

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 19422 - L2 Version 2  
Chandra X-Ray Center

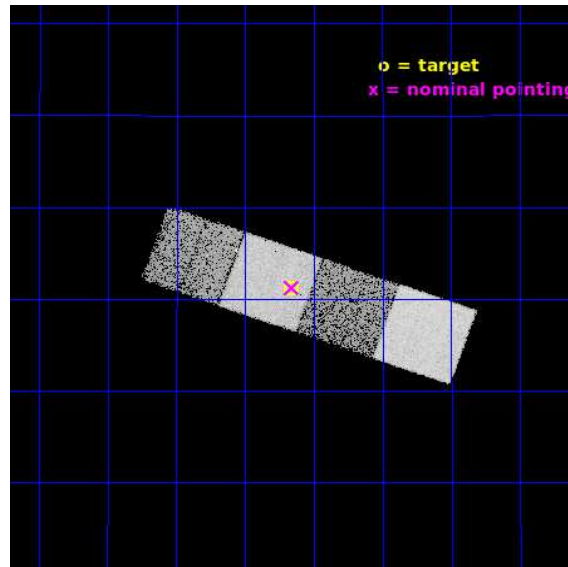
L2 Processing Date : Oct 25 2020

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# 1 Front

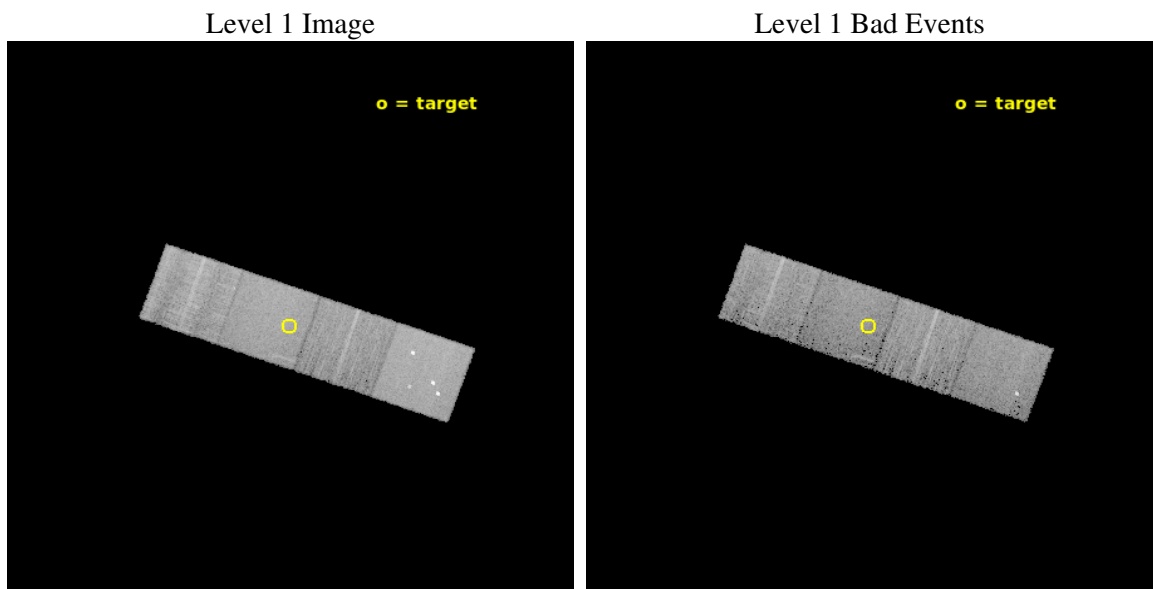
seq_num	601379	Sequence number
obs_id	19422	Observation id
title	Spiral galaxies of the Virgo cluster	Proposal title
observer	Roberto Soria	Principal investigator
object	NGC 4498	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	187.915	Observer's specified target RA [deg]
dec_targ	16.852778	Observer's specified target Dec [deg]
ra_nom	187.91482817414	Nominal RA [deg]
dec_nom	16.85422137845	Nominal Dec [deg]
roll_nom	199.445572791	Nominal Roll [deg]
revision	2	Processing version of data
ontime	8199.5000631809	Sum of GTIs [s]
livetime	8092.3675584713	Livetime [s]
ontime5	8199.5000631809	Sum of GTIs [s]
ontime6	8183.7950816154	Sum of GTIs [s]
ontime7	8199.5000631809	Sum of GTIs [s]
ontime8	8199.5000631809	Sum of GTIs [s]
l2events	91362	Number of level 2 events



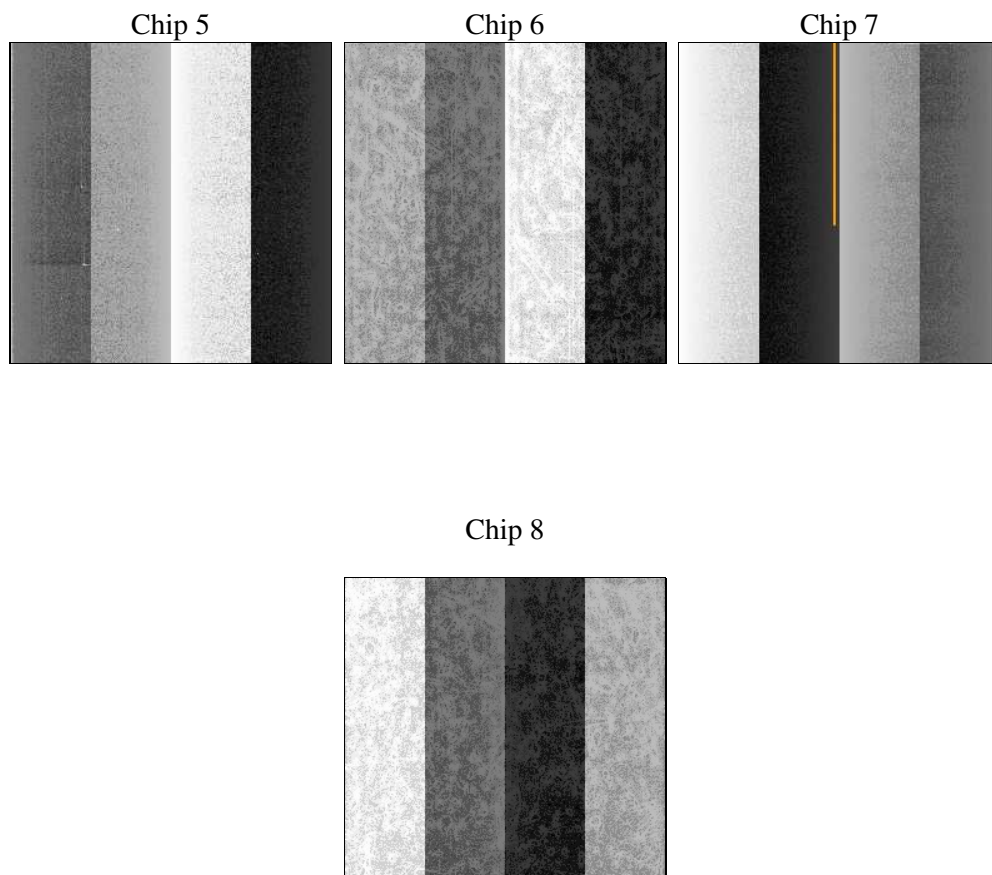
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	8135.047000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	8199.5000631809	Sum of GTIs [s]
caldsver	4.9.3	&#160	ontime5	8199.5000631809	Sum of GTIs [s]
date	2020-10-25T10:27:11	Date and time of file creation	ontime6	8183.7950816154	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	8199.5000631809	Sum of GTIs [s]
			ontime8	8199.5000631809	Sum of GTIs [s]
			l1events	324646	Number of level 1 events

### 2.1.4 Events

	<b>ccd 5</b>	<b>ccd 6</b>	<b>ccd 7</b>	<b>ccd 8</b>
level 1 events	102619	61224	78964	81839
rejected events	50262	54130	44364	57788
rejected %	48%	88%	56%	70%

