

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 15217 - L2 Version 2  
Chandra X-Ray Center

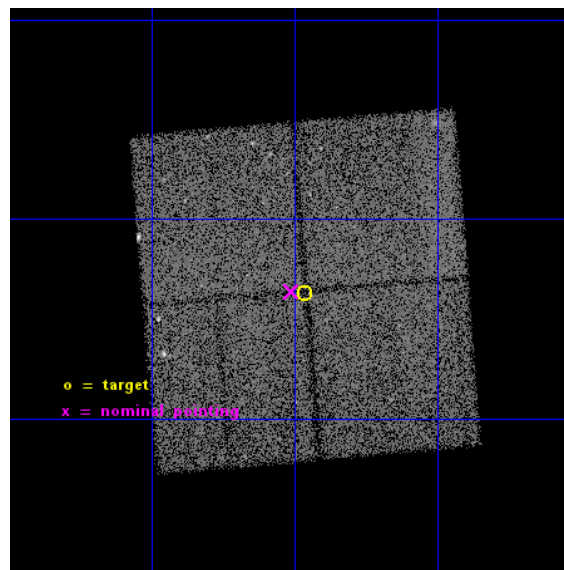
L2 Processing Date : Dec 2 2014

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# 1 Front

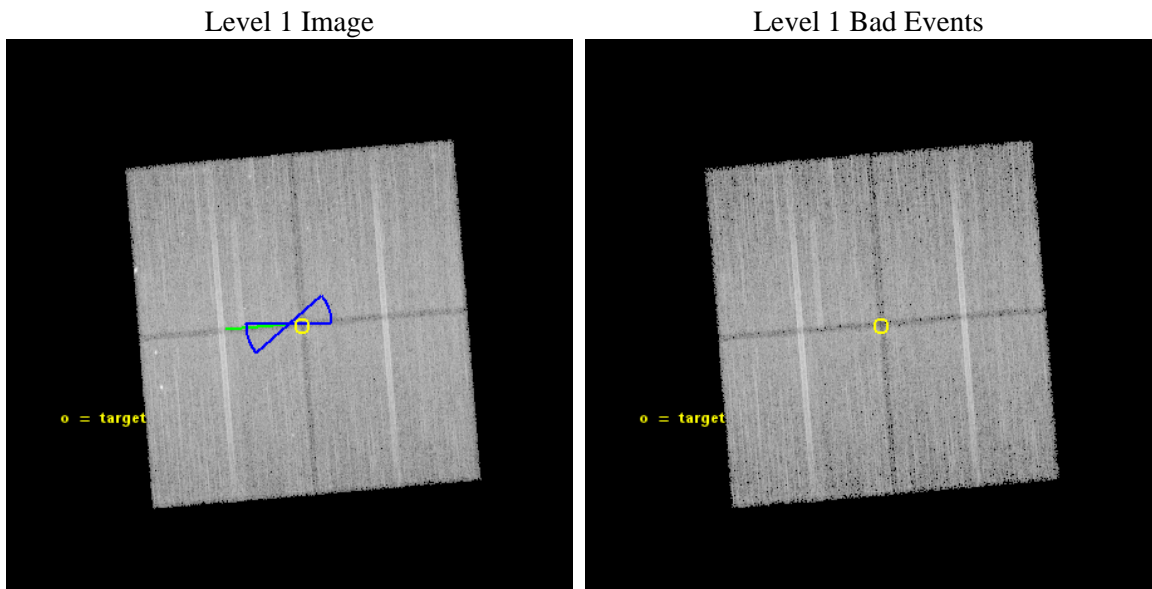
seq_num	901047	Sequence number
obs_id	15217	Observation id
title	The COSMOS Legacy Survey	Proposal title
observer	Dr Francesca Civano	Principal investigator
object	COSMOS Legacy	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	149.6157	Observer's specified target RA [deg]
dec_targ	2.270986	Observer's specified target Dec [deg]
ra_nom	149.6275095912	Nominal RA [deg]
dec_nom	2.2729227692687	Nominal Dec [deg]
roll_nom	265.2082232875	Nominal Roll [deg]
revision	2	Processing version of data
ontime	46666.821251631	Sum of GTIs [s]
livetime	46057.084876364	Livetime [s]
ontime0	46673.062272251	Sum of GTIs [s]
ontime1	46666.821251631	Sum of GTIs [s]
ontime2	46666.862301648	Sum of GTIs [s]
ontime3	46676.326432705	Sum of GTIs [s]
l2events	96758	Number of level 2 events



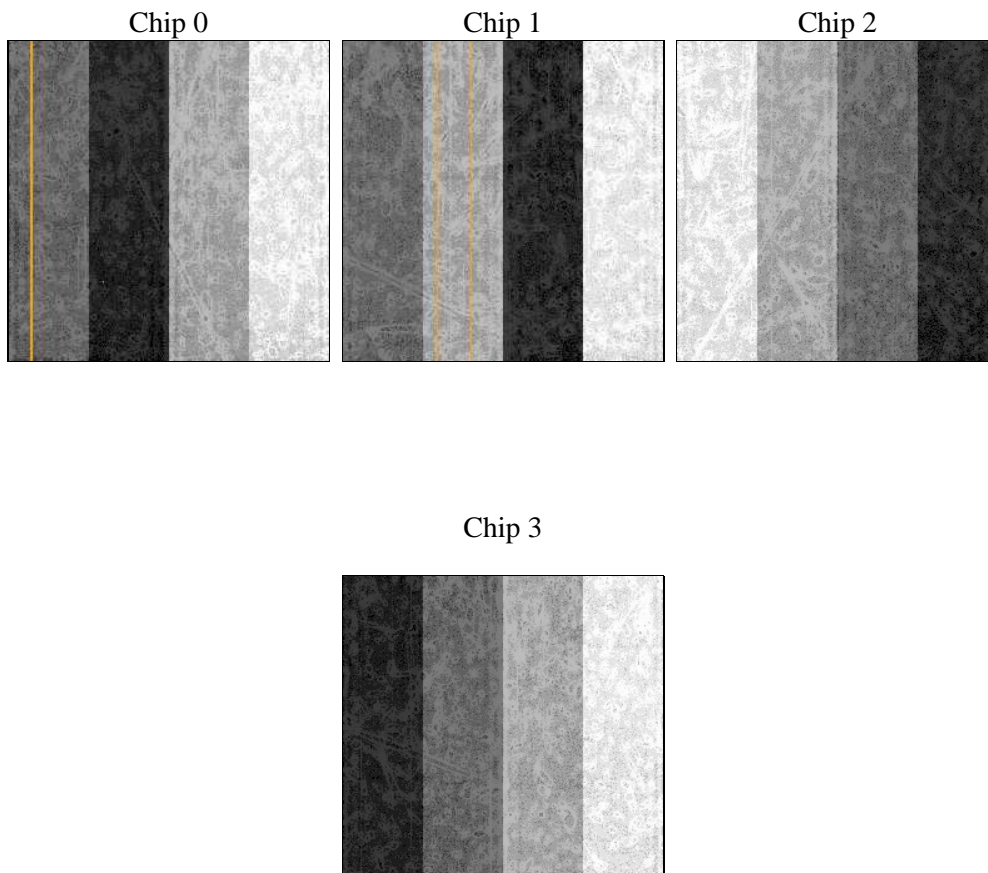
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	46585.709000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	46666.821251631	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime0	46673.062272251	Sum of GTIs [s]
date	2014-12-02T08:07:37	Date and time of file creation	ontime1	46666.821251631	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	46666.862301648	Sum of GTIs [s]
			ontime3	46676.326432705	Sum of GTIs [s]
			l1events	911175	Number of level 1 events

