

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5718 - L2 Version 4  
Chandra X-Ray Center

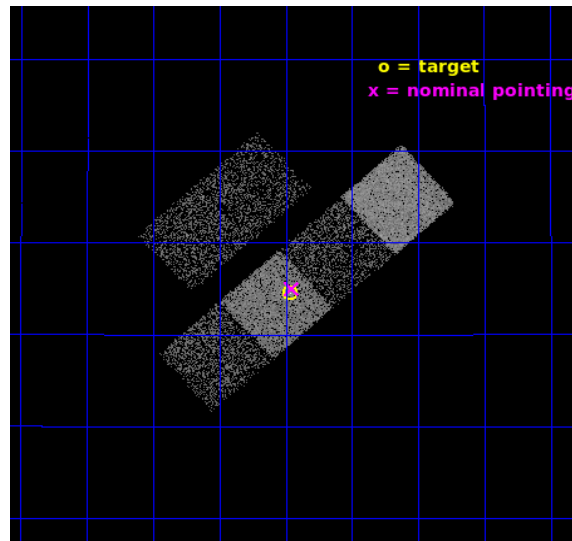
L2 Processing Date : Oct 7 2020

## 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

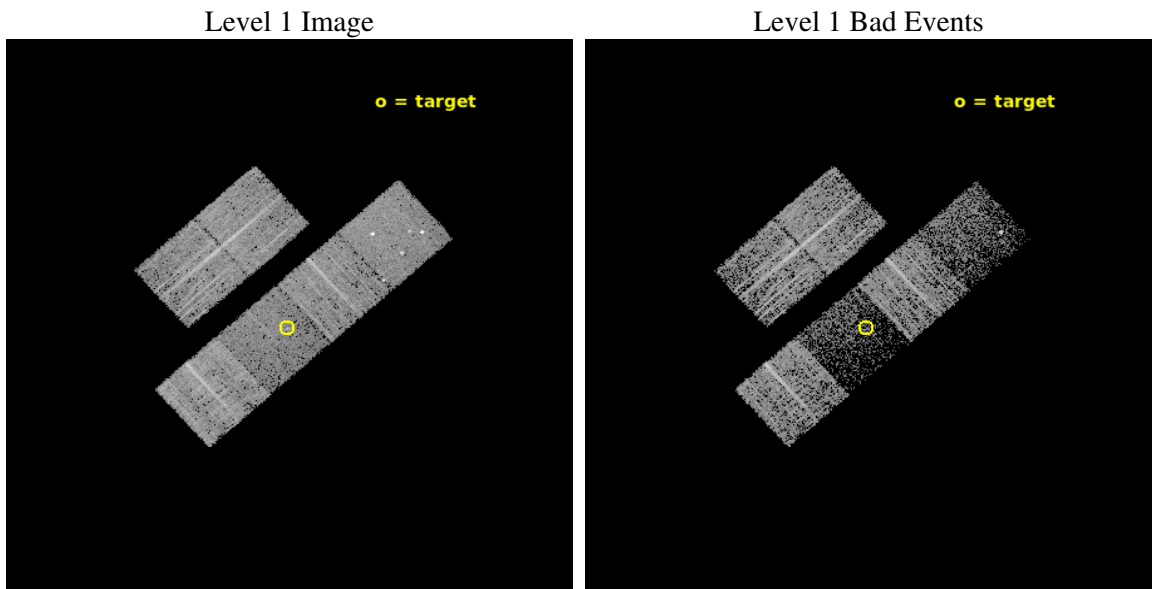
seq_num	701140	Sequence number
obs_id	5718	Observation id
title	What kind of Jets does Nature make? X-ray characterization of the FIRST Flat Spectrum Sample	Proposal title
observer	Dr. Giovanni Fossati	Principal investigator
object	87GB 123528.0+225113	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	189.49125	Observer's specified target RA [deg]
dec_targ	22.575111	Observer's specified target Dec [deg]
ra_nom	189.48826114787	Nominal RA [deg]
dec_nom	22.583431248427	Nominal Dec [deg]
roll_nom	138.11772750394	Nominal Roll [deg]
revision	4	Processing version of data
ontime	4956.7999815345	Sum of GTIs [s]
livetime	4894.0339955417	Livetime [s]
ontime2	4956.7999815345	Sum of GTIs [s]
ontime3	4956.7999815345	Sum of GTIs [s]
ontime5	4956.7999815345	Sum of GTIs [s]
ontime6	4956.7999815345	Sum of GTIs [s]
ontime7	4956.7999815345	Sum of GTIs [s]
ontime8	4956.7999815345	Sum of GTIs [s]
l2events	28416	Number of level 2 events



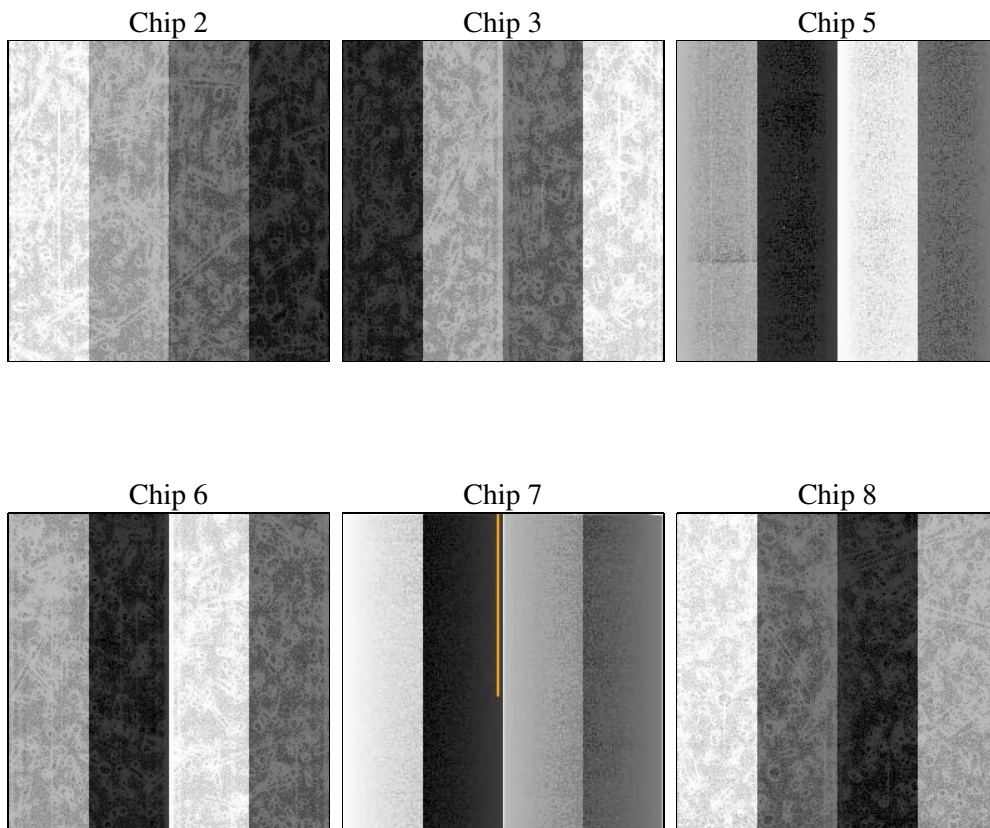
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	4956.7999815345	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime2	4956.7999815345	Sum of GTIs [s]
date	2020-10-07T05:12:58	Date and time of file creation	ontime3	4956.7999815345	Sum of GTIs [s]
revision	4	Processing version of data	ontime5	4956.7999815345	Sum of GTIs [s]
			ontime6	4956.7999815345	Sum of GTIs [s]
			ontime7	4956.7999815345	Sum of GTIs [s]
			ontime8	4956.7999815345	Sum of GTIs [s]
			l1events	150762	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	27465	26354	24987	25043	15411	31502
rejected events	25302	24249	9527	22724	6609	23876
rejected %	92%	92%	38%	90%	42%	75%

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	881	882	3179	911	1127	2109
	3%	3%	12%	3%	7%	6%
grade 1 events	15	19	78	13	31	34
	0%	0%	0%	0%	0%	0%
grade 2 events	476	440	4819	502	2037	1713
	1%	1%	19%	2%	13%	5%
grade 3 events	217	241	711	261	898	818
	0%	0%	2%	1%	5%	2%
grade 4 events	257	227	657	256	881	778
	0%	0%	2%	1%	5%	2%
grade 5 events	424	504	1891	519	1651	878
	1%	1%	7%	2%	10%	2%
grade 6 events	333	315	6103	391	3863	2209
	1%	1%	24%	1%	25%	7%
grade 7 events	24862	23726	7549	22190	4923	22963
	90%	90%	30%	88%	31%	72%

