

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12852 - L2 Version 2  
Chandra X-Ray Center

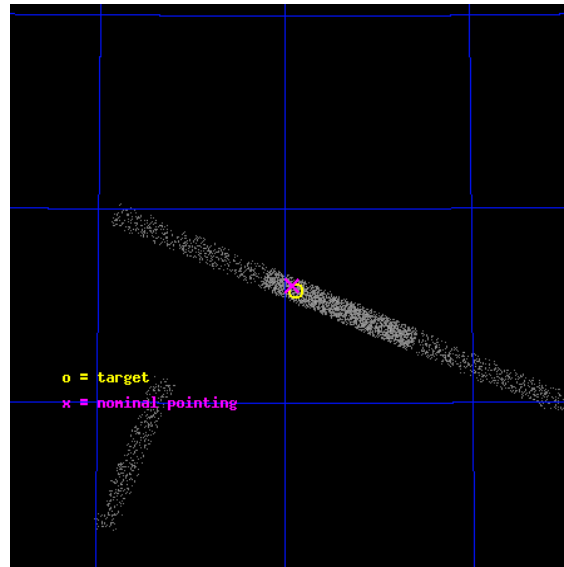
L2 Processing Date : Feb 3 2012

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
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
<b>A</b>	<b>Summary</b>	<b>17</b>
A.1	Status . . . . .	17
A.2	Comments . . . . .	17

# 1 Front

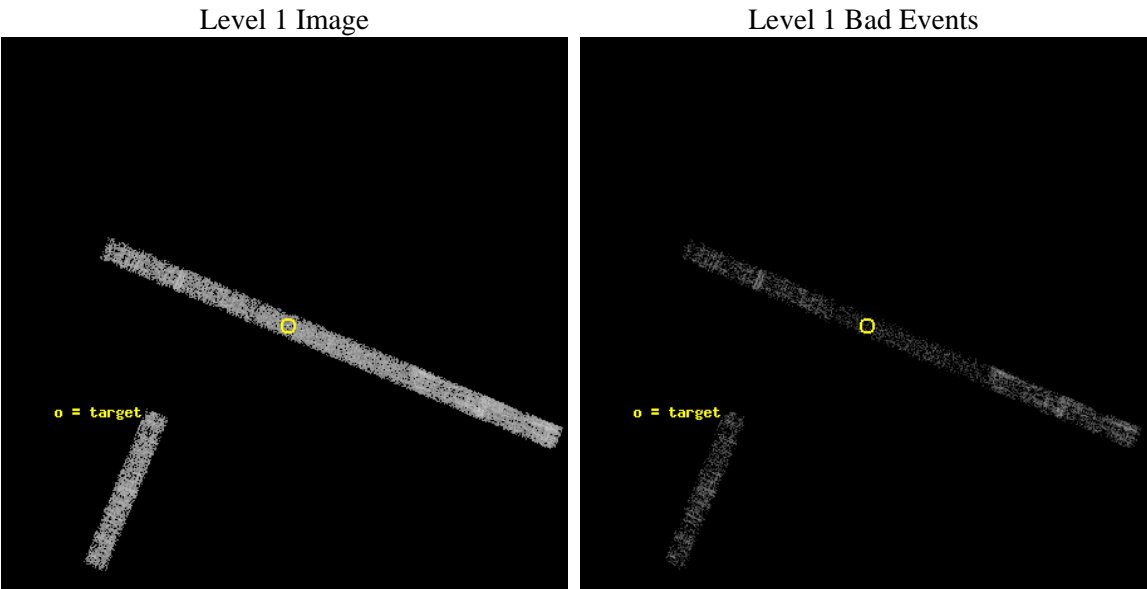
seq_num	702485	Sequence number
obs_id	12852	Observation id
title	X-ray properties of the Youngest Radio Sources	Proposal title
observer	Aneta Siemiginowska	Principal investigator
object	1946+708	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	296.472917	Observer's specified target RA [deg]
dec_targ	70.930194	Observer's specified target Dec [deg]
ra_nom	296.48170801248	Nominal RA [deg]
dec_nom	70.9341491928	Nominal Dec [deg]
roll_nom	22.672074465591	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5066.4002013206	Sum of GTIs [s]
livetime	4742.0443666423	Livetime [s]
ontime2	5066.3695715666	Sum of GTIs [s]
ontime6	5066.4002013206	Sum of GTIs [s]
ontime7	5066.4002013206	Sum of GTIs [s]
ontime8	5066.4002013206	Sum of GTIs [s]
l2events	4511	Number of level 2 events



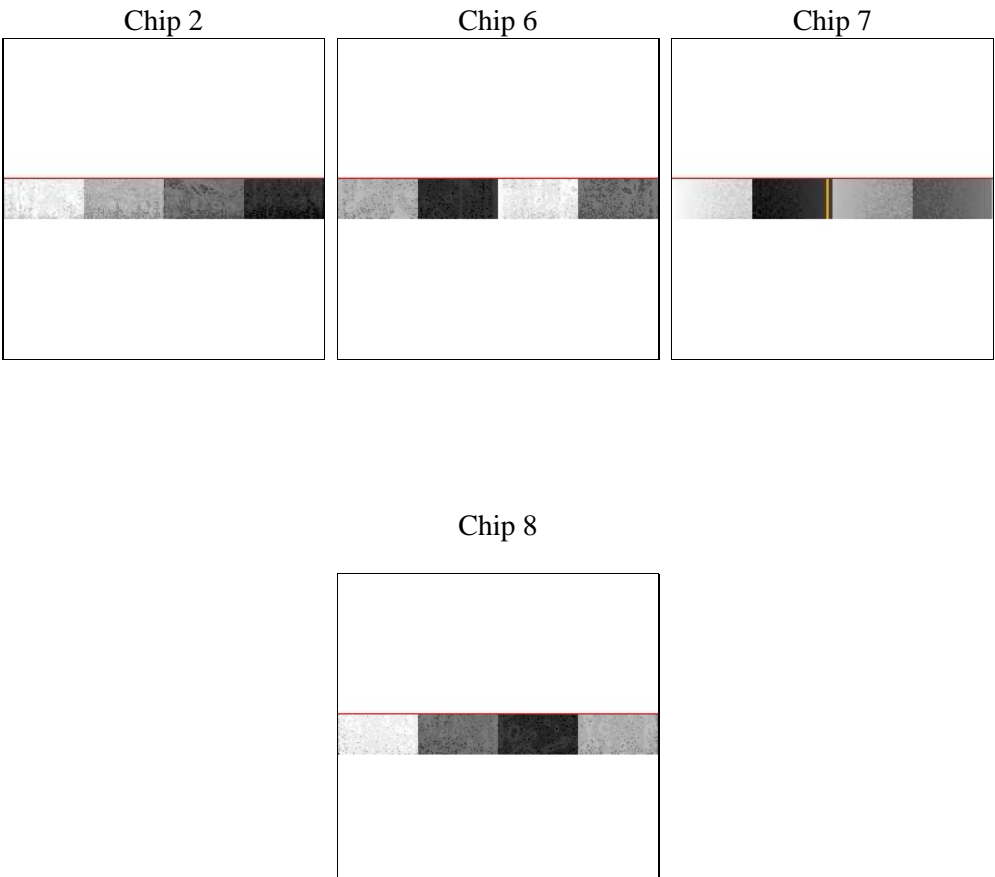
# 2 OBI

## 2.1 OBI

### 2.1.1 Images



### 2.1.2 Bias



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	5066.4002013206	Sum of GTIs [s]
caldsver	4.4.7	&#160	ontime2	5066.3695715666	Sum of GTIs [s]
date	2012-02-03T14:42:54	Date and time of file creation	ontime6	5066.4002013206	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	5066.4002013206	Sum of GTIs [s]
			ontime8	5066.4002013206	Sum of GTIs [s]
			l1events	27682	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 6	ccd 7	ccd 8
level 1 events	6049	5936	6341	9356
rejected events	5412	5258	3288	7341
rejected %	89%	88%	51%	78%

