

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 4600 - L2 Version 4  
Chandra X-Ray Center

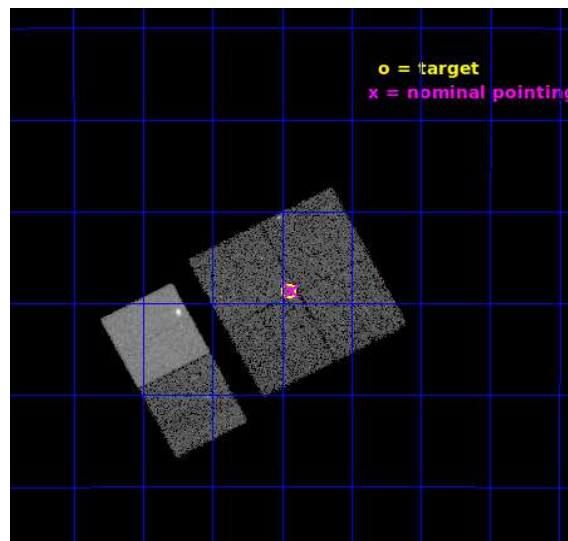
L2 Processing Date : Sep 27 2020

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>A</b>	<b>Summary</b>	<b>17</b>
A.1	Status . . . . .	17
A.2	Comments . . . . .	17

# 1 Front

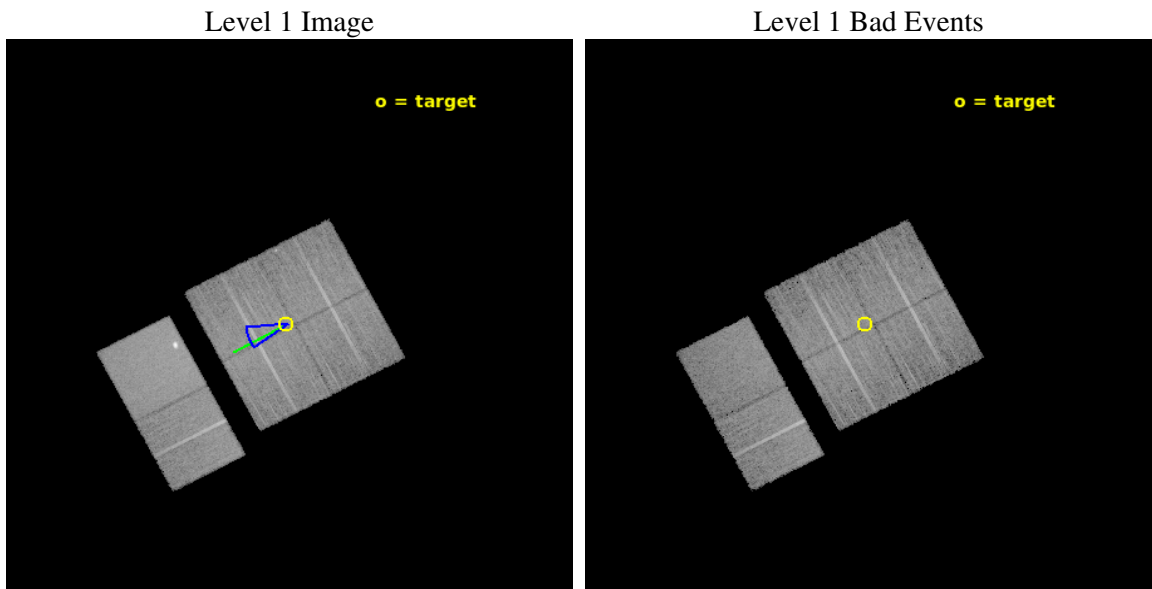
seq_num	500425	Sequence number
obs_id	4600	Observation id
title	Center-filled Supernova Remnant G16.85-1.05 and its surroundings	P
observer	Gordon Garmire	Principal investigator
object	LS 5039	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	276.3625	Observer's specified target RA [deg]
dec_targ	-14.810556	Observer's specified target Dec [deg]
ra_nom	276.35705465249	Nominal RA [deg]
dec_nom	-14.810467899235	Nominal Dec [deg]
roll_nom	242.20649606808	Nominal Roll [deg]
revision	4	Processing version of data
ontime	11177.59995836	Sum of GTIs [s]
livetime	11036.062457345	Livetime [s]
ontime0	11177.59995836	Sum of GTIs [s]
ontime1	11177.59995836	Sum of GTIs [s]
ontime2	11177.59995836	Sum of GTIs [s]
ontime3	11177.59995836	Sum of GTIs [s]
ontime6	11177.59995836	Sum of GTIs [s]
ontime7	11177.59995836	Sum of GTIs [s]
l2events	99983	Number of level 2 events



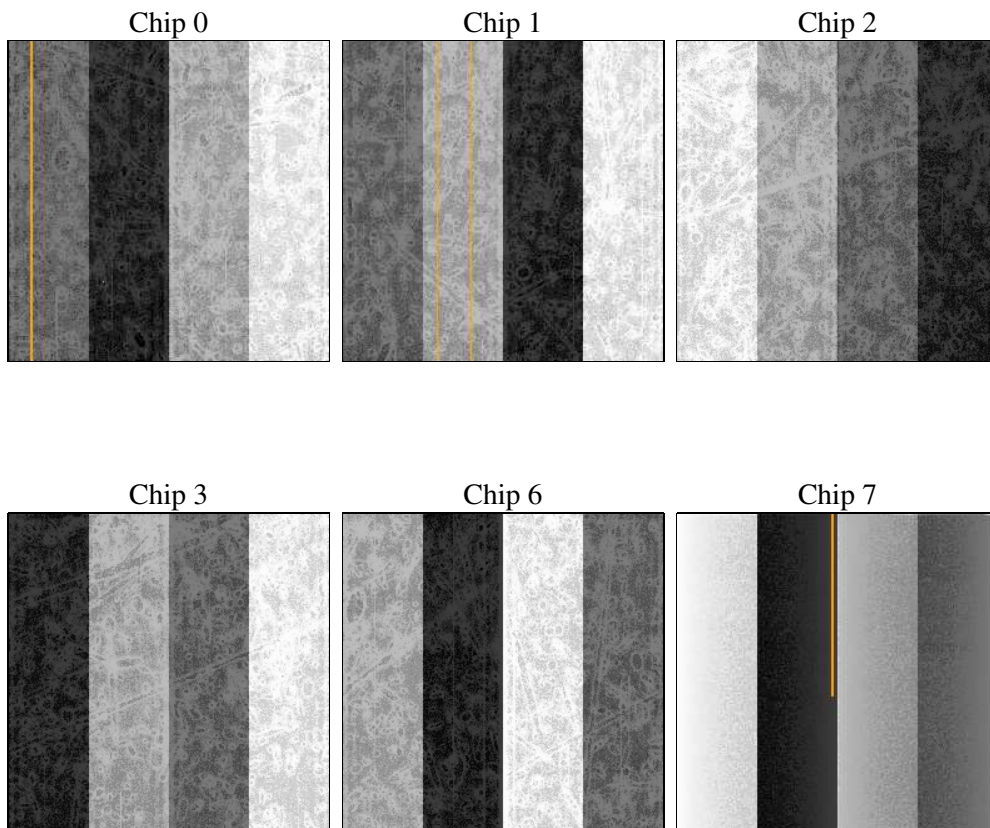
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	11000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	11177.59995836	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime0	11177.59995836	Sum of GTIs [s]
date	2020-09-27T03:39:59	Date and time of file creation	ontime1	11177.59995836	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	11177.59995836	Sum of GTIs [s]
			ontime3	11177.59995836	Sum of GTIs [s]
			ontime6	11177.59995836	Sum of GTIs [s]
			ontime7	11177.59995836	Sum of GTIs [s]
			l1events	608785	Number of level 1 events

