

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5791 - L2 Version 4  
Chandra X-Ray Center

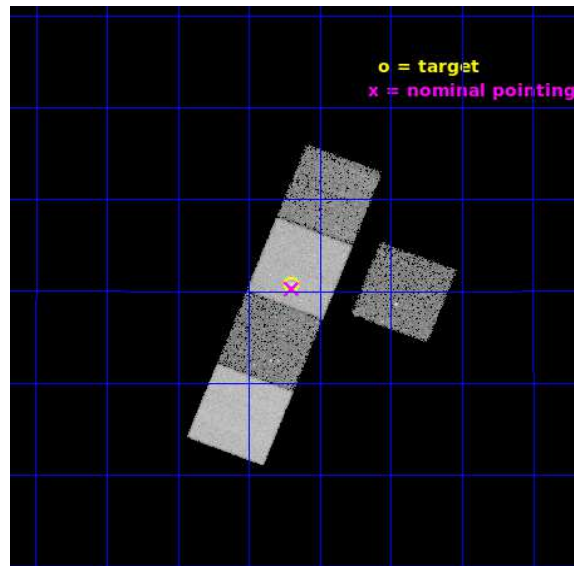
L2 Processing Date : Oct 5 2020

## 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

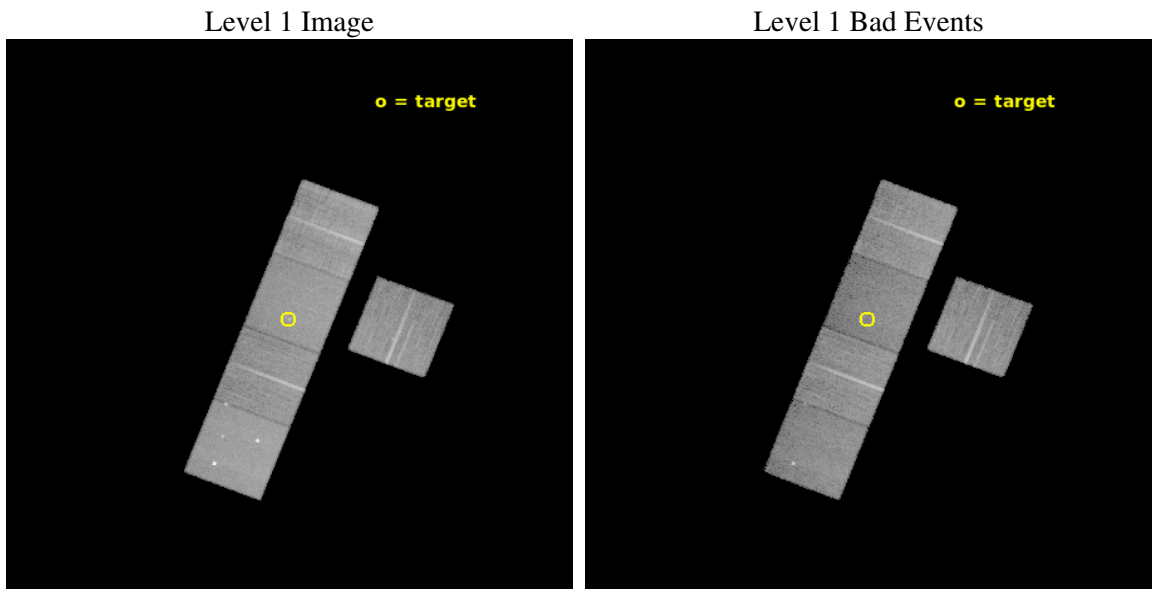
seq_num	800504	Sequence number
obs_id	5791	Observation id
title	Dark Matter in Isolated Ellipticals and Groups	Proposal title
observer	Gordon Garmire	Principal investigator
object	NGC766	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	29.675417	Observer's specified target RA [deg]
dec_targ	8.346583	Observer's specified target Dec [deg]
ra_nom	29.674145360896	Nominal RA [deg]
dec_nom	8.337862002606	Nominal Dec [deg]
roll_nom	291.29270433424	Nominal Roll [deg]
revision	4	Processing version of data
ontime	20177.899961174	Sum of GTIs [s]
livetime	19914.260843427	Livetime [s]
ontime3	20174.758990914	Sum of GTIs [s]
ontime5	20177.899961174	Sum of GTIs [s]
ontime6	20177.899961174	Sum of GTIs [s]
ontime7	20177.899961174	Sum of GTIs [s]
ontime8	20168.477000564	Sum of GTIs [s]
l2events	167444	Number of level 2 events



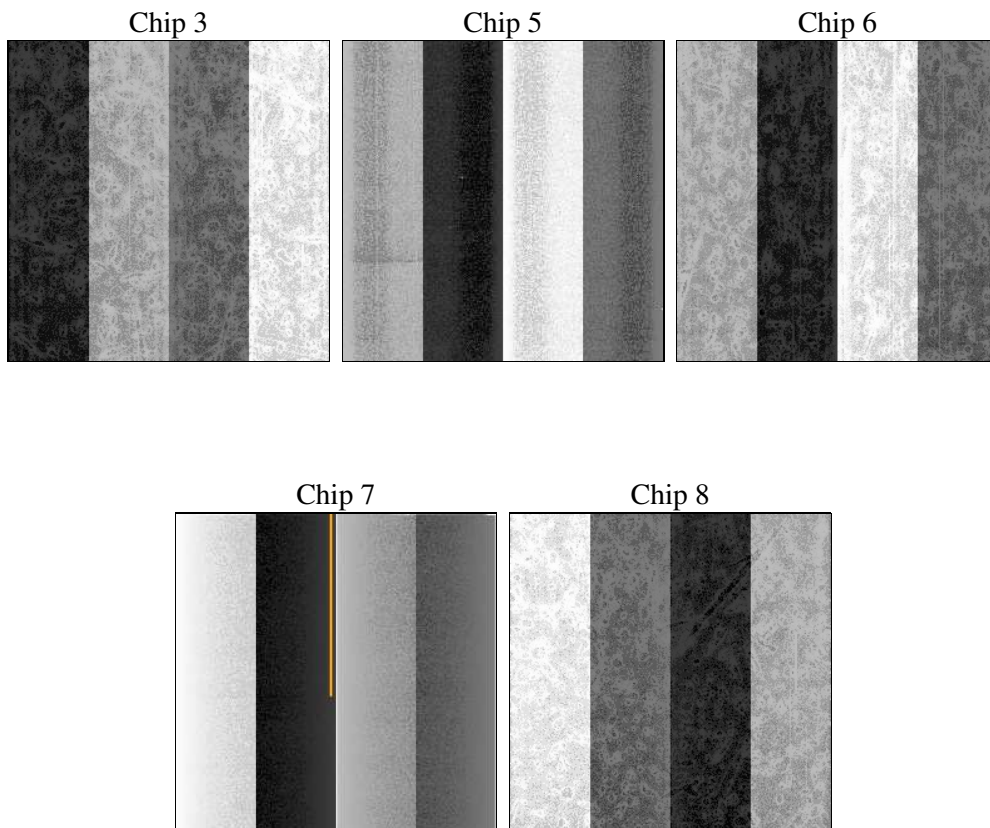
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	20177.899961174	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime3	20174.758990914	Sum of GTIs [s]
date	2020-10-06T02:38:41	Date and time of file creation	ontime5	20177.899961174	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	20177.899961174	Sum of GTIs [s]
			ontime7	20177.899961174	Sum of GTIs [s]
			ontime8	20168.477000564	Sum of GTIs [s]
			l1events	687614	Number of level 1 events

