

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5134 - L2 Version 4  
Chandra X-Ray Center

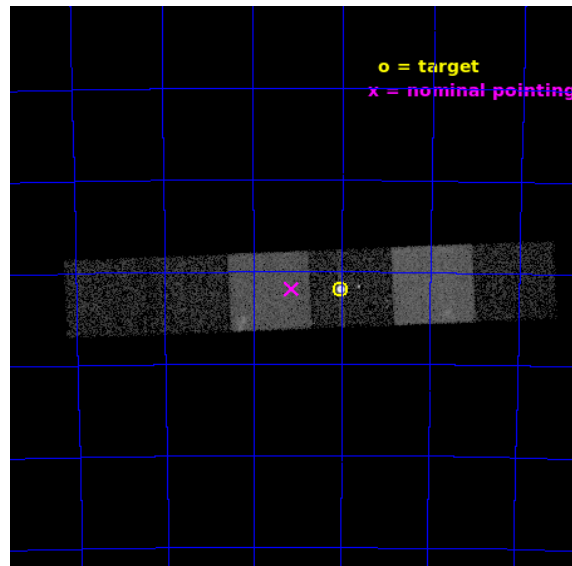
L2 Processing Date : Sep 24 2020

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# 1 Front

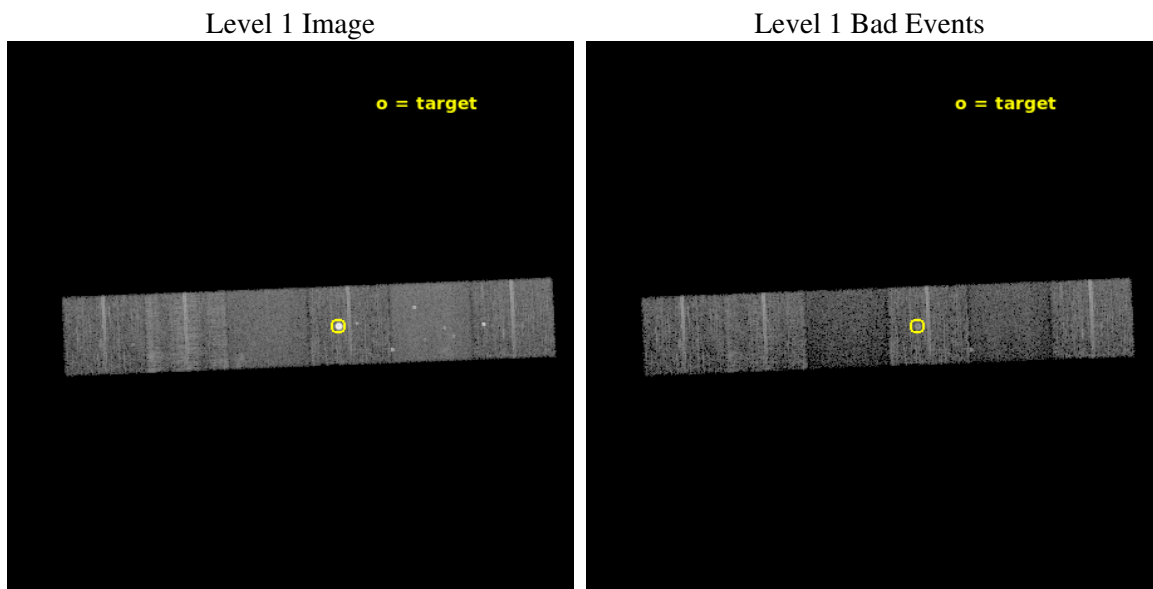
seq_num	590332	Sequence number
obs_id	5134	Observation id
title	AO5B ACIS-S Calibration Observations of E0102-72	Proposal title
observer	CXC Calibration	Principal investigator
object	E0102-72.3	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	16.01	Observer's specified target RA [deg]
dec_targ	-72.032028	Observer's specified target Dec [deg]
ra_nom	16.281816191119	Nominal RA [deg]
dec_nom	-72.031090232683	Nominal Dec [deg]
roll_nom	177.57729808358	Nominal Roll [deg]
revision	4	Processing version of data
ontime	7596.7999716997	Sum of GTIs [s]
livetime	7500.6047162143	Livetime [s]
ontime4	7590.318021208	Sum of GTIs [s]
ontime5	7596.7999716997	Sum of GTIs [s]
ontime6	7596.7999716997	Sum of GTIs [s]
ontime7	7596.7999716997	Sum of GTIs [s]
ontime8	7593.5590114295	Sum of GTIs [s]
ontime9	7593.559001416	Sum of GTIs [s]
l2events	89091	Number of level 2 events



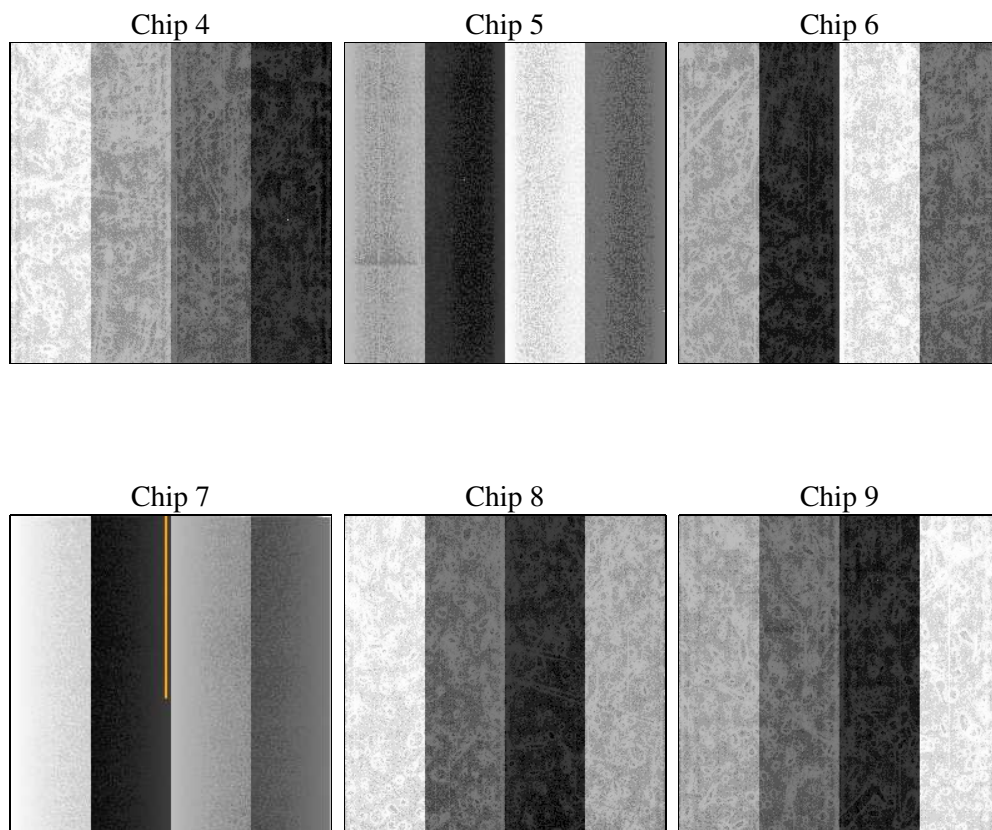
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	7840.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	7596.7999716997	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime4	7590.318021208	Sum of GTIs [s]
date	2020-09-25T01:26:07	Date and time of file creation	ontime5	7596.7999716997	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	7596.7999716997	Sum of GTIs [s]
			ontime7	7596.7999716997	Sum of GTIs [s]
			ontime8	7593.5590114295	Sum of GTIs [s]
			ontime9	7593.559001416	Sum of GTIs [s]
			l1events	319044	Number of level 1 events

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	51344	53071	72939	41122	59761	40807	grade 0 events	4407	3580	27186	2325	6380	1842
rejected events	44133	24644	39794	20129	41513	36232		8%	6%	37%	5%	10%	4%
rejected %	85%	46%	54%	48%	69%	88%	grade 1 events	53	210	270	40	69	18
								0%	0%	0%	0%	0%	0%
							grade 2 events	1067	8092	2988	4458	2921	951
								2%	15%	4%	10%	4%	2%
							grade 3 events	485	1508	953	2111	2820	468
								0%	2%	1%	5%	4%	1%
							grade 4 events	543	1407	965	2105	2636	435
								1%	2%	1%	5%	4%	1%
							grade 5 events	1288	4355	1475	4375	2163	1587
								2%	8%	2%	10%	3%	3%
							grade 6 events	714	13865	1083	10009	3506	882
								1%	26%	1%	24%	5%	2%
							grade 7 events	42787	20054	38019	15699	39266	34624
								83%	37%	52%	38%	65%	84%

