

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 12466 - L2 Version 2
Chandra X-Ray Center

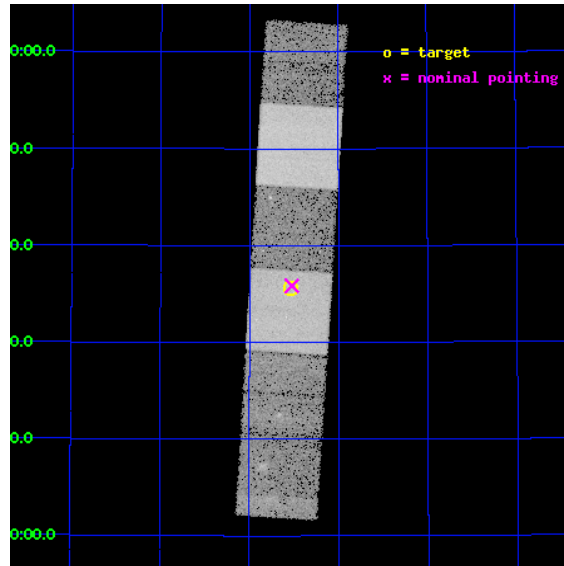
L2 Processing Date : Feb 10 2012

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

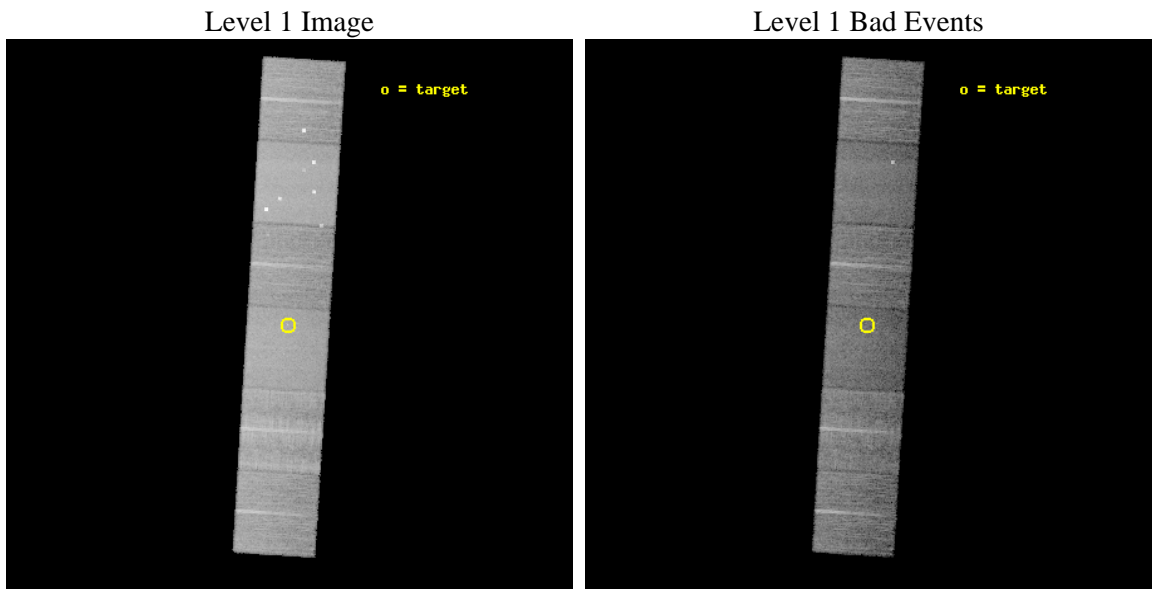
seq_num	401207	Sequence number
obs_id	12466	Observation id
title	First X-ray Observations of Four New Fermi-Associated Black-Widow Pulsars	Proposal title
observer	Prof. Maura McLaughlin	Principal investigator
object	J2215+41	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	333.885312	Observer's specified target RA [deg]
dec_targ	51.593436	Observer's specified target Dec [deg]
ra_nom	333.88078065761	Nominal RA [deg]
dec_nom	51.597423219293	Nominal Dec [deg]
roll_nom	93.524050888977	Nominal Roll [deg]
revision	2	Processing version of data
ontime	17048.897274196	Sum of GTIs [s]
livetime	16833.013871297	Livetime [s]
ontime4	17048.938314199	Sum of GTIs [s]
ontime5	17048.856234193	Sum of GTIs [s]
ontime6	17048.81519419	Sum of GTIs [s]
ontime7	17048.897274196	Sum of GTIs [s]
ontime8	17048.774154186	Sum of GTIs [s]
ontime9	17048.733114183	Sum of GTIs [s]
l2events	188520	Number of level 2 events



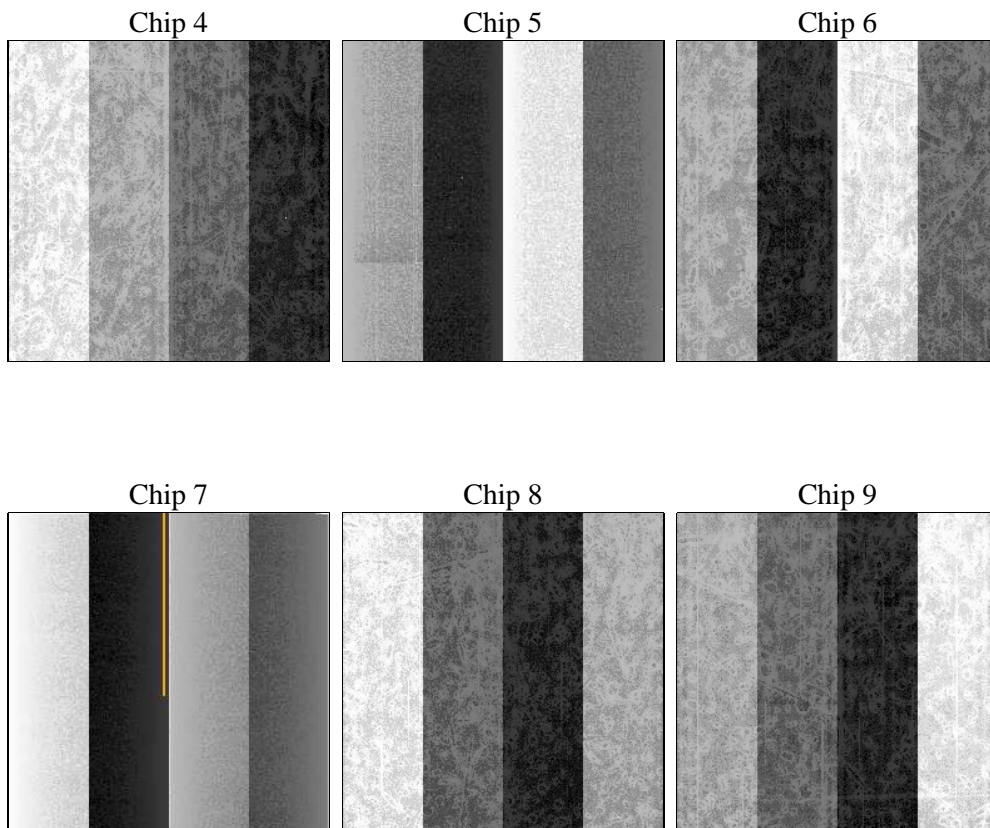
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	17000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	17048.897274196	Sum of GTIs [s]
caldsver	4.4.7	 	ontime4	17048.938314199	Sum of GTIs [s]
date	2012-02-10T06:26:38	Date and time of file creation	ontime5	17048.856234193	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	17048.81519419	Sum of GTIs [s]
			ontime7	17048.897274196	Sum of GTIs [s]
			ontime8	17048.774154186	Sum of GTIs [s]
			ontime9	17048.733114183	Sum of GTIs [s]
			l1events	819646	Number of level 1 events

