

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 20331 - L2 Version 2  
Chandra X-Ray Center

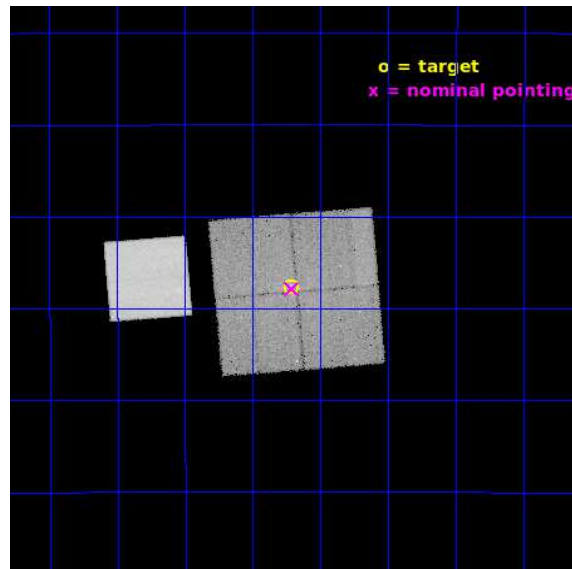
L2 Processing Date : Oct 27 2020

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# 1 Front

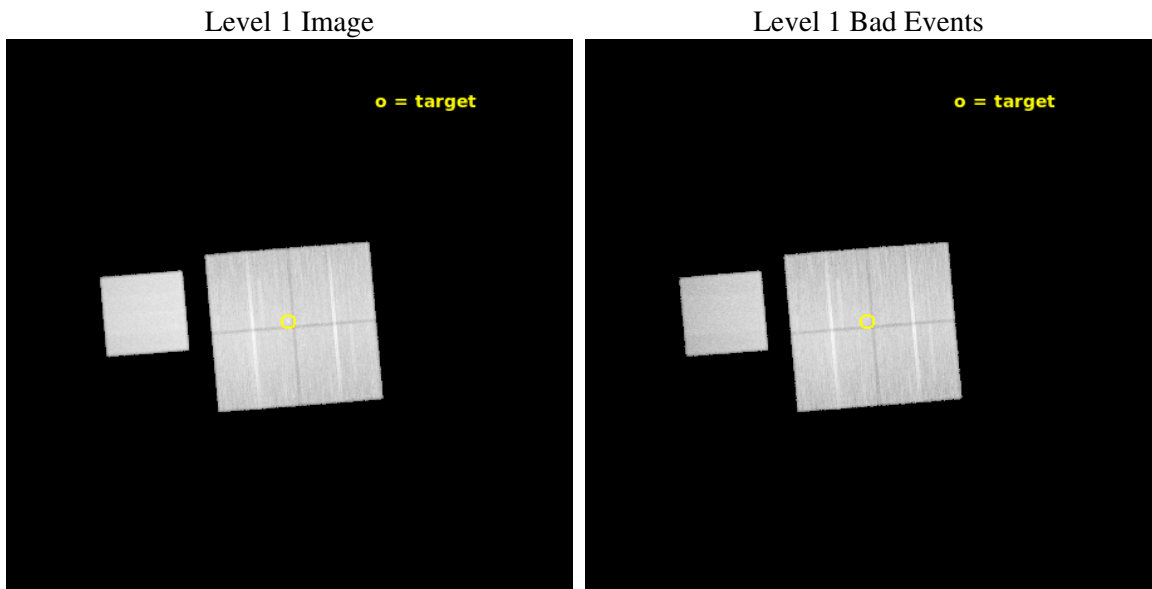
seq_num	503024	Sequence number
obs_id	20331	Observation id
title	The wagging jet and the X-ray plerion of PSR J1809-1917	Proposal t
observer	George Pavlov	Principal investigator
object	PSR J1809-1917	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	272.429583	Observer's specified target RA [deg]
dec_targ	-19.293917	Observer's specified target Dec [deg]
ra_nom	272.42774157788	Nominal RA [deg]
dec_nom	-19.297600961498	Nominal Dec [deg]
roll_nom	265.20035532232	Nominal Roll [deg]
revision	2	Processing version of data
ontime	40055.10030818	Sum of GTIs [s]
livetime	39531.750934518	Livetime [s]
ontime0	40048.818267822	Sum of GTIs [s]
ontime1	40055.10030818	Sum of GTIs [s]
ontime2	40048.818307519	Sum of GTIs [s]
ontime3	40055.10030818	Sum of GTIs [s]
ontime7	40055.10030818	Sum of GTIs [s]
l2events	297753	Number of level 2 events



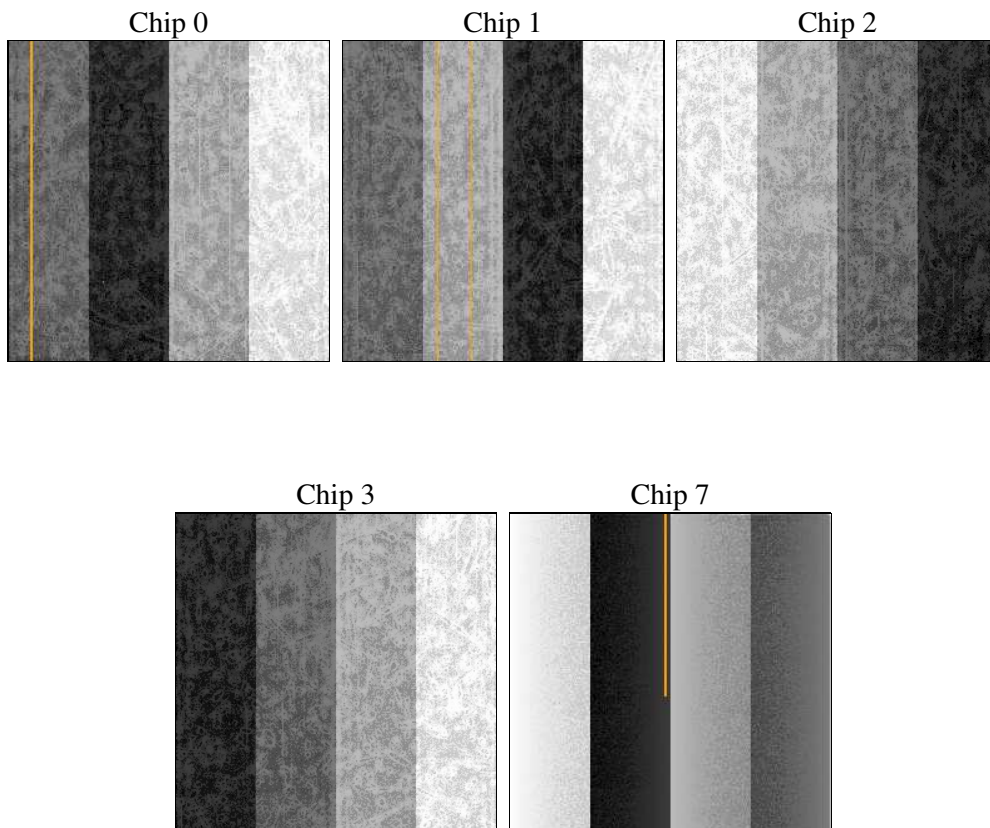
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	40000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	40055.10030818	Sum of GTIs [s]
caldbver	4.9.3	&#160	ontime0	40048.818267822	Sum of GTIs [s]
date	2020-10-27T10:16:55	Date and time of file creation	ontime1	40055.10030818	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	40048.818307519	Sum of GTIs [s]
			ontime3	40055.10030818	Sum of GTIs [s]
			ontime7	40055.10030818	Sum of GTIs [s]
			l1events	1569430	Number of level 1 events

