

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 12772 - L2 Version 3
Chandra X-Ray Center

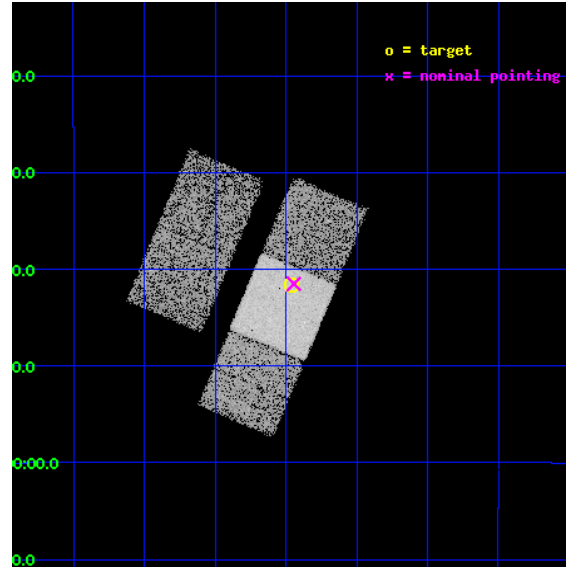
L2 Processing Date : Feb 10 2012

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1 Front

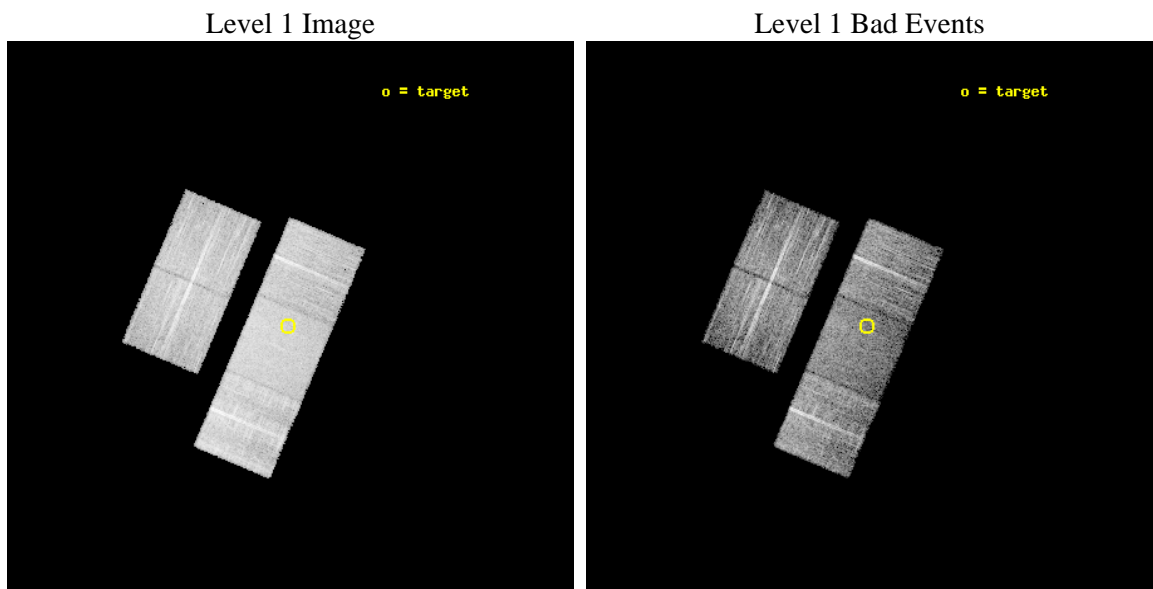
seq_num	702408	Sequence number
obs_id	12772	Observation id
title	X-ray Properties of 2MASS Selected BALQSOs	Proposal title
observer	Dr. Xinyu Dai	Principal investigator
object	SDSSJ225257.62-084141.2	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	343.24	Observer's specified target RA [deg]
dec_targ	-8.694806	Observer's specified target Dec [deg]
ra_nom	343.23602908678	Nominal RA [deg]
dec_nom	-8.6919868468683	Nominal Dec [deg]
roll_nom	112.94256064965	Nominal Roll [deg]
revision	3	Processing version of data
ontime	9943.8790131211	Sum of GTIs [s]
livetime	9813.9549132375	Livetime [s]
ontime2	9943.7148531079	Sum of GTIs [s]
ontime3	9943.7969331145	Sum of GTIs [s]
ontime6	9943.8379731178	Sum of GTIs [s]
ontime7	9943.8790131211	Sum of GTIs [s]
ontime8	9943.7558931112	Sum of GTIs [s]
l2events	61393	Number of level 2 events



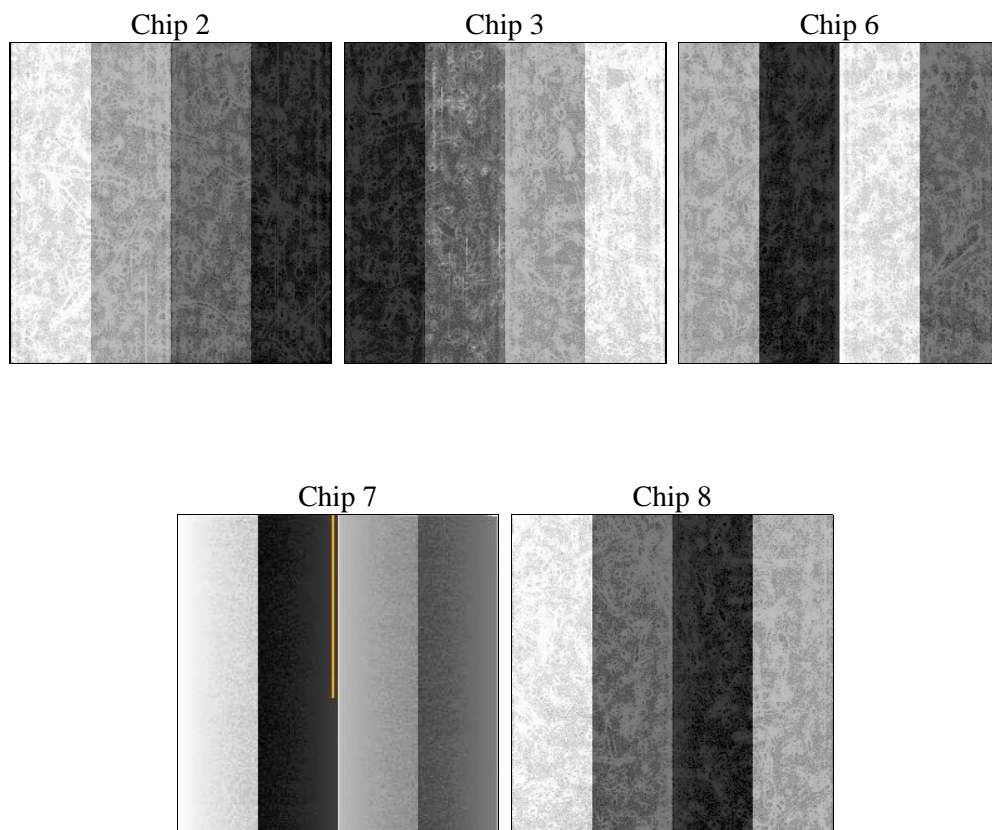
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	9900.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	9943.8790131211	Sum of GTIs [s]
caldsver	4.4.7	 	ontime2	9943.7148531079	Sum of GTIs [s]
date	2012-02-10T13:46:53	Date and time of file creation	ontime3	9943.7969331145	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	9943.8379731178	Sum of GTIs [s]
			ontime7	9943.8790131211	Sum of GTIs [s]
			ontime8	9943.7558931112	Sum of GTIs [s]
			l1events	363999	Number of level 1 events