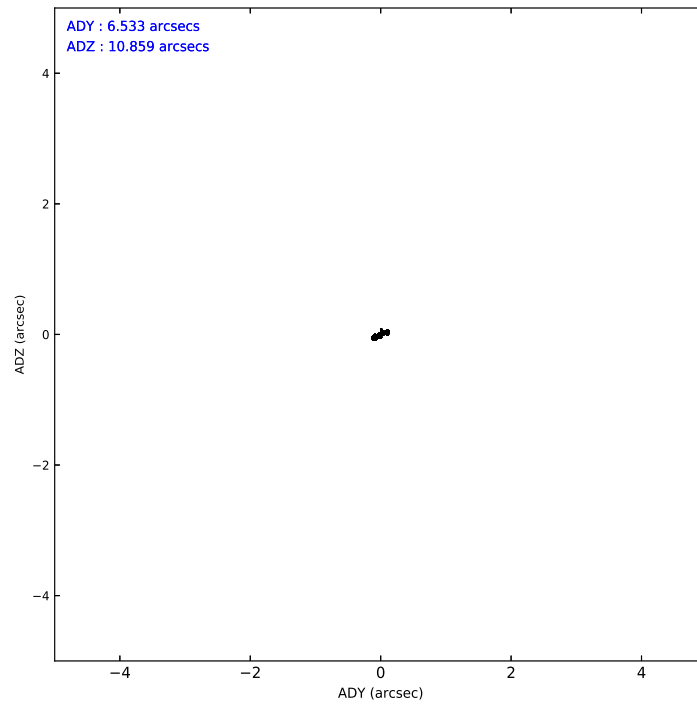
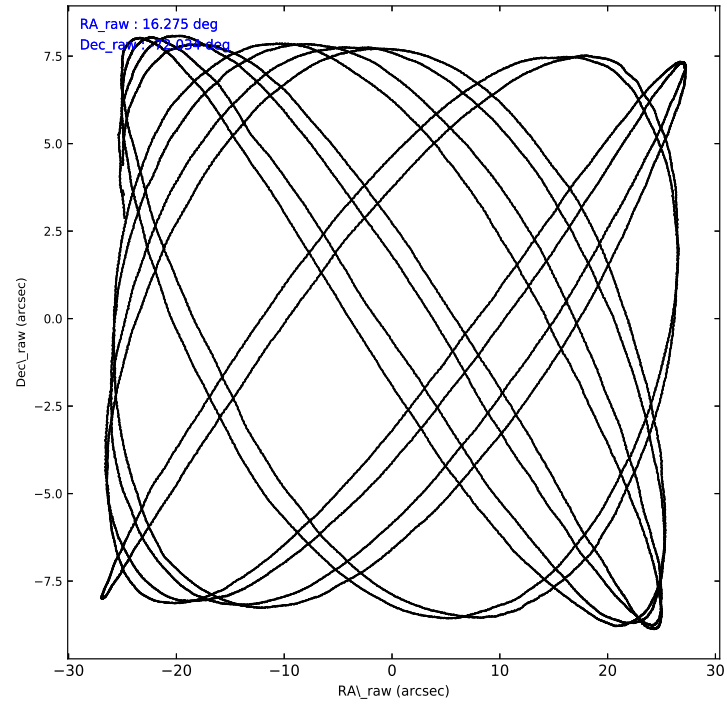


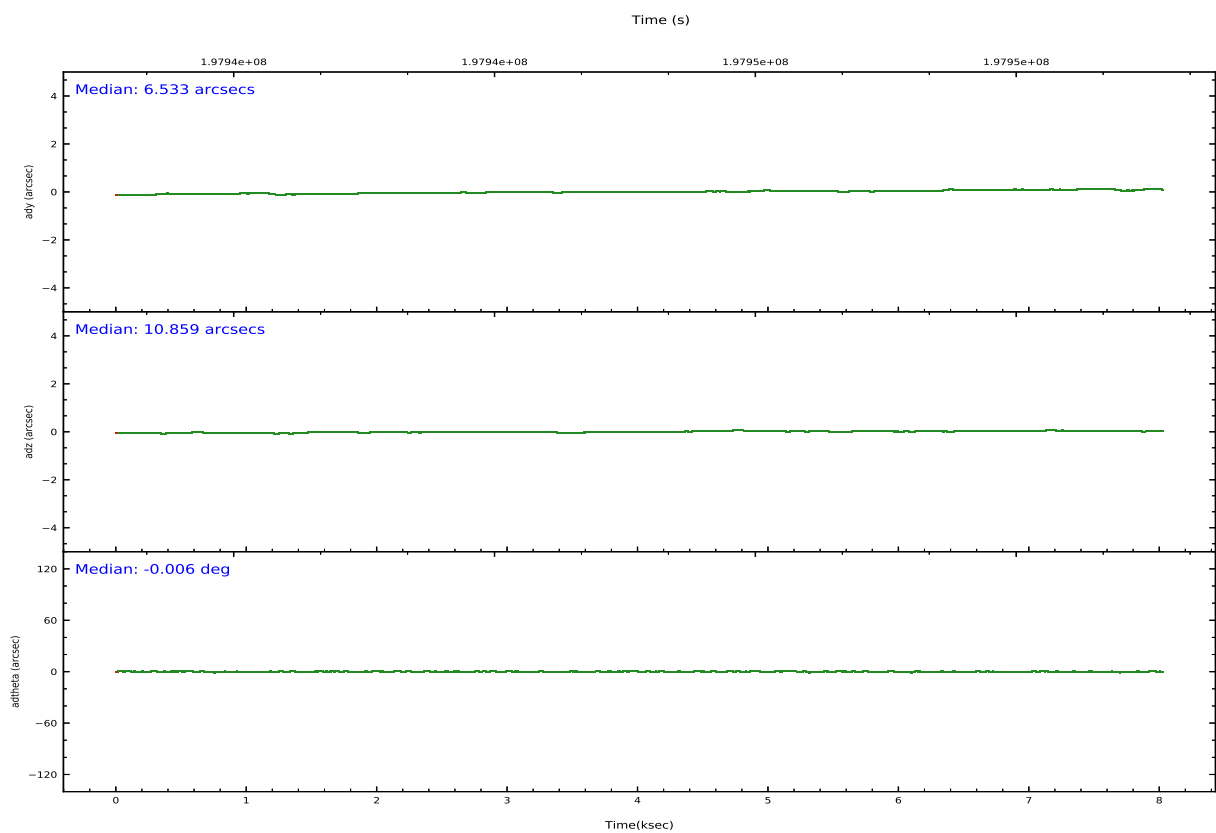
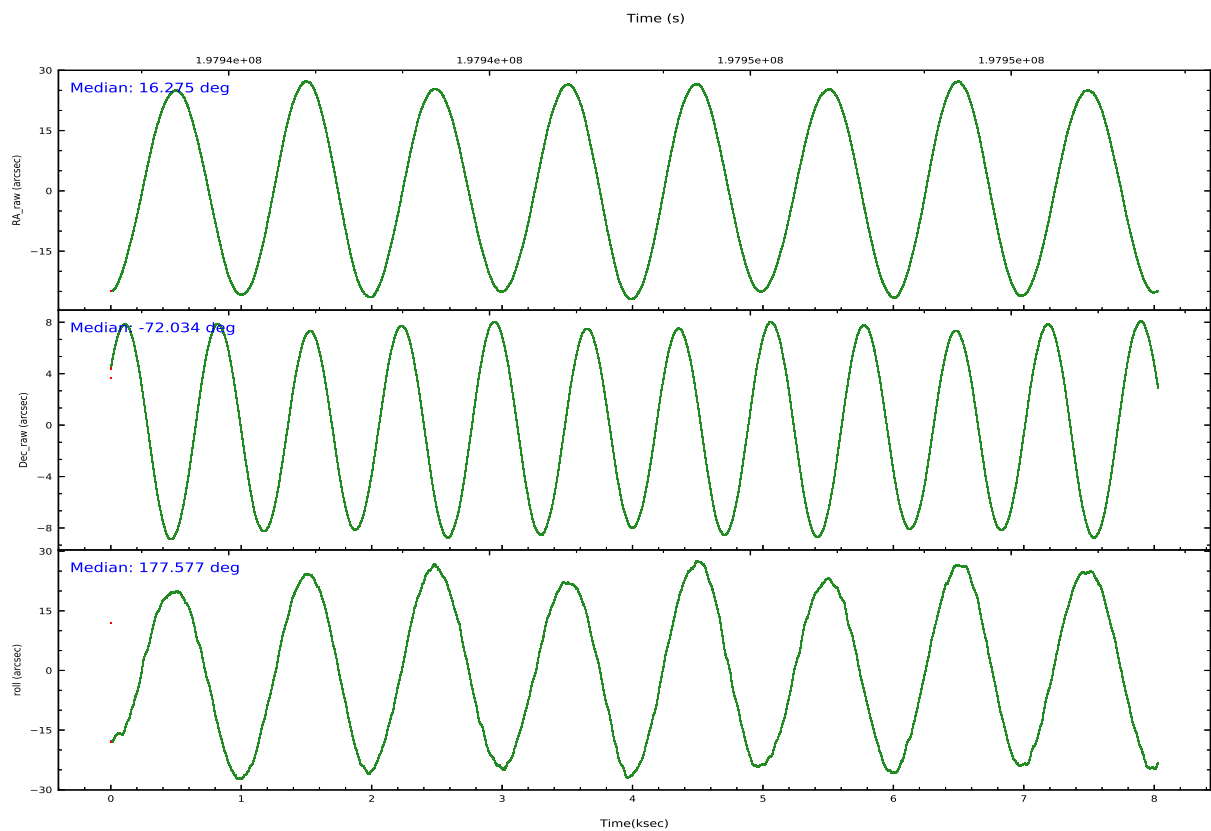
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-456789	ACIS-456789
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	16.352793	16.281816191119
[deg] Pointing Dec	-72.021282	-72.031090232683
[deg] Pointing Roll	177.498798	177.57729808358
[s] Window start time (MET)	197164864.184000	197164864.184000
[s] Window stop time (MET)	199670464.184000	199670464.184000
[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)	197941287.184000	197940911.45099
Observation start date	2004-04-09T23:40:23	2004-04-09T23:35:11
[s] Observation end time (MET)	197949127.184000	197949908.38889
Observation end date	2004-04-10T01:51:03	2004-04-10T02:05:08
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



