

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 10415 - L2 Version 2  
Chandra X-Ray Center

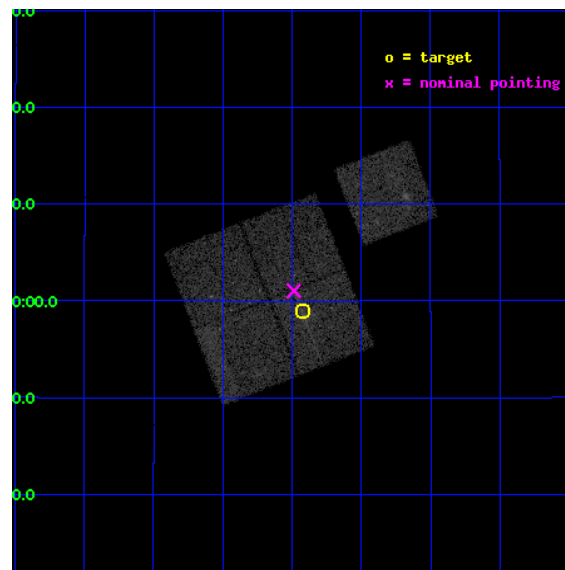
L2 Processing Date : May 28 2012

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# 1 Front

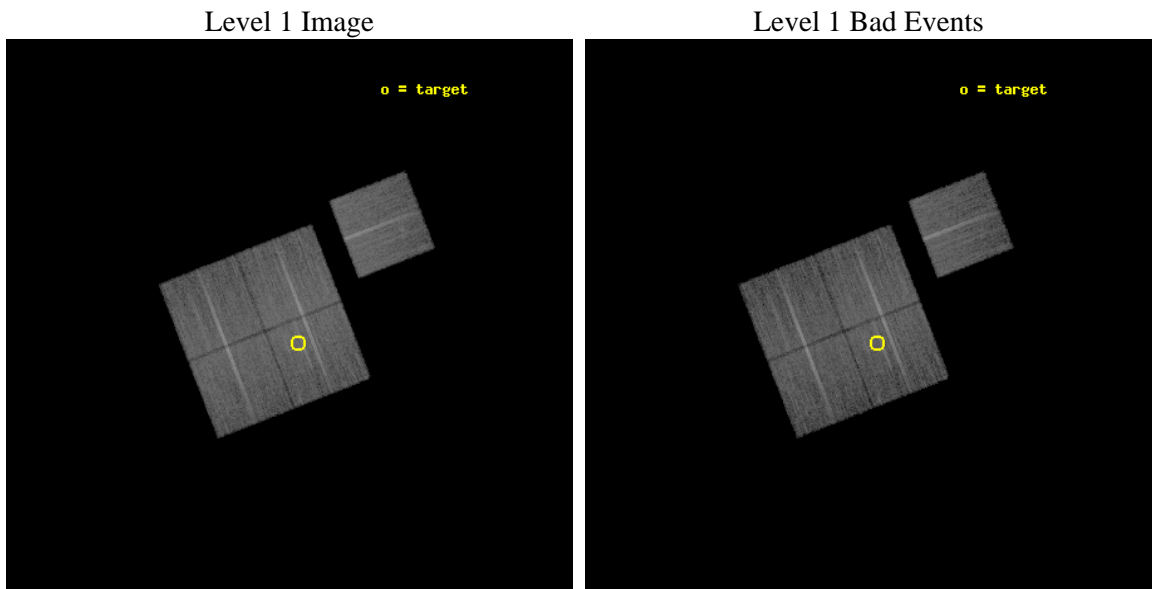
seq_num	800776	Sequence number
obs_id	10415	Observation id
title	Completing a combined X-ray/Sunyaev-Zel'dovich effect sample of galaxy clusters	Proposal title
observer	Dr Ben Maughan	Principal investigator
object	A689	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	129.355833	Observer's specified target RA [deg]
dec_targ	14.983	Observer's specified target Dec [deg]
ra_nom	129.37178735466	Nominal RA [deg]
dec_nom	15.01745580131	Nominal Dec [deg]
roll_nom	68.720616151357	Nominal Roll [deg]
revision	2	Processing version of data
ontime	14044.716547251	Sum of GTIs [s]
livetime	13861.211985991	Livetime [s]
ontime0	14047.734447479	Sum of GTIs [s]
ontime1	14044.634477139	Sum of GTIs [s]
ontime2	14041.534506857	Sum of GTIs [s]
ontime3	14044.716547251	Sum of GTIs [s]
ontime6	14044.552387238	Sum of GTIs [s]
l2events	58746	Number of level 2 events



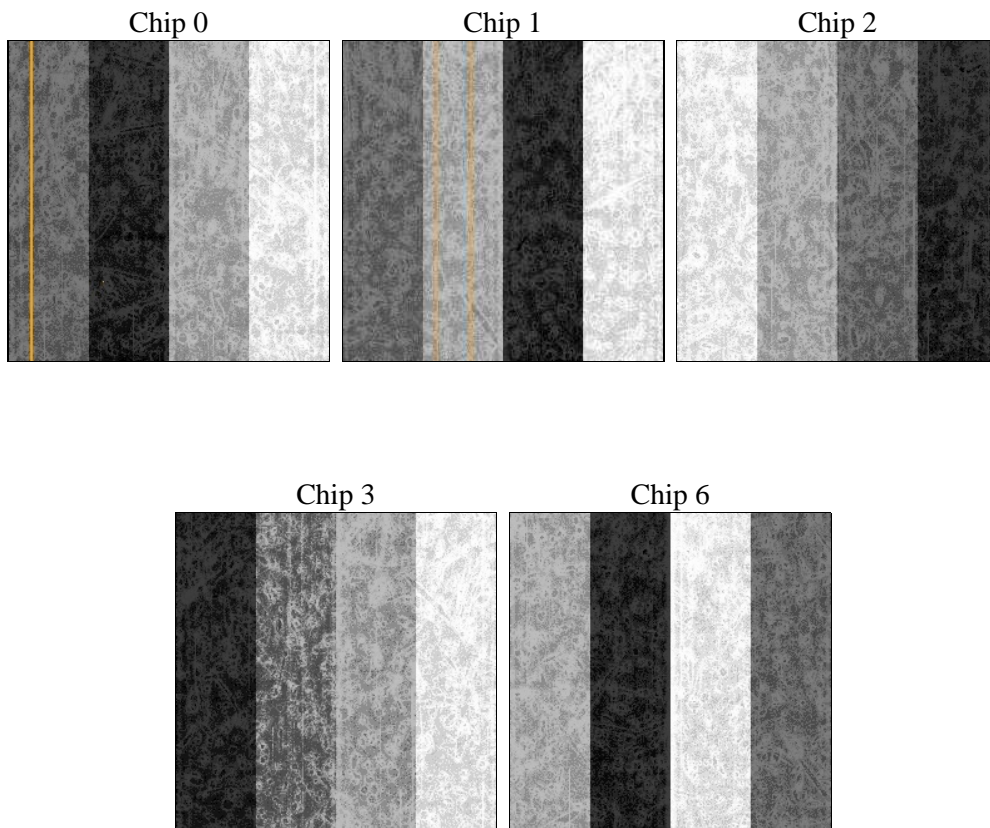
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	14000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	14044.716547251	Sum of GTIs [s]
caldbver	4.4.9	&#160	ontime0	14047.734447479	Sum of GTIs [s]
date	2012-05-28T11:55:08	Date and time of file creation	ontime1	14044.634477139	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	14041.534506857	Sum of GTIs [s]
			ontime3	14044.716547251	Sum of GTIs [s]
			ontime6	14044.552387238	Sum of GTIs [s]
			l1events	589813	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	109347	109380	126072	125013	120001
rejected events	97197	95689	114160	106992	106832
rejected %	88%	87%	90%	85%	89%

