

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5005 - L2 Version 4  
Chandra X-Ray Center

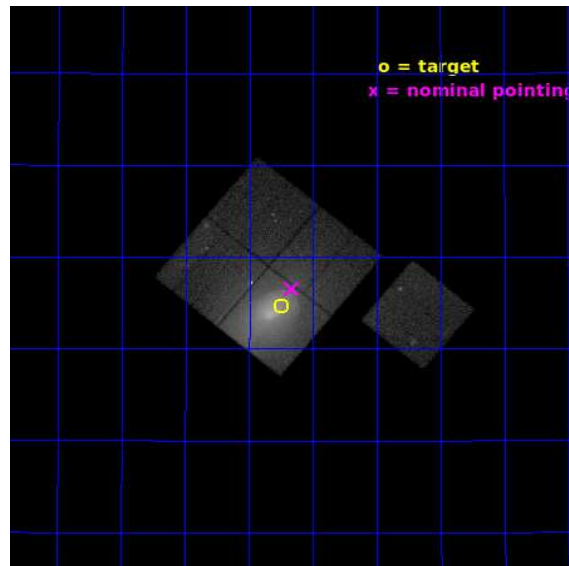
L2 Processing Date : Oct 7 2020

## 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

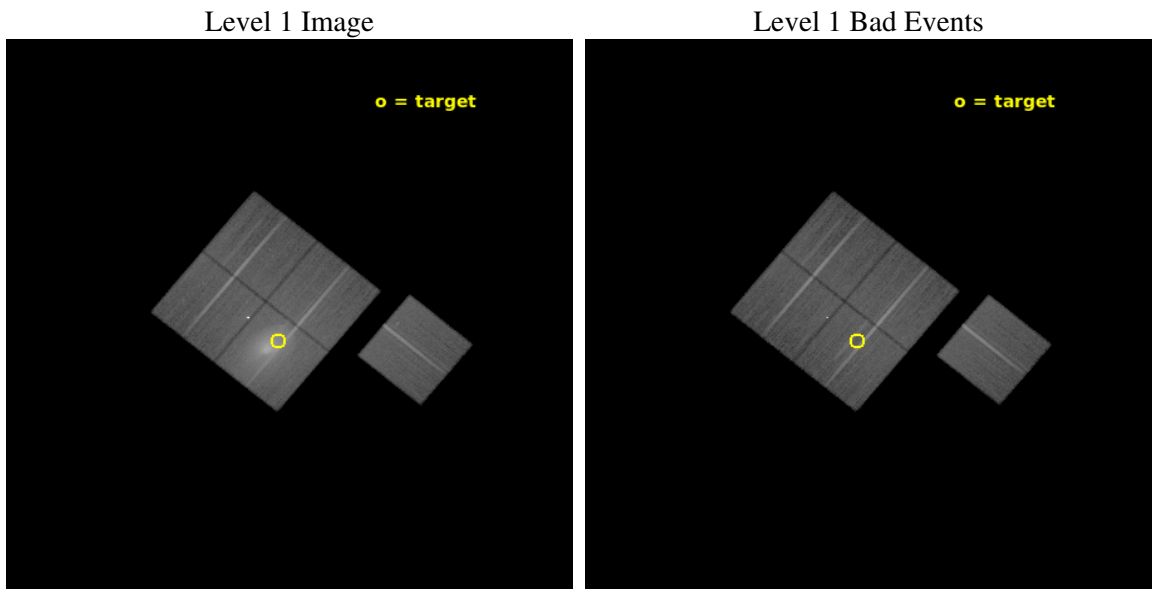
seq_num	800448	Sequence number
obs_id	5005	Observation id
title	Cluster studies: Determination of H0/q0	Proposal title
observer	DR. LEON VANSPEYBROECK	Principal investigator
object	A2142	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	239.562917	Observer's specified target RA [deg]
dec_targ	27.245278	Observer's specified target Dec [deg]
ra_nom	239.54137446029	Nominal RA [deg]
dec_nom	27.275898701989	Nominal Dec [deg]
roll_nom	129.41337257949	Nominal Roll [deg]
revision	4	Processing version of data
ontime	45154.517952651	Sum of GTIs [s]
livetime	44564.540933327	Livetime [s]
ontime0	45154.517982423	Sum of GTIs [s]
ontime1	45154.517942637	Sum of GTIs [s]
ontime2	45157.658913016	Sum of GTIs [s]
ontime3	45154.517952651	Sum of GTIs [s]
ontime6	45154.517912805	Sum of GTIs [s]
l2events	486006	Number of level 2 events



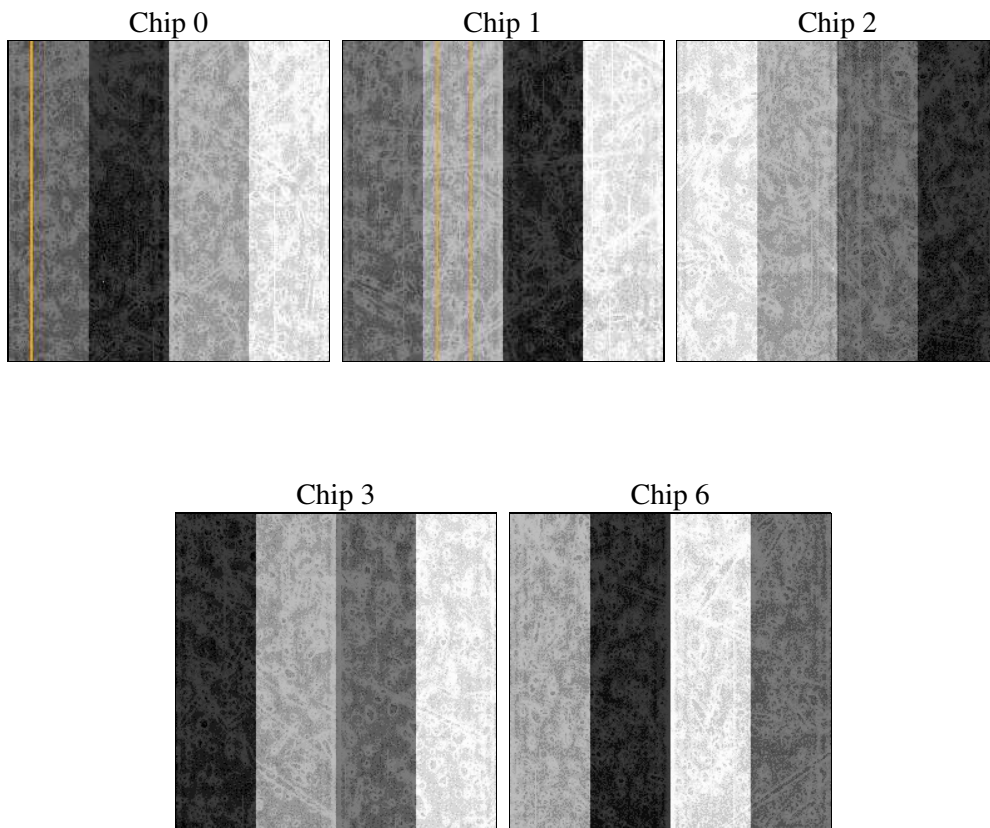
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	2	Obi number	sched_exp_time	45000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	45154.517952651	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime0	45154.517982423	Sum of GTIs [s]
date	2020-10-07T18:59:31	Date and time of file creation	ontime1	45154.517942637	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	45157.658913016	Sum of GTIs [s]
			ontime3	45154.517952651	Sum of GTIs [s]
			ontime6	45154.517912805	Sum of GTIs [s]
			l1events	1798494	Number of level 1 events

