

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 19402 - L2 Version 2  
Chandra X-Ray Center

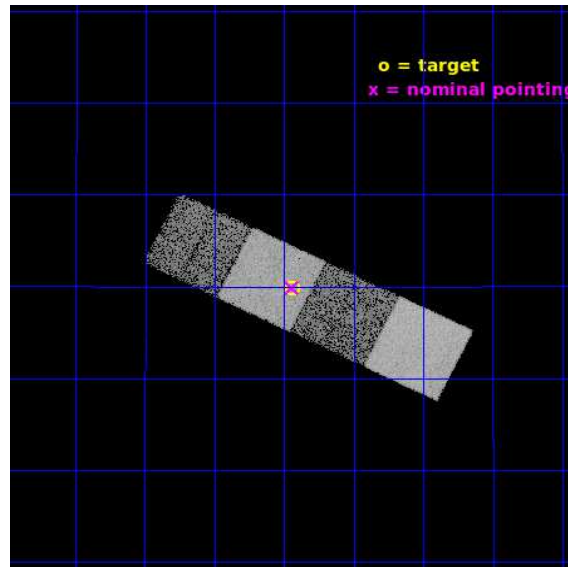
L2 Processing Date : Oct 25 2020

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# 1 Front

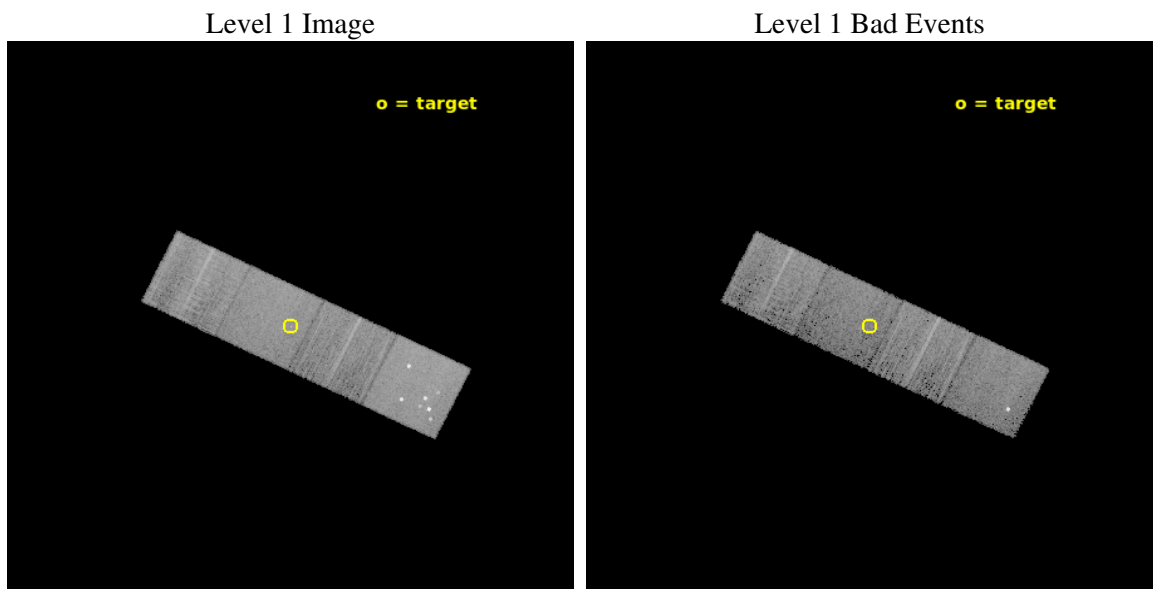
seq_num	601359	Sequence number
obs_id	19402	Observation id
title	Spiral galaxies of the Virgo cluster	Proposal title
observer	Roberto Soria	Principal investigator
object	NGC 4548	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	188.860417	Observer's specified target RA [deg]
dec_targ	14.496333	Observer's specified target Dec [deg]
ra_nom	188.86097526069	Nominal RA [deg]
dec_nom	14.498065165007	Nominal Dec [deg]
roll_nom	206.0281286025	Nominal Roll [deg]
revision	2	Processing version of data
ontime	7659.2315298319	Sum of GTIs [s]
livetime	7559.1580312504	Livetime [s]
ontime5	7659.1904898882	Sum of GTIs [s]
ontime6	7659.1494498253	Sum of GTIs [s]
ontime7	7659.2315298319	Sum of GTIs [s]
ontime8	7659.1084098816	Sum of GTIs [s]
l2events	83763	Number of level 2 events



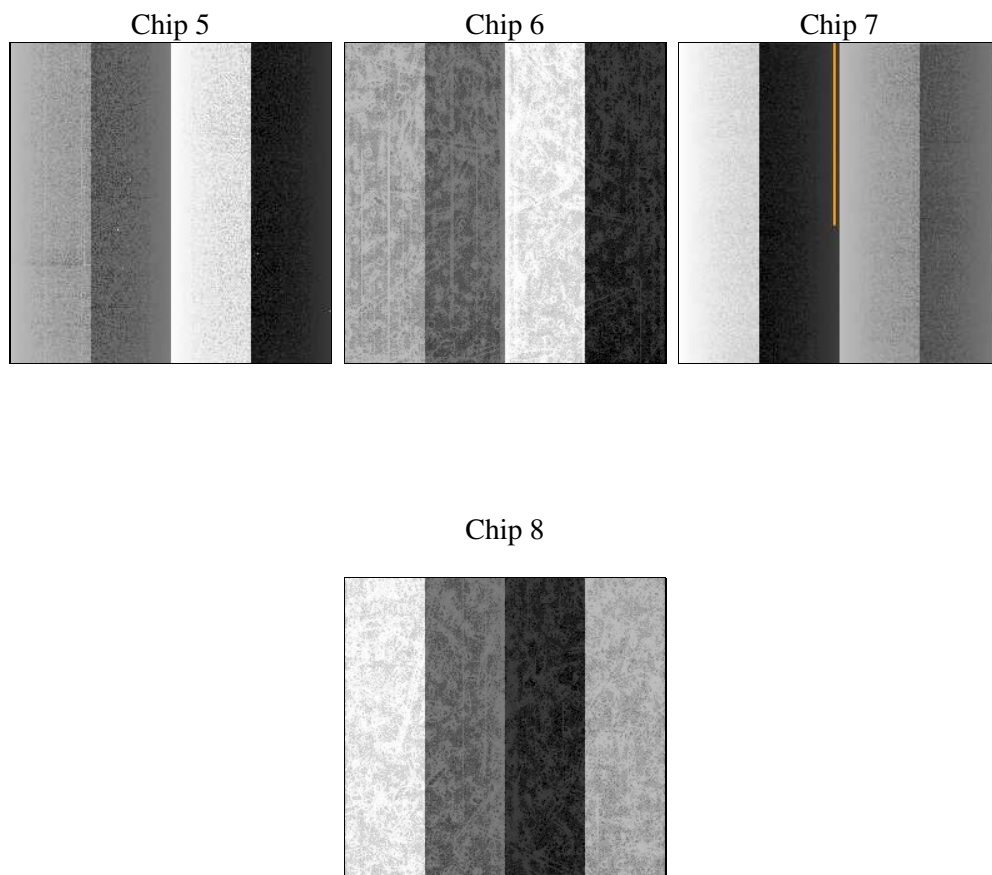
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	7600.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	7659.2315298319	Sum of GTIs [s]
caldsver	4.9.3	&#160	ontime5	7659.1904898882	Sum of GTIs [s]
date	2020-10-25T11:53:02	Date and time of file creation	ontime6	7659.1494498253	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	7659.2315298319	Sum of GTIs [s]
			ontime8	7659.1084098816	Sum of GTIs [s]
			l1events	310185	Number of level 1 events

### 2.1.4 Events

	<b>ccd 5</b>	<b>ccd 6</b>	<b>ccd 7</b>	<b>ccd 8</b>
level 1 events	101770	59714	73535	75166
rejected events	49599	53050	41737	55720
rejected %	48%	88%	56%	74%