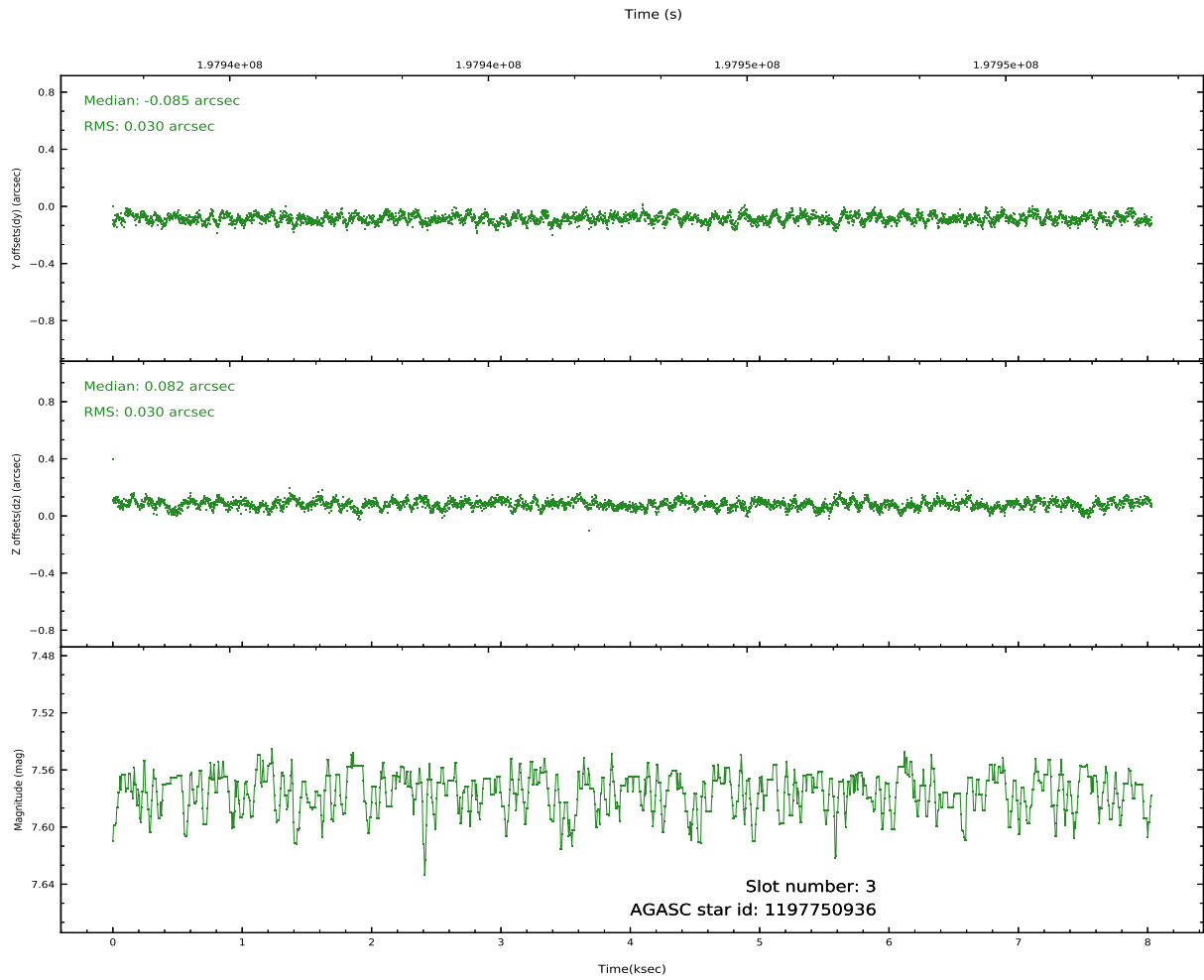
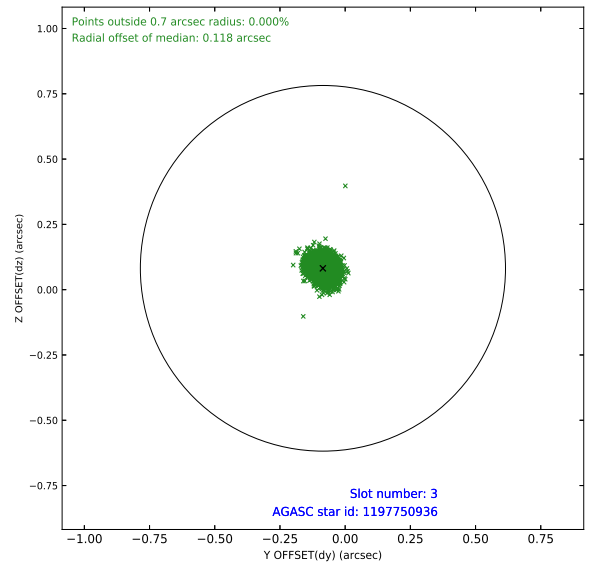
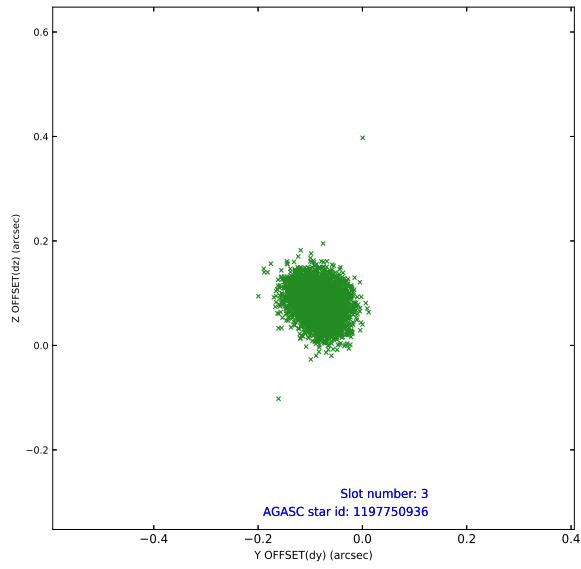


