

V&V Reference Report

L2 ASCDS Version : 10

Observation 15327 - L2 Version 2
Chandra X-Ray Center

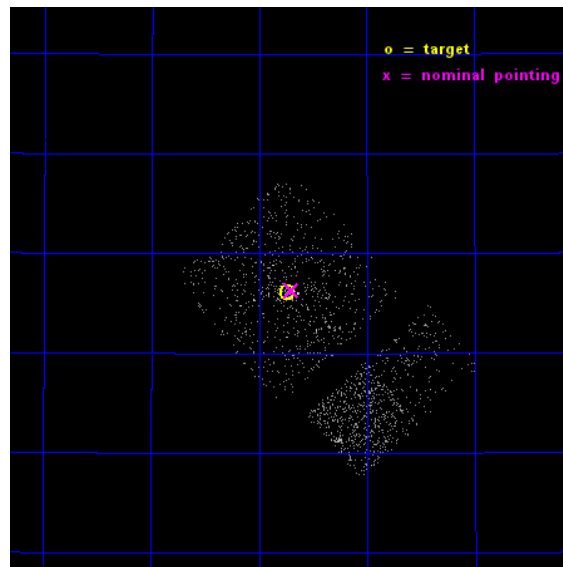
L2 Processing Date : Dec 6 2014

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1 Front

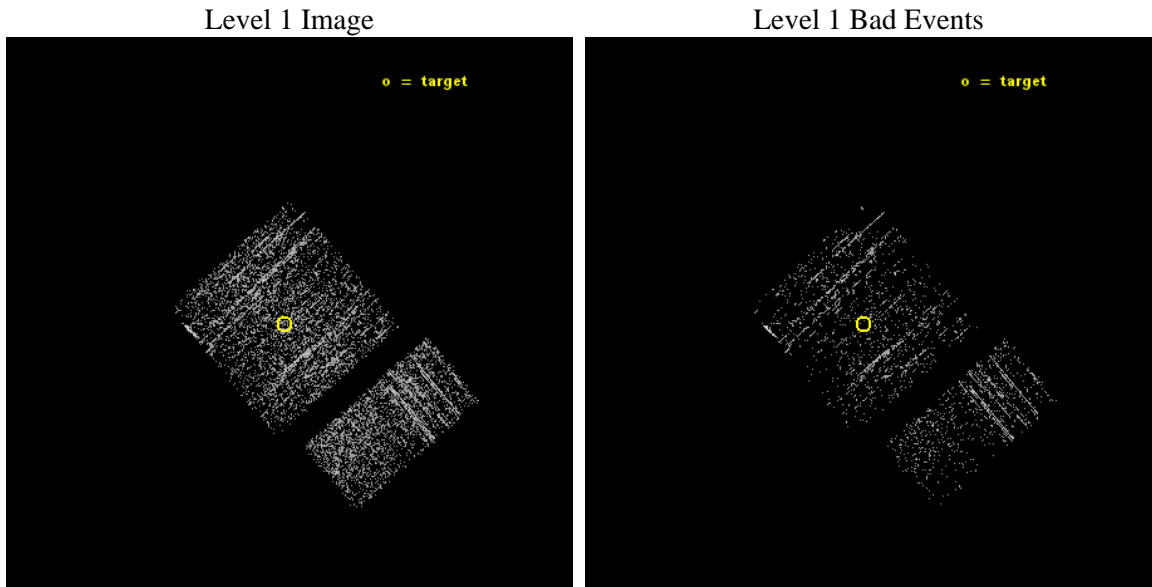
seq_num	601083	Sequence number
obs_id	15327	Observation id
title	Monitoring M31 for BHXNe	Proposal title
observer	Dr Stephen Murray	Principal investigator
object	M31 BHXN	Source name
dtcycle	0	
cycle	P	events are from which exps? P[rimary] S[econdar
ra_targ	10.685	Observer's specified target RA [deg]
dec_targ	41.268972	Observer's specified target Dec [deg]
ra_nom	10.675205986635	Nominal RA [deg]
dec_nom	41.272083996798	Nominal Dec [deg]
roll_nom	139.34215896259	Nominal Roll [deg]
revision	2	Processing version of data
ontime	926.34740823507	Sum of GTIs [s]
livetime	145.8294270132	Livetime [s]
ontime0	926.34740823507	Sum of GTIs [s]
ontime1	926.34740823507	Sum of GTIs [s]
ontime2	926.34740823507	Sum of GTIs [s]
ontime3	926.34740823507	Sum of GTIs [s]
ontime6	926.34740823507	Sum of GTIs [s]
ontime7	926.34740823507	Sum of GTIs [s]
l2events	1907	Number of level 2 events



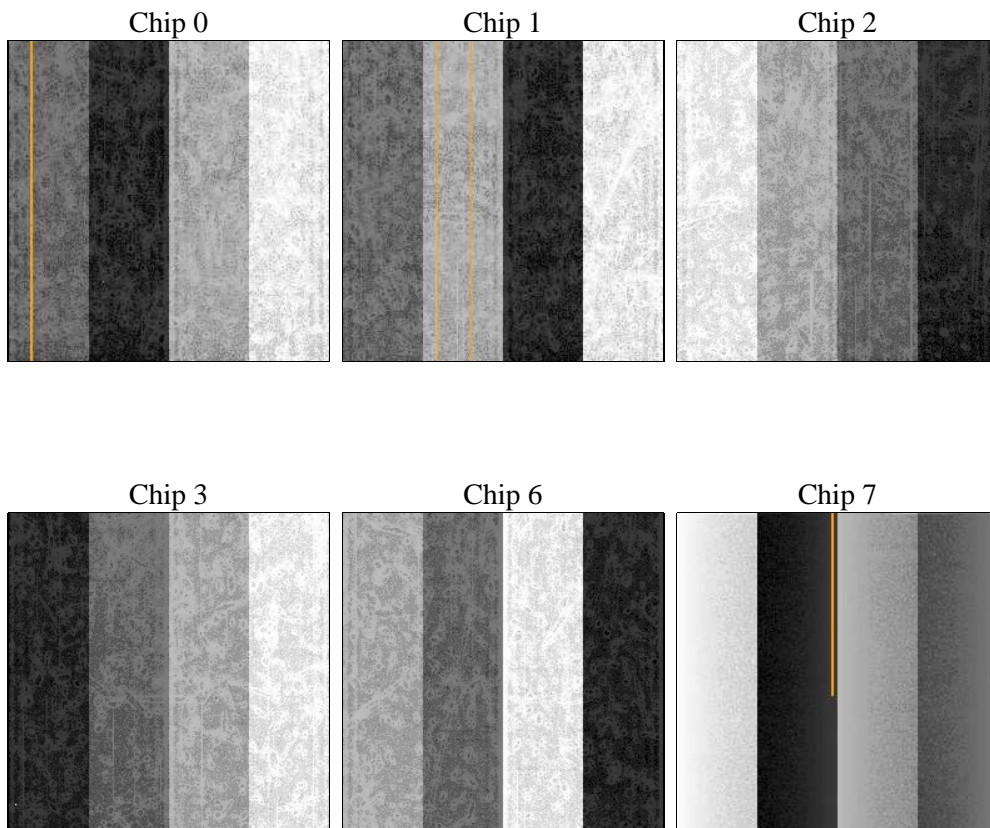
2 OBI Primary

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	10.3.1	Processing system revision	ontime	926.34740823507	Sum of GTIs [s]
caldsver	4.6.4	 	ontime0	926.34740823507	Sum of GTIs [s]
date	2014-12-06T08:22:33	Date and time of file creation	ontime1	926.34740823507	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	926.34740823507	Sum of GTIs [s]
			ontime3	926.34740823507	Sum of GTIs [s]
			ontime6	926.34740823507	Sum of GTIs [s]
			ontime7	926.34740823507	Sum of GTIs [s]
			l1events	14115	Number of level 1 events

