

# V&V Reference Report

## L2 ASCDS Version : 10

Observation 15177 - L2 Version 3  
Chandra X-Ray Center

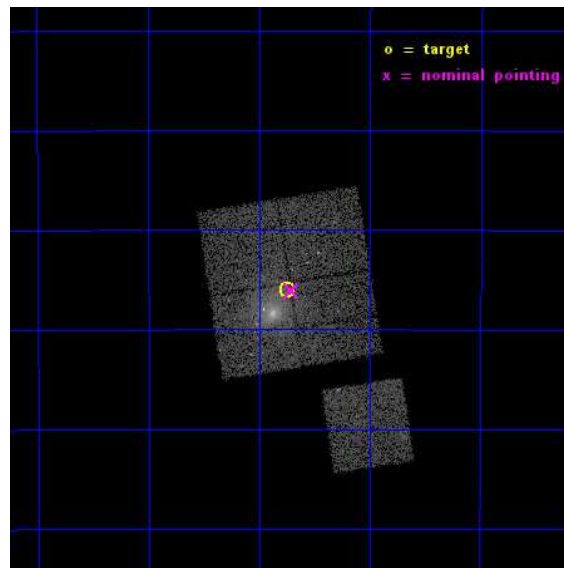
L2 Processing Date : Dec 4 2014

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# 1 Front

seq_num	801304	Sequence number
obs_id	15177	Observation id
title	Extreme Cluster Mergers - Deep Chandra Follow-up to Two Massive Cluster Mergers at Redshift 0.25 Detected by Planck	Proposal title
observer	Dr Ralph Kraft	Principal investigator
object	RXC J0528.9-3927	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	82.187549	Observer's specified target RA [deg]
dec_targ	-39.433407	Observer's specified target Dec [deg]
ra_nom	82.177214391768	Nominal RA [deg]
dec_nom	-39.434568752068	Nominal Dec [deg]
roll_nom	171.00214322329	Nominal Roll [deg]
revision	3	Processing version of data
ontime	17077.859161019	Sum of GTIs [s]
livetime	16854.724358544	Livetime [s]
ontime0	17077.85916096	Sum of GTIs [s]
ontime1	17081.000131369	Sum of GTIs [s]
ontime2	17077.859111249	Sum of GTIs [s]
ontime3	17077.859161019	Sum of GTIs [s]
ontime6	17077.859171033	Sum of GTIs [s]
l2events	52084	Number of level 2 events

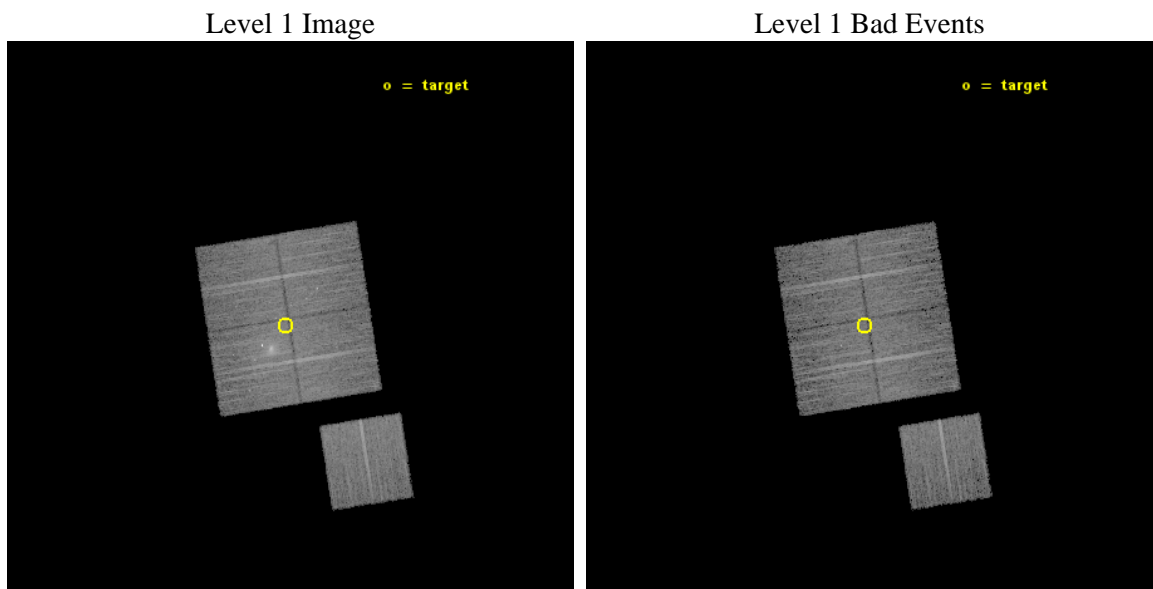




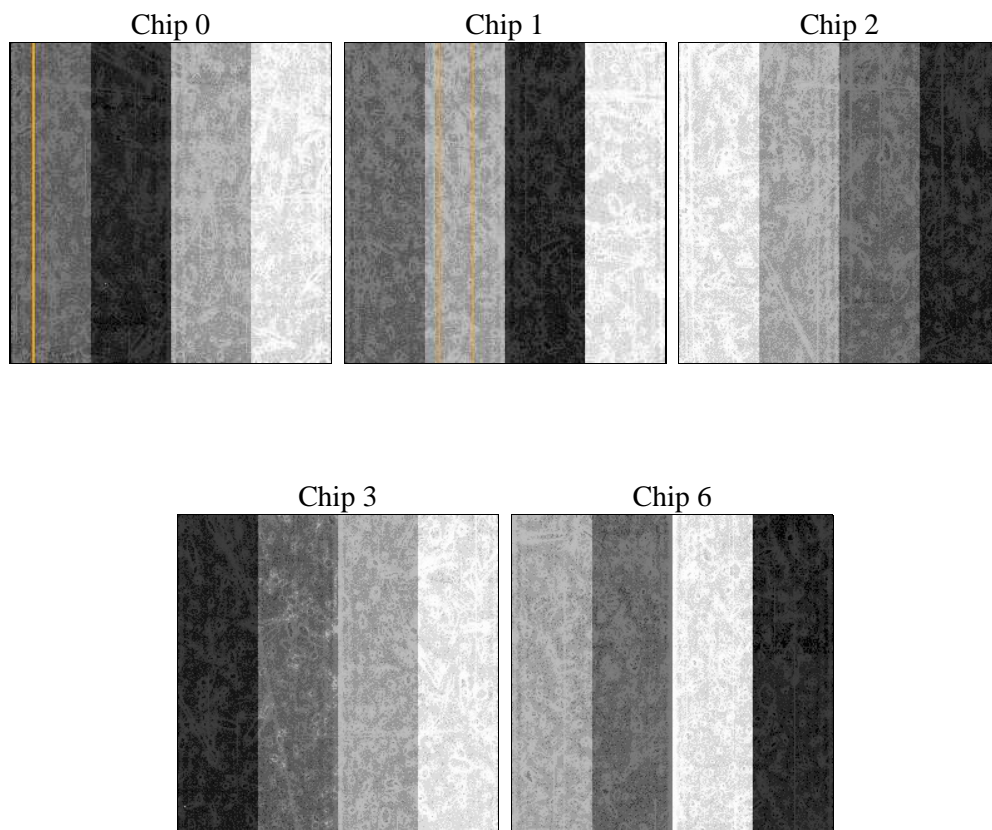
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	17000.192000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	17077.859161019	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime0	17077.85916096	Sum of GTIs [s]
date	2014-12-04T17:31:52	Date and time of file creation	ontime1	17081.000131369	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	17077.859111249	Sum of GTIs [s]
			ontime3	17077.859161019	Sum of GTIs [s]
			ontime6	17077.859171033	Sum of GTIs [s]
			l1events	389243	Number of level 1 events

