

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 11998 - L2 Version 3
Chandra X-Ray Center

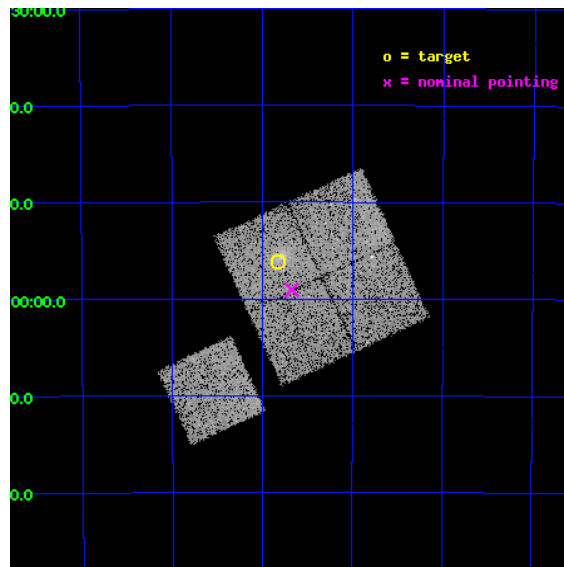
L2 Processing Date : Jun 20 2012

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1 Front

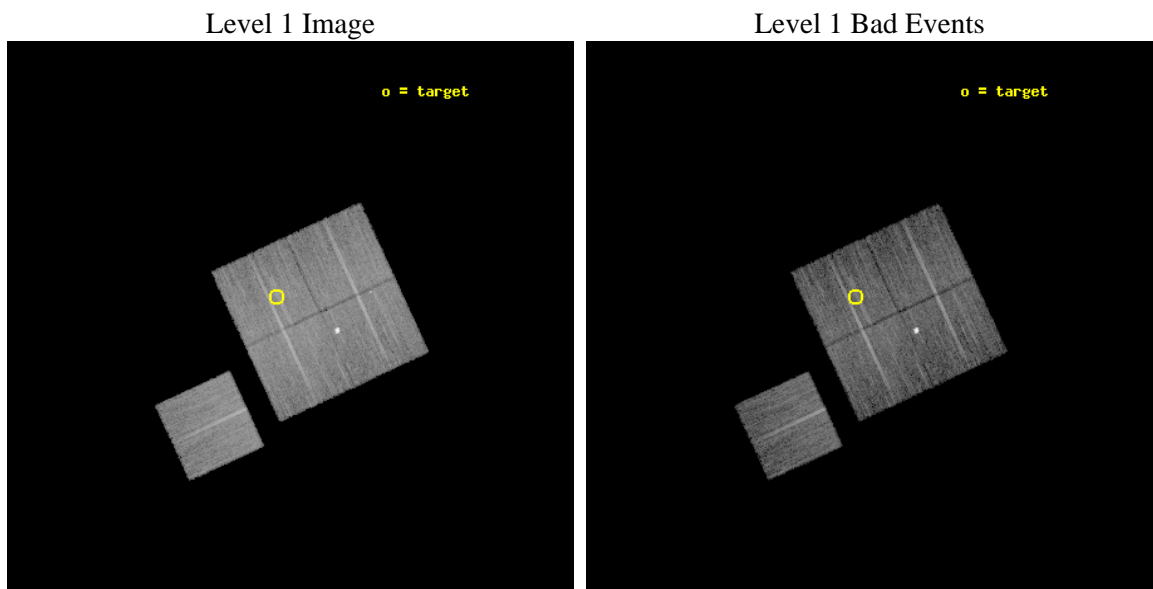
seq_num	800937	Sequence number
obs_id	11998	Observation id
title	Chandra Observations of SZ-selected Galaxy Clusters Detected by the South Pole Telescope	Proposal title
observer	Professor Gordon Garmire	Principal investigator
object	SPT-CL2356-5056	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	358.957083	Observer's specified target RA [deg]
dec_targ	-50.936	Observer's specified target Dec [deg]
ra_nom	358.91802750652	Nominal RA [deg]
dec_nom	-50.984514825717	Nominal Dec [deg]
roll_nom	245.17833151975	Nominal Roll [deg]
revision	3	Processing version of data
ontime	10133.900077939	Sum of GTIs [s]
livetime	10001.493212952	Livetime [s]
ontime0	10130.759117603	Sum of GTIs [s]
ontime1	10127.618127227	Sum of GTIs [s]
ontime2	10133.900077939	Sum of GTIs [s]
ontime3	10133.900077939	Sum of GTIs [s]
ontime6	10133.900077939	Sum of GTIs [s]
l2events	40916	Number of level 2 events



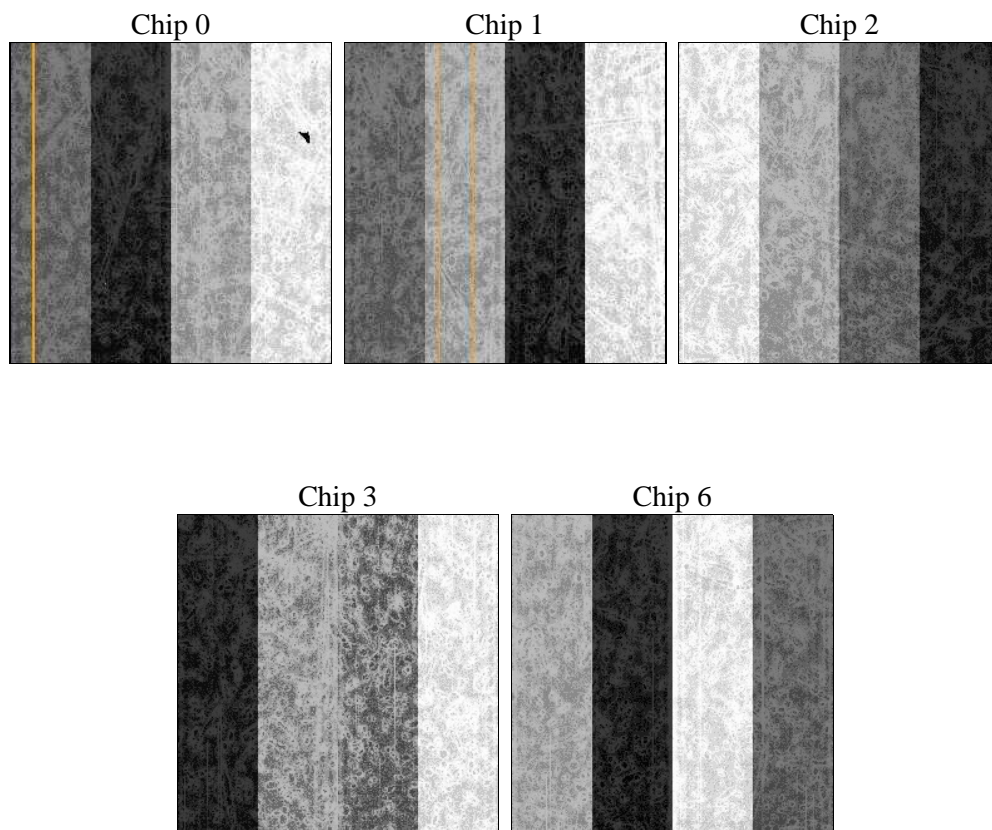
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	10133.900077939	Sum of GTIs [s]
caldsver	4.4.10	 	ontime0	10130.759117603	Sum of GTIs [s]
date	2012-06-20T21:00:52	Date and time of file creation	ontime1	10127.618127227	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	10133.900077939	Sum of GTIs [s]
			ontime3	10133.900077939	Sum of GTIs [s]
			ontime6	10133.900077939	Sum of GTIs [s]
			l1events	480737	Number of level 1 events

