

# V&V Reference Report

## L2 ASCDS Version : 10

Observation 15243 - L2 Version 2  
Chandra X-Ray Center

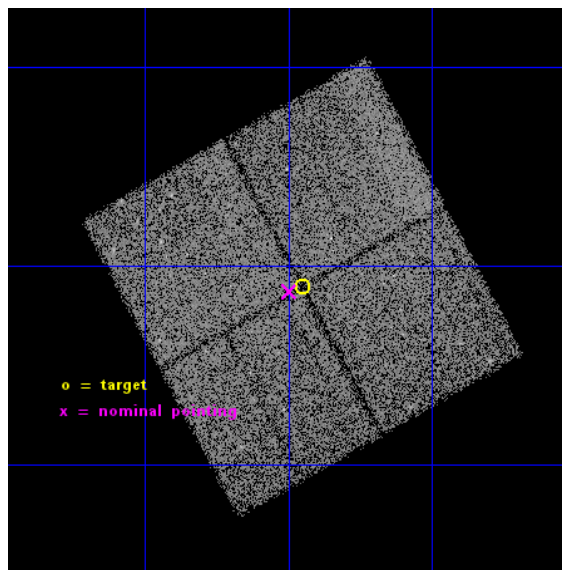
L2 Processing Date : Dec 4 2014

## 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

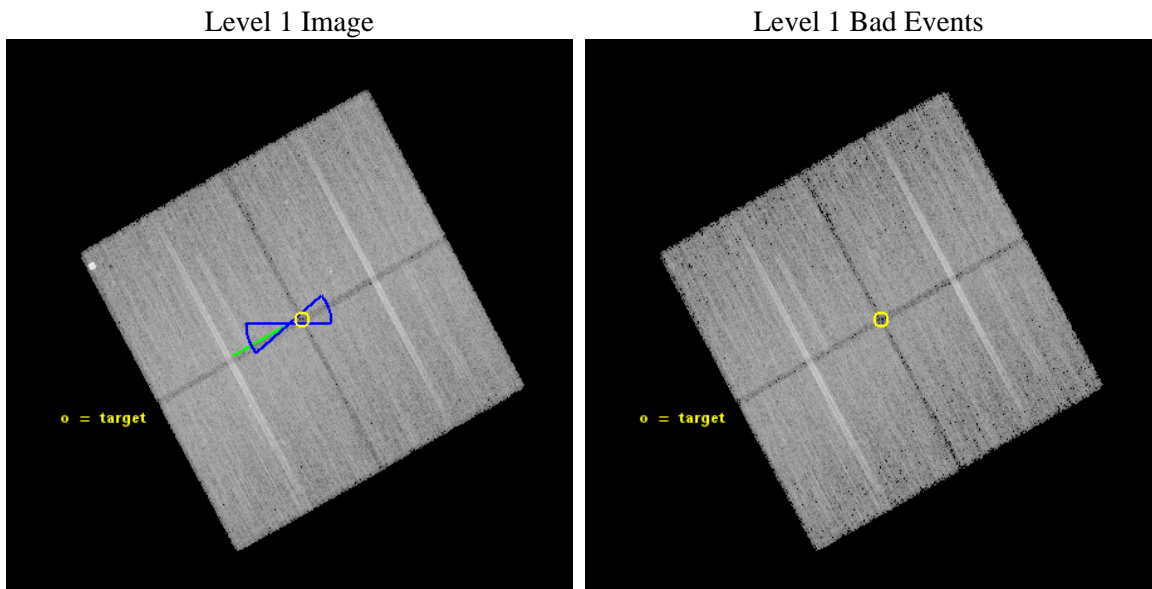
seq_num	901073	Sequence number
obs_id	15243	Observation id
title	The COSMOS Legacy Survey	Proposal title
observer	Dr Francesca Civano	Principal investigator
object	COSMOS Legacy	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	149.48785	Observer's specified target RA [deg]
dec_targ	2.315689	Observer's specified target Dec [deg]
ra_nom	149.49911376711	Nominal RA [deg]
dec_nom	2.3120609215823	Nominal Dec [deg]
roll_nom	241.2082315626	Nominal Roll [deg]
revision	2	Processing version of data
ontime	48620.359443545	Sum of GTIs [s]
livetime	47985.098653628	Livetime [s]
ontime0	48617.21840322	Sum of GTIs [s]
ontime1	48620.359443545	Sum of GTIs [s]
ontime2	48614.077492893	Sum of GTIs [s]
ontime3	48617.218453228	Sum of GTIs [s]
l2events	93487	Number of level 2 events



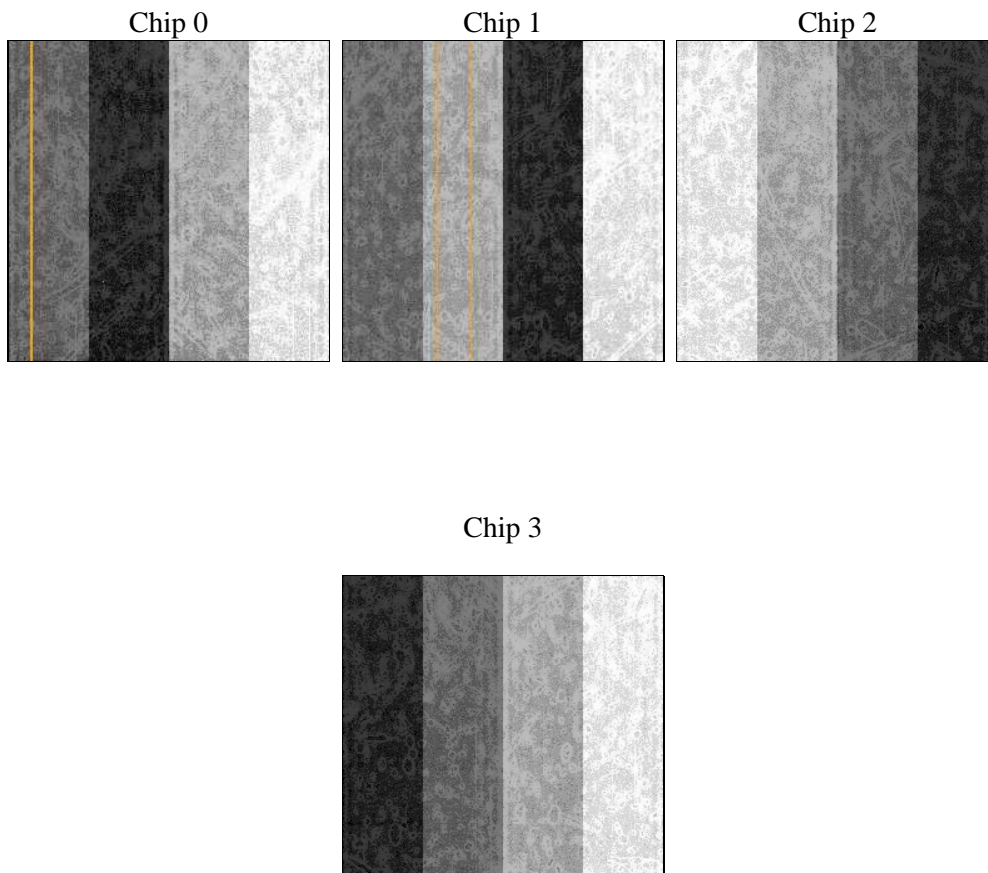
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	48532.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	48620.359443545	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	48617.21840322	Sum of GTIs [s]
date	2014-12-04T10:37:40	Date and time of file creation	ontime1	48620.359443545	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	48614.077492893	Sum of GTIs [s]
			ontime3	48617.218453228	Sum of GTIs [s]
			l1events	877249	Number of level 1 events

