

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12840 - L2 Version 2  
Chandra X-Ray Center

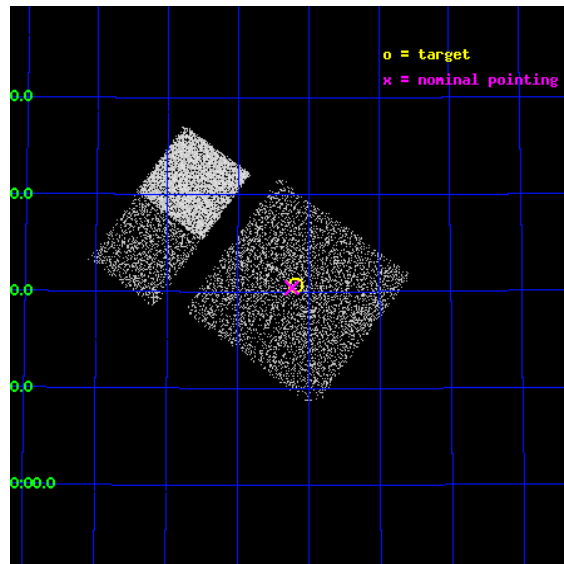
L2 Processing Date : Feb 4 2012

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# 1 Front

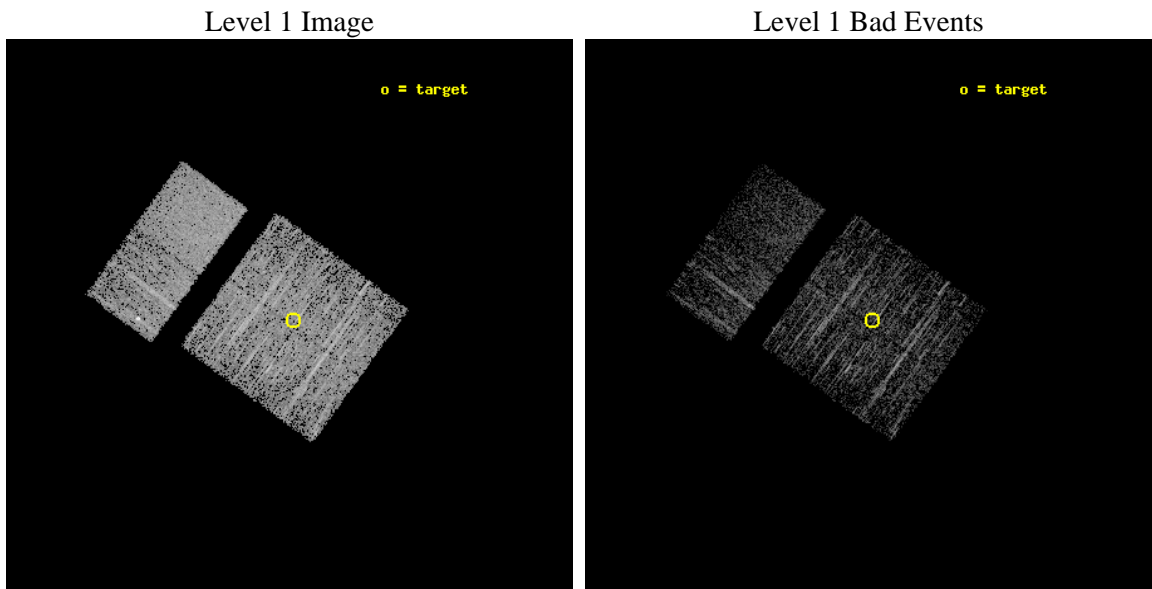
seq_num	702473	Sequence number
obs_id	12840	Observation id
title	Chandra observations of unidentified Fermi sources detected by INTEGRAL	Proposal title
observer	Mr. Claudio Ricci	Principal investigator
object	1FGL J0214.1+6020	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	33.546667	Observer's specified target RA [deg]
dec_targ	60.344694	Observer's specified target Dec [deg]
ra_nom	33.559833113013	Nominal RA [deg]
dec_nom	60.340160365985	Nominal Dec [deg]
roll_nom	306.2416144999	Nominal Roll [deg]
revision	2	Processing version of data
ontime	2053.1666620374	Sum of GTIs [s]
livetime	2027.1682294941	Livetime [s]
ontime0	2049.8025217652	Sum of GTIs [s]
ontime1	2053.0845820308	Sum of GTIs [s]
ontime2	2053.1256220341	Sum of GTIs [s]
ontime3	2053.1666620374	Sum of GTIs [s]
ontime6	2053.248742044	Sum of GTIs [s]
ontime7	2053.2077020407	Sum of GTIs [s]
l2events	14896	Number of level 2 events



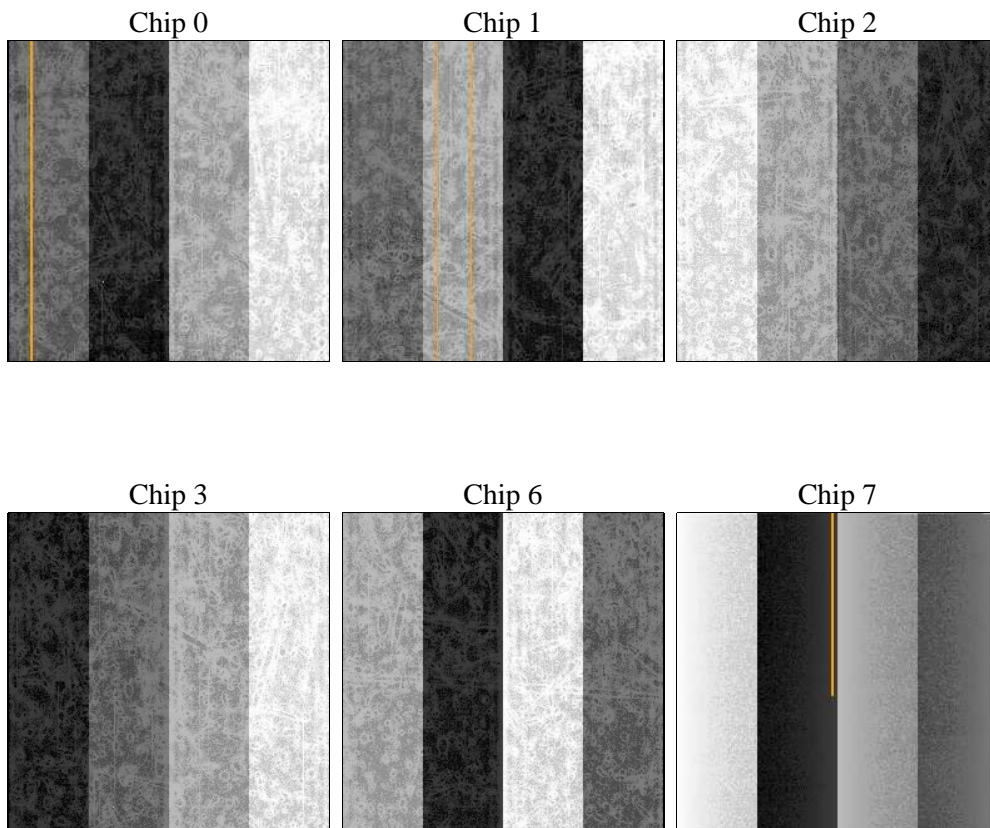
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	2000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	2053.1666620374	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime0	2049.8025217652	Sum of GTIs [s]
date	2012-02-04T20:02:34	Date and time of file creation	ontime1	2053.0845820308	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	2053.1256220341	Sum of GTIs [s]
			ontime3	2053.1666620374	Sum of GTIs [s]
			ontime6	2053.248742044	Sum of GTIs [s]
			ontime7	2053.2077020407	Sum of GTIs [s]
			l1events	93370	Number of level 1 events