### 2.1.4 Events

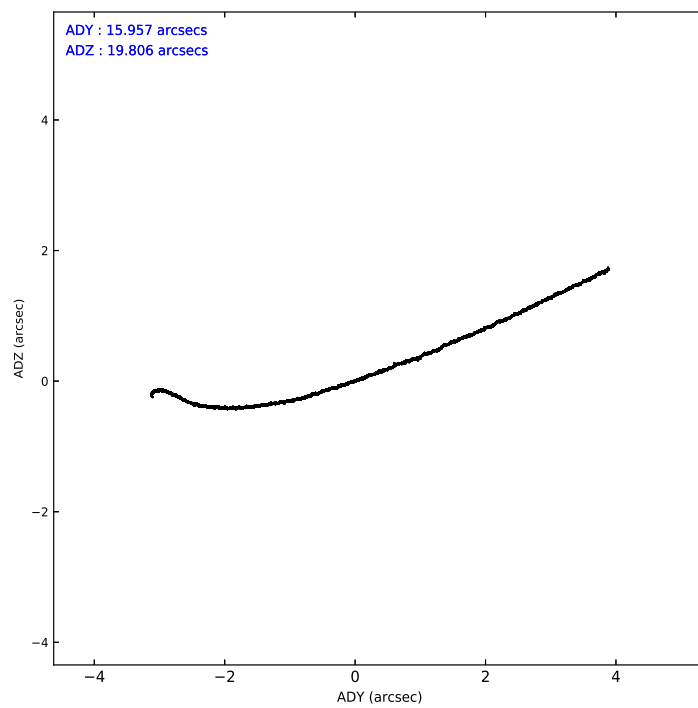
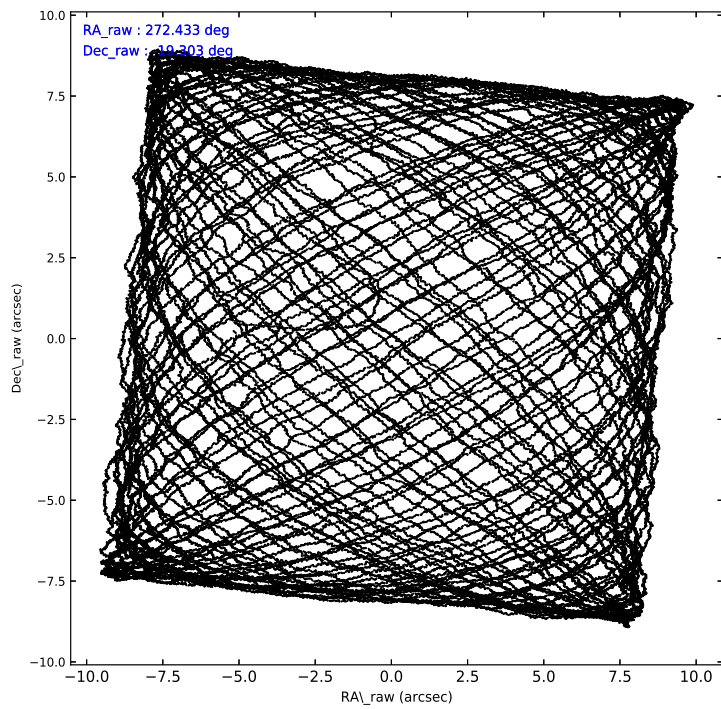
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	279622	285808	311176	300775	392049
rejected events	241595	244922	271914	264742	218929
rejected %	86%	85%	87%	88%	55%

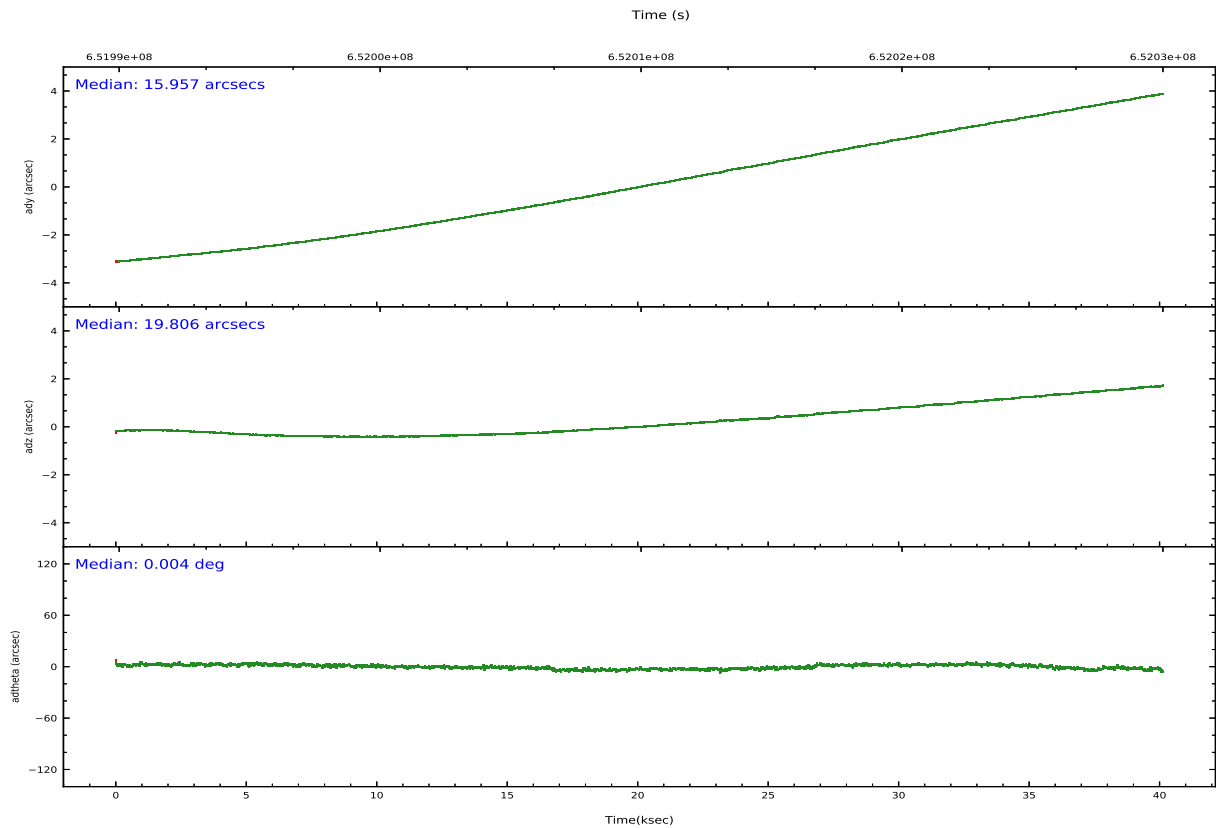
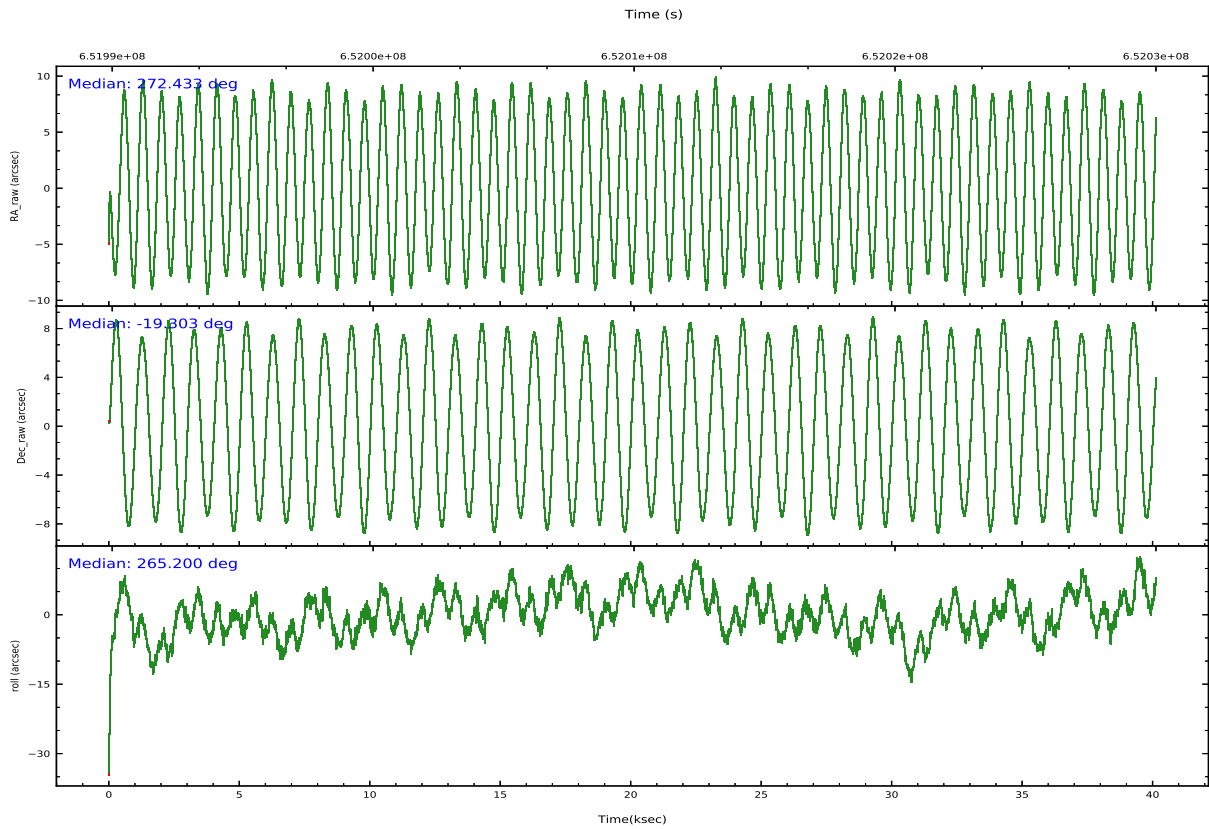
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	14747	14902	16407	14722	15317
	5%	5%	5%	4%	3%
grade 1 events	179	157	223	201	570
	0%	0%	0%	0%	0%
grade 2 events	9060	10009	9003	7587	37333
	3%	3%	2%	2%	9%
grade 3 events	3567	3705	3539	3473	13738
	1%	1%	1%	1%	3%
grade 4 events	3292	3675	3644	3421	13808
	1%	1%	1%	1%	3%
grade 5 events	12968	13590	11990	14095	38676
	4%	4%	3%	4%	9%
grade 6 events	7362	8599	6672	6832	92936
	2%	3%	2%	2%	23%
grade 7 events	228447	231171	259698	250444	179671
	81%	80%	83%	83%	45%