### 2.1.4 Events

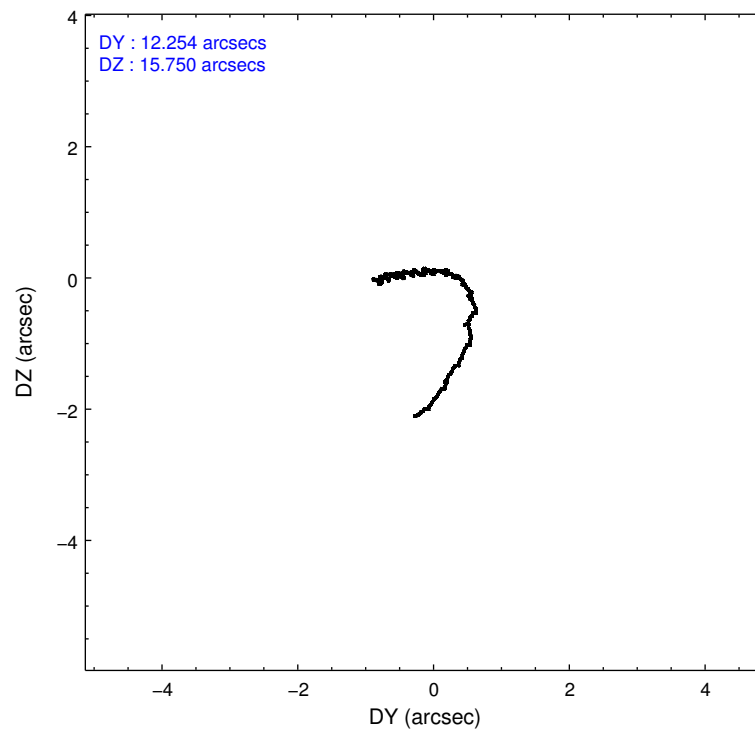
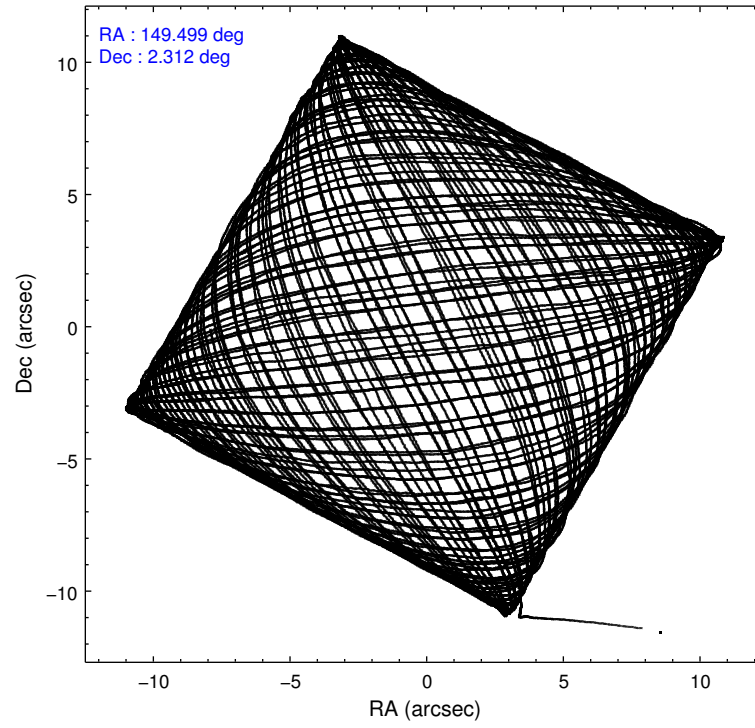
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	206672	212394	228296	229887
rejected events	179170	181665	201896	197837
rejected %	86%	85%	88%	86%

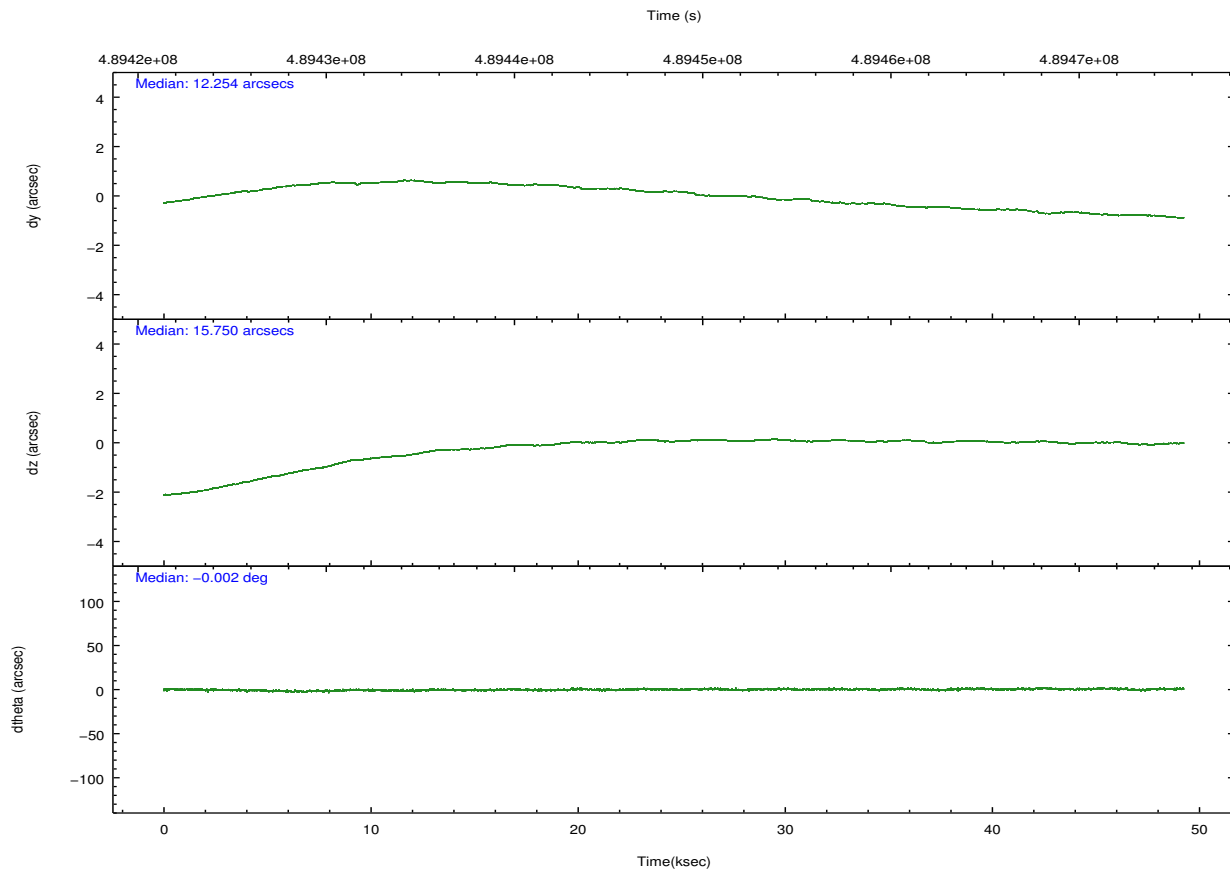
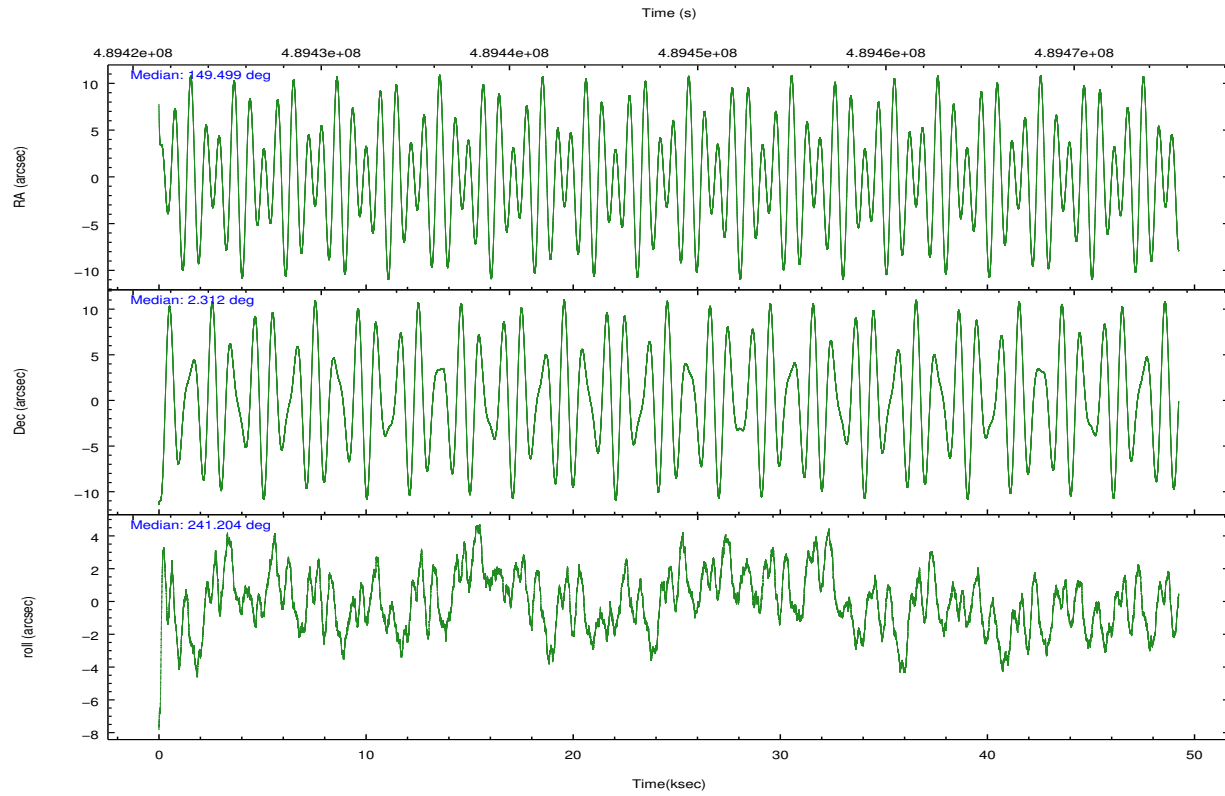
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	9413	10730	9256	14994
	4%	5%	4%	6%
grade 1 events	112	112	139	185
	0%	0%	0%	0%
grade 2 events	6980	7454	6642	5821
	3%	3%	2%	2%
grade 3 events	2870	3040	2640	2690
	1%	1%	1%	1%
grade 4 events	2668	2940	2715	2902
	1%	1%	1%	1%
grade 5 events	10703	11564	10147	12416
	5%	5%	4%	5%
grade 6 events	5573	6571	5149	5647
	2%	3%	2%	2%
grade 7 events	168353	169983	191608	185232
	81%	80%	83%	80%

