

# V&V Reference Report

## L2 ASCDS Version : 10

Observation 15290 - L2 Version 2  
Chandra X-Ray Center

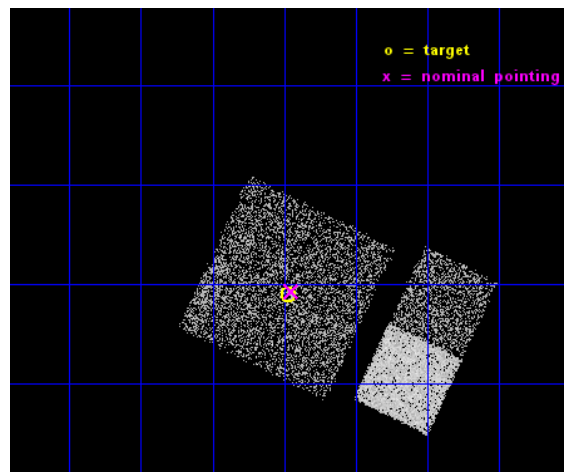
L2 Processing Date : Dec 4 2014

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# 1 Front

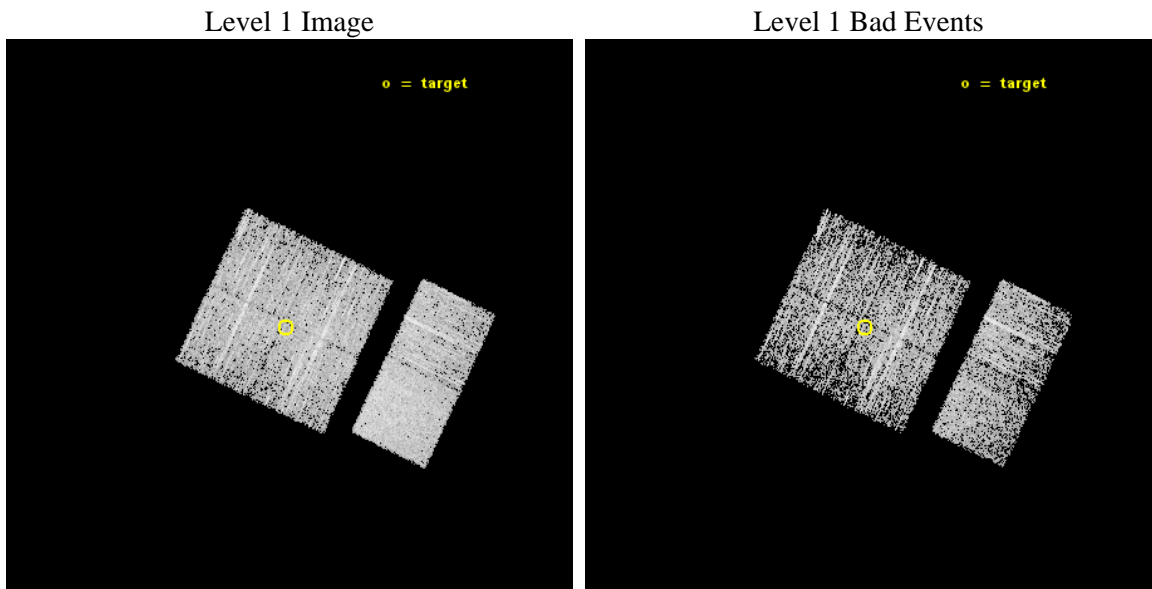
seq_num	801328	Sequence number
obs_id	15290	Observation id
title	Paving the way for eROSITA: with Chandra observations of the CODEX-BOSS clusters	Proposal title
observer	Dr. Peter Predehl	Principal investigator
object	CODEX 59304	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	331.867917	Observer's specified target RA [deg]
dec_targ	0.149056	Observer's specified target Dec [deg]
ra_nom	331.86240837755	Nominal RA [deg]
dec_nom	0.15499030492007	Nominal Dec [deg]
roll_nom	115.70104537471	Nominal Roll [deg]
revision	2	Processing version of data
ontime	3967.9999852777	Sum of GTIs [s]
livetime	3917.7547802213	Livetime [s]
ontime0	3964.7589449286	Sum of GTIs [s]
ontime1	3967.9999852777	Sum of GTIs [s]
ontime2	3967.9999852777	Sum of GTIs [s]
ontime3	3967.9999852777	Sum of GTIs [s]
ontime6	3967.9999852777	Sum of GTIs [s]
ontime7	3967.9999852777	Sum of GTIs [s]
l2events	20407	Number of level 2 events



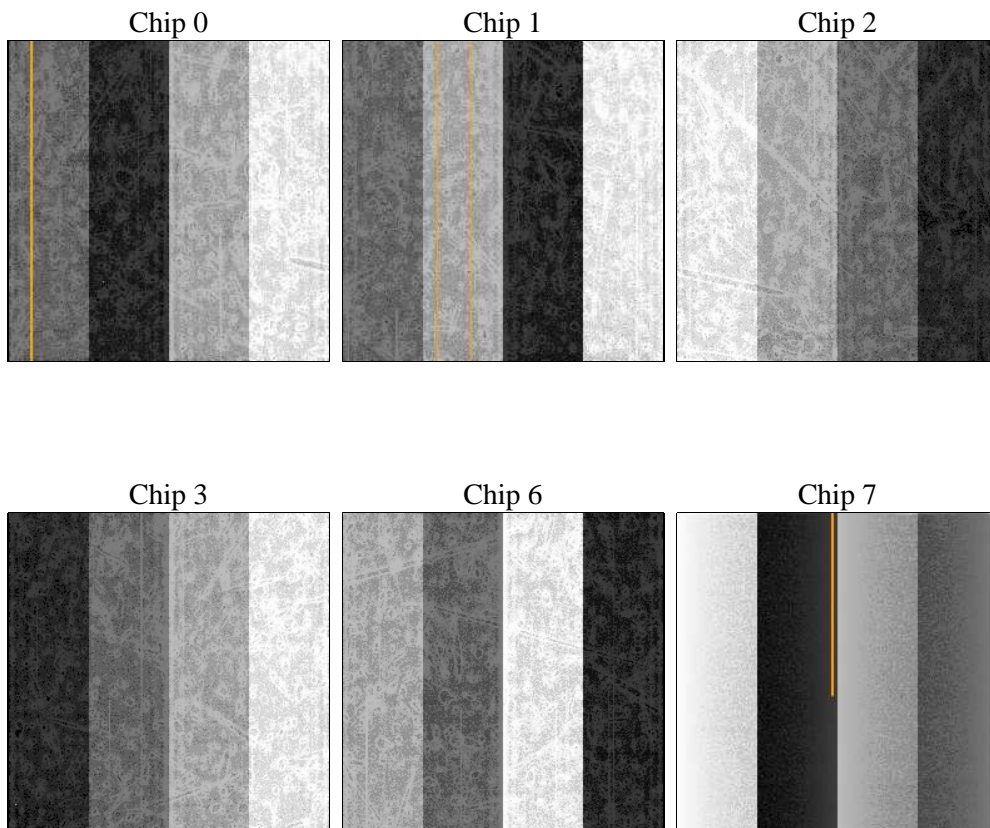
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	2	Obi number	sched_exp_time	4000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	3967.9999852777	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	3964.7589449286	Sum of GTIs [s]
date	2014-12-04T06:53:28	Date and time of file creation	ontime1	3967.9999852777	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	3967.9999852777	Sum of GTIs [s]
			ontime3	3967.9999852777	Sum of GTIs [s]
			ontime6	3967.9999852777	Sum of GTIs [s]
			ontime7	3967.9999852777	Sum of GTIs [s]
			l1events	120904	Number of level 1 events

