

V&V Reference Report

L2 ASCDS Version : 8.5.1.1

Observation 15625 - L2 Version 2
Chandra X-Ray Center

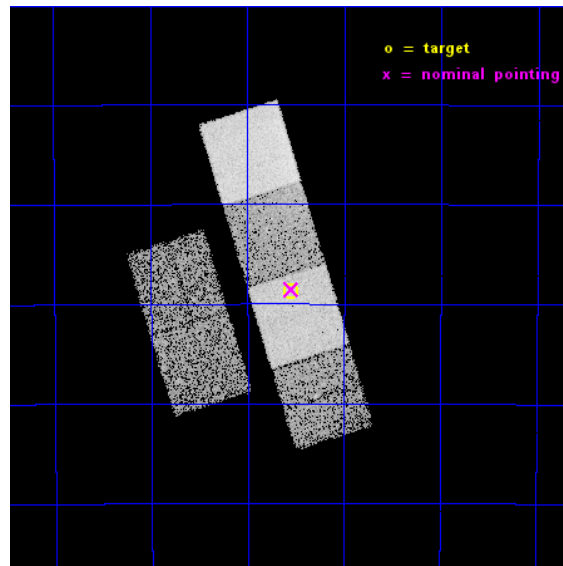
L2 Processing Date : Dec 2 2014

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1 Front

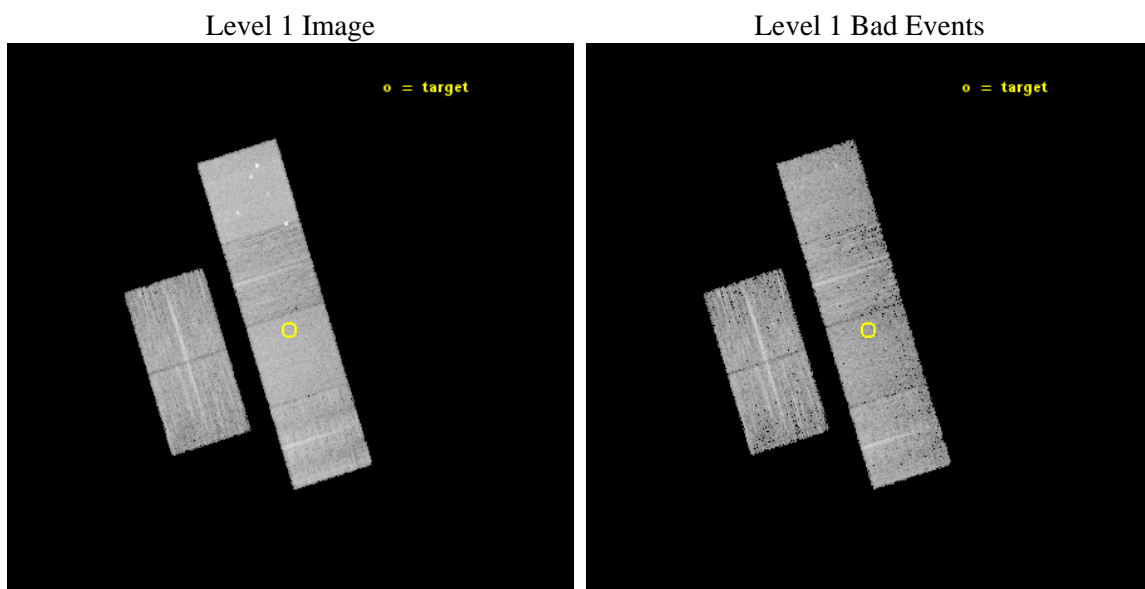
seq_num	901095	Sequence number
obs_id	15625	Observation id
title	Localizing NuSTAR J163433-473838: the First Source Discovered by NuSTAR	Proposal title
observer	John Tomsick	Principal investigator
object	NuSTAR J163433-473841	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	248.63925	Observer's specified target RA [deg]
dec_targ	-47.644972	Observer's specified target Dec [deg]
ra_nom	248.6363044848	Nominal RA [deg]
dec_nom	-47.642686684091	Nominal Dec [deg]
roll_nom	72.779141322712	Nominal Roll [deg]
revision	2	Processing version of data
ontime	9964.7700818181	Sum of GTIs [s]
livetime	9838.5901629779	Livetime [s]
ontime2	9964.7999629378	Sum of GTIs [s]
ontime3	9964.6469618082	Sum of GTIs [s]
ontime5	9964.7290418148	Sum of GTIs [s]
ontime6	9964.6880018115	Sum of GTIs [s]
ontime7	9964.7700818181	Sum of GTIs [s]
ontime8	9964.6059218049	Sum of GTIs [s]
l2events	107866	Number of level 2 events



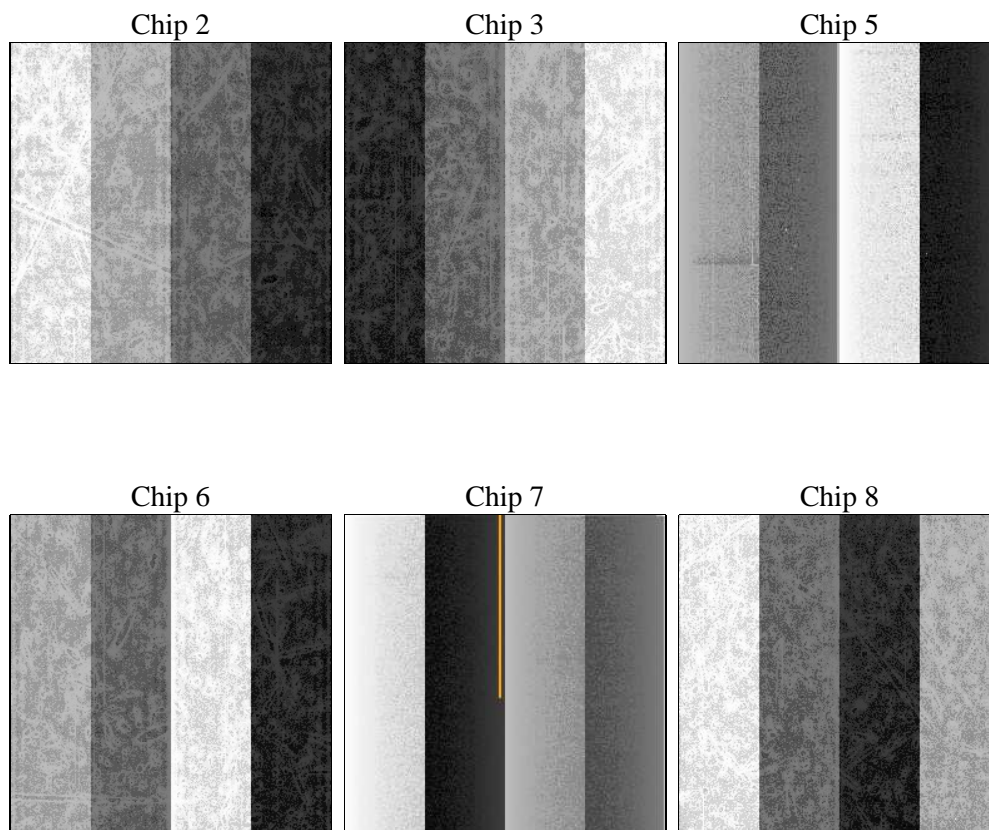
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	9964.7700818181	Sum of GTIs [s]
caldsver	4.6.4	 	ontime2	9964.7999629378	Sum of GTIs [s]
date	2014-12-02T07:18:50	Date and time of file creation	ontime3	9964.6469618082	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	9964.7290418148	Sum of GTIs [s]
			ontime6	9964.6880018115	Sum of GTIs [s]
			ontime7	9964.7700818181	Sum of GTIs [s]
			ontime8	9964.6059218049	Sum of GTIs [s]
			l1events	389534	Number of level 1 events

