

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 3906 - L2 Version 4  
Chandra X-Ray Center

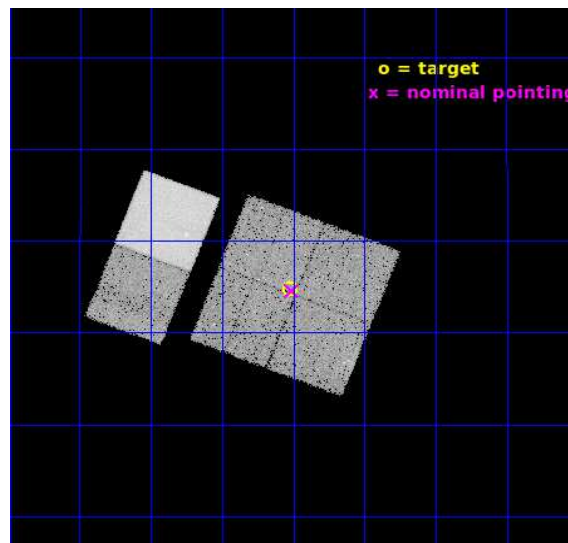
L2 Processing Date : Sep 23 2020

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# 1 Front

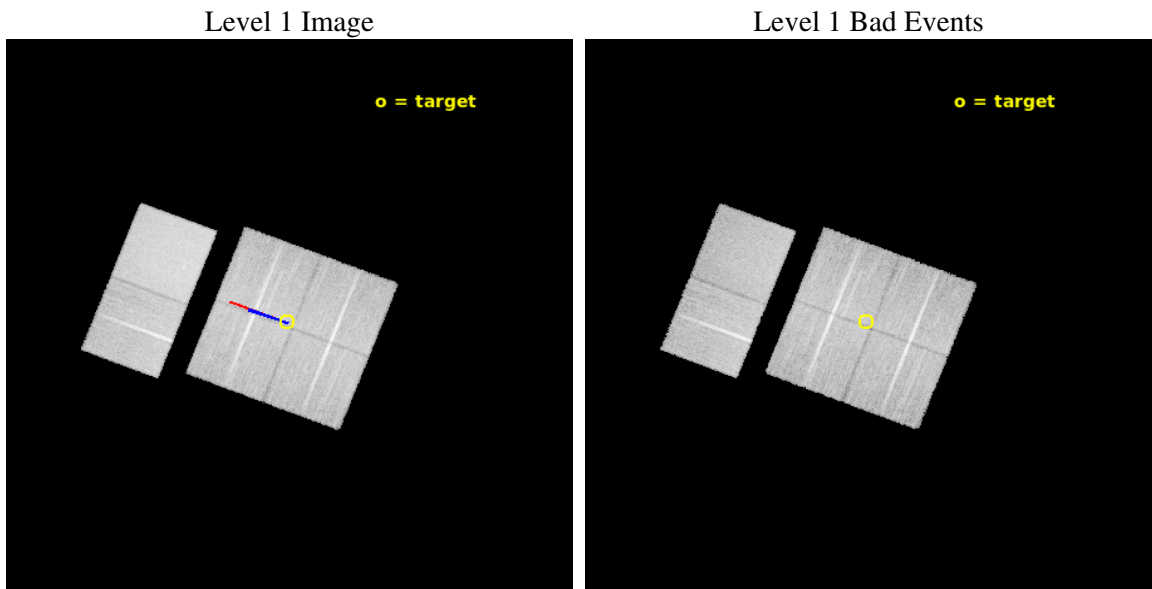
seq_num	500385	Sequence number
obs_id	3906	Observation id
title	THE ORIGIN OF X-RAY RICH GAMMA-RAY BURSTS: HIGH-Z EVENTS AND NEW COSMIC EXPLOSIONS	Proposal title
observer	Dr. Luigi Piro	Principal investigator
object	GRB031220	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	69.881083	Observer's specified target RA [deg]
dec_targ	7.413611	Observer's specified target Dec [deg]
ra_nom	69.877293375845	Nominal RA [deg]
dec_nom	7.4098224509808	Nominal Dec [deg]
roll_nom	291.20135690432	Nominal Roll [deg]
revision	4	Processing version of data
ontime	19660.799926758	Sum of GTIs [s]
livetime	19411.843039773	Livetime [s]
ontime0	19660.799926758	Sum of GTIs [s]
ontime1	19660.799926758	Sum of GTIs [s]
ontime2	19660.799926758	Sum of GTIs [s]
ontime3	19660.799926758	Sum of GTIs [s]
ontime6	19660.799926758	Sum of GTIs [s]
ontime7	19660.799926758	Sum of GTIs [s]
l2events	154038	Number of level 2 events



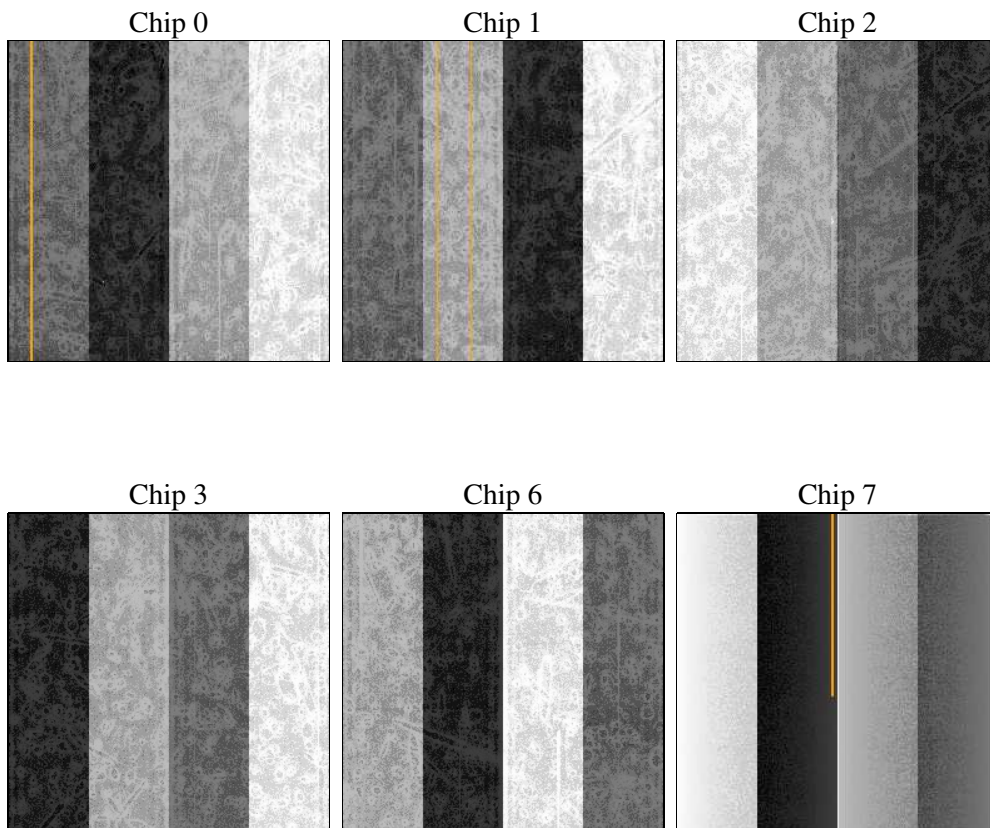
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	19521.529000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	19660.799926758	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime0	19660.799926758	Sum of GTIs [s]
date	2020-09-23T13:03:10	Date and time of file creation	ontime1	19660.799926758	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	19660.799926758	Sum of GTIs [s]
			ontime3	19660.799926758	Sum of GTIs [s]
			ontime6	19660.799926758	Sum of GTIs [s]
			ontime7	19660.799926758	Sum of GTIs [s]
			l1events	868340	Number of level 1 events