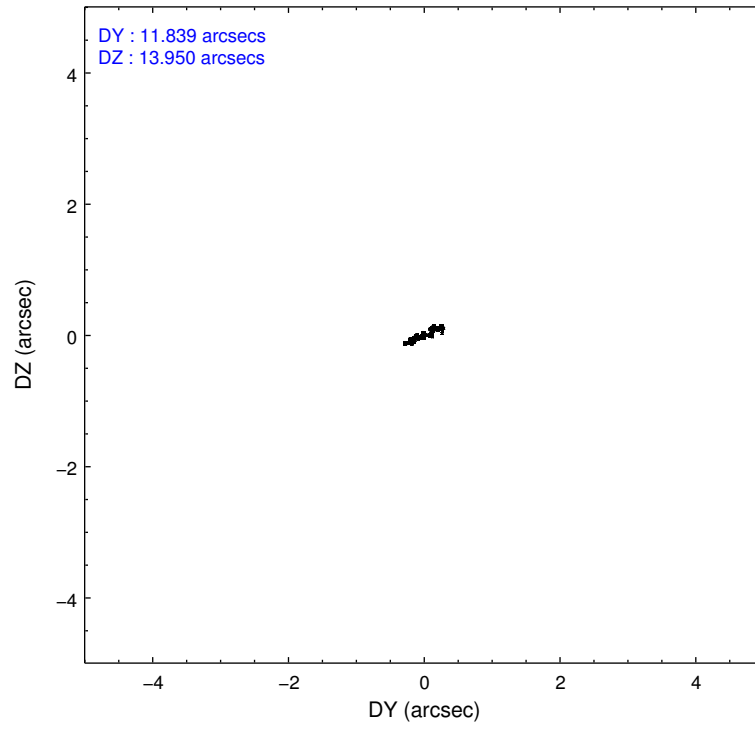
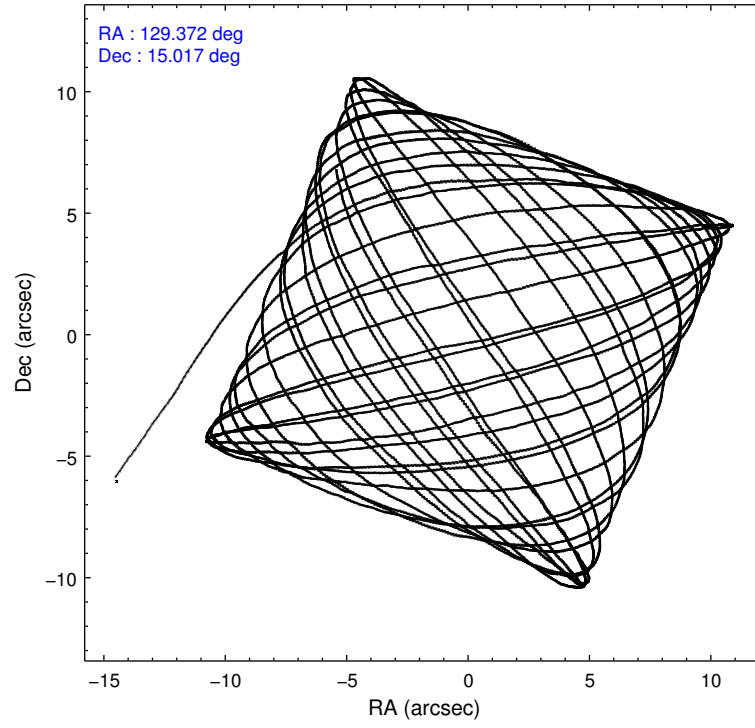
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	4266	5049	4356	8057	5004
	3%	4%	3%	6%	4%
grade 1 events	61	58	62	1122	54
	0%	0%	0%	0%	0%
grade 2 events	2951	3095	2882	3625	2830
	2%	2%	2%	2%	2%
grade 3 events	1349	1395	1226	1689	1333
	1%	1%	0%	1%	1%
grade 4 events	1245	1435	1263	1684	1354
	1%	1%	1%	1%	1%
grade 5 events	4354	4626	4065	5777	4744
	3%	4%	3%	4%	3%
grade 6 events	2343	2724	2190	2970	2657
	2%	2%	1%	2%	2%
grade 7 events	92778	90998	110028	100089	102025
	84%	83%	87%	80%	85%