### 2.1.4 Events

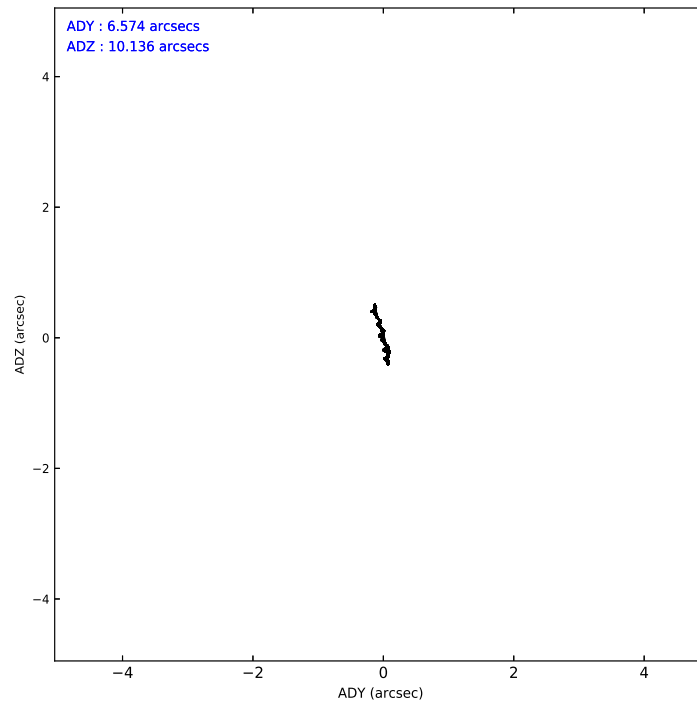
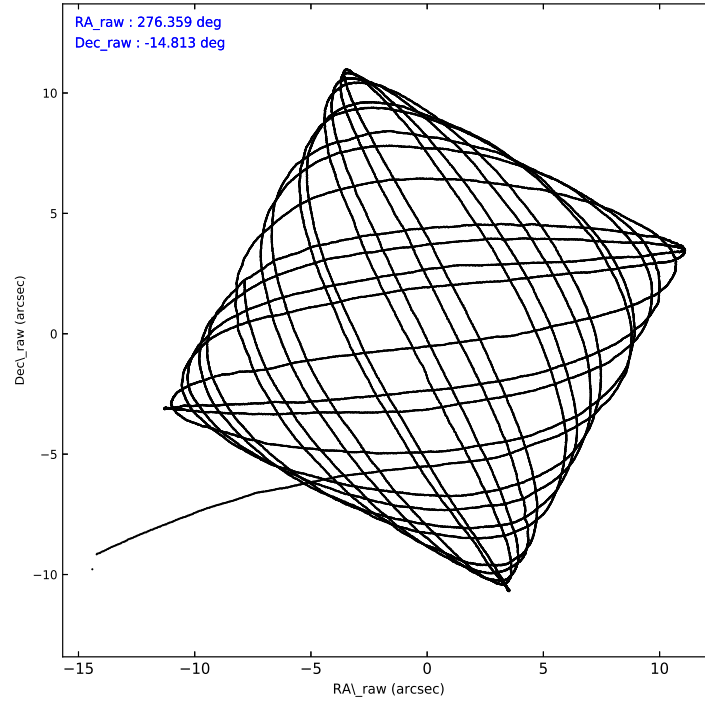
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	87730	91821	98864	96458	99728	134184	grade 0 events	5219	5395	5324	5651	5100	6450
rejected events	77084	80313	88572	85691	88724	79727		5%	5%	5%	5%	5%	4%
rejected %	87%	87%	89%	88%	88%	59%	grade 1 events	55	42	54	74	74	126
								0%	0%	0%	0%	0%	0%
							grade 2 events	2430	2662	2277	2189	2589	12373
								2%	2%	2%	2%	2%	9%
							grade 3 events	1201	1248	1022	1132	1137	5432
								1%	1%	1%	1%	1%	4%
							grade 4 events	1080	1223	1046	1042	1102	5522
								1%	1%	1%	1%	1%	4%
							grade 5 events	3755	3961	3581	4149	4542	12370
								4%	4%	3%	4%	4%	9%
							grade 6 events	1985	2276	1774	1922	2282	30152
								2%	2%	1%	1%	2%	22%
							grade 7 events	72005	75014	83786	80299	82902	61759
								82%	81%	84%	83%	83%	46%

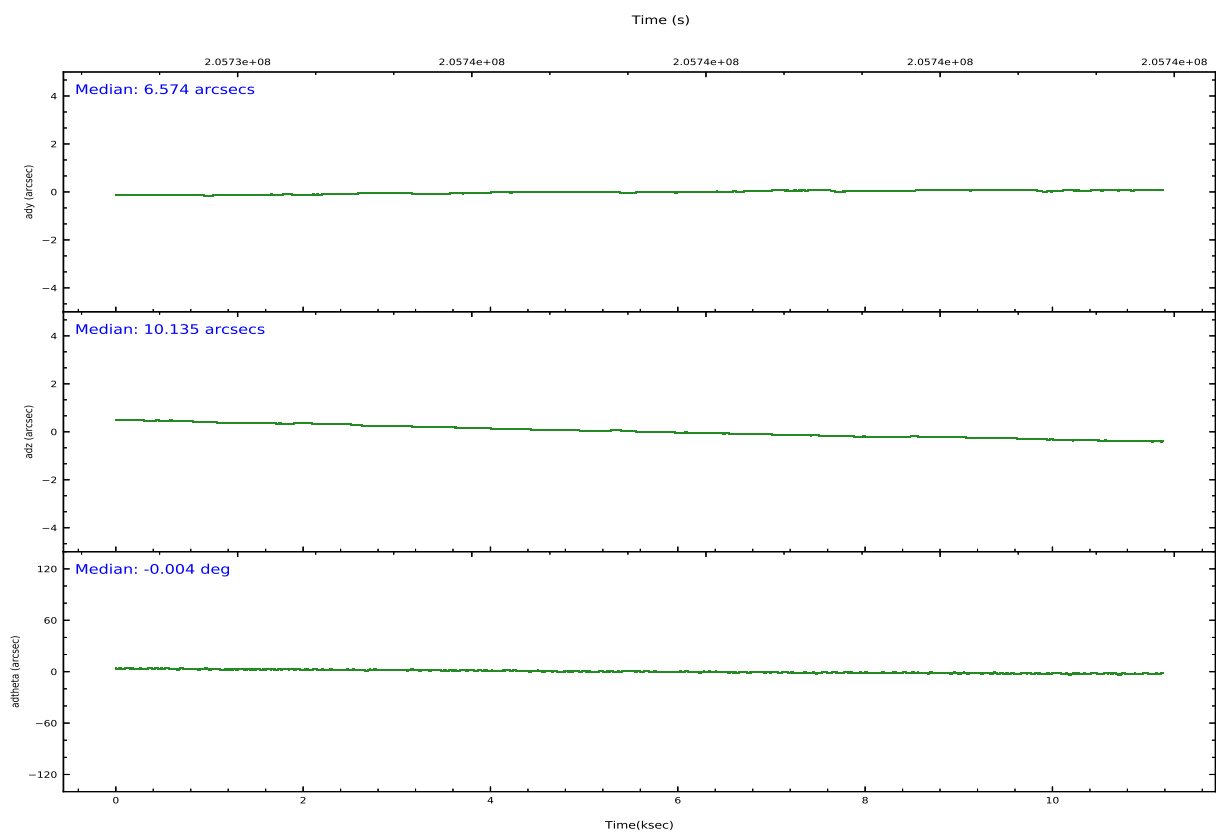
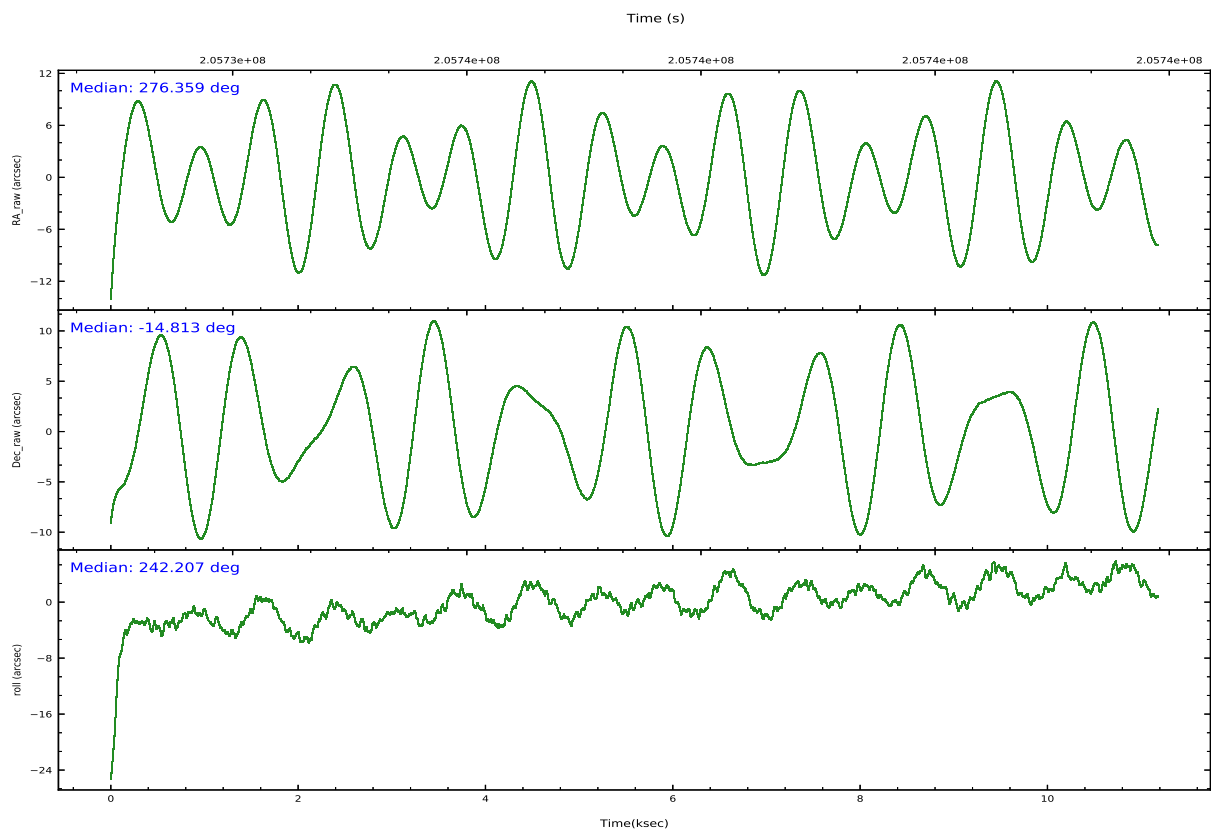


