

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 12354 - L2 Version 3
Chandra X-Ray Center

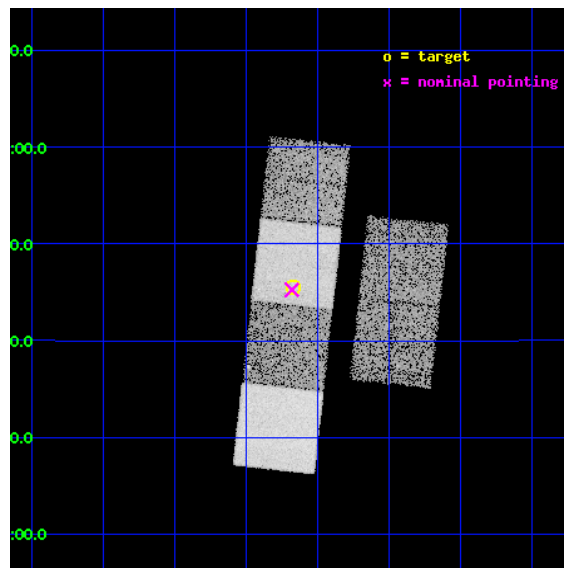
L2 Processing Date : Feb 5 2012

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1 Front

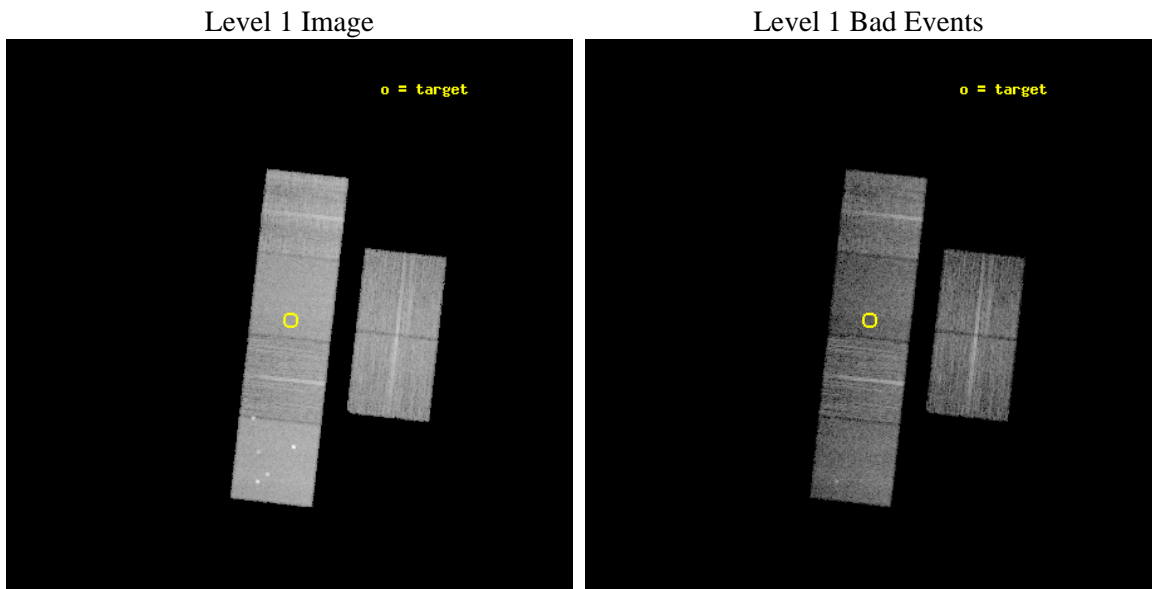
seq_num	200689	Sequence number
obs_id	12354	Observation id
title	Searching for Millisecond Pulsars in Extremely Low-Mass White Dwarf Binaries	Proposal title
observer	Dr Marcel Agueros	Principal investigator
object	SDSS J084910.13+044528.7	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	132.292083	Observer's specified target RA [deg]
dec_targ	4.757972	Observer's specified target Dec [deg]
ra_nom	132.29510870169	Nominal RA [deg]
dec_nom	4.7541784152557	Nominal Dec [deg]
roll_nom	276.37826926103	Nominal Roll [deg]
revision	3	Processing version of data
ontime	11049.599958897	Sum of GTIs [s]
livetime	10909.683270947	Livetime [s]
ontime2	11049.599958897	Sum of GTIs [s]
ontime3	11049.599958897	Sum of GTIs [s]
ontime5	11049.599958897	Sum of GTIs [s]
ontime6	11049.599958897	Sum of GTIs [s]
ontime7	11049.599958897	Sum of GTIs [s]
ontime8	11049.599958897	Sum of GTIs [s]
l2events	127297	Number of level 2 events



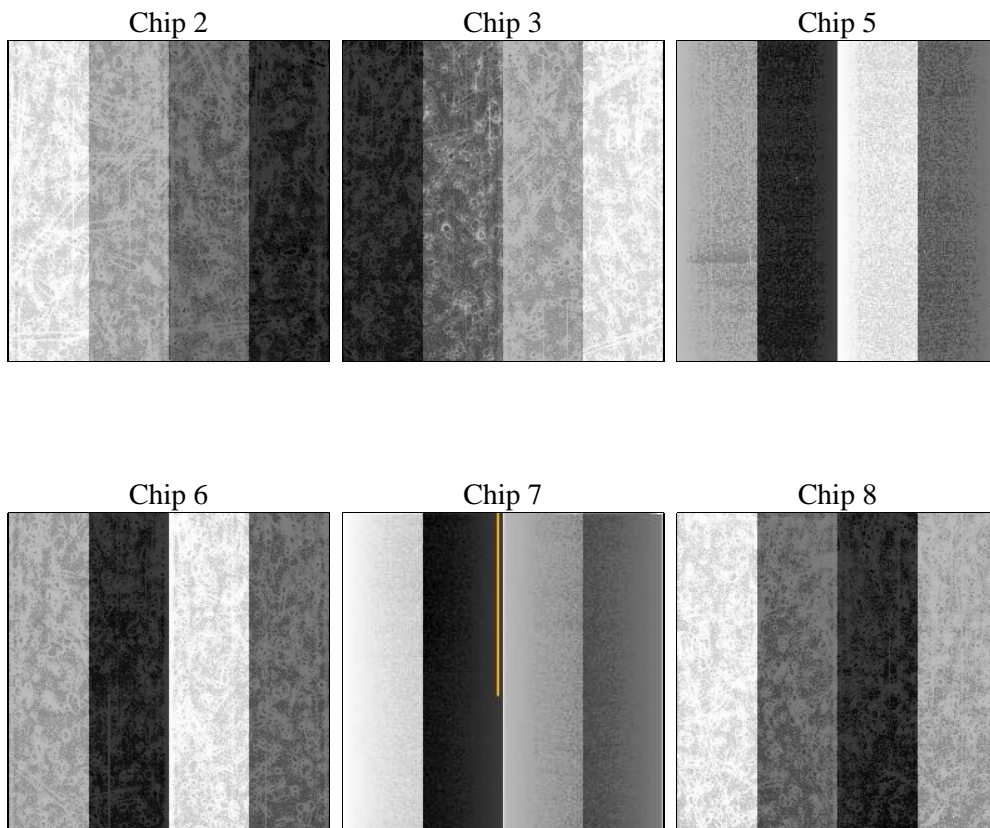
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	11000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	11049.599958897	Sum of GTIs [s]
caldbver	4.4.7	 	ontime2	11049.599958897	Sum of GTIs [s]
date	2012-02-05T17:51:09	Date and time of file creation	ontime3	11049.599958897	Sum of GTIs [s]
revision	3	Processing version of data	ontime5	11049.599958897	Sum of GTIs [s]
			ontime6	11049.599958897	Sum of GTIs [s]
			ontime7	11049.599958897	Sum of GTIs [s]
			ontime8	11049.599958897	Sum of GTIs [s]
			l1events	546692	Number of level 1 events

