

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 6170 - L2 Version 4  
Chandra X-Ray Center

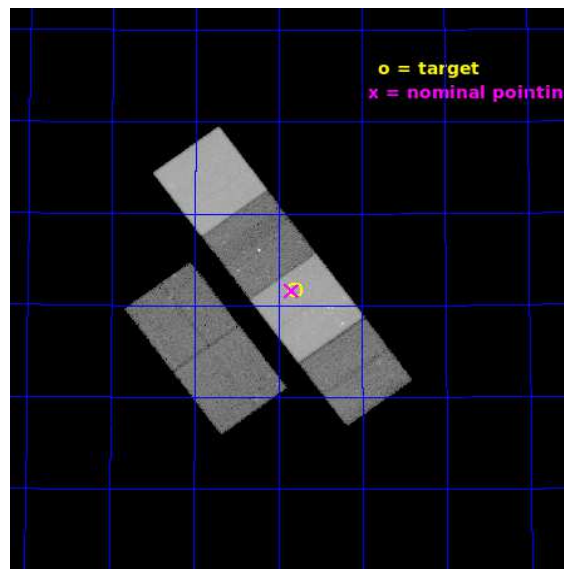
L2 Processing Date : Oct 5 2020

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# 1 Front

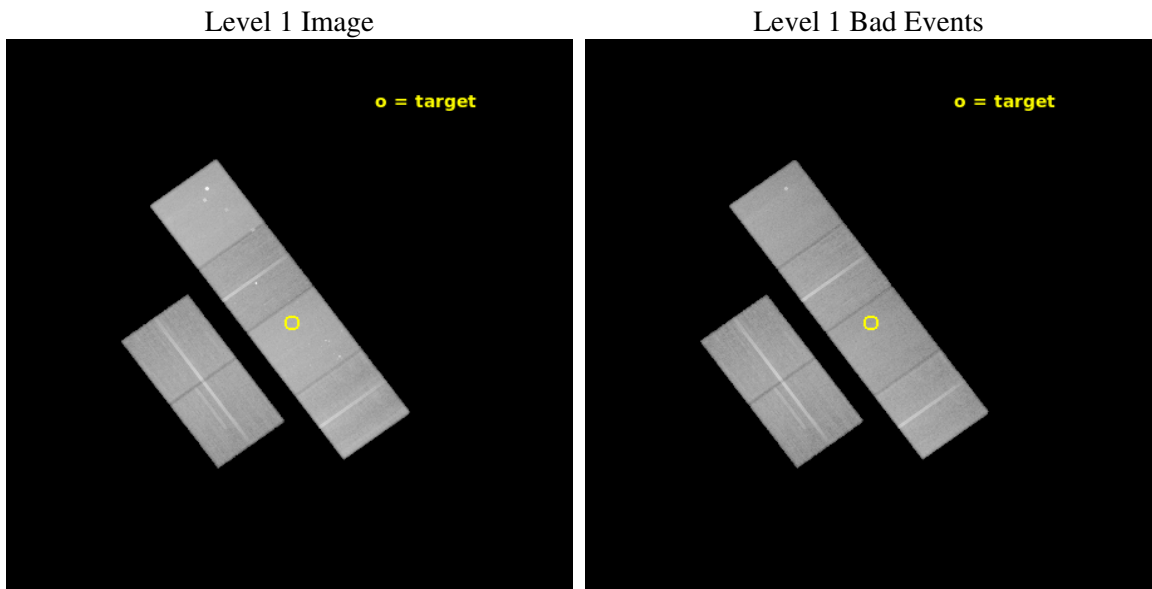
seq_num	600392	Sequence number
obs_id	6170	Observation id
title	An Ultra-Deep Study of M101	Proposal title
observer	Dr. K.D. Kuntz	Principal investigator
object	M101	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	210.950833	Observer's specified target RA [deg]
dec_targ	54.361389	Observer's specified target Dec [deg]
ra_nom	210.95946907765	Nominal RA [deg]
dec_nom	54.360359717495	Nominal Dec [deg]
roll_nom	53.703472398087	Nominal Roll [deg]
revision	4	Processing version of data
ontime	48563.199819088	Sum of GTIs [s]
livetime	47948.26334173	Livetime [s]
ontime2	48556.717868507	Sum of GTIs [s]
ontime3	48556.717848599	Sum of GTIs [s]
ontime5	48563.199819088	Sum of GTIs [s]
ontime6	48556.717858553	Sum of GTIs [s]
ontime7	48563.199819088	Sum of GTIs [s]
ontime8	48553.477047712	Sum of GTIs [s]
l2events	632711	Number of level 2 events



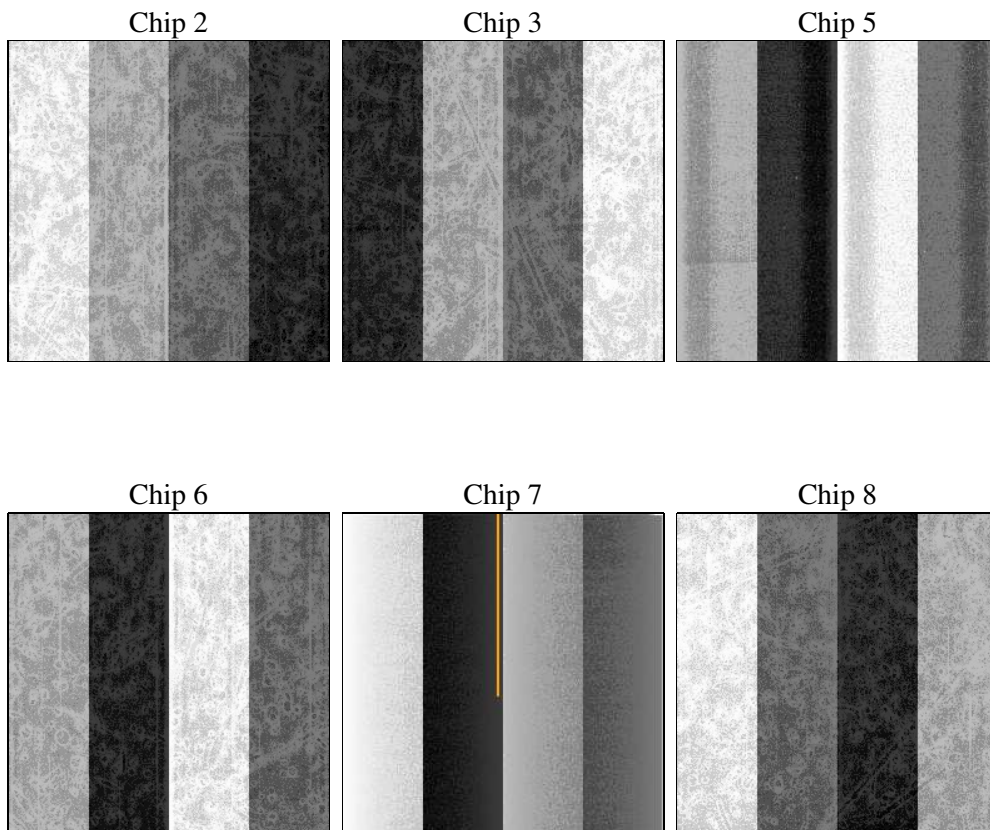
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	48400.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	48563.199819088	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime2	48556.717868507	Sum of GTIs [s]
date	2020-10-05T18:29:49	Date and time of file creation	ontime3	48556.717848599	Sum of GTIs [s]
revision	4	Processing version of data	ontime5	48563.199819088	Sum of GTIs [s]
			ontime6	48556.717858553	Sum of GTIs [s]
			ontime7	48563.199819088	Sum of GTIs [s]
			ontime8	48553.477047712	Sum of GTIs [s]
			l1events	2713116	Number of level 1 events

