

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5131 - L2 Version 4  
Chandra X-Ray Center

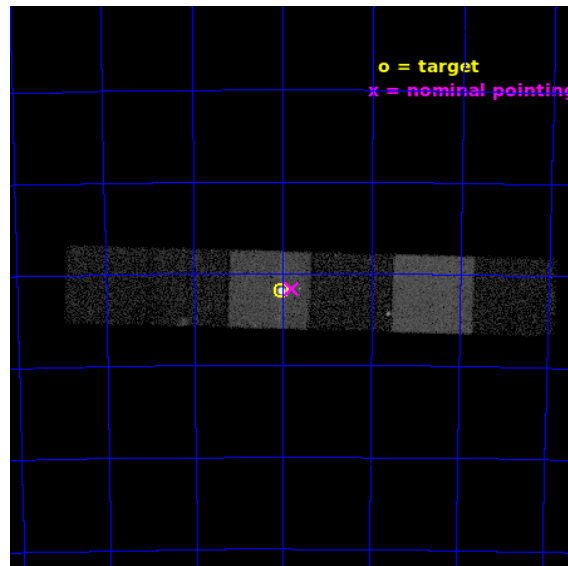
L2 Processing Date : Sep 24 2020

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# 1 Front

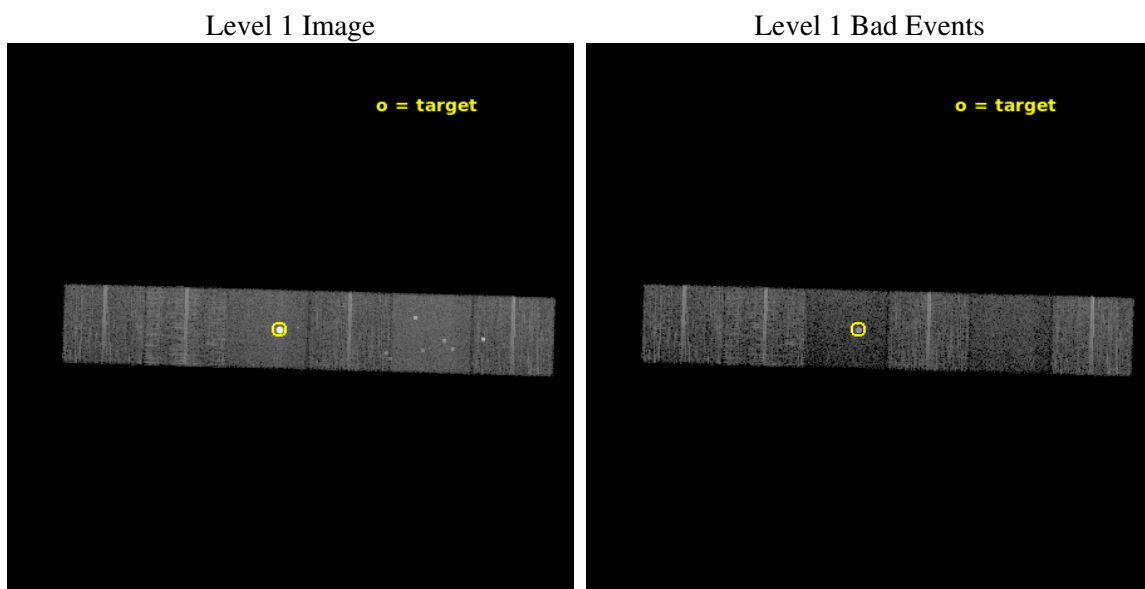
seq_num	590329	Sequence number
obs_id	5131	Observation id
title	AO5B ACIS-S Calibration Observations of E0102-72	Proposal title
observer	CXC Calibration	Principal investigator
object	E0102-72.3	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	16.01	Observer's specified target RA [deg]
dec_targ	-72.032028	Observer's specified target Dec [deg]
ra_nom	15.948509873836	Nominal RA [deg]
dec_nom	-72.02778639926	Nominal Dec [deg]
roll_nom	181.65273446755	Nominal Roll [deg]
revision	4	Processing version of data
ontime	8115.1999697685	Sum of GTIs [s]
livetime	8012.4404213645	Livetime [s]
ontime4	8115.1999697685	Sum of GTIs [s]
ontime5	8115.1999697685	Sum of GTIs [s]
ontime6	8115.1999697685	Sum of GTIs [s]
ontime7	8115.1999697685	Sum of GTIs [s]
ontime8	8115.1999697685	Sum of GTIs [s]
ontime9	8111.9589994848	Sum of GTIs [s]
l2events	117523	Number of level 2 events



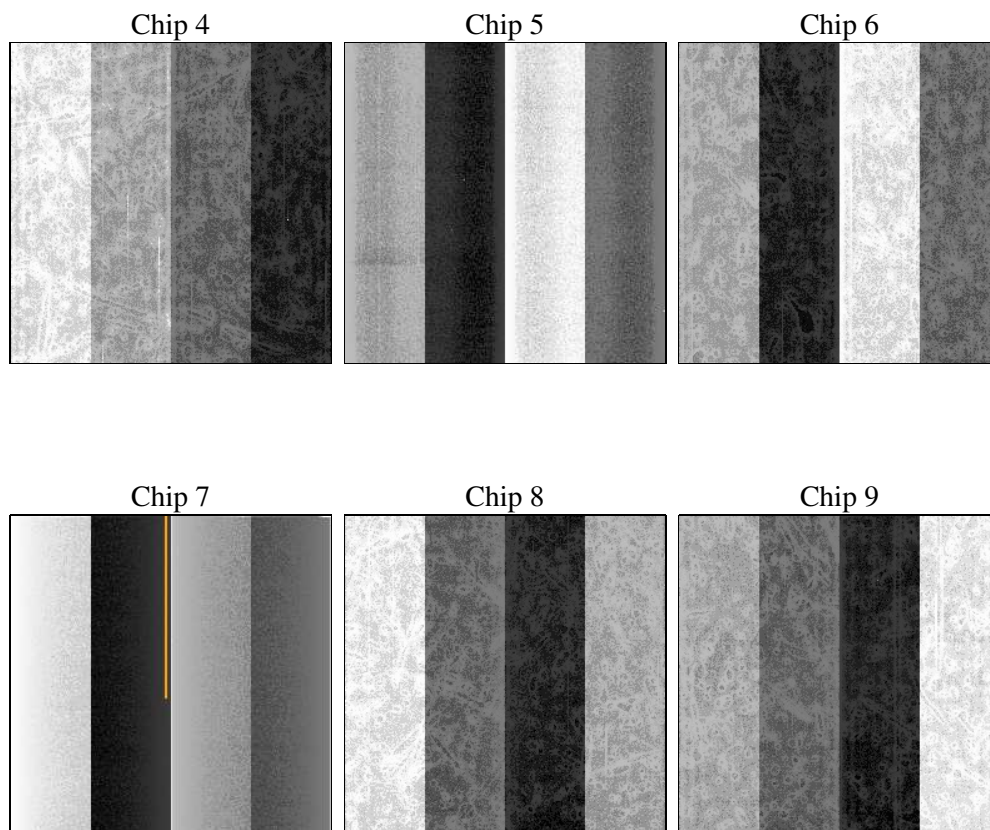
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	8000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	8115.1999697685	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime4	8115.1999697685	Sum of GTIs [s]
date	2020-09-25T01:12:40	Date and time of file creation	ontime5	8115.1999697685	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	8115.1999697685	Sum of GTIs [s]
			ontime7	8115.1999697685	Sum of GTIs [s]
			ontime8	8115.1999697685	Sum of GTIs [s]
			ontime9	8111.9589994848	Sum of GTIs [s]
			l1events	367020	Number of level 1 events