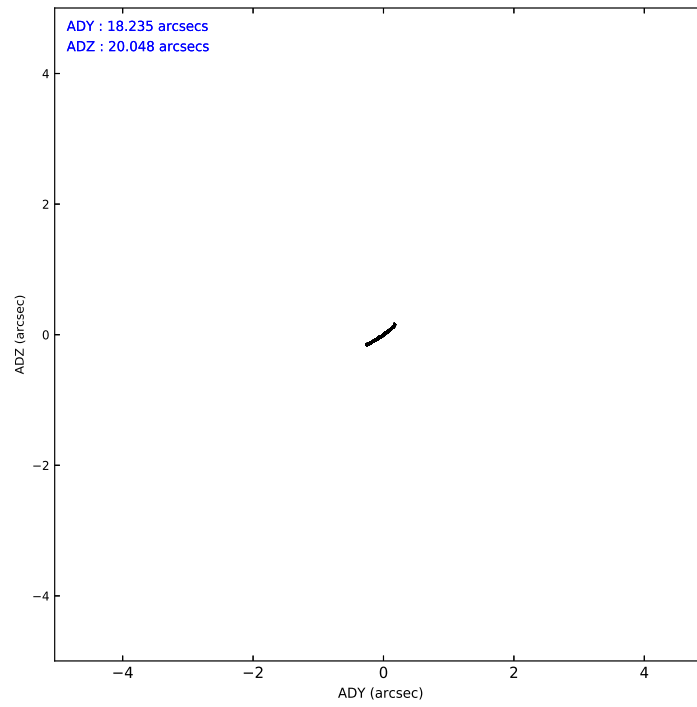
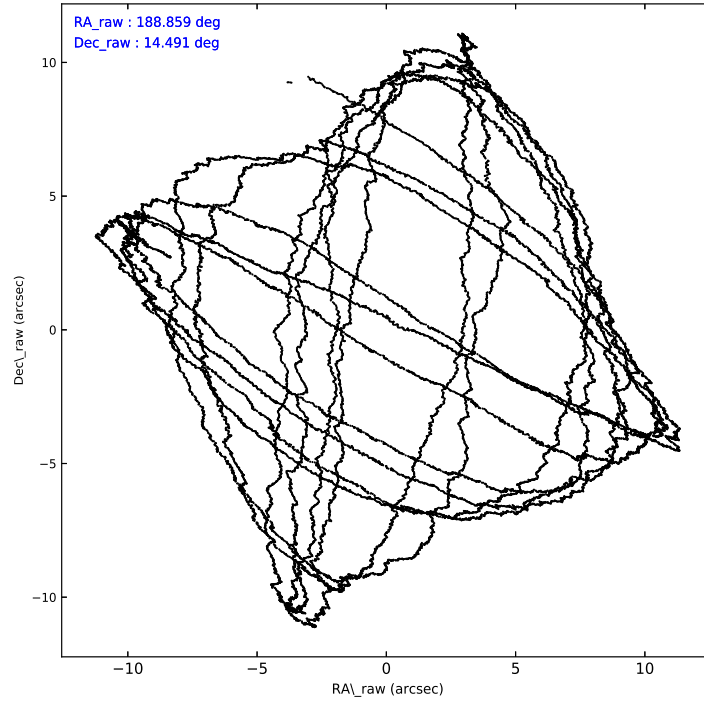
	<b>ccd 5</b>	<b>ccd 6</b>	<b>ccd 7</b>	<b>ccd 8</b>
grade 0 events	10505	2266	2745	5463
	10%	3%	3%	7%
grade 1 events	239	17	94	52
	0%	0%	0%	0%
grade 2 events	14865	1587	6727	4550
	14%	2%	9%	6%
grade 3 events	1538	614	2509	2082
	1%	1%	3%	2%
grade 4 events	1241	621	2500	2007
	1%	1%	3%	2%
grade 5 events	5959	2556	7130	3921
	5%	4%	9%	5%
grade 6 events	24091	1587	17351	5365
	23%	2%	23%	7%
grade 7 events	43332	50466	34479	51726
	42%	84%	46%	68%

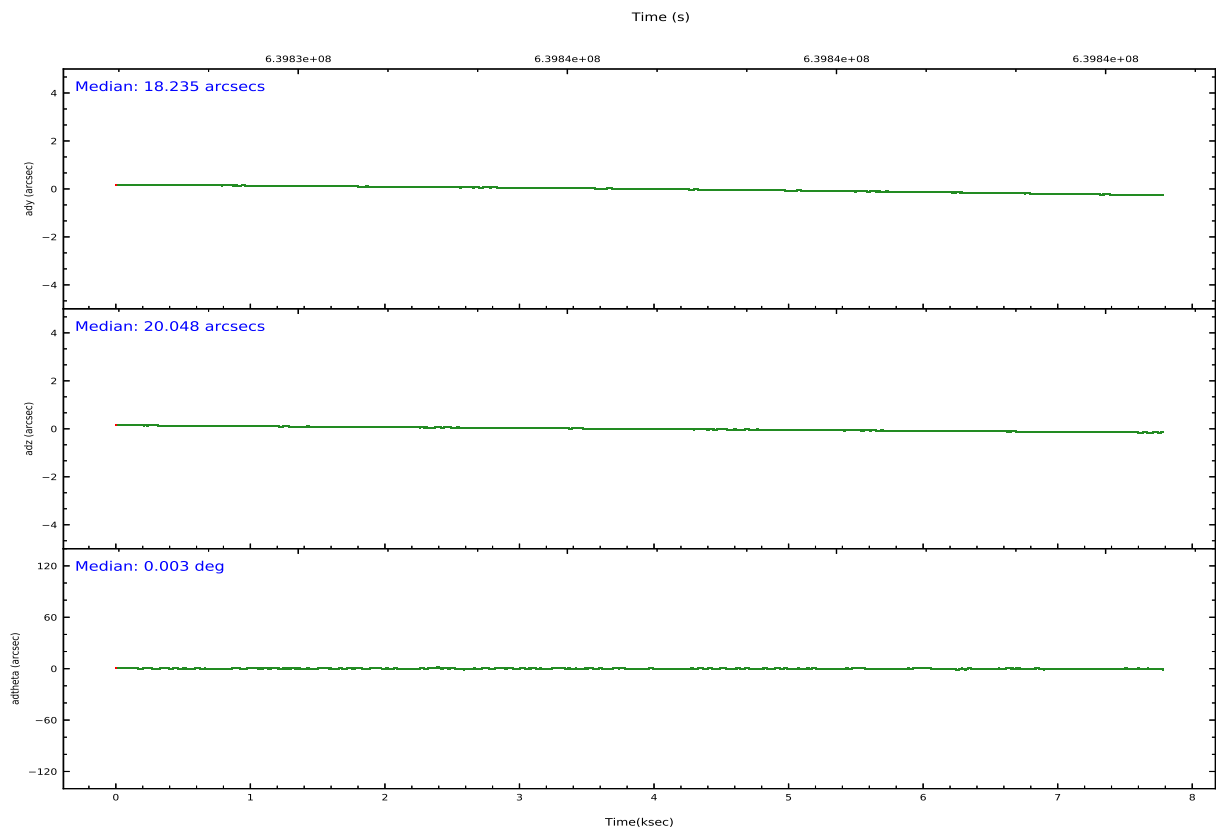
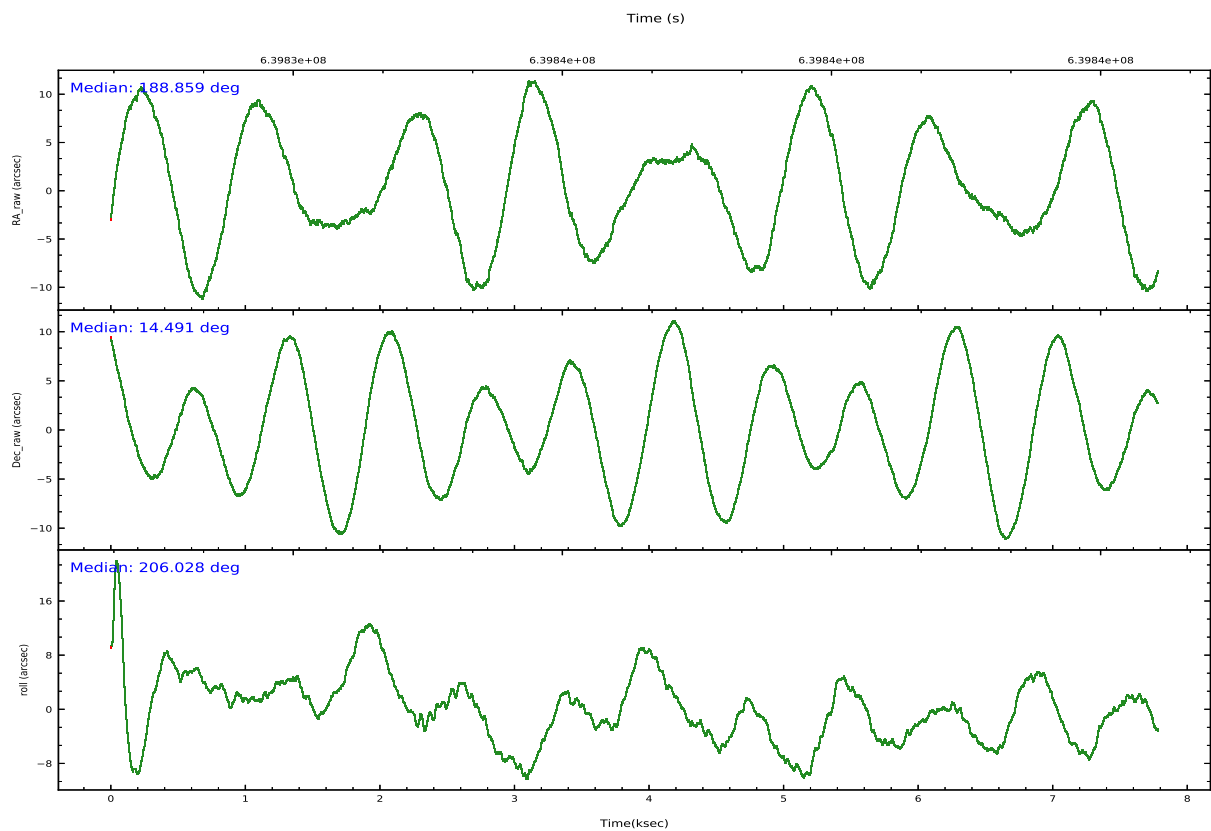