2.1.4 Events

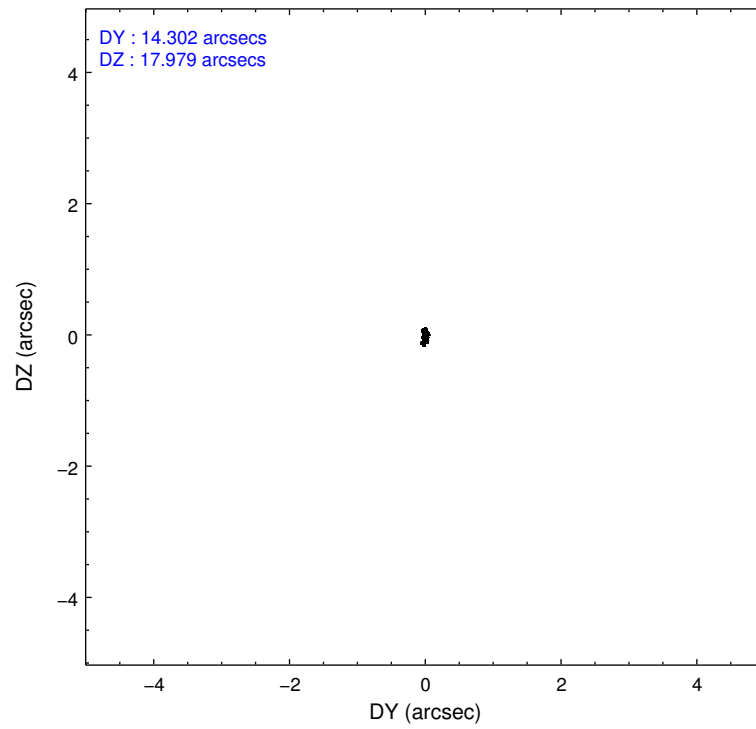
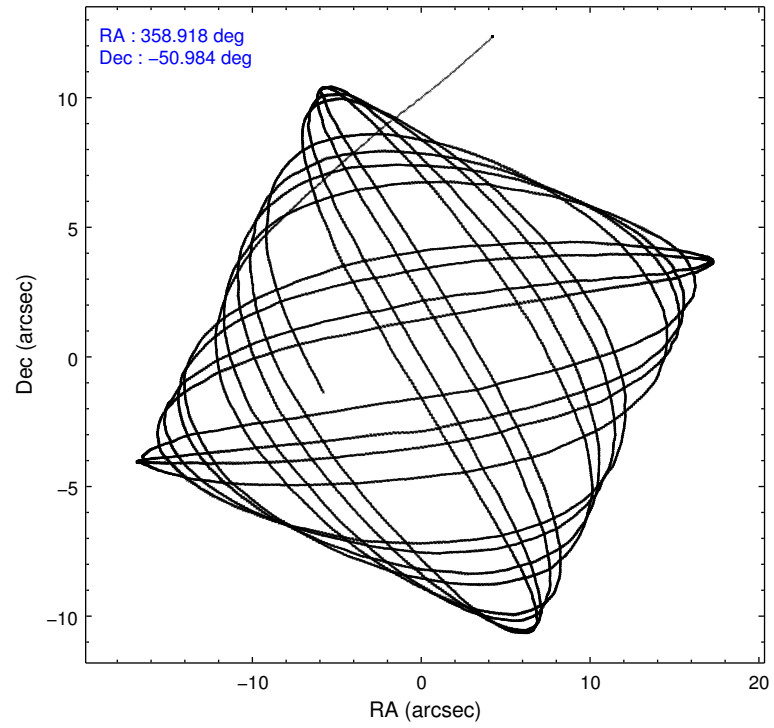
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	97223	90805	97714	95224	99771
rejected events	87889	80019	88675	85389	90210
rejected %	90%	88%	90%	89%	90%