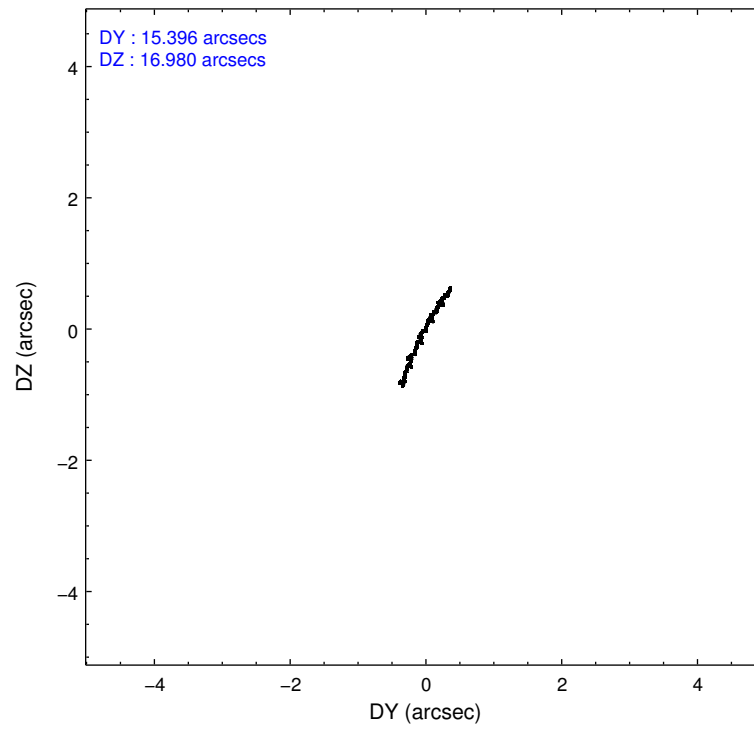
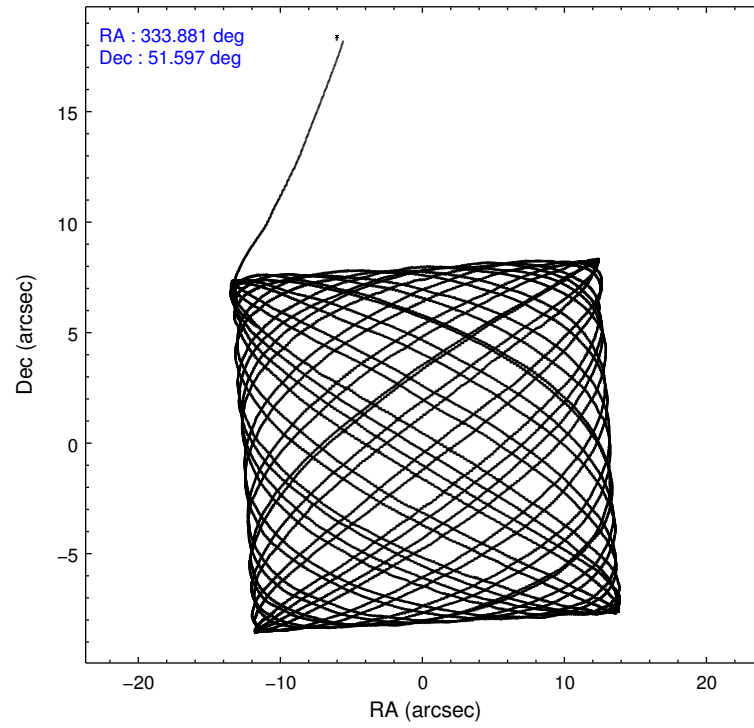
2.1.4 Events