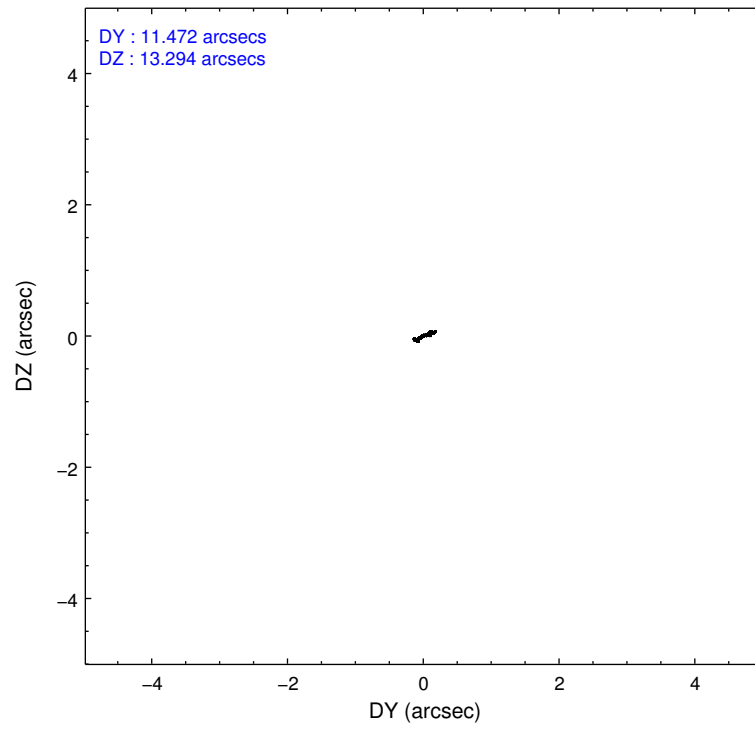
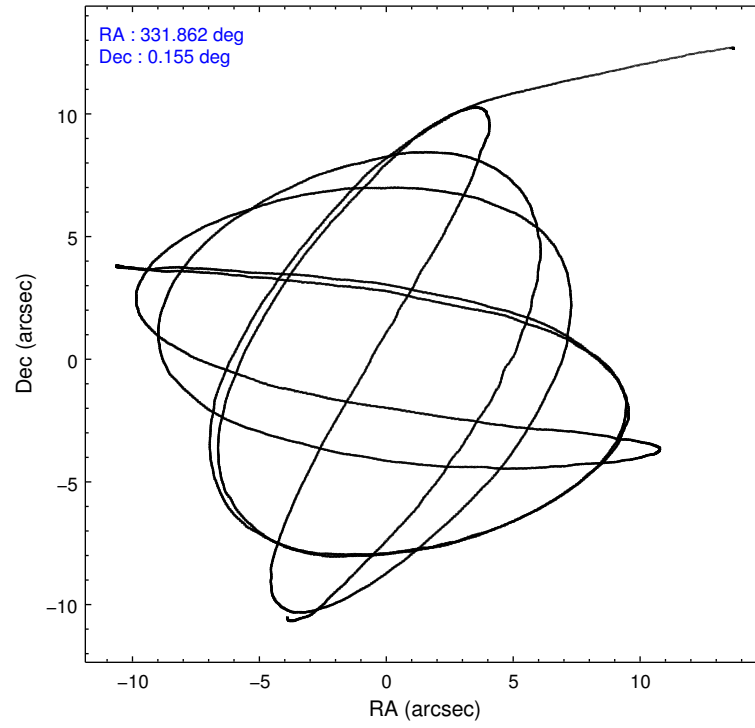
### 2.1.4 Events

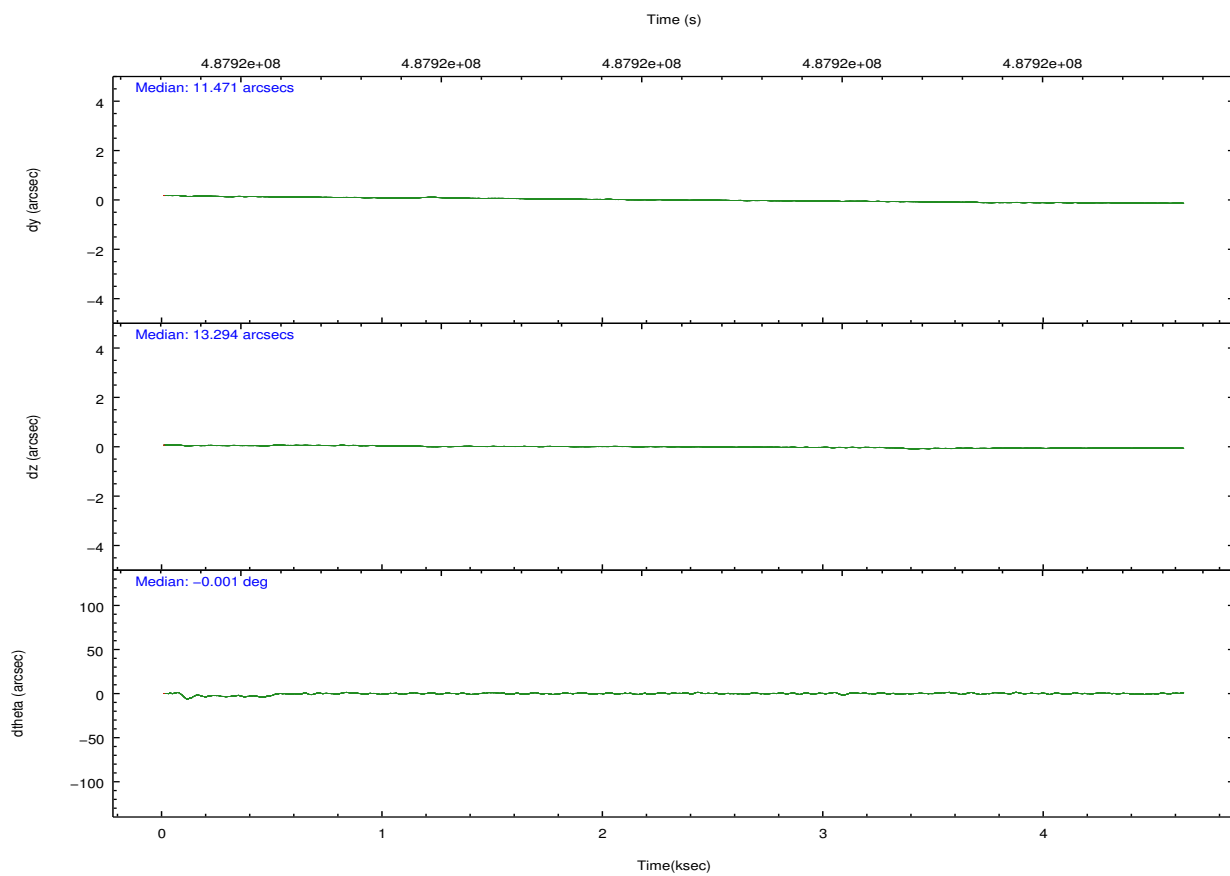
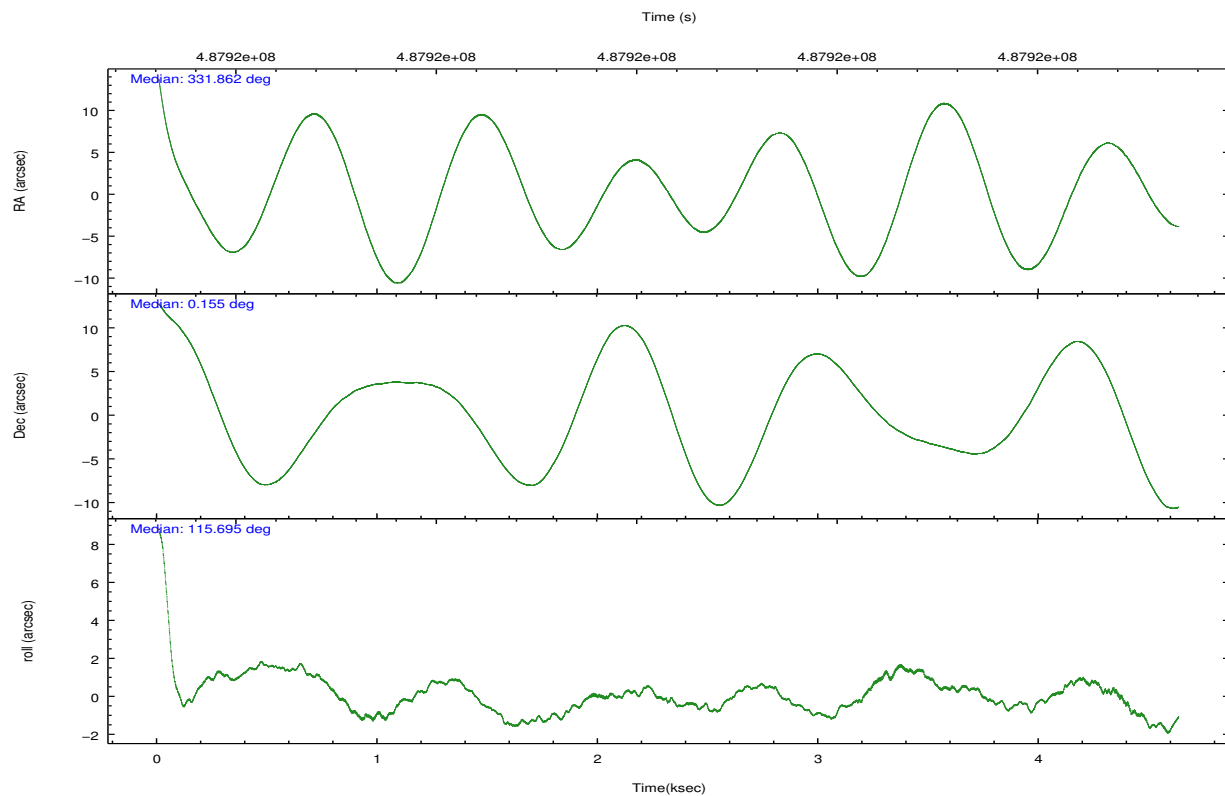
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	18297	17760	19446	18605	20525	26271	grade 0 events	772	882	768	751	704	916
rejected events	16070	15249	17360	16530	18194	15200		4%	4%	3%	4%	3%	3%
rejected %	87%	85%	89%	88%	88%	57%	grade 1 events	11	9	10	6	12	38
								0%	0%	0%	0%	0%	0%
							grade 2 events	508	615	464	423	558	2341
								2%	3%	2%	2%	2%	8%
							grade 3 events	248	239	219	232	246	865
								1%	1%	1%	1%	1%	3%
							grade 4 events	234	230	231	231	235	885
								1%	1%	1%	1%	1%	3%
							grade 5 events	900	927	825	1008	1089	2665
								4%	5%	4%	5%	5%	10%
							grade 6 events	470	552	407	439	590	6069
								2%	3%	2%	2%	2%	23%
							grade 7 events	15154	14306	16522	15515	17091	12492
								82%	80%	84%	83%	83%	47%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012367	ACIS-012367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	331.885182	331.8624083775496	CCD I2 on	Y	Y
[deg] Pointing Dec	0.139560	0.1549903049200696	CCD I3 on	Y	Y
[deg] Pointing Roll	115.492272	115.7010453747056	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O2	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O1	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	487920477.184000	487919151.61512	CCD S5 on	N	N
Observation start date	2013-06-18T05:26:50	2013-06-18T05:05:51	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	487924477.184000	487925798.74048	On-chip summing requested	N	N
Observation end date	2013-06-18T06:33:30	2013-06-18T06:56:38	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



