

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 12820 - L2 Version 3
Chandra X-Ray Center

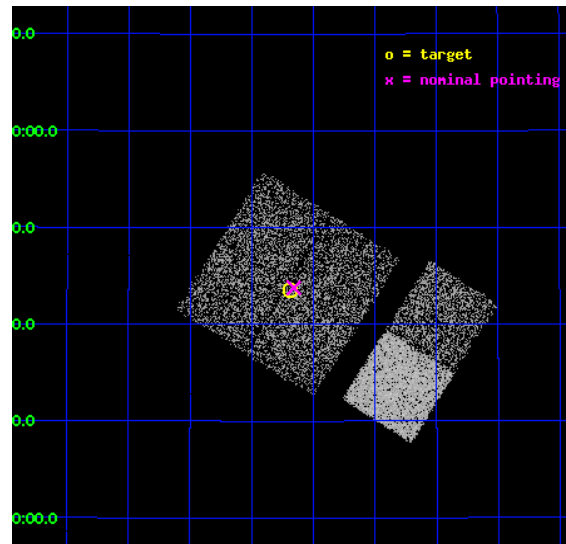
L2 Processing Date : Feb 3 2012

Contents

1	Front	2
2	OBI	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
A	Summary	17
A.1	Status	17
A.2	Comments	17

1 Front

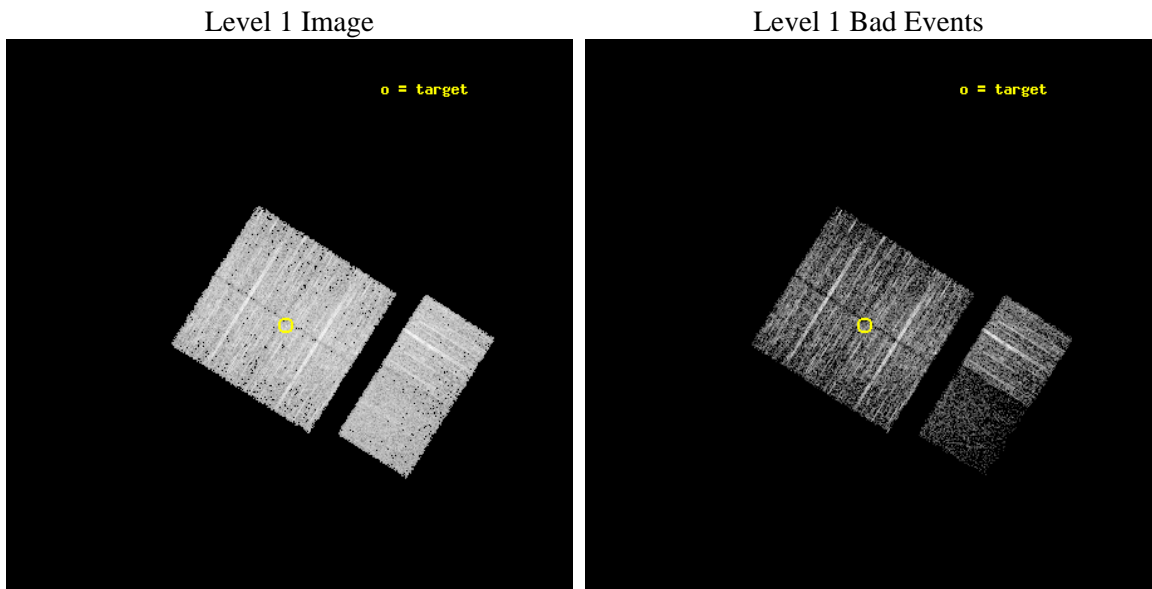
seq_num	702456	Sequence number
obs_id	12820	Observation id
title	A Systematic Chandra Survey of AGN in Major Mergers -- How many Binary AGN are out there?	Proposal title
observer	DR. Kevin Schawinski	Principal investigator
object	GZ_merger_AGN_10	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	161.796667	Observer's specified target RA [deg]
dec_targ	30.724361	Observer's specified target Dec [deg]
ra_nom	161.78938866226	Nominal RA [deg]
dec_nom	30.729591334259	Nominal Dec [deg]
roll_nom	122.39939735205	Nominal Roll [deg]
revision	3	Processing version of data
ontime	4962.9713483453	Sum of GTIs [s]
livetime	4900.12721679	Livetime [s]
ontime0	4962.8482283354	Sum of GTIs [s]
ontime1	4962.8892683387	Sum of GTIs [s]
ontime2	4962.930308342	Sum of GTIs [s]
ontime3	4962.9713483453	Sum of GTIs [s]
ontime6	4963.0534283519	Sum of GTIs [s]
ontime7	4963.0123883486	Sum of GTIs [s]
l2events	21574	Number of level 2 events



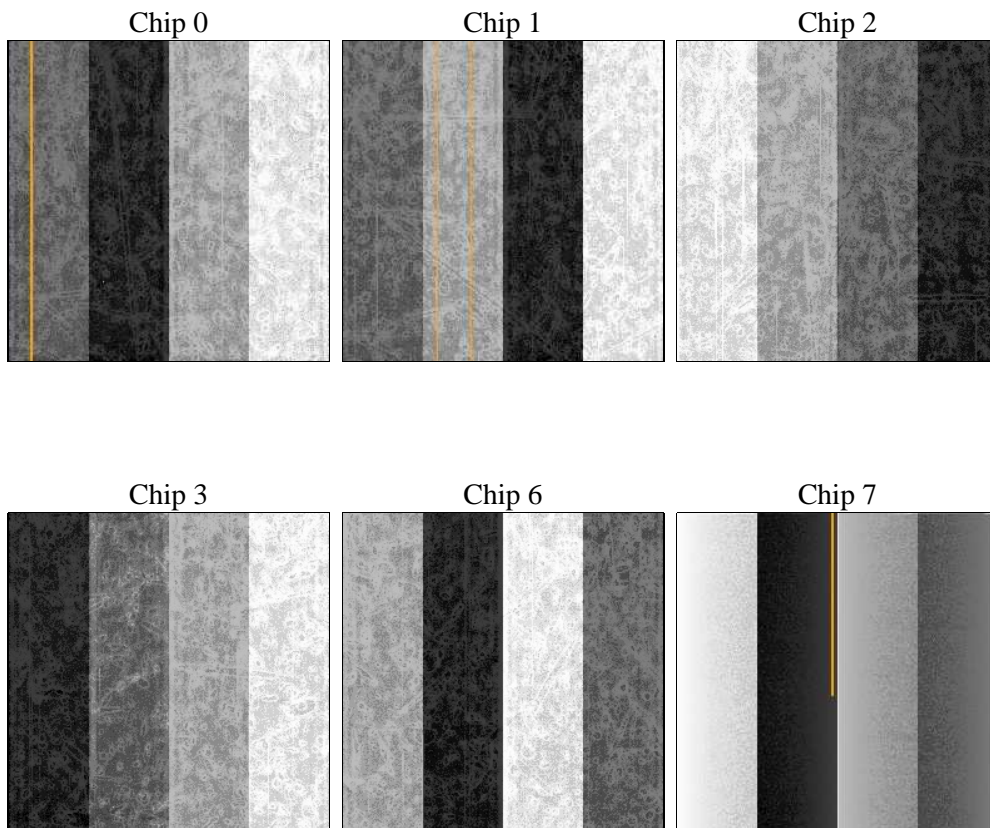
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	4962.9713483453	Sum of GTIs [s]
caldsver	4.4.7	 	ontime0	4962.8482283354	Sum of GTIs [s]
date	2012-02-03T19:31:34	Date and time of file creation	ontime1	4962.8892683387	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	4962.930308342	Sum of GTIs [s]
			ontime3	4962.9713483453	Sum of GTIs [s]
			ontime6	4963.0534283519	Sum of GTIs [s]
			ontime7	4963.0123883486	Sum of GTIs [s]
			l1events	157434	Number of level 1 events

