

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5850 - L2 Version 5  
Chandra X-Ray Center

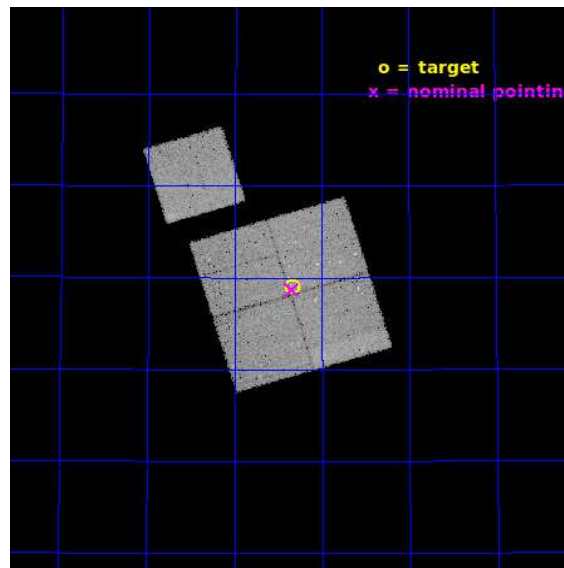
L2 Processing Date : Oct 10 2020

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# 1 Front

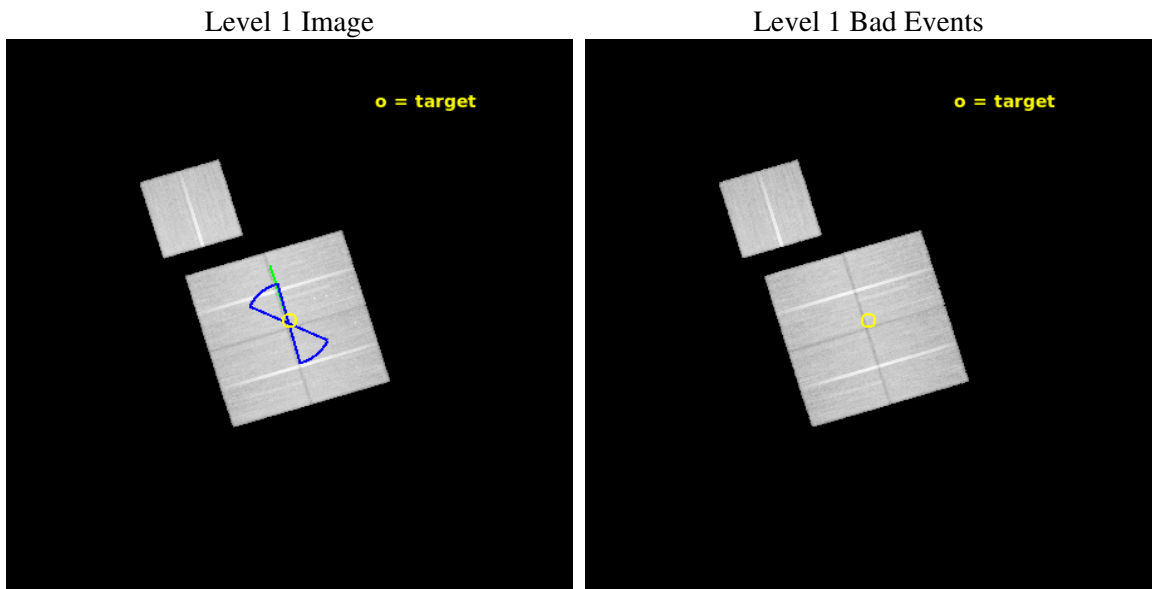
seq_num	900352	Sequence number
obs_id	5850	Observation id
title	Deep Chandra Imaging of the Extended Groth Strip: The Co-evolution of Black Holes and Galaxies	Proposal title
observer	Prof Kirpal Nandra	Principal investigator
object	Extended Groth Strip (EGS)	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	214.584915	Observer's specified target RA [deg]
dec_targ	52.65052	Observer's specified target Dec [deg]
ra_nom	214.58618485924	Nominal RA [deg]
dec_nom	52.644883396535	Nominal Dec [deg]
roll_nom	343.05771785075	Nominal Roll [deg]
revision	5	Processing version of data
ontime	46149.617970735	Sum of GTIs [s]
livetime	45546.639237093	Livetime [s]
ontime0	46140.195109844	Sum of GTIs [s]
ontime1	46149.617950827	Sum of GTIs [s]
ontime2	46152.758950979	Sum of GTIs [s]
ontime3	46149.617970735	Sum of GTIs [s]
ontime6	46155.899911225	Sum of GTIs [s]
l2events	128671	Number of level 2 events



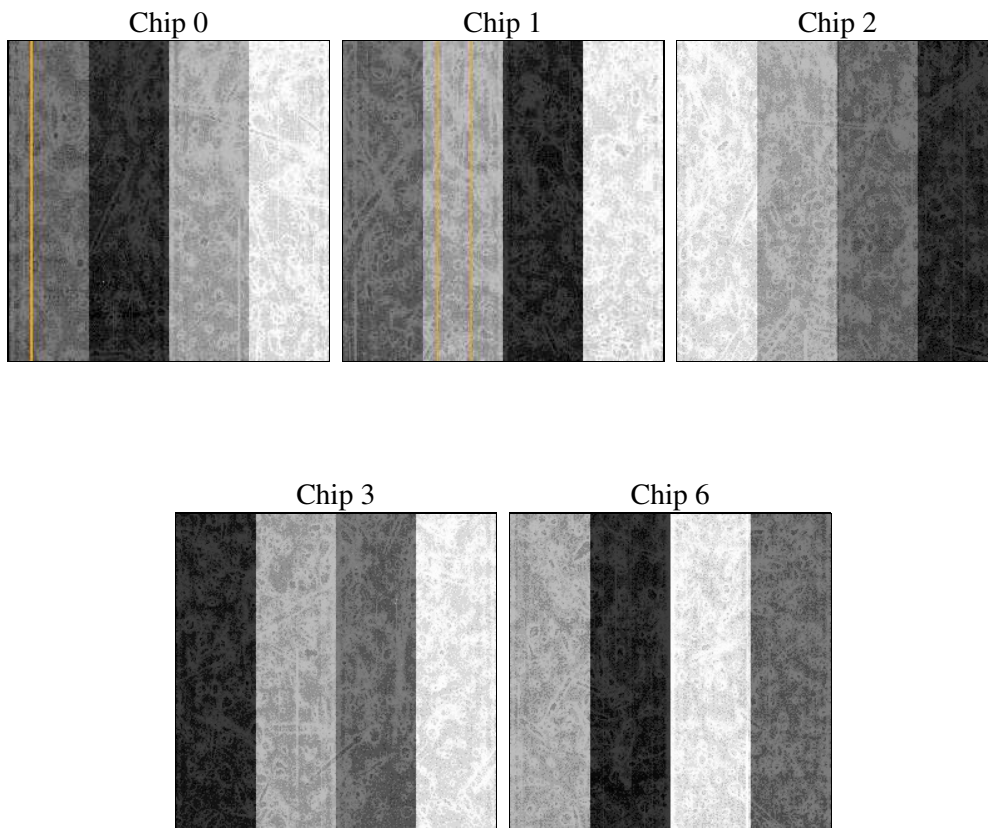
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	46000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	46149.617970735	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime0	46140.195109844	Sum of GTIs [s]
date	2020-10-11T02:41:11	Date and time of file creation	ontime1	46149.617950827	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	46152.758950979	Sum of GTIs [s]
			ontime3	46149.617970735	Sum of GTIs [s]
			ontime6	46155.899911225	Sum of GTIs [s]
			l1events	1488134	Number of level 1 events

