

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 13752 - L2 Version 1
Chandra X-Ray Center

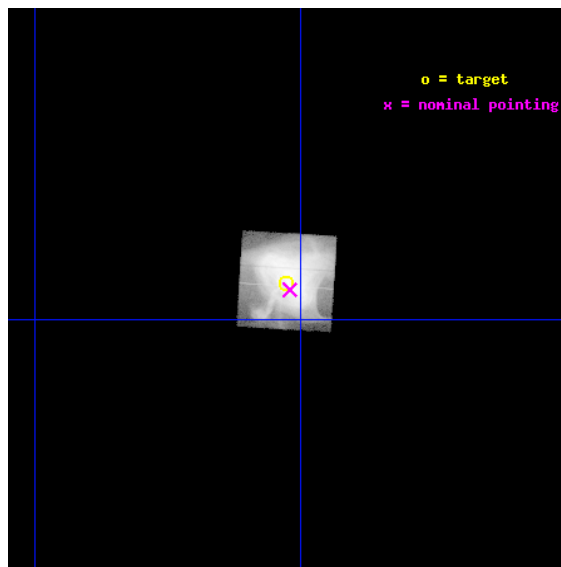
L2 Processing Date : Feb 10 2012

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1 Front

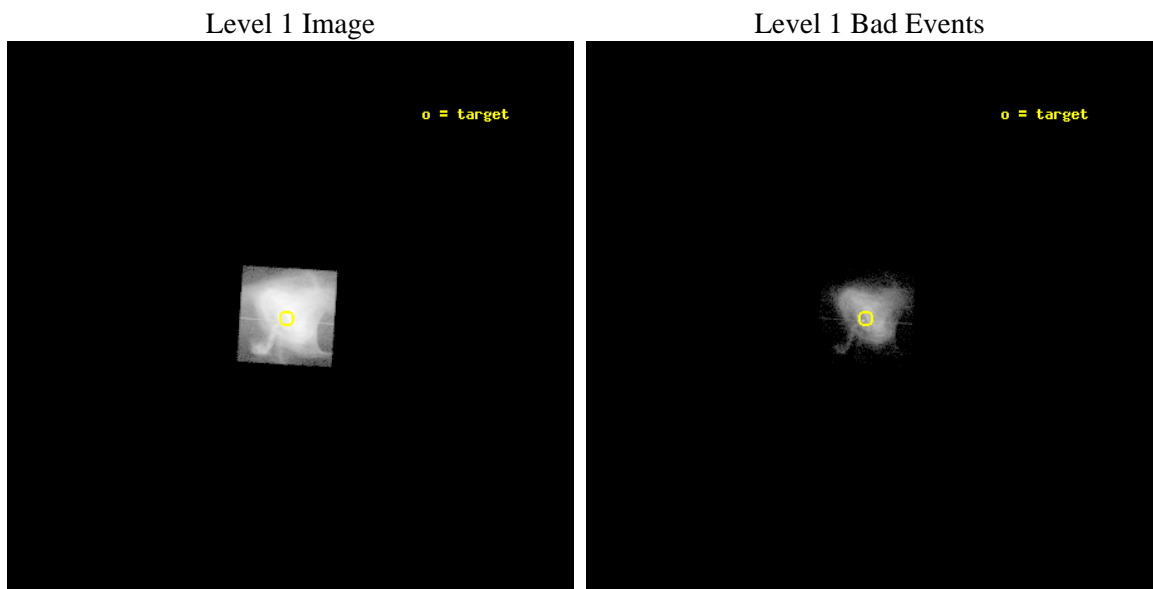
seq_num	501585	Sequence number
obs_id	13752	Observation id
title	Joint Chandra and HST Monitoring of the Crab Nebula	Proposal title
observer	Dr. Martin Weisskopf	Principal investigator
object	Crab	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.631667	Observer's specified target RA [deg]
dec_targ	22.015667	Observer's specified target Dec [deg]
ra_nom	83.630125935145	Nominal RA [deg]
dec_nom	22.012779497741	Nominal Dec [deg]
roll_nom	273.55917518487	Nominal Roll [deg]
revision	1	Processing version of data
ontime	3397.5615895987	Sum of GTIs [s]
livetime	591.02417799091	Livetime [s]
ontime7	3397.5615895987	Sum of GTIs [s]
l2events	1704242	Number of level 2 events



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	3397.5615895987	Sum of GTIs [s]
caldsver	4.4.7	 	ontime7	3397.5615895987	Sum of GTIs [s]
date	2012-02-11T00:40:33	Date and time of file creation	l1events	1894055	Number of level 1 events
revision	1	Processing version of data			

2.1.3 Events

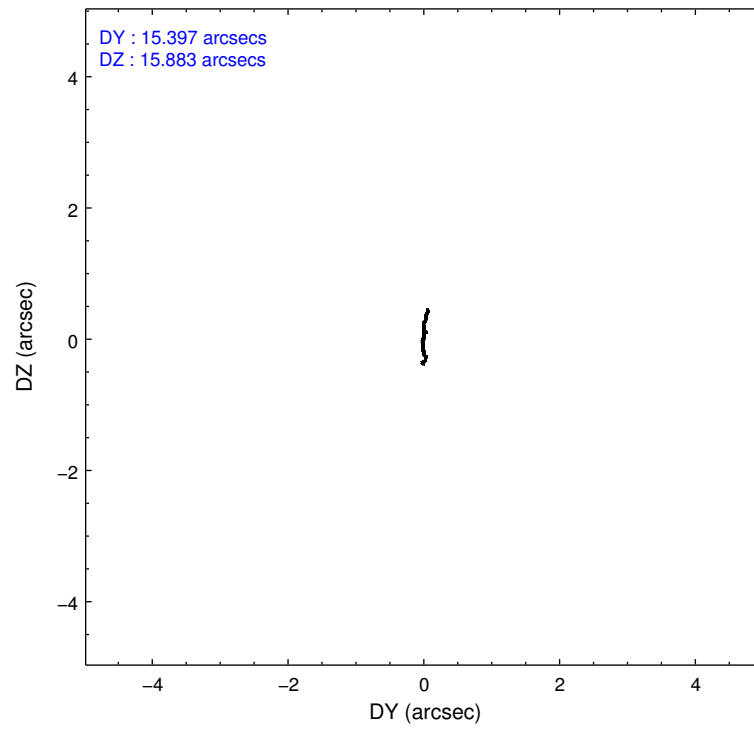
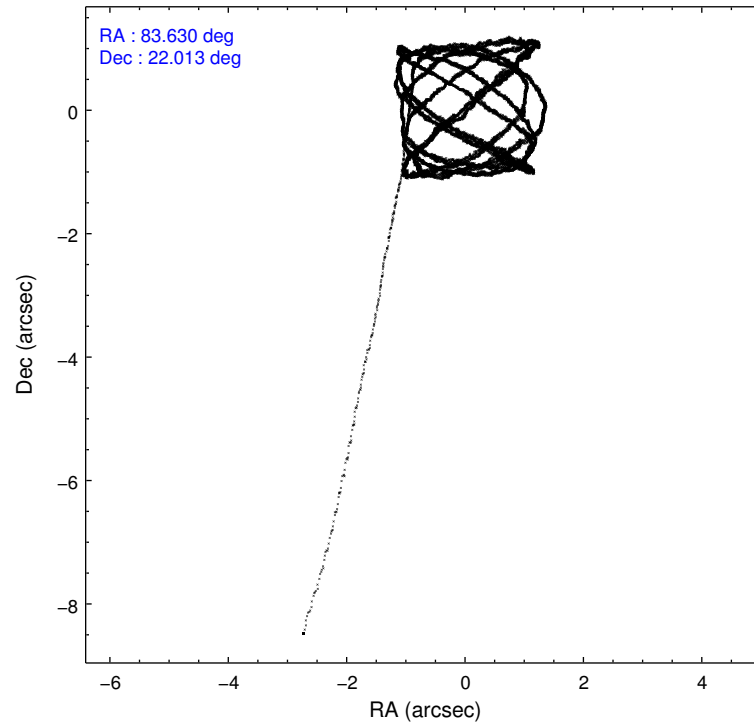
	ccd 7
level 1 events	1894055
rejected events	165387
rejected %	8%