2.1.4 Events

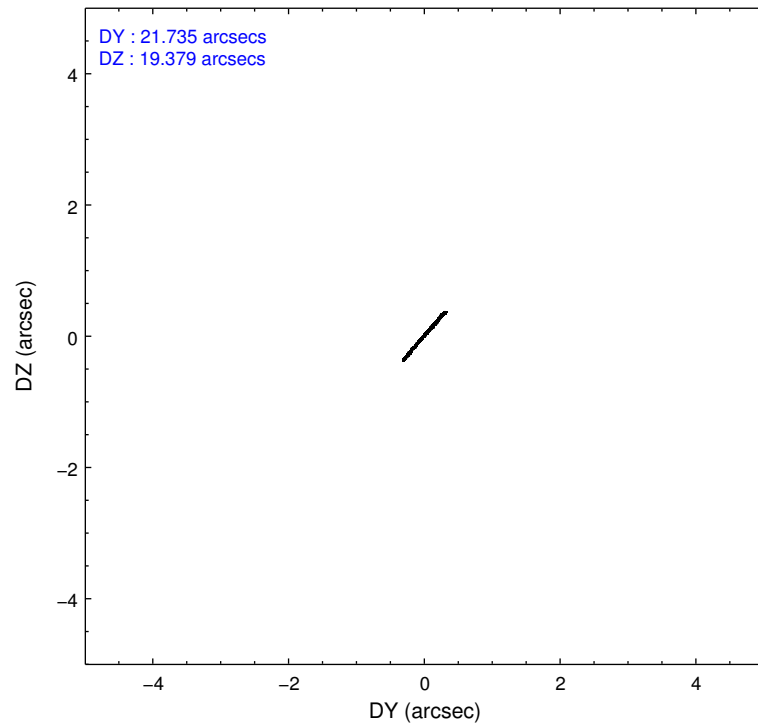
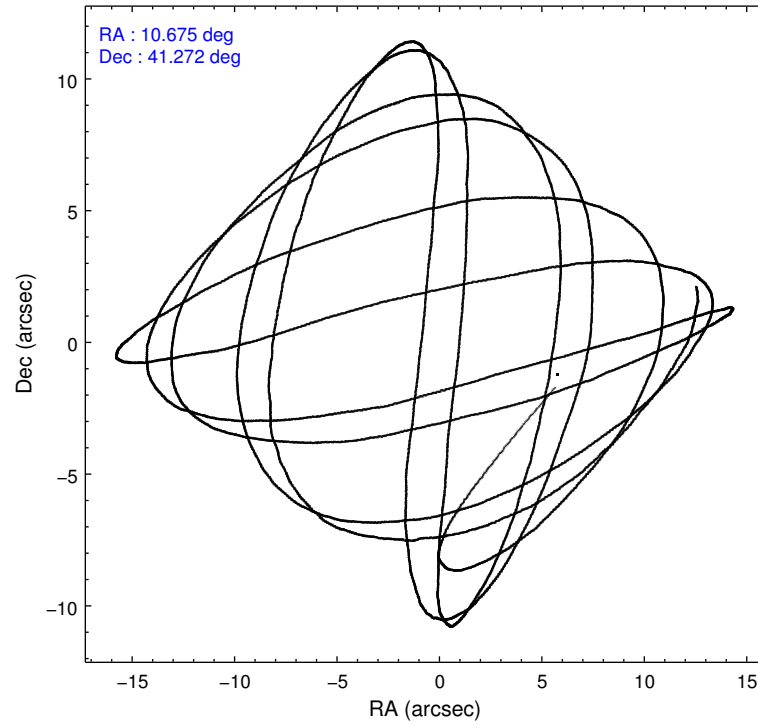
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	2146	2365	2287	2086	3002	2229
rejected events	1900	2049	1903	1772	2820	1541
rejected %	88%	86%	83%	84%	93%	69%

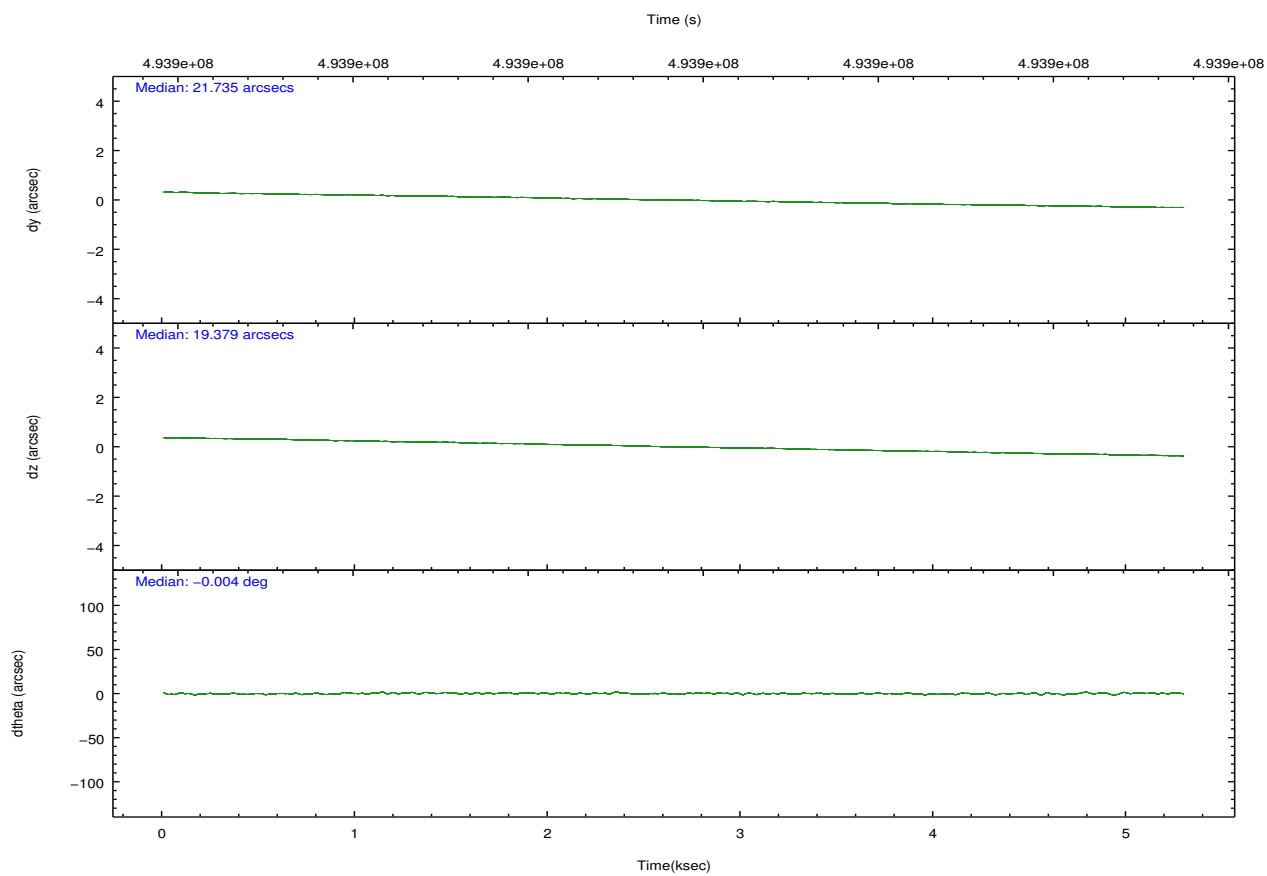
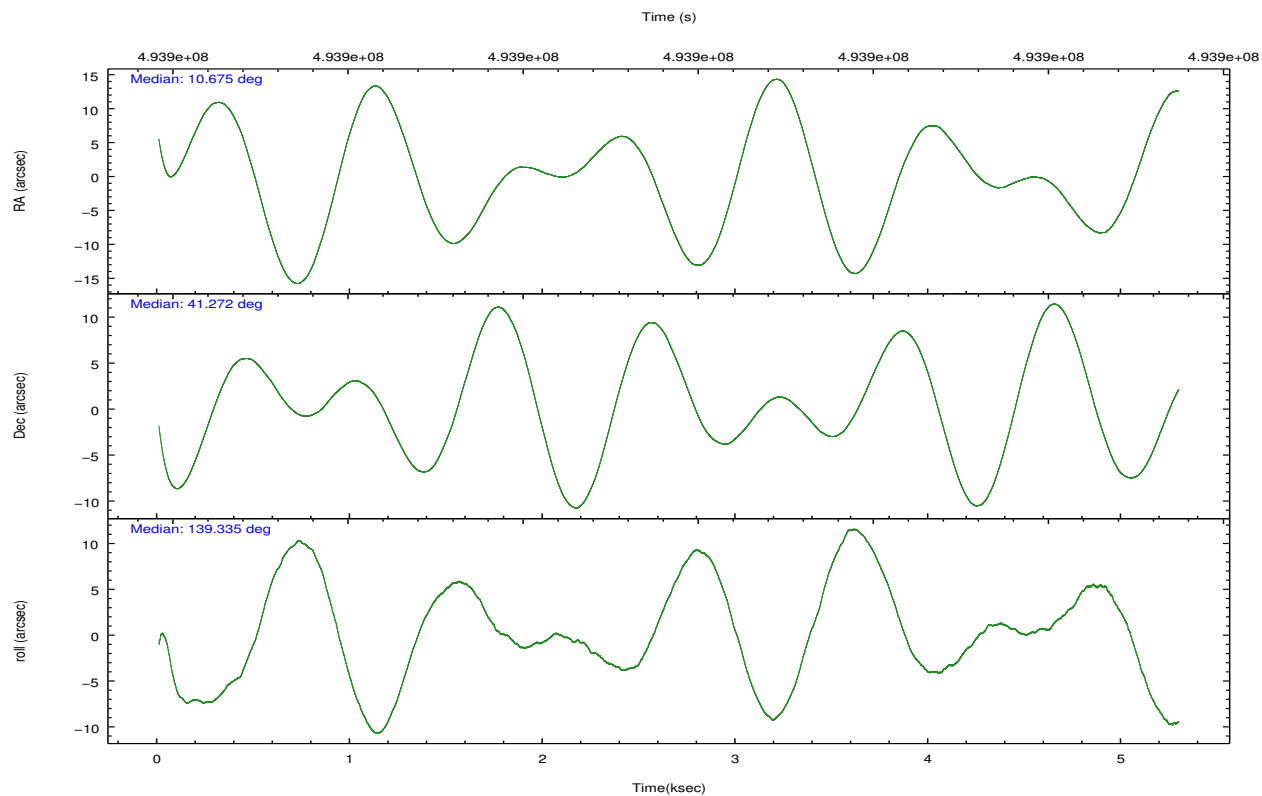
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	84	145	215	150	42	78
	3%	6%	9%	7%	1%	3%
grade 1 events	0	1	2	0	0	2
	0%	0%	0%	0%	0%	0%
grade 2 events	62	55	70	68	55	145
	2%	2%	3%	3%	1%	6%
grade 3 events	25	28	22	30	21	57
	1%	1%	0%	1%	0%	2%
grade 4 events	31	27	35	26	19	72
	1%	1%	1%	1%	0%	3%
grade 5 events	95	102	99	94	93	187
	4%	4%	4%	4%	3%	8%
grade 6 events	44	61	45	41	47	337
	2%	2%	1%	1%	1%	15%
grade 7 events	1805	1946	1799	1677	2725	1351
	84%	82%	78%	80%	90%	60%

