

# V&V Reference Report

## L2 ASCDS Version : 10

Observation 15237 - L2 Version 2  
Chandra X-Ray Center

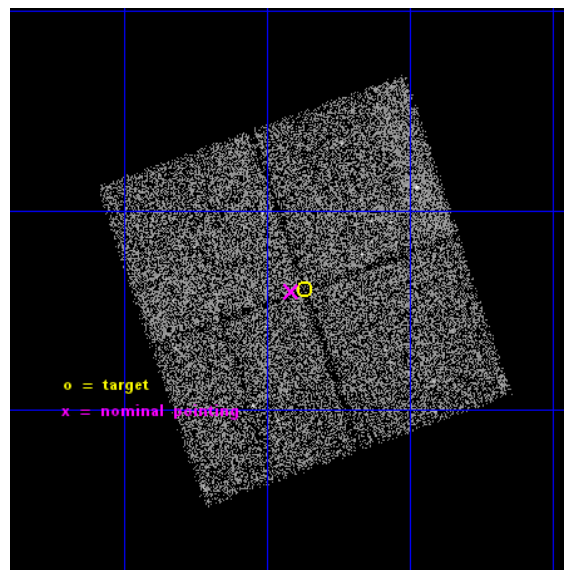
L2 Processing Date : Dec 3 2014

## 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

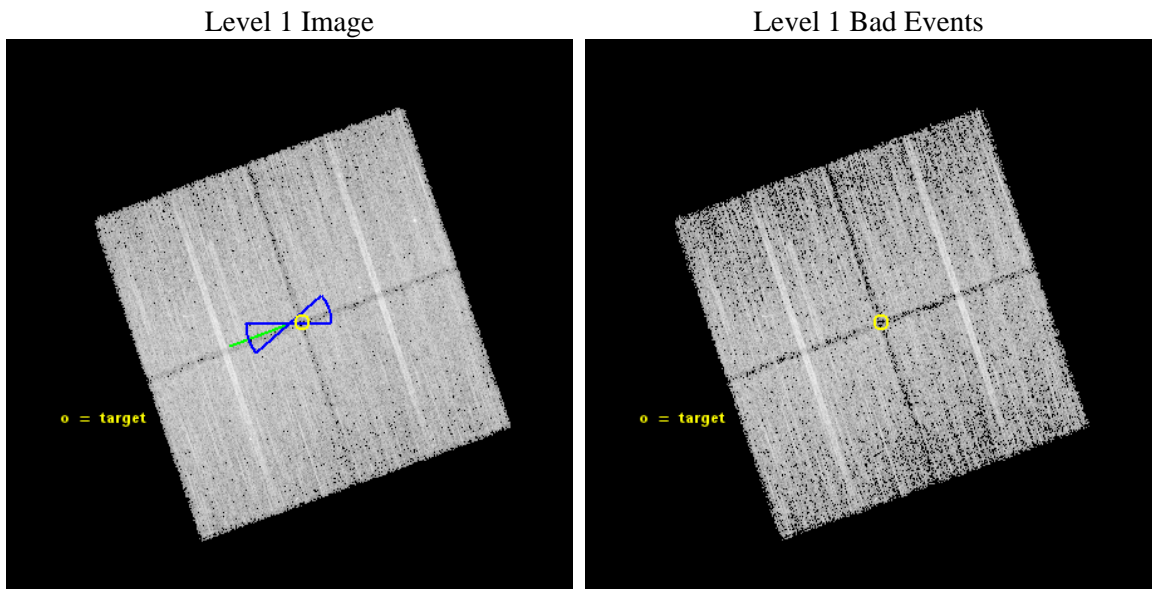
seq_num	901067	Sequence number
obs_id	15237	Observation id
title	The COSMOS Legacy Survey	Proposal title
observer	Dr Francesca Civano	Principal investigator
object	COSMOS Legacy	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	150.21716	Observer's specified target RA [deg]
dec_targ	2.767518	Observer's specified target Dec [deg]
ra_nom	150.22856395486	Nominal RA [deg]
dec_nom	2.7659296566297	Nominal Dec [deg]
roll_nom	250.65812902276	Nominal Roll [deg]
revision	2	Processing version of data
ontime	25581.15920651	Sum of GTIs [s]
livetime	25246.922528901	Livetime [s]
ontime0	25584.300196767	Sum of GTIs [s]
ontime1	25581.15920651	Sum of GTIs [s]
ontime2	25581.159196377	Sum of GTIs [s]
ontime3	25574.877216041	Sum of GTIs [s]
l2events	47881	Number of level 2 events



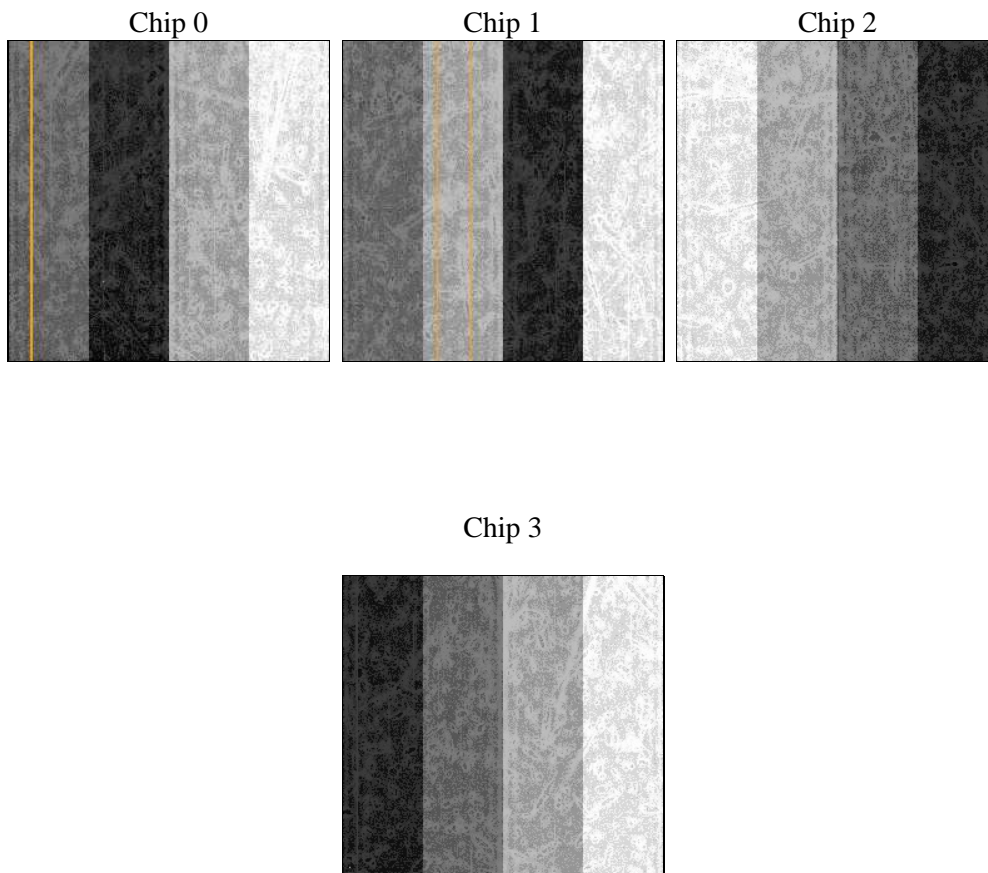
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	25493.238000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	25581.15920651	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	25584.300196767	Sum of GTIs [s]
date	2014-12-03T12:21:31	Date and time of file creation	ontime1	25581.15920651	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	25581.159196377	Sum of GTIs [s]
			ontime3	25574.877216041	Sum of GTIs [s]
			l1events	454788	Number of level 1 events