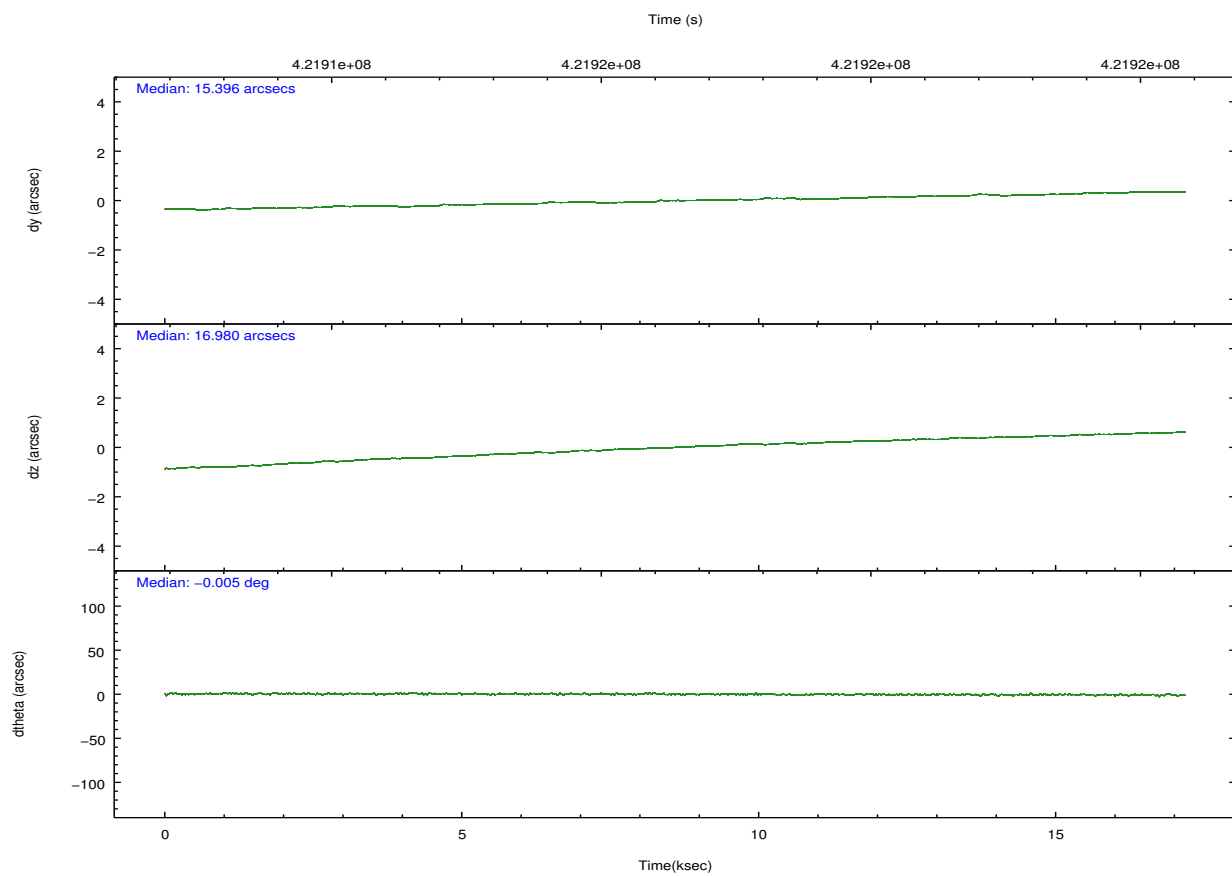
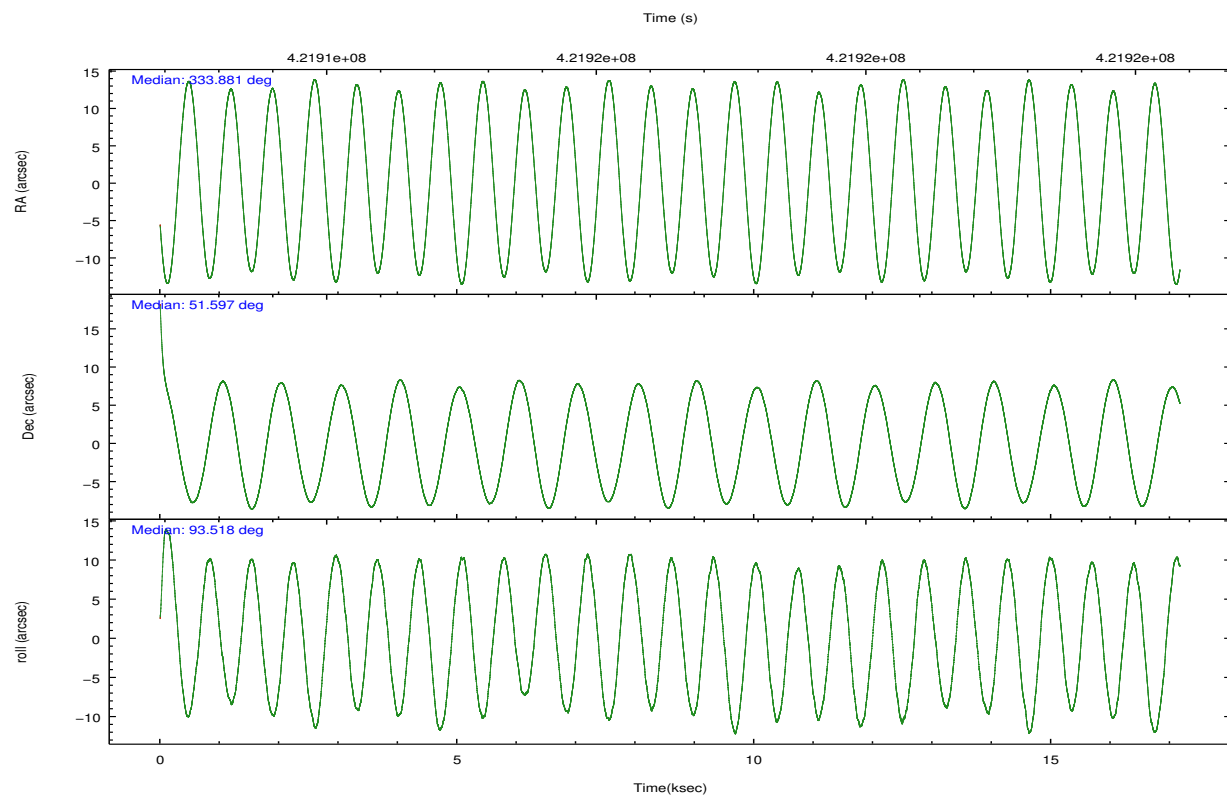
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	127860	182006	109740	139401	150748	109891	grade 0 events	9262	16014	4807	5801	12649	5607
rejected events	110130	88165	96476	76642	109636	95693		7%	8%	4%	4%	8%	5%
rejected %	86%	48%	87%	54%	72%	87%	grade 1 events	137	361	62	176	124	73
								0%	0%	0%	0%	0%	0%
							grade 2 events	3317	26830	3009	12944	9266	2933
								2%	14%	2%	9%	6%	2%
							grade 3 events	1435	3209	1275	5548	4518	1454
								1%	1%	1%	3%	2%	1%
							grade 4 events	1374	3047	1315	5479	4126	1364
								1%	1%	1%	3%	2%	1%
							grade 5 events	5357	13040	5247	14516	7781	5800
								4%	7%	4%	10%	5%	5%
							grade 6 events	2346	44770	2865	32999	10557	2845
								1%	24%	2%	23%	7%	2%
							grade 7 events	104632	74735	91160	61938	101727	89815
								81%	41%	83%	44%	67%	81%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	333.905608	333.8807806576055	Subarray requested	NONE	NONE
[deg] Pointing Dec	51.574804	51.59742321929266	Alternating exposures requested	N	N
[deg] Pointing Roll	93.347982	93.52405088897726	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	421907954.184000	421906936.22761			
Observation start date	2011-05-16T04:38:08	2011-05-16T04:22:16			
[s] Observation end time (MET)	421924954.184000	421925959.7161			
Observation end date	2011-05-16T09:21:28	2011-05-16T09:39:19			
Read mode	TIMED	TIMED			

