

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 12970 - L2 Version 2
Chandra X-Ray Center

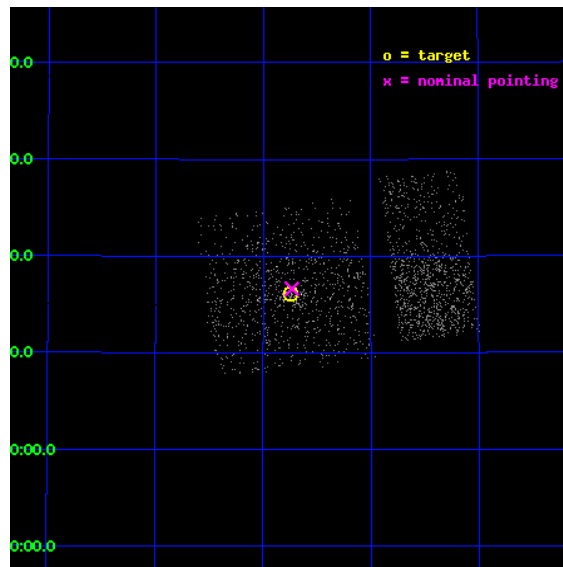
L2 Processing Date : Feb 10 2012

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1 Front

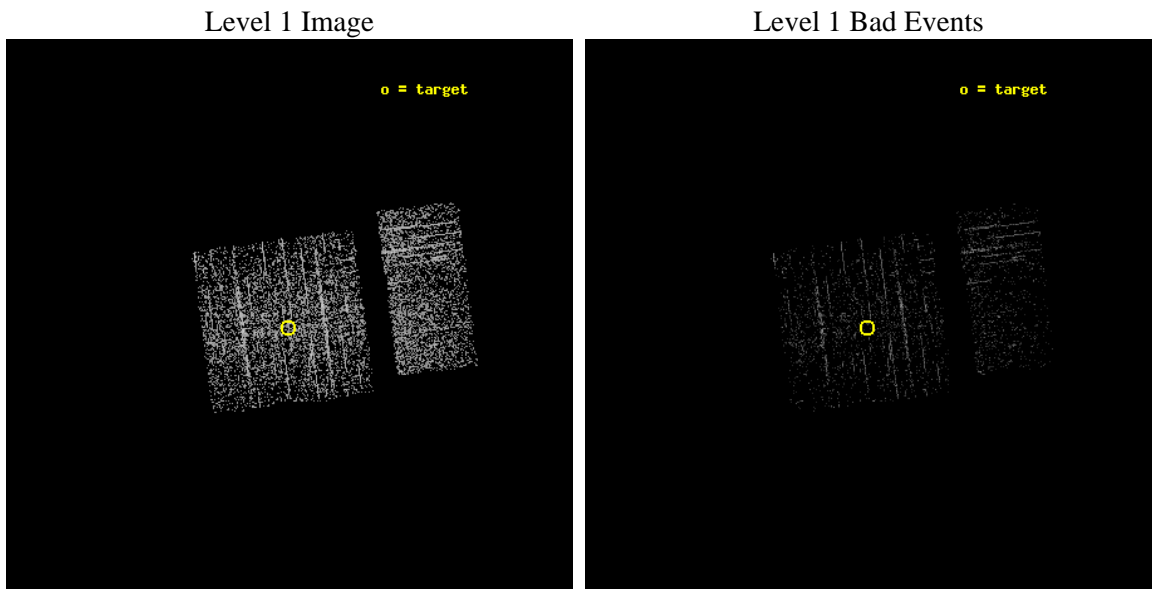
seq_num	600938	Sequence number
obs_id	12970	Observation id
title	Monitoring M31 for BHXNe	Proposal title
observer	Dr Michael Garcia	Principal investigator
object	M31	Source name
dtcycle	0	
cycle	P	events are from which exps? P[primary] S[econdar]
ra_targ	10.685	Observer's specified target RA [deg]
dec_targ	41.268972	Observer's specified target Dec [deg]
ra_nom	10.683228436654	Nominal RA [deg]
dec_nom	41.277048861807	Nominal Dec [deg]
roll_nom	82.698843808231	Nominal Roll [deg]
revision	2	Processing version of data
ontime	941.37424004078	Sum of GTIs [s]
livetime	148.19501281025	Livetime [s]
ontime0	941.37424004078	Sum of GTIs [s]
ontime1	941.37424004078	Sum of GTIs [s]
ontime2	937.56288003922	Sum of GTIs [s]
ontime3	941.37424004078	Sum of GTIs [s]
ontime6	941.37424004078	Sum of GTIs [s]
ontime7	941.37424004078	Sum of GTIs [s]
l2events	2243	Number of level 2 events



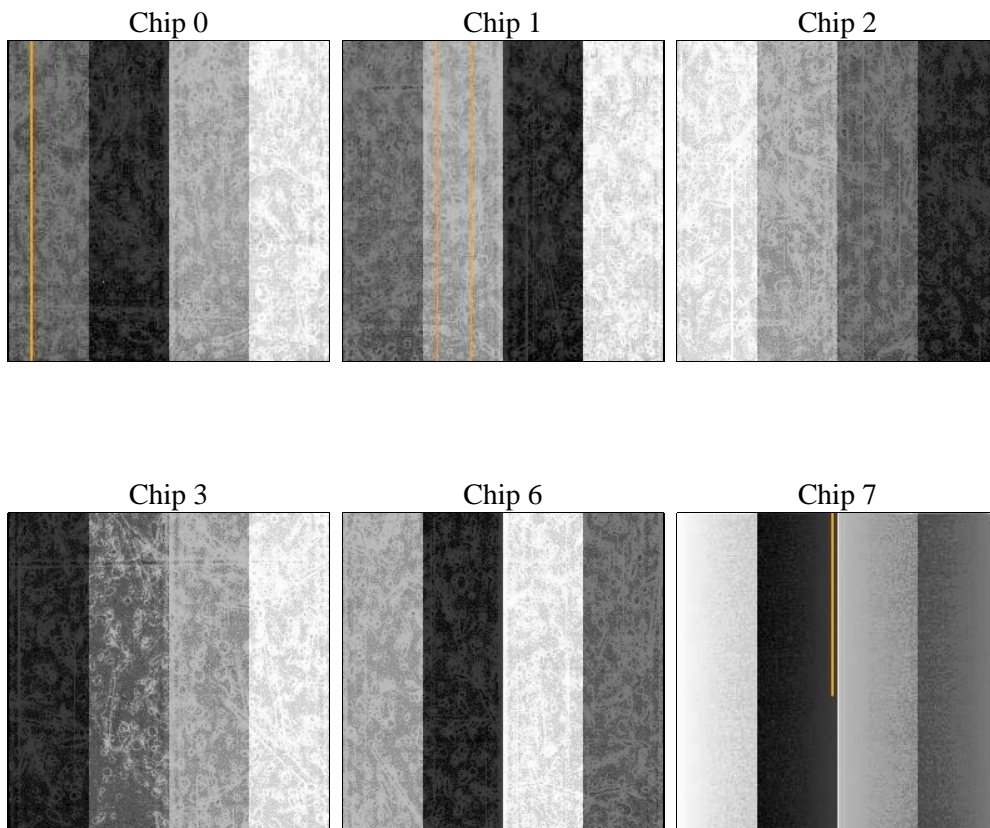
2 OBI Primary

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	941.37424004078	Sum of GTIs [s]
caldbver	4.4.7	 	ontime0	941.37424004078	Sum of GTIs [s]
date	2012-02-11T00:16:06	Date and time of file creation	ontime1	941.37424004078	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	937.56288003922	Sum of GTIs [s]
			ontime3	941.37424004078	Sum of GTIs [s]
			ontime6	941.37424004078	Sum of GTIs [s]
			ontime7	941.37424004078	Sum of GTIs [s]
			l1events	18304	Number of level 1 events