Slot Statistics

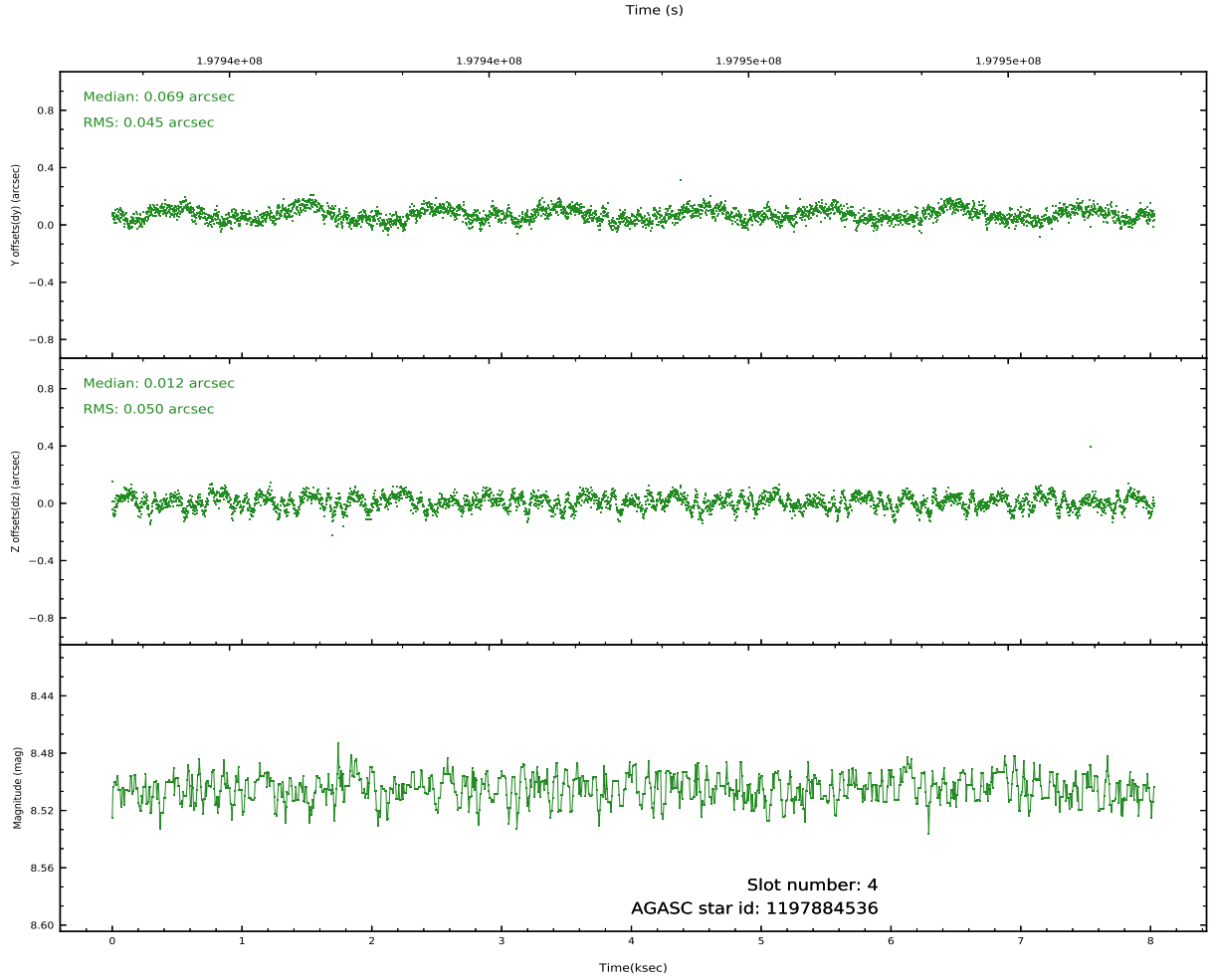
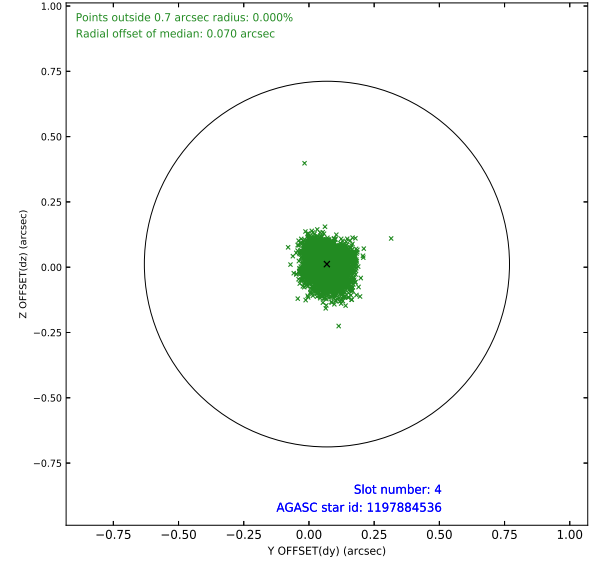
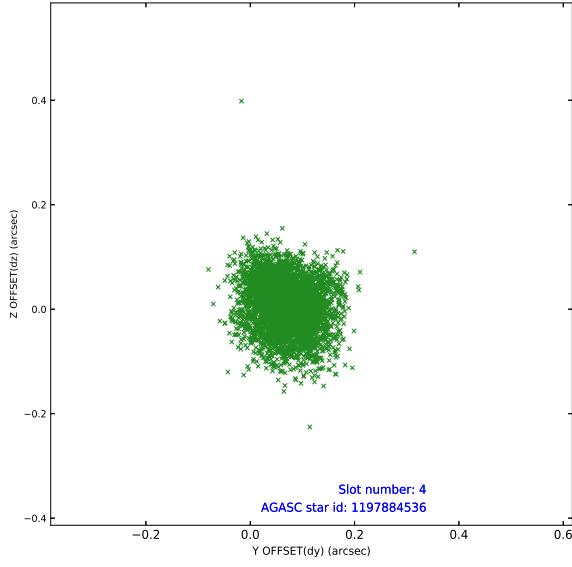
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.10	1959	1.000	-0.085	-0.050	0.007	0.011	0.000000	0.000000	-759.31	-1732
1	FID		ACIS-S-4	7.21	1959	1.000	0.133	0.054	0.006	0.011	0.000000	0.000000	2153.82	175
2	FID		ACIS-S-5	7.23	1959	1.000	-0.078	0.004	0.007	0.011	0.000000	0.000000	-1811.30	170
3	GUIDE	used	1197750936	7.57	3918	1.000	-0.085	0.082	0.045	0.071	15.387940	-71.549550	1172.37	-1638
4	GUIDE	used	1197884536	8.50	3918	1.000	0.069	0.012	0.072	0.113	17.160729	-71.835289	-876.15	-702
5	GUIDE	used	1197884712	8.29	3917	1.000	-0.052	-0.070	0.051	0.083	16.087398	-72.252690	254.38	845
6	GUIDE	used	1197885104	9.36	3915	1.000	0.094	-0.031	0.074	0.123	17.845067	-72.189368	-1668.30	553
7	GUIDE	used	1197885328	7.23	3917	1.000	-0.026	0.015	0.045	0.073	16.283090	-71.733943	123.27	-1029

