

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12833 - L2 Version 2  
Chandra X-Ray Center

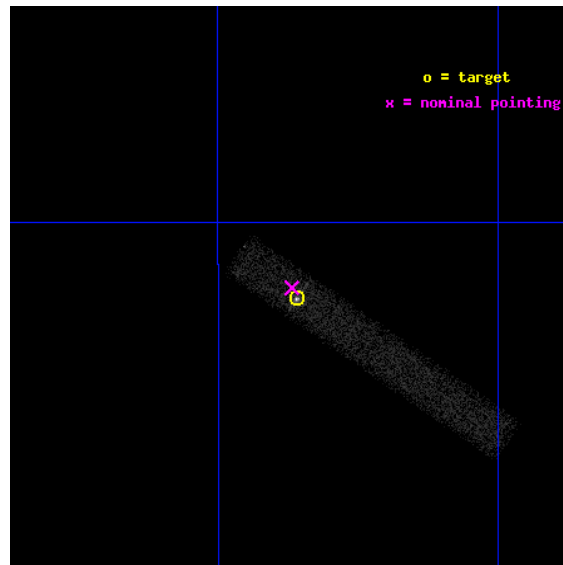
L2 Processing Date : Feb 4 2012

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# 1 Front

seq_num	702466	Sequence number
obs_id	12833	Observation id
title	Energy Dependent X-ray Microlensing	Proposal title
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	172.96703164432	Nominal RA [deg]
dec_nom	-12.528080779271	Nominal Dec [deg]
roll_nom	34.376916774661	Nominal Roll [deg]
revision	2	Processing version of data
ontime	15009.999105334	Sum of GTIs [s]
livetime	13613.276895823	Livetime [s]
ontime7	15009.999105334	Sum of GTIs [s]
l2events	19761	Number of level 2 events

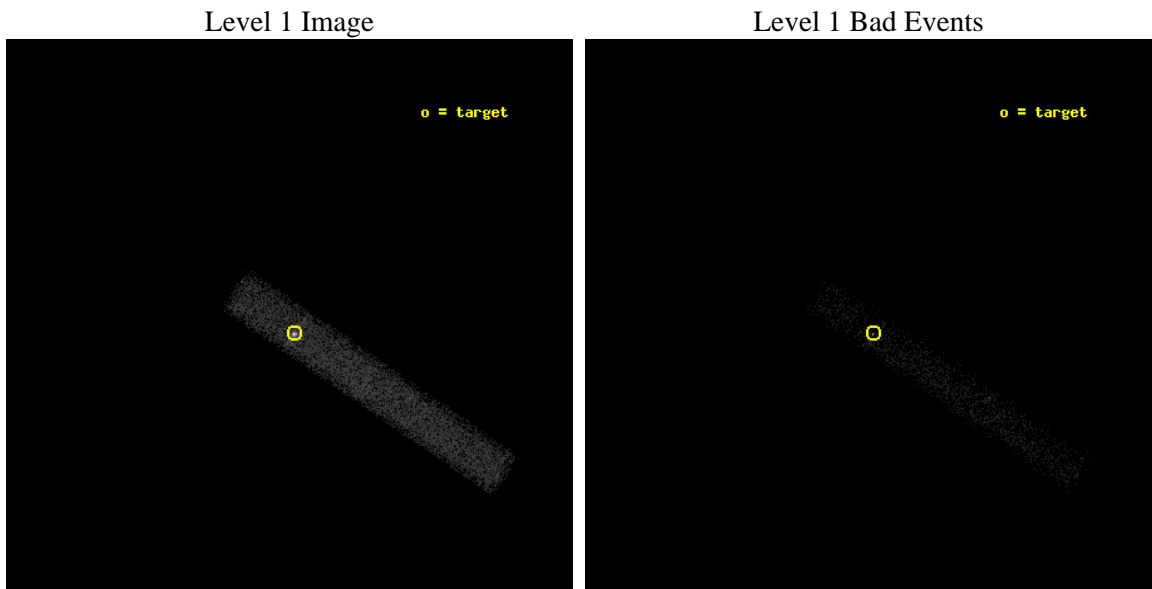




## 2 OBI

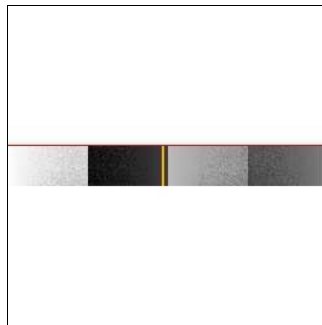
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	15009.999105334	Sum of GTIs [s]
caldsver	4.4.7	&#160	ontime7	15009.999105334	Sum of GTIs [s]
date	2012-02-04T20:02:00	Date and time of file creation	l1events	29590	Number of level 1 events
revision	2	Processing version of data			

### 2.1.4 Events

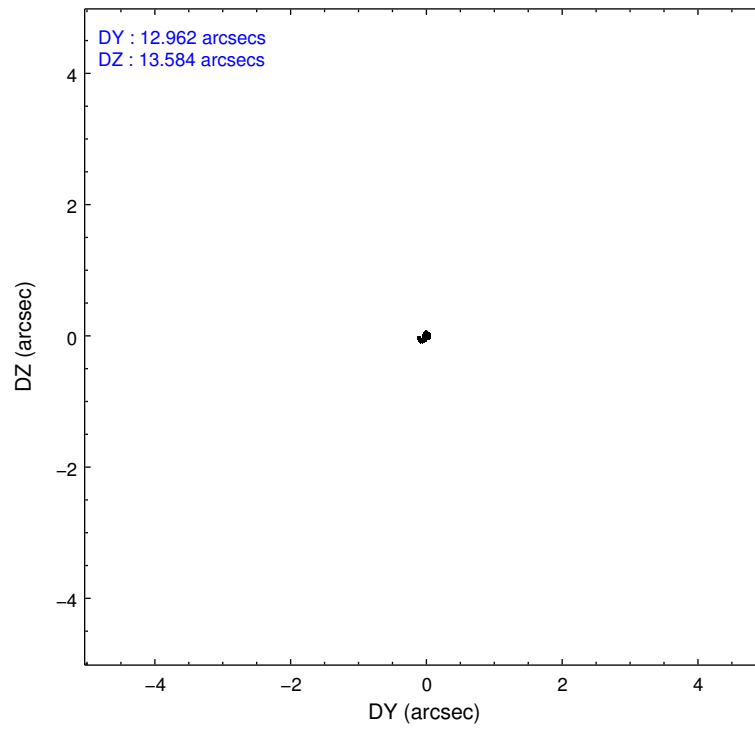
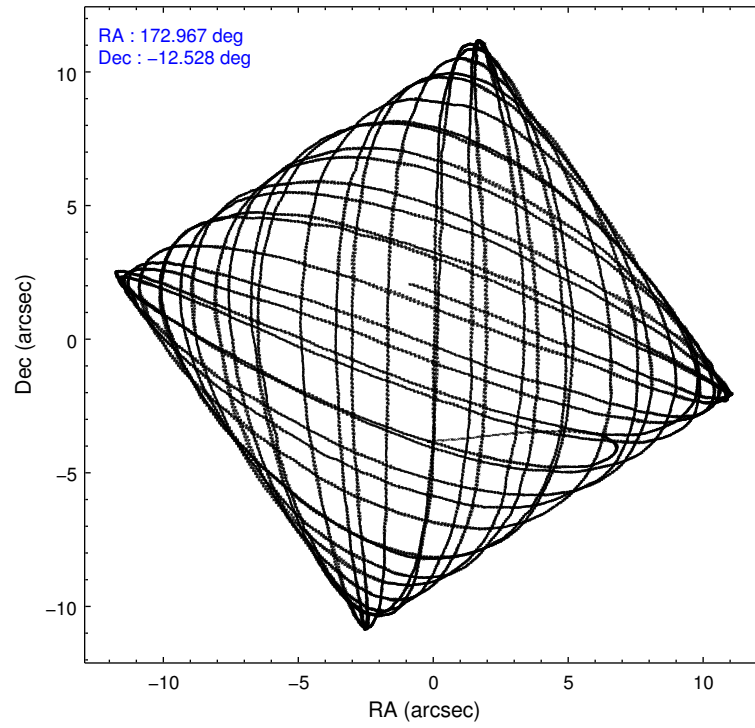
	<b>ccd 7</b>
level 1 events	29590
rejected events	9412
rejected %	31%