### 2.1.4 Events

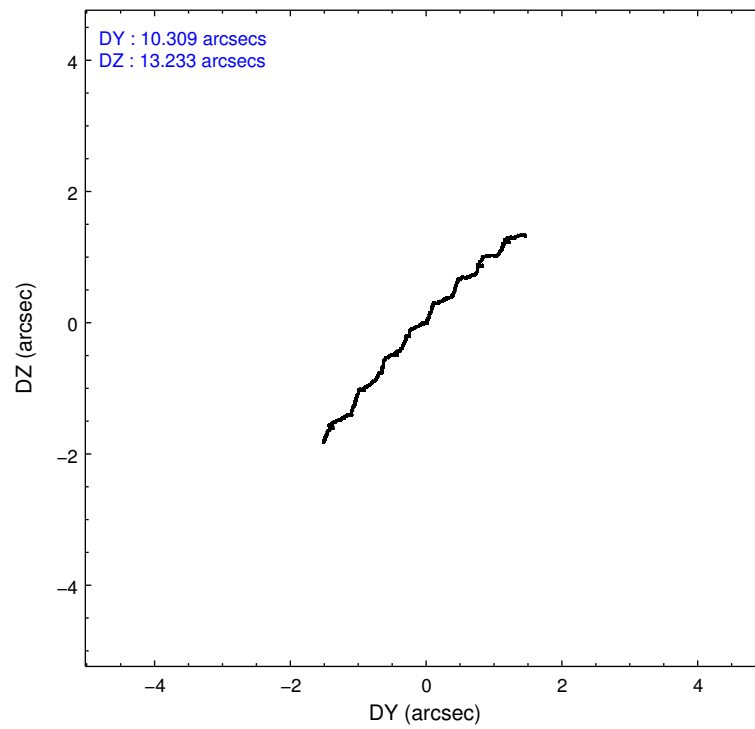
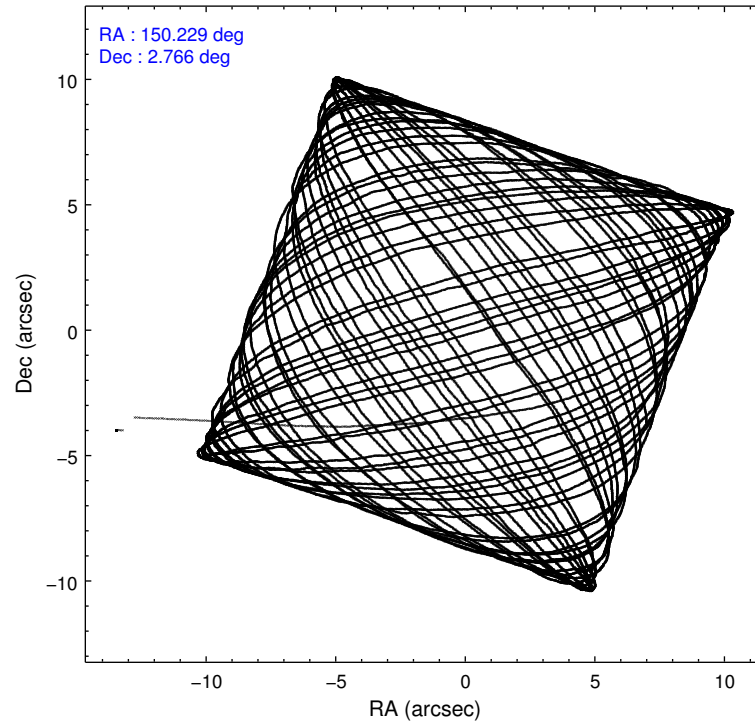
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	106740	113123	118789	116136
rejected events	92749	97182	105227	102664
rejected %	86%	85%	88%	88%

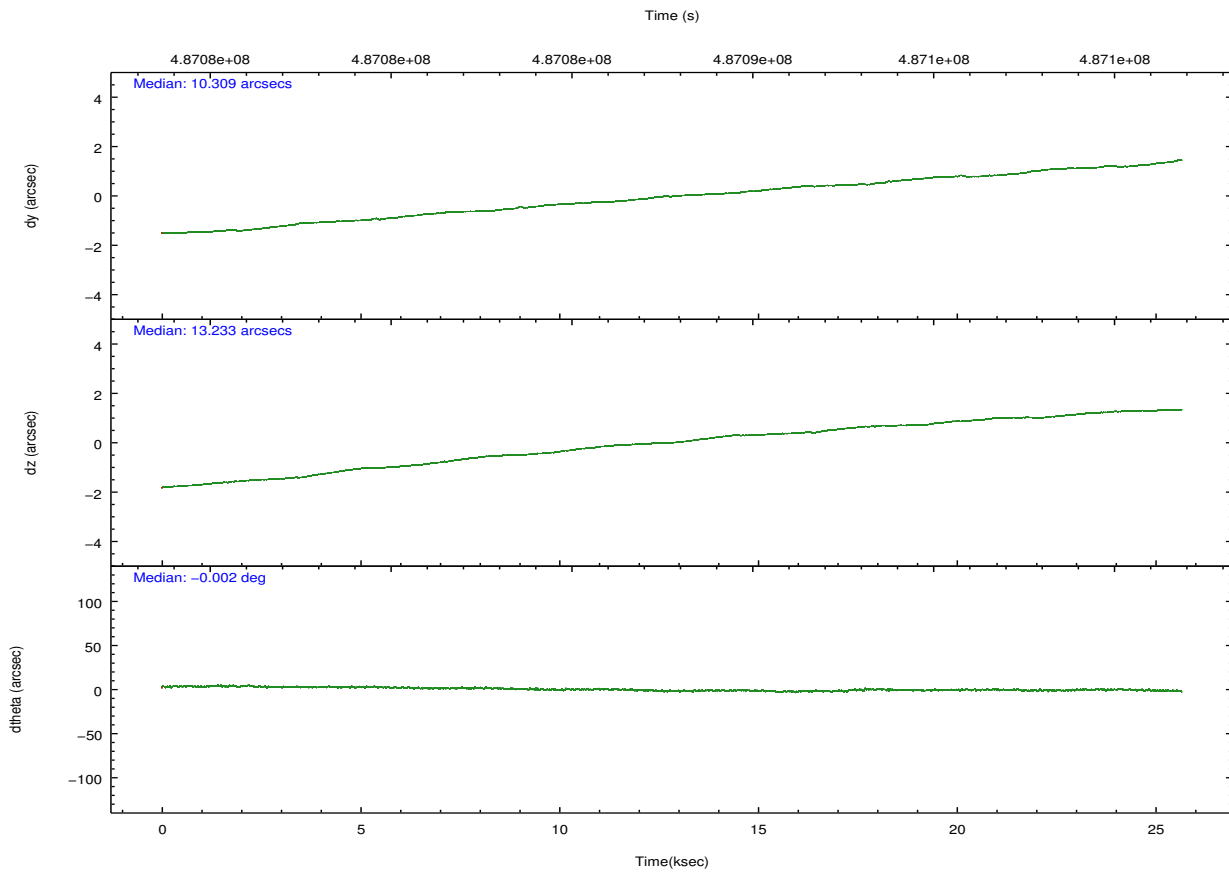
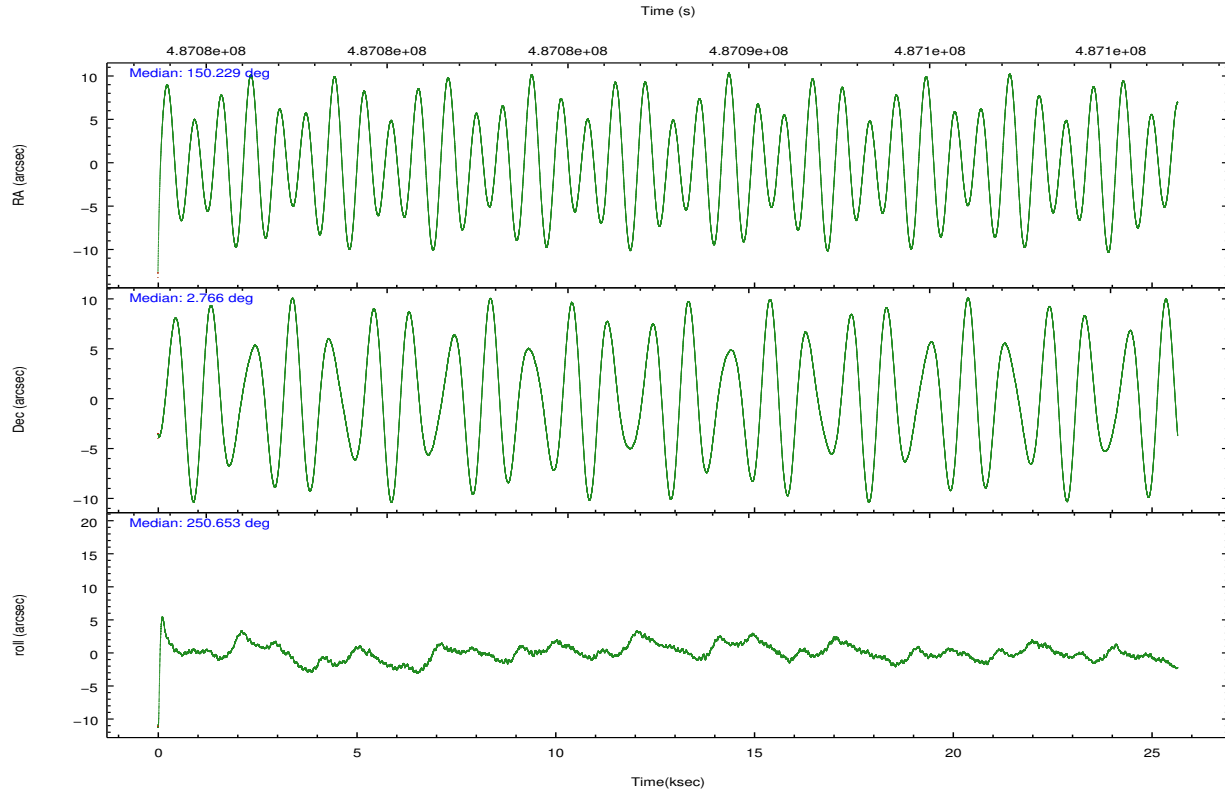
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	4867	5739	4760	4941
	4%	5%	4%	4%
grade 1 events	62	58	59	68
	0%	0%	0%	0%
grade 2 events	3506	3746	3382	2888
	3%	3%	2%	2%
grade 3 events	1462	1548	1381	1440
	1%	1%	1%	1%
grade 4 events	1318	1526	1395	1465
	1%	1%	1%	1%
grade 5 events	5638	5813	5283	6357
	5%	5%	4%	5%
grade 6 events	2844	3384	2646	2740
	2%	2%	2%	2%
grade 7 events	87043	91309	99883	96237
	81%	80%	84%	82%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-0123	ACIS-0123	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	150.223357	150.2285639548629	Subarray requested	NONE	NONE
[deg] Pointing Dec	2.792910	2.765929656629674	Alternating exposures requested	N	N
[deg] Pointing Roll	250.449710	250.6581290227593	[s] Primary exposure time	0.000000	3.1
[deg] Roll angle	250.000000	250.000000			
[deg] Roll tolerance	20.000000	20.000000			
Roll constraint allows 180D rotation	Y	Y			
[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)	487075095.184000	487073843.29418			
Observation start date	2013-06-08T10:37:08	2013-06-08T10:17:23			
[s] Observation end time (MET)	487100588.184000	487100825.39565			
Observation end date	2013-06-08T17:42:01	2013-06-08T17:47:05			
Read mode	TIMED	TIMED			