### 2.1.4 Events

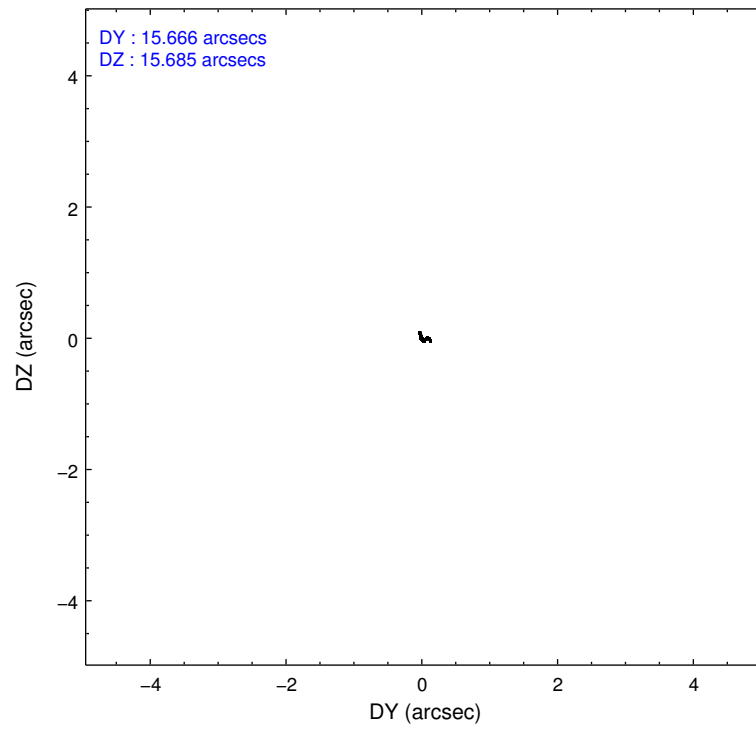
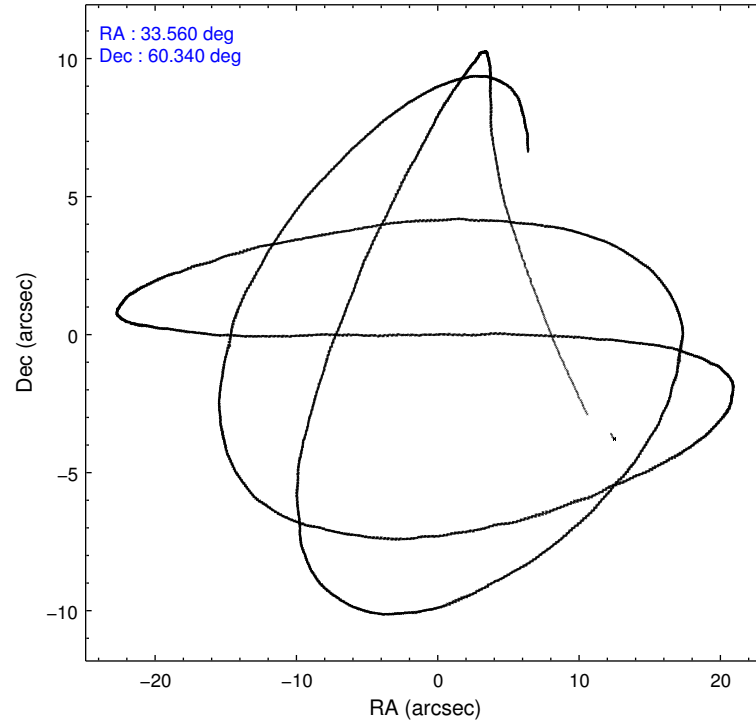
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	14728	14338	15635	14843	15362	18464
rejected events	13077	12506	14017	13337	13033	10272
rejected %	88%	87%	89%	89%	84%	55%

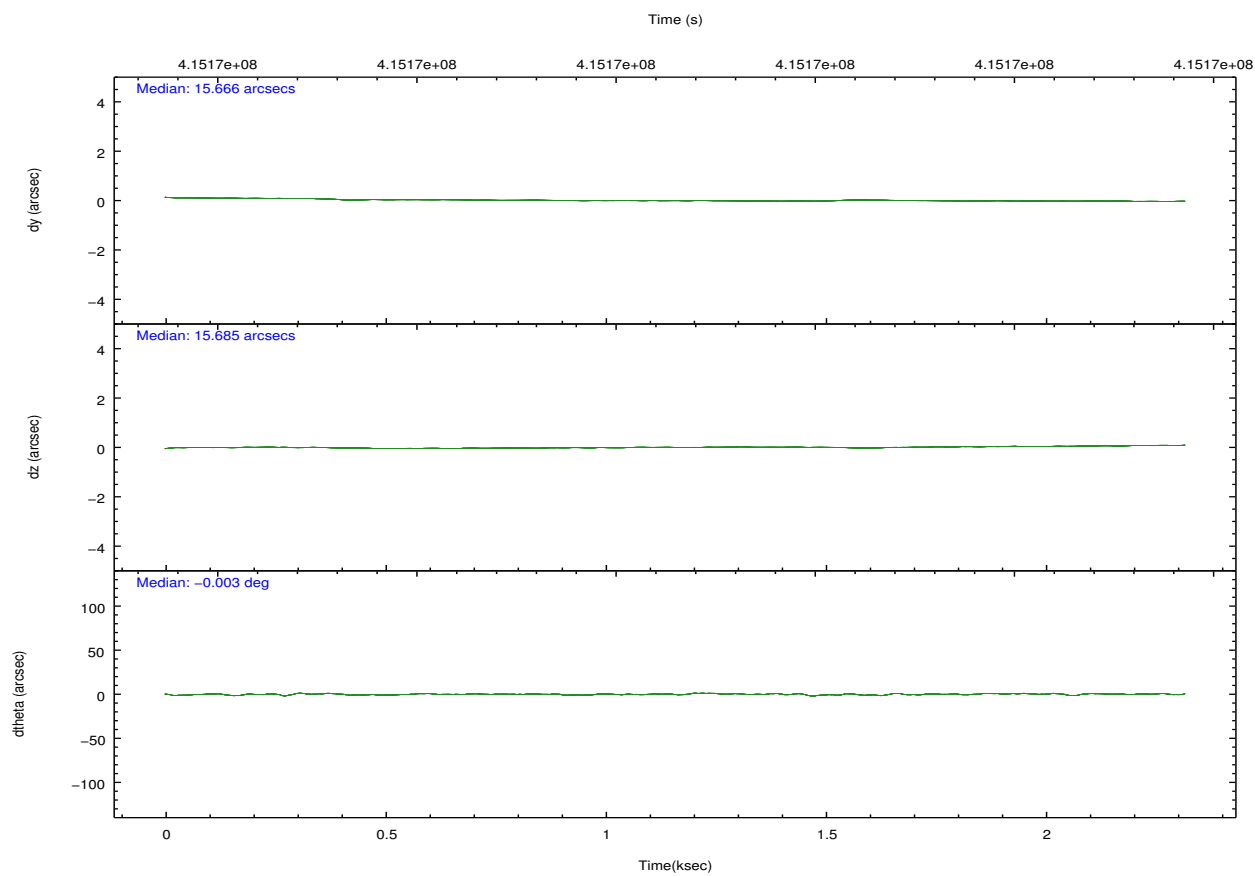
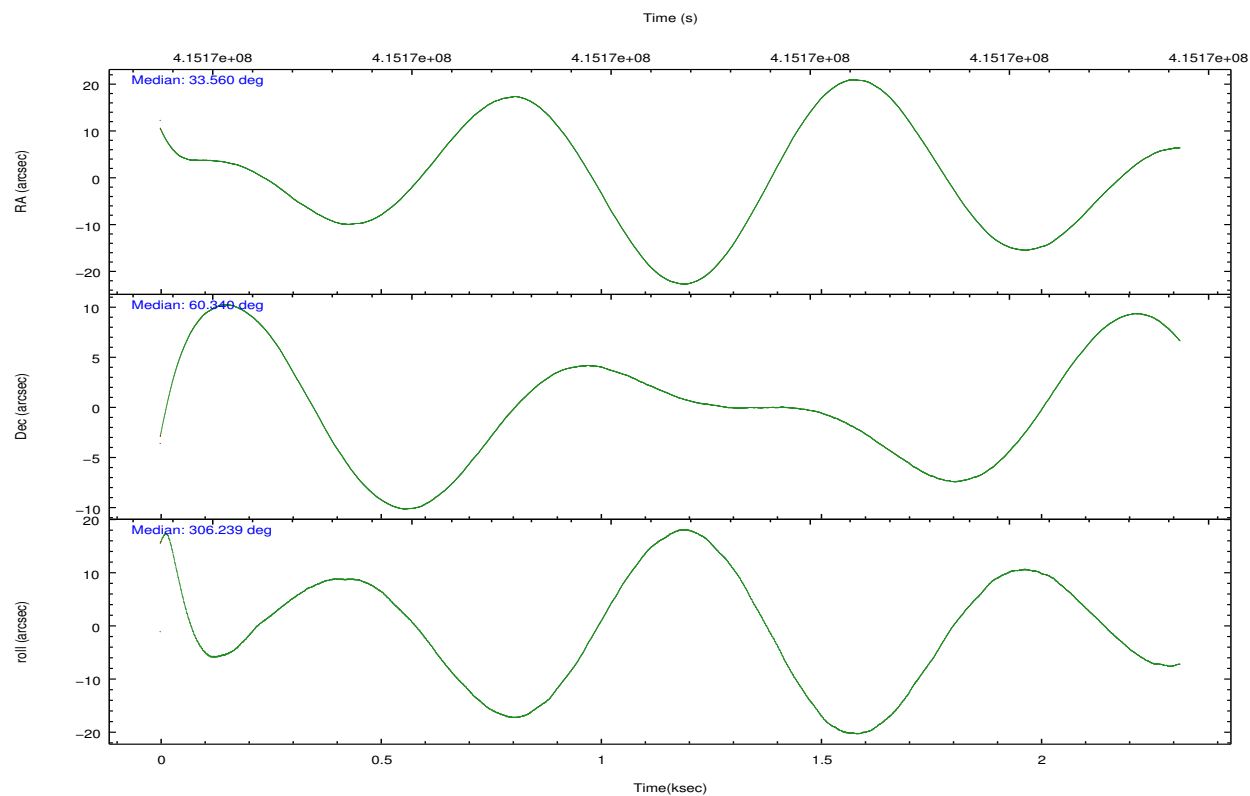
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	583	661	549	528	572	686
	3%	4%	3%	3%	3%	3%
grade 1 events	9	6	12	12	4	22
	0%	0%	0%	0%	0%	0%
grade 2 events	384	437	406	317	1086	1656
	2%	3%	2%	2%	7%	8%
grade 3 events	180	204	167	182	166	714
	1%	1%	1%	1%	1%	3%
grade 4 events	167	176	198	158	144	728
	1%	1%	1%	1%	0%	3%
grade 5 events	658	648	564	706	709	1917
	4%	4%	3%	4%	4%	10%
grade 6 events	341	360	299	326	365	4421
	2%	2%	1%	2%	2%	23%
grade 7 events	12406	11846	13440	12614	12316	8320
	84%	82%	85%	84%	80%	45%

