

V&V Reference Report

L2 ASCDS Version : 10

Observation 15328 - L2 Version 2
Chandra X-Ray Center

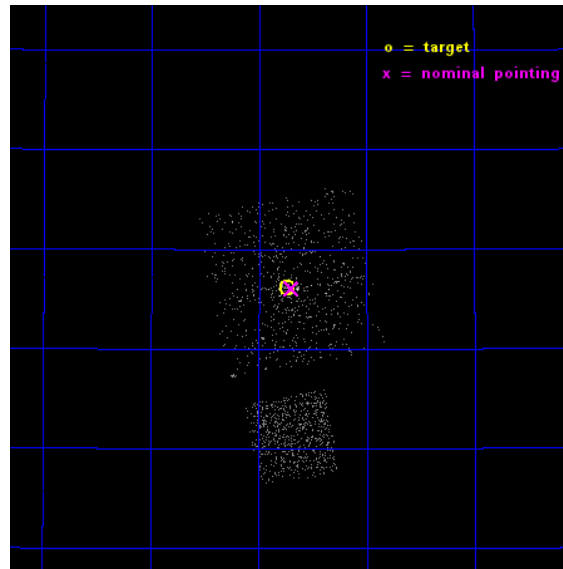
L2 Processing Date : Dec 6 2014

Contents

1	Front	2
2	OBI Primary	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
3	OBI Secondary	17
3.1	OBI	17
3.1.1	Images	17
3.1.2	Bias	17
3.1.3	Parameters	18
3.1.4	Events	18
A	Summary	19
A.1	Status	19
A.2	Comments	19

1 Front

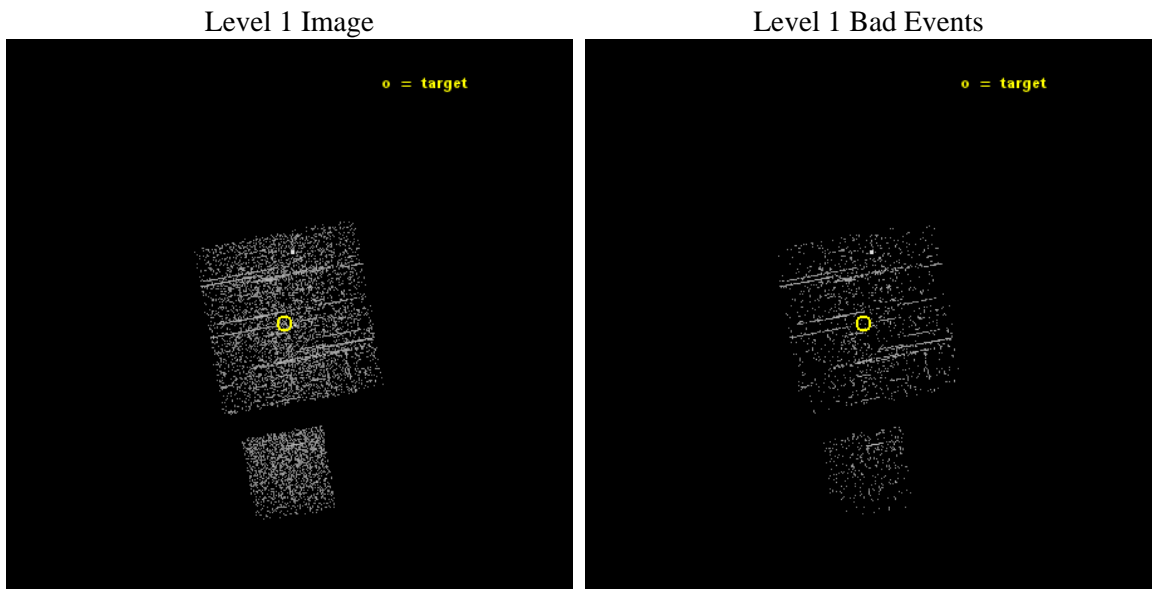
seq_num	601084	Sequence number
obs_id	15328	Observation id
title	Monitoring M31 for BHXNe	Proposal title
observer	Dr Stephen Murray	Principal investigator
object	M31 BHXN	Source name
dtcycle	0	
cycle	P	events are from which exps? P[primary] S[econdar
ra_targ	10.685	Observer's specified target RA [deg]
dec_targ	41.268972	Observer's specified target Dec [deg]
ra_nom	10.674421893563	Nominal RA [deg]
dec_nom	41.26789081116	Nominal Dec [deg]
roll_nom	169.85693190425	Nominal Roll [deg]
revision	2	Processing version of data
ontime	961.36465805769	Sum of GTIs [s]
livetime	152.99259326584	Livetime [s]
ontime0	961.36465805769	Sum of GTIs [s]
ontime1	961.36465805769	Sum of GTIs [s]
ontime2	961.36465805769	Sum of GTIs [s]
ontime3	961.36465805769	Sum of GTIs [s]
ontime7	961.36465805769	Sum of GTIs [s]
l2events	1743	Number of level 2 events



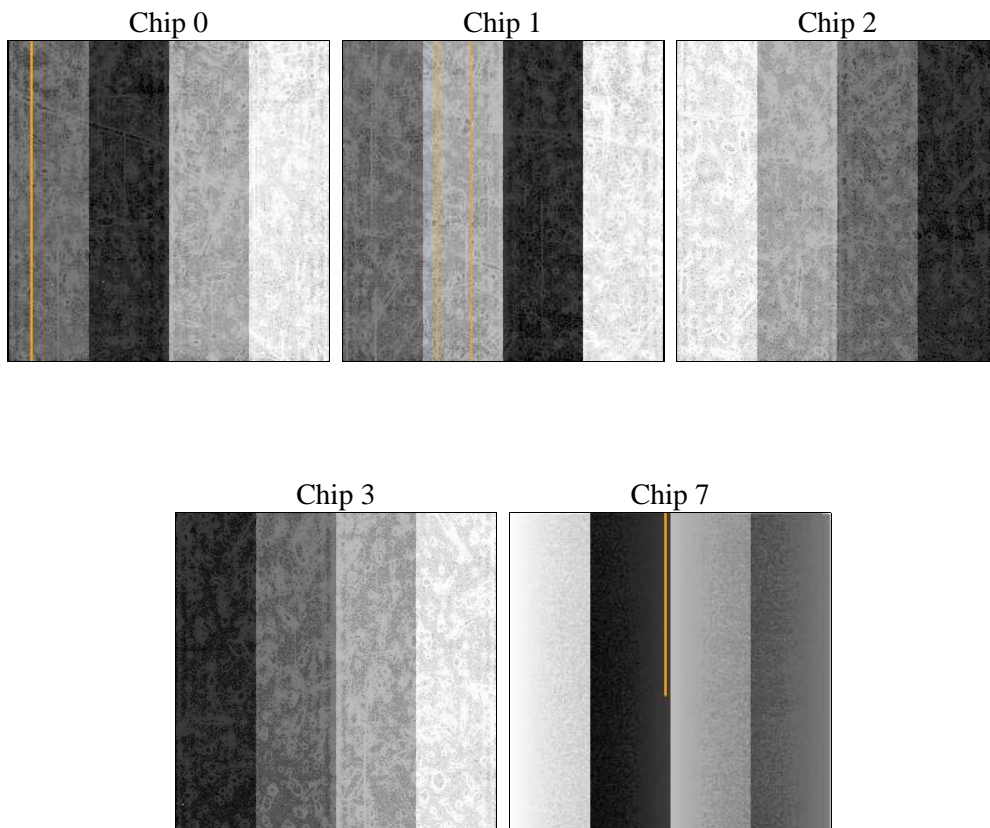
2 OBI Primary

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	961.36465805769	Sum of GTIs [s]
caldsver	4.6.4	 	ontime0	961.36465805769	Sum of GTIs [s]
date	2014-12-06T22:36:00	Date and time of file creation	ontime1	961.36465805769	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	961.36465805769	Sum of GTIs [s]
			ontime3	961.36465805769	Sum of GTIs [s]
			ontime7	961.36465805769	Sum of GTIs [s]
			l1events	12269	Number of level 1 events

