

# V&V Reference Report

## L2 ASCDS Version : 10.4.2.1

Observation 16452 - L2 Version 2  
Chandra X-Ray Center

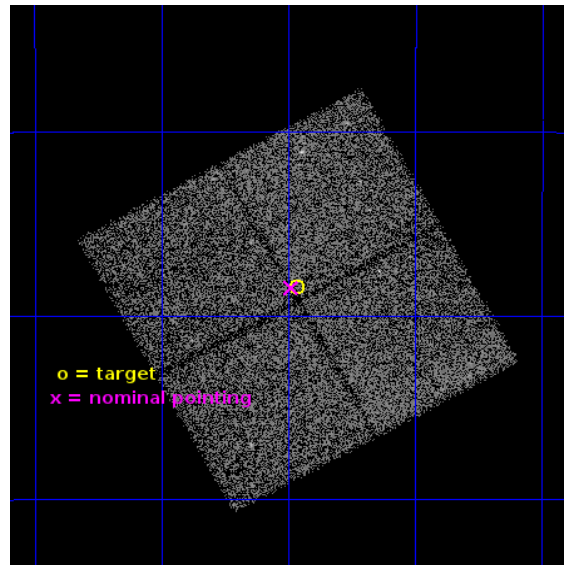
L2 Processing Date : Dec 16 2015

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# 1 Front

seq_num	901115	Sequence number
obs_id	16452	Observation id
title	The Chandra Deep Field-South: A Peerless Ultradeep Survey for Exploring the Distant X-ray Universe	Proposal title
observer	Prof. William Brandt	Principal investigator
object	Chandra Deep Field-South	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	53.117083	Observer's specified target RA [deg]
dec_targ	-27.807333	Observer's specified target Dec [deg]
ra_nom	53.122153403123	Nominal RA [deg]
dec_nom	-27.807963370137	Nominal Dec [deg]
roll_nom	331.04655072314	Nominal Roll [deg]
revision	2	Processing version of data
ontime	28072.107246161	Sum of GTIs [s]
livetime	27705.324498605	Livetime [s]
ontime0	28078.266227007	Sum of GTIs [s]
ontime1	28075.166226745	Sum of GTIs [s]
ontime2	28078.348307014	Sum of GTIs [s]
ontime3	28072.107246161	Sum of GTIs [s]
l2events	56743	Number of level 2 events

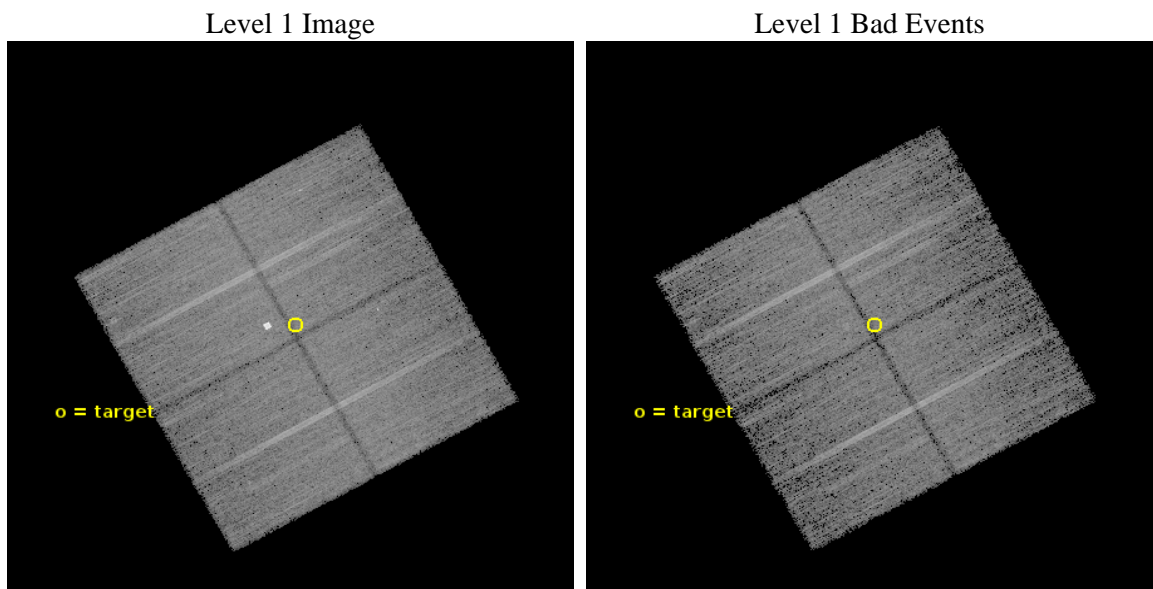




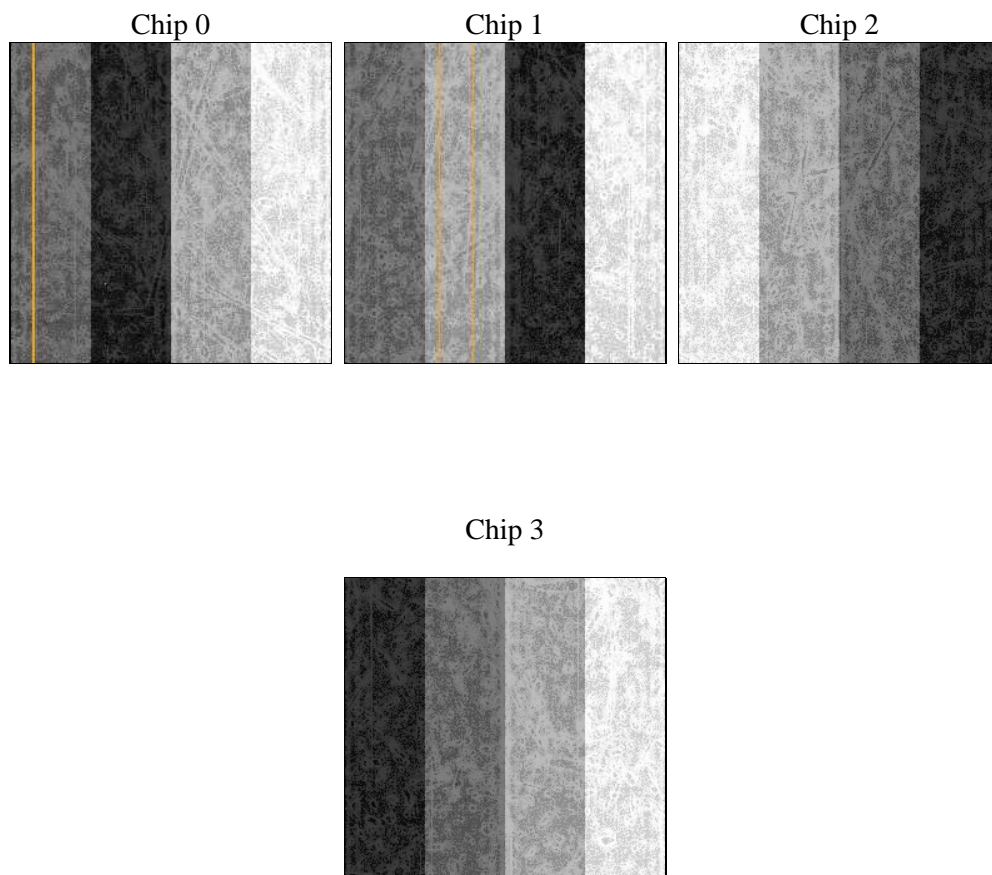
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	28000.000000	[s] Scheduled observation exposure time
ascdsver	10.4.3	Processing system revision	ontime	28072.107246161	Sum of GTIs [s]
caldsver	4.7.0	&#160	ontime0	28078.266227007	Sum of GTIs [s]
date	2015-12-16T20:30:54	Date and time of file creation	ontime1	28075.166226745	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	28078.348307014	Sum of GTIs [s]
			ontime3	28072.107246161	Sum of GTIs [s]
			l1events	598716	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	137537	144297	166236	150646
rejected events	120645	125741	142123	134250
rejected %	87%	87%	85%	89%

