

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 20518 - L2 Version 2  
Chandra X-Ray Center

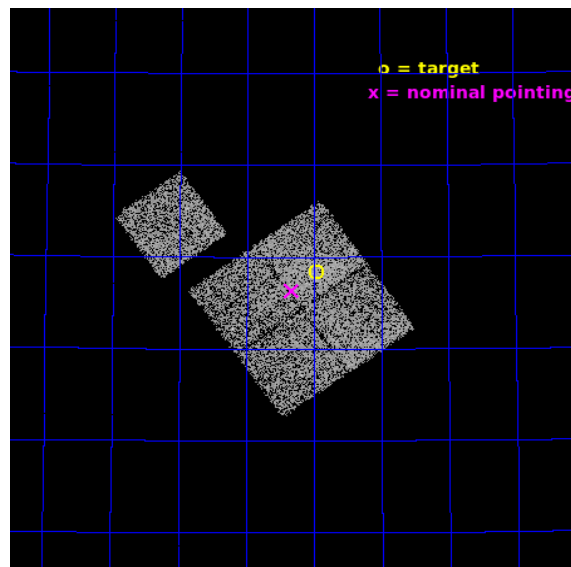
L2 Processing Date : Oct 27 2020

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# 1 Front

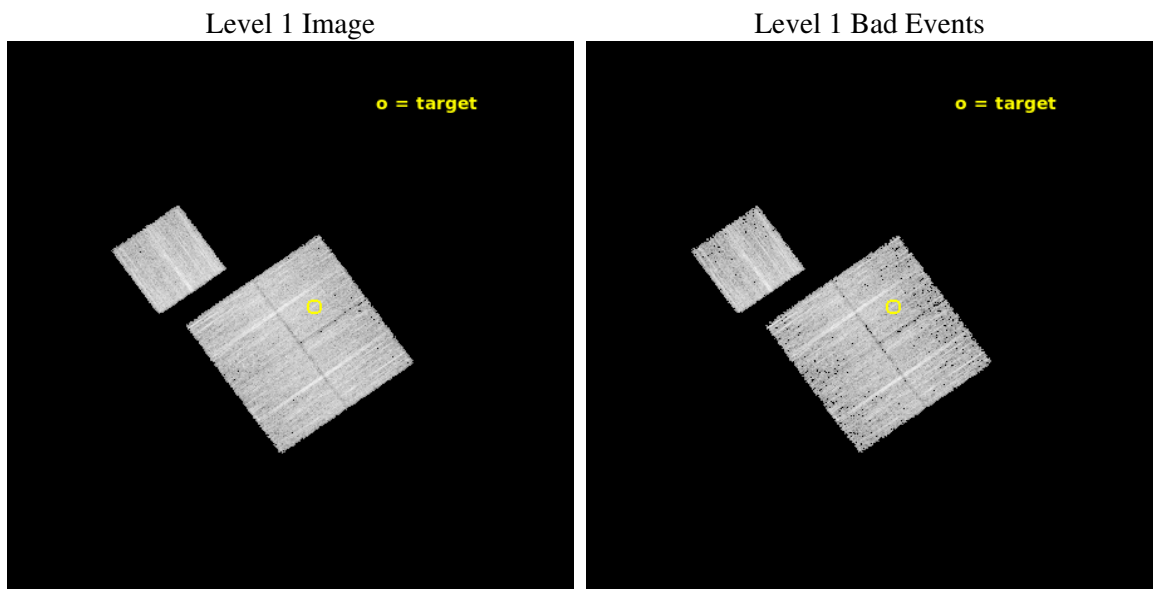
seq_num	801732	Sequence number
obs_id	20518	Observation id
title	Enabling precision cosmology with optically selected galaxy clusters	&#160
observer	Roger Morris	Principal investigator
object	CIG J125558+620848	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	193.99125	Observer's specified target RA [deg]
dec_targ	62.138583	Observer's specified target Dec [deg]
ra_nom	194.08215580176	Nominal RA [deg]
dec_nom	62.10564039941	Nominal Dec [deg]
roll_nom	324.60979813086	Nominal Roll [deg]
revision	2	Processing version of data
ontime	7070.35453403	Sum of GTIs [s]
livetime	6977.9751469236	Livetime [s]
ontime0	7070.2314140797	Sum of GTIs [s]
ontime1	7070.2724540234	Sum of GTIs [s]
ontime2	7070.3134940863	Sum of GTIs [s]
ontime3	7070.35453403	Sum of GTIs [s]
ontime6	7070.1903740168	Sum of GTIs [s]
l2events	25718	Number of level 2 events



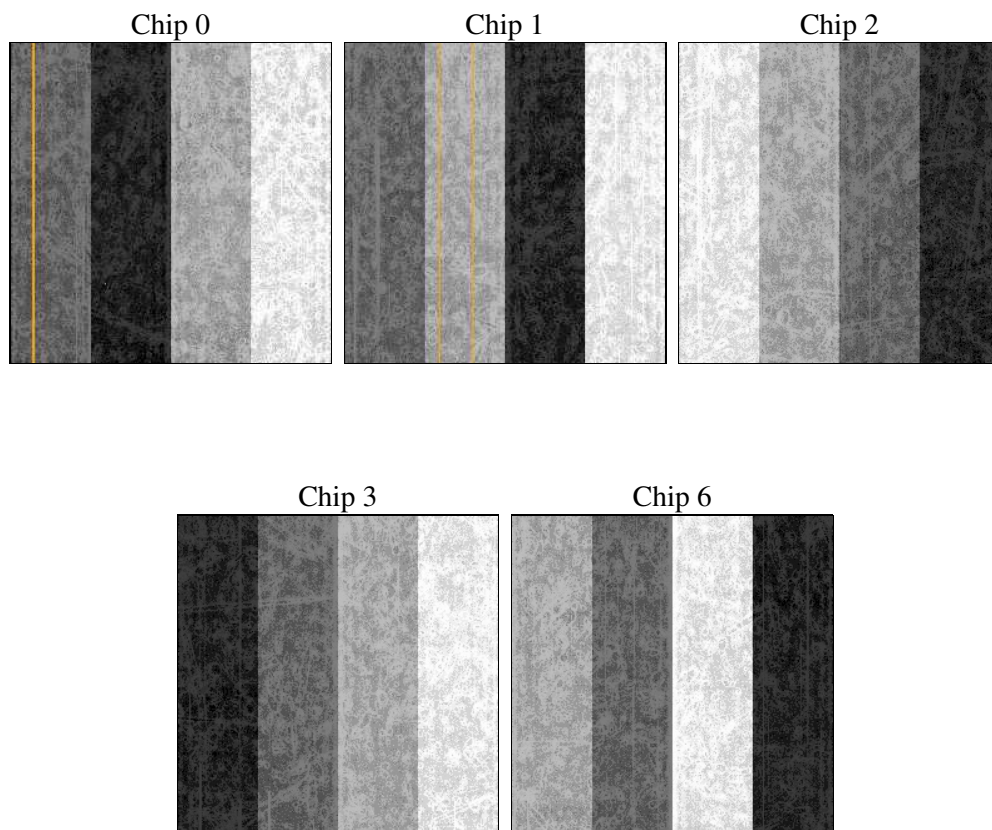
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	7000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	7070.35453403	Sum of GTIs [s]
caldsver	4.9.3	&#160	ontime0	7070.2314140797	Sum of GTIs [s]
date	2020-10-27T18:52:29	Date and time of file creation	ontime1	7070.2724540234	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	7070.3134940863	Sum of GTIs [s]
			ontime3	7070.35453403	Sum of GTIs [s]
			ontime6	7070.1903740168	Sum of GTIs [s]
			l1events	252492	Number of level 1 events

### 2.1.4 Events

	<b>ccd 0</b>	<b>ccd 1</b>	<b>ccd 2</b>	<b>ccd 3</b>	<b>ccd 6</b>
level 1 events	47456	47976	53470	48870	54720
rejected events	41500	41462	47727	42399	48935
rejected %	87%	86%	89%	86%	89%

