

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 11545 - L2 Version 2  
Chandra X-Ray Center

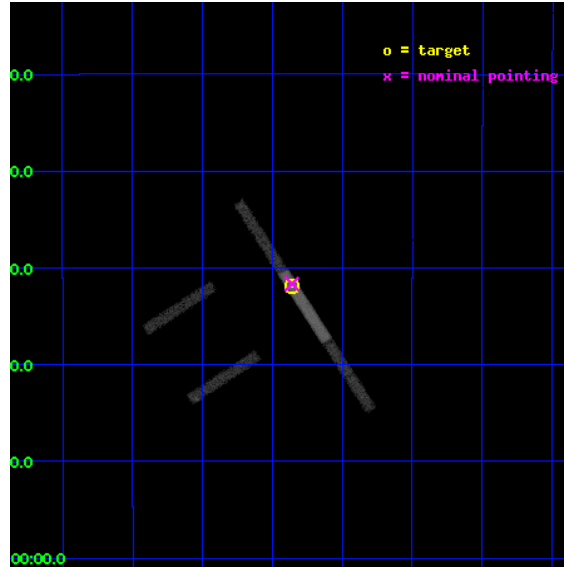
L2 Processing Date : Feb 2 2012

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# 1 Front

seq_num	702131	Sequence number
obs_id	11545	Observation id
title	The Size of Quasar Non-Thermal/X-ray Emission Regions	Proposal tit
observer	Dr. Christopher Kochanek	Principal investigator
object	RXJ1131-1231	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	172.965	Observer's specified target RA [deg]
dec_targ	-12.5325	Observer's specified target Dec [deg]
ra_nom	172.96515278814	Nominal RA [deg]
dec_nom	-12.527755599605	Nominal Dec [deg]
roll_nom	57.070087292818	Nominal Roll [deg]
revision	2	Processing version of data
ontime	26064.499556065	Sum of GTIs [s]
livetime	24621.005194382	Livetime [s]
ontime2	26064.360592067	Sum of GTIs [s]
ontime3	26064.442672074	Sum of GTIs [s]
ontime6	26064.483712077	Sum of GTIs [s]
ontime7	26064.499556065	Sum of GTIs [s]
ontime8	26064.401632071	Sum of GTIs [s]
l2events	35013	Number of level 2 events

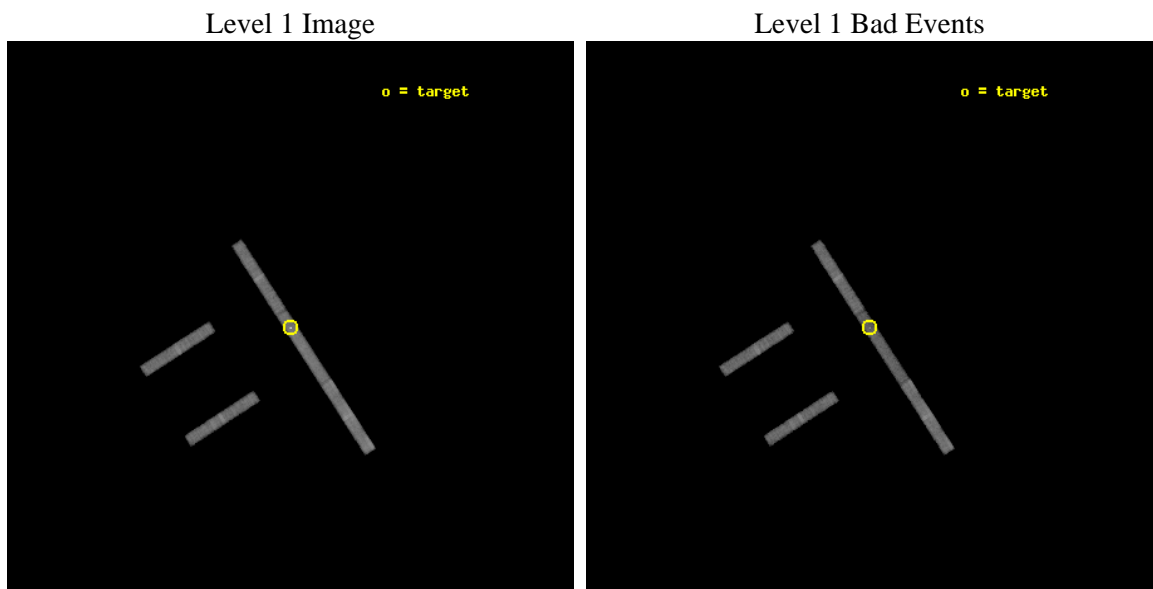




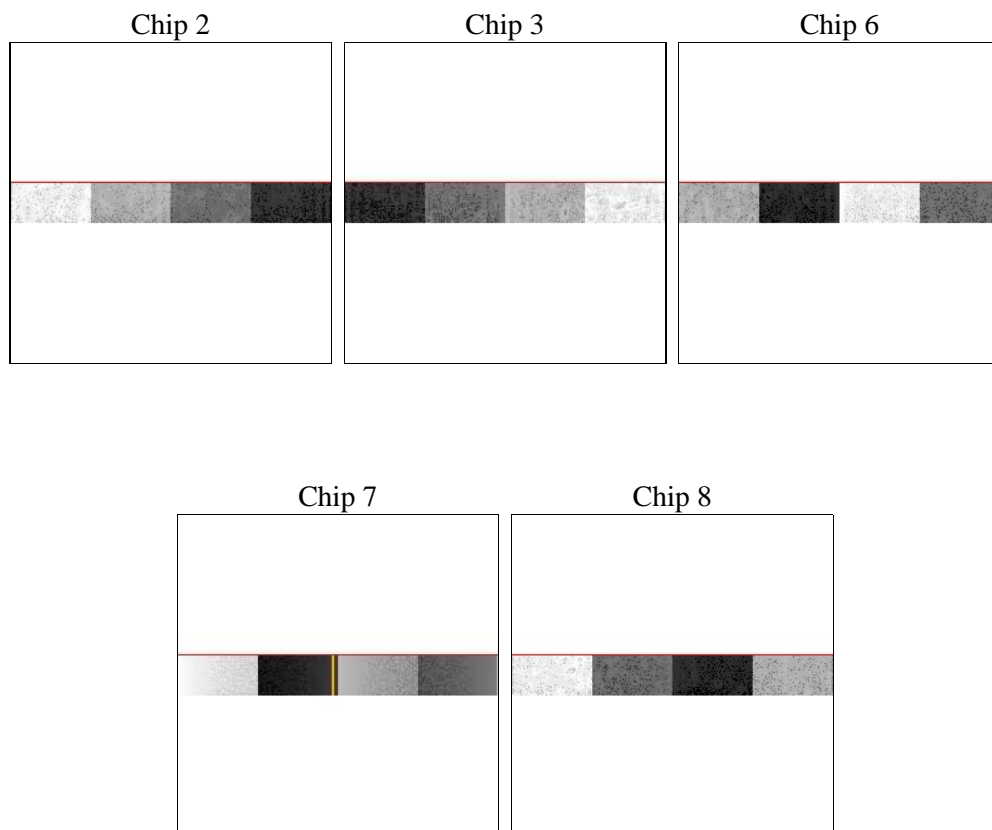
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	26000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	26064.499556065	Sum of GTIs [s]
caldsver	4.4.7	&#160	ontime2	26064.360592067	Sum of GTIs [s]
date	2012-02-02T23:00:55	Date and time of file creation	ontime3	26064.442672074	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	26064.483712077	Sum of GTIs [s]
			ontime7	26064.499556065	Sum of GTIs [s]
			ontime8	26064.401632071	Sum of GTIs [s]
			l1events	174835	Number of level 1 events