2.3 Aspect



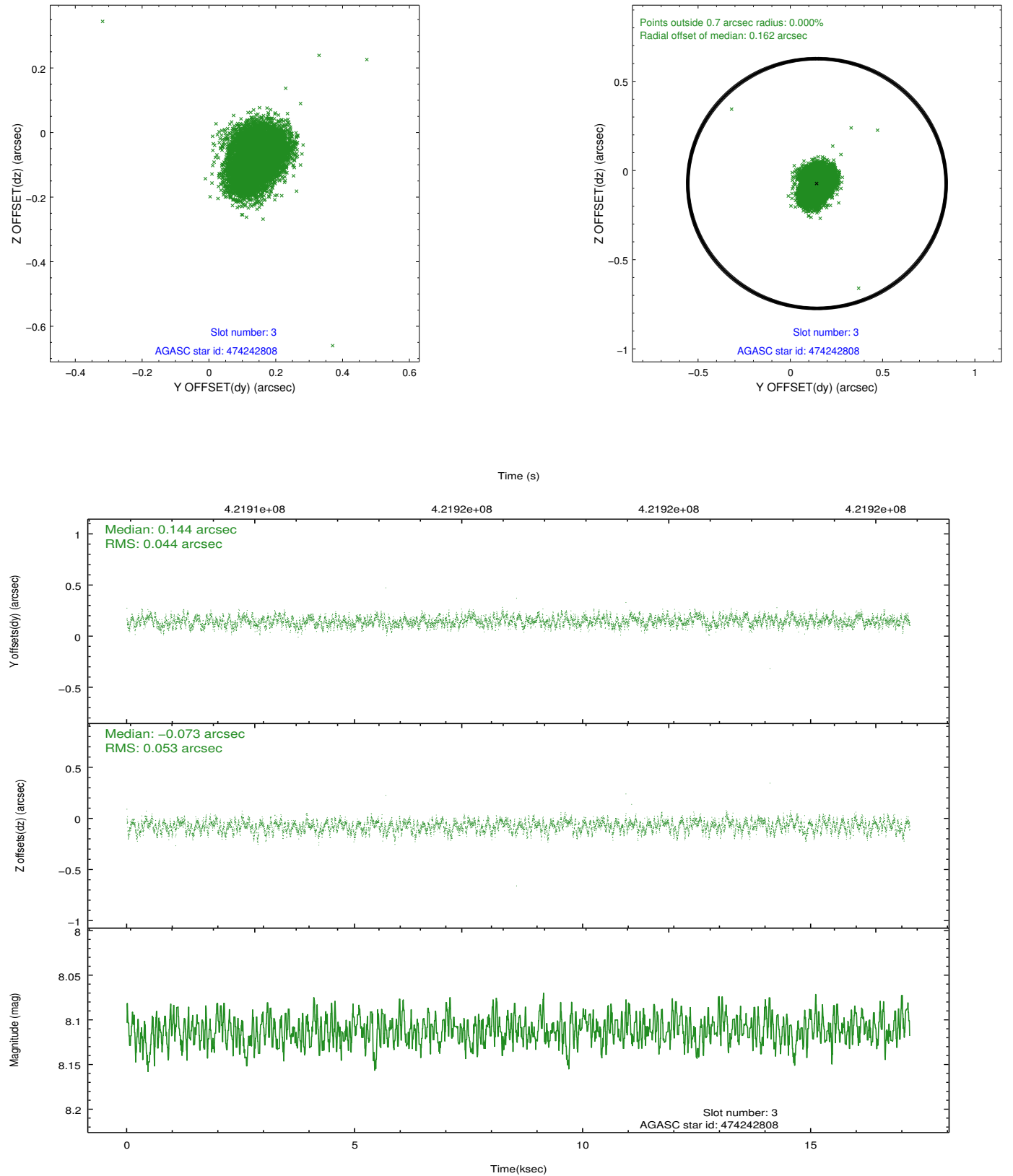


Slot Statistics

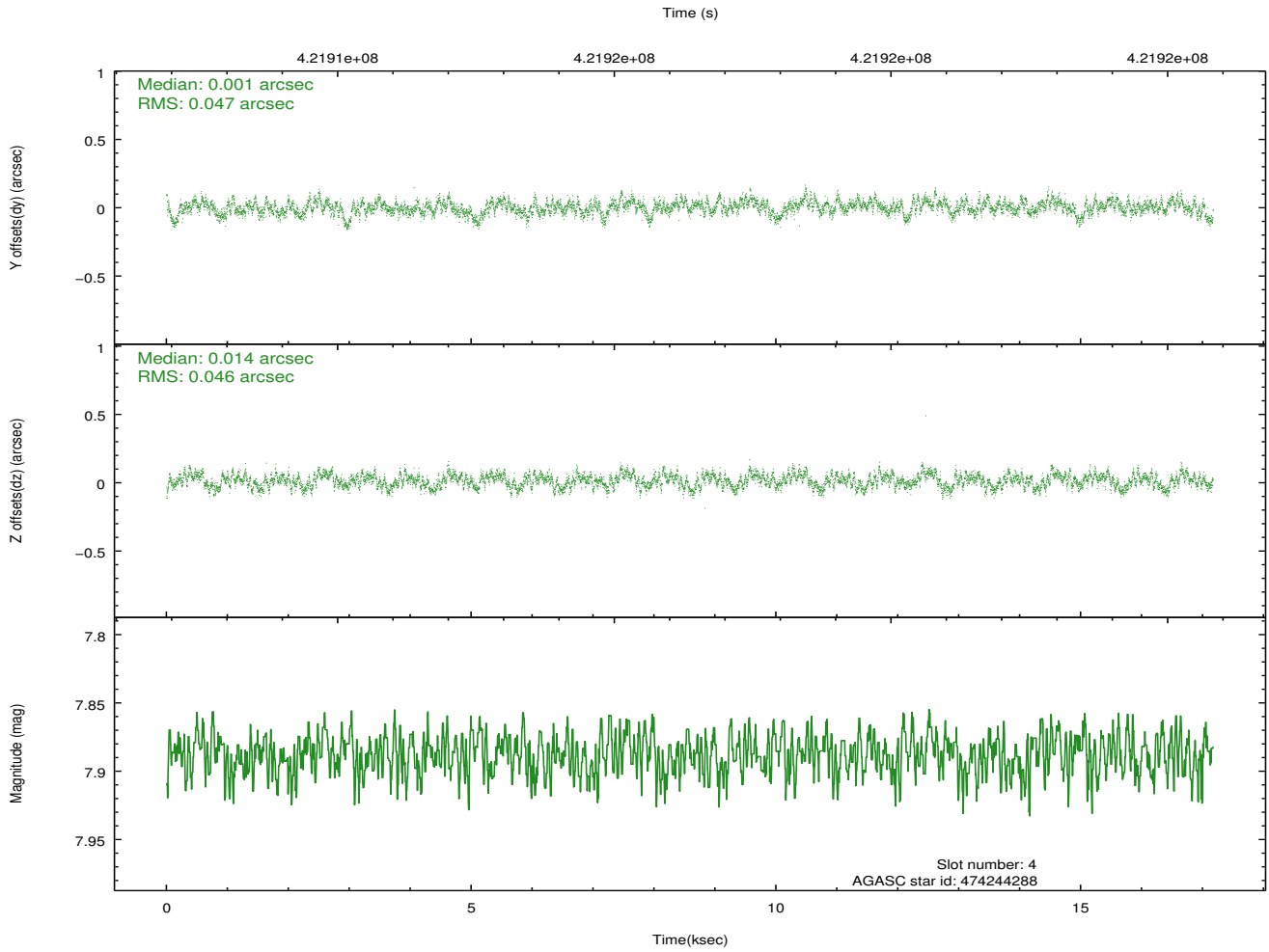
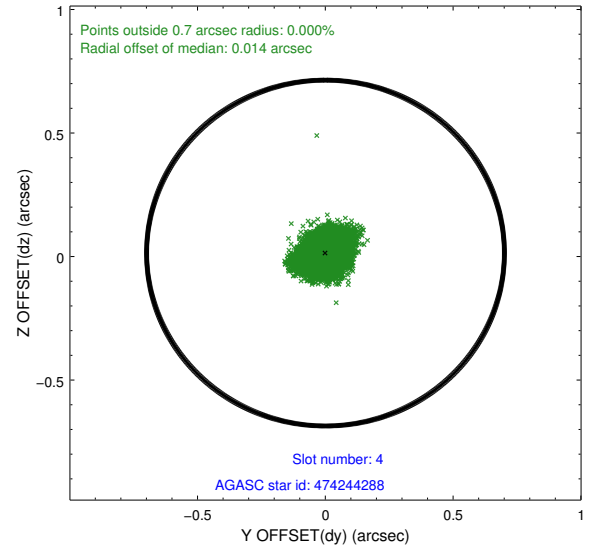
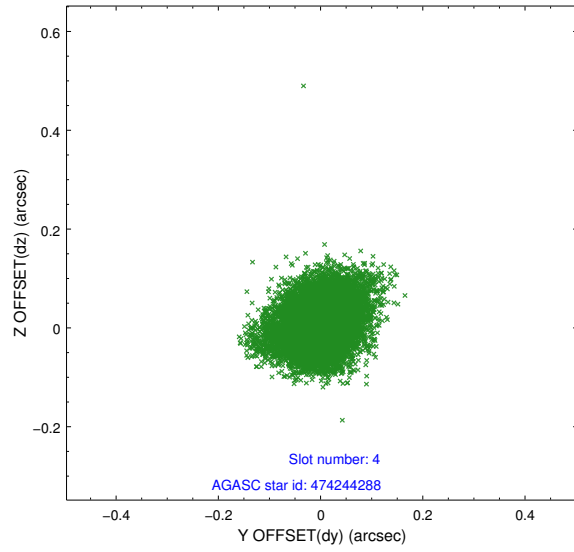
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.99	4189	-0.015	-0.042	0.030	0.040	0.000000	0.000000	927.65	-1734.04
1	FID	ACIS-S-4	7.00	4189	0.064	0.006	0.015	0.022	0.000000	0.000000	2145.27	169.92
2	FID	ACIS-S-6	7.15	4188	-0.072	0.049	0.016	0.023	0.000000	0.000000	393.84	807.60
3	GUIDE	474242808	8.11	8375	0.144	-0.073	0.073	0.116	334.410164	51.318044	-984.75	-1079.47
4	GUIDE	474244288	7.89	8376	0.001	0.014	0.071	0.112	334.076752	51.085786	-1779.54	-283.61
5	GUIDE	474245360	7.82	8376	0.062	0.081	0.071	0.110	334.095340	51.007325	-2063.77	-309.97
6	GUIDE	474361520	8.85	8357	-0.116	0.024	0.090	0.142	334.733422	52.024192	1518.38	-1925.32
7	GUIDE	474220840	9.19	8368	-0.094	-0.038	0.089	0.145	332.811498	52.162545	2272.01	2286.77

