

V&V Reference Report

L2 ASCDS Version : 10.3.1

Observation 16147 - L2 Version 1
Chandra X-Ray Center

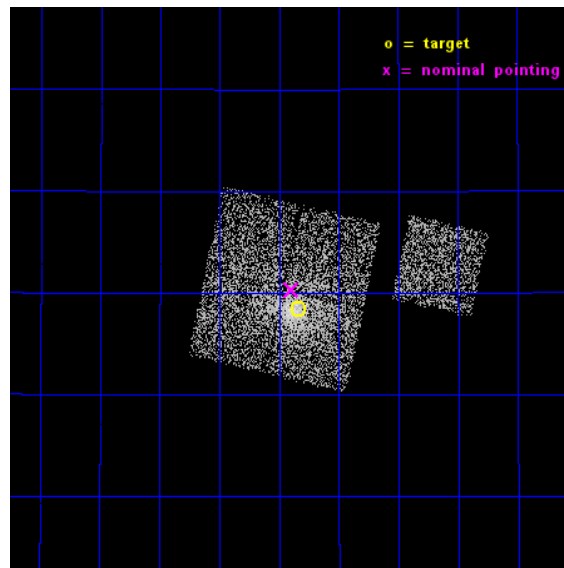
L2 Processing Date : Jan 16 2015

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1 Front

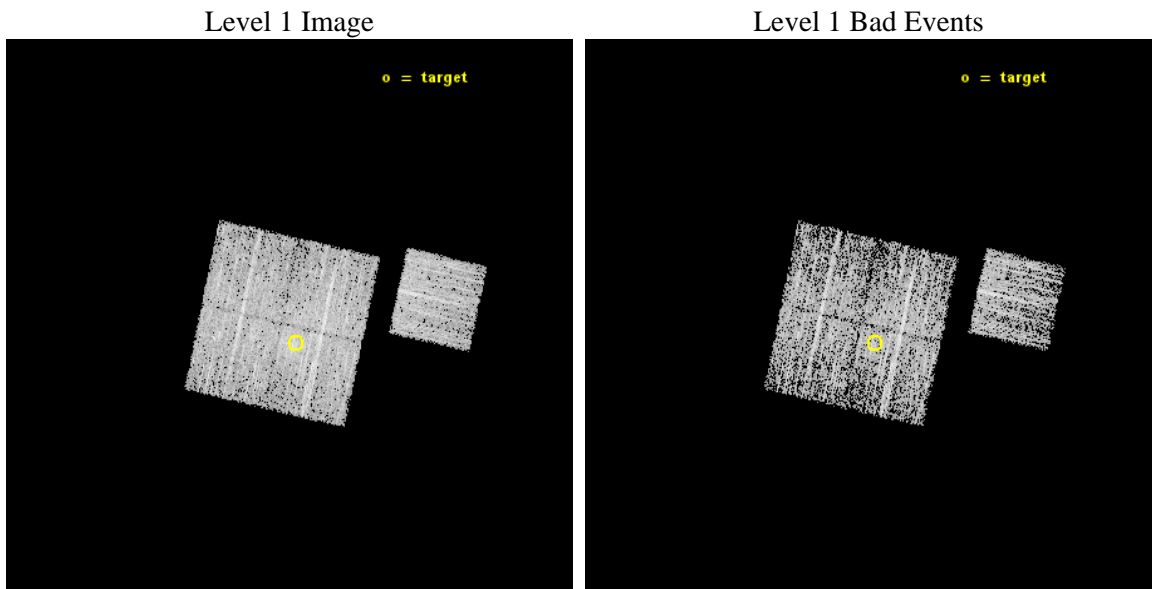
seq_num	801400	Sequence number
obs_id	16147	Observation id
title	Setting the Scale: Supporting precision cluster cosmology with Chandra observations of low-z lensing clusters	Proposal title
observer	Dr Adam Mantz	Principal investigator
object	A961	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	154.085	Observer's specified target RA [deg]
dec_targ	33.641	Observer's specified target Dec [deg]
ra_nom	154.0993568956	Nominal RA [deg]
dec_nom	33.672060920832	Nominal Dec [deg]
roll_nom	102.58727116326	Nominal Roll [deg]
revision	1	Processing version of data
ontime	5142.9000396729	Sum of GTIs [s]
livetime	5075.7042645066	Livetime [s]
ontime0	5139.7590095997	Sum of GTIs [s]
ontime1	5142.9000396729	Sum of GTIs [s]
ontime2	5136.6179988384	Sum of GTIs [s]
ontime3	5142.9000396729	Sum of GTIs [s]
ontime6	5142.9000396729	Sum of GTIs [s]
l2events	13020	Number of level 2 events



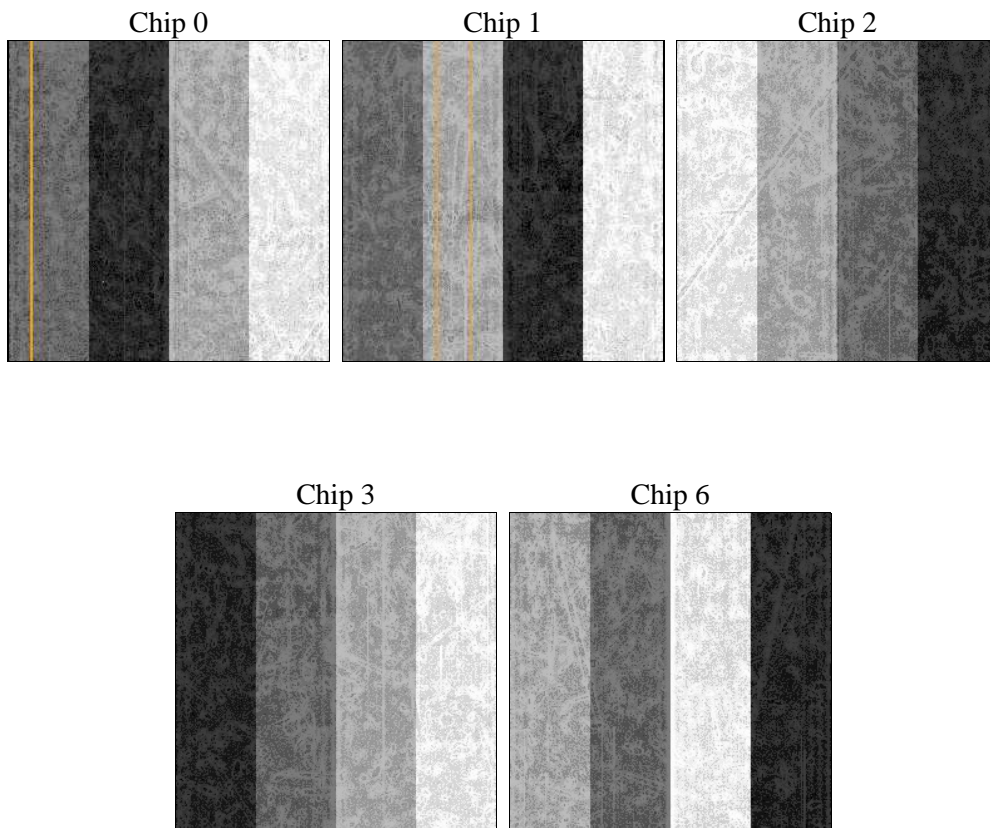
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5019.927000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	5142.9000396729	Sum of GTIs [s]
caldsver	4.6.5	 	ontime0	5139.7590095997	Sum of GTIs [s]
date	2015-01-17T01:10:38	Date and time of file creation	ontime1	5142.9000396729	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	5136.6179988384	Sum of GTIs [s]
			ontime3	5142.9000396729	Sum of GTIs [s]
			ontime6	5142.9000396729	Sum of GTIs [s]
			l1events	112149	Number of level 1 events

