

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5948 - L2 Version 4  
Chandra X-Ray Center

L2 Processing Date : Oct 9 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

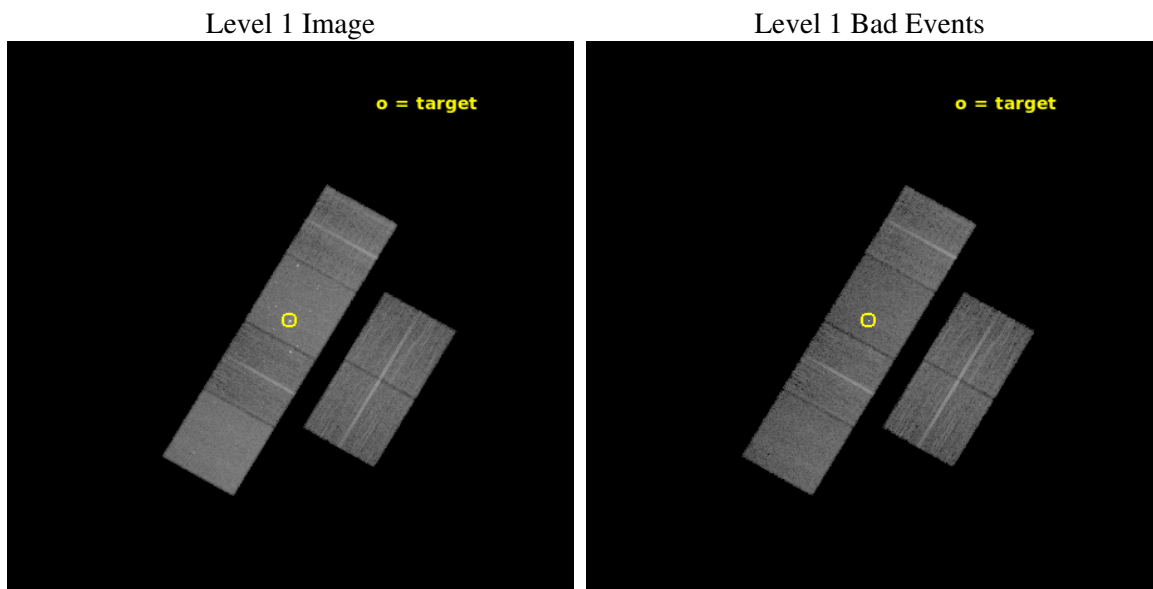
seq_num	600467	Sequence number
obs_id	5948	Observation id
title	An Unprecedented View of a Galaxy's Dynamic X-ray Source Population	&#160
observer	David Pooley	Principal investigator
object	M81	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	148.888333	Observer's specified target RA [deg]
dec_targ	69.065306	Observer's specified target Dec [deg]
ra_nom	148.887118718	Nominal RA [deg]
dec_nom	69.056249844011	Nominal Dec [deg]
roll_nom	300.14654281374	Nominal Roll [deg]
revision	4	Processing version of data
ontime	12182.399954617	Sum of GTIs [s]
livetime	12028.139071031	Livetime [s]
ontime2	12182.399954617	Sum of GTIs [s]
ontime3	12182.399954617	Sum of GTIs [s]
ontime5	12182.399954617	Sum of GTIs [s]
ontime6	12182.399954617	Sum of GTIs [s]
ontime7	12182.399954617	Sum of GTIs [s]
ontime8	12182.399954617	Sum of GTIs [s]
l2events	163651	Number of level 2 events



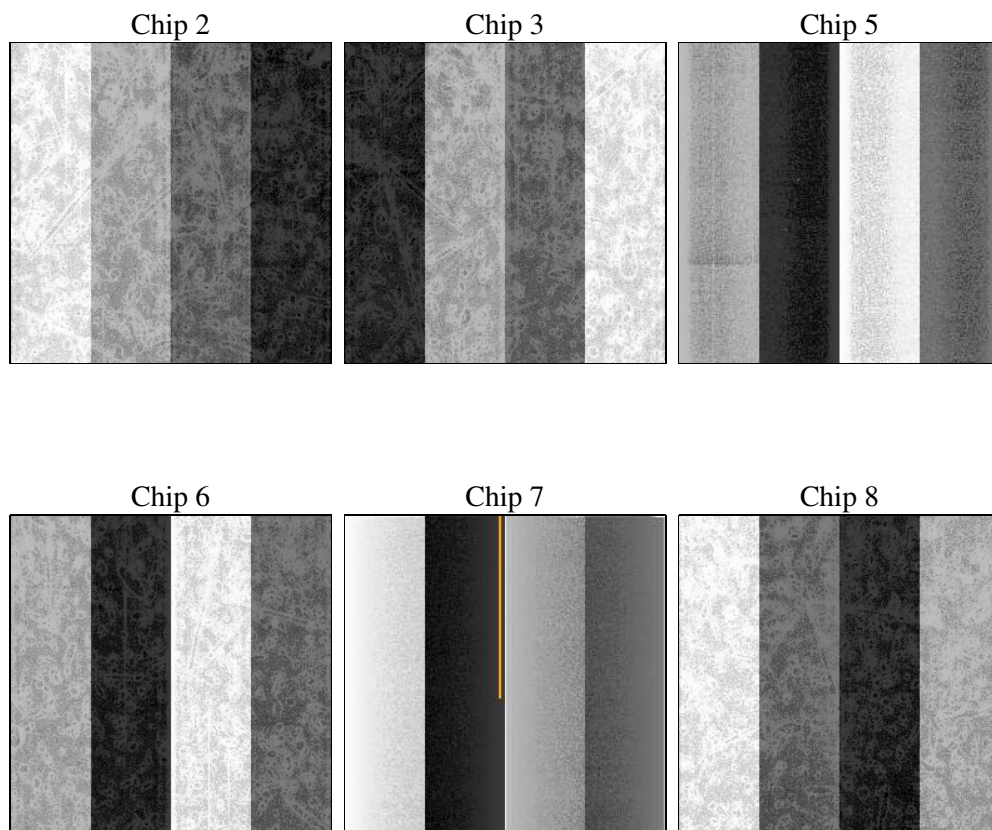
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	12000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	12182.399954617	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime2	12182.399954617	Sum of GTIs [s]
date	2020-10-09T07:18:15	Date and time of file creation	ontime3	12182.399954617	Sum of GTIs [s]
revision	4	Processing version of data	ontime5	12182.399954617	Sum of GTIs [s]
			ontime6	12182.399954617	Sum of GTIs [s]
			ontime7	12182.399954617	Sum of GTIs [s]
			ontime8	12182.399954617	Sum of GTIs [s]
			l1events	749595	Number of level 1 events

