

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 7171 - L2 Version 5  
Chandra X-Ray Center

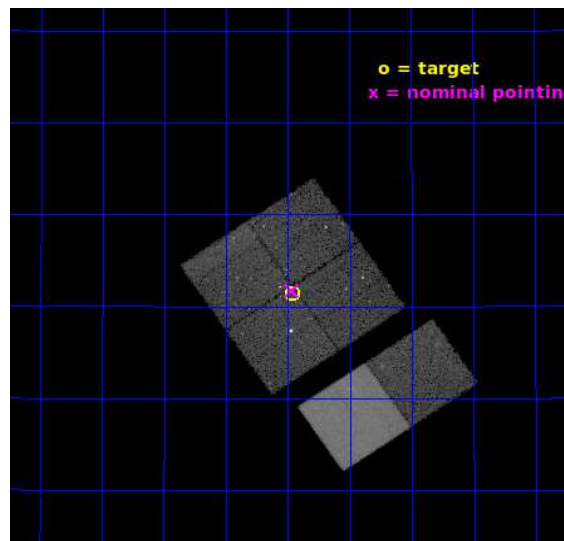
L2 Processing Date : Oct 10 2020

## 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

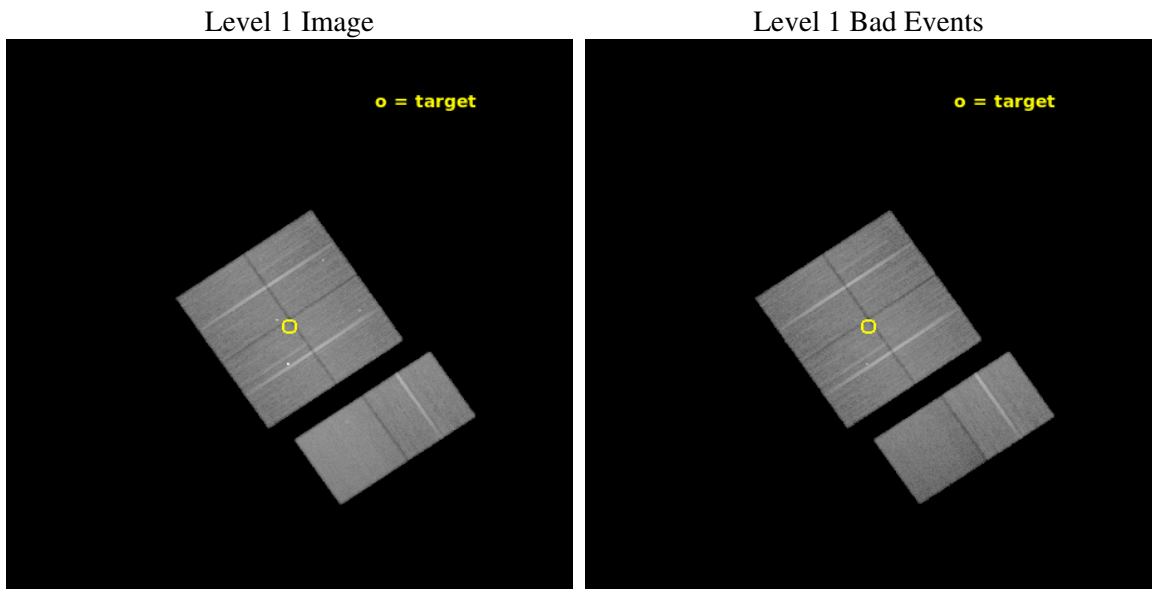
seq_num	600486	Sequence number
obs_id	7171	Observation id
title	The Chandra ACIS Survey of M33 (ChASem33): A Deep Survey of the Nearest Face-on Spiral Galaxy	Proposal title
observer	Manami Sasaki	Principal investigator
object	M33	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	23.36625	Observer's specified target RA [deg]
dec_targ	30.523694	Observer's specified target Dec [deg]
ra_nom	23.366844278364	Nominal RA [deg]
dec_nom	30.528859489066	Nominal Dec [deg]
roll_nom	145.70726160643	Nominal Roll [deg]
revision	5	Processing version of data
ontime	38175.917847216	Sum of GTIs [s]
livetime	37692.511388657	Livetime [s]
ontime0	38179.15884757	Sum of GTIs [s]
ontime1	38182.399857759	Sum of GTIs [s]
ontime2	38175.917907	Sum of GTIs [s]
ontime3	38175.917847216	Sum of GTIs [s]
ontime6	38182.399857759	Sum of GTIs [s]
ontime7	38182.399857759	Sum of GTIs [s]
l2events	225051	Number of level 2 events



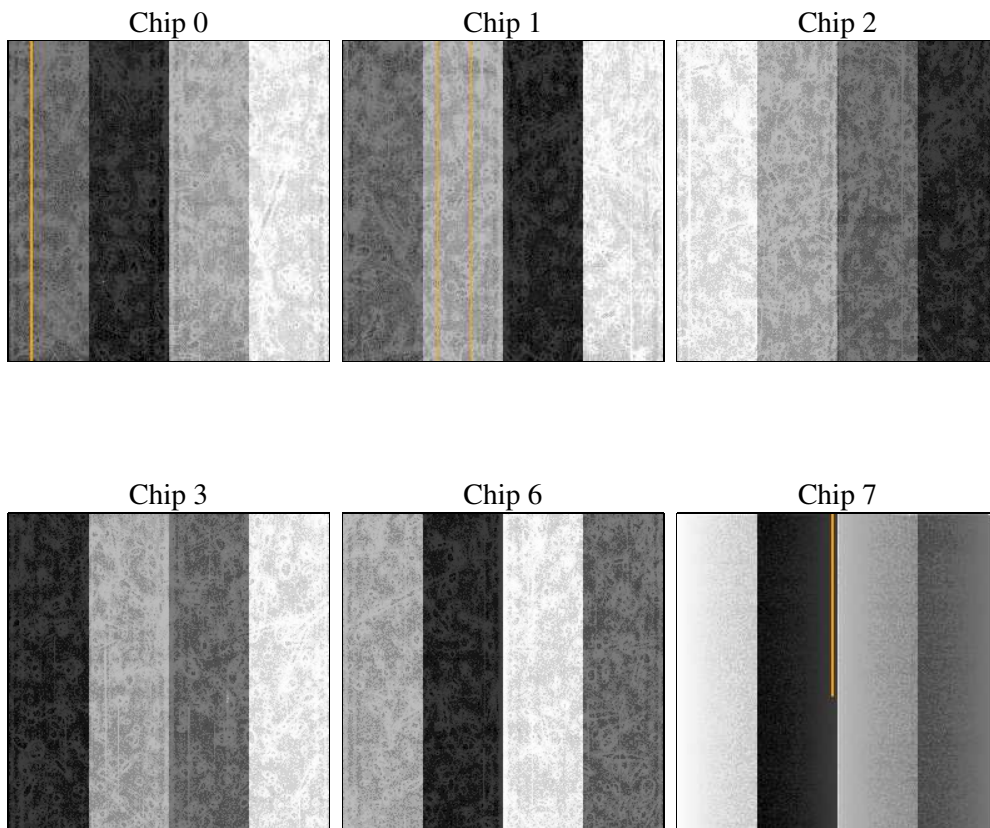
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	38000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	38175.917847216	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime0	38179.15884757	Sum of GTIs [s]
date	2020-10-10T14:25:52	Date and time of file creation	ontime1	38182.399857759	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	38175.917907	Sum of GTIs [s]
			ontime3	38175.917847216	Sum of GTIs [s]
			ontime6	38182.399857759	Sum of GTIs [s]
			ontime7	38182.399857759	Sum of GTIs [s]
			l1events	1421709	Number of level 1 events