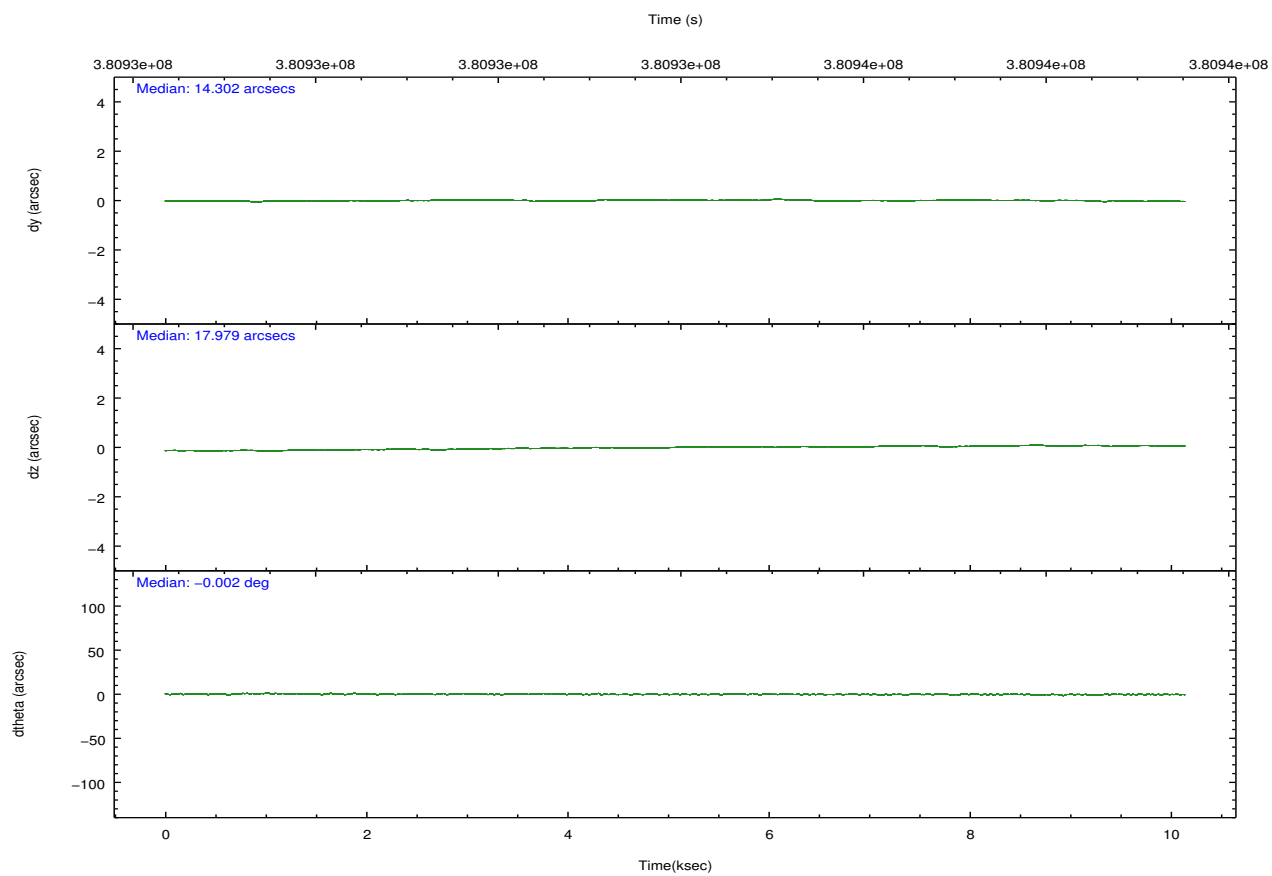
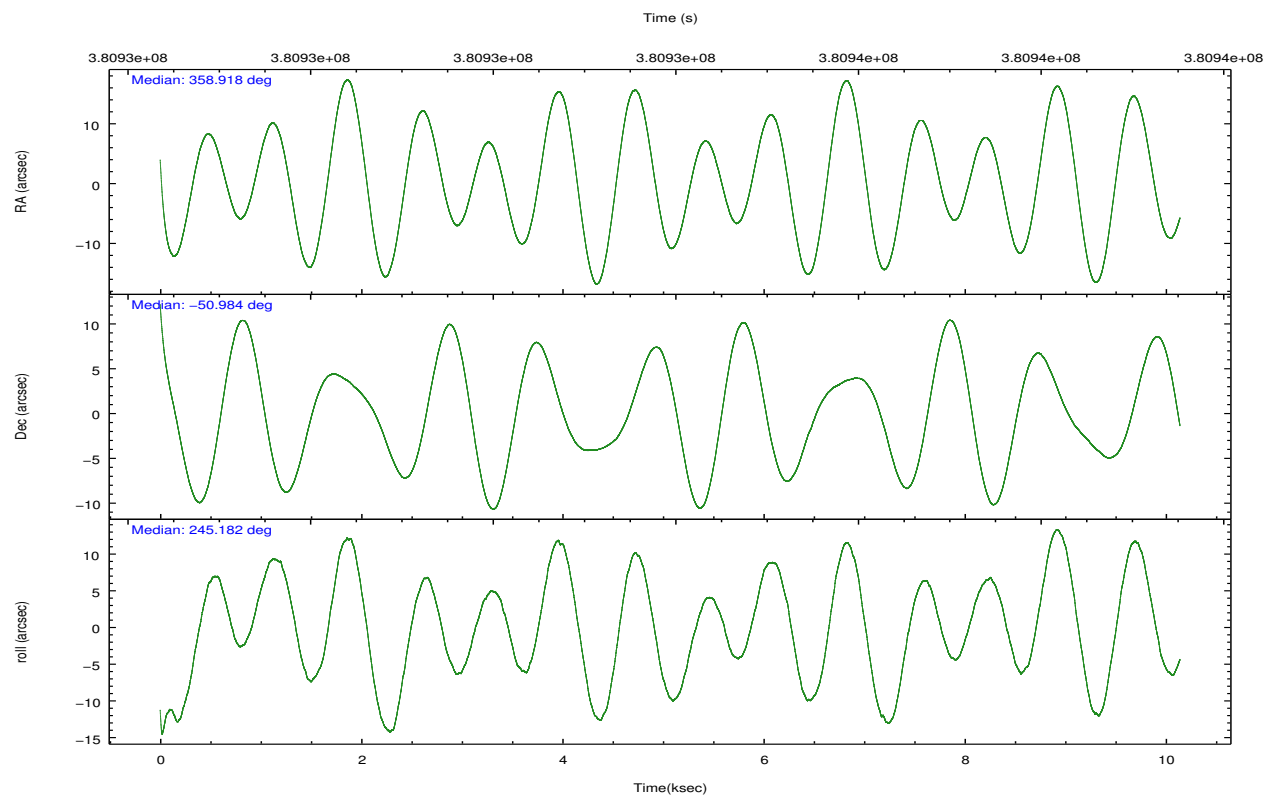
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	3779	4565	3656	4509	3914
	3%	5%	3%	4%	3%
grade 1 events	52	53	57	86	56
	0%	0%	0%	0%	0%
grade 2 events	2502	2682	2381	2185	2353
	2%	2%	2%	2%	2%
grade 3 events	1104	1172	1087	1137	1104
	1%	1%	1%	1%	1%
grade 4 events	1061	1204	1057	1093	1044
	1%	1%	1%	1%	1%
grade 5 events	3723	3920	3571	4098	4041
	3%	4%	3%	4%	4%
grade 6 events	1913	2328	1928	1953	2238
	1%	2%	1%	2%	2%
grade 7 events	83089	74881	83977	80163	85021
	85%	82%	85%	84%	85%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	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	358.913962	358.9180275065158	Subarray requested	NONE	NONE
[deg] Pointing Dec	-50.957163	-50.9845148257175	Alternating exposures requested	N	N
[deg] Pointing Roll	244.966509	245.1783315197494	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-225.840463	-225.8458576473255			
[mm] SIM translation stage offset	-7.752	-7.746595355604228			
[s] Observation start time (MET)	380928998.184000	380927446.93734			
Observation start date	2010-01-26T21:35:32	2010-01-26T21:10:46			
[s] Observation end time (MET)	380938998.184000	380940128.75049			
Observation end date	2010-01-27T00:22:12	2010-01-27T00:42:08			
Read mode	TIMED	TIMED			