### 2.1.4 Events

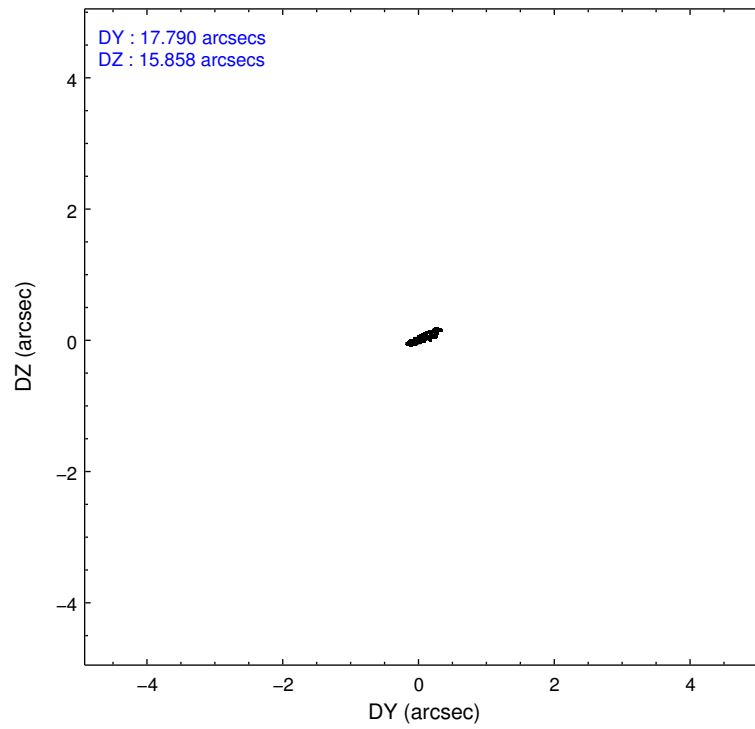
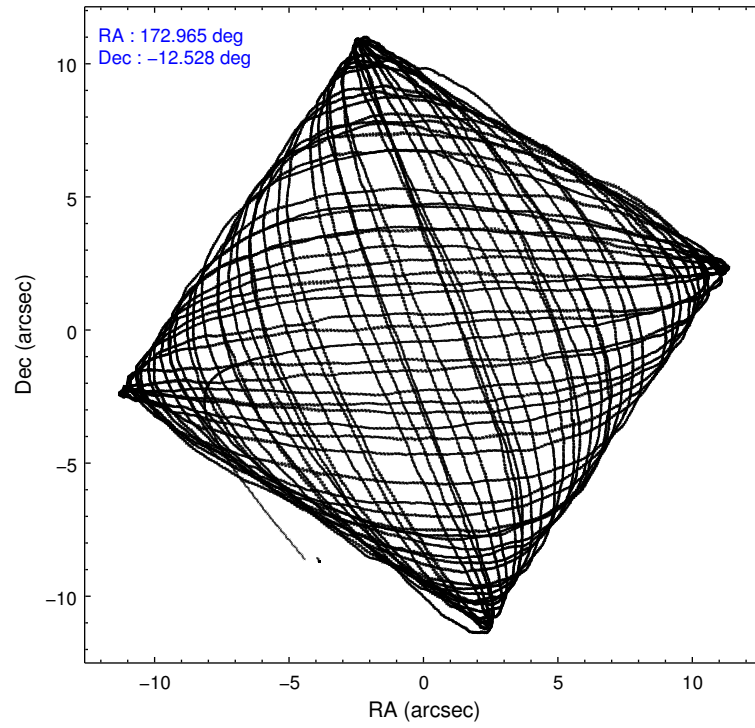
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	28627	28509	30460	43069	44170
rejected events	25516	25476	27058	17800	34731
rejected %	89%	89%	88%	41%	78%

