

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5541 - L2 Version 4  
Chandra X-Ray Center

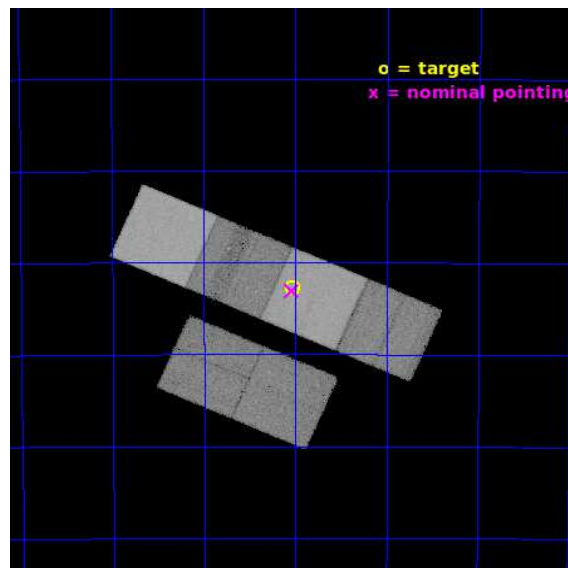
L2 Processing Date : Oct 11 2020

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# 1 Front

seq_num	500534	Sequence number
obs_id	5541	Observation id
title	Astrometric study of isolated neutron stars	Proposal title
observer	Dr Christian Motch	Principal investigator
object	RX J0420.0-5022	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	65.007917	Observer's specified target RA [deg]
dec_targ	-50.380028	Observer's specified target Dec [deg]
ra_nom	65.009690008776	Nominal RA [deg]
dec_nom	-50.384554745106	Nominal Dec [deg]
roll_nom	23.574395582365	Nominal Roll [deg]
revision	4	Processing version of data
ontime	19956.968528301	Sum of GTIs [s]
livetime	19704.261376151	Livetime [s]
ontime2	19957.009568304	Sum of GTIs [s]
ontime3	19953.604427963	Sum of GTIs [s]
ontime5	19956.927488297	Sum of GTIs [s]
ontime6	19956.886448294	Sum of GTIs [s]
ontime7	19956.968528301	Sum of GTIs [s]
ontime8	19953.563378006	Sum of GTIs [s]
l2events	368902	Number of level 2 events

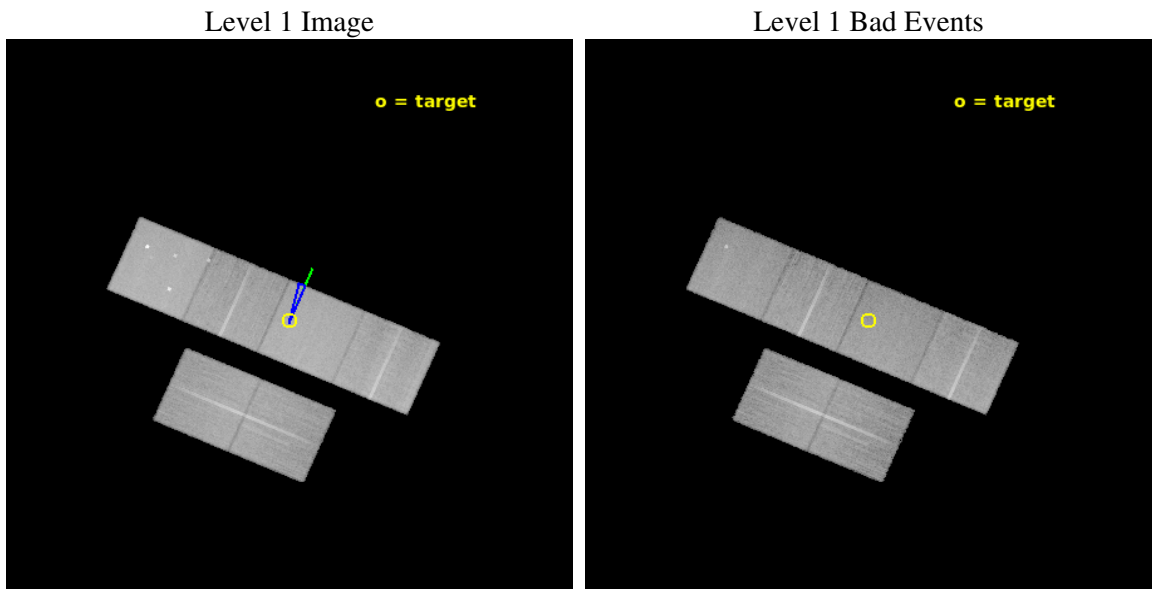




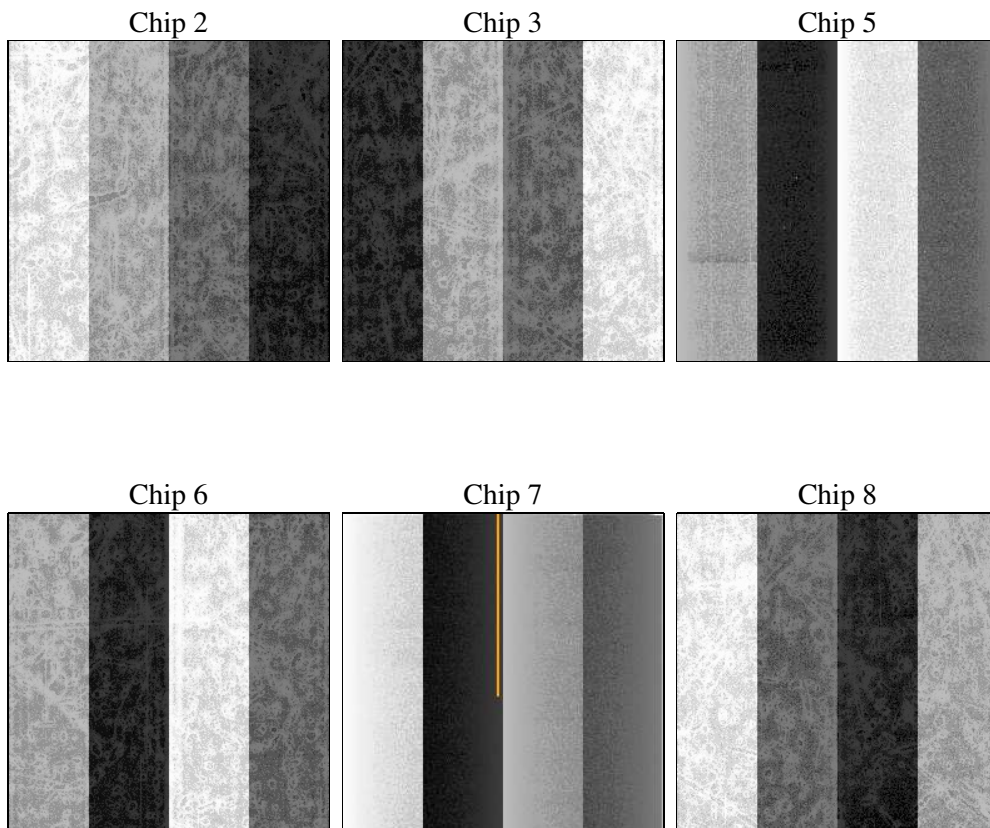
## 2 OBI

### 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	19956.968528301	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime2	19957.009568304	Sum of GTIs [s]
date	2020-10-11T14:57:17	Date and time of file creation	ontime3	19953.604427963	Sum of GTIs [s]
revision	4	Processing version of data	ontime5	19956.927488297	Sum of GTIs [s]
			ontime6	19956.886448294	Sum of GTIs [s]
			ontime7	19956.968528301	Sum of GTIs [s]
			ontime8	19953.563378006	Sum of GTIs [s]
			l1events	1247451	Number of level 1 events