### 2.1.4 Events

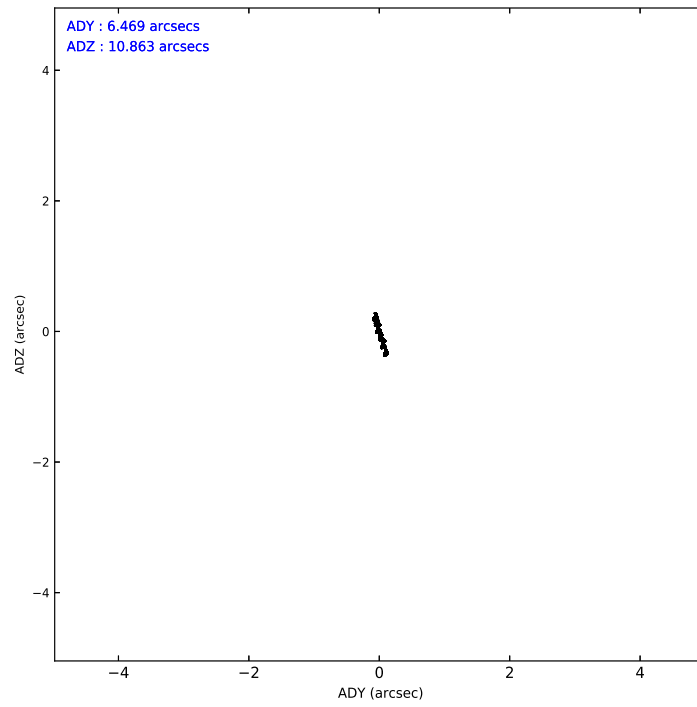
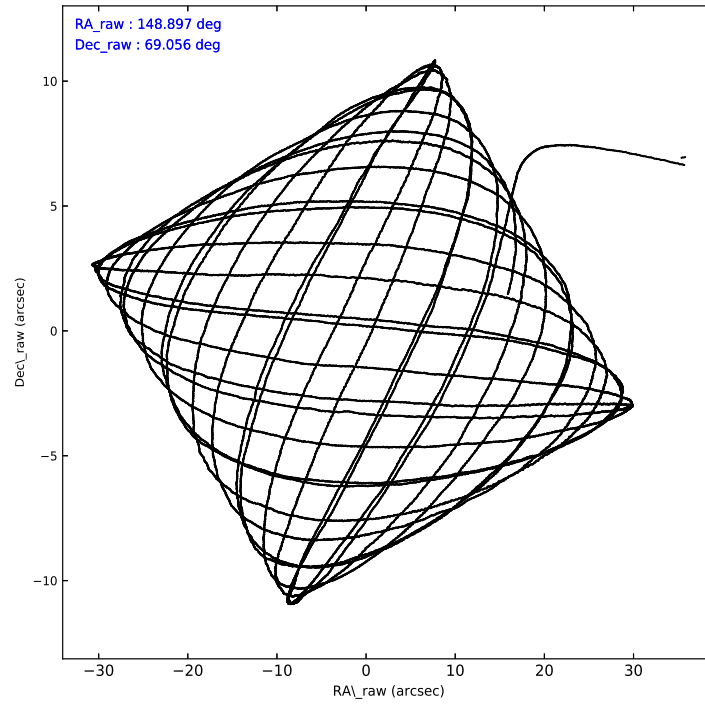
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	103250	103719	152667	107154	153566	129239	grade 0 events	5434	5219	4629	6472	7592	8951
rejected events	92039	92659	90396	93965	91083	103893		5%	5%	3%	6%	4%	6%
rejected %	89%	89%	59%	87%	59%	80%	grade 1 events	60	65	186	74	240	82
								0%	0%	0%	0%	0%	0%
							grade 2 events	2468	2250	20744	2704	13811	6138
								2%	2%	13%	2%	8%	4%
							grade 3 events	1193	1171	2672	1273	6103	2958
								1%	1%	1%	1%	3%	2%
							grade 4 events	1113	1209	2533	1223	6046	2767
								1%	1%	1%	1%	3%	2%
							grade 5 events	3996	4709	11284	4775	14087	6505
								3%	4%	7%	4%	9%	5%
							grade 6 events	1991	2138	37494	2504	33833	6973
								1%	2%	24%	2%	22%	5%
							grade 7 events	86995	86958	73125	88129	71854	94865
								84%	83%	47%	82%	46%	73%

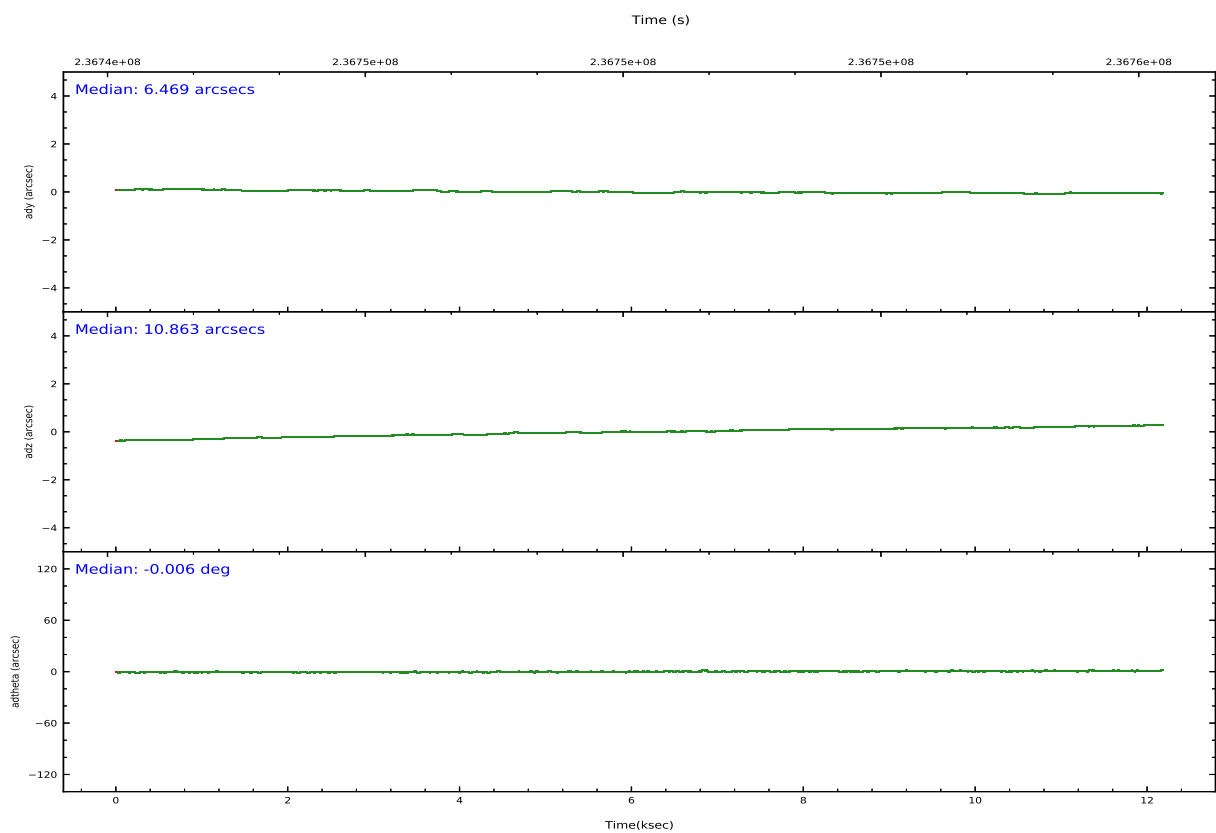
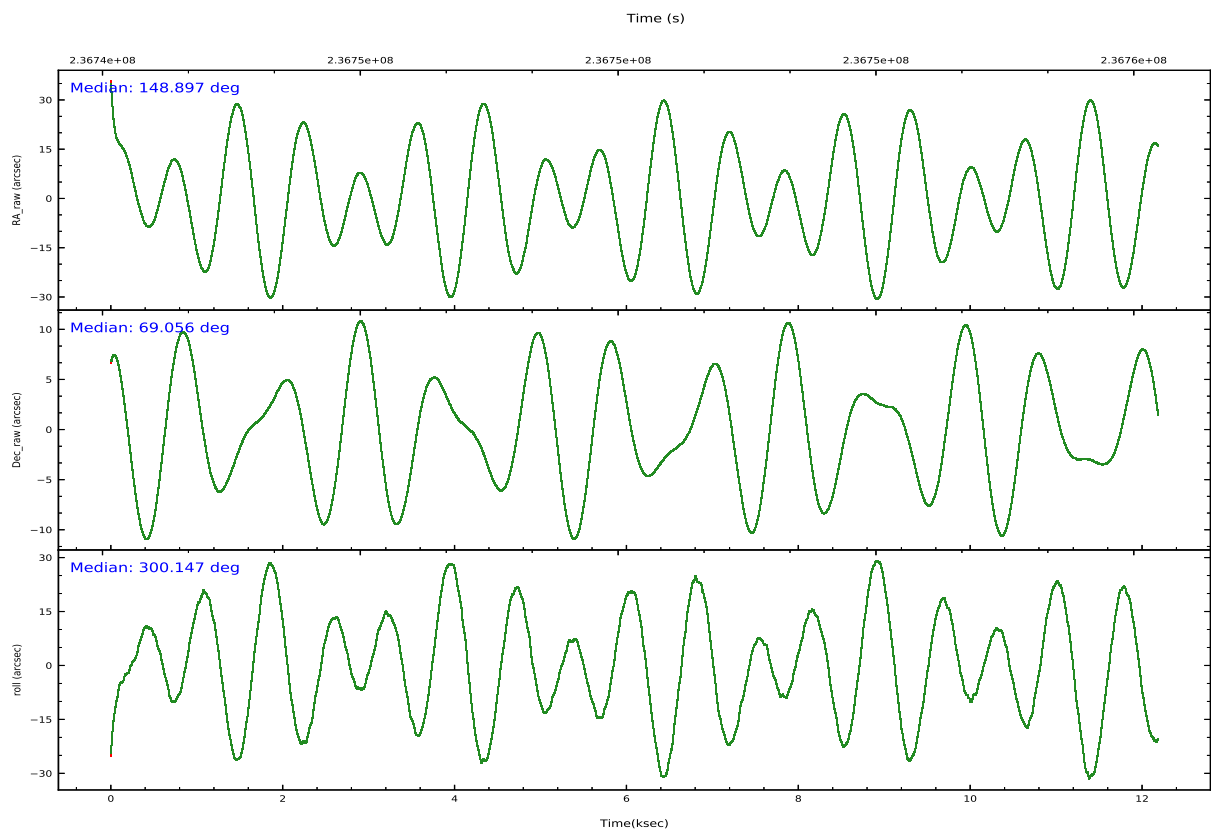


