

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 13205 - L2 Version 2
Chandra X-Ray Center

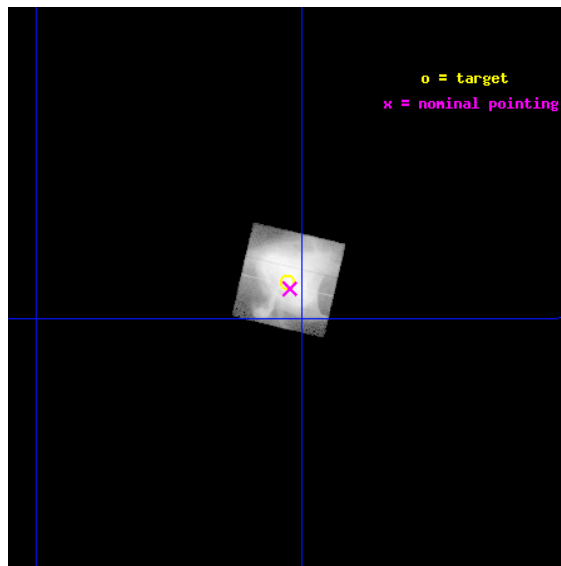
L2 Processing Date : Feb 4 2012

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1 Front

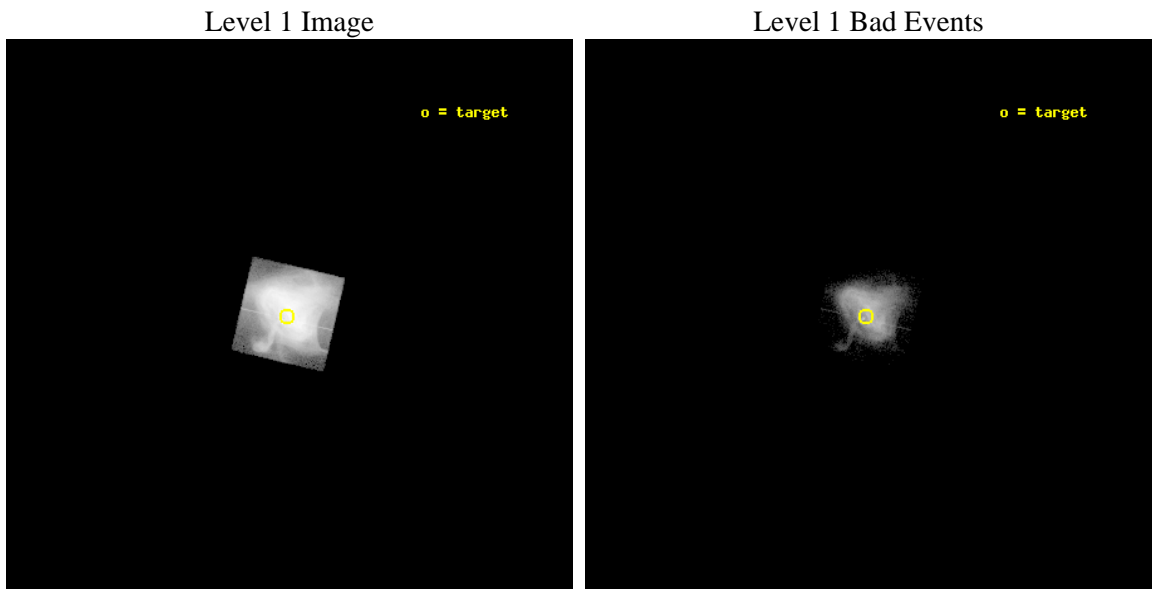
seq_num	501543	Sequence number
obs_id	13205	Observation id
title	Monitoring of the Crab Nebula	Proposal title
observer	Dr. Martin Weisskopf	Principal investigator
object	Crab	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.631667	Observer's specified target RA [deg]
dec_targ	22.015667	Observer's specified target Dec [deg]
ra_nom	83.630656002828	Nominal RA [deg]
dec_nom	22.012601630127	Nominal Dec [deg]
roll_nom	283.15699179671	Nominal Roll [deg]
revision	2	Processing version of data
ontime	3335.4603959322	Sum of GTIs [s]
livetime	581.8407696215	Livetime [s]
ontime7	3335.4603959322	Sum of GTIs [s]
l2events	1697775	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	3335.4603959322	Sum of GTIs [s]
caldsver	4.4.7	 	ontime7	3335.4603959322	Sum of GTIs [s]
date	2012-02-04T06:35:52	Date and time of file creation	l1events	1889262	Number of level 1 events
revision	2	Processing version of data			

2.1.3 Events

	ccd 7
level 1 events	1889262
rejected events	166977
rejected %	8%

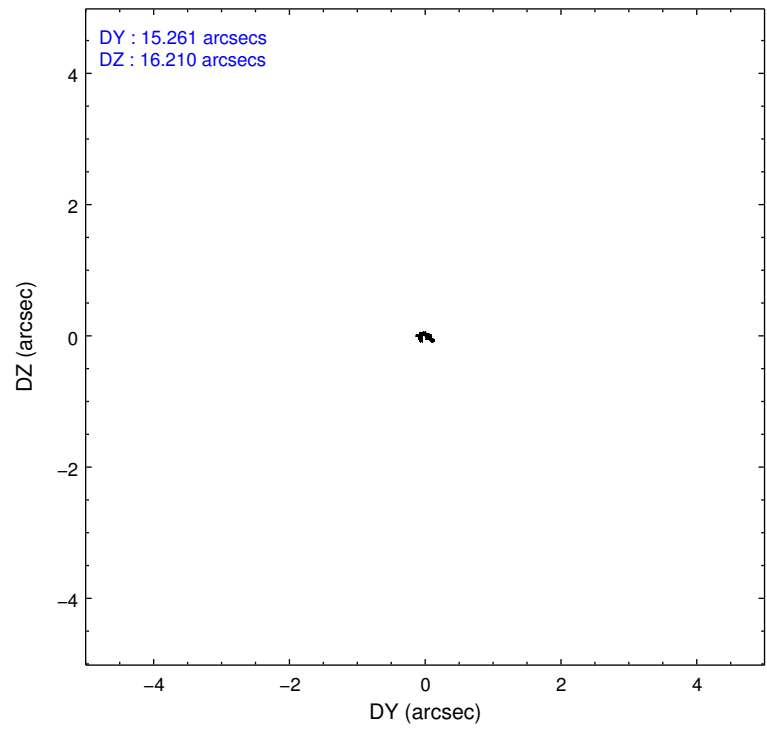
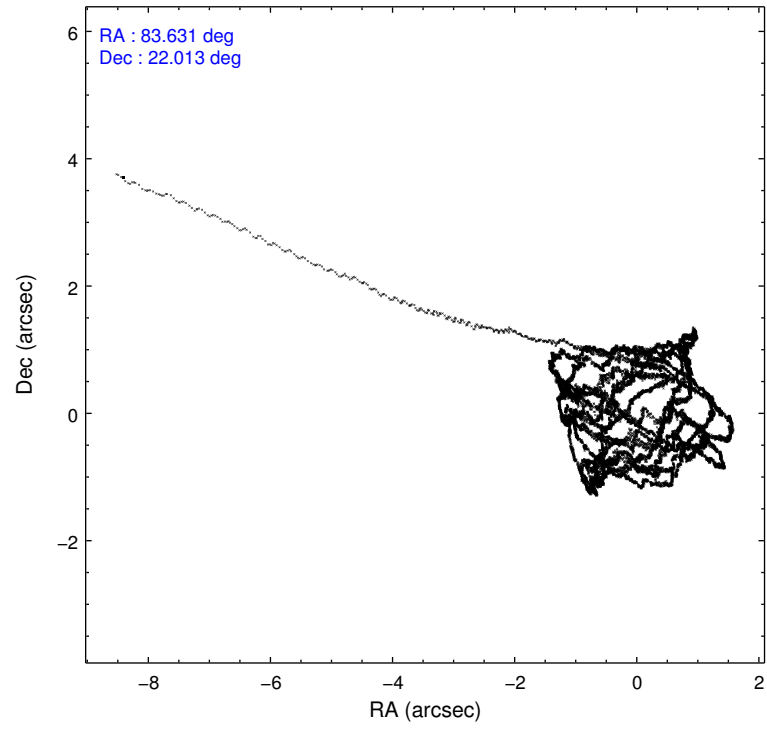
	ccd 7
grade 0 events	385315
	20%
grade 1 events	21886
	1%
grade 2 events	465176
	24%
grade 3 events	196676
	10%
grade 4 events	193619
	10%
grade 5 events	61684
	3%
grade 6 events	482085
	25%
grade 7 events	82821
	4%