## 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	272.420894	272.42774157788	CCD I2 on	Y	Y
[deg] Pointing Dec	-19.277817	-19.297600961498	CCD I3 on	Y	Y
[deg] Pointing Roll	264.997133	265.20035532232	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	-233.592463	-233.5874344608287	CCD S3 on	O1	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	651990007.184000	651988933.93305	CCD S5 on	N	N
Observation start date	2018-08-30T04:18:58	2018-08-30T04:02:13	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	652030007.184000	652030580.19802	On-chip summing requested	N	N
Observation end date	2018-08-30T15:25:38	2018-08-30T15:36:20	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





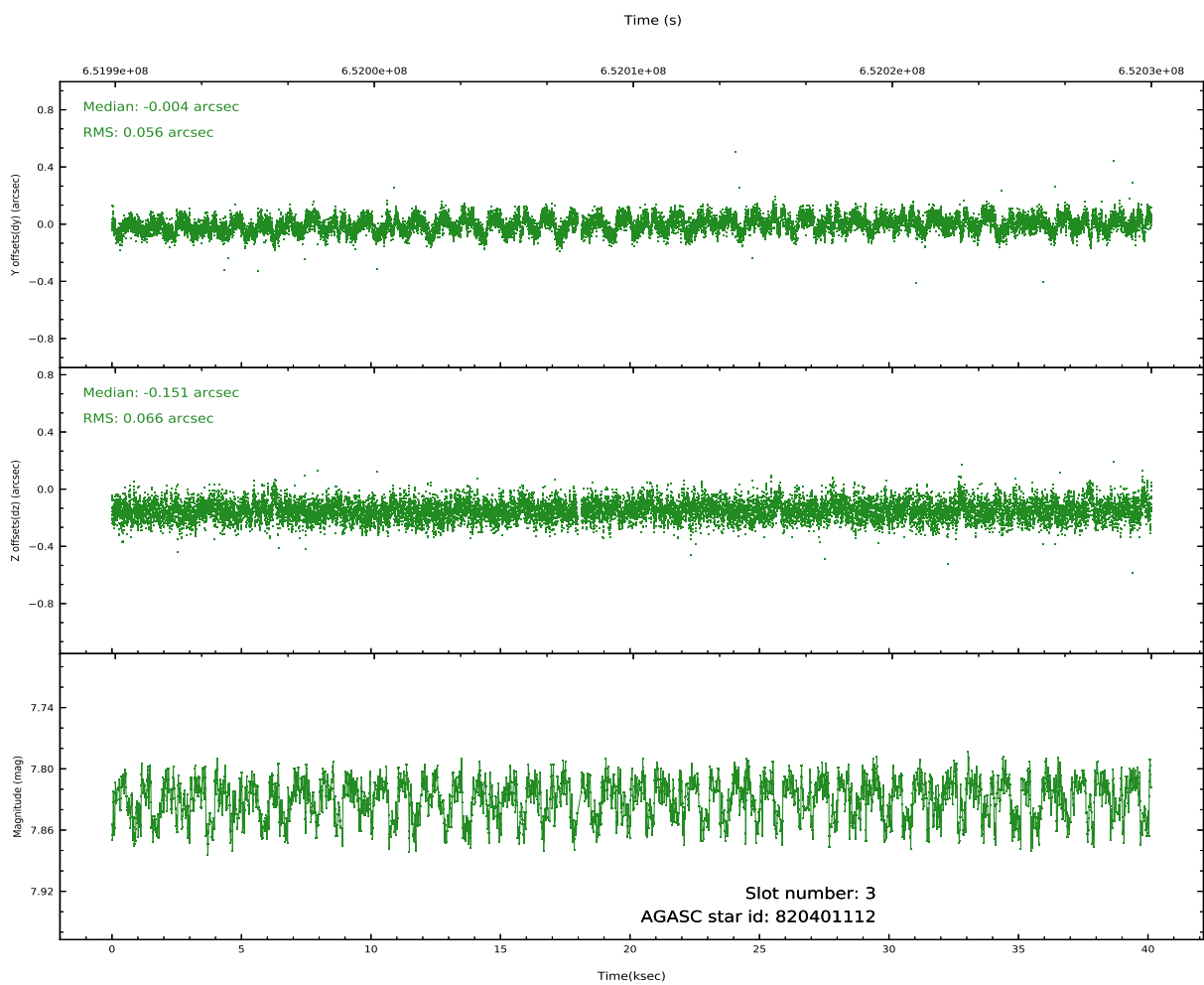
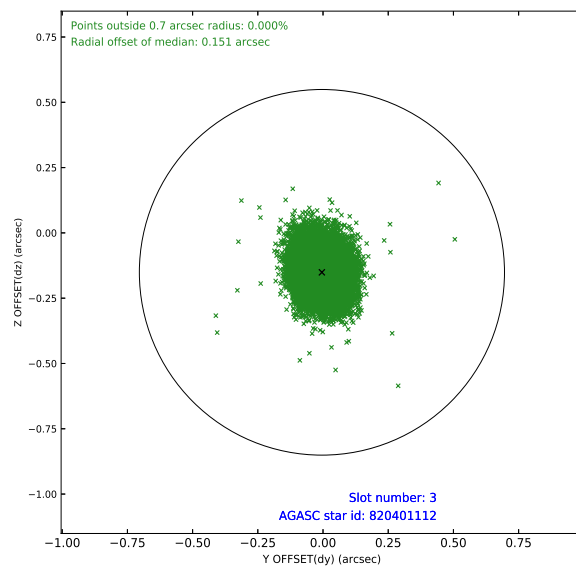
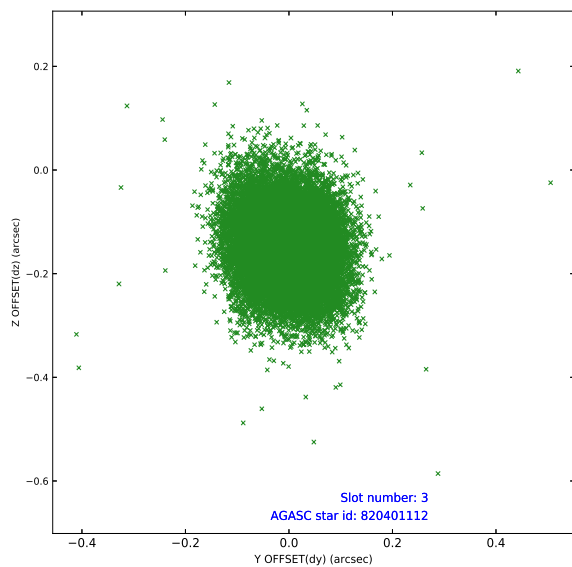
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-I-1	7.19	9790	1.000	0.029	-0.077	0.032	0.044	0.000000	0.000000	923.30	-843
1	FID		ACIS-I-2	7.09	9788	1.000	-0.081	0.067	0.027	0.041	0.000000	0.000000	-770.89	-850
2	FID		ACIS-I-4	7.12	9787	1.000	-0.039	0.076	0.019	0.028	0.000000	0.000000	2143.30	1055
3	GUIDE	used	820401112	7.83	19508	1.000	-0.004	-0.151	0.092	0.148	271.884761	-19.293988	220.23	-1809
4	GUIDE	used	822091704	8.06	19575	1.000	0.045	0.034	0.098	0.161	272.220028	-18.943658	-1137.83	-786
5	GUIDE	used	822096760	8.01	19573	1.000	-0.208	-0.069	0.123	0.206	272.830526	-19.438690	457.28	1436
6	GUIDE	used	822100176	8.59	19565	1.000	0.439	-0.132	0.134	0.211	272.112888	-19.868886	2212.56	-852
7	GUIDE	used	821559528	9.07	19494	1.000	-0.269	0.322	0.152	0.245	272.980625	-18.673858	-2329.05	1712