### 2.1.4 Events

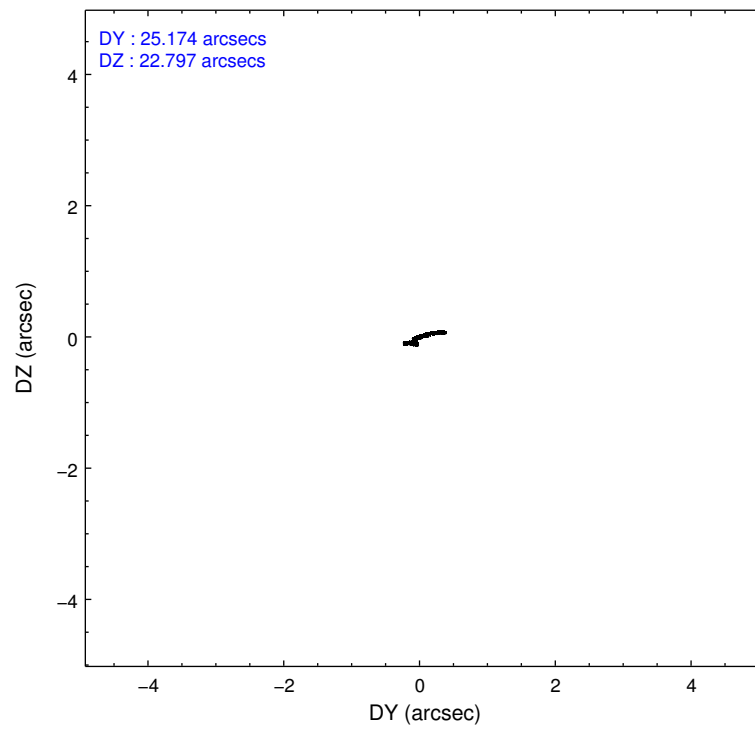
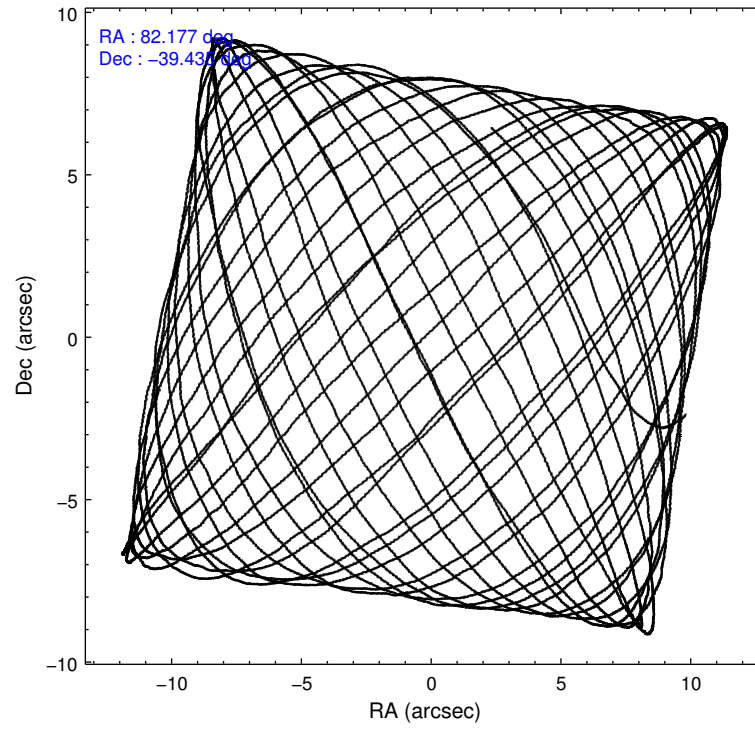
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	74707	70697	79176	88850	75813
rejected events	64782	60632	69666	67718	66330
rejected %	86%	85%	87%	76%	87%