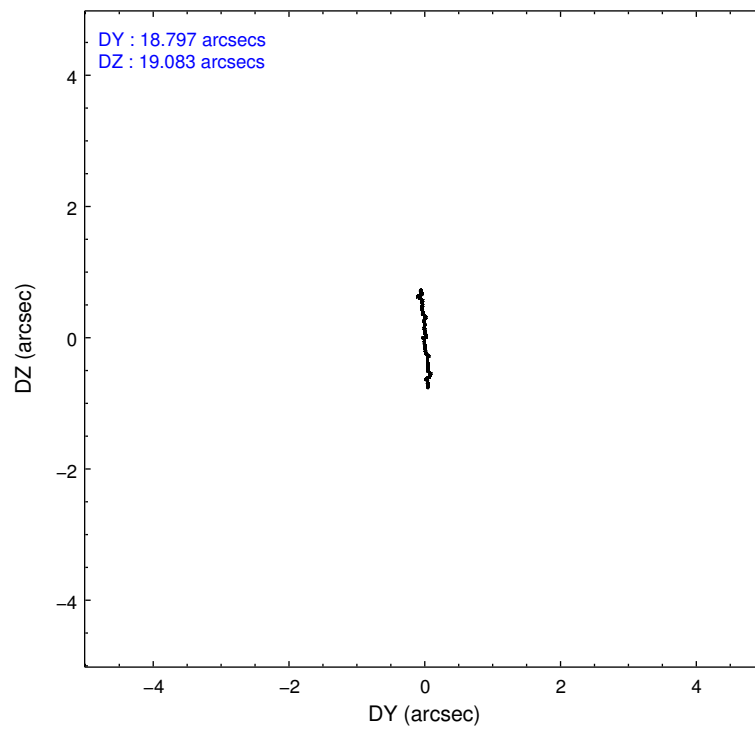
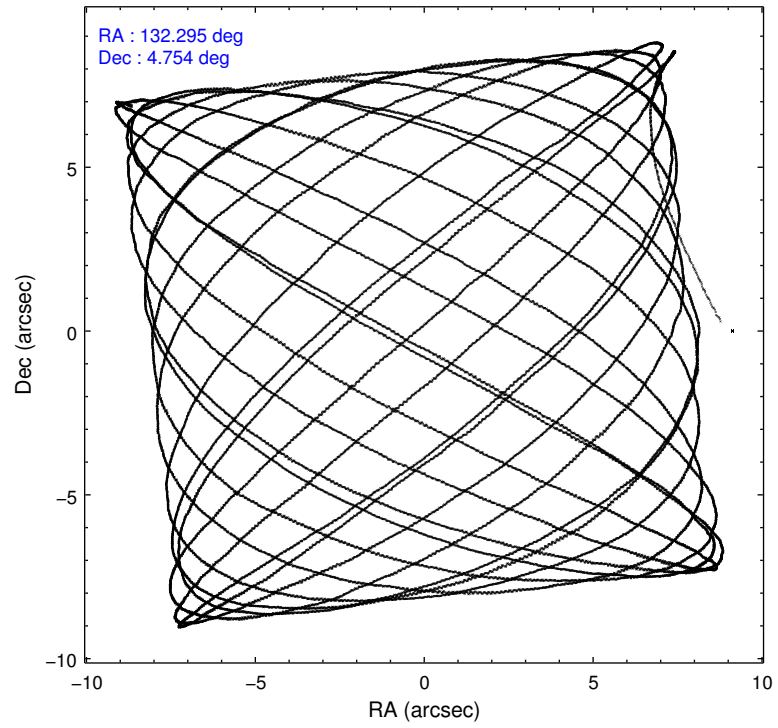
2.1.4 Events

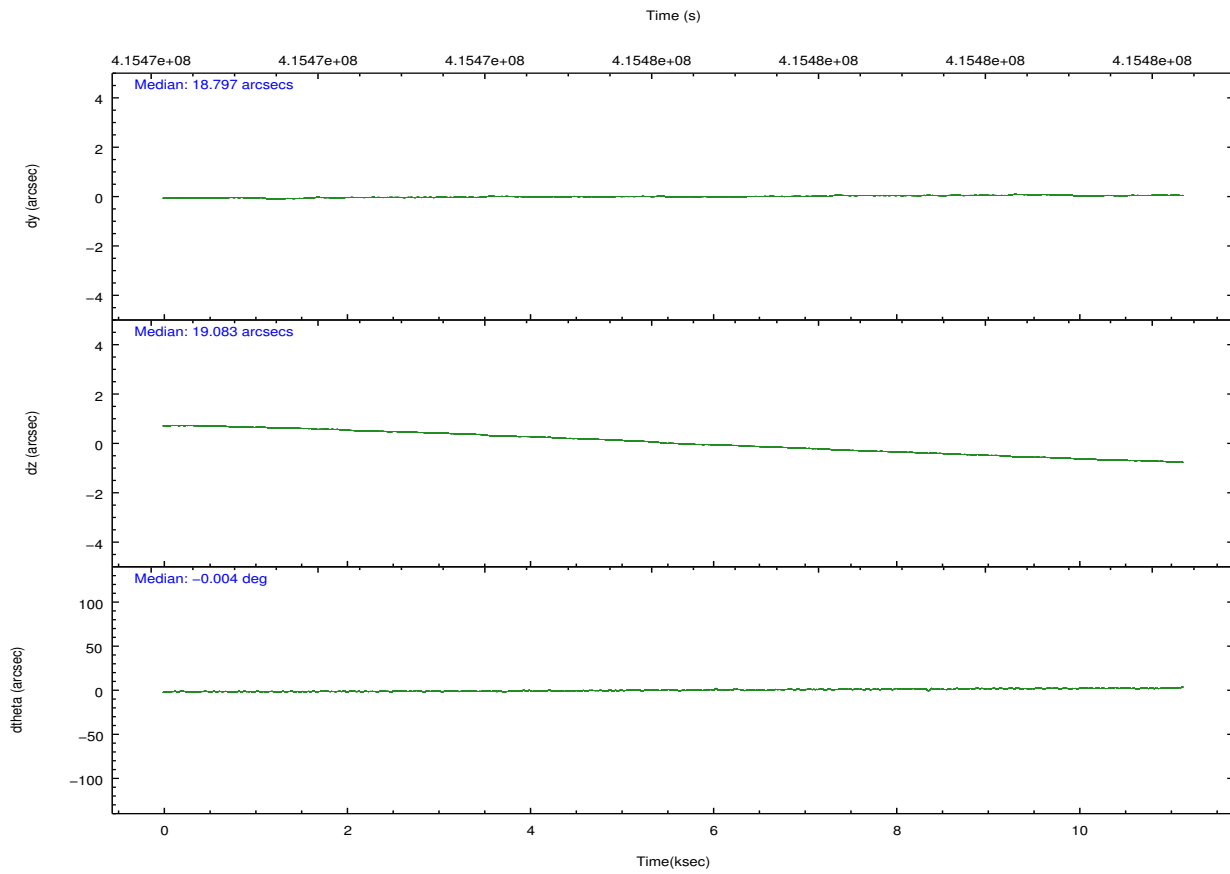
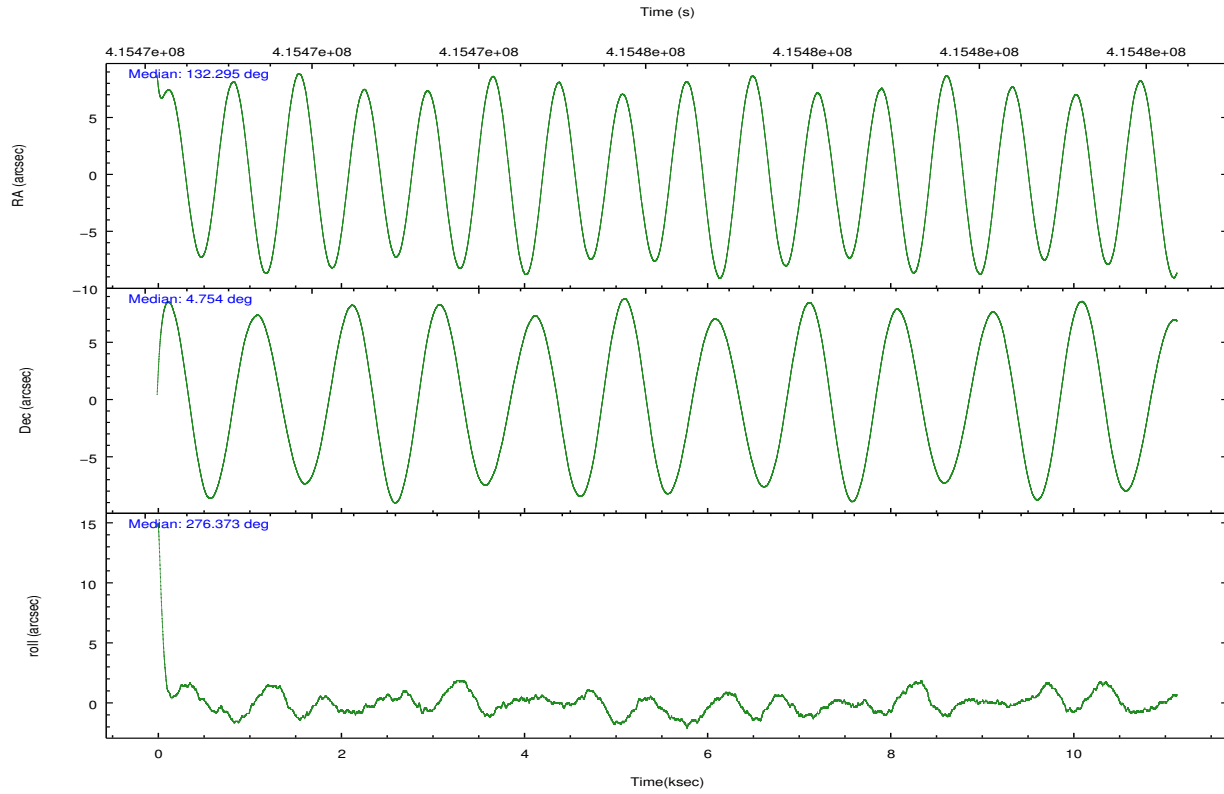
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	77378	72169	122922	78833	95667	99723	grade 0 events	3025	2705	8258	3039	3795	7935
rejected events	68983	64333	61025	70033	52758	72762		3%	3%	6%	3%	3%	7%
rejected %	89%	89%	49%	88%	55%	72%	grade 1 events	60	40	222	37	132	68
								0%	0%	0%	0%	0%	0%
							grade 2 events	2065	1765	18490	1959	8894	6391
								2%	2%	15%	2%	9%	6%
							grade 3 events	882	871	2239	859	3768	2925
								1%	1%	1%	1%	3%	2%
							grade 4 events	814	882	2231	931	3788	2561
								1%	1%	1%	1%	3%	2%
							grade 5 events	3093	3569	9103	3532	9989	5117
								3%	4%	7%	4%	10%	5%
							grade 6 events	1610	1617	30702	2014	22675	7159
								2%	2%	24%	2%	23%	7%
							grade 7 events	65829	60720	51677	66462	42626	67567
								85%	84%	42%	84%	44%	67%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	132.278511	132.2951087016862	CCD I2 on	O1	Y
[deg] Pointing Dec	4.775947	4.754178415255737	CCD I3 on	O2	Y
[deg] Pointing Roll	276.223004	276.3782692610284	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	Y	Y
[s] Observation start time (MET)	415470815.184000	415469557.66874	CCD S5 on	N	N
Observation start date	2011-03-02T16:32:29	2011-03-02T16:12:37	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	415481815.184000	415483210.66945	On-chip summing requested	N	N
Observation end date	2011-03-02T19:35:49	2011-03-02T20:00:10	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