### 2.1.4 Events

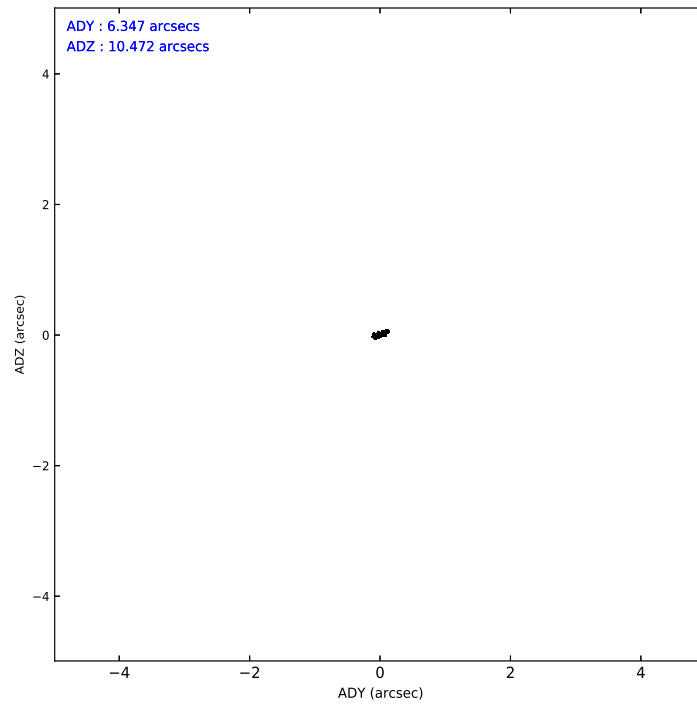
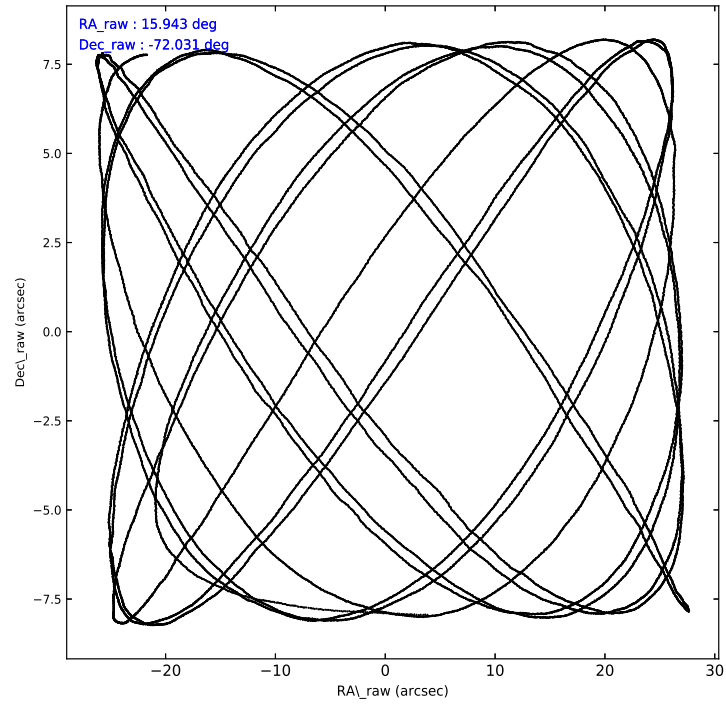
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	56205	57829	47199	103586	57690	44511	grade 0 events	4410	5808	2292	23760	3659	1734
rejected events	49379	28317	42126	26729	45503	40200		7%	10%	4%	22%	6%	3%
rejected %	87%	48%	89%	25%	78%	90%	grade 1 events	44	119	28	463	41	22
								0%	0%	0%	0%	0%	0%
							grade 2 events	1162	8529	1109	20125	3103	947
								2%	14%	2%	19%	5%	2%
							grade 3 events	529	1519	533	9040	1381	542
								0%	2%	1%	8%	2%	1%
							grade 4 events	488	1439	546	9023	1250	530
								0%	2%	1%	8%	2%	1%
							grade 5 events	1553	4694	1583	5650	2303	1704
								2%	8%	3%	5%	3%	3%
							grade 6 events	745	14607	910	18017	3908	956
								1%	25%	1%	17%	6%	2%
							grade 7 events	47274	21114	40198	17508	42045	38076
								84%	36%	85%	16%	72%	85%

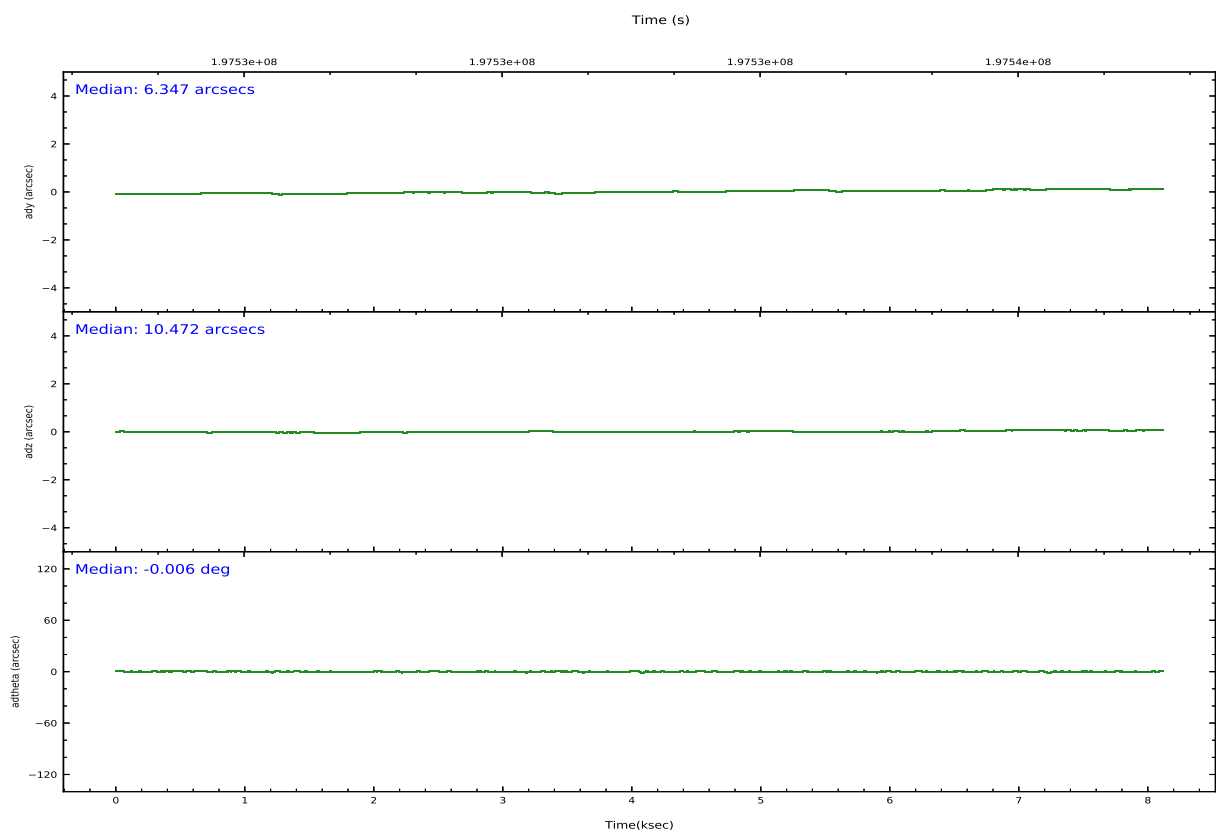
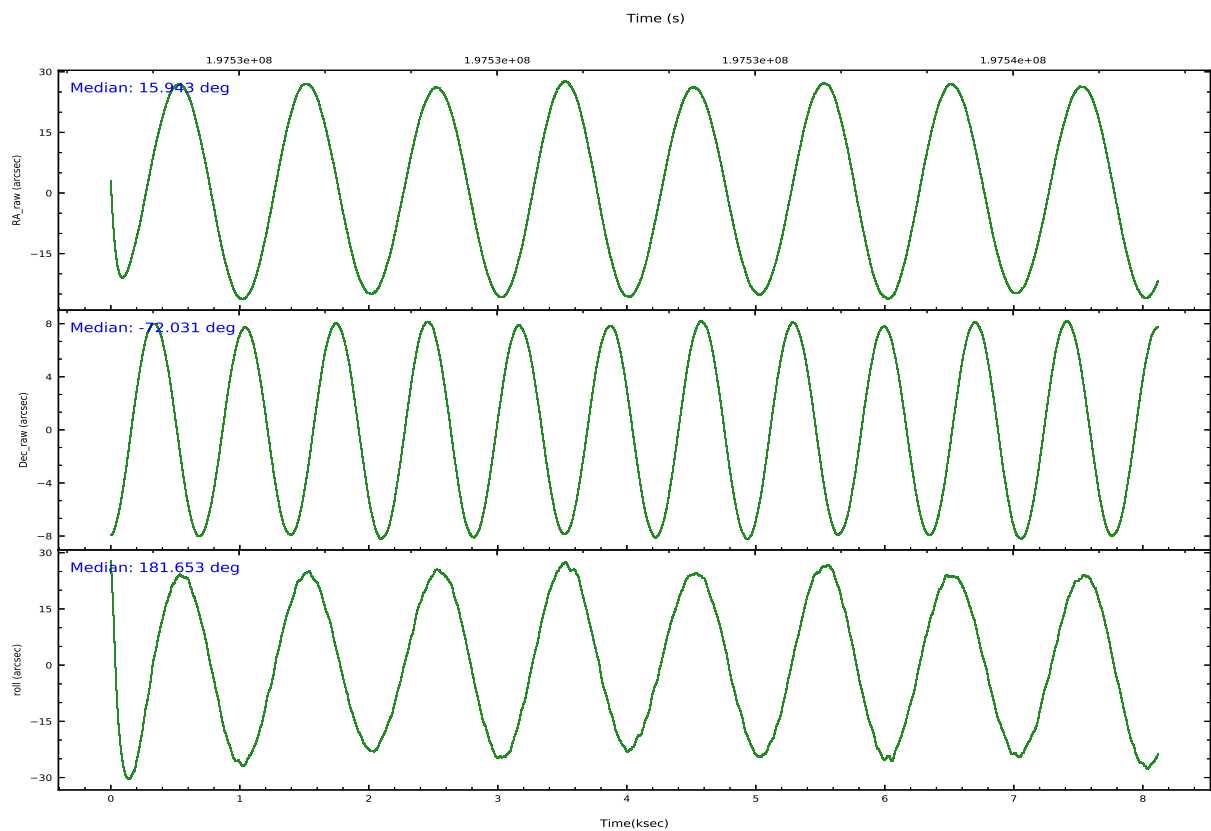