### 2.1.4 Events

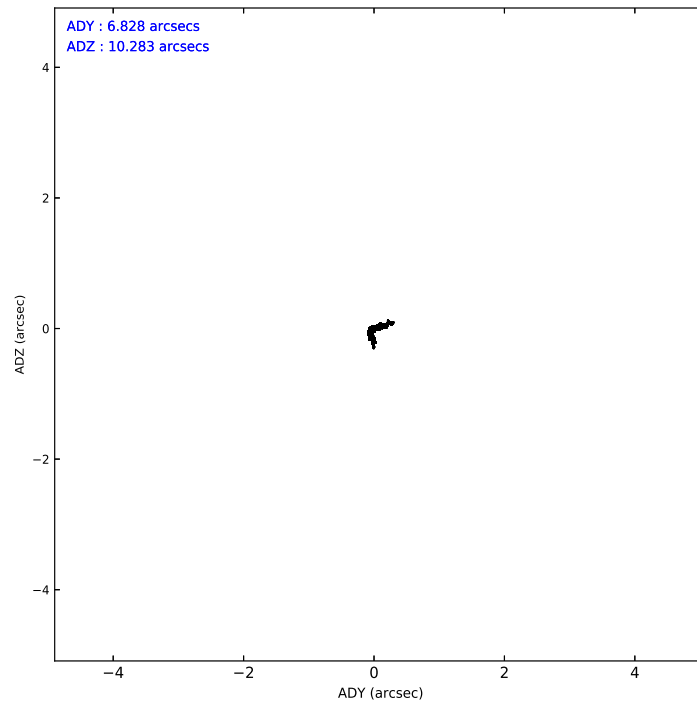
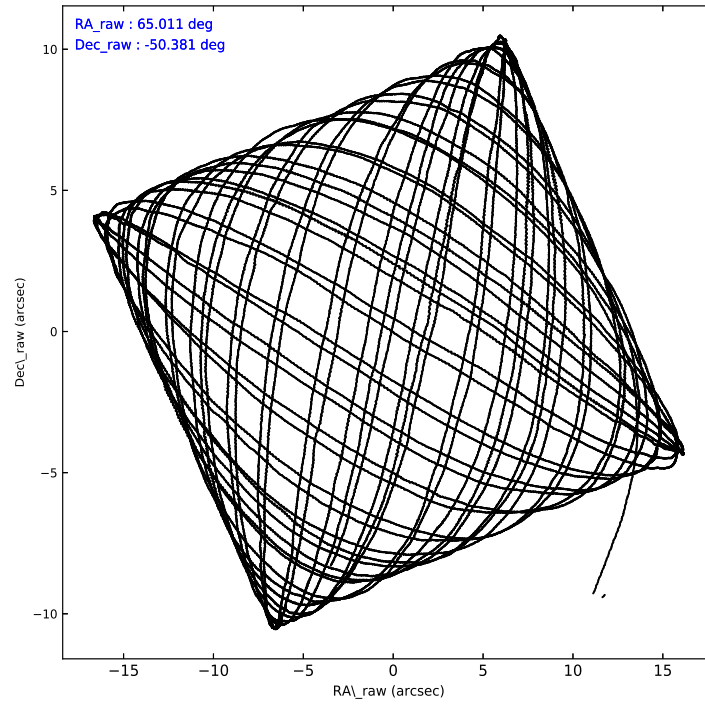
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	183753	170443	260534	177820	234032	220869	grade 0 events	24975	24283	16086	22123	10318	30592
rejected events	143540	130502	131664	138412	126492	154298		13%	14%	6%	12%	4%	13%
rejected %	78%	76%	50%	77%	54%	69%	grade 1 events	185	203	1184	135	260	251
								0%	0%	0%	0%	0%	0%
							grade 2 events	6094	5875	38552	6808	20563	12200
								3%	3%	14%	3%	8%	5%
							grade 3 events	2543	2668	4836	2543	8804	5675
								1%	1%	1%	1%	3%	2%
							grade 4 events	2467	2659	4701	2529	8623	5257
								1%	1%	1%	1%	3%	2%
							grade 5 events	6223	6933	17478	7560	20547	9612
								3%	4%	6%	4%	8%	4%
							grade 6 events	4136	4461	64718	5409	59242	12872
								2%	2%	24%	3%	25%	5%
							grade 7 events	137130	123361	112979	130713	105675	144410
								74%	72%	43%	73%	45%	65%

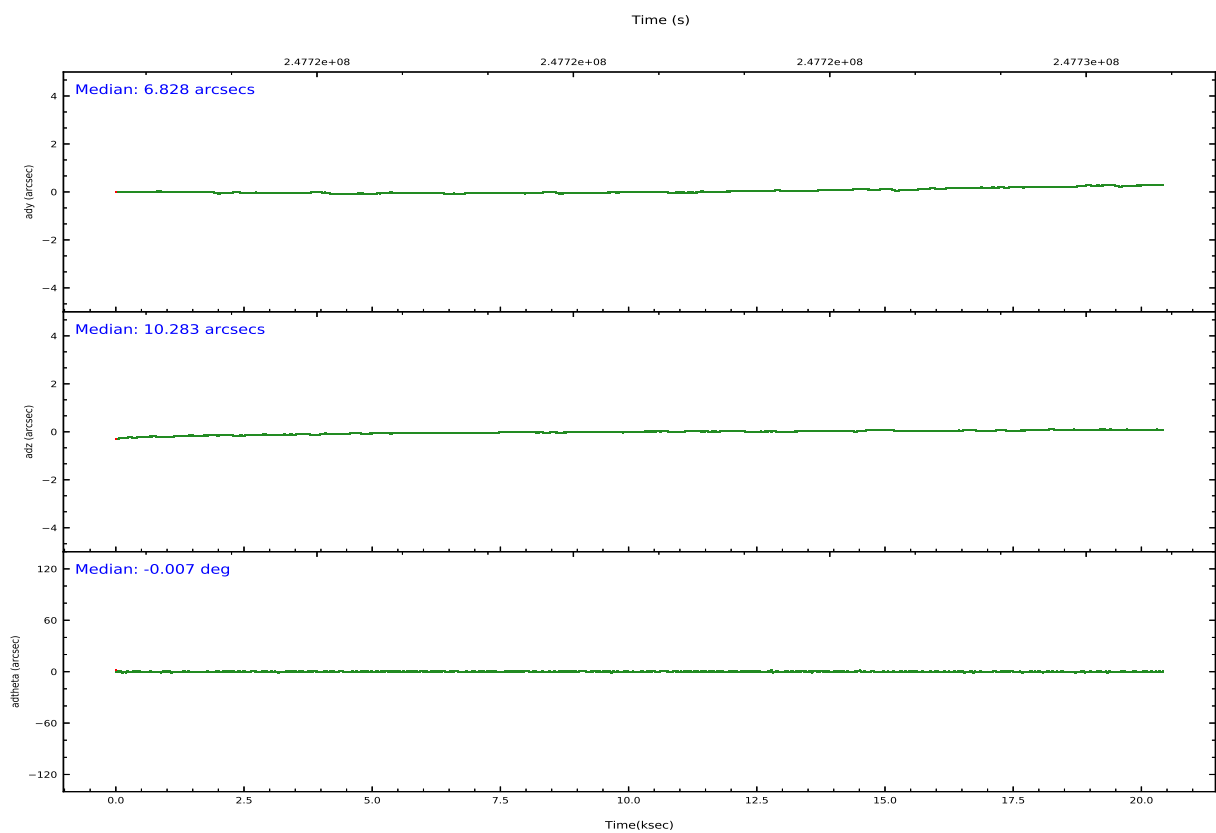
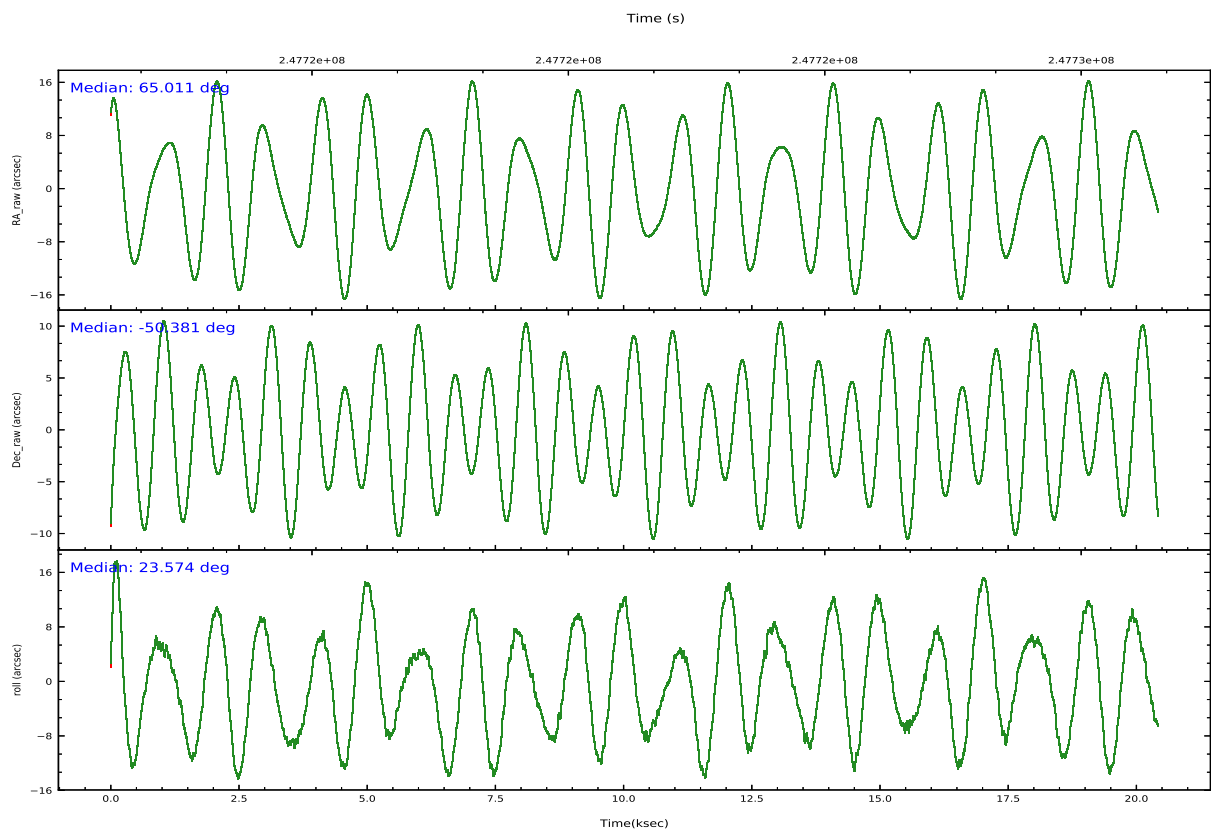
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-235678	ACIS-235678
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	64.985855	65.009690008776
[deg] Pointing Dec	-50.403187	-50.384554745106
[deg] Pointing Roll	23.400189	23.574395582365
[deg] Roll angle	18.650000	18.650000
[deg] Roll tolerance	5.000000	5.000000
Roll constraint allows 180D rotation	N	N
[s] Window start time (MET)	246412864.184000	246412864.184000
[s] Window stop time (MET)	249955204.184000	249955204.184000
[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)	247711501.184000	247710422.14634
Observation start date	2005-11-07T00:43:57	2005-11-07T00:27:02
[s] Observation end time (MET)	247731501.184000	247732870.67238
Observation end date	2005-11-07T06:17:17	2005-11-07T06:41:10
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar version number	8	8
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