## 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	33.508836	33.55983311301289	CCD I2 on	Y	Y
[deg] Pointing Dec	60.350866	60.34016036598481	CCD I3 on	Y	Y
[deg] Pointing Roll	306.077102	306.2416144998979	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)	415170811.184000	415169736.44071	CCD S5 on	N	N
Observation start date	2011-02-27T05:12:25	2011-02-27T04:55:36	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	415172811.184000	415173292.1659	On-chip summing requested	N	N
Observation end date	2011-02-27T05:45:45	2011-02-27T05:54:52	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect





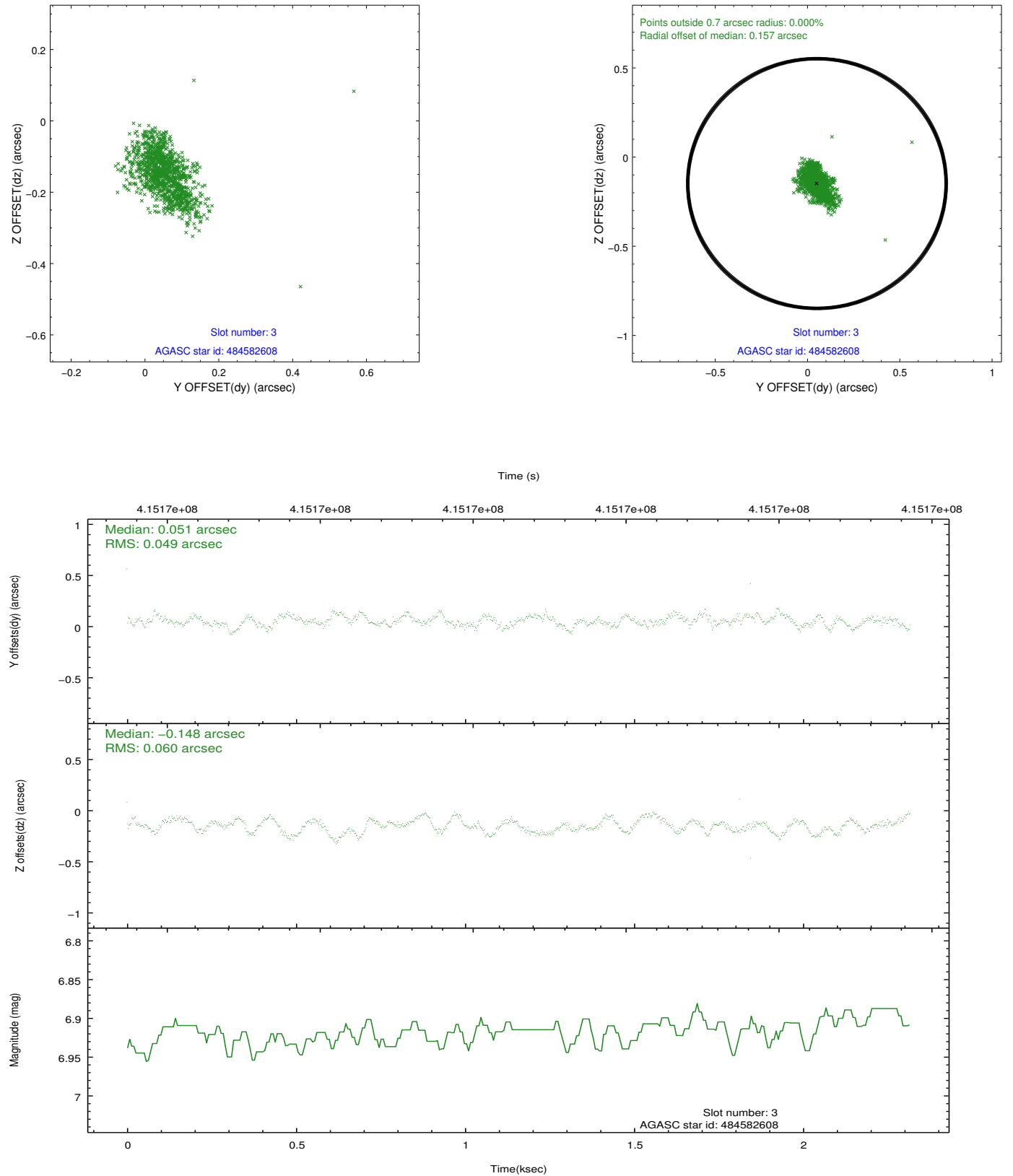
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	6.94	565	-0.088	-0.084	0.010	0.018	0.000000	0.000000	-770.48	-845.77
1	FID	ACIS-I-4	6.94	566	0.191	0.076	0.007	0.012	0.000000	0.000000	2142.53	1059.20
2	FID	ACIS-I-5	7.01	566	-0.203	0.076	0.010	0.017	0.000000	0.000000	-1820.87	1060.17
3	GUIDE	484582608	6.92	1131	0.051	-0.148	0.080	0.126	32.606303	59.979814	115.40	-2094.42
4	GUIDE	528631144	8.36	1131	0.017	-0.332	0.070	0.111	32.245654	60.194281	-891.70	-2148.66
5	GUIDE	528632608	8.91	1131	-0.082	-0.029	0.084	0.135	34.073357	60.719240	-489.68	1584.46
6	GUIDE	528630392	8.59	1131	0.098	0.408	0.059	0.100	32.567481	60.821165	-2350.21	-330.13
7	GUIDE	530331144	7.29	1130	-0.084	0.094	0.082	0.134	34.935324	60.029549	2421.82	1407.84

