

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 13153 - L2 Version 2
Chandra X-Ray Center

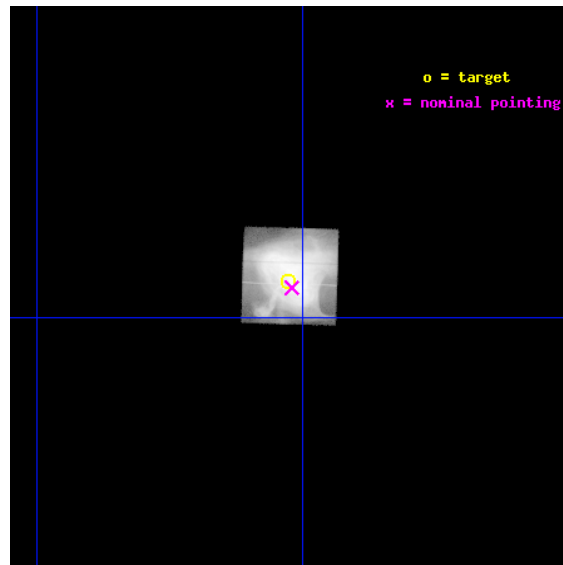
L2 Processing Date : Feb 8 2012

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1 Front

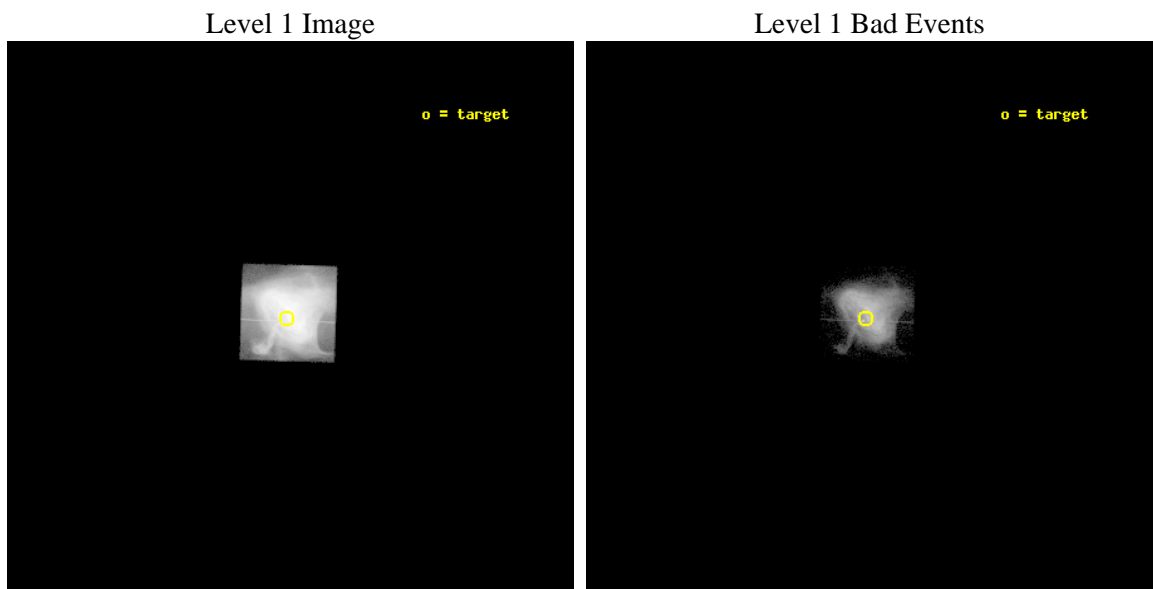
seq_num	501539	Sequence number
obs_id	13153	Observation id
title	Study of spatial structure associated with a gamma-ray enhancement of the Crab	Proposal title
observer	Dr. Martin Weisskopf	Principal investigator
object	Crab Nebula	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.631667	Observer's specified target RA [deg]
dec_targ	22.015667	Observer's specified target Dec [deg]
ra_nom	83.630025463053	Nominal RA [deg]
dec_nom	22.012838499113	Nominal Dec [deg]
roll_nom	271.77535641283	Nominal Roll [deg]
revision	2	Processing version of data
ontime	6917.9534741044	Sum of GTIs [s]
livetime	1208.0385349255	Livetime [s]
ontime7	6917.9534741044	Sum of GTIs [s]
l2events	3501130	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	10000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	6917.9534741044	Sum of GTIs [s]
caldbver	4.4.7	 	ontime7	6917.9534741044	Sum of GTIs [s]
date	2012-02-08T23:31:37	Date and time of file creation	l1events	3892025	Number of level 1 events
revision	2	Processing version of data			

2.1.3 Events

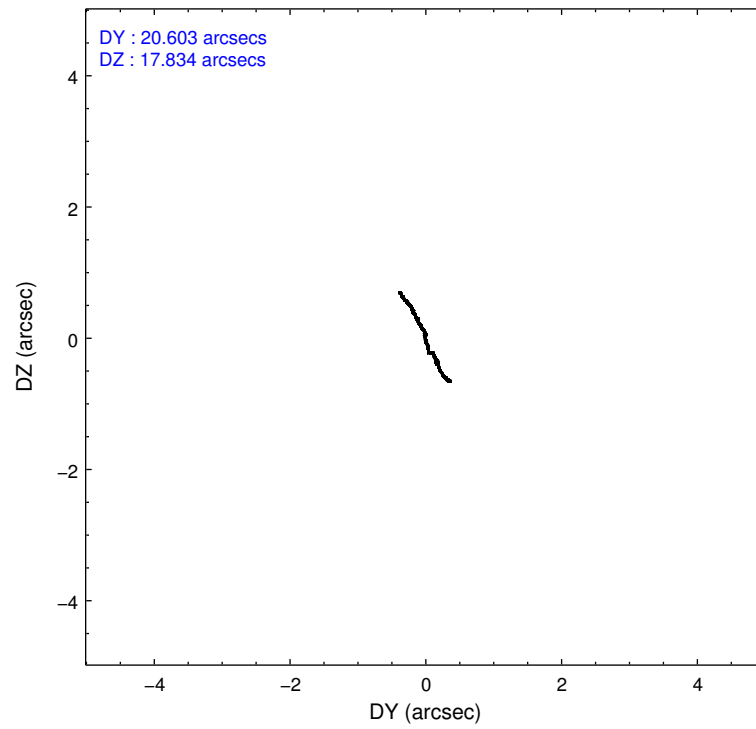
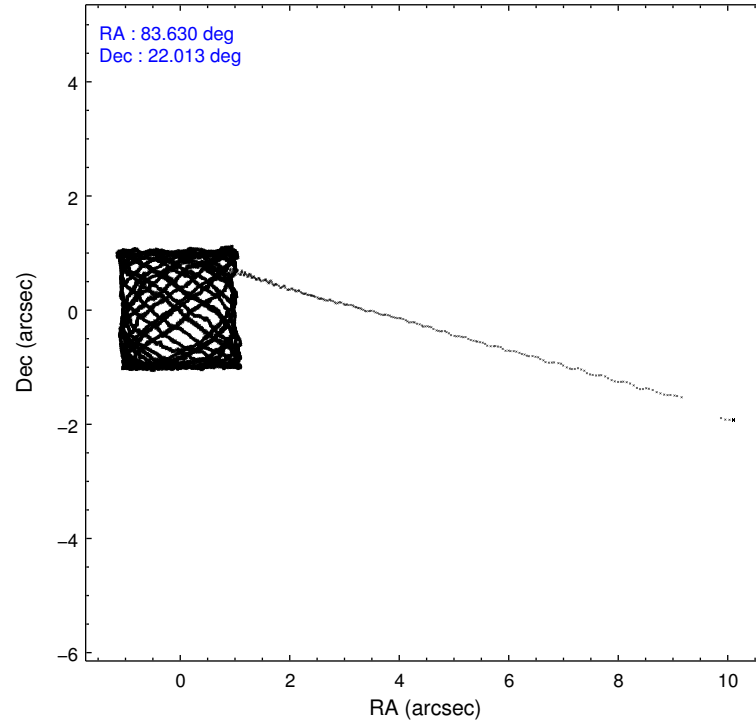
	ccd 7
level 1 events	3892025
rejected events	341858
rejected %	8%

