

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5192 - L2 Version 4  
Chandra X-Ray Center

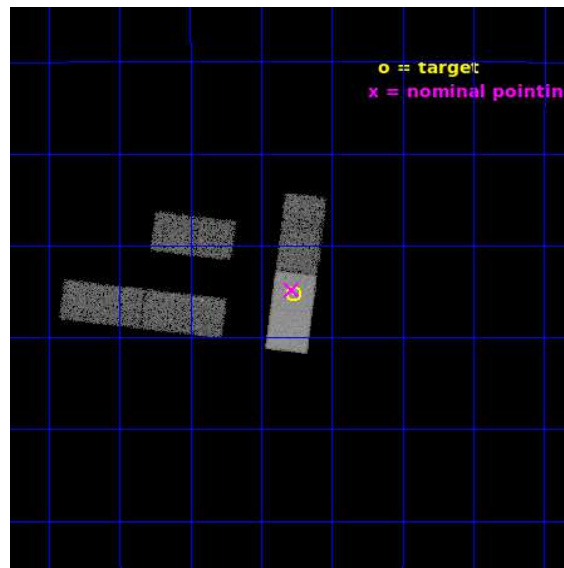
L2 Processing Date : Sep 29 2020

## 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

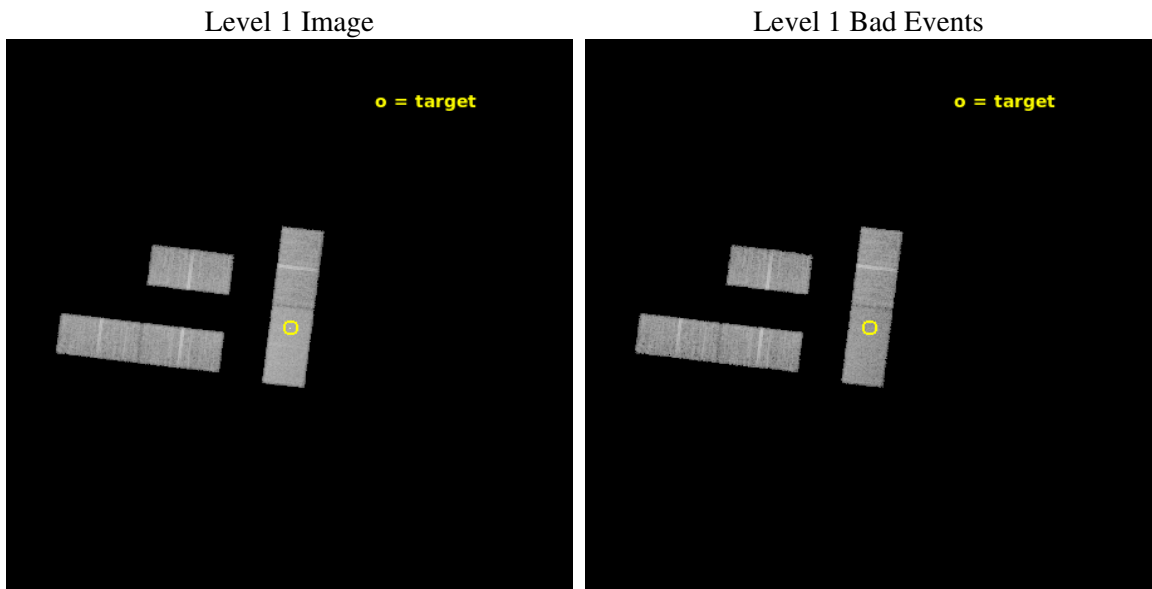
seq_num	701006	Sequence number
obs_id	5192	Observation id
title	Alternate - A STUDY OF QUASAR EVOLUTION WITH THE AID OF LENSING	Pr
observer	Gordon Garmire	Principal investigator
object	QSO B0142-100	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	26.316667	Observer's specified target RA [deg]
dec_targ	-9.754167	Observer's specified target Dec [deg]
ra_nom	26.320544616309	Nominal RA [deg]
dec_nom	-9.7468234468703	Nominal Dec [deg]
roll_nom	97.017684614136	Nominal Roll [deg]
revision	4	Processing version of data
ontime	13656.099904239	Sum of GTIs [s]
livetime	13334.196708408	Livetime [s]
ontime1	13656.099904239	Sum of GTIs [s]
ontime2	13656.099904239	Sum of GTIs [s]
ontime3	13656.099904239	Sum of GTIs [s]
ontime6	13656.099904239	Sum of GTIs [s]
ontime7	13656.099904239	Sum of GTIs [s]
l2events	51015	Number of level 2 events



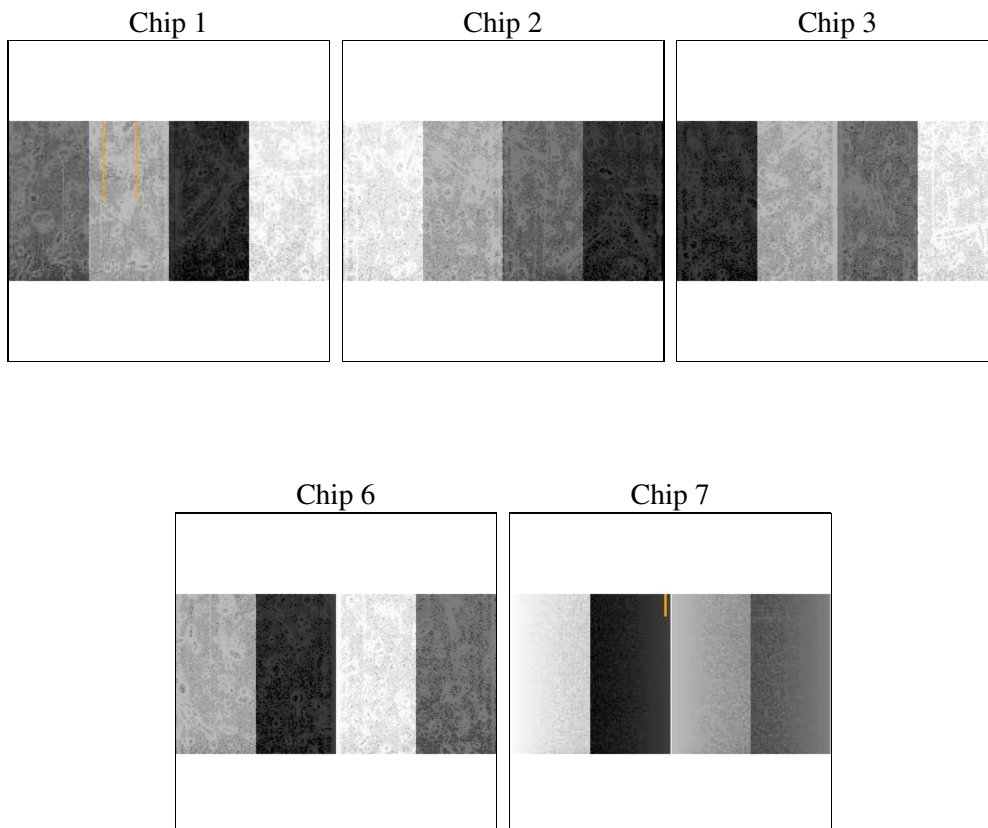
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	13500.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	13656.099904239	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime1	13656.099904239	Sum of GTIs [s]
date	2020-09-29T07:54:16	Date and time of file creation	ontime2	13656.099904239	Sum of GTIs [s]
revision	4	Processing version of data	ontime3	13656.099904239	Sum of GTIs [s]
			ontime6	13656.099904239	Sum of GTIs [s]
			ontime7	13656.099904239	Sum of GTIs [s]
			l1events	298877	Number of level 1 events

