

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5614 - L2 Version 5  
Chandra X-Ray Center

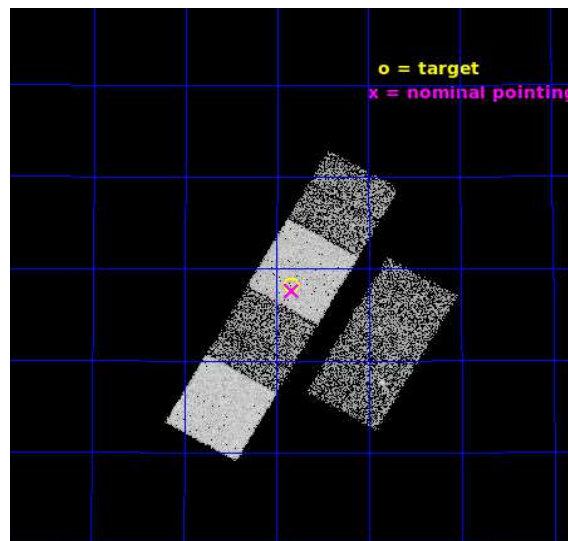
L2 Processing Date : Oct 10 2020

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# 1 Front

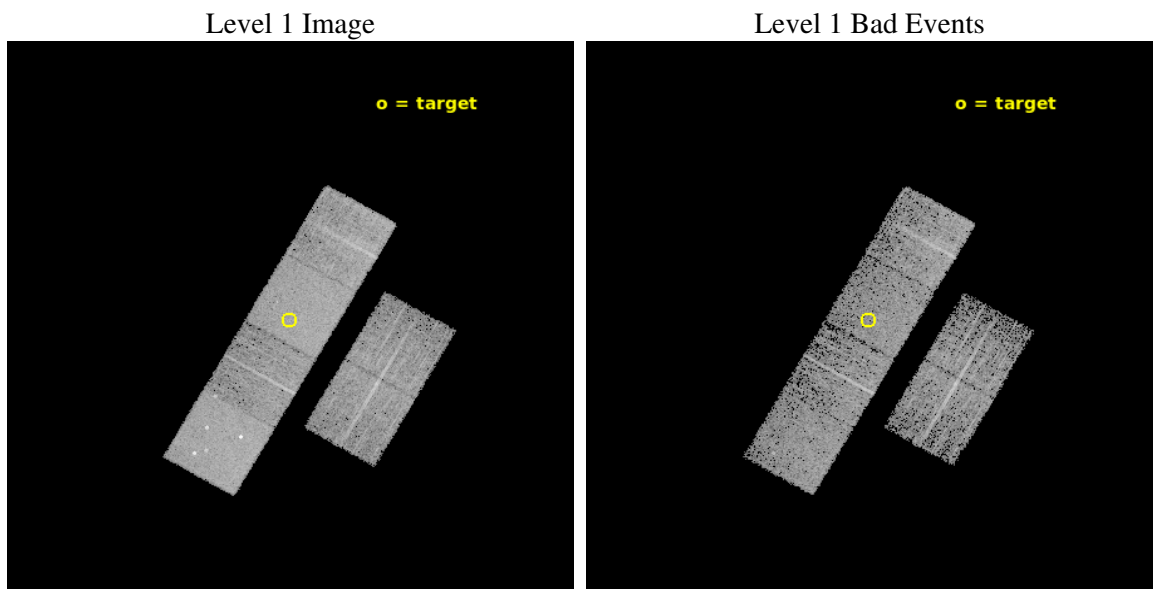
seq_num	701037	Sequence number
obs_id	5614	Observation id
title	A Chandra Survey of the Most Distant Quasars: X-raying the First Massive Black Holes	Proposal title
observer	William Brandt	Principal investigator
object	SDSS J153650.25+500810.3	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	234.209583	Observer's specified target RA [deg]
dec_targ	50.136194	Observer's specified target Dec [deg]
ra_nom	234.20891327563	Nominal RA [deg]
dec_nom	50.127328967705	Nominal Dec [deg]
roll_nom	299.89150861668	Nominal Roll [deg]
revision	5	Processing version of data
ontime	4678.3999825716	Sum of GTIs [s]
livetime	4619.159264998	Livetime [s]
ontime2	4678.3999825716	Sum of GTIs [s]
ontime3	4678.3999825716	Sum of GTIs [s]
ontime5	4678.3999825716	Sum of GTIs [s]
ontime6	4678.3999825716	Sum of GTIs [s]
ontime7	4678.3999825716	Sum of GTIs [s]
ontime8	4678.3999825716	Sum of GTIs [s]
l2events	52908	Number of level 2 events



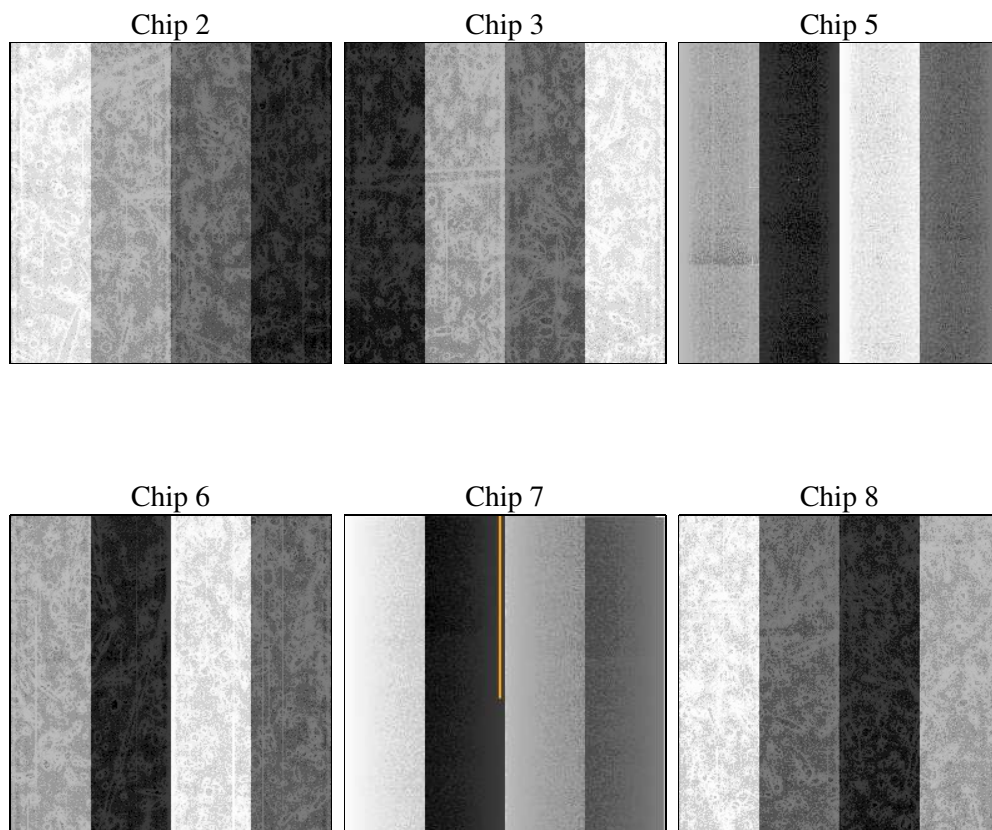
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	4500.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	4678.3999825716	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime2	4678.3999825716	Sum of GTIs [s]
date	2020-10-10T13:04:18	Date and time of file creation	ontime3	4678.3999825716	Sum of GTIs [s]
revision	5	Processing version of data	ontime5	4678.3999825716	Sum of GTIs [s]
			ontime6	4678.3999825716	Sum of GTIs [s]
			ontime7	4678.3999825716	Sum of GTIs [s]
			ontime8	4678.3999825716	Sum of GTIs [s]
			l1events	230068	Number of level 1 events

