

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 6053 - L2 Version 4  
Chandra X-Ray Center

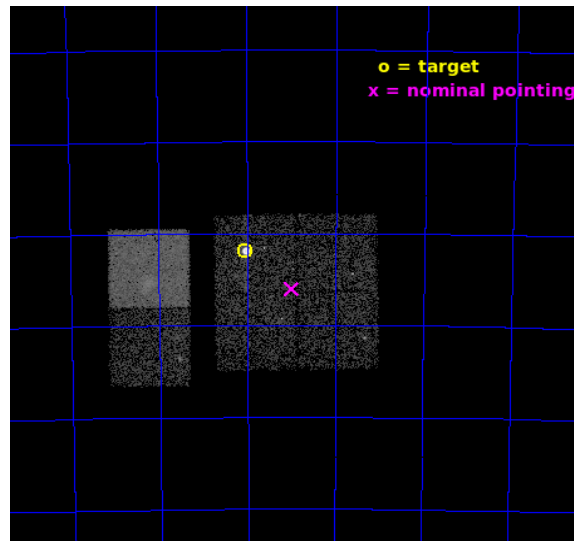
L2 Processing Date : Oct 6 2020

## 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

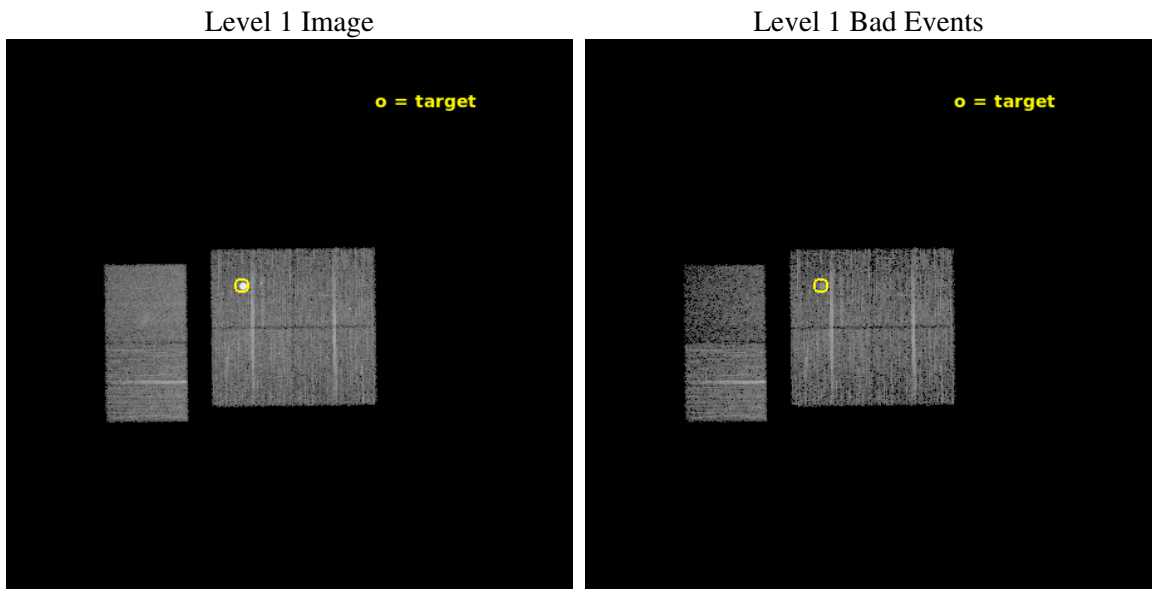
seq_num	590380	Sequence number
obs_id	6053	Observation id
title	AO6A ACIS-I Calibration Observations of E0102-72	Proposal title
observer	CXC Calibration	Principal investigator
object	E0102-72.3	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	16.01	Observer's specified target RA [deg]
dec_targ	-72.032028	Observer's specified target Dec [deg]
ra_nom	15.747368491314	Nominal RA [deg]
dec_nom	-72.100263346044	Nominal Dec [deg]
roll_nom	269.34110875311	Nominal Roll [deg]
revision	4	Processing version of data
ontime	7254.2481284142	Sum of GTIs [s]
livetime	7162.3904706284	Livetime [s]
ontime0	7254.1250084341	Sum of GTIs [s]
ontime1	7254.1660484076	Sum of GTIs [s]
ontime2	7254.2070685029	Sum of GTIs [s]
ontime3	7254.2481284142	Sum of GTIs [s]
ontime6	7254.3301885128	Sum of GTIs [s]
ontime7	7254.2891485095	Sum of GTIs [s]
l2events	58451	Number of level 2 events



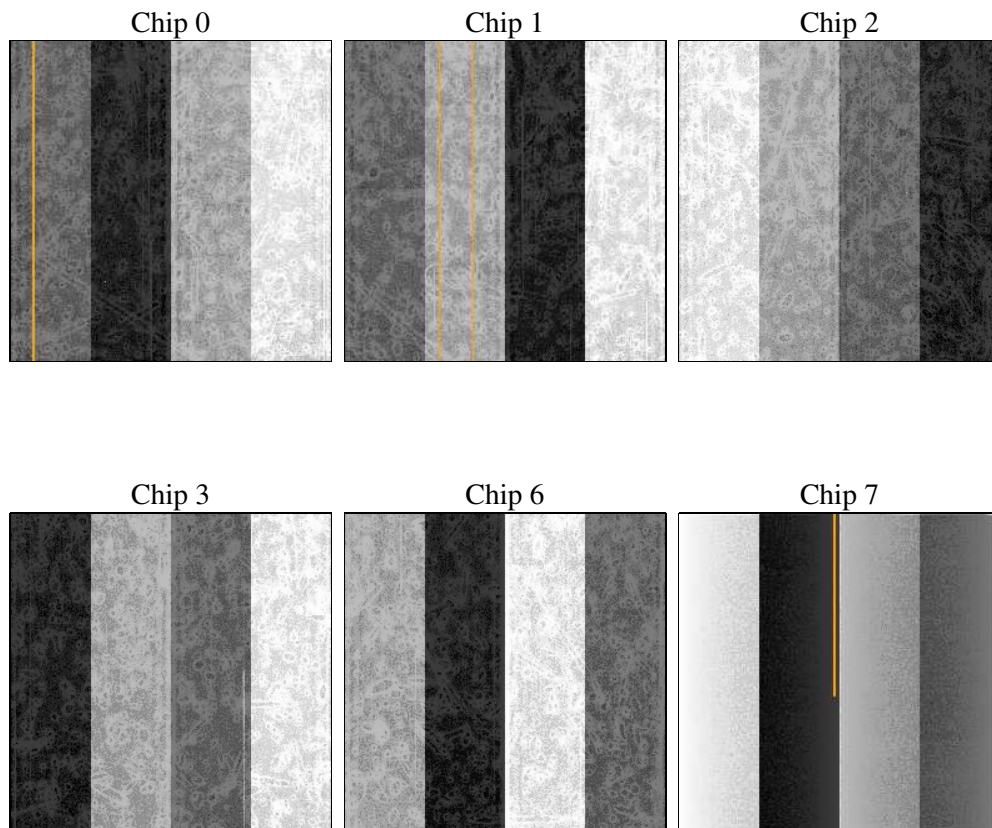
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	7500.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	7254.2481284142	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime0	7254.1250084341	Sum of GTIs [s]
date	2020-10-06T03:54:22	Date and time of file creation	ontime1	7254.1660484076	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	7254.2070685029	Sum of GTIs [s]
			ontime3	7254.2481284142	Sum of GTIs [s]
			ontime6	7254.3301885128	Sum of GTIs [s]
			ontime7	7254.2891485095	Sum of GTIs [s]
			l1events	267948	Number of level 1 events