### 2.1.4 Events

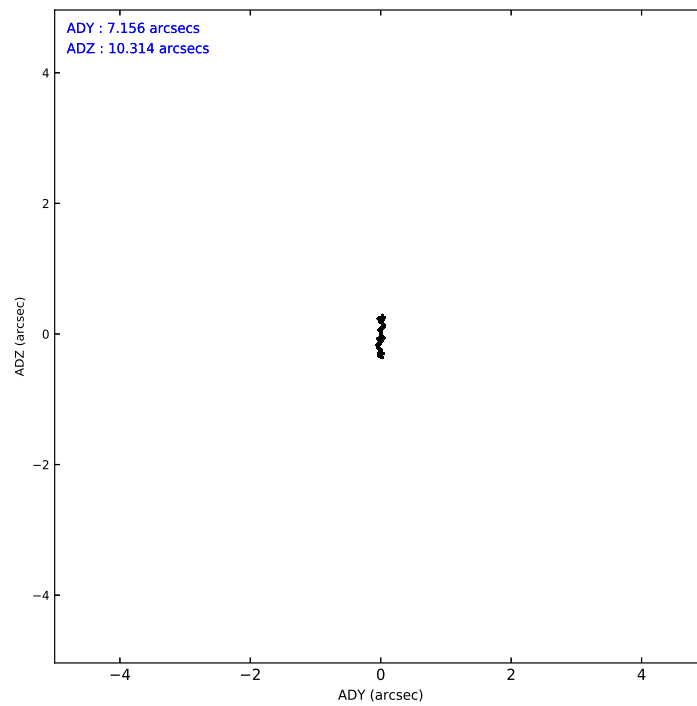
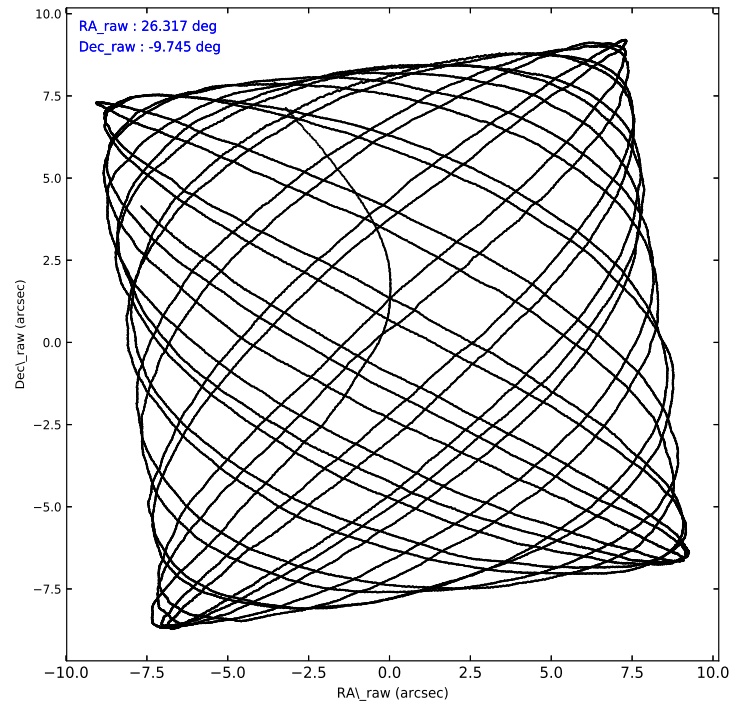
	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	53225	57419	56011	57867	74355
rejected events	46671	51143	49623	51488	44218
rejected %	87%	89%	88%	88%	59%

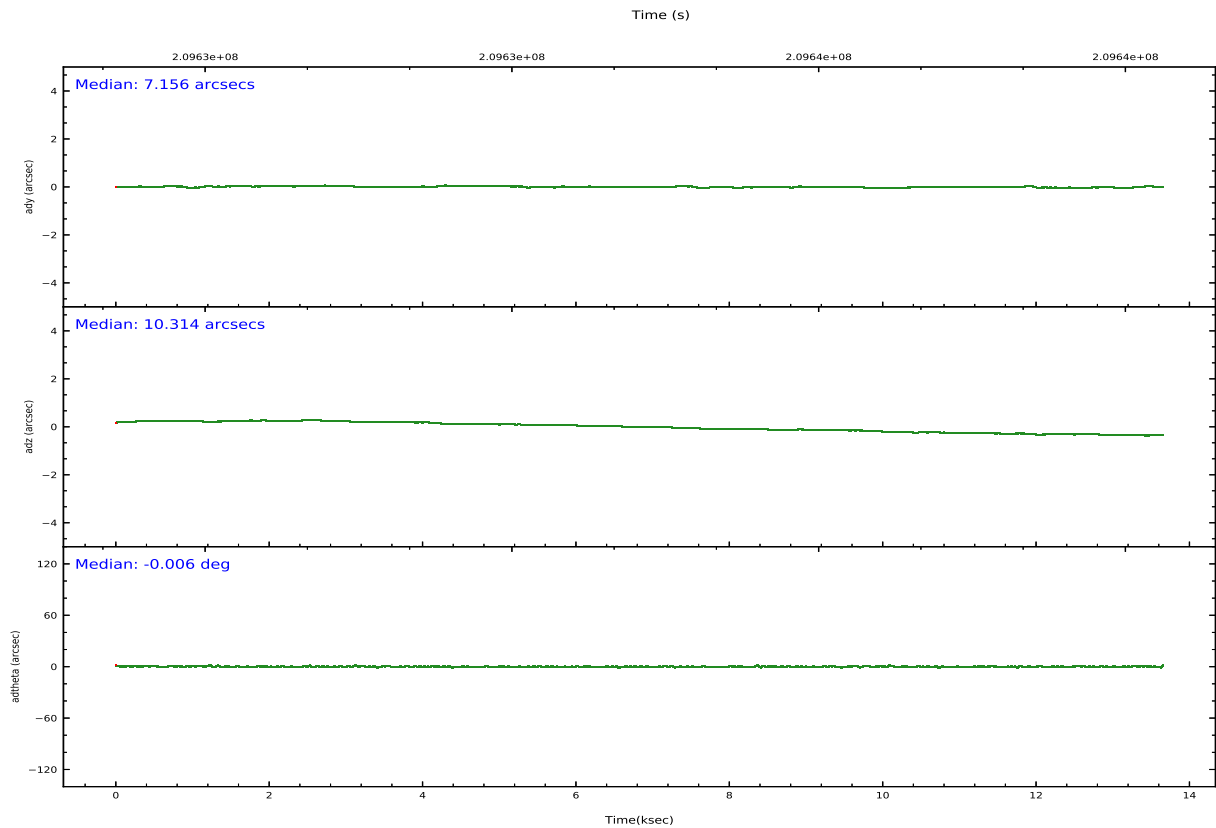
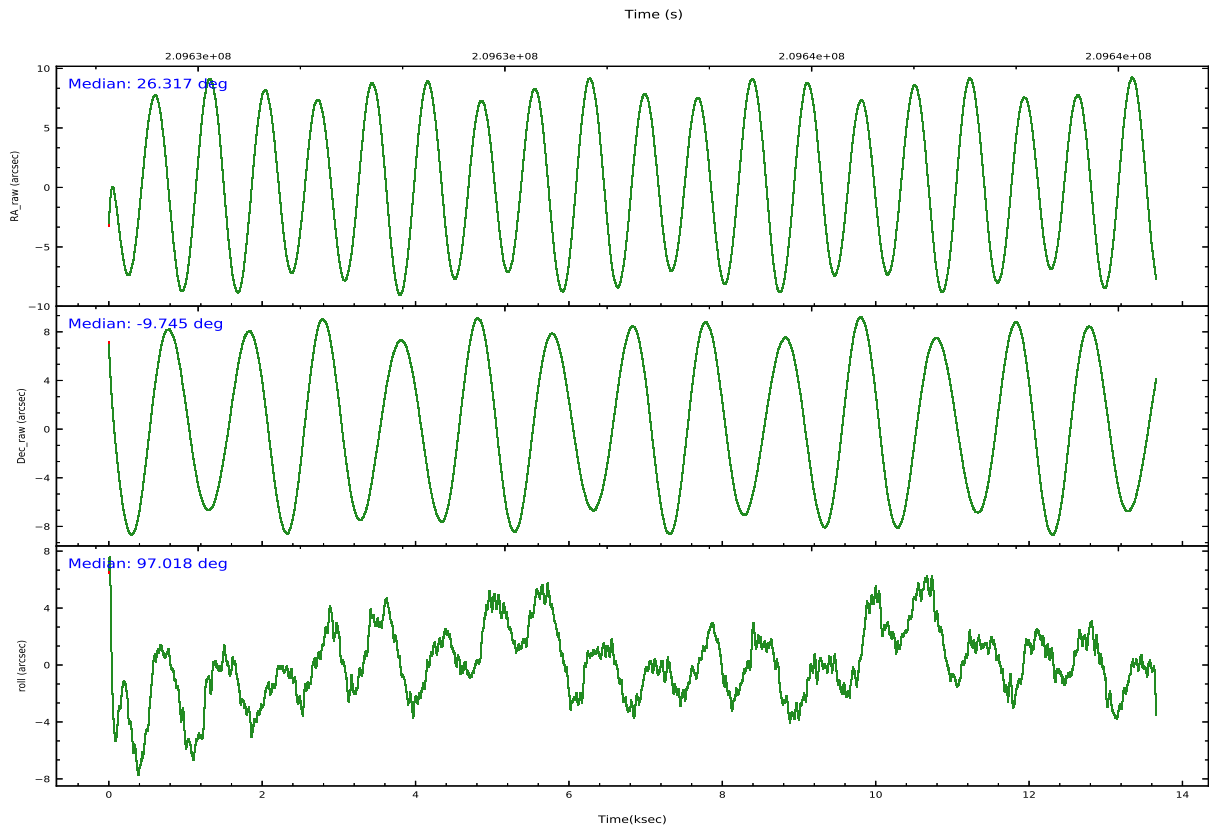
	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	2600	2727	2733	2484	3133
	4%	4%	4%	4%	4%
grade 1 events	20	28	23	22	74
	0%	0%	0%	0%	0%
grade 2 events	1341	1220	1200	1307	6433
	2%	2%	2%	2%	8%
grade 3 events	809	745	789	808	3067
	1%	1%	1%	1%	4%
grade 4 events	792	743	791	769	2984
	1%	1%	1%	1%	4%
grade 5 events	2336	2054	2433	2622	7068
	4%	3%	4%	4%	9%
grade 6 events	1306	1104	1162	1313	15944
	2%	1%	2%	2%	21%
grade 7 events	44021	48798	46880	48542	35652
	82%	84%	83%	83%	47%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-12367	ACIS-12367	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	26.334185	26.320544616309	Subarray requested	CUSTOM	1/2
[deg] Pointing Dec	-9.766524	-9.7468234468703	Subarray start row	257	257
[deg] Pointing Roll	96.863466	97.017684614136	Subarray row count	512	512
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	1.7
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	209626993.184000	209625876.09328			
Observation start date	2004-08-23T05:42:09	2004-08-23T05:24:36			
[s] Observation end time (MET)	209640493.184000	209642134.1315			
Observation end date	2004-08-23T09:27:09	2004-08-23T09:55:34			
Read mode	TIMED	TIMED			