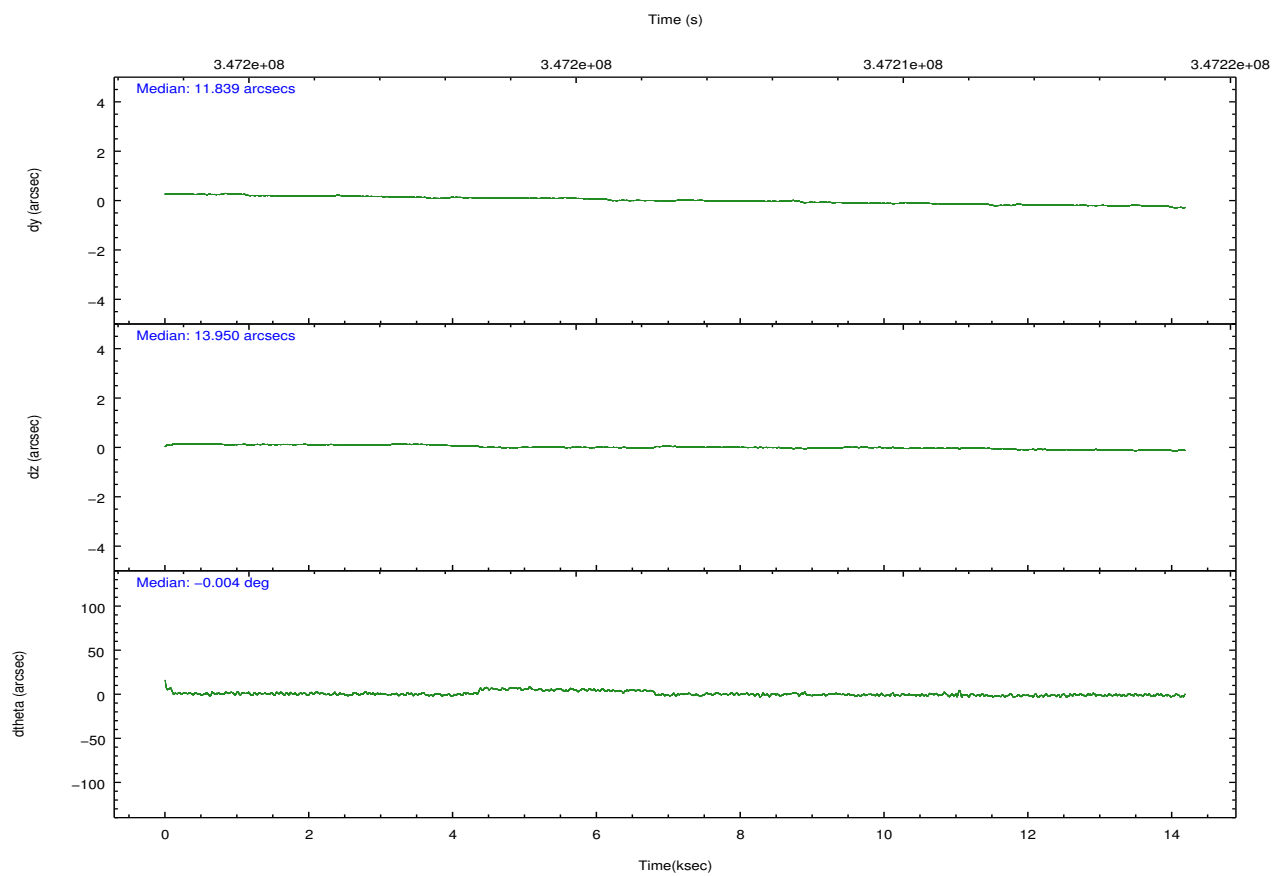
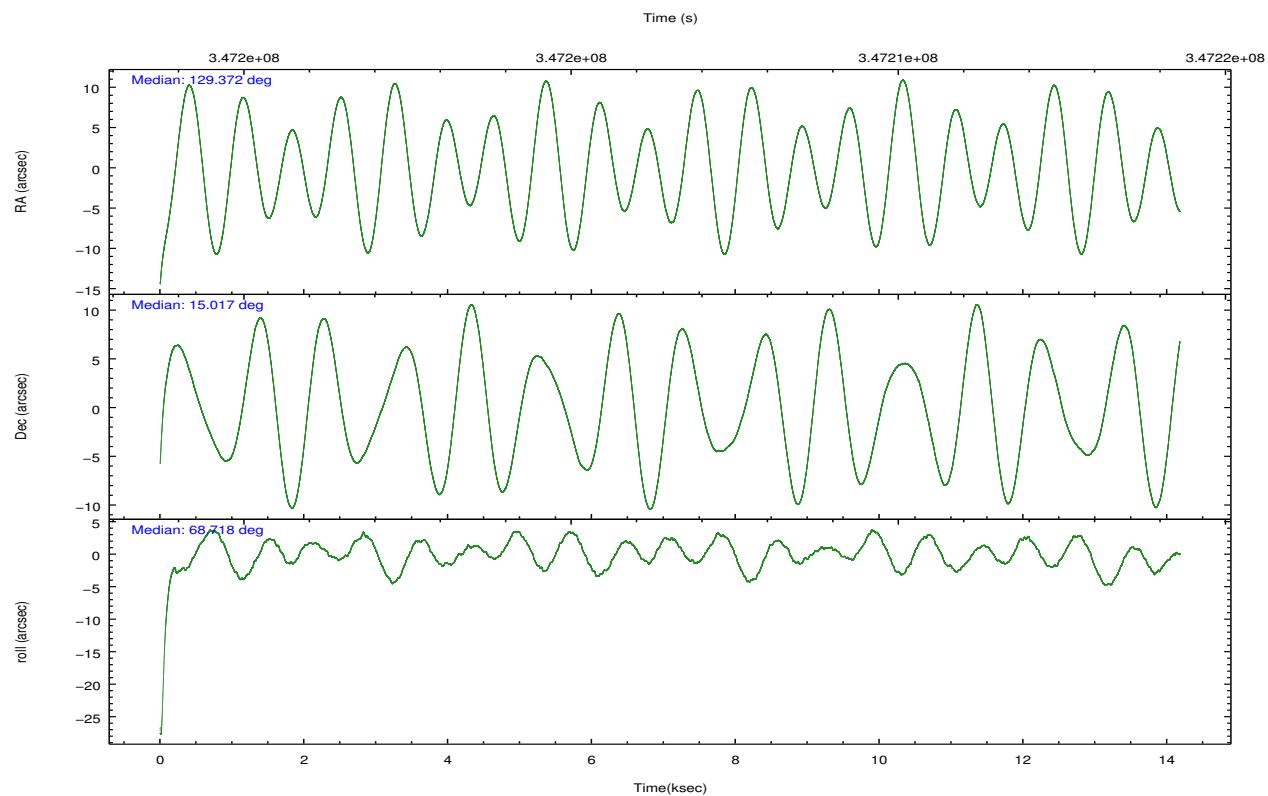


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	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	129.376229	129.3717873546632	CCD I2 on	Y	Y
[deg] Pointing Dec	14.990293	15.01745580130996	CCD I3 on	Y	Y
[deg] Pointing Roll	68.510796	68.72061615135718	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	O1	Y
[mm] SIM translation stage pos	-227.592463	-227.5933067819097	CCD S3 on	N	N
[mm] SIM translation stage offset	-6	-5.999146221020027	CCD S4 on	N	N
[s] Observation start time (MET)	347199609.184000	347198677.88733	CCD S5 on	N	N
Observation start date	2009-01-01T12:19:03	2009-01-01T12:04:37	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	347213609.184000	347214176.4006	On-chip summing requested	N	N
Observation end date	2009-01-01T16:12:23	2009-01-01T16:22:56	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