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-012367	ACIS-012367	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	276.357581	276.35705465249	Subarray requested	NONE	NONE
[deg] Pointing Dec	-14.786127	-14.810467899235	Alternating exposures requested	N	N
[deg] Pointing Roll	241.998752	242.20649606808	[s] Primary exposure time	0.000000	3.2
[deg] Roll angle	250.000000	250.000000			
[deg] Roll tolerance	15.000000	15.000000			
Roll constraint allows 180D rotation	N	N			
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-233.592463	-233.5874344608287			
[mm] SIM translation stage offset	0	-0.005018542100998502			
[s] Observation start time (MET)	205731381.184000	205729679.74509			
Observation start date	2004-07-09T03:35:17	2004-07-09T03:07:59			
[s] Observation end time (MET)	205742381.184000	205743749.92071			
Observation end date	2004-07-09T06:38:37	2004-07-09T07:02:29			
Read mode	TIMED	TIMED			

## 2.3 Aspect



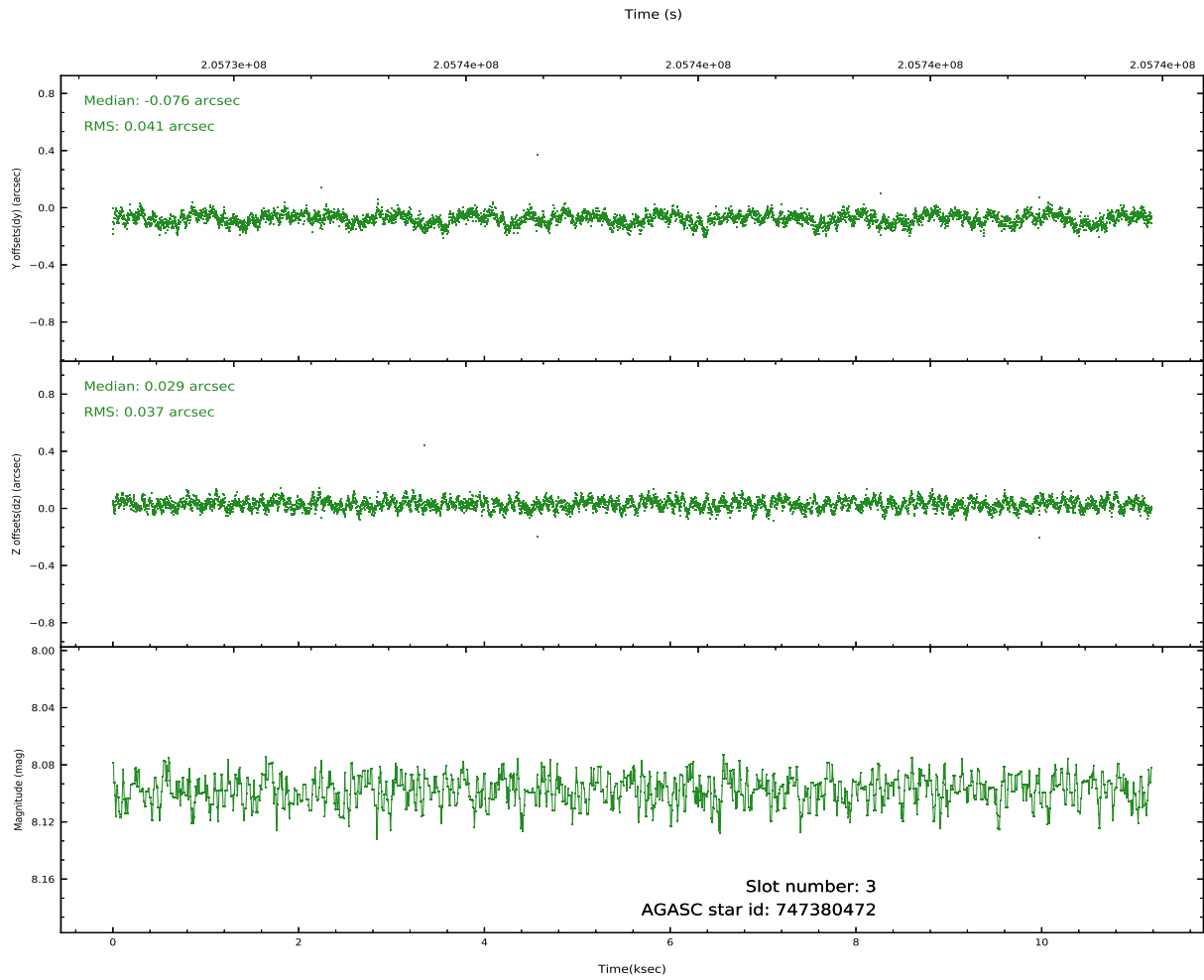
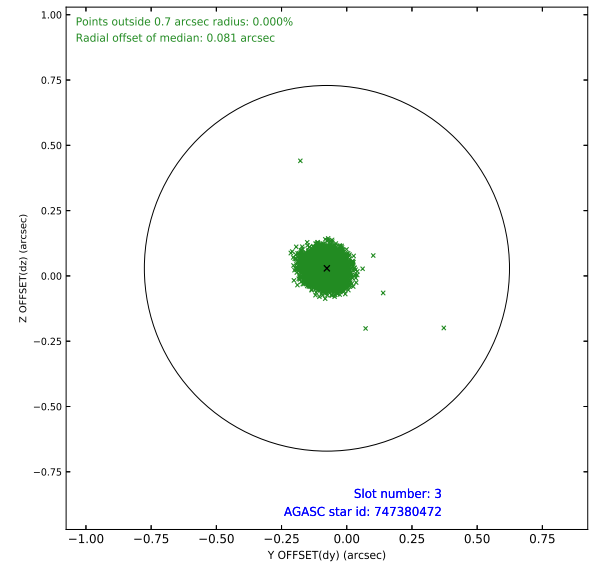
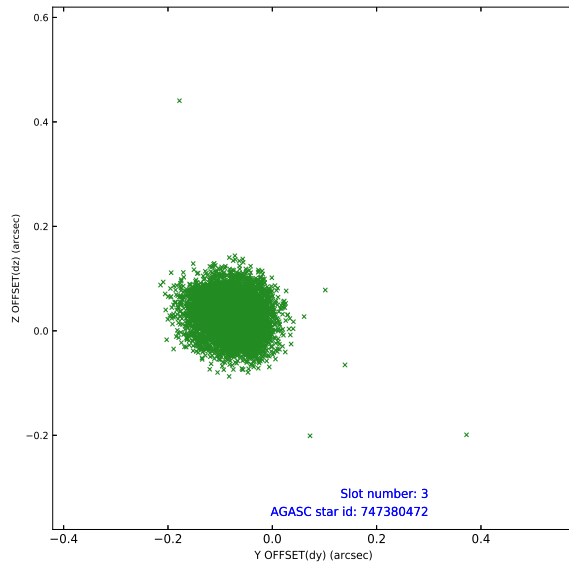