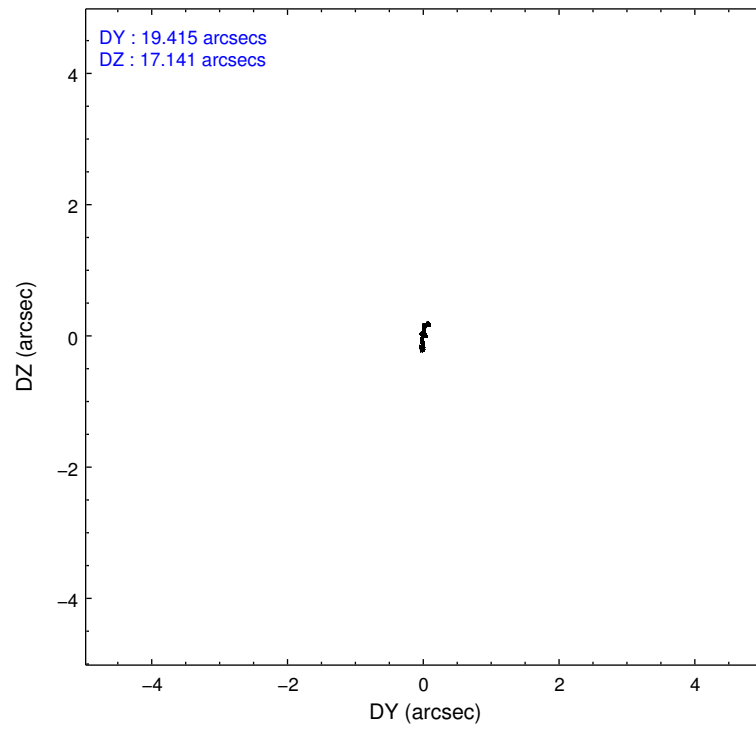
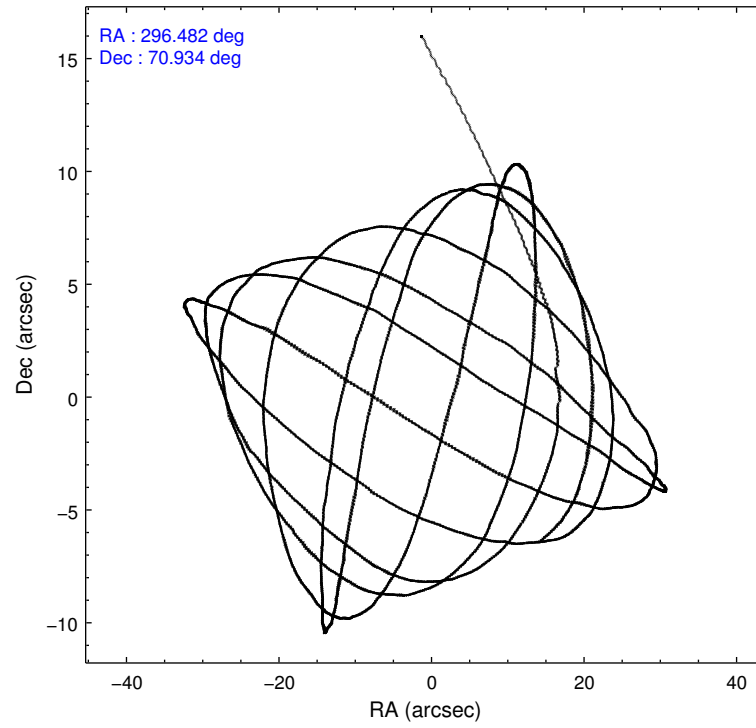
	ccd 2	ccd 6	ccd 7	ccd 8
grade 0 events	164	177	323	473
	2%	2%	5%	5%
grade 1 events	0	3	6	4
	0%	0%	0%	0%
grade 2 events	128	126	631	444
	2%	2%	9%	4%
grade 3 events	111	130	389	208
	1%	2%	6%	2%
grade 4 events	139	125	360	200
	2%	2%	5%	2%
grade 5 events	162	238	599	331
	2%	4%	9%	3%
grade 6 events	95	120	1351	690
	1%	2%	21%	7%
grade 7 events	5250	5017	2682	7006
	86%	84%	42%	74%