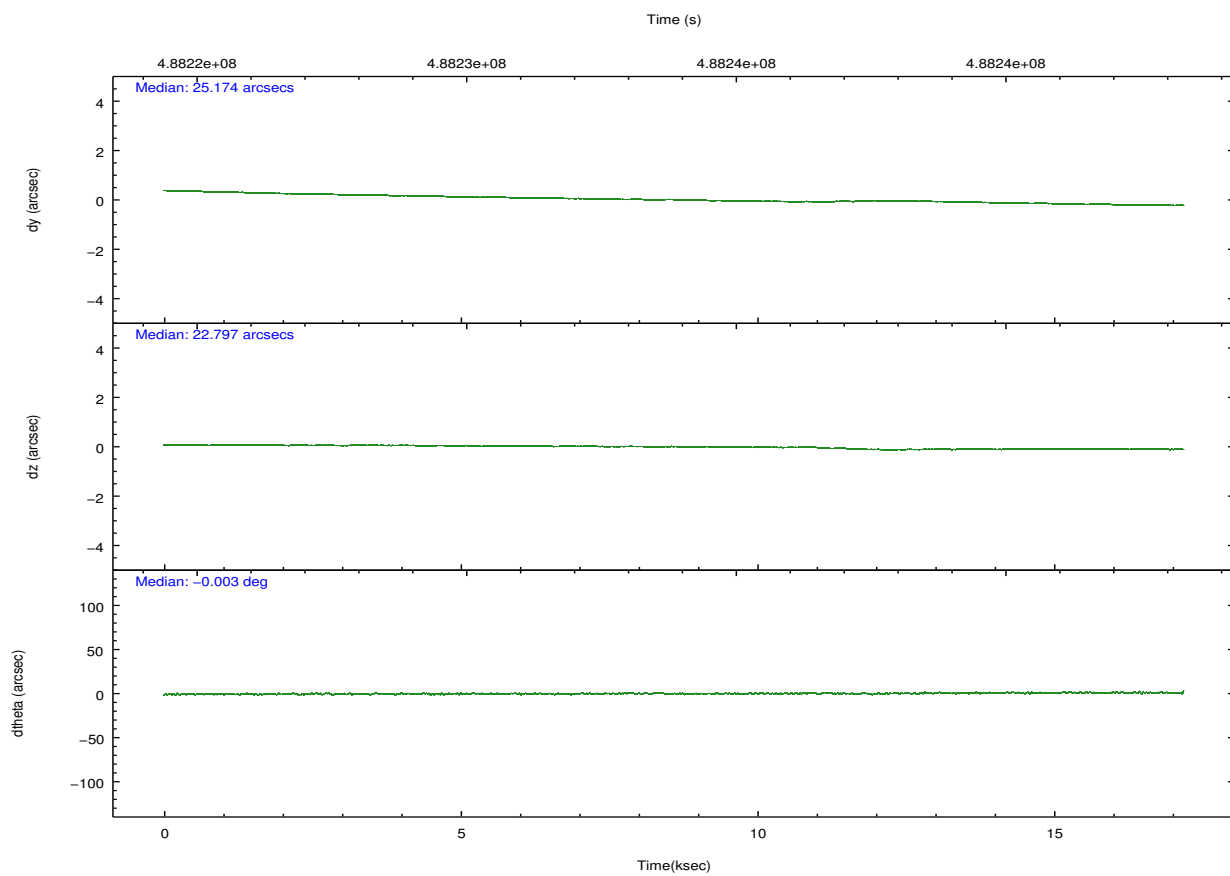
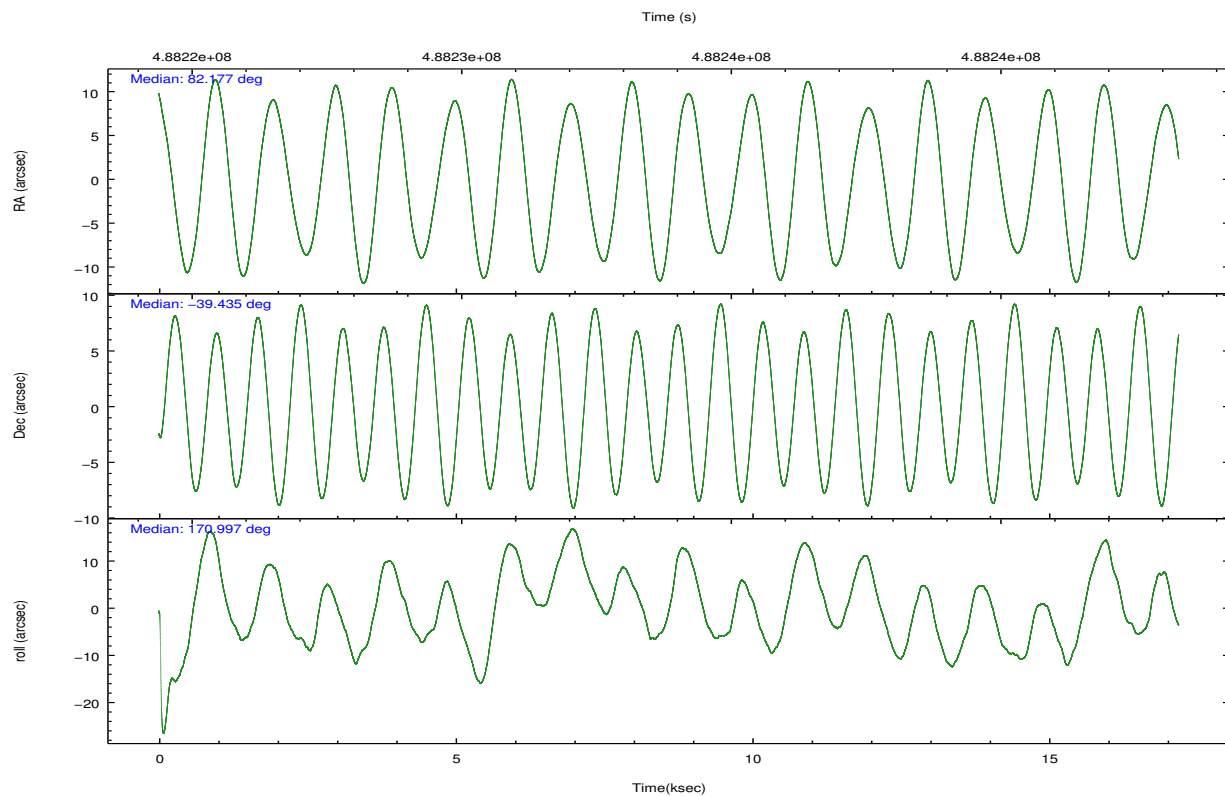
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	3942	3682	3643	13122	3361
	5%	5%	4%	14%	4%
grade 1 events	45	35	42	187	50
	0%	0%	0%	0%	0%
grade 2 events	2420	2308	2310	3304	2157
	3%	3%	2%	3%	2%
grade 3 events	949	1044	943	1380	983
	1%	1%	1%	1%	1%
grade 4 events	938	1003	918	1328	981
	1%	1%	1%	1%	1%
grade 5 events	3145	3450	2840	3783	3411
	4%	4%	3%	4%	4%
grade 6 events	1680	2033	1701	2011	2009
	2%	2%	2%	2%	2%
grade 7 events	61588	57142	66779	63735	62861
	82%	80%	84%	71%	82%

## 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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	82.210368	82.17721439176765	Subarray requested	NONE	NONE
[deg] Pointing Dec	-39.424613	-39.43456875206759	Alternating exposures requested	N	N
[deg] Pointing Roll	170.814494	171.002143223293	[s] Primary exposure time	0.000000	3.1
[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)	488225421.184000	488224241.34415			
Observation start date	2013-06-21T18:09:14	2013-06-21T17:50:41			
[s] Observation end time (MET)	488242421.184000	488242659.57015			
Observation end date	2013-06-21T22:52:34	2013-06-21T22:57:39			
Read mode	TIMED	TIMED			

