

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 20282 - L2 Version 2  
Chandra X-Ray Center

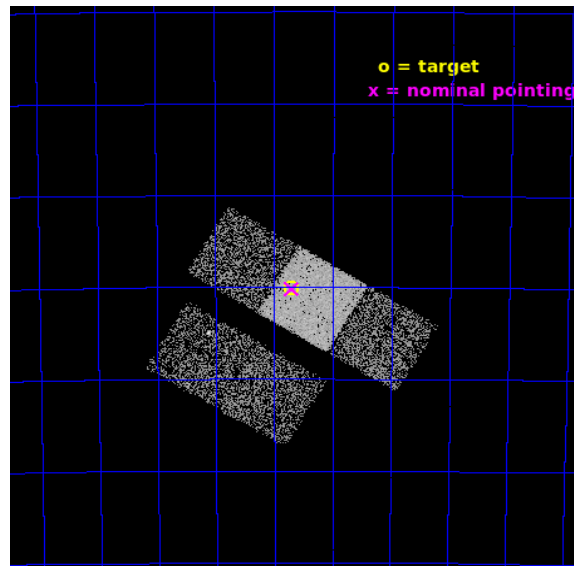
L2 Processing Date : Oct 24 2020

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# 1 Front

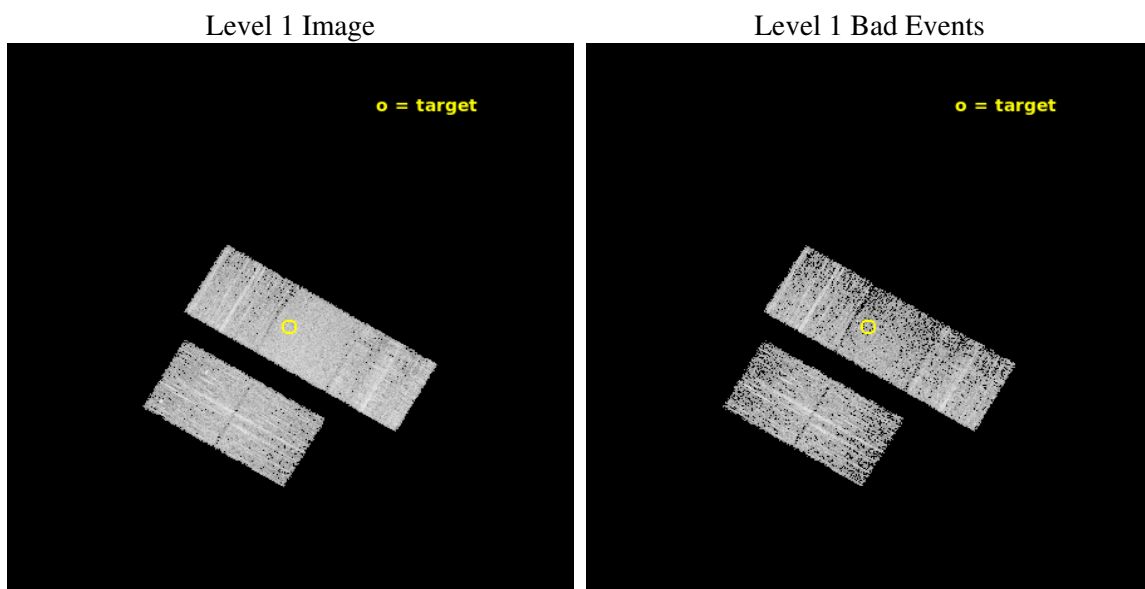
seq_num	502981	Sequence number
obs_id	20282	Observation id
title	Where Have All the Central Compact Objects Gone?	Proposal title
observer	Eric Gotthelf	Principal investigator
object	PSR J1210-6550	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	182.675	Observer's specified target RA [deg]
dec_targ	-65.834611	Observer's specified target Dec [deg]
ra_nom	182.67423730727	Nominal RA [deg]
dec_nom	-65.836293618549	Nominal Dec [deg]
roll_nom	30.614582043307	Nominal Roll [deg]
revision	2	Processing version of data
ontime	3546.4000273943	Sum of GTIs [s]
livetime	3500.0637002147	Livetime [s]
ontime2	3546.4000273943	Sum of GTIs [s]
ontime3	3546.4000273943	Sum of GTIs [s]
ontime6	3546.4000273943	Sum of GTIs [s]
ontime7	3546.4000273943	Sum of GTIs [s]
ontime8	3546.4000273943	Sum of GTIs [s]
l2events	24461	Number of level 2 events



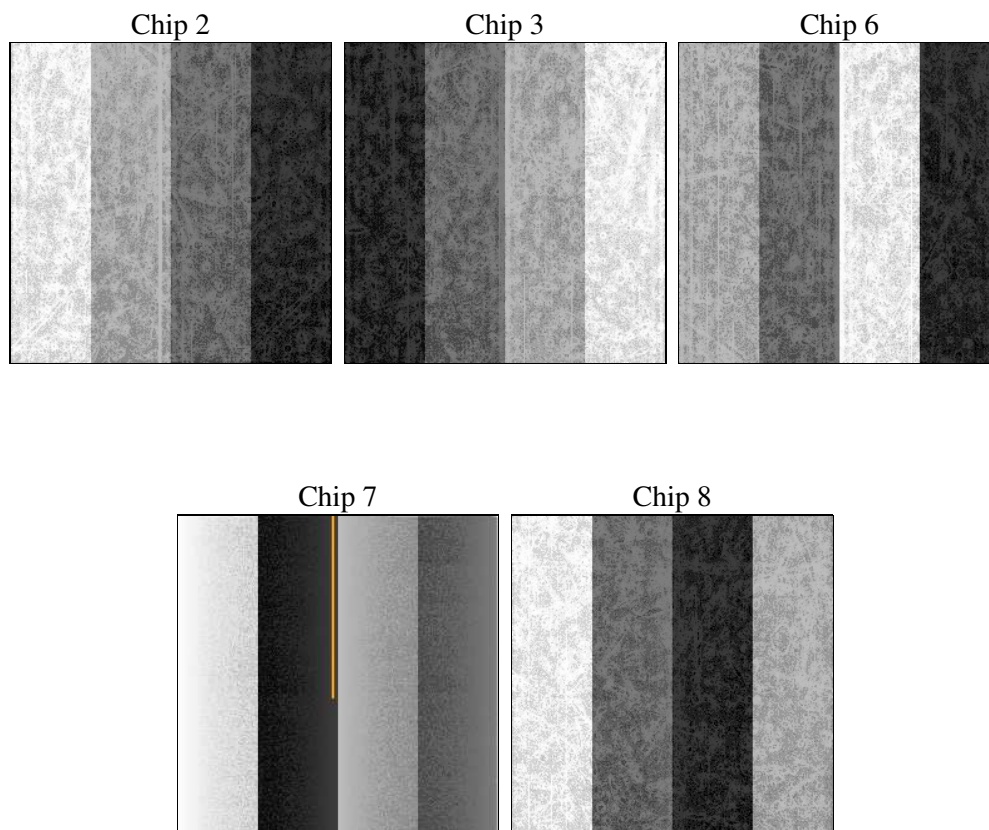
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	3500.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	3546.4000273943	Sum of GTIs [s]
caldsver	4.9.3	&#160	ontime2	3546.4000273943	Sum of GTIs [s]
date	2020-10-24T17:52:21	Date and time of file creation	ontime3	3546.4000273943	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	3546.4000273943	Sum of GTIs [s]
			ontime7	3546.4000273943	Sum of GTIs [s]
			ontime8	3546.4000273943	Sum of GTIs [s]
			l1events	150541	Number of level 1 events