## 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	149.498421	149.4991137671051	Subarray requested	NONE	NONE
[deg] Pointing Dec	2.339555	2.312060921582305	Alternating exposures requested	N	N
[deg] Pointing Roll	240.999578	241.2082315625987	[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)	489424543.184000	489422750.3343			
Observation start date	2013-07-05T15:14:36	2013-07-05T14:45:50			
[s] Observation end time (MET)	489473075.184000	489473965.48709			
Observation end date	2013-07-06T04:43:28	2013-07-06T04:59:25			
Read mode	TIMED	TIMED			

## 2.3 Aspect



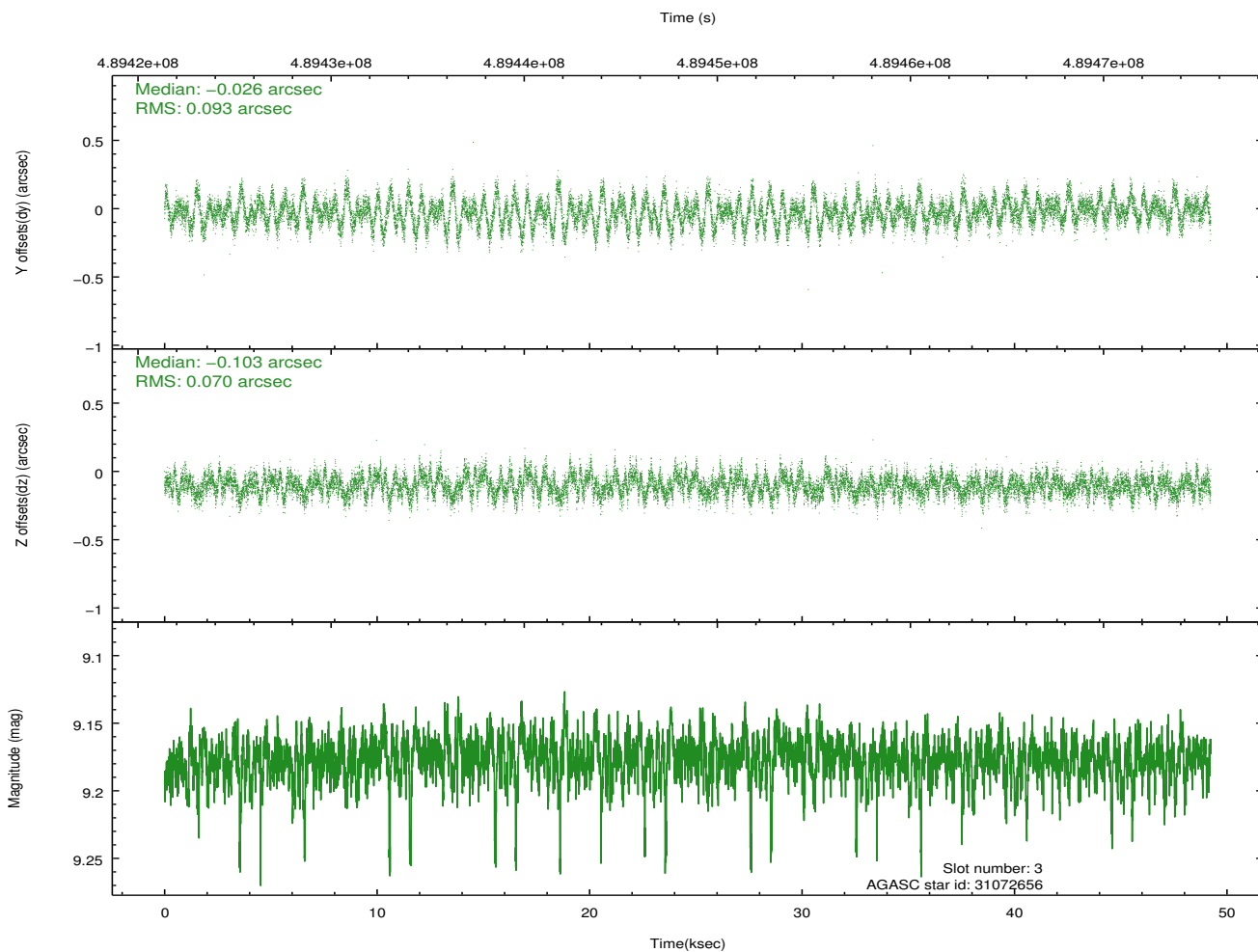
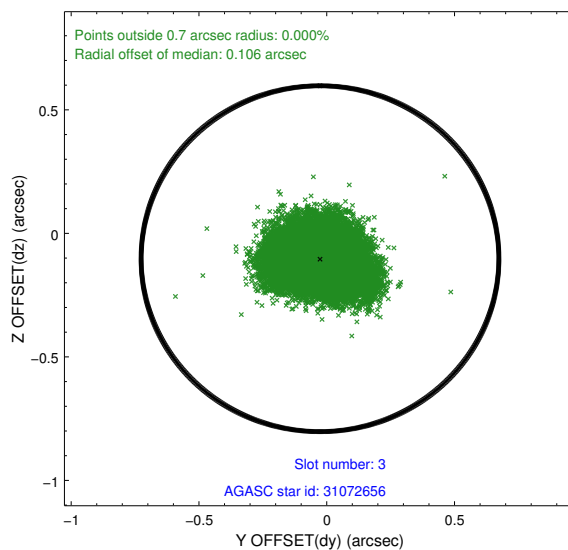
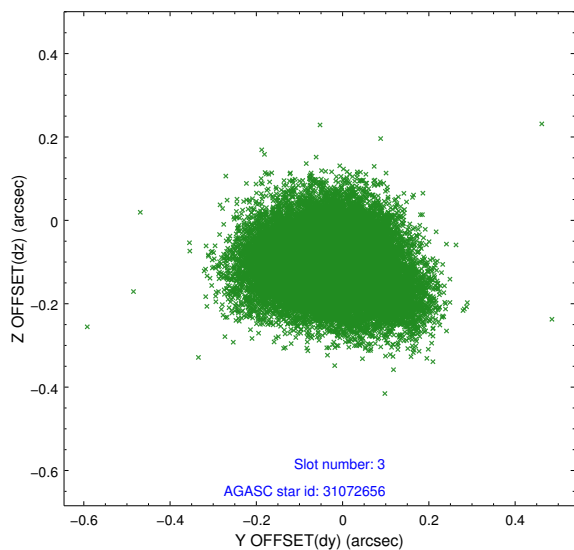


