

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 13204 - L2 Version 2
Chandra X-Ray Center

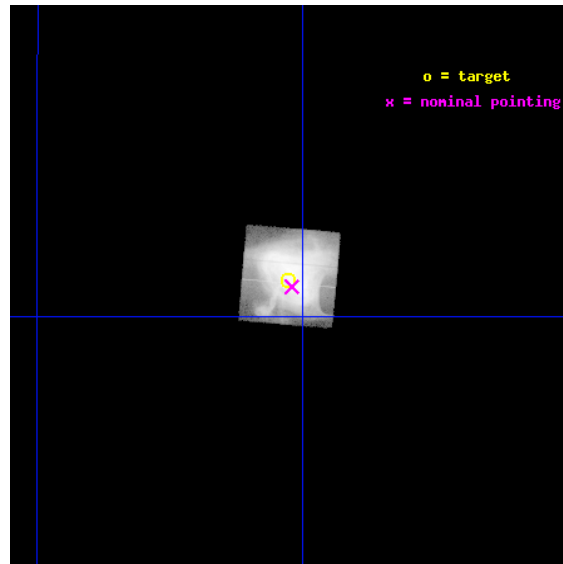
L2 Processing Date : Feb 2 2012

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Parameters	4
2.1.3	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
A	Summary	17
A.1	Status	17
A.2	Comments	17

1 Front

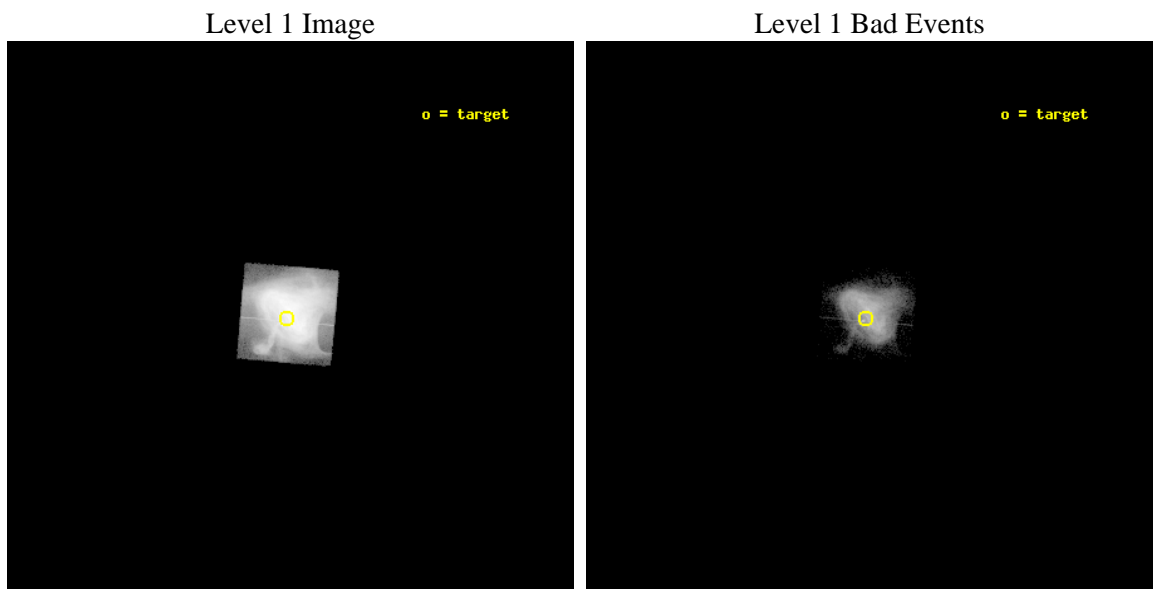
seq_num	501542	Sequence number
obs_id	13204	Observation id
title	Monitoring of the Crab Nebula	Proposal title
observer	Dr. Martin Weisskopf	Principal investigator
object	Crab	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.631667	Observer's specified target RA [deg]
dec_targ	22.015667	Observer's specified target Dec [deg]
ra_nom	83.630246911937	Nominal RA [deg]
dec_nom	22.012771286825	Nominal Dec [deg]
roll_nom	274.94114962479	Nominal Roll [deg]
revision	2	Processing version of data
ontime	3323.6280952692	Sum of GTIs [s]
livetime	579.97907640895	Livetime [s]
ontime7	3323.6280952692	Sum of GTIs [s]
l2events	1697454	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	3323.6280952692	Sum of GTIs [s]
caldsver	4.4.7	 	ontime7	3323.6280952692	Sum of GTIs [s]
date	2012-02-02T04:33:29	Date and time of file creation	l1events	1890122	Number of level 1 events
revision	2	Processing version of data			

2.1.3 Events

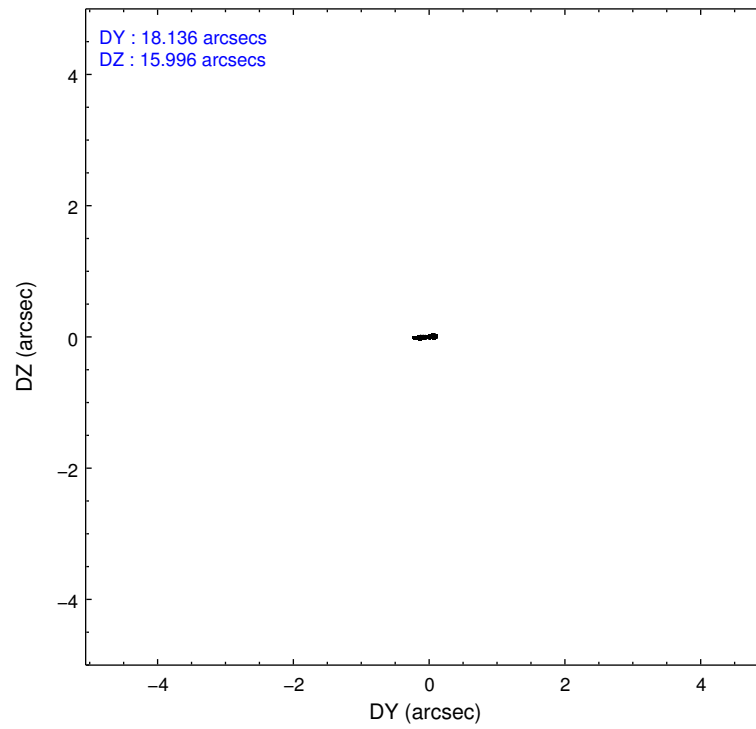
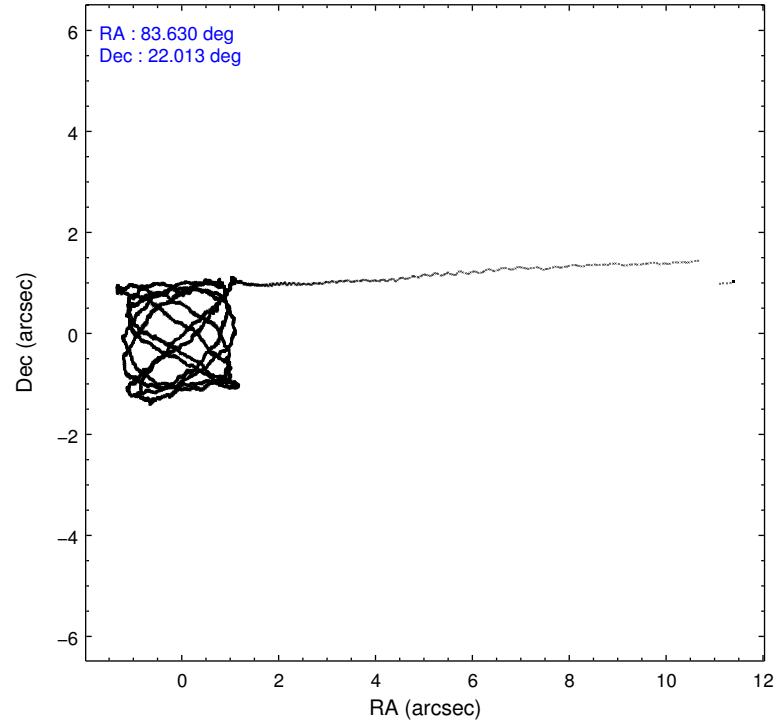
	ccd 7
level 1 events	1890122
rejected events	168246
rejected %	8%

