

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5816 - L2 Version 4  
Chandra X-Ray Center

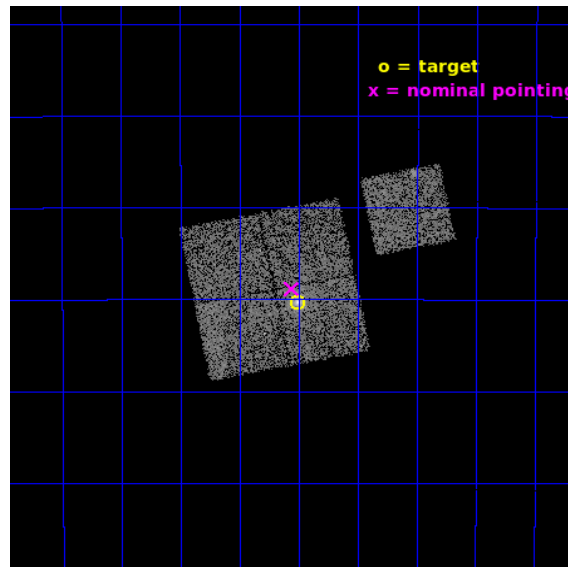
L2 Processing Date : Oct 8 2020

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# 1 Front

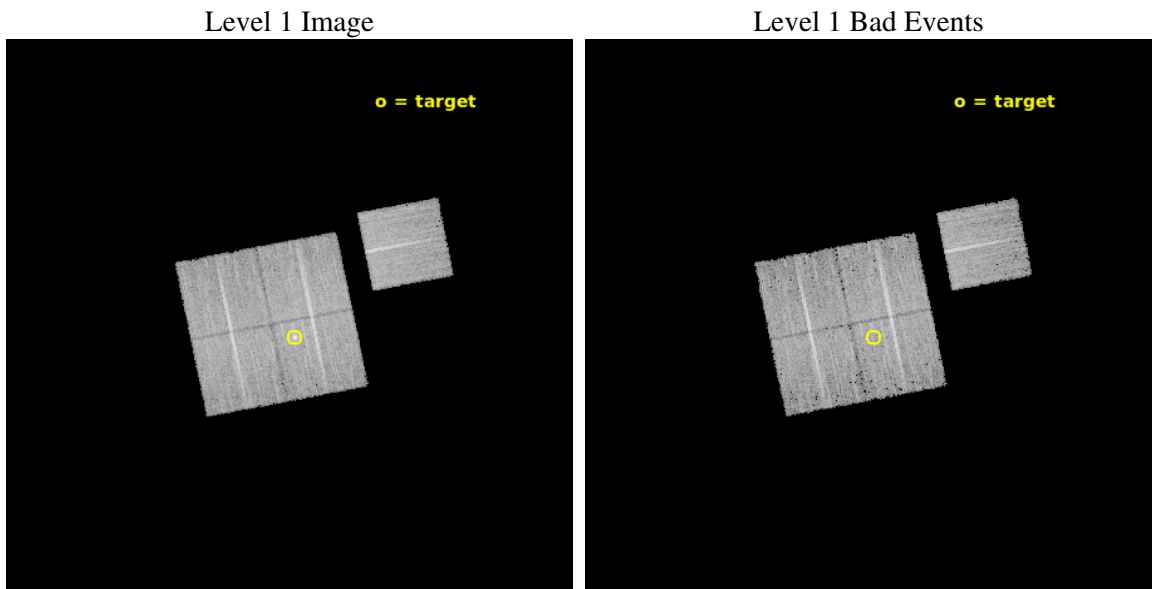
seq_num	800529	Sequence number
obs_id	5816	Observation id
title	MACS: The most massive galaxy clusters at $z>0.3$	Proposal title
observer	Harald Ebeling	Principal investigator
object	MACSJ2046.0-3430	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	311.502792	Observer's specified target RA [deg]
dec_targ	-34.505417	Observer's specified target Dec [deg]
ra_nom	311.51438799884	Nominal RA [deg]
dec_nom	-34.480775421404	Nominal Dec [deg]
roll_nom	78.750467364116	Nominal Roll [deg]
revision	4	Processing version of data
ontime	10171.099980414	Sum of GTIs [s]
livetime	10038.207071315	Livetime [s]
ontime0	10171.099980414	Sum of GTIs [s]
ontime1	10171.099980414	Sum of GTIs [s]
ontime2	10171.099980414	Sum of GTIs [s]
ontime3	10171.099980414	Sum of GTIs [s]
ontime6	10171.099980414	Sum of GTIs [s]
l2events	30535	Number of level 2 events



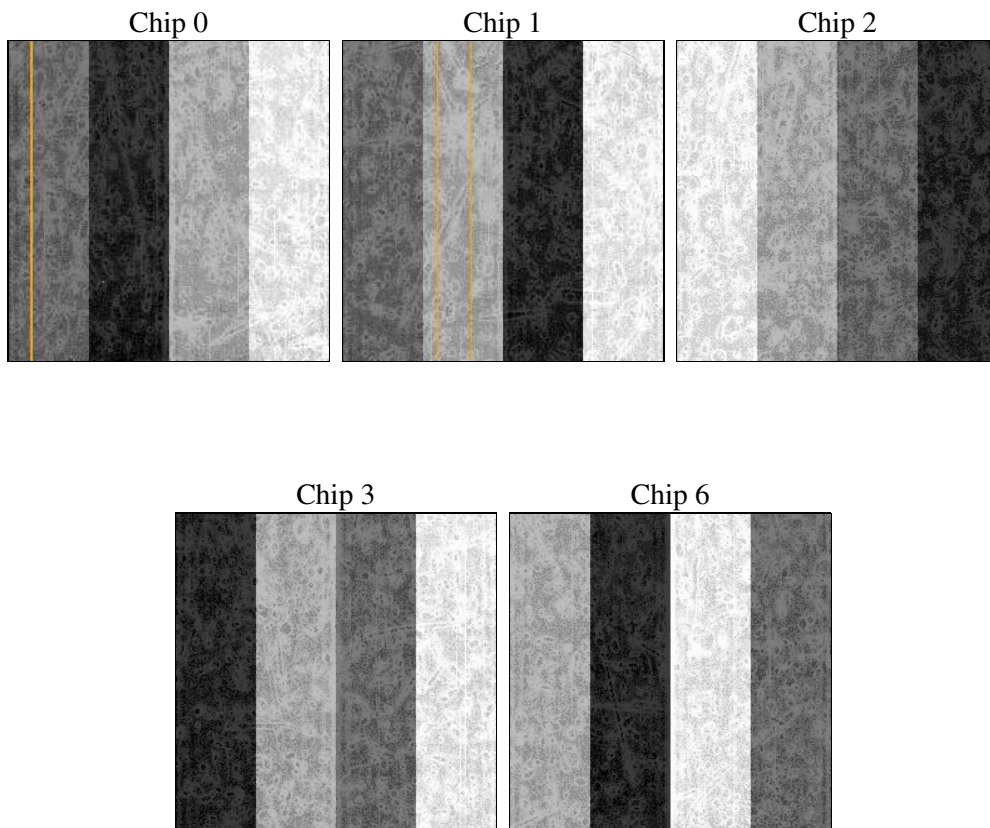
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	10171.099980414	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime0	10171.099980414	Sum of GTIs [s]
date	2020-10-09T02:05:38	Date and time of file creation	ontime1	10171.099980414	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	10171.099980414	Sum of GTIs [s]
			ontime3	10171.099980414	Sum of GTIs [s]
			ontime6	10171.099980414	Sum of GTIs [s]
			l1events	352060	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	65514	68229	73696	72201	72420
rejected events	58762	60636	67335	63541	65455
rejected %	89%	88%	91%	88%	90%