### 2.1.4 Events

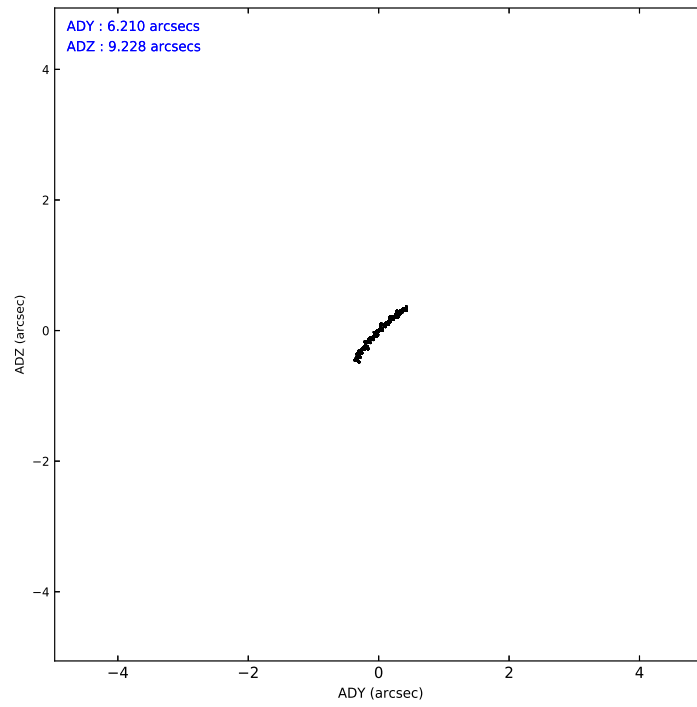
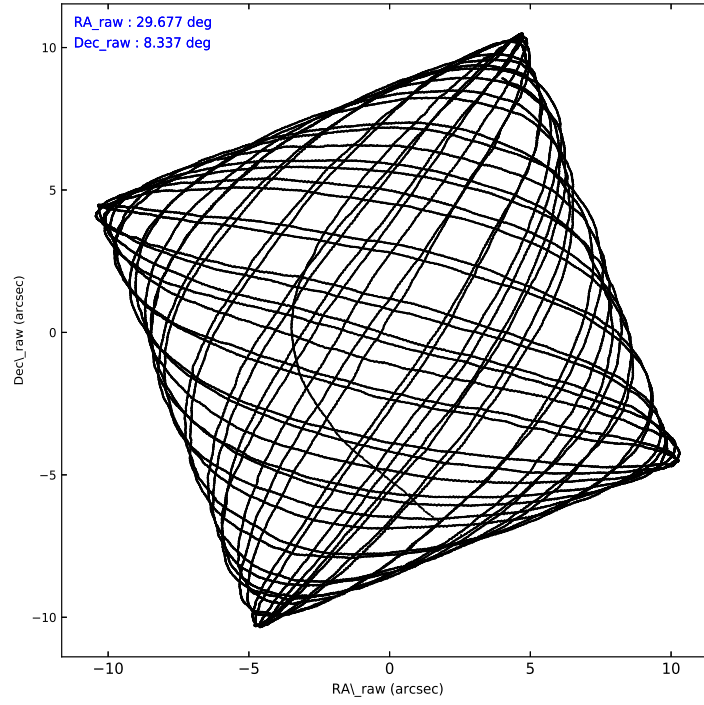
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	116875	166999	118993	133365	151382
rejected events	105437	82725	106064	72108	116033
rejected %	90%	49%	89%	54%	76%

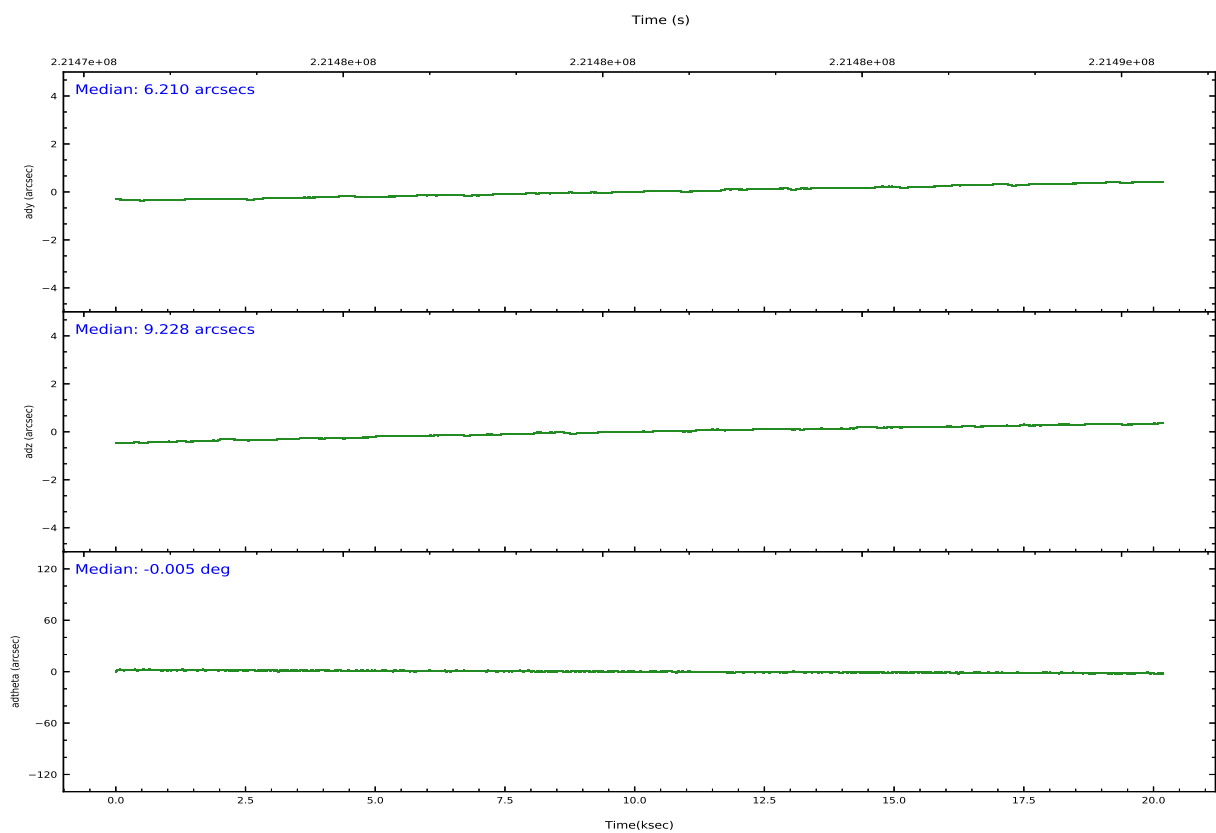
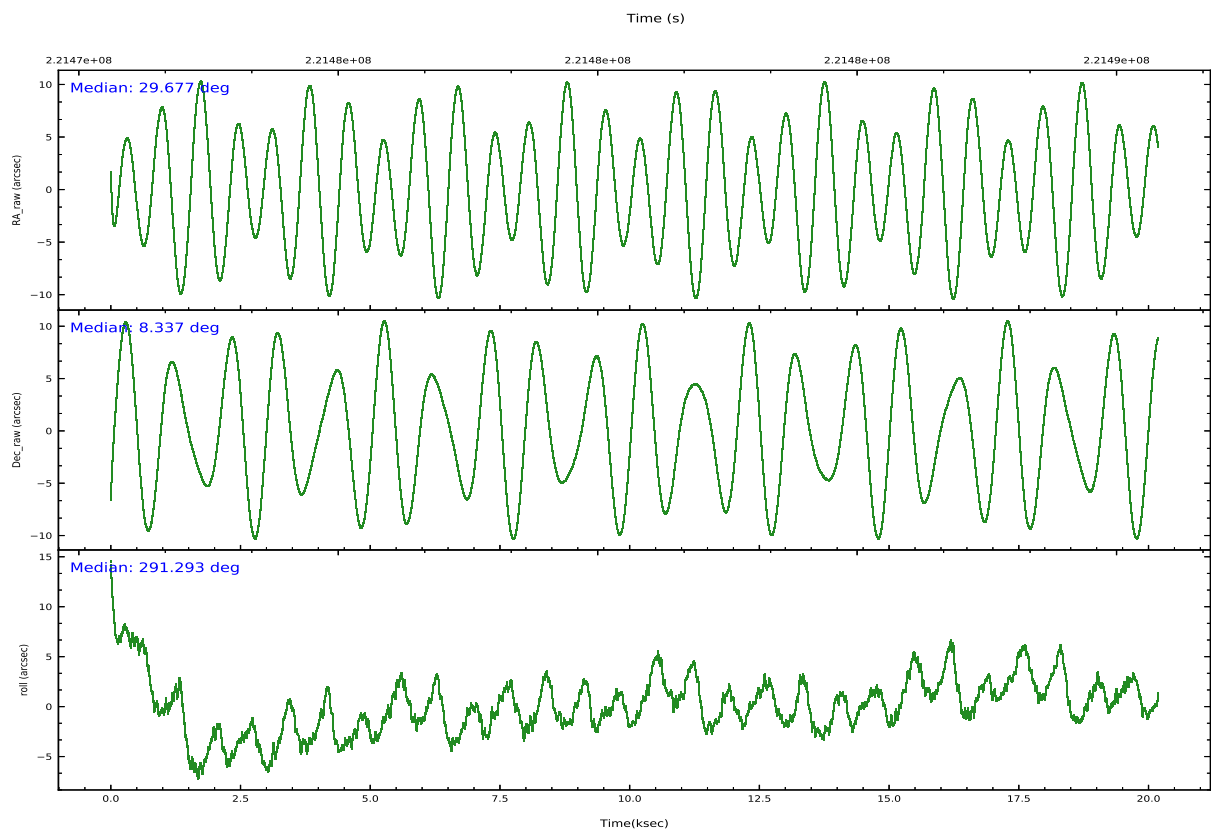
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	4320	11107	4886	6133	10962
	3%	6%	4%	4%	7%
grade 1 events	66	1215	67	104	117
	0%	0%	0%	0%	0%
grade 2 events	2351	25504	2656	12332	7693
	2%	15%	2%	9%	5%
grade 3 events	1274	3510	1440	5949	4050
	1%	2%	1%	4%	2%
grade 4 events	1327	3498	1392	5877	3674
	1%	2%	1%	4%	2%
grade 5 events	4597	12789	4719	13977	6684
	3%	7%	3%	10%	4%
grade 6 events	2193	40874	2586	31147	9086
	1%	24%	2%	23%	6%
grade 7 events	100747	68502	101247	57846	109116
	86%	41%	85%	43%	72%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-35678	ACIS-35678	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	29.655606	29.674145360896	Subarray requested	NONE	NONE
[deg] Pointing Dec	8.353828	8.337862002606	Alternating exposures requested	N	N
[deg] Pointing Roll	291.142205	291.29270433424	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	221470801.184000	221469777.24907			
Observation start date	2005-01-07T07:38:57	2005-01-07T07:22:57			
[s] Observation end time (MET)	221490801.184000	221491538.00005			
Observation end date	2005-01-07T13:12:17	2005-01-07T13:25:38			
Read mode	TIMED	TIMED			