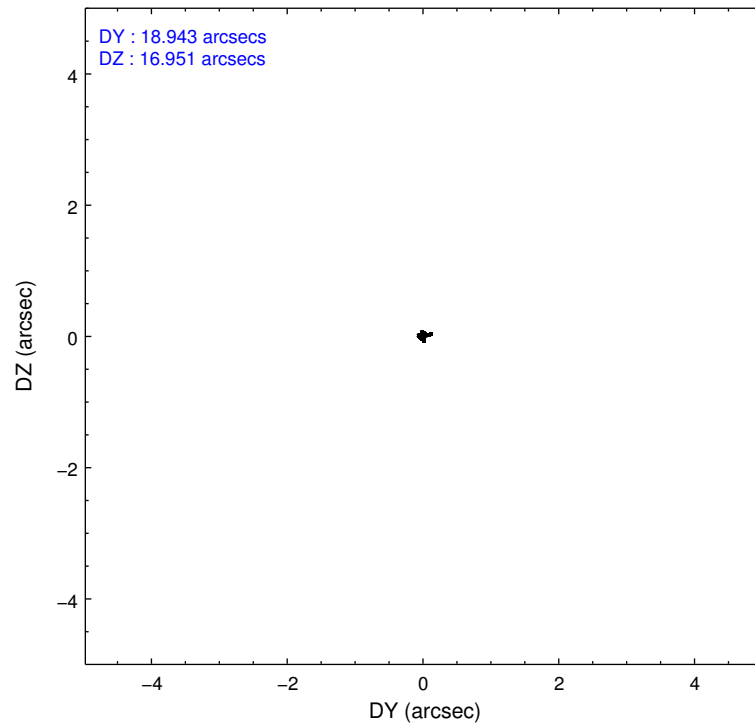
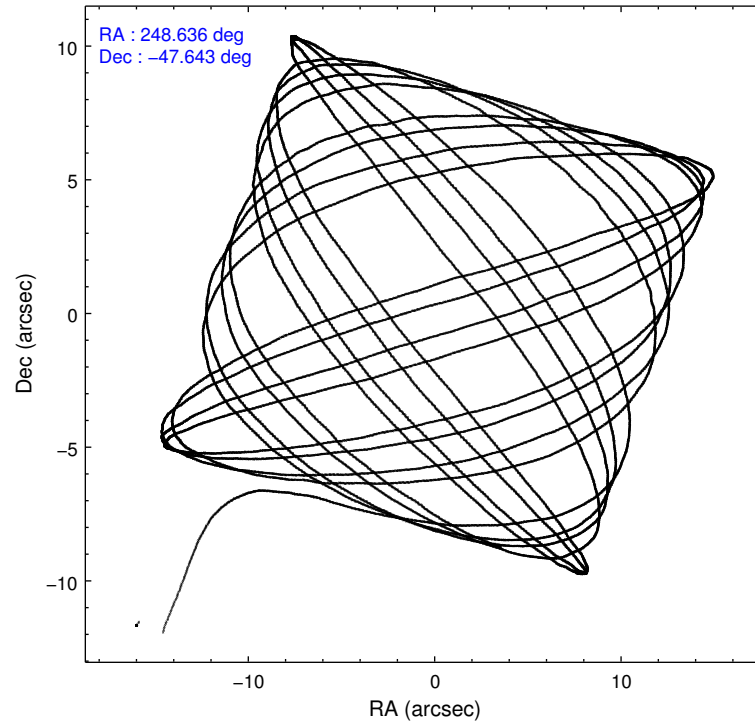
2.1.4 Events