2.4 Star Slots

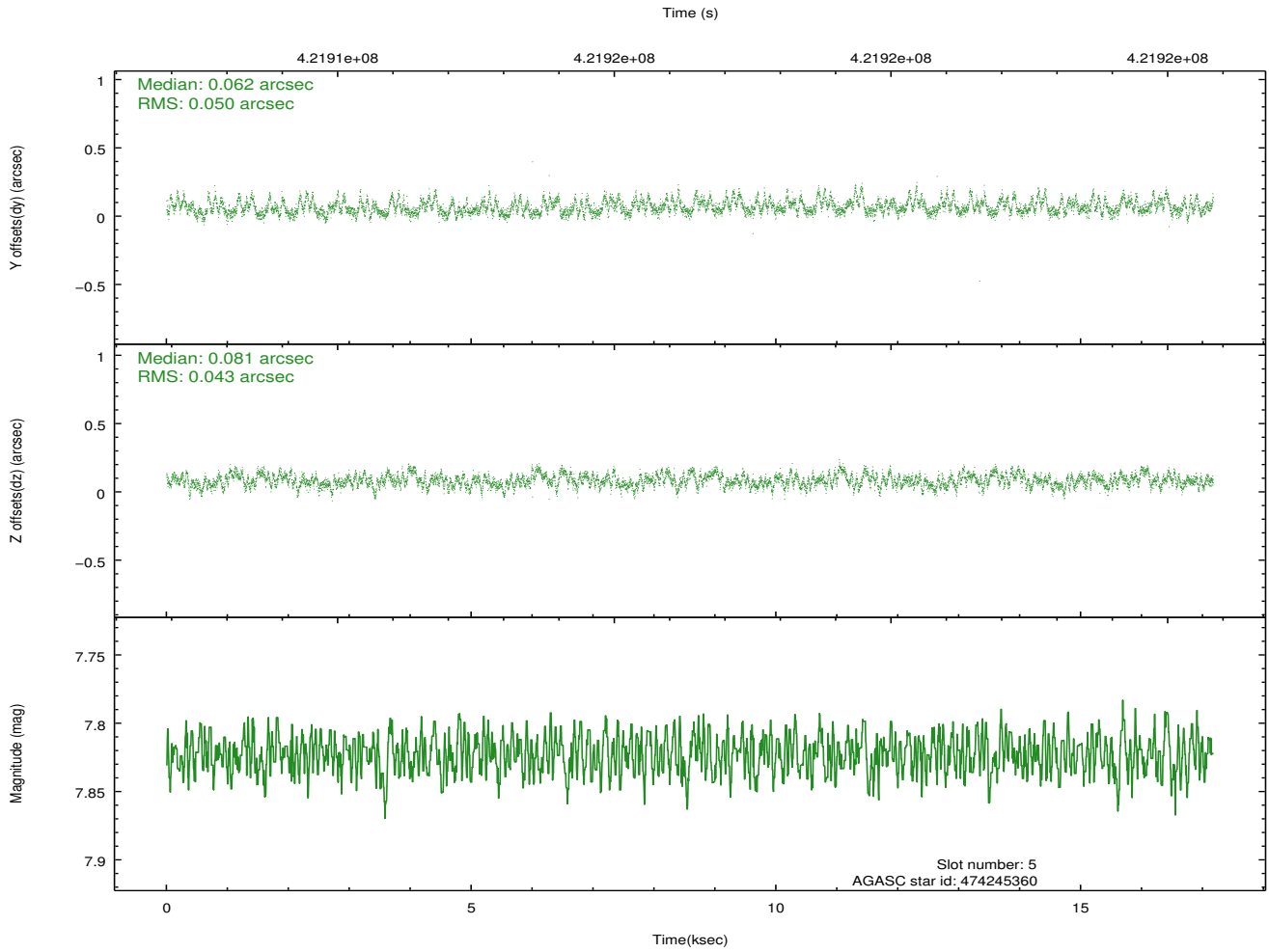
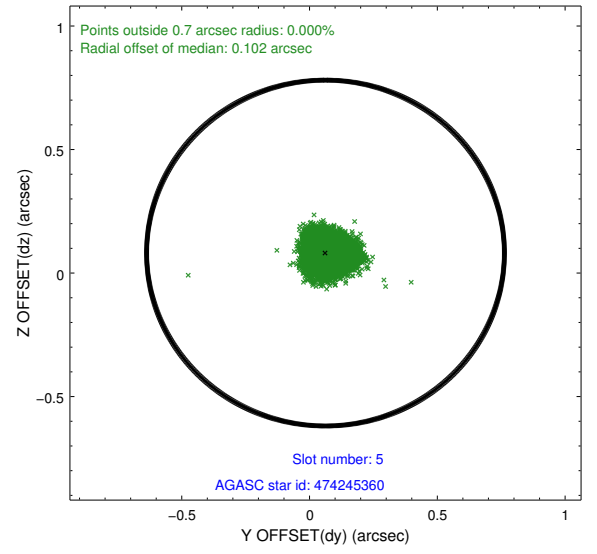
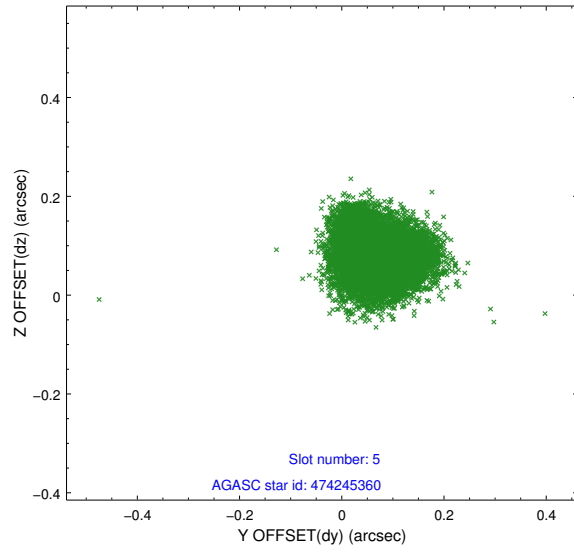
2.4.1 Slot 3