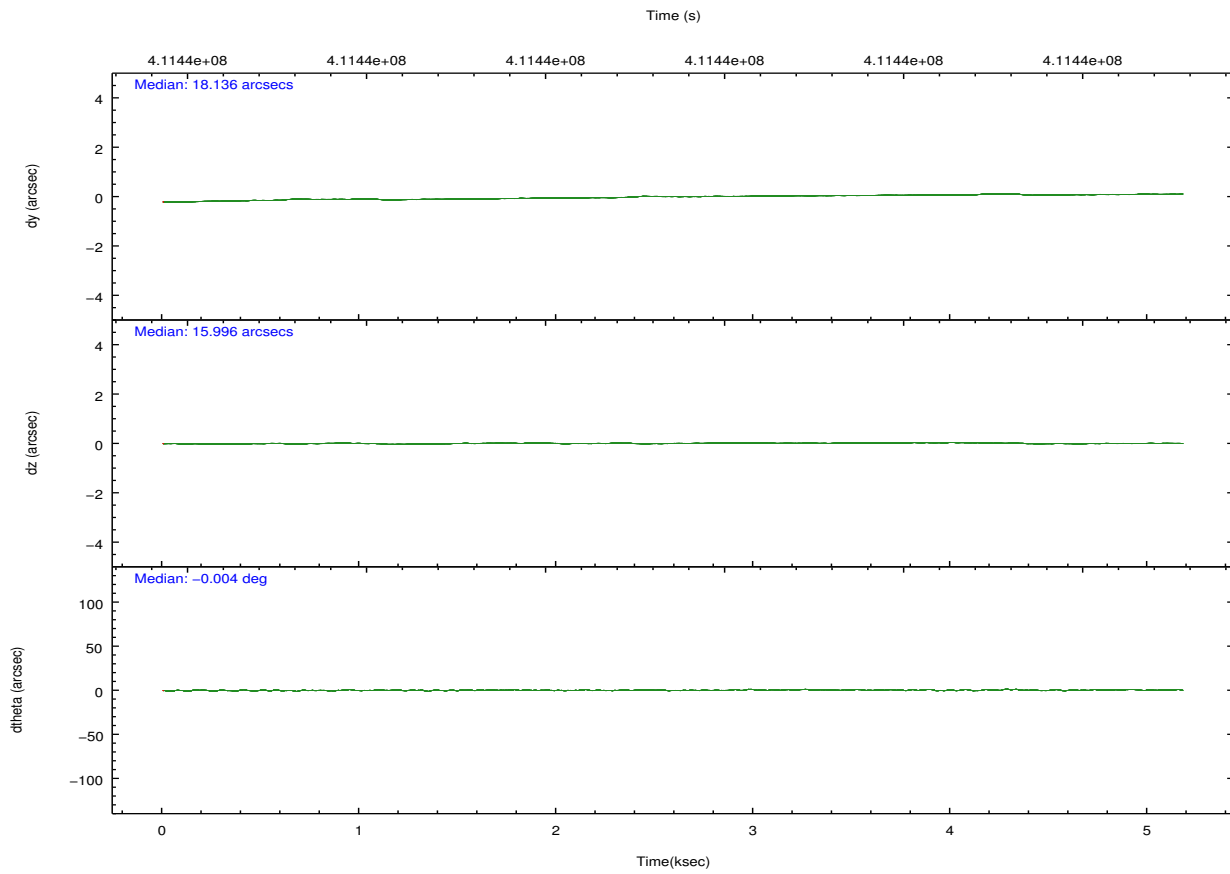
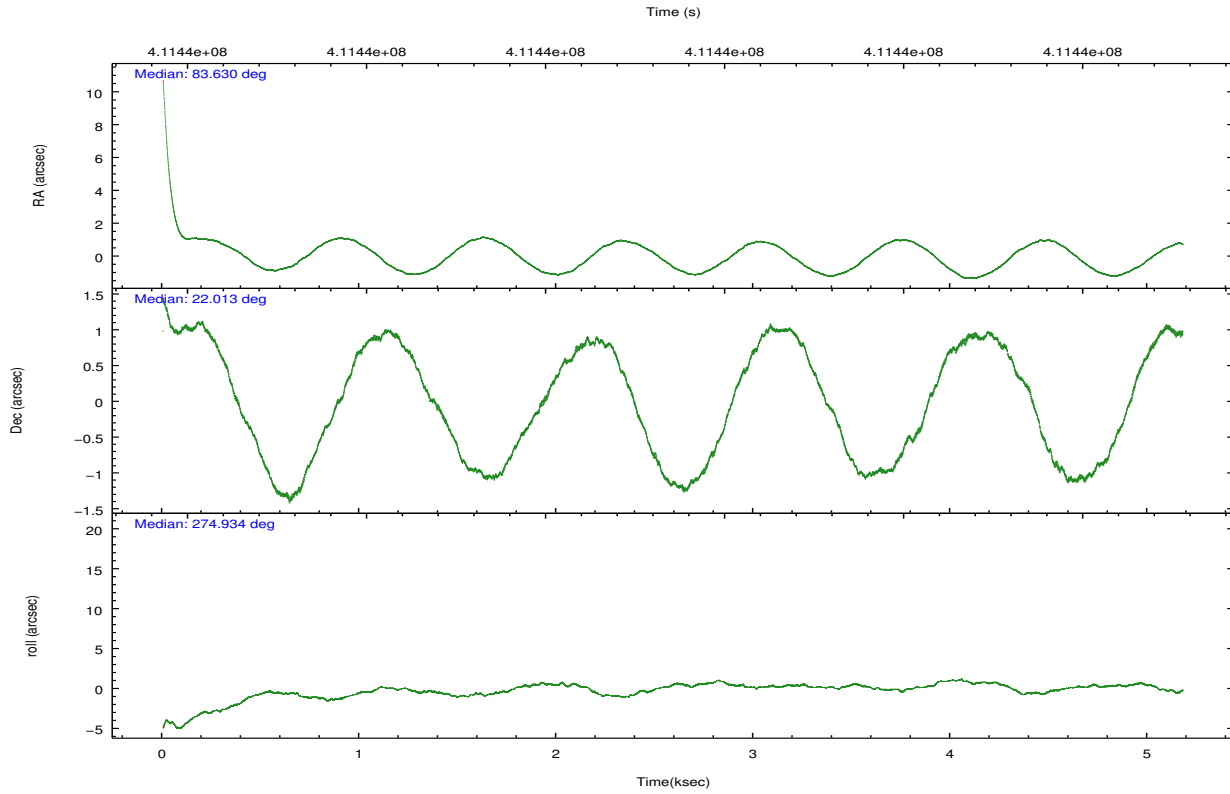
	ccd 7
grade 0 events	381471
	20%
grade 1 events	21406
	1%
grade 2 events	464182
	24%
grade 3 events	195806
	10%
grade 4 events	193290
	10%
grade 5 events	61892
	3%
grade 6 events	487726
	25%
grade 7 events	84349
	4%