### Slot Statistics

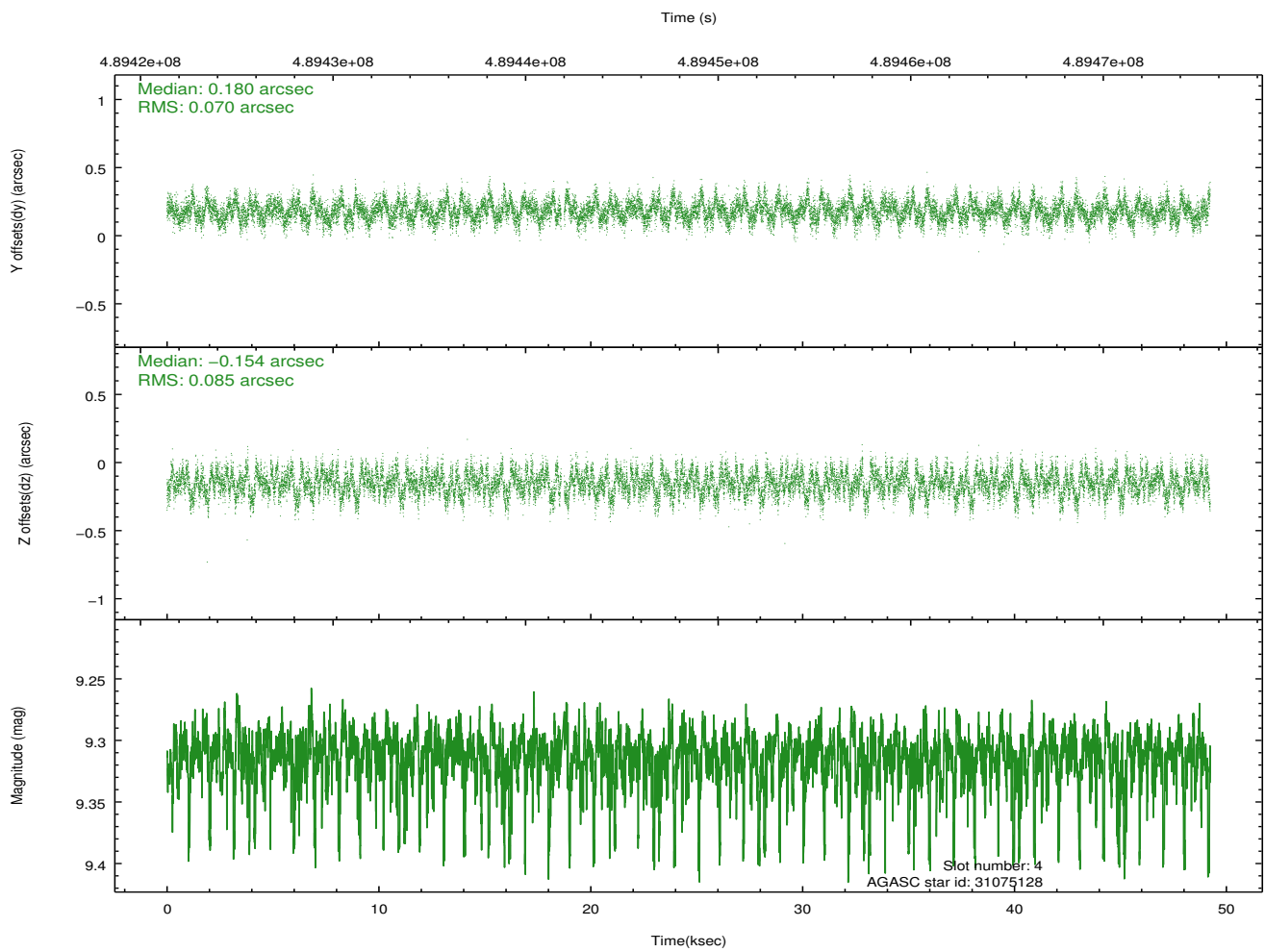
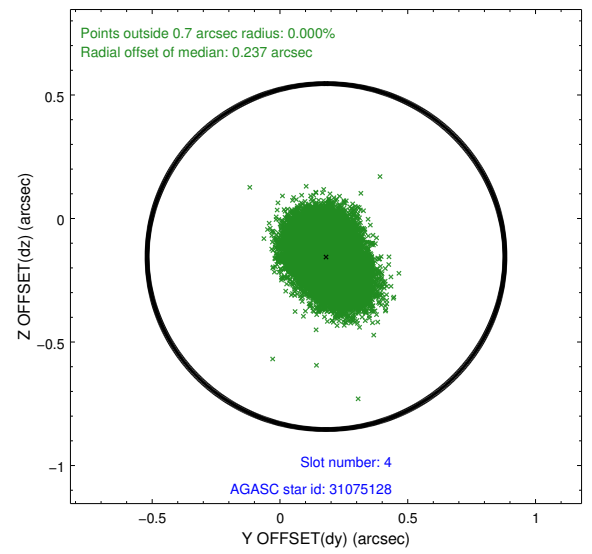
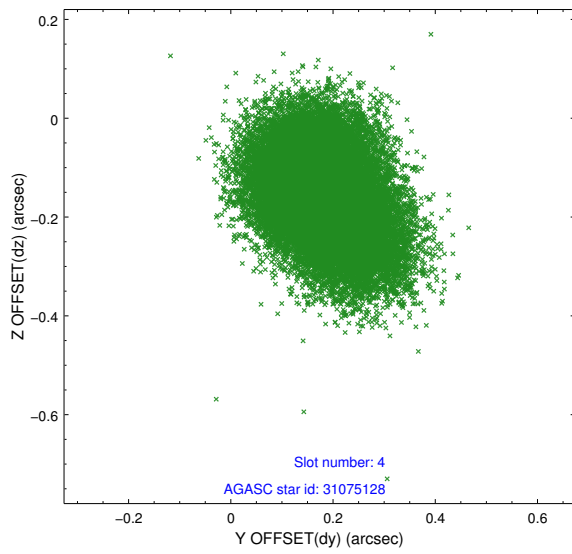
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.03	12010	-0.012	-0.052	0.020	0.094	0.000000	0.000000	927.31	-839.08
1	FID		ACIS-I-4	6.96	12010	0.147	0.063	0.041	0.060	0.000000	0.000000	2147.49	1060.83
2	FID		ACIS-I-5	7.02	12009	-0.230	0.058	0.031	0.039	0.000000	0.000000	-1820.94	1058.65
3	GUIDE	used	31072656	9.18	23994	-0.026	-0.103	0.124	0.201	149.313368	1.815013	1974.74	333.72
4	GUIDE	used	31075128	9.31	23921	0.180	-0.154	0.117	0.190	149.584516	2.364347	-227.76	227.65
5	GUIDE	used	31463760	8.80	24005	0.051	-0.011	0.091	0.150	148.998237	2.798749	-573.54	-2374.56
6	GUIDE	used	32375384	9.91	23760	-0.155	0.201	0.147	0.241	150.238117	2.622063	-2179.83	1832.85
7	GUIDE	used	31069328	8.96	23998	-0.044	0.078	0.099	0.154	149.407760	1.639418	2362.56	936.92