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-456789	ACIS-456789	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	16.017243	15.948509873836	Subarray requested	NONE	NONE
[deg] Pointing Dec	-72.016304	-72.02778639925999	Alternating exposures requested	N	N
[deg] Pointing Roll	181.569356	181.65273446755	[s] Primary exposure time	0.000000	3.2
[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)	197529125.184000	197527772.37032			
Observation start date	2004-04-05T05:11:01	2004-04-05T04:49:32			
[s] Observation end time (MET)	197537125.184000	197537596.99576			
Observation end date	2004-04-05T07:24:21	2004-04-05T07:33:16			
Read mode	TIMED	TIMED			

## 2.3 Aspect



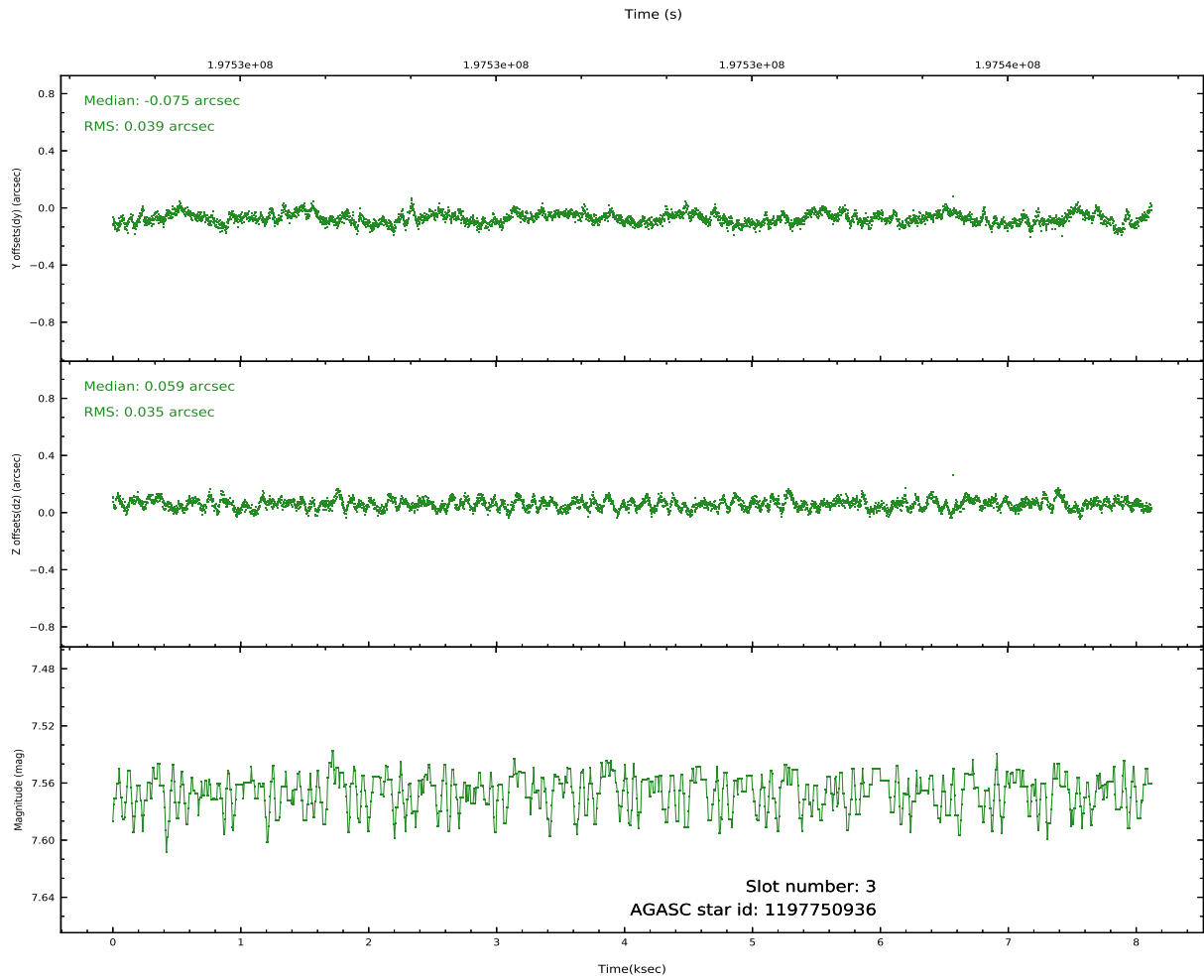
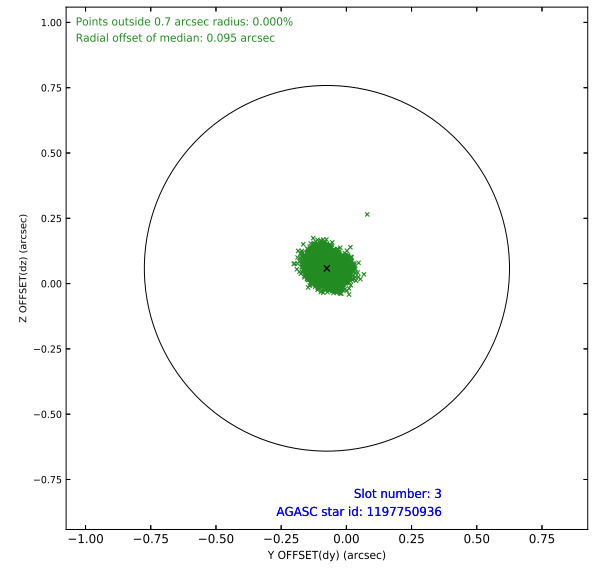
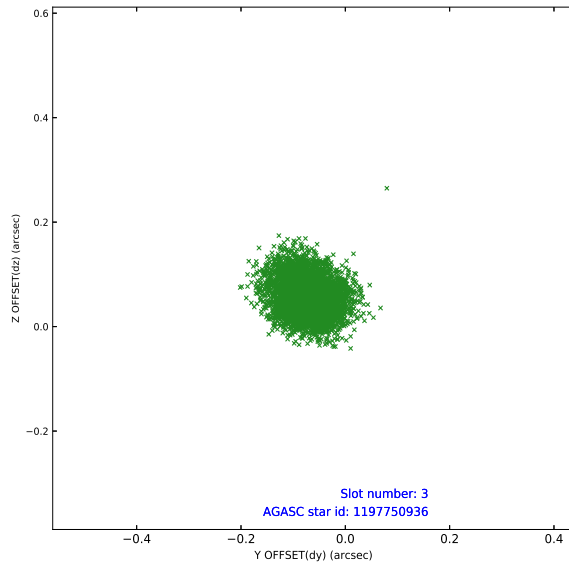