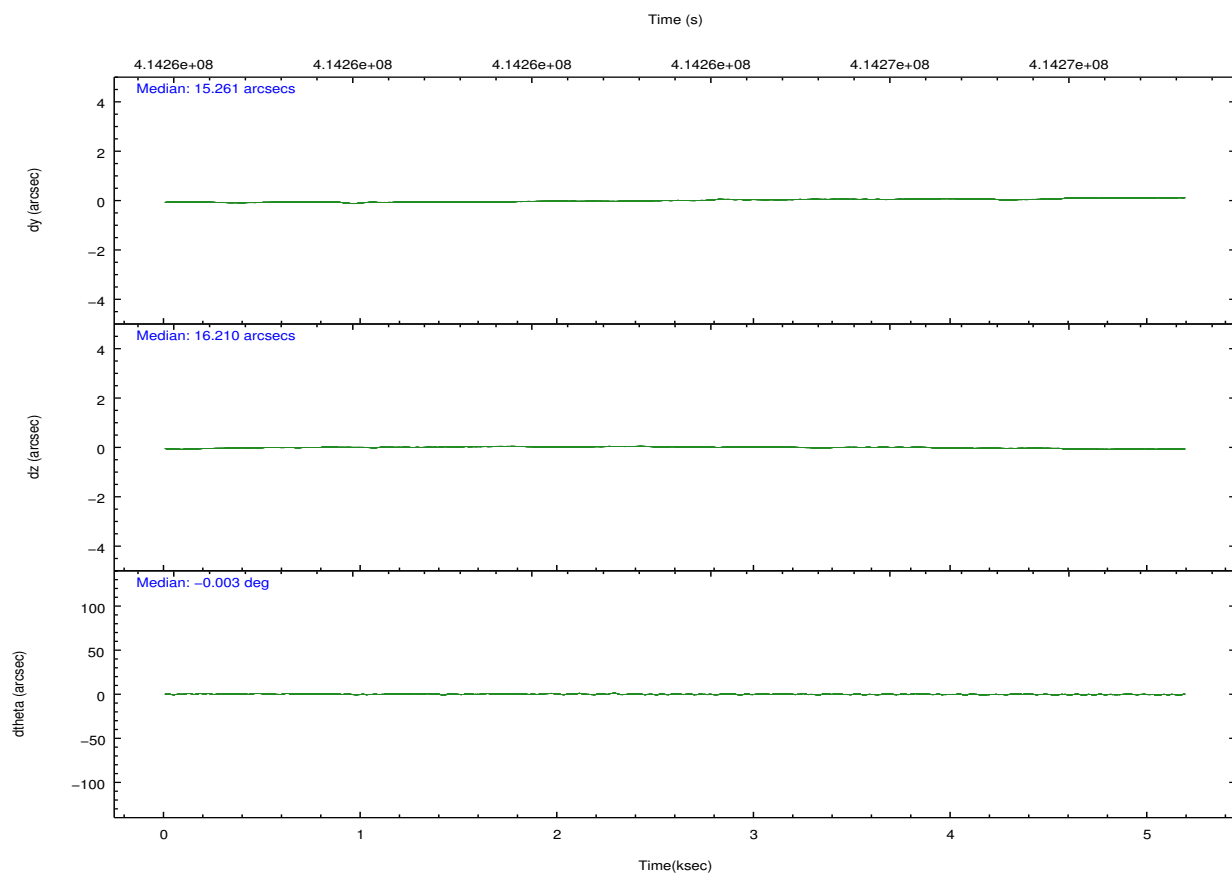
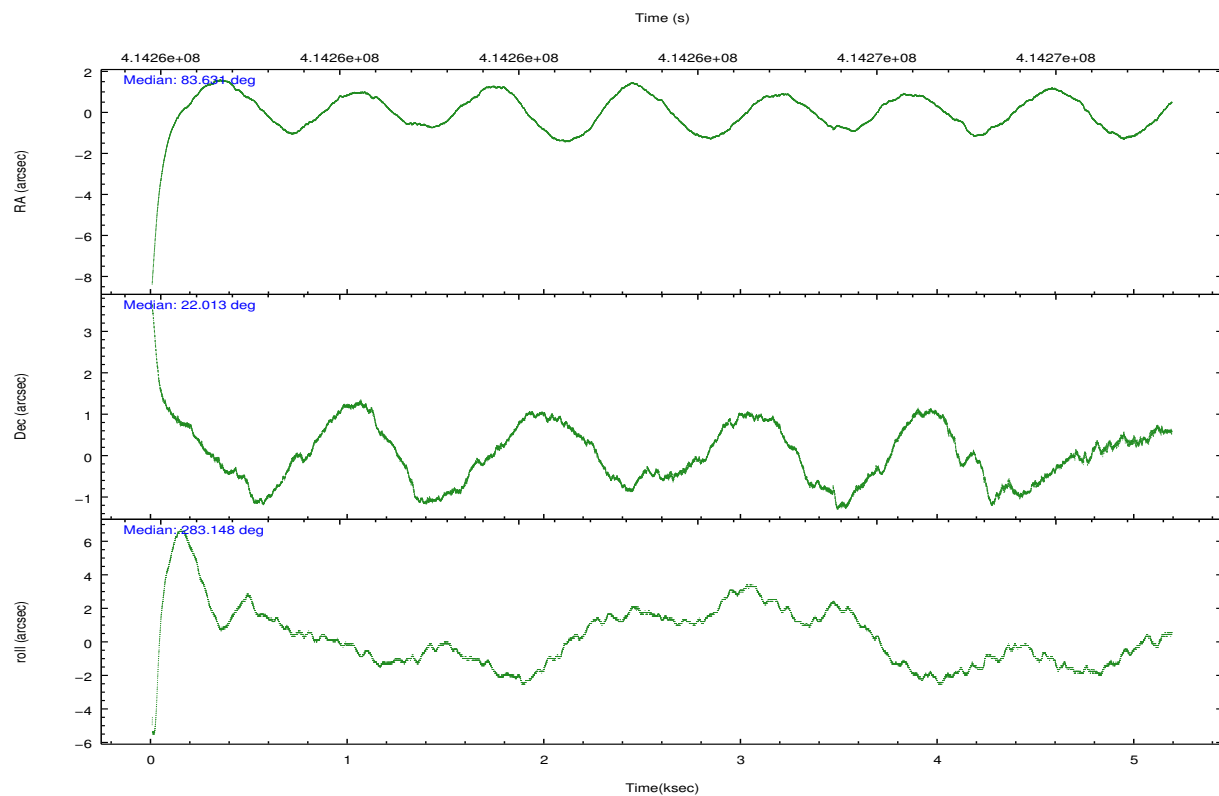
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-7	ACIS-7
Grating	NONE	NONE
Data mode	GRADED	GRADED
Observation mode	POINTING	POINTING
[deg] Pointing RA	83.610179	83.63065600282813
[deg] Pointing Dec	22.032276	22.01260163012731
[deg] Pointing Roll	283.008060	283.1569917967141
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-184.556523	-184.550743134504
[mm] SIM translation stage offset	-5.576	-5.581779448503795
[s] Observation start time (MET)	414262403.184000	414261394.7187
Observation start date	2011-02-16T16:52:17	2011-02-16T16:36:34
[s] Observation end time (MET)	414267403.184000	414268450.81907
Observation end date	2011-02-16T18:15:37	2011-02-16T18:34:10
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	CUSTOM	CUSTOM
Subarray start row	105	105
Subarray row count	300	300
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	0.2

