

V&V Reference Report

L2 ASCDS Version : 10.2.2

Observation 16294 - L2 Version 2
Chandra X-Ray Center

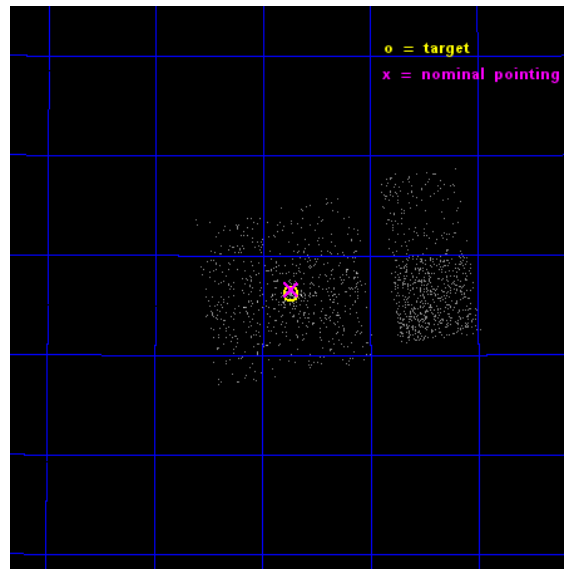
L2 Processing Date : Dec 11 2014

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1 Front

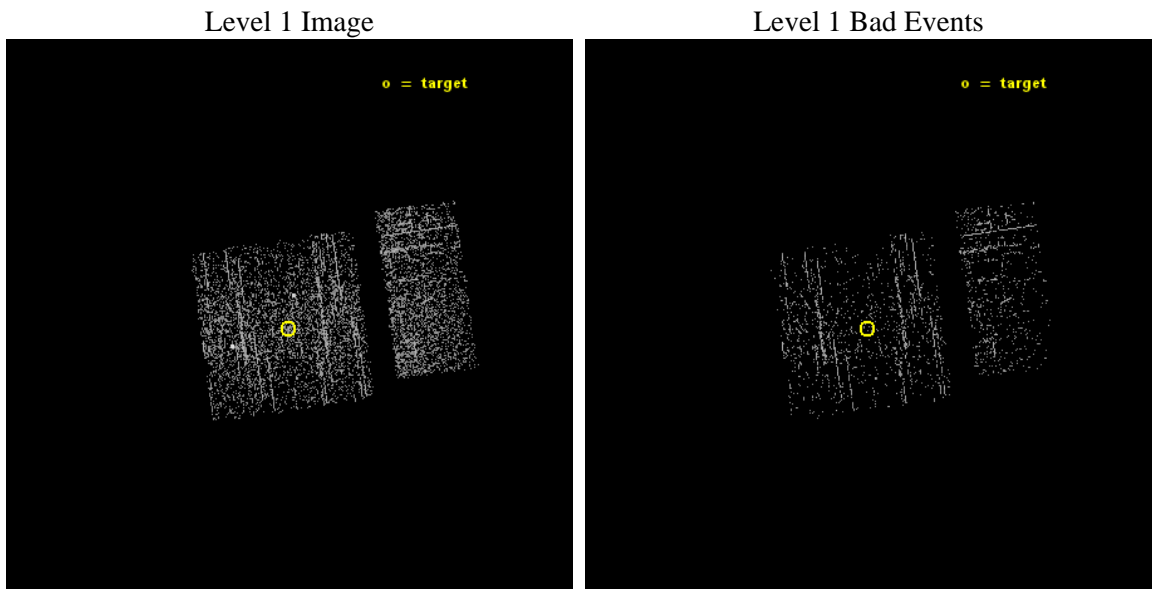
seq_num	601138	Sequence number
obs_id	16294	Observation id
title	M31 BHXNe	Proposal title
observer	Dr. Stephen Murray	Principal investigator
object	M31 BHXNe	Source name
dtcycle	0	
cycle	P	events are from which exps? P[rimary] S[econdar
ra_targ	10.685	Observer's specified target RA [deg]
dec_targ	41.268972	Observer's specified target Dec [deg]
ra_nom	10.68319205527	Nominal RA [deg]
dec_nom	41.276921794782	Nominal Dec [deg]
roll_nom	81.957094366739	Nominal Roll [deg]
revision	2	Processing version of data
ontime	926.32300466299	Sum of GTIs [s]
livetime	145.8255853023	Livetime [s]
ontime0	926.32300466299	Sum of GTIs [s]
ontime1	926.32300466299	Sum of GTIs [s]
ontime2	926.32300466299	Sum of GTIs [s]
ontime3	926.32300466299	Sum of GTIs [s]
ontime6	926.32300466299	Sum of GTIs [s]
ontime7	926.32300466299	Sum of GTIs [s]
l2events	1751	Number of level 2 events



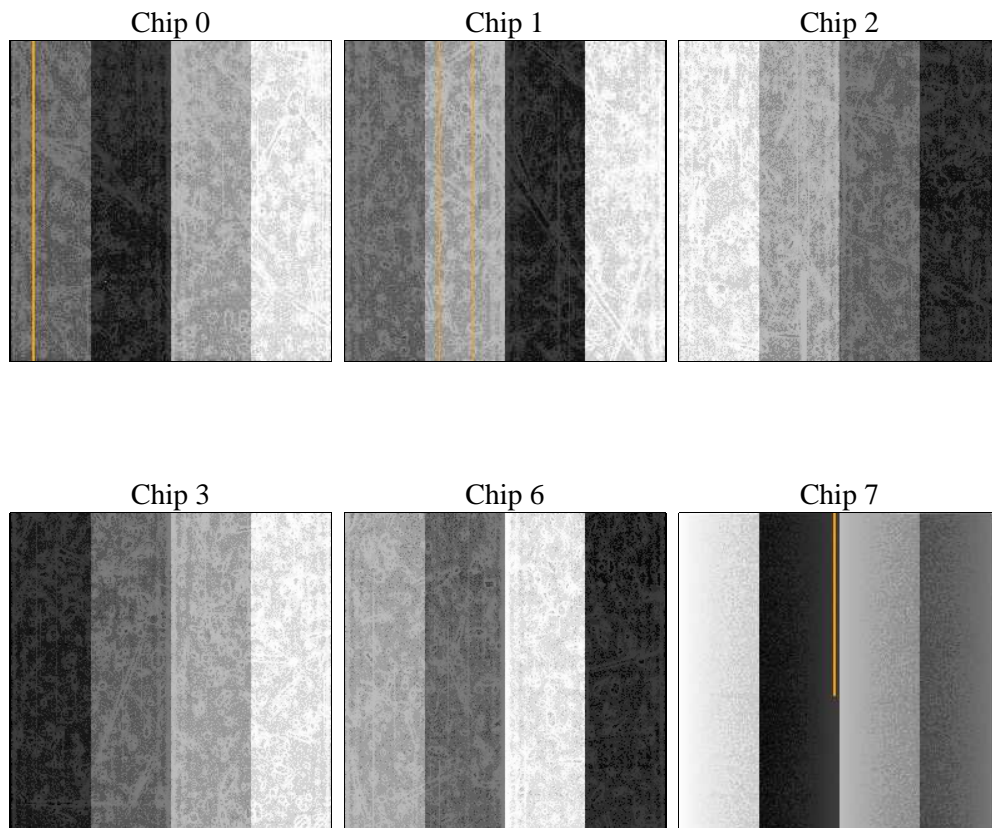
2 OBI Primary

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.997000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	926.32300466299	Sum of GTIs [s]
caldsver	4.6.4	 	ontime0	926.32300466299	Sum of GTIs [s]
date	2014-12-11T22:58:25	Date and time of file creation	ontime1	926.32300466299	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	926.32300466299	Sum of GTIs [s]
			ontime3	926.32300466299	Sum of GTIs [s]
			ontime6	926.32300466299	Sum of GTIs [s]
			ontime7	926.32300466299	Sum of GTIs [s]
			l1events	13765	Number of level 1 events

