

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 7180 - L2 Version 5  
Chandra X-Ray Center

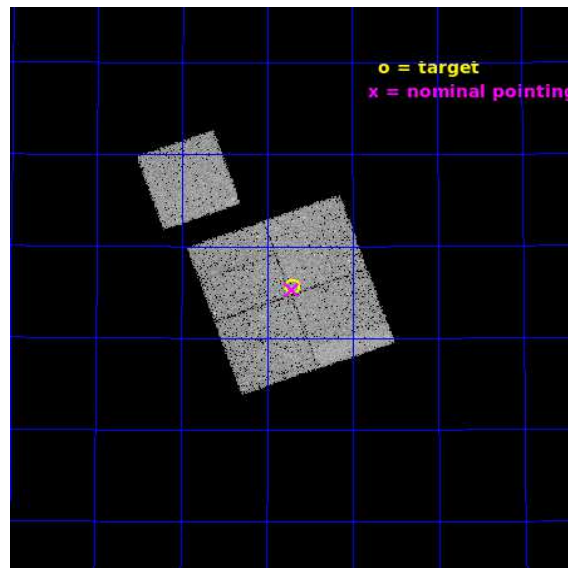
L2 Processing Date : Oct 10 2020

## 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	900348	Sequence number
obs_id	7180	Observation id
title	Deep Chandra Imaging of the Extended Groth Strip: The Co-evolution of Black Holes and Galaxies	Proposal title
observer	Prof Kirpal Nandra	Principal investigator
object	Extended Groth Strip (EGS)	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	215.676254	Observer's specified target RA [deg]
dec_targ	53.427086	Observer's specified target Dec [deg]
ra_nom	215.67723181267	Nominal RA [deg]
dec_nom	53.421645963578	Nominal Dec [deg]
roll_nom	340.19799977243	Nominal Roll [deg]
revision	5	Processing version of data
ontime	20704.858940065	Sum of GTIs [s]
livetime	20434.334715318	Livetime [s]
ontime0	20707.999960154	Sum of GTIs [s]
ontime1	20707.999960154	Sum of GTIs [s]
ontime2	20707.999960154	Sum of GTIs [s]
ontime3	20704.858940065	Sum of GTIs [s]
ontime6	20707.999960154	Sum of GTIs [s]
l2events	64955	Number of level 2 events

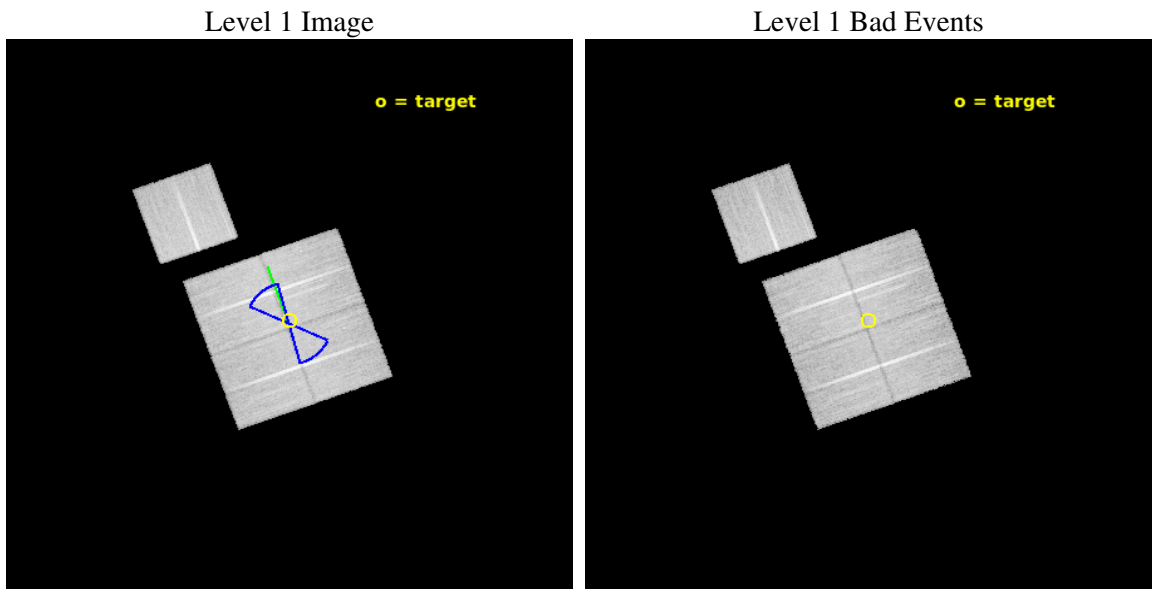




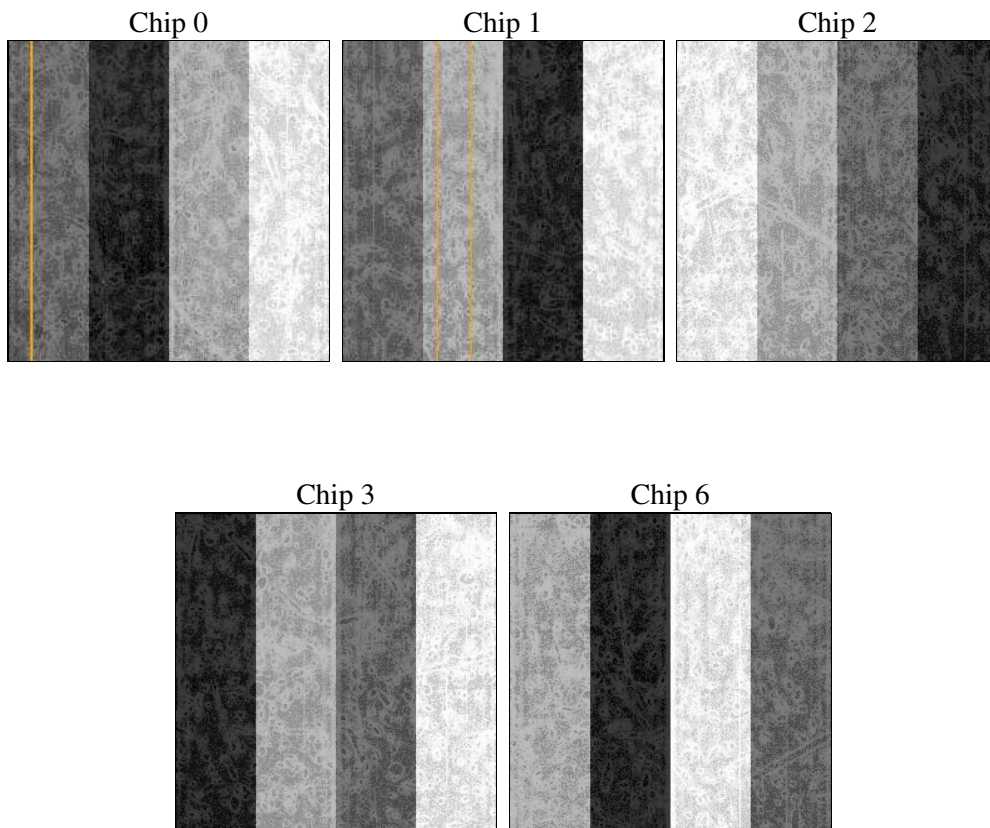
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20571.713000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	20704.858940065	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime0	20707.999960154	Sum of GTIs [s]
date	2020-10-11T02:16:29	Date and time of file creation	ontime1	20707.999960154	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	20707.999960154	Sum of GTIs [s]
			ontime3	20704.858940065	Sum of GTIs [s]
			ontime6	20707.999960154	Sum of GTIs [s]
			l1events	665099	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	126663	126021	143186	134833	134396
rejected events	111751	108881	128743	120147	118865
rejected %	88%	86%	89%	89%	88%