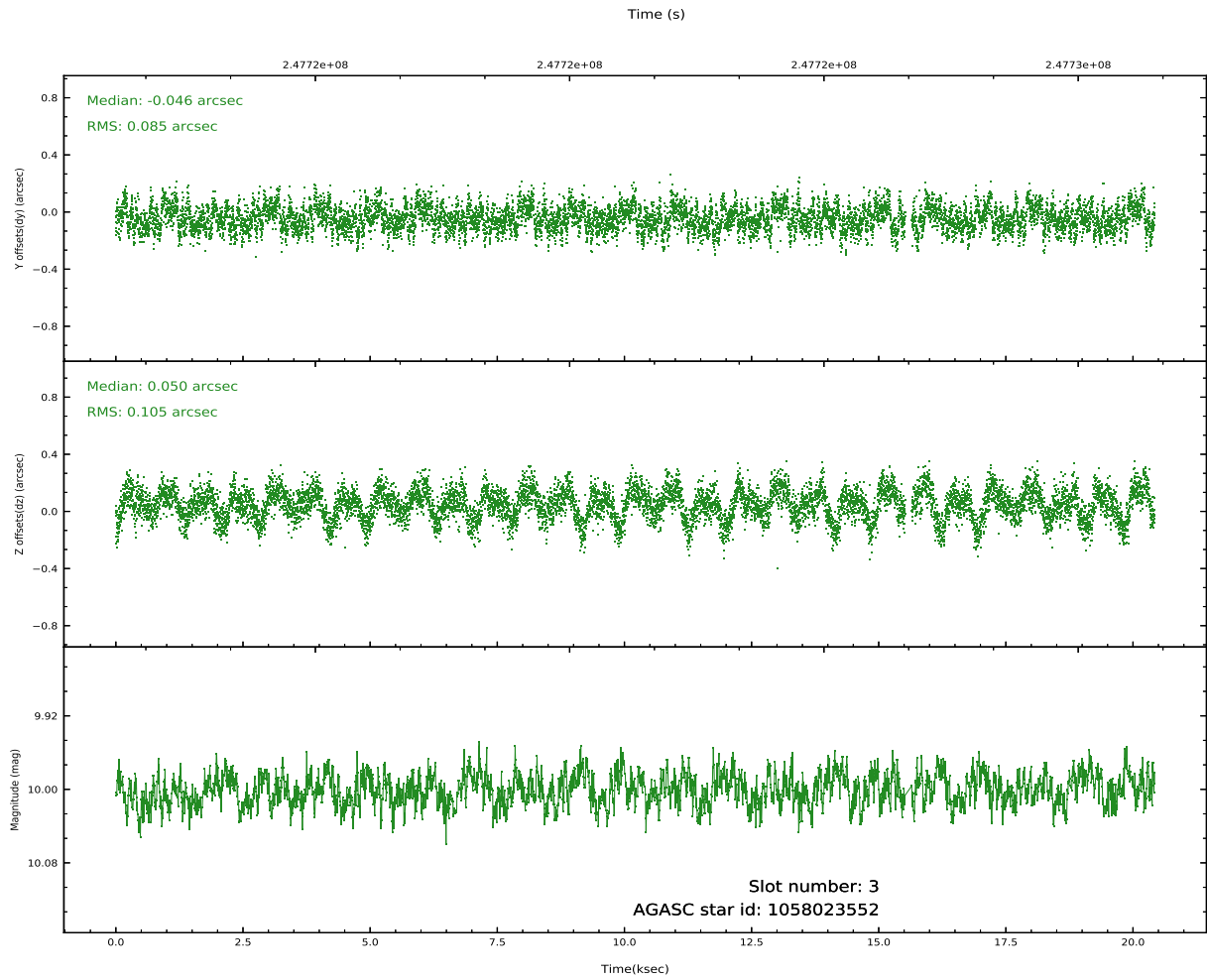
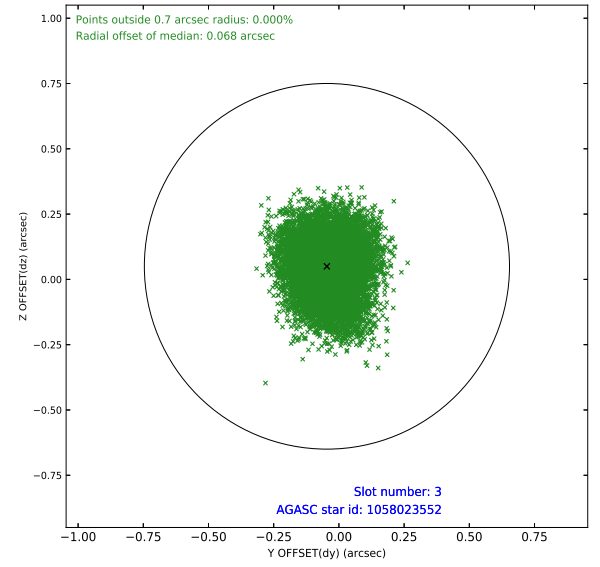
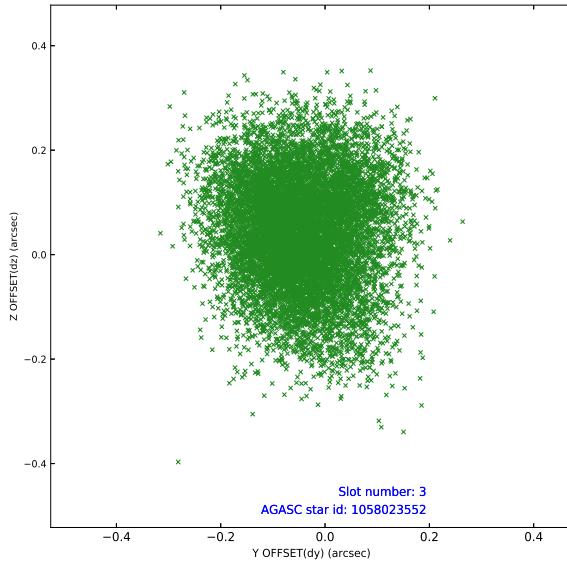


