

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 13300 - L2 Version 1
Chandra X-Ray Center

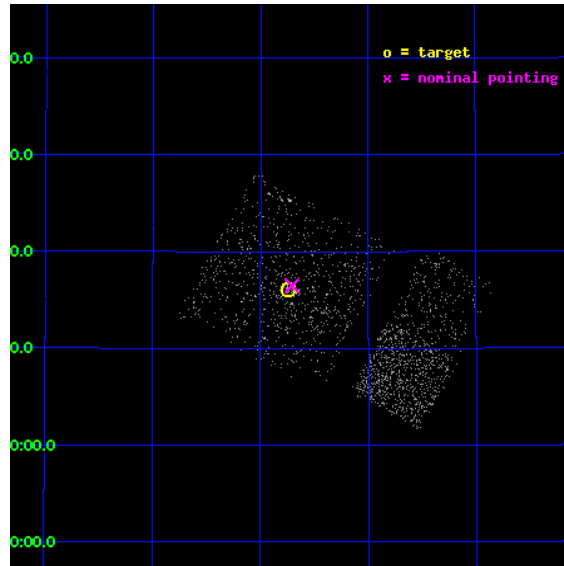
L2 Processing Date : Jul 21 2012

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1 Front

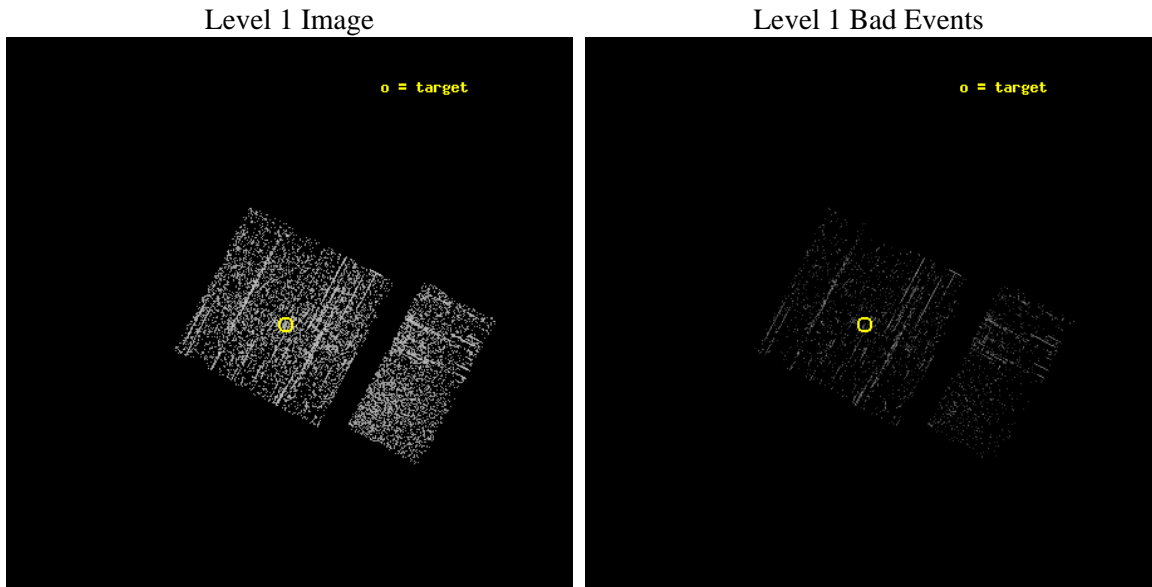
seq_num	600988	Sequence number
obs_id	13300	Observation id
title	Black Hole X-ray Novae in M31	Proposal title
observer	Dr. Stephen Murray	Principal investigator
object	M31	Source name
dtcycle	0	
cycle	P	events are from which exps? P[rimary] S[econdar
ra_targ	10.685	Observer's specified target RA [deg]
dec_targ	41.268972	Observer's specified target Dec [deg]
ra_nom	10.677252018147	Nominal RA [deg]
dec_nom	41.274671731421	Nominal Dec [deg]
roll_nom	118.07995990455	Nominal Roll [deg]
revision	1	Processing version of data
ontime	922.20118445158	Sum of GTIs [s]
livetime	145.17671137624	Livetime [s]
ontime0	922.20118445158	Sum of GTIs [s]
ontime1	922.20118445158	Sum of GTIs [s]
ontime2	922.20118445158	Sum of GTIs [s]
ontime3	922.20118445158	Sum of GTIs [s]
ontime6	922.22950989008	Sum of GTIs [s]
ontime7	922.20118445158	Sum of GTIs [s]
l2events	2165	Number of level 2 events



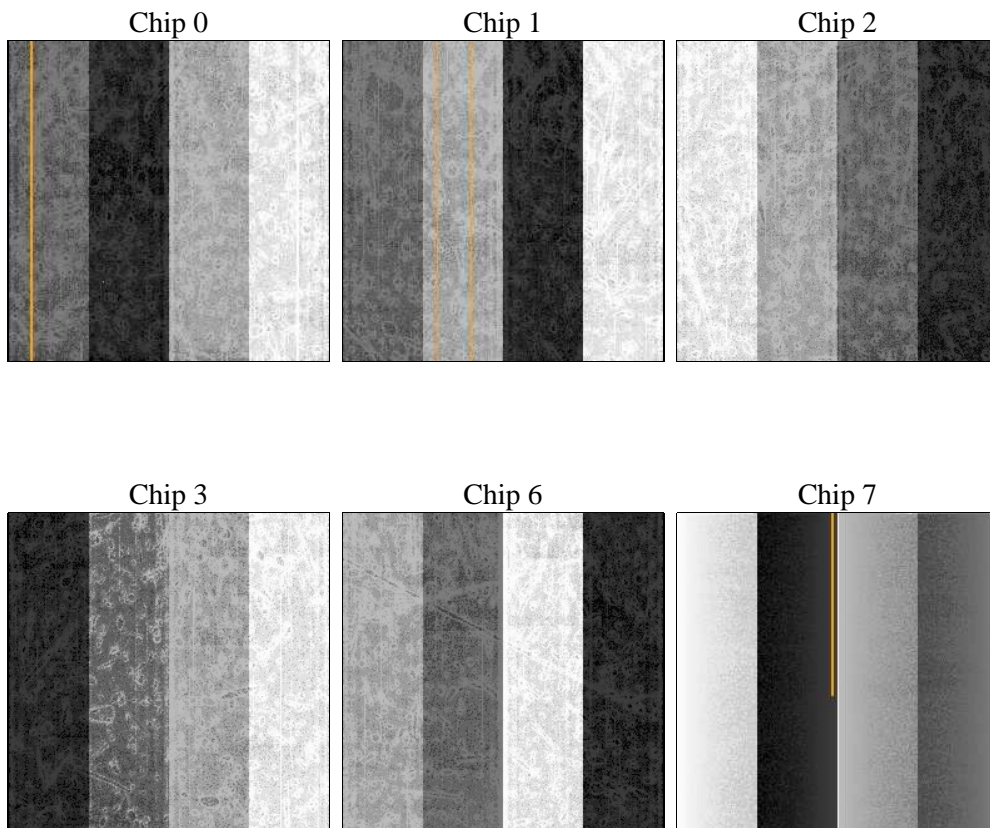
2 OBI Primary

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	2	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	922.20118445158	Sum of GTIs [s]
caldsver	4.5.0	 	ontime0	922.20118445158	Sum of GTIs [s]
date	2012-07-21T03:29:09	Date and time of file creation	ontime1	922.20118445158	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	922.20118445158	Sum of GTIs [s]
			ontime3	922.20118445158	Sum of GTIs [s]
			ontime6	922.22950989008	Sum of GTIs [s]
			ontime7	922.20118445158	Sum of GTIs [s]
			l1events	16746	Number of level 1 events