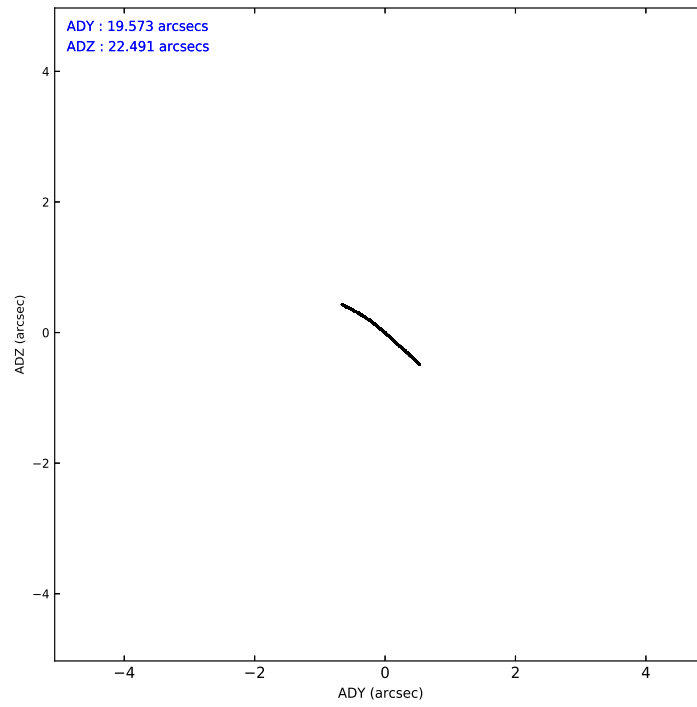
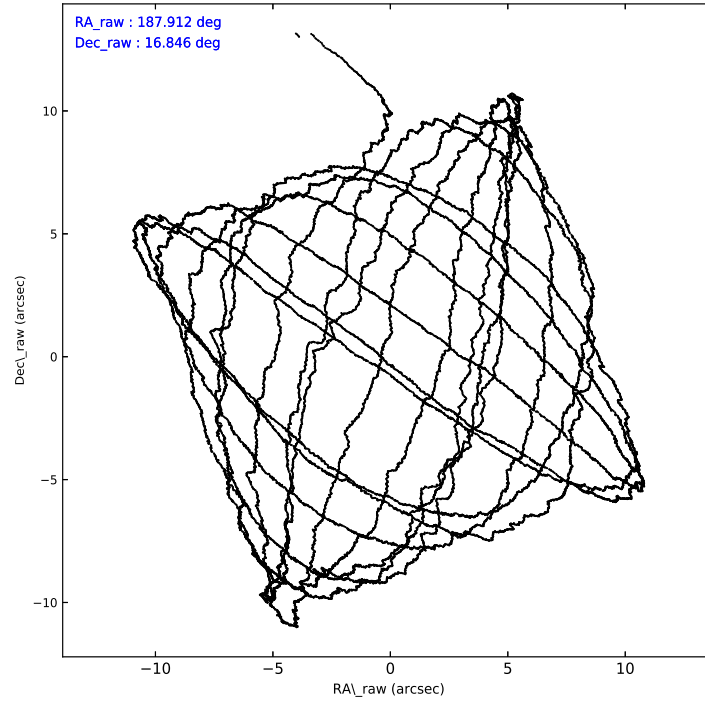
	<b>ccd 5</b>	<b>ccd 6</b>	<b>ccd 7</b>	<b>ccd 8</b>
grade 0 events	8335	2368	3039	7098
	8%	3%	3%	8%
grade 1 events	247	32	146	57
	0%	0%	0%	0%
grade 2 events	15709	1639	7408	5714
	15%	2%	9%	6%
grade 3 events	1580	714	2751	2591
	1%	1%	3%	3%
grade 4 events	1518	723	2779	2380
	1%	1%	3%	2%
grade 5 events	6974	2870	7738	4403
	6%	4%	9%	5%
grade 6 events	25244	1652	18632	6269
	24%	2%	23%	7%
grade 7 events	43012	51226	36471	53327
	41%	83%	46%	65%

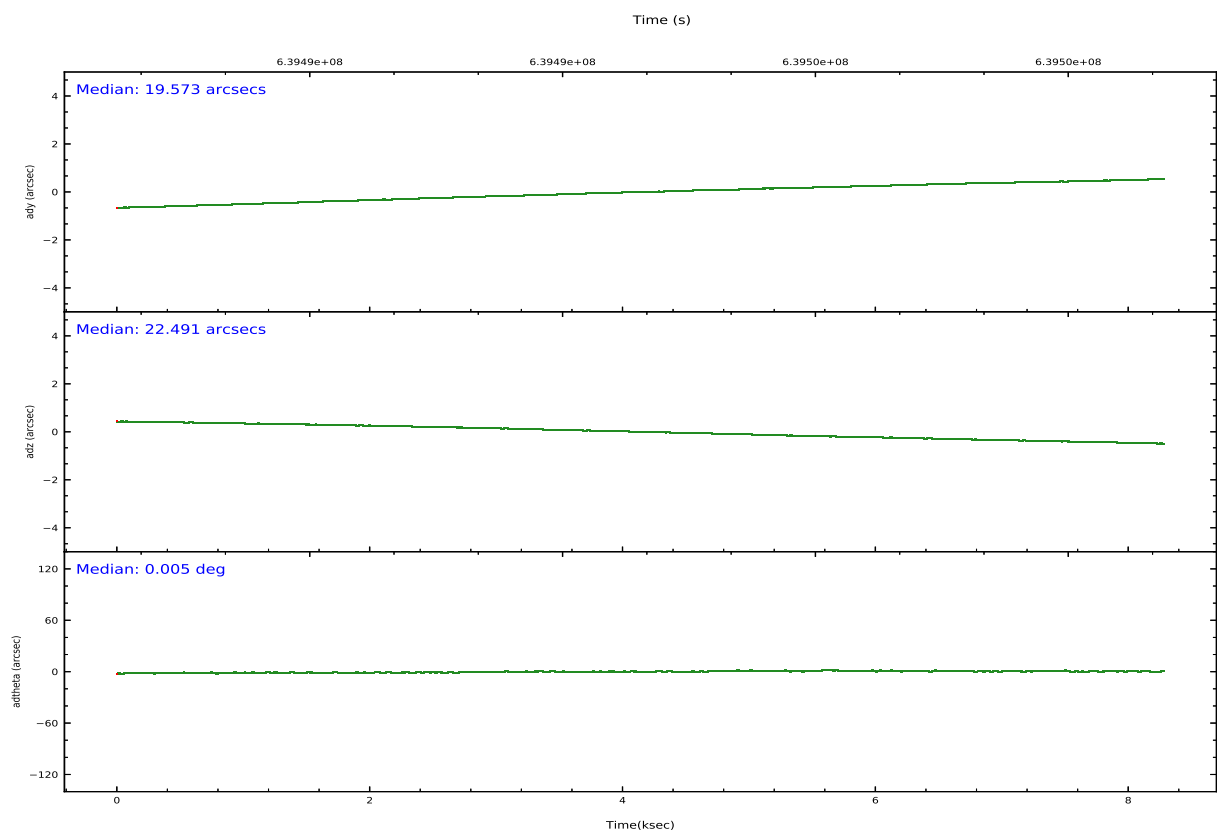
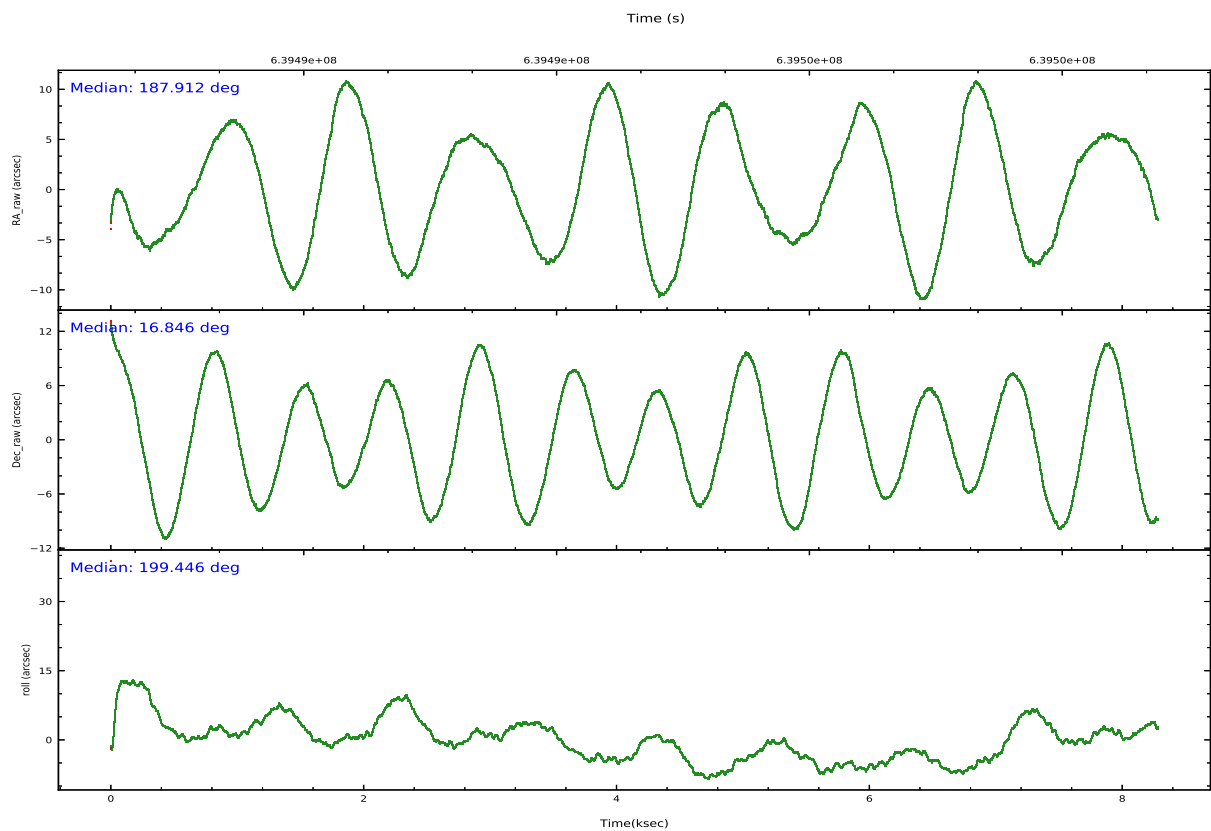