Slot Statistics

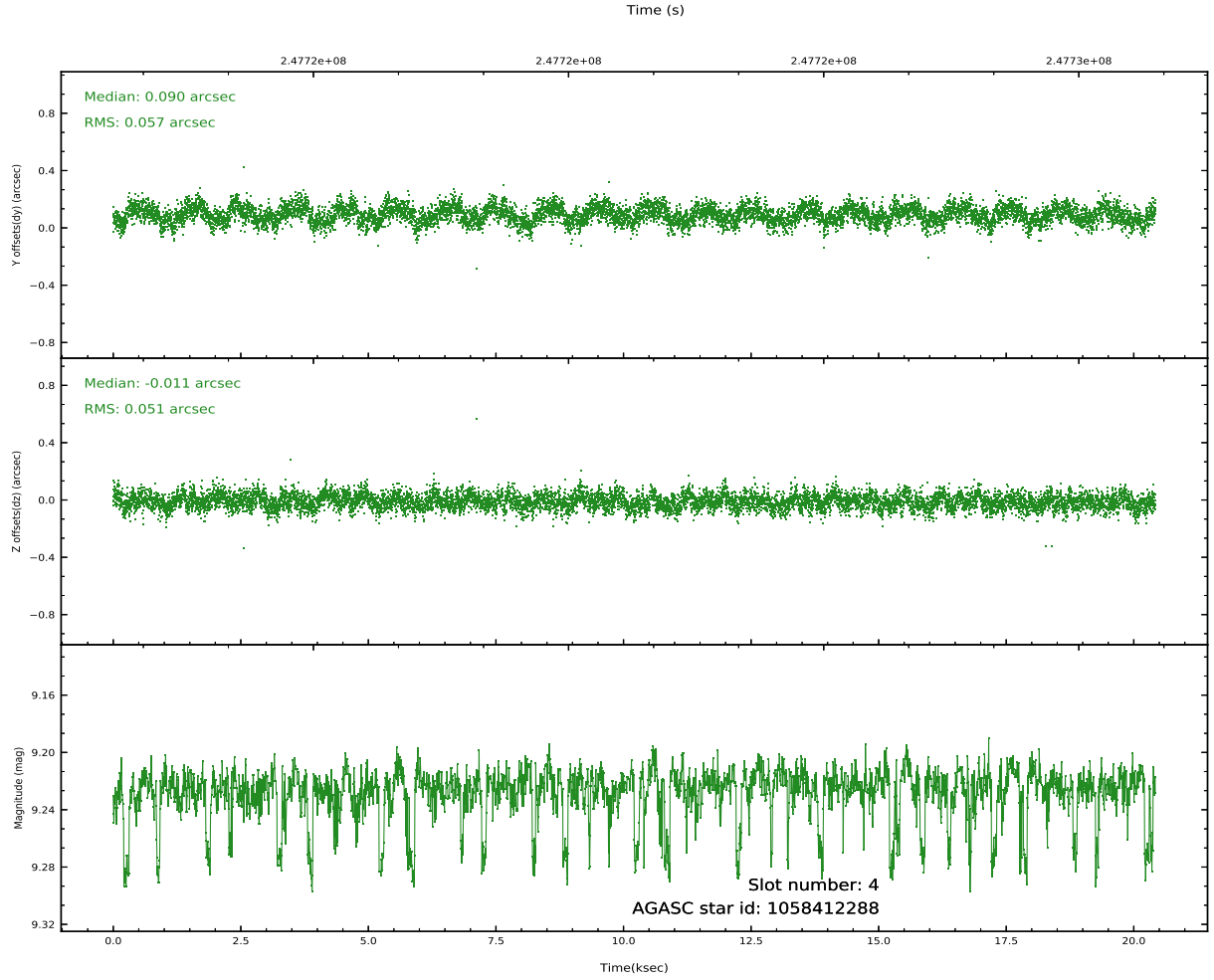
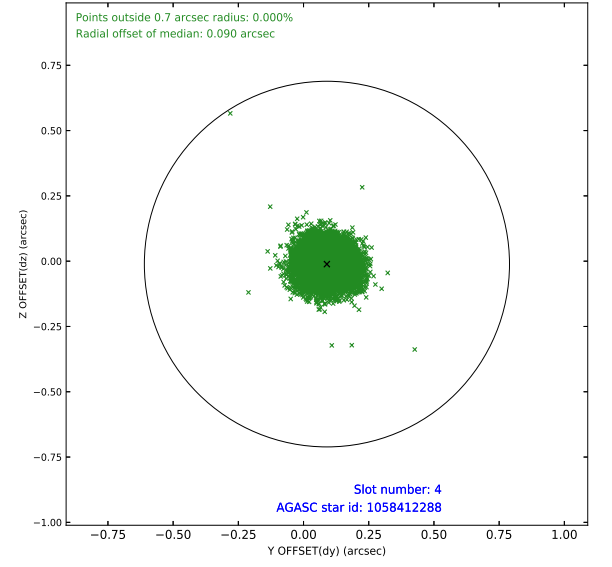
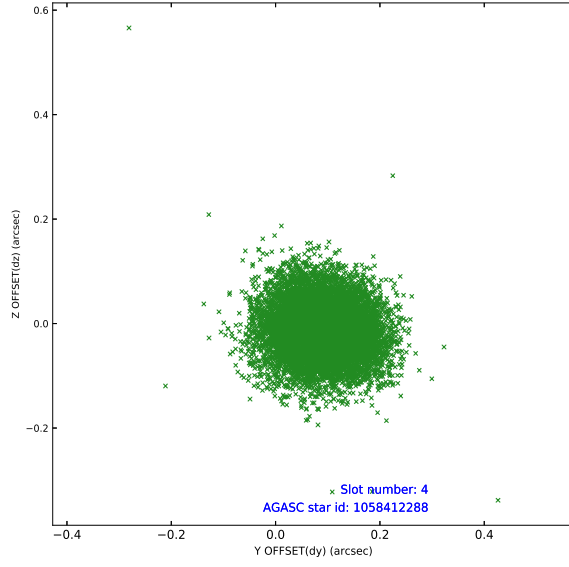
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.19	4982	1.000	-0.001	-0.077	0.009	0.015	0.000000	0.000000	936.45	-1727
1	FID		ACIS-S-4	7.21	4982	1.000	0.125	0.058	0.007	0.011	0.000000	0.000000	2154.04	176
2	FID		ACIS-S-5	7.23	4982	1.000	-0.150	0.031	0.007	0.012	0.000000	0.000000	-1812.38	170
3	GUIDE	used	1058023552	10.00	9892	1.000	-0.046	0.050	0.144	0.231	64.133515	-49.952760	-1172.69	2261
4	GUIDE	used	1058412288	9.22	9878	1.000	0.090	-0.011	0.080	0.131	65.457997	-50.004198	1571.88	881
5	GUIDE	used	1058416856	8.84	9962	1.000	0.012	-0.071	0.089	0.141	64.911305	-50.956617	-945.60	-1761
6	GUIDE	used	1058418424	9.57	9891	1.000	-0.015	0.029	0.092	0.149	65.947855	-50.664334	1636.11	-1747
7	GUIDE	used	1058419656	7.74	9961	1.000	-0.040	0.008	0.061	0.100	66.211277	-50.622190	2246.24	-1856