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	10.711108	10.67520598663509	CCD I2 on	Y	Y
[deg] Pointing Dec	41.267191	41.27208399679828	CCD I3 on	Y	Y
[deg] Pointing Roll	139.109773	139.3421589625905	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)	493898479.184000	493897460.34054	CCD S5 on	N	N
Observation start date	2013-08-26T10:00:12	2013-08-26T09:44:20	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	493903479.184000	493904746.55343	On-chip summing requested	N	N
Observation end date	2013-08-26T11:23:32	2013-08-26T11:45:46	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



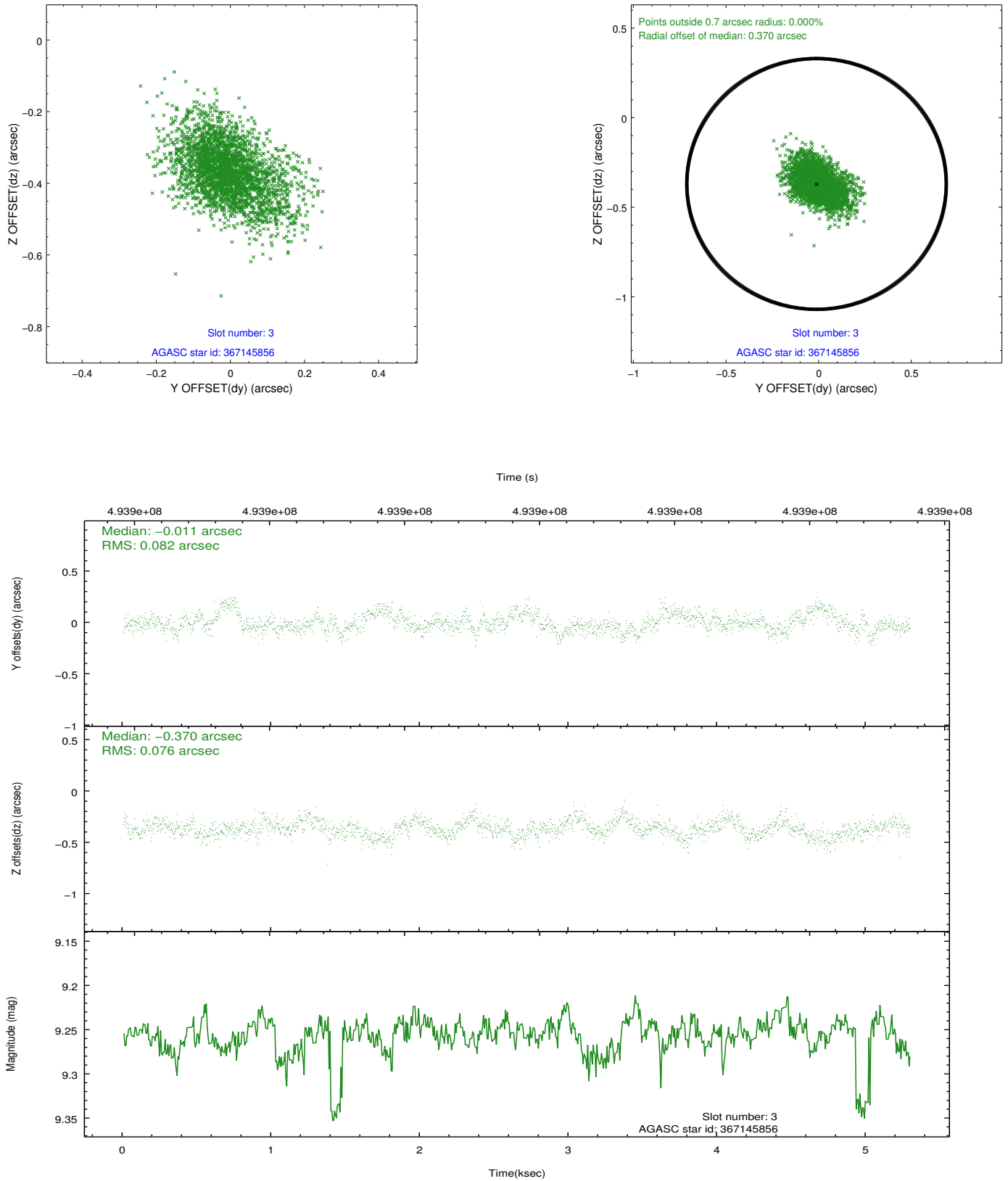


Slot Statistics

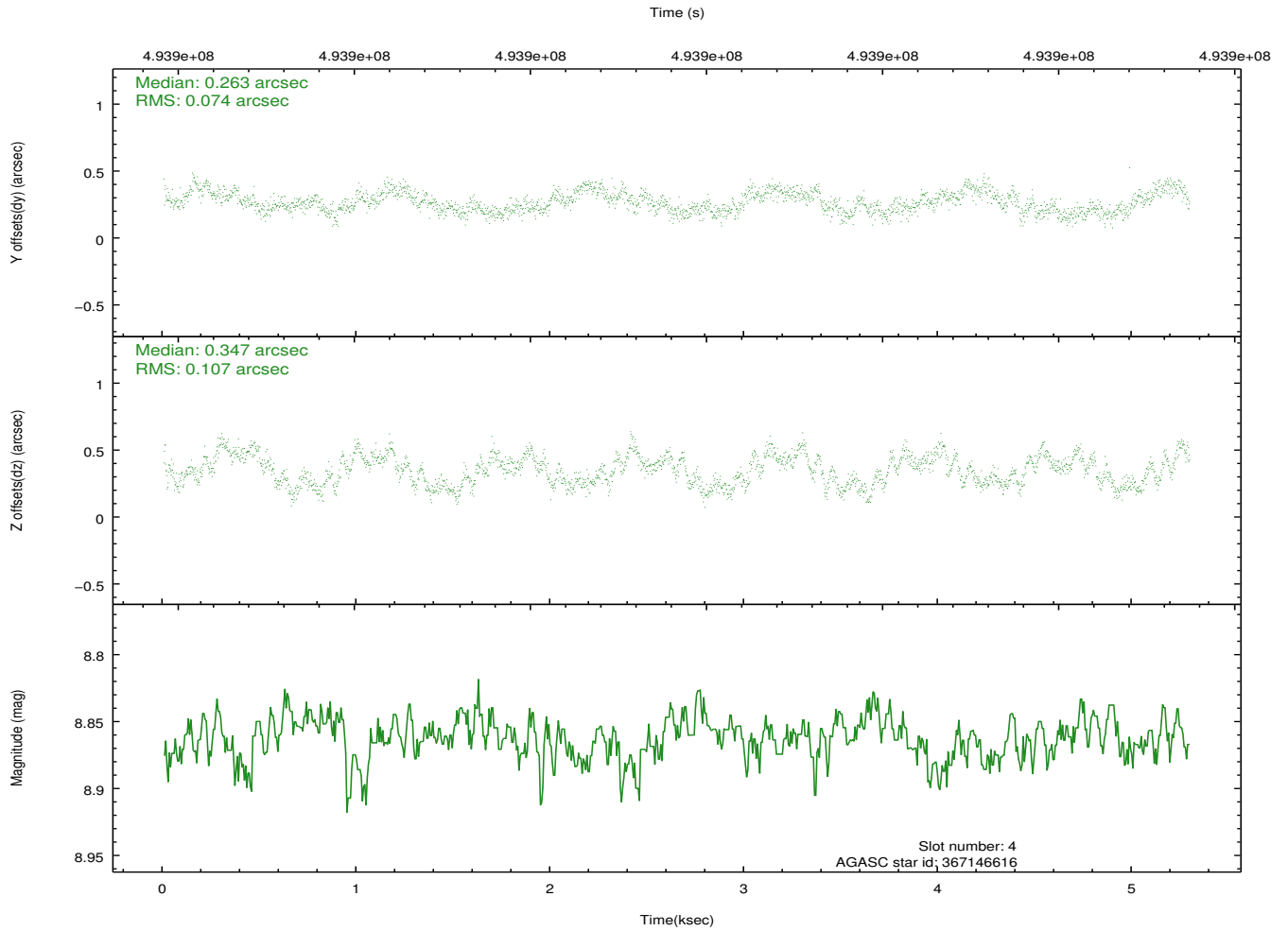
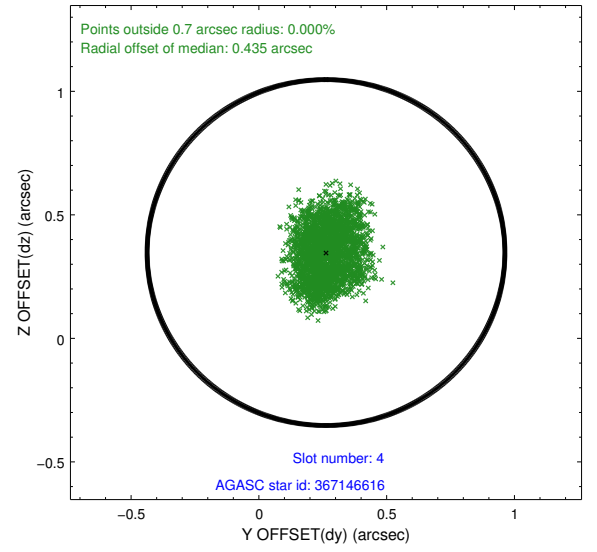
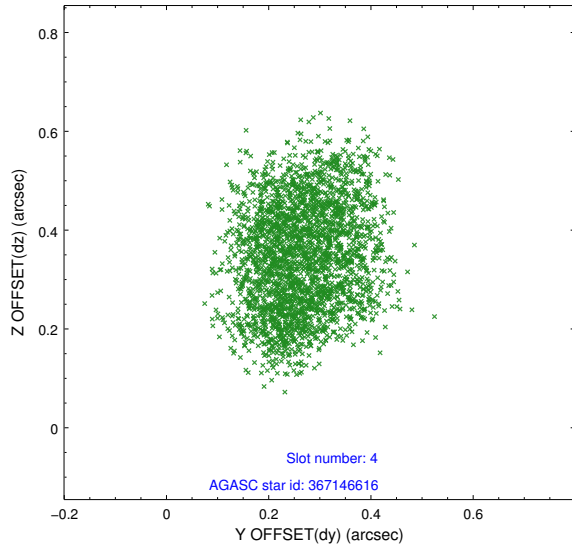
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-4	7.03	1291	0.231	0.043	0.010	0.019	0.000000	0.000000	2137.70	1056.91
1	FID		ACIS-I-5	7.08	1291	-0.365	0.025	0.007	0.013	0.000000	0.000000	-1829.40	1055.25
2	FID		ACIS-I-6	7.09	1291	0.035	-0.001	0.010	0.017	0.000000	0.000000	381.81	1699.63
3	GUIDE	used	367145856	9.26	2573	-0.011	-0.370	0.114	0.200	10.744946	40.402085	-2108.56	2293.68
4	GUIDE	used	367146616	8.86	2581	0.263	0.347	0.142	0.211	11.418645	41.190163	-1625.35	-1049.71
5	GUIDE	used	367148872	7.22	2582	-0.145	-0.506	0.095	0.153	10.505940	40.688258	-941.47	1941.71
6	GUIDE	used	367657272	8.40	2580	0.098	0.543	0.087	0.137	11.834471	41.298907	-2208.71	-2088.75
7	GUIDE	used	367663272	9.24	2560	-0.207	-0.030	0.202	0.275	10.656279	41.699429	1130.13	-1079.18