## 2.4 Star Slots

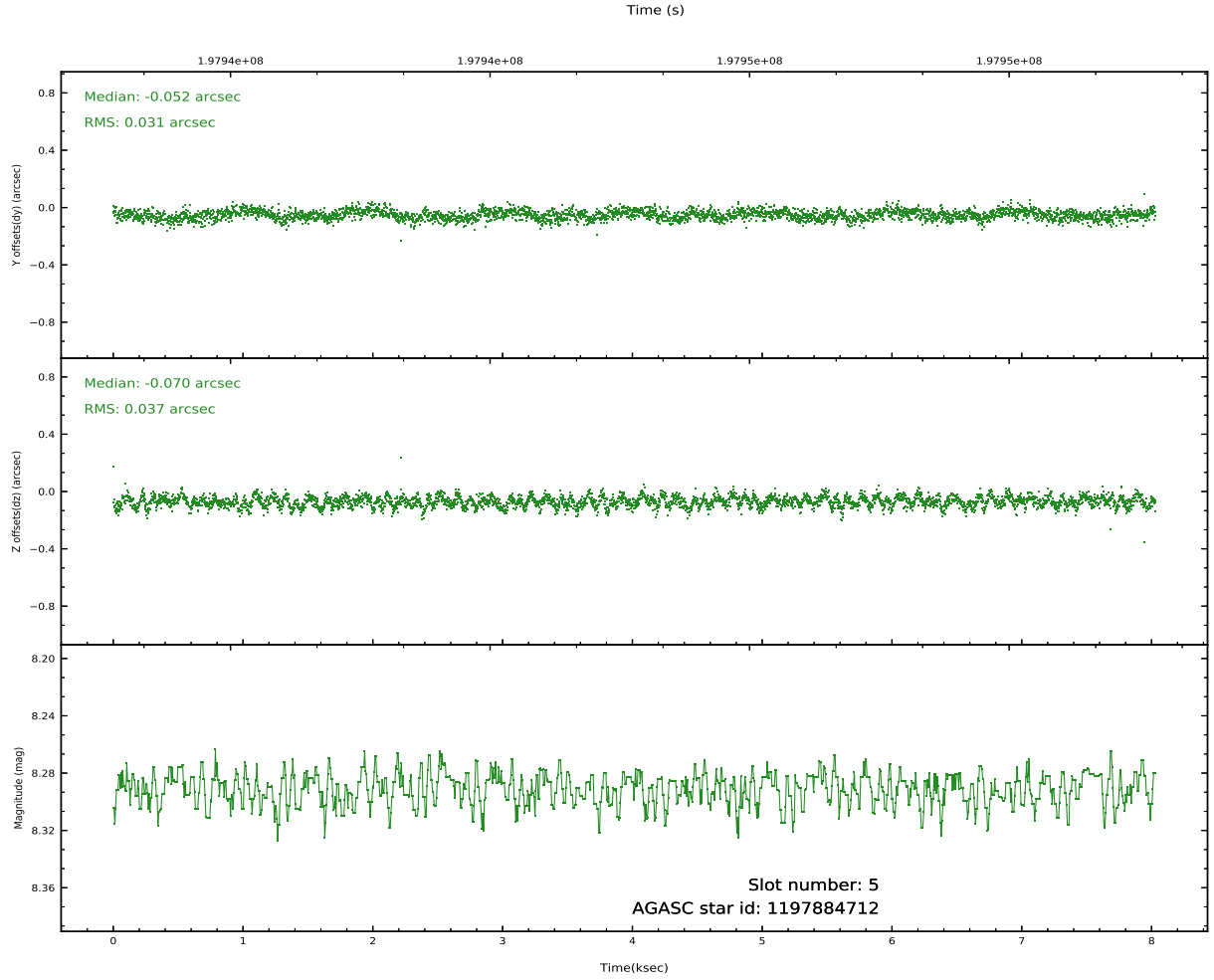
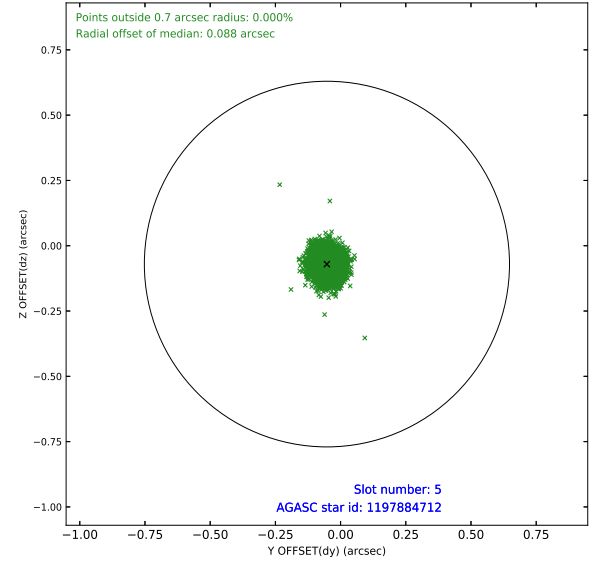
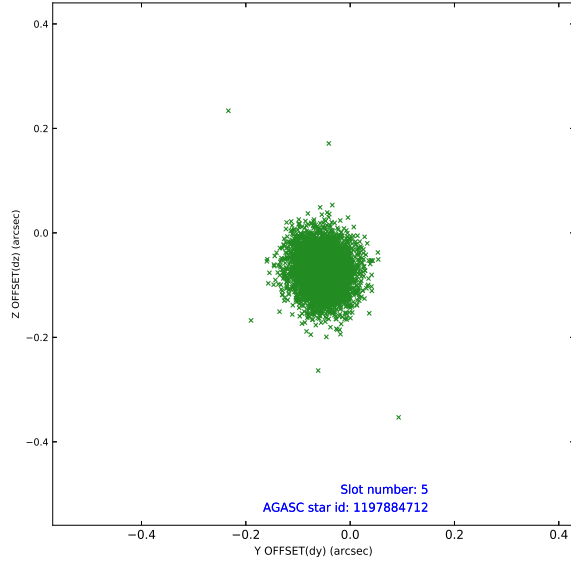
### 2.4.1 Slot 3



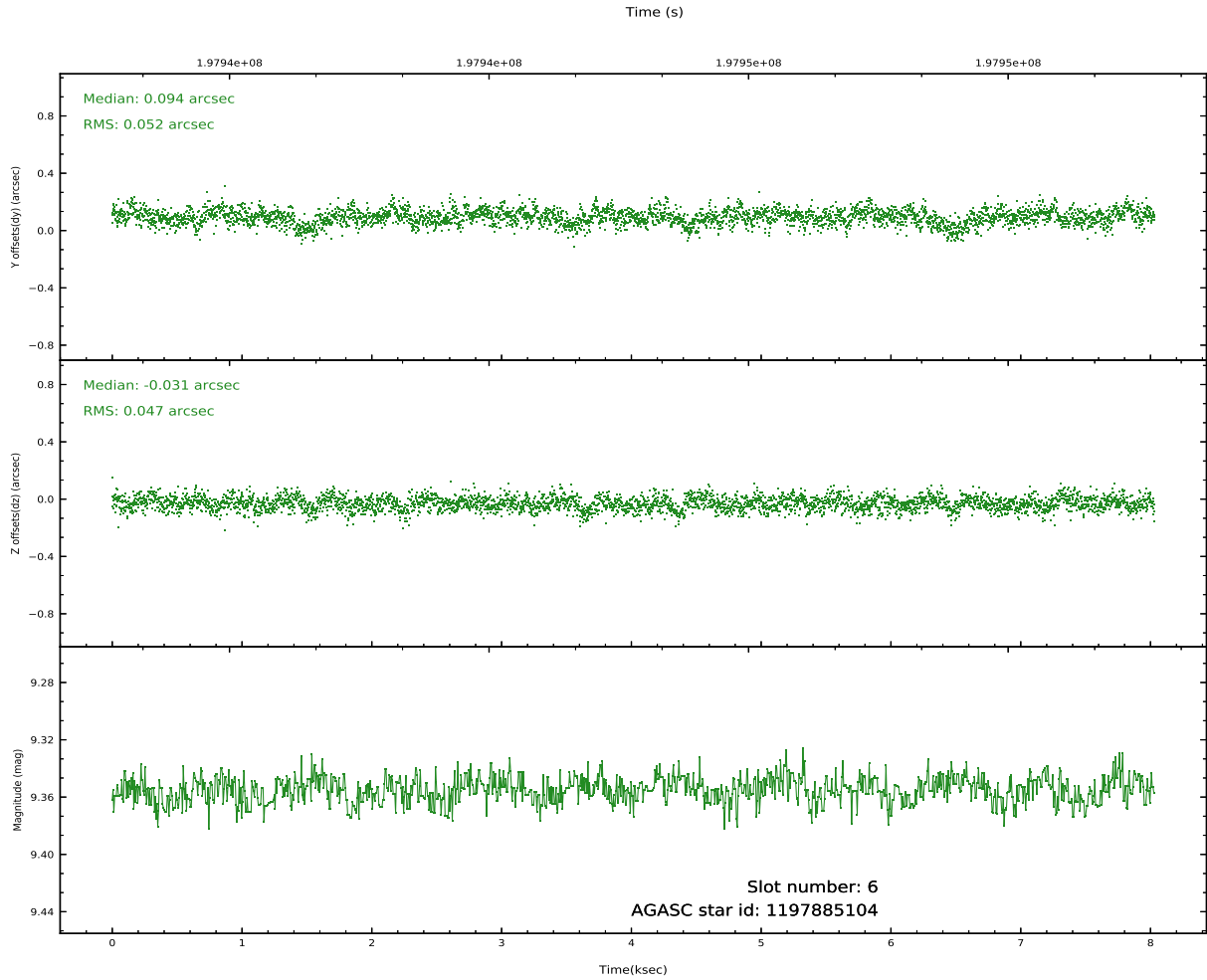
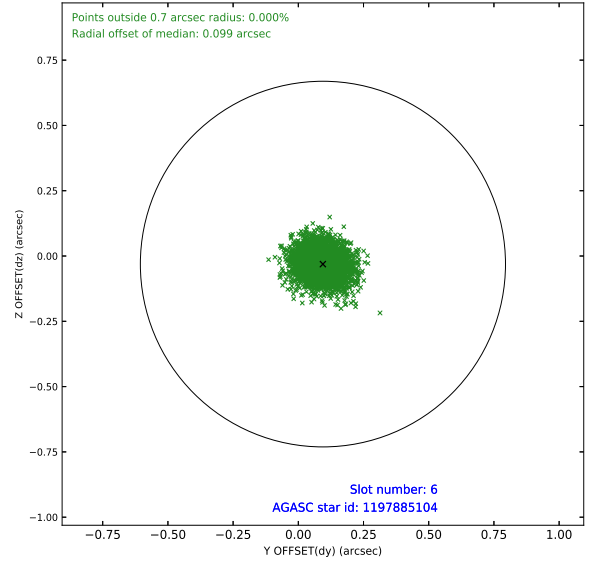
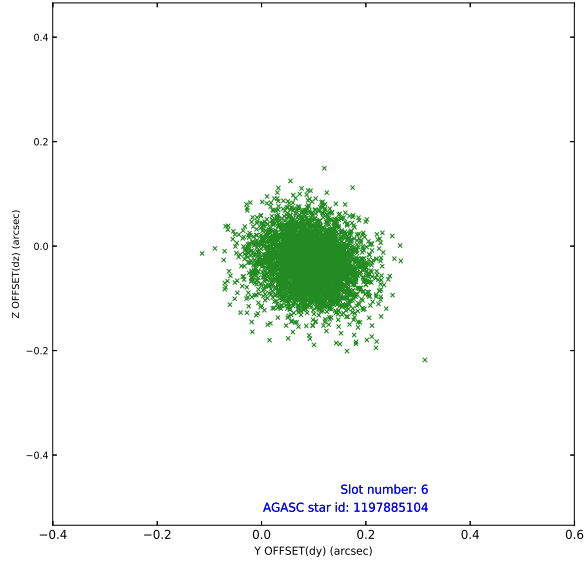
## 2.4.2 Slot 4