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	83.612960	83.63024691193665	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	22.034956	22.01277128682539	Subarray start row	95	95
[deg] Pointing Roll	274.790991	274.9411496247932	Subarray row count	300	300
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	0.2
[mm] SIM translation stage pos	-184.316523	-184.3093688655542			
[mm] SIM translation stage offset	-5.816	-5.823153717453579			
[s] Observation start time (MET)	411437304.184000	411436094.31004			
Observation start date	2011-01-15T00:07:18	2011-01-14T23:48:14			
[s] Observation end time (MET)	411442304.184000	411443804.36044			
Observation end date	2011-01-15T01:30:38	2011-01-15T01:56:44			
Read mode	TIMED	TIMED			

2.3 Aspect



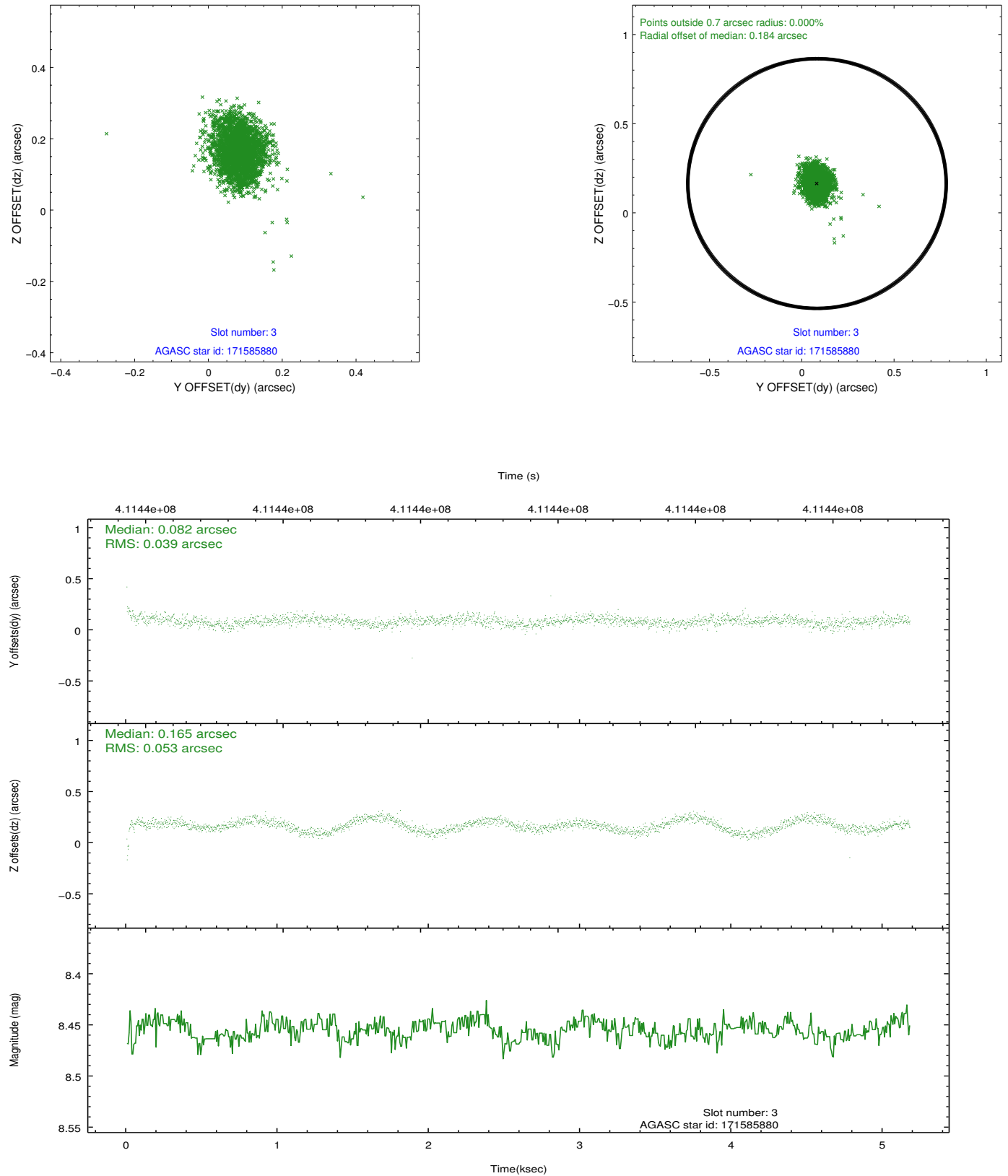


Slot Statistics

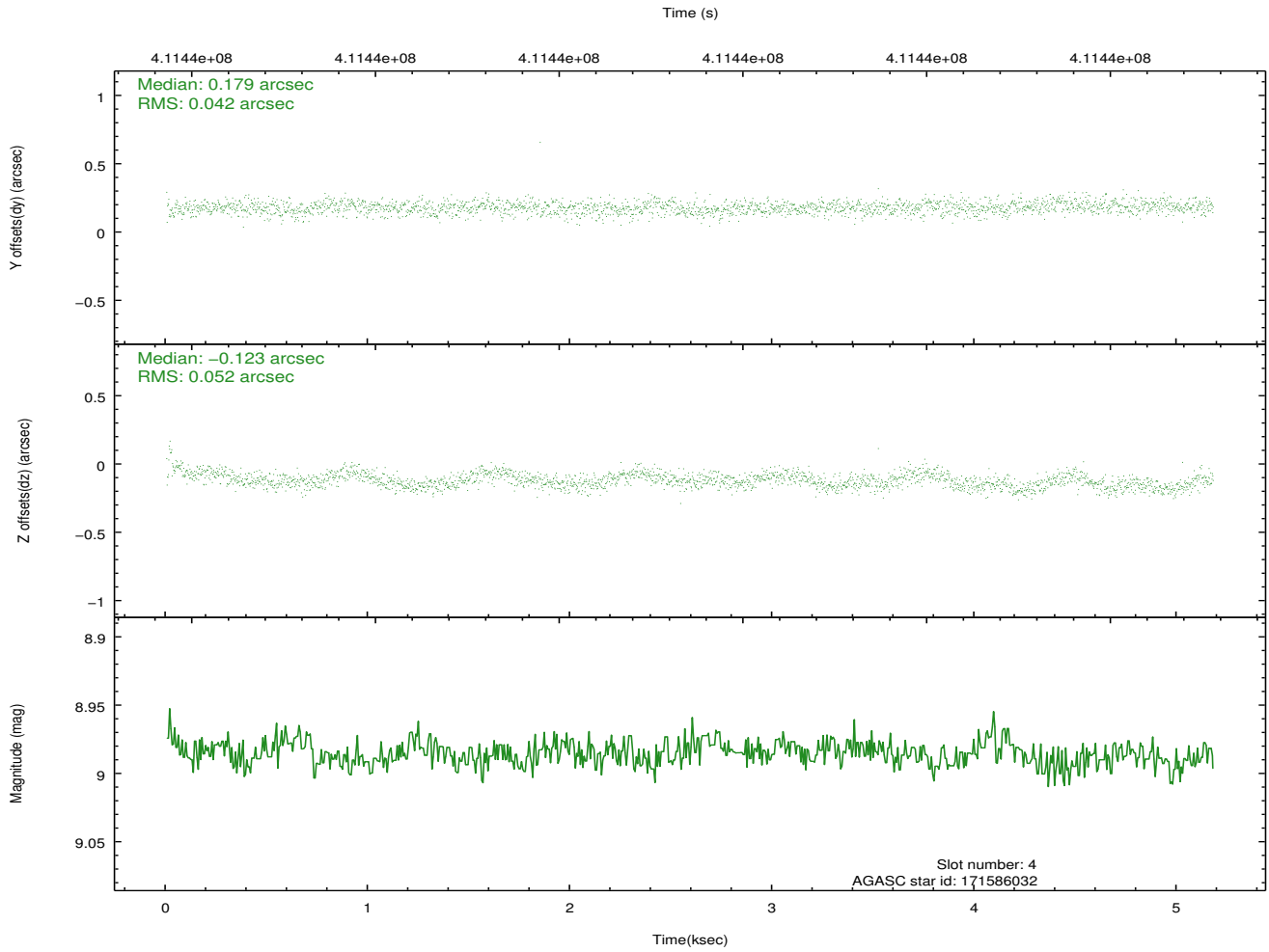
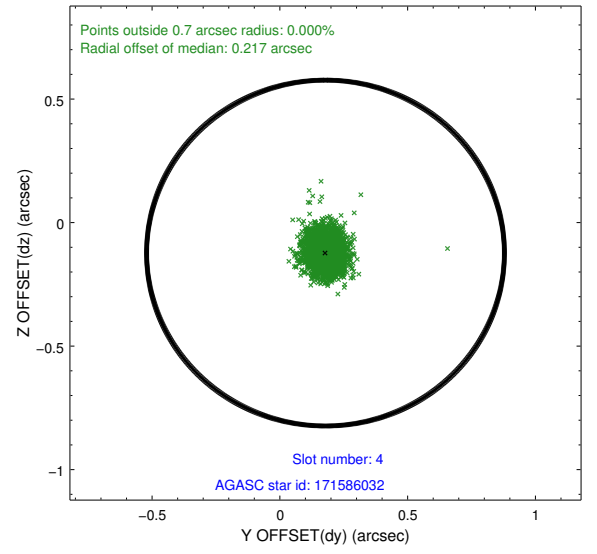
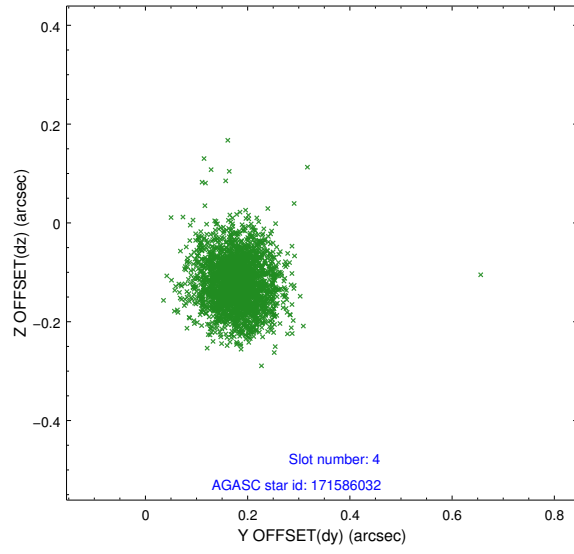
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.93	1263	-0.078	-0.067	0.007	0.010	0.000000	0.000000	-770.84	-1857.50
1	FID	ACIS-S-4	7.00	1263	0.152	0.055	0.008	0.014	0.000000	0.000000	2142.14	49.78
2	FID	ACIS-S-5	7.05	1263	-0.105	0.019	0.009	0.015	0.000000	0.000000	-1822.20	44.75
3	GUIDE	171585880	8.46	2523	0.082	0.165	0.069	0.108	83.676260	22.176319	-489.12	252.93
4	GUIDE	171586032	8.99	2524	0.179	-0.123	0.070	0.112	83.950197	22.083225	-80.22	1135.67
5	GUIDE	171597832	9.18	2524	0.013	0.052	0.092	0.149	83.183230	21.366702	2275.58	-1635.71
6	GUIDE	171721904	9.17	2523	-0.053	-0.143	0.110	0.170	84.272676	22.116922	-114.07	2216.79
7	GUIDE	243941560	8.36	2525	-0.224	0.055	0.048	0.074	83.733264	22.568598	-1880.95	559.60