2.1.4 Events

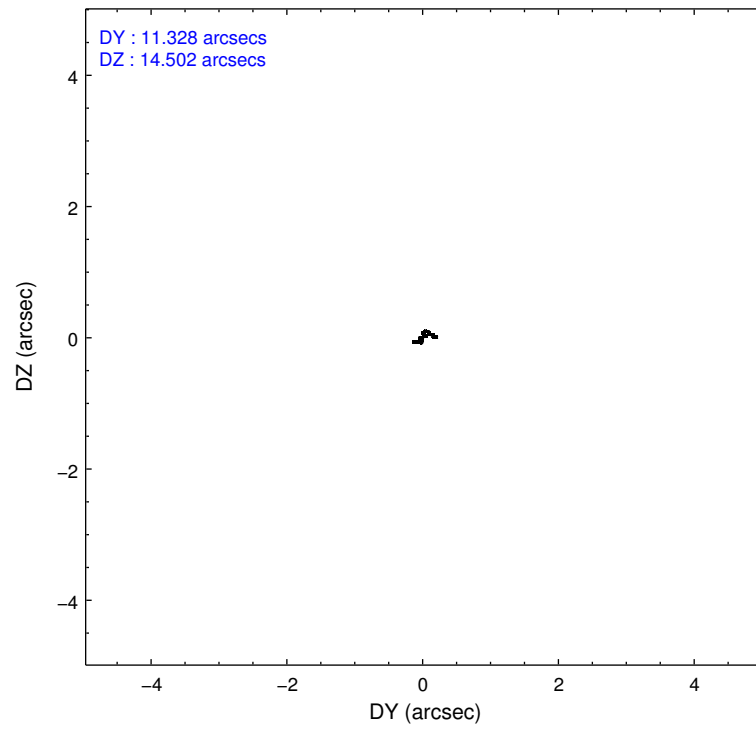
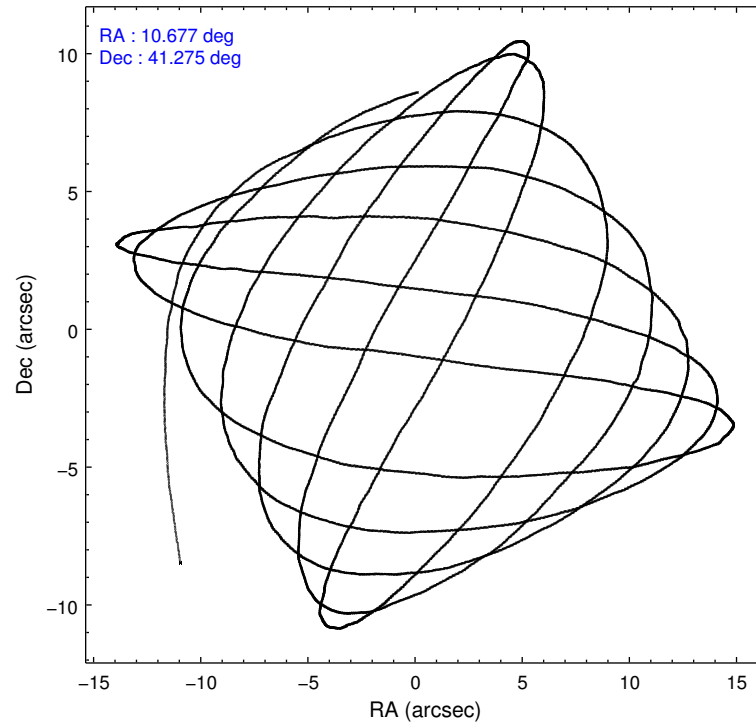
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	2081	2698	3289	3045	2972	2661
rejected events	1749	2367	2927	2615	2692	1823
rejected %	84%	87%	88%	85%	90%	68%

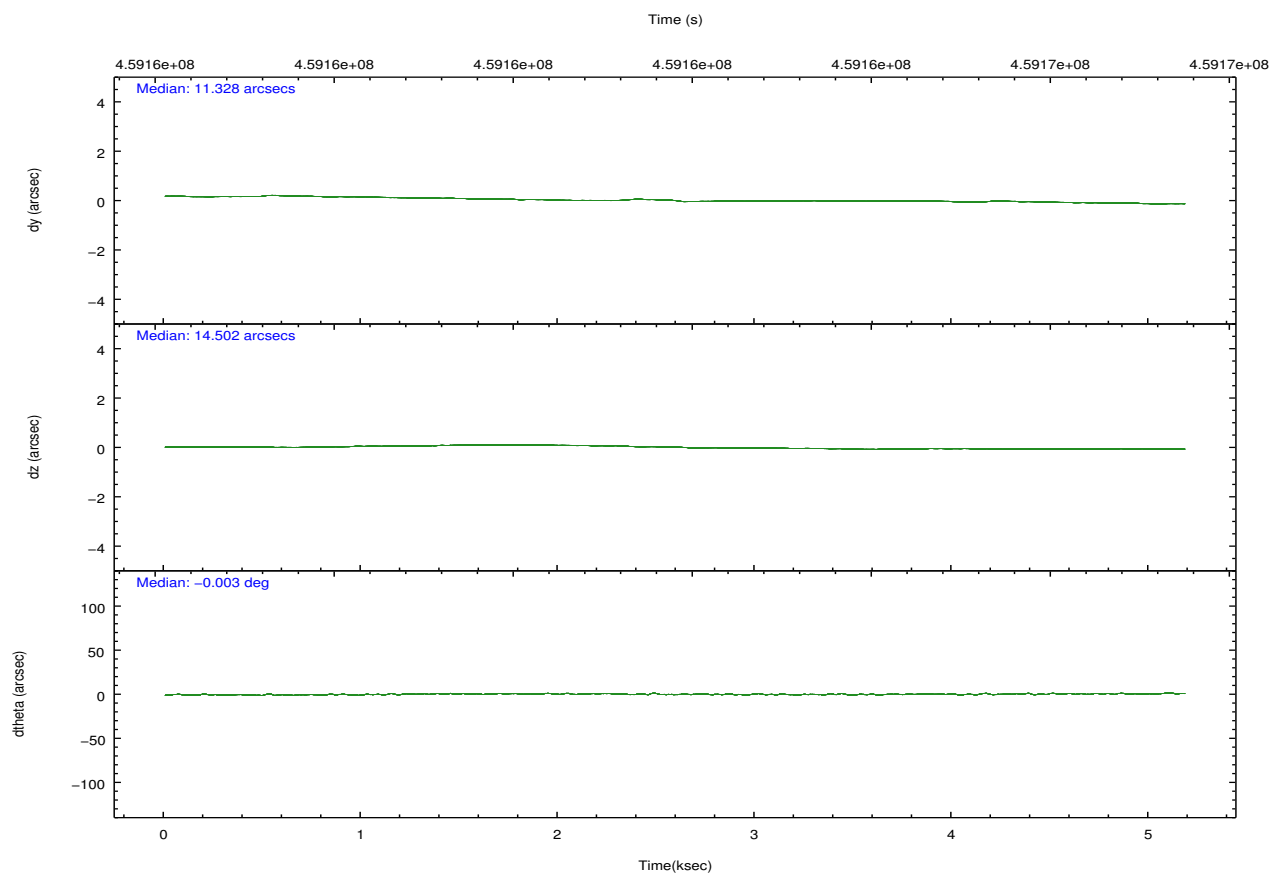
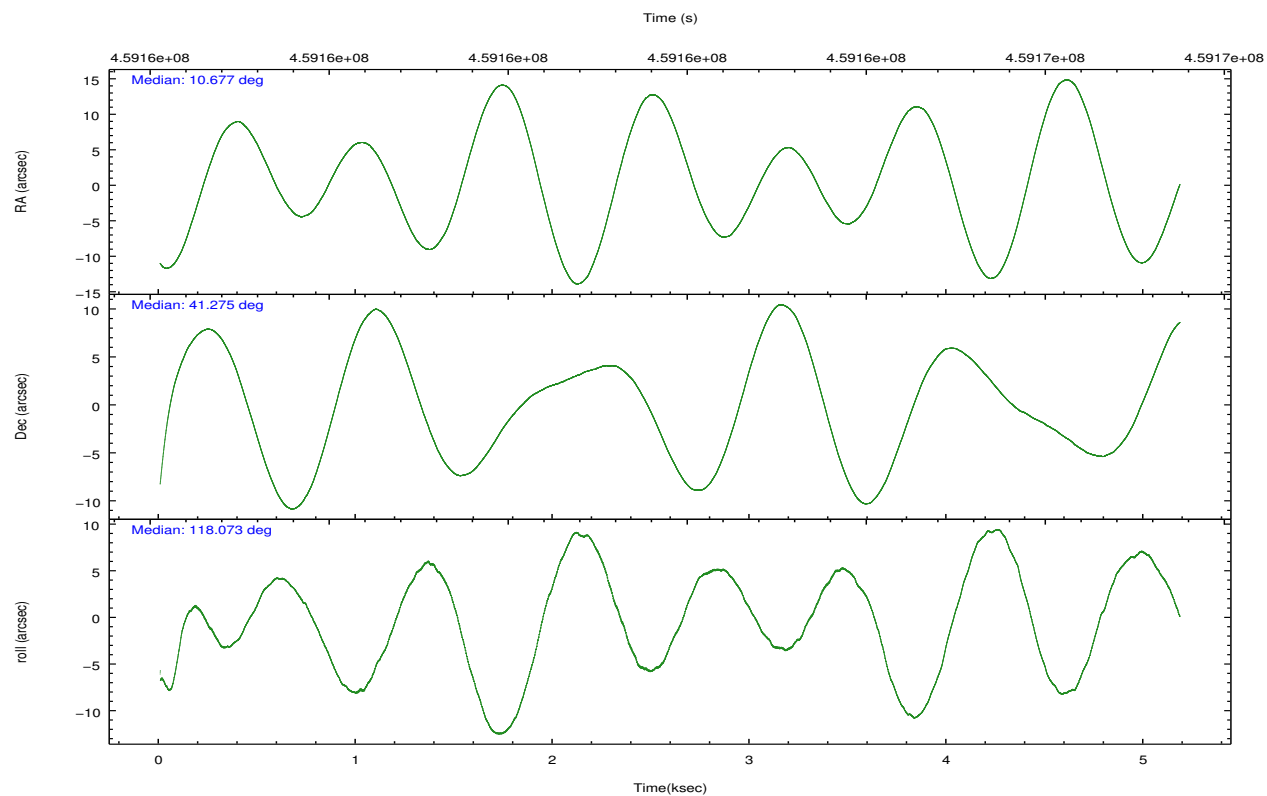
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	155	150	140	228	78	71
	7%	5%	4%	7%	2%	2%
grade 1 events	0	2	1	4	0	2
	0%	0%	0%	0%	0%	0%
grade 2 events	78	73	108	96	85	197
	3%	2%	3%	3%	2%	7%
grade 3 events	34	25	31	32	29	75
	1%	0%	0%	1%	0%	2%
grade 4 events	25	39	32	22	33	64
	1%	1%	0%	0%	1%	2%
grade 5 events	78	90	105	91	85	226
	3%	3%	3%	2%	2%	8%
grade 6 events	42	50	53	53	57	437
	2%	1%	1%	1%	1%	16%
grade 7 events	1669	2269	2819	2519	2605	1589
	80%	84%	85%	82%	87%	59%