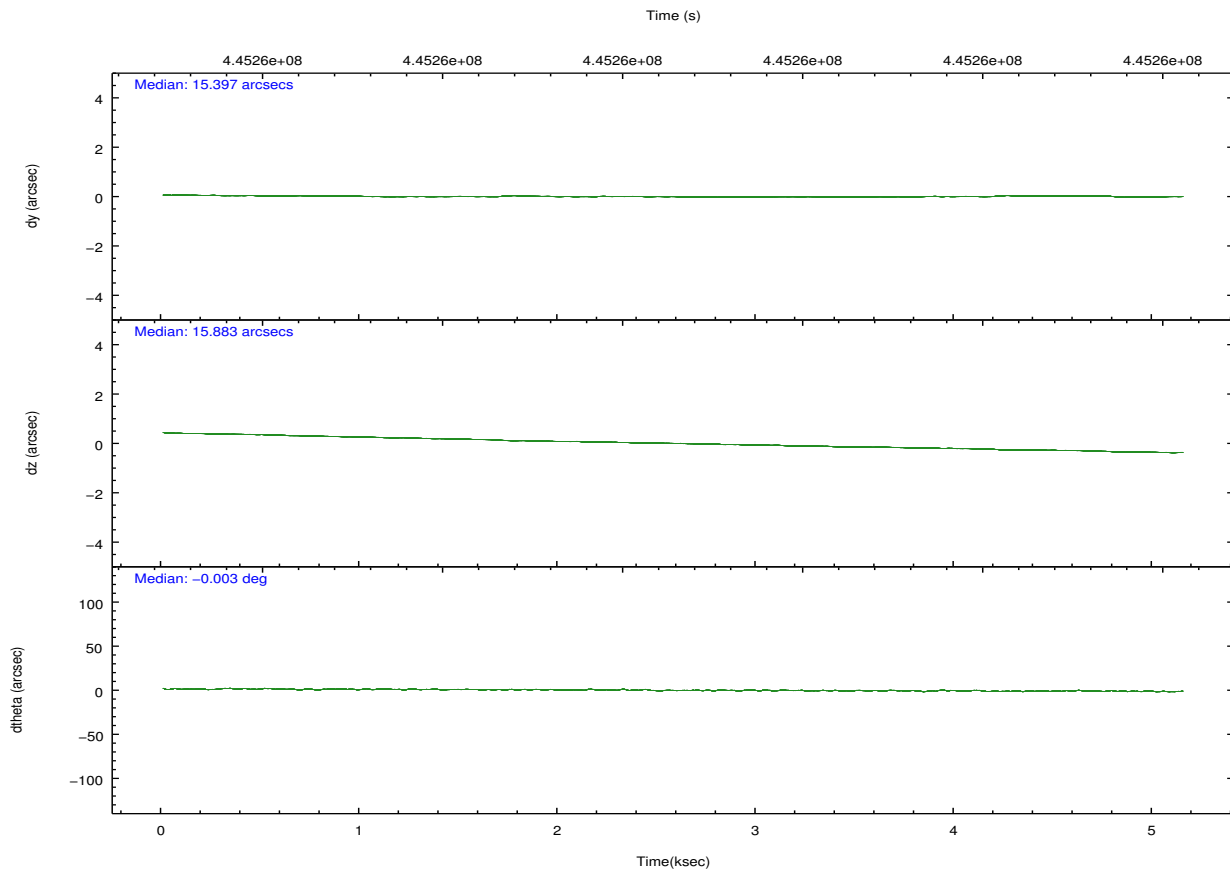
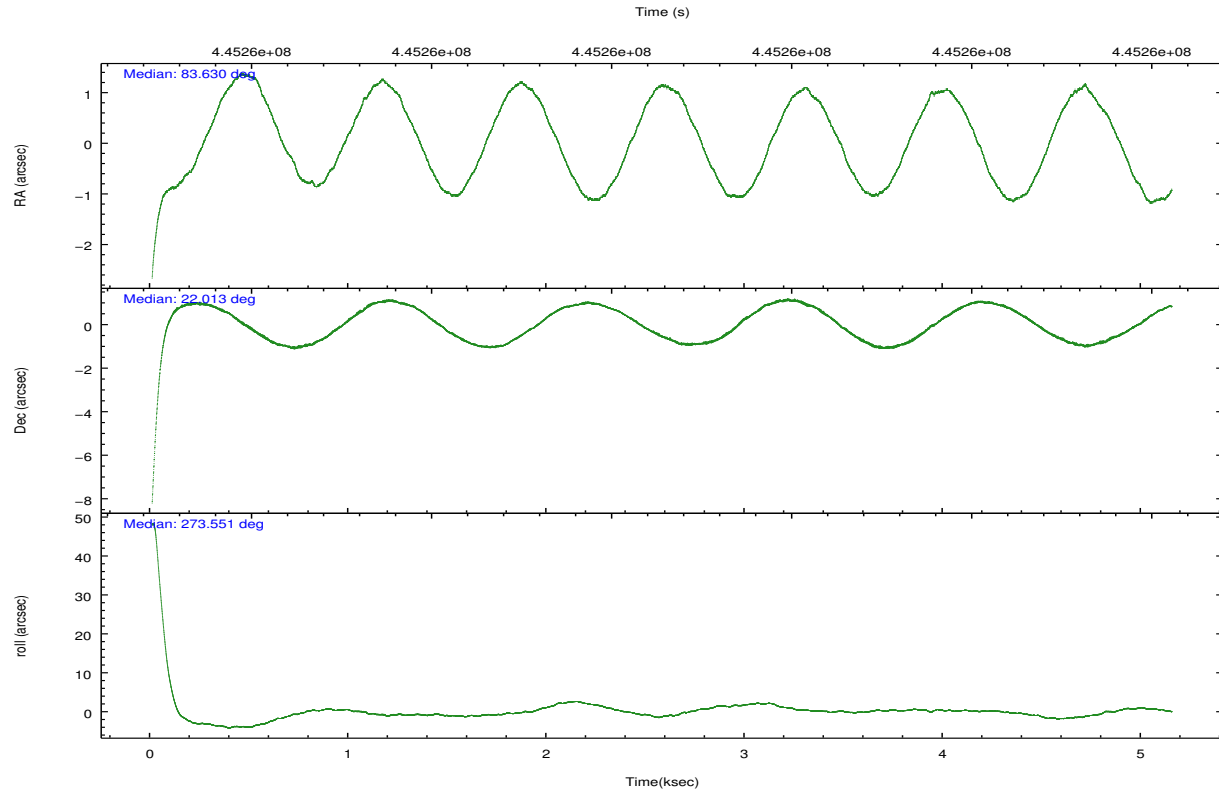
	ccd 7
grade 0 events	397709
	20%
grade 1 events	21908
	1%
grade 2 events	471102
	24%
grade 3 events	196407
	10%
grade 4 events	191574
	10%
grade 5 events	61049
	3%
grade 6 events	473106
	24%
grade 7 events	81200
	4%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-7	ACIS-7	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	GRADED	GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	83.613469	83.63012593514489	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	22.035372	22.01277949774065	Subarray start row	185	185
[deg] Pointing Roll	273.408661	273.5591751848711	Subarray row count	300	300
[s] Window start time (MET)	445219266.184000	445219266.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	446169665.184000	446169665.184000	[s] Primary exposure time	0.000000	0.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-186.476523	-186.4817372861021			
[mm] SIM translation stage offset	-3.656	-3.650785296905724			
[s] Observation start time (MET)	445256864.184000	445255236.59294			
Observation start date	2012-02-10T10:26:38	2012-02-10T10:00:36			
[s] Observation end time (MET)	445261864.184000	445262643.75583			
Observation end date	2012-02-10T11:49:58	2012-02-10T12:04:03			
Read mode	TIMED	TIMED			