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-5678	ACIS-5678	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	187.929885	187.91482817414	Subarray requested	NONE	NONE
[deg] Pointing Dec	16.867301	16.85422137845	Alternating exposures requested	N	N
[deg] Pointing Roll	199.298146	199.445572791	[s] Primary exposure time	0.000000	3.1
[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)	639490623.184000	639489411.30575			
Observation start date	2018-04-07T12:15:54	2018-04-07T11:56:51			
[s] Observation end time (MET)	639498758.184000	639499824.28136			
Observation end date	2018-04-07T14:31:29	2018-04-07T14:50:24			
Read mode	TIMED	TIMED			

## 2.3 Aspect



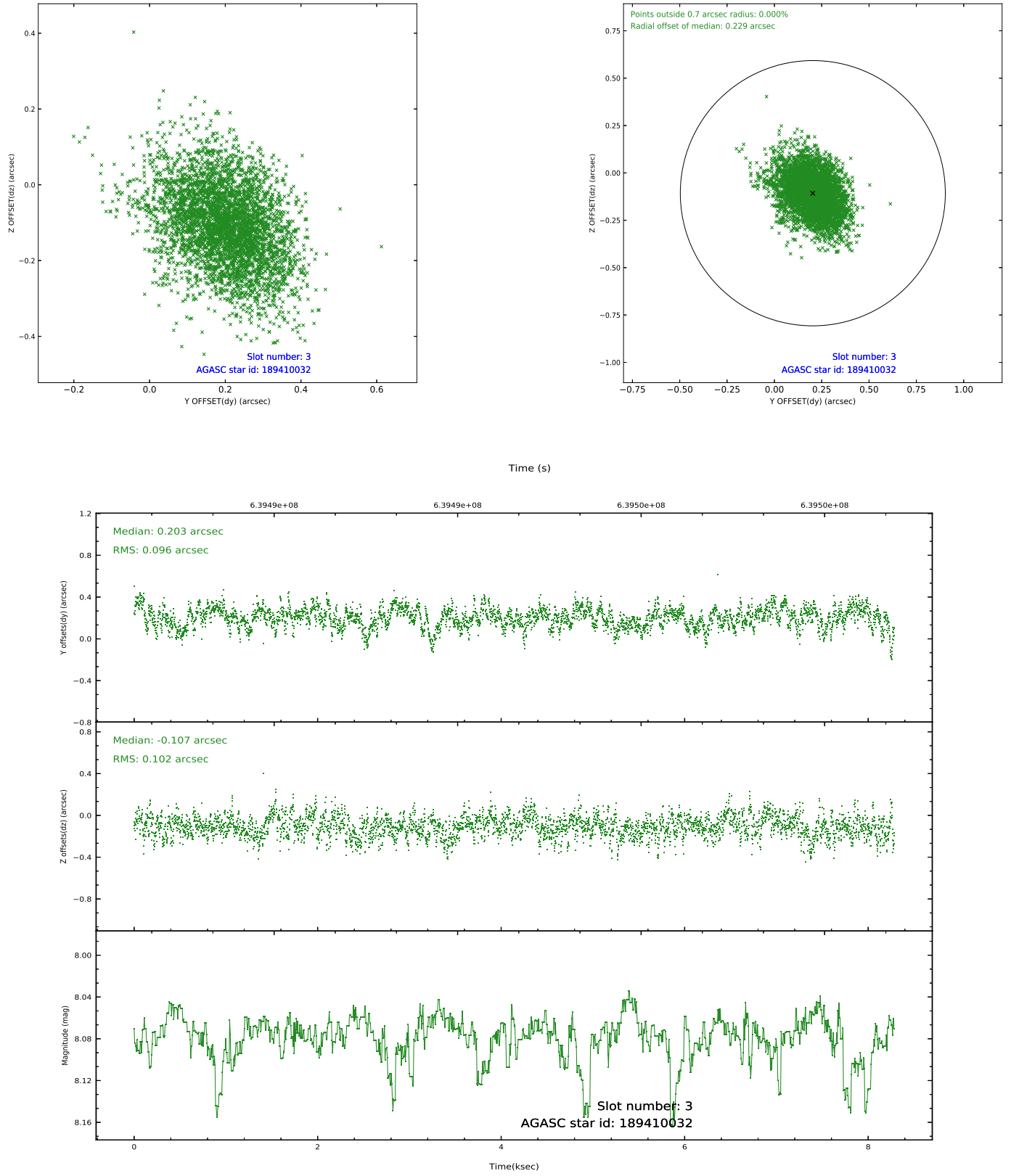


### Slot Statistics

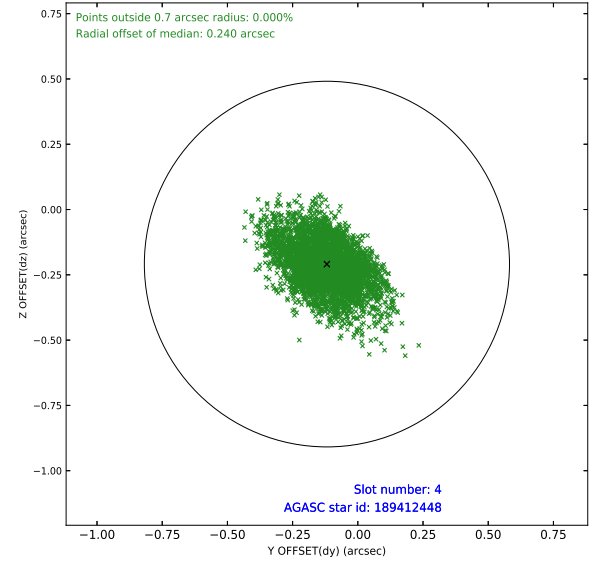
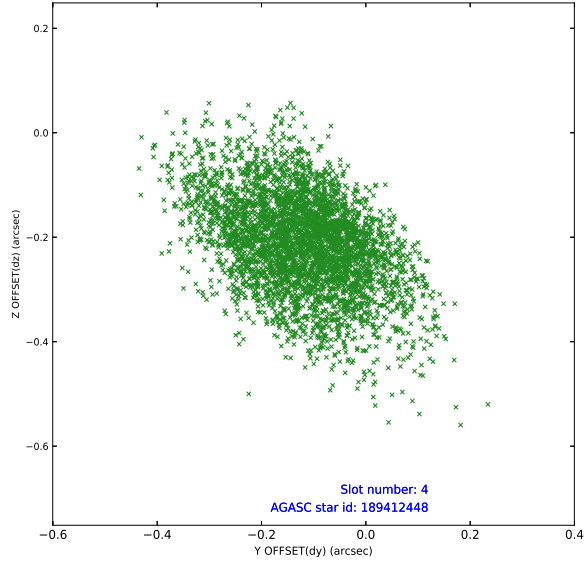
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	6.97	2021	1.000	0.130	-0.102	0.011	0.017	0.000000	0.000000	-772.78	-1743
1	FID		ACIS-S-4	7.08	2021	1.000	0.068	-0.036	0.017	0.024	0.000000	0.000000	2140.41	163
2	FID		ACIS-S-5	7.08	2021	1.000	-0.228	0.146	0.013	0.020	0.000000	0.000000	-1824.83	158
3	GUIDE	used	189410032	8.08	4039	1.000	0.203	-0.107	0.147	0.247	187.335255	17.321917	1388.12	-2221
4	GUIDE	used	189412448	7.30	4041	1.000	-0.118	-0.209	0.141	0.240	187.776697	16.614118	800.47	685
5	GUIDE	used	189532264	9.46	4032	1.000	0.010	0.219	0.193	0.327	188.220402	17.621548	-1837.36	-2233
6	GUIDE	used	189533632	9.37	4031	1.000	-0.149	0.014	0.165	0.286	188.646001	16.426664	-1811.92	2309
7	GUIDE	used	189537728	9.28	4032	1.000	0.087	0.082	0.279	0.399	188.083246	16.538135	-108.23	1294