## 2.3 Aspect



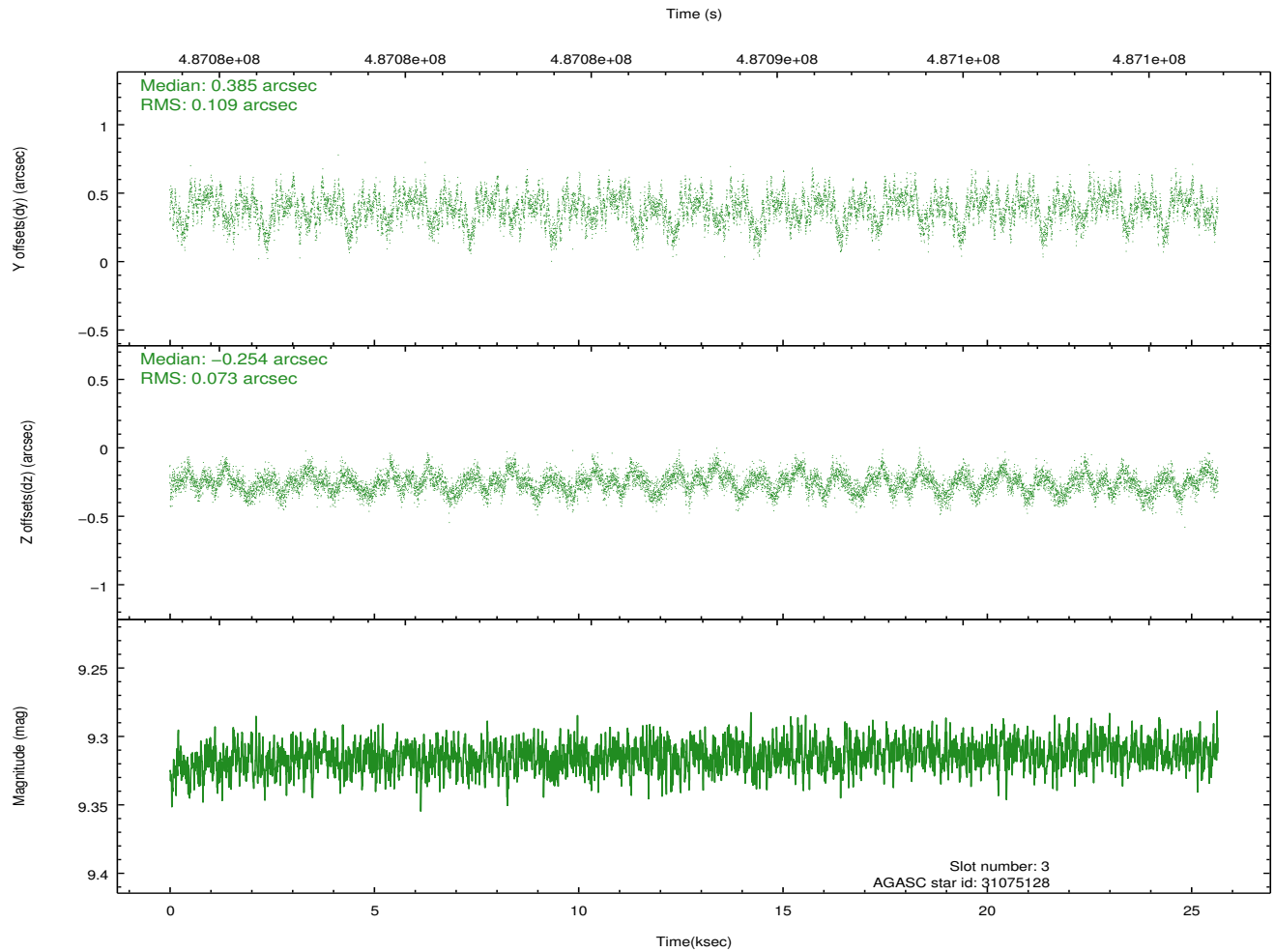
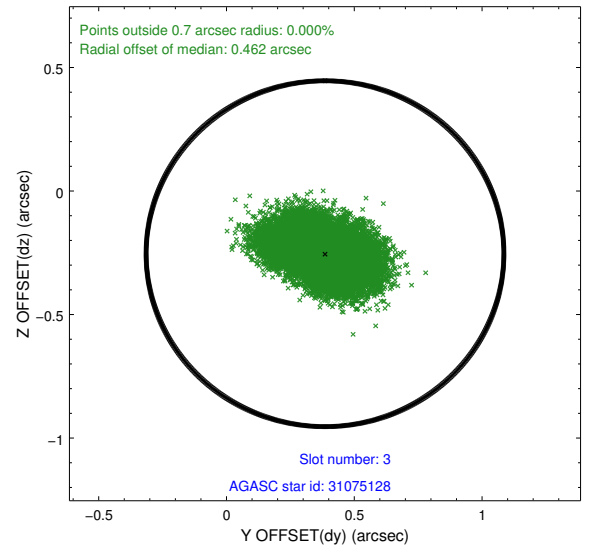
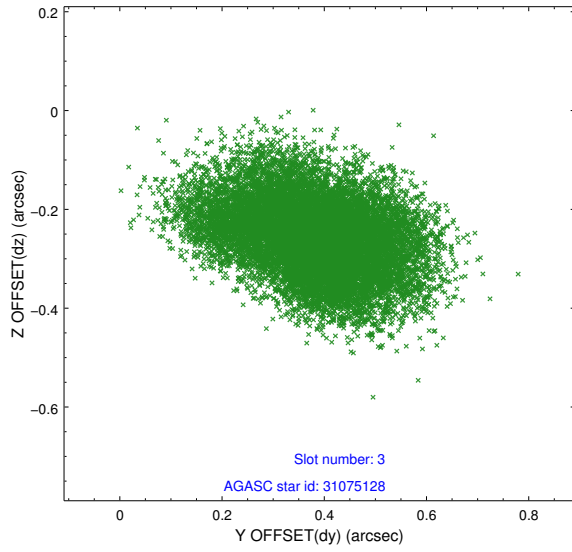