2.1.4 Events

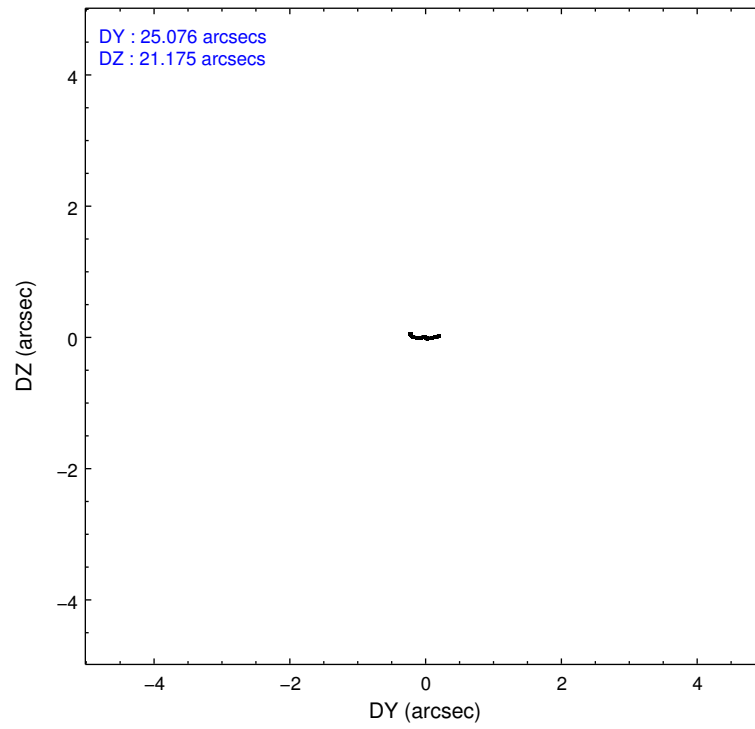
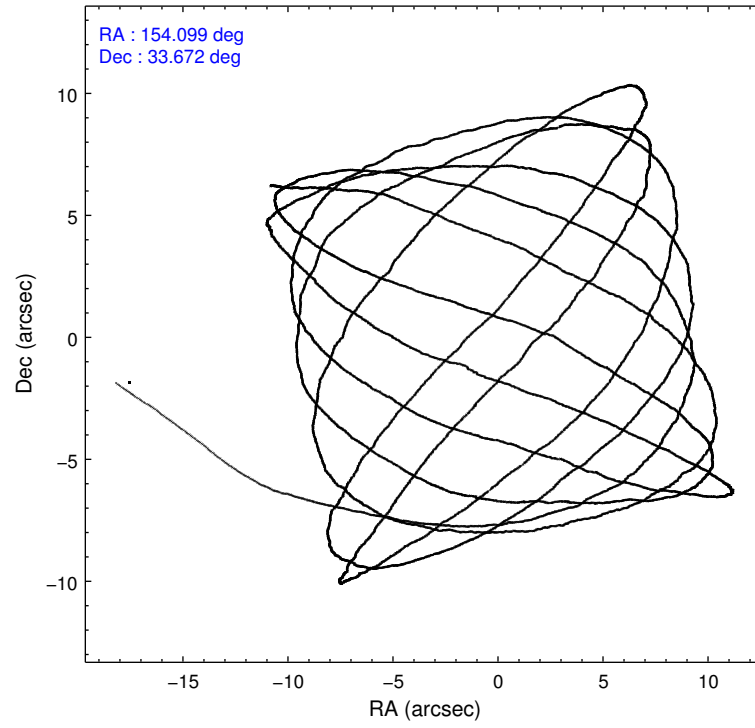
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	20475	21842	23204	23852	22776
rejected events	17850	18526	20391	19769	20188
rejected %	87%	84%	87%	82%	88%

