

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 21007 - L2 Version 2  
Chandra X-Ray Center

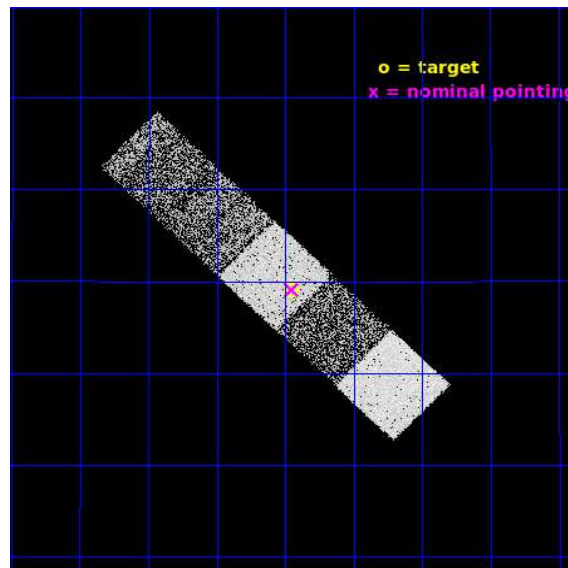
L2 Processing Date : Oct 26 2020

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# 1 Front

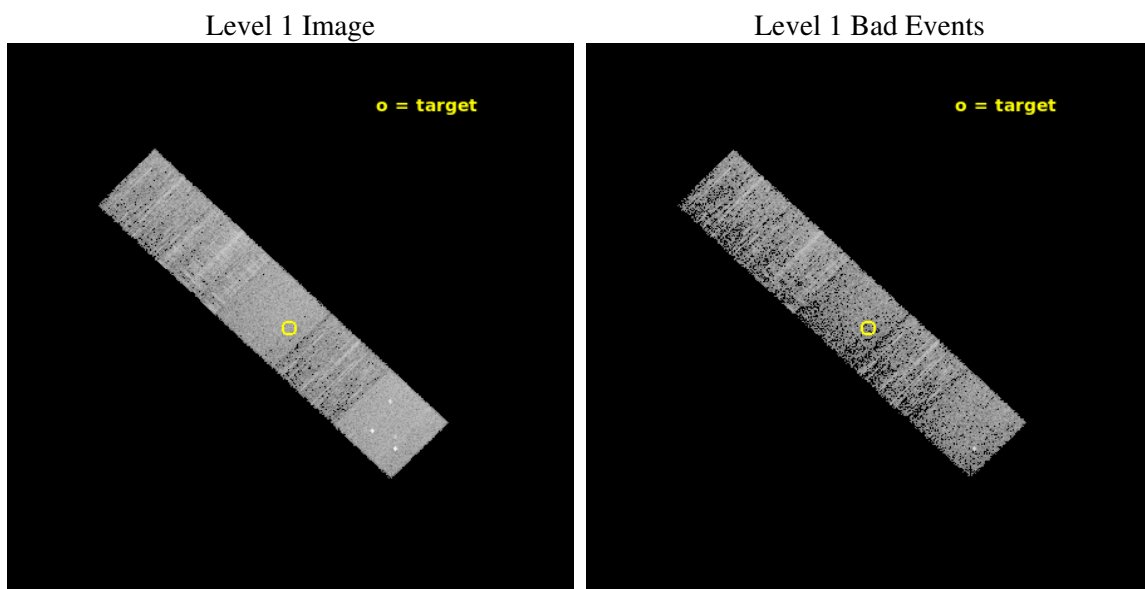
seq_num	703648	Sequence number
obs_id	21007	Observation id
title	LOW SURFACE BRIGHTNESS GALAXIES AND THE BLACK HOLE OCCUPATION FRACTION	Proposal title
observer	Elena Gallo	Principal investigator
object	CGCG 098-132	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	184.36375	Observer's specified target RA [deg]
dec_targ	17.650528	Observer's specified target Dec [deg]
ra_nom	184.36300367035	Nominal RA [deg]
dec_nom	17.651649116586	Nominal Dec [deg]
roll_nom	224.15581096513	Nominal Roll [deg]
revision	2	Processing version of data
ontime	3253.7647378445	Sum of GTIs [s]
livetime	3211.2519061578	Livetime [s]
ontime5	3253.7236979008	Sum of GTIs [s]
ontime6	3253.6826578379	Sum of GTIs [s]
ontime7	3253.7647378445	Sum of GTIs [s]
ontime8	3253.6416178942	Sum of GTIs [s]
ontime9	3253.6005778313	Sum of GTIs [s]
l2events	39377	Number of level 2 events



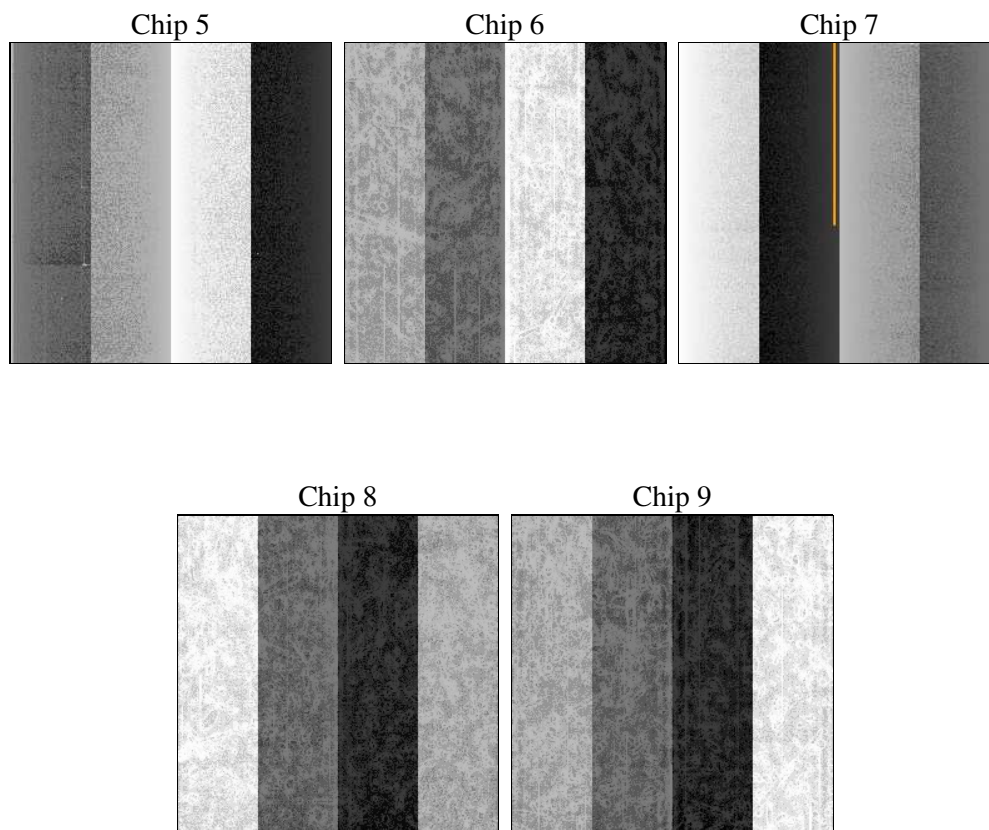
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	3200.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	3253.7647378445	Sum of GTIs [s]
caldsver	4.9.3	&#160	ontime5	3253.7236979008	Sum of GTIs [s]
date	2020-10-26T07:28:38	Date and time of file creation	ontime6	3253.6826578379	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	3253.7647378445	Sum of GTIs [s]
			ontime8	3253.6416178942	Sum of GTIs [s]
			ontime9	3253.6005778313	Sum of GTIs [s]
			l1events	156831	Number of level 1 events

