

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 12164 - L2 Version 2
Chandra X-Ray Center

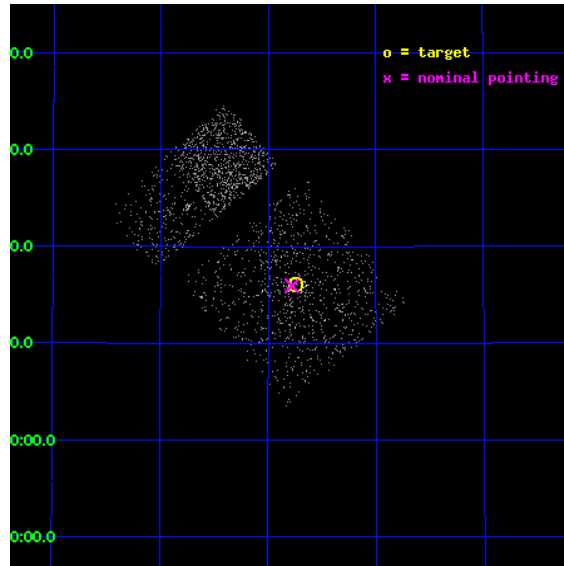
L2 Processing Date : Feb 4 2012

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1 Front

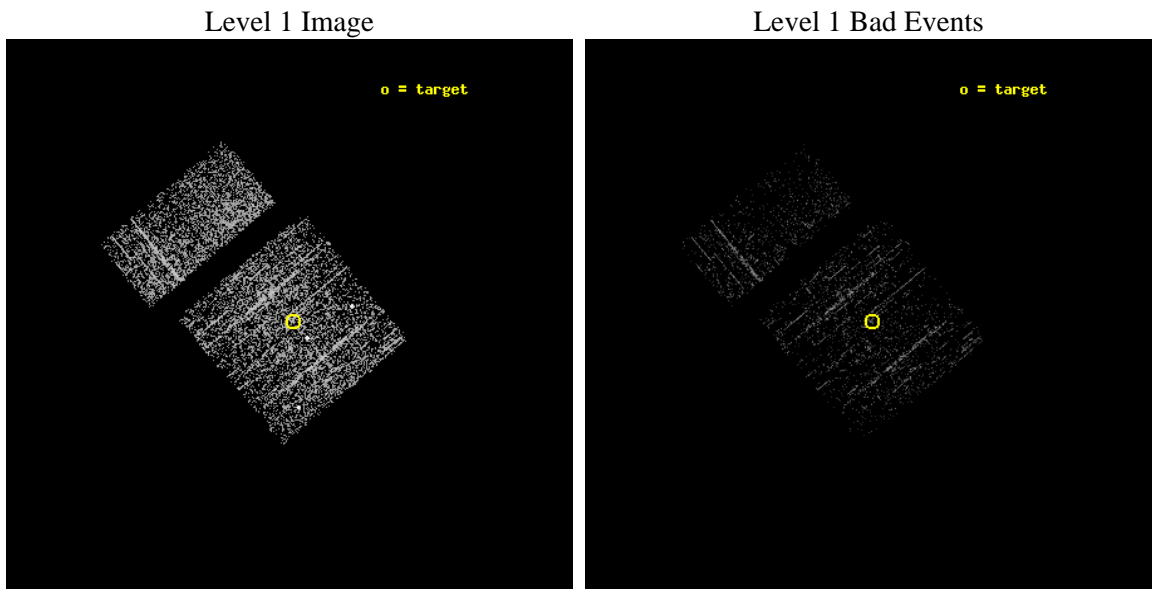
seq_num	600918	Sequence number
obs_id	12164	Observation id
title	Black Hole X-ray Novae in M31	Proposal title
observer	Dr Stephen Murray	Principal investigator
object	M31	Source name
dtcycle	0	
cycle	P	events are from which exps? P[primary] S[econdar
ra_targ	10.685	Observer's specified target RA [deg]
dec_targ	41.268972	Observer's specified target Dec [deg]
ra_nom	10.694994358401	Nominal RA [deg]
dec_nom	41.265940746125	Nominal Dec [deg]
roll_nom	320.20216866513	Nominal Roll [deg]
revision	2	Processing version of data
ontime	937.74221116304	Sum of GTIs [s]
livetime	147.62324385464	Livetime [s]
ontime0	937.74220132828	Sum of GTIs [s]
ontime1	937.74220132828	Sum of GTIs [s]
ontime2	937.74220132828	Sum of GTIs [s]
ontime3	937.74221116304	Sum of GTIs [s]
ontime6	937.74221116304	Sum of GTIs [s]
ontime7	937.74219125509	Sum of GTIs [s]
l2events	2401	Number of level 2 events



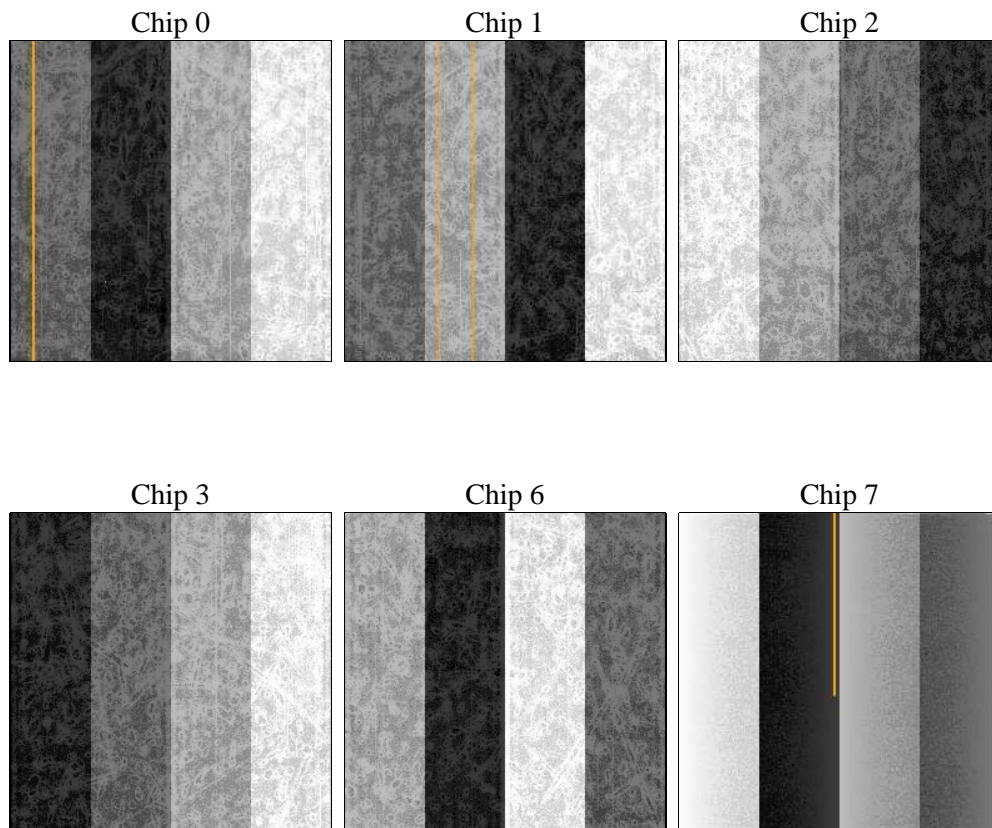
2 OBI Primary

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	937.74221116304	Sum of GTIs [s]
caldsver	4.4.7	 	ontime0	937.74220132828	Sum of GTIs [s]
date	2012-02-04T06:07:40	Date and time of file creation	ontime1	937.74220132828	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	937.74220132828	Sum of GTIs [s]
			ontime3	937.74221116304	Sum of GTIs [s]
			ontime6	937.74221116304	Sum of GTIs [s]
			ontime7	937.74219125509	Sum of GTIs [s]
			l1events	20271	Number of level 1 events

2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	3248	3740	3315	3415	3519	3034
rejected events	2677	2762	2961	3057	3223	2072
rejected %	82%	73%	89%	89%	91%	68%