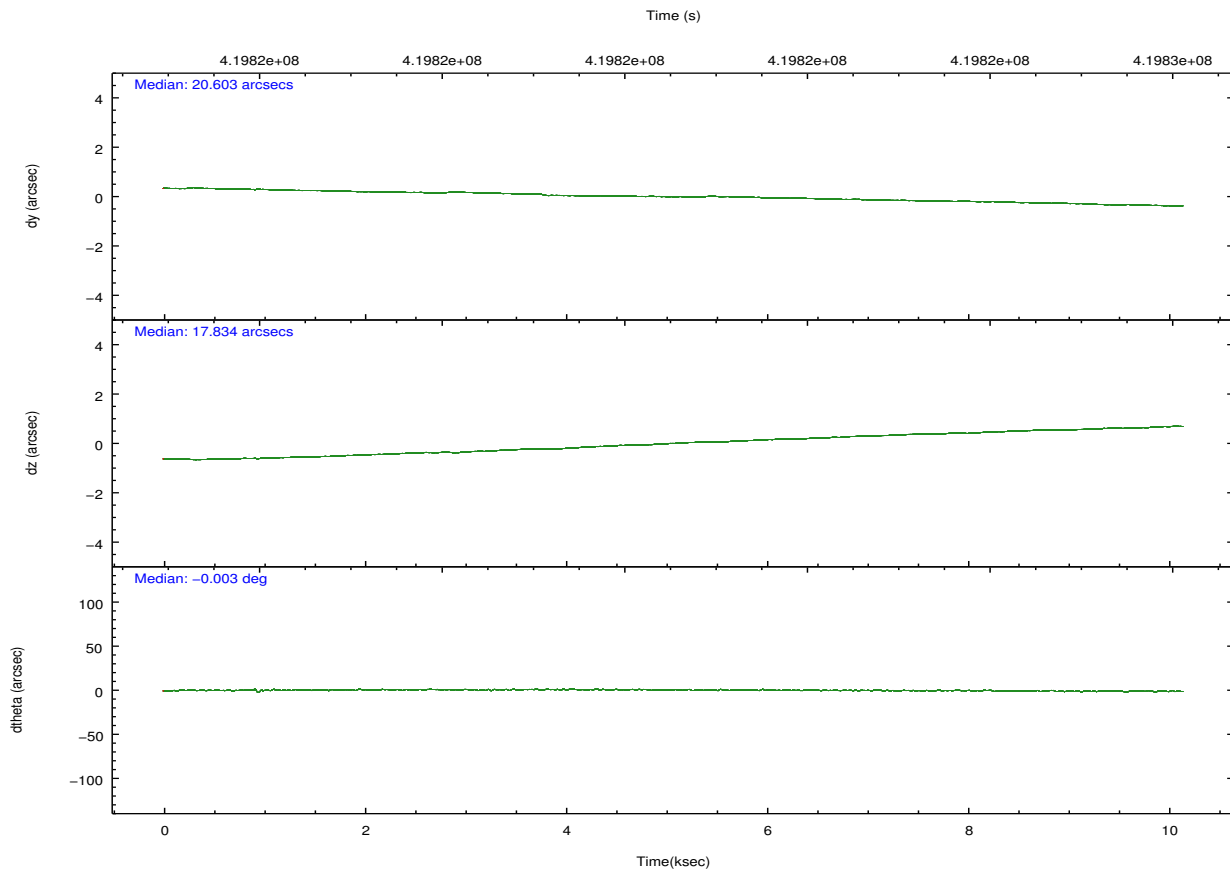
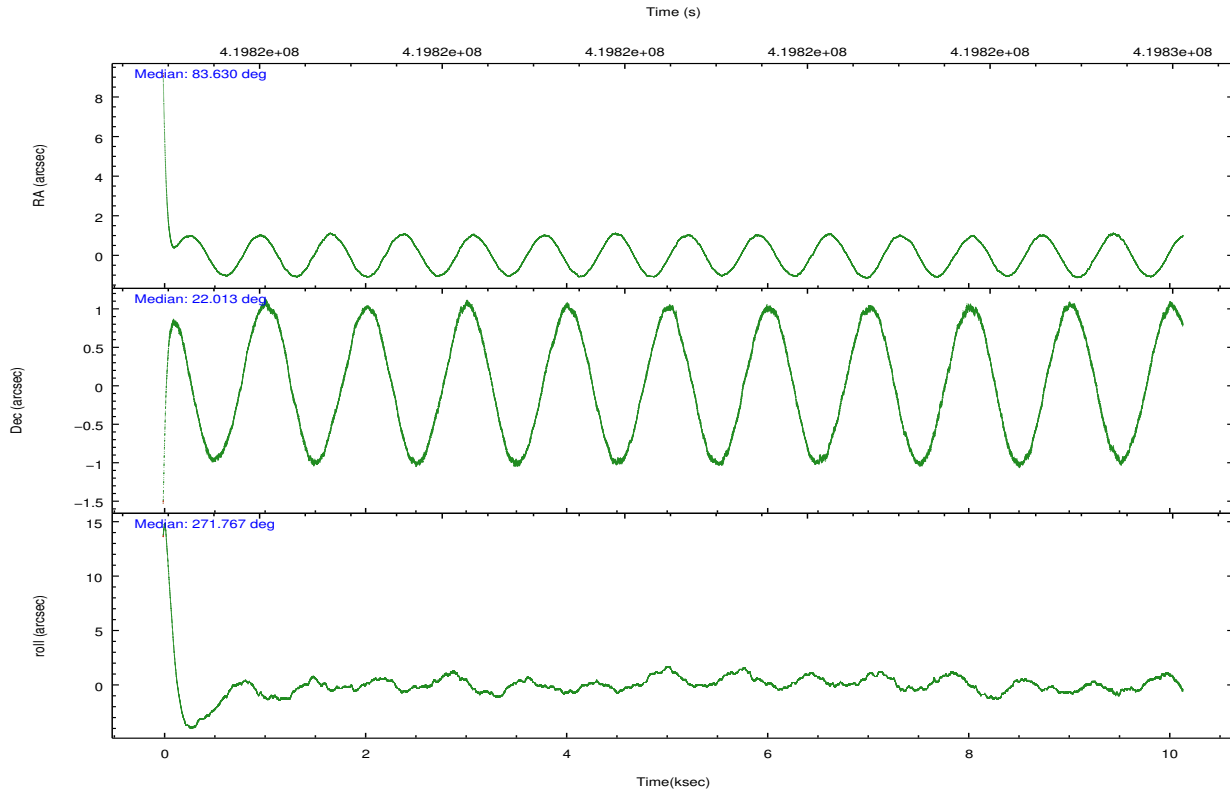
	ccd 7
grade 0 events	779477
	20%
grade 1 events	43791
	1%
grade 2 events	953917
	24%
grade 3 events	403971
	10%
grade 4 events	397387
	10%
grade 5 events	125525
	3%
grade 6 events	1016026
	26%
grade 7 events	171931
	4%