### 2.1.4 Events

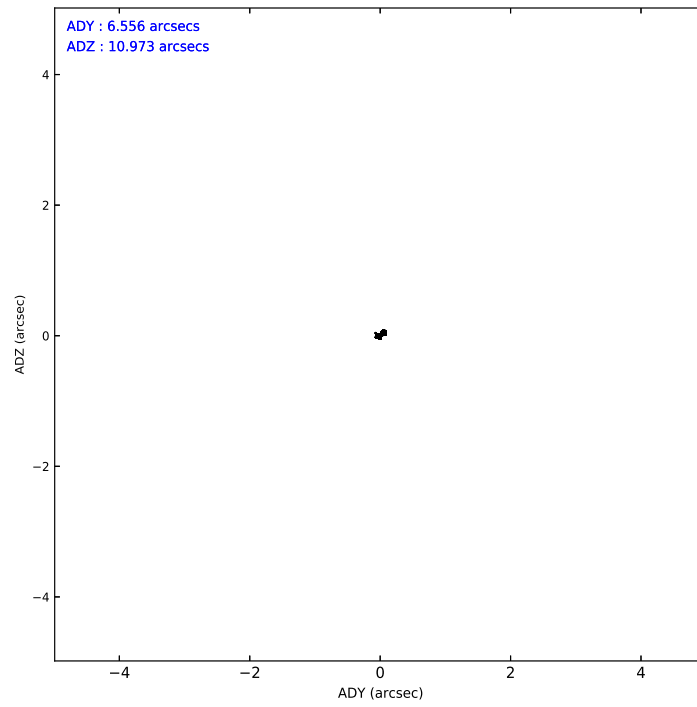
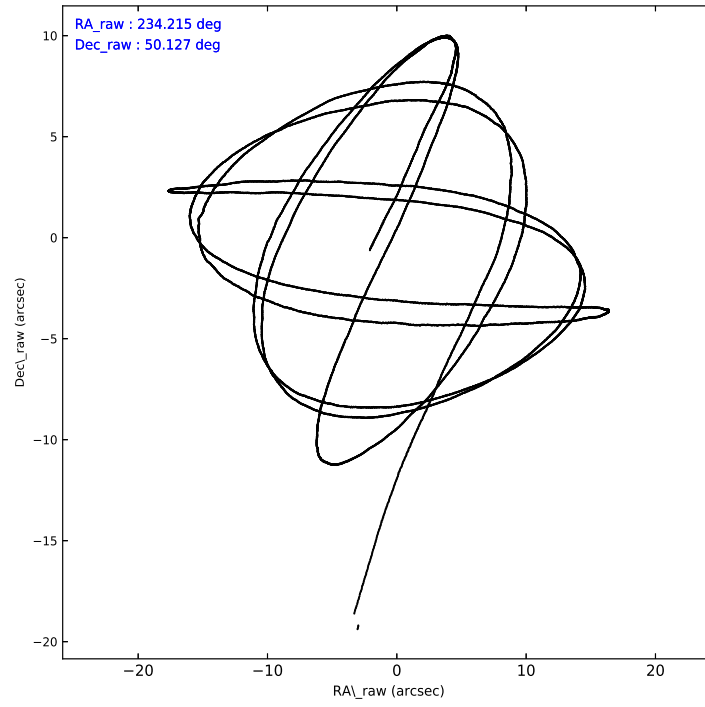
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	31236	29062	51395	31667	44934	41774	grade 0 events	1818	1683	4117	1589	1709	2806
rejected events	27242	25213	26928	27670	26488	33192		5%	5%	8%	5%	3%	6%
rejected %	87%	86%	52%	87%	58%	79%	grade 1 events	29	33	177	10	48	29
								0%	0%	0%	0%	0%	0%
							grade 2 events	822	787	6790	836	3745	1888
								2%	2%	13%	2%	8%	4%
							grade 3 events	348	366	974	377	1644	974
								1%	1%	1%	1%	3%	2%
							grade 4 events	378	359	943	377	1660	850
								1%	1%	1%	1%	3%	2%
							grade 5 events	1312	1514	3745	1604	4214	2091
								4%	5%	7%	5%	9%	5%
							grade 6 events	659	694	11848	853	9857	2132
								2%	2%	23%	2%	21%	5%
							grade 7 events	25870	23626	22801	26021	22057	31004
								82%	81%	44%	82%	49%	74%

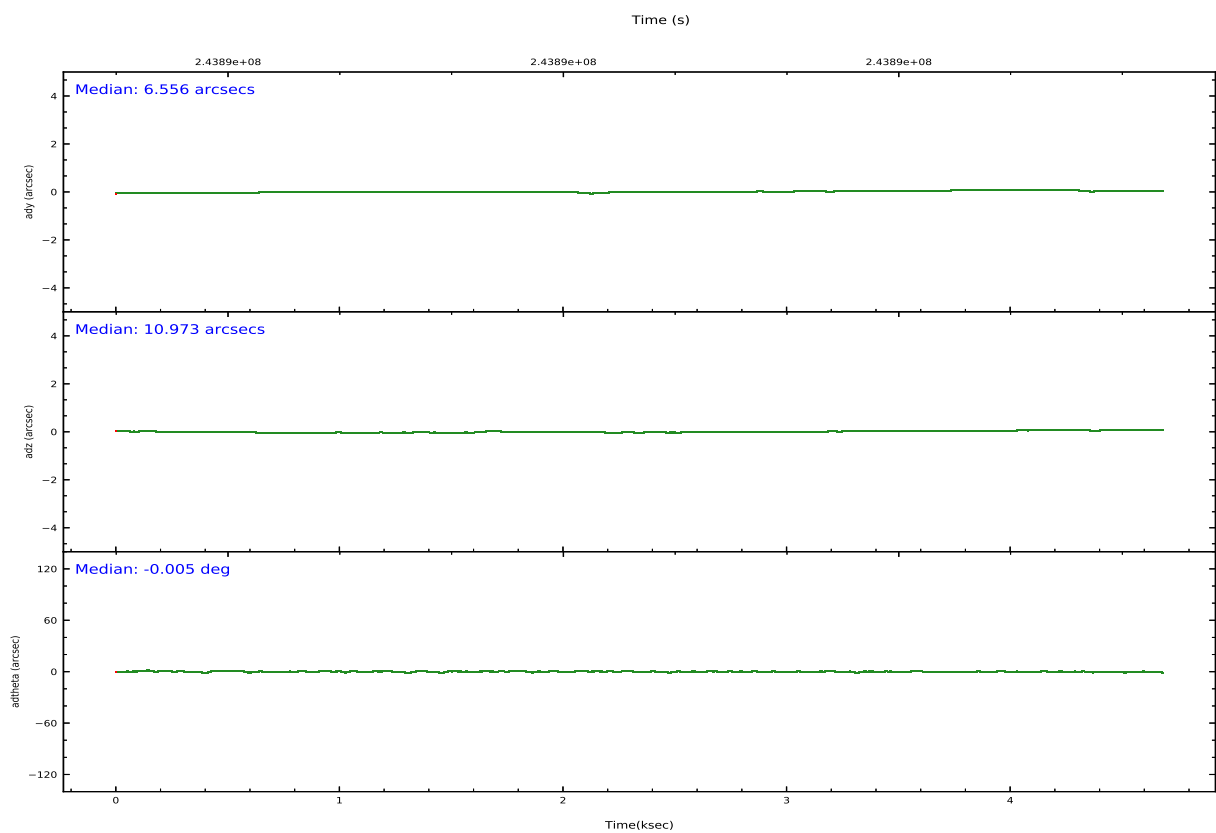
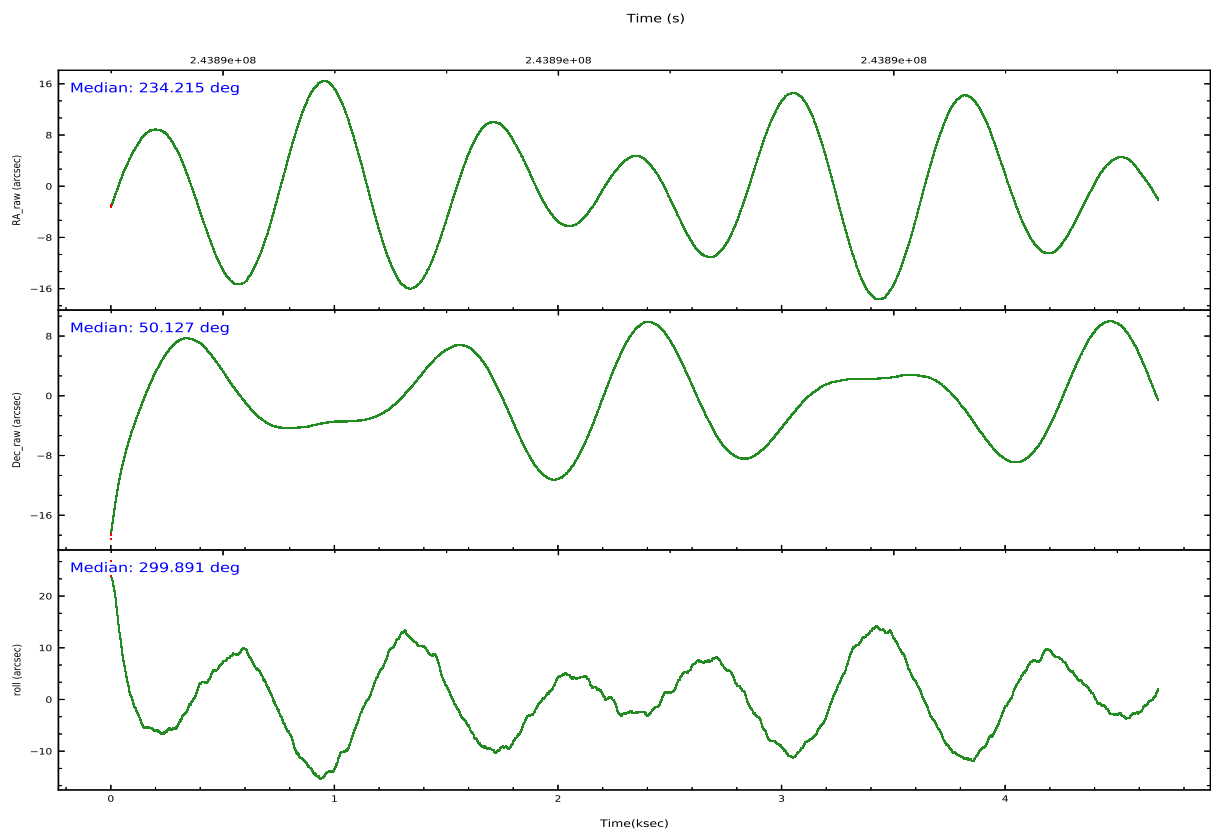