2.3 Aspect



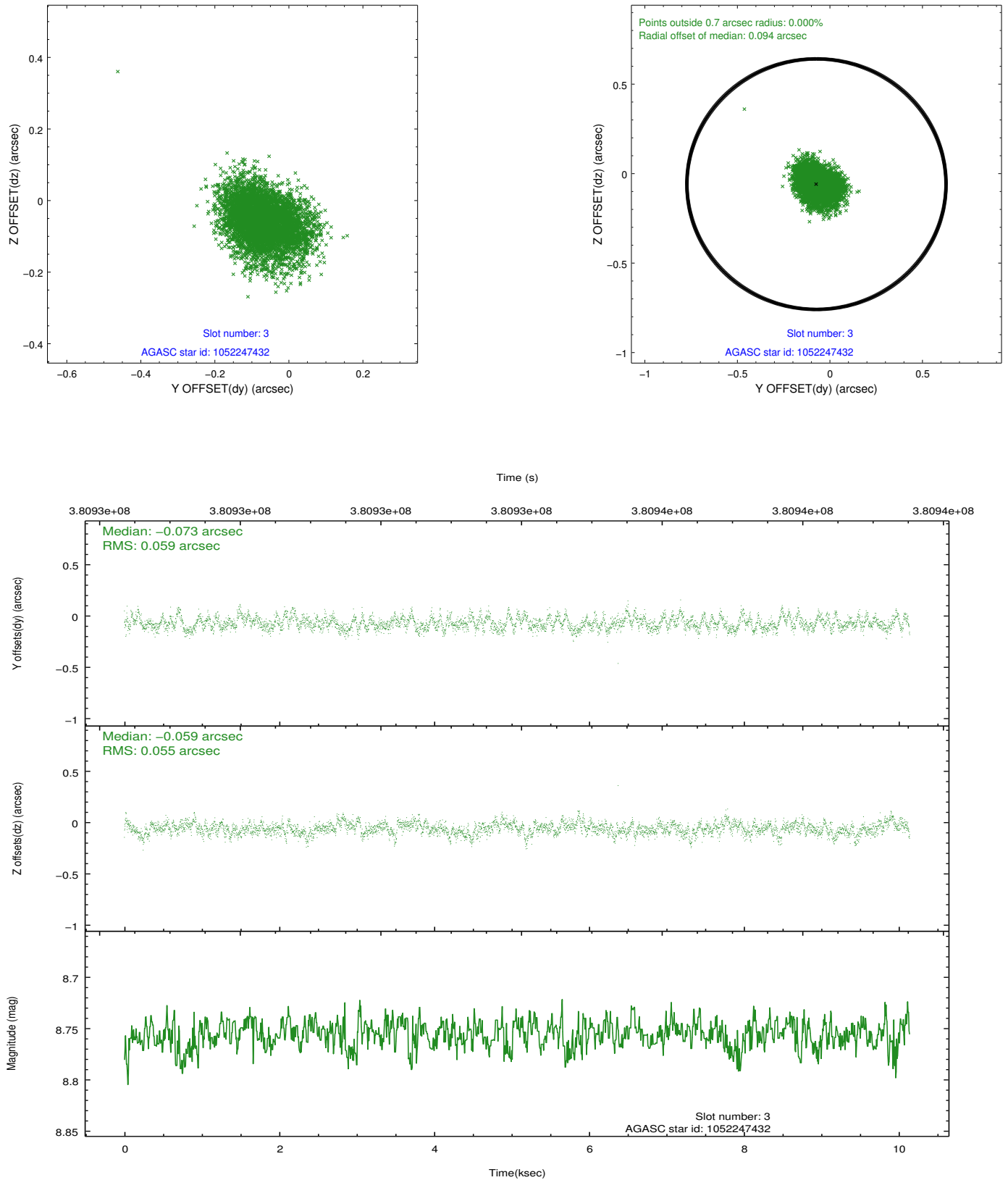


Slot Statistics

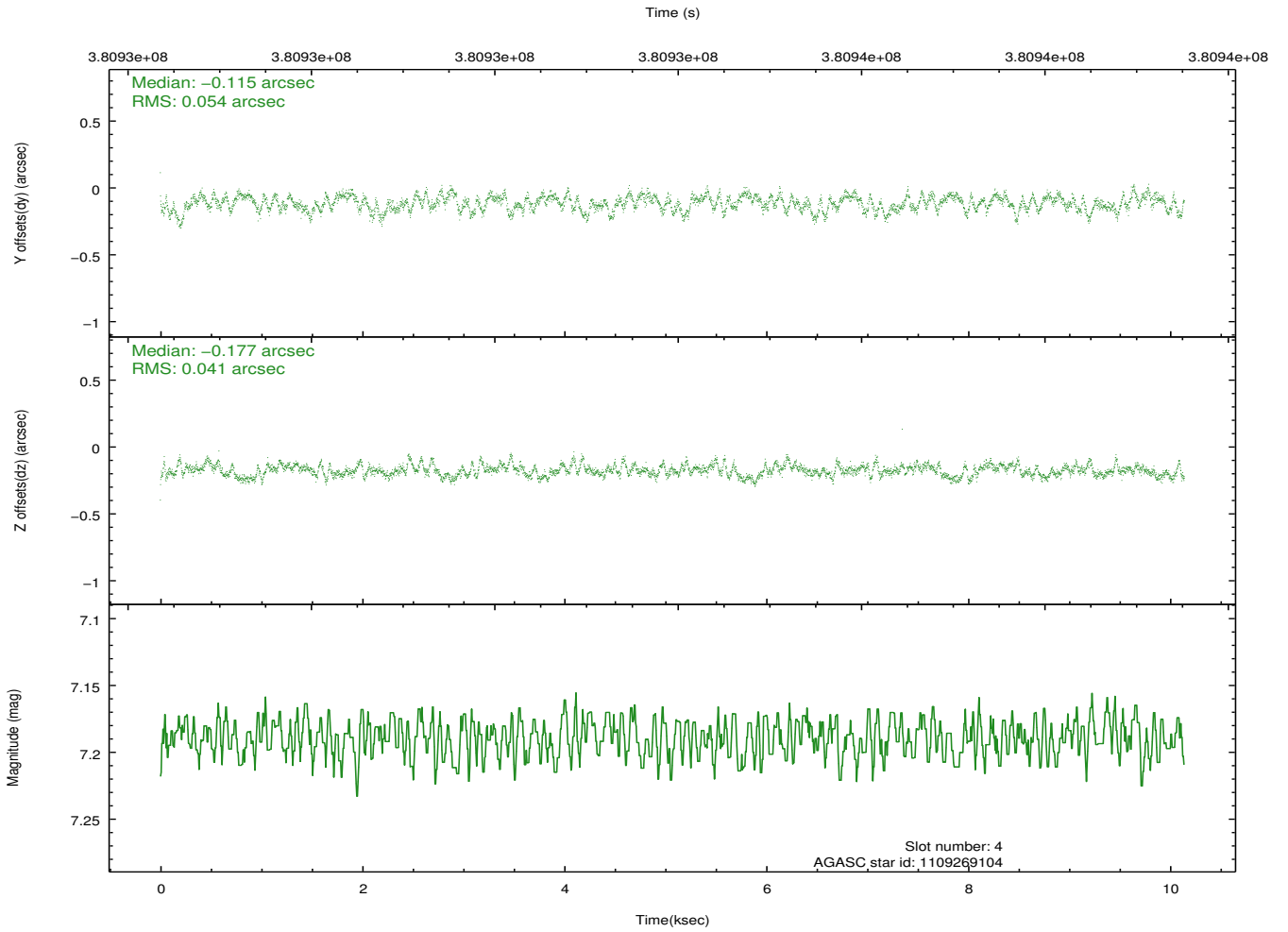
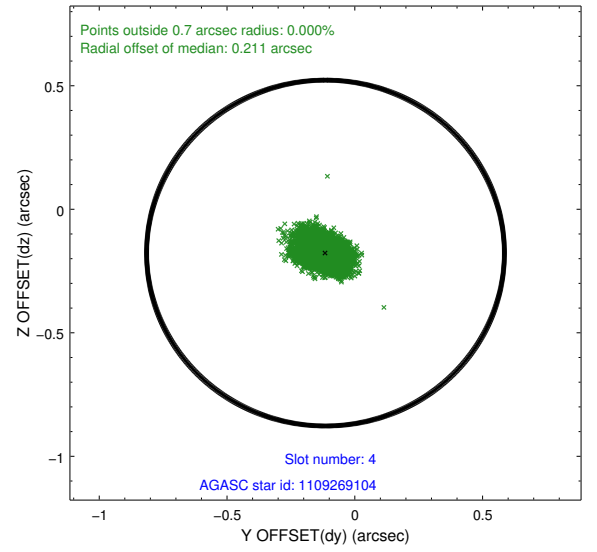
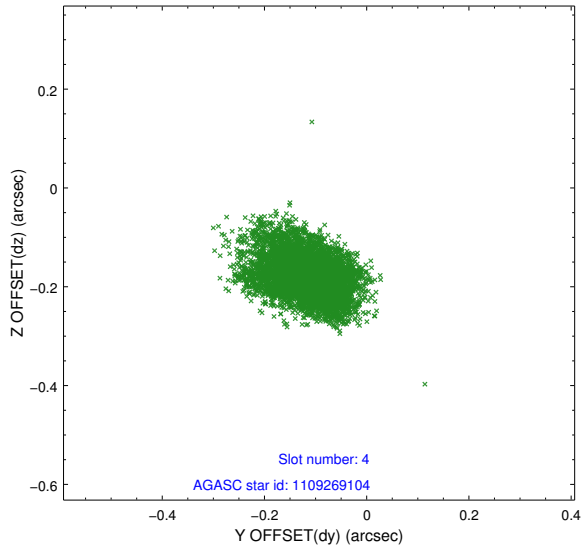
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	6.98	2474	0.116	-0.056	0.007	0.012	0.000000	0.000000	925.15	-1000.72
1	FID	ACIS-I-5	6.98	2474	-0.278	0.101	0.006	0.011	0.000000	0.000000	-1823.07	896.59
2	FID	ACIS-I-6	7.00	2474	0.071	0.025	0.006	0.010	0.000000	0.000000	390.07	1541.62
3	GUIDE	1052247432	8.76	4944	-0.073	-0.059	0.084	0.141	0.036415	-50.866976	-1356.17	2181.81
4	GUIDE	1109269104	7.19	4948	-0.115	-0.177	0.072	0.116	359.942074	-50.999251	-833.50	2182.12
5	GUIDE	1109269560	8.97	4940	0.018	0.047	0.082	0.131	359.604150	-50.909062	-813.20	1350.75
6	GUIDE	1109270368	8.53	4944	0.138	-0.013	0.074	0.120	358.906310	-51.374260	1367.96	621.87
7	GUIDE	1109267592	9.32	4933	0.030	0.205	0.093	0.149	359.147847	-50.303746	-2356.21	-507.29