### 2.1.4 Events

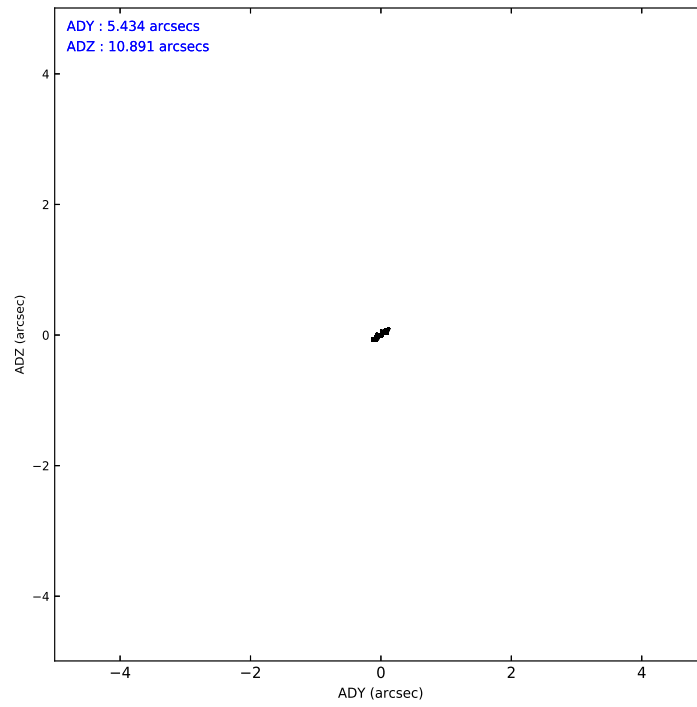
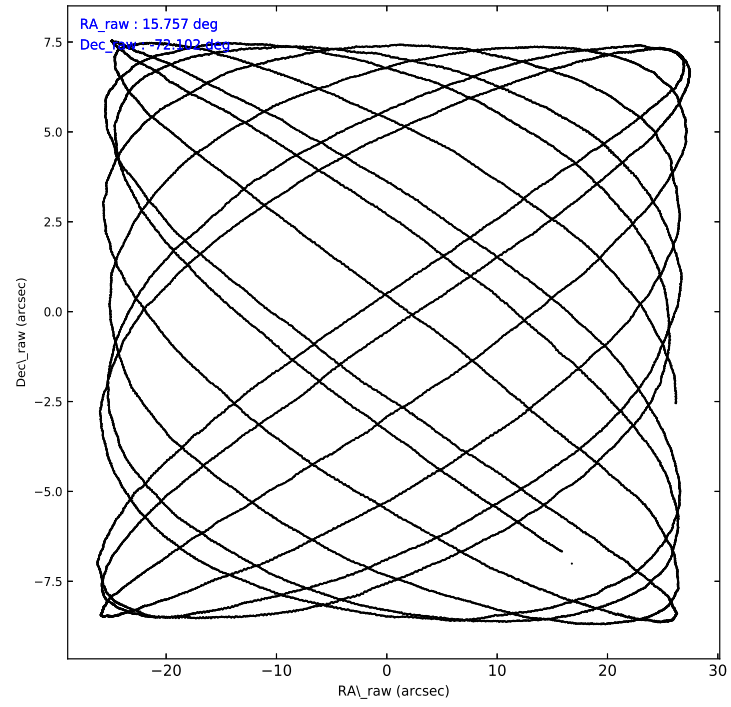
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	39505	39932	43247	62093	43584	39587	grade 0 events	1663	1755	1980	20733	1693	2153
rejected events	35115	35366	38677	36517	39154	19902		4%	4%	4%	33%	3%	5%
rejected %	88%	88%	89%	58%	89%	50%	grade 1 events	18	18	28	174	20	36
								0%	0%	0%	0%	0%	0%
							grade 2 events	1067	933	987	2311	923	4191
								2%	2%	2%	3%	2%	10%
							grade 3 events	453	505	417	876	466	1966
								1%	1%	0%	1%	1%	4%
							grade 4 events	437	513	450	850	457	1951
								1%	1%	1%	1%	1%	4%
							grade 5 events	1232	1311	1161	1389	1471	4252
								3%	3%	2%	2%	3%	10%
							grade 6 events	775	865	741	836	895	9440
								1%	2%	1%	1%	2%	23%
							grade 7 events	33860	34032	37483	34924	37659	15598
								85%	85%	86%	56%	86%	39%

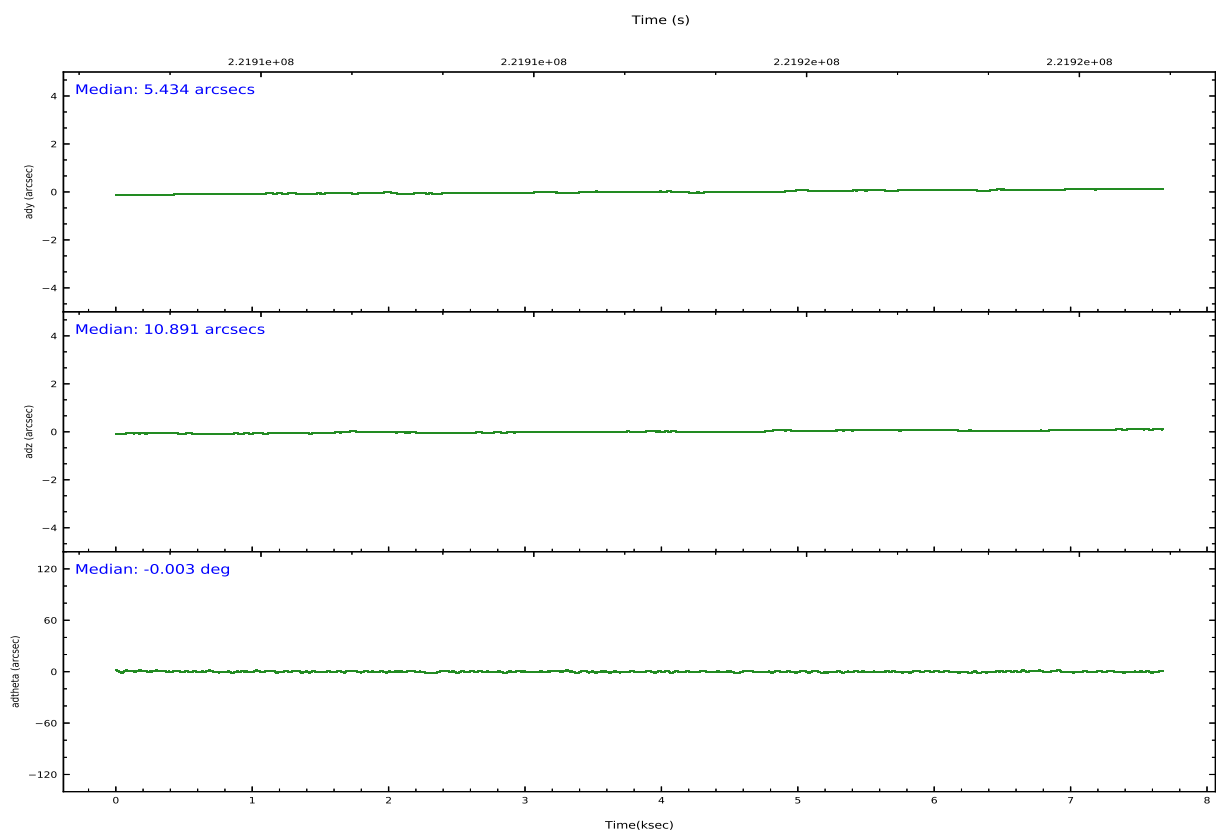
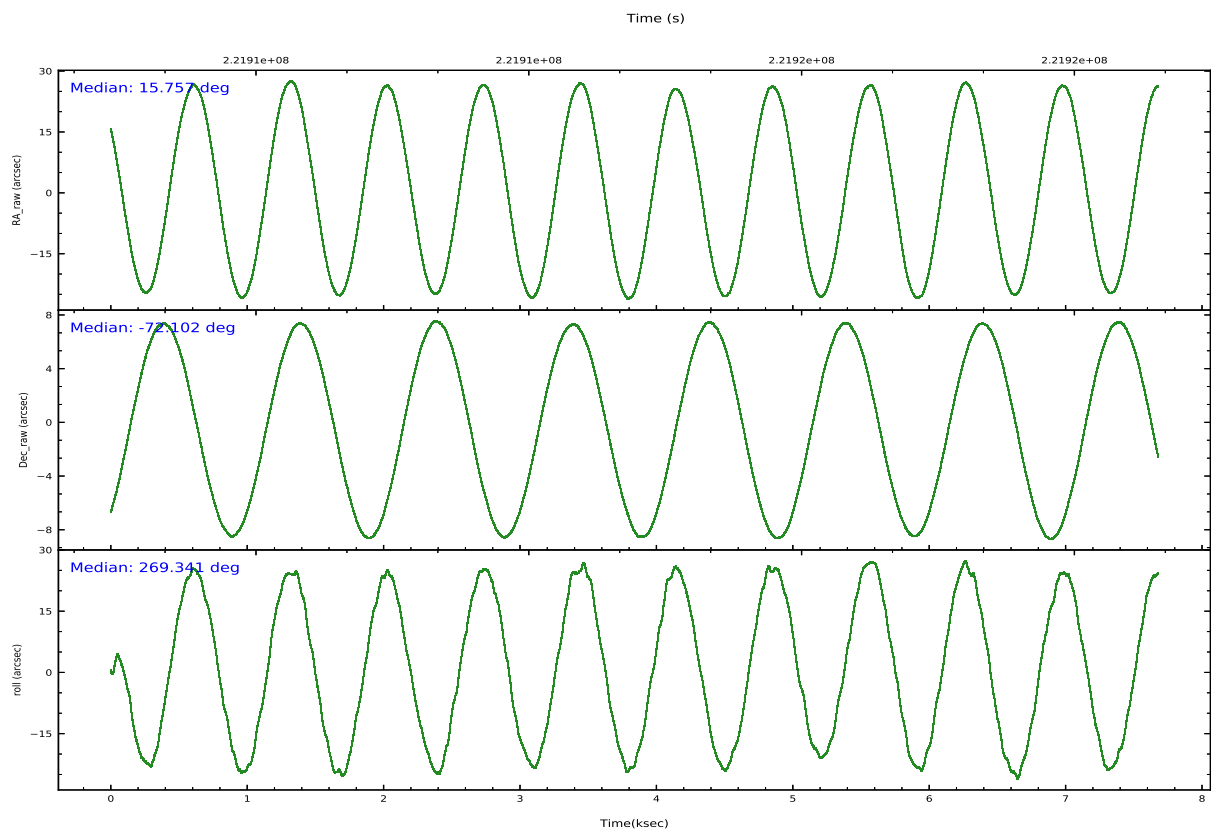