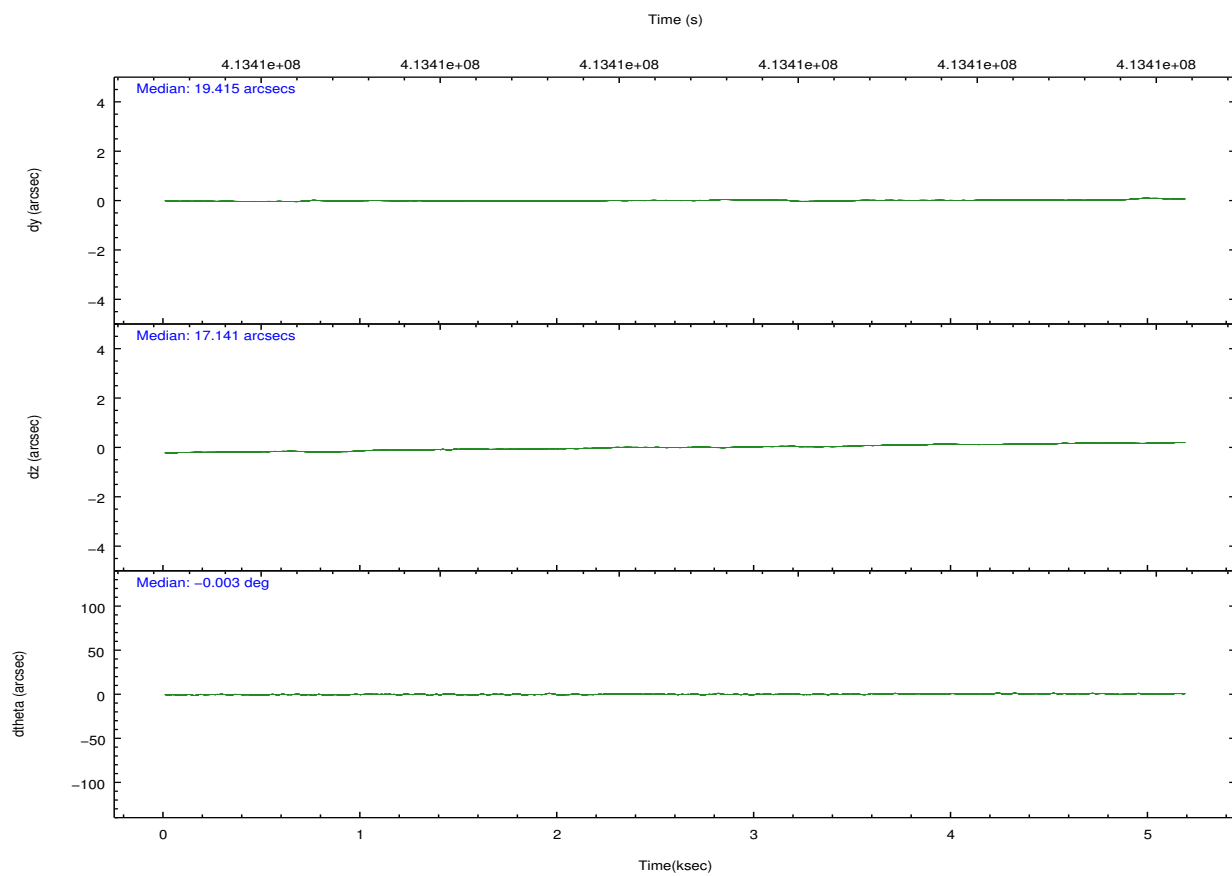
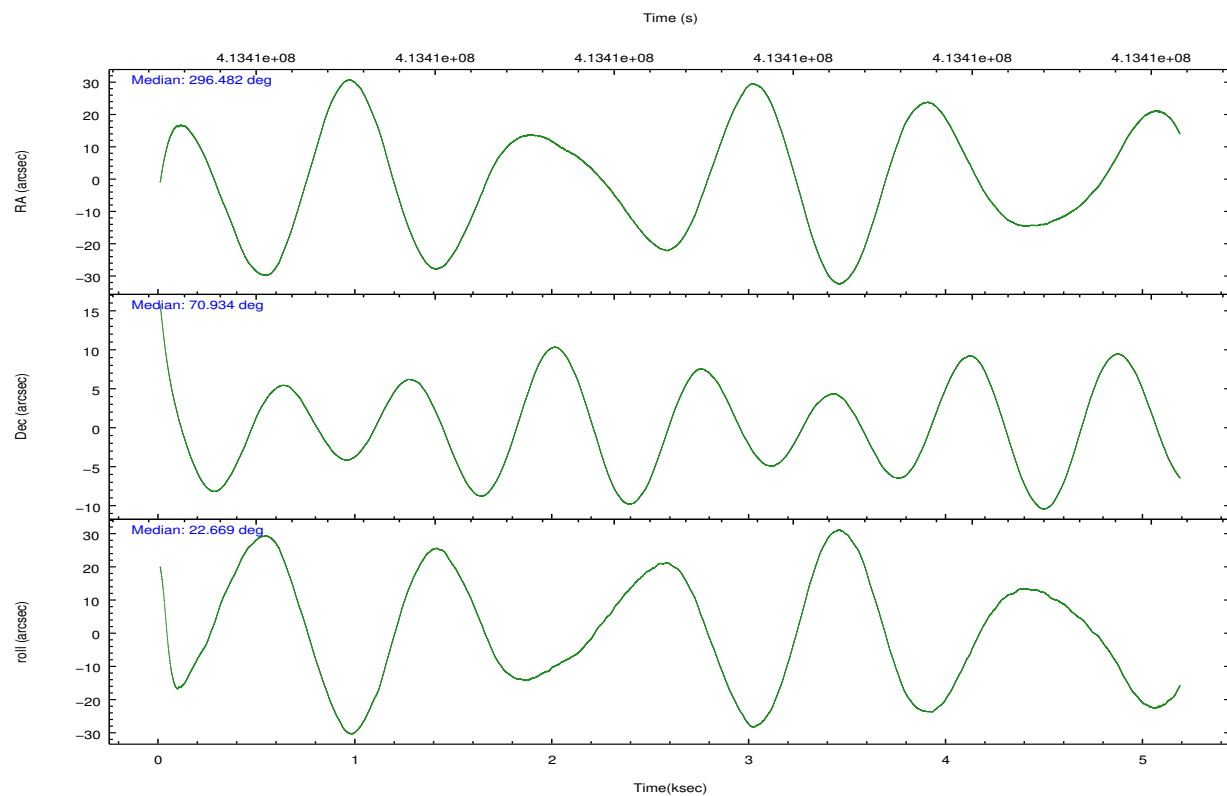


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-2678	ACIS-2678	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	296.431787	296.4817080124832	Subarray requested	CUSTOM	1/8
[deg] Pointing Dec	70.912156	70.93414919280022	Subarray start row	449	449
[deg] Pointing Roll	22.562564	22.67207446559082	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	0.6
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	413406912.184000	413405239.84939			
Observation start date	2011-02-06T19:14:06	2011-02-06T18:47:19			
[s] Observation end time (MET)	413411912.184000	413412772.06228			
Observation end date	2011-02-06T20:37:26	2011-02-06T20:52:52			
Read mode	TIMED	TIMED			