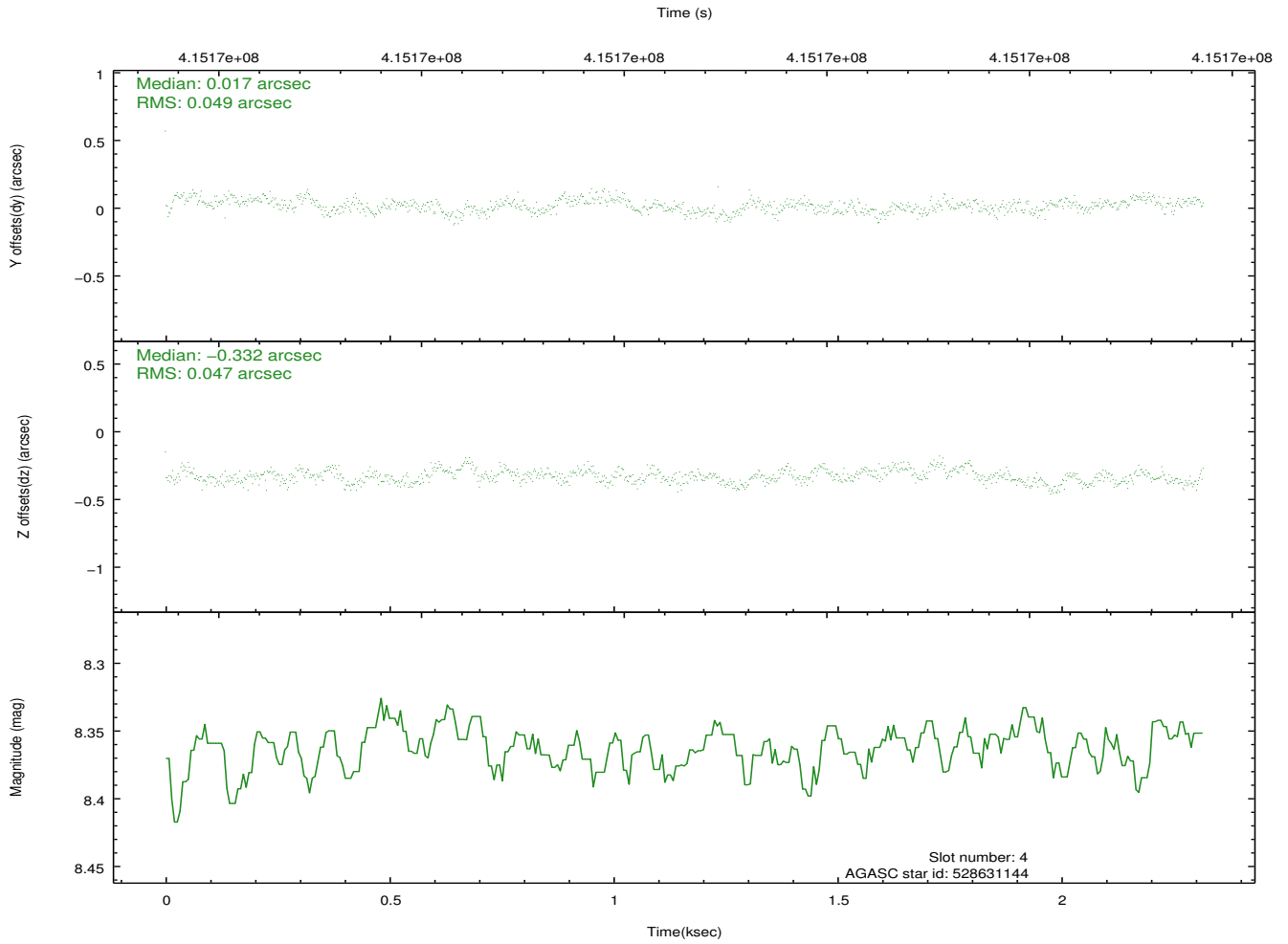
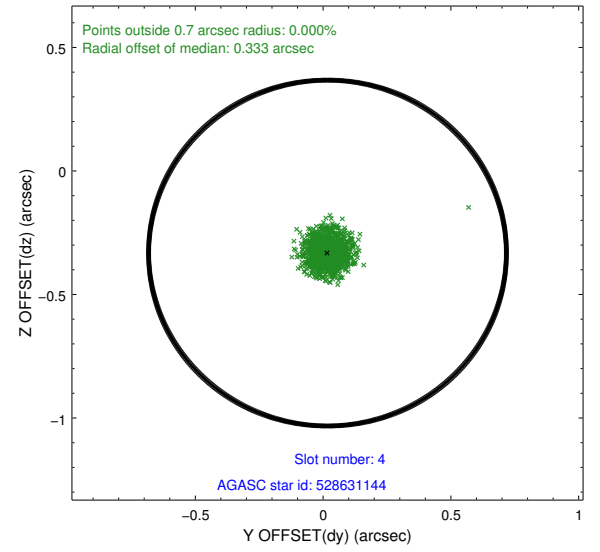
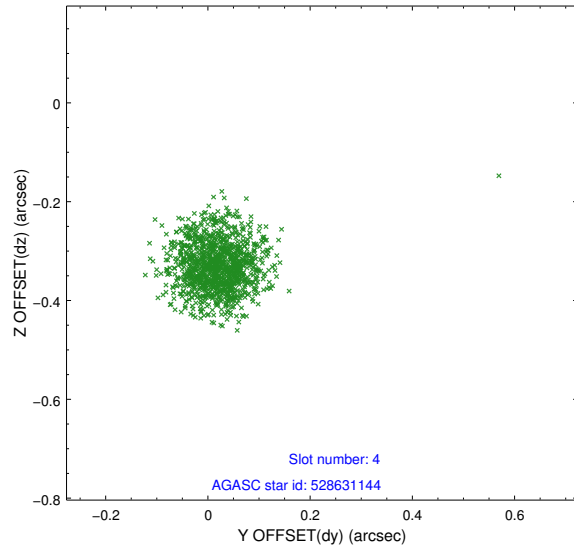