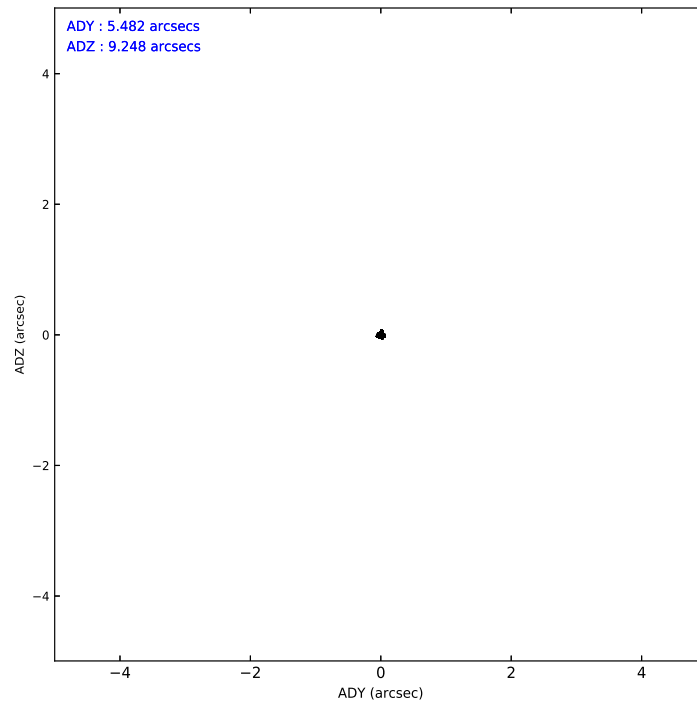
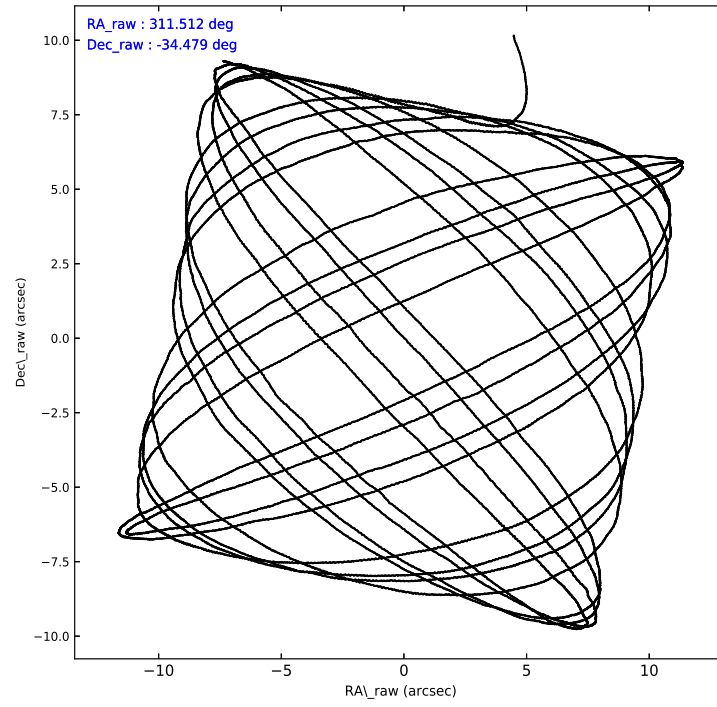
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2504	2879	2417	4315	2622
	3%	4%	3%	5%	3%
grade 1 events	33	28	32	48	29
	0%	0%	0%	0%	0%
grade 2 events	1687	1715	1568	1673	1514
	2%	2%	2%	2%	2%
grade 3 events	826	854	701	819	750
	1%	1%	0%	1%	1%
grade 4 events	706	873	714	761	827
	1%	1%	0%	1%	1%
grade 5 events	2556	2666	2325	2803	2732
	3%	3%	3%	3%	3%
grade 6 events	1364	1650	1264	1424	1557
	2%	2%	1%	1%	2%
grade 7 events	55838	57564	64675	60358	62389
	85%	84%	87%	83%	86%

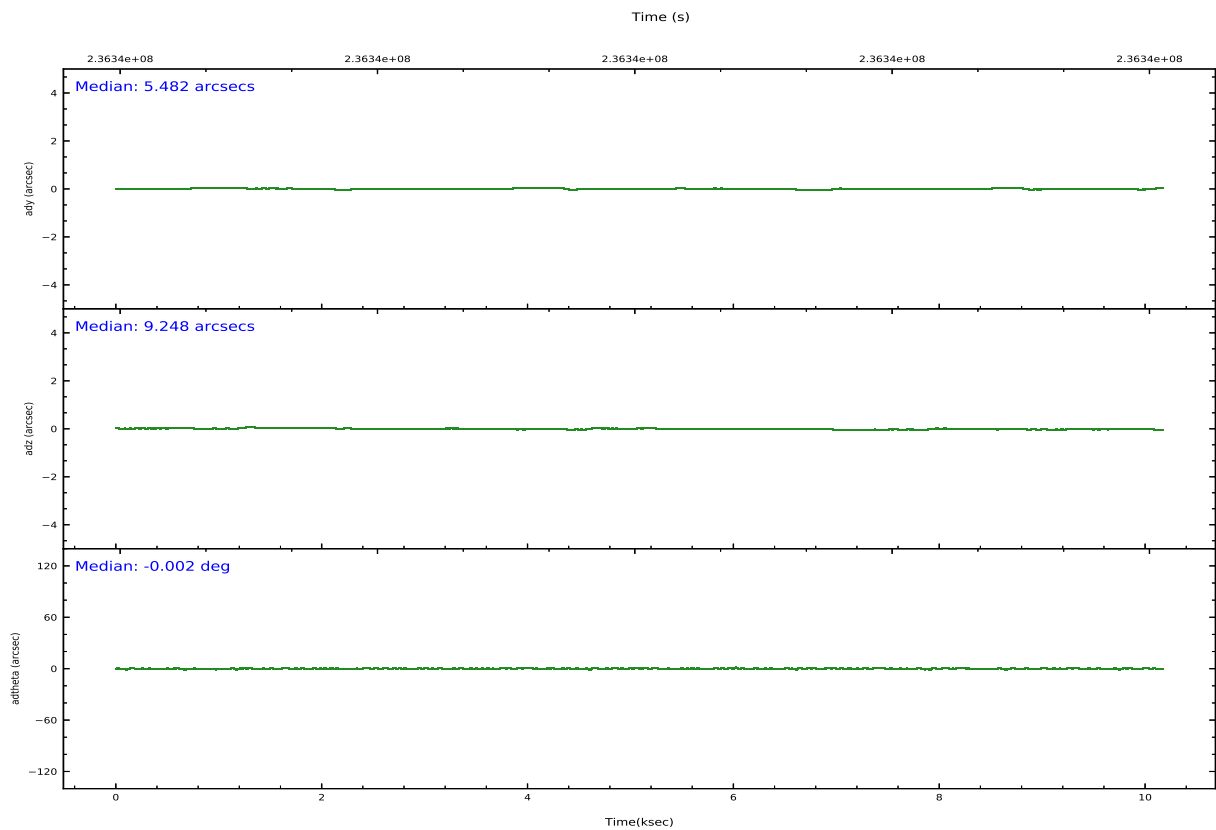
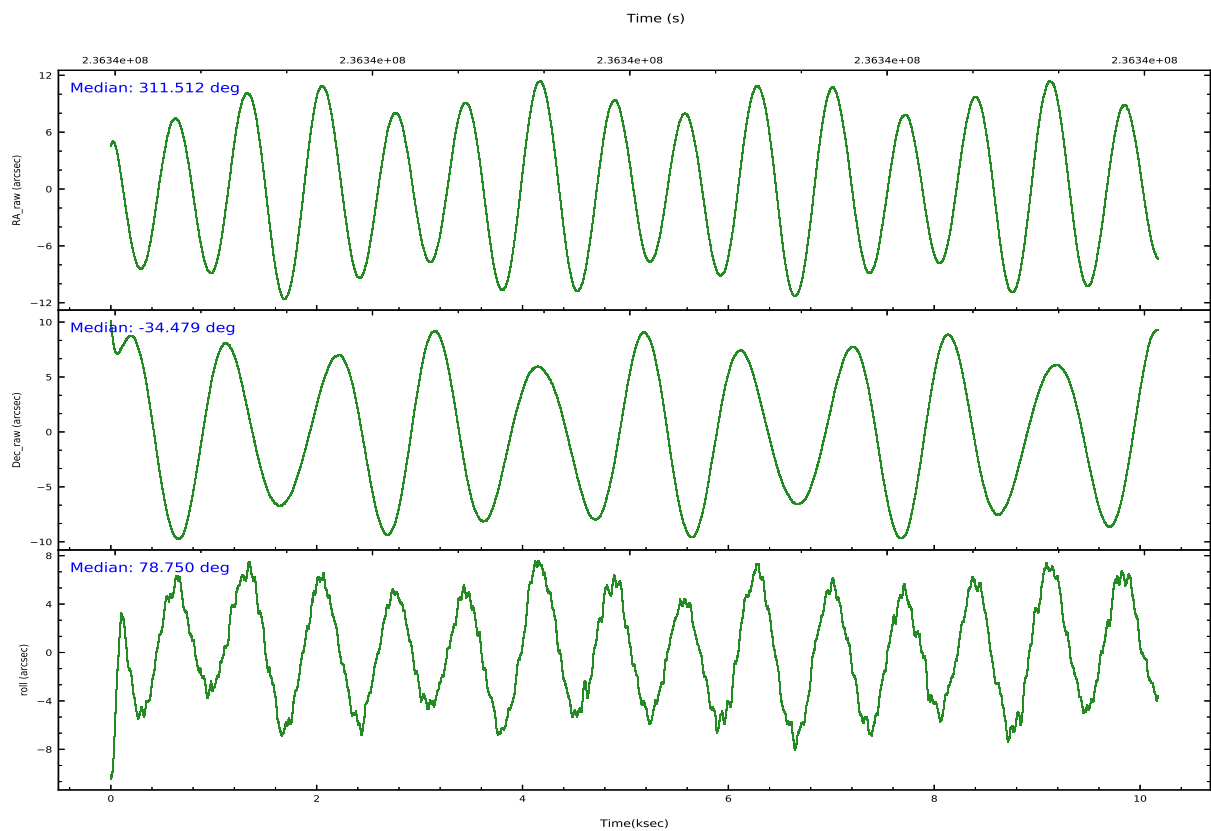