## 2.3 Aspect



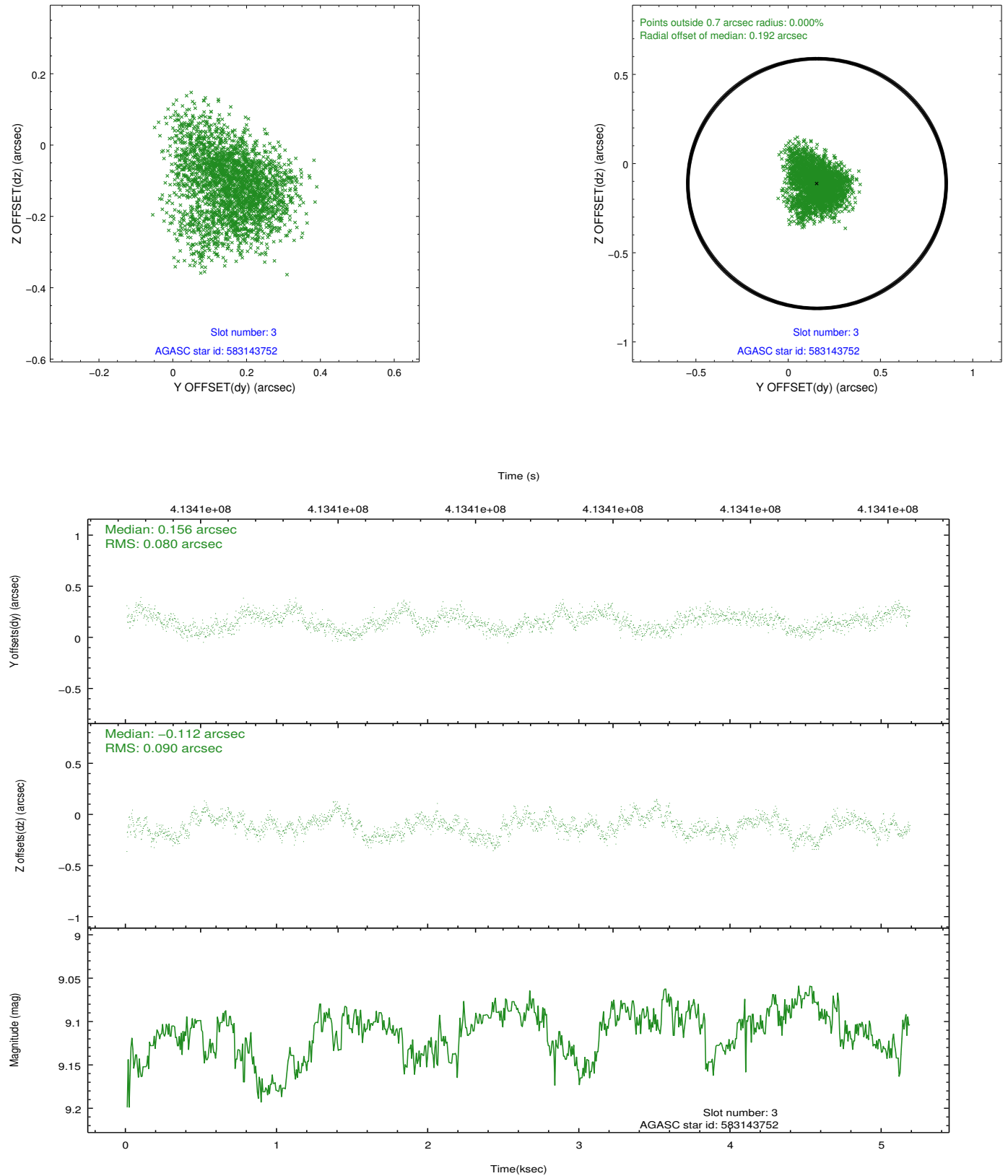


### Slot Statistics

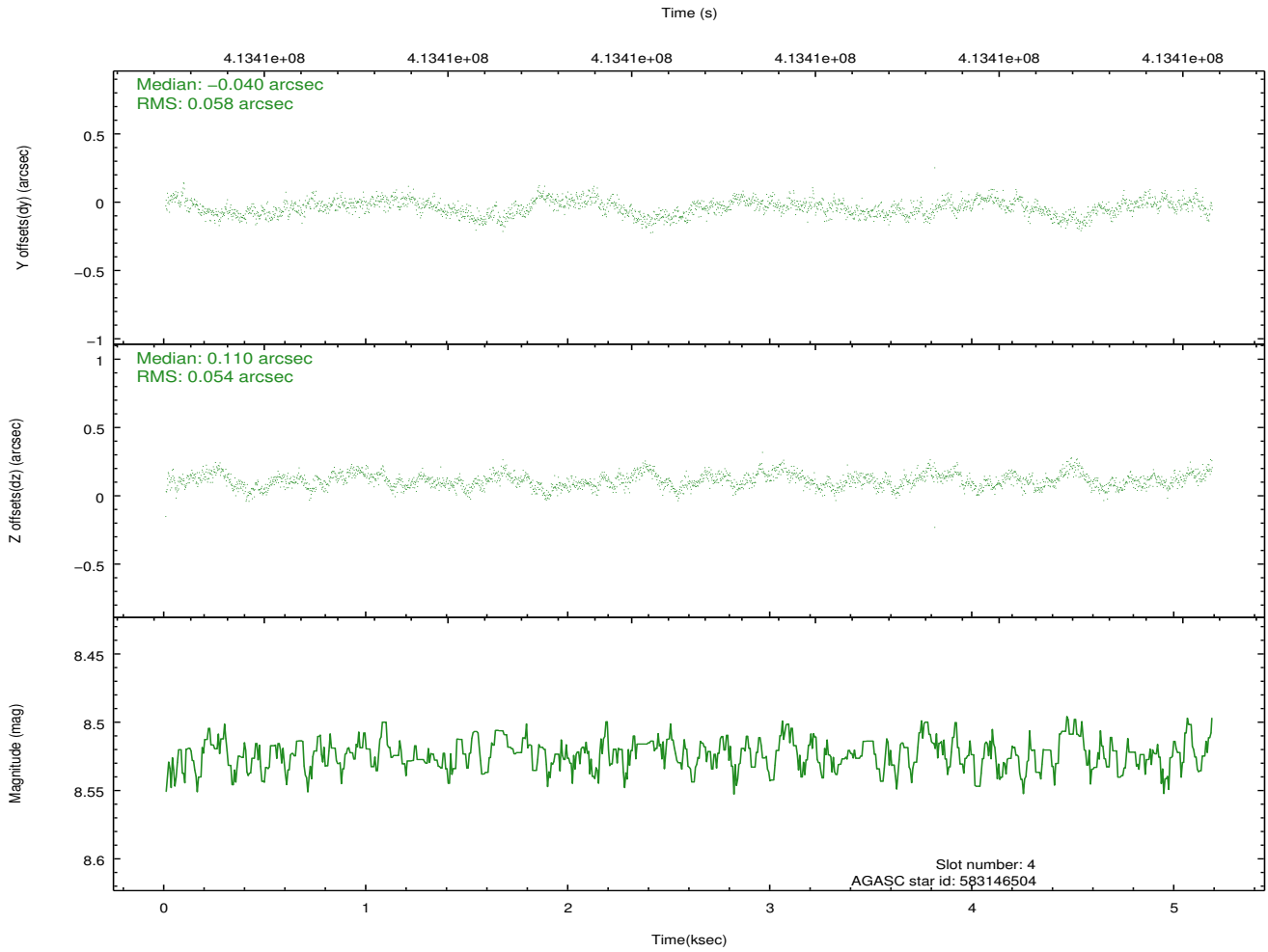
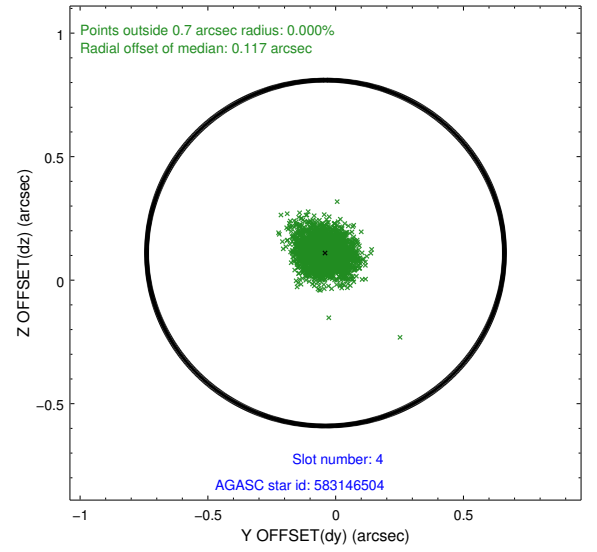
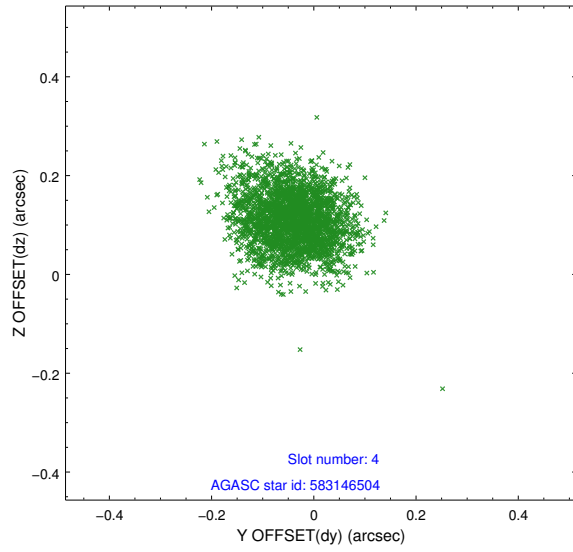
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.97	1264	-0.093	-0.060	0.008	0.013	0.000000	0.000000	-772.64	-1738.61
1	FID	ACIS-S-4	7.05	1264	0.256	0.061	0.006	0.010	0.000000	0.000000	2140.49	168.71
2	FID	ACIS-S-5	7.08	1264	-0.195	0.008	0.008	0.013	0.000000	0.000000	-1824.04	163.75
3	GUIDE	583143752	9.11	2526	0.156	-0.112	0.132	0.205	295.552201	70.949752	-899.33	528.42
4	GUIDE	583146504	8.52	2525	-0.040	0.110	0.084	0.135	295.271138	70.221197	-2255.09	-1741.84
5	GUIDE	583159328	9.51	2524	0.000	0.108	0.137	0.214	297.860984	70.438520	943.52	-2217.26
6	GUIDE	583664248	9.02	2528	-0.095	0.066	0.103	0.169	297.416749	71.443790	1780.63	1342.66
7	GUIDE	583670104	9.51	2512	-0.016	-0.165	0.140	0.220	296.322771	71.305586	428.09	1356.83