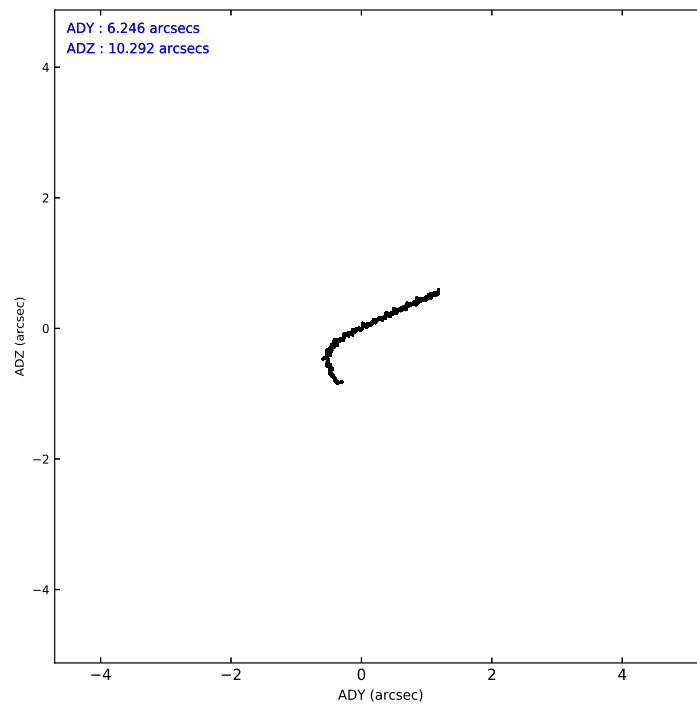
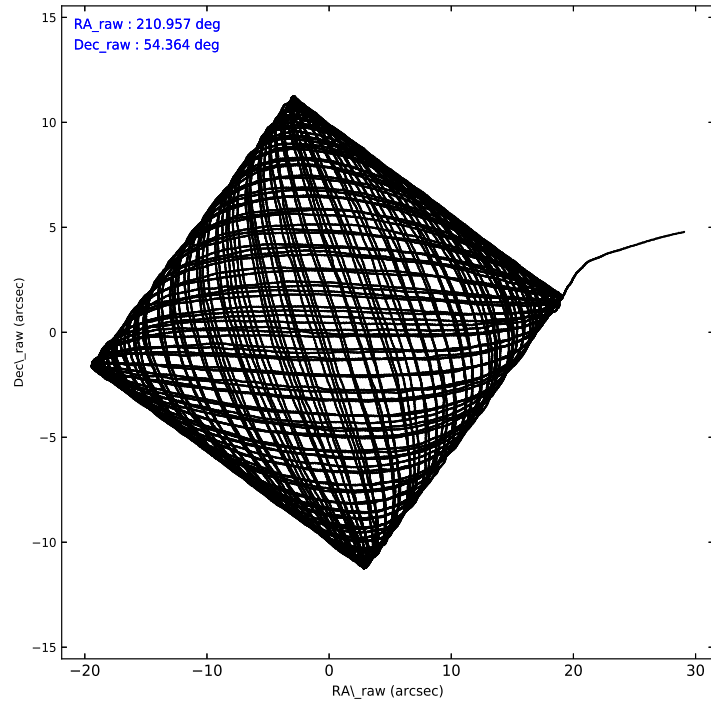
### 2.1.4 Events

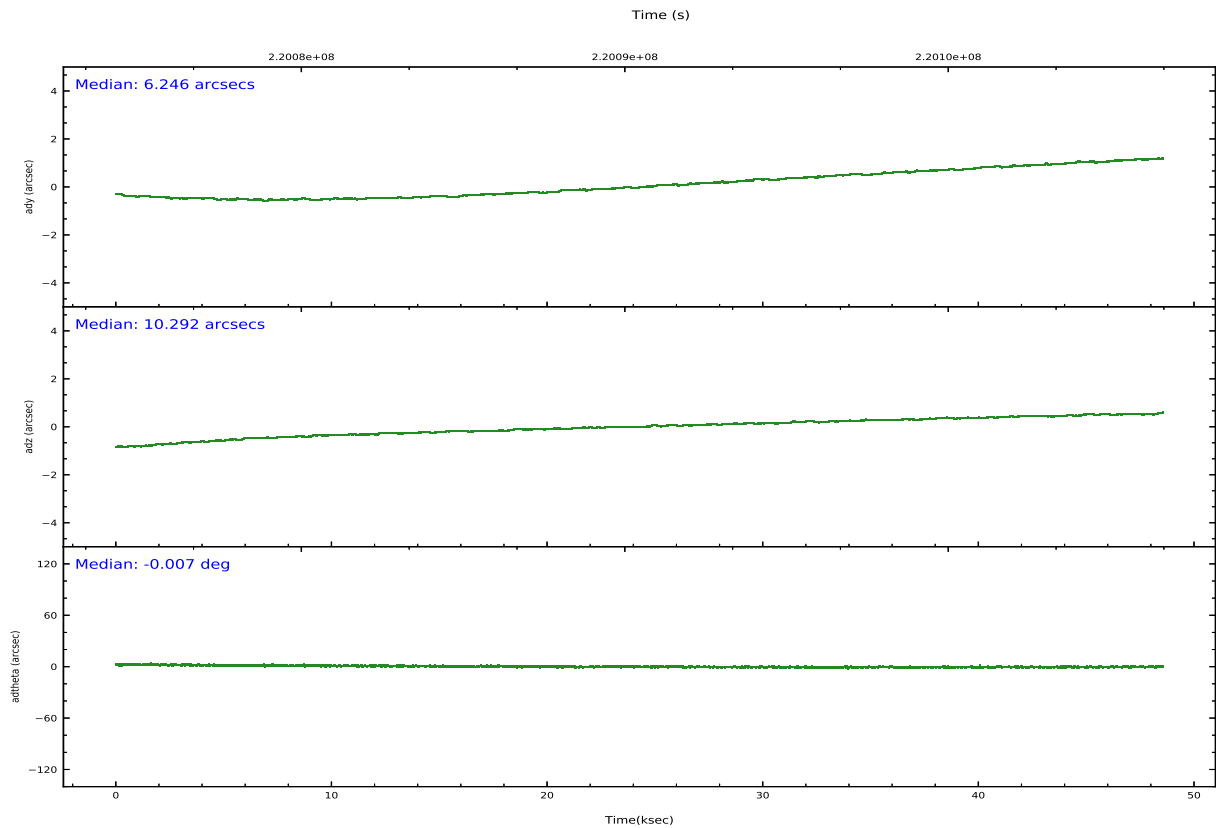
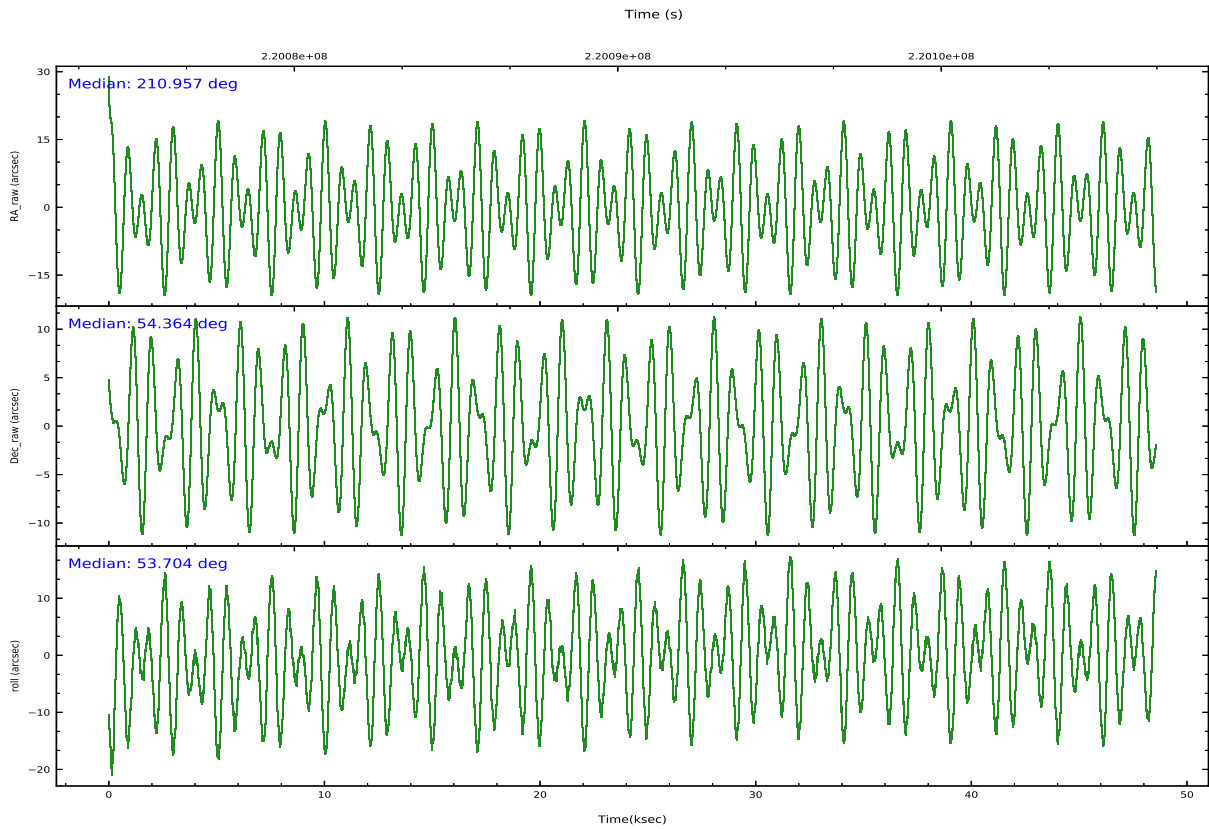
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	387204	368394	574431	381696	525962	475429	grade 0 events	20980	19436	25864	21641	22897	33998
rejected events	341094	324439	307369	332512	298880	372296		5%	5%	4%	5%	4%	7%
rejected %	88%	88%	53%	87%	56%	78%	grade 1 events	258	235	2341	226	475	362
								0%	0%	0%	0%	0%	0%
							grade 2 events	9328	8335	81812	9756	45603	22400
								2%	2%	14%	2%	8%	4%
							grade 3 events	4173	4334	10743	4423	20141	10970
								1%	1%	1%	1%	3%	2%
							grade 4 events	4071	4222	10701	4435	20048	10273
								1%	1%	1%	1%	3%	2%
							grade 5 events	14974	16249	42427	17508	49203	22777
								3%	4%	7%	4%	9%	4%
							grade 6 events	7604	7680	138276	8983	118613	25566
								1%	2%	24%	2%	22%	5%
							grade 7 events	325816	307903	262267	314724	248982	349083
								84%	83%	45%	82%	47%	73%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-235678	ACIS-235678	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	210.952749	210.95946907765	Subarray requested	NONE	NONE
[deg] Pointing Dec	54.336526	54.360359717495	Alternating exposures requested	N	N
[deg] Pointing Roll	53.549439	53.703472398087	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	220066564.184000	220065477.98579			
Observation start date	2004-12-22T01:35:00	2004-12-22T01:17:57			
[s] Observation end time (MET)	220114964.184000	220115609.71305			
Observation end date	2004-12-22T15:01:40	2004-12-22T15:13:29			
Read mode	TIMED	TIMED			