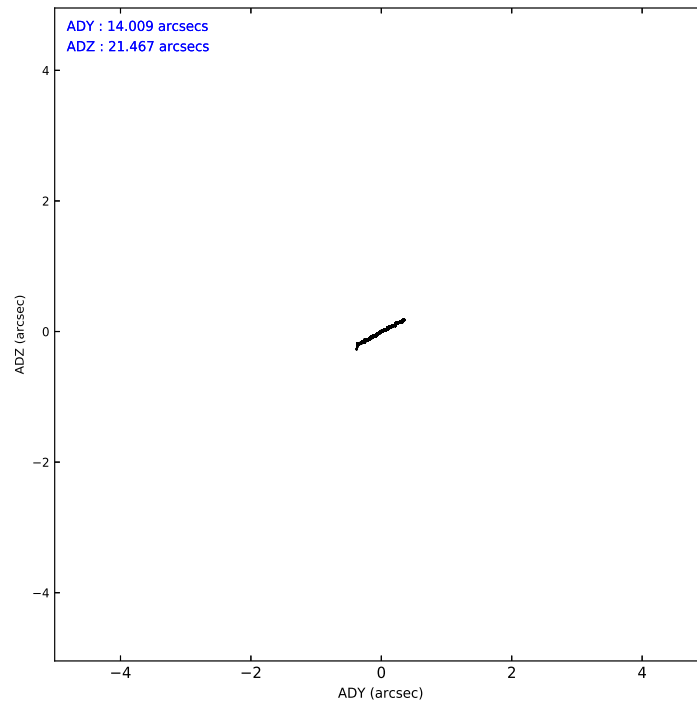
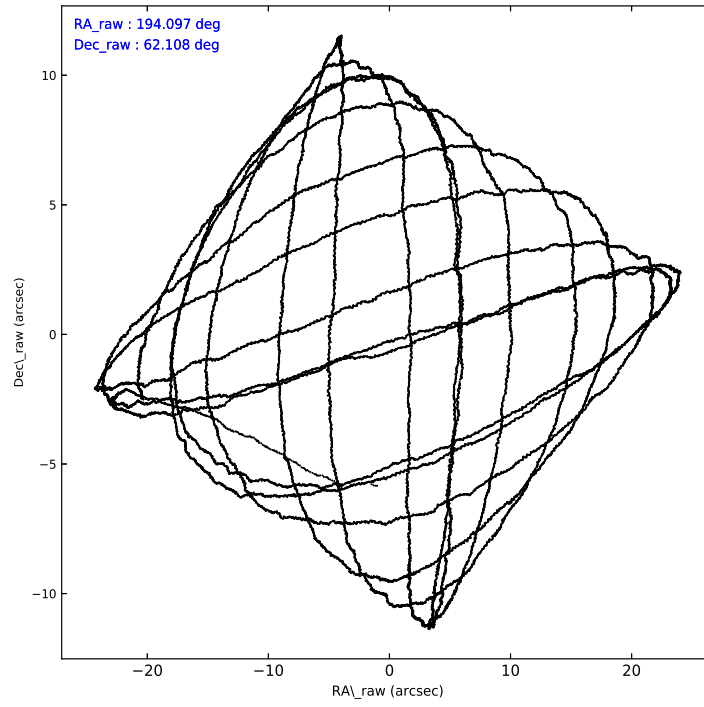
	<b>ccd 0</b>	<b>ccd 1</b>	<b>ccd 2</b>	<b>ccd 3</b>	<b>ccd 6</b>
grade 0 events	2085	2206	2014	2811	1898
	4%	4%	3%	5%	3%
grade 1 events	22	24	36	41	26
	0%	0%	0%	0%	0%
grade 2 events	1498	1655	1545	1296	1323
	3%	3%	2%	2%	2%
grade 3 events	580	616	537	604	576
	1%	1%	1%	1%	1%
grade 4 events	590	603	550	605	602
	1%	1%	1%	1%	1%
grade 5 events	2338	2427	2064	2542	2406
	4%	5%	3%	5%	4%
grade 6 events	1205	1440	1098	1156	1387
	2%	3%	2%	2%	2%
grade 7 events	39138	39005	45626	39815	46502
	82%	81%	85%	81%	84%

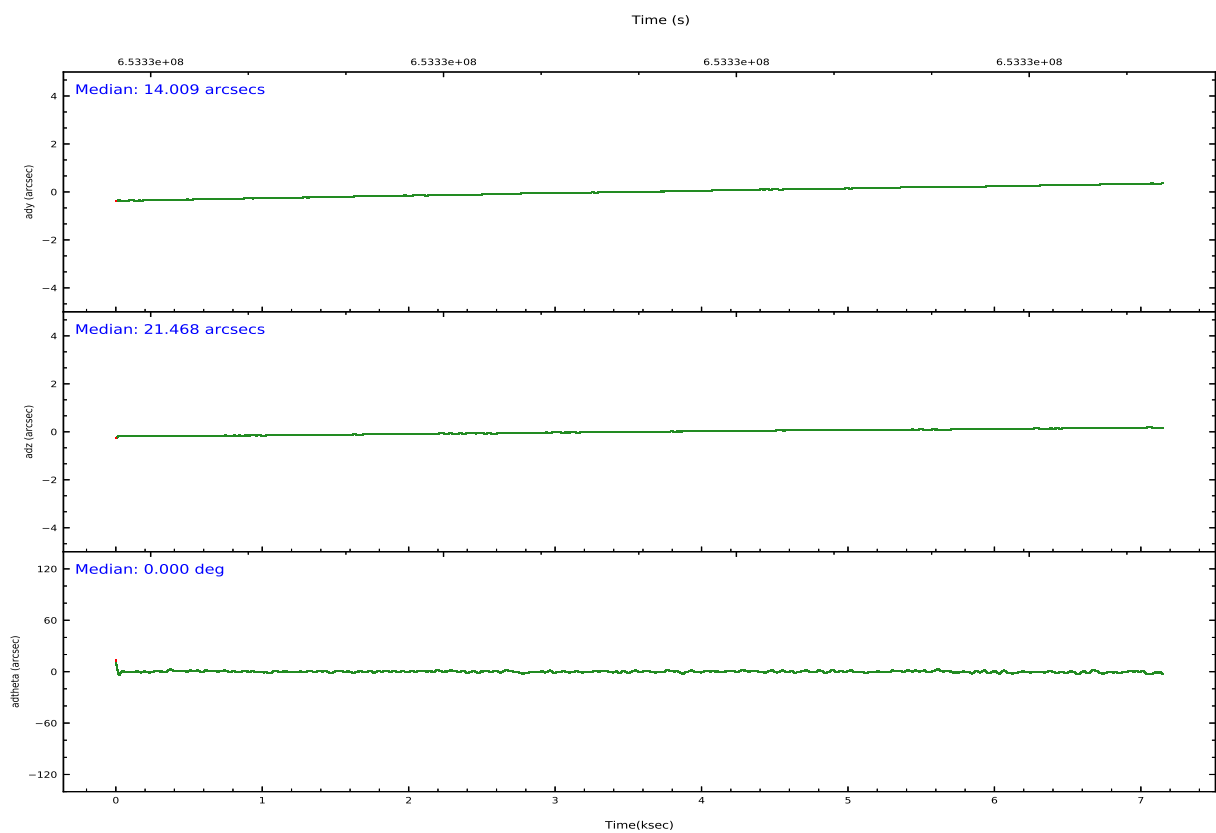
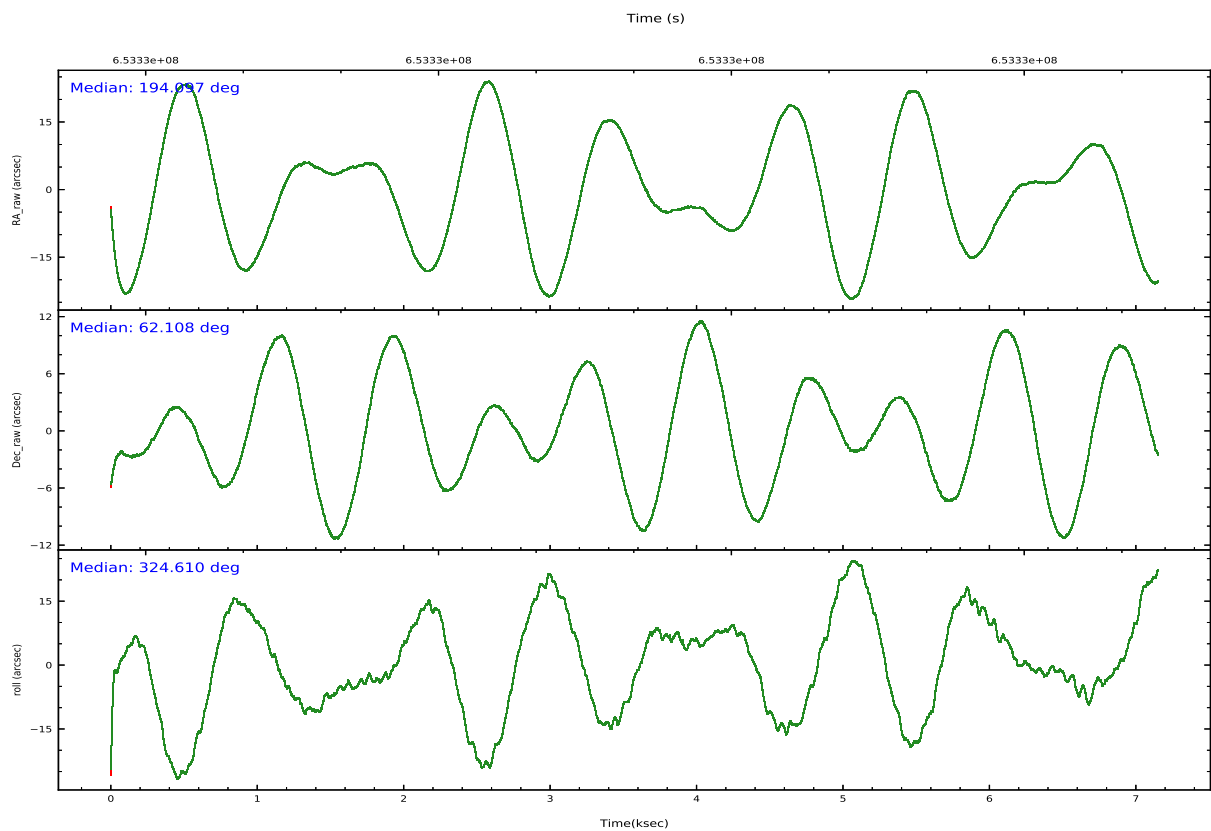