2.1.4 Events

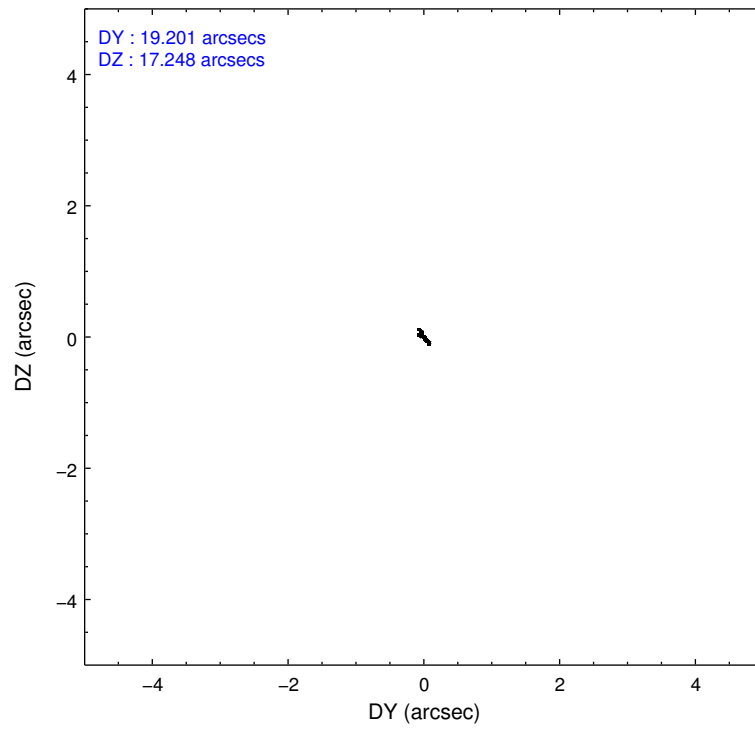
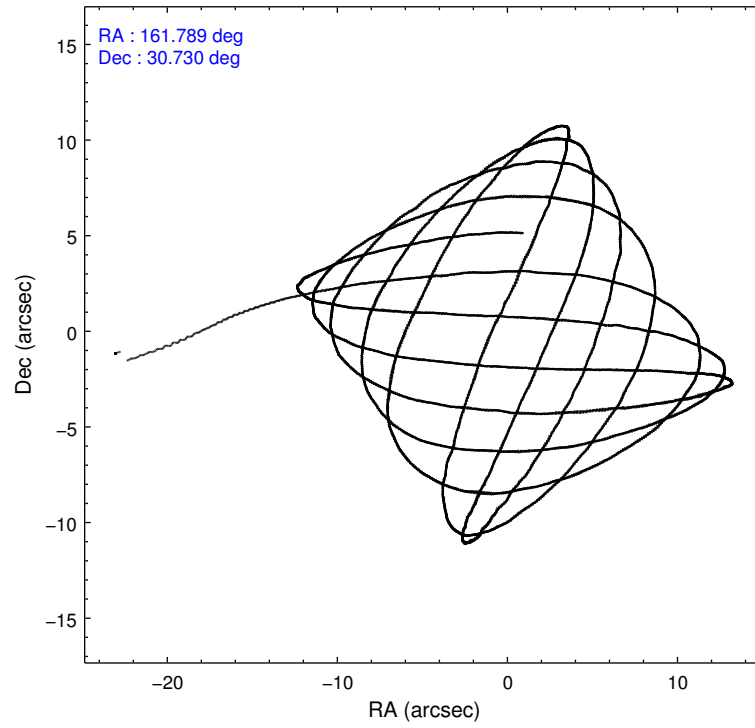
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	24921	26676	29802	27197	29823	19015
rejected events	22066	23797	27067	24523	26936	8268
rejected %	88%	89%	90%	90%	90%	43%