## 2.2 Compared Parameters

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	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	15.713702	15.747368491314	Subarray requested	NONE	NONE
[deg] Pointing Dec	-72.078124	-72.100263346044	Alternating exposures requested	N	N
[deg] Pointing Roll	269.091403	269.34110875311	[s] Primary exposure time	0.000000	3.2
[s] Window start time (MET)	215654464.184000	215654464.184000			
[s] Window stop time (MET)	223516864.184000	223516864.184000			
[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)	221911114.184000	221910737.39394			
Observation start date	2005-01-12T09:57:30	2005-01-12T09:52:17			
[s] Observation end time (MET)	221918614.184000	221918747.76931			
Observation end date	2005-01-12T12:02:30	2005-01-12T12:05:47			
Read mode	TIMED	TIMED			

## 2.3 Aspect



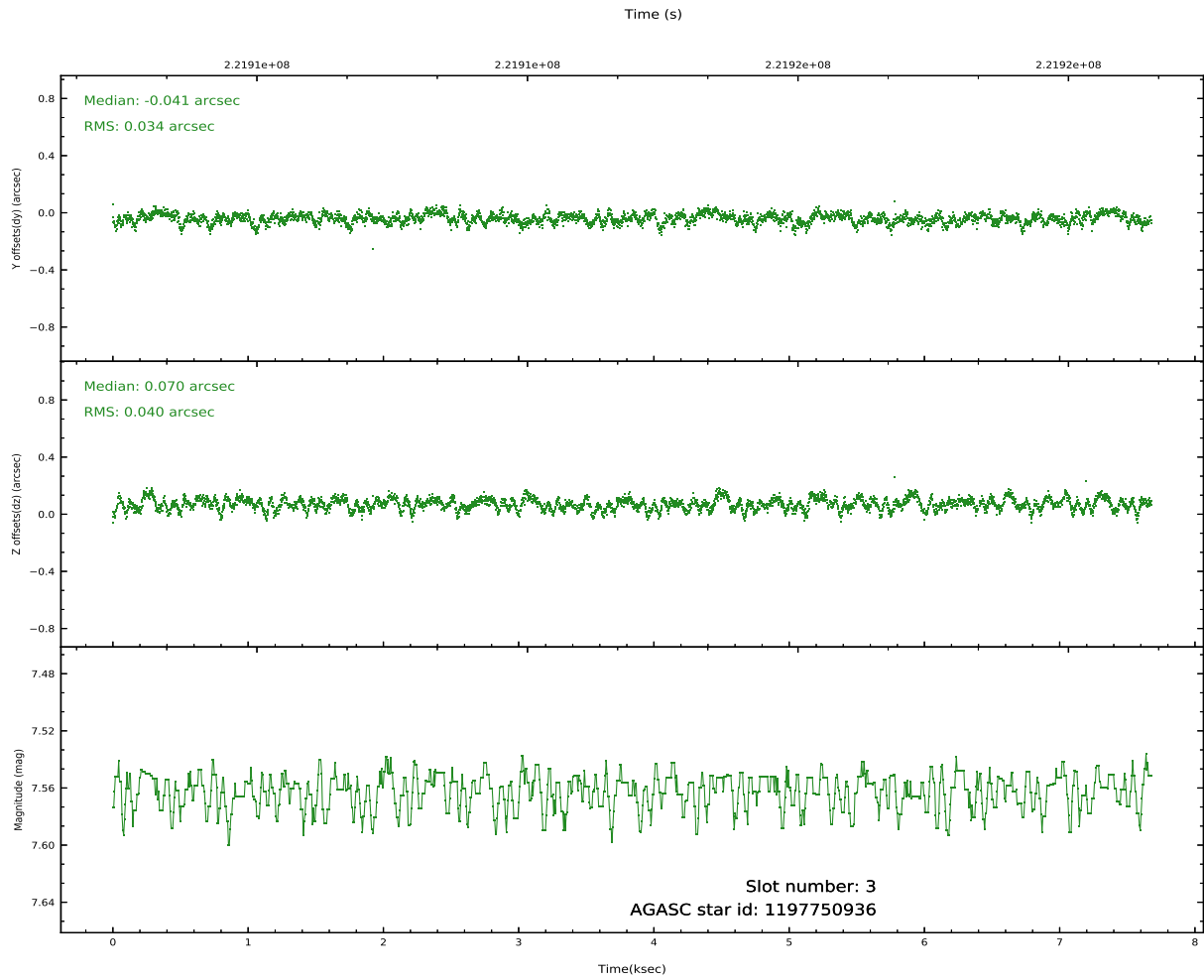
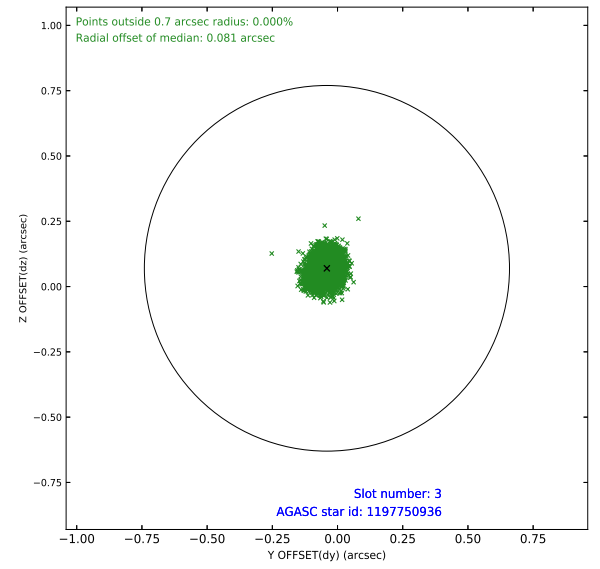
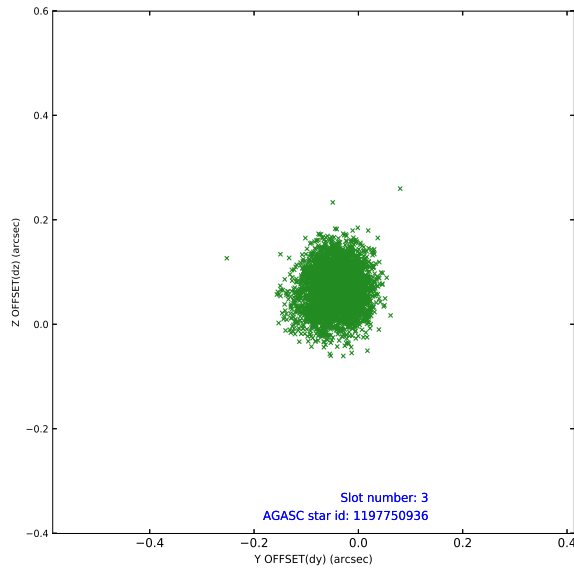