### 2.1.4 Events

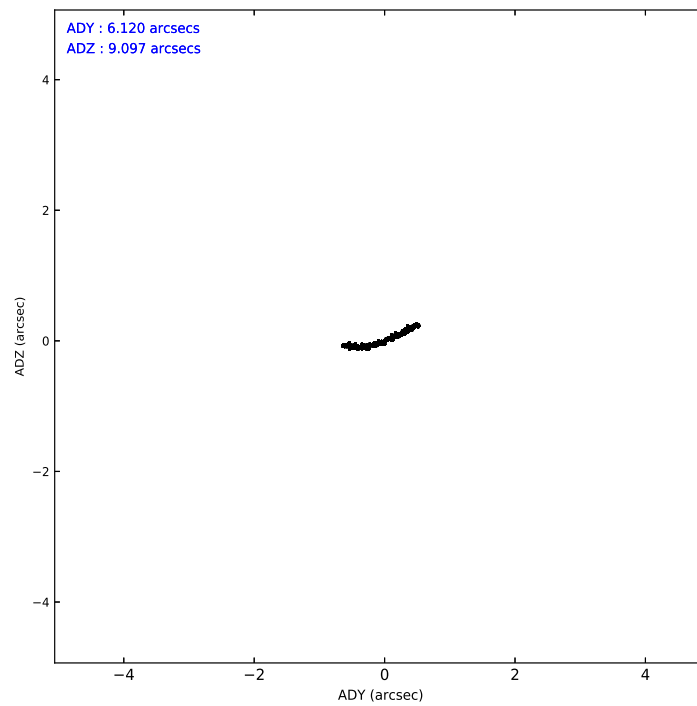
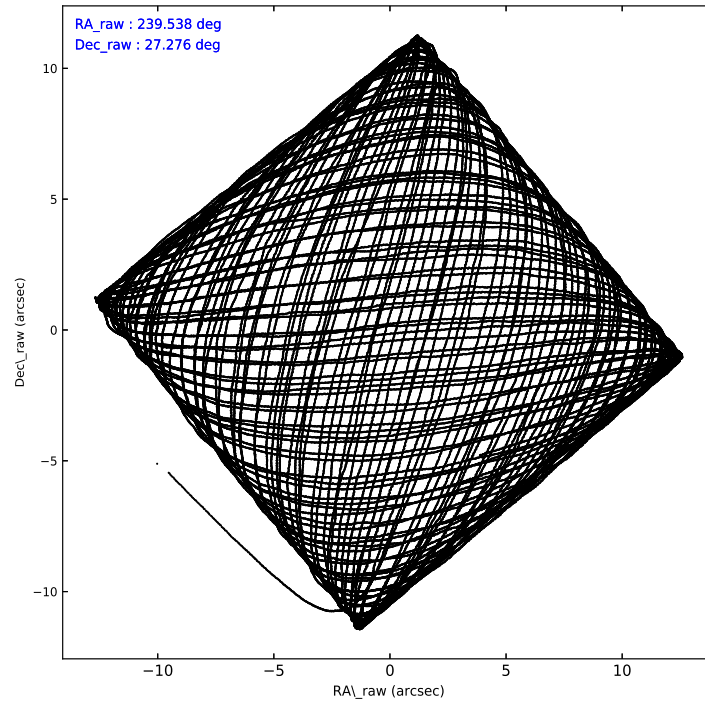
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	271019	322198	318374	596201	290702
rejected events	236586	241262	267383	267521	258857
rejected %	87%	74%	83%	44%	89%

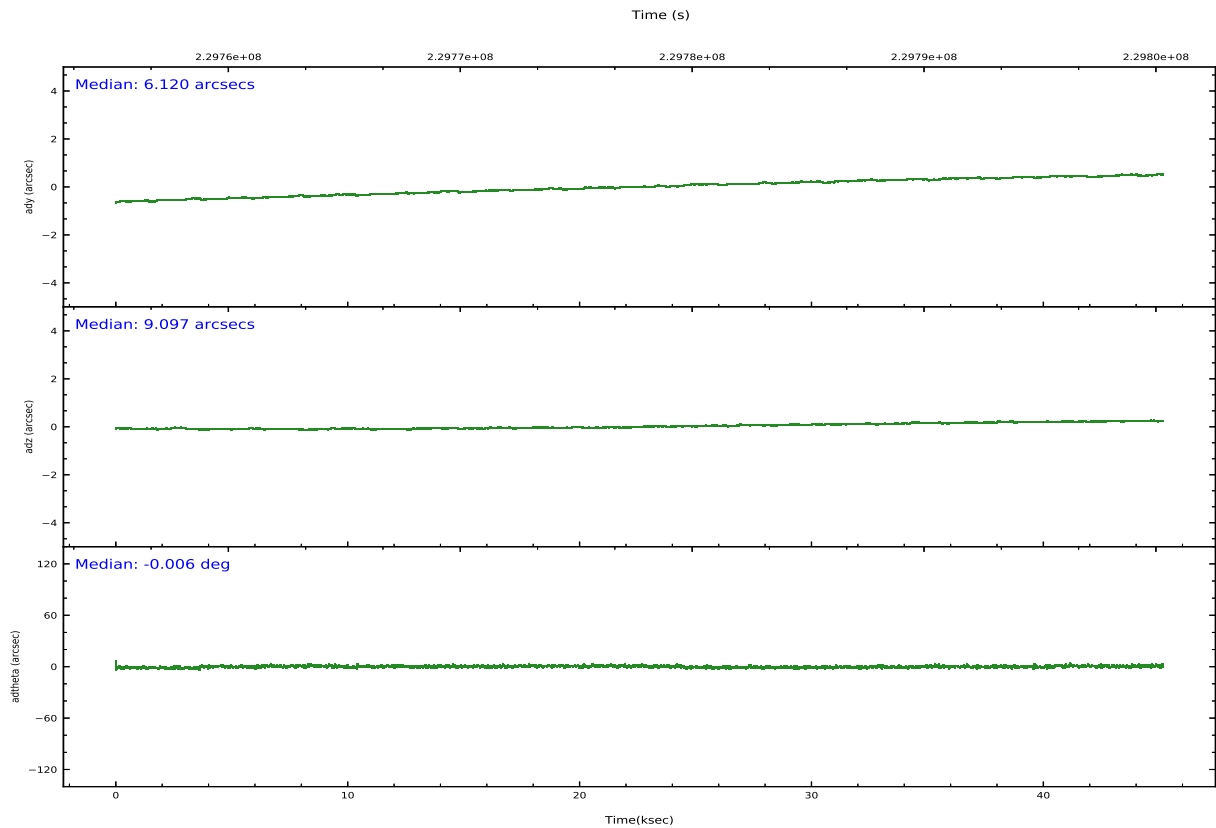
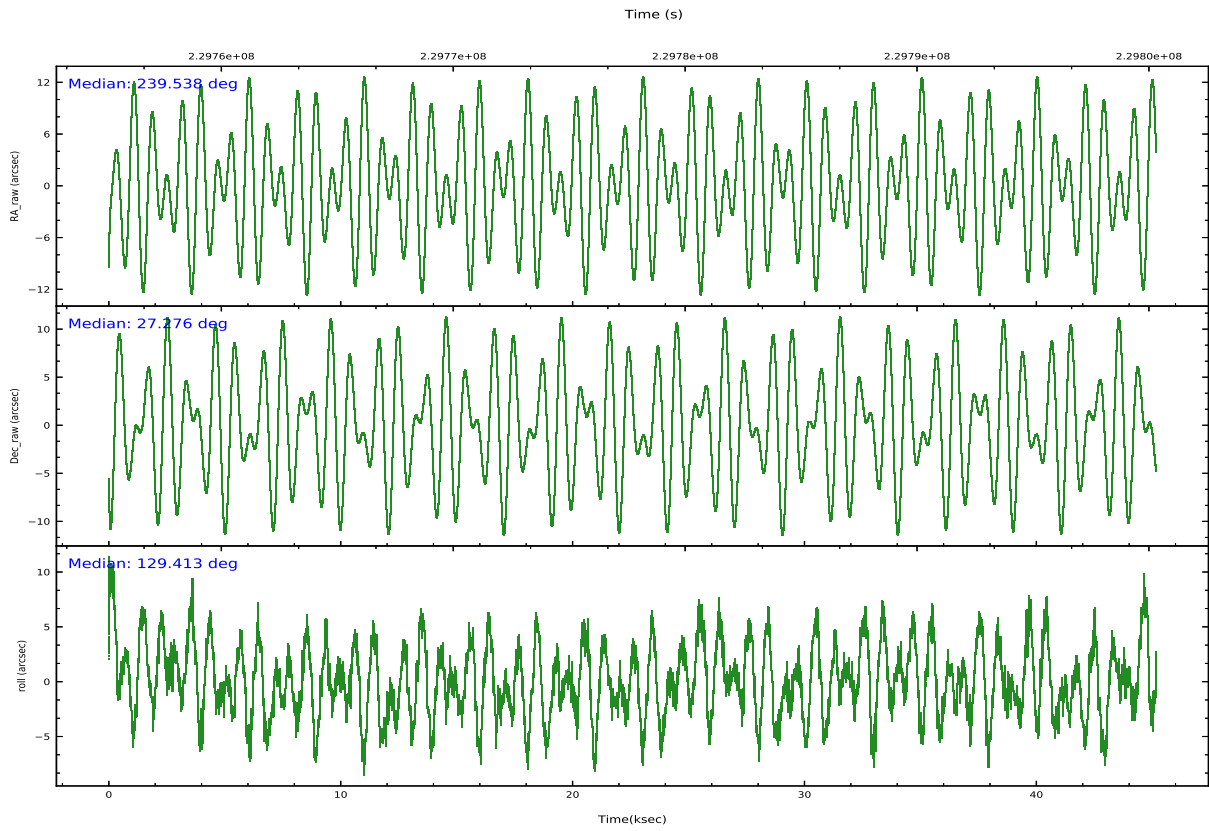
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	14774	48702	28639	254253	12241
	5%	15%	8%	42%	4%
grade 1 events	195	2300	270	1433	125
	0%	0%	0%	0%	0%
grade 2 events	7149	12930	8970	36039	6530
	2%	4%	2%	6%	2%
grade 3 events	3517	5608	3765	12632	3435
	1%	1%	1%	2%	1%
grade 4 events	3234	5521	3775	12658	3287
	1%	1%	1%	2%	1%
grade 5 events	10221	11833	9494	12395	11391
	3%	3%	2%	2%	3%
grade 6 events	5786	8236	5888	13365	6388
	2%	2%	1%	2%	2%
grade 7 events	226143	227068	257573	253426	247305
	83%	70%	80%	42%	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	239.566616	239.54137446029	Subarray requested	NONE	NONE
[deg] Pointing Dec	27.266025	27.275898701989	Alternating exposures requested	N	N
[deg] Pointing Roll	129.191199	129.41337257949	[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	-224.592463	-224.5962429424501			
[mm] SIM translation stage offset	-9	-8.996210060479569			
[s] Observation start time (MET)	229755310.184000	229754309.37414			
Observation start date	2005-04-13T04:54:06	2005-04-13T04:38:29			
[s] Observation end time (MET)	229800310.184000	229800769.55125			
Observation end date	2005-04-13T17:24:06	2005-04-13T17:32:49			
Read mode	TIMED	TIMED			