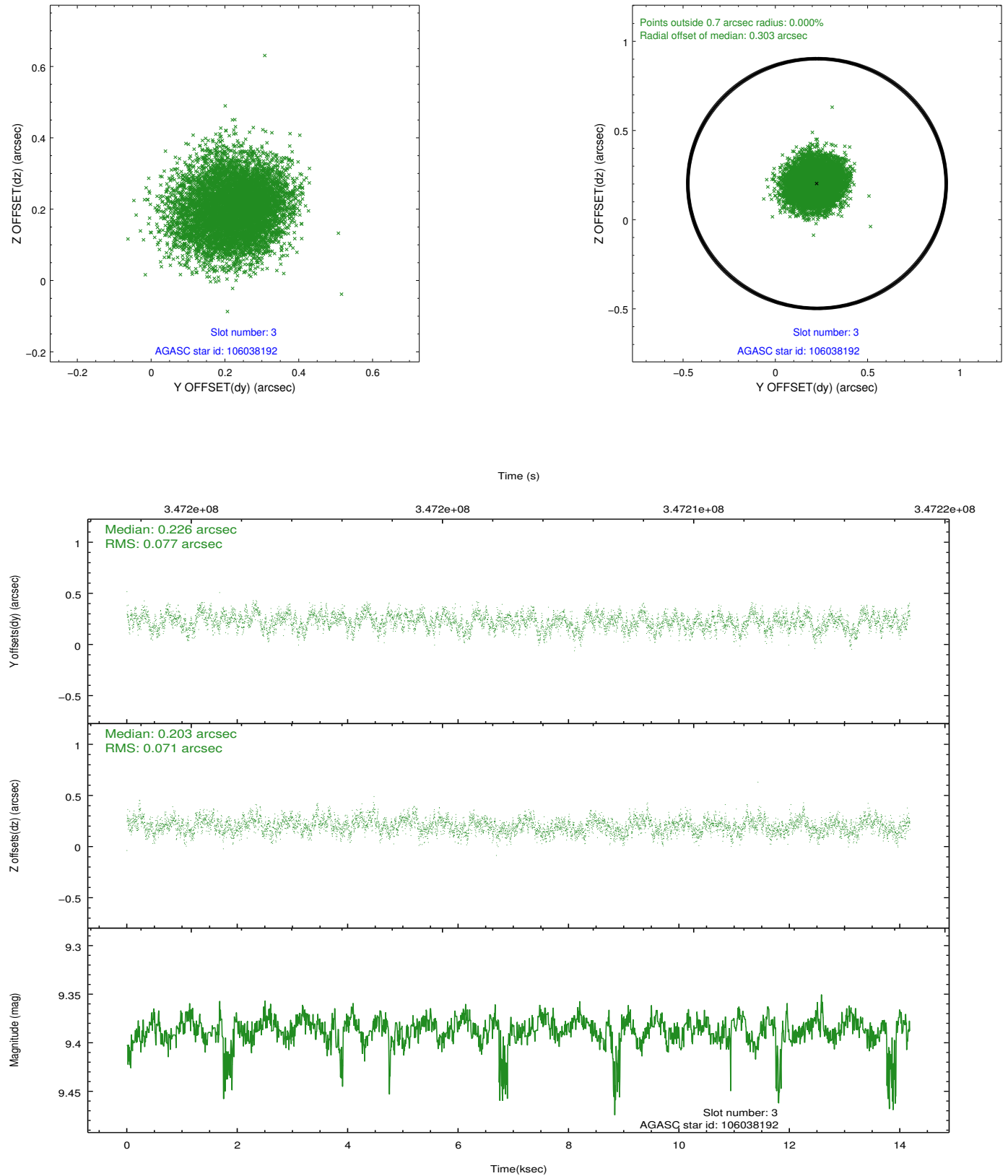


### Slot Statistics

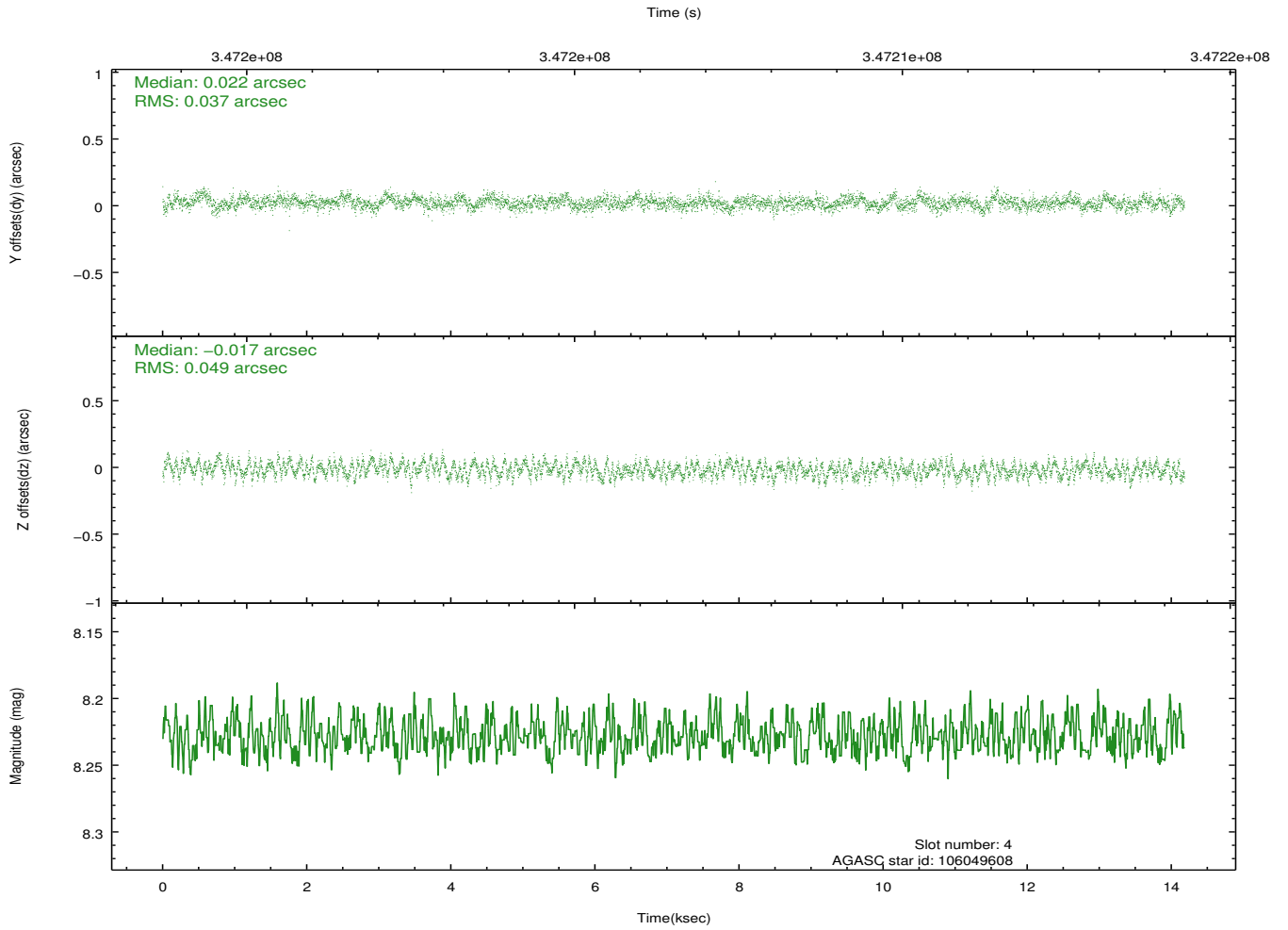
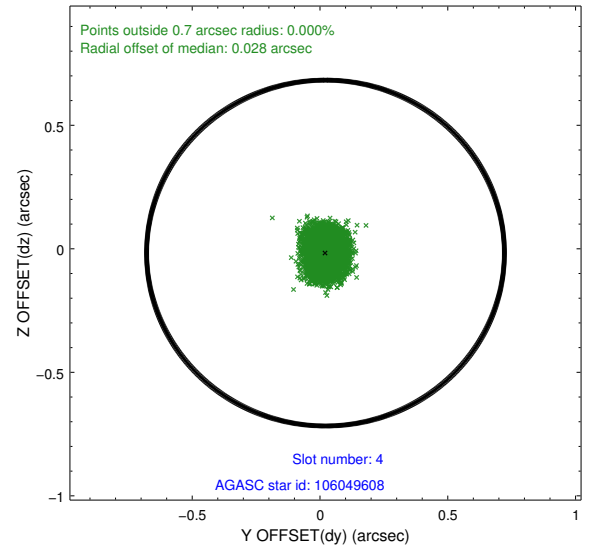
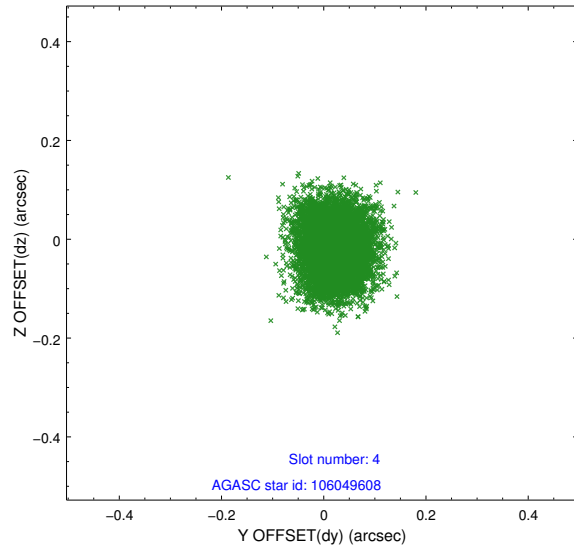
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.09	3459	0.051	-0.051	0.018	0.031	0.000000	0.000000	927.68	-960.68
1	FID	ACIS-I-2	7.03	3459	-0.223	-0.022	0.011	0.035	0.000000	0.000000	-766.82	-966.55
2	FID	ACIS-I-4	6.99	3459	0.074	0.136	0.011	0.036	0.000000	0.000000	2147.03	939.90
3	GUIDE	106038192	9.39	6907	0.226	0.203	0.112	0.177	129.572989	14.330735	-1957.15	-1507.55
4	GUIDE	106049608	8.23	6918	0.022	-0.017	0.065	0.104	129.621015	14.858170	-130.14	-966.87
5	GUIDE	182462456	8.76	6912	-0.239	-0.175	0.079	0.122	129.241135	15.652221	2045.79	1308.57
6	GUIDE	182467528	8.45	6913	0.043	0.142	0.062	0.100	129.502662	15.134875	645.38	-217.42
7	GUIDE	182469304	6.59	6918	-0.052	-0.155	0.074	0.115	129.032134	15.313629	646.30	1538.18