2.1.4 Events

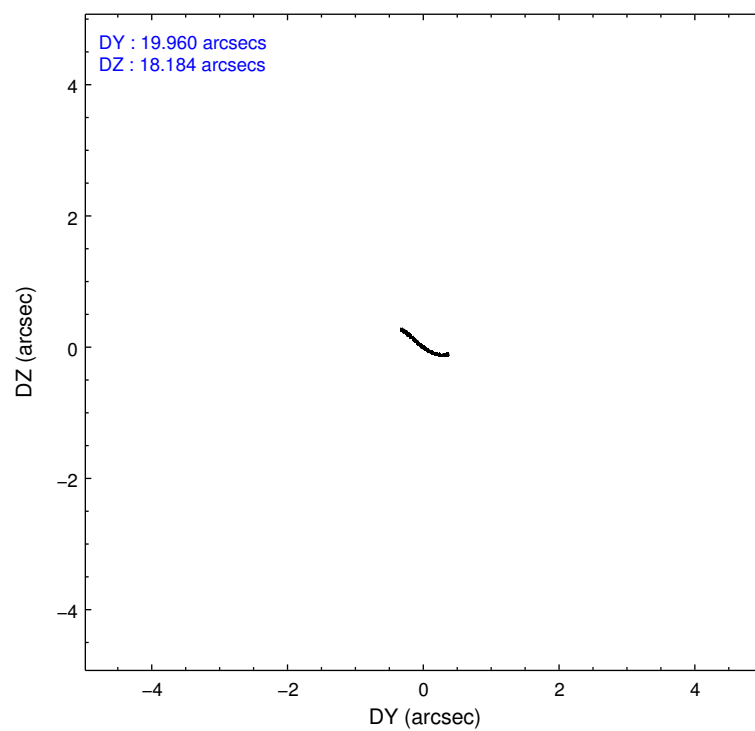
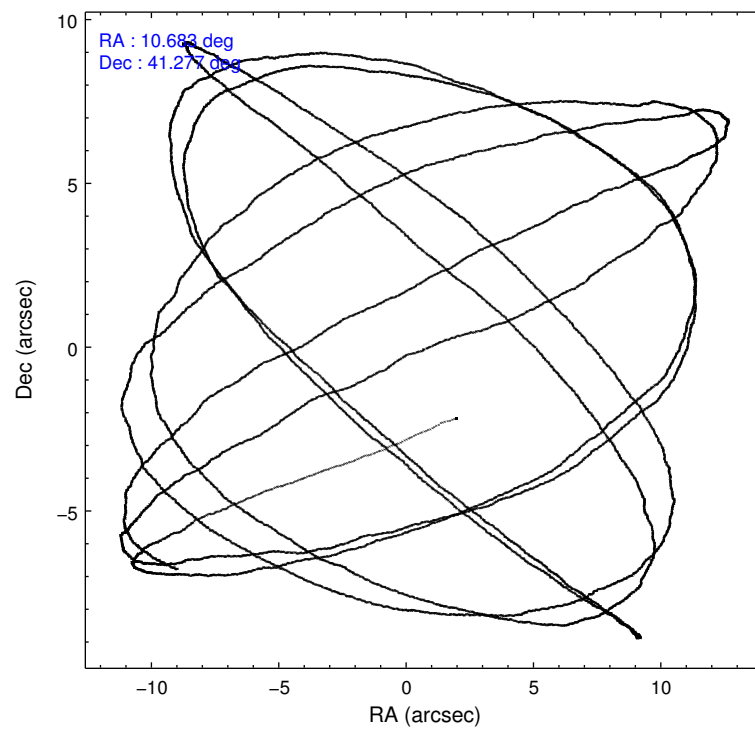
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	2058	2443	2270	2360	2386	2248
rejected events	1851	1925	1912	1949	2217	1601
rejected %	89%	78%	84%	82%	92%	71%

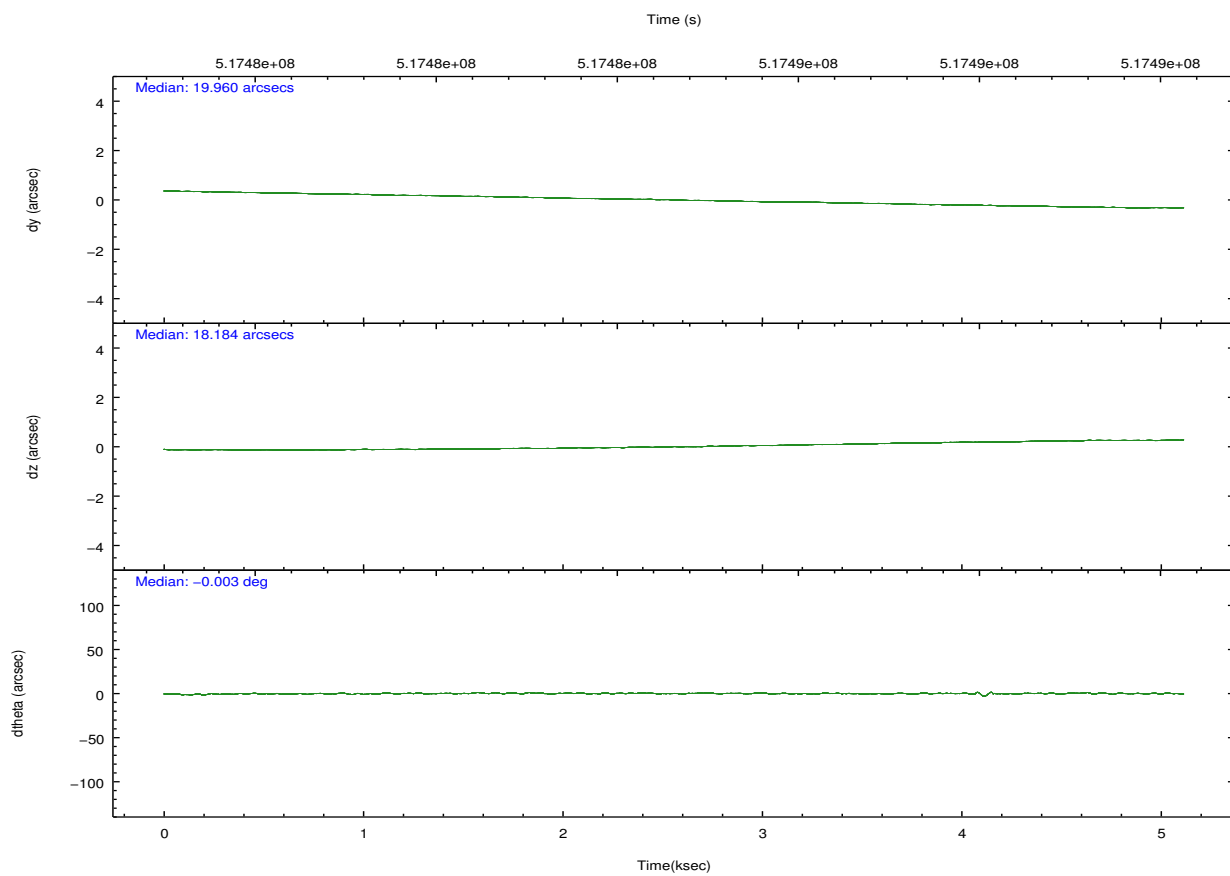
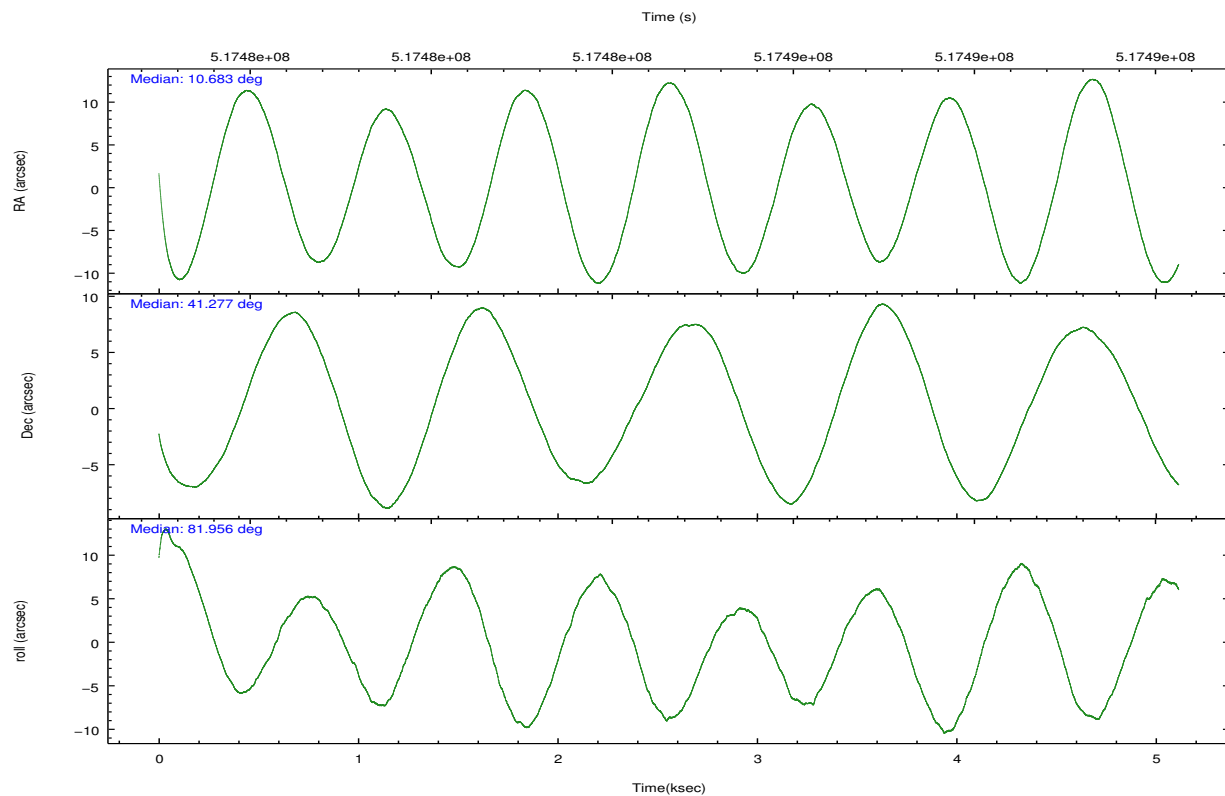
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	80	117	232	242	39	59
	3%	4%	10%	10%	1%	2%
grade 1 events	0	2	3	5	2	1
	0%	0%	0%	0%	0%	0%
grade 2 events	51	309	56	62	42	127
	2%	12%	2%	2%	1%	5%
grade 3 events	25	24	20	30	27	67
	1%	0%	0%	1%	1%	2%
grade 4 events	21	20	20	36	22	54
	1%	0%	0%	1%	0%	2%
grade 5 events	97	92	93	114	91	176
	4%	3%	4%	4%	3%	7%
grade 6 events	32	51	31	43	41	340
	1%	2%	1%	1%	1%	15%
grade 7 events	1752	1828	1815	1828	2122	1424
	85%	74%	79%	77%	88%	63%