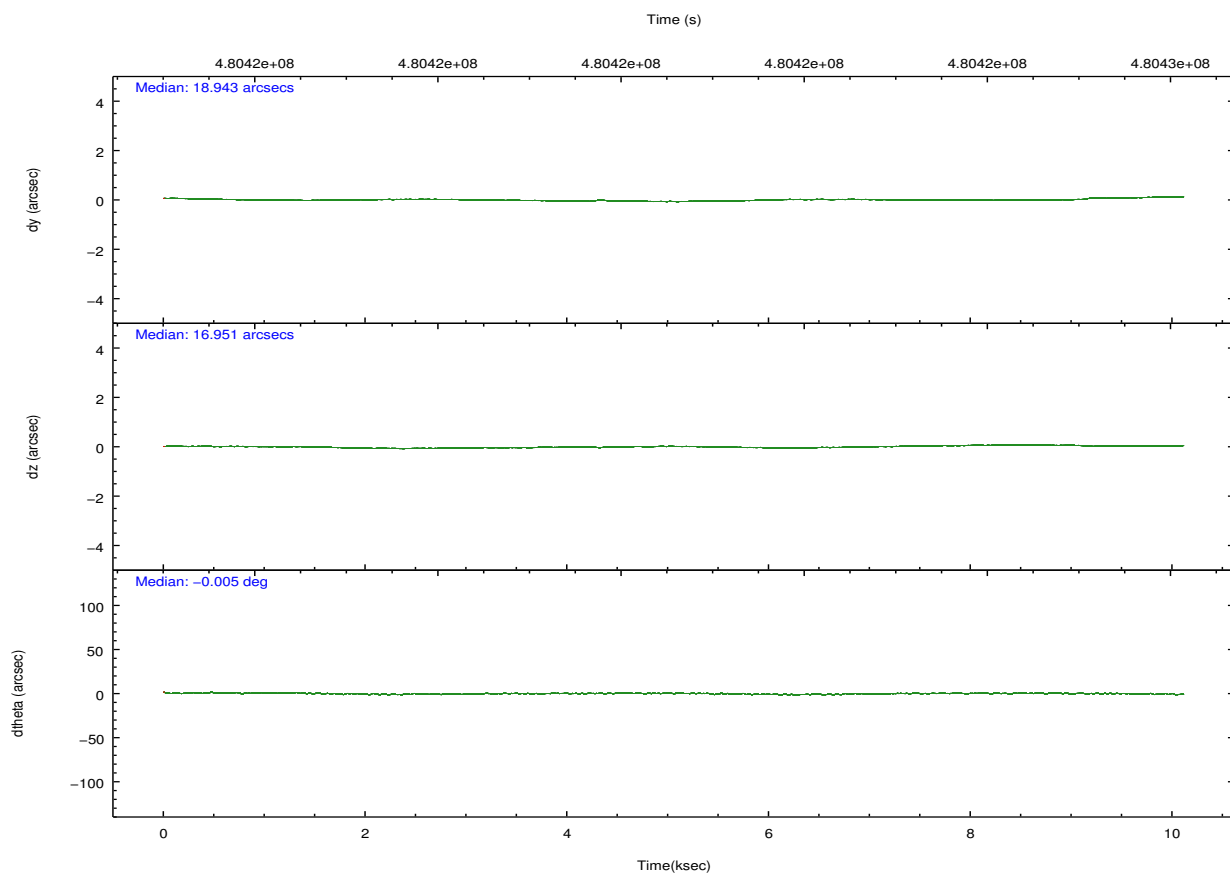
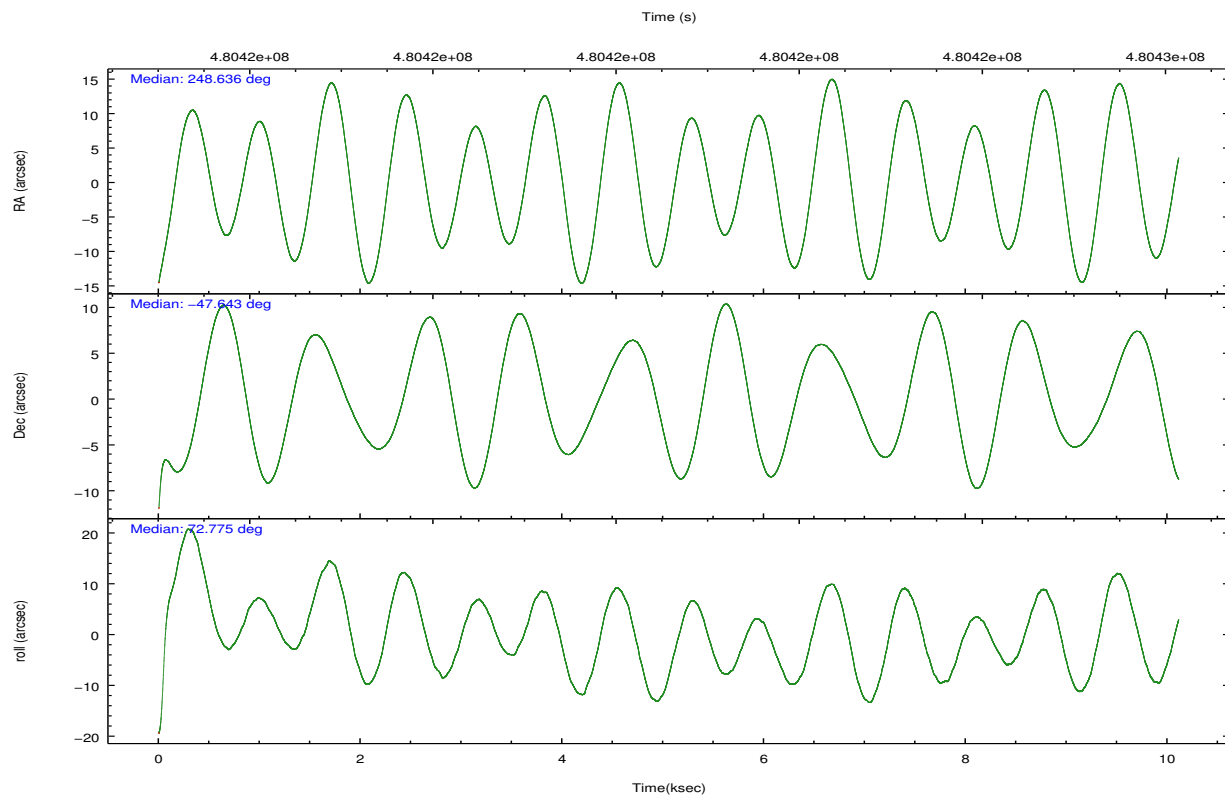
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	51277	49575	94070	55881	71041	67690	grade 0 events	3019	2655	7005	6257	3164	5951
rejected events	44126	43234	43608	44041	38561	48428		5%	5%	7%	11%	4%	8%
rejected %	86%	87%	46%	78%	54%	71%	grade 1 events	40	30	303	37	96	59
								0%	0%	0%	0%	0%	0%
							grade 2 events	1548	1293	15263	2223	6692	4453
								3%	2%	16%	3%	9%	6%
							grade 3 events	649	637	2164	912	2883	1958
								1%	1%	2%	1%	4%	2%
							grade 4 events	704	600	2248	831	2844	1859
								1%	1%	2%	1%	4%	2%
							grade 5 events	2236	2614	6252	2681	7325	3828
								4%	5%	6%	4%	10%	5%
							grade 6 events	1234	1159	23795	1620	16910	5075
								2%	2%	25%	2%	23%	7%
							grade 7 events	41847	40587	37040	41320	31127	44507
								81%	81%	39%	73%	43%	65%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	248.645856	248.6363044848	CCD I2 on	Y	Y
[deg] Pointing Dec	-47.669247	-47.64268668409087	CCD I3 on	Y	Y
[deg] Pointing Roll	72.629604	72.77914132271167	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	480415637.184000	480413869.55836	CCD S5 on	N	N
Observation start date	2013-03-23T08:46:10	2013-03-23T08:17:49	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	480425637.184000	480426883.98406	On-chip summing requested	N	N
Observation end date	2013-03-23T11:32:50	2013-03-23T11:54:43	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