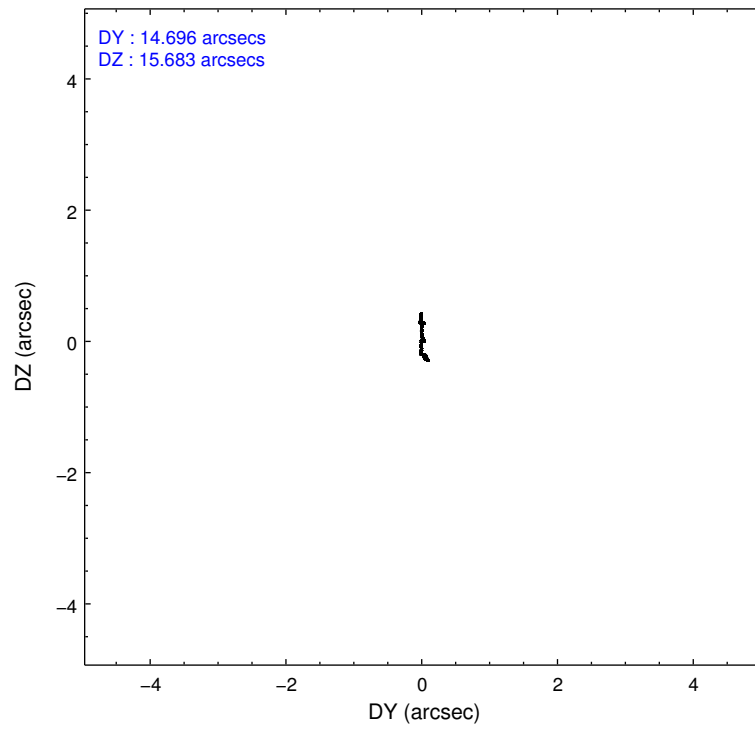
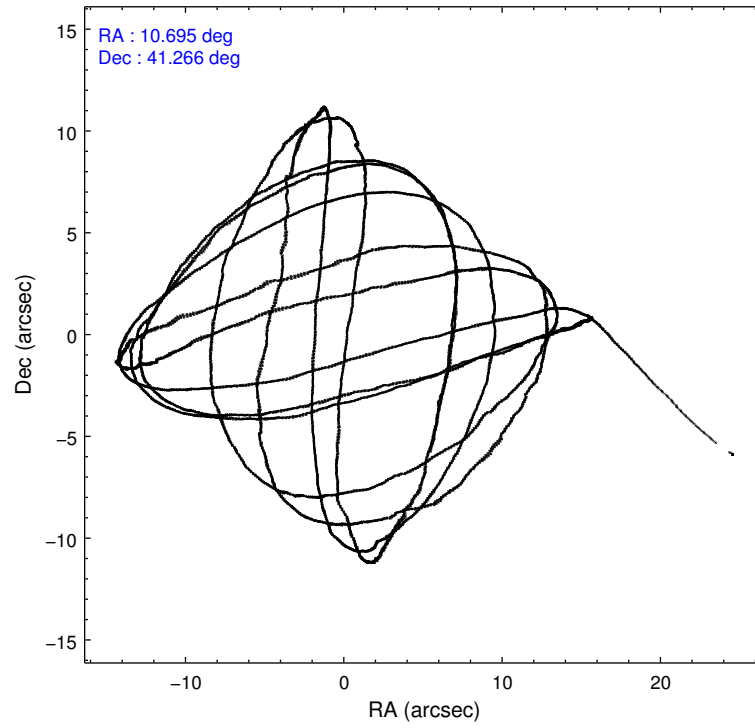
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	354	743	153	149	76	83
	10%	19%	4%	4%	2%	2%
grade 1 events	1	3	1	1	0	3
	0%	0%	0%	0%	0%	0%
grade 2 events	85	95	79	73	75	219
	2%	2%	2%	2%	2%	7%
grade 3 events	38	38	36	39	32	90
	1%	1%	1%	1%	0%	2%
grade 4 events	38	54	44	42	51	86
	1%	1%	1%	1%	1%	2%
grade 5 events	122	124	123	132	144	292
	3%	3%	3%	3%	4%	9%
grade 6 events	60	55	44	57	65	487
	1%	1%	1%	1%	1%	16%
grade 7 events	2550	2628	2835	2922	3076	1774
	78%	70%	85%	85%	87%	58%

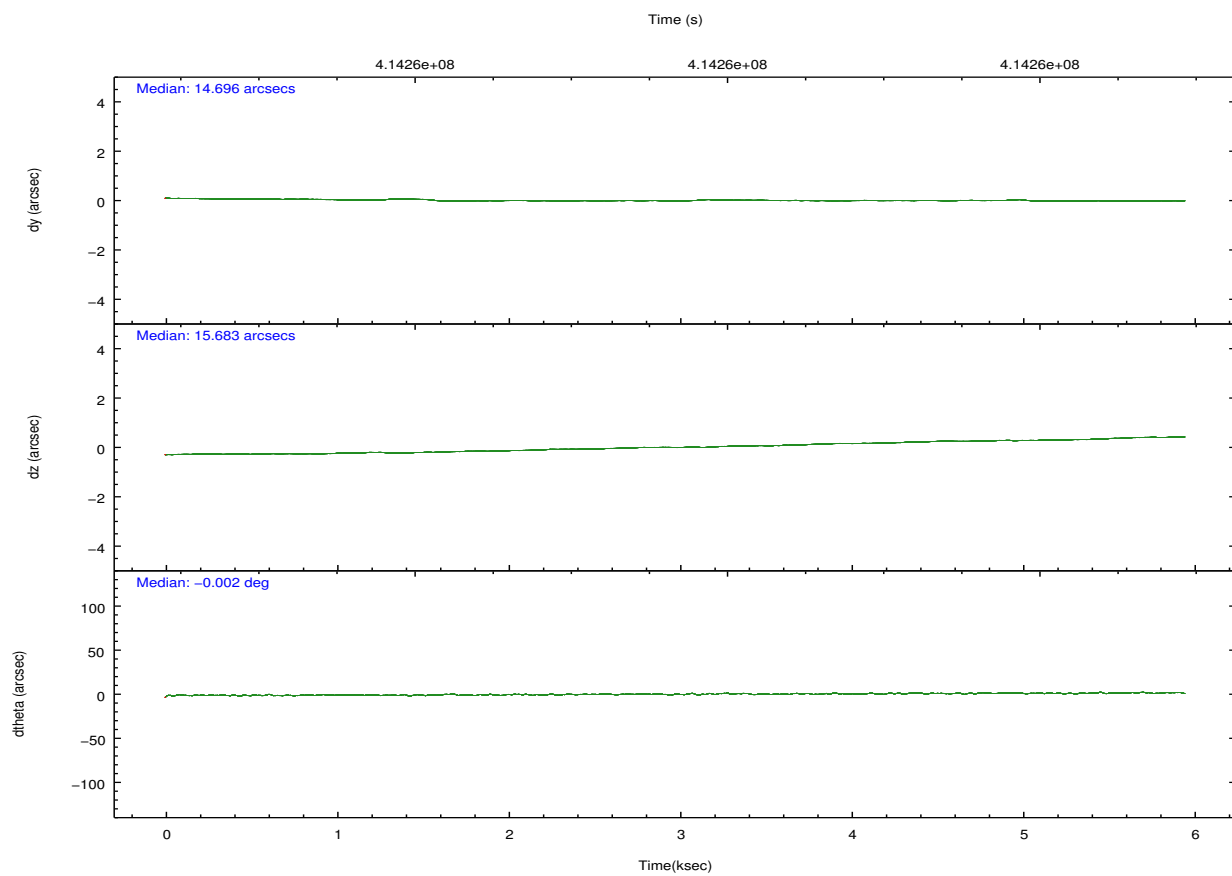
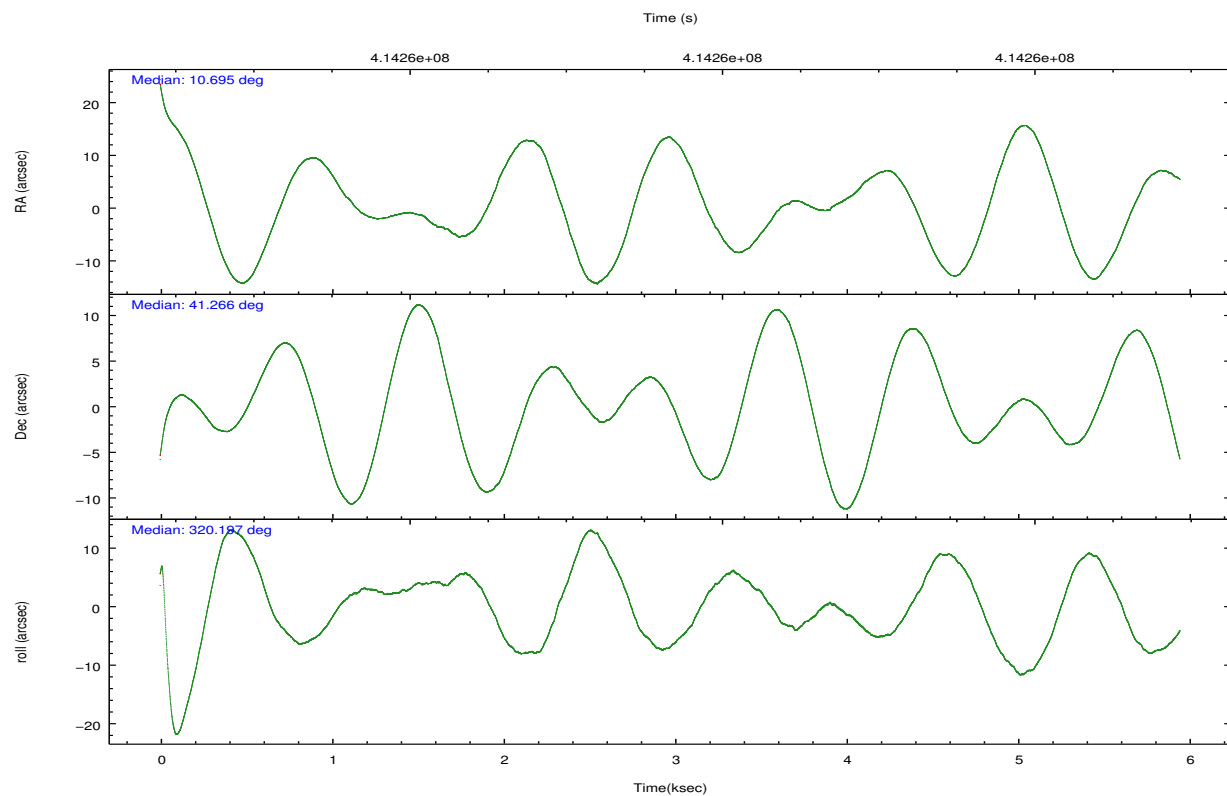
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-012367	ACIS-012367
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	10.658856	10.69499435840147
[deg] Pointing Dec	41.270449	41.26594074612477
[deg] Pointing Roll	320.017247	320.2021686651331
[mm] SIM focus pos	-0.782348	-0.7809083437167272
[mm] SIM defocus	0	0.001439871863259334
[mm] SIM translation stage pos	-233.592463	-233.5874344608287
[mm] SIM translation stage offset	0	-0.005018542100998502
[s] Observation start time (MET)	414255628.184000	414253656.4808
Observation start date	2011-02-16T14:59:22	2011-02-16T14:27:36
[s] Observation end time (MET)	414260628.184000	414261394.7187
Observation end date	2011-02-16T16:22:42	2011-02-16T16:36:34
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	Y	Y
CCD I1 on	Y	Y
CCD I2 on	Y	Y
CCD I3 on	Y	Y
CCD S0 on	N	N
CCD S1 on	N	N
CCD S2 on	O2	Y
CCD S3 on	O1	Y
CCD S4 on	N	N
CCD S5 on	N	N
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
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