### 2.1.4 Events

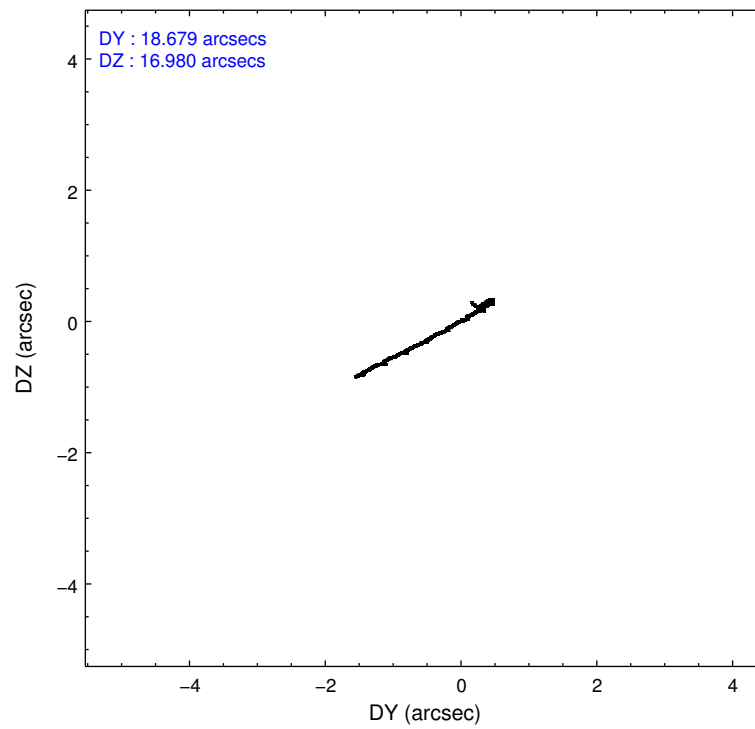
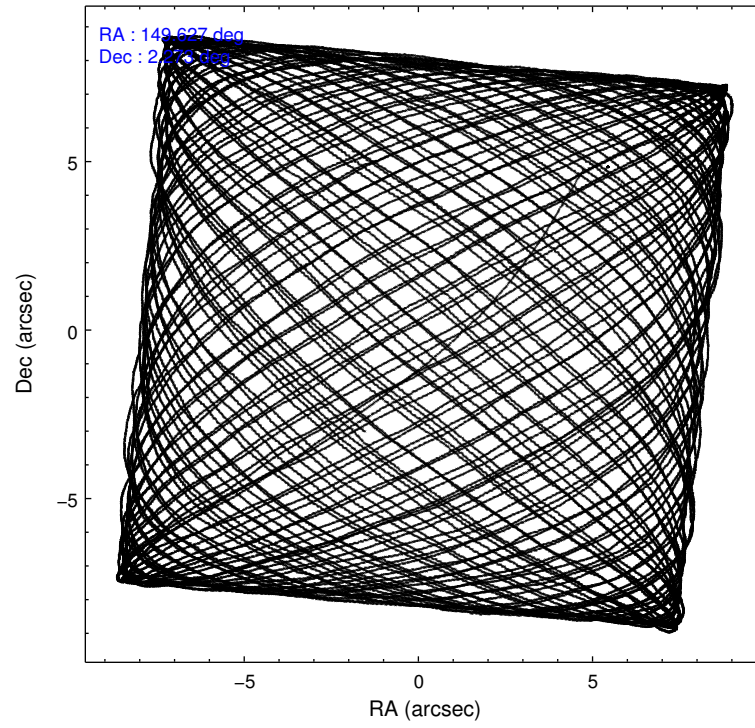
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	217601	222258	236086	235230
rejected events	189890	191225	207637	207460
rejected %	87%	86%	87%	88%

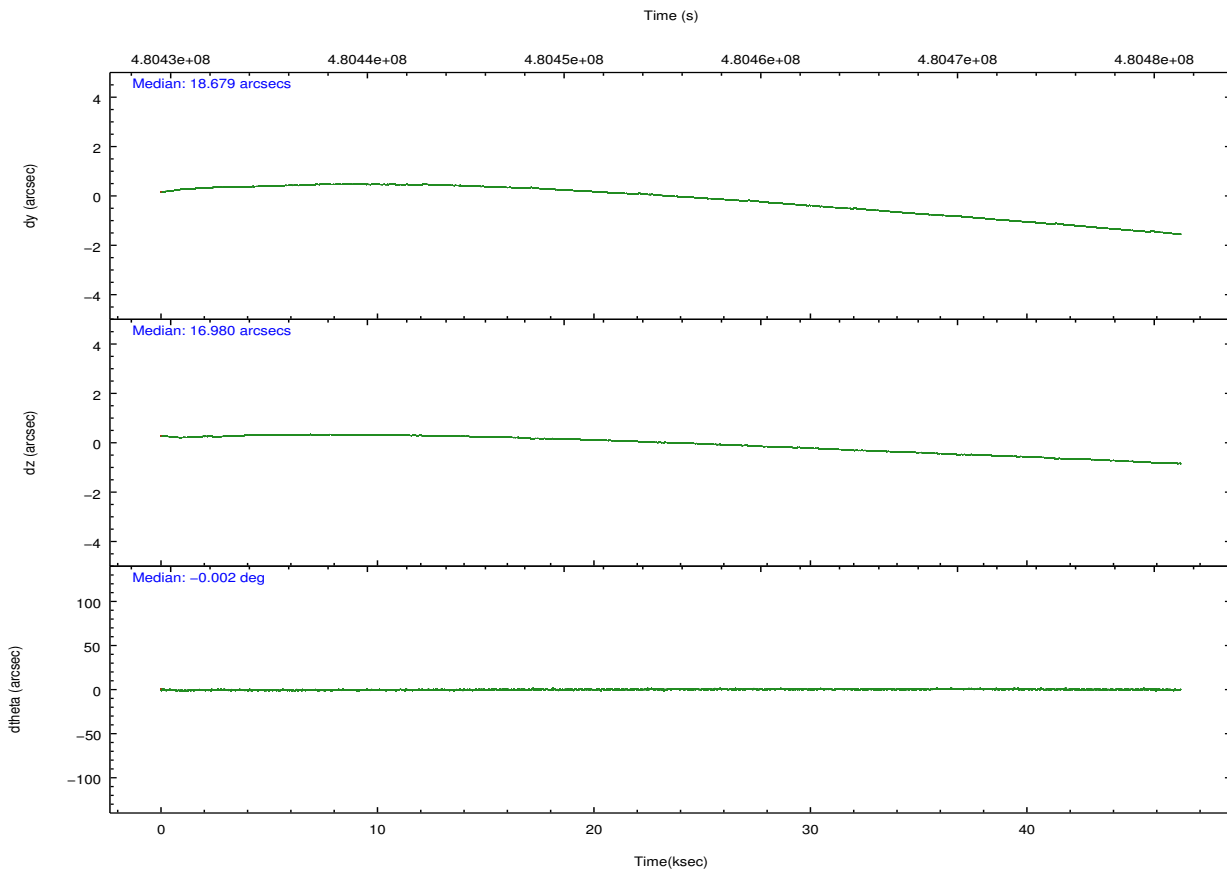
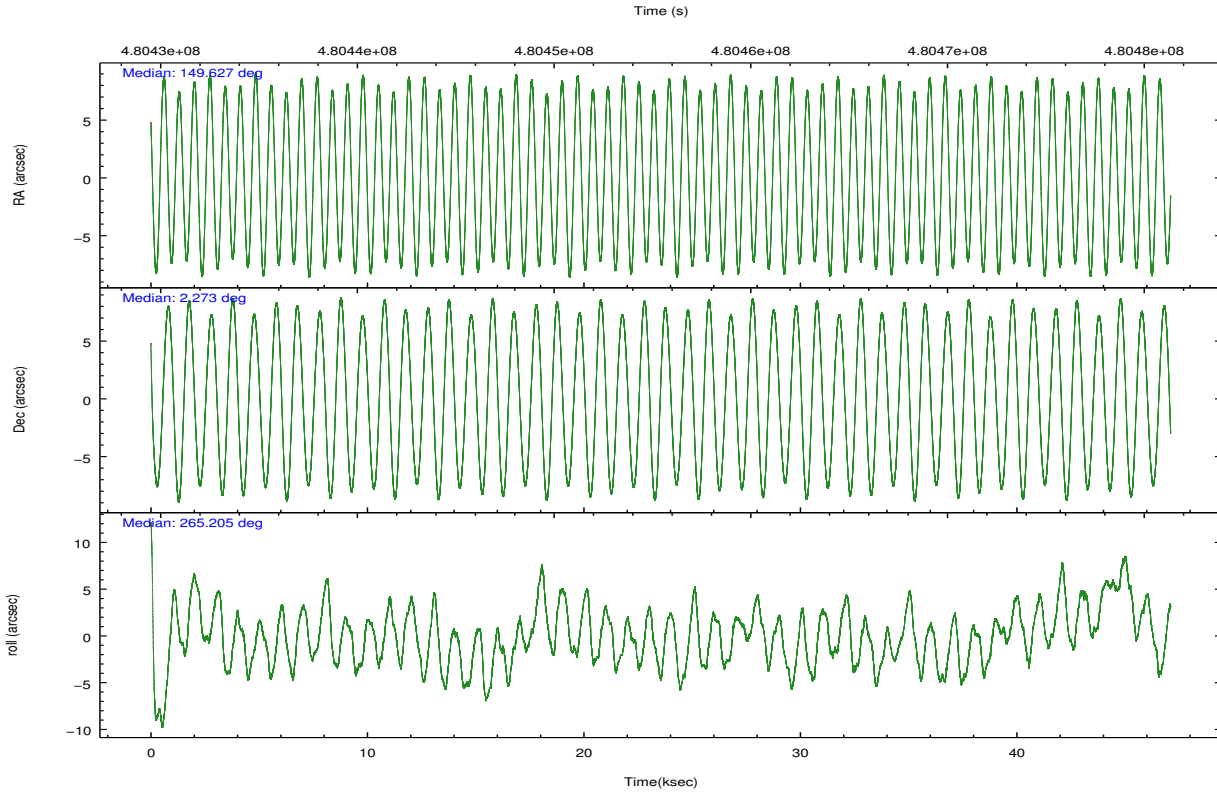
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	9372	10682	10774	10223
	4%	4%	4%	4%
grade 1 events	129	146	138	147
	0%	0%	0%	0%
grade 2 events	6761	7426	6713	6148
	3%	3%	2%	2%
grade 3 events	2999	3131	2771	2849
	1%	1%	1%	1%
grade 4 events	2787	3081	2810	2865
	1%	1%	1%	1%
grade 5 events	10775	11700	10189	12329
	4%	5%	4%	5%
grade 6 events	5796	6716	5383	5686
	2%	3%	2%	2%
grade 7 events	178982	179376	197308	194983
	82%	80%	83%	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	149.615697	149.627509591202	Subarray requested	NONE	NONE
[deg] Pointing Dec	2.297756	2.272922769268682	Alternating exposures requested	N	N
[deg] Pointing Roll	265.000002	265.2082232874999	[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)	480432390.184000	480431345.8093			
Observation start date	2013-03-23T13:25:23	2013-03-23T13:09:05			
[s] Observation end time (MET)	480478976.184000	480479213.31189			
Observation end date	2013-03-24T02:21:49	2013-03-24T02:26:53			
Read mode	TIMED	TIMED			