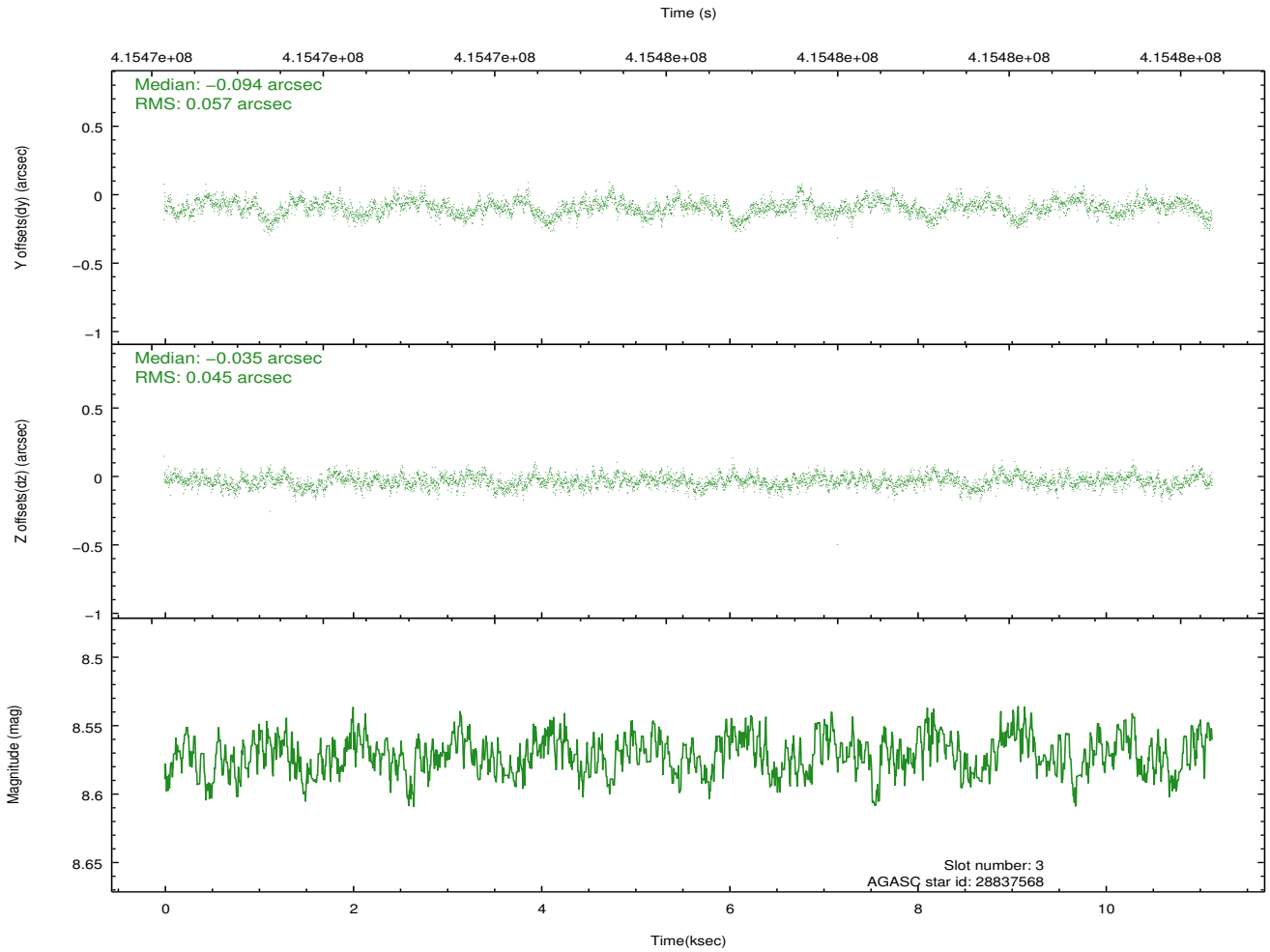
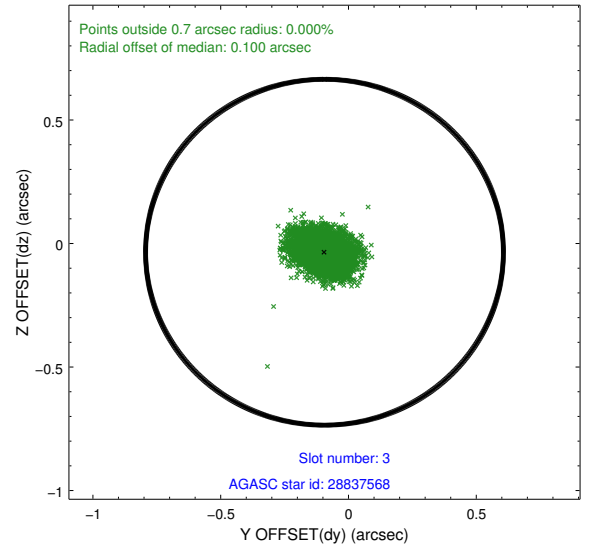
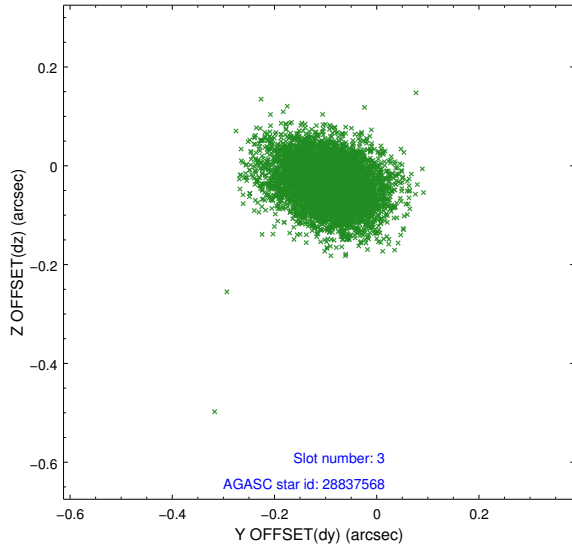