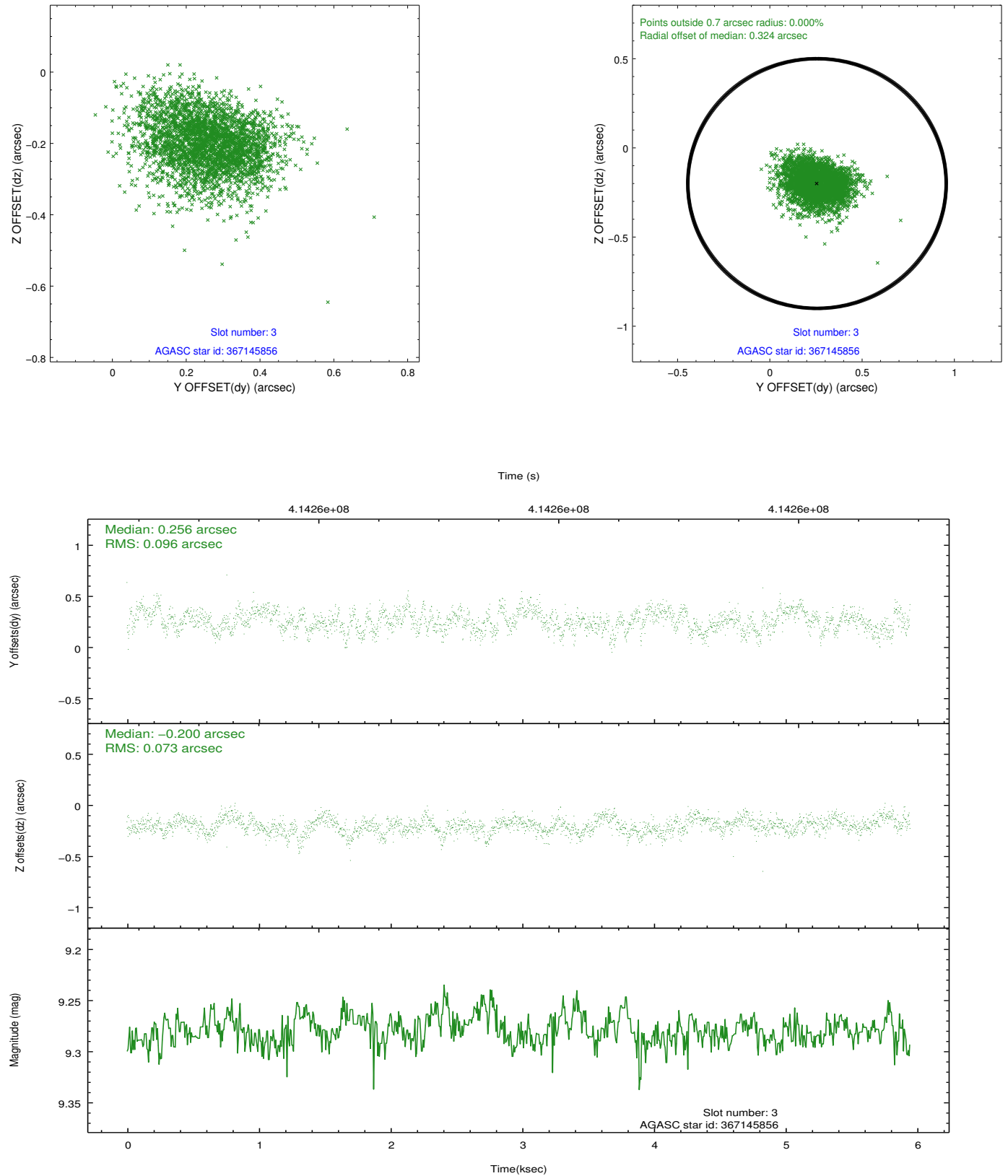


Slot Statistics

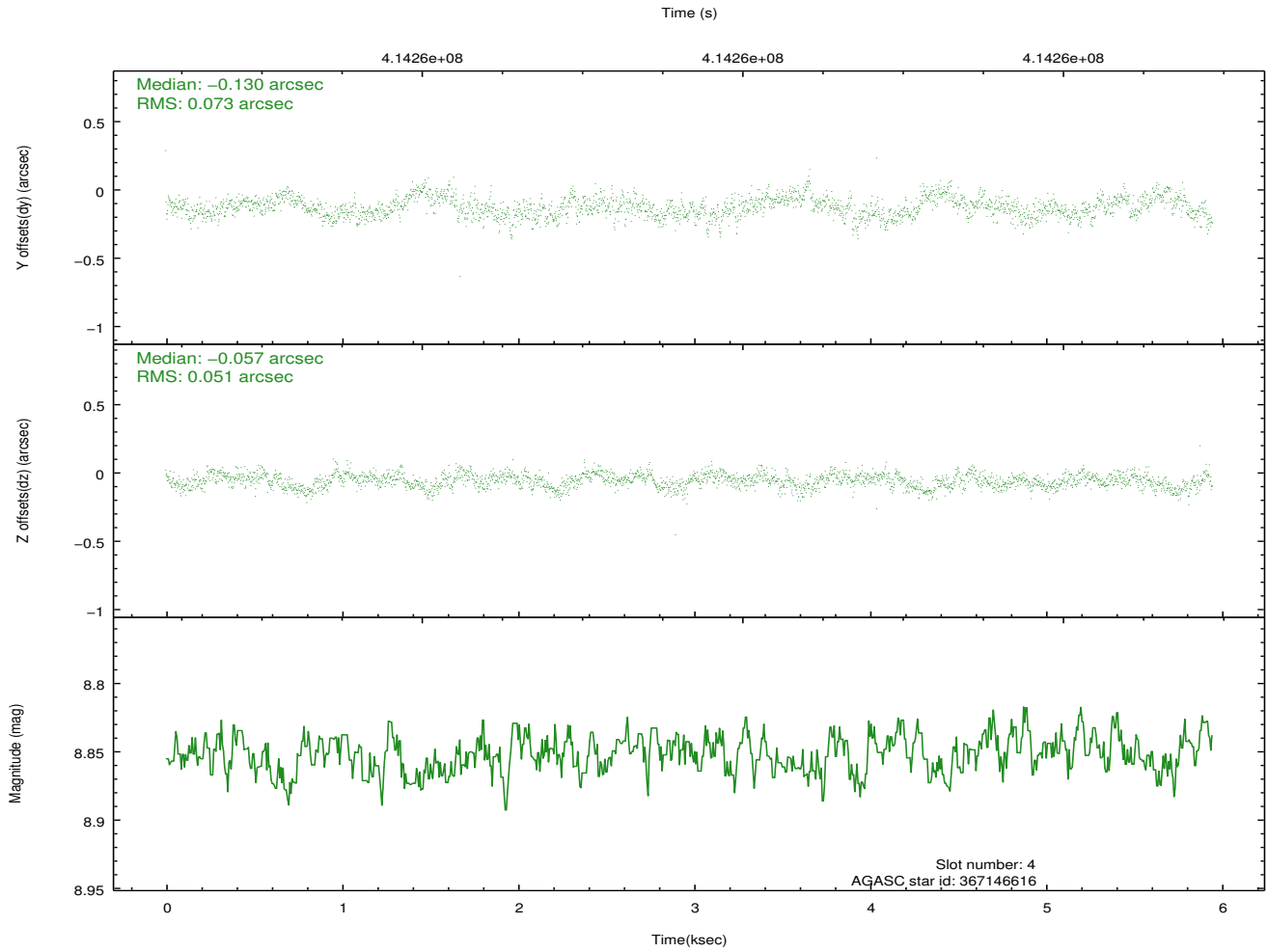
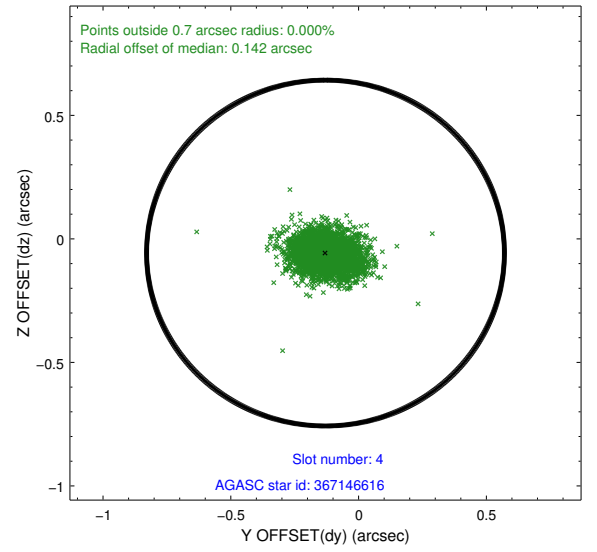
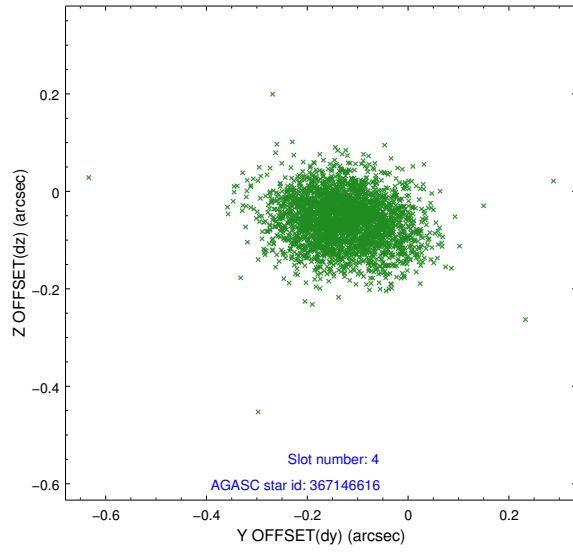
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.08	1451	0.061	-0.049	0.010	0.018	0.000000	0.000000	924.82	-839.37
1	FID	ACIS-I-5	7.07	1451	-0.236	0.052	0.007	0.012	0.000000	0.000000	-1823.04	1057.72
2	FID	ACIS-I-6	7.08	1451	0.084	0.067	0.009	0.014	0.000000	0.000000	389.30	1703.37
3	GUIDE	367145856	9.28	2900	0.256	-0.200	0.128	0.210	10.744946	40.402085	2190.24	-2244.07
4	GUIDE	367146616	8.85	2901	-0.130	-0.057	0.092	0.155	11.418645	41.190163	1757.96	1107.24
5	GUIDE	367148872	7.23	2901	-0.077	-0.013	0.080	0.142	10.505940	40.688258	1028.05	-1874.21
6	GUIDE	367663272	9.28	2897	-0.132	0.194	0.118	0.191	10.656279	41.699429	-997.59	1177.29
7	GUIDE	367657272	8.42	2901	0.079	0.079	0.087	0.145	11.834471	41.298907	2356.51	2138.64