## 2.4 Star Slots

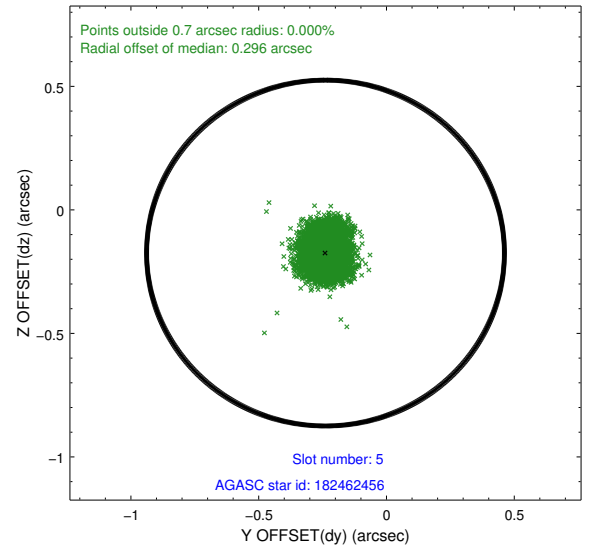
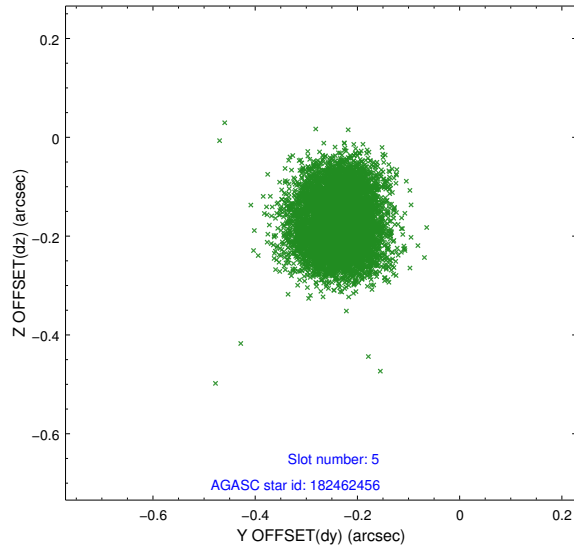
### 2.4.1 Slot 3