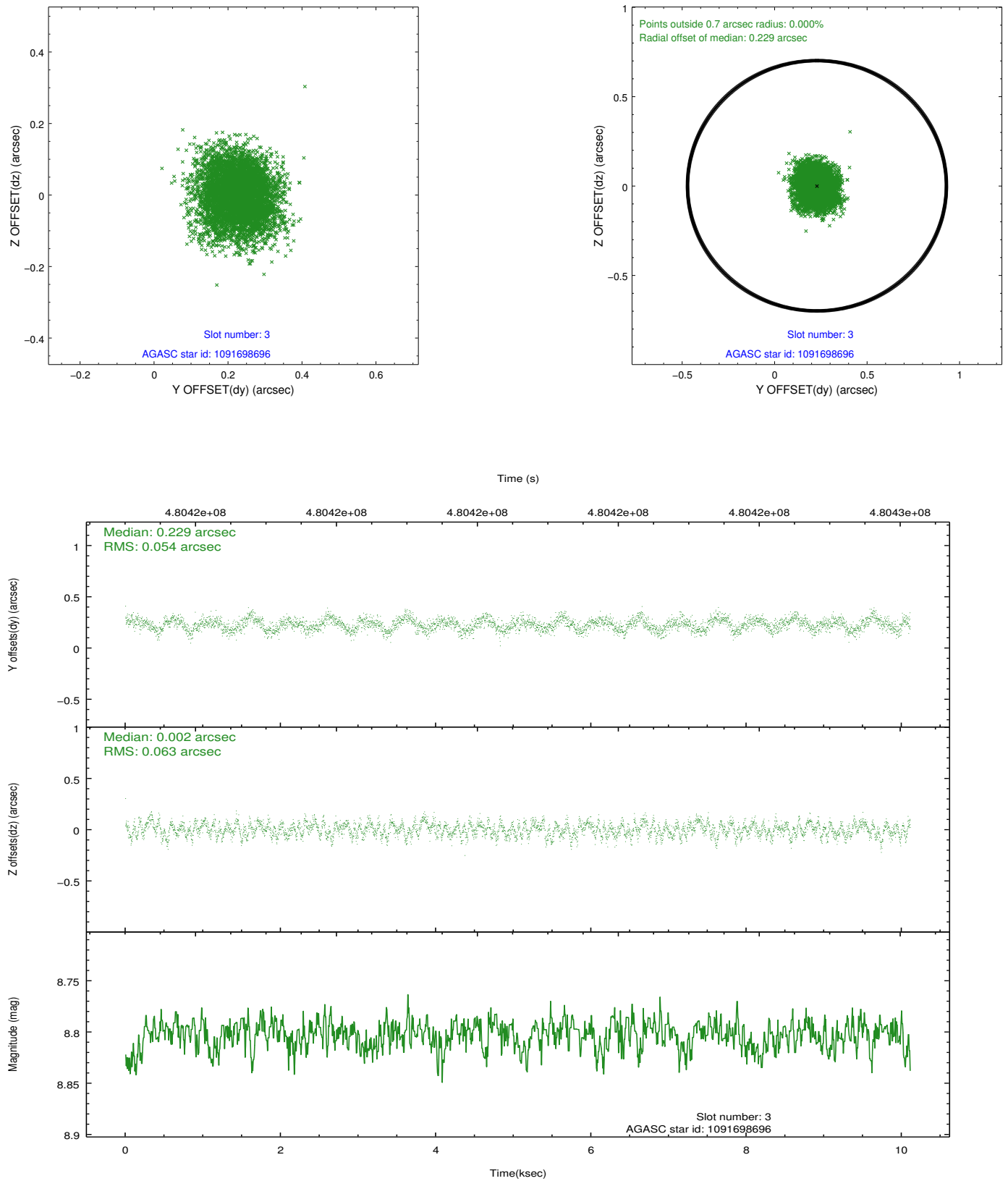


Slot Statistics

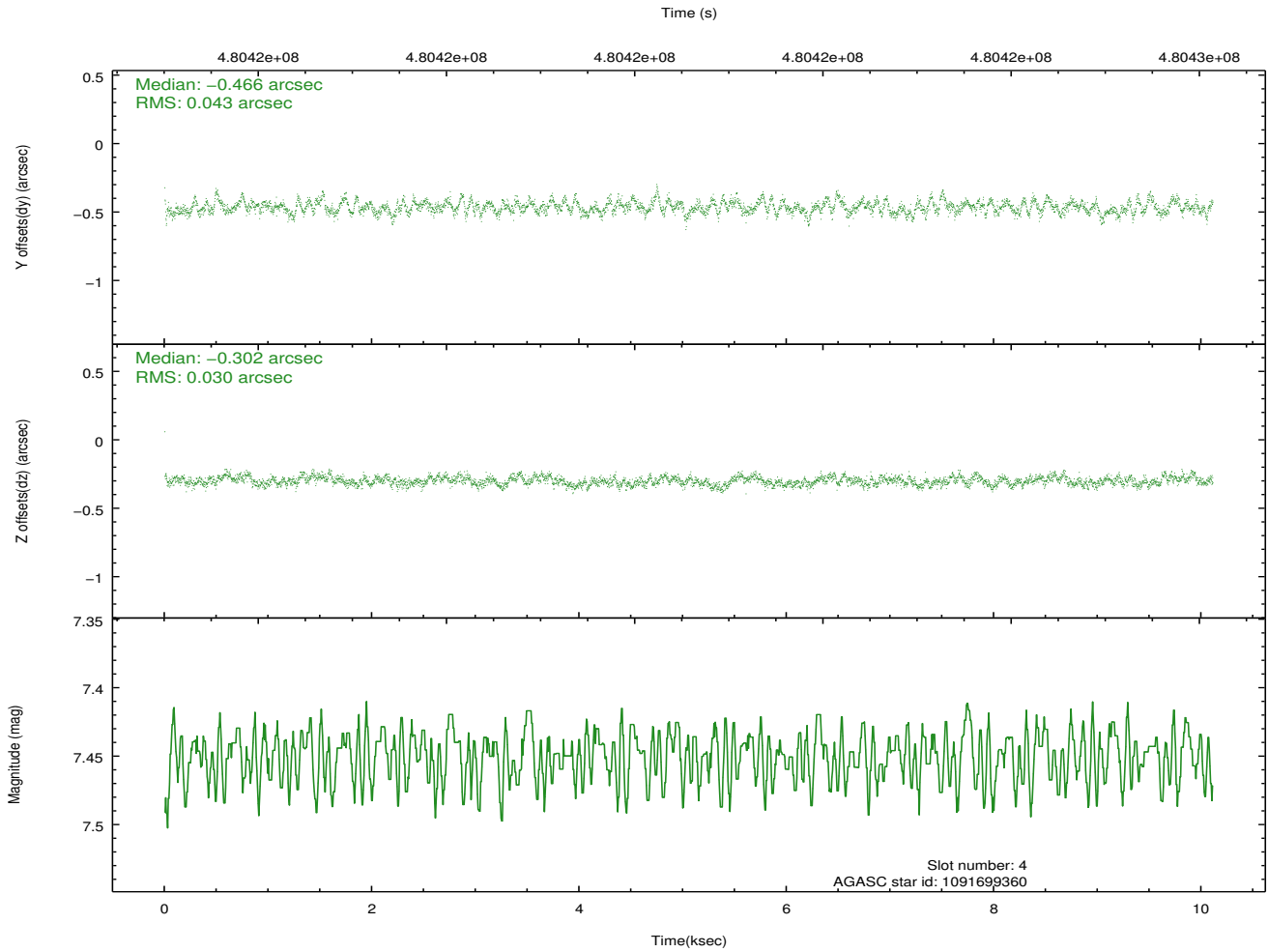
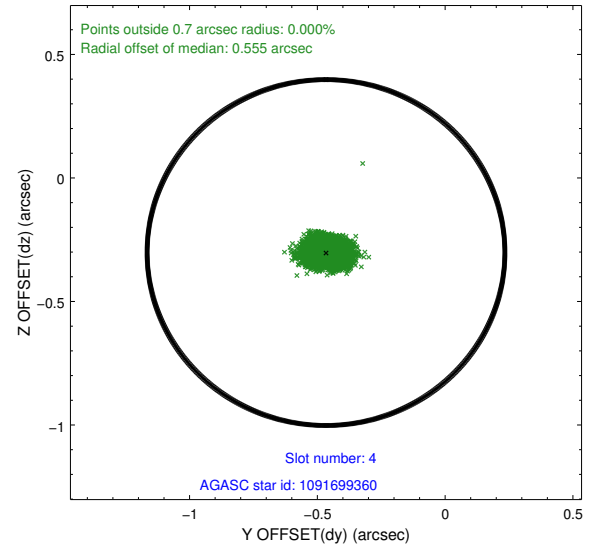
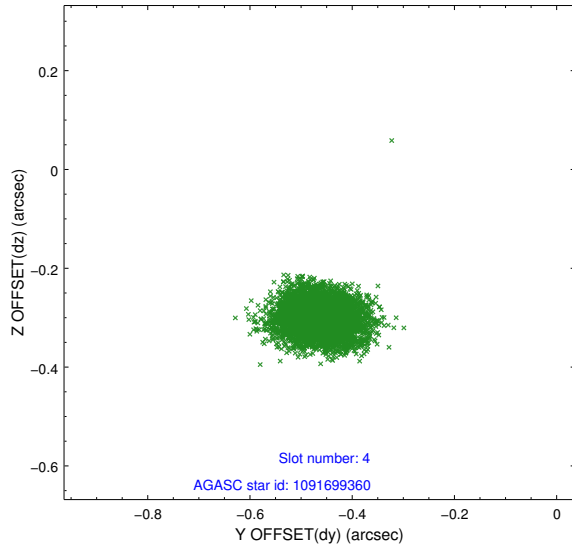
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.09	2466	0.063	-0.058	0.007	0.012	0.000000	0.000000	924.05	-1734.02
1	FID		ACIS-S-4	7.09	2467	0.194	0.015	0.007	0.012	0.000000	0.000000	2141.89	169.66
2	FID		ACIS-S-5	7.13	2467	-0.284	0.056	0.006	0.011	0.000000	0.000000	-1824.48	163.91
3	GUIDE	used	1091698696	8.80	4932	0.229	0.002	0.089	0.143	248.529134	-48.079711	-1493.99	-173.26
4	GUIDE	used	1091699360	7.45	4933	-0.466	-0.302	0.054	0.091	248.660725	-47.004364	2294.92	679.76
5	GUIDE	used	1091702440	8.73	4928	0.160	-0.316	0.079	0.127	248.295809	-47.683380	-302.97	793.93
6	GUIDE	used	1091709768	7.72	4928	0.063	0.152	0.054	0.087	249.435228	-47.706899	432.52	-1868.10
7	GUIDE	used	1091699976	9.22	4922	0.012	0.464	0.115	0.184	249.617486	-47.776281	320.67	-2362.59