### 2.4.3 Slot 5

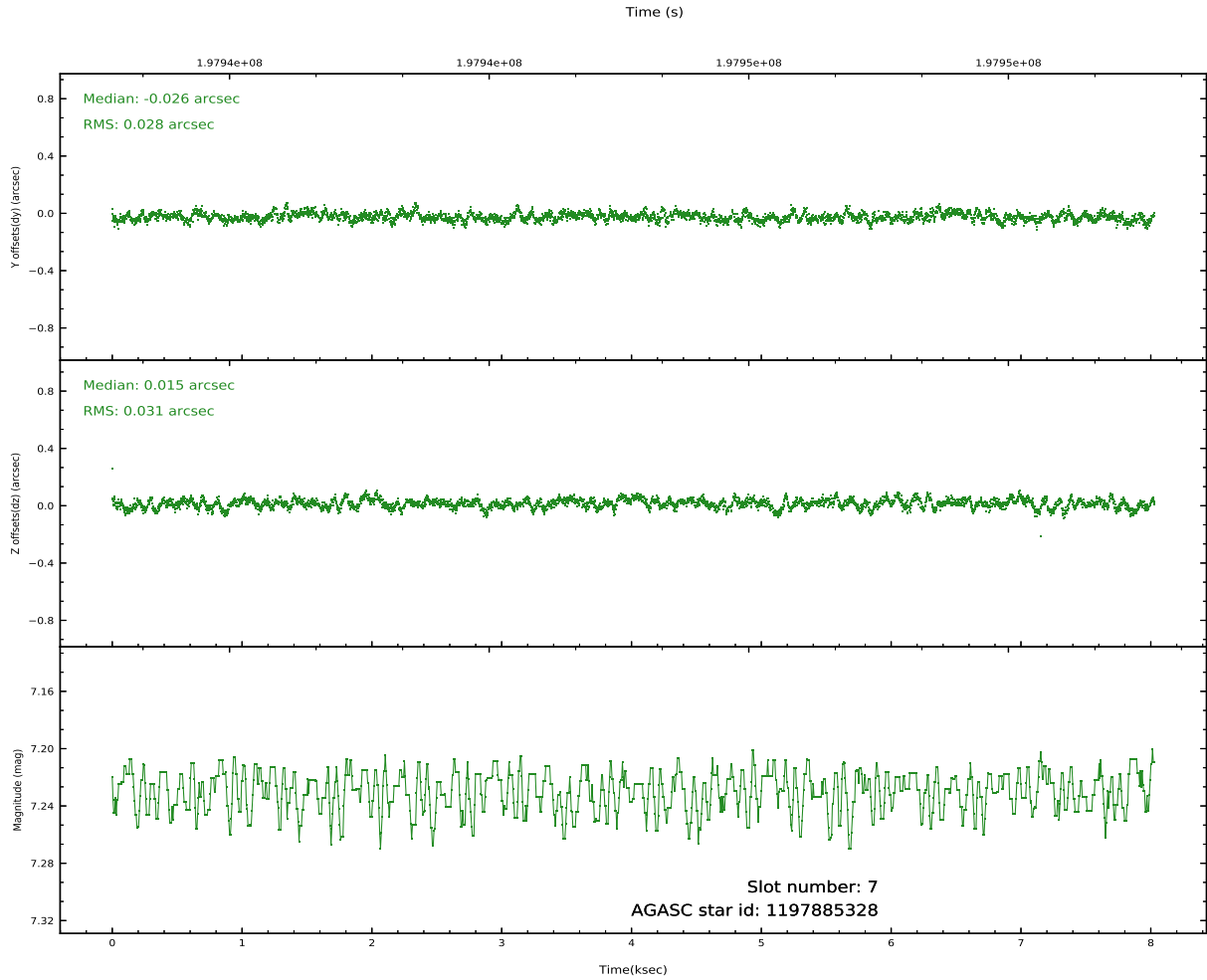
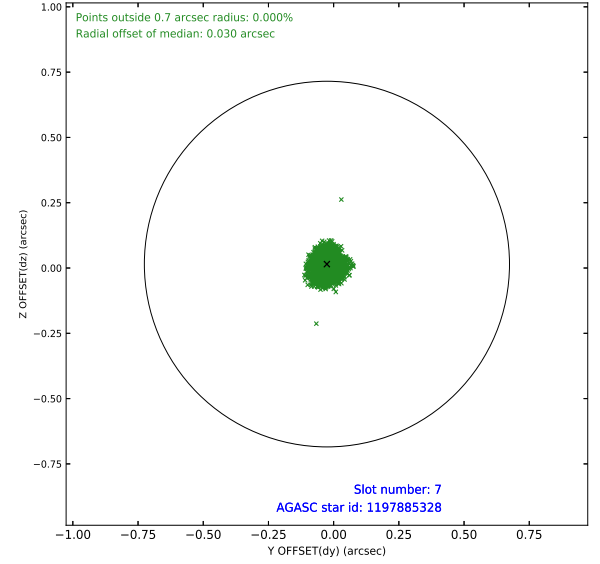
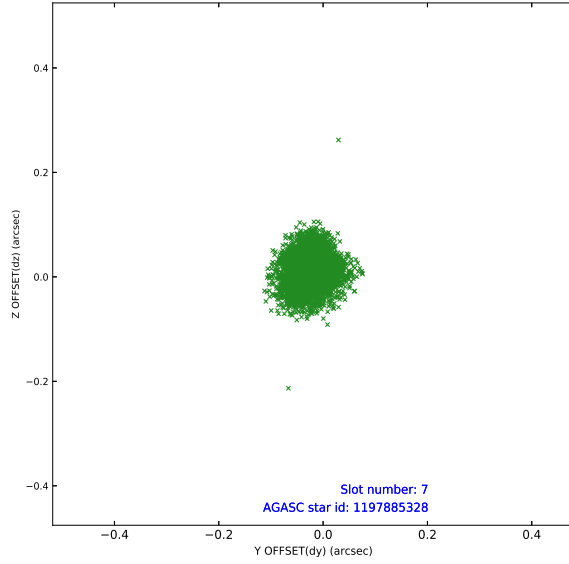