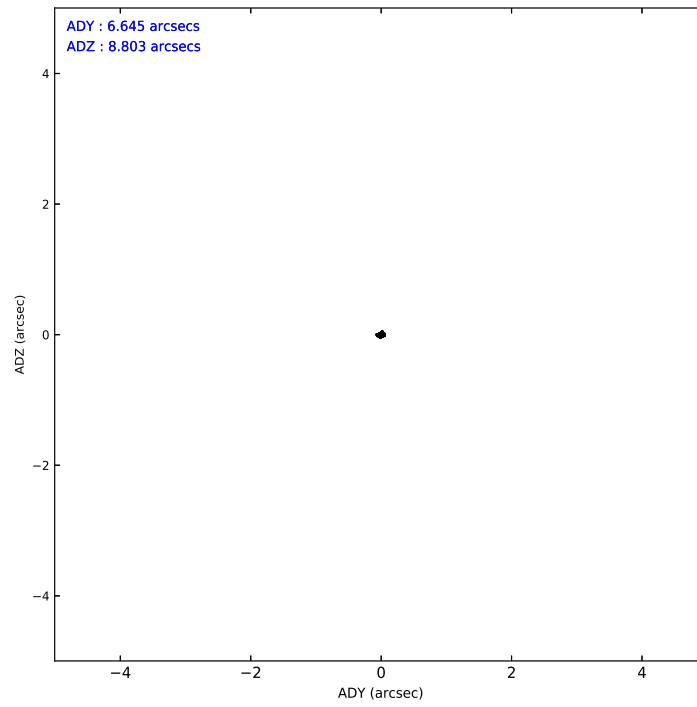
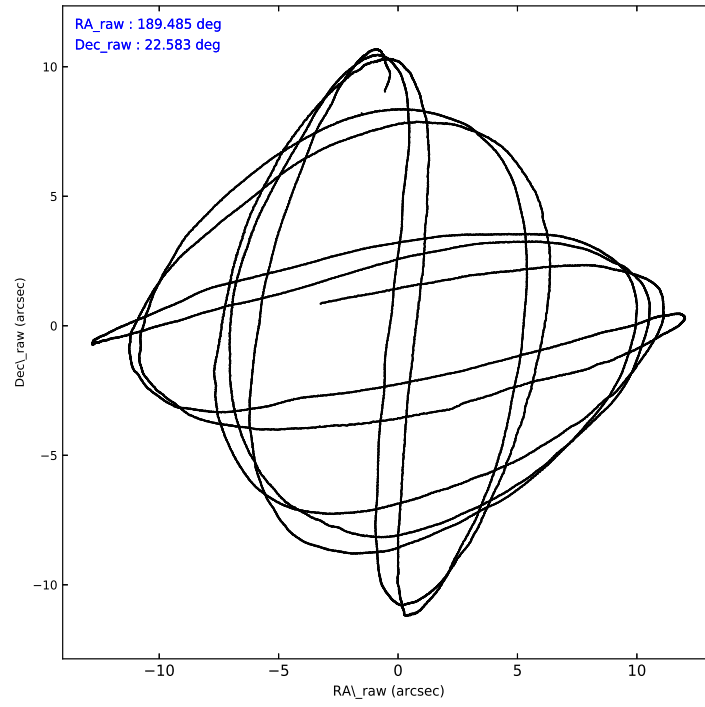


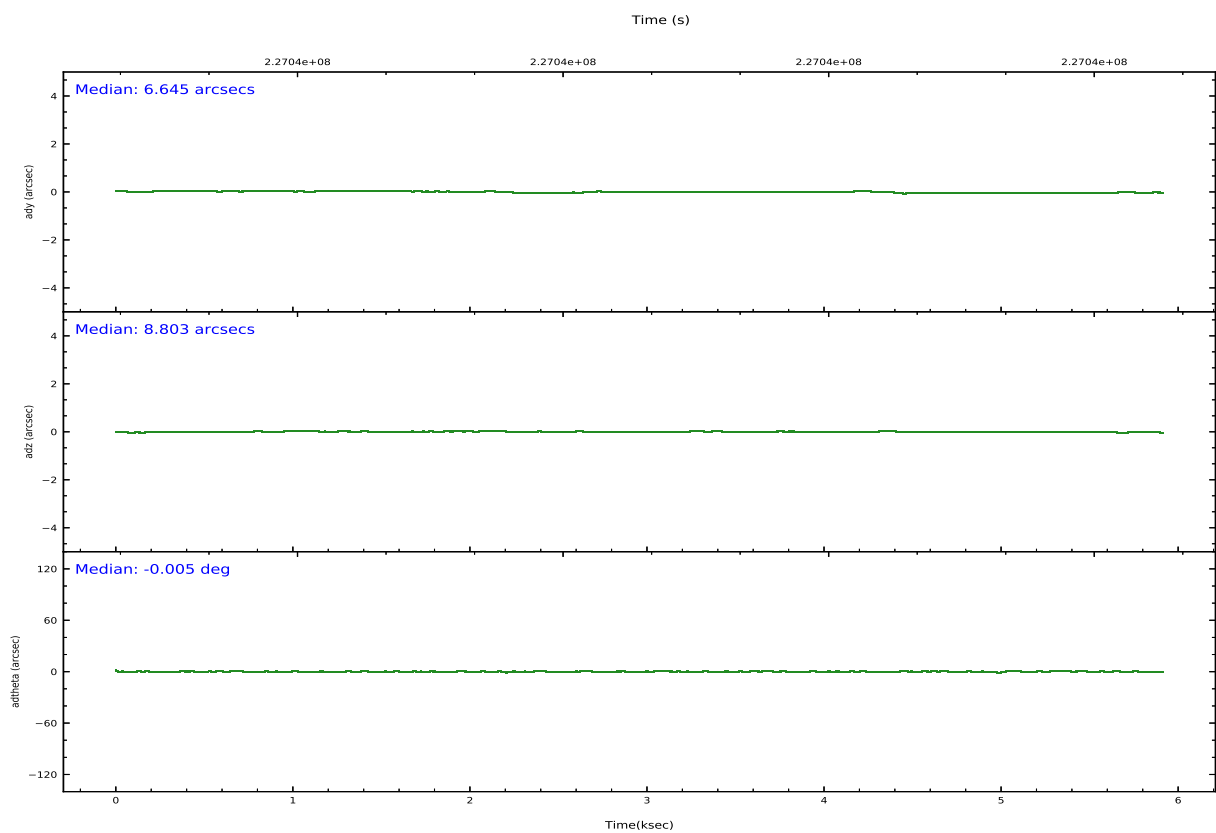
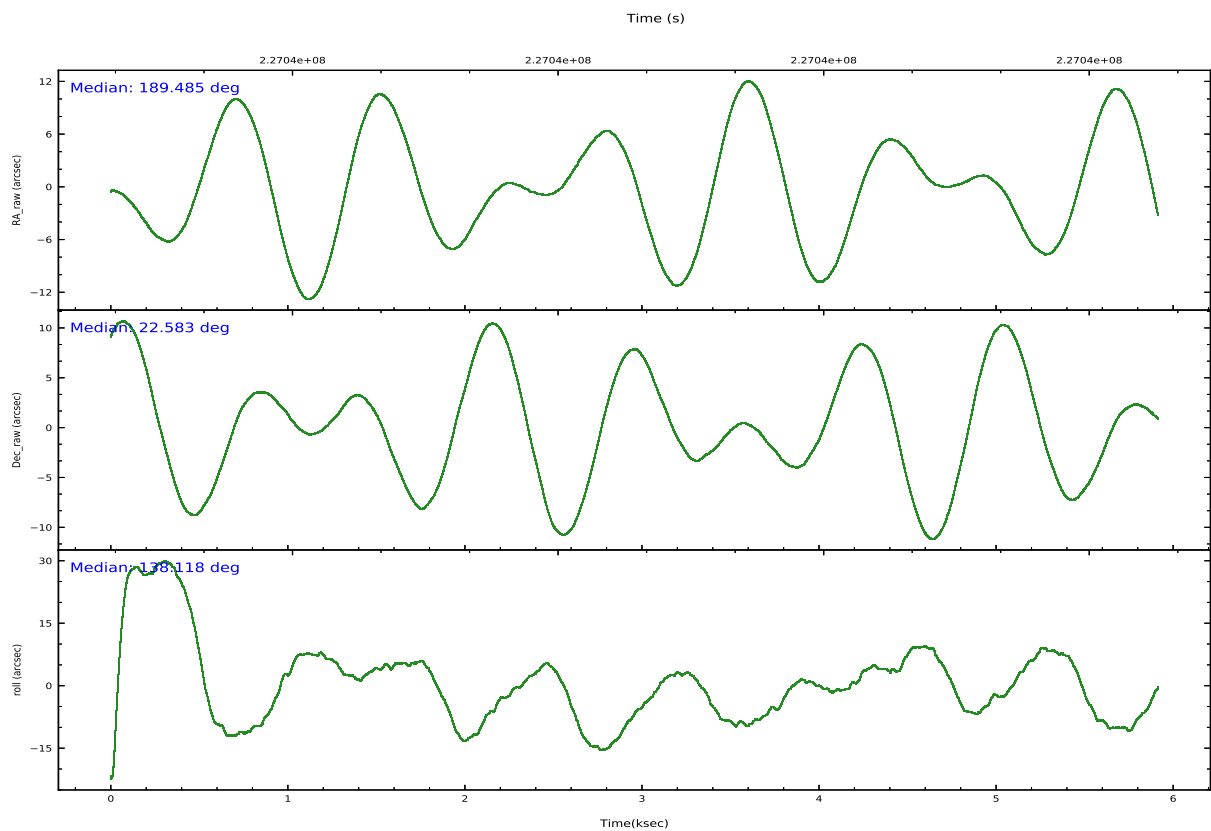
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-235678	ACIS-235678
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	189.513742	189.48826114787
[deg] Pointing Dec	22.577479	22.583431248427
[deg] Pointing Roll	137.949040	138.11772750394
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1425803651734
[mm] SIM translation stage offset	0	0.01005778216563158
[s] Observation start time (MET)	227039389.184000	227038062.32583
Observation start date	2005-03-12T18:28:45	2005-03-12T18:07:42
[s] Observation end time (MET)	227044389.184000	227045345.46366
Observation end date	2005-03-12T19:52:05	2005-03-12T20:09:05
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	3.2

