

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5812 - L2 Version 4  
Chandra X-Ray Center

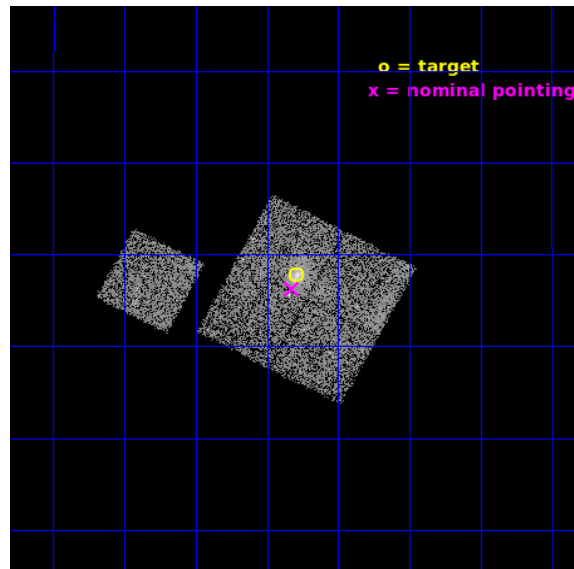
L2 Processing Date : Oct 5 2020

## 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

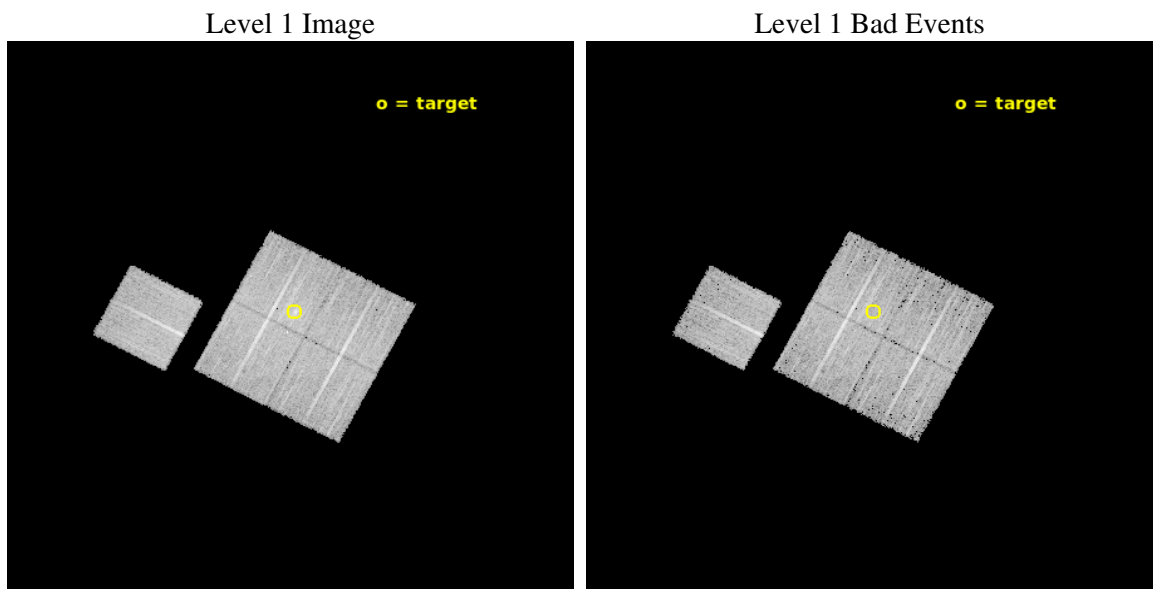
seq_num	800525	Sequence number
obs_id	5812	Observation id
title	MACS: The most massive galaxy clusters at $z>0.3$	Proposal title
observer	Harald Ebeling	Principal investigator
object	MACSJ0455.2+0657	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	73.822875	Observer's specified target RA [deg]
dec_targ	6.963139	Observer's specified target Dec [deg]
ra_nom	73.831079247854	Nominal RA [deg]
dec_nom	6.9382894348572	Nominal Dec [deg]
roll_nom	297.91518882296	Nominal Roll [deg]
revision	4	Processing version of data
ontime	10071.045223564	Sum of GTIs [s]
livetime	9939.4596035224	Livetime [s]
ontime0	10070.922103554	Sum of GTIs [s]
ontime1	10070.963143557	Sum of GTIs [s]
ontime2	10067.863173425	Sum of GTIs [s]
ontime3	10071.045223564	Sum of GTIs [s]
ontime6	10070.881063551	Sum of GTIs [s]
l2events	27966	Number of level 2 events



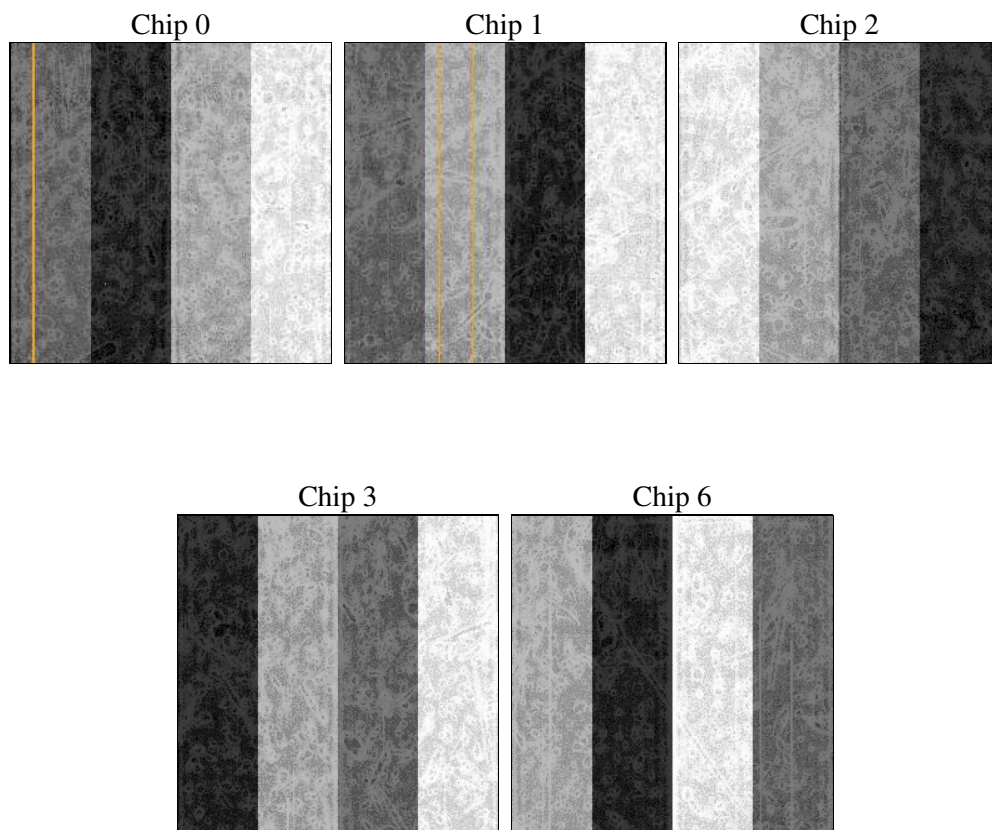
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10300.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	10071.045223564	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime0	10070.922103554	Sum of GTIs [s]
date	2020-10-06T03:18:26	Date and time of file creation	ontime1	10070.963143557	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	10067.863173425	Sum of GTIs [s]
			ontime3	10071.045223564	Sum of GTIs [s]
			ontime6	10070.881063551	Sum of GTIs [s]
			l1events	289871	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	54972	54987	60247	61076	58589
rejected events	48827	48049	54194	52944	52553
rejected %	88%	87%	89%	86%	89%