2.4 Star Slots

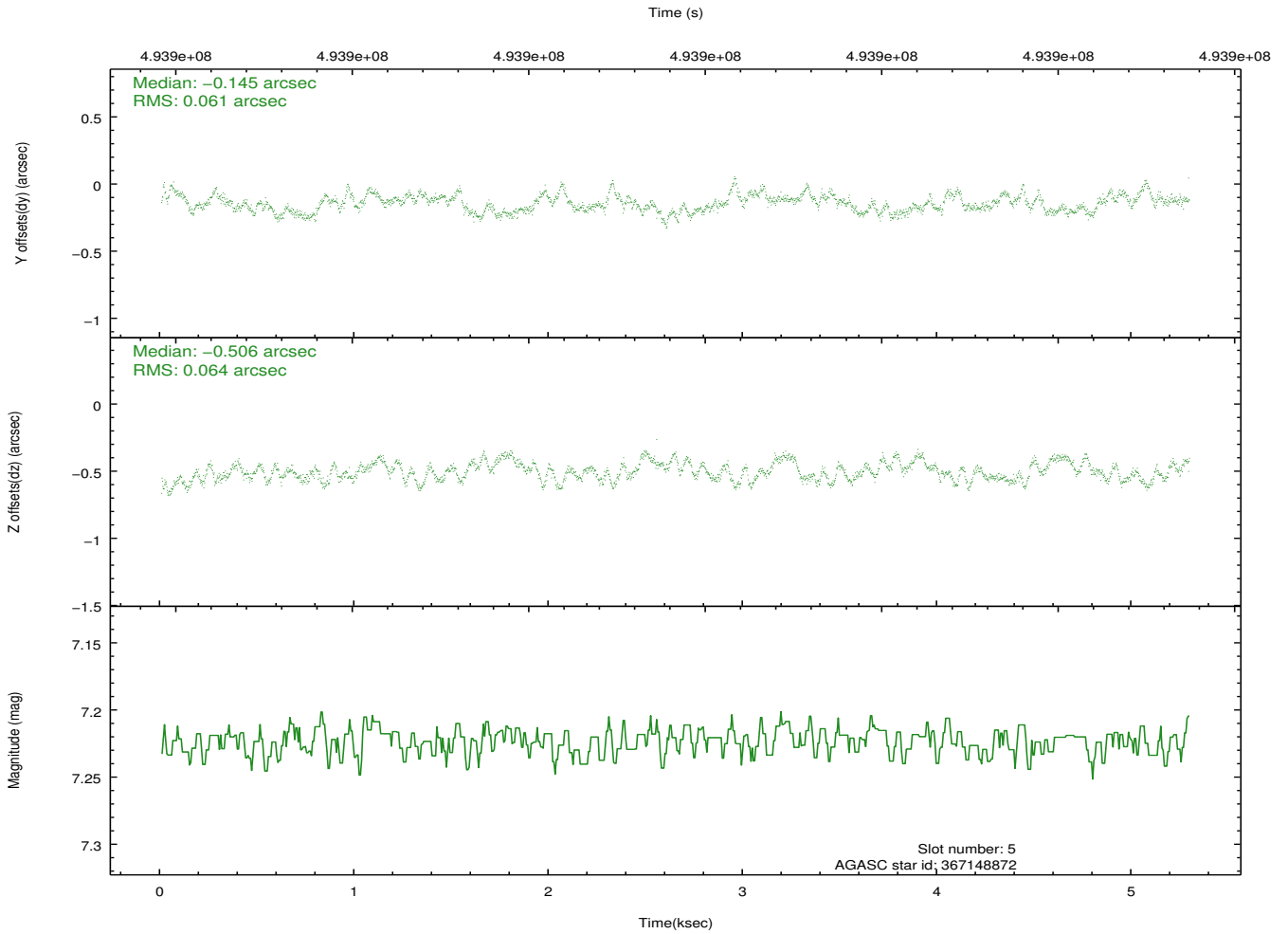
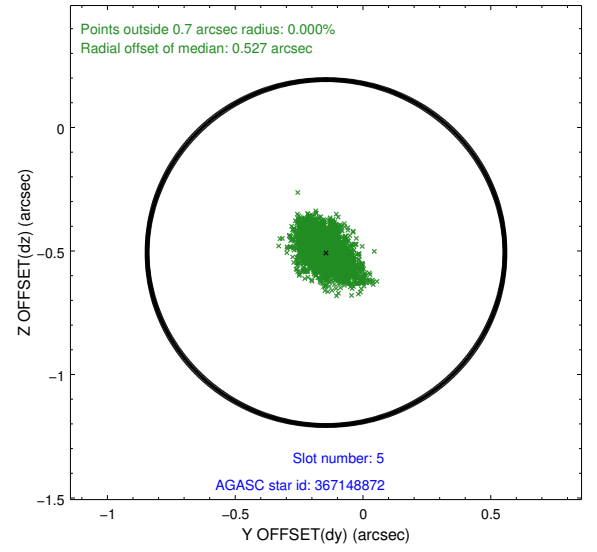
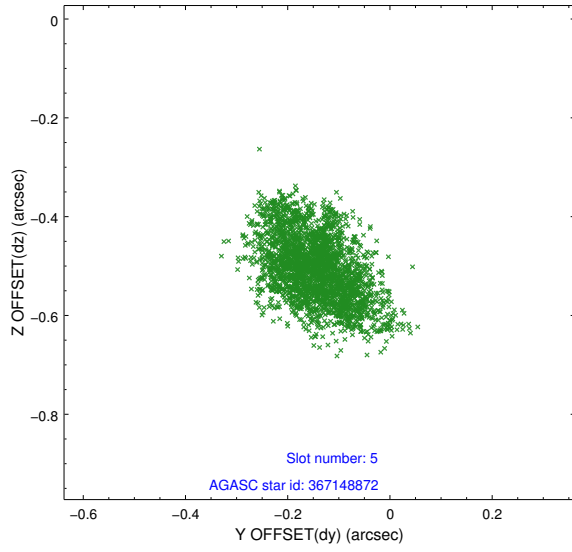