2.3 Aspect



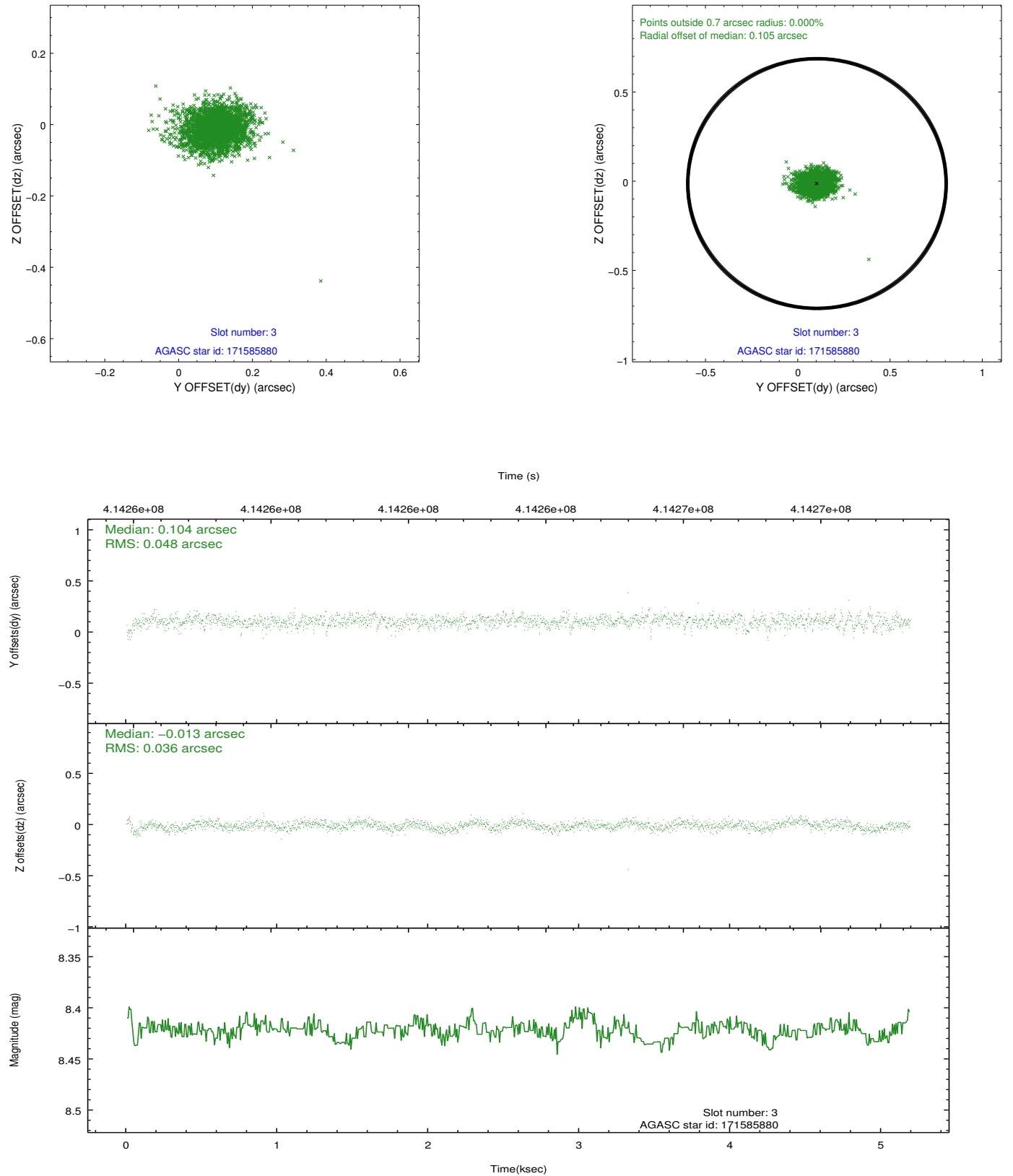


Slot Statistics

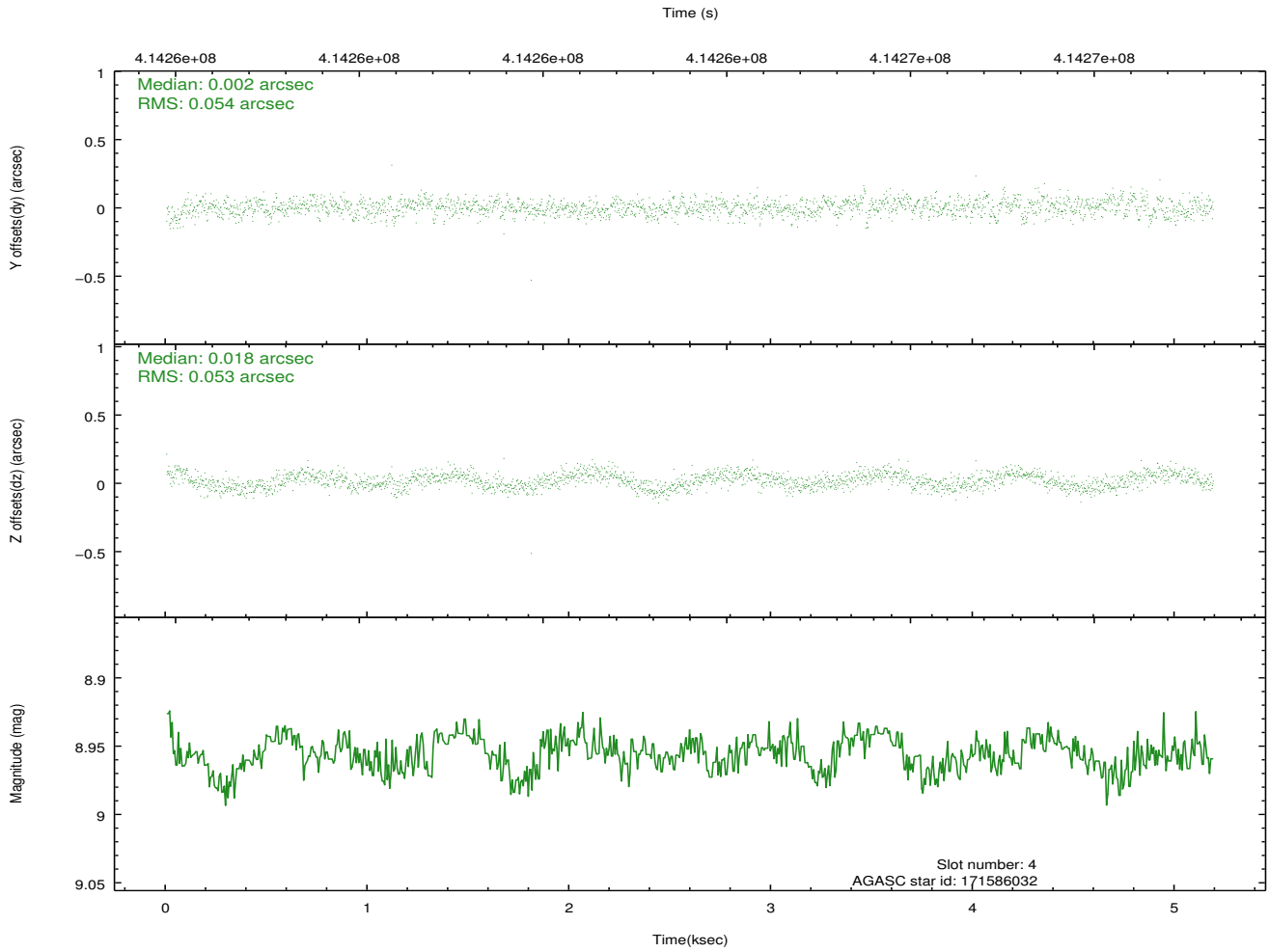
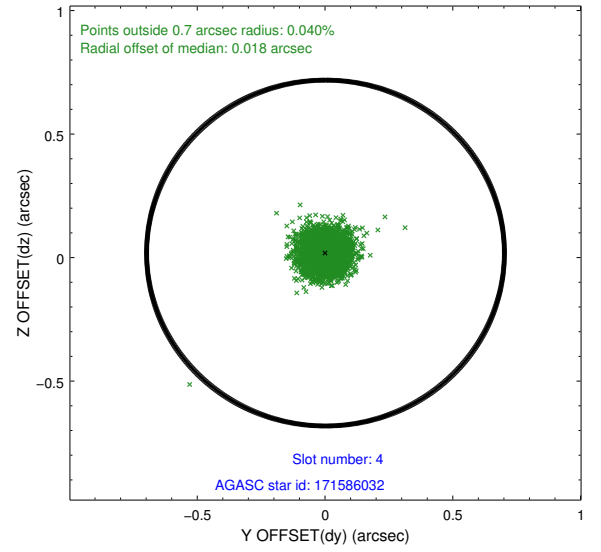
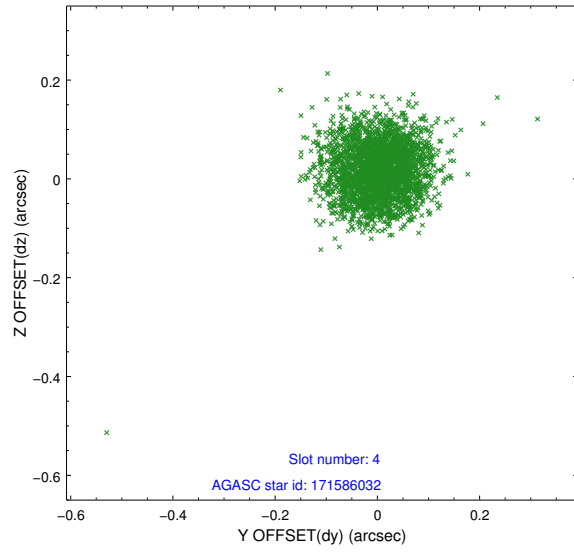
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.92	1265	-0.106	-0.091	0.007	0.012	0.000000	0.000000	-767.98	-1852.76
1	FID	ACIS-S-4	7.00	1265	0.215	0.075	0.005	0.010	0.000000	0.000000	2145.11	54.53
2	FID	ACIS-S-5	7.05	1265	-0.141	0.024	0.006	0.012	0.000000	0.000000	-1819.33	49.54
3	GUIDE	171585880	8.42	2530	0.104	-0.013	0.061	0.102	83.676260	22.176319	-455.28	331.55
4	GUIDE	171586032	8.96	2528	0.002	0.018	0.080	0.124	83.950197	22.083225	75.39	1147.15
5	GUIDE	171597832	9.25	2508	0.051	-0.074	0.083	0.146	83.183230	21.366702	2011.29	-1932.65
6	GUIDE	243941560	8.32	2531	-0.073	-0.018	0.076	0.127	83.733264	22.568598	-1788.16	832.34
7	GUIDE	171586976	8.43	2529	-0.079	0.084	0.063	0.116	83.857953	22.438065	-1238.68	1132.99