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	234.177650	234.20891327563	Subarray requested	NONE	NONE
[deg] Pointing Dec	50.140425	50.127328967705	Alternating exposures requested	N	N
[deg] Pointing Roll	299.764953	299.89150861668	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	243887183.184000	243886094.6952			
Observation start date	2005-09-23T18:25:19	2005-09-23T18:08:14			
[s] Observation end time (MET)	243891683.184000	243893315.30803			
Observation end date	2005-09-23T19:40:19	2005-09-23T20:08:35			
Read mode	TIMED	TIMED			

## 2.3 Aspect



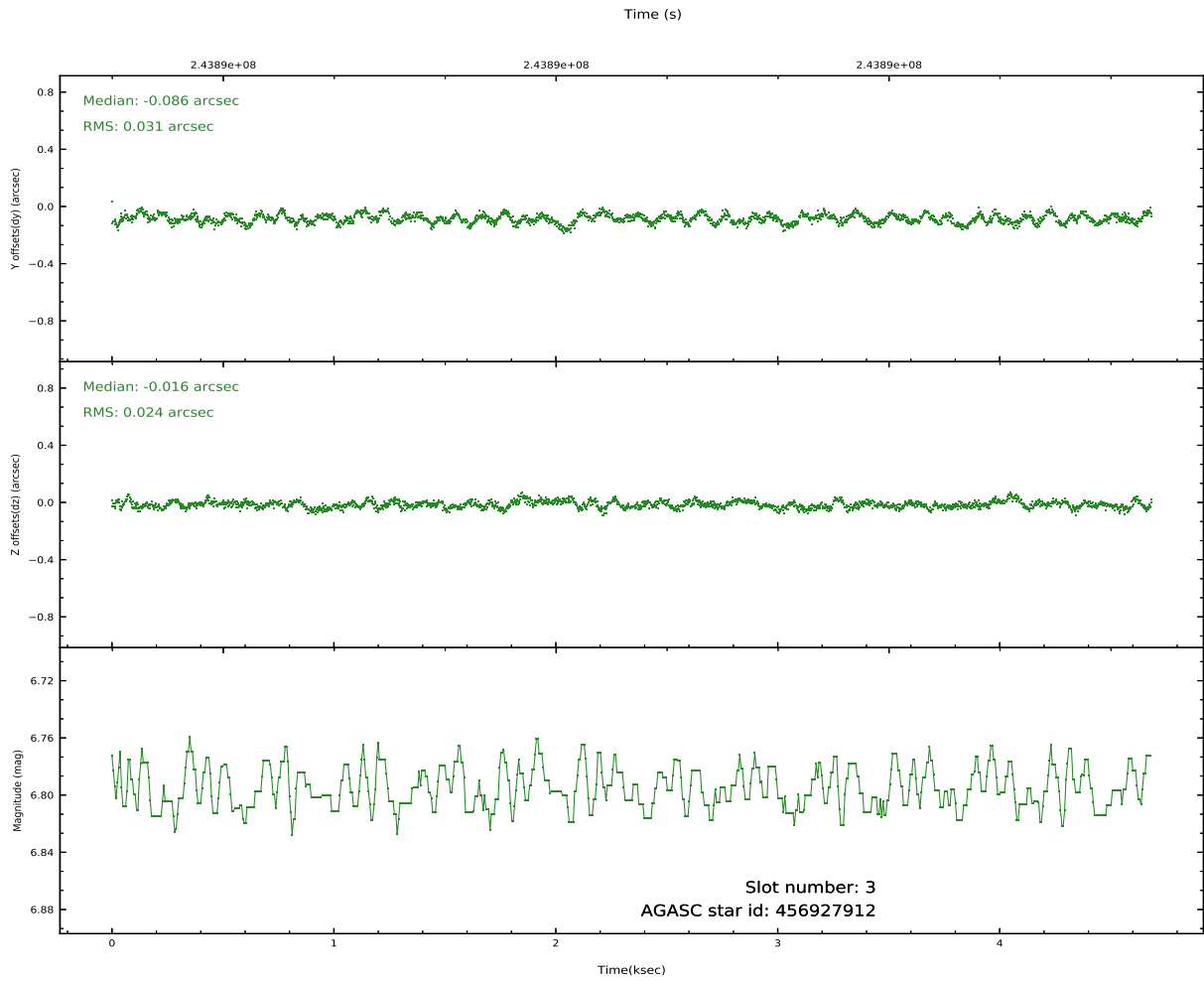
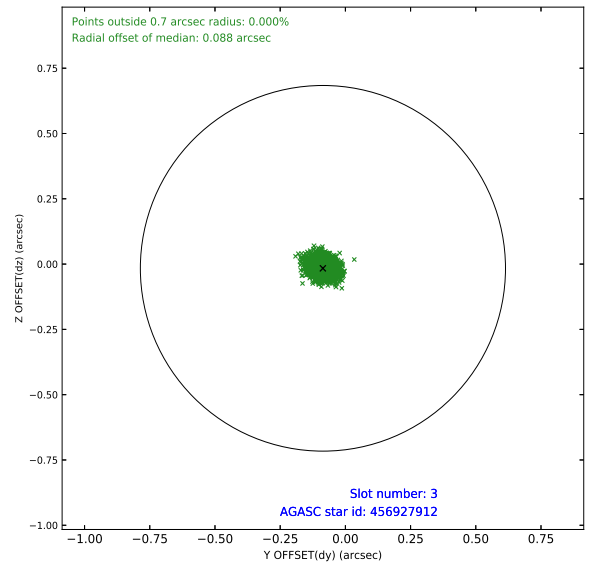
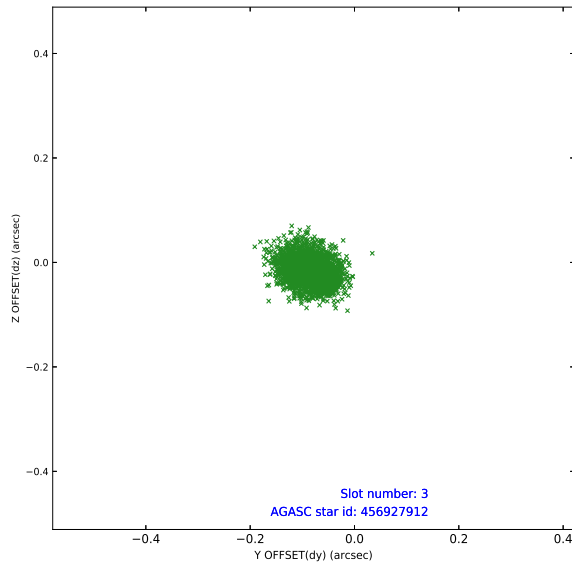