## 2.3 Aspect





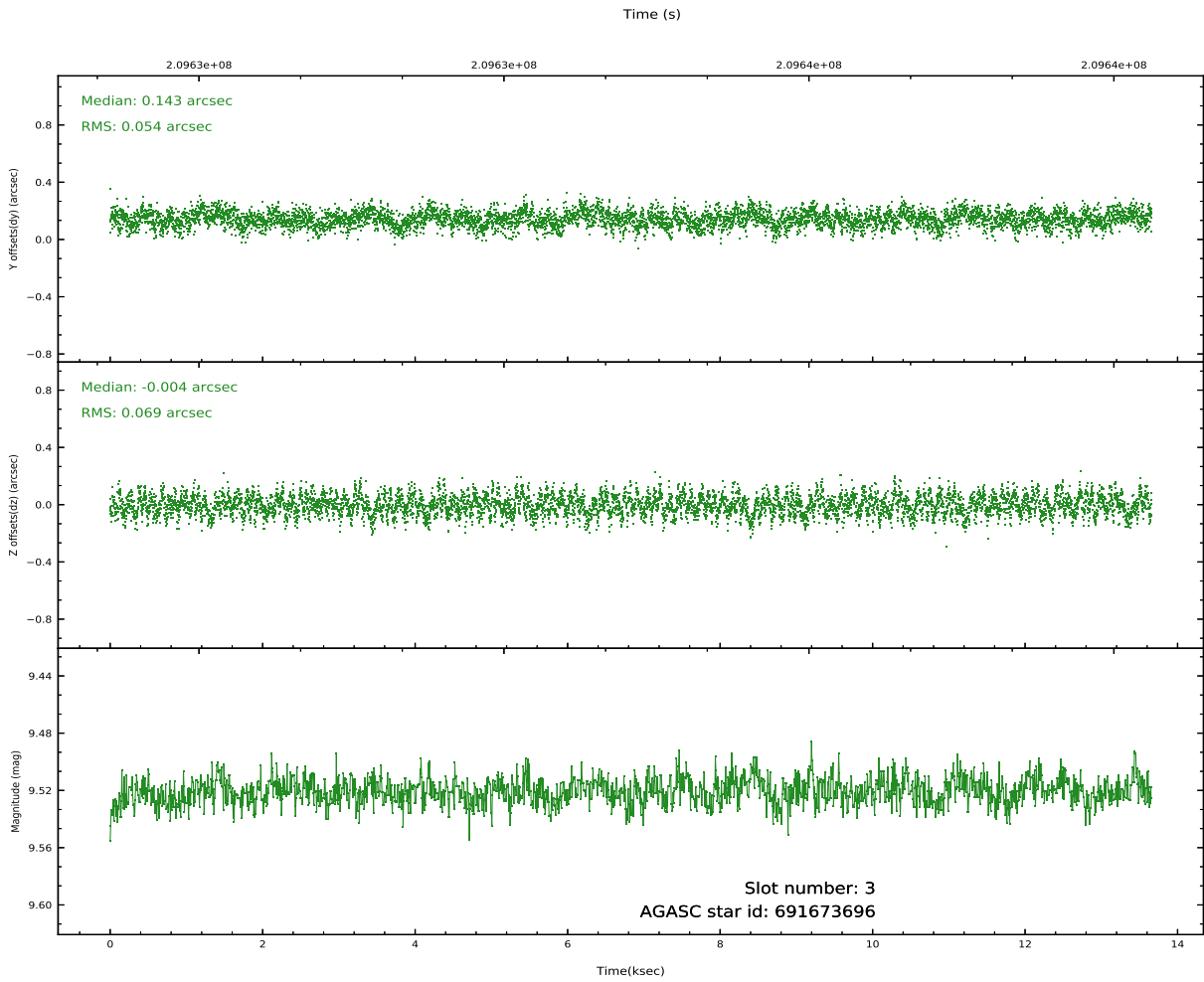
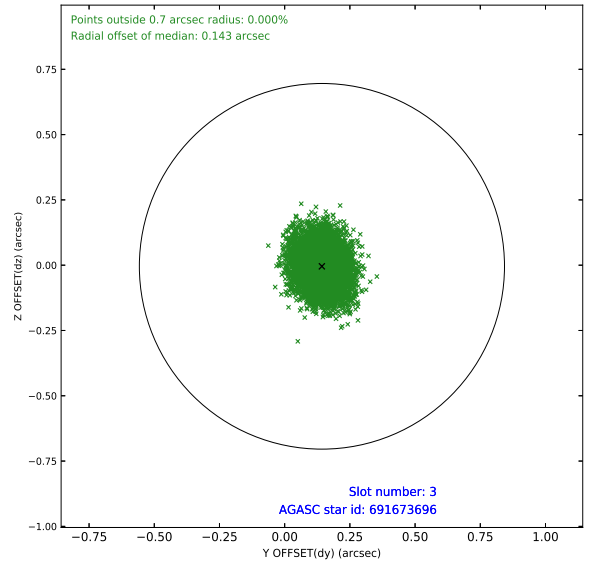
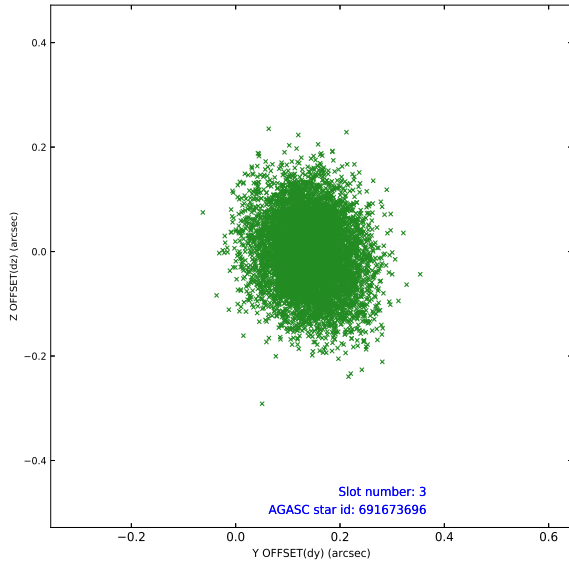
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-2	7.10	3331	1.000	-0.108	-0.089	0.006	0.011	0.000000	0.000000	-759.97	-1731
1	FID		ACIS-S-4	7.21	3332	1.000	0.097	0.051	0.007	0.012	0.000000	0.000000	2153.30	176
2	FID		ACIS-S-6	7.34	3331	1.000	-0.017	0.046	0.008	0.014	0.000000	0.000000	402.48	814
3	GUIDE	used	691673696	9.52	6656	1.000	0.143	-0.004	0.094	0.150	26.730303	-10.038309	-1139.26	-1277
4	GUIDE	used	691676896	8.10	6660	1.000	-0.080	0.032	0.059	0.094	26.776202	-9.599337	409.53	-1629
5	GUIDE	used	691801584	8.74	6659	1.000	-0.130	0.134	0.068	0.110	26.853827	-9.497860	739.05	-1947
6	GUIDE	used	691668096	9.30	6657	1.000	-0.064	-0.172	0.098	0.159	26.136153	-9.609789	644.59	630
7	GUIDE	used	691667008	10.05	6659	1.000	0.131	0.014	0.143	0.225	26.749958	-10.019309	-1079.48	-1354