2.4 Star Slots

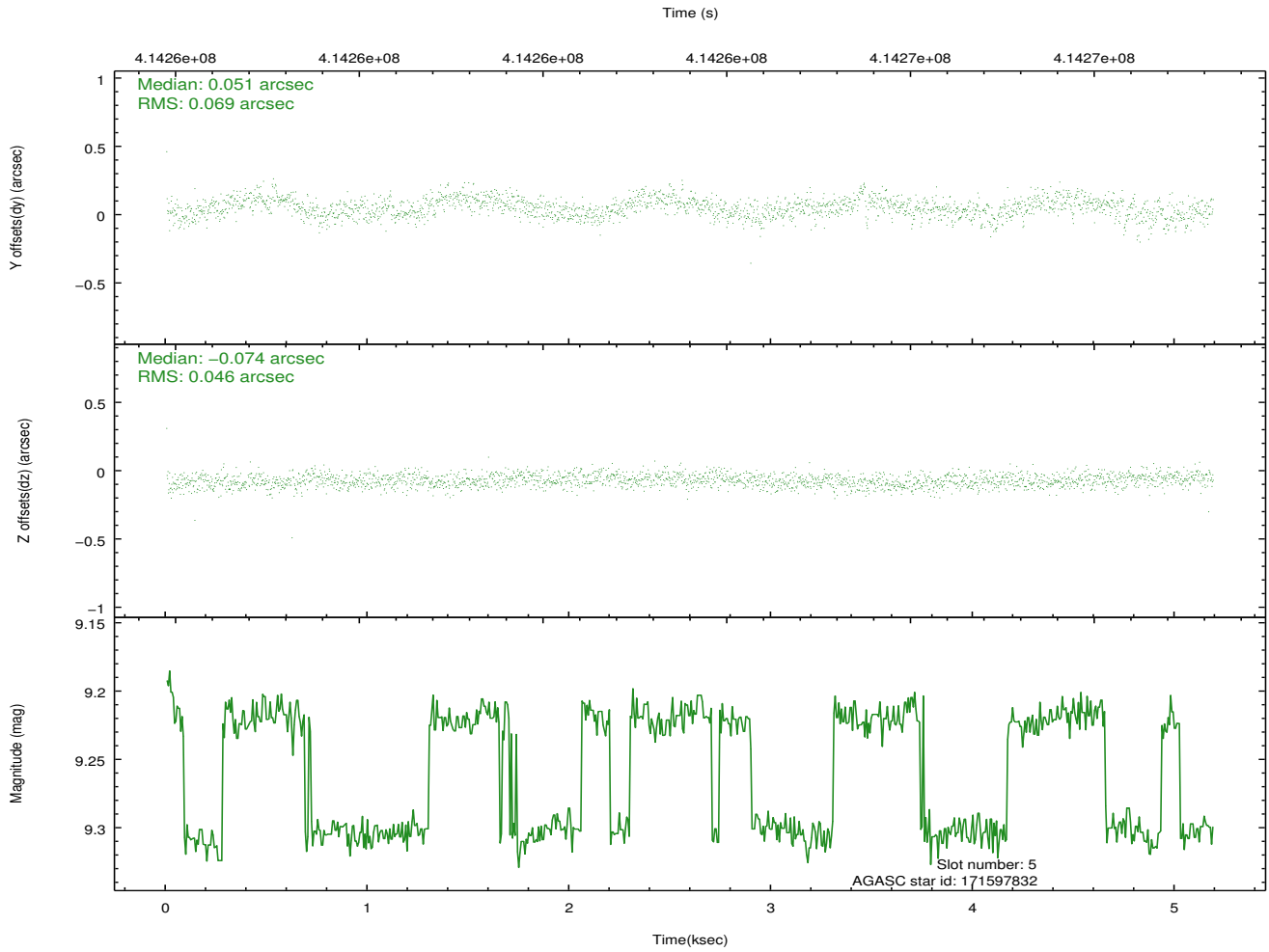
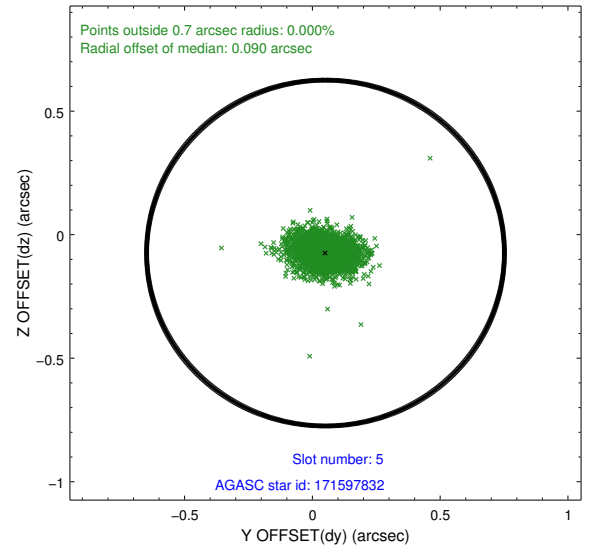
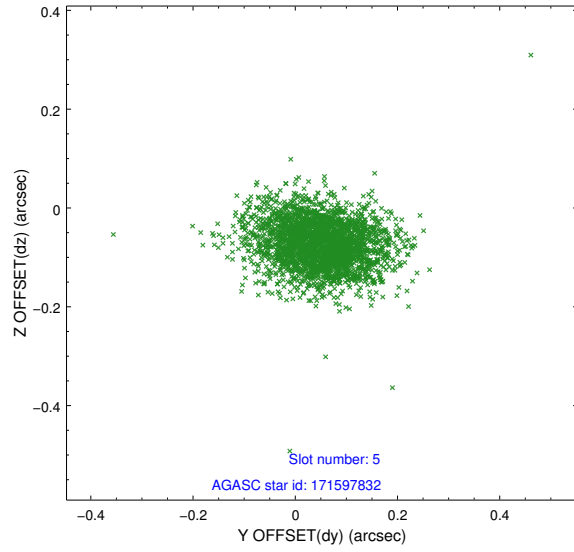
2.4.1 Slot 3