### 2.1.4 Events

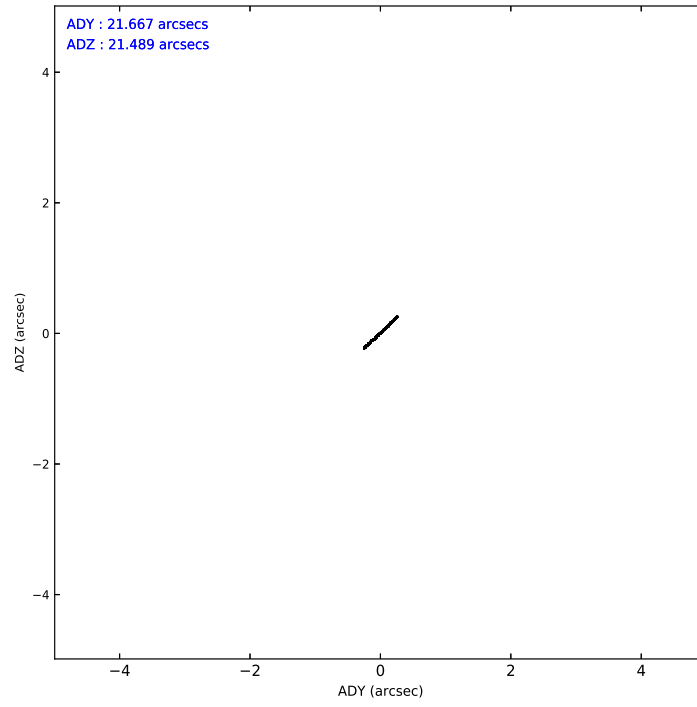
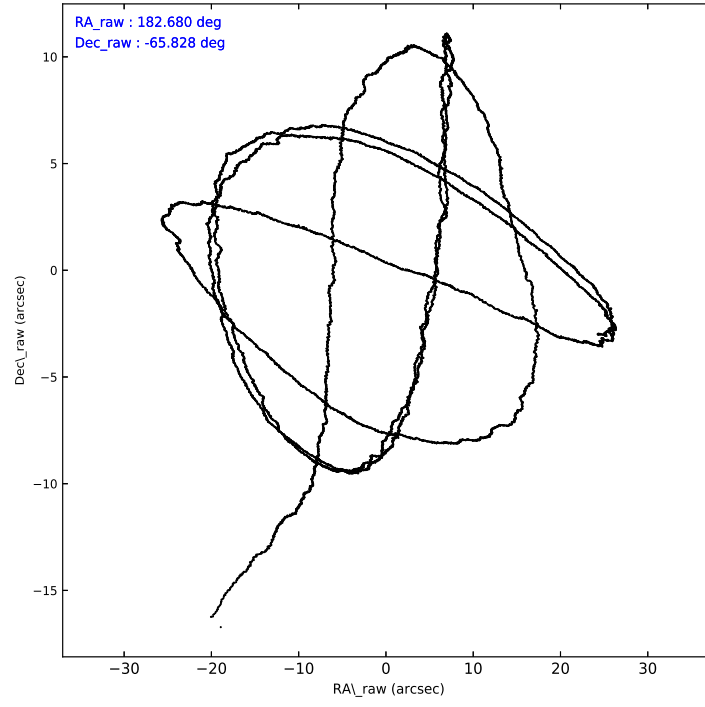
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	26905	26214	28675	33873	34874
rejected events	23844	23589	25677	19143	25856
rejected %	88%	89%	89%	56%	74%

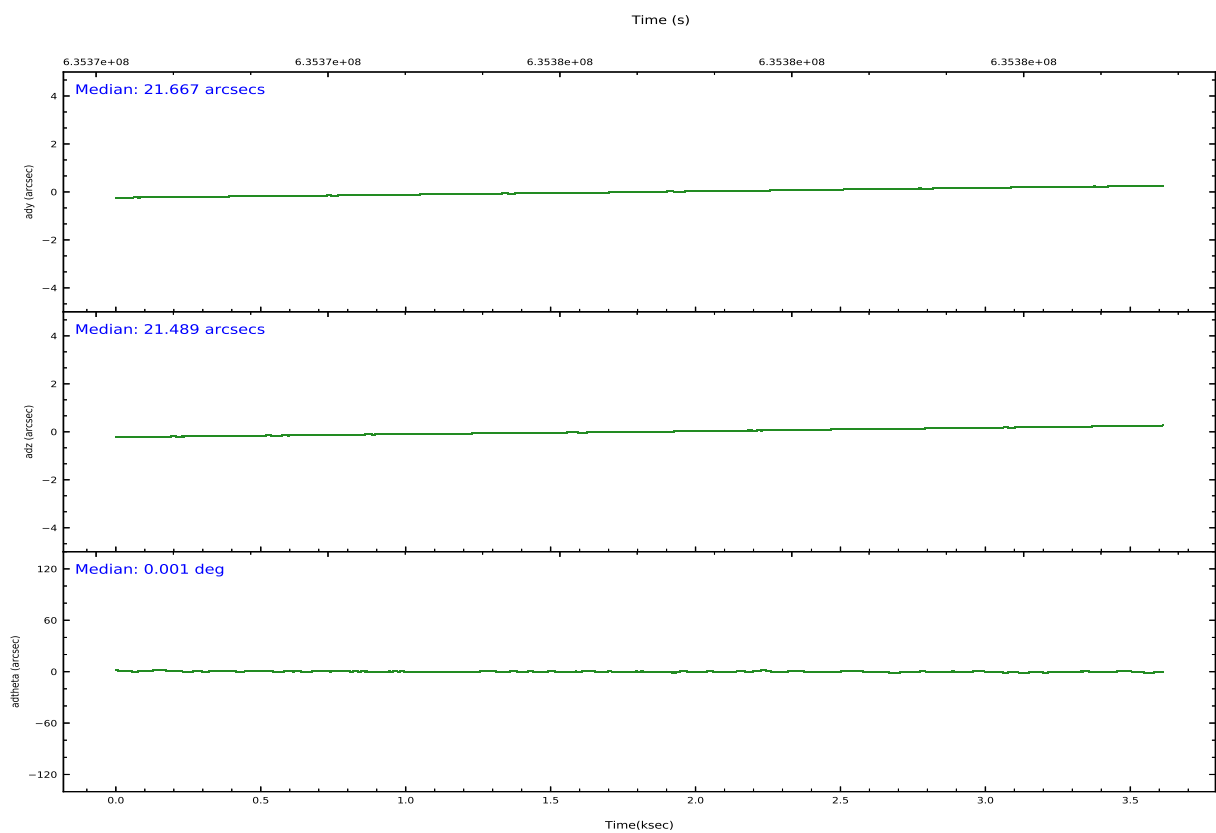
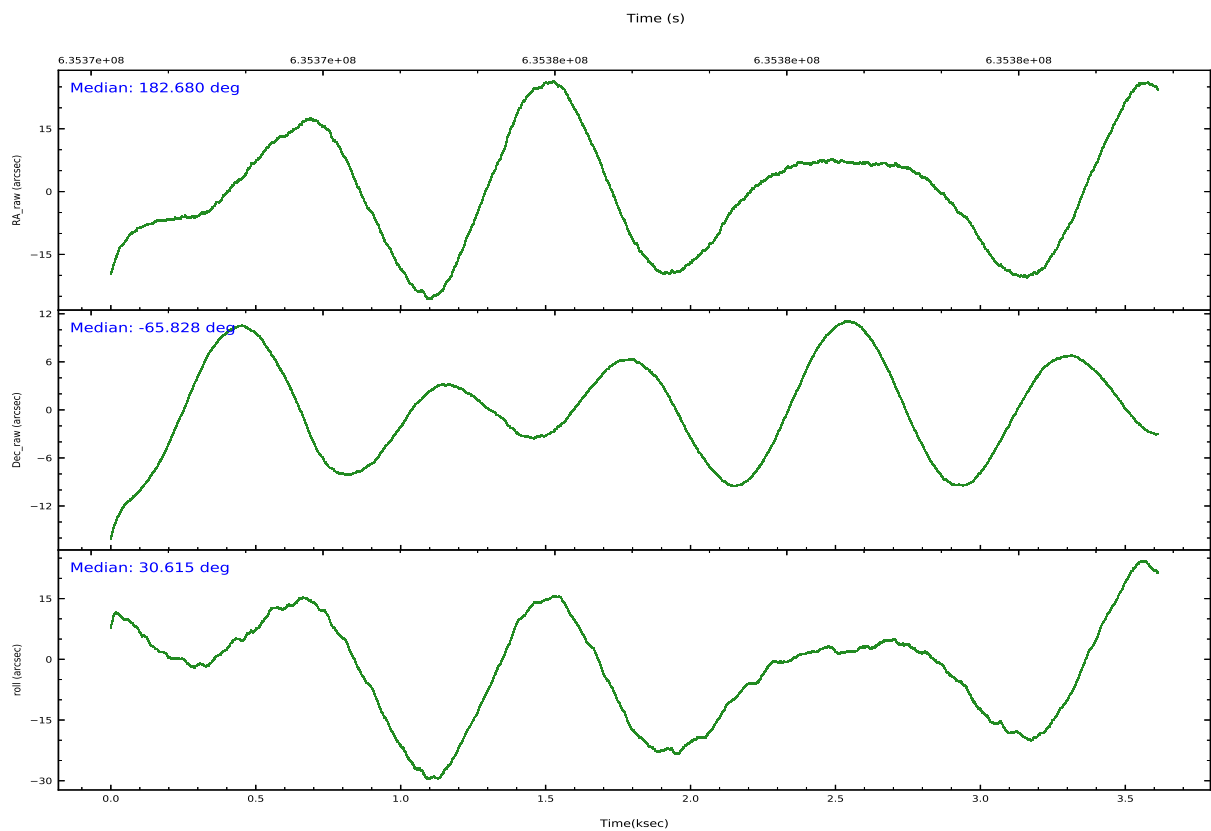
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	1247	885	942	1208	2540
	4%	3%	3%	3%	7%
grade 1 events	12	15	14	38	36
	0%	0%	0%	0%	0%
grade 2 events	691	569	710	3085	2108
	2%	2%	2%	9%	6%
grade 3 events	271	262	271	1198	993
	1%	0%	0%	3%	2%
grade 4 events	310	282	295	1195	910
	1%	1%	1%	3%	2%
grade 5 events	973	1156	1199	3314	1817
	3%	4%	4%	9%	5%
grade 6 events	549	630	782	8072	2481
	2%	2%	2%	23%	7%
grade 7 events	22852	22415	24462	15763	23989
	84%	85%	85%	46%	68%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-23678	ACIS-23678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	182.647424	182.67423730727	CCD I2 on	O1	Y
[deg] Pointing Dec	-65.851824	-65.83629361854901	CCD I3 on	O2	Y
[deg] Pointing Roll	30.435675	30.614582043307	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[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)	635373782.184000	635372446.28798	CCD S5 on	N	N
Observation start date	2018-02-18T20:41:53	2018-02-18T20:20:46	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	635377282.184000	635378045.86331	On-chip summing requested	N	N
Observation end date	2018-02-18T21:40:13	2018-02-18T21:54:05	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