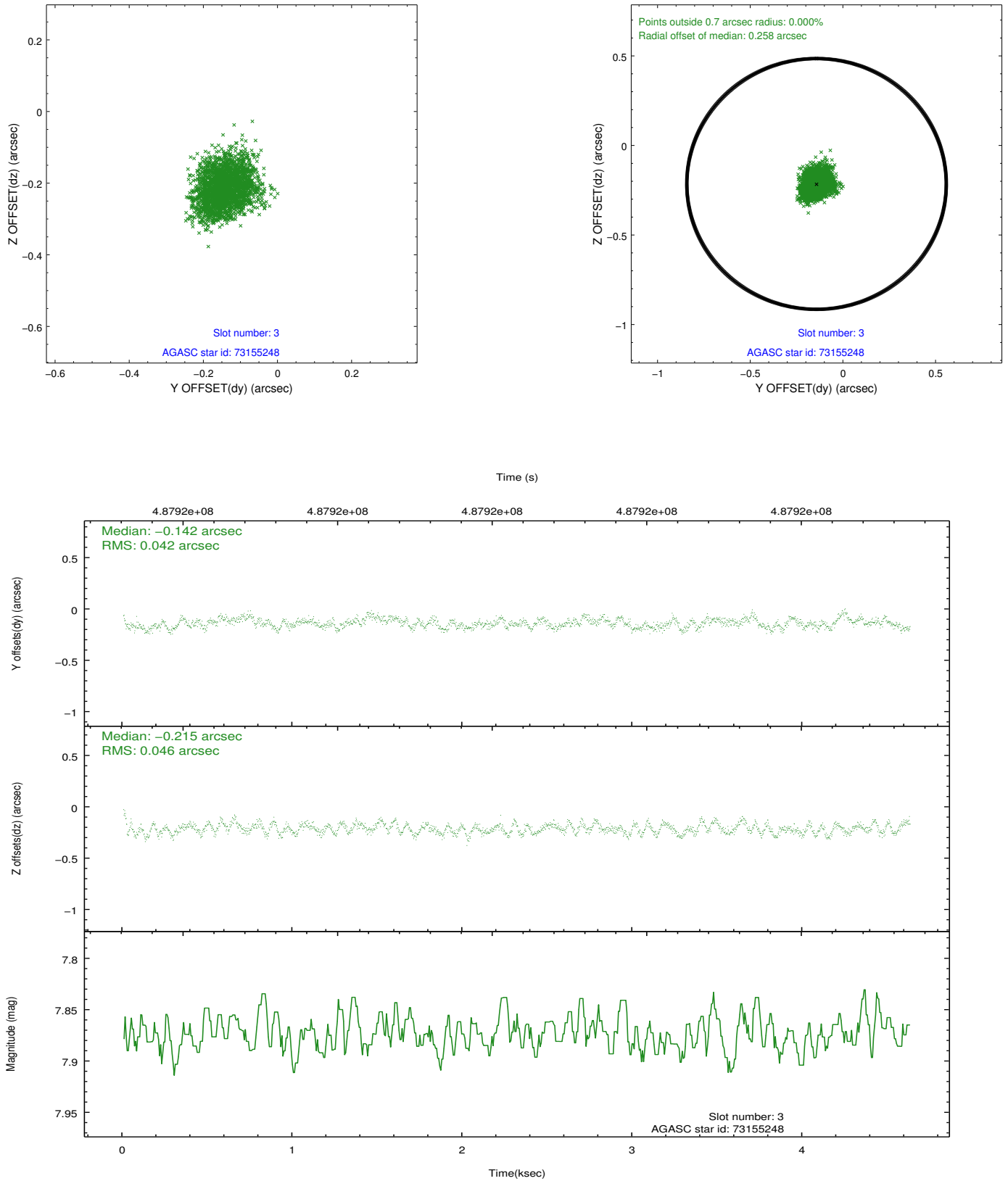


### Slot Statistics

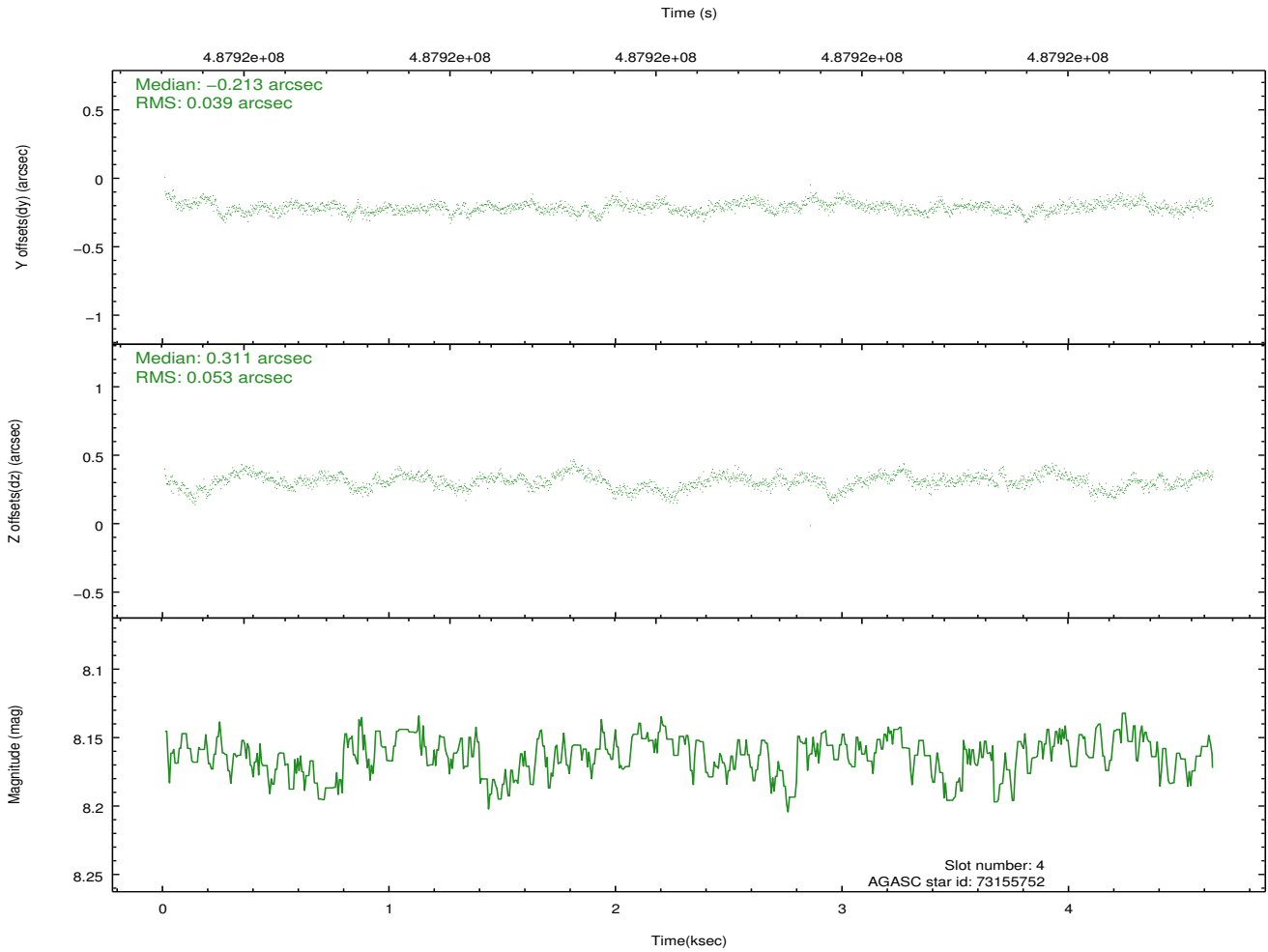
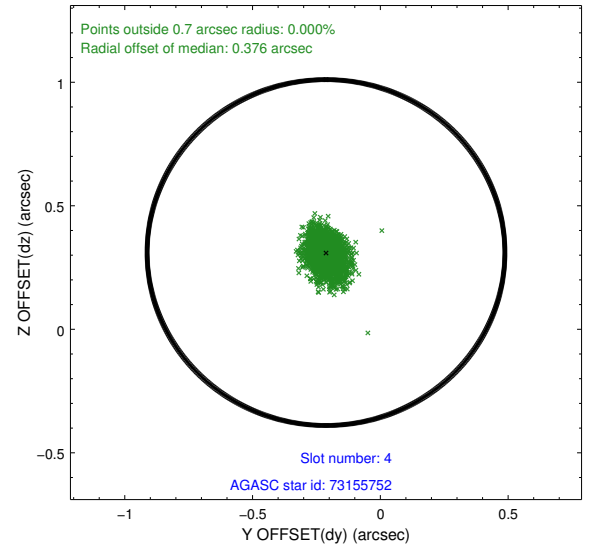
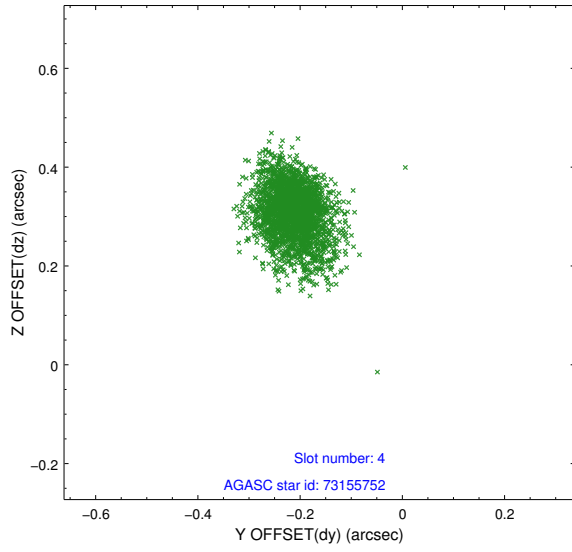
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-4	7.13	1129	0.177	0.005	0.009	0.017	0.000000	0.000000	2148.24	1063.00
1	FID		ACIS-I-5	7.19	1129	-0.273	0.005	0.006	0.012	0.000000	0.000000	-1818.46	1061.71
2	FID		ACIS-I-6	7.18	1129	-0.004	0.057	0.010	0.024	0.000000	0.000000	392.21	1706.04
3	GUIDE	used	73155248	7.87	2258	-0.142	-0.215	0.068	0.104	331.348846	0.261149	1226.04	1554.52
4	GUIDE	used	73155752	8.16	2257	-0.213	0.311	0.068	0.119	332.399991	0.526110	459.29	-2270.54
5	GUIDE	used	73155896	9.35	2253	0.363	0.140	0.129	0.202	332.181196	0.231459	-159.31	-1104.63
6	GUIDE	used	73157368	8.70	2257	0.378	0.023	0.091	0.136	332.168561	0.061132	-693.67	-799.82
7	GUIDE	used	73159896	6.91	2257	-0.388	-0.255	0.052	0.087	331.383933	0.627581	2361.80	872.60