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	83.614146	83.63002546305292	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	22.035887	22.0128384991133	Subarray start row	75	75
[deg] Pointing Roll	271.624672	271.7753564128273	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	-183.836523	-183.8467348500672			
[mm] SIM translation stage offset	-6.296	-6.285787732940605			
[s] Observation start time (MET)	419815587.184000	419814300.21894			
Observation start date	2011-04-21T23:25:21	2011-04-21T23:05:00			
[s] Observation end time (MET)	419825587.184000	419826481.31957			
Observation end date	2011-04-22T02:12:01	2011-04-22T02:28:01			
Read mode	TIMED	TIMED			

2.3 Aspect



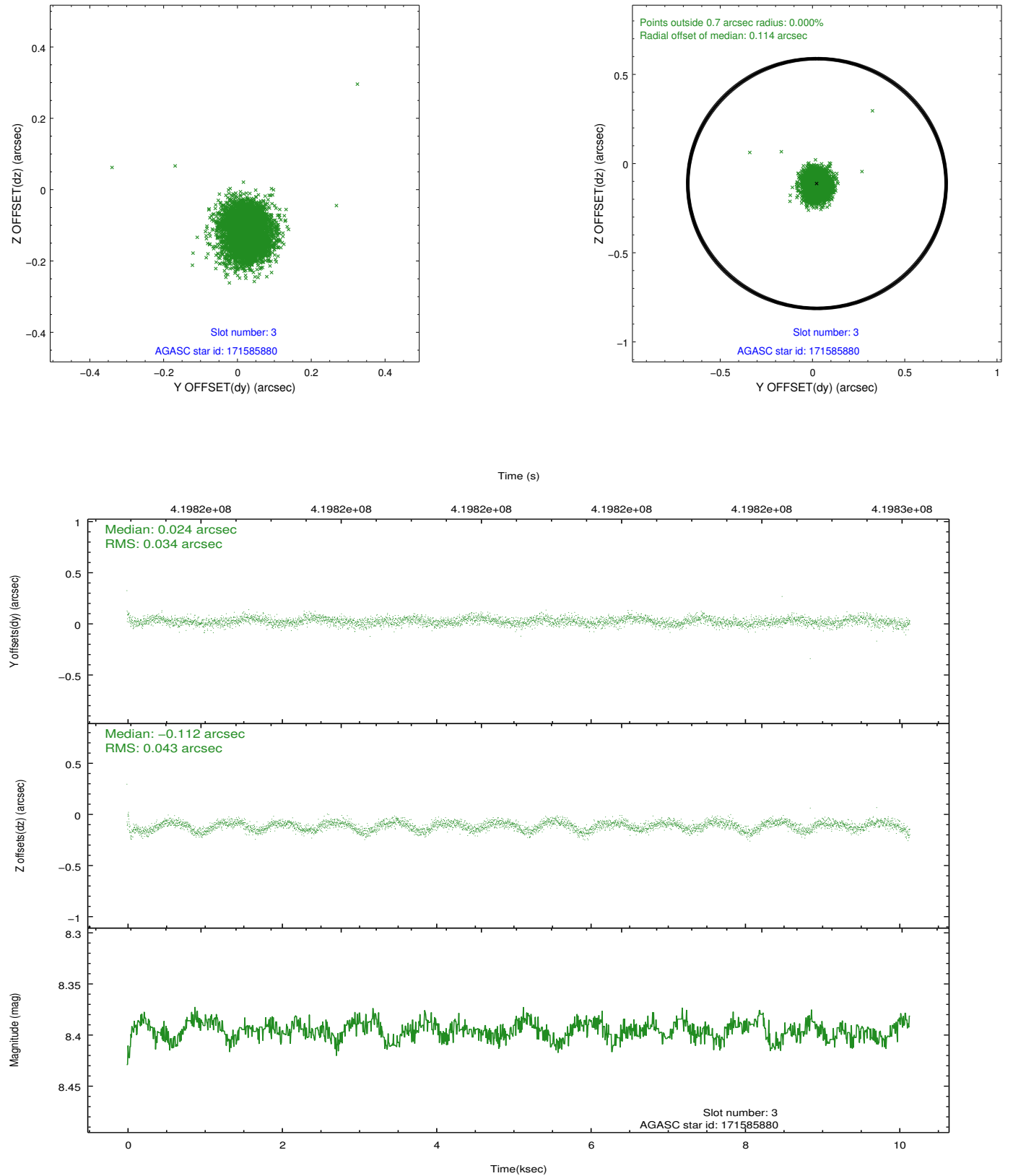


Slot Statistics

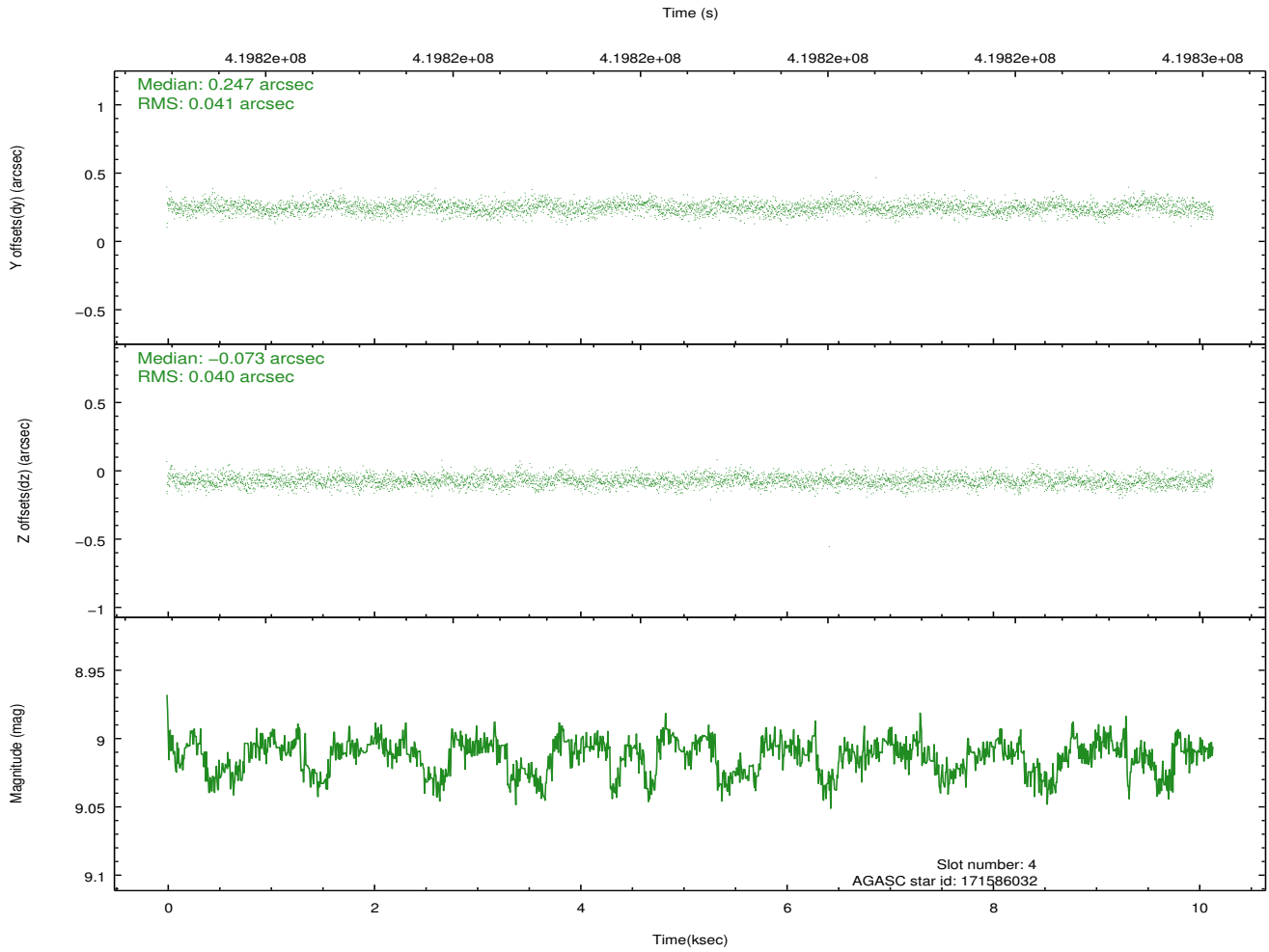