2.4 Star Slots

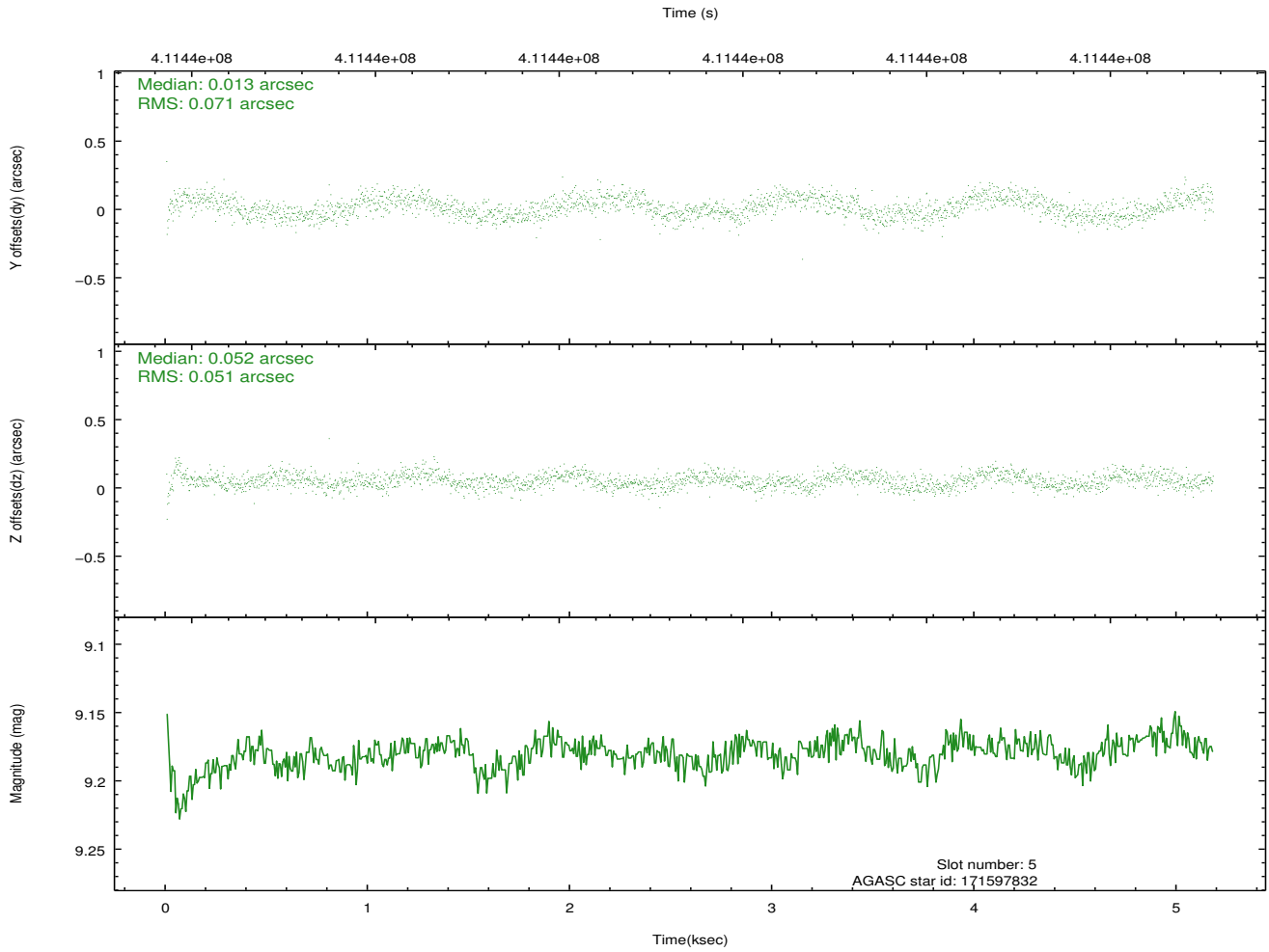
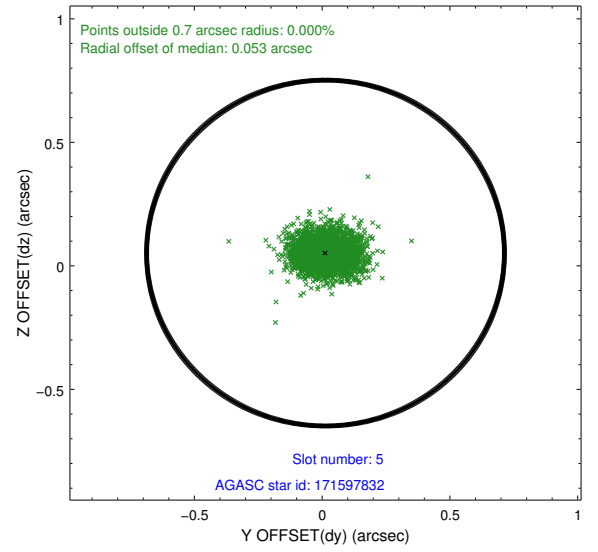
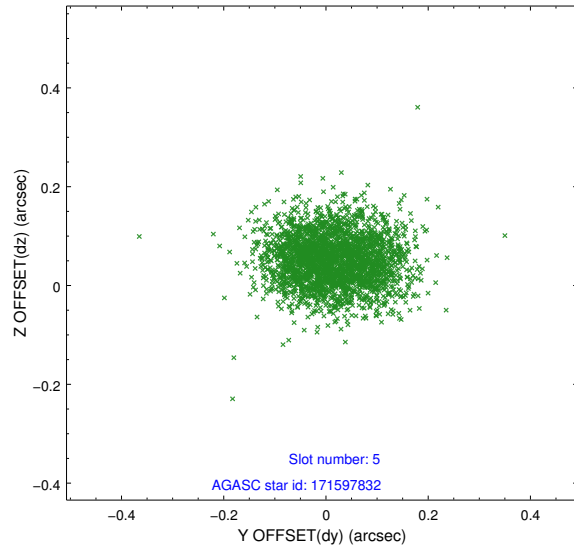
2.4.1 Slot 3