## 2.3 Aspect



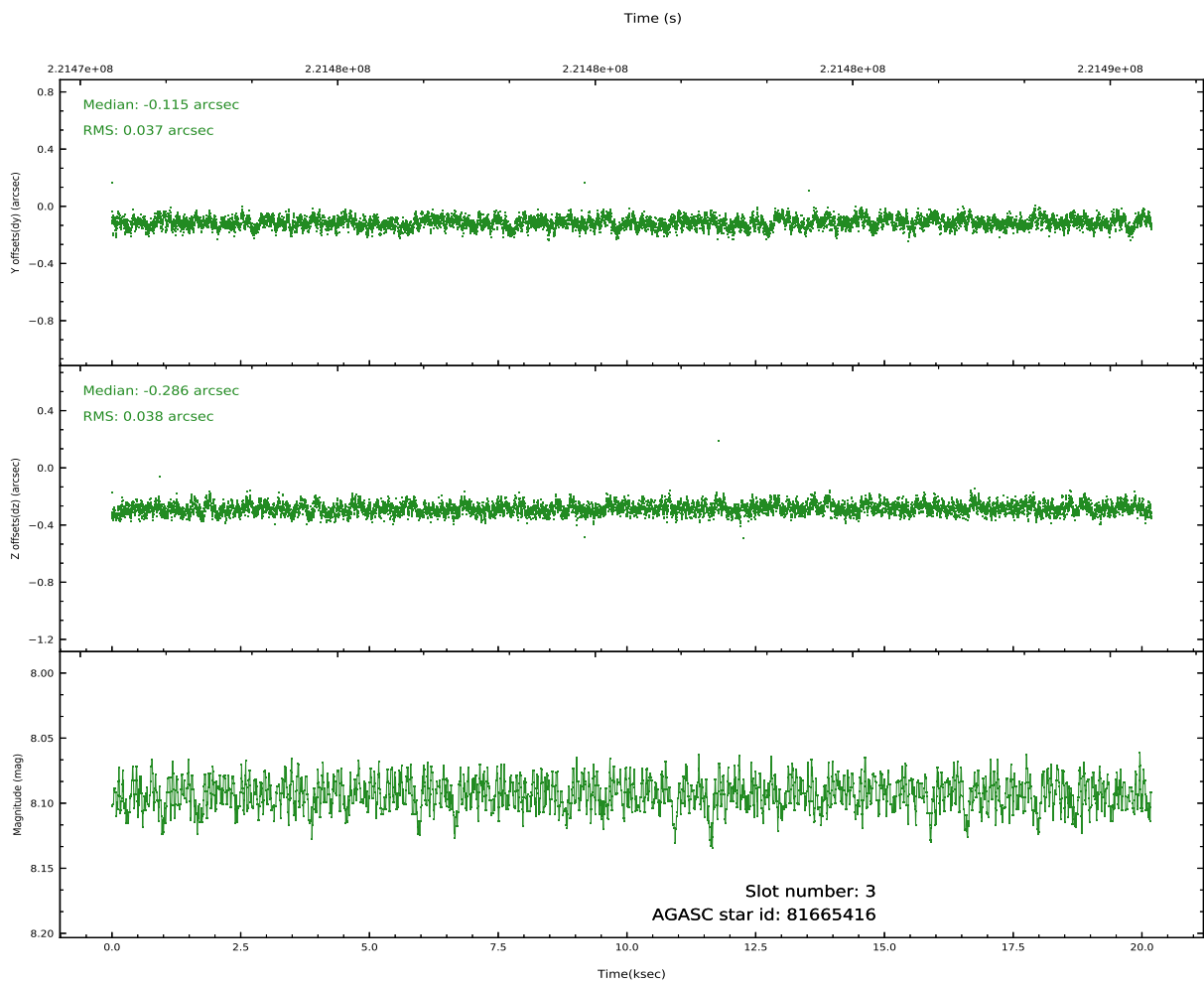
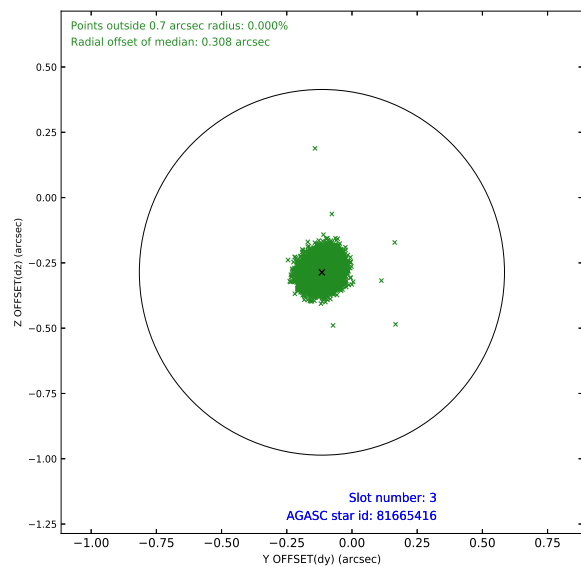
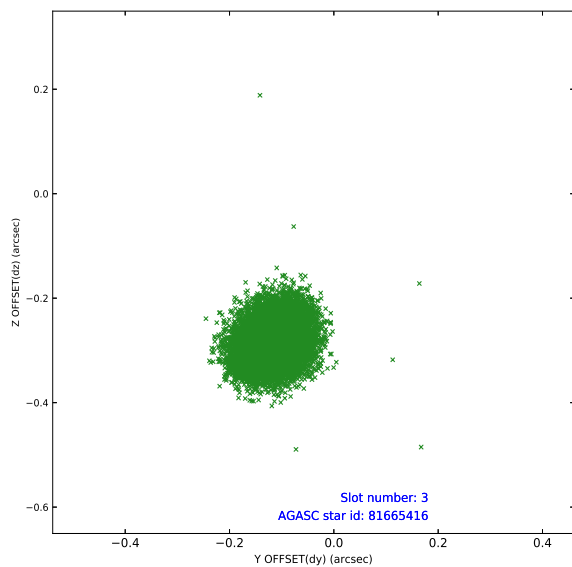