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-235678	ACIS-235678	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	148.831001	148.887118718	Subarray requested	NONE	NONE
[deg] Pointing Dec	69.069437	69.05624984401101	Alternating exposures requested	N	N
[deg] Pointing Roll	300.053551	300.14654281374	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	236743284.184000	236741677.80512			
Observation start date	2005-07-03T02:00:20	2005-07-03T01:34:37			
[s] Observation end time (MET)	236755284.184000	236756389.11829			
Observation end date	2005-07-03T05:20:20	2005-07-03T05:39:49			
Read mode	TIMED	TIMED			

## 2.3 Aspect



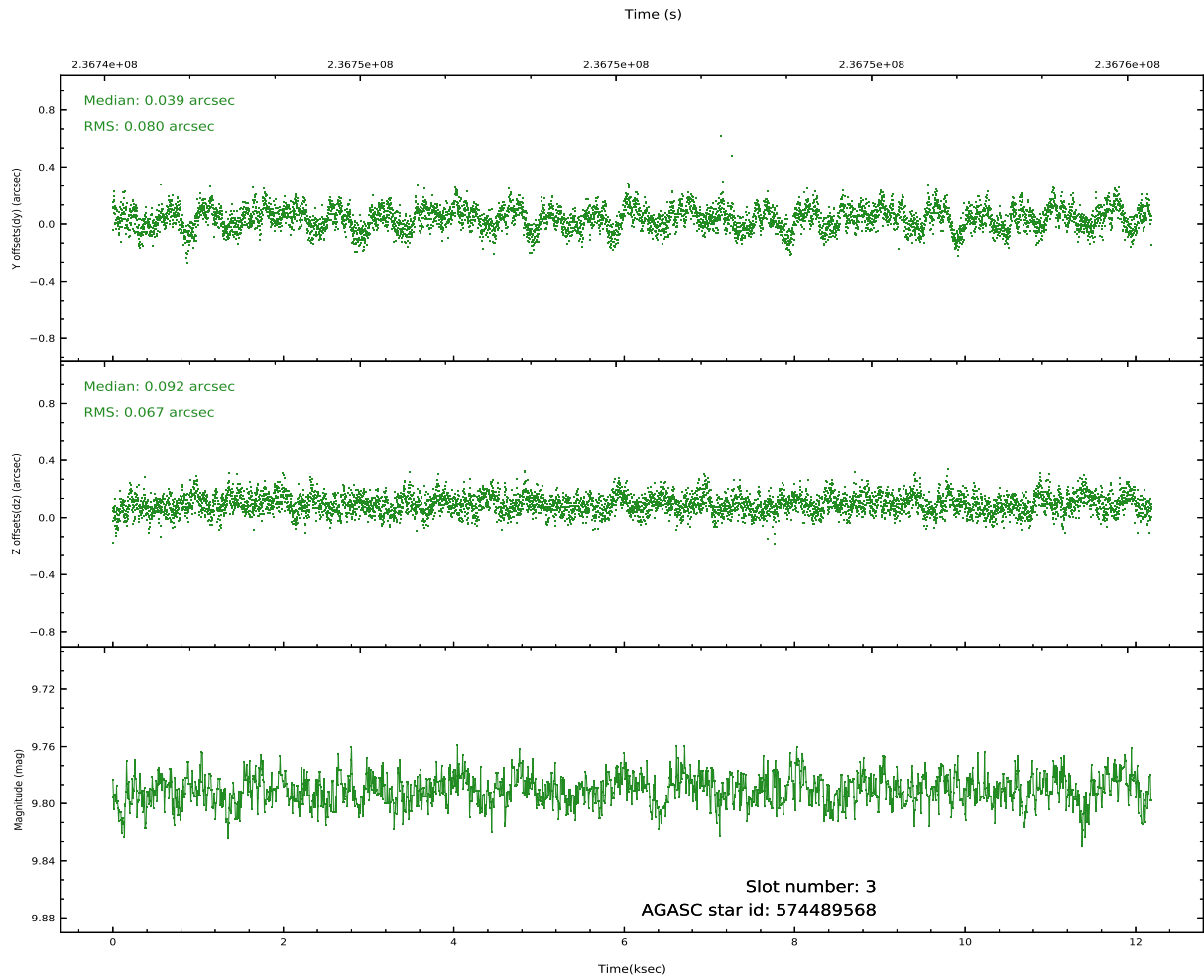
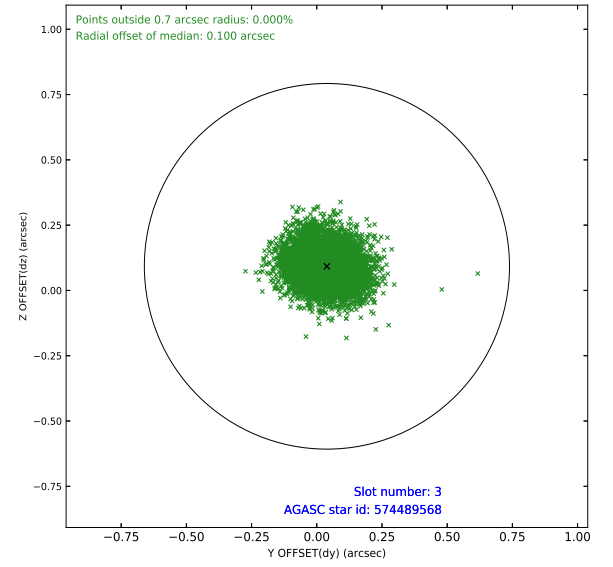
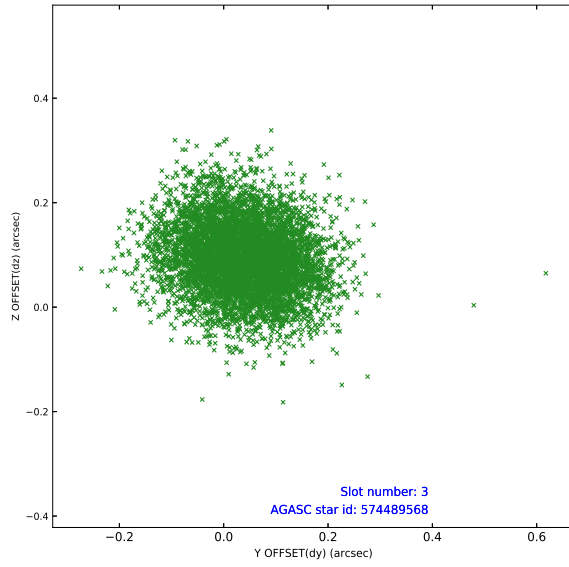