## 2.3 Aspect





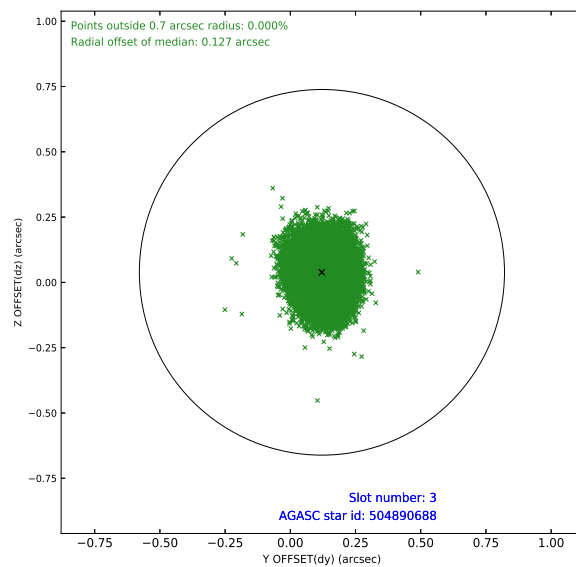
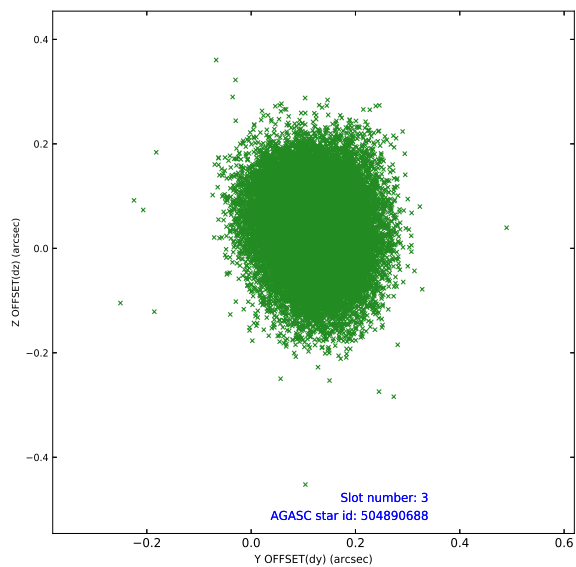
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-4	7.20	11847	1.000	0.106	-0.004	0.011	0.018	0.000000	0.000000	2154.35	177
1	FID		ACIS-S-5	7.23	11845	1.000	-0.150	-0.009	0.018	0.028	0.000000	0.000000	-1812.12	170
2	FID		ACIS-S-6	7.35	11845	1.000	0.020	0.027	0.019	0.026	0.000000	0.000000	402.52	814
3	GUIDE	used	504890688	9.19	23681	1.000	0.121	0.039	0.104	0.164	211.697686	53.837149	-498.68	-2336
4	GUIDE	used	504891480	8.07	23691	1.000	-0.018	-0.076	0.075	0.119	210.708012	54.666096	652.39	1115
5	GUIDE	used	504894408	9.26	23674	1.000	-0.119	0.087	0.101	0.159	211.942794	54.047749	419.17	-2291
6	GUIDE	used	504894856	8.97	23678	1.000	0.099	-0.030	0.075	0.123	209.819510	54.132689	-1994.73	1497
7	GUIDE	used	505292416	9.29	23676	1.000	-0.085	-0.015	0.096	0.154	210.920759	55.040479	1999.30	1559

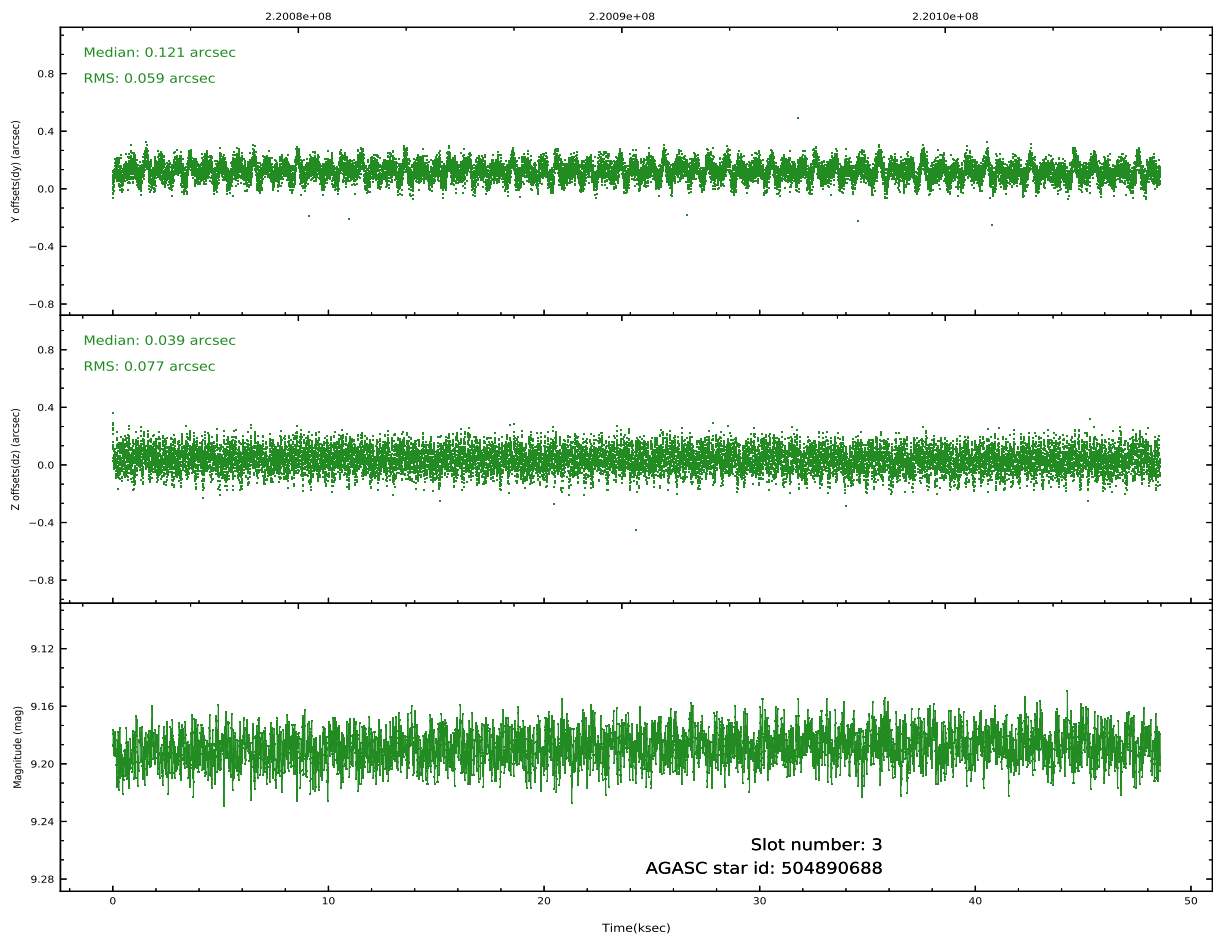
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## 2.4 Star Slots