## 2.3 Aspect





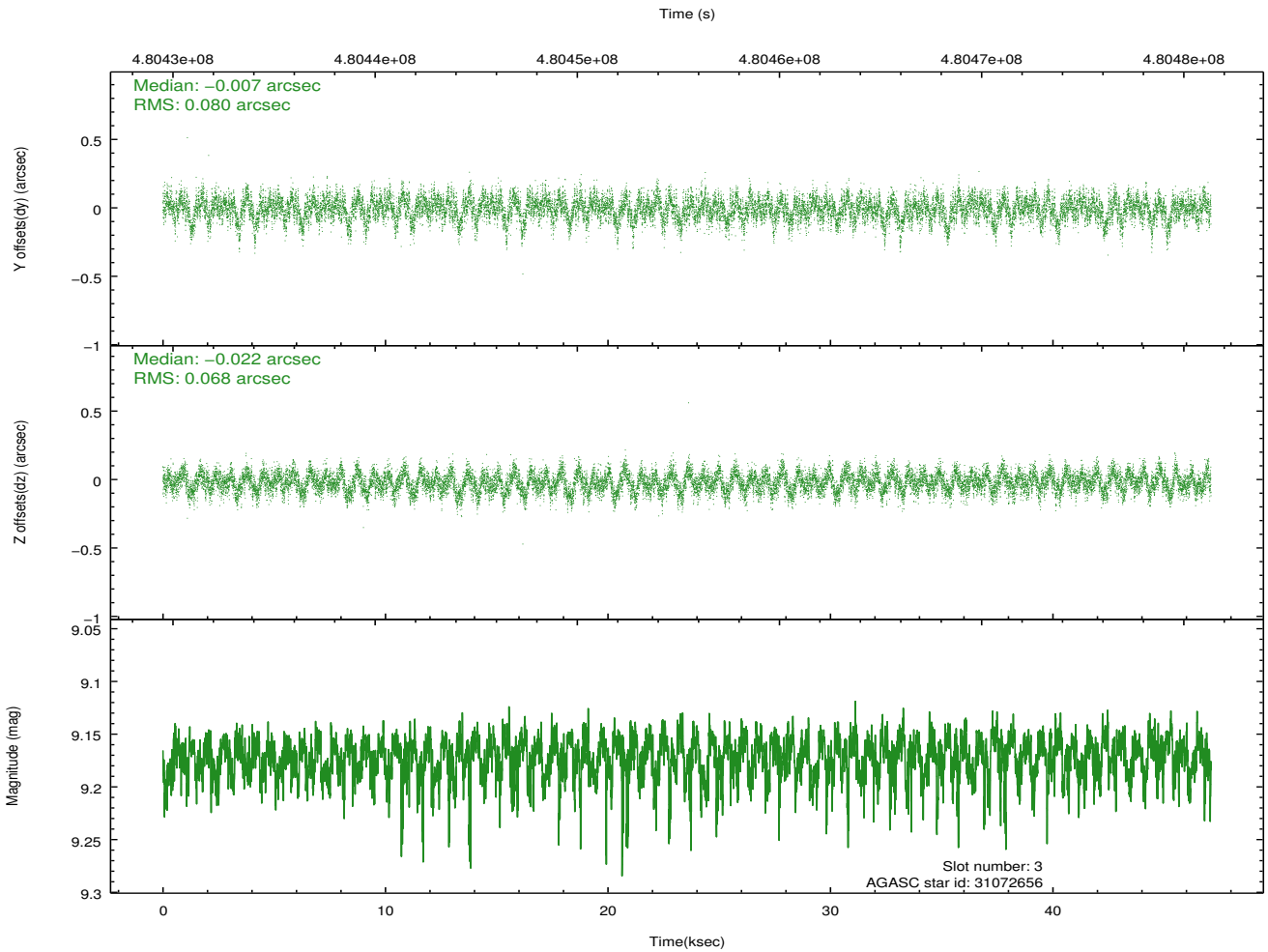
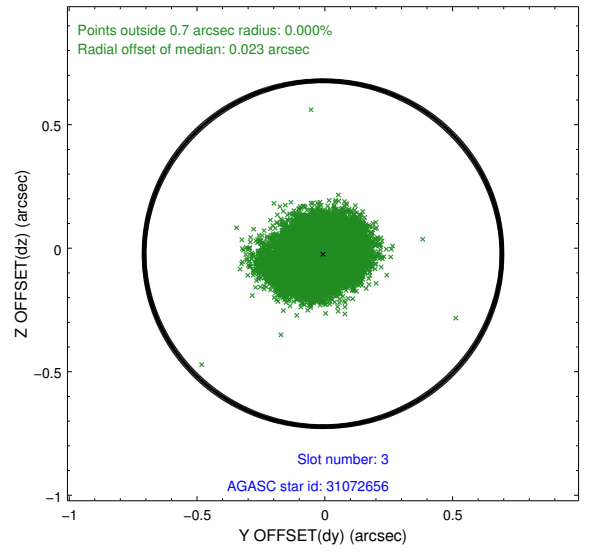
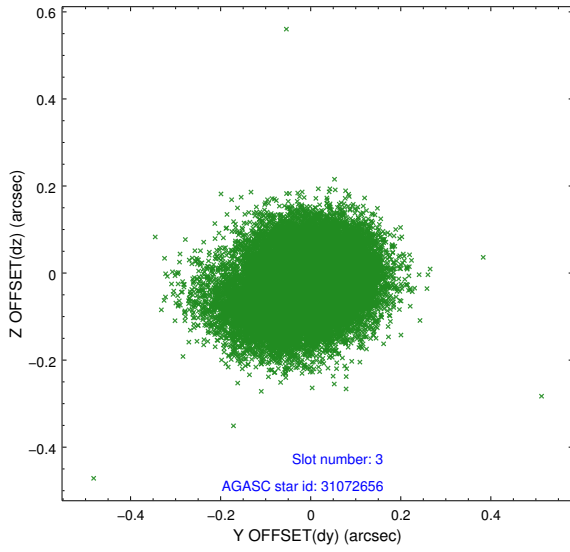
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.14	11490	0.079	-0.031	0.013	0.023	0.000000	0.000000	920.97	-840.57
1	FID		ACIS-I-5	7.12	11489	-0.278	0.065	0.011	0.025	0.000000	0.000000	-1827.49	1057.02
2	FID		ACIS-I-6	7.13	11490	0.108	0.036	0.017	0.029	0.000000	0.000000	386.56	1701.49
3	GUIDE	used	31072656	9.17	22963	-0.007	-0.022	0.112	0.182	149.313368	1.815013	1826.69	-931.73
4	GUIDE	used	31075128	9.33	22945	0.117	0.014	0.180	0.313	149.584516	2.364347	-228.51	-132.43
5	GUIDE	used	31463760	8.81	22861	-0.058	0.112	0.109	0.180	148.998237	2.798749	-1603.22	-2368.99
6	GUIDE	used	32375384	9.94	22842	0.007	-0.174	0.261	0.422	150.238117	2.622063	-1358.62	2127.41
7	GUIDE	used	31069328	8.96	22961	-0.029	0.062	0.108	0.166	149.407760	1.639418	2426.27	-538.59