2.1.4 Events

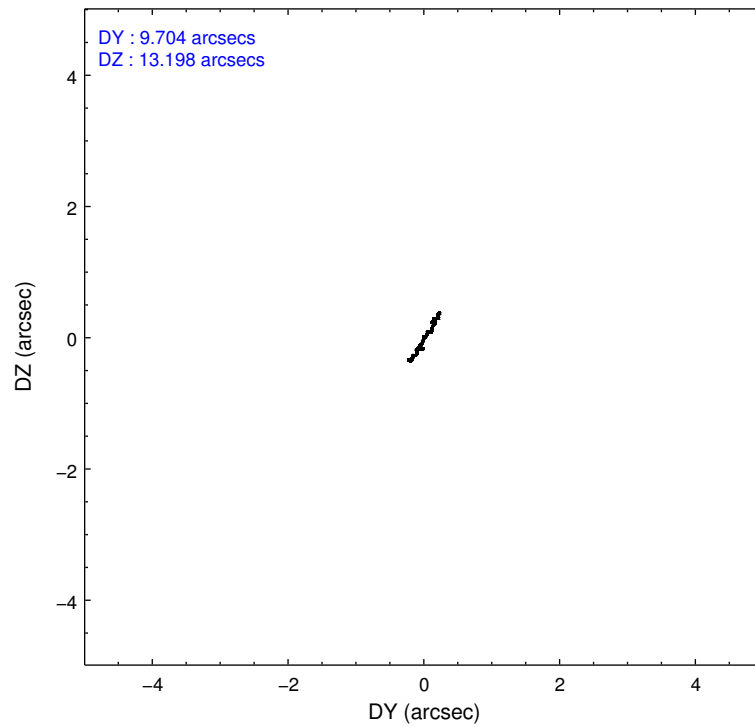
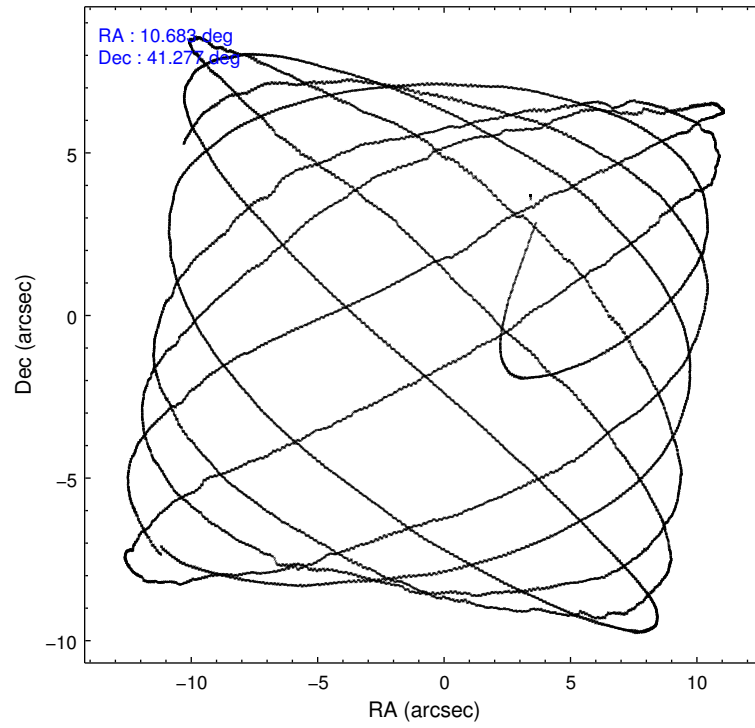
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	2855	2771	3221	3155	3446	2856
rejected events	2557	2390	2929	2692	3130	2024
rejected %	89%	86%	90%	85%	90%	70%

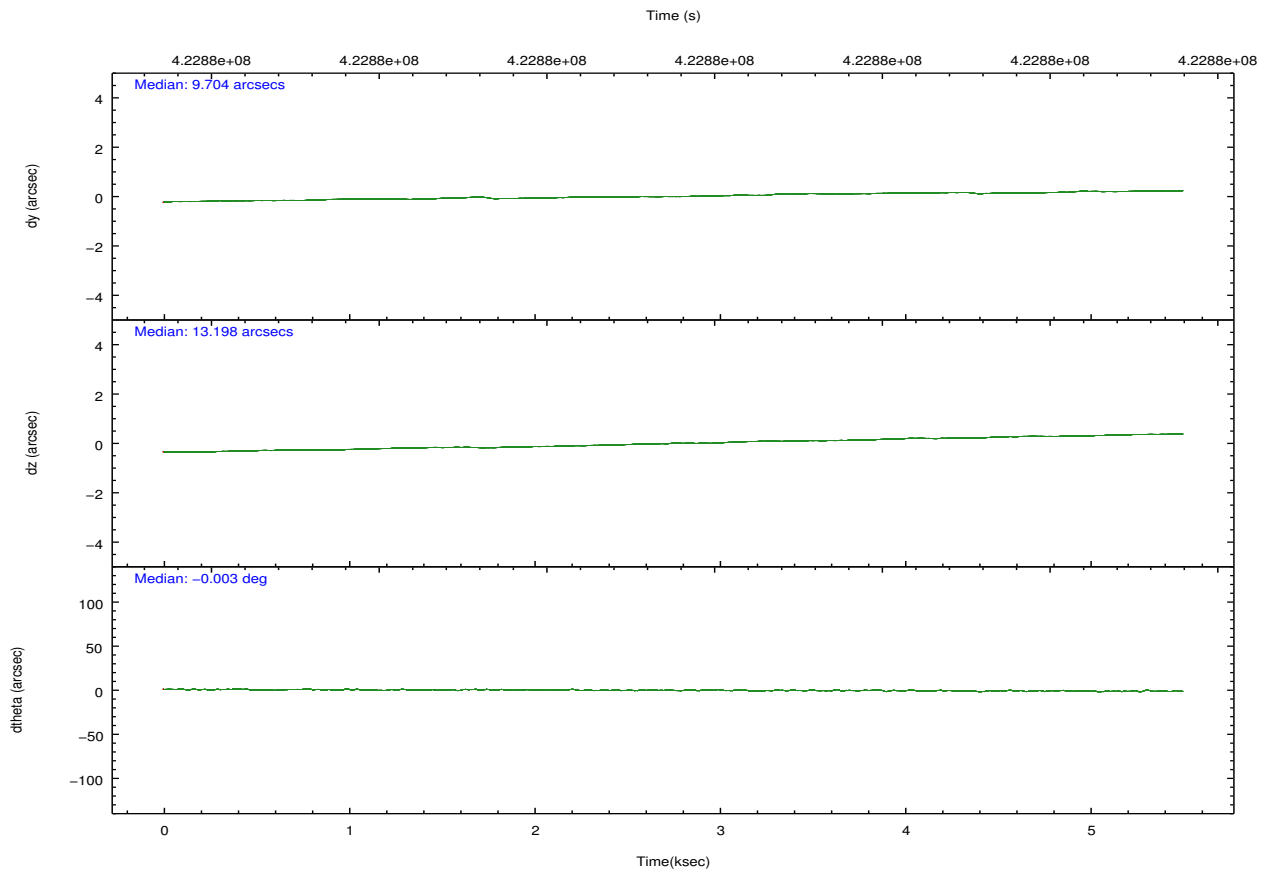
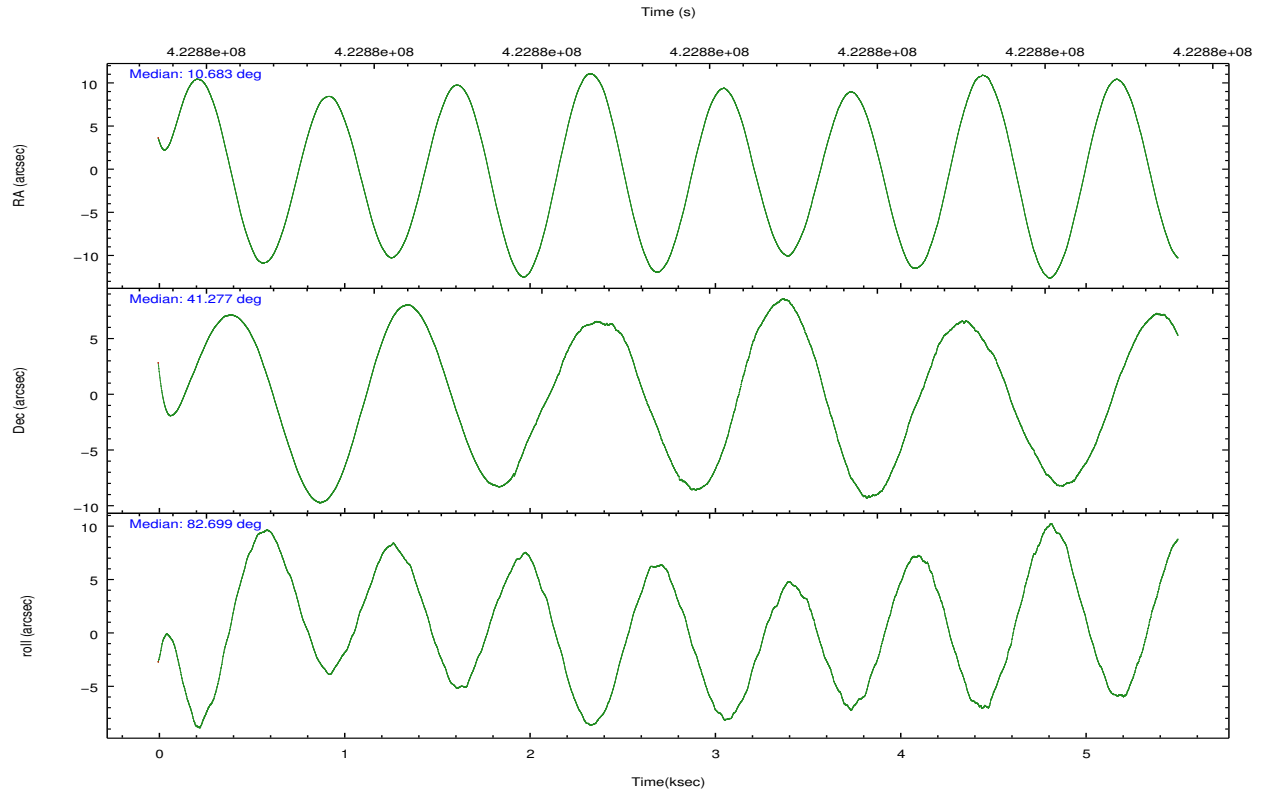
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	100	147	122	266	85	67
	3%	5%	3%	8%	2%	2%
grade 1 events	2	3	1	5	2	2
	0%	0%	0%	0%	0%	0%
grade 2 events	81	84	67	86	69	196
	2%	3%	2%	2%	2%	6%
grade 3 events	30	40	24	41	55	63
	1%	1%	0%	1%	1%	2%
grade 4 events	39	39	27	32	40	73
	1%	1%	0%	1%	1%	2%
grade 5 events	95	111	95	148	116	253
	3%	4%	2%	4%	3%	8%
grade 6 events	48	74	52	44	70	440
	1%	2%	1%	1%	2%	15%
grade 7 events	2460	2273	2833	2533	3009	1762
	86%	82%	87%	80%	87%	61%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012367	ACIS-012367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	10.697384	10.68322843665419	CCD I2 on	Y	Y
[deg] Pointing Dec	41.251603	41.27704886180663	CCD I3 on	Y	Y
[deg] Pointing Roll	82.480841	82.69884380823098	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O2	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O1	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	422876496.184000	422875326.04041	CCD S5 on	N	N
Observation start date	2011-05-27T09:40:30	2011-05-27T09:22:06	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	422881496.184000	422882596.87828	On-chip summing requested	N	N
Observation end date	2011-05-27T11:03:50	2011-05-27T11:23:16	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	Y	Y
			[s] Primary exposure time	0.600000	0.6
			[s] Secondary exposure time	0.000000	3.2
			Duty cycle	5	5