## 2.3 Aspect



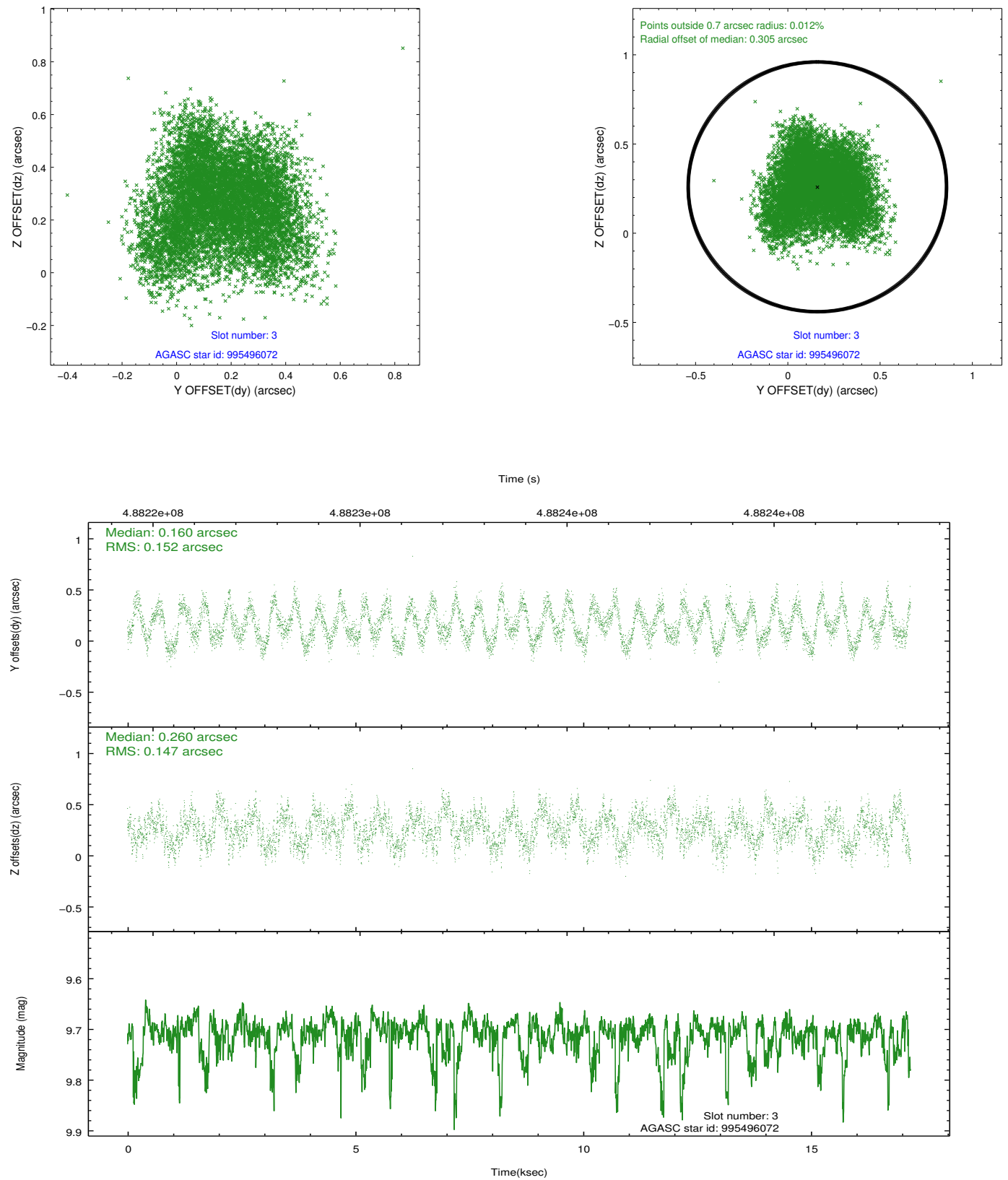


### Slot Statistics

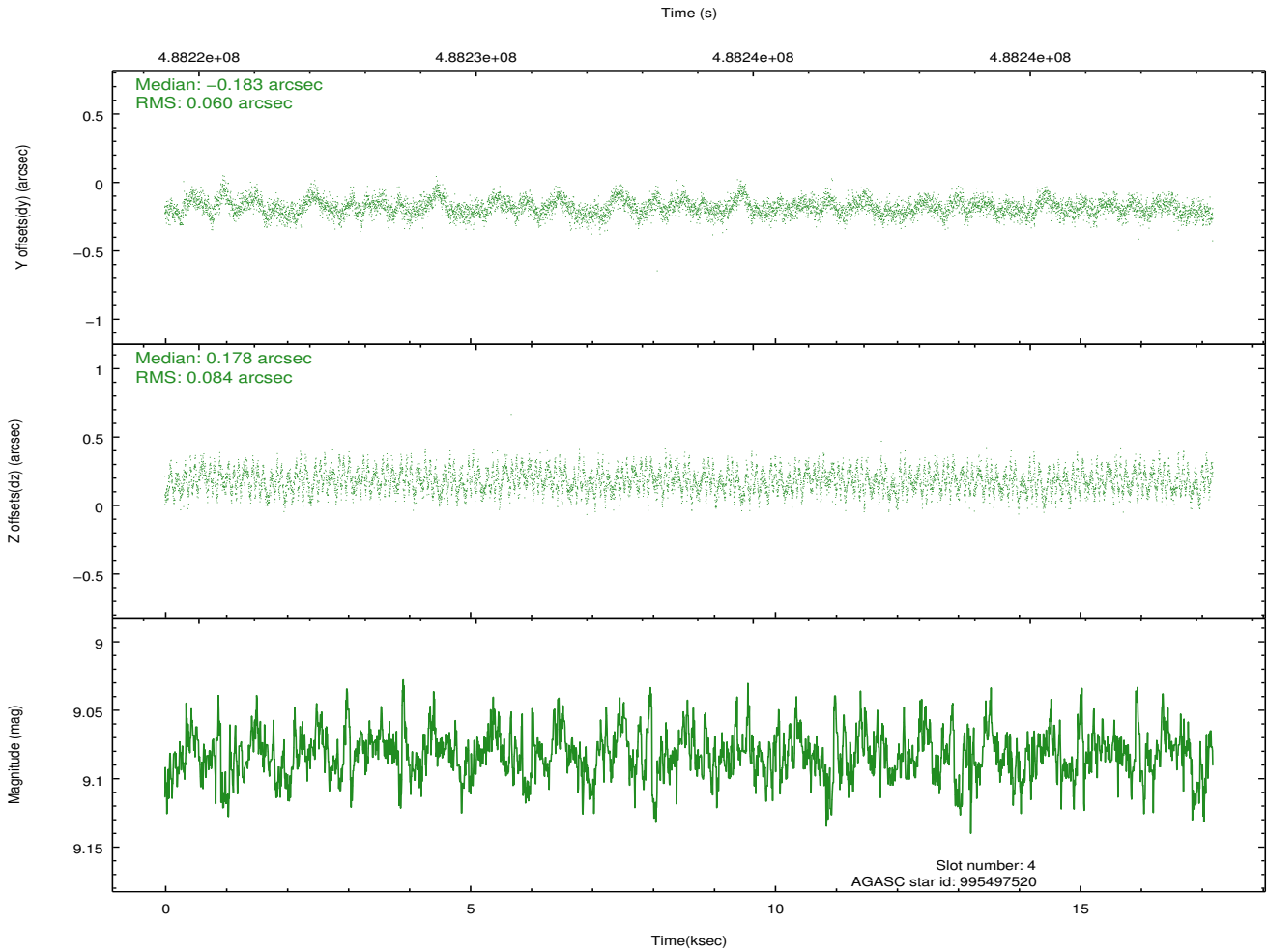
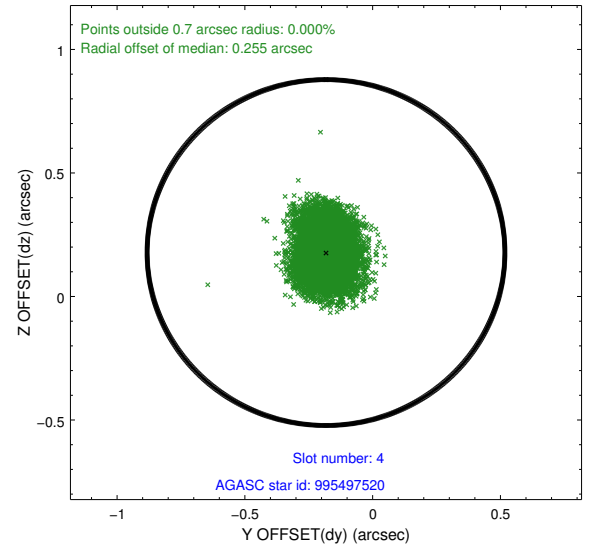
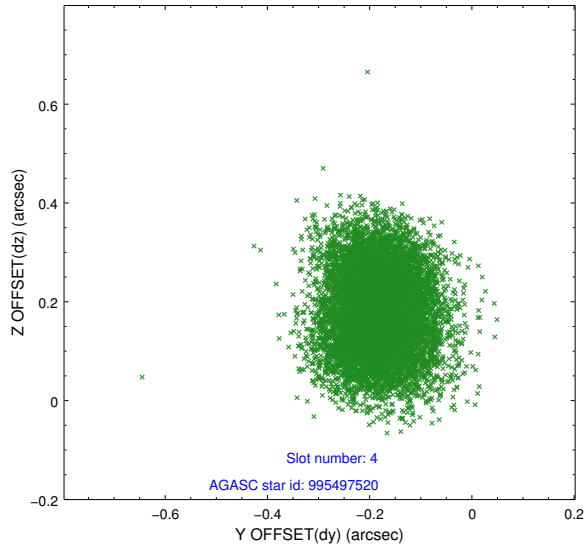
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.07	4192	-0.025	0.030	0.015	0.024	0.000000	0.000000	913.97	-846.53
1	FID		ACIS-I-4	7.04	4192	0.240	0.015	0.008	0.013	0.000000	0.000000	2134.36	1053.17
2	FID		ACIS-I-5	7.06	4192	-0.315	0.025	0.011	0.018	0.000000	0.000000	-1834.06	1051.21
3	GUIDE	used	995496072	9.71	8325	0.160	0.260	0.231	0.346	82.242247	-38.787996	278.52	-2276.24
4	GUIDE	used	995497520	9.08	8378	-0.183	0.178	0.111	0.175	82.116967	-39.370982	286.75	-149.29
5	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
6	GUIDE	used	996018960	9.50	8274	-0.128	-0.337	0.131	0.208	81.511270	-39.679524	1764.79	1222.36
7	GUIDE	used	996147256	9.38	8354	0.127	-0.111	0.168	0.244	82.511157	-39.766031	-1017.35	1081.31