Slot Statistics

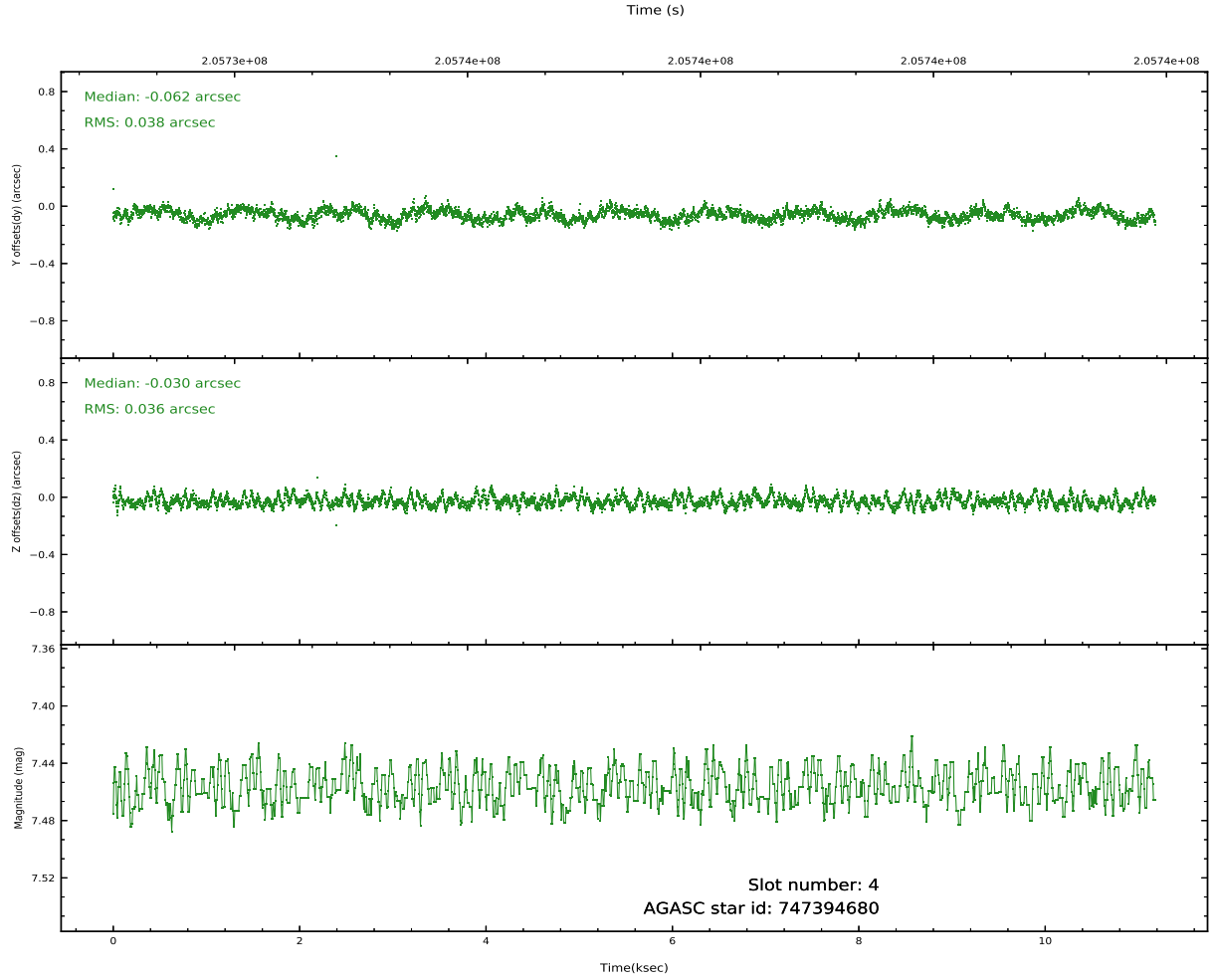
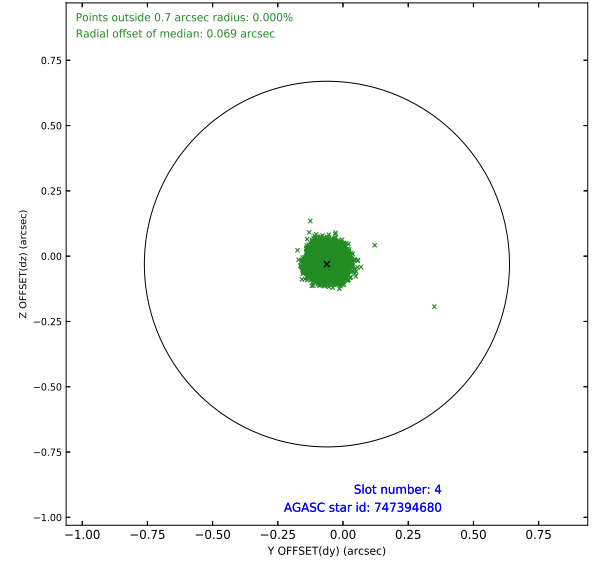
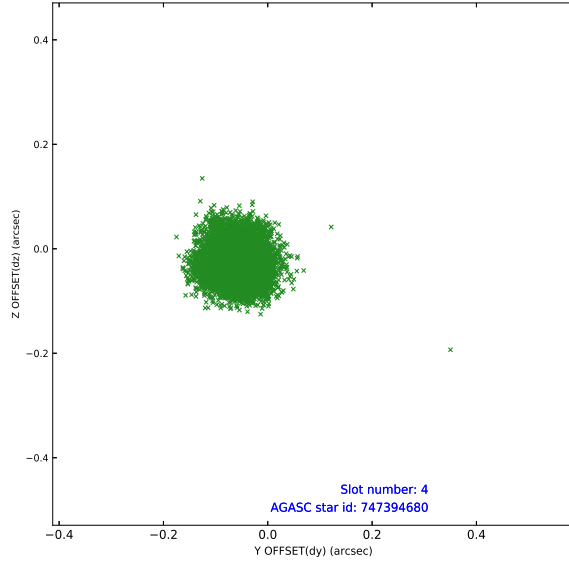
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.24	2728	1.000	0.040	-0.035	0.011	0.019	0.000000	0.000000	933.21	-833
1	FID		ACIS-I-5	7.23	2728	1.000	-0.078	0.076	0.017	0.028	0.000000	0.000000	-1814.84	1063
2	FID		ACIS-I-6	7.24	2727	1.000	-0.052	0.029	0.019	0.030	0.000000	0.000000	398.07	1708
3	GUIDE	used	747380472	8.10	5454	1.000	-0.076	0.029	0.058	0.091	276.808218	-14.697222	-1018.00	1235
4	GUIDE	used	747394680	7.46	5453	1.000	-0.062	-0.030	0.057	0.087	276.275759	-14.649373	-300.90	-482
5	GUIDE	used	821297448	7.46	5456	1.000	-0.033	-0.135	0.052	0.085	276.406695	-15.152775	1085.30	770
6	GUIDE	used	821318160	7.74	5452	1.000	0.118	0.137	0.052	0.090	276.598709	-15.630197	2291.20	2165
7	GUIDE	used	747380456	8.61	5454	1.000	0.049	0.002	0.055	0.088	276.136187	-14.775528	329.14	-697