Slot Statistics

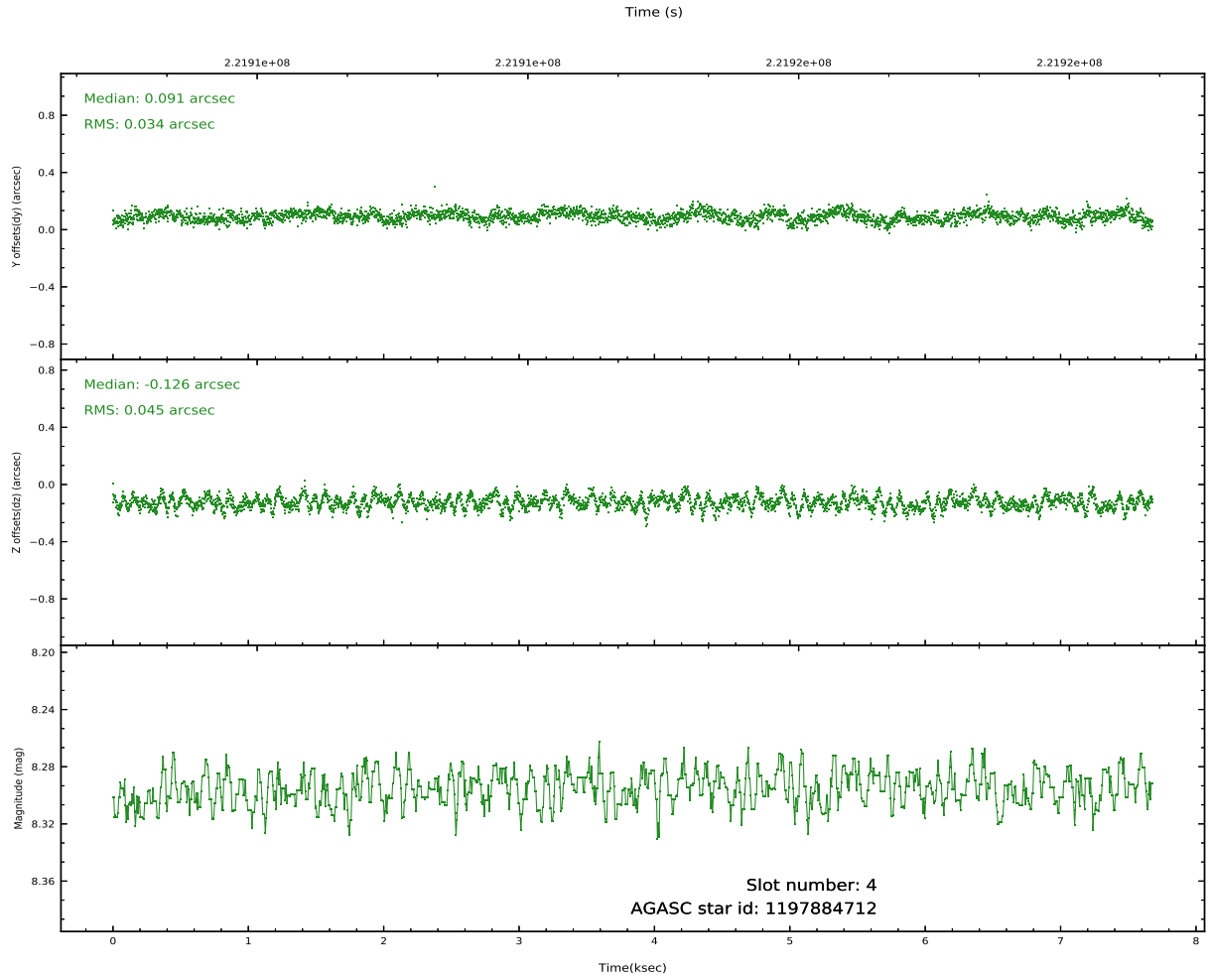
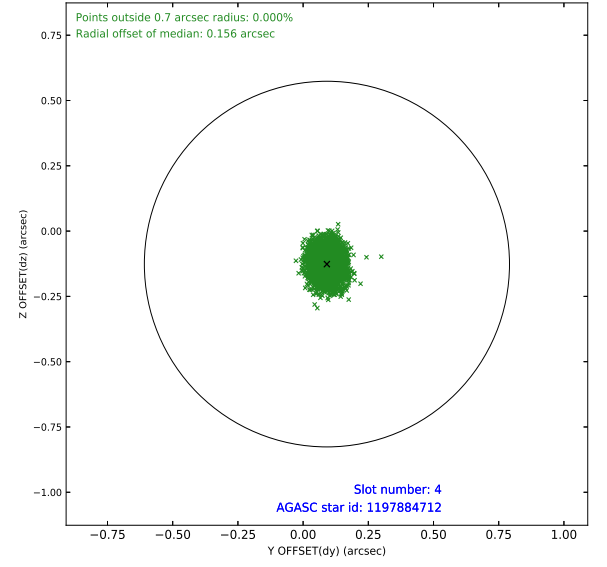
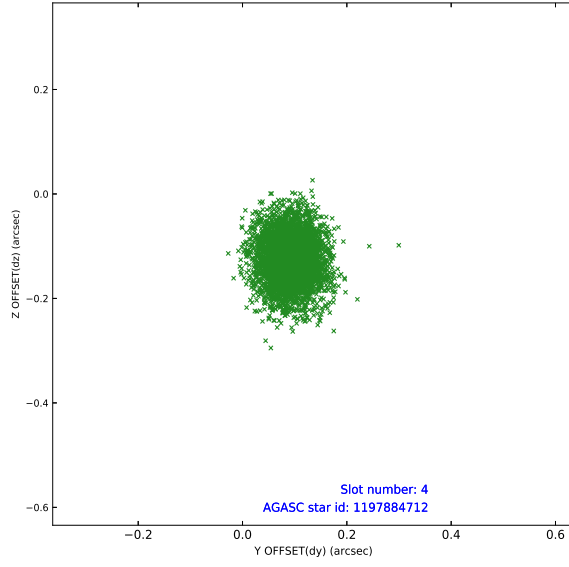
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-2	7.14	1873	1.000	-0.097	-0.134	0.010	0.016	0.000000	0.000000	-759.97	-840
1	FID		ACIS-I-4	7.18	1873	1.000	0.161	0.093	0.006	0.010	0.000000	0.000000	2153.98	1065
2	FID		ACIS-I-5	7.22	1873	1.000	-0.166	0.109	0.010	0.016	0.000000	0.000000	-1812.94	1063
3	GUIDE	used	1197750936	7.56	3744	1.000	-0.041	0.070	0.057	0.092	15.387940	-71.549550	-1895.14	-401
4	GUIDE	used	1197884712	8.30	3747	1.000	0.091	-0.126	0.059	0.098	16.087398	-72.252690	623.13	420
5	GUIDE	used	1197885104	9.35	3729	1.000	0.043	-0.003	0.127	0.195	17.845067	-72.189368	405.56	2353
6	GUIDE	used	1197885328	7.22	3677	1.000	-0.033	-0.073	0.067	0.101	16.283090	-71.733943	-1245.78	624
7	GUIDE	used	1198189696	7.38	3746	1.000	-0.059	0.129	0.050	0.079	15.223750	-72.697522	2240.12	-488