## 2.4 Star Slots

### 2.4.1 Slot 3

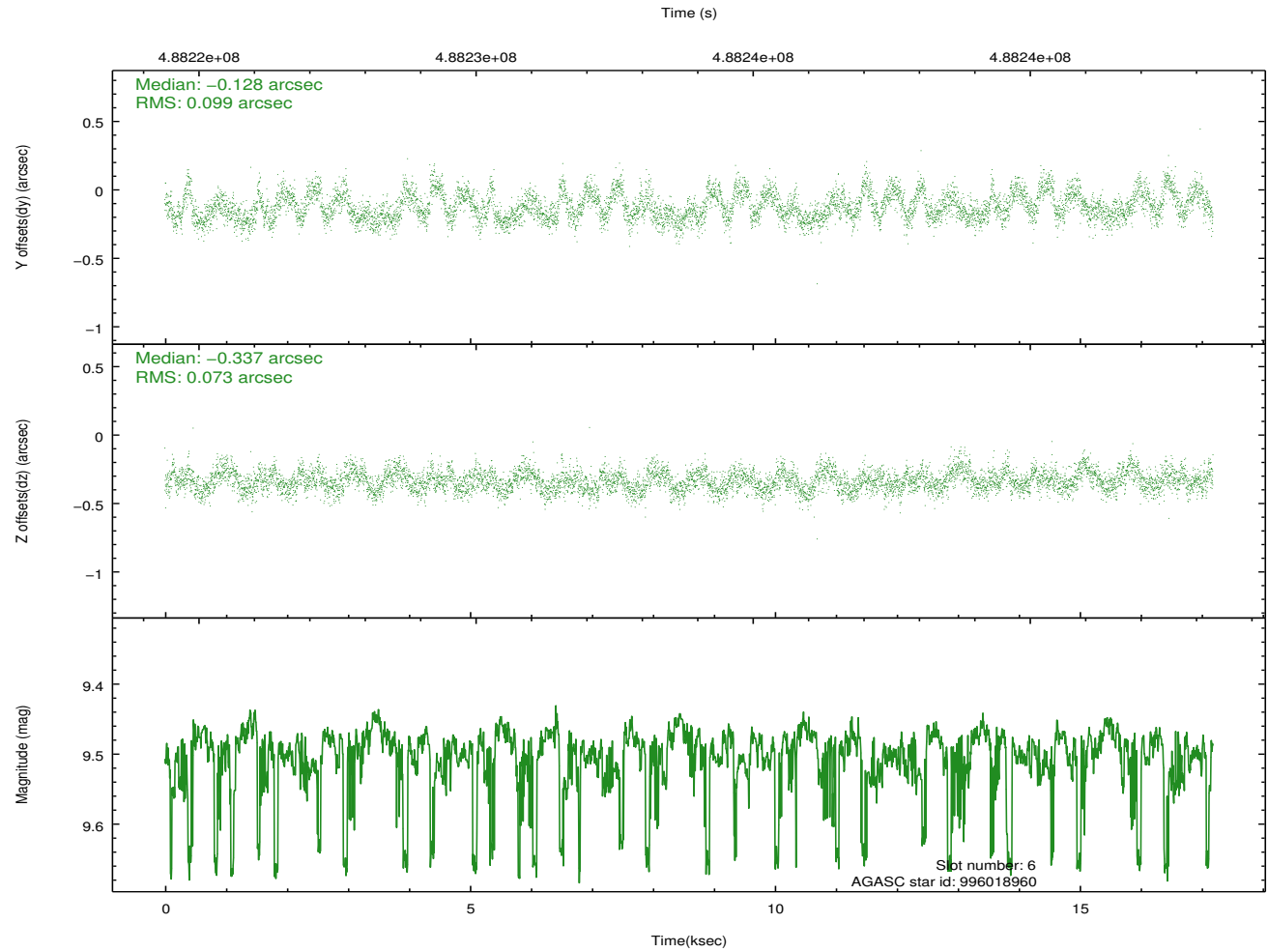
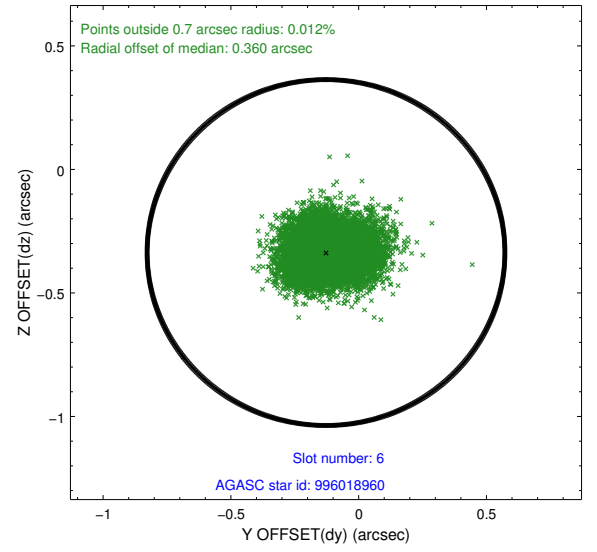
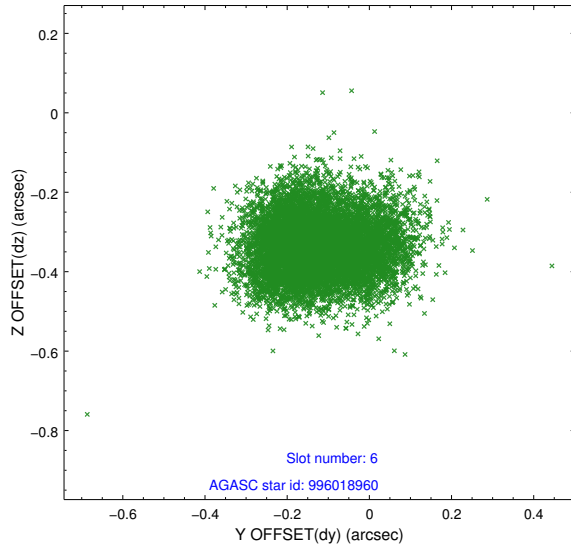