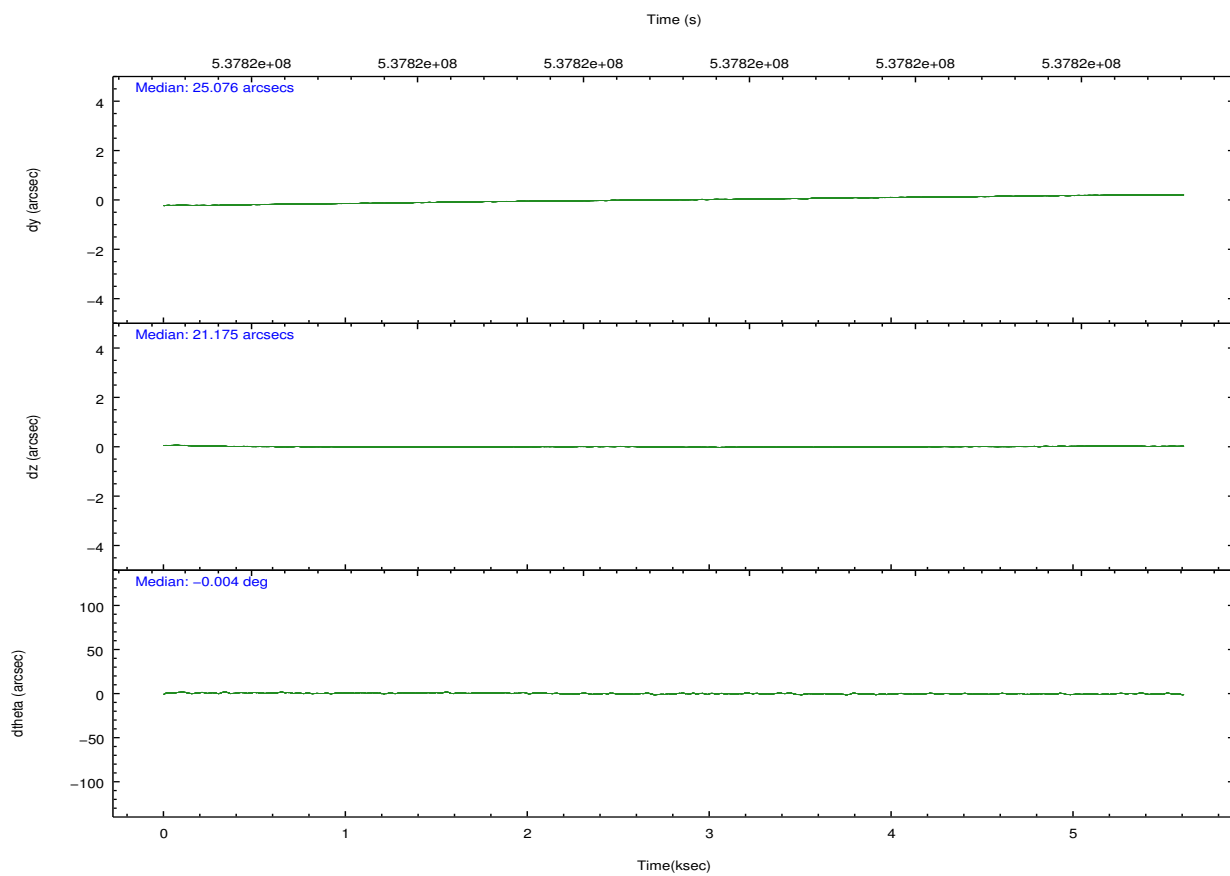
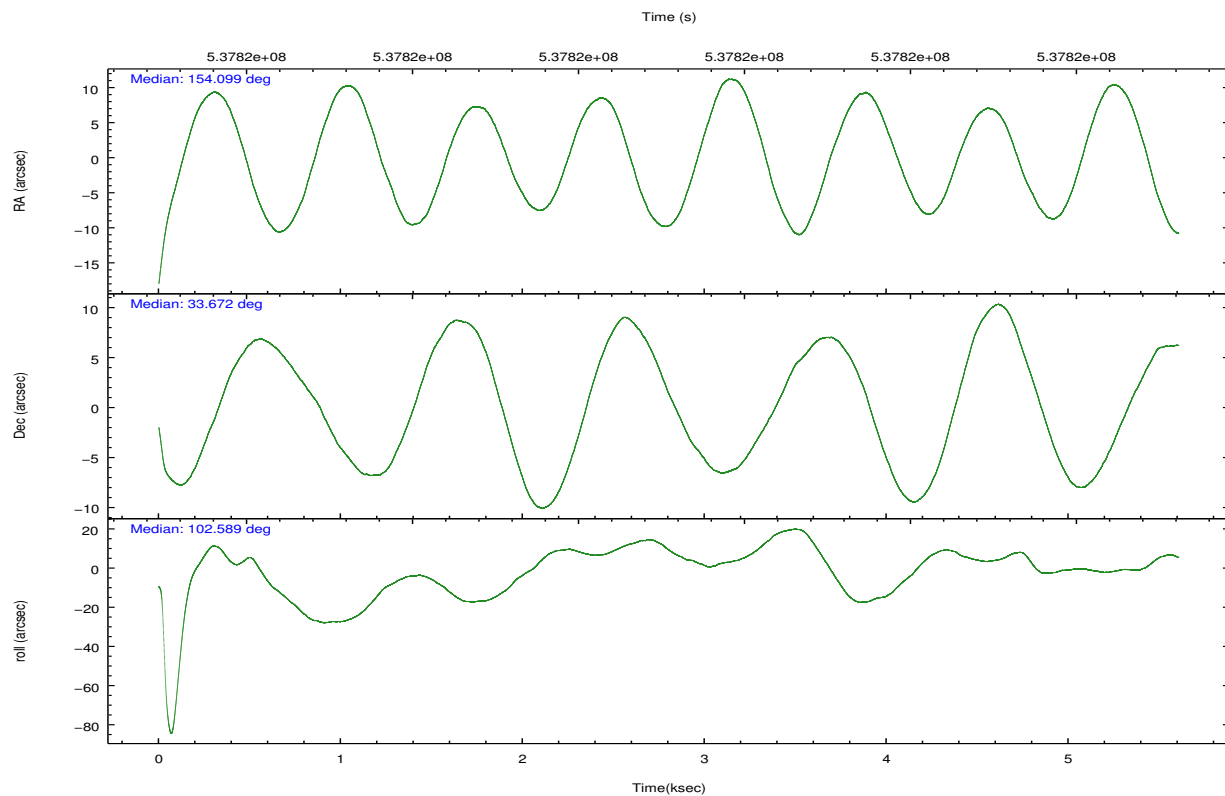
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	1039	1484	1170	2260	948
	5%	6%	5%	9%	4%
grade 1 events	14	29	8	12	16
	0%	0%	0%	0%	0%
grade 2 events	639	688	673	715	614
	3%	3%	2%	2%	2%
grade 3 events	255	308	245	329	264
	1%	1%	1%	1%	1%
grade 4 events	256	306	281	295	271
	1%	1%	1%	1%	1%
grade 5 events	771	800	728	917	782
	3%	3%	3%	3%	3%
grade 6 events	437	532	445	488	492
	2%	2%	1%	2%	2%
grade 7 events	17064	17695	19654	18836	19389
	83%	81%	84%	78%	85%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	154.121905	154.0993568956015	CCD I2 on	Y	Y
[deg] Pointing Dec	33.651844	33.67206092083241	CCD I3 on	Y	Y
[deg] Pointing Roll	102.366128	102.5872711632616	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	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	537818317.184000	537817143.49033	CCD S5 on	N	N
Observation start date	2015-01-16T17:57:30	2015-01-16T17:39:03	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	537823337.184000	537823578.44068	On-chip summing requested	N	N
Observation end date	2015-01-16T19:21:10	2015-01-16T19:26:18	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