## 2.4 Star Slots

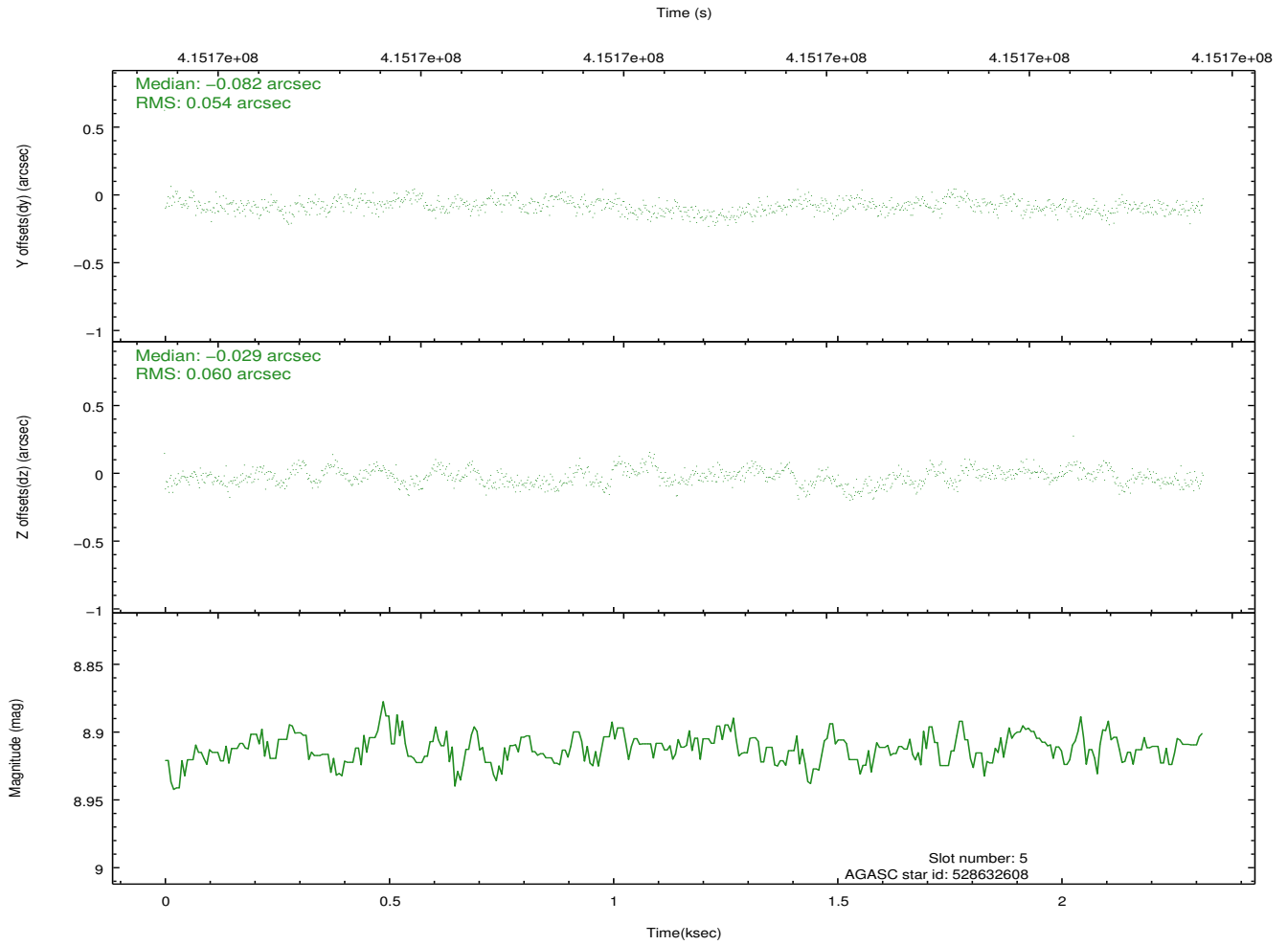
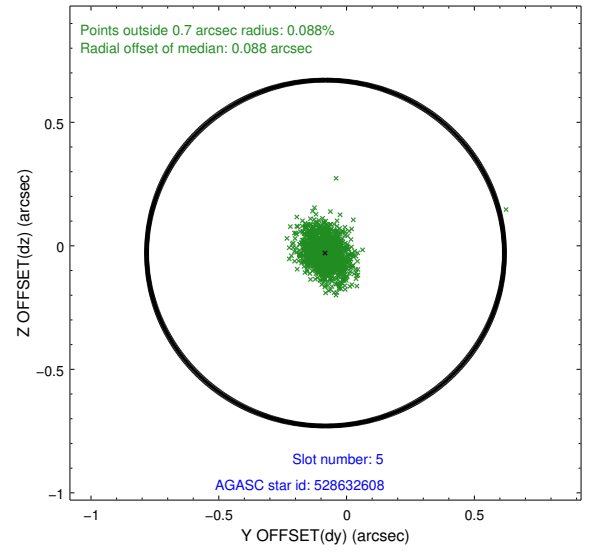
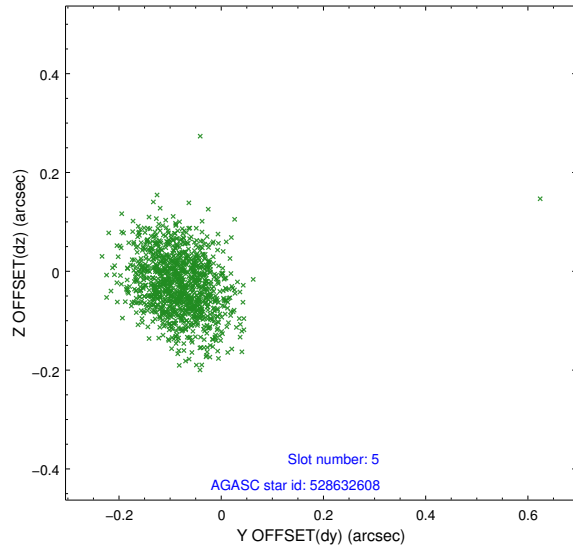
### 2.4.1 Slot 3



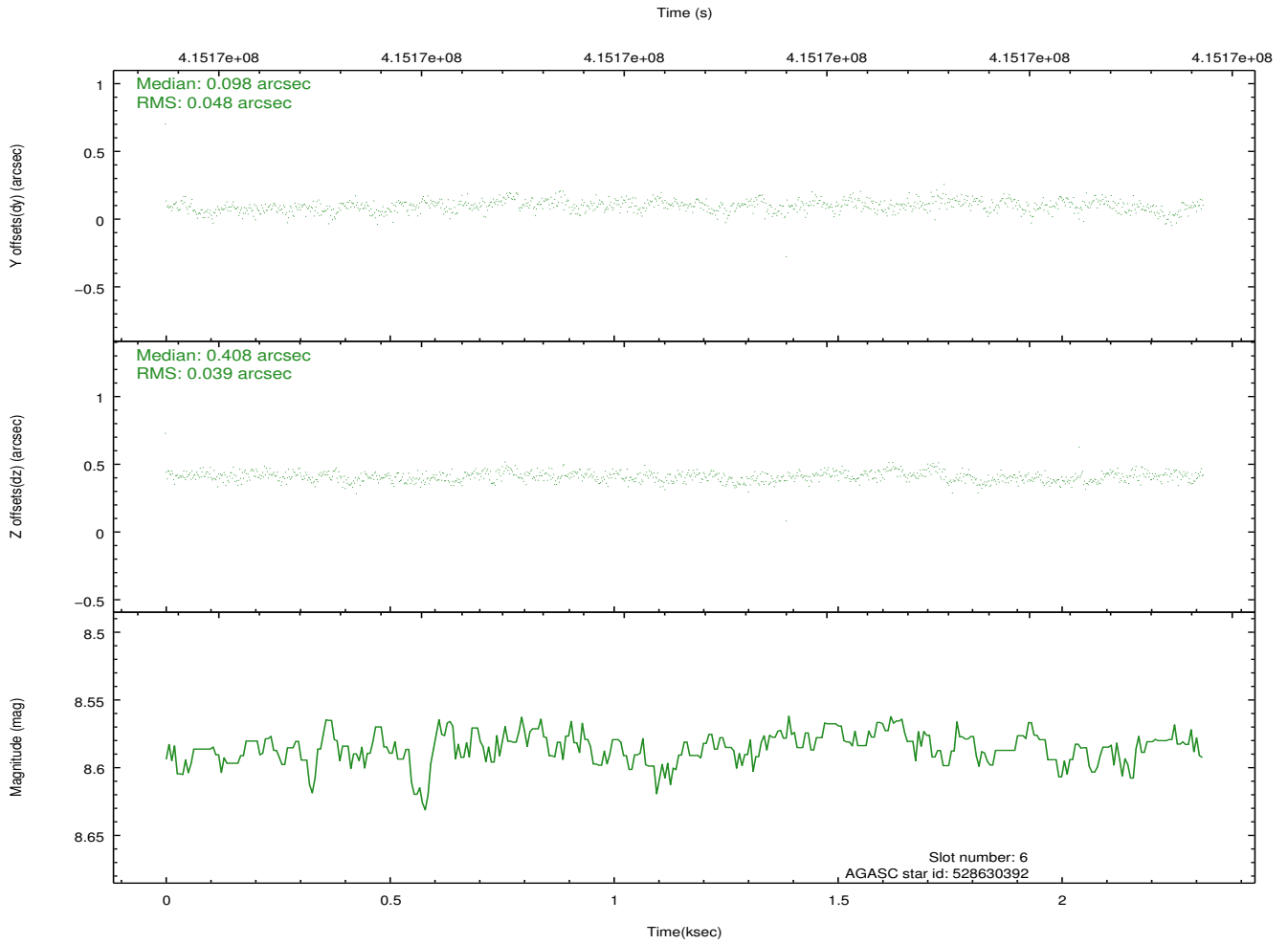
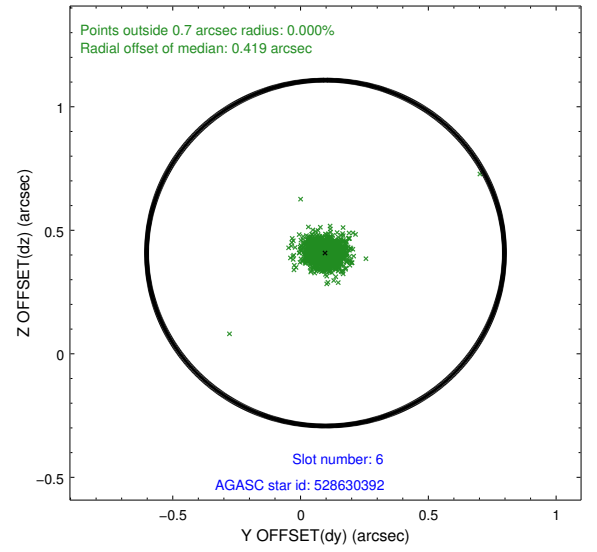
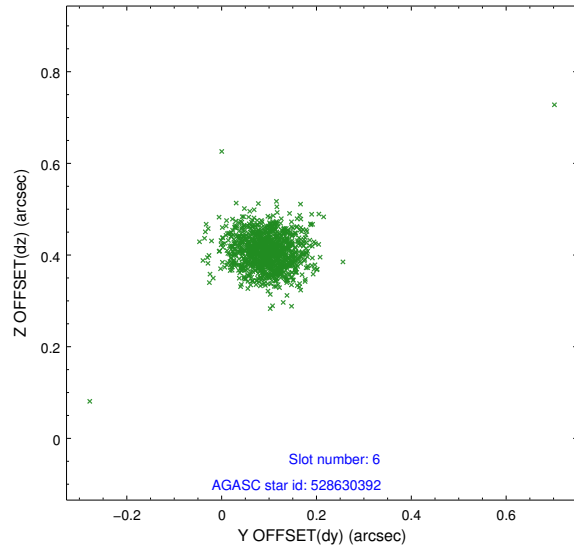
## 2.4.2 Slot 4