2.4 Star Slots

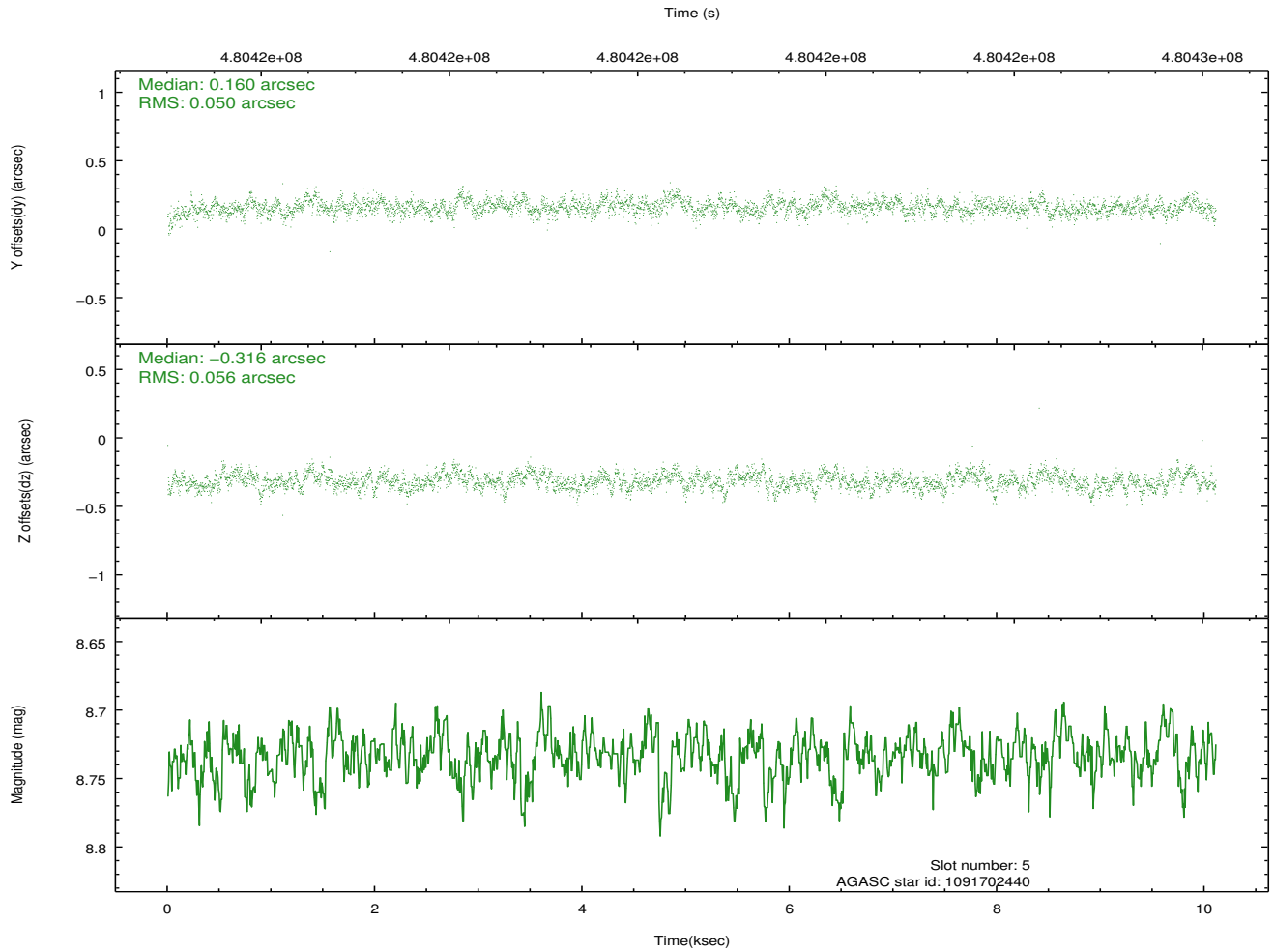
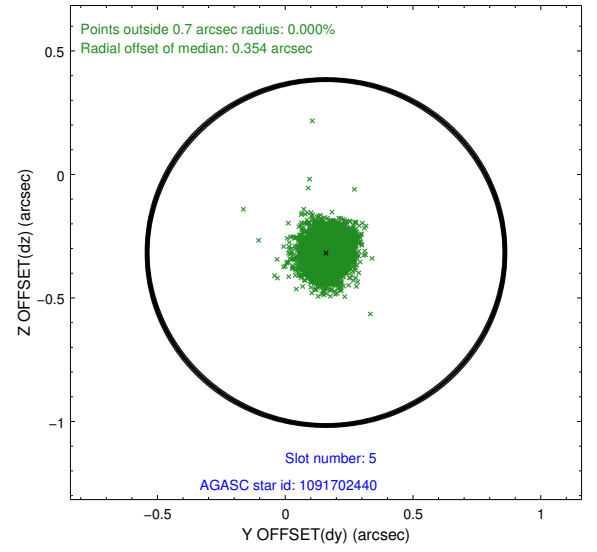
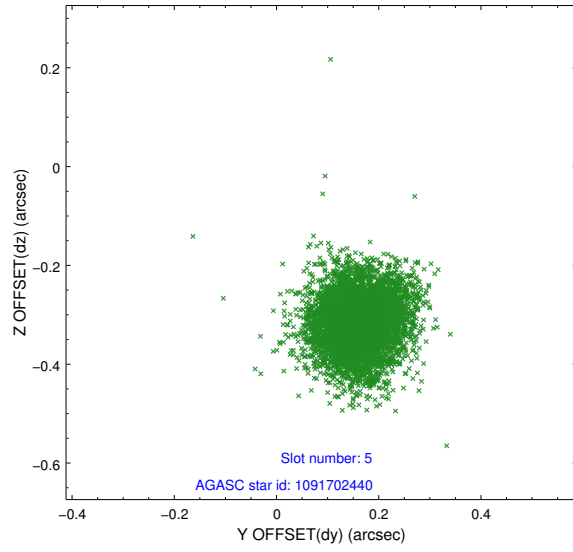
2.4.1 Slot 3