### 2.1.4 Events

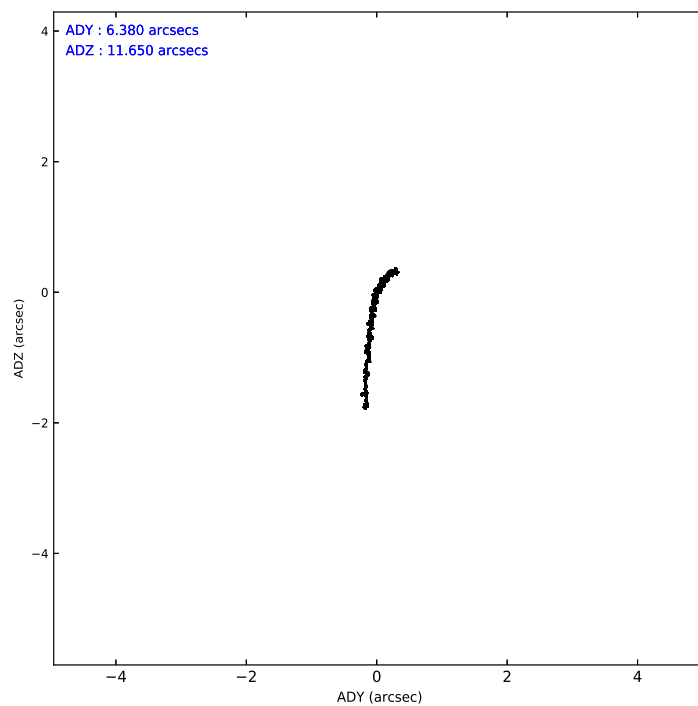
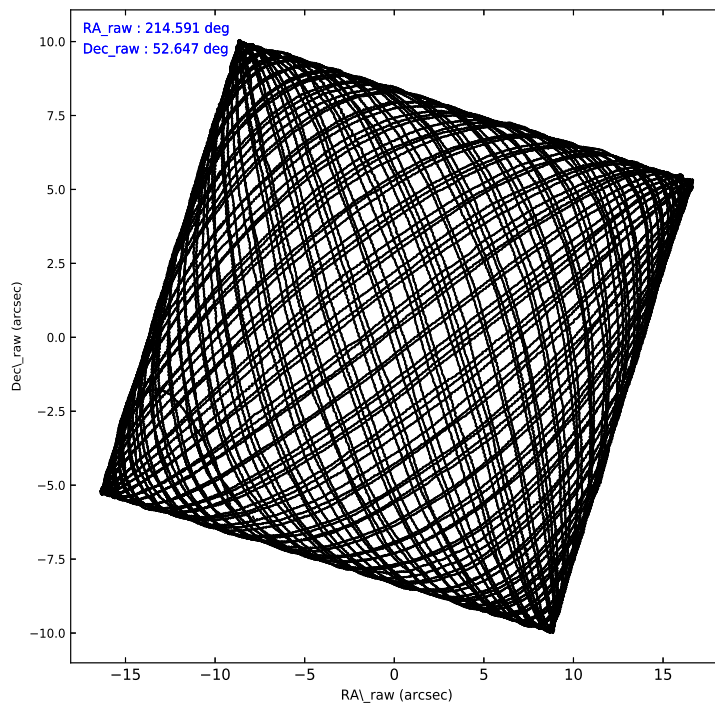
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	289009	281390	311337	305476	300922
rejected events	259570	246842	281805	275278	269800
rejected %	89%	87%	90%	90%	89%

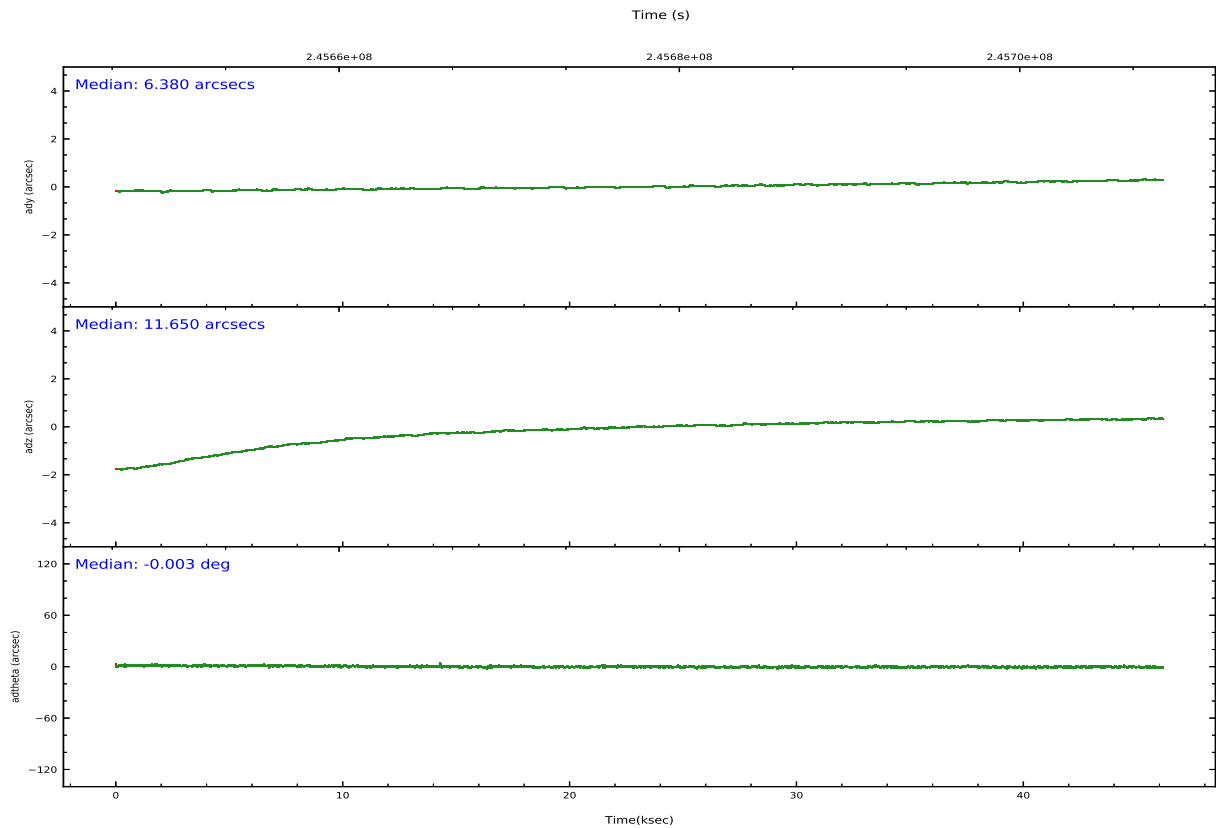
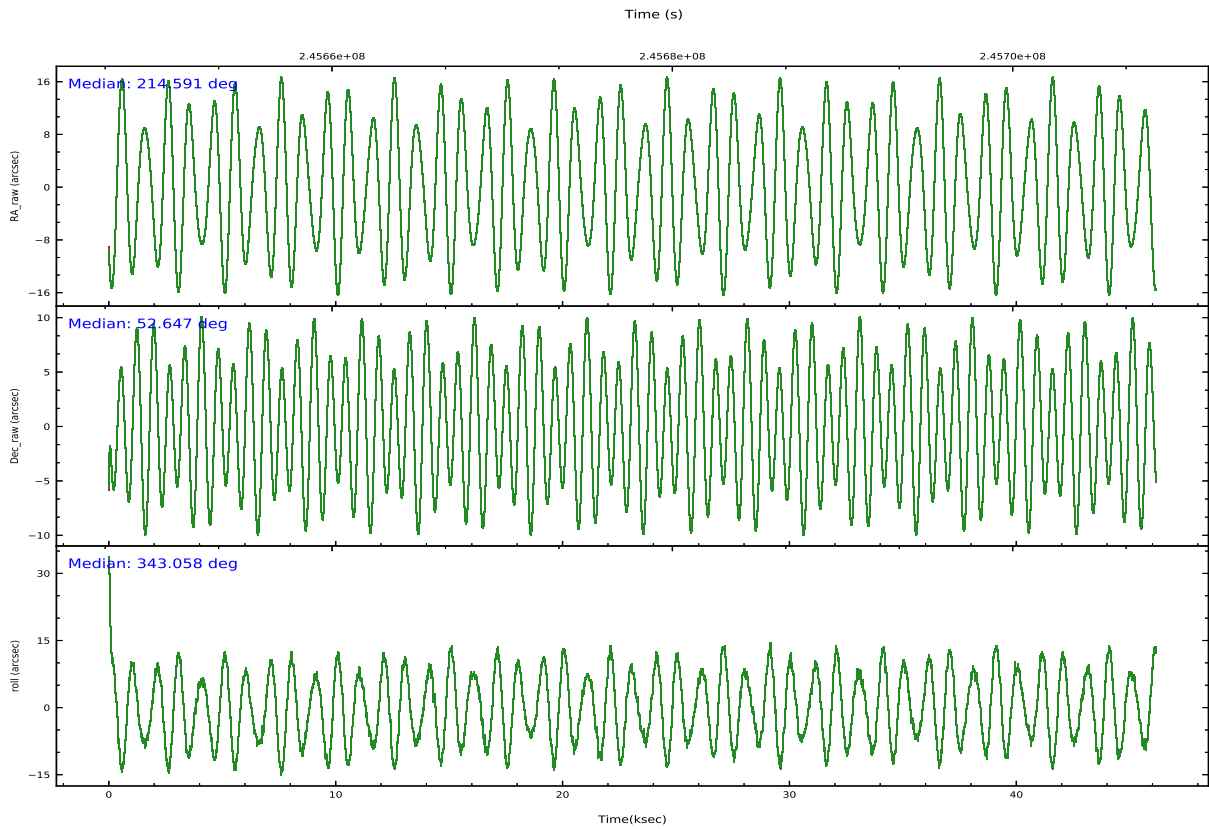
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	10820	13367	11152	11755	11719
	3%	4%	3%	3%	3%
grade 1 events	155	134	157	178	128
	0%	0%	0%	0%	0%
grade 2 events	7062	7594	6918	6351	6637
	2%	2%	2%	2%	2%
grade 3 events	3363	3747	3222	3411	3388
	1%	1%	1%	1%	1%
grade 4 events	3077	3706	3355	3283	3333
	1%	1%	1%	1%	1%
grade 5 events	10307	11523	9502	12210	11796
	3%	4%	3%	3%	3%
grade 6 events	5541	6617	5296	5804	6556
	1%	2%	1%	1%	2%
grade 7 events	248684	234702	271735	262484	257365
	86%	83%	87%	85%	85%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
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	214.546865	214.58618485924	Subarray requested	NONE	NONE
[deg] Pointing Dec	52.641238	52.644883396535	Alternating exposures requested	N	N
[deg] Pointing Roll	342.890149	343.05771785075	[s] Primary exposure time	0.000000	3.1
[deg] Roll angle	50.756000	50.756000			
[deg] Roll tolerance	25.000000	25.000000			
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)	245655322.184000	245654137.77656			
Observation start date	2005-10-14T05:34:18	2005-10-14T05:15:37			
[s] Observation end time (MET)	245701322.184000	245702262.04128			
Observation end date	2005-10-14T18:20:58	2005-10-14T18:37:42			
Read mode	TIMED	TIMED			