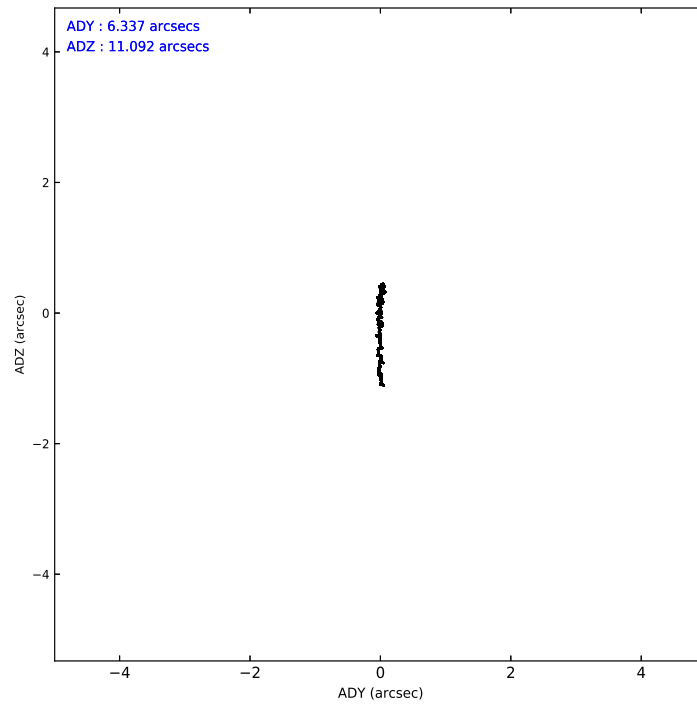
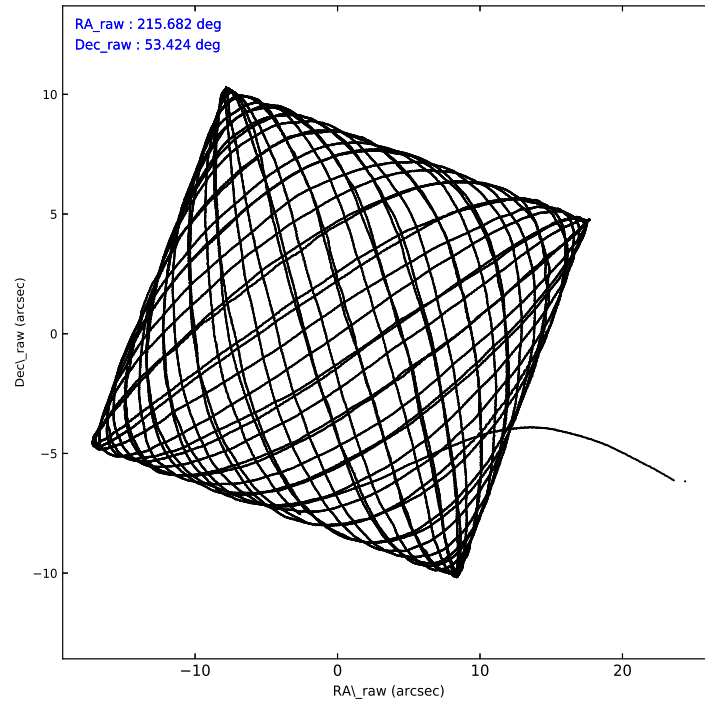
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	5877	7323	5942	6066	6246
	4%	5%	4%	4%	4%
grade 1 events	70	68	79	87	52
	0%	0%	0%	0%	0%
grade 2 events	3461	3762	3275	2961	3283
	2%	2%	2%	2%	2%
grade 3 events	1619	1657	1526	1644	1606
	1%	1%	1%	1%	1%
grade 4 events	1564	1613	1484	1550	1619
	1%	1%	1%	1%	1%
grade 5 events	4513	5230	4524	5437	5440
	3%	4%	3%	4%	4%
grade 6 events	2642	3112	2477	2731	3048
	2%	2%	1%	2%	2%
grade 7 events	106917	103256	123879	114357	113102
	84%	81%	86%	84%	84%

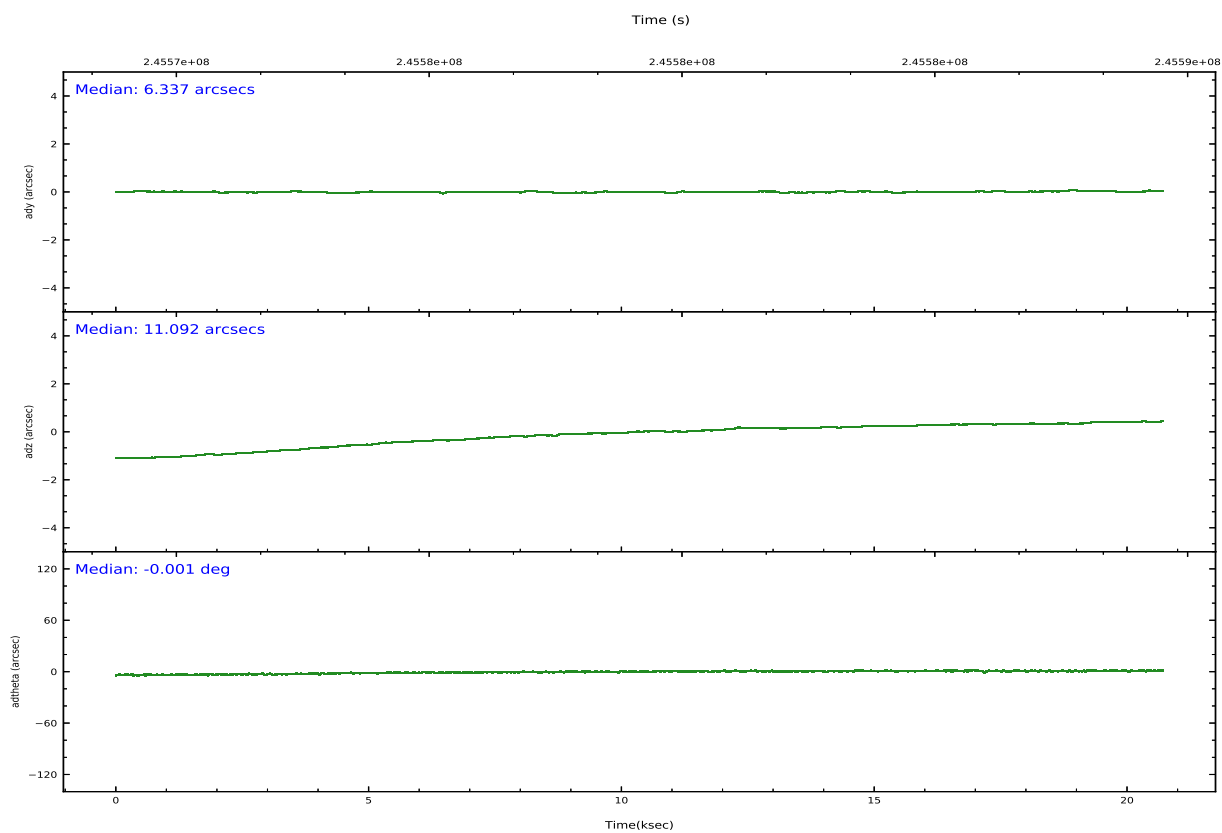
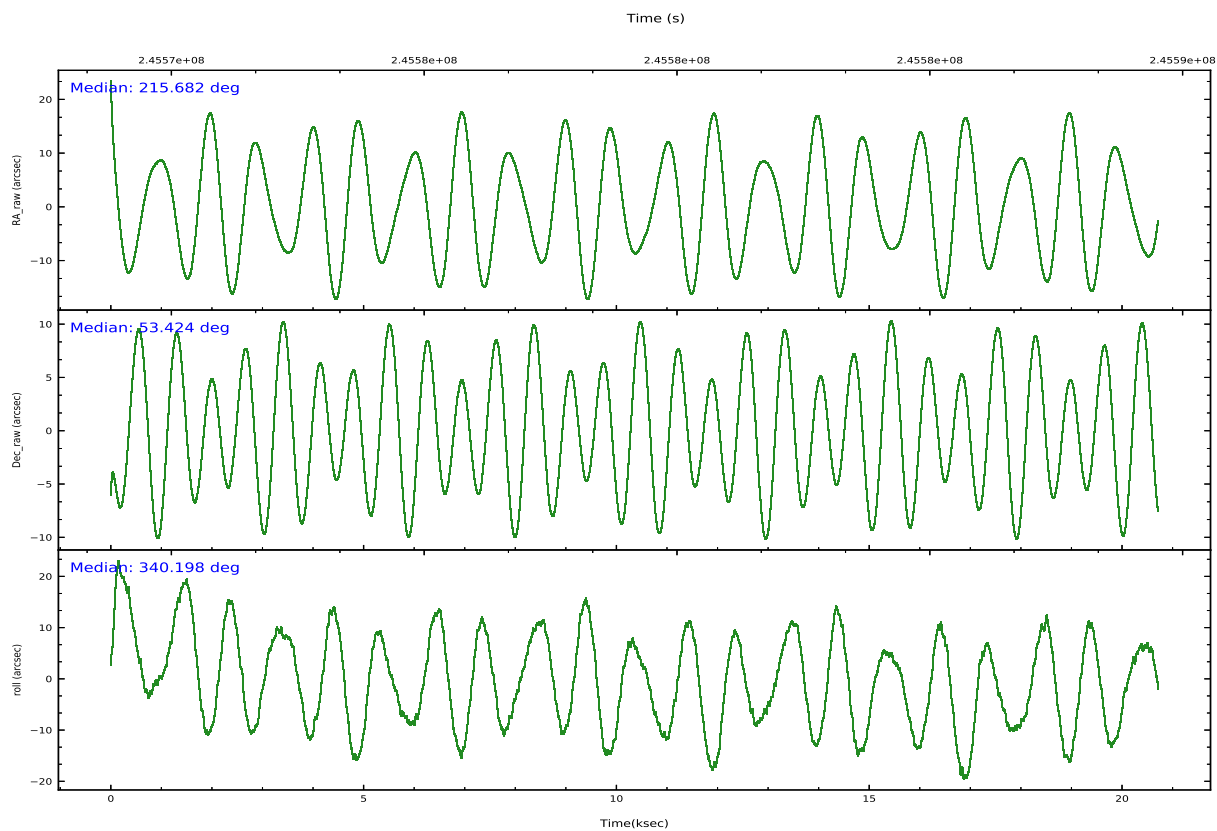
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-01236	ACIS-01236
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	215.636785	215.67723181267
[deg] Pointing Dec	53.418971	53.421645963578
[deg] Pointing Roll	340.031691	340.19799977243
[deg] Roll angle	50.756000	50.756000
[deg] Roll tolerance	25.000000	25.000000
Roll constraint allows 180D rotation	Y	Y
[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)	245568944.184000	245567764.61008
Observation start date	2005-10-13T05:34:40	2005-10-13T05:16:04
[s] Observation end time (MET)	245589515.184000	245589753.93609
Observation end date	2005-10-13T11:17:31	2005-10-13T11:22:33
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar version number	8	8
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