2.4 Star Slots

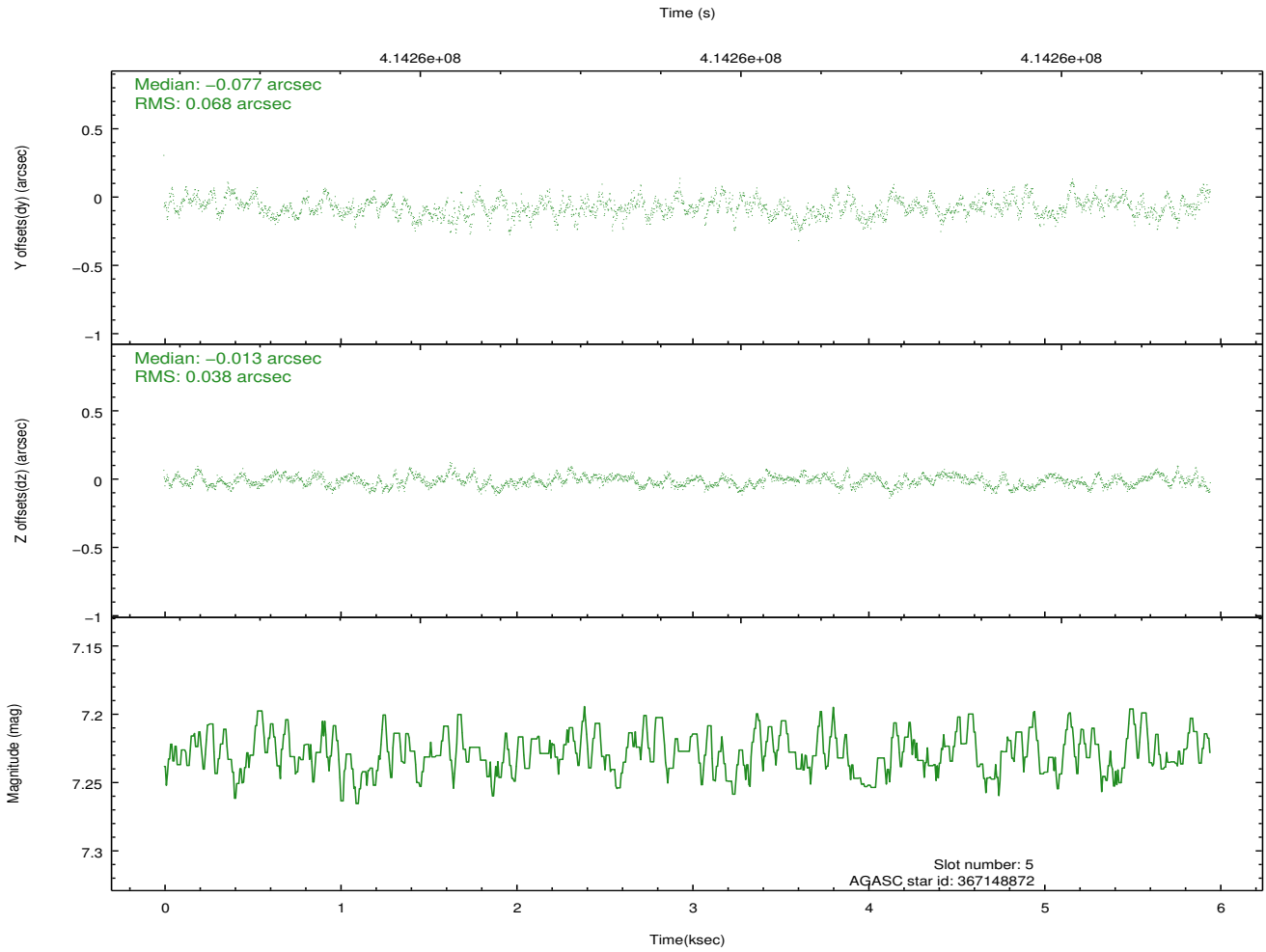
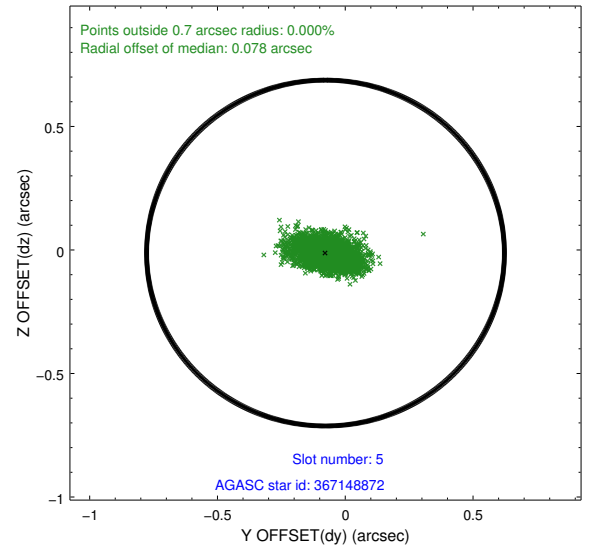
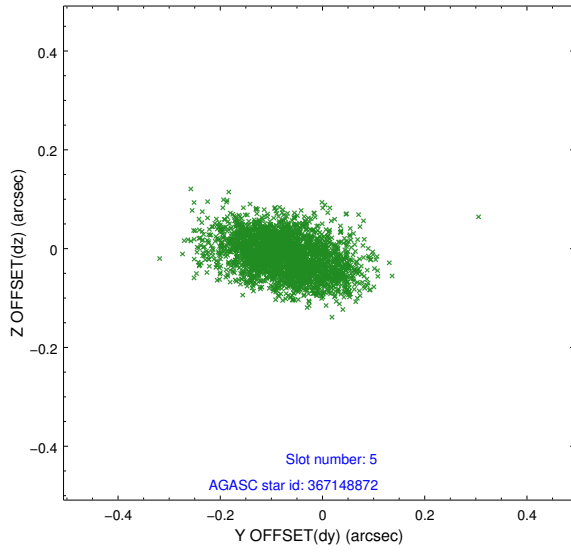