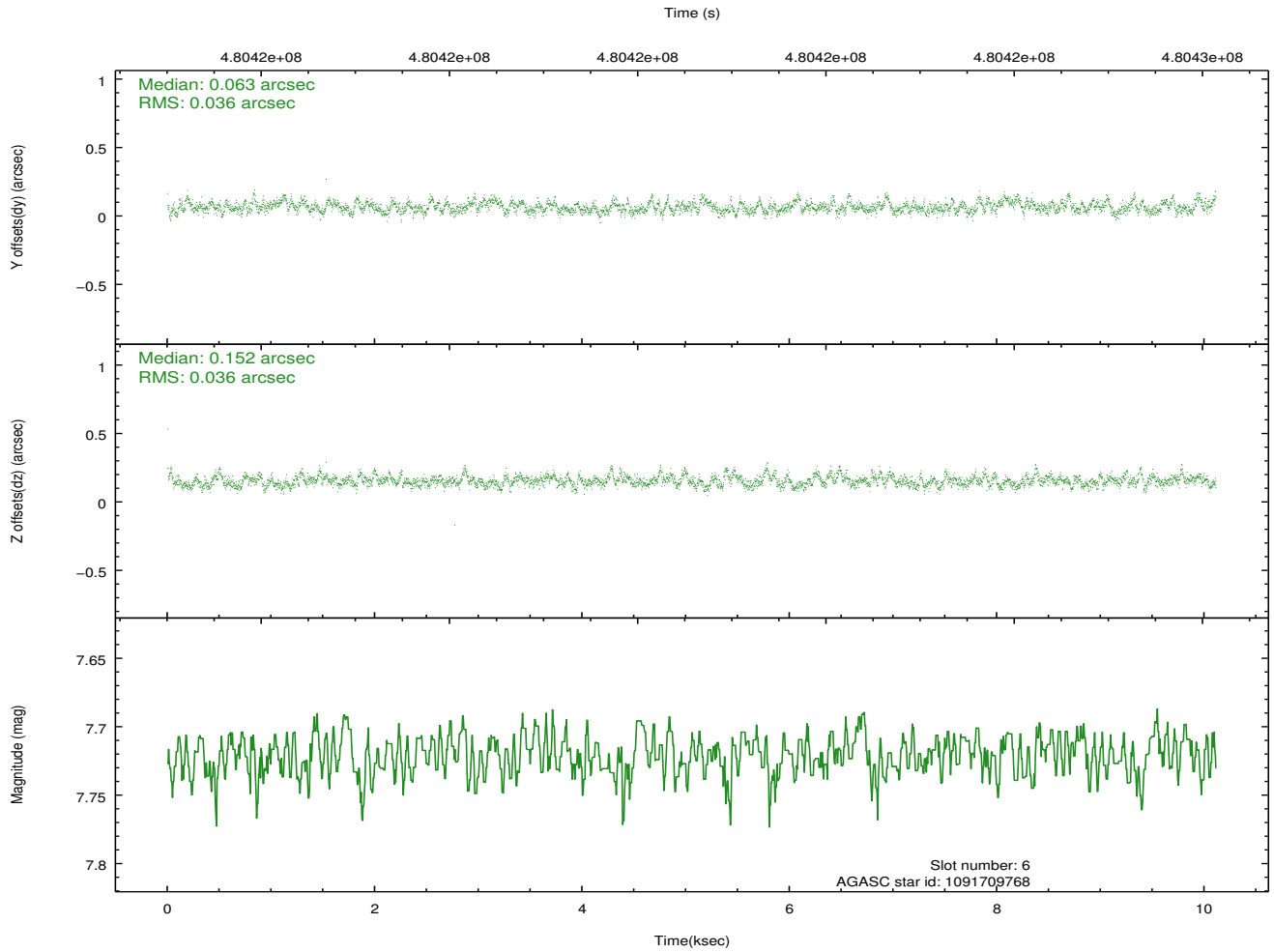
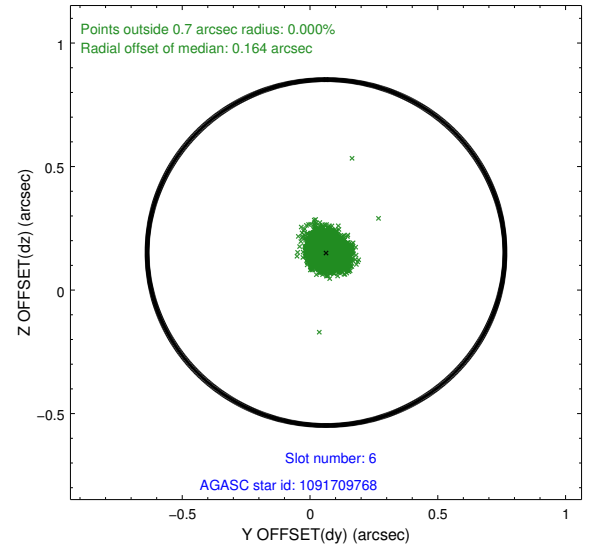
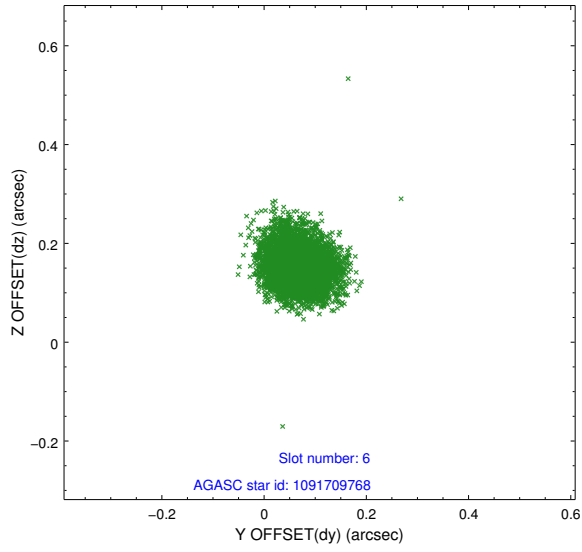
2.4.2 Slot 4