2.1.4 Events

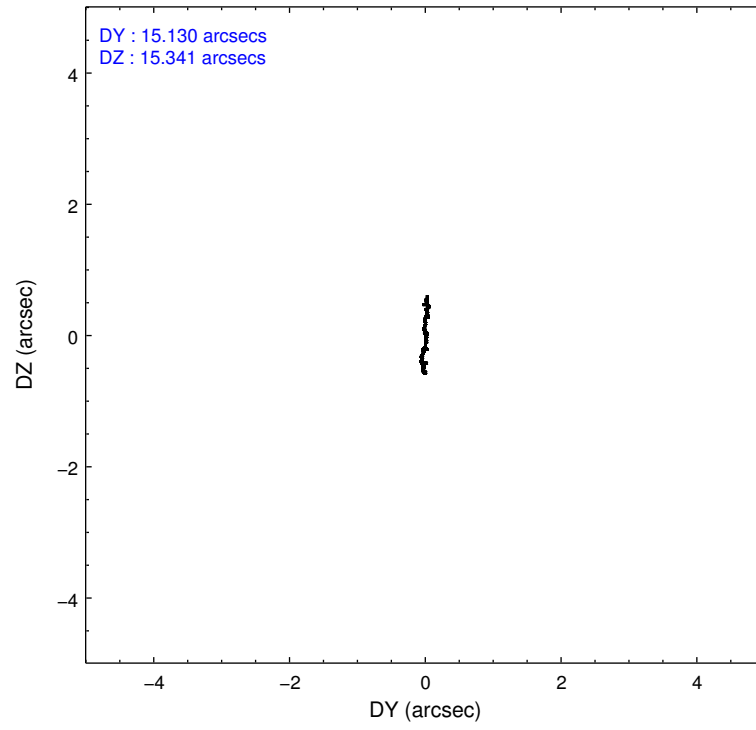
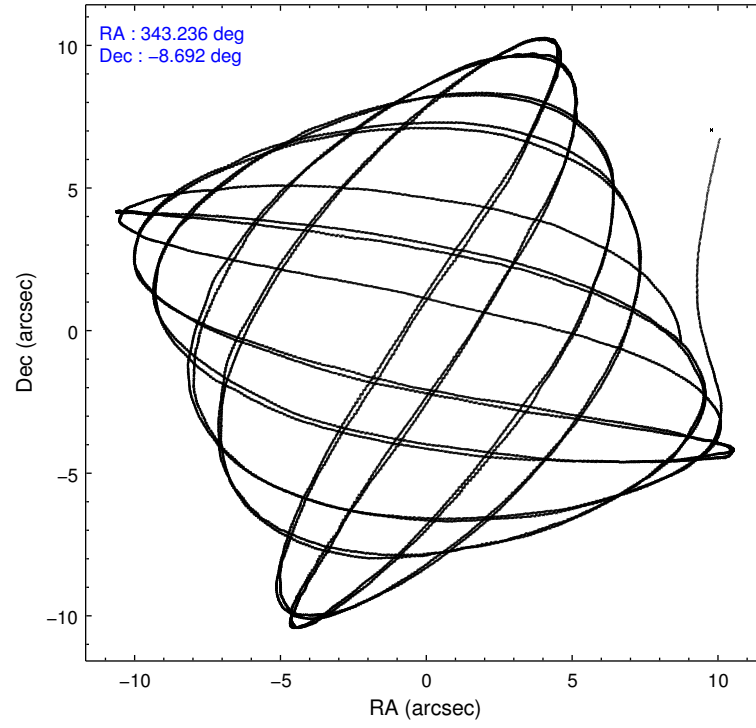
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	65266	63395	64802	81046	89490
rejected events	58259	56708	57364	44848	65486
rejected %	89%	89%	88%	55%	73%