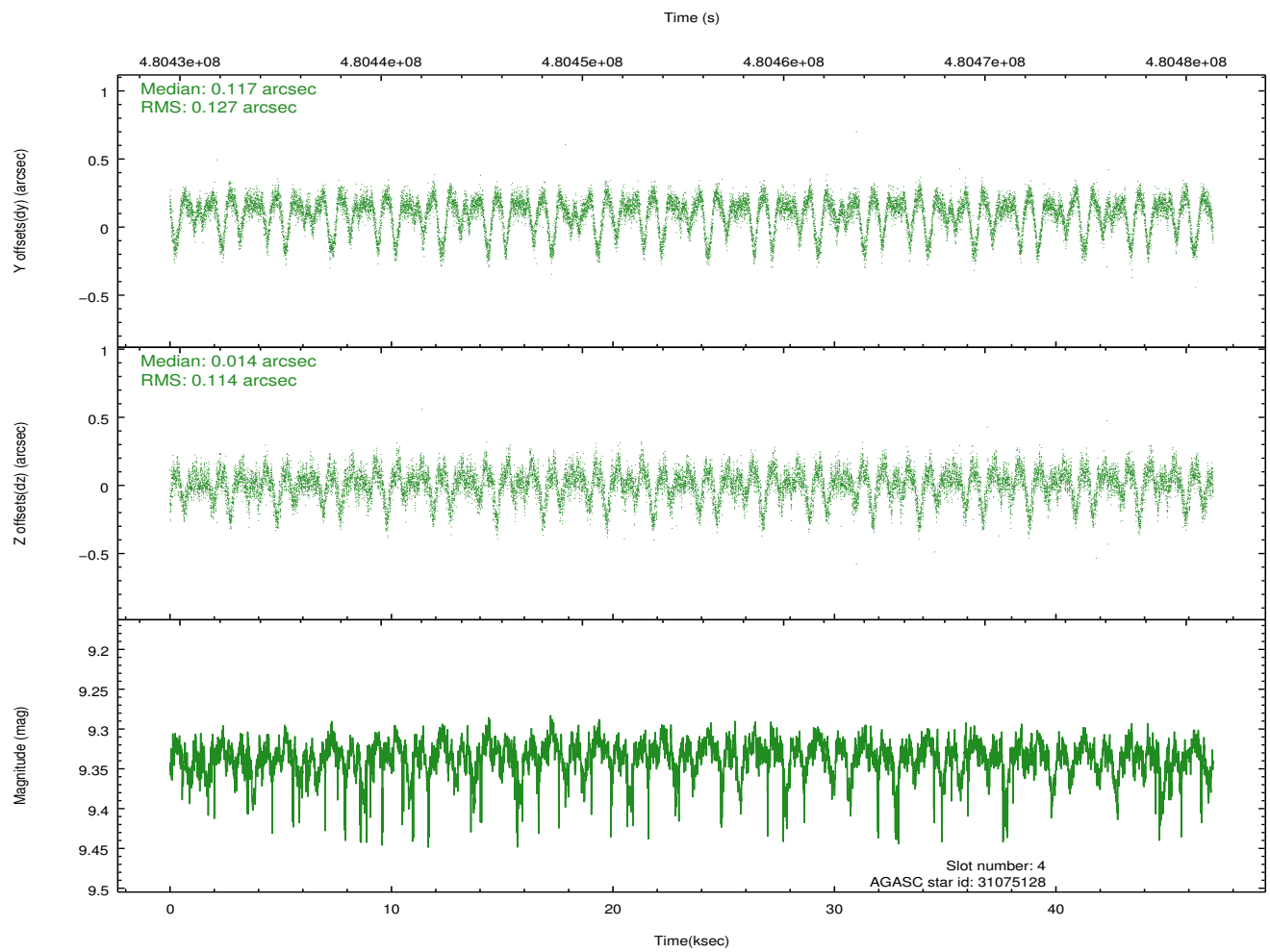
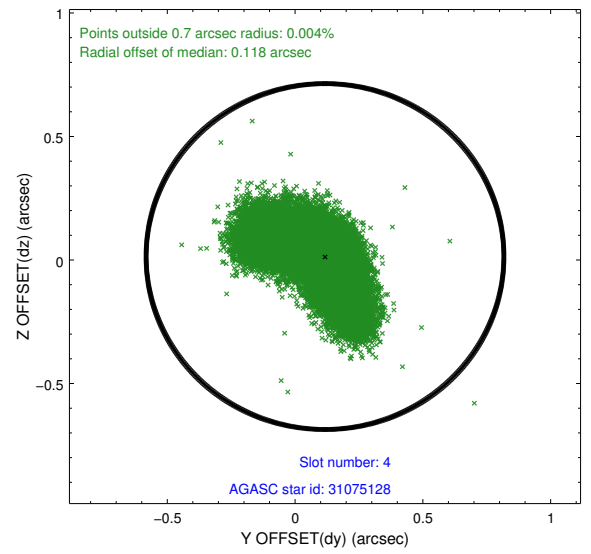
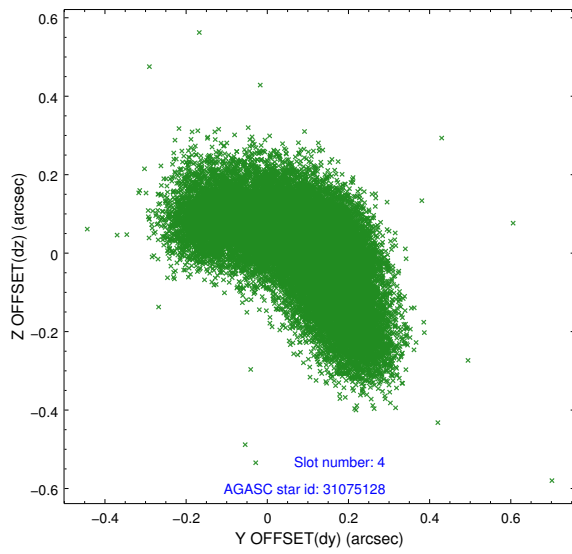
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## 2.4 Star Slots

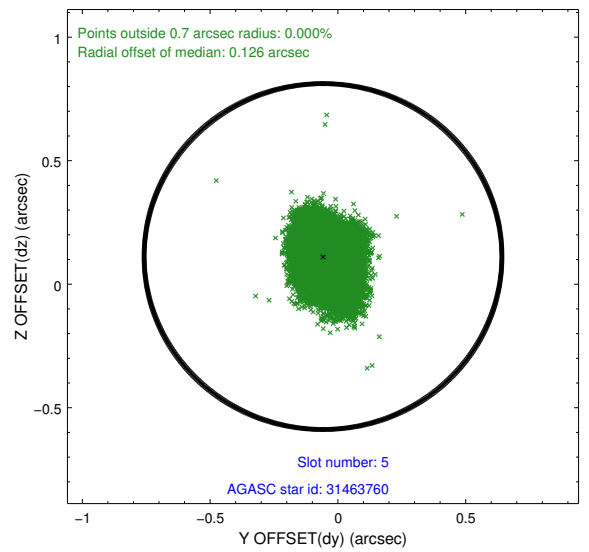
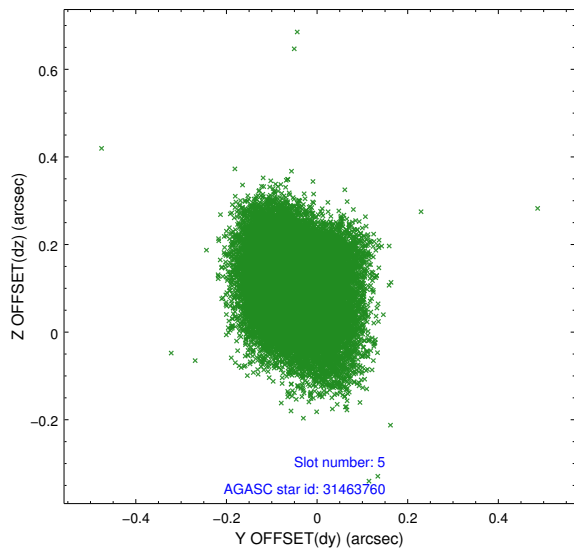
### 2.4.1 Slot 3