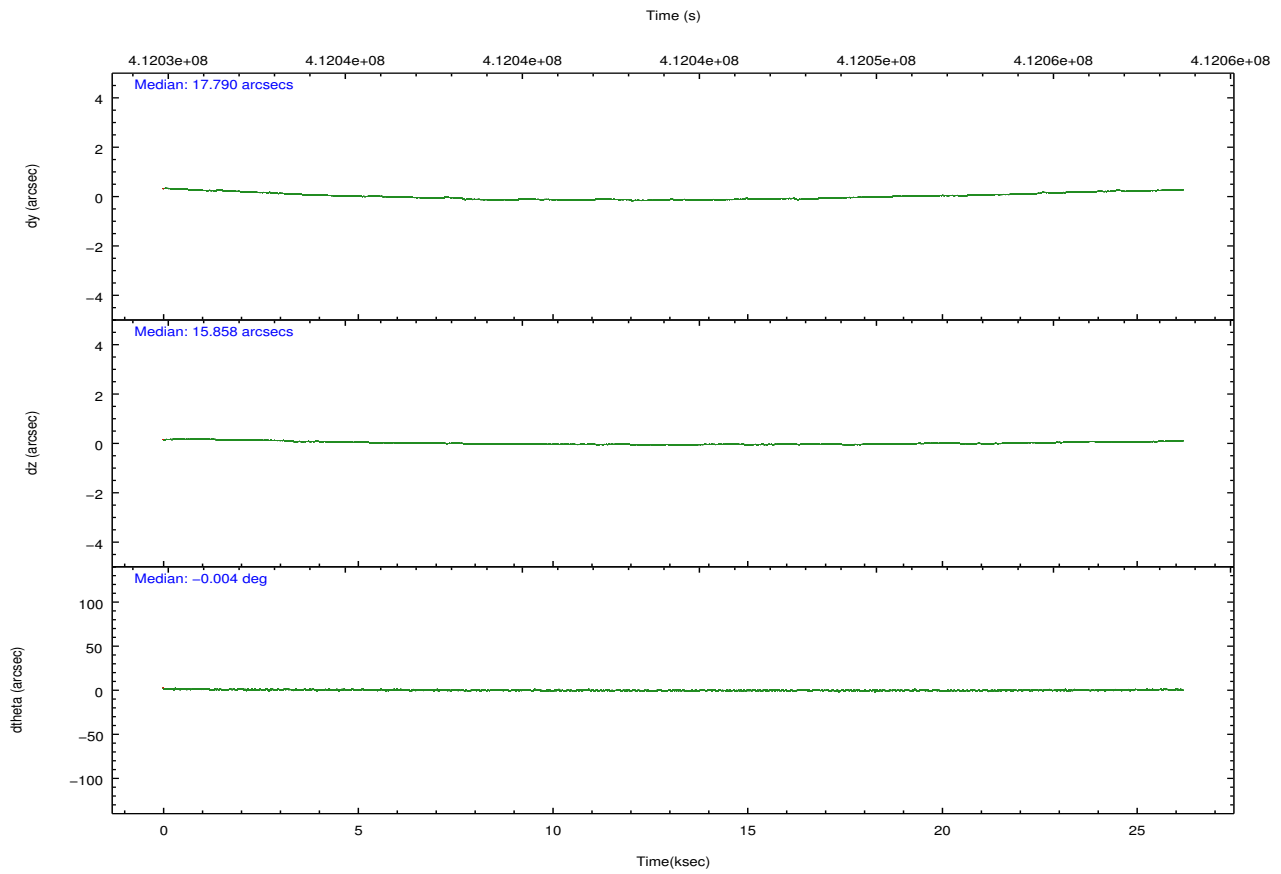
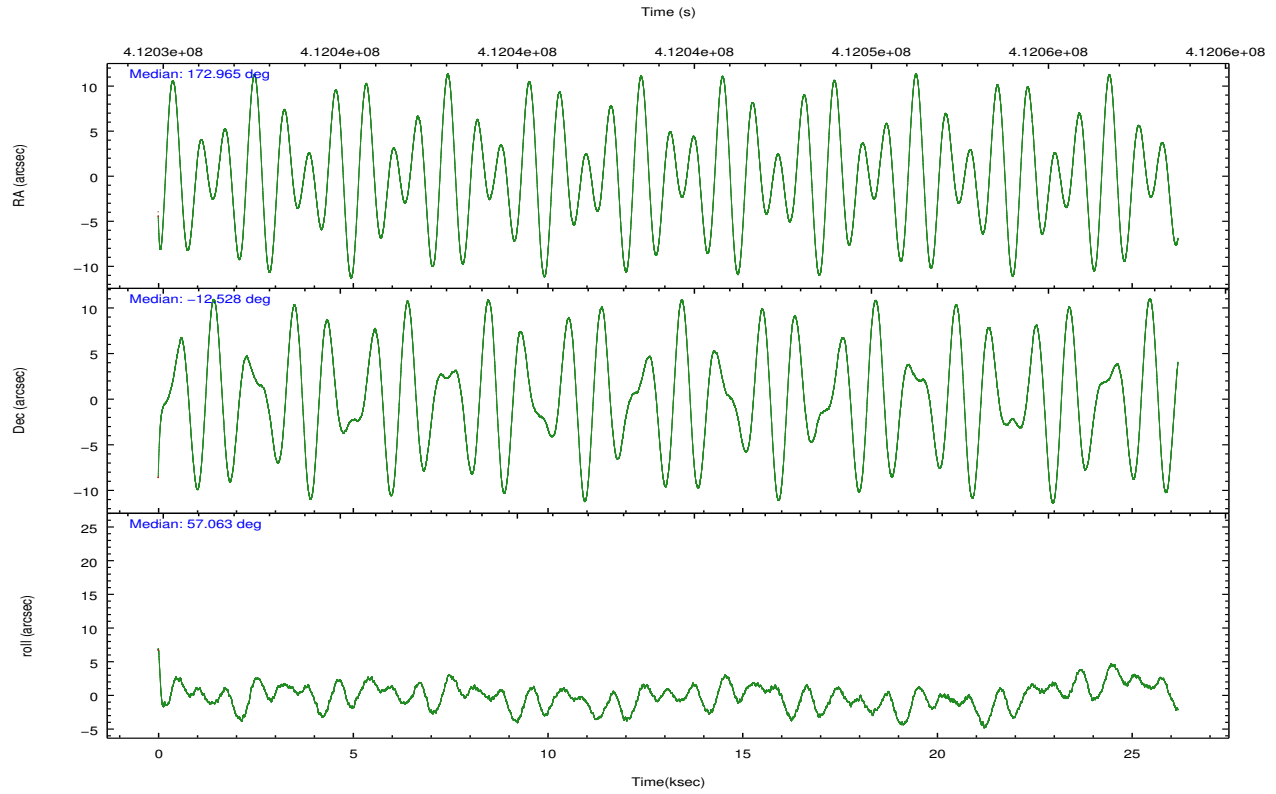
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	885	908	981	4529	2158
	3%	3%	3%	10%	4%
grade 1 events	9	12	8	90	18
	0%	0%	0%	0%	0%
grade 2 events	651	550	617	5651	2045
	2%	1%	2%	13%	4%
grade 3 events	522	537	613	2968	1114
	1%	1%	2%	6%	2%
grade 4 events	486	478	539	2889	1019
	1%	1%	1%	6%	2%
grade 5 events	912	1117	1207	3592	1628
	3%	3%	3%	8%	3%
grade 6 events	567	560	652	9234	3103
	1%	1%	2%	21%	7%
grade 7 events	24595	24347	25843	14116	33085
	85%	85%	84%	32%	74%

## 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	172.964056	172.9651527881425	CCD I2 on	O4	Y
[deg] Pointing Dec	-12.554974	-12.52775559960485	CCD I3 on	O3	Y
[deg] Pointing Roll	56.913234	57.07008729281779	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	O1	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	O2	Y
[s] Observation start time (MET)	412031344.184000	412030555.90326	CCD S5 on	N	N
Observation start date	2011-01-21T21:07:58	2011-01-21T20:55:55	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	412057344.184000	412058147.87969	On-chip summing requested	N	N
Observation end date	2011-01-22T04:21:18	2011-01-22T04:35:47	Subarray requested	CUSTOM	1/8
Read mode	TIMED	TIMED	Subarray start row	449	449
			Subarray row count	128	128
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	0.7