Slot Statistics

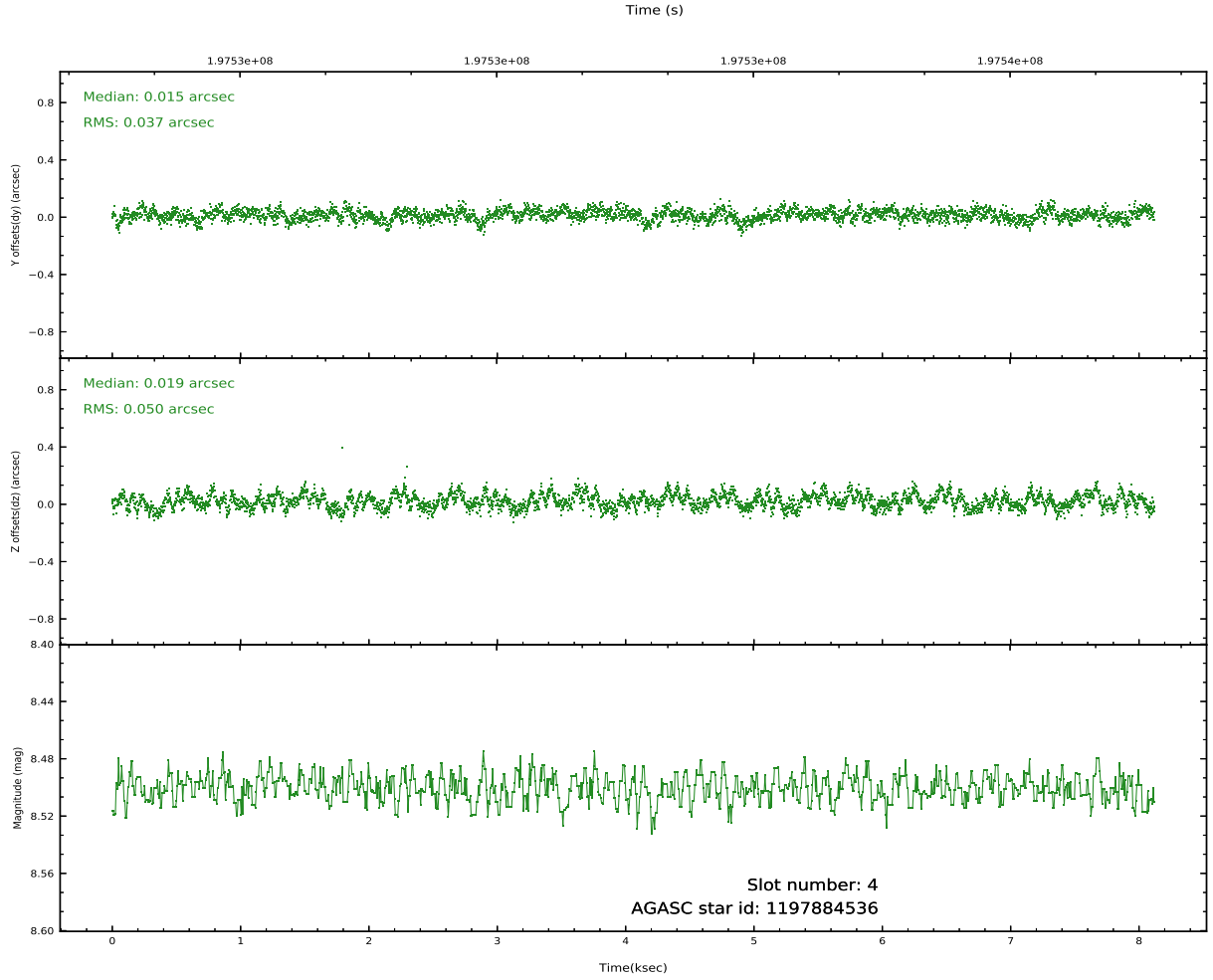
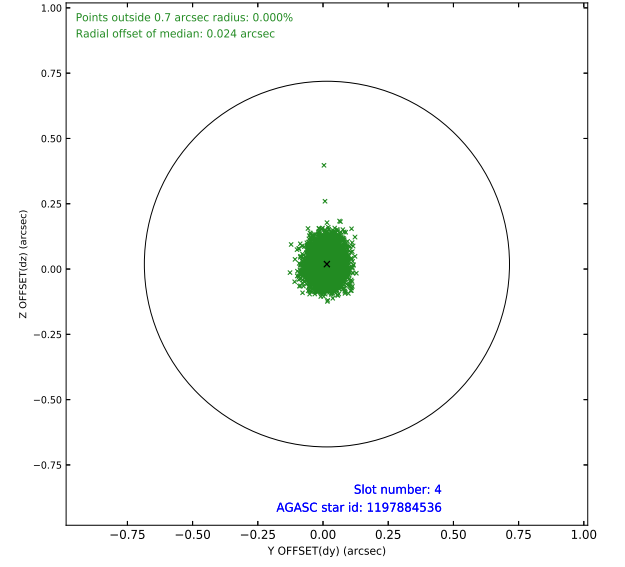
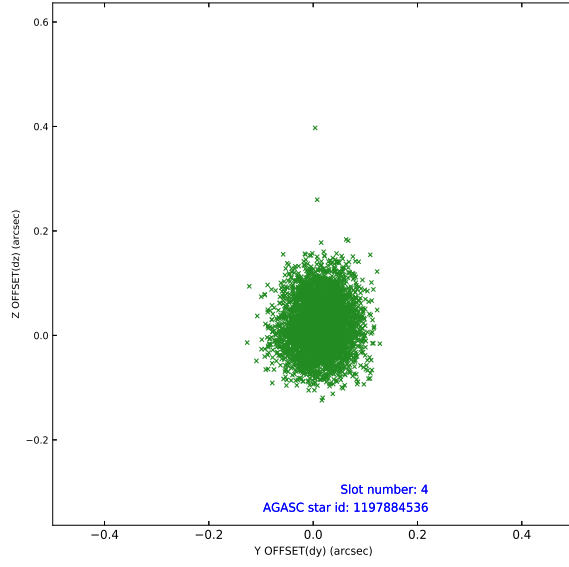
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.10	1981	1.000	-0.089	-0.051	0.007	0.011	0.000000	0.000000	-759.12	-1731
1	FID		ACIS-S-4	7.21	1981	1.000	0.139	0.057	0.008	0.014	0.000000	0.000000	2154.01	176
2	FID		ACIS-S-5	7.23	1981	1.000	-0.082	0.003	0.008	0.013	0.000000	0.000000	-1811.13	170
3	GUIDE	used	1197750936	7.56	3962	1.000	-0.075	0.059	0.057	0.089	15.387940	-71.549550	671.14	-1694
4	GUIDE	used	1197884536	8.50	3959	1.000	0.015	0.019	0.066	0.107	17.160729	-71.835289	-1299.83	-604
5	GUIDE	used	1197884712	8.31	3962	1.000	-0.022	-0.023	0.059	0.096	16.087398	-72.252690	-53.95	853
6	GUIDE	used	1197885104	9.35	3959	1.000	0.061	-0.052	0.087	0.141	17.845067	-72.189368	-1993.42	708
7	GUIDE	used	1197885328	7.24	3961	1.000	0.023	-0.005	0.053	0.081	16.283090	-71.733943	-328.26	-1006