2.4.1 Slot 3



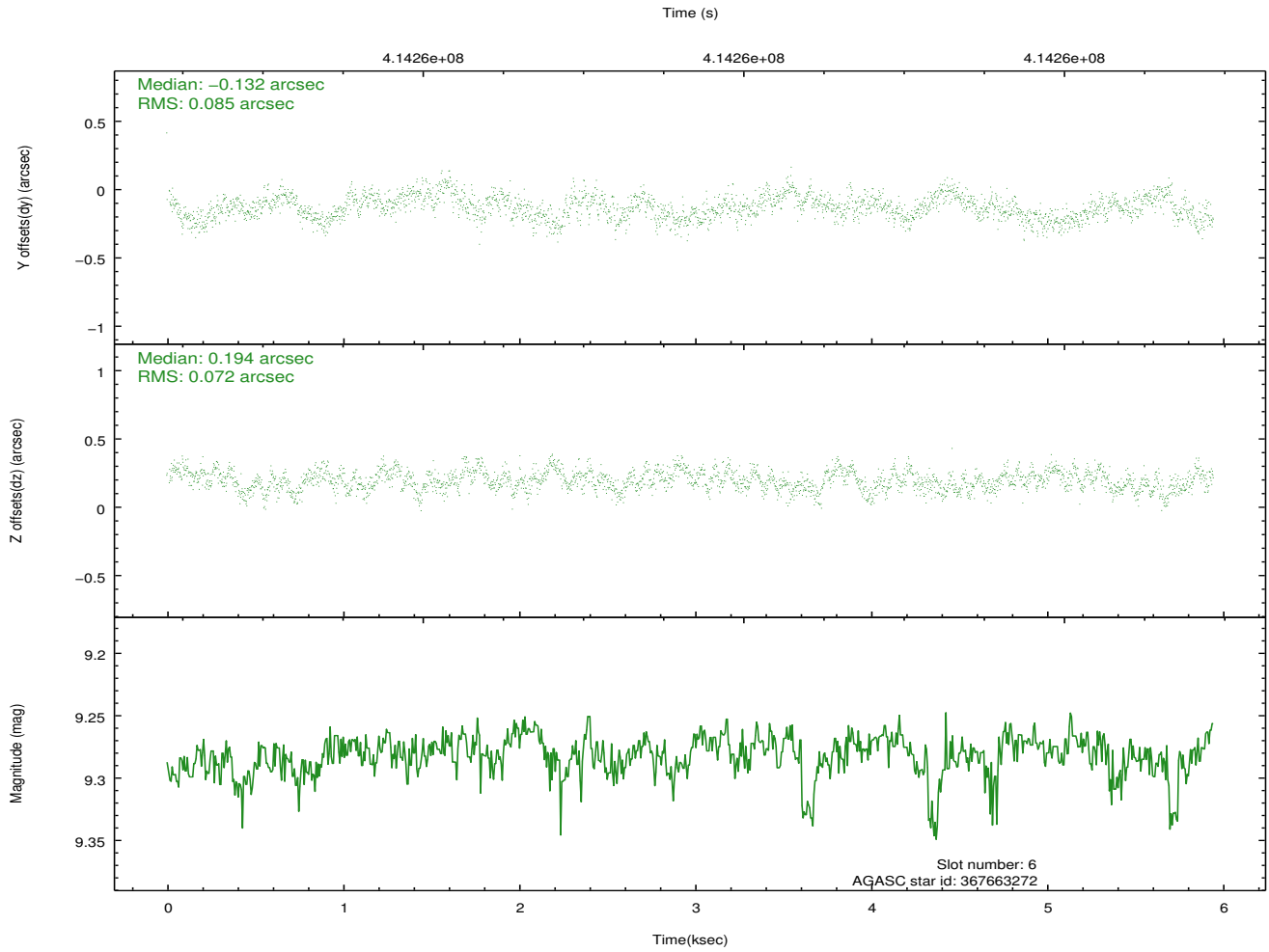
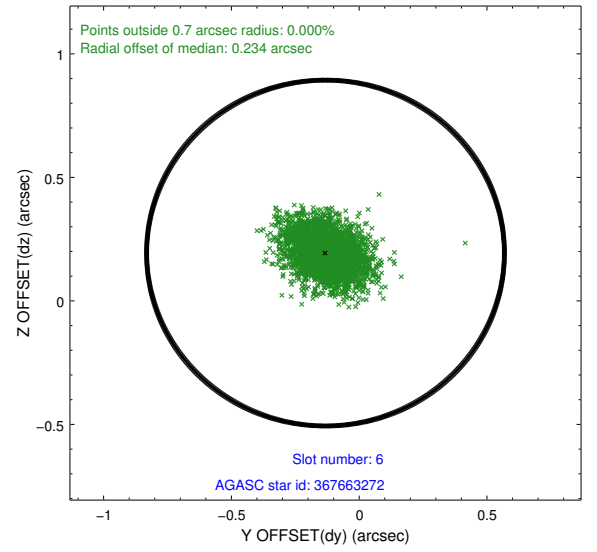
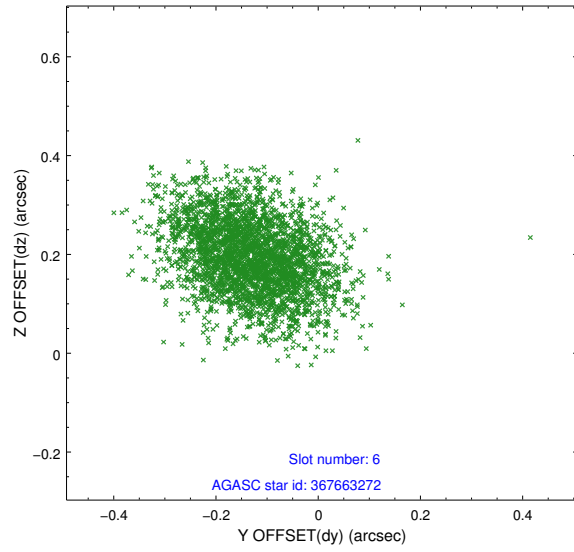
2.4.2 Slot 4