## 2.3 Aspect



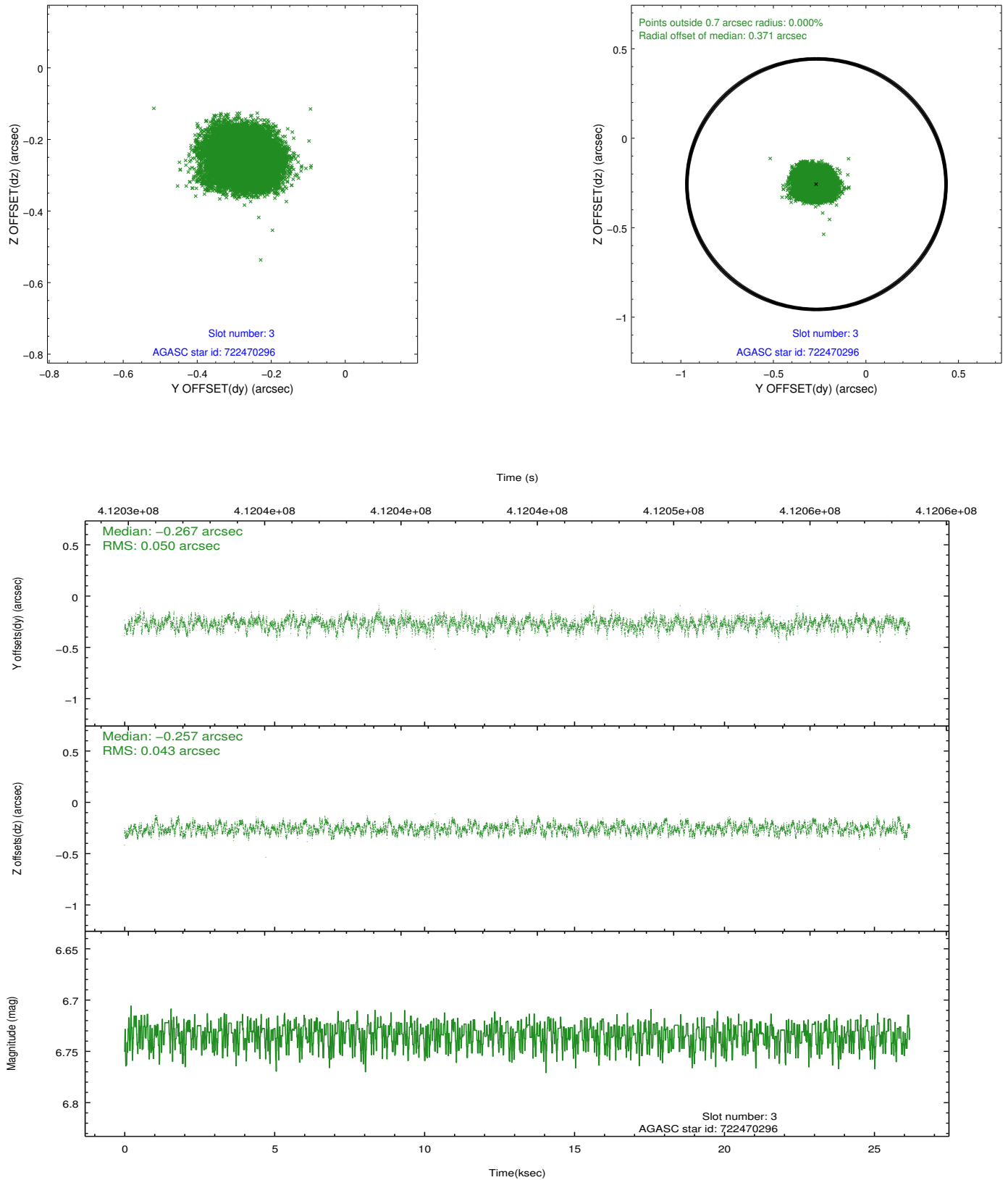


### Slot Statistics

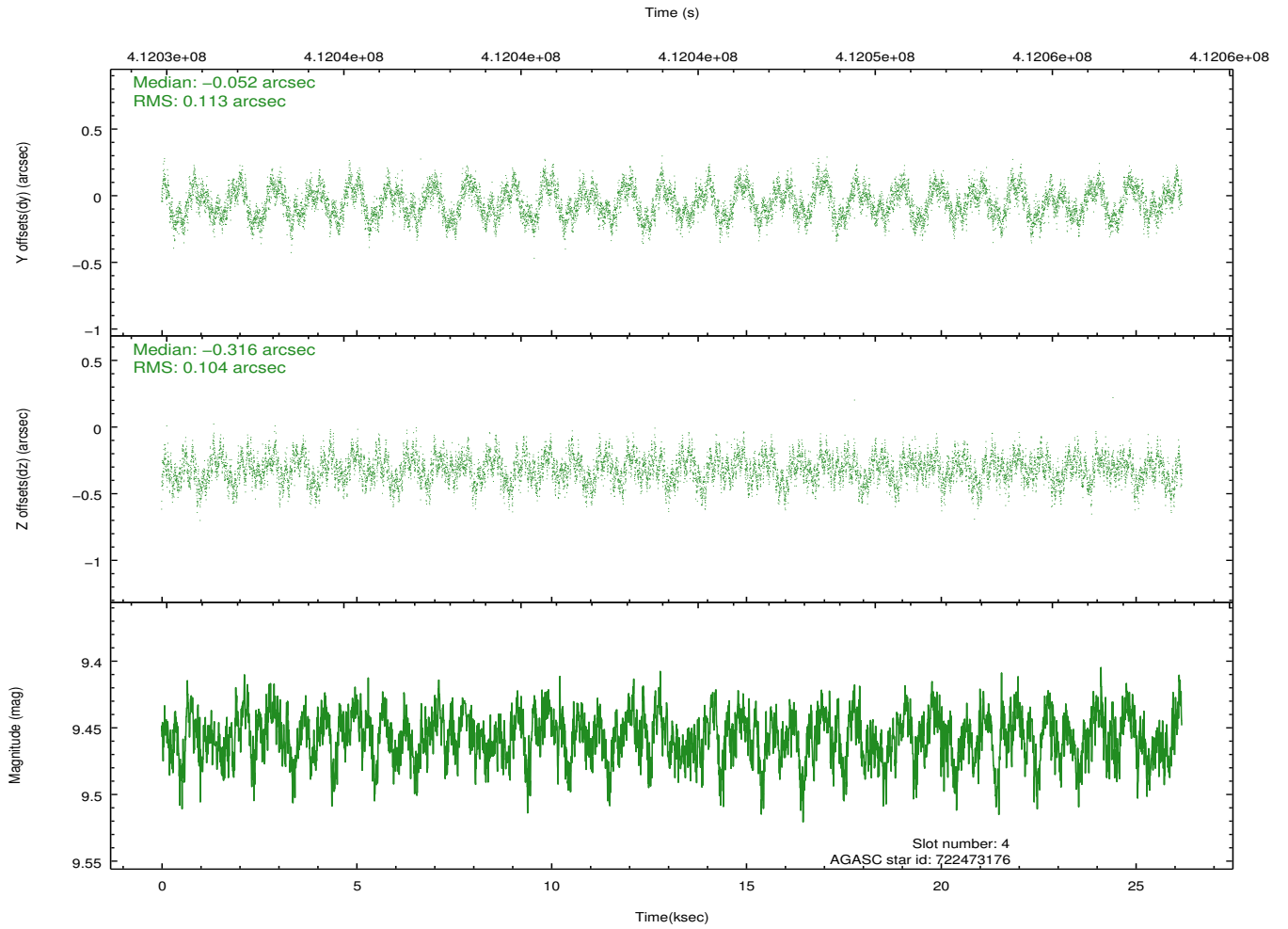
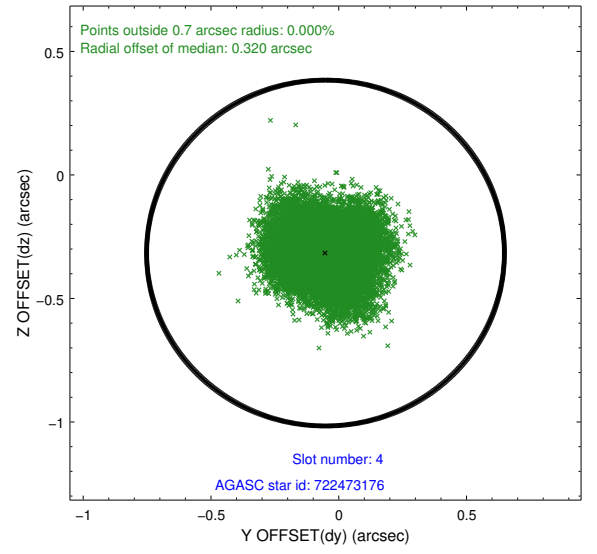
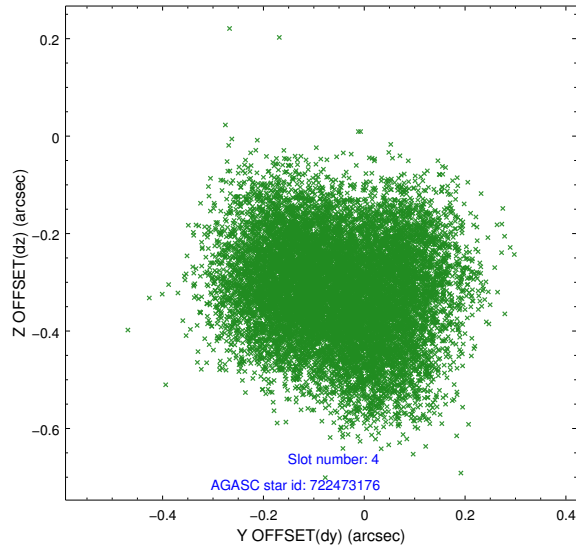
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.01	6388	-0.105	-0.072	0.006	0.012	0.000000	0.000000	-770.98	-1737.34
1	FID	ACIS-S-4	7.09	6387	0.164	0.034	0.007	0.011	0.000000	0.000000	2142.54	171.11
2	FID	ACIS-S-6	7.22	6388	-0.087	0.046	0.007	0.012	0.000000	0.000000	391.18	808.65
3	GUIDE	722470296	6.73	12774	-0.267	-0.257	0.071	0.111	172.921689	-12.381367	442.29	466.30
4	GUIDE	722473176	9.46	12760	-0.052	-0.316	0.168	0.253	172.599746	-12.066793	771.43	2033.66
5	GUIDE	722871728	9.67	12756	0.032	0.119	0.158	0.247	173.202235	-12.568355	416.69	-726.98
6	GUIDE	722873464	7.32	12773	0.192	0.278	0.066	0.112	172.661543	-13.050266	-2073.30	-85.27
7	GUIDE	722612744	7.37	12772	0.092	0.170	0.086	0.152	173.886990	-12.411174	2199.66	-2438.97