## 2.4 Star Slots

### 2.4.1 Slot 3

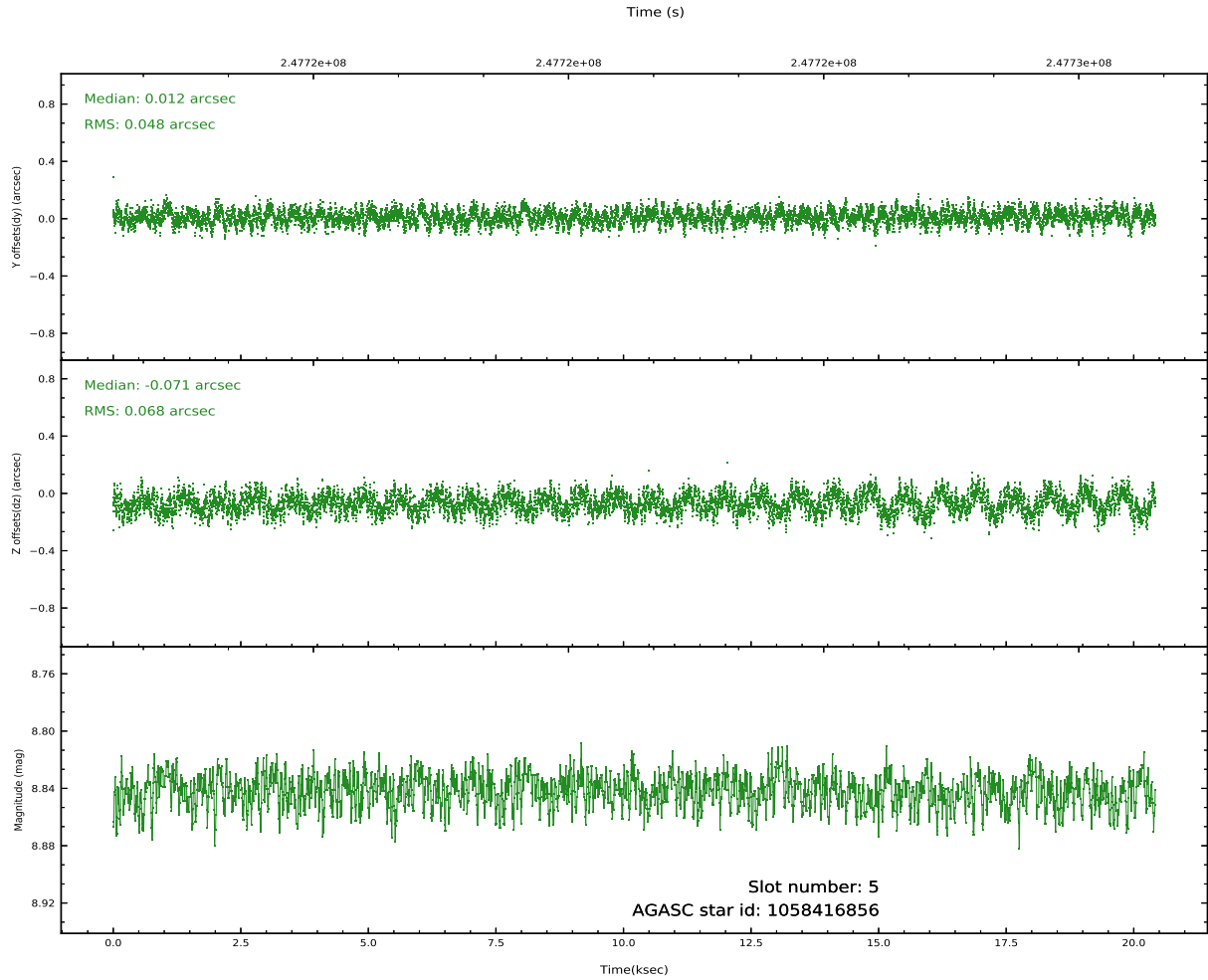
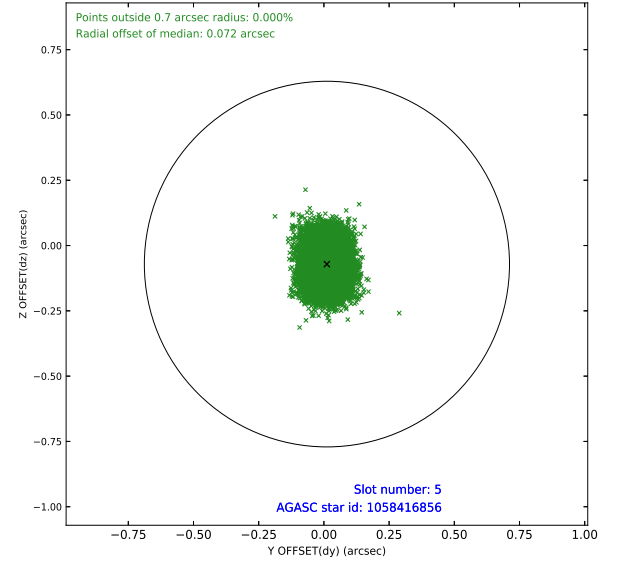
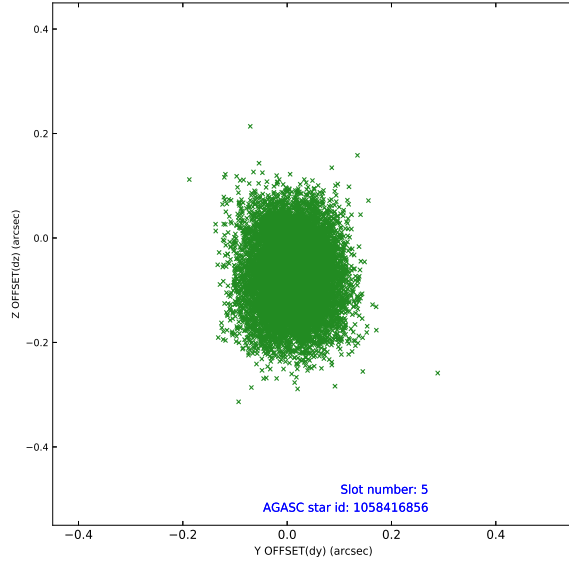


## 2.4.2 Slot 4

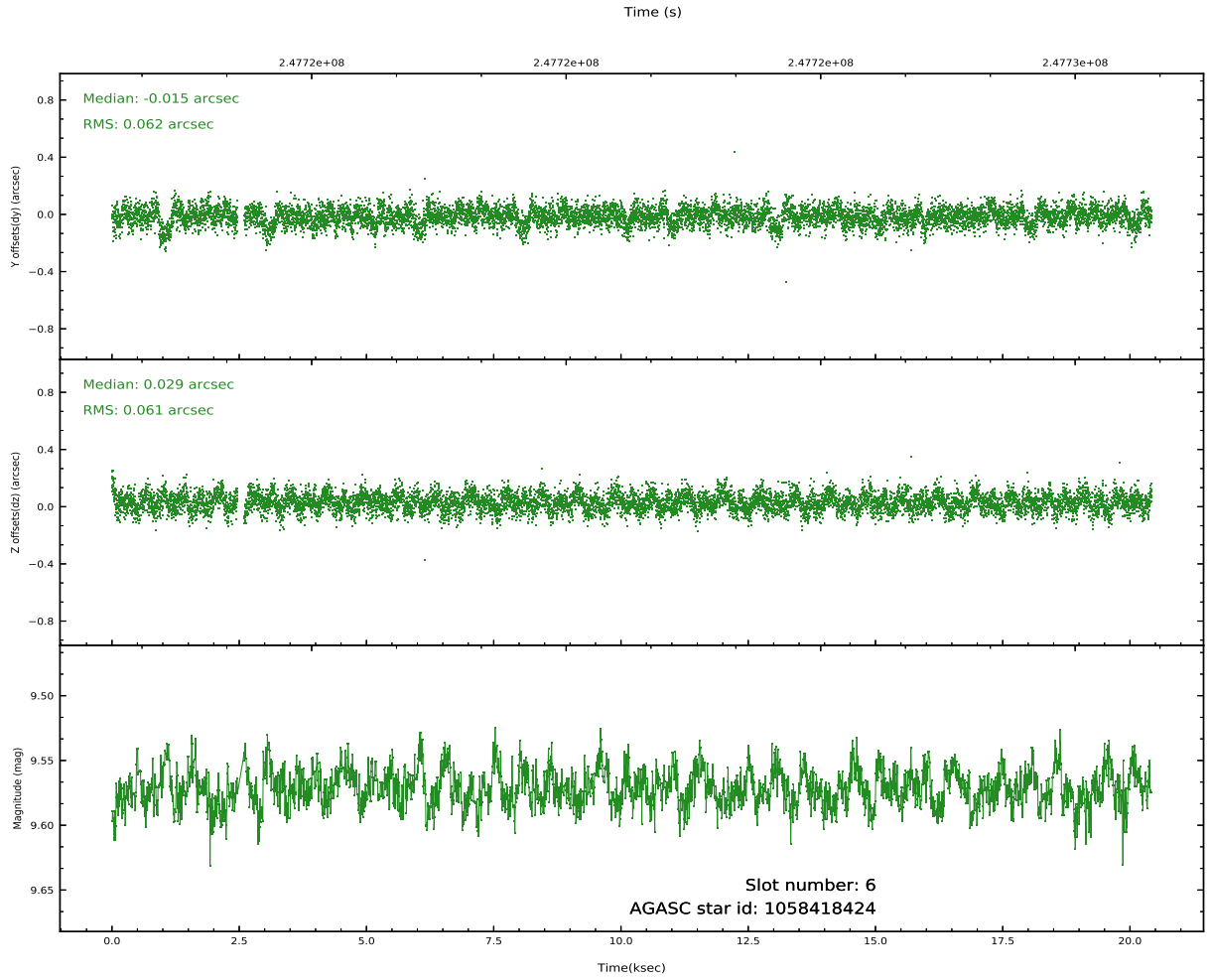
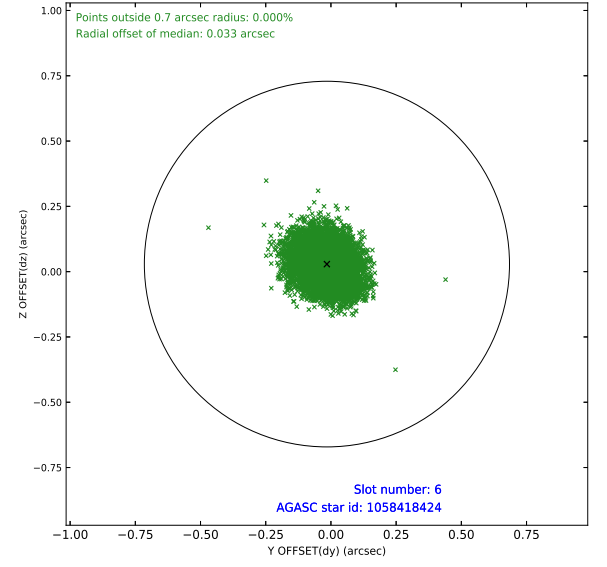
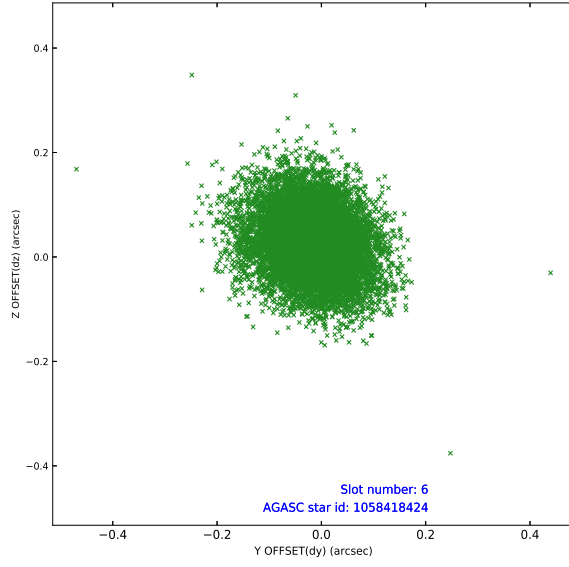




