

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 20329 - L2 Version 2  
Chandra X-Ray Center

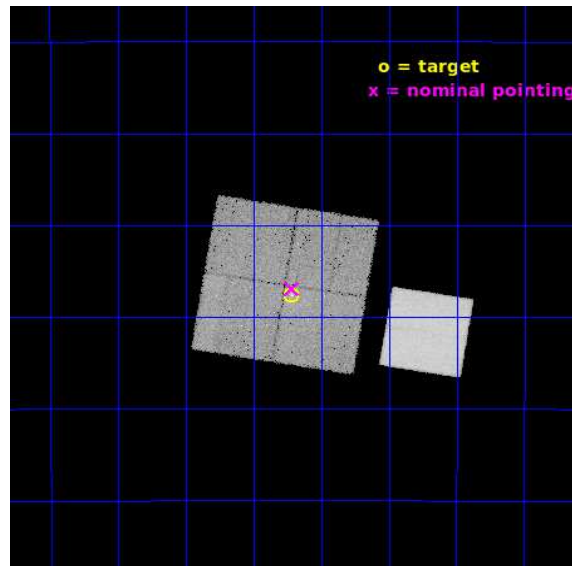
L2 Processing Date : Oct 25 2020

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# 1 Front

seq_num	503022	Sequence number
obs_id	20329	Observation id
title	The wagging jet and the X-ray plerion of PSR J1809-1917	Proposal t
observer	George Pavlov	Principal investigator
object	PSR J1809-1917	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	272.429583	Observer's specified target RA [deg]
dec_targ	-19.293917	Observer's specified target Dec [deg]
ra_nom	272.42914946499	Nominal RA [deg]
dec_nom	-19.281967333292	Nominal Dec [deg]
roll_nom	99.20125773109	Nominal Roll [deg]
revision	2	Processing version of data
ontime	30054.459180832	Sum of GTIs [s]
livetime	29661.775545863	Livetime [s]
ontime0	30057.60023129	Sum of GTIs [s]
ontime1	30057.60023129	Sum of GTIs [s]
ontime2	30057.60023129	Sum of GTIs [s]
ontime3	30054.459180832	Sum of GTIs [s]
ontime7	30057.60023129	Sum of GTIs [s]
l2events	215221	Number of level 2 events

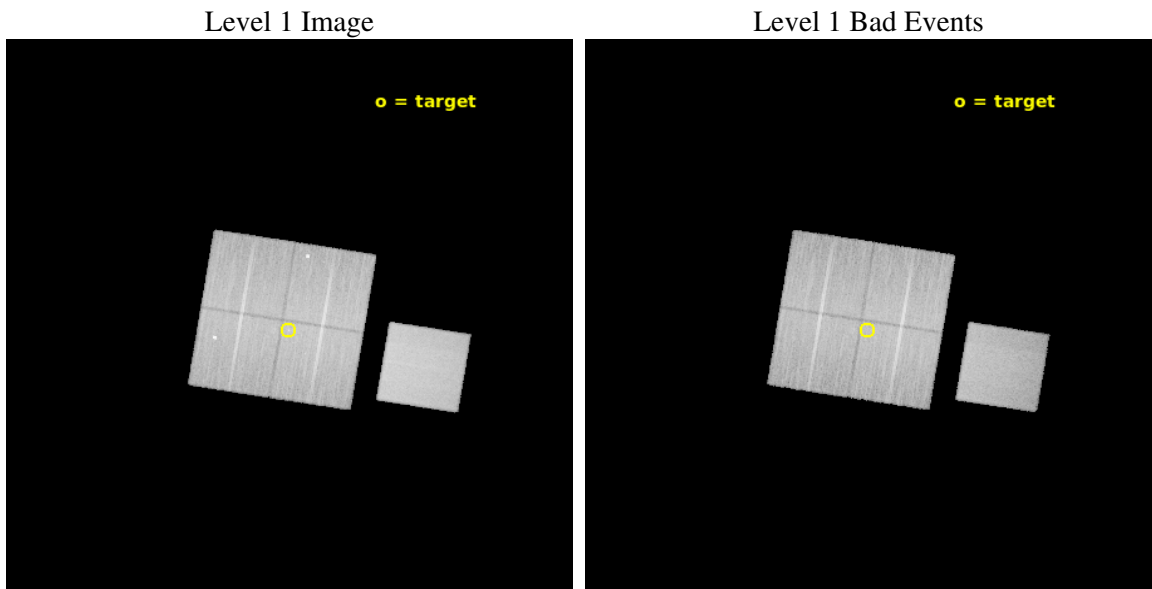




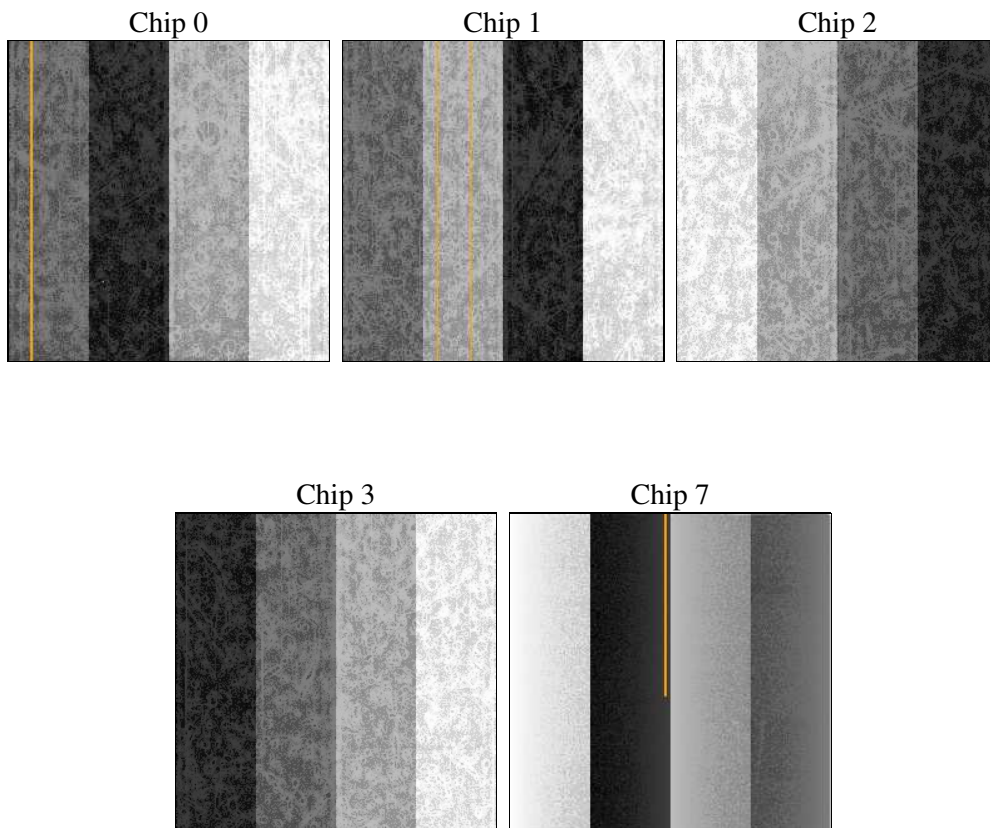
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	30054.459180832	Sum of GTIs [s]
caldsver	4.9.3	&#160	ontime0	30057.60023129	Sum of GTIs [s]
date	2020-10-26T01:01:57	Date and time of file creation	ontime1	30057.60023129	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	30057.60023129	Sum of GTIs [s]
			ontime3	30054.459180832	Sum of GTIs [s]
			ontime7	30057.60023129	Sum of GTIs [s]
			l1events	1141582	Number of level 1 events