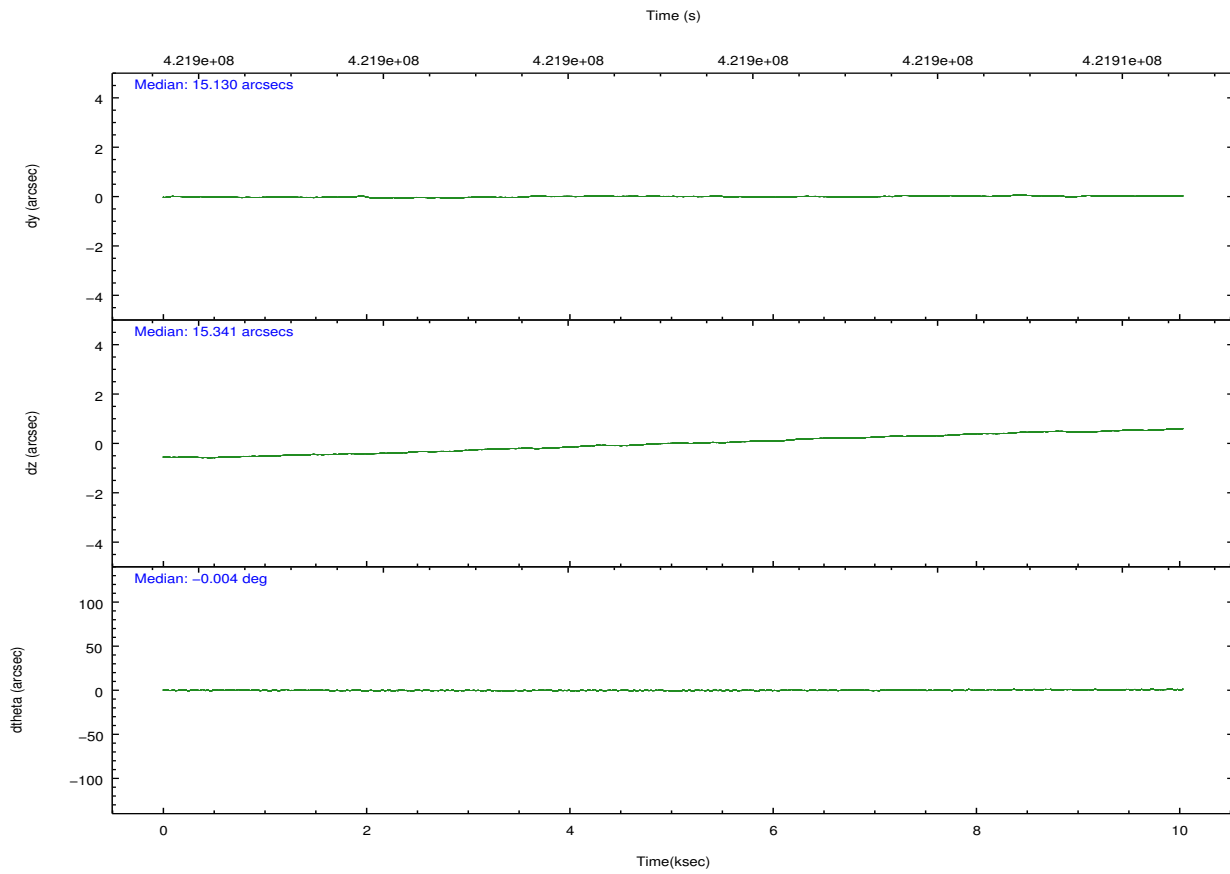
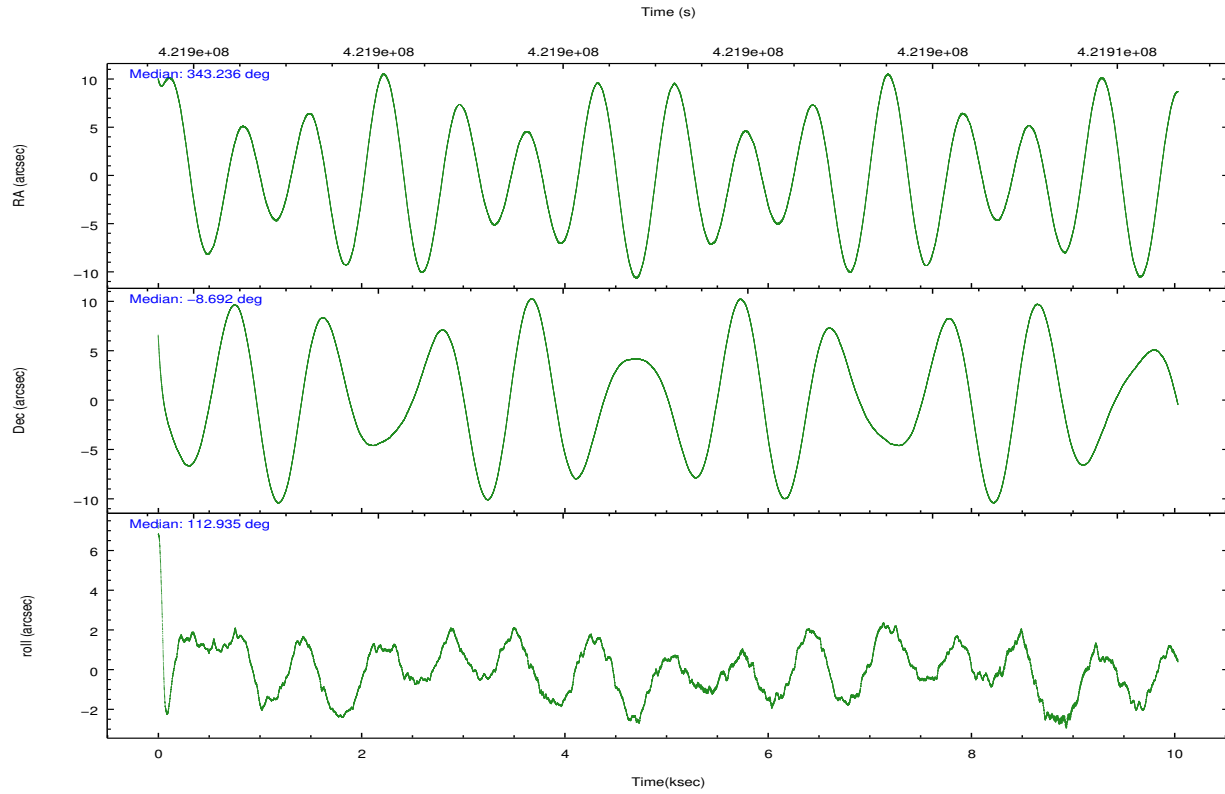
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	2465	2343	2635	3308	6945
	3%	3%	4%	4%	7%
grade 1 events	45	36	37	112	65
	0%	0%	0%	0%	0%
grade 2 events	1730	1491	1672	7503	5506
	2%	2%	2%	9%	6%
grade 3 events	760	737	749	3184	2678
	1%	1%	1%	3%	2%
grade 4 events	703	722	763	3184	2407
	1%	1%	1%	3%	2%
grade 5 events	2485	3110	3041	8569	4514
	3%	4%	4%	10%	5%
grade 6 events	1350	1397	1620	19034	6470
	2%	2%	2%	23%	7%
grade 7 events	55728	53559	54285	36152	60905
	85%	84%	83%	44%	68%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23678	ACIS-23678	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	343.258301	343.2360290867835	CCD I2 on	O4	Y
[deg] Pointing Dec	-8.708173	-8.691986846868341	CCD I3 on	O3	Y
[deg] Pointing Roll	112.789295	112.9425606496467	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O2	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	O1	Y
[s] Observation start time (MET)	421896260.184000	421895116.43949	CCD S5 on	N	N
Observation start date	2011-05-16T01:23:14	2011-05-16T01:05:16	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	421906160.184000	421906936.22761	On-chip summing requested	N	N
Observation end date	2011-05-16T04:08:14	2011-05-16T04:22:16	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