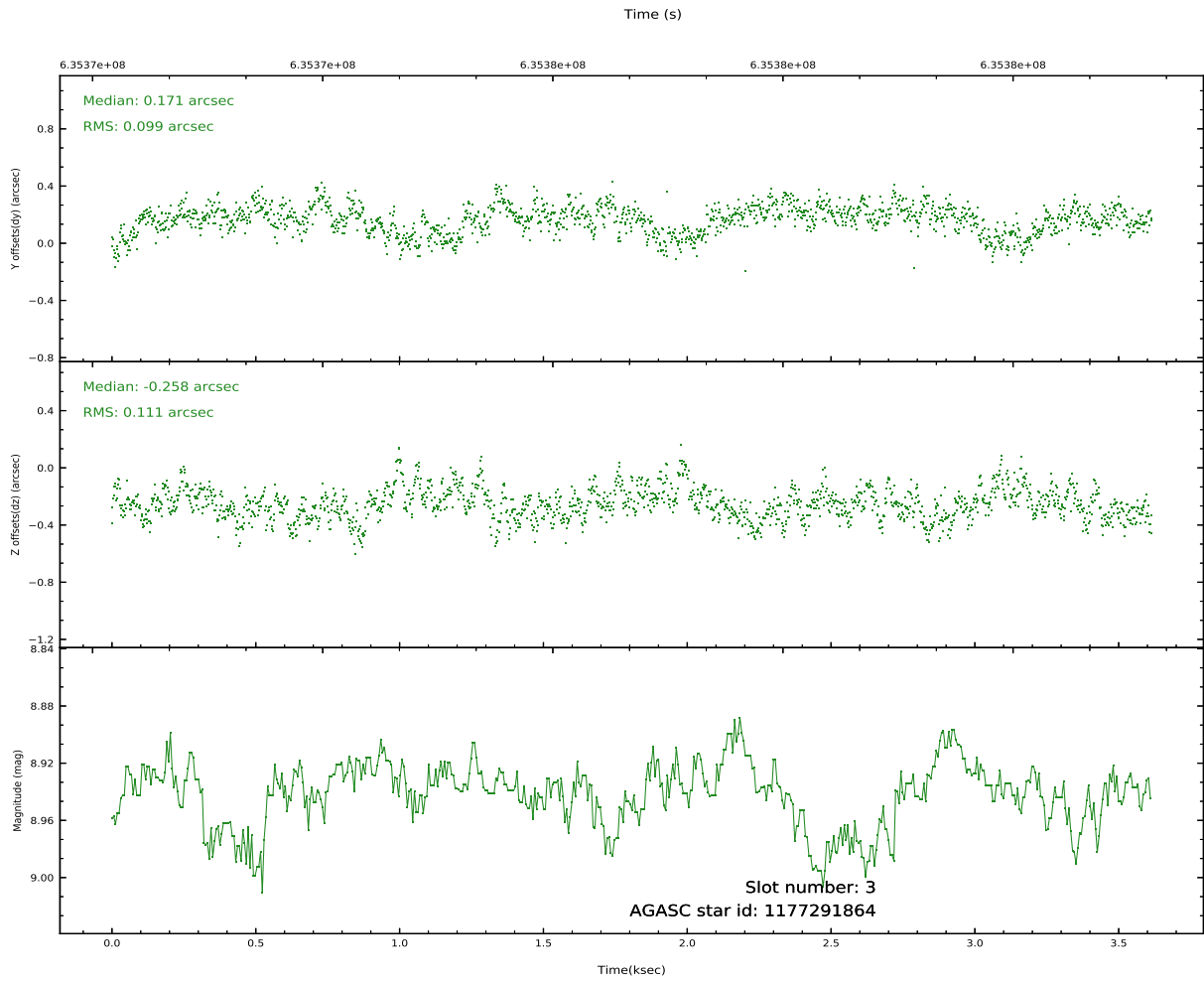
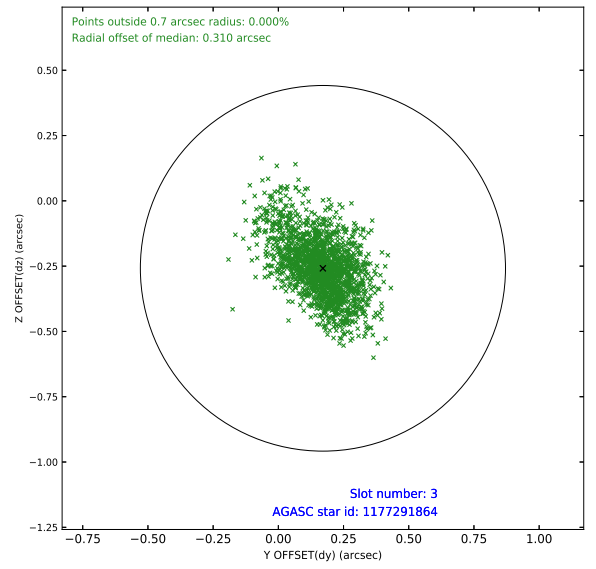
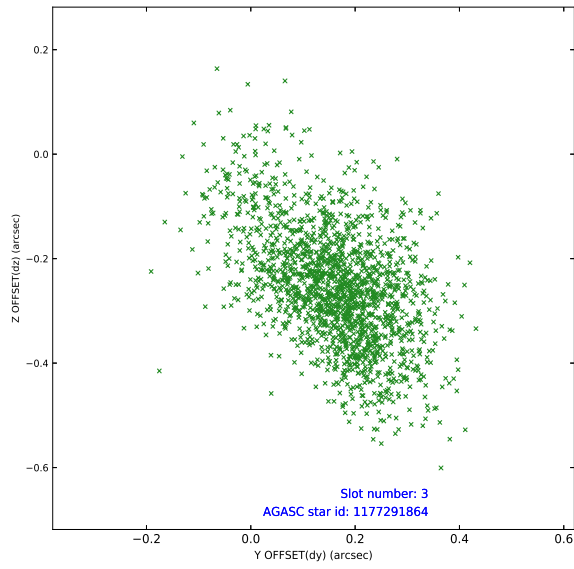
Slot Statistics

pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.12	882	1.000	0.049	0.013	0.007	0.012	0.000000	0.000000	-774.92	-1742
1	FID		ACIS-S-4	7.24	882	1.000	0.055	-0.094	0.009	0.015	0.000000	0.000000	2137.72	163
2	FID		ACIS-S-6	7.38	882	1.000	-0.131	0.088	0.008	0.014	0.000000	0.000000	389.32	803
3	GUIDE	used	1177291864	8.94	1764	1.000	0.171	-0.258	0.152	0.278	183.330949	-65.620108	1295.91	200
4	GUIDE	used	1177327112	6.64	1764	1.000	-0.024	-0.122	0.126	0.215	181.473413	-65.546878	-959.88	1819
5	GUIDE	used	1177829104	8.22	1764	1.000	-0.013	0.115	0.125	0.226	180.751065	-65.715237	-2193.38	1810
6	GUIDE	used	1177844760	8.59	1764	1.000	0.085	0.073	0.134	0.221	184.034154	-65.668208	2095.81	-489
7	GUIDE	used	1177955240	7.95	1762	1.000	-0.209	0.186	0.113	0.184	184.346620	-65.724487	2384.25	-907