2.3 Aspect



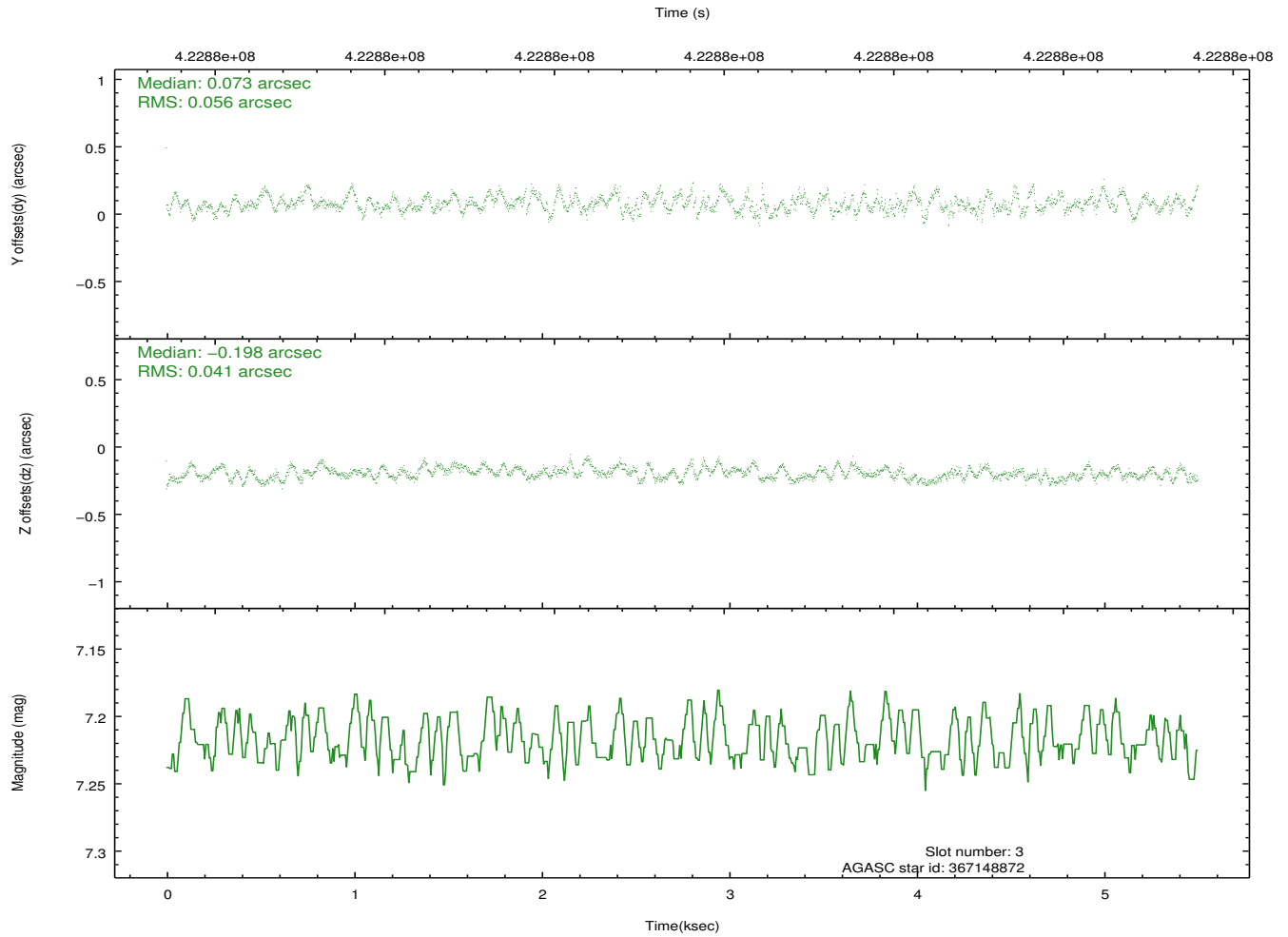
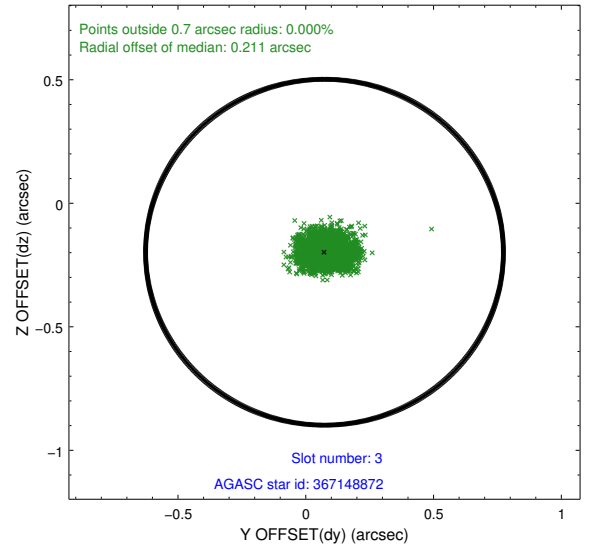
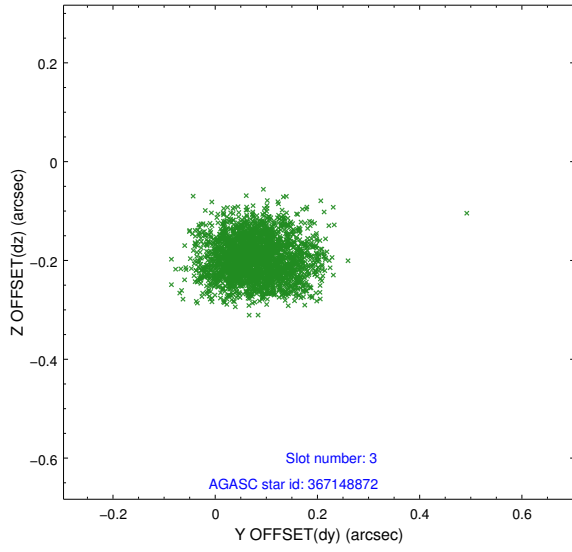