Slot Statistics

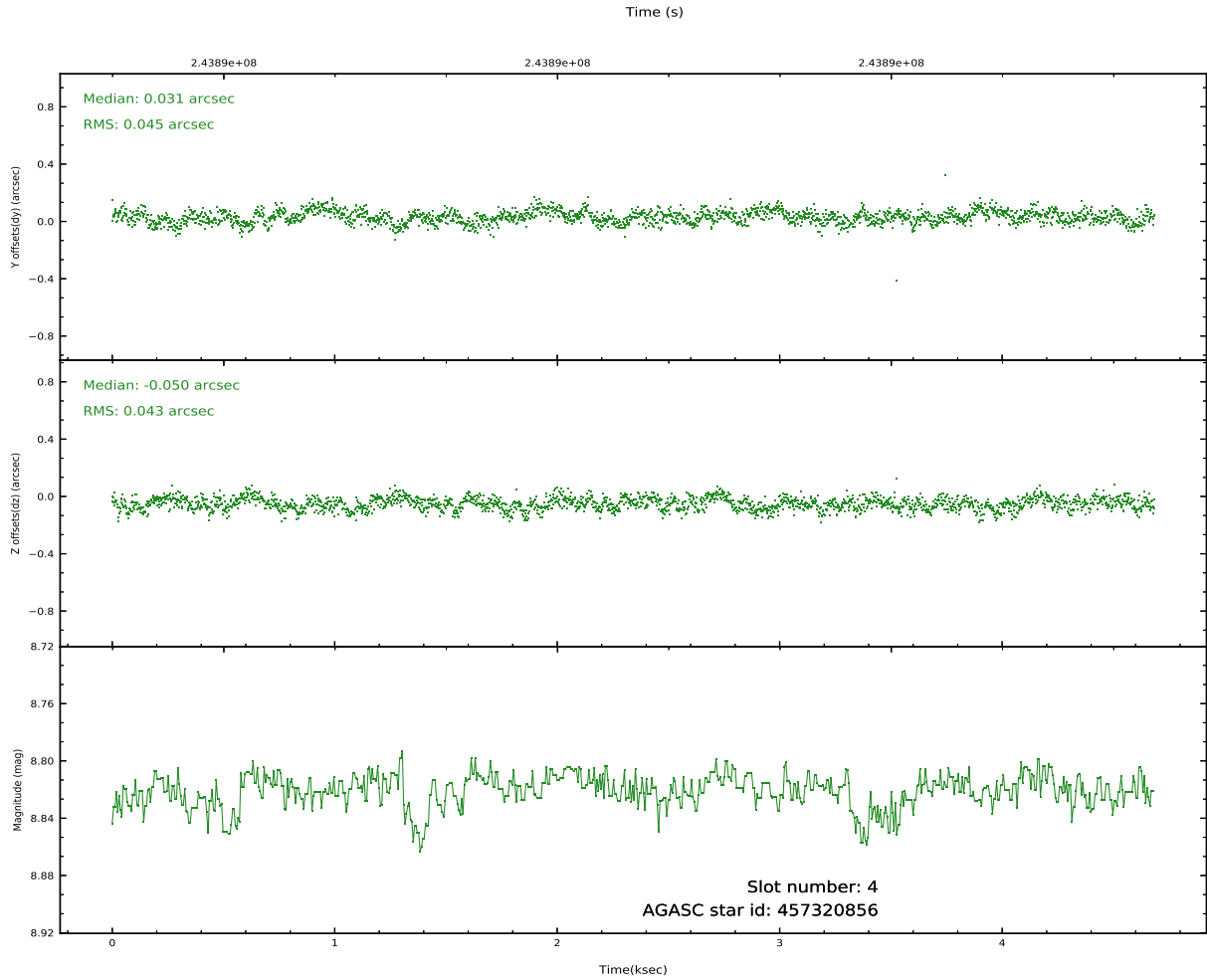
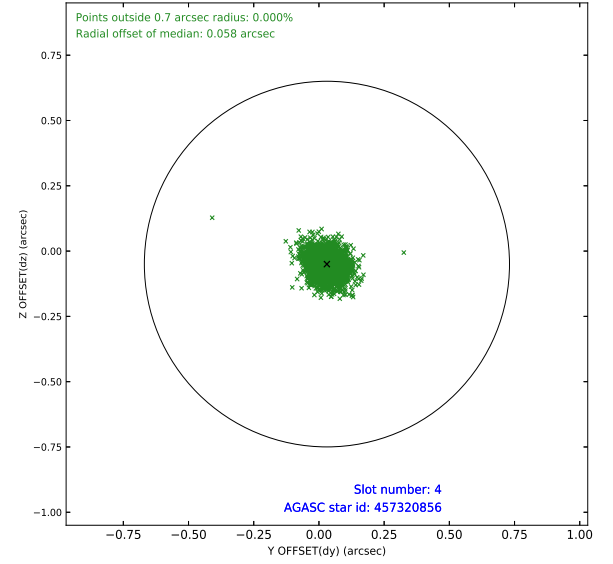
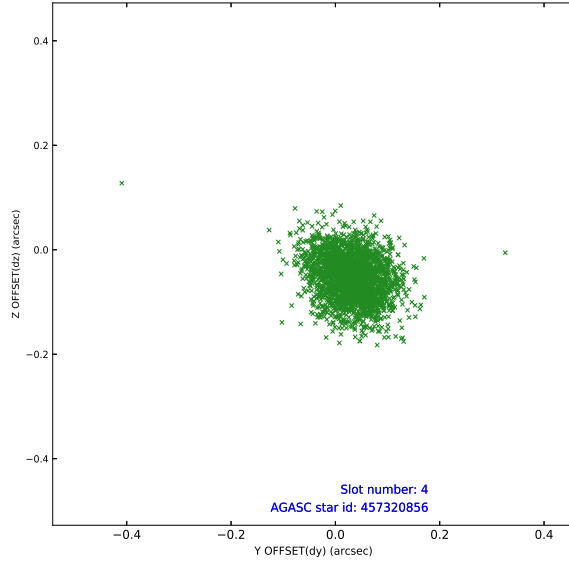
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.10	1143	1.000	-0.038	-0.061	0.006	0.011	0.000000	0.000000	-759.30	-1732
1	FID		ACIS-S-5	7.24	1143	1.000	-0.065	-0.013	0.007	0.011	0.000000	0.000000	-1813.08	168
2	FID		ACIS-S-6	7.35	1143	1.000	0.078	0.082	0.006	0.010	0.000000	0.000000	400.95	813
3	GUIDE	used	456927912	6.80	2286	1.000	-0.086	-0.016	0.042	0.066	233.811769	49.698370	957.55	-1528
4	GUIDE	used	457320856	8.82	2285	1.000	0.031	-0.050	0.066	0.104	234.225195	50.509014	-1096.83	752
5	GUIDE	used	457316216	8.81	2284	1.000	0.014	-0.060	0.087	0.139	233.360540	50.157678	-998.10	-1600
6	GUIDE	used	457315008	8.91	2284	1.000	0.031	-0.009	0.098	0.149	235.308988	50.203845	1078.85	2385
7	GUIDE	used	456920104	9.00	2284	1.000	0.006	0.132	0.073	0.115	234.356412	49.891668	983.96	-83