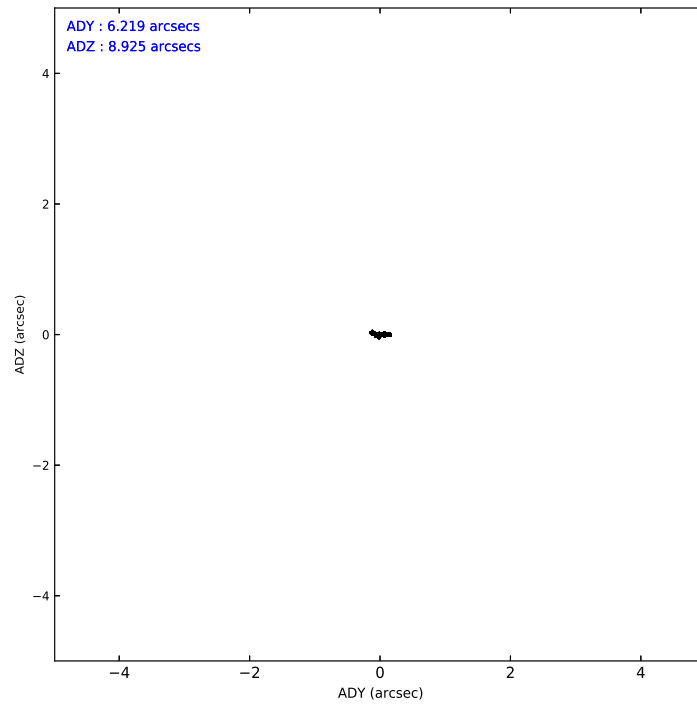
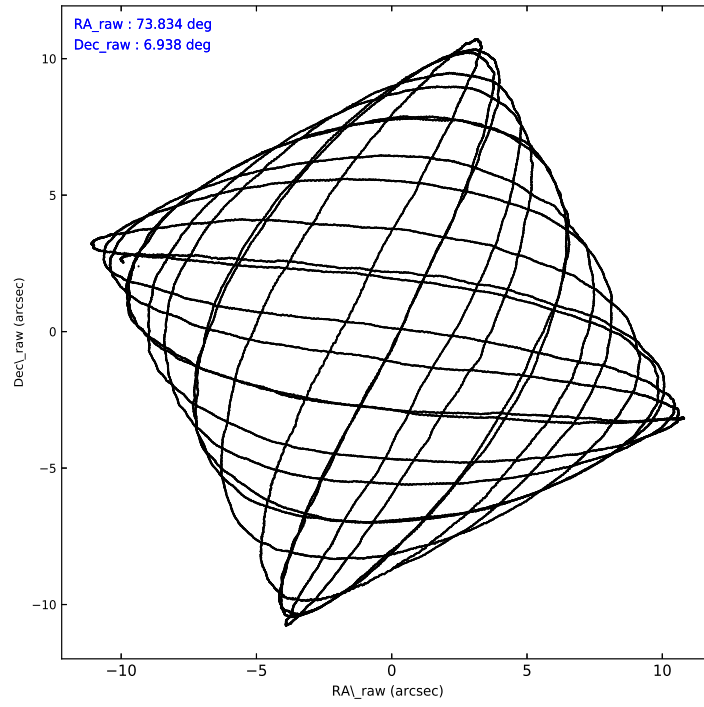
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2224	2659	2333	4065	2215
	4%	4%	3%	6%	3%
grade 1 events	33	23	28	44	17
	0%	0%	0%	0%	0%
grade 2 events	1363	1465	1368	1458	1279
	2%	2%	2%	2%	2%
grade 3 events	700	734	612	754	654
	1%	1%	1%	1%	1%
grade 4 events	657	767	695	726	630
	1%	1%	1%	1%	1%
grade 5 events	2164	2301	1967	2374	2336
	3%	4%	3%	3%	3%
grade 6 events	1208	1317	1046	1134	1262
	2%	2%	1%	1%	2%
grade 7 events	46623	45721	52198	50521	50196
	84%	83%	86%	82%	85%

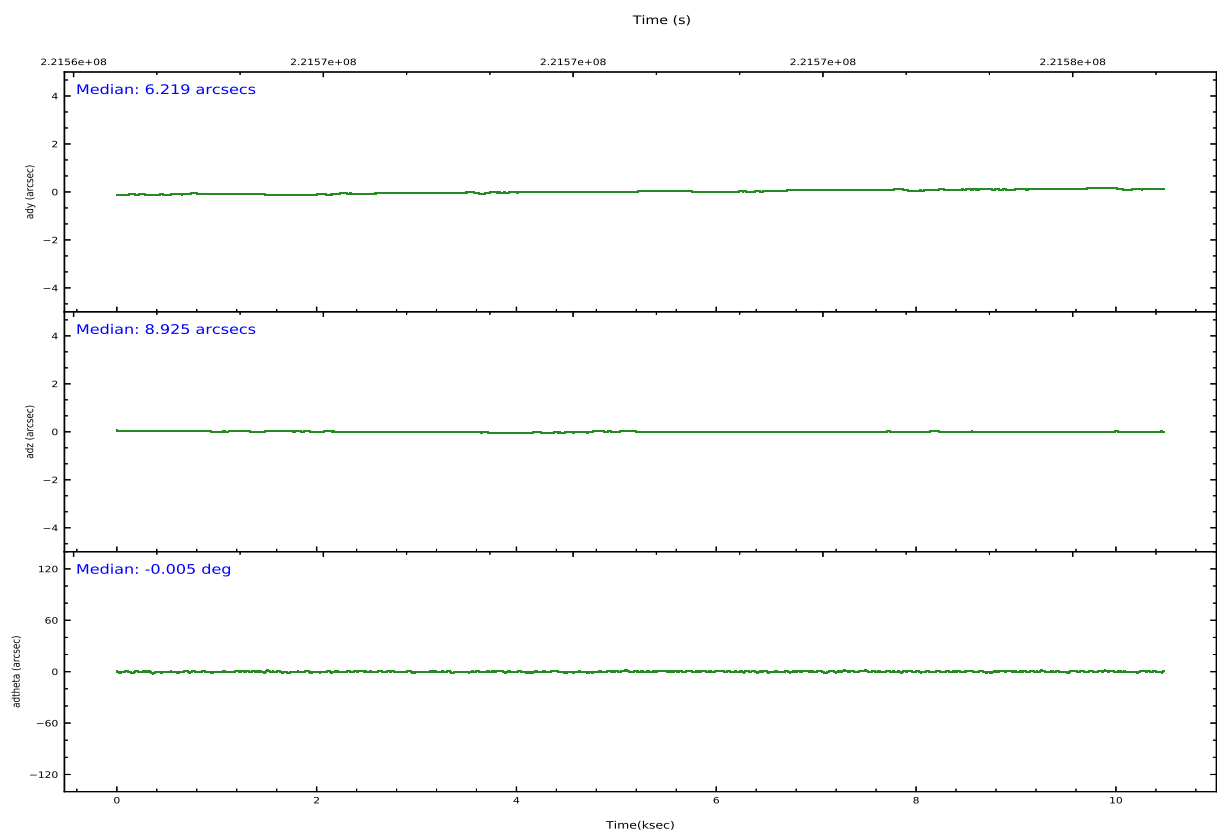
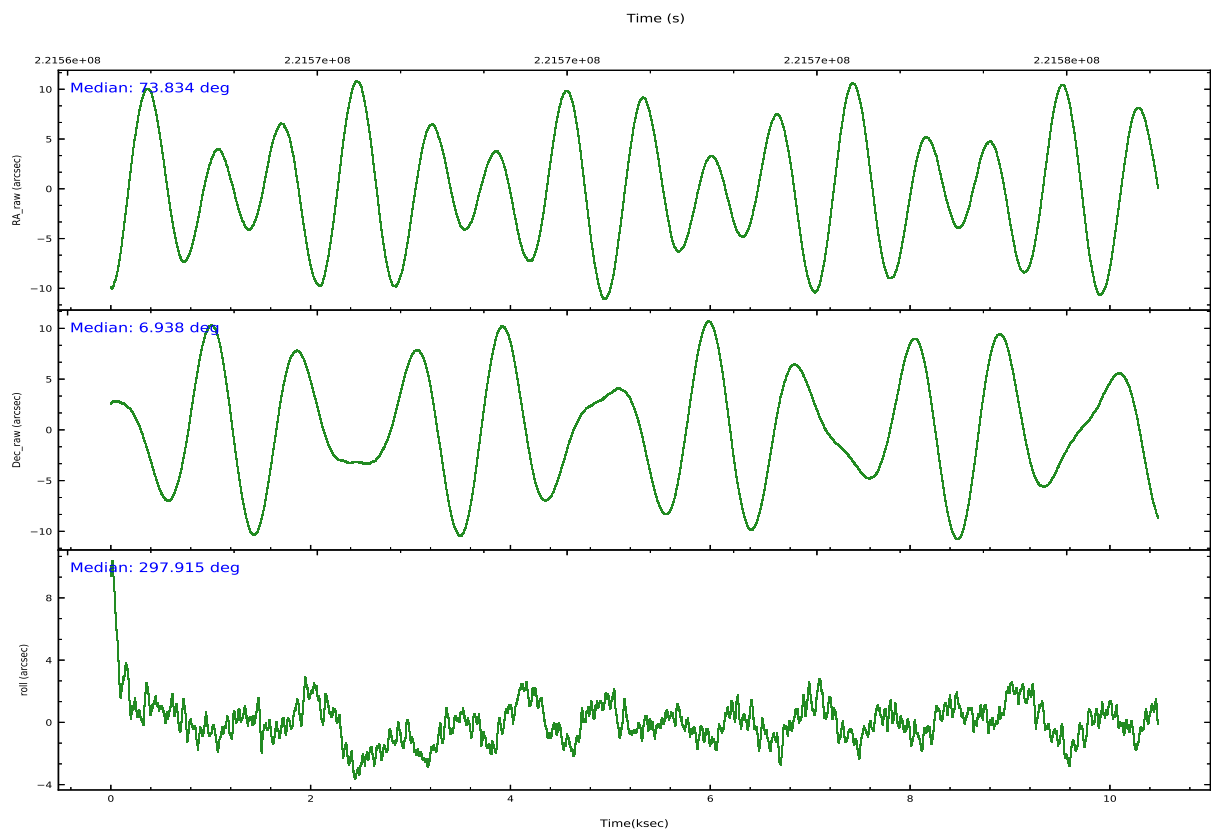