## 2.4 Star Slots

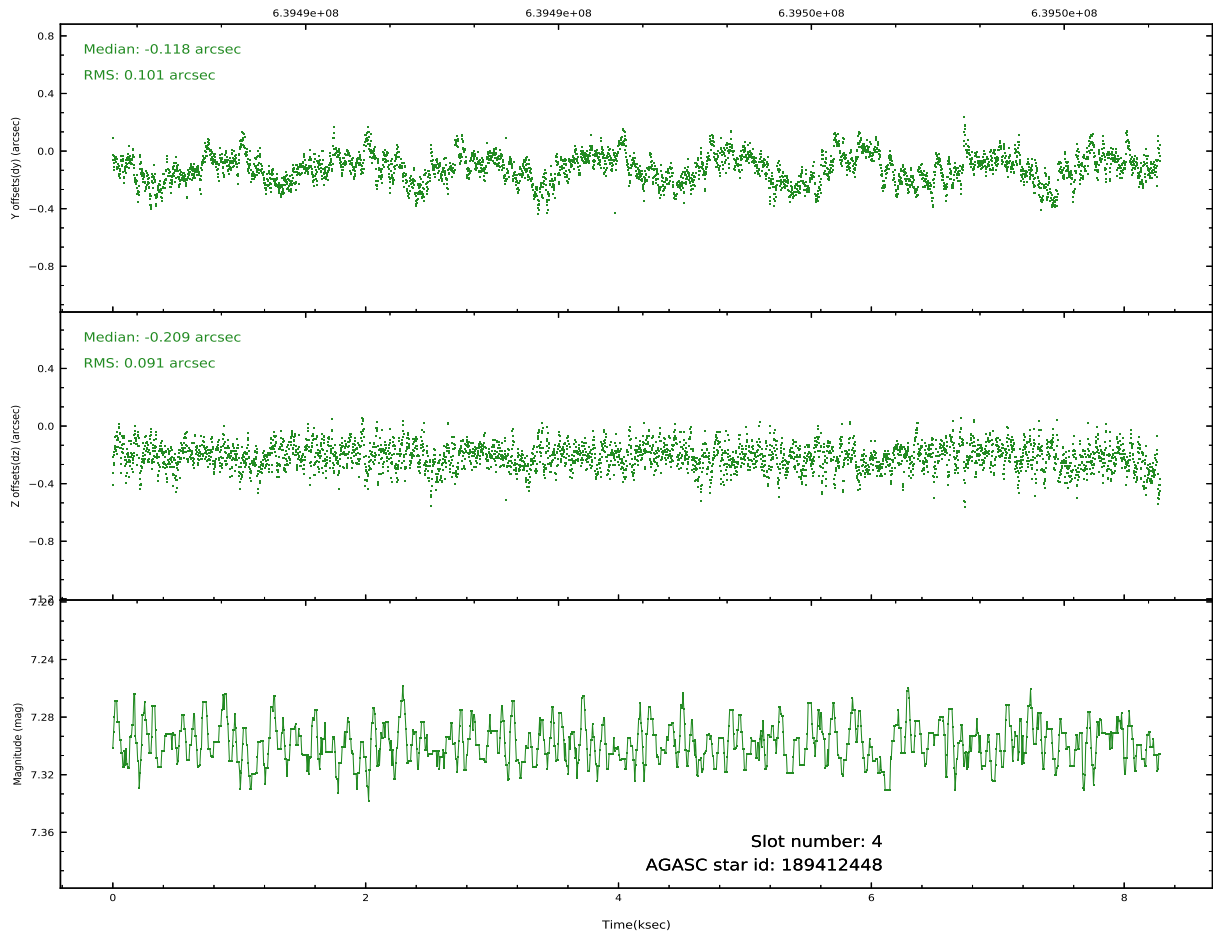
### 2.4.1 Slot 3



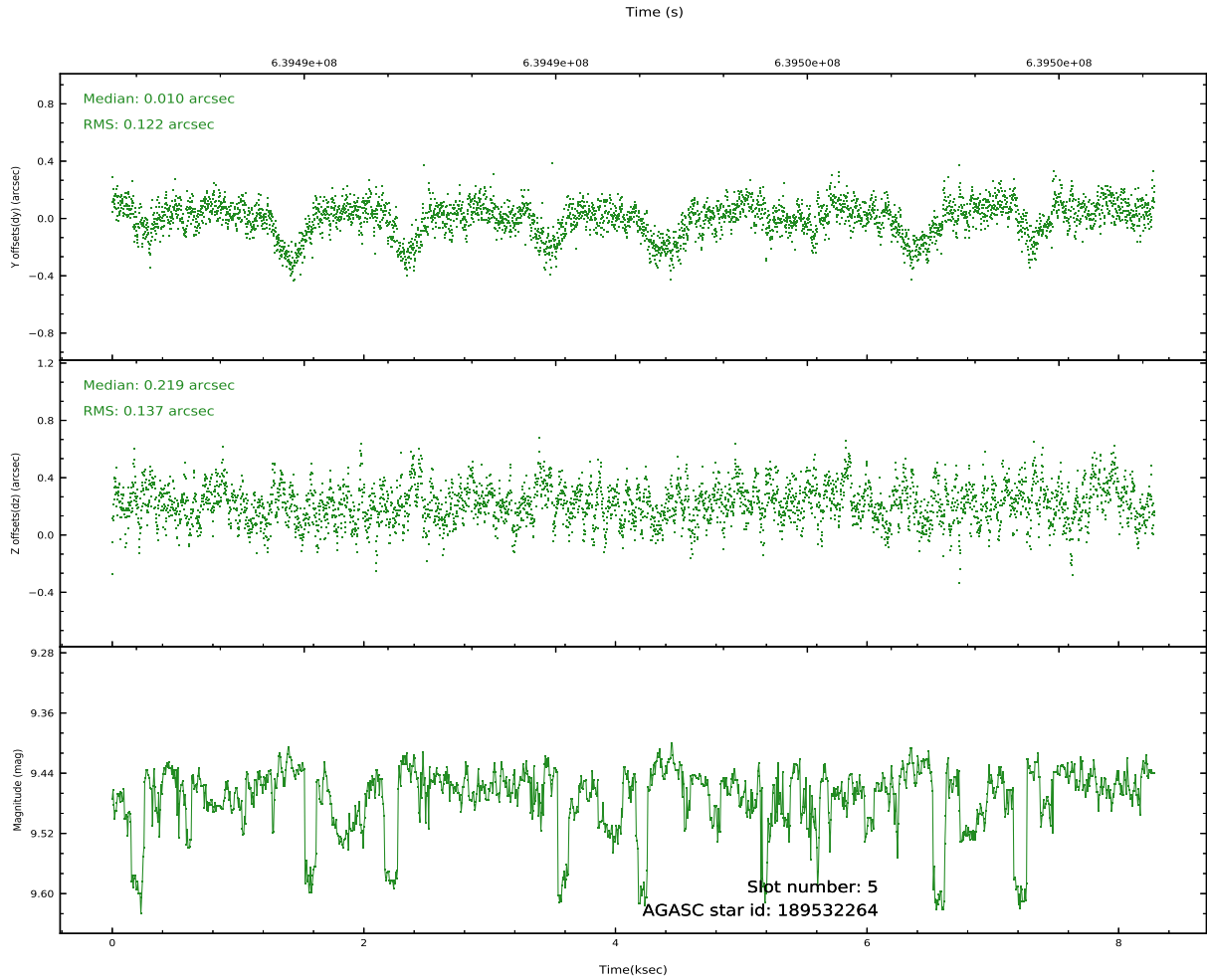
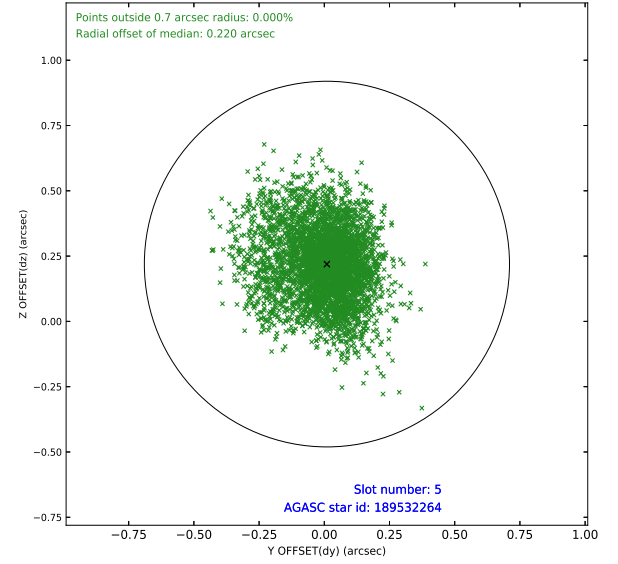
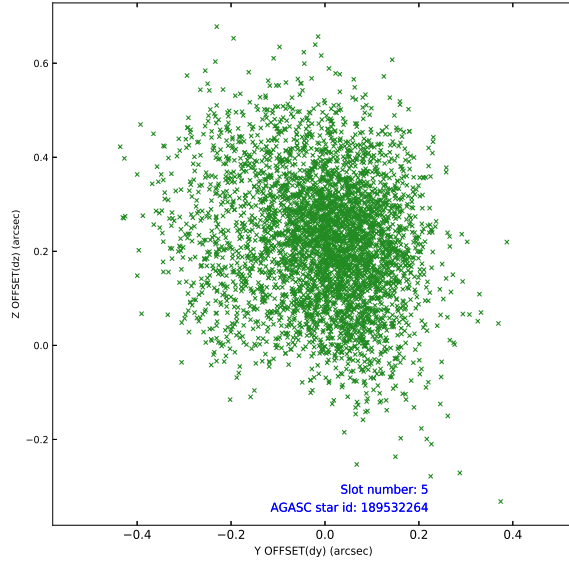
## 2.4.2 Slot 4