## 2.3 Aspect



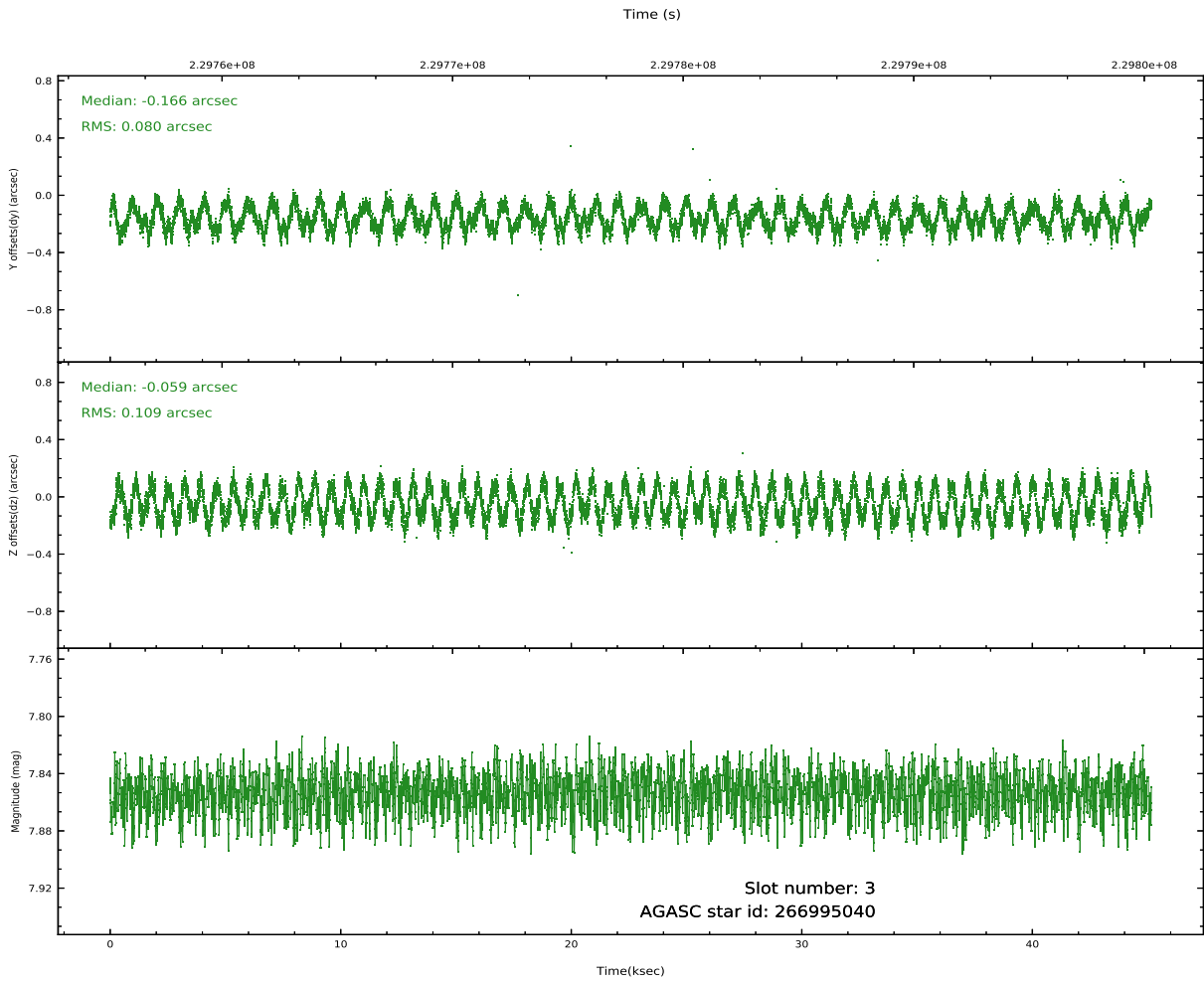
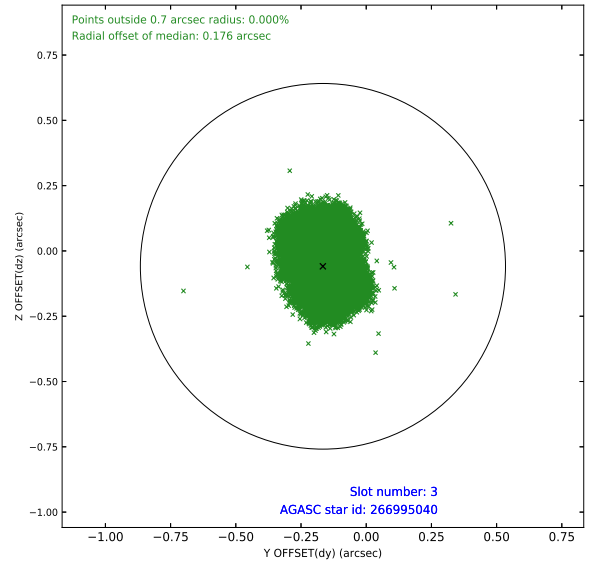
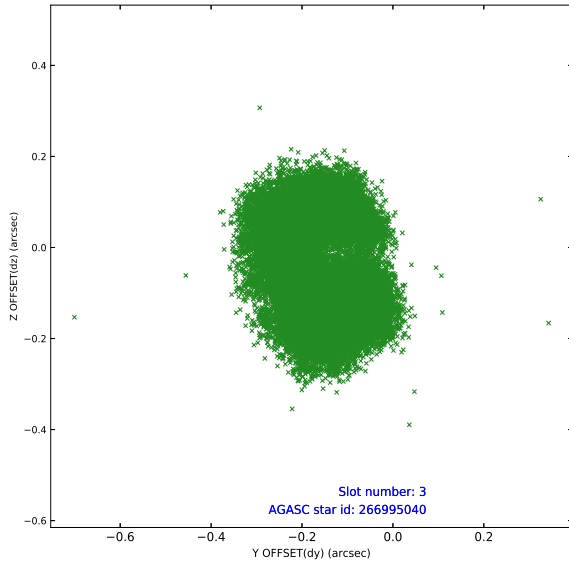