Slot Statistics

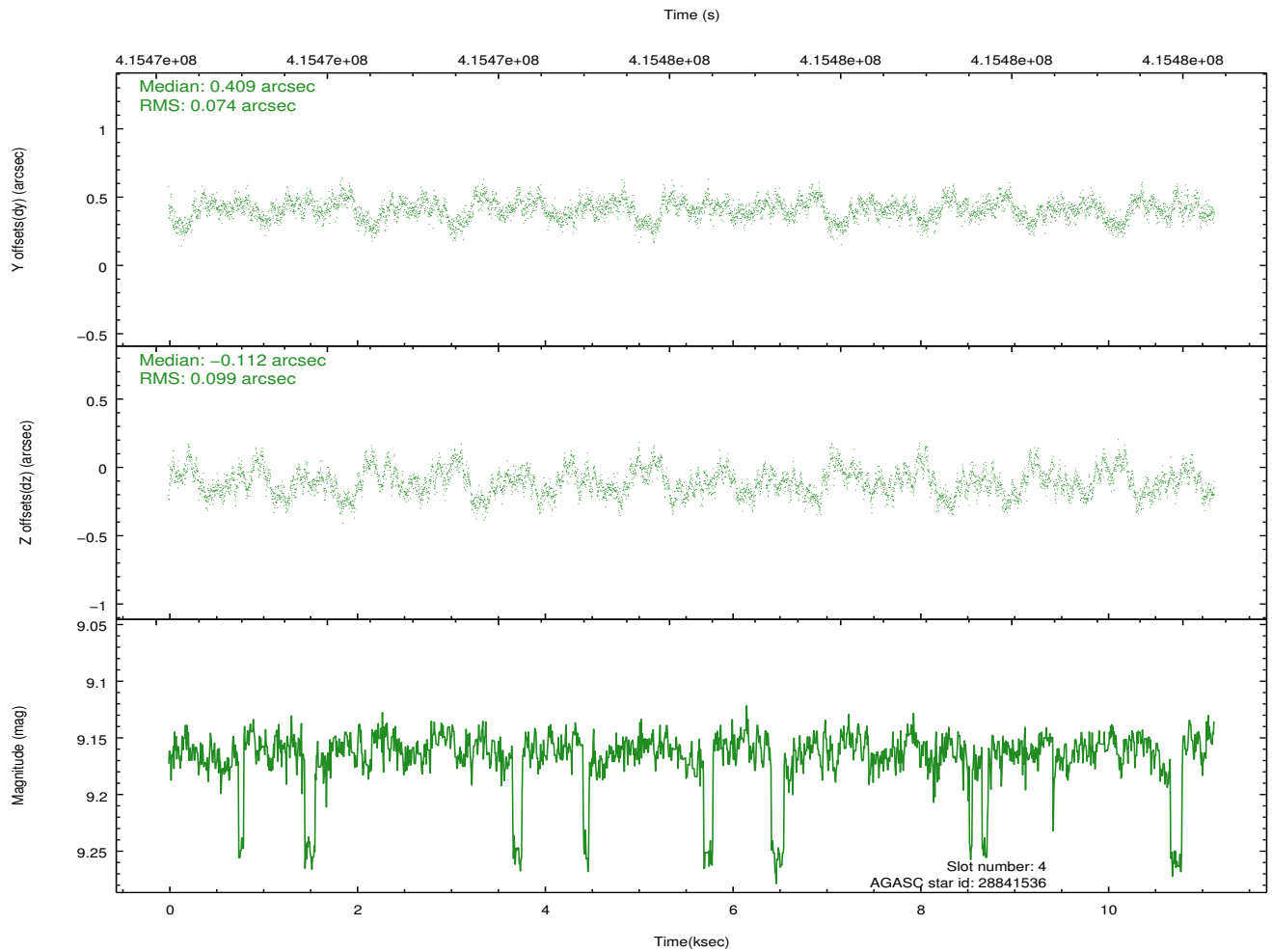
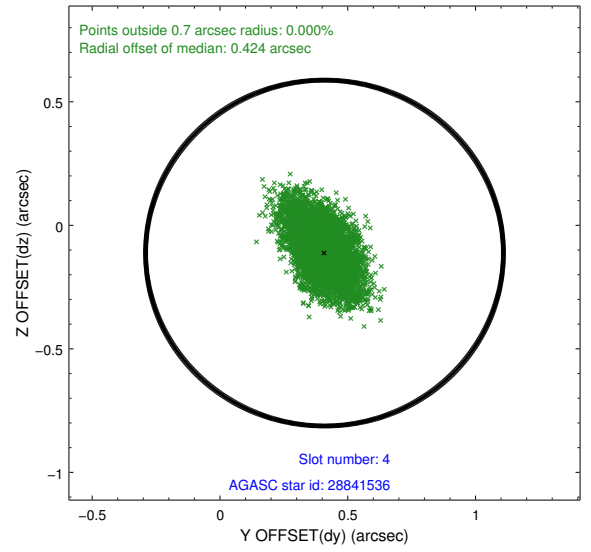
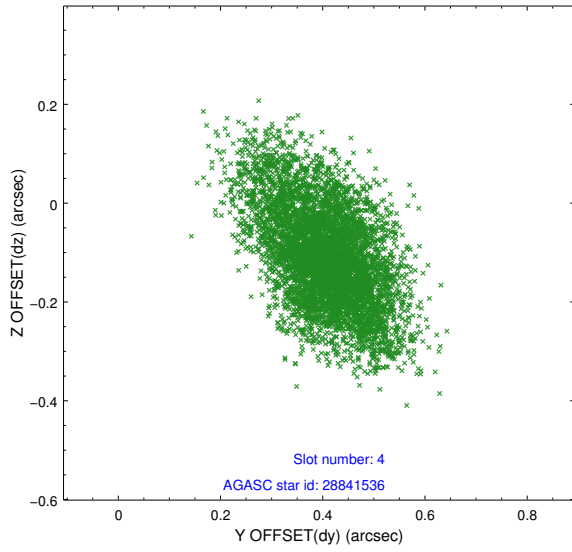
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.90	2717	-0.094	-0.040	0.015	0.022	0.000000	0.000000	-771.97	-1740.62
1	FID	ACIS-S-4	6.97	2717	0.227	0.055	0.006	0.012	0.000000	0.000000	2141.42	167.46
2	FID	ACIS-S-5	7.00	2717	-0.165	-0.007	0.014	0.021	0.000000	0.000000	-1824.29	161.61
3	GUIDE	28837568	8.57	5433	-0.094	-0.035	0.077	0.128	132.699151	5.146016	-1161.27	1643.74
4	GUIDE	28841536	9.16	5416	0.409	-0.112	0.130	0.224	132.799187	5.163038	-1183.32	2007.16
5	GUIDE	28843472	8.05	5435	-0.264	0.024	0.063	0.098	132.953682	4.281415	2031.14	2217.39
6	GUIDE	28845608	7.84	5434	0.150	0.088	0.083	0.130	131.793602	4.357993	1307.60	-1892.76
7	GUIDE	28836080	8.28	5433	-0.197	0.038	0.095	0.157	131.551996	5.286863	-2111.64	-2390.00