## 2.4 Star Slots

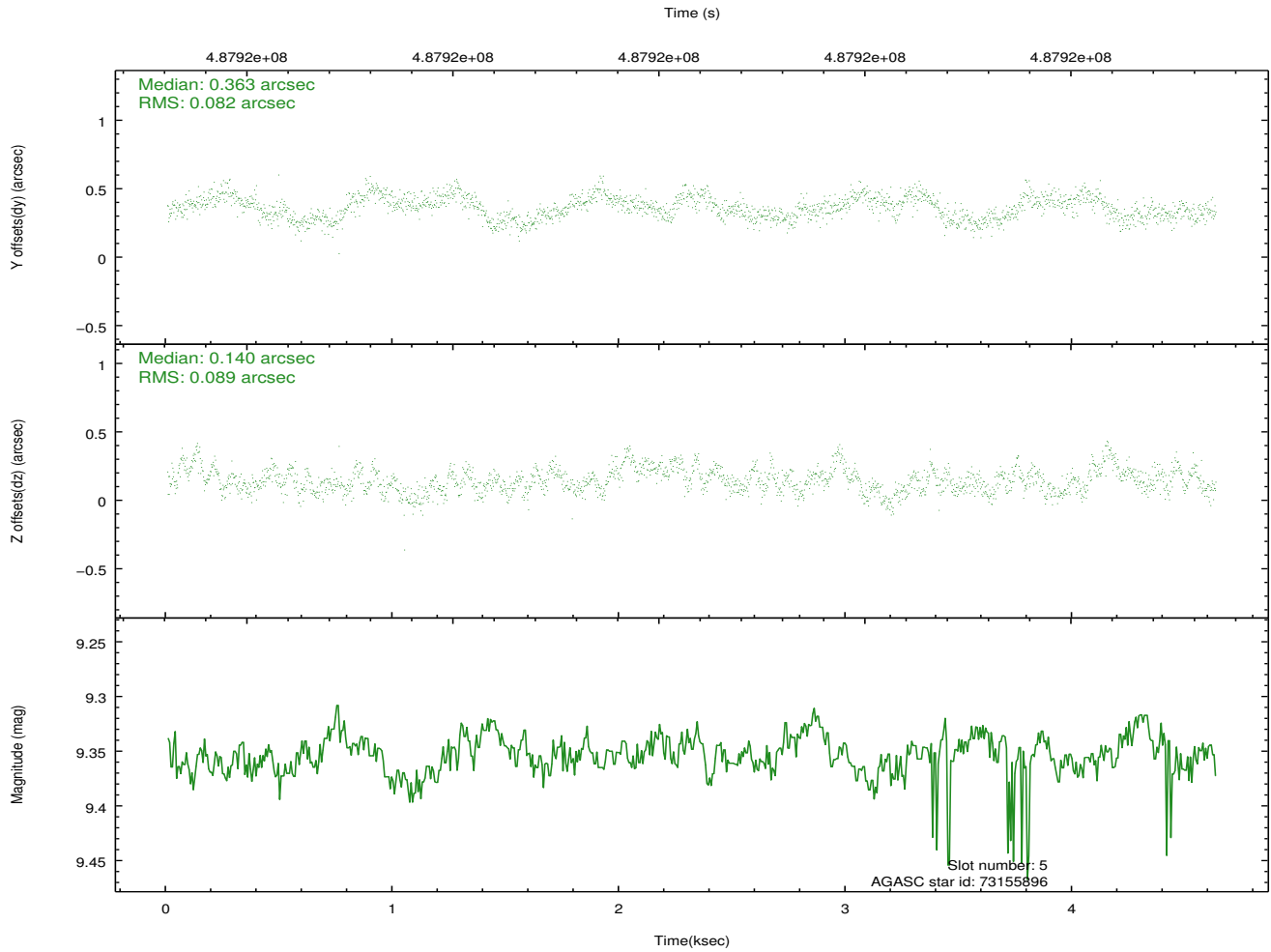
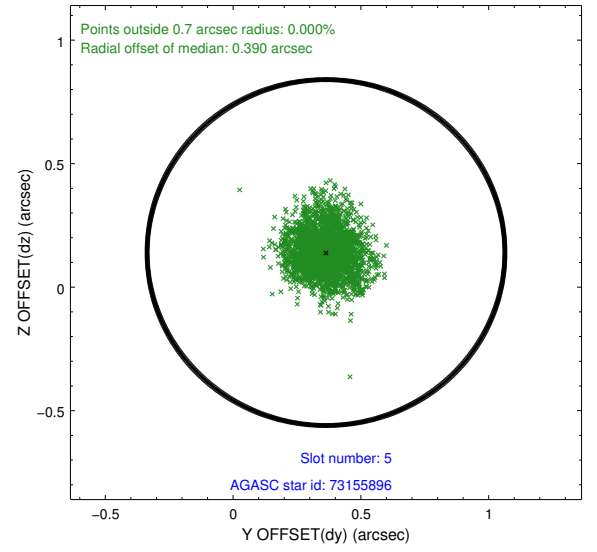
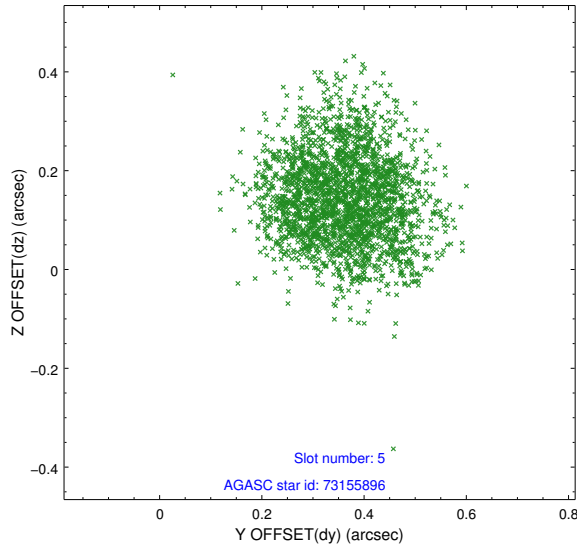
### 2.4.1 Slot 3