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-01236	ACIS-01236	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	311.522390	311.51438799884	Subarray requested	NONE	NONE
[deg] Pointing Dec	-34.504610	-34.480775421404	Alternating exposures requested	N	N
[deg] Pointing Roll	78.546169	78.75046736411601	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-229.442463	-229.4438428438578			
[mm] SIM translation stage offset	-4.15	-4.148610159071865			
[s] Observation start time (MET)	236335134.184000	236333899.98648			
Observation start date	2005-06-28T08:37:50	2005-06-28T08:18:19			
[s] Observation end time (MET)	236345134.184000	236345815.61202			
Observation end date	2005-06-28T11:24:30	2005-06-28T11:36:55			
Read mode	TIMED	TIMED			

## 2.3 Aspect



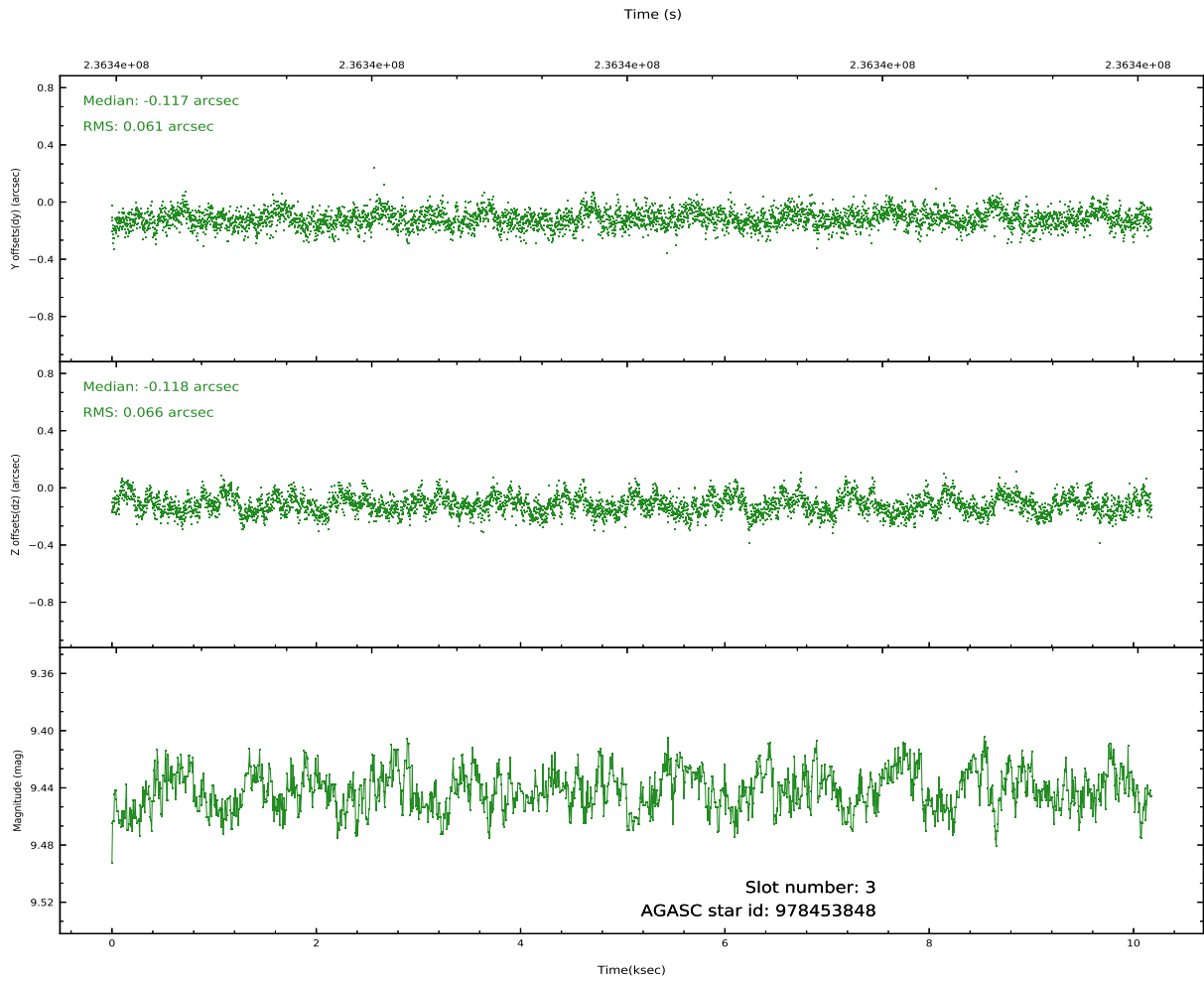
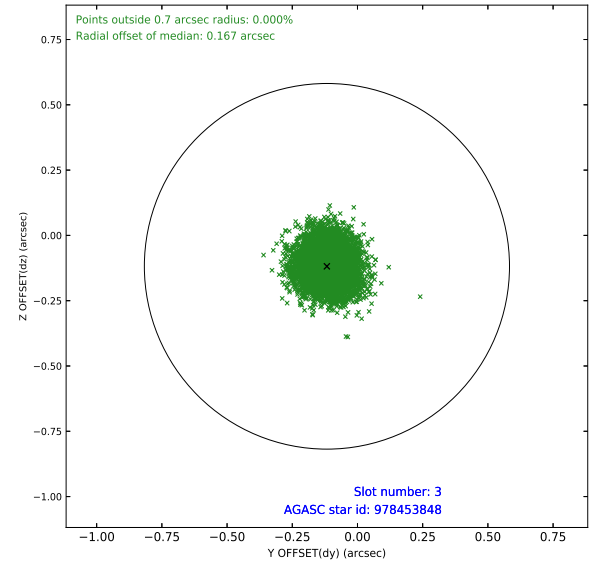
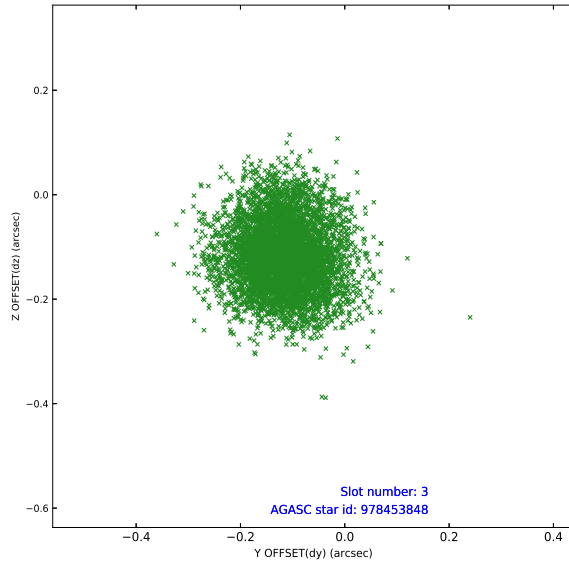