Slot Statistics

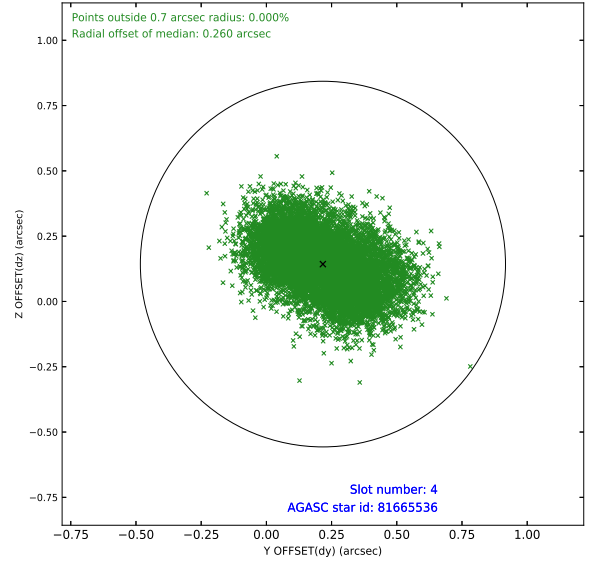
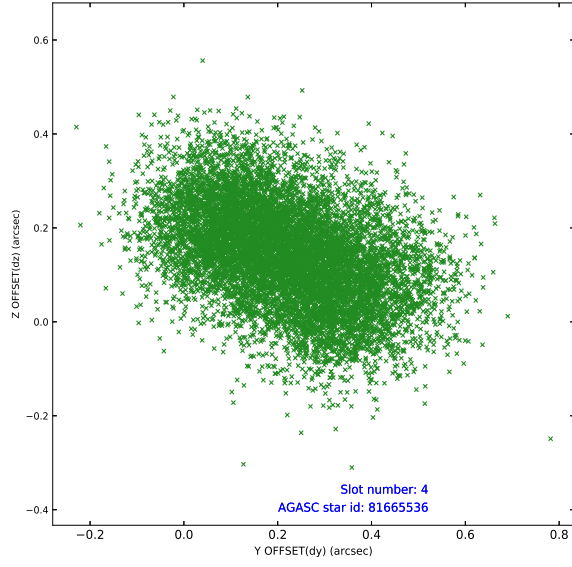
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.10	4924	1.000	-0.083	-0.080	0.010	0.016	0.000000	0.000000	-759.00	-1730
1	FID		ACIS-S-4	7.21	4924	1.000	0.152	0.061	0.009	0.015	0.000000	0.000000	2154.39	178
2	FID		ACIS-S-5	7.23	4924	1.000	-0.100	0.027	0.012	0.019	0.000000	0.000000	-1811.66	171
3	GUIDE	used	81665416	8.09	9846	1.000	-0.115	-0.286	0.057	0.091	29.170944	8.253807	-287.44	-1740
4	GUIDE	used	81665536	10.33	9834	1.000	0.217	0.143	0.193	0.304	30.263547	8.070248	1732.58	1653
5	GUIDE	used	81666448	9.83	9844	1.000	-0.161	0.064	0.112	0.184	29.785373	8.895570	-1651.82	1134
6	GUIDE	used	81668208	9.99	9841	1.000	0.060	-0.055	0.135	0.223	29.515621	7.942388	1202.01	-999
7	GUIDE	used	81668520	9.06	9843	1.000	-0.003	0.133	0.086	0.137	30.181336	8.202942	1181.61	1552