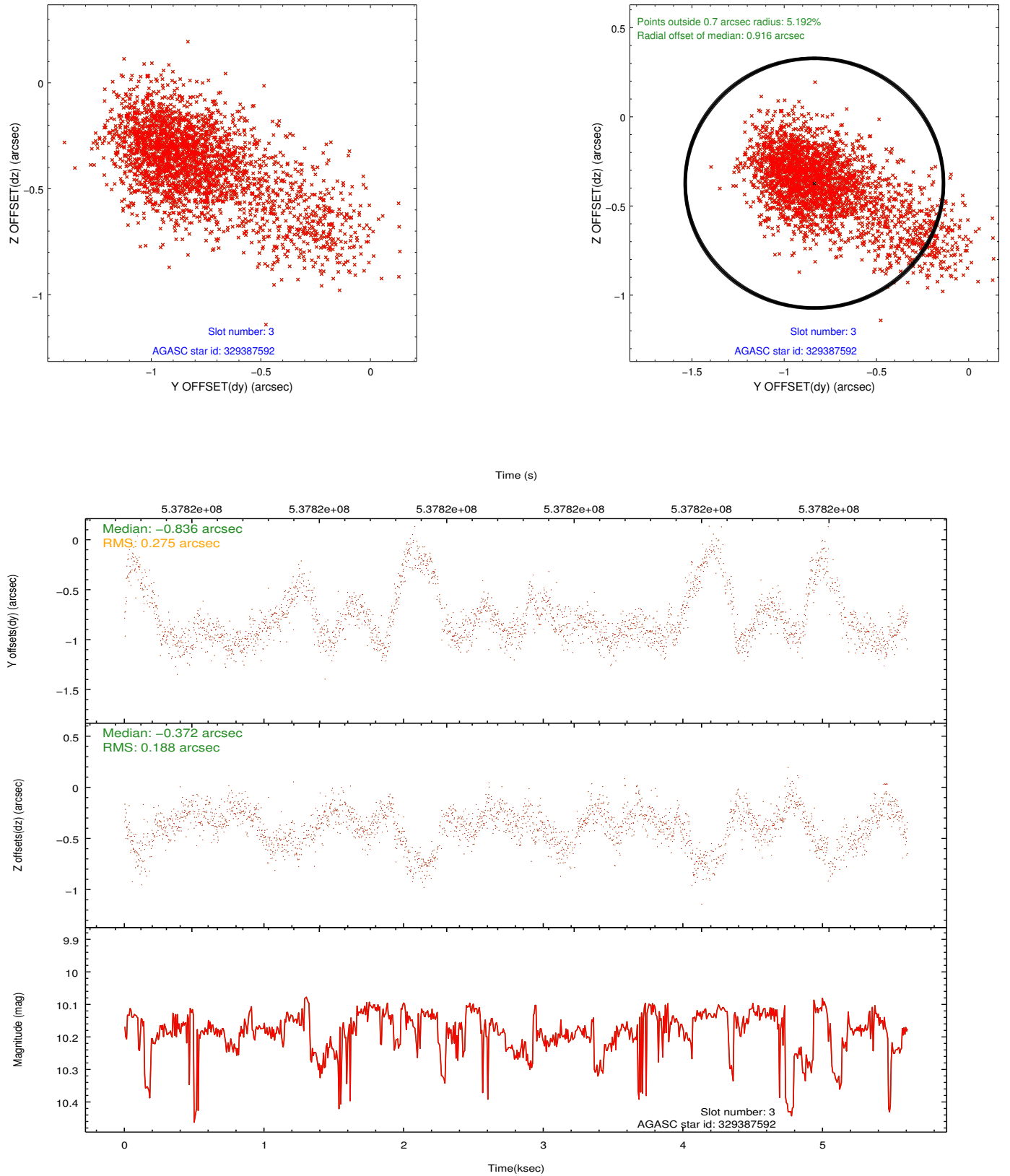


Slot Statistics

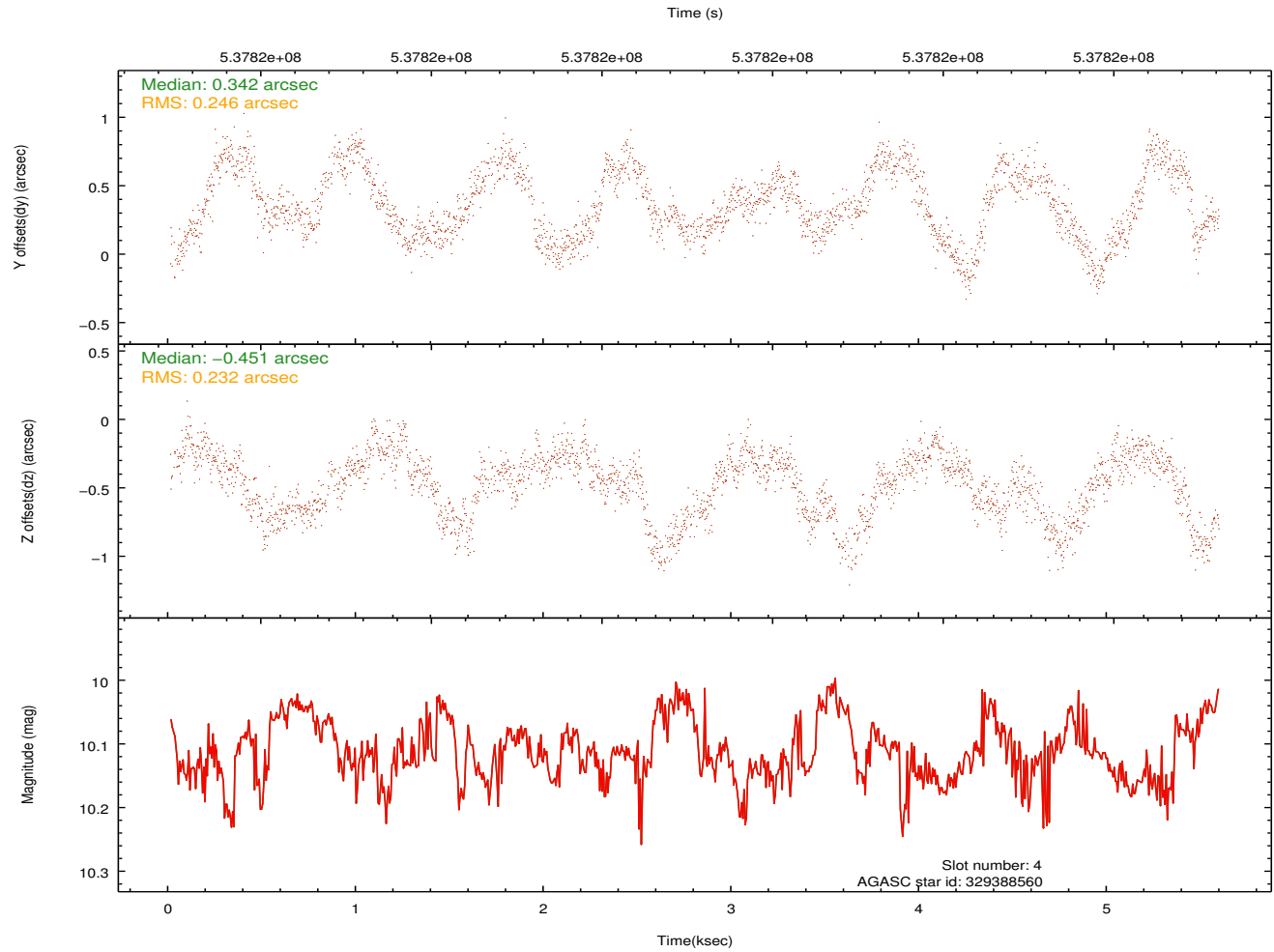
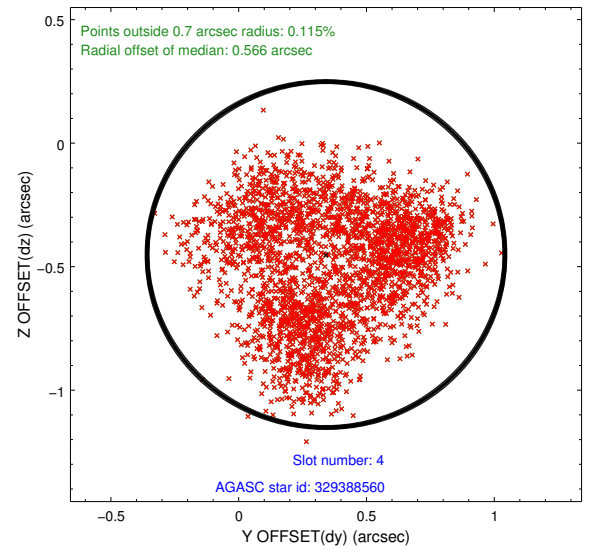
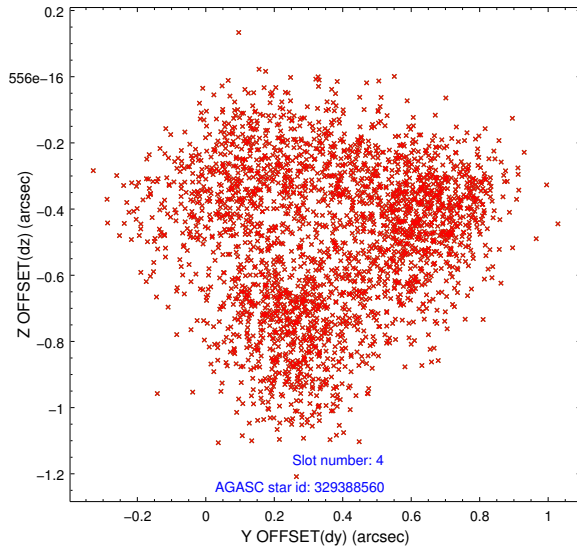
lot	status	used	id	mag	n_pts	med_dy	med_dz	drl	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-I-1	7.14	1368	0.061	-0.026	0.013	0.022	0.000000	0.000000	914.20	-844.93
1	FID		ACIS-I-5	7.13	1368	-0.319	0.034	0.009	0.014	0.000000	0.000000	-1833.78	1051.98
2	FID		ACIS-I-6	7.13	1368	0.165	0.065	0.008	0.013	0.000000	0.000000	378.58	1697.83
3	BAD	used	329387592	10.18	2600	-0.836	-0.372	0.296	0.706	153.781975	34.201704	2152.02	564.33
4	BAD	used	329388560	10.12	2605	0.342	-0.451	0.371	0.526	153.320157	34.100359	2099.21	1986.93
5	GUIDE	used	329389024	9.29	2734	-0.095	-0.089	0.170	0.274	153.717750	33.741164	576.31	1114.66
6	GUIDE	used	329392240	9.04	2735	0.092	0.020	0.140	0.224	154.039456	33.793970	553.12	131.59
7	GUIDE	used	329390024	10.16	2722	0.365	0.897	0.368	0.545	154.644229	34.133581	1365.66	-1891.76