## 2.4 Star Slots

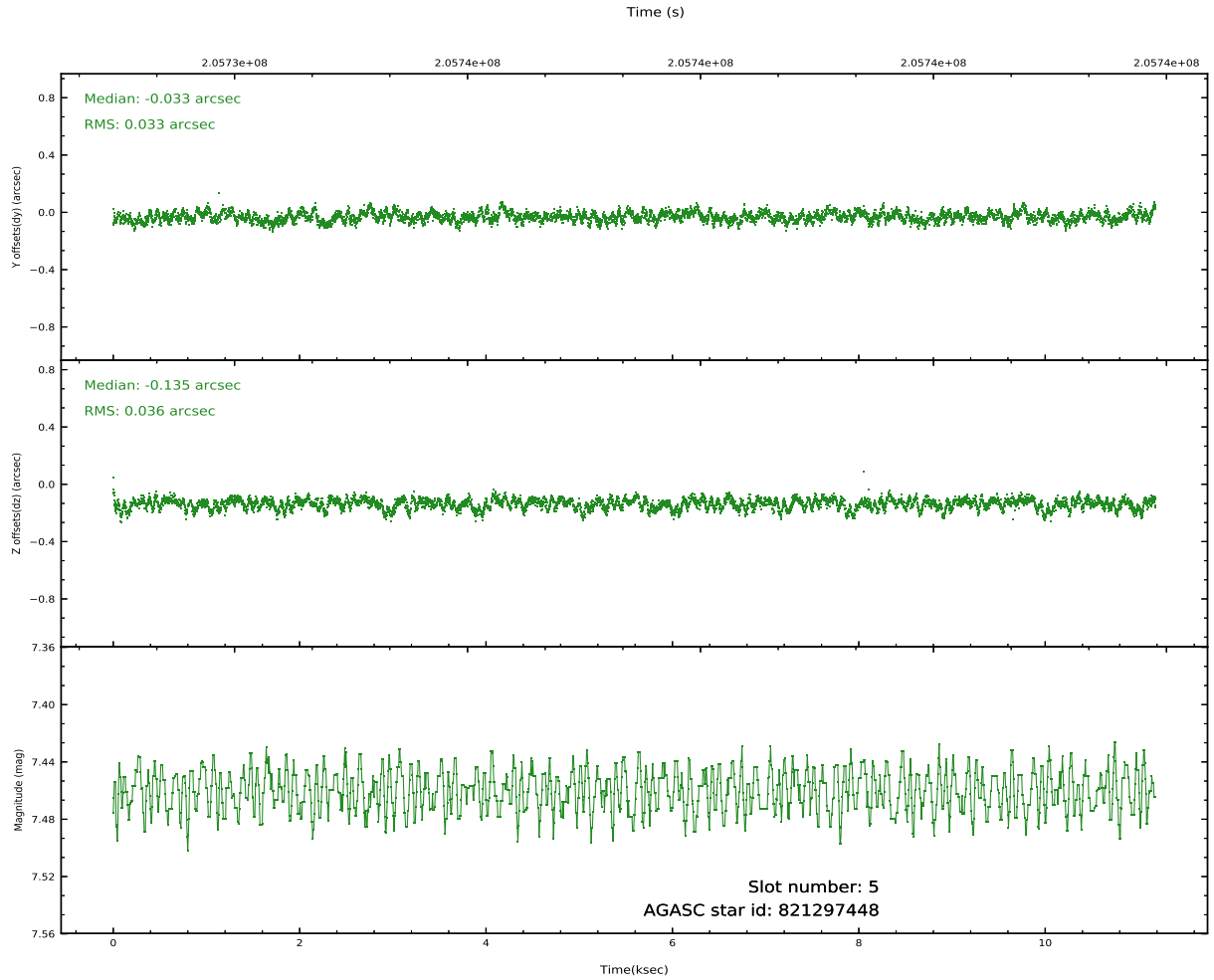
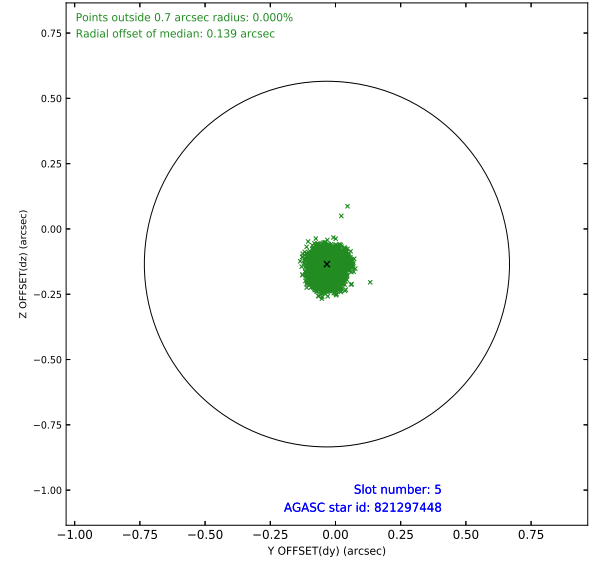
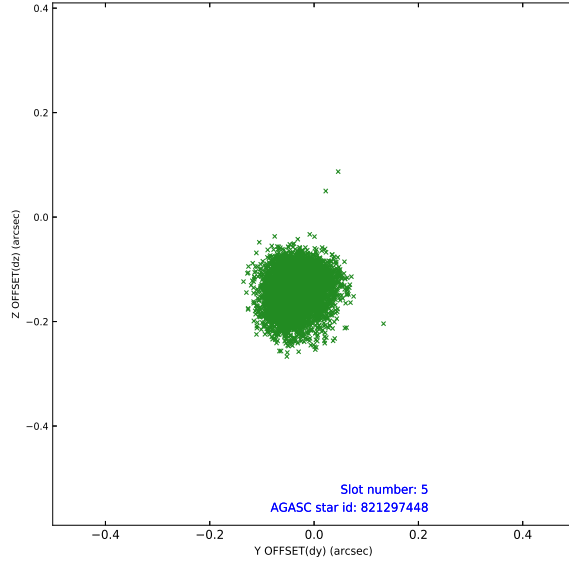
### 2.4.1 Slot 3



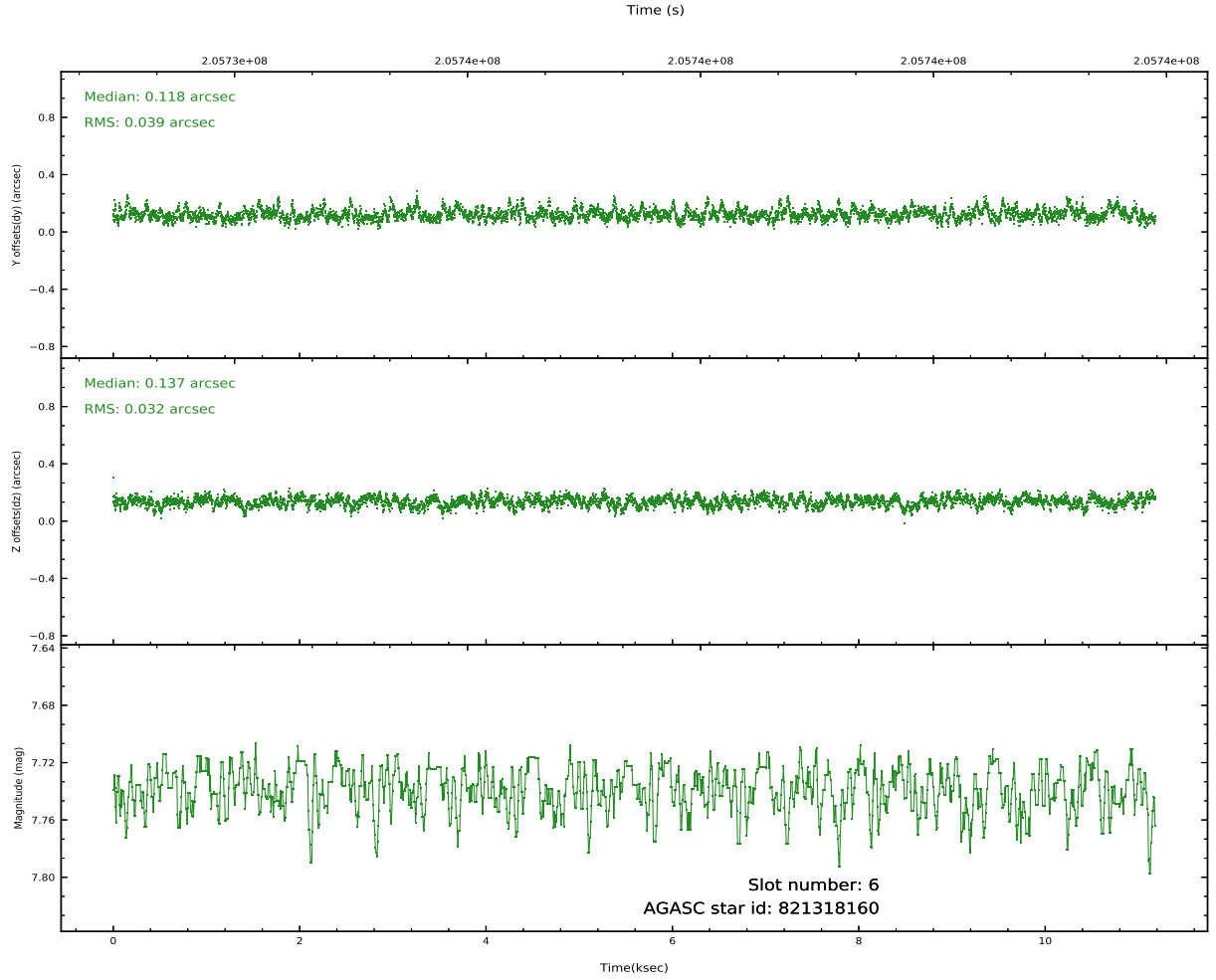
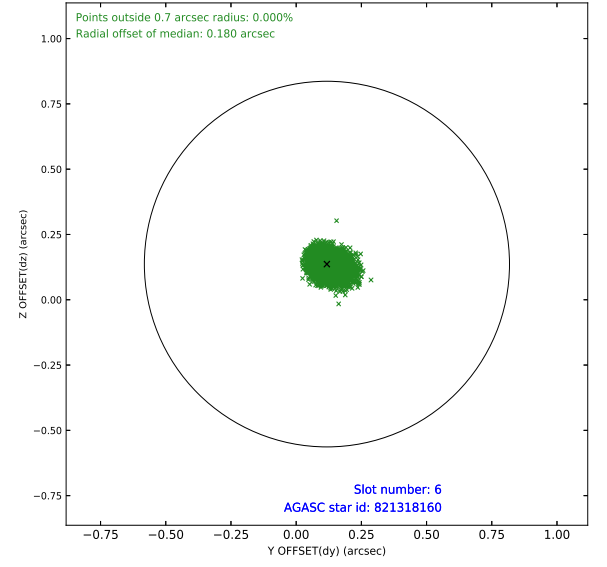
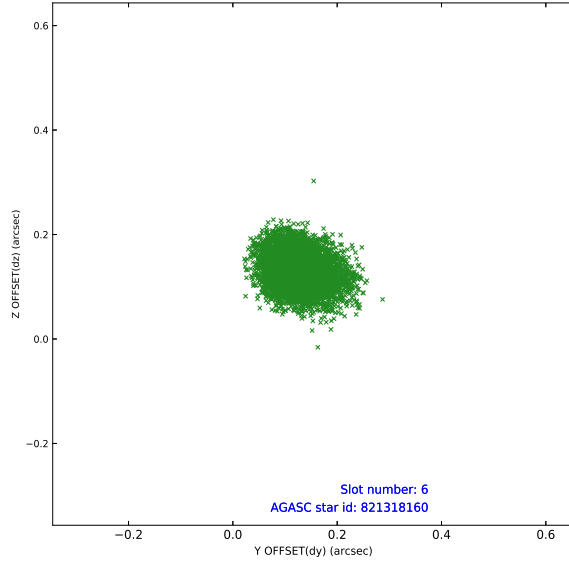
## 2.4.2 Slot 4