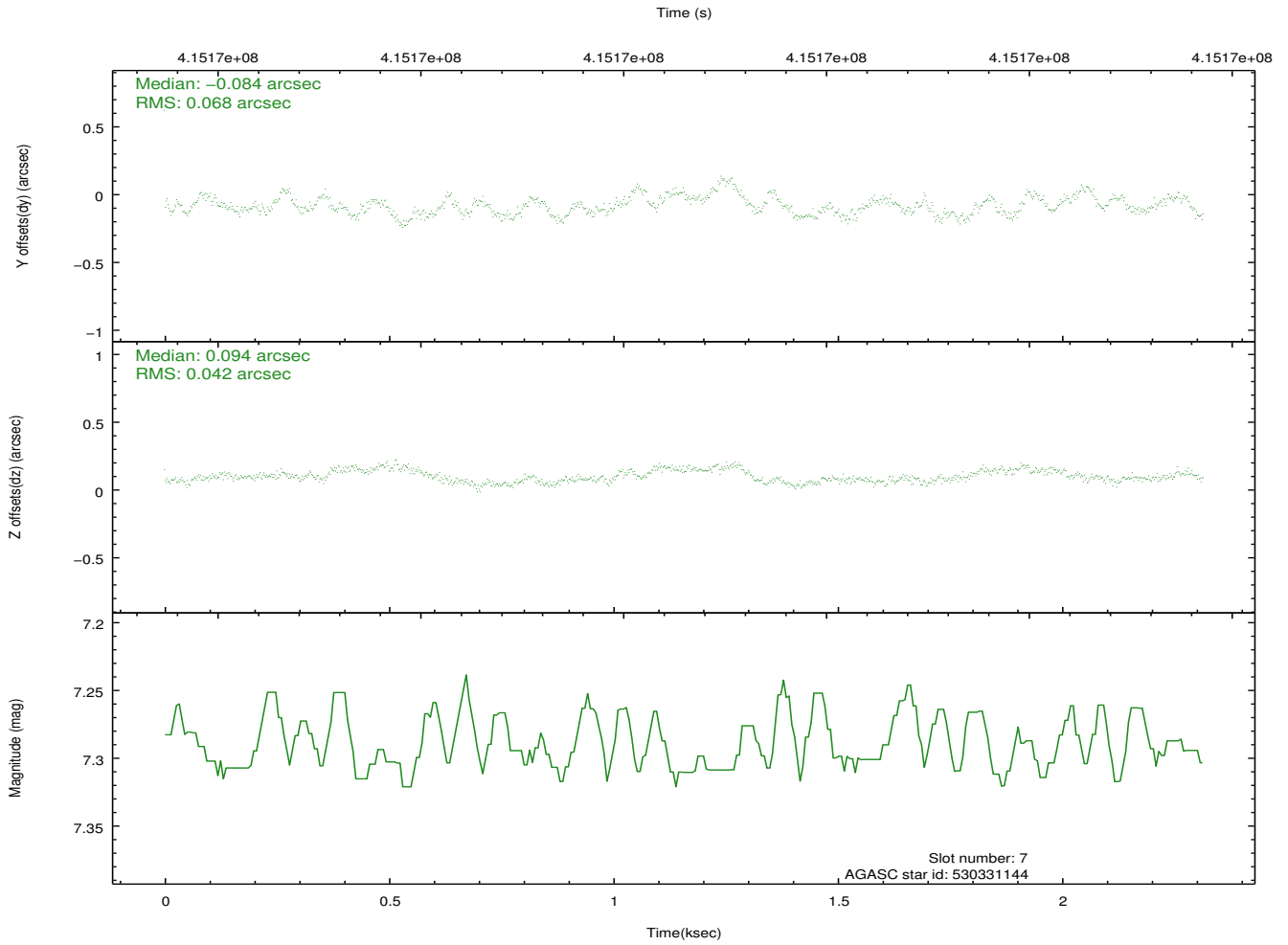
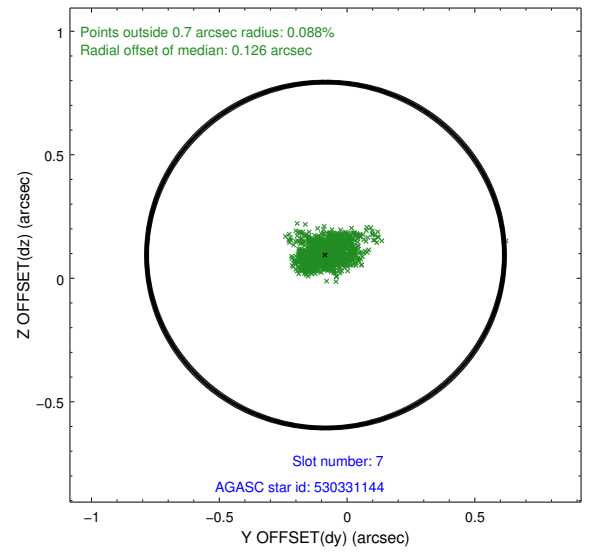
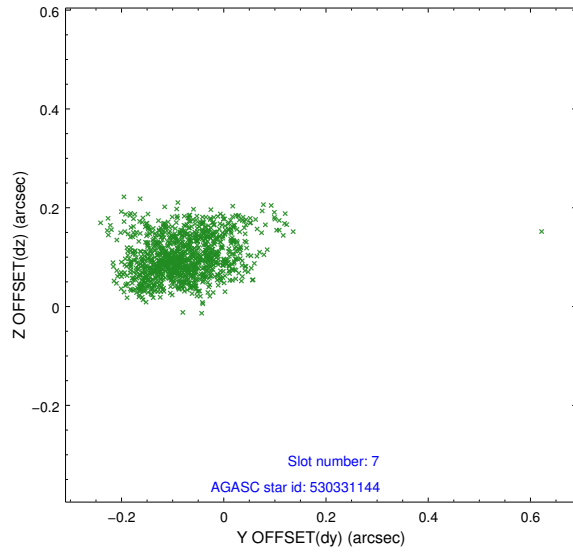
### 2.4.3 Slot 5