2.1.4 Events

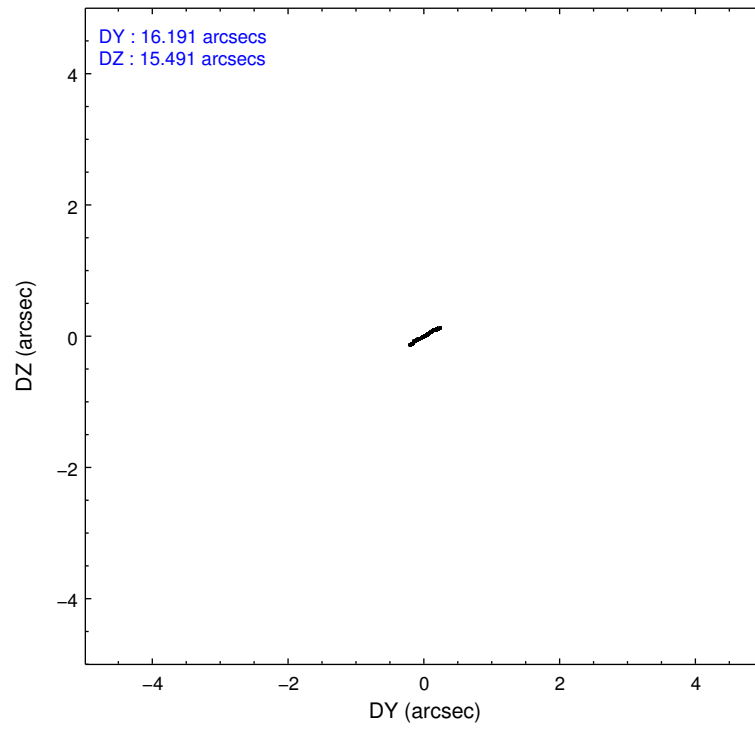
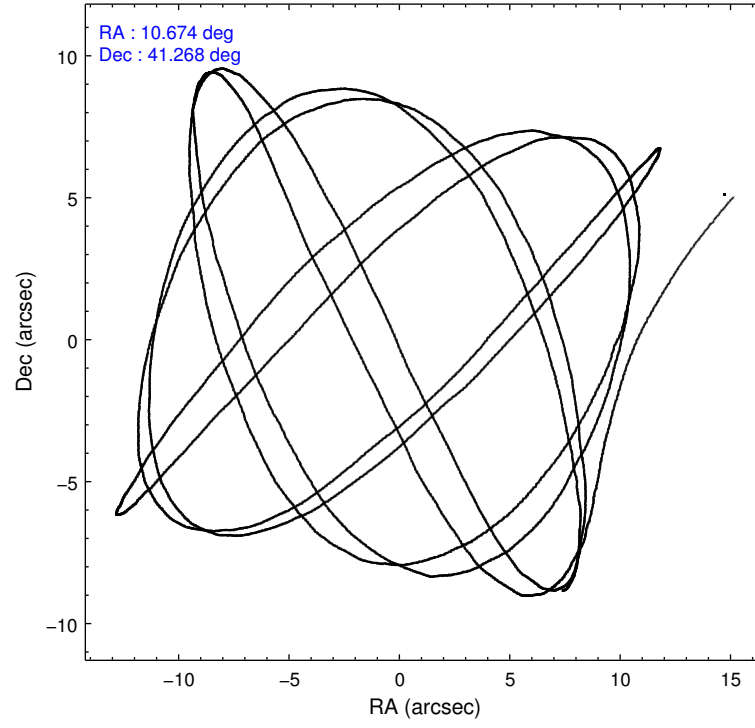
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	2241	2626	2624	2402	2376
rejected events	2001	2382	2223	2048	1667
rejected %	89%	90%	84%	85%	70%

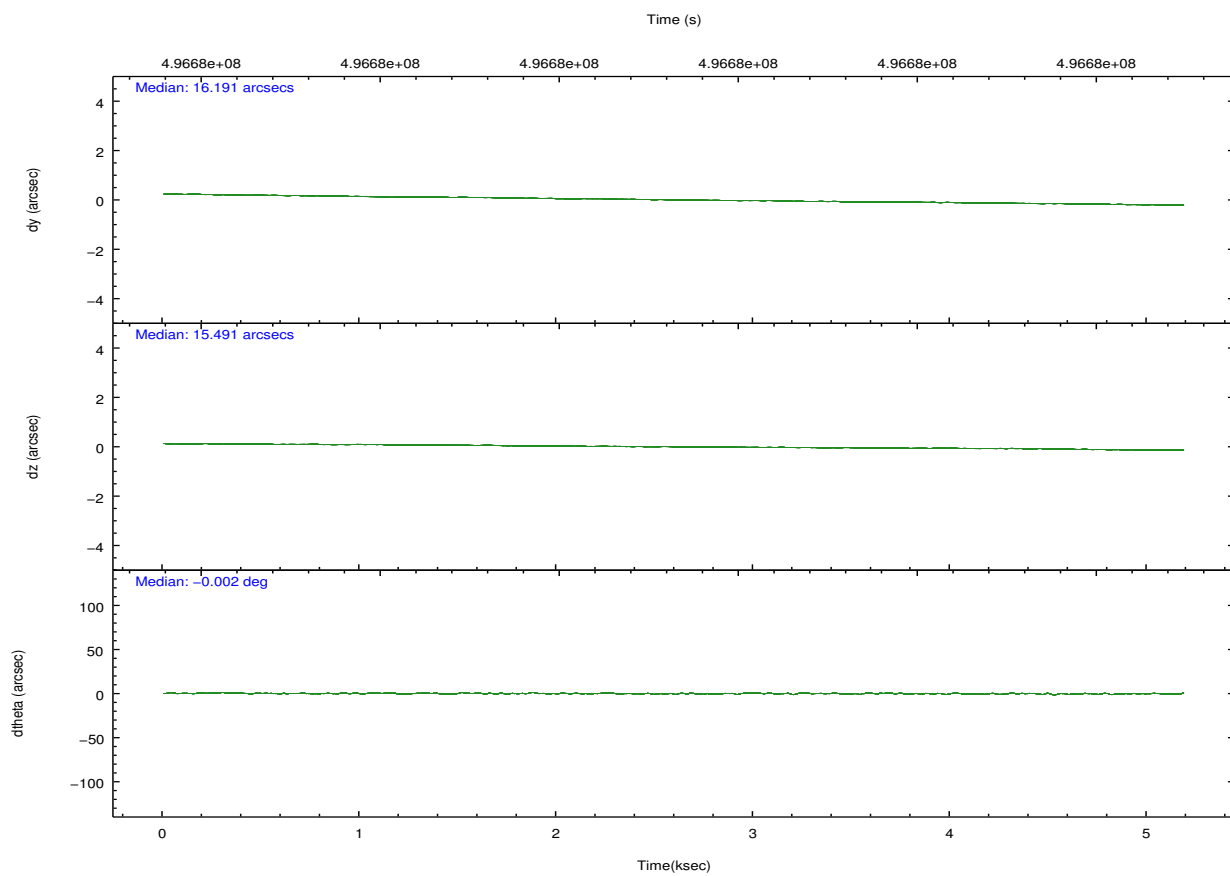
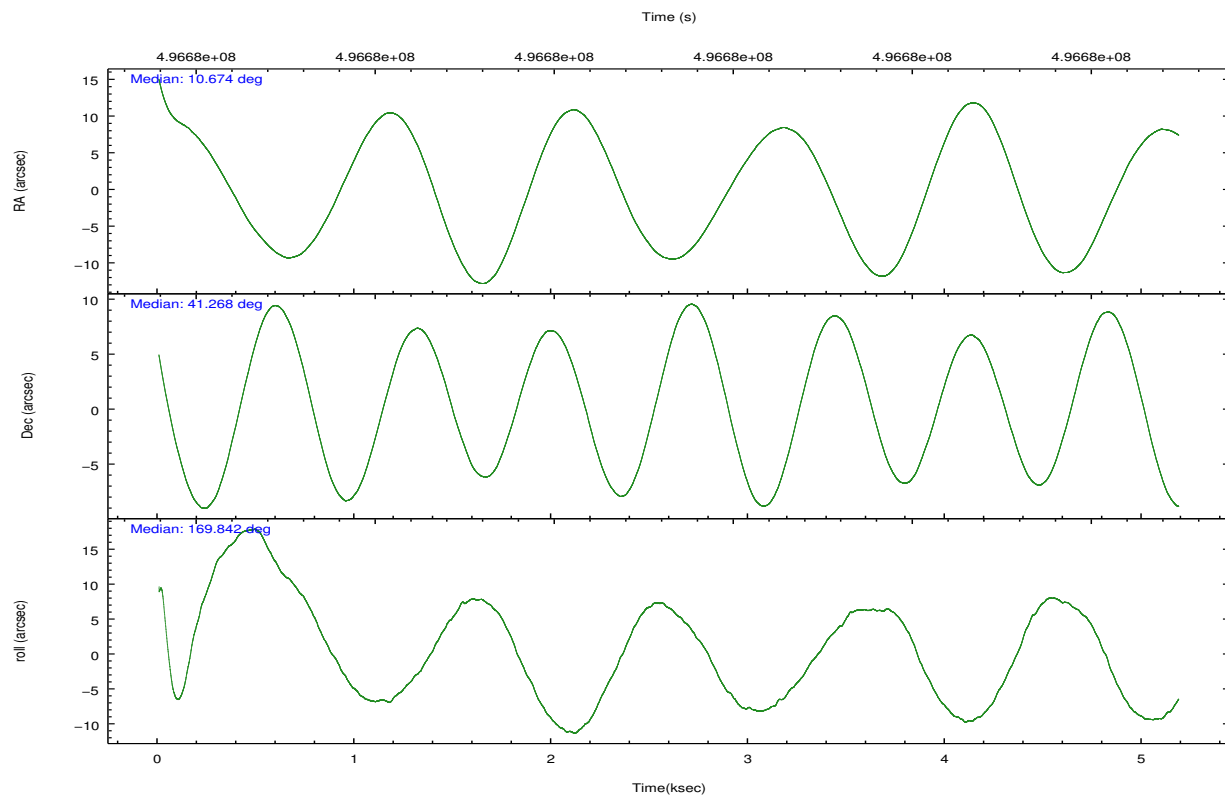
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	79	79	223	187	56
	3%	3%	8%	7%	2%
grade 1 events	253	1	6	3	2
	11%	0%	0%	0%	0%
grade 2 events	49	64	71	55	129
	2%	2%	2%	2%	5%
grade 3 events	34	23	33	36	63
	1%	0%	1%	1%	2%
grade 4 events	24	29	33	34	63
	1%	1%	1%	1%	2%
grade 5 events	99	91	90	98	206
	4%	3%	3%	4%	8%
grade 6 events	54	52	45	46	403
	2%	1%	1%	1%	16%
grade 7 events	1649	2287	2123	1943	1454
	73%	87%	80%	80%	61%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01237	ACIS-01237	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	10.708697	10.67442189356325	CCD I2 on	Y	Y
[deg] Pointing Dec	41.277412	41.2678908111597	CCD I3 on	Y	Y
[deg] Pointing Roll	169.625579	169.8569319042493	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	N
[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)	496678239.184000	496676847.92978	CCD S5 on	N	N
Observation start date	2013-09-27T14:09:32	2013-09-27T13:47:27	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	496683239.184000	496683789.23016	On-chip summing requested	N	N
Observation end date	2013-09-27T15:32:52	2013-09-27T15:43:09	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	3.1
			Duty cycle	5	5