## 2.3 Aspect



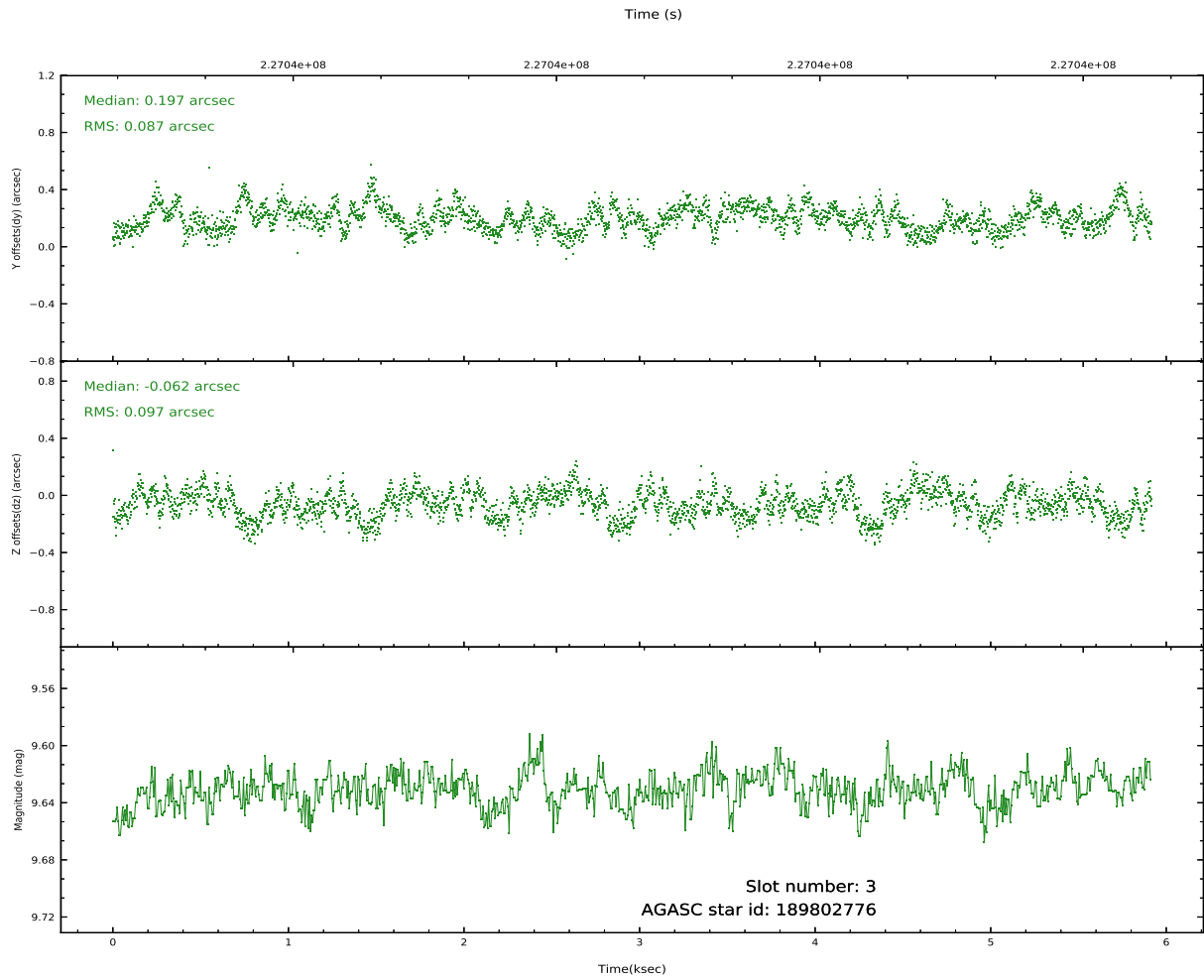
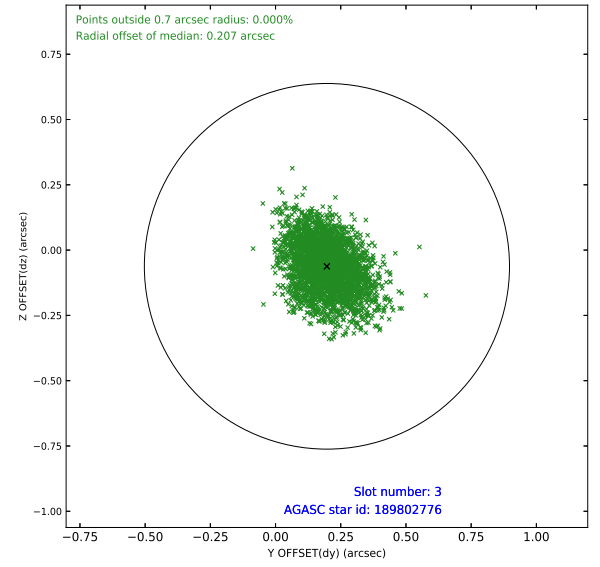
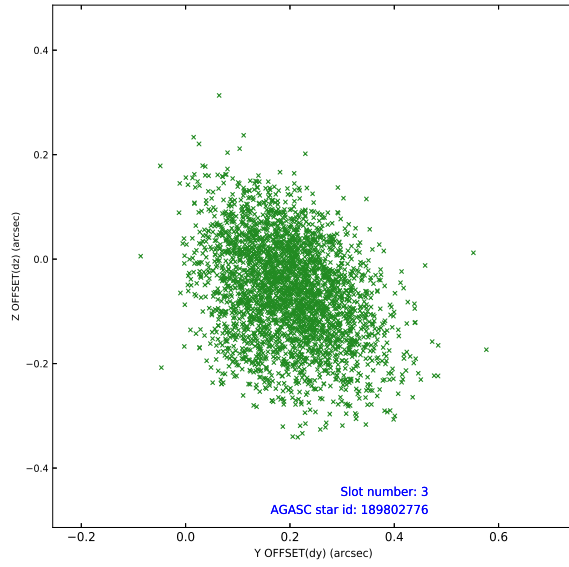