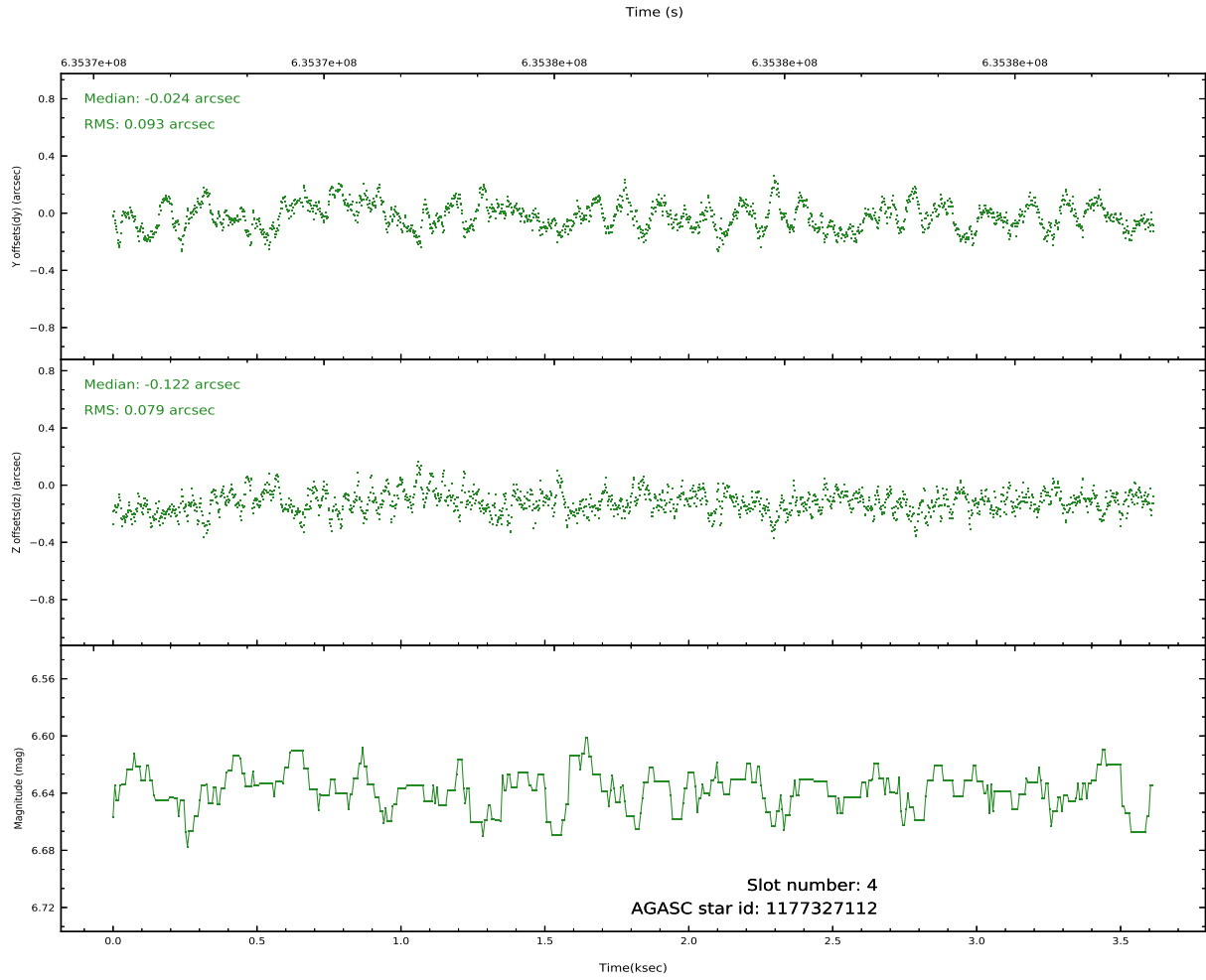
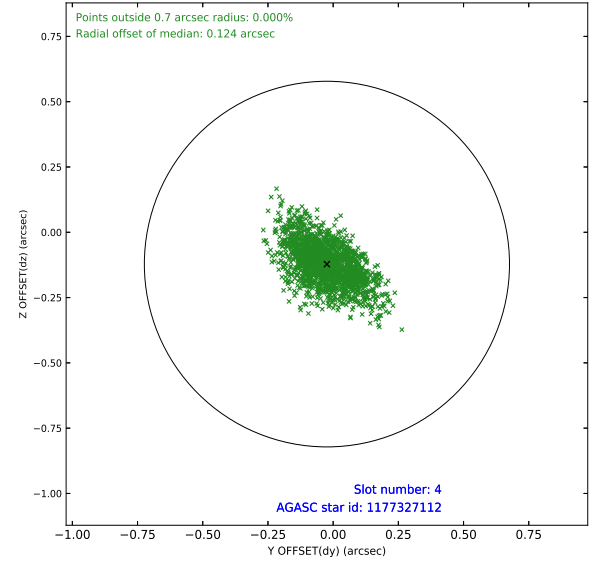
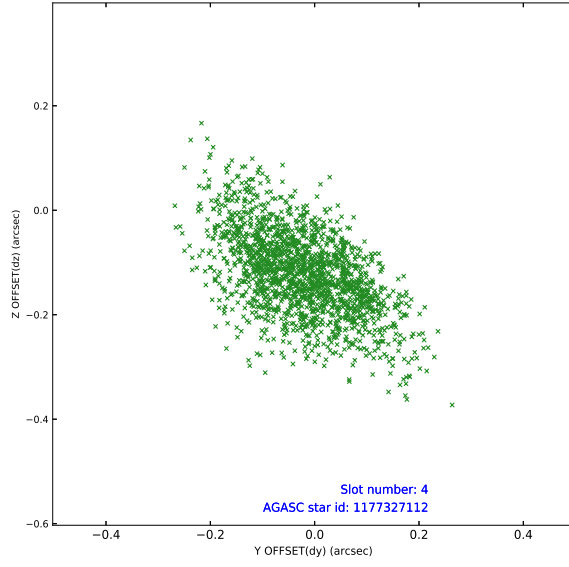