## 2.4.2 Slot 4

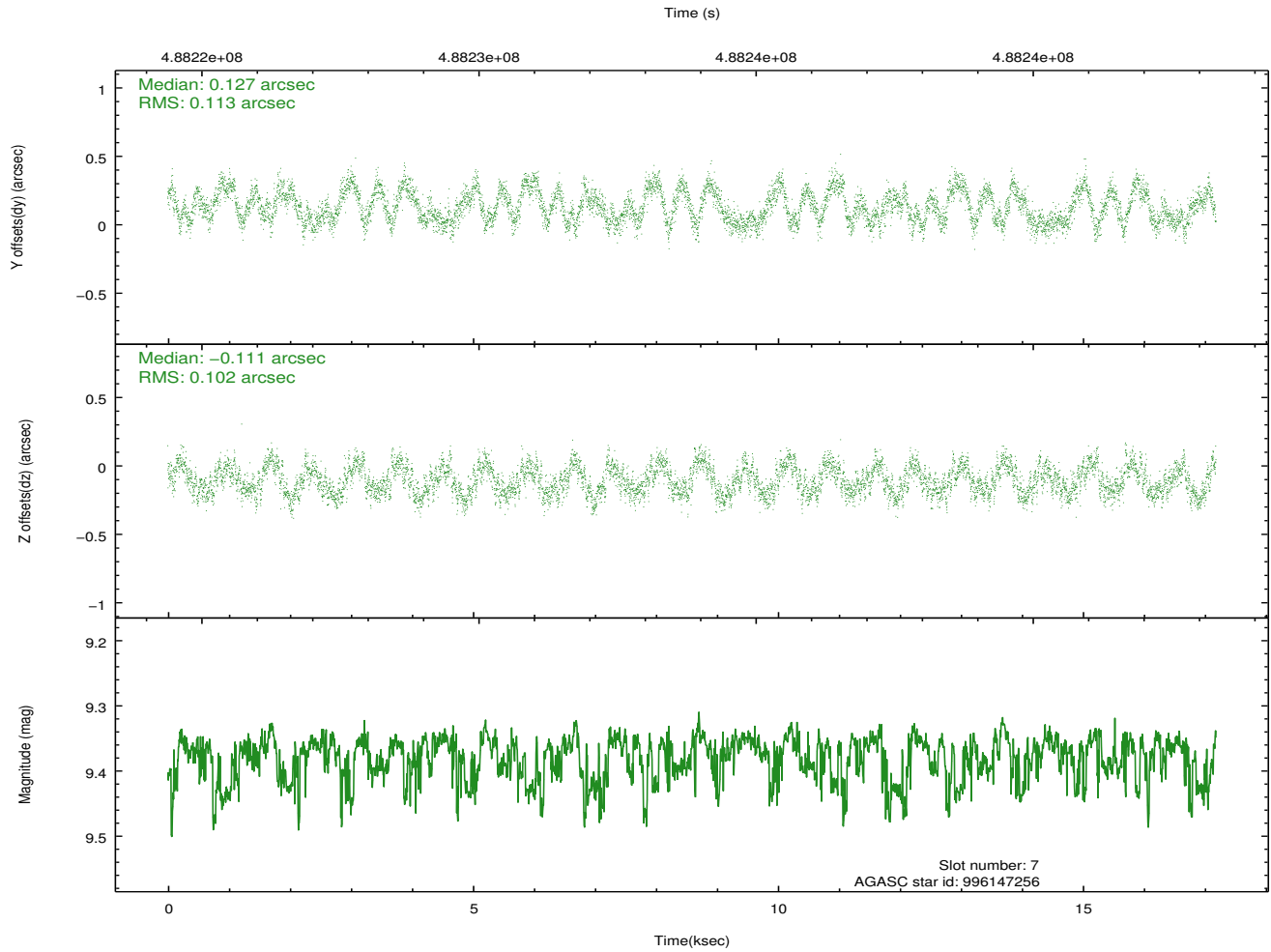
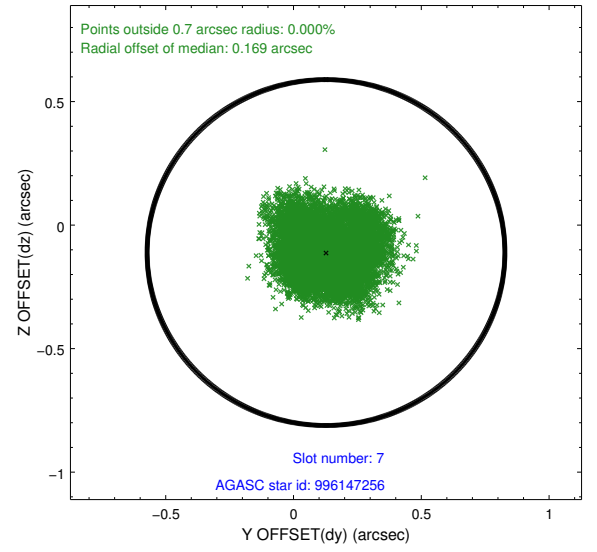
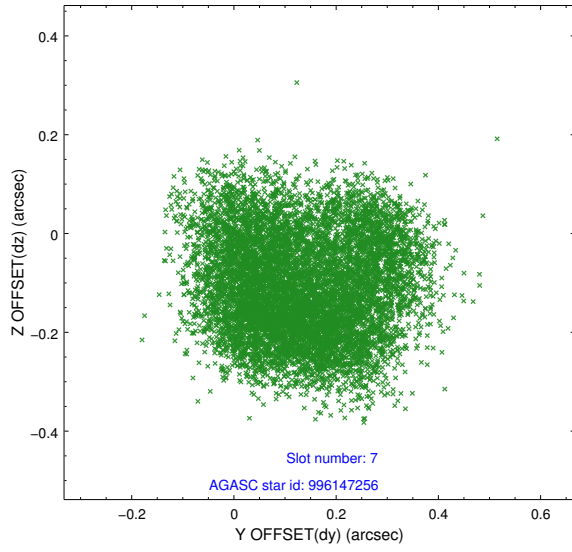