## 2.4 Star Slots

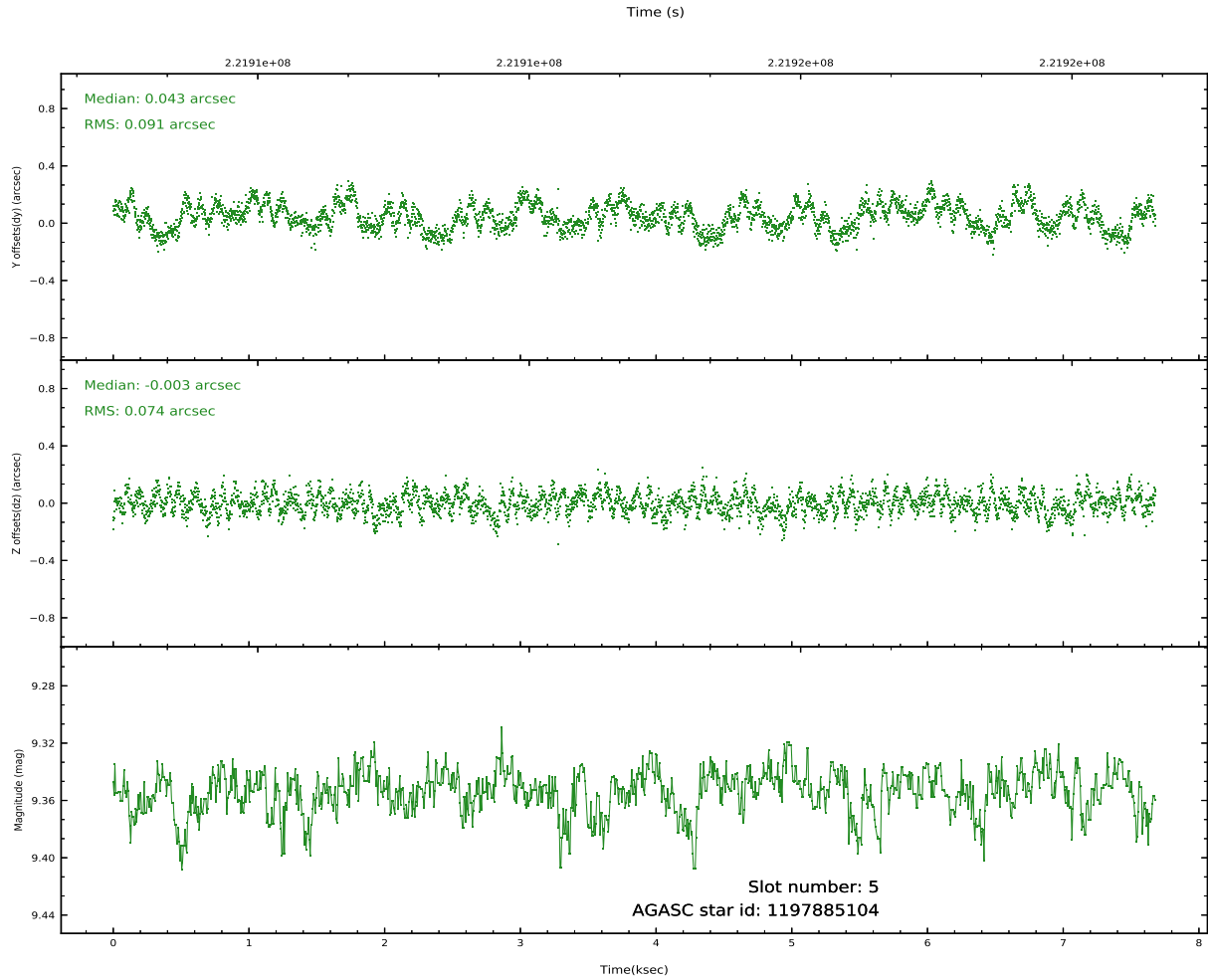
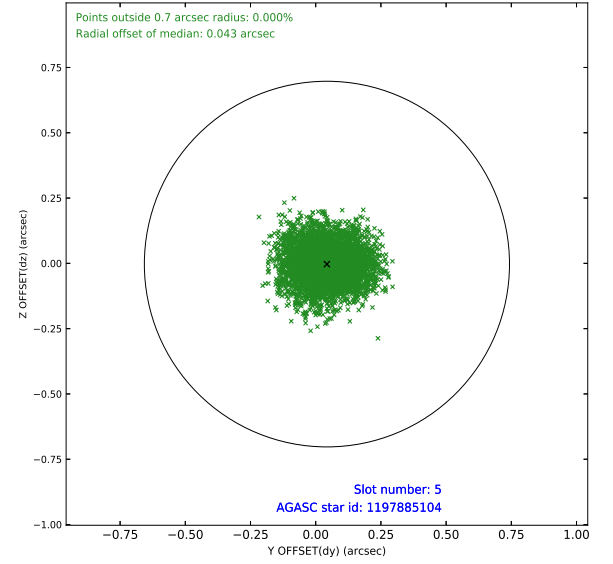
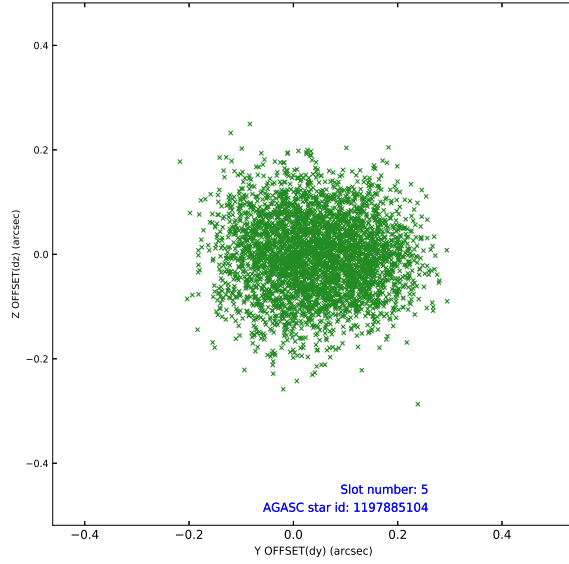
### 2.4.1 Slot 3



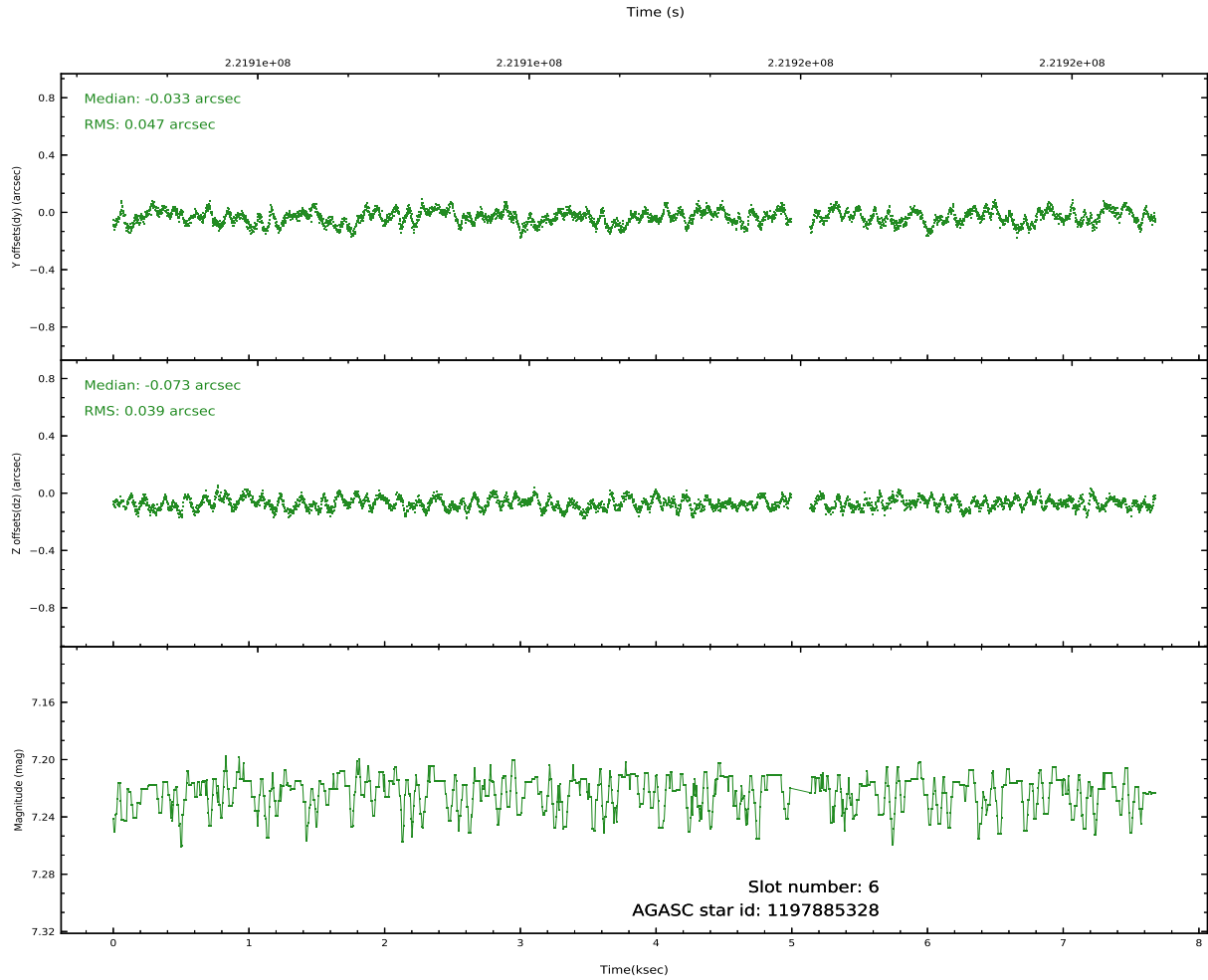
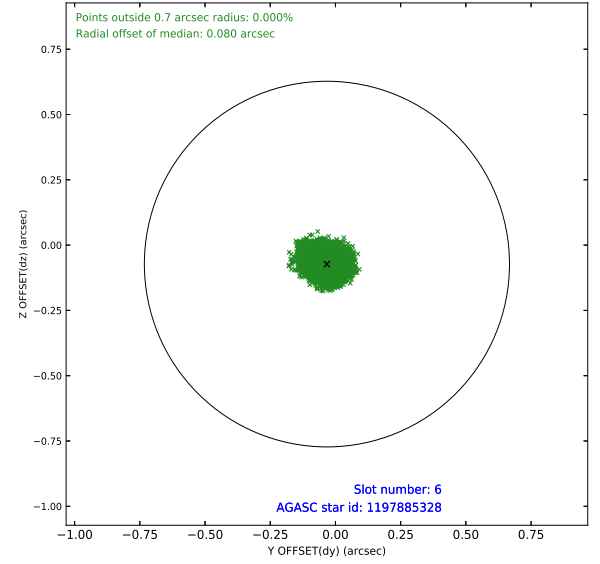
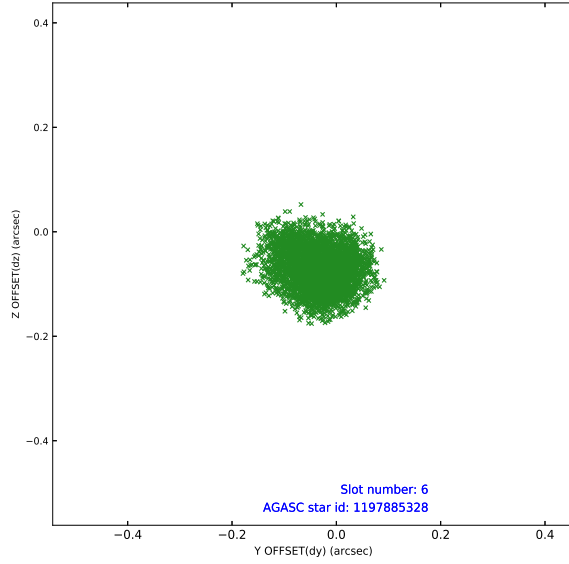
## 2.4.2 Slot 4