2.4 Star Slots

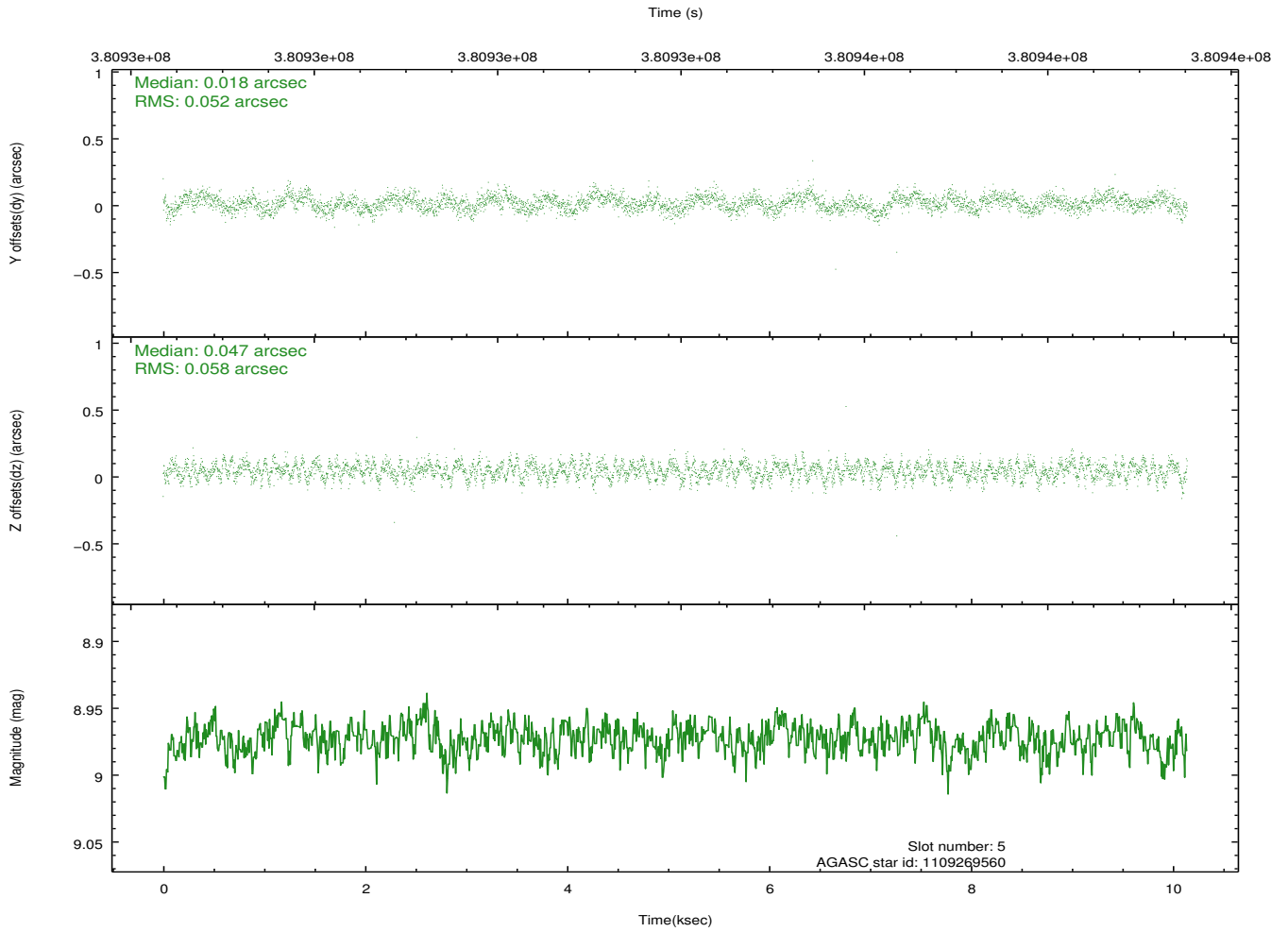
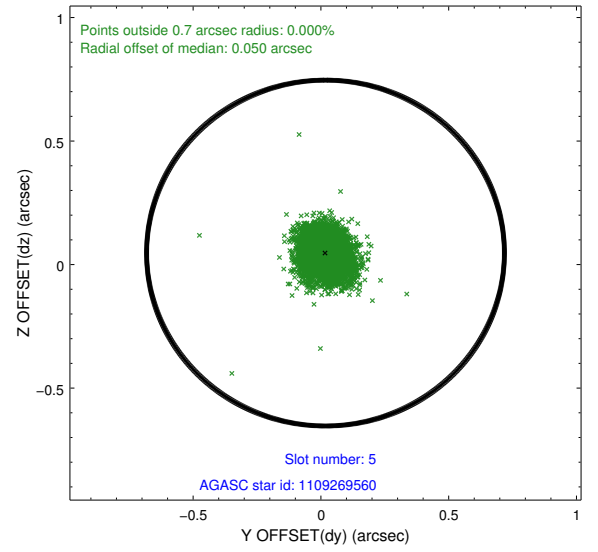
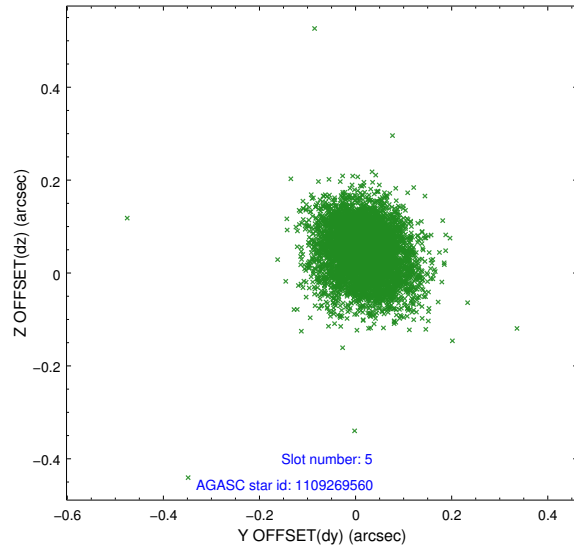
2.4.1 Slot 3