## 2.2 Compared Parameters

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	73.810775	73.83107924785401	Subarray requested	NONE	NONE
[deg] Pointing Dec	6.952308	6.9382894348572	Alternating exposures requested	N	N
[deg] Pointing Roll	297.712967	297.91518882296	[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)	221565616.184000	221565051.00336			
Observation start date	2005-01-08T09:59:12	2005-01-08T09:50:51			
[s] Observation end time (MET)	221575916.184000	221576627.86638			
Observation end date	2005-01-08T12:50:52	2005-01-08T13:03:47			
Read mode	TIMED	TIMED			

## 2.3 Aspect



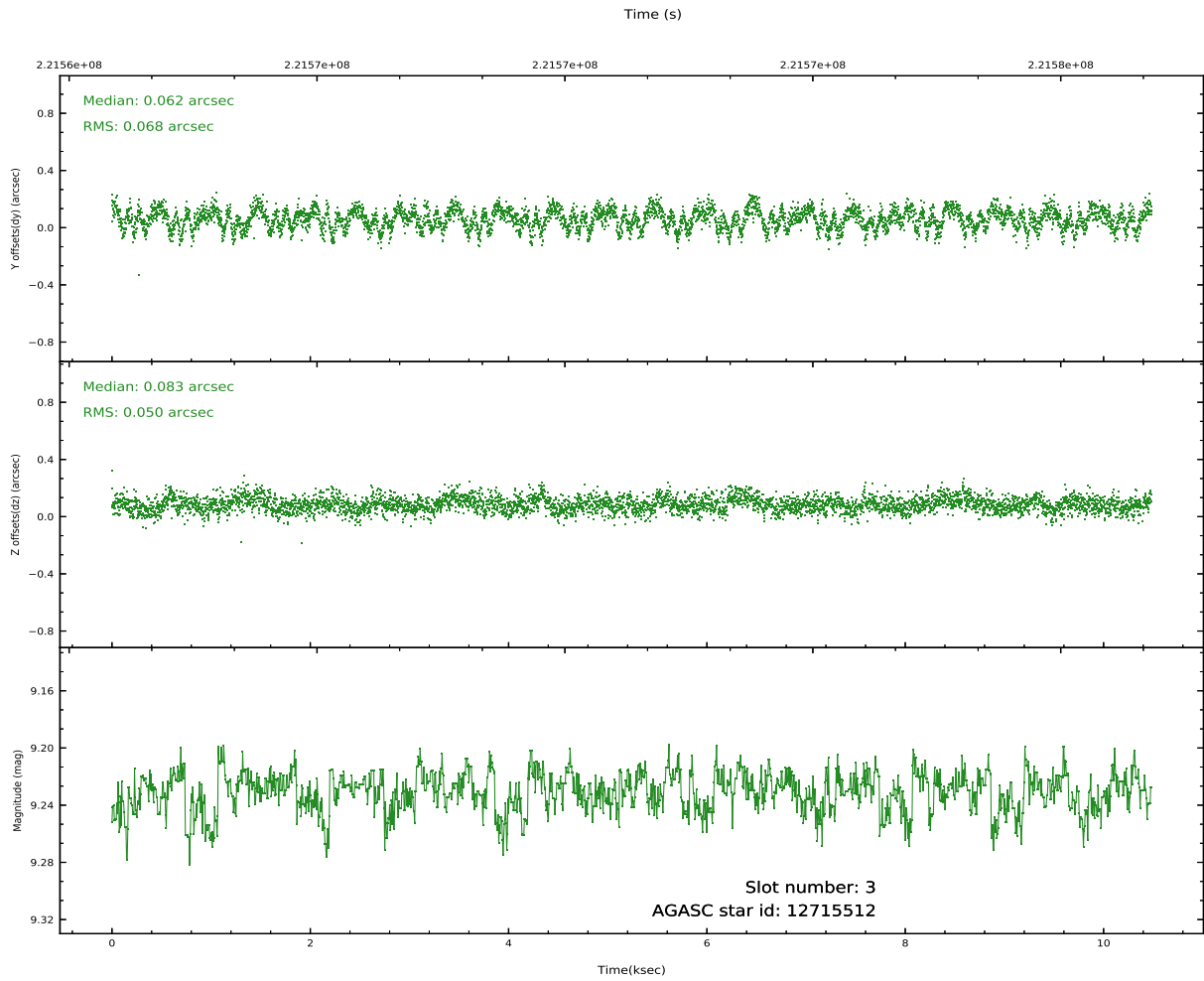
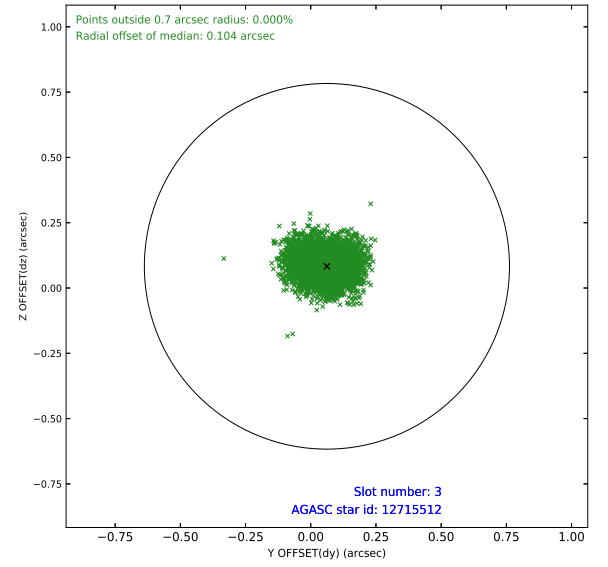
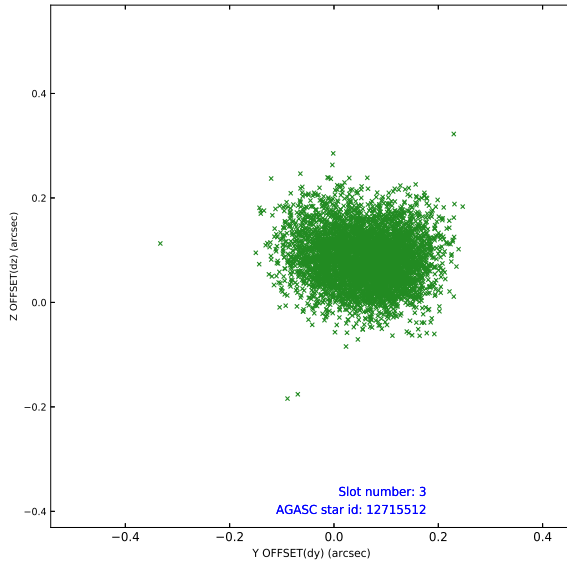