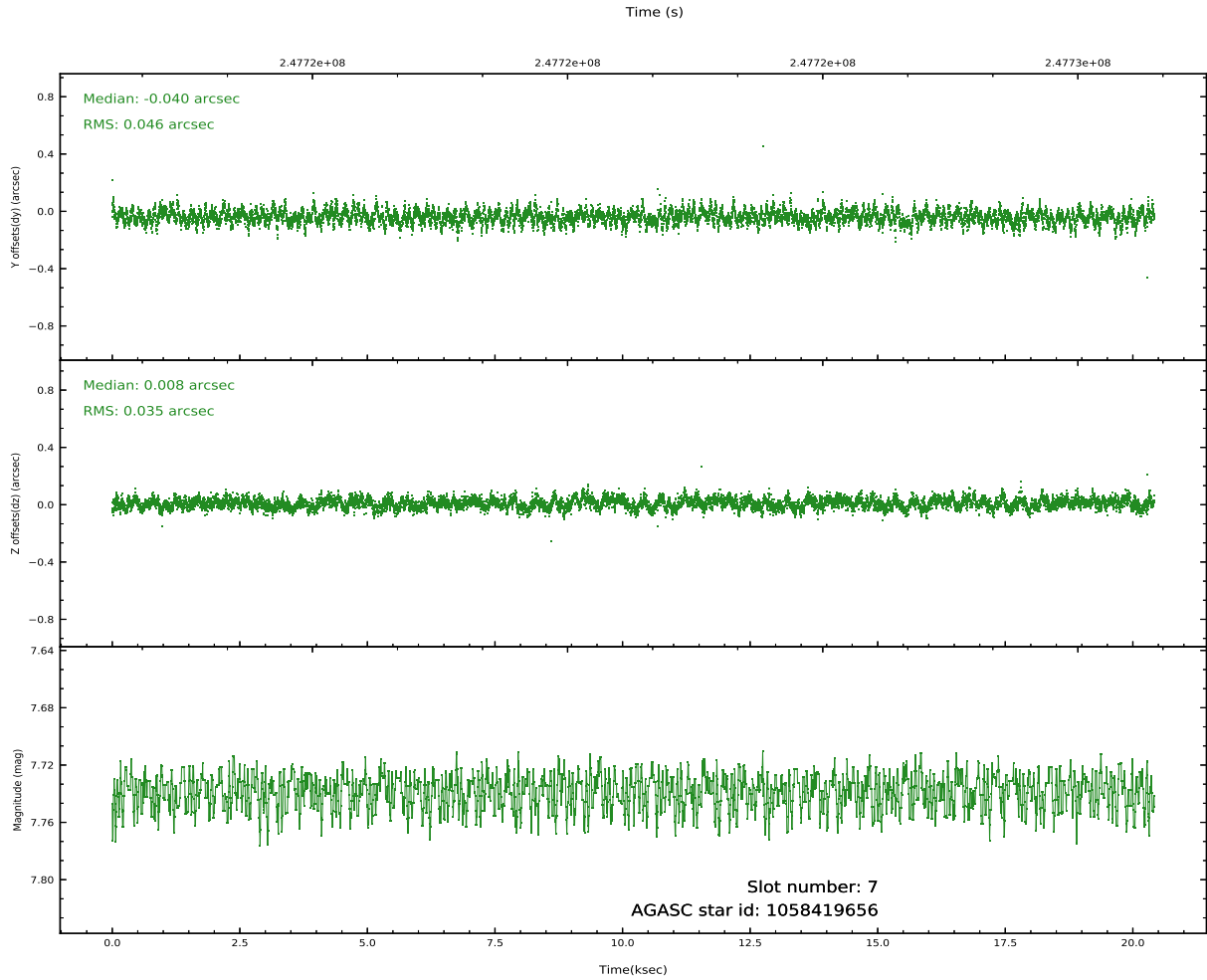
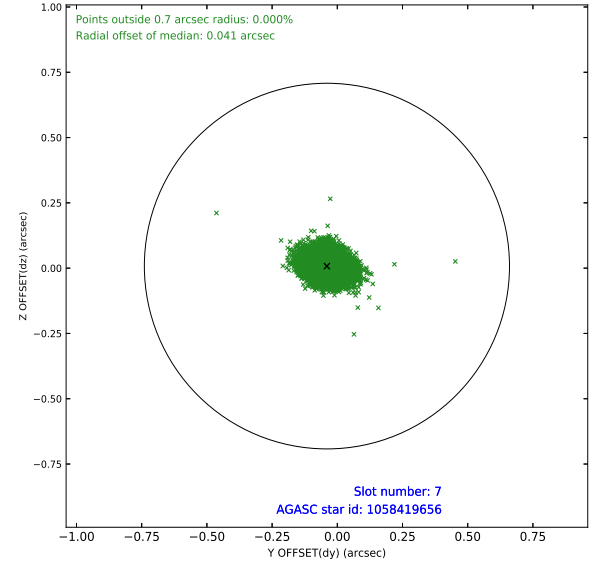
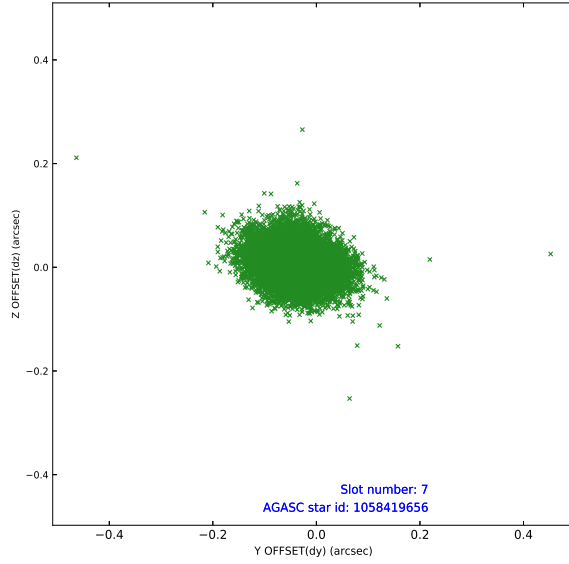
### 2.4.3 Slot 5