## 2.4 Star Slots

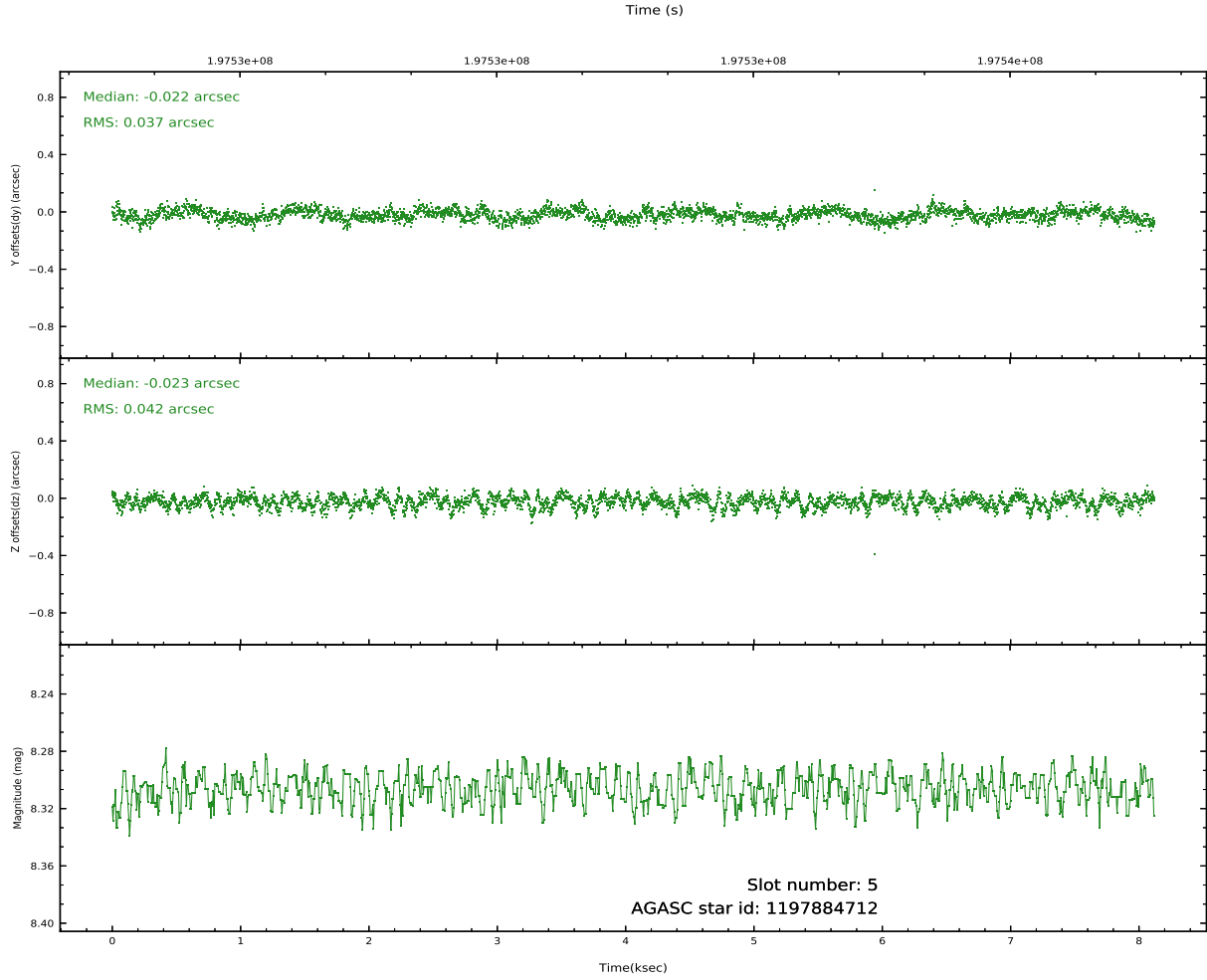
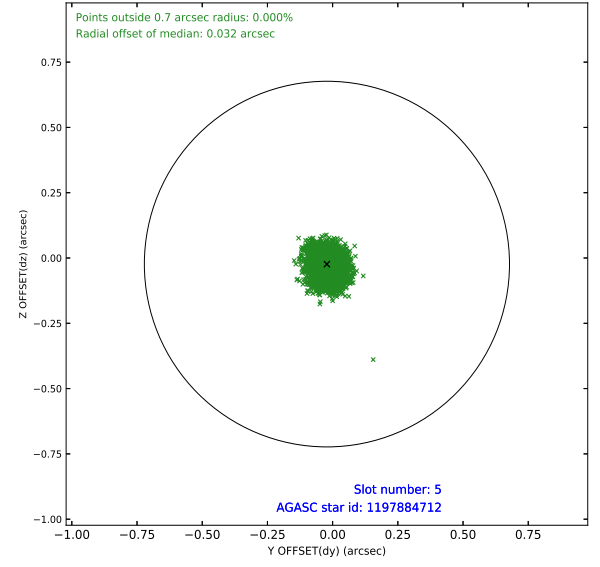
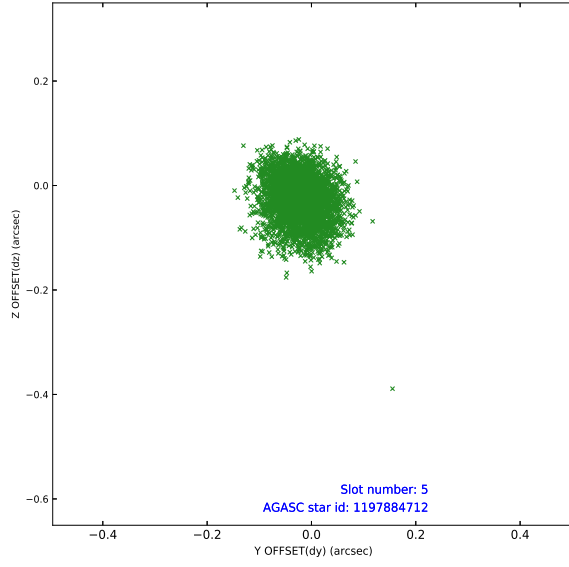
### 2.4.1 Slot 3



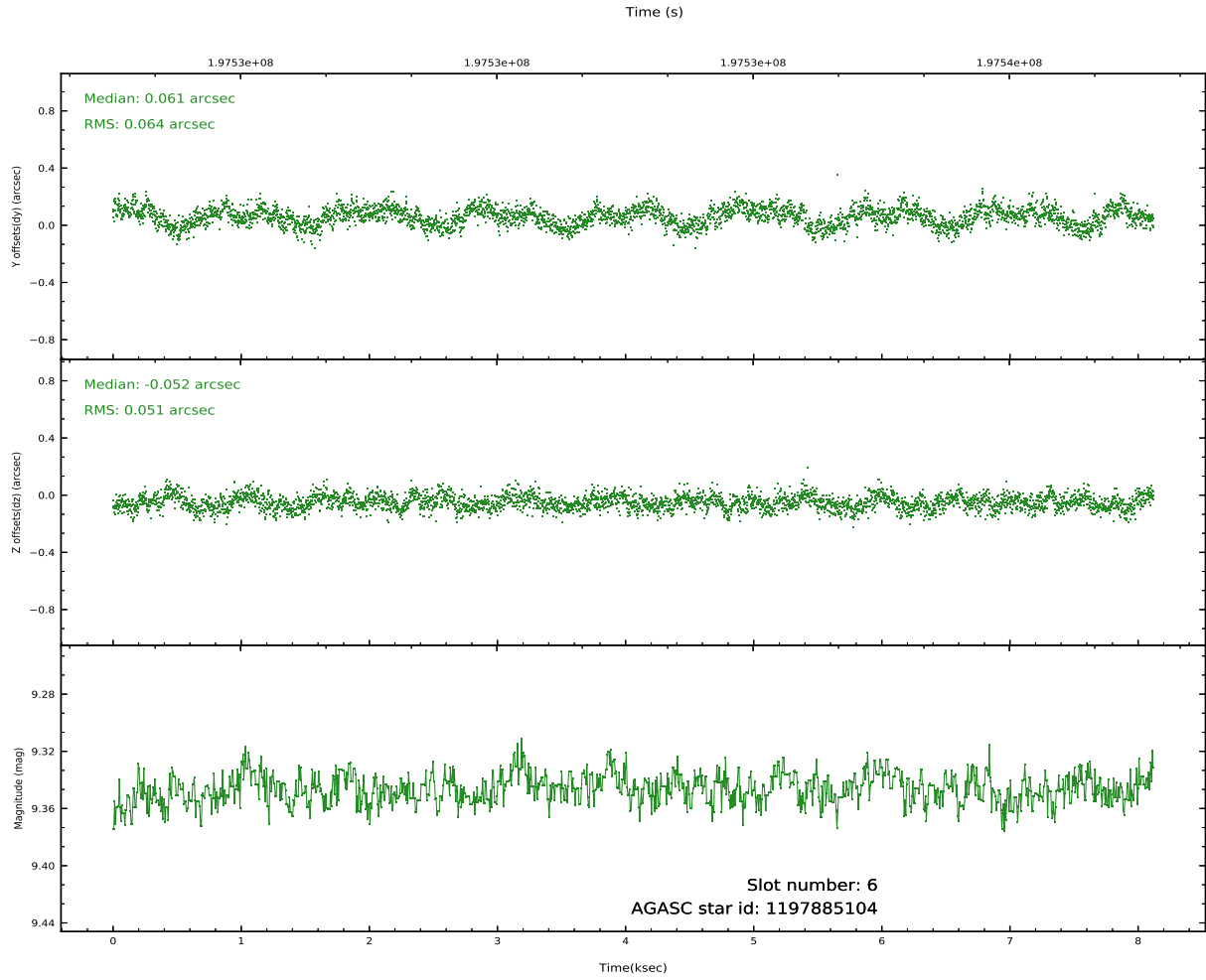
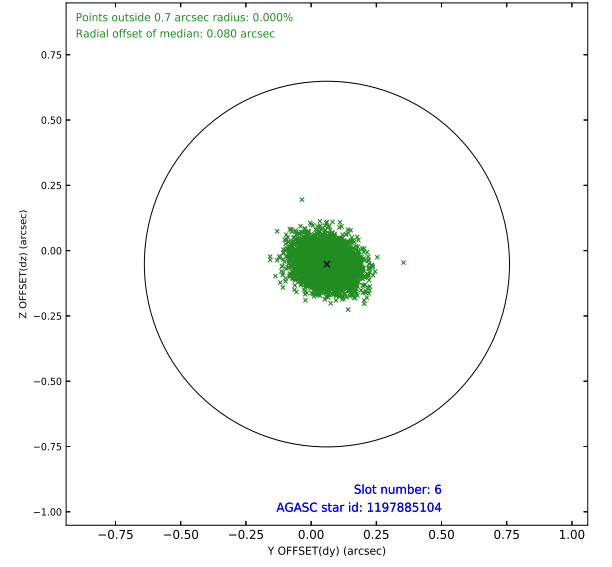
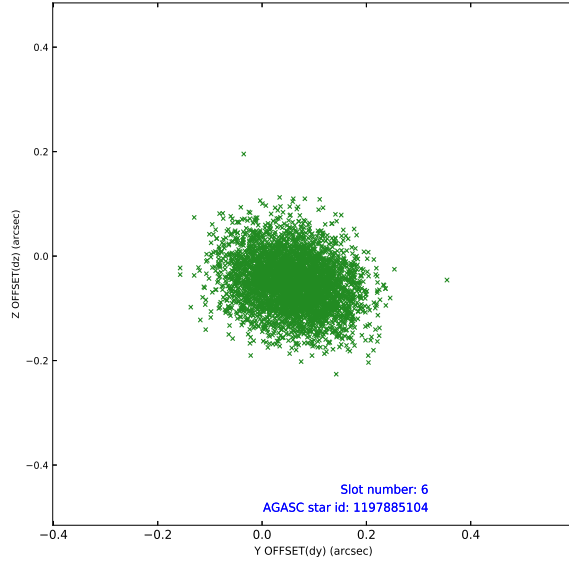
## 2.4.2 Slot 4