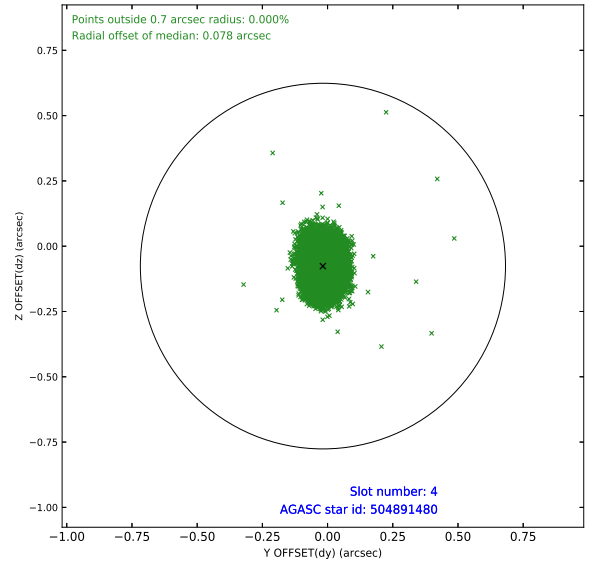
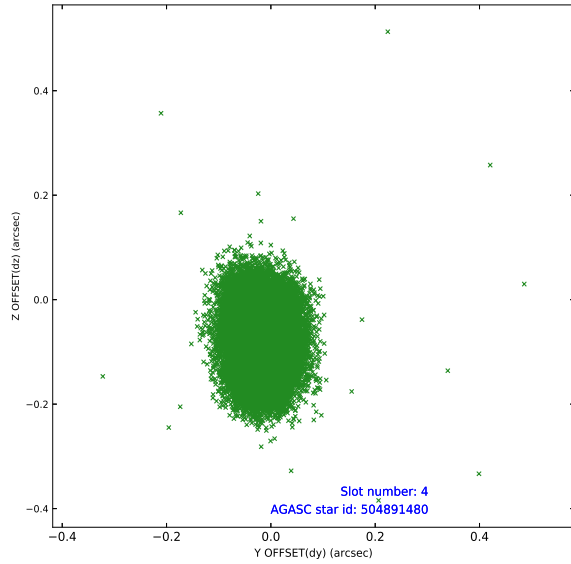
### 2.4.1 Slot 3



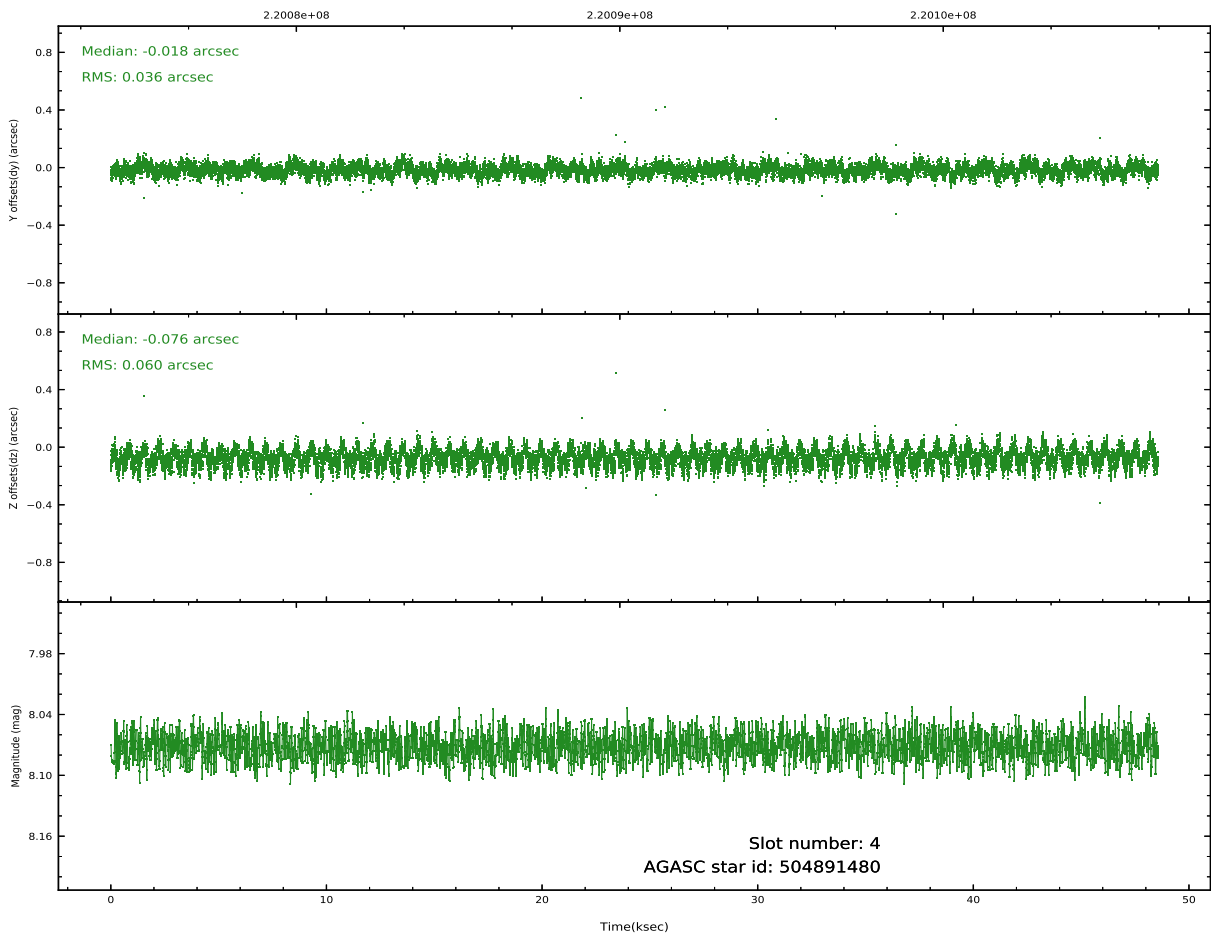
Time (s)



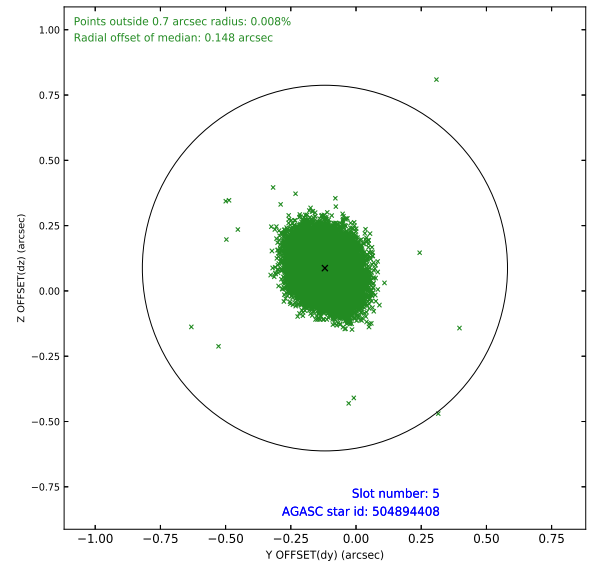
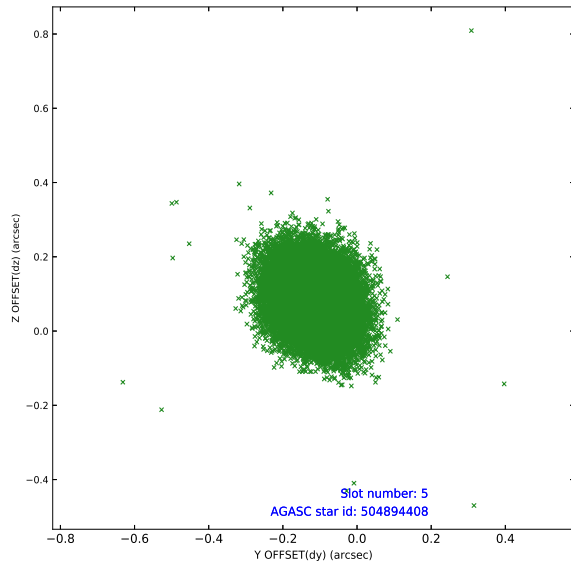
## 2.4.2 Slot 4