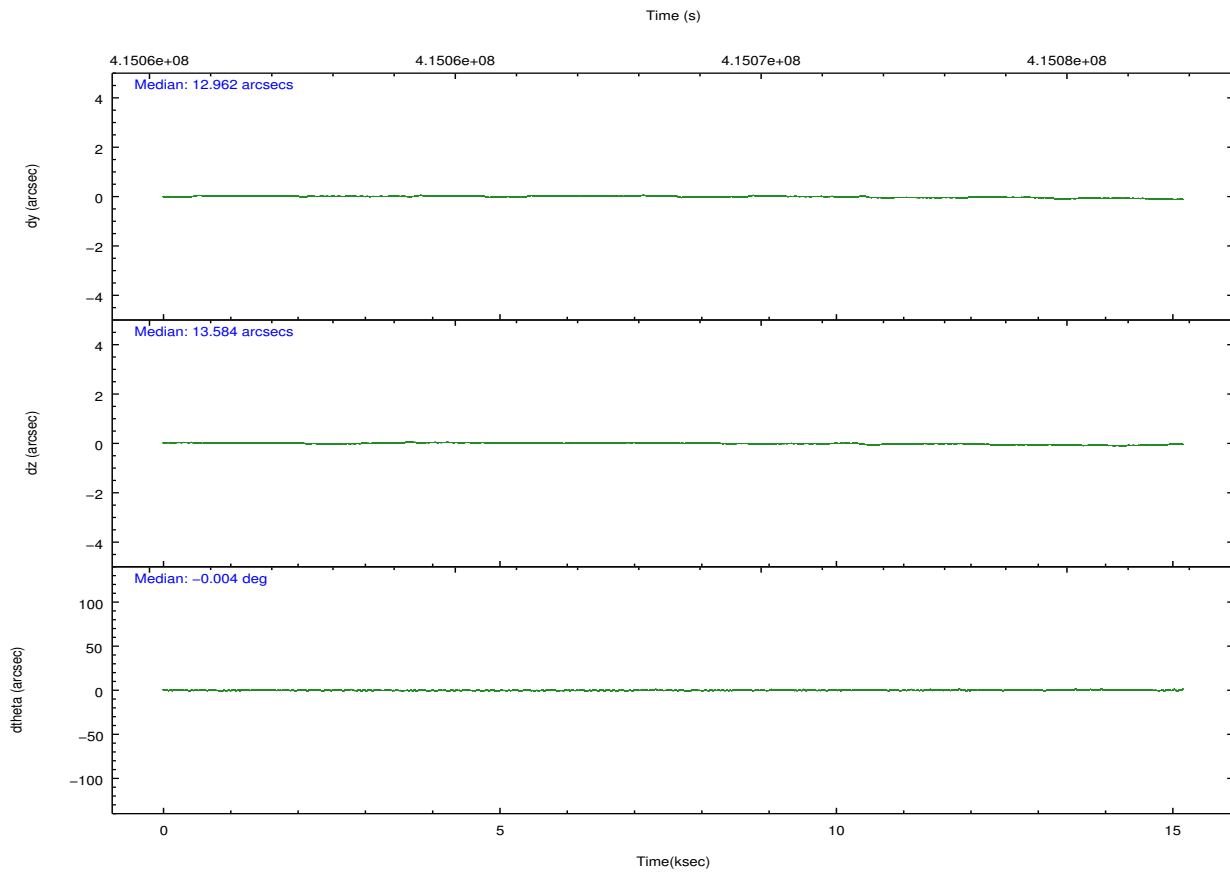
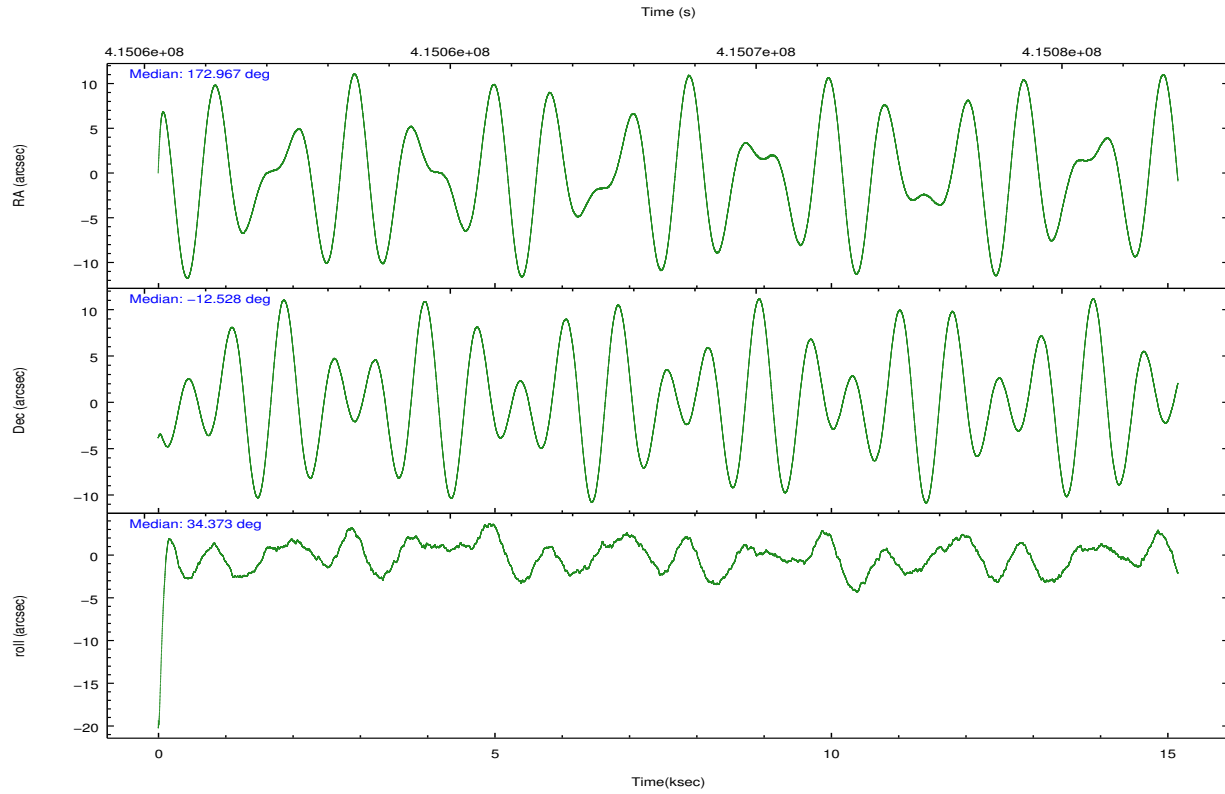
	<b>ccd 7</b>
grade 0 events	4239
	14%
grade 1 events	97
	0%
grade 2 events	4586
	15%
grade 3 events	2541
	8%
grade 4 events	2491
	8%
grade 5 events	2066
	6%
grade 6 events	6321
	21%
grade 7 events	7249
	24%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-7	ACIS-7	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	172.955251	172.9670316443189	Subarray requested	CUSTOM	1/8
[deg] Pointing Dec	-12.552883	-12.52808077927073	Subarray start row	449	449
[deg] Pointing Roll	34.217736	34.37691677466059	Subarray row count	128	128
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	0.4
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	415061142.184000	415060137.28504			
Observation start date	2011-02-25T22:44:36	2011-02-25T22:28:57			
[s] Observation end time (MET)	415076142.184000	415076823.77341			
Observation end date	2011-02-26T02:54:36	2011-02-26T03:07:03			
Read mode	TIMED	TIMED			