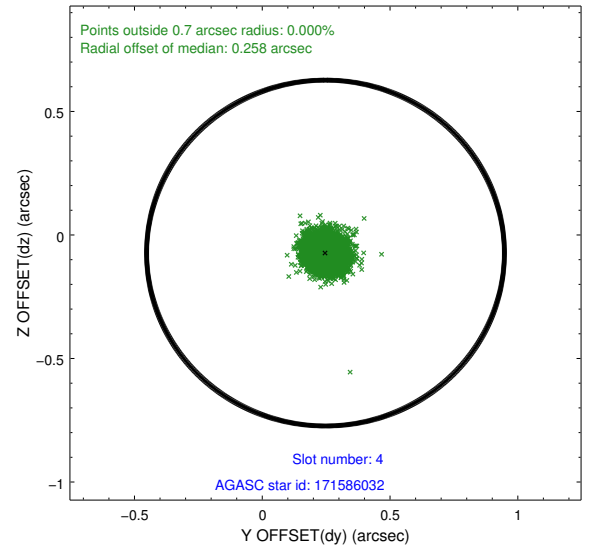
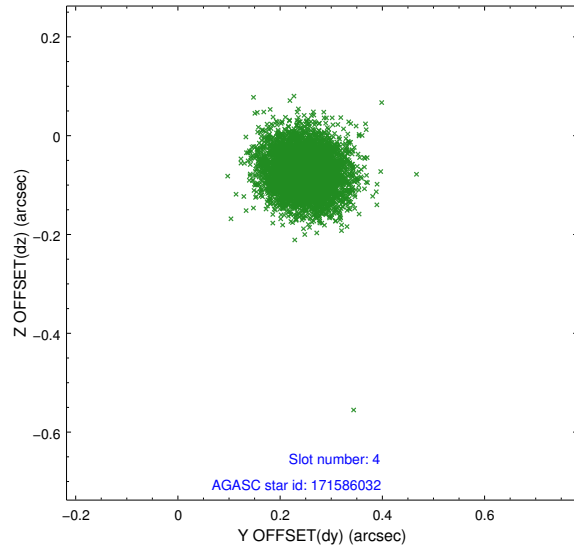
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.97	2475	-0.102	-0.126	0.013	0.027	0.000000	0.000000	-773.42	-1868.94
1	FID	ACIS-S-4	7.04	2475	0.254	0.082	0.007	0.013	0.000000	0.000000	2140.01	39.08
2	FID	ACIS-S-5	7.10	2475	-0.183	0.051	0.012	0.023	0.000000	0.000000	-1825.64	33.40
3	GUIDE	171585880	8.40	4944	0.024	-0.112	0.058	0.092	83.676260	22.176319	-499.17	221.38
4	GUIDE	171586032	9.01	4945	0.247	-0.073	0.060	0.098	83.950197	22.083225	-139.46	1125.65
5	GUIDE	171721904	9.25	4944	0.003	0.445	0.094	0.148	84.272676	22.116922	-234.07	2204.67
6	GUIDE	243941560	8.38	4947	-0.347	-0.153	0.045	0.074	83.733264	22.568598	-1905.83	450.34
7	GUIDE	171597832	9.17	4943	0.074	-0.099	0.081	0.135	83.183230	21.366702	2365.43	-1511.85