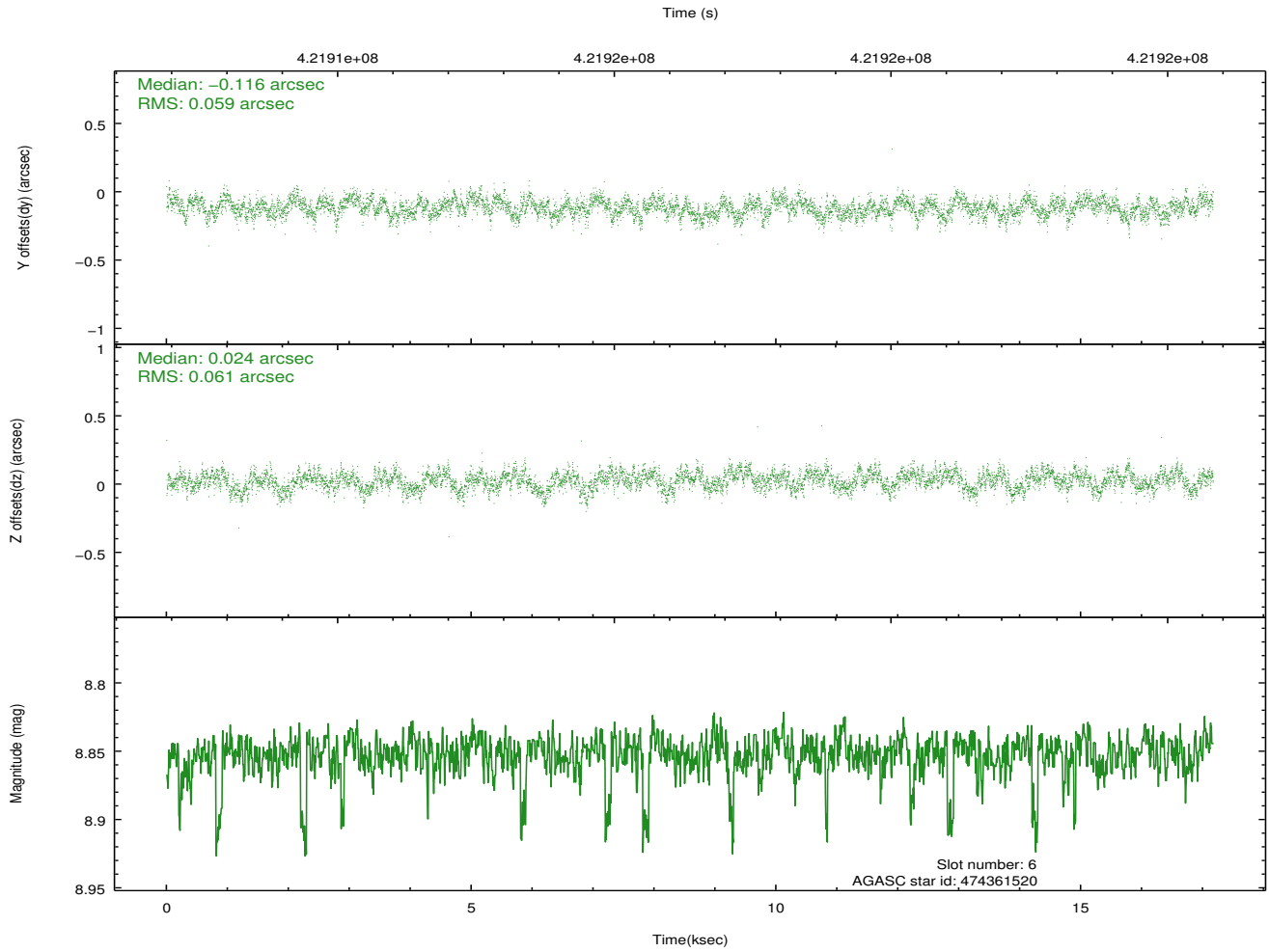
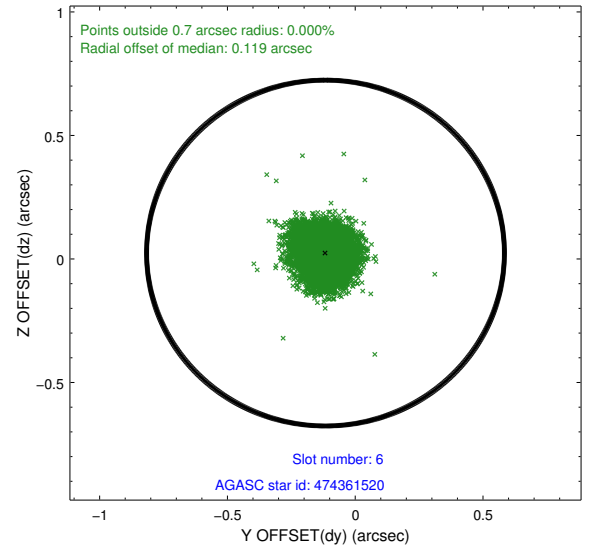
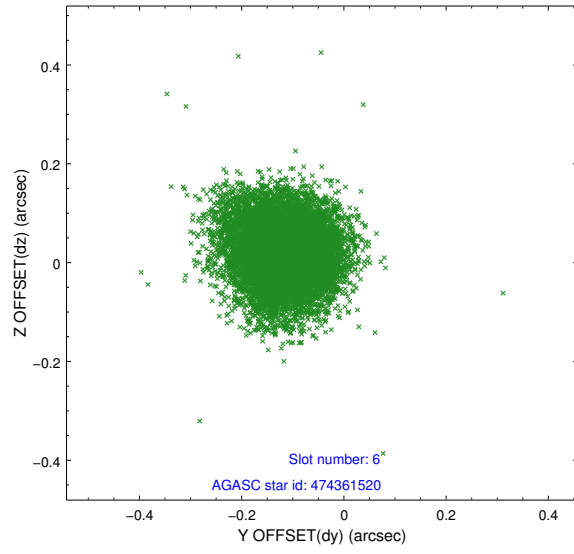
2.4.2 Slot 4