Slot Statistics

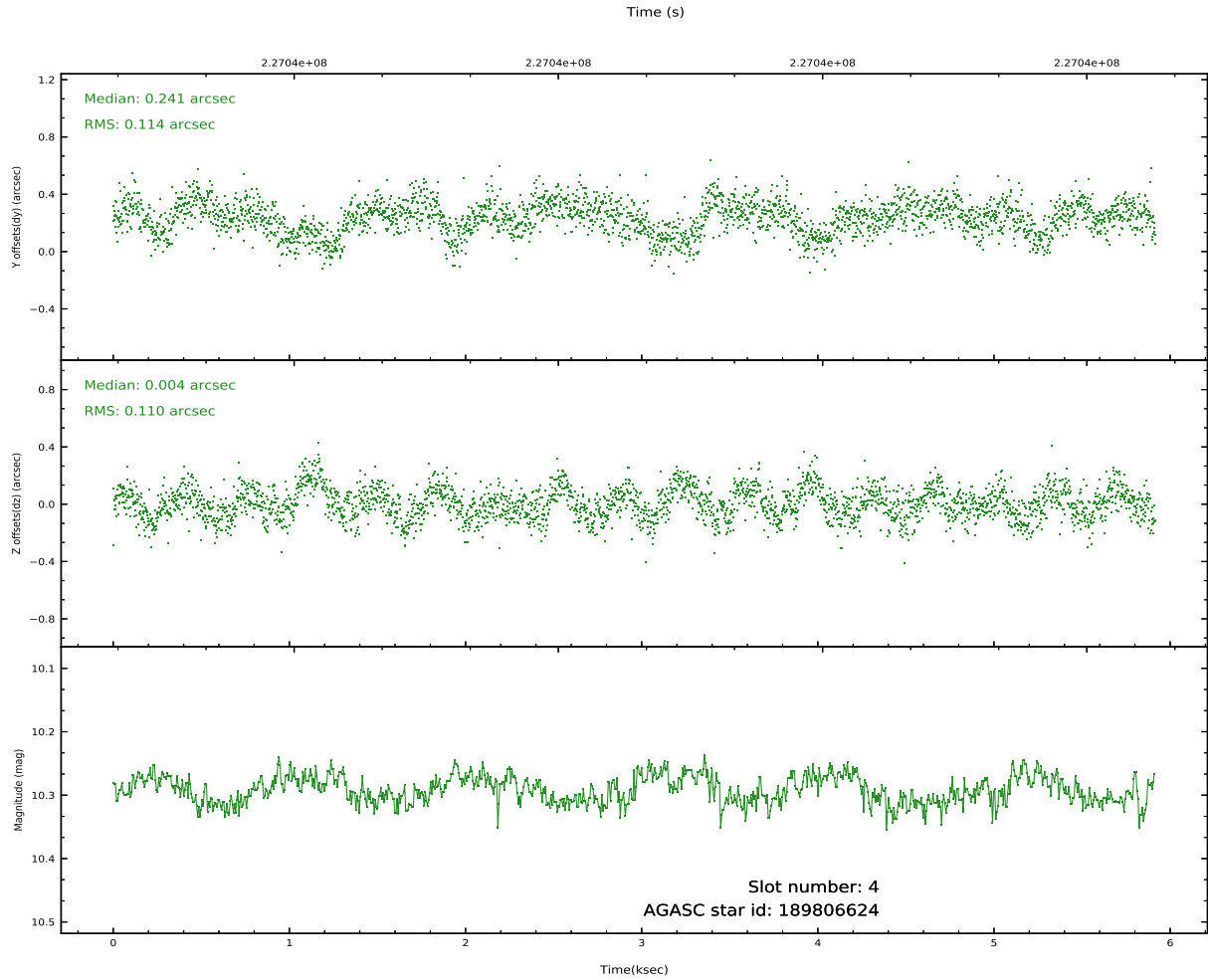
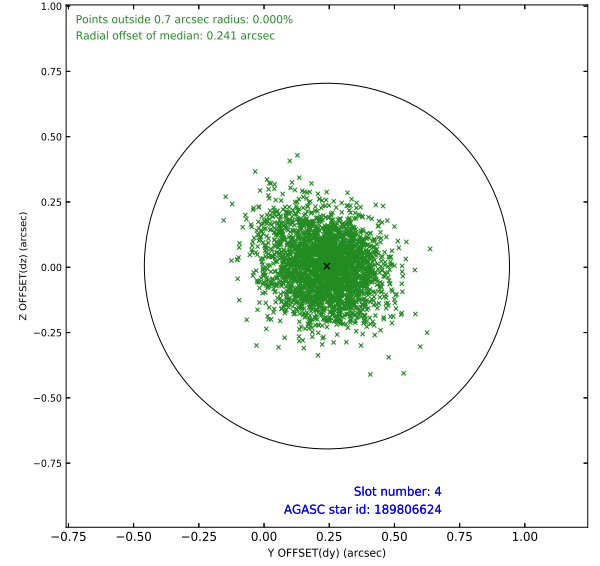
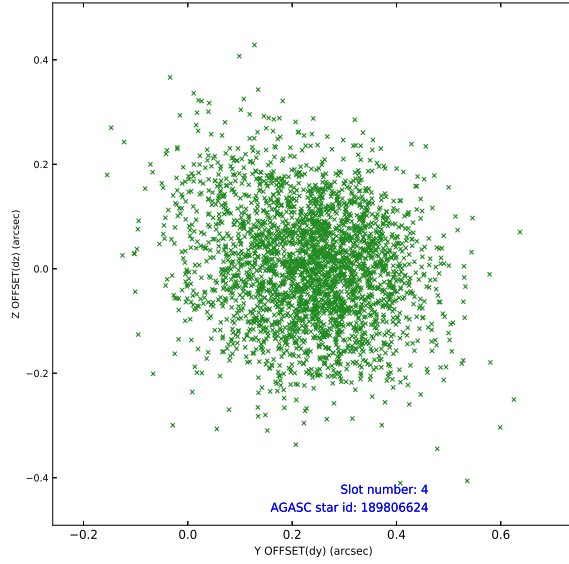
	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	m
	FID		ACIS-S-2	7.10	1443	1.000	-0.070	-0.087	0.006	0.010	0.000000	0.000000	-759.42	-17
	FID		ACIS-S-4	7.21	1443	1.000	0.151	0.057	0.005	0.009	0.000000	0.000000	2153.59	1
	FID		ACIS-S-5	7.23	1443	1.000	-0.111	0.039	0.006	0.010	0.000000	0.000000	-1811.04	1
	GUIDE	used	189802776	9.63	2887	1.000	0.197	-0.062	0.139	0.222	188.981383	22.262186	558.85	20
	GUIDE	used	189806624	10.29	2884	1.000	0.241	0.004	0.166	0.277	189.934725	22.083355	-2232.41	3
	GUIDE	used	260851360	9.74	2872	1.000	0.023	0.018	0.138	0.236	190.235632	22.625925	-1661.52	-17
	BAD	used	260863048	10.69	2726	1.000	-0.554	0.059	0.257	0.411	189.106386	22.633289	1140.77	7
	GUIDE	used	260863544	6.24	2886	1.000	0.069	0.002	0.105	0.153	189.759086	22.659498	-406.29	-7