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	FAINT	FAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	10.708473	10.67725201814698	CCD I2 on	Y	Y
[deg] Pointing Dec	41.260205	41.2746717314214	CCD I3 on	Y	Y
[deg] Pointing Roll	117.850682	118.0799599045543	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	O1	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O2	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	459161502.184000	459160457.54057	CCD S5 on	N	N
Observation start date	2012-07-20T08:50:35	2012-07-20T08:34:17	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	459166502.184000	459167880.59096	On-chip summing requested	N	N
Observation end date	2012-07-20T10:13:55	2012-07-20T10:38:00	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



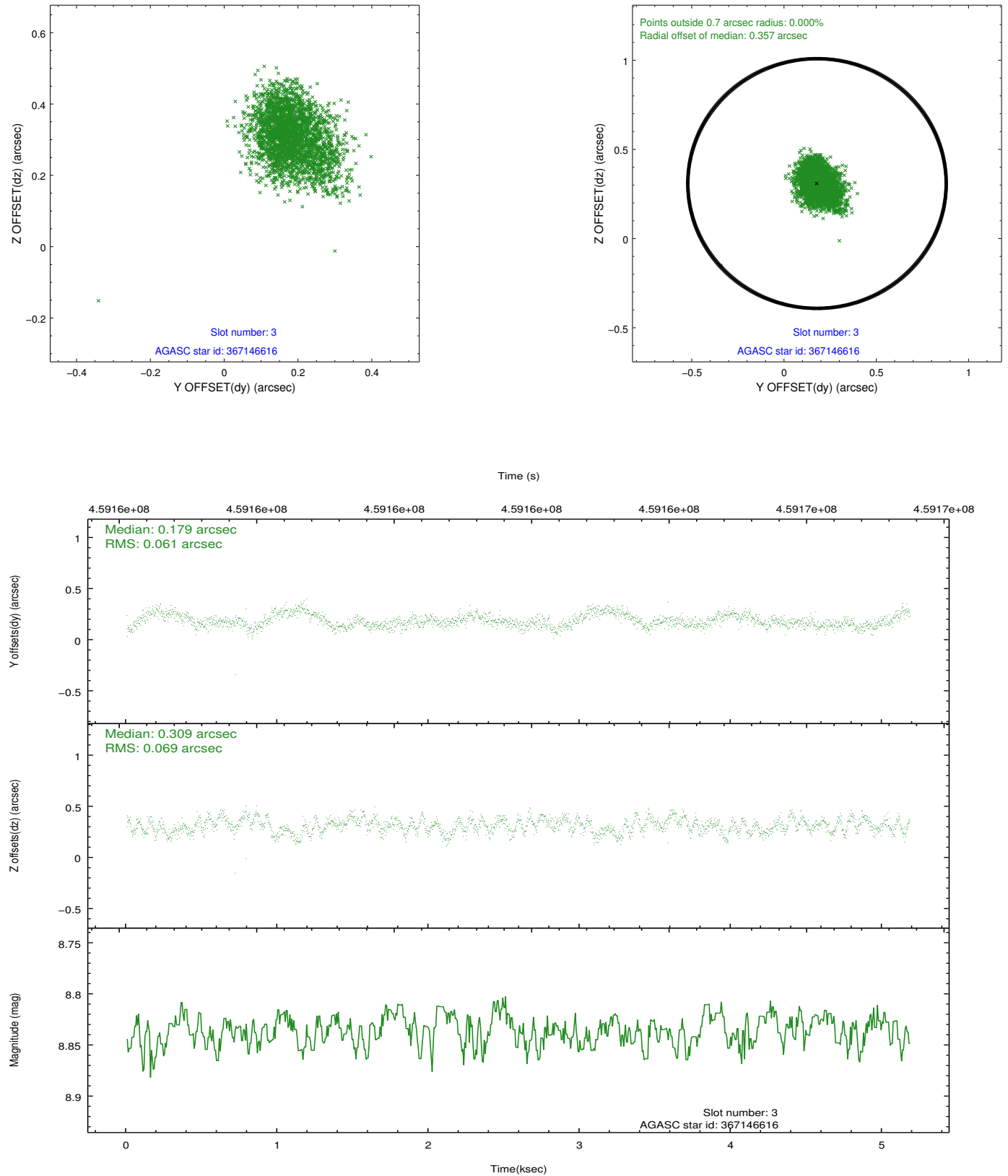


Slot Statistics

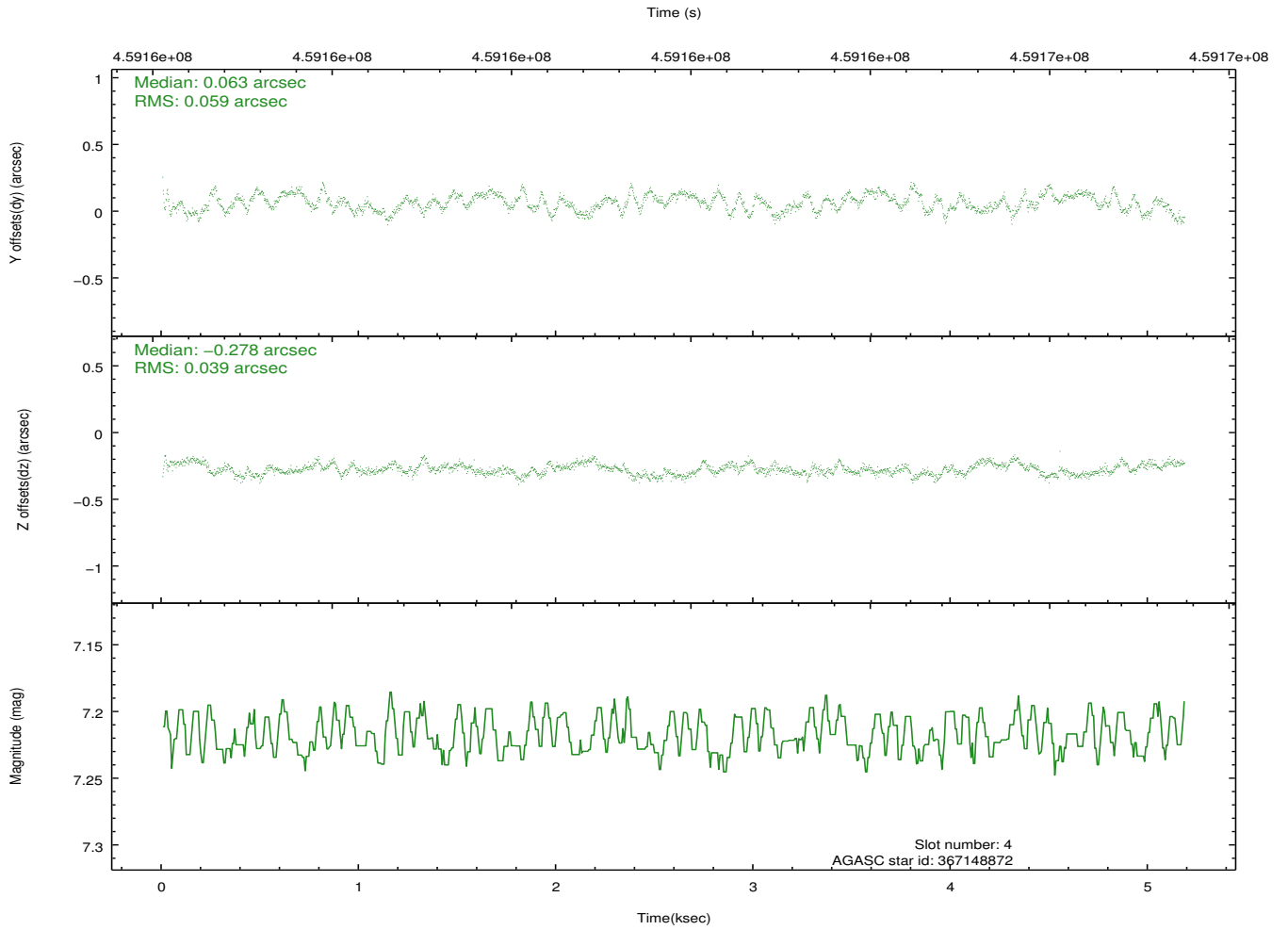
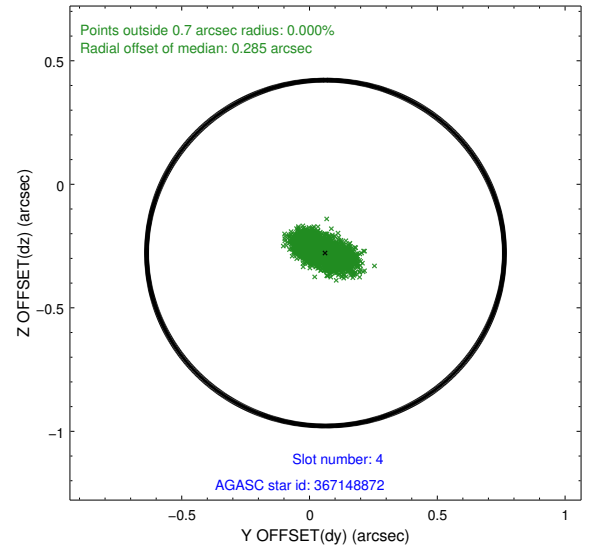