### 2.4.3 Slot 5

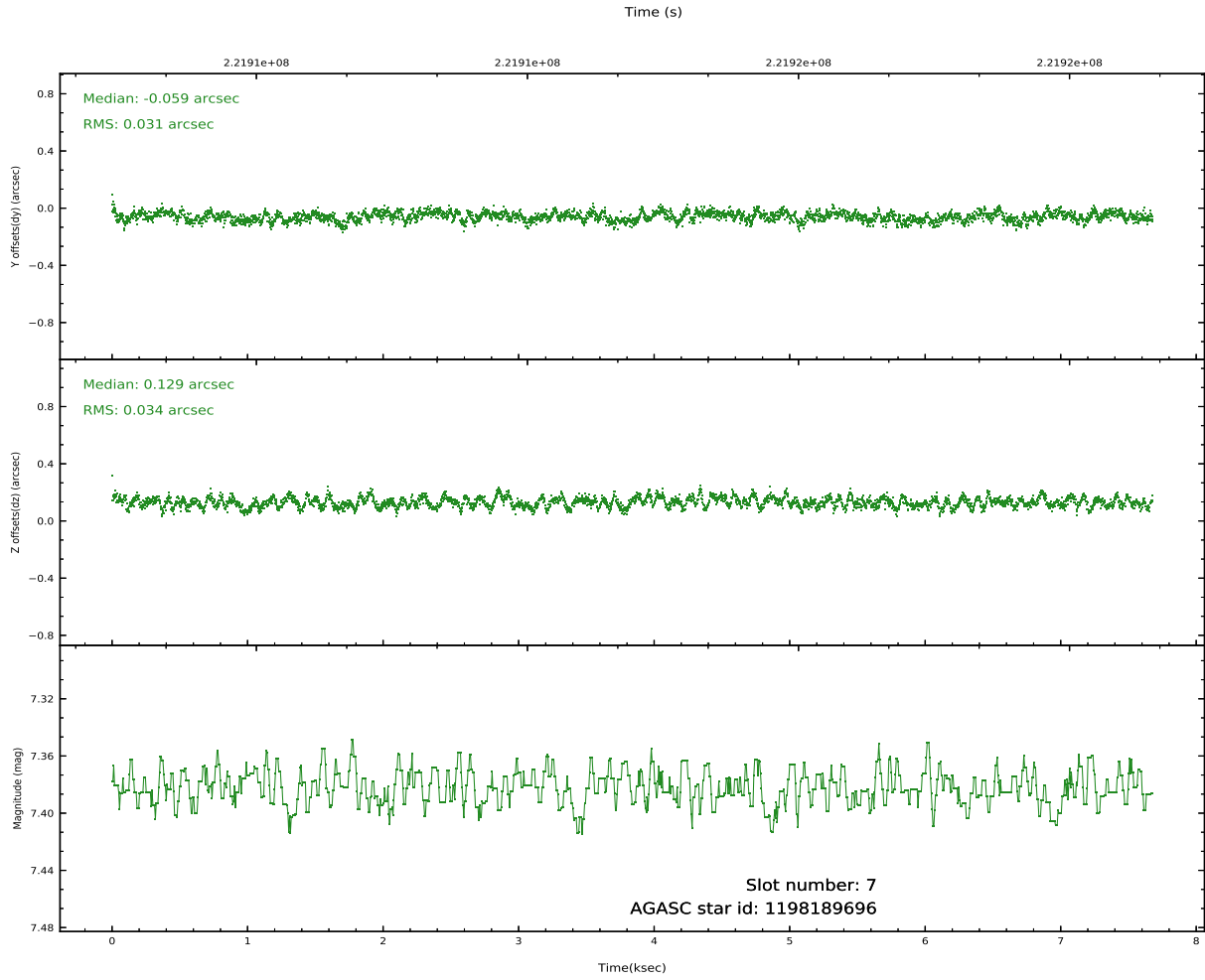
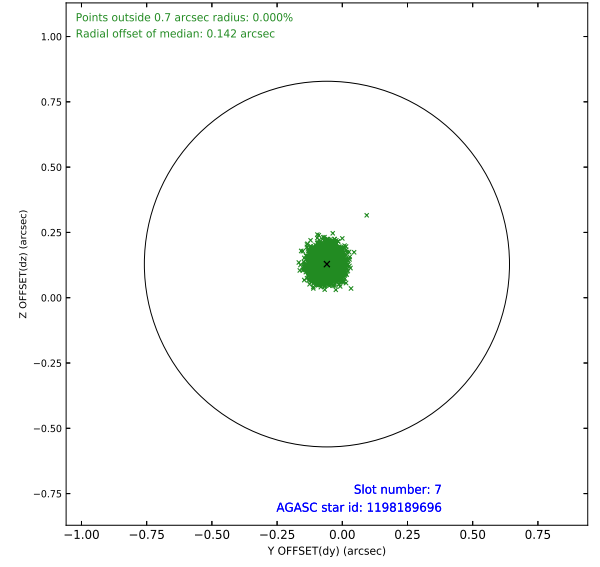
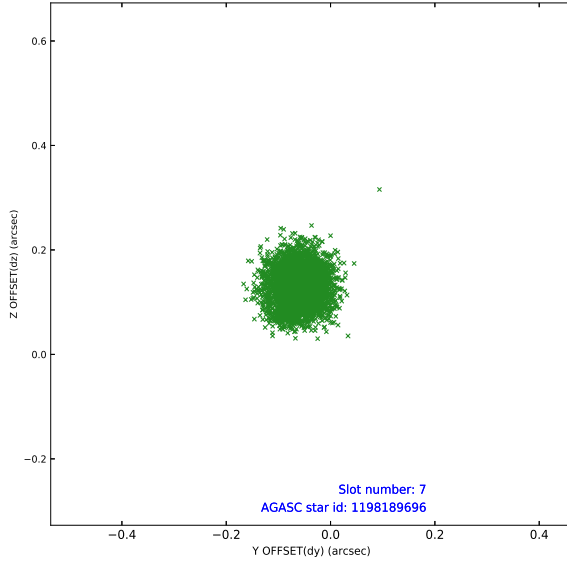