## 2.4 Star Slots

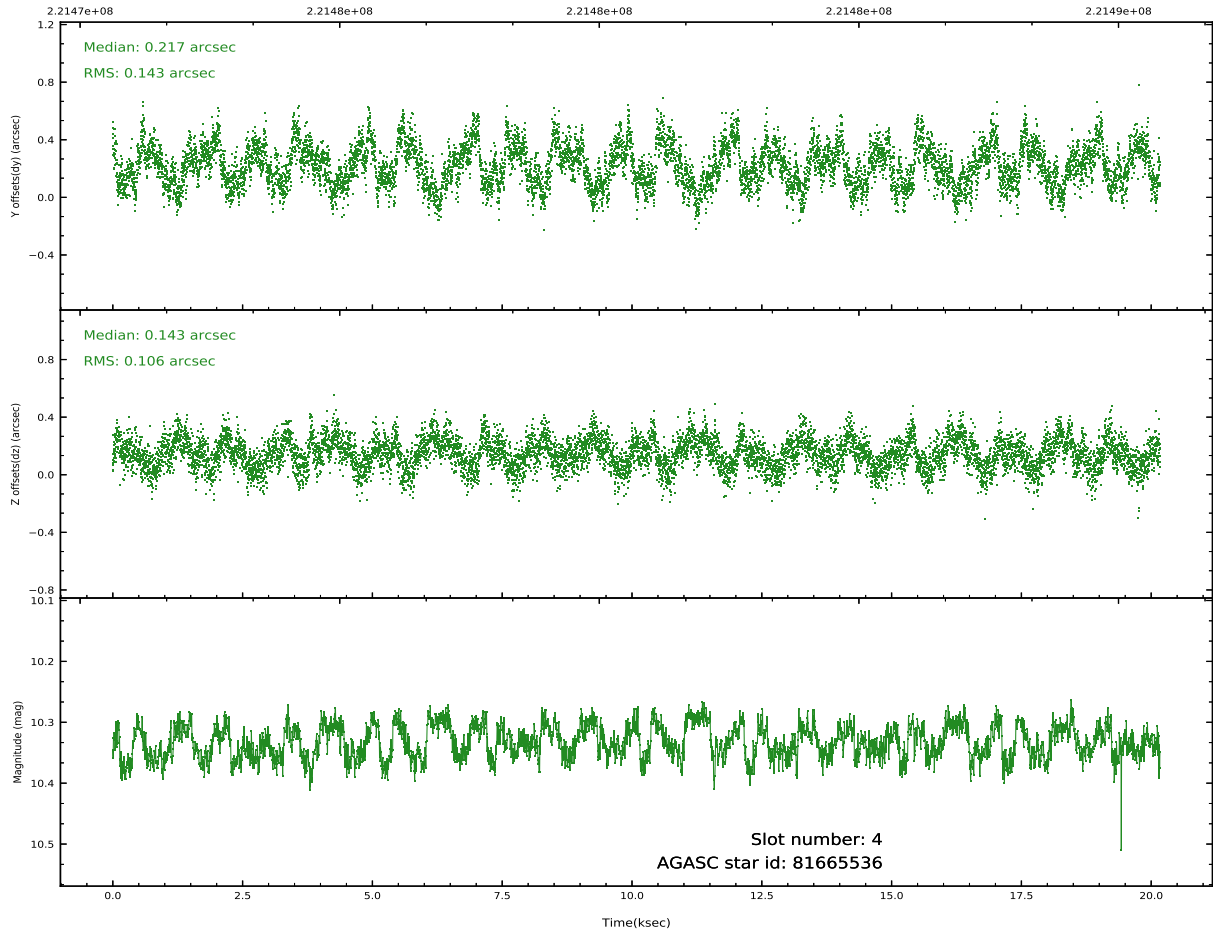
### 2.4.1 Slot 3



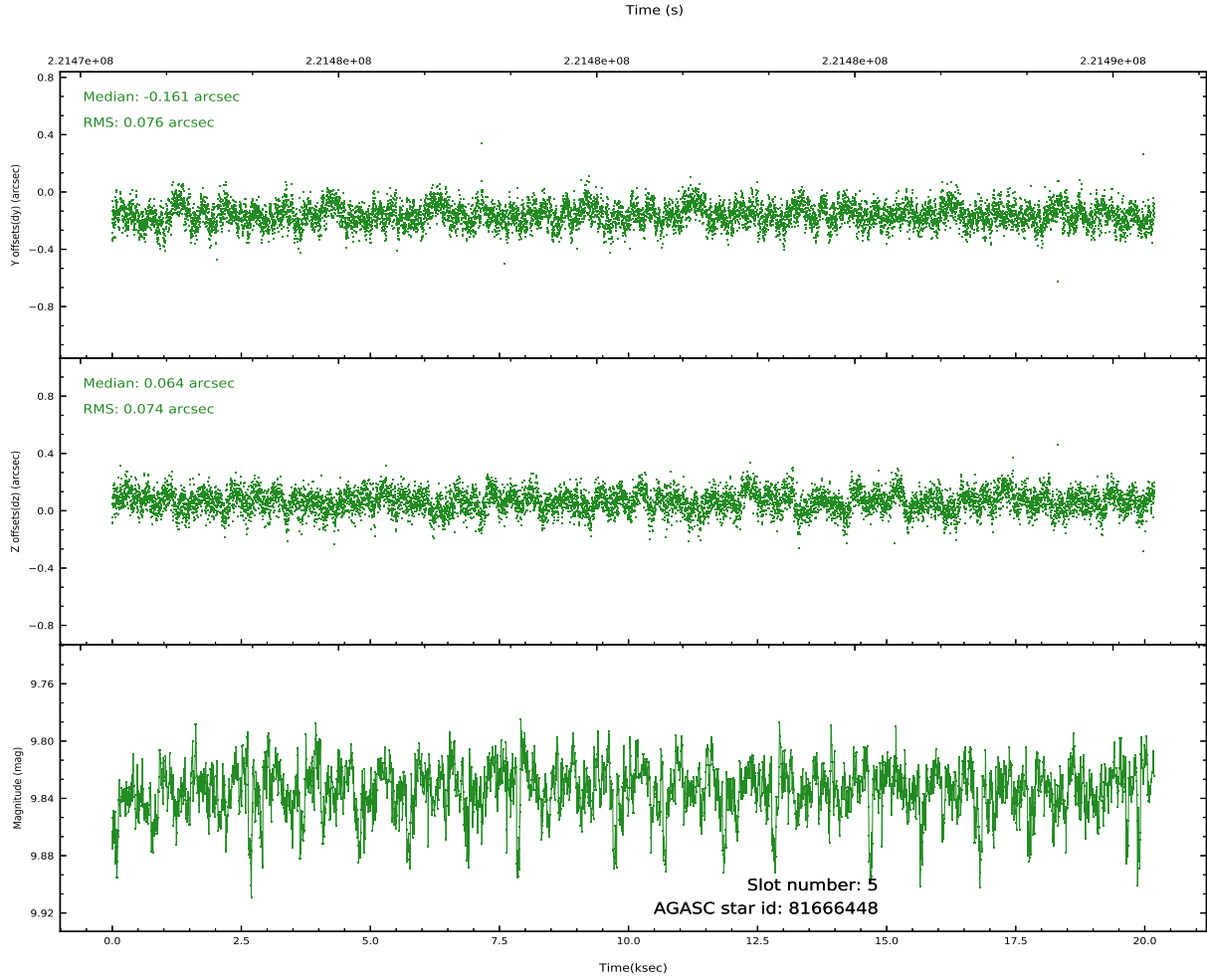
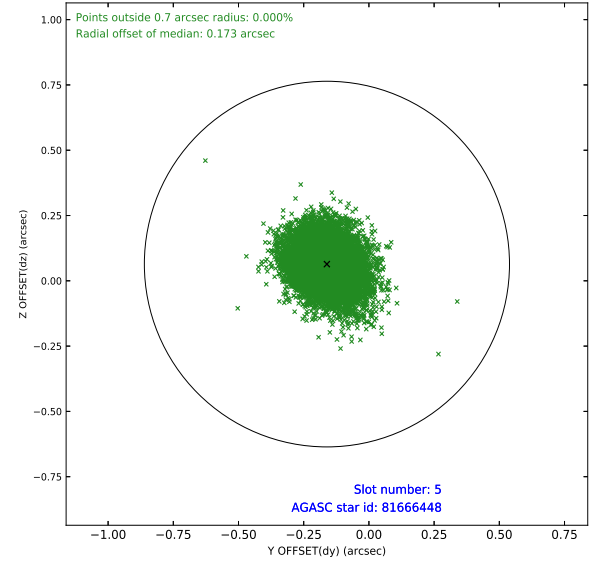
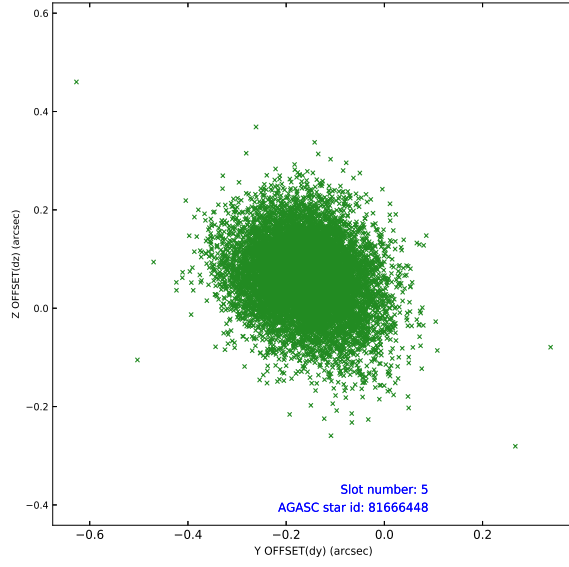
## 2.4.2 Slot 4



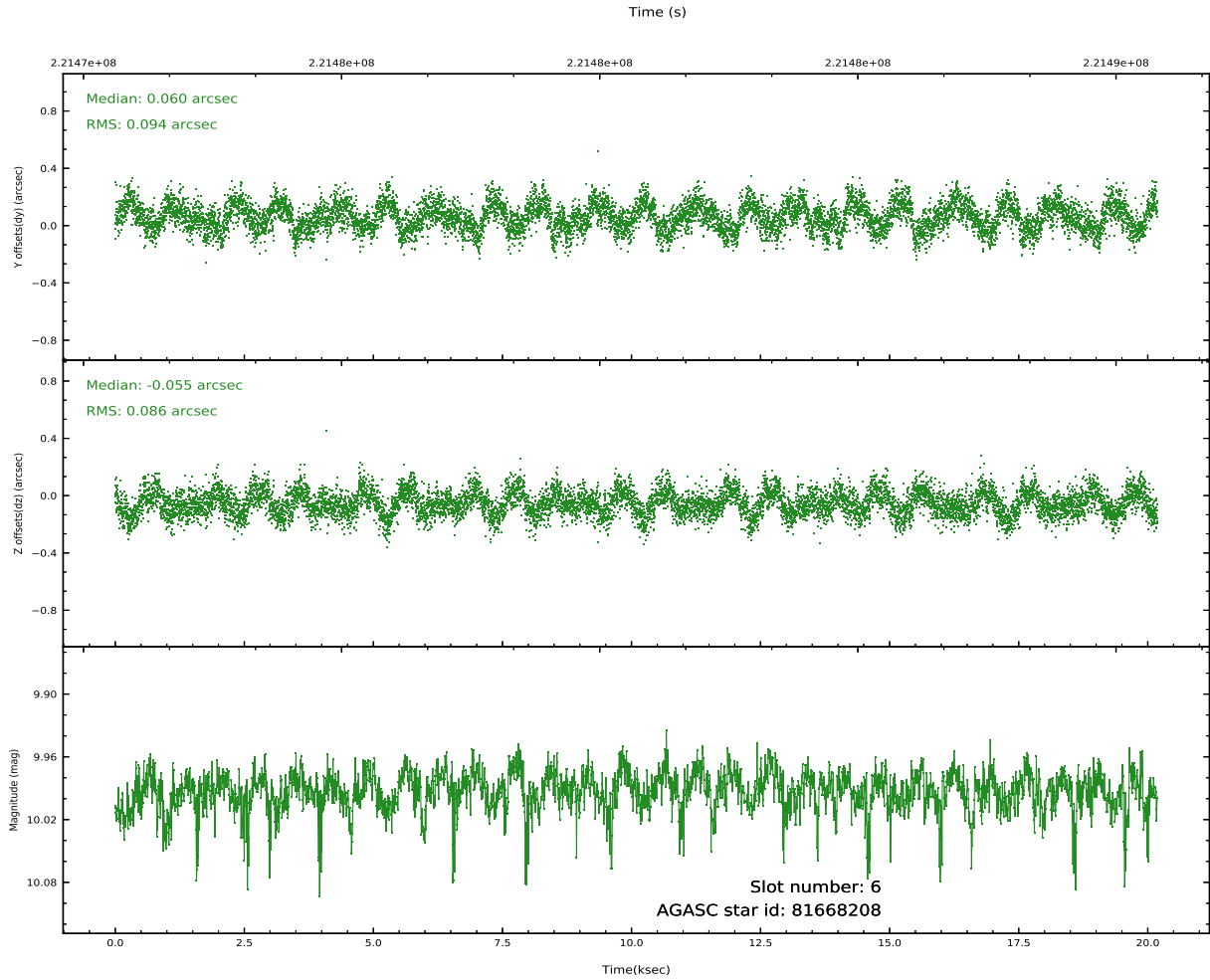
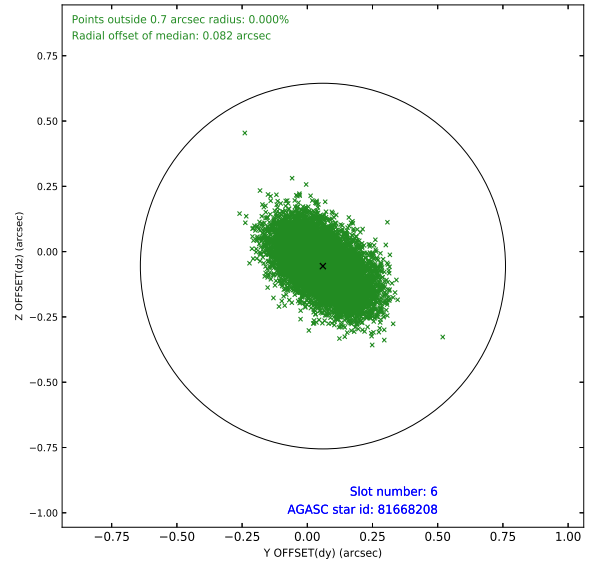
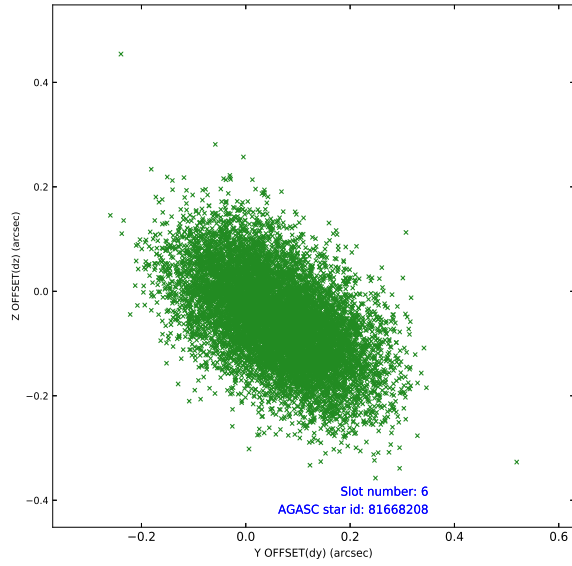
Time (s)