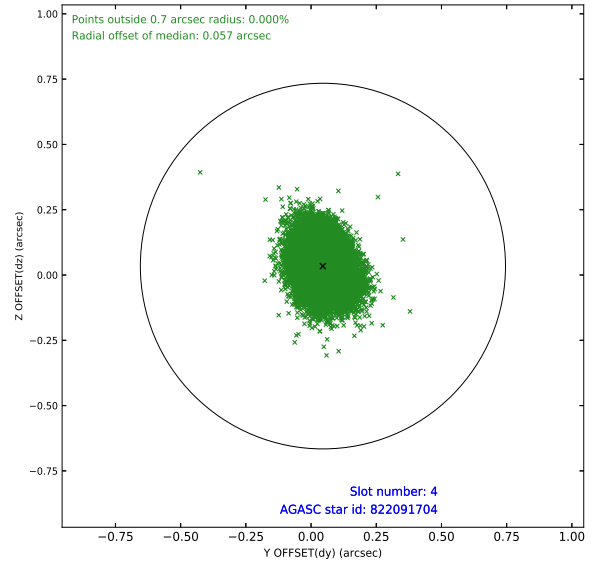
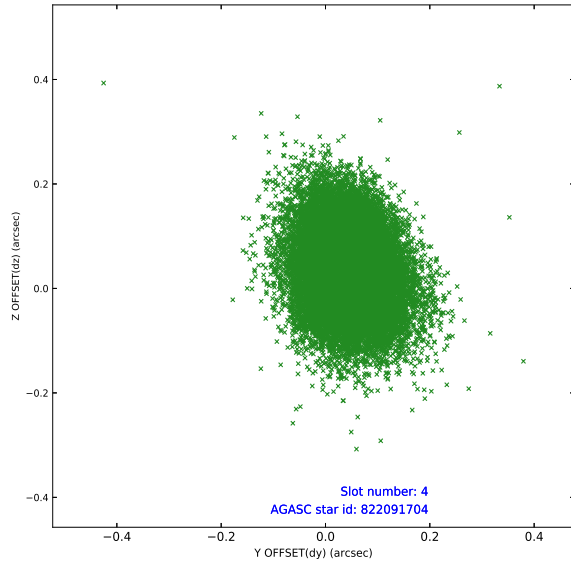
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## 2.4 Star Slots