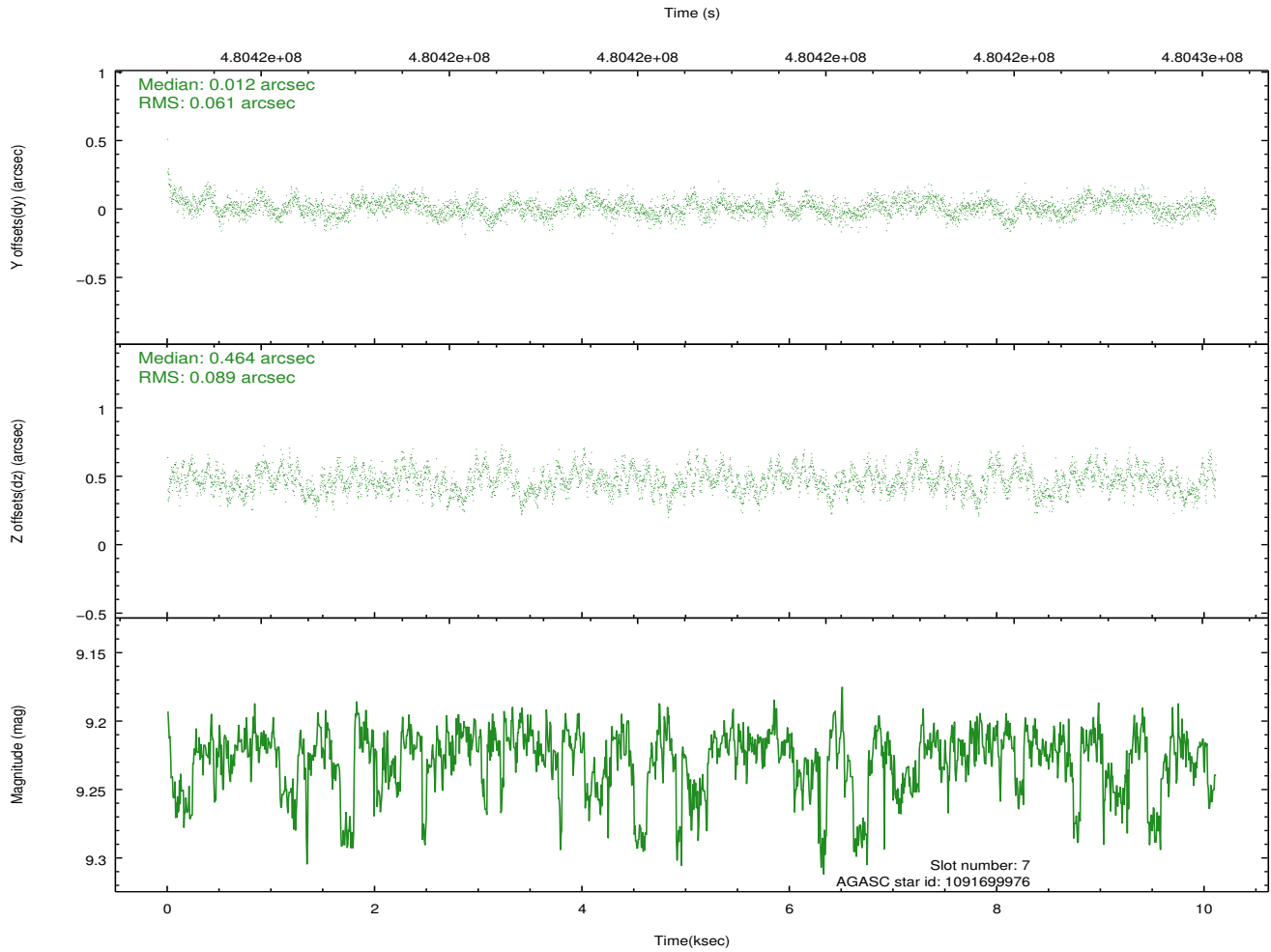
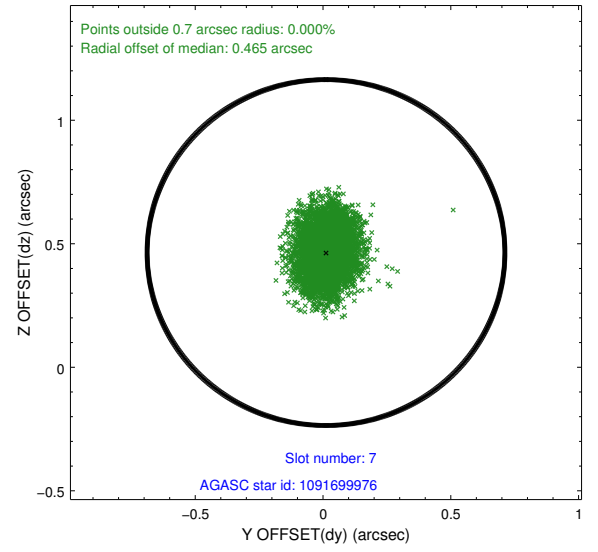
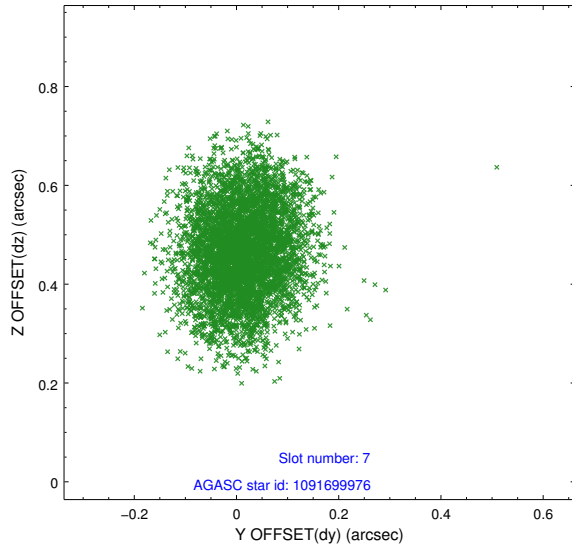
2.4.3 Slot 5