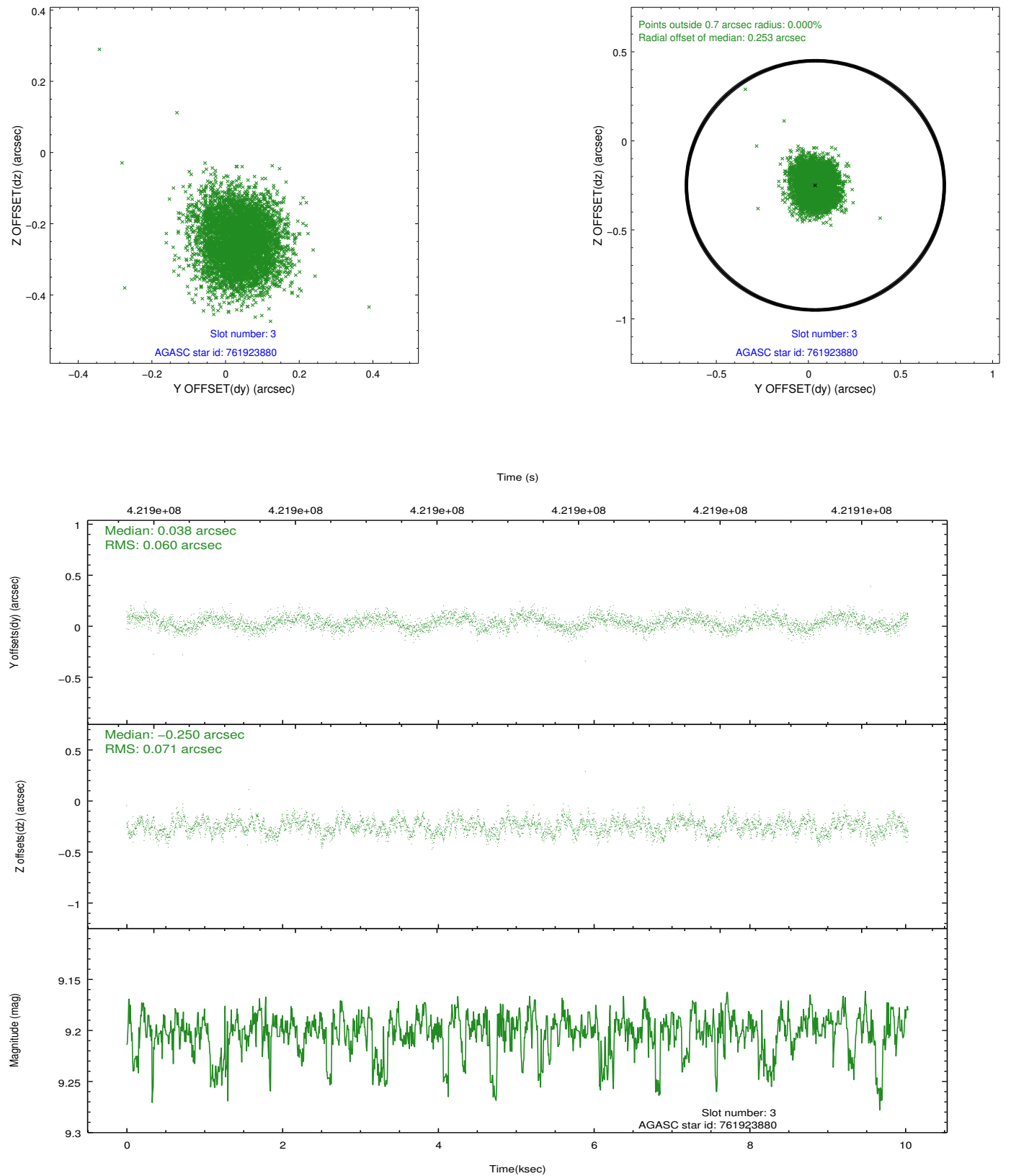


Slot Statistics

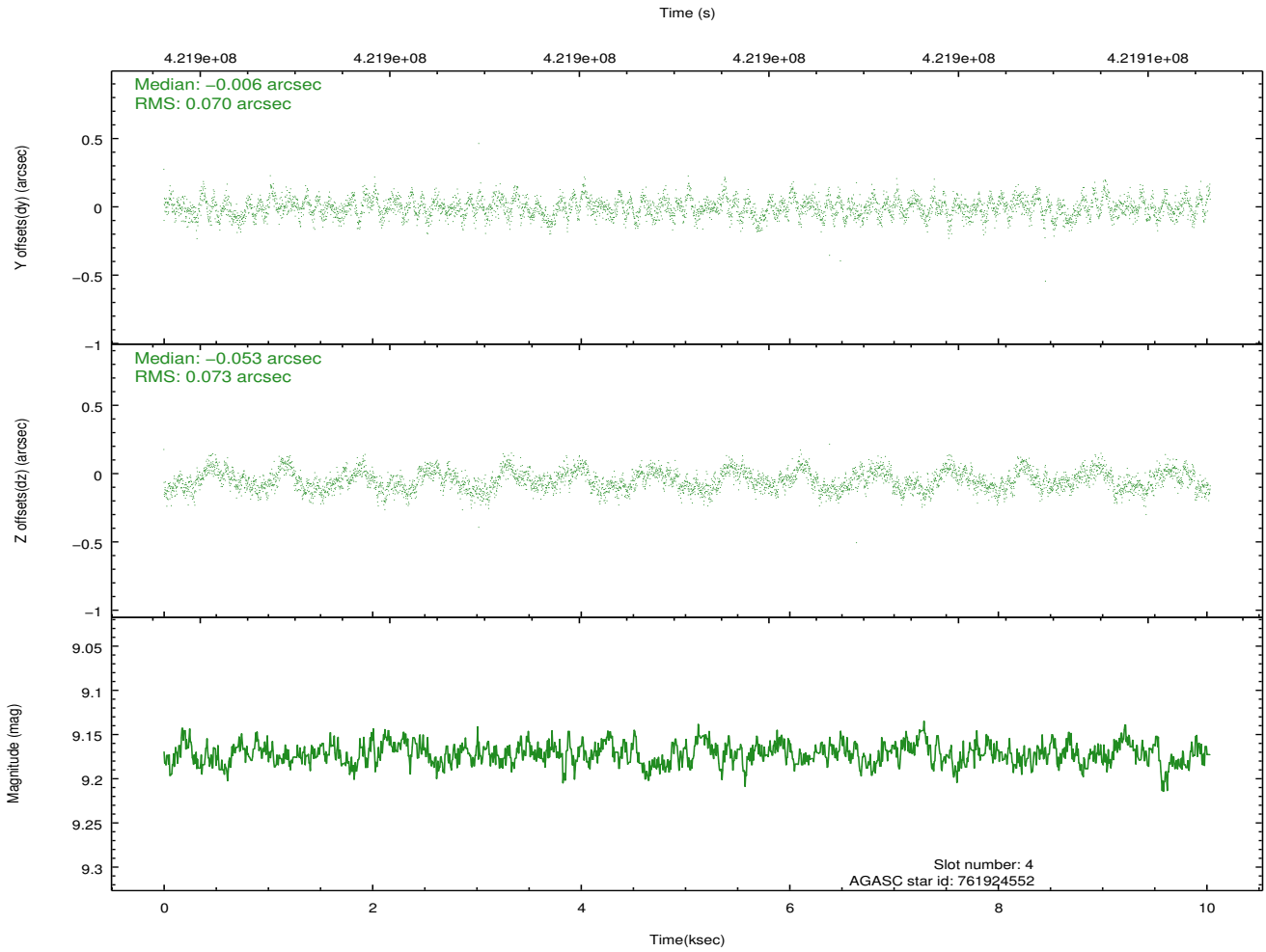
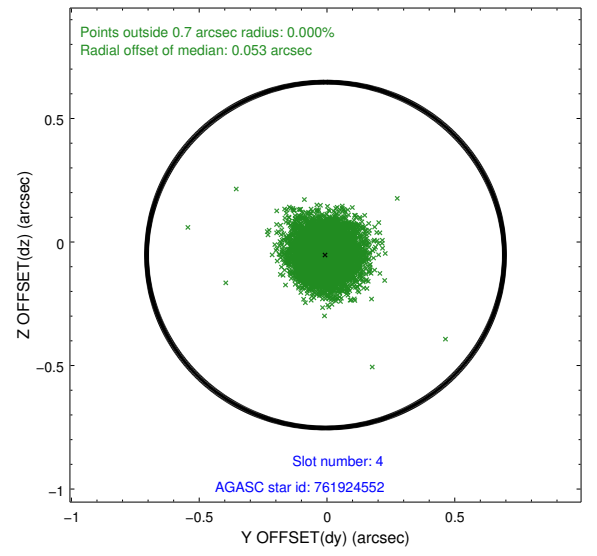
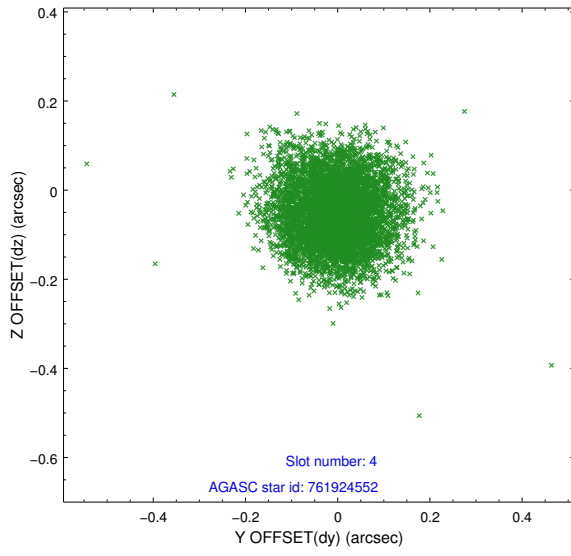
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.95	2448	-0.105	-0.030	0.008	0.014	0.000000	0.000000	-768.19	-1736.75
1	FID	ACIS-S-4	7.04	2448	0.219	0.059	0.007	0.013	0.000000	0.000000	2145.15	171.29
2	FID	ACIS-S-5	7.06	2448	-0.146	-0.020	0.008	0.013	0.000000	0.000000	-1820.41	165.46
3	GUIDE	761923880	9.20	4890	0.038	-0.250	0.099	0.156	342.941535	-8.558862	931.64	831.75
4	GUIDE	761924552	9.17	4892	-0.006	-0.053	0.109	0.169	343.496108	-8.042798	1880.38	-1708.59
5	GUIDE	761924592	9.13	4859	-0.292	0.229	0.098	0.163	343.253085	-8.139884	1893.68	-774.84
6	GUIDE	761927512	8.64	4896	0.173	0.443	0.069	0.113	343.917772	-8.787710	-1173.71	-2050.93
7	GUIDE	761930192	8.11	4893	0.084	-0.368	0.064	0.104	342.801132	-9.325163	-1420.01	2357.43