### 2.1.4 Events

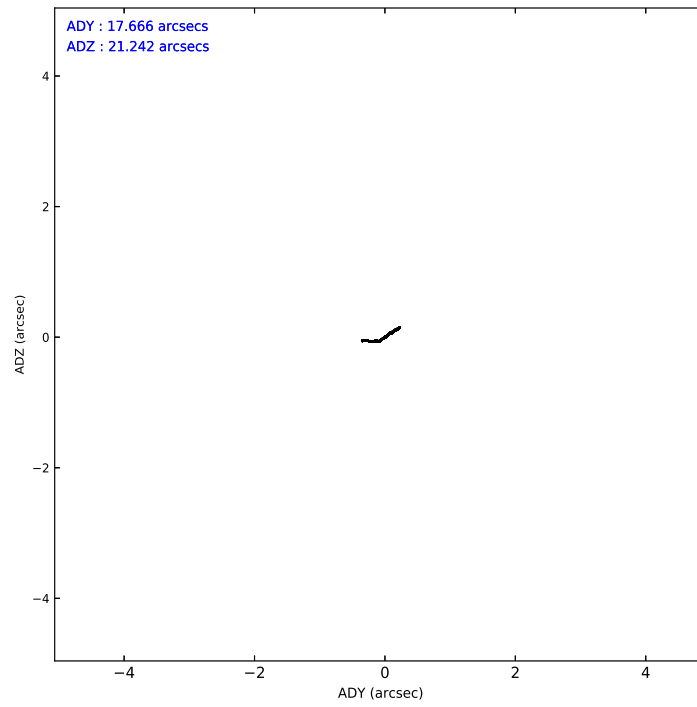
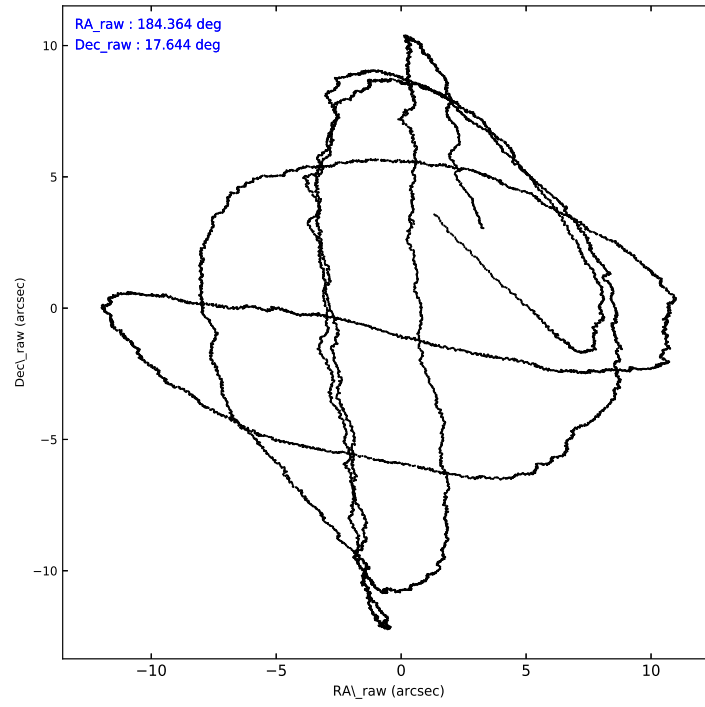
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	40896	23822	31680	35053	25380
rejected events	20578	21079	17943	25253	22359
rejected %	50%	88%	56%	72%	88%

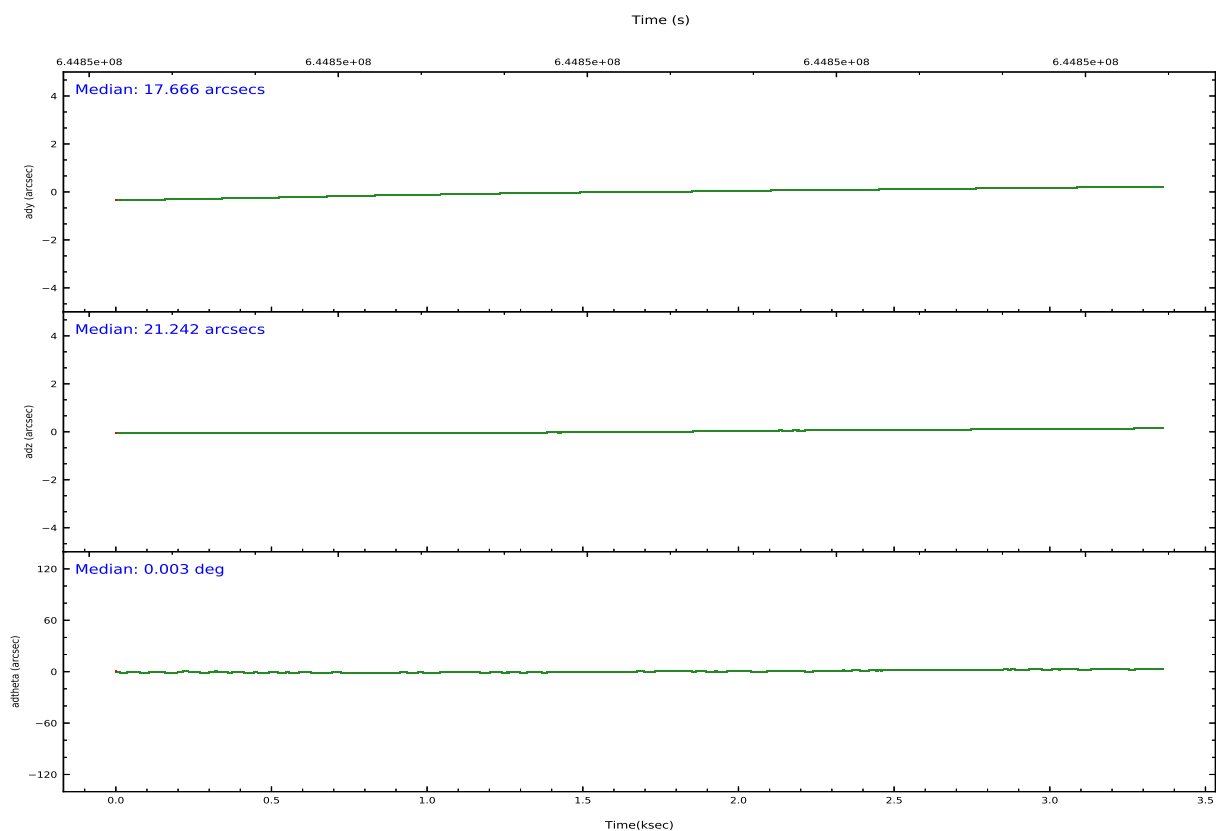
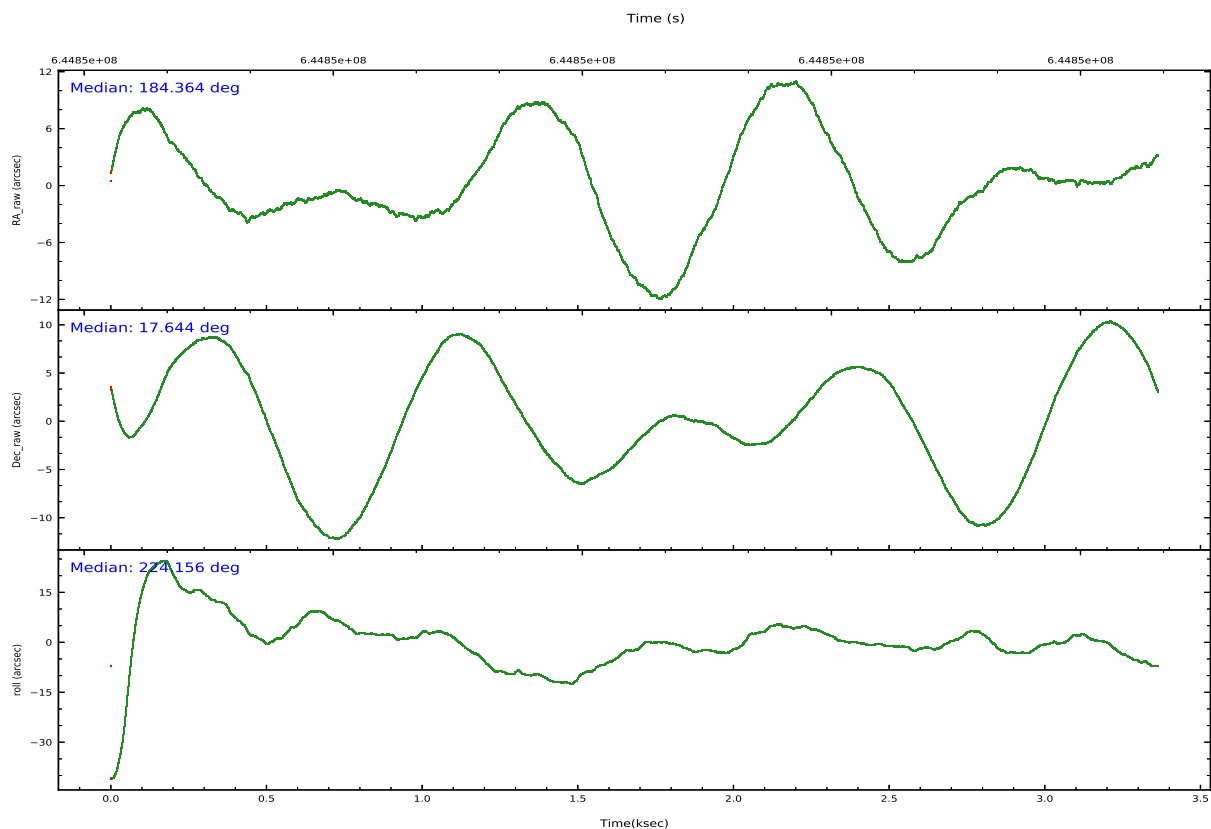
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	2335	959	1151	2740	1086
	5%	4%	3%	7%	4%
grade 1 events	96	11	49	26	20
	0%	0%	0%	0%	0%
grade 2 events	6455	630	3027	2317	703
	15%	2%	9%	6%	2%
grade 3 events	627	281	1119	993	290
	1%	1%	3%	2%	1%
grade 4 events	560	258	1109	976	290
	1%	1%	3%	2%	1%
grade 5 events	2908	1141	3183	1769	1377
	7%	4%	10%	5%	5%
grade 6 events	10358	616	7344	2783	654
	25%	2%	23%	7%	2%
grade 7 events	17557	19926	14698	23449	20960
	42%	83%	46%	66%	82%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-56789	ACIS-56789	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	184.371122	184.36300367035	CCD I2 on	N	N
[deg] Pointing Dec	17.670062	17.651649116586	CCD I3 on	N	N
[deg] Pointing Roll	223.997766	224.15581096513	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	644845850.184000	644844861.34717	CCD S5 on	O2	Y
Observation start date	2018-06-08T11:49:41	2018-06-08T11:34:21	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	644849050.184000	644849880.77247	On-chip summing requested	N	N
Observation end date	2018-06-08T12:43:01	2018-06-08T12:58:00	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