## 2.4.4 Slot 6

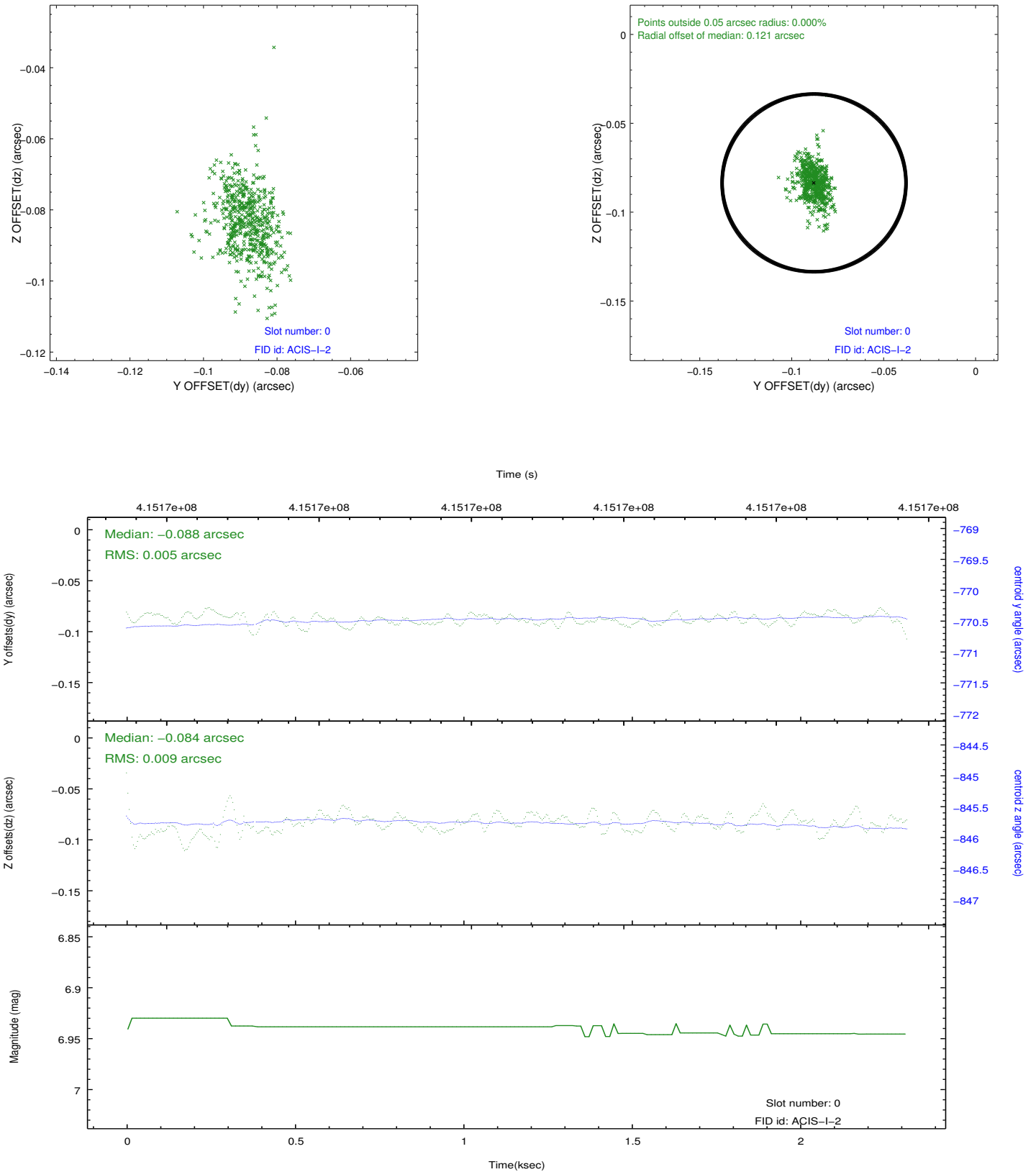


## 2.4.5 Slot 7

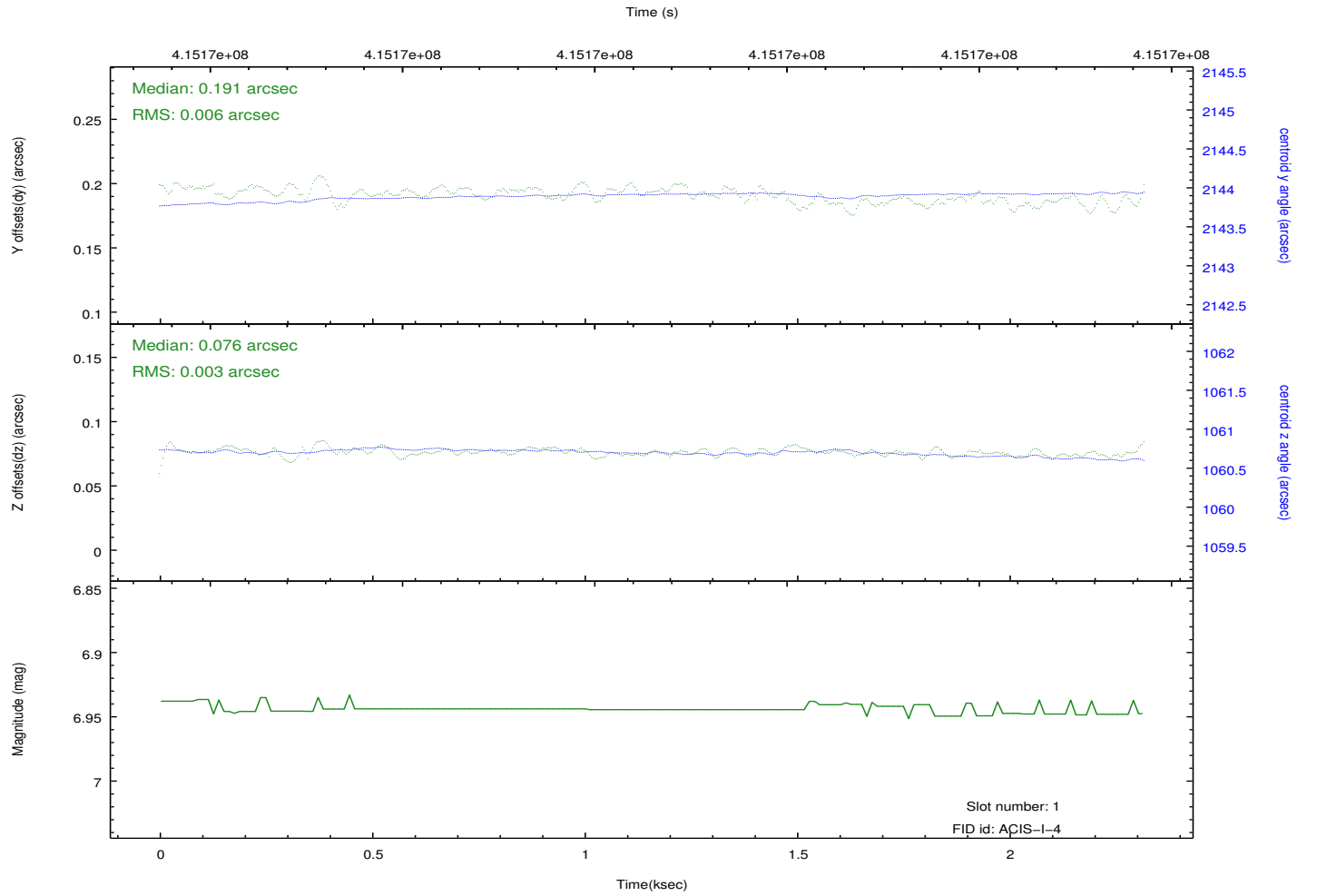
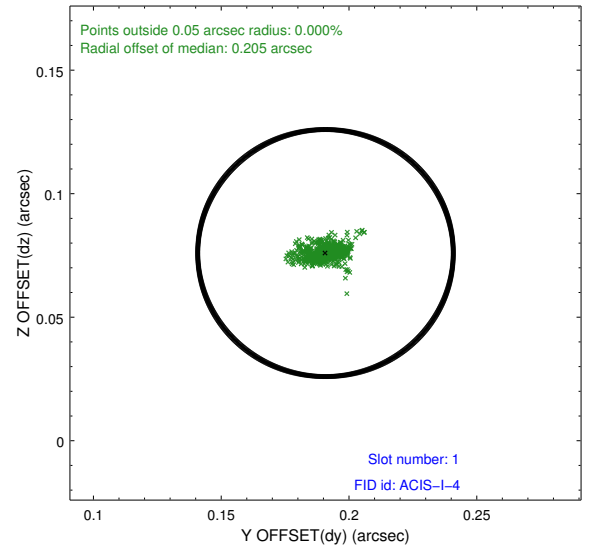
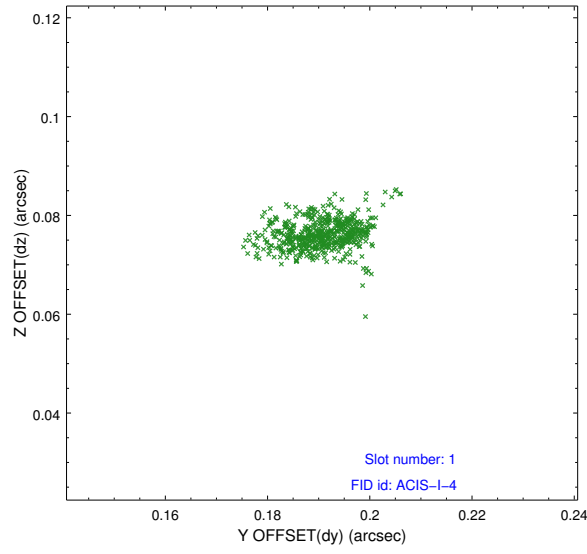