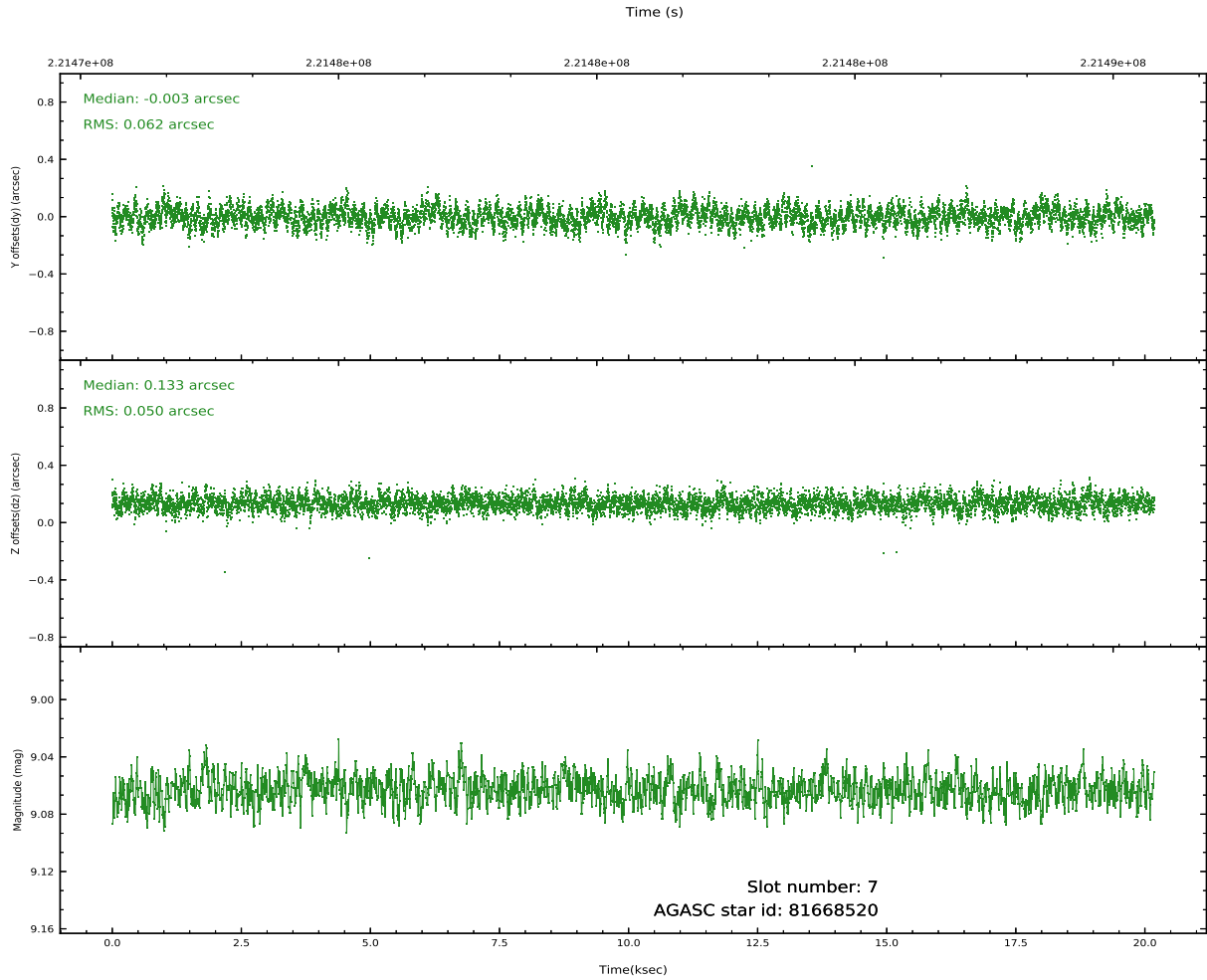
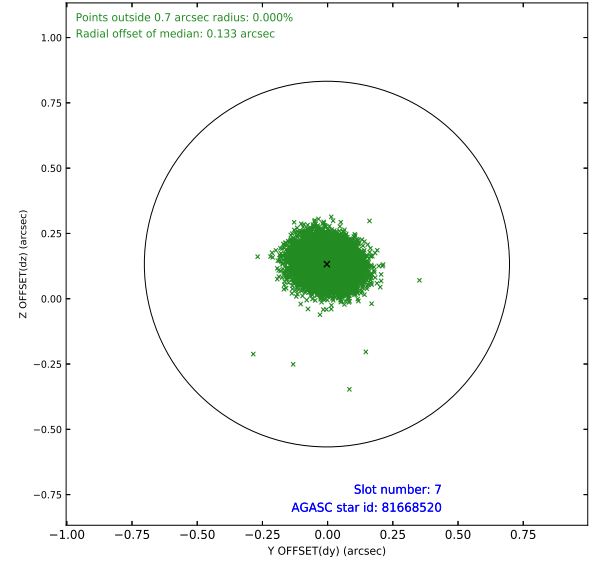
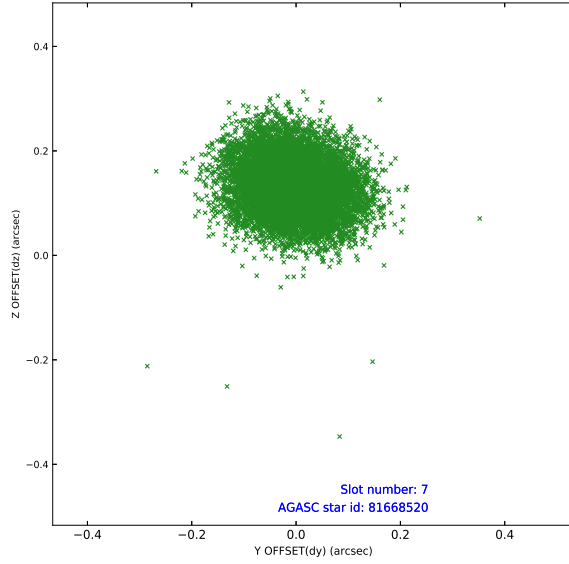
### 2.4.3 Slot 5