### Slot Statistics

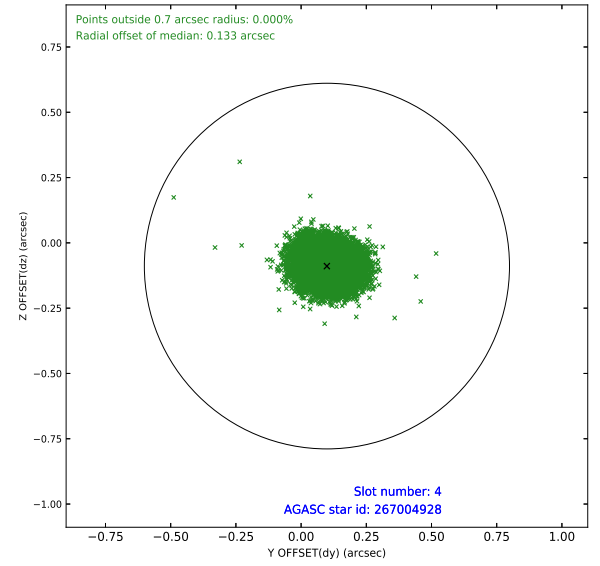
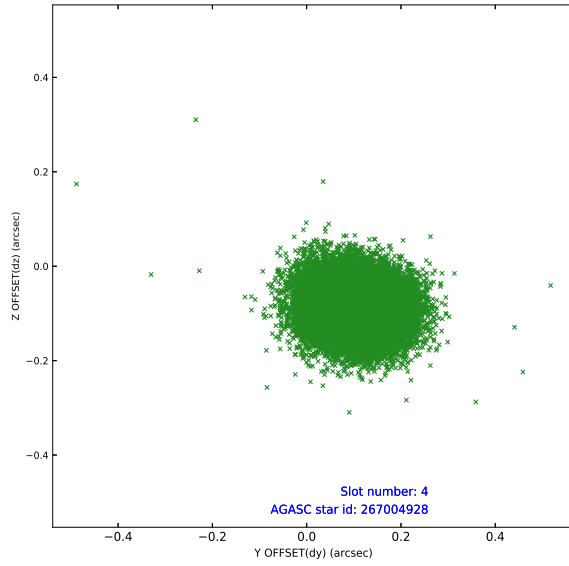
slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.22	11015	1.000	0.066	-0.117	0.013	0.021	0.000000	0.000000	933.58	-1017
1	FID		ACIS-I-2	7.17	11016	1.000	-0.226	0.015	0.008	0.013	0.000000	0.000000	-761.28	-1022
2	FID		ACIS-I-4	7.14	11014	1.000	0.062	0.168	0.009	0.015	0.000000	0.000000	2152.81	883
3	GUIDE	used	266995040	7.85	22025	1.000	-0.166	-0.059	0.150	0.204	239.014769	27.051479	522.27	1857
4	GUIDE	used	267004928	9.07	22021	1.000	0.099	-0.089	0.076	0.126	239.711277	26.663193	-1975.61	1010
5	GUIDE	used	267137048	7.87	22031	1.000	0.081	0.081	0.066	0.102	240.280451	27.143889	-1780.32	-1498
6	GUIDE	used	267006816	9.93	21868	1.000	0.011	-0.134	0.201	0.308	239.280899	27.325938	745.52	571
7	GUIDE	used	267139016	9.16	22019	1.000	-0.012	0.182	0.125	0.190	240.326918	27.469213	-961.50	-2348

## 2.4 Star Slots

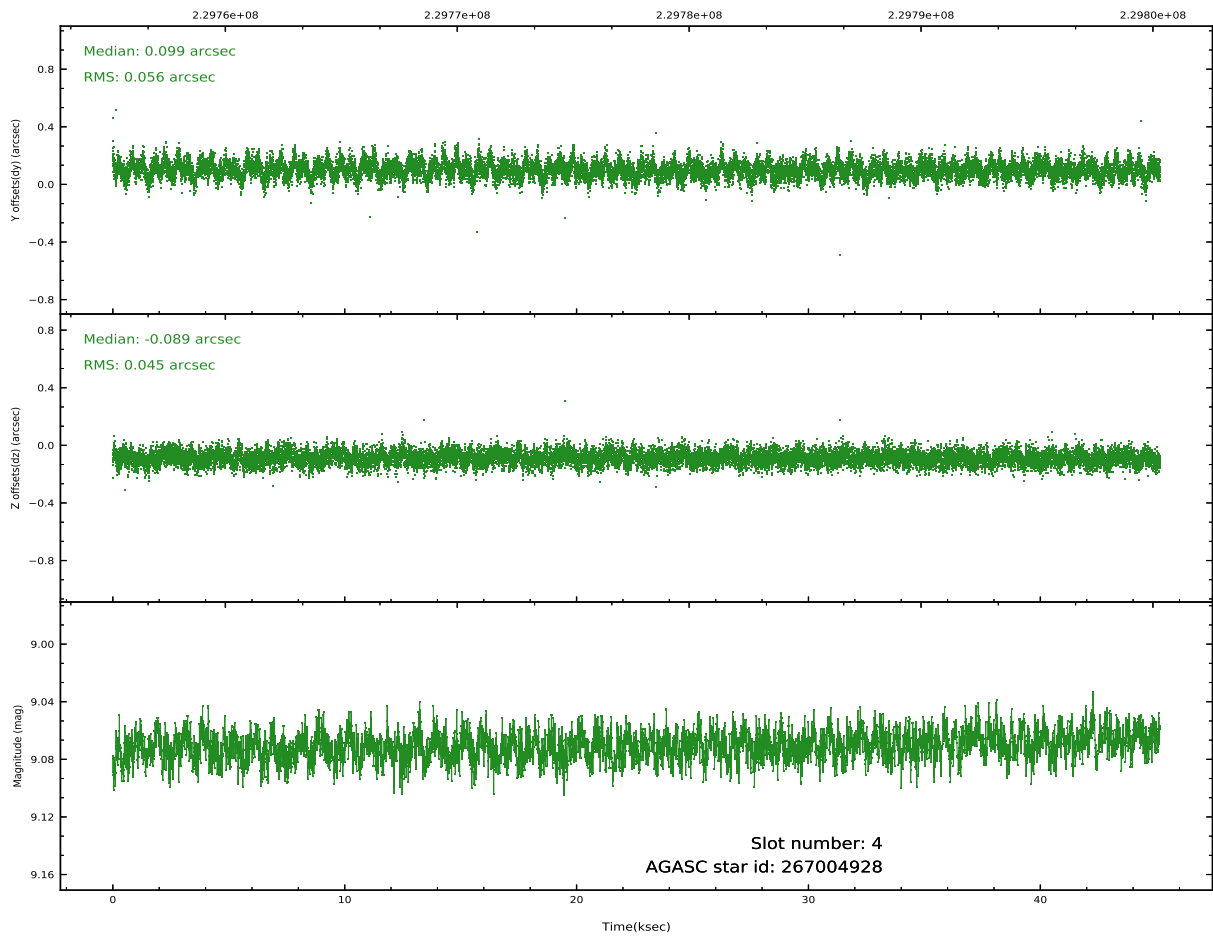
### 2.4.1 Slot 3



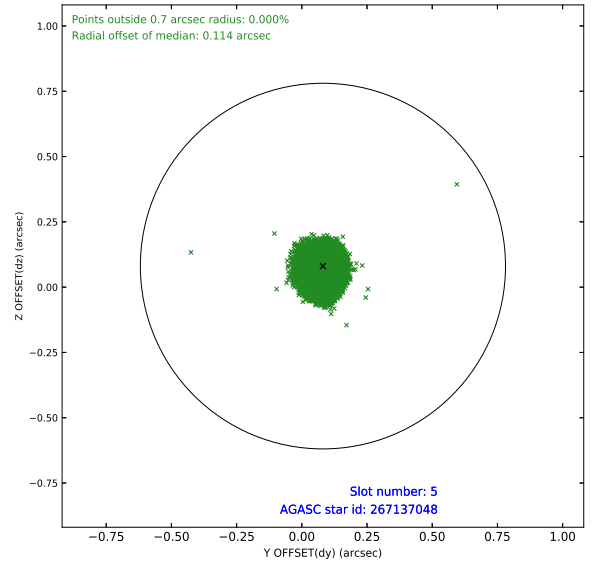
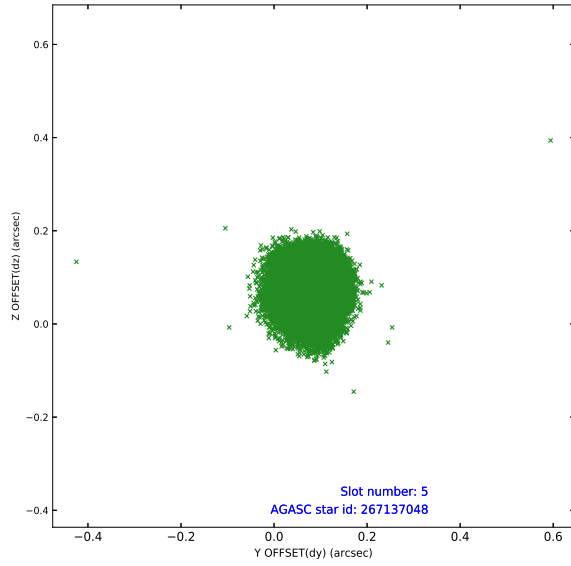
## 2.4.2 Slot 4