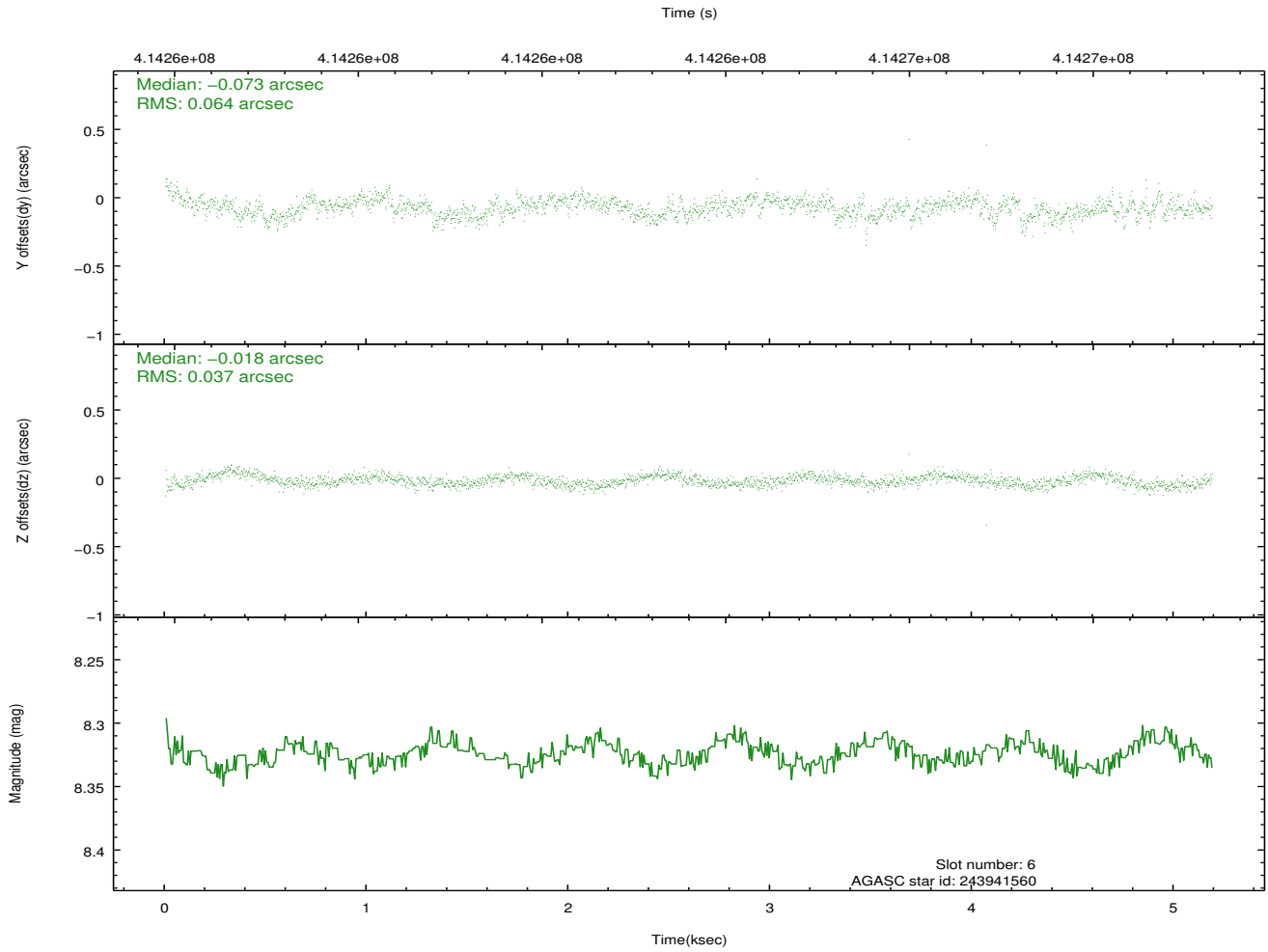
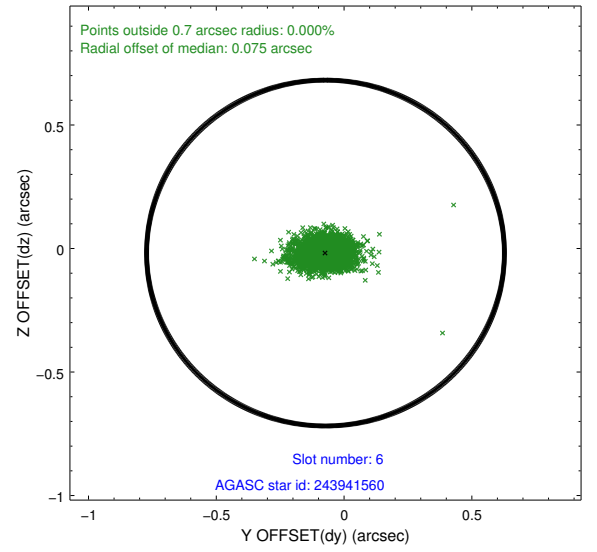
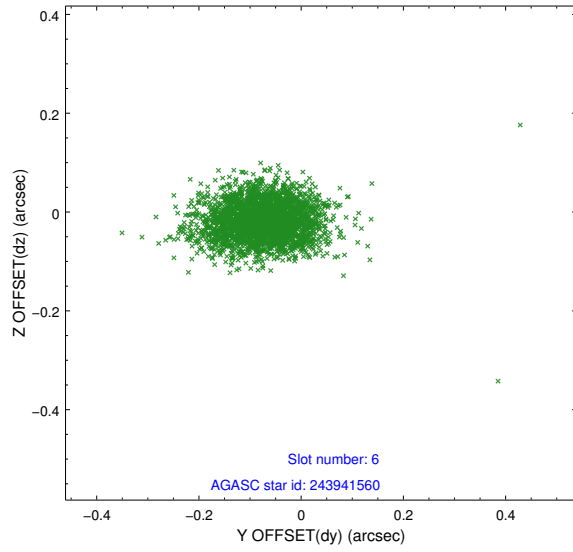
2.4.2 Slot 4