2.4 Star Slots

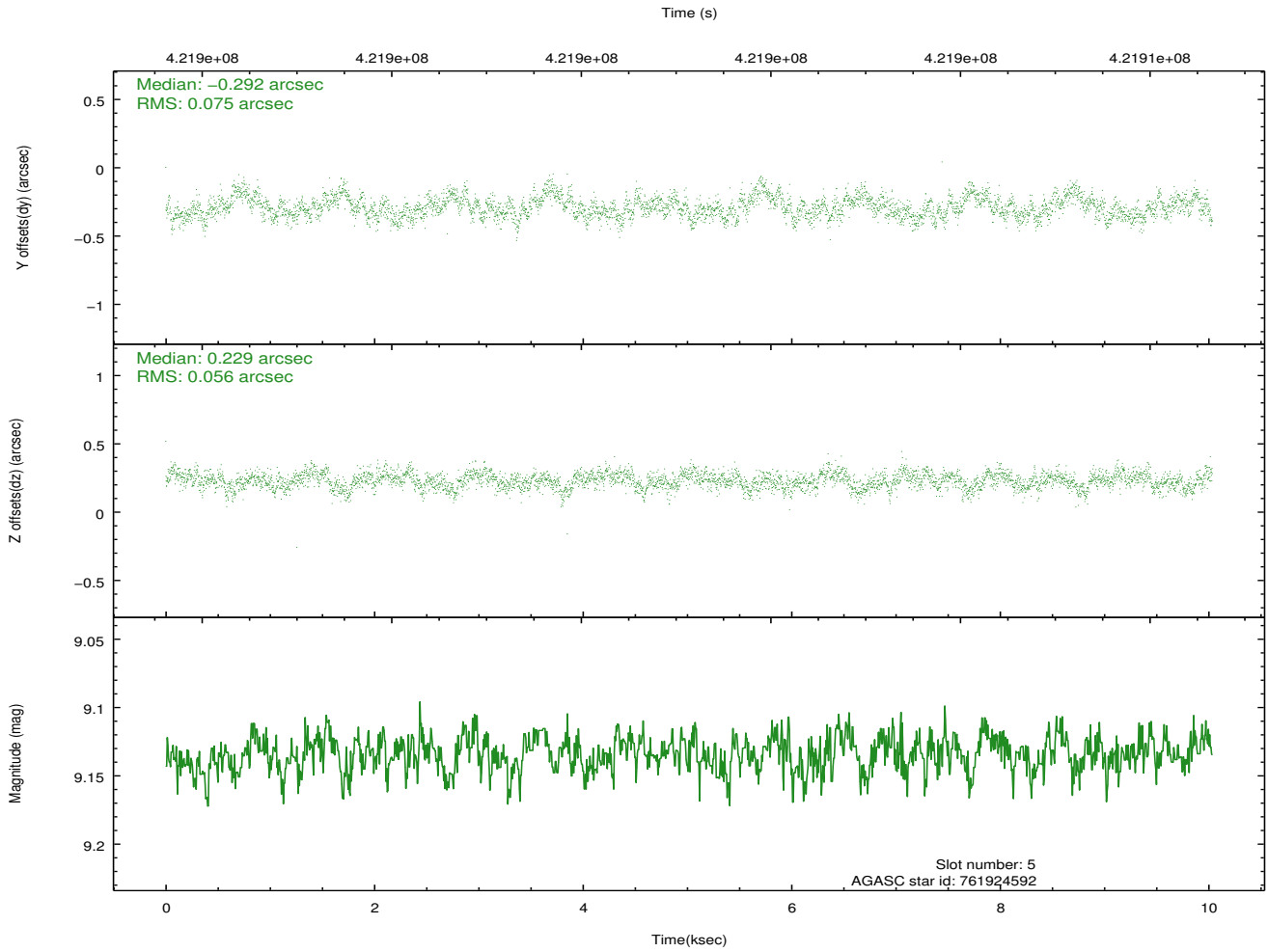
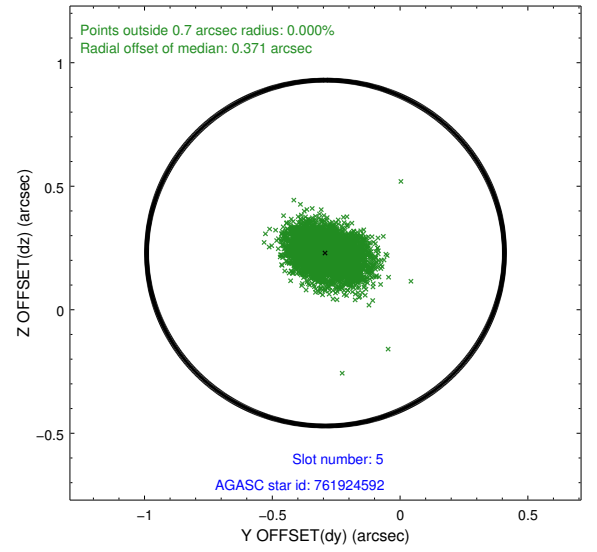
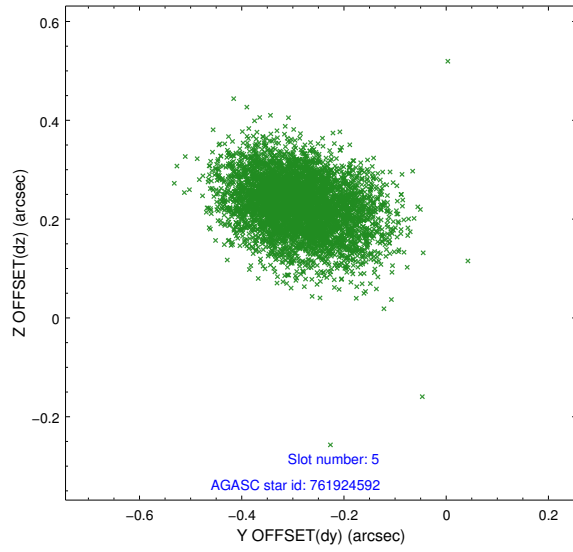
2.4.1 Slot 3