## 2.4 Star Slots

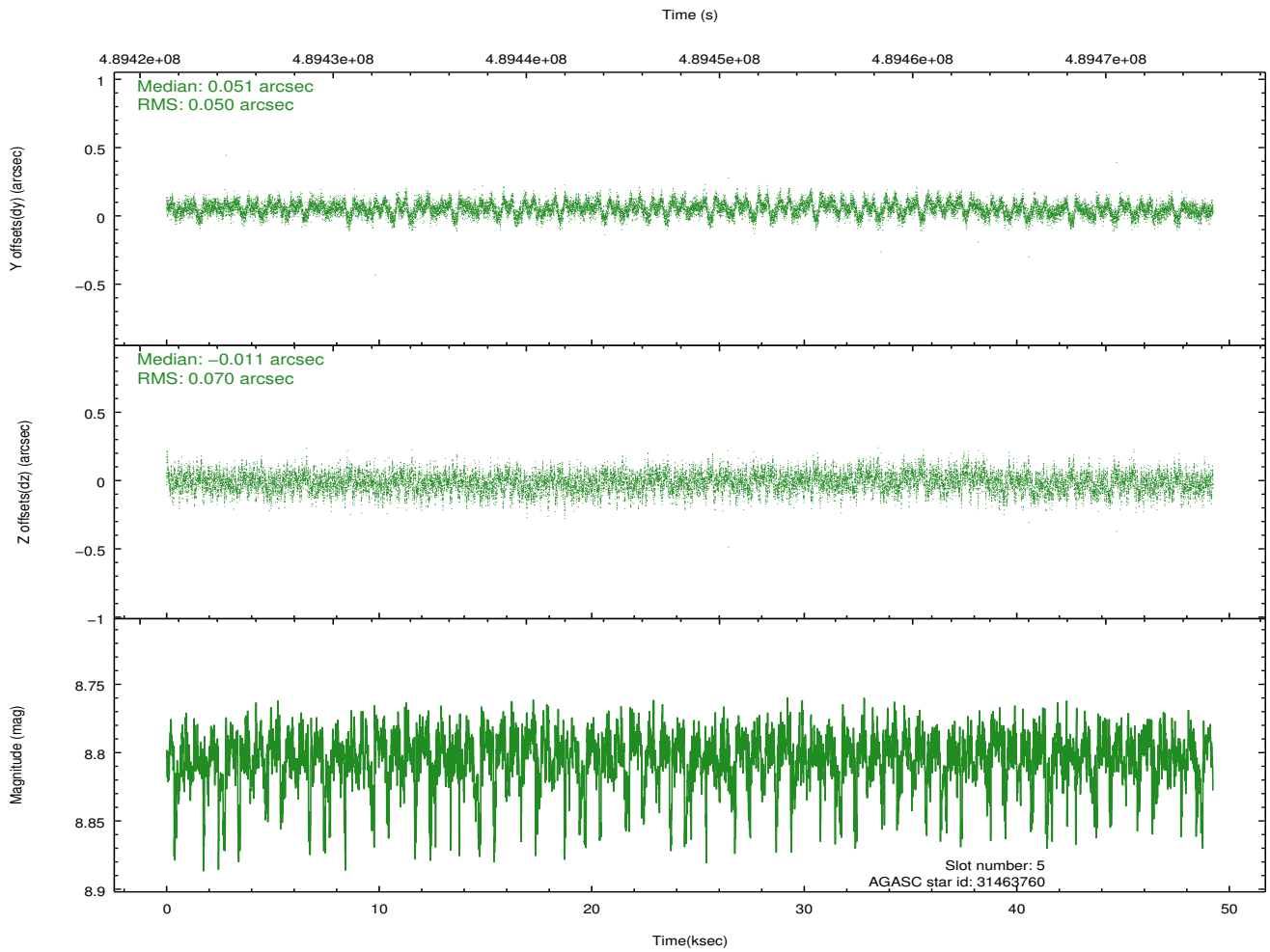
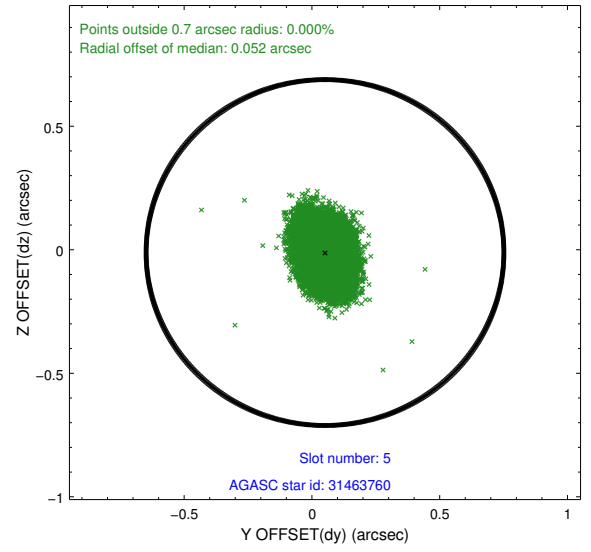
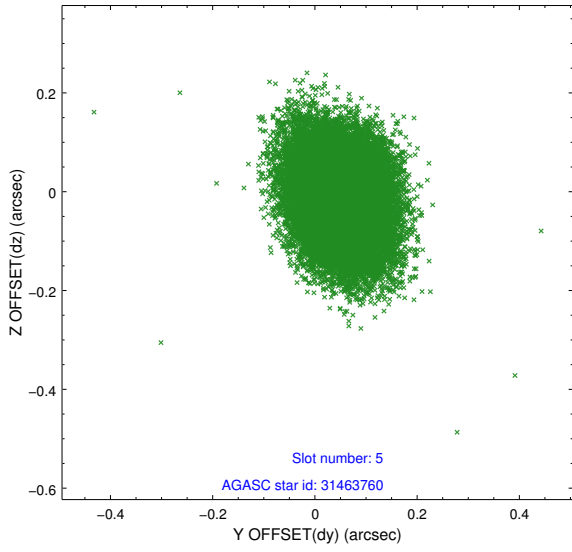
### 2.4.1 Slot 3



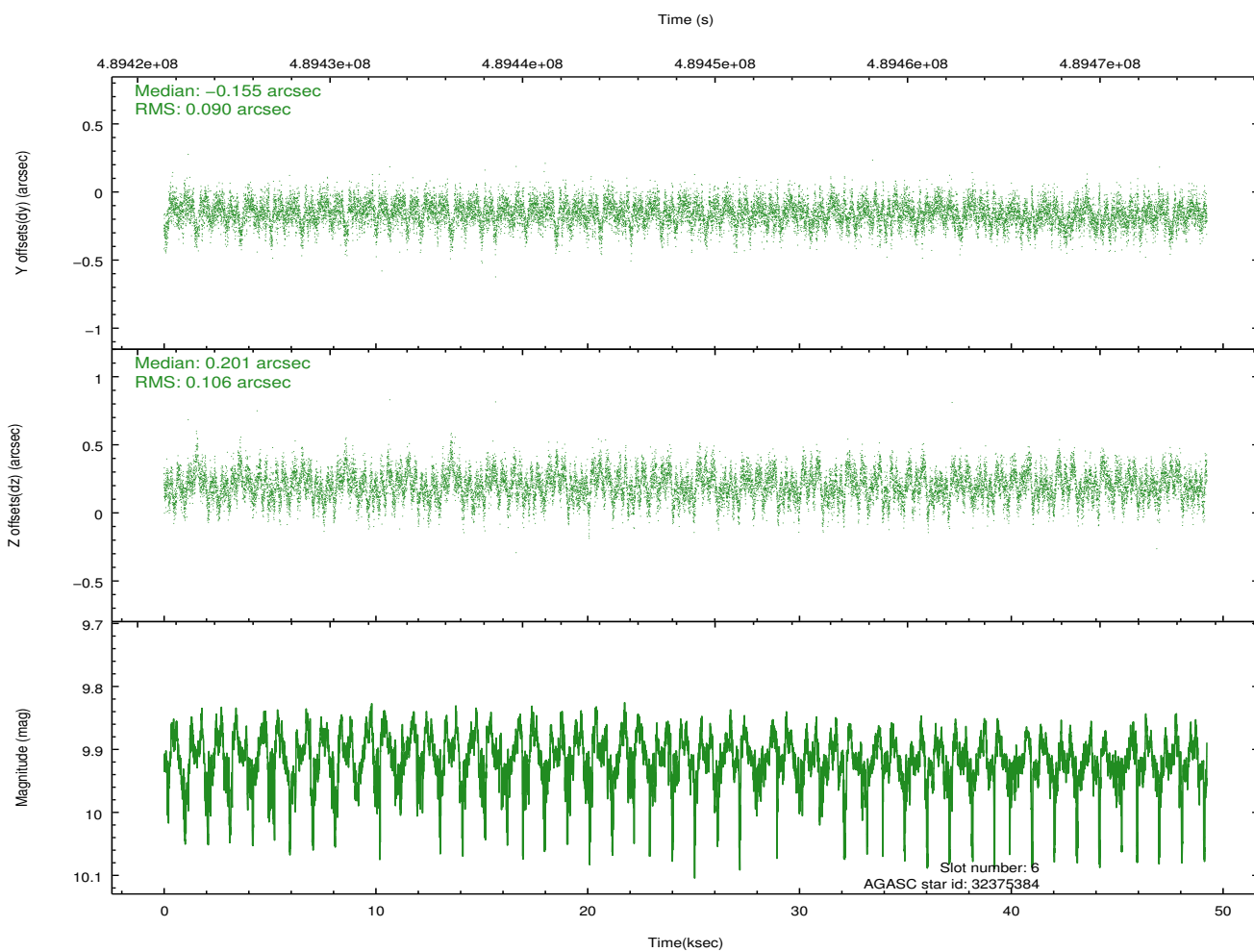
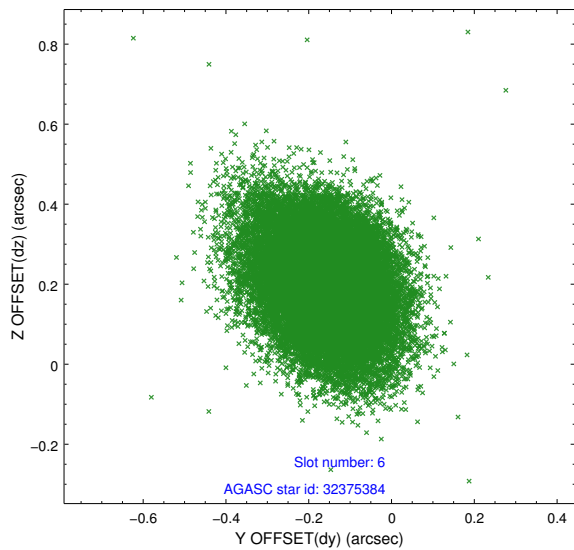
## 2.4.2 Slot 4