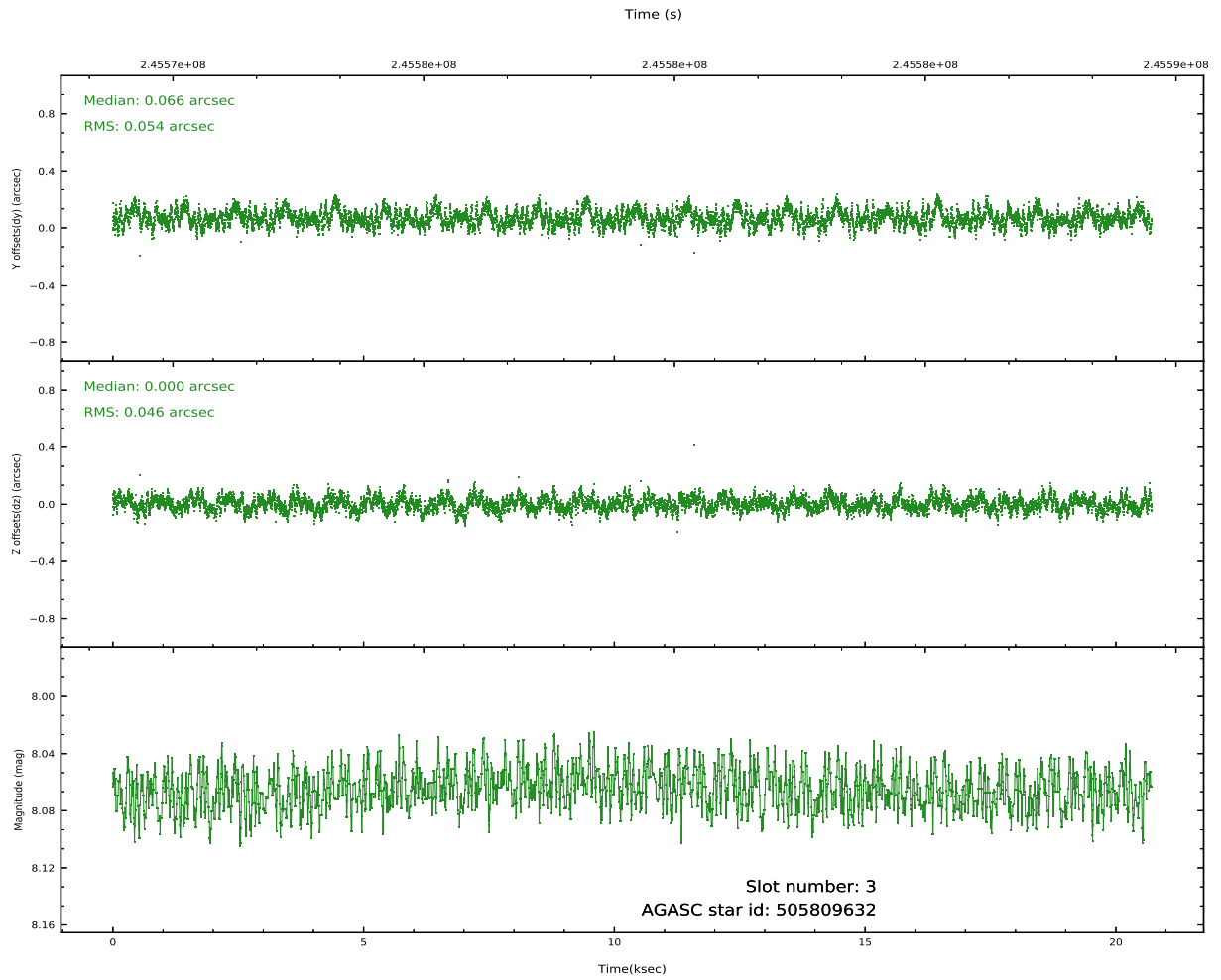
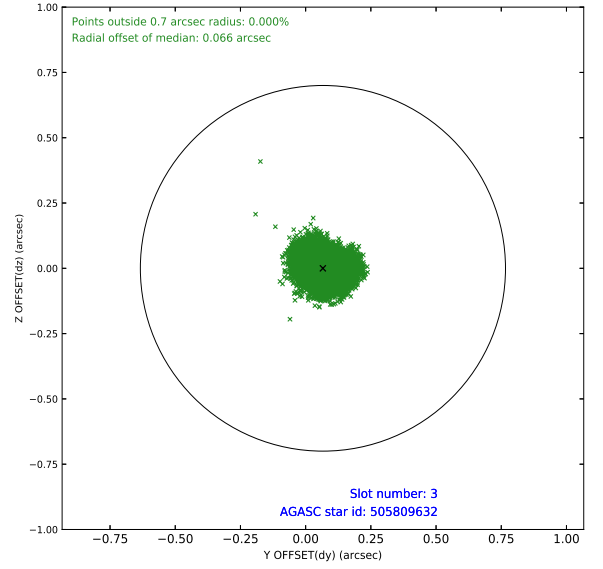
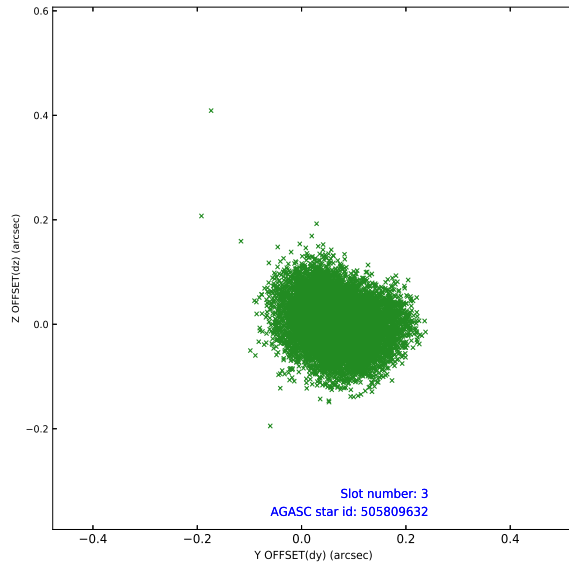