Slot Statistics

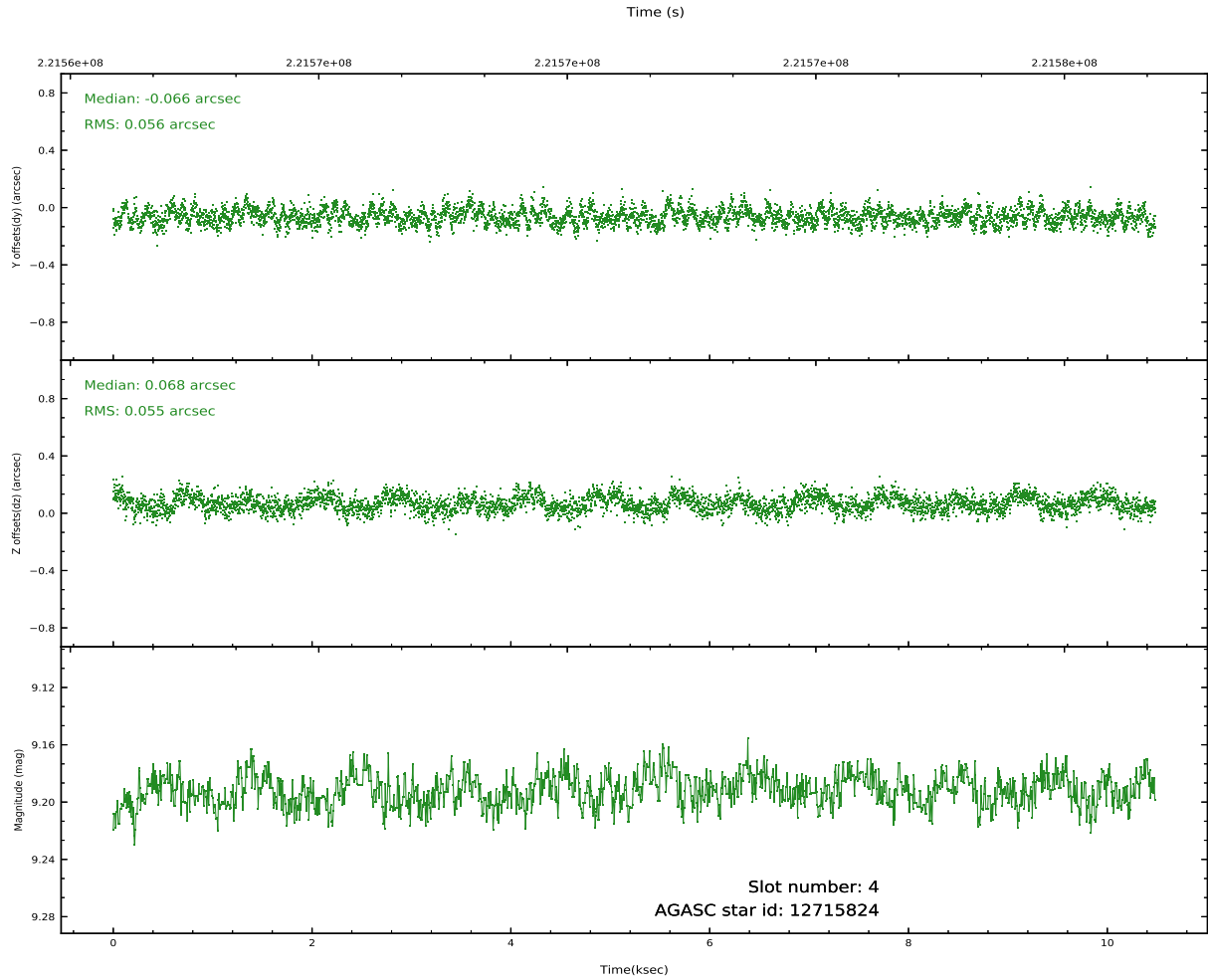
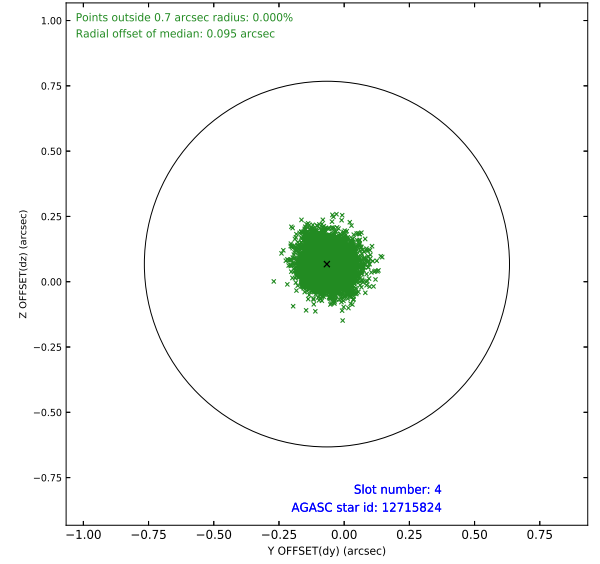
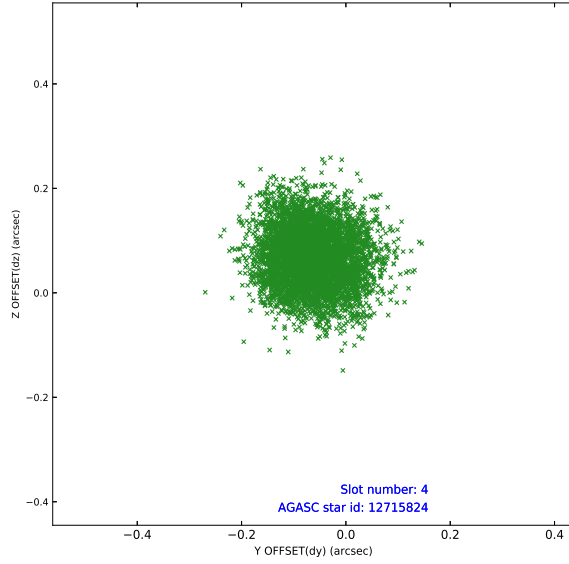
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.25	2556	1.000	0.008	-0.080	0.008	0.013	0.000000	0.000000	933.45	-917
1	FID		ACIS-I-4	7.17	2557	1.000	0.109	0.076	0.009	0.014	0.000000	0.000000	2153.55	982
2	FID		ACIS-I-5	7.22	2557	1.000	-0.215	0.075	0.007	0.013	0.000000	0.000000	-1814.21	980
3	GUIDE	used	12715512	9.23	5111	1.000	0.062	0.083	0.089	0.147	74.481096	6.817192	1543.53	1896
4	GUIDE	used	12715824	9.19	5110	1.000	-0.066	0.068	0.084	0.135	73.974793	7.404186	-1167.58	1275
5	GUIDE	used	12715960	8.57	5113	1.000	-0.021	0.090	0.060	0.096	74.053303	7.151841	-233.20	1101
6	GUIDE	used	12716864	9.02	5110	1.000	-0.014	-0.136	0.072	0.119	73.507186	6.461487	1059.44	-1782
7	GUIDE	used	12720136	9.07	5112	1.000	0.041	-0.109	0.088	0.140	73.348538	6.962593	-800.87	-1445