## 2.4 Star Slots

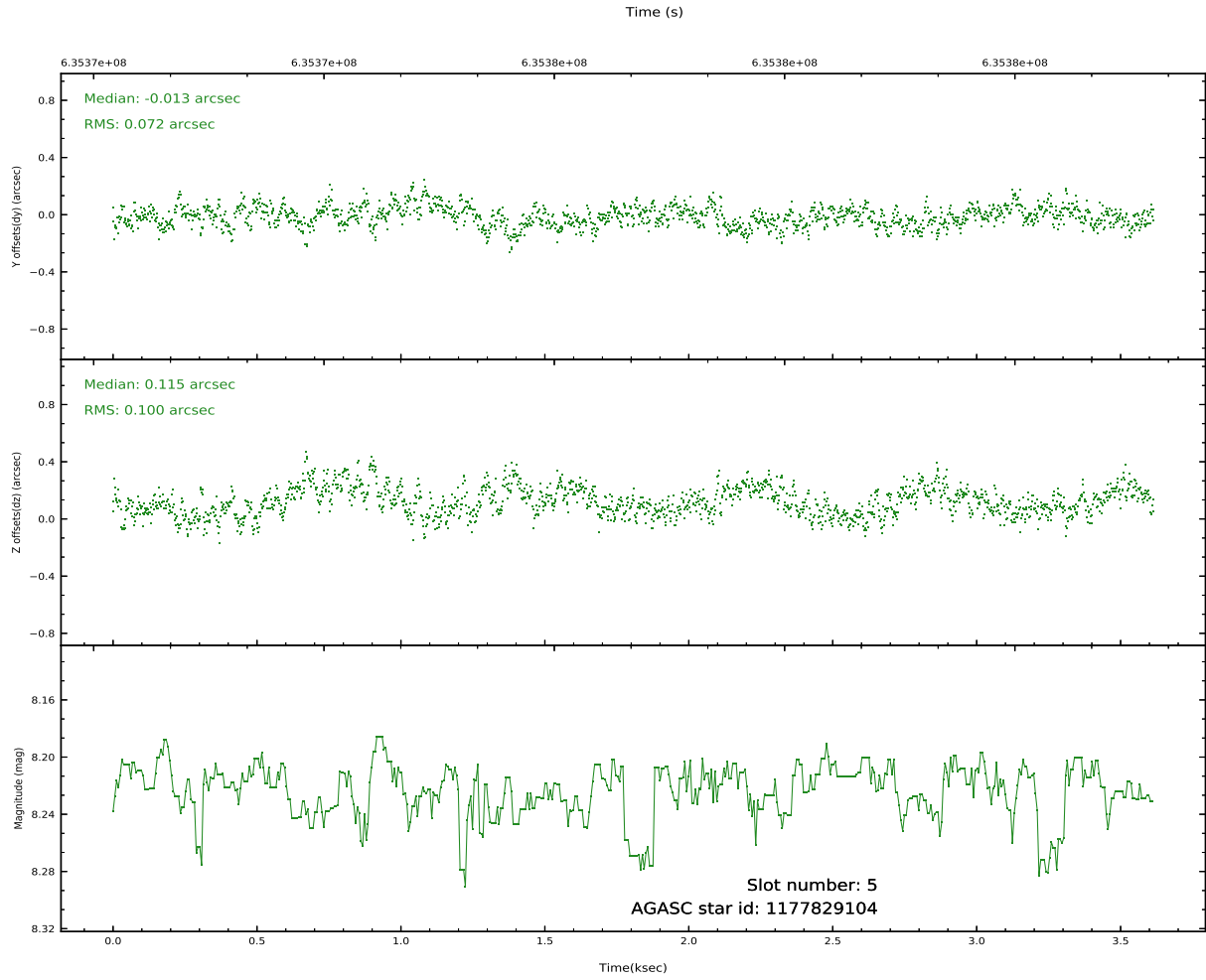
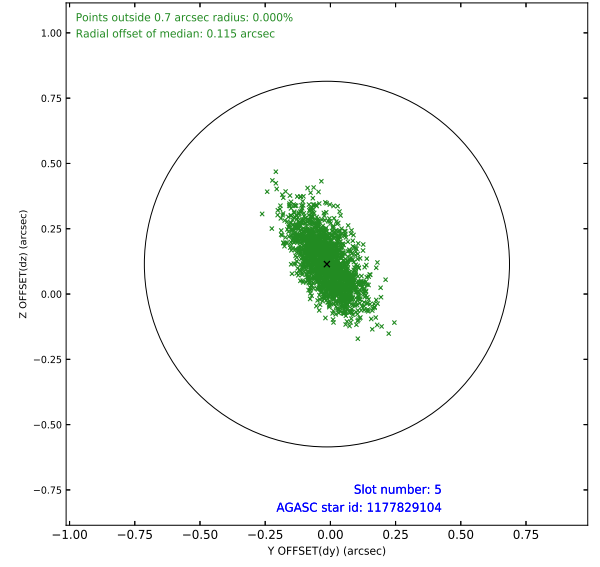
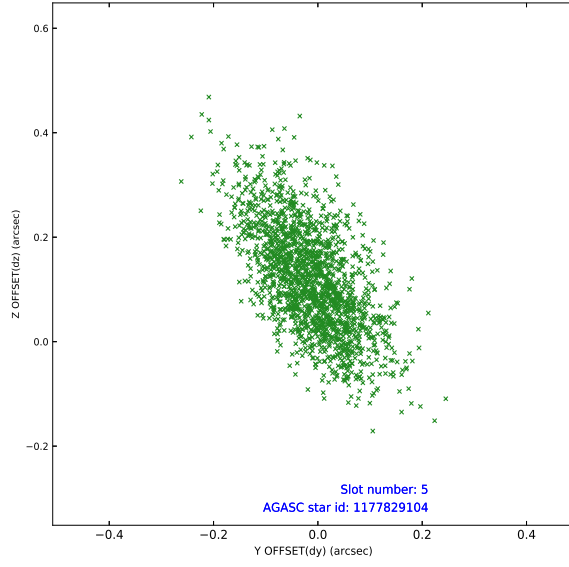
### 2.4.1 Slot 3



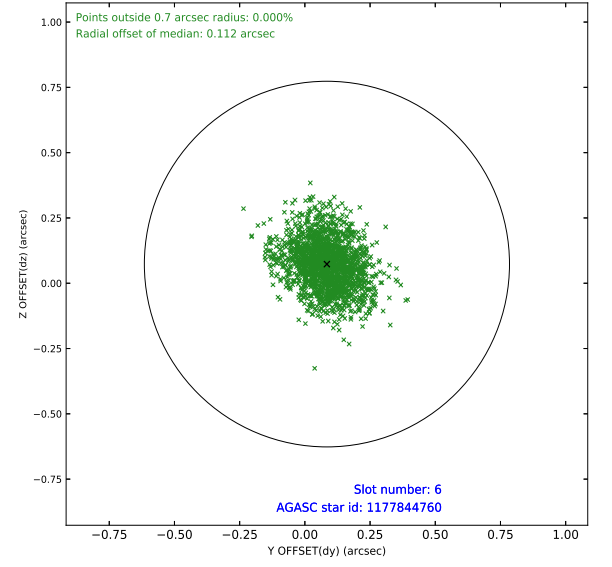
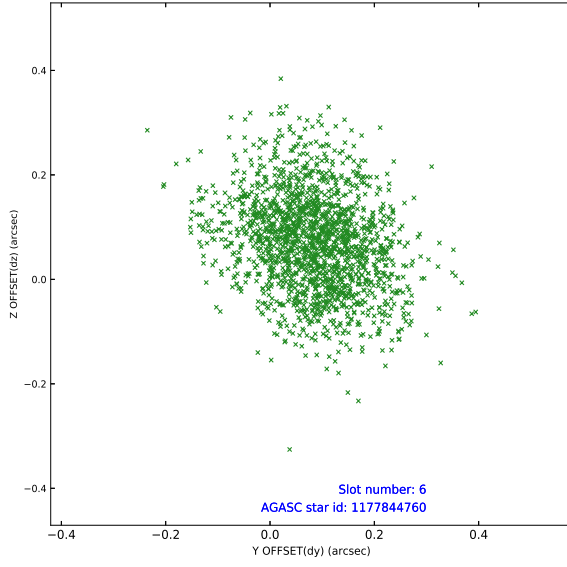
## 2.4.2 Slot 4