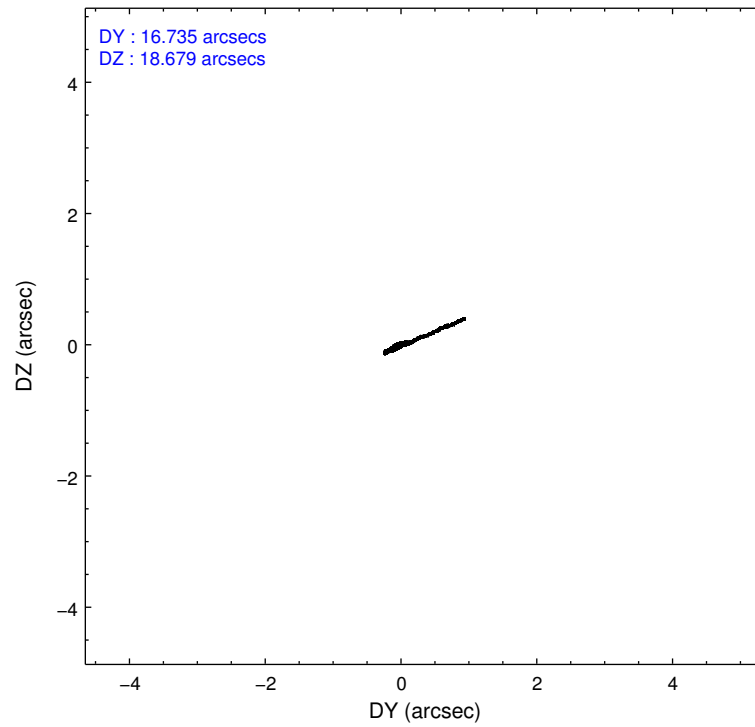
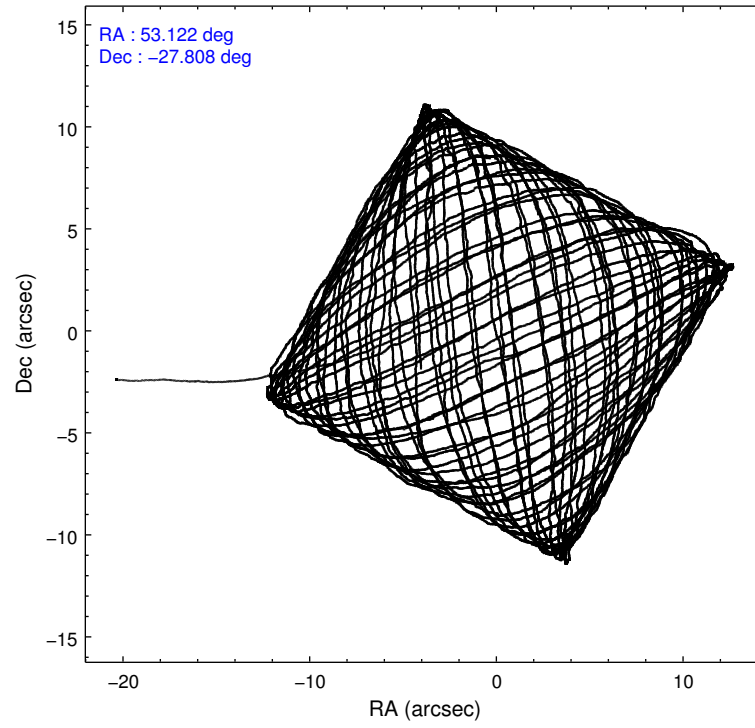
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	5673	6114	14023	5772
	4%	4%	8%	3%
grade 1 events	67	61	150	66
	0%	0%	0%	0%
grade 2 events	4003	4483	3729	3500
	2%	3%	2%	2%
grade 3 events	1860	1806	1600	1697
	1%	1%	0%	1%
grade 4 events	1605	1731	1520	1790
	1%	1%	0%	1%
grade 5 events	6572	6840	6165	7532
	4%	4%	3%	4%
grade 6 events	3752	4427	3245	3640
	2%	3%	1%	2%
grade 7 events	114005	118835	135804	126649
	82%	82%	81%	84%