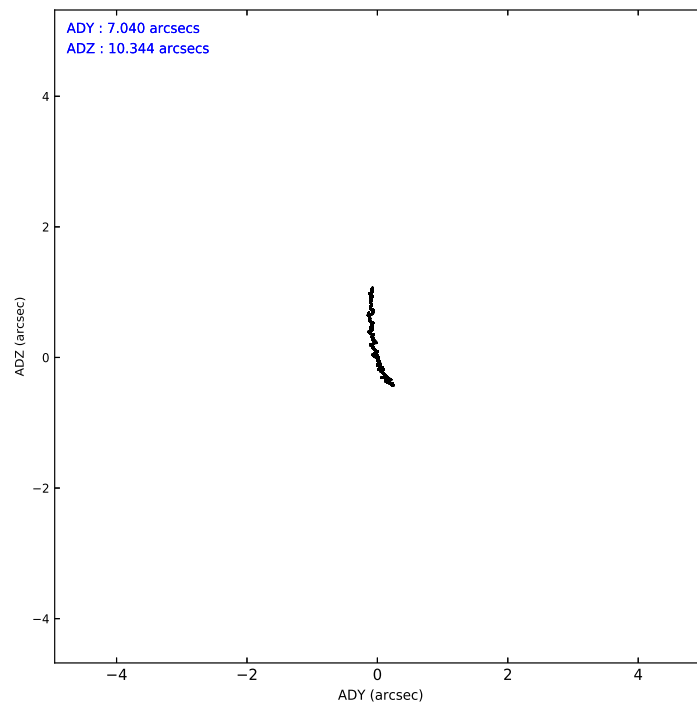
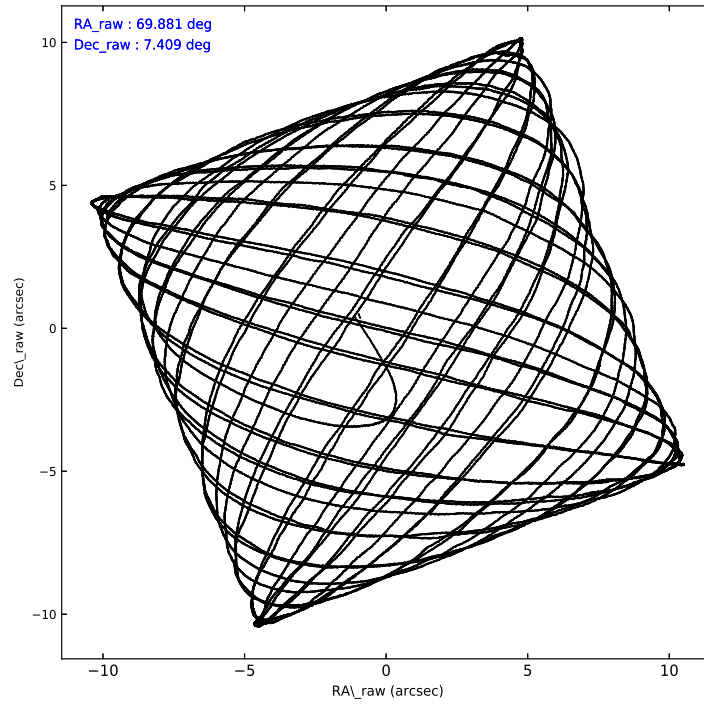
### 2.1.4 Events

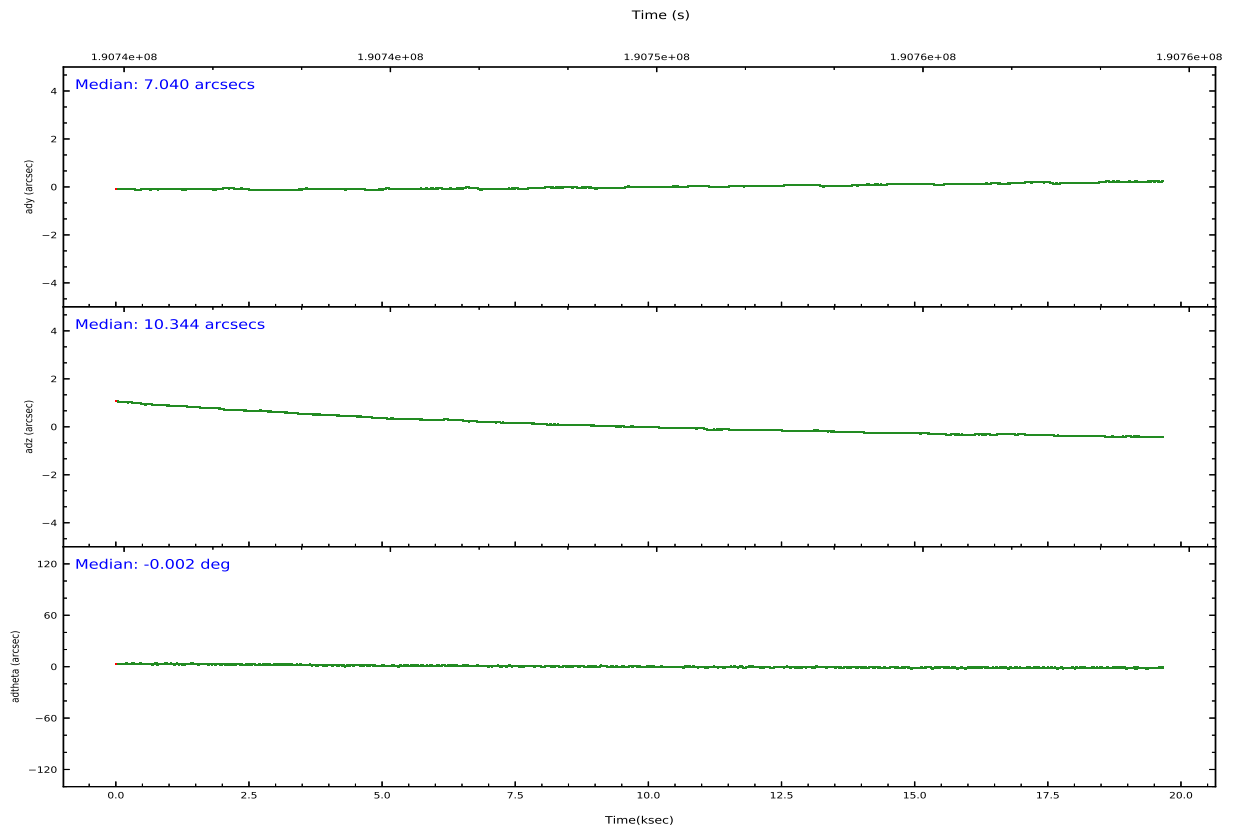
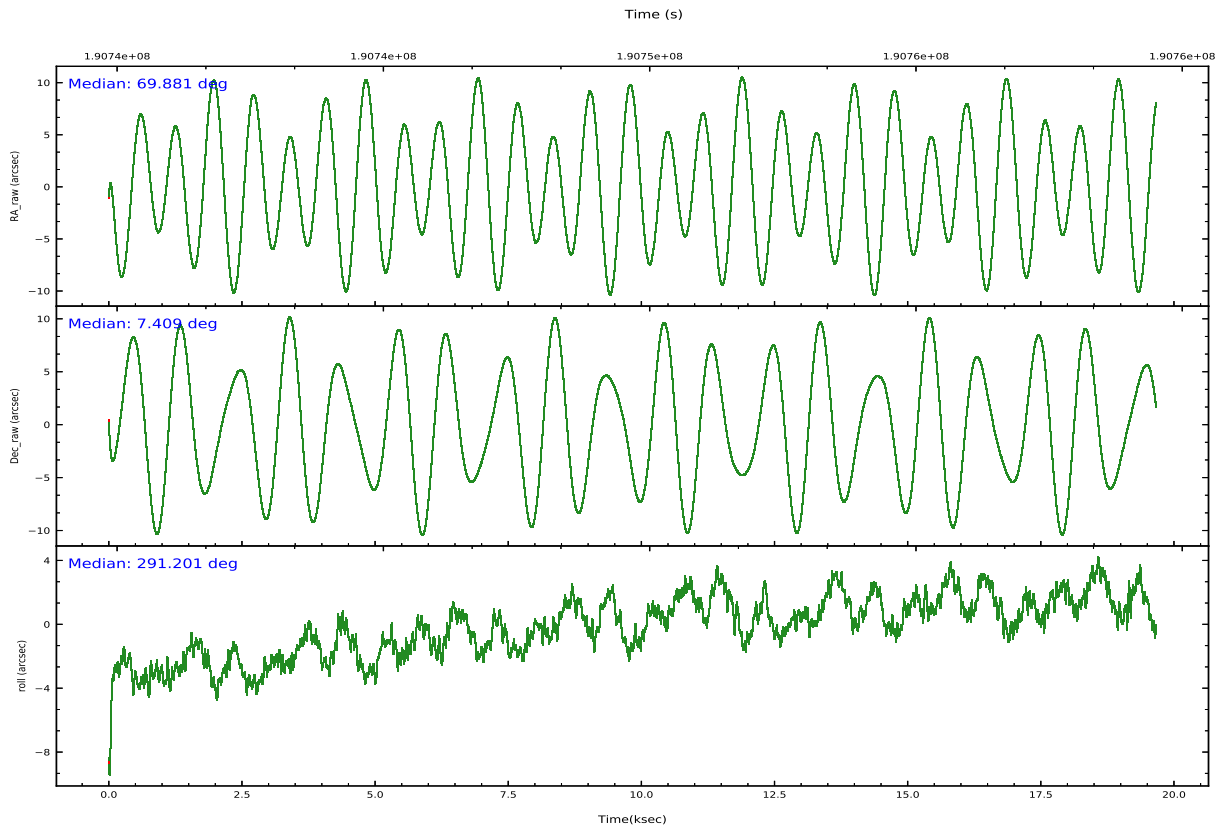
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	126377	130579	134850	134052	142933	199549	grade 0 events	9095	7831	8309	8477	8255	8305
rejected events	108571	113352	118514	117484	125579	117525		7%	5%	6%	6%	5%	4%
rejected %	85%	86%	87%	87%	87%	58%	grade 1 events	92	63	73	78	62	205
								0%	0%	0%	0%	0%	0%
							grade 2 events	3850	3989	3394	3395	3884	17385
								3%	3%	2%	2%	2%	8%
							grade 3 events	1676	1813	1610	1608	1627	7607
								1%	1%	1%	1%	1%	3%
							grade 4 events	1590	1764	1633	1635	1664	7710
								1%	1%	1%	1%	1%	3%
							grade 5 events	5566	5819	5331	6234	6437	17648
								4%	4%	3%	4%	4%	8%
							grade 6 events	3101	3358	2868	2886	3493	49267
								2%	2%	2%	2%	2%	24%
							grade 7 events	101407	105942	111632	109739	117511	91422
								80%	81%	82%	81%	82%	45%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-012367	ACIS-012367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	69.859343	69.877293375845	Subarray requested	NONE	NONE
[deg] Pointing Dec	7.426050	7.4098224509808	Alternating exposures requested	N	N
[deg] Pointing Roll	291.002814	291.20135690432	[s] Primary exposure time	0.000000	3.2
[deg] Roll angle	290.000000	290.000000			
[deg] Roll tolerance	1.000000	1.000000			
Roll constraint allows 180D rotation	N	N			
[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)	190739988.184000	190738008.58546			
Observation start date	2004-01-17T15:18:44	2004-01-17T14:46:48			
[s] Observation end time (MET)	190759509.184000	190759823.66142			
Observation end date	2004-01-17T20:44:05	2004-01-17T20:50:23			
Read mode	TIMED	TIMED			