2.3 Aspect



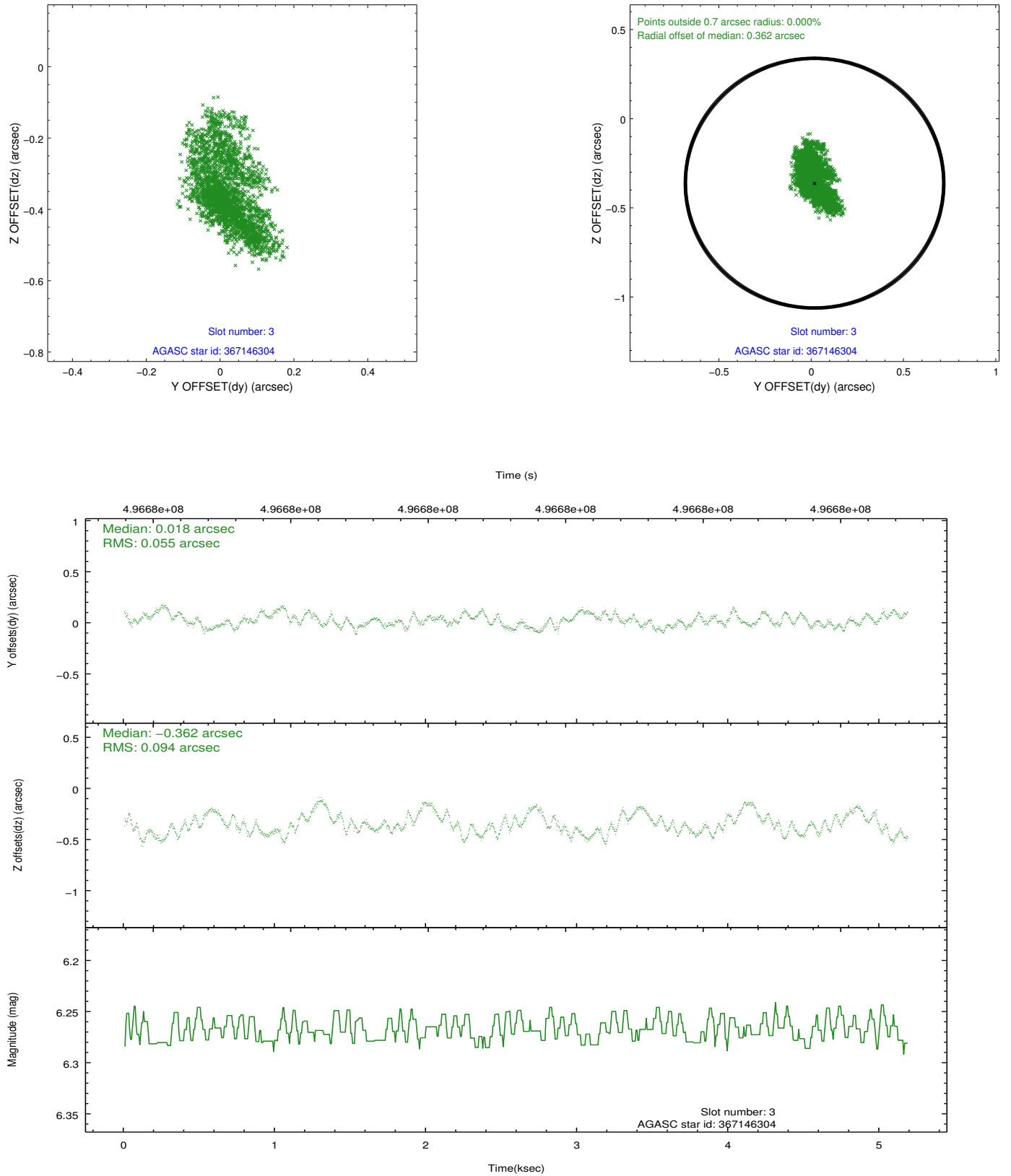


Slot Statistics

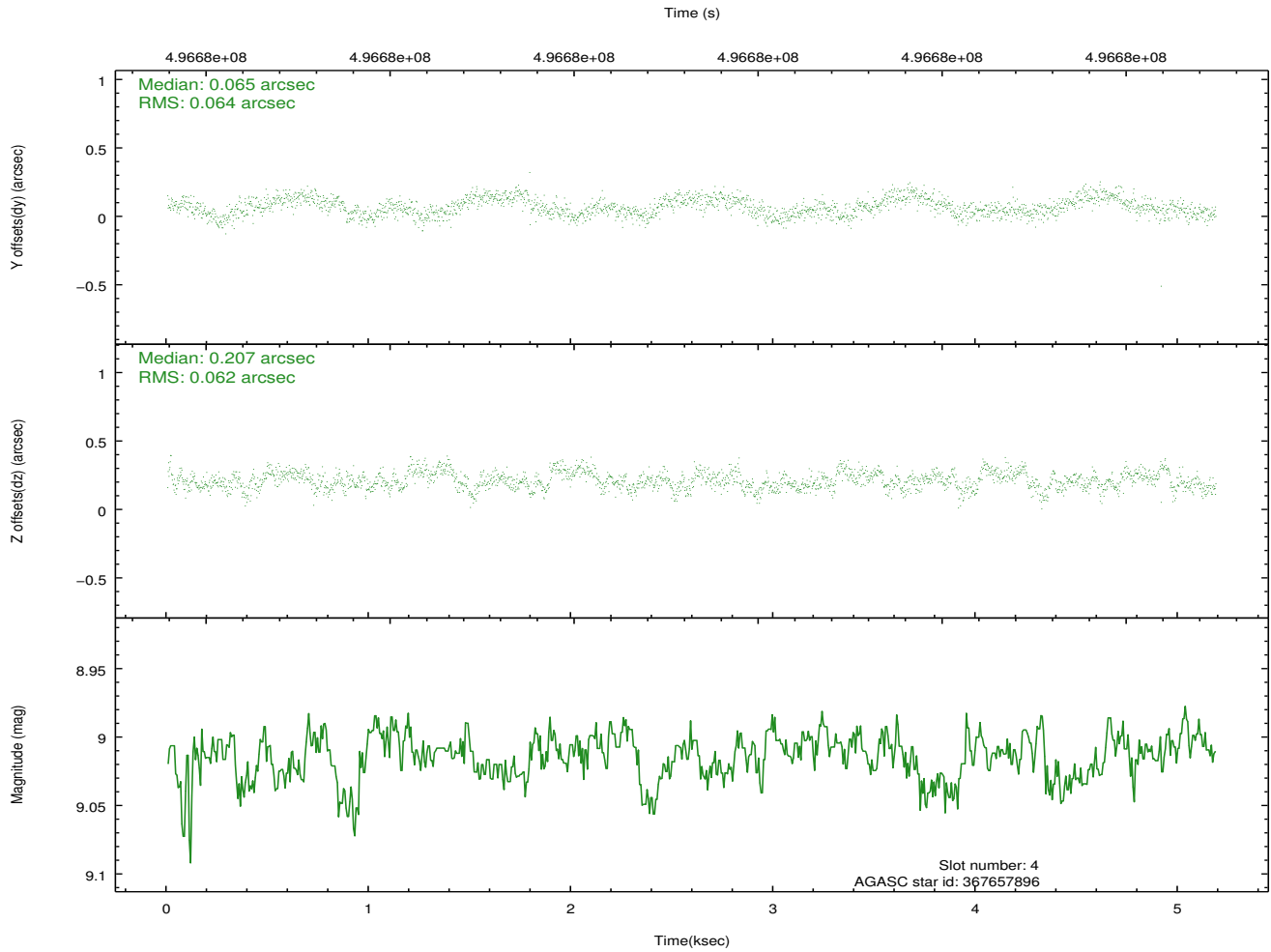
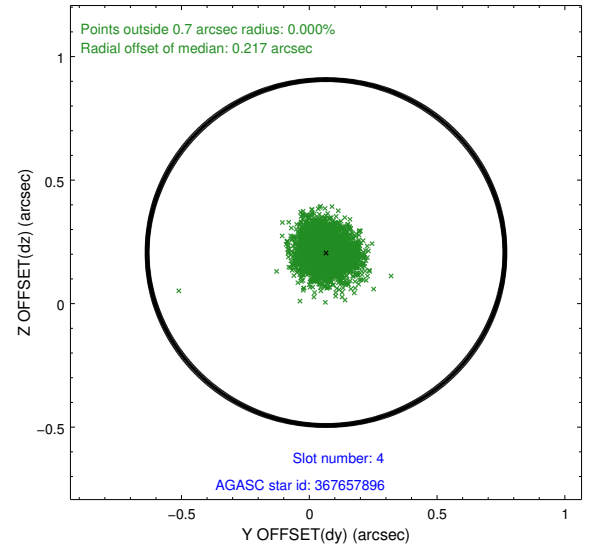
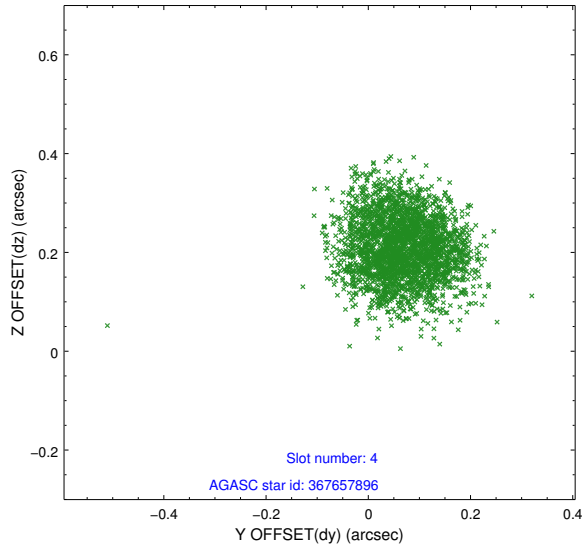
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.20	1264	0.046	-0.026	0.008	0.016	0.000000	0.000000	923.28	-839.12
1	FID		ACIS-I-5	7.20	1263	-0.228	0.043	0.008	0.014	0.000000	0.000000	-1824.47	1057.82
2	FID		ACIS-I-6	7.20	1264	0.091	0.054	0.007	0.013	0.000000	0.000000	387.57	1703.68
3	GUIDE	used	367146304	6.27	2529	0.018	-0.362	0.116	0.198	11.154952	40.679362	-1585.69	1894.89