## 2.3 Aspect



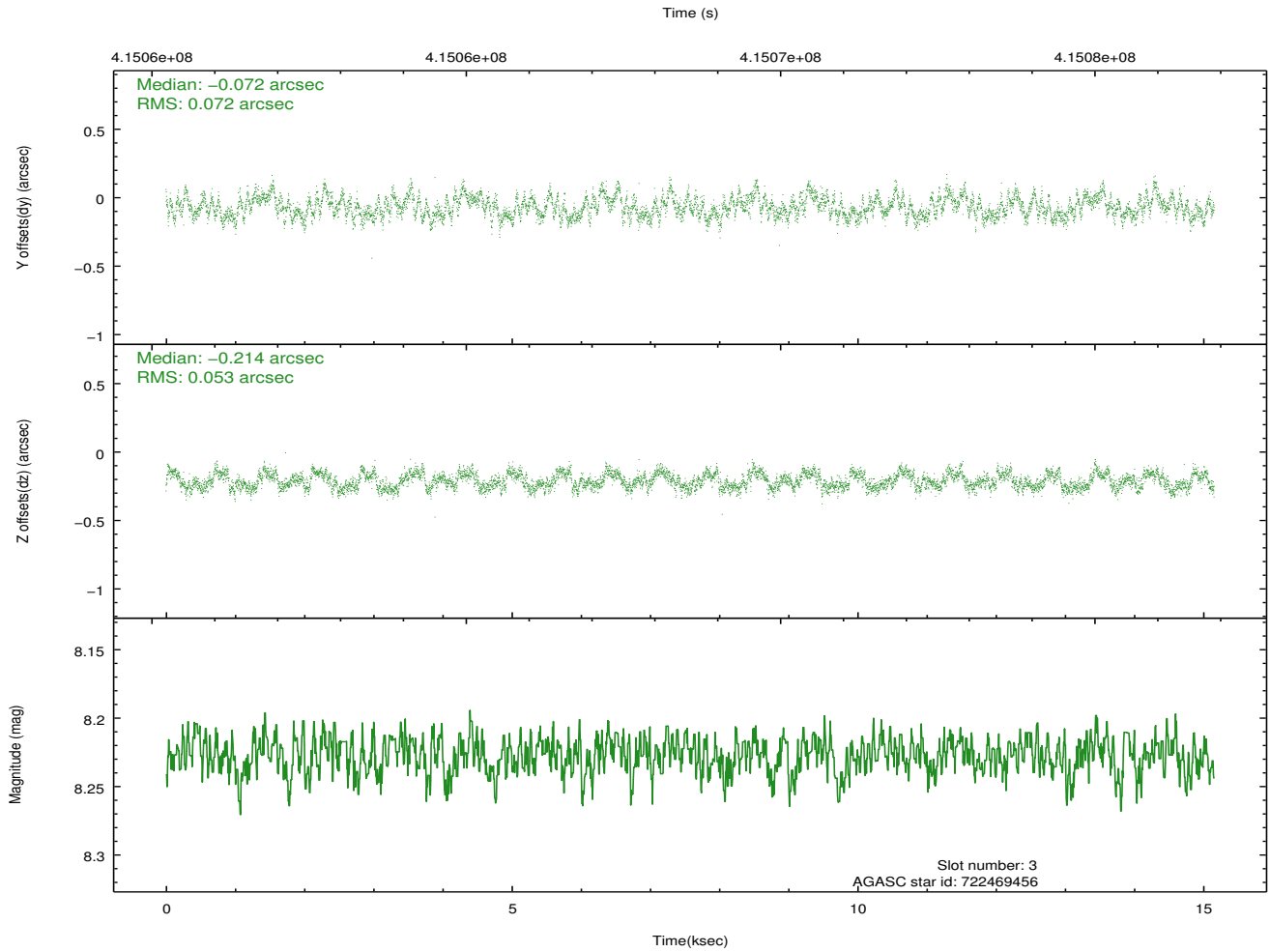
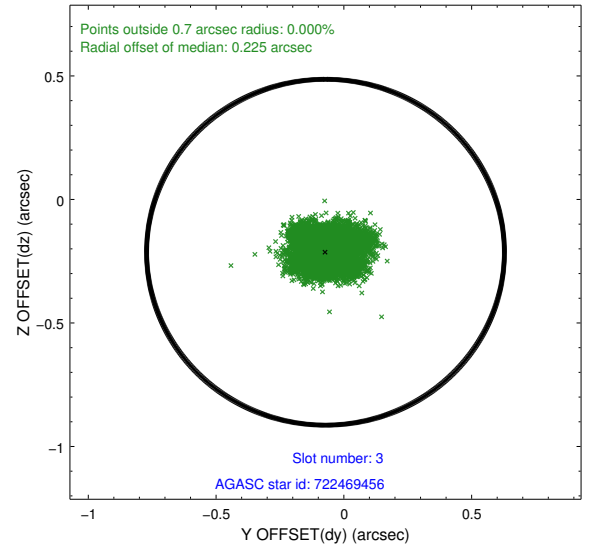
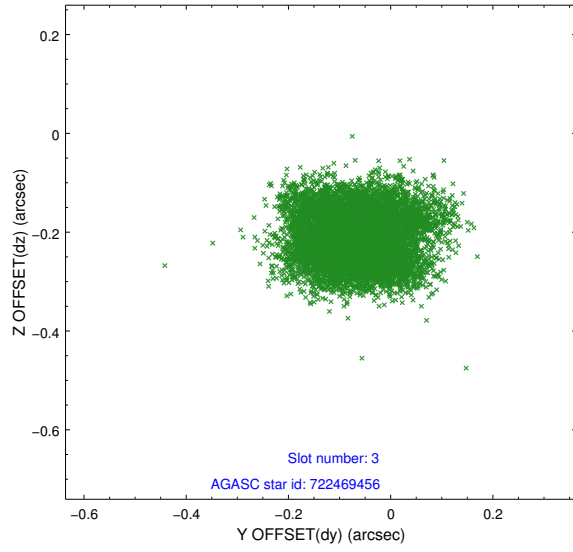