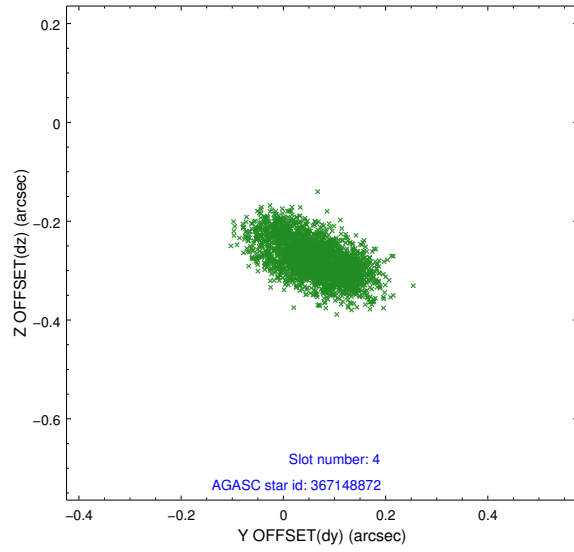
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	6.99	1264	0.025	0.023	0.007	0.012	0.000000	0.000000	928.24	-838.05
1	FID	ACIS-I-5	6.97	1264	-0.162	0.050	0.006	0.011	0.000000	0.000000	-1819.44	1058.83
2	FID	ACIS-I-6	6.99	1264	0.045	-0.003	0.007	0.012	0.000000	0.000000	392.49	1704.65
3	GUIDE	367146616	8.84	2528	0.179	0.309	0.098	0.154	11.418645	41.190163	-1114.28	-1586.71
4	GUIDE	367148872	7.22	2528	0.063	-0.278	0.076	0.124	10.505940	40.688258	-1562.73	1449.94
5	GUIDE	367657896	9.02	2517	0.075	-0.008	0.083	0.137	11.197765	41.313576	-445.15	-1260.69
6	GUIDE	367663272	9.27	2525	-0.131	-0.078	0.114	0.189	10.656279	41.699429	1463.57	-613.86
7	GUIDE	367674552	8.85	2527	-0.185	0.059	0.094	0.149	11.016238	41.570845	603.36	-1256.13

2.4 Star Slots

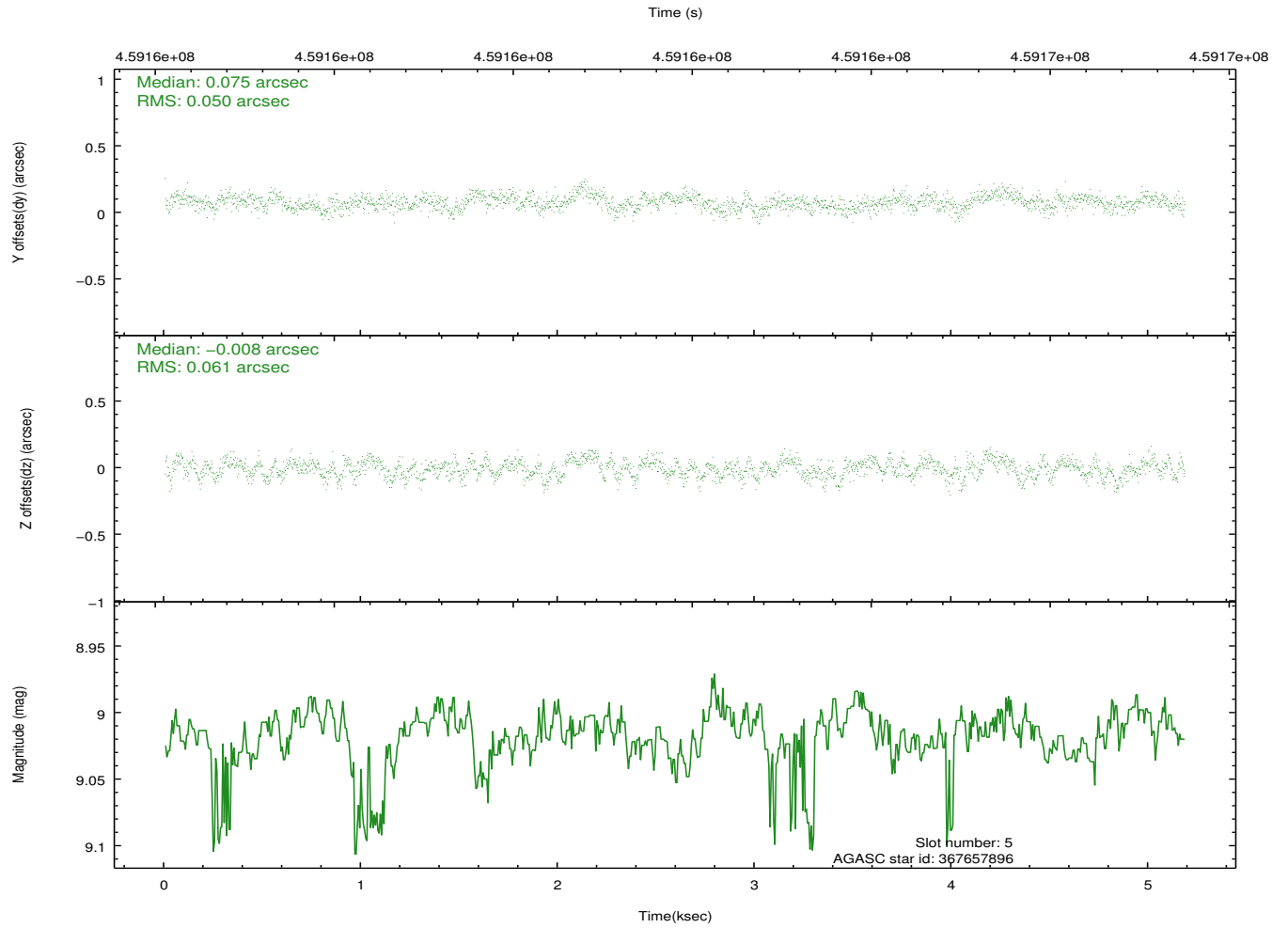
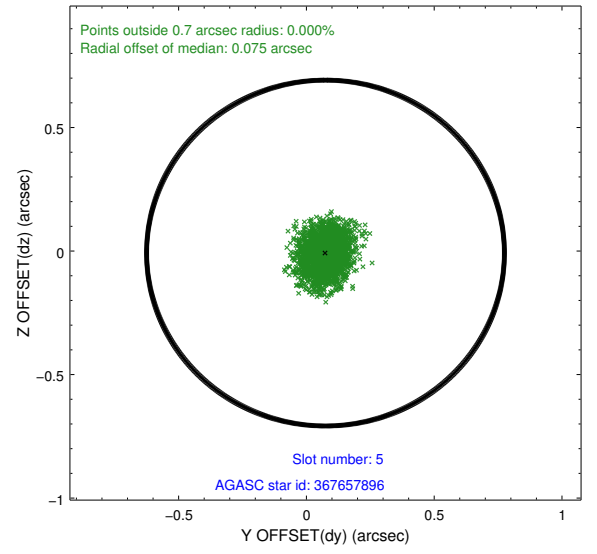
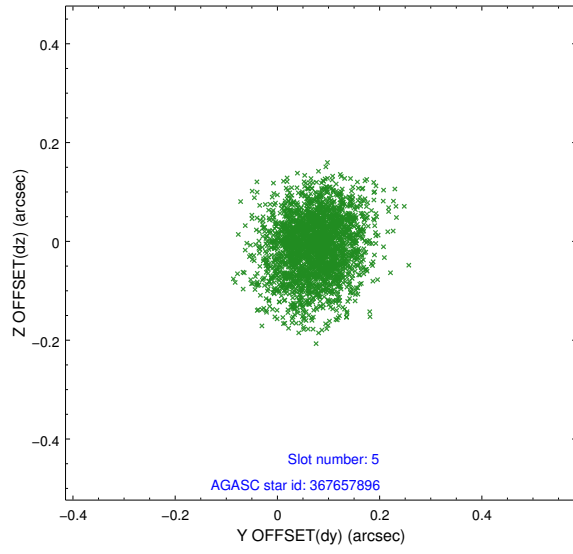
2.4.1 Slot 3