2.4 Star Slots

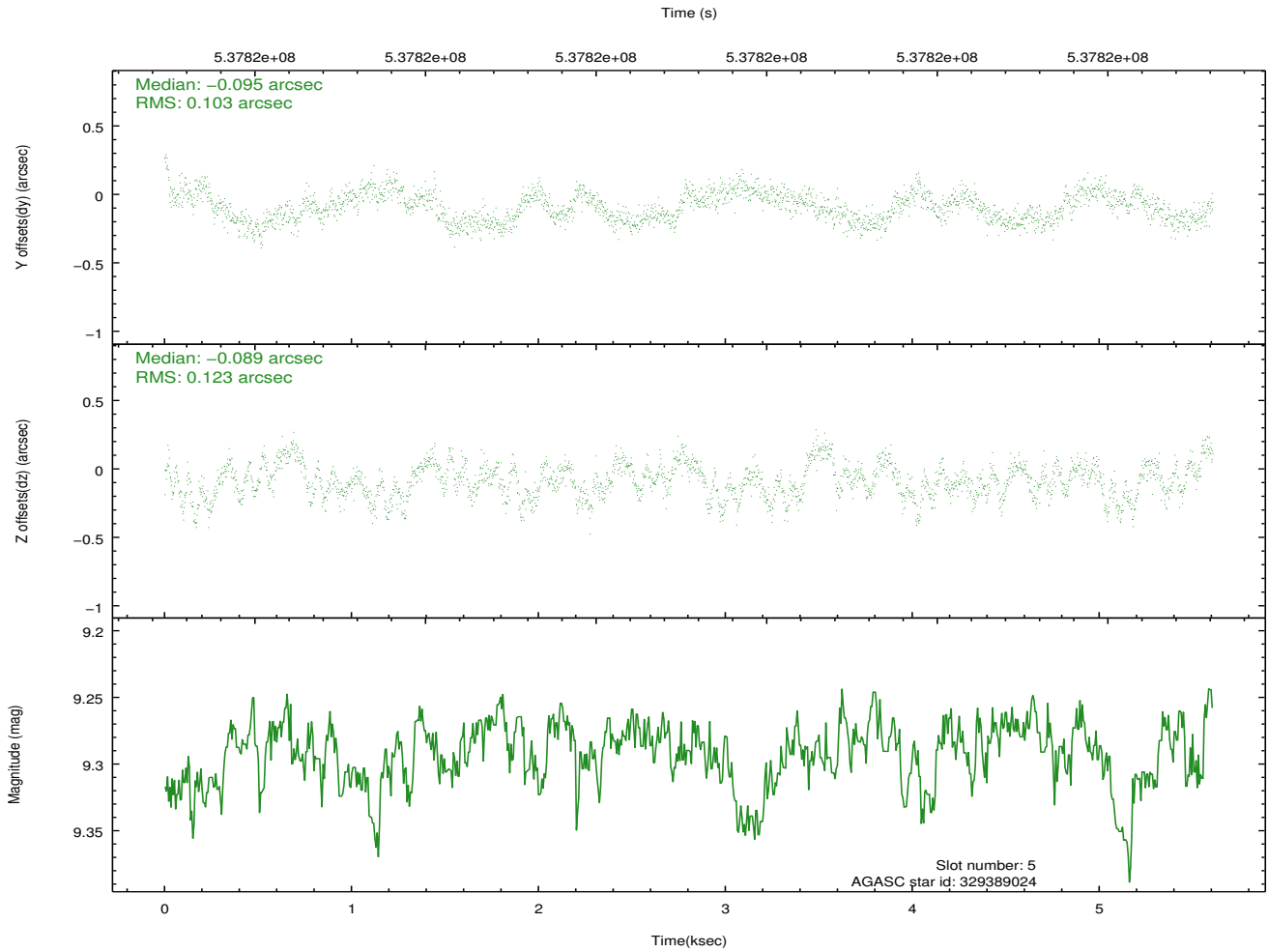
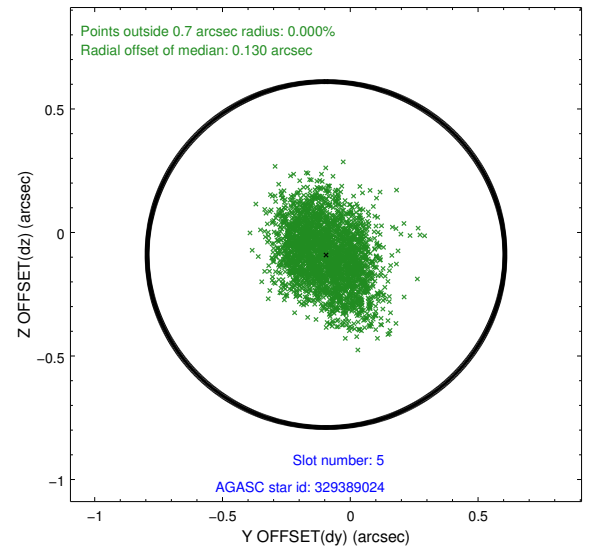
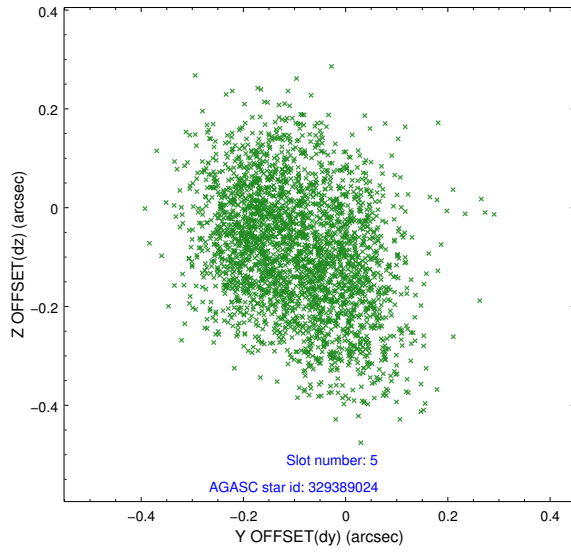
2.4.1 Slot 3