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-01236	ACIS-01236	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	194.038286	194.08215580176	CCD I2 on	Y	Y
[deg] Pointing Dec	62.110759	62.10564039941	CCD I3 on	Y	Y
[deg] Pointing Roll	324.458412	324.60979813086	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O1	Y
[mm] SIM translation stage pos	-228.472463	-228.4808600833603	CCD S3 on	N	N
[mm] SIM translation stage offset	-5.12	-5.111592919569347	CCD S4 on	N	N
[s] Observation start time (MET)	653327915.184000	653326149.52496	CCD S5 on	N	N
Observation start date	2018-09-14T15:57:26	2018-09-14T15:29:09	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	653334915.184000	653335966.46305	On-chip summing requested	N	N
Observation end date	2018-09-14T17:54:06	2018-09-14T18:12:46	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



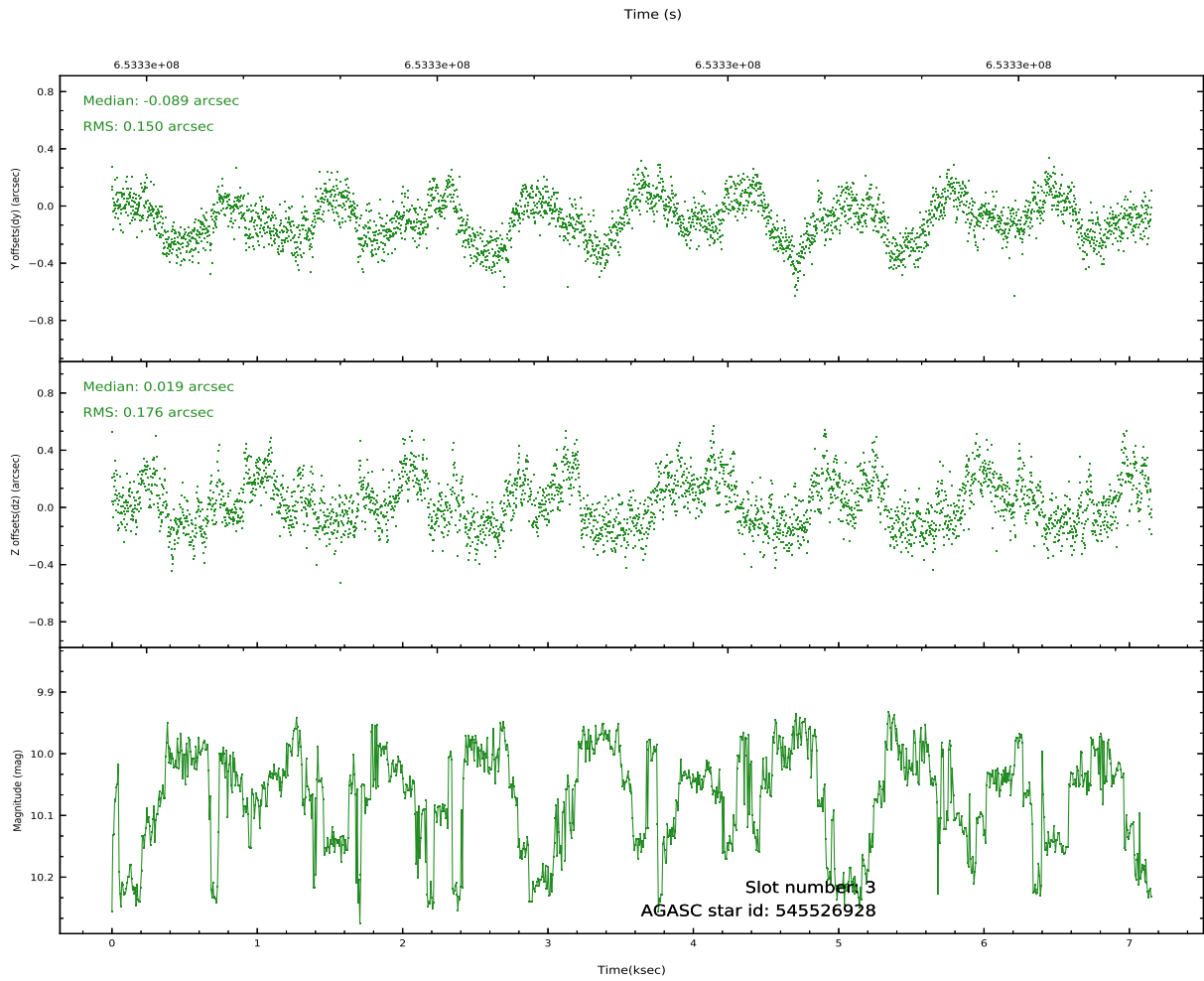
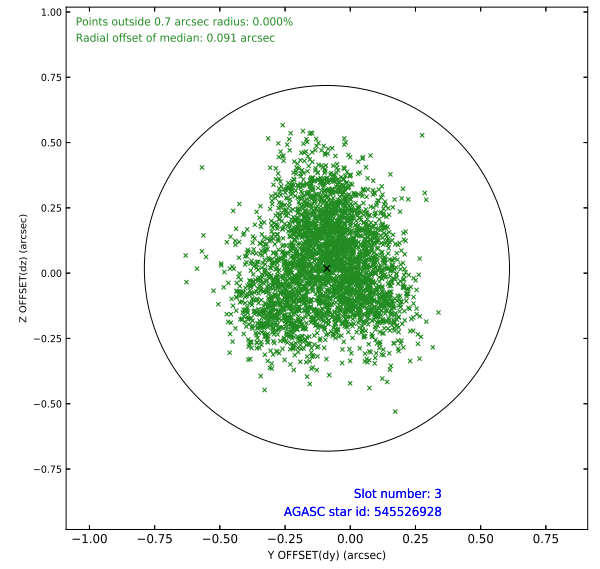
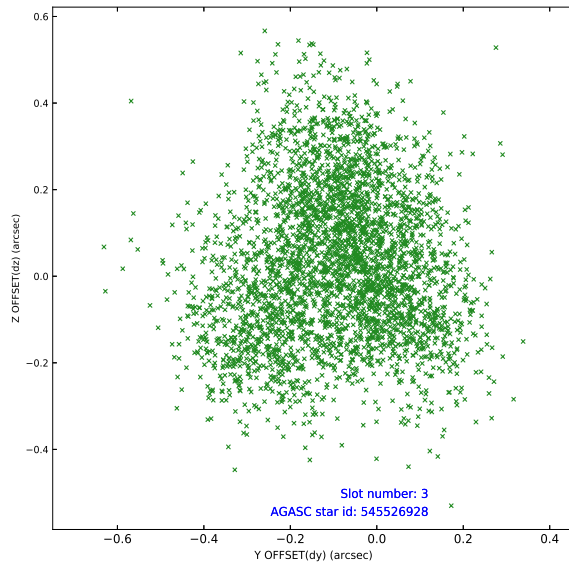