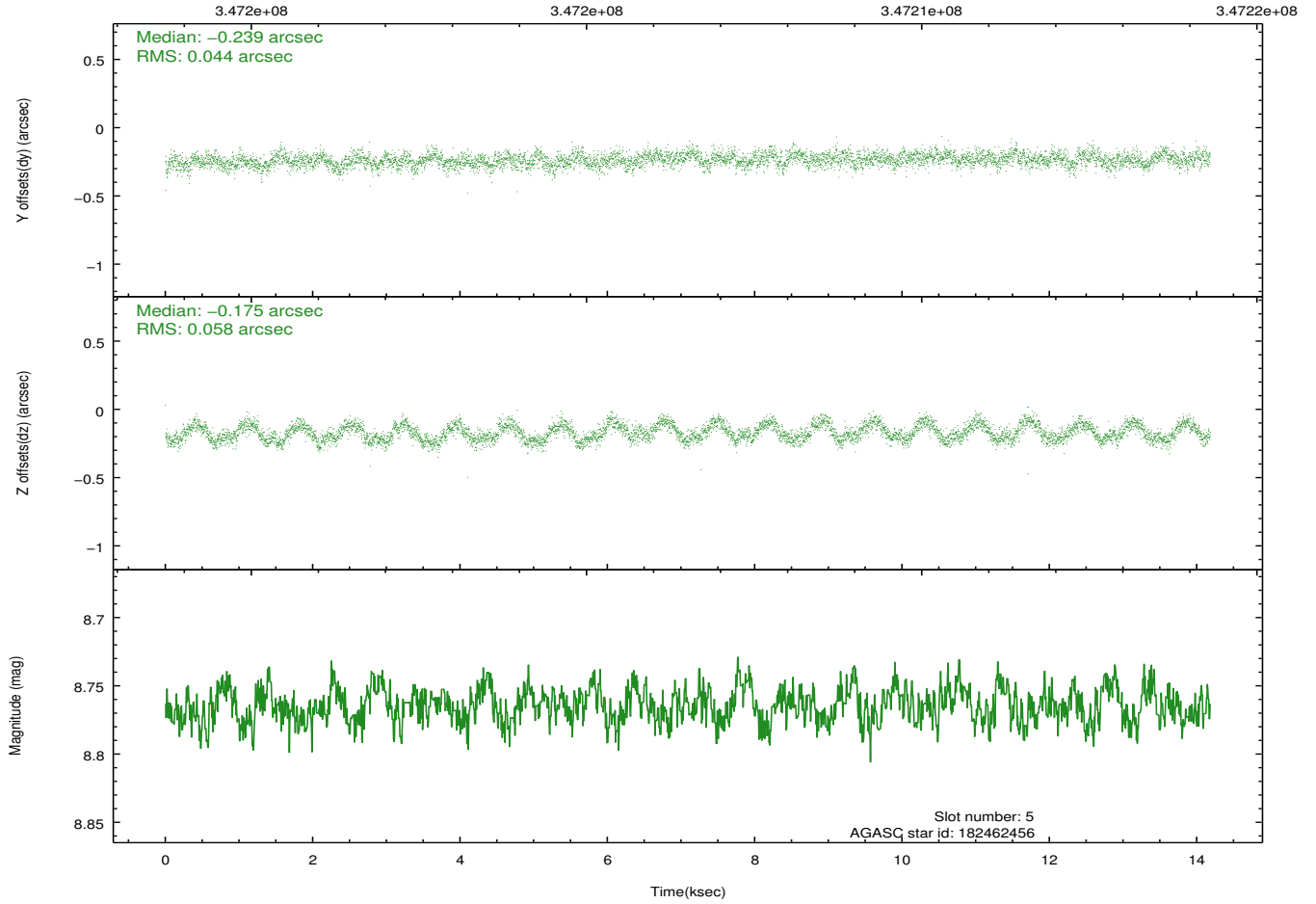
## 2.4.2 Slot 4



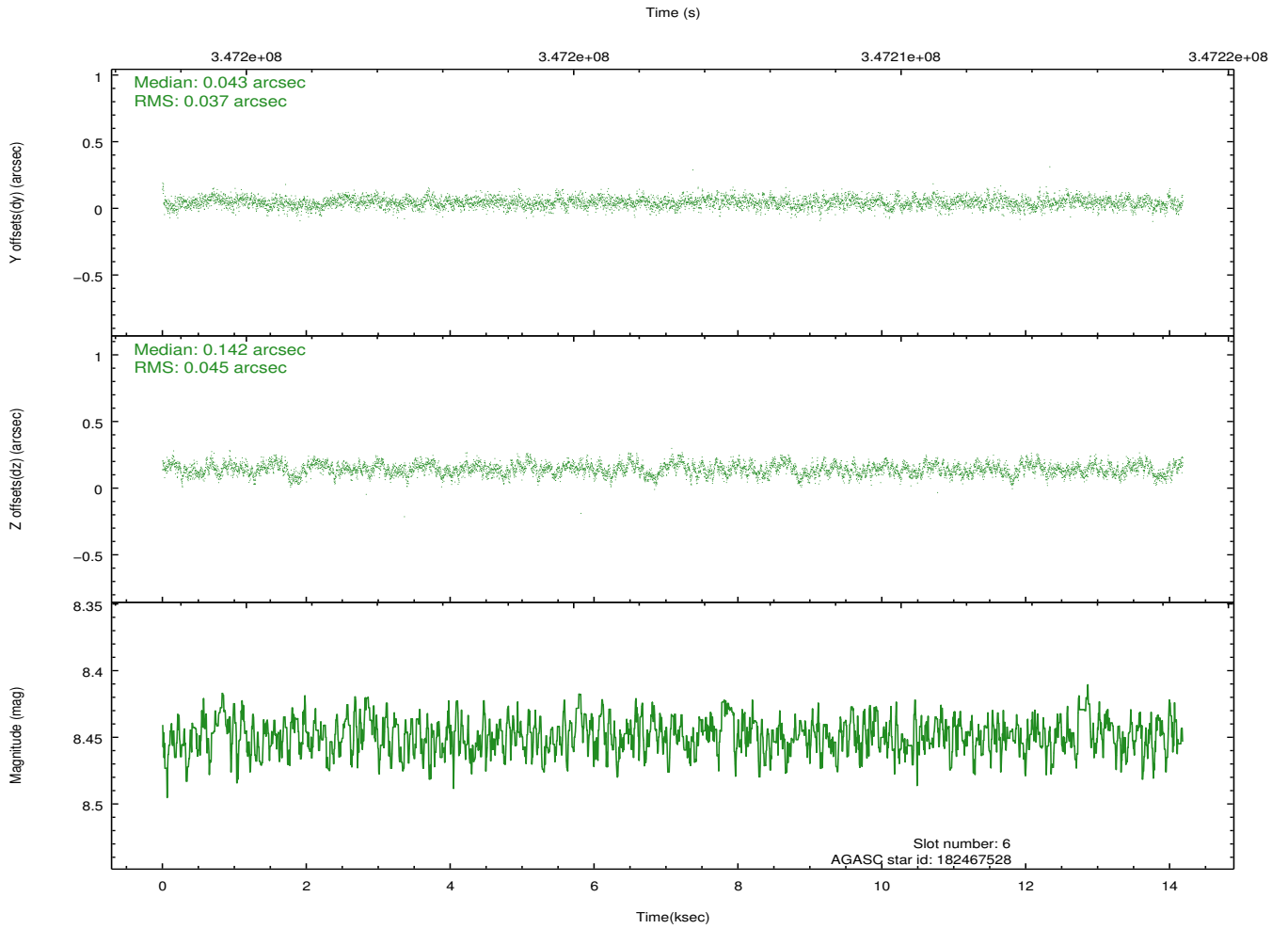
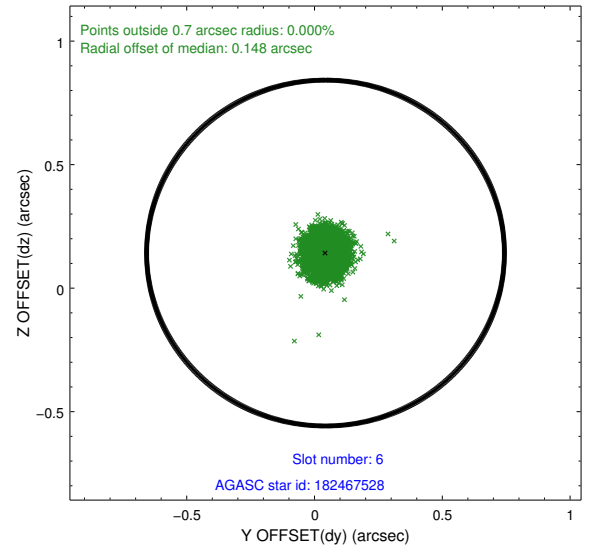
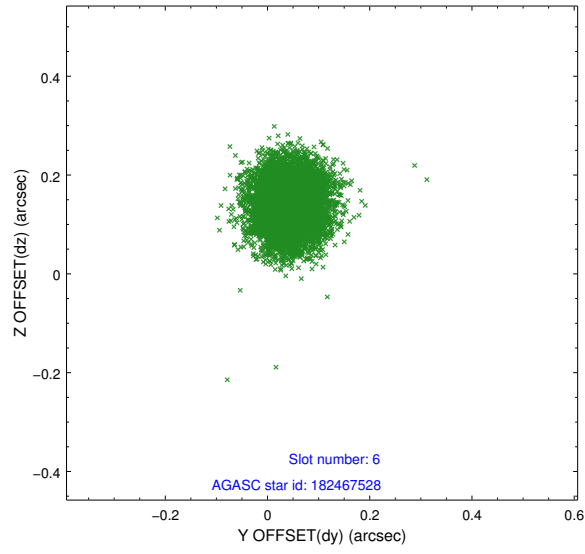
### 2.4.3 Slot 5



Time (s)

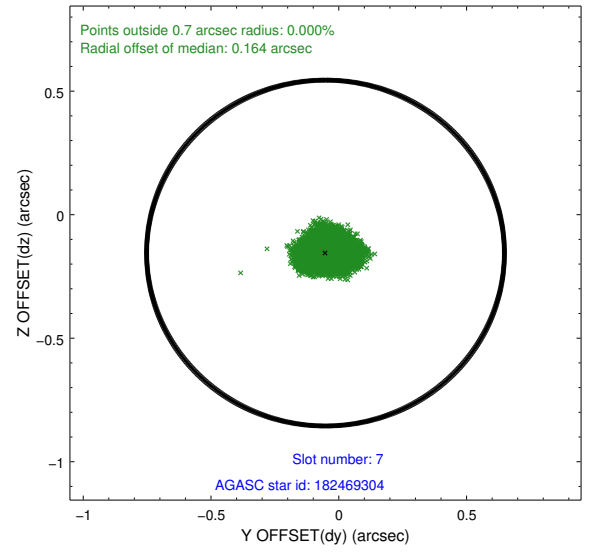
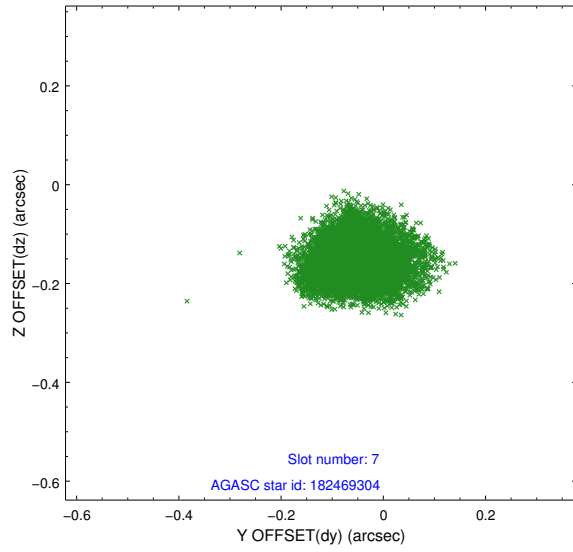