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-5678	ACIS-5678	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	188.874215	188.86097526069	Subarray requested	NONE	NONE
[deg] Pointing Dec	14.513499	14.498065165007	Alternating exposures requested	N	N
[deg] Pointing Roll	205.873452	206.0281286025	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.145094680475			
[mm] SIM translation stage offset	0	0.01257209746719923			
[s] Observation start time (MET)	639832829.184000	639831284.70092			
Observation start date	2018-04-11T11:19:20	2018-04-11T10:54:44			
[s] Observation end time (MET)	639840429.184000	639840607.07647			
Observation end date	2018-04-11T13:26:00	2018-04-11T13:30:07			
Read mode	TIMED	TIMED			

## 2.3 Aspect



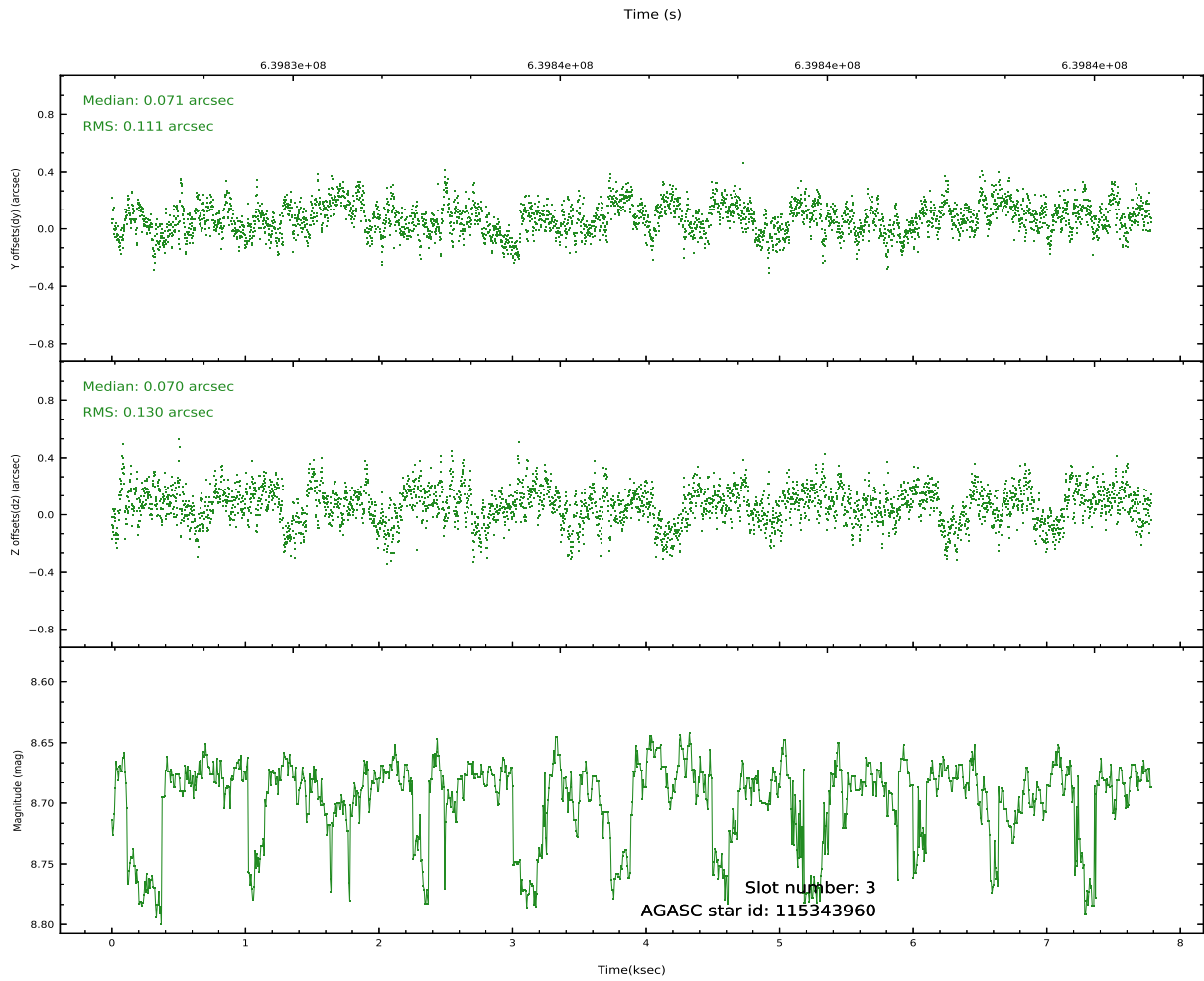
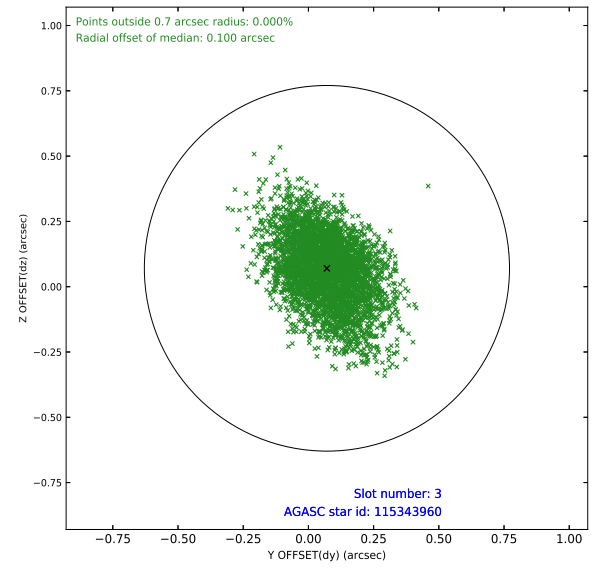
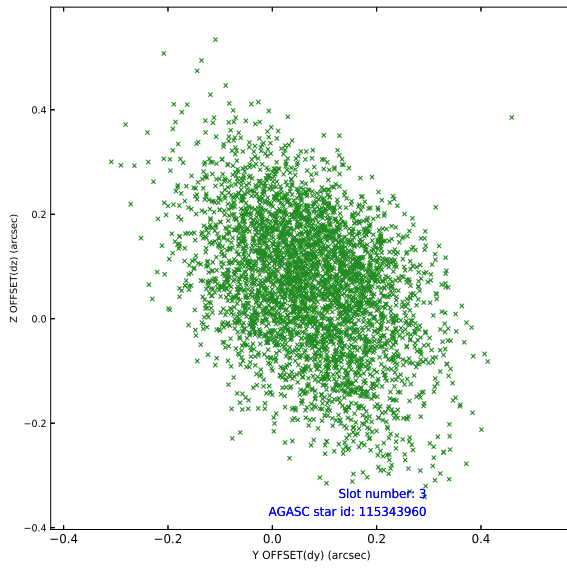