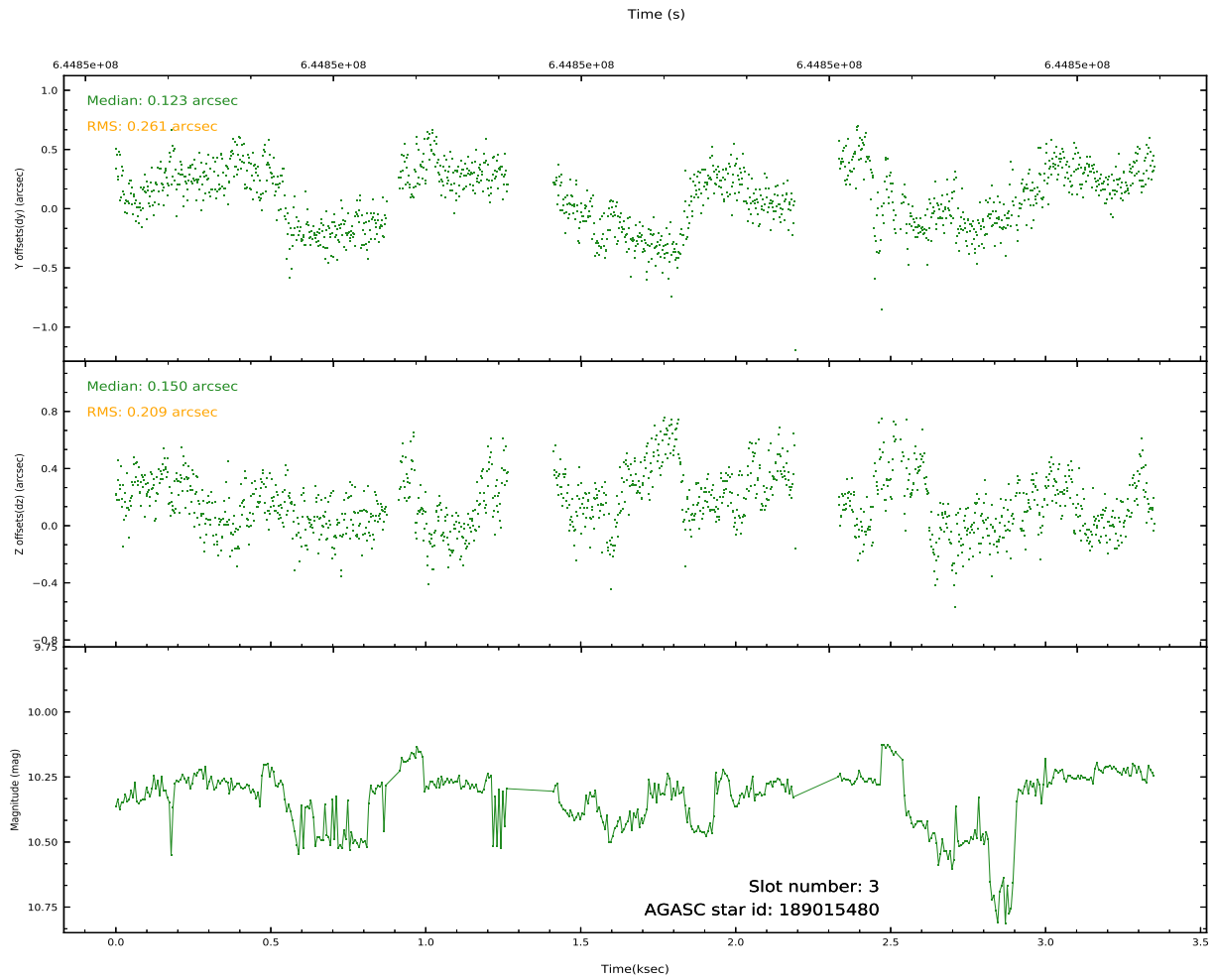
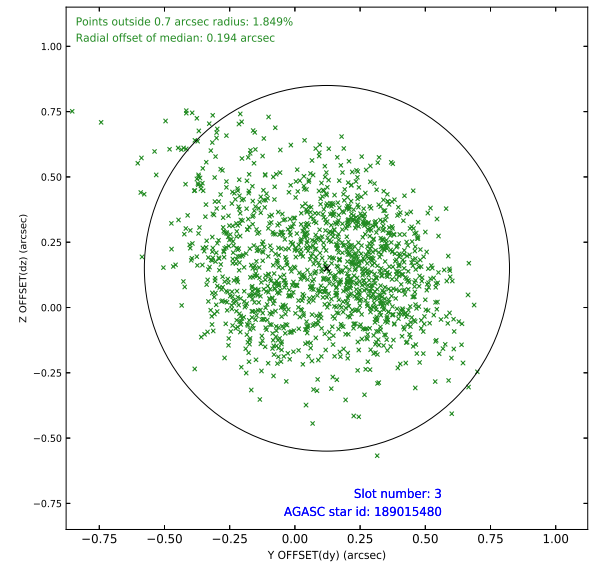
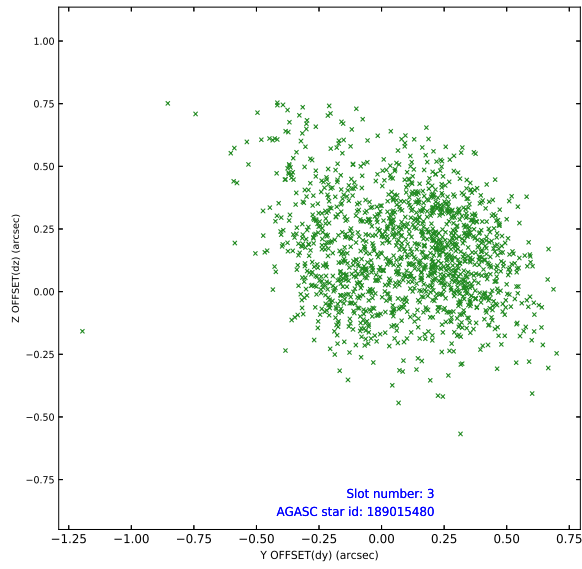
Slot Statistics

	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	m
	FID		ACIS-S-2	6.94	821	1.000	0.135	-0.049	0.009	0.014	0.000000	0.000000	-770.76	-17
	FID		ACIS-S-4	7.05	821	1.000	0.072	-0.052	0.010	0.019	0.000000	0.000000	2141.81	1
	FID		ACIS-S-5	7.04	821	1.000	-0.236	0.109	0.008	0.012	0.000000	0.000000	-1821.34	1
	BAD	used	189015480	10.30	1460	1.000	0.123	0.150	0.355	0.575	183.788431	17.356468	2223.61	-5
	GUIDE	used	189409160	9.87	1639	1.000	-0.356	0.157	0.226	0.462	185.242291	17.697963	-2221.99	19
	GUIDE	used	189417920	9.85	1629	1.000	0.246	-0.339	0.281	0.554	184.110608	17.335507	1482.53	2
	GUIDE	used	189417400	7.72	1642	1.000	-0.070	0.001	0.134	0.246	184.517250	18.435045	-2270.40	-16
	GUIDE	used	189410928	8.84	1639	1.000	0.039	0.056	0.165	0.297	184.740508	17.329484	-63.13	17