## 2.4.4 Slot 6

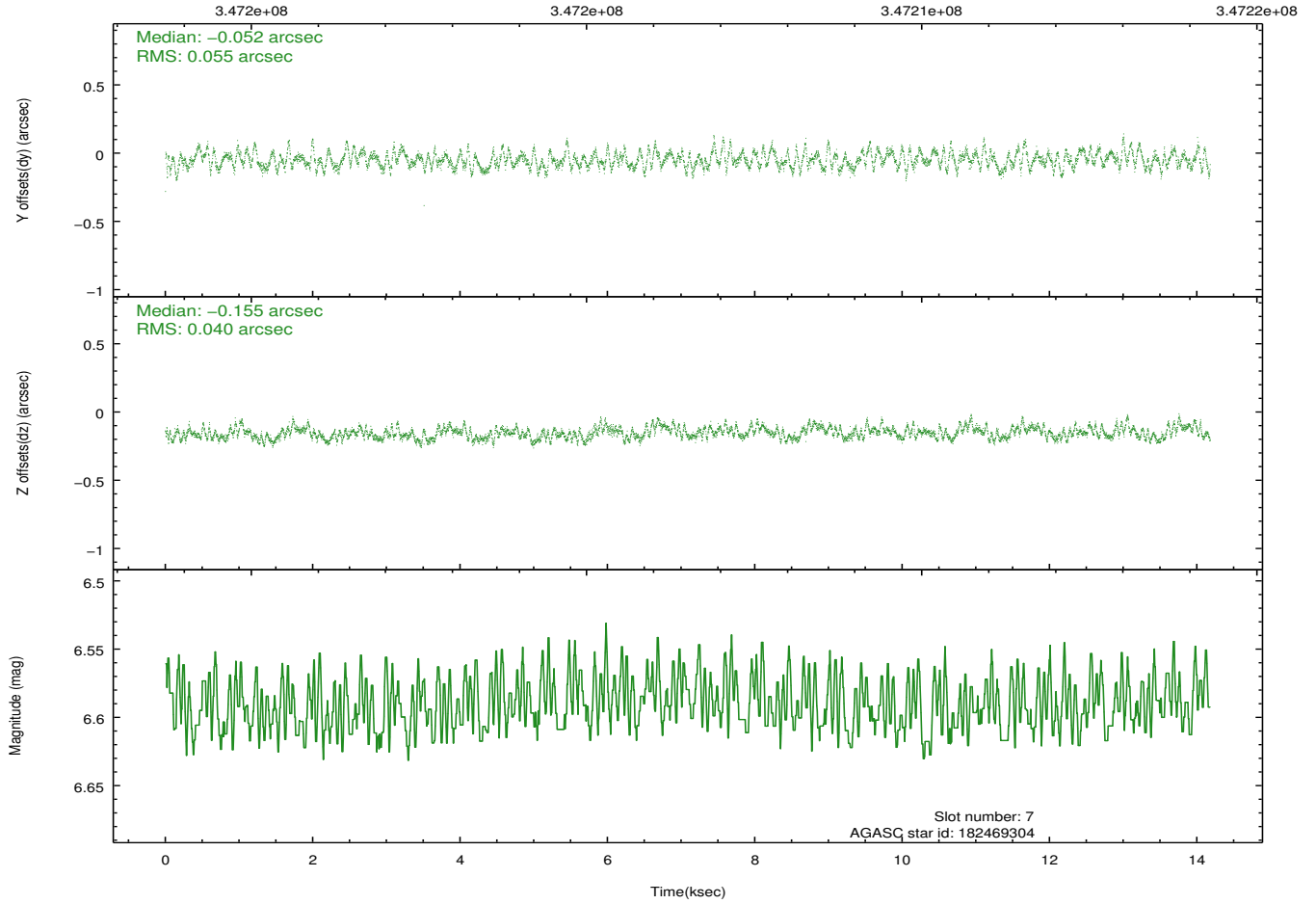




## 2.4.5 Slot 7

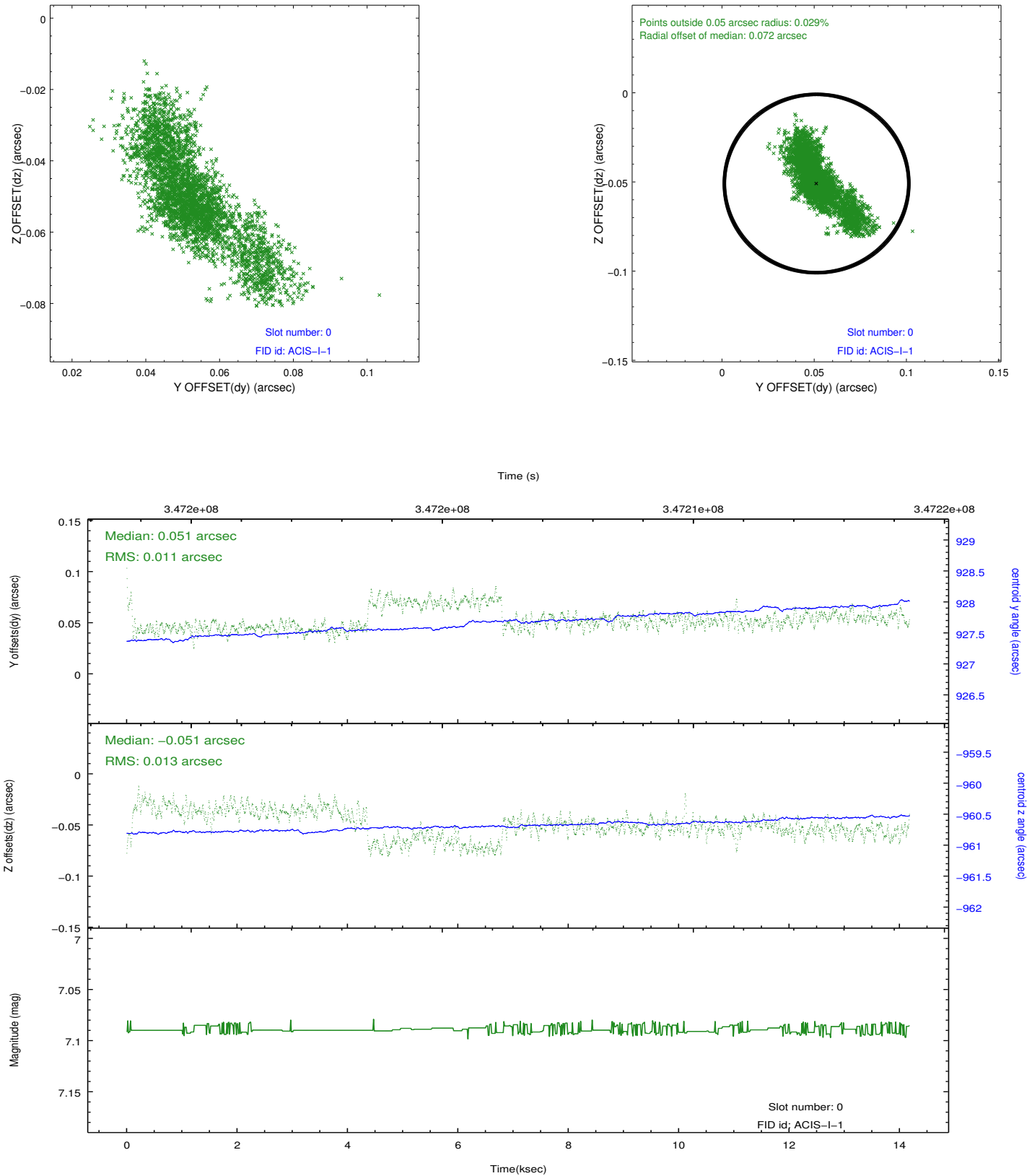


Time (s)