2.4 Star Slots

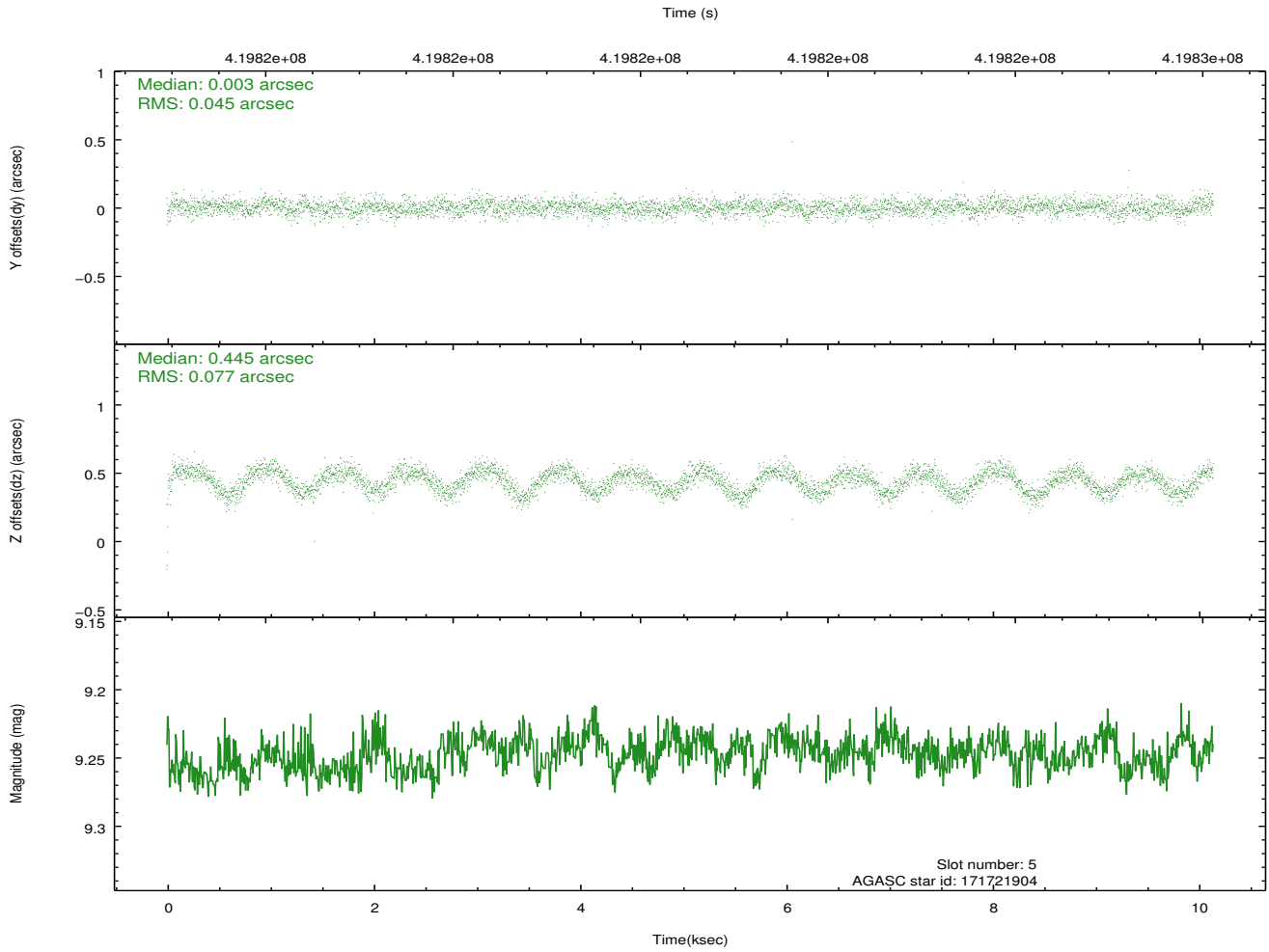
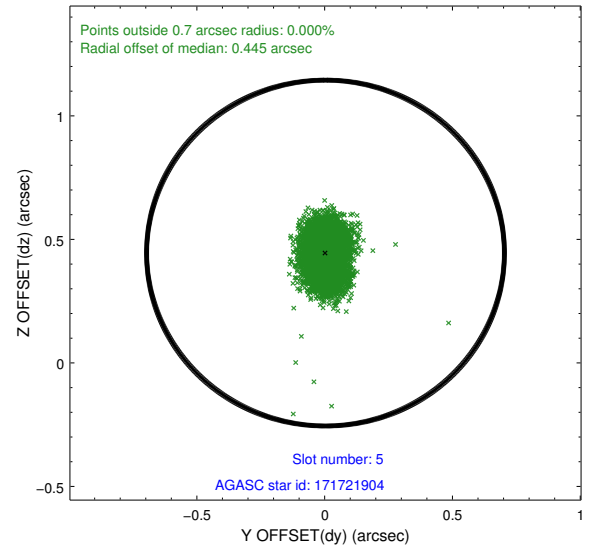
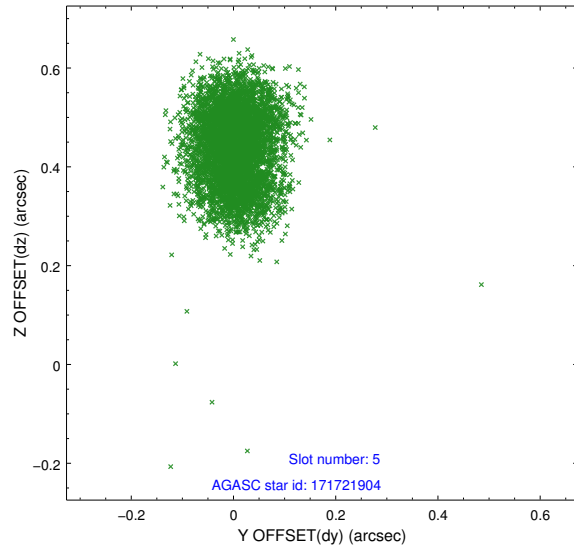
2.4.1 Slot 3