## 2.4.4 Slot 6

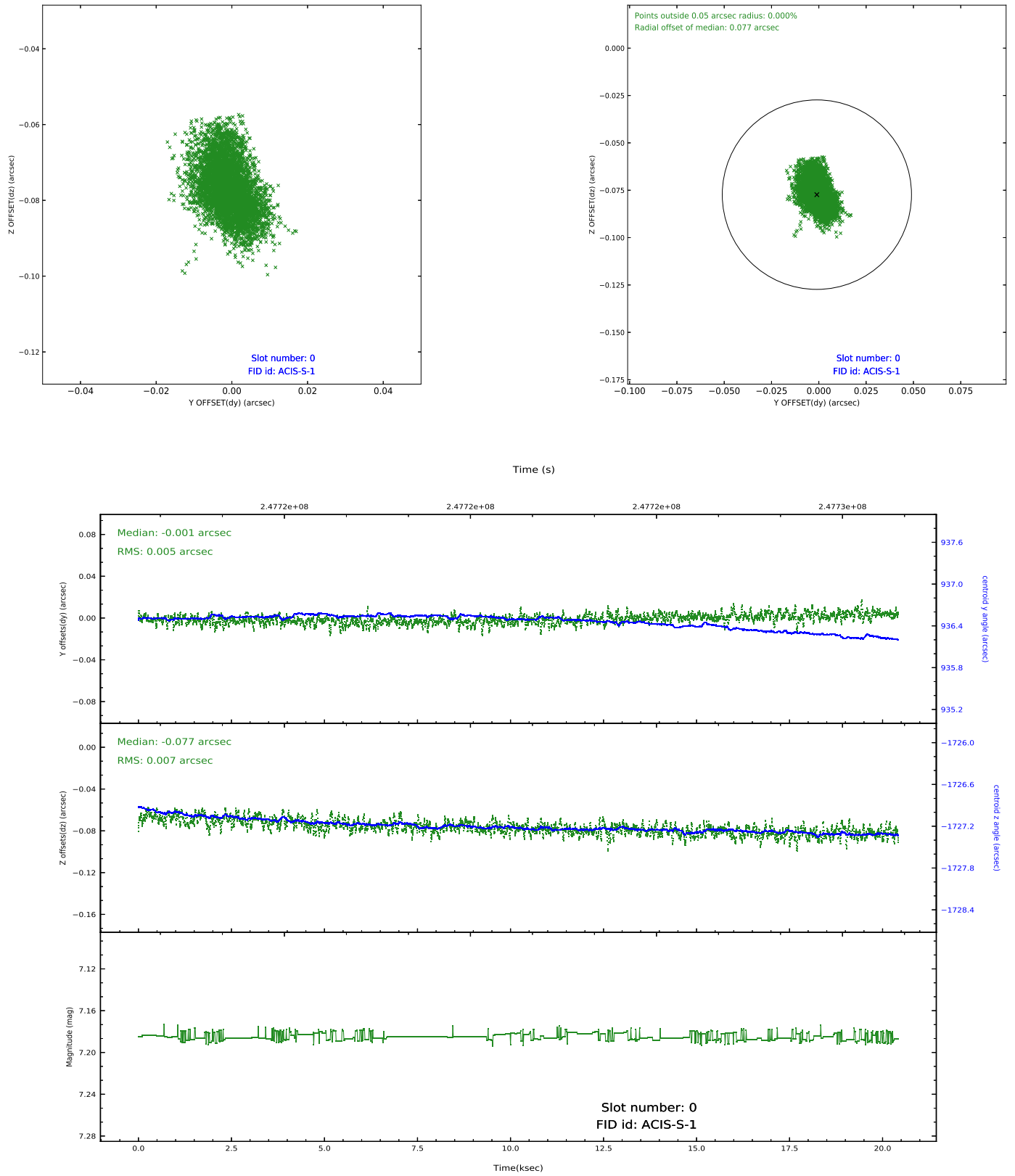


## 2.4.5 Slot 7

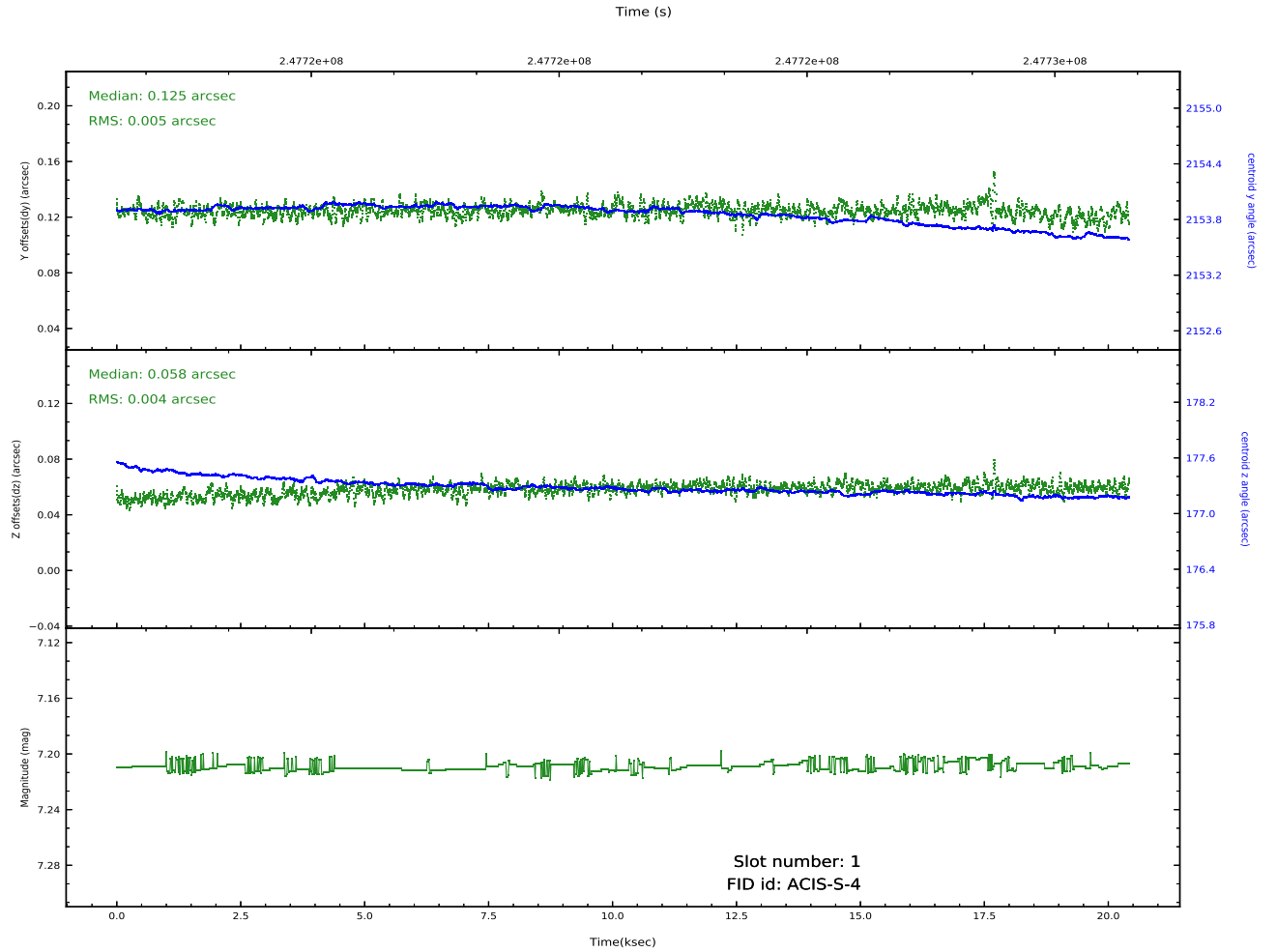
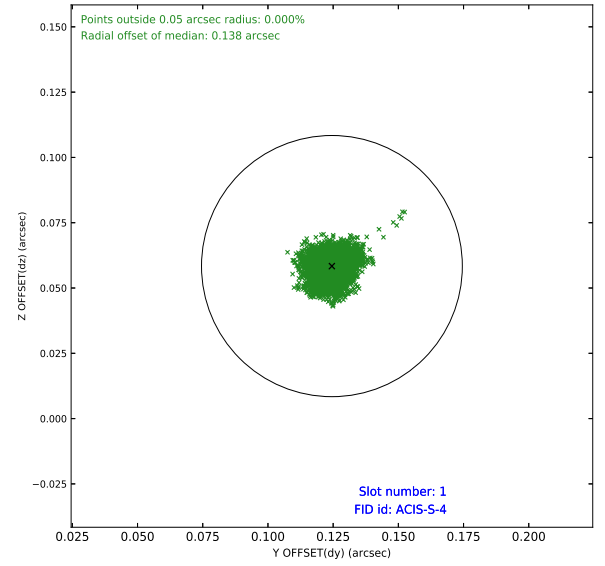
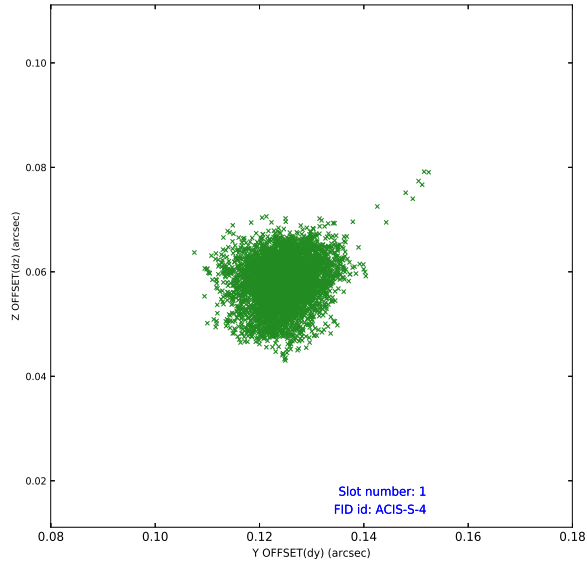