## 2.4.4 Slot 6



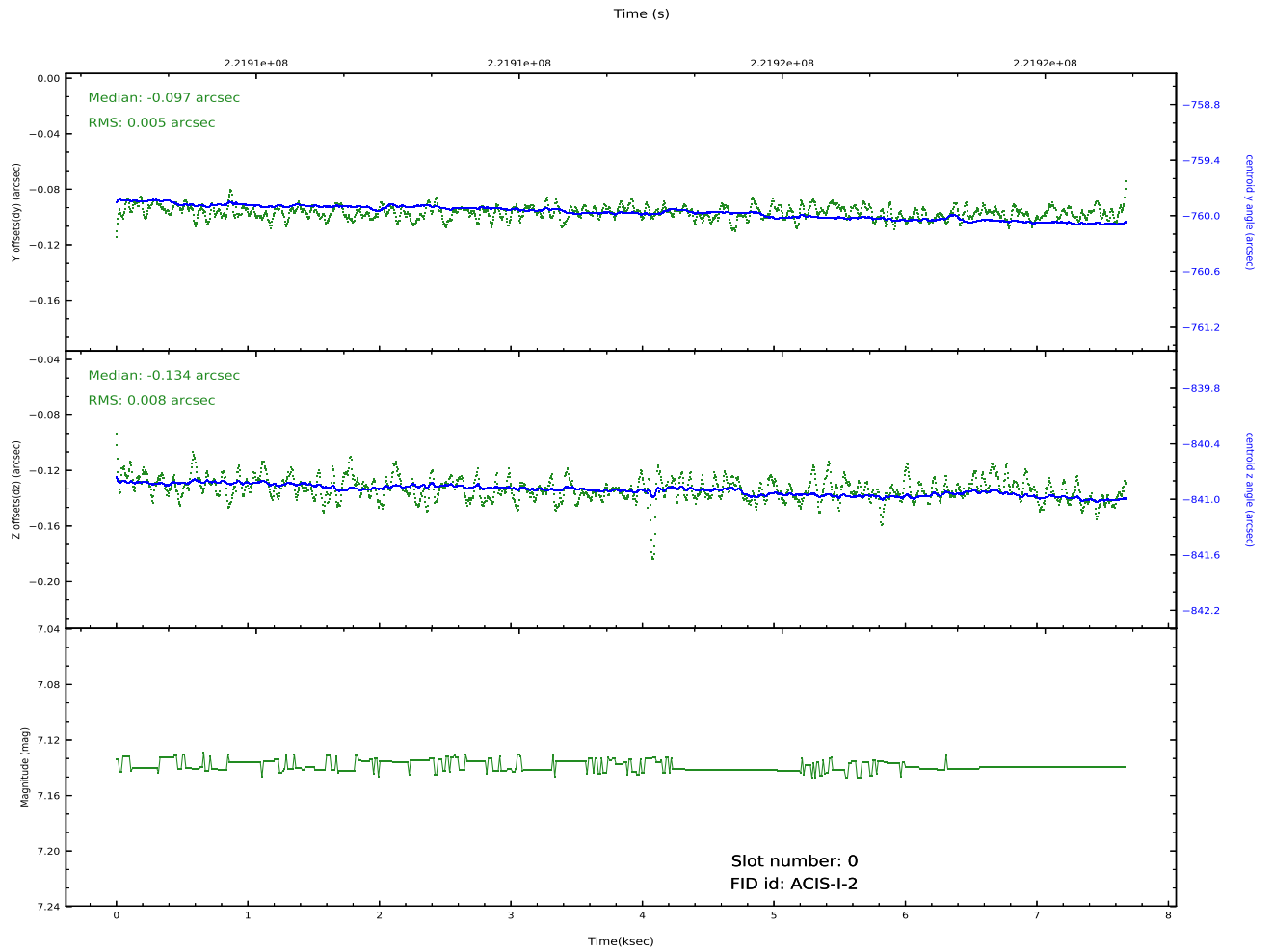
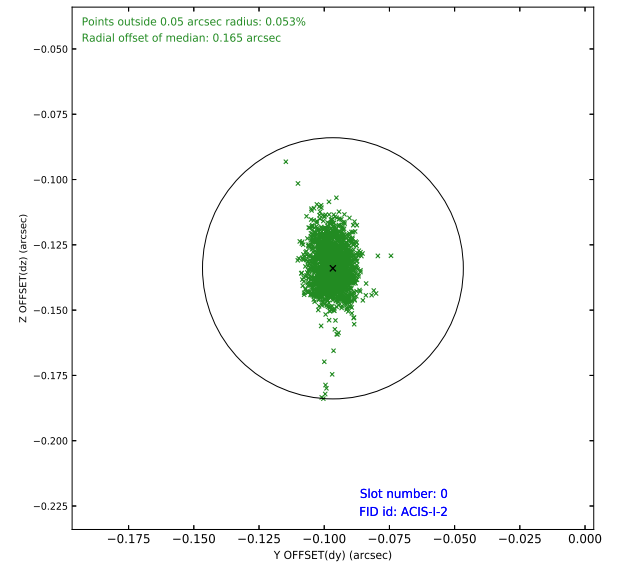
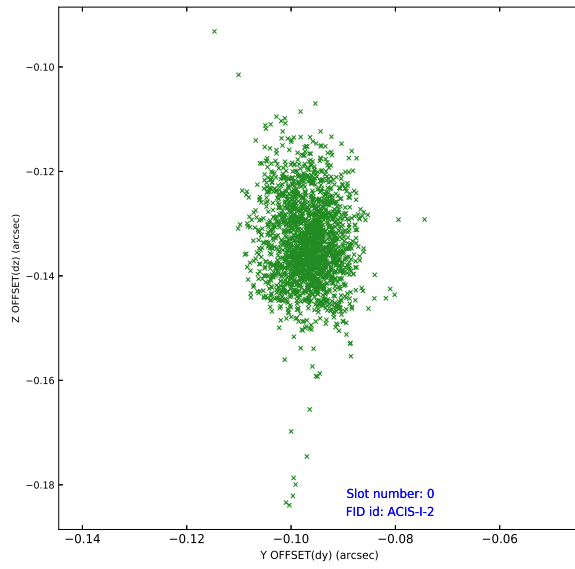


## 2.4.5 Slot 7

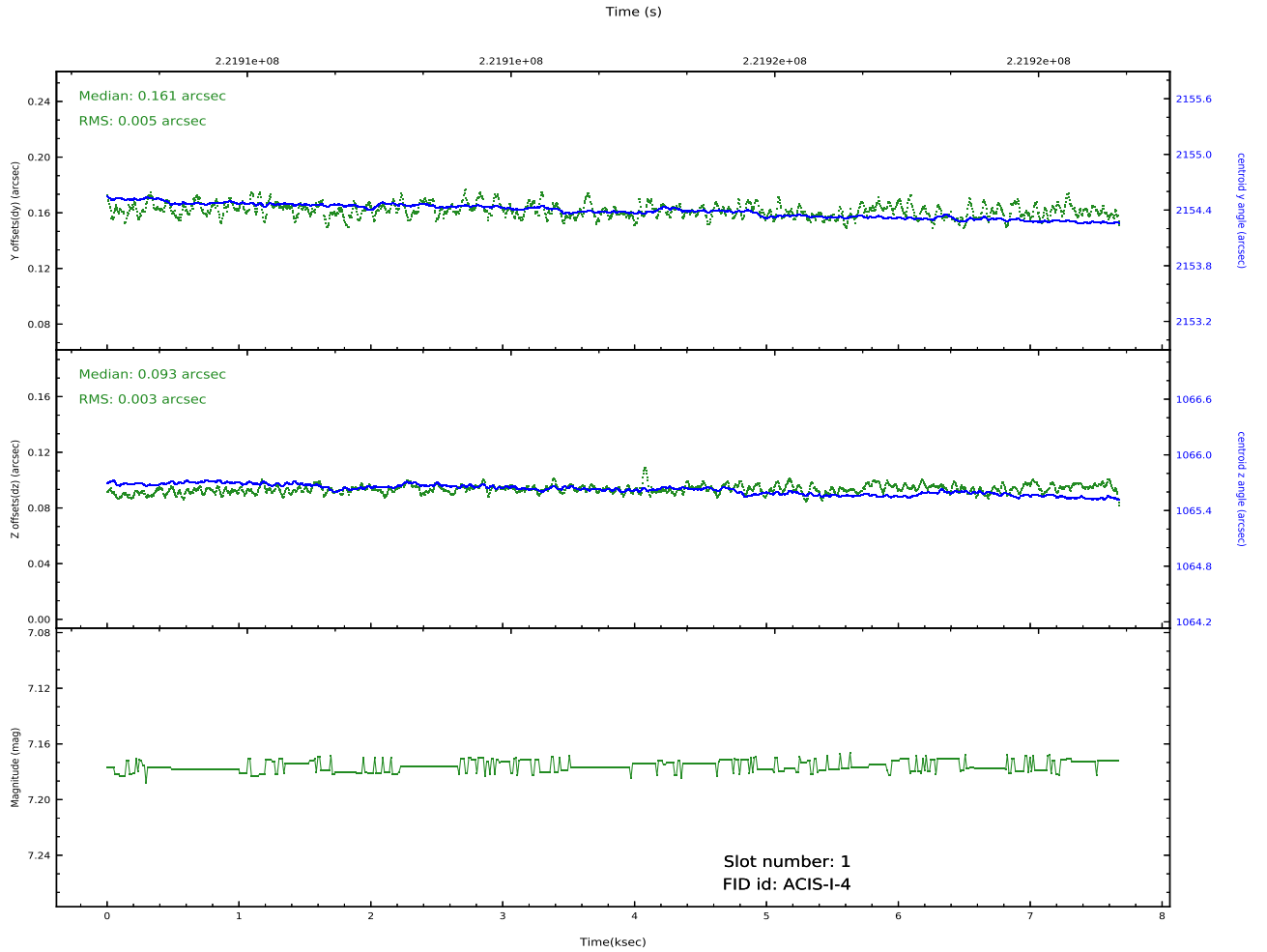
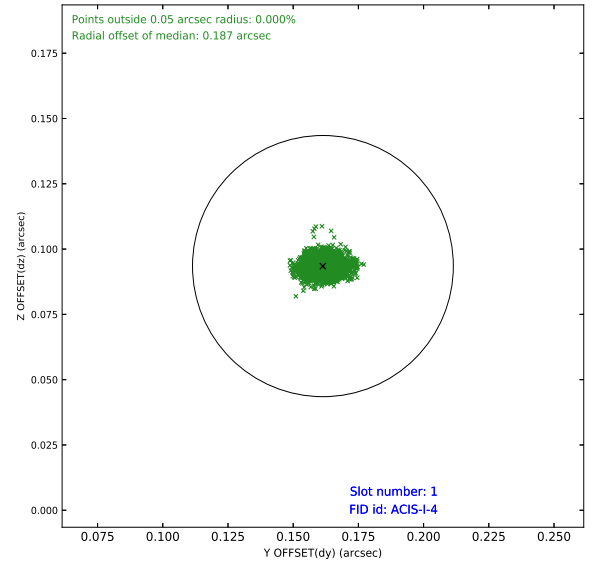
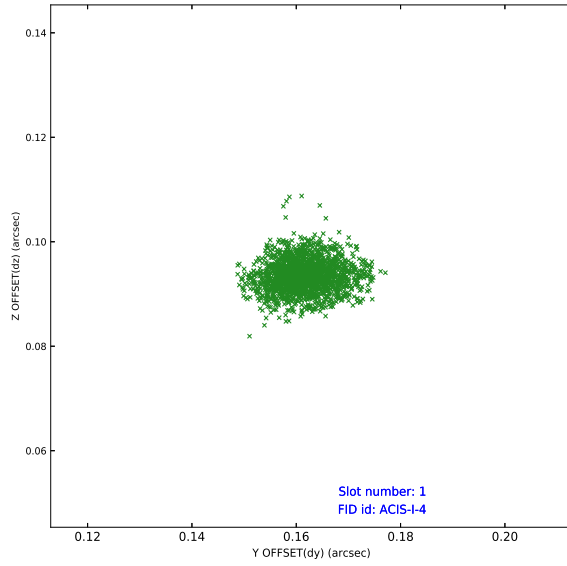