4	GUIDE	used	367657896	9.01	2527	0.065	0.207	0.096	0.147	11.197765	41.313576	-1276.58	-369.14
5	GUIDE	used	367663272	9.27	2525	-0.121	-0.021	0.105	0.171	10.656279	41.699429	413.50	-1468.33
6	GUIDE	used	367674552	8.85	2529	0.162	0.078	0.091	0.147	11.016238	41.570845	-623.26	-1190.16
7	GUIDE	used	367671800	9.37	2523	-0.130	0.107	0.145	0.241	10.554735	41.964935	852.00	-2360.84

2.4 Star Slots

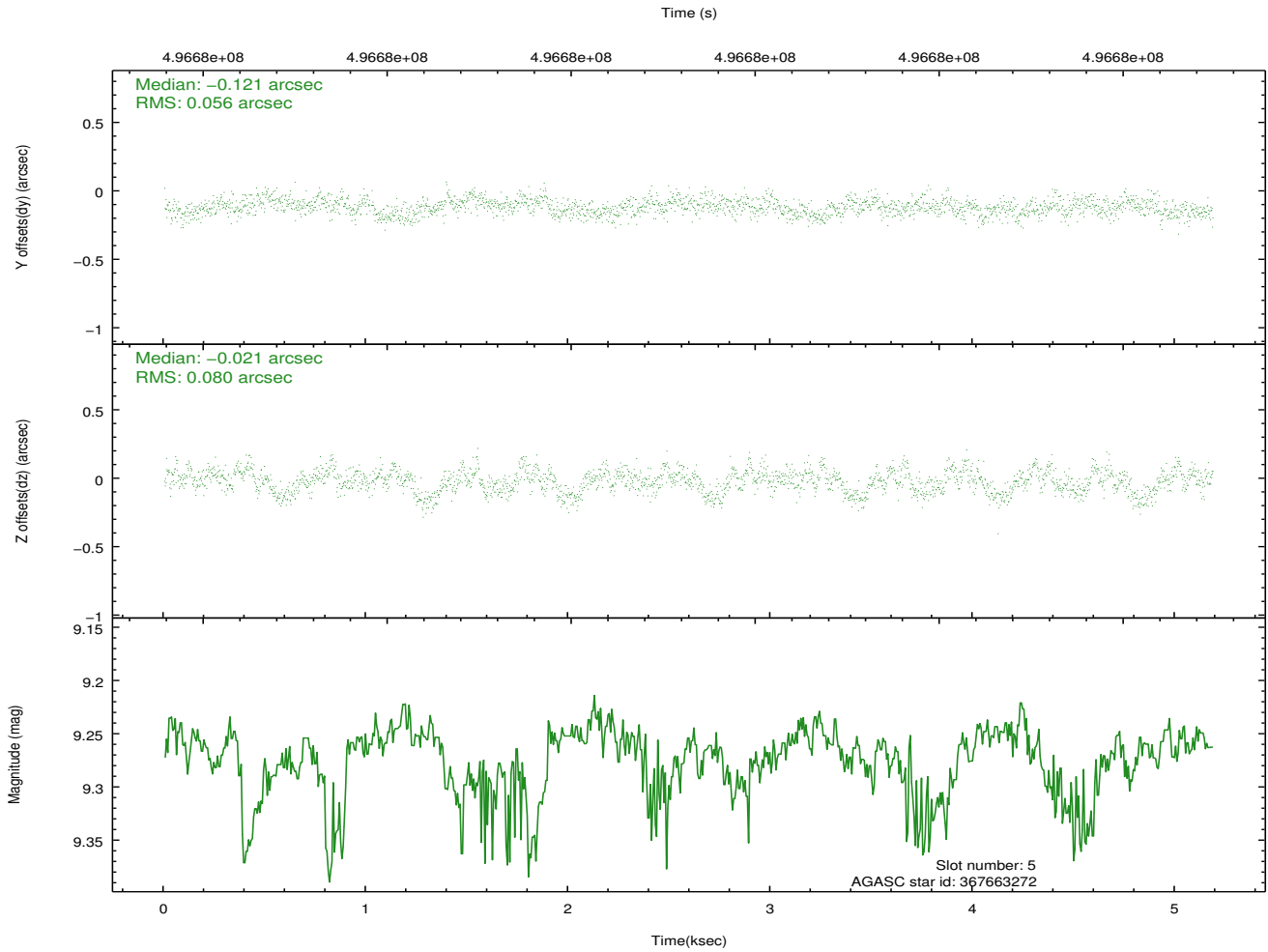
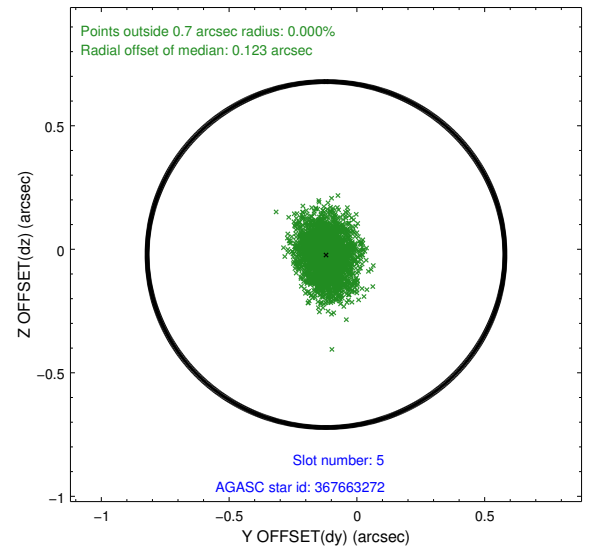
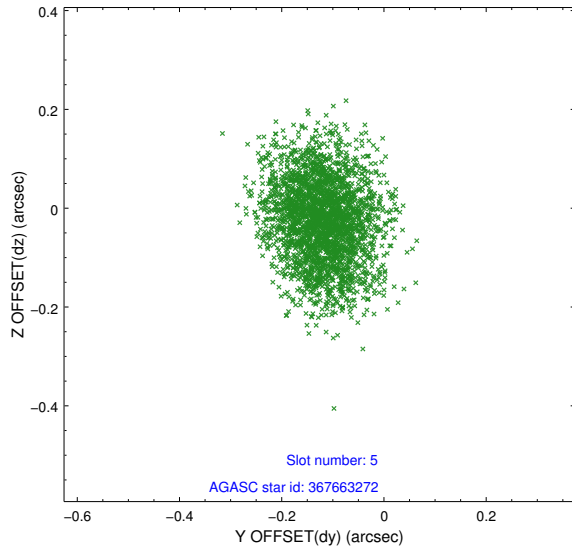
2.4.1 Slot 3