2.3 Aspect



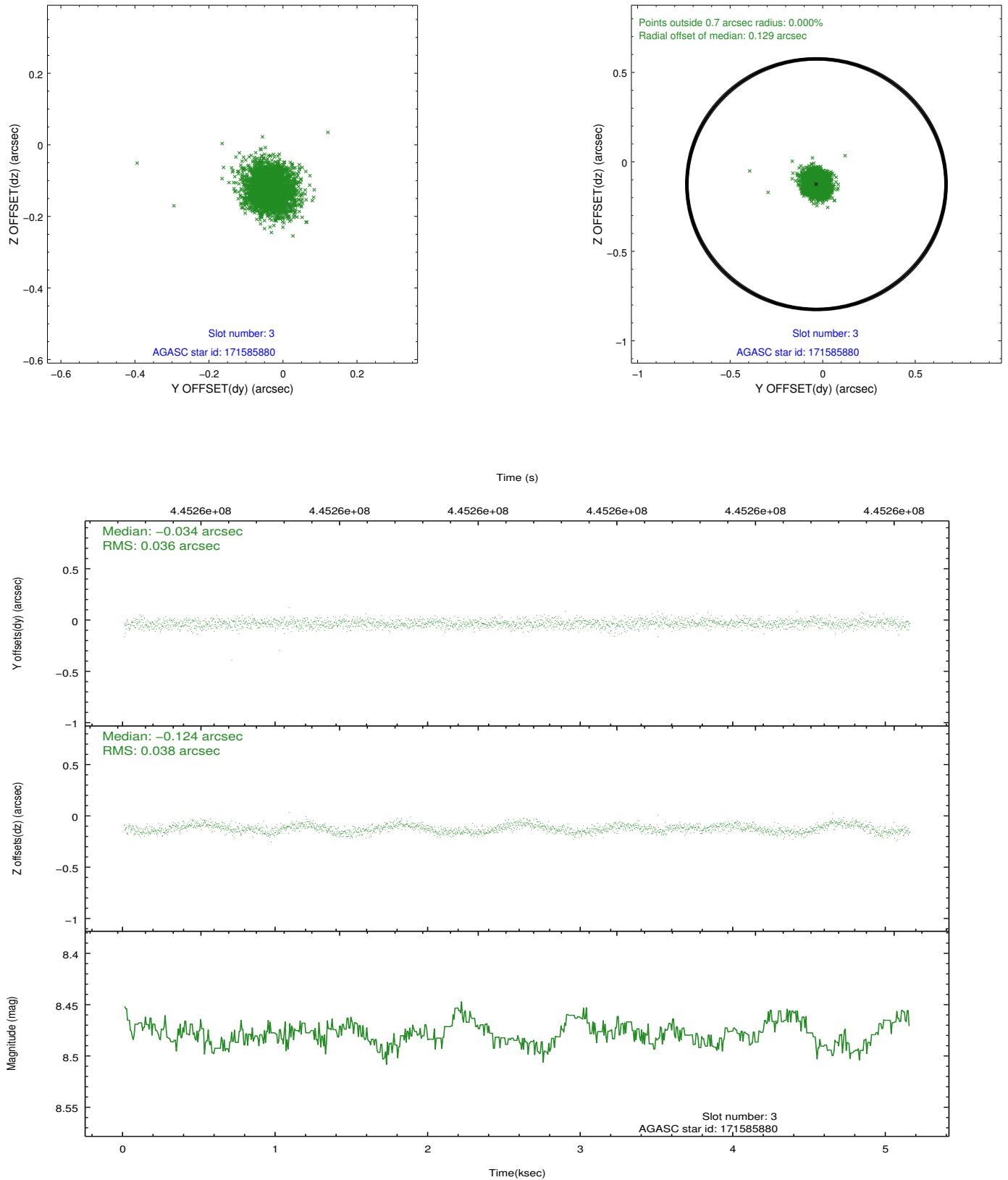


Slot Statistics

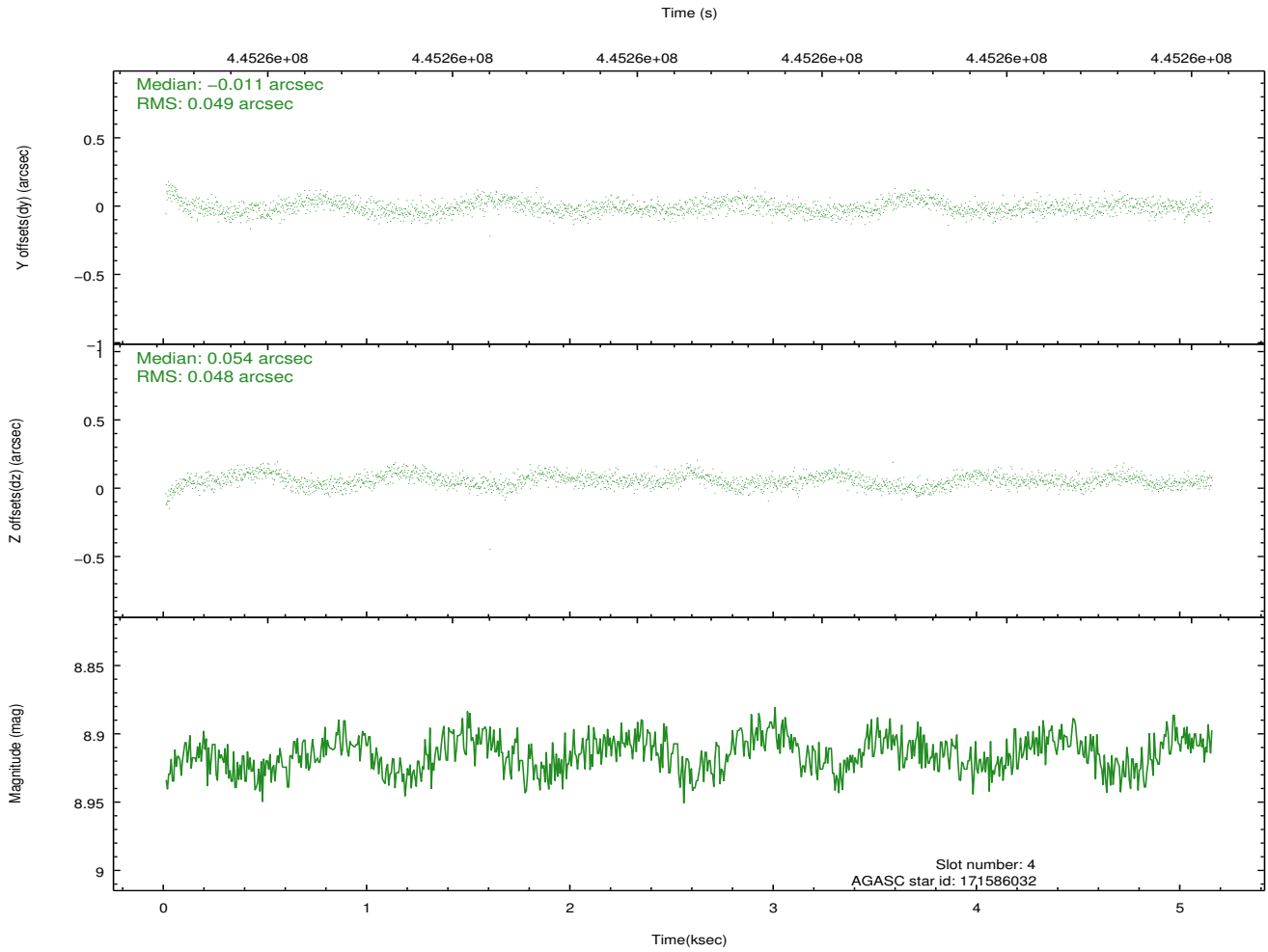
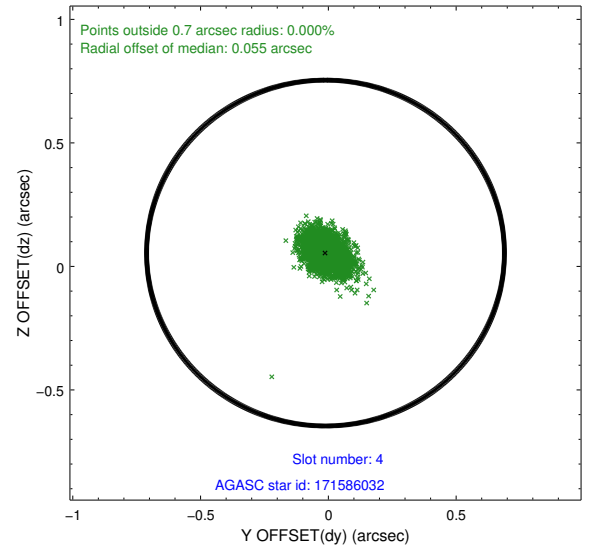
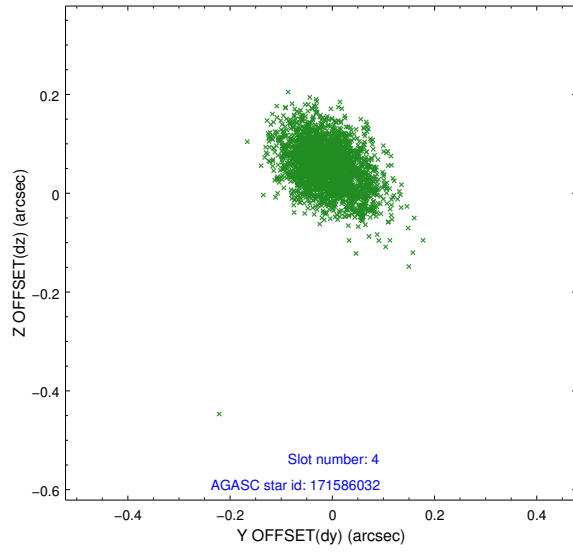
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.90	1256	-0.118	-0.054	0.019	0.026	0.000000	0.000000	-768.28	-1812.67
1	FID	ACIS-S-4	6.98	1256	0.239	0.071	0.008	0.014	0.000000	0.000000	2144.85	94.60
2	FID	ACIS-S-5	7.01	1256	-0.154	-0.009	0.019	0.027	0.000000	0.000000	-1819.62	89.60
3	GUIDE	171585880	8.48	2512	-0.034	-0.124	0.055	0.088	83.676260	22.176319	-493.91	239.11
4	GUIDE	171586032	8.91	2511	-0.011	0.054	0.070	0.119	83.950197	22.083225	-106.51	1131.92
5	GUIDE	171721904	9.20	2508	-0.011	0.136	0.079	0.127	84.272676	22.116922	-167.18	2213.10
6	GUIDE	243941560	8.32	2511	-0.056	0.032	0.081	0.122	83.733264	22.568598	-1892.43	512.35
7	GUIDE	171597832	9.13	2507	0.113	-0.097	0.087	0.151	83.183230	21.366702	2315.07	-1582.36