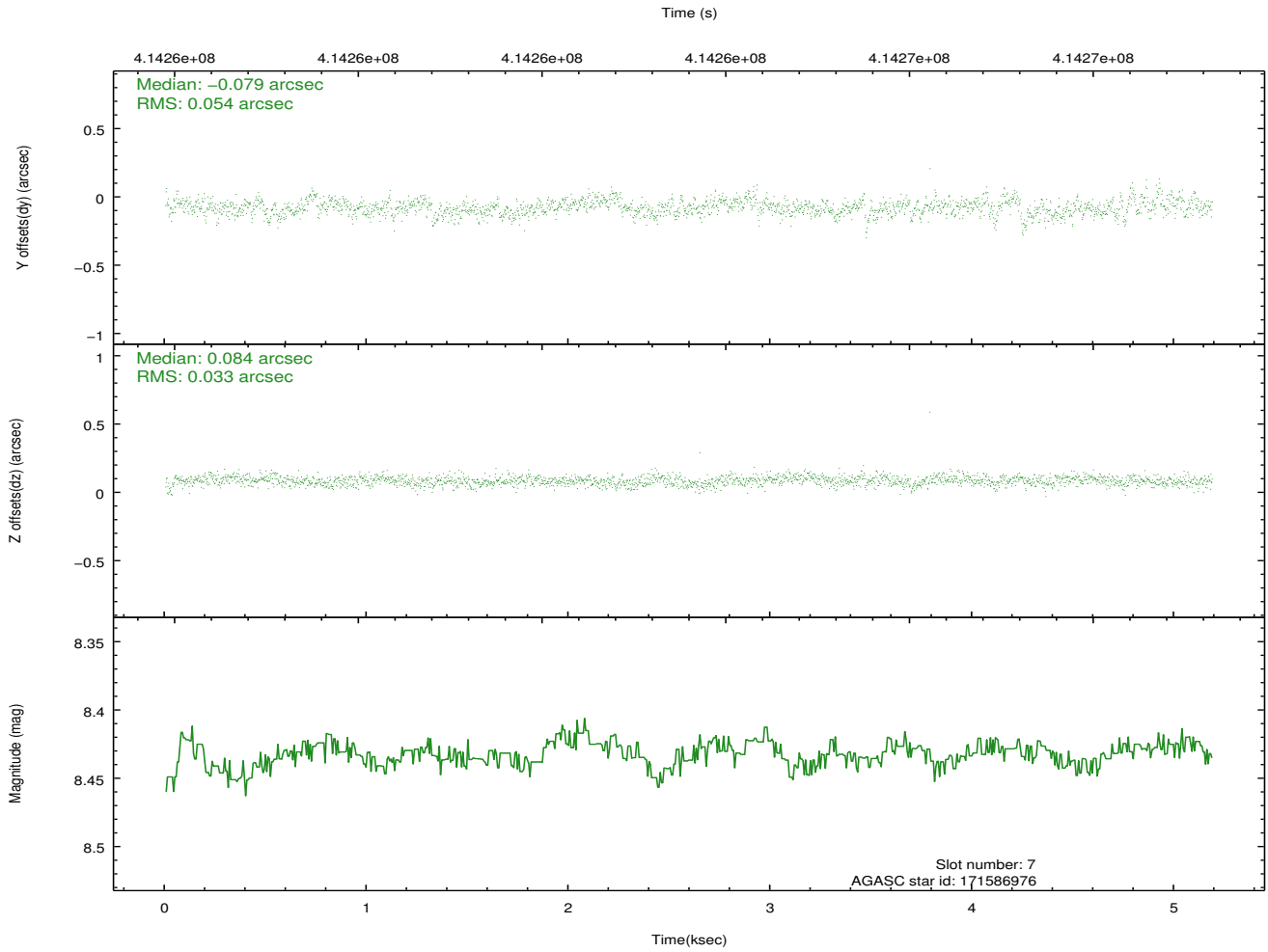
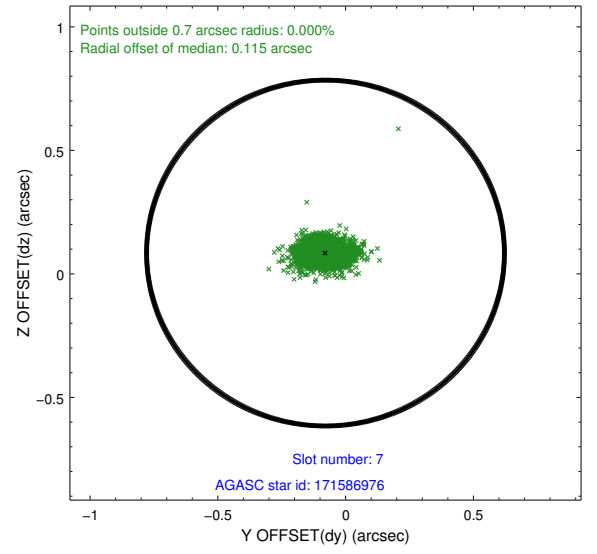
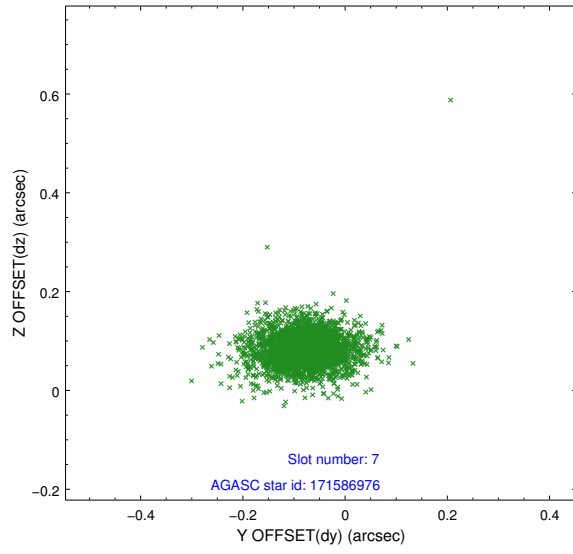
2.4.3 Slot 5