## 2.4 Star Slots

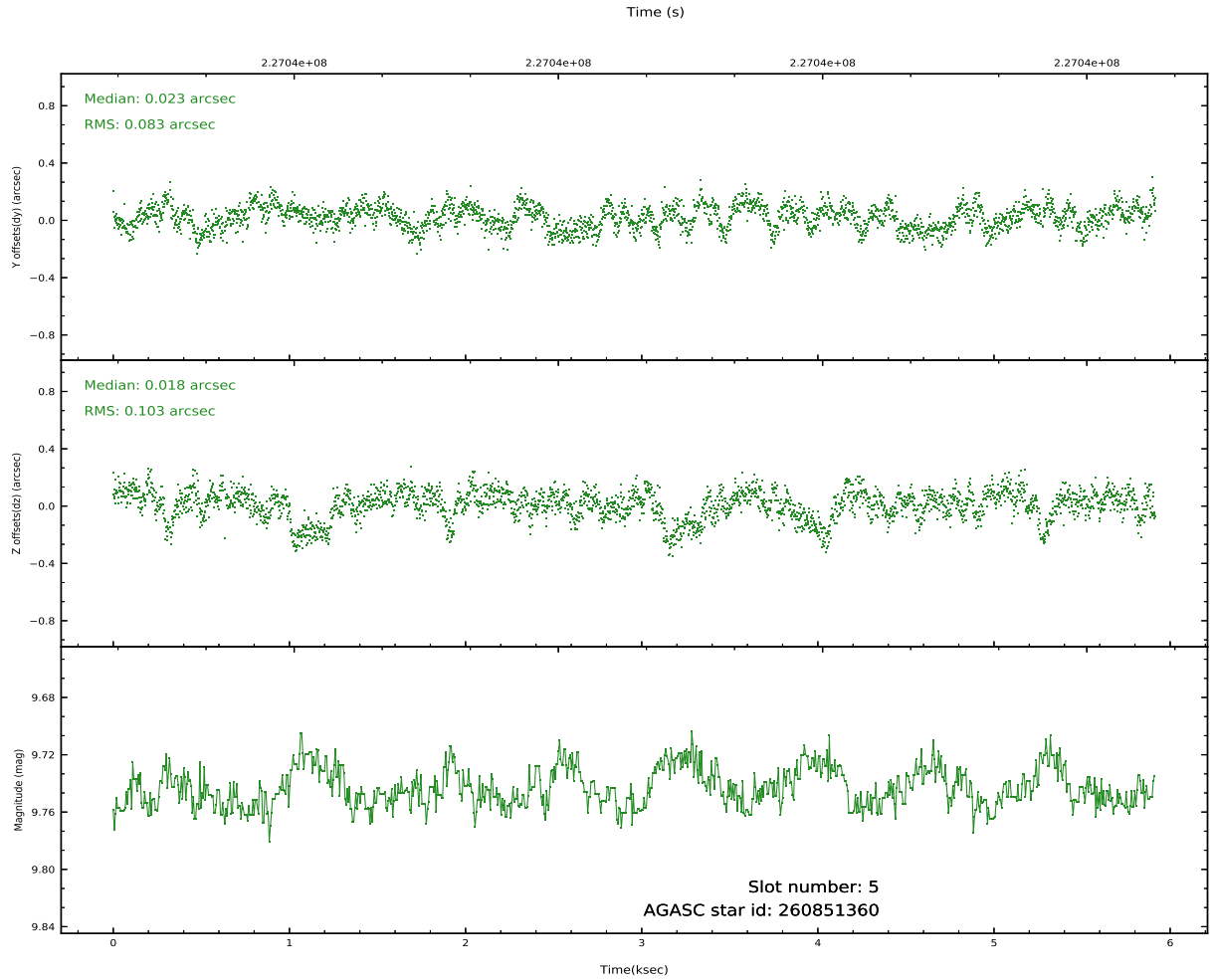
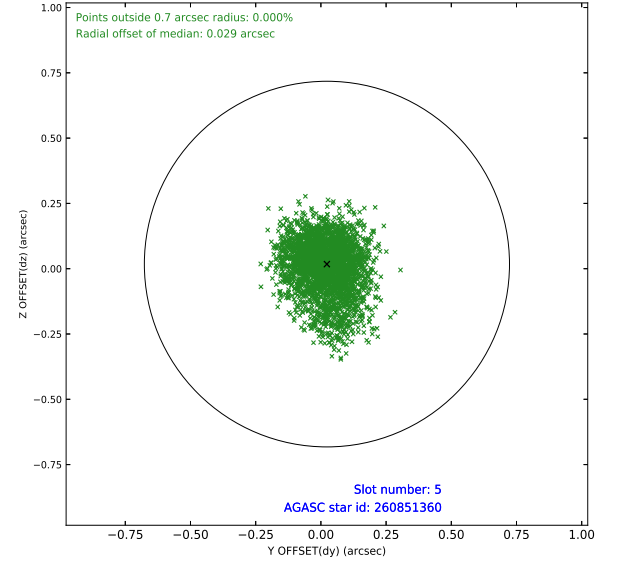
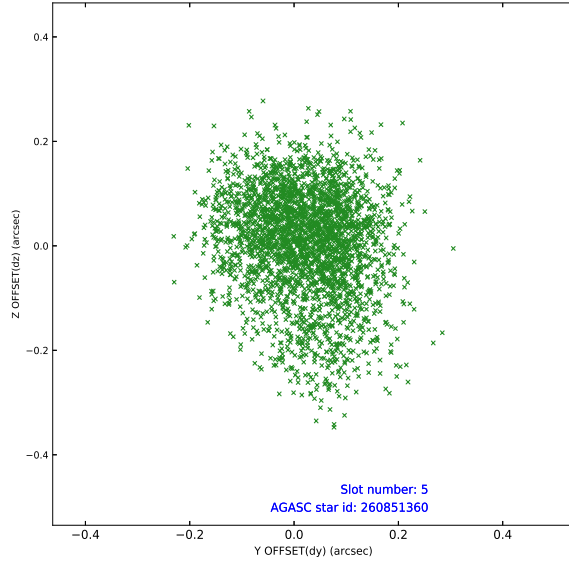
### 2.4.1 Slot 3



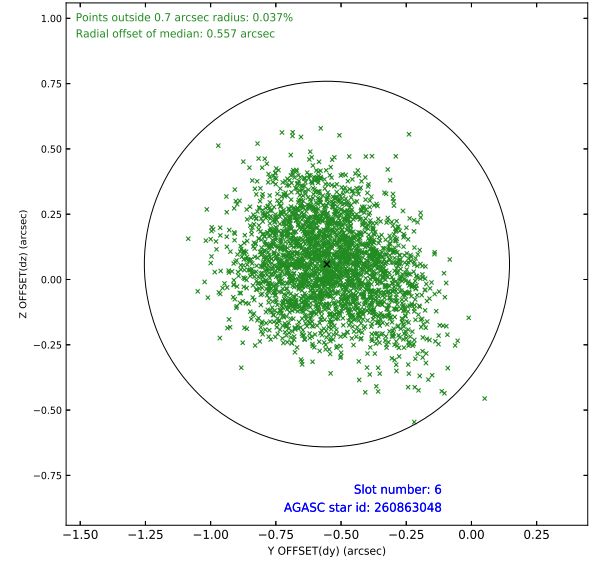
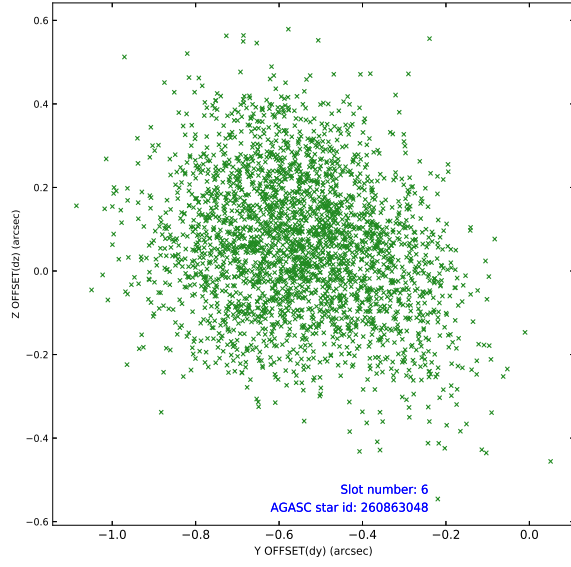
## 2.4.2 Slot 4