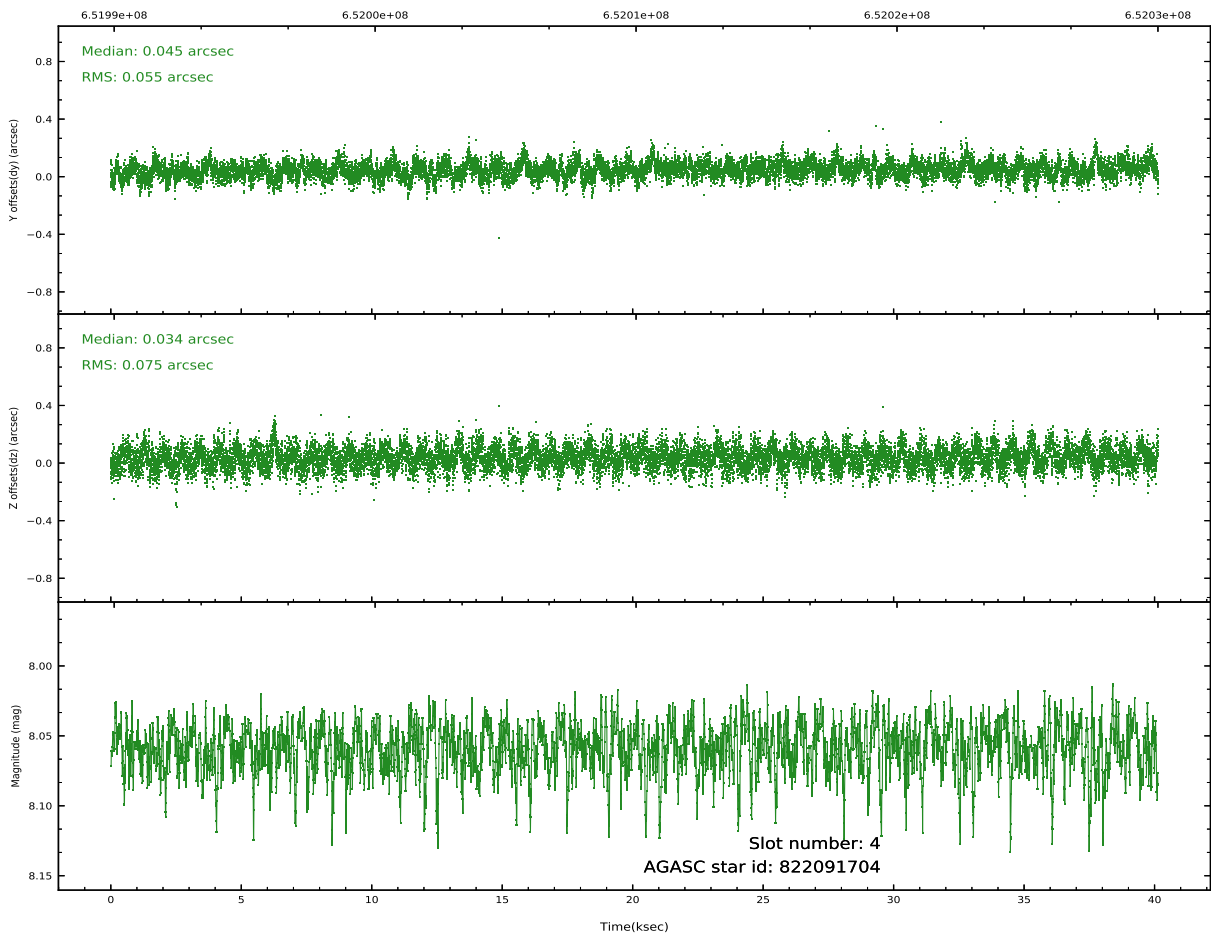
### 2.4.1 Slot 3



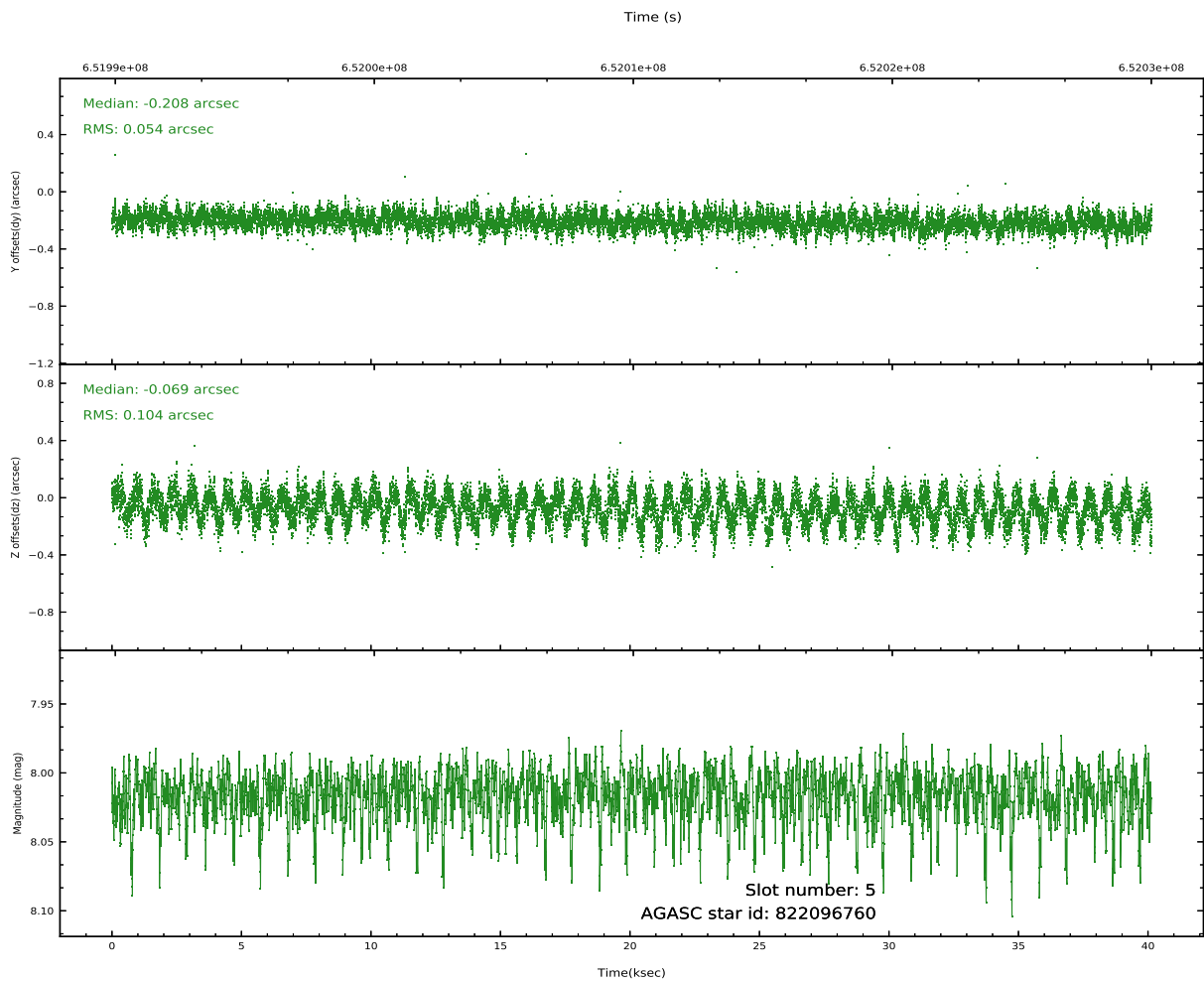
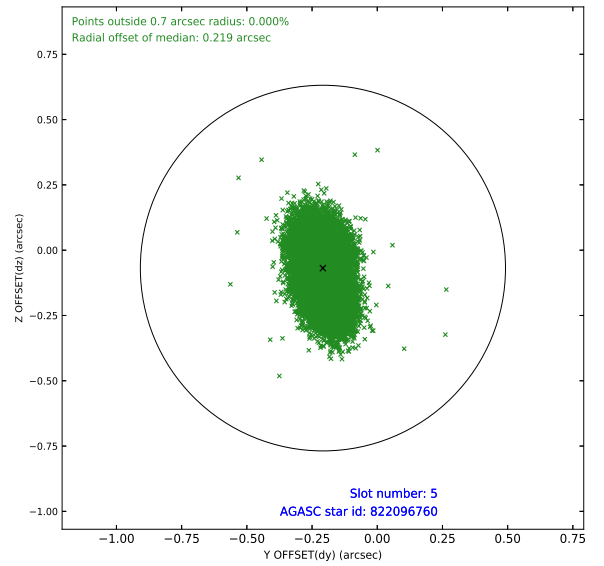
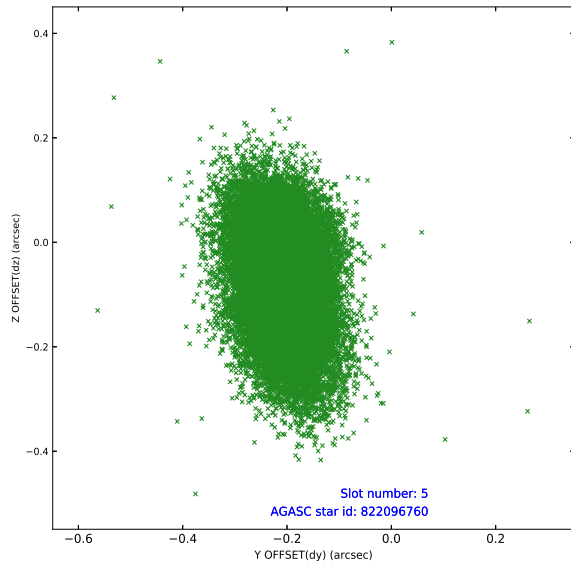
## 2.4.2 Slot 4



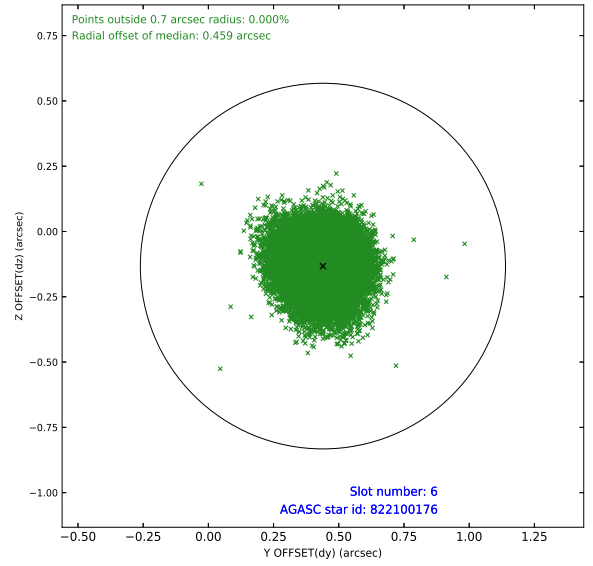
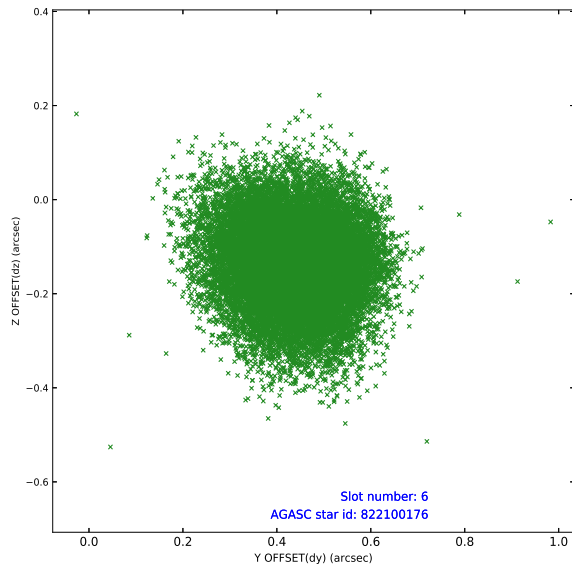
Time (s)