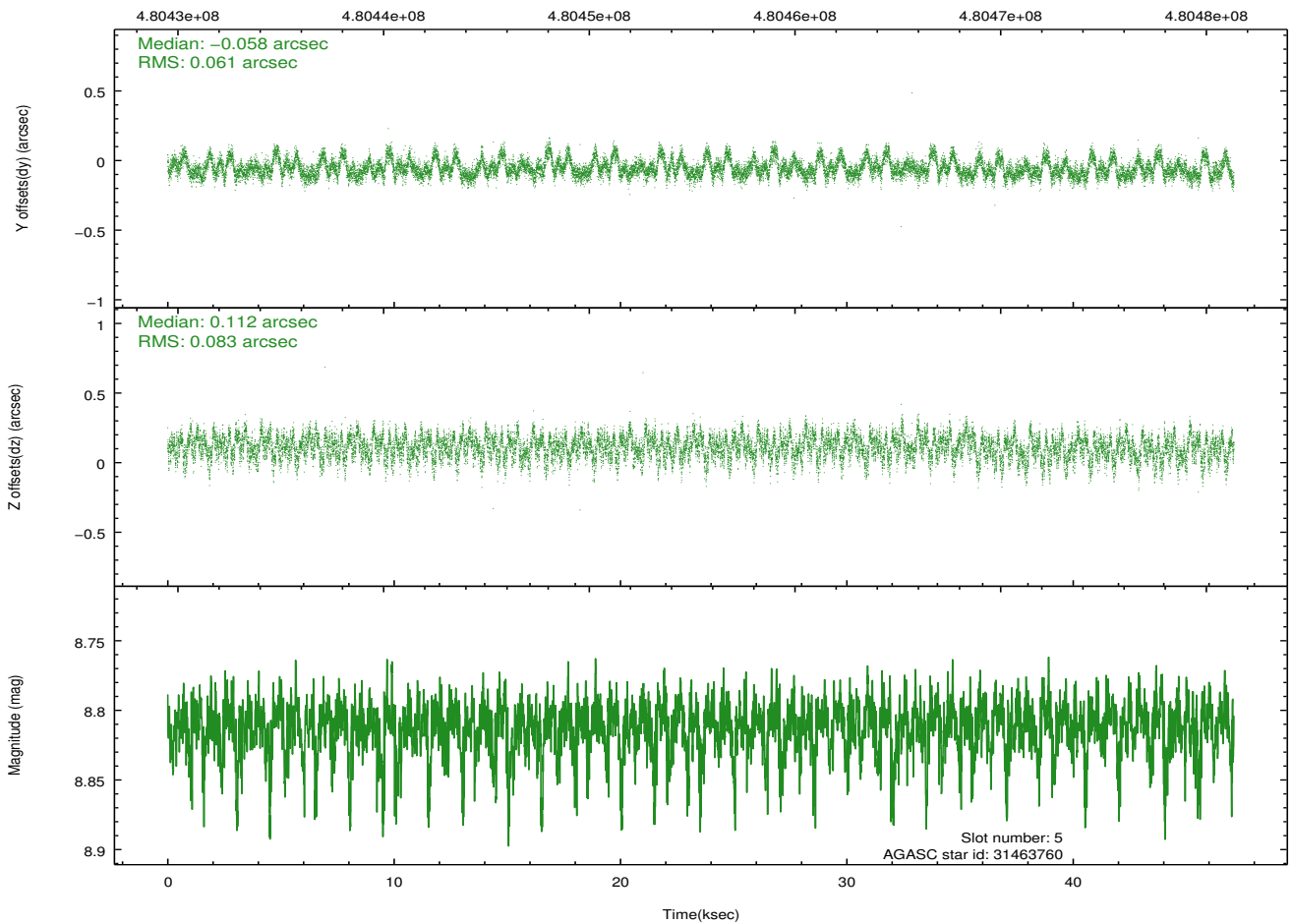
## 2.4.2 Slot 4



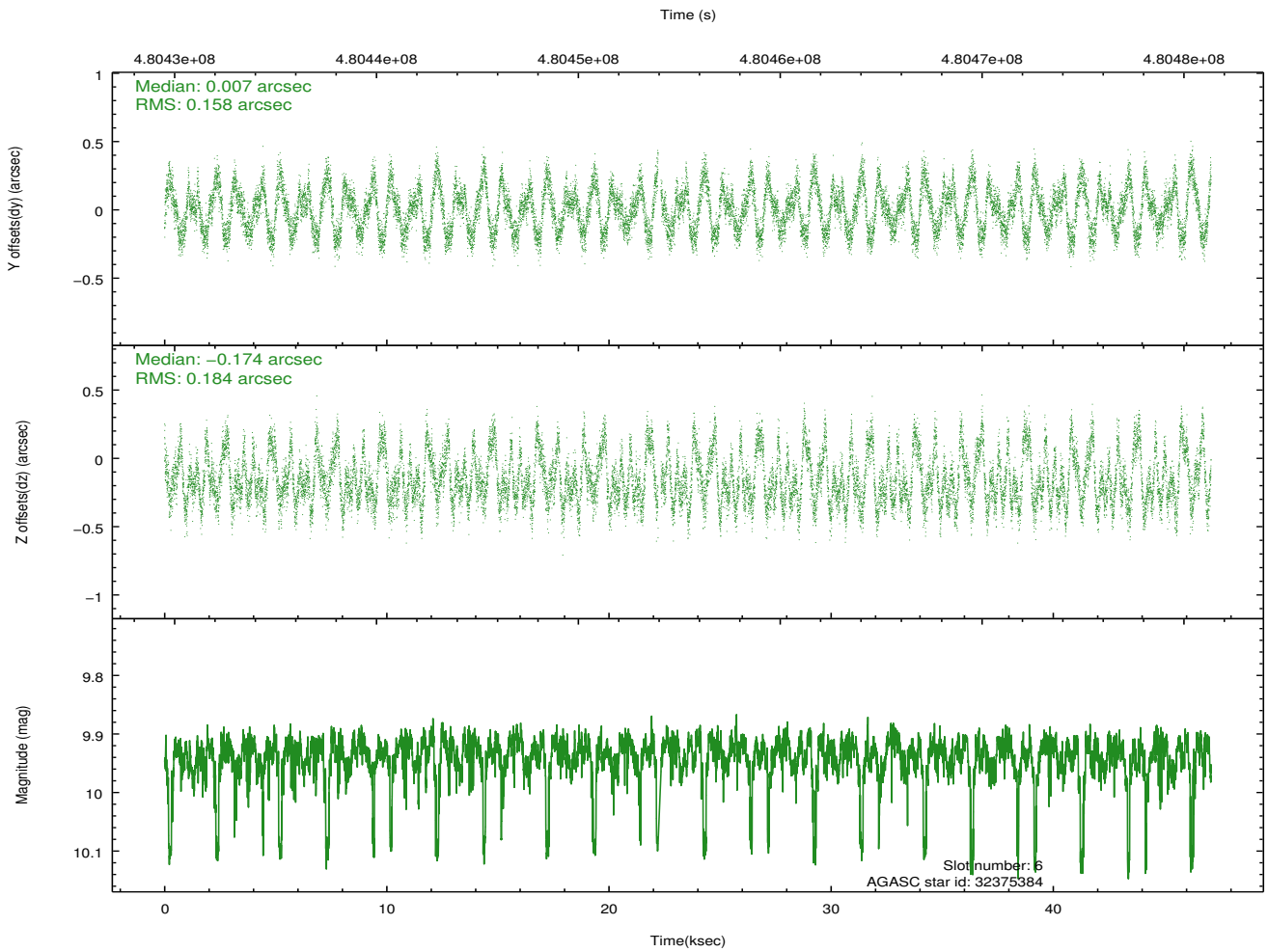
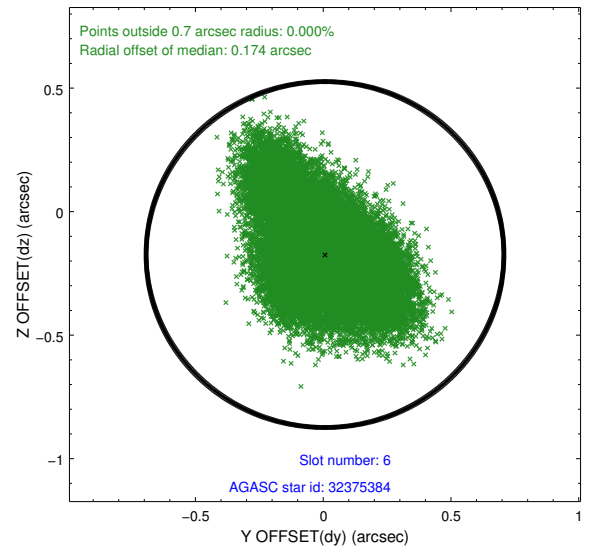
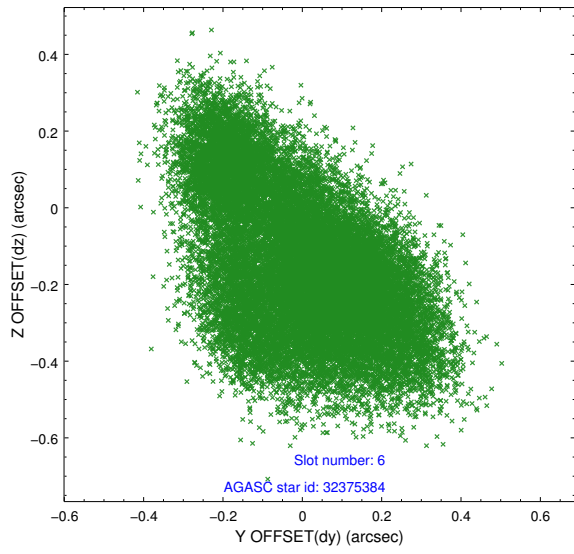
### 2.4.3 Slot 5