Slot Statistics

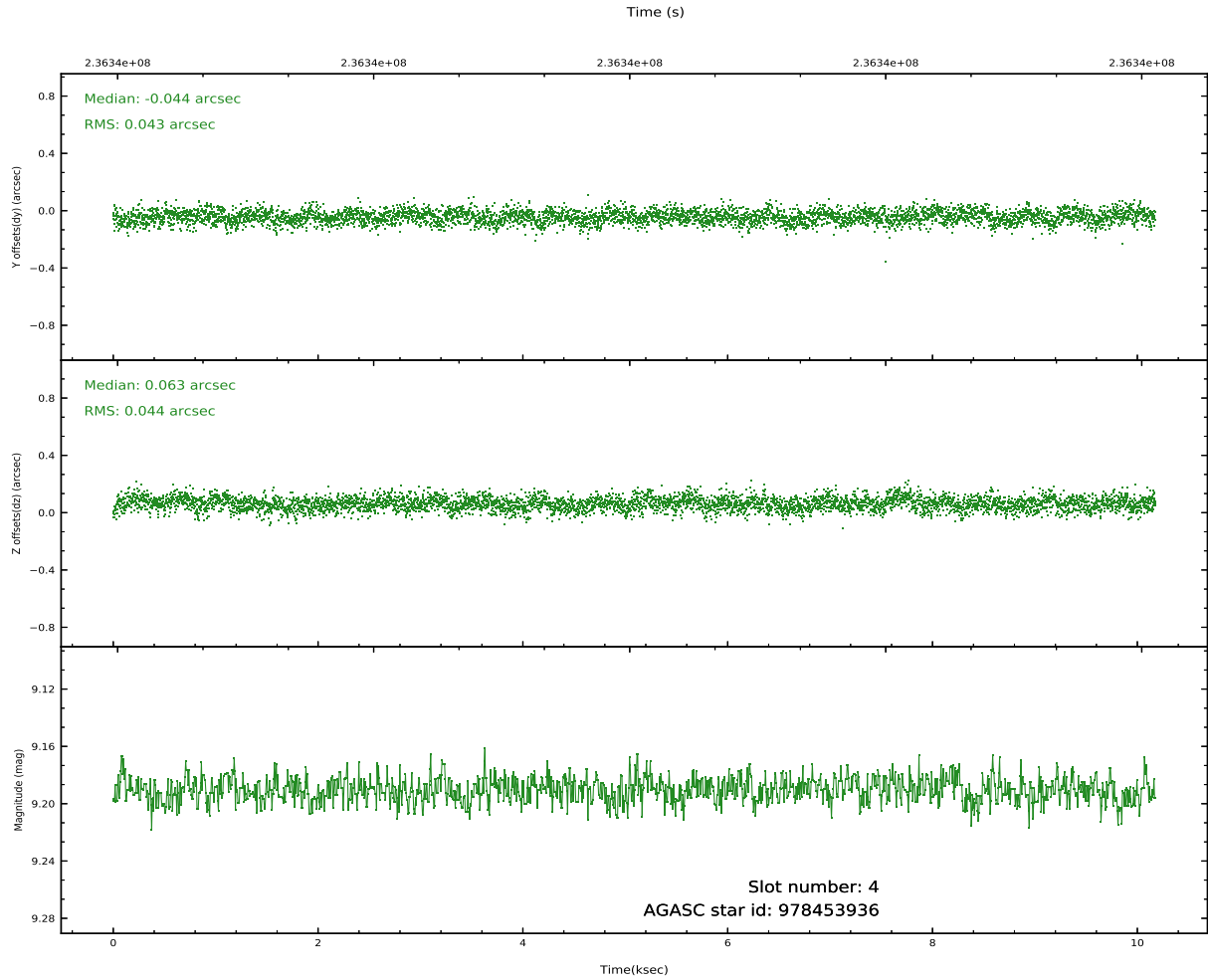
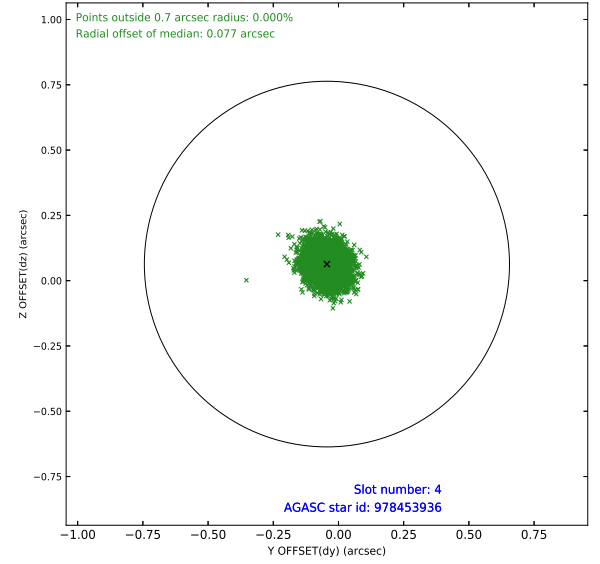
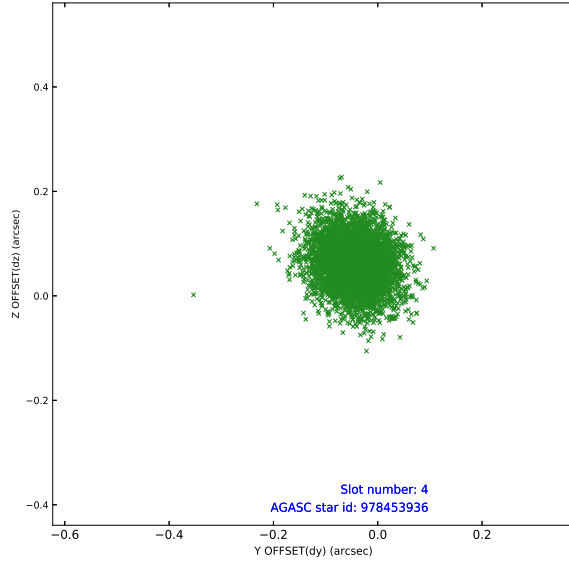
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.25	2482	1.000	0.063	-0.028	0.006	0.011	0.000000	0.000000	934.23	-917
1	FID		ACIS-I-5	7.23	2482	1.000	-0.267	0.051	0.006	0.010	0.000000	0.000000	-1813.93	979
2	FID		ACIS-I-6	7.25	2482	1.000	0.112	0.048	0.006	0.011	0.000000	0.000000	399.25	1624
3	GUIDE	used	978453848	9.44	4964	1.000	-0.117	-0.118	0.096	0.153	311.653333	-33.911133	2171.21	40
4	GUIDE	used	978453936	9.19	4961	1.000	-0.044	0.063	0.065	0.107	311.802976	-34.260845	1025.16	-643
5	GUIDE	used	978455424	8.29	4965	1.000	-0.092	-0.060	0.064	0.106	311.088053	-34.518926	-308.90	1251
6	GUIDE	used	978456752	9.40	4960	1.000	0.179	0.112	0.083	0.137	311.555579	-34.579139	-243.33	-149
7	GUIDE	used	978462280	8.25	4959	1.000	0.072	0.007	0.063	0.103	311.819254	-35.154089	-2119.48	-1321