## 2.3 Aspect





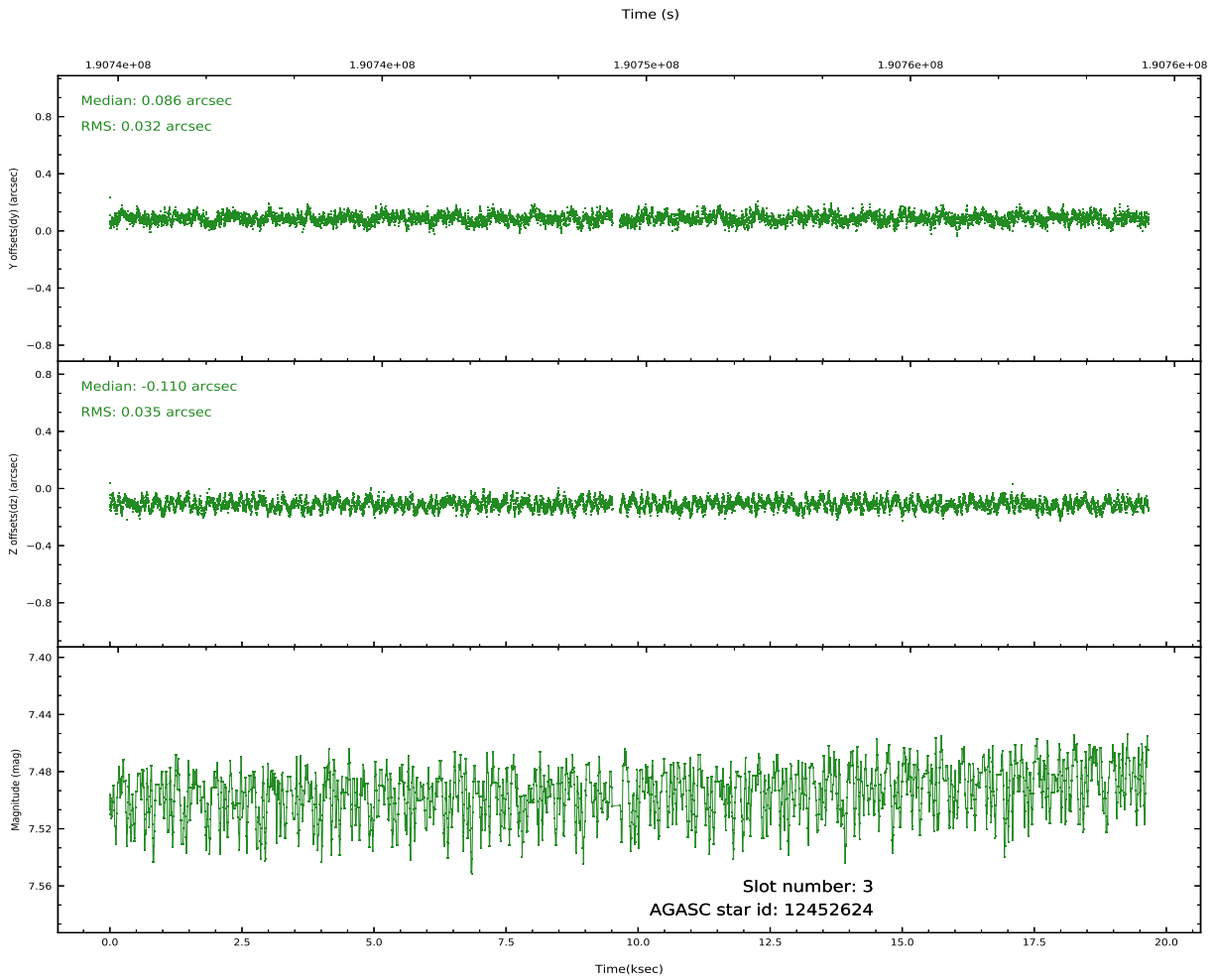
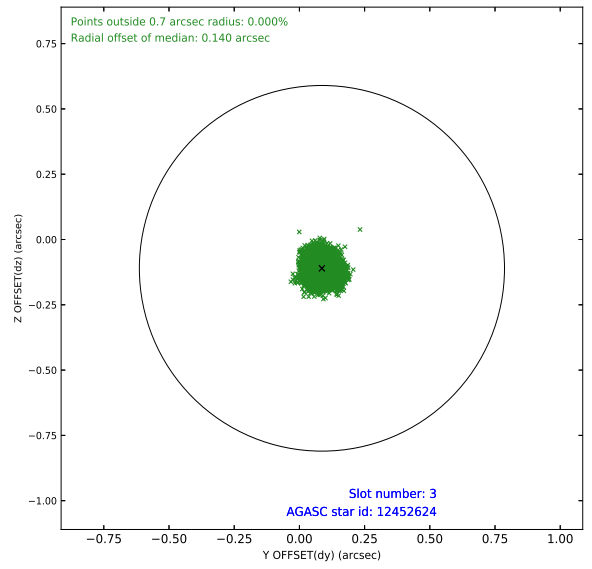
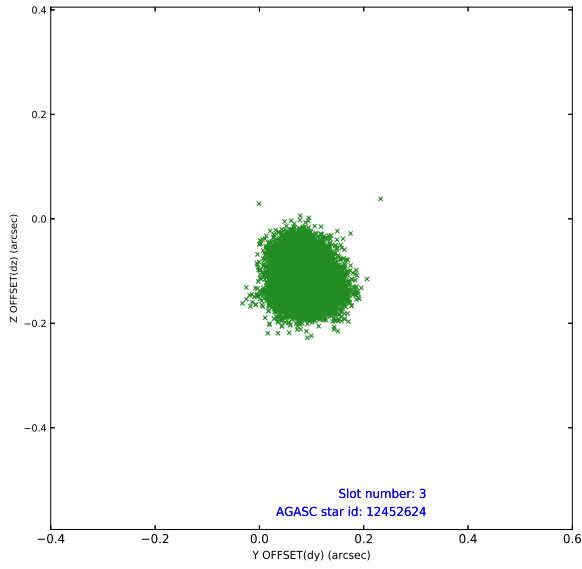
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.24	4797	1.000	0.017	-0.014	0.017	0.031	0.000000	0.000000	932.64	-833
1	FID		ACIS-I-5	7.23	4797	1.000	-0.177	0.027	0.010	0.020	0.000000	0.000000	-1815.55	1063
2	FID		ACIS-I-6	7.25	4796	1.000	0.068	0.056	0.013	0.021	0.000000	0.000000	398.03	1708
3	GUIDE	used	12452624	7.49	9527	1.000	0.086	-0.110	0.051	0.081	69.476403	7.317631	-125.59	-1416
4	GUIDE	used	12455320	8.62	9591	1.000	0.166	-0.047	0.066	0.105	69.662131	6.874787	1600.80	-1368
5	GUIDE	used	89403544	7.89	9529	1.000	-0.151	0.081	0.044	0.073	69.809992	7.987097	-1948.28	559
6	GUIDE	used	12331072	8.68	9591	1.000	-0.091	0.047	0.070	0.112	69.220131	7.248777	-223.42	-2358
7	GUIDE	used	89400656	8.85	9592	1.000	-0.004	0.033	0.082	0.129	70.426351	7.827138	-624.56	2405