### 2.1.4 Events

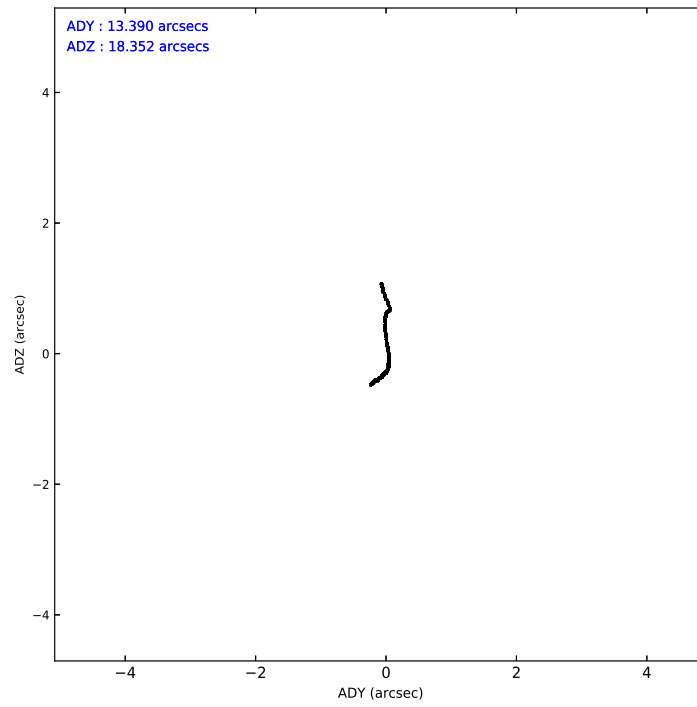
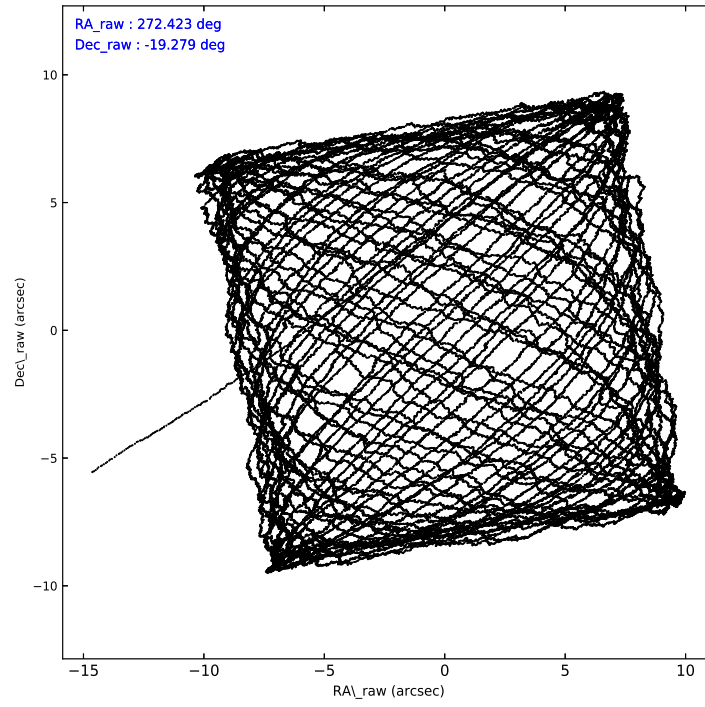
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	201432	211197	223647	219177	286129
rejected events	174440	178441	195240	191494	161281
rejected %	86%	84%	87%	87%	56%

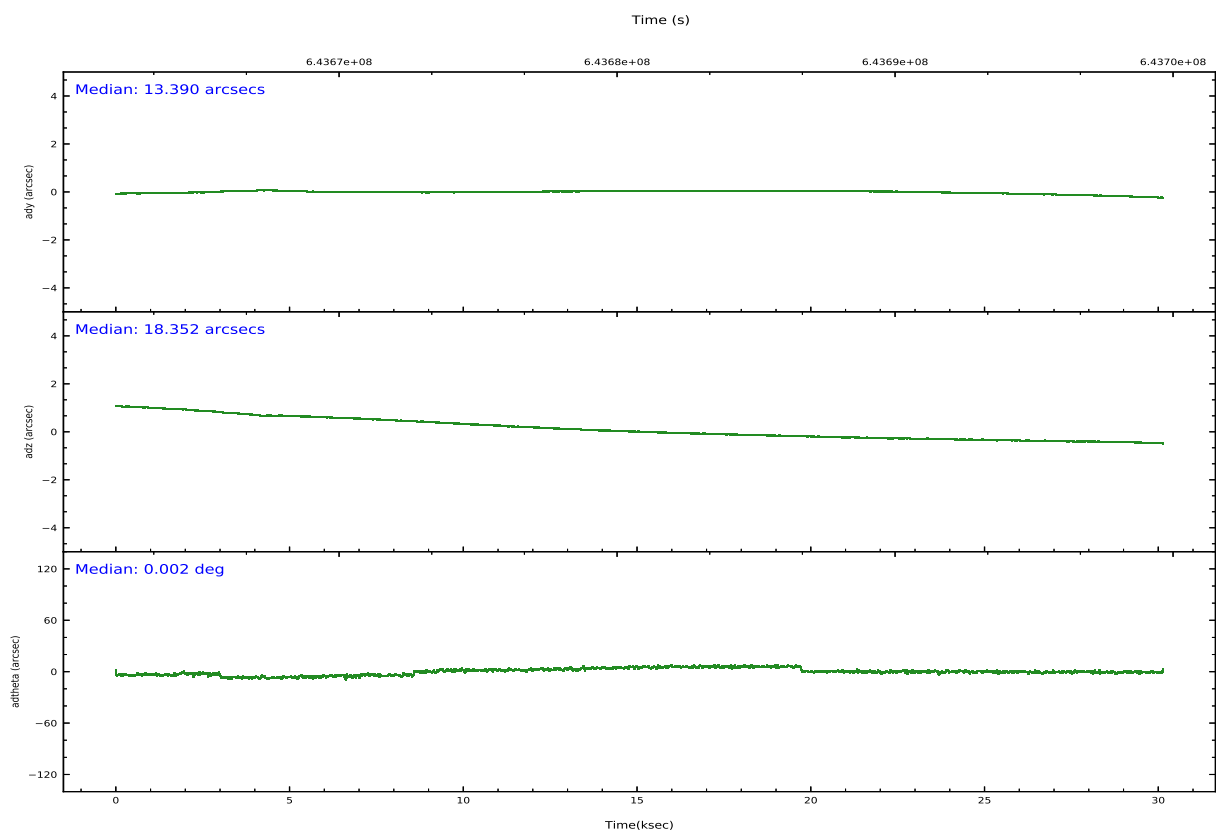
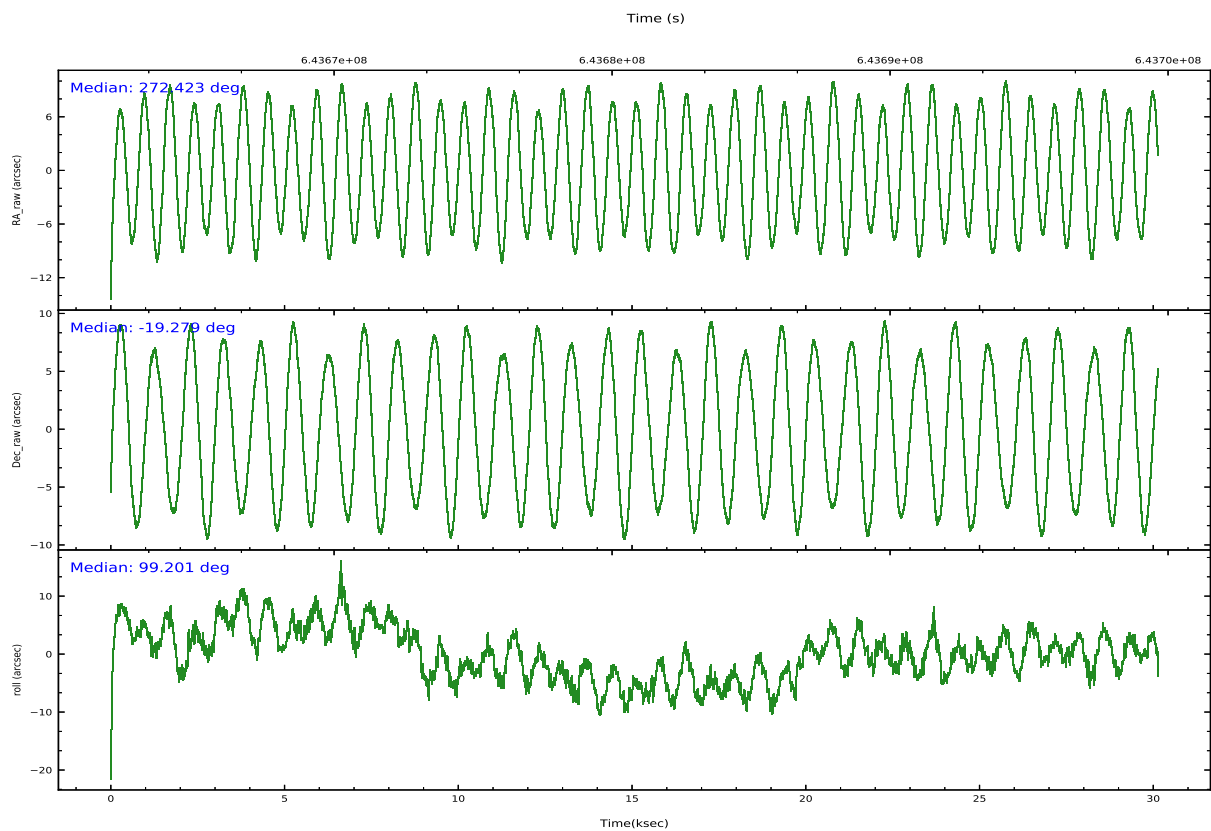
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	10117	14105	12410	11591	10997
	5%	6%	5%	5%	3%
grade 1 events	140	147	149	155	388
	0%	0%	0%	0%	0%
grade 2 events	6620	7179	6142	5745	26544
	3%	3%	2%	2%	9%
grade 3 events	2605	2574	2493	2635	10187
	1%	1%	1%	1%	3%
grade 4 events	2432	2643	2563	2734	10012
	1%	1%	1%	1%	3%
grade 5 events	9667	9844	8891	10654	28913
	4%	4%	3%	4%	10%
grade 6 events	5224	6257	4810	4979	67118
	2%	2%	2%	2%	23%
grade 7 events	164627	168448	186189	180684	131970
	81%	79%	83%	82%	46%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-01237	ACIS-01237	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	272.441522	272.42914946499	CCD I2 on	Y	Y
[deg] Pointing Dec	-19.300325	-19.281967333292	CCD I3 on	Y	Y
[deg] Pointing Roll	99.003943	99.20125773109	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	N	N
[mm] SIM translation stage pos	-232.422463	-232.4207921609049	CCD S3 on	O1	Y
[mm] SIM translation stage offset	-1.17	-1.171660842024835	CCD S4 on	N	N
[s] Observation start time (MET)	643665714.184000	643664523.03986	CCD S5 on	N	N
Observation start date	2018-05-25T20:00:45	2018-05-25T19:42:03	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	643695714.184000	643696684.46676	On-chip summing requested	N	N
Observation end date	2018-05-26T04:20:45	2018-05-26T04:38:04	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