2.4.1 Slot 3



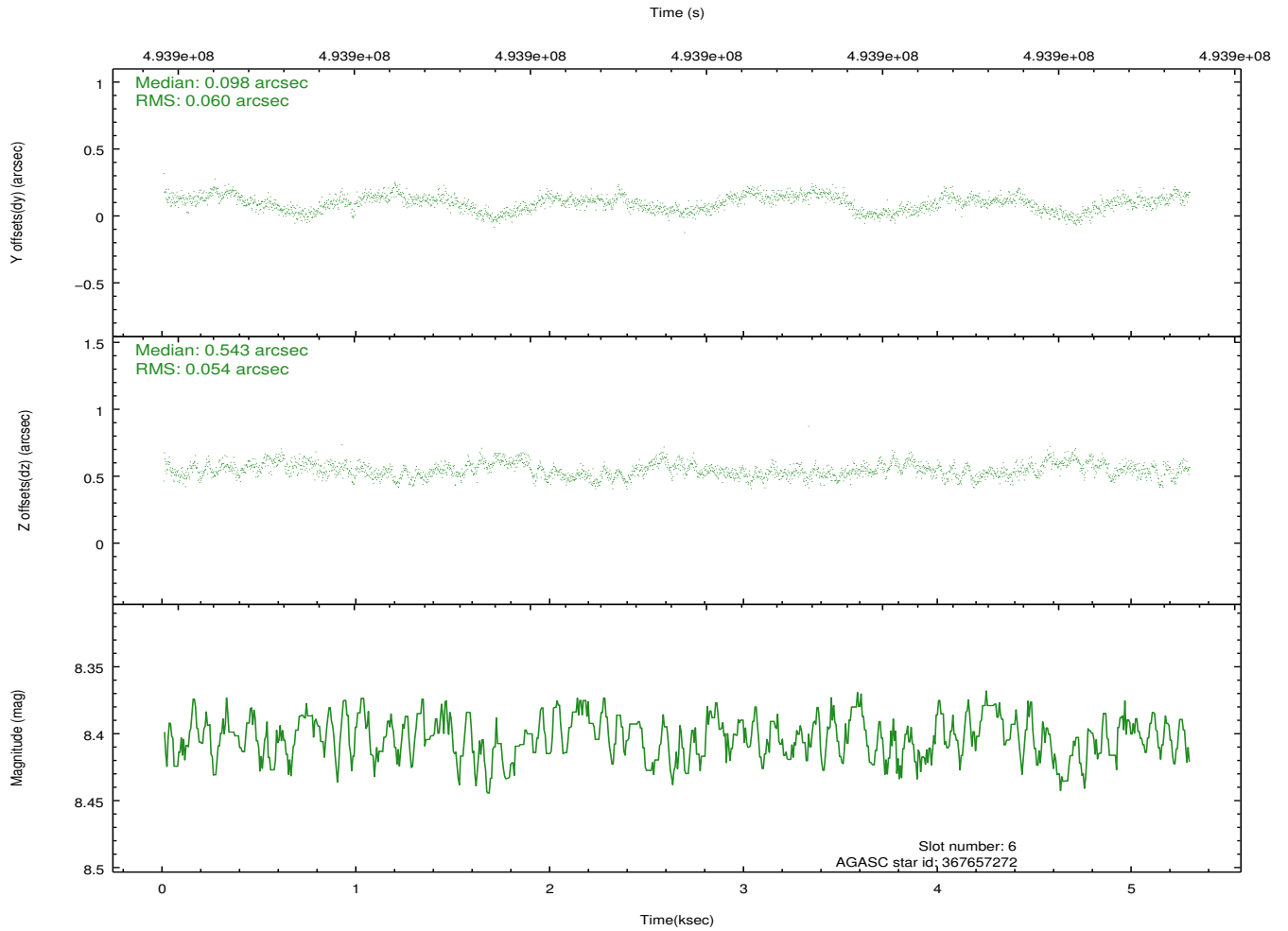
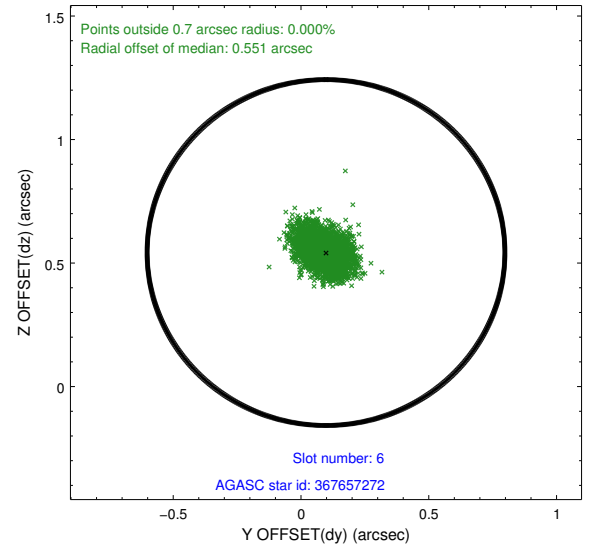
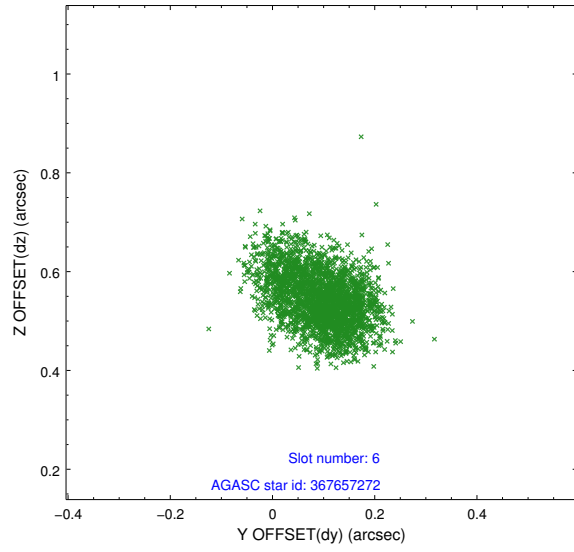
2.4.2 Slot 4