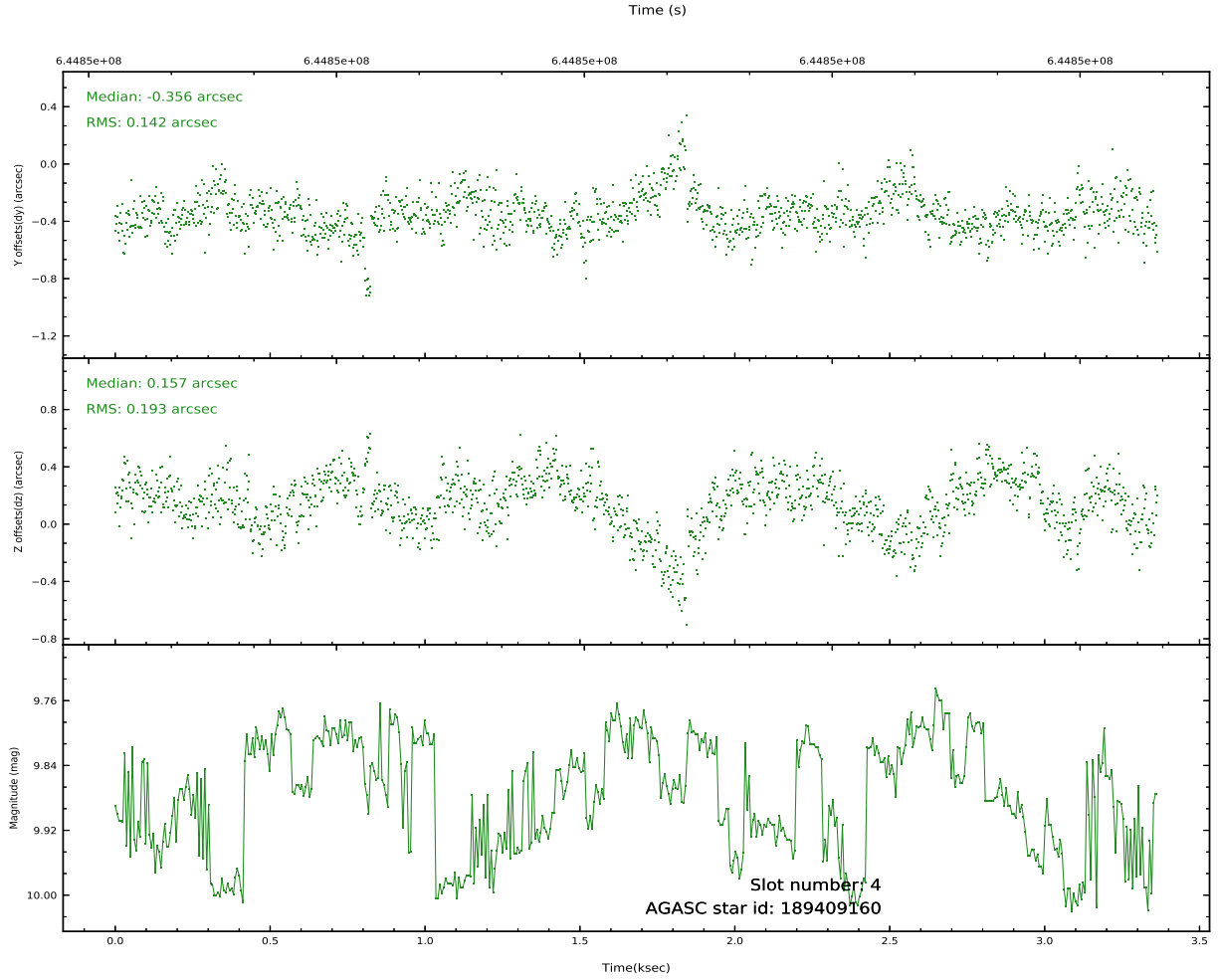
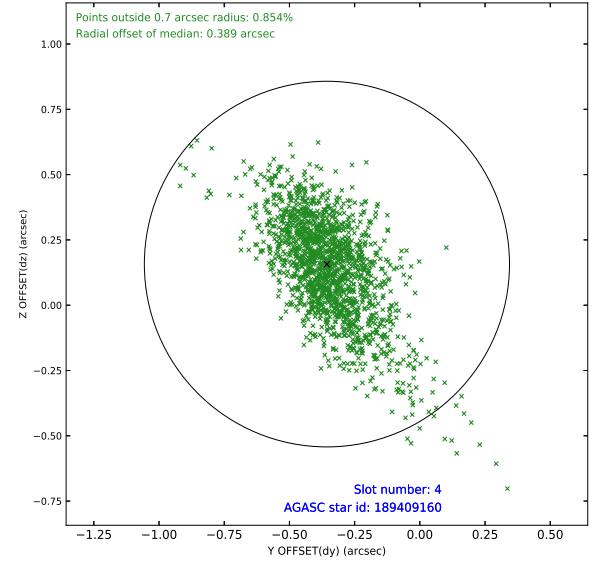
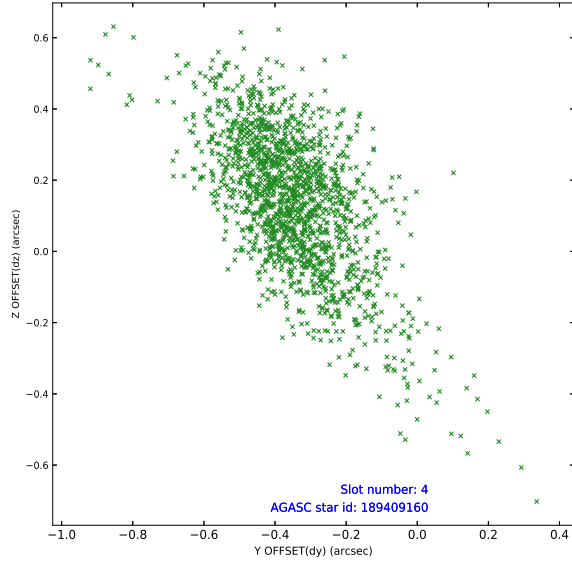


## 2.4 Star Slots

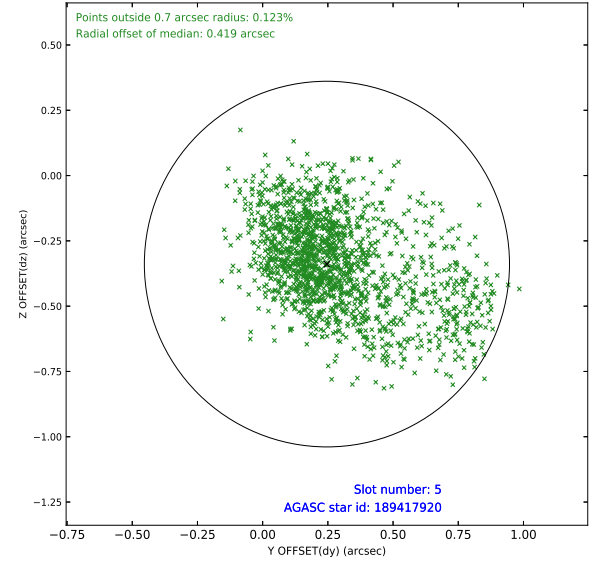
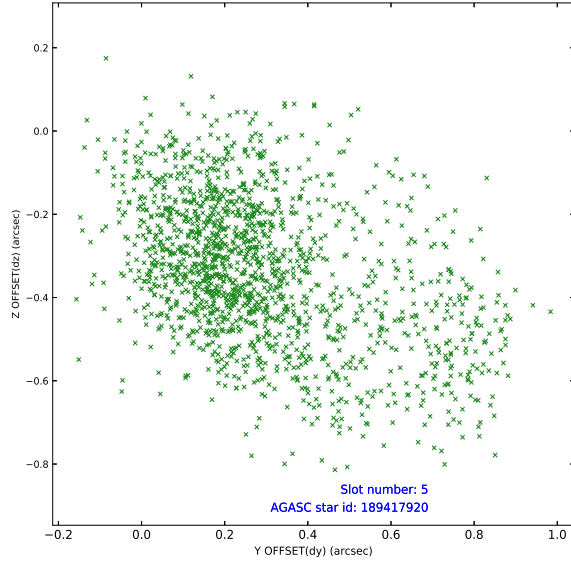
### 2.4.1 Slot 3