## 2.3 Aspect



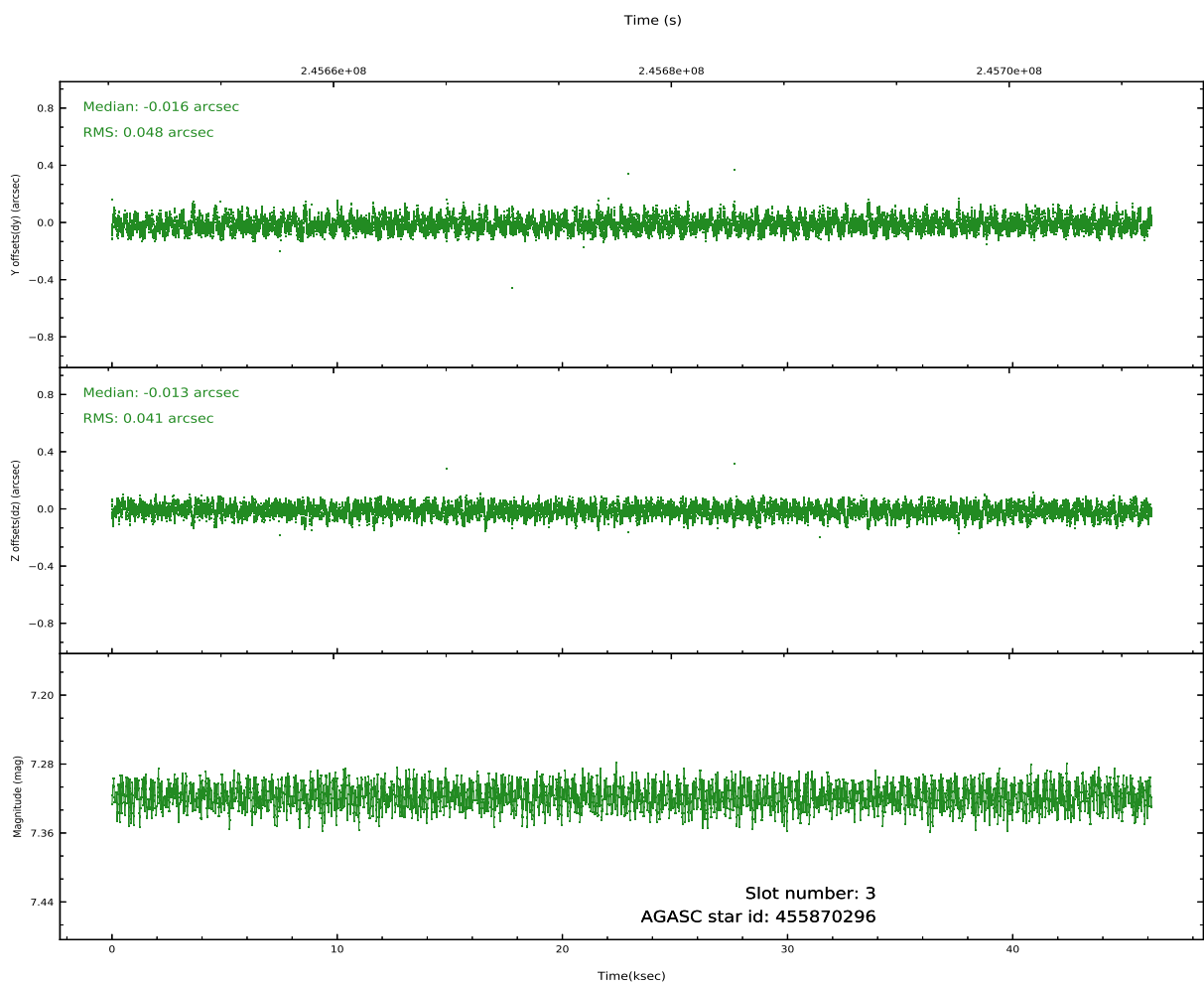
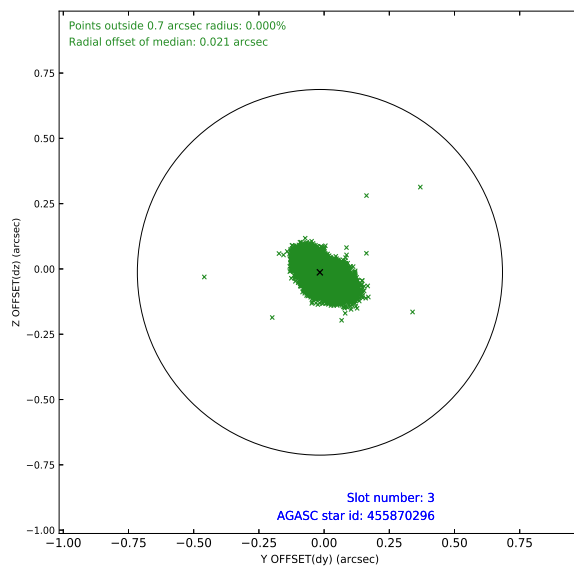
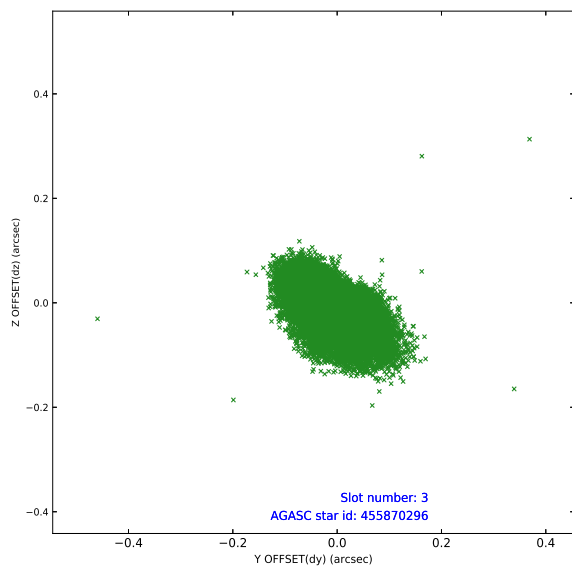