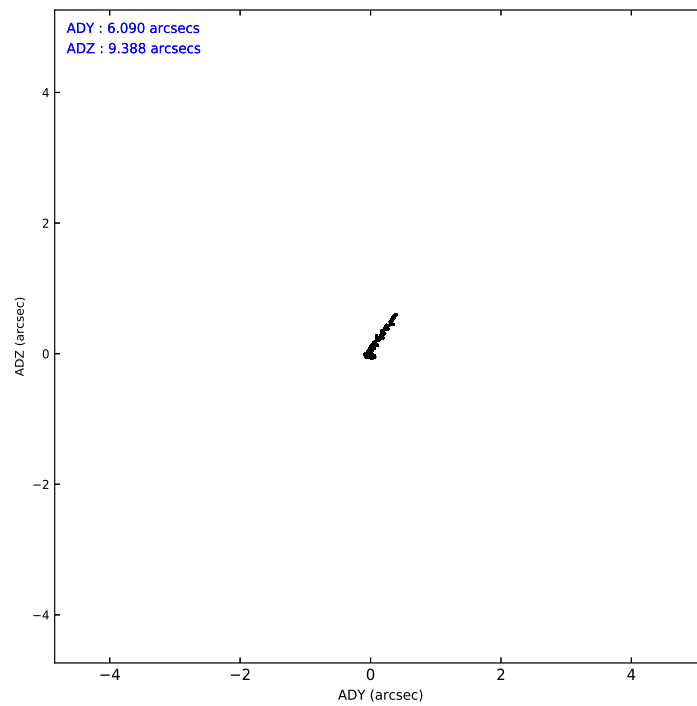
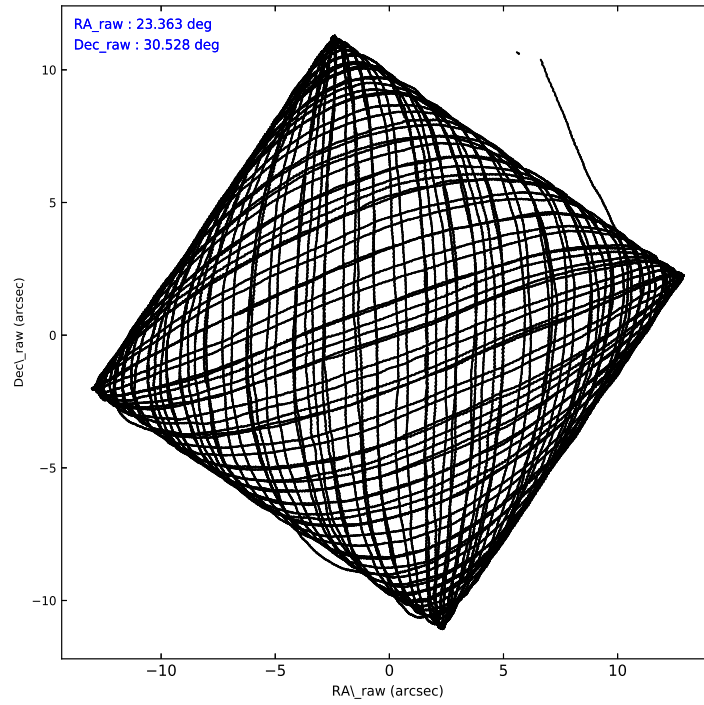
### 2.1.4 Events

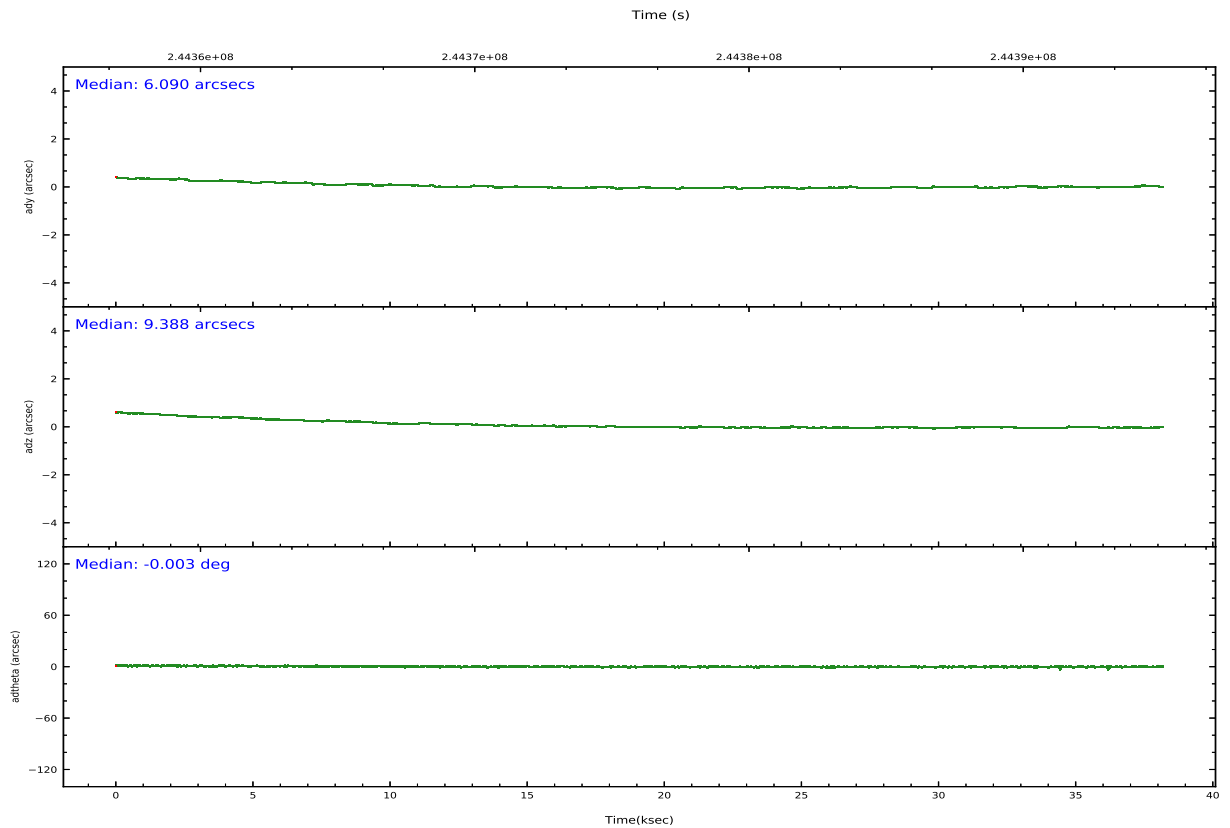
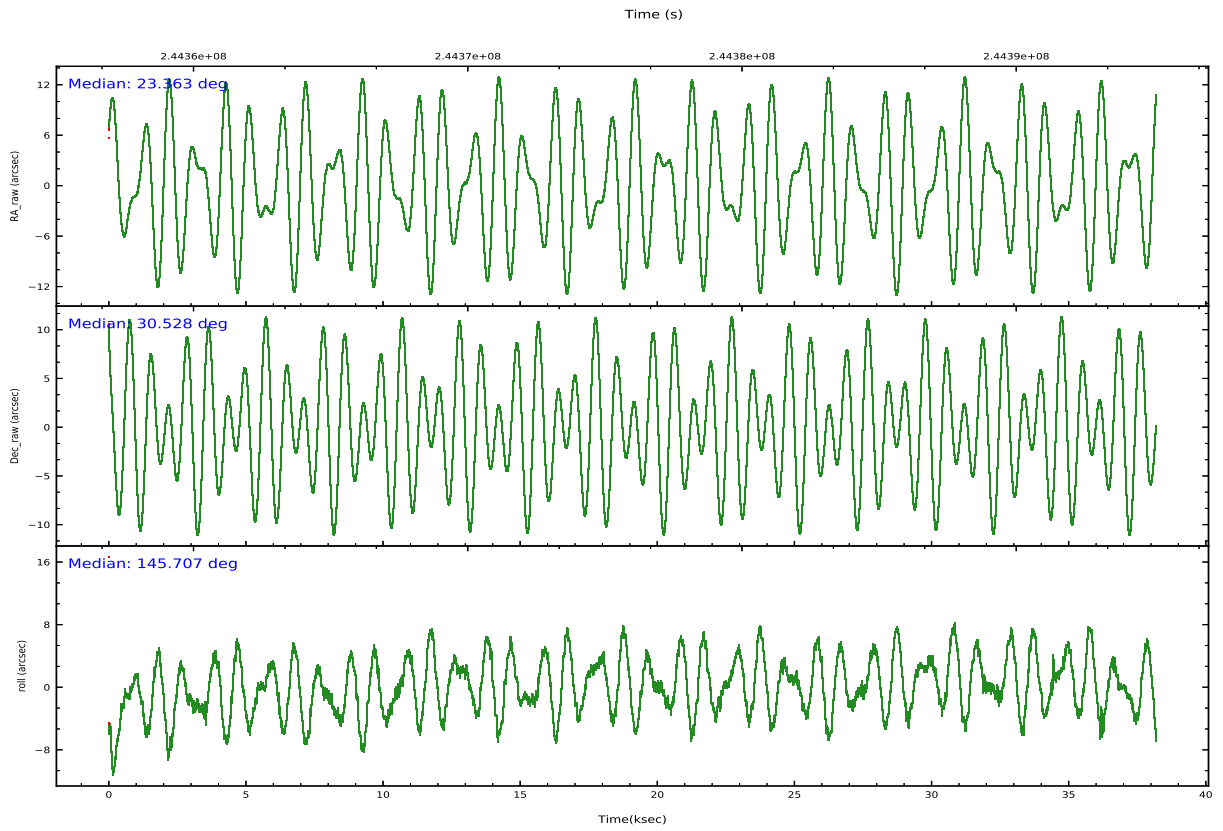
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	218213	220449	240824	237014	240755	264454	grade 0 events	9611	13095	8619	14767	8579	9912
rejected events	193754	190183	218025	206514	216412	148111		4%	5%	3%	6%	3%	3%
rejected %	88%	86%	90%	87%	89%	56%	grade 1 events	125	194	135	498	112	222
								0%	0%	0%	0%	0%	0%
							grade 2 events	5646	6110	5443	5797	5323	23723
								2%	2%	2%	2%	2%	8%
							grade 3 events	2705	2998	2410	2816	2730	11183
								1%	1%	1%	1%	1%	4%
							grade 4 events	2412	3077	2640	2832	2677	10961
								1%	1%	1%	1%	1%	4%
							grade 5 events	8073	9000	7544	9569	9887	28044
								3%	4%	3%	4%	4%	10%
							grade 6 events	4544	5447	4103	4731	5475	62707
								2%	2%	1%	1%	2%	23%
							grade 7 events	185097	180528	209930	196004	205972	117702
								84%	81%	87%	82%	85%	44%