## 2.4.4 Slot 6



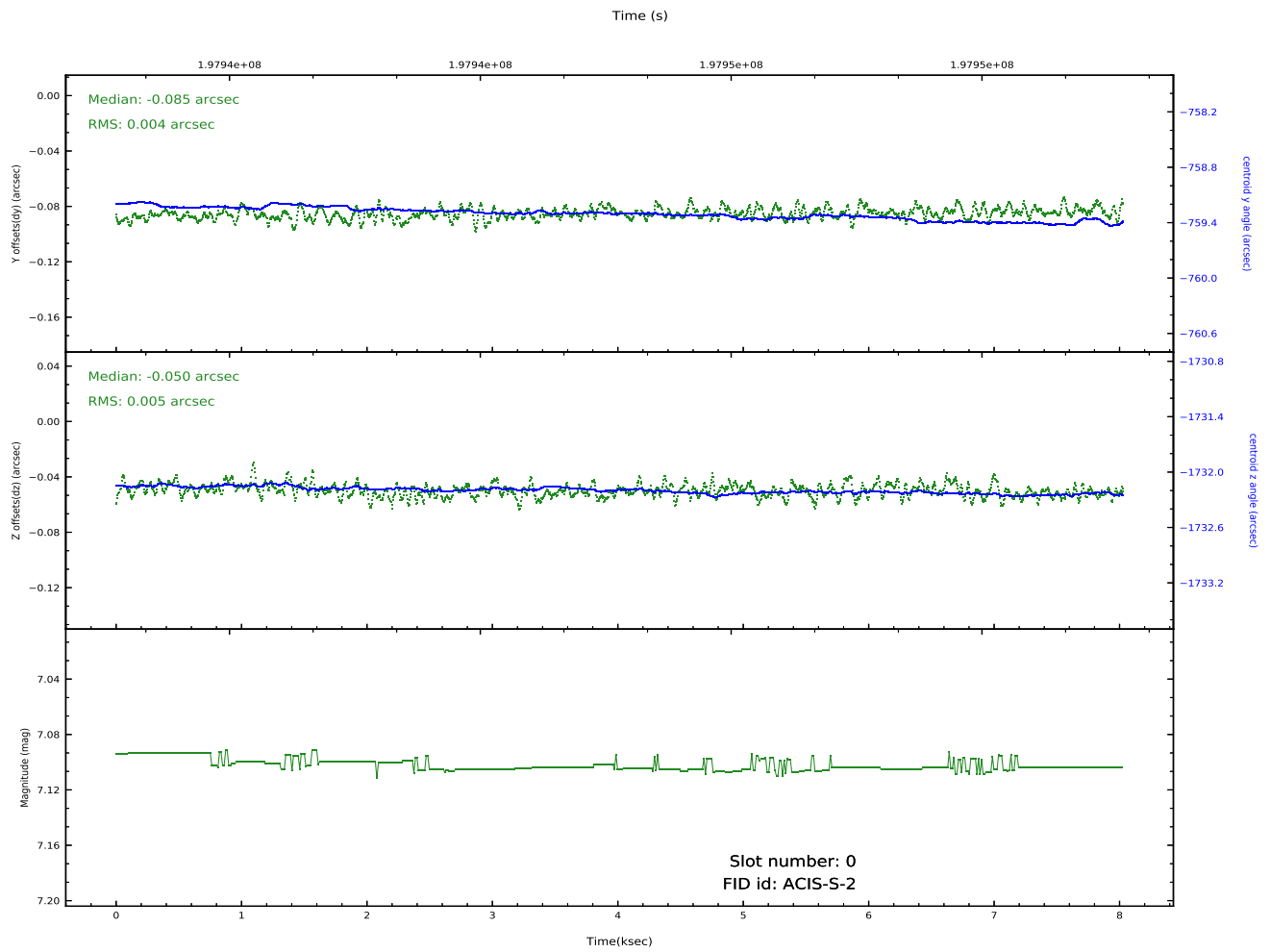
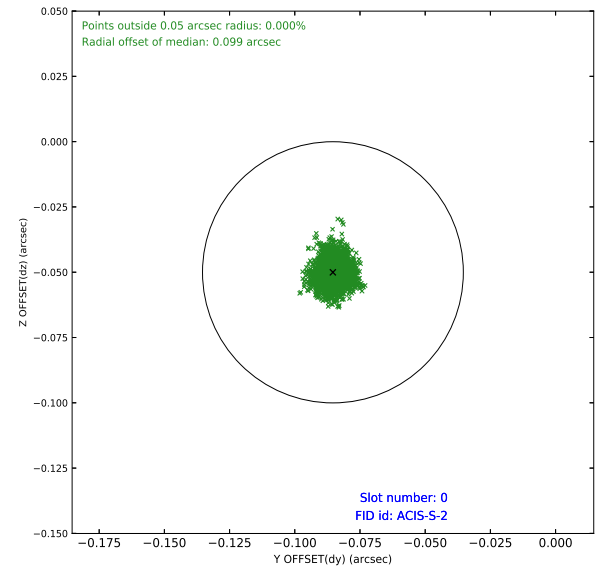
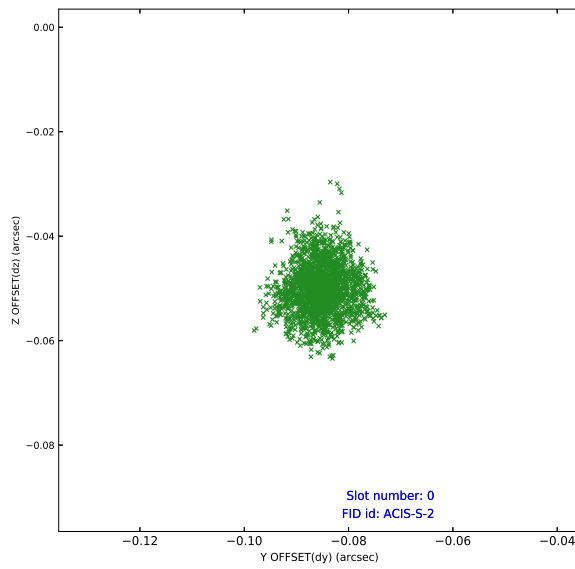


## 2.4.5 Slot 7

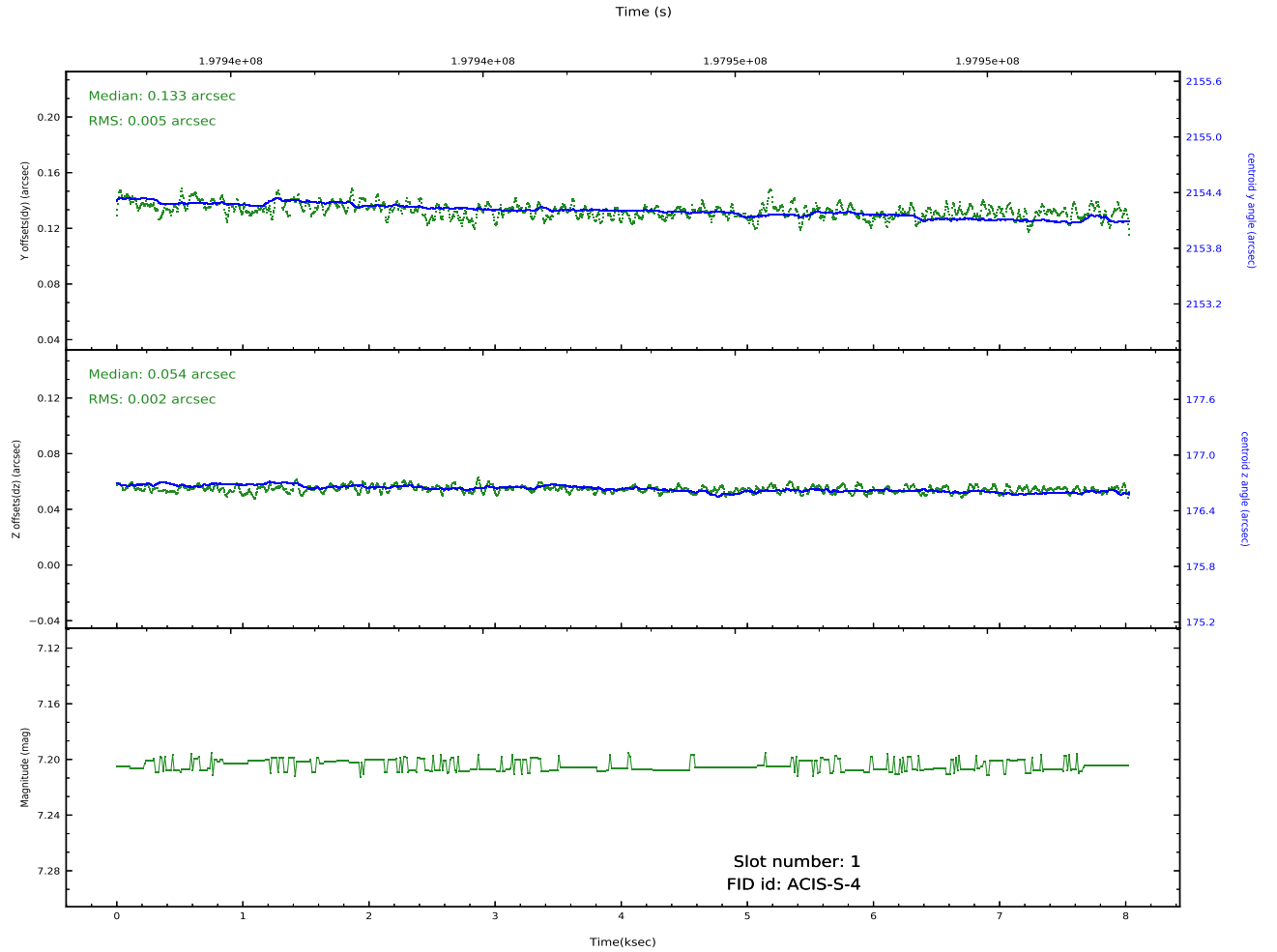
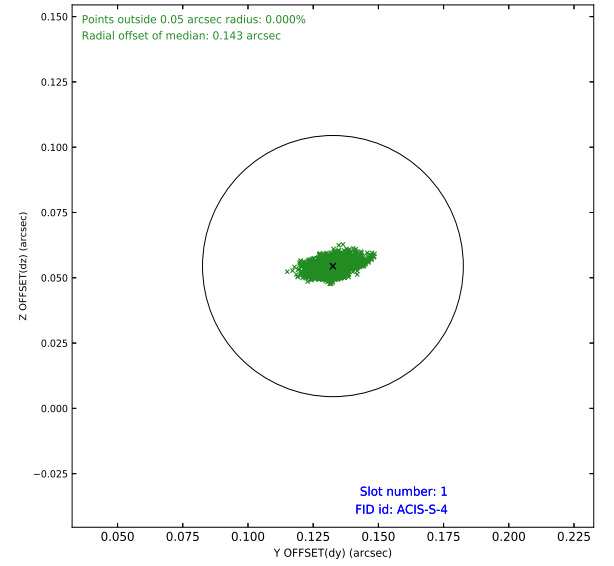
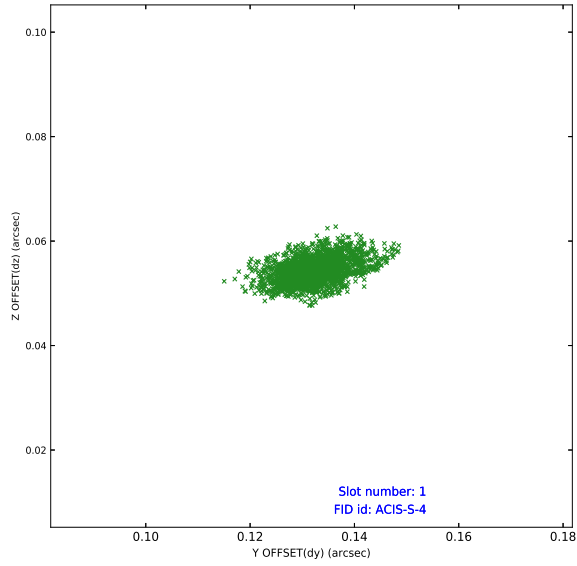