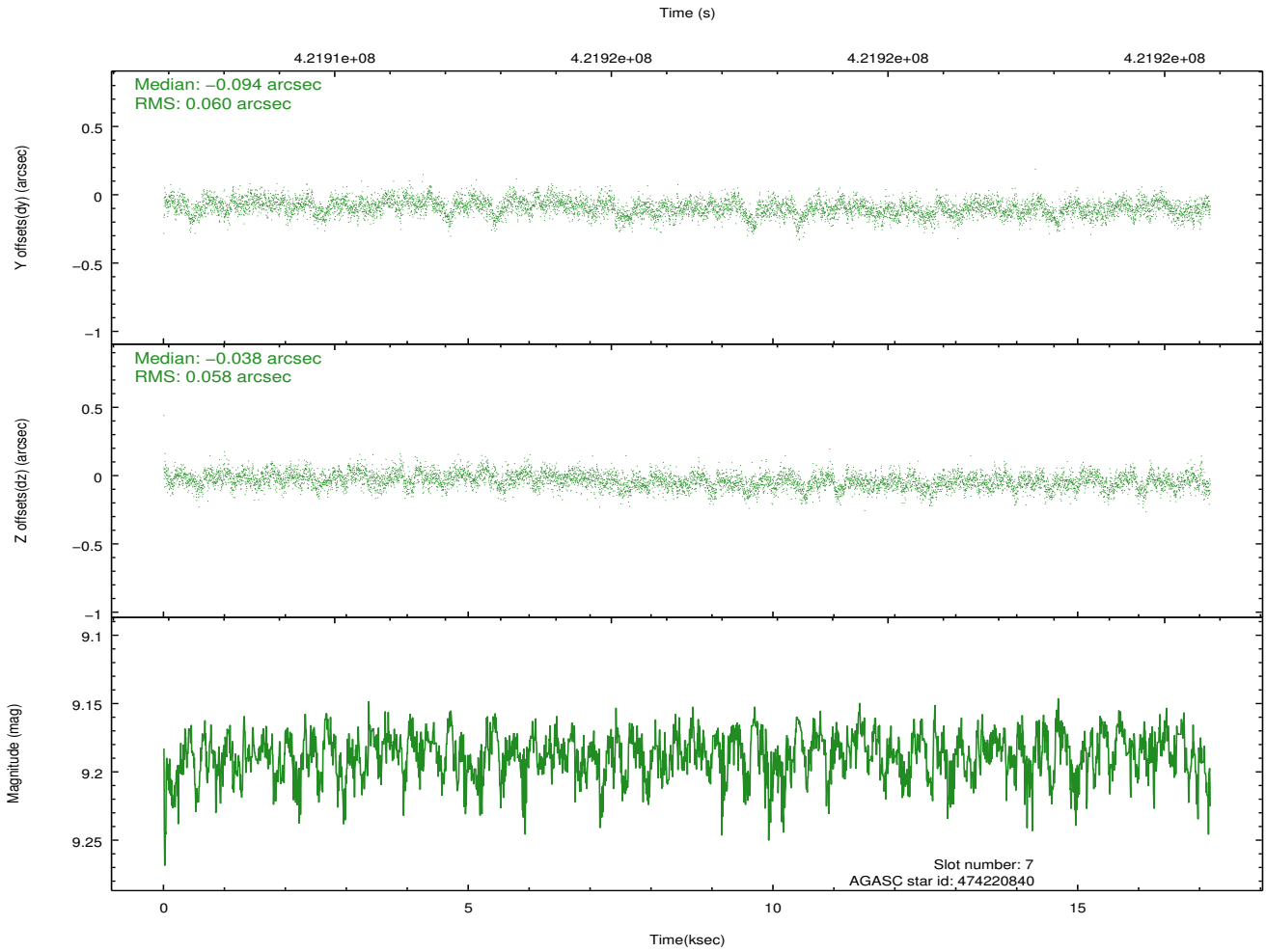
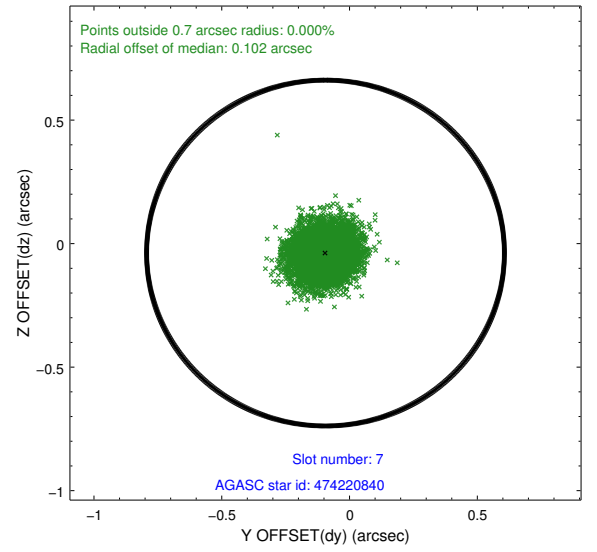
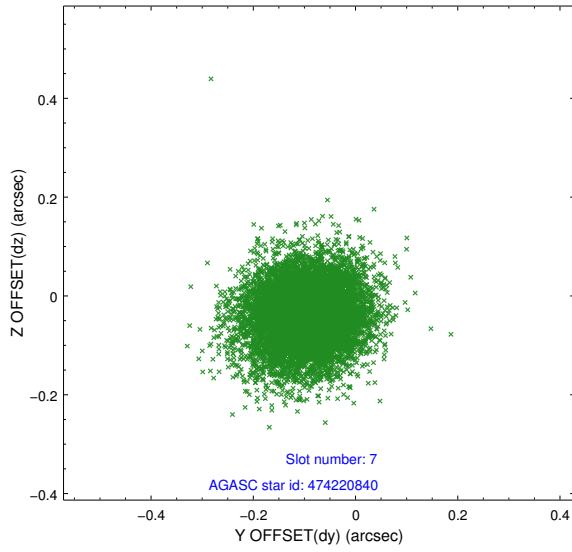
2.4.3 Slot 5



