

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12851 - L2 Version 2  
Chandra X-Ray Center

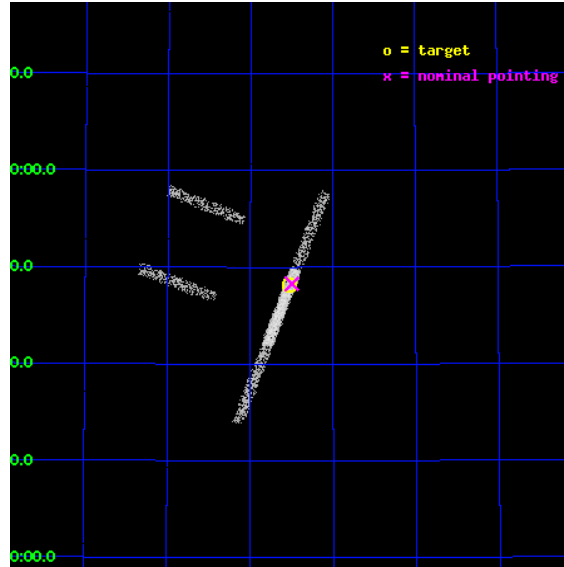
L2 Processing Date : Feb 9 2012

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# 1 Front

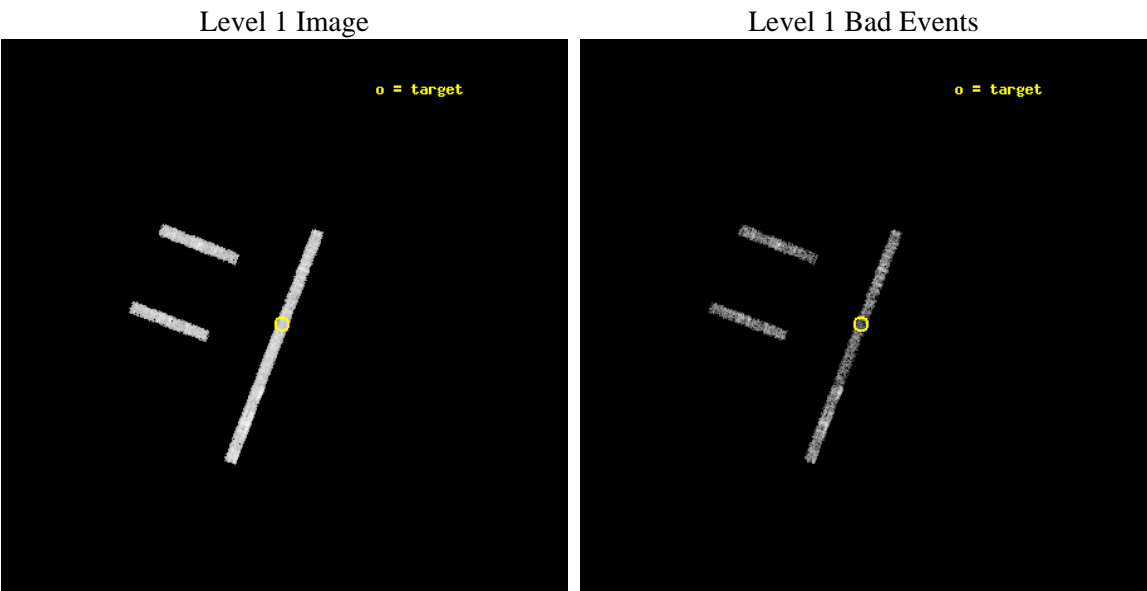
seq_num	702484	Sequence number
obs_id	12851	Observation id
title	X-ray properties of the Youngest Radio Sources	Proposal title
observer	Aneta Siemiginowska	Principal investigator
object	1943+546	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	296.13125	Observer's specified target RA [deg]
dec_targ	54.801944	Observer's specified target Dec [deg]
ra_nom	296.12435810573	Nominal RA [deg]
dec_nom	54.804894608369	Nominal Dec [deg]
roll_nom	111.16088541938	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5064.3033881783	Sum of GTIs [s]
livetime	4783.8340328792	Livetime [s]
ontime2	5064.1392281651	Sum of GTIs [s]
ontime3	5064.2213081717	Sum of GTIs [s]
ontime6	5064.262348175	Sum of GTIs [s]
ontime7	5064.3033881783	Sum of GTIs [s]
ontime8	5064.1802681684	Sum of GTIs [s]
l2events	4424	Number of level 2 events



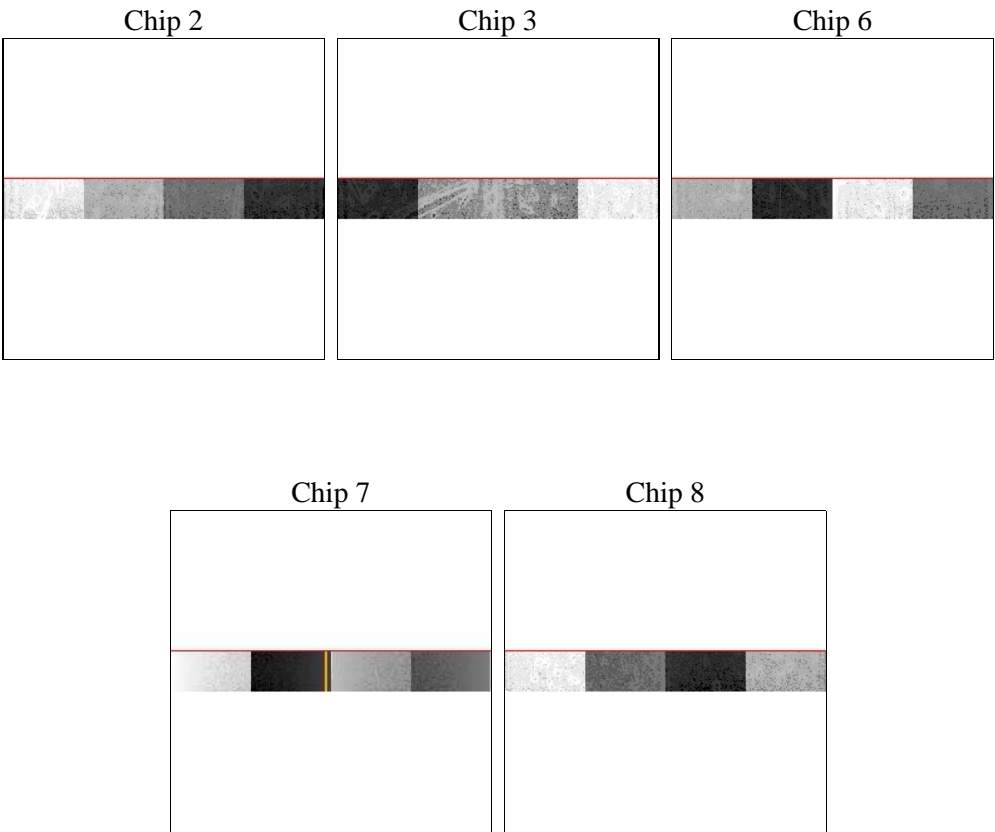
# 2 OBI

## 2.1 OBI

### 2.1.1 Images



### 2.1.2 Bias



Chip 7



Chip 8



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	5064.3033881783	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime2	5064.1392281651	Sum of GTIs [s]
date	2012-02-09T14:13:28	Date and time of file creation	ontime3	5064.2213081717	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	5064.262348175	Sum of GTIs [s]
			ontime7	5064.3033881783	Sum of GTIs [s]
			ontime8	5064.1802681684	Sum of GTIs [s]
			l1events	28134	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	4686	4715	5232	5591	7910
rejected events	4099	4219	4641	2928	5927
rejected %	87%	89%	88%	52%	74%