## 2.4 Star Slots

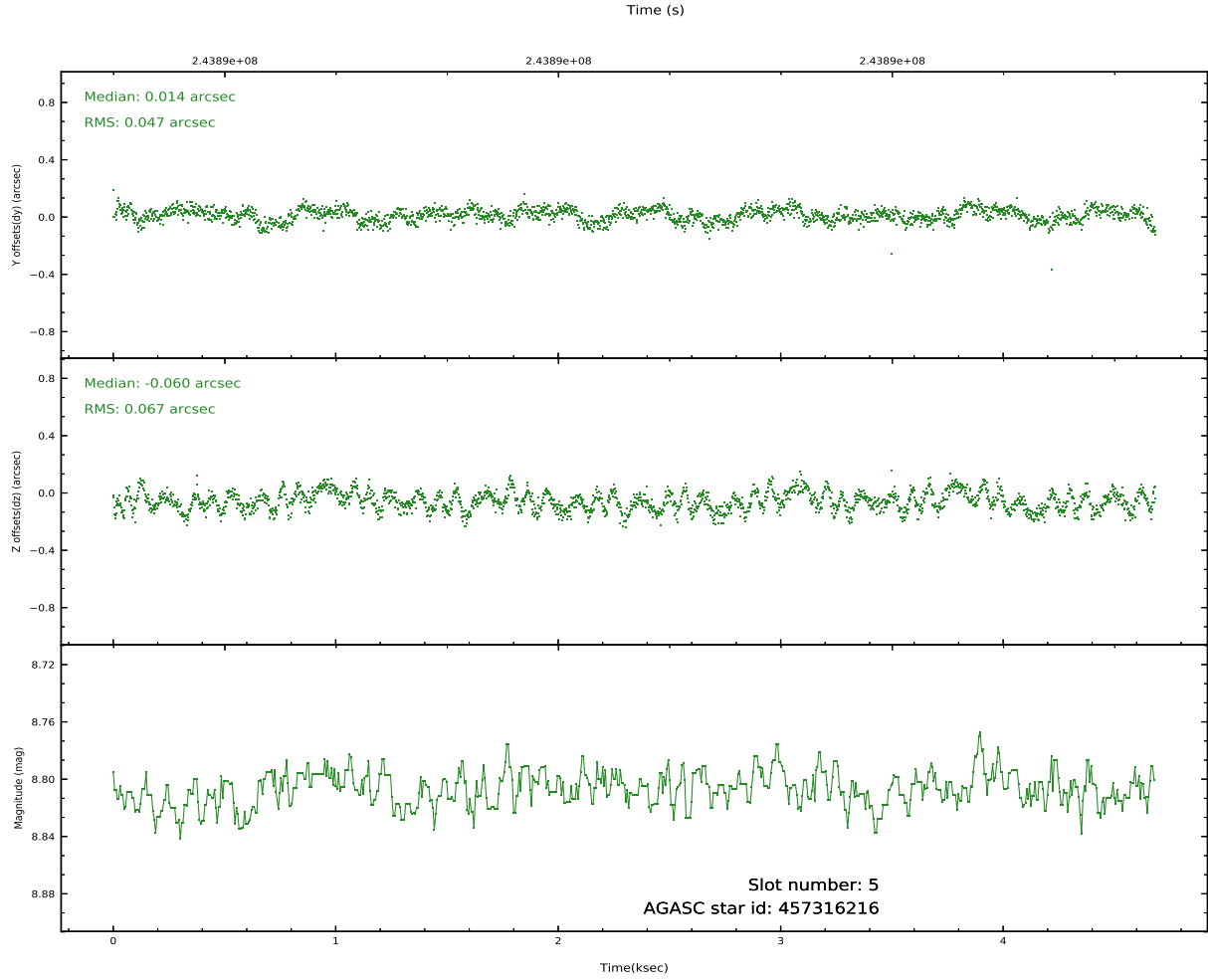
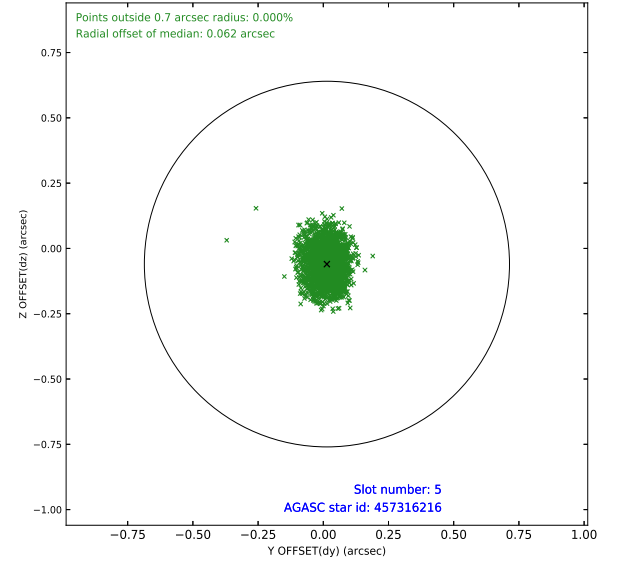
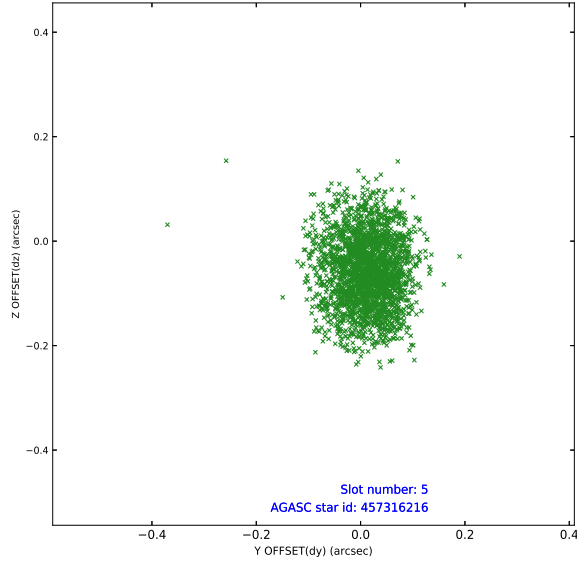
### 2.4.1 Slot 3



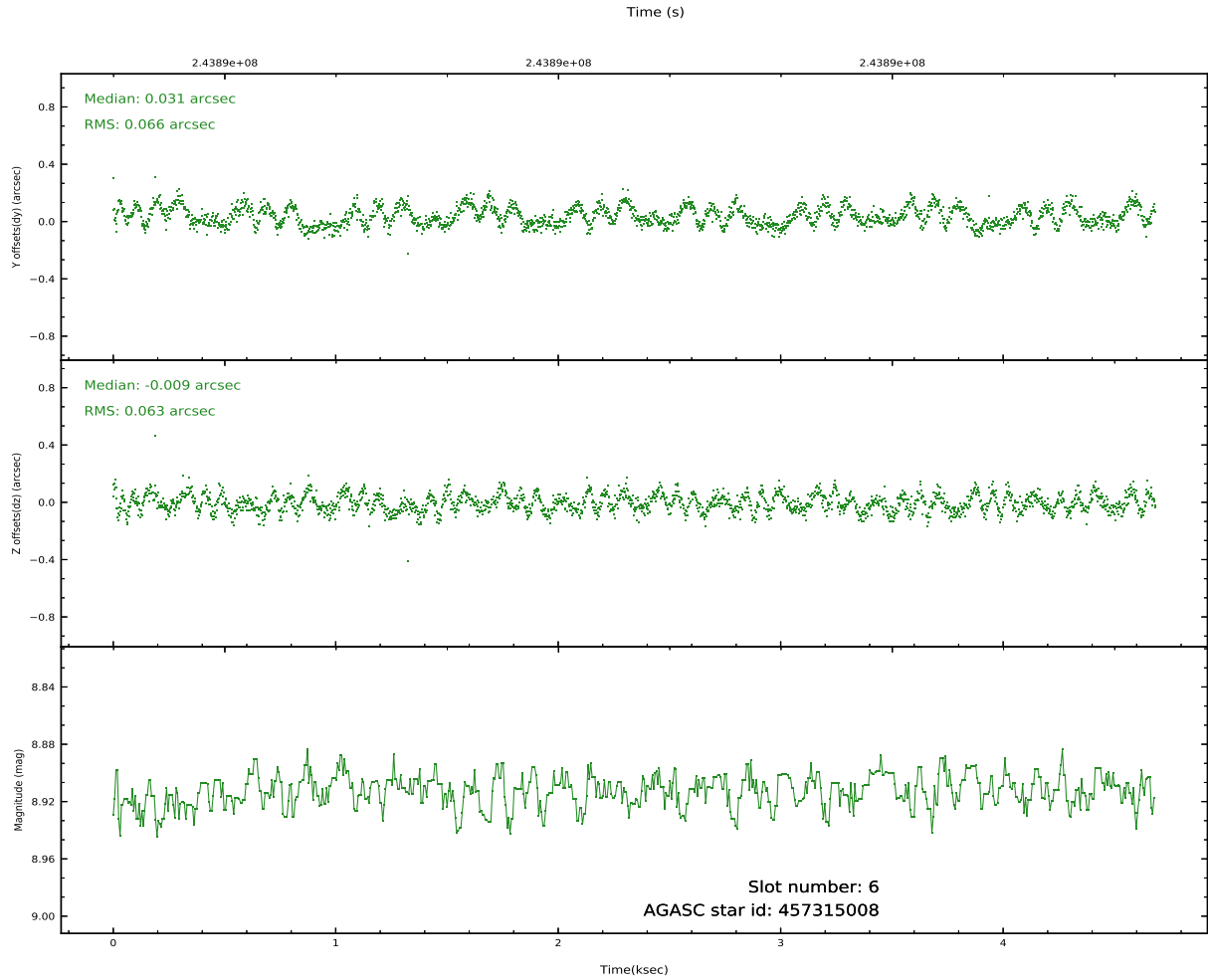
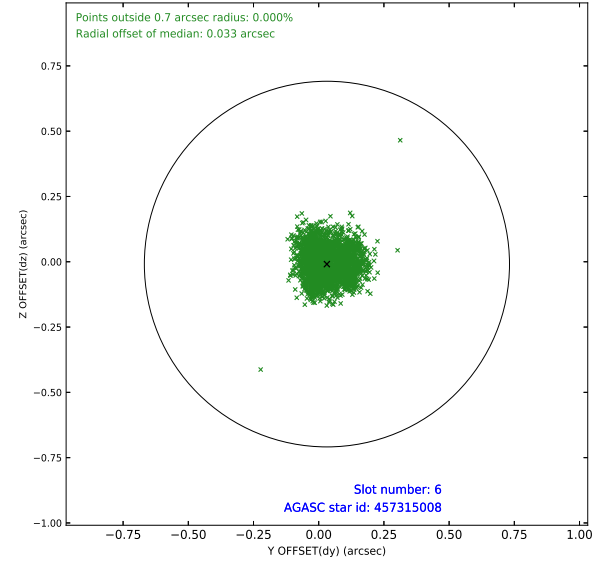
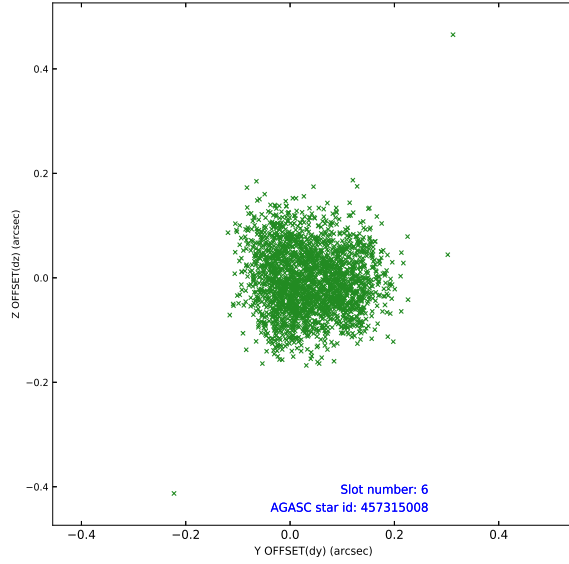
## 2.4.2 Slot 4