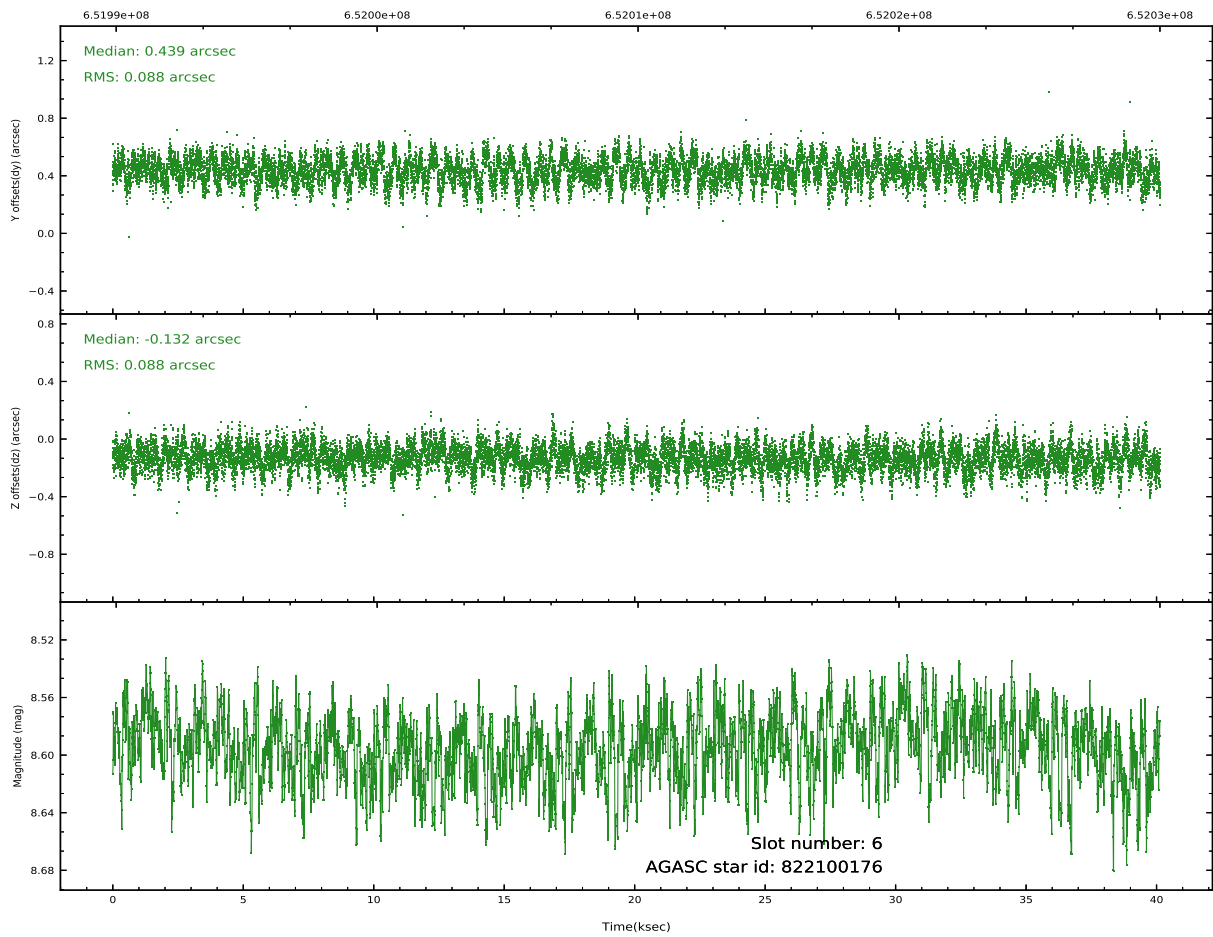
### 2.4.3 Slot 5



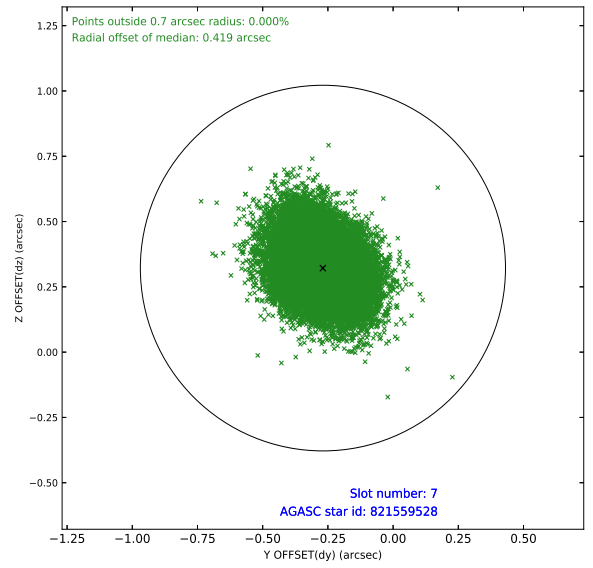
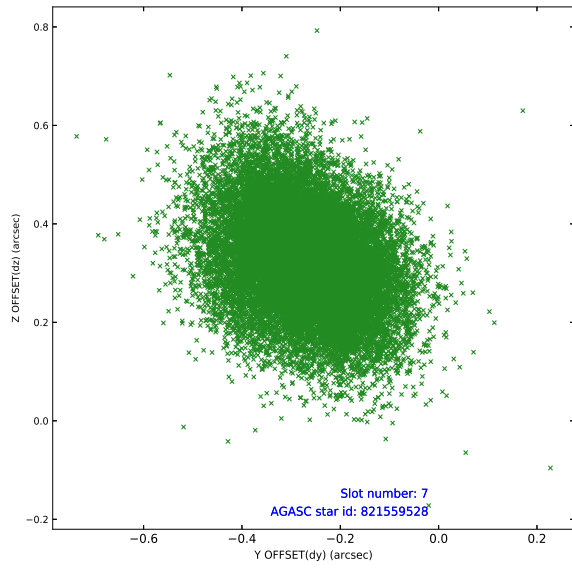
## 2.4.4 Slot 6



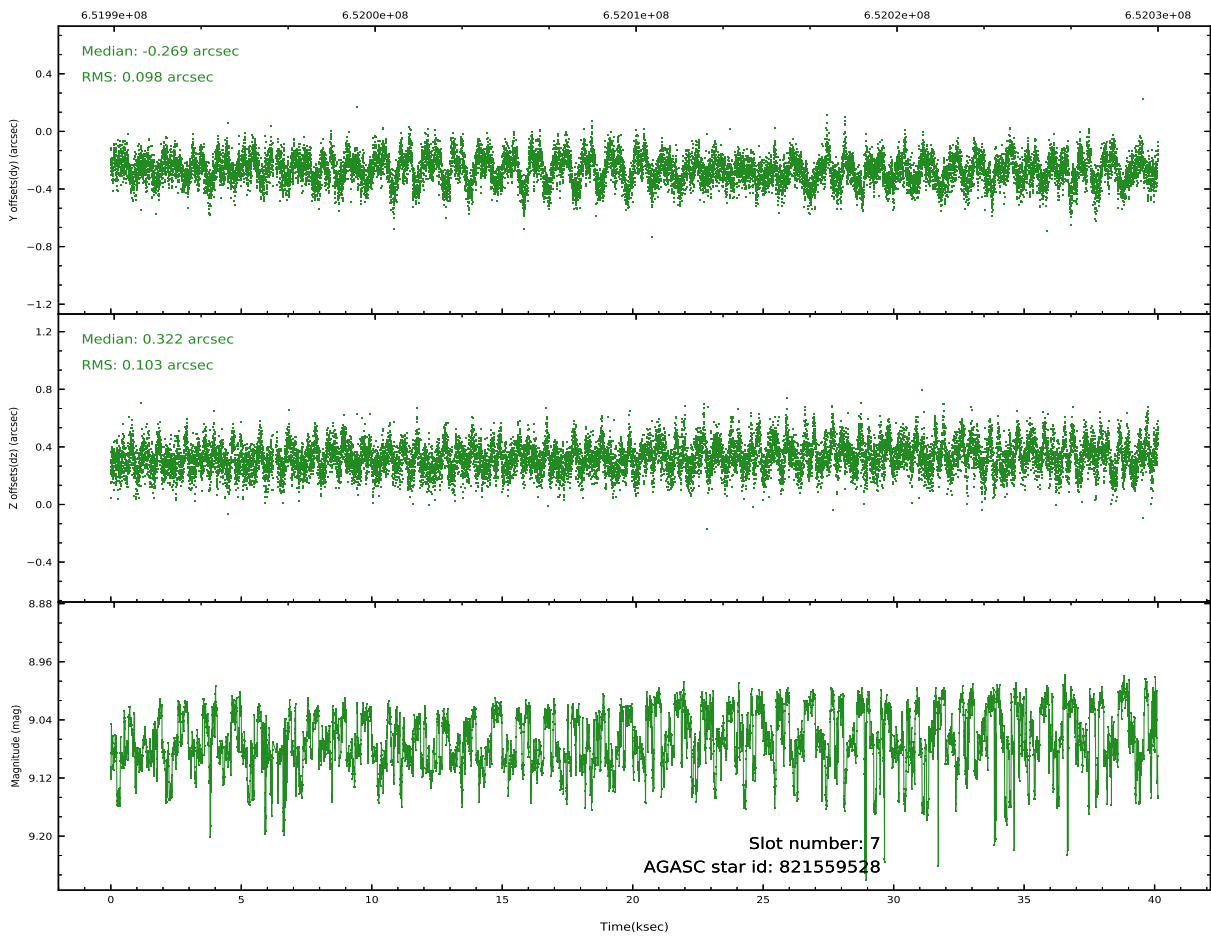
Time (s)