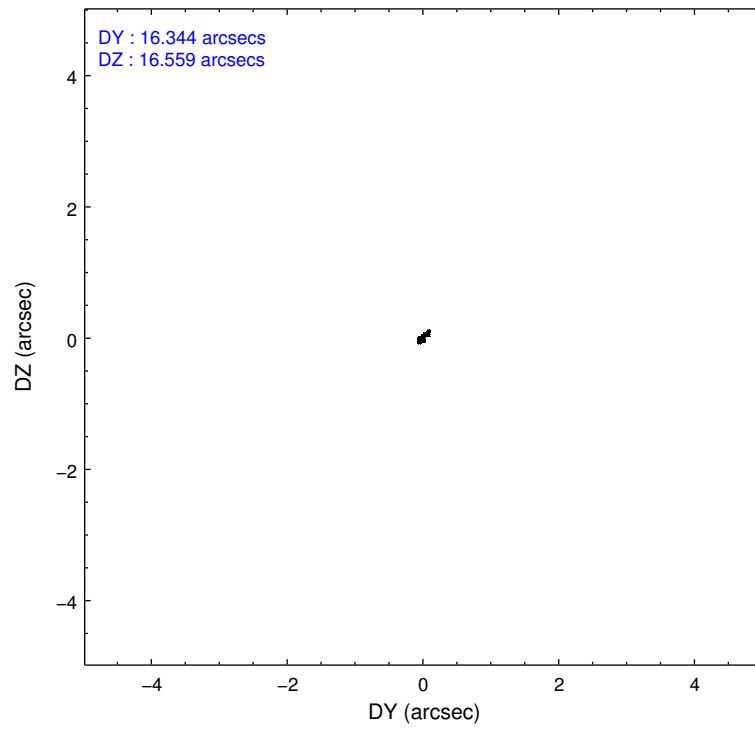
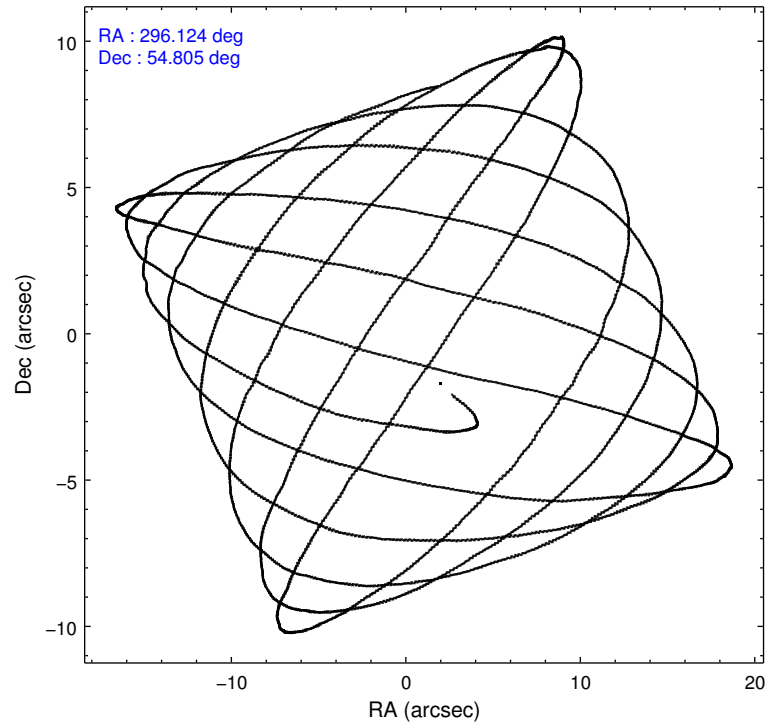
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	167	111	155	301	511
	3%	2%	2%	5%	6%
grade 1 events	1	2	3	11	4
	0%	0%	0%	0%	0%
grade 2 events	121	105	107	538	354
	2%	2%	2%	9%	4%
grade 3 events	100	86	112	301	263
	2%	1%	2%	5%	3%
grade 4 events	96	84	117	291	237
	2%	1%	2%	5%	2%
grade 5 events	158	192	184	583	307
	3%	4%	3%	10%	3%
grade 6 events	103	110	101	1232	618
	2%	2%	1%	22%	7%
grade 7 events	3940	4025	4453	2334	5616
	84%	85%	85%	41%	70%