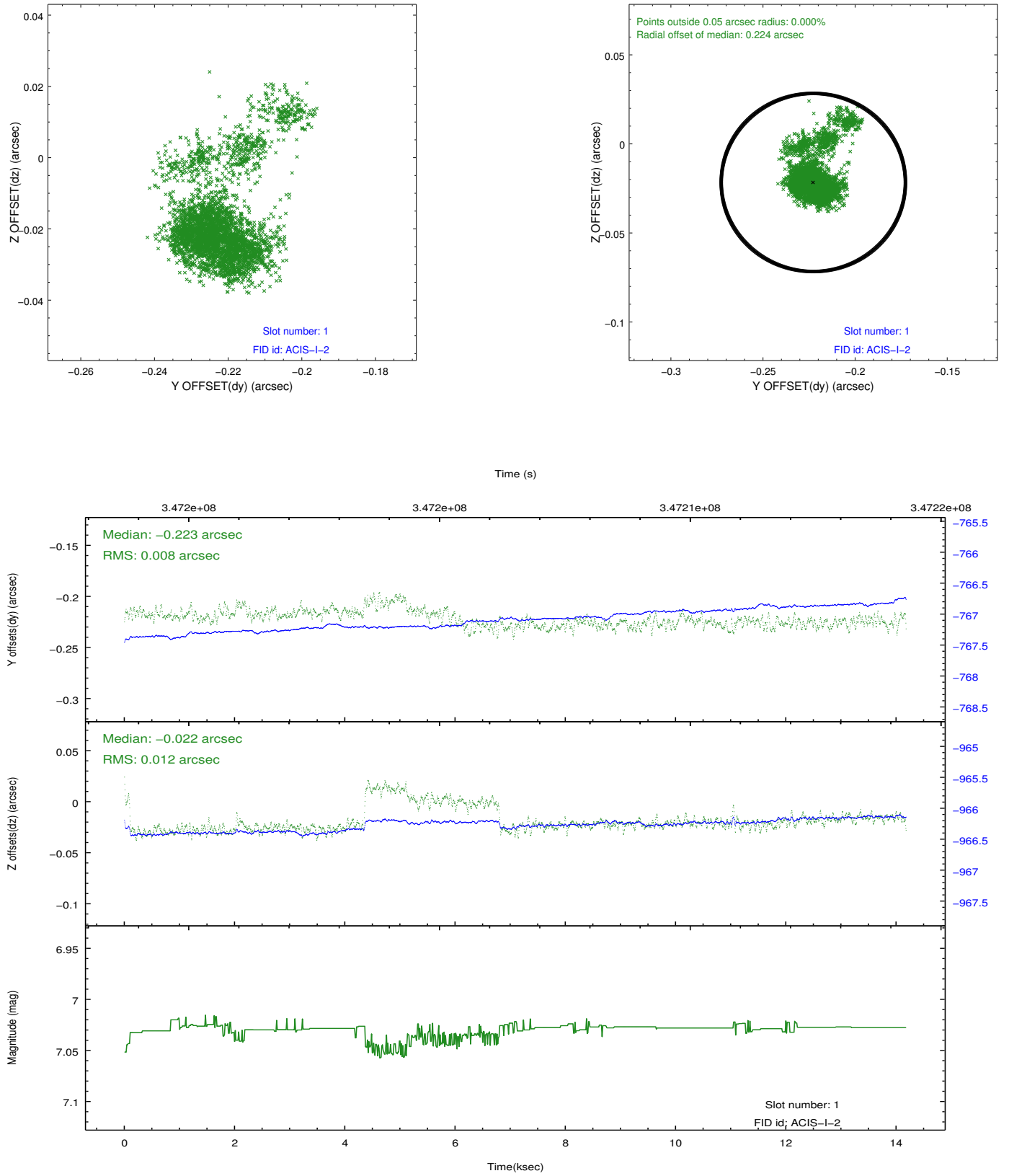


## 2.5 FID Slots

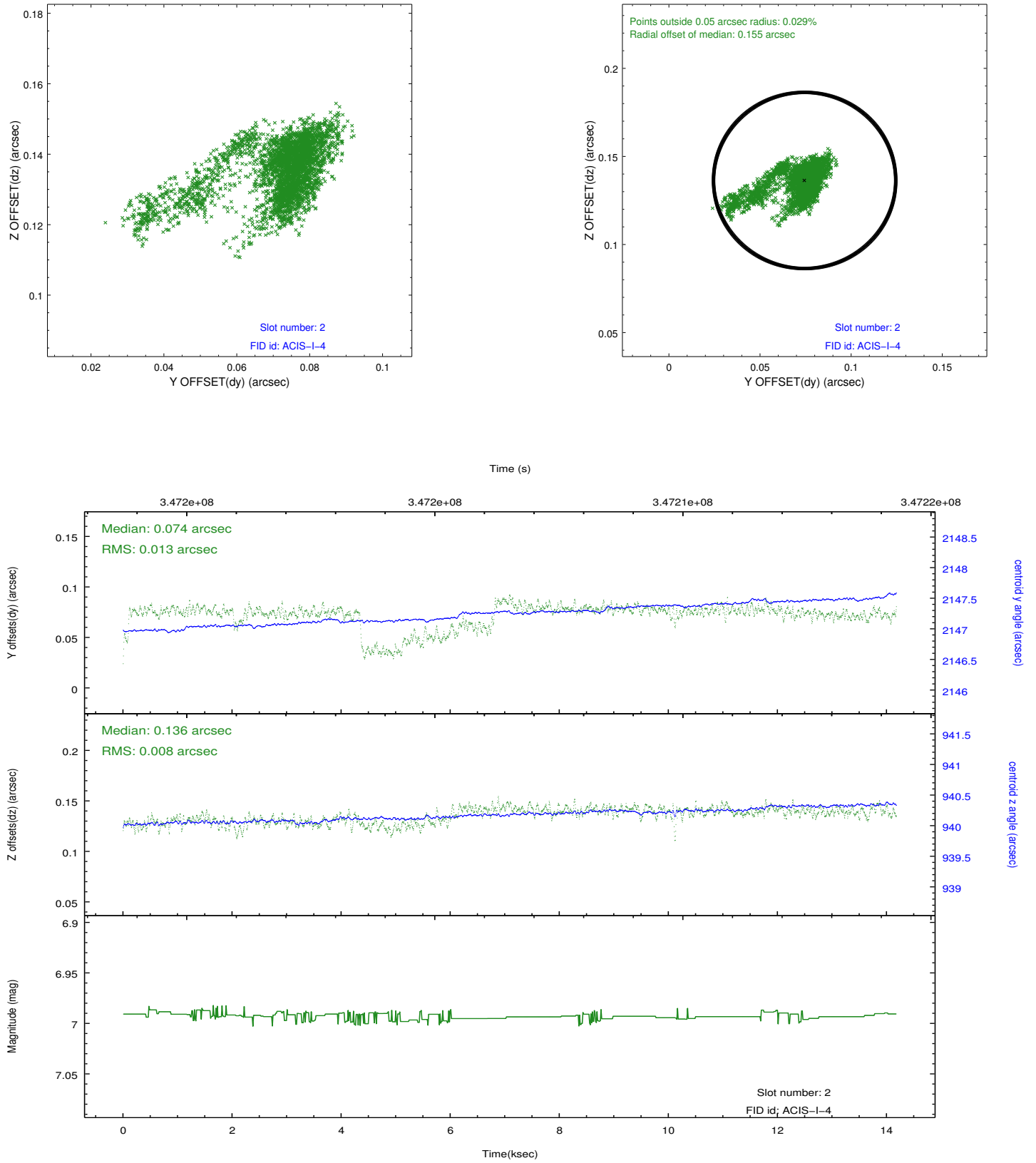
### 2.5.1 Slot 0



## 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)	2012.06.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.046059

### A.2 Comments