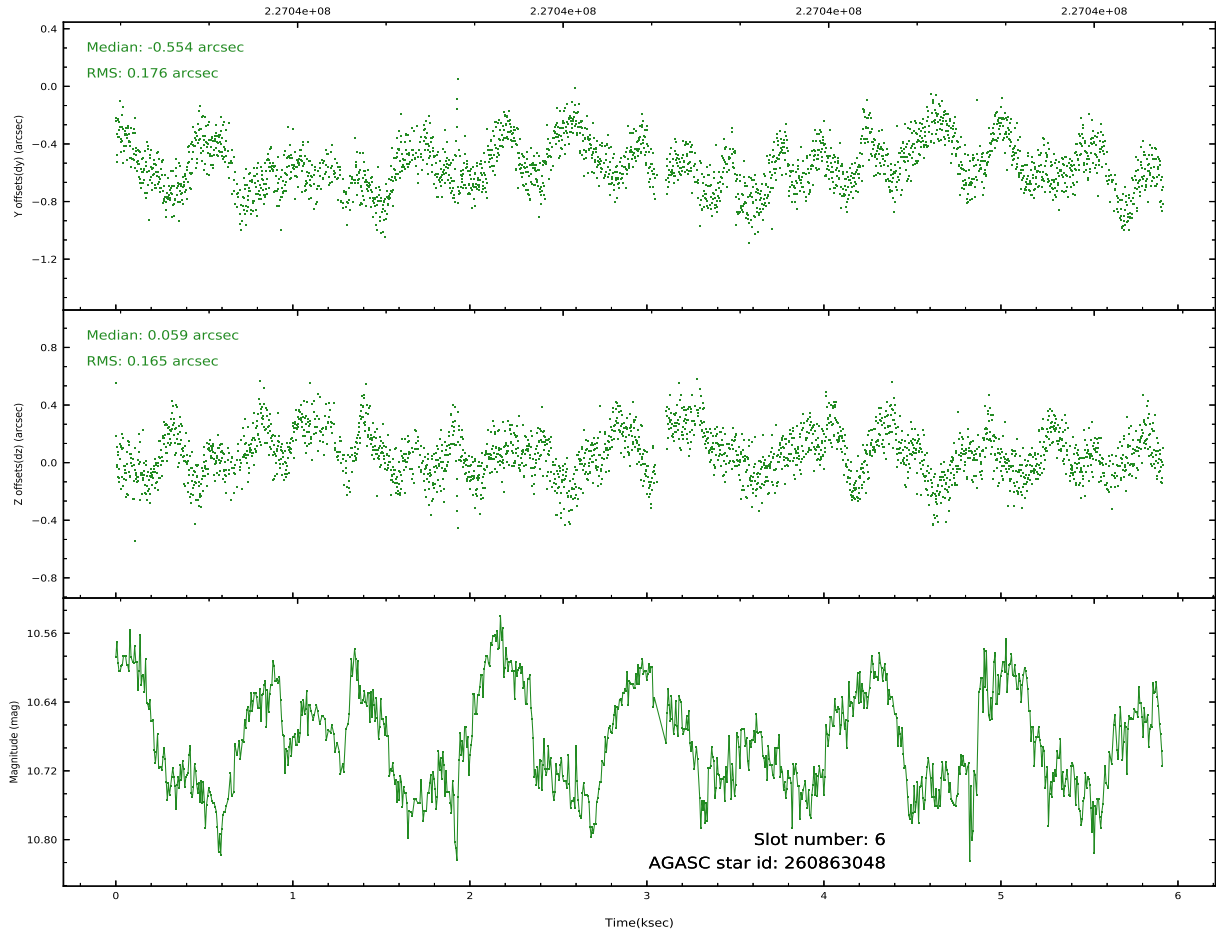
### 2.4.3 Slot 5



## 2.4.4 Slot 6

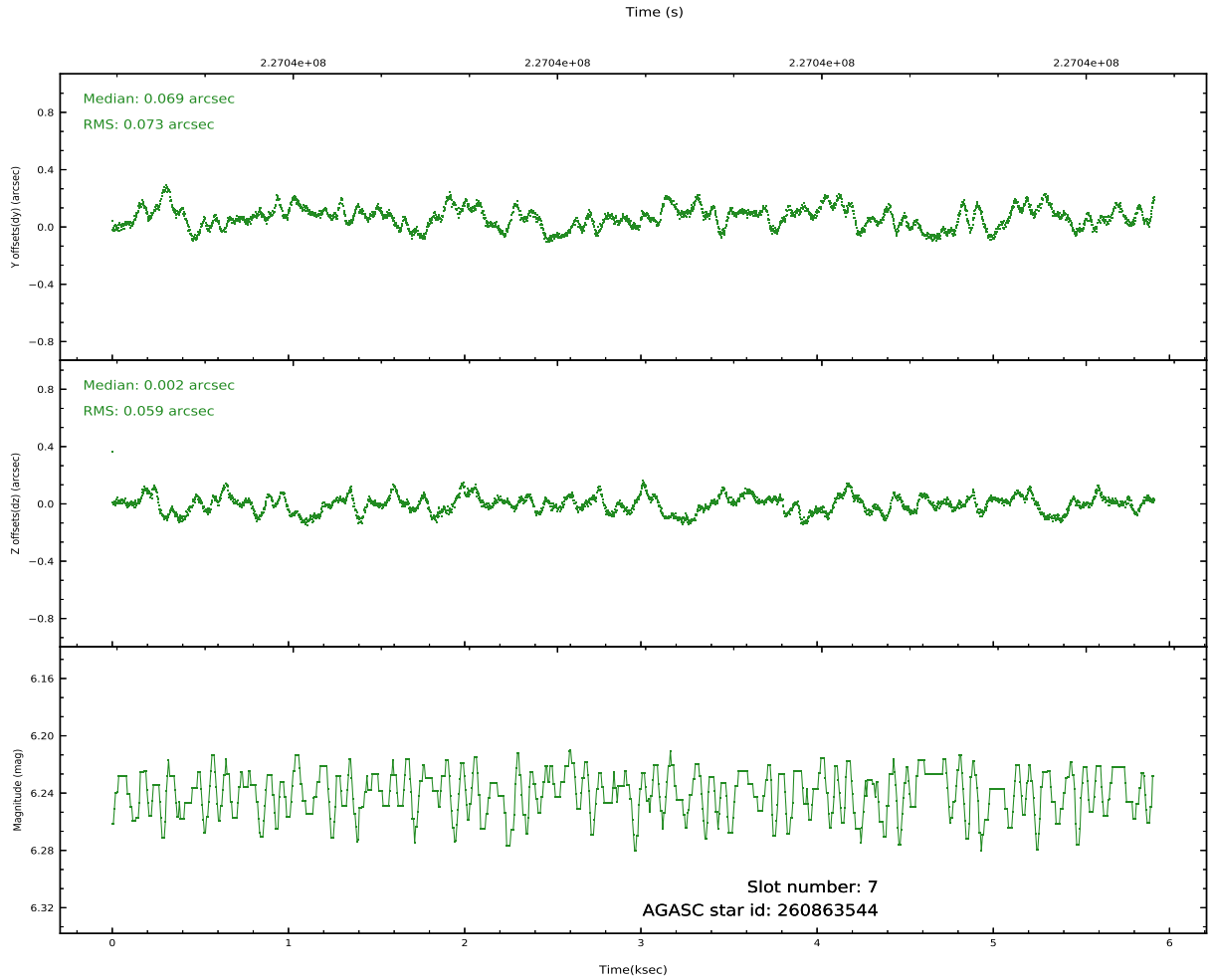
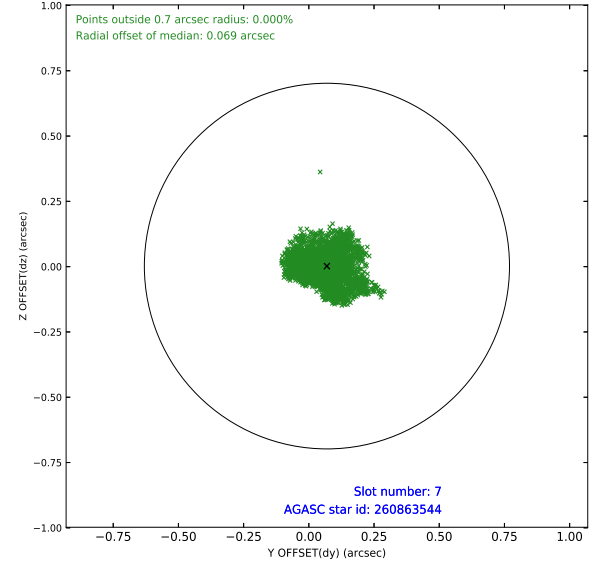
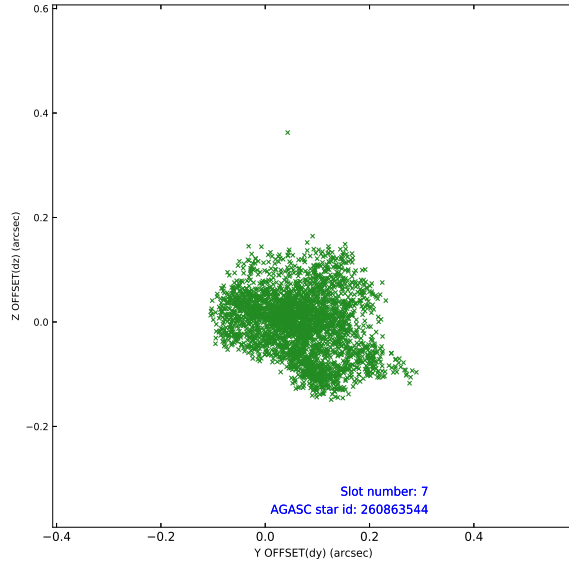