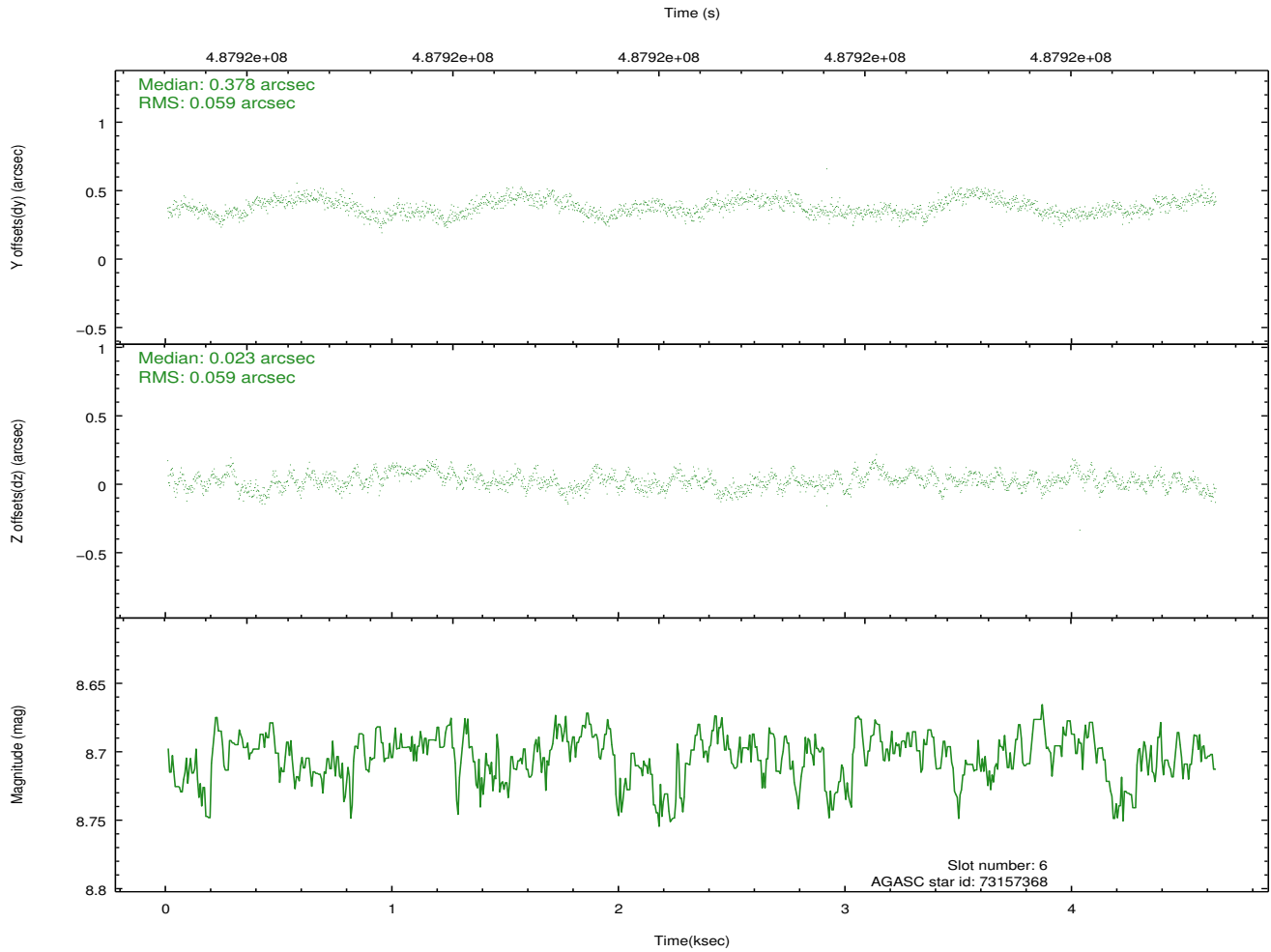
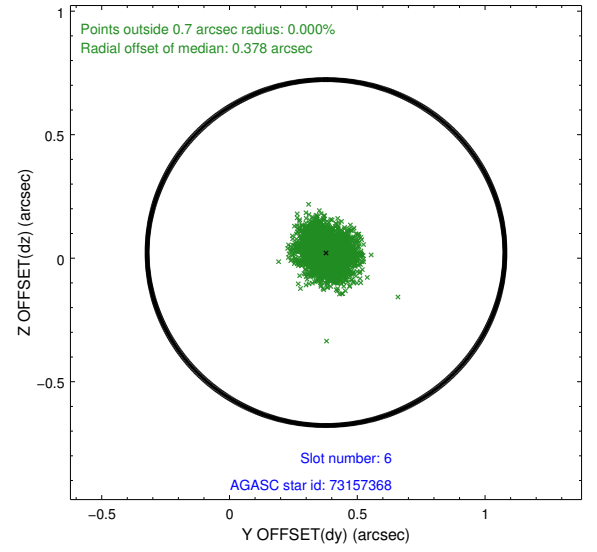
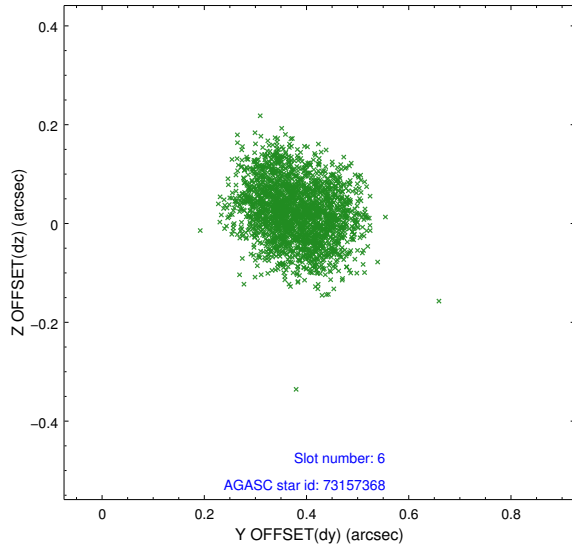