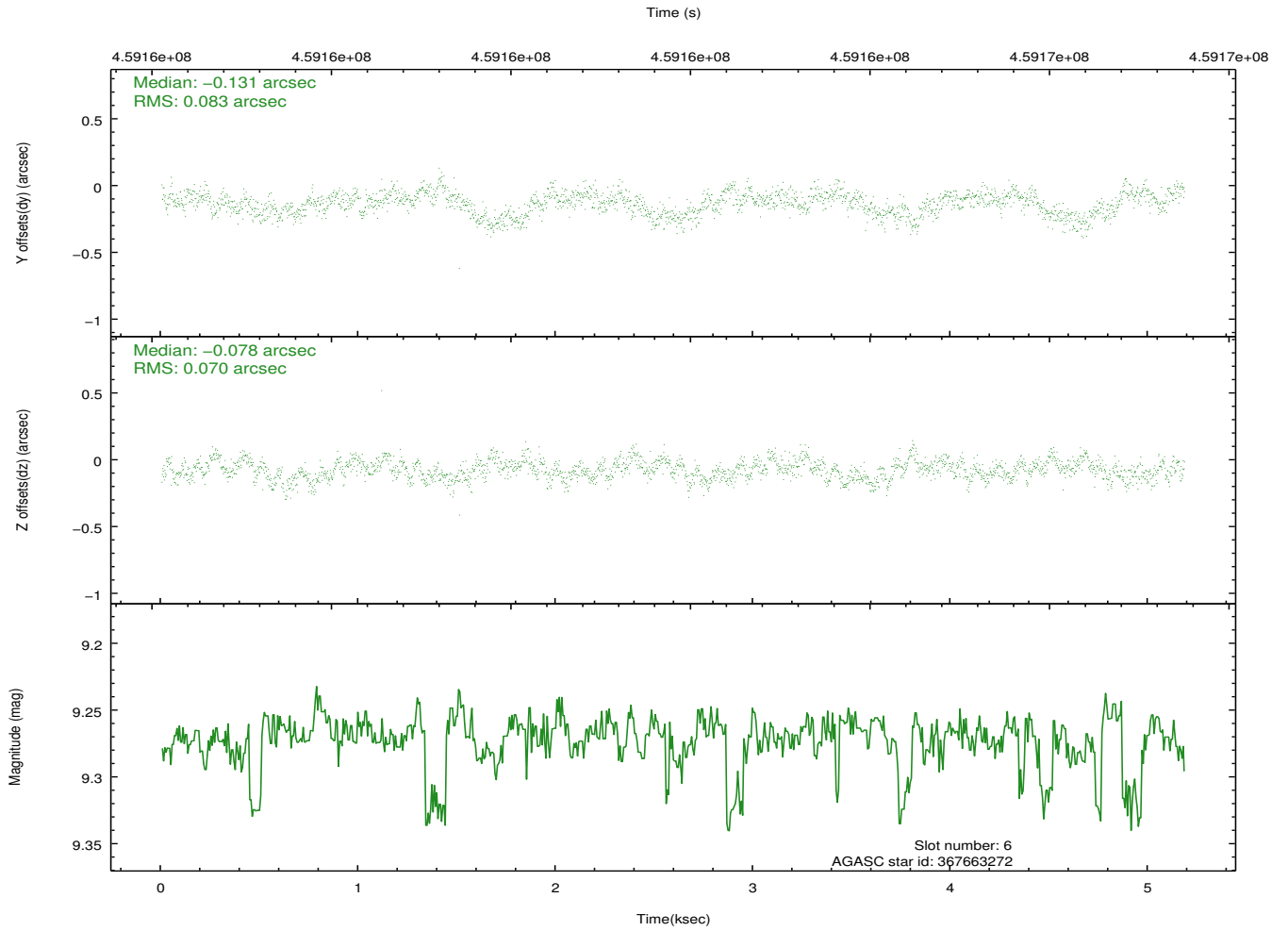
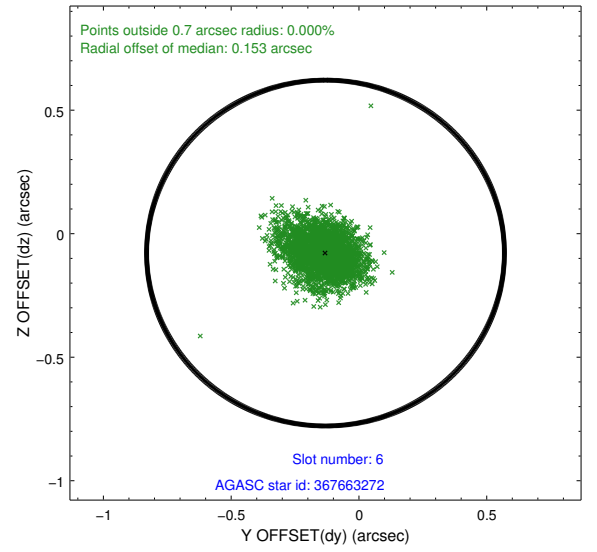
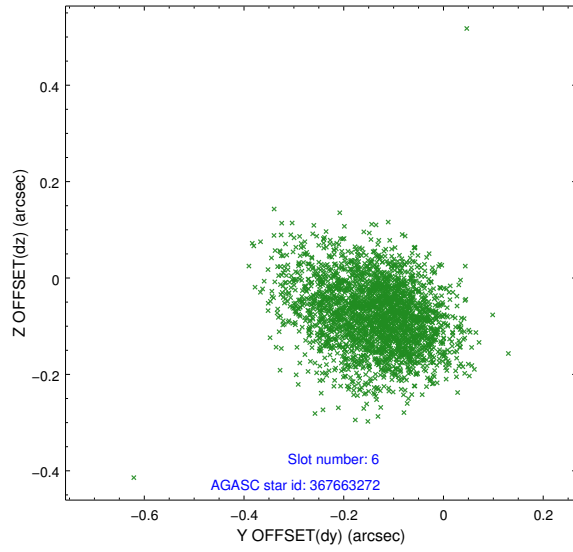
2.4.2 Slot 4