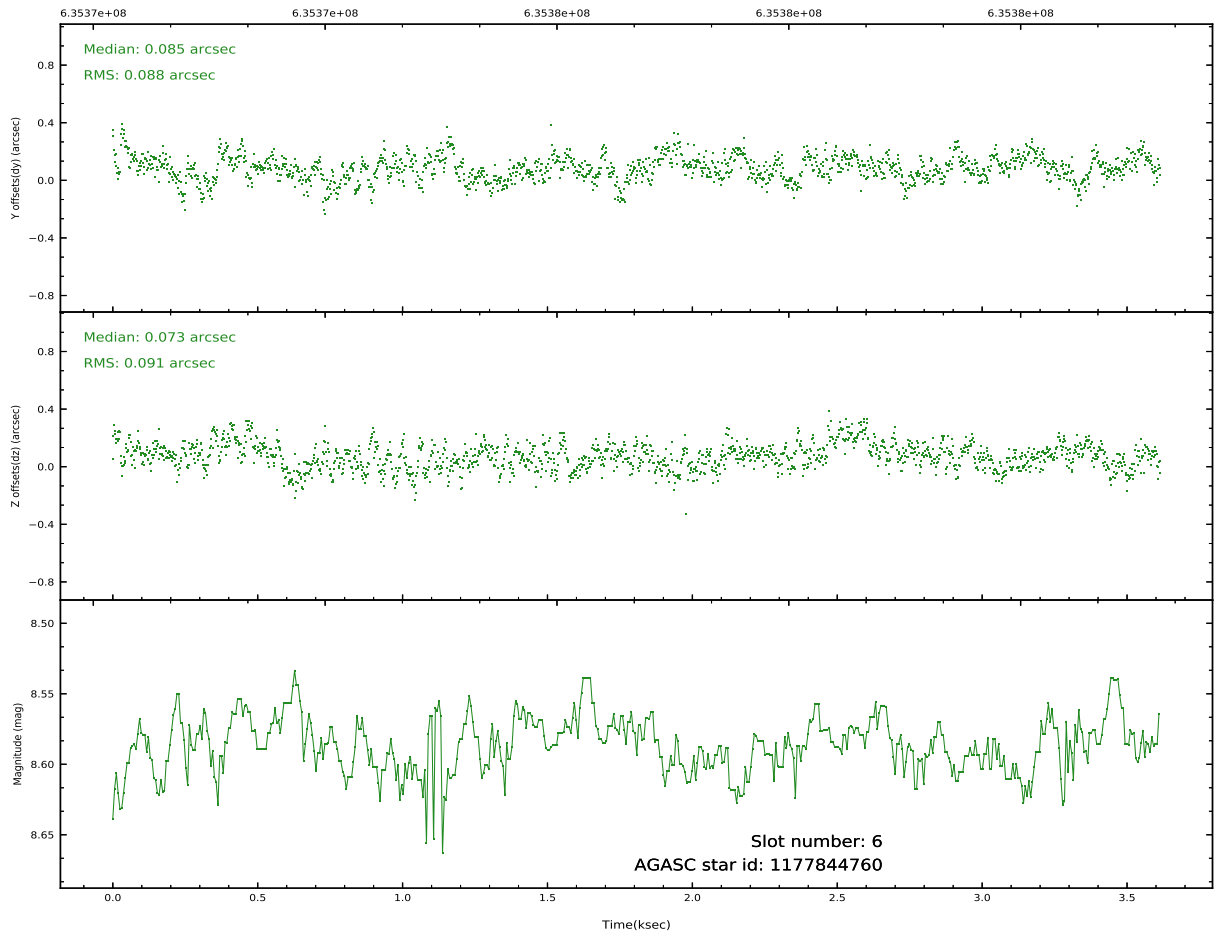
### 2.4.3 Slot 5



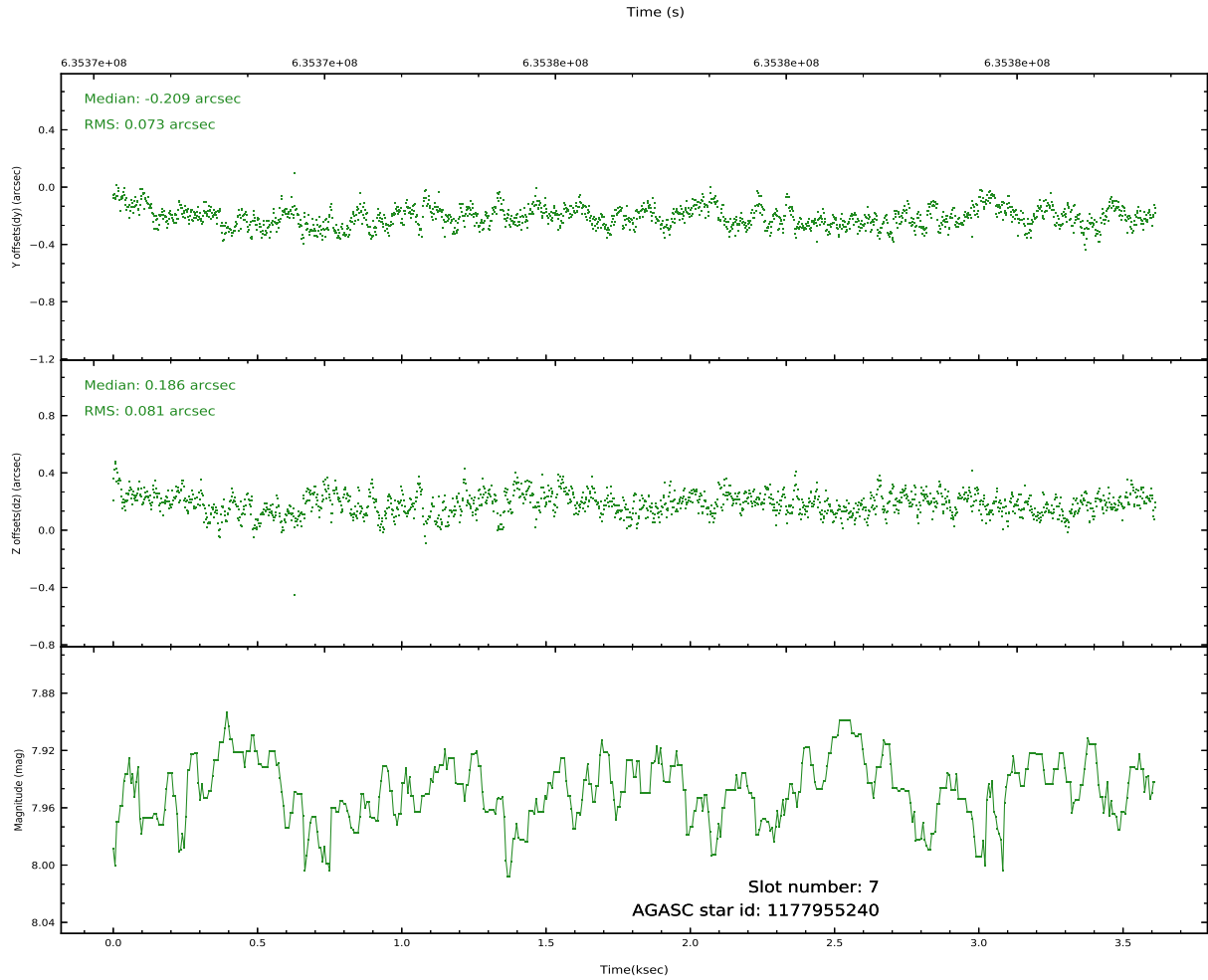
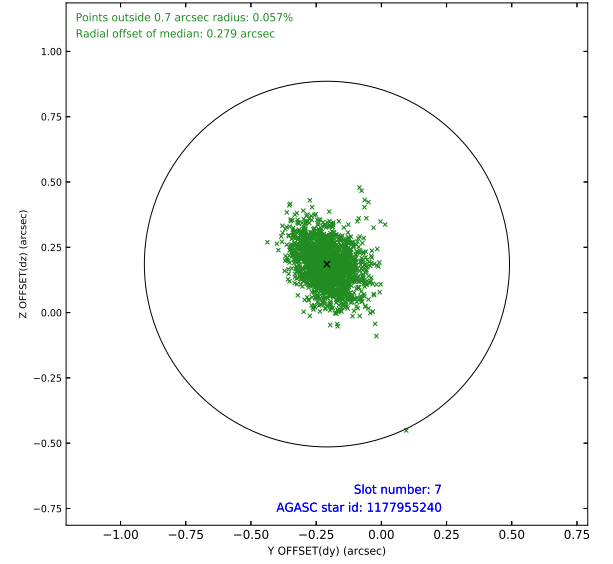
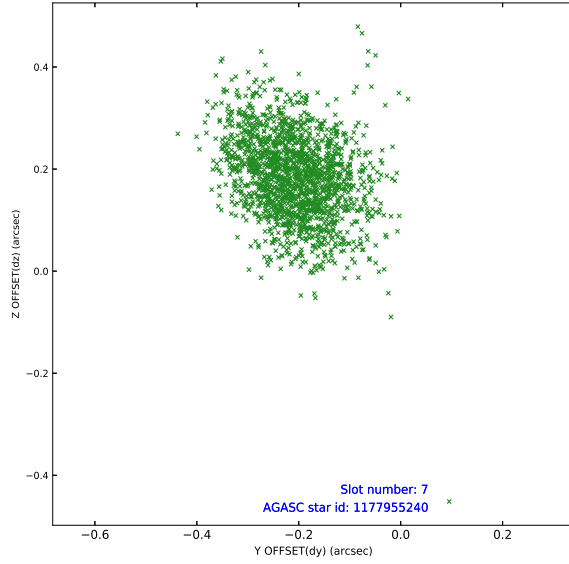
## 2.4.4 Slot 6