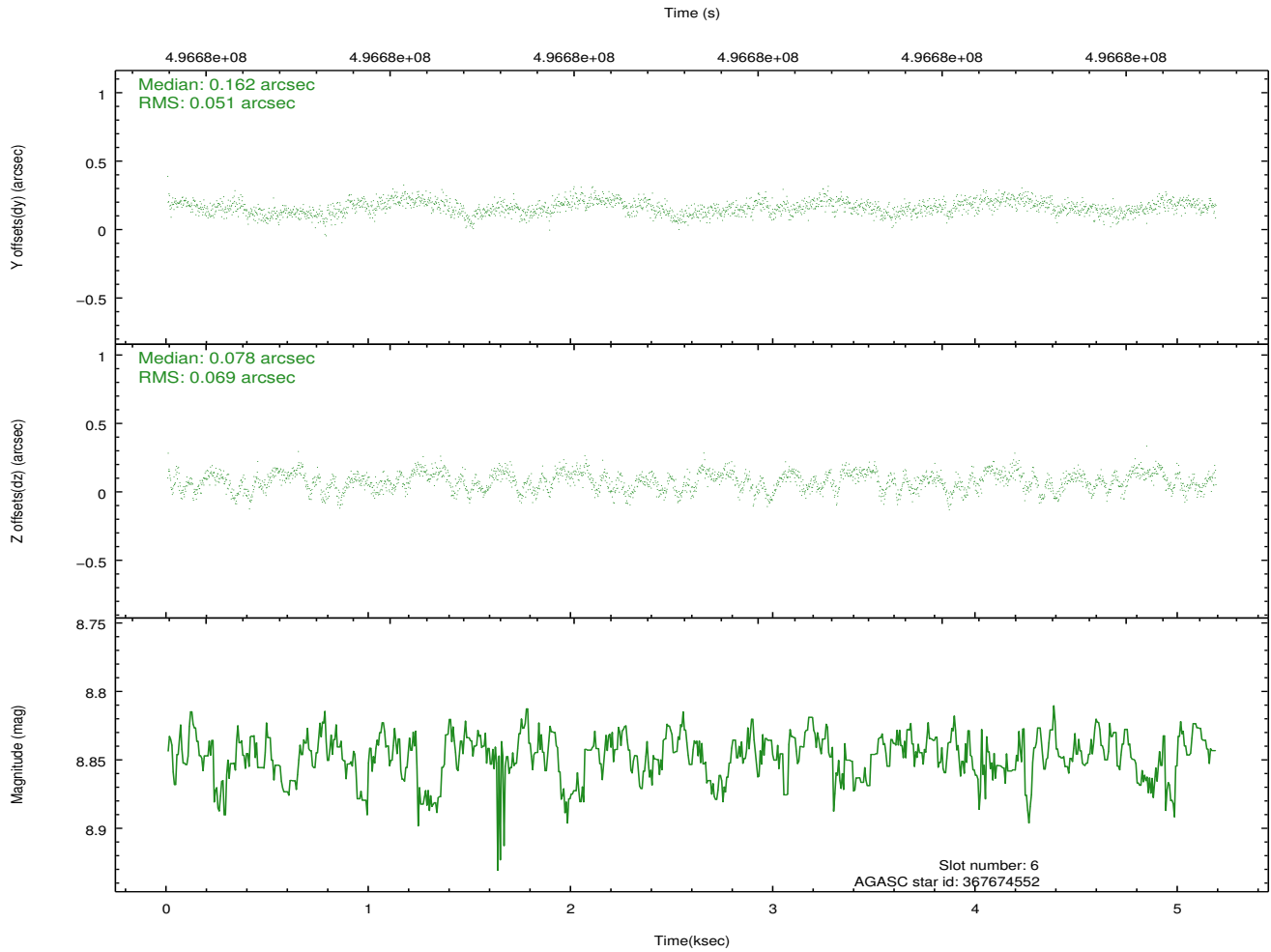
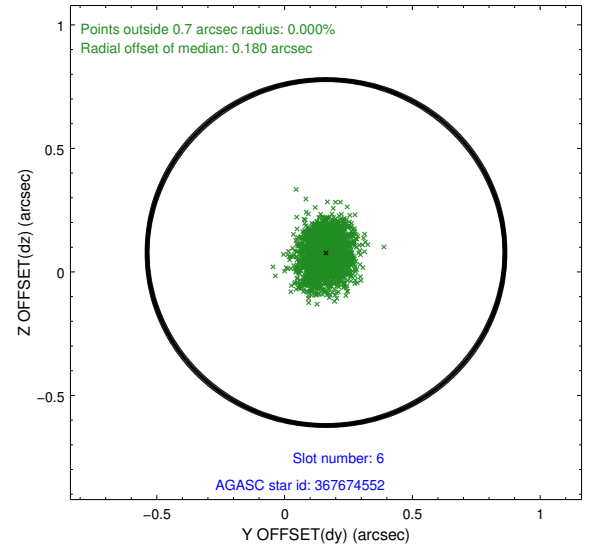
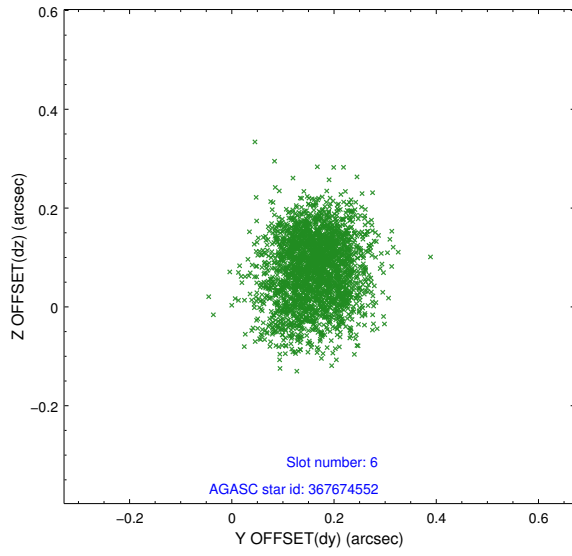
2.4.2 Slot 4