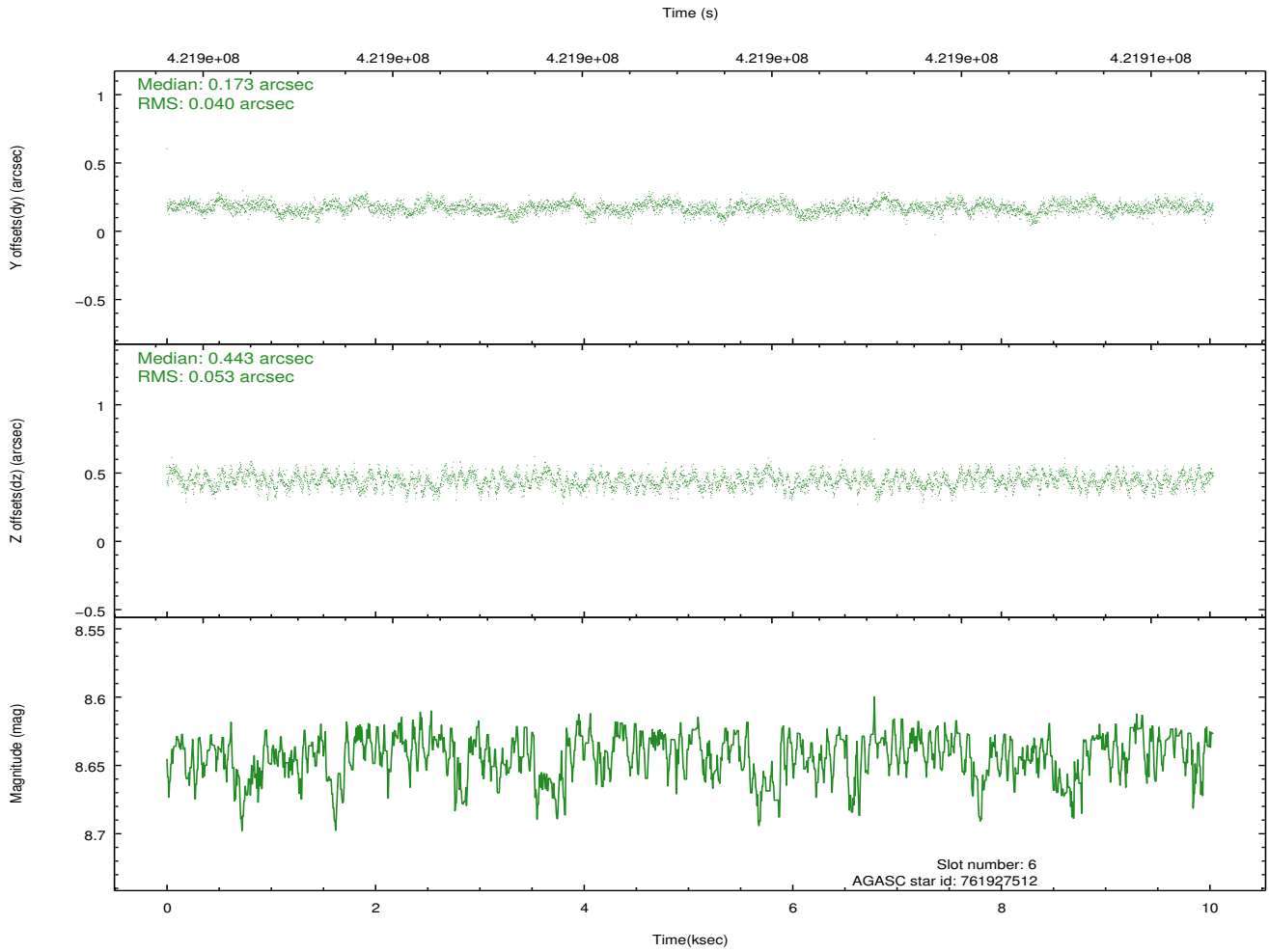
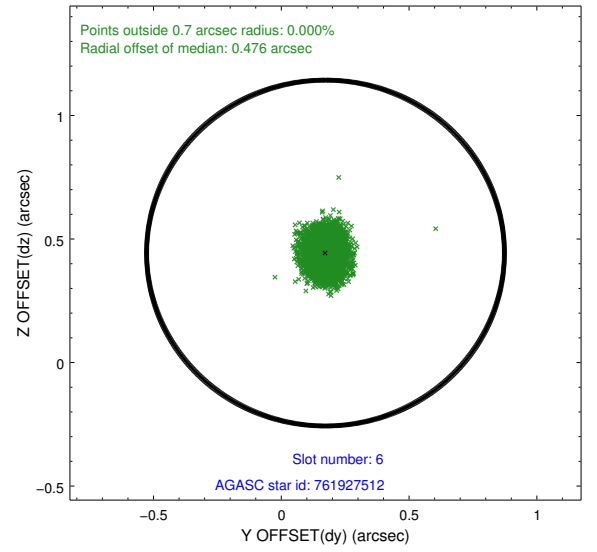
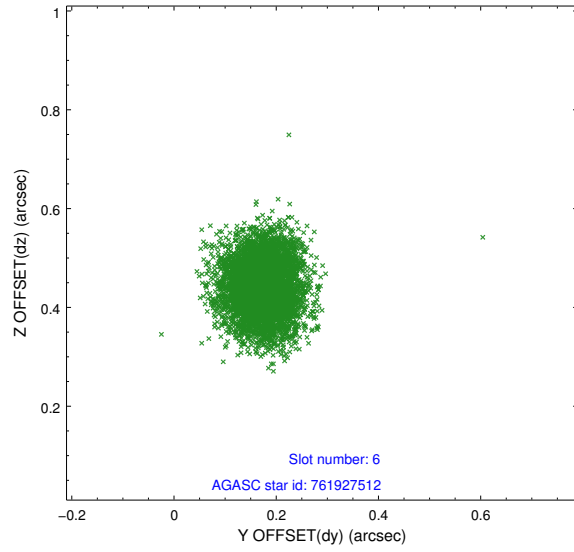
2.4.2 Slot 4