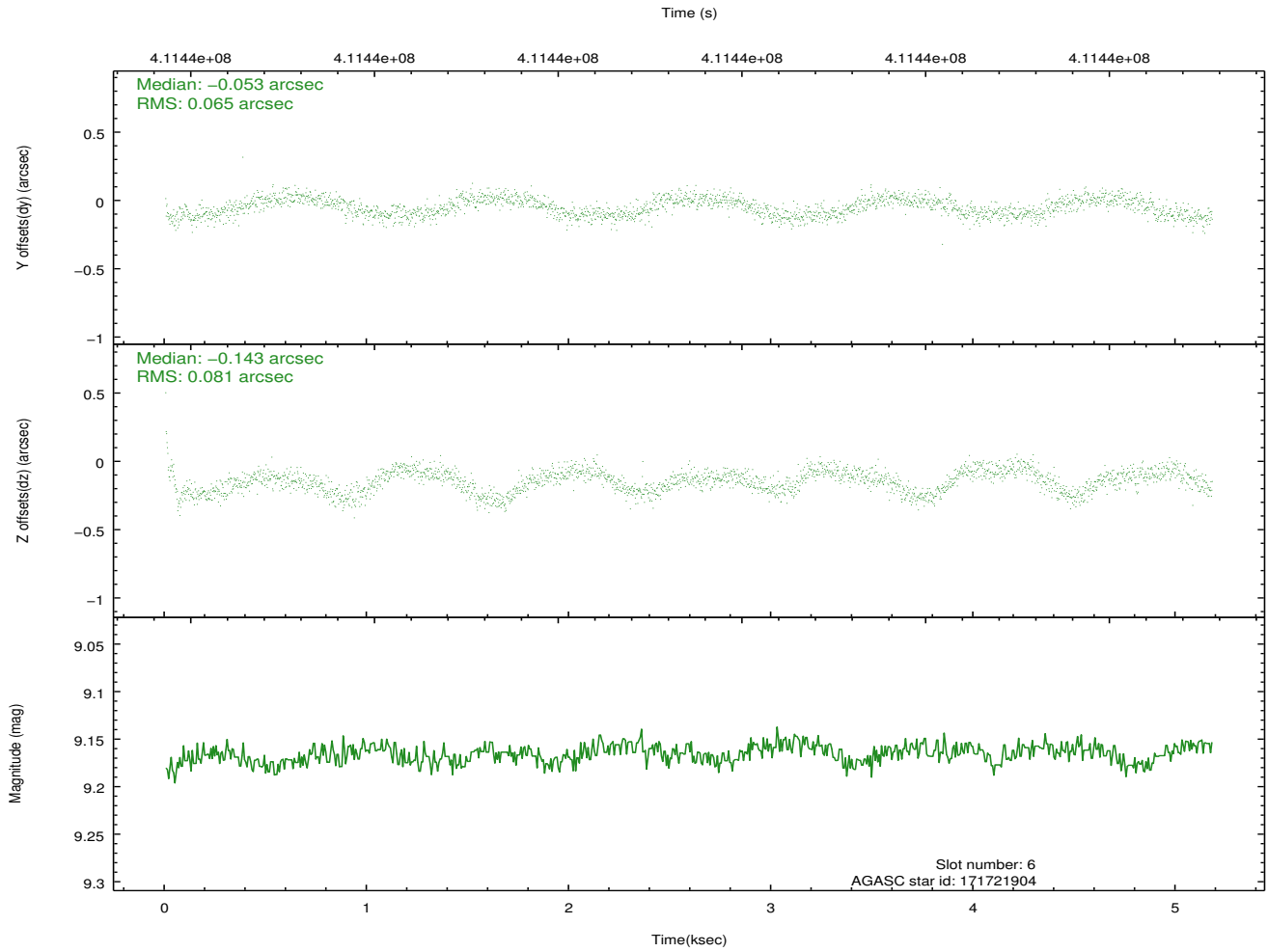
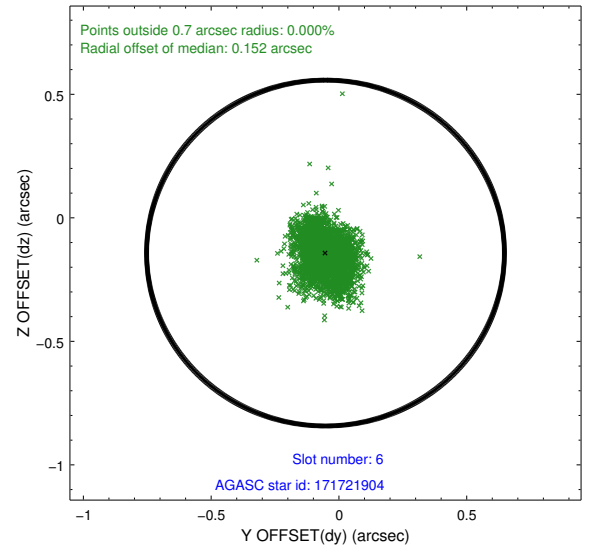
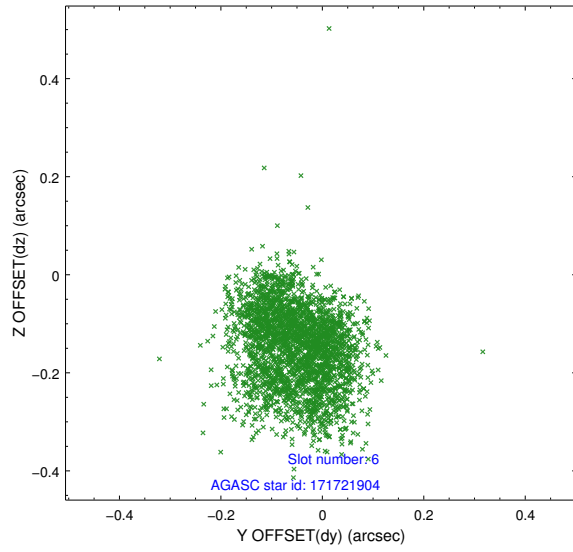
2.4.2 Slot 4