### 2.4.3 Slot 5

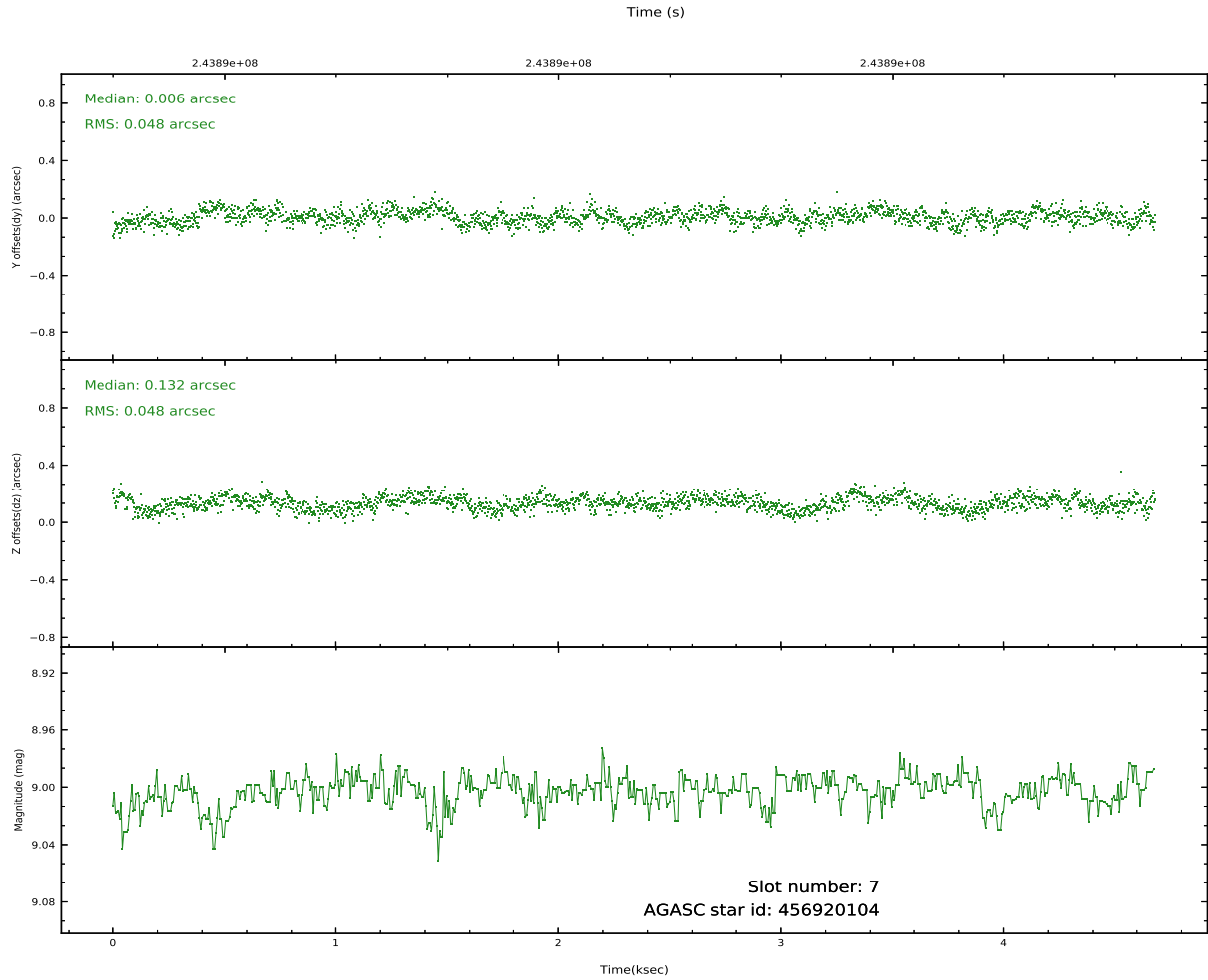
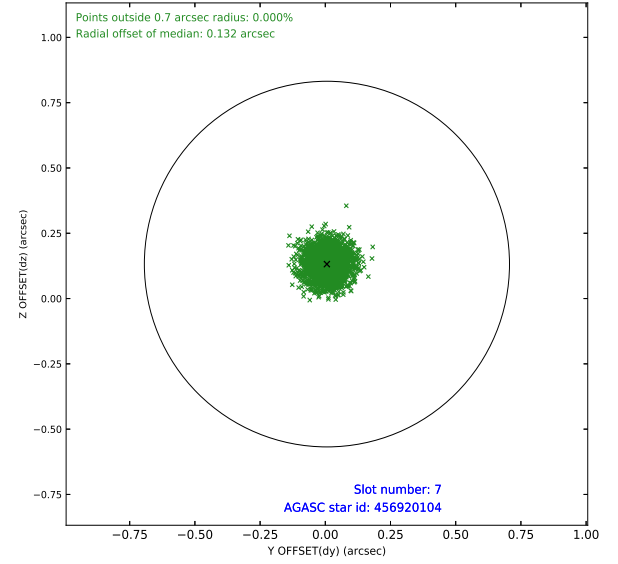
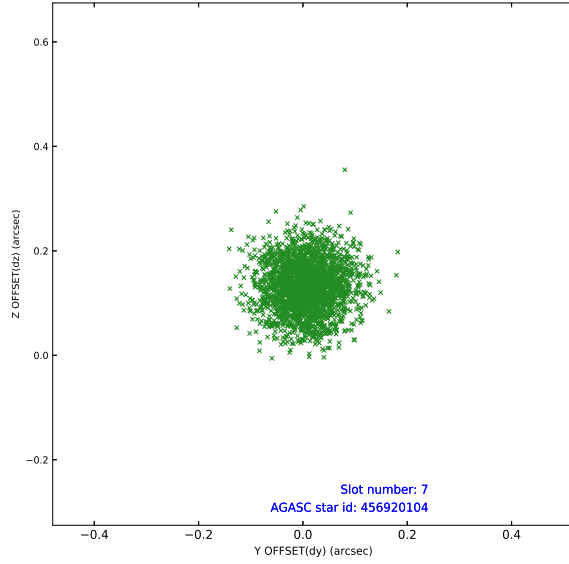