## 2.4 Star Slots

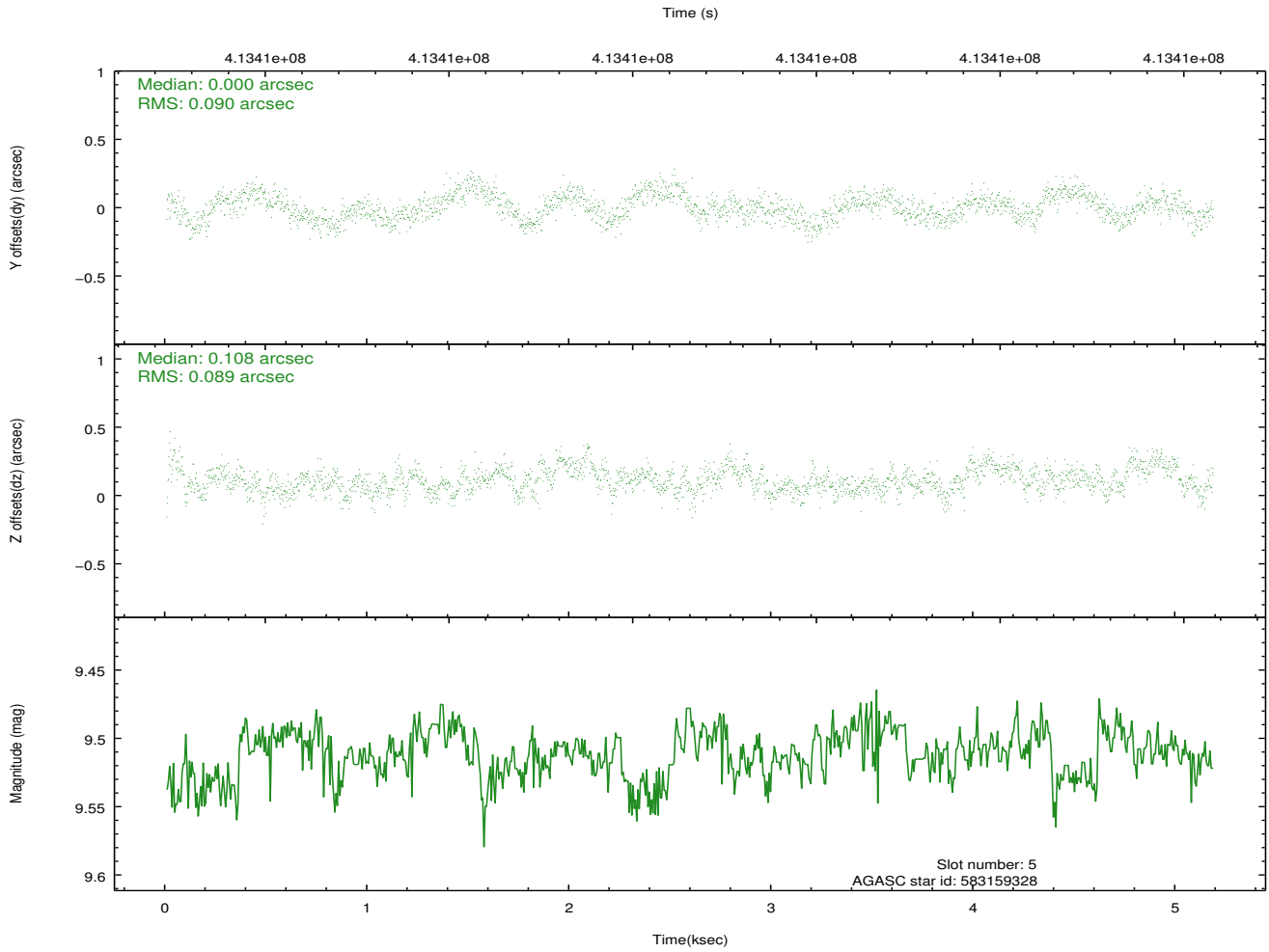
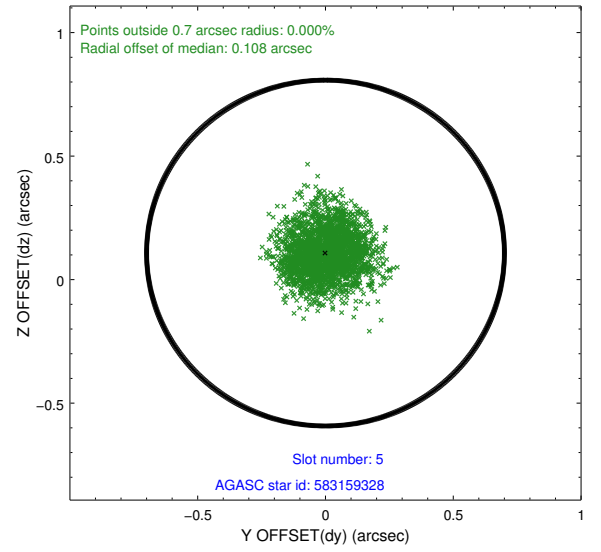
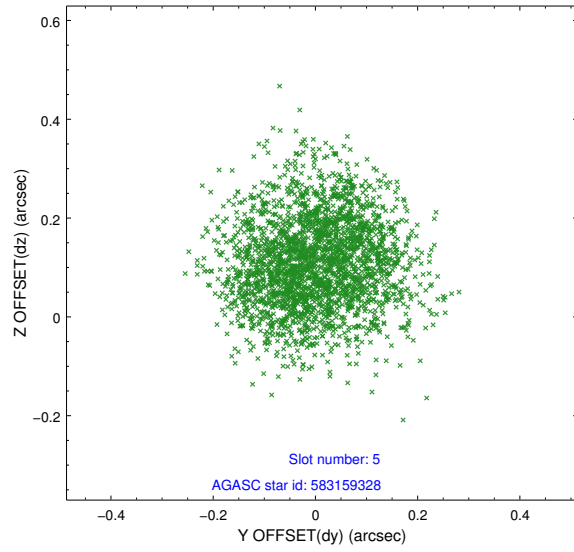
### 2.4.1 Slot 3