### Slot Statistics

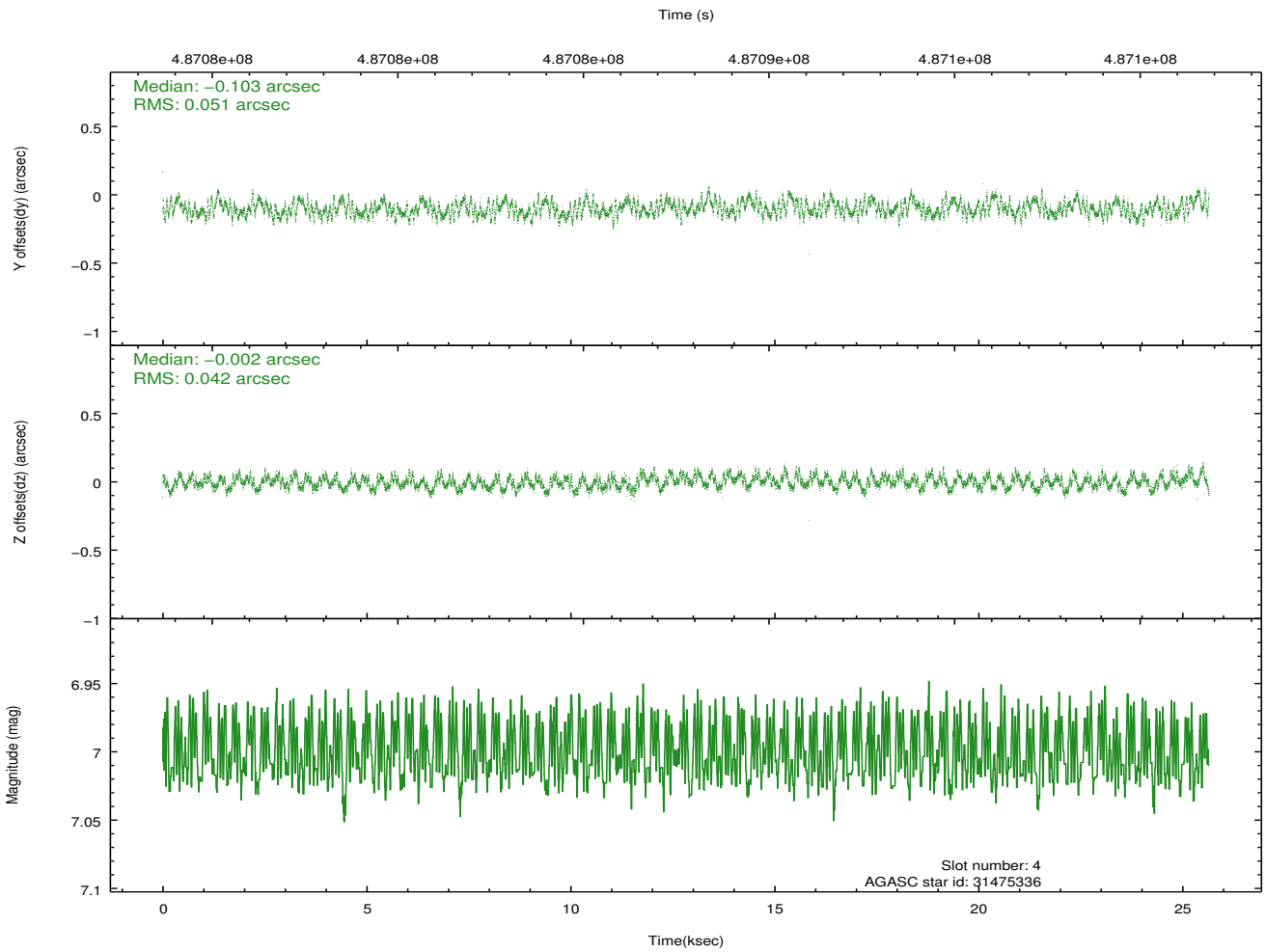
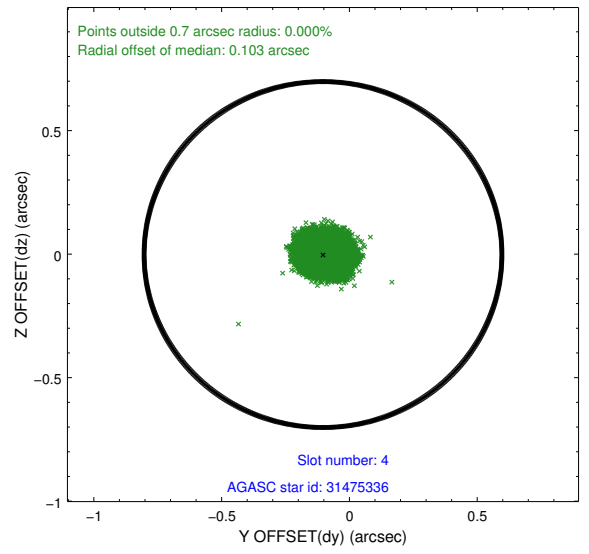
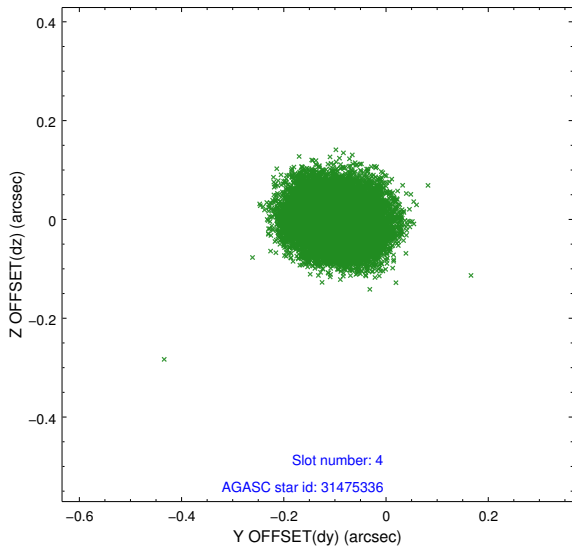
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.15	6258	0.027	-0.010	0.042	0.058	0.000000	0.000000	929.37	-836.74
1	FID		ACIS-I-4	7.07	6258	0.133	0.021	0.025	0.036	0.000000	0.000000	2149.58	1063.05
2	FID		ACIS-I-5	7.13	6258	-0.245	0.063	0.040	0.060	0.000000	0.000000	-1818.77	1061.08
3	GUIDE	used	31075128	9.31	12507	0.385	-0.254	0.139	0.229	149.584516	2.364347	2222.99	-1649.21
4	GUIDE	used	31475336	7.00	12515	-0.103	-0.002	0.072	0.109	149.929497	3.384805	-1654.37	-1709.29
5	GUIDE	used	32374896	9.21	12506	0.079	0.102	0.115	0.177	150.682269	2.512794	397.85	1893.10
6	GUIDE	used	31983336	8.56	12513	-0.141	-0.025	0.081	0.137	150.429924	2.291234	1453.14	1305.07
7	GUIDE	used	32388536	6.69	12514	-0.230	0.177	0.094	0.154	151.035133	3.201055	-2360.78	2257.49