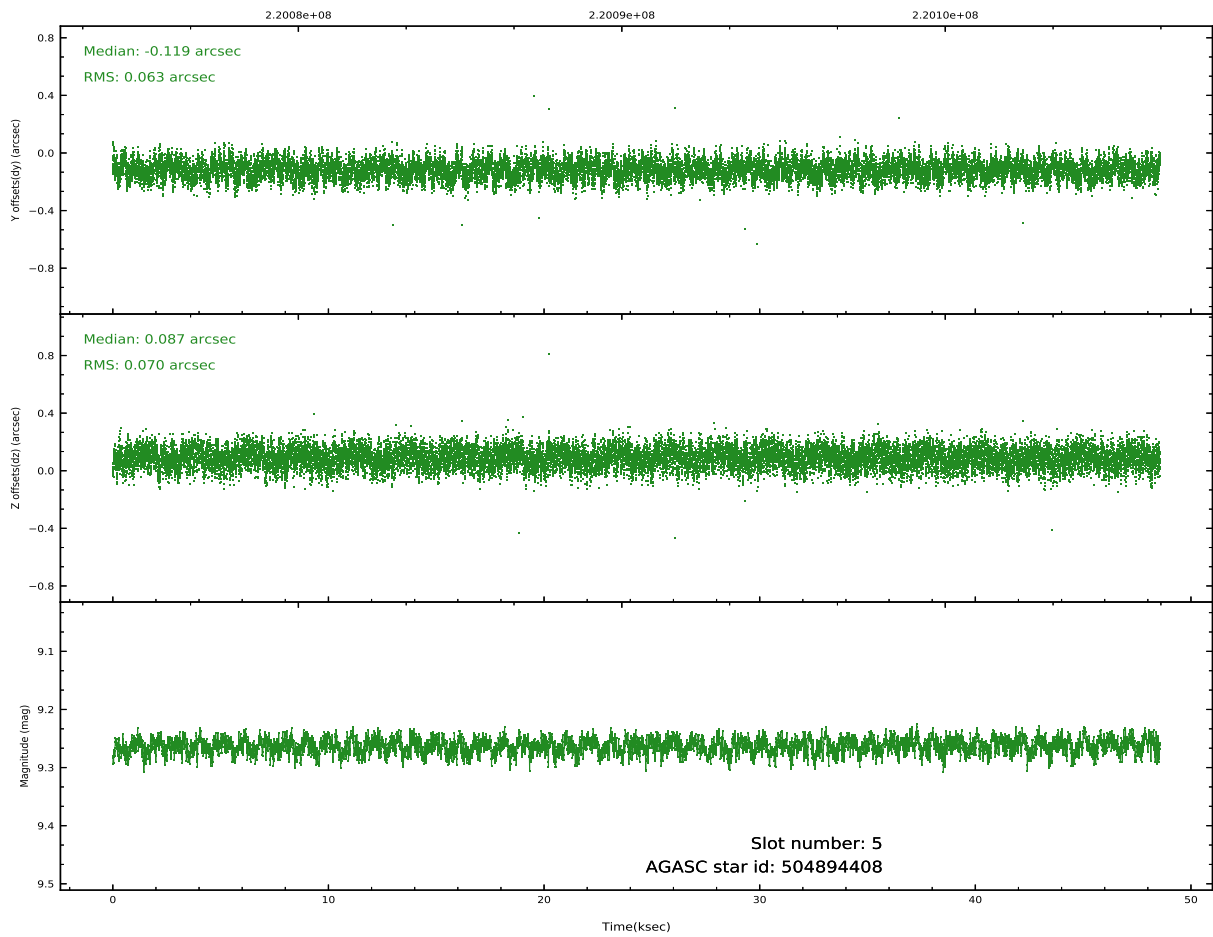
Time (s)



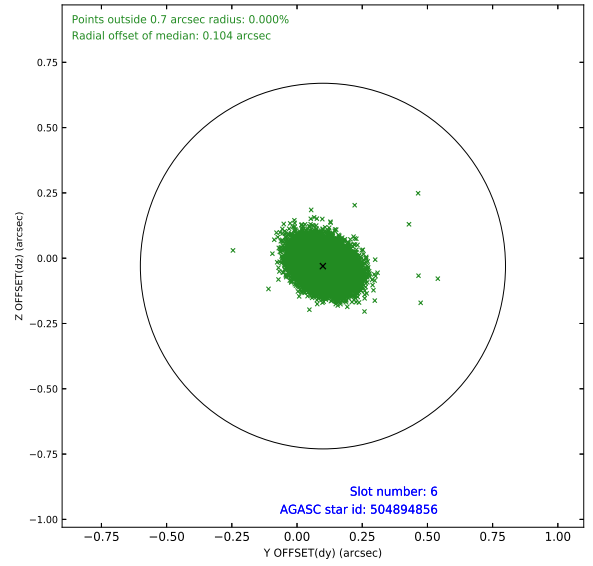
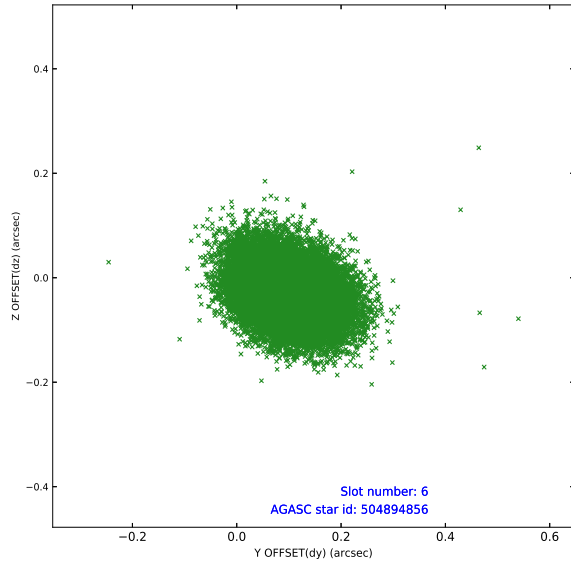
### 2.4.3 Slot 5



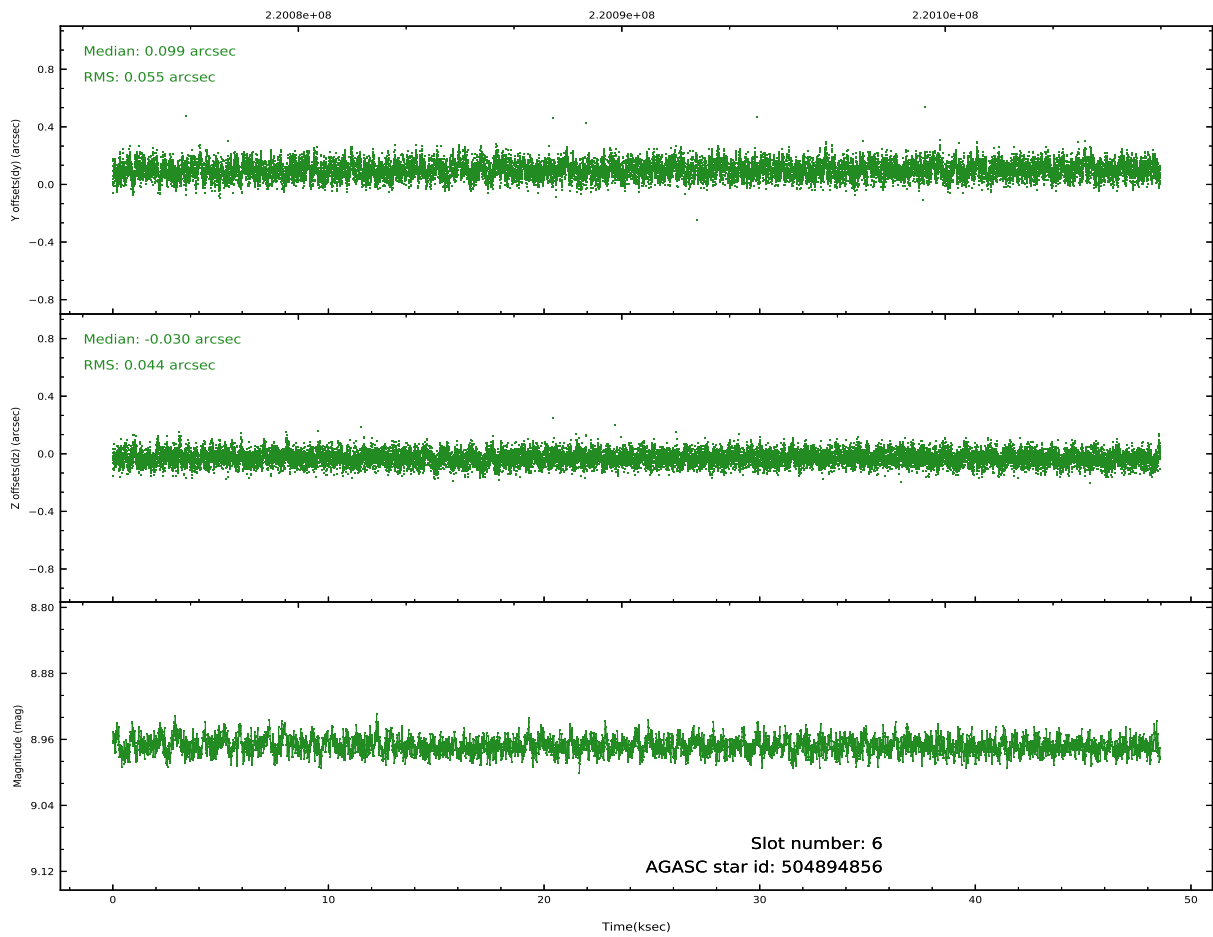
Time (s)