### 2.4.3 Slot 5

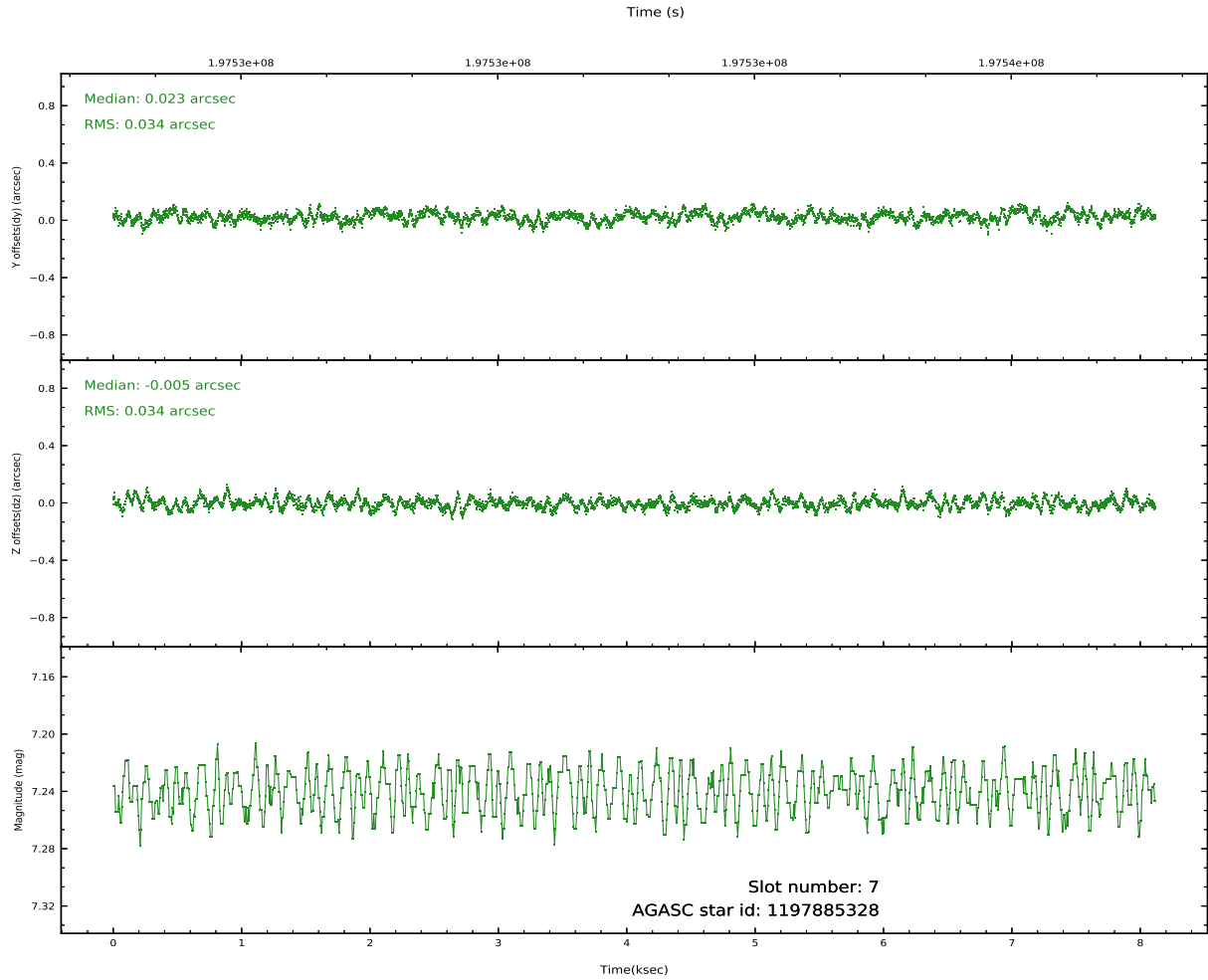
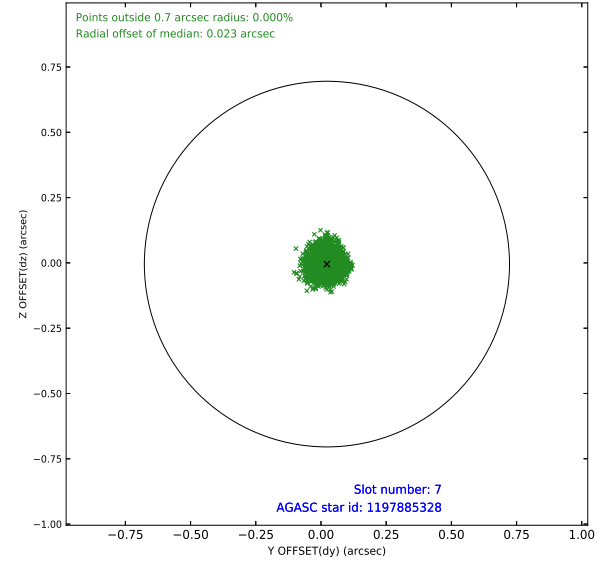
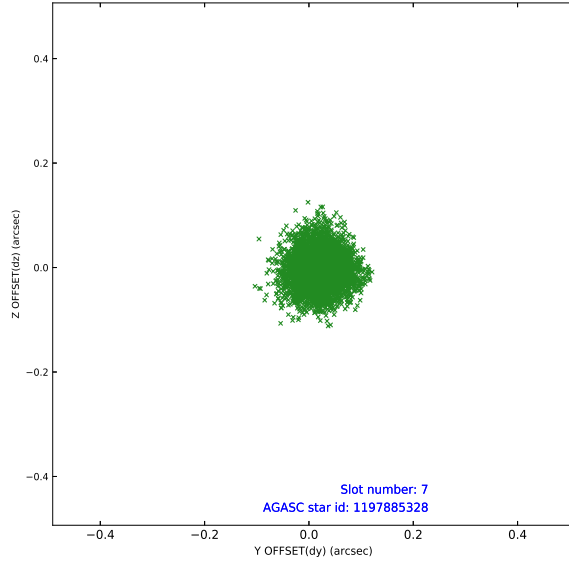