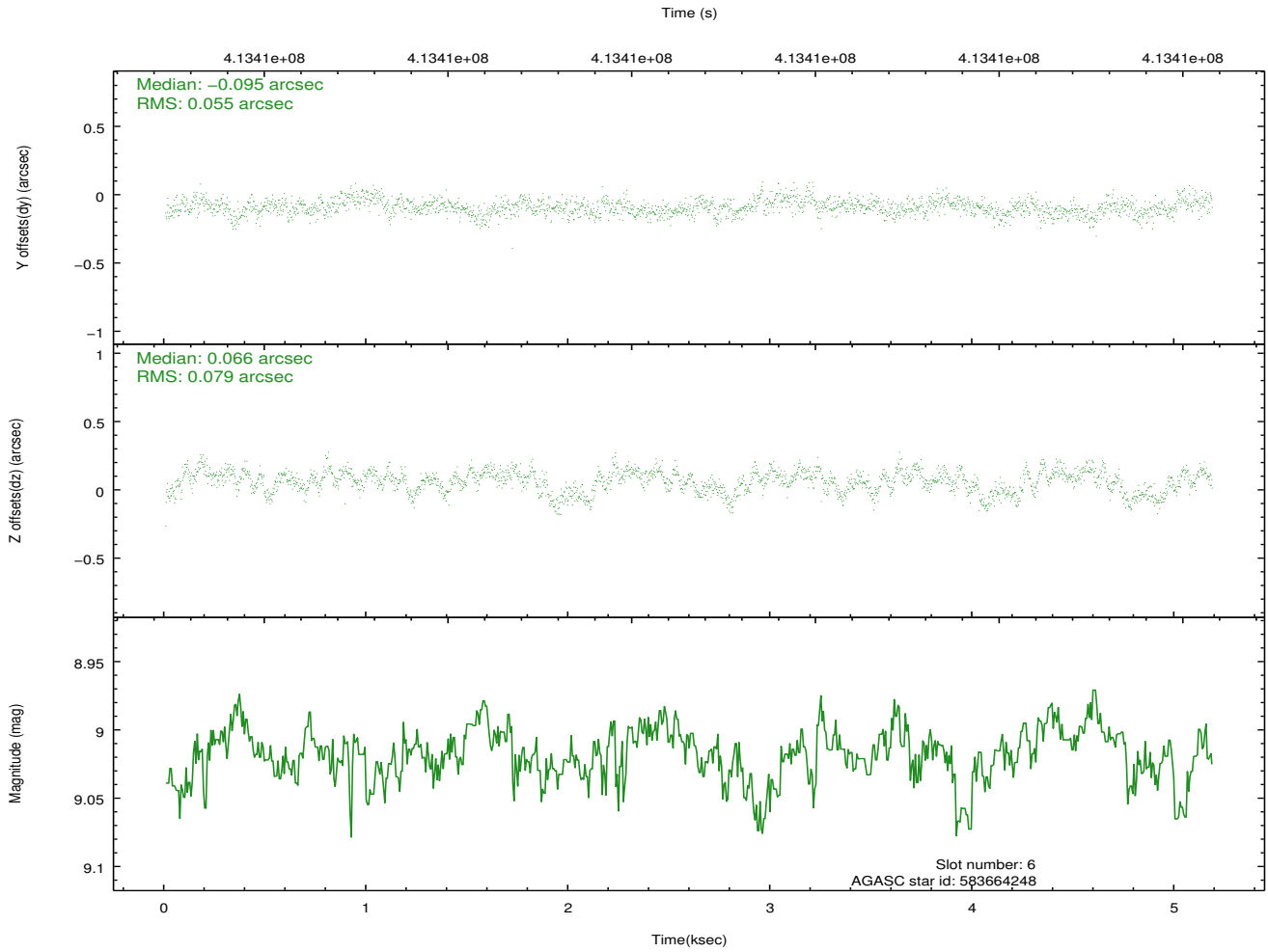
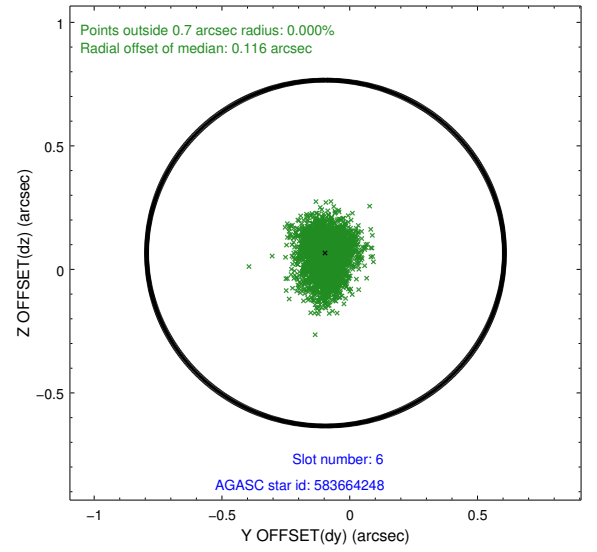
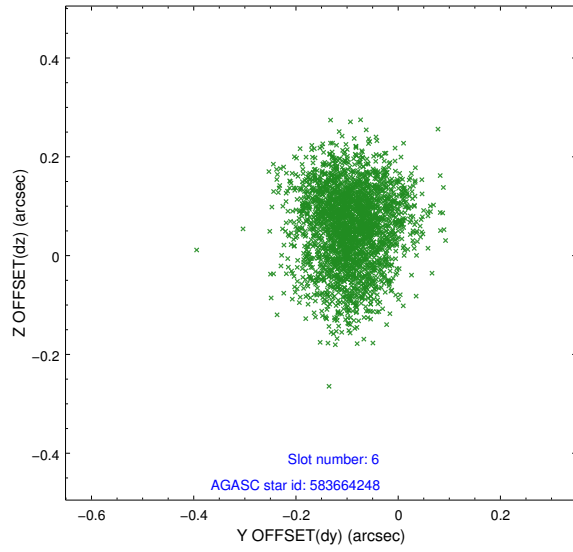
## 2.4.2 Slot 4