## 2.4 Star Slots

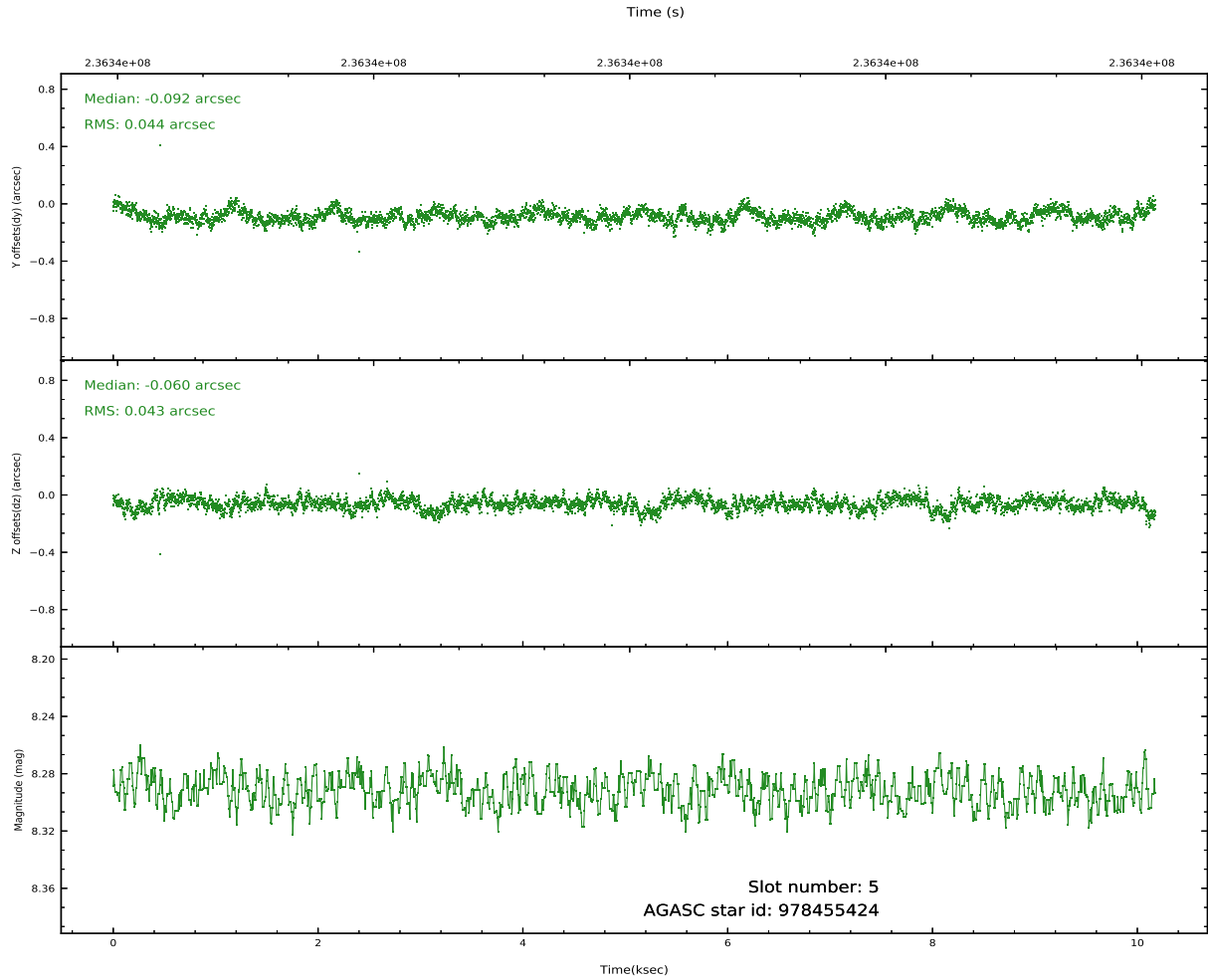
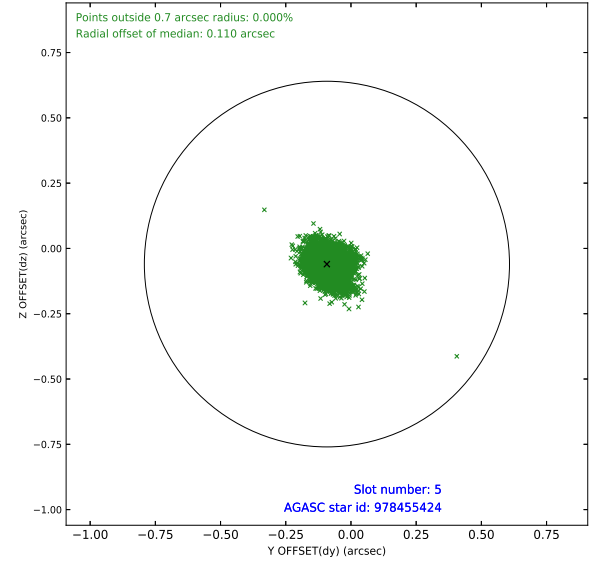
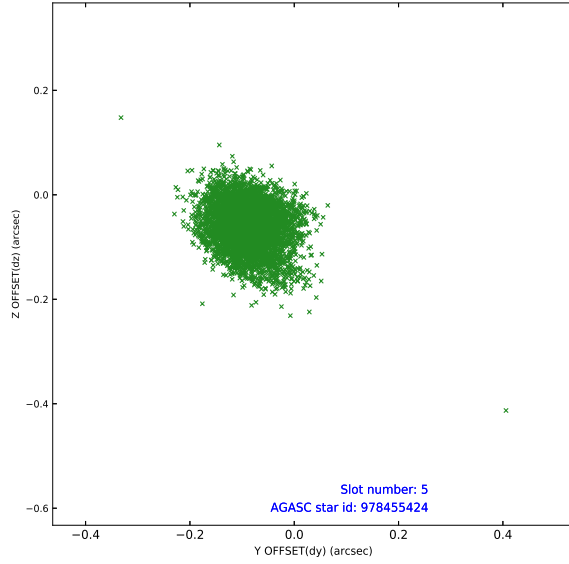
### 2.4.1 Slot 3



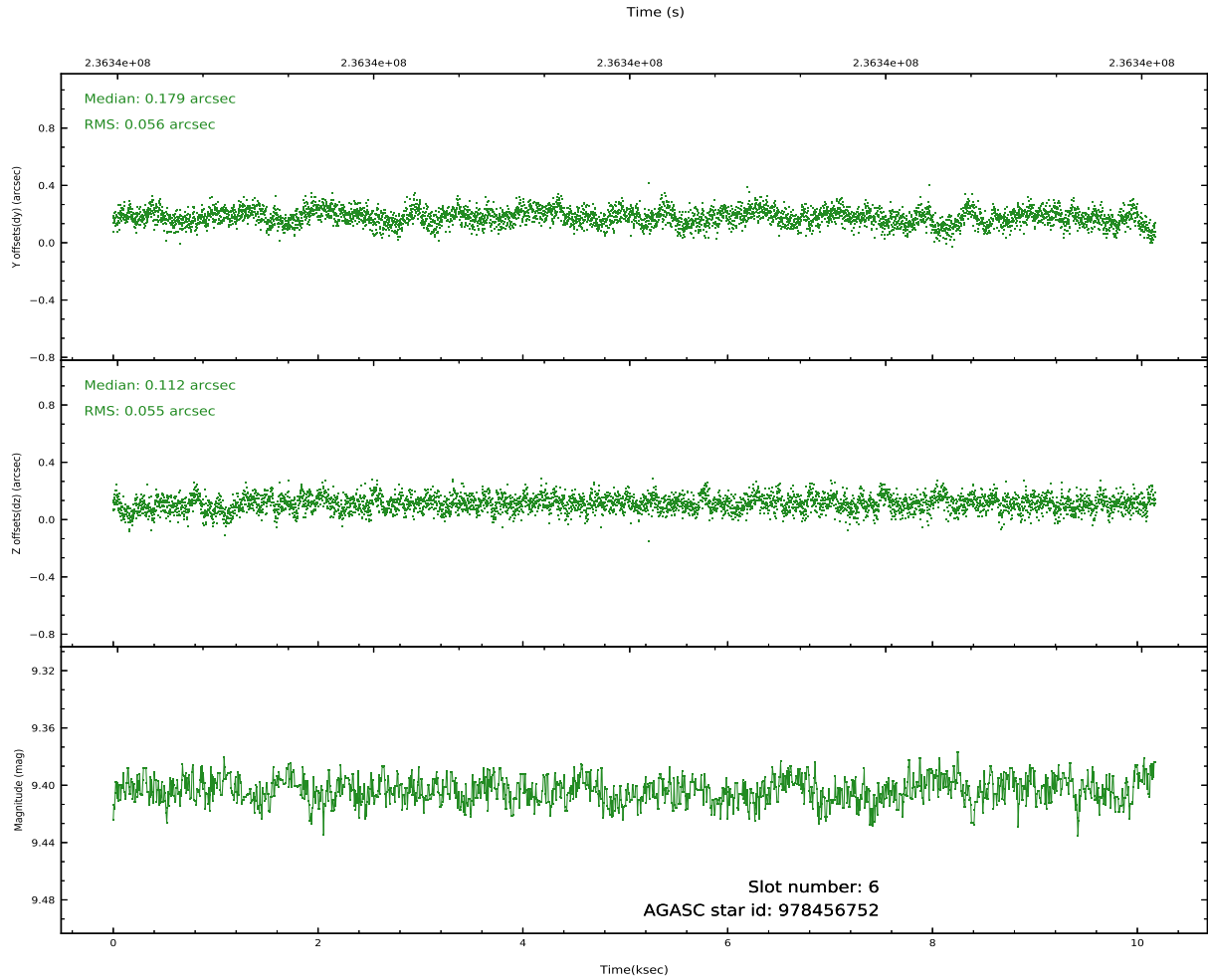
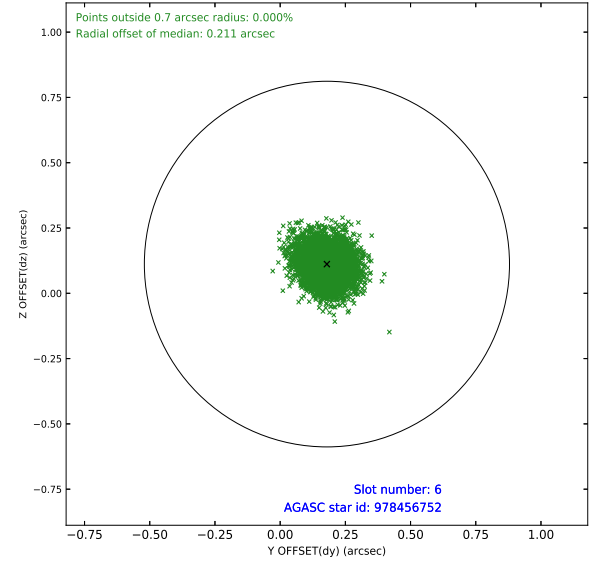
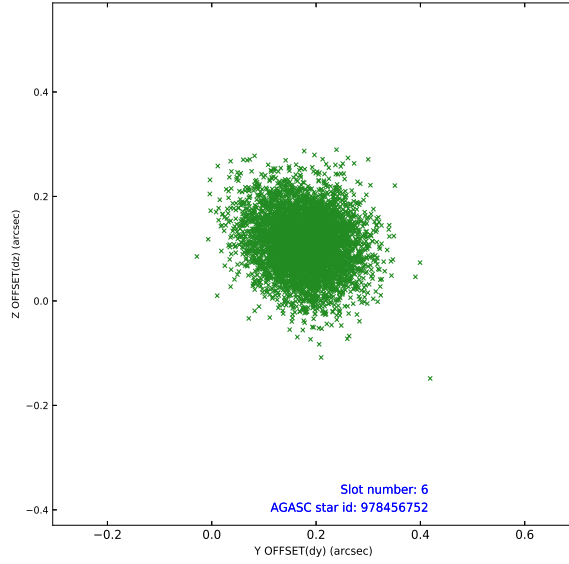
## 2.4.2 Slot 4