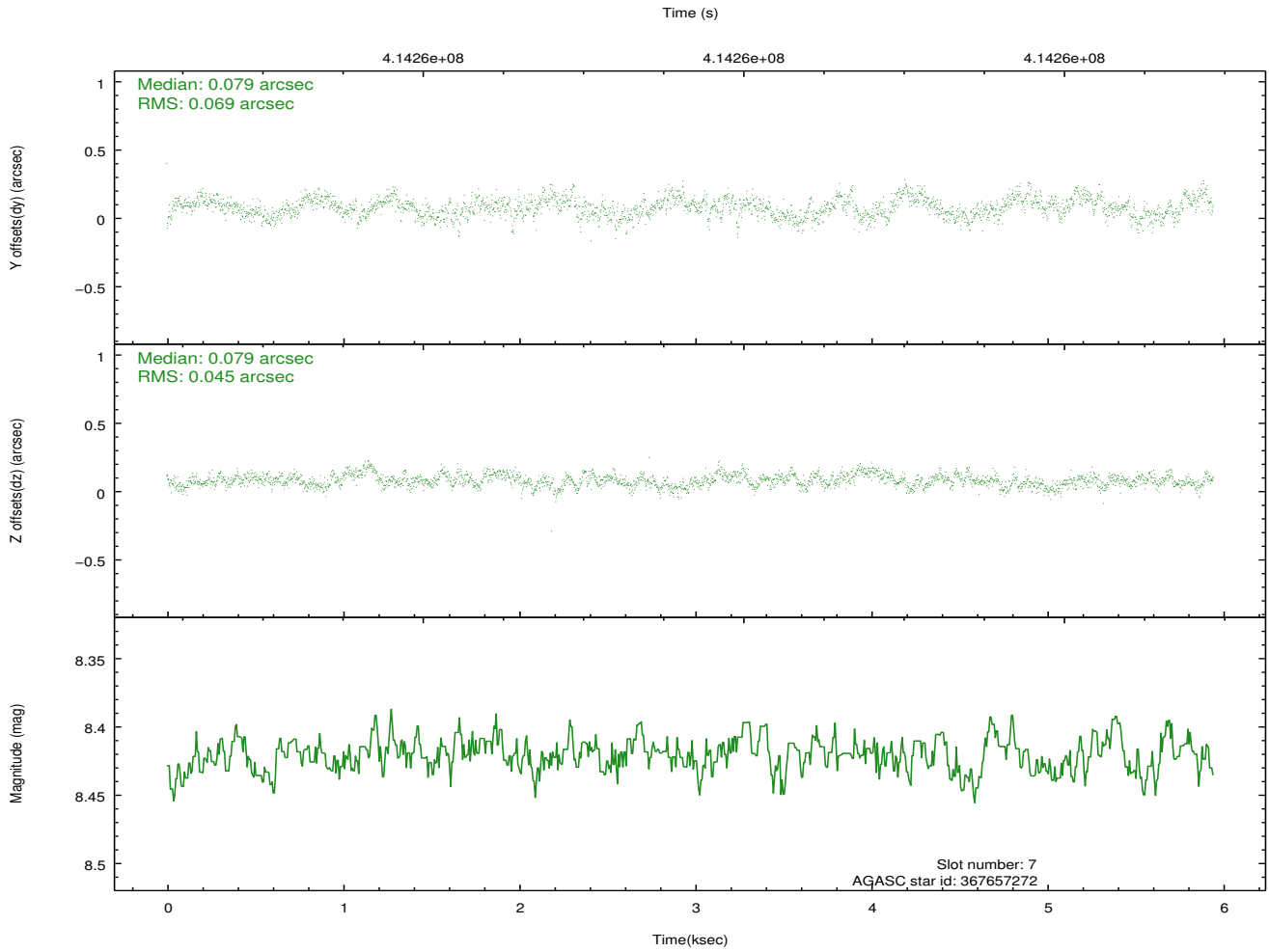
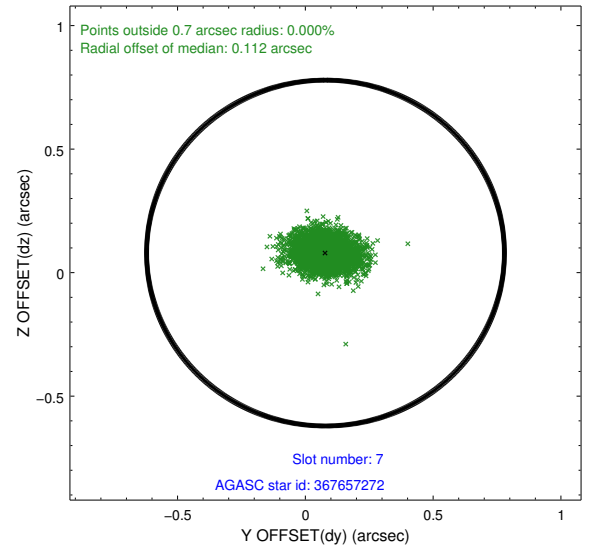
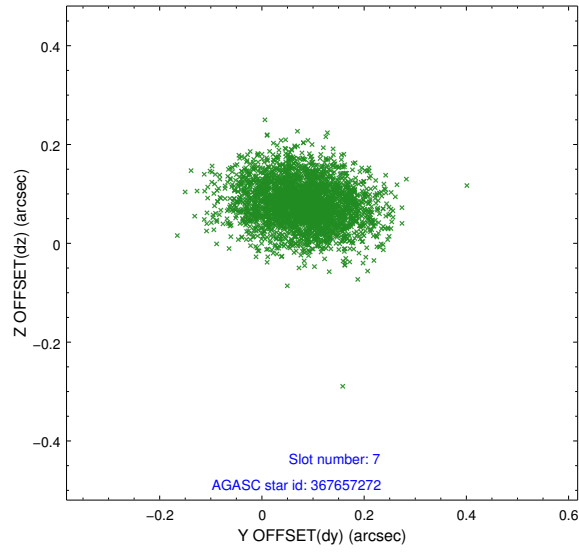
2.4.3 Slot 5