### 2.4.3 Slot 6

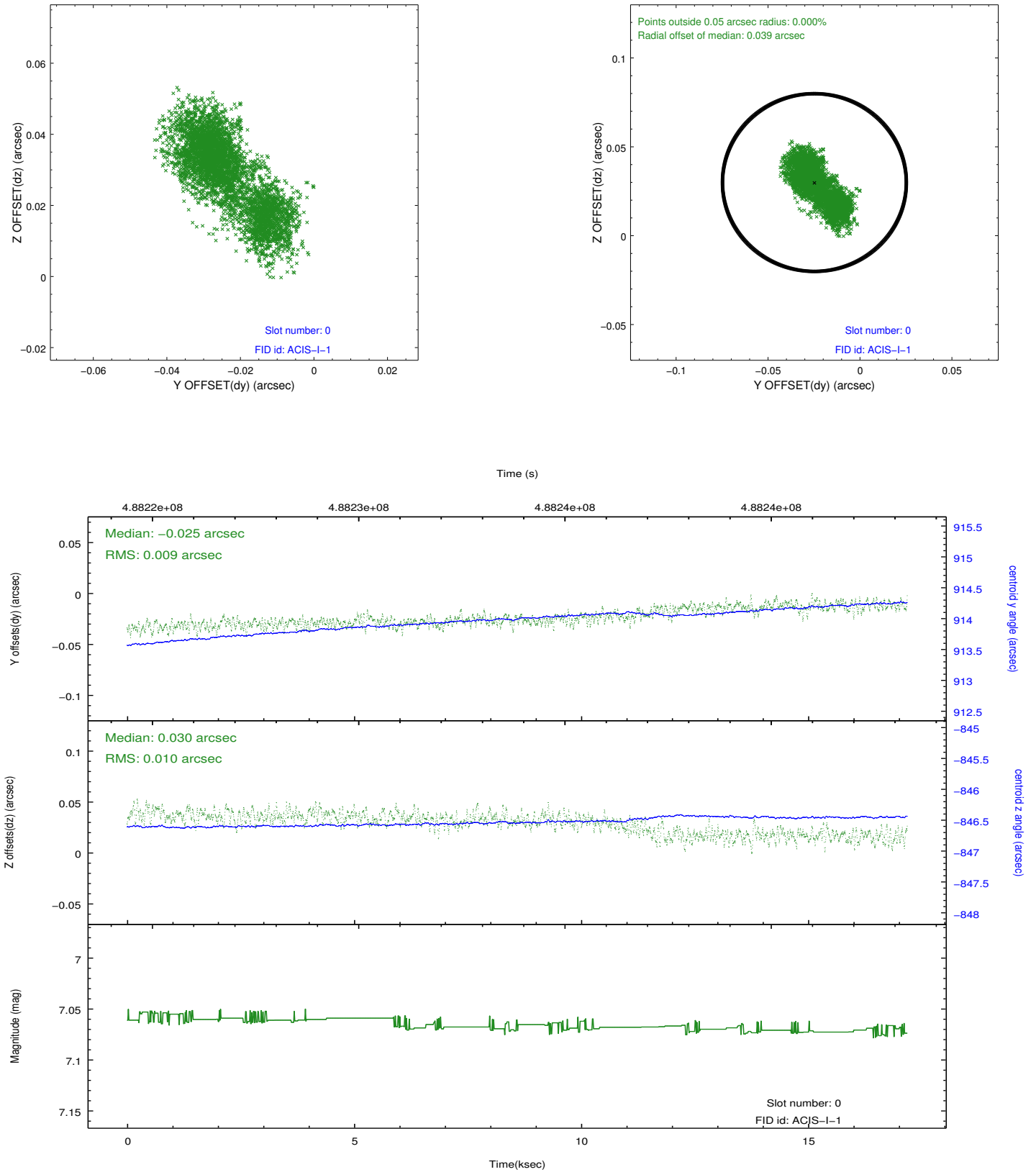


## 2.4.4 Slot 7

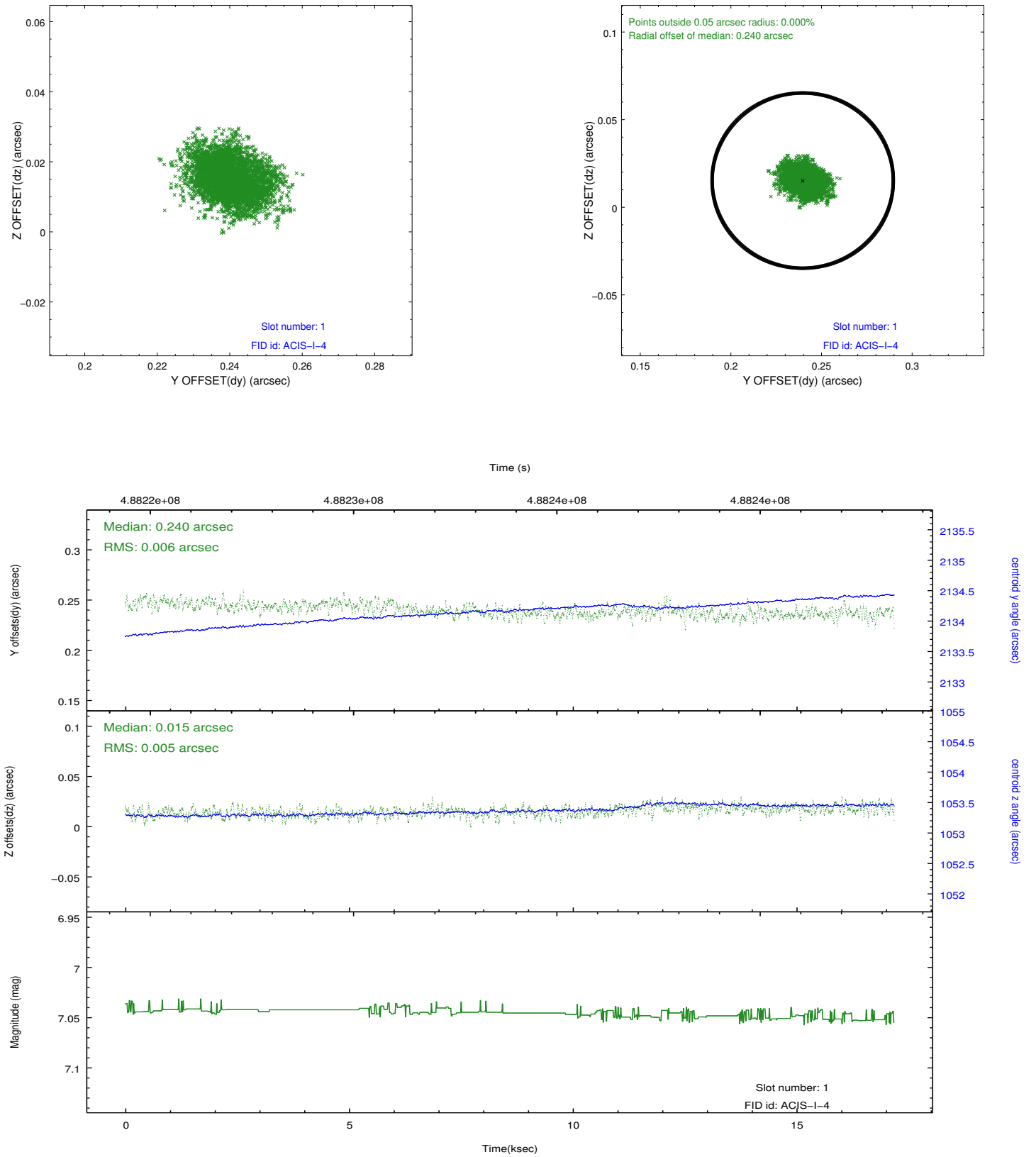


## 2.5 FID Slots

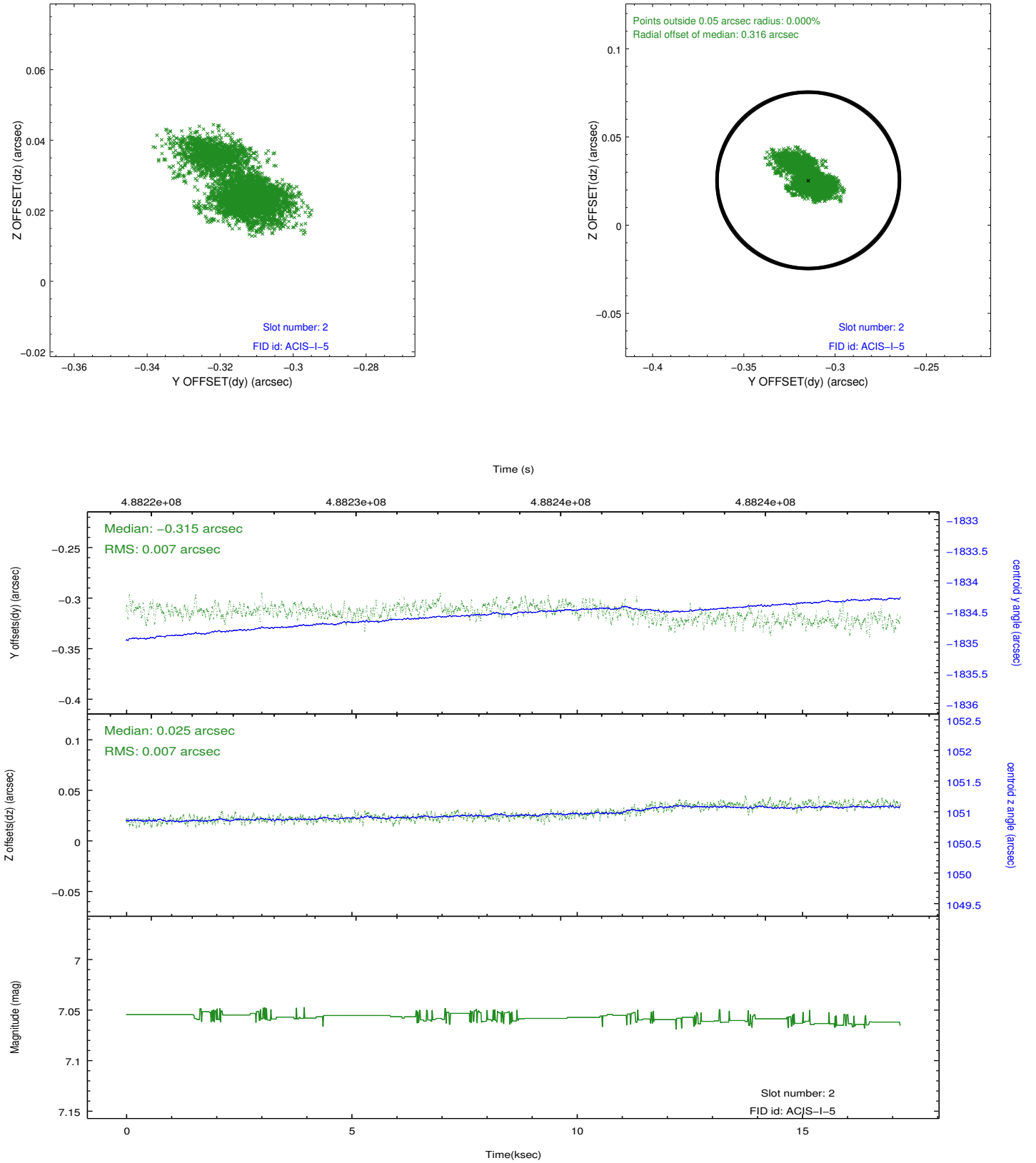
### 2.5.1 Slot 0



## 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)	2014.12.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	17.077859161019

## A.2 Comments

The guide star in slot 5 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.

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.