## 2.5 FID Slots

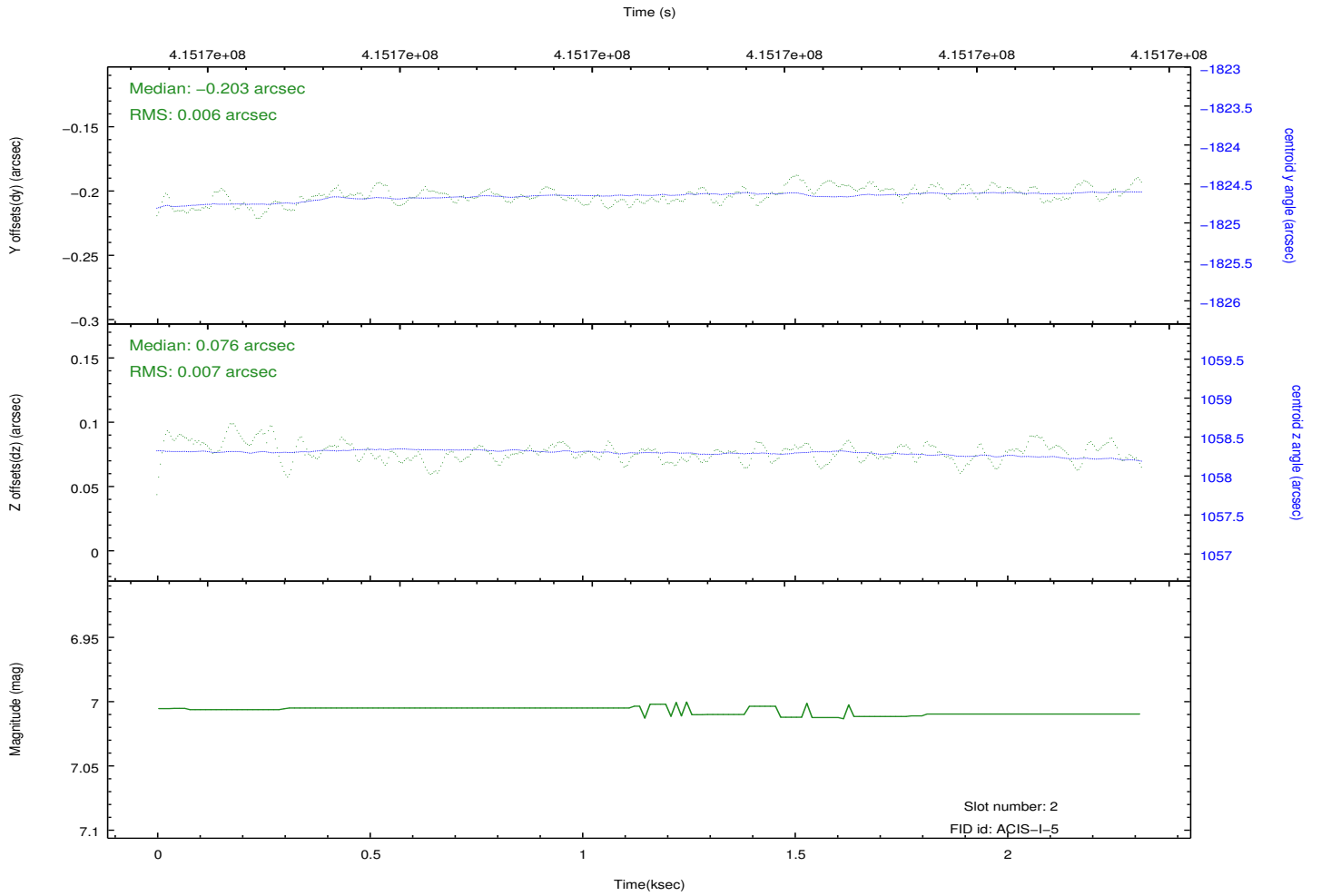
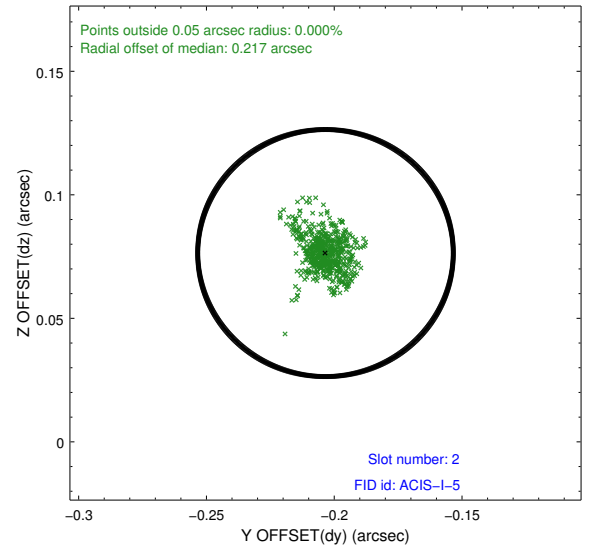
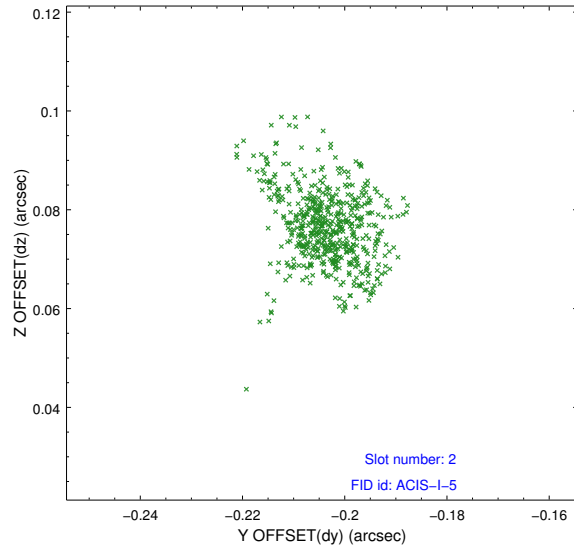
### 2.5.1 Slot 0



## 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	2.0531666676402

## 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.