Slot Statistics

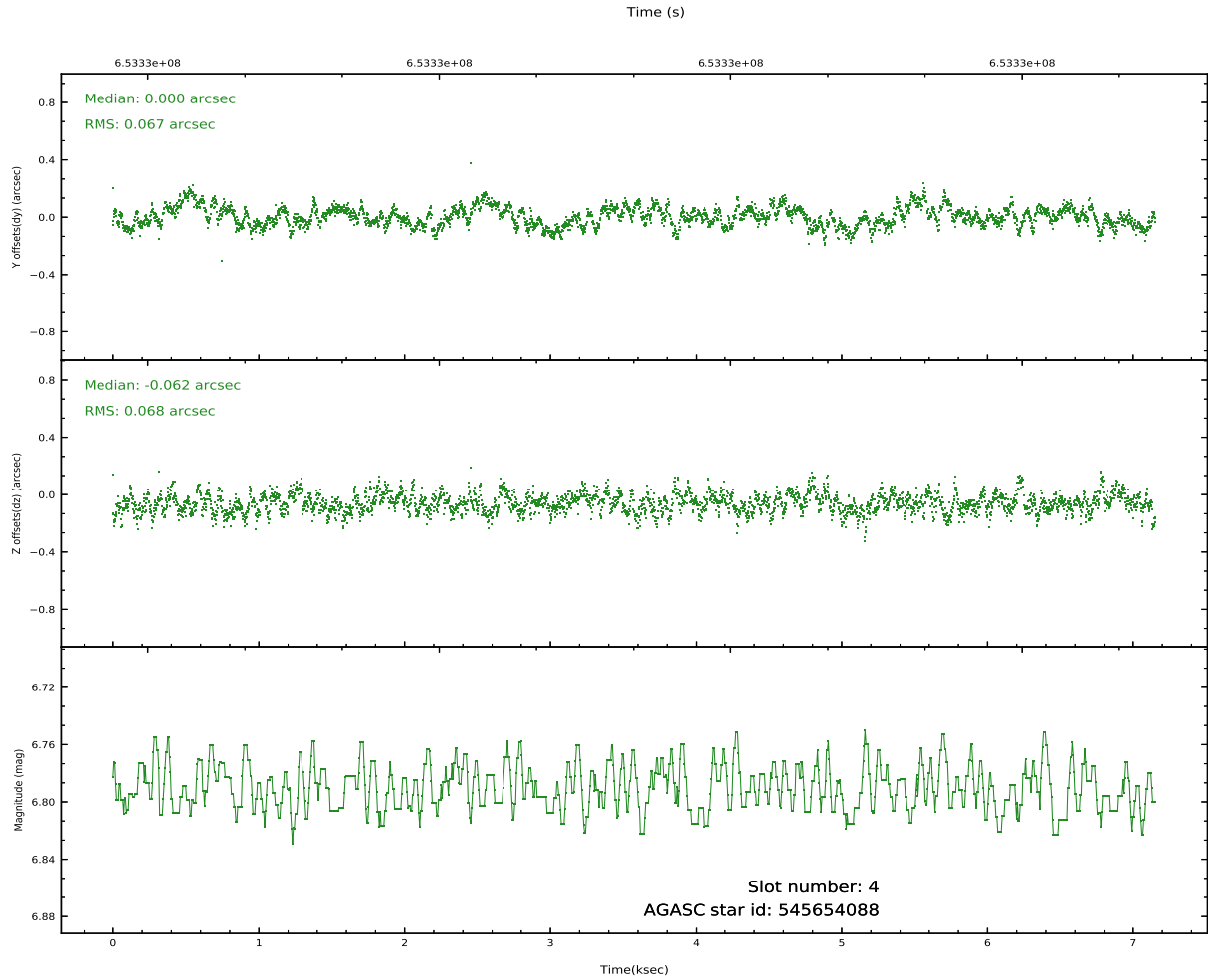
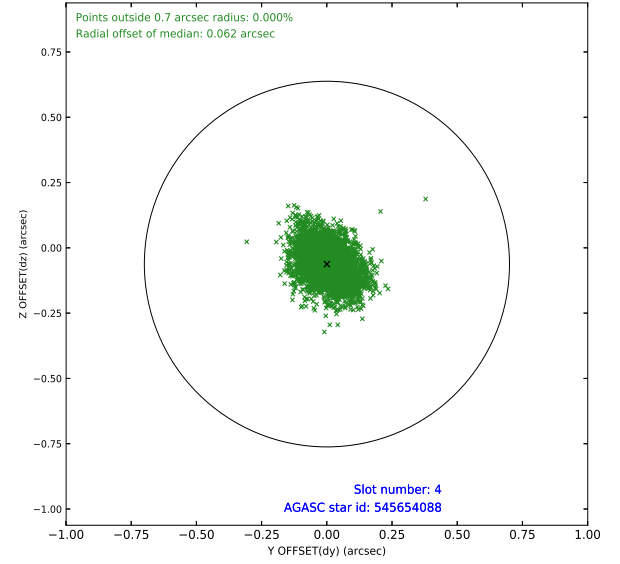
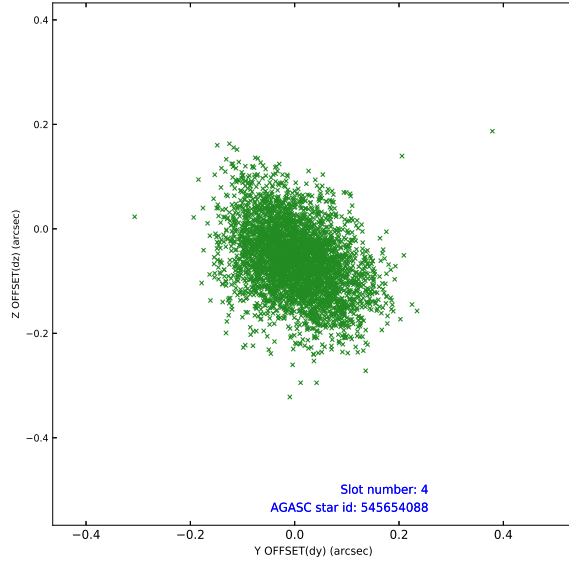
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.08	1745	1.000	0.124	-0.156	0.011	0.016	0.000000	0.000000	925.46	-950
1	FID		ACIS-I-2	7.04	1745	1.000	-0.195	0.090	0.008	0.015	0.000000	0.000000	-768.77	-956
2	FID		ACIS-I-4	7.02	1745	1.000	-0.026	0.133	0.010	0.021	0.000000	0.000000	2144.61	949
3	GUIDE	used	545526928	10.06	3479	1.000	-0.089	0.019	0.252	0.385	193.486397	61.660531	170.28	-1863
4	GUIDE	used	545654088	6.79	3490	1.000	0.000	-0.062	0.101	0.168	194.628308	61.716972	1640.79	-565
5	GUIDE	used	545654720	9.75	3486	1.000	-0.061	0.174	0.264	0.434	194.415379	61.952705	850.79	-90
6	GUIDE	used	545921592	9.00	3486	1.000	0.154	-0.085	0.131	0.220	193.389113	62.599073	-1898.67	809
7	GUIDE	used	545922000	9.54	3485	1.000	0.015	-0.059	0.152	0.251	193.816309	62.966151	-2085.99	2295