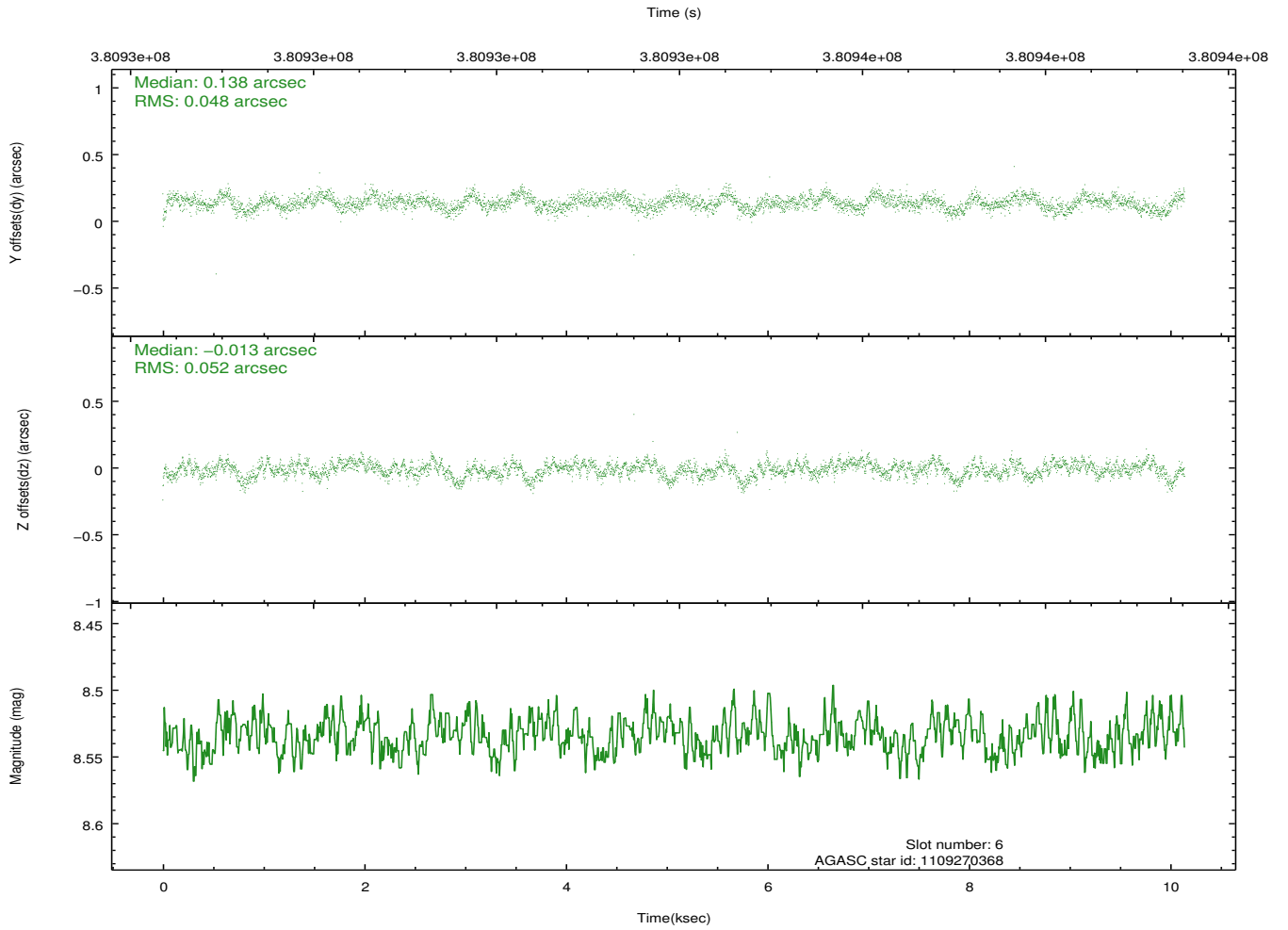
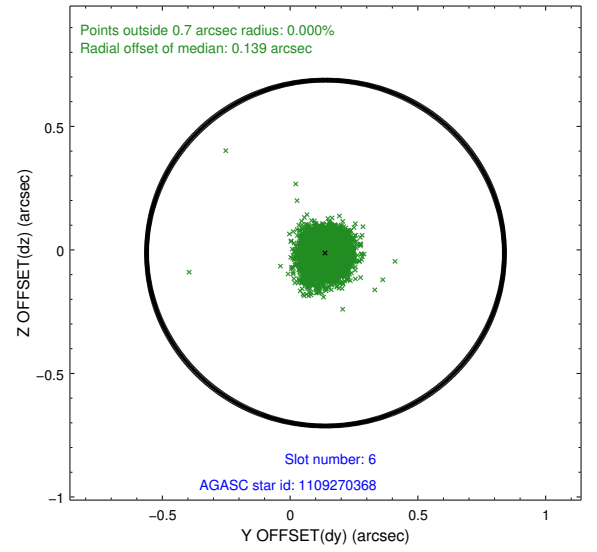
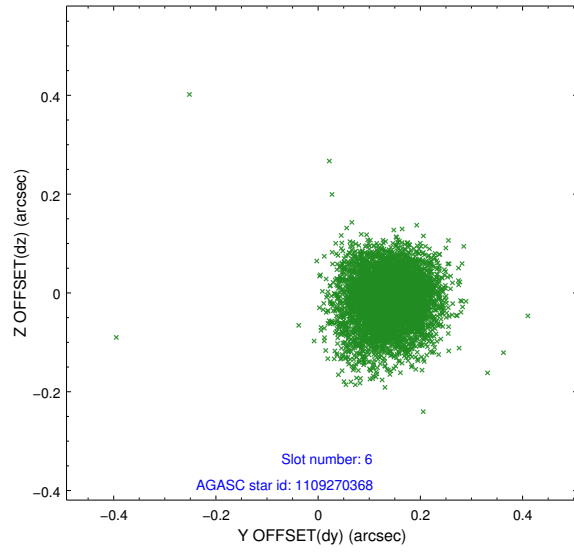
2.4.2 Slot 4