Slot Statistics

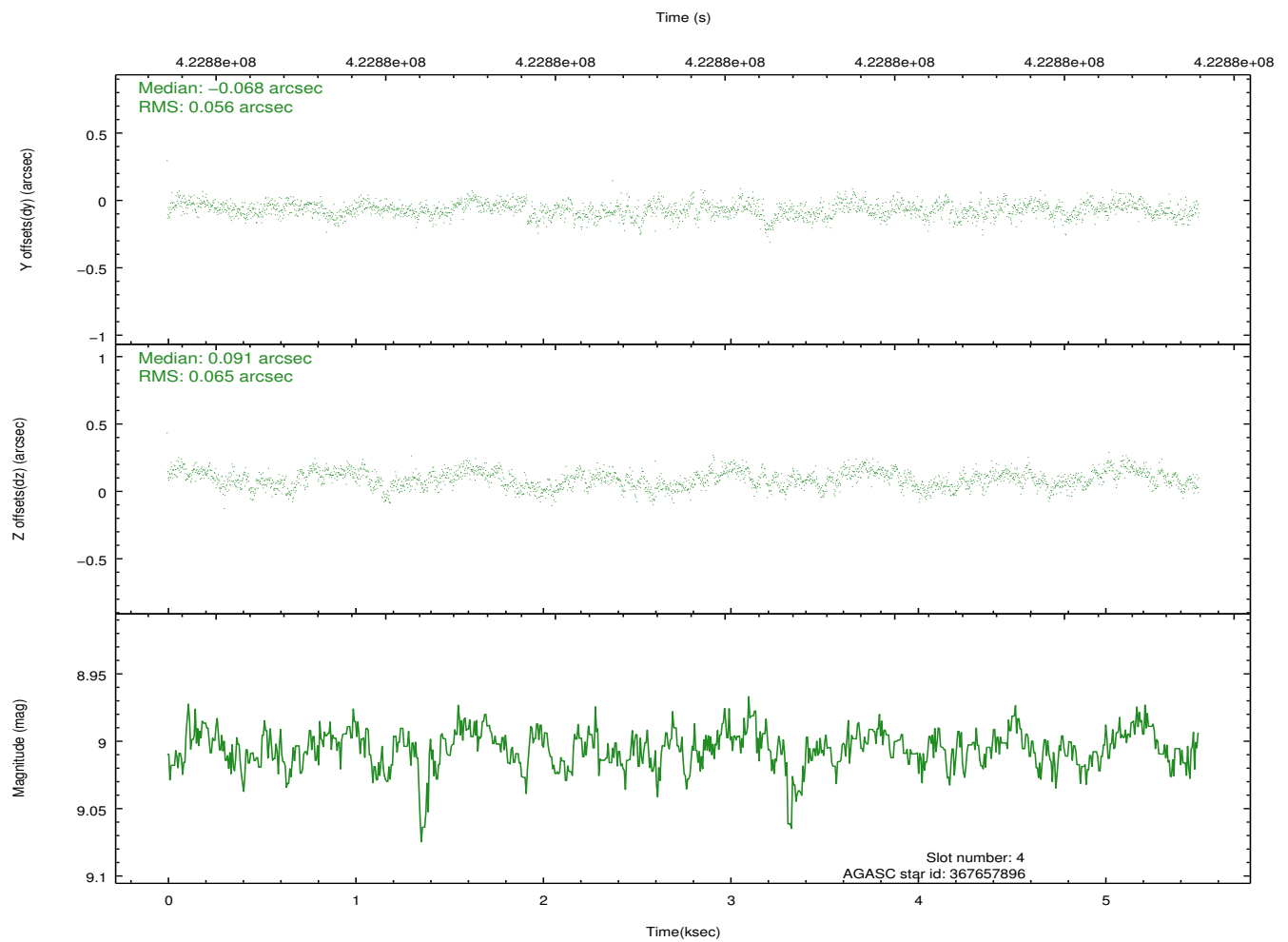
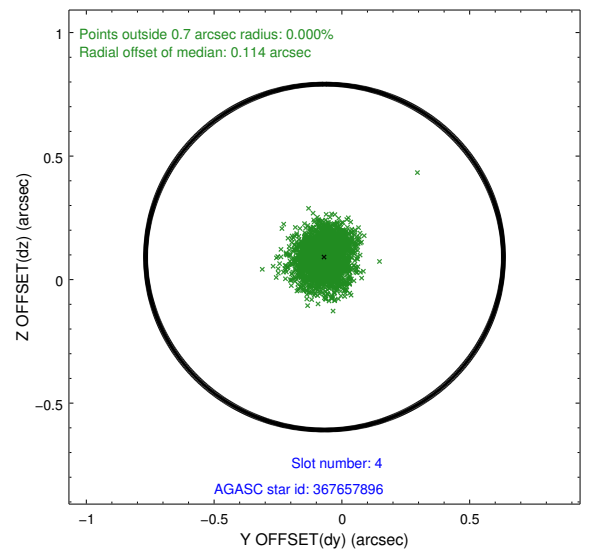
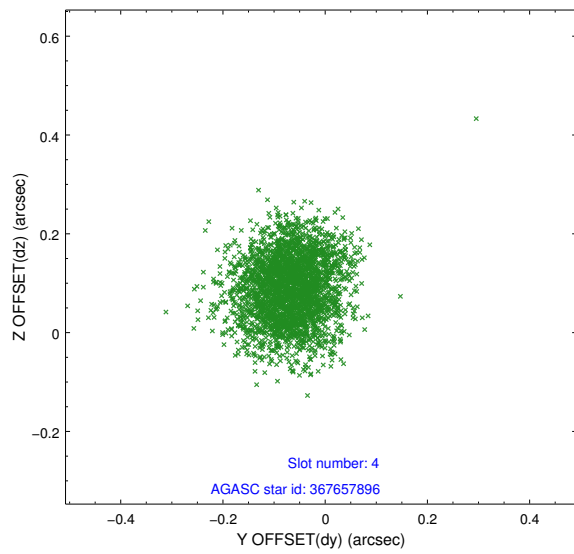
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.05	1343	0.068	-0.003	0.017	0.039	0.000000	0.000000	929.96	-836.74
1	FID	ACIS-I-5	7.03	1343	-0.217	0.076	0.012	0.028	0.000000	0.000000	-1817.85	1060.24
2	FID	ACIS-I-6	7.04	1343	0.058	-0.002	0.009	0.018	0.000000	0.000000	394.28	1705.93
3	GUIDE	367148872	7.22	2685	0.073	-0.198	0.073	0.119	10.505940	40.688258	-2079.13	253.04
4	GUIDE	367657896	9.01	2683	-0.068	0.091	0.092	0.147	11.197765	41.313576	401.20	-1311.11
5	GUIDE	367663272	9.27	2676	0.017	-0.196	0.094	0.154	10.656279	41.699429	1583.42	321.08
6	GUIDE	367674552	8.84	2682	-0.058	0.132	0.078	0.126	11.016238	41.570845	1253.72	-700.31
7	GUIDE	367138920	7.72	2684	0.036	0.169	0.074	0.128	11.513485	40.808909	-1278.81	-2412.61

2.4 Star Slots

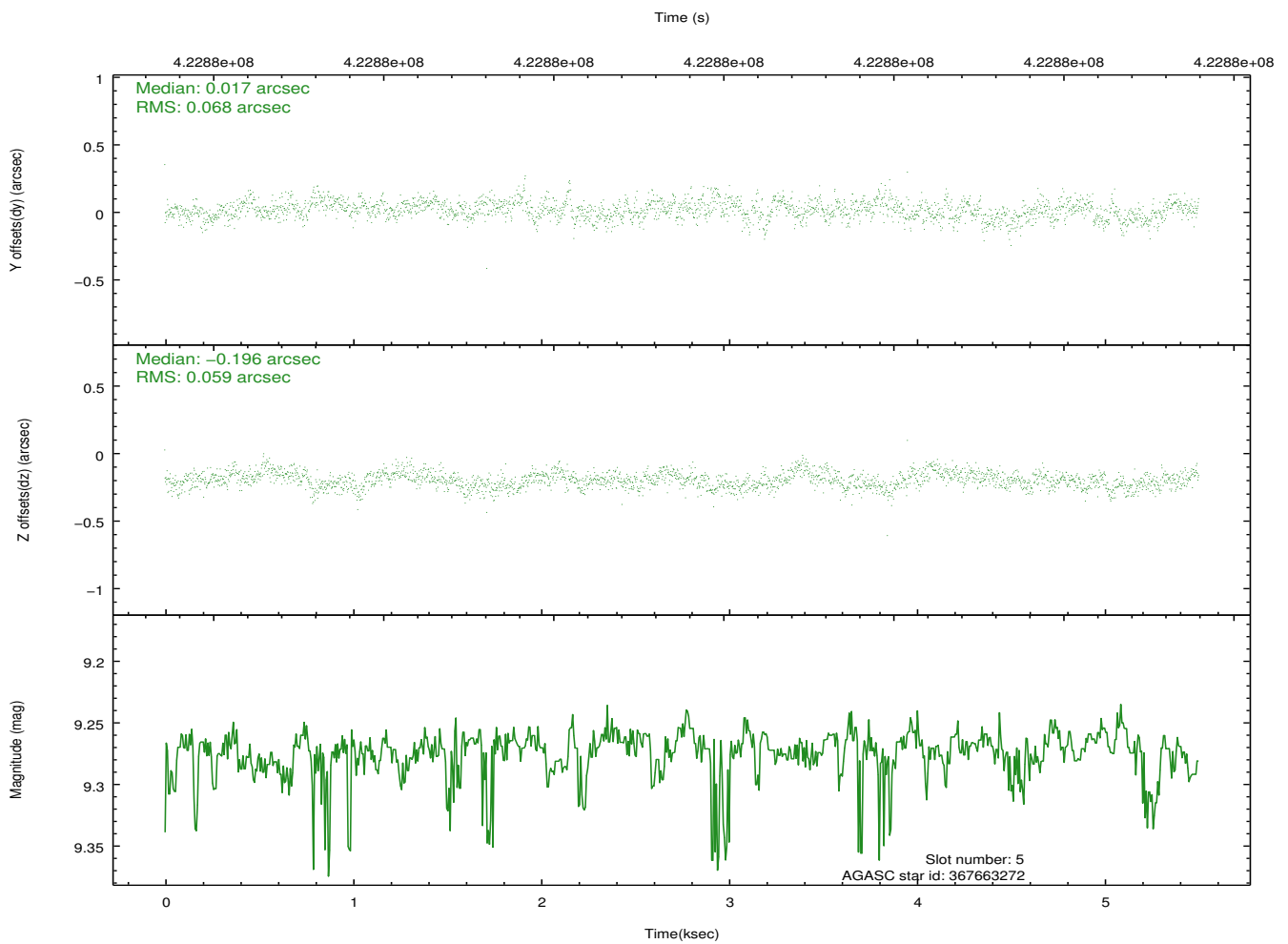
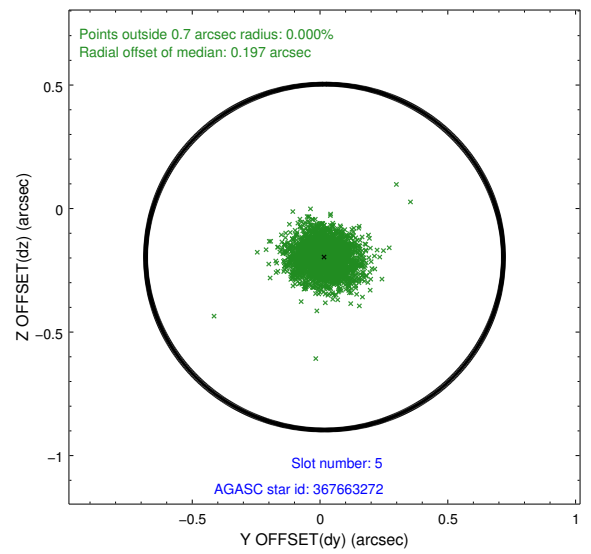
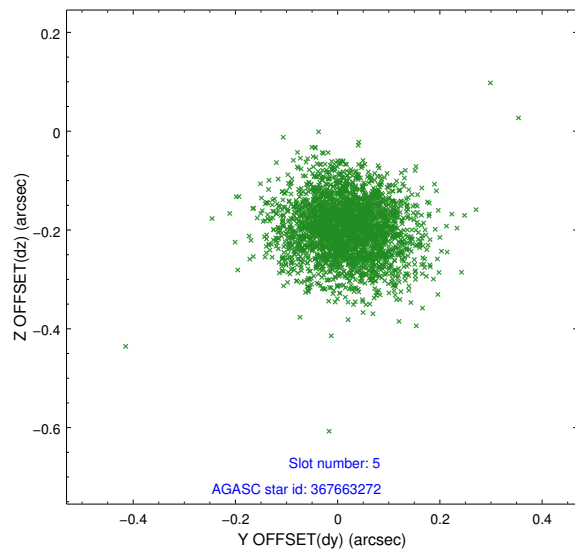
2.4.1 Slot 3