## 2.4 Star Slots

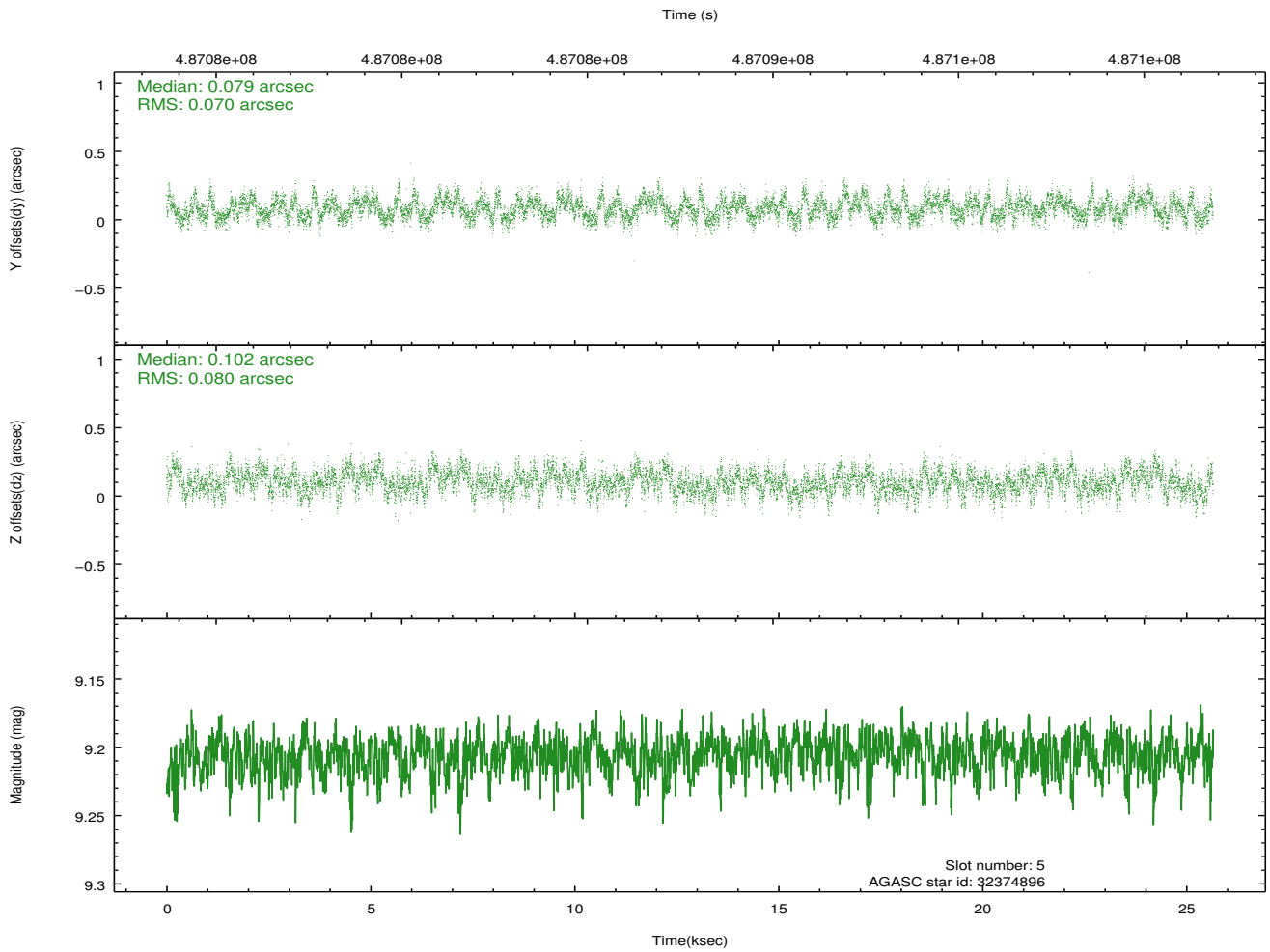
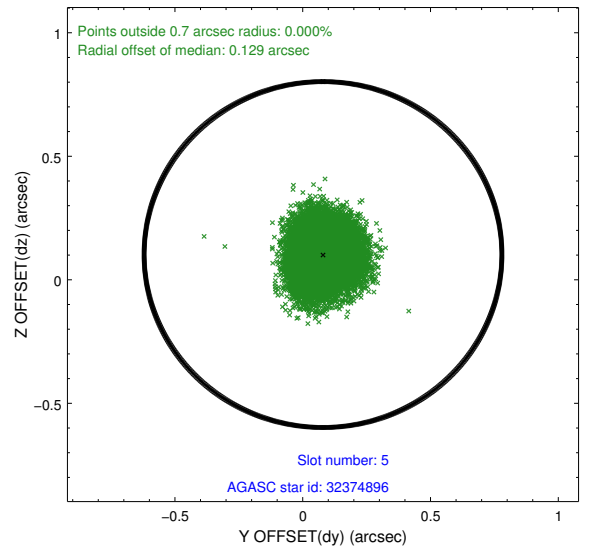
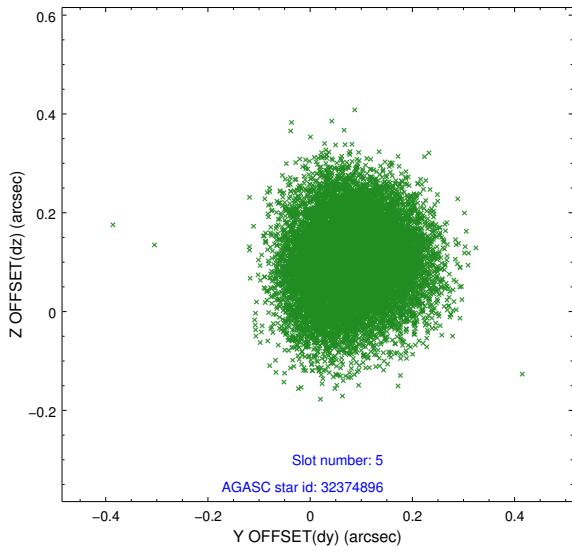
### 2.4.1 Slot 3



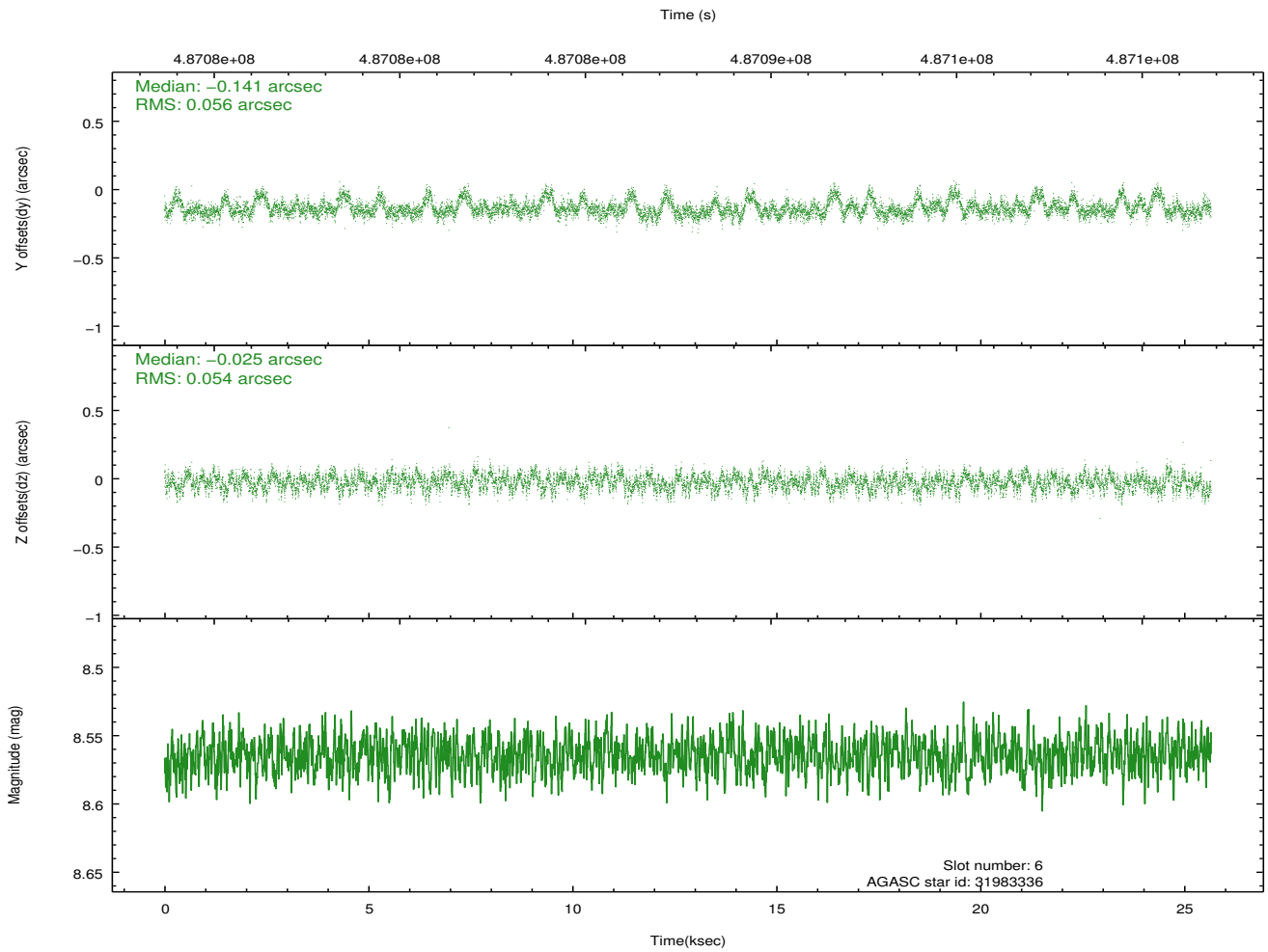
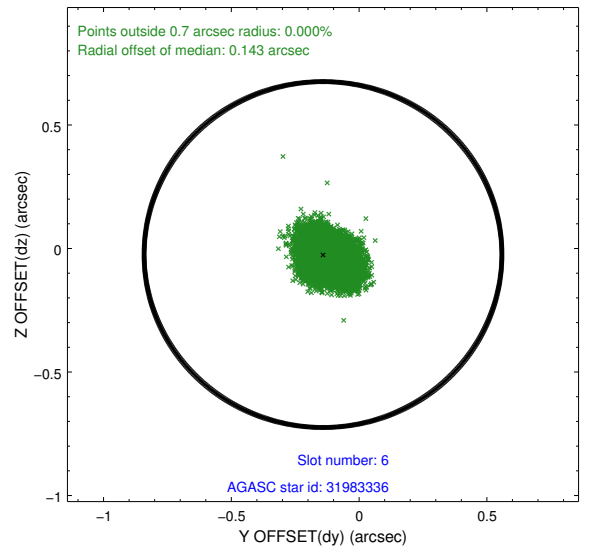
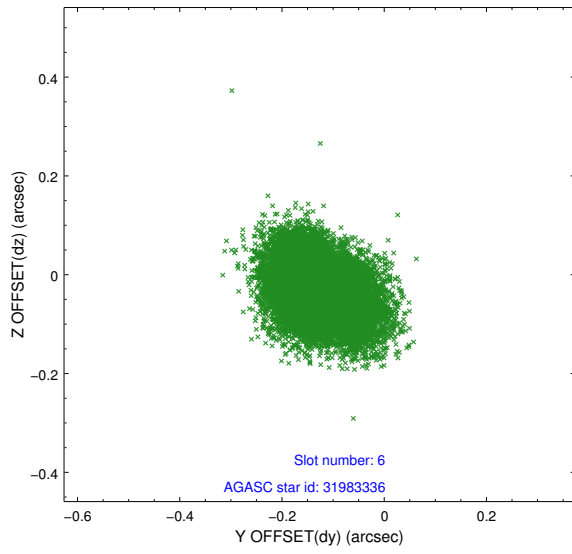
## 2.4.2 Slot 4