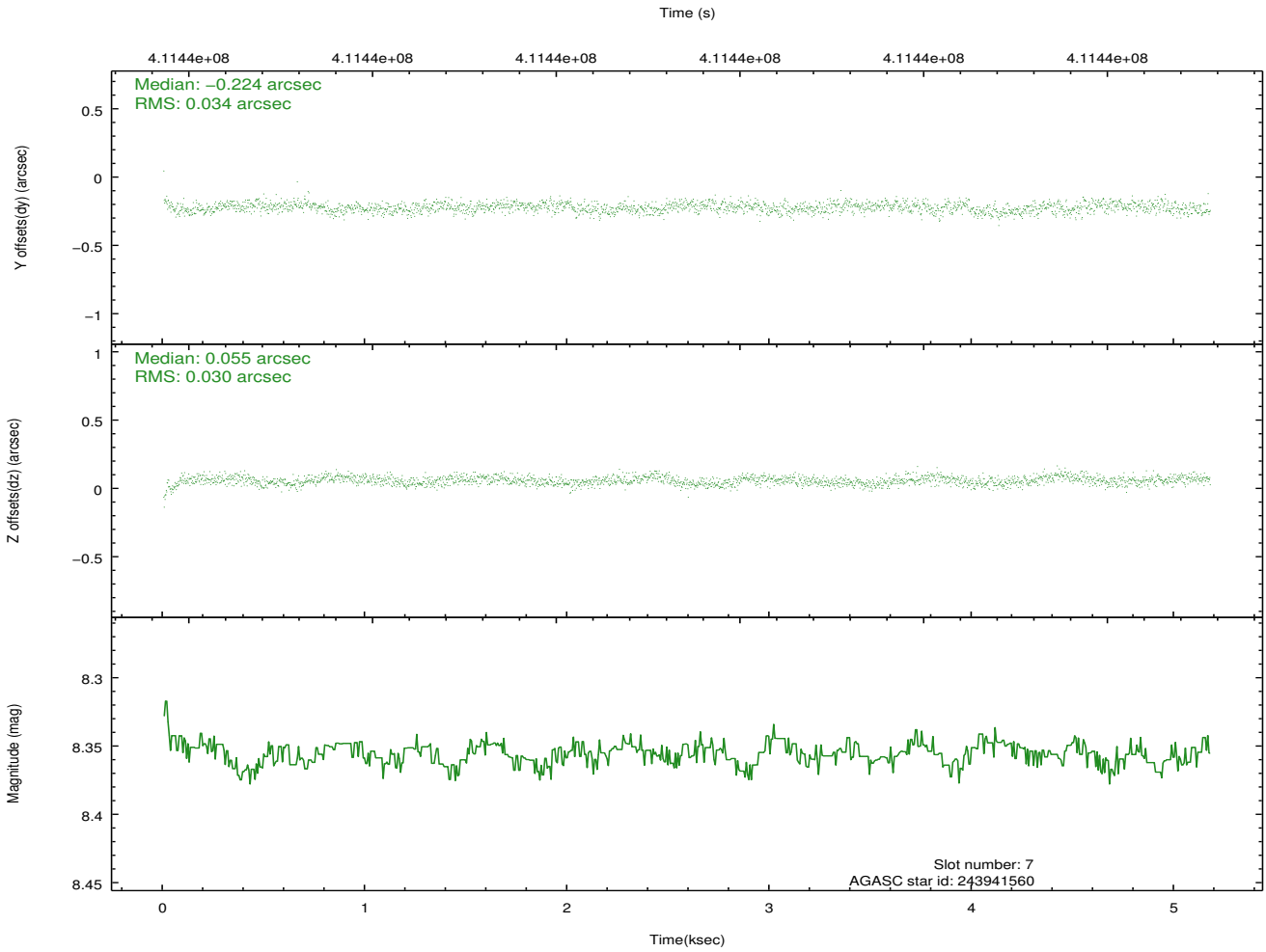
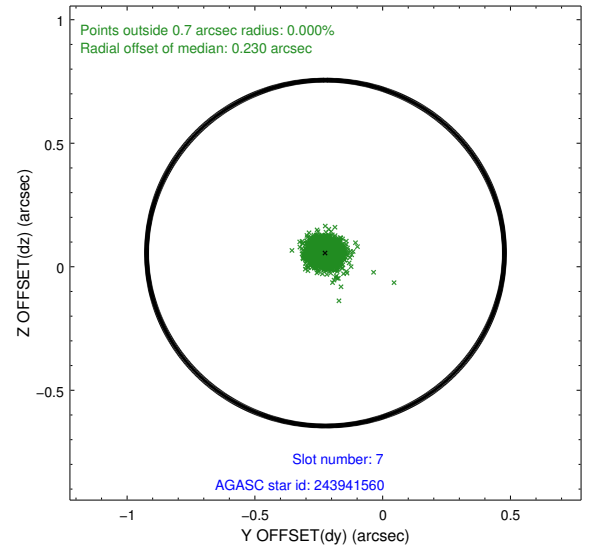
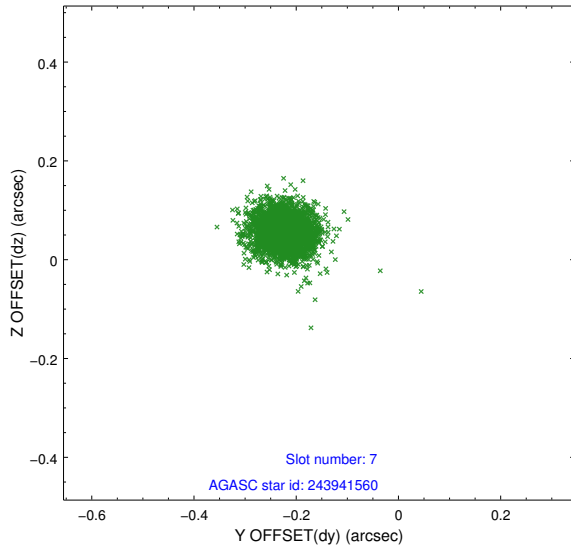
2.4.3 Slot 5