## 2.4.4 Slot 6



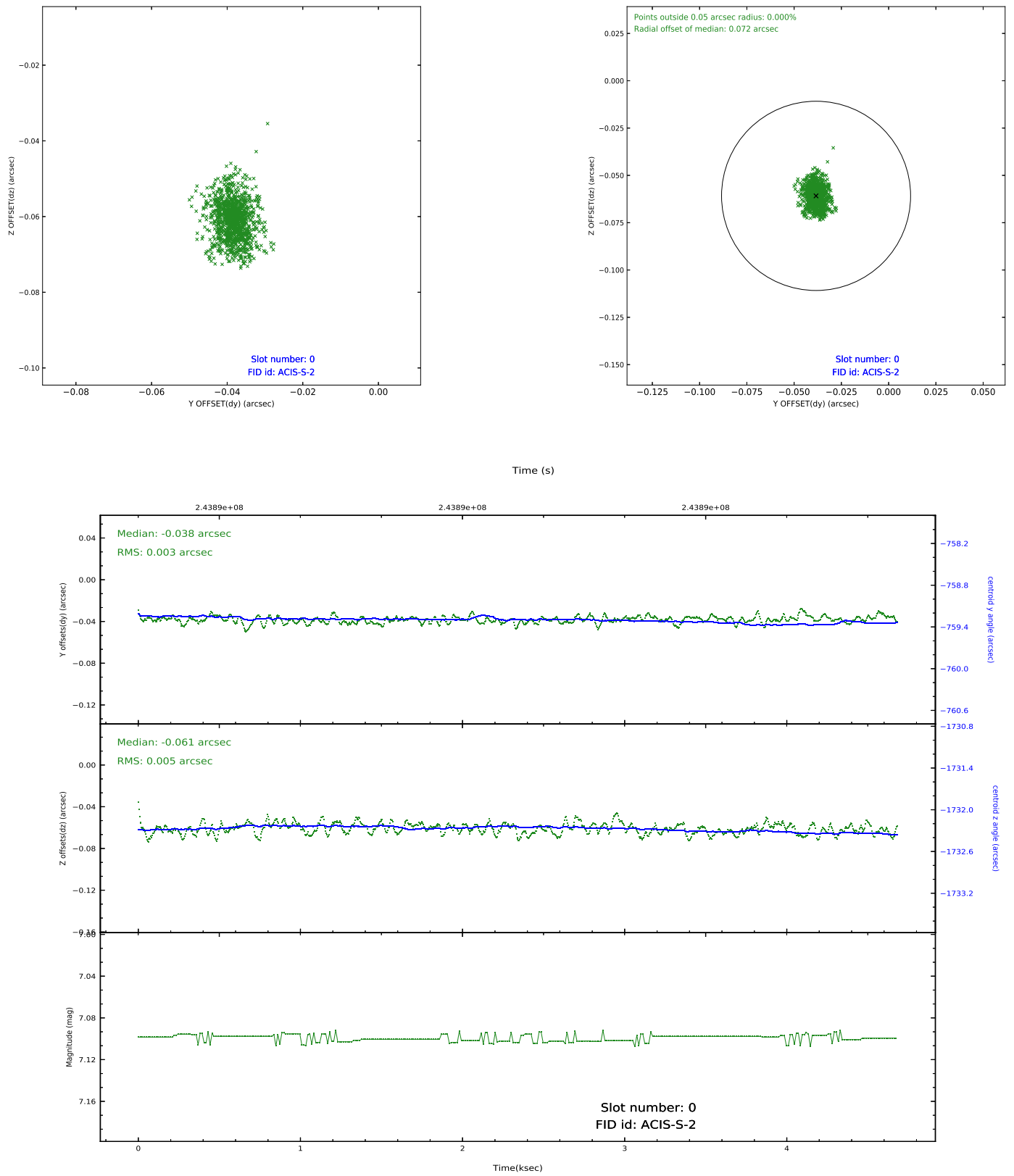


## 2.4.5 Slot 7

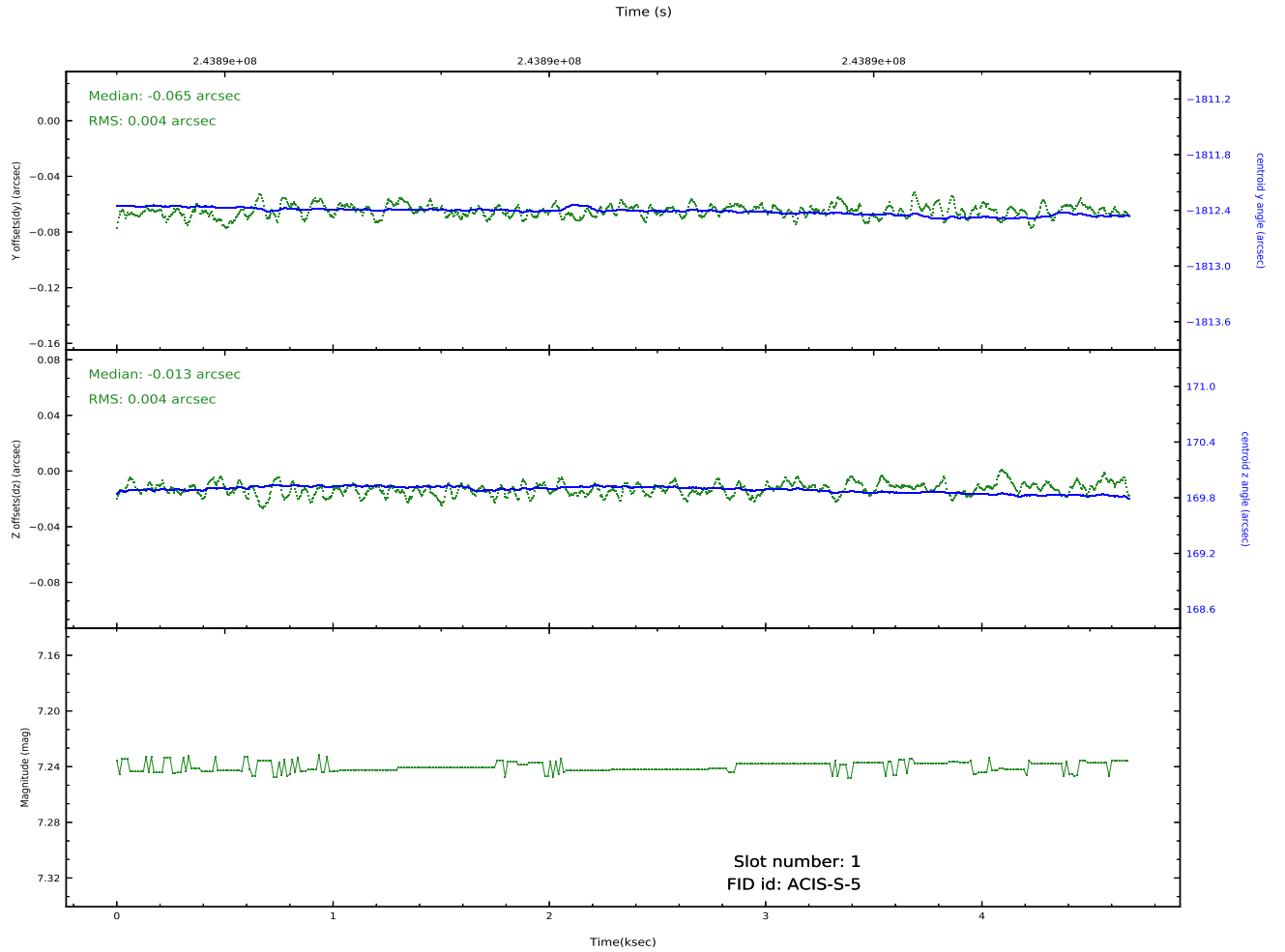
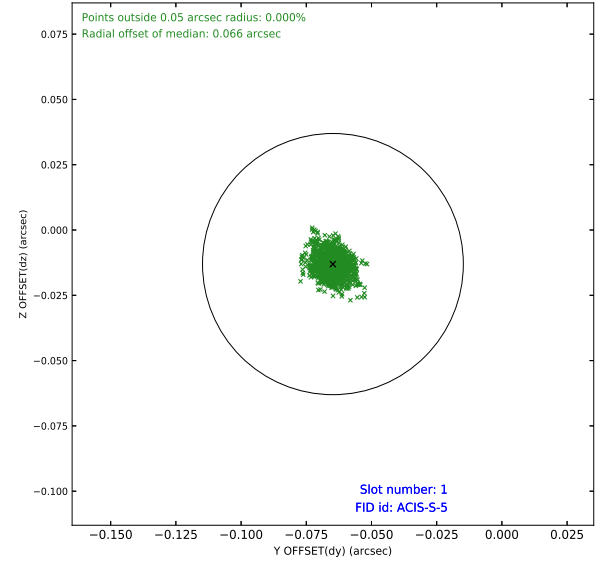
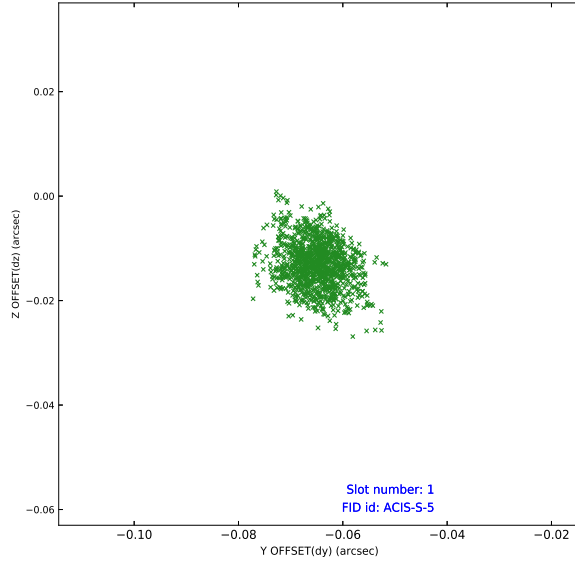