## 2.4 Star Slots

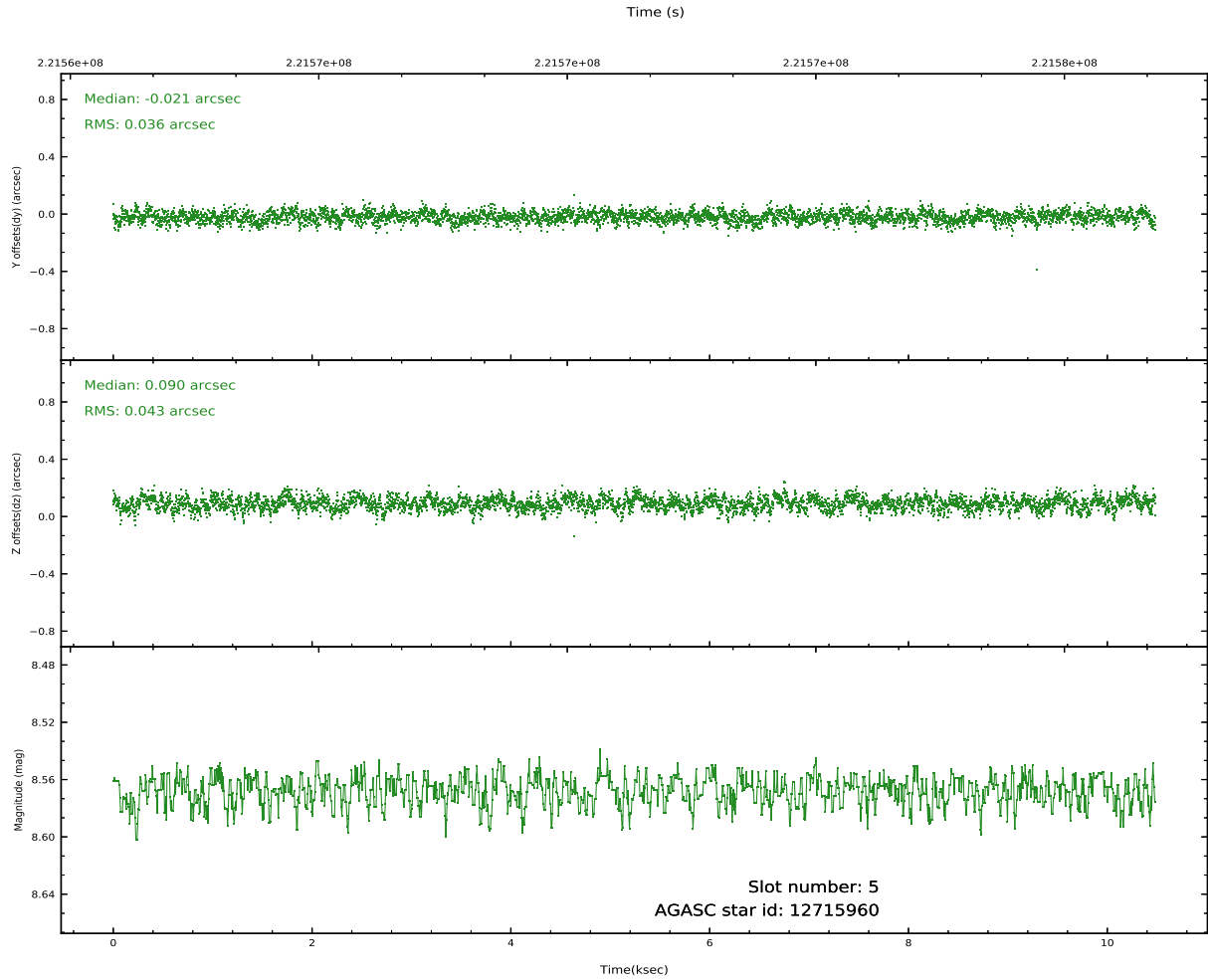
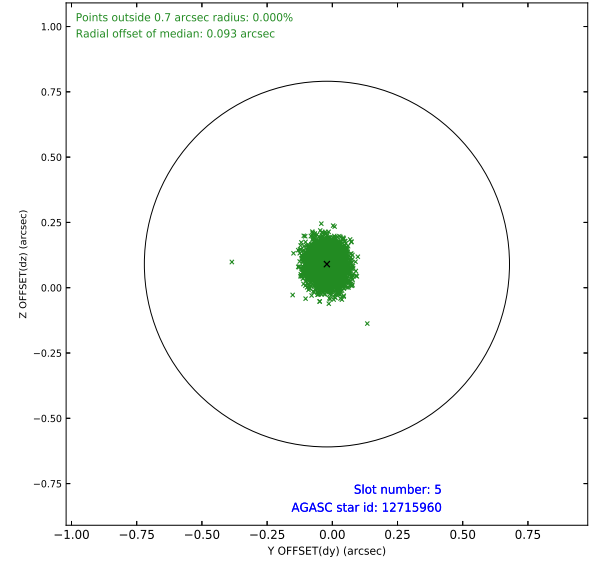
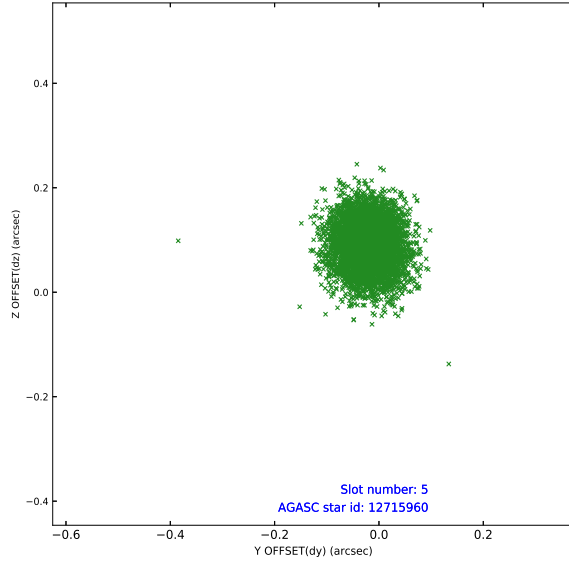
### 2.4.1 Slot 3



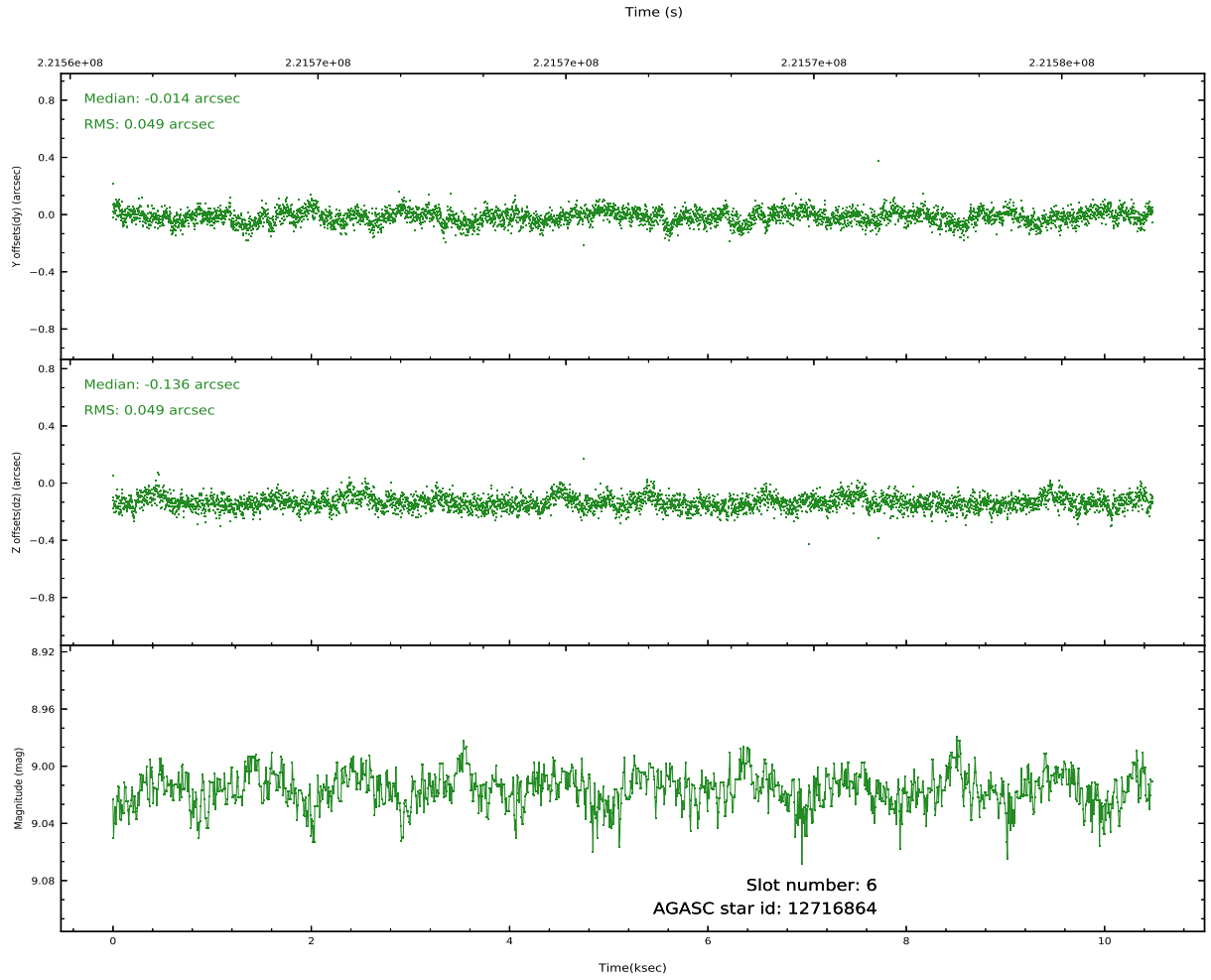
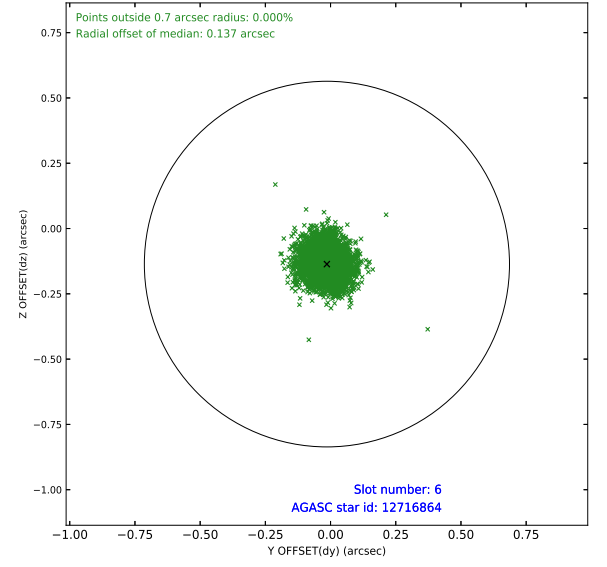
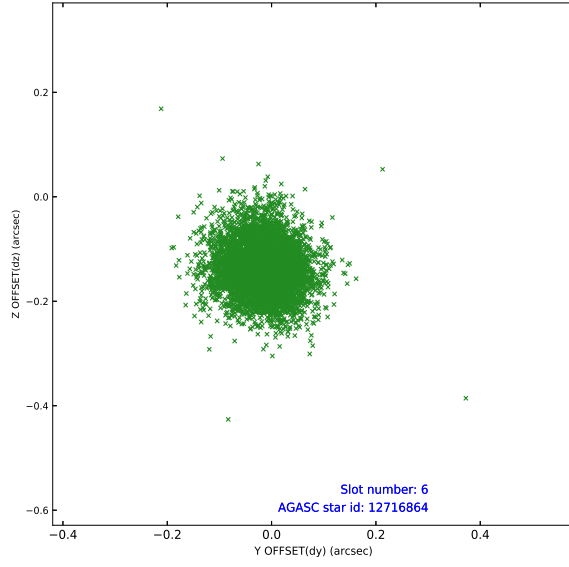
## 2.4.2 Slot 4