## 2.4.5 Slot 7

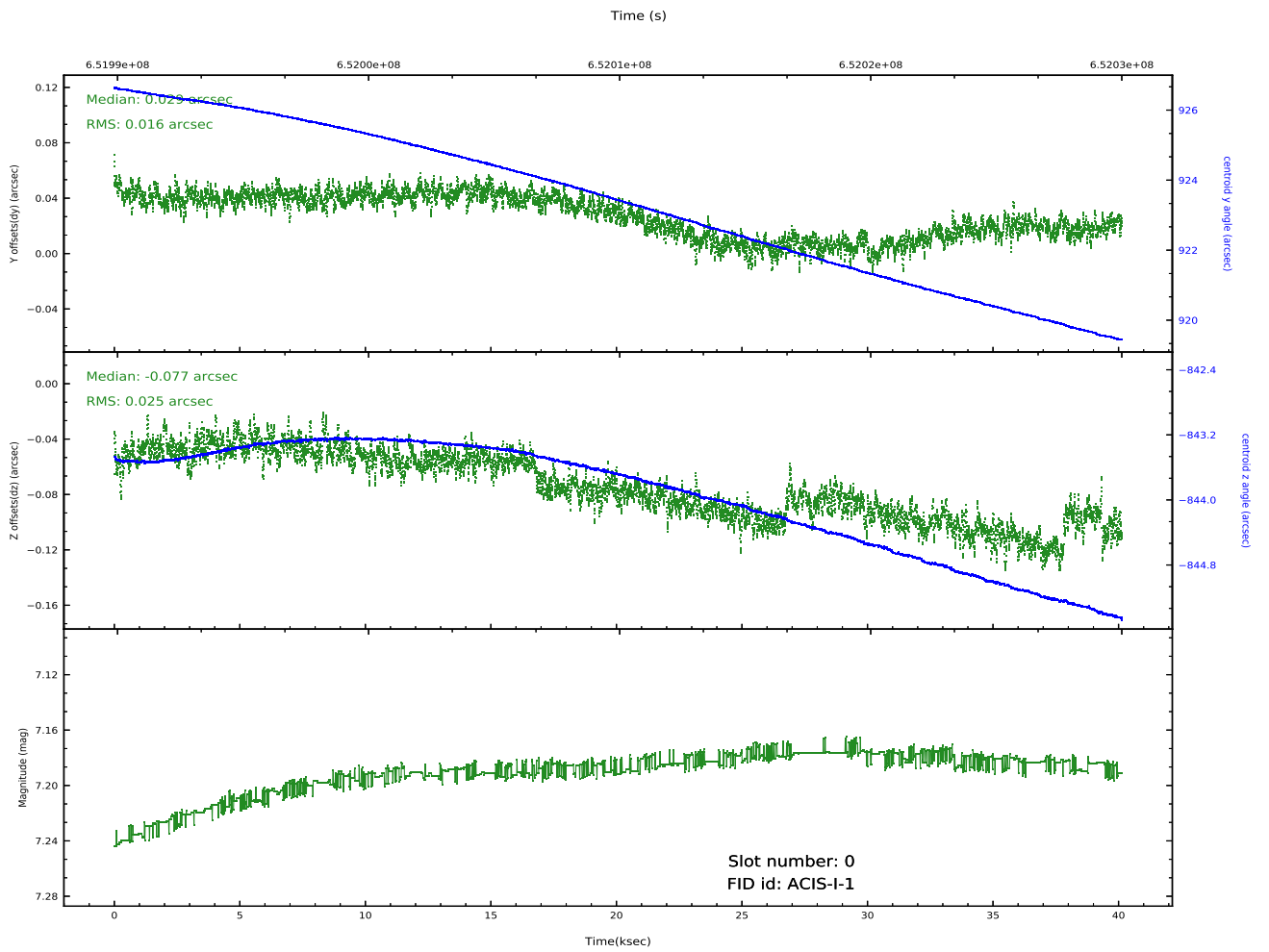
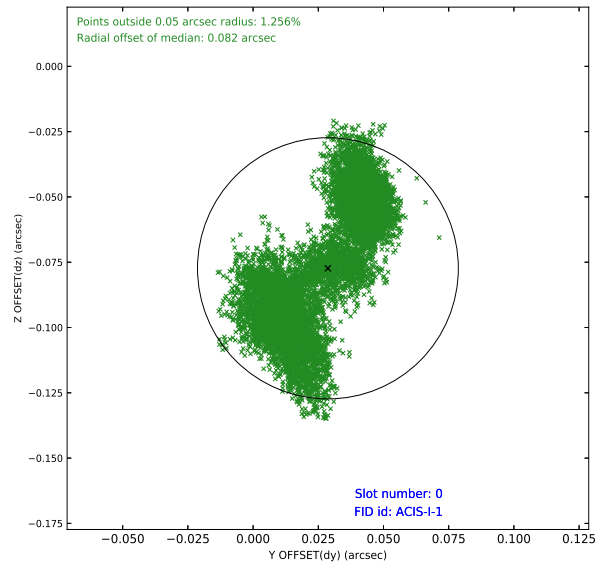
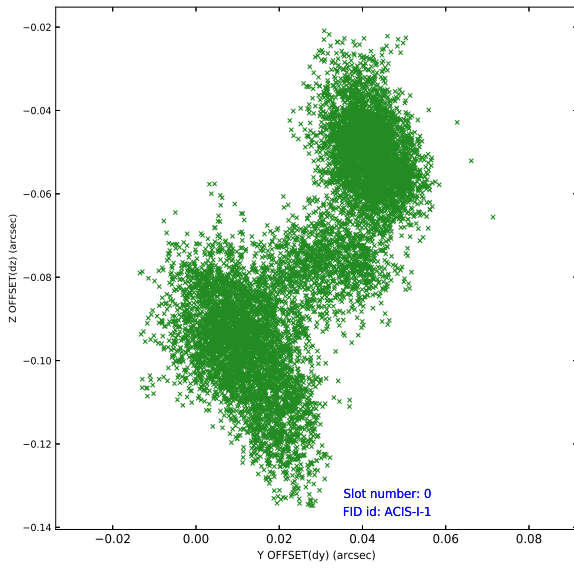


Time (s)

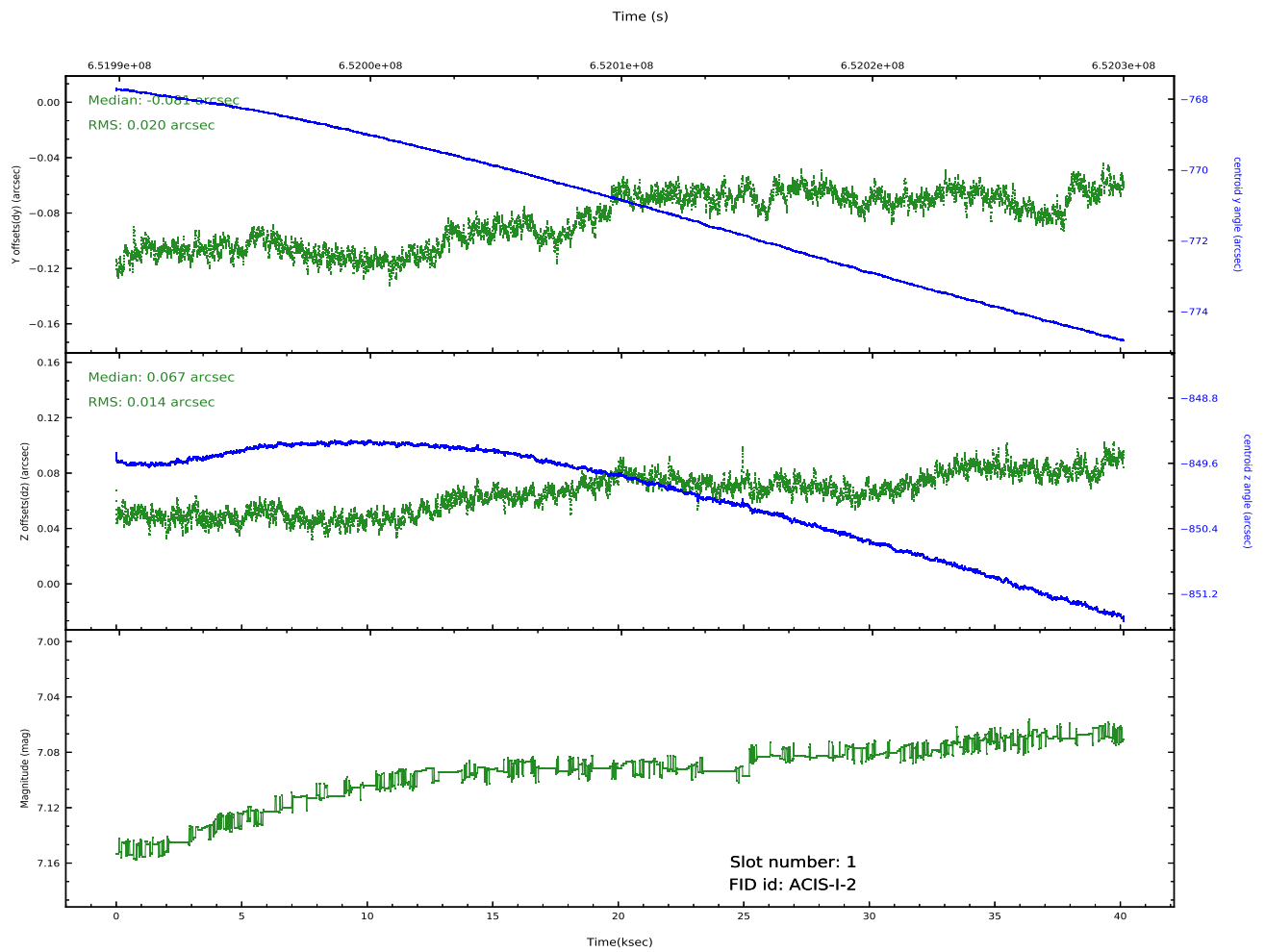
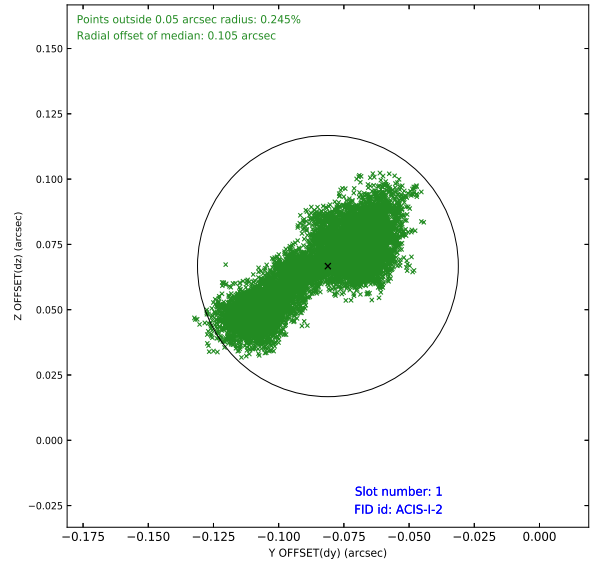
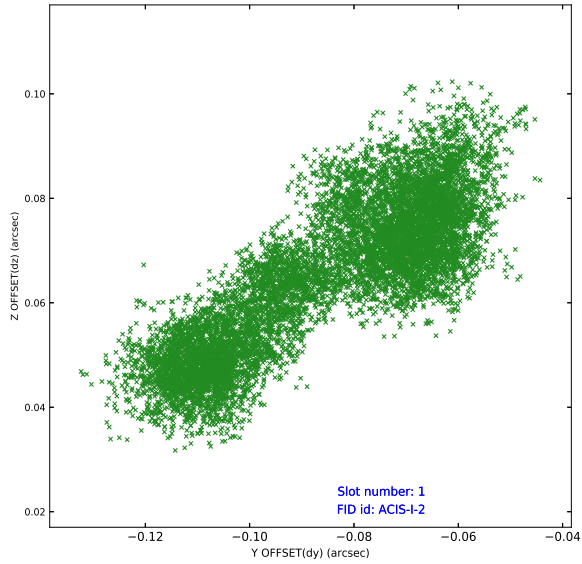