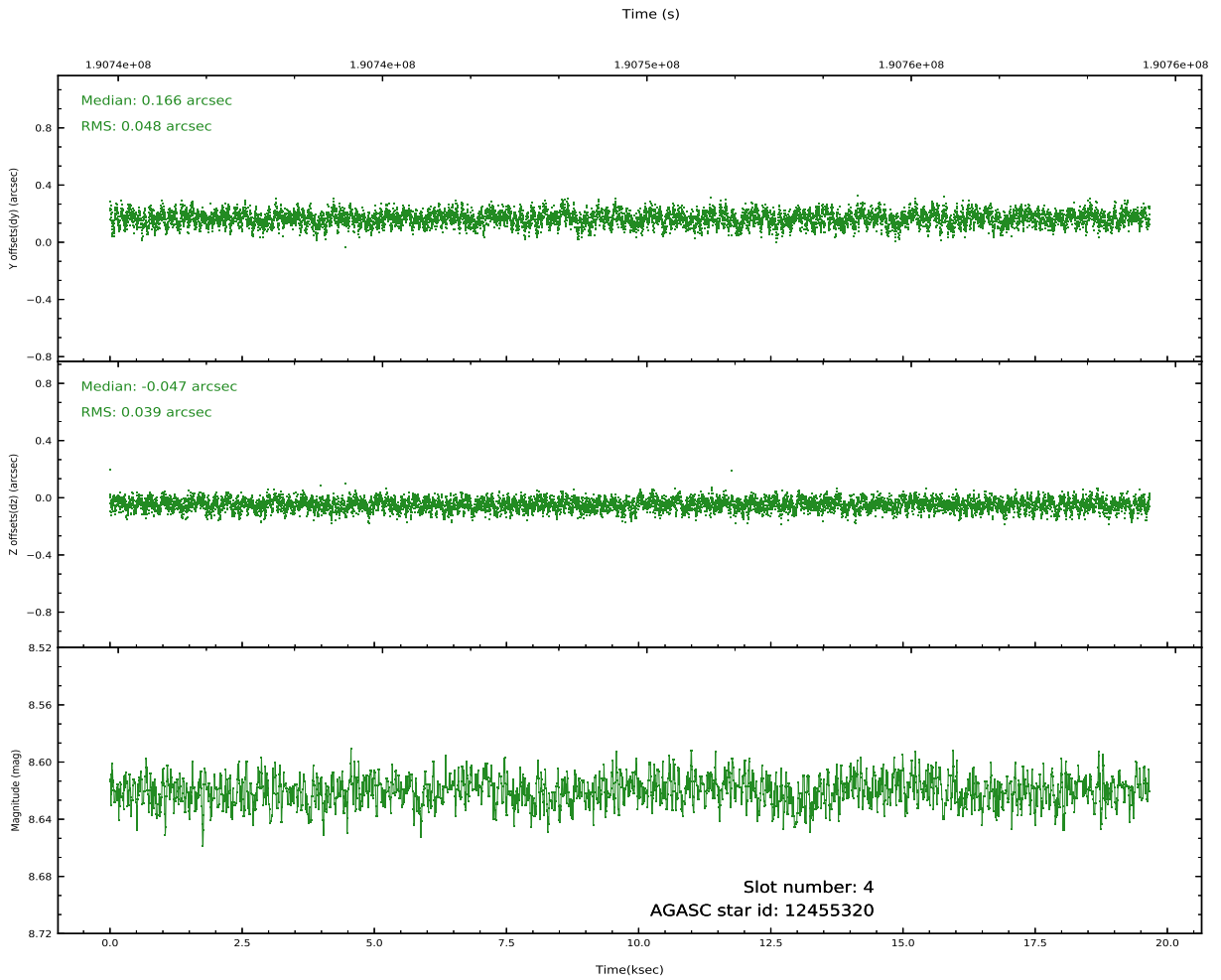
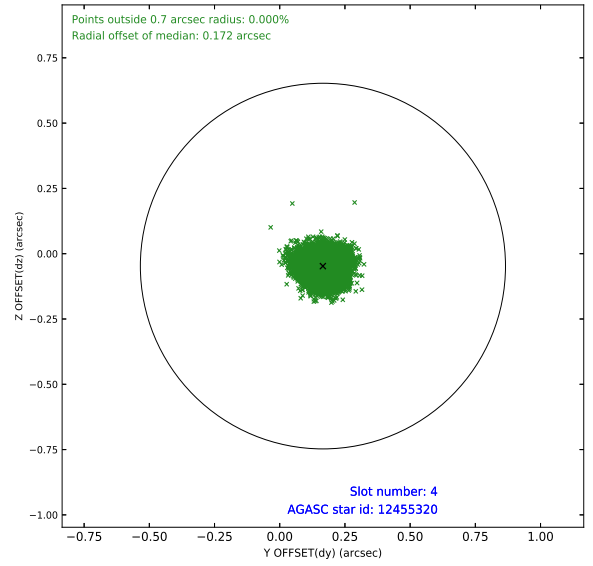
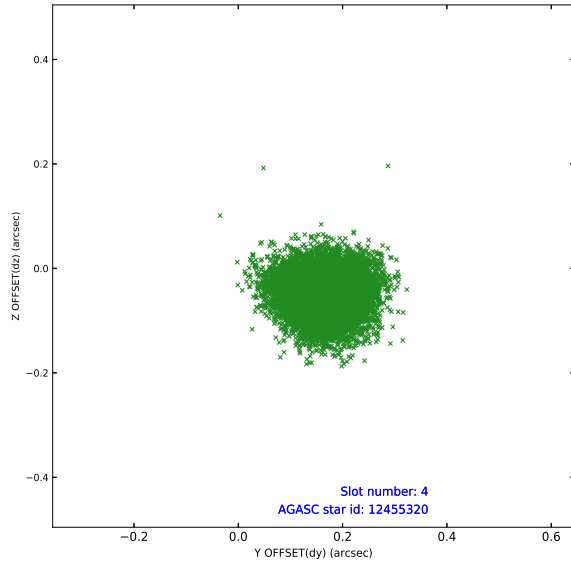
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## 2.4 Star Slots