Slot Statistics

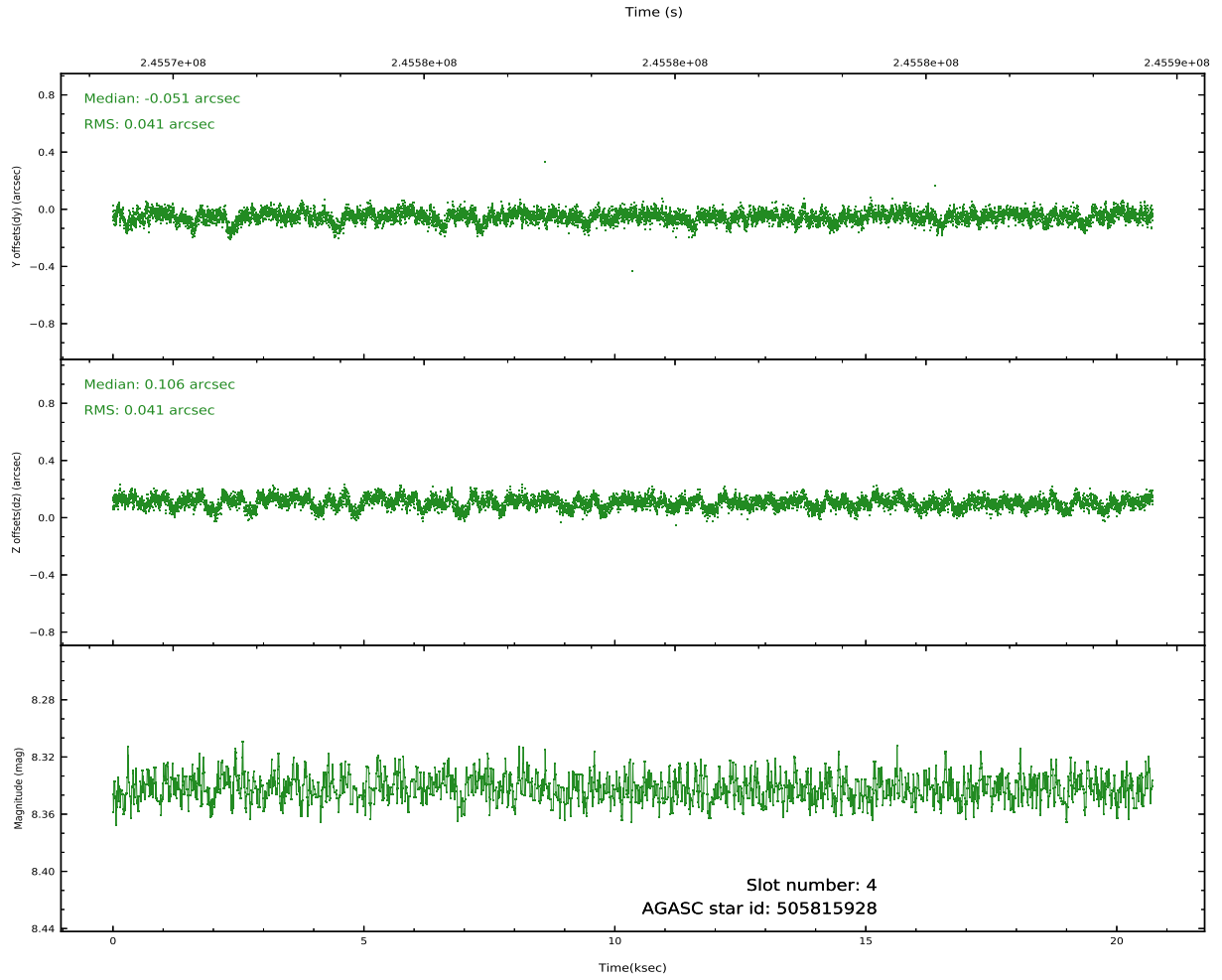
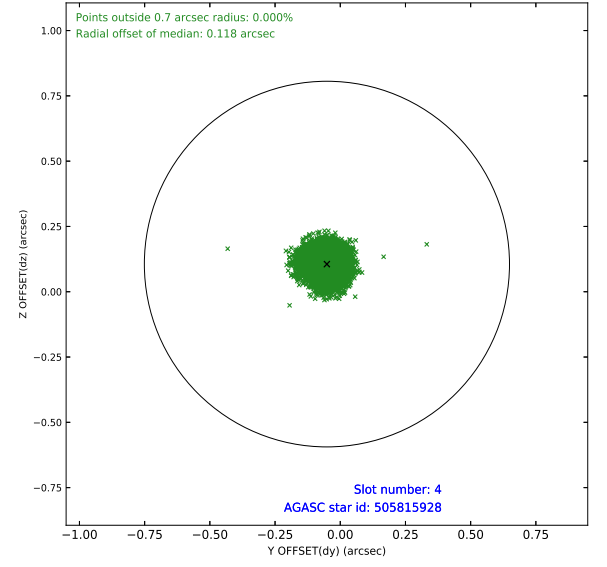
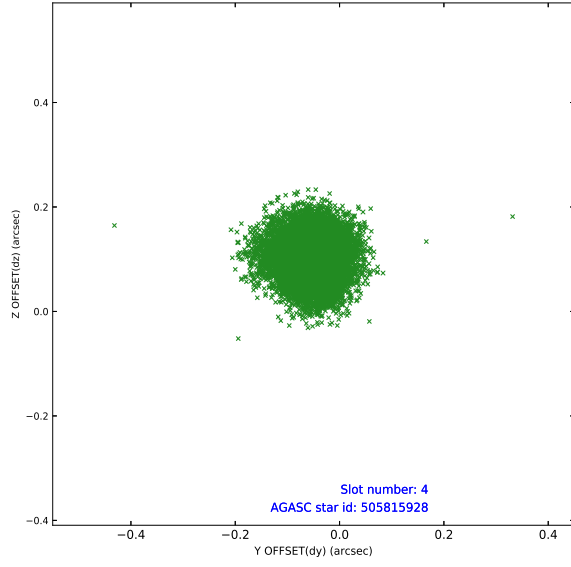
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.24	5053	1.000	0.052	-0.051	0.016	0.051	0.000000	0.000000	933.39	-834
1	FID		ACIS-I-5	7.23	5053	1.000	-0.202	0.050	0.013	0.030	0.000000	0.000000	-1814.84	1063
2	FID		ACIS-I-6	7.26	5052	1.000	0.061	0.070	0.012	0.023	0.000000	0.000000	398.80	1707
3	GUIDE	used	505809632	8.07	10104	1.000	0.066	0.000	0.076	0.120	215.499426	53.521185	-401.70	245
4	GUIDE	used	505815928	8.34	10105	1.000	-0.051	0.106	0.062	0.098	216.234742	53.074559	1637.41	-718
5	GUIDE	used	505817176	8.25	10105	1.000	-0.050	0.051	0.061	0.099	216.408138	53.717379	1174.59	1579
6	GUIDE	used	505815088	7.28	10106	1.000	-0.015	0.013	0.056	0.090	216.315963	53.584954	1158.67	1063
7	GUIDE	used	505816088	10.42	10086	1.000	0.046	-0.173	0.197	0.337	216.276680	52.548591	2385.48	-2460