## 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	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	23.395045	23.366844278364	Subarray requested	NONE	NONE
[deg] Pointing Dec	30.525656	30.528859489066	Alternating exposures requested	N	N
[deg] Pointing Roll	145.485377	145.70726160643	[s] Primary exposure time	0.000000	3.2
[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)	244357101.184000	244355692.8293			
Observation start date	2005-09-29T04:57:17	2005-09-29T04:34:52			
[s] Observation end time (MET)	244395101.184000	244396689.24368			
Observation end date	2005-09-29T15:30:37	2005-09-29T15:58:09			
Read mode	TIMED	TIMED			

## 2.3 Aspect





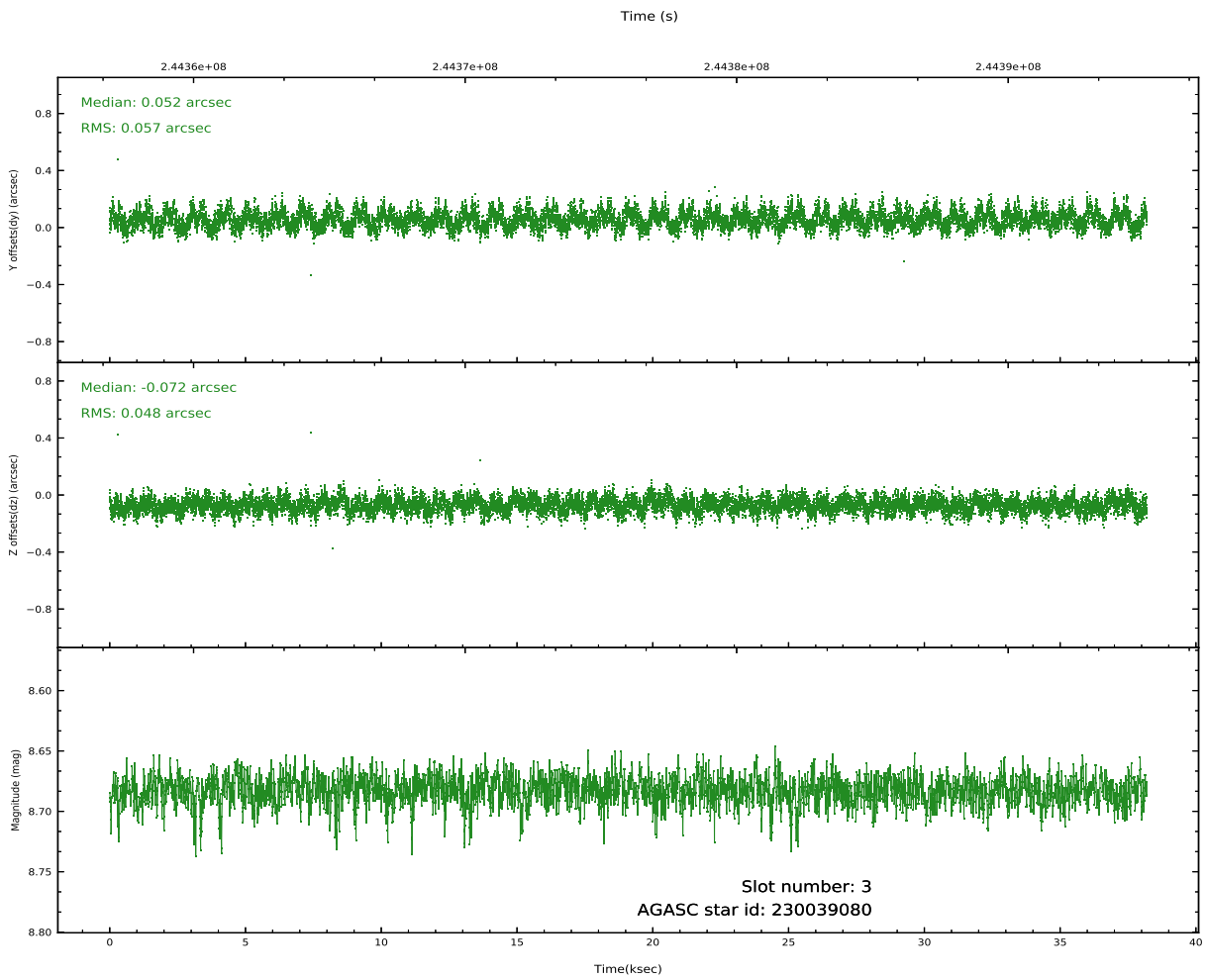
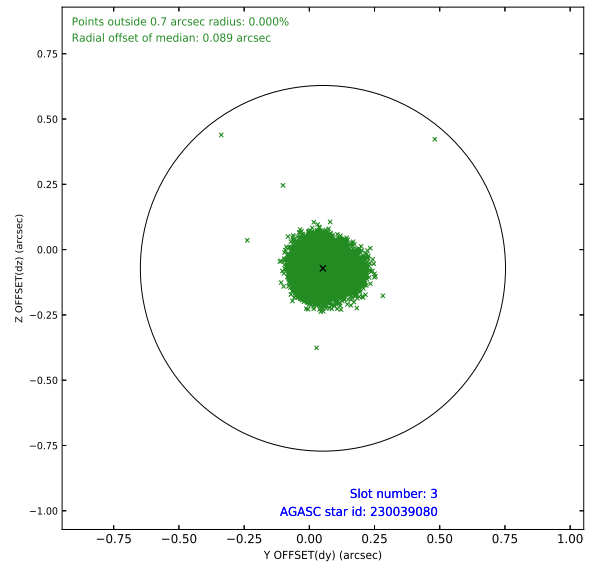
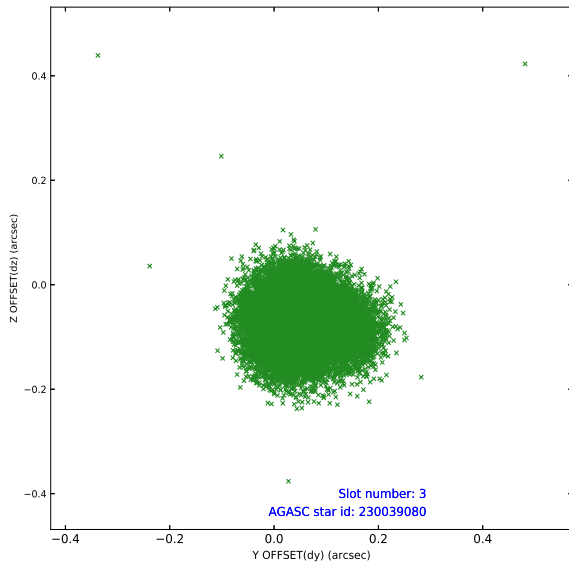
### Slot Statistics

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	9315	1.000	0.015	0.002	0.009	0.018	0.000000	0.000000	933.59	-832
1	FID		ACIS-I-5	7.23	9315	1.000	-0.195	0.024	0.006	0.011	0.000000	0.000000	-1814.73	1064
2	FID		ACIS-I-6	7.26	9315	1.000	0.088	0.044	0.009	0.018	0.000000	0.000000	399.15	1709
3	GUIDE	used	230039080	8.68	18620	1.000	0.052	-0.072	0.080	0.126	23.320866	29.887774	-1110.38	2023
4	GUIDE	used	300417960	9.21	18620	1.000	0.039	0.086	0.087	0.140	22.346894	30.364196	2361.91	2311
5	GUIDE	used	300553080	9.05	18617	1.000	-0.013	0.107	0.070	0.114	23.777101	30.773227	-467.22	-1405
6	GUIDE	used	300559160	9.40	18616	1.000	0.036	-0.005	0.115	0.174	24.161026	30.632205	-1732.88	-1667
7	GUIDE	used	300559960	7.88	18627	1.000	-0.124	-0.113	0.067	0.108	22.944463	30.624765	1353.37	494