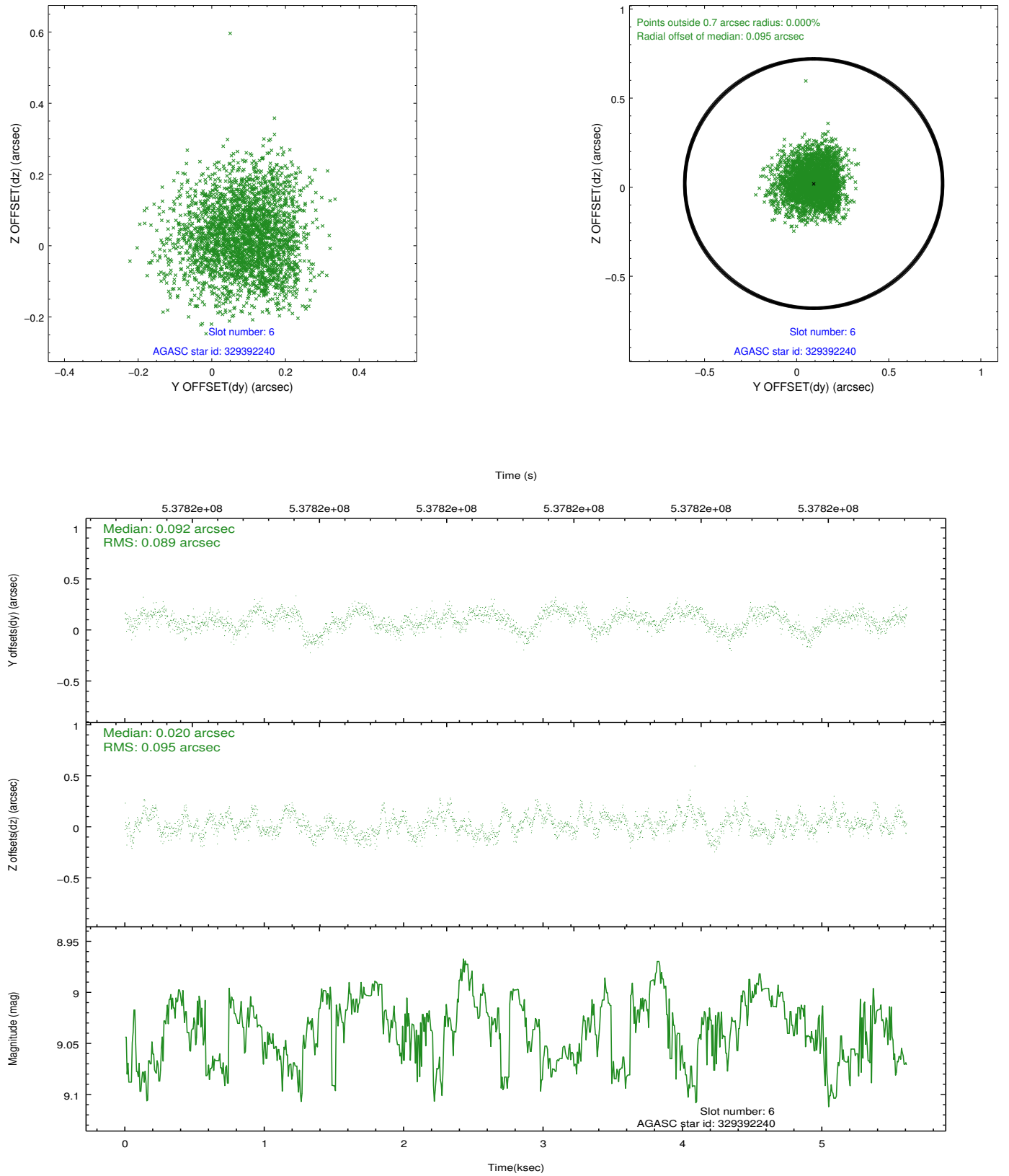
2.4.2 Slot 4



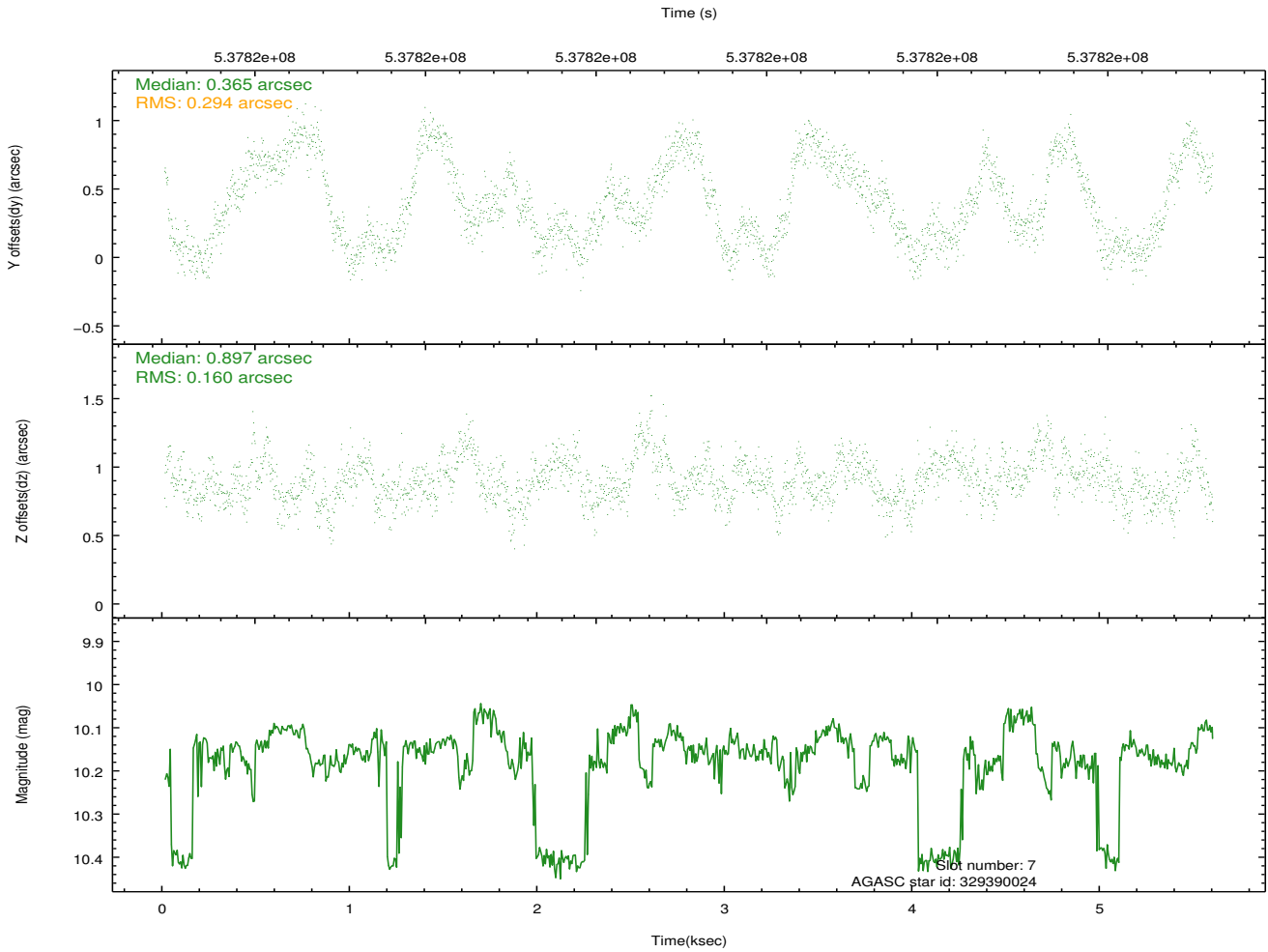
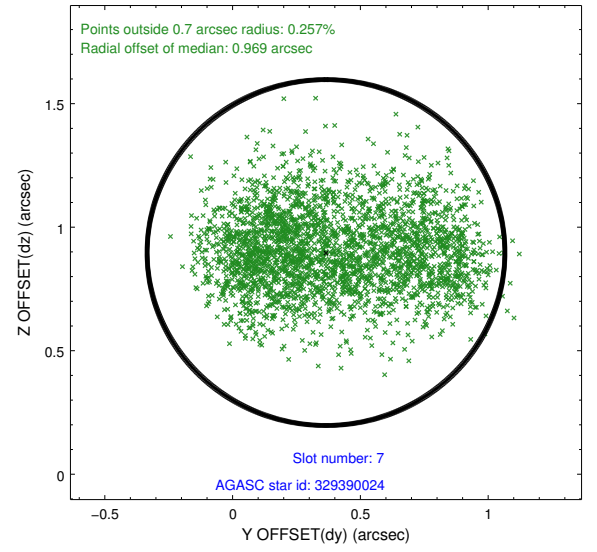
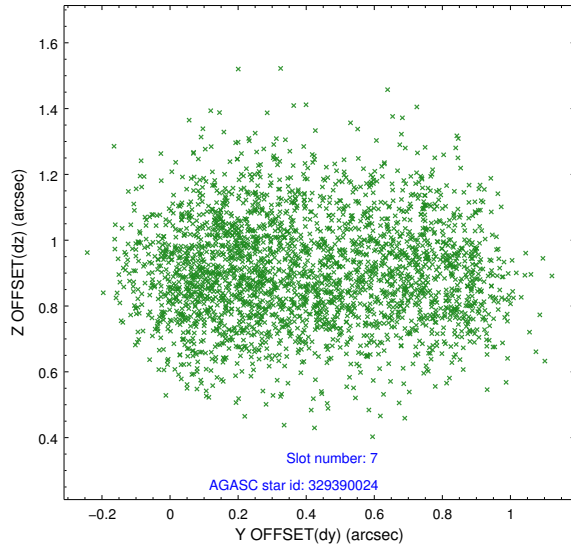
2.4.3 Slot 5