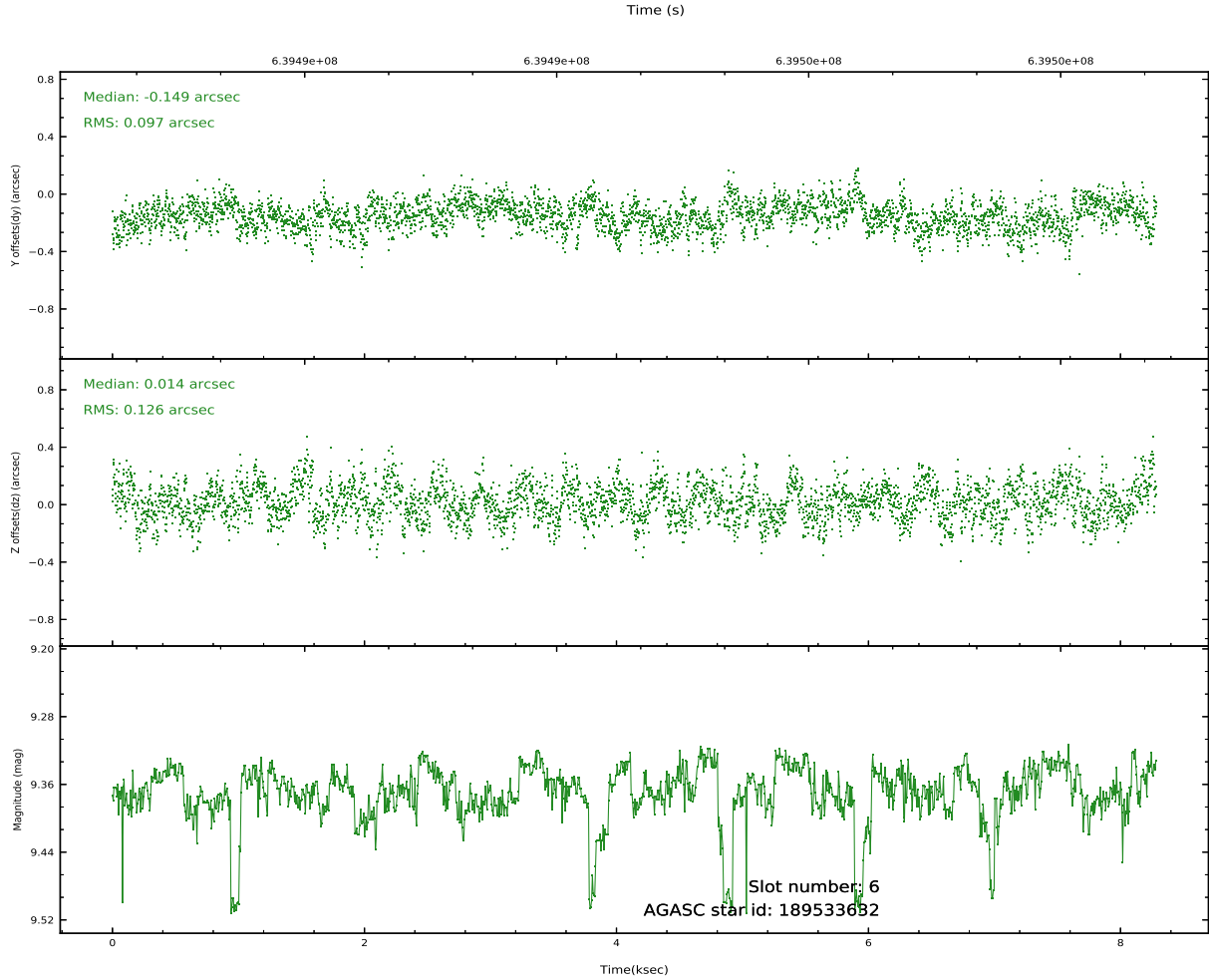
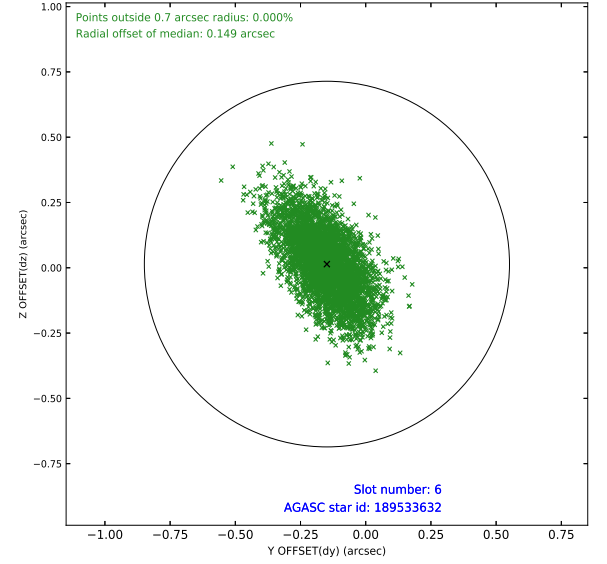
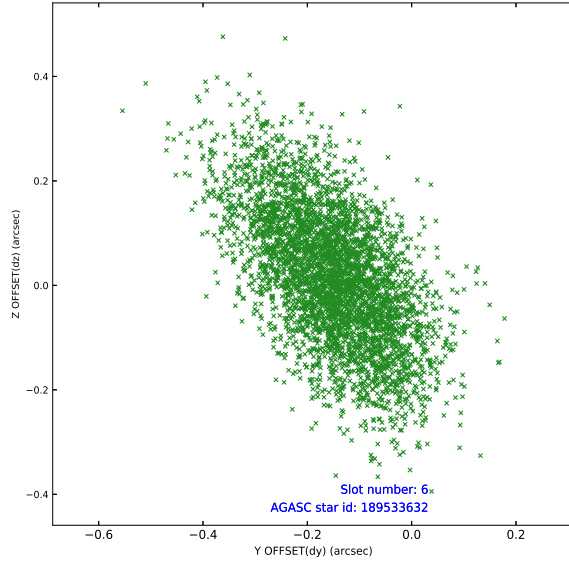
Time (s)