### 2.4.3 Slot 5

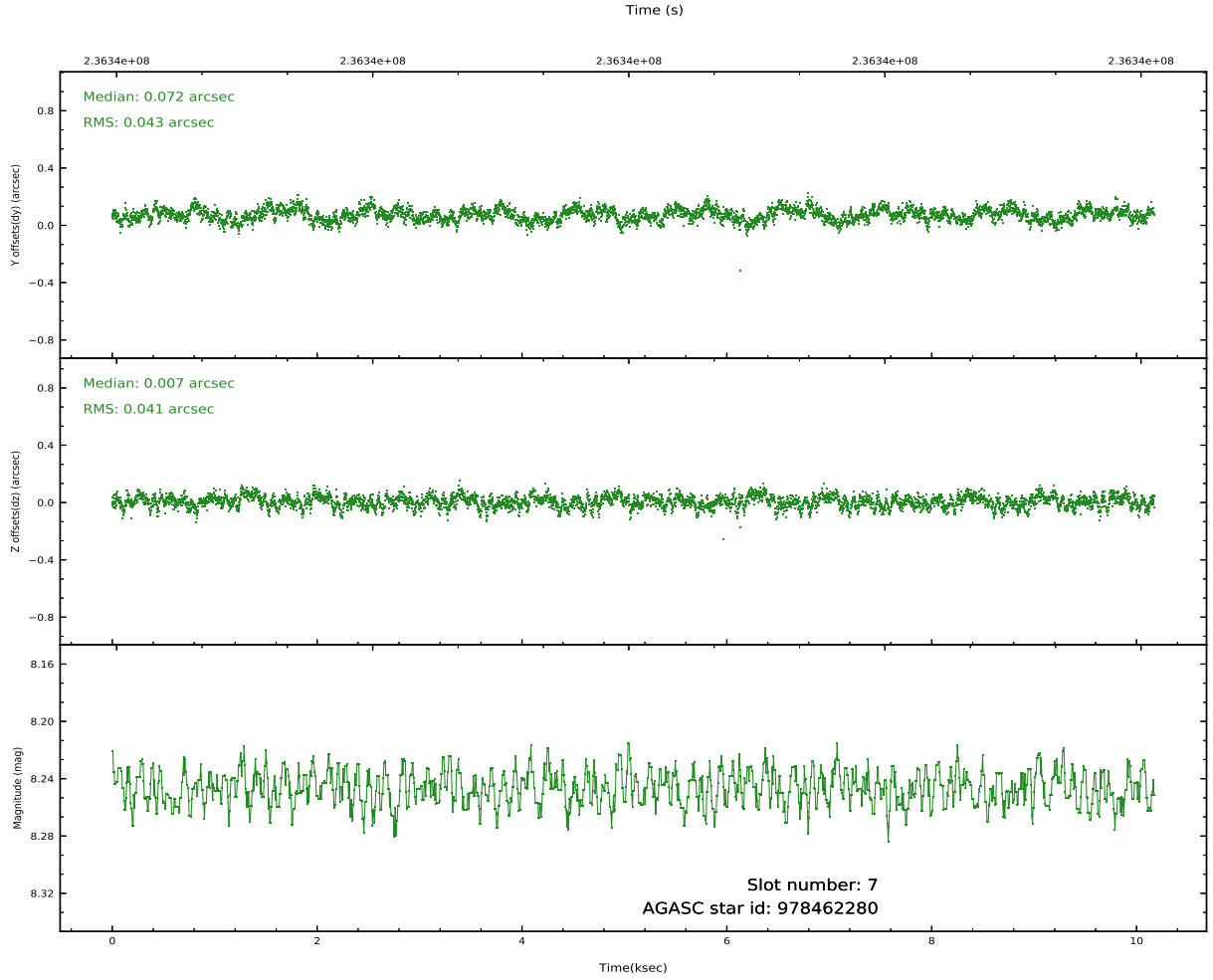
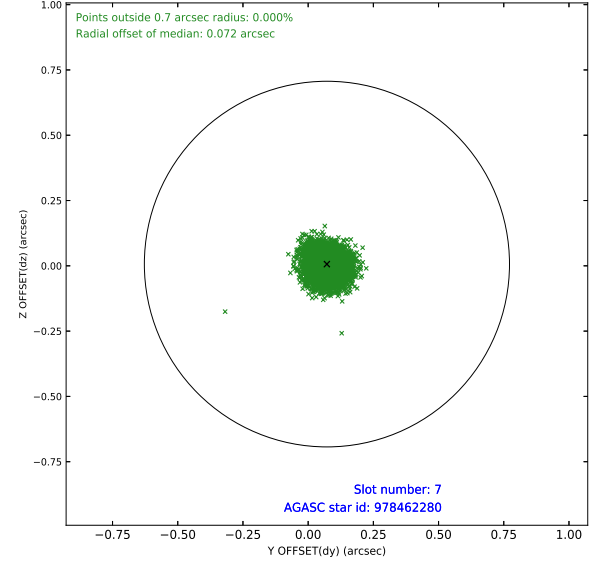
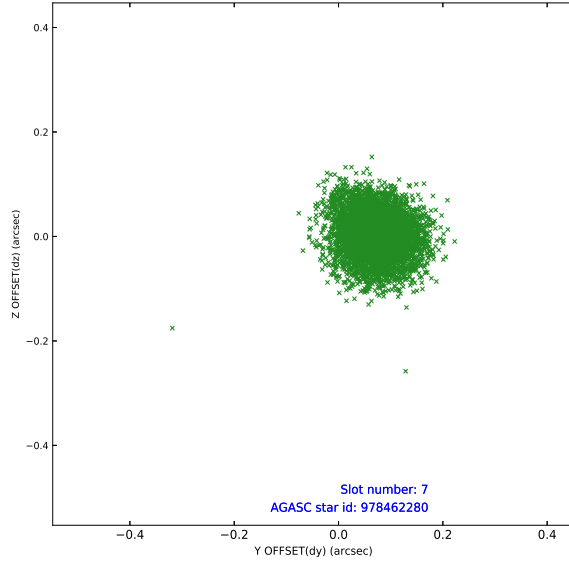