Slot Statistics

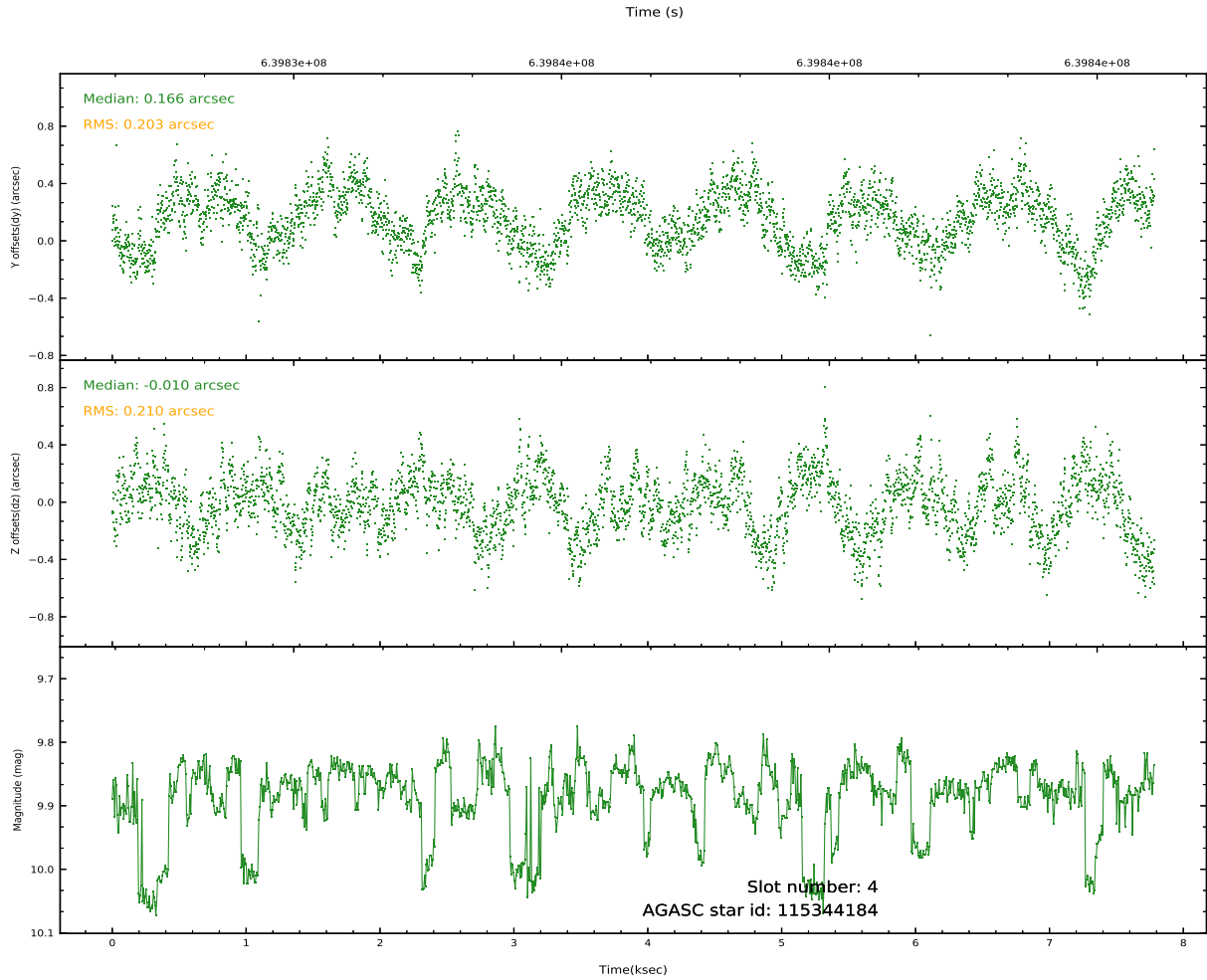
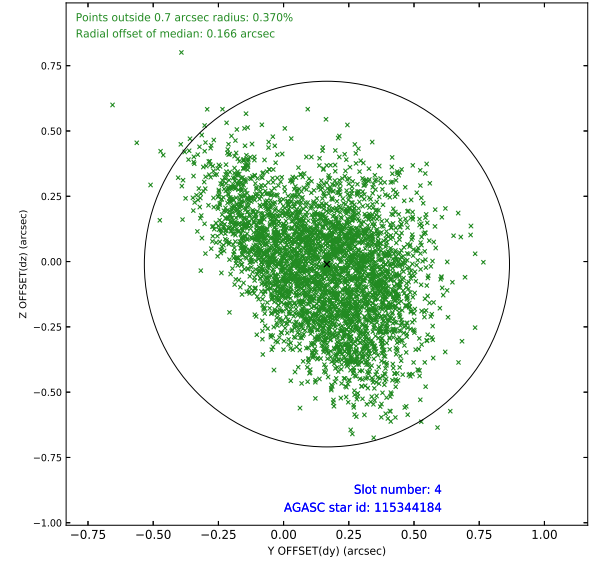
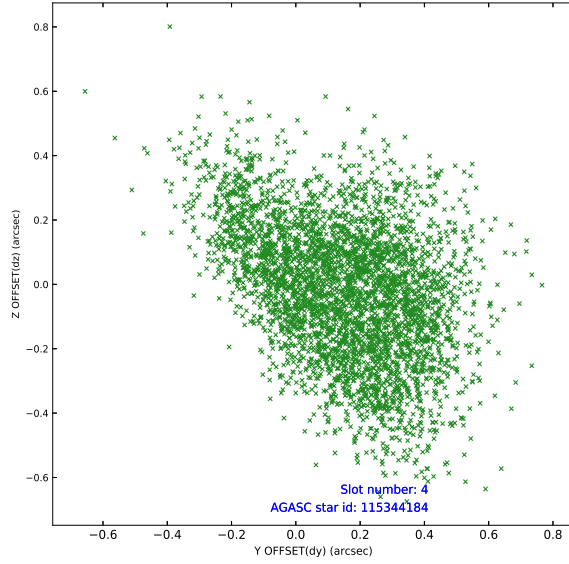
	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	m
	FID		ACIS-S-2	7.08	1899	1.000	0.110	-0.075	0.009	0.013	0.000000	0.000000	-771.37	-17
	FID		ACIS-S-4	7.18	1899	1.000	0.135	-0.033	0.006	0.010	0.000000	0.000000	2141.81	1
	FID		ACIS-S-5	7.18	1899	1.000	-0.277	0.117	0.009	0.014	0.000000	0.000000	-1823.45	1
	GUIDE	used	115343960	8.69	3794	1.000	0.071	0.070	0.178	0.303	188.590007	14.643744	686.66	-8
	GUIDE	used	115344184	9.88	3786	1.000	0.166	-0.010	0.308	0.502	188.223378	14.673173	1788.10	-15
	GUIDE	used	115348280	9.70	3784	1.000	0.066	-0.045	0.273	0.501	188.509617	13.876544	2147.62	15
	BAD	used	115474672	10.07	3367	1.000	-0.407	-0.273	0.375	0.591	189.254999	14.985564	-1931.39	-9
	GUIDE	used	189543784	9.01	3791	1.000	0.100	0.208	0.183	0.311	189.184903	15.264210	-2150.53	-19