## 2.4 Star Slots

### 2.4.1 Slot 3

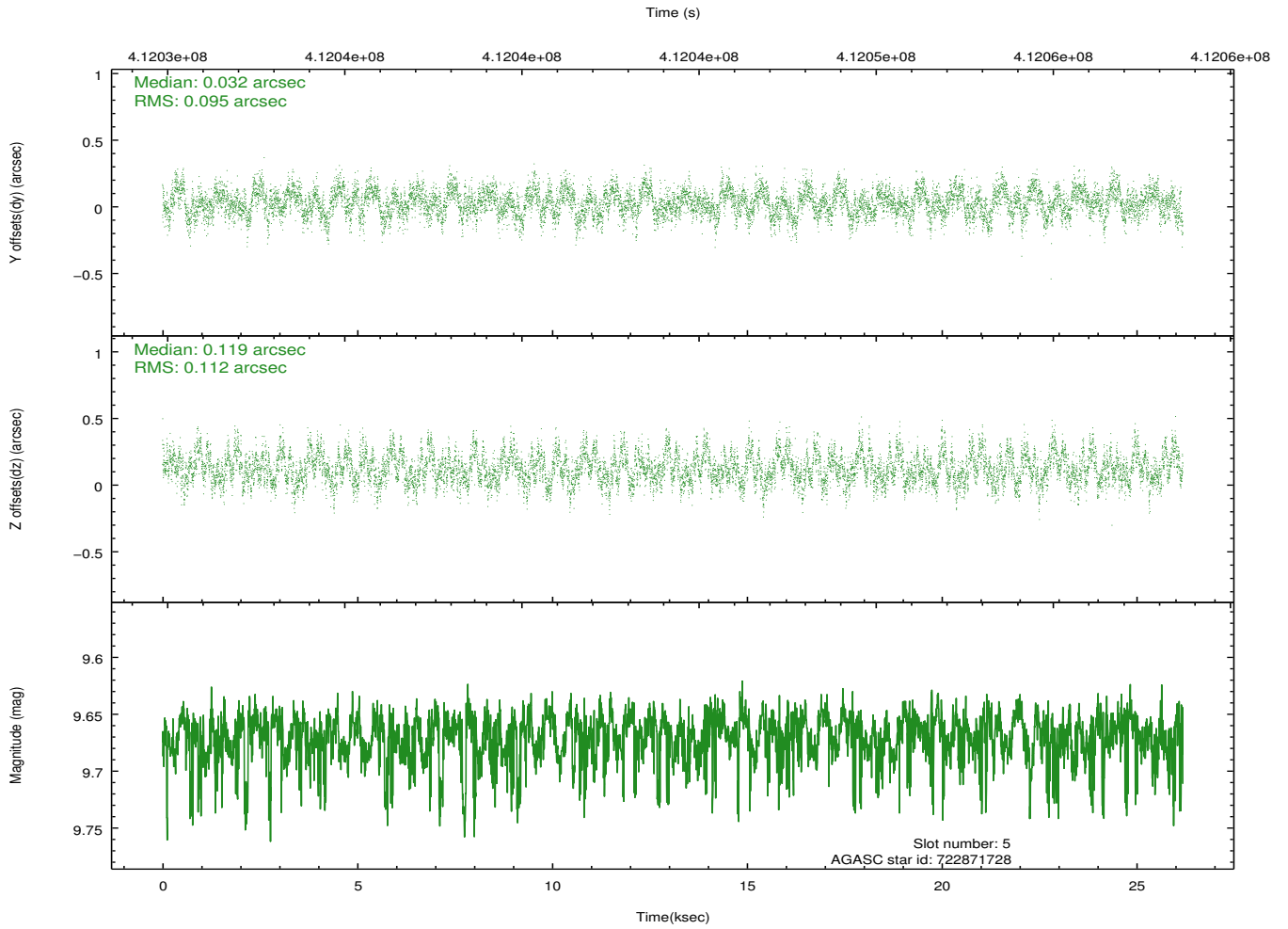
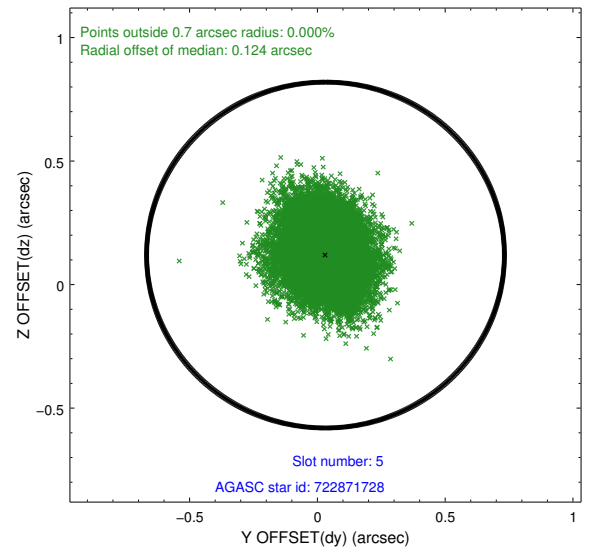
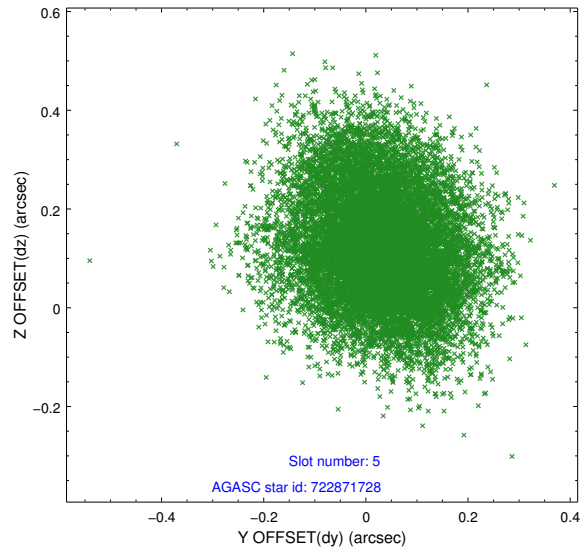