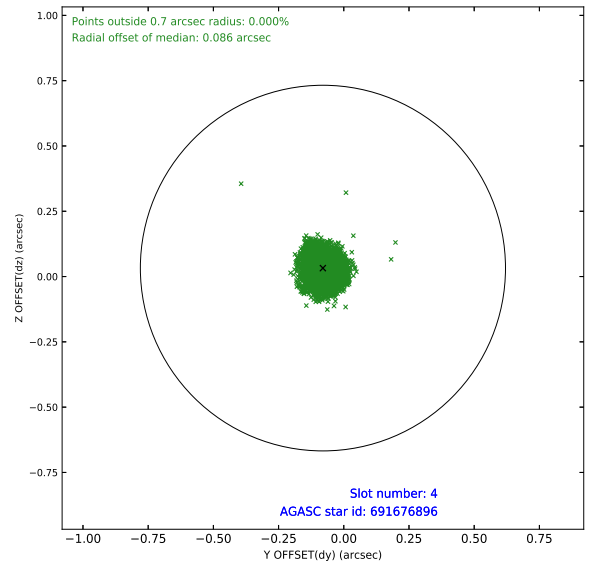
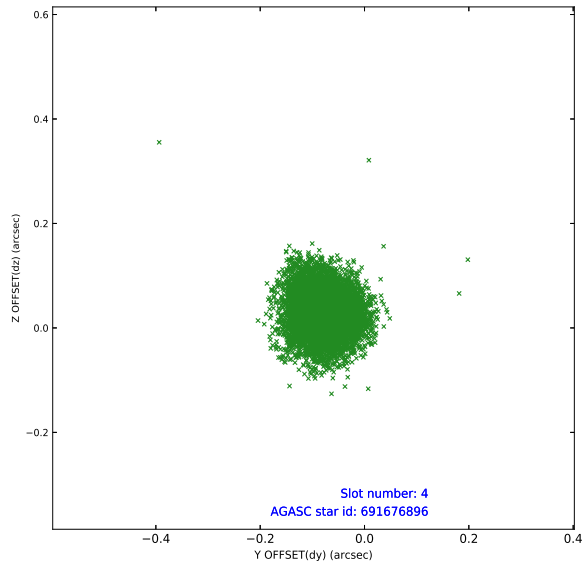
∞

## 2.4 Star Slots

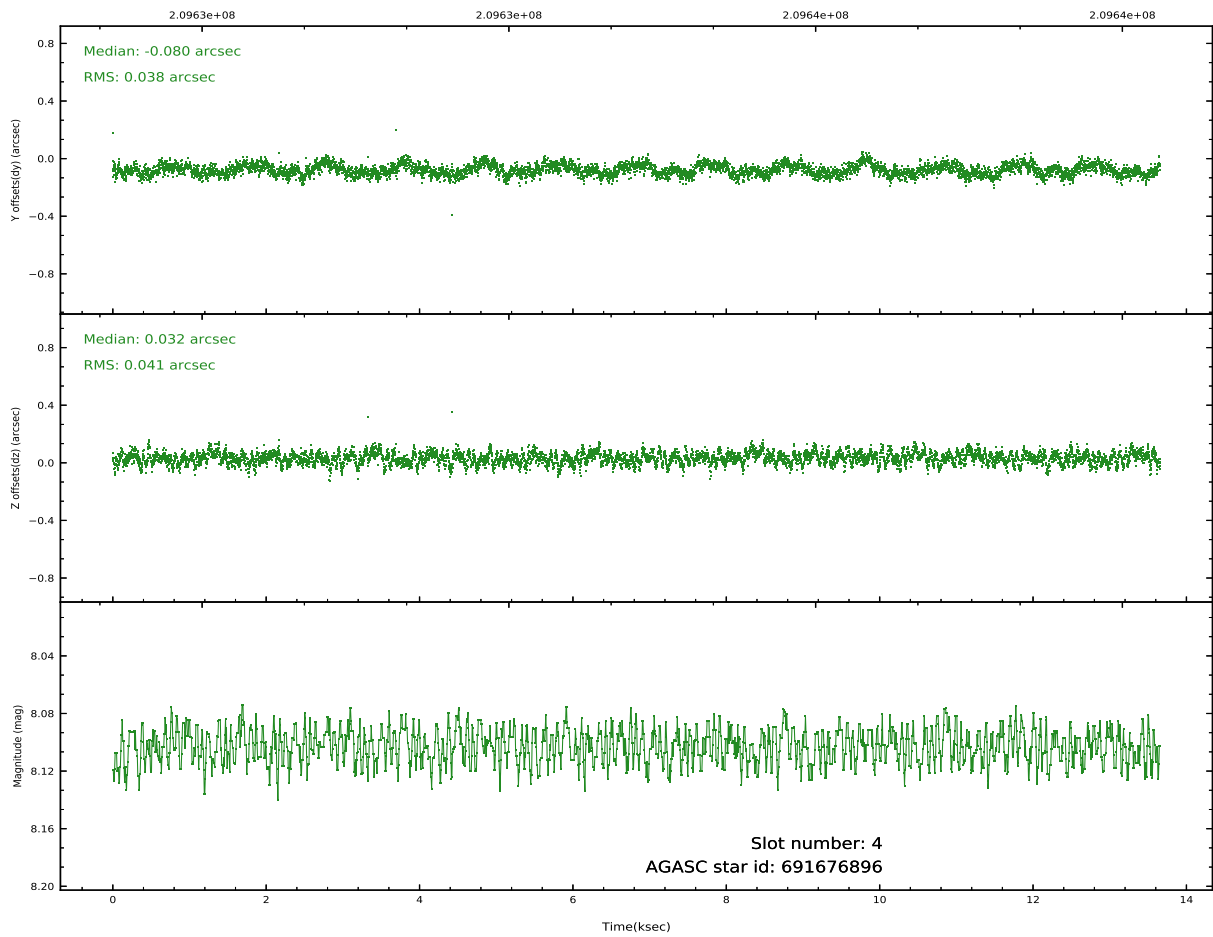
### 2.4.1 Slot 3



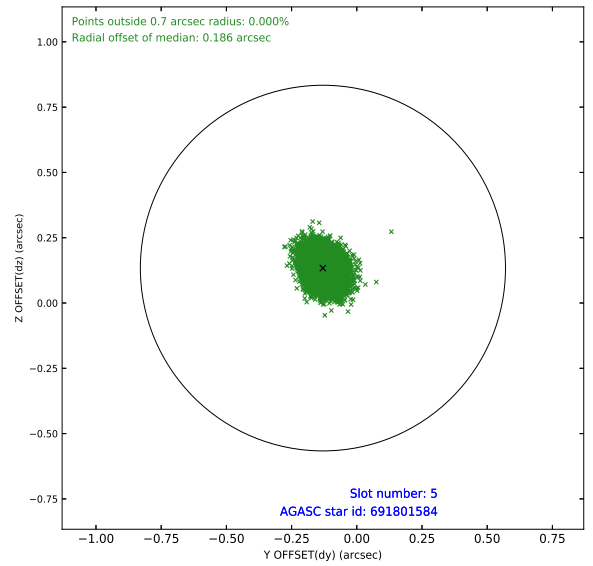
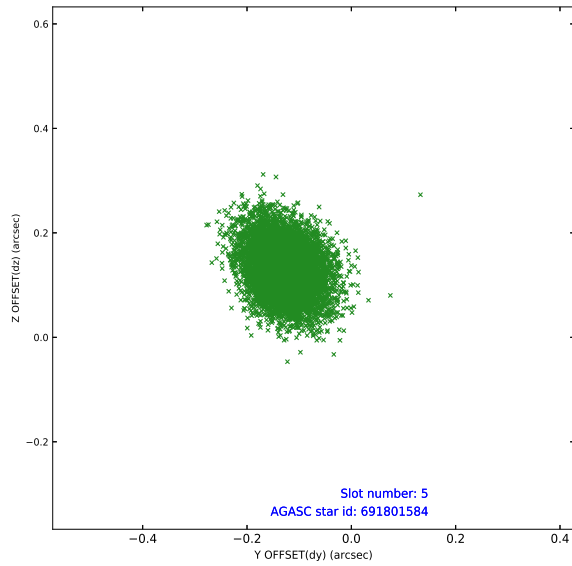
## 2.4.2 Slot 4