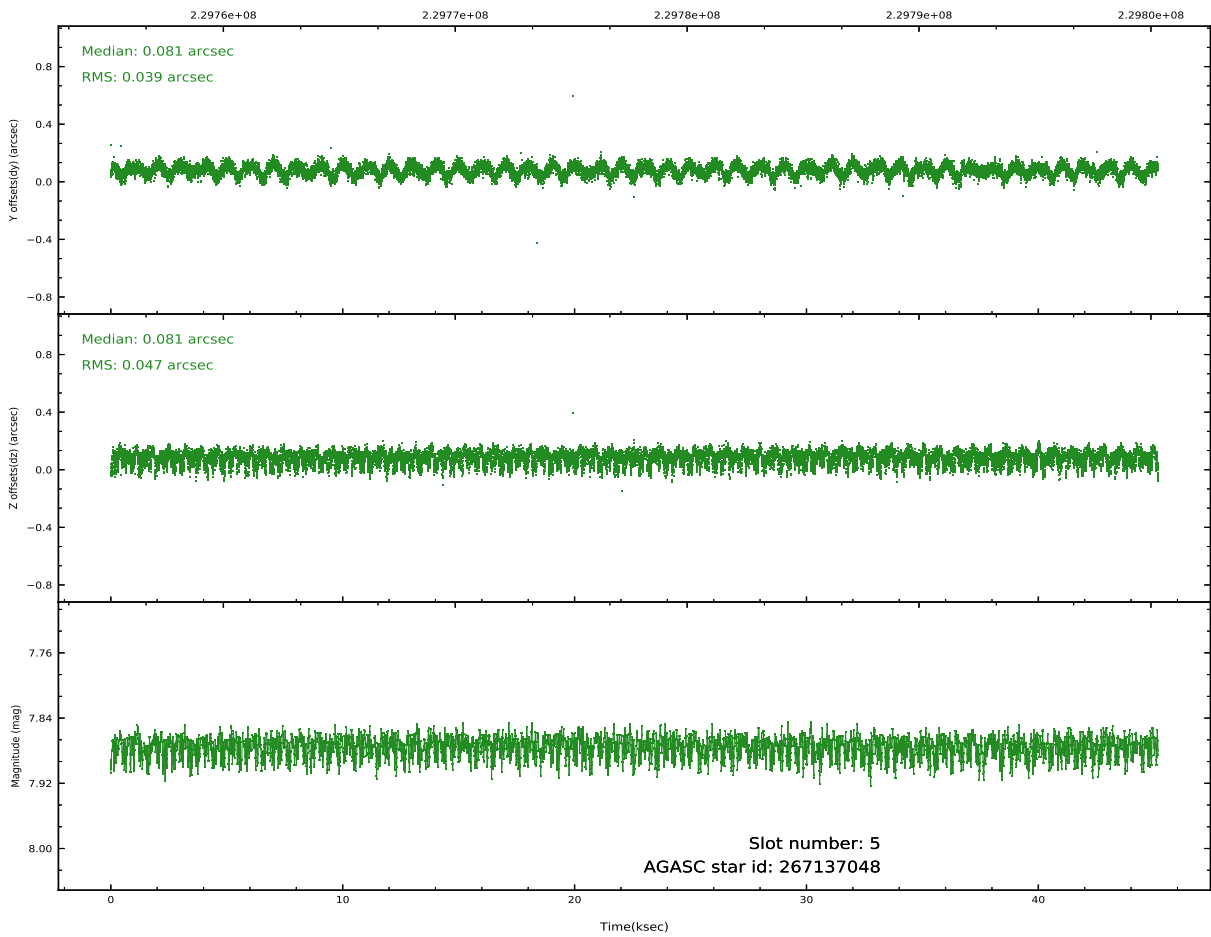
Time (s)



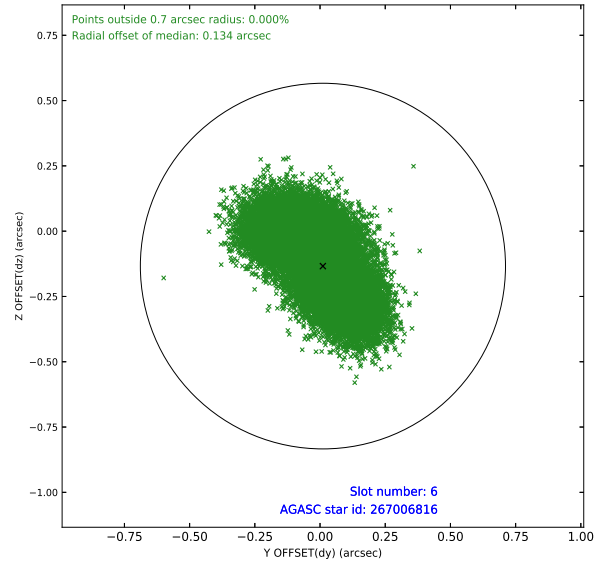
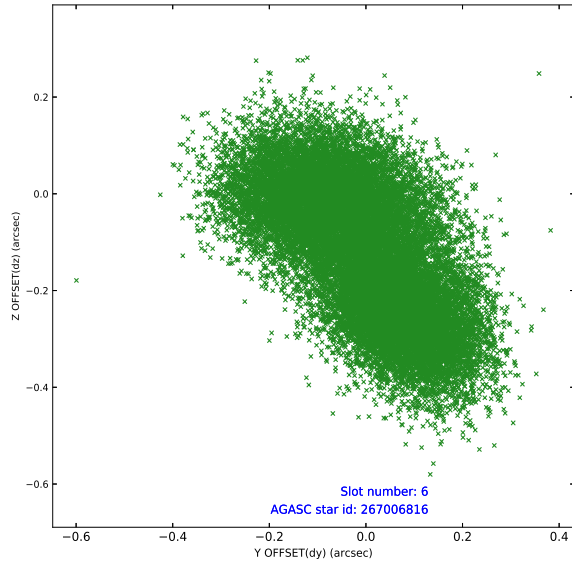
### 2.4.3 Slot 5



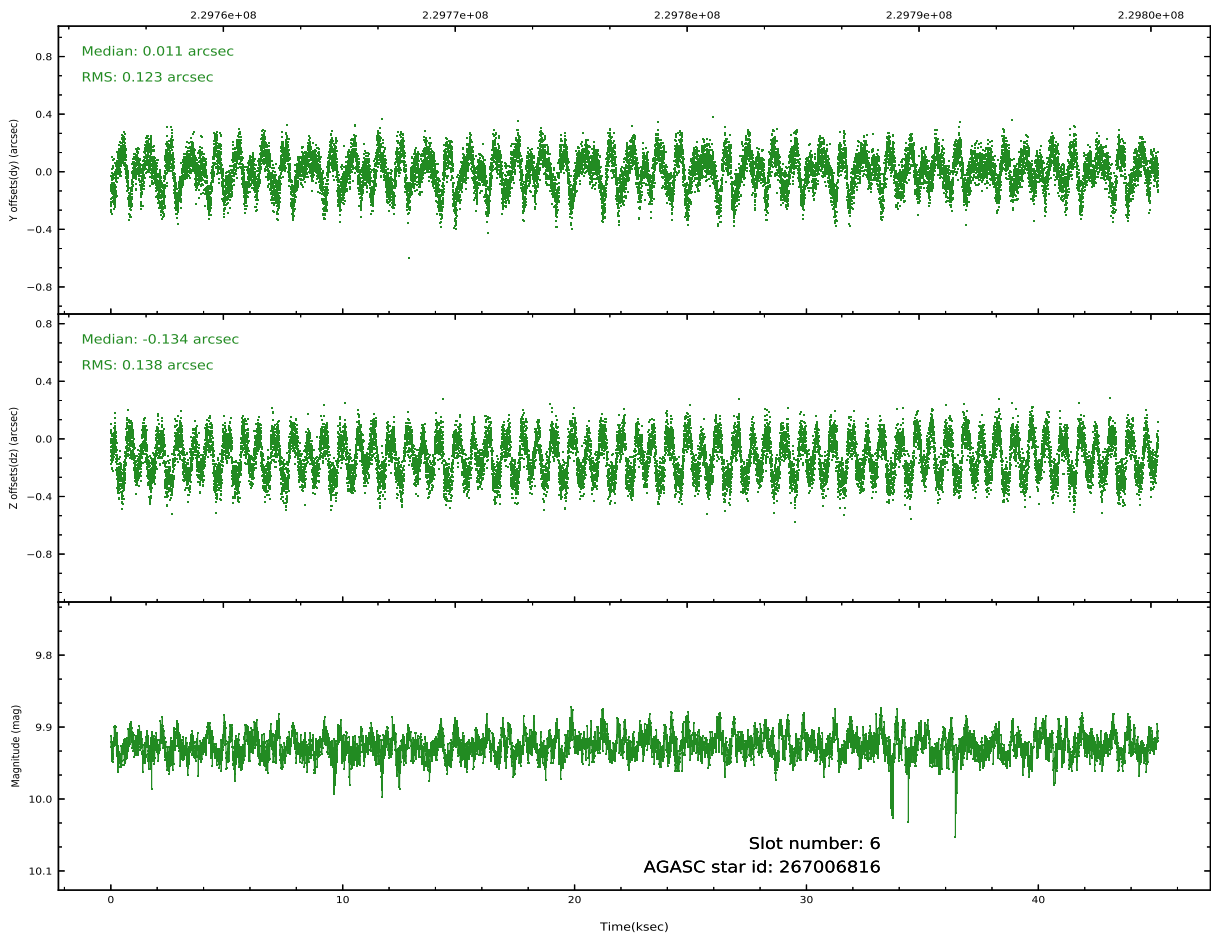
Time (s)