2.4 Star Slots

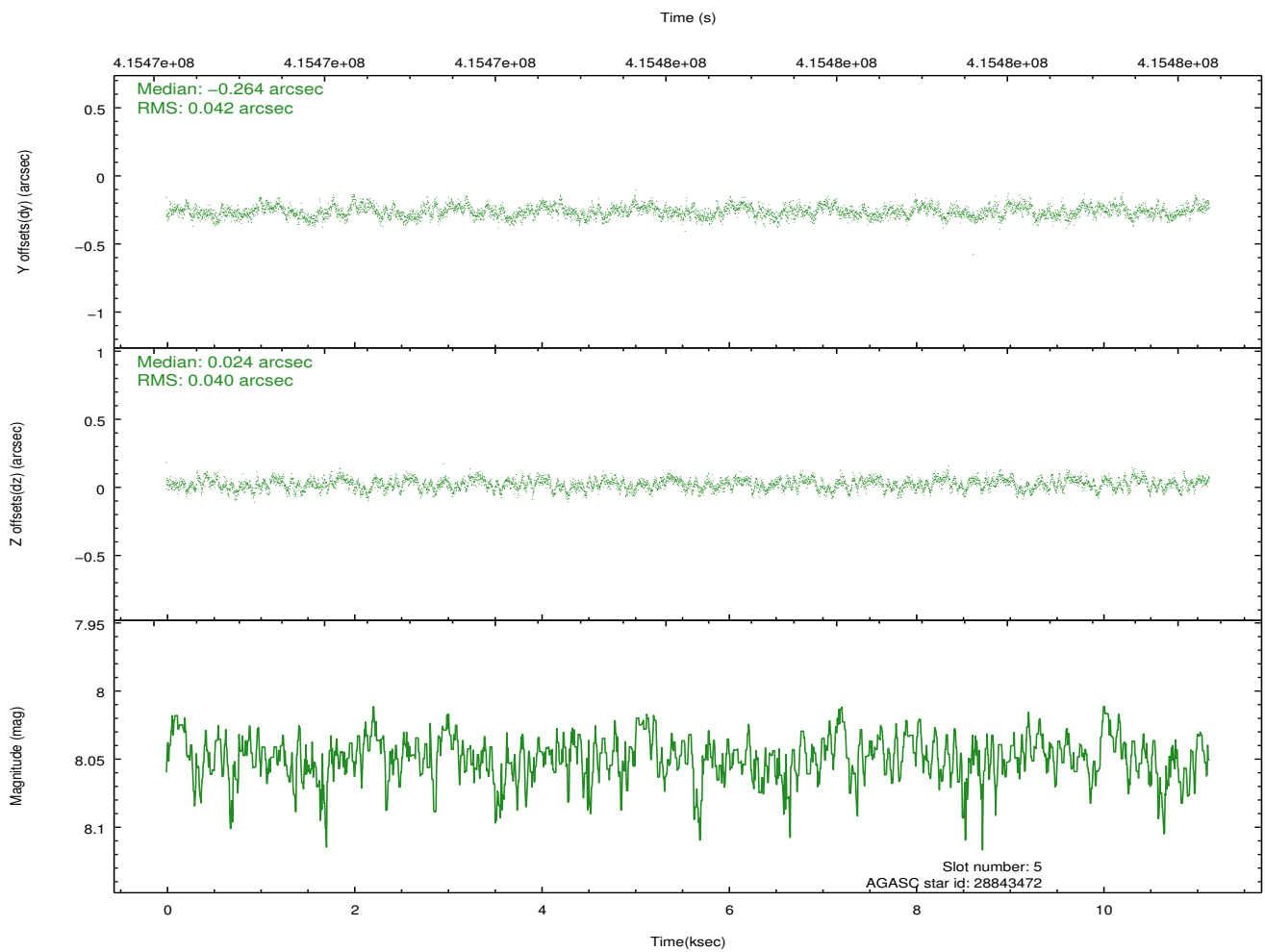
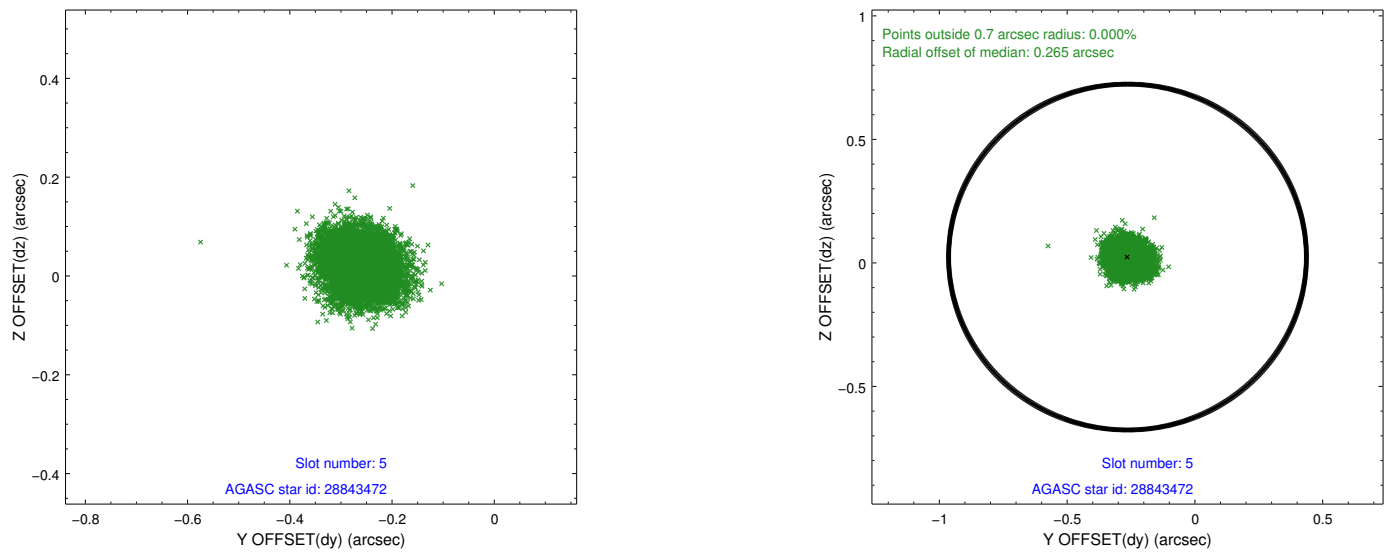
2.4.1 Slot 3