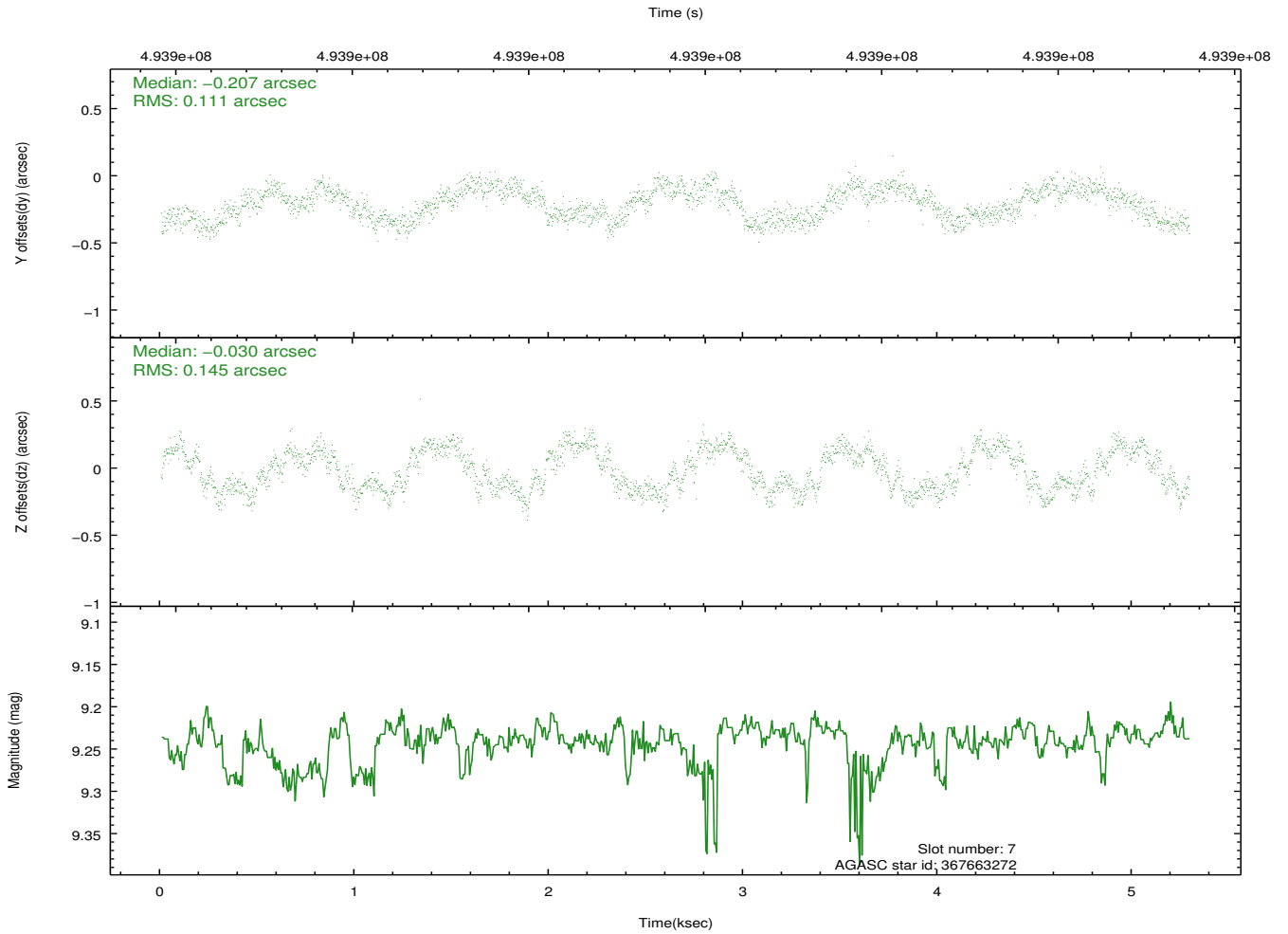
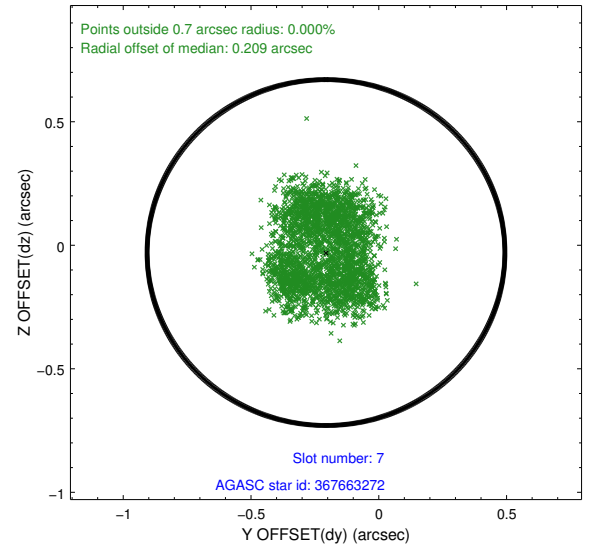
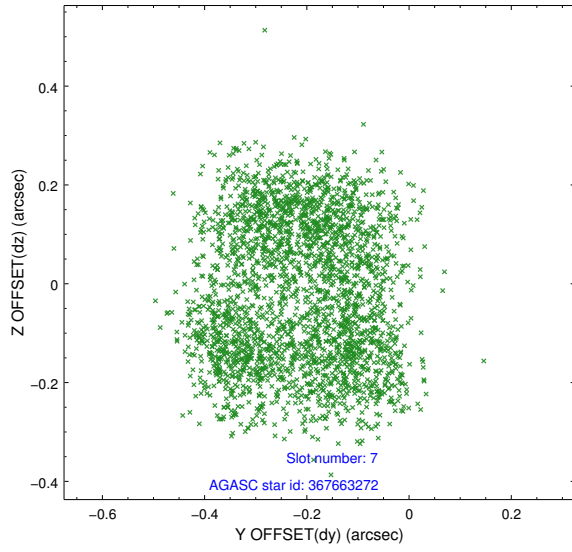
2.4.3 Slot 5