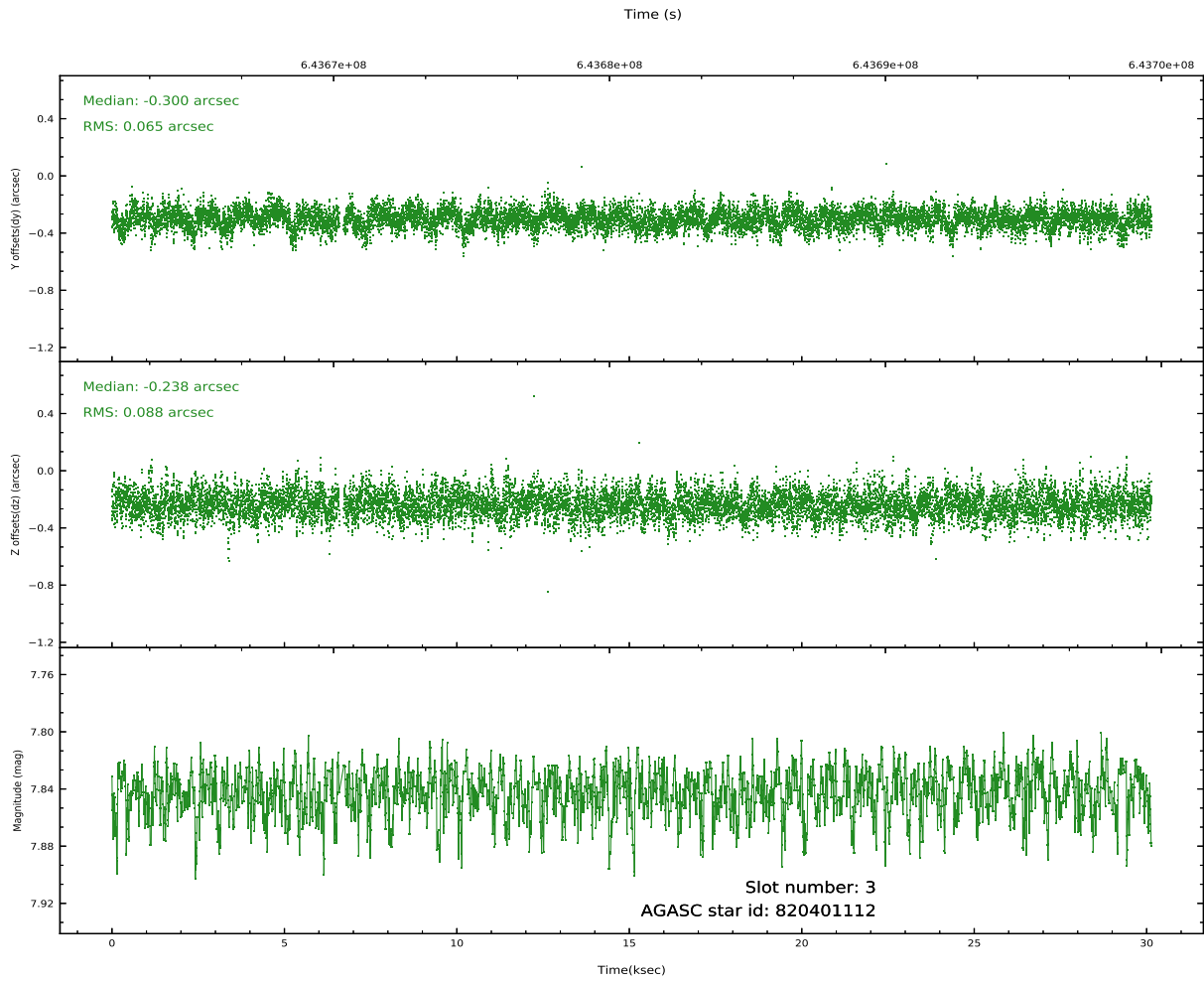
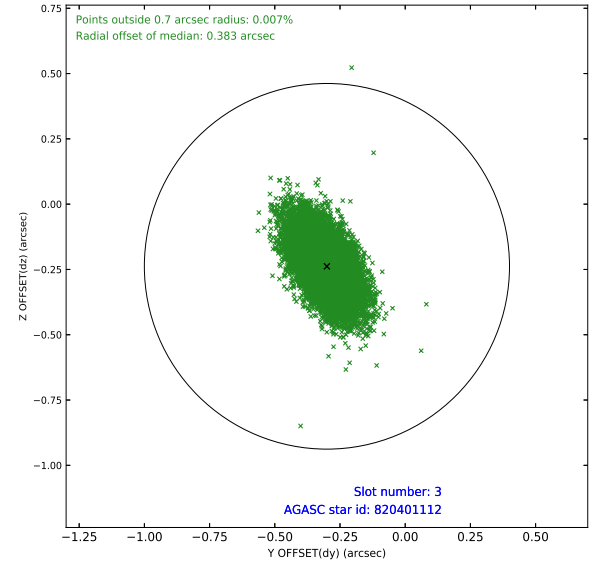
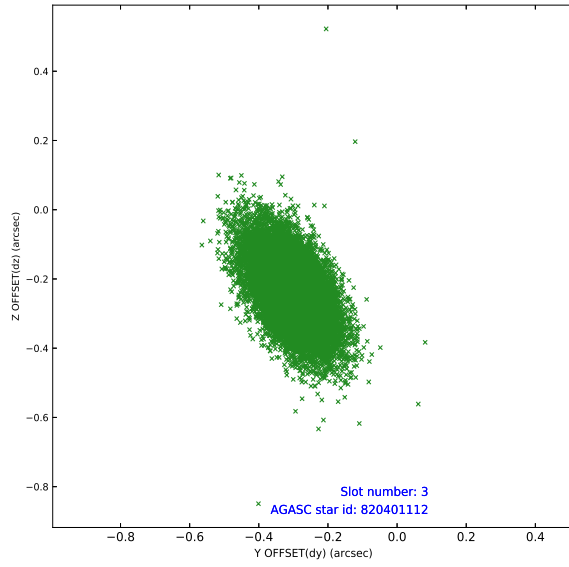