Slot Statistics

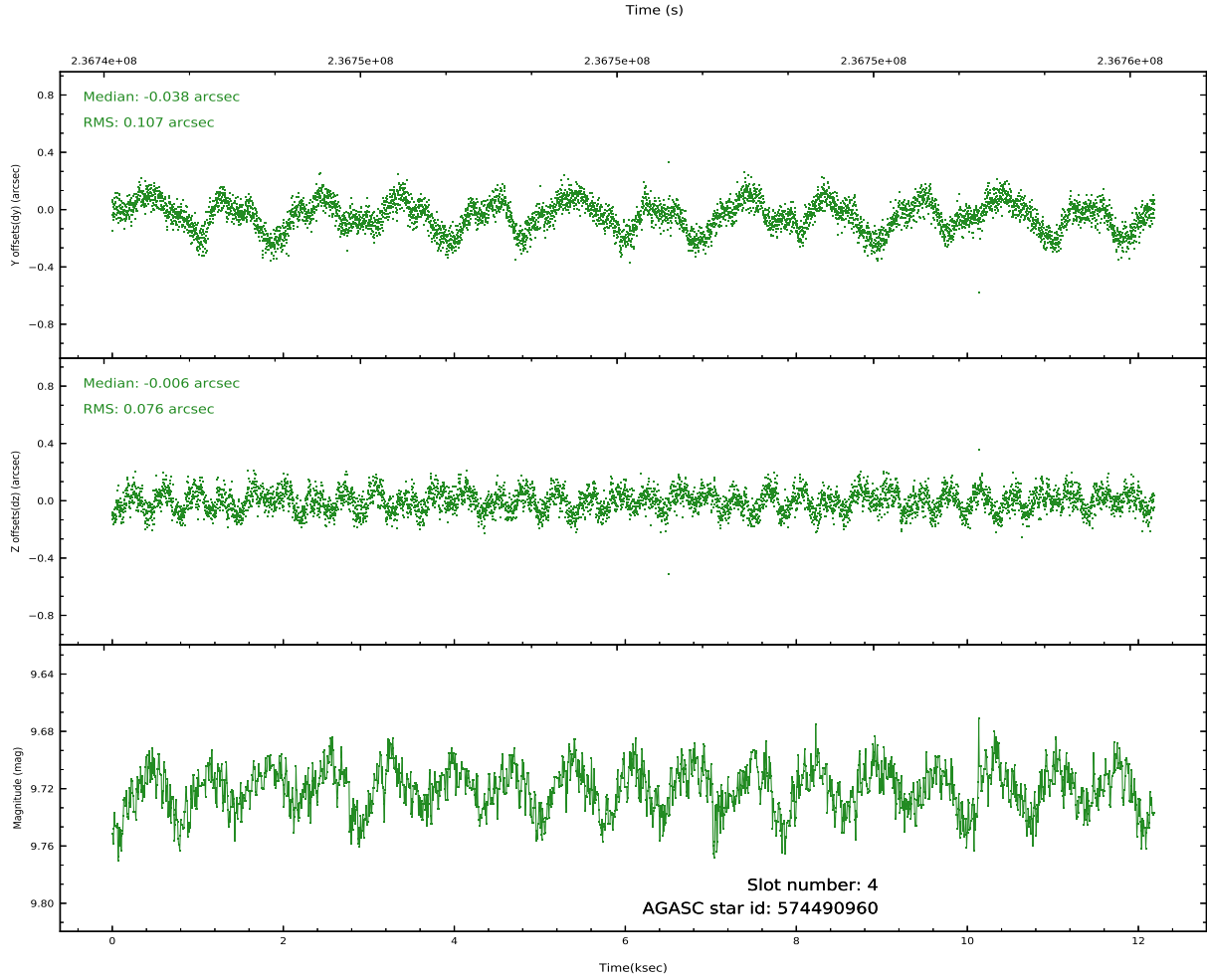
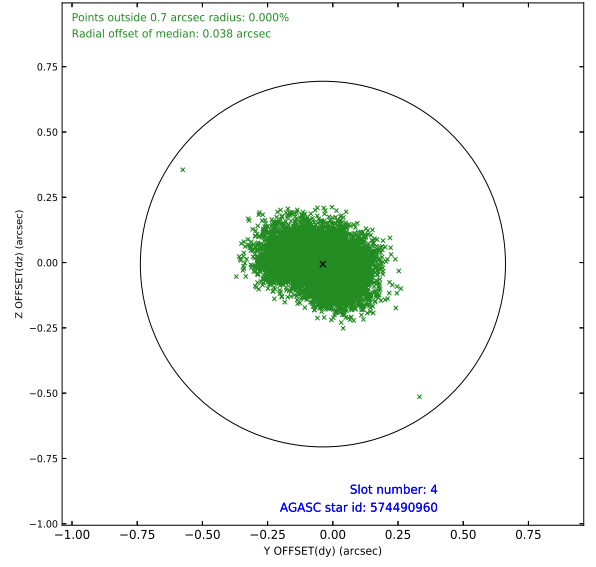
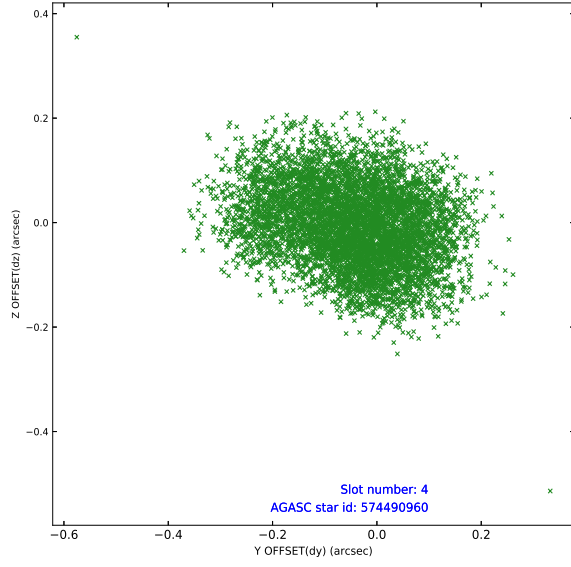
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.18	2972	1.000	-0.008	-0.097	0.011	0.019	0.000000	0.000000	936.83	-1727
1	FID		ACIS-S-4	7.20	2973	1.000	0.106	0.076	0.008	0.013	0.000000	0.000000	2154.55	176
2	FID		ACIS-S-5	7.23	2971	1.000	-0.125	0.034	0.007	0.011	0.000000	0.000000	-1811.66	170
3	GUIDE	used	574489568	9.79	5942	1.000	0.039	0.092	0.112	0.178	147.223974	69.438157	-2189.01	-1080
4	GUIDE	used	574490960	9.72	5936	1.000	-0.038	-0.006	0.142	0.223	148.185918	69.658768	-2244.40	365
5	GUIDE	used	574491280	9.35	5945	1.000	-0.015	-0.049	0.084	0.136	148.611567	69.450135	-1325.57	446
6	GUIDE	used	574497600	10.45	5937	1.000	0.065	-0.069	0.179	0.311	147.824120	68.451903	1248.56	-2259
7	GUIDE	used	574491184	9.06	5942	1.000	-0.052	0.029	0.075	0.123	148.582453	69.768699	-2334.11	993