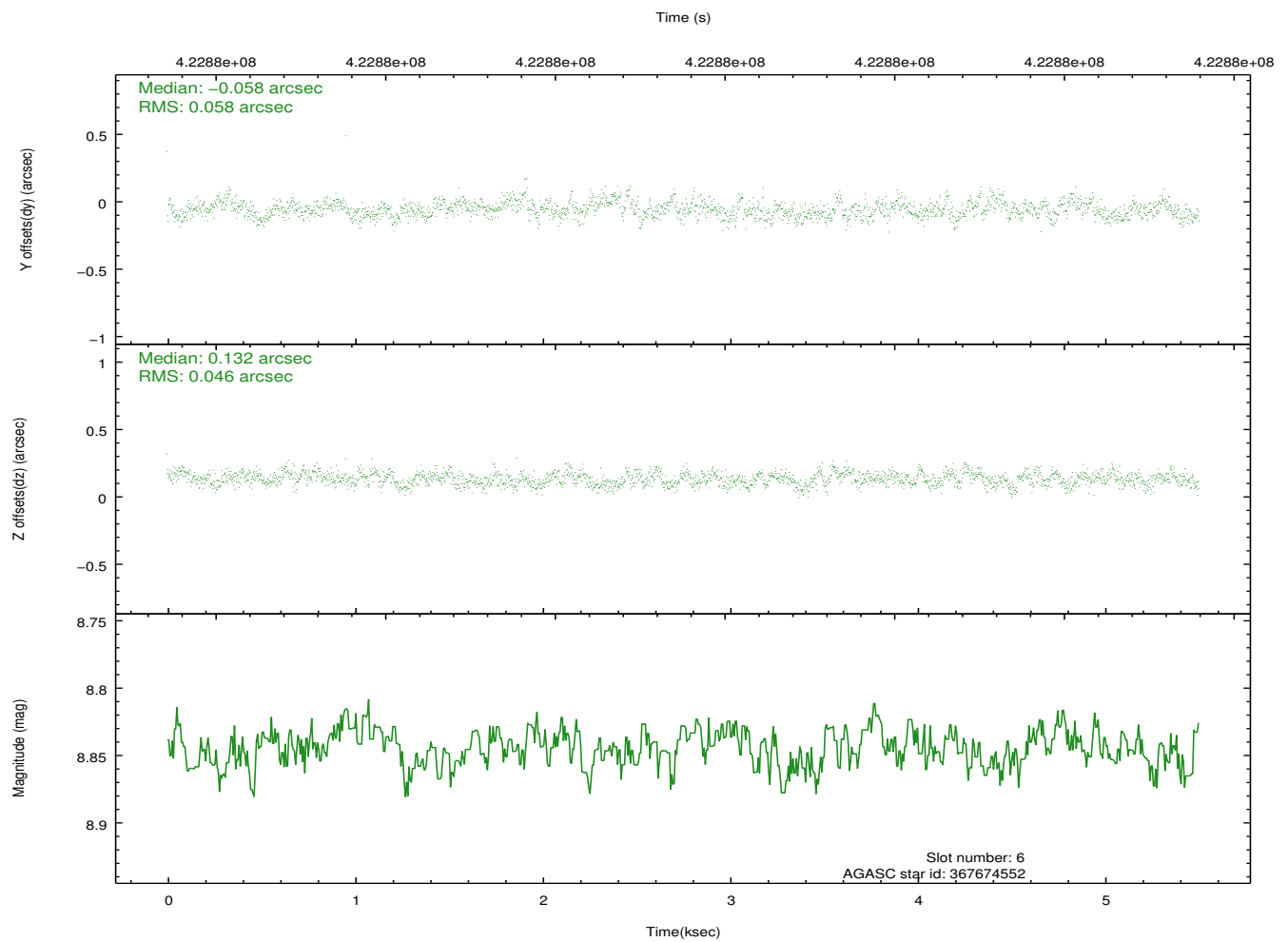
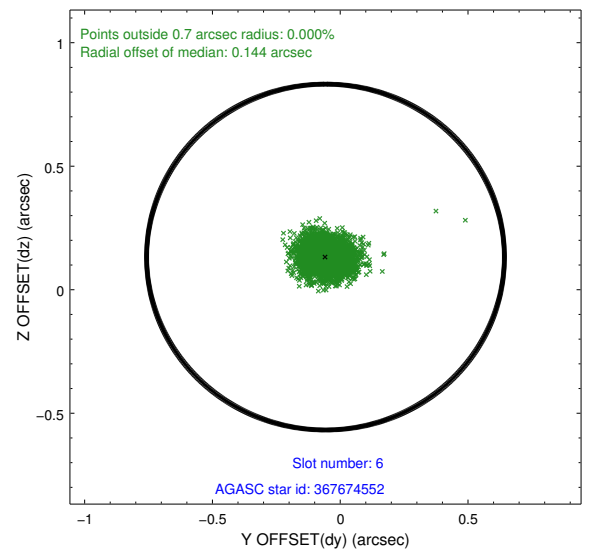
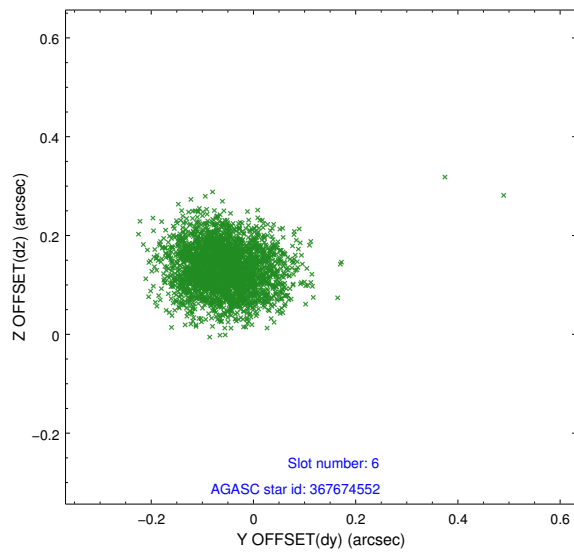
2.4.2 Slot 4