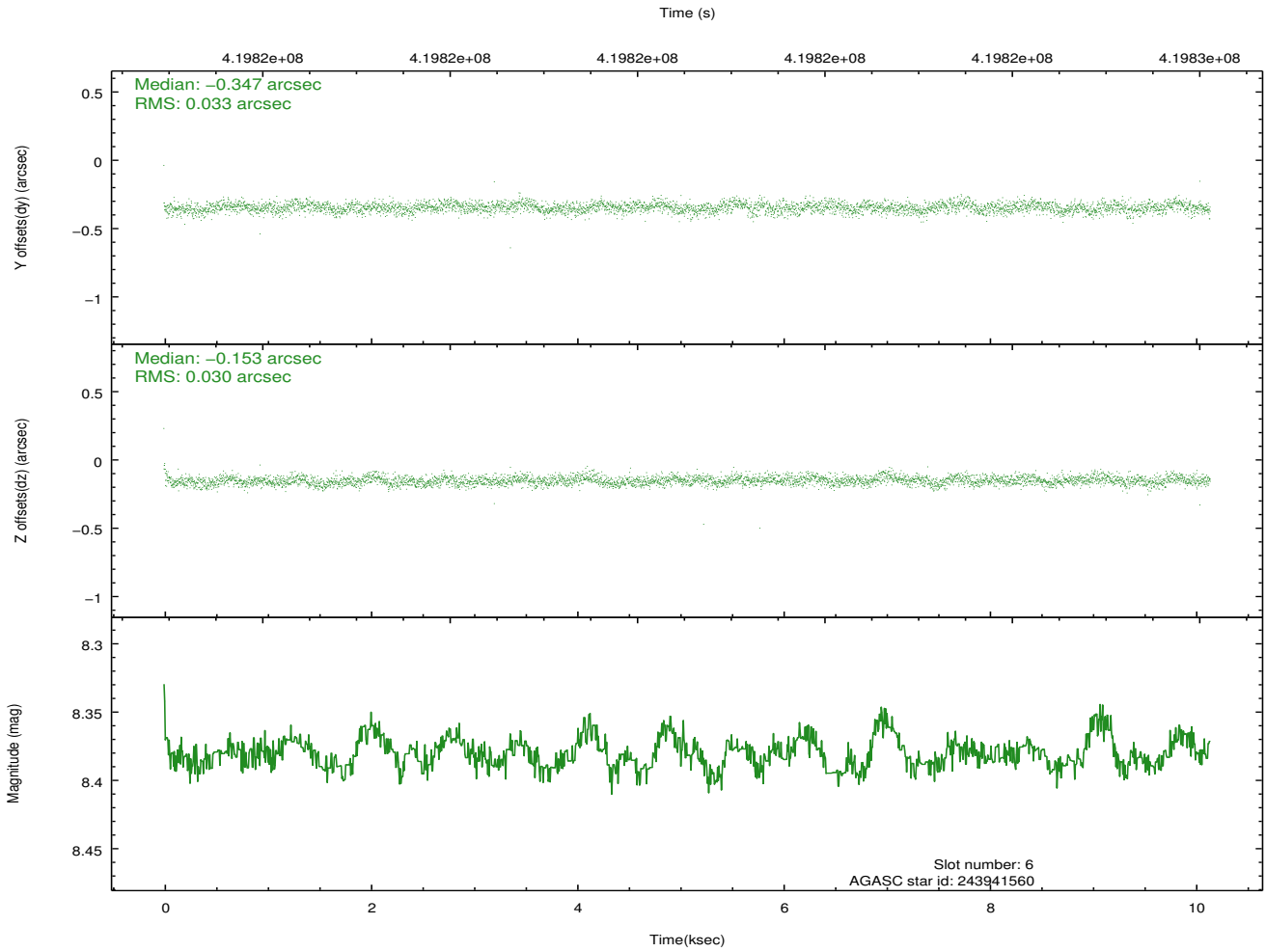
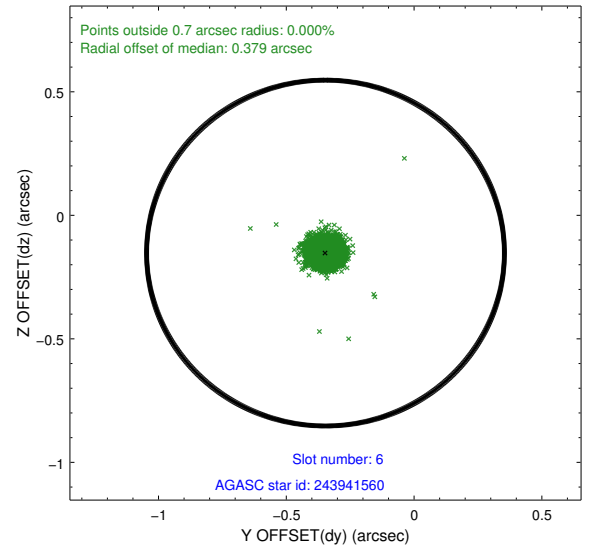
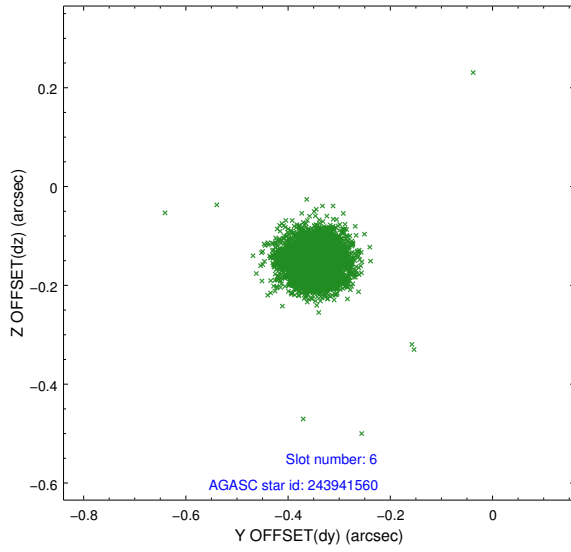
2.4.2 Slot 4