## 2.4.2 Slot 4



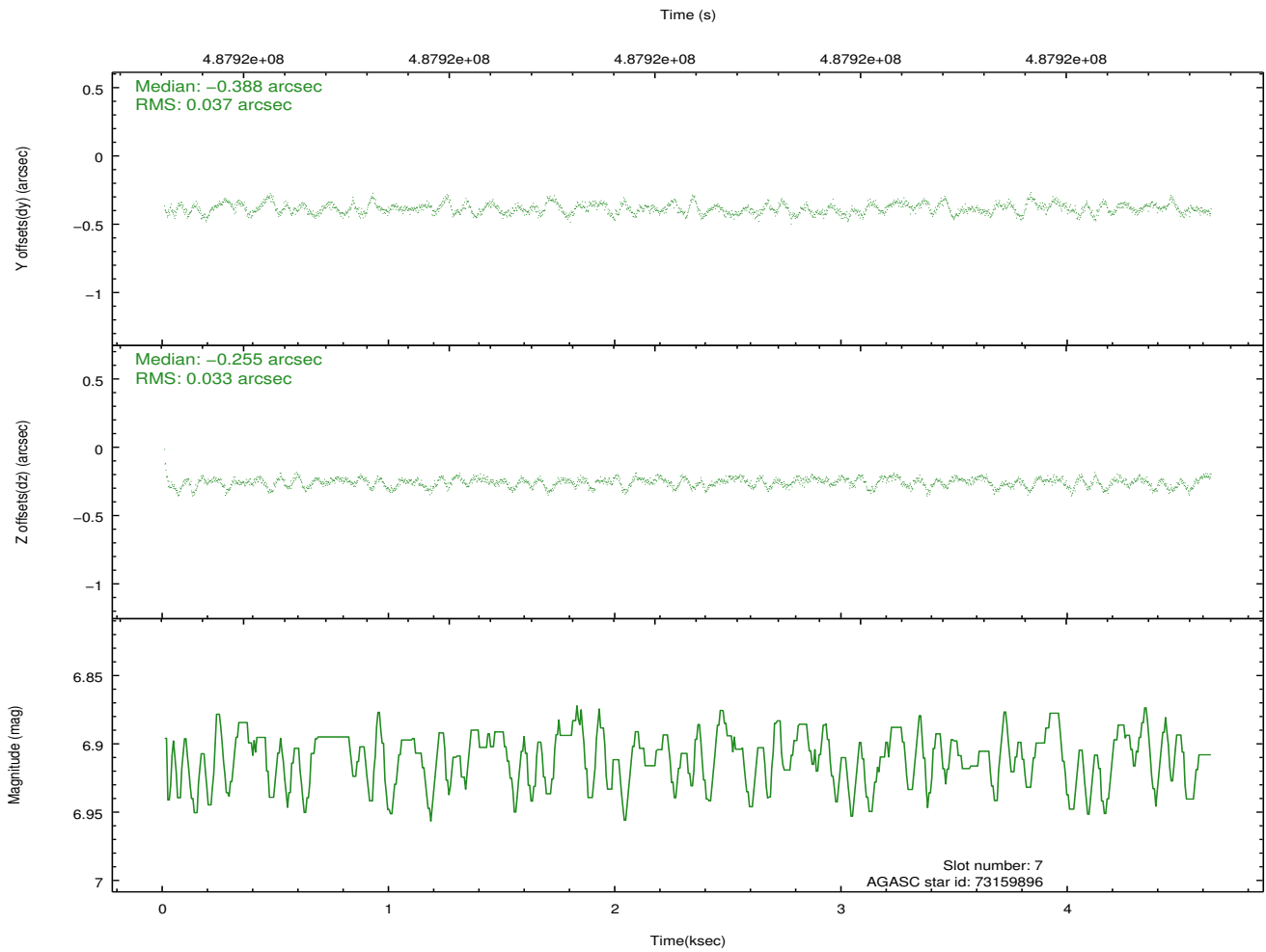
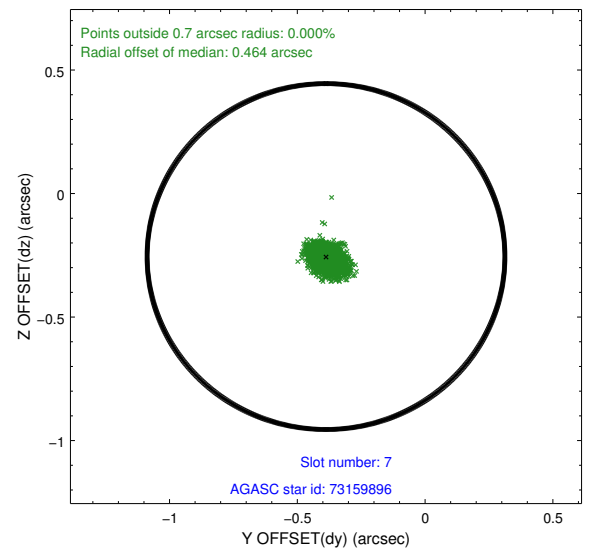
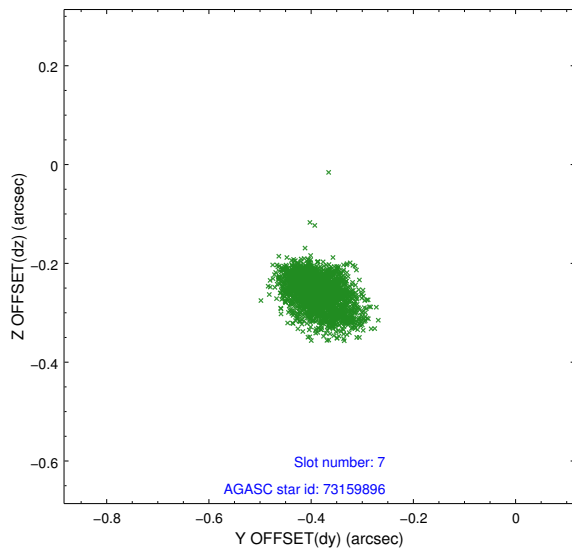
### 2.4.3 Slot 5