## 2.4 Star Slots

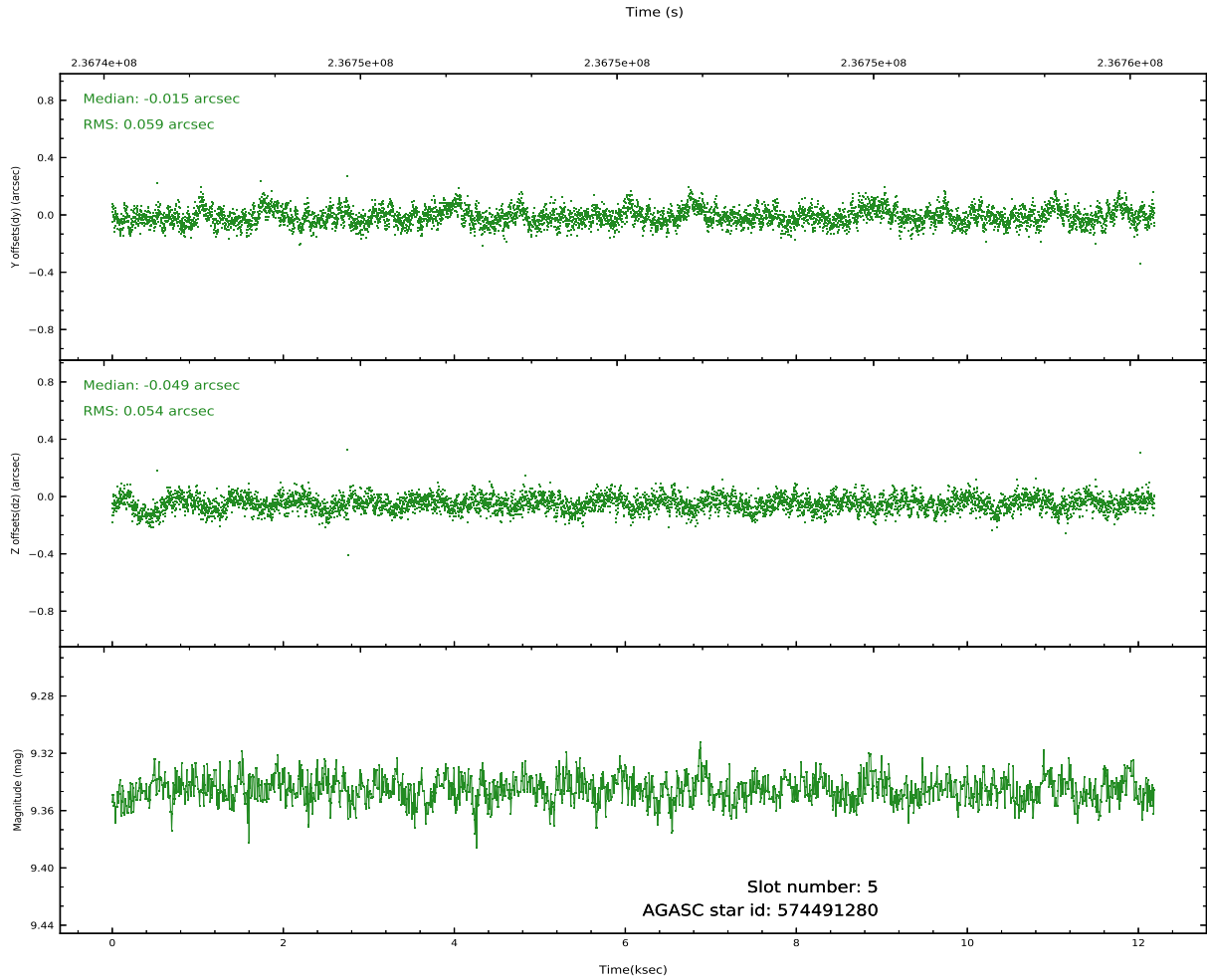
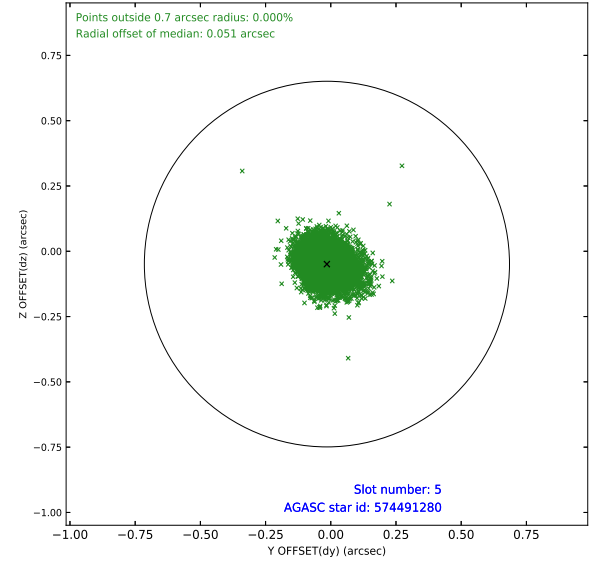
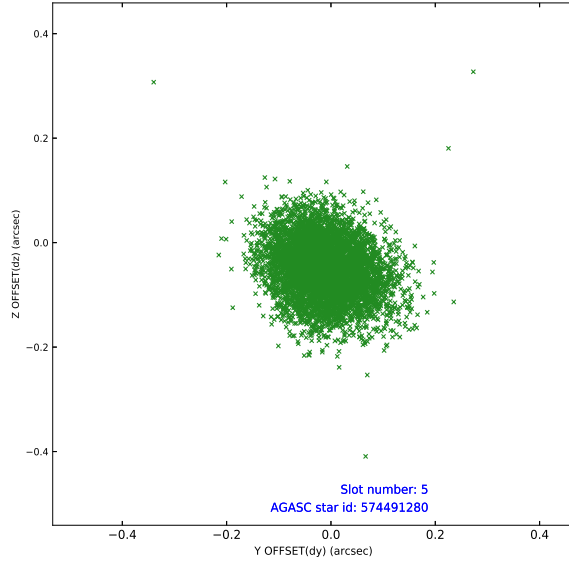
### 2.4.1 Slot 3



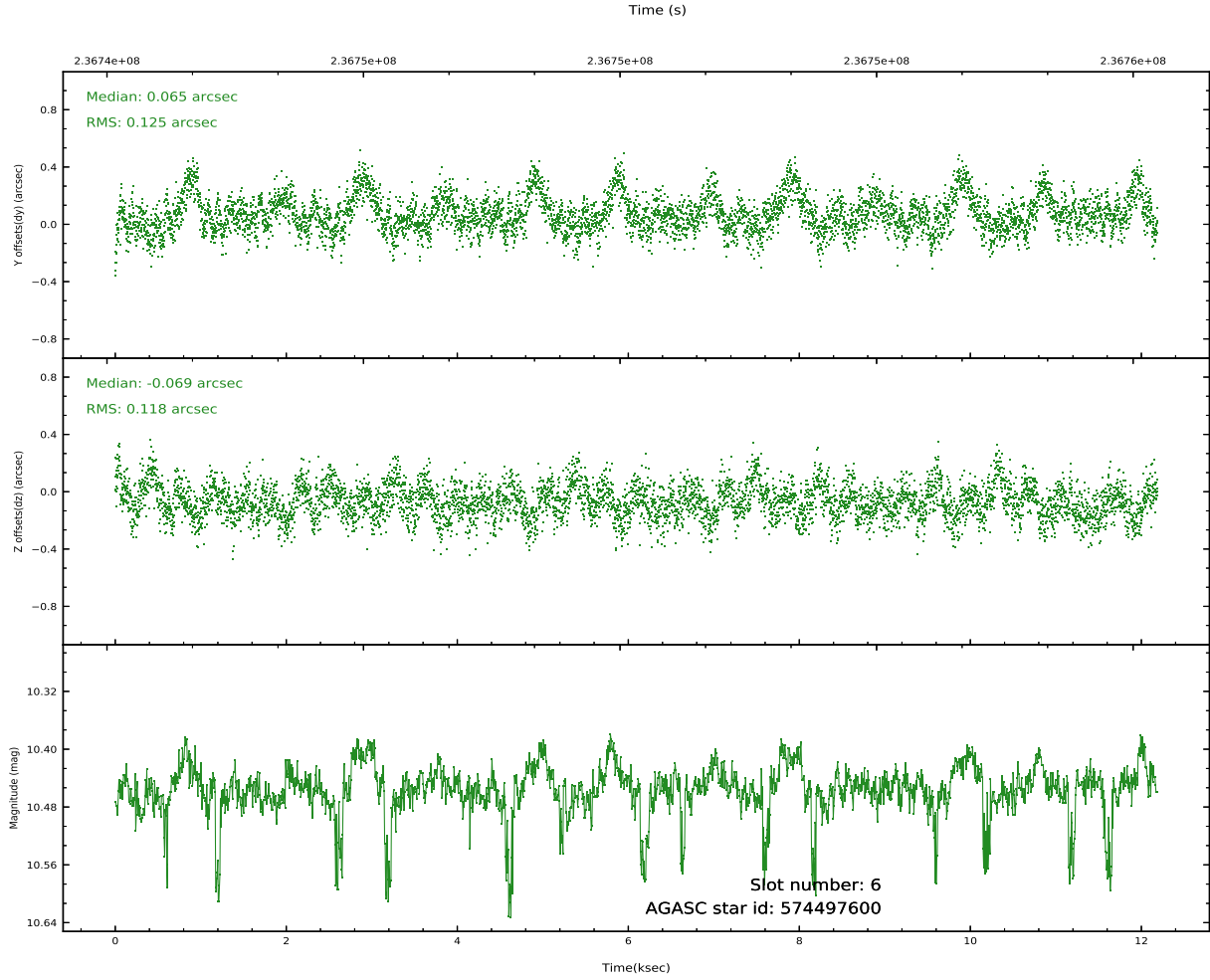
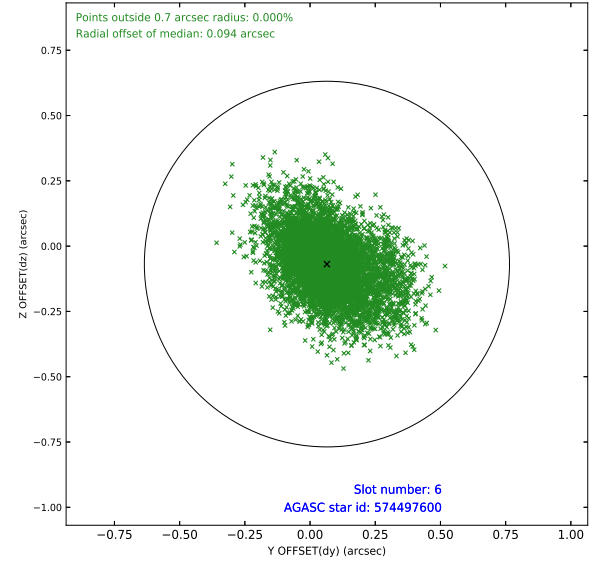
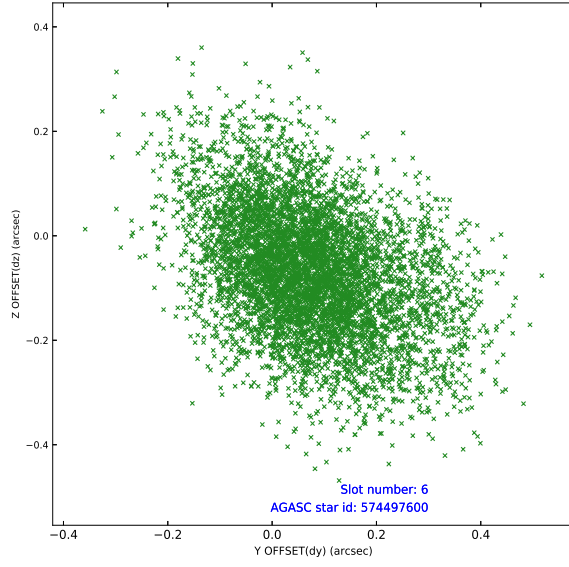
## 2.4.2 Slot 4