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	10.697084	10.68319205527035	CCD I2 on	Y	Y
[deg] Pointing Dec	41.251483	41.27692179478245	CCD I3 on	Y	Y
[deg] Pointing Roll	81.739244	81.95709436673862	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)	517482864.184000	517481553.89855	CCD S5 on	N	N
Observation start date	2014-05-26T09:13:17	2014-05-26T08:52:33	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	517487865.184000	517488102.11141	On-chip summing requested	N	N
Observation end date	2014-05-26T10:36:38	2014-05-26T10:41:42	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



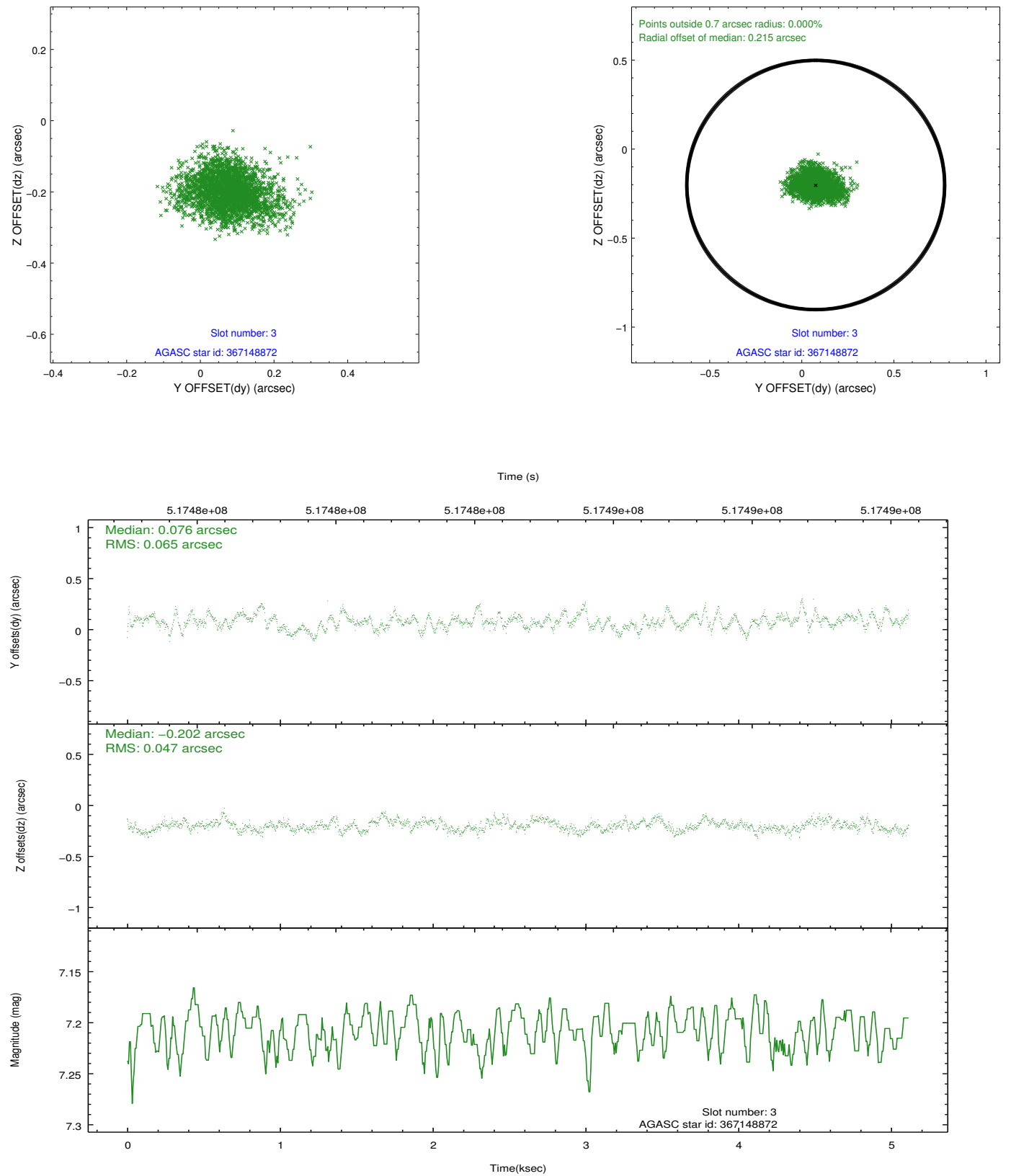


Slot Statistics

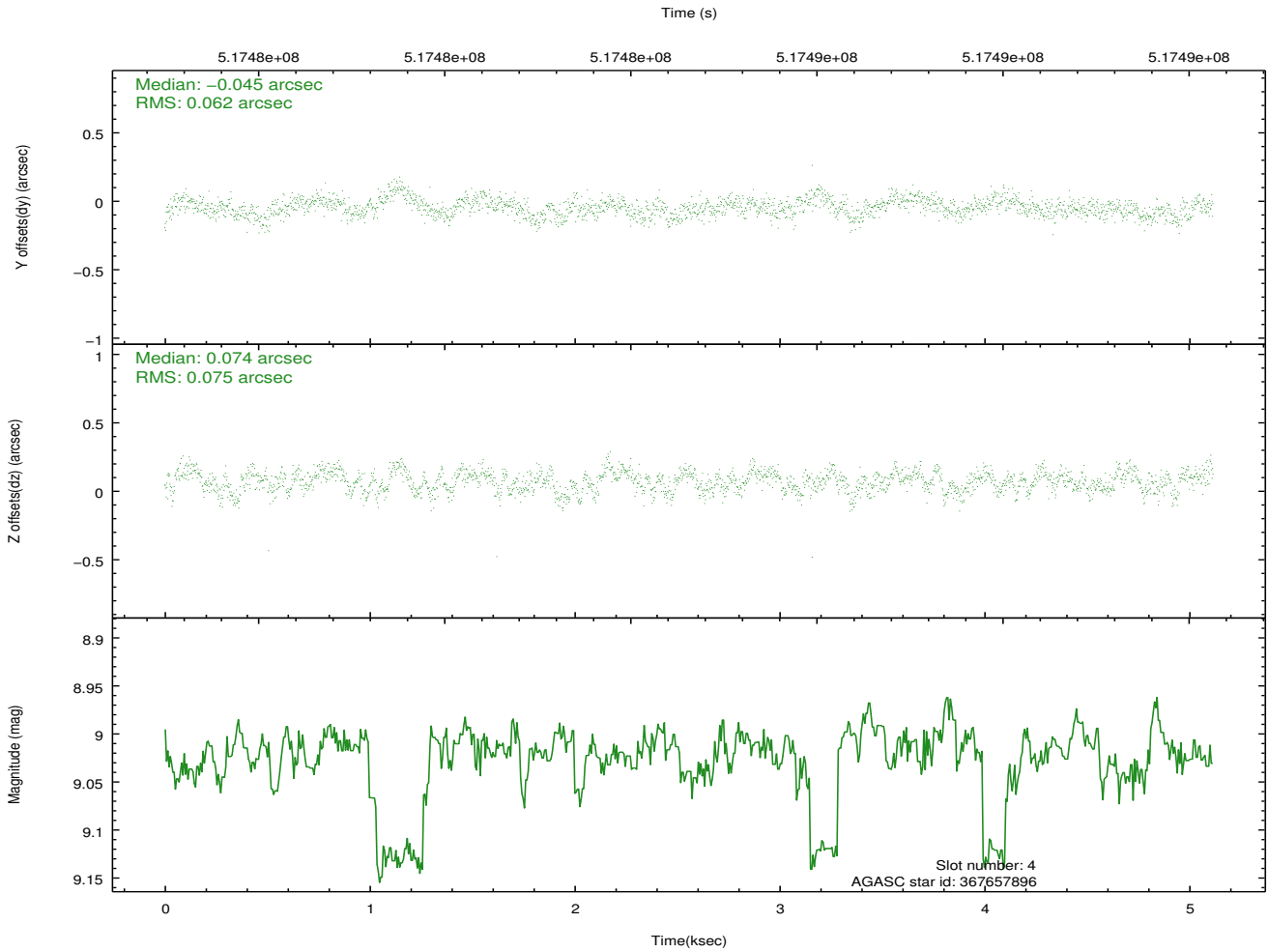
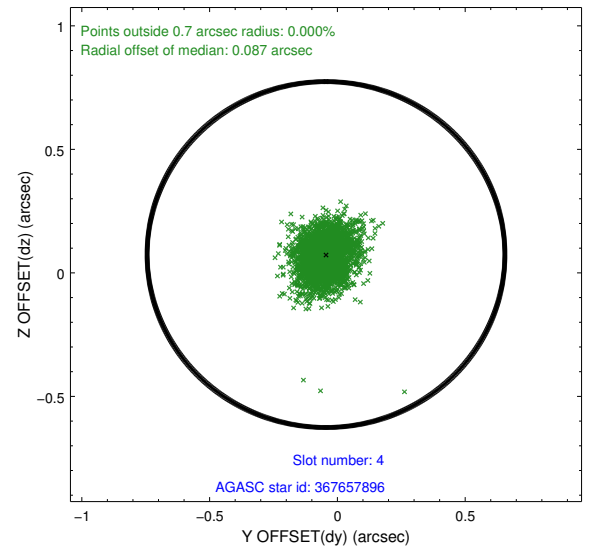
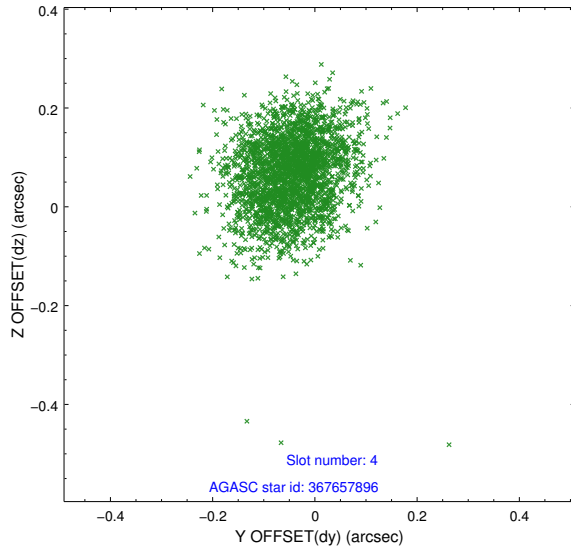
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.21	1248	0.055	0.027	0.009	0.017	0.000000	0.000000	919.43	-841.85
1	FID		ACIS-I-5	7.21	1247	-0.285	0.050	0.007	0.013	0.000000	0.000000	-1828.40	1055.01
2	FID		ACIS-I-6	7.21	1247	0.138	-0.006	0.008	0.013	0.000000	0.000000	383.71	1700.84
3	GUIDE	used	367148872	7.21	2496	0.076	-0.202	0.084	0.143	10.505940	40.688258	-2081.31	225.01
4	GUIDE	used	367657896	9.02	2496	-0.045	0.074	0.102	0.165	11.197765	41.313576	419.27	-1306.86
5	GUIDE	used	367663272	9.27	2495	-0.106	-0.327	0.124	0.201	10.656279	41.699429	1579.99	340.60
6	GUIDE	used	367674552	8.85	2494	-0.092	0.133	0.101	0.156	11.016238	41.570845	1263.81	-685.07
7	GUIDE	used	367138920	7.73	2495	0.165	0.323	0.079	0.131	11.513485	40.808909	-1246.26	-2430.20