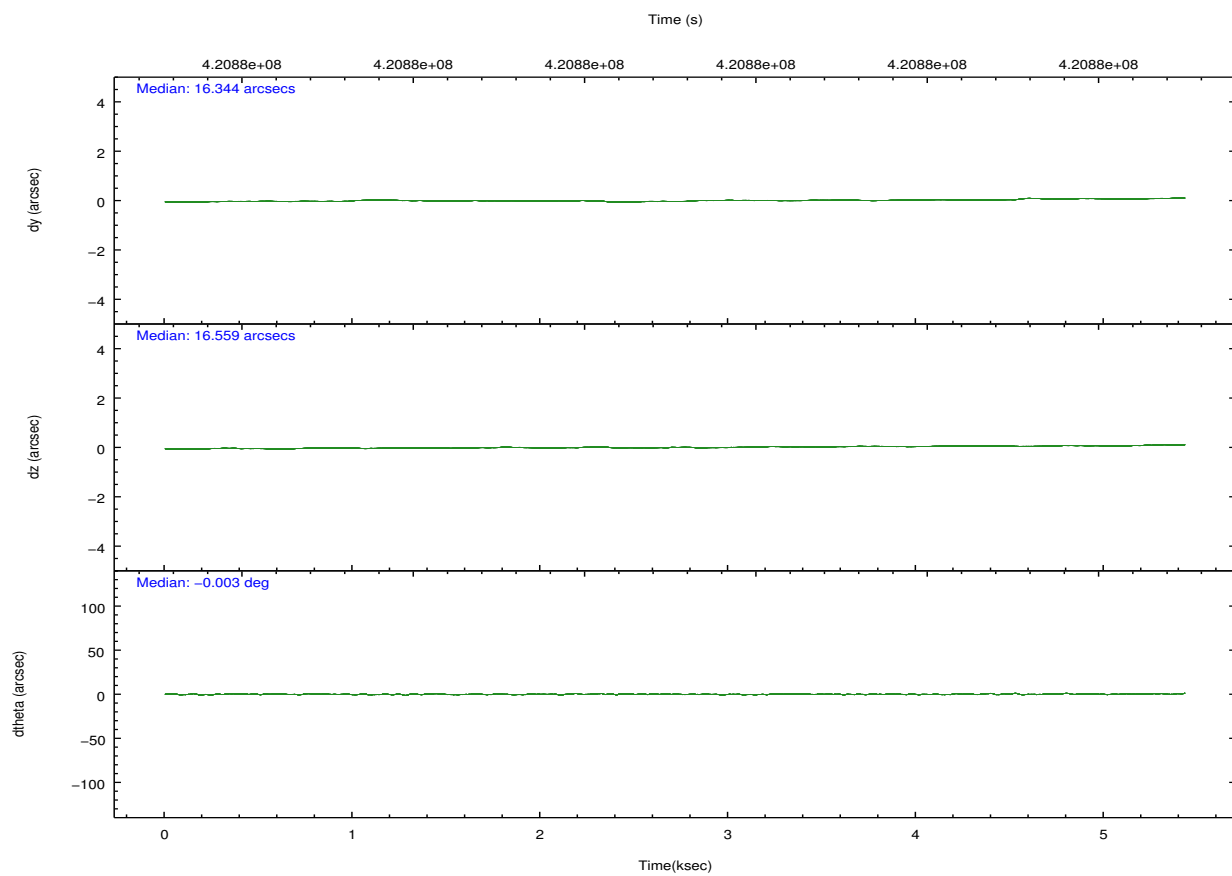
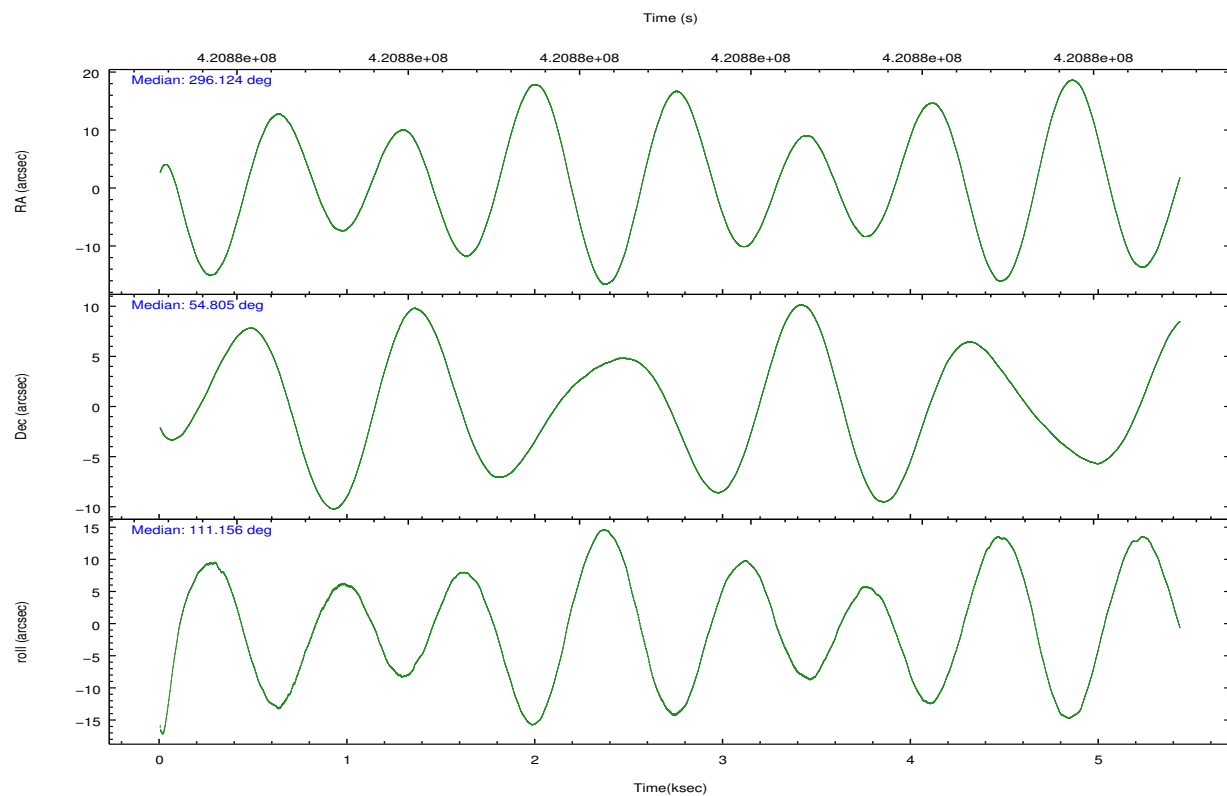


## 2.2 Compared Parameters

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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	296.161893	296.1243581057252	Subarray requested	CUSTOM	1/8
[deg] Pointing Dec	54.788017	54.80489460836871	Subarray start row	449	449
[deg] Pointing Roll	110.973616	111.1608854193848	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	0.7
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	420880243.184000	420879275.78673			
Observation start date	2011-05-04T07:09:37	2011-05-04T06:54:35			
[s] Observation end time (MET)	420885243.184000	420886002.34958			
Observation end date	2011-05-04T08:32:57	2011-05-04T08:46:42			
Read mode	TIMED	TIMED			