## 2.4 Star Slots

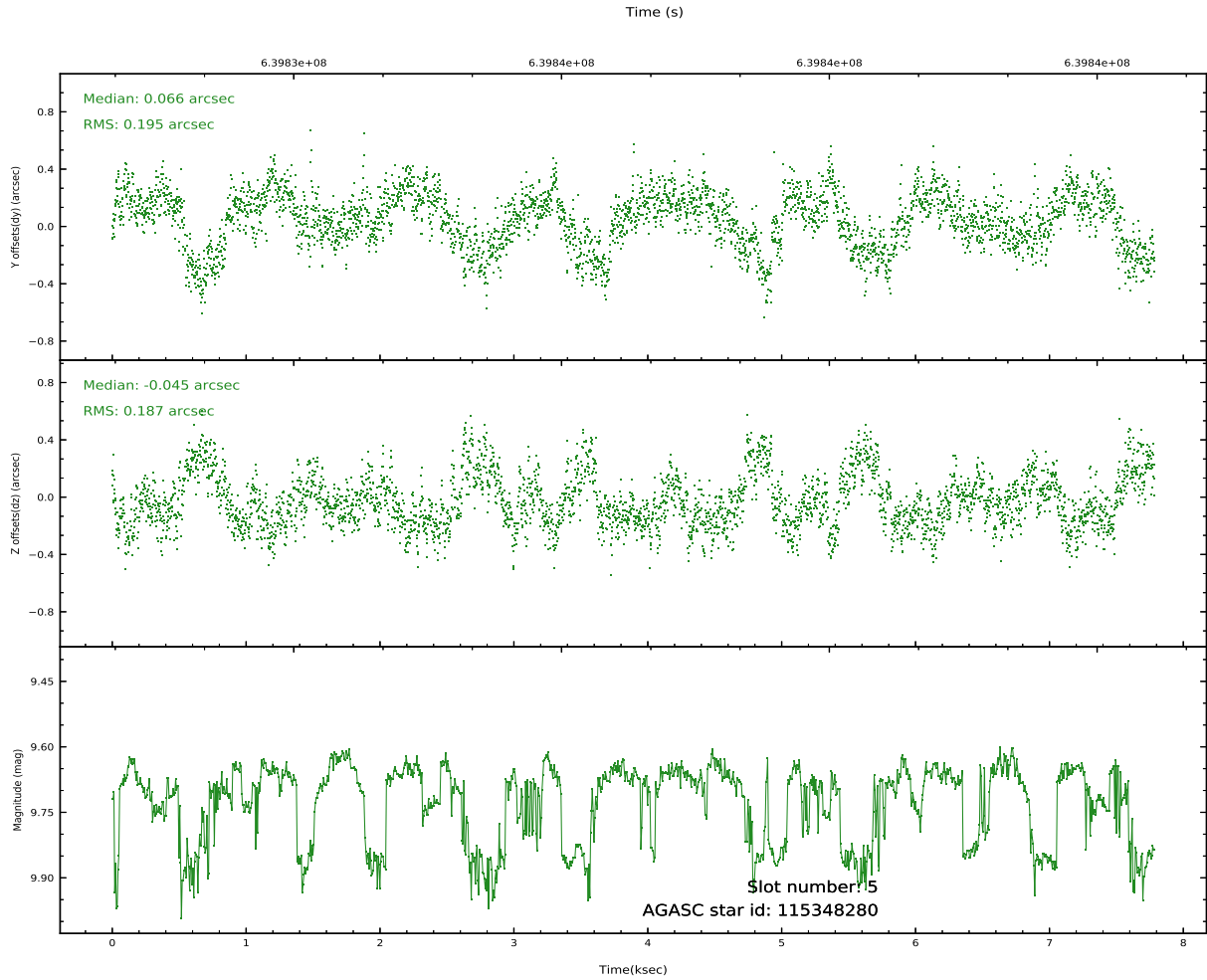
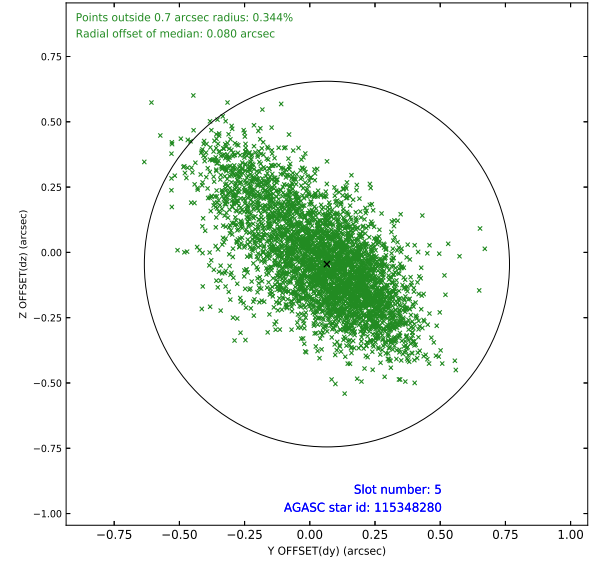
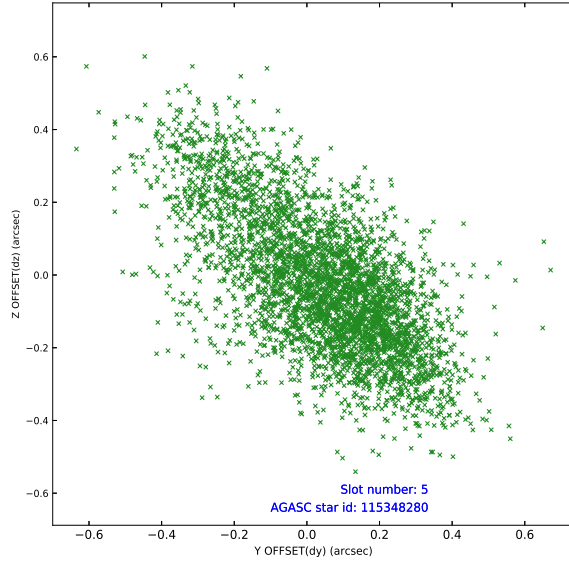
### 2.4.1 Slot 3



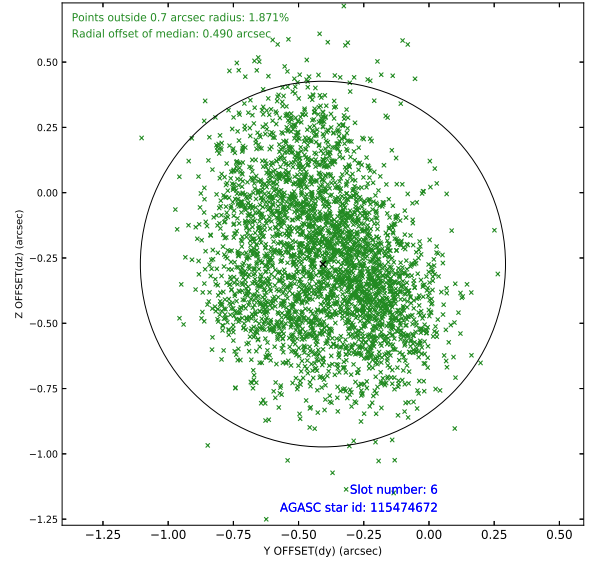
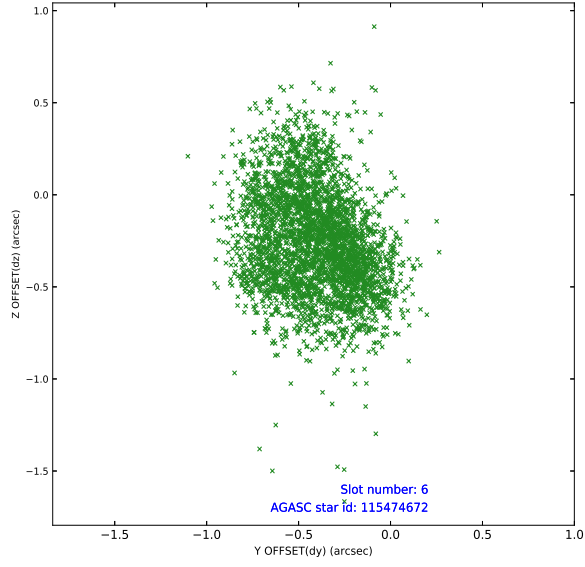
## 2.4.2 Slot 4