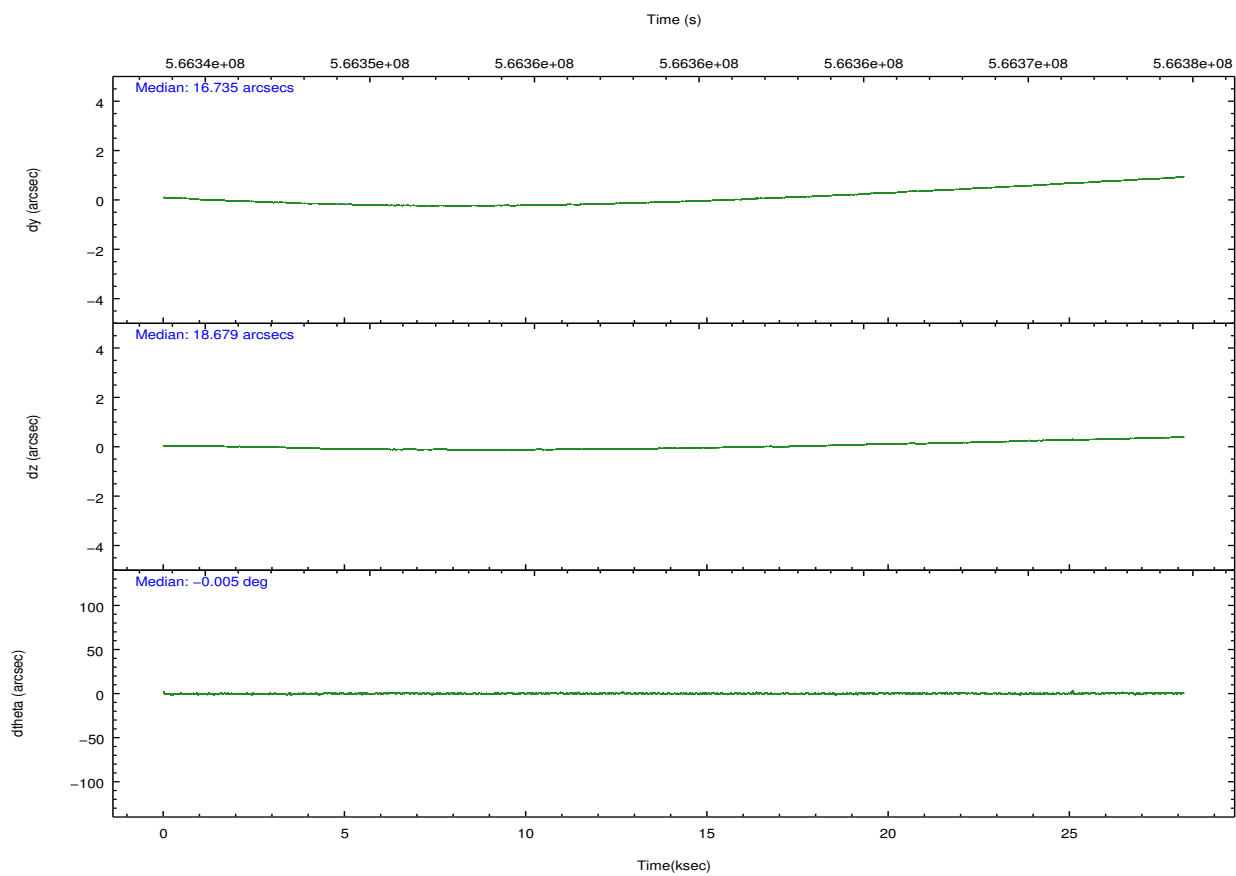
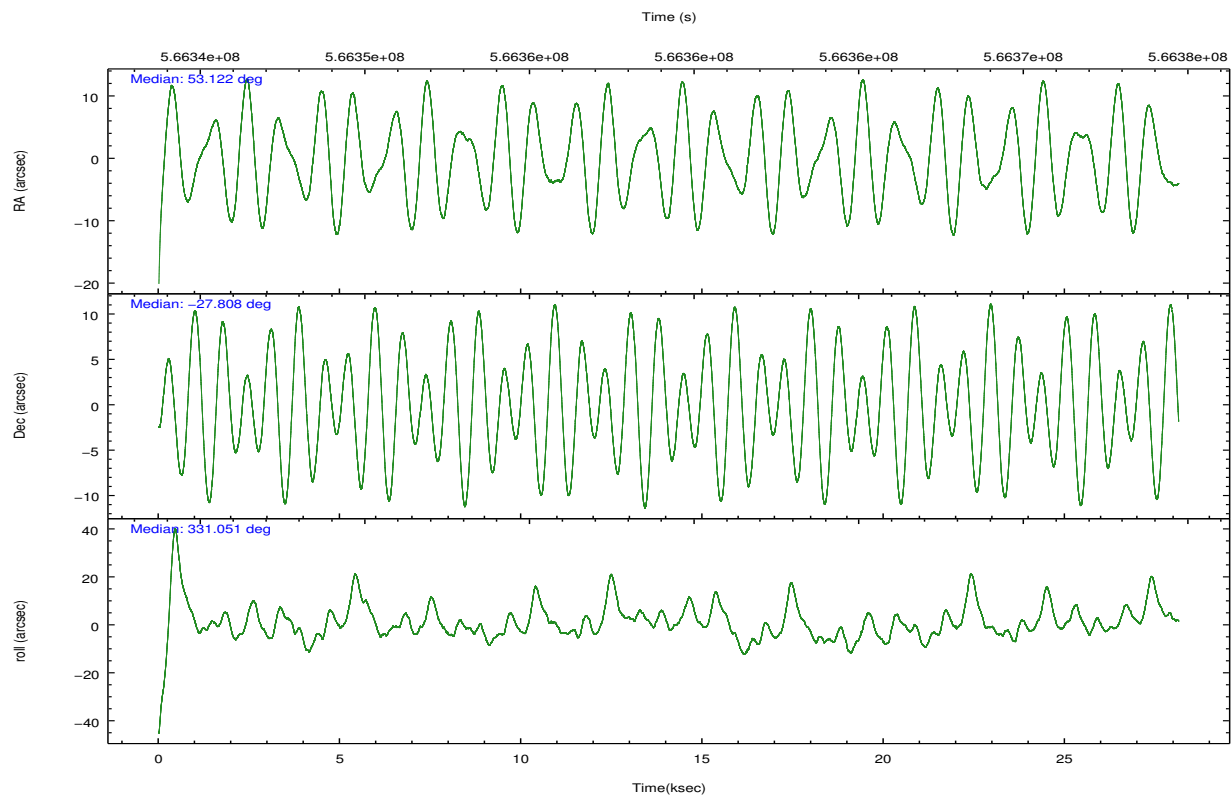
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-0123	ACIS-0123
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	53.090959	53.12215340312345
[deg] Pointing Dec	-27.808584	-27.80796337013691
[deg] Pointing Roll	330.823313	331.0465507231359
[mm] SIM focus pos	-0.782348	-0.7809083437167272
[mm] SIM defocus	0	0.001439871863259334
[mm] SIM translation stage pos	-233.592463	-233.5874344608287
[mm] SIM translation stage offset	0	-0.005018542100998502
[s] Observation start time (MET)	566345306.184000	566344150.99628
Observation start date	2015-12-12T22:07:18	2015-12-12T21:49:10
[s] Observation end time (MET)	566373306.184000	566374065.1104701
Observation end date	2015-12-13T05:53:58	2015-12-13T06:07:45
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