## 2.5 FID Slots

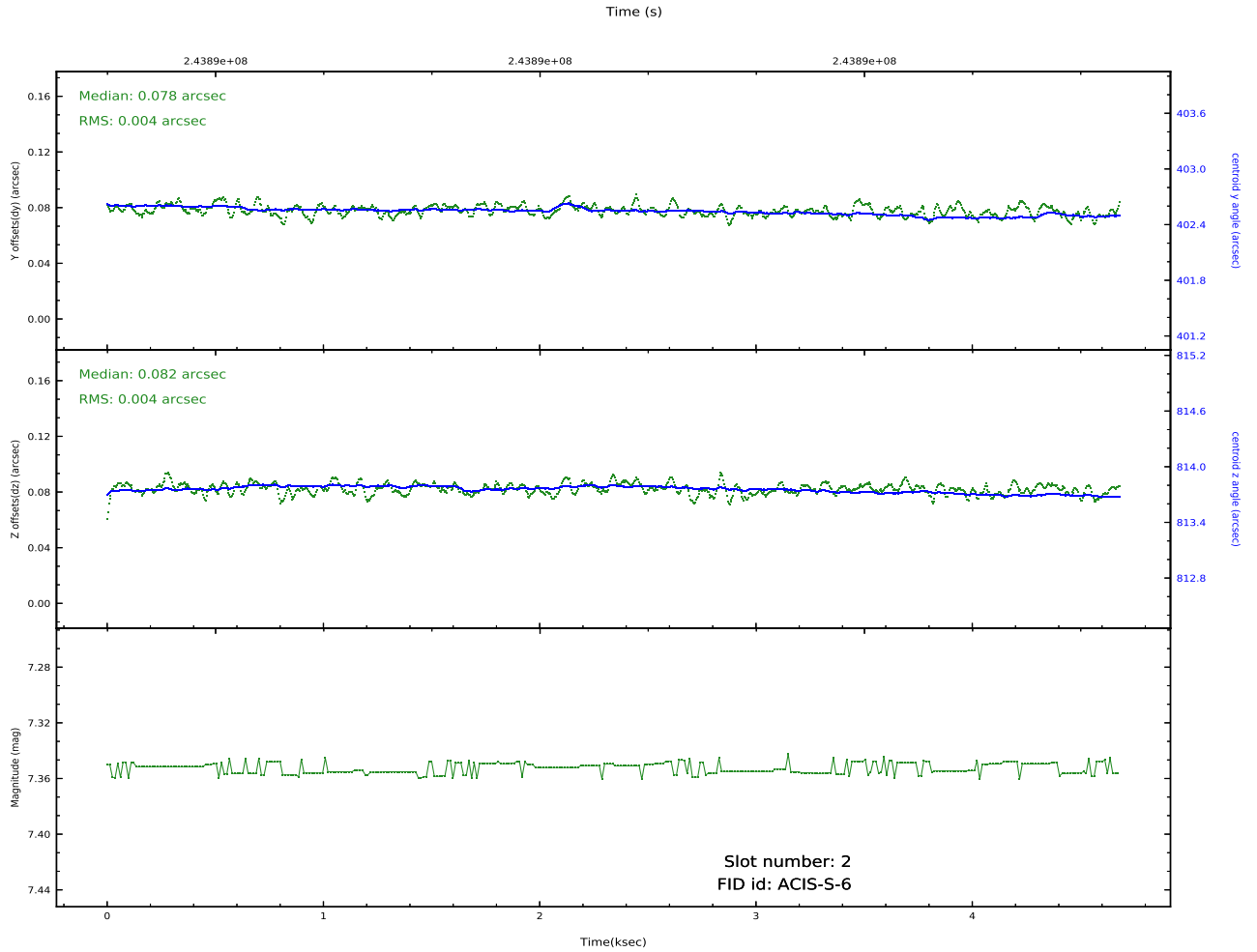
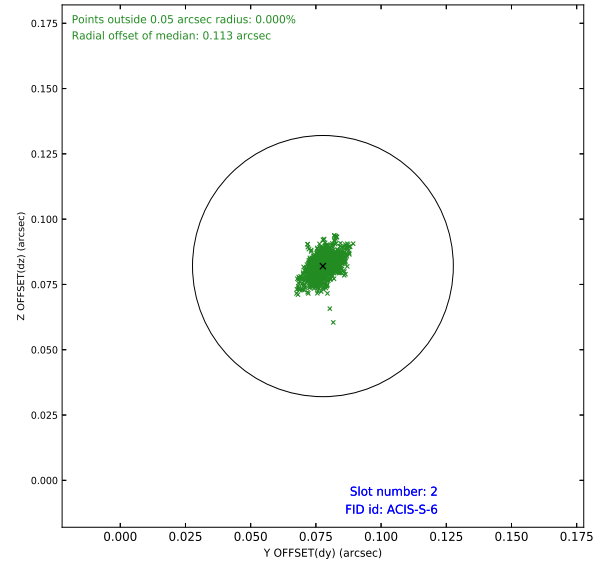
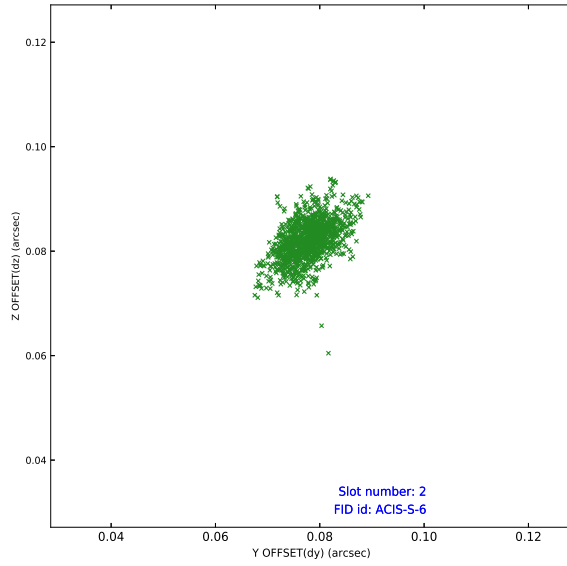
### 2.5.1 Slot 0



## 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)	2020.10.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.678399

## A.2 Comments

As a consequence of the DEA-A shutdown anomaly on Sep 15th (DOY258), the reported value of the ACIS FP temperature was ~1.3 degrees warmer than the actual temperature. The value for FP temperature reported in the headers of the Level 2 event file and the Mission Timeline files ARE INCORRECT by this amount for this processing. However, the temperature is corrected in the processing in order to obtain the correct temperature for the CTI correction. So the calibrated data are correct.