### Slot Statistics

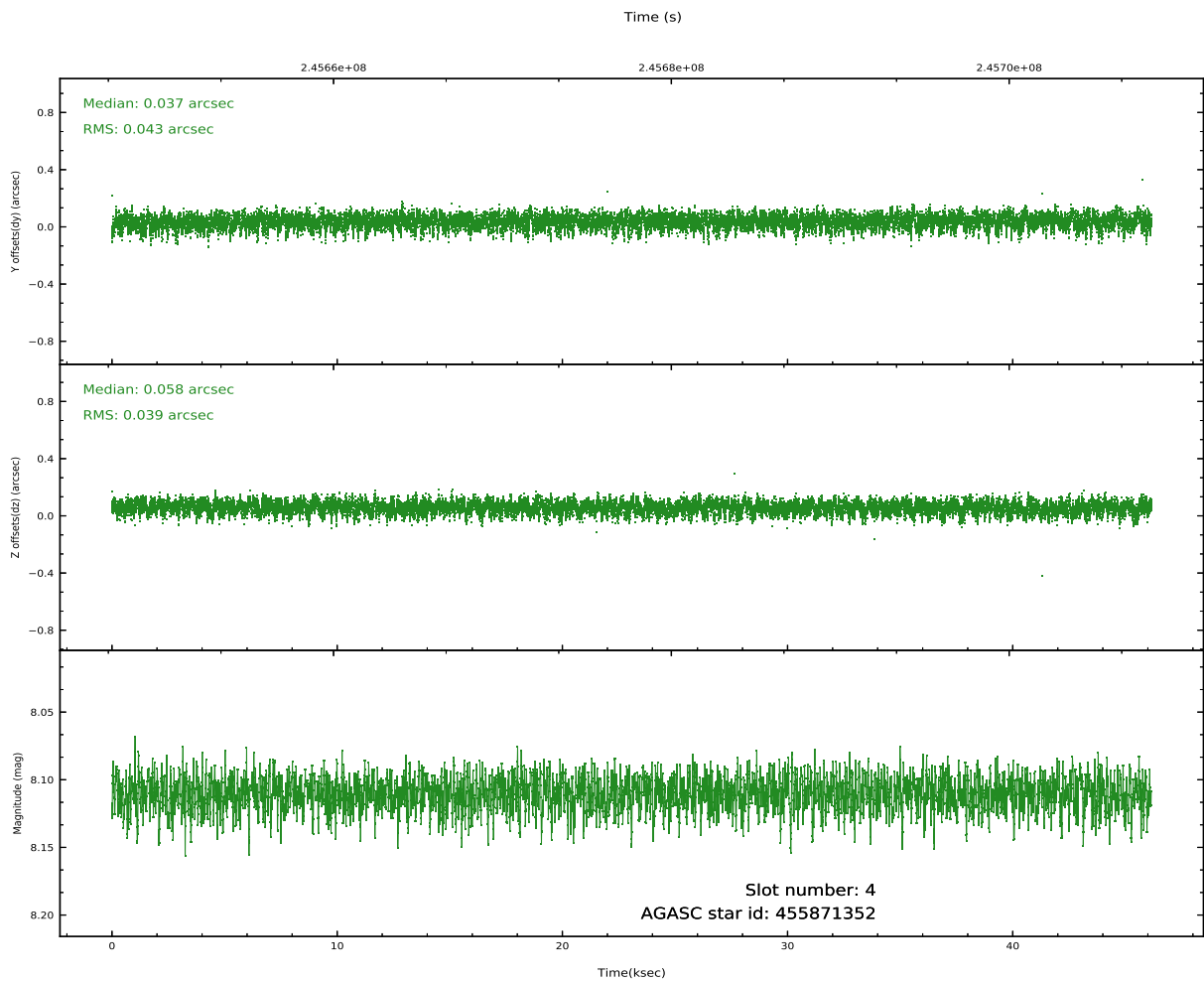
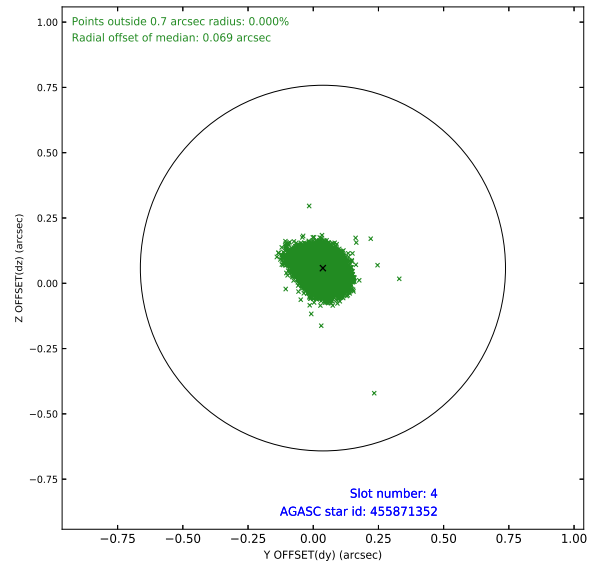
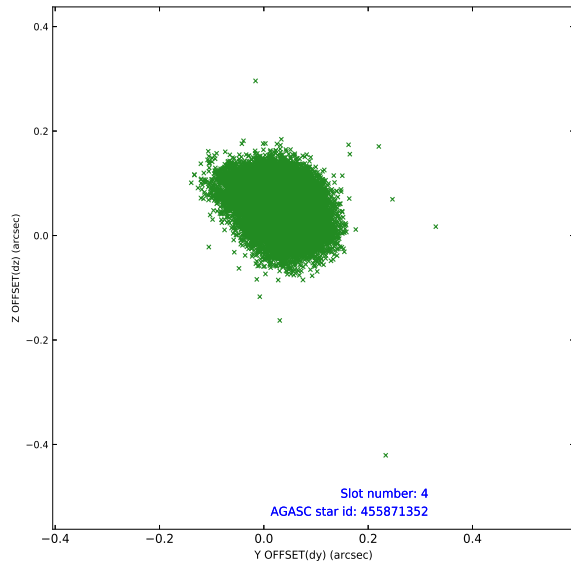
slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-I-2	7.14	11258	1.000	-0.106	-0.152	0.017	0.045	0.000000	0.000000	-760.97	-841
1	FID		ACIS-I-4	7.17	11259	1.000	0.173	0.103	0.010	0.021	0.000000	0.000000	2153.34	1065
2	FID		ACIS-I-5	7.22	11258	1.000	-0.169	0.117	0.012	0.026	0.000000	0.000000	-1814.90	1062
3	GUIDE	used	455870296	7.32	22513	1.000	-0.016	-0.013	0.066	0.110	214.629779	52.033323	819.92	-2037
4	GUIDE	used	455871352	8.11	22513	1.000	0.037	0.058	0.062	0.100	215.099961	52.172669	1662.63	-1247
5	GUIDE	used	505812088	8.16	22515	1.000	0.072	-0.030	0.064	0.107	214.186617	53.263562	-1401.05	1914
6	GUIDE	used	505812376	7.67	22519	1.000	-0.044	-0.038	0.046	0.073	214.039537	52.937930	-1367.50	700
7	GUIDE	used	505806936	7.02	22516	1.000	-0.059	0.023	0.062	0.105	213.820815	52.535927	-1410.06	-822