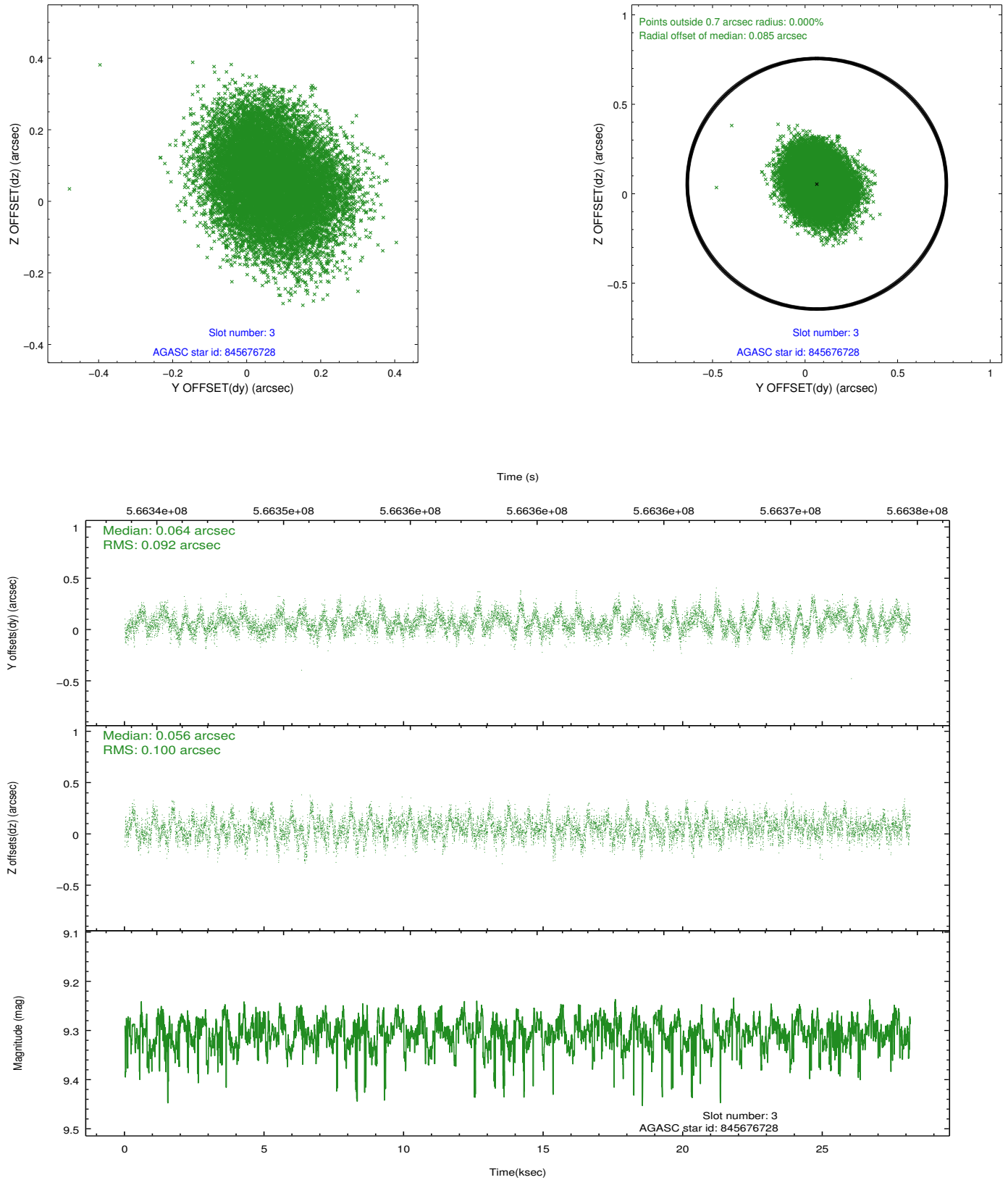


### Slot Statistics

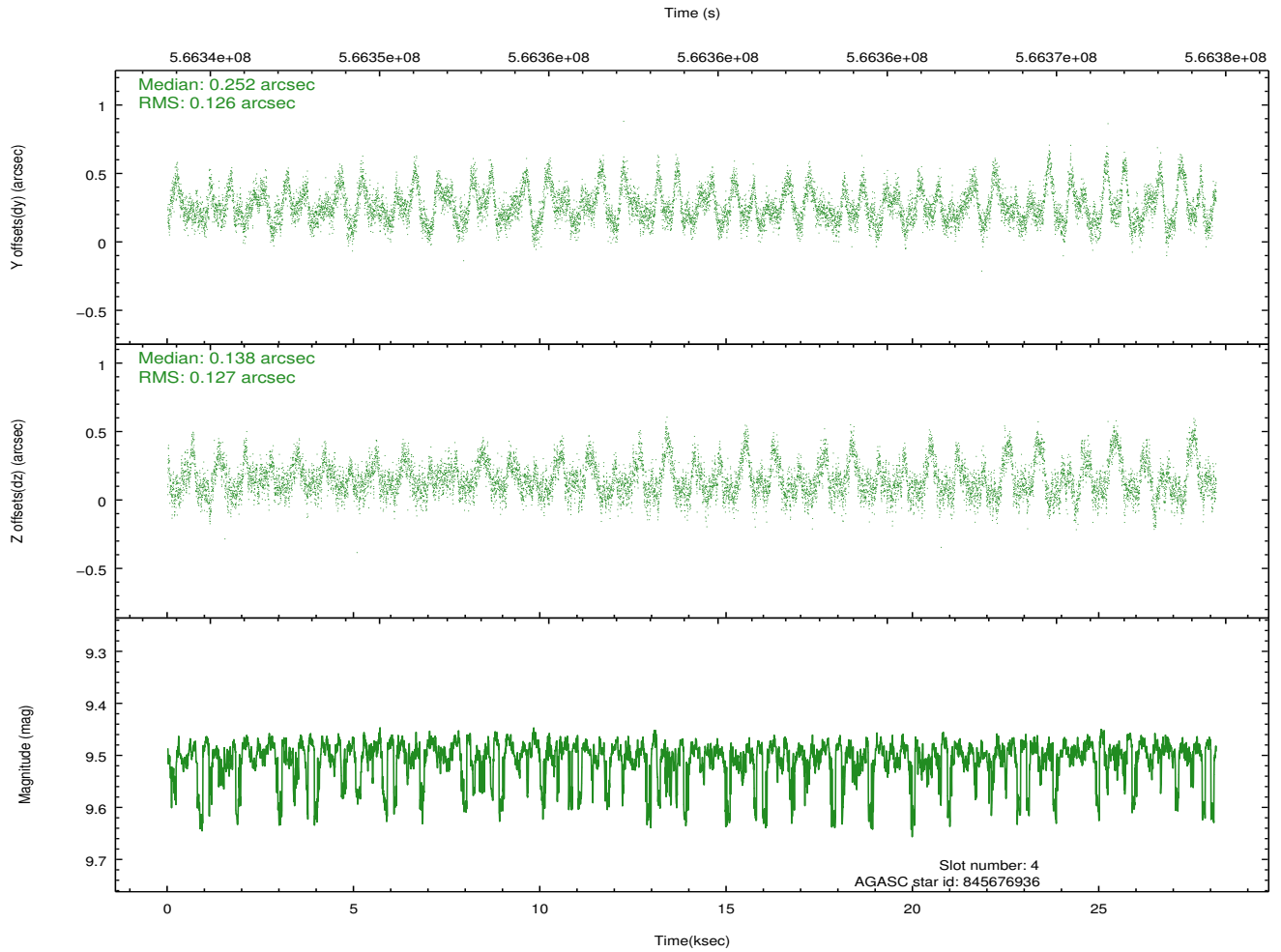
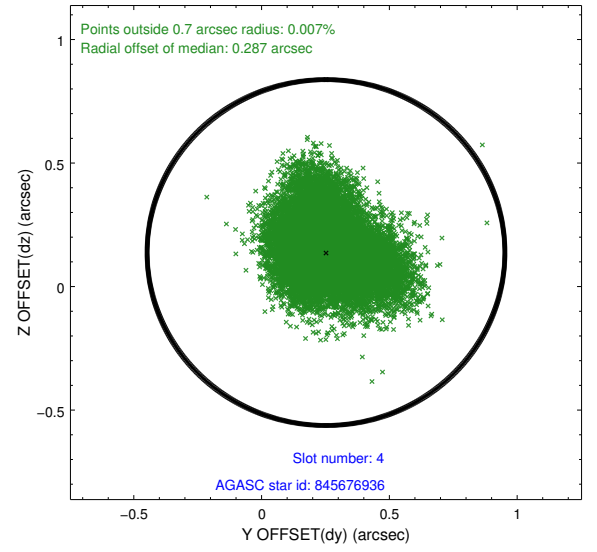
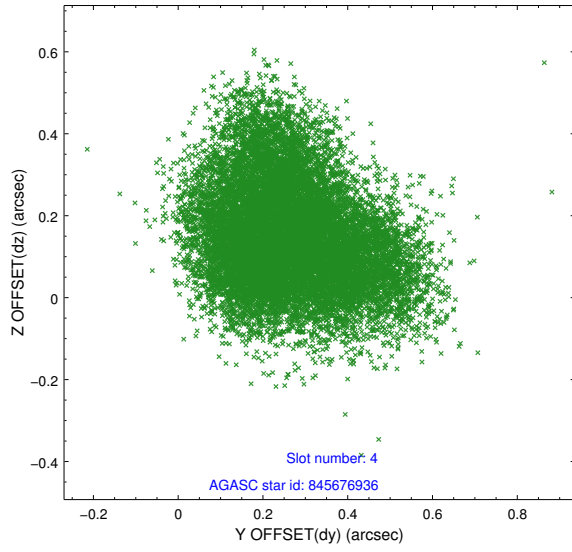
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.27	6862	0.061	0.004	0.008	0.018	0.000000	0.000000	922.65	-842.37
1	FID		ACIS-I-5	7.27	6862	-0.356	0.029	0.007	0.012	0.000000	0.000000	-1825.91	1054.97
2	FID		ACIS-I-6	7.28	6862	0.204	0.037	0.009	0.018	0.000000	0.000000	388.13	1699.69
3	GUIDE	used	845676728	9.31	13713	0.064	0.056	0.147	0.229	52.877179	-27.664318	-847.32	120.79
4	GUIDE	used	845676936	9.50	13711	0.252	0.138	0.191	0.308	52.843773	-27.880153	-559.57	-608.40
5	GUIDE	used	845807880	8.79	13712	-0.144	-0.003	0.095	0.153	53.382027	-27.886093	945.69	206.83
6	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
7	GUIDE	used	845808968	9.87	13712	-0.196	-0.198	0.269	0.423	54.016598	-27.589085	2199.59	2119.76