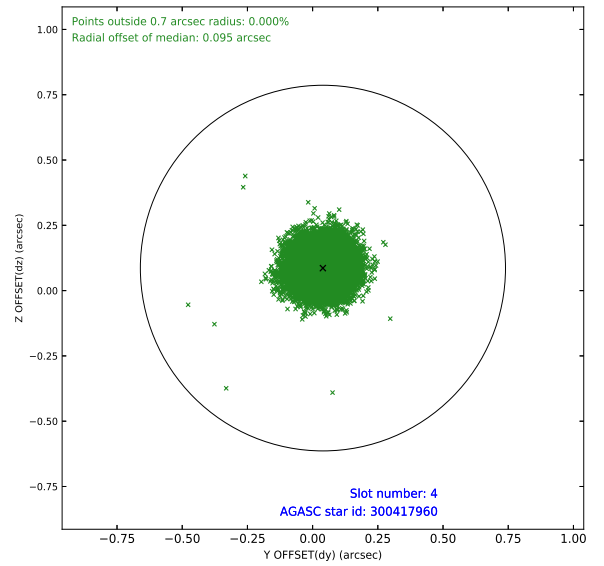
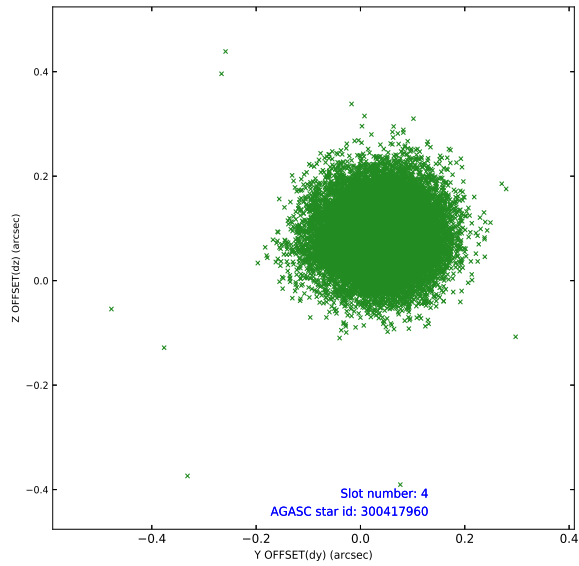
∞

## 2.4 Star Slots

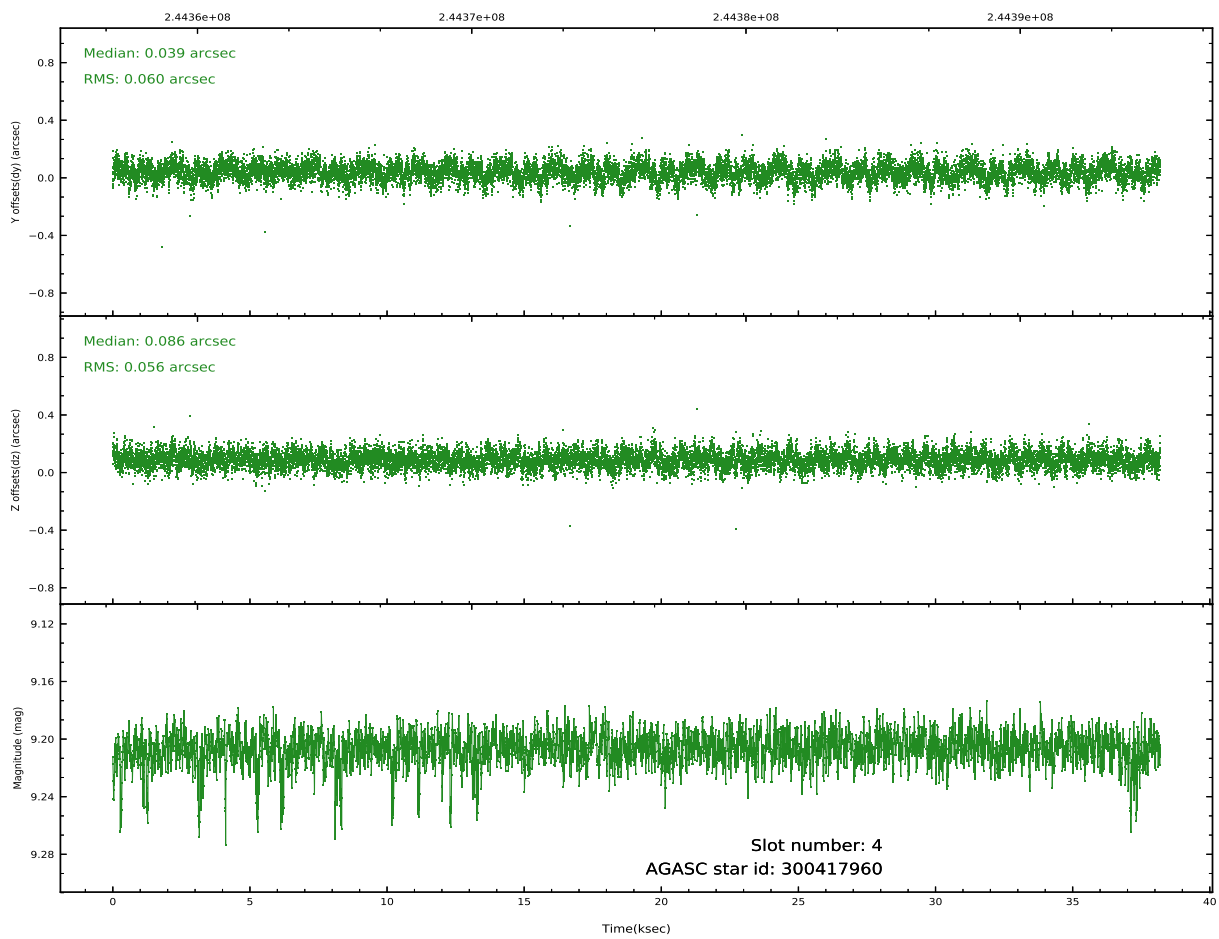
### 2.4.1 Slot 3



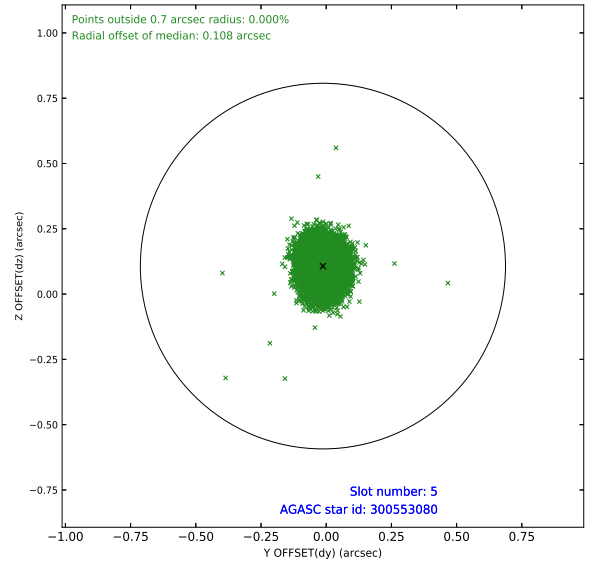
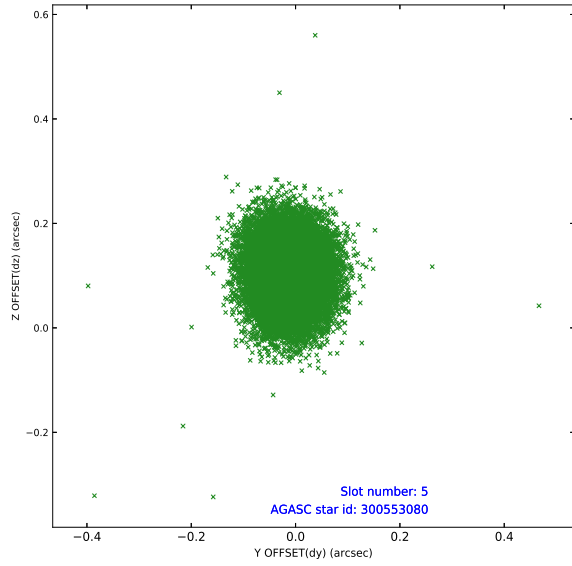
## 2.4.2 Slot 4