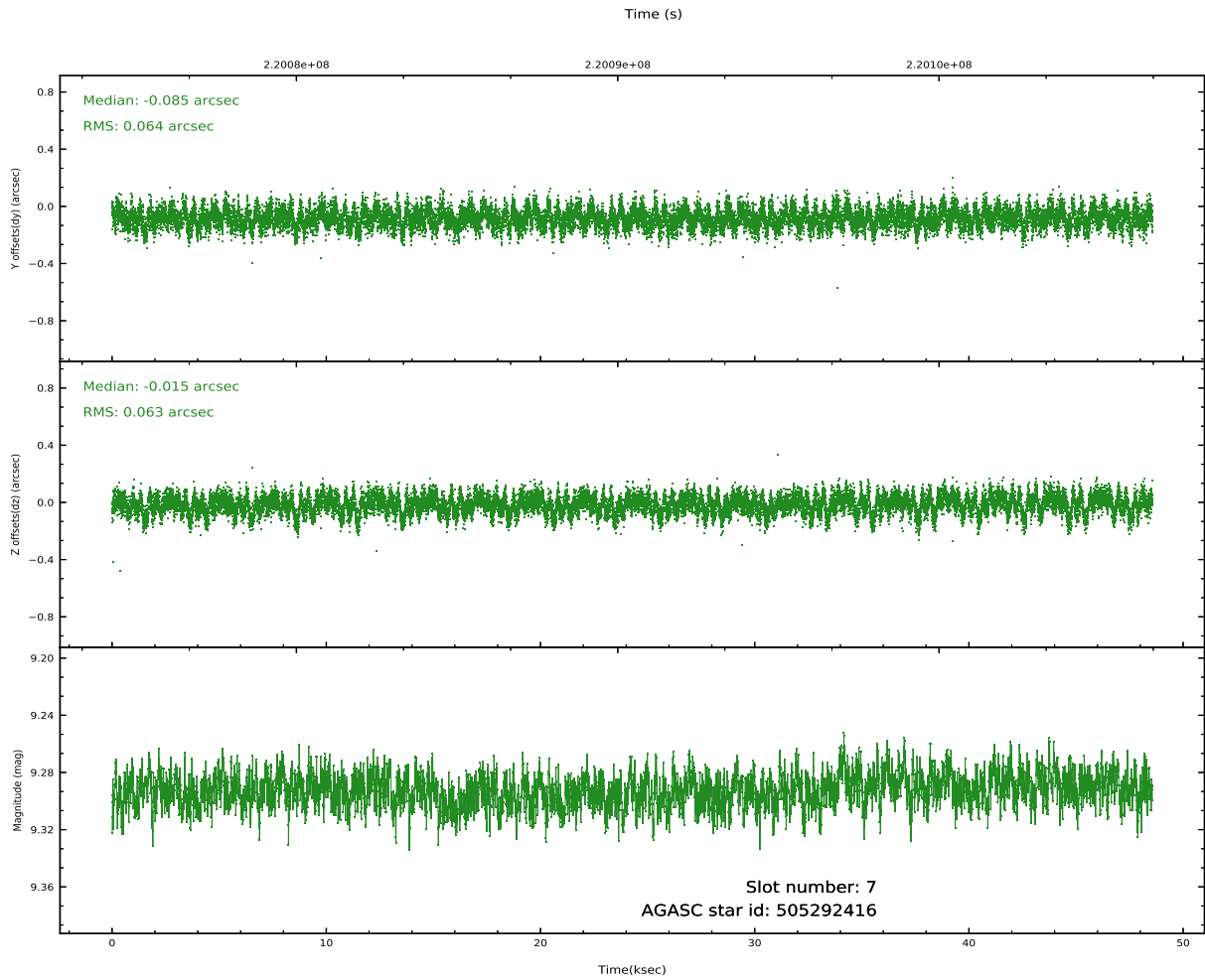
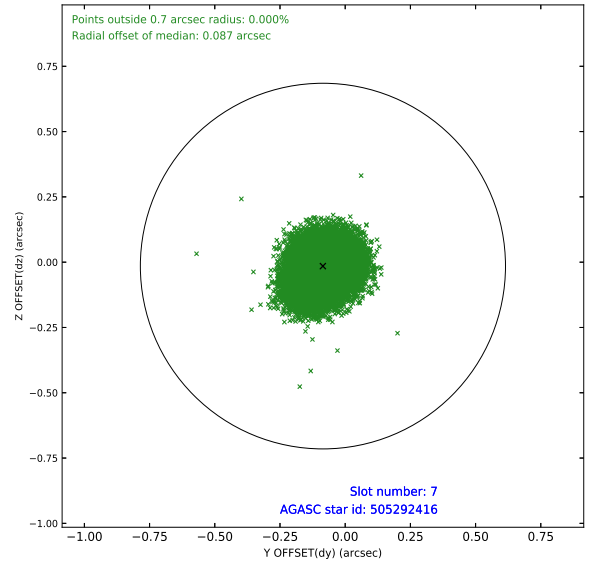
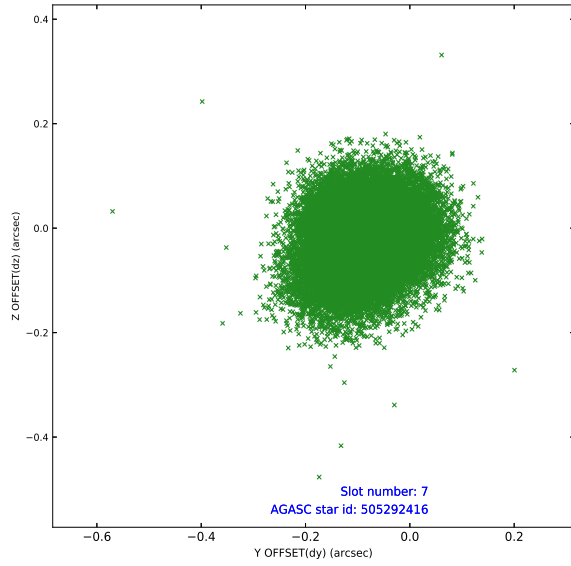
## 2.4.4 Slot 6



Time (s)