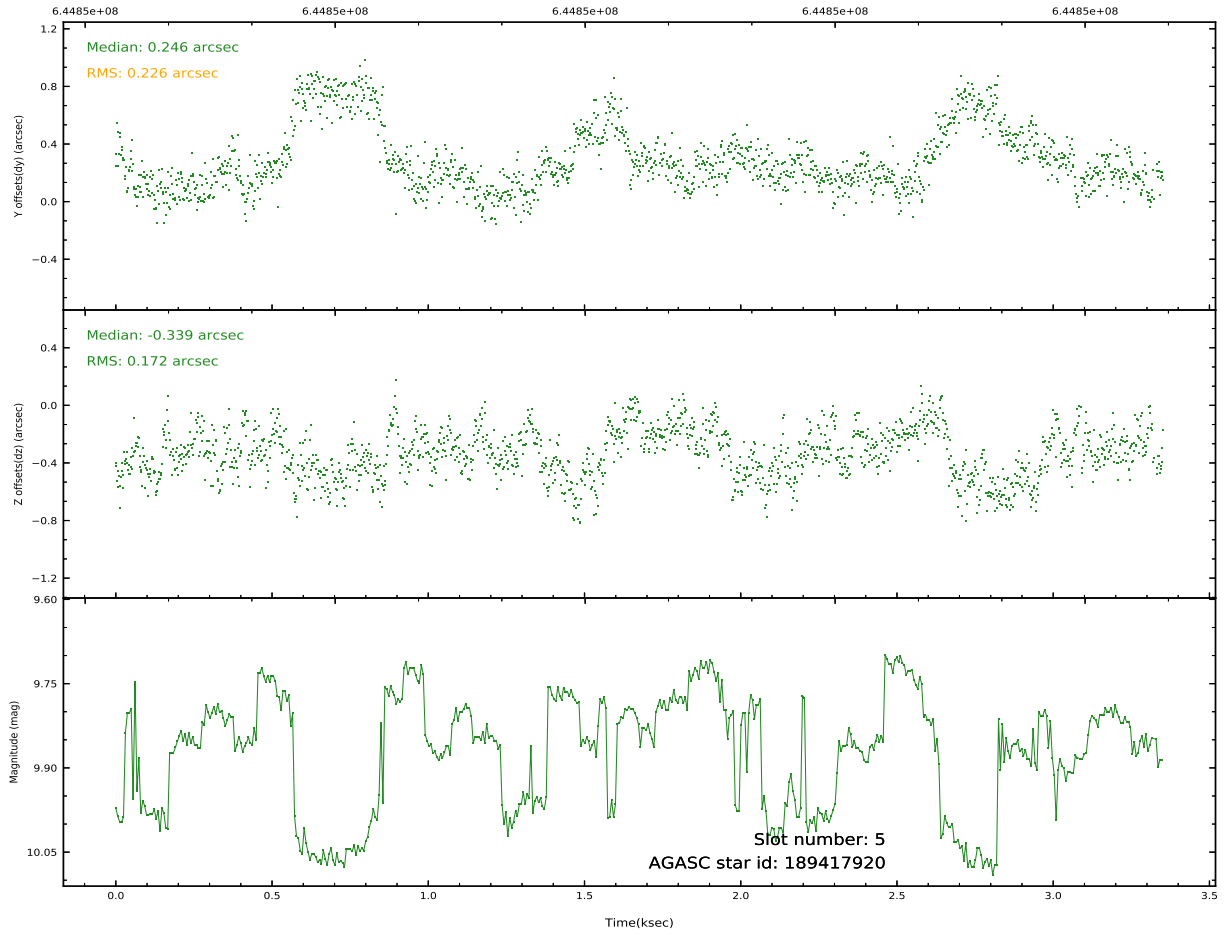
## 2.4.2 Slot 4



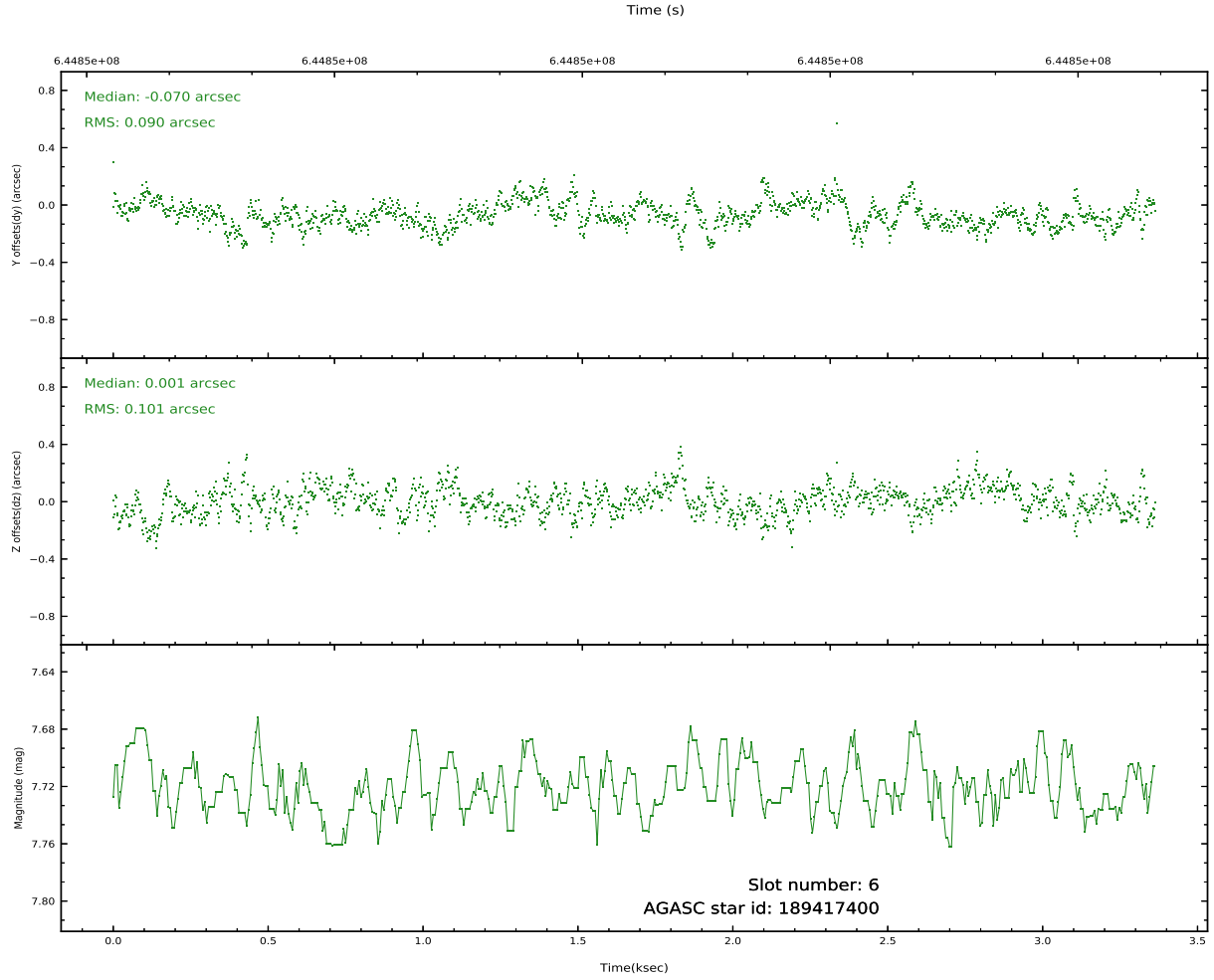
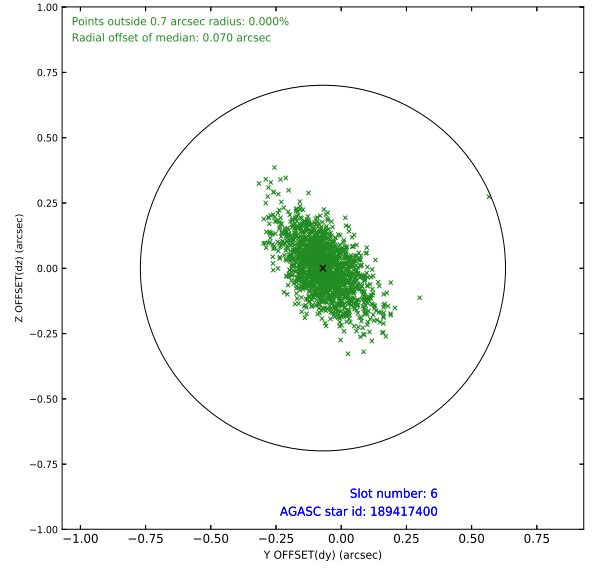
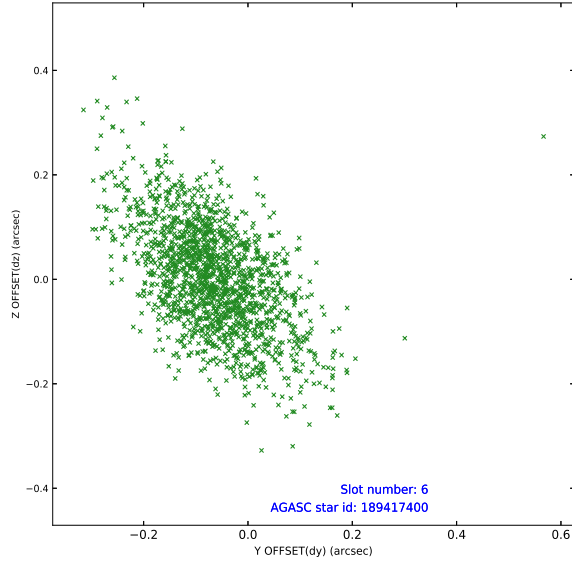
### 2.4.3 Slot 5