2.4.4 Slot 6

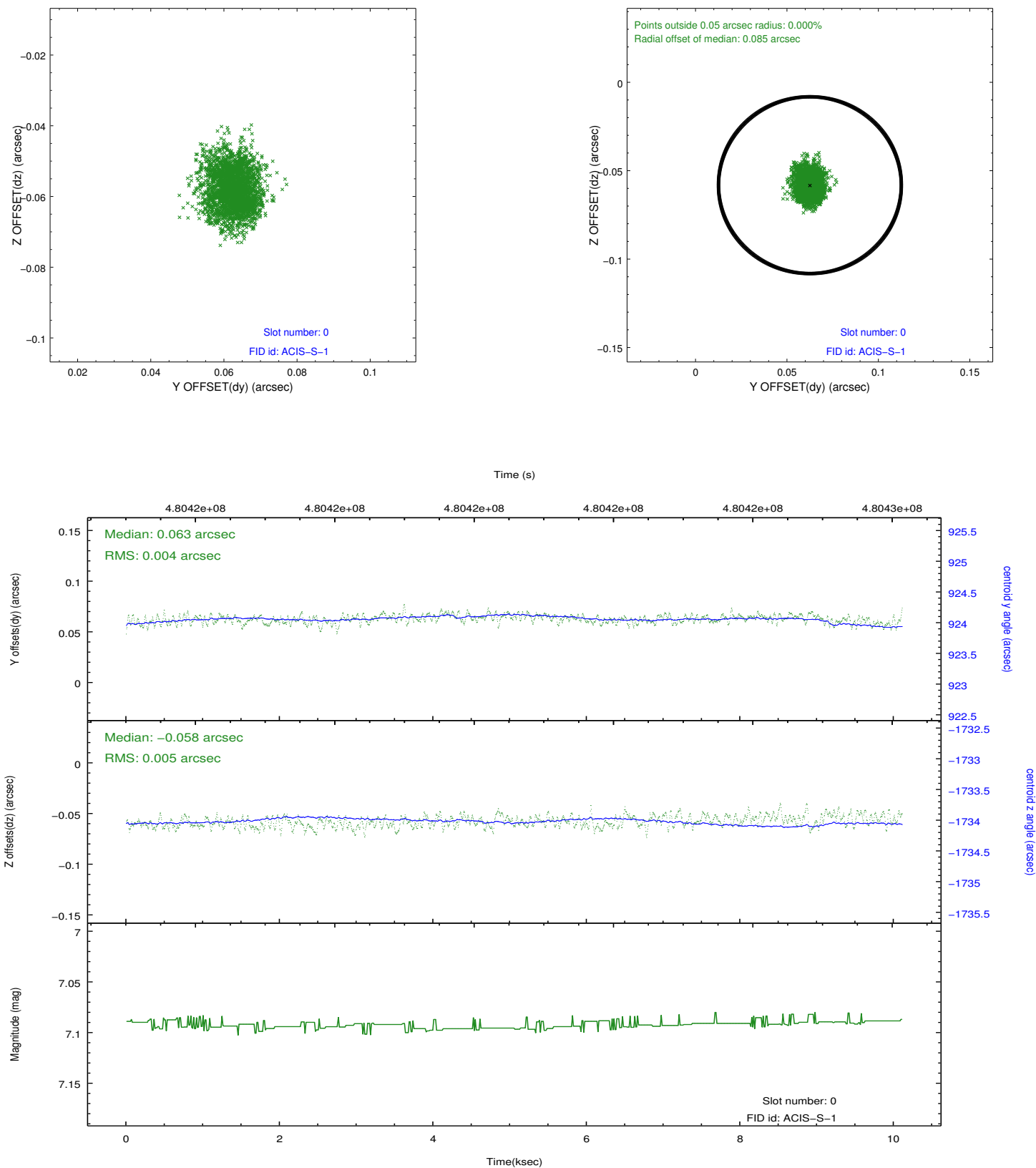


2.4.5 Slot 7

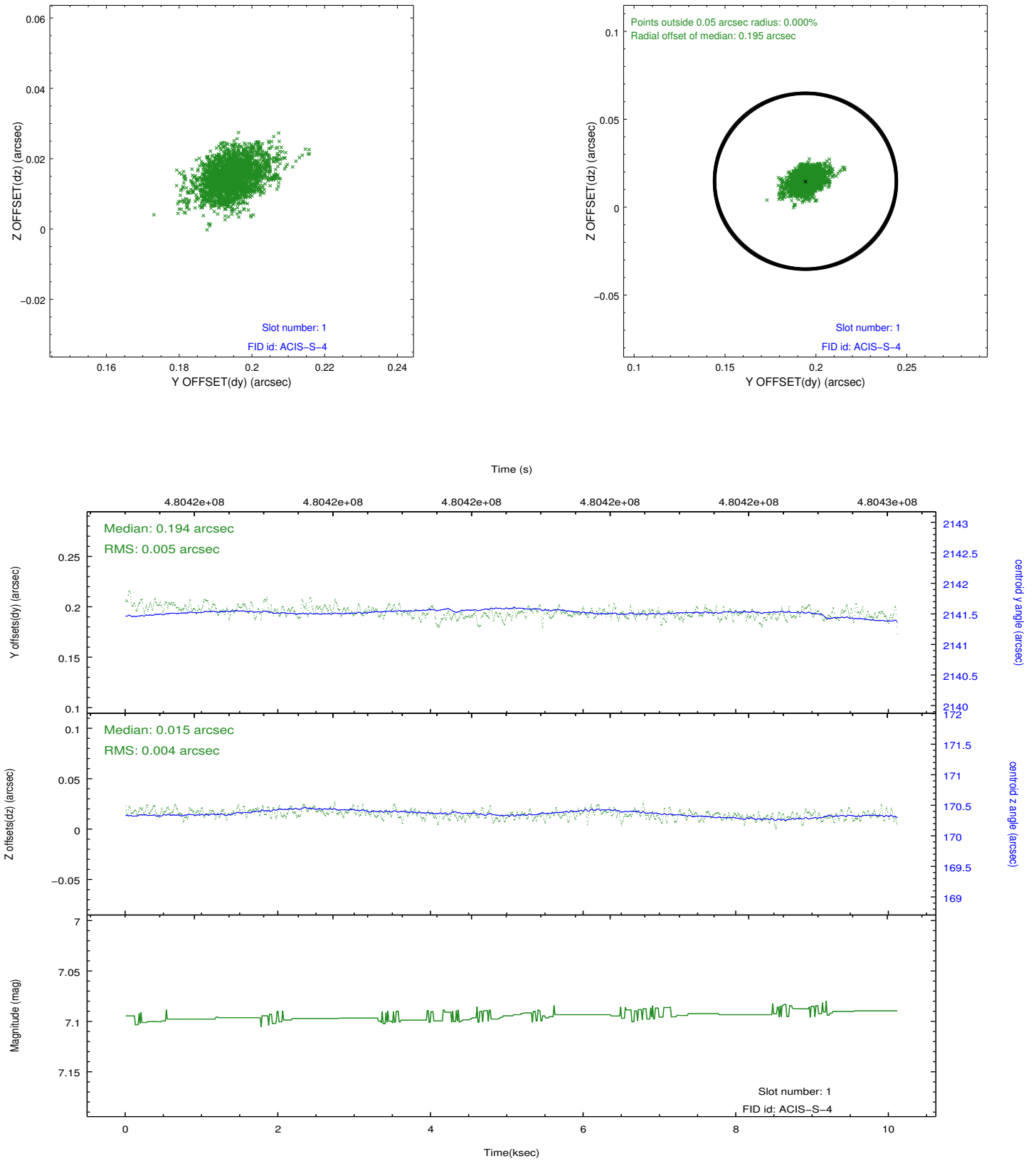


2.5 FID Slots

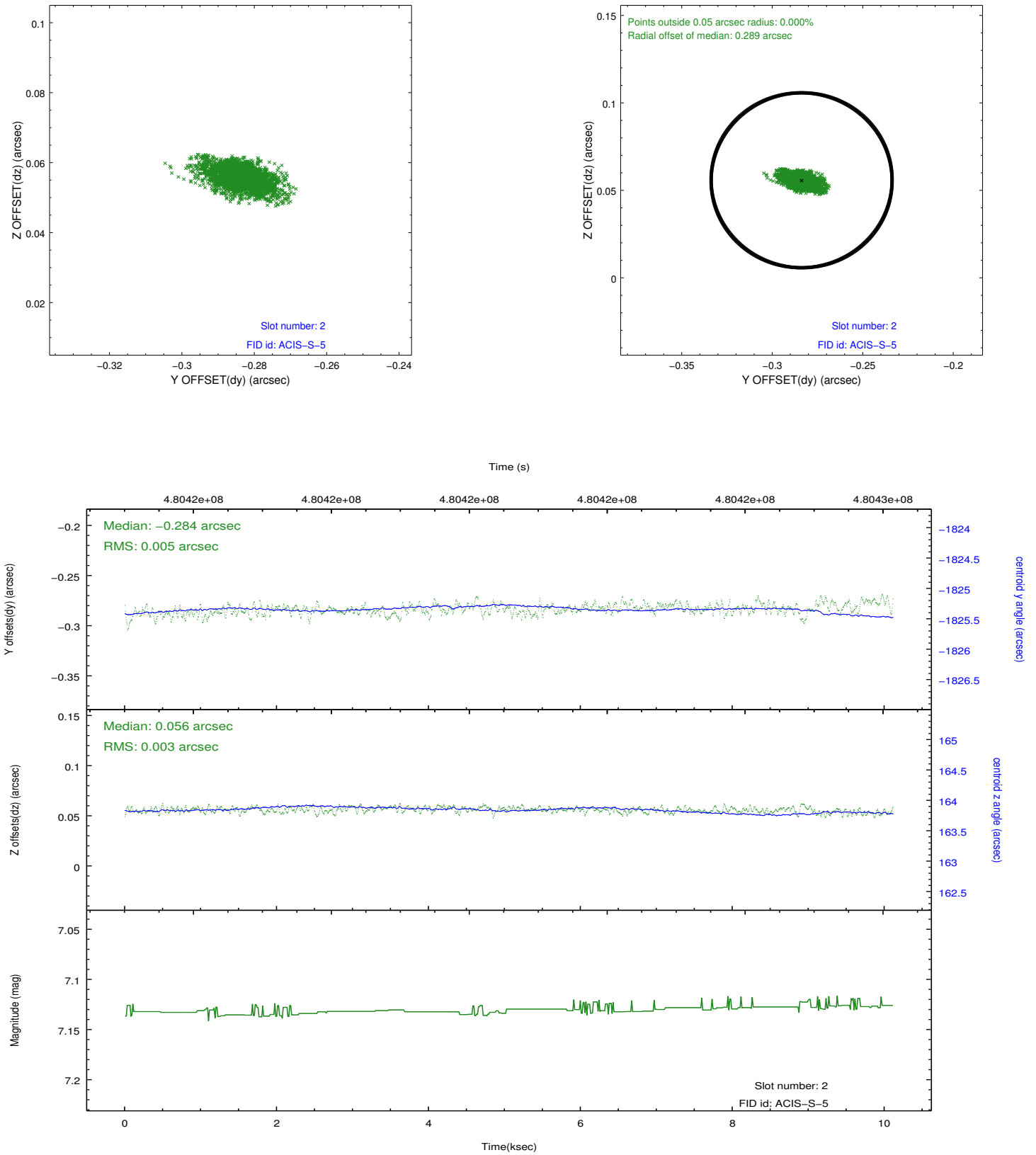
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.9647700818181

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.