### 2.4.3 Slot 5

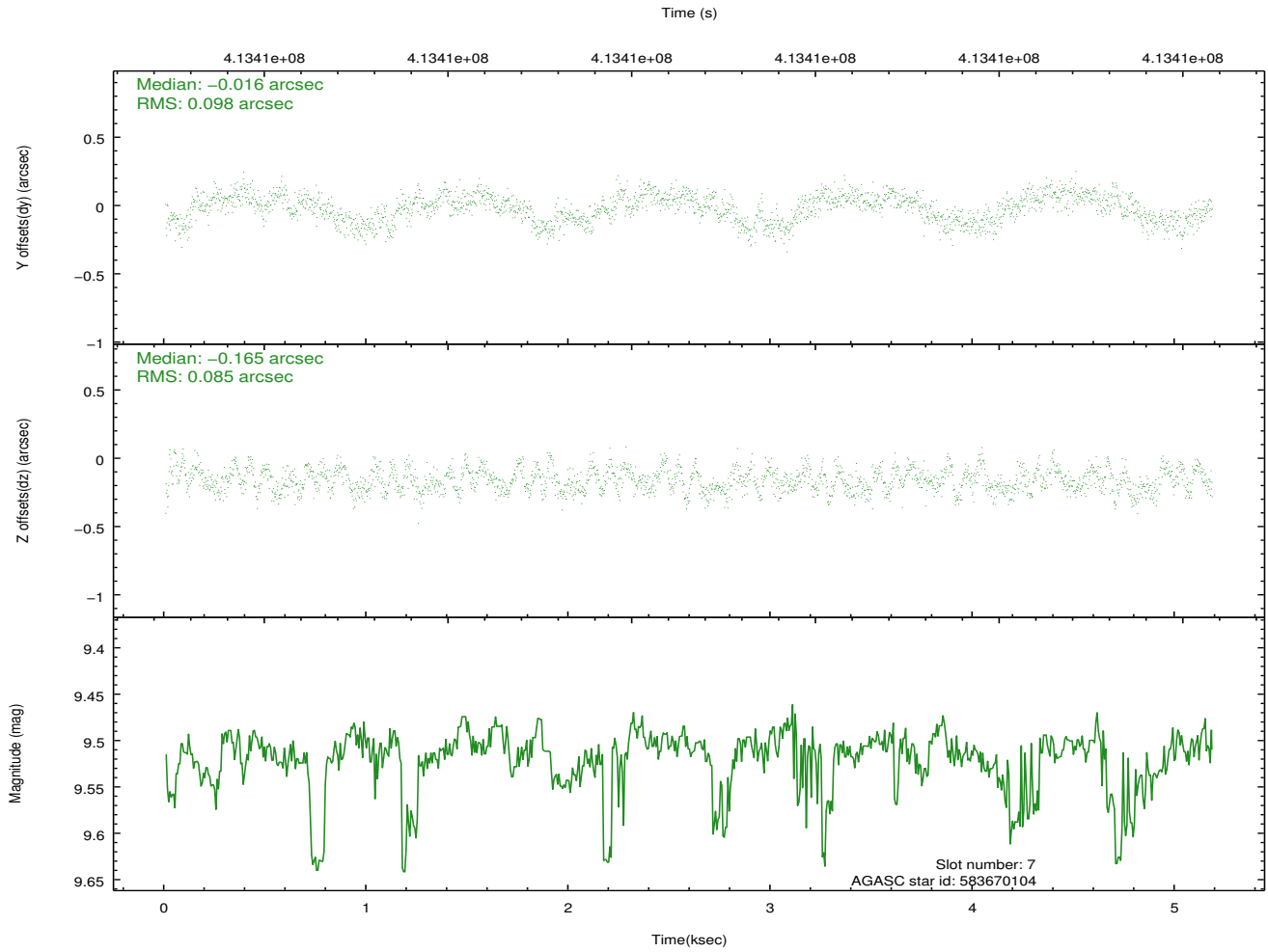
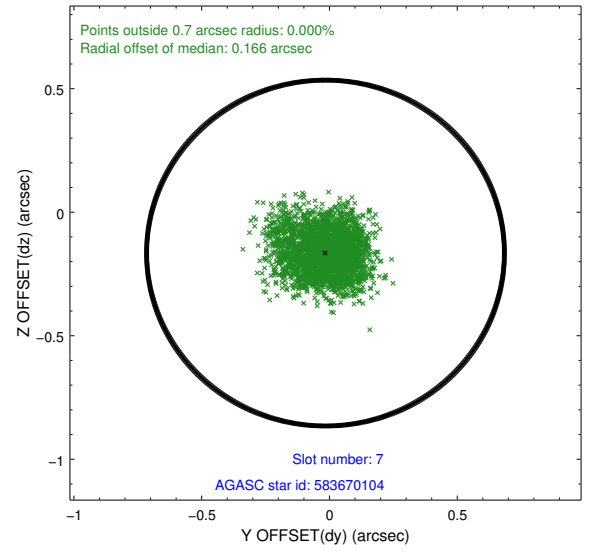
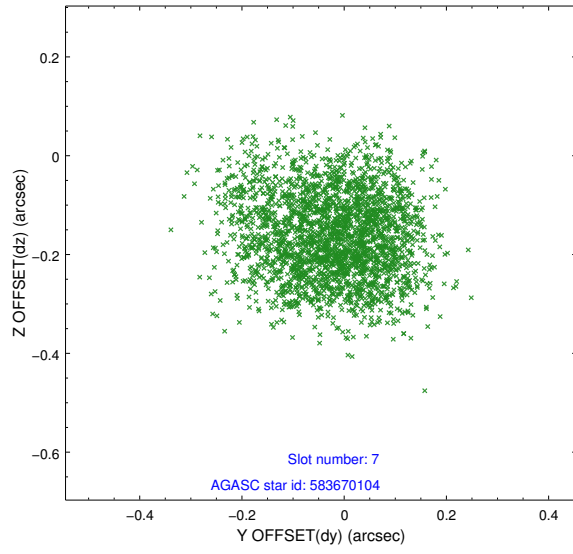