2.4 Star Slots

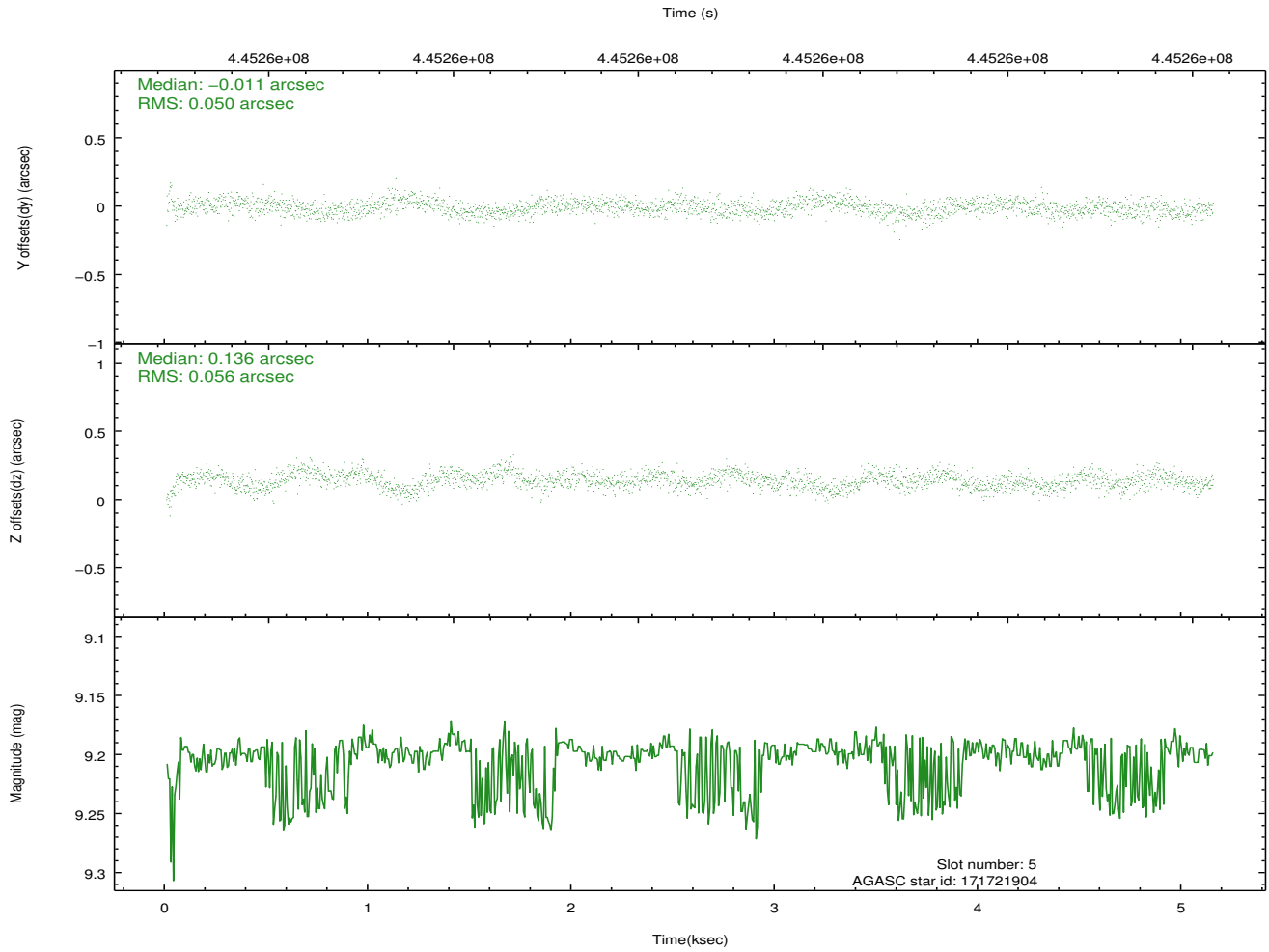
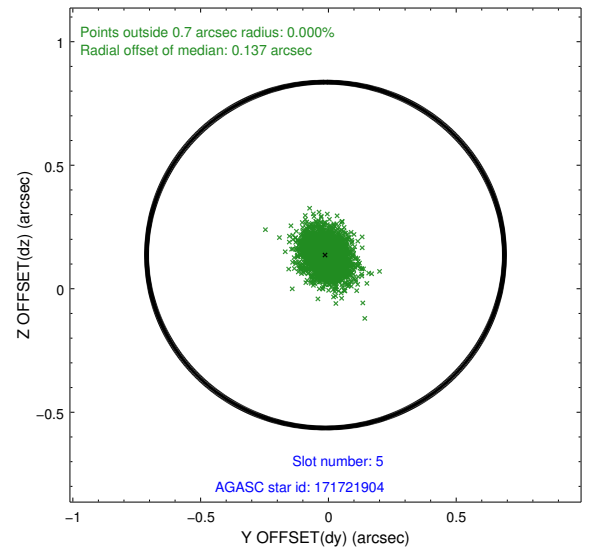
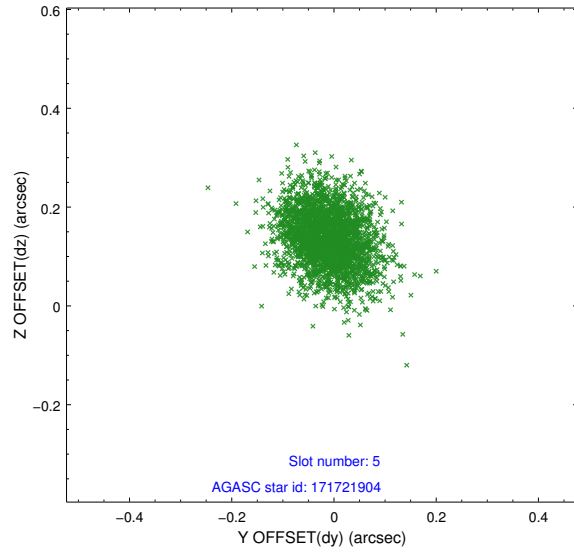
2.4.1 Slot 3