### 2.4.3 Slot 5

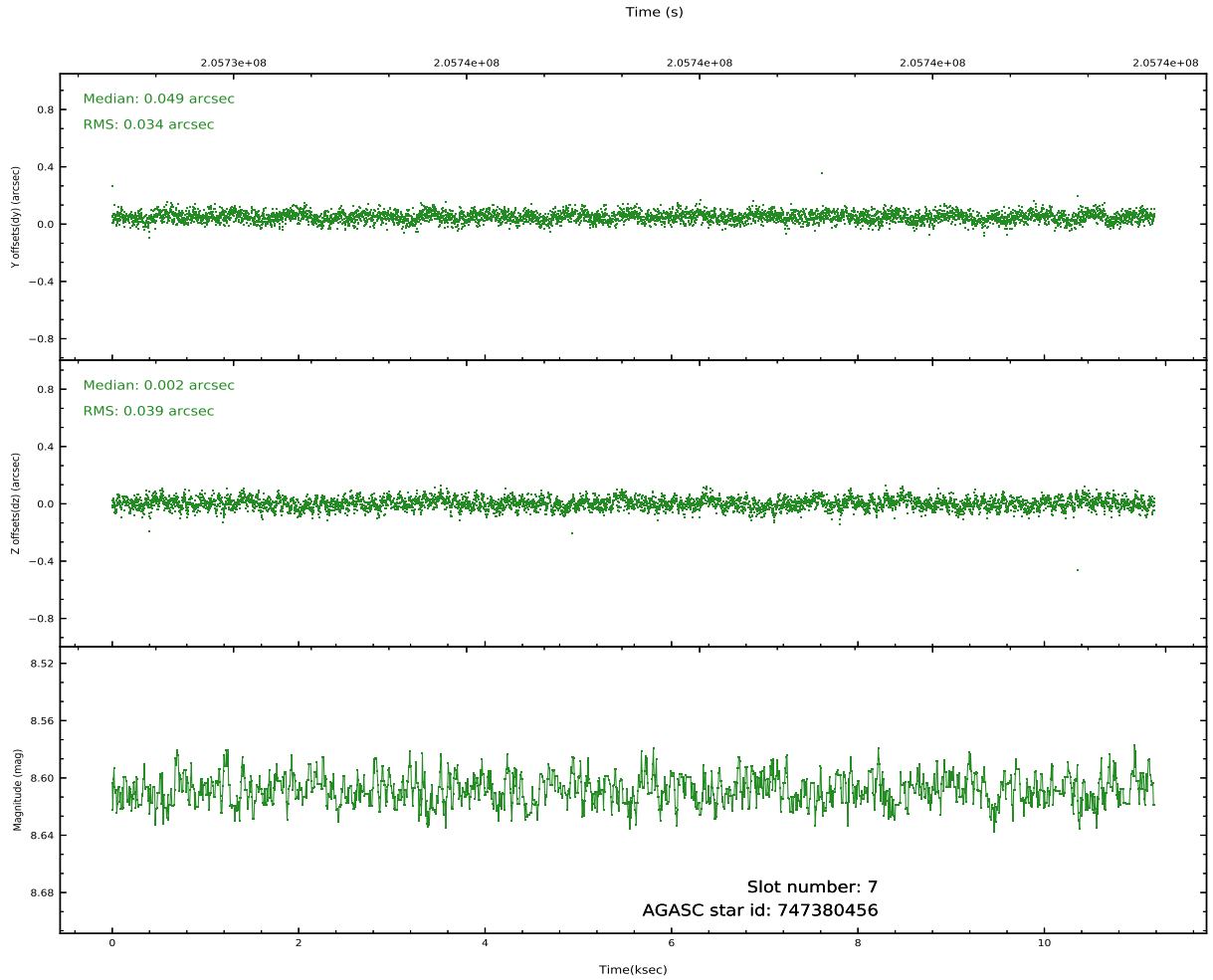
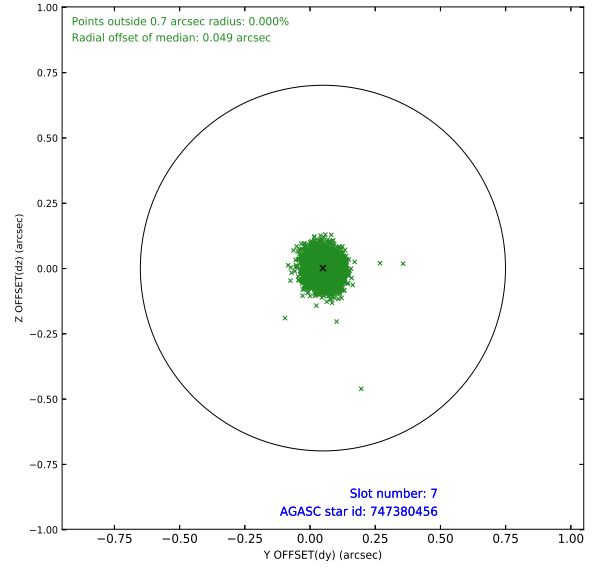
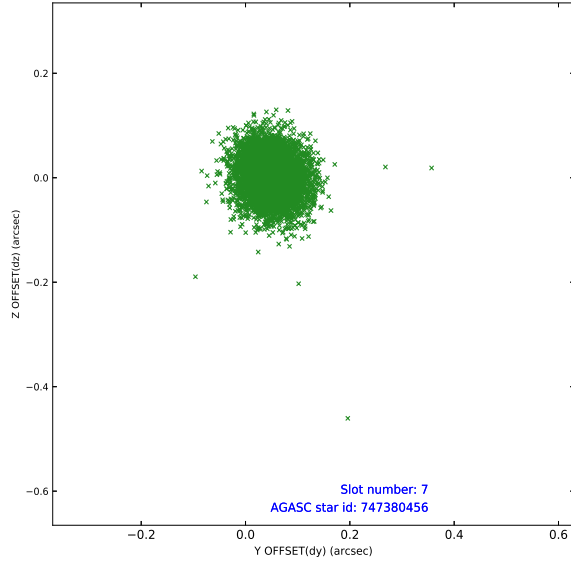