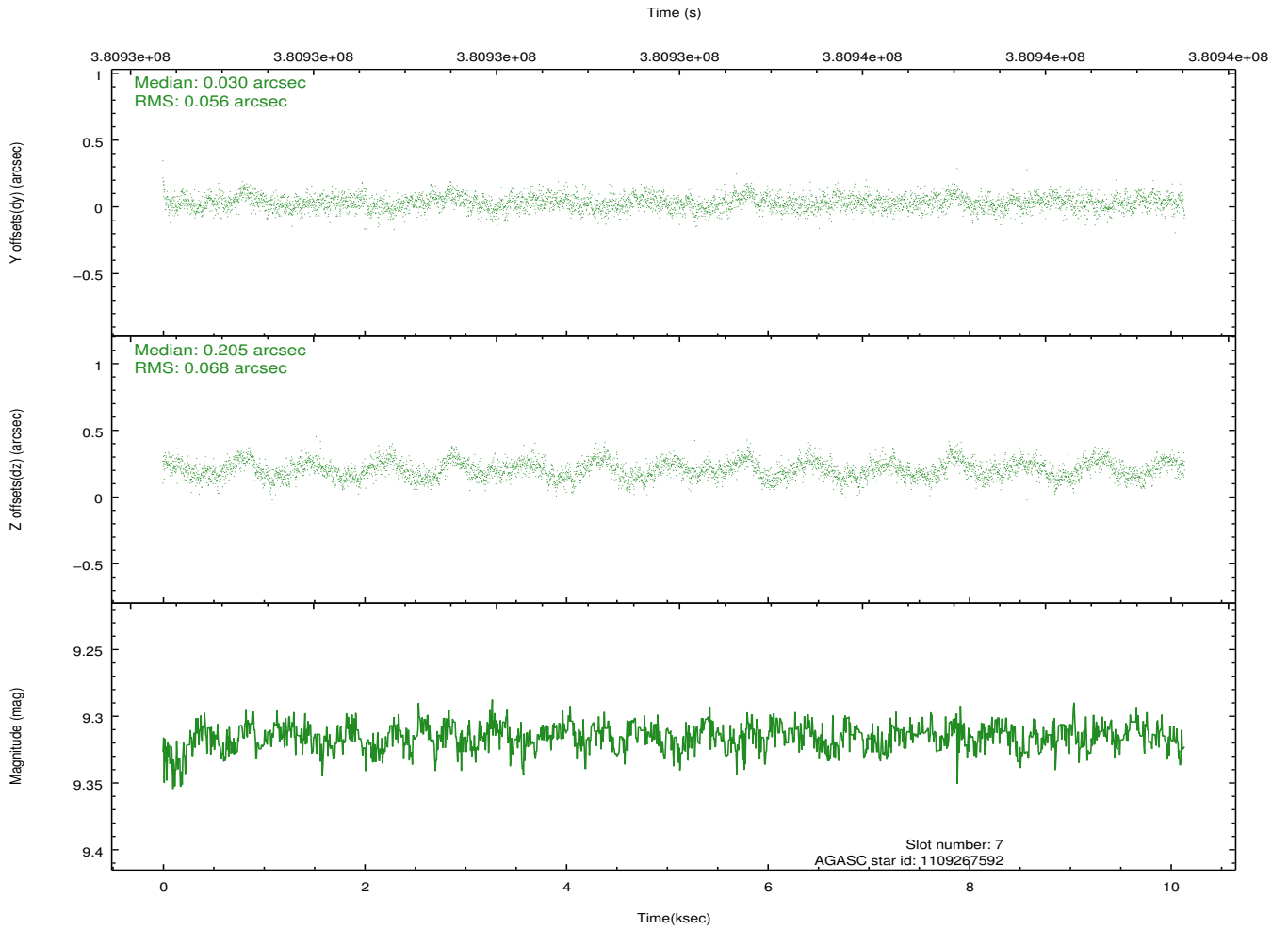
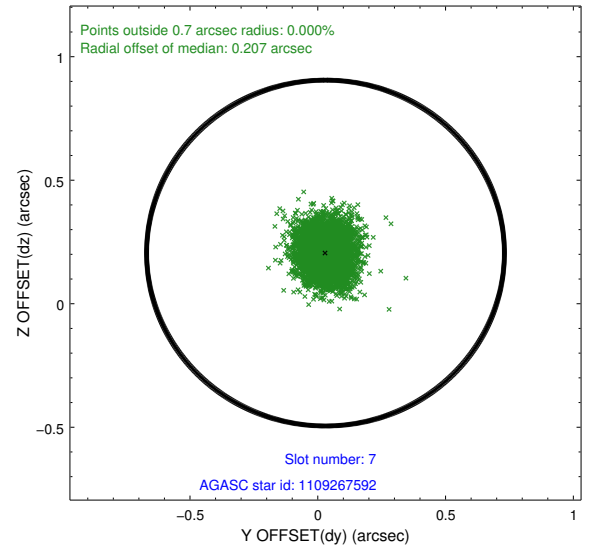
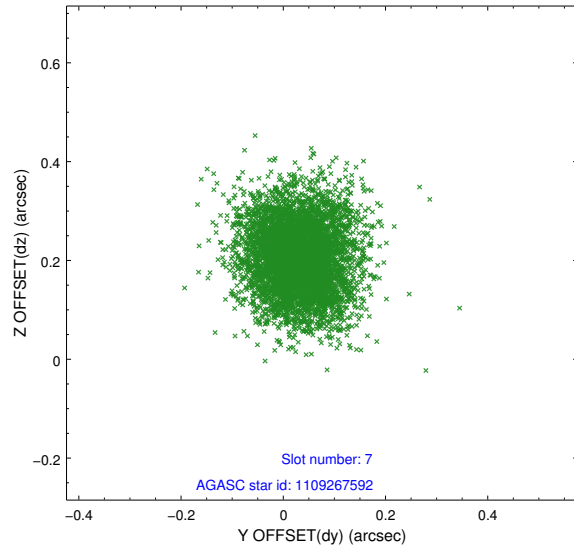
2.4.3 Slot 5