## 2.4 Star Slots

### 2.4.1 Slot 3

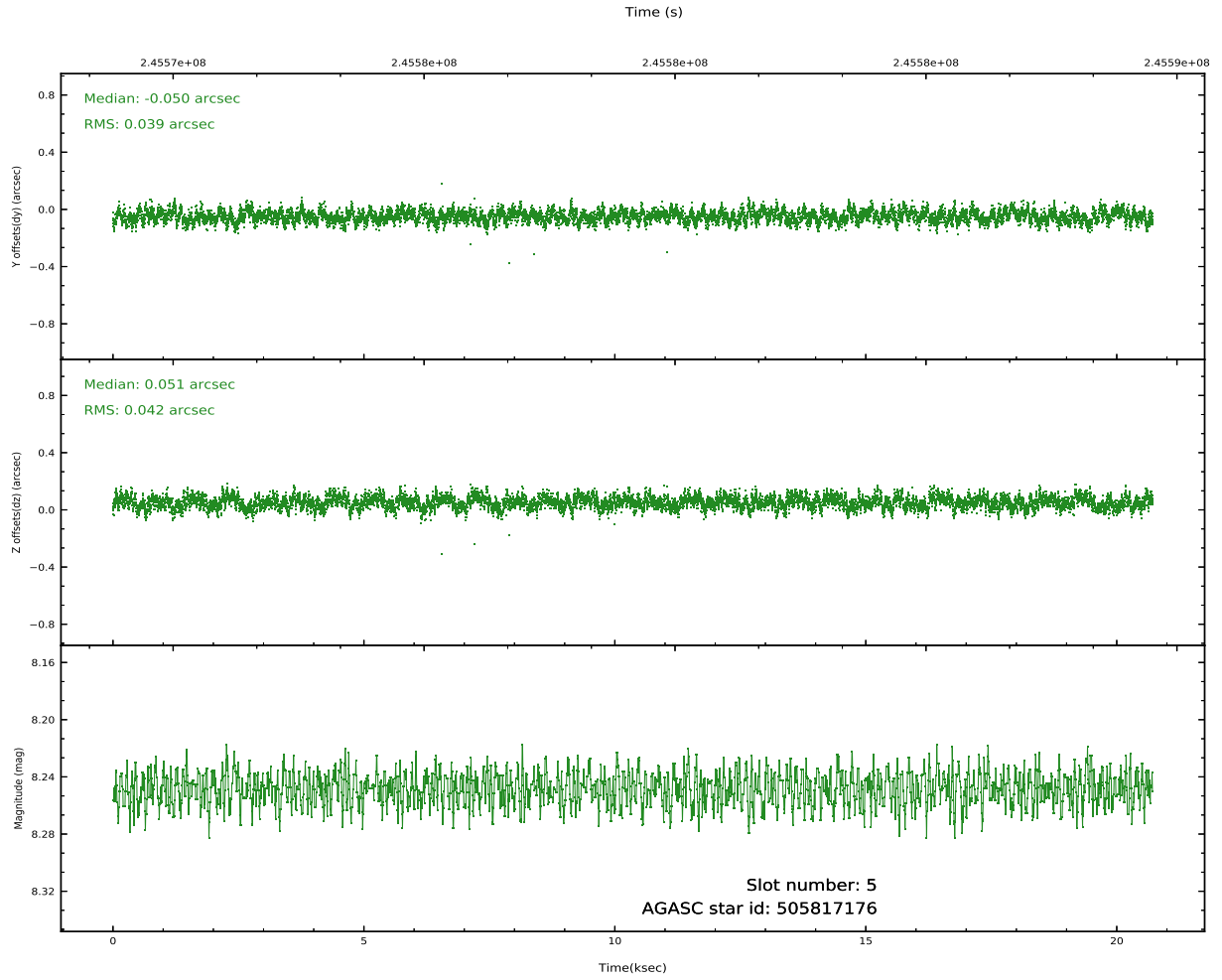
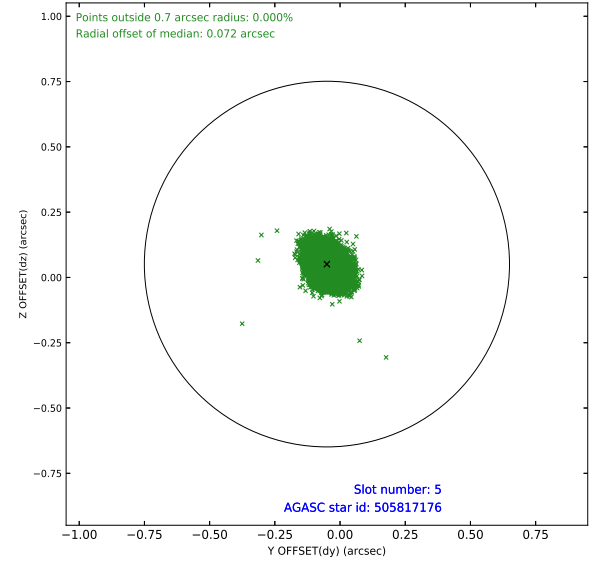
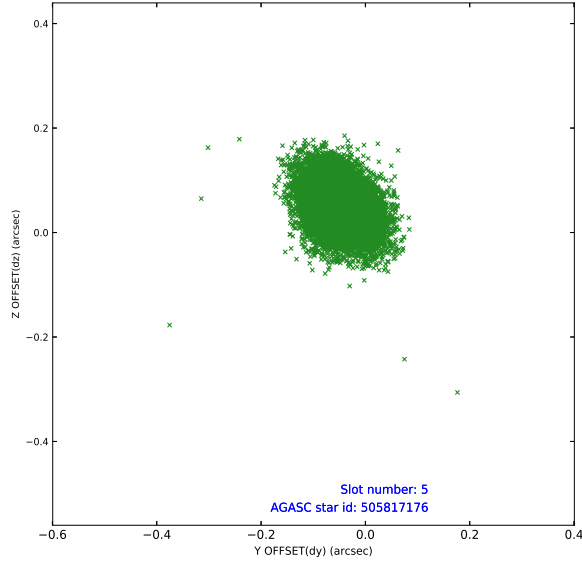


## 2.4.2 Slot 4

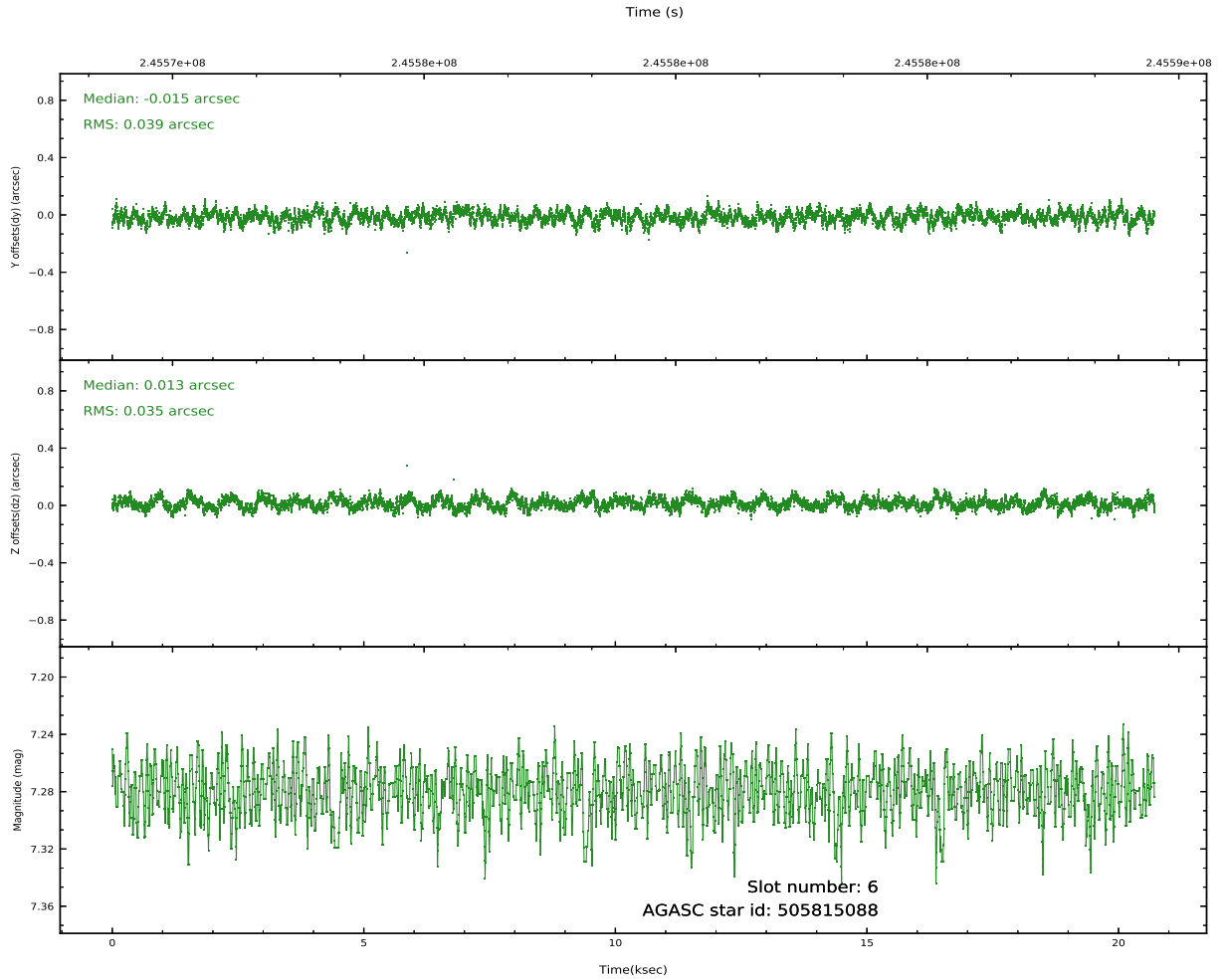
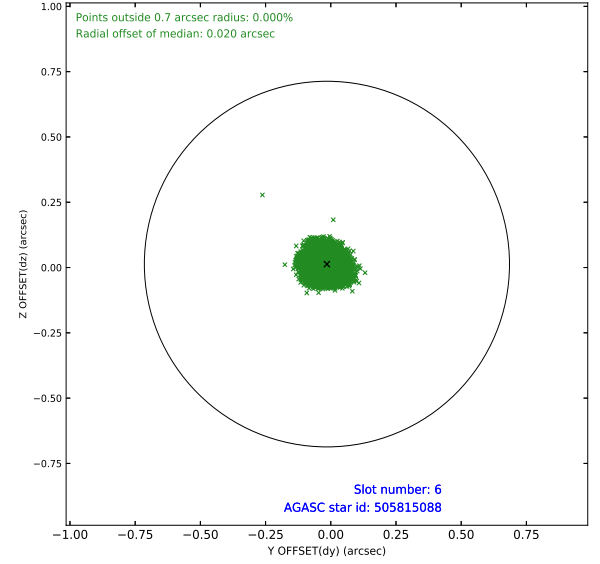
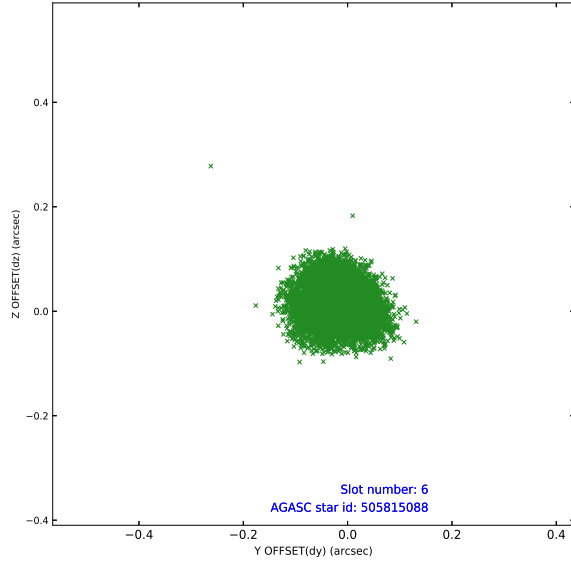