### 2.4.3 Slot 5

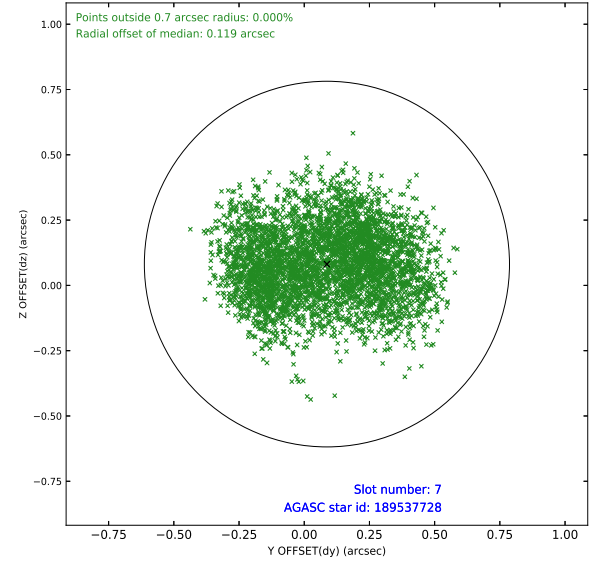
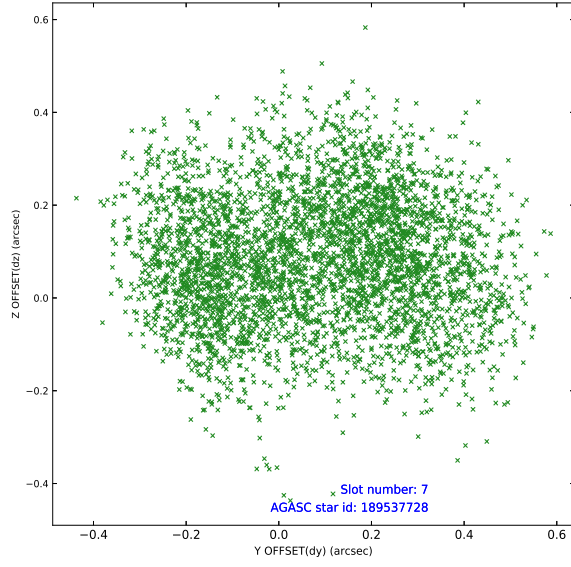