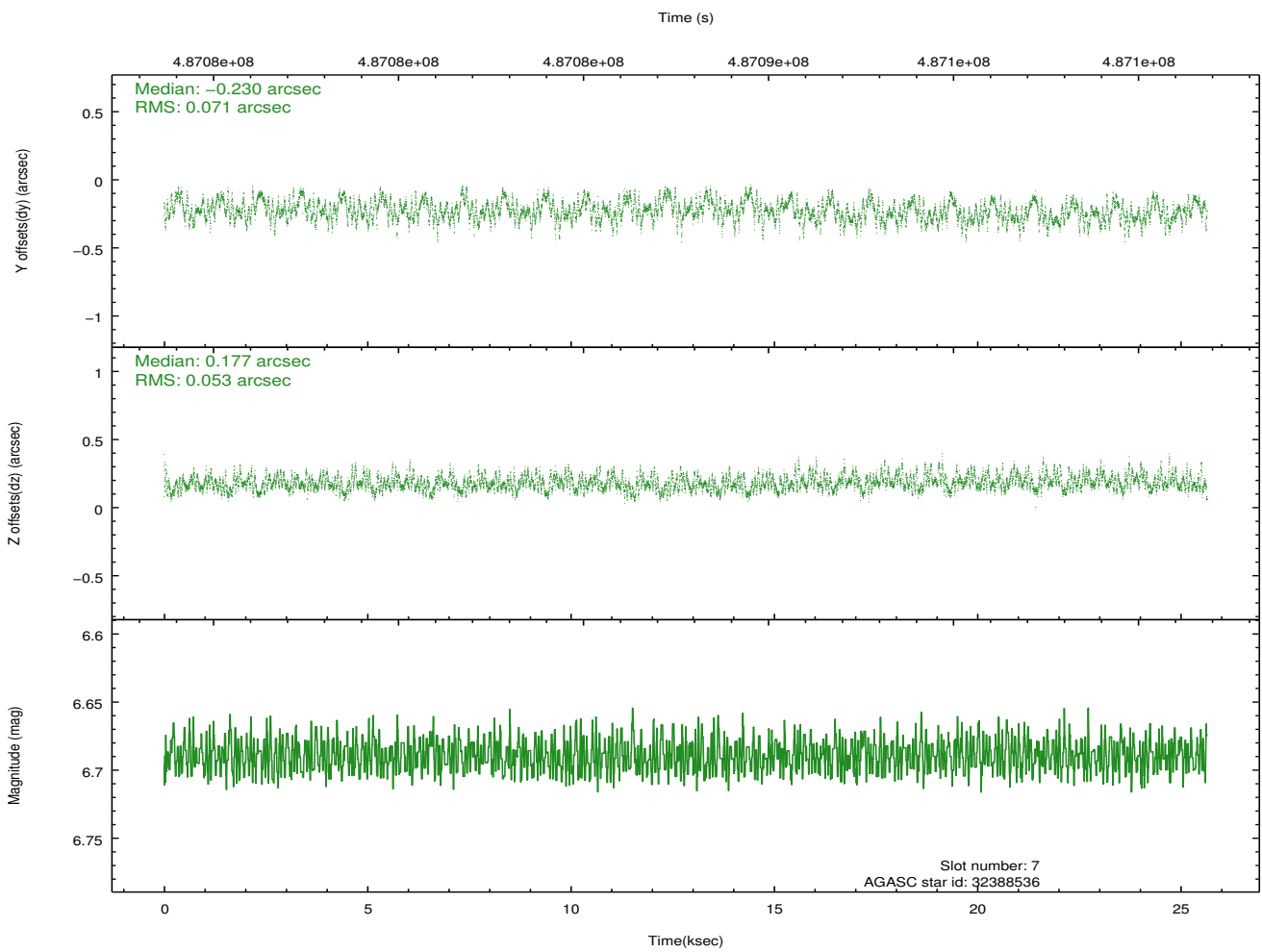
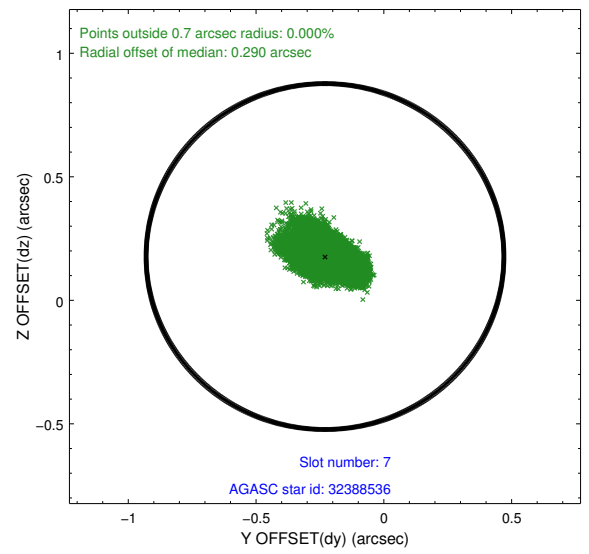
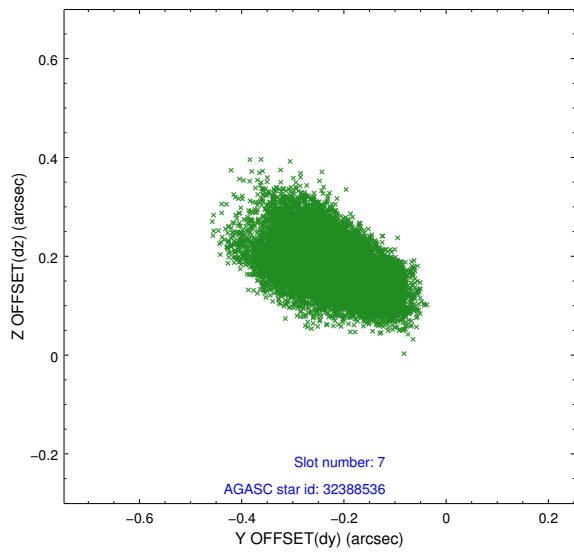
### 2.4.3 Slot 5