### 2.4.3 Slot 5

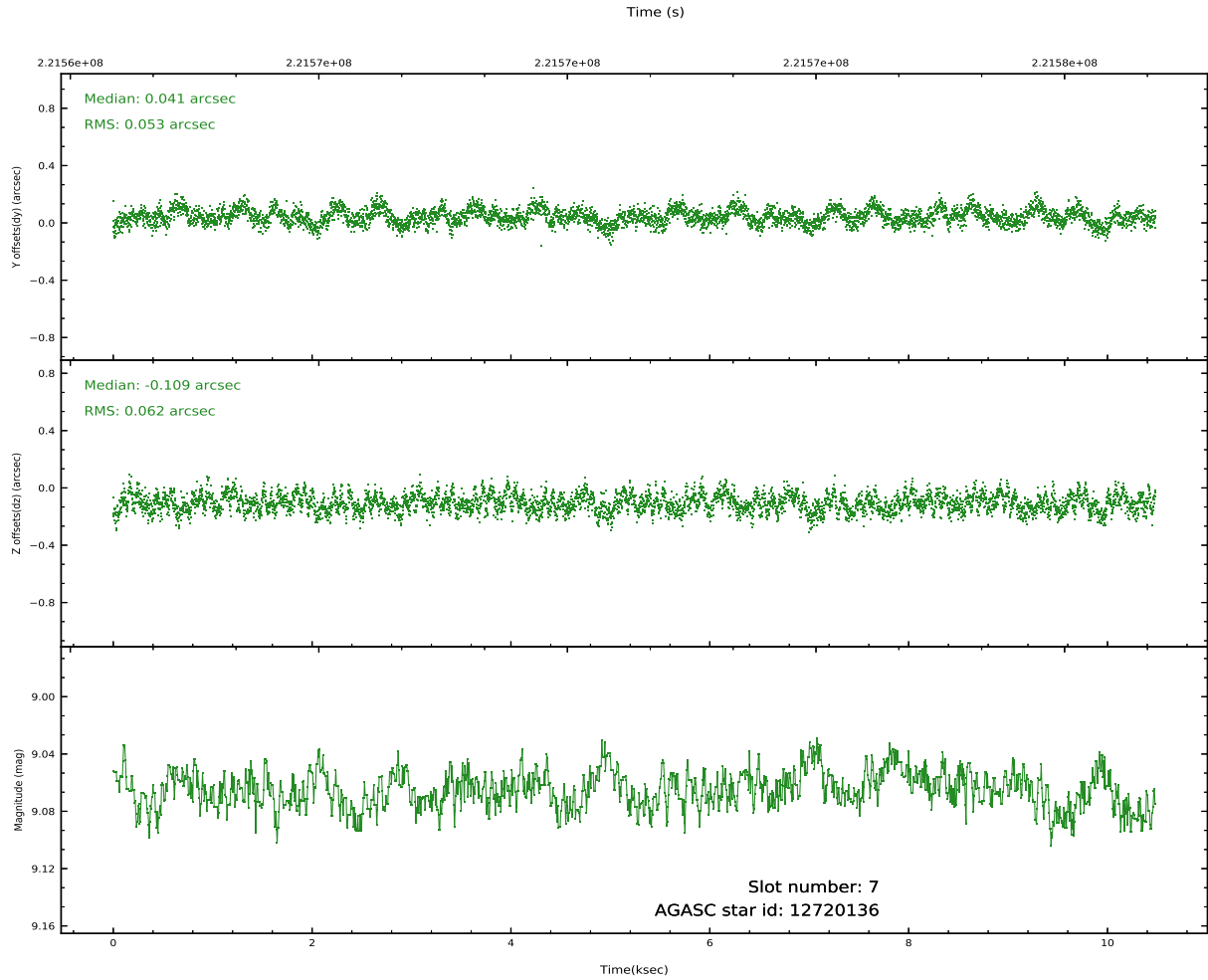
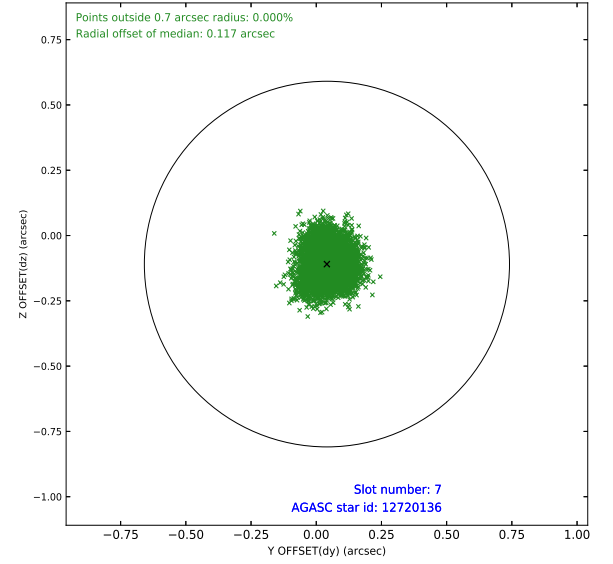
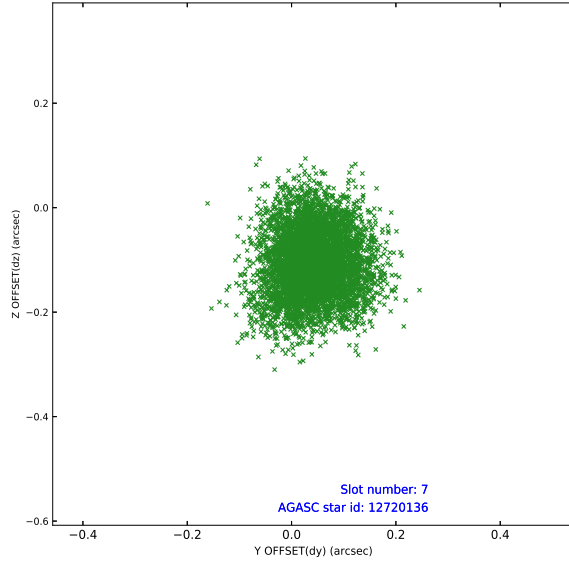