Time (s)



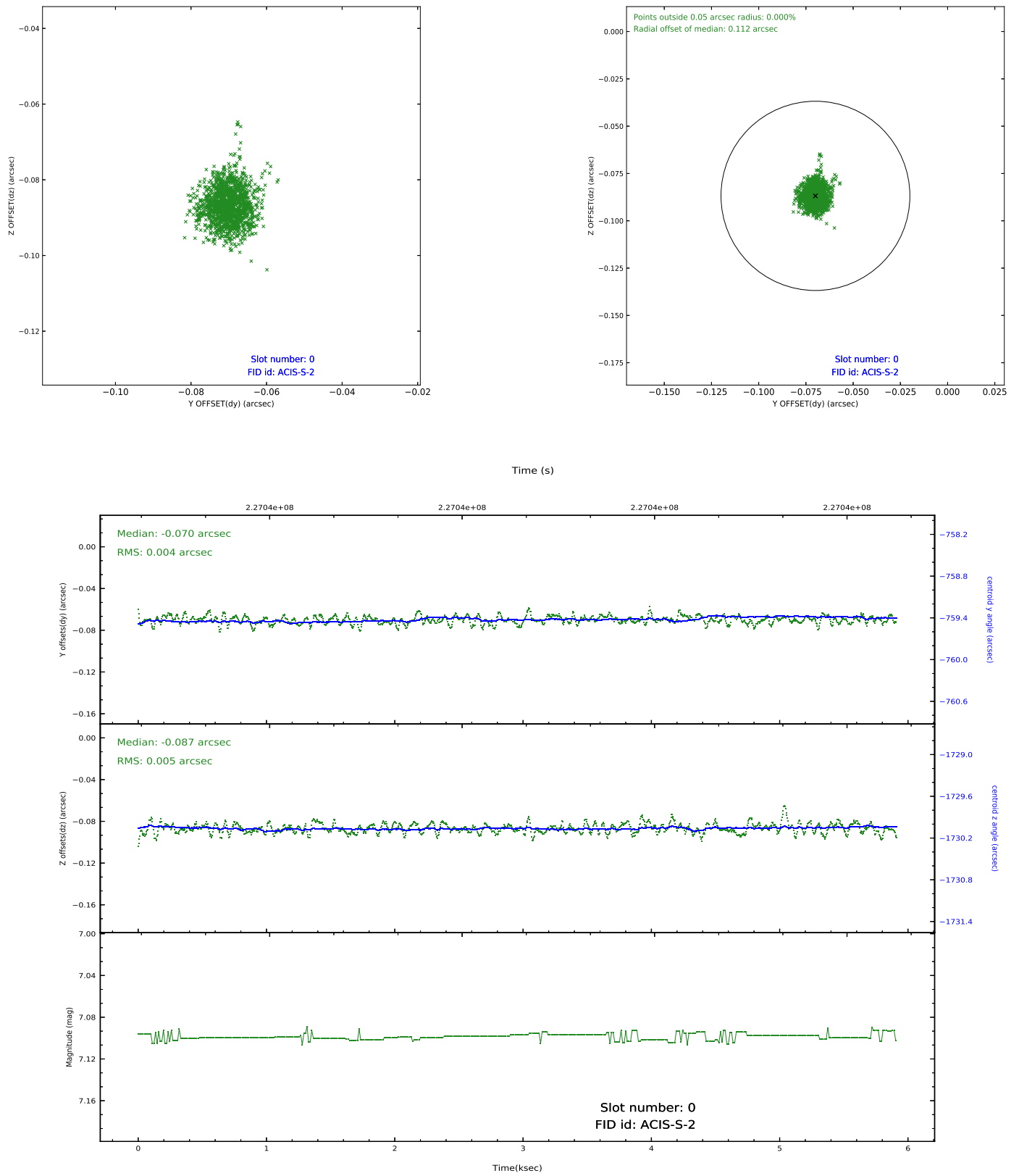


## 2.4.5 Slot 7

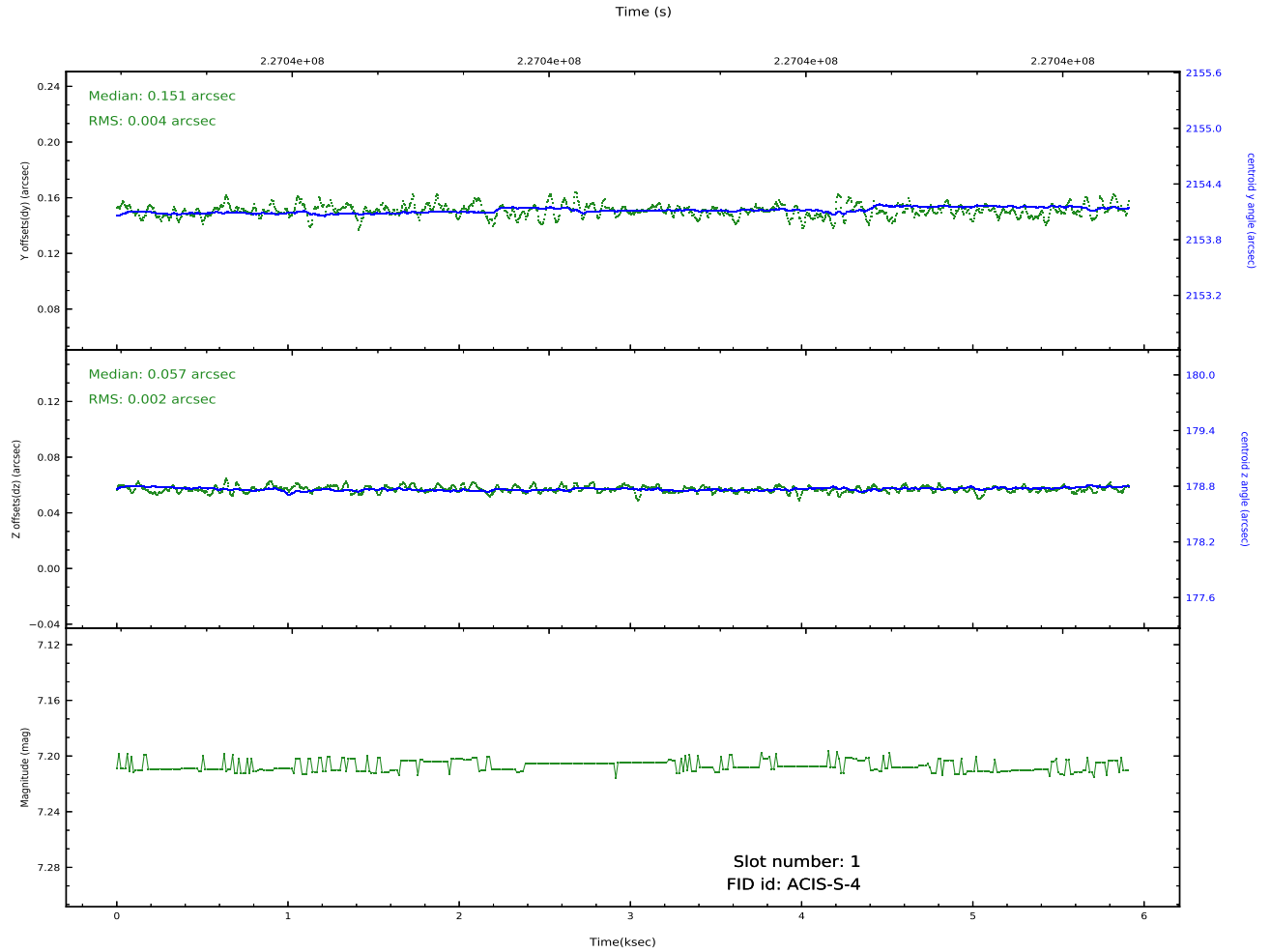
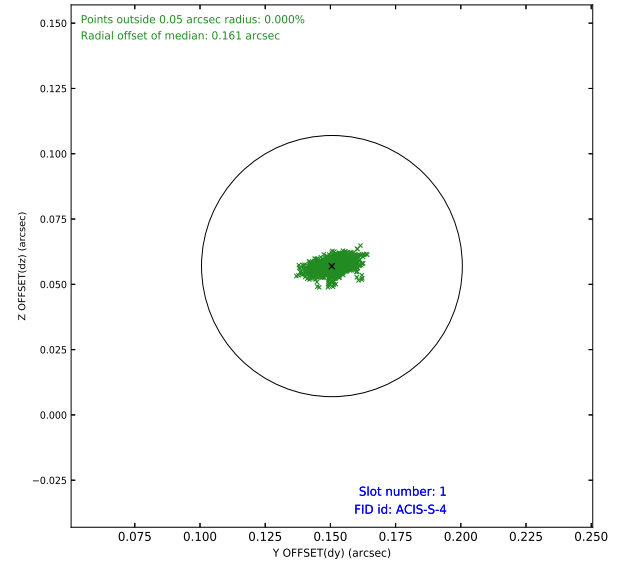
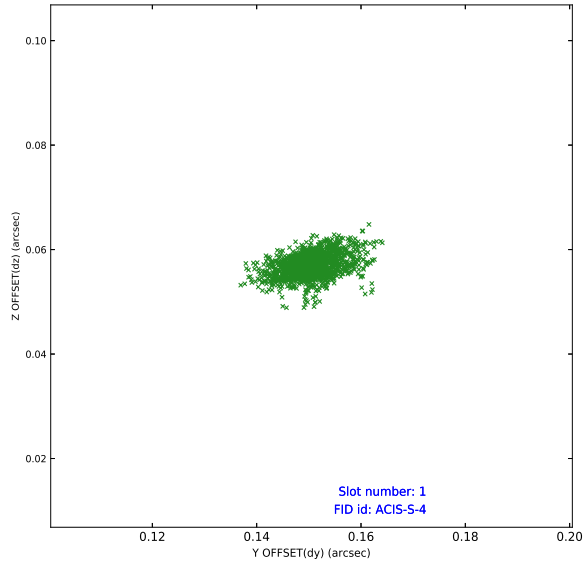