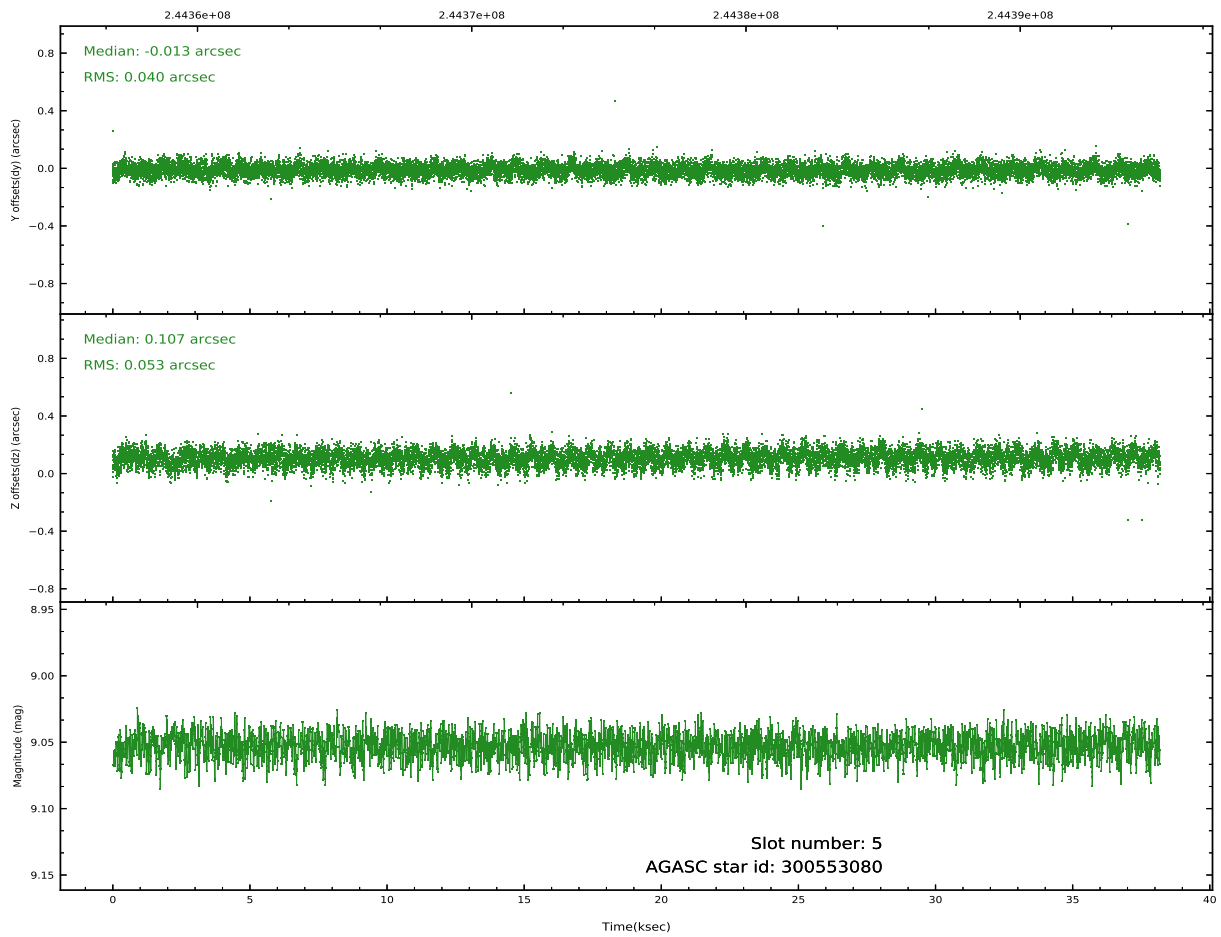
Time (s)



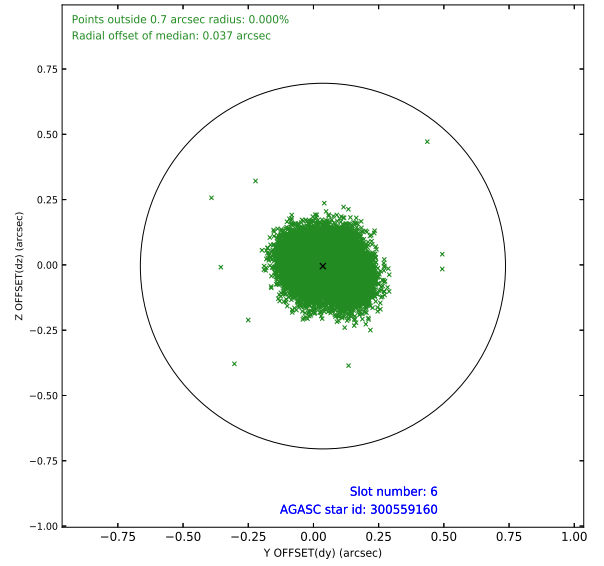
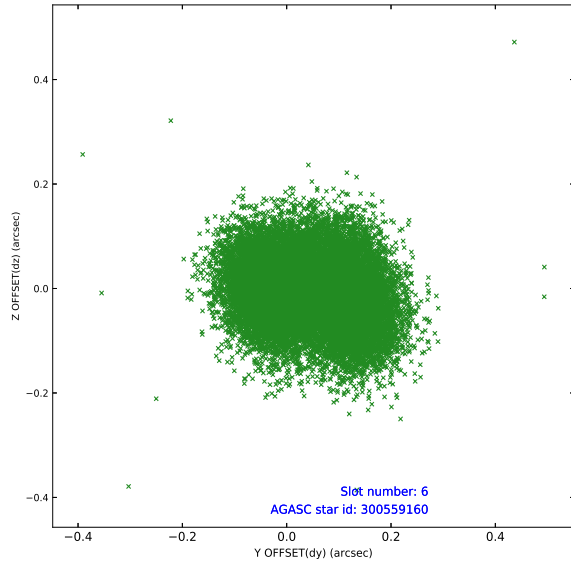
### 2.4.3 Slot 5



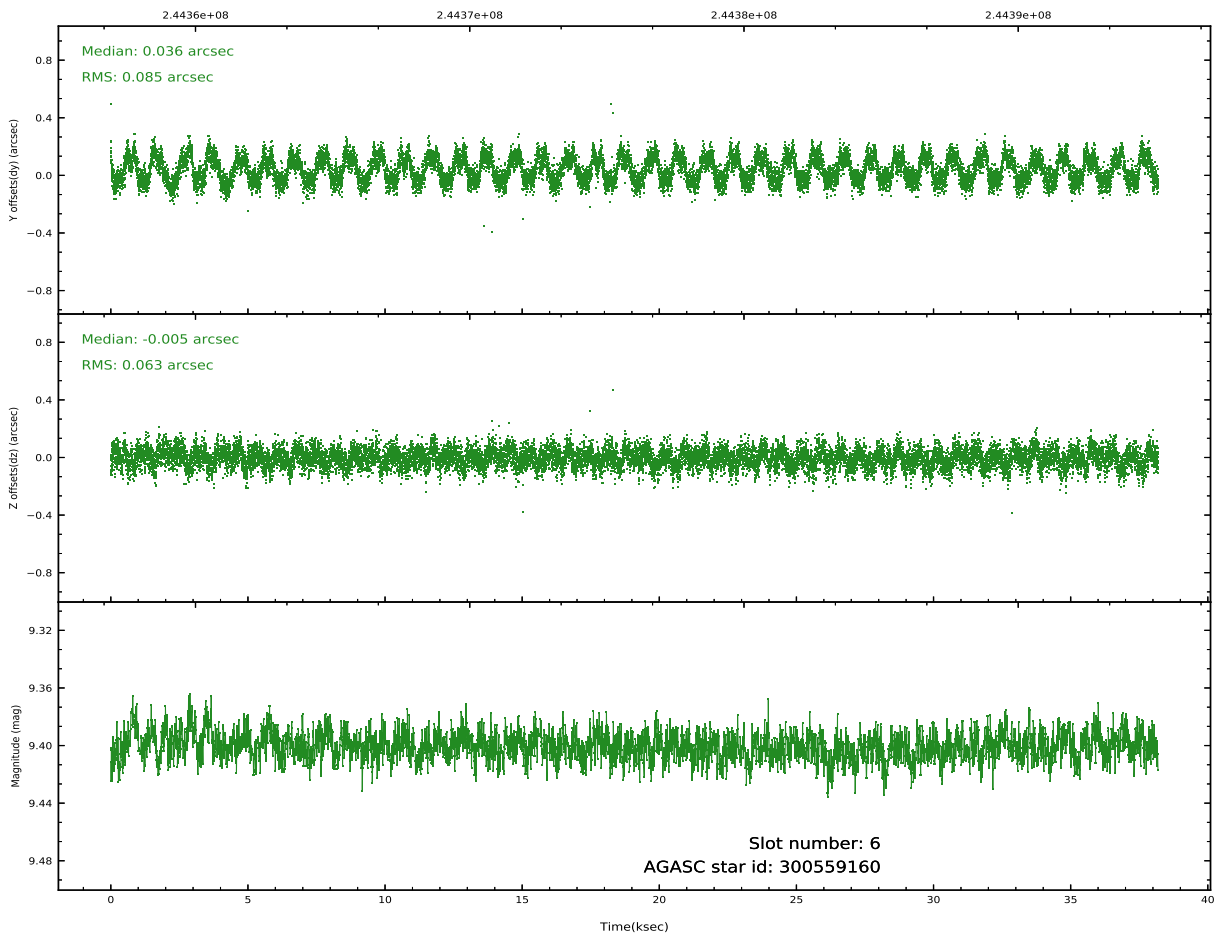
Time (s)