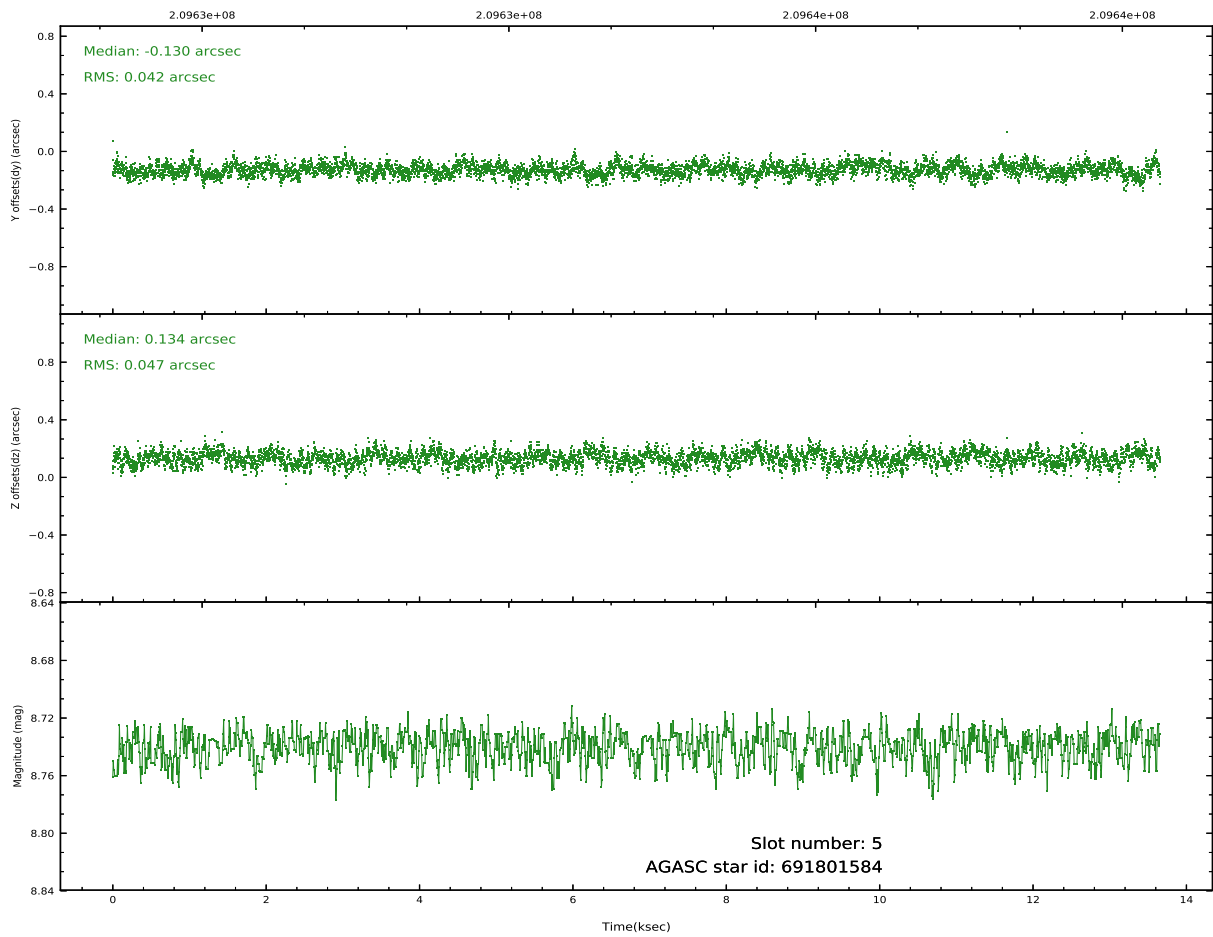
Time (s)



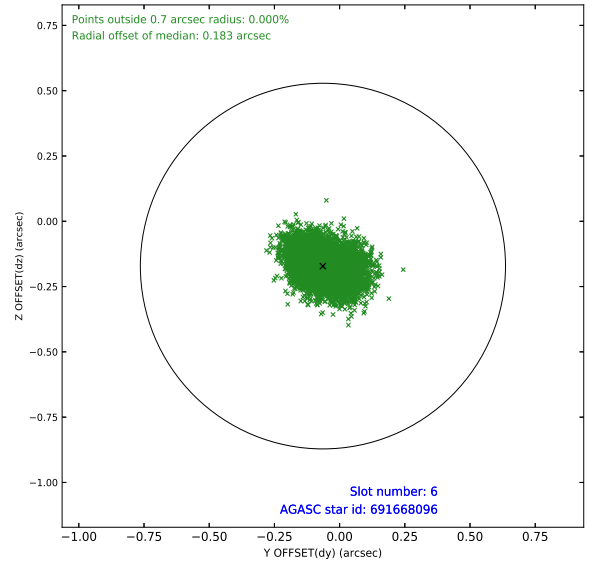
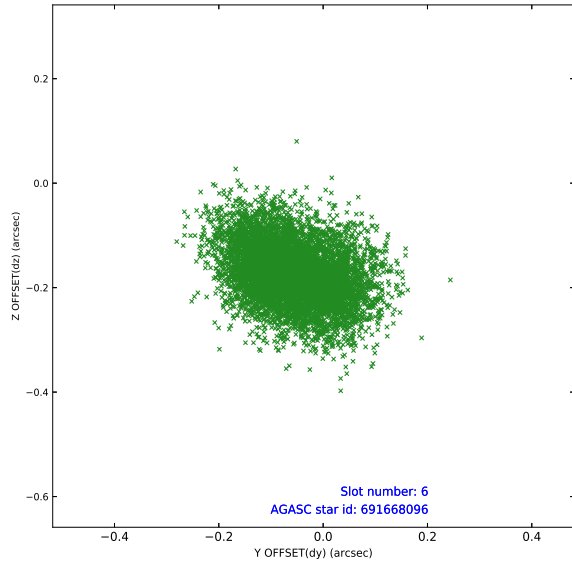
### 2.4.3 Slot 5



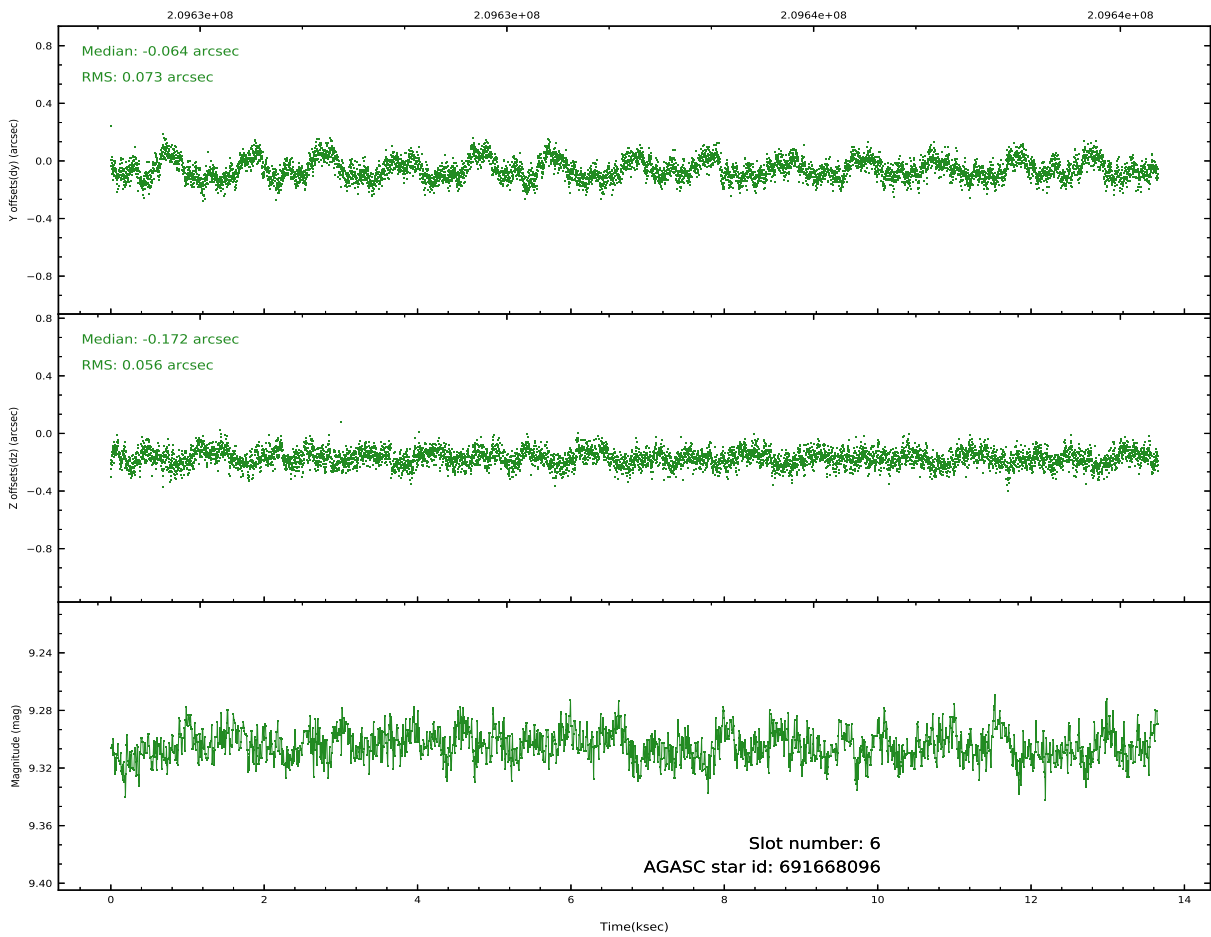
Time (s)