### 2.4.3 Slot 5

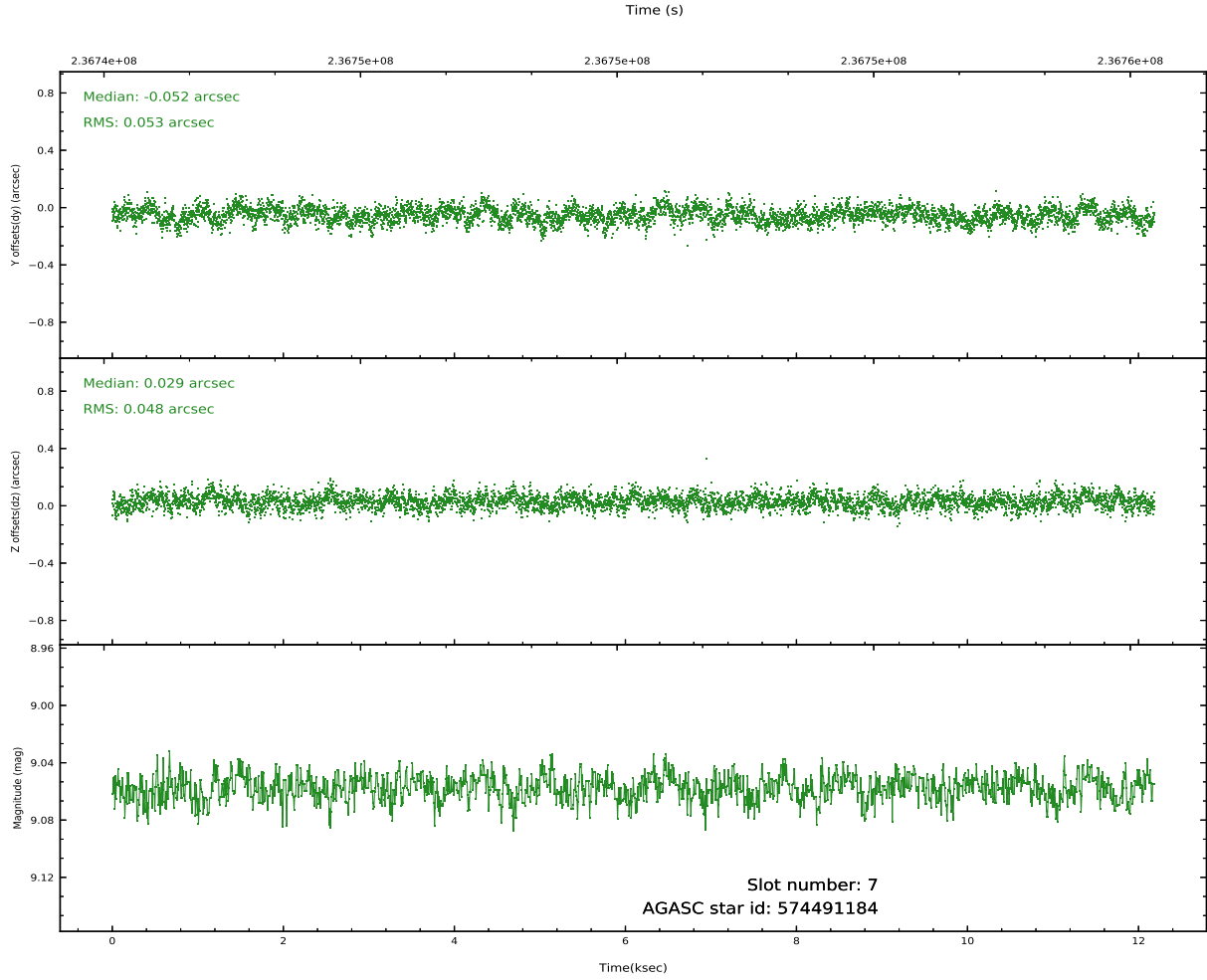
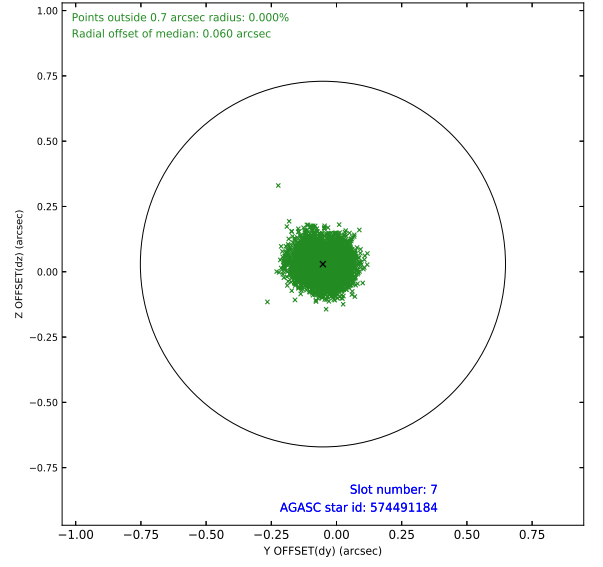
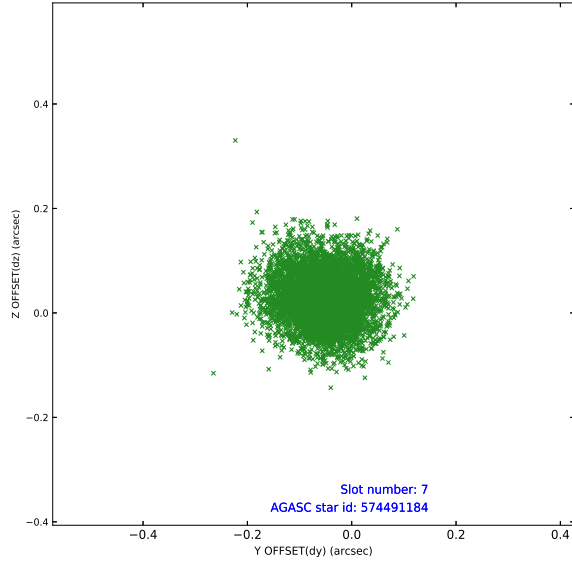