2.4 Star Slots

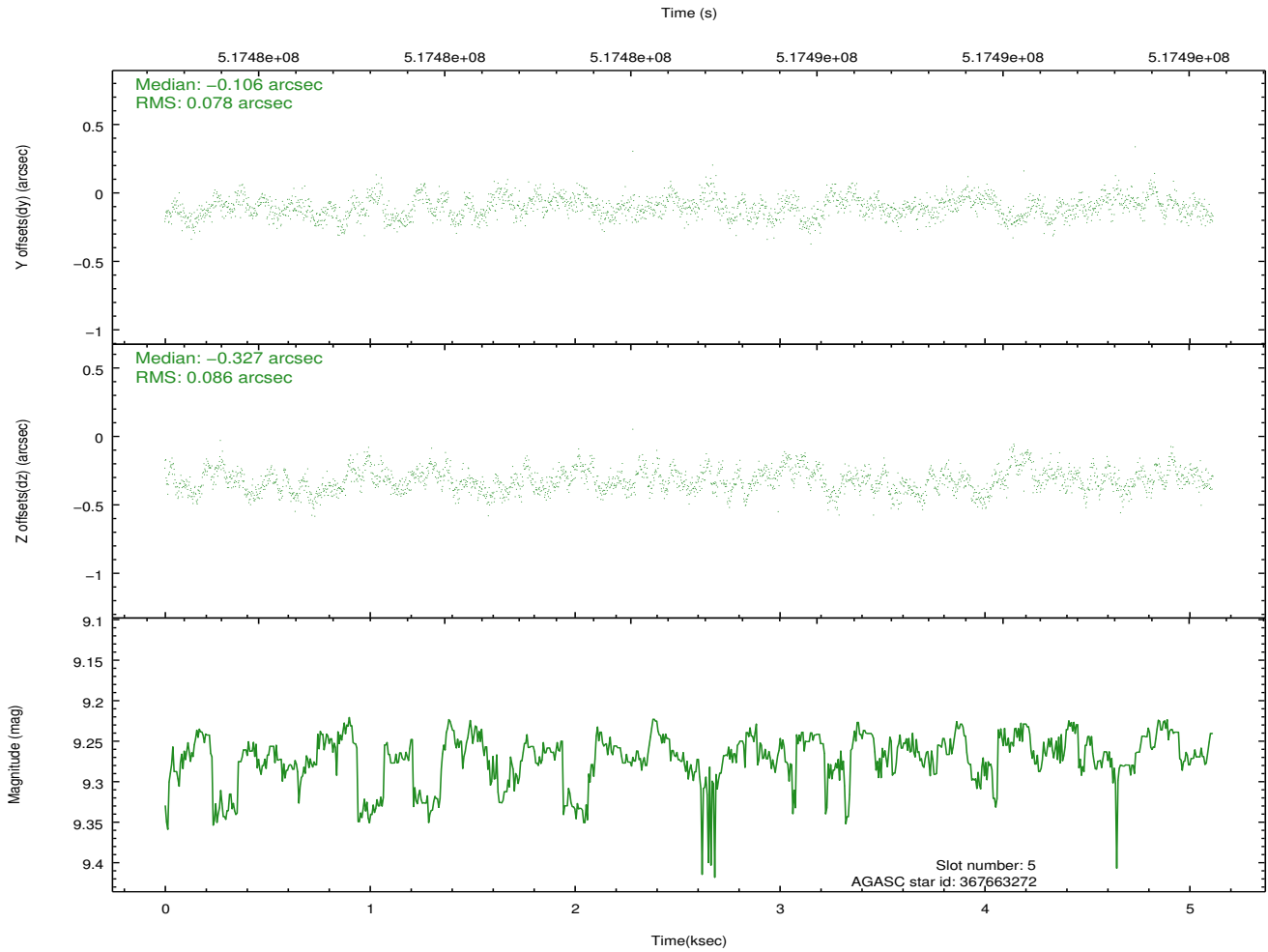
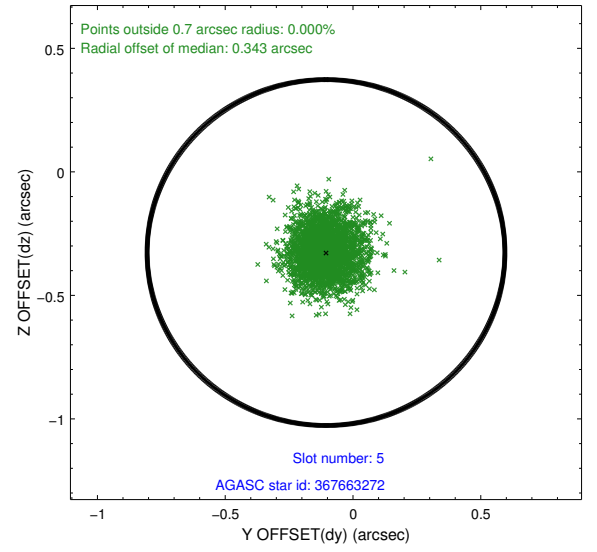
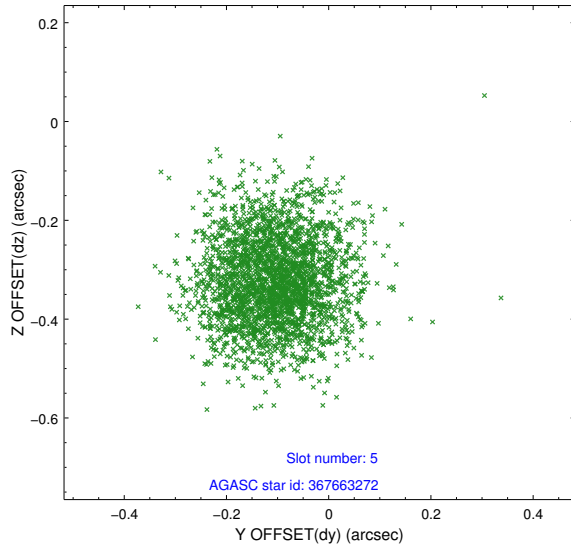