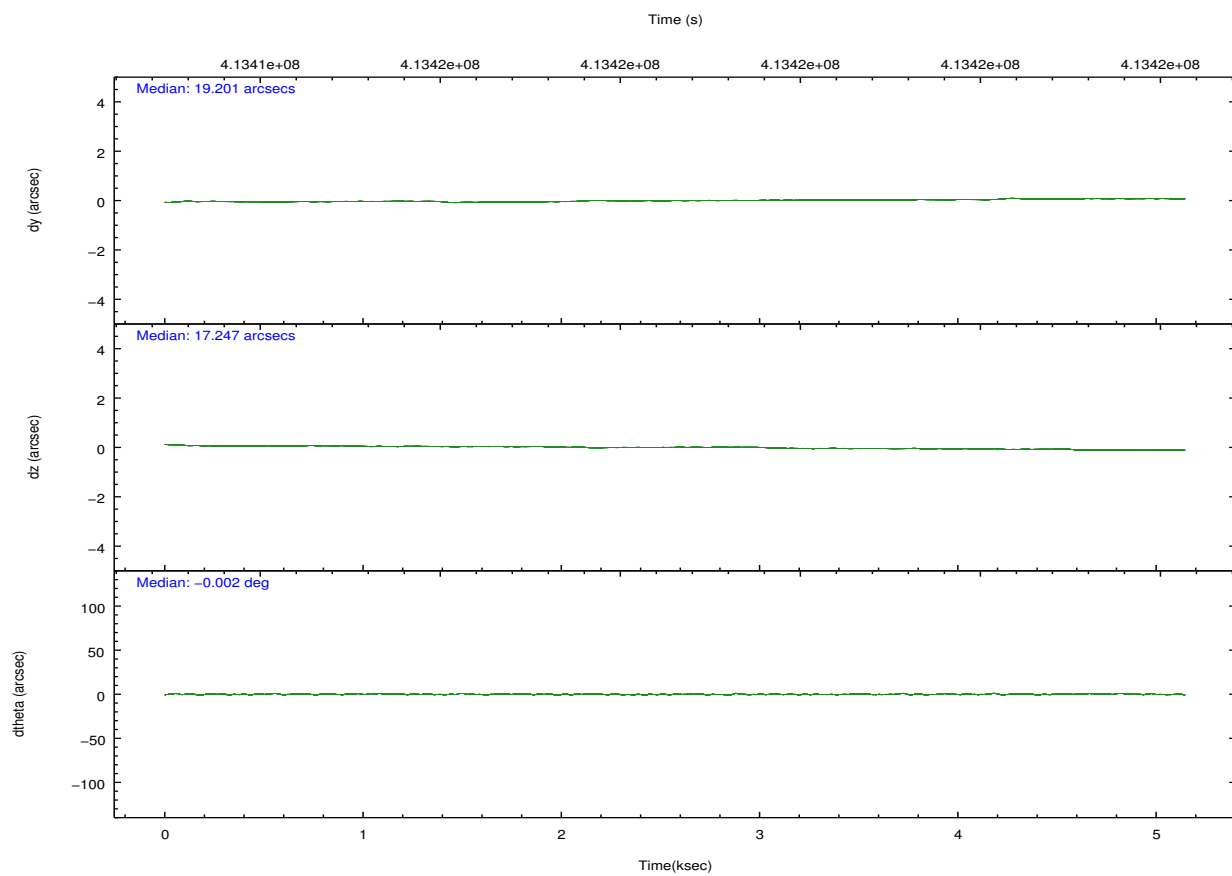
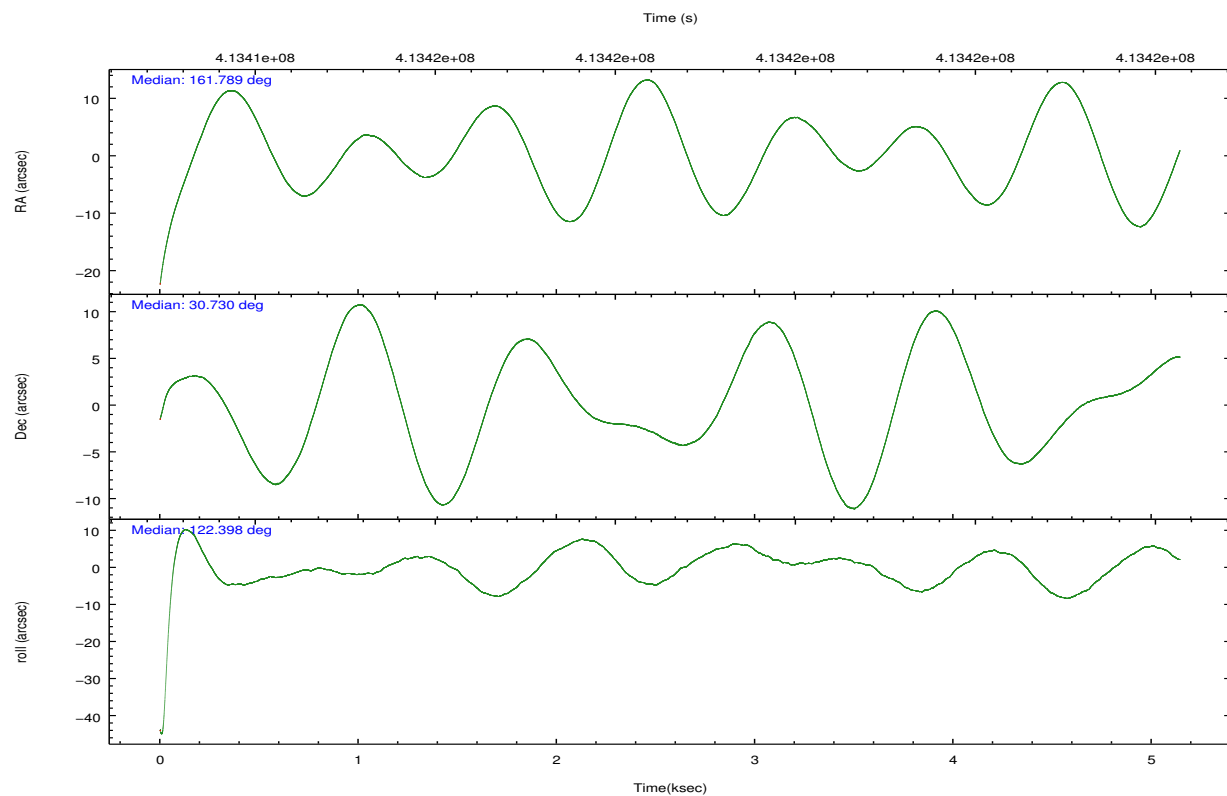
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	1115	1101	1123	1079	1118	1374
	4%	4%	3%	3%	3%	7%
grade 1 events	20	11	24	12	19	62
	0%	0%	0%	0%	0%	0%
grade 2 events	724	665	682	617	648	2628
	2%	2%	2%	2%	2%	13%
grade 3 events	293	338	252	297	269	1005
	1%	1%	0%	1%	0%	5%
grade 4 events	288	281	273	270	324	1031
	1%	1%	0%	0%	1%	5%
grade 5 events	609	705	528	739	711	2082
	2%	2%	1%	2%	2%	10%
grade 6 events	440	496	408	414	531	4713
	1%	1%	1%	1%	1%	24%
grade 7 events	21432	23079	26512	23769	26203	6120
	85%	86%	88%	87%	87%	32%

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	161.817902	161.789388662263	CCD I2 on	Y	Y
[deg] Pointing Dec	30.716939	30.72959133425898	CCD I3 on	Y	Y
[deg] Pointing Roll	122.176318	122.3993973520518	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)	413413874.184000	413412772.06228	CCD S5 on	N	N
Observation start date	2011-02-06T21:10:08	2011-02-06T20:52:52	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	413418874.184000	413419373.57512	On-chip summing requested	N	N
Observation end date	2011-02-06T22:33:28	2011-02-06T22:42:53	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