## 2.4.4 Slot 6

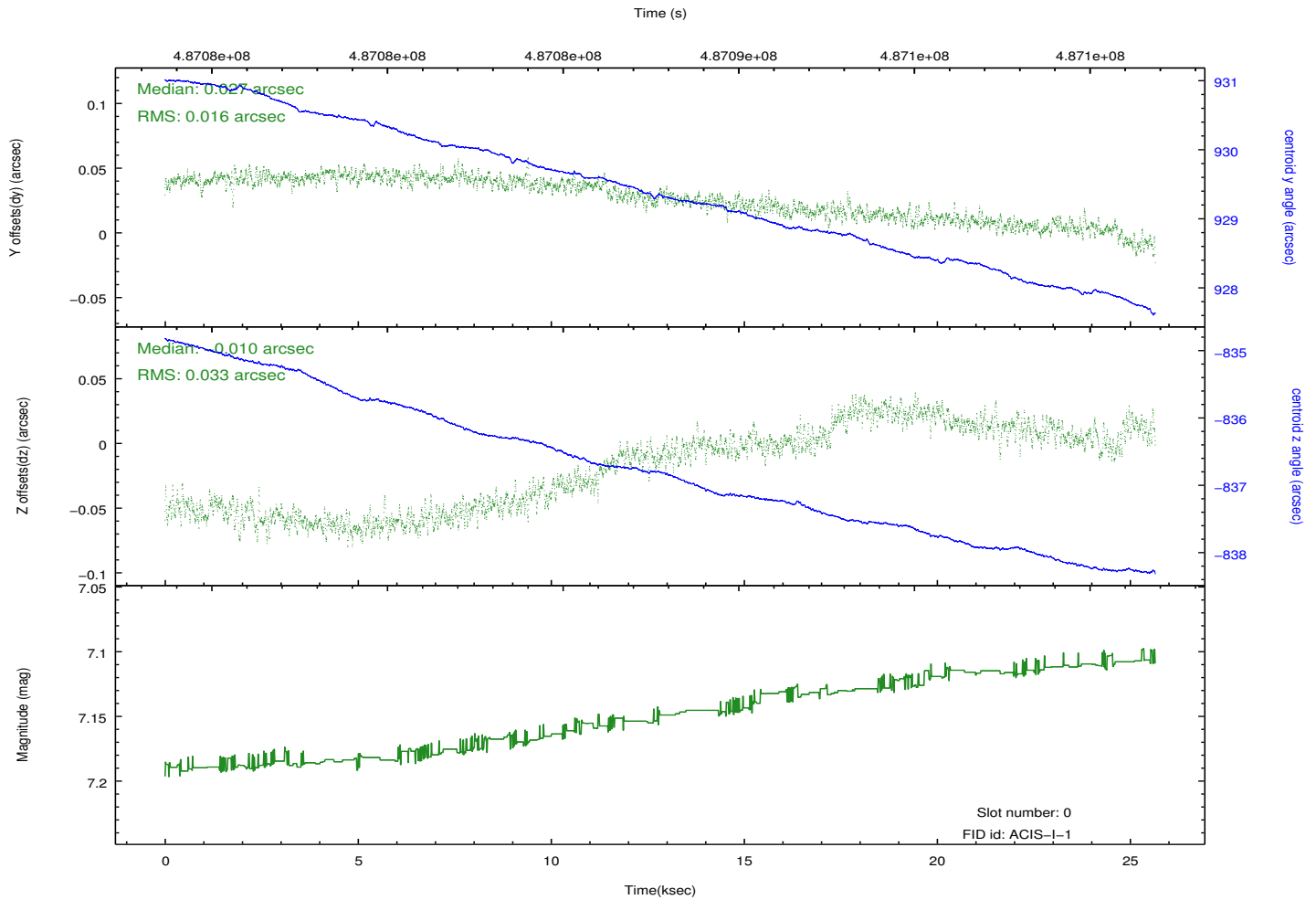
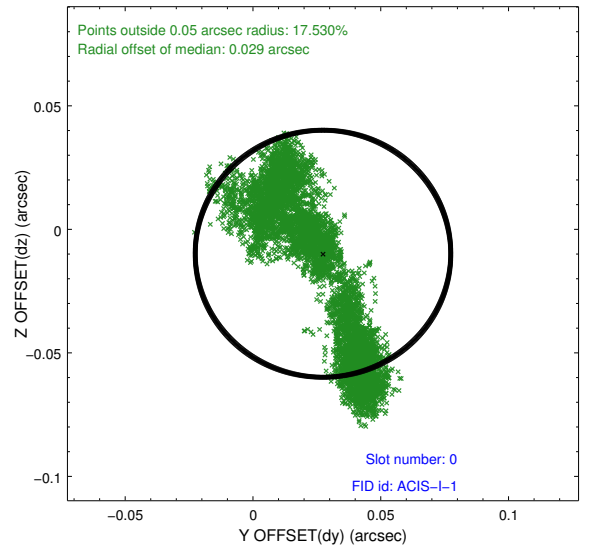
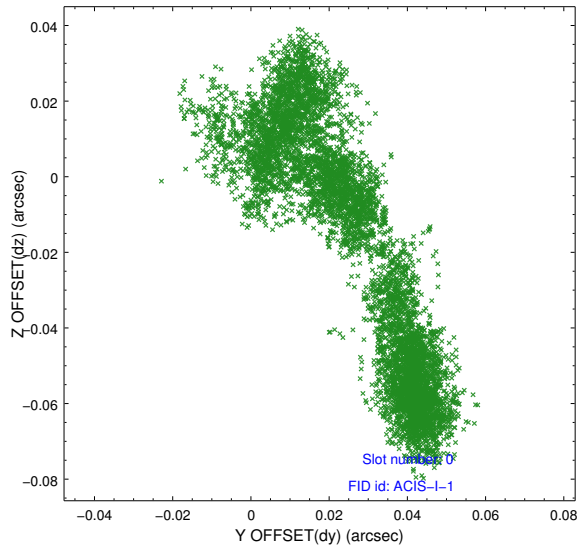


## 2.4.5 Slot 7

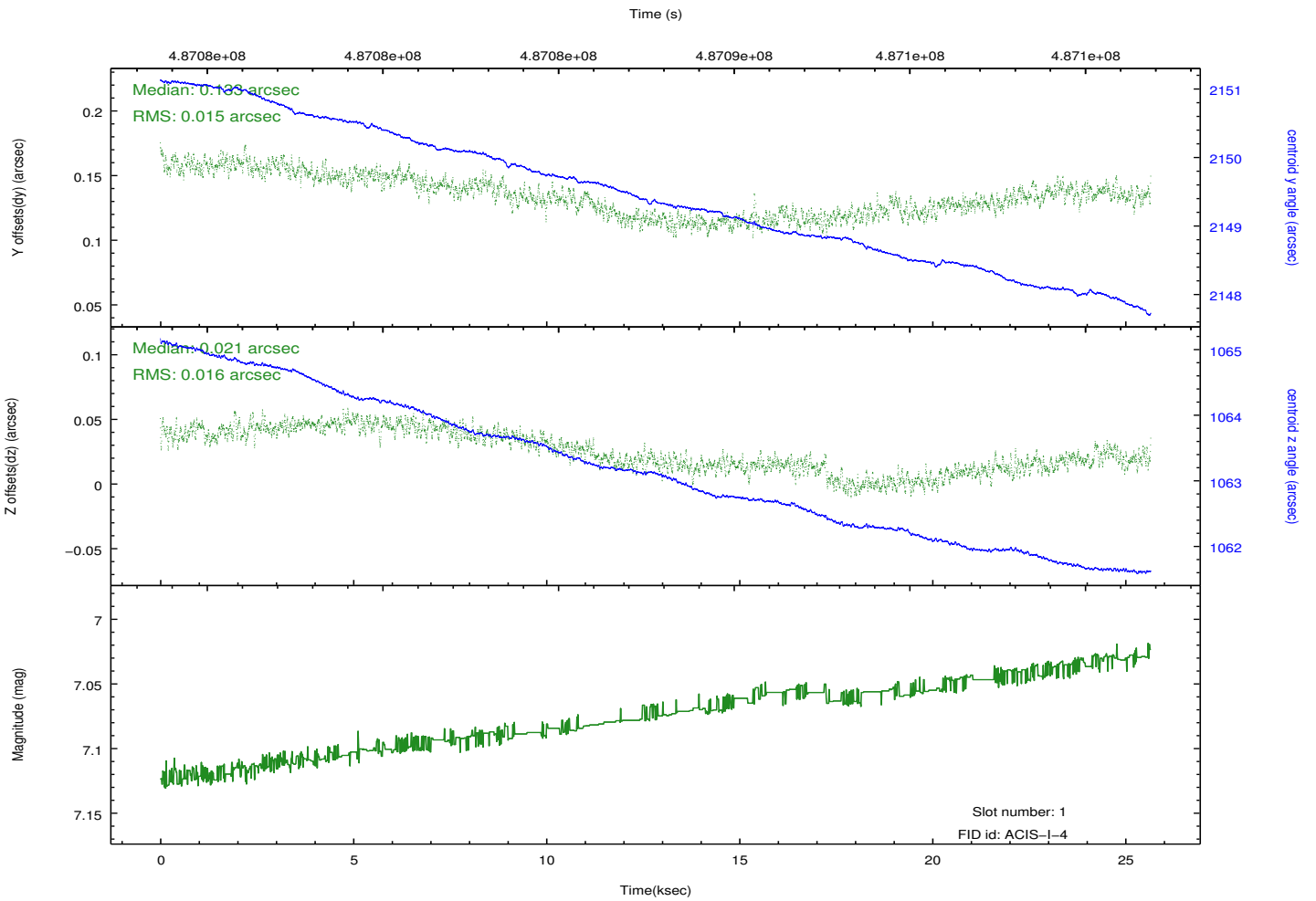
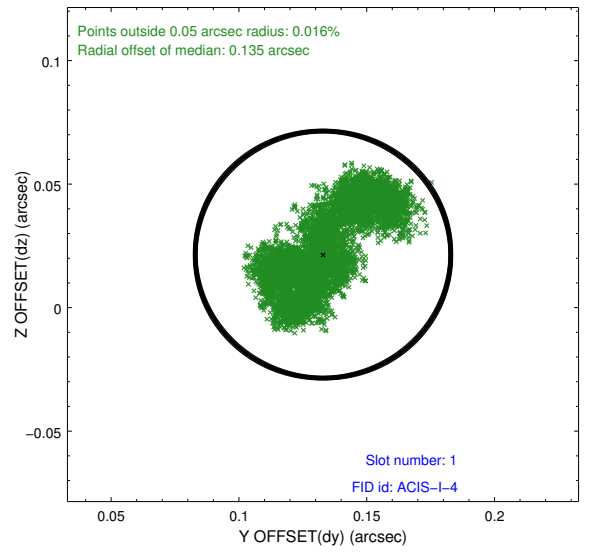
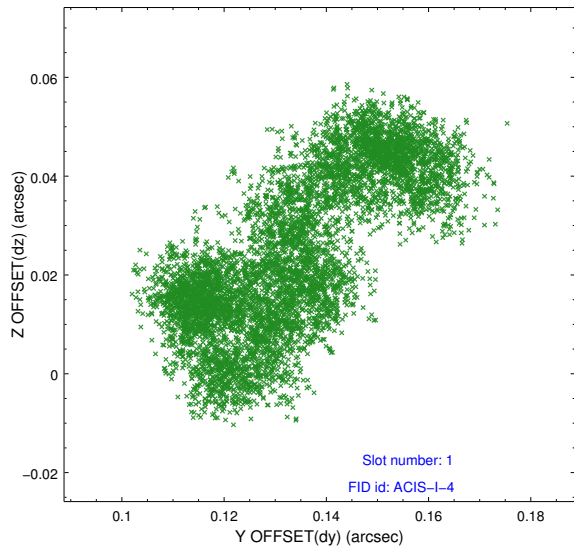