2.4.4 Slot 6

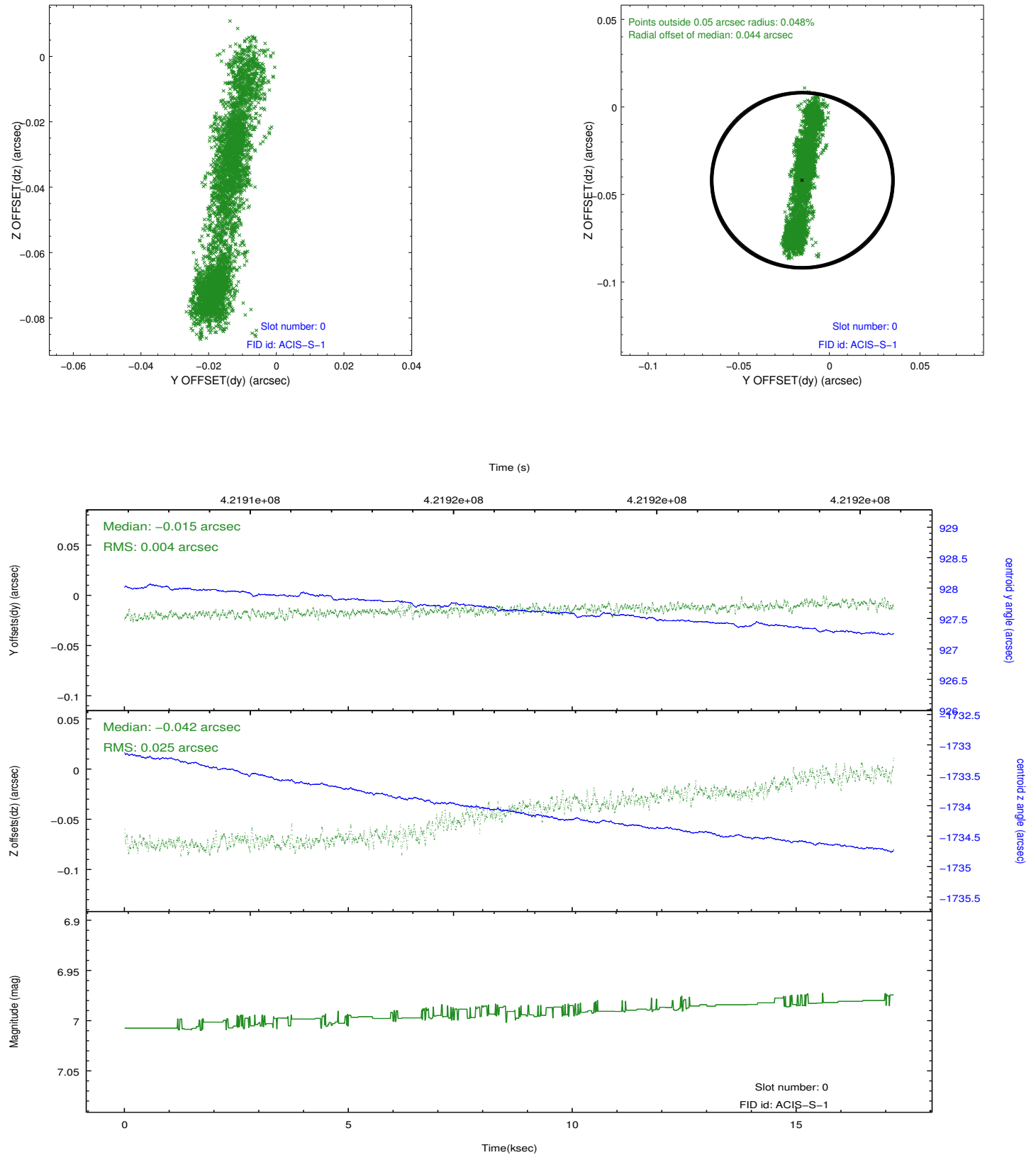


2.4.5 Slot 7

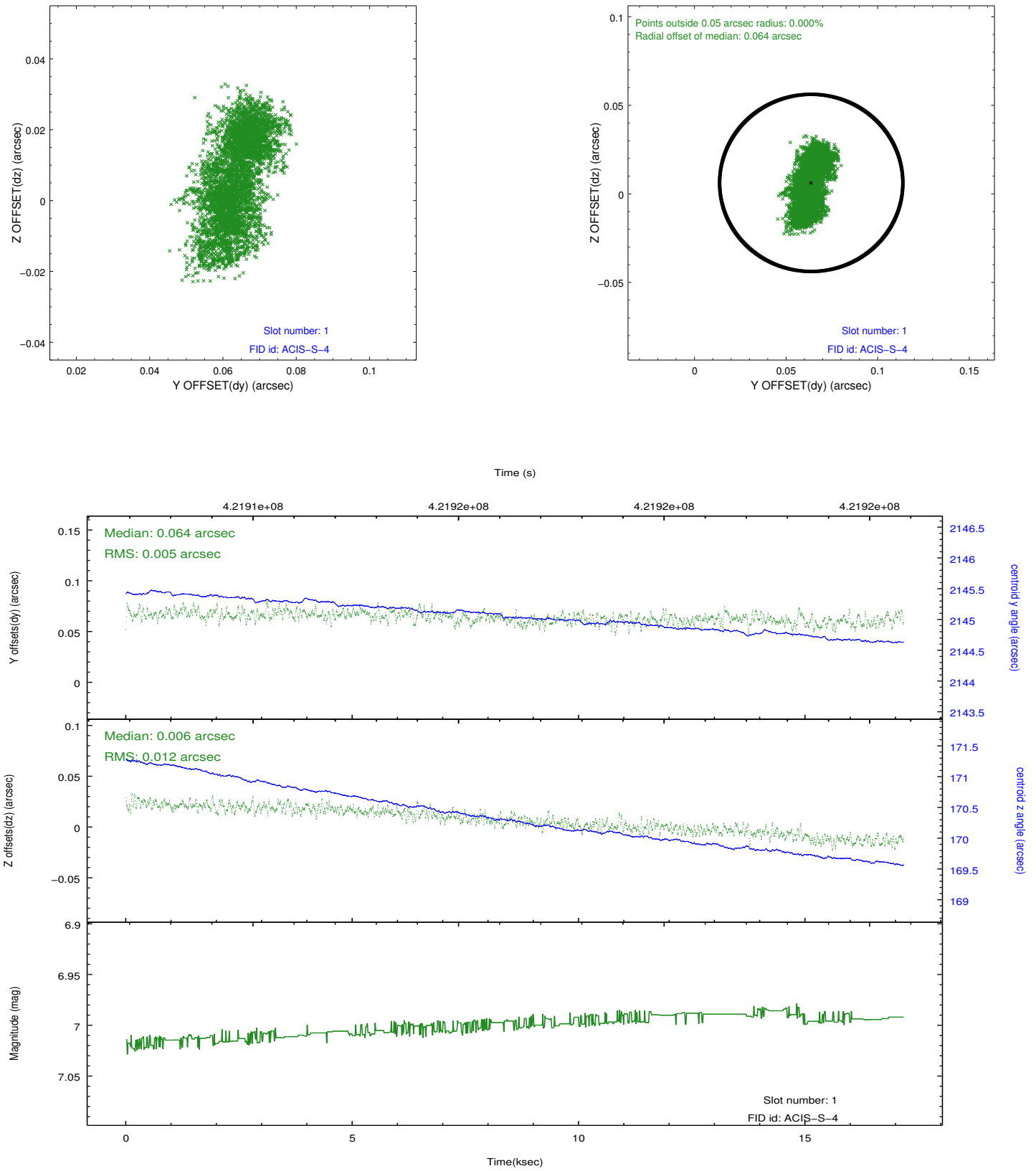


2.5 FID Slots

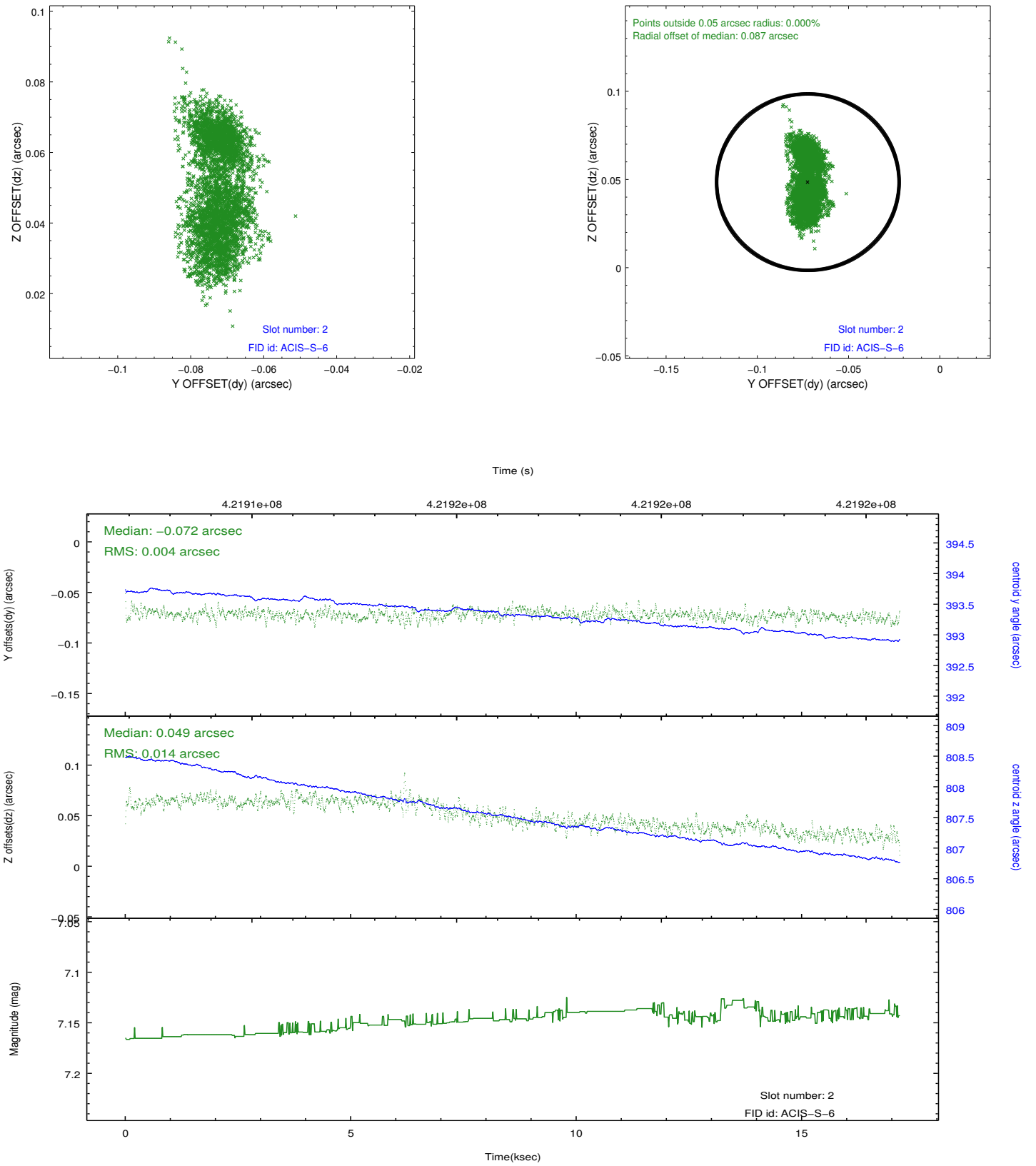
2.5.1 Slot 0



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	17.048897272944

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.