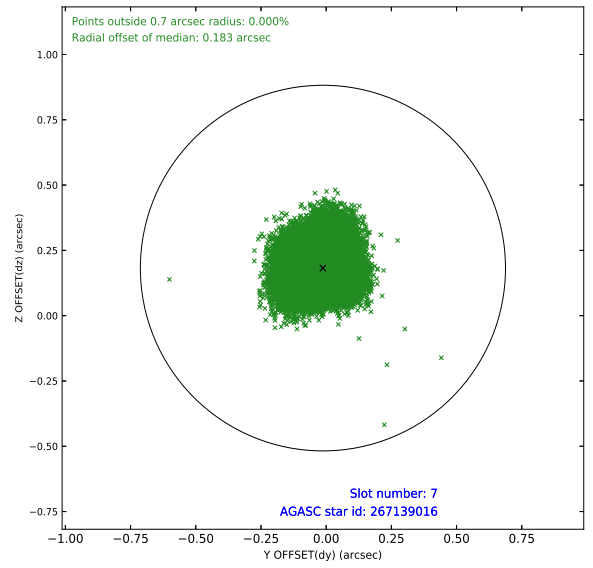
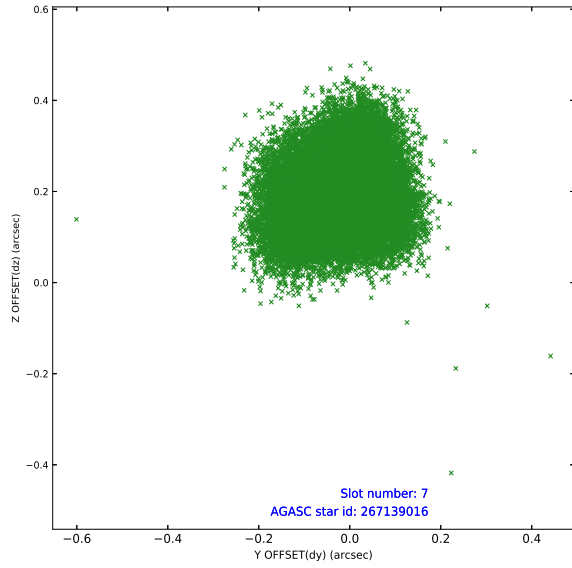
## 2.4.4 Slot 6



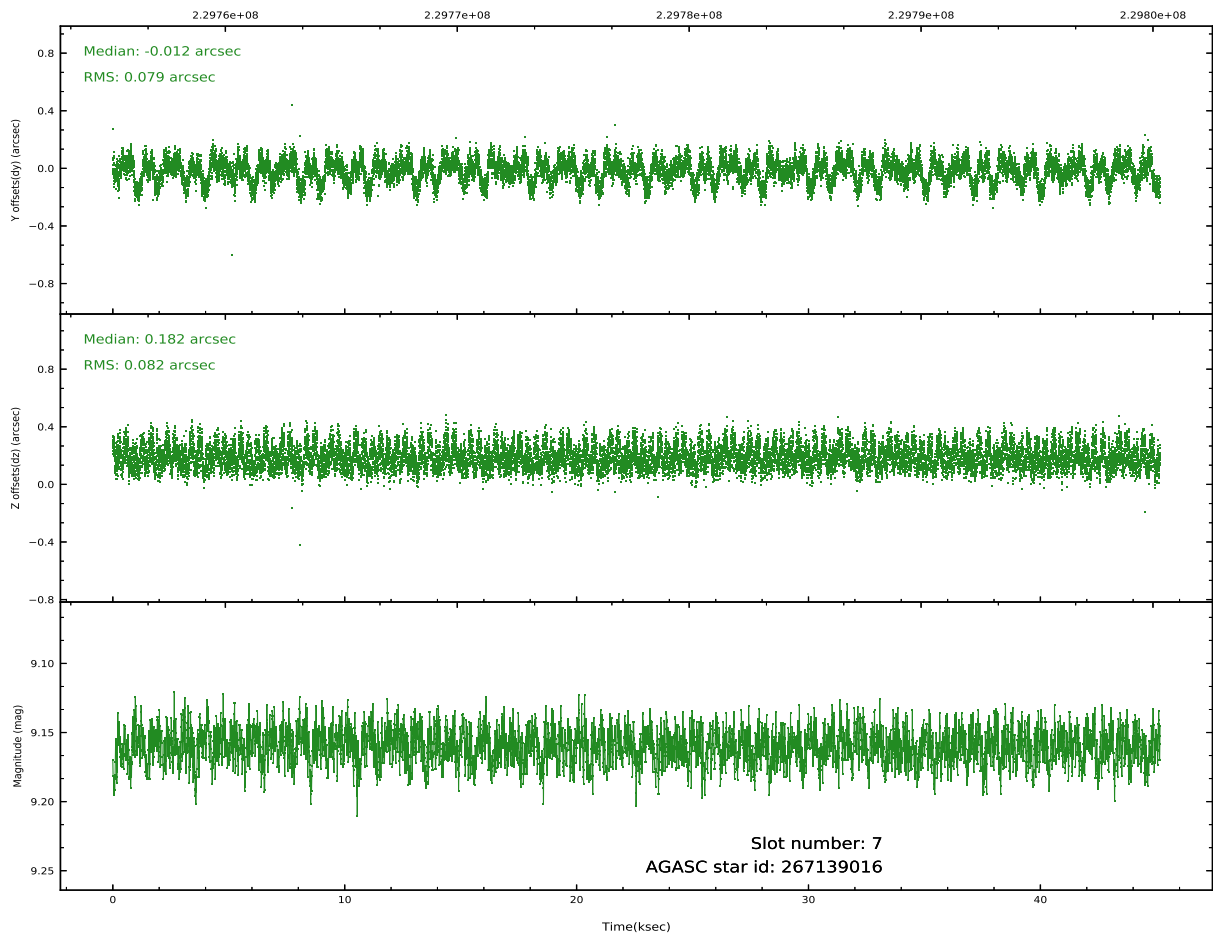
Time (s)