Slot Statistics

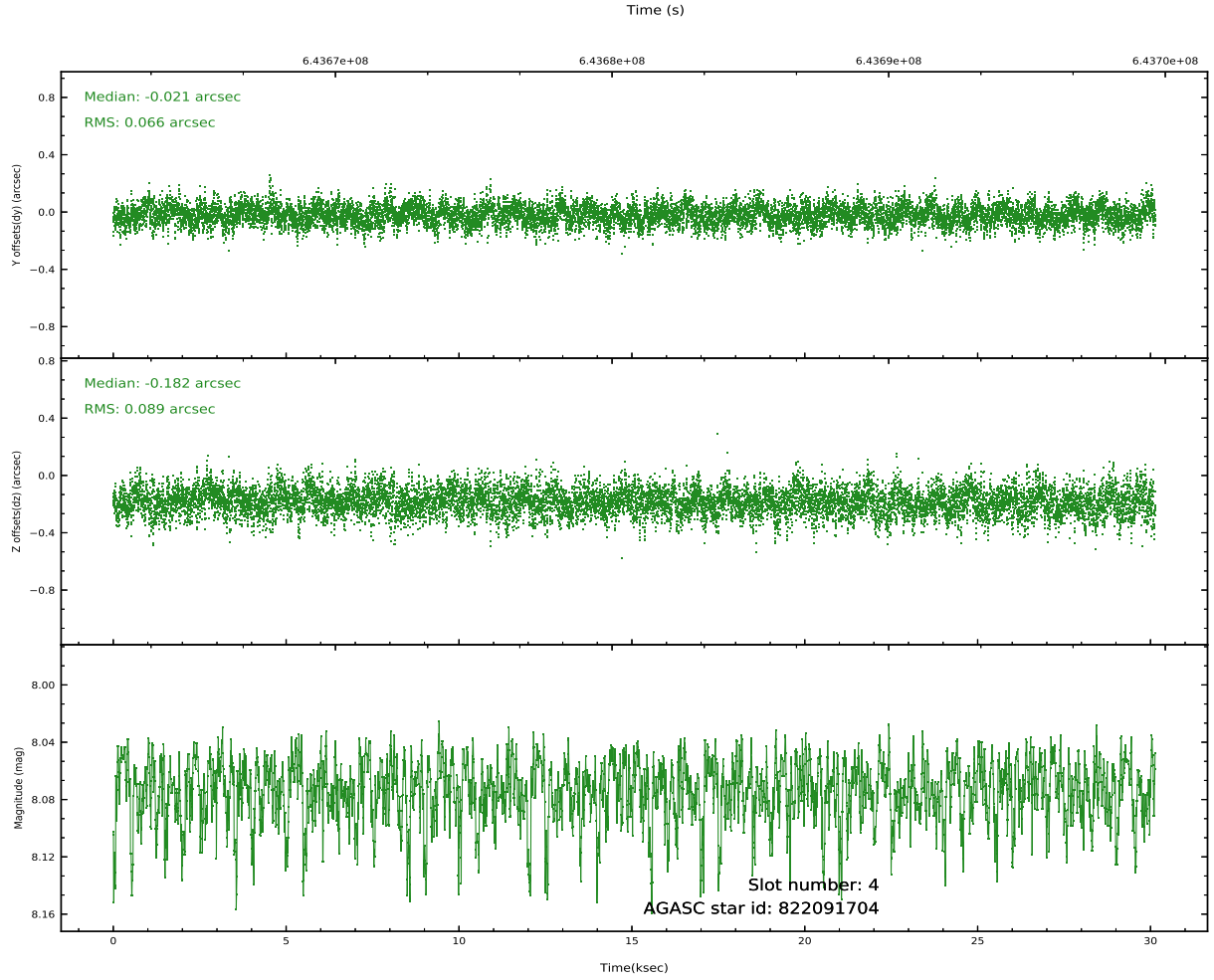
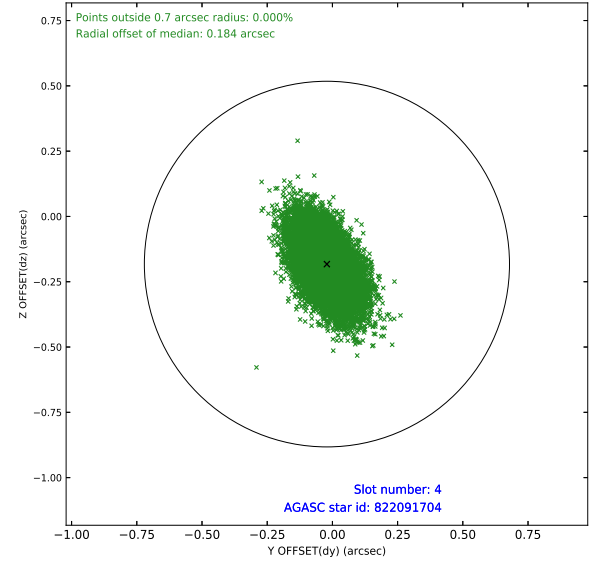
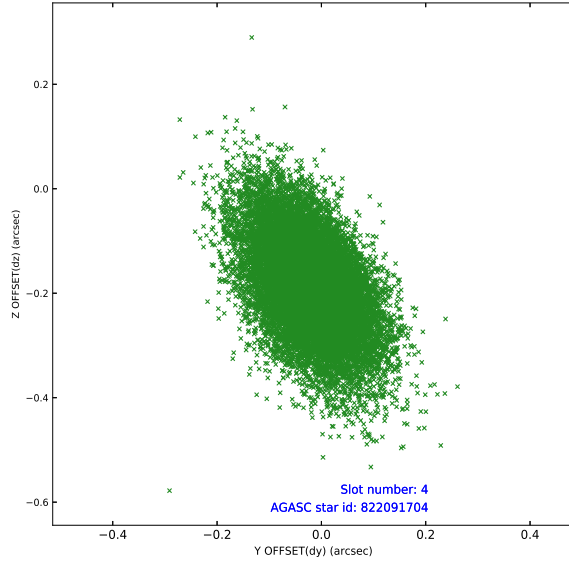
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.11	7352	1.000	-0.013	0.032	0.025	0.037	0.000000	0.000000	926.03	-866
1	FID		ACIS-I-2	7.02	7349	1.000	-0.127	-0.030	0.017	0.031	0.000000	0.000000	-768.19	-872
2	FID		ACIS-I-4	7.05	7352	1.000	0.041	0.074	0.027	0.039	0.000000	0.000000	2146.00	1033
3	GUIDE	used	820401112	7.84	14635	1.000	-0.300	-0.238	0.111	0.198	271.884761	-19.293988	315.37	1865
4	GUIDE	used	822091704	8.07	14697	1.000	-0.021	-0.182	0.115	0.200	272.220028	-18.943658	1385.92	544
5	GUIDE	used	822098736	8.45	14698	1.000	0.209	-0.014	0.118	0.209	272.269355	-19.875225	-1952.89	899
6	GUIDE	used	822088160	6.50	14704	1.000	-0.105	0.116	0.105	0.195	272.729284	-18.869551	1377.52	-1210
7	GUIDE	used	822098064	8.21	14696	1.000	0.219	0.321	0.130	0.218	273.233974	-19.745214	-2007.62	-2400