2.4.1 Slot 3



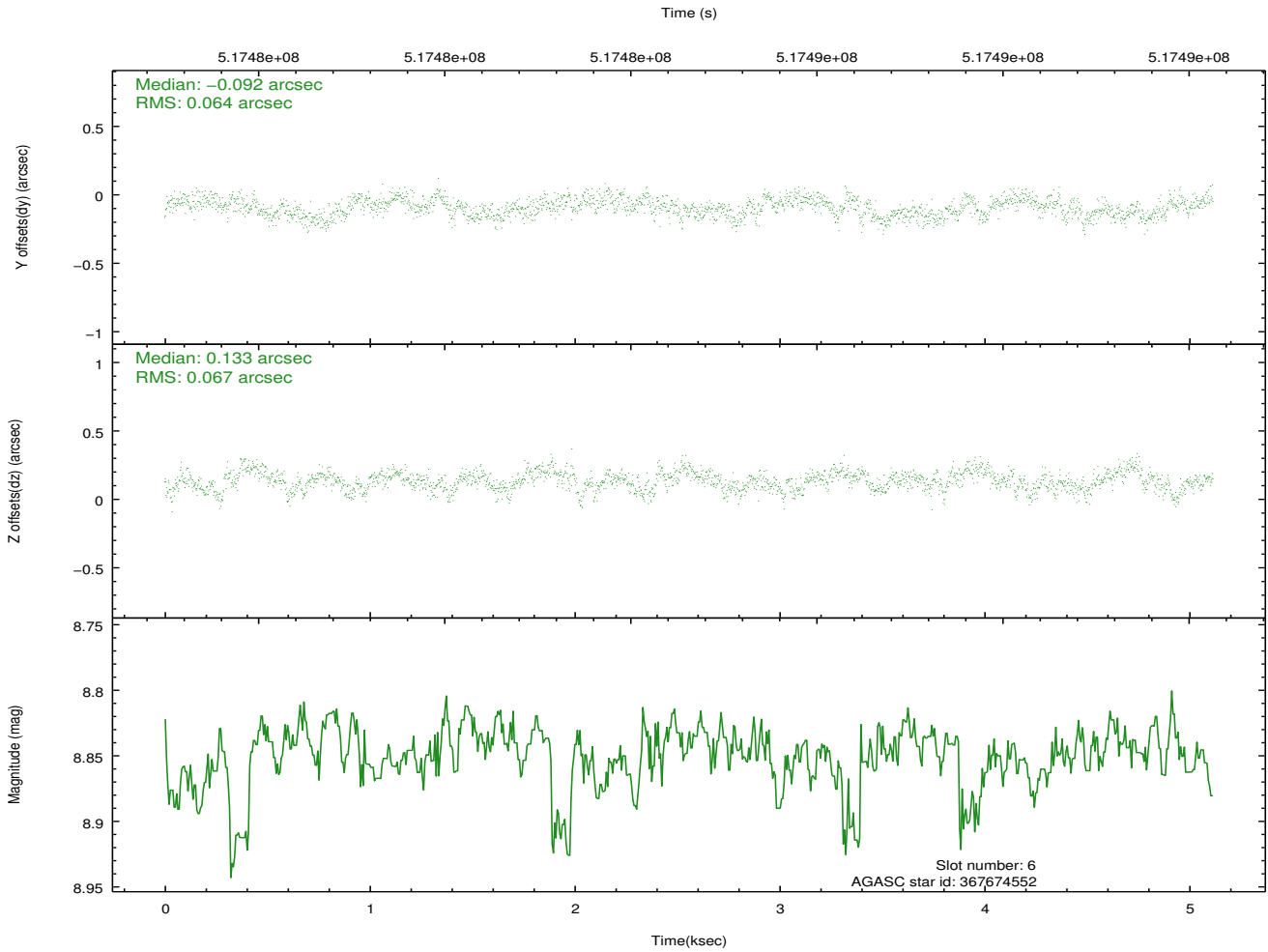
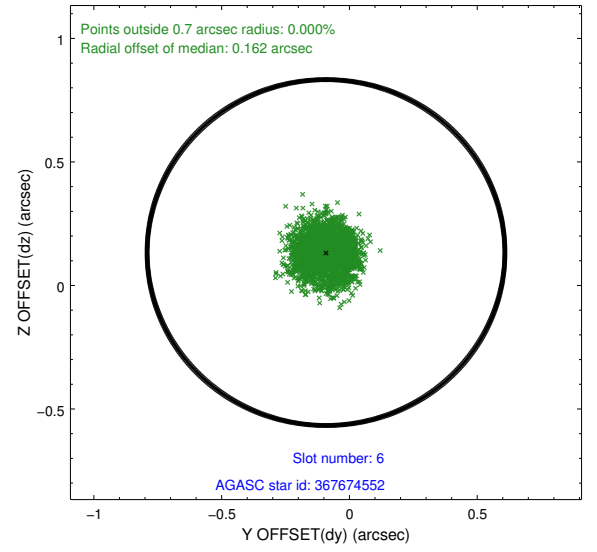
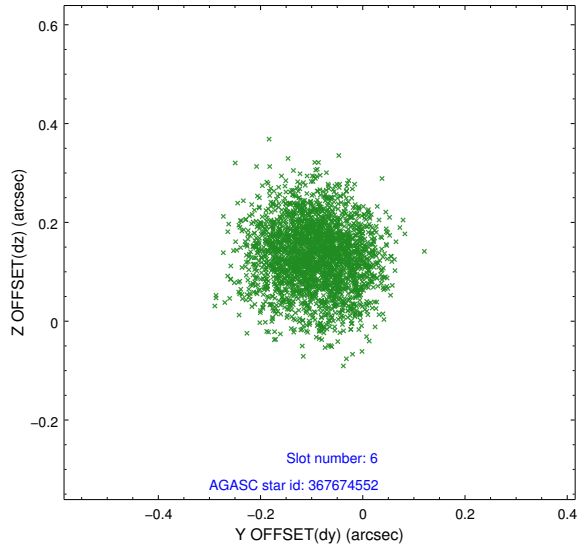
2.4.2 Slot 4