2.4.4 Slot 6

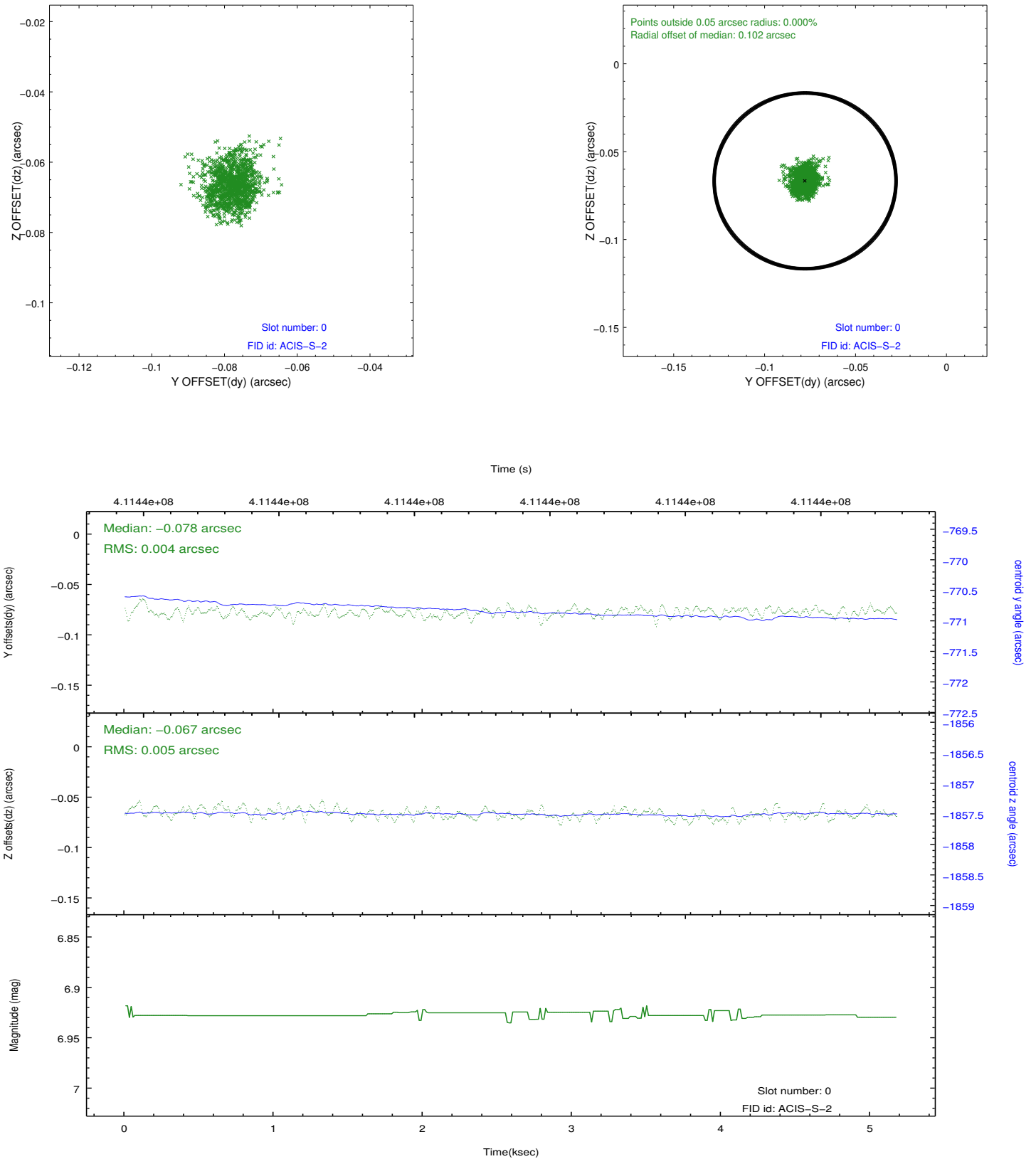


2.4.5 Slot 7

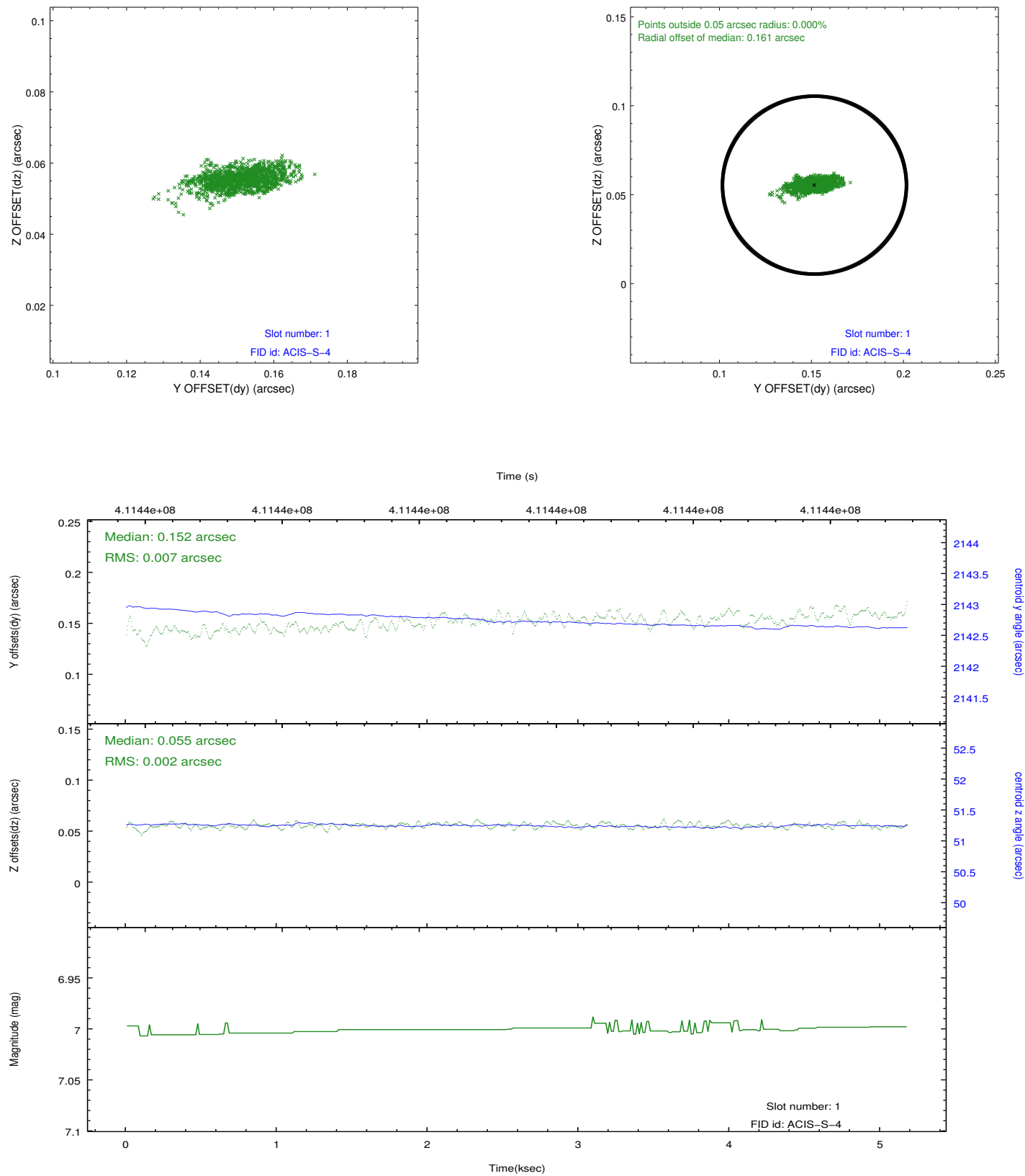


2.5 FID Slots

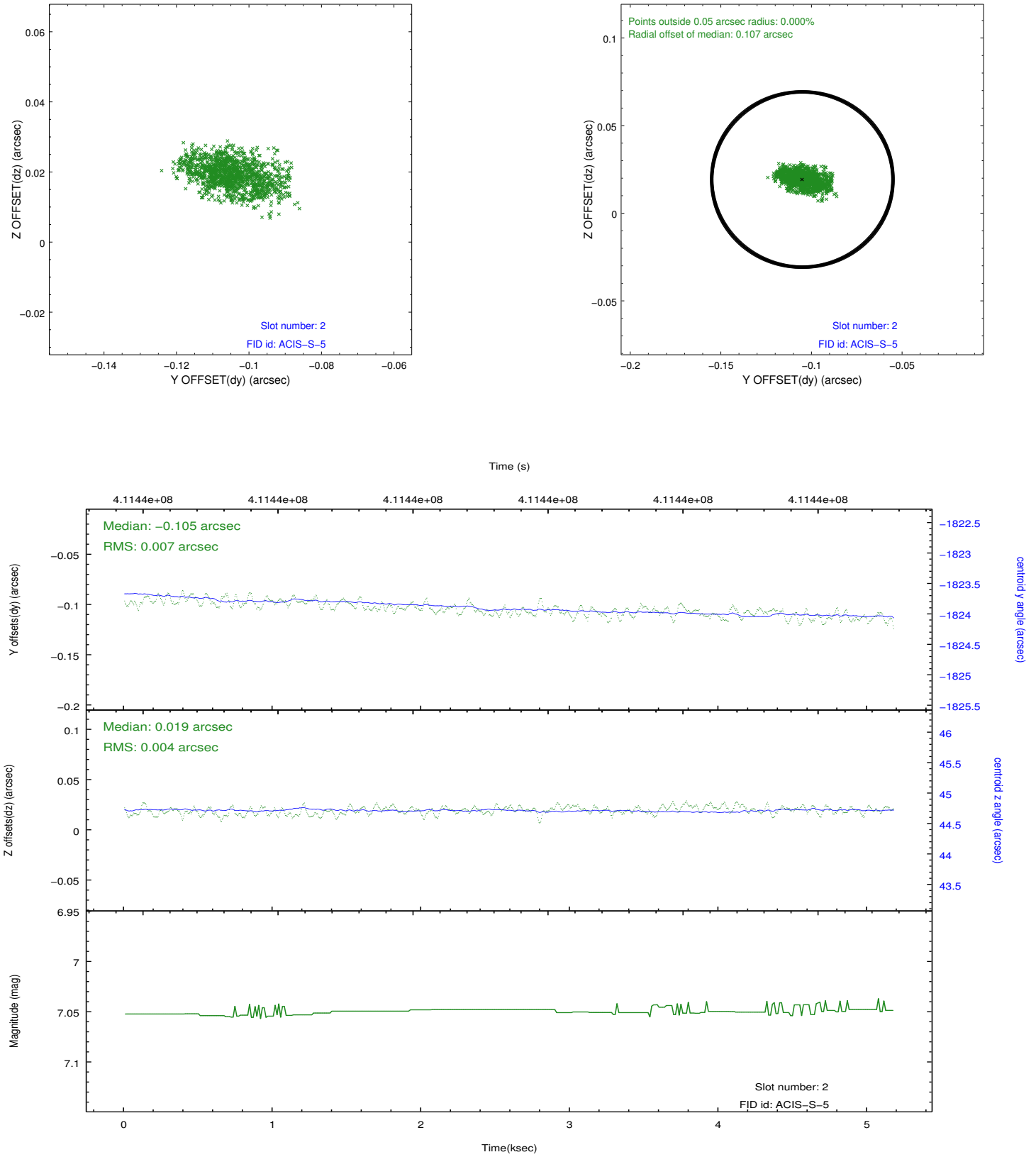
2.5.1 Slot 0



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)	2012.02.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.3236280962825

A.2 Comments

This observation has significant telemetry saturation. The ONTIME is therefore less than the requested 5000 seconds.

=== A non-standard dither amplitude of 1 arcsec was used.

=====

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.