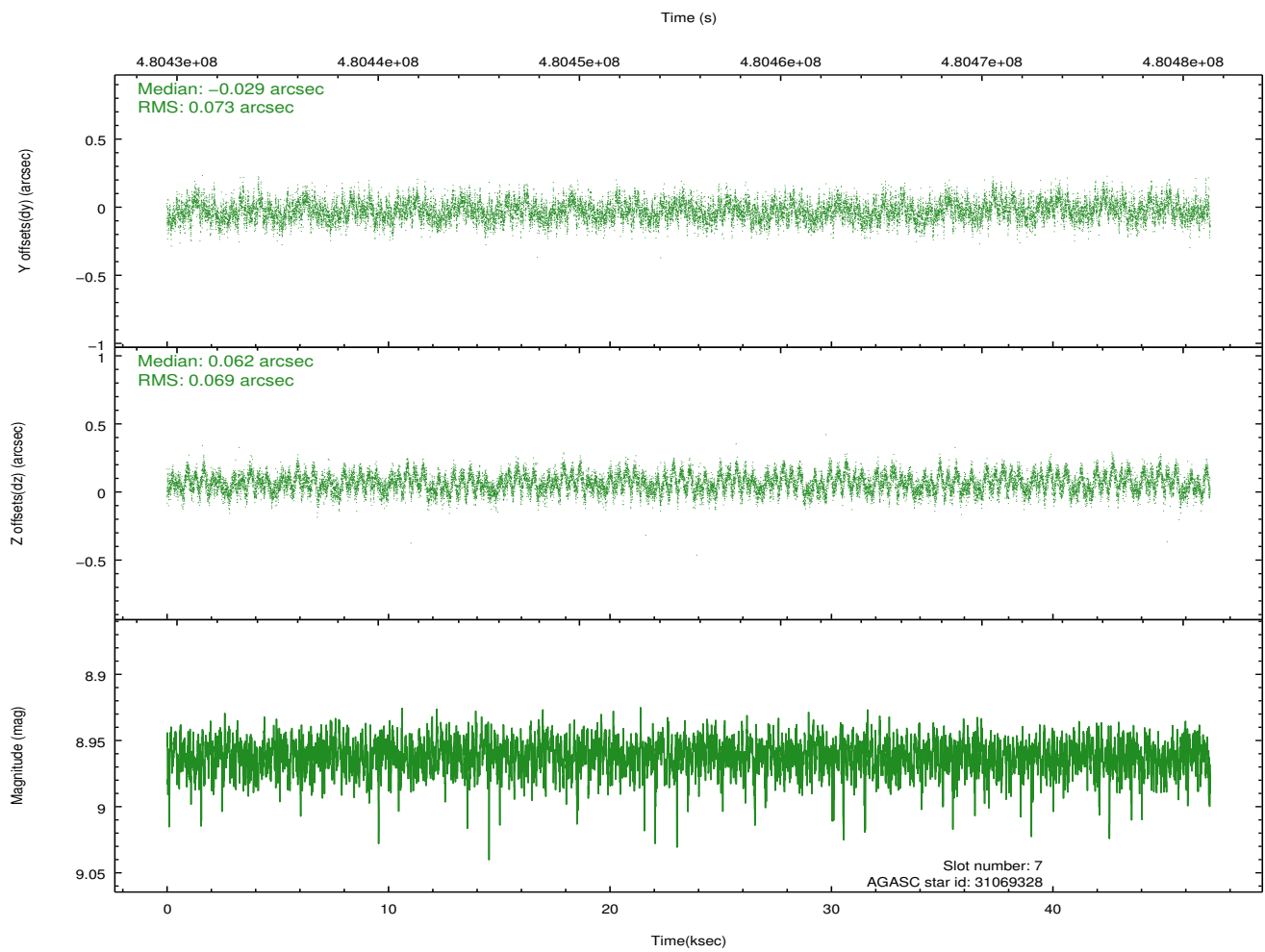
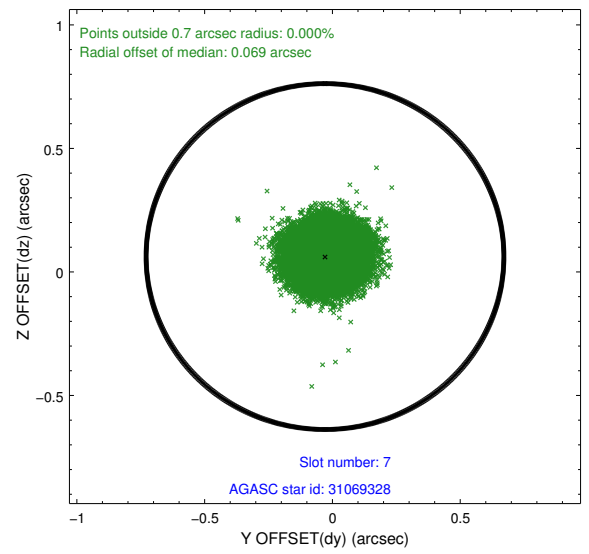
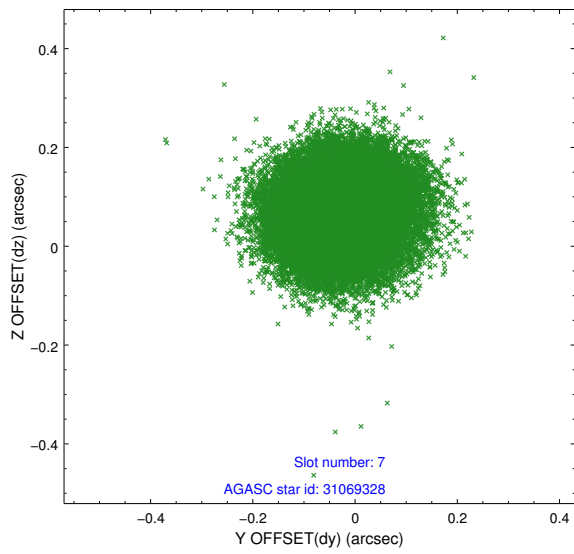
Time (s)