## 2.4 Star Slots

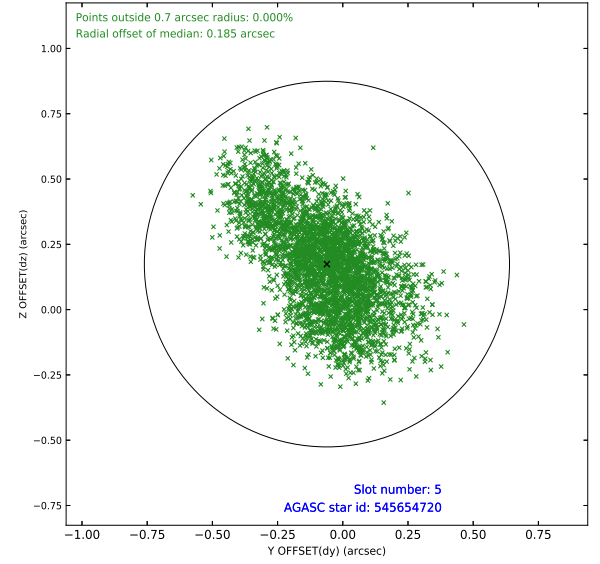
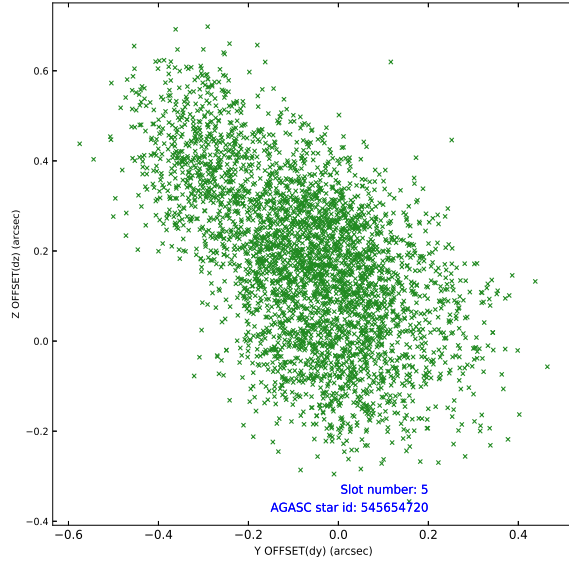
### 2.4.1 Slot 3



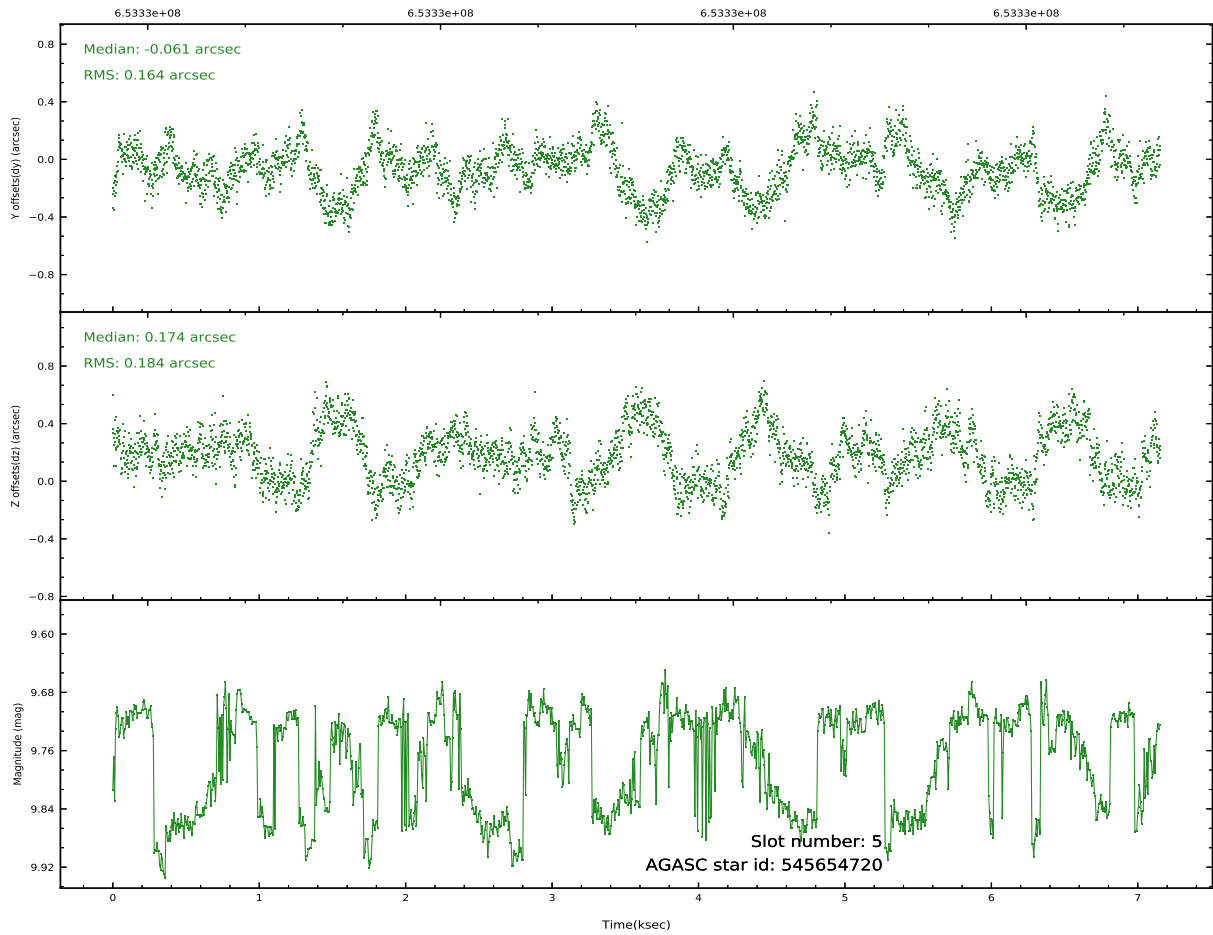
## 2.4.2 Slot 4



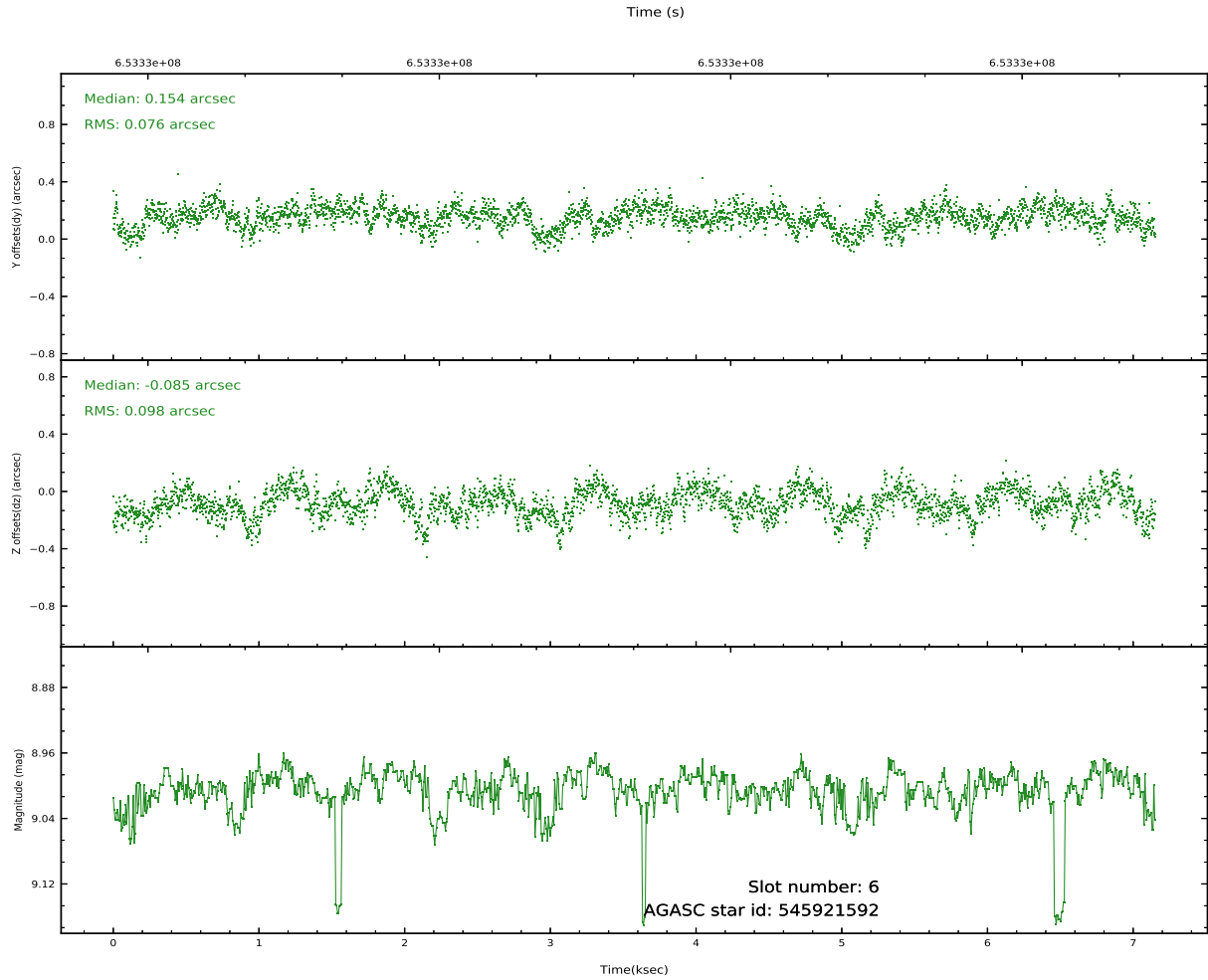
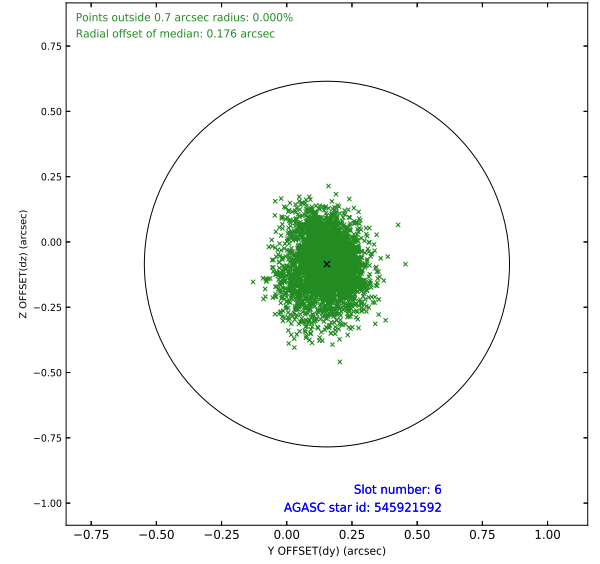
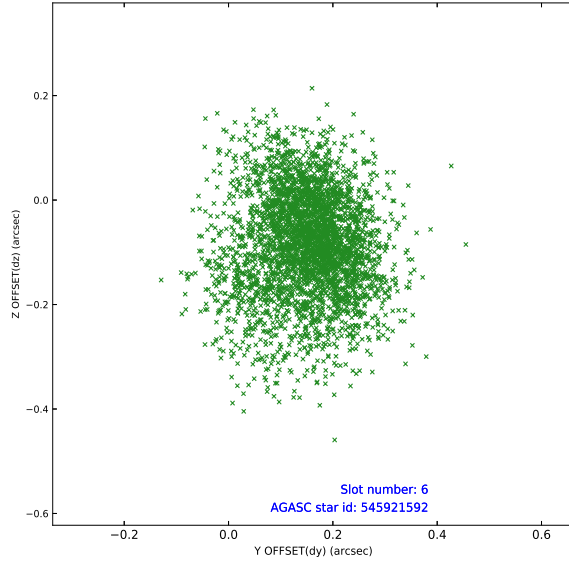
### 2.4.3 Slot 5