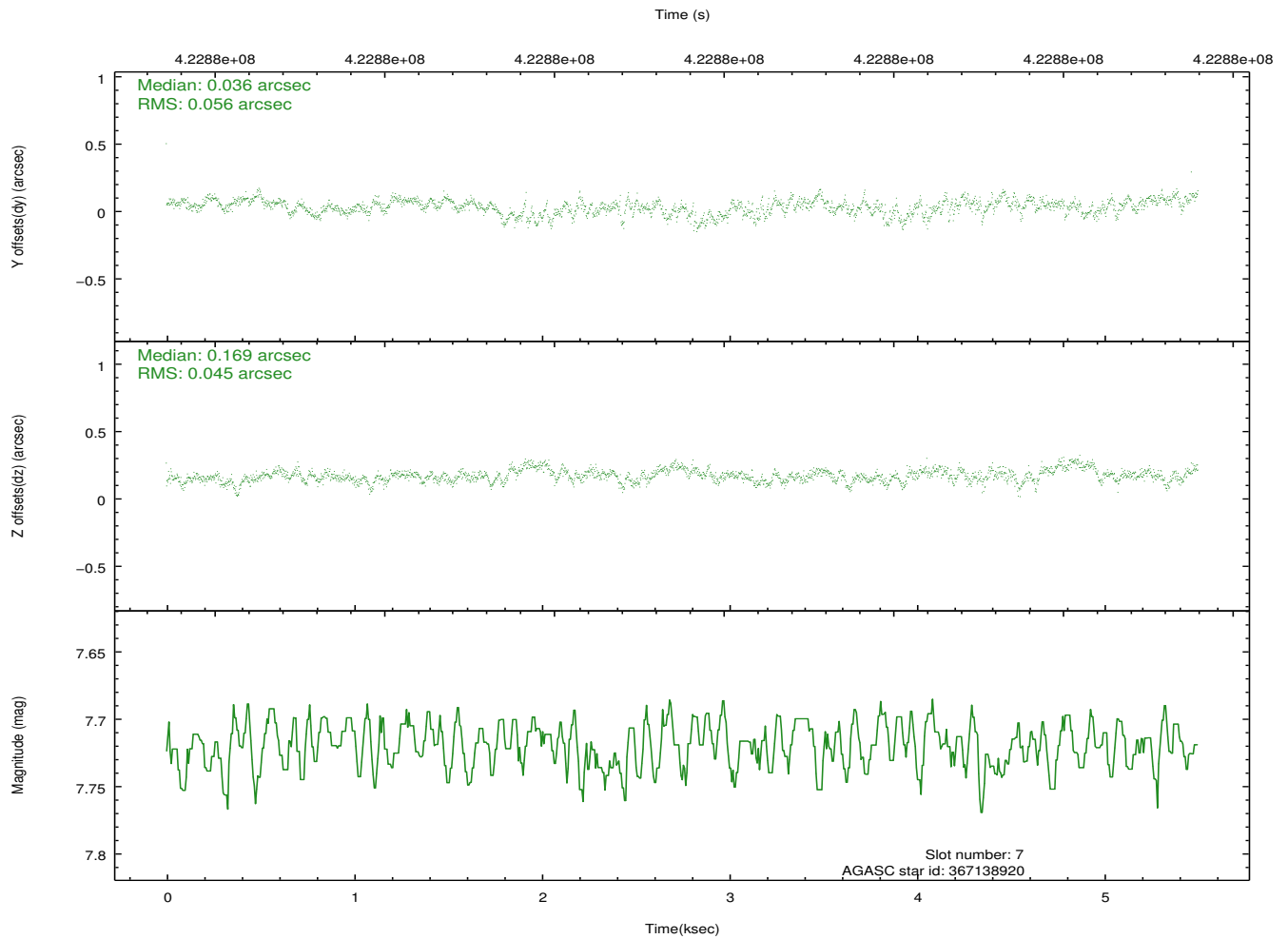
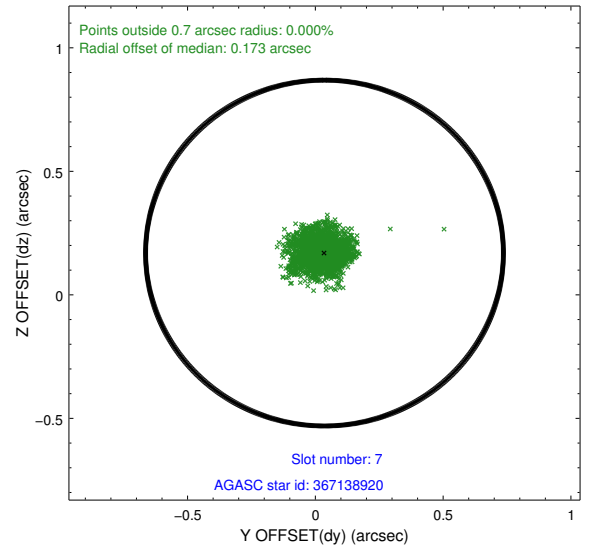
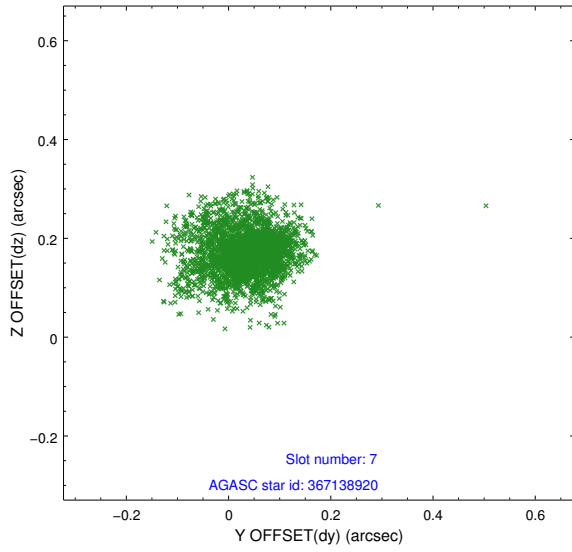
2.4.3 Slot 5



2.4.4 Slot 6

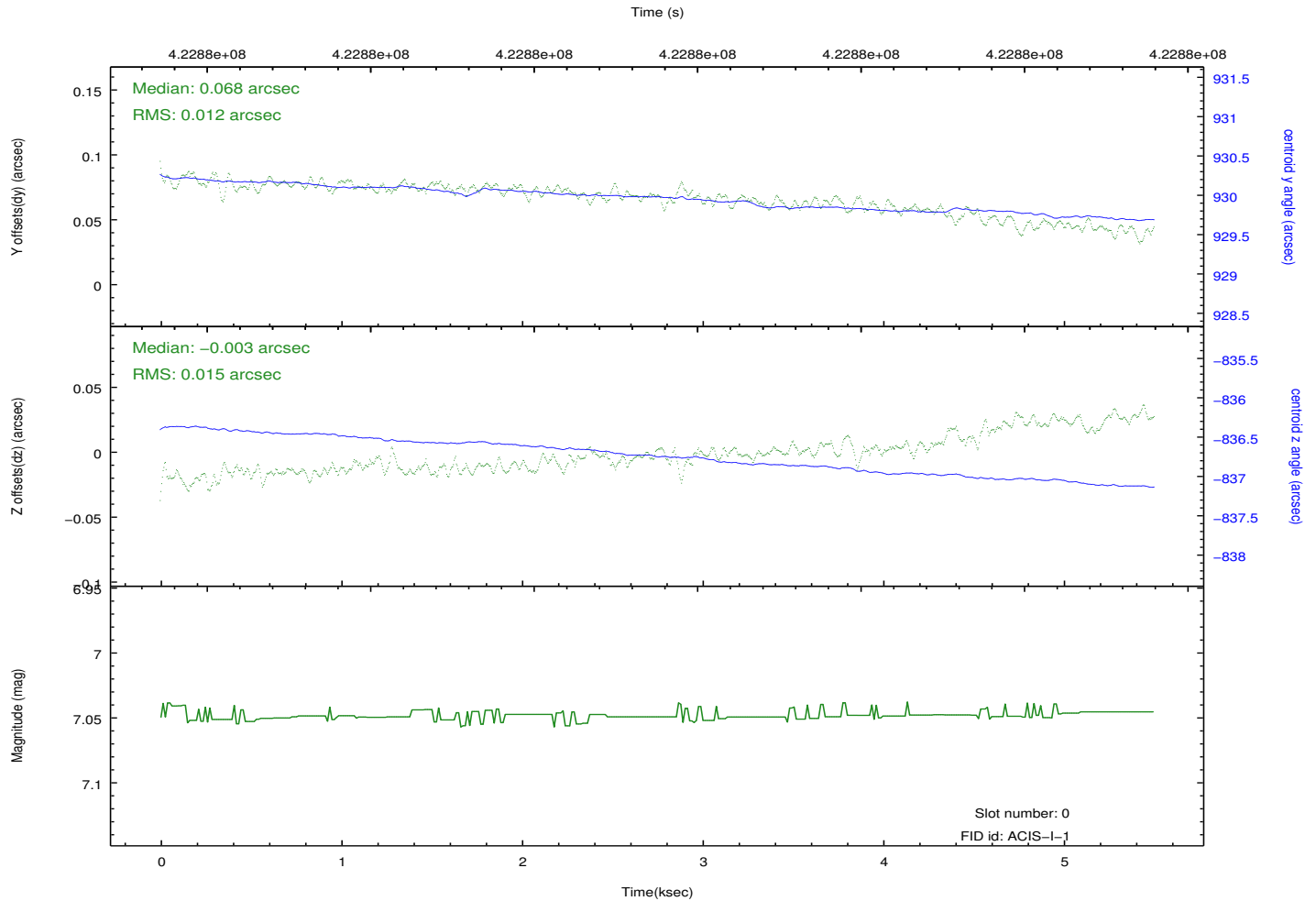
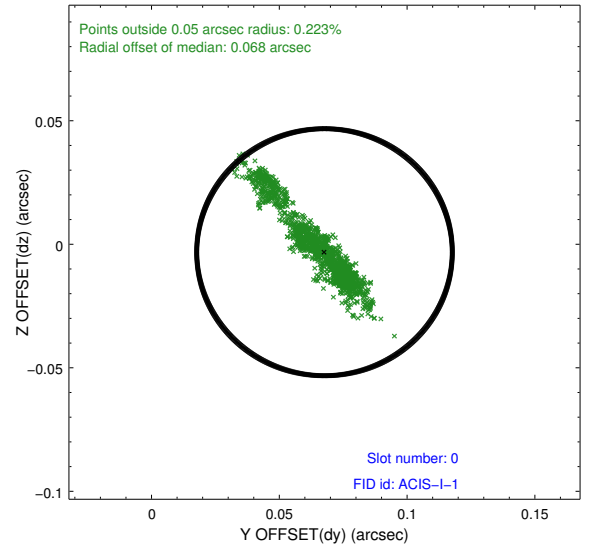
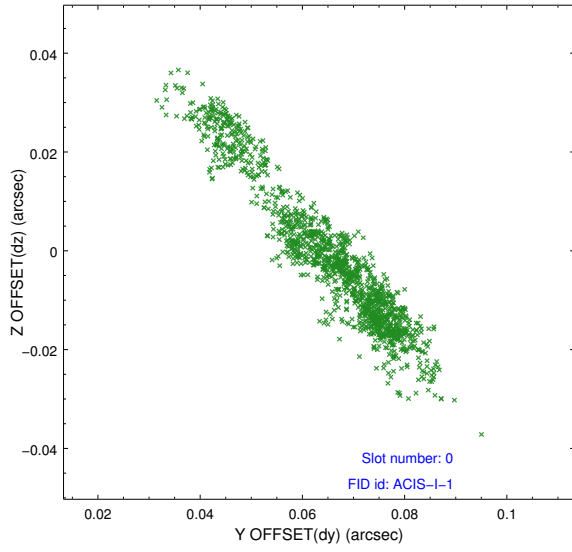