## 2.4.4 Slot 6

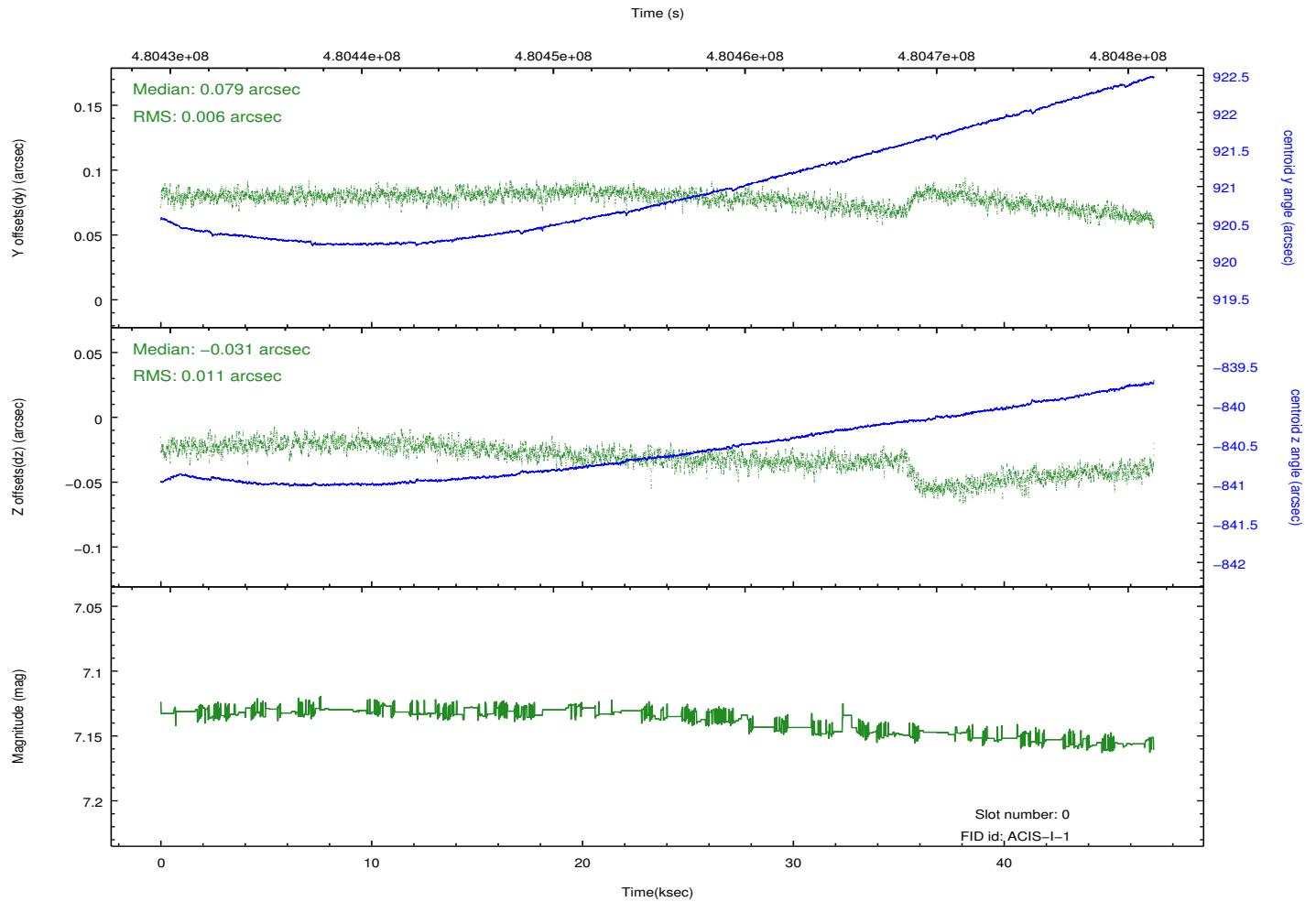
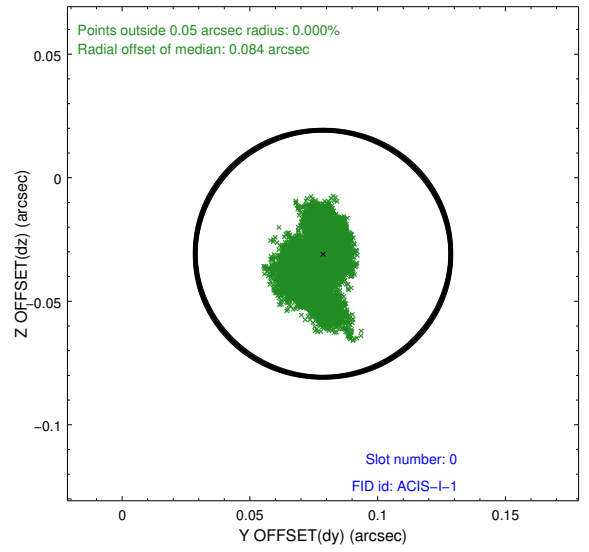
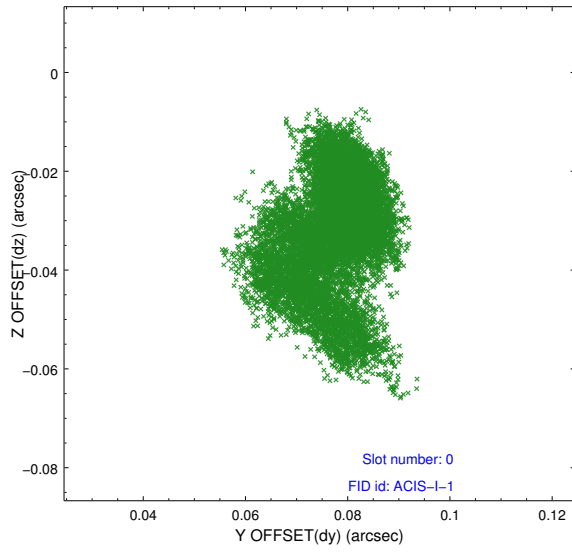


## 2.4.5 Slot 7

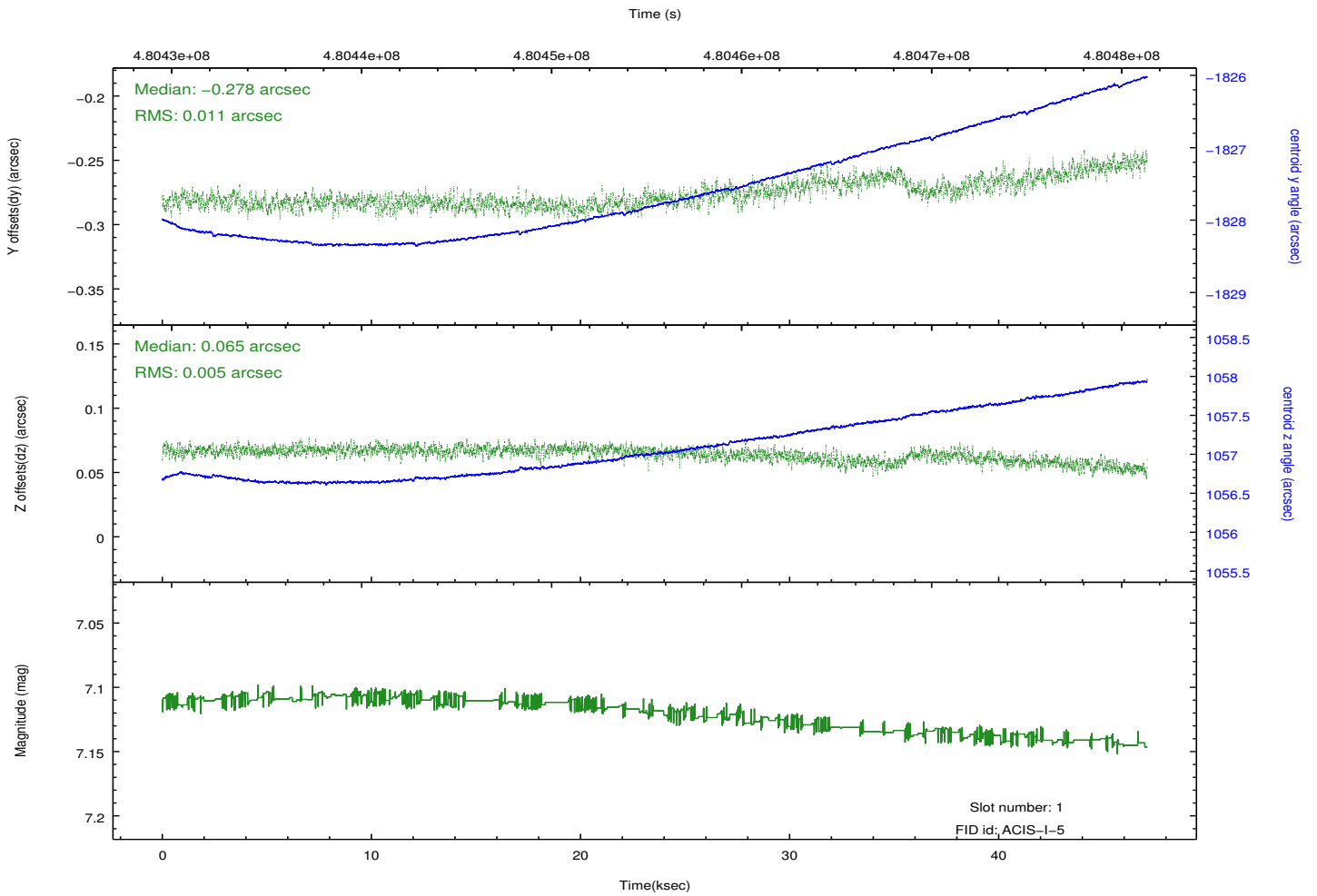
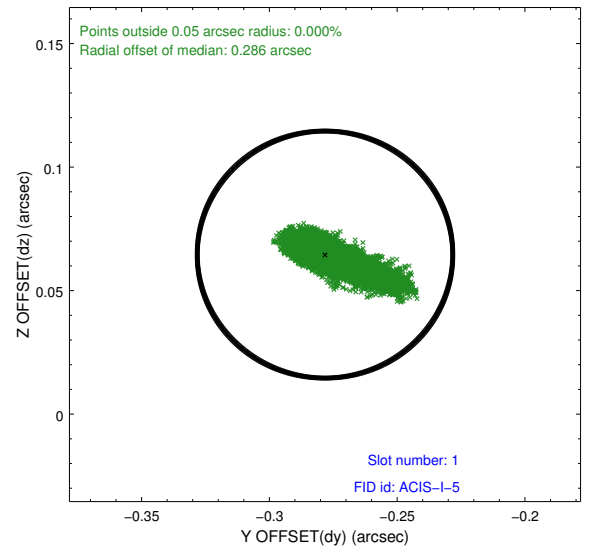
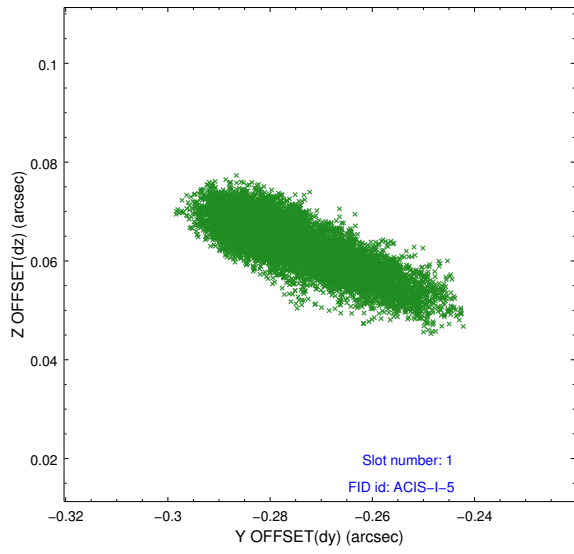