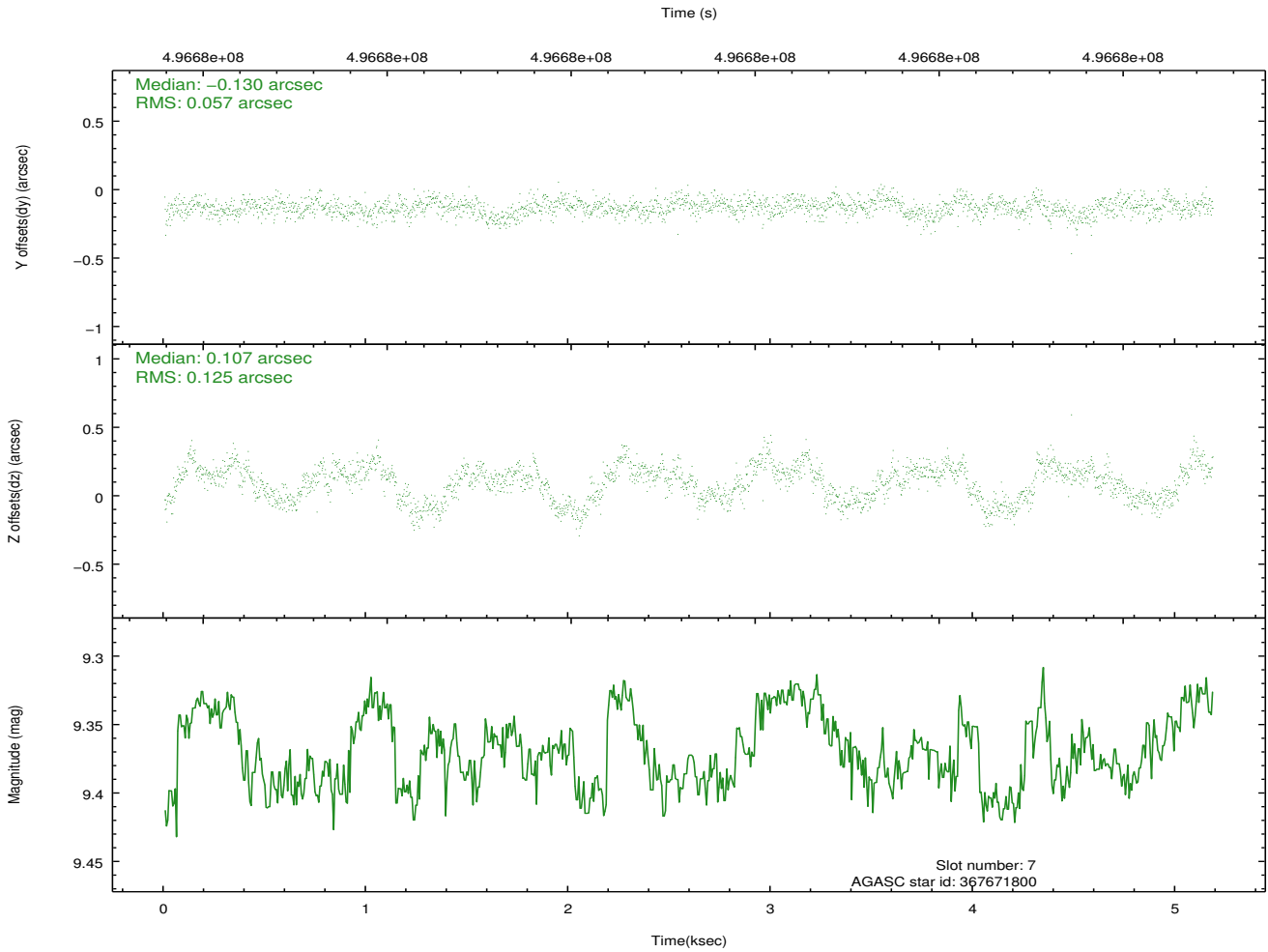
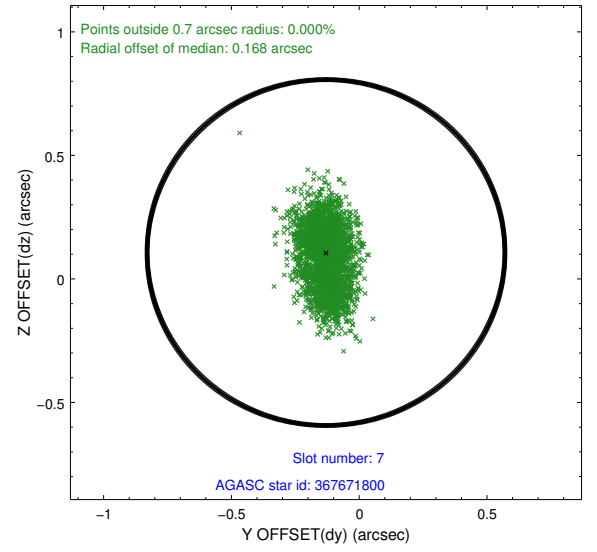
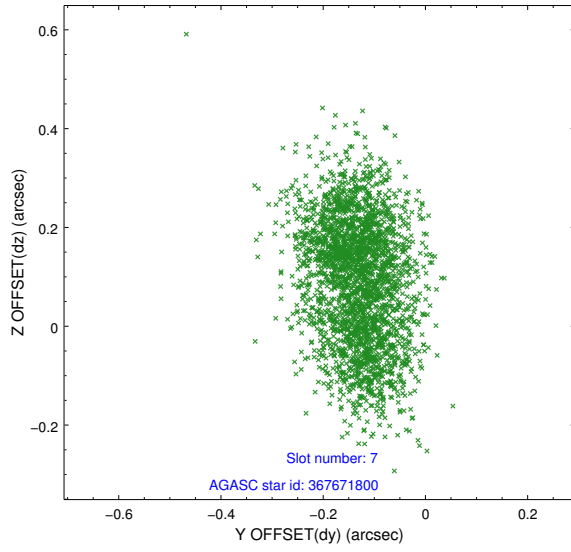
2.4.3 Slot 5