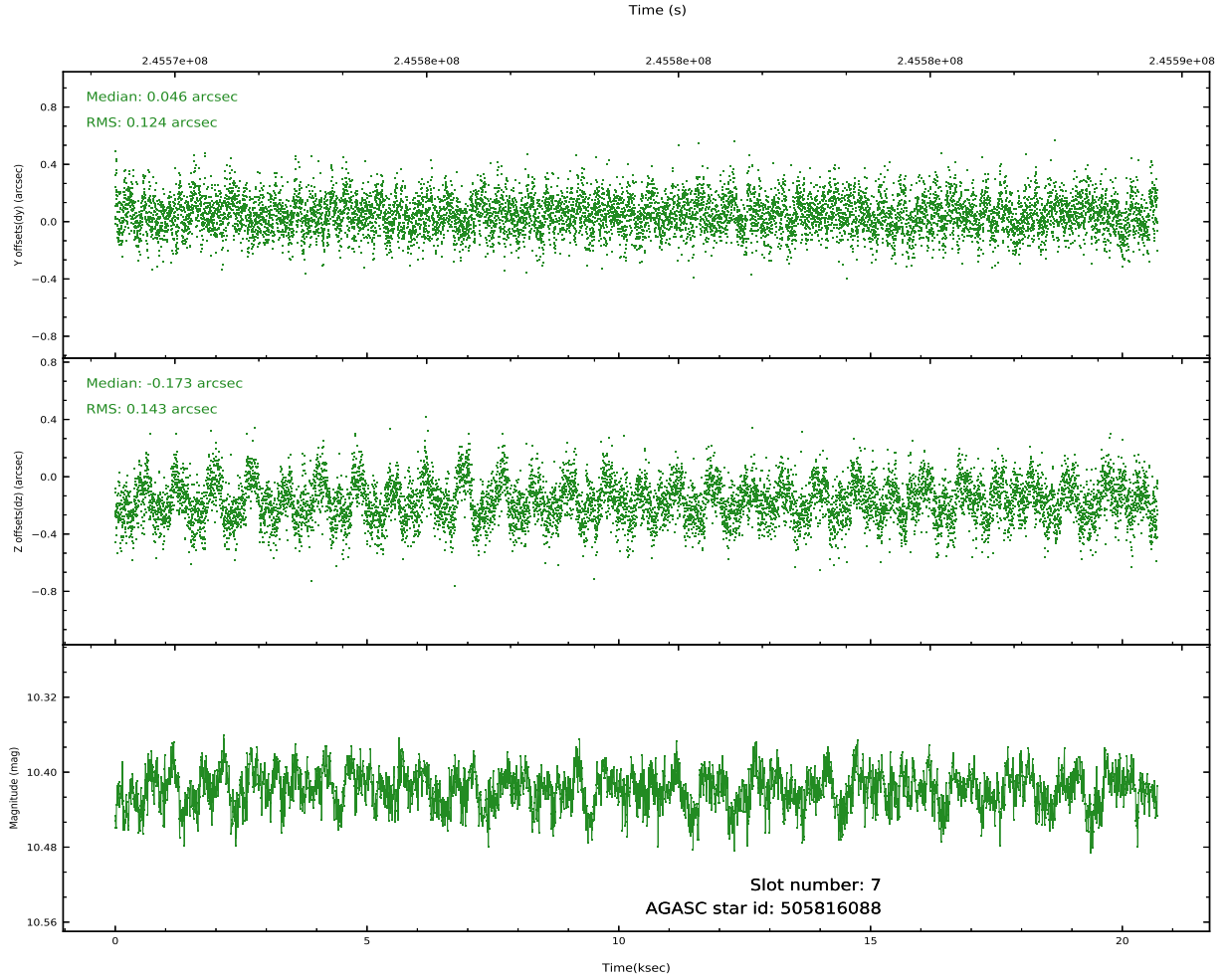
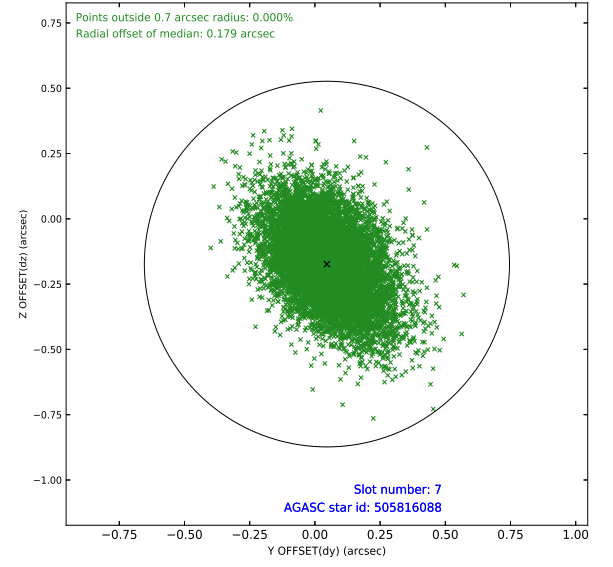
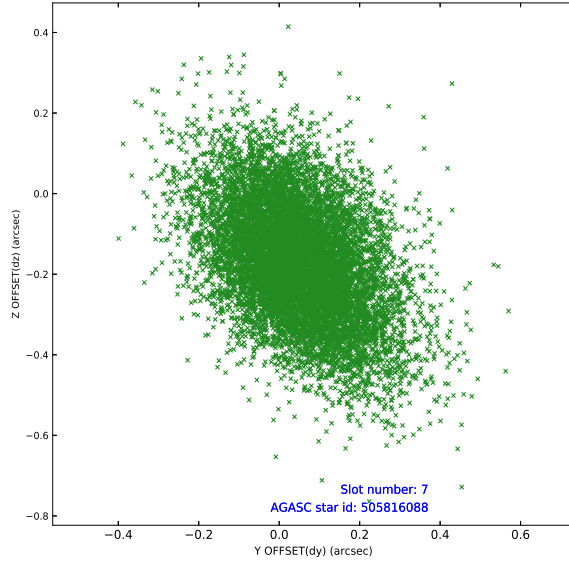
### 2.4.3 Slot 5