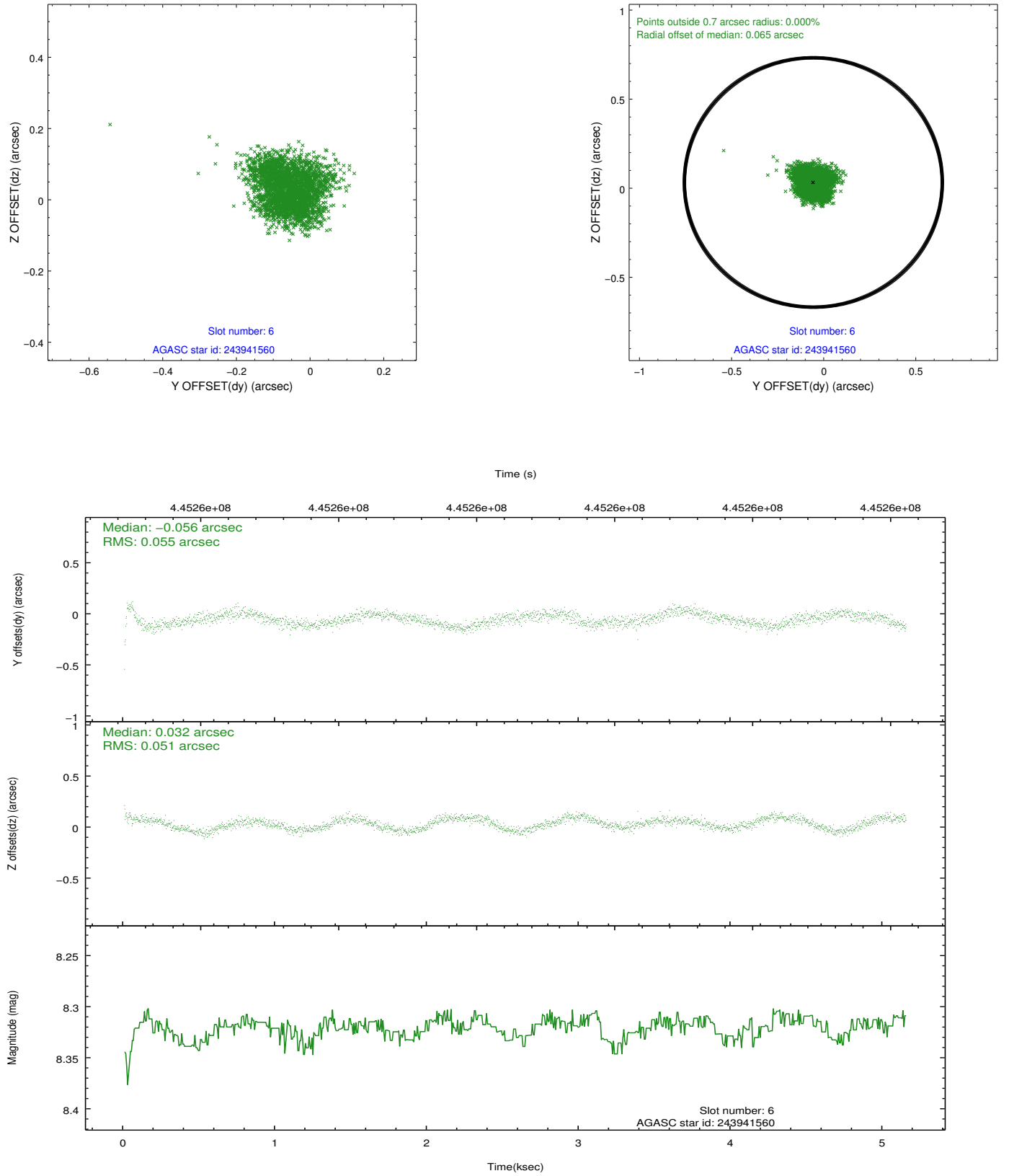
2.4.2 Slot 4



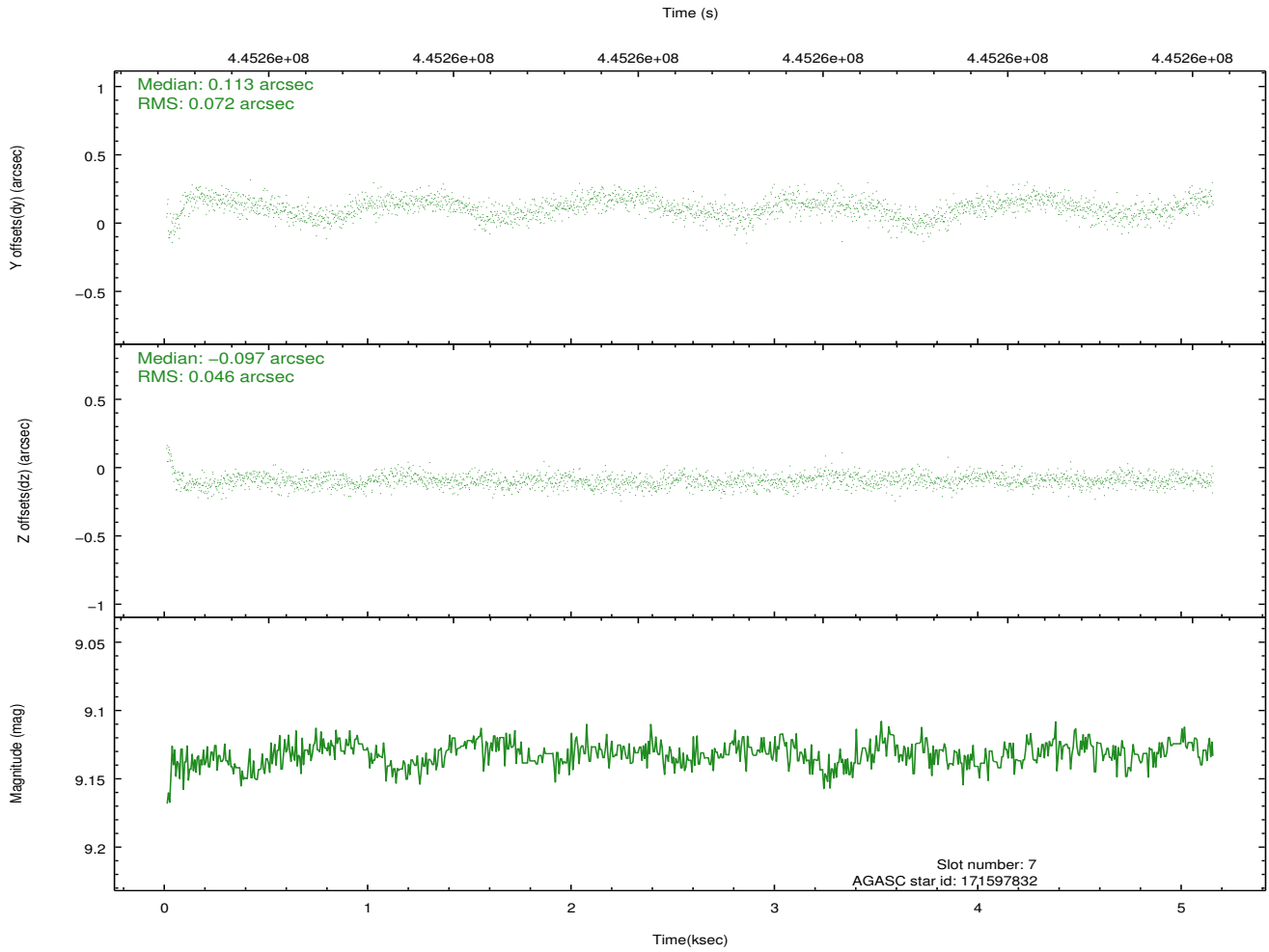
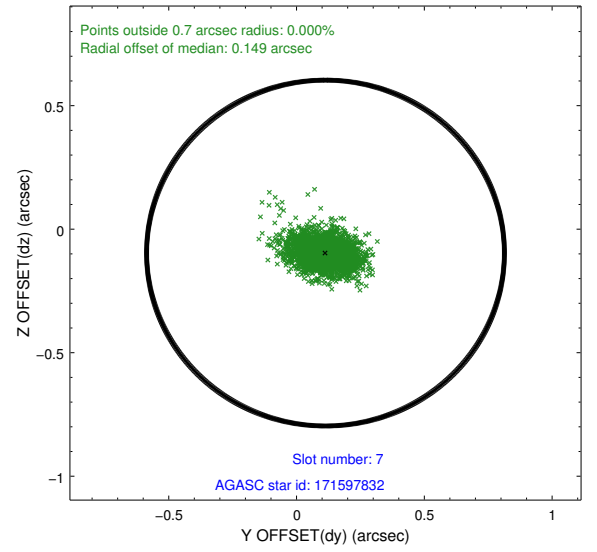
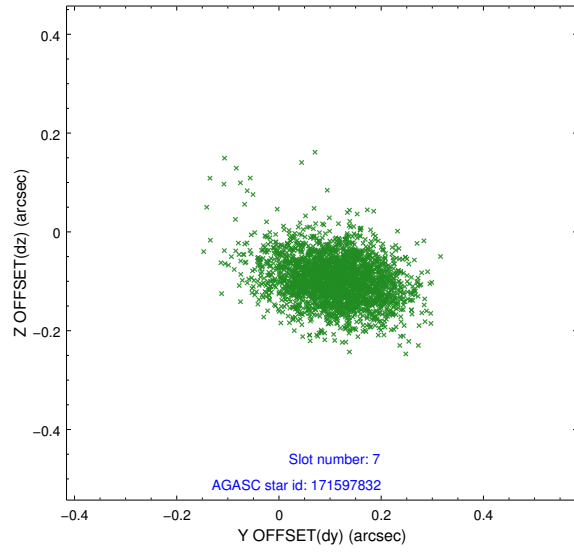
2.4.3 Slot 5