Time (s)

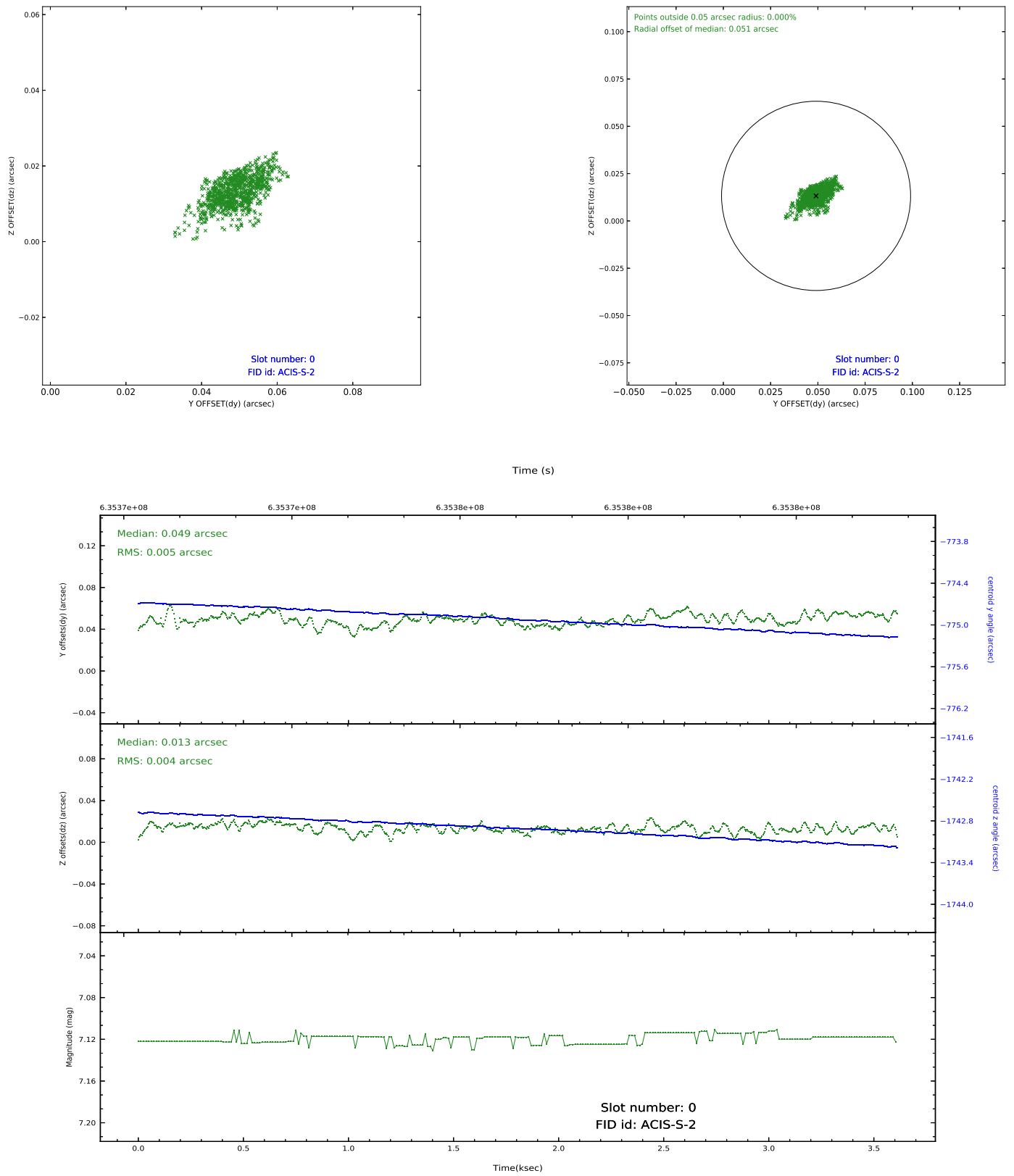


## 2.4.5 Slot 7

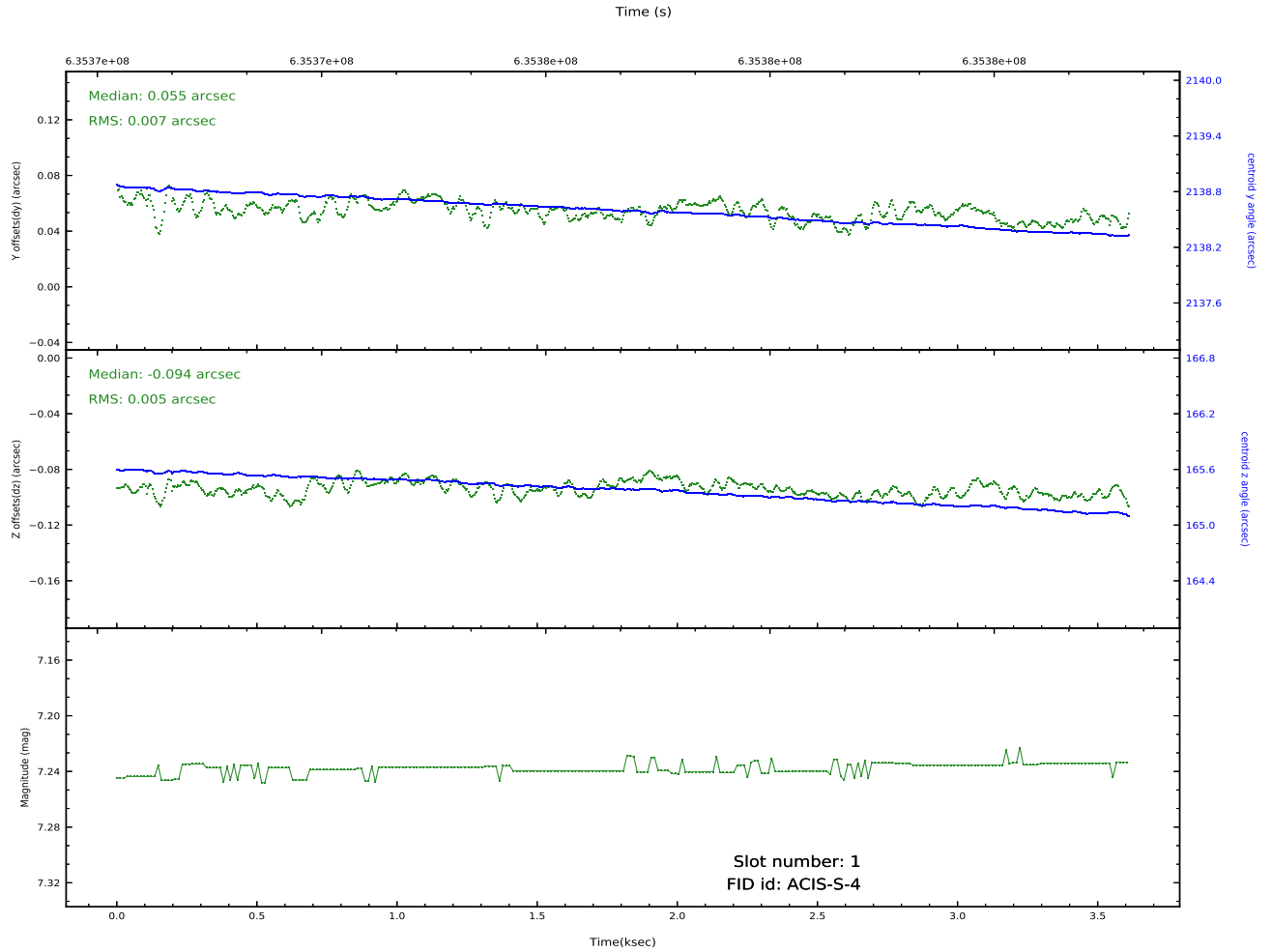
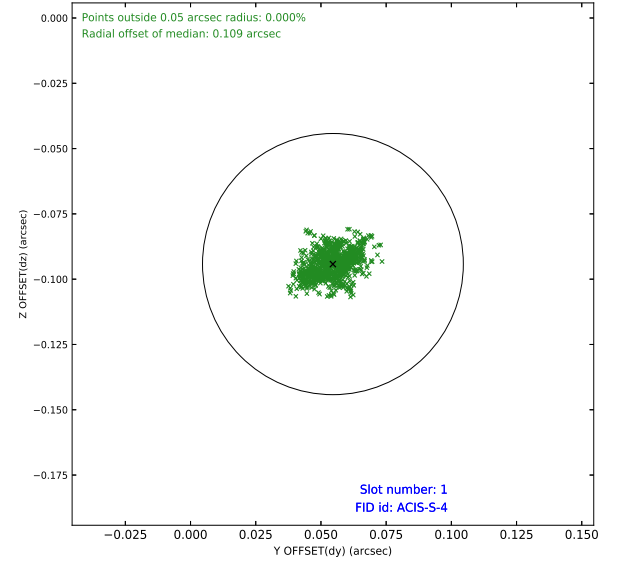
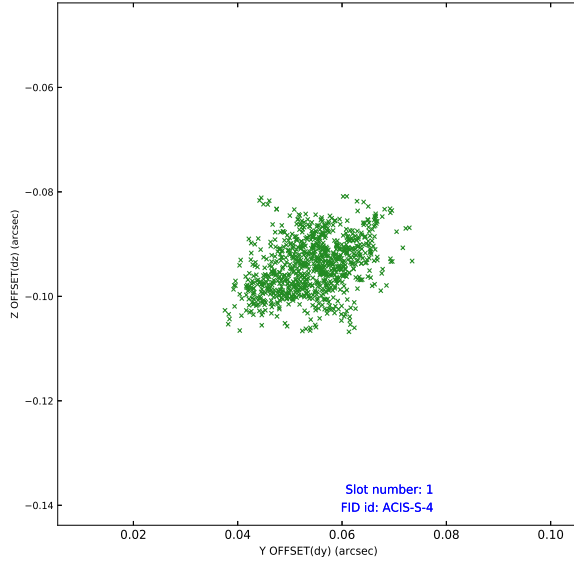