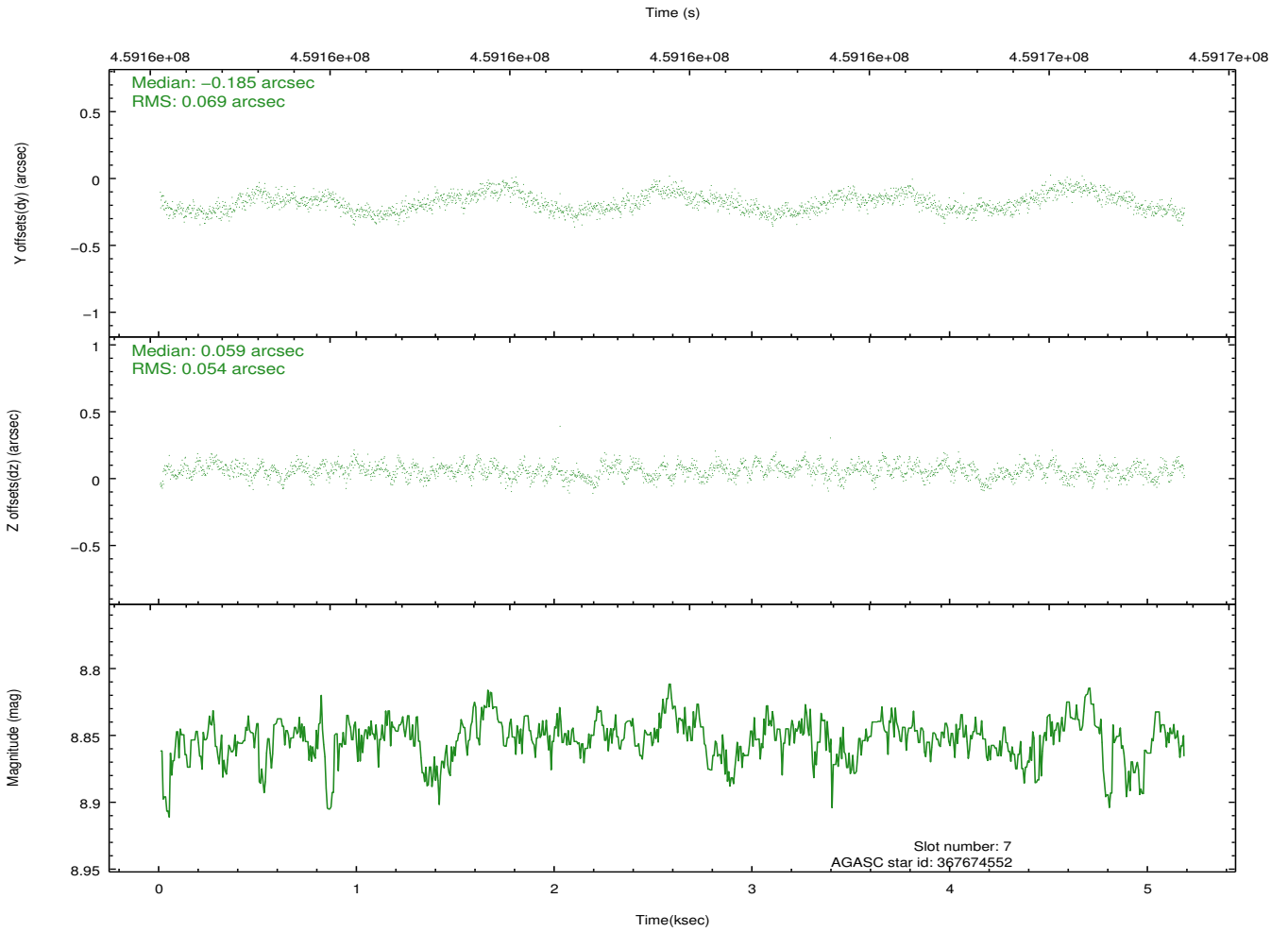
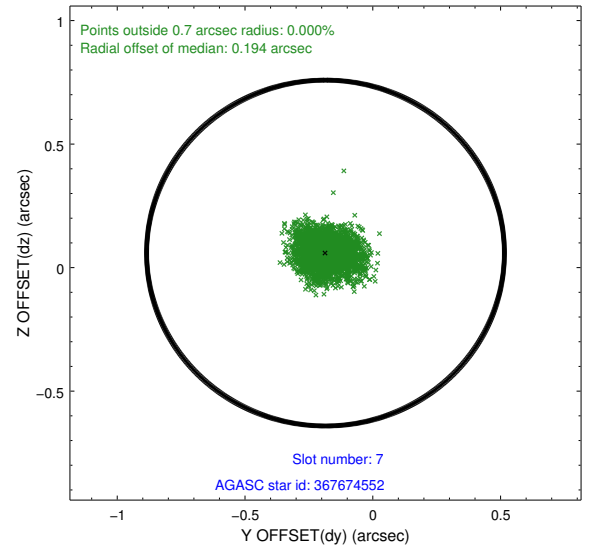
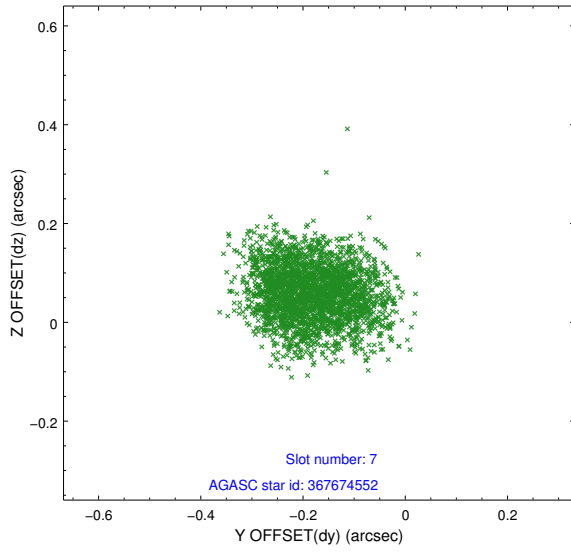
2.4.3 Slot 5