## 2.4.4 Slot 6



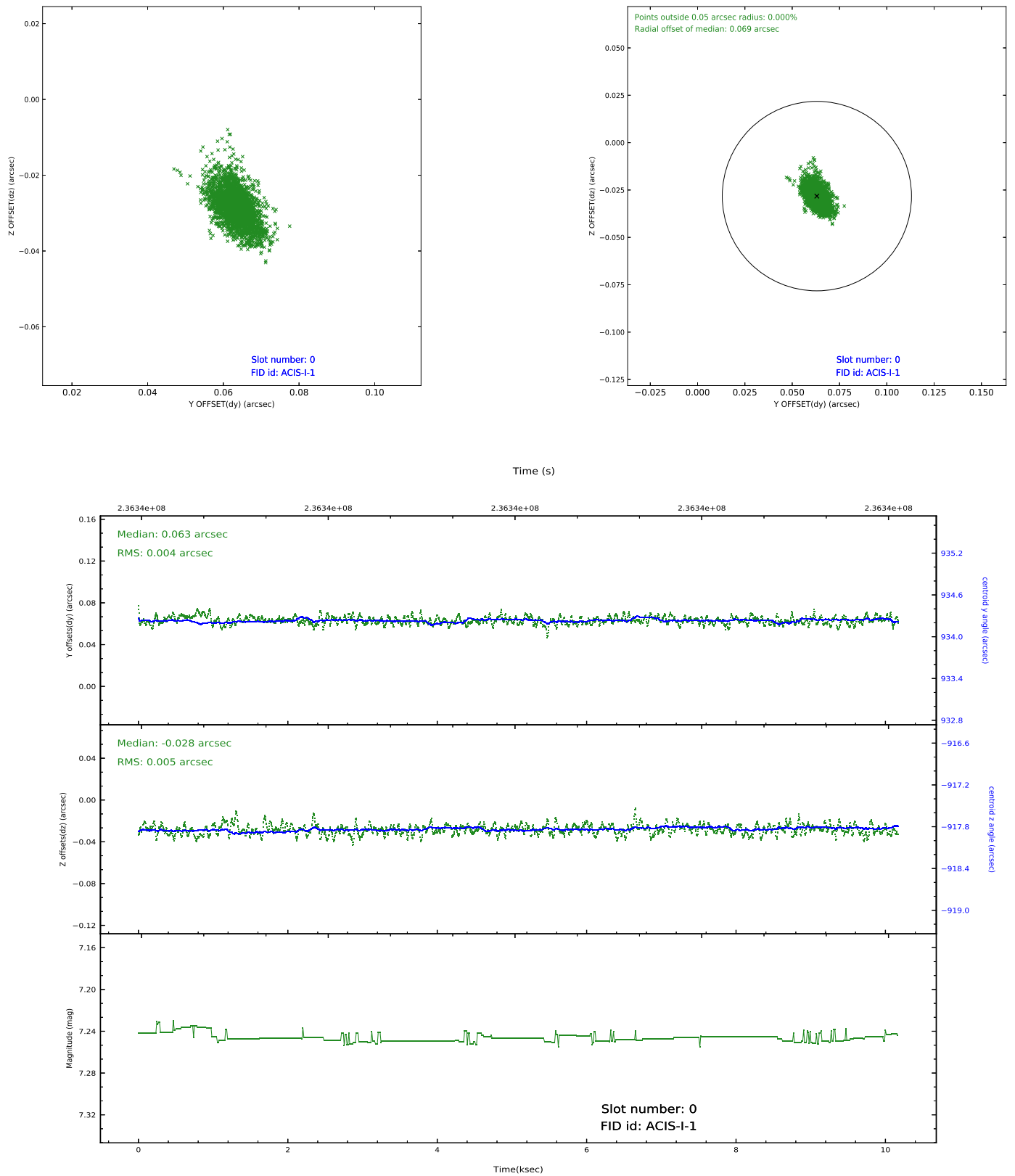


## 2.4.5 Slot 7

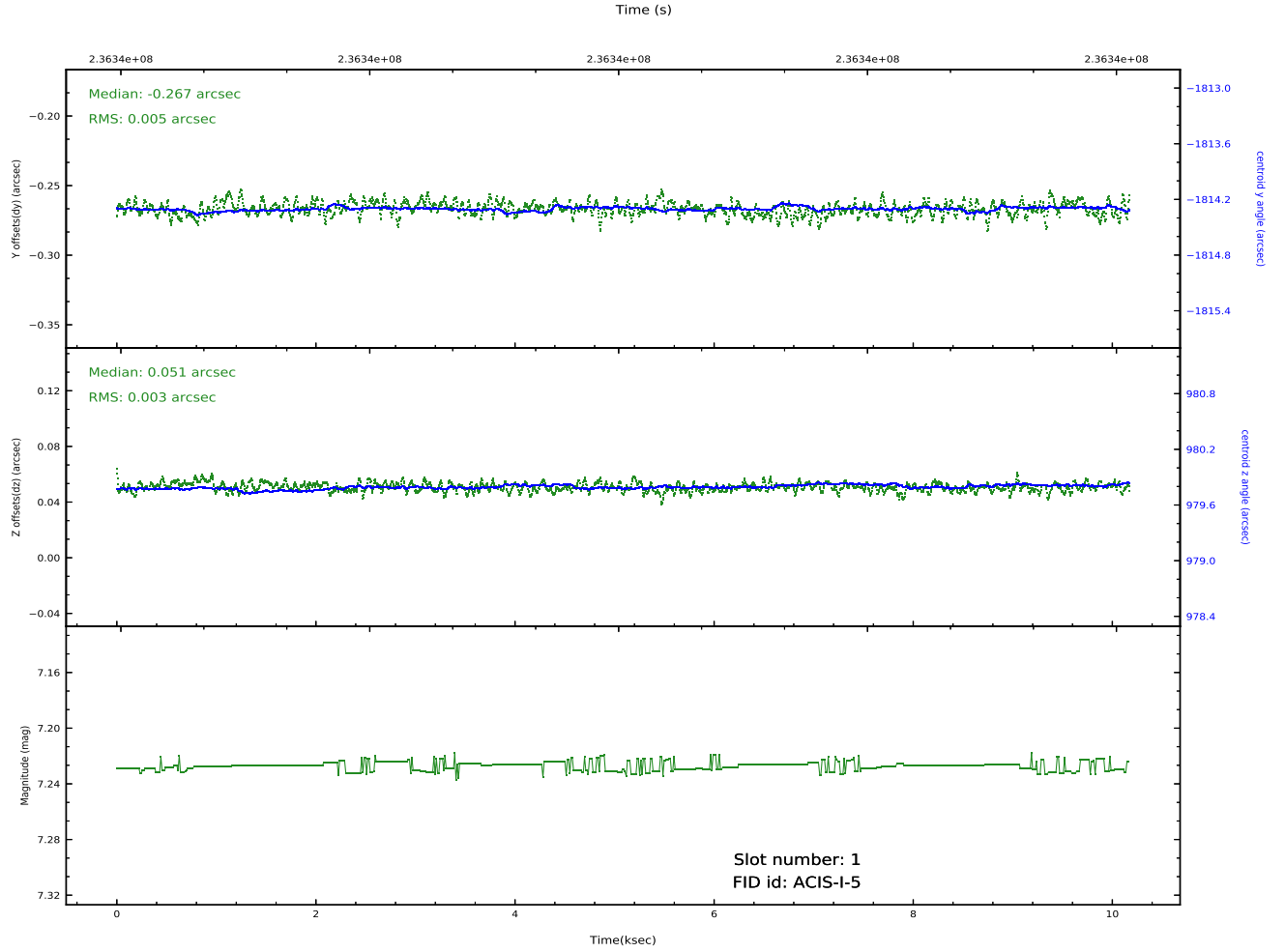
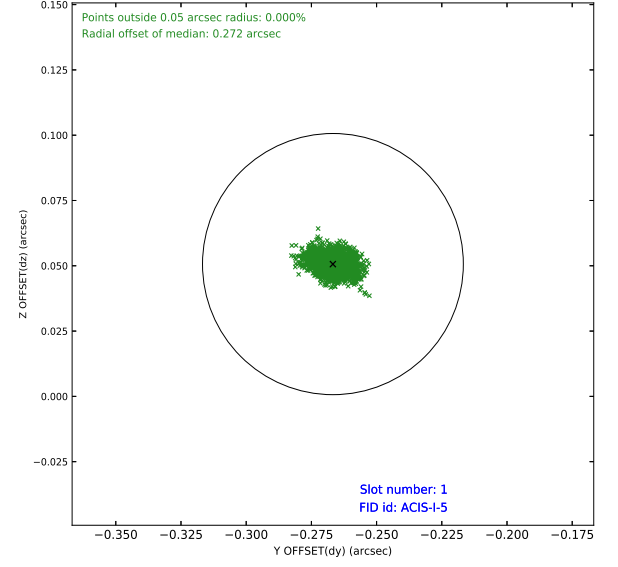
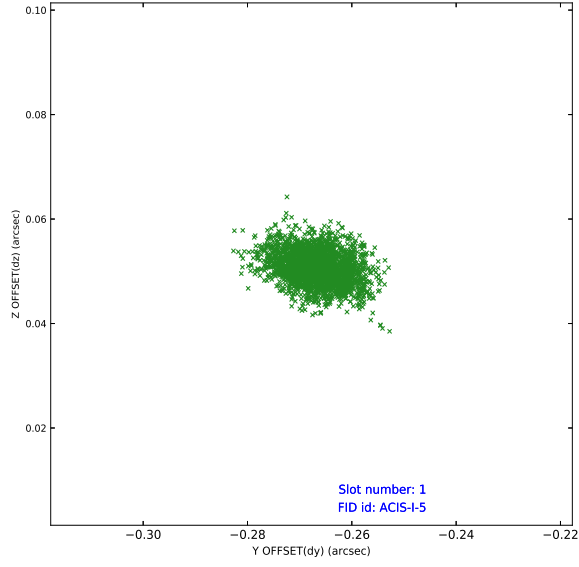