## 2.3 Aspect



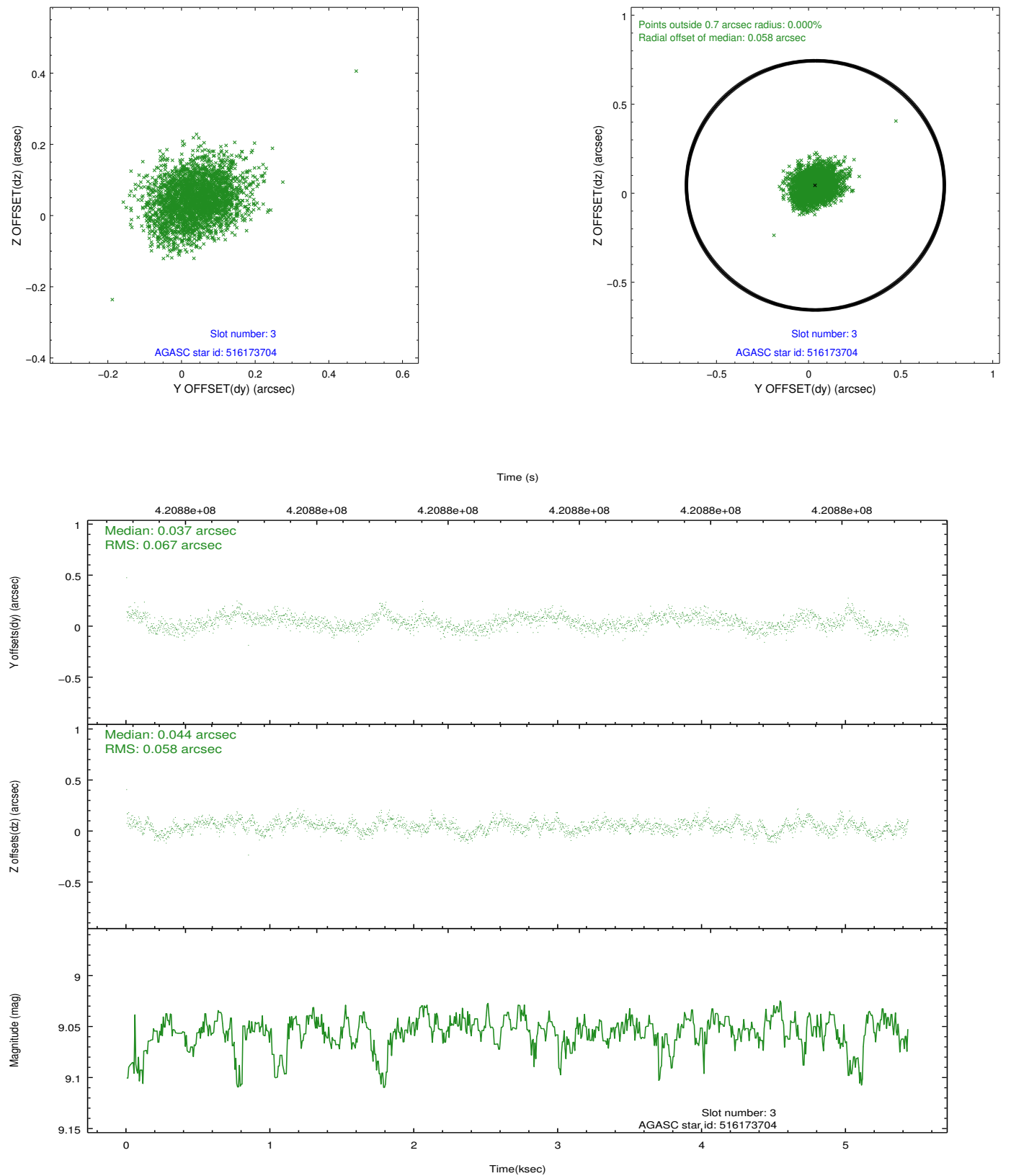


### Slot Statistics

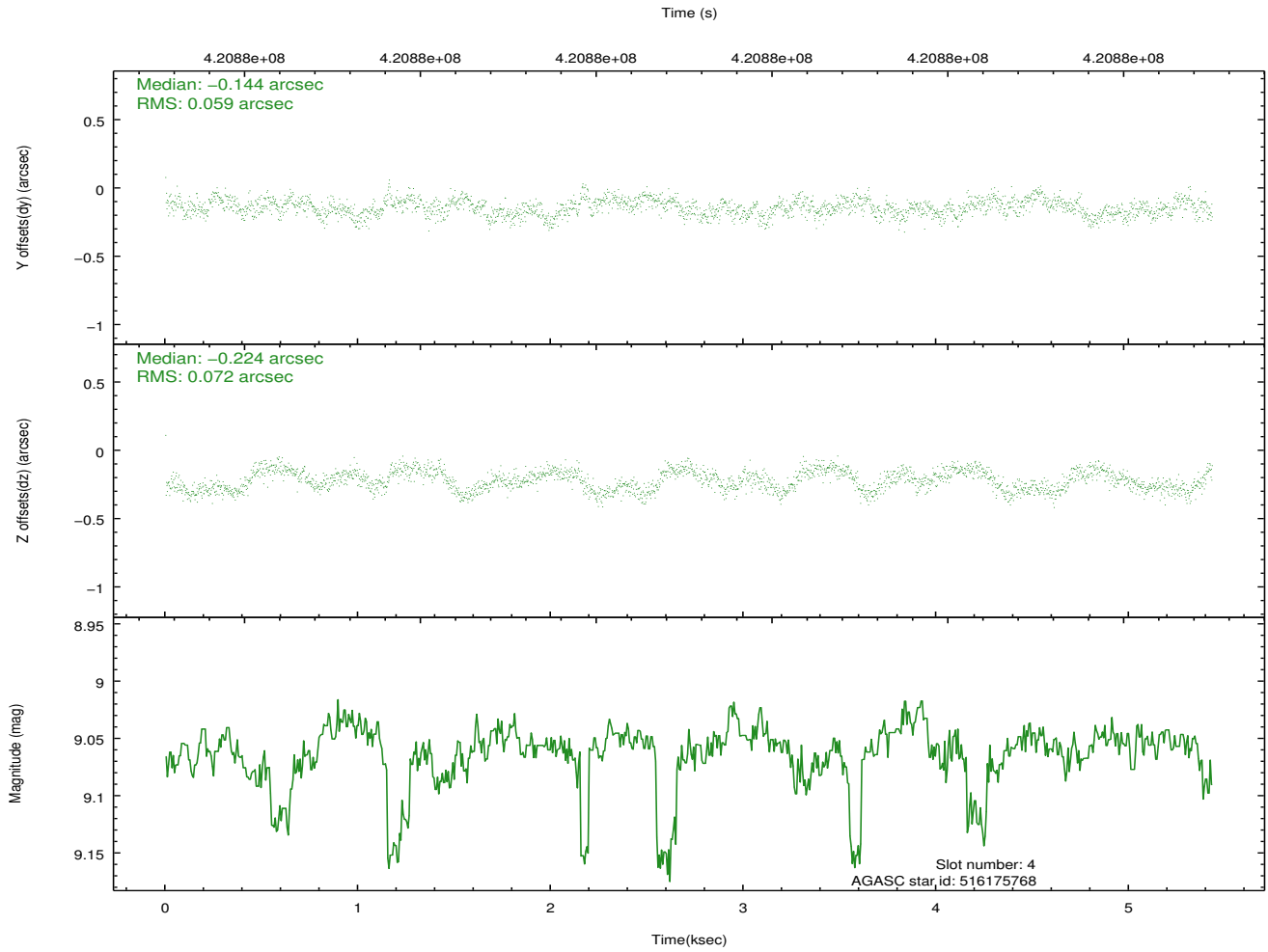
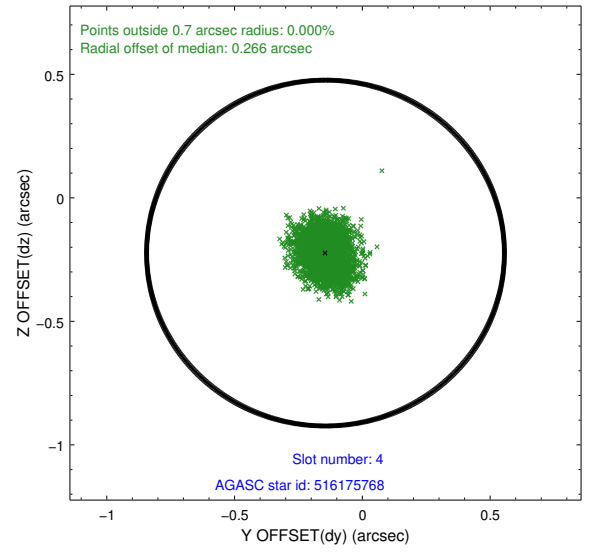
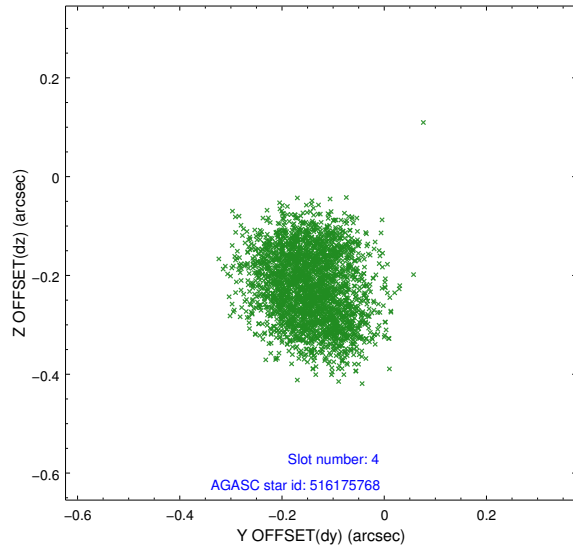
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.86	1325	-0.065	0.012	0.006	0.010	0.000000	0.000000	-769.44	-1737.97
1	FID	ACIS-S-4	6.94	1325	0.122	0.028	0.005	0.010	0.000000	0.000000	2143.54	169.35
2	FID	ACIS-S-5	6.98	1325	-0.089	-0.032	0.006	0.011	0.000000	0.000000	-1820.87	164.26
3	GUIDE	516173704	9.05	2649	0.037	0.044	0.093	0.150	295.860974	55.398920	2275.09	-213.20
4	GUIDE	516175768	9.06	2638	-0.144	-0.224	0.102	0.153	295.223330	55.135778	1872.96	1350.56
5	GUIDE	516176904	7.92	2648	-0.031	-0.025	0.076	0.121	296.320375	55.028442	692.27	-614.92
6	GUIDE	516298920	8.65	2647	-0.063	0.190	0.071	0.112	296.675164	54.379819	-1753.38	-480.65
7	GUIDE	516297056	9.24	2647	0.197	0.009	0.126	0.201	296.874931	55.639140	2349.27	-2452.47