## 2.4.4 Slot 6



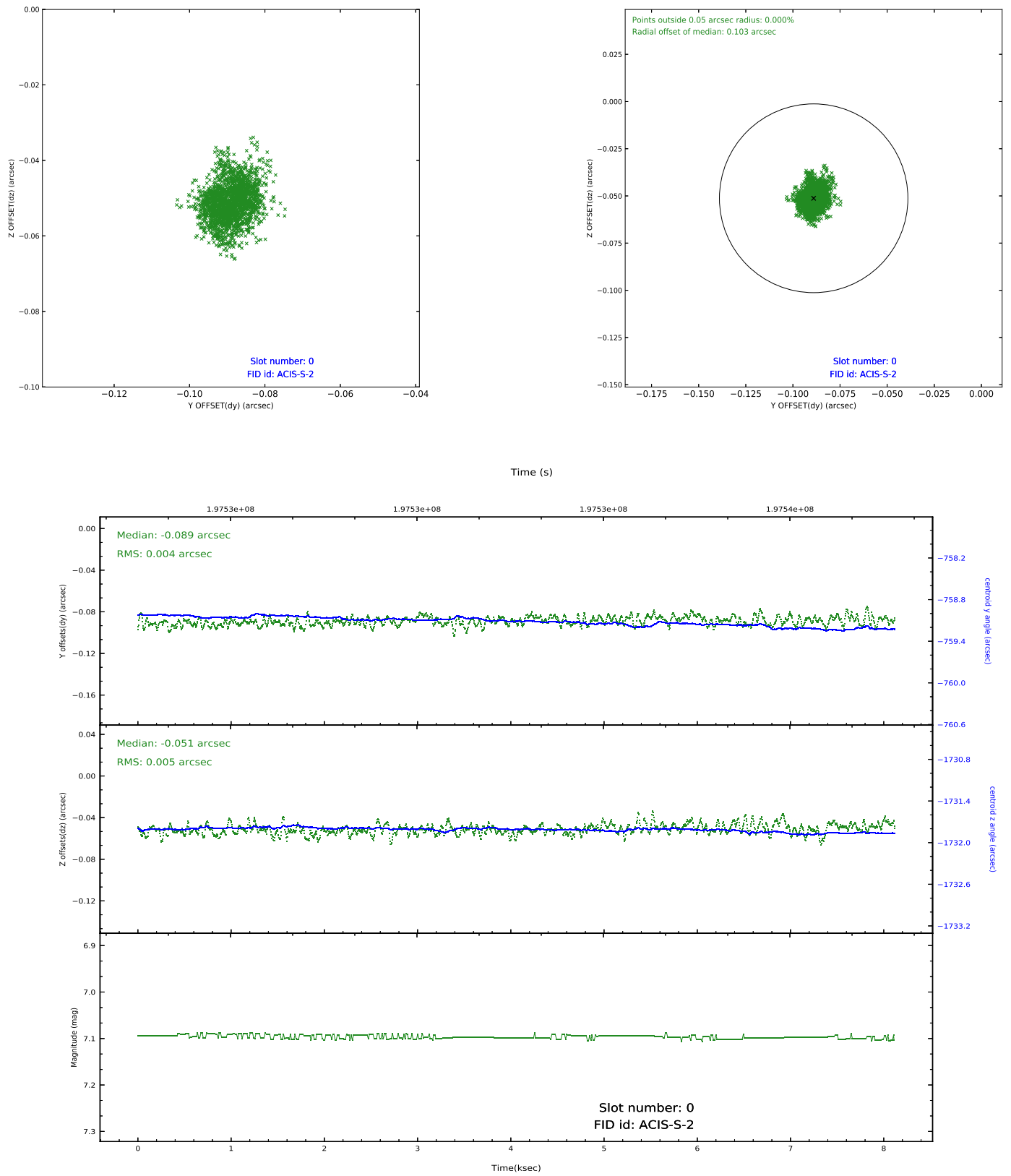


## 2.4.5 Slot 7

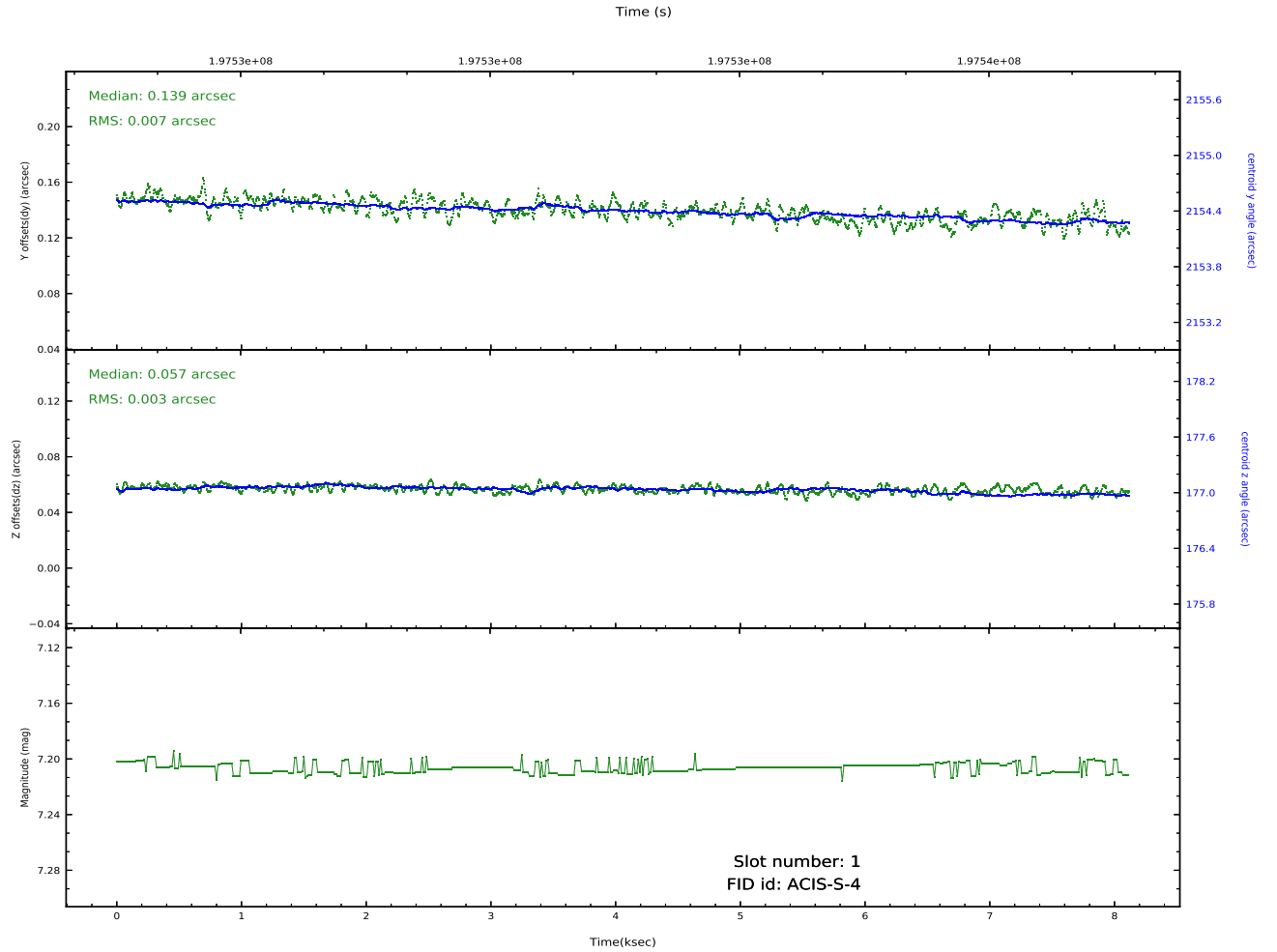
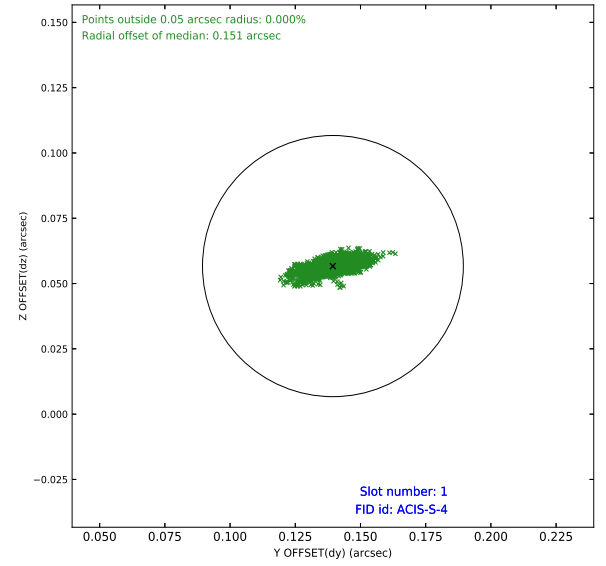
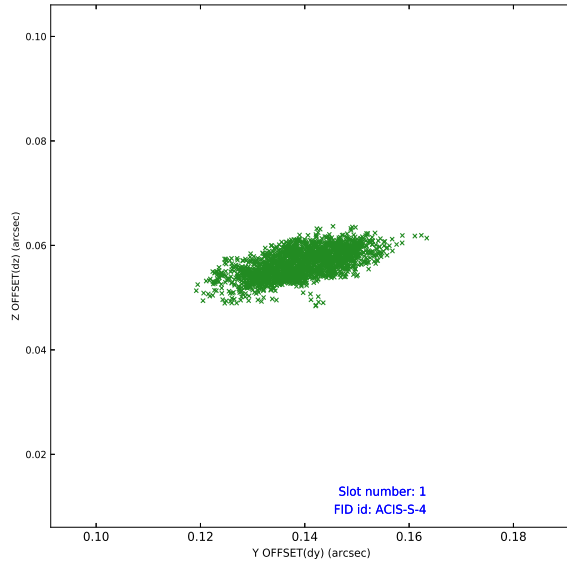