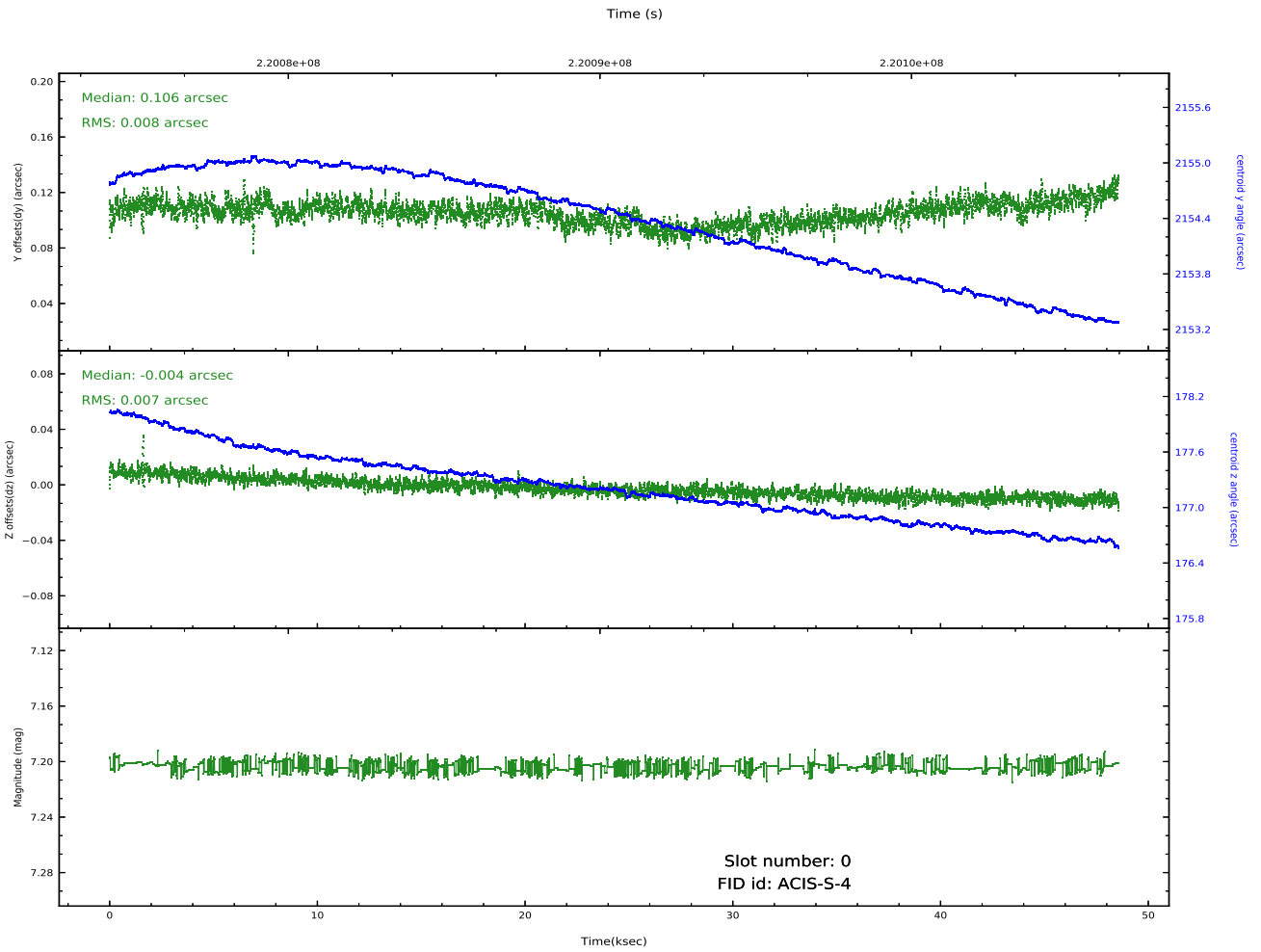
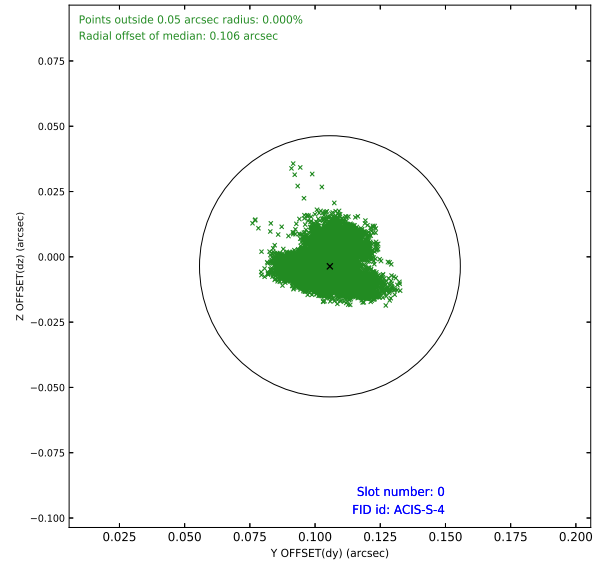
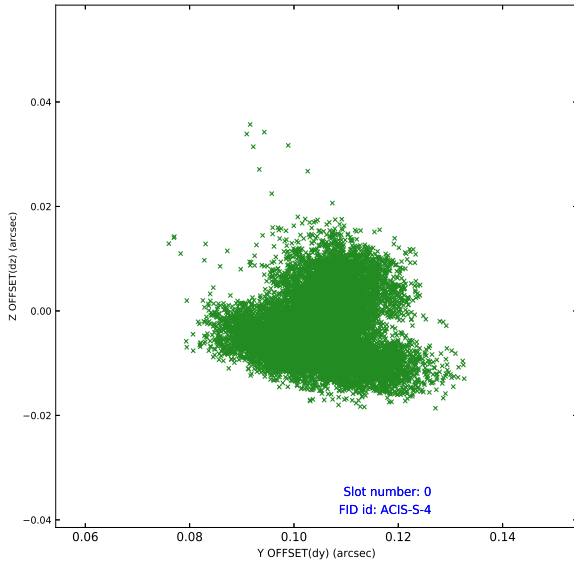


## 2.4.5 Slot 7

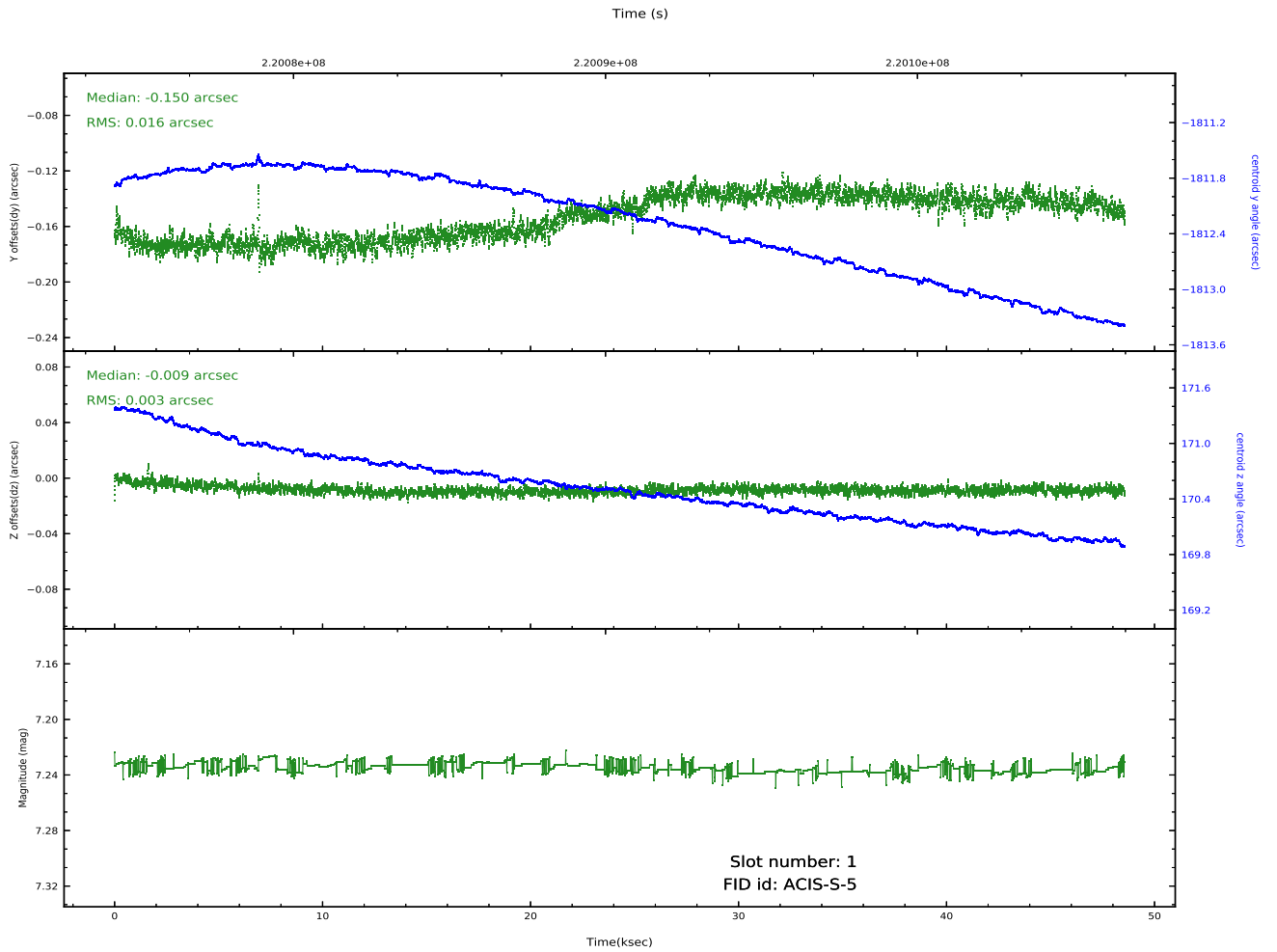
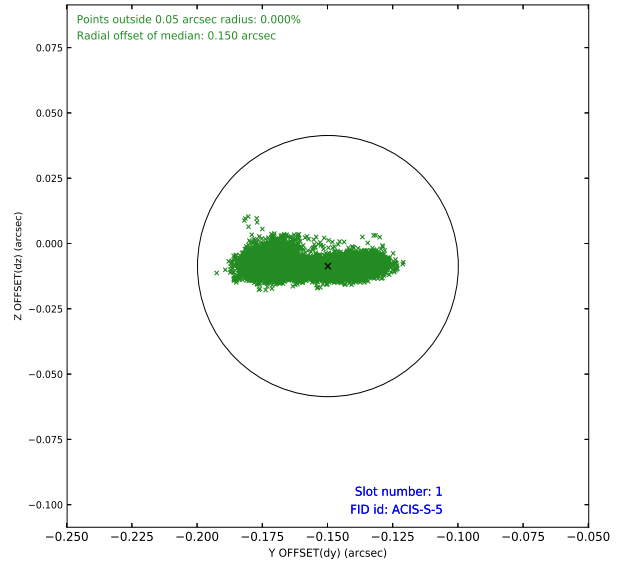
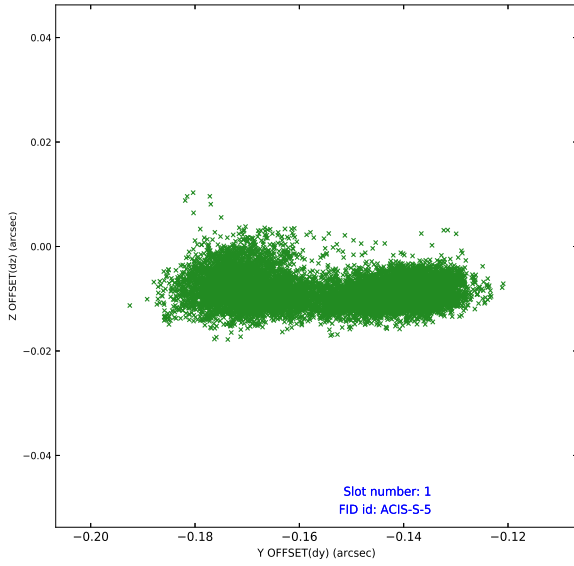