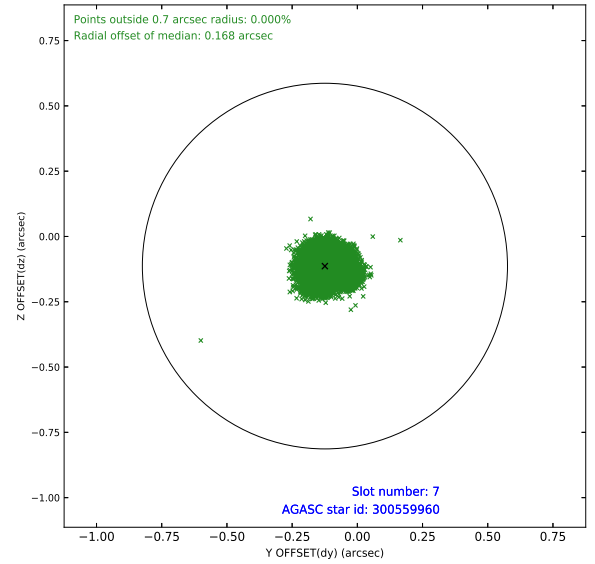
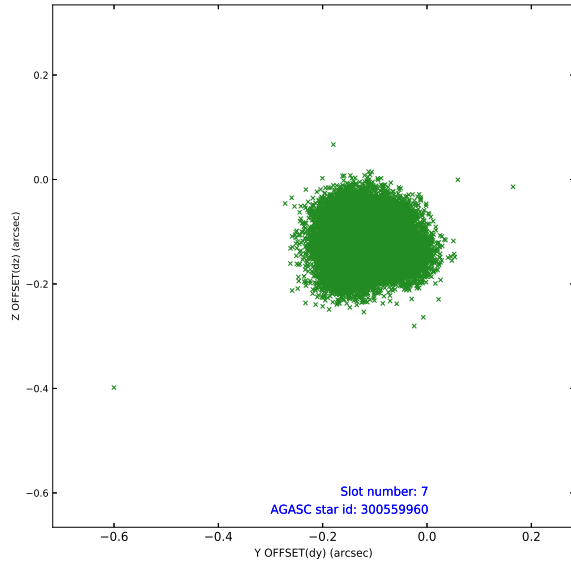
## 2.4.4 Slot 6



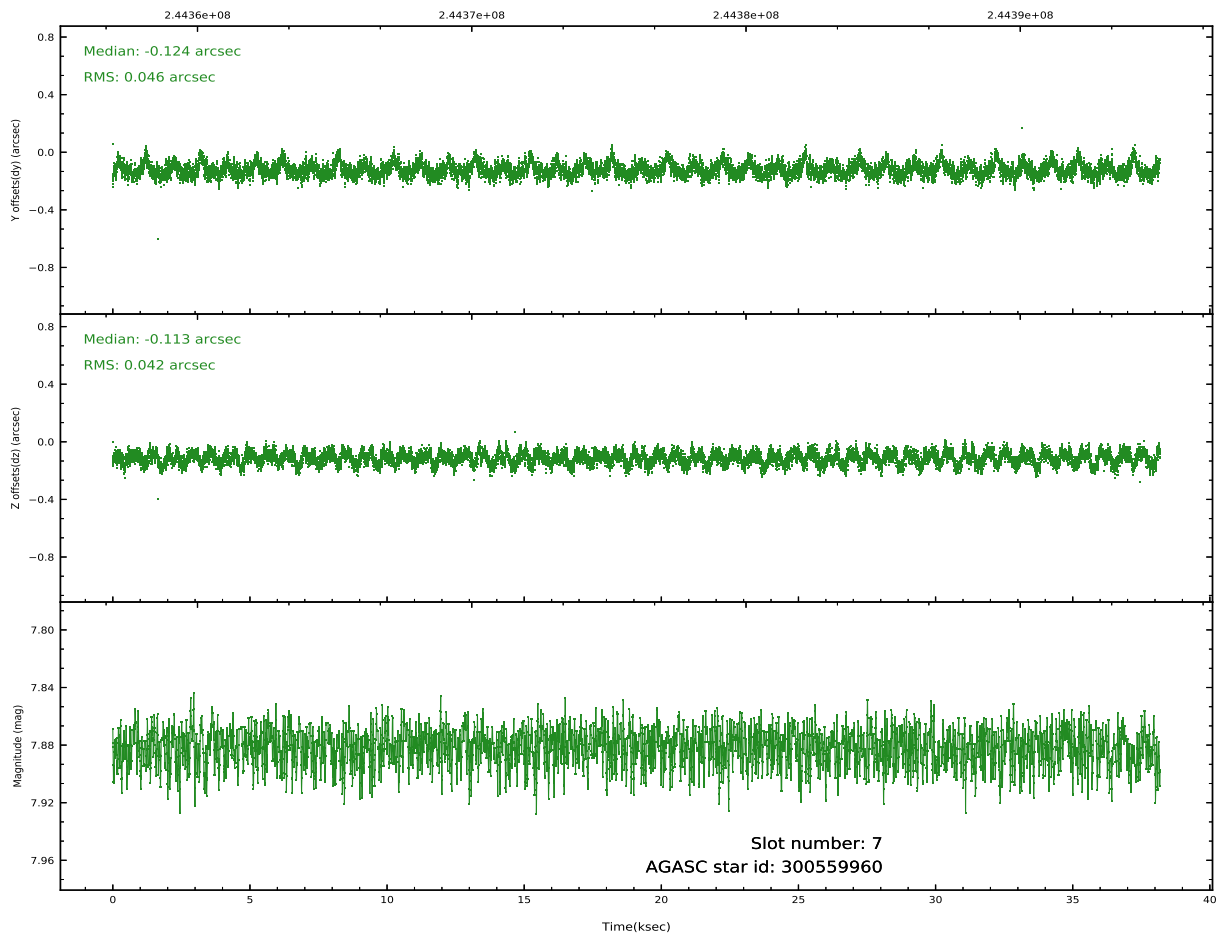
Time (s)



## 2.4.5 Slot 7

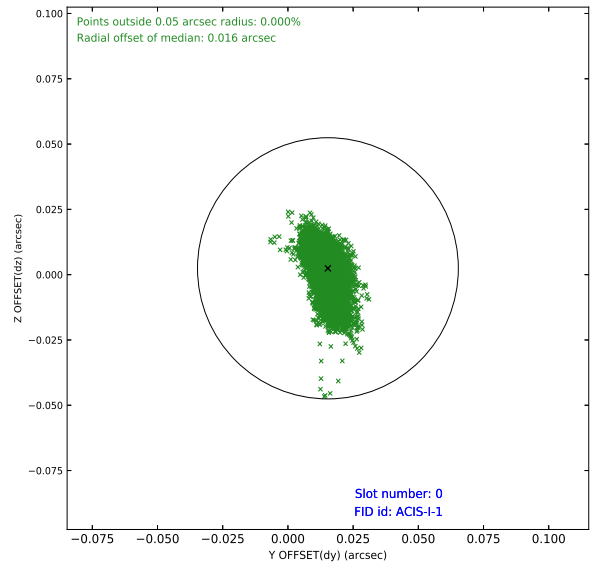
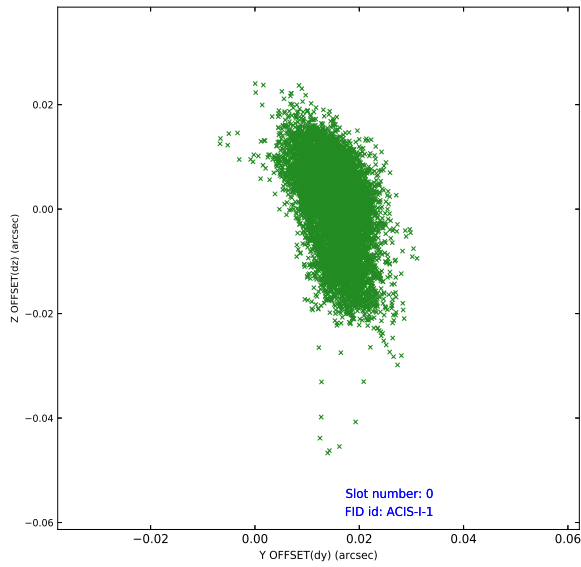