2.4.4 Slot 6

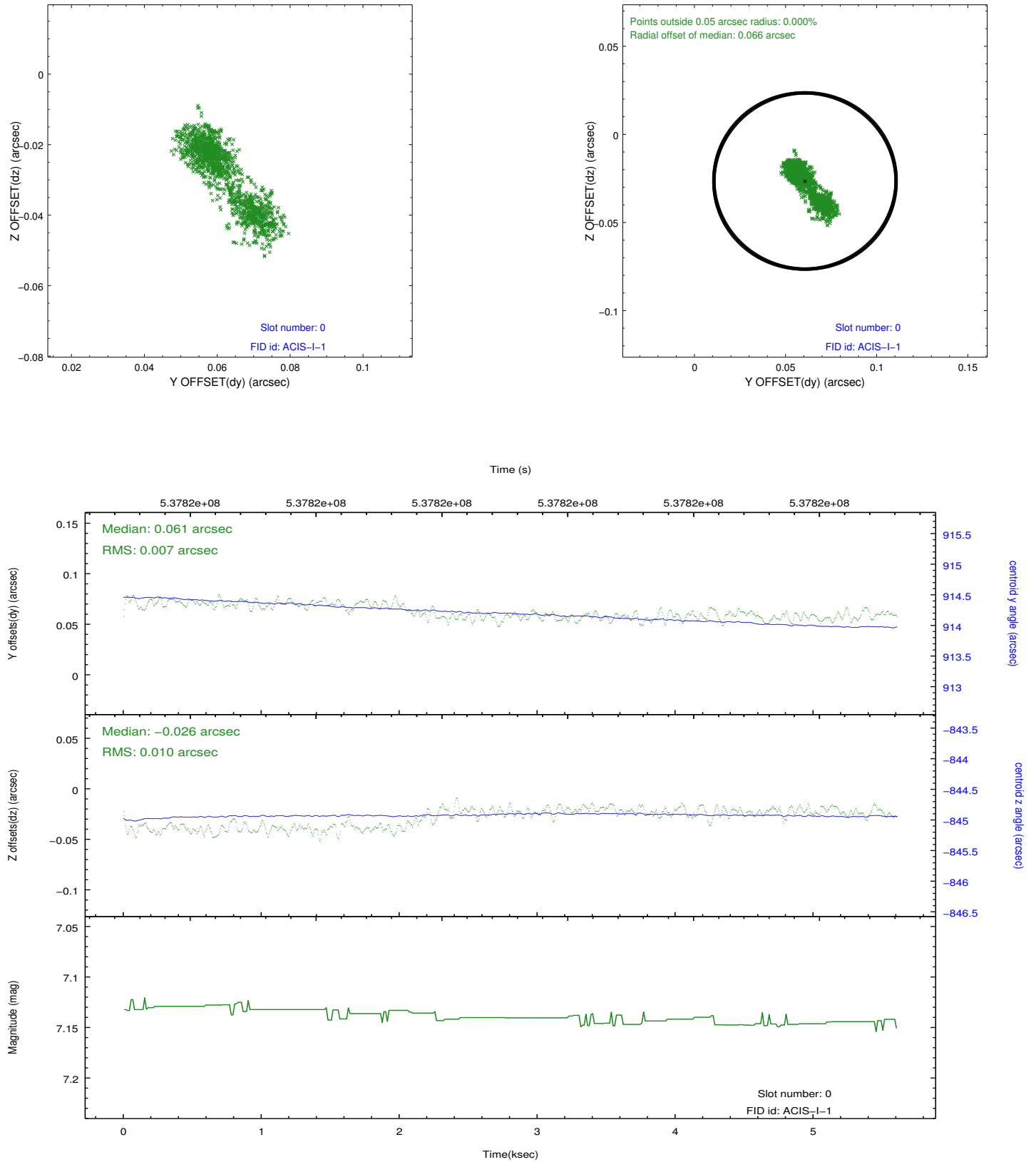


2.4.5 Slot 7

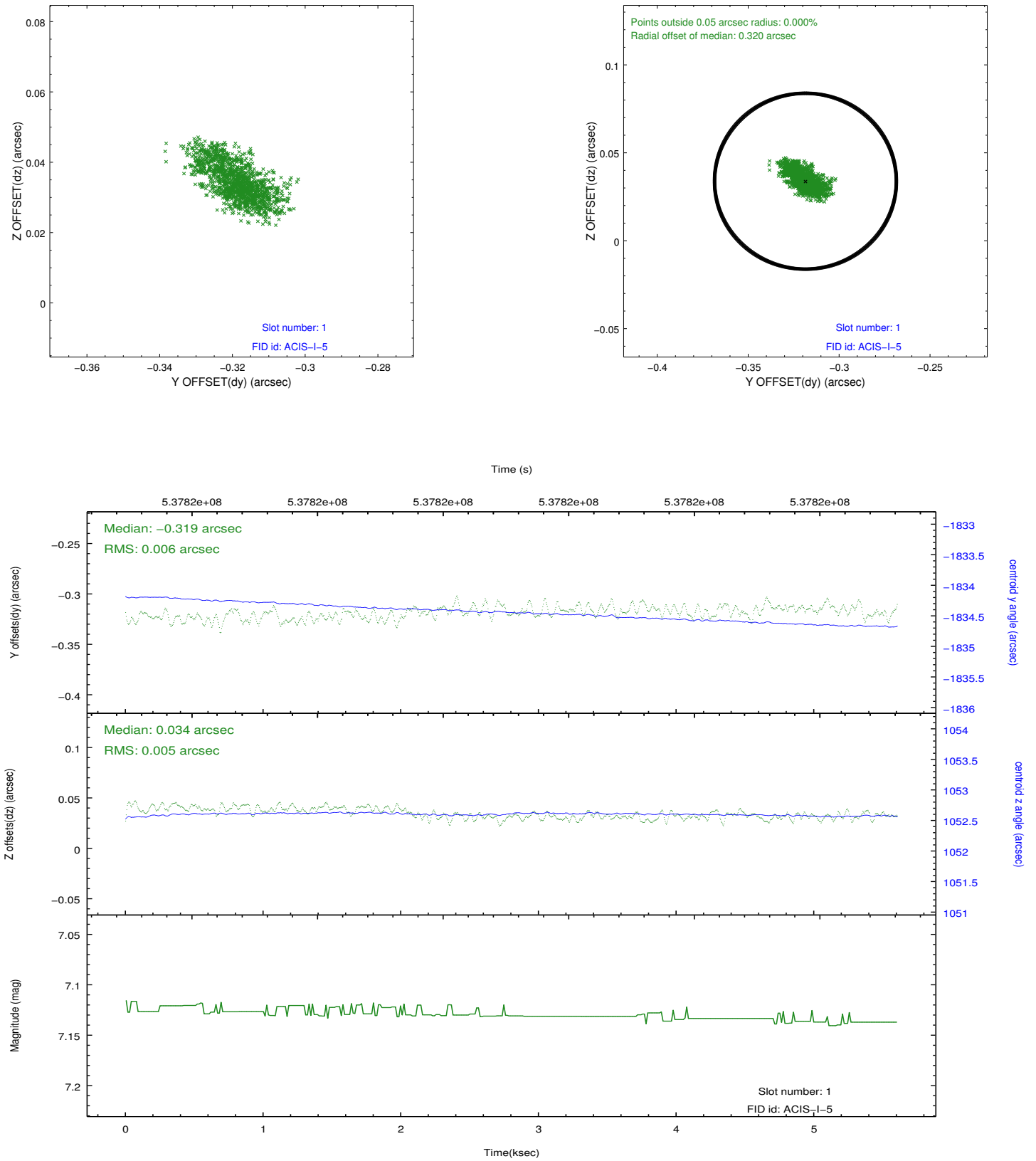


2.5 FID Slots

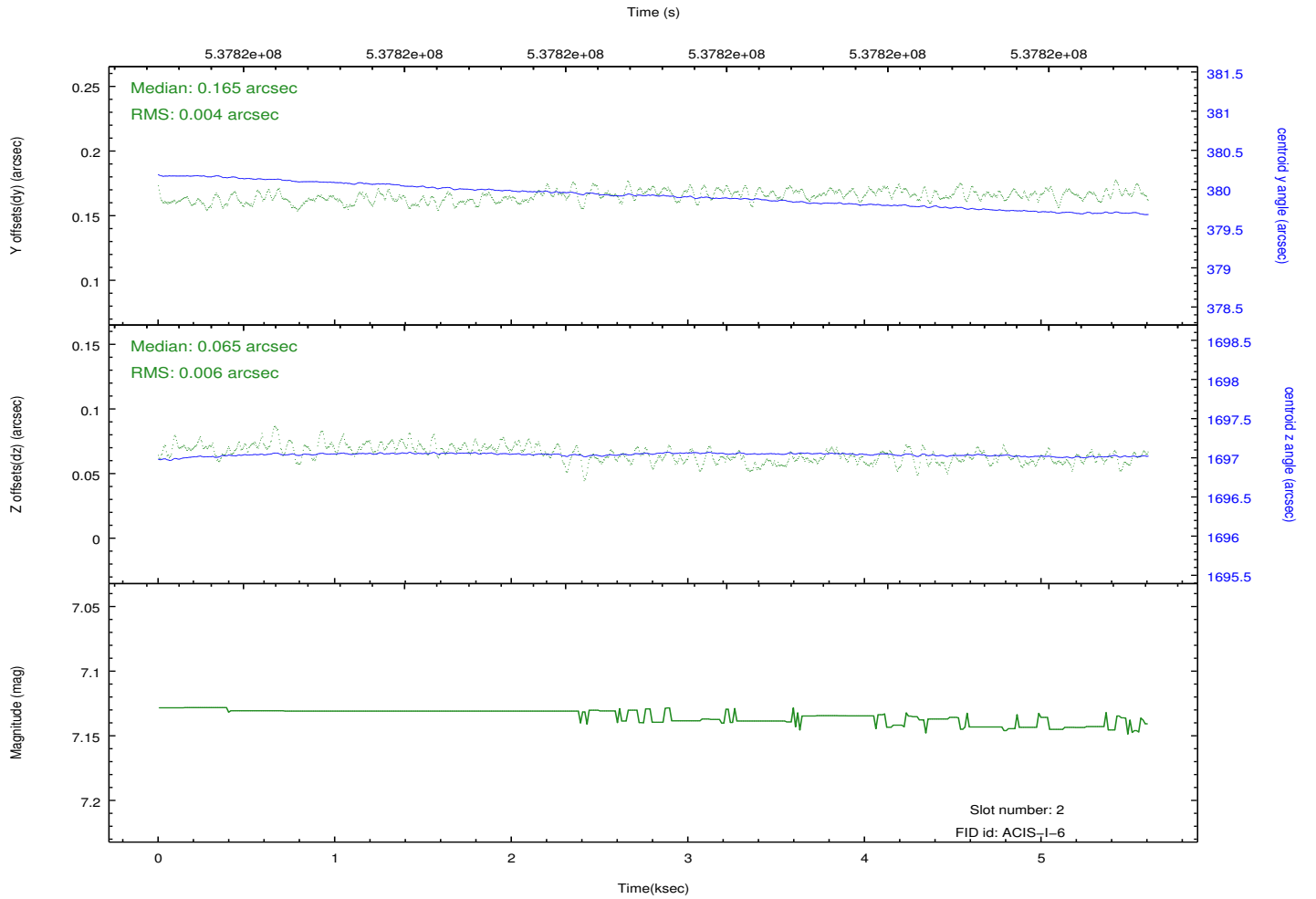
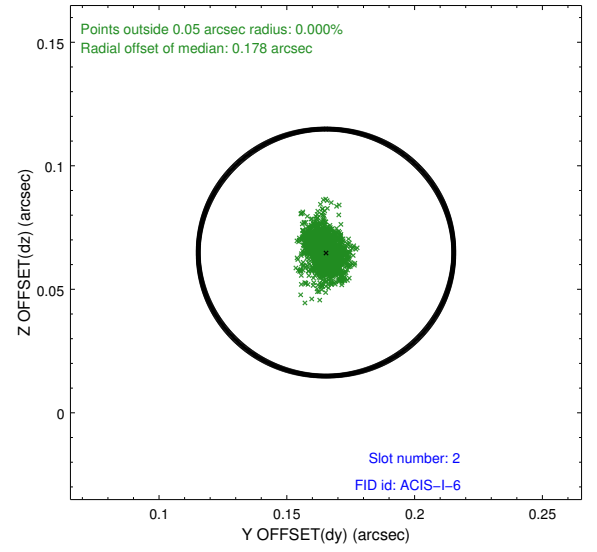
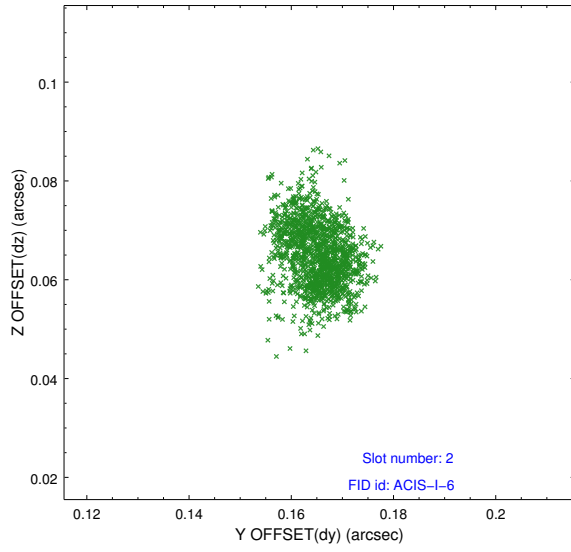
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2015.01.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.1429000396729

A.2 Comments

Aspect Team Review:

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The yellow-limit warnings on slots 3, 4, and 7 are acceptable. I have reprocessed this on the side excluding combinations of these slots and don't see any processing path that creates significant improvement of the aspect solution. I note that slots 3 and 4 are marked bad because they have missing data:

ACA_ID_IMAGE: WARNING, not enough good samples
found for slot # 3 only 93.713 percent of records tracked
ACA_ID_IMAGE: WARNING, n_star_pred=5 != n_star_obs=3
ACA_ID_IMAGE: WARNING, not enough good samples
found for slot # 4 only 94.170 percent of records tracked

but they were still used in the solution and may stay.