### Slot Statistics

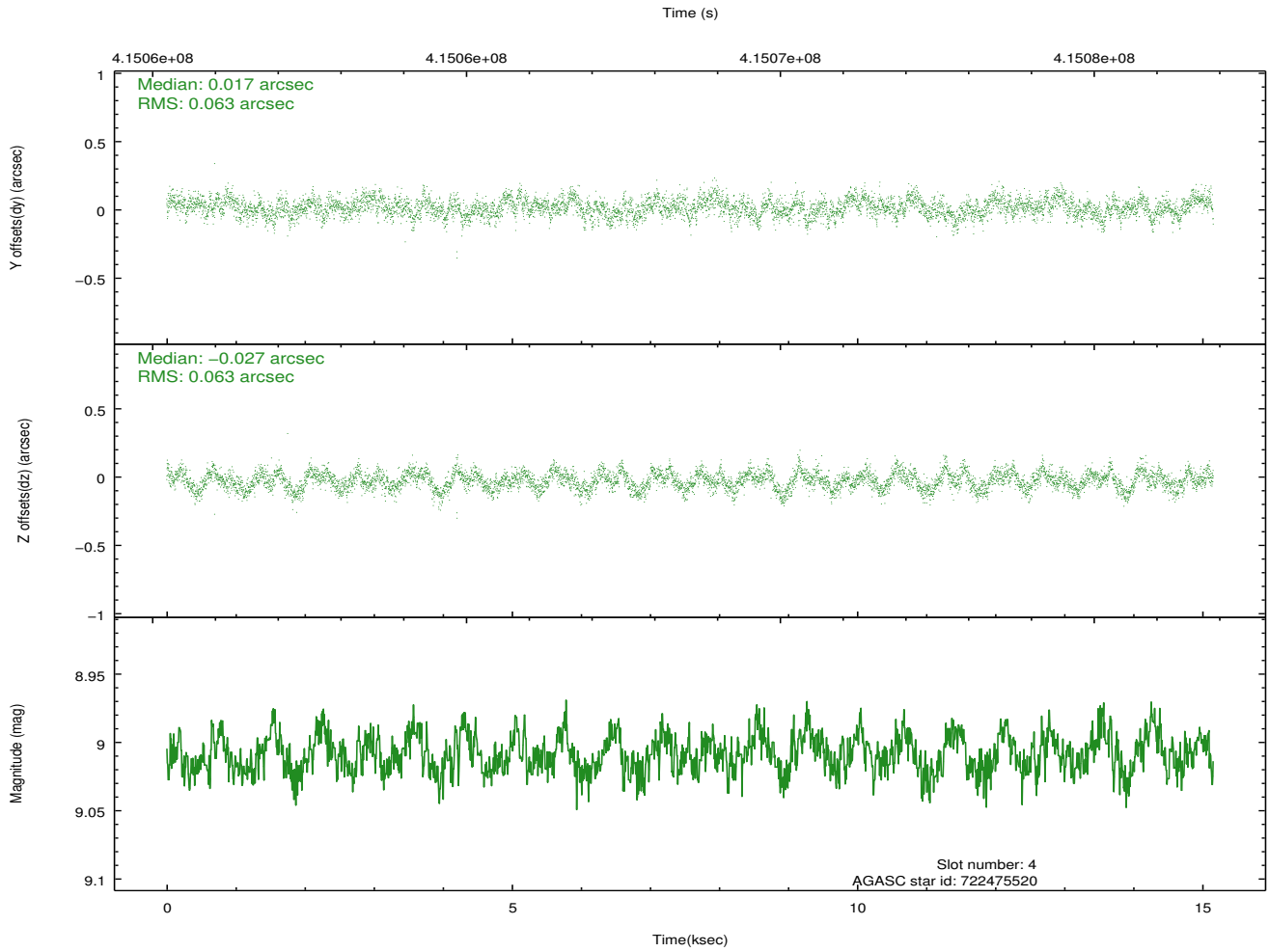
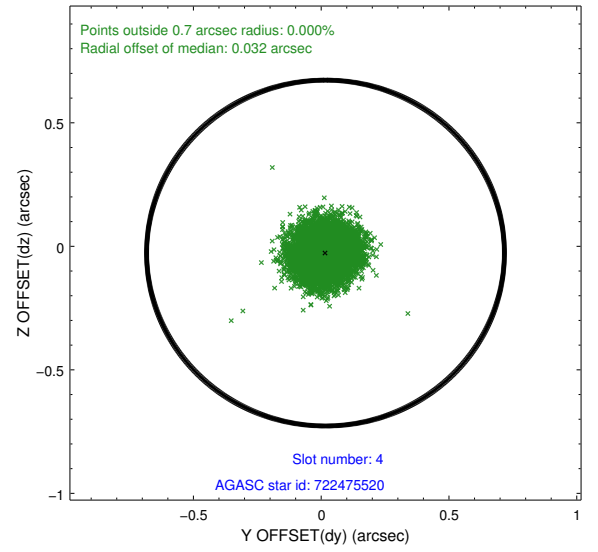
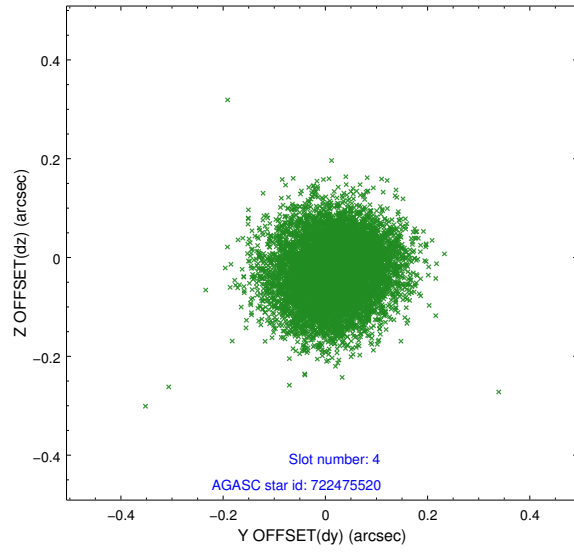
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.97	3697	-0.034	-0.061	0.006	0.010	0.000000	0.000000	-765.90	-1734.98
1	FID	ACIS-S-4	7.05	3697	0.170	0.033	0.006	0.010	0.000000	0.000000	2147.45	173.29
2	FID	ACIS-S-5	7.09	3697	-0.167	0.037	0.006	0.011	0.000000	0.000000	-1818.49	167.30
3	GUIDE	722469456	8.23	7390	-0.072	-0.214	0.097	0.153	172.170630	-12.308273	-1789.45	2276.53
4	GUIDE	722475520	9.01	7388	0.017	-0.027	0.096	0.149	173.101668	-11.691634	2169.88	2274.14
5	GUIDE	722871728	9.67	7387	-0.029	0.222	0.114	0.185	173.202235	-12.568355	686.36	-533.52
6	GUIDE	722873464	7.30	7394	-0.001	0.215	0.090	0.142	172.661543	-13.050266	-1858.79	-902.40
7	GUIDE	722473176	9.48	7383	0.082	-0.201	0.137	0.219	172.599746	-12.066793	-51.86	2149.99