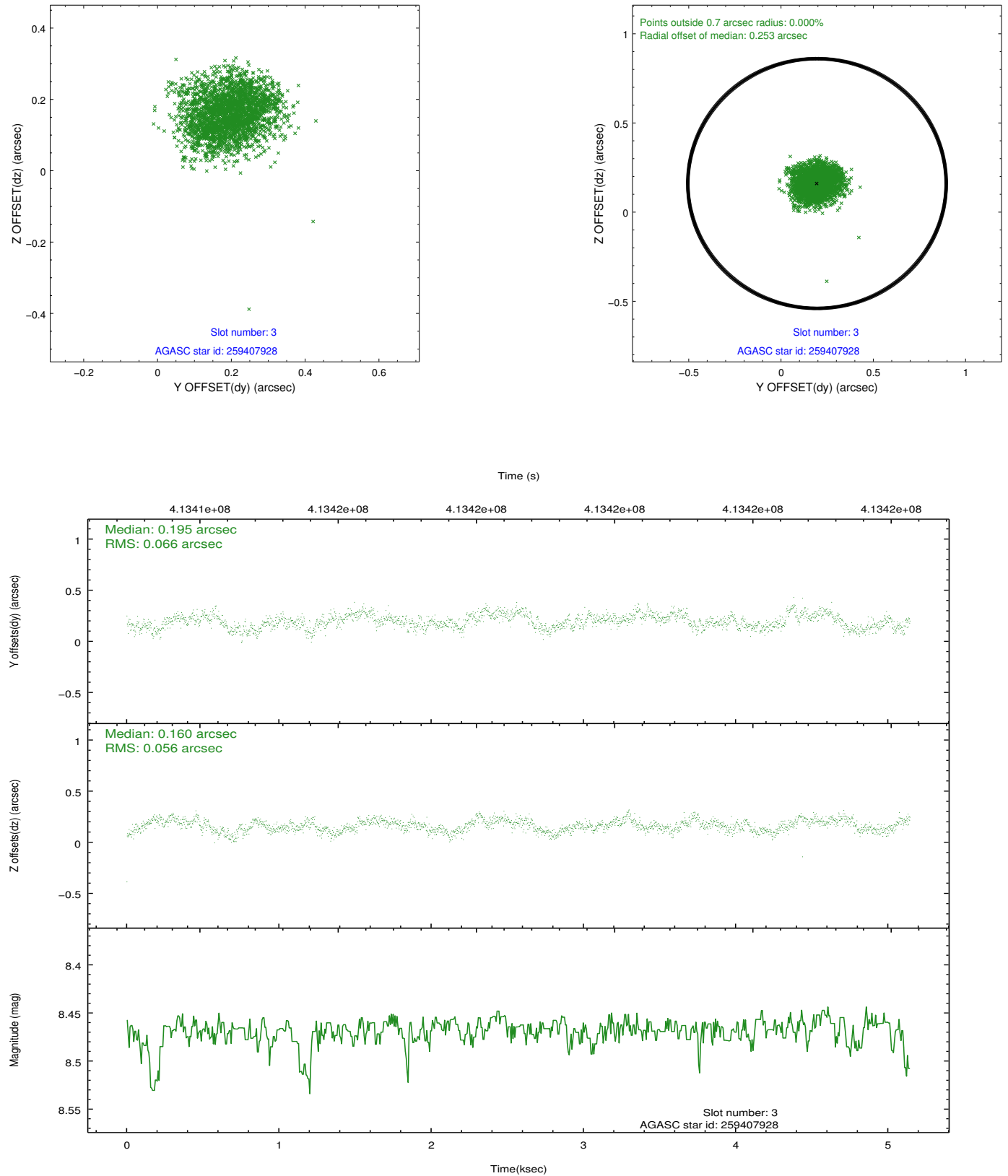


Slot Statistics

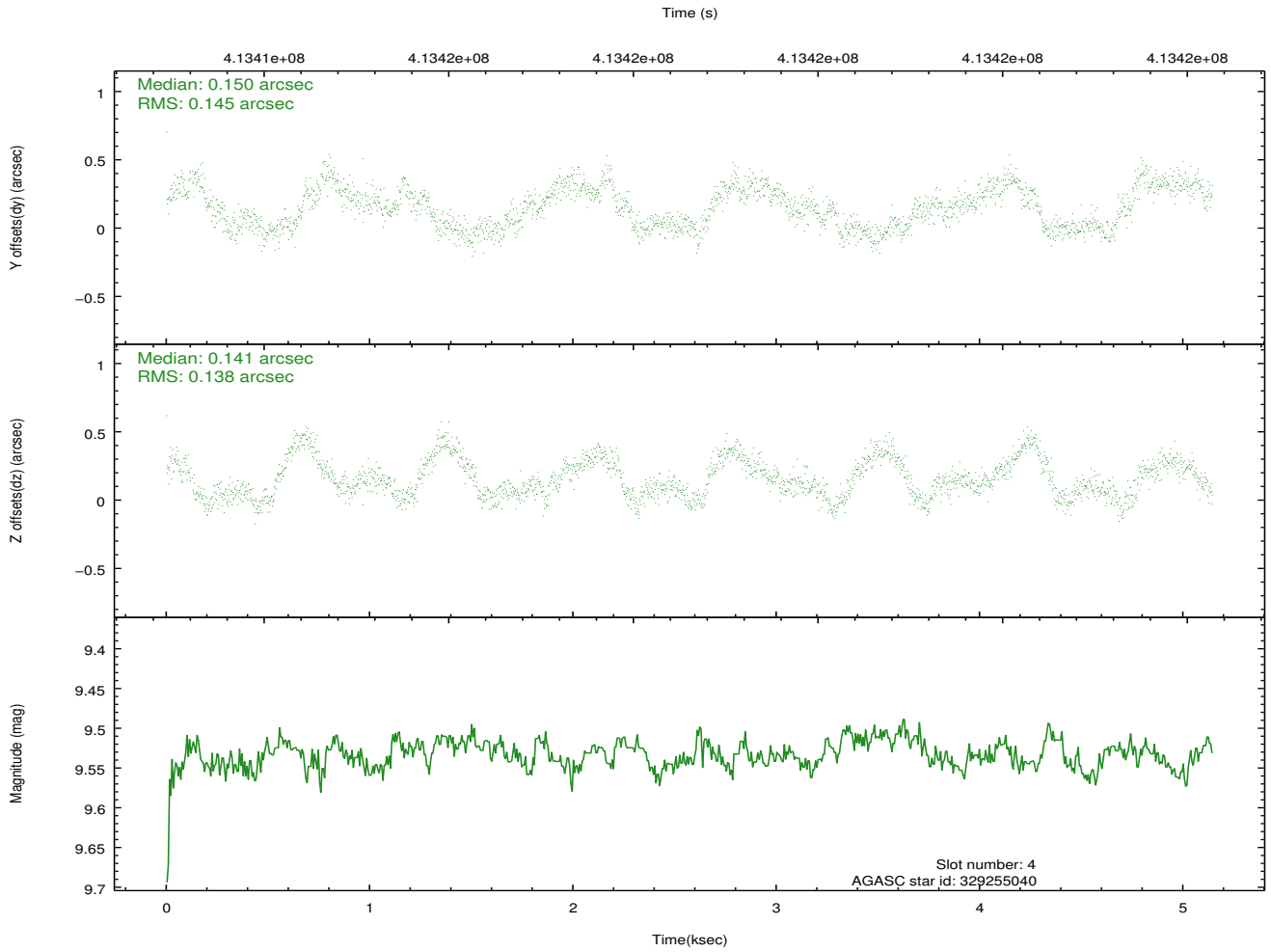
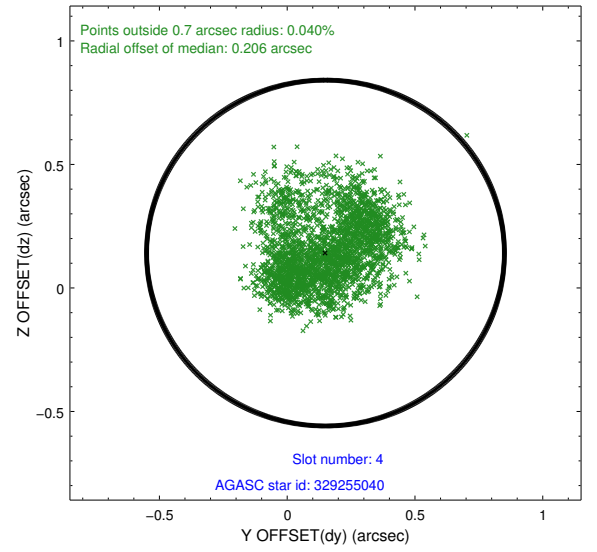
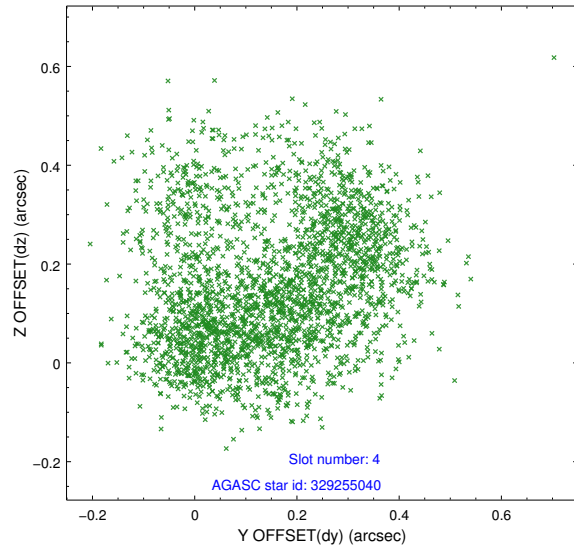
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.06	1255	0.056	0.005	0.009	0.016	0.000000	0.000000	920.20	-840.89
1	FID	ACIS-I-5	7.05	1255	-0.245	0.058	0.008	0.014	0.000000	0.000000	-1827.56	1056.06
2	FID	ACIS-I-6	7.08	1255	0.098	0.008	0.007	0.011	0.000000	0.000000	384.50	1701.85
3	GUIDE	259407928	8.47	2509	0.195	0.160	0.094	0.144	161.844239	29.981360	-2285.52	1340.98
4	GUIDE	329255040	9.53	2502	0.150	0.141	0.221	0.319	161.666274	31.228189	1803.95	-583.18
5	GUIDE	329255408	8.89	2509	-0.180	-0.225	0.098	0.154	161.086567	30.691431	1134.72	1960.69
6	GUIDE	329255504	8.47	2507	0.011	-0.062	0.082	0.132	161.603255	30.674829	226.53	644.09
7	GUIDE	329256376	7.38	2509	-0.169	-0.025	0.093	0.149	161.473444	30.628023	298.54	1073.20