Time (s)

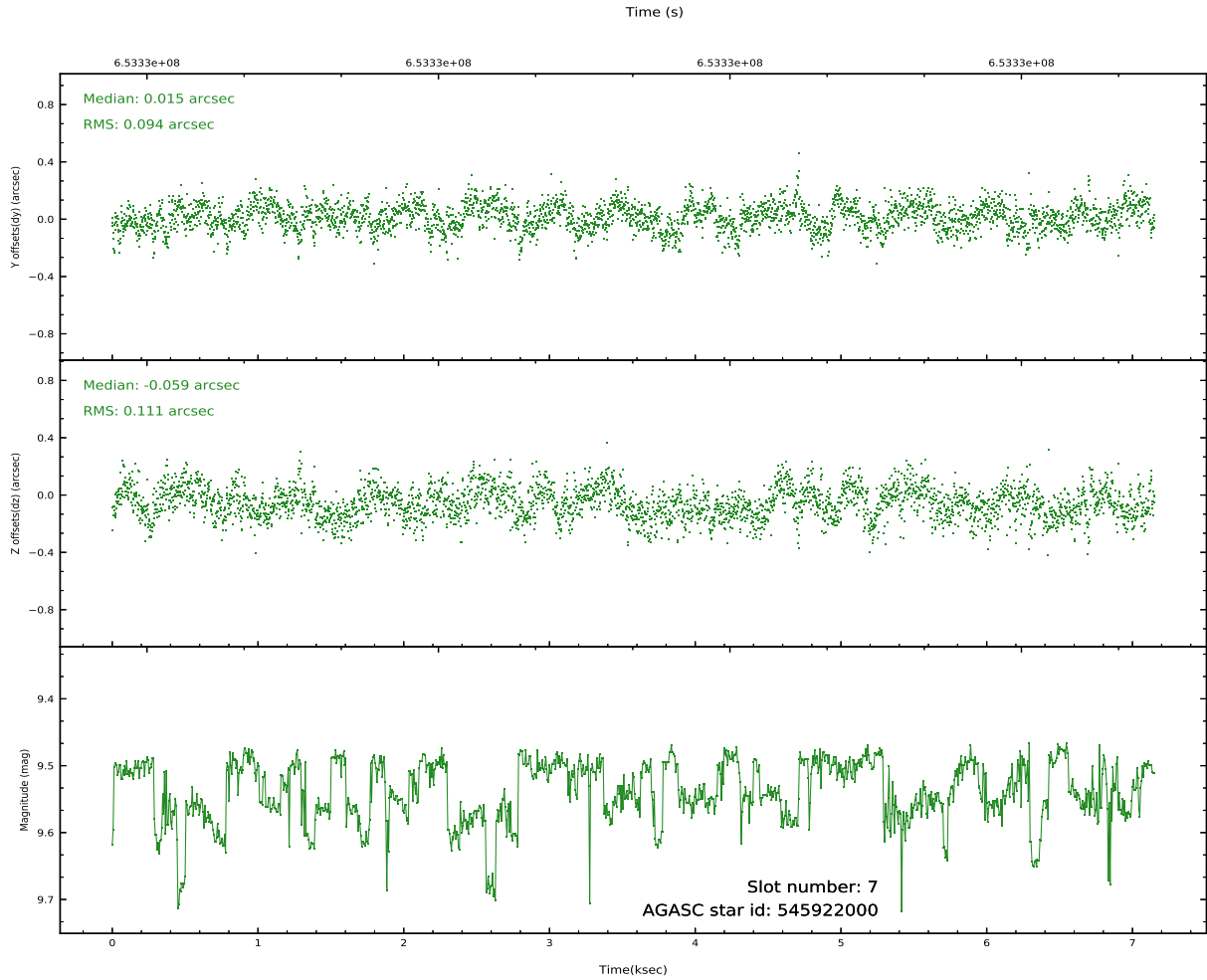
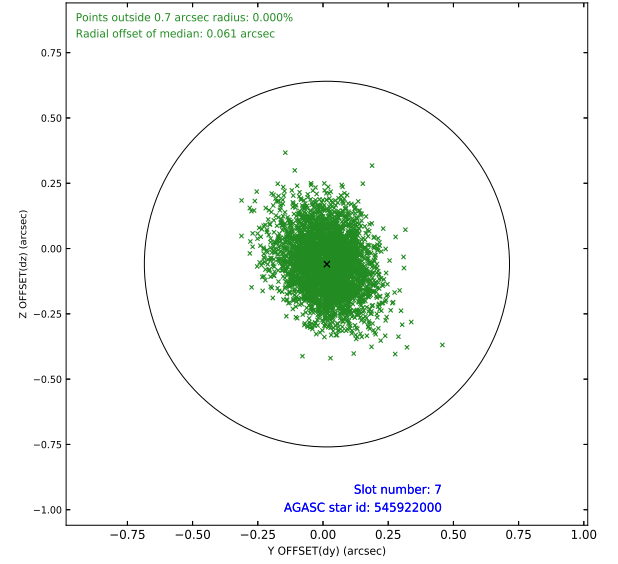
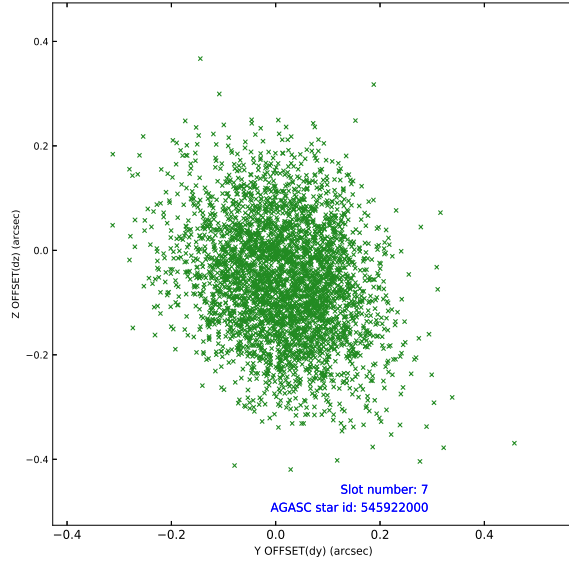