## 2.4.4 Slot 6



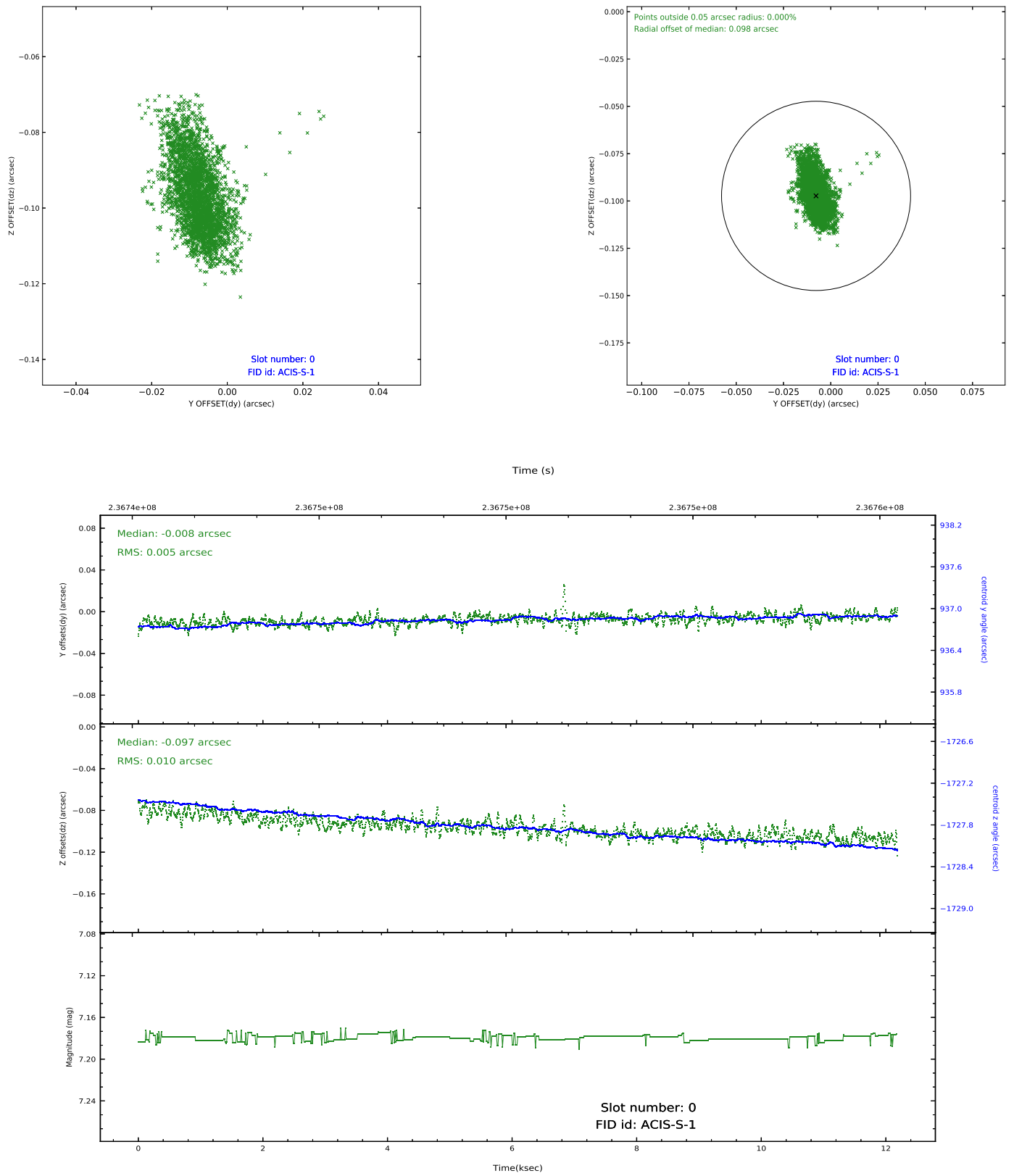


## 2.4.5 Slot 7

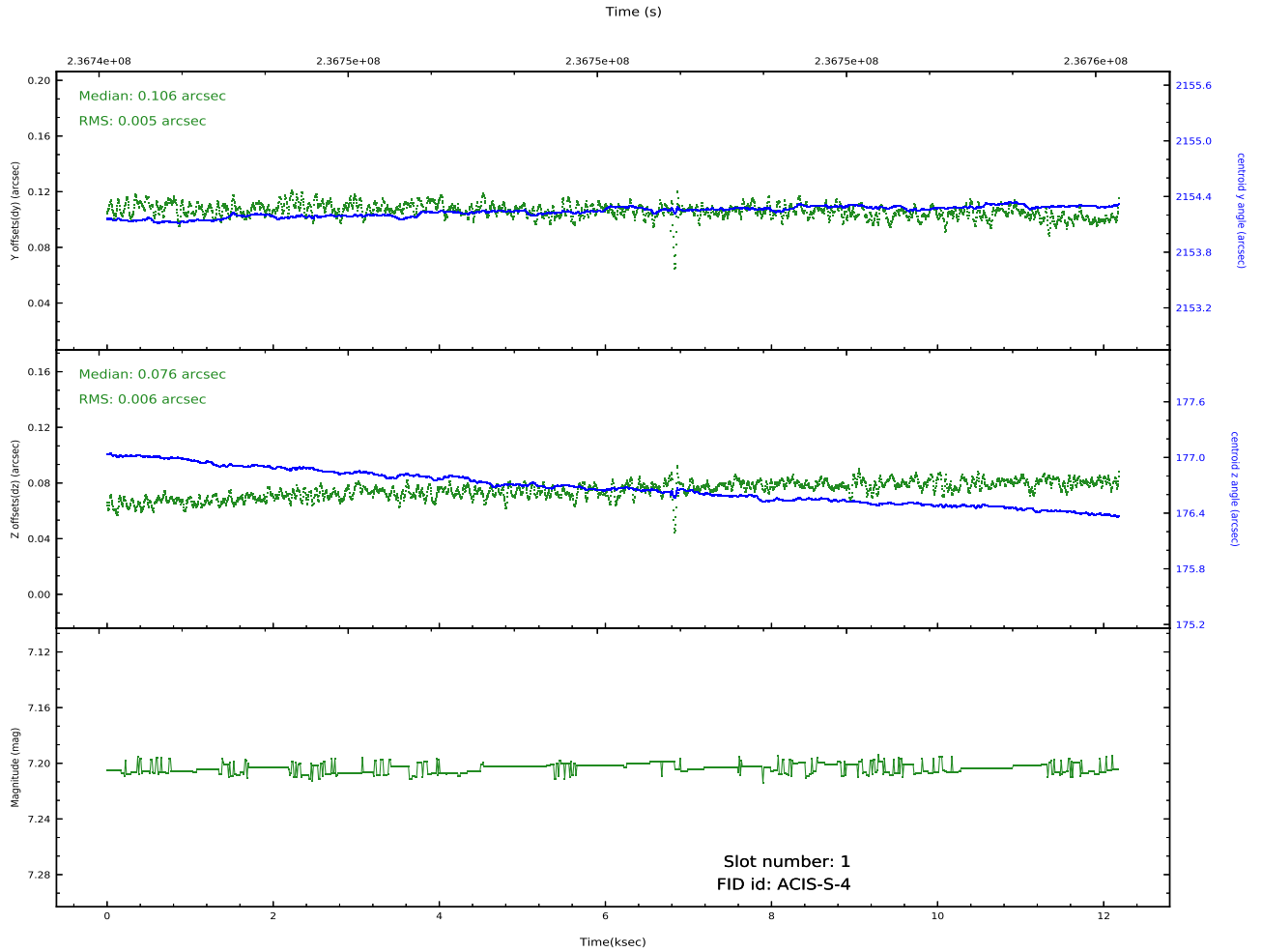
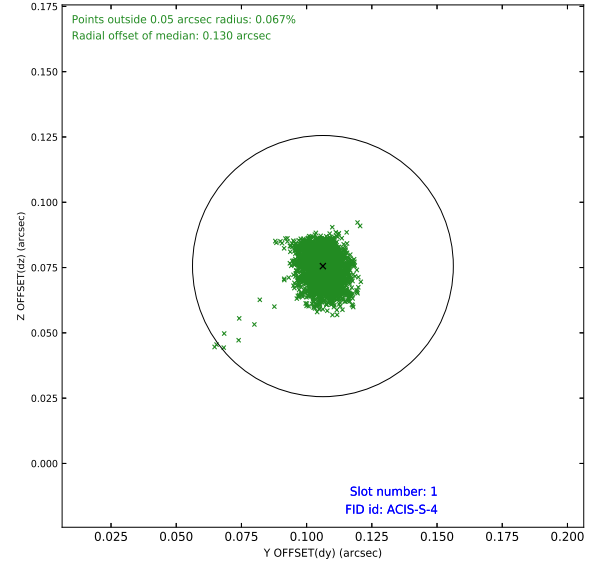
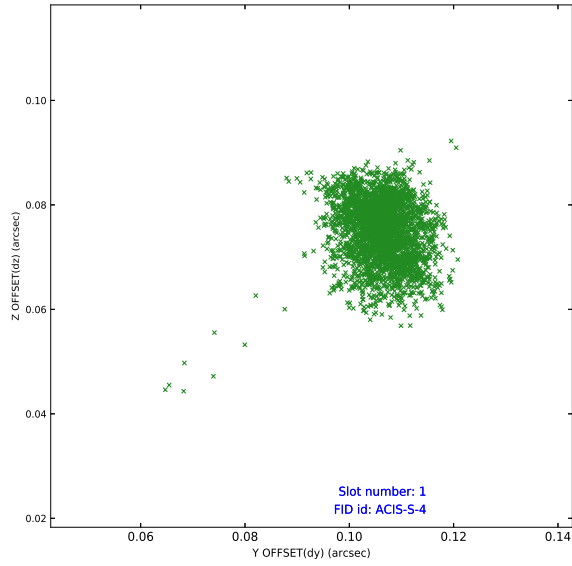