## 2.4.2 Slot 4

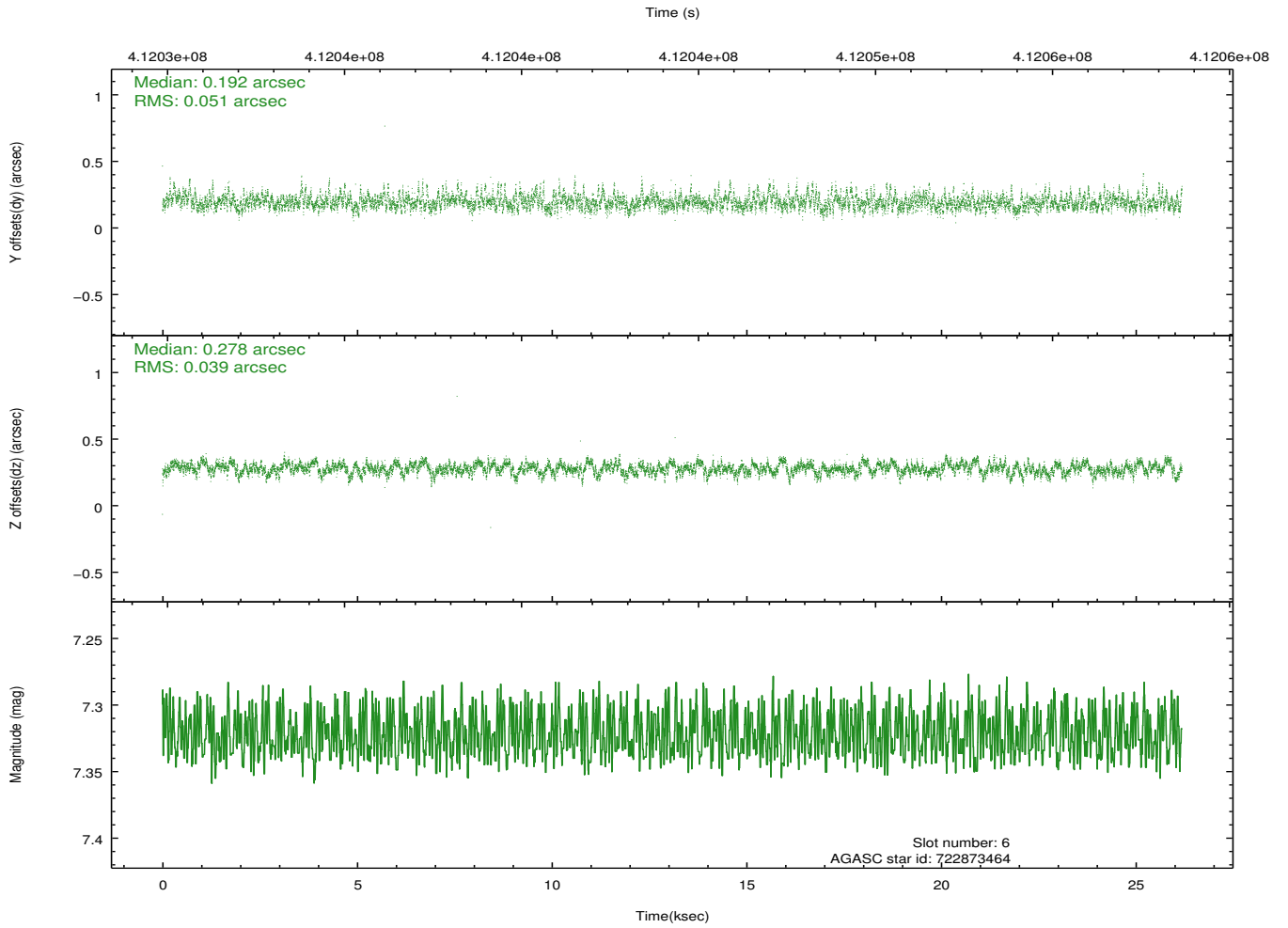
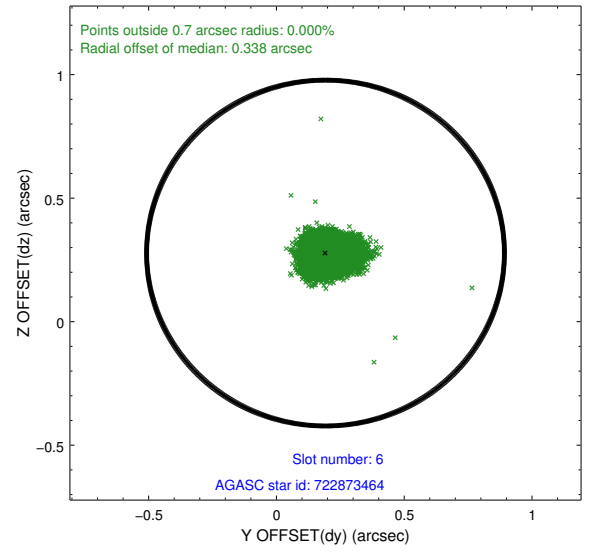
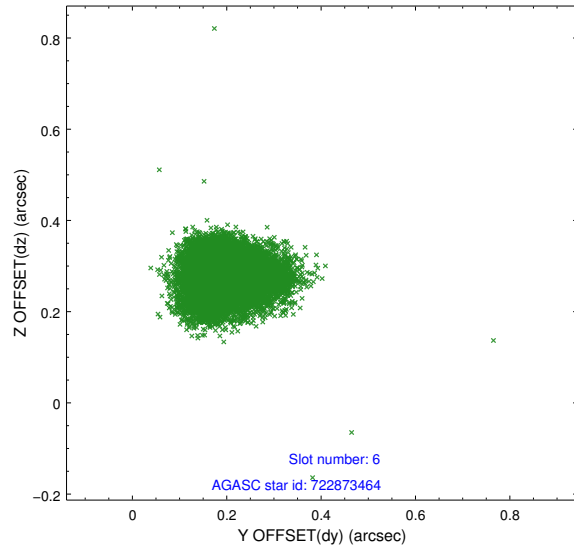