## 2.4 Star Slots

### 2.4.1 Slot 3

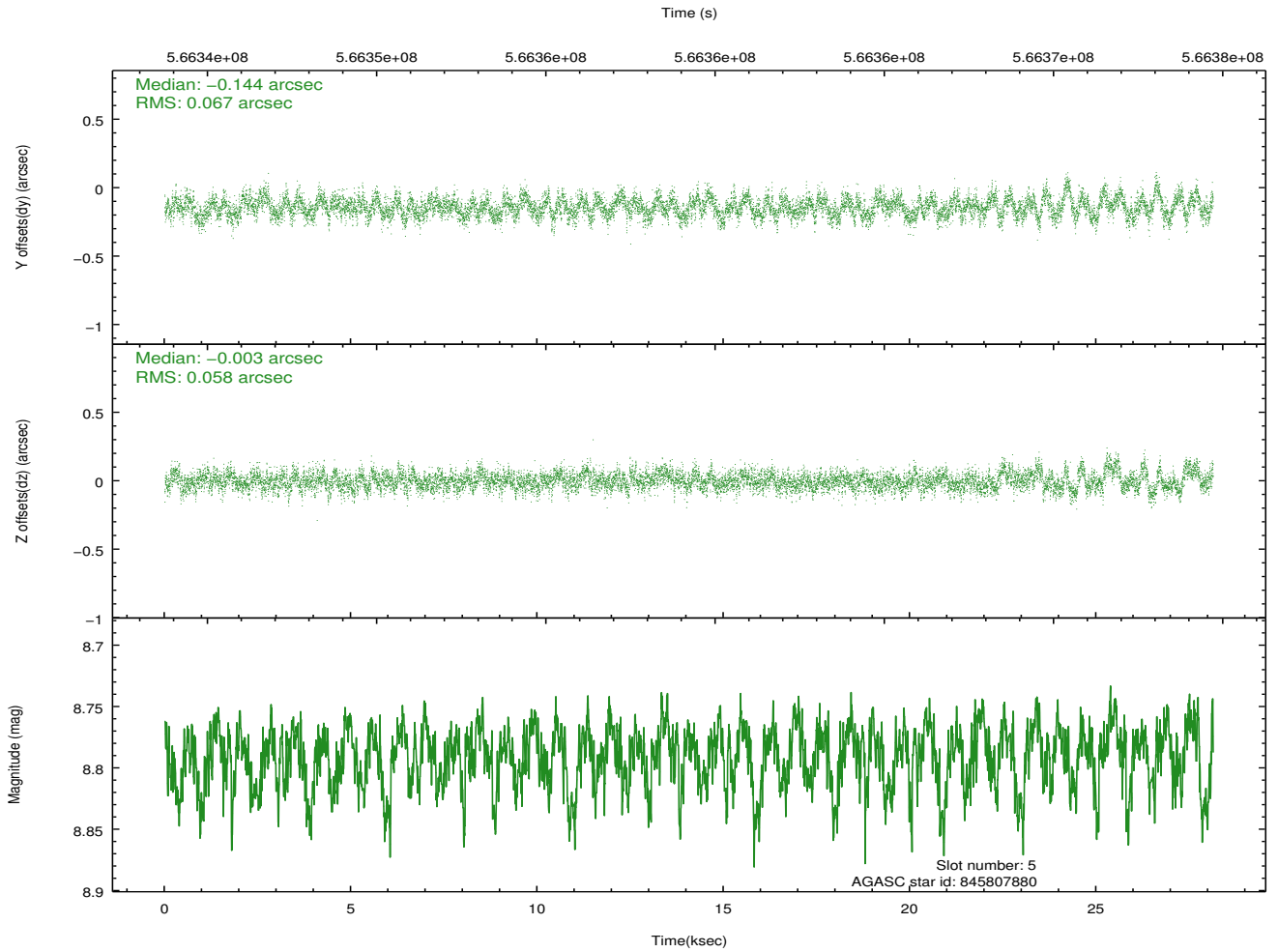
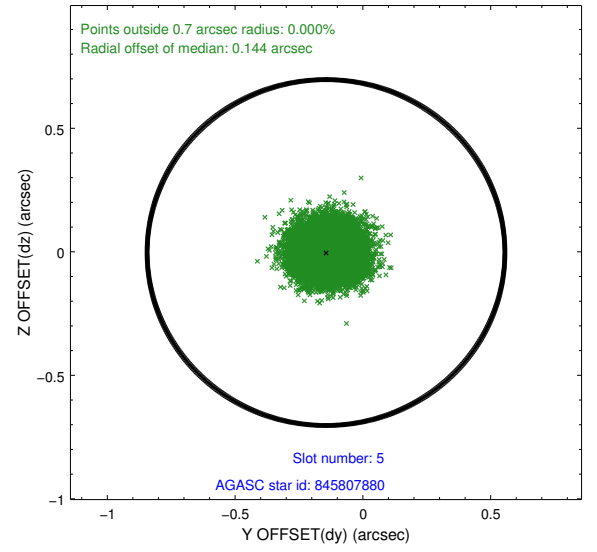
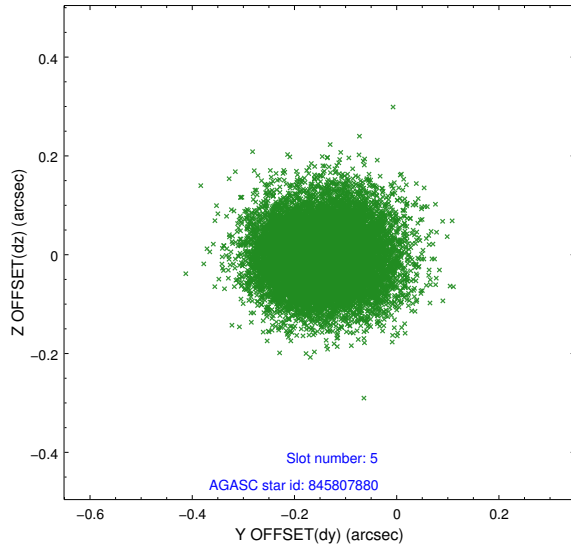