## 2.5 FID Slots

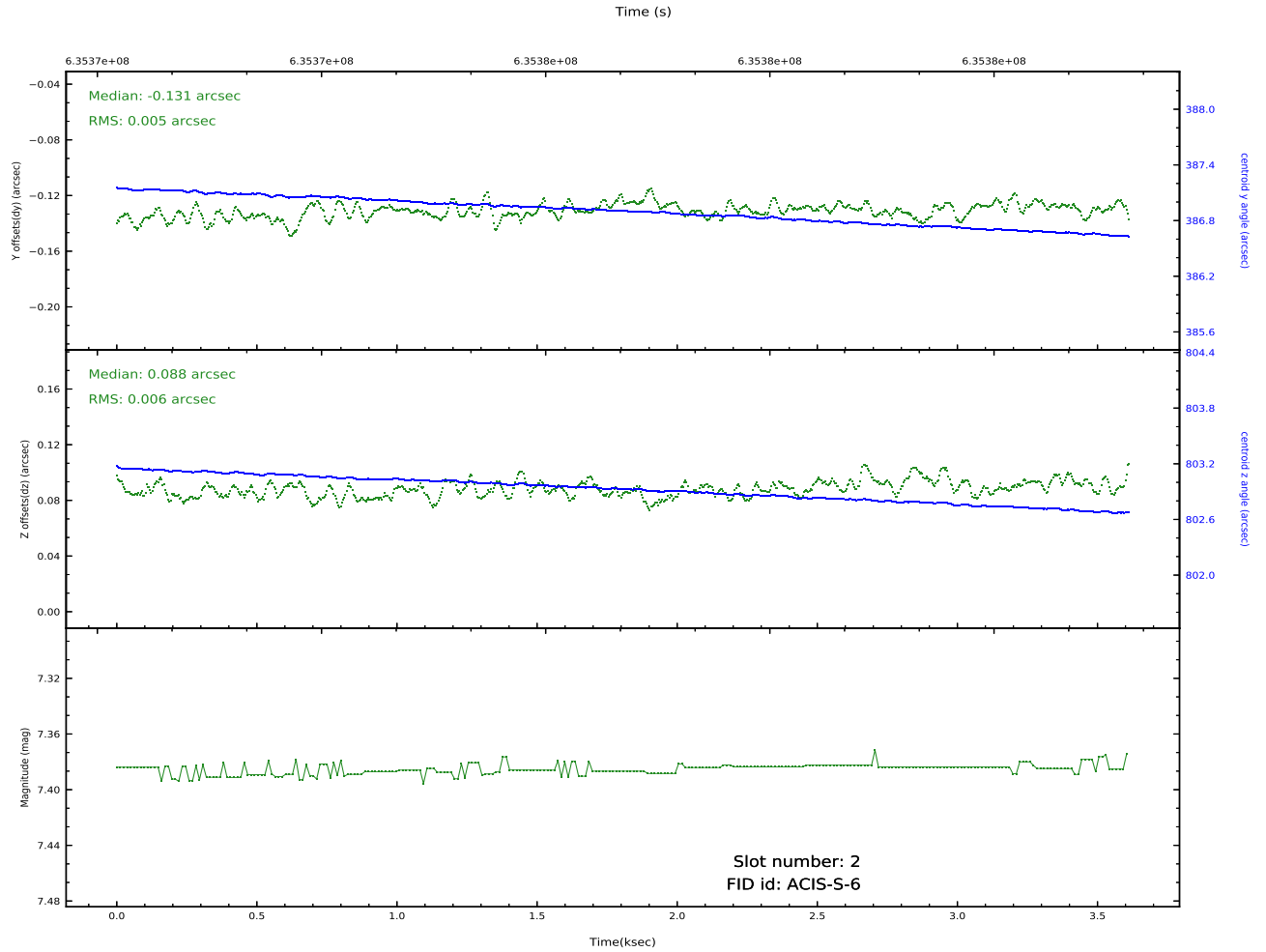
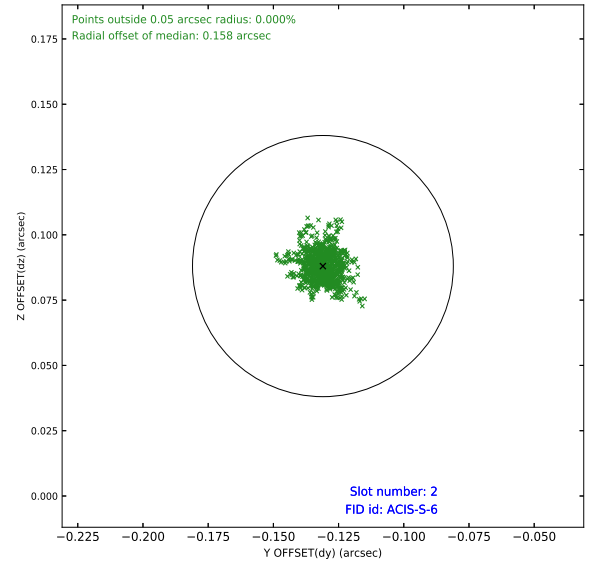
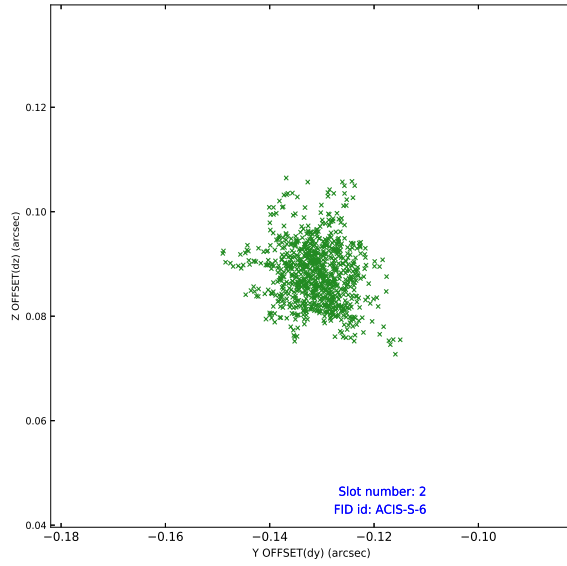
### 2.5.1 Slot 0



## 2.5.2 Slot 1



## 2.5.3 Slot 2





## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.5464000273943

### A.2 Comments