2.4.5 Slot 7

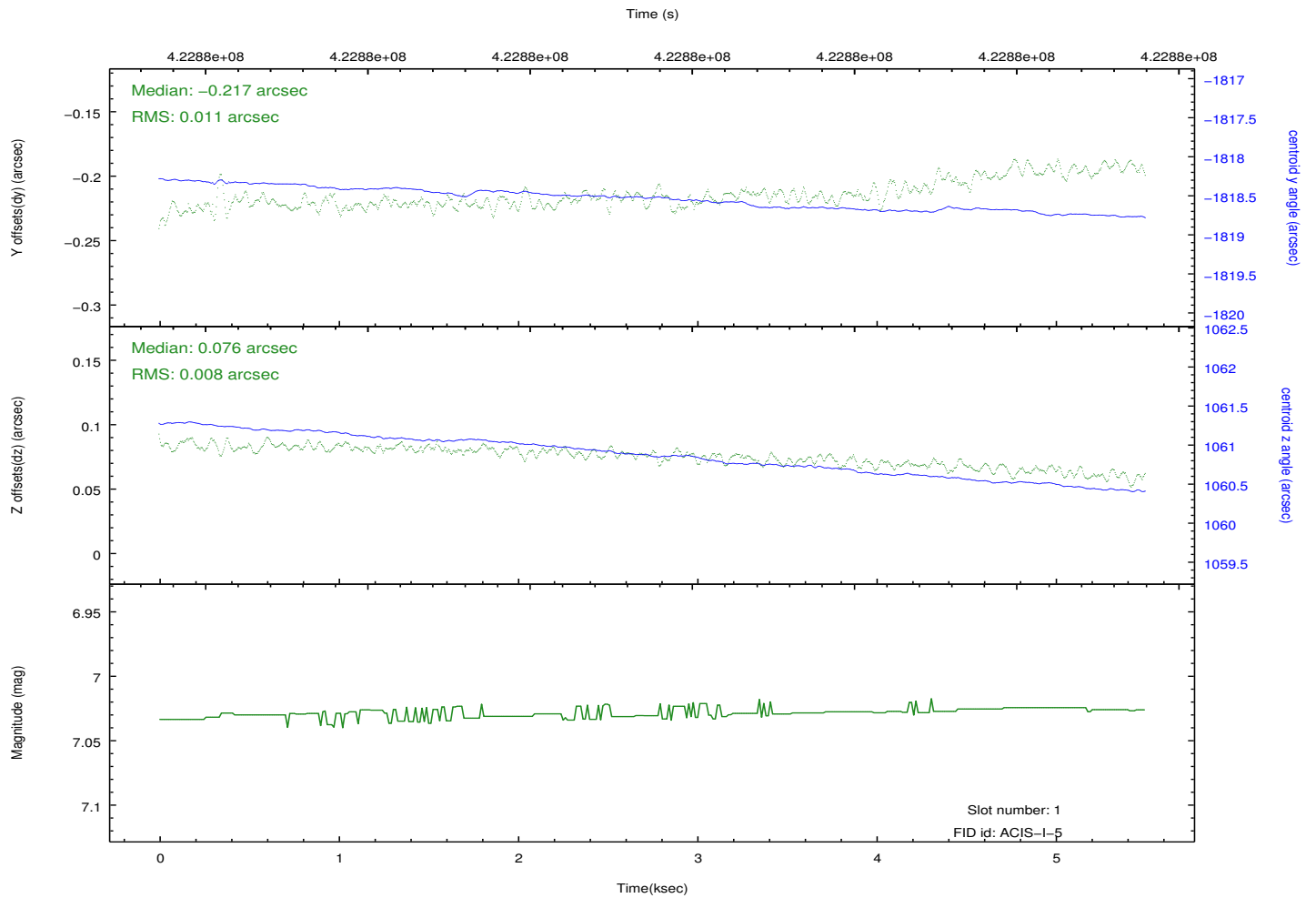
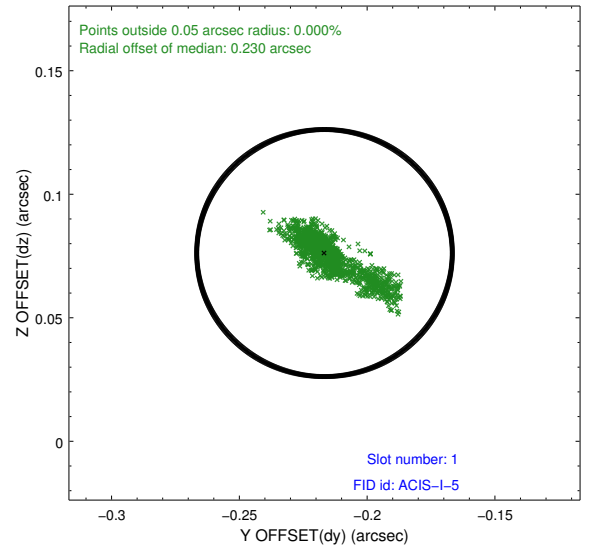
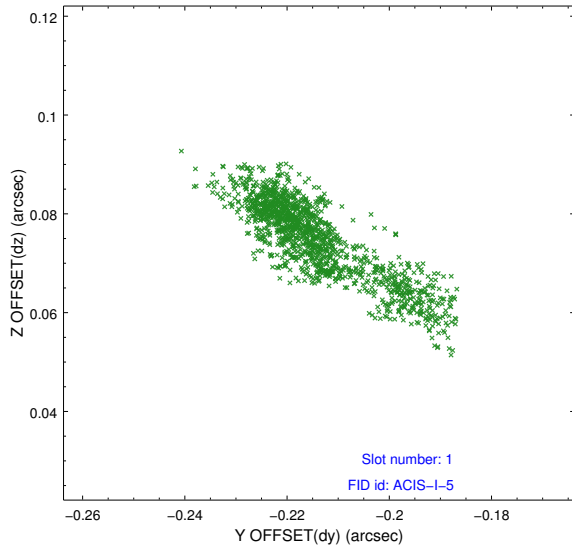


2.5 FID Slots

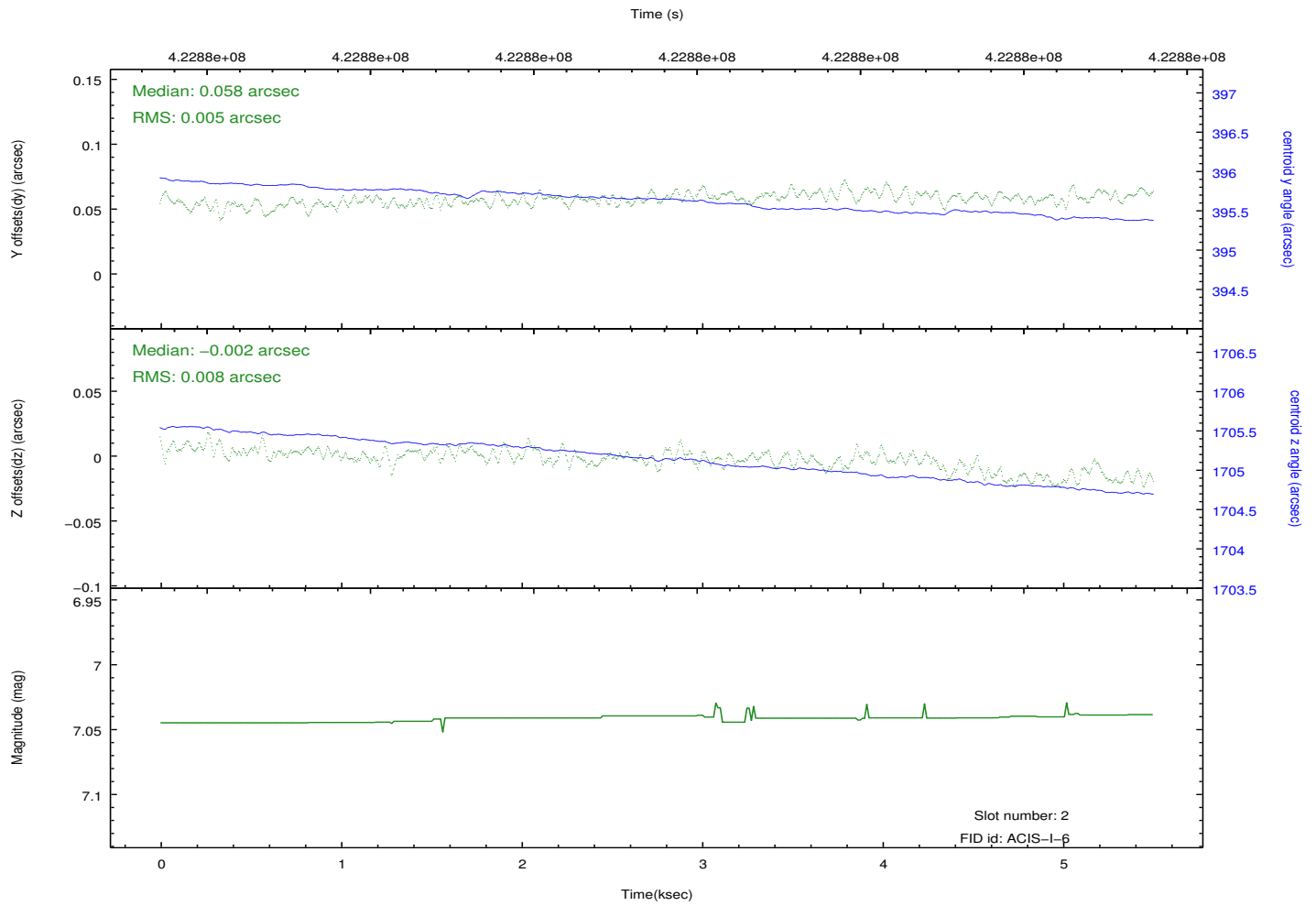
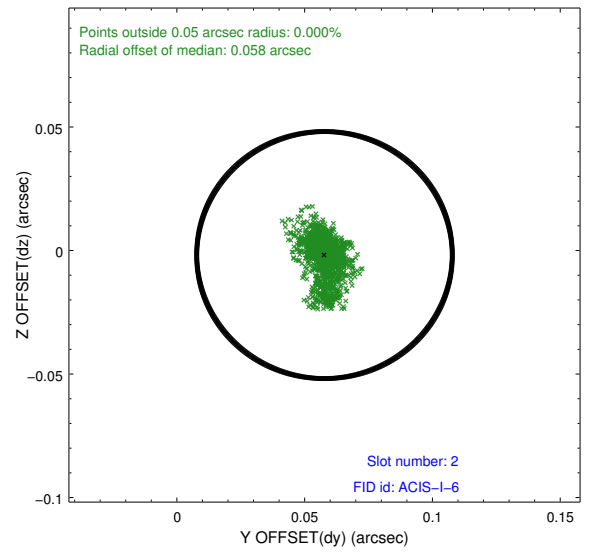
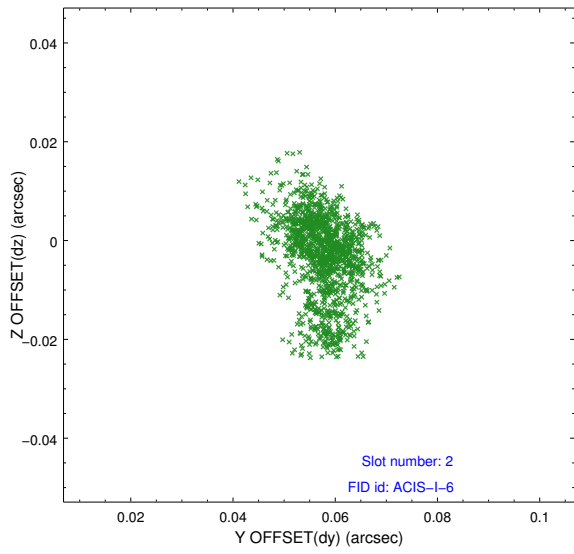
2.5.1 Slot 0