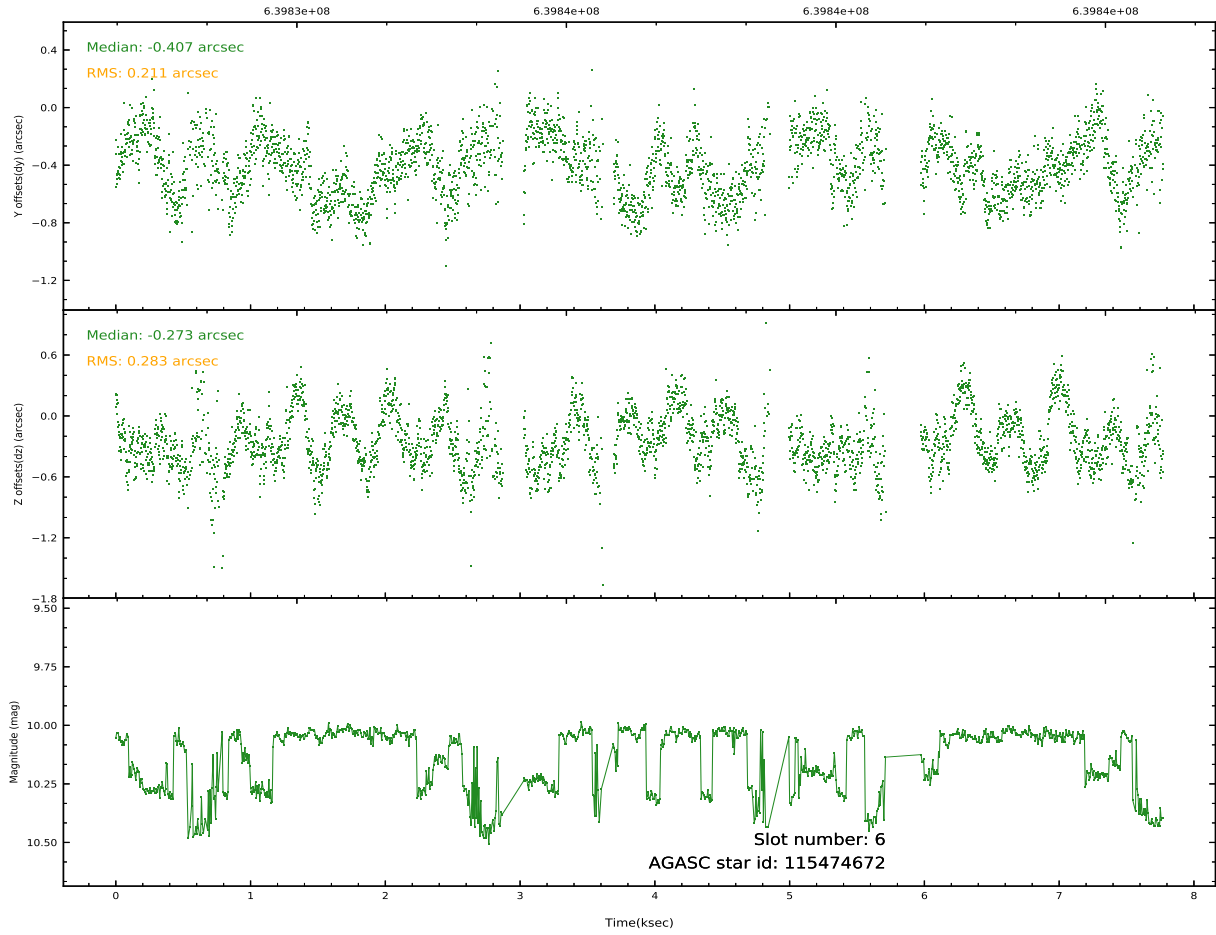
### 2.4.3 Slot 5



## 2.4.4 Slot 6

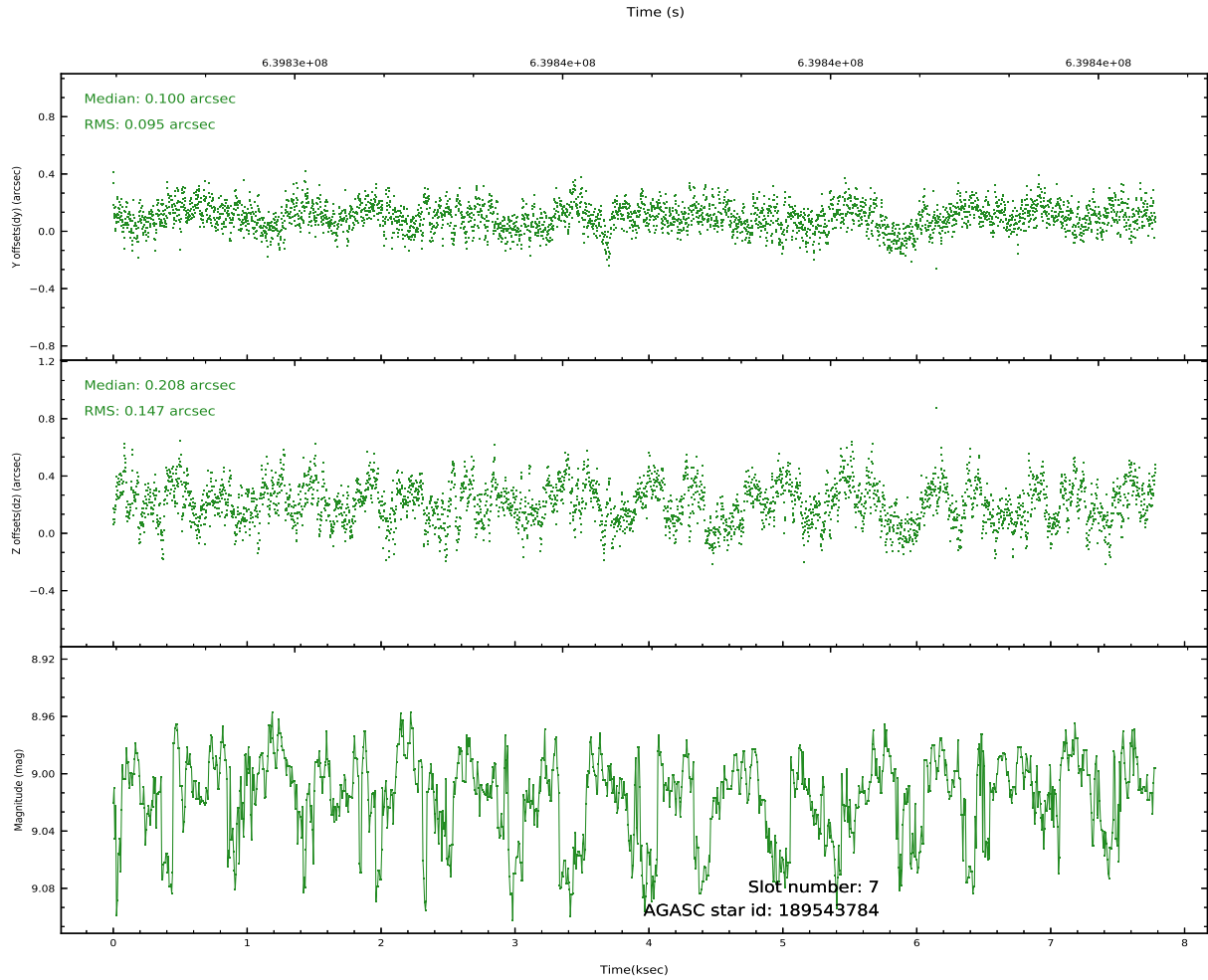
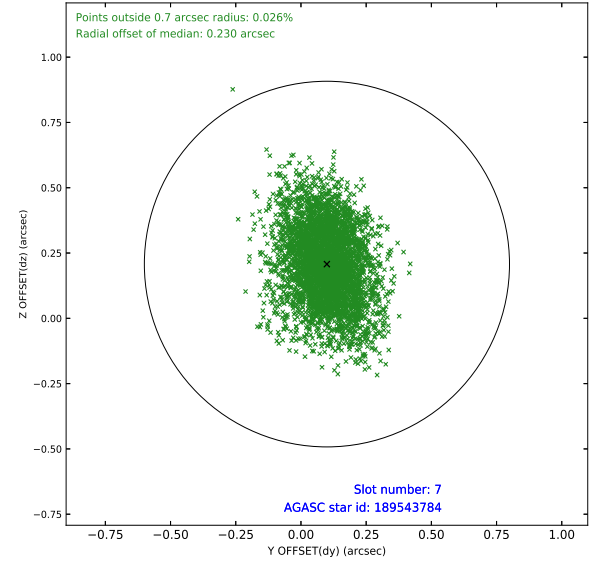
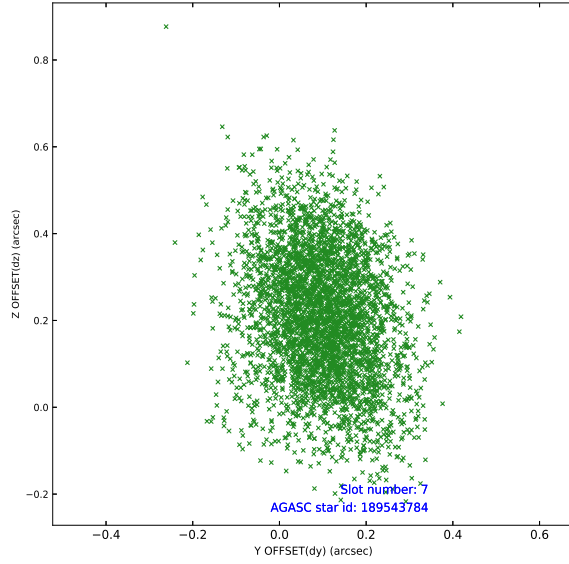