2.4.4 Slot 6

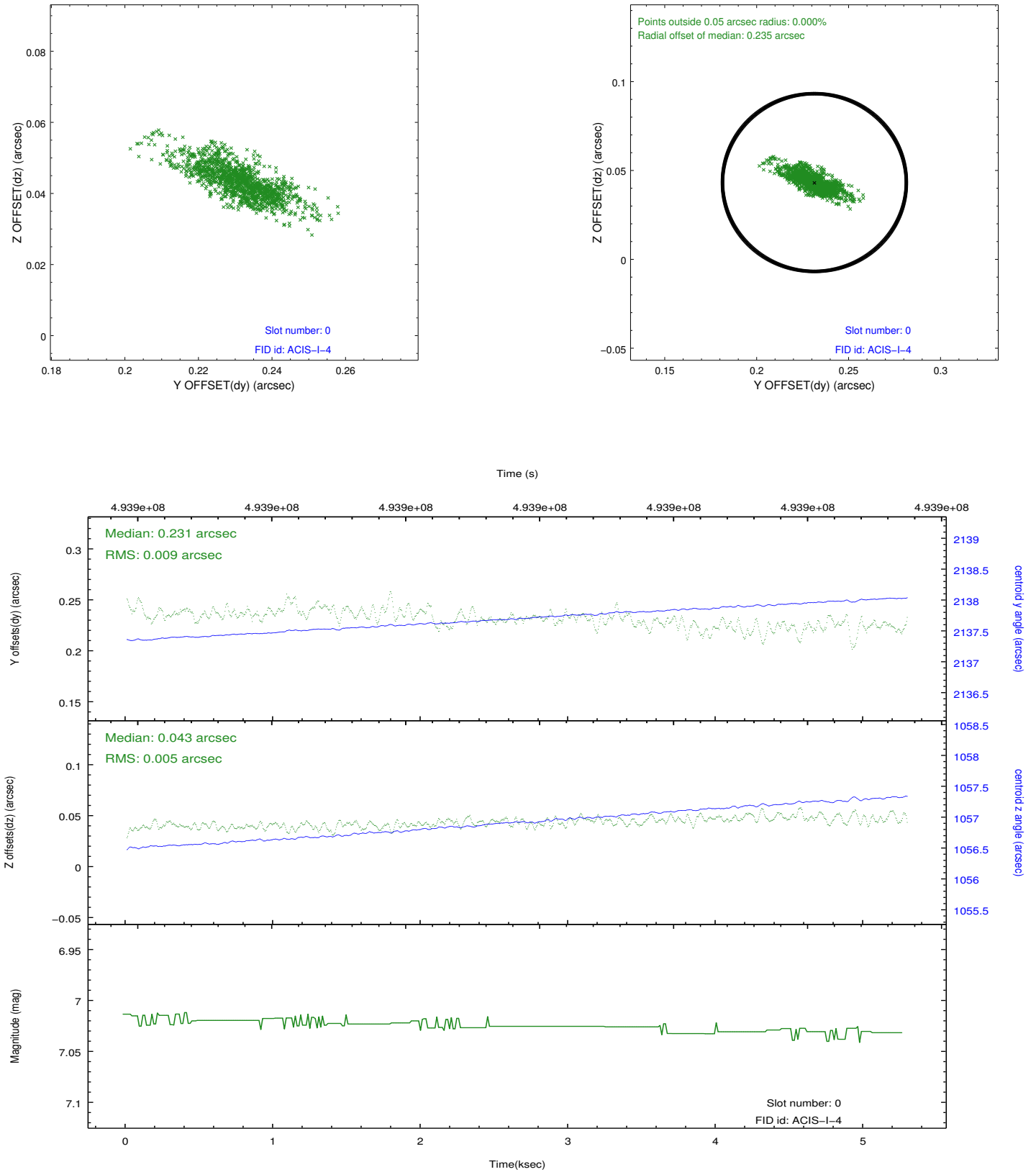


2.4.5 Slot 7

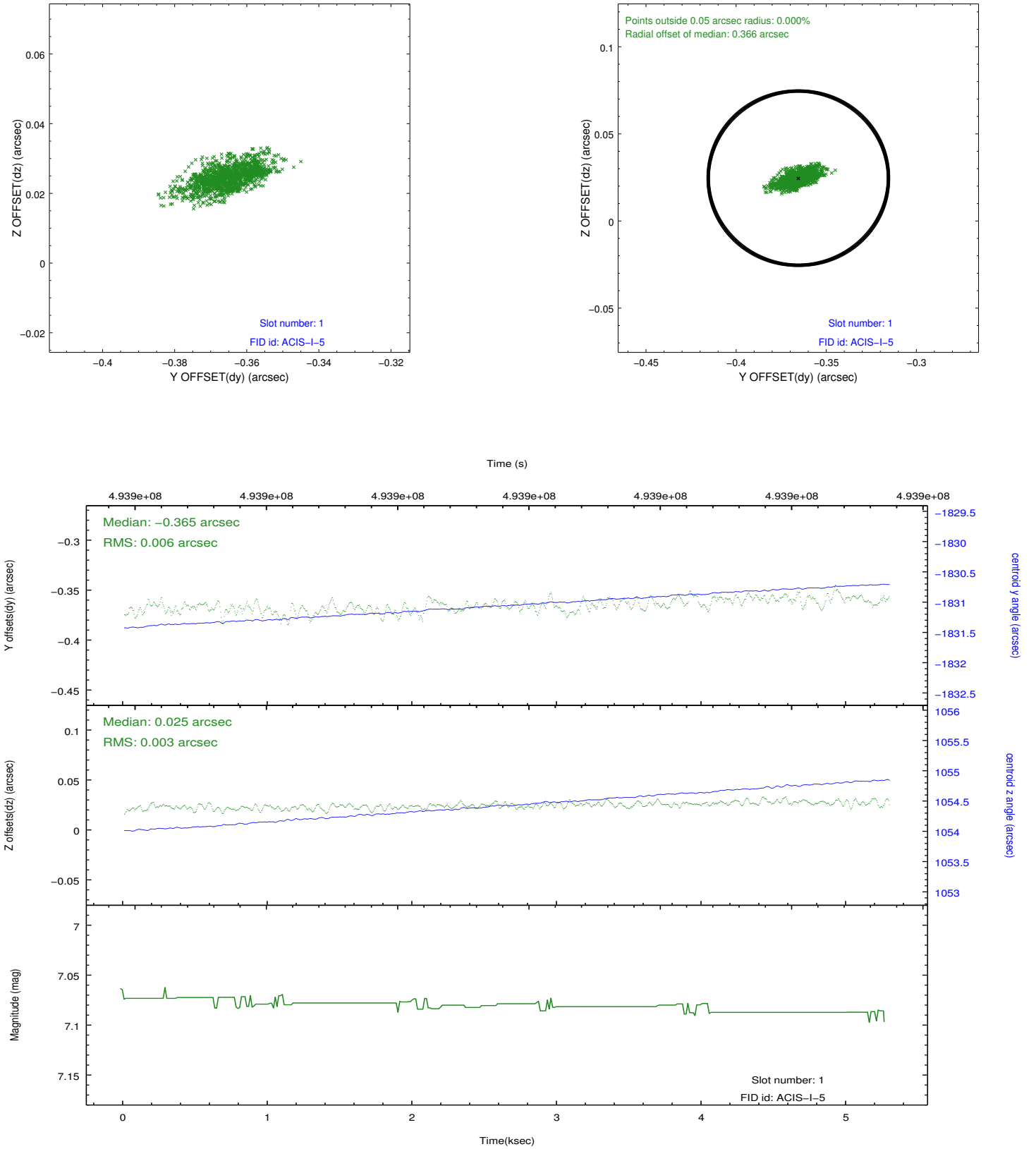


2.5 FID Slots

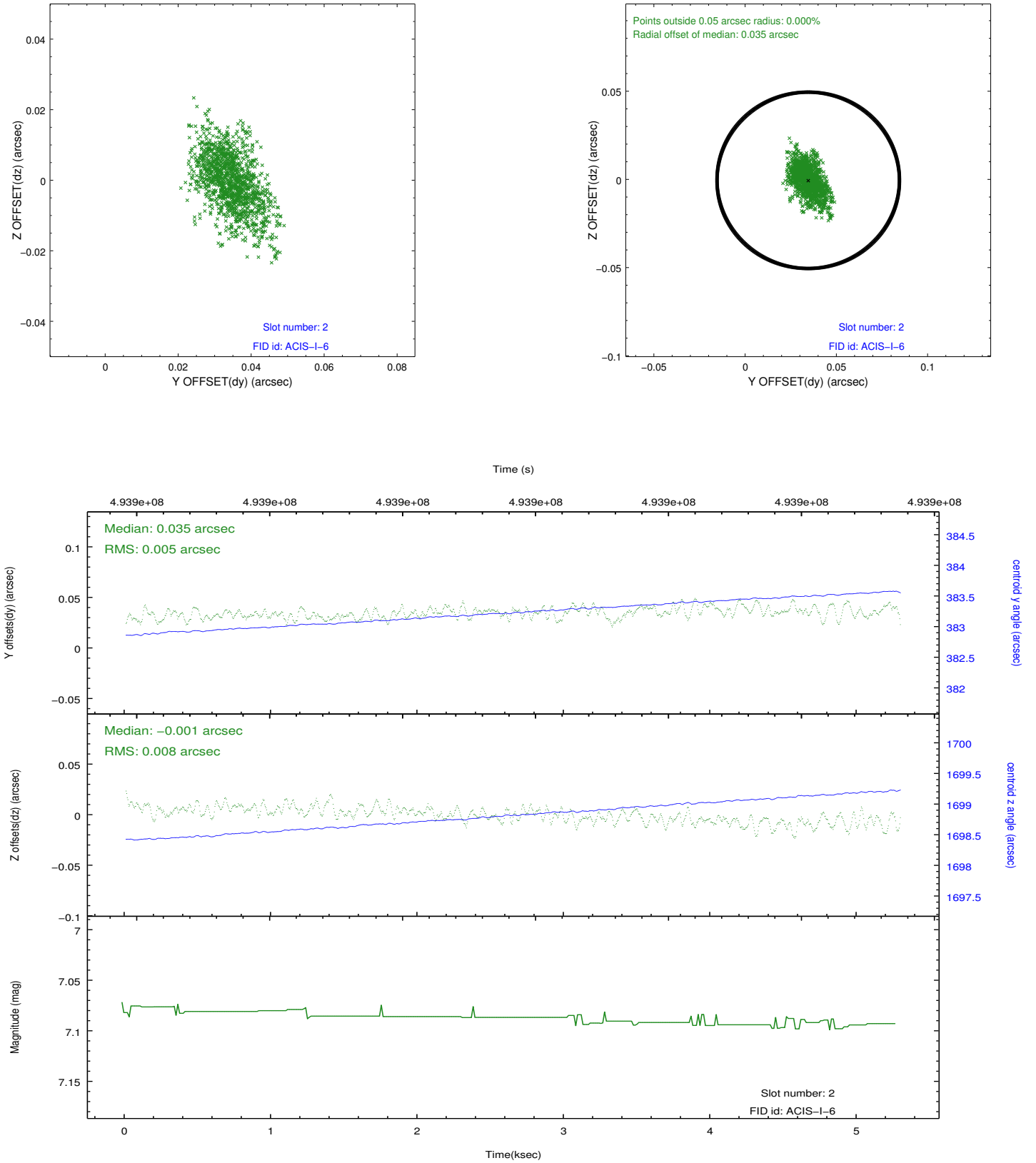
2.5.1 Slot 0



2.5.2 Slot 1



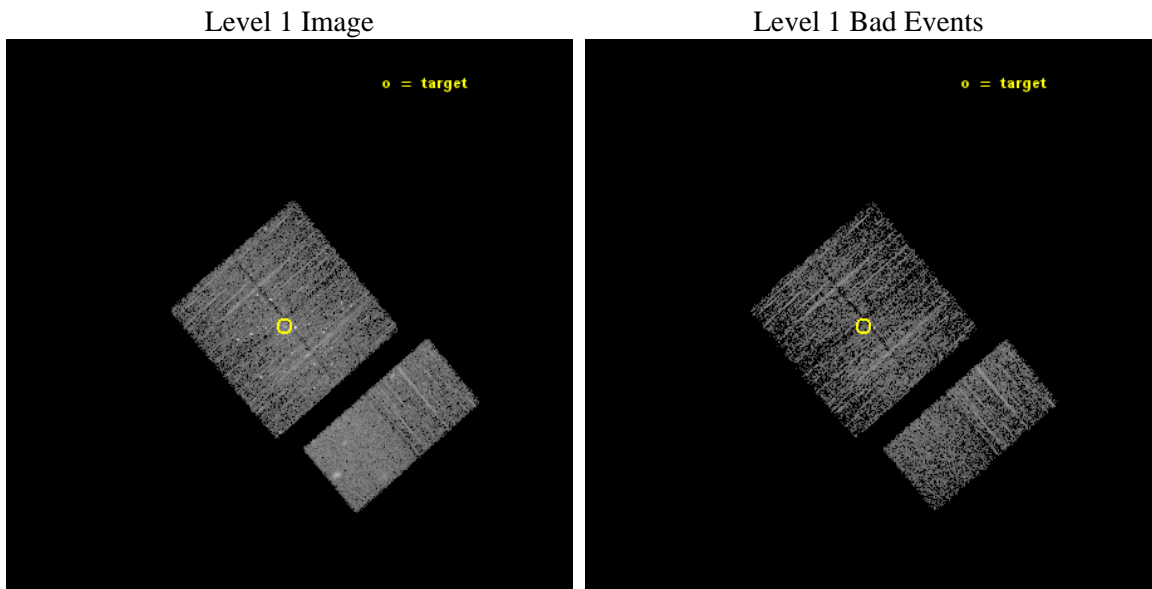
2.5.3 Slot 2



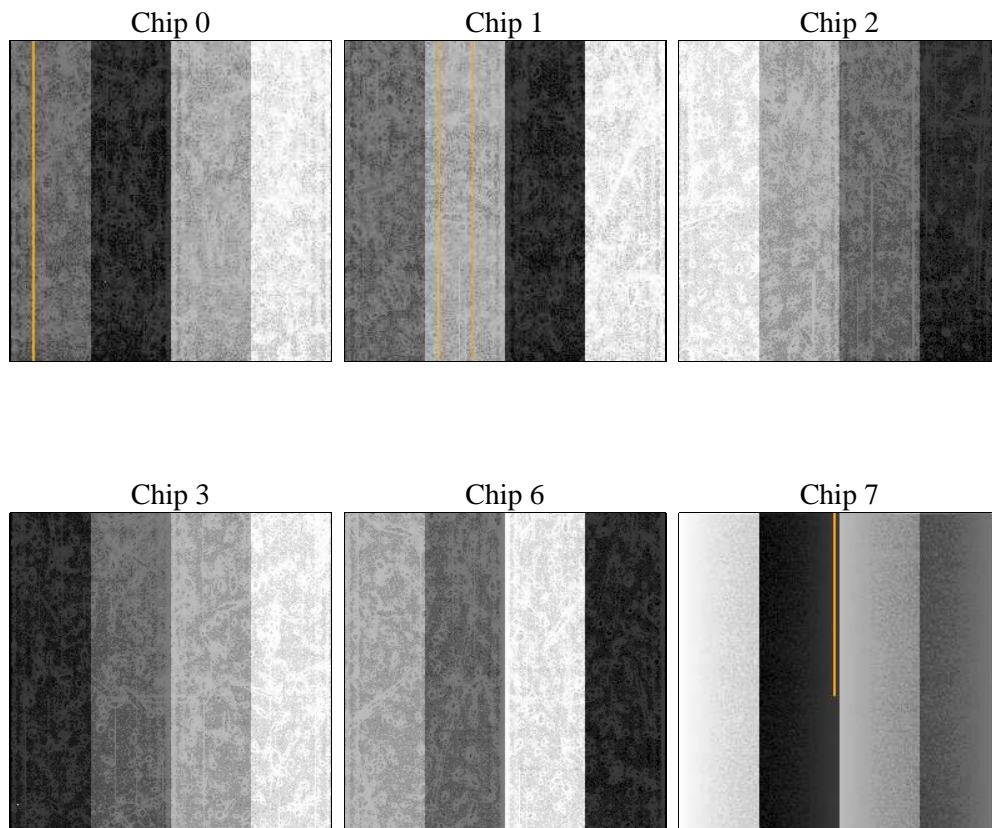
3 OBI Secondary

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	10.3.1	Processing system revision	ontime	3957.6323177218	Sum of GTIs [s]
caldsver	4.6.4	 	ontime0	3957.6323373318	Sum of GTIs [s]
date	2014-12-06T08:23:57	Date and time of file creation	ontime1	3957.6322880387	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	3957.6322689056	Sum of GTIs [s]
			ontime3	3957.6323177218	Sum of GTIs [s]
			ontime6	3957.6322984099	Sum of GTIs [s]
			ontime7	3957.6322390437	Sum of GTIs [s]
			l1events	126168	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	16848	19062	20926	21614	20360	27358	grade 0 events	1588	2592	3662	3505	928	1423
rejected events	13699	14464	15058	16220	17851	14634		9%	13%	17%	16%	4%	5%
rejected %	81%	75%	71%	75%	87%	53%	grade 1 events	16	20	141	54	9	35
								0%	0%	0%	0%	0%	0%
							grade 2 events	620	786	914	756	551	2659
								3%	4%	4%	3%	2%	9%
							grade 3 events	252	304	360	307	228	1096
								1%	1%	1%	1%	1%	4%
							grade 4 events	233	307	364	309	246	1090
								1%	1%	1%	1%	1%	3%
							grade 5 events	852	963	916	1023	1014	2748
								5%	5%	4%	4%	4%	10%
							grade 6 events	465	618	576	528	556	6473
								2%	3%	2%	2%	2%	23%
							grade 7 events	12822	13472	13993	15132	16828	11834
								76%	70%	66%	70%	82%	43%

A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.88397972595687

A.2 Comments

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.