## 2.5 FID Slots

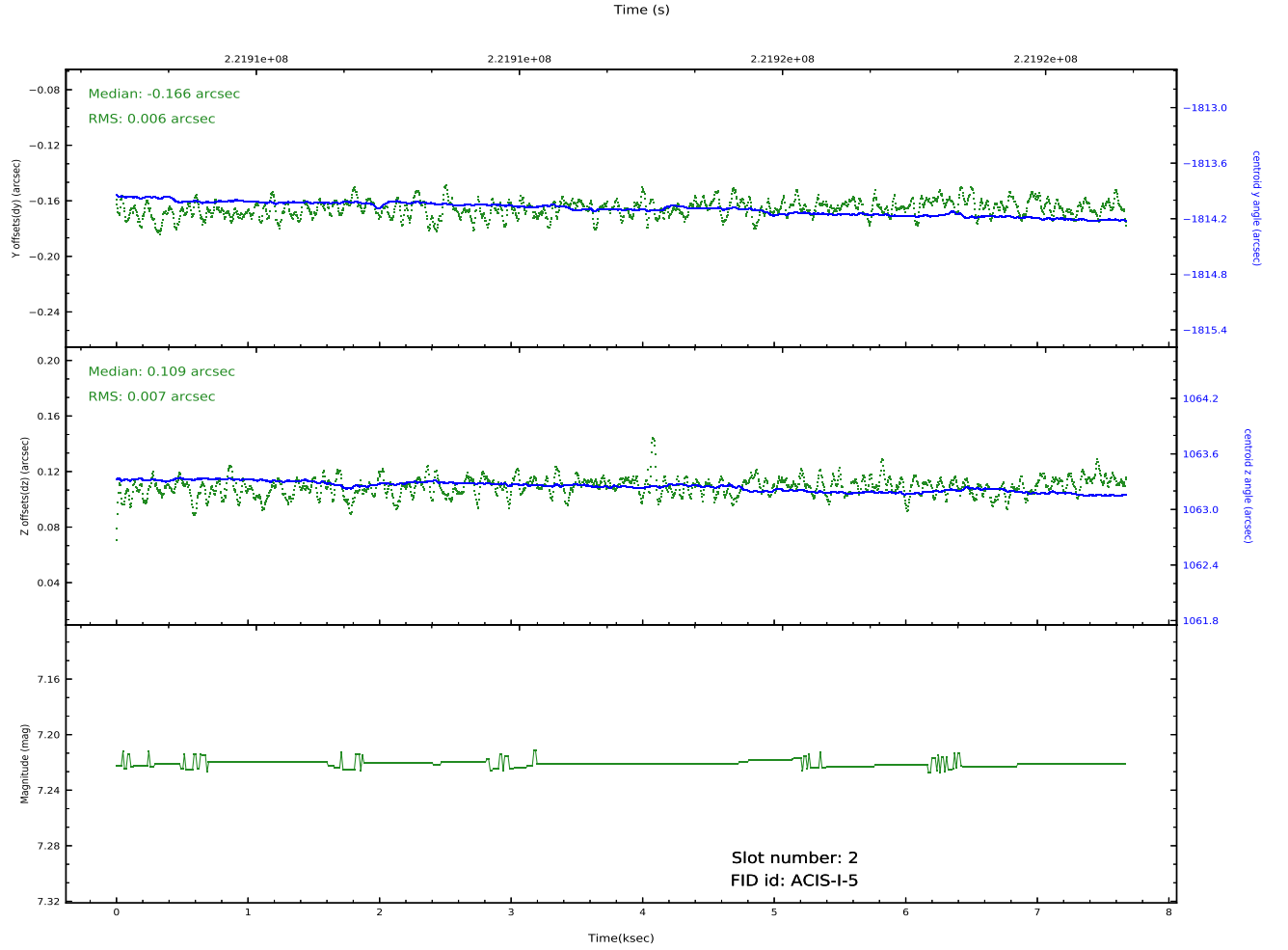
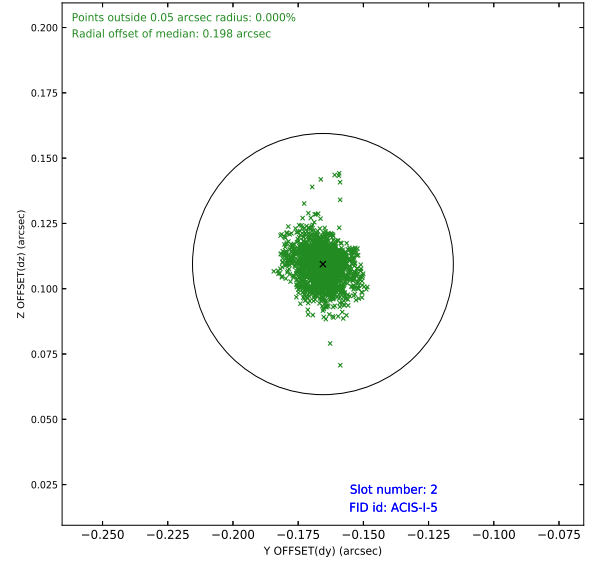
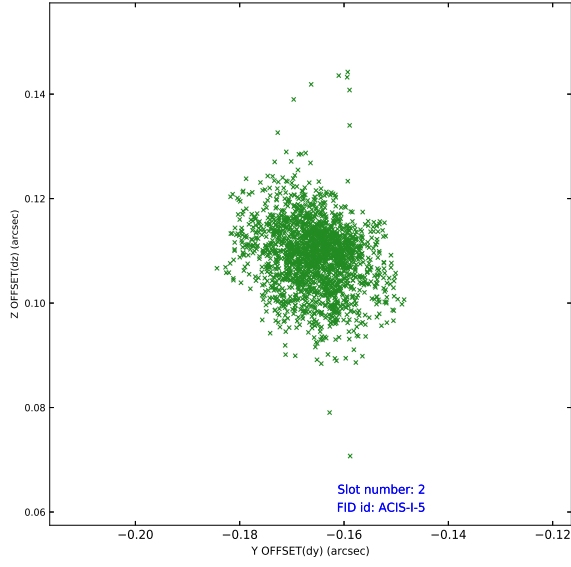
### 2.5.1 Slot 0



## 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)	2020.10.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	7.254399

### A.2 Comments

Window constraint met.