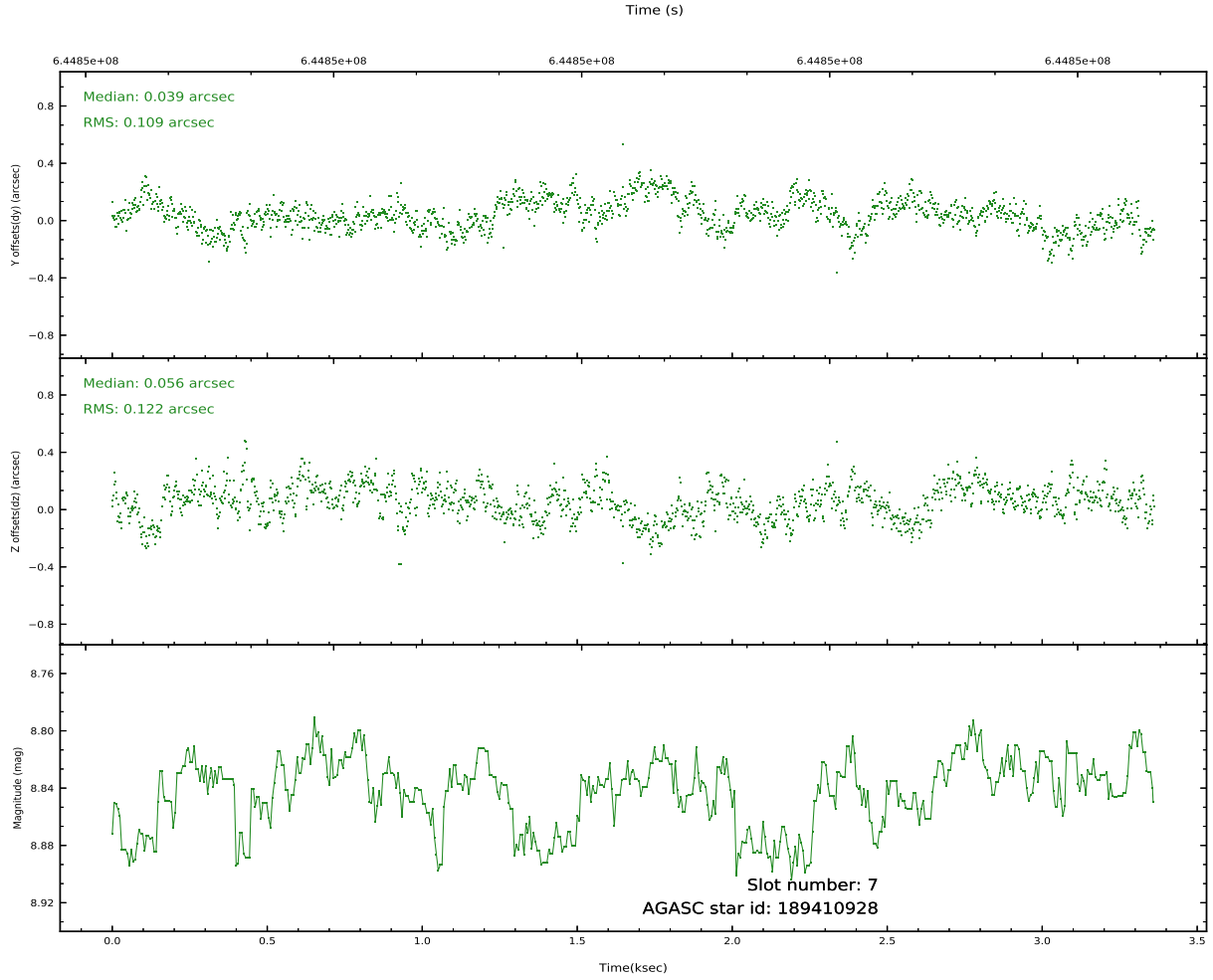
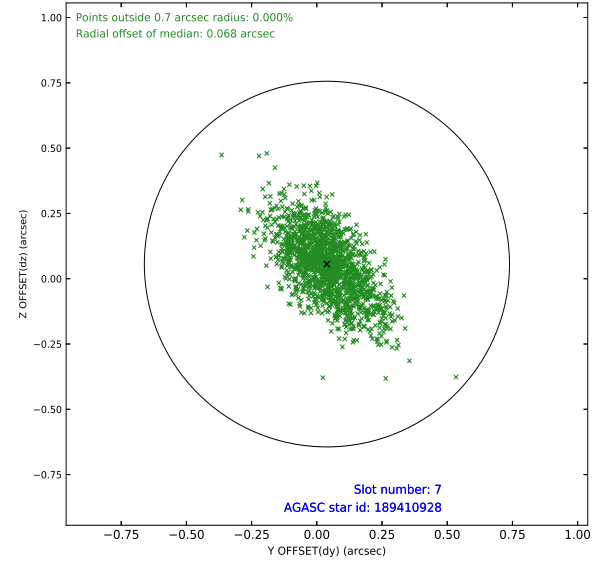
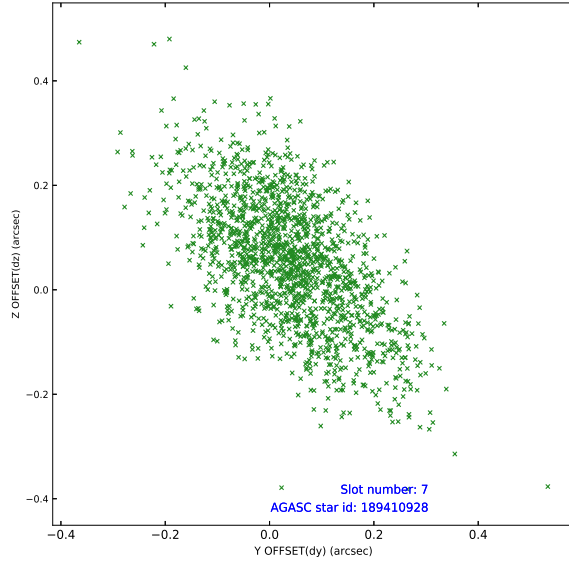
Time (s)