2.4 Star Slots

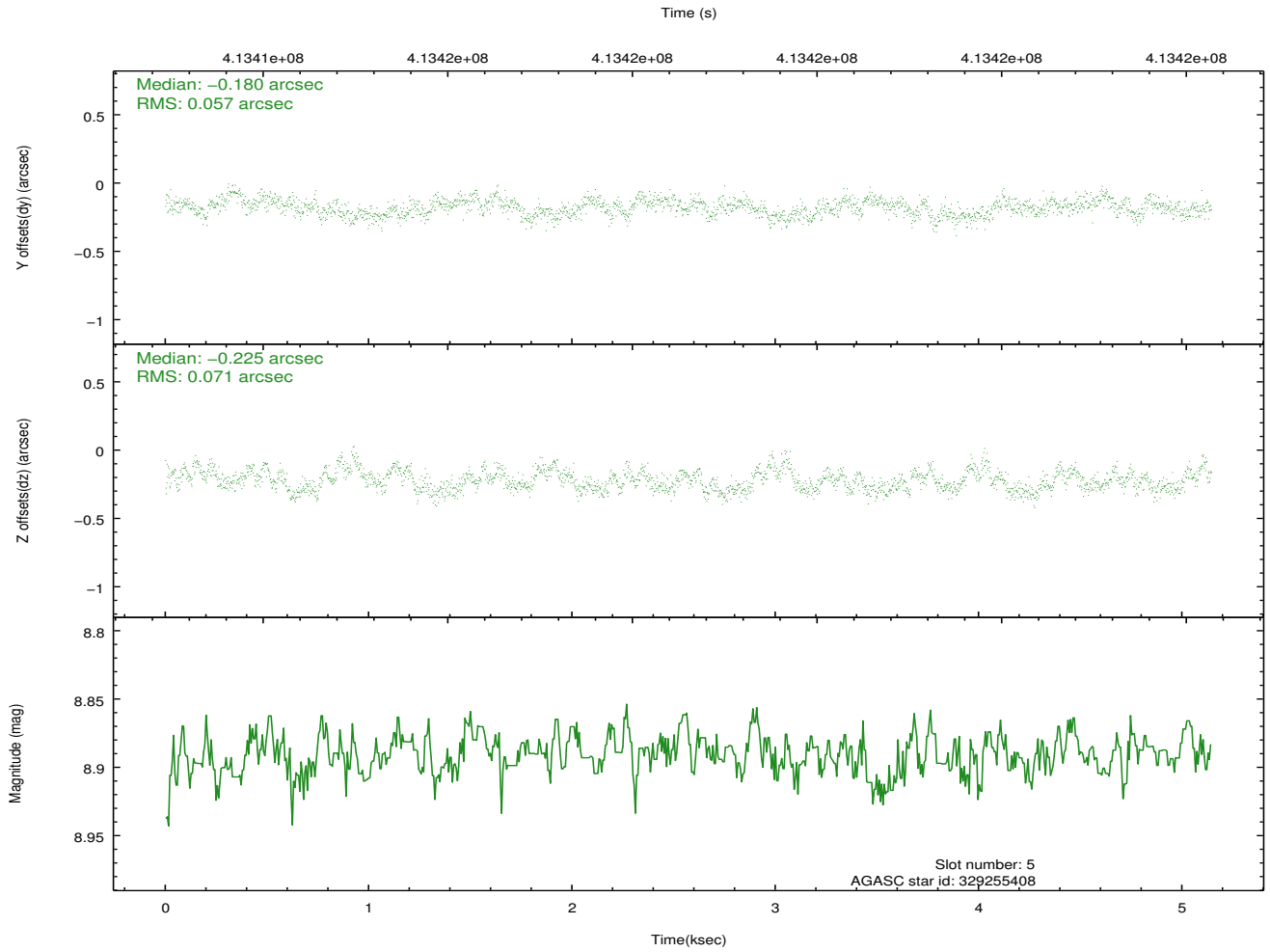
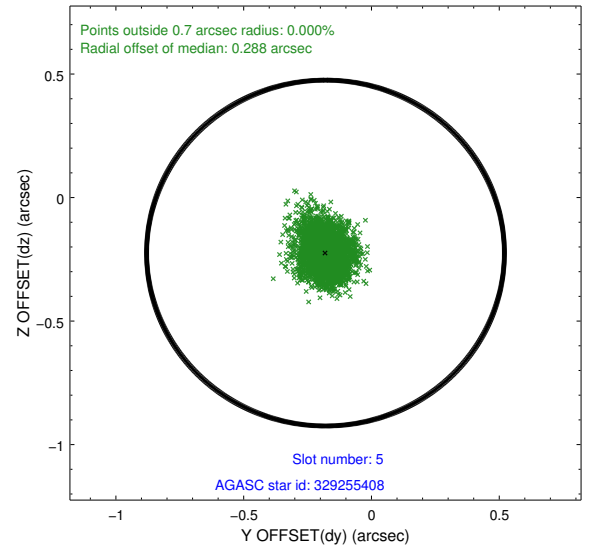
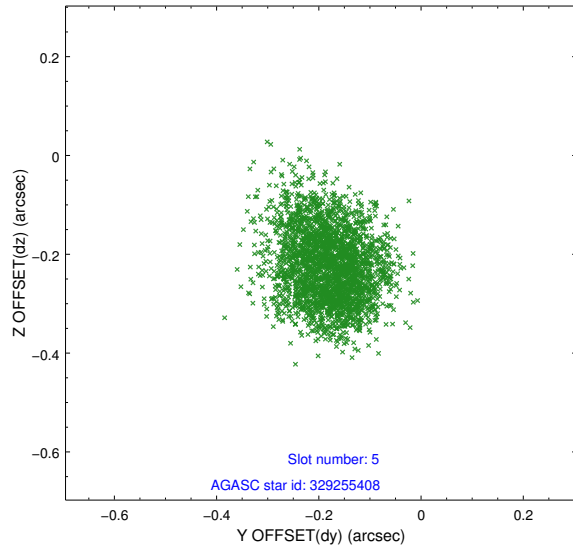
2.4.1 Slot 3