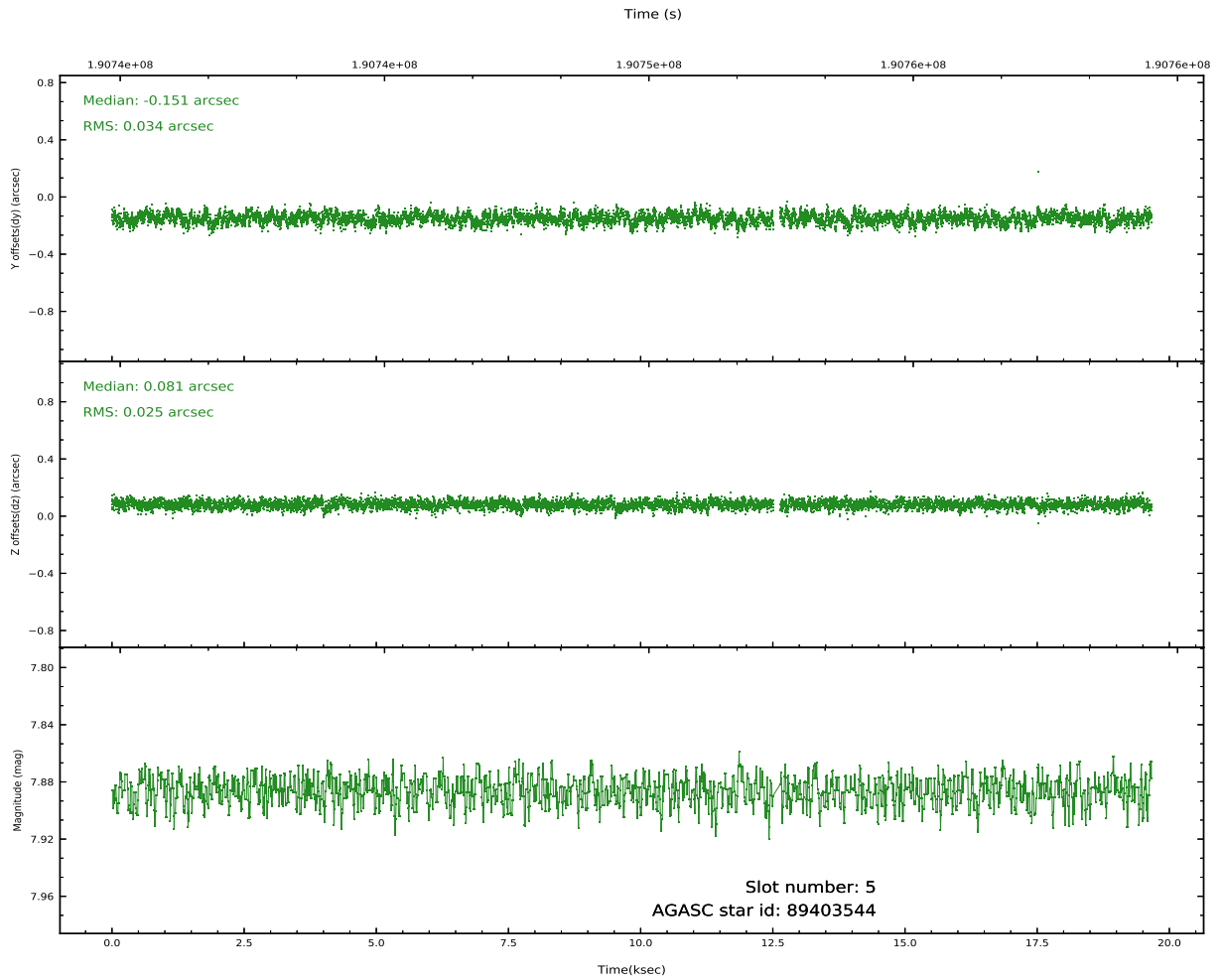
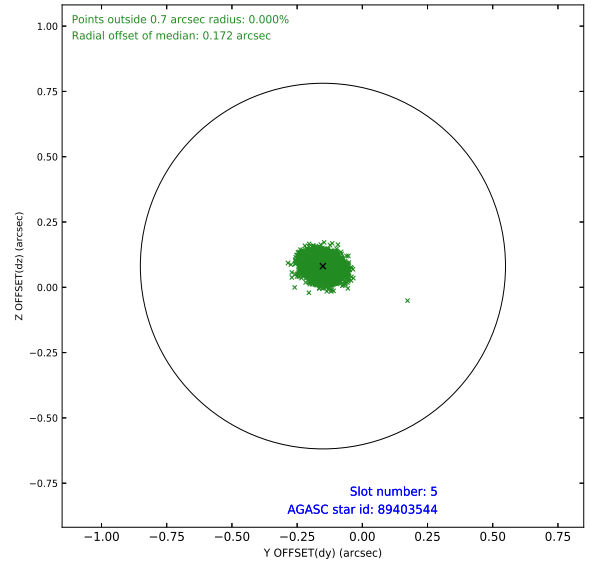
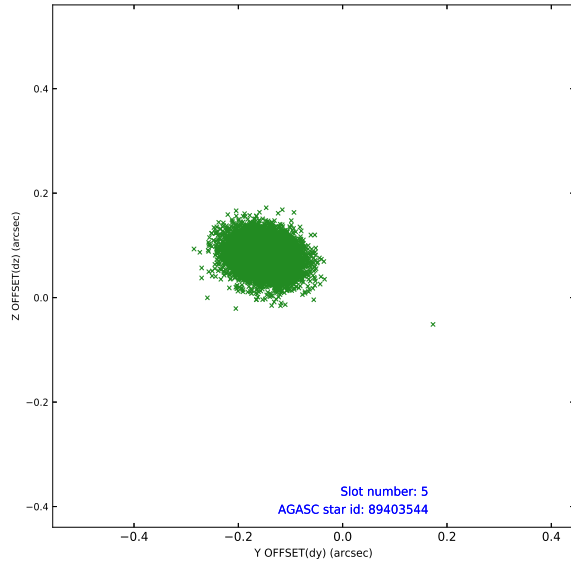
### 2.4.1 Slot 3



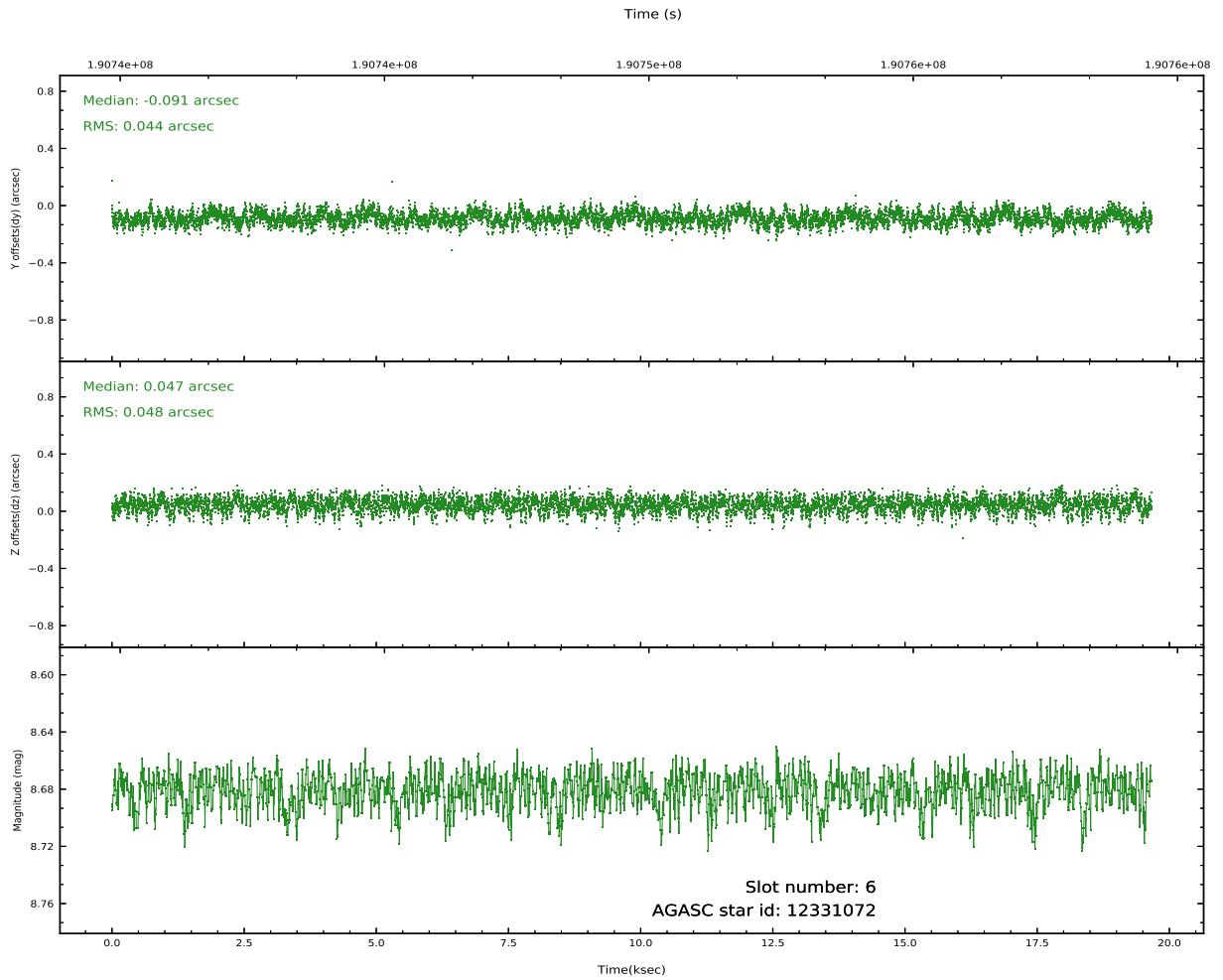
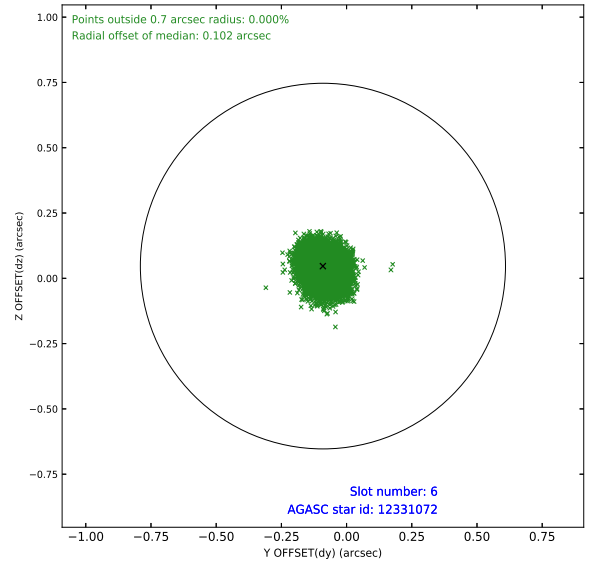
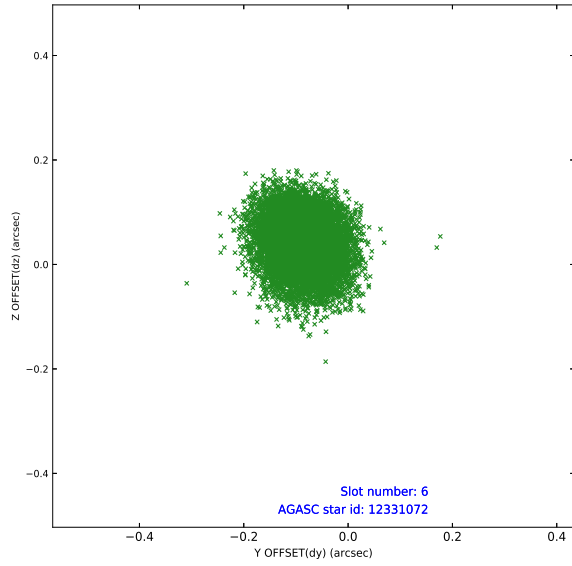
## 2.4.2 Slot 4