## 2.5 FID Slots

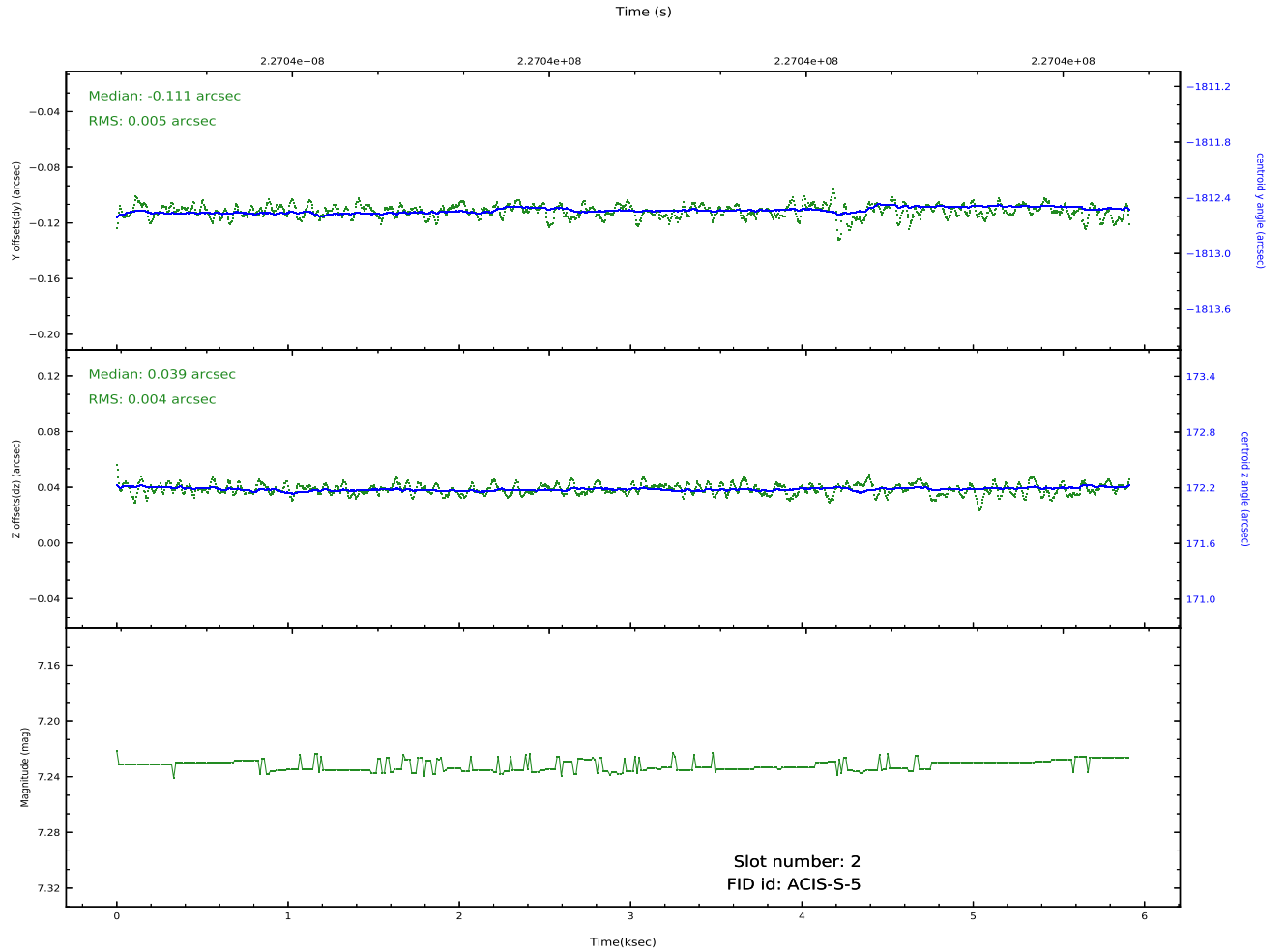
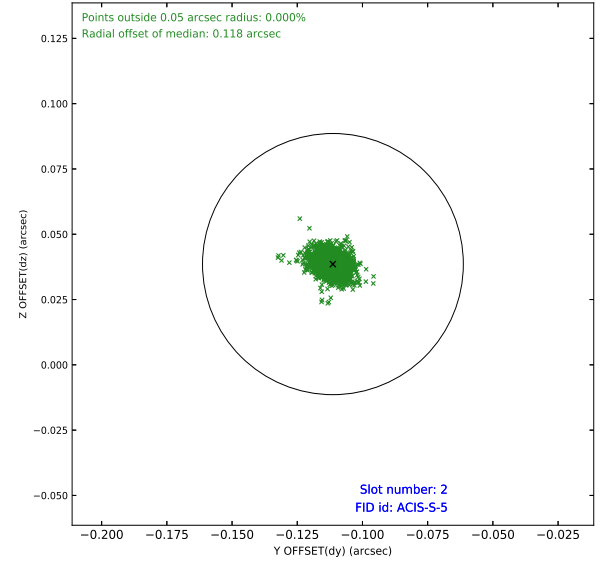
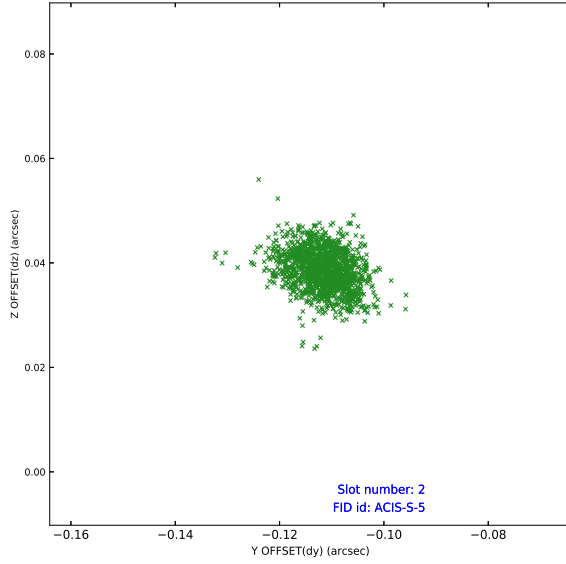
### 2.5.1 Slot 0



## 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)	2020.10.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.956799

### A.2 Comments