## 2.4.4 Slot 6

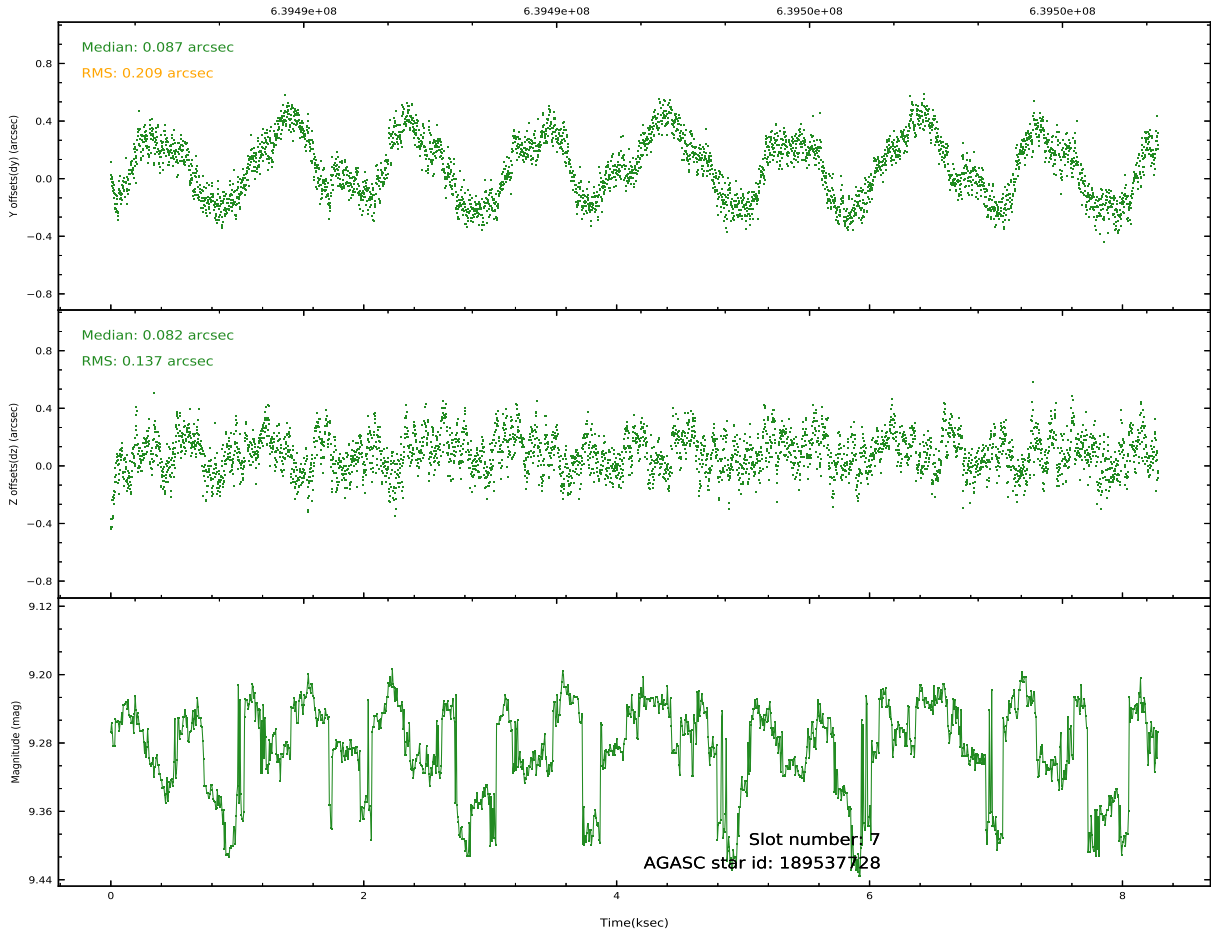




## 2.4.5 Slot 7

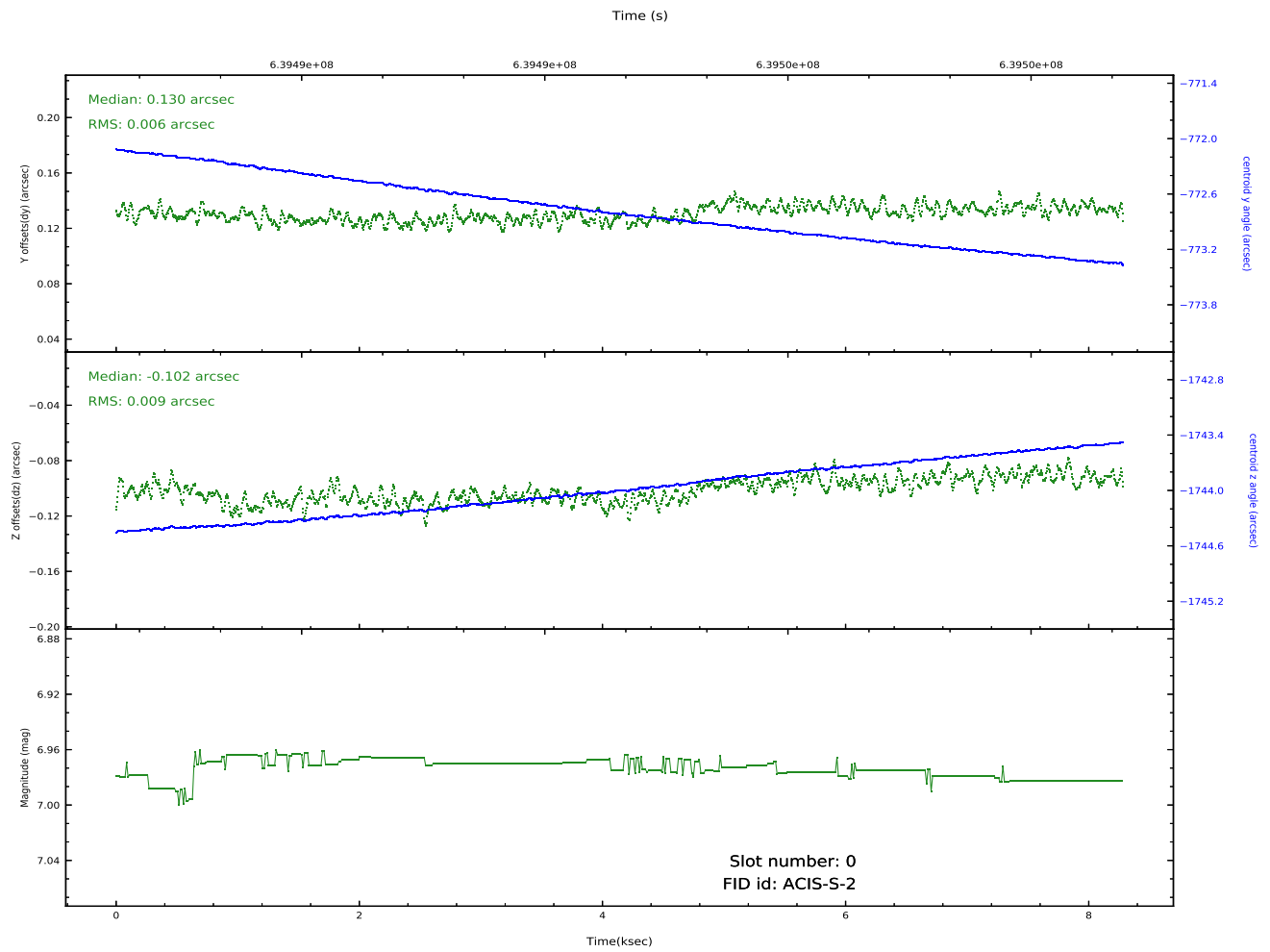
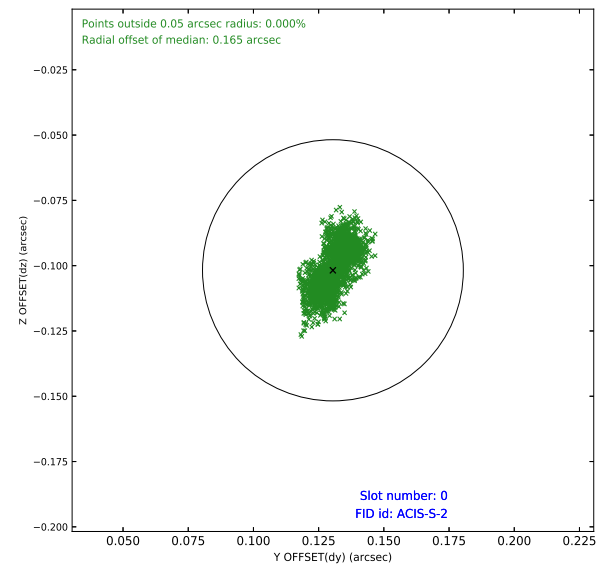
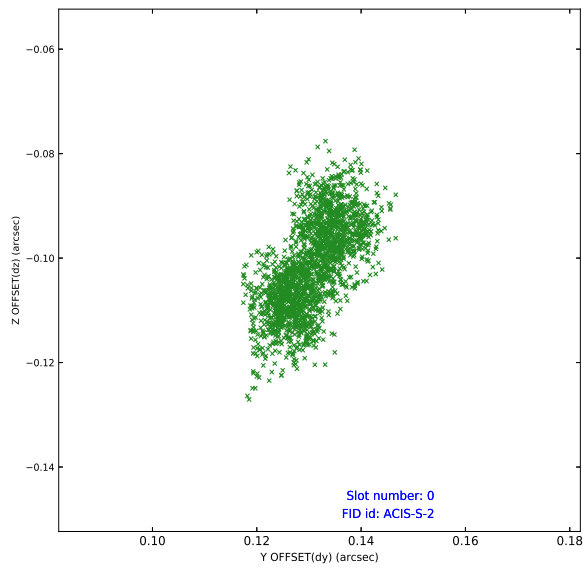


Time (s)

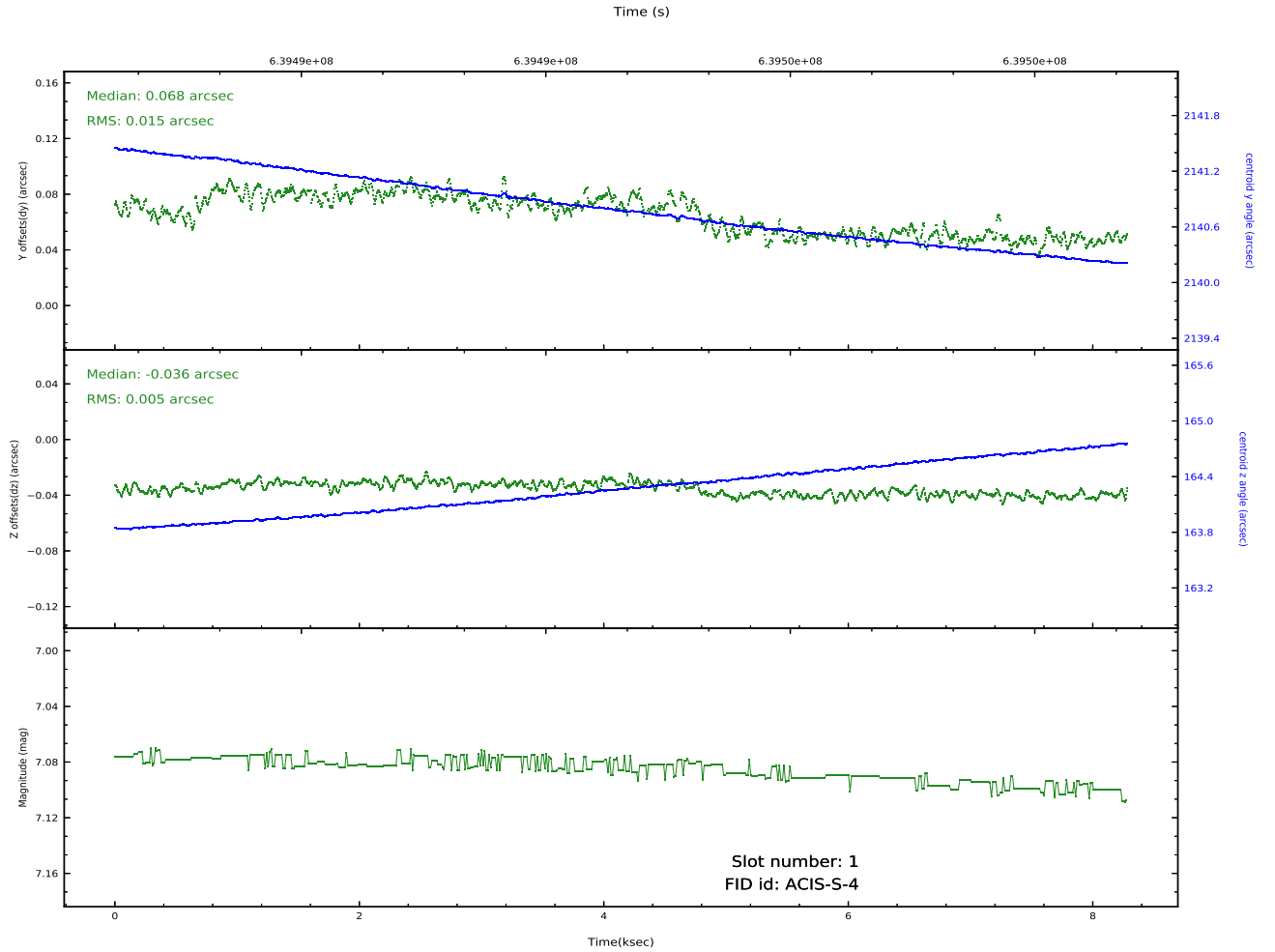
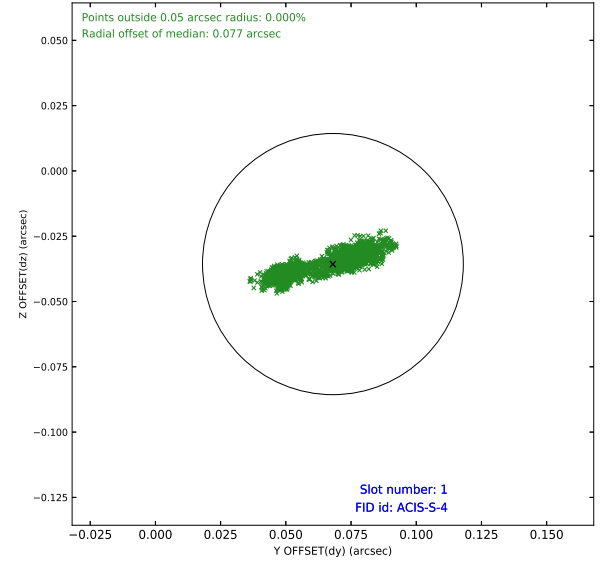
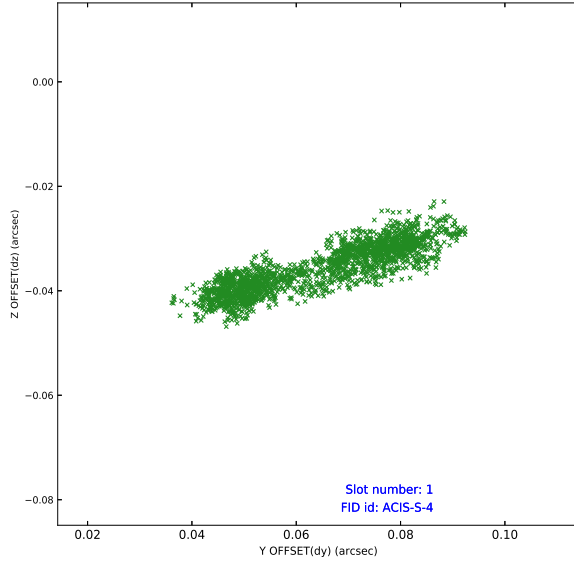