## 2.5 FID Slots

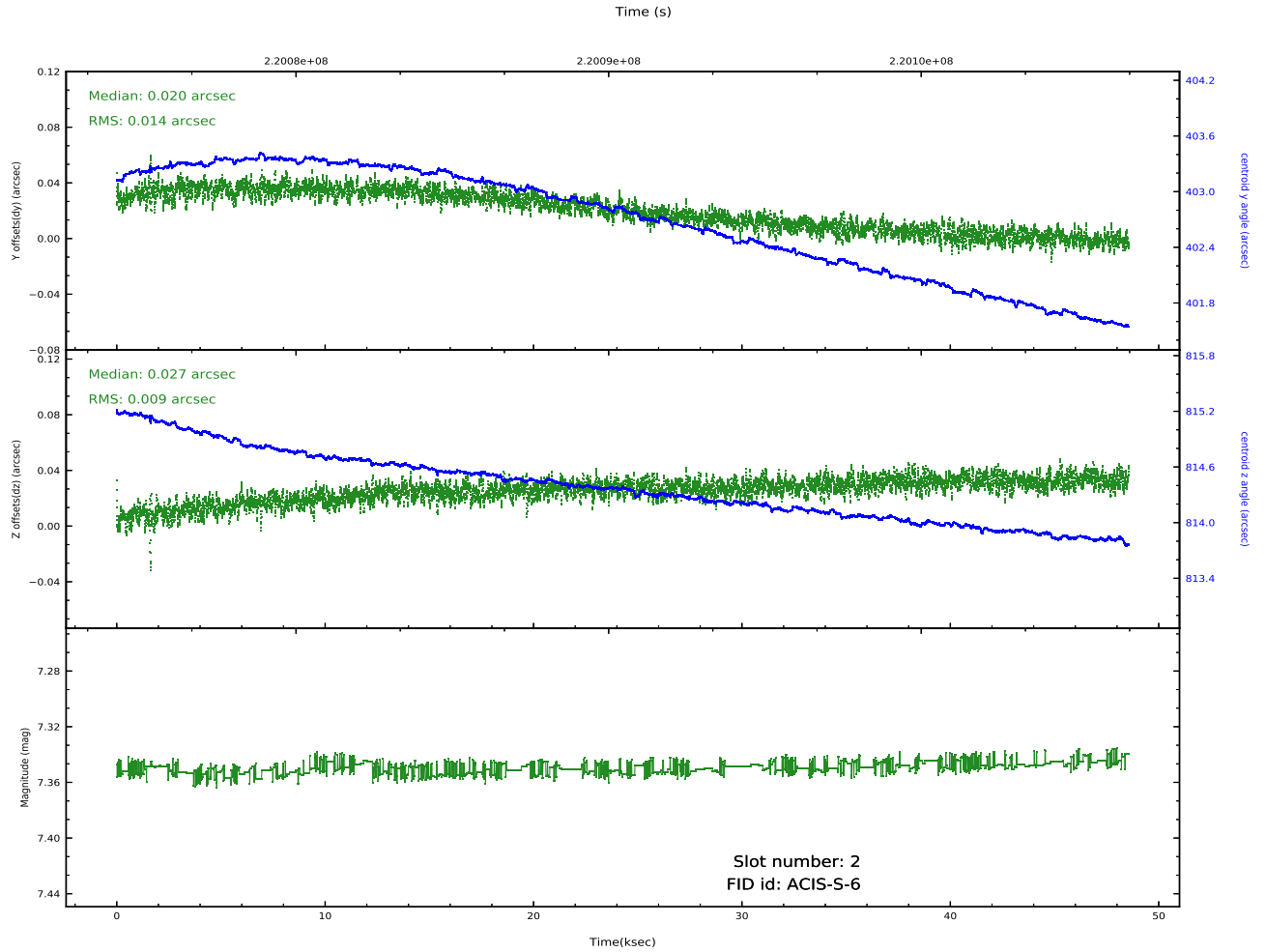
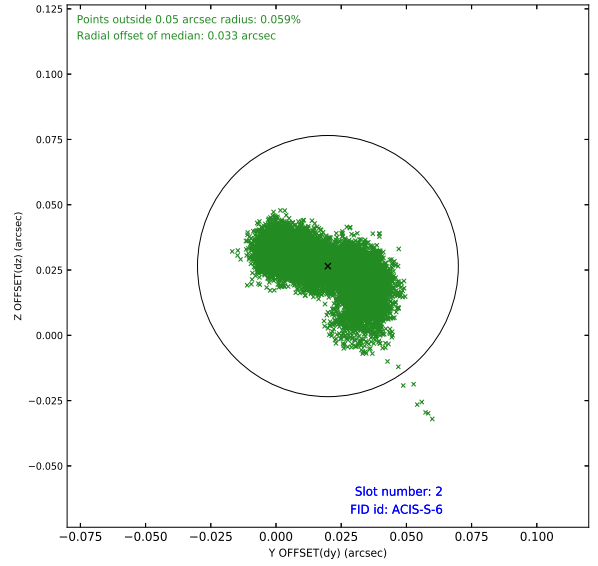
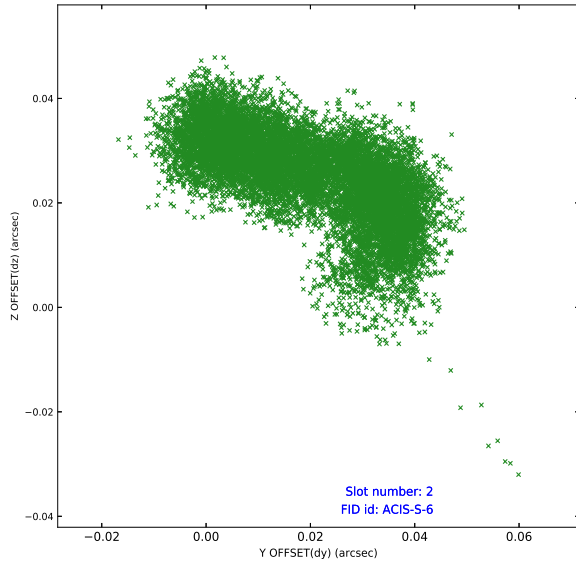
### 2.5.1 Slot 0



## 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)	2020.10.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	48.56319

## A.2 Comments