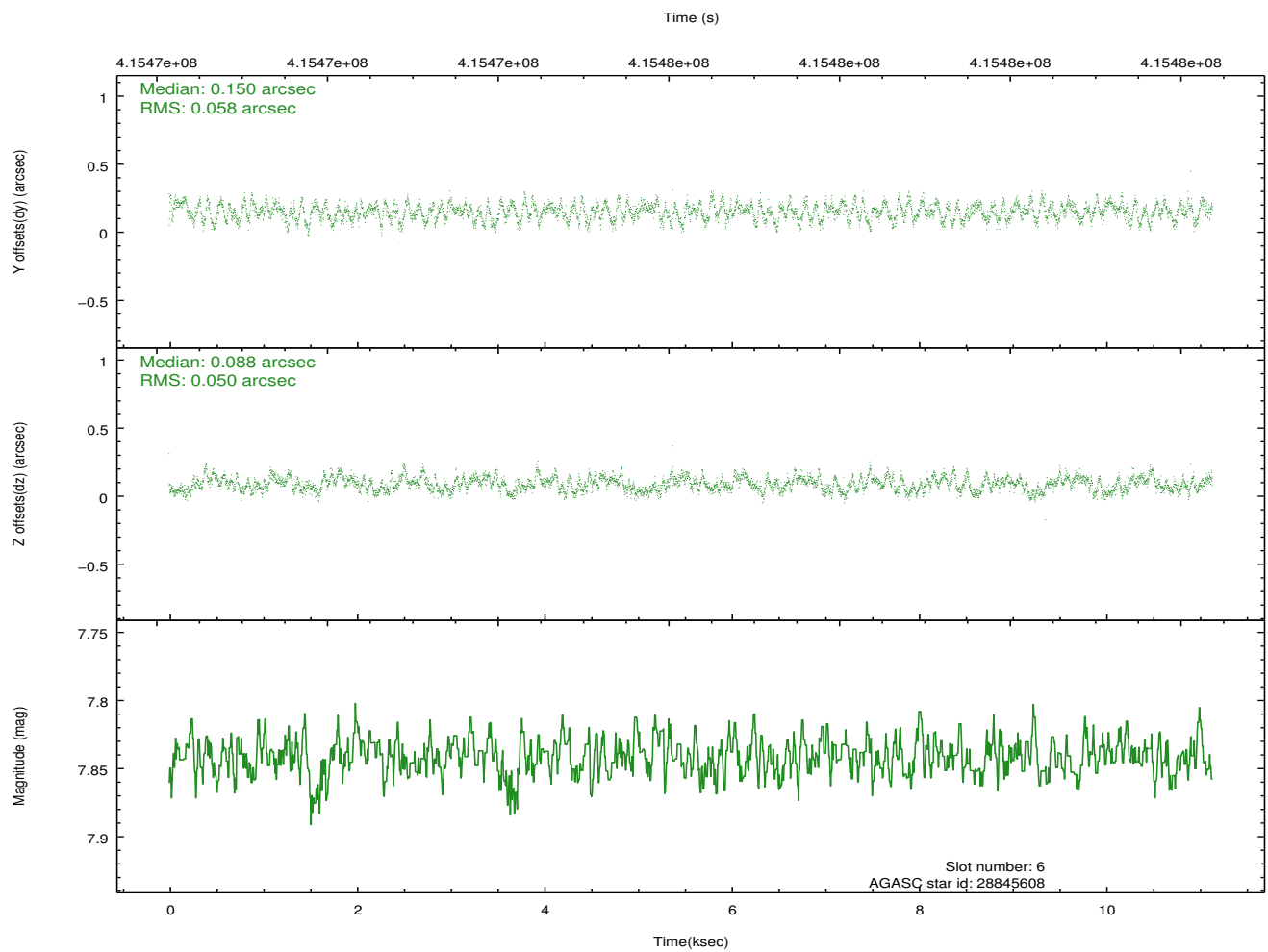
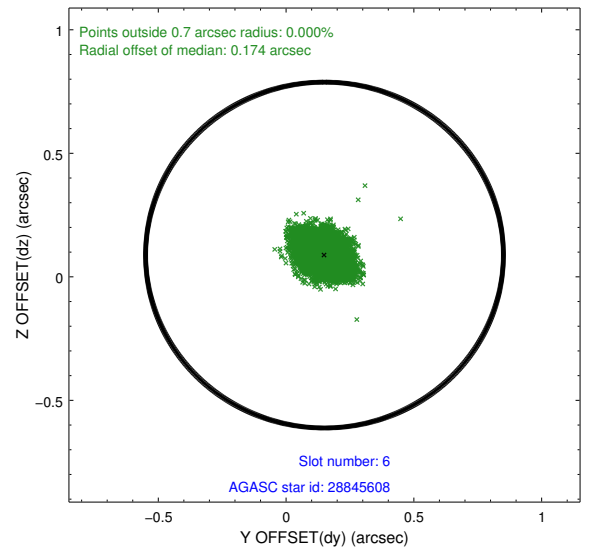
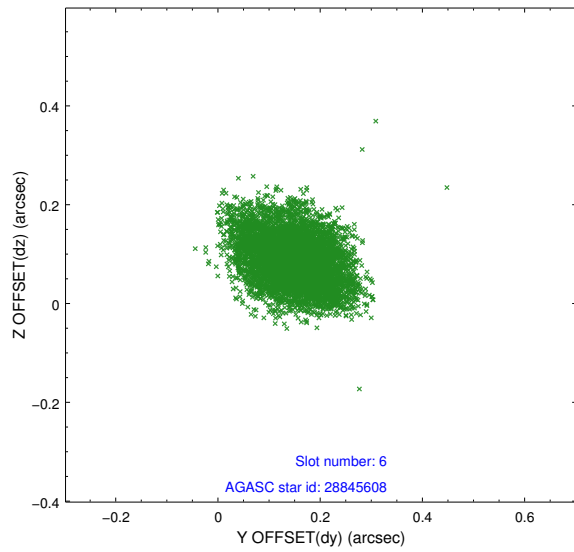
2.4.2 Slot 4



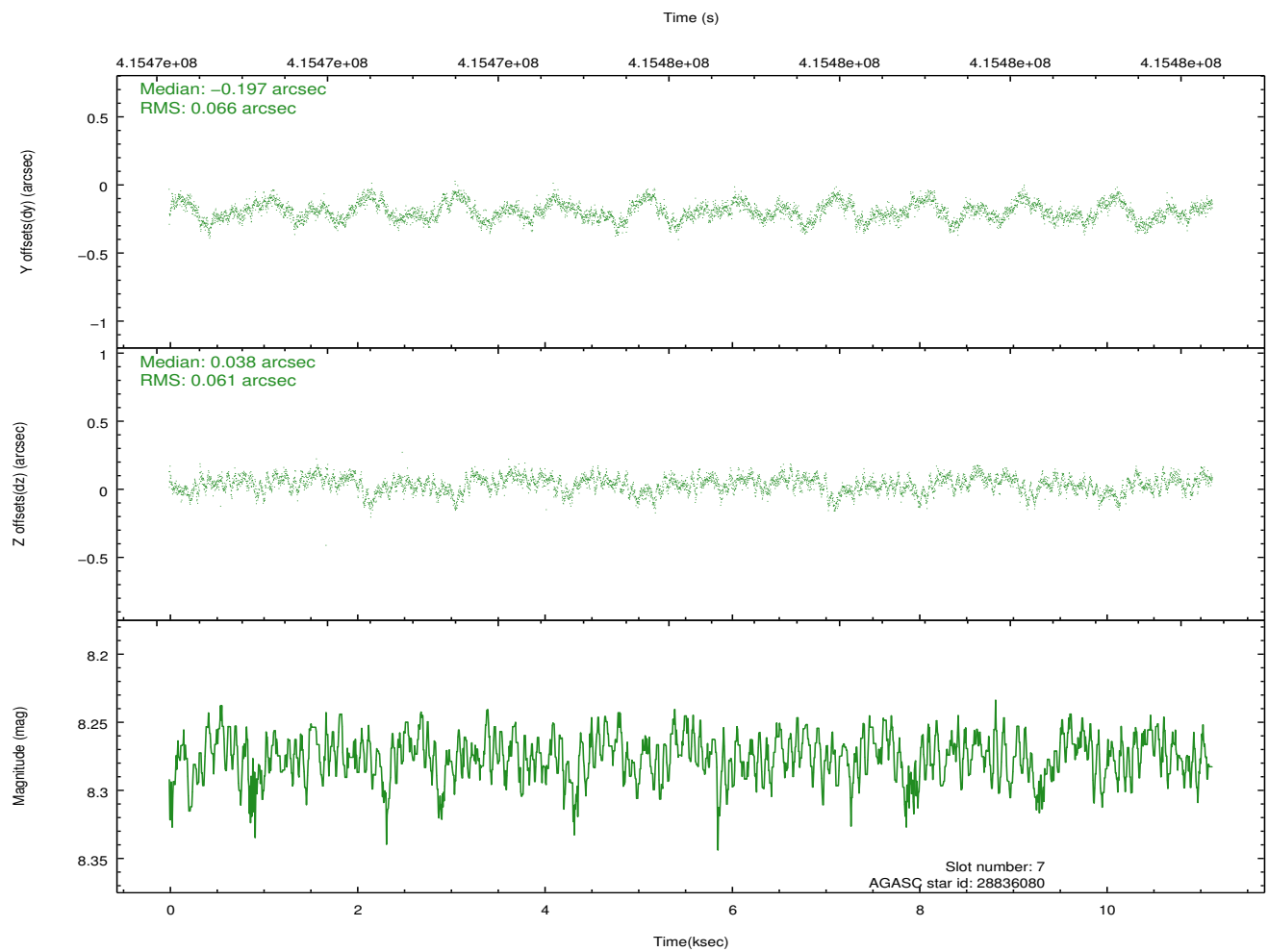
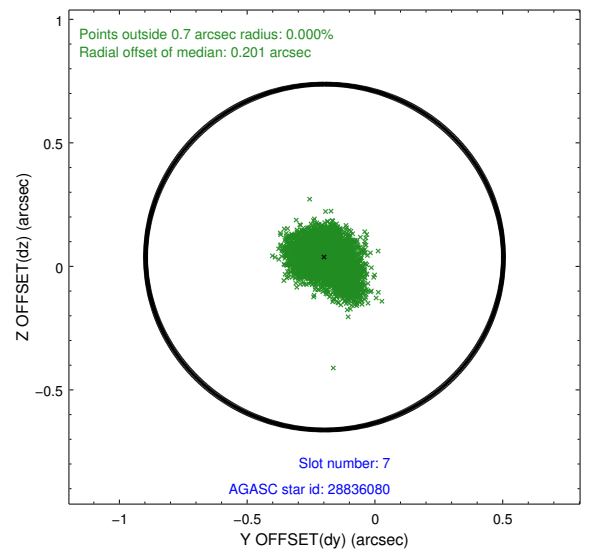
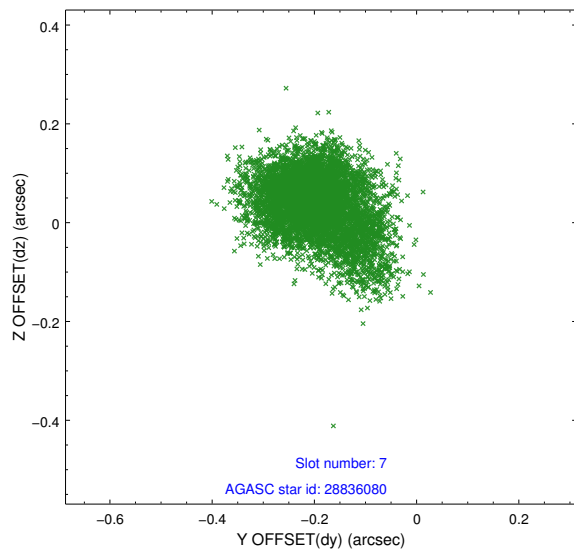
2.4.3 Slot 5