## 2.4.2 Slot 4

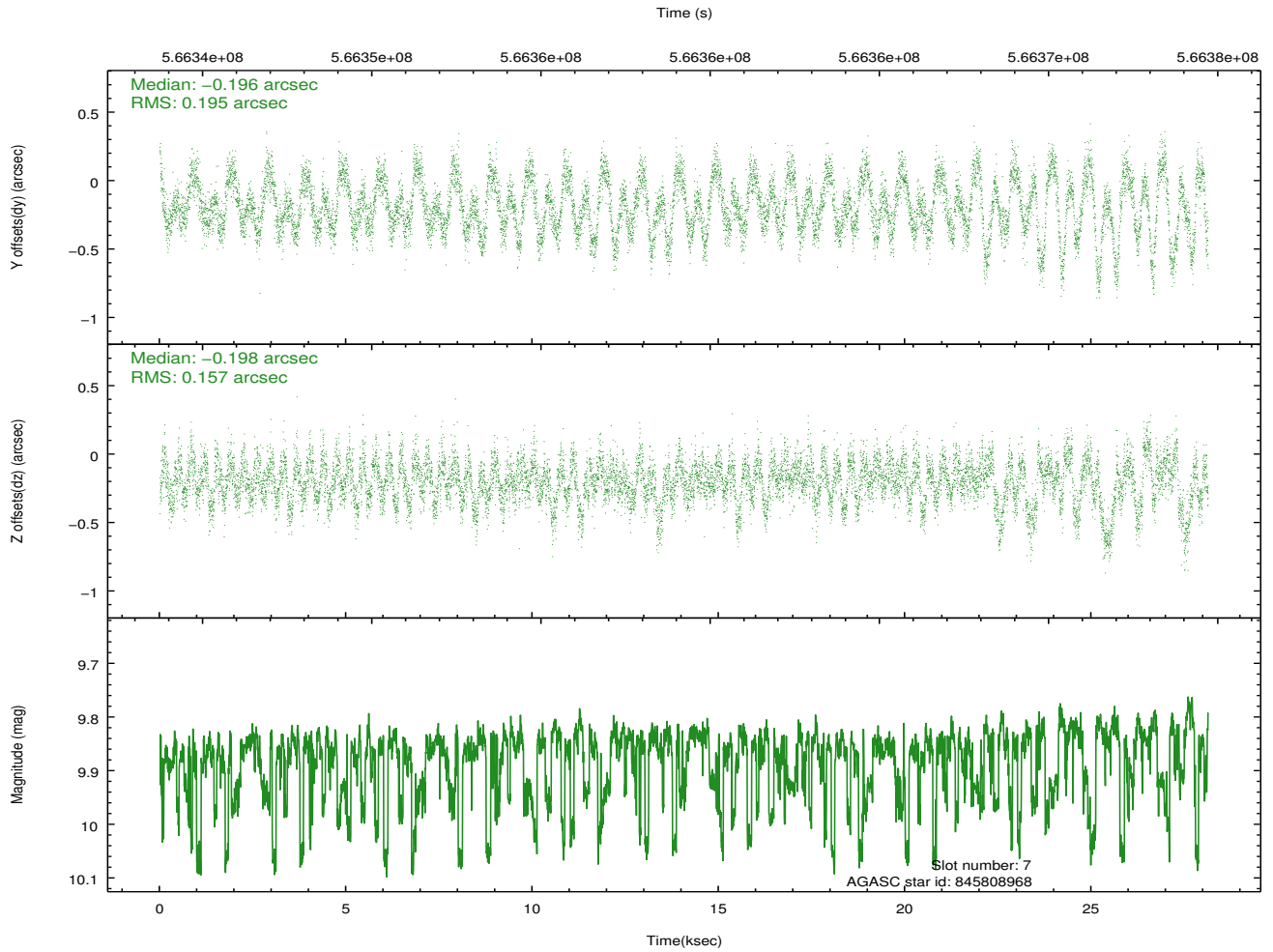
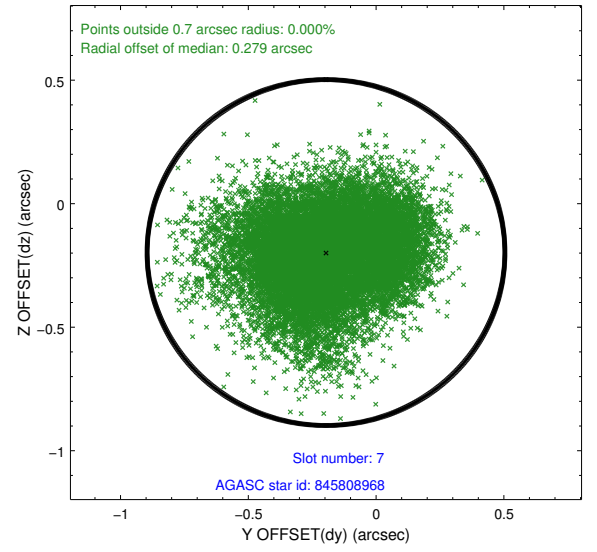
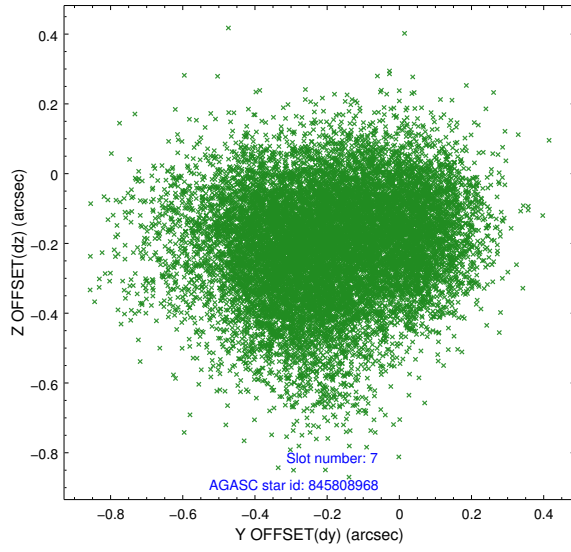