## 2.4 Star Slots

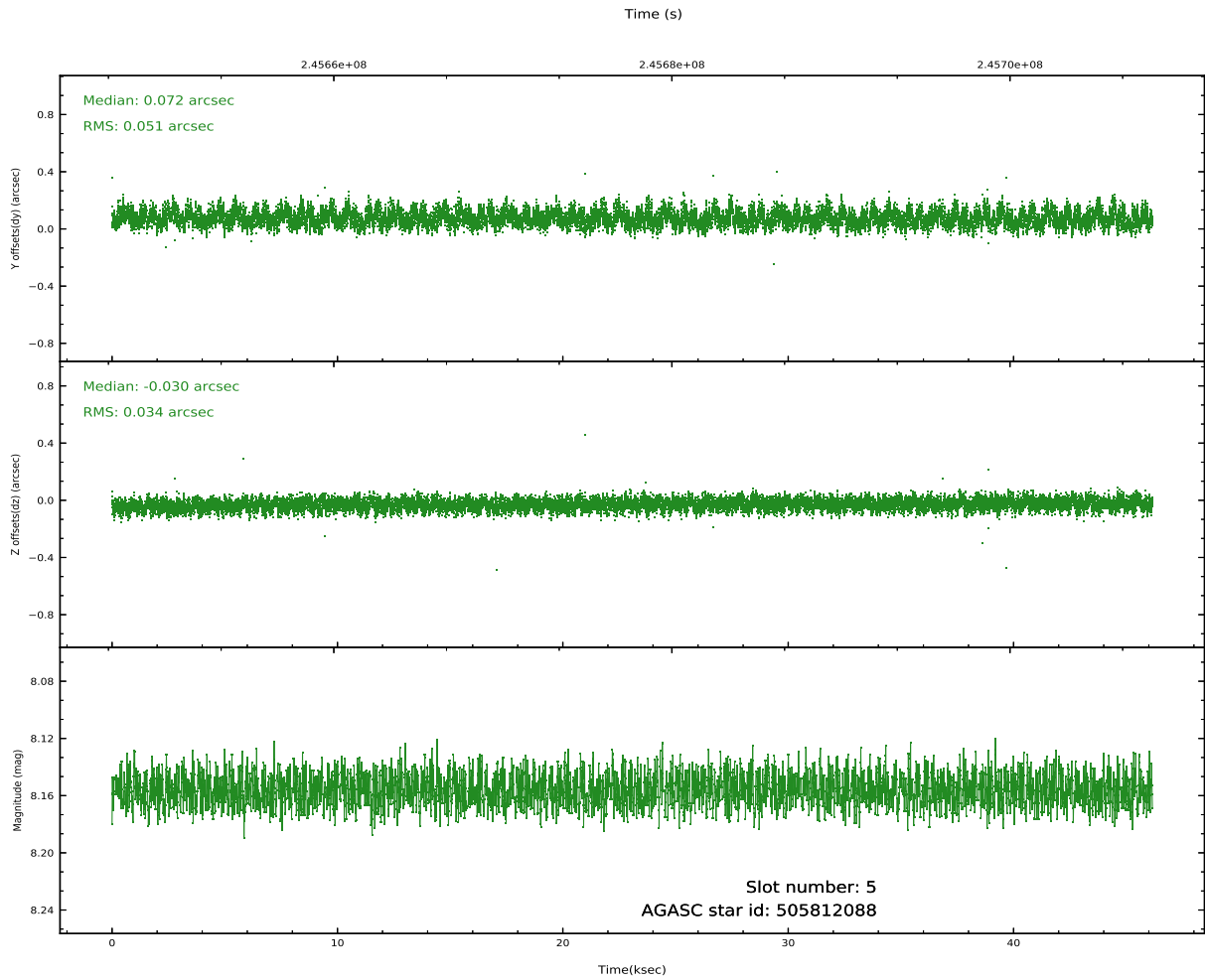
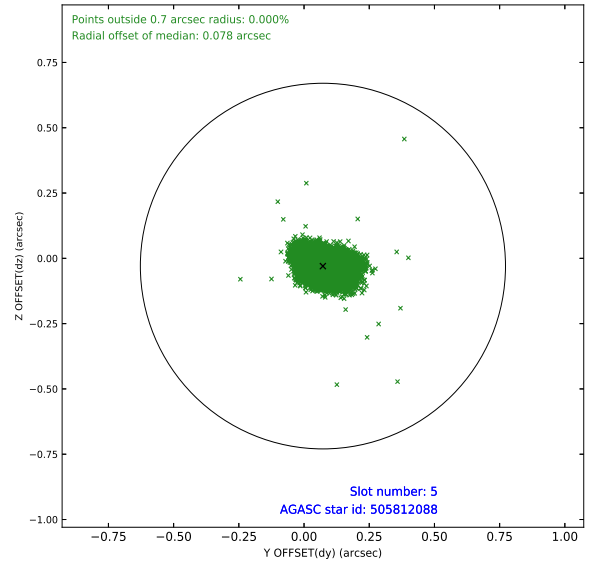
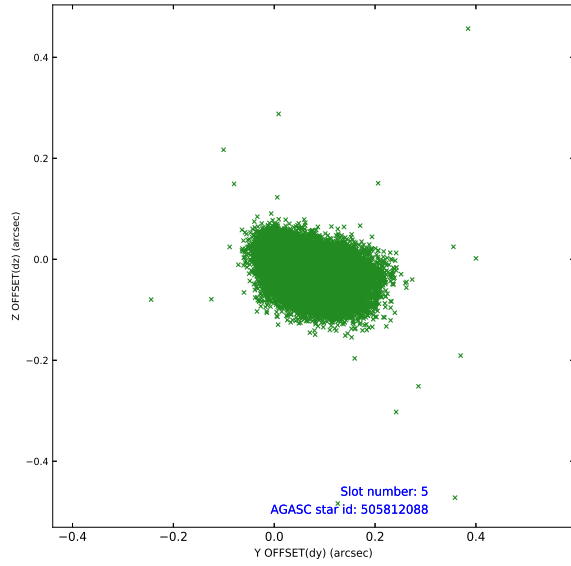
### 2.4.1 Slot 3



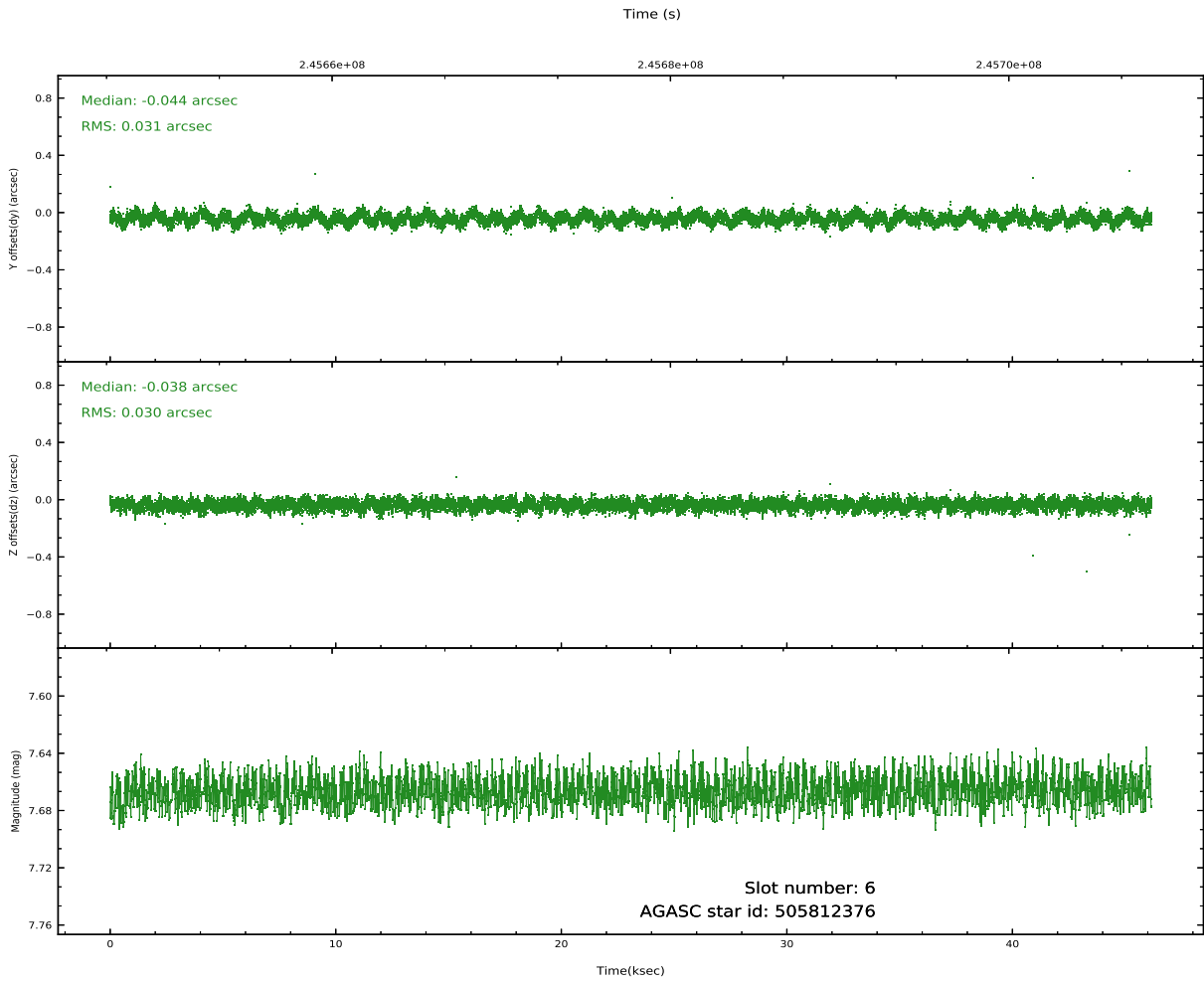
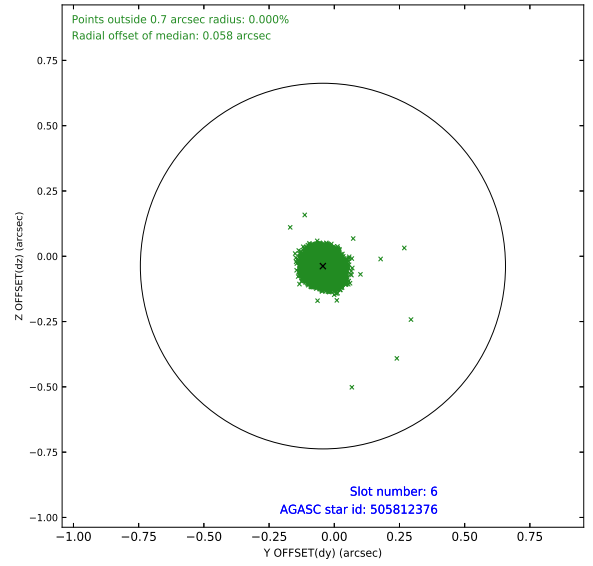
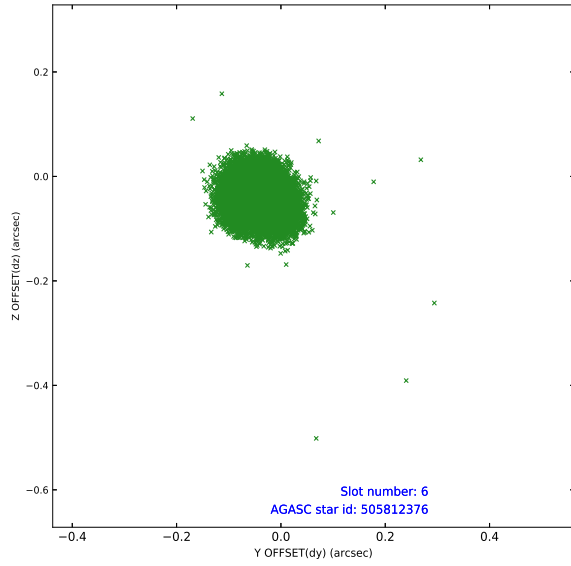
## 2.4.2 Slot 4