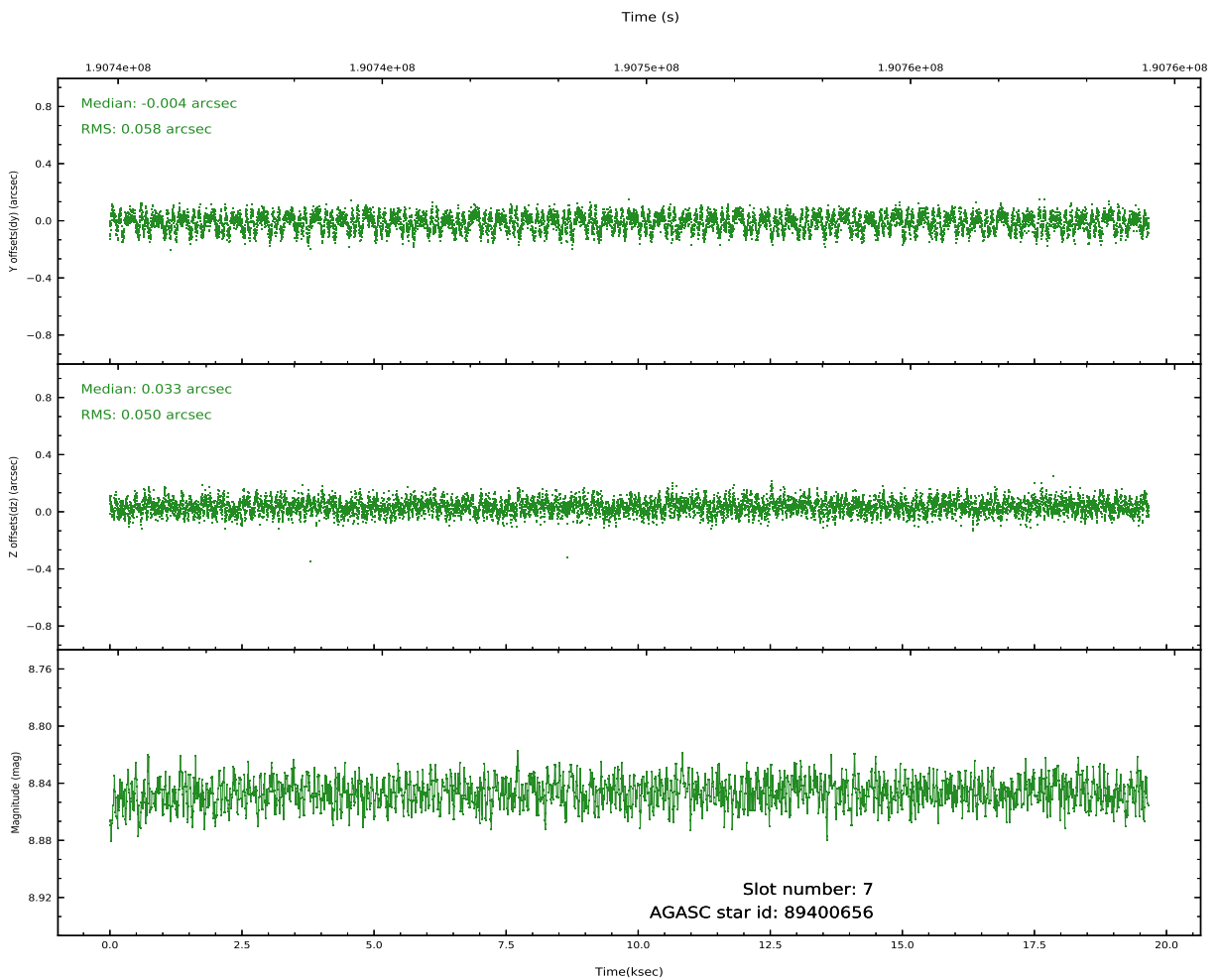
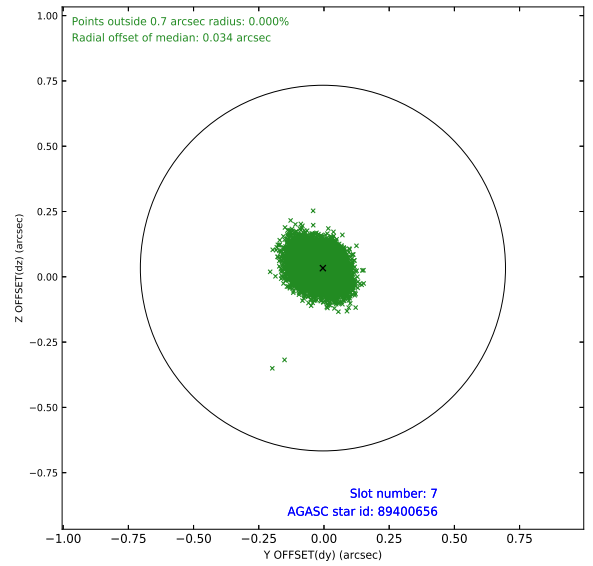
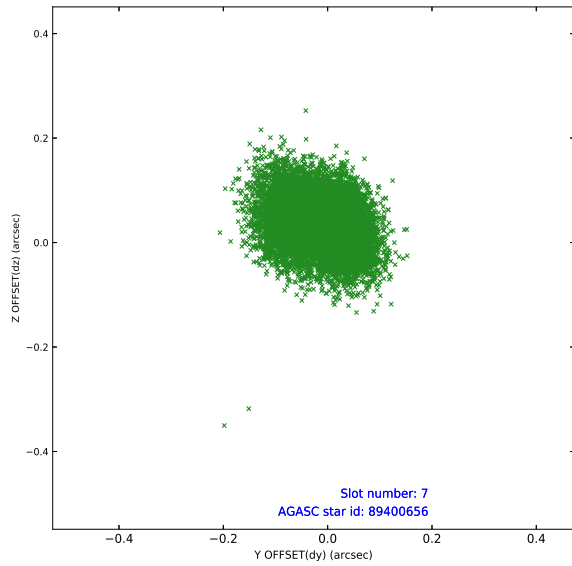
### 2.4.3 Slot 5