## 2.4 Star Slots

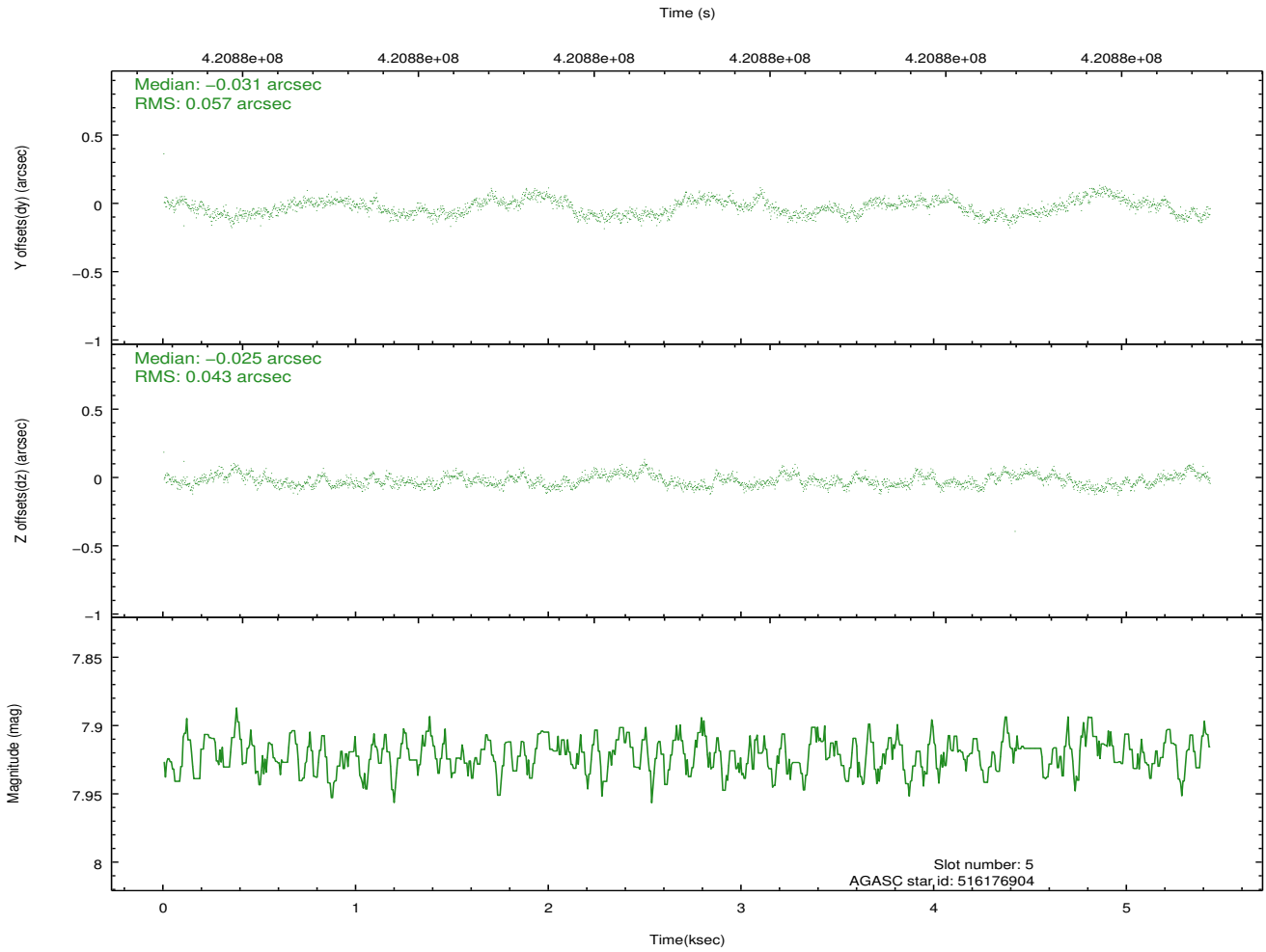
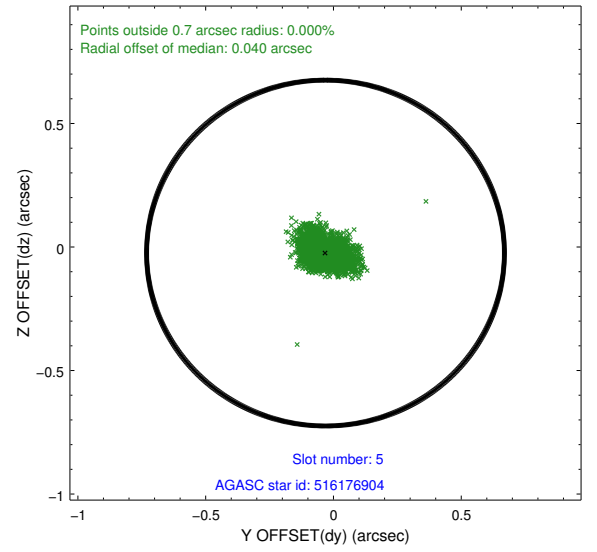
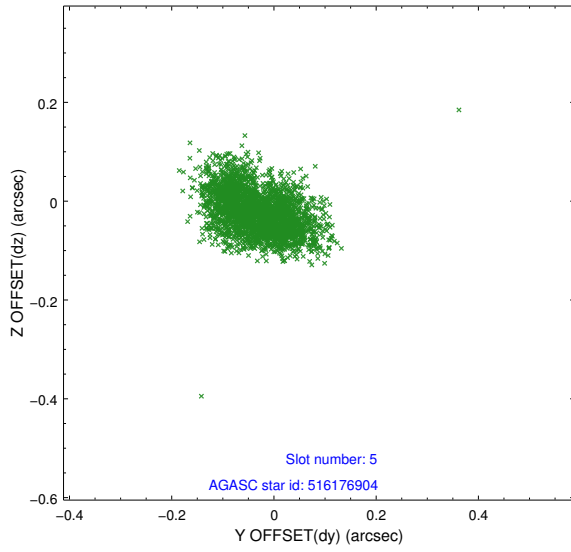
### 2.4.1 Slot 3



