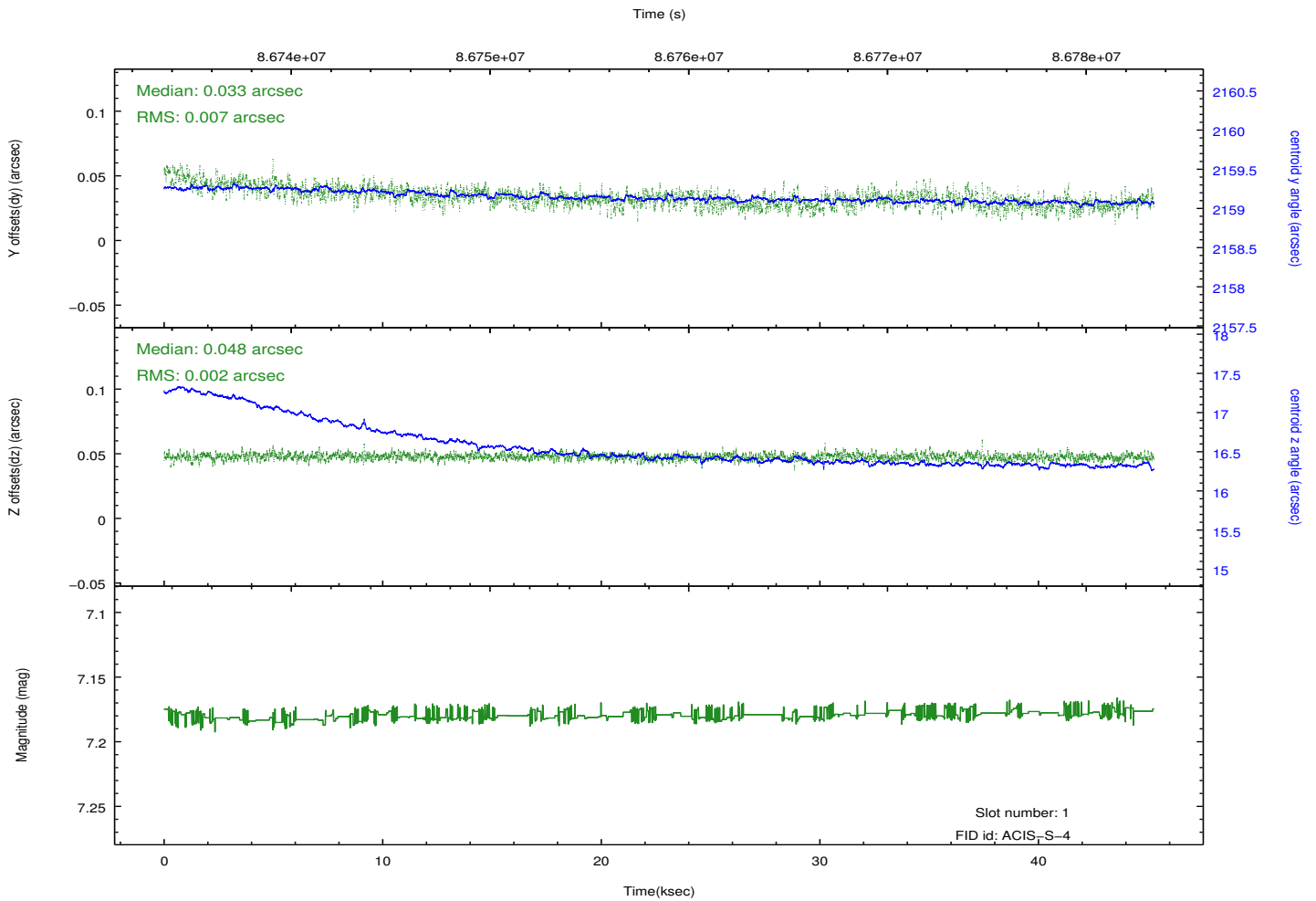
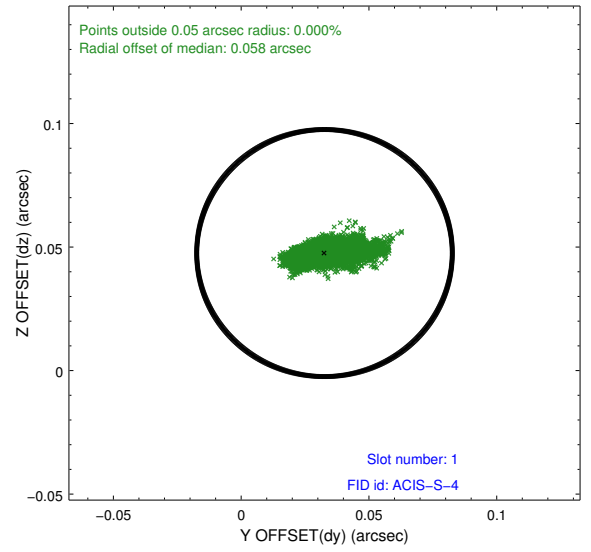
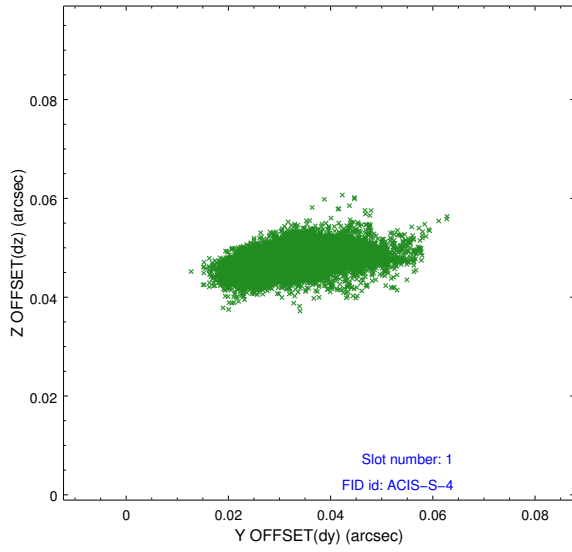