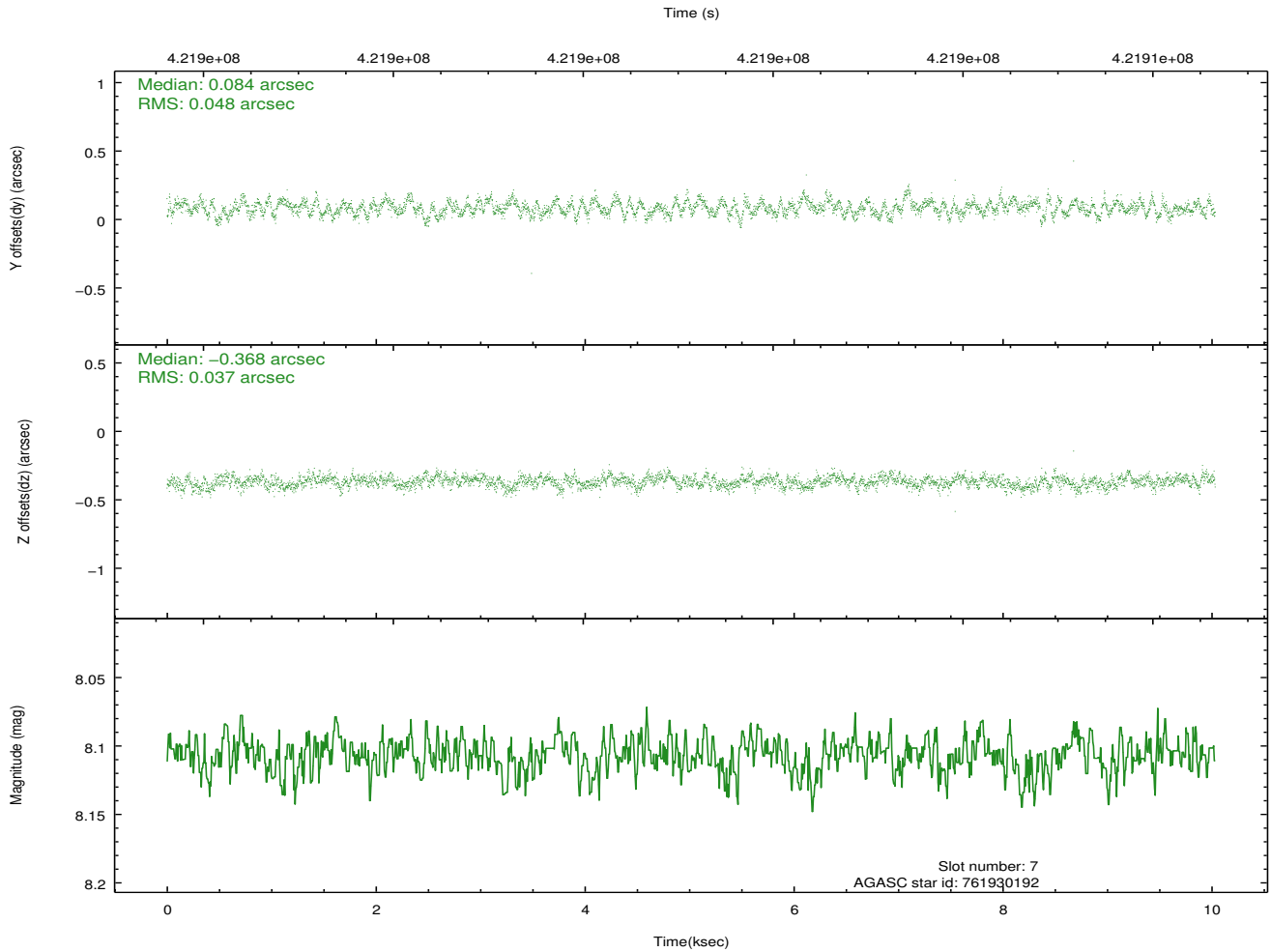
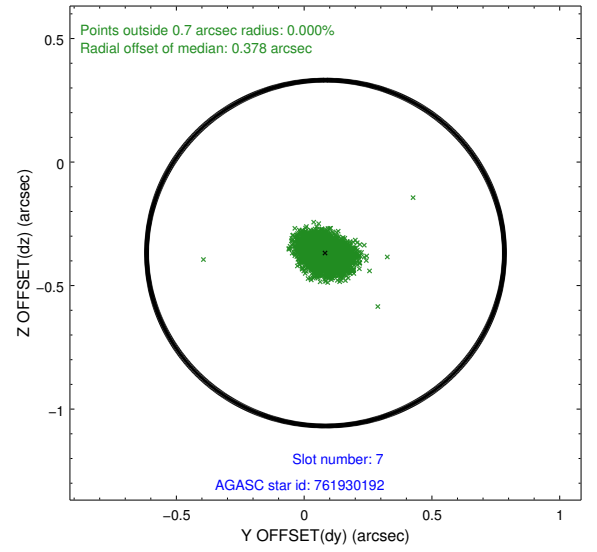
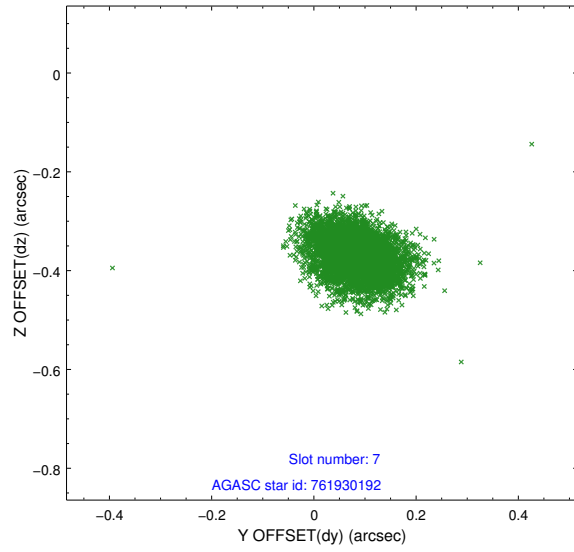
2.4.3 Slot 5