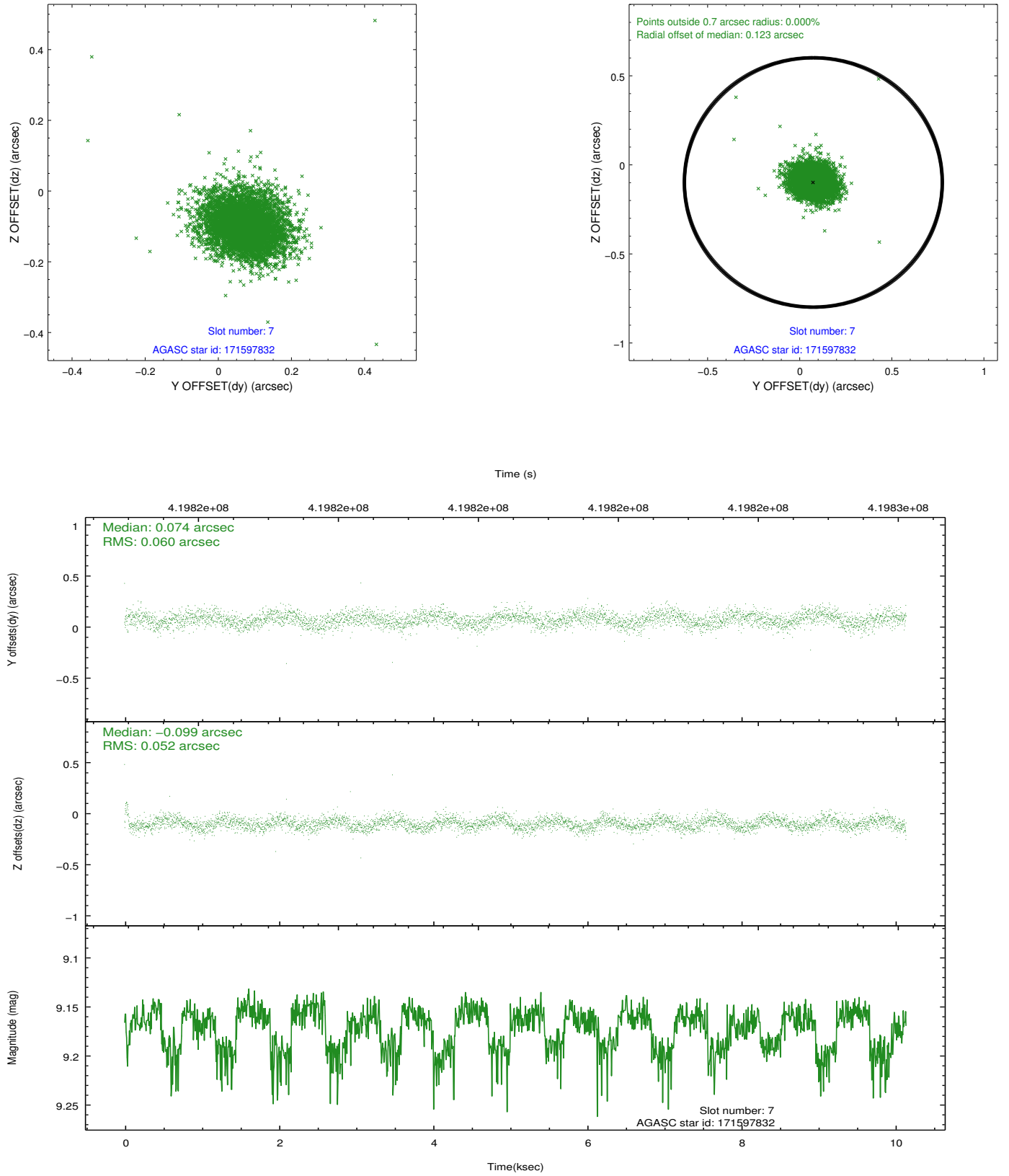
2.4.3 Slot 5



2.4.4 Slot 6

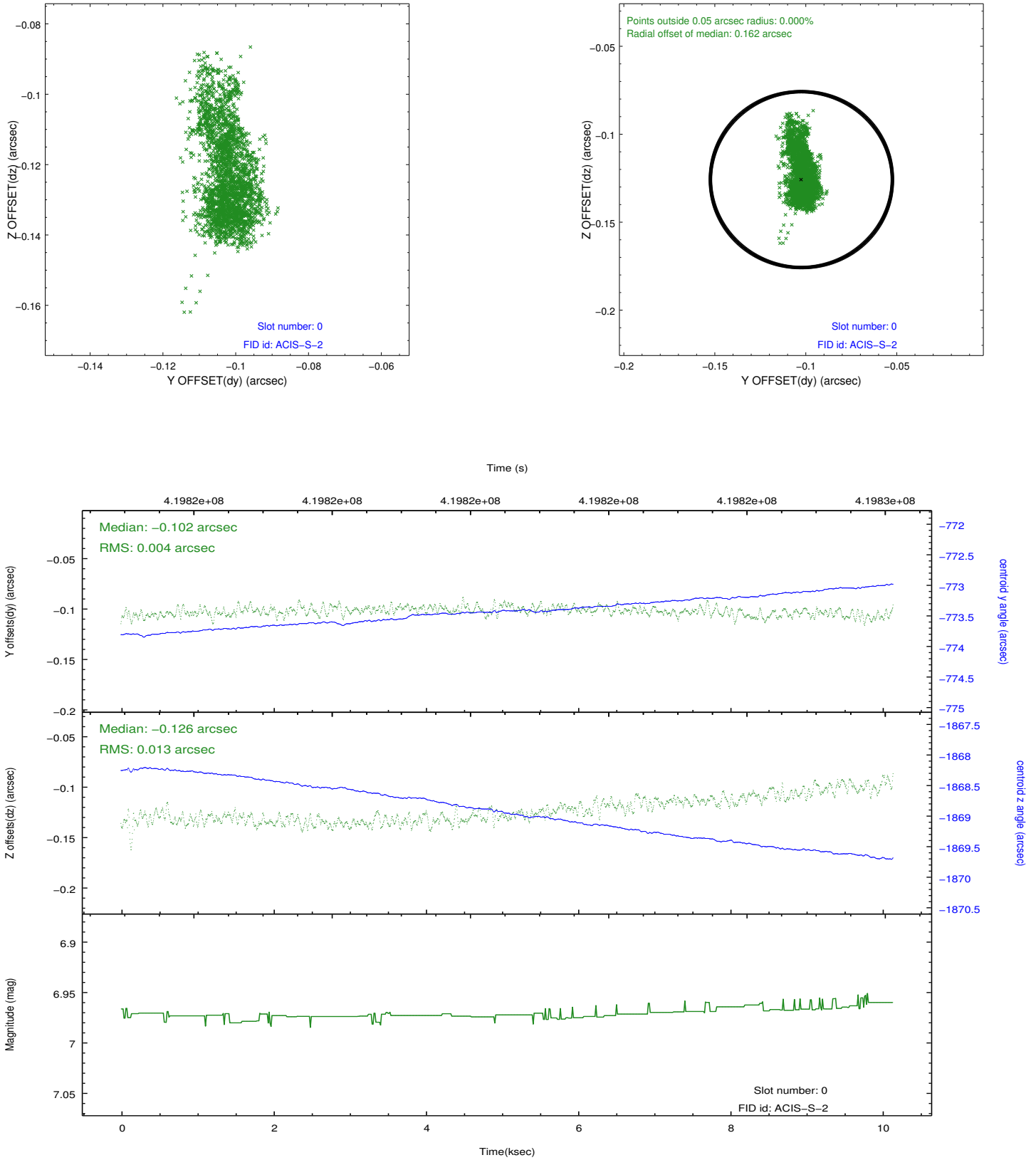


2.4.5 Slot 7

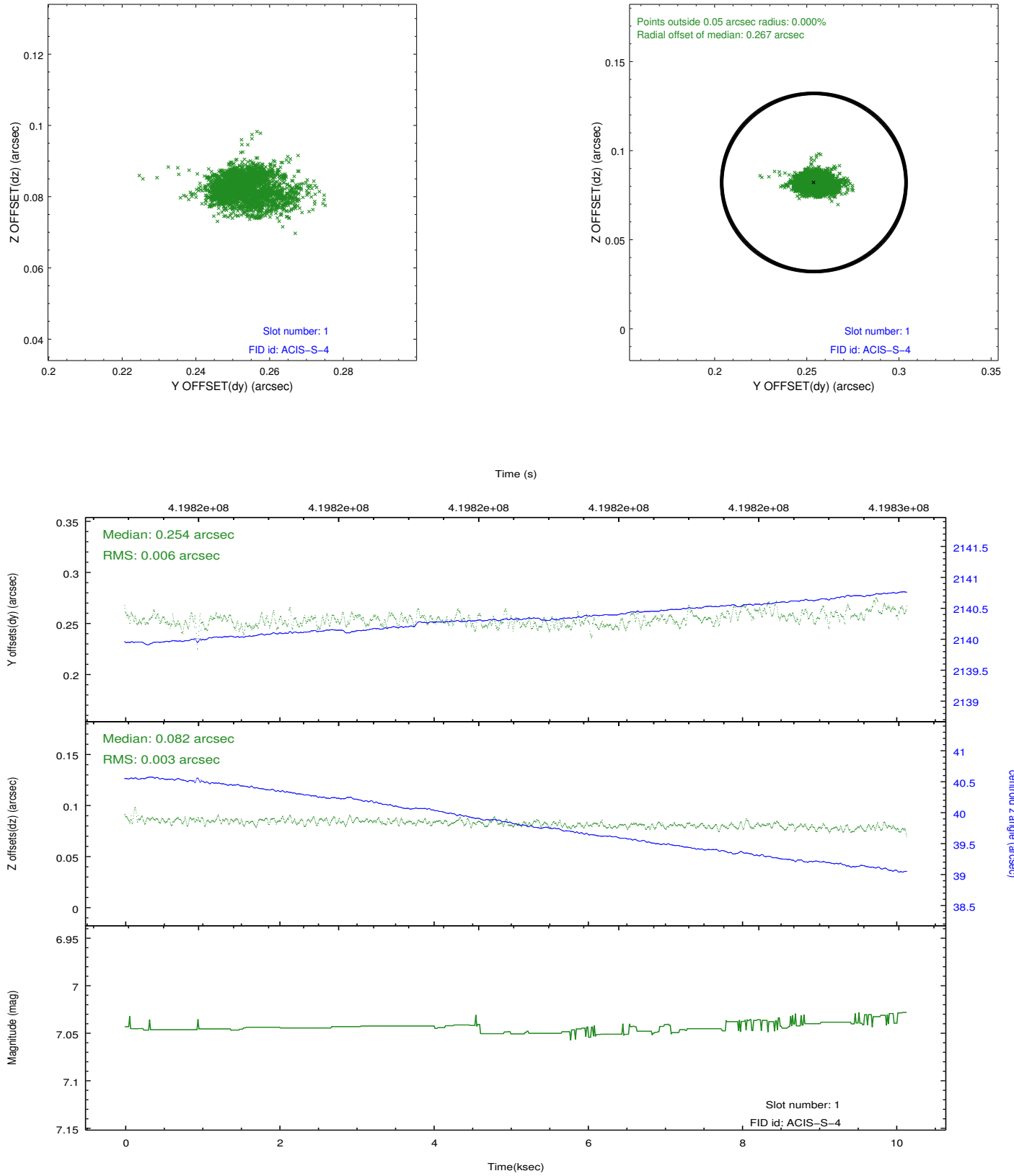


2.5 FID Slots

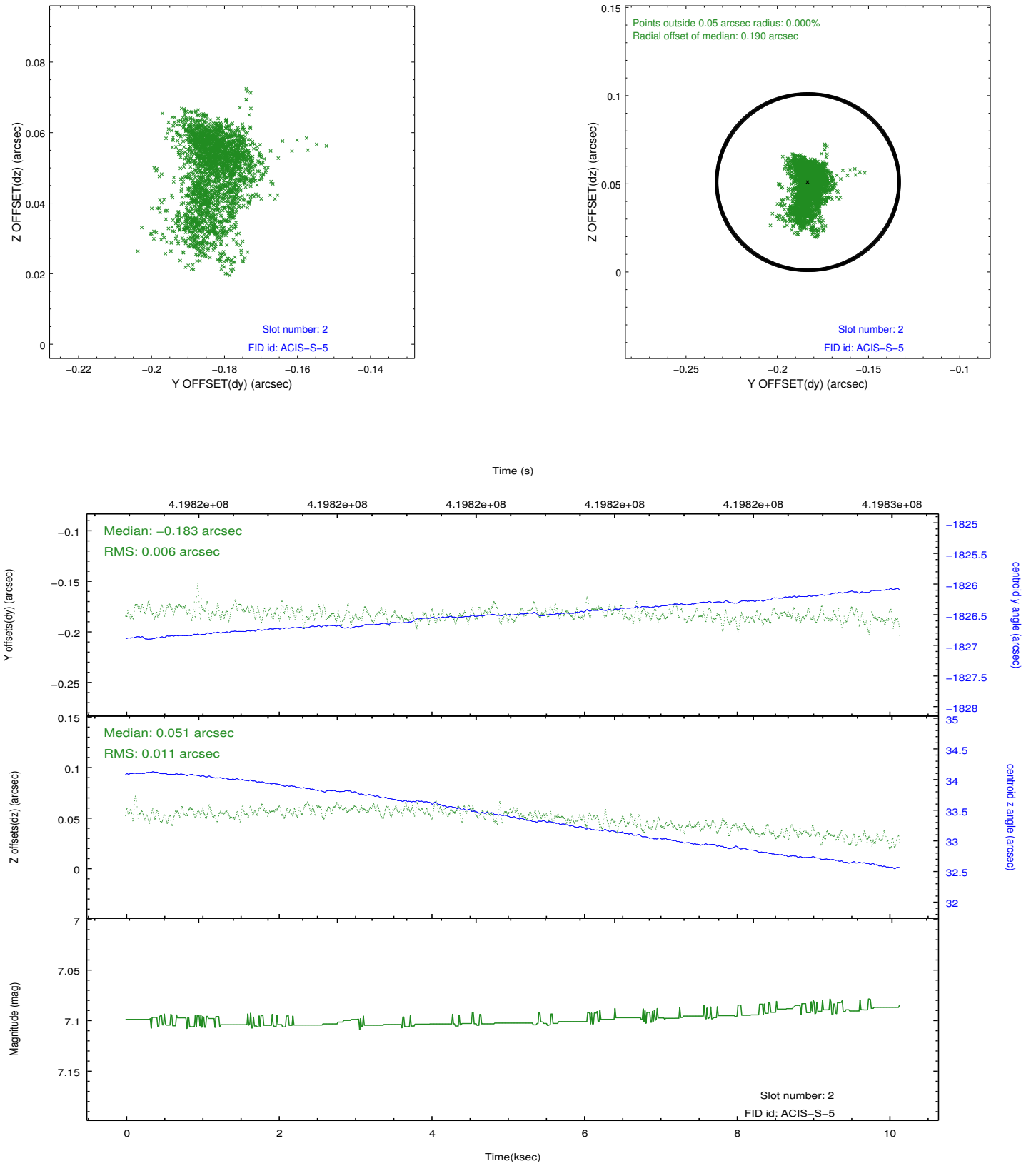
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2012.02.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10

A.2 Comments

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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Charge time for this observation remains at original value of 10 ksec, although with the current processing the charge time would have been 6.9 ksec.