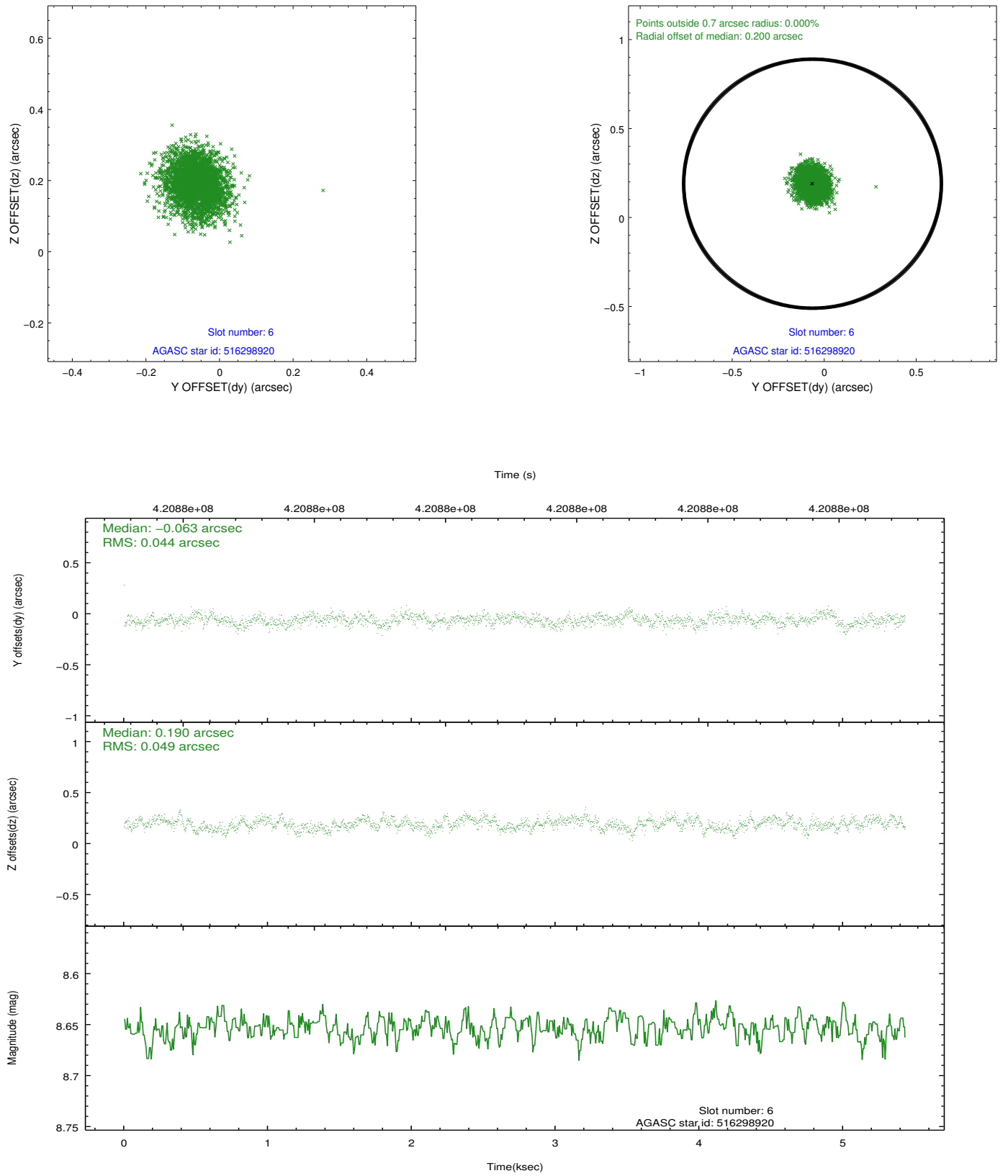
## 2.4.2 Slot 4



### 2.4.3 Slot 5

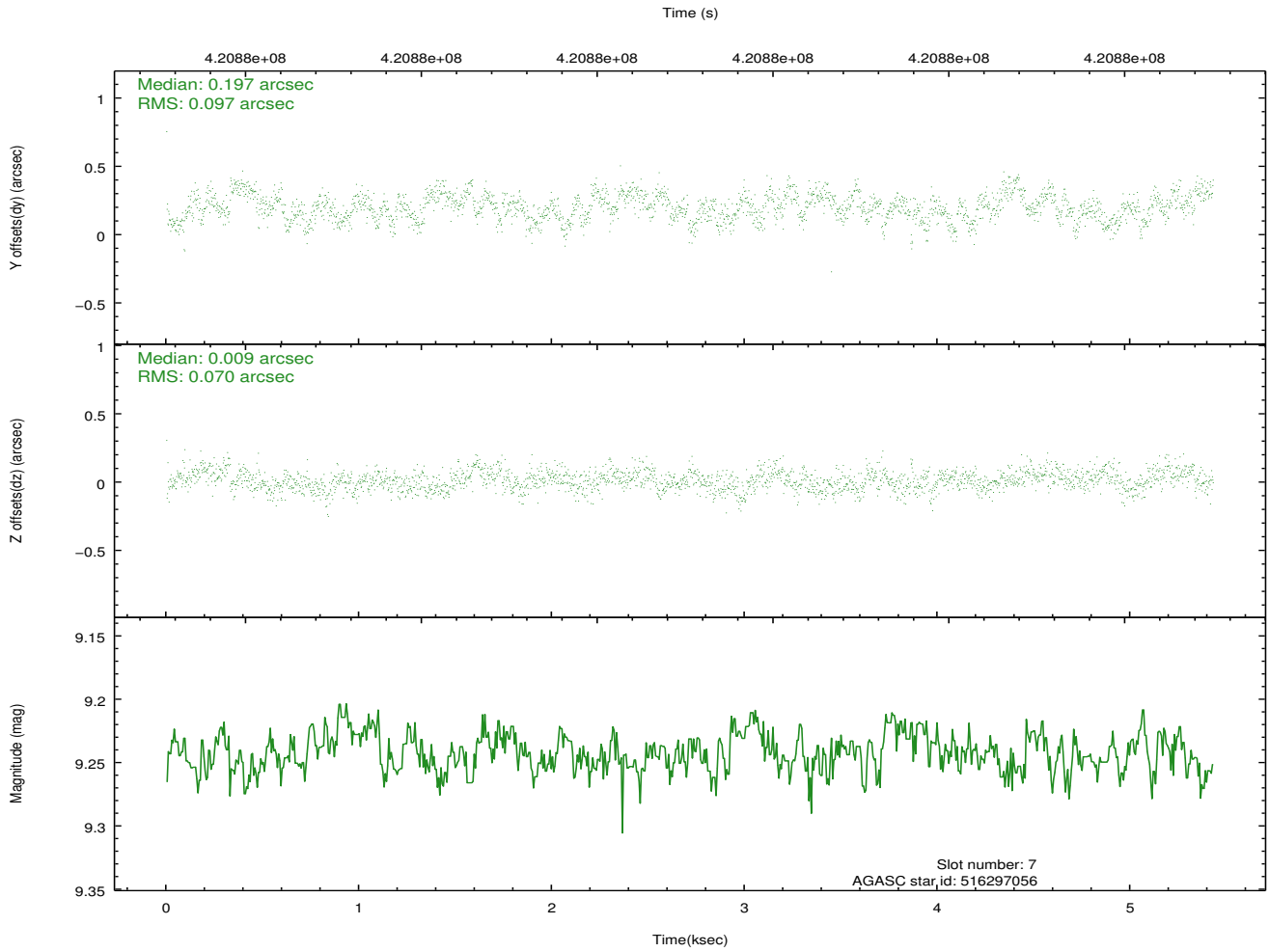
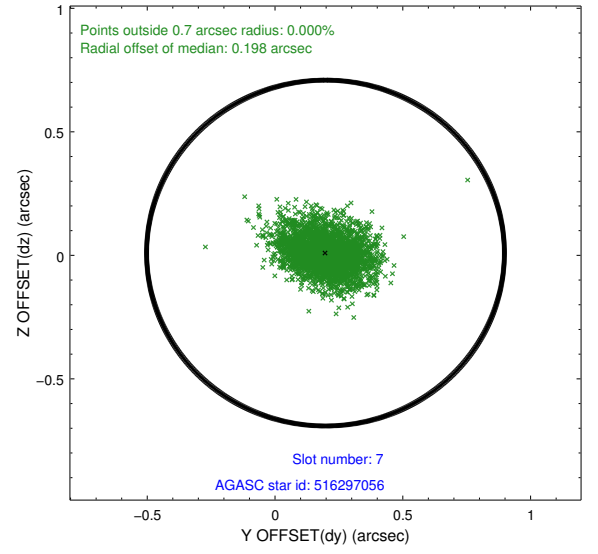
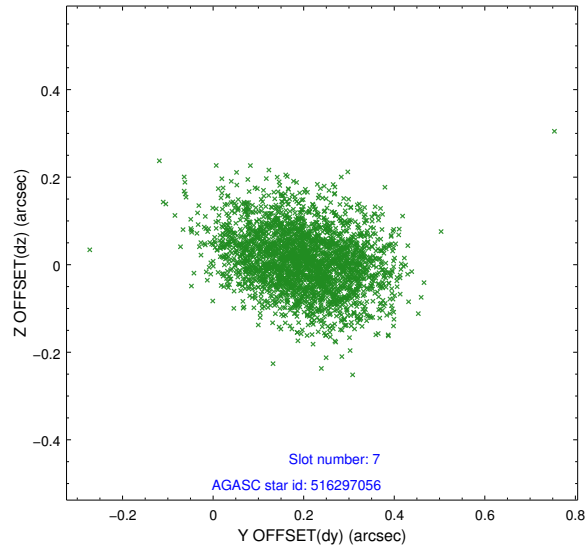