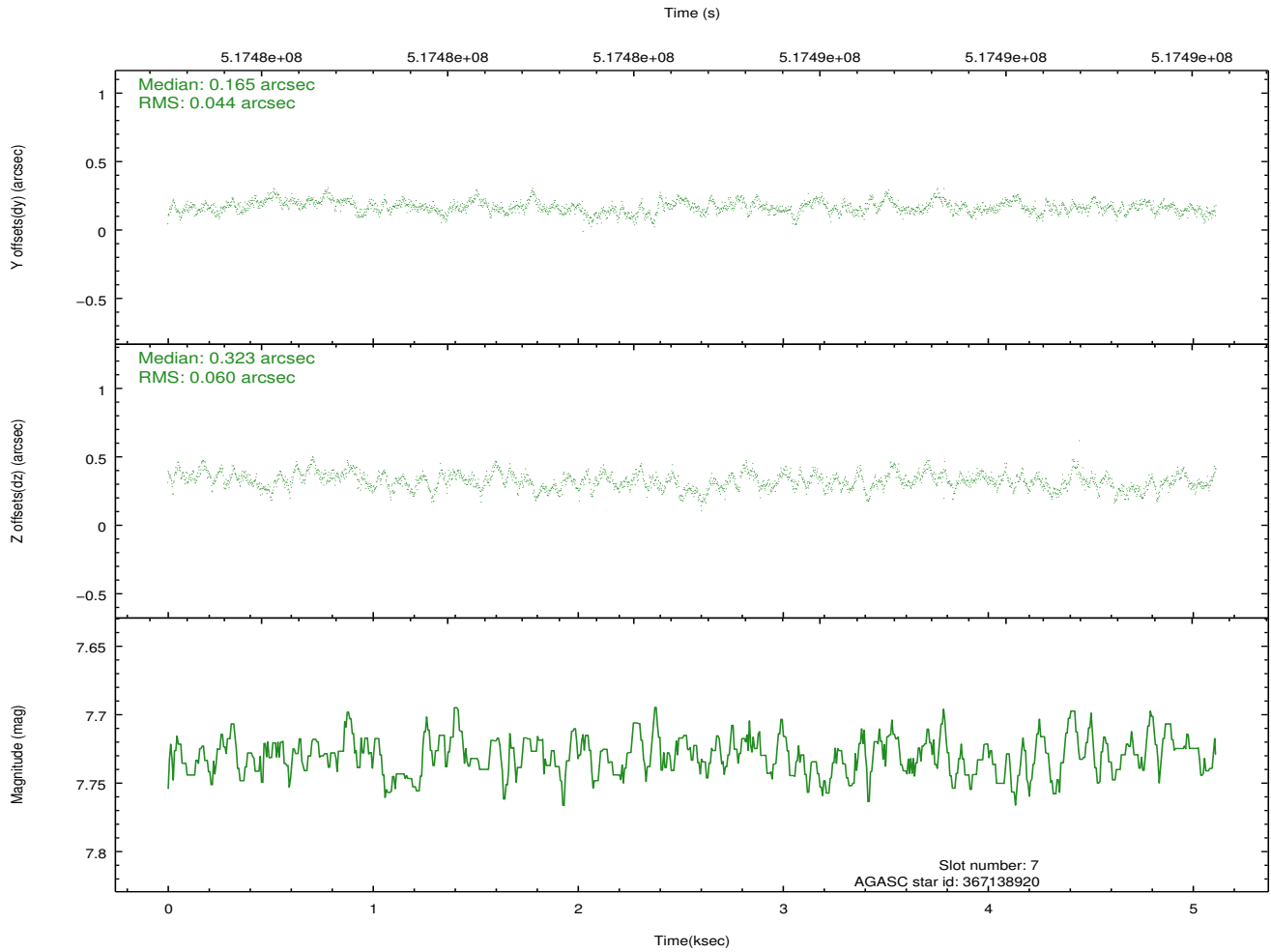
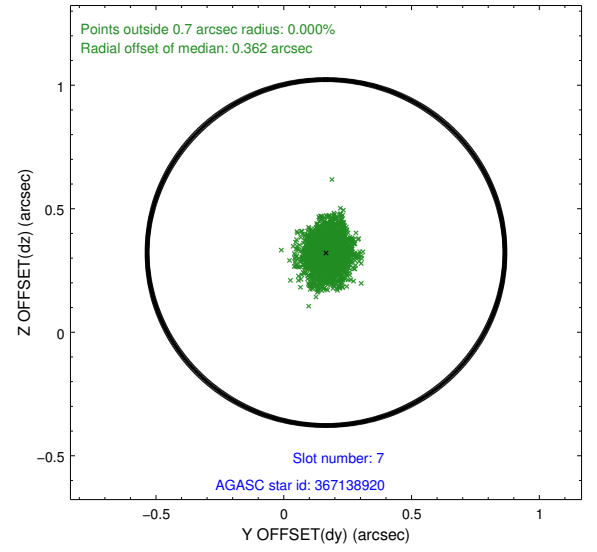
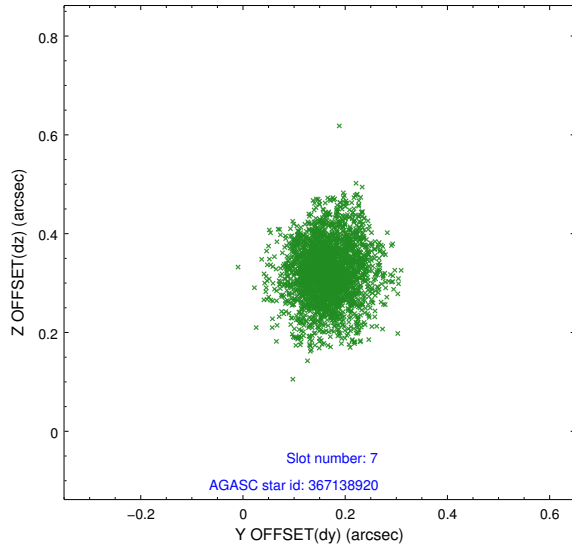
2.4.3 Slot 5