## 2.4.4 Slot 6



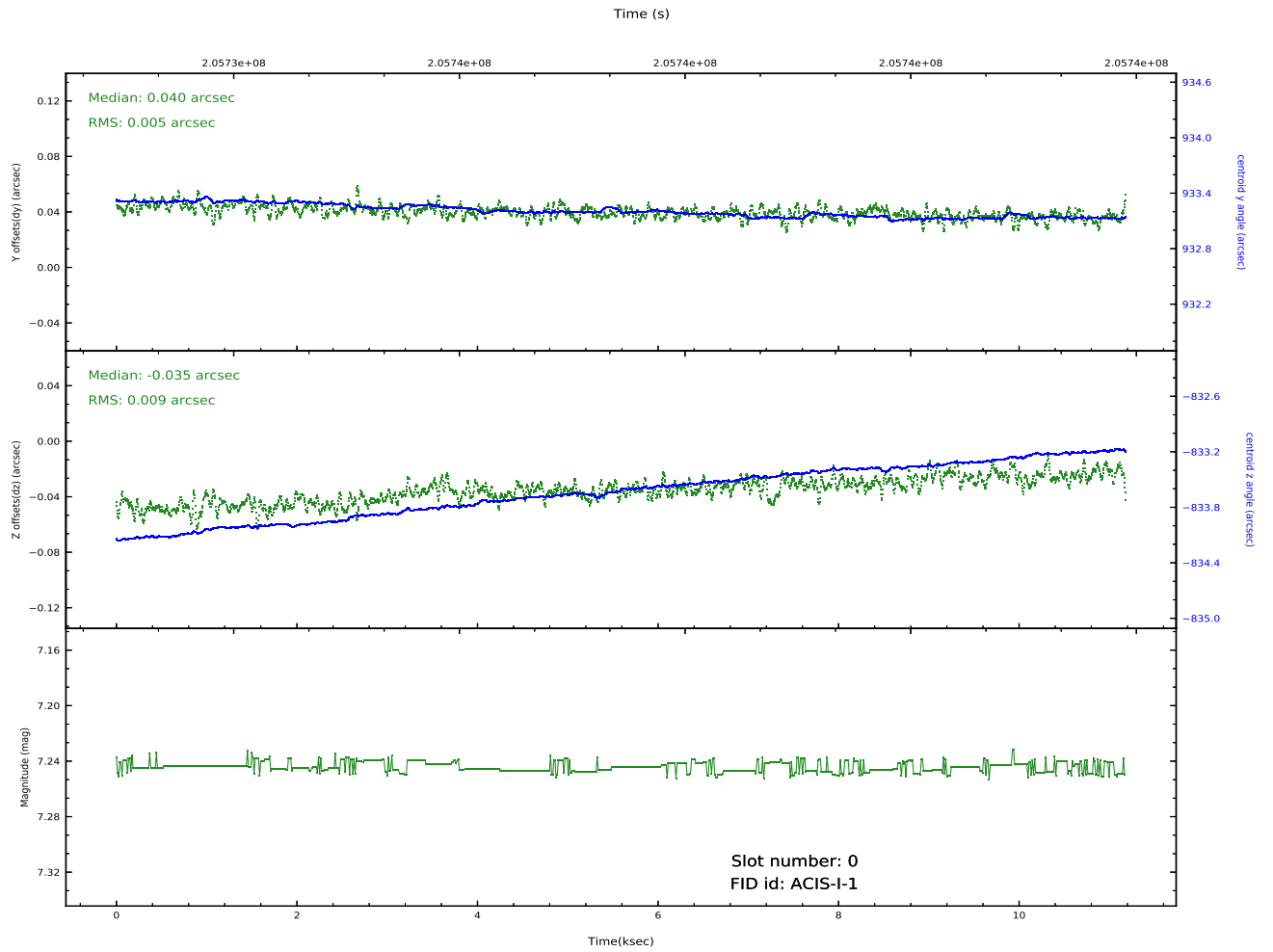
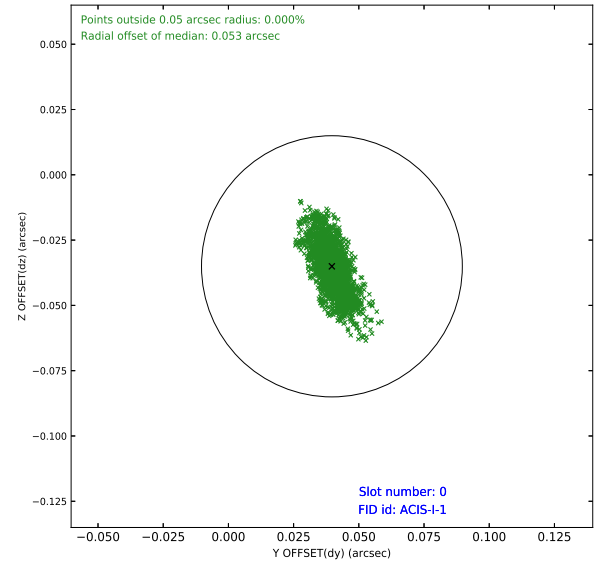
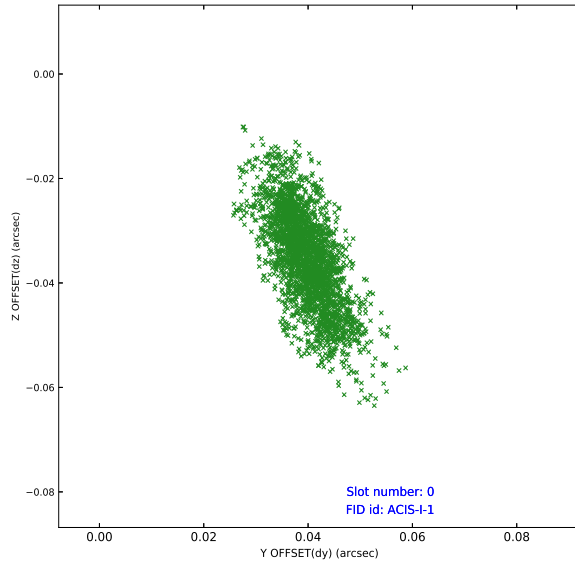


## 2.4.5 Slot 7

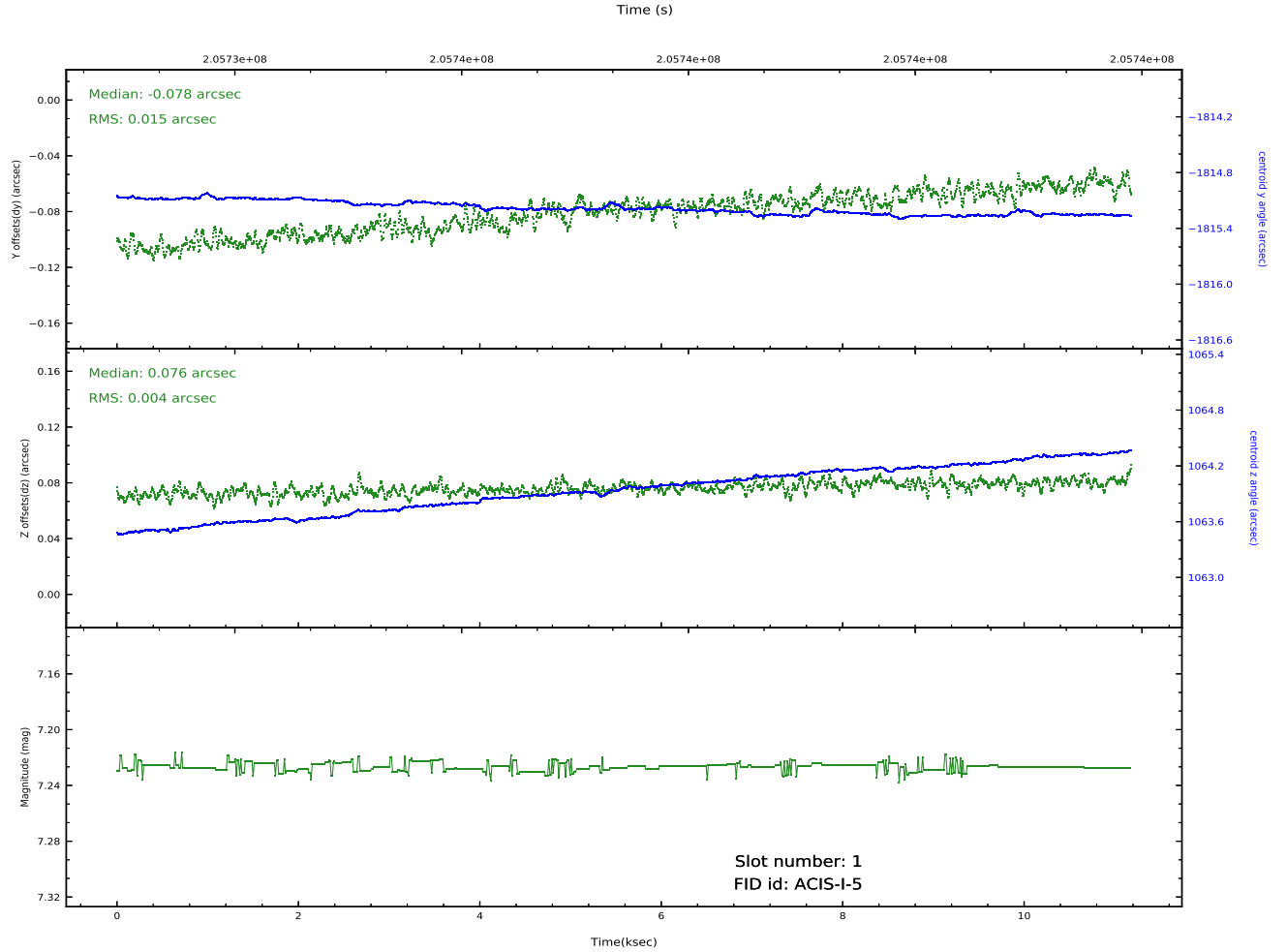
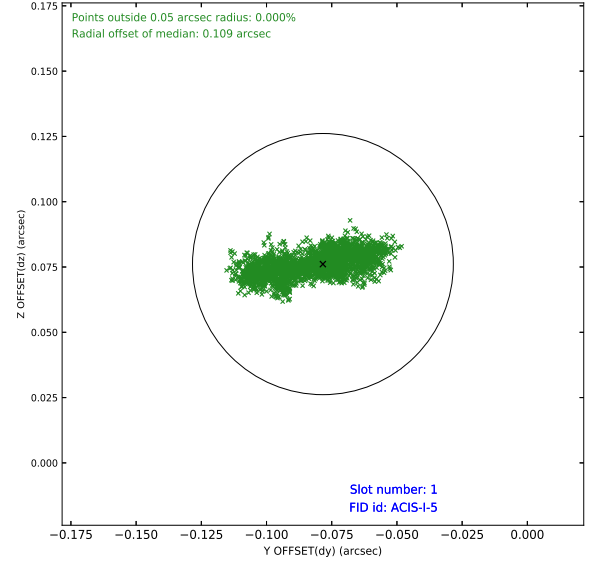
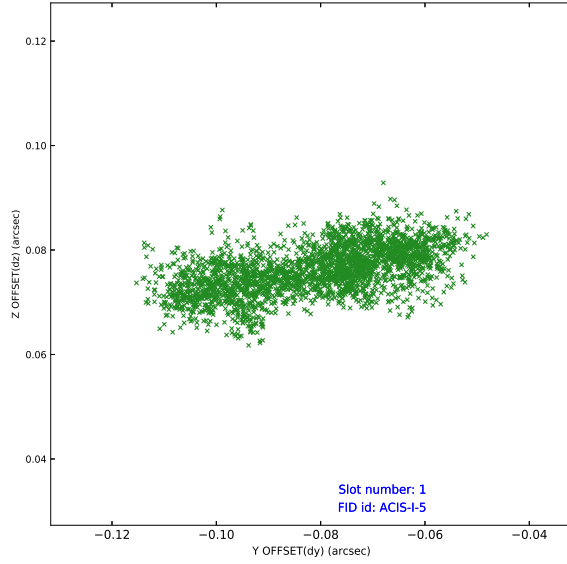