## 2.4.4 Slot 6



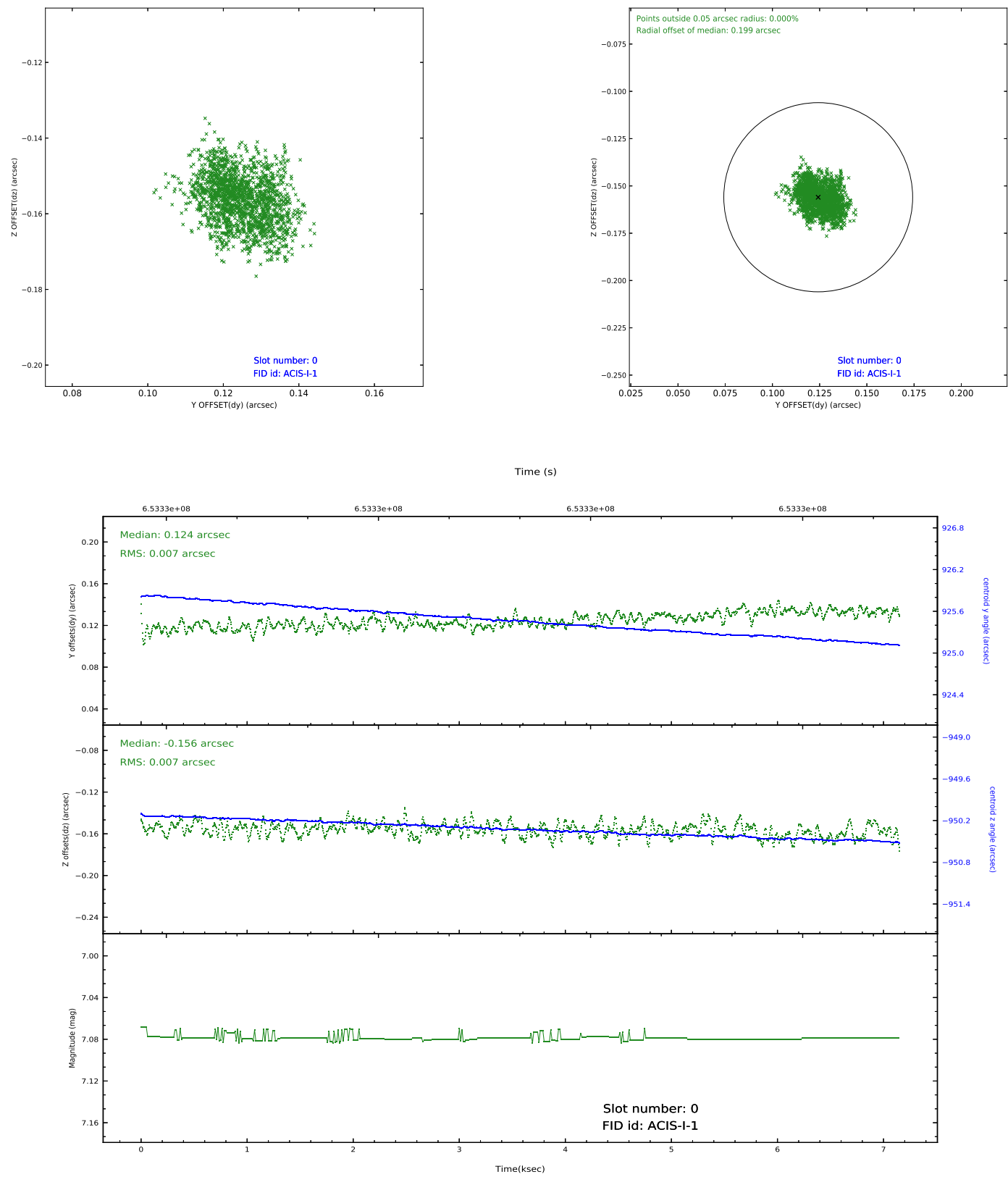


## 2.4.5 Slot 7

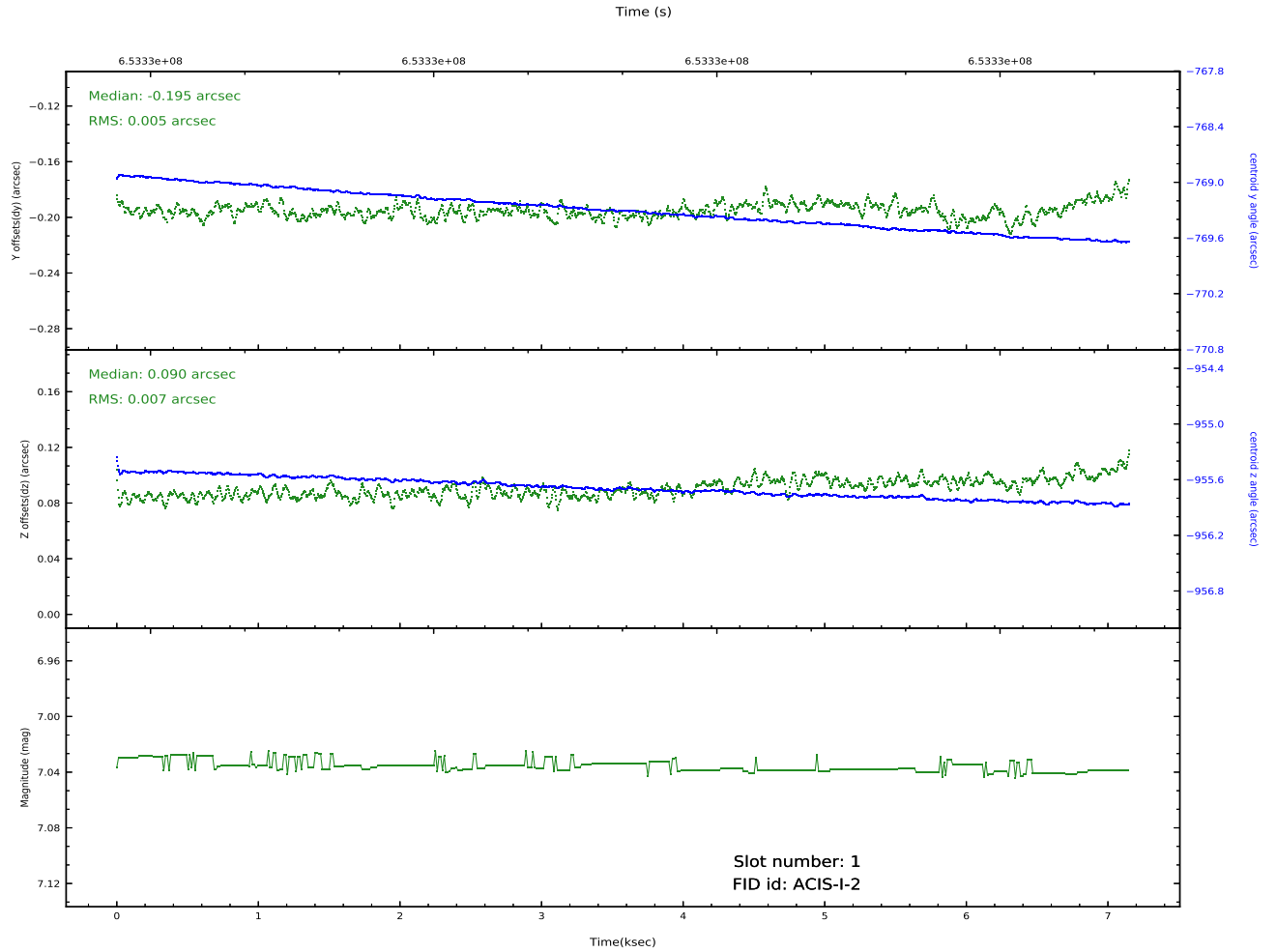
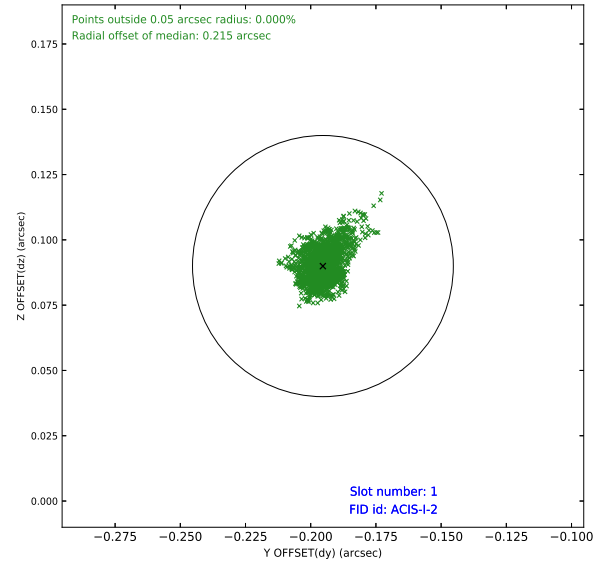
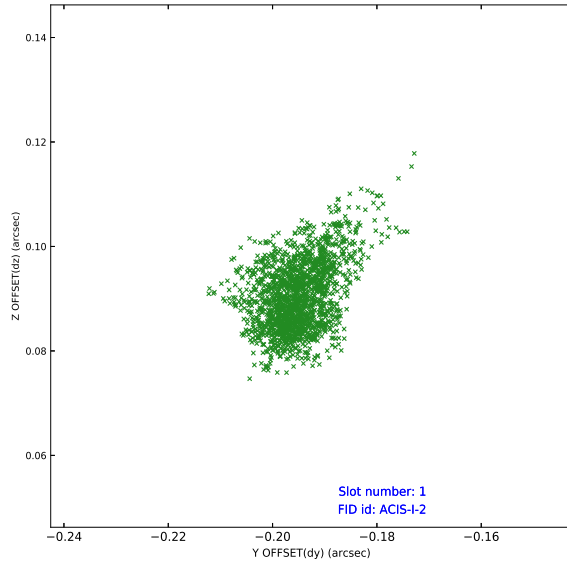