## 2.4.4 Slot 6

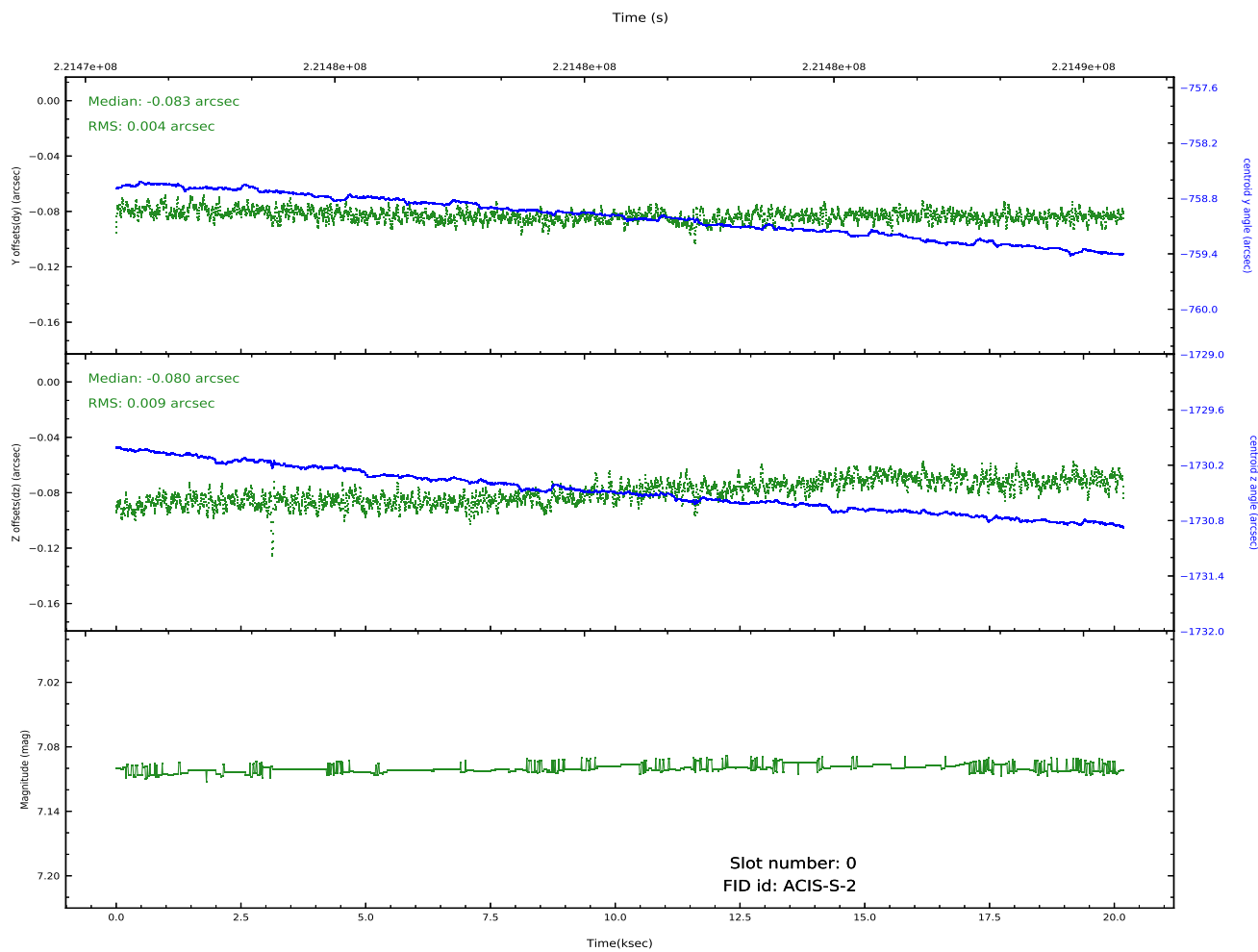
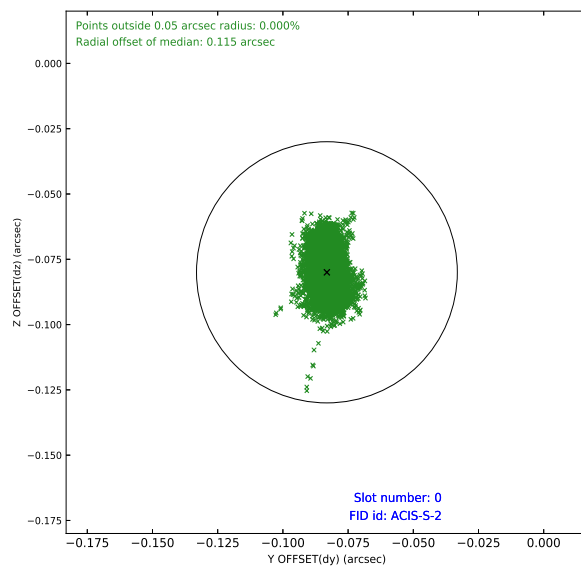
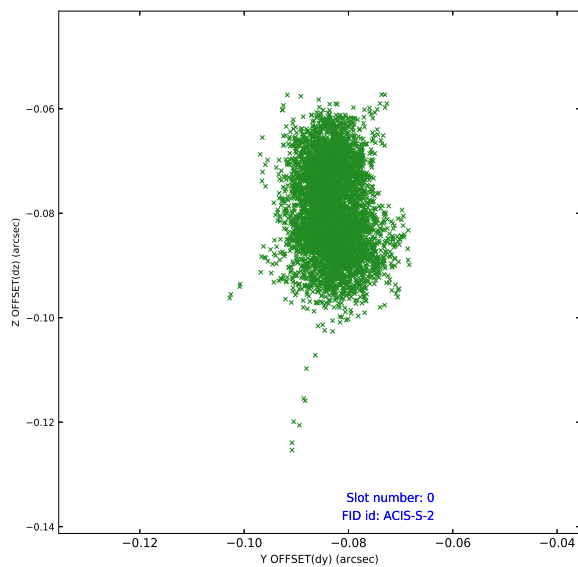


## 2.4.5 Slot 7

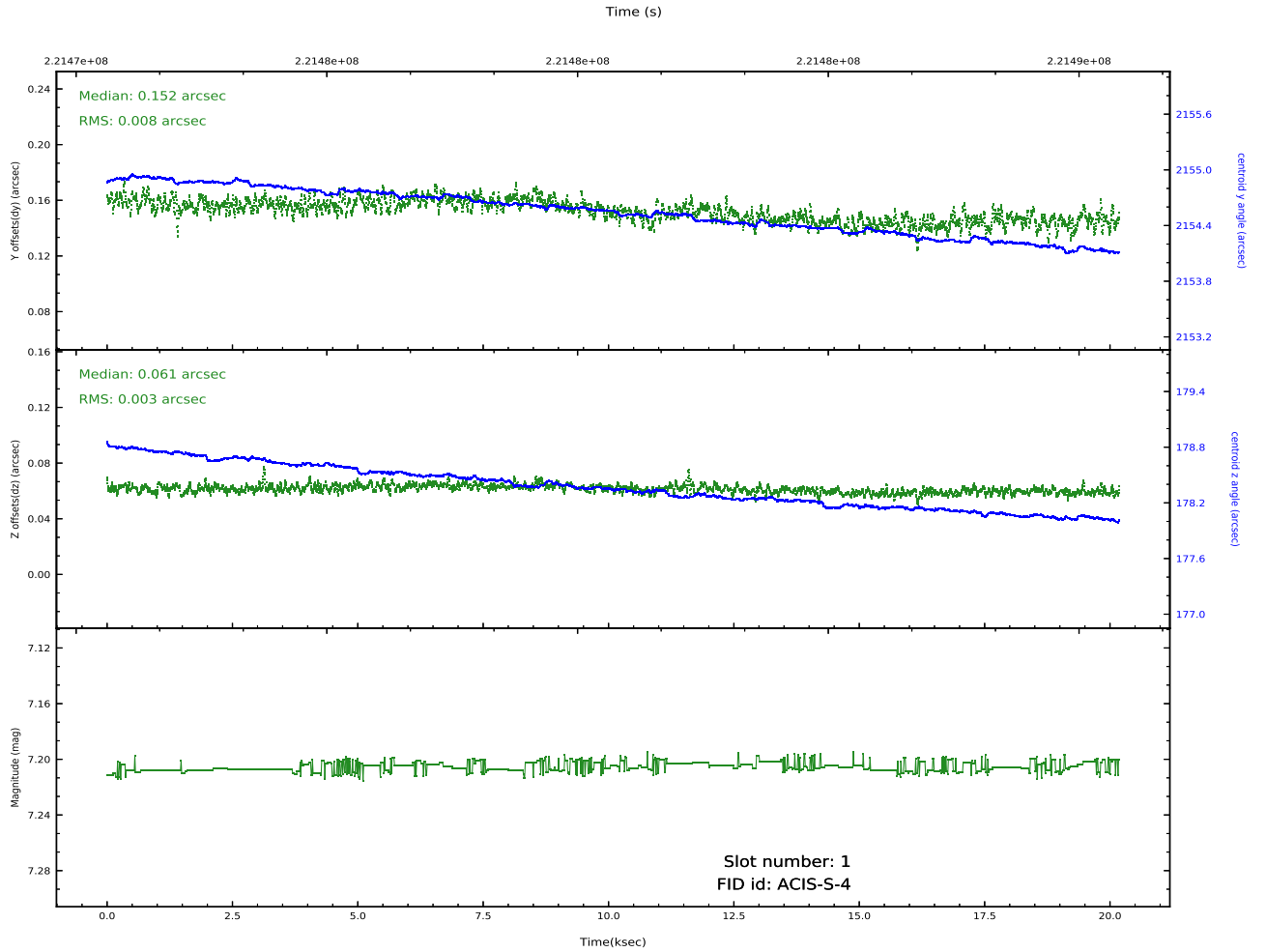
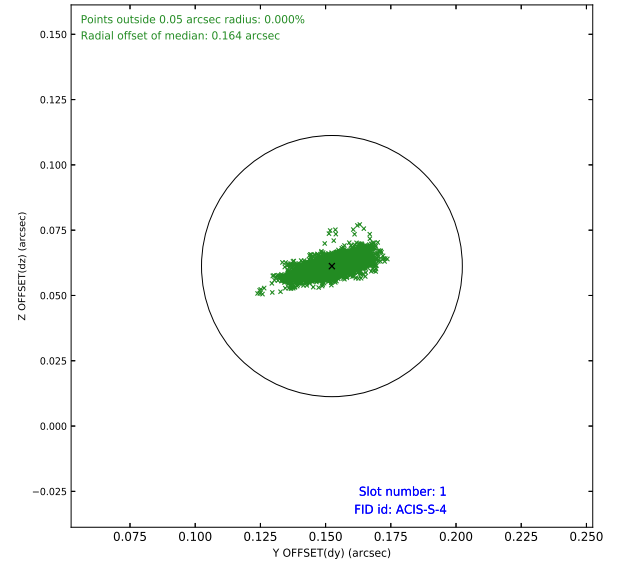
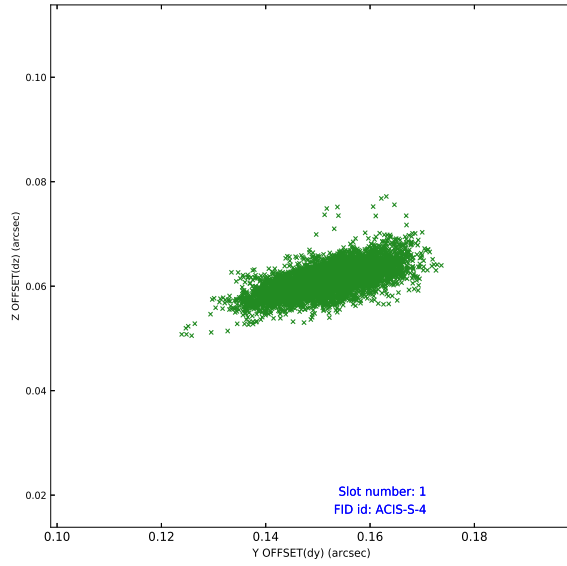