2.4.4 Slot 6

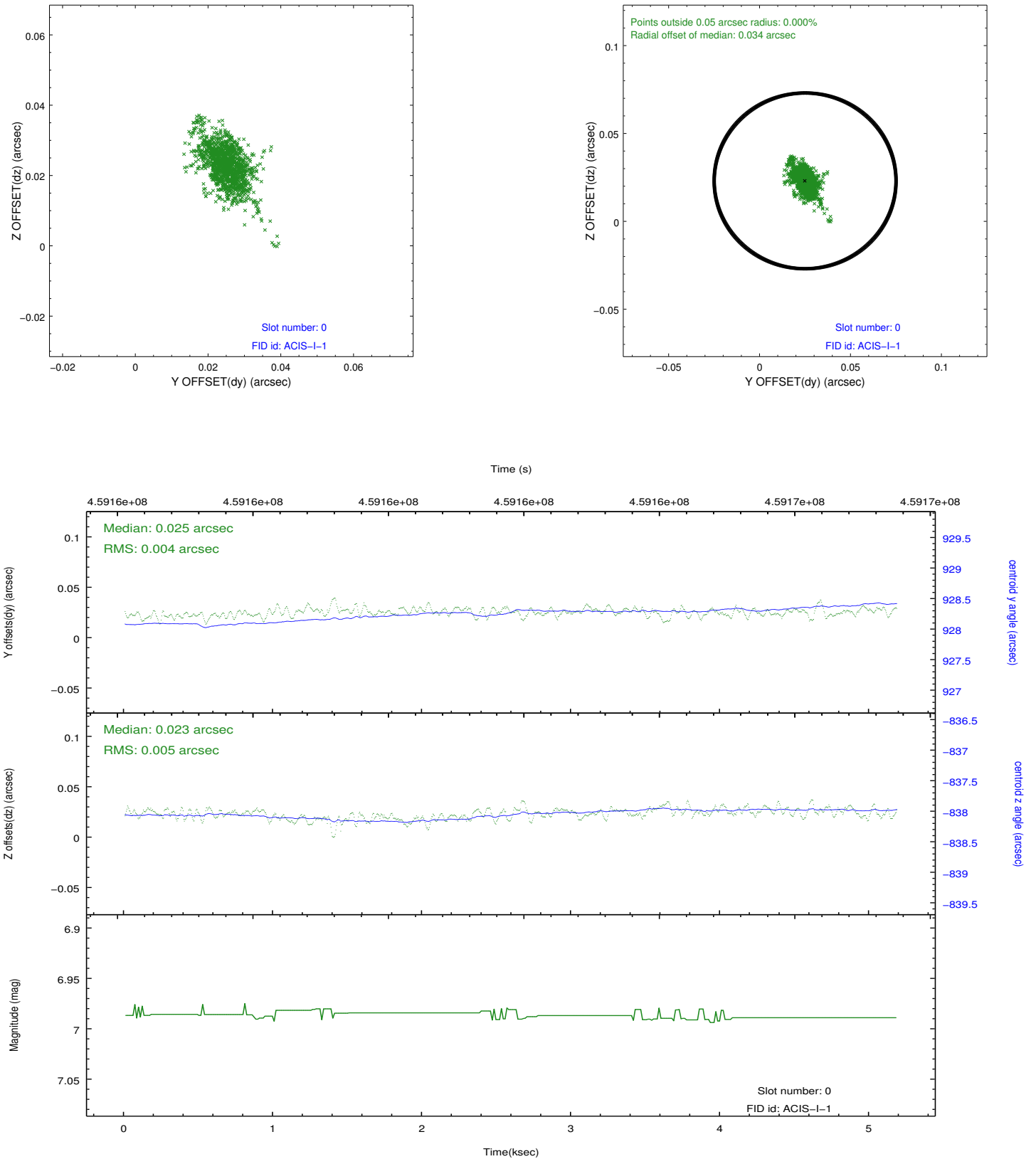


2.4.5 Slot 7

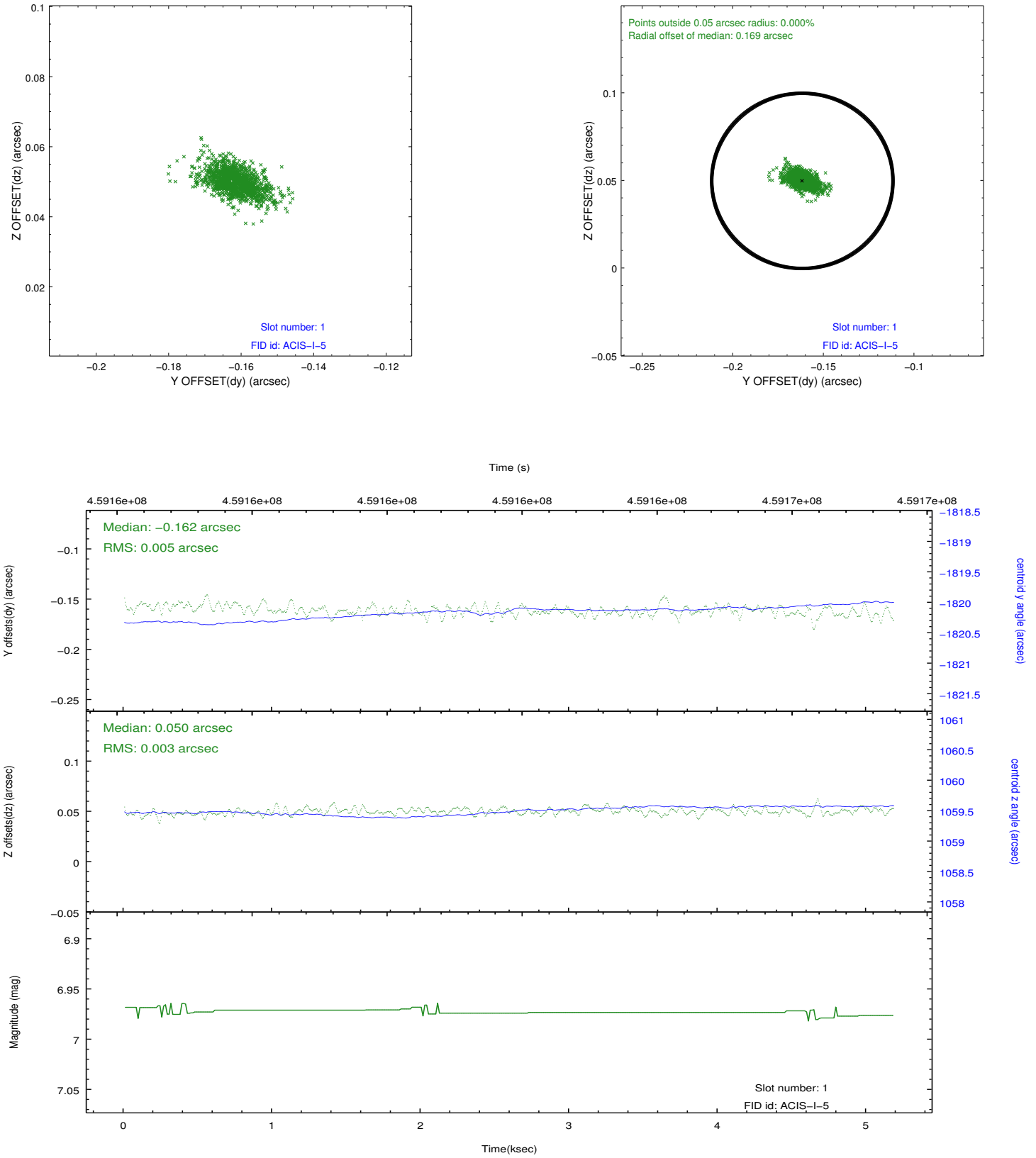


2.5 FID Slots

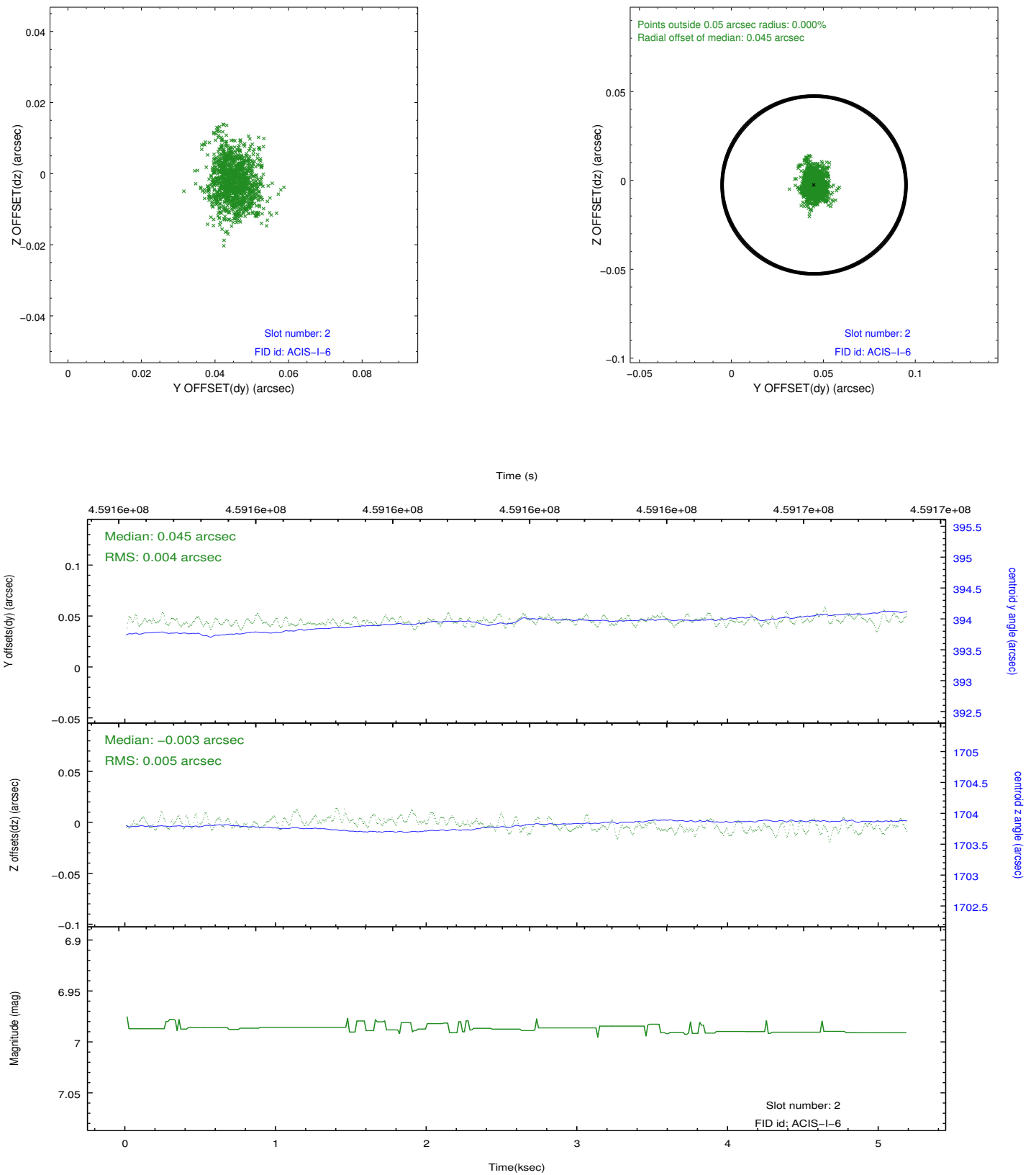
2.5.1 Slot 0



2.5.2 Slot 1



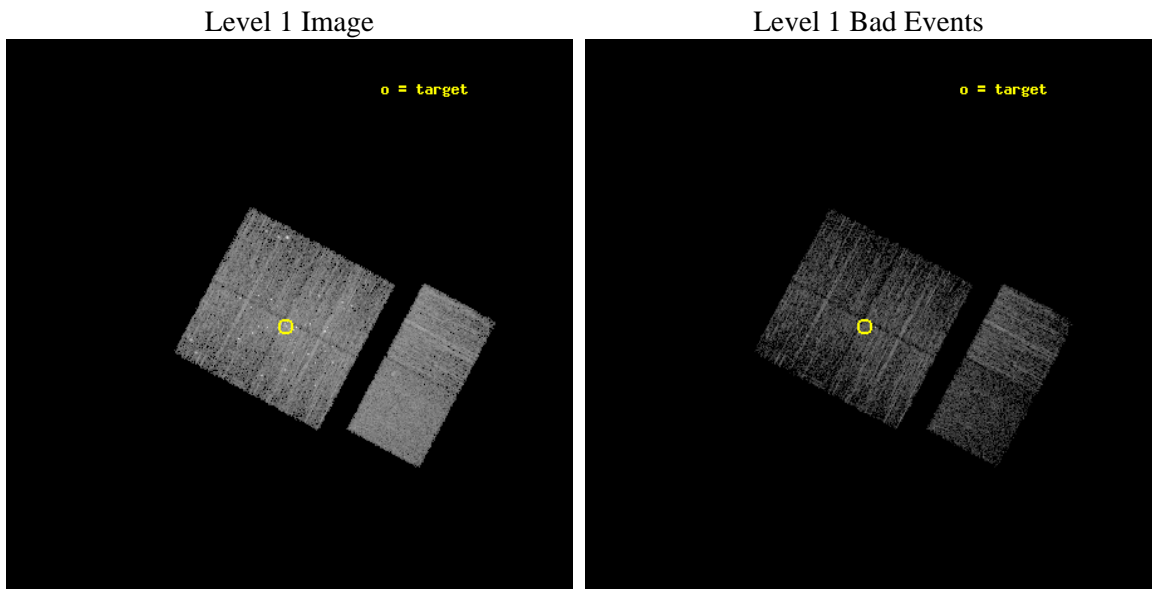
2.5.3 Slot 2



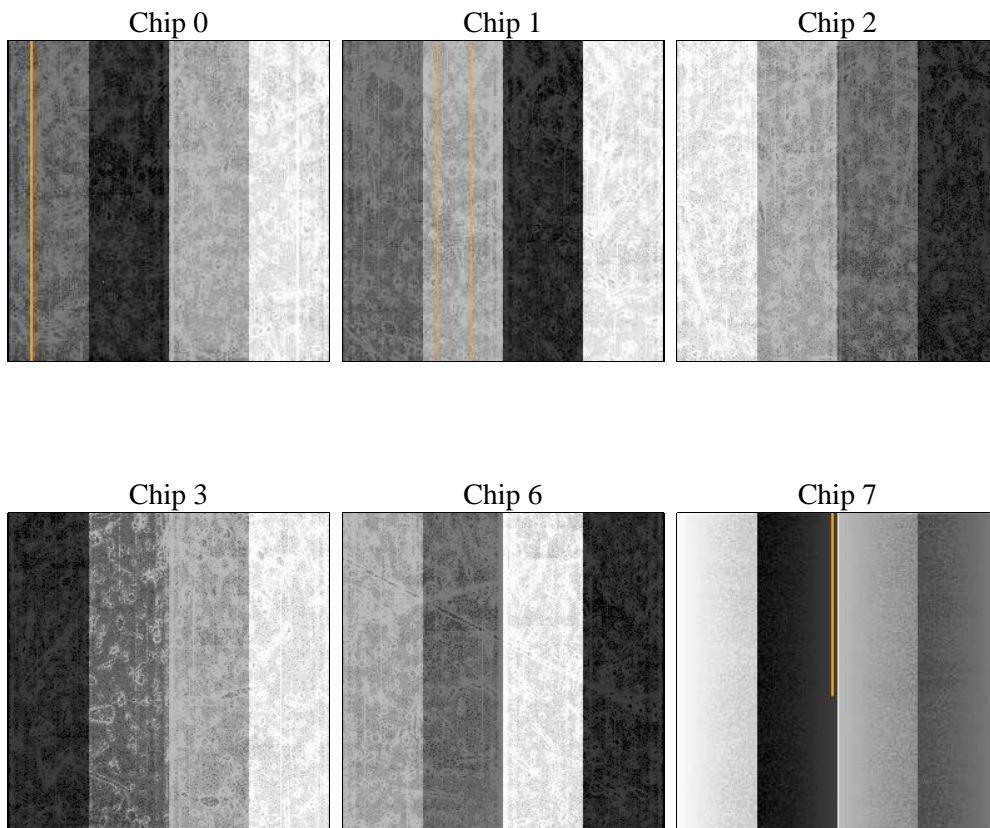
3 OBI Secondary

3.1 OBI

3.1.1 Images



3.1.2 Bias



3.1.3 Parameters

obi_num	2	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	3957.649530232	Sum of GTIs [s]
caldsver	4.5.0	 	ontime0	3957.6493018866	Sum of GTIs [s]
date	2012-07-21T03:29:55	Date and time of file creation	ontime1	3957.6494306326	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	3957.6499189138	Sum of GTIs [s]
			ontime3	3957.649530232	Sum of GTIs [s]
			ontime6	3957.6492019892	Sum of GTIs [s]
			ontime7	3957.6494308114	Sum of GTIs [s]
			l1events	176611	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	24432	26533	29815	33240	31765	30826	grade 0 events	3115	3334	3602	4619	1540	1544
rejected events	18751	20571	23393	25990	27914	16285		12%	12%	12%	13%	4%	5%
rejected %	76%	77%	78%	78%	87%	52%	grade 1 events	29	34	47	134	9	45
								0%	0%	0%	0%	0%	0%
							grade 2 events	1309	1194	1391	1129	1062	3373
								5%	4%	4%	3%	3%	10%
							grade 3 events	312	344	334	422	288	1294
								1%	1%	1%	1%	0%	4%
							grade 4 events	312	368	455	402	268	1274
								1%	1%	1%	1%	0%	4%
							grade 5 events	901	992	904	1090	1034	2968
								3%	3%	3%	3%	3%	9%
							grade 6 events	636	724	643	685	693	7067
								2%	2%	2%	2%	2%	22%
							grade 7 events	17818	19543	22439	24759	26871	13261
								72%	73%	75%	74%	84%	43%

A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.07.24
V&V Edition	2
V&V Disposition and Status	OK
V&V Charge Time	4.87985071468358

A.2 Comments

There are very few events on CCD_ID = 6 for the primary exposures. As a result, it is not possible to reliably determine the nominal number of events per pixel while searching for an excess number of events that may be associated for an afterglow. For this reason, the primary data on CCD_ID = 6 is not searched for evidence of cosmic-ray afterglows. However, the data for the other 5 CCDs are searched for afterglows. The event data for all 6 CCDs in the file that contains the information for the secondary exposures is searched for afterglows.