## 2.4.4 Slot 6

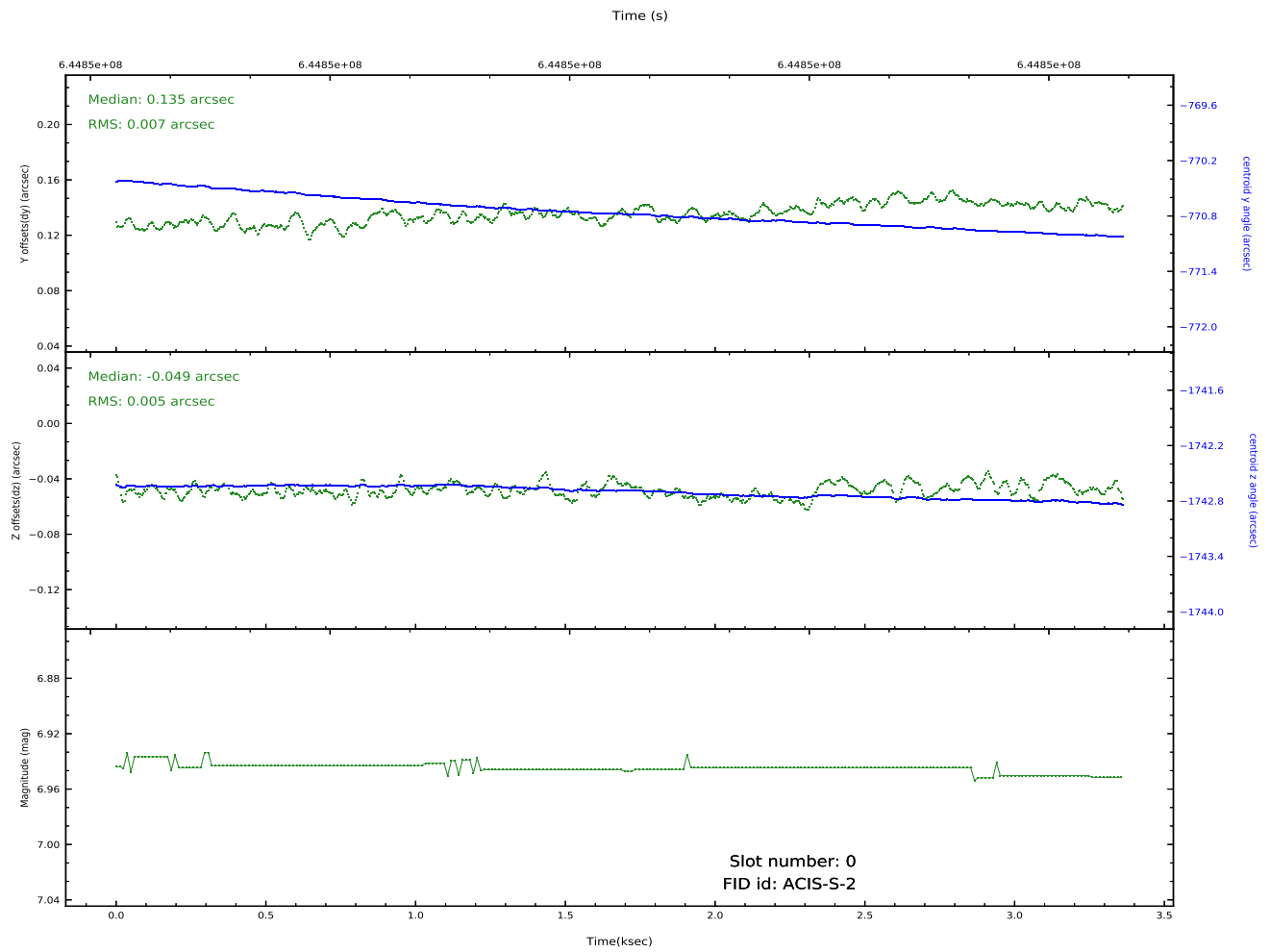
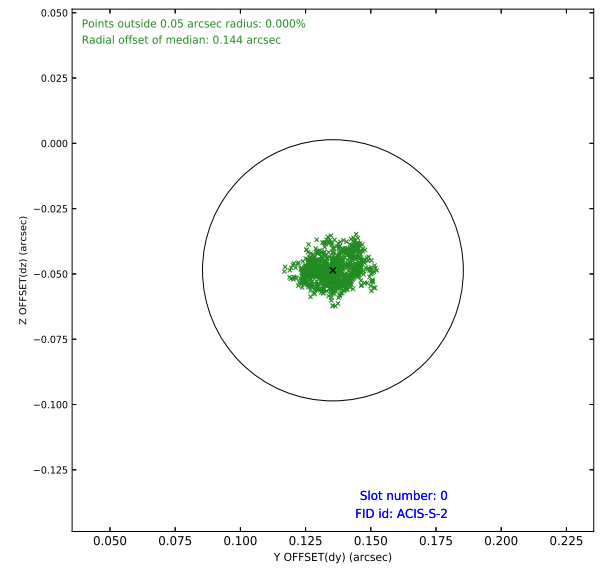
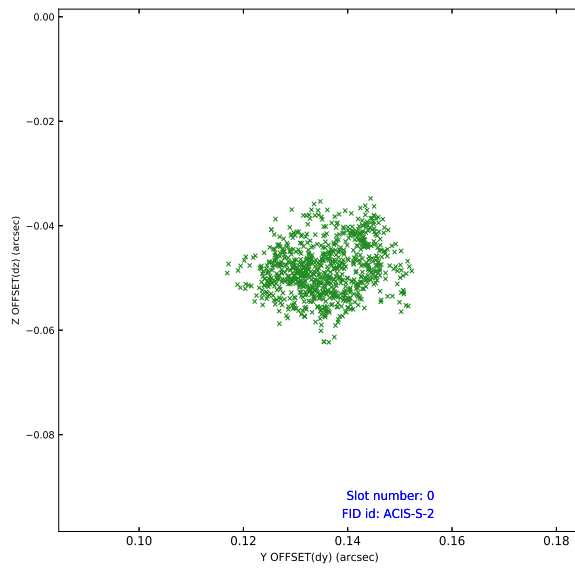


## 2.4.5 Slot 7

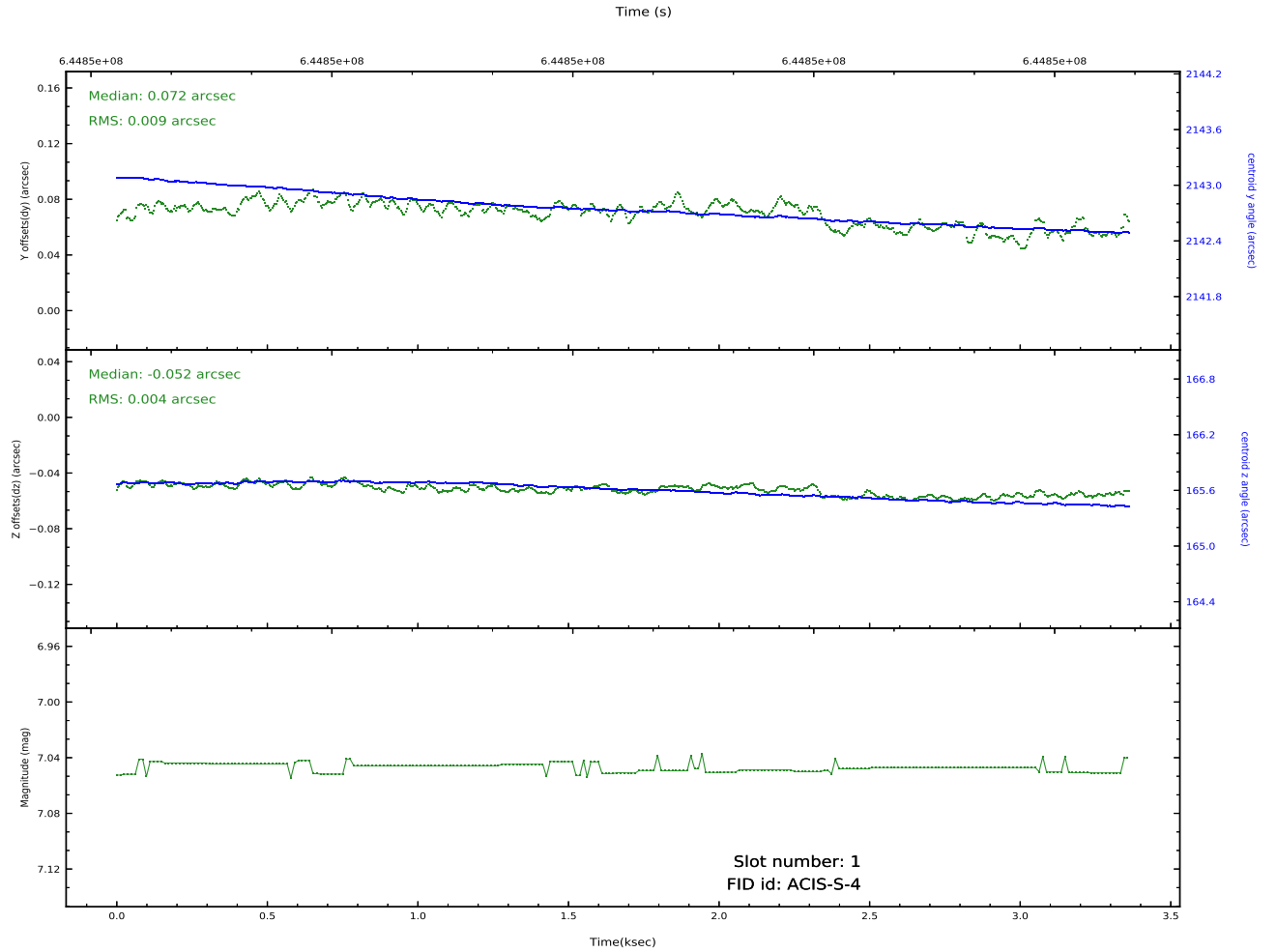
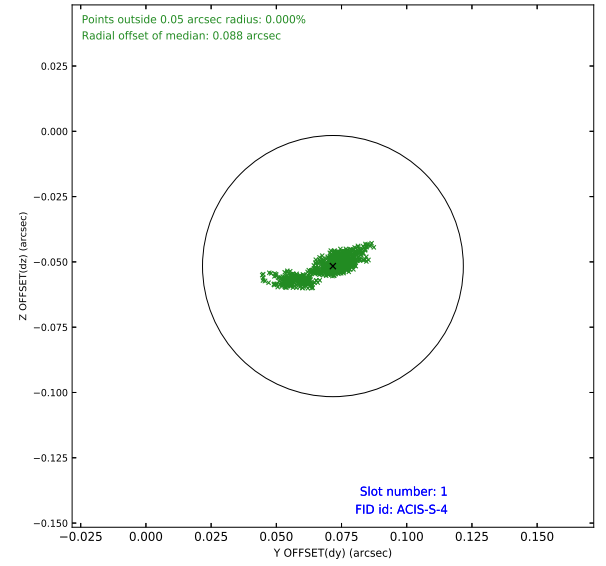
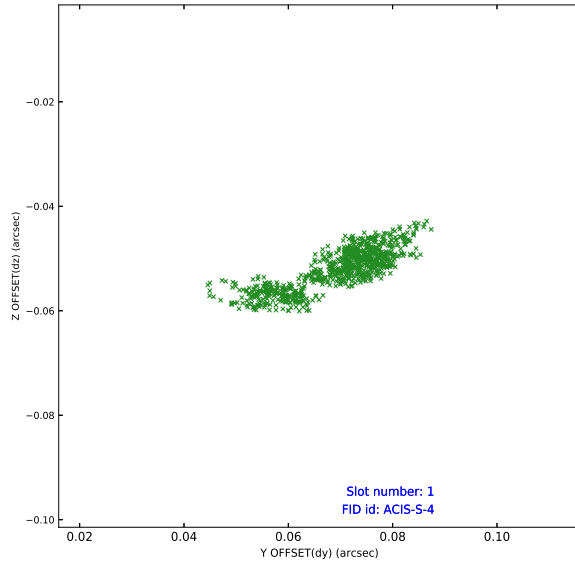