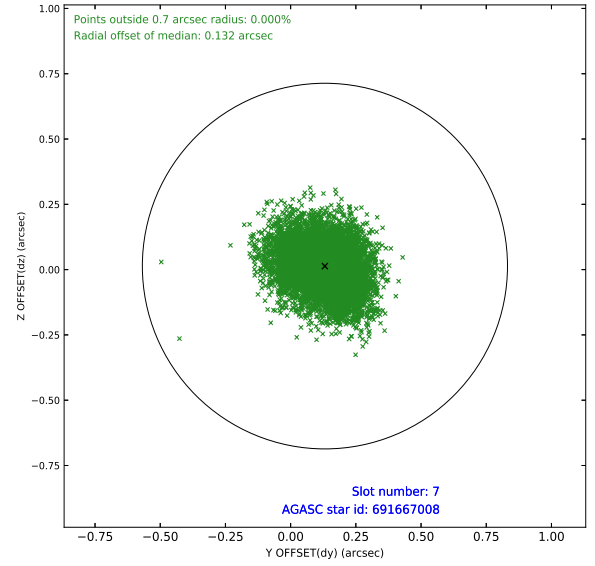
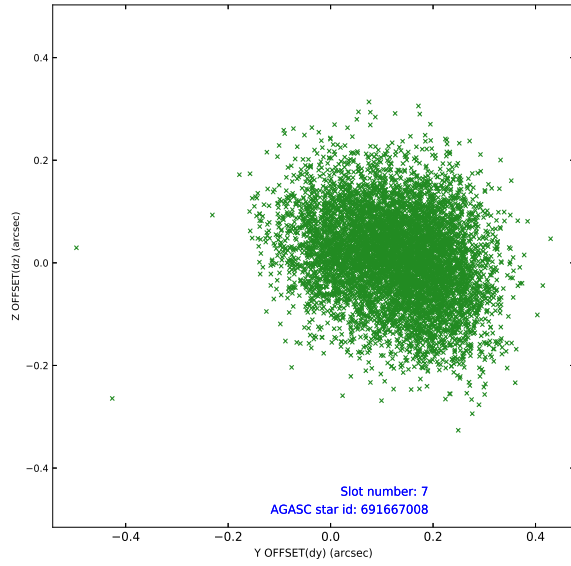
## 2.4.4 Slot 6



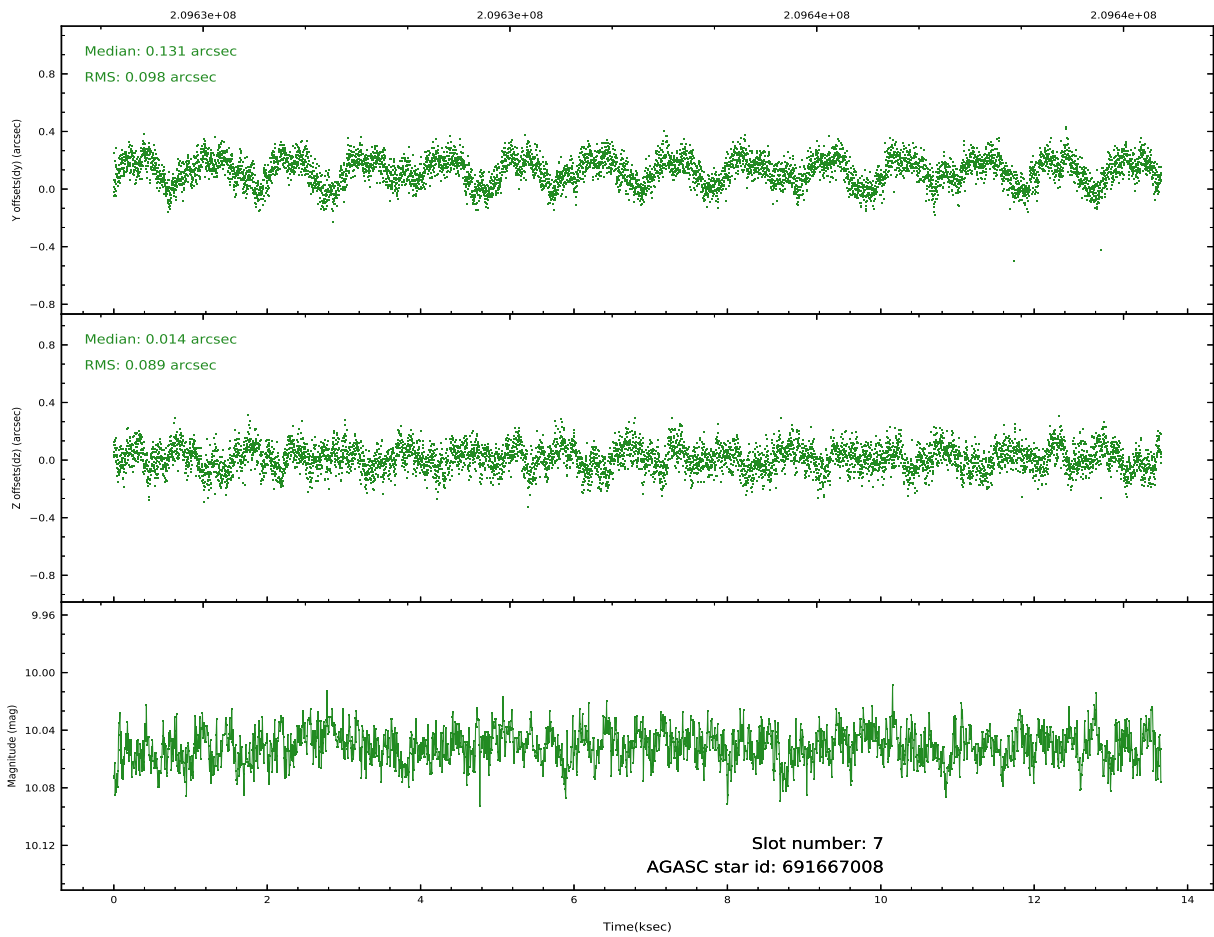
Time (s)



## 2.4.5 Slot 7

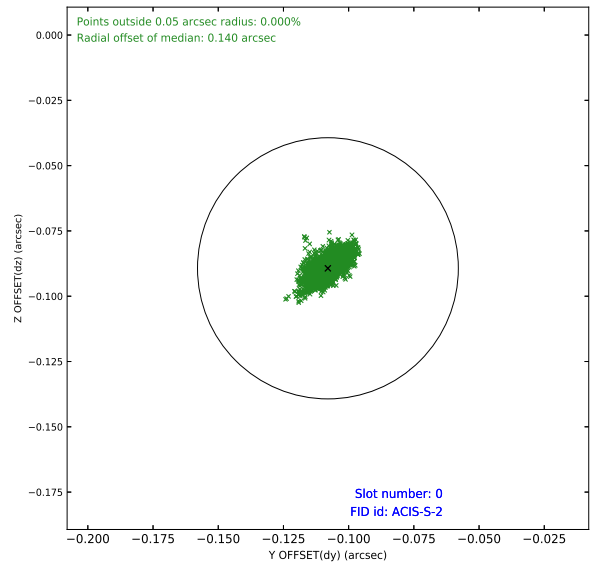
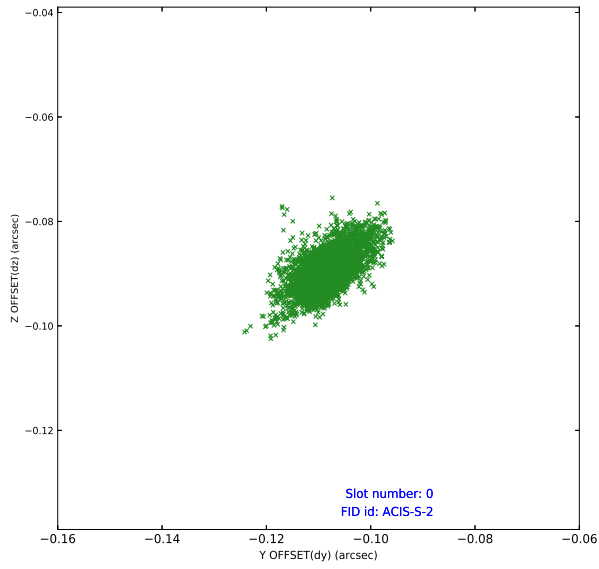