## 2.5 FID Slots

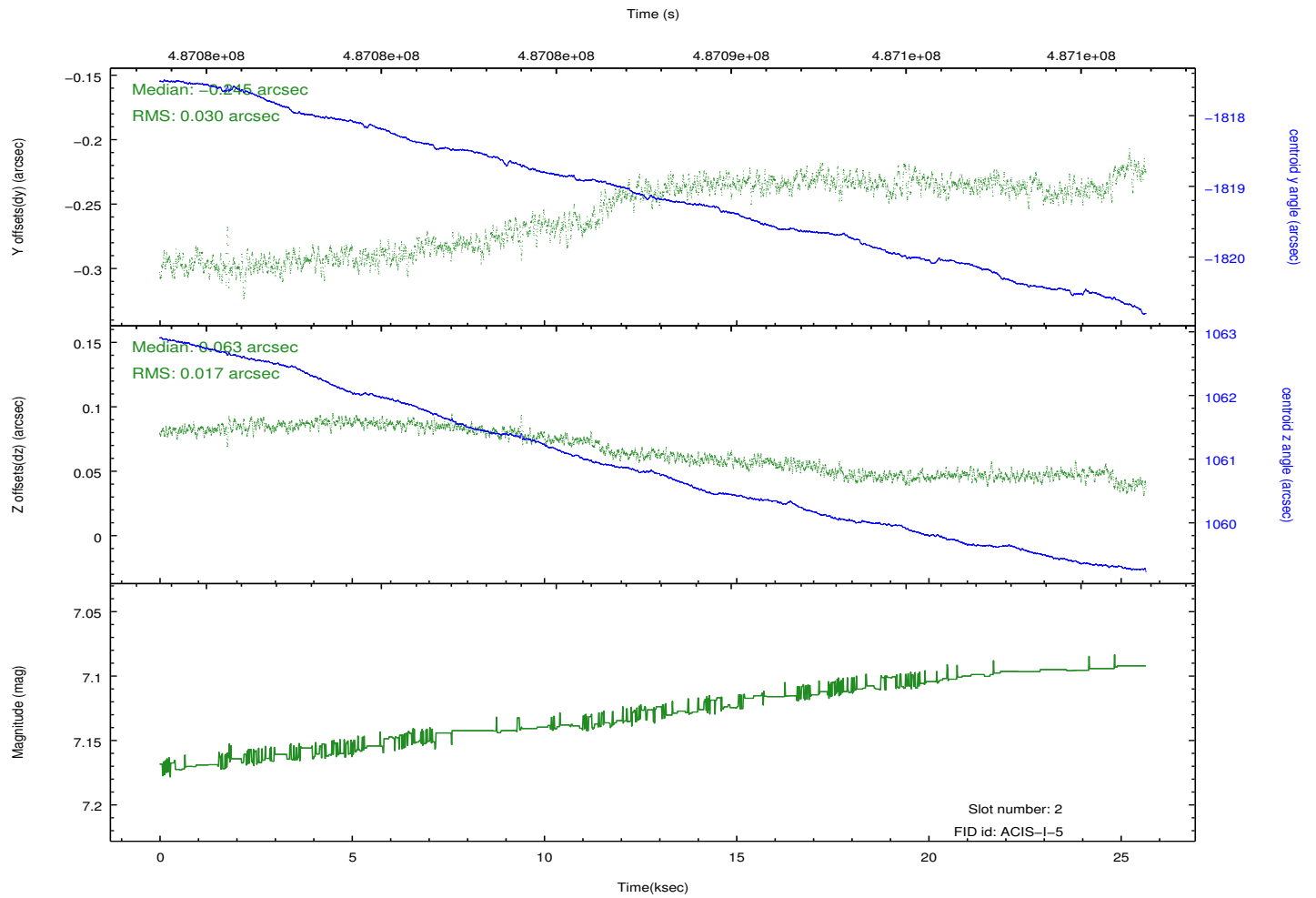
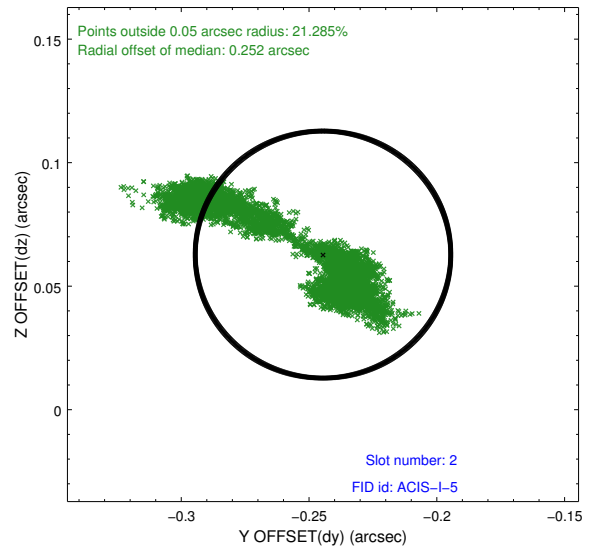
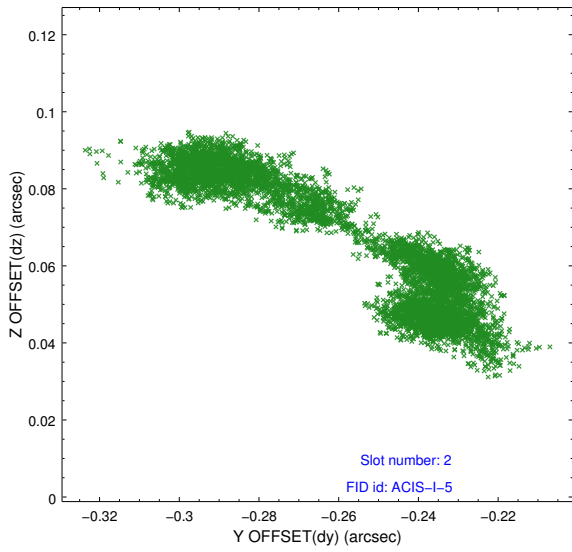
### 2.5.1 Slot 0



## 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	25.58115920651

## A.2 Comments

Roll constraint met.

=====

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.