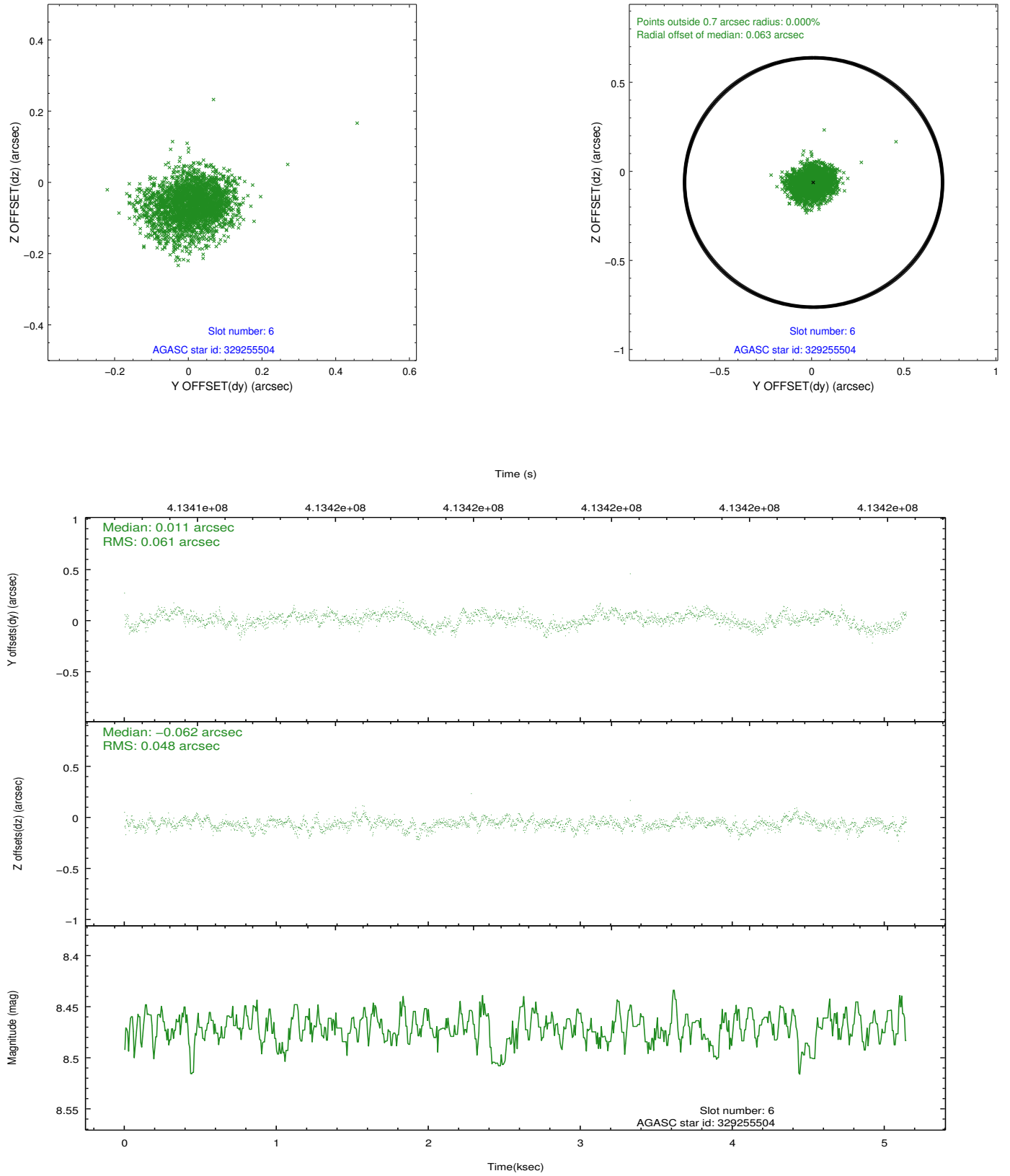
2.4.2 Slot 4



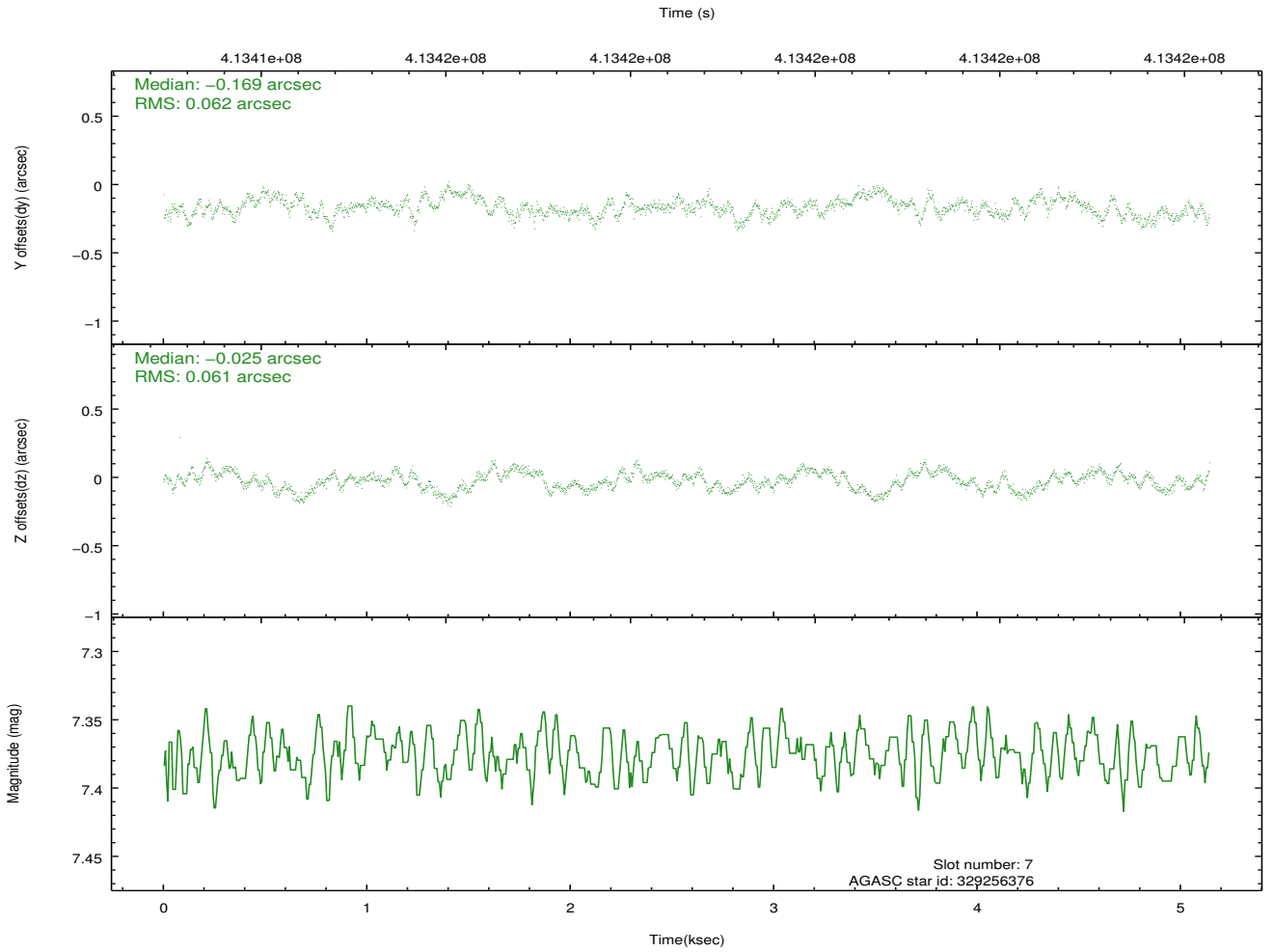
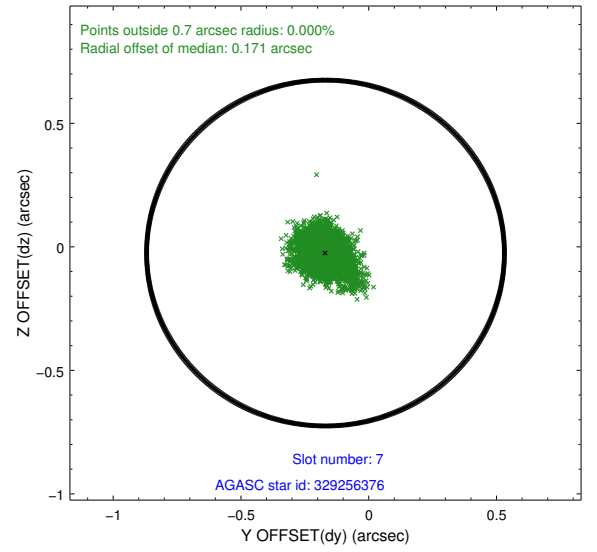
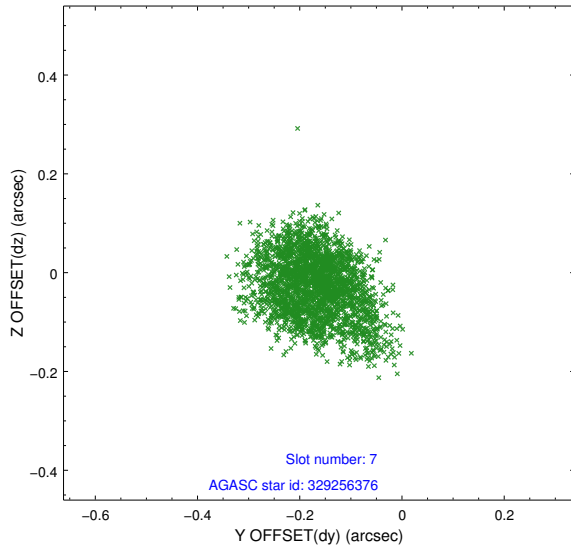
2.4.3 Slot 5