## 2.4 Star Slots

### 2.4.1 Slot 3

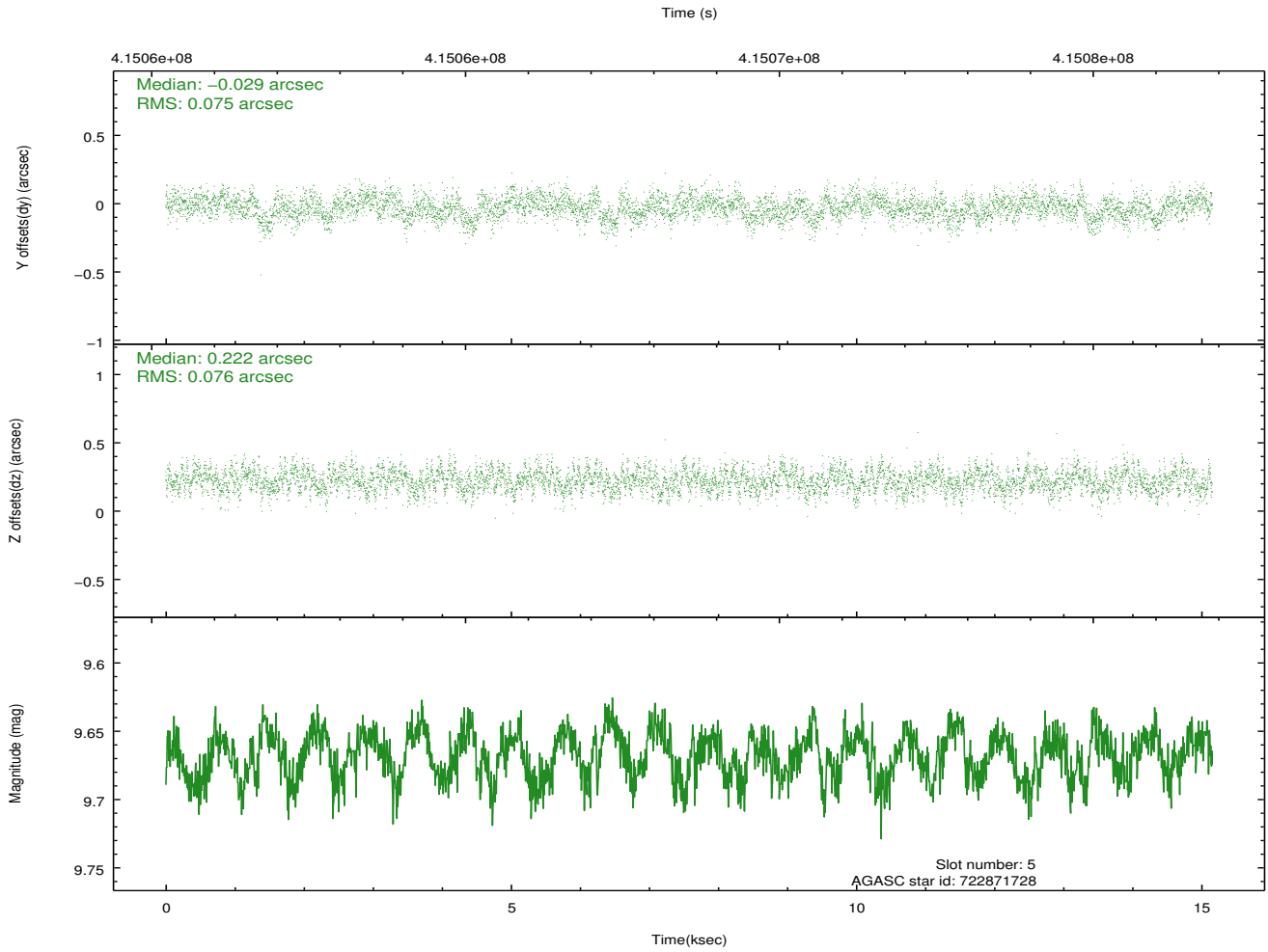
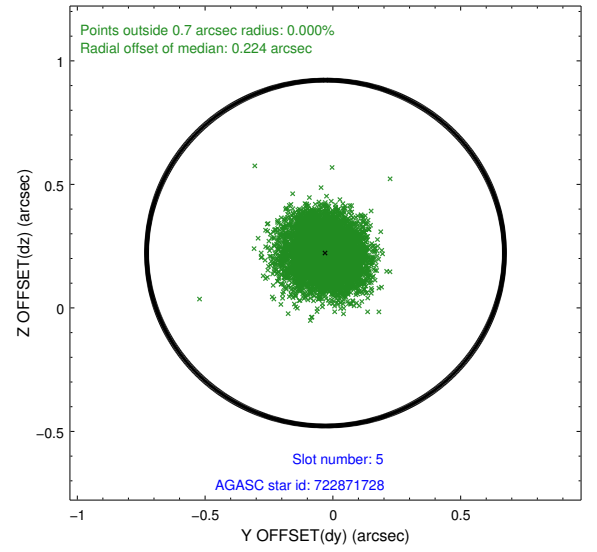
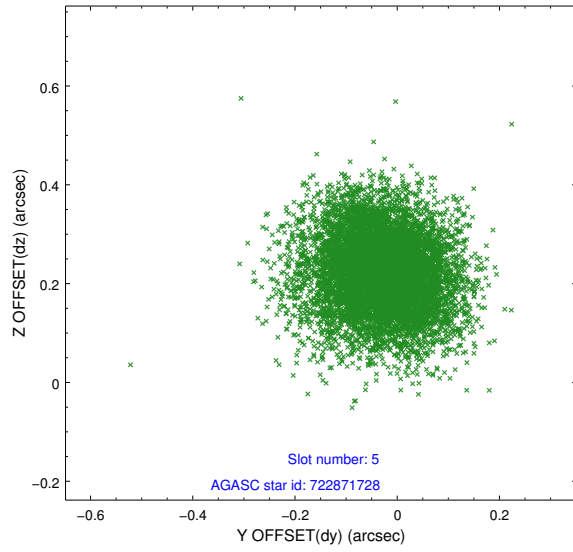