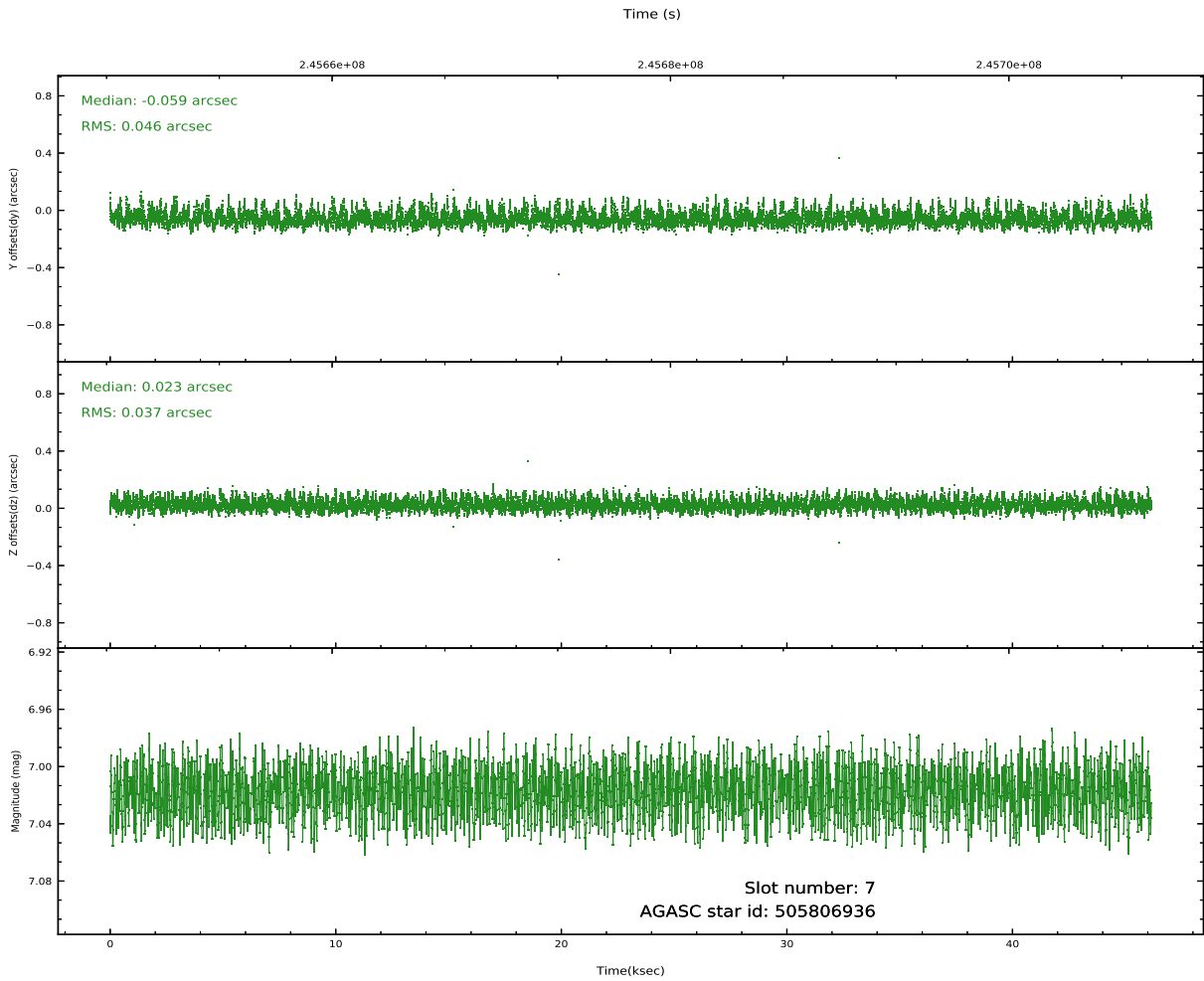
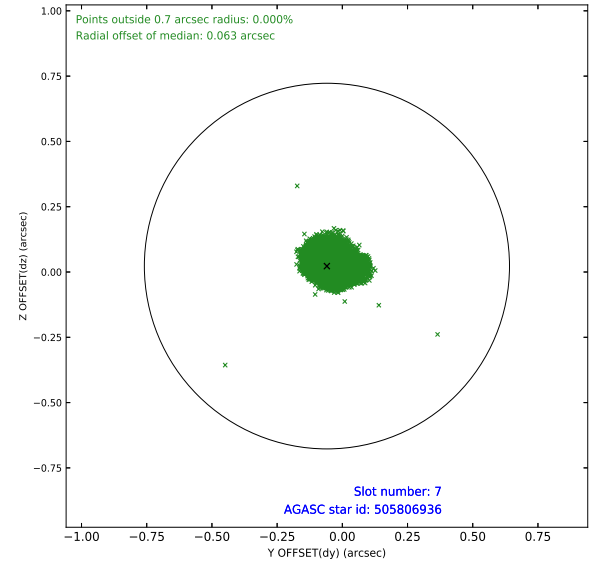
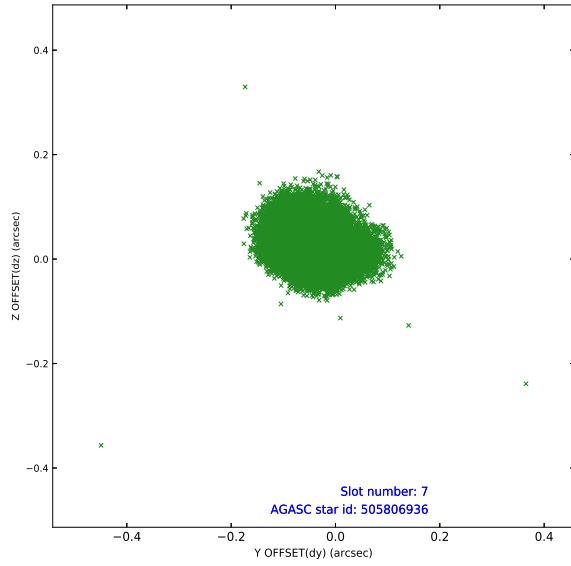
### 2.4.3 Slot 5