## 2.5 FID Slots

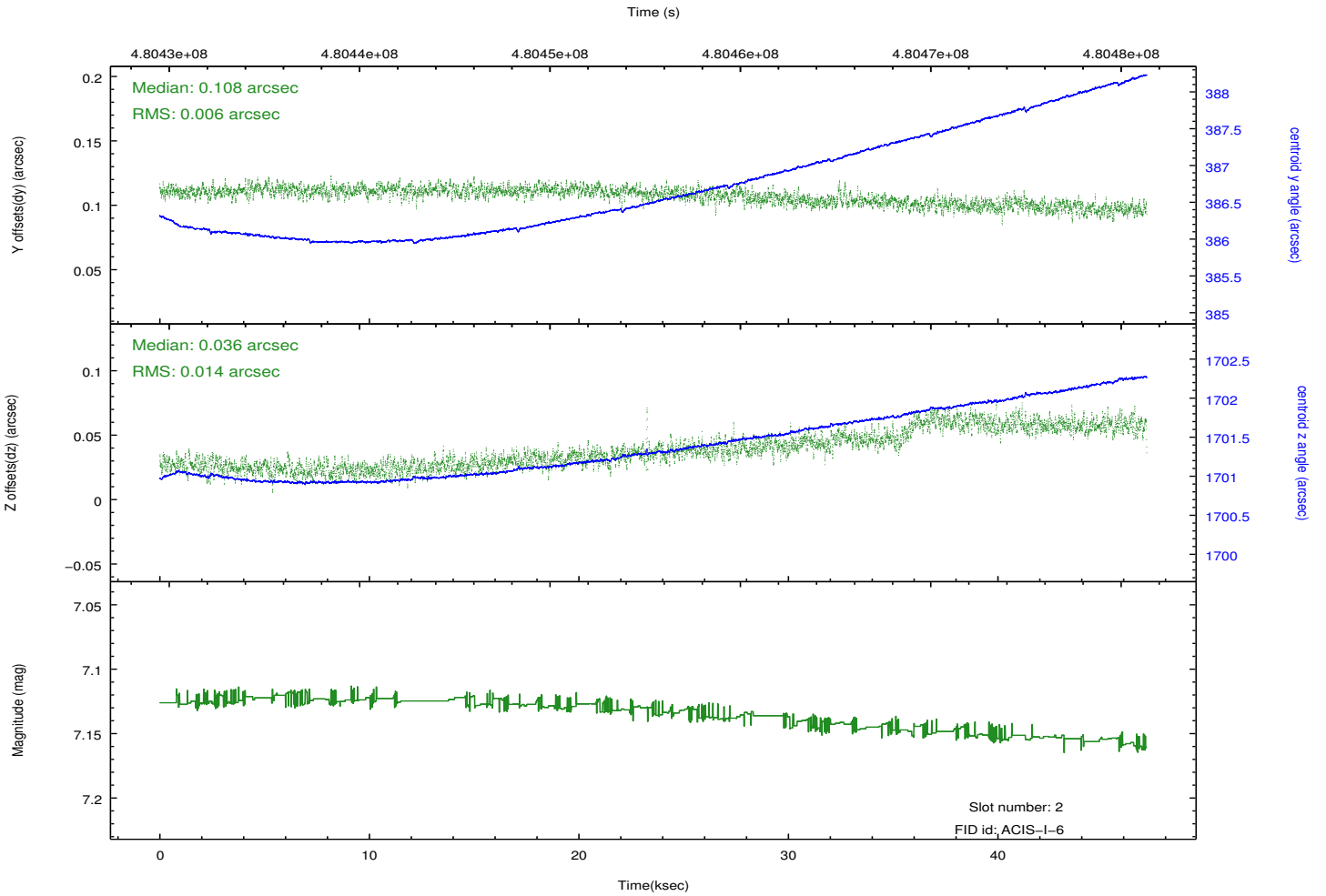
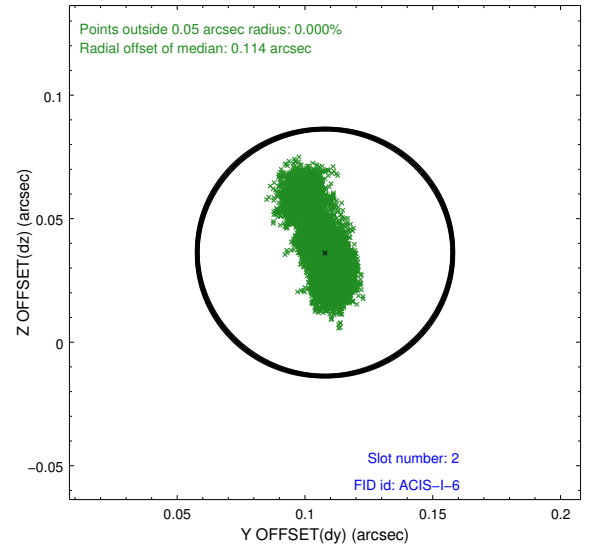
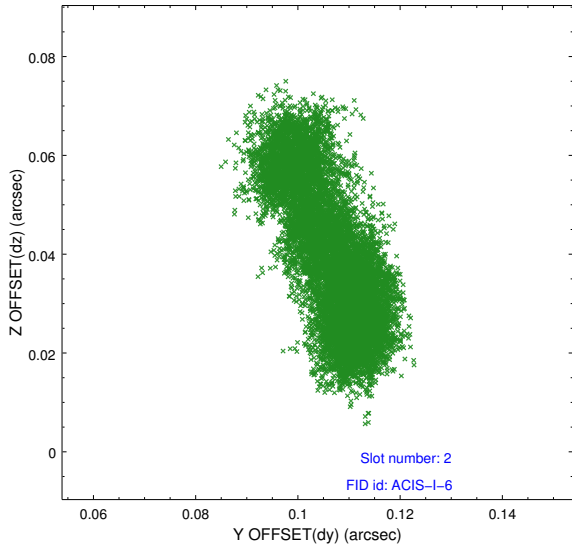
### 2.5.1 Slot 0



## 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)	2014.12.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	46.666821251631

## A.2 Comments

Roll constraint met.

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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.