Time (s)

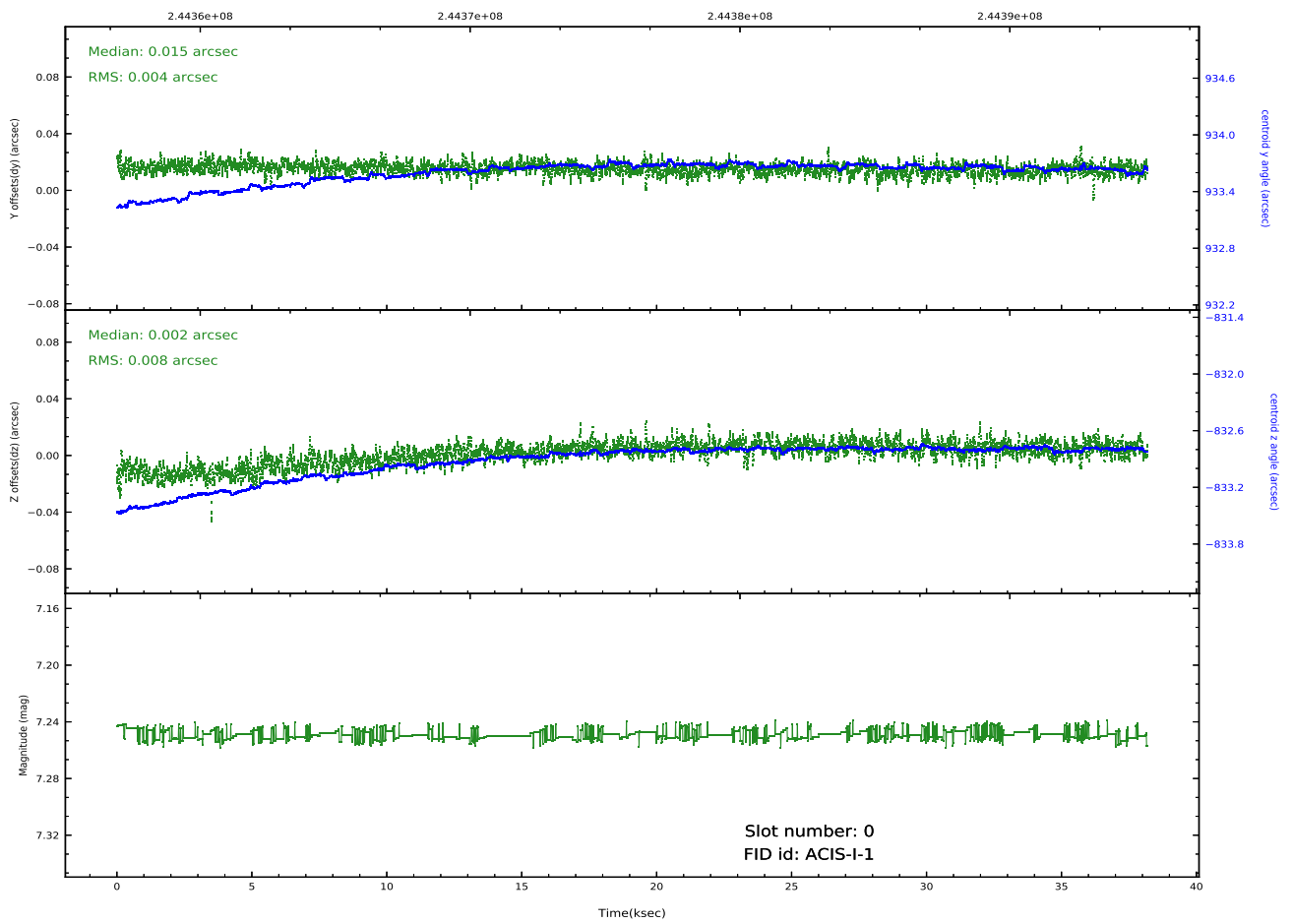


## 2.5 FID Slots

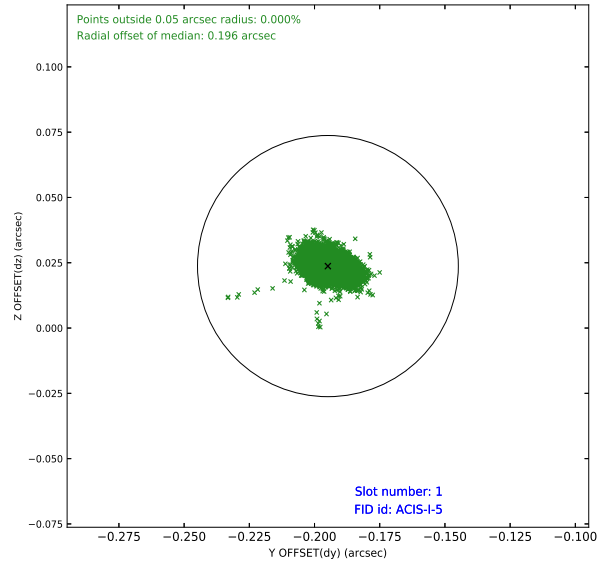
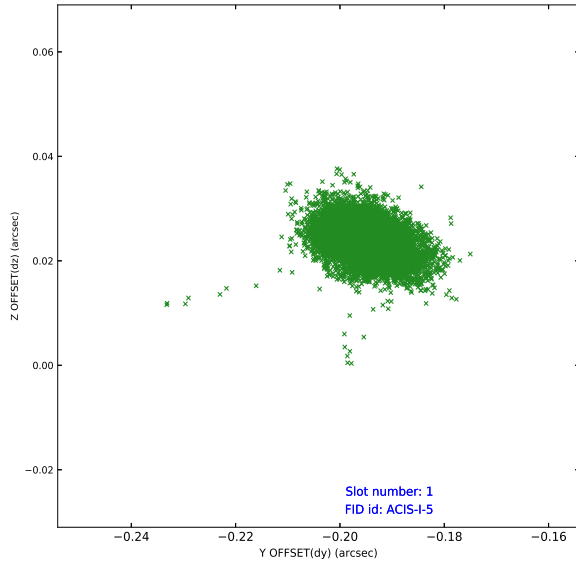
### 2.5.1 Slot 0