## 2.4.4 Slot 6



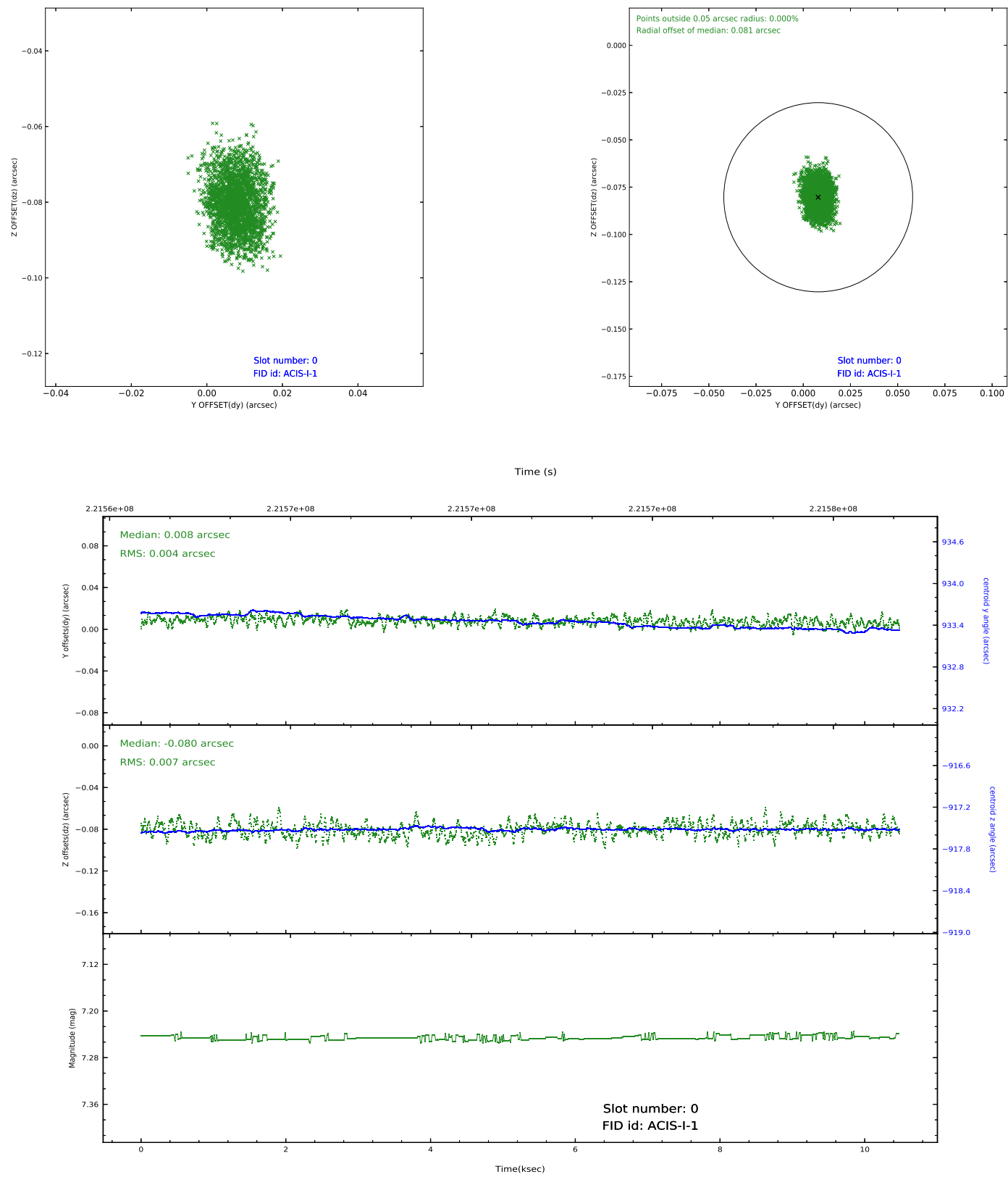


## 2.4.5 Slot 7

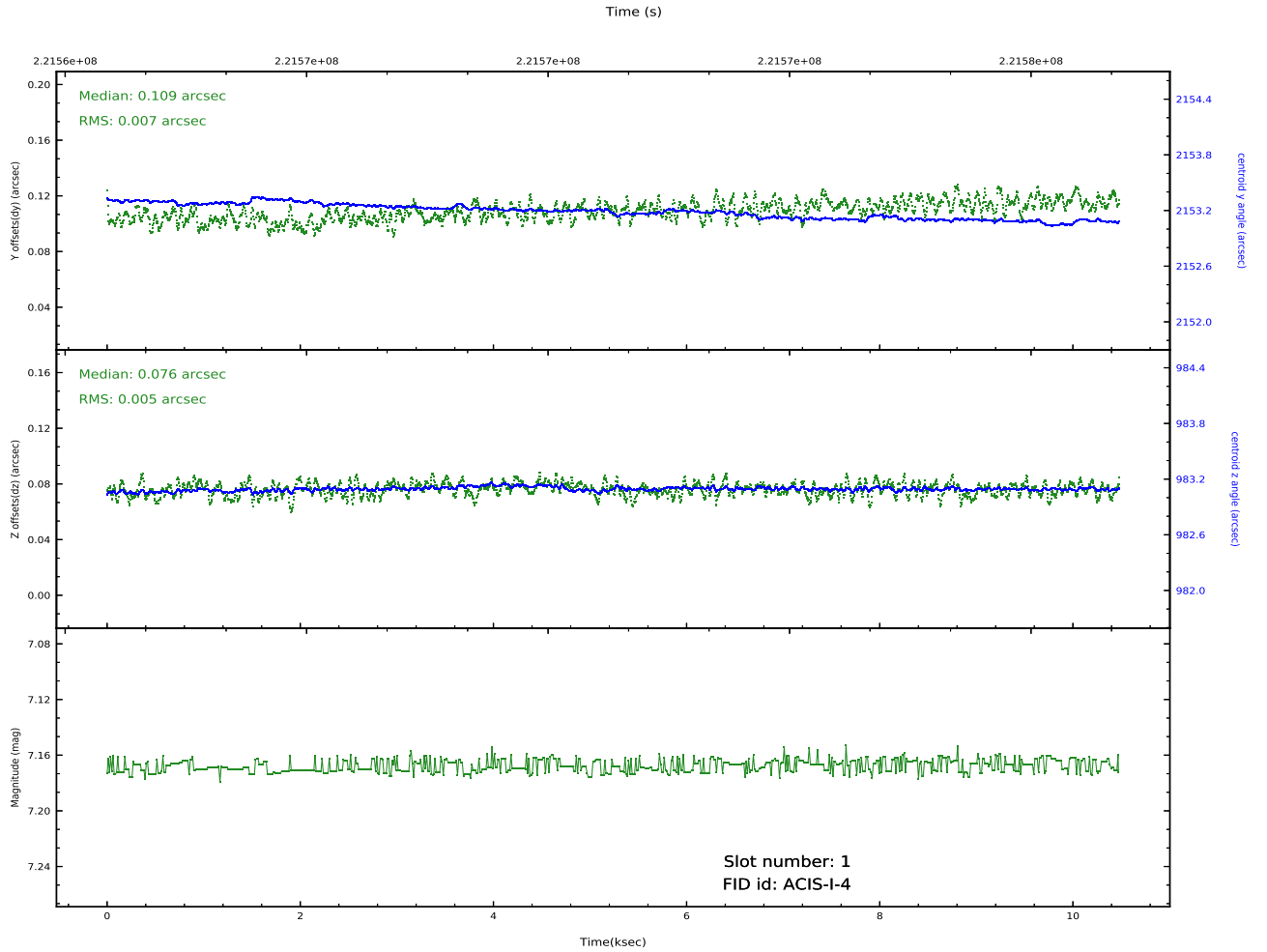
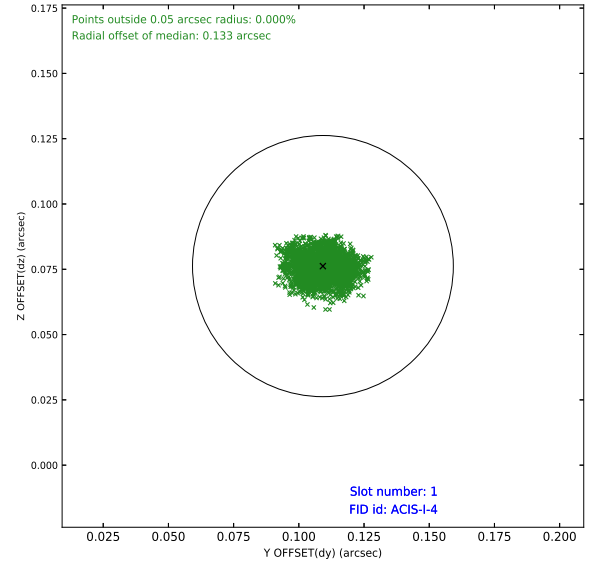
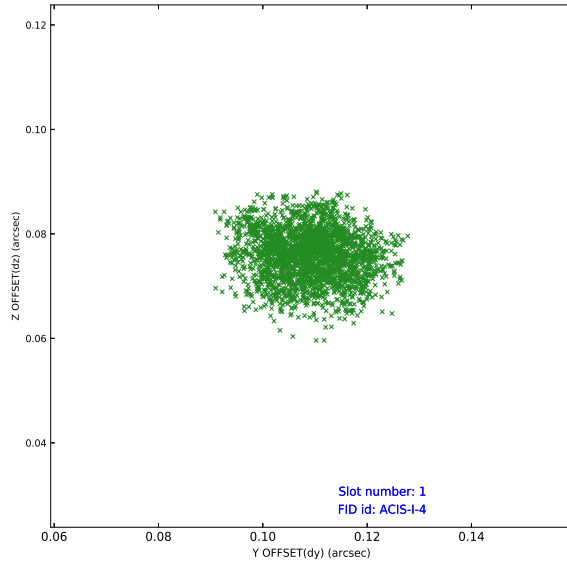