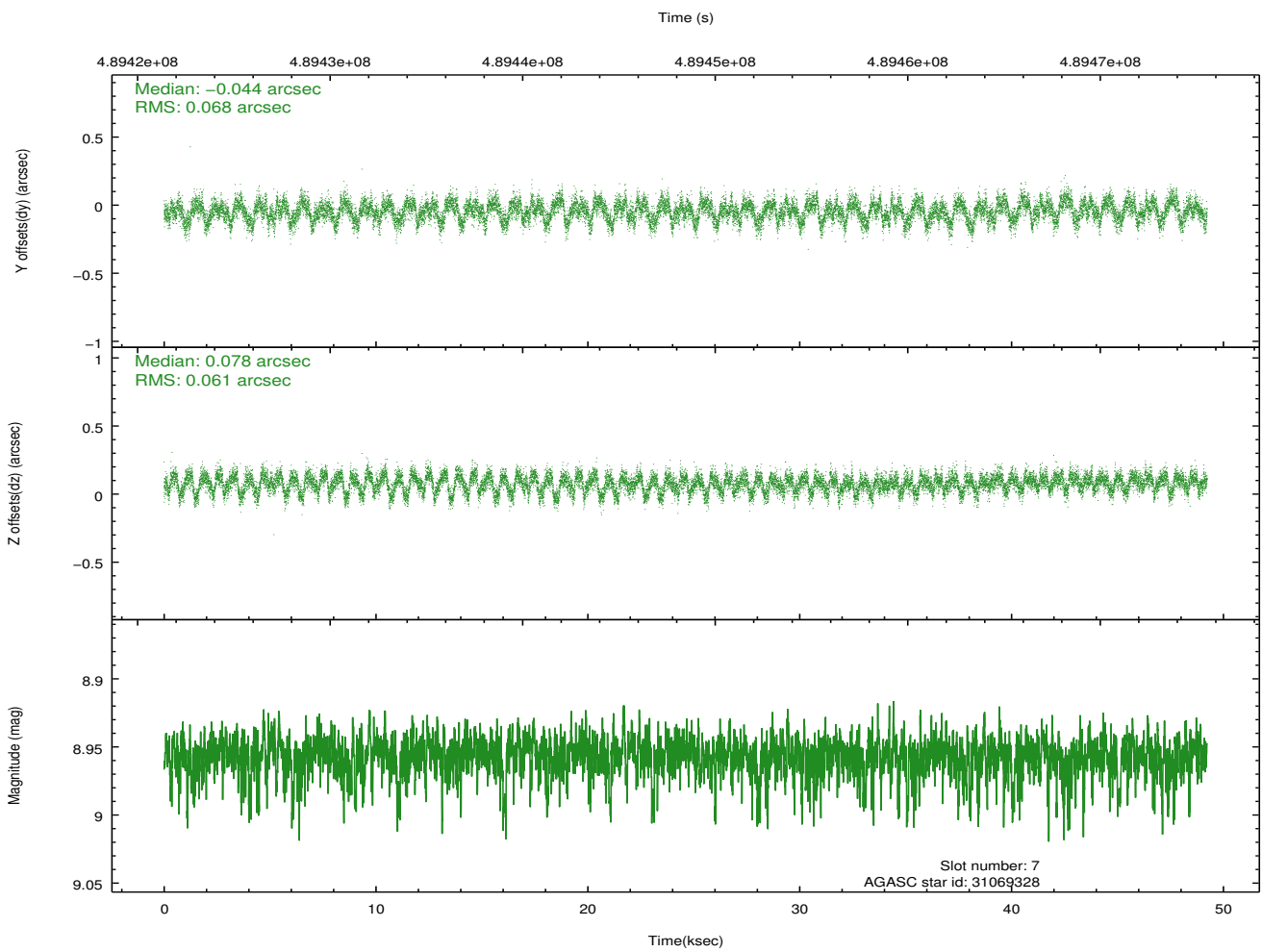
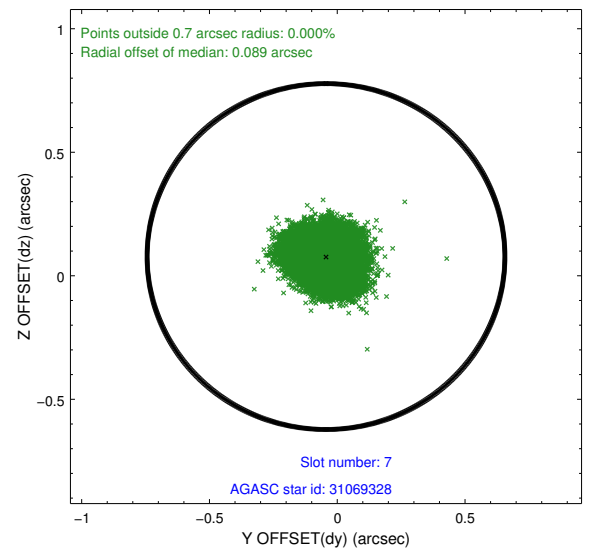
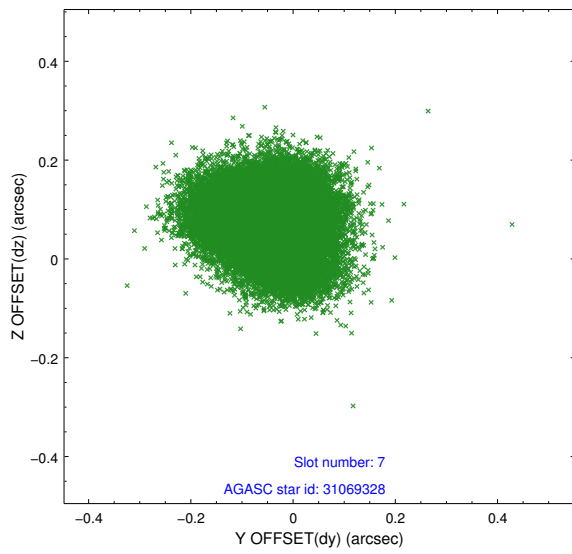
### 2.4.3 Slot 5