Time (s)

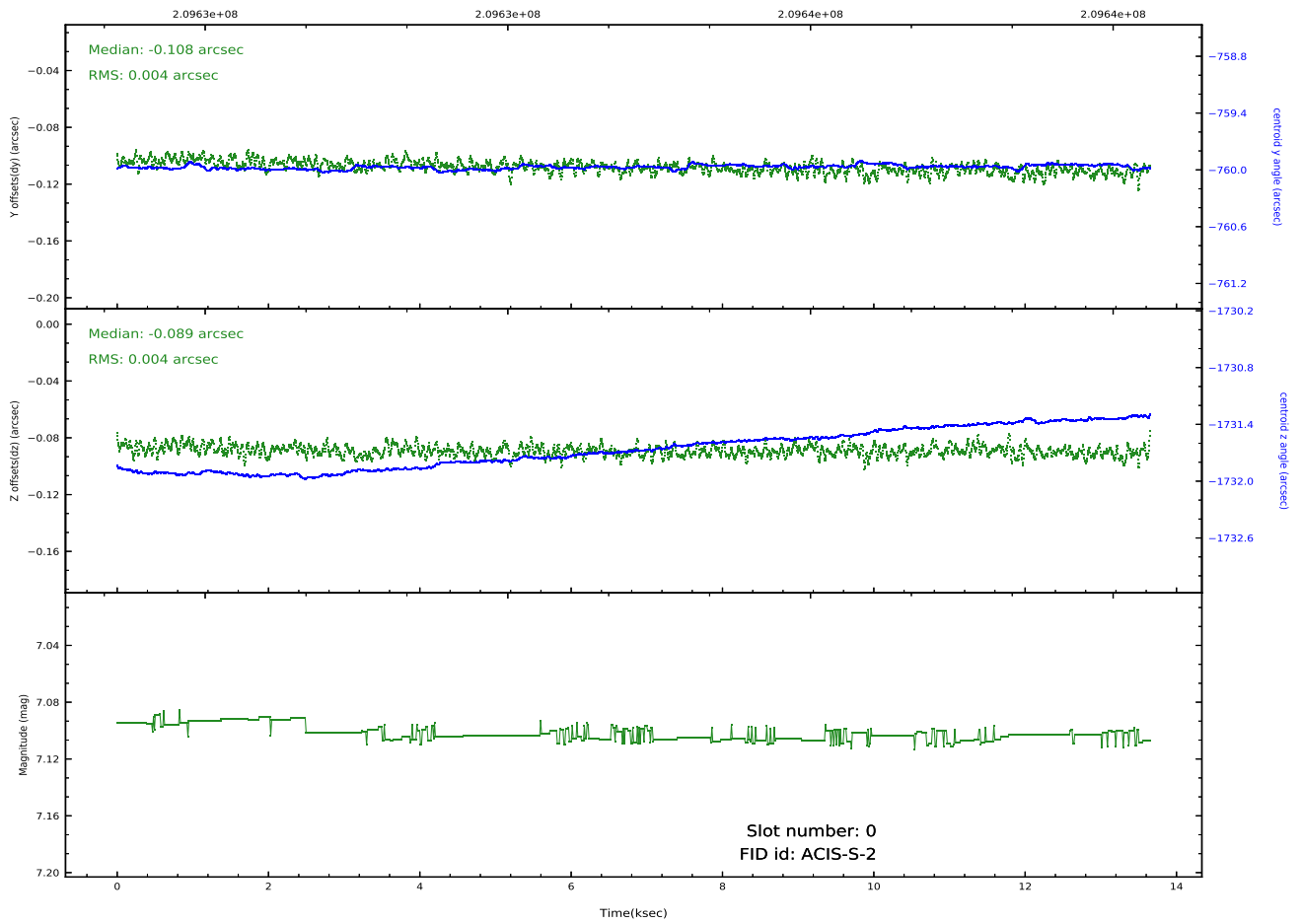


## 2.5 FID Slots

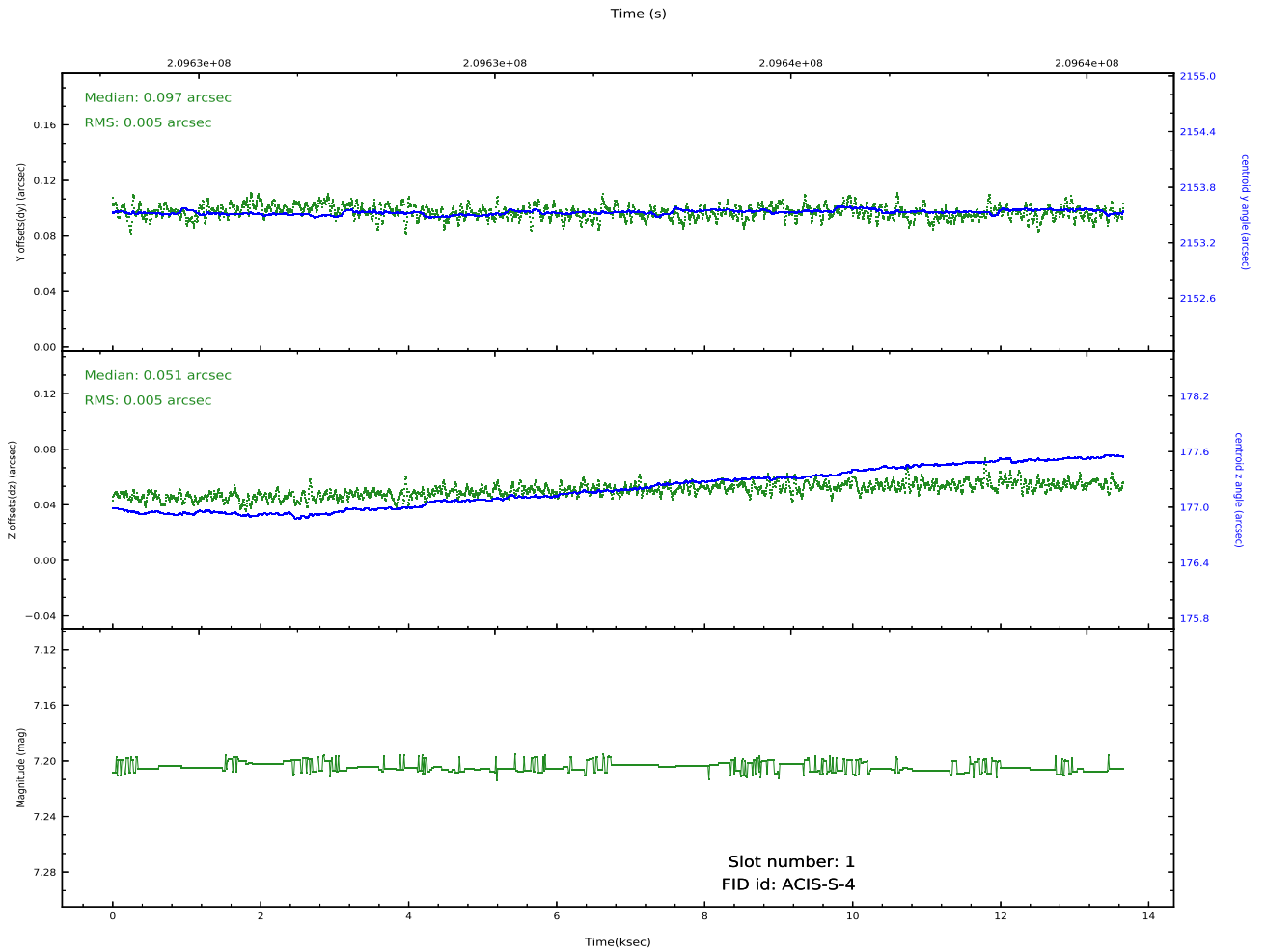
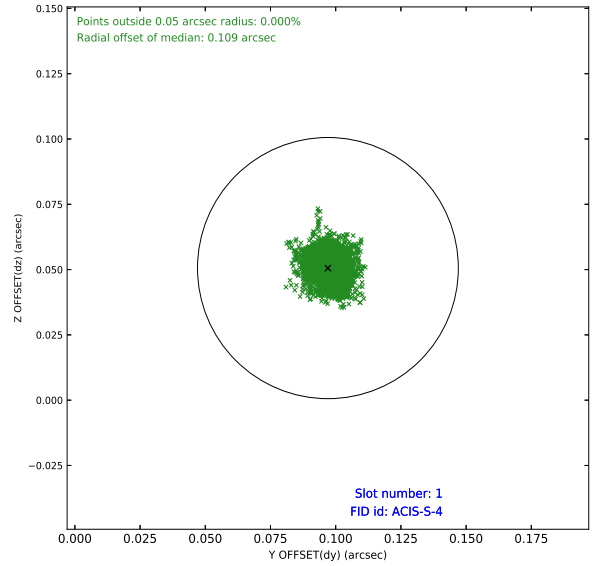
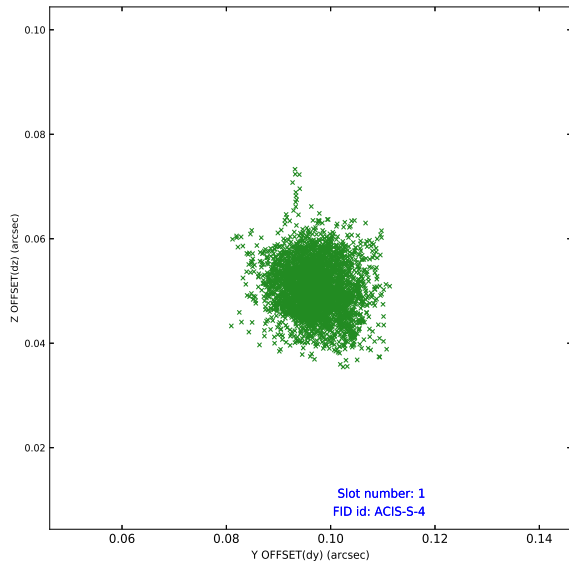
### 2.5.1 Slot 0