2.4.4 Slot 6

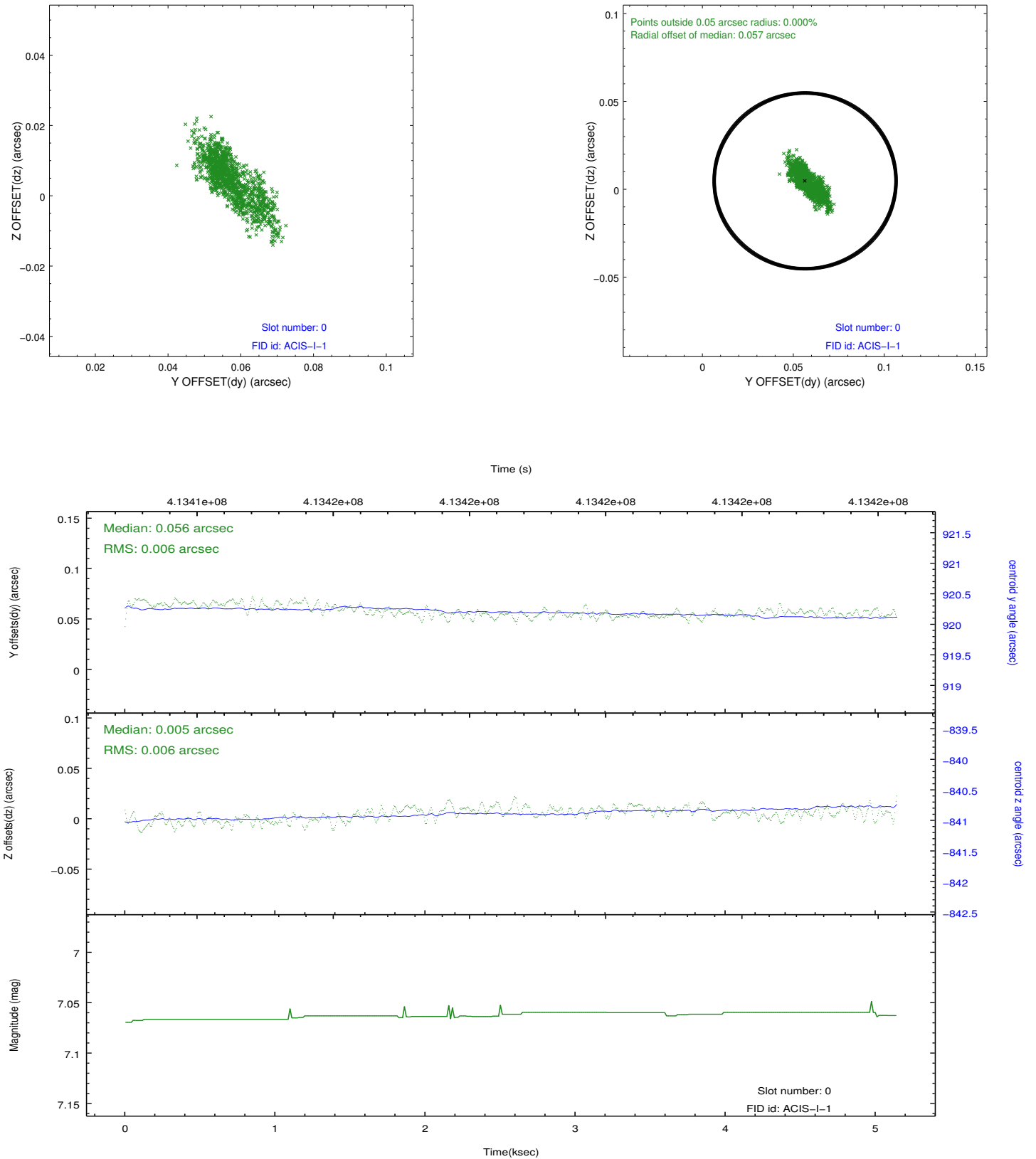


2.4.5 Slot 7

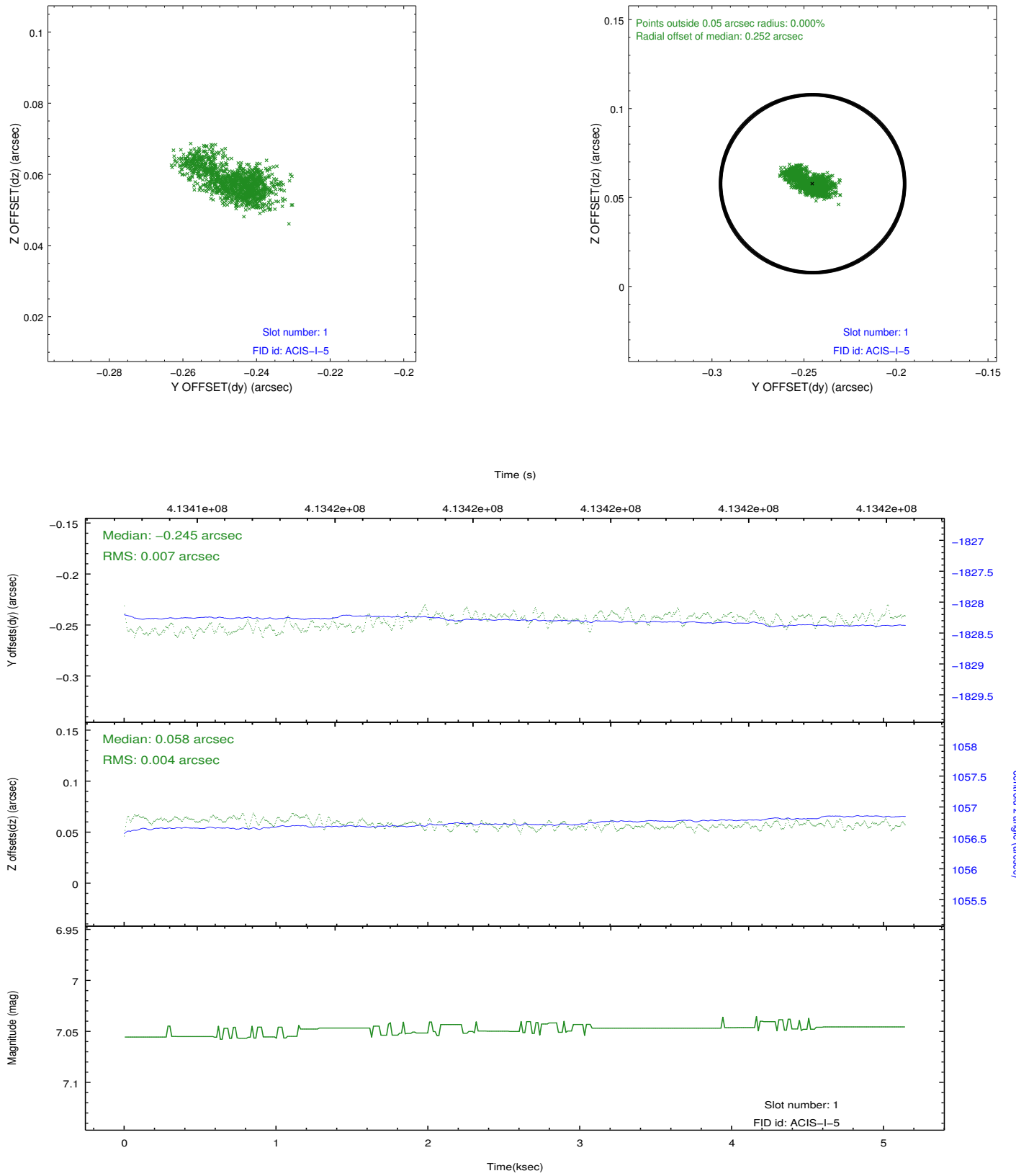


2.5 FID Slots

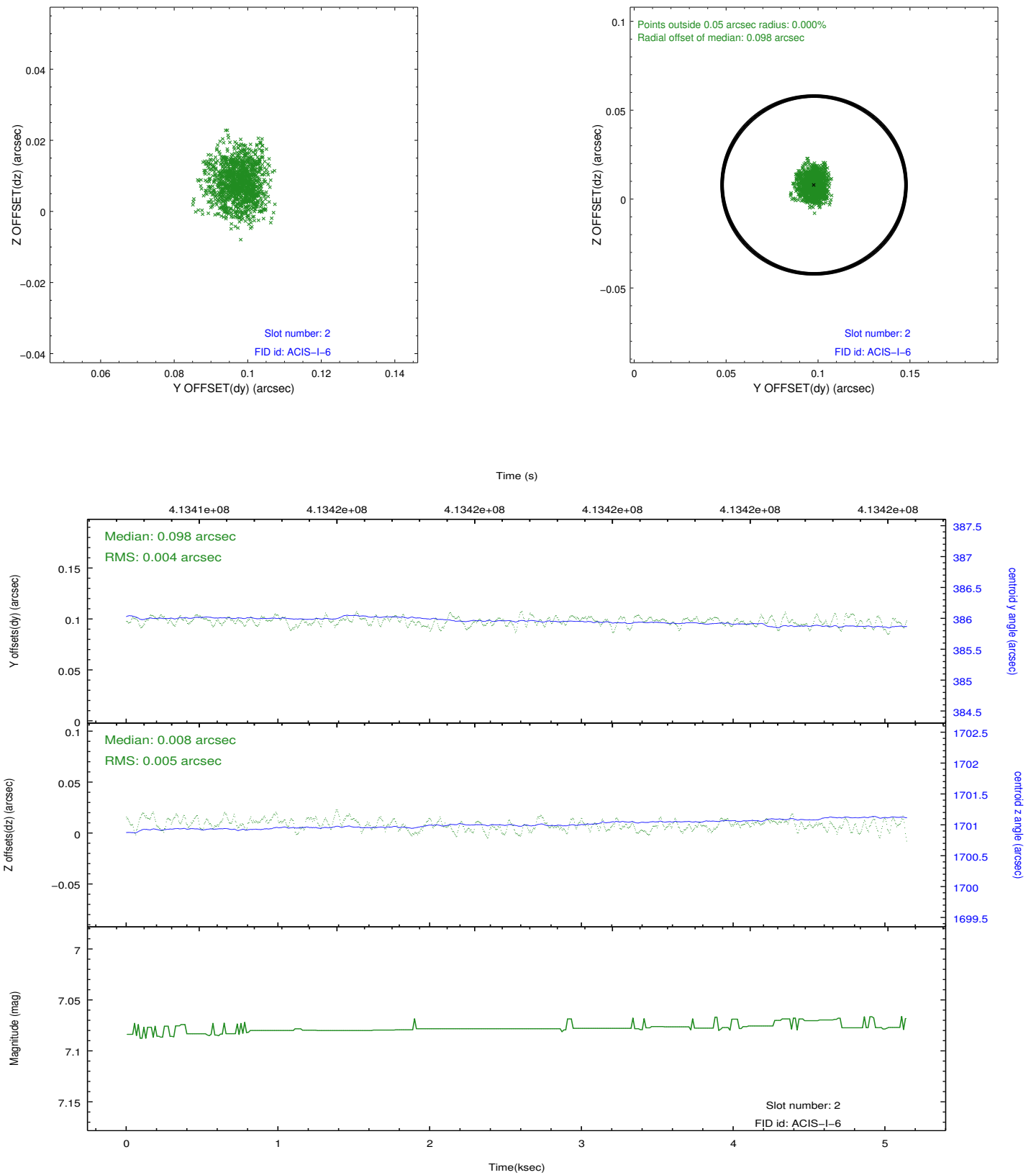
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.02.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.962971346736

A.2 Comments

The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSER algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use `acis_process_events` to reprocess the data with the parameter `pix_adj=NONE` or `RANDOMIZE`, respectively.

=====

A spatial region of the original bias map for `CCD = 0` suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~ 20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for `CCD = 0` has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:
(161.72959,30.86425),(161.72516,30.86185),(161.74058,30.84102),(161.74781,30.83963)