## 2.5 FID Slots

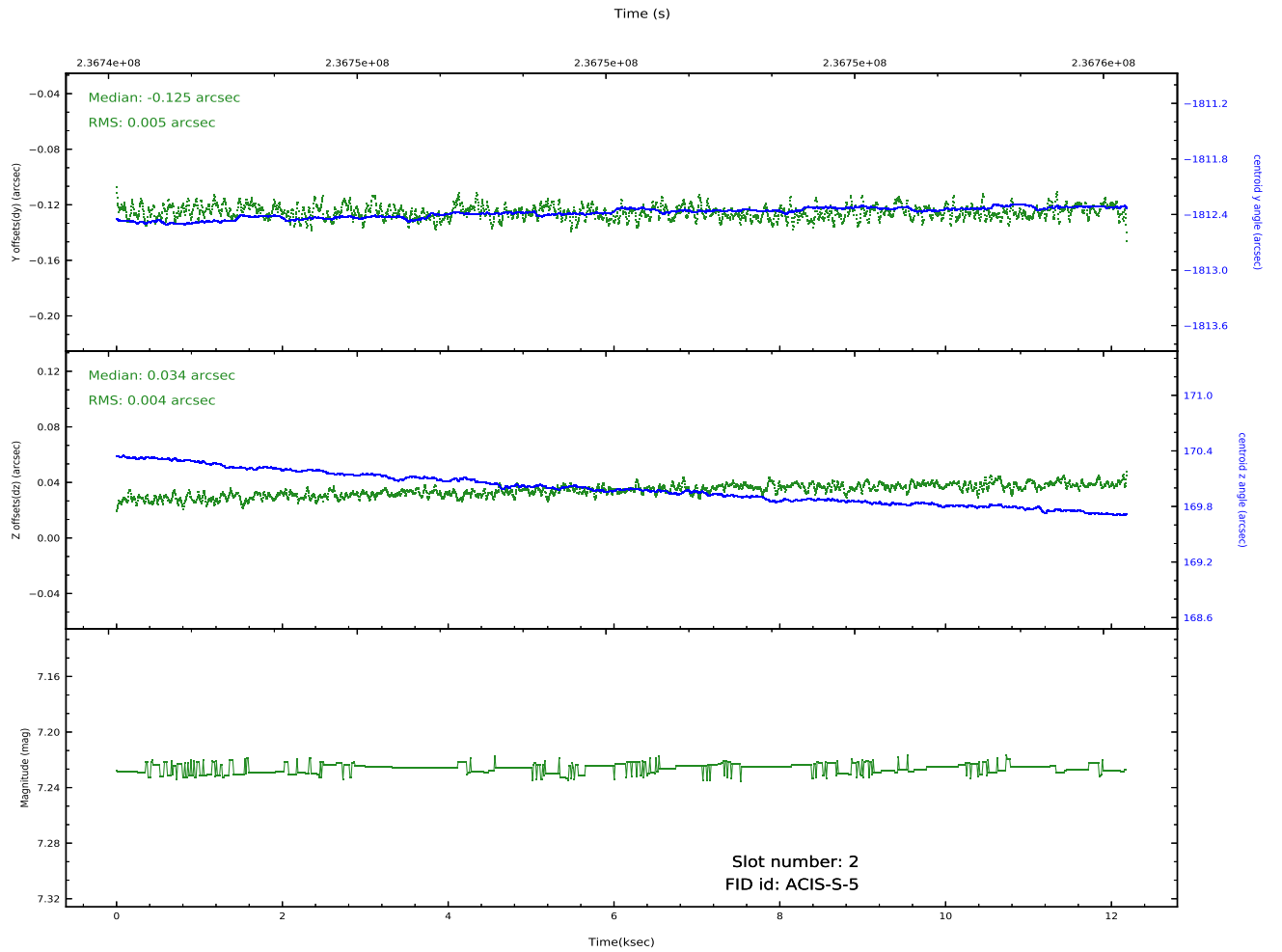
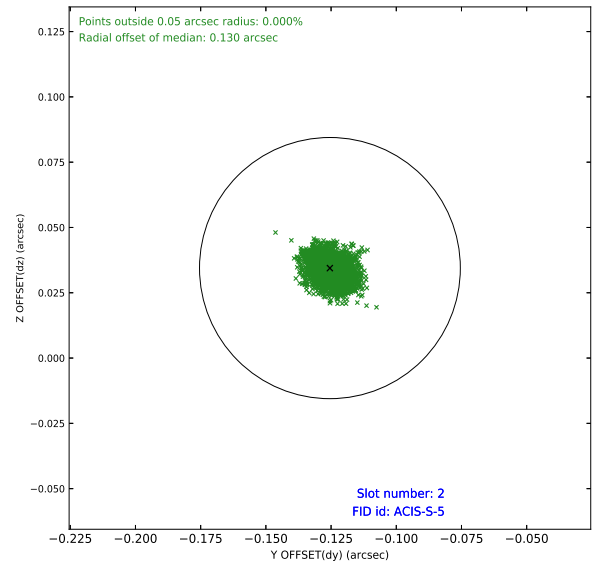
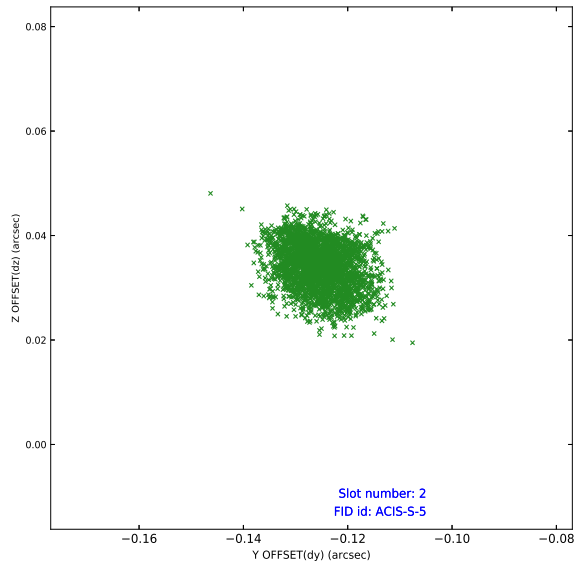
### 2.5.1 Slot 0



## 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)	2020.10.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	12.18239

### A.2 Comments