## 2.5 FID Slots

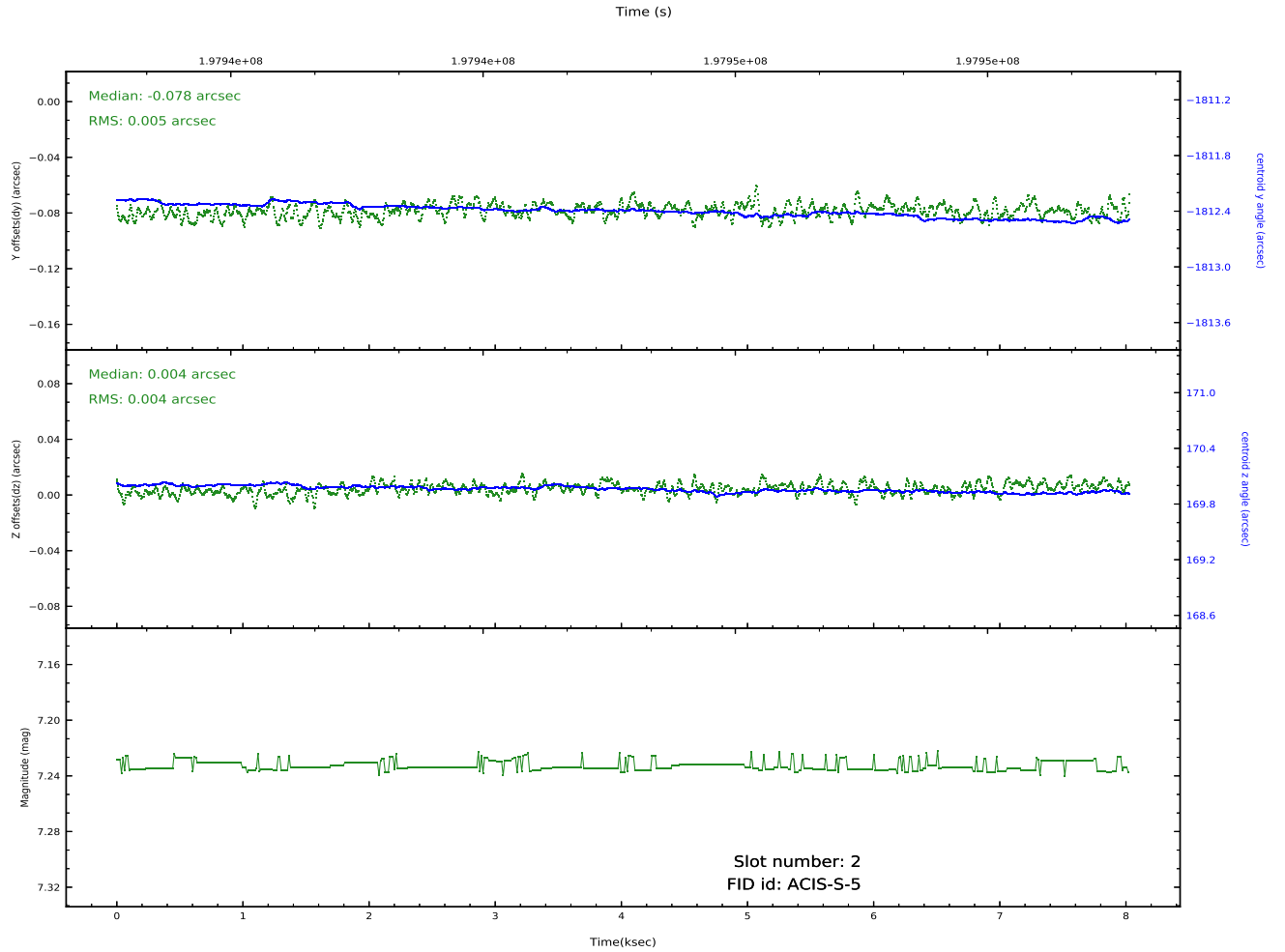
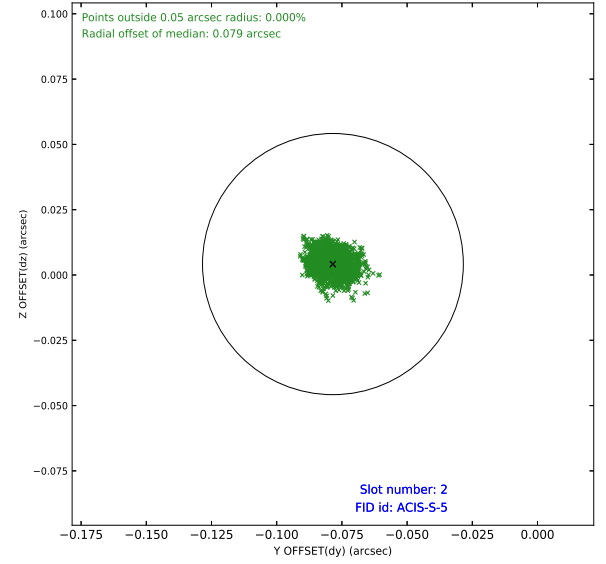
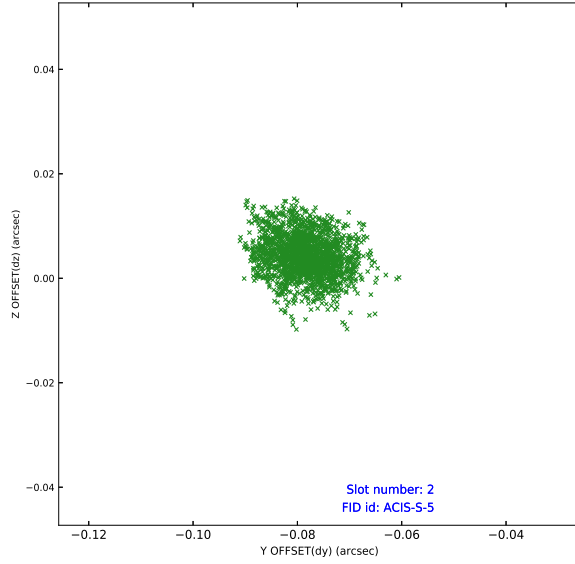
### 2.5.1 Slot 0



## 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)	2020.09.25
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	7.599

### A.2 Comments

Window constraint met.