## 2.4 Star Slots

### 2.4.1 Slot 3

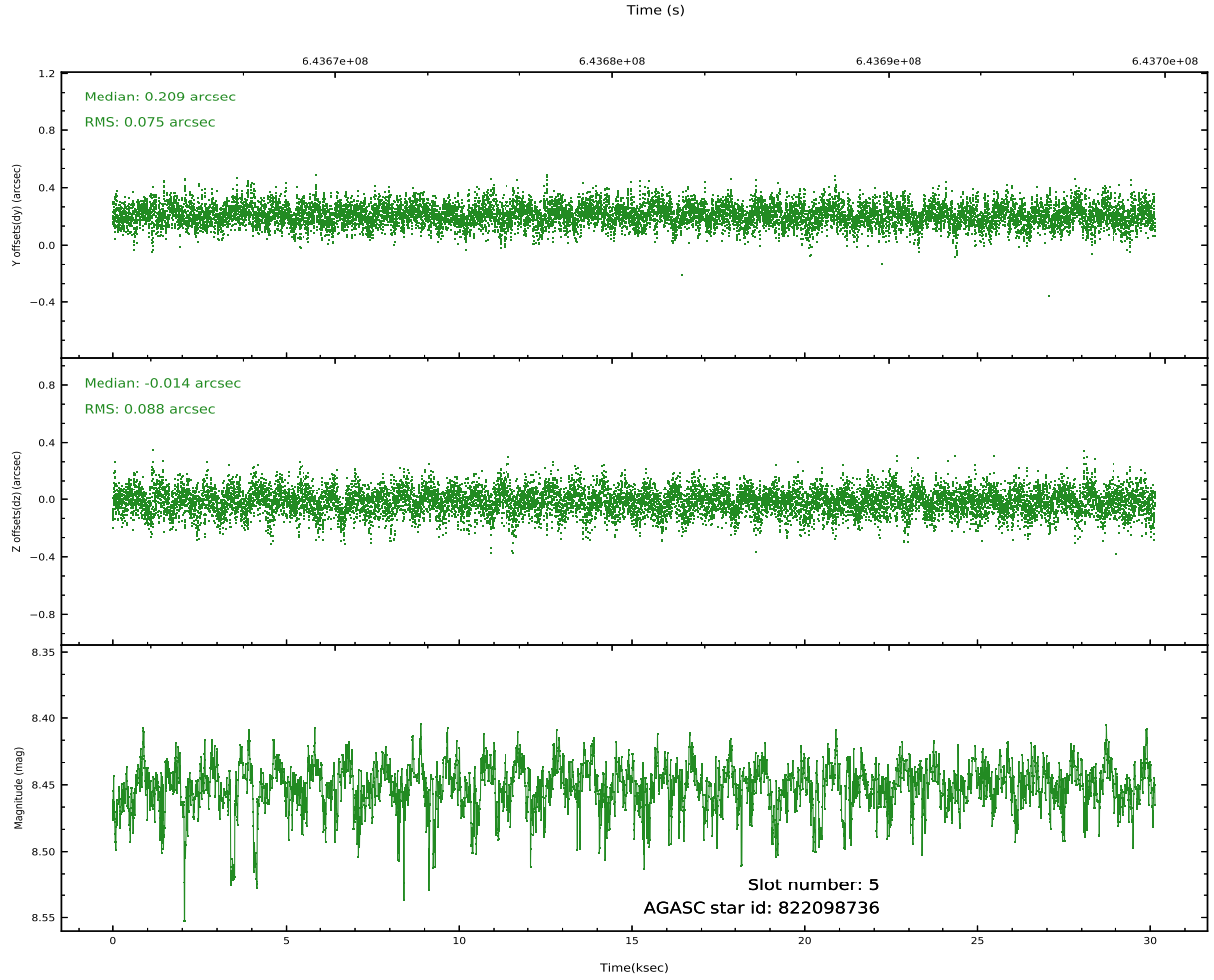
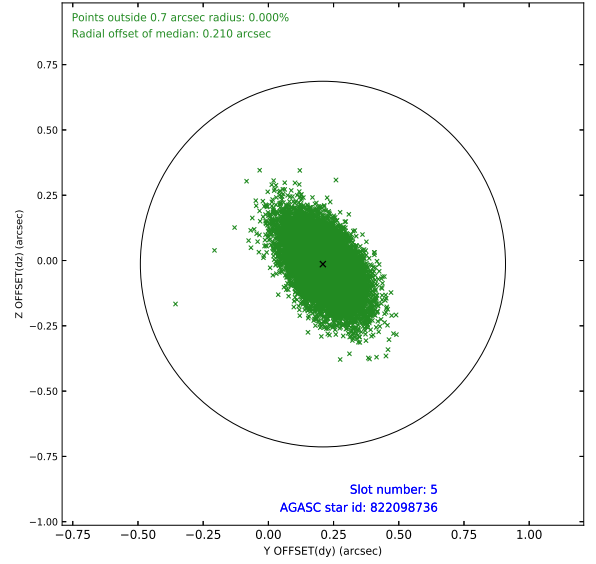
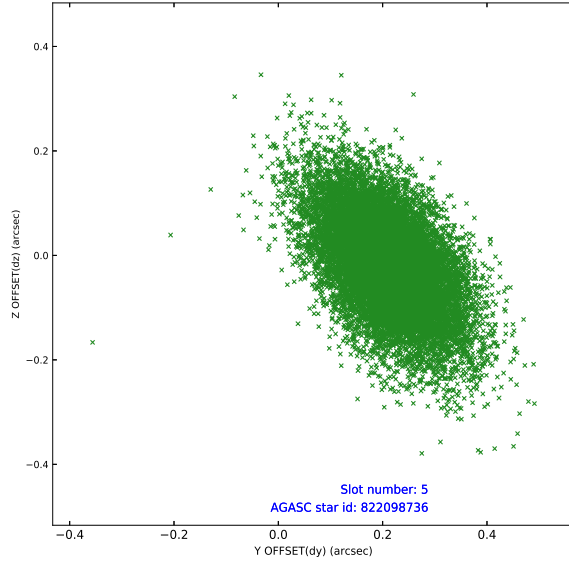


## 2.4.2 Slot 4

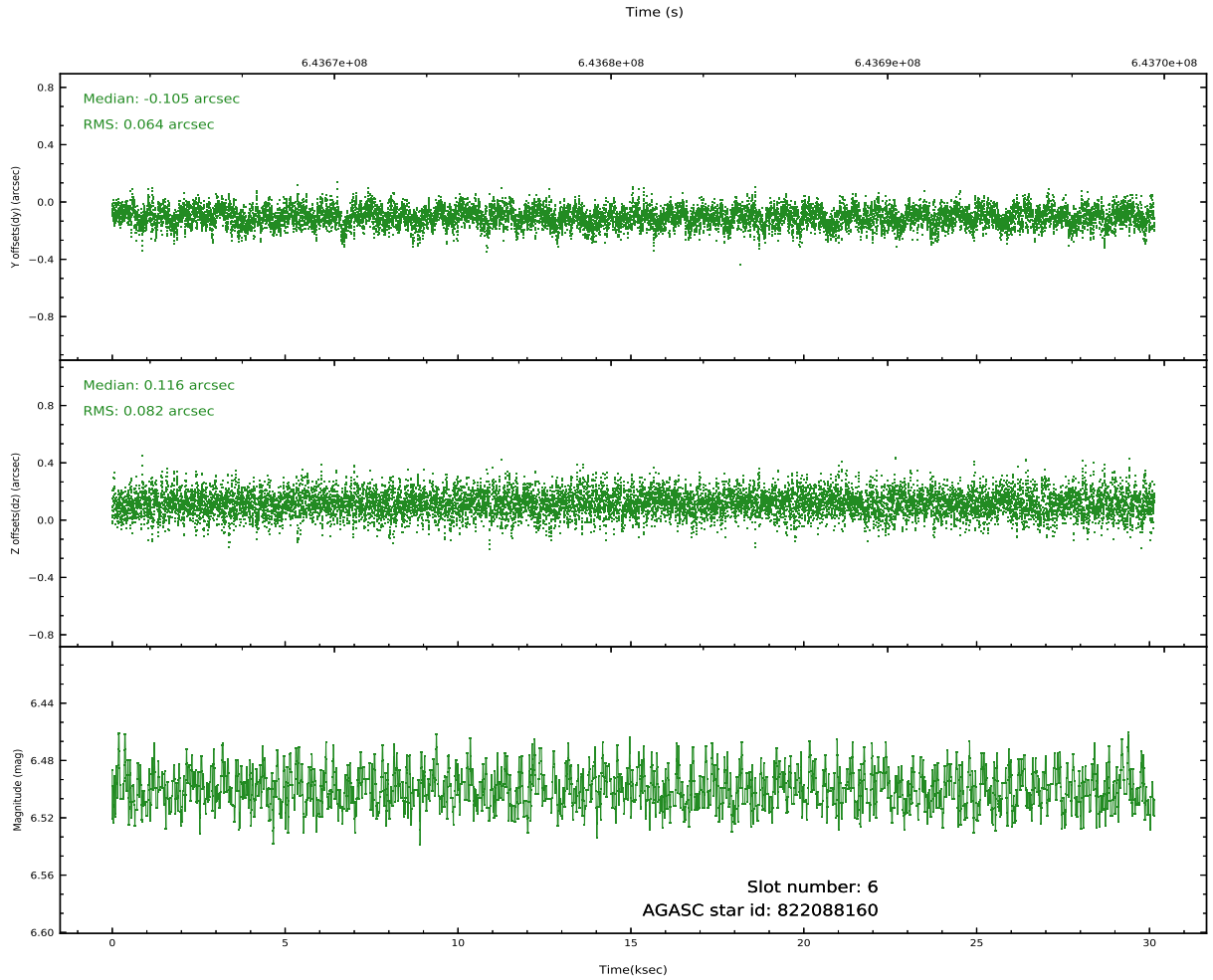
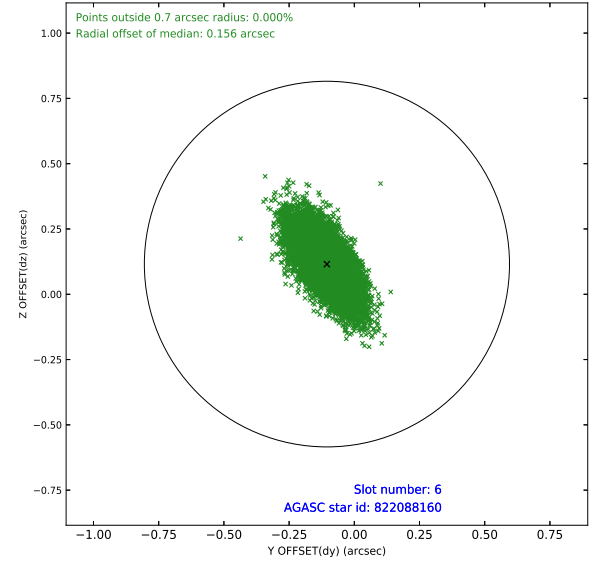
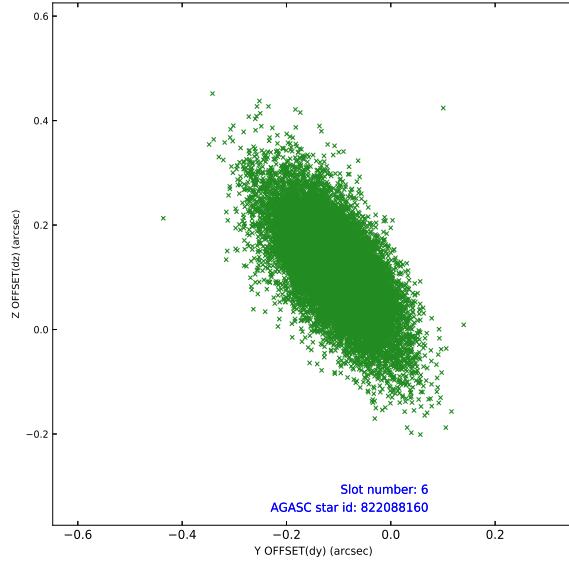