## 2.4.4 Slot 6

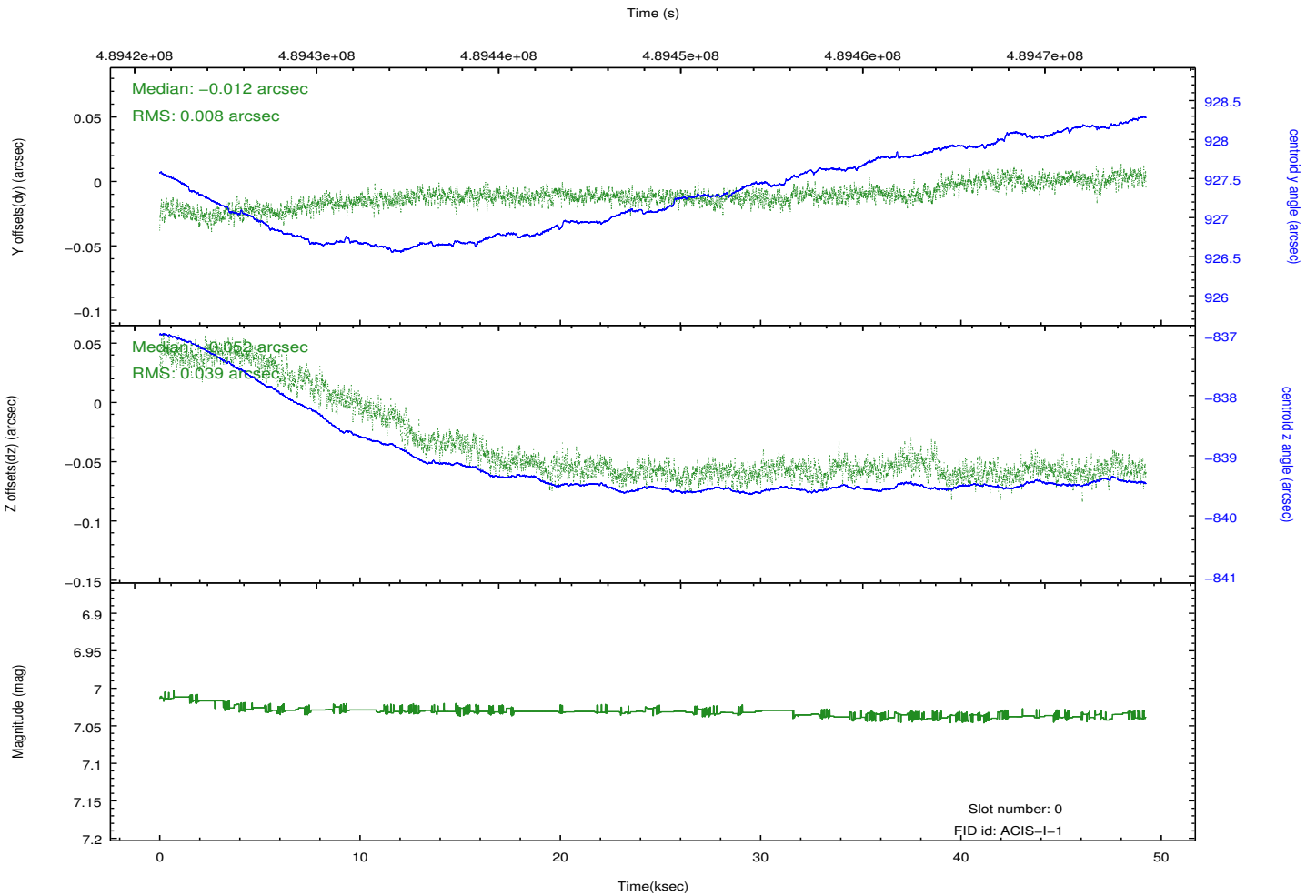
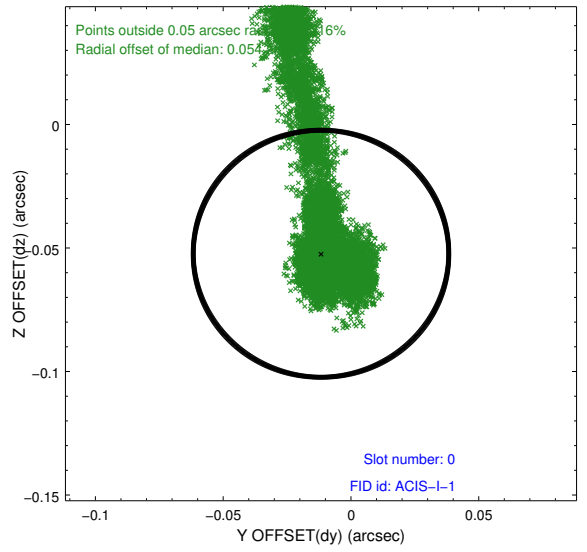
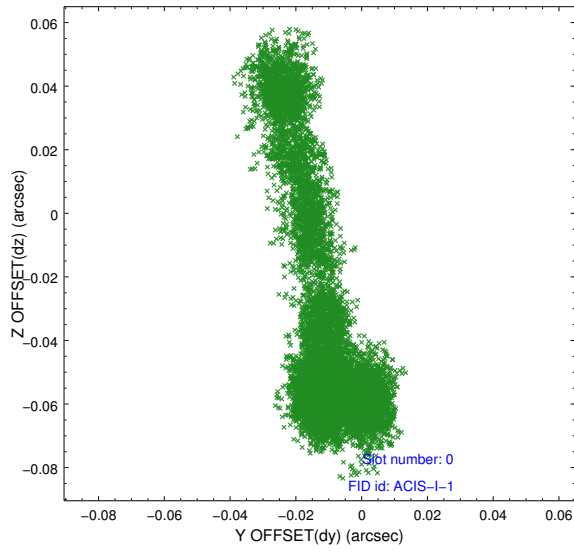


## 2.4.5 Slot 7

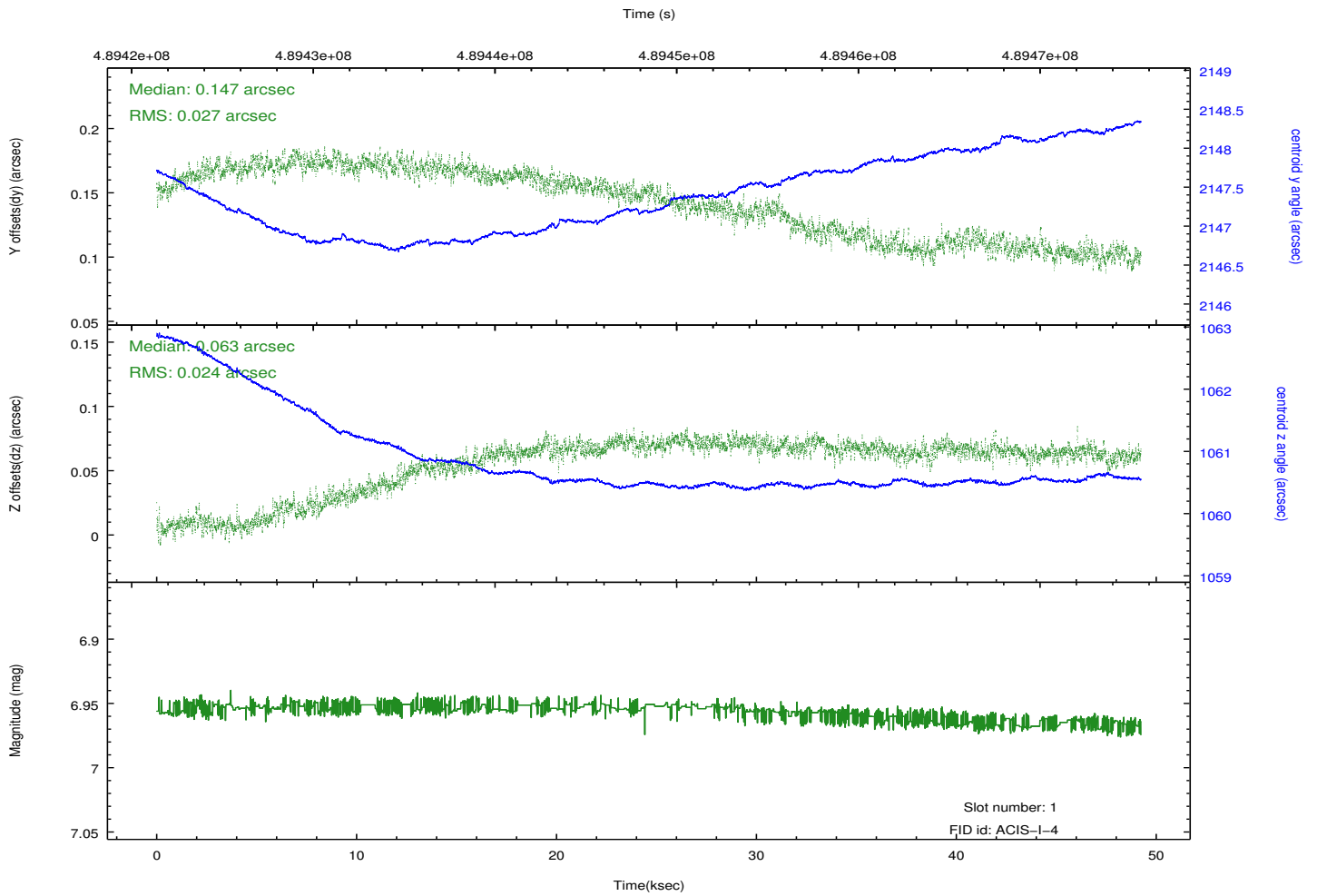
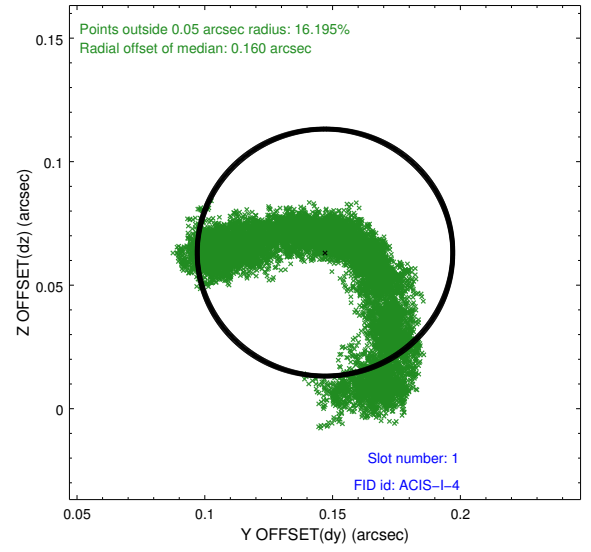
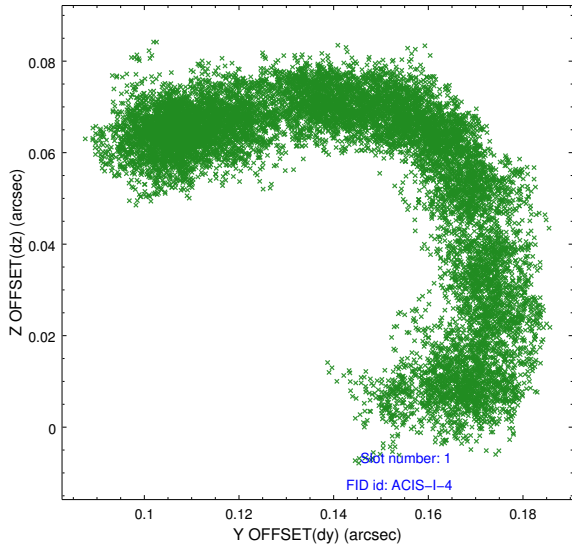