## 2.4.2 Slot 4

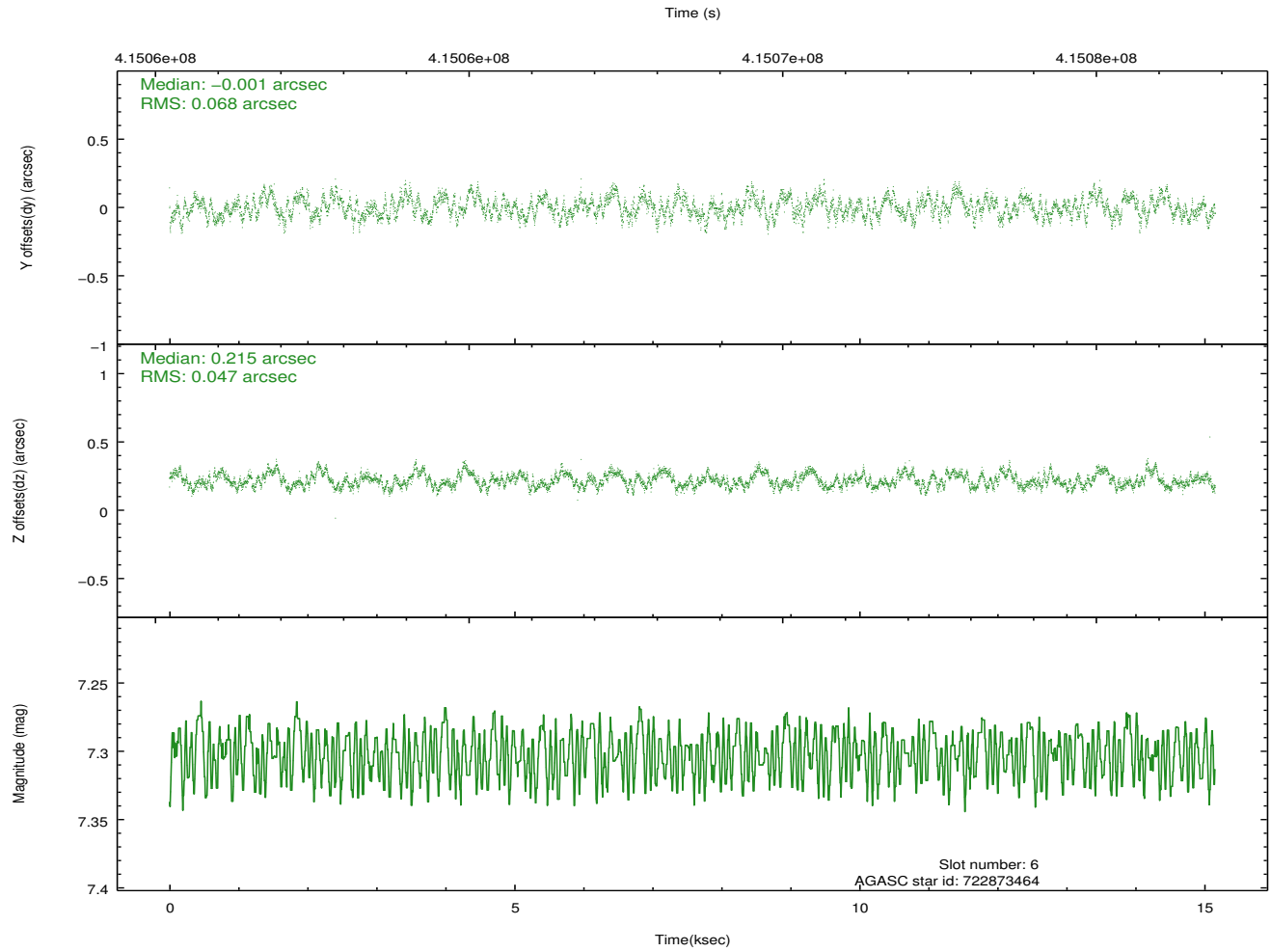
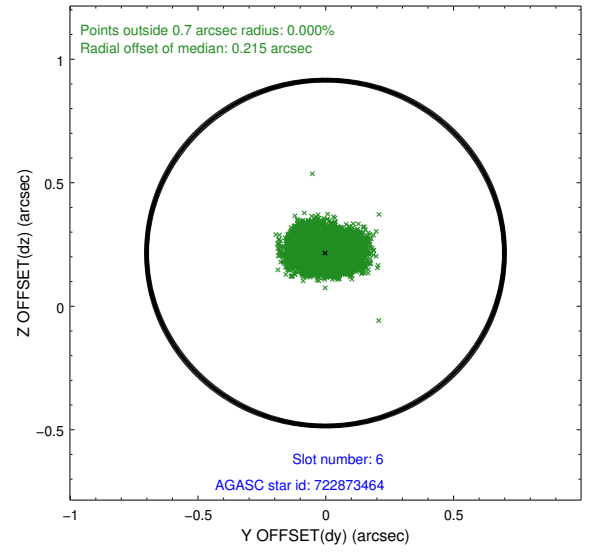
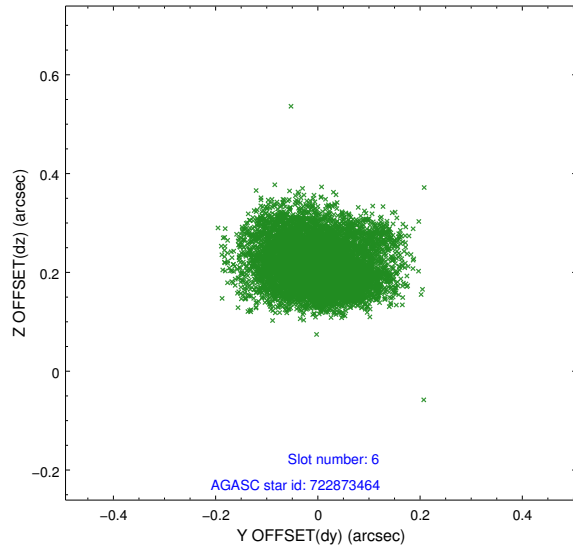