## 2.4.4 Slot 6



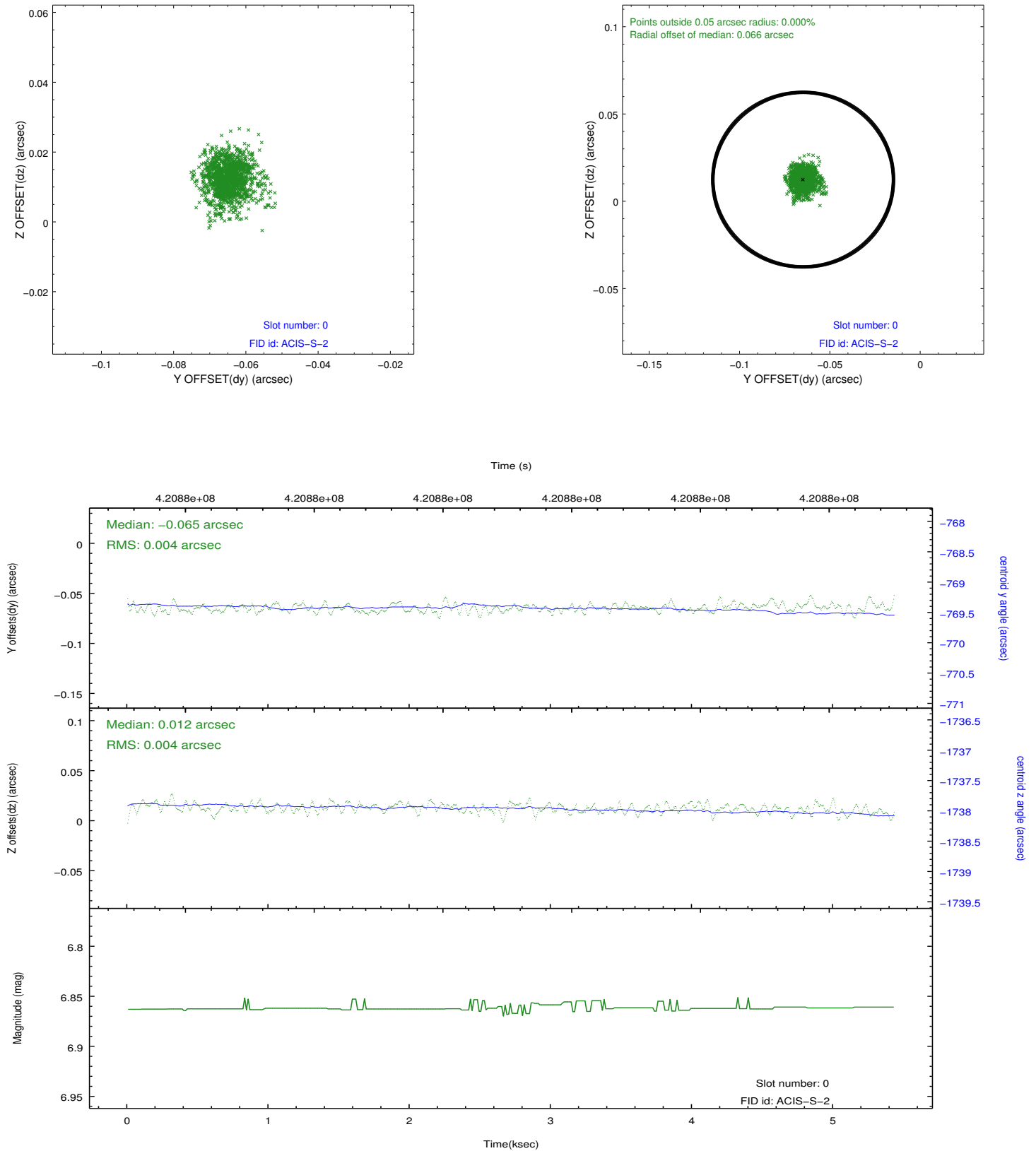


## 2.4.5 Slot 7

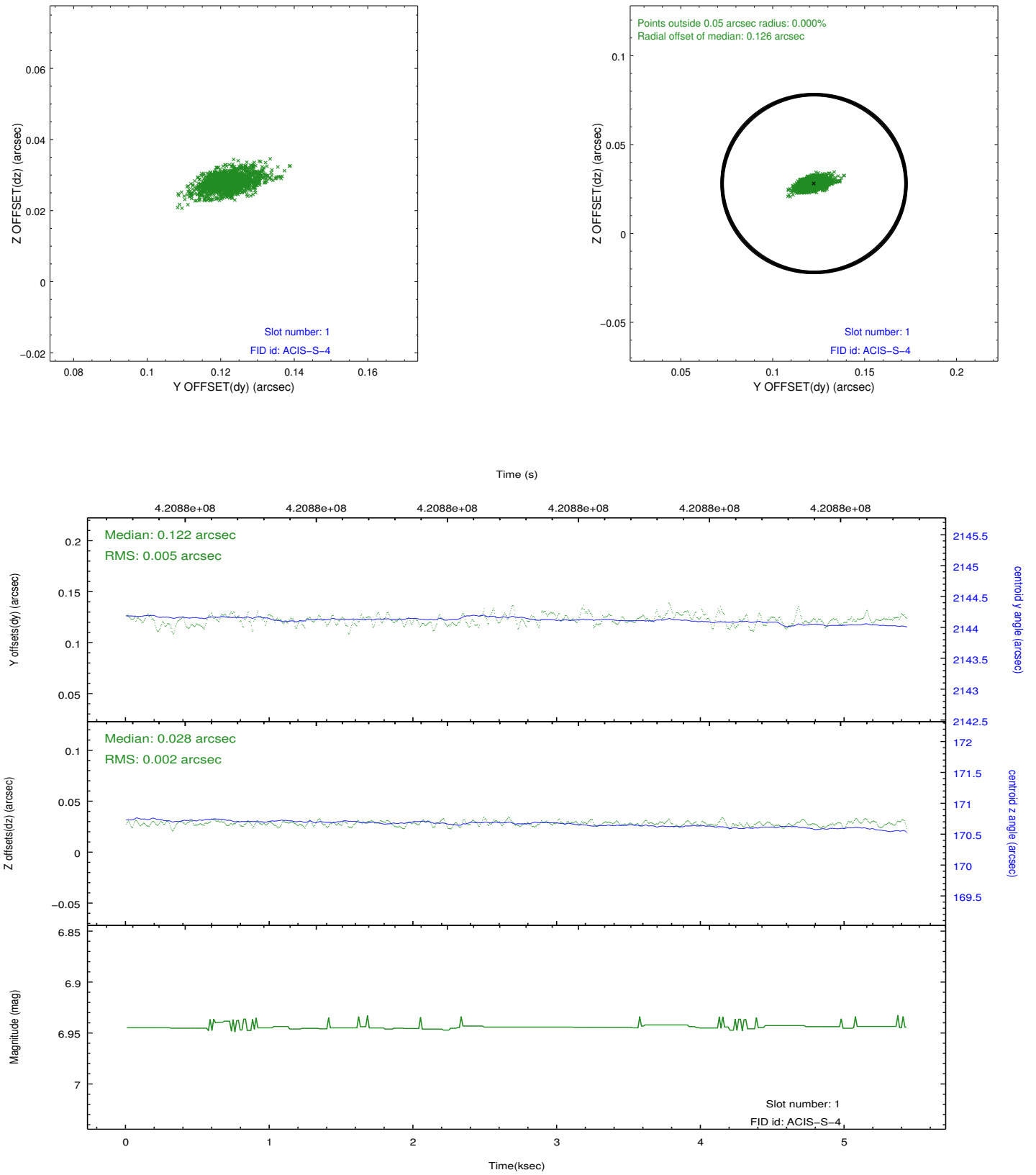


## 2.5 FID Slots

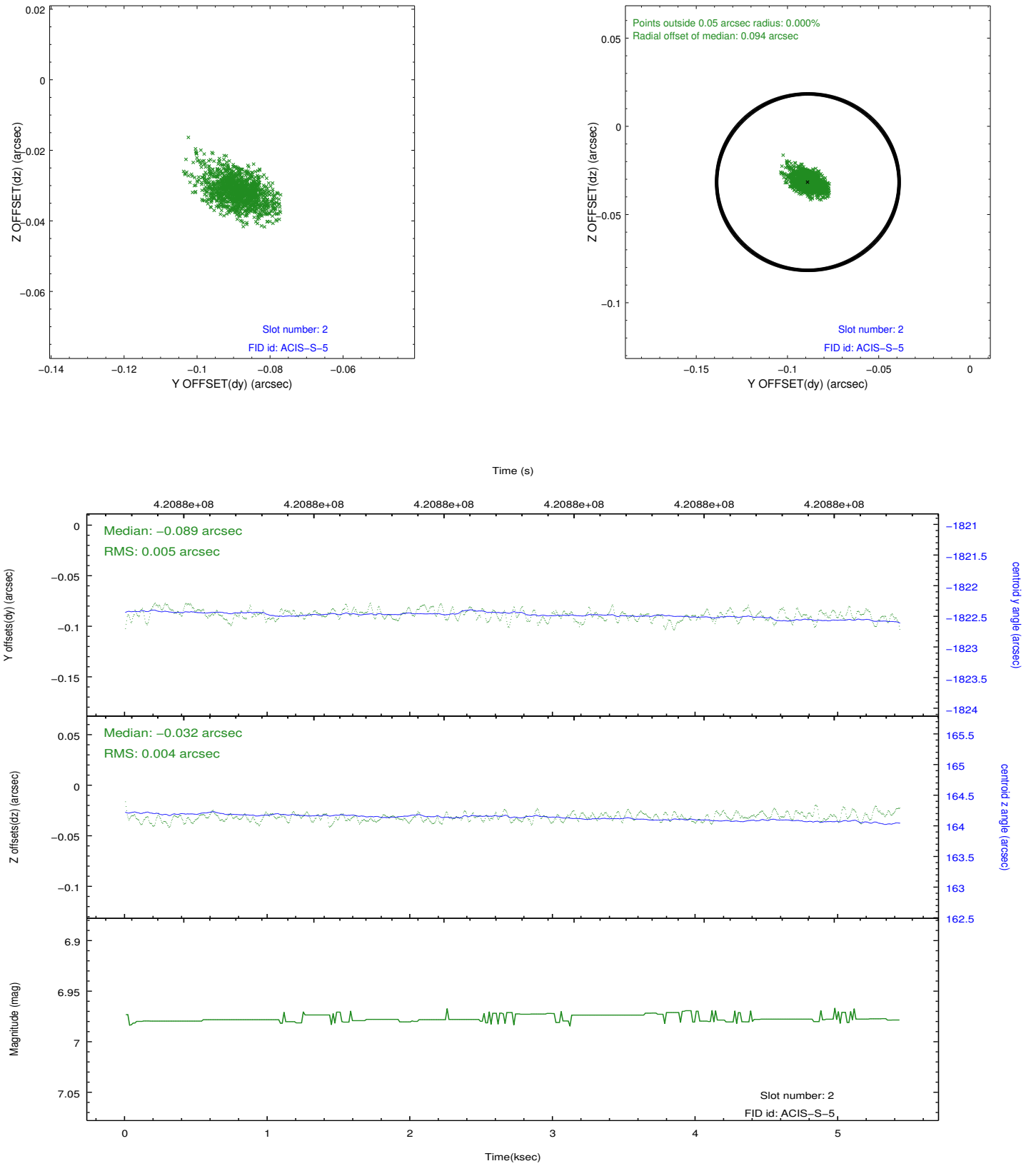
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2012.02.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.0643033929467

## 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.