2.4.4 Slot 6

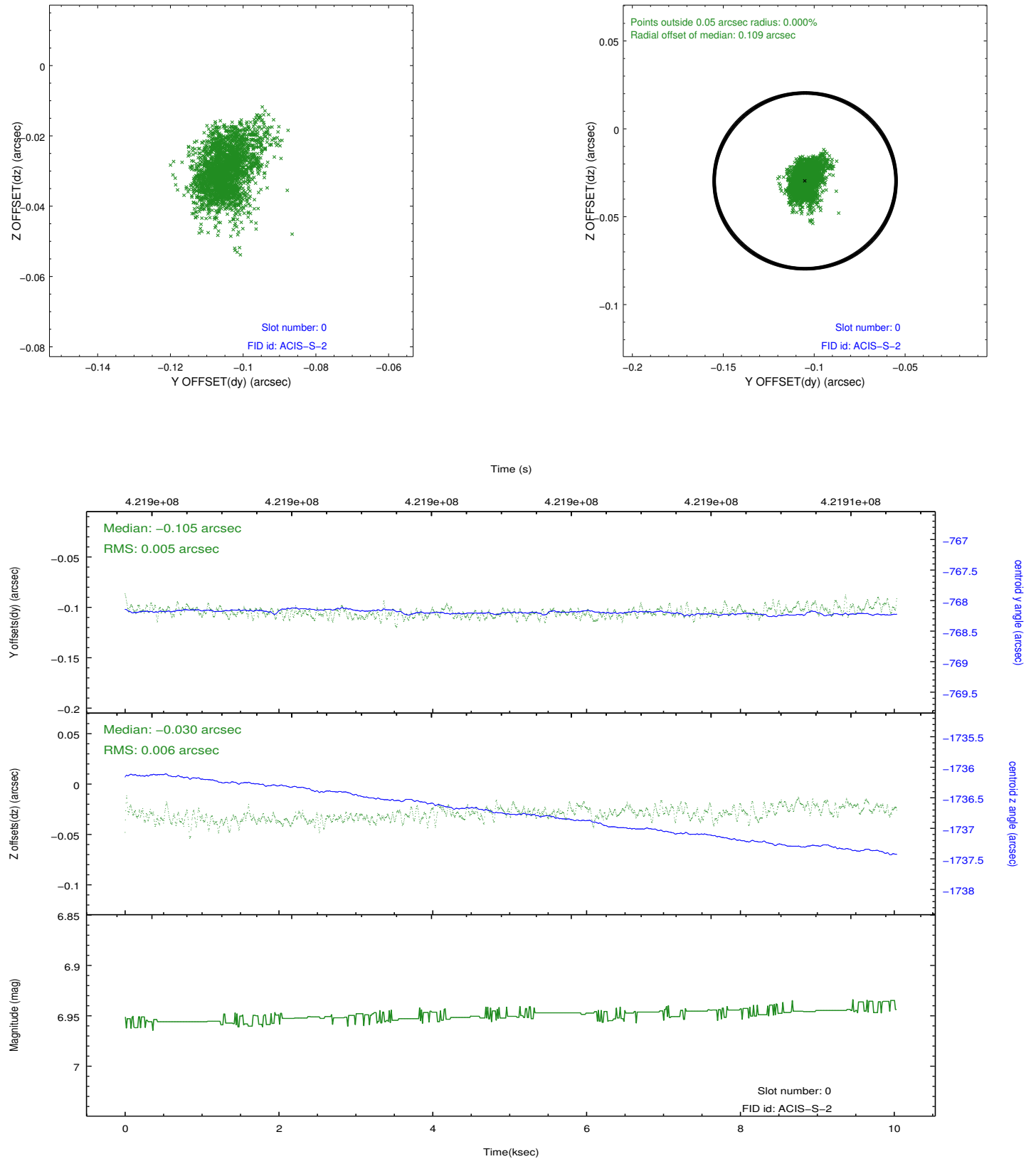


2.4.5 Slot 7

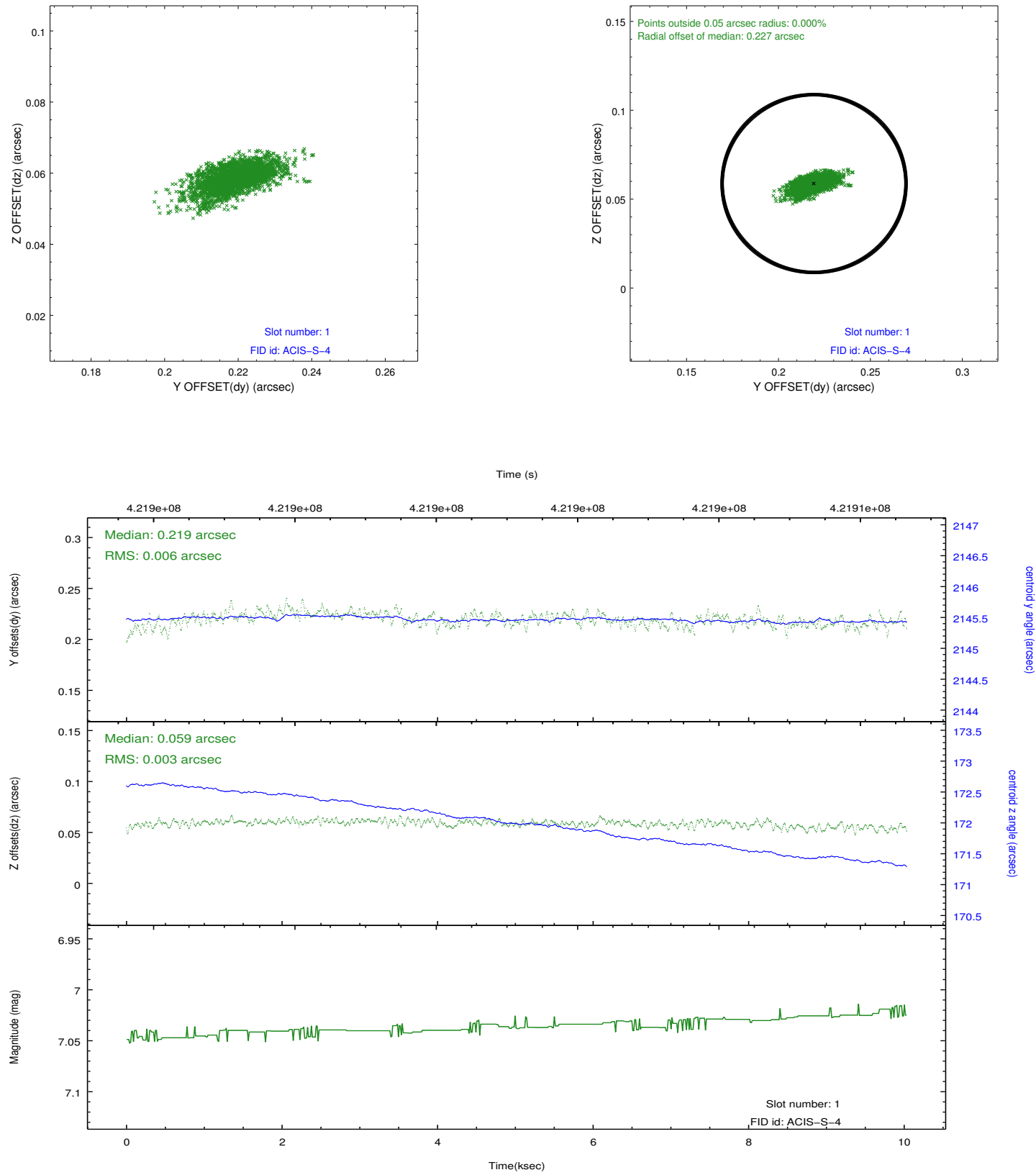


2.5 FID Slots

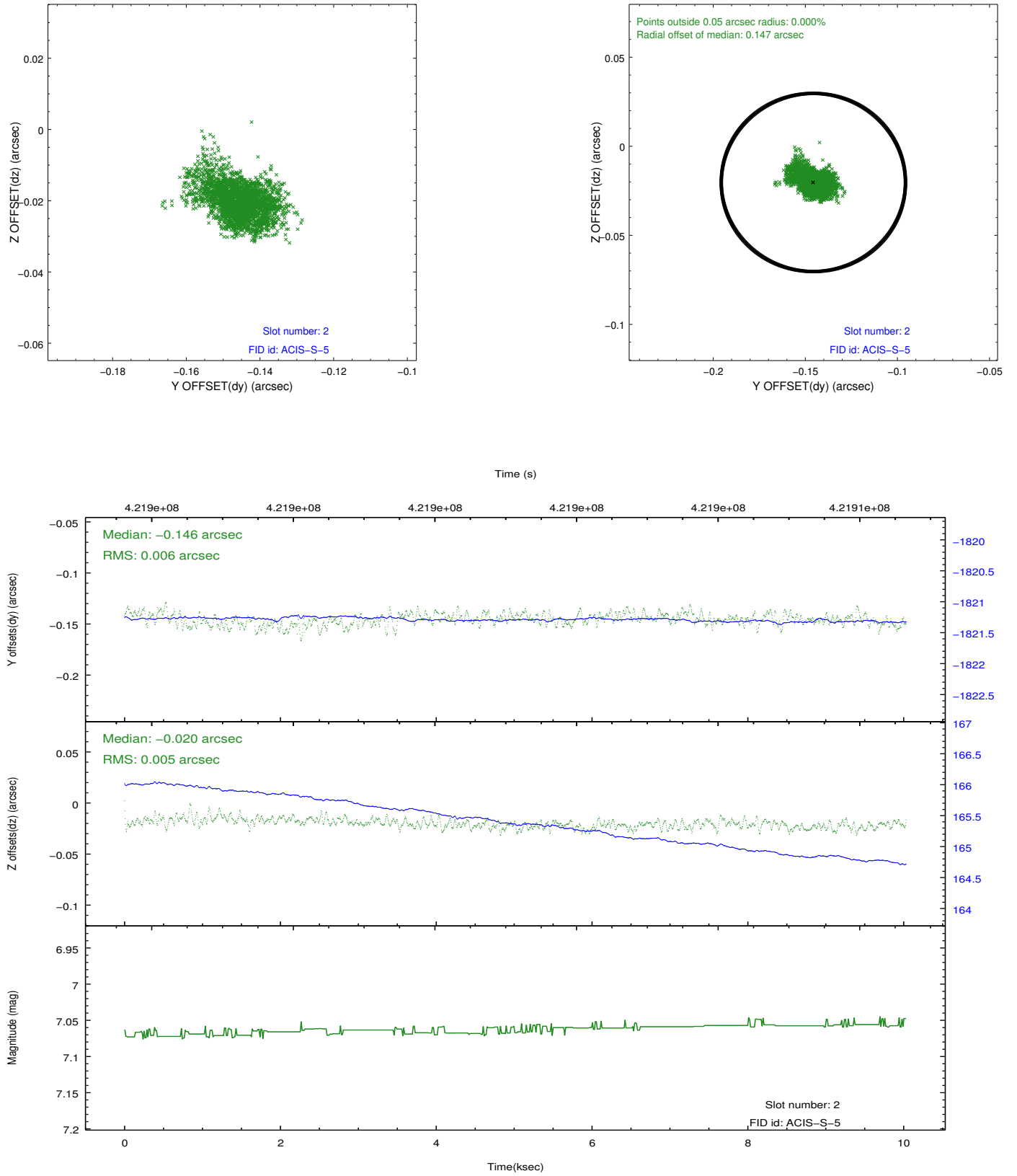
2.5.1 Slot 0



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)	2012.02.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.9438790217042

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 = 3 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 = 3 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:
(343.47932,-8.67313),(343.48148,-8.67223),(343.45659,-8.61425),(343.45443,-8.61515)