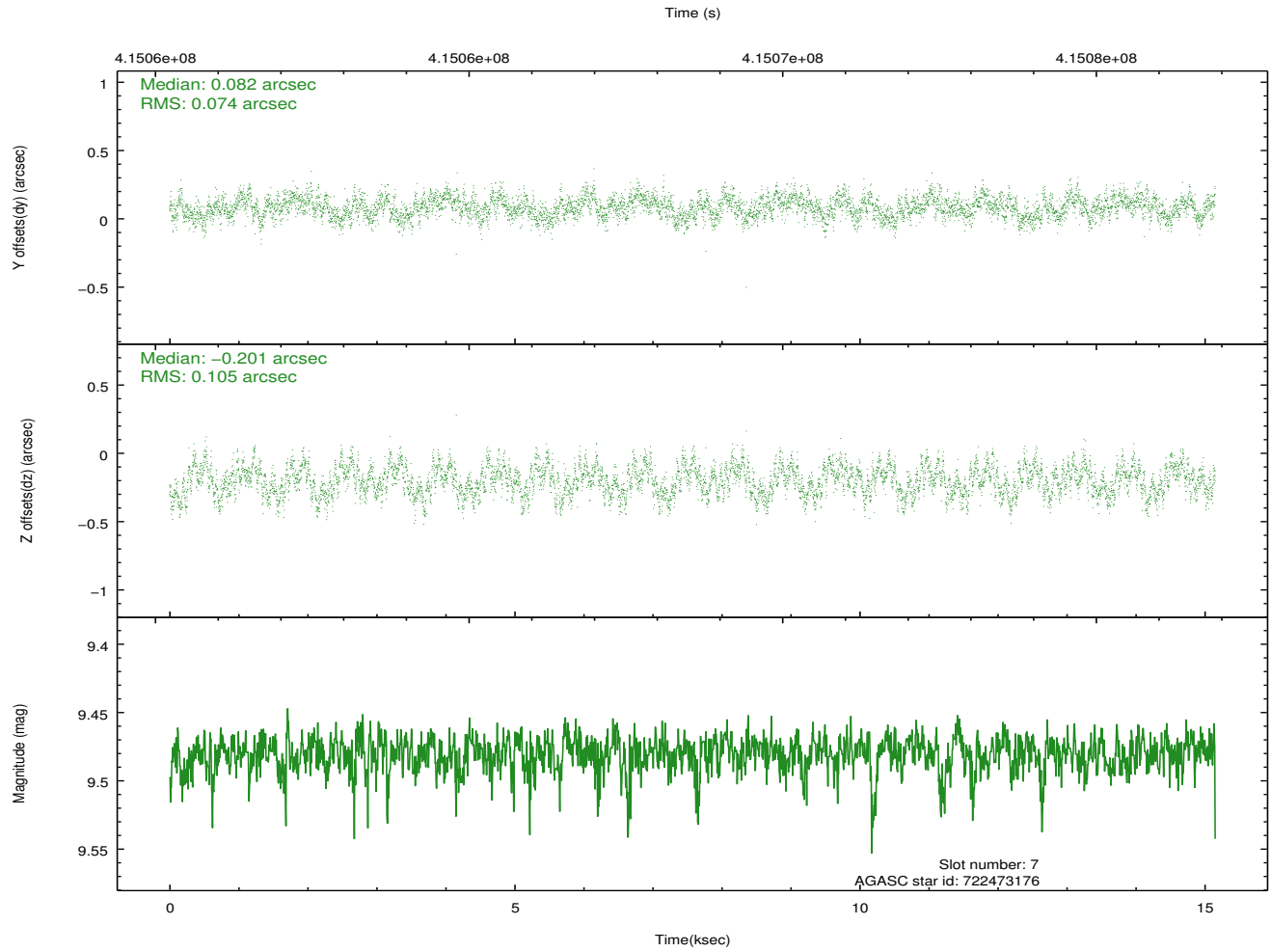
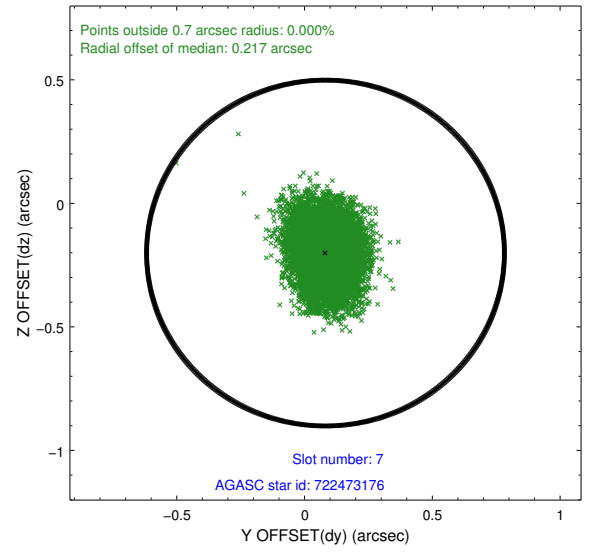
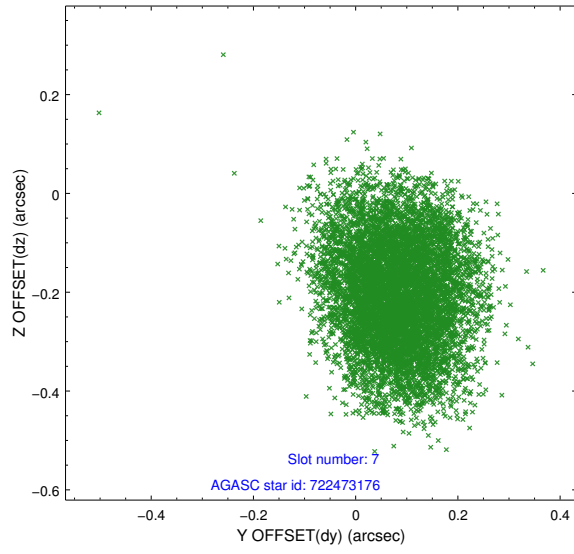
### 2.4.3 Slot 5