## 2.5 FID Slots

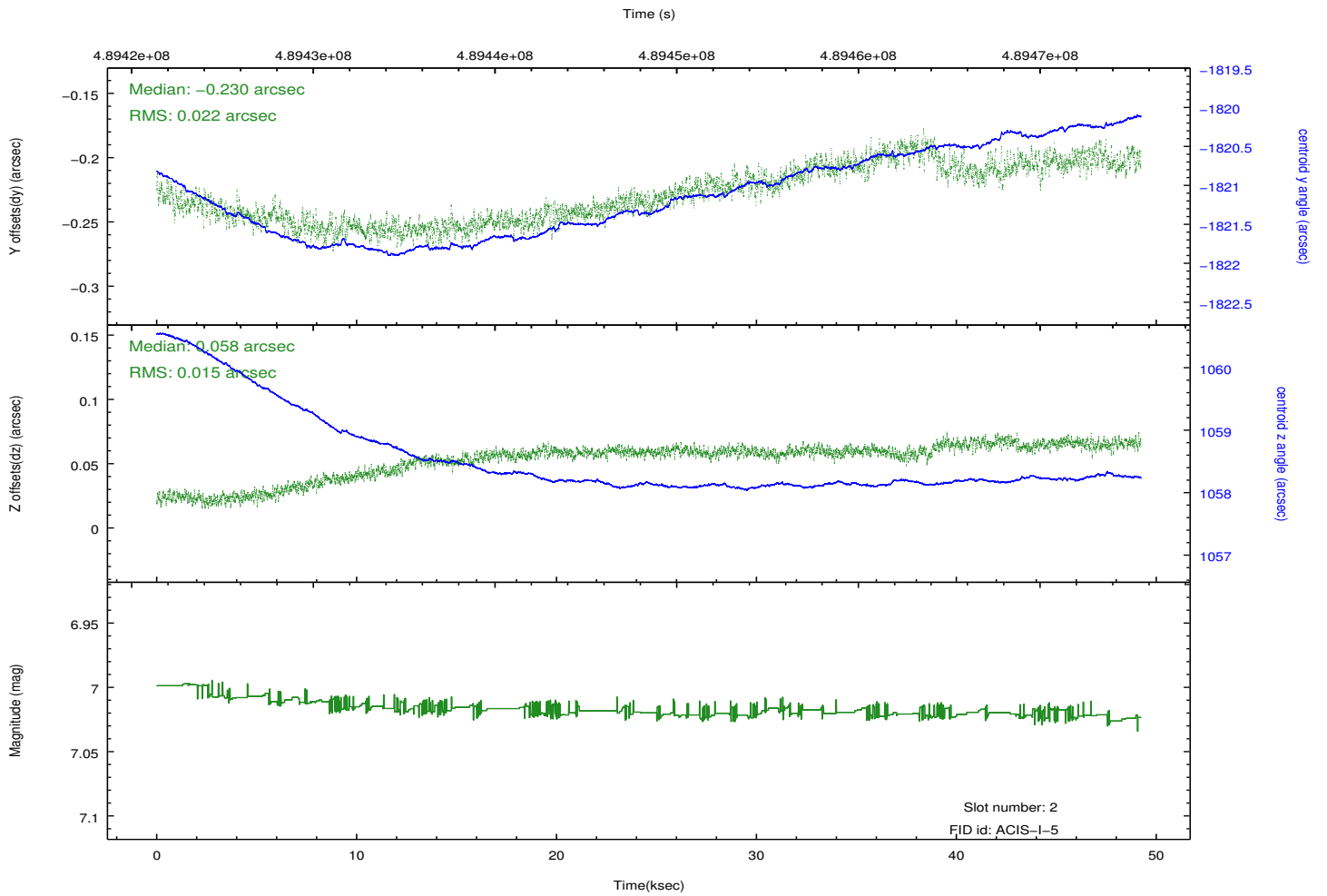
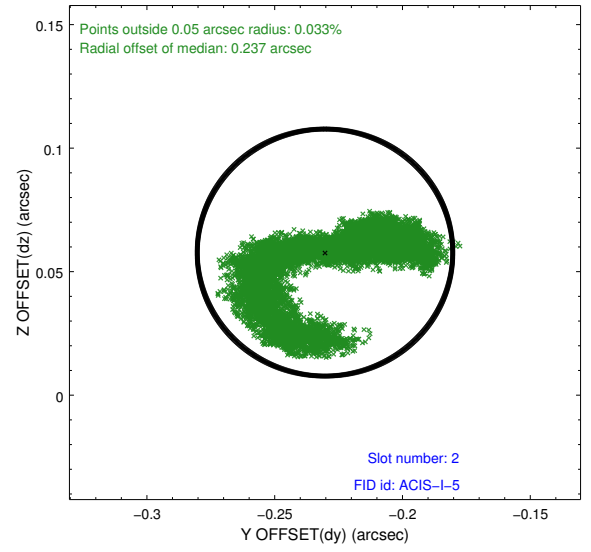
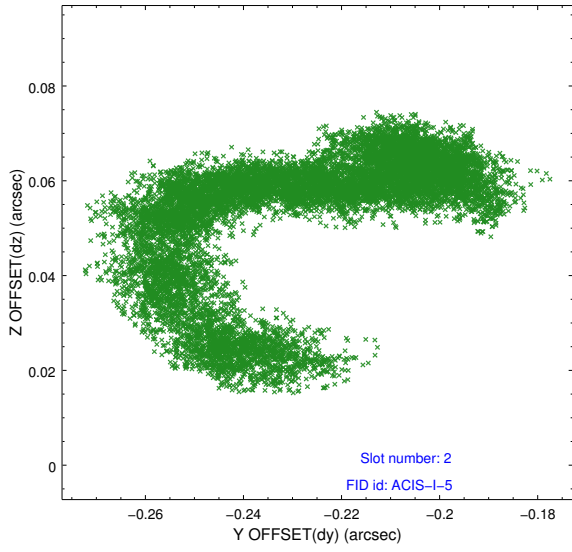
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	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	48.620359443545

## A.2 Comments

Roll preference 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.