2.4.4 Slot 6

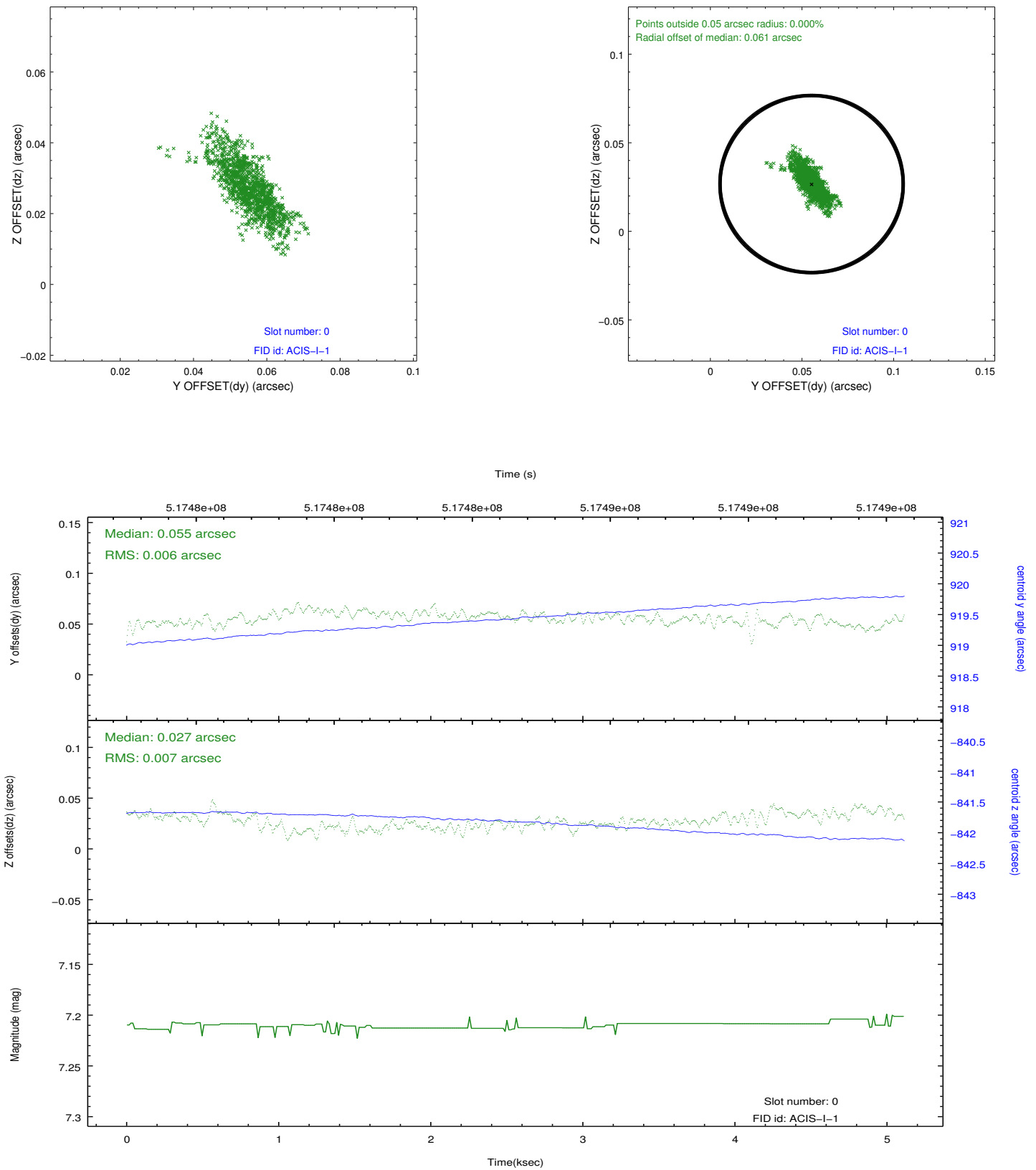


2.4.5 Slot 7

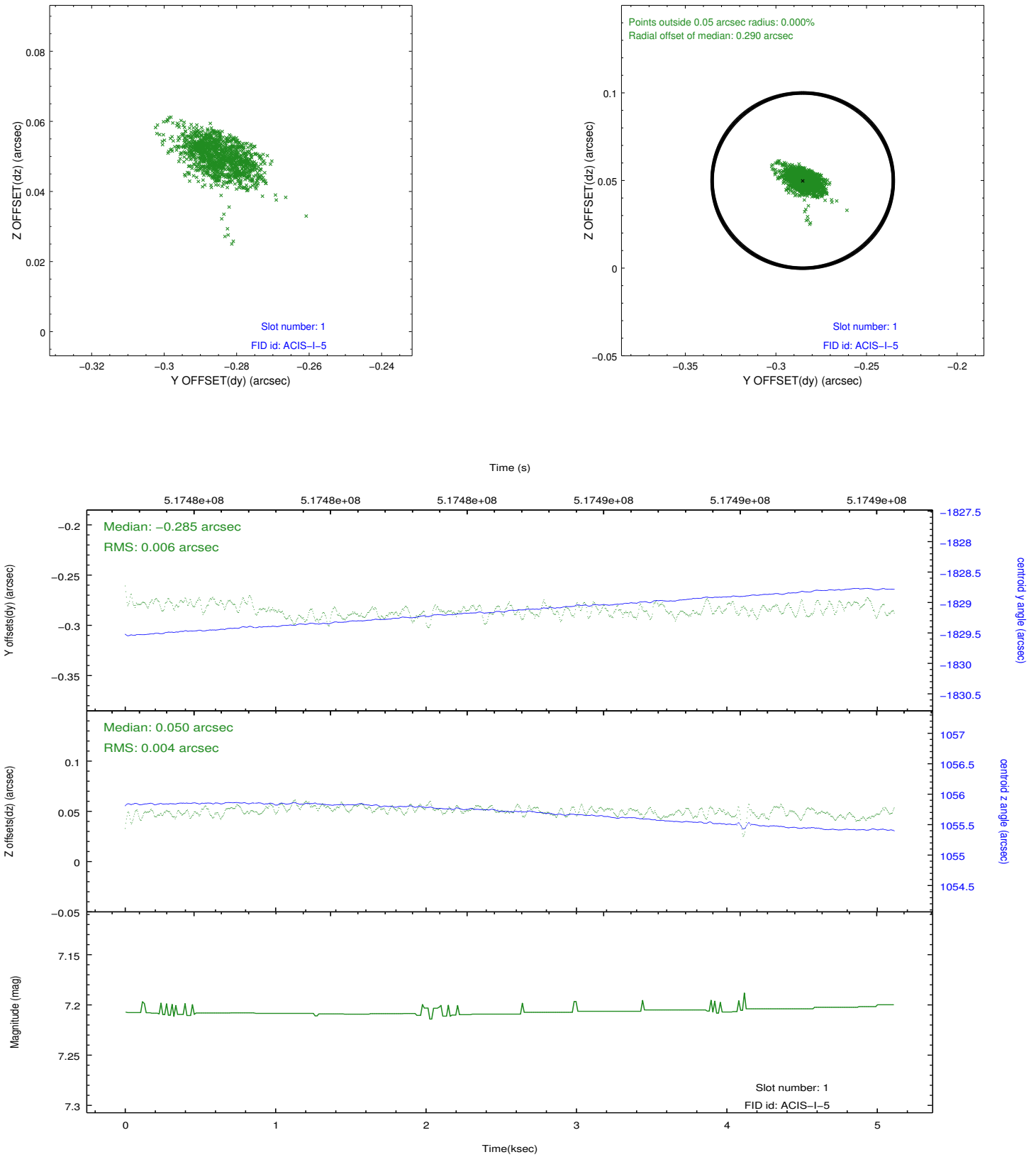


2.5 FID Slots

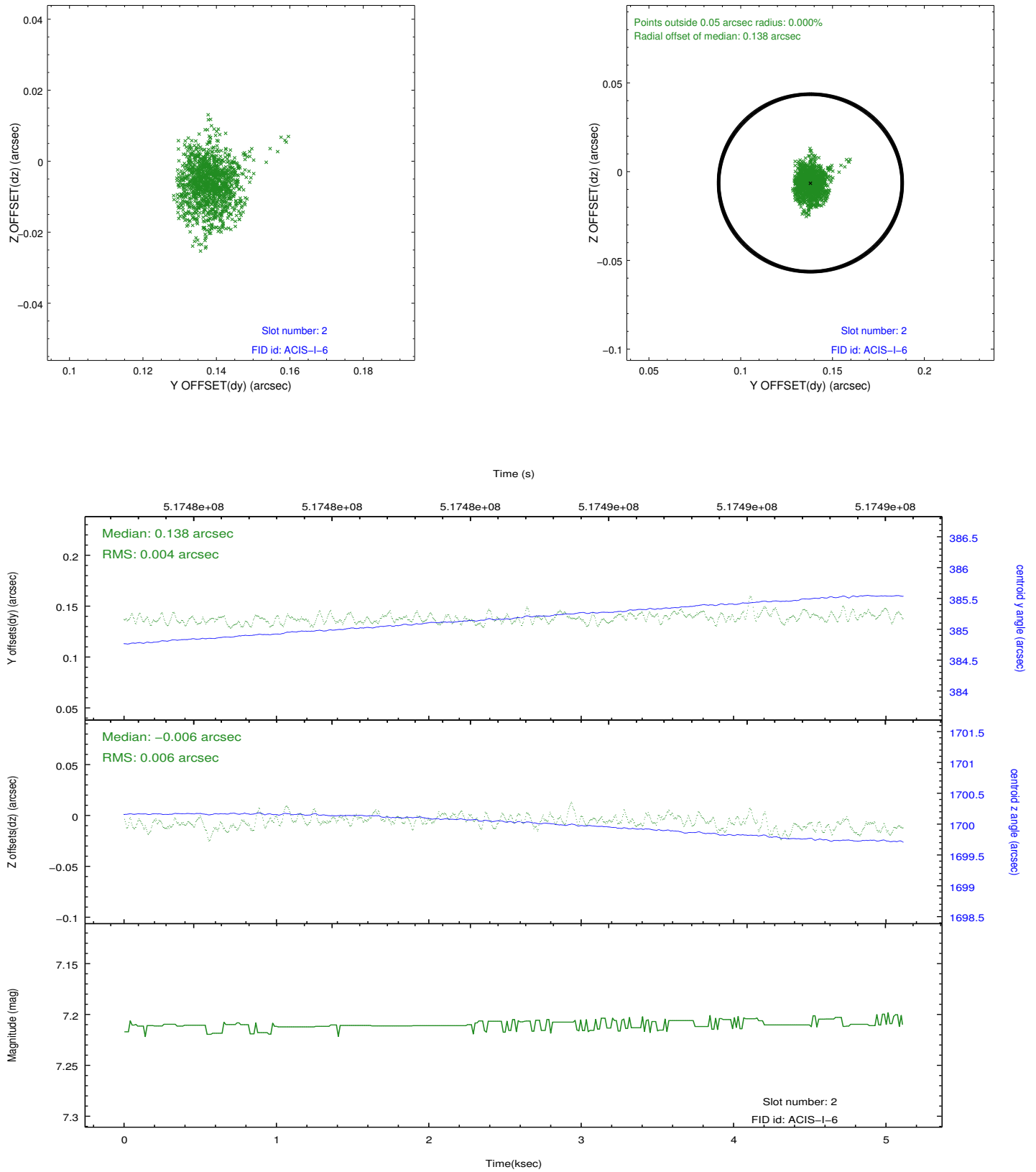
2.5.1 Slot 0



2.5.2 Slot 1



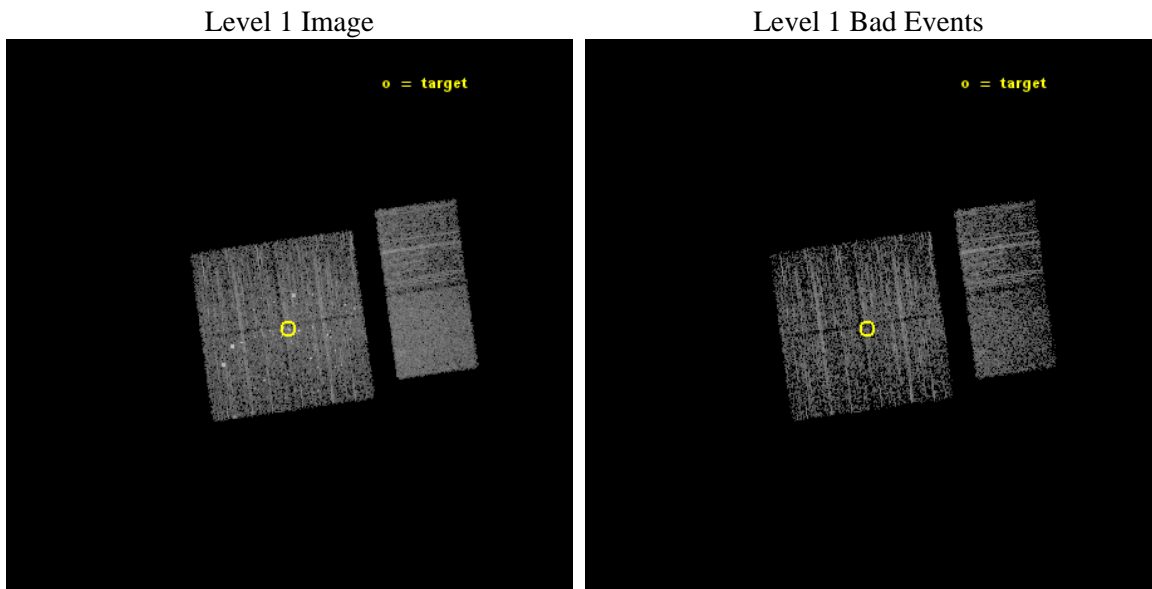
2.5.3 Slot 2



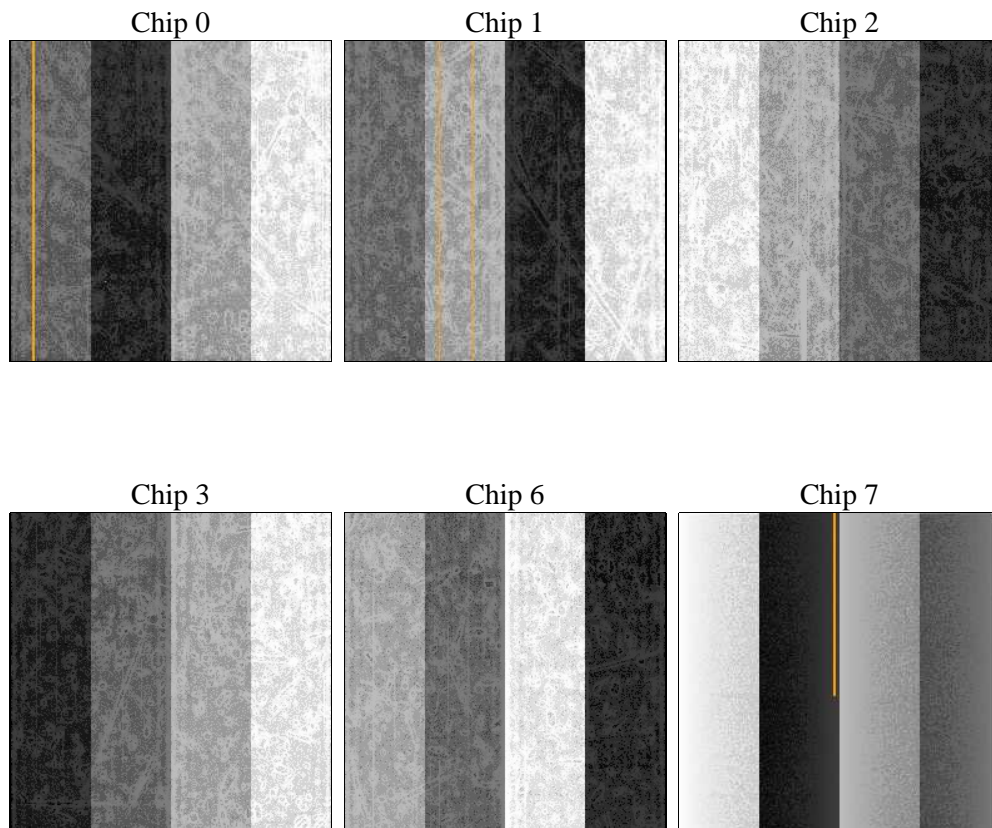
3 OBI Secondary

3.1 OBI

3.1.1 Images



3.1.2 Bias



3.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.997000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	3957.623467207	Sum of GTIs [s]
caldsver	4.6.4	 	ontime0	3957.6234568357	Sum of GTIs [s]
date	2014-12-11T22:58:28	Date and time of file creation	ontime1	3957.6234970093	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	3957.6234968901	Sum of GTIs [s]
			ontime3	3957.623467207	Sum of GTIs [s]
			ontime6	3957.6235372424	Sum of GTIs [s]
			ontime7	3957.6234972477	Sum of GTIs [s]
			l1events	129273	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	18315	21016	21711	22728	19506	25997	grade 0 events	1650	3312	2465	4343	761	948
rejected events	15070	14401	17682	15961	17203	14885		9%	15%	11%	19%	3%	3%
rejected %	82%	68%	81%	70%	88%	57%	grade 1 events	20	20	36	178	7	23
								0%	0%	0%	0%	0%	0%
							grade 2 events	602	2086	609	917	524	2286
								3%	9%	2%	4%	2%	8%
							grade 3 events	245	305	267	429	237	874
								1%	1%	1%	1%	1%	3%
							grade 4 events	290	302	252	407	221	820
								1%	1%	1%	1%	1%	3%
							grade 5 events	814	894	824	1145	958	2562
								4%	4%	3%	5%	4%	9%
							grade 6 events	465	621	442	678	563	6200
								2%	2%	2%	2%	2%	23%
							grade 7 events	14229	13476	16816	14631	16235	12284
								77%	64%	77%	64%	83%	47%

A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.88394647186999

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.