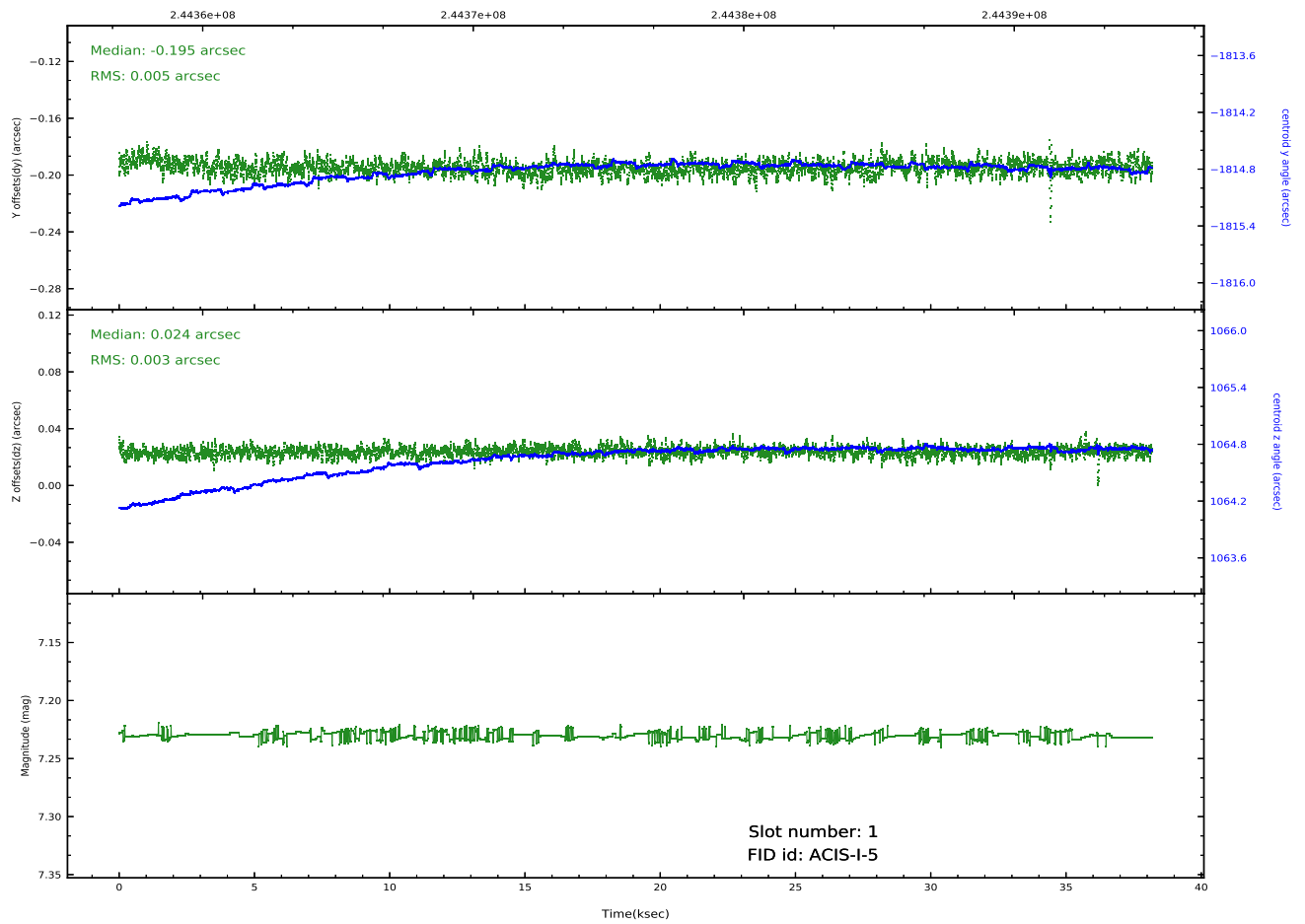
Time (s)



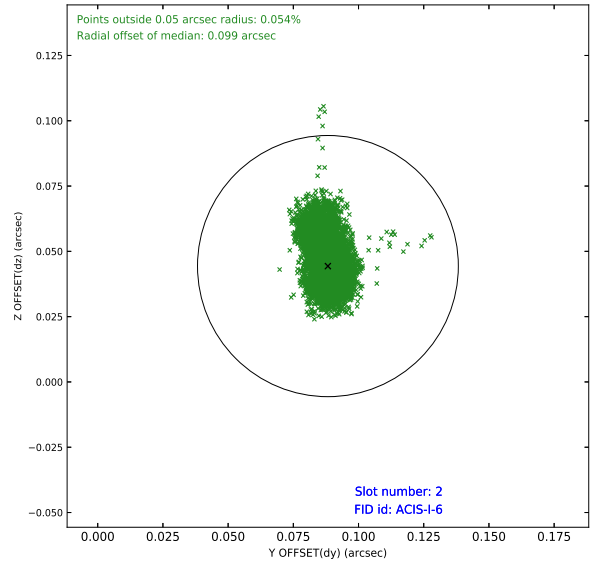
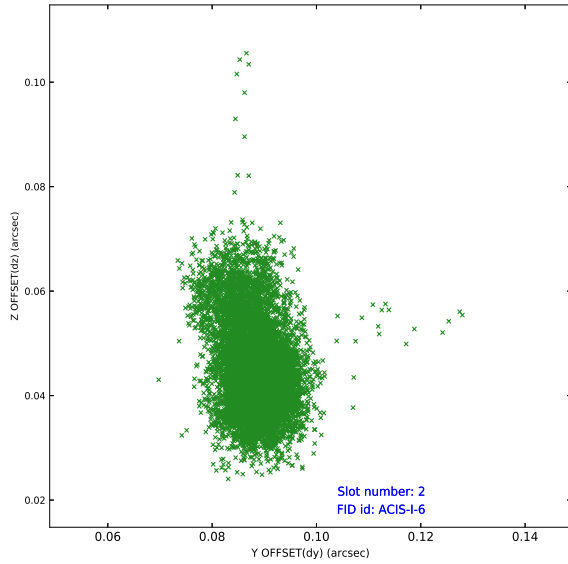
## 2.5.2 Slot 1



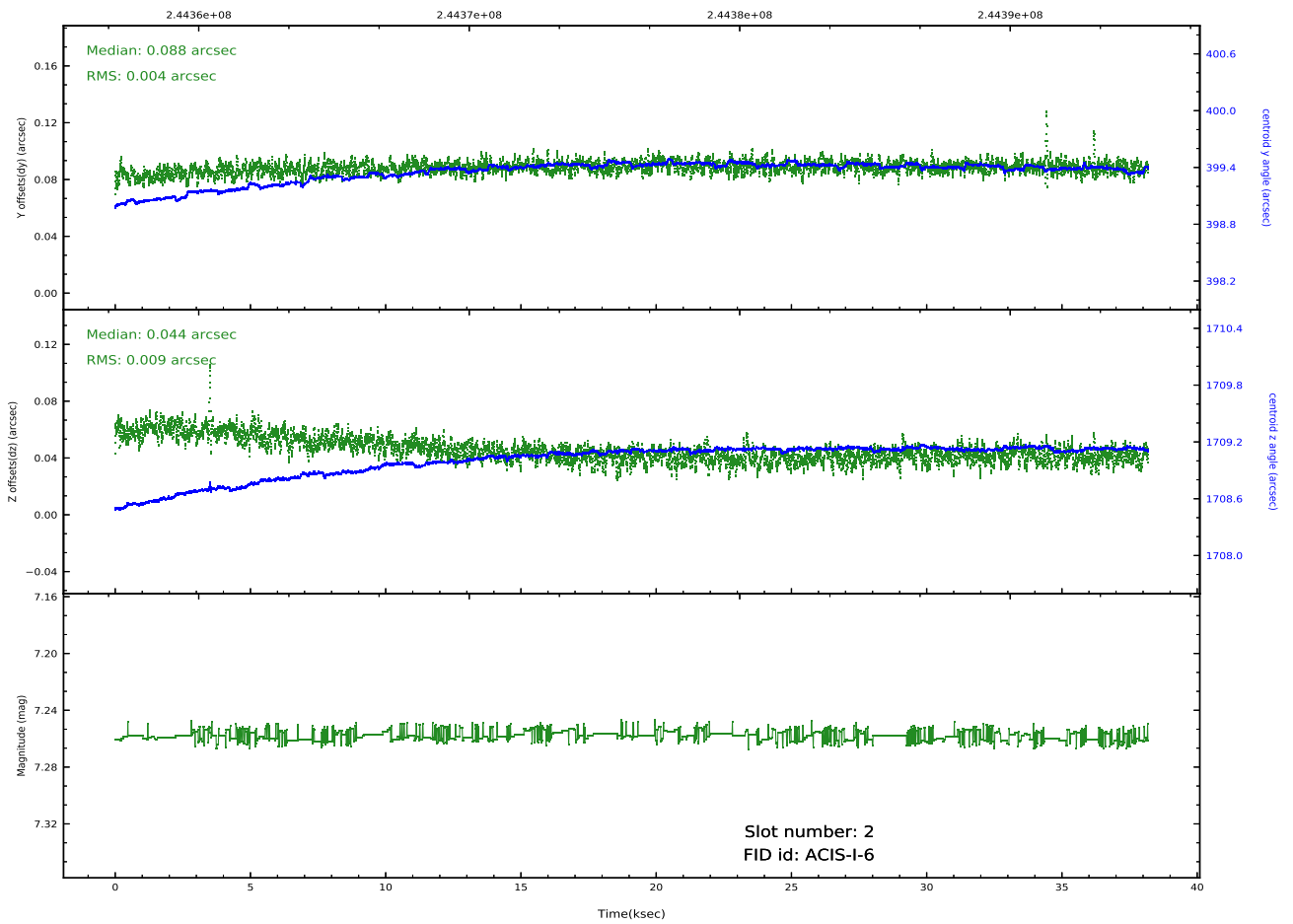
Time (s)



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	38.17591

## A.2 Comments

As a consequence of the DEA-A shutdown anomaly on Sep 15th (DOY258), the reported value of the ACIS FP temperature was ~1.3 degrees warmer than the actual temperature. The value for FP temperature reported in the headers of the Level 2 event file and the Mission Timeline files ARE INCORRECT by this amount for this processing. However, the temperature is corrected in the processing in order to obtain the correct temperature for the CTI correction. So the calibrated data are correct.