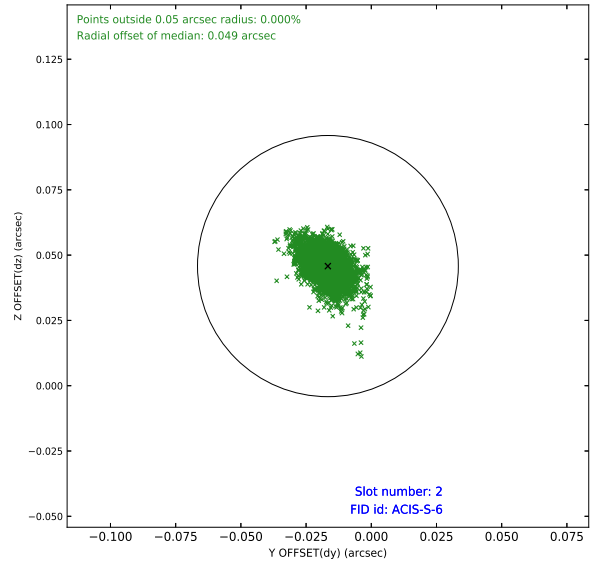
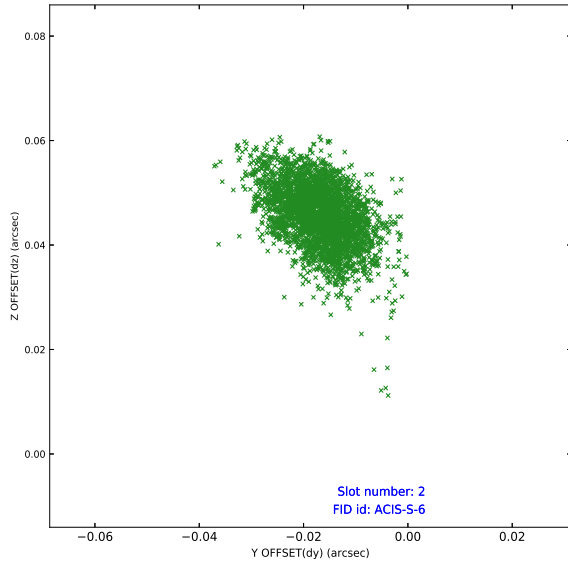
Time (s)



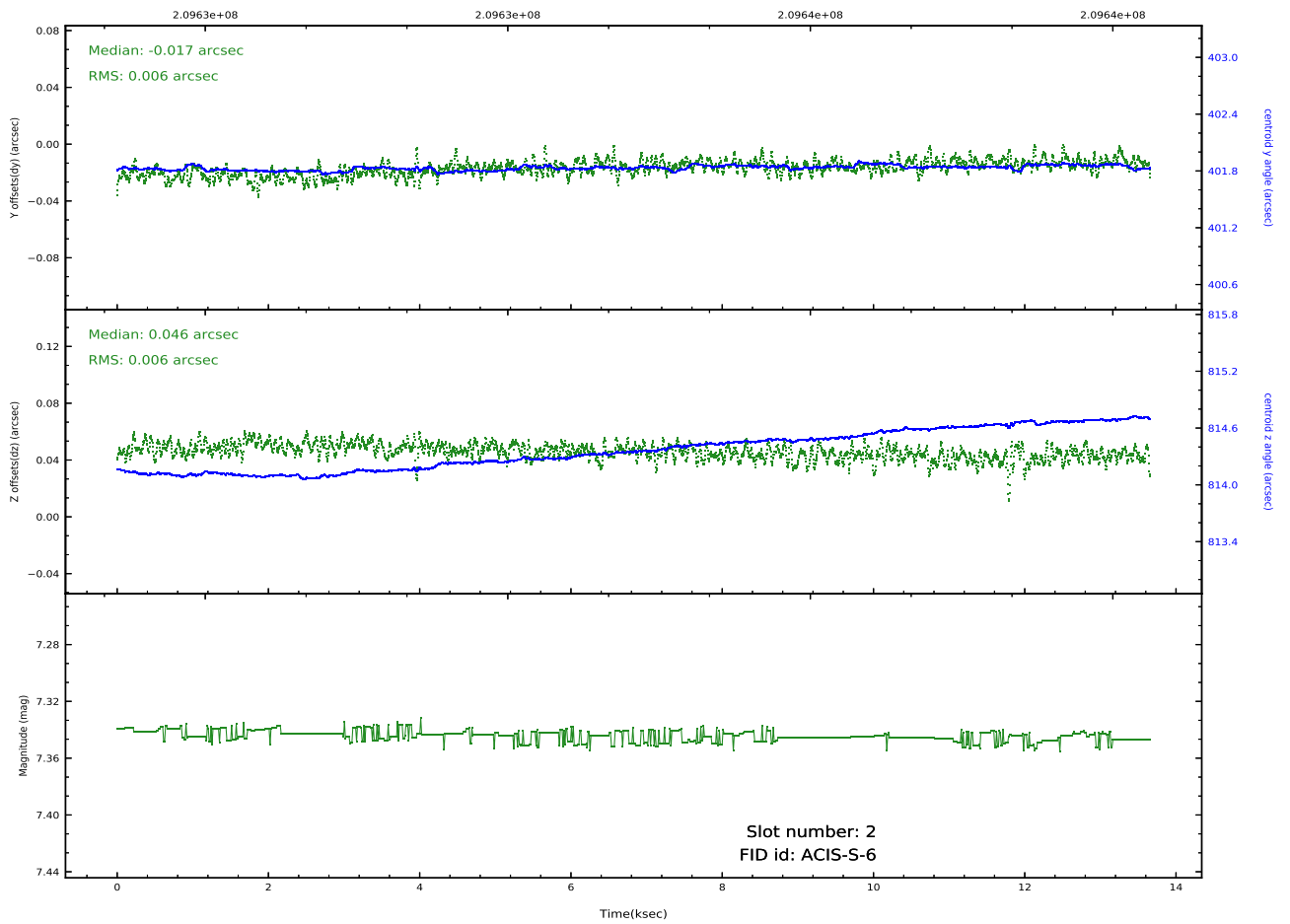
## 2.5.2 Slot 1



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2020.09.29
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	13.656

## A.2 Comments