## 2.4.4 Slot 6

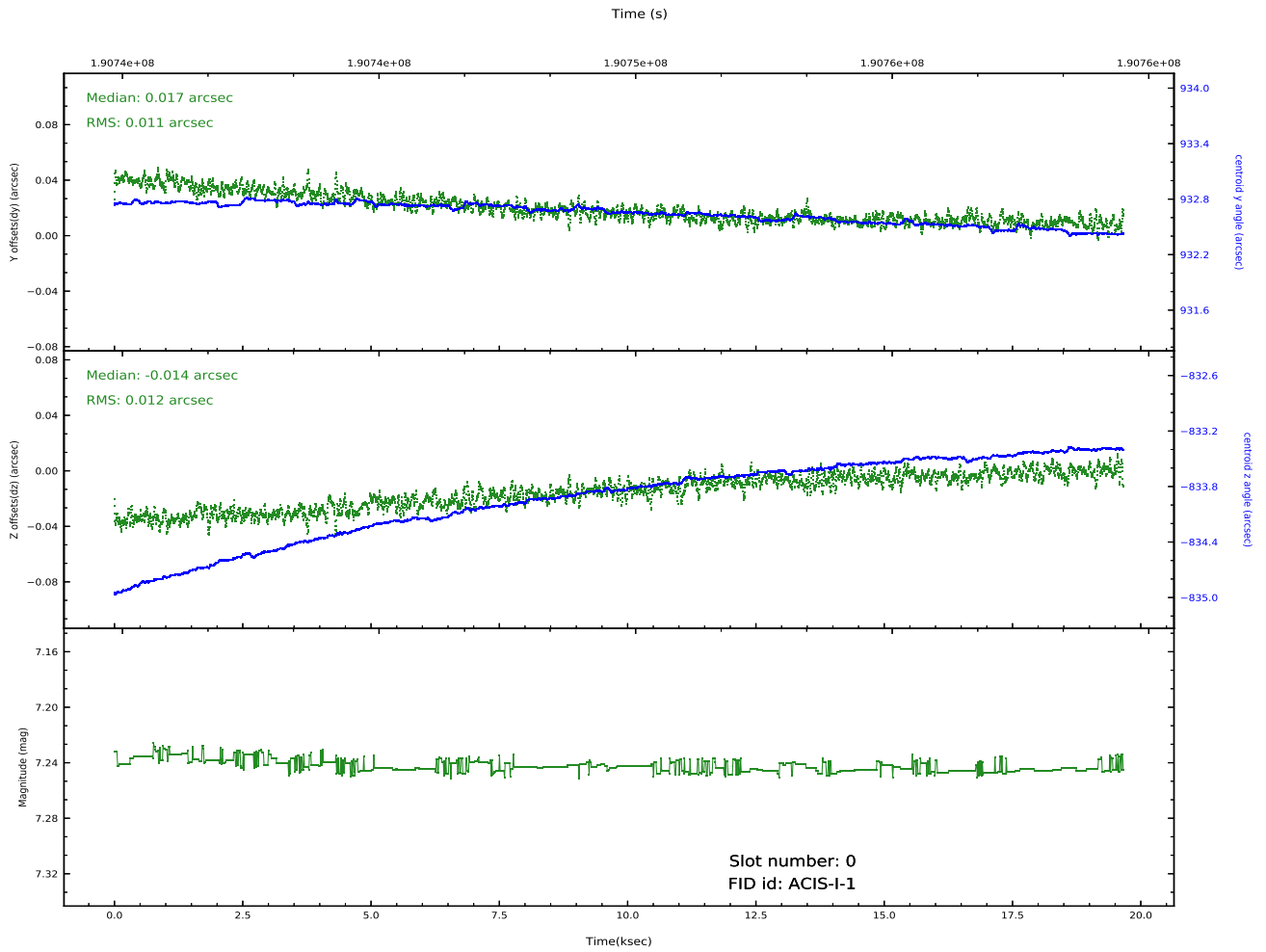
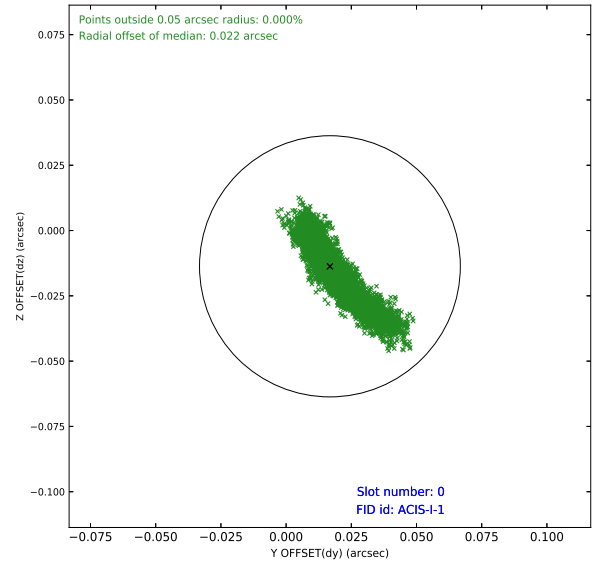
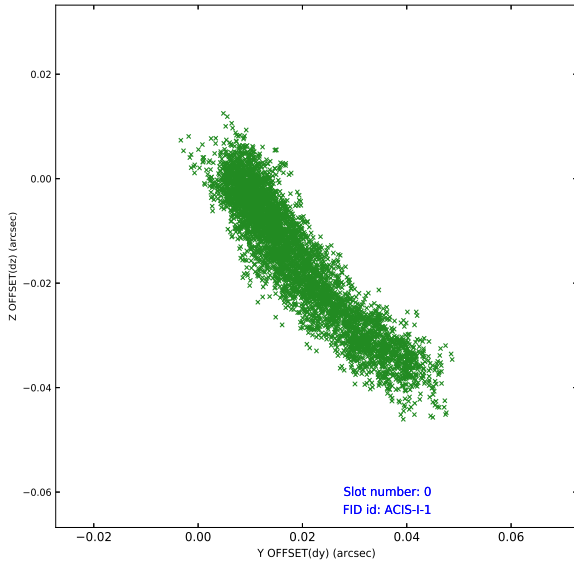


## 2.4.5 Slot 7

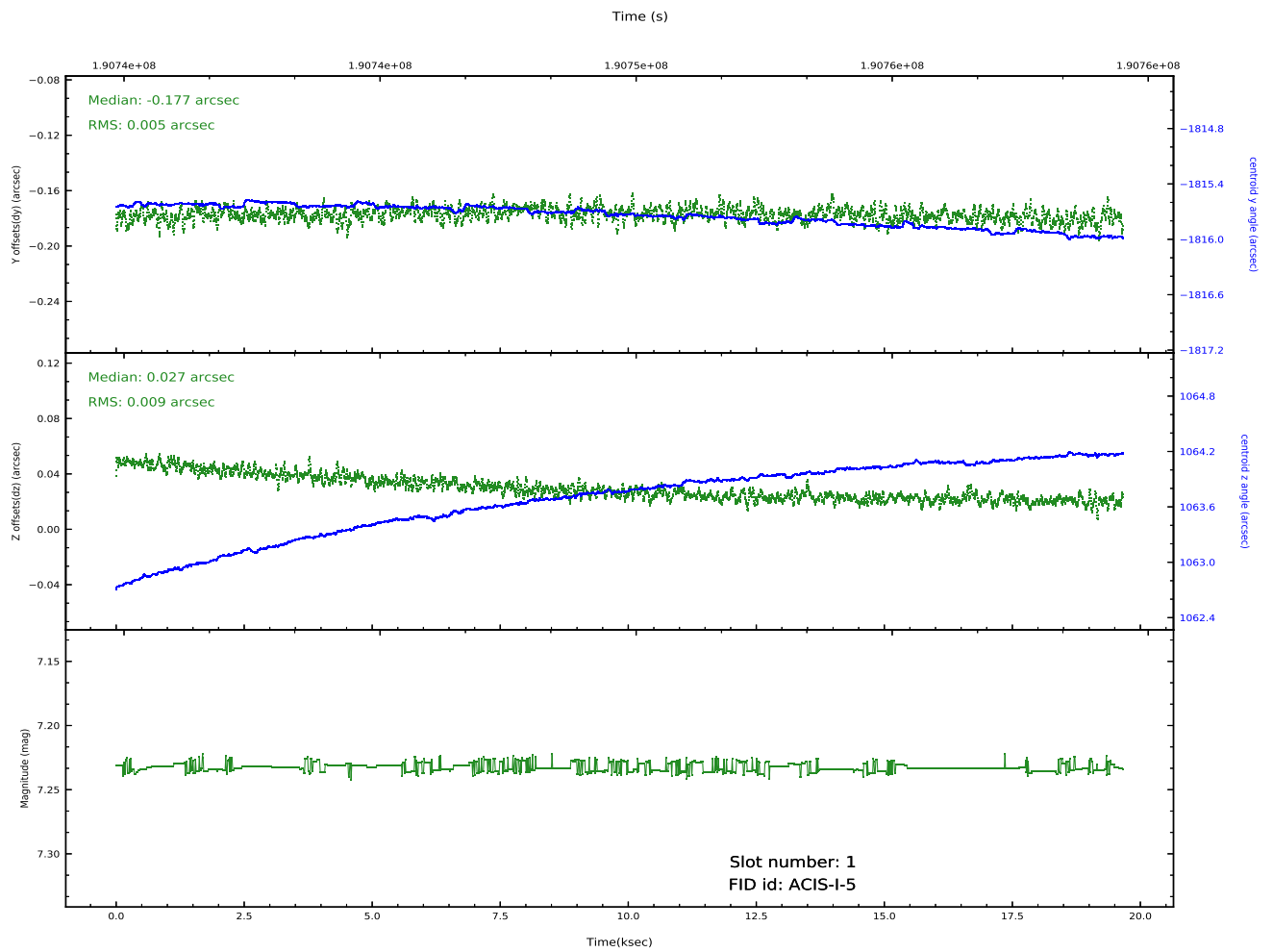
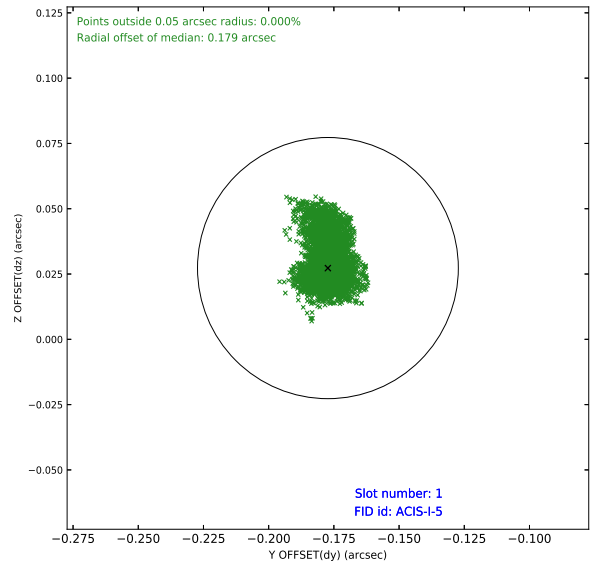
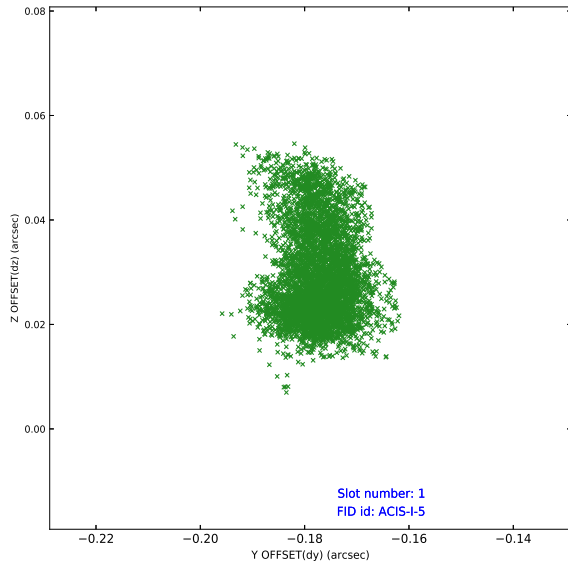