2.4.4 Slot 6

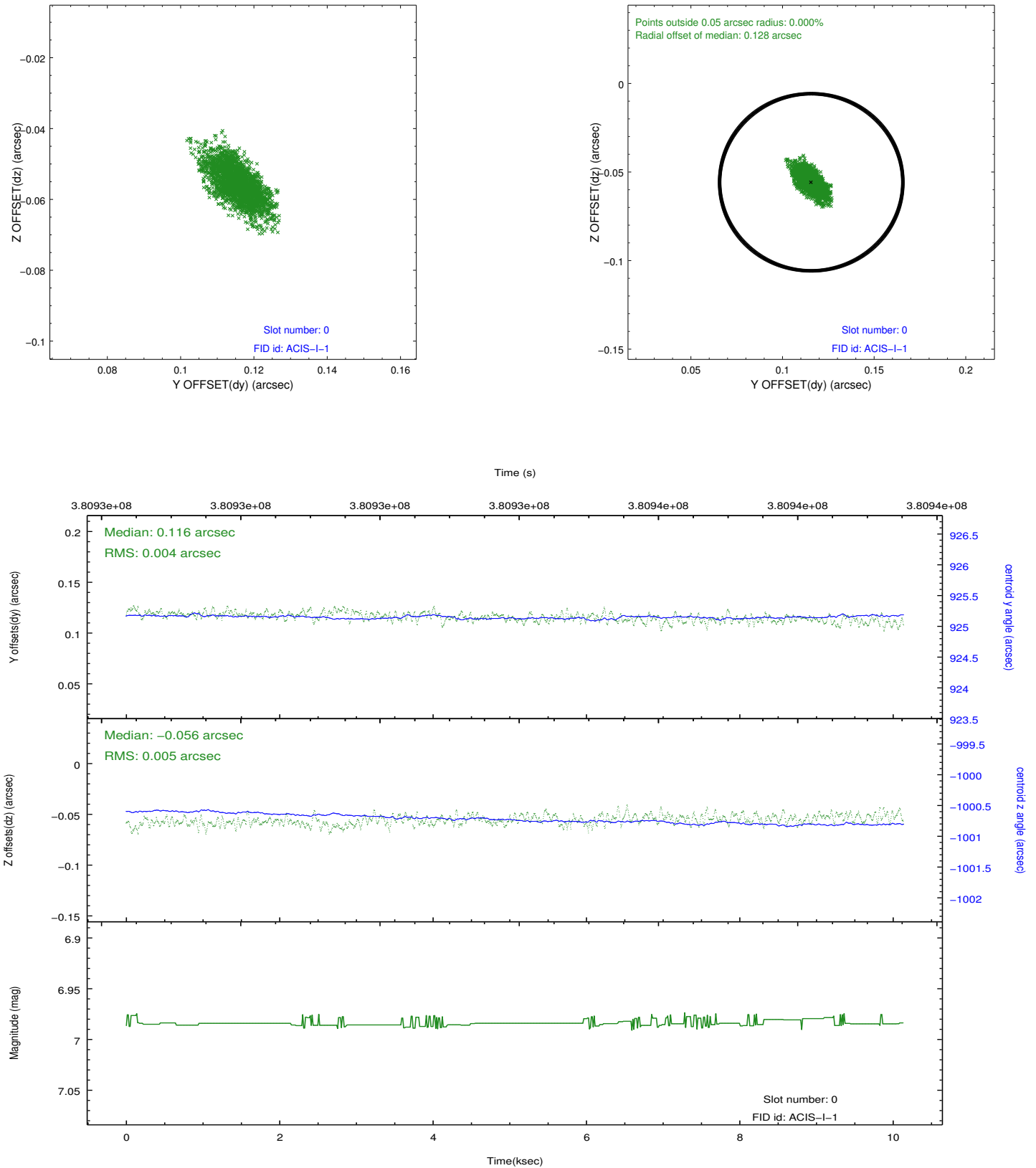


2.4.5 Slot 7

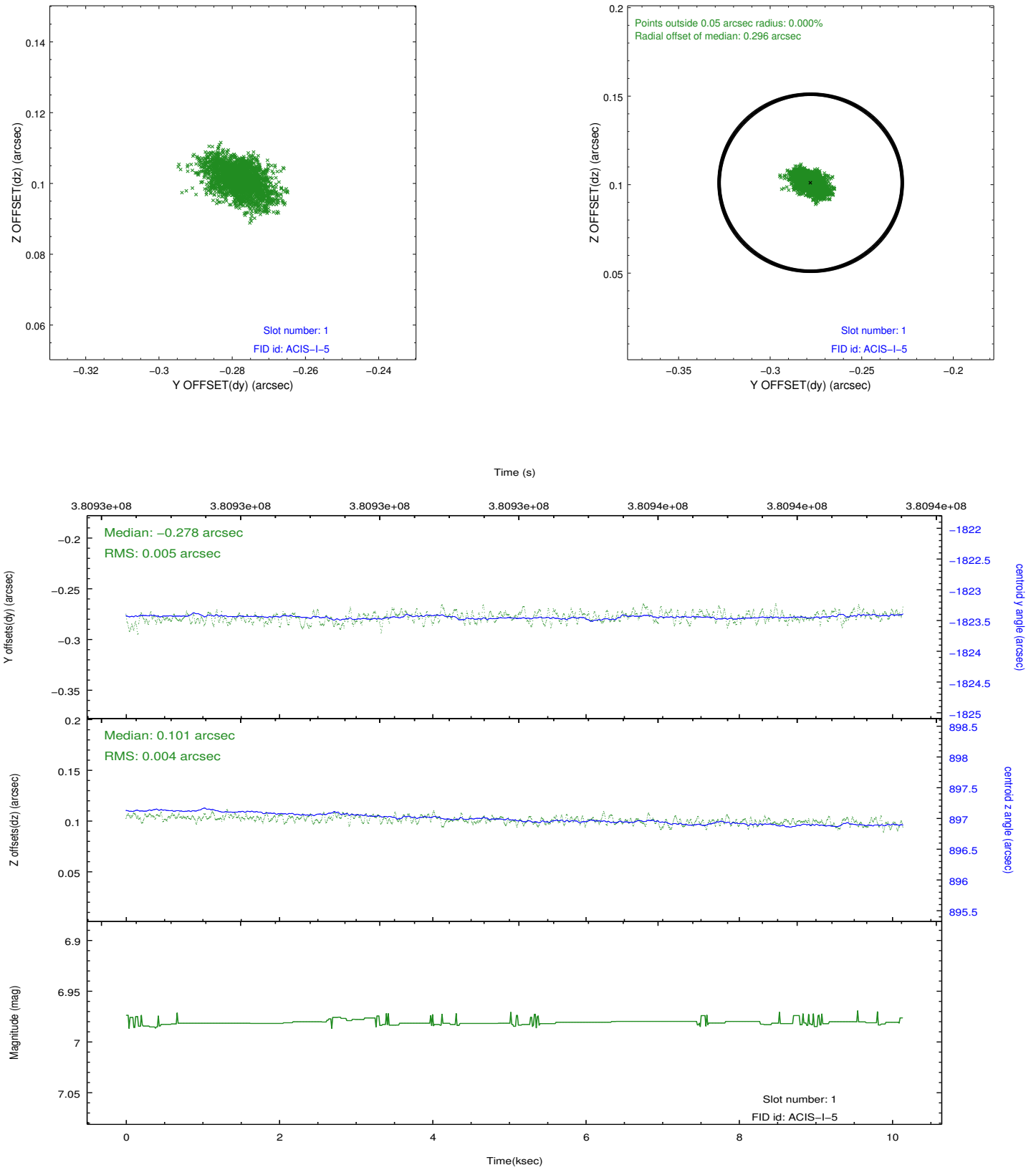


2.5 FID Slots

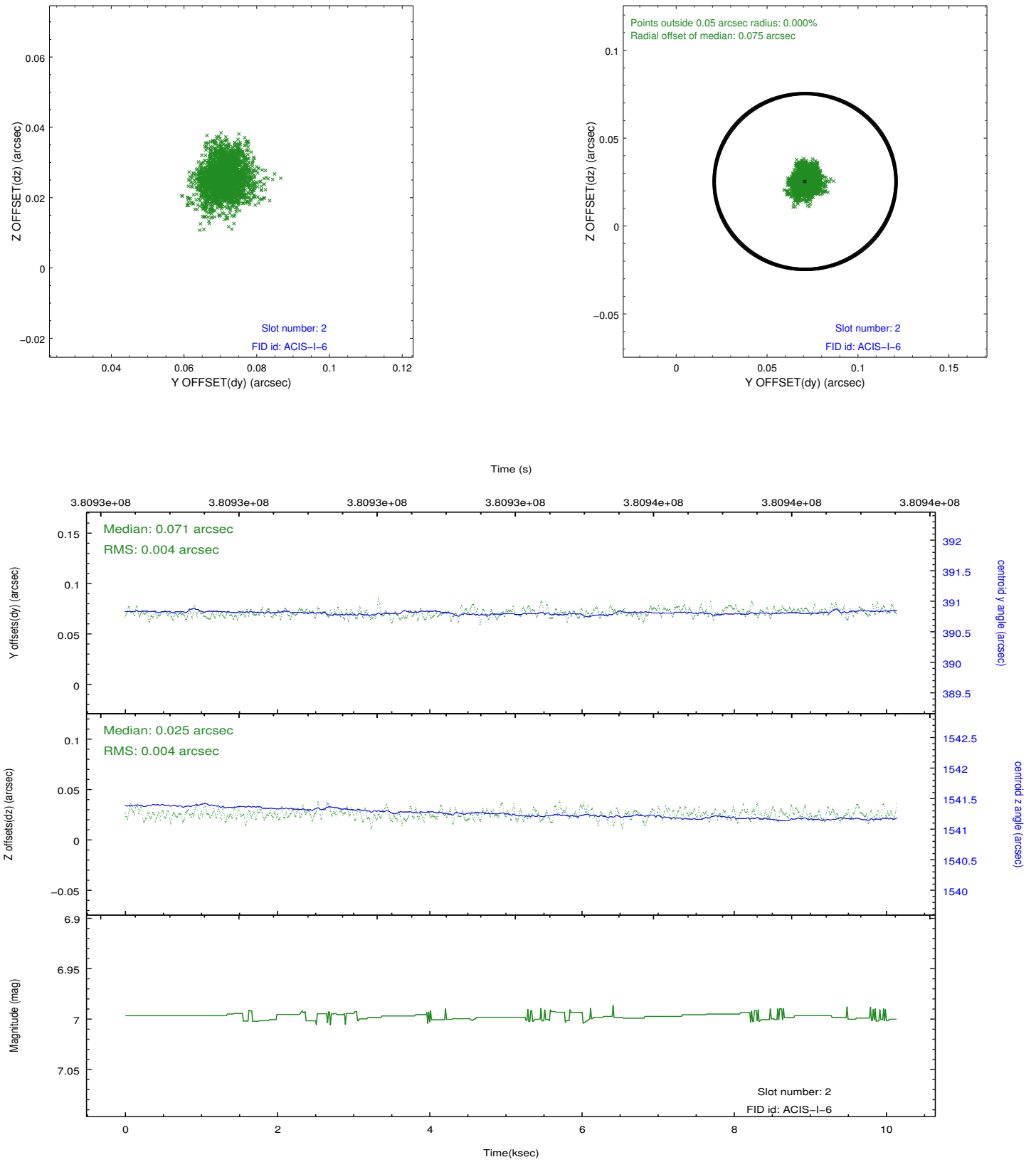
2.5.1 Slot 0



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)	2012.06.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.1339

A.2 Comments

The bias map for chip=0 has an anomalous region of very low pixel values. The region is irregular in shape with adu values in the approximate range 300-425. However, the median adu value for the entire node is approximately 765. The processing software worked correctly in the sense that all pixels in the anomalously low pixel values were flagged as bad and are not included in the Level 2 event file.

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A spatial region of the original bias map for CCD = 2 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 2 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:

(358.82139,-51.11347),(358.83342,-51.11695),(358.87477,-51.06091),(358.86549,-51.05373)

Please note this is a separate issue than that of CCD=0.