## 2.5 FID Slots

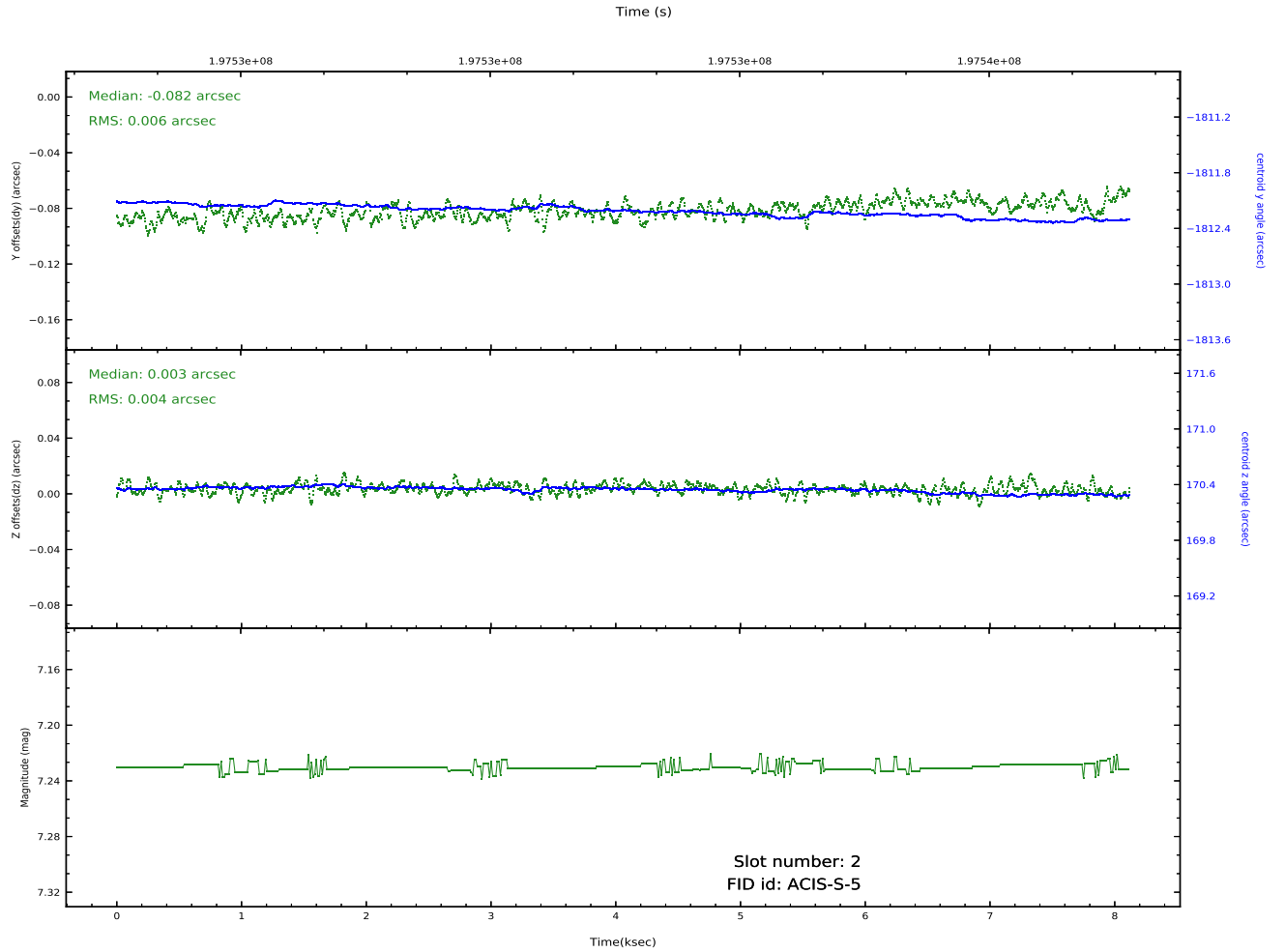
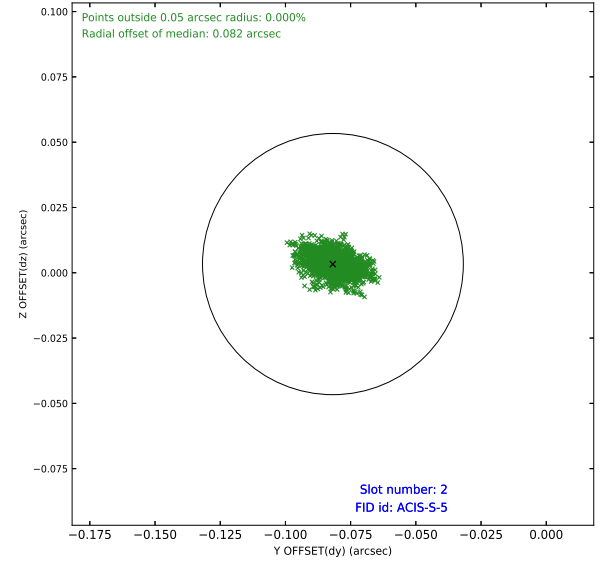
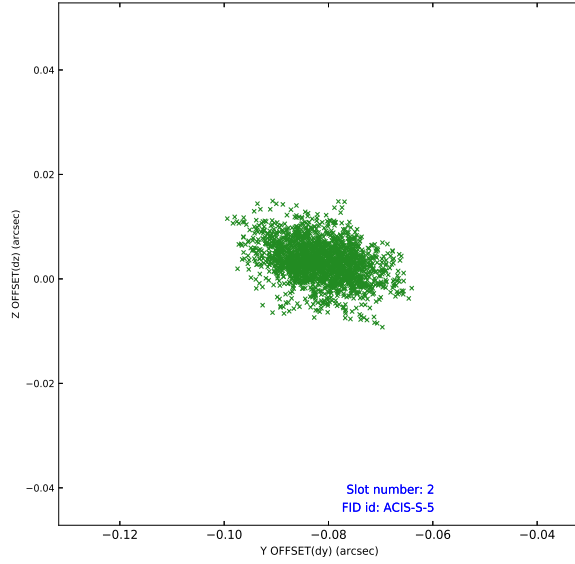
### 2.5.1 Slot 0



## 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	8.115

### A.2 Comments

Window preference met.