## 2.5 FID Slots

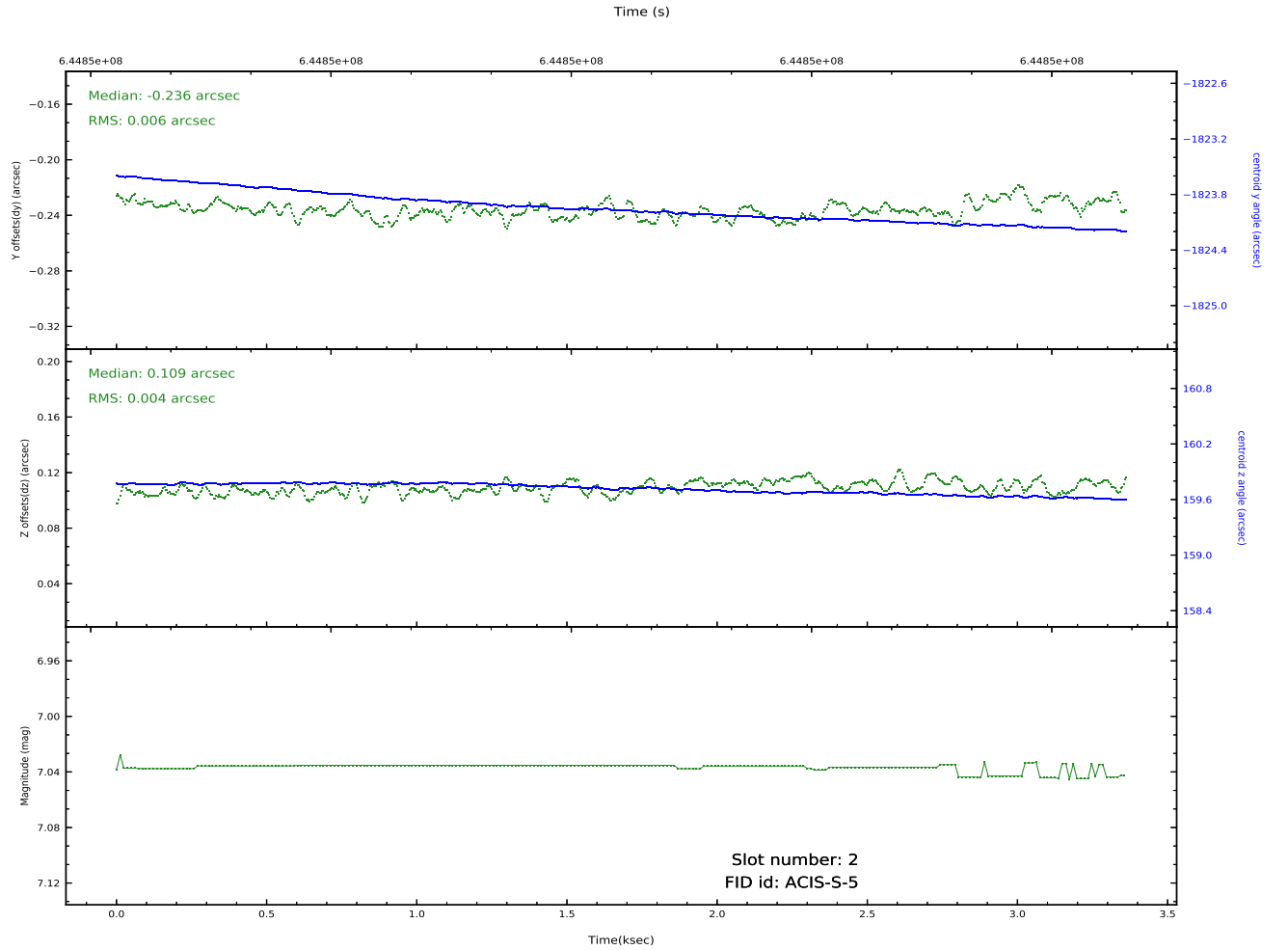
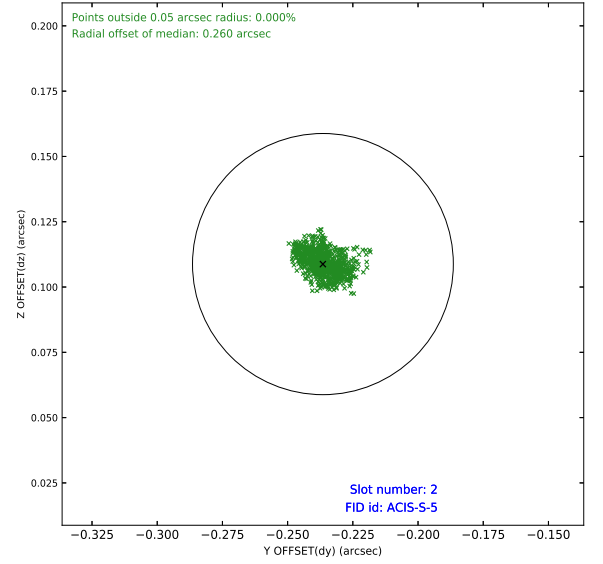
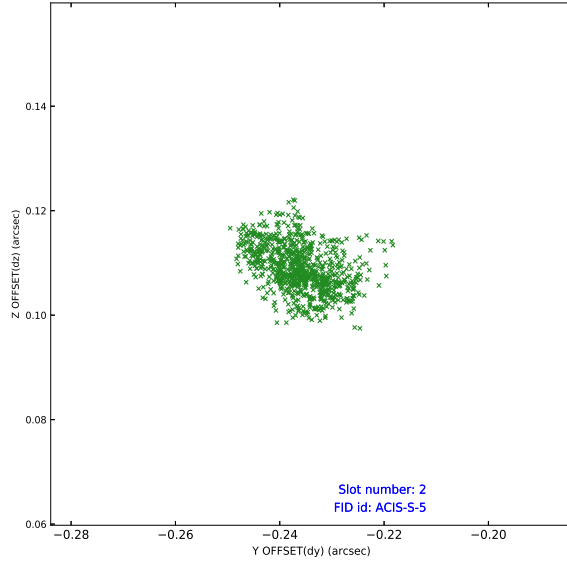
### 2.5.1 Slot 0



## 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)	2020.10.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.2537647401094

### A.2 Comments