2.4.4 Slot 6

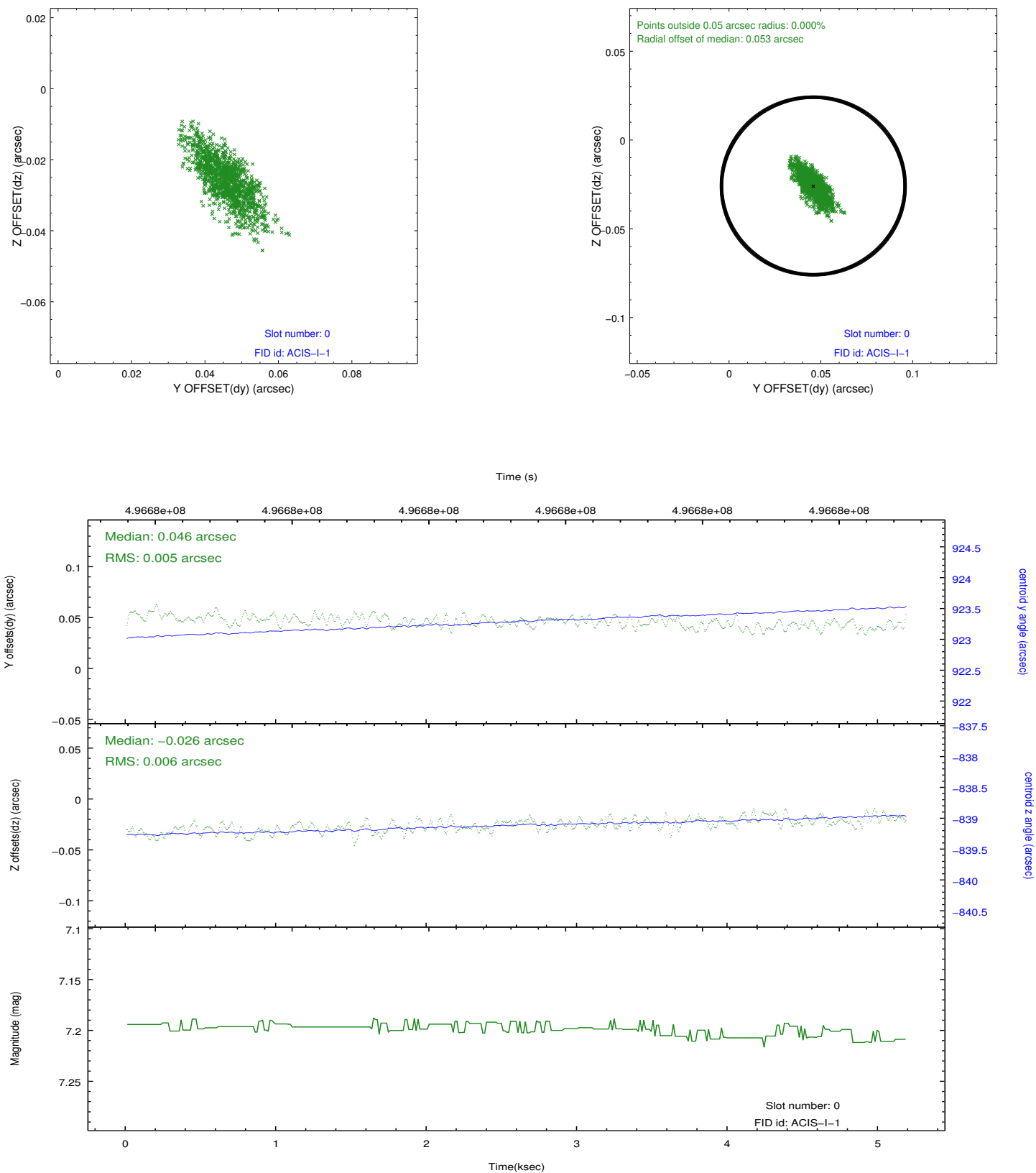


2.4.5 Slot 7

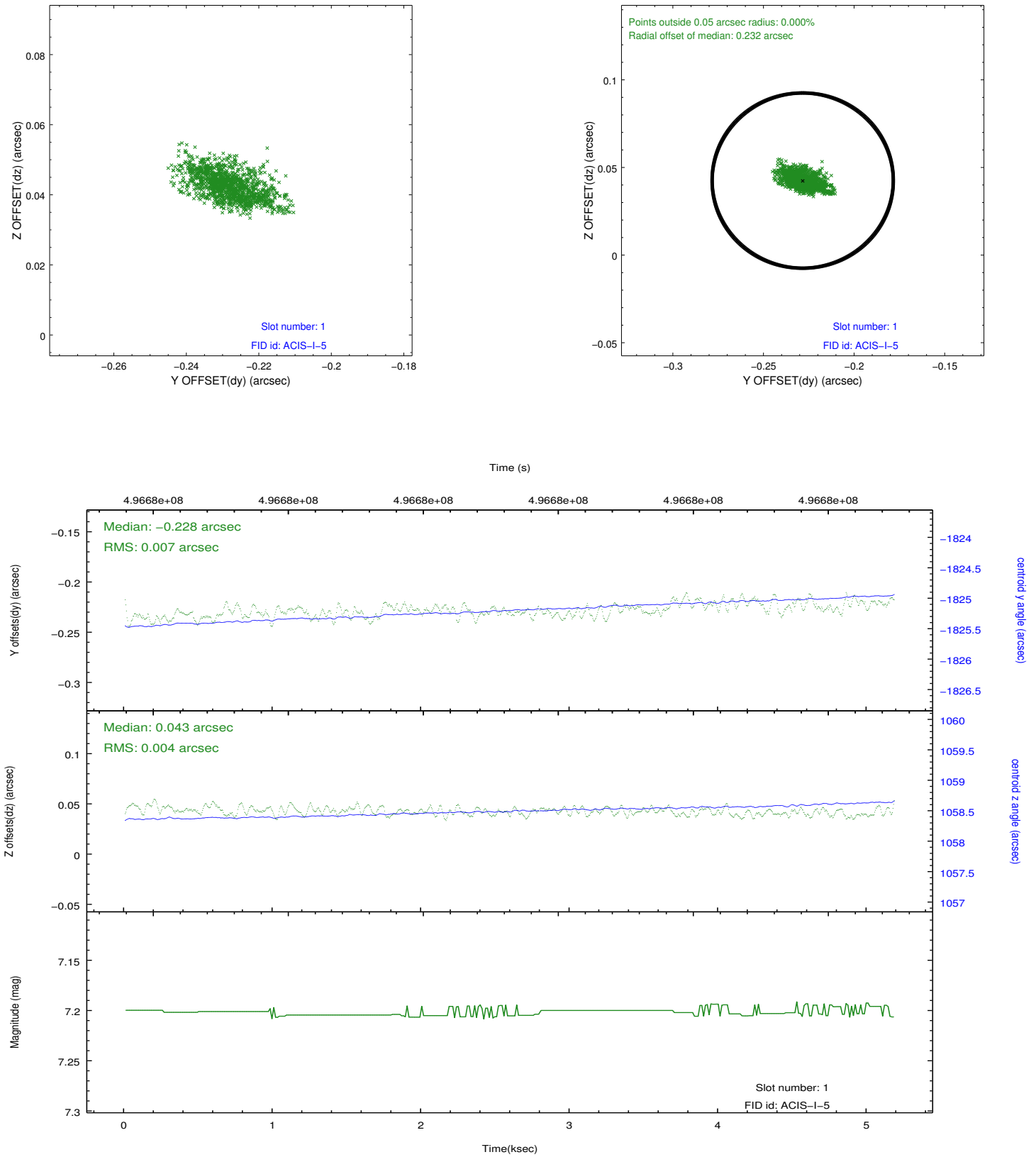


2.5 FID Slots

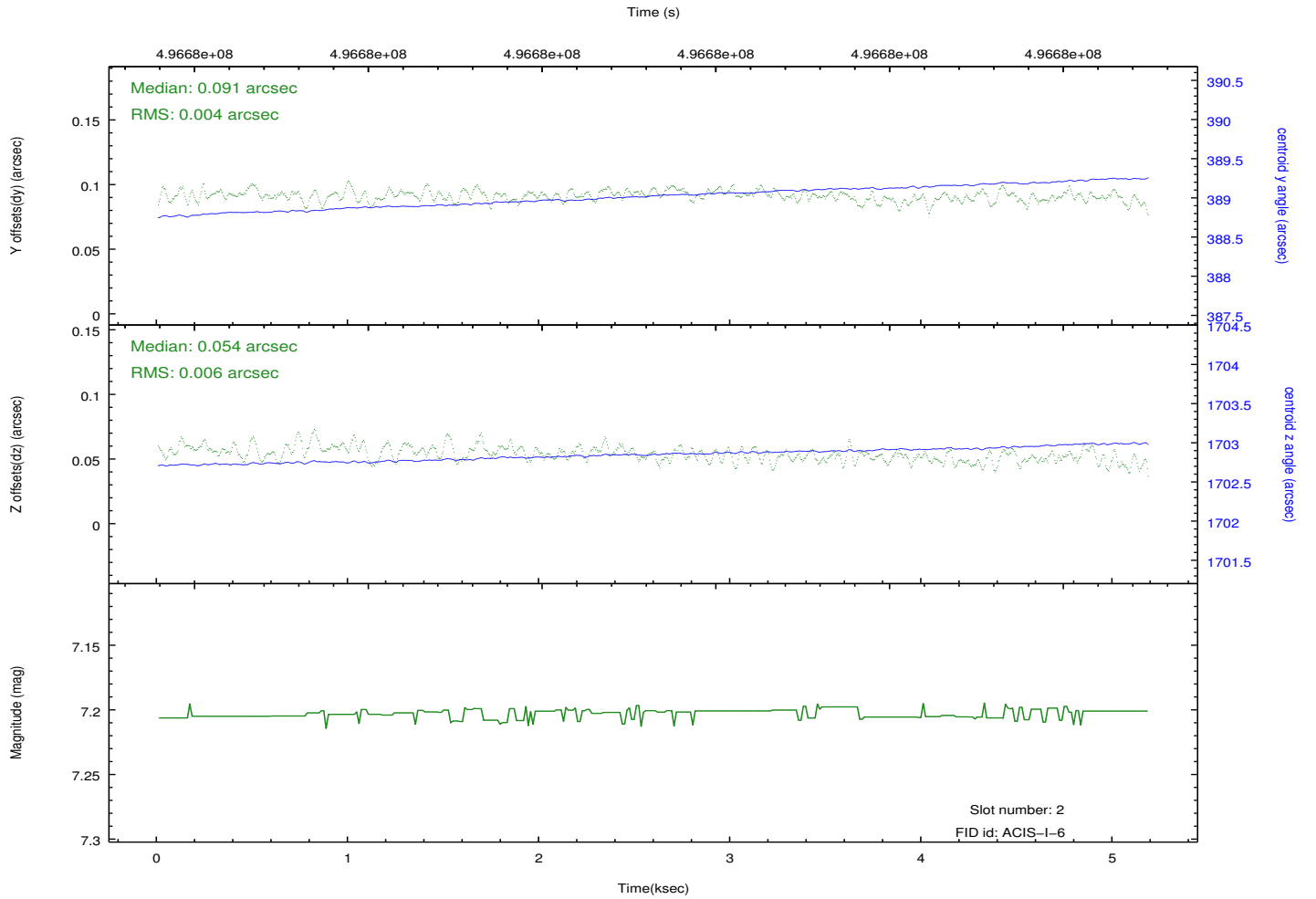
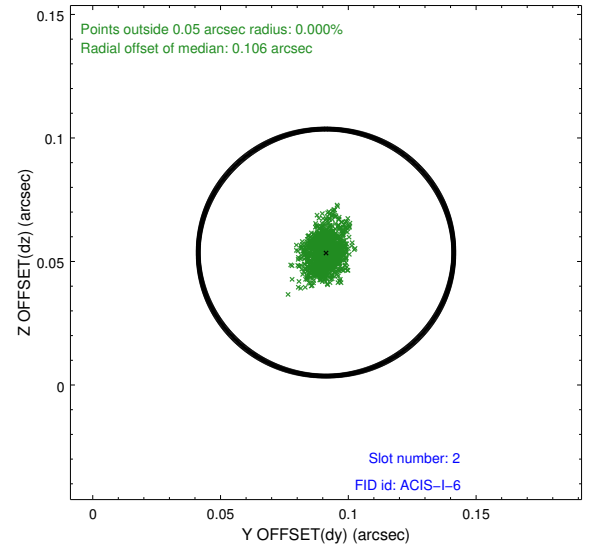
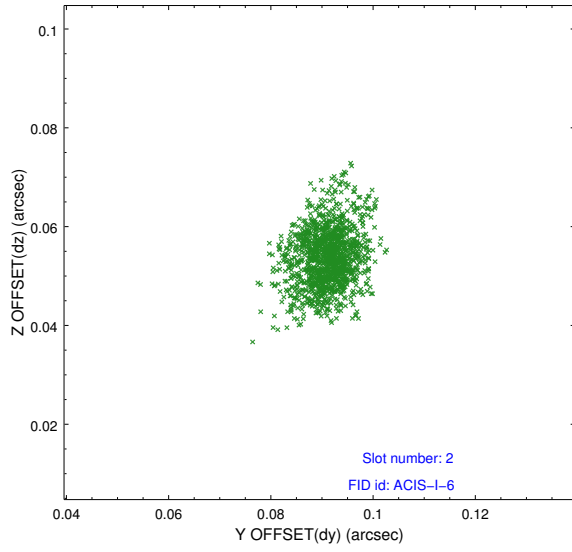
2.5.1 Slot 0