## 2.4.4 Slot 6

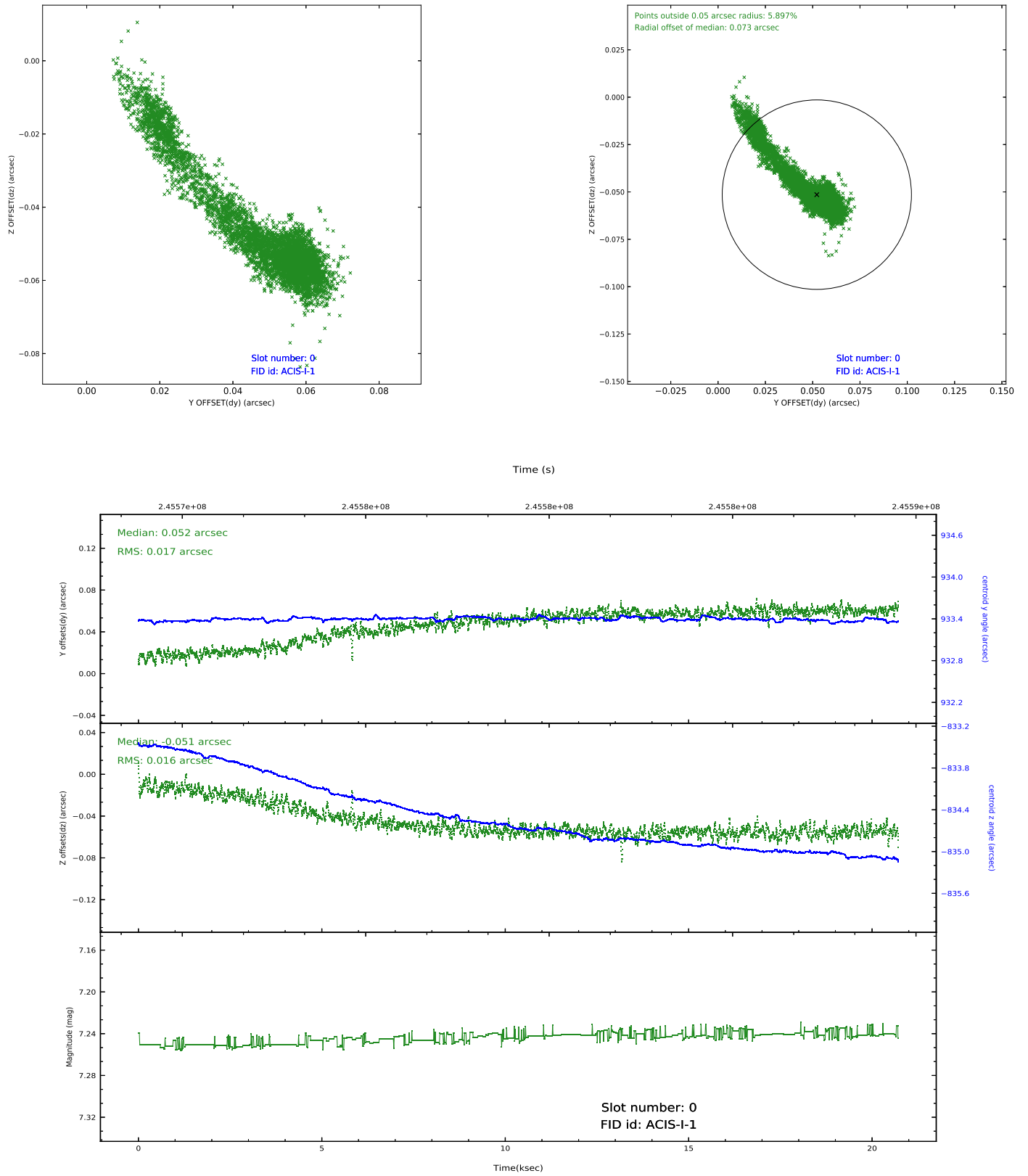


## 2.4.5 Slot 7

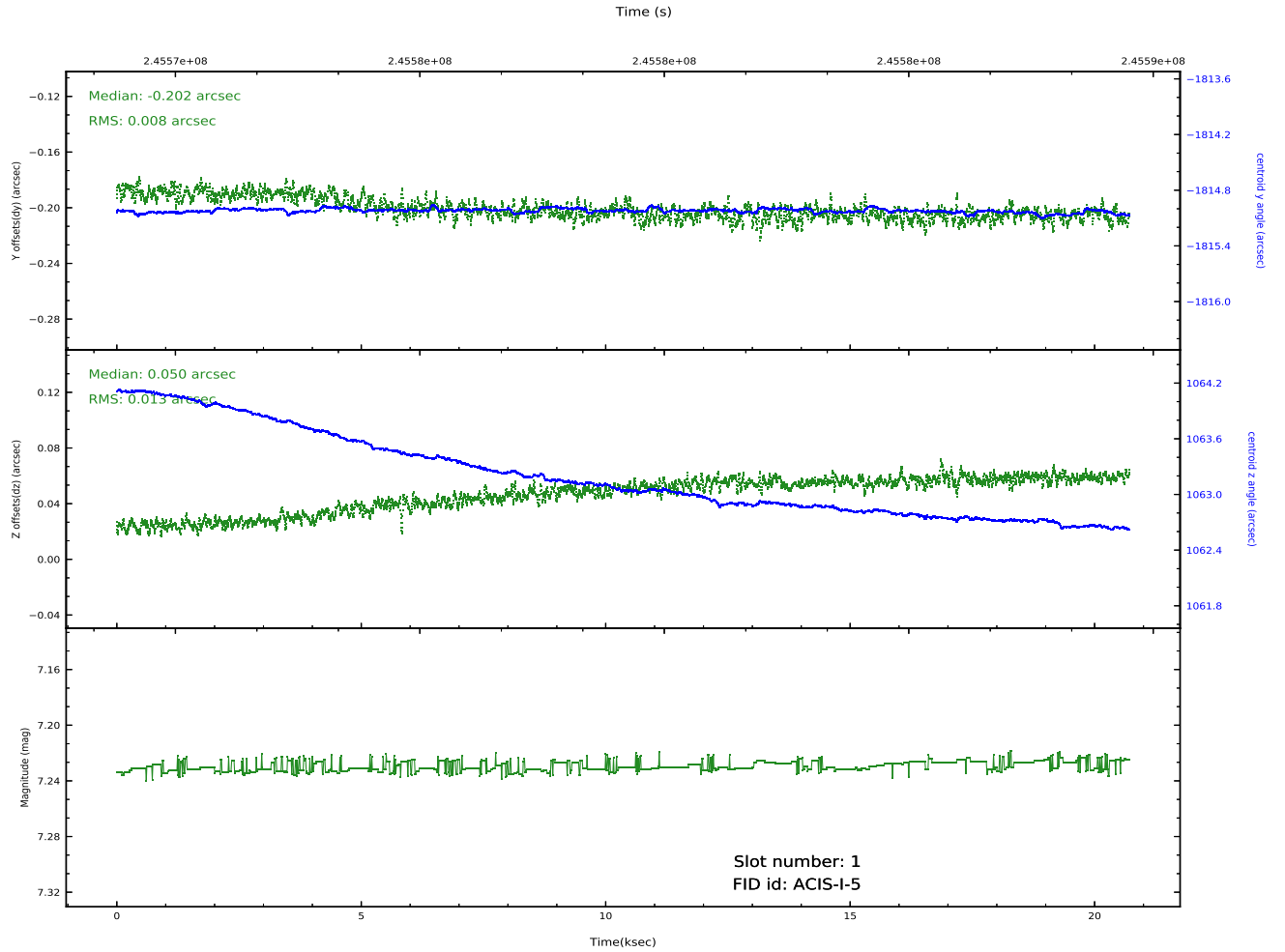
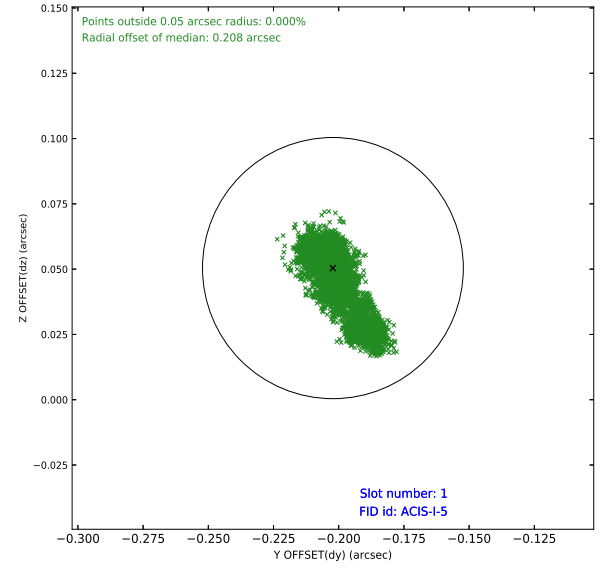
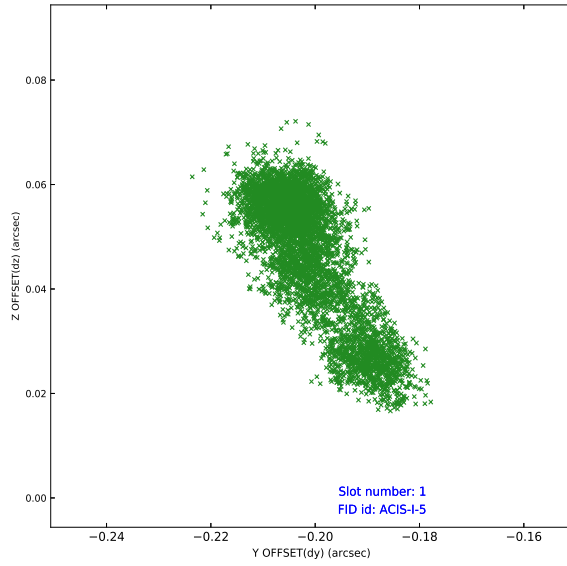