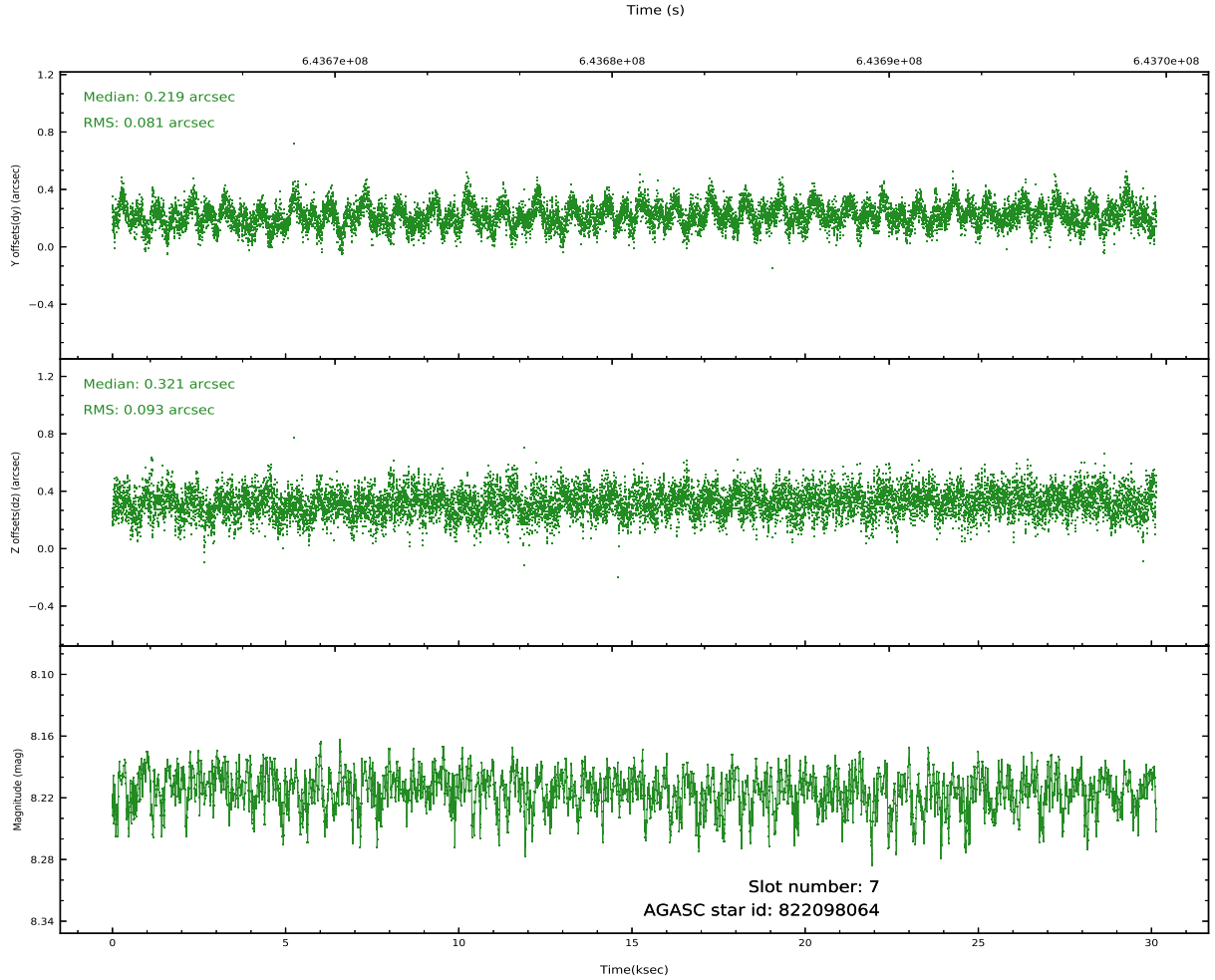
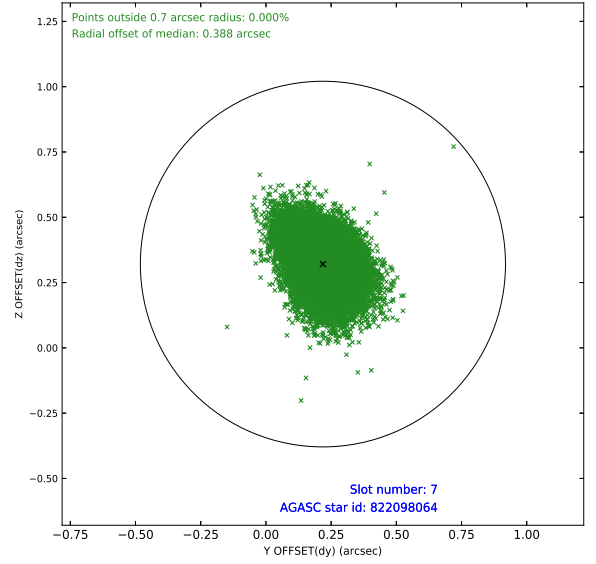
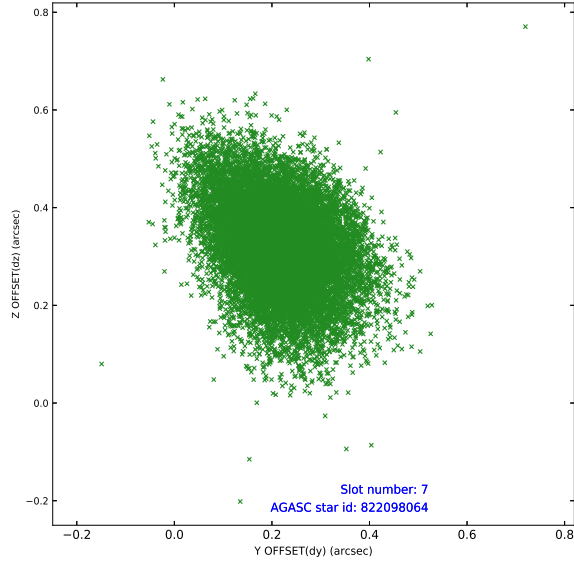
### 2.4.3 Slot 5