## 2.4.4 Slot 6



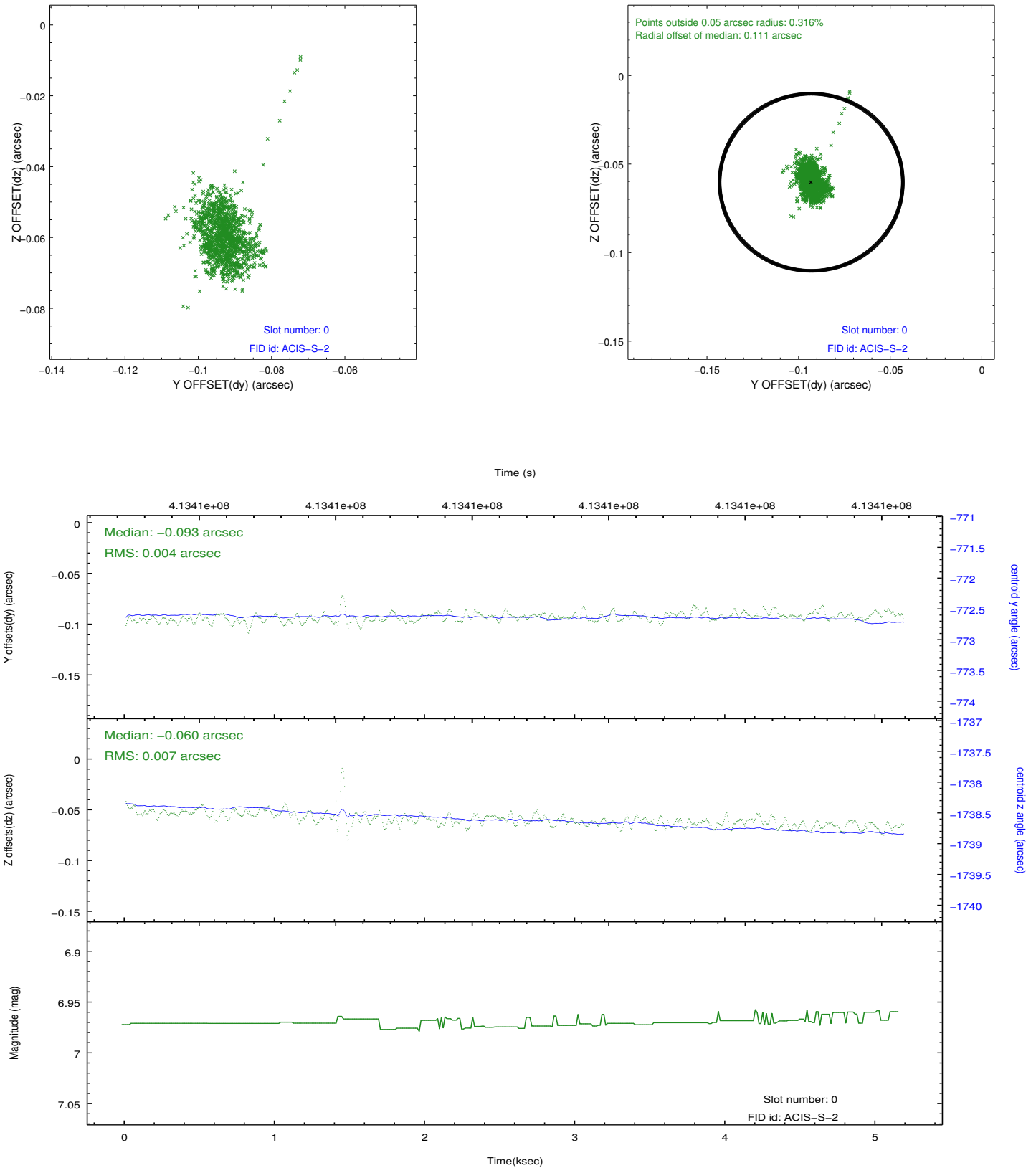


## 2.4.5 Slot 7

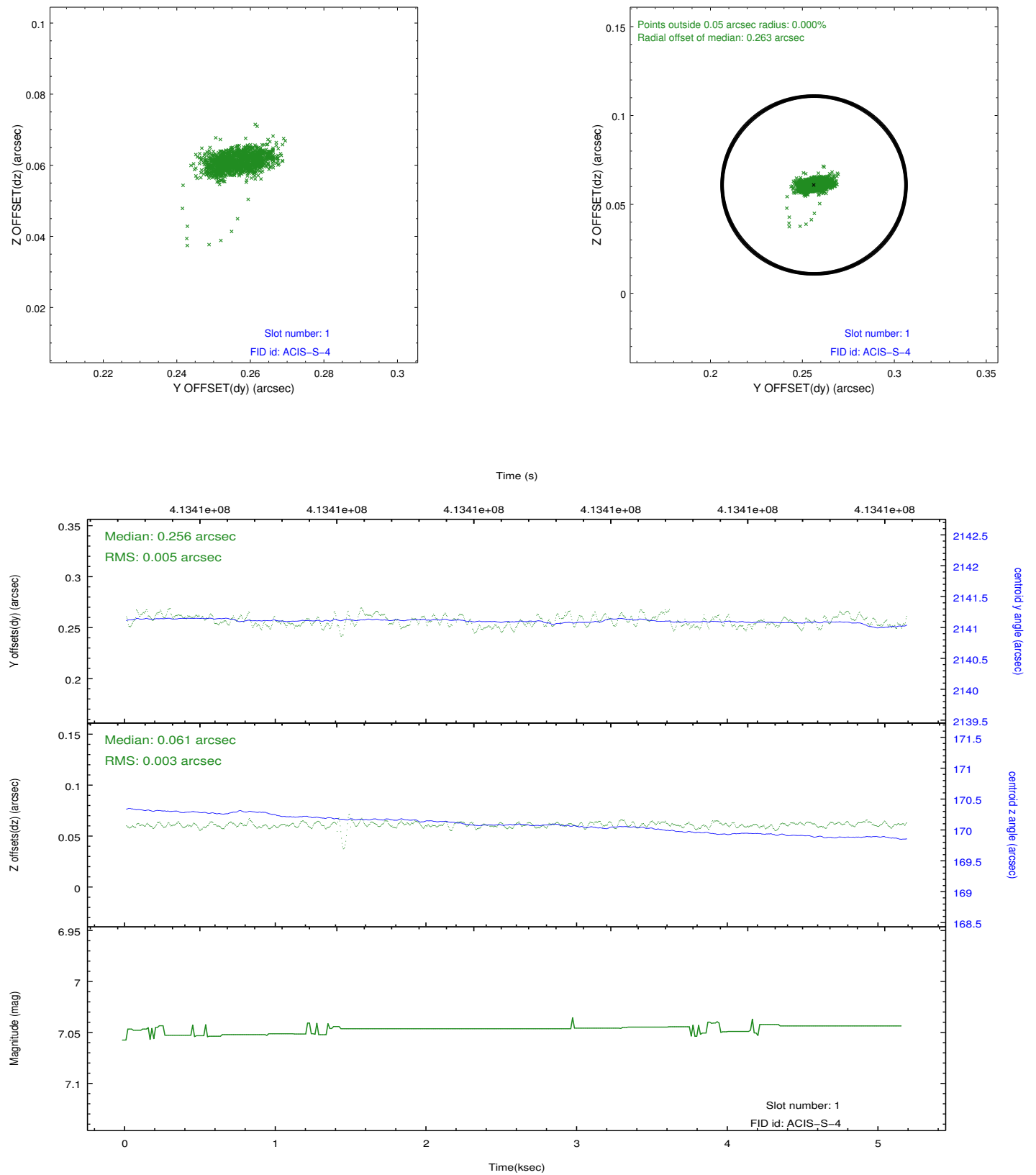


## 2.5 FID Slots

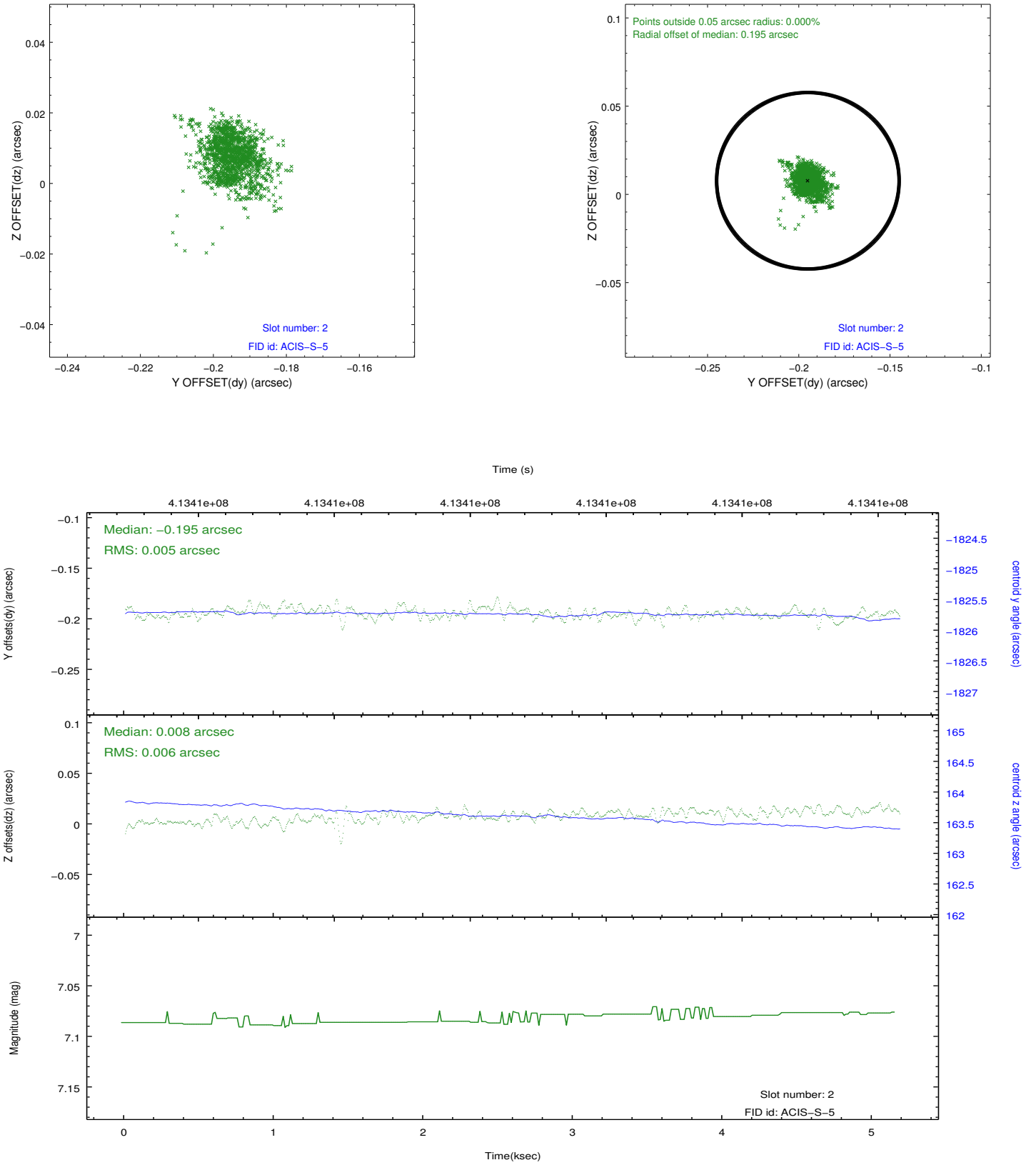
### 2.5.1 Slot 0



## 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)	2012.02.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.0664002013206

## 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.