## 2.4.5 Slot 7

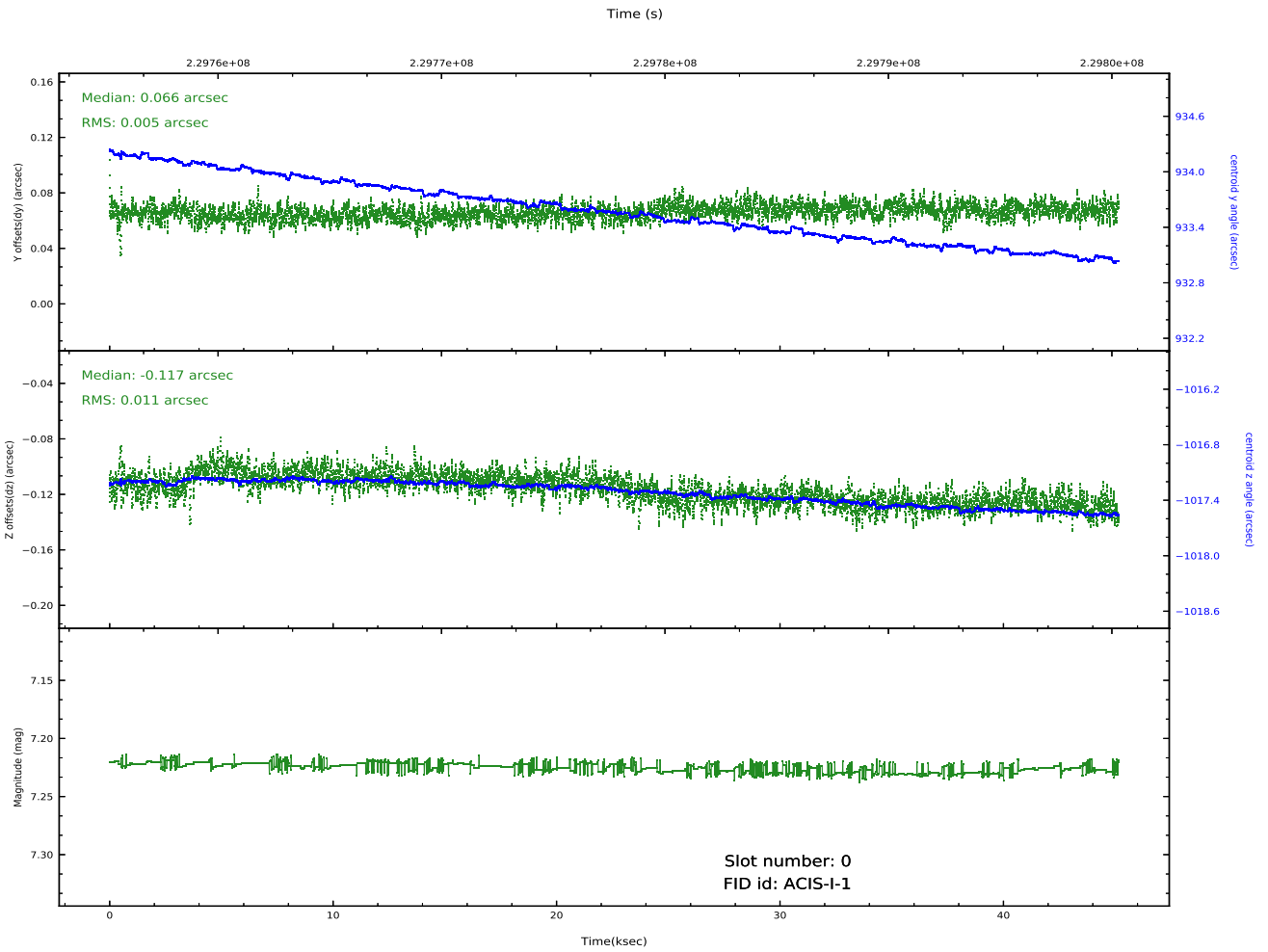
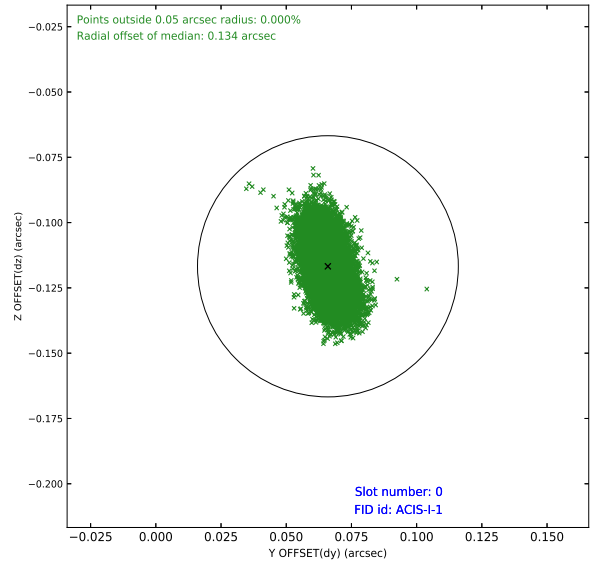
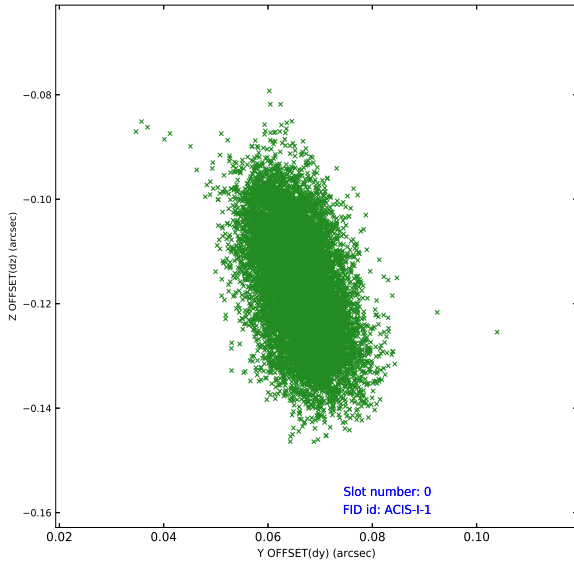


Time (s)

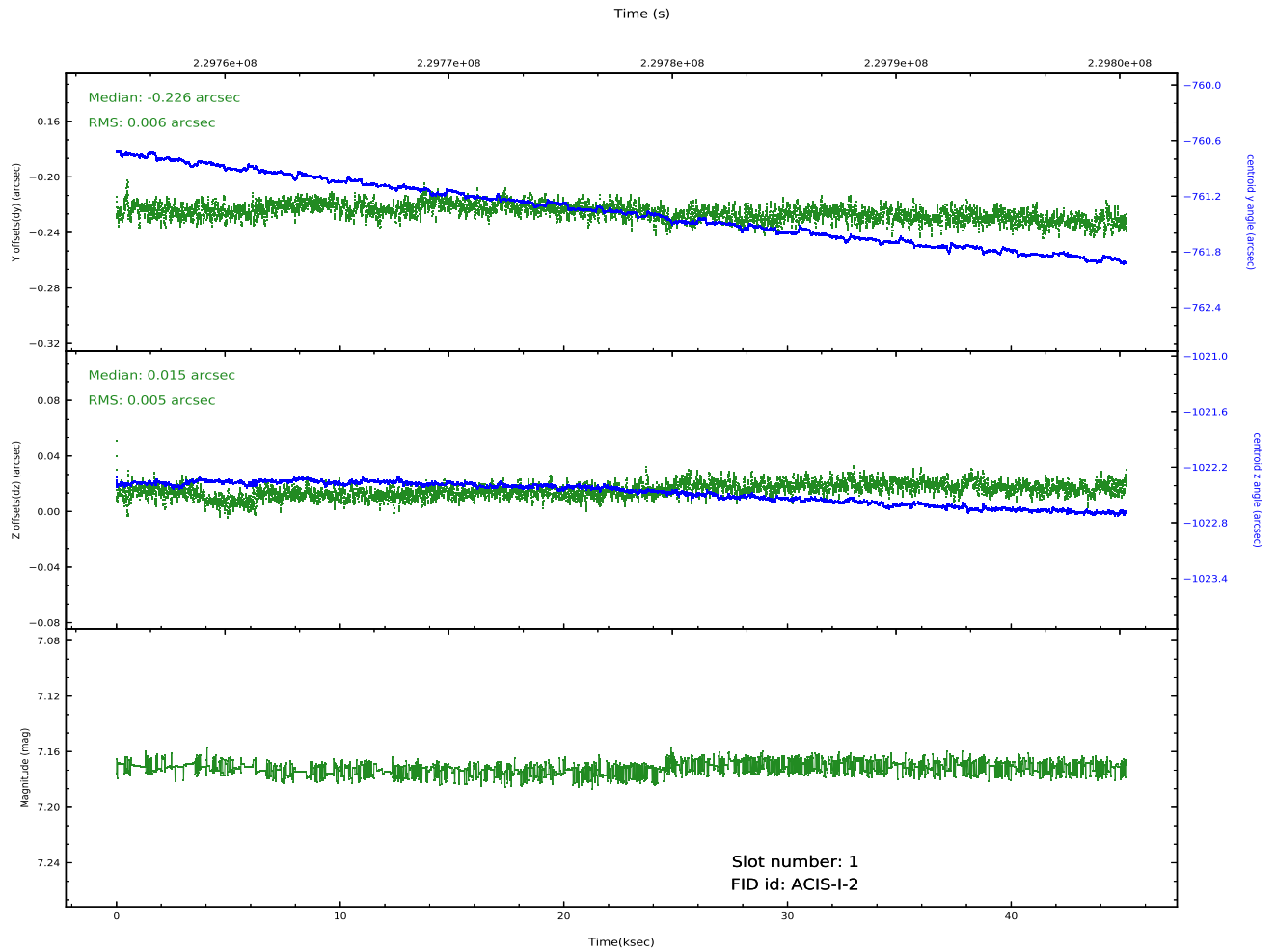
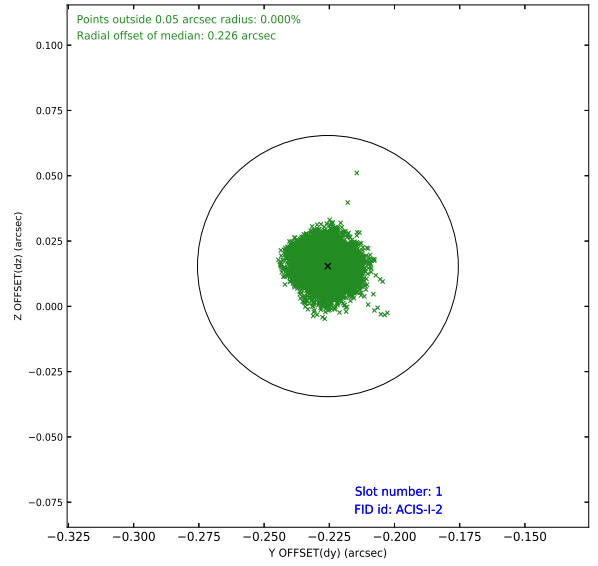
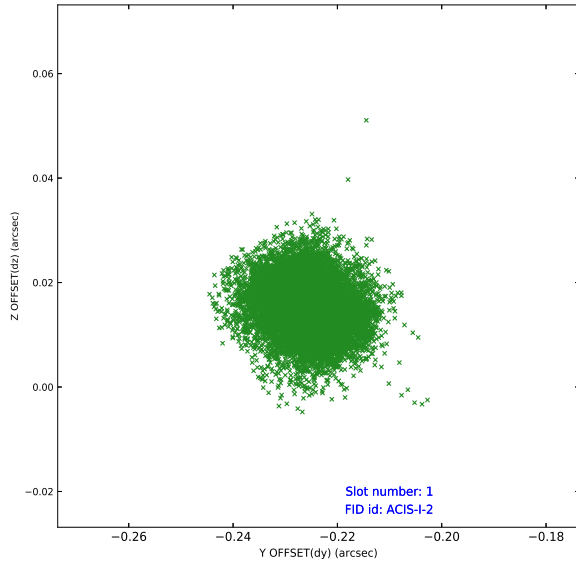