2.4.4 Slot 6

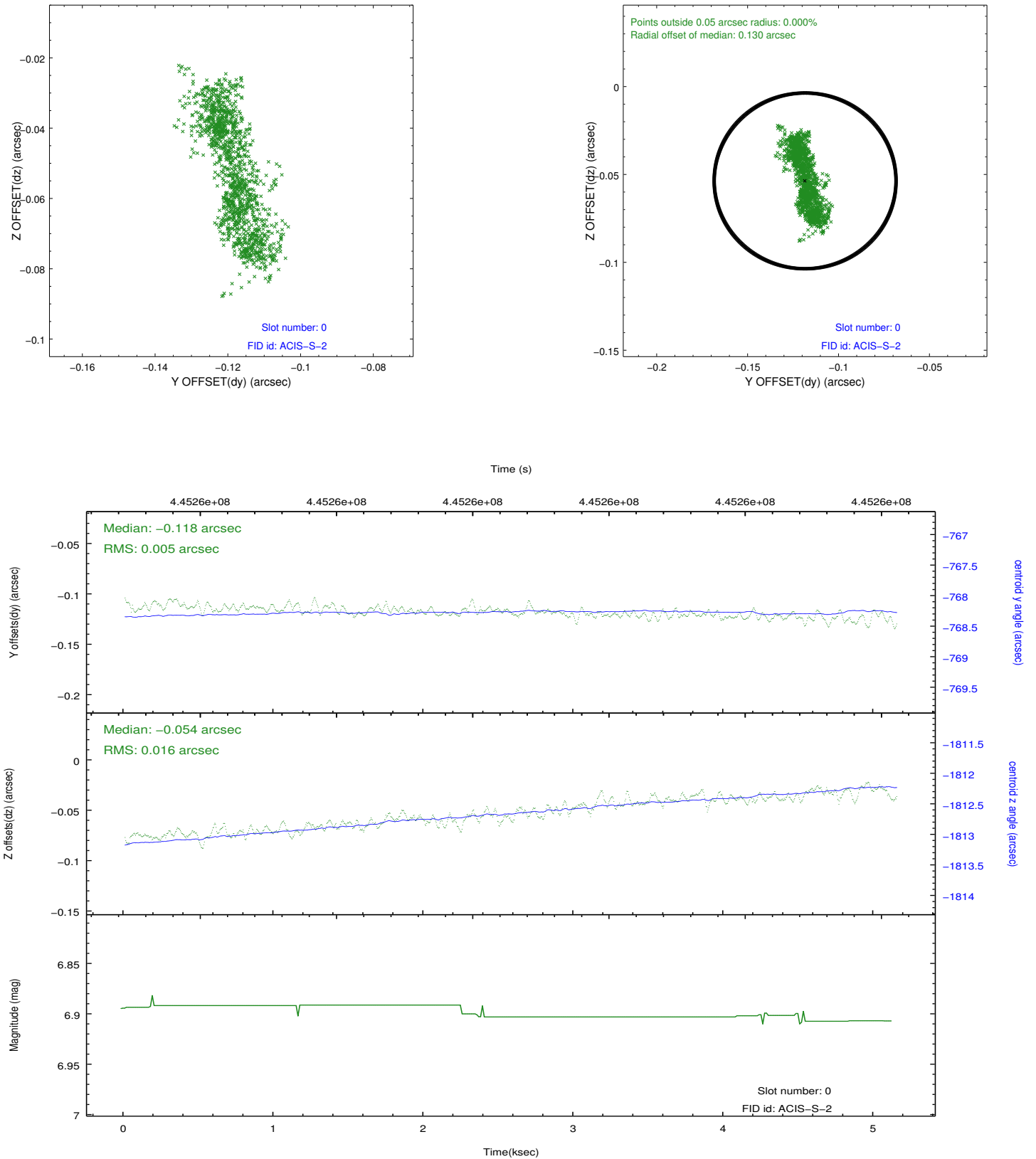


2.4.5 Slot 7

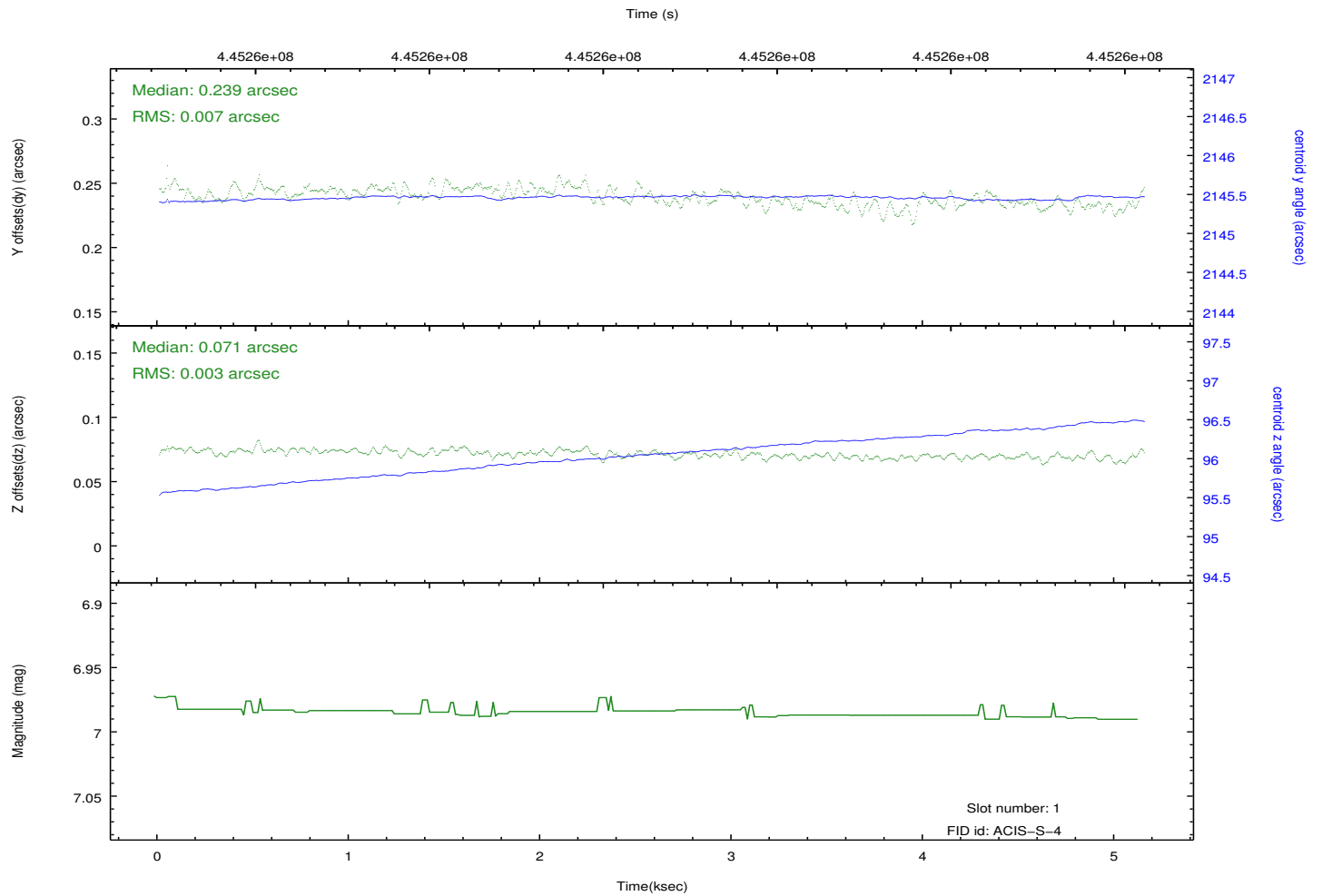
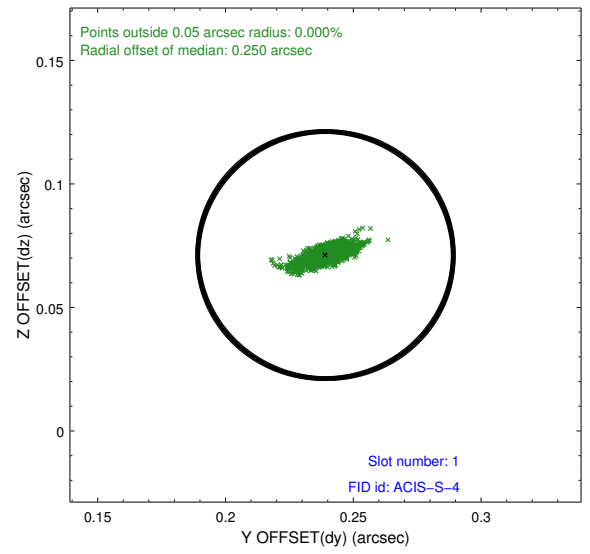
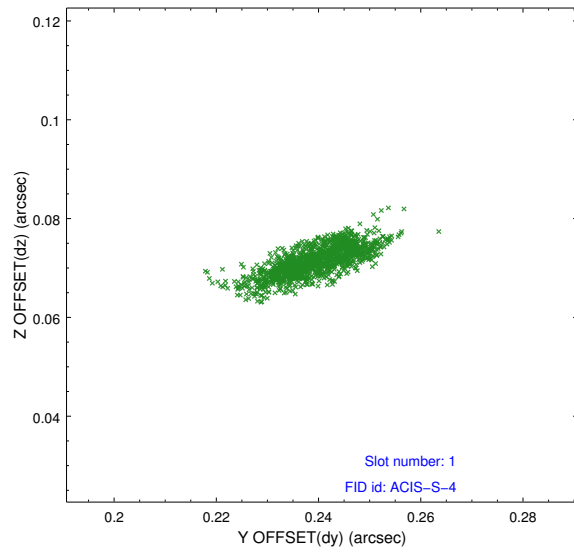