Time (s)



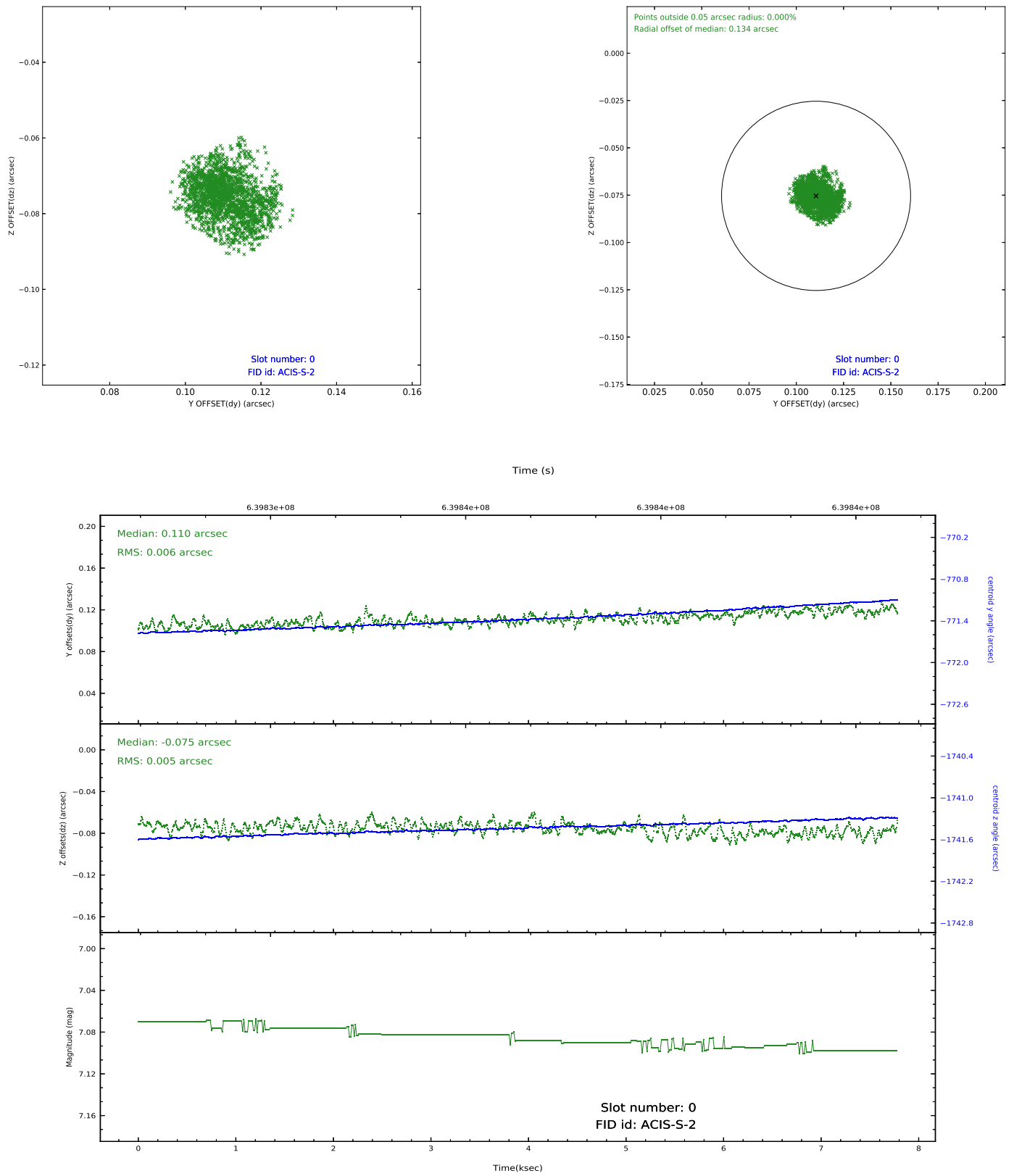


## 2.4.5 Slot 7

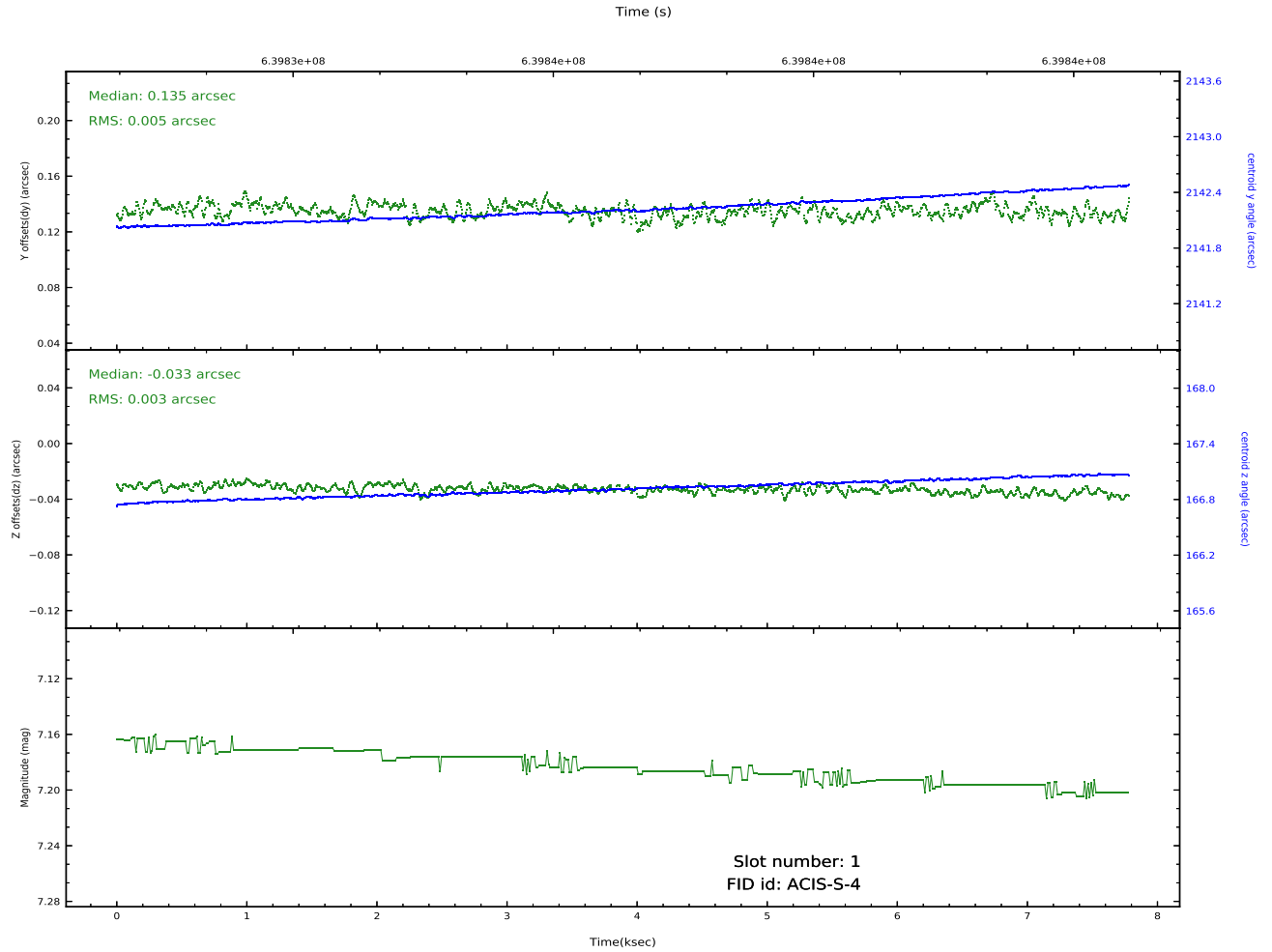
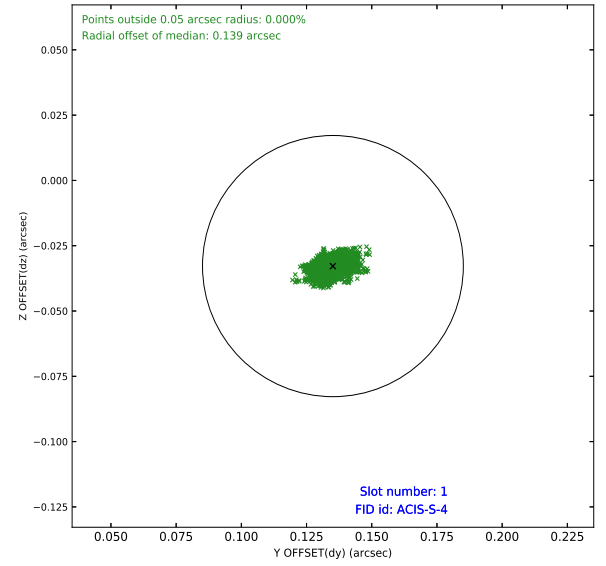
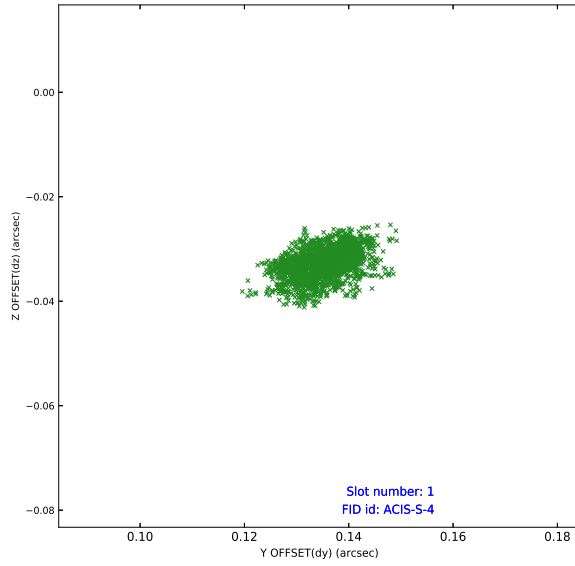