## 2.4.4 Slot 6

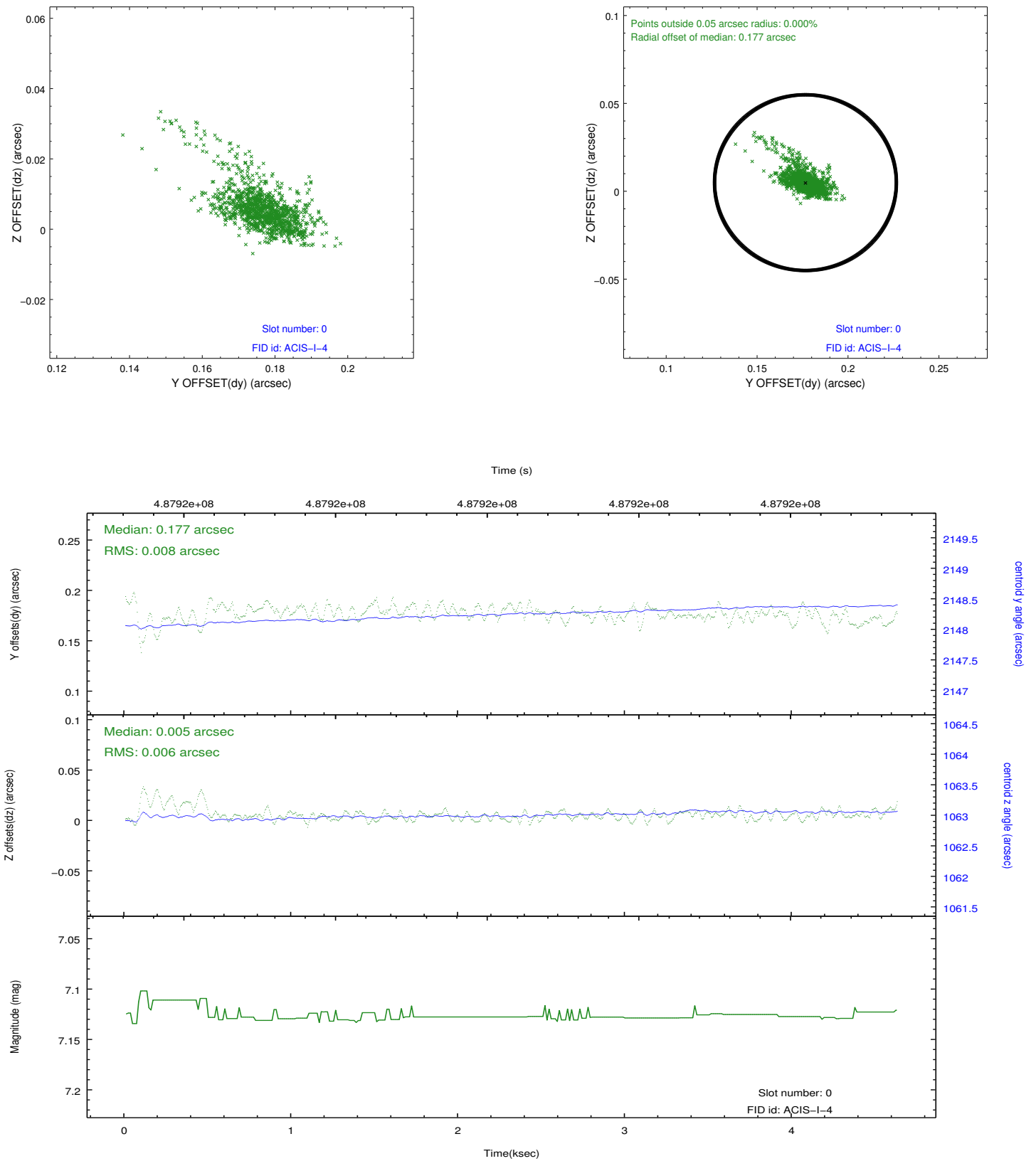


## 2.4.5 Slot 7

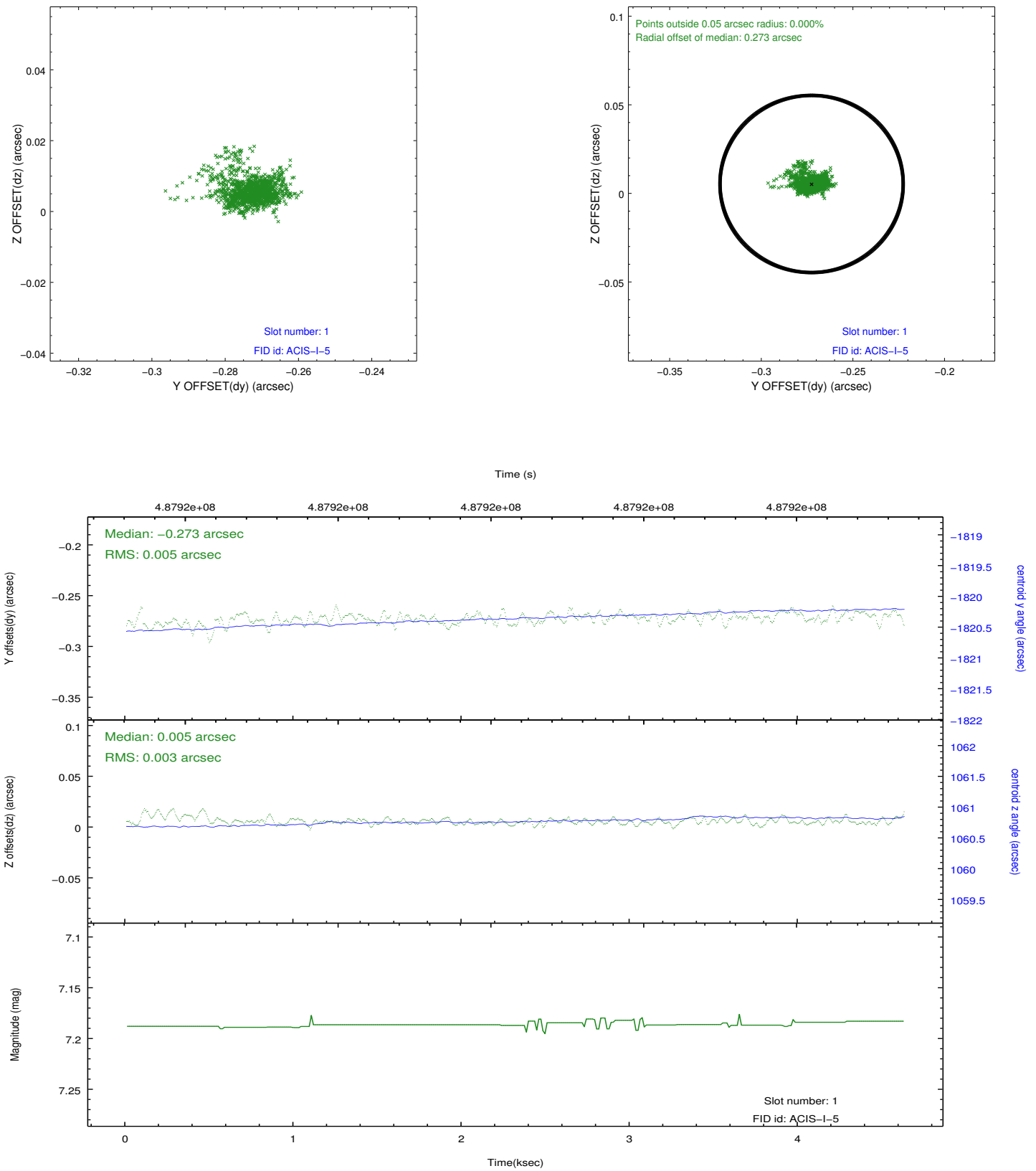


## 2.5 FID Slots

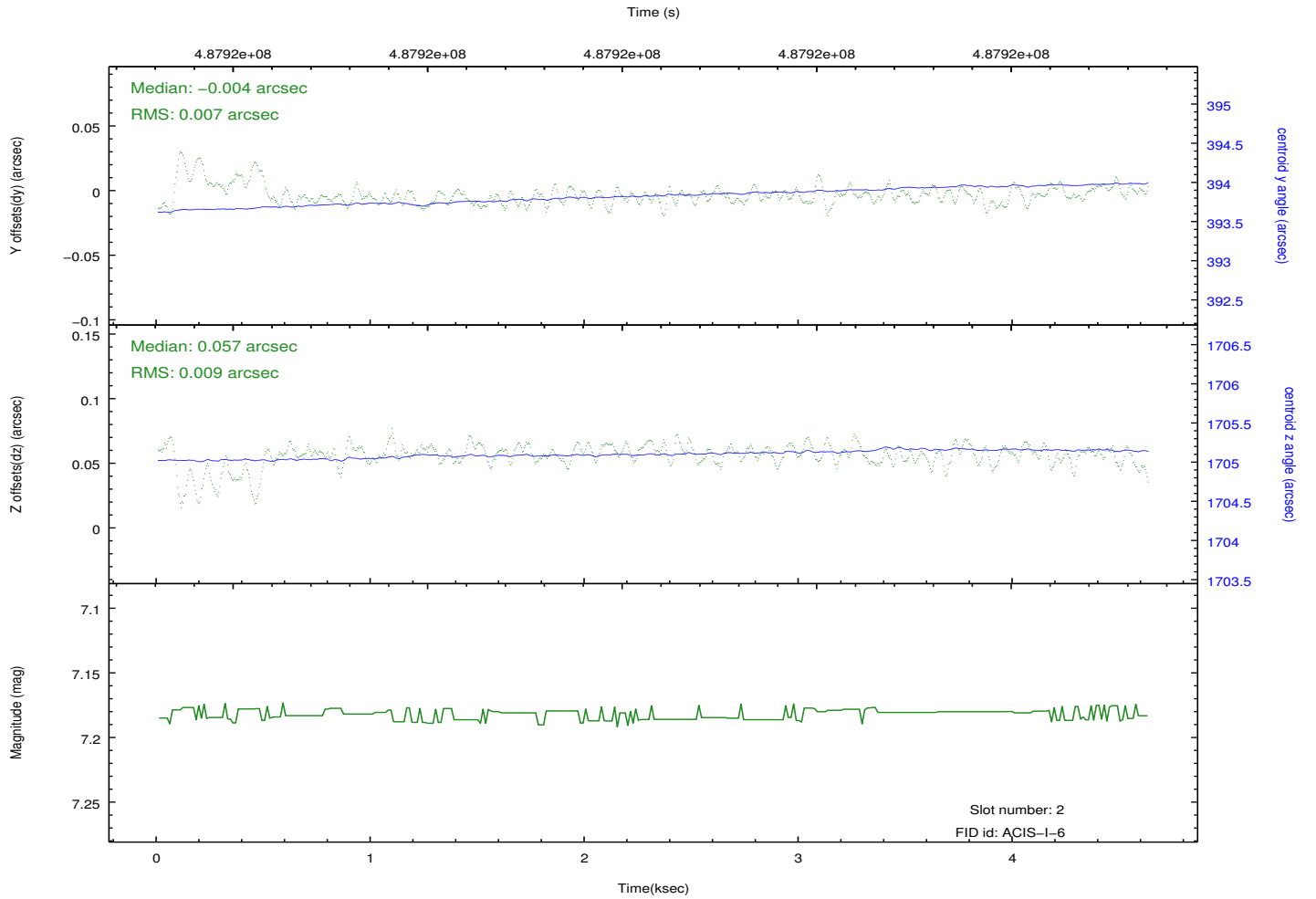
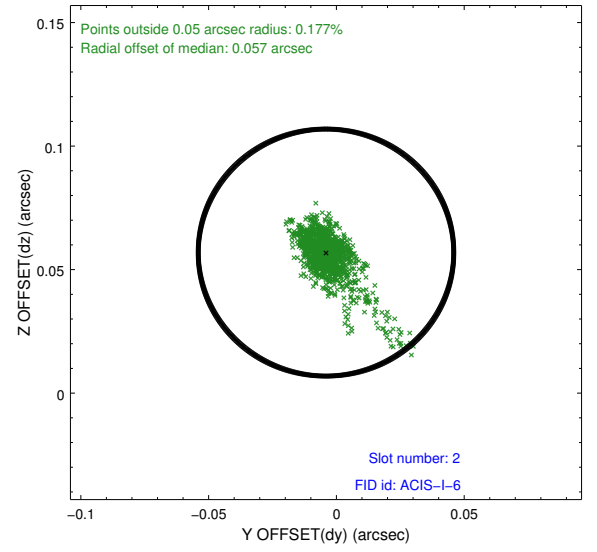
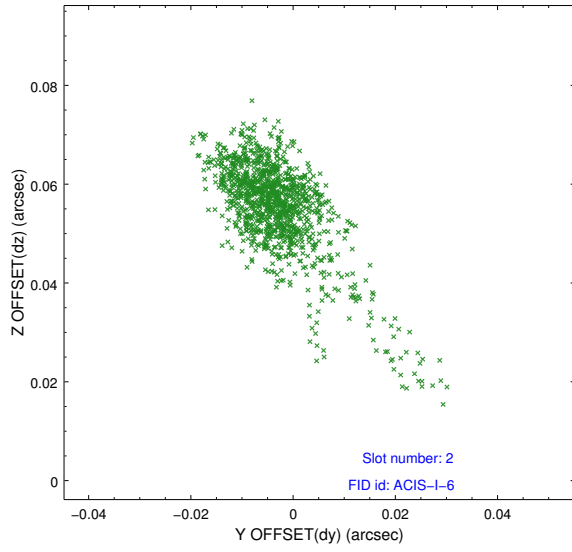
### 2.5.1 Slot 0



## 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)	2014.12.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.9679999852777

## A.2 Comments

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.