2.5 FID Slots

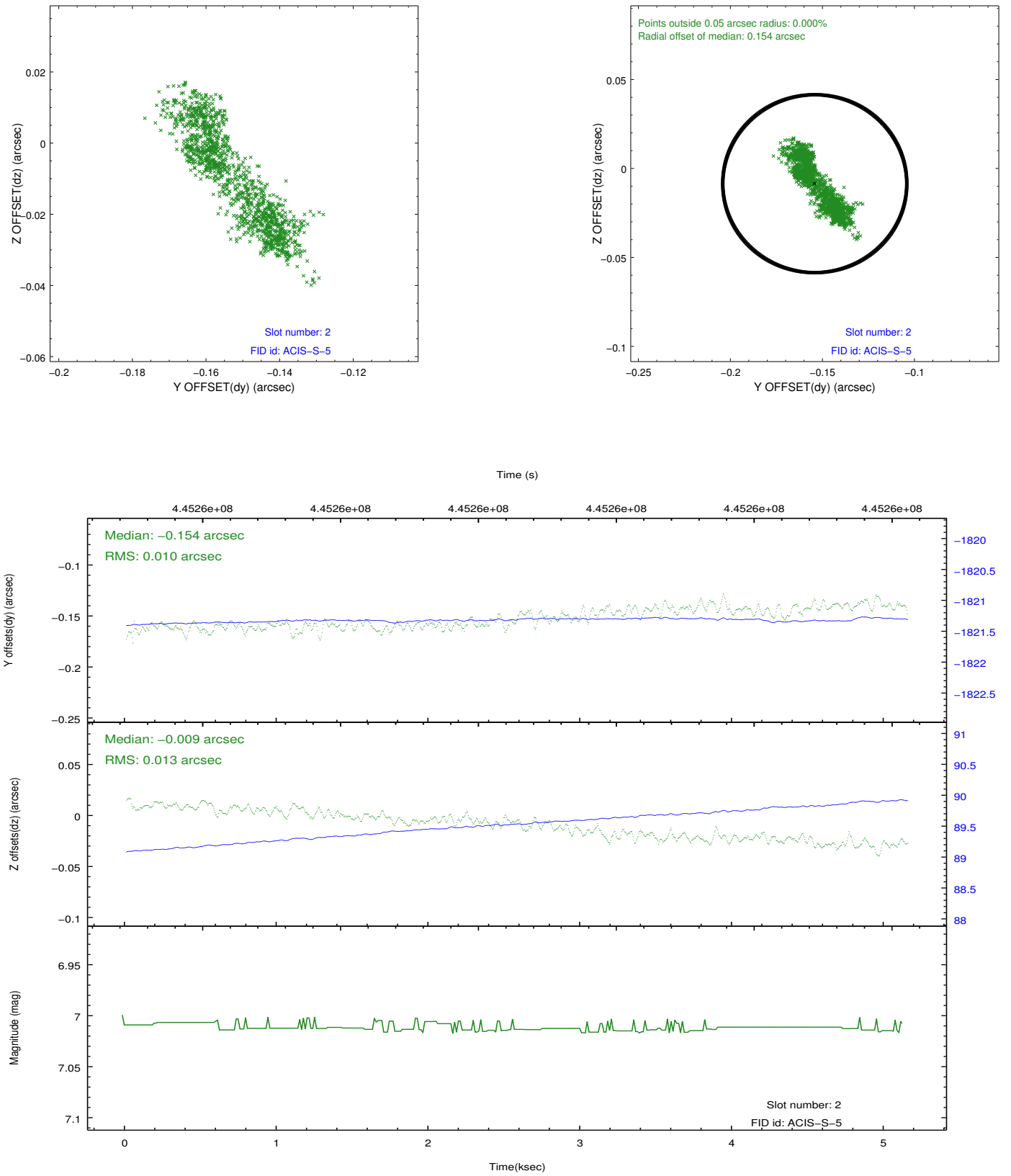
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.02.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5

A.2 Comments

Special dither pattern of 1 arcsec used.

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The high count rate resulted in telemetry saturation and a large number of dropped exposures. The ONTIME value reflects the lost exposure time.

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The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSER algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use `acis_process_events` to reprocess the data with the parameter `pix_adj=NONE` or `RANDOMIZE`, respectively.

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The high count rate resulted in telemetry saturation and a number of dropped exposures. The ONTIME value reflects the lost exposure time.

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Joint proposal with HST.

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Window preference satisfied.