## 2.5 FID Slots

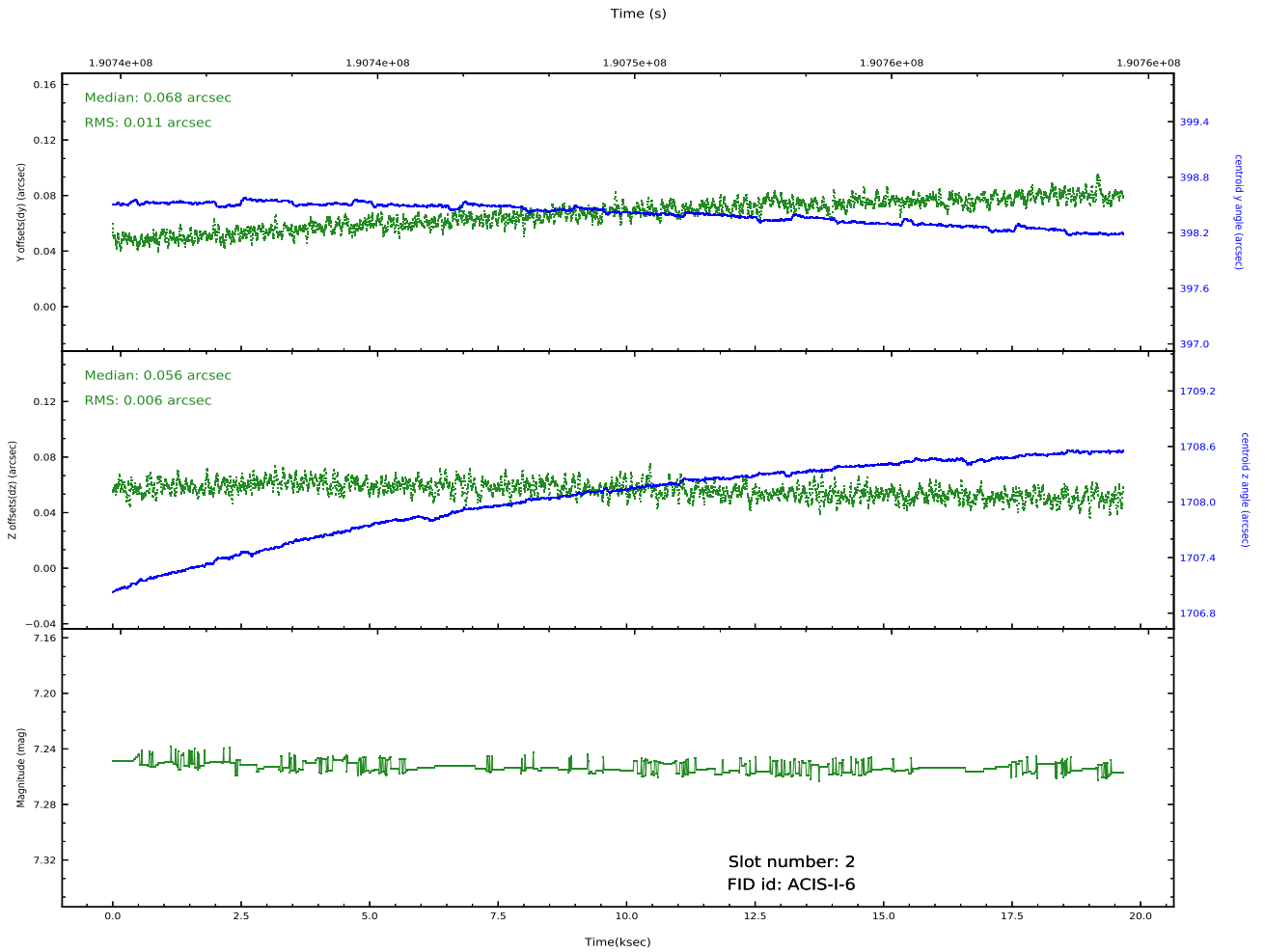
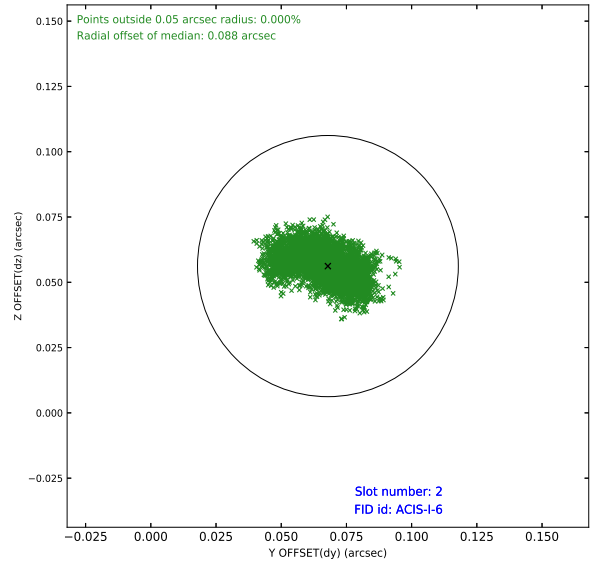
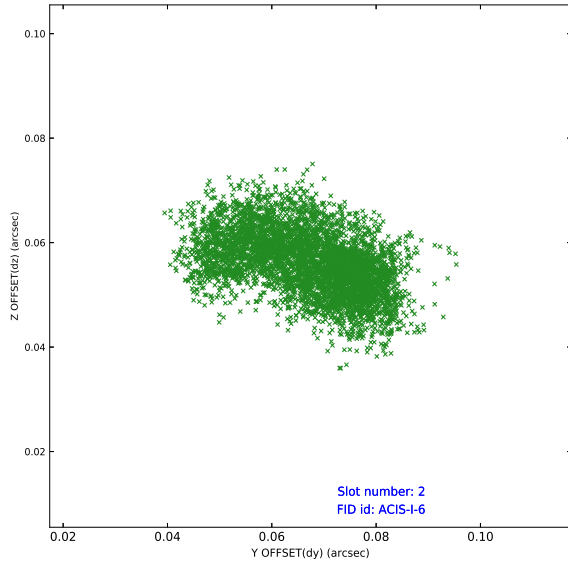
### 2.5.1 Slot 0



## 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)	2020.09.23
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	19.66

## A.2 Comments

Roll constraint was not met.