2.4.4 Slot 6

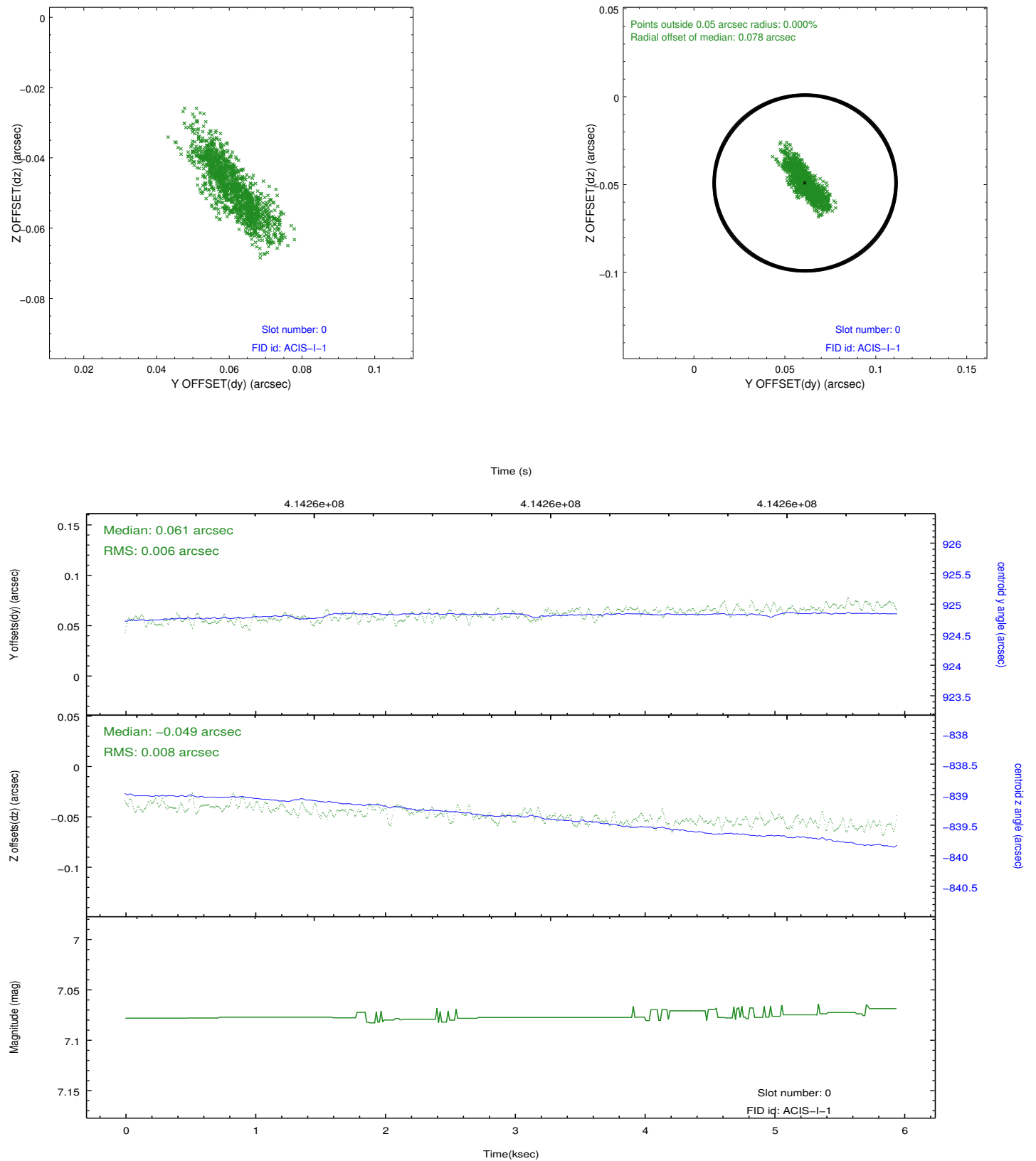


2.4.5 Slot 7

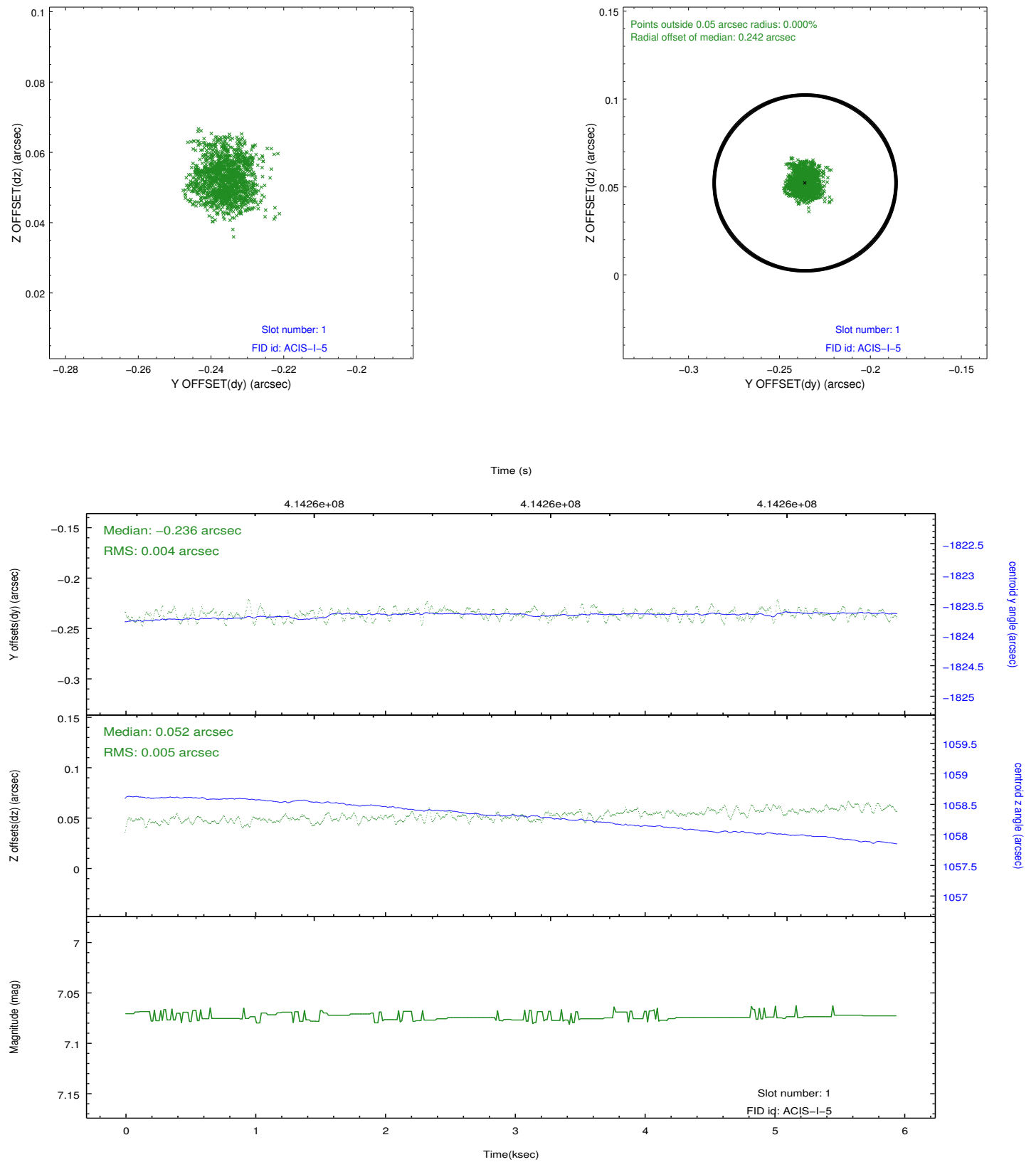


2.5 FID Slots

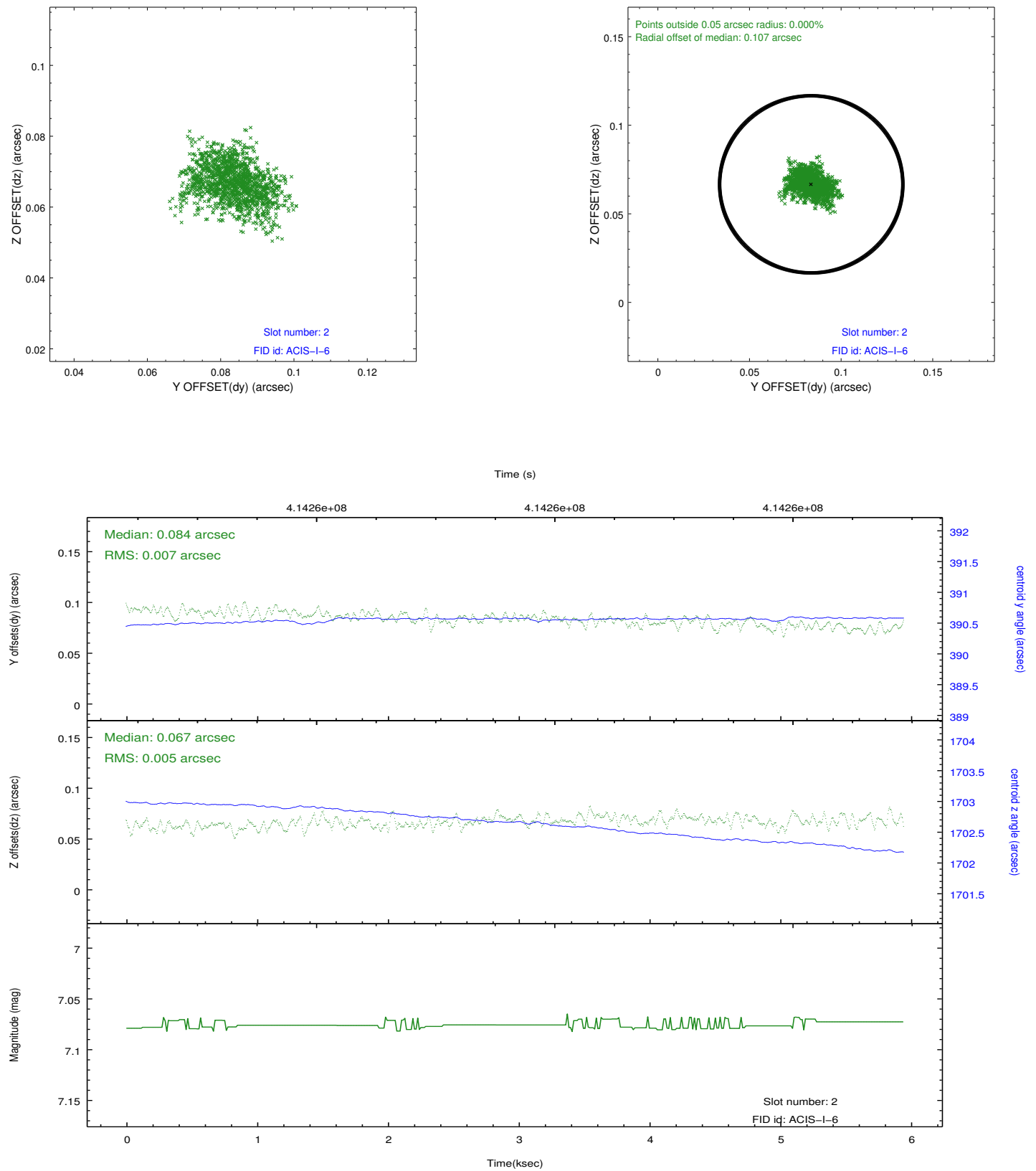
2.5.1 Slot 0



2.5.2 Slot 1



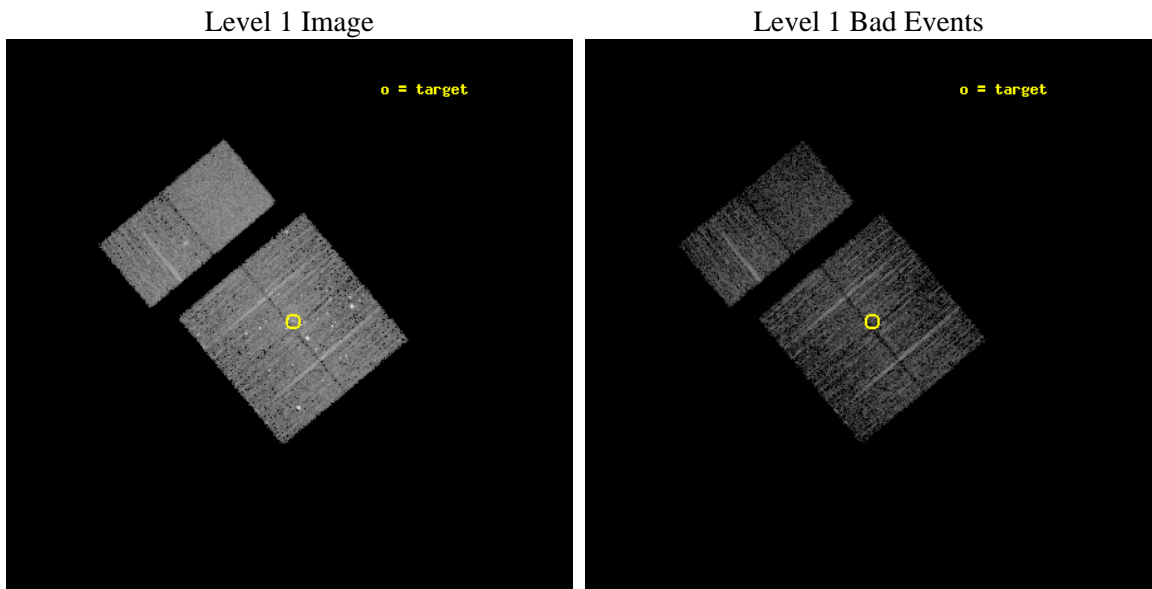
2.5.3 Slot 2



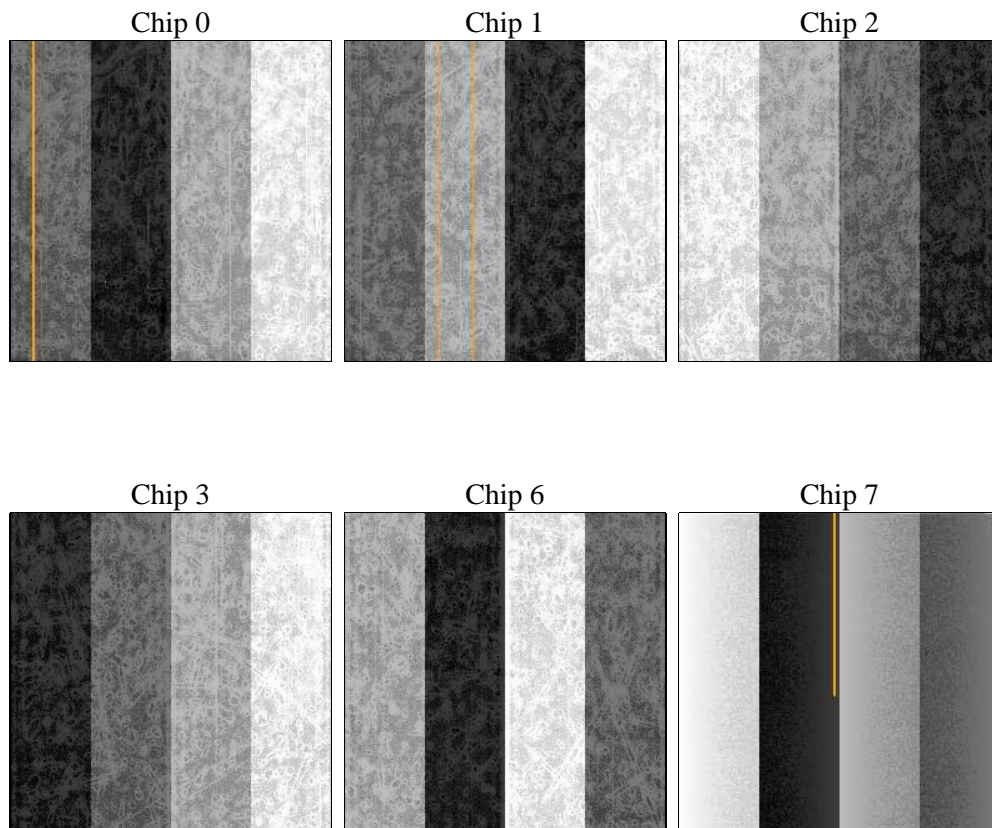
3 OBI Secondary

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	4022.1905534863	Sum of GTIs [s]
caldsver	4.4.7	 	ontime0	4022.1905247569	Sum of GTIs [s]
date	2012-02-04T06:08:49	Date and time of file creation	ontime1	4022.1906428933	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	4022.1903558969	Sum of GTIs [s]
			ontime3	4022.1905534863	Sum of GTIs [s]
			ontime6	4022.1903856993	Sum of GTIs [s]
			ontime7	4022.1904059052	Sum of GTIs [s]
			l1events	193480	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	28267	34415	32184	32057	30390	36167	grade 0 events	3059	7103	3420	3536	1531	1408
rejected events	22938	23908	26201	25966	26665	19738		10%	20%	10%	11%	5%	3%
rejected %	81%	69%	81%	80%	87%	54%	grade 1 events	22	119	58	57	20	53
								0%	0%	0%	0%	0%	0%
							grade 2 events	880	1460	1052	1033	786	3371
								3%	4%	3%	3%	2%	9%
							grade 3 events	379	513	405	407	327	1450
								1%	1%	1%	1%	1%	4%
							grade 4 events	325	529	449	418	359	1407
								1%	1%	1%	1%	1%	3%
							grade 5 events	1194	1382	1130	1390	1380	3685
								4%	4%	3%	4%	4%	10%
							grade 6 events	690	924	667	709	725	8806
								2%	2%	2%	2%	2%	24%
							grade 7 events	21718	22385	25003	24507	25262	15987
								76%	65%	77%	76%	83%	44%

A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.02.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.95993276453014

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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Monitor constraint met, follows obs12163 by 34 days.