## 2.4.4 Slot 6

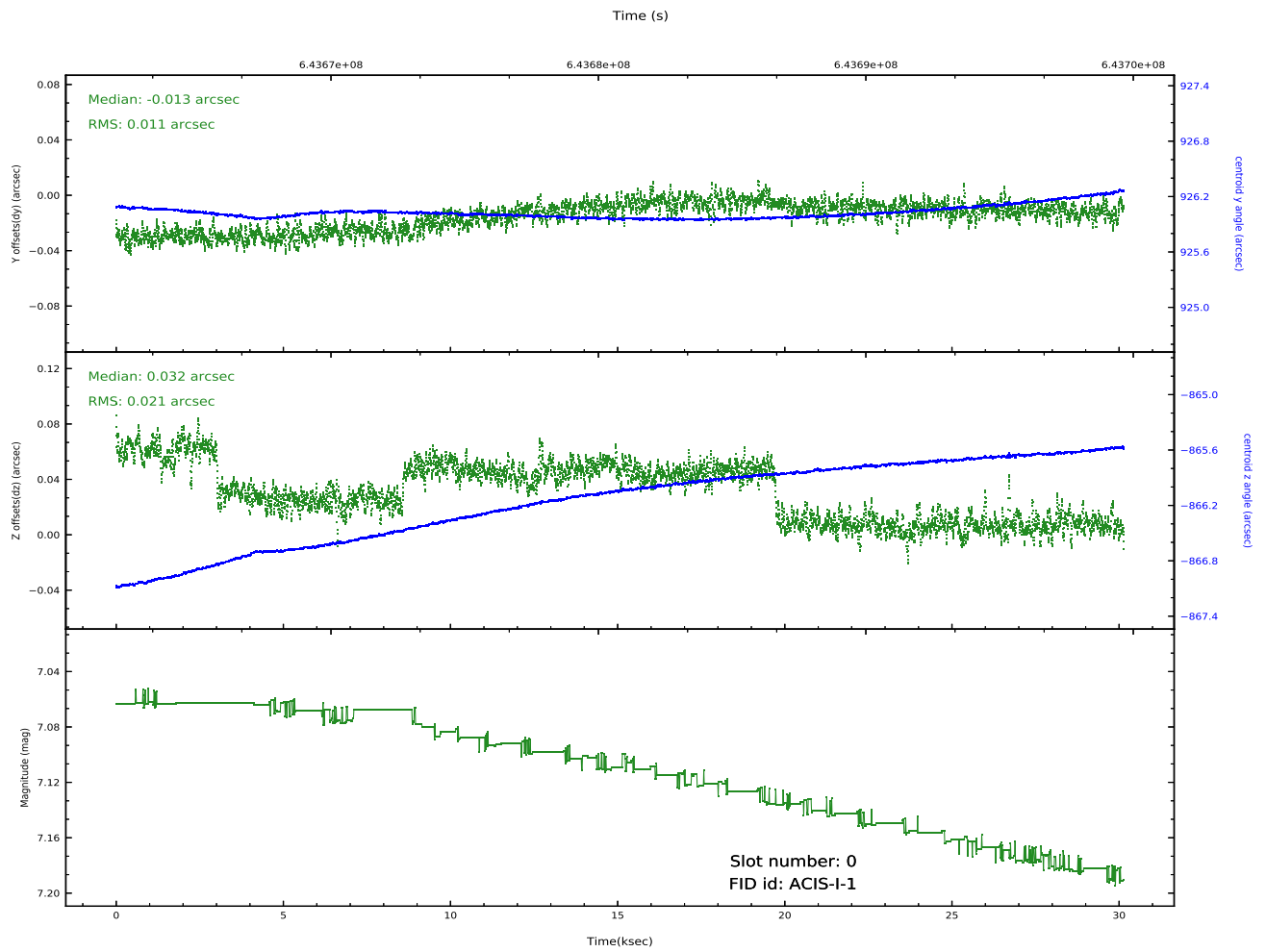
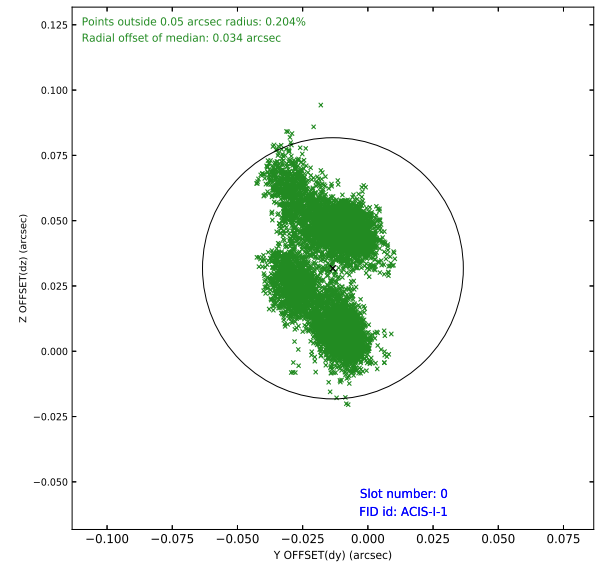
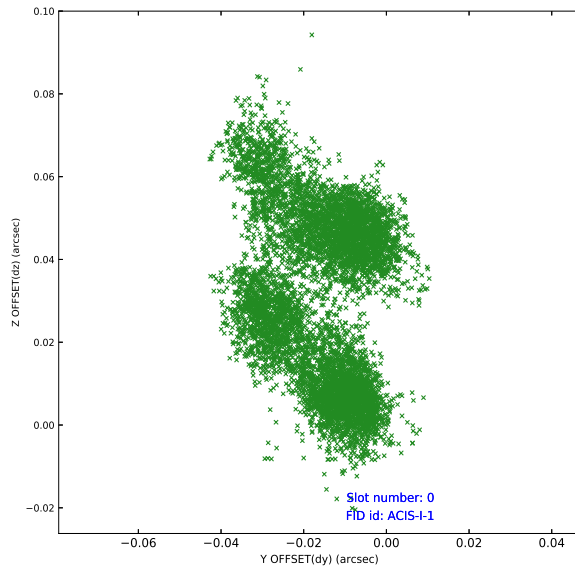