2.5.2 Slot 1



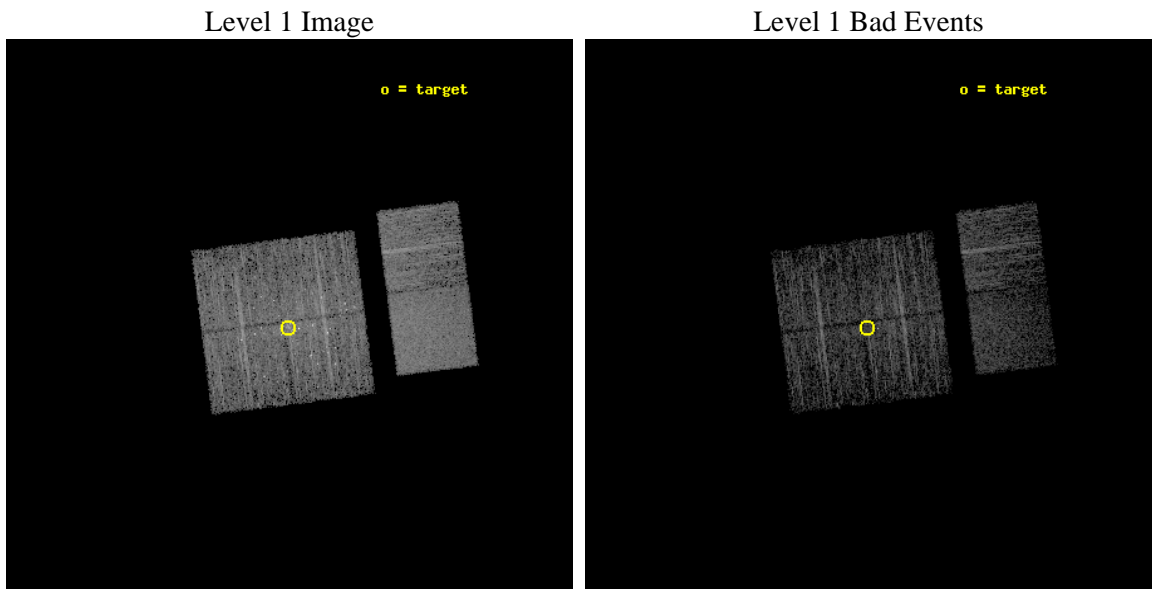
2.5.3 Slot 2



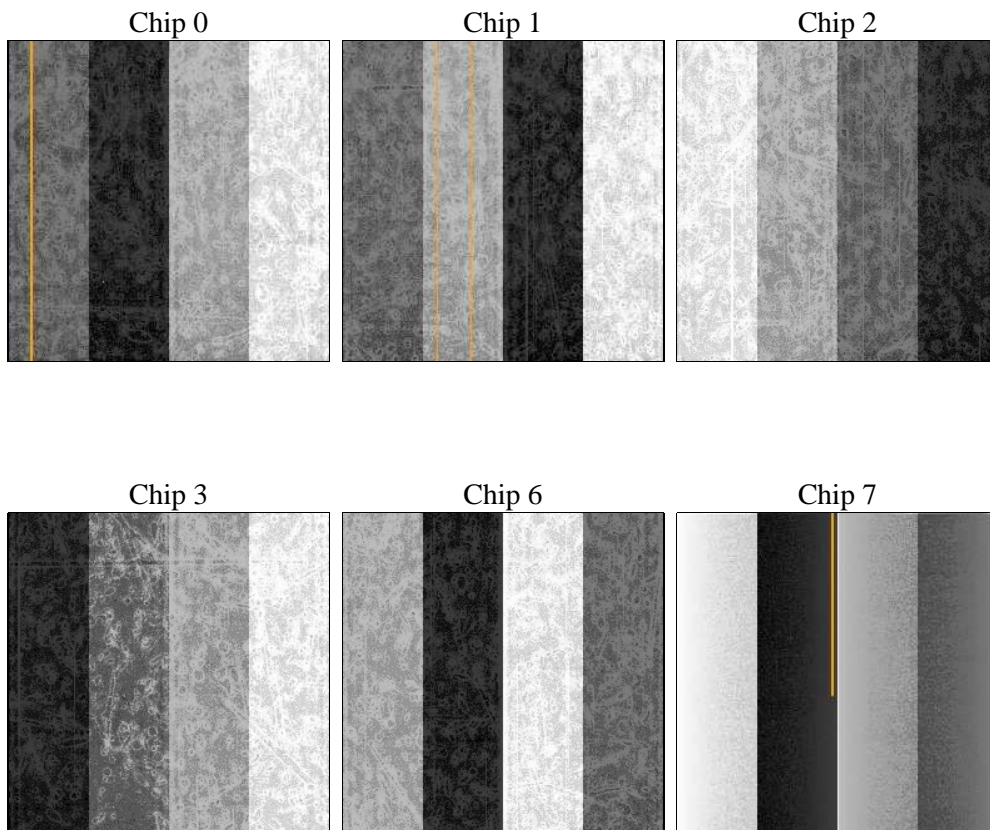
3 OBI Secondary

3.1 OBI

3.1.1 Images



3.1.2 Bias



3.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	4025.2033855319	Sum of GTIs [s]
caldbver	4.4.7	 	ontime0	4025.2031569481	Sum of GTIs [s]
date	2012-02-11T00:17:36	Date and time of file creation	ontime1	4025.2034155726	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	4025.2036343217	Sum of GTIs [s]
			ontime3	4025.2033855319	Sum of GTIs [s]
			ontime6	4025.2032064795	Sum of GTIs [s]
			ontime7	4025.203664422	Sum of GTIs [s]
			l1events	173147	Number of level 1 events

3.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	26165	26433	28338	31225	27460	33526	grade 0 events	2086	3127	2203	5151	1035	1460
rejected events	21807	20647	24097	23042	24430	18249		7%	11%	7%	16%	3%	4%
rejected %	83%	78%	85%	73%	88%	54%	grade 1 events	19	40	29	193	14	51
								0%	0%	0%	0%	0%	0%
							grade 2 events	934	1087	816	1151	721	3226
								3%	4%	2%	3%	2%	9%
							grade 3 events	356	399	326	558	322	1376
								1%	1%	1%	1%	1%	4%
							grade 4 events	345	420	349	539	287	1348
								1%	1%	1%	1%	1%	4%
							grade 5 events	1110	1200	1038	1386	1244	3463
								4%	4%	3%	4%	4%	10%
							grade 6 events	643	757	558	792	681	7881
								2%	2%	1%	2%	2%	23%
							grade 7 events	20672	19403	23019	21455	23156	14721
								79%	73%	81%	68%	84%	43%

A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2012.02.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.9665776255131

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.

==

Joint proposal with HST.