2.4.4 Slot 6

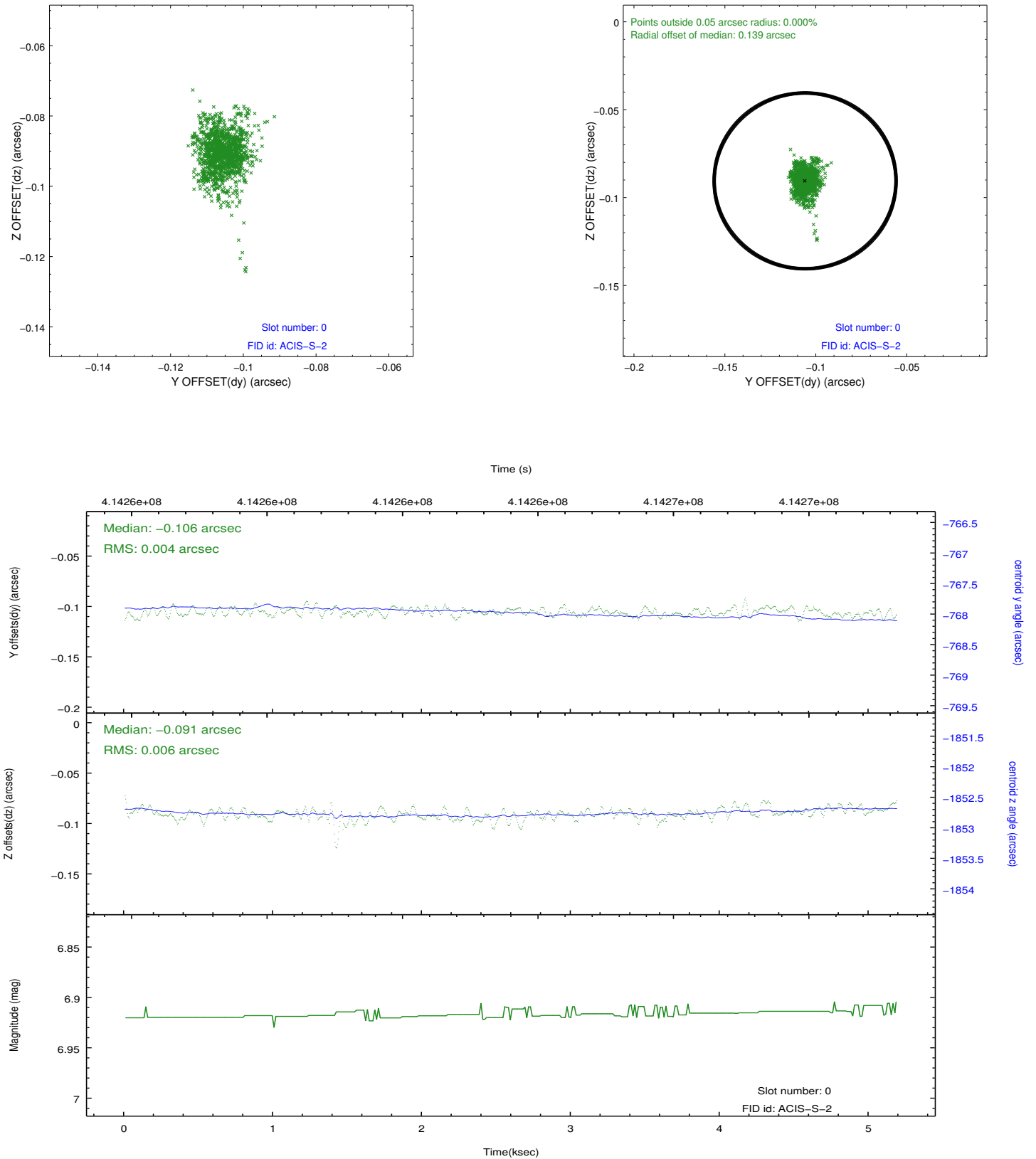


2.4.5 Slot 7

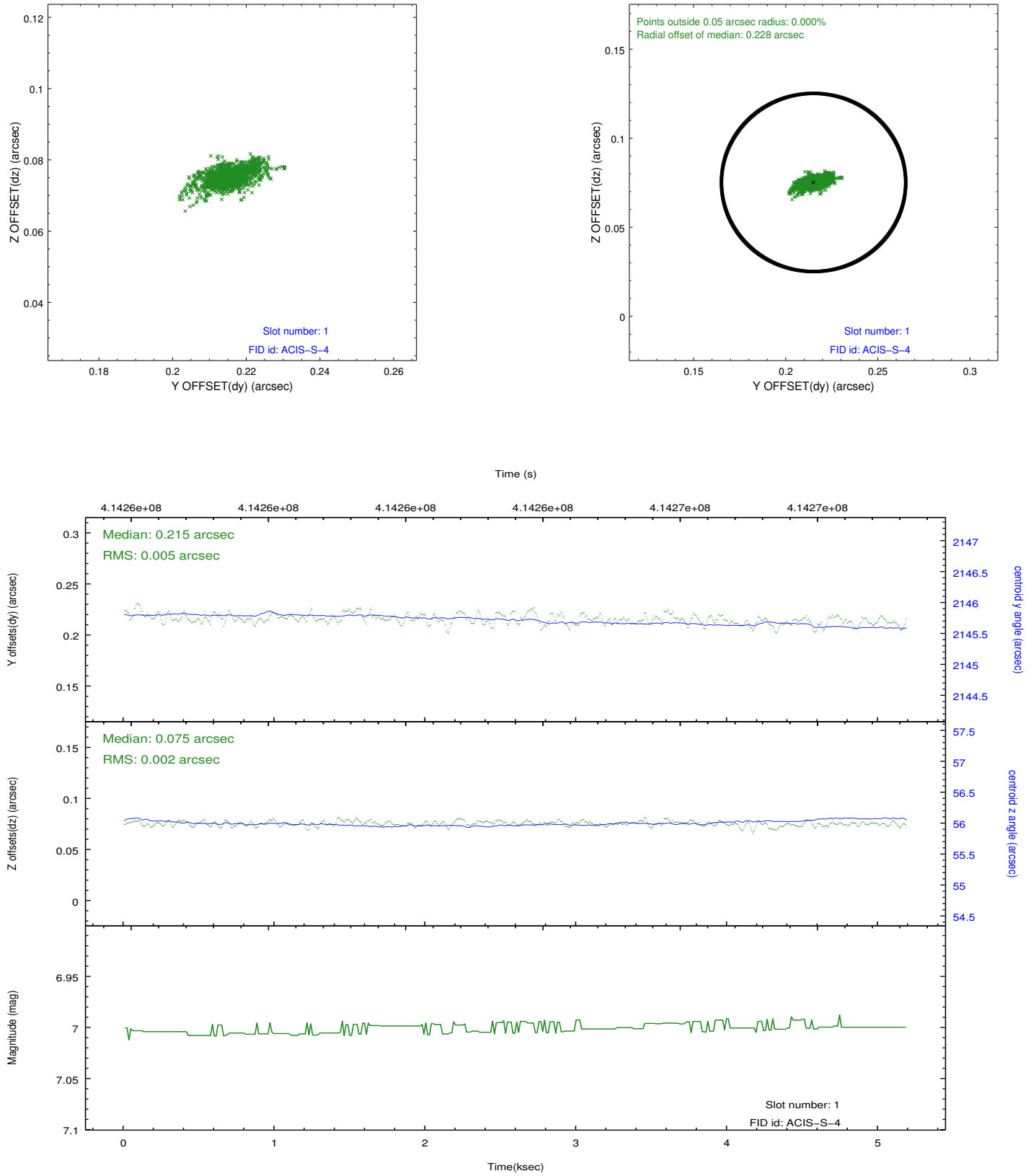


2.5 FID Slots

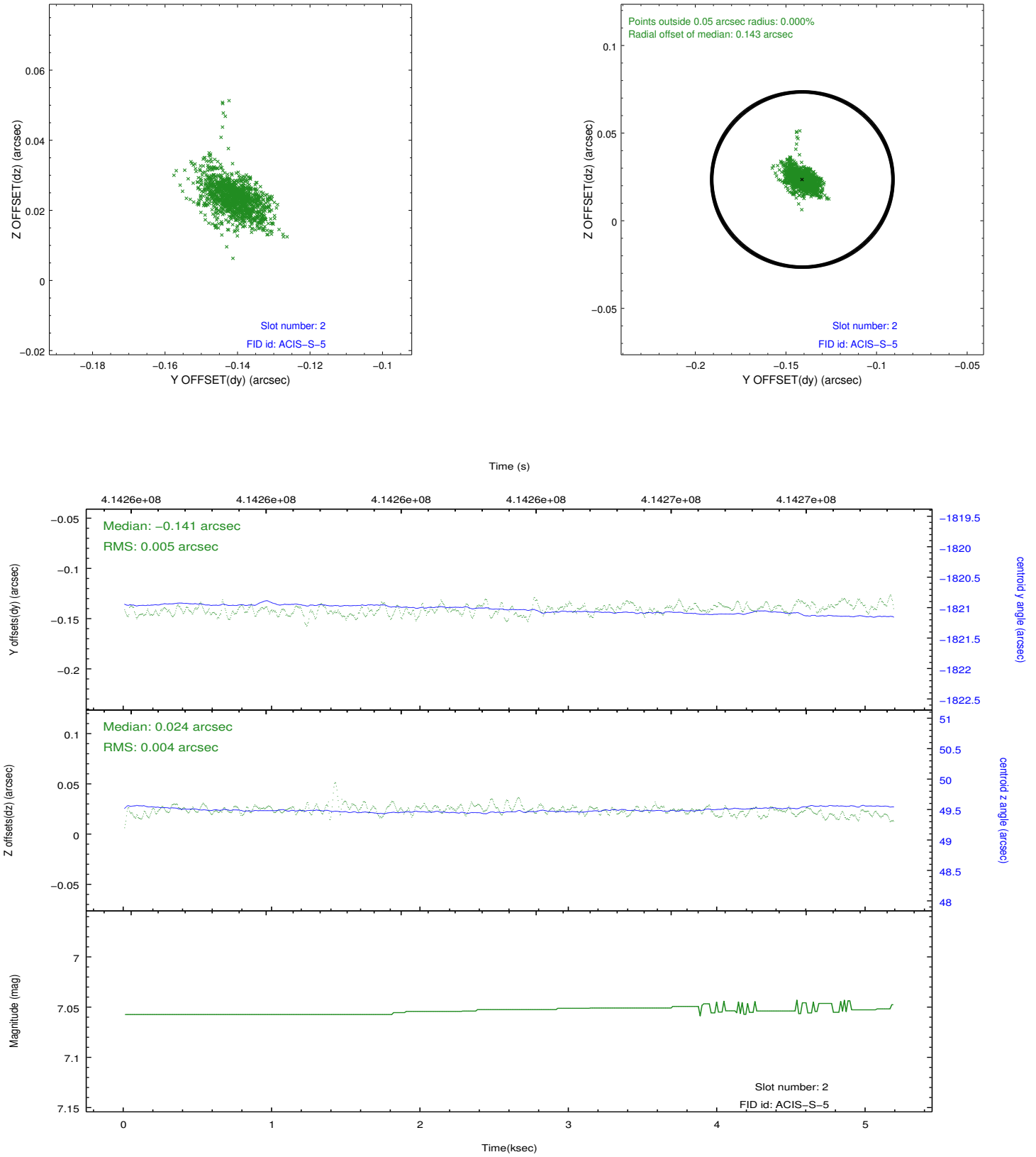
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.02.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5

A.2 Comments

Charge time: ONTIME of 3335.4603956938 seconds is less than 85% of expected scheduled time of 5000 seconds. This is due to telemetry saturation, since the source is so bright. Charge time was adjusted to the elapsed time of 5000s.

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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.