## 2.4.4 Slot 6

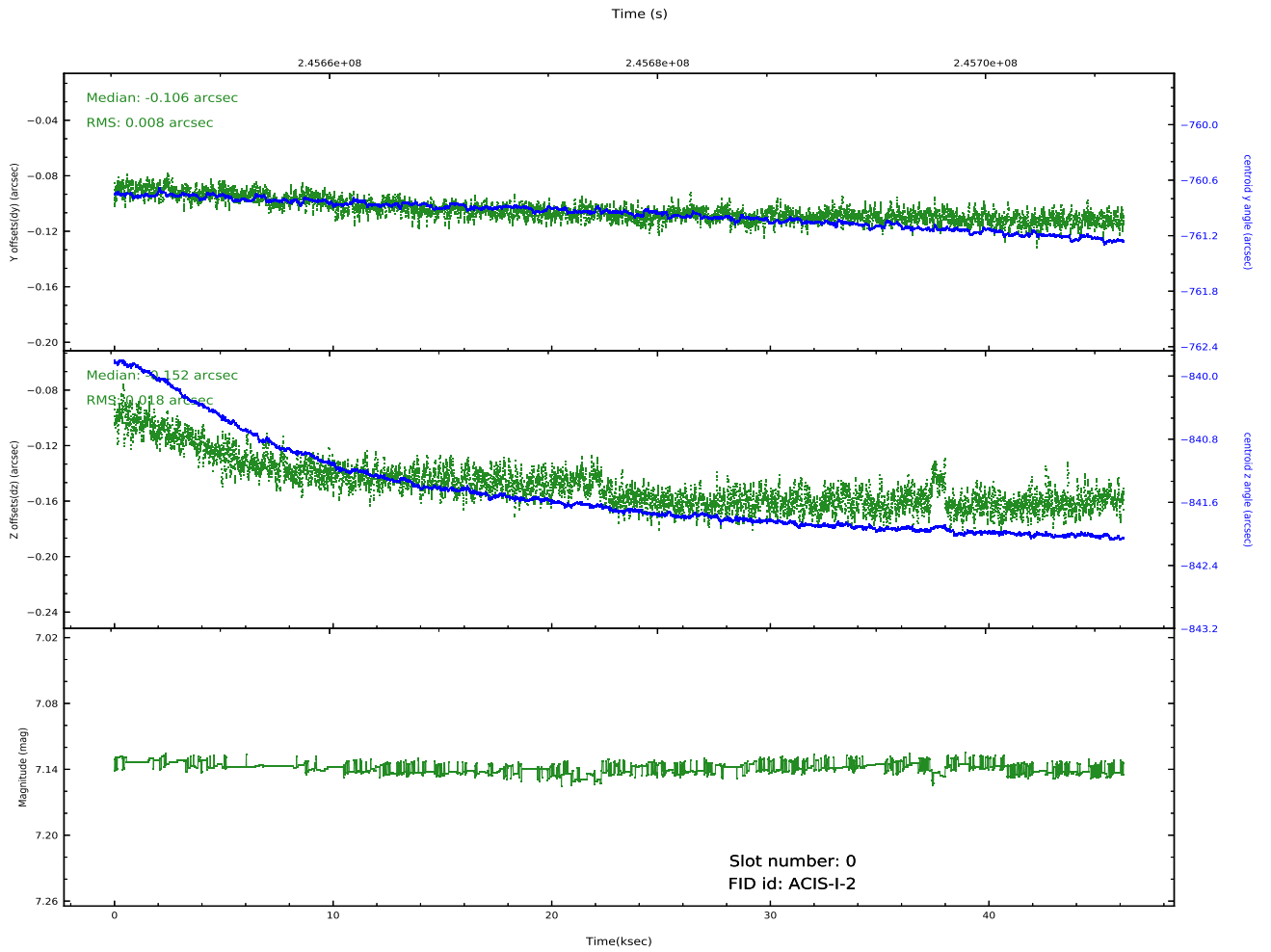
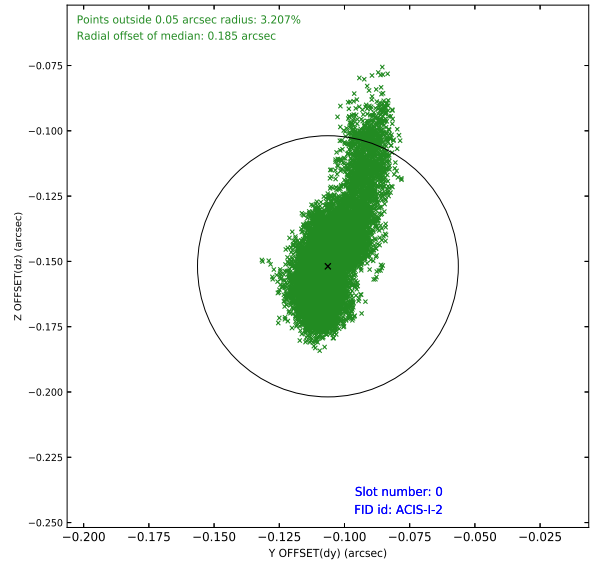
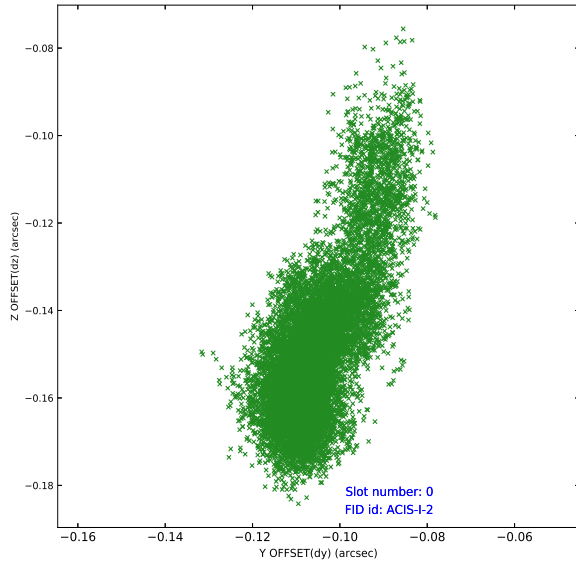


## 2.4.5 Slot 7

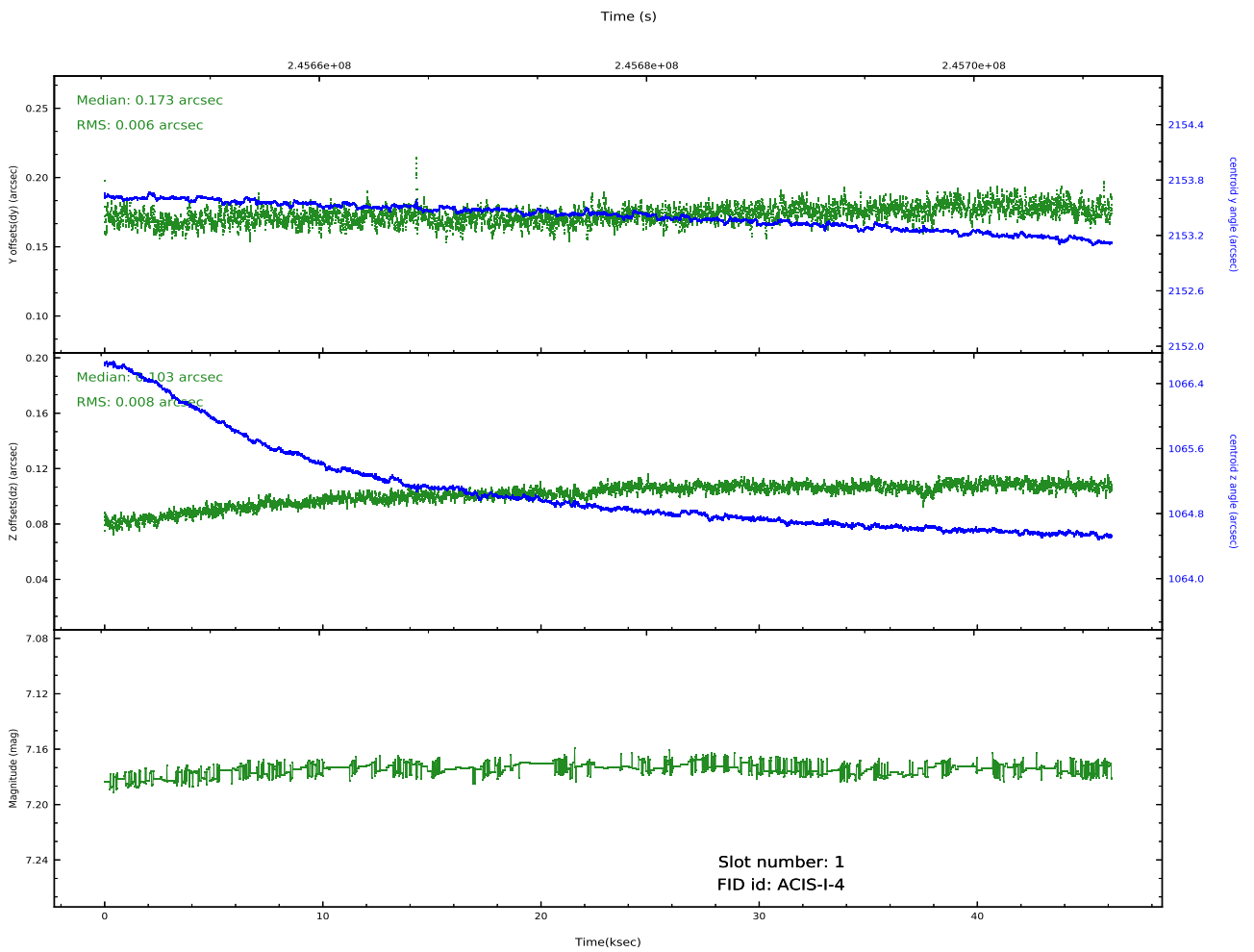
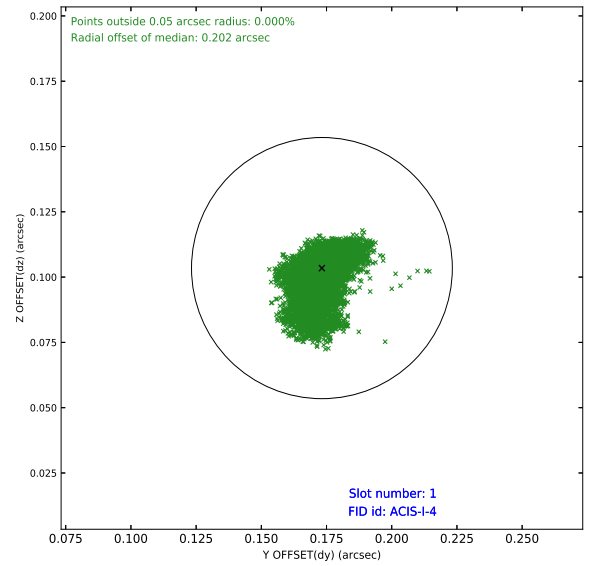
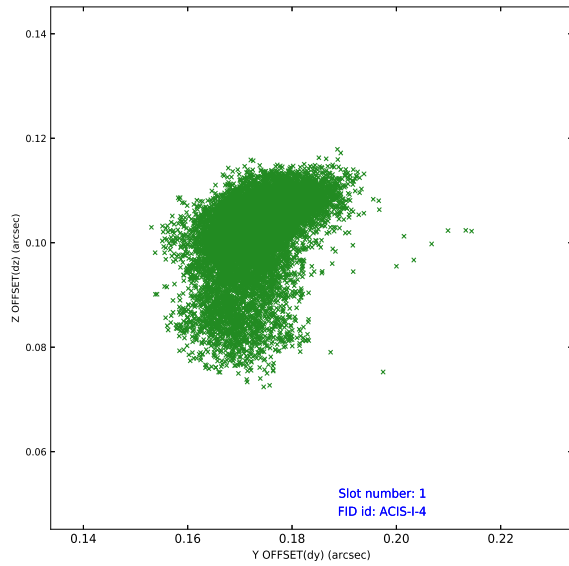