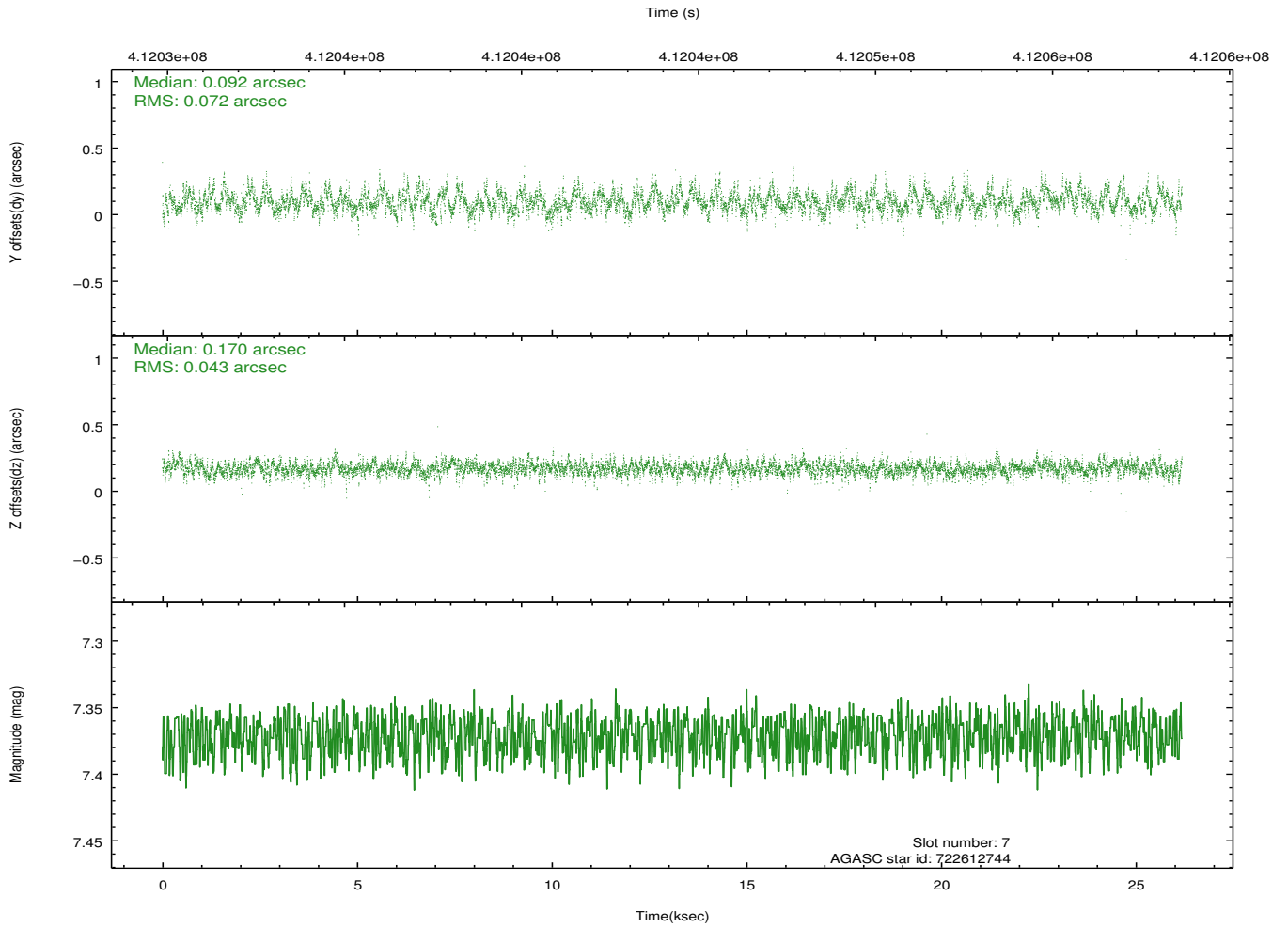
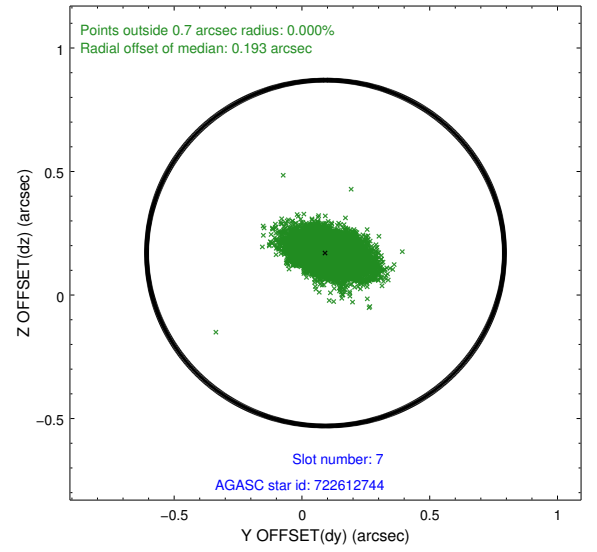
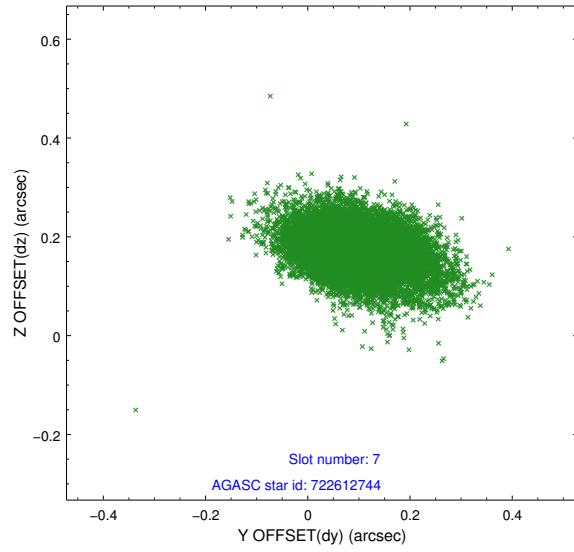
### 2.4.3 Slot 5