## 2.5 FID Slots

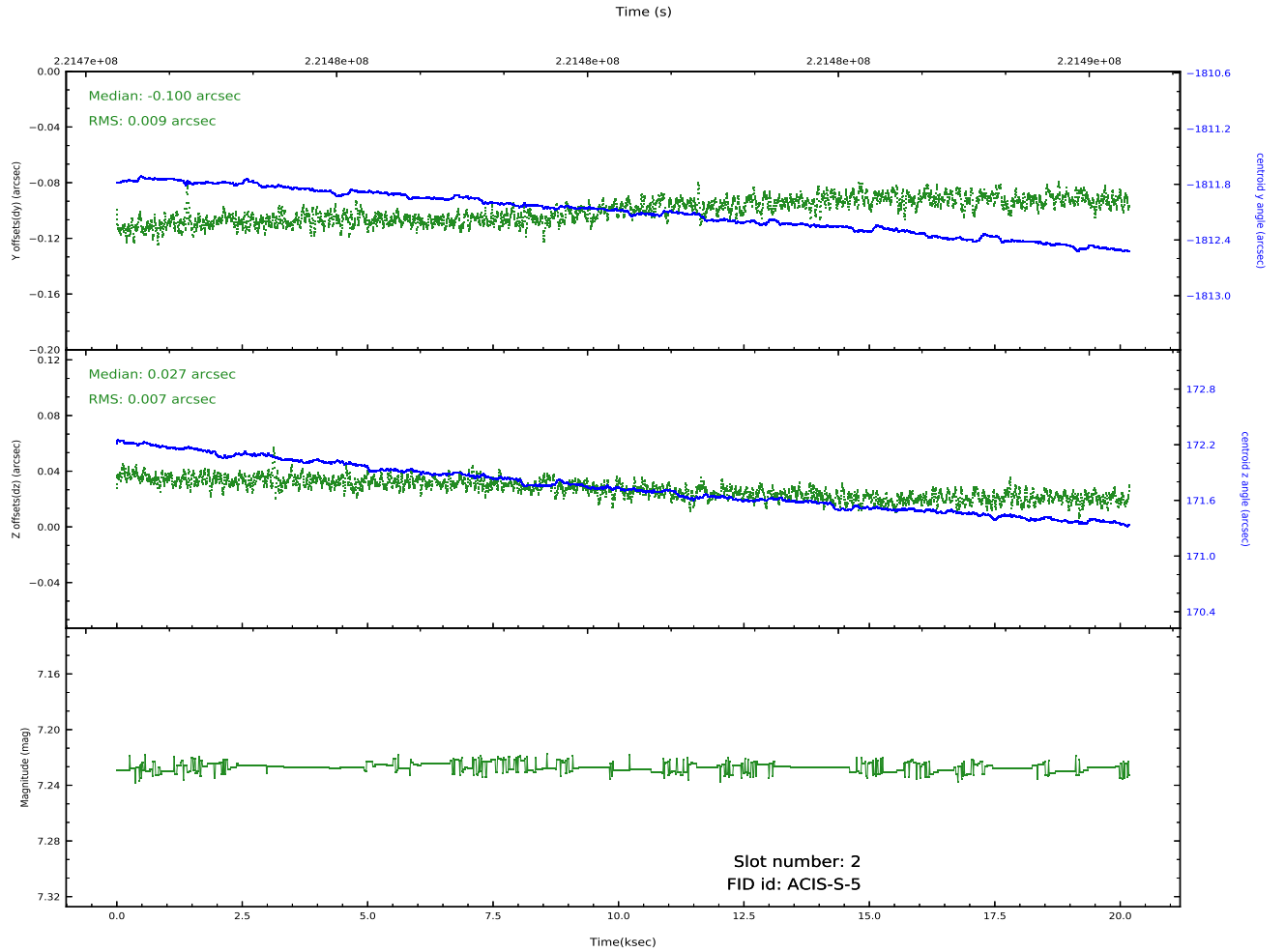
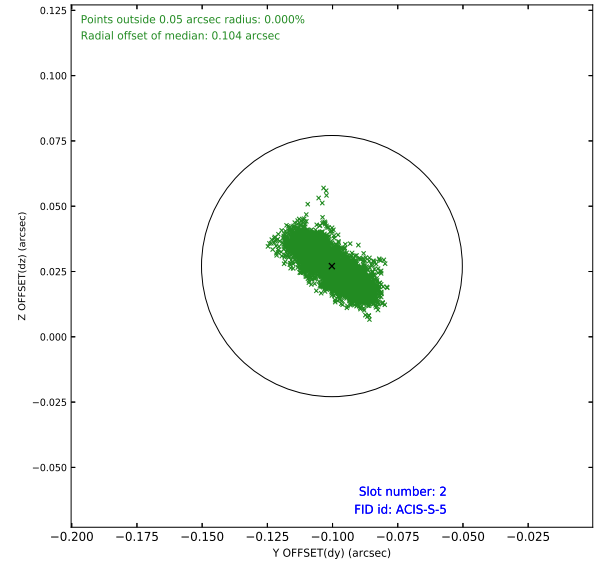
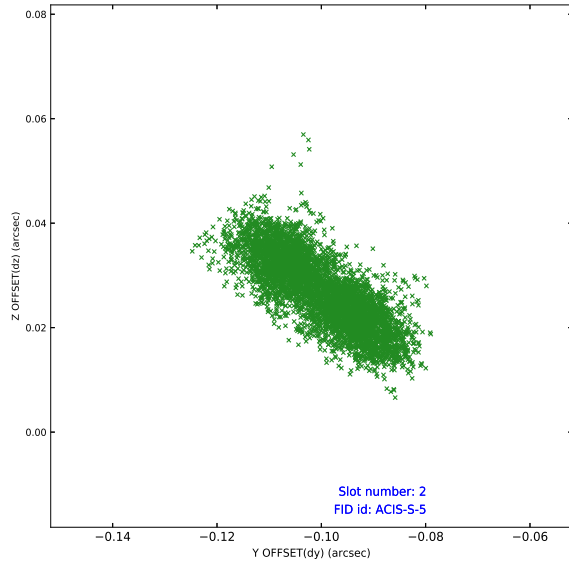
### 2.5.1 Slot 0



## 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)	2020.10.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.17789

### A.2 Comments