## 2.5 FID Slots

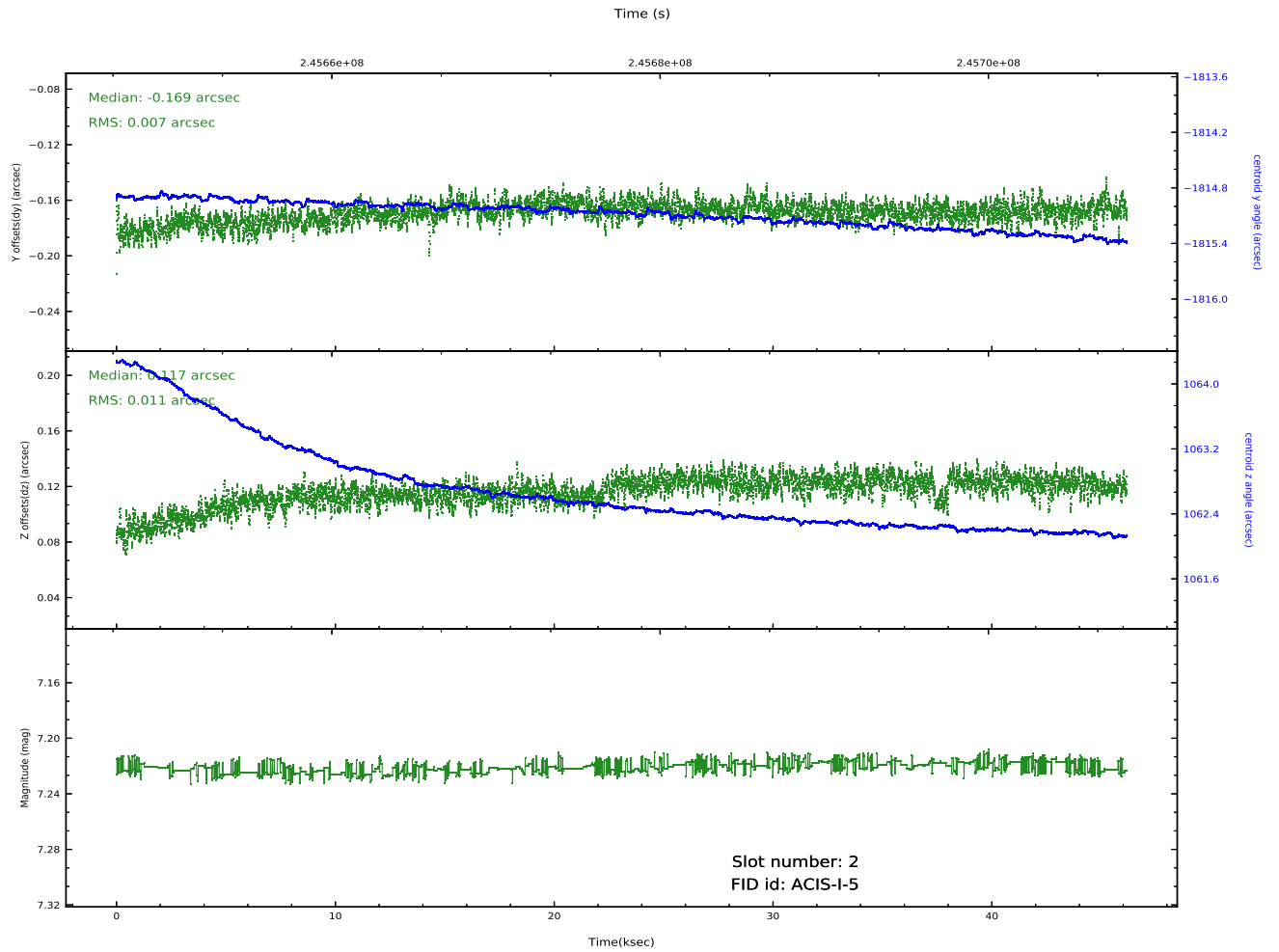
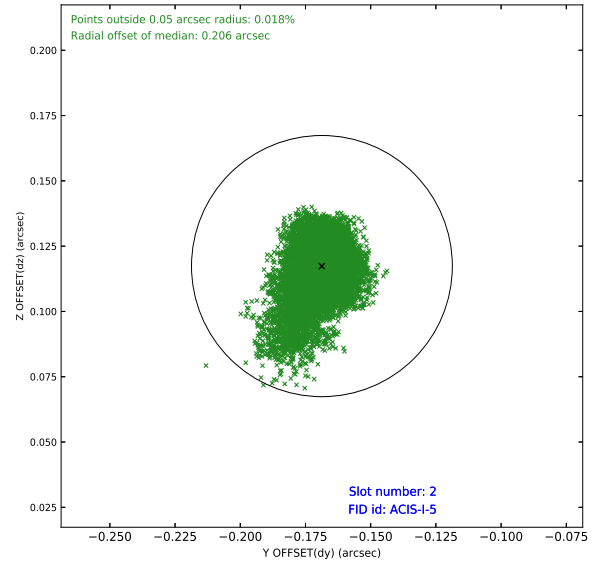
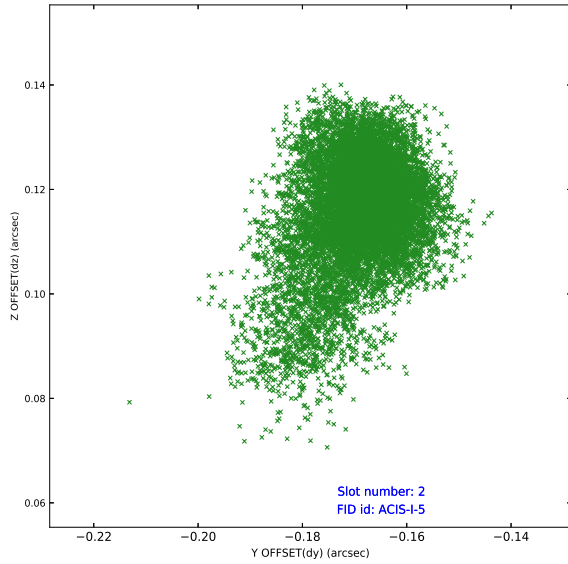
### 2.5.1 Slot 0



## 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)	2020.10.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	46.14961

## A.2 Comments

As a consequence of the DEA-A shutdown anomaly on Sep 15th (DOY258), the reported value of the ACIS FP temperature was ~1.3 degrees warmer than the actual temperature. The value for FP temperature reported in the headers of the Level 2 event file and the Mission Timeline files ARE INCORRECT by this amount for this processing. However, the temperature is corrected in the processing in order to obtain the correct temperature for the CTI correction. So the calibrated data are correct.

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Roll constraint met.