2.5.2 Slot 1



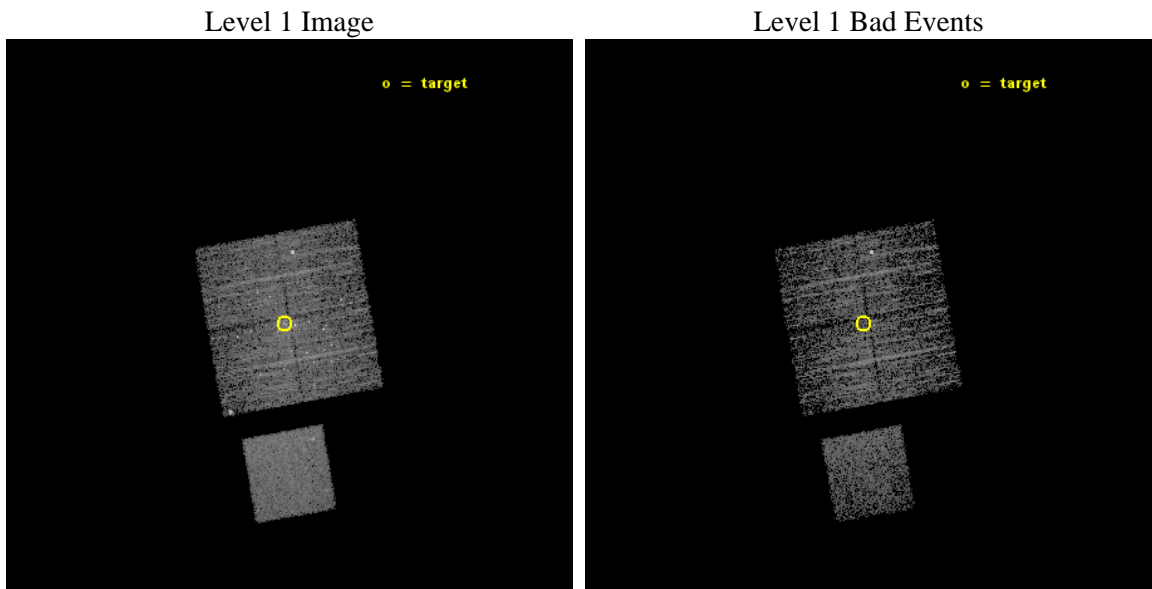
2.5.3 Slot 2



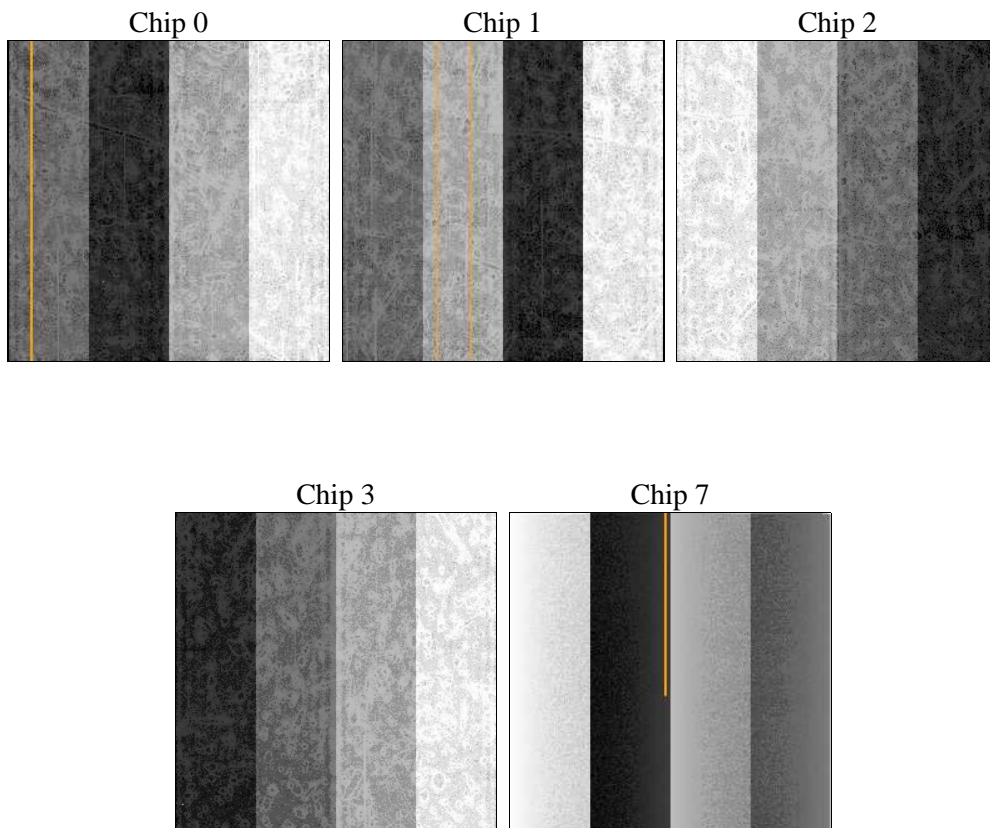
3 OBI Secondary

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	4026.8152931333	Sum of GTIs [s]
caldsver	4.6.4	 	ontime0	4026.8153334856	Sum of GTIs [s]
date	2014-12-06T22:36:35	Date and time of file creation	ontime1	4026.8152931929	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	4026.8152723312	Sum of GTIs [s]
			ontime3	4026.8152931333	Sum of GTIs [s]
			ontime7	4026.815467298	Sum of GTIs [s]
			l1events	113246	Number of level 1 events

3.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	19554	19359	23407	23733	27193
rejected events	16360	15371	17055	17304	15316
rejected %	83%	79%	72%	72%	56%

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	1535	2037	3896	4299	1053
	7%	10%	16%	18%	3%
grade 1 events	1262	23	162	39	34
	6%	0%	0%	0%	0%
grade 2 events	616	727	992	864	2340
	3%	3%	4%	3%	8%
grade 3 events	278	324	379	332	1031
	1%	1%	1%	1%	3%
grade 4 events	268	306	438	342	989
	1%	1%	1%	1%	3%
grade 5 events	981	972	1048	1062	2544
	5%	5%	4%	4%	9%
grade 6 events	502	596	653	599	6492
	2%	3%	2%	2%	23%
grade 7 events	14112	14374	15839	16196	12710
	72%	74%	67%	68%	46%

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	4.98817995119099

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.