## 2.5 FID Slots

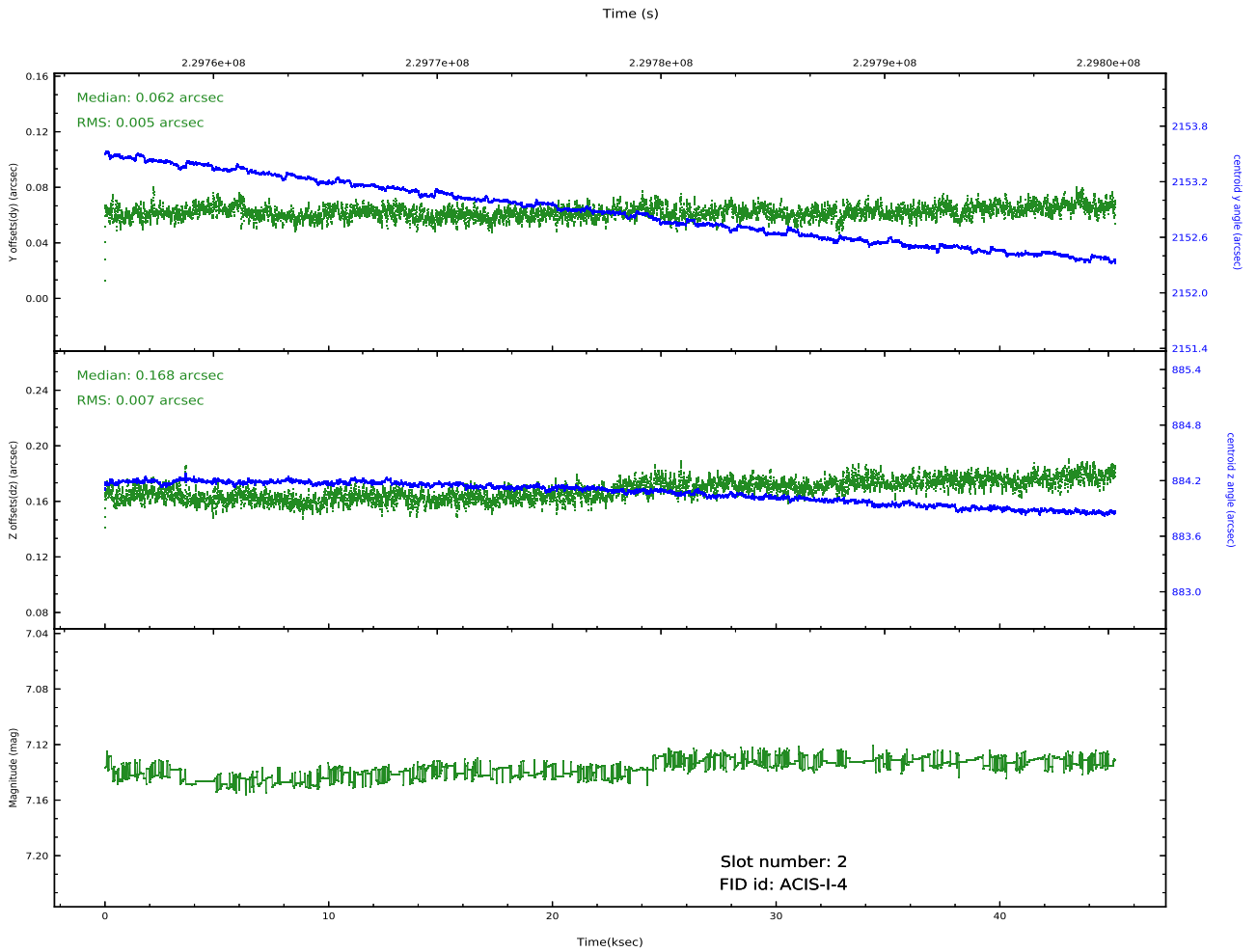
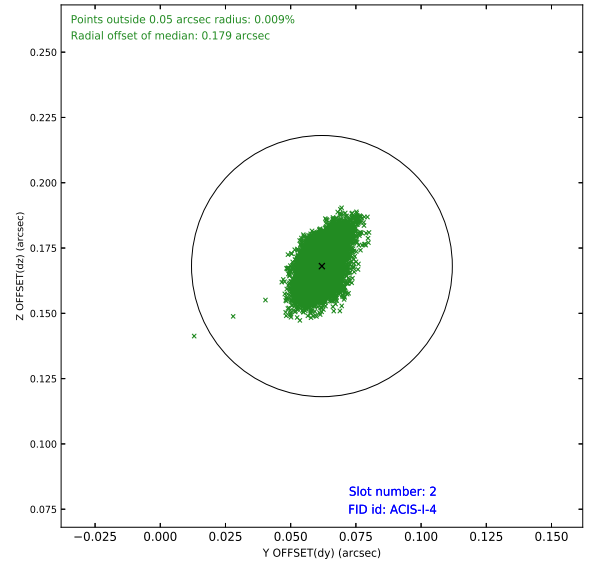
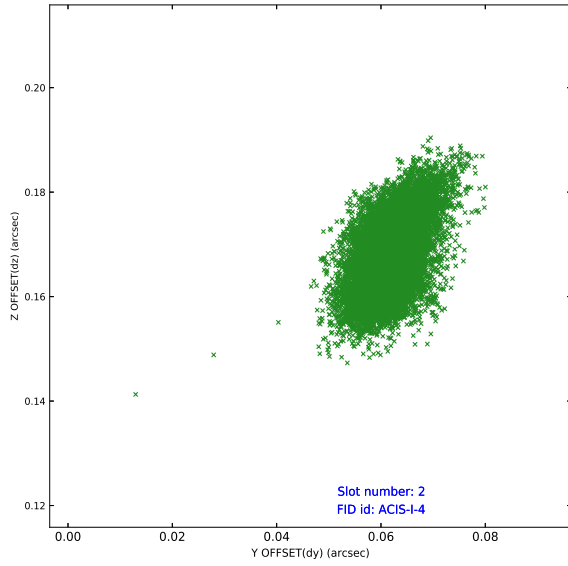
### 2.5.1 Slot 0



## 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)	2020.10.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	45.15451

## A.2 Comments