# 2.5 FID Slots

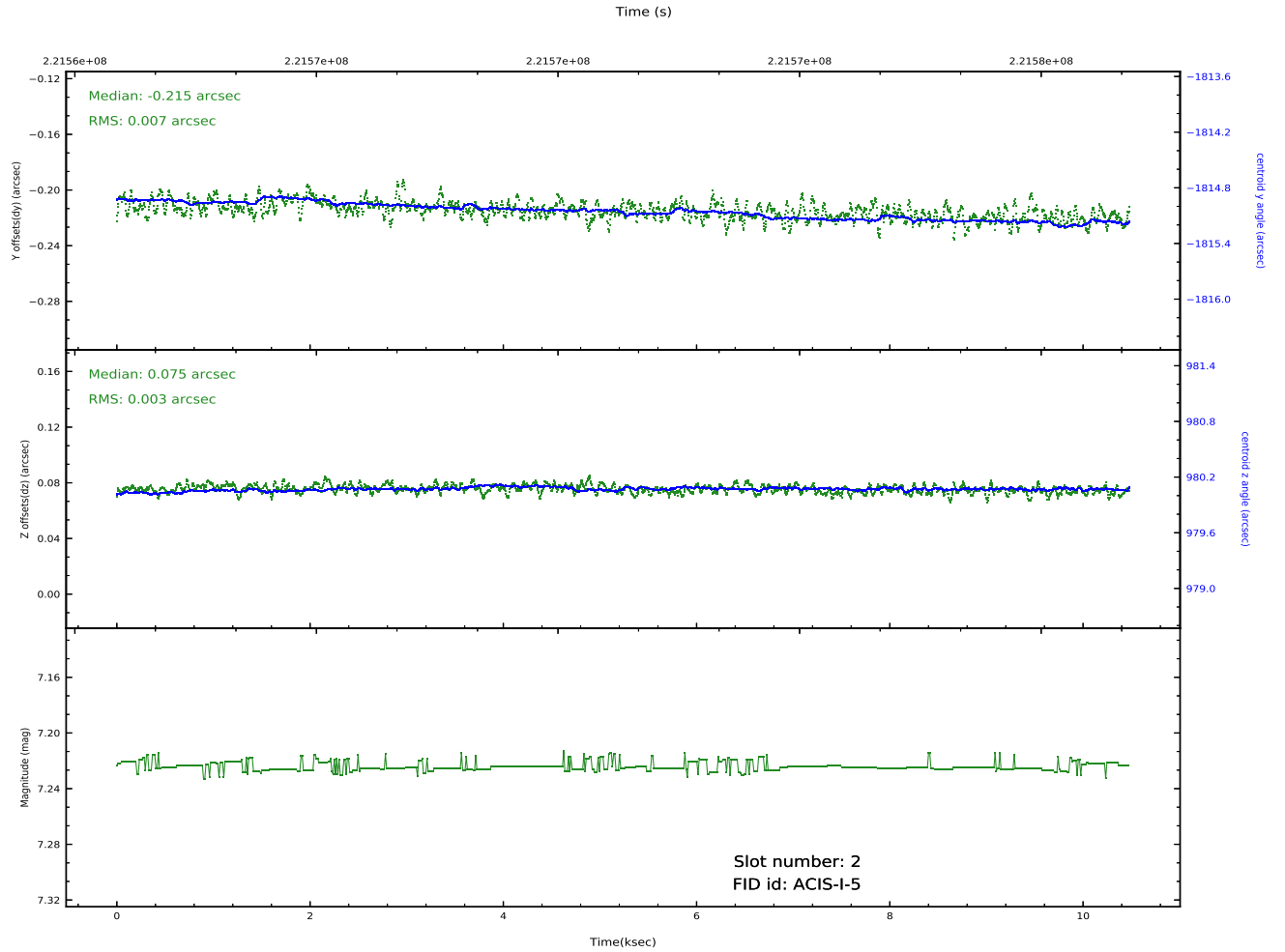
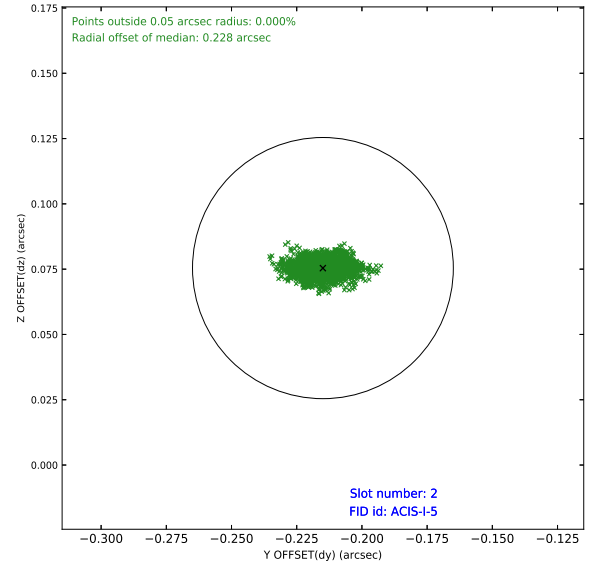
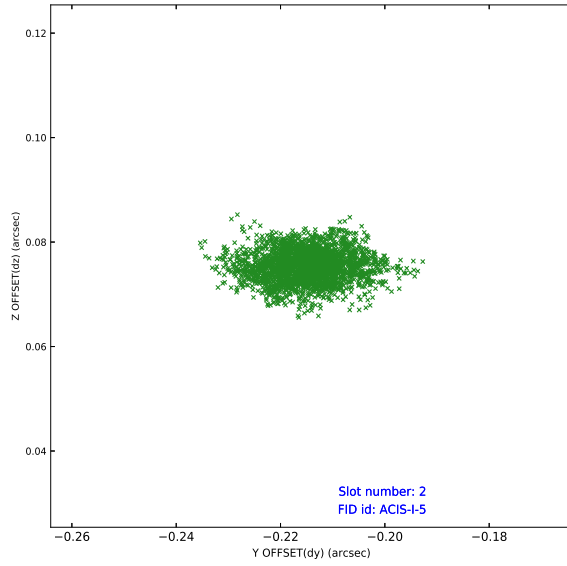
## 2.5.1 Slot 0



## 2.5.2 Slot 1



## 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.07189

### A.2 Comments