## 2.5 FID Slots

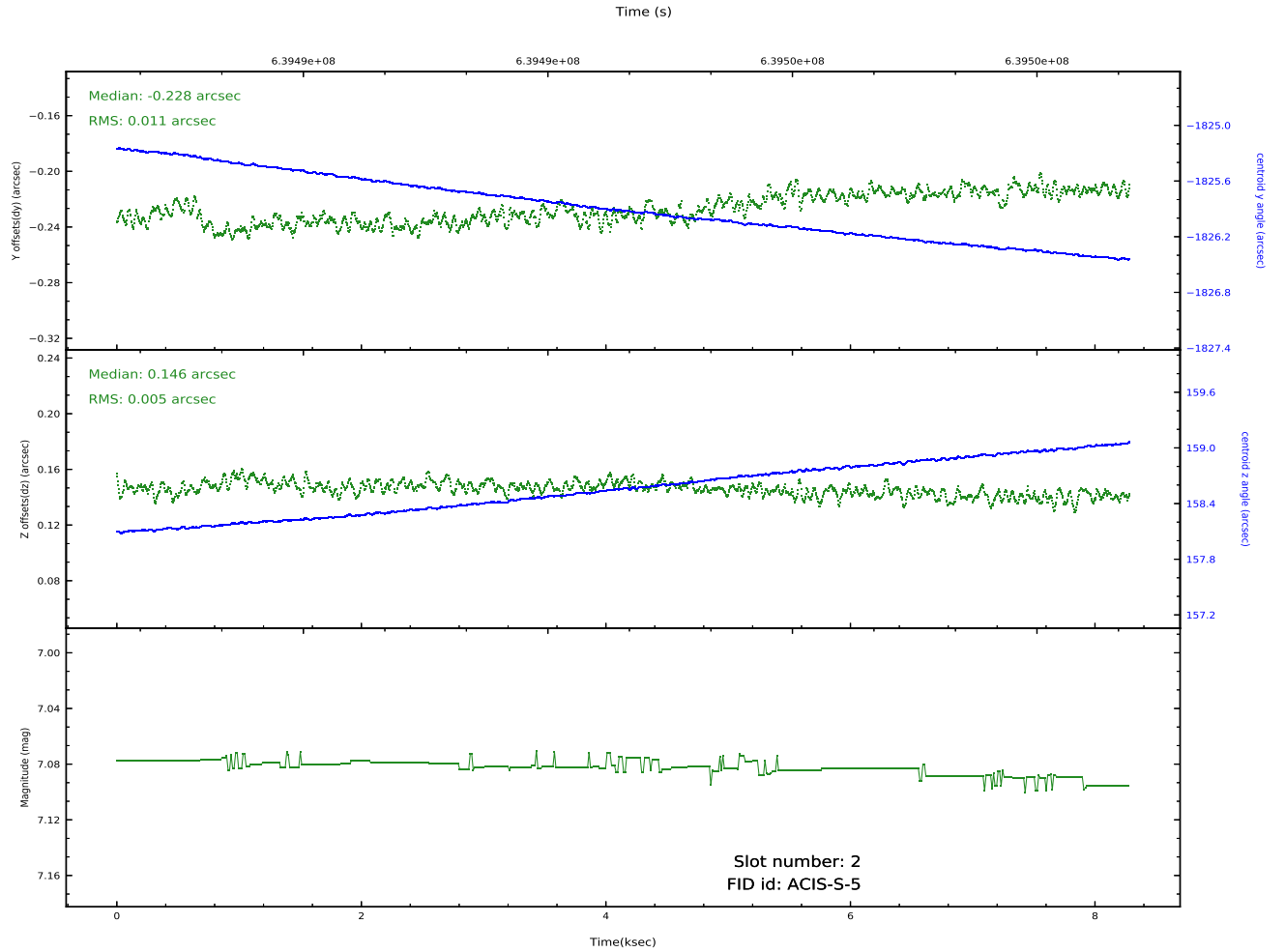
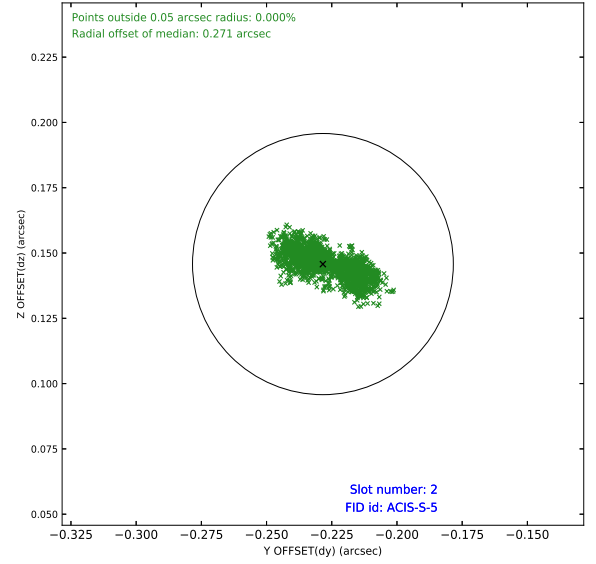
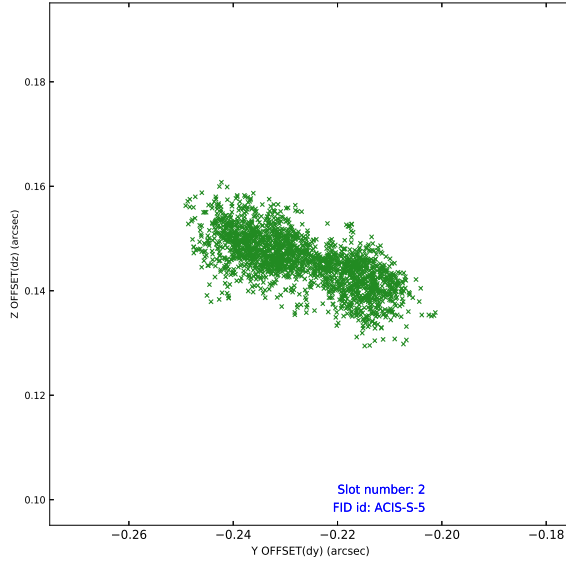
### 2.5.1 Slot 0



## 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)	2020.10.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.1995000631809

### **A.2 Comments**