## 2.5 FID Slots

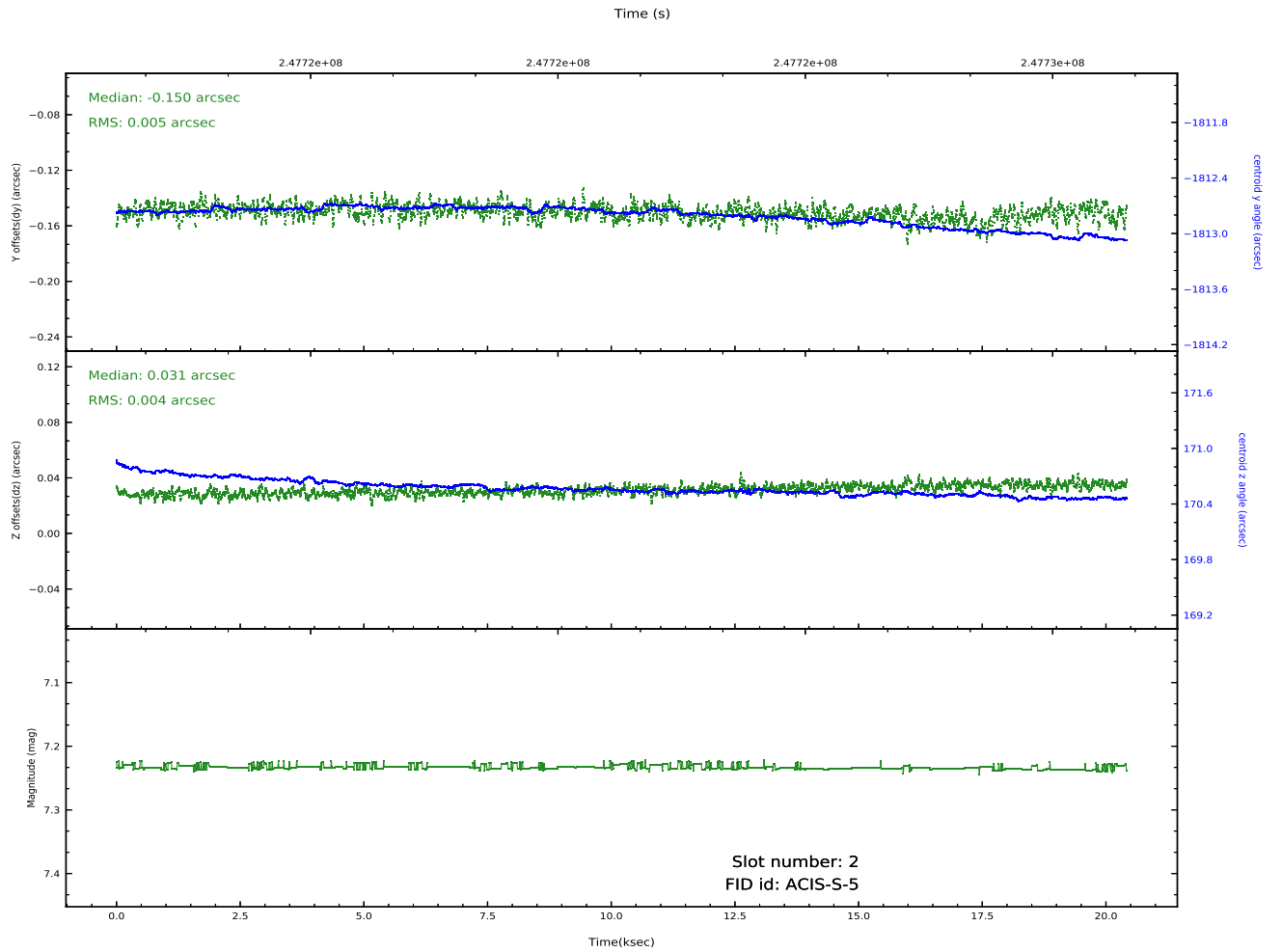
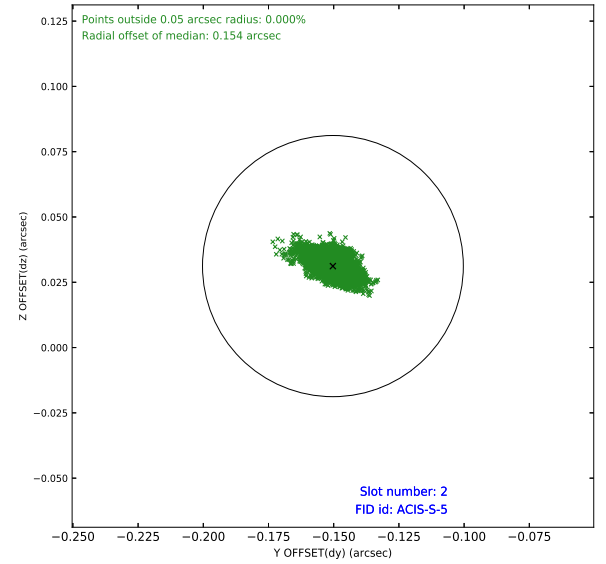
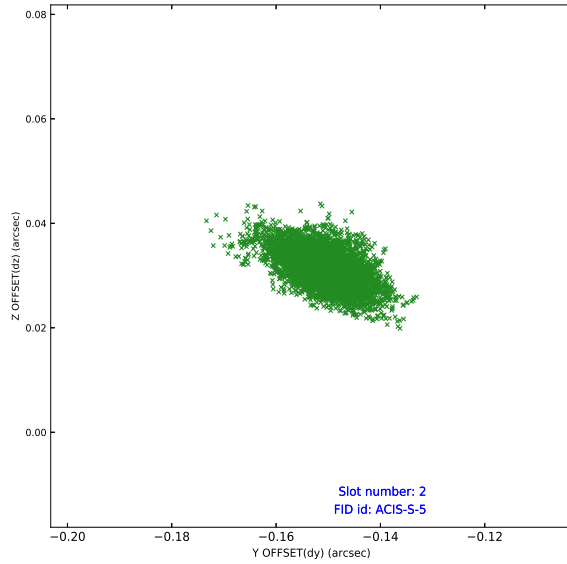
### 2.5.1 Slot 0



## 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)	2020.10.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	19.95839

### A.2 Comments

Roll preference met. Window preference met.