## 2.5 FID Slots

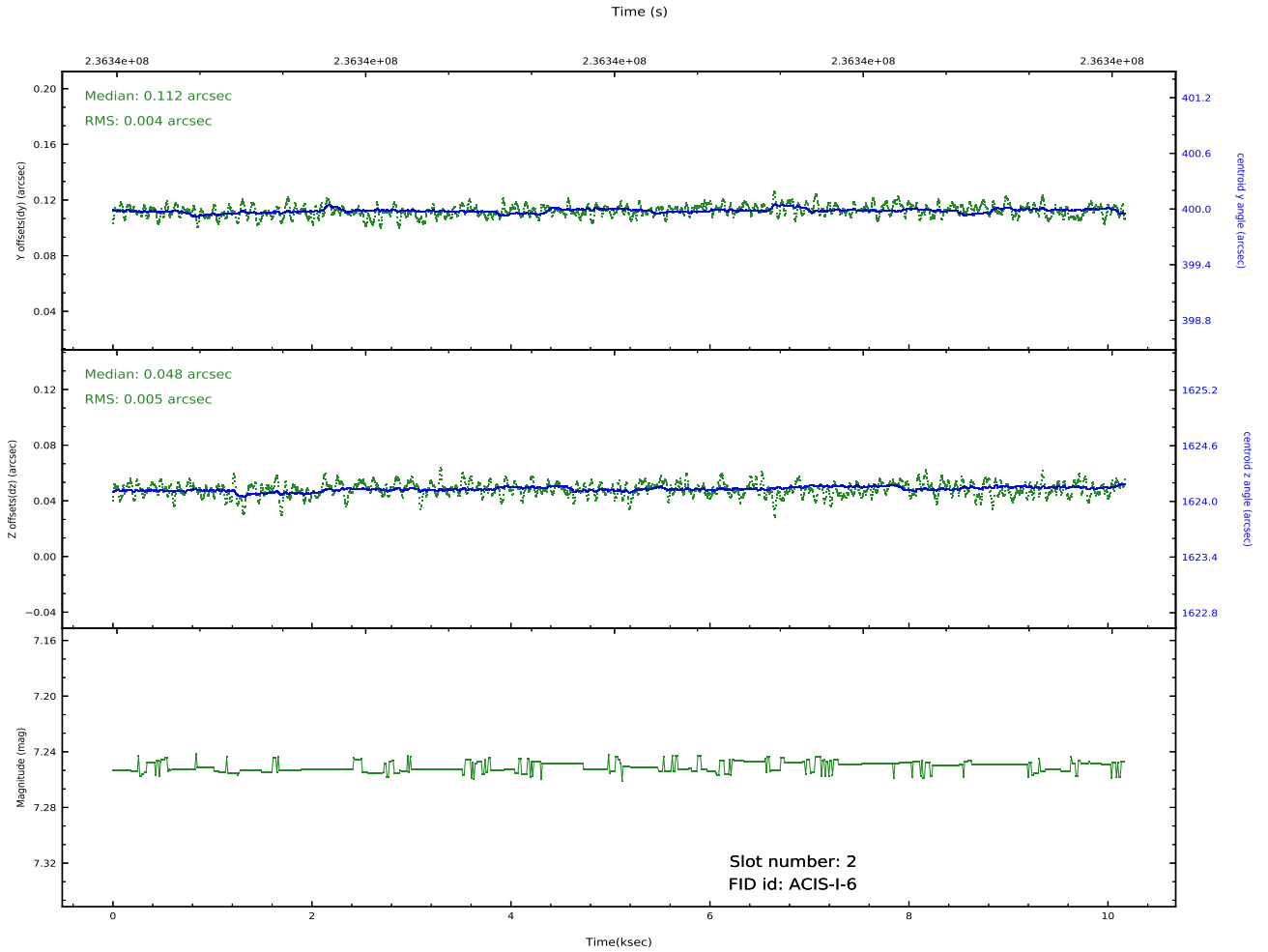
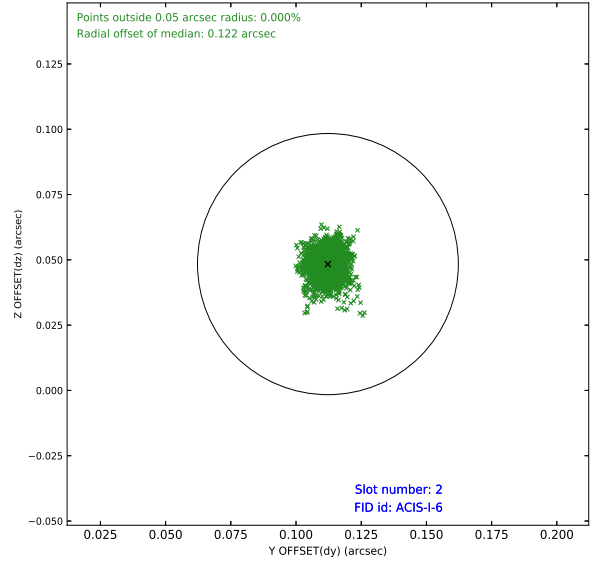
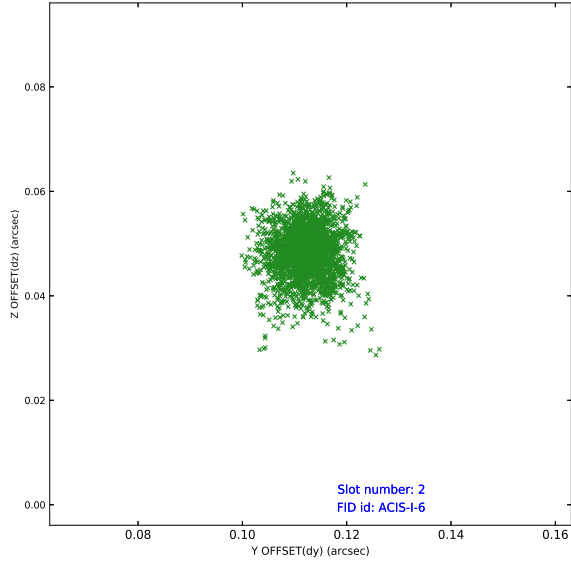
### 2.5.1 Slot 0



## 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)	2020.10.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.17109

### **A.2 Comments**