## 2.4.5 Slot 7

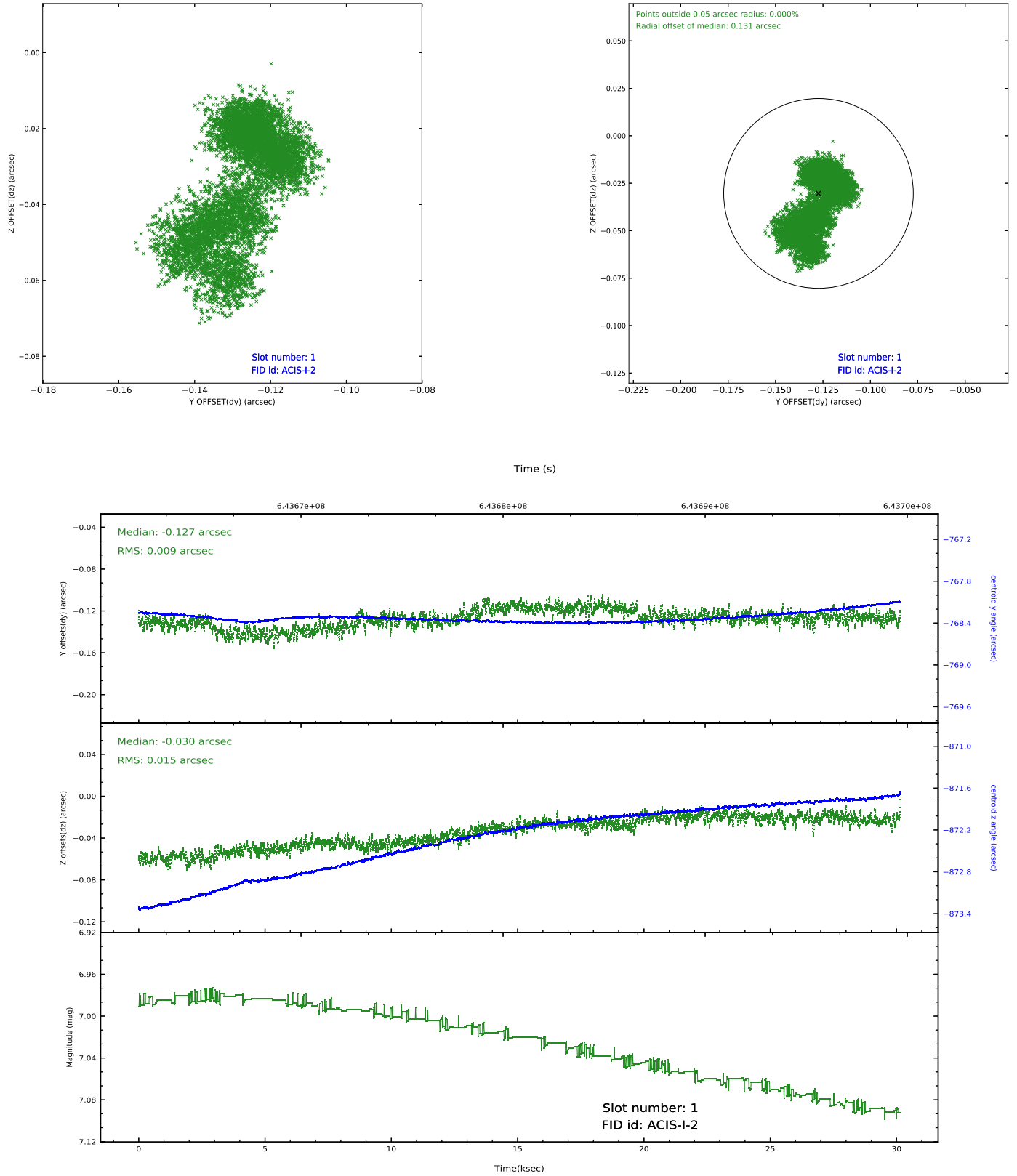


## 2.5 FID Slots

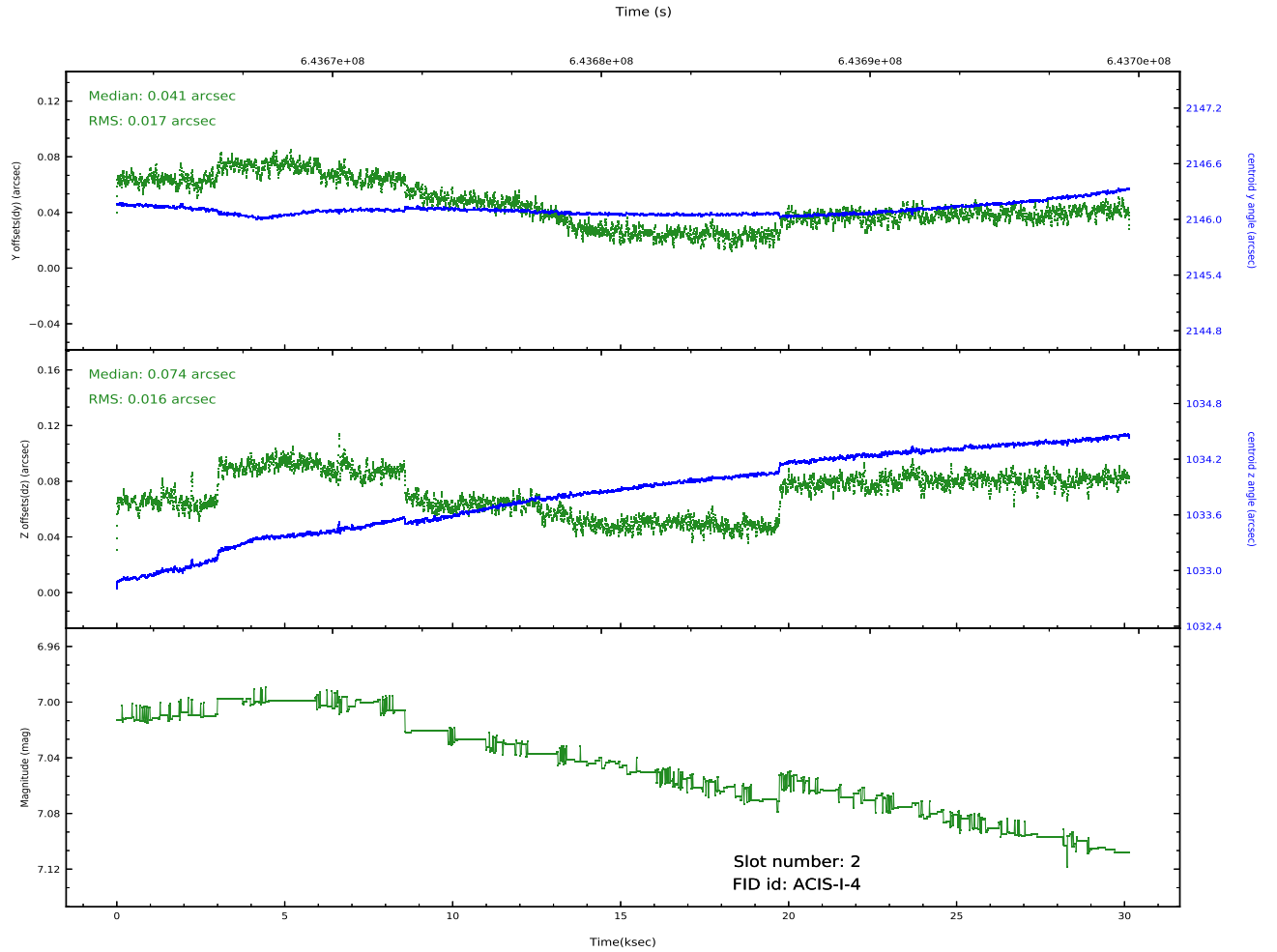
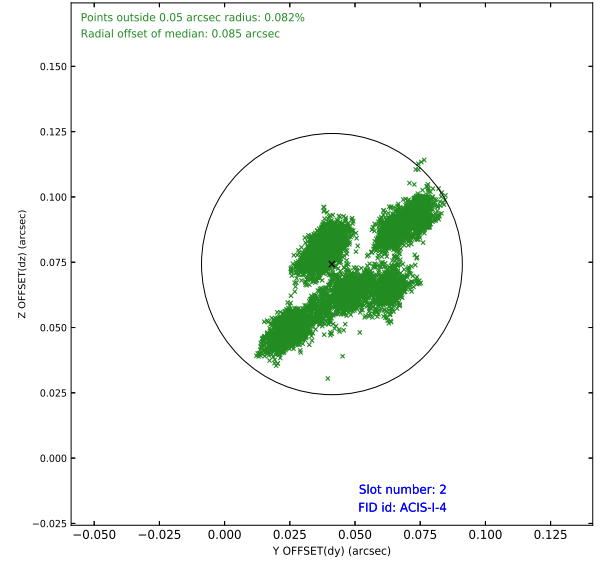
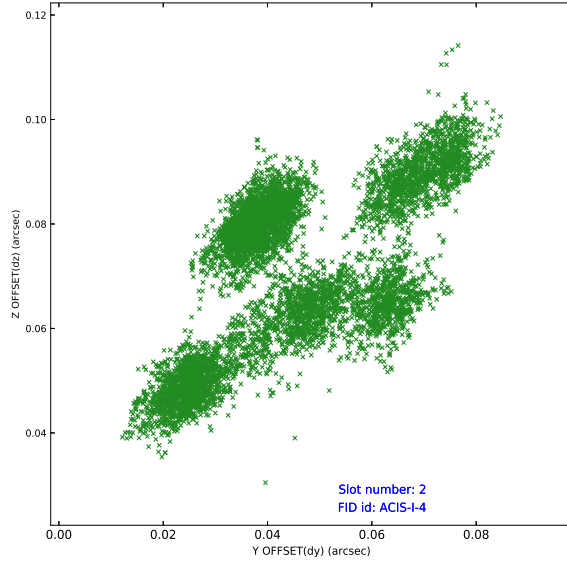
### 2.5.1 Slot 0



## 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)	2020.10.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.054459180832

### A.2 Comments