## 2.5 FID Slots

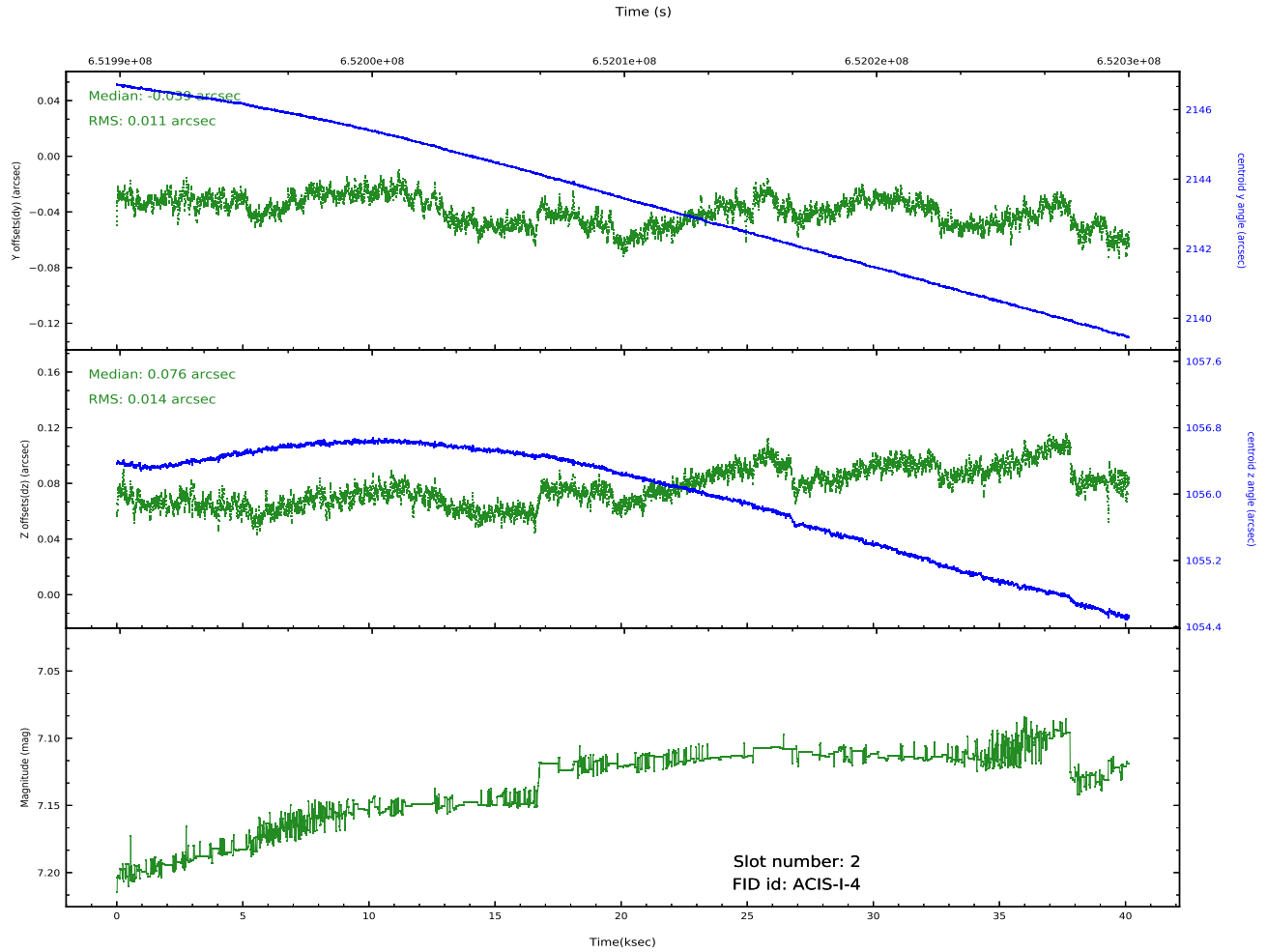
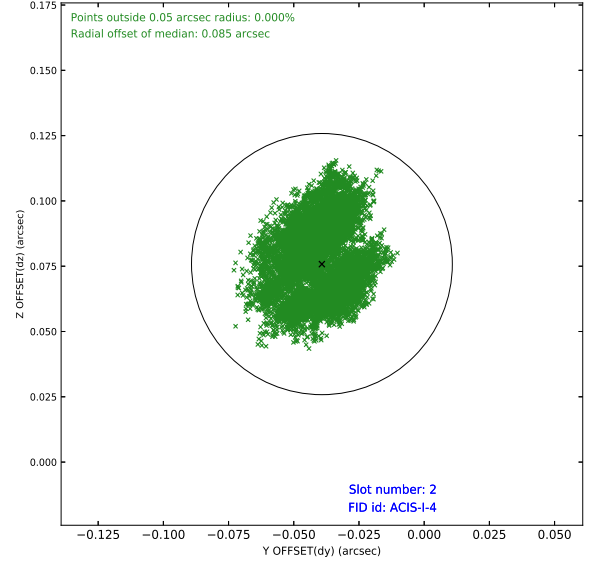
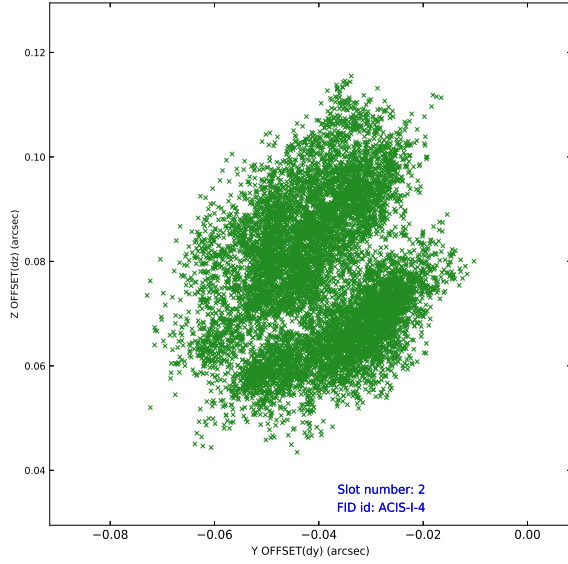
### 2.5.1 Slot 0



## 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	40.05510030818

## A.2 Comments