## 2.5 FID Slots

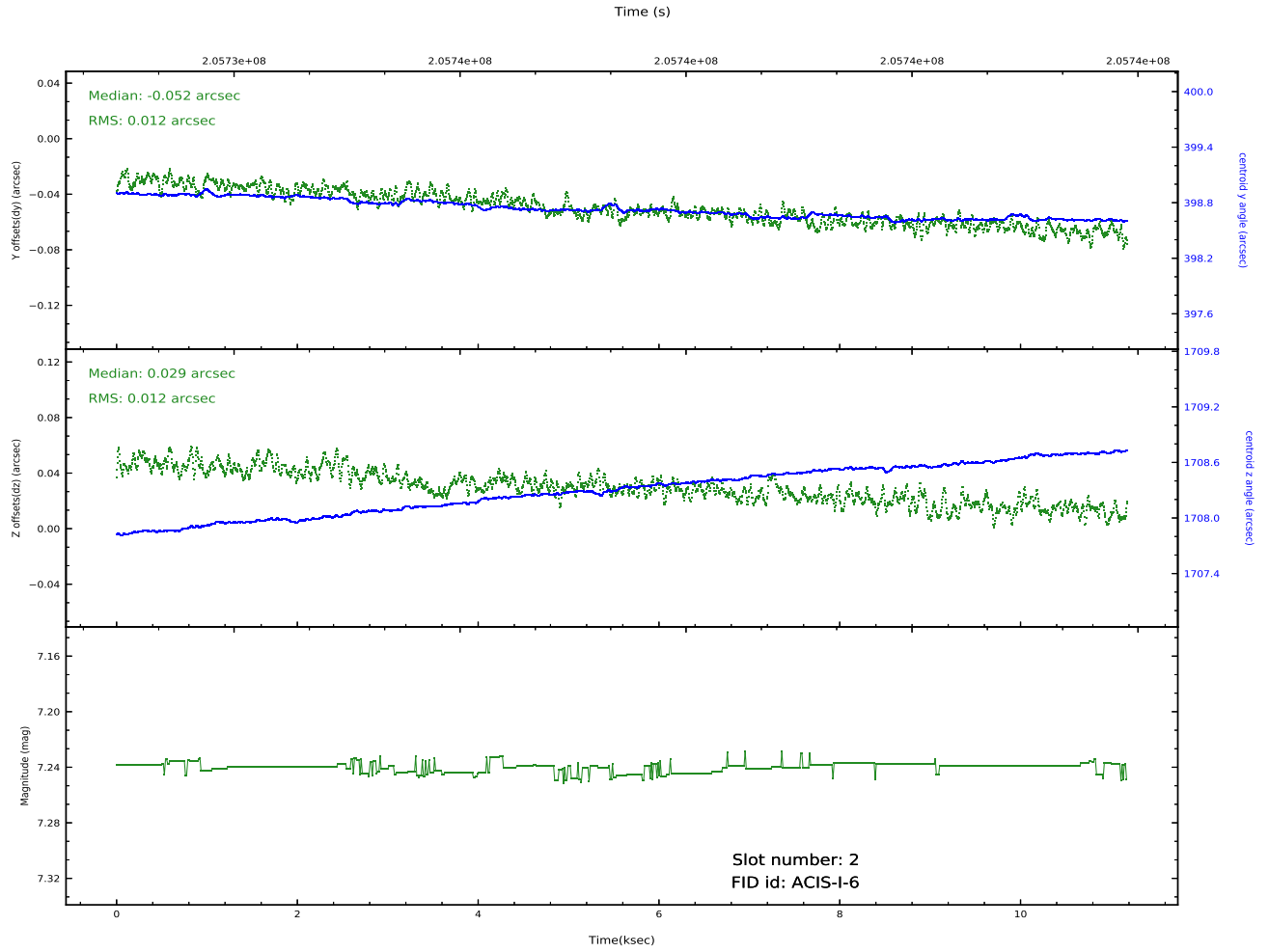
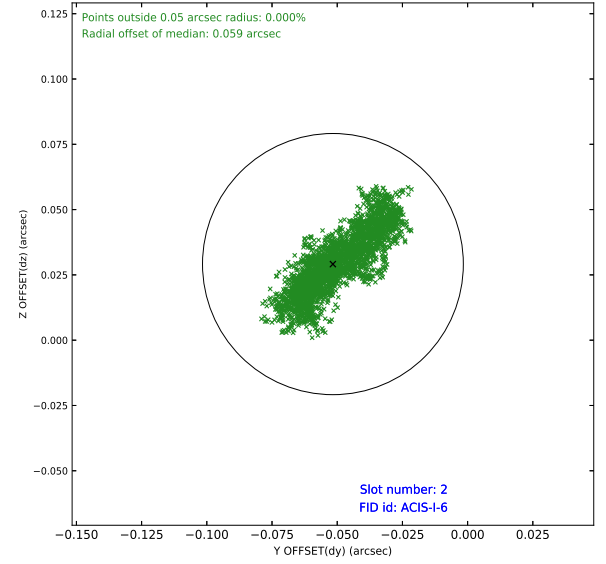
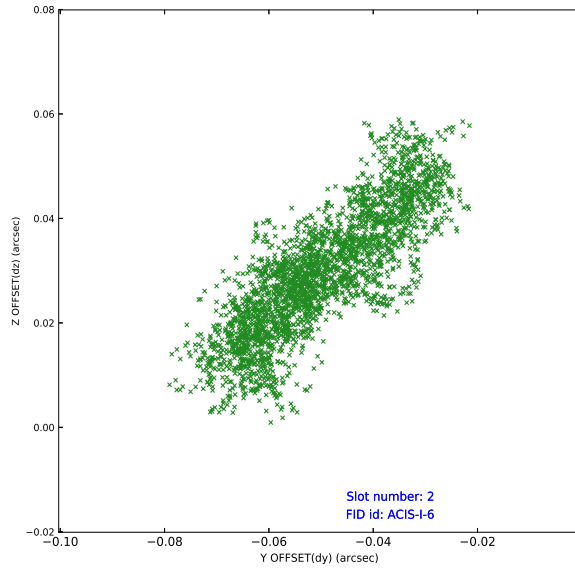
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Francesca Civano
V&V Date (YYYY-MM-DD)	2020.09.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	11.177

### A.2 Comments

Roll constraint met.