## 2.4.4 Slot 6

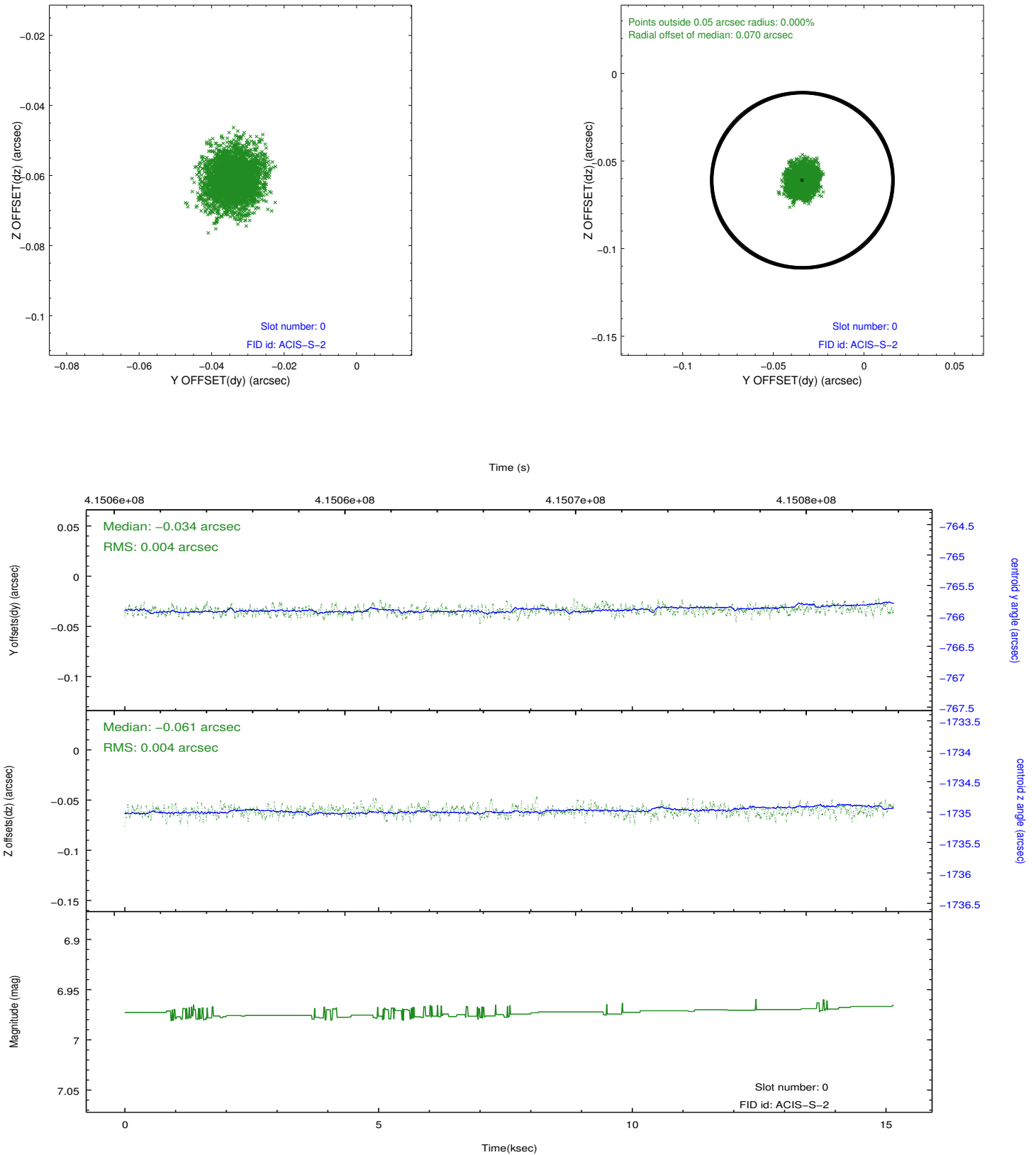


### 2.4.5 Slot 7

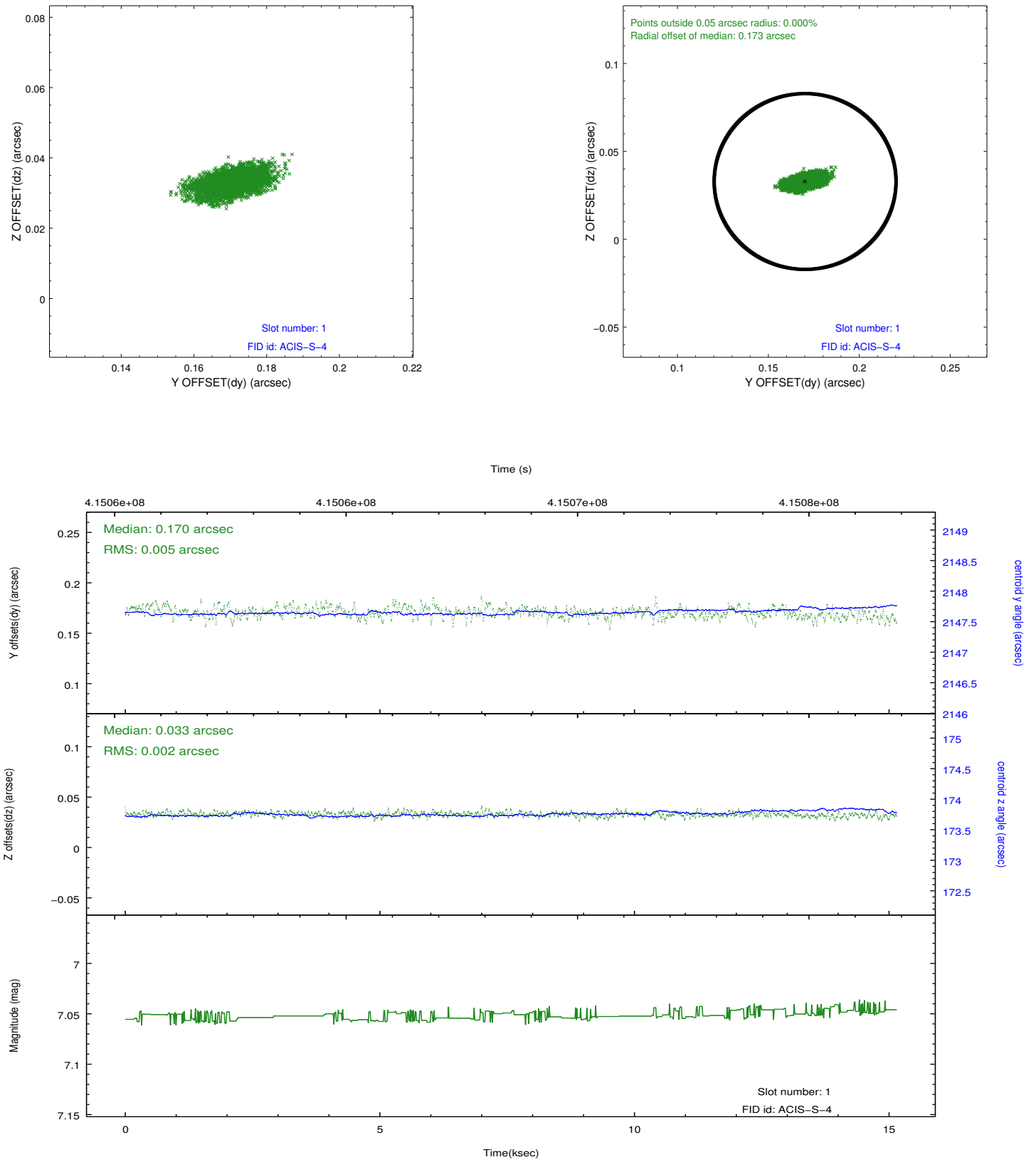


## 2.5 FID Slots

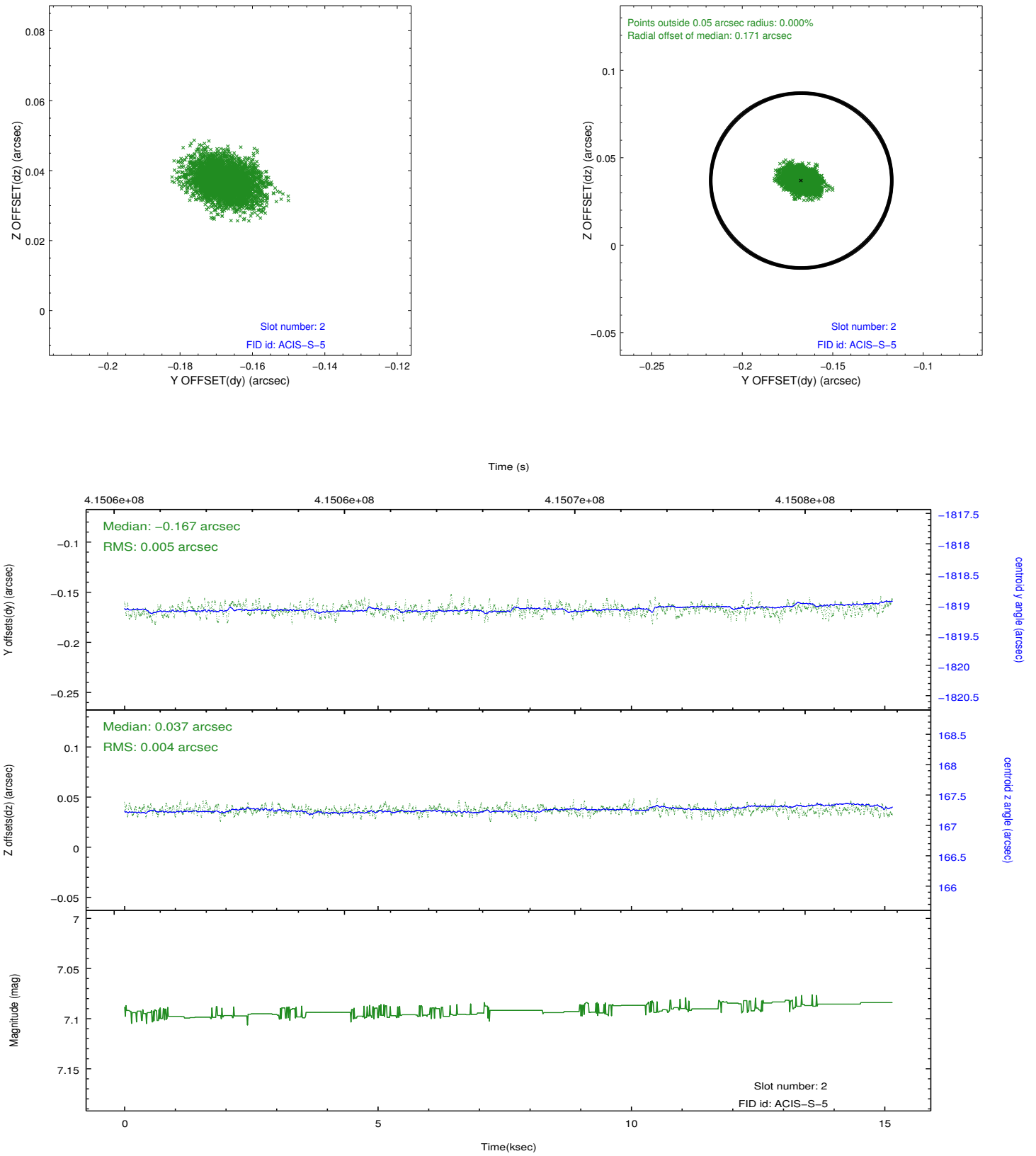
### 2.5.1 Slot 0



## 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	15.009999105334

## 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.