## 2.5 FID Slots

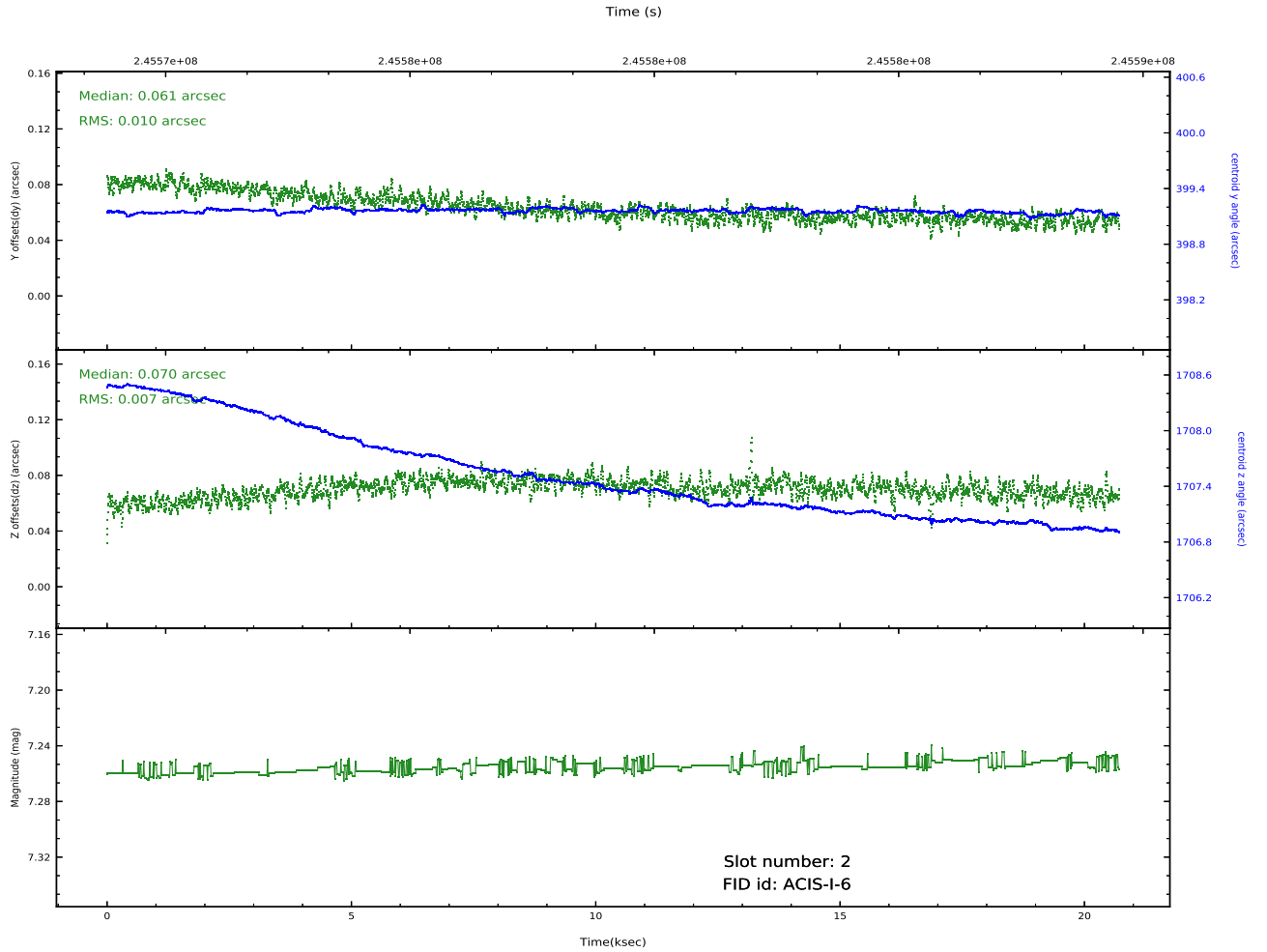
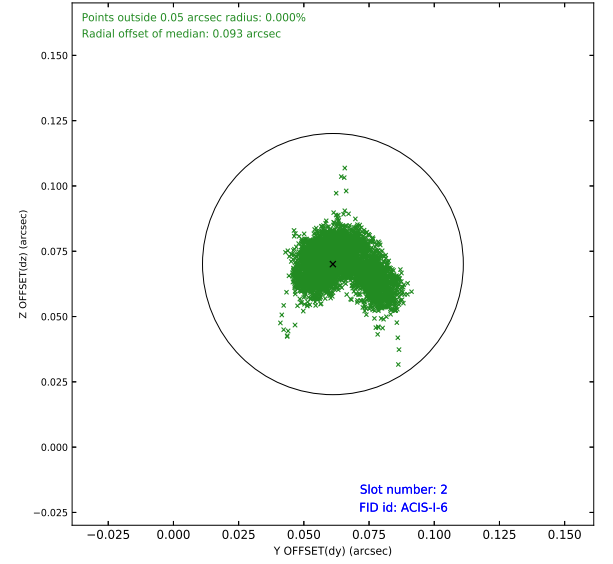
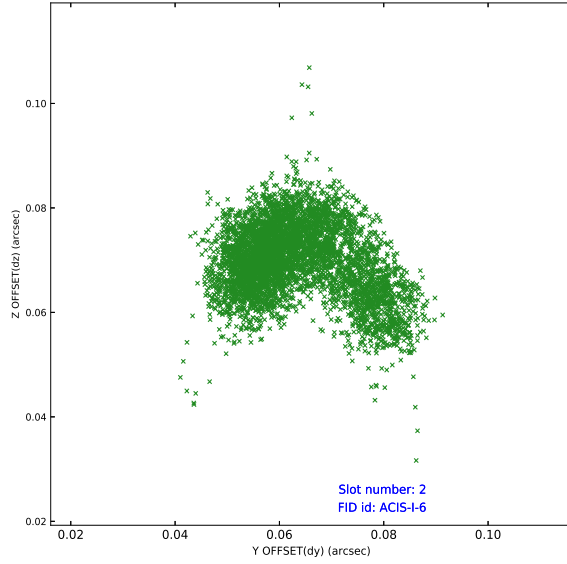
### 2.5.1 Slot 0



## 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)	2020.10.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.70485

## 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.

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Roll constraint was met.