### 2.4.3 Slot 5

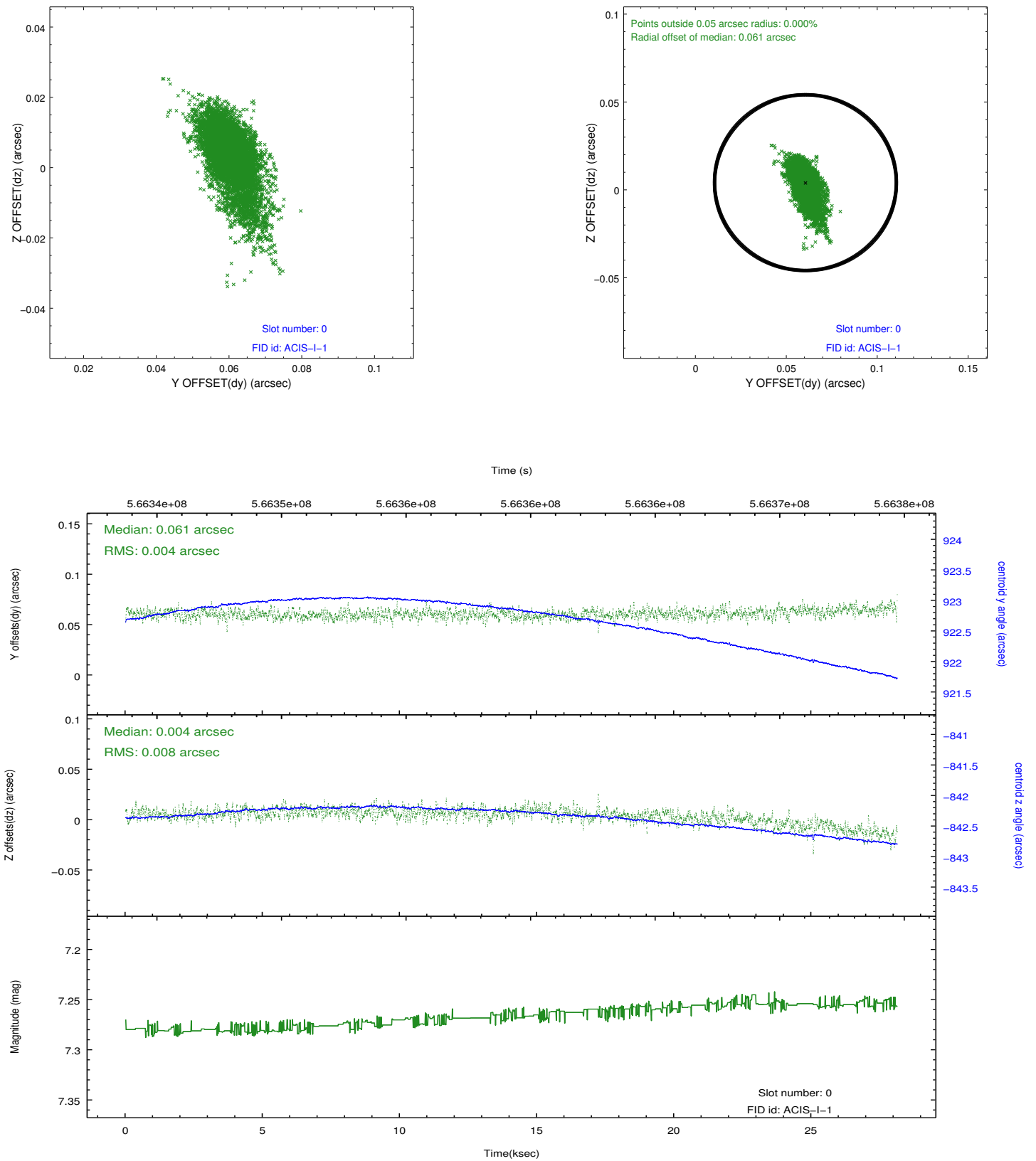


## 2.4.4 Slot 7

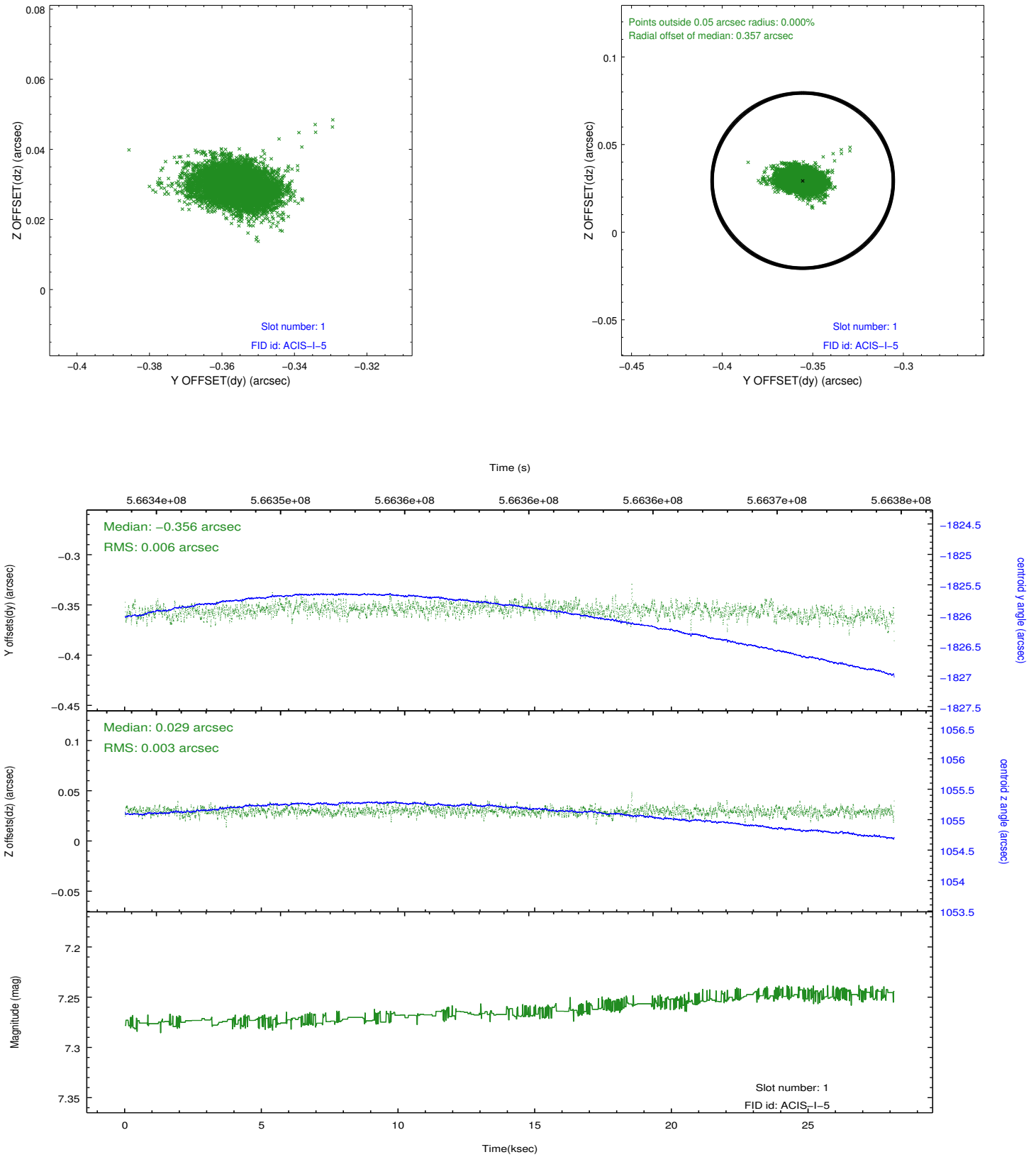


## 2.5 FID Slots

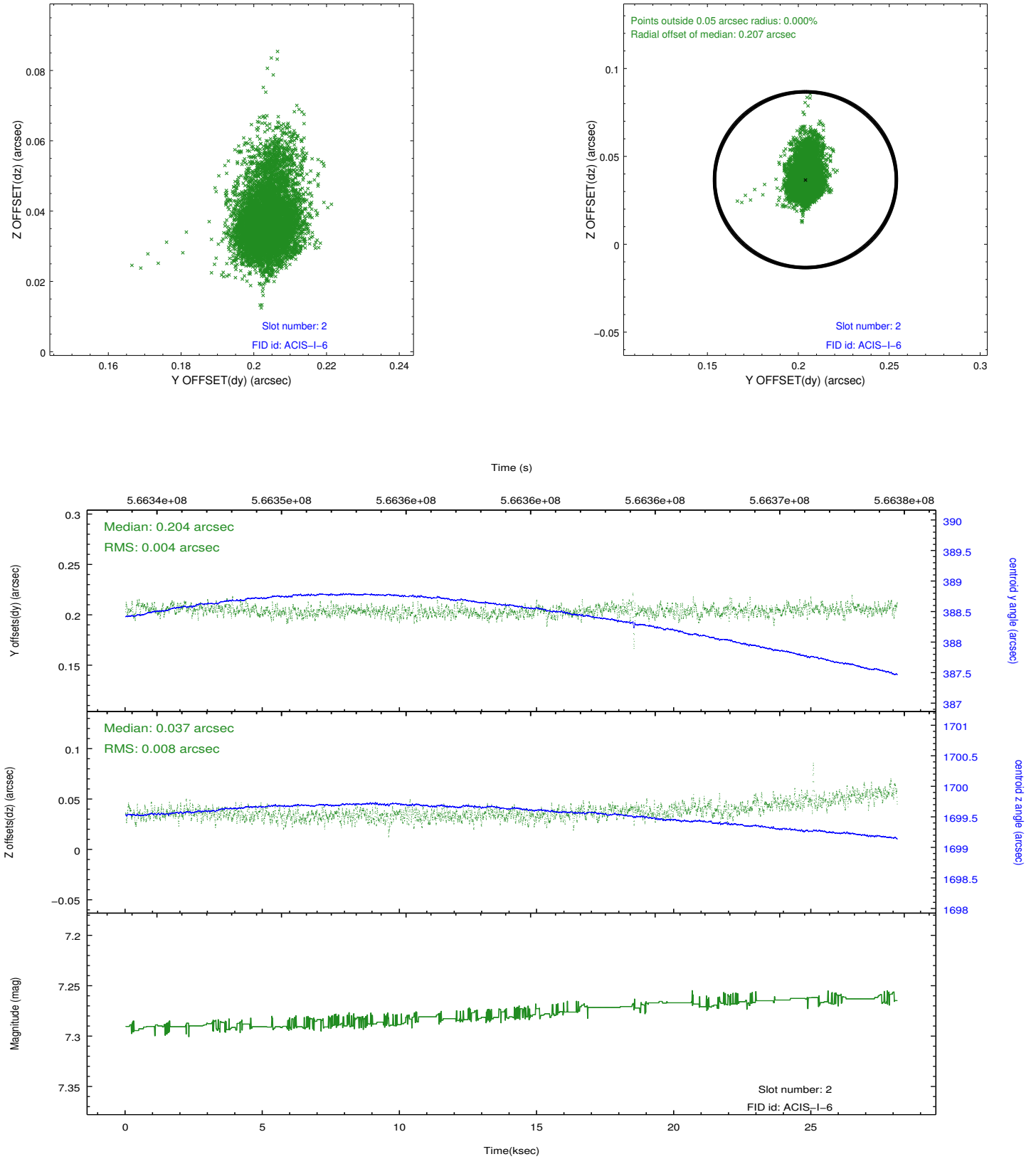
### 2.5.1 Slot 0



## 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)	2015.12.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	28.072107246161

### A.2 Comments

The guide star in slot 6 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this star from the solution.