2.5 FID Slots

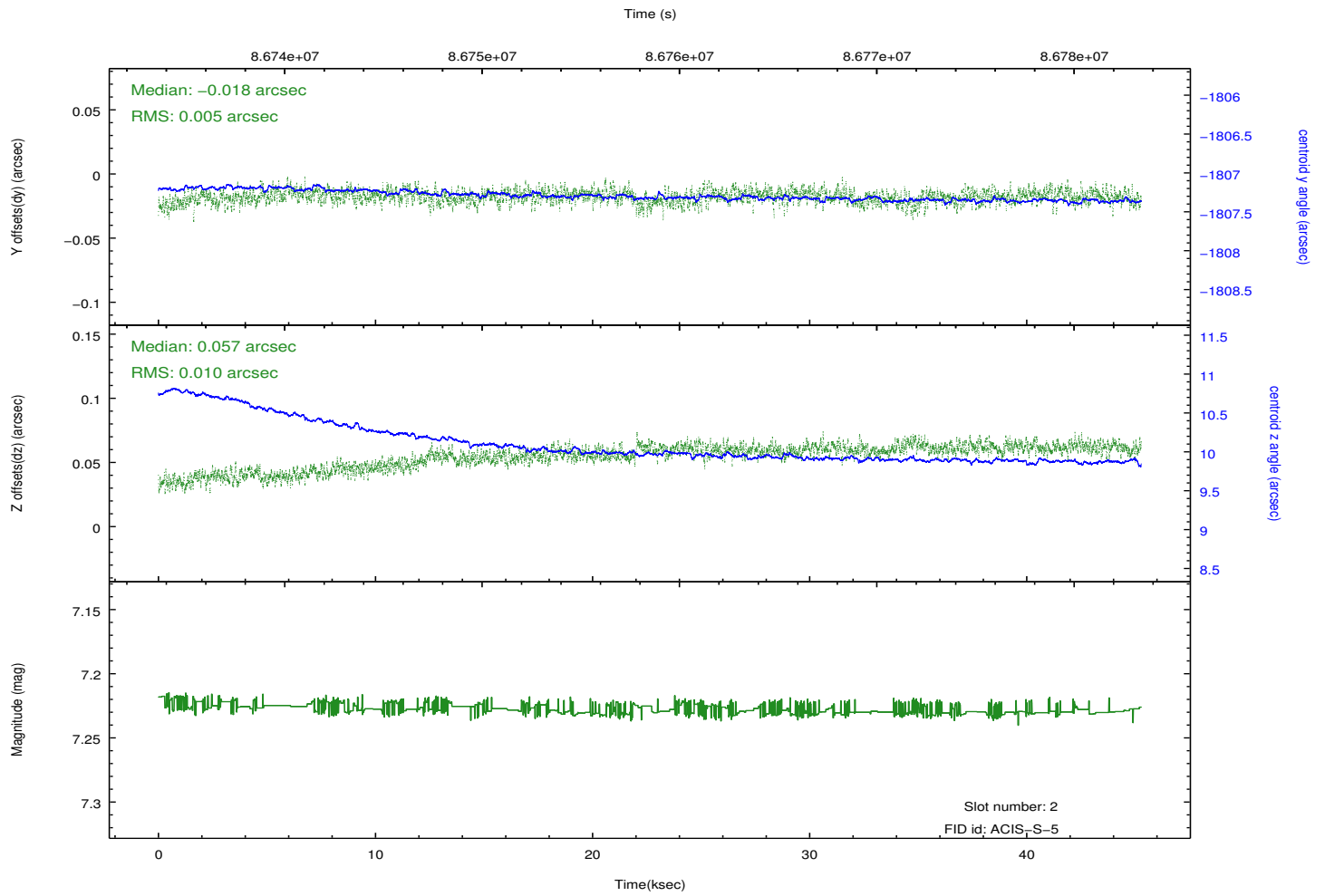
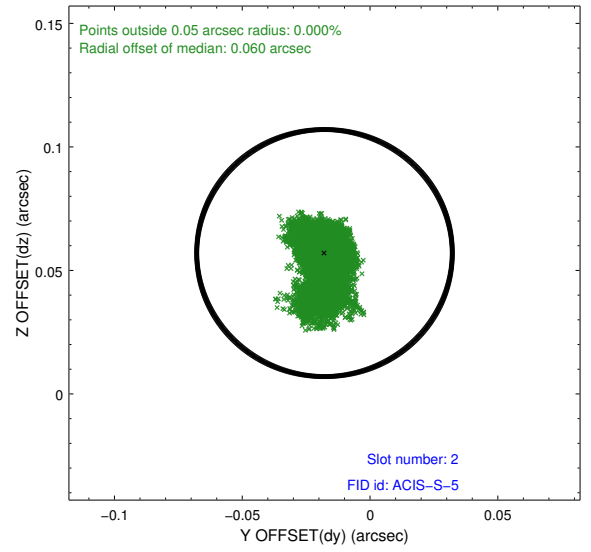
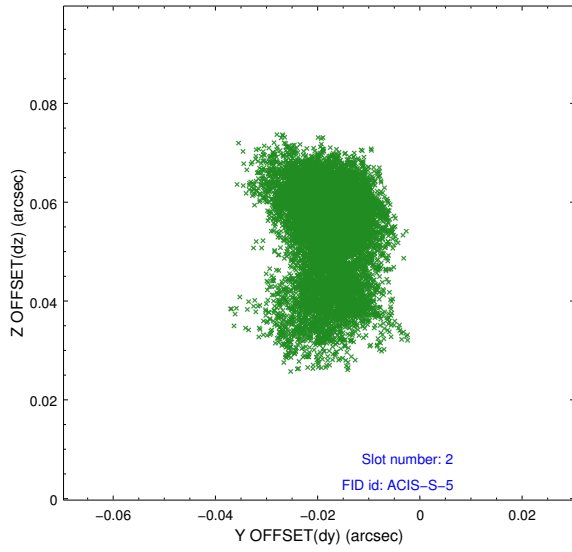
2.5.1 Slot 0