2.4.4 Slot 6

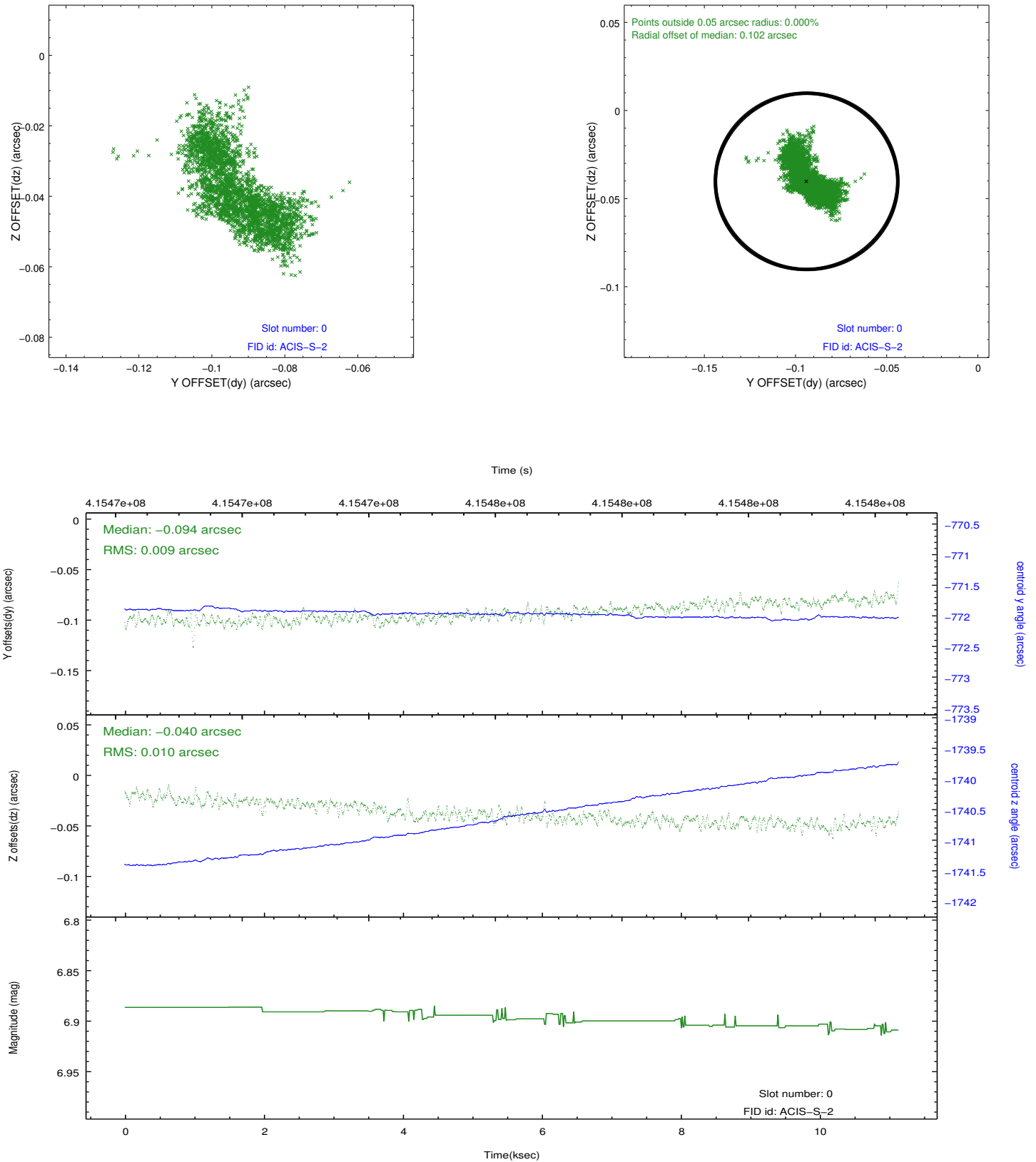


2.4.5 Slot 7

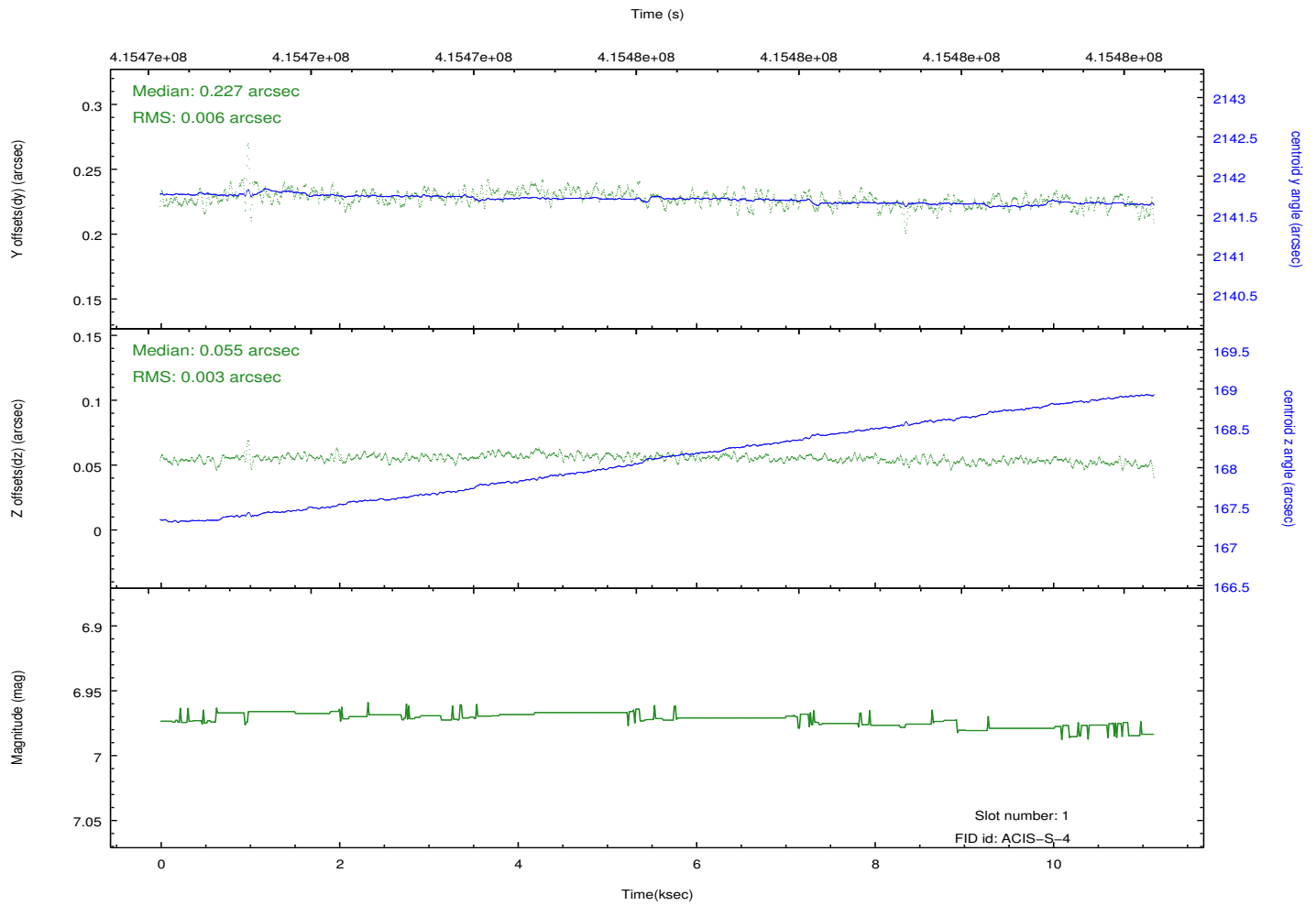
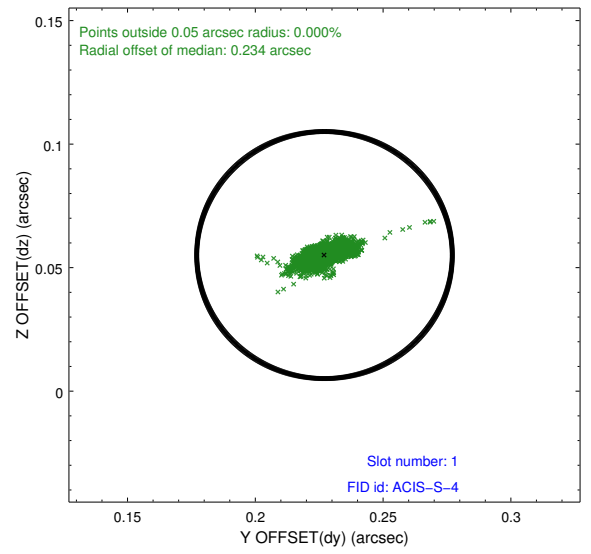
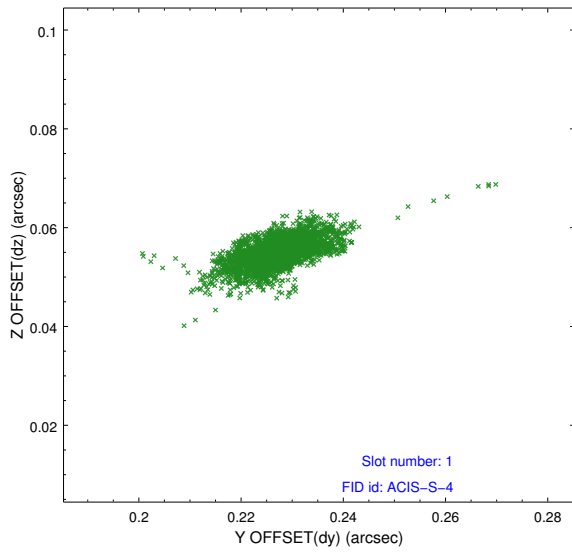