## 2.4.4 Slot 6

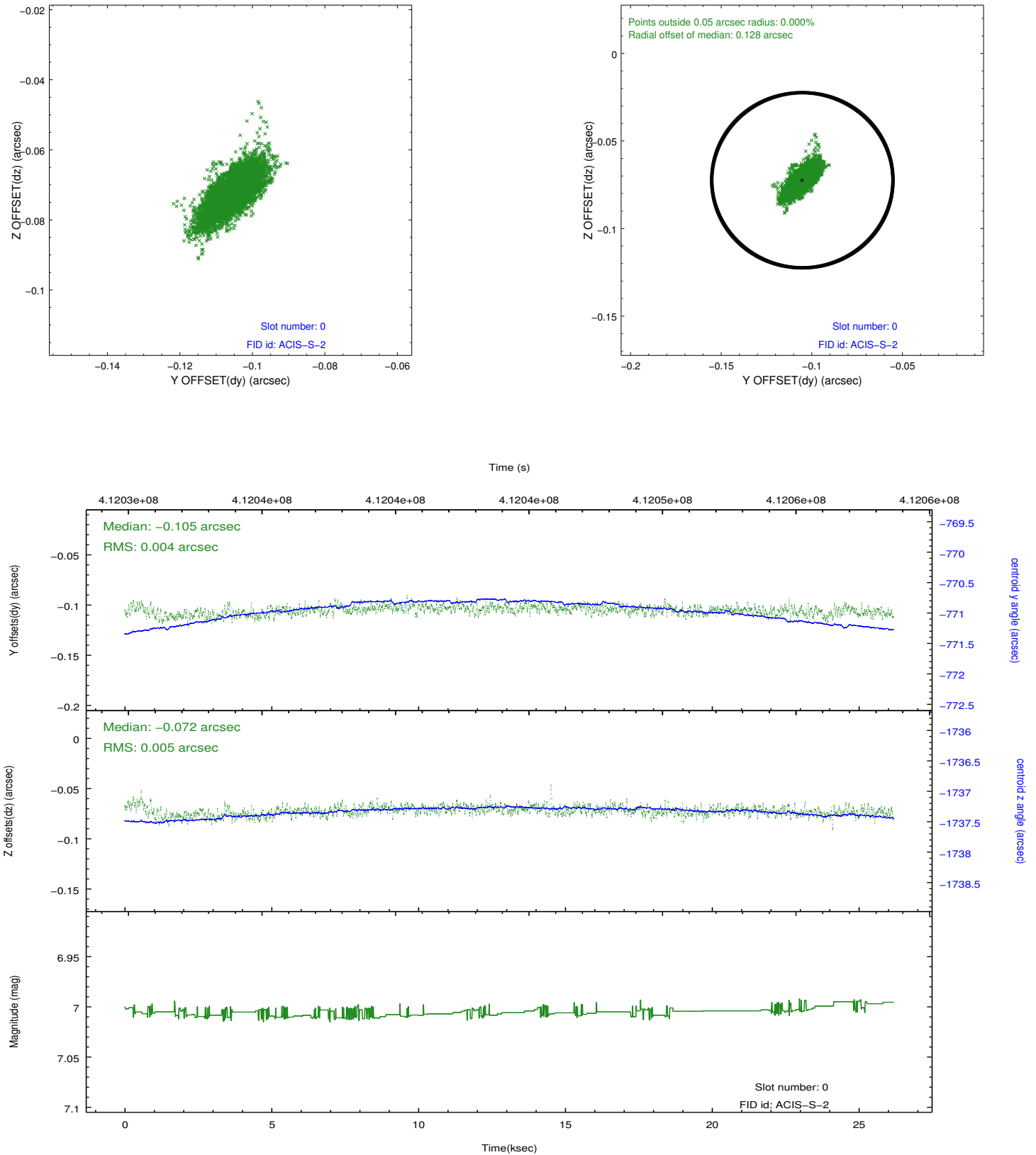


## 2.4.5 Slot 7

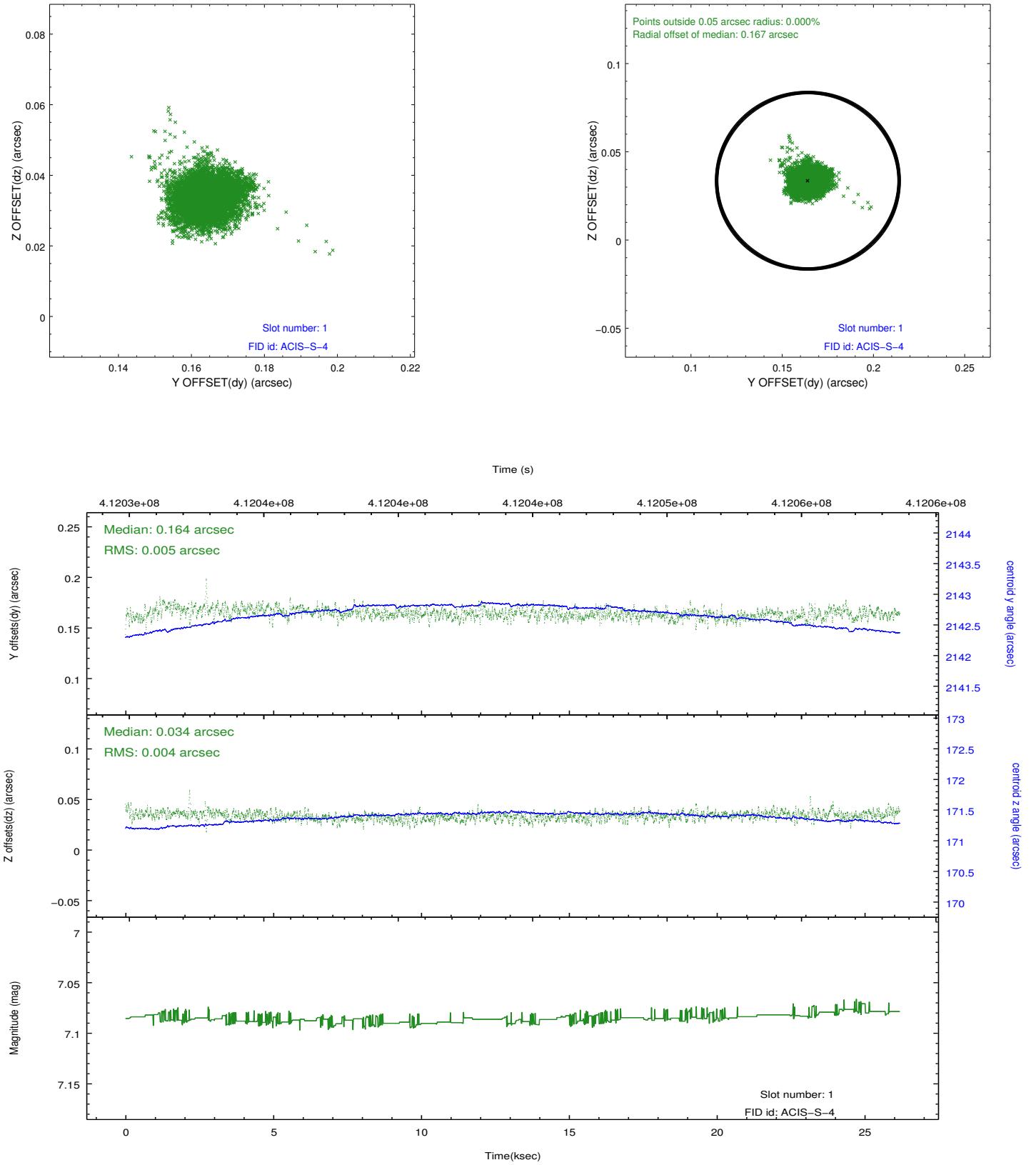


## 2.5 FID Slots

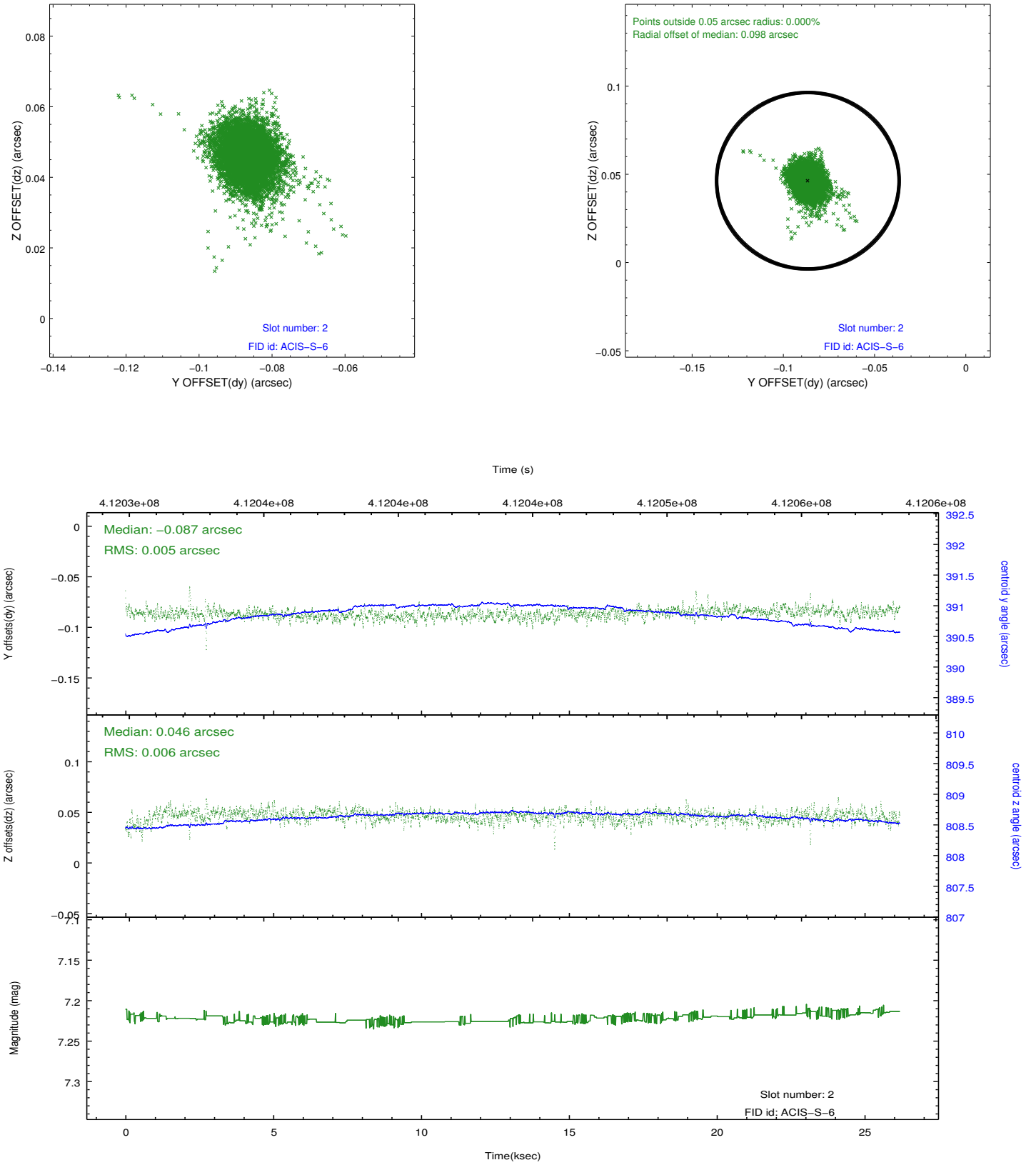
### 2.5.1 Slot 0



## 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)	2012.02.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	26.064499556065

## 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.