2.5.2 Slot 1

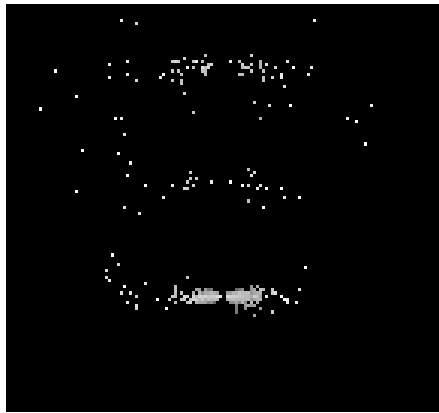


2.5.3 Slot 2

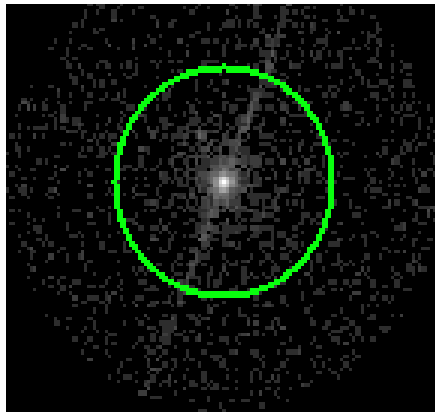


3 Gratings

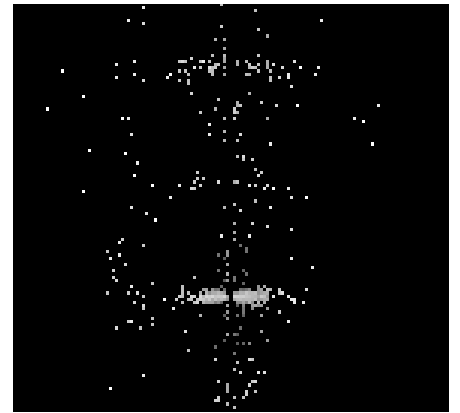
3.1 LETG Arm



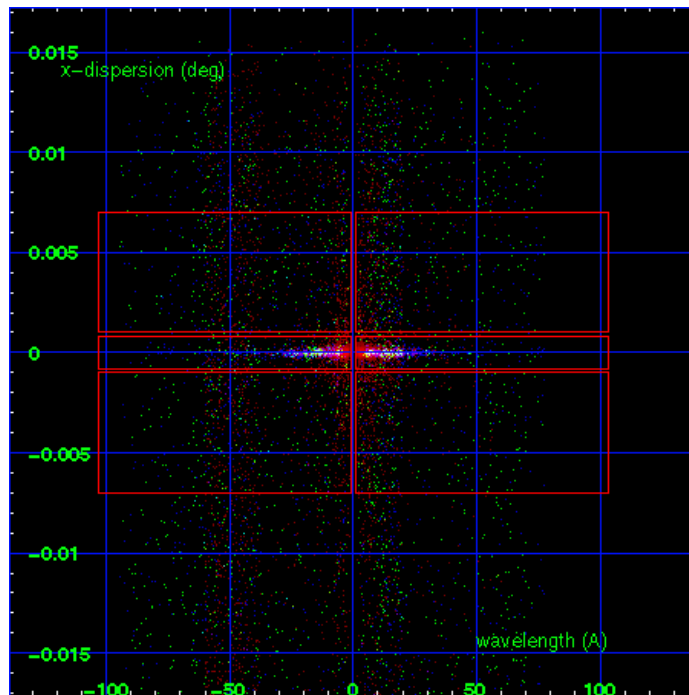
LETG Order Sort 123



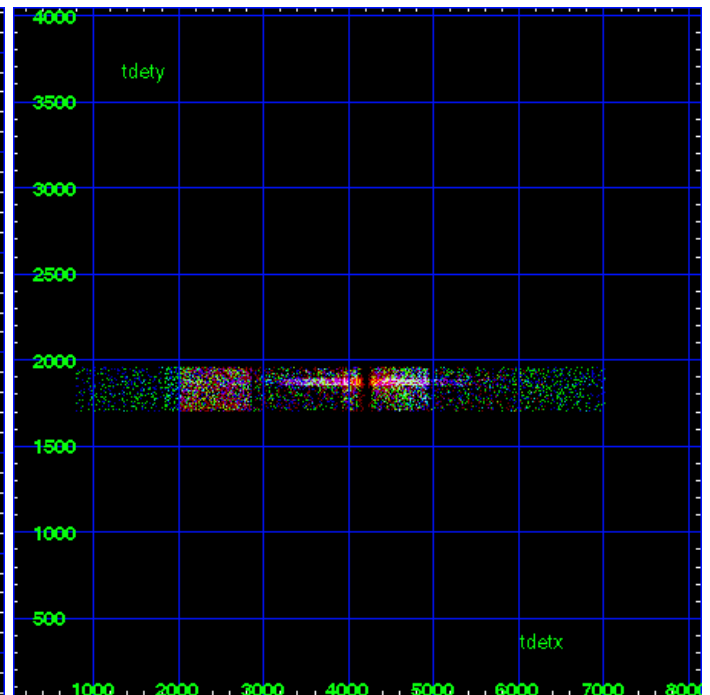
LETG Zero Order



LETG Order Sort ALL

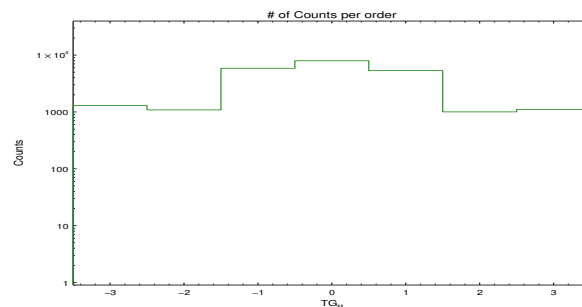


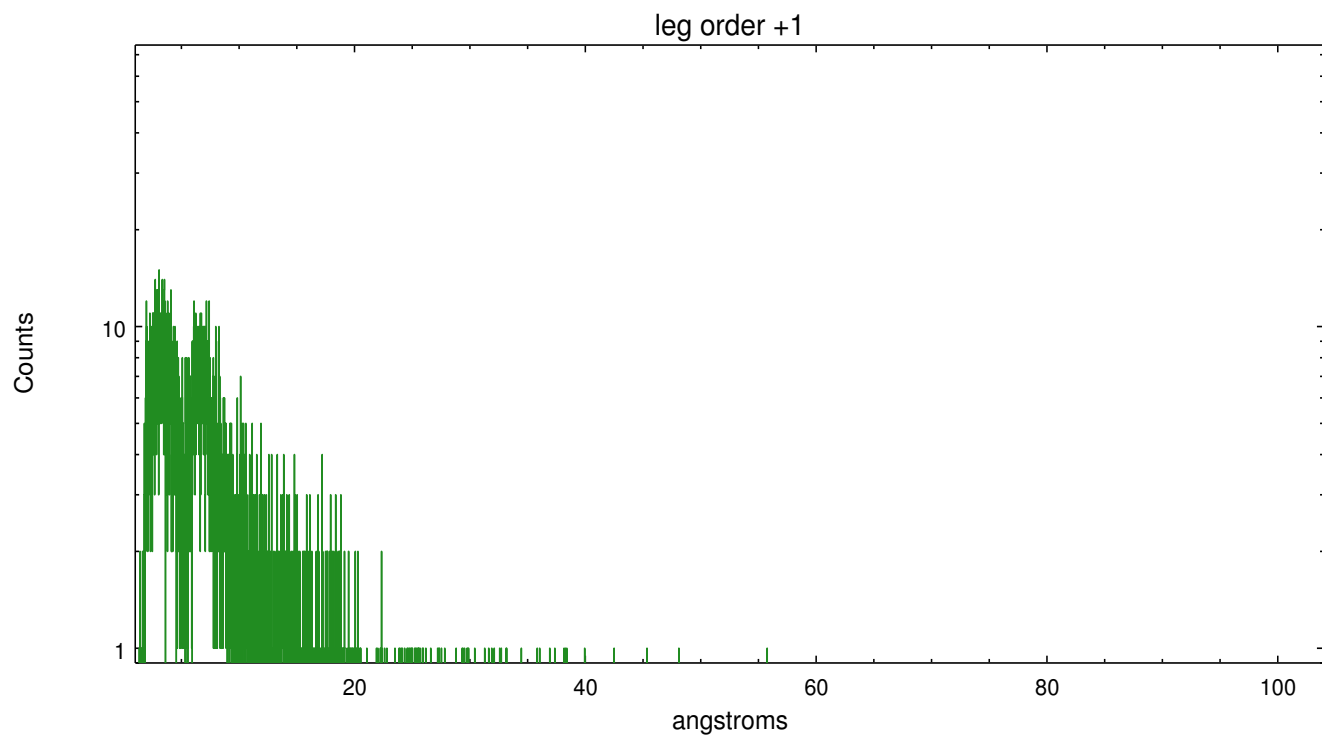
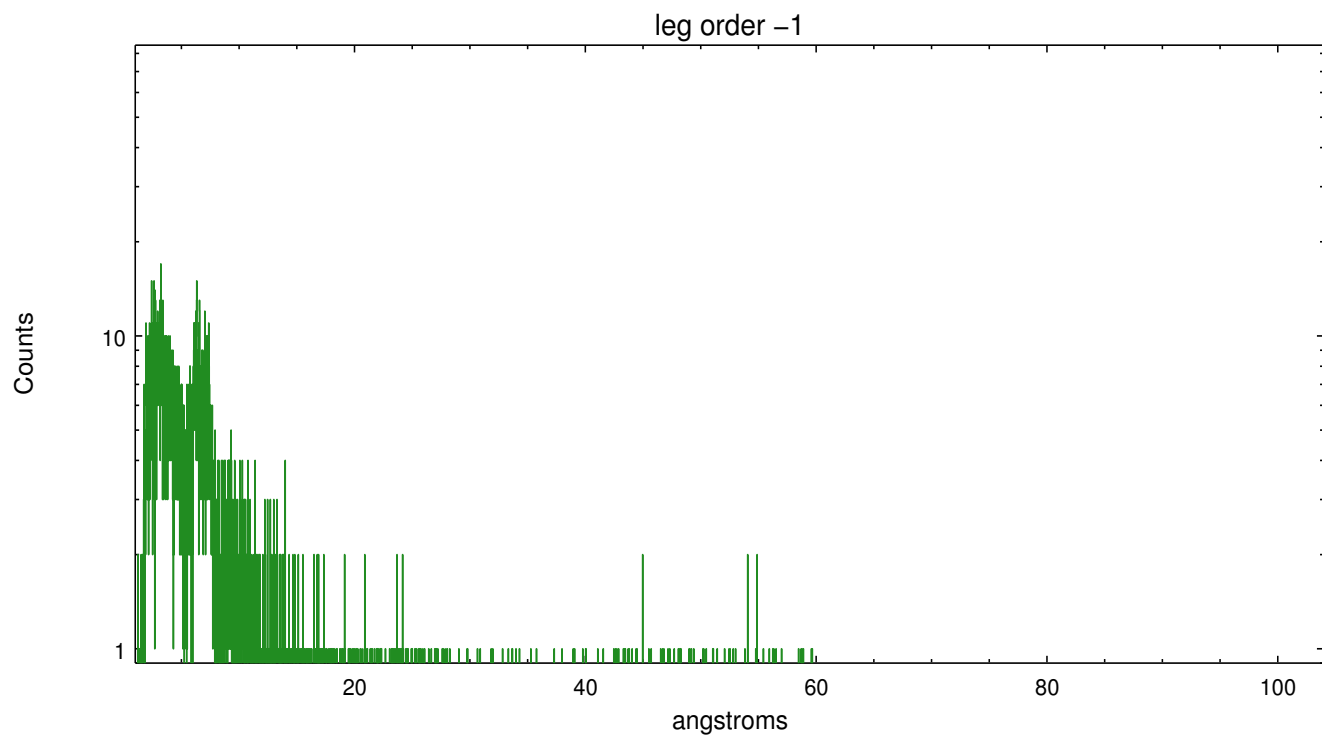
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1295	1085	5867	7948	5333	1003	1111





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.09.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	45.272

A.2 Comments

The zeroth order of the source is significantly off-center in the ACIS subarray detector in the cross-dispersion direction. This placement probably does not affect the quality of spectral extraction of the source data, although it is advisable to re-extract the spectrum with a slightly narrower region in the cross-dispersion direction. However, the background spectrum in this standard processing is the combination of the background on either side of the source spectrum. The effective area is not identical in the background region above and below the spectral extraction region, because one of these background regions includes significant area that is off the detector. The user is advised to use exposure-corrected data for analysis, and narrower extraction regions for at least the background, as well as possibly for the source extraction region.