2.5 FID Slots

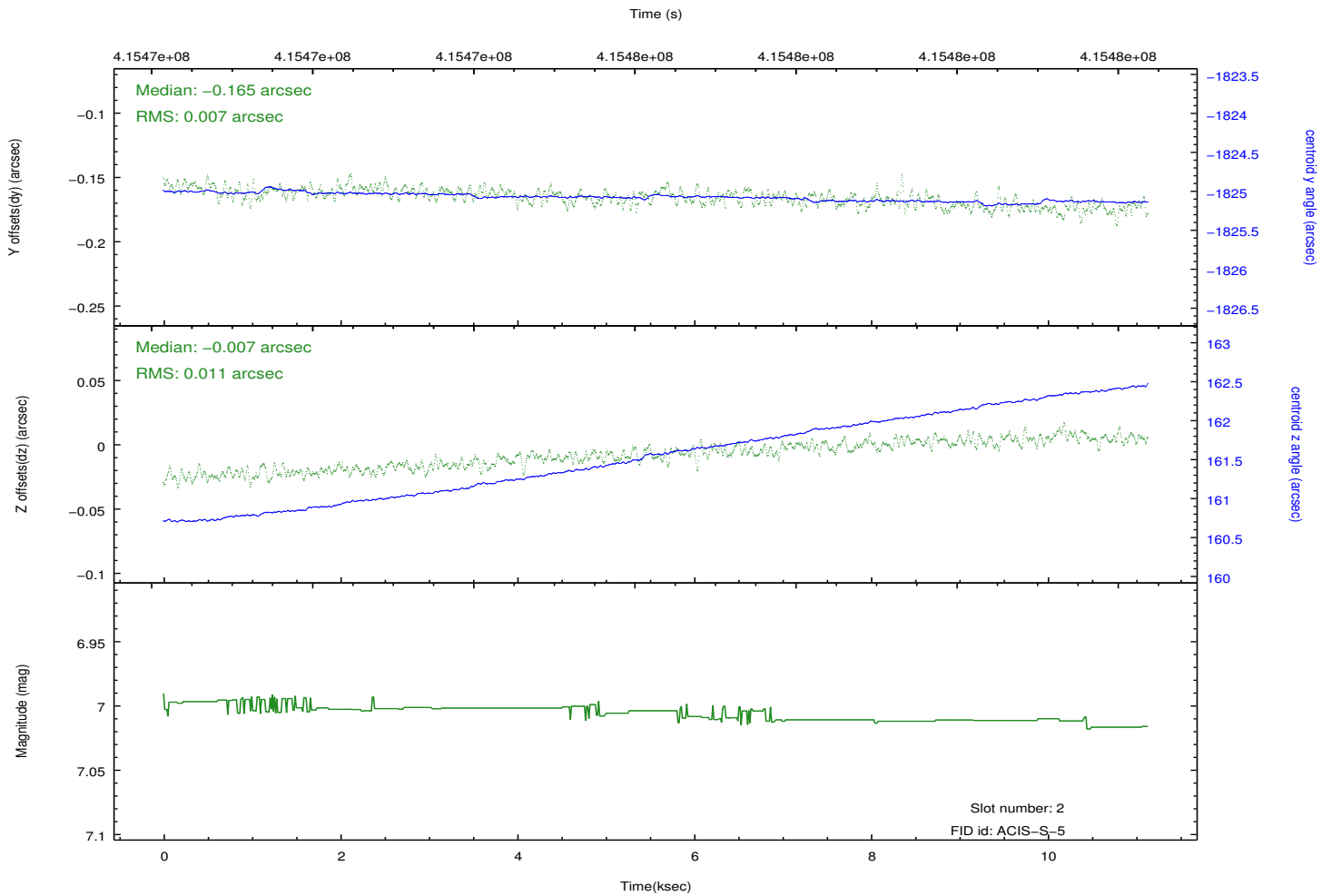
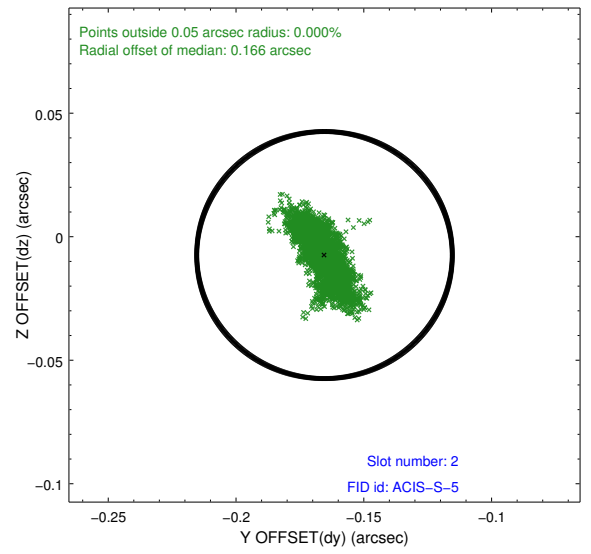
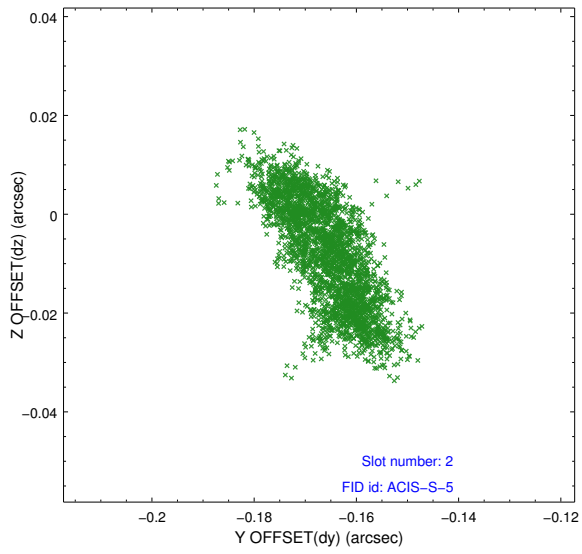
2.5.1 Slot 0



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)	2012.02.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	11.049599958897

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.

=====

A spatial region of the original bias map for CCD = 3 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 = 3 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:
(132.10506,4.87449), (132.10030,4.87397), (132.10410,4.84023), (132.10909,4.83872)