## 2.5 FID Slots

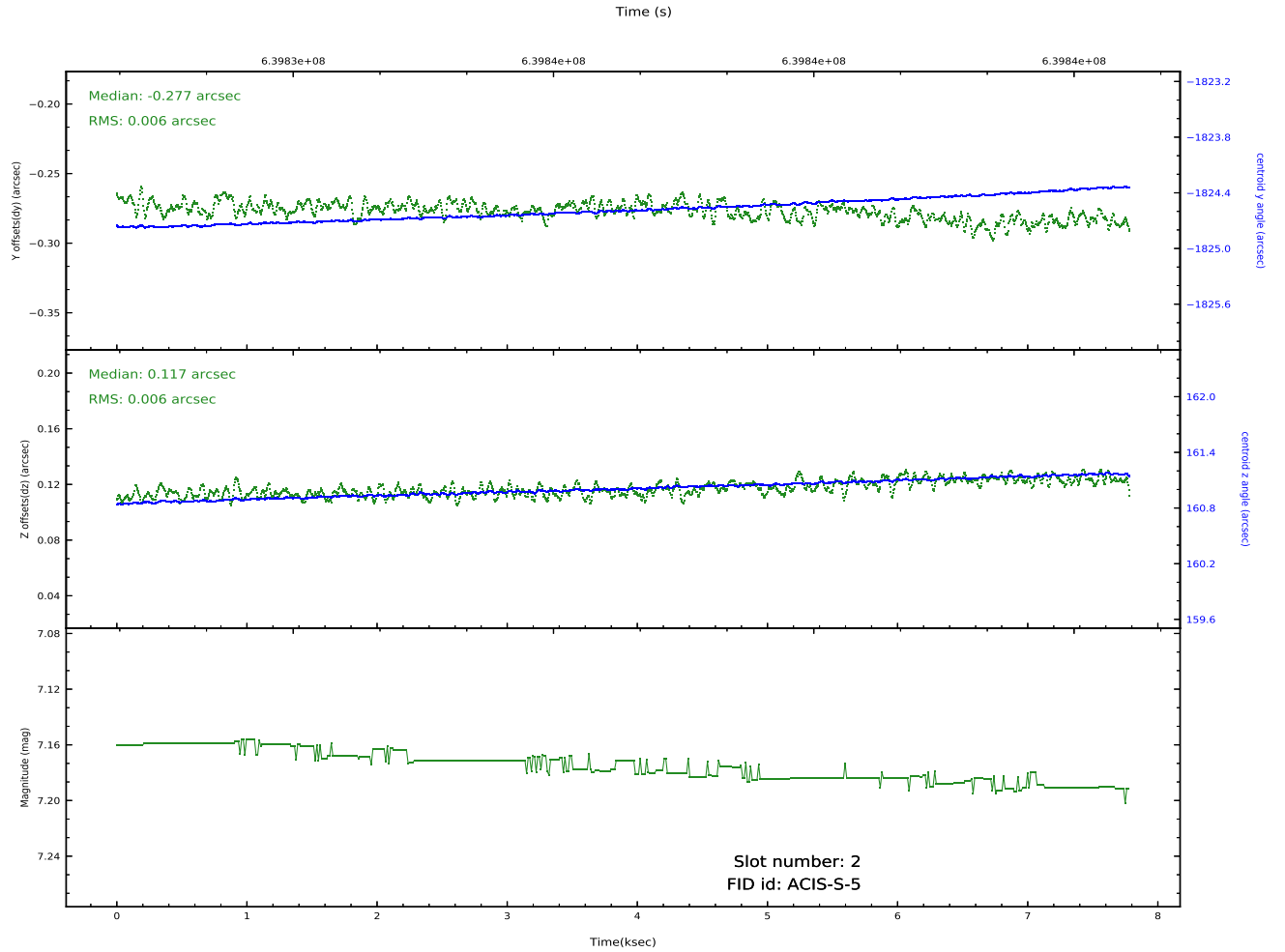
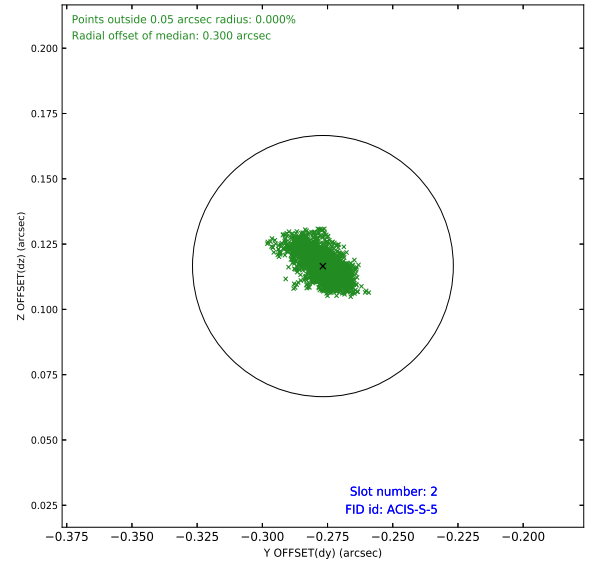
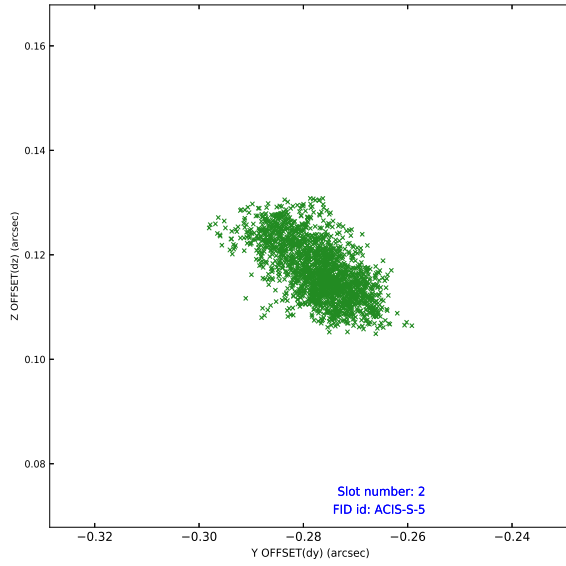
### 2.5.1 Slot 0



## 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)	2020.10.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	7.6592315301895

### A.2 Comments