# 2.5 FID Slots

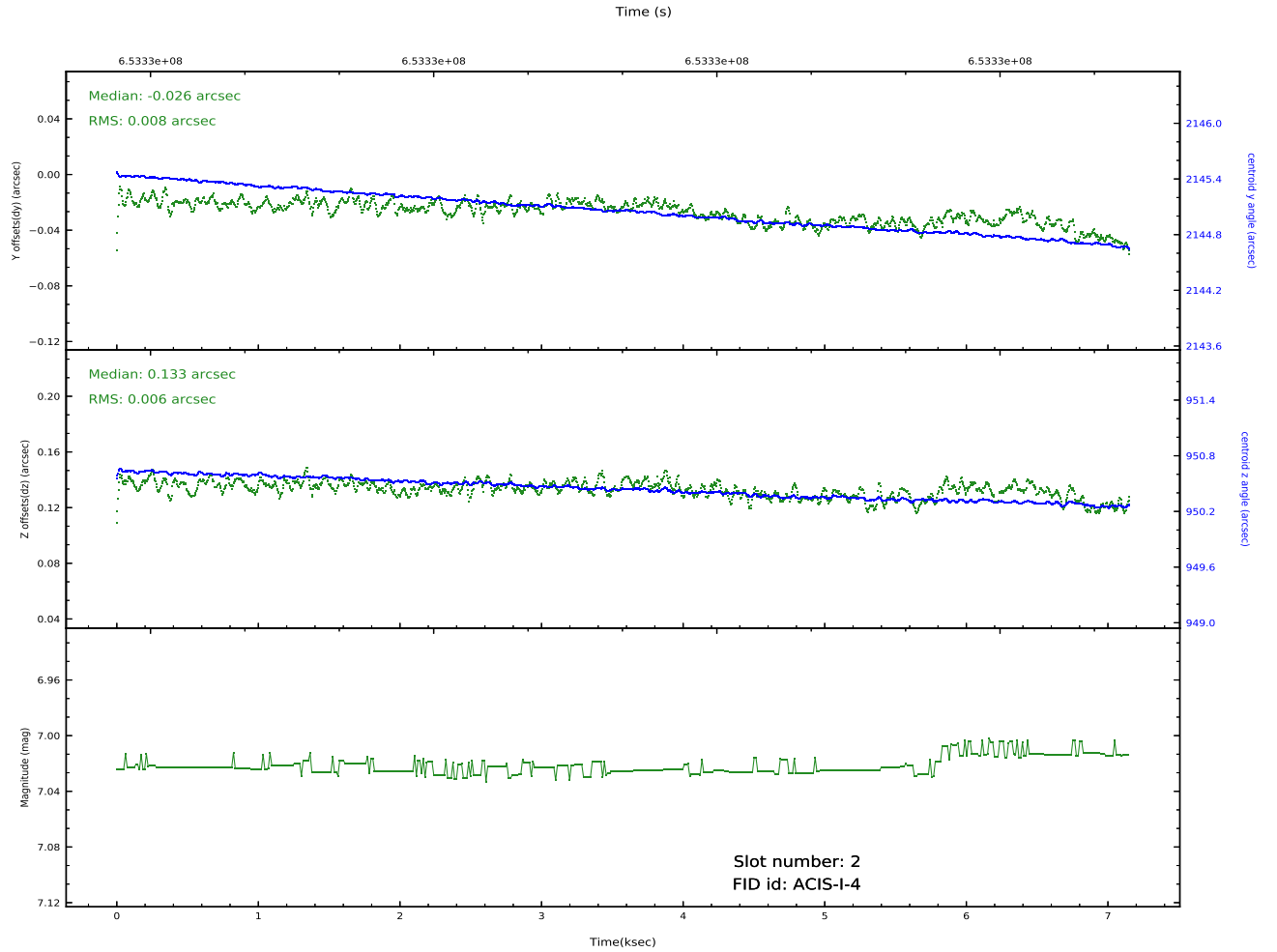
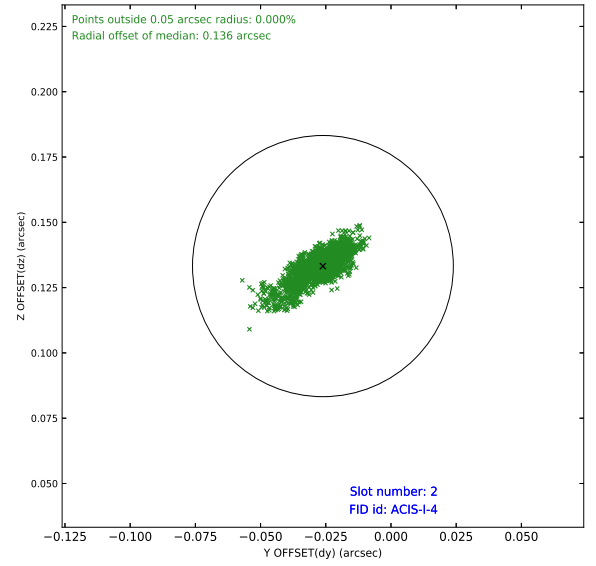
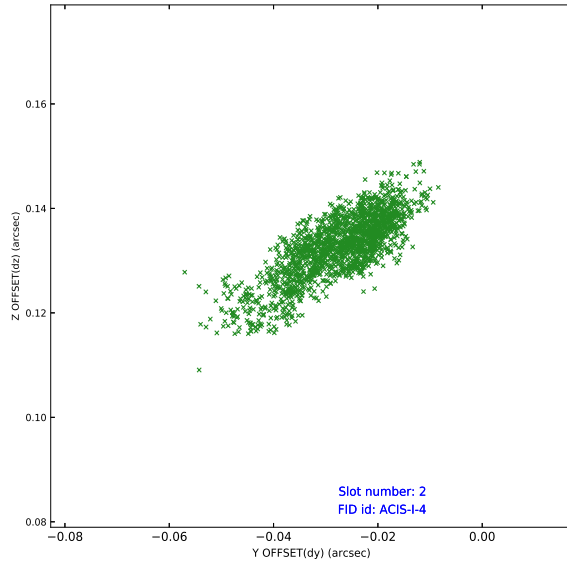
## 2.5.1 Slot 0



## 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)	2020.10.30
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	7.0703545347452

### A.2 Comments