

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 4953 - L2 Version 4  
Chandra X-Ray Center

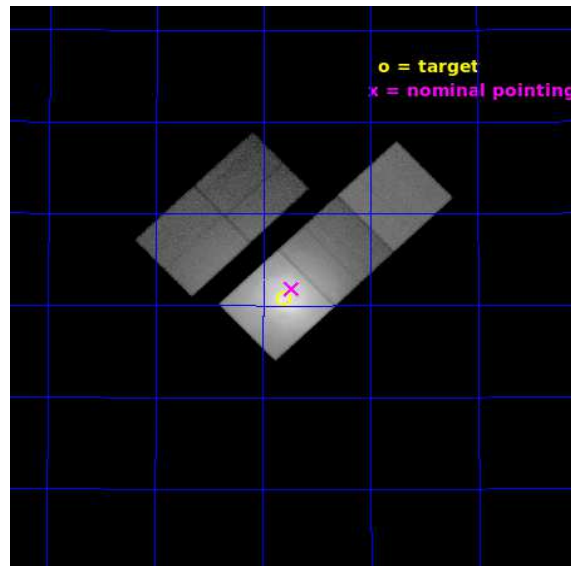
L2 Processing Date : Oct 3 2020

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# 1 Front

seq_num	800400	Sequence number
obs_id	4953	Observation id
title	A Megasecond Image of the Core of the Perseus Cluster	Proposal tit
observer	Andrew Fabian	Principal investigator
object	Abell 426	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	49.950833	Observer's specified target RA [deg]
dec_targ	41.511722	Observer's specified target Dec [deg]
ra_nom	49.932801940688	Nominal RA [deg]
dec_nom	41.530742733195	Nominal Dec [deg]
roll_nom	136.24165018878	Nominal Roll [deg]
revision	4	Processing version of data
ontime	30475.934998304	Sum of GTIs [s]
livetime	30077.744471494	Livetime [s]
ontime2	30472.629867971	Sum of GTIs [s]
ontime3	30475.811888218	Sum of GTIs [s]
ontime5	30475.8939583	Sum of GTIs [s]
ontime6	30475.852928221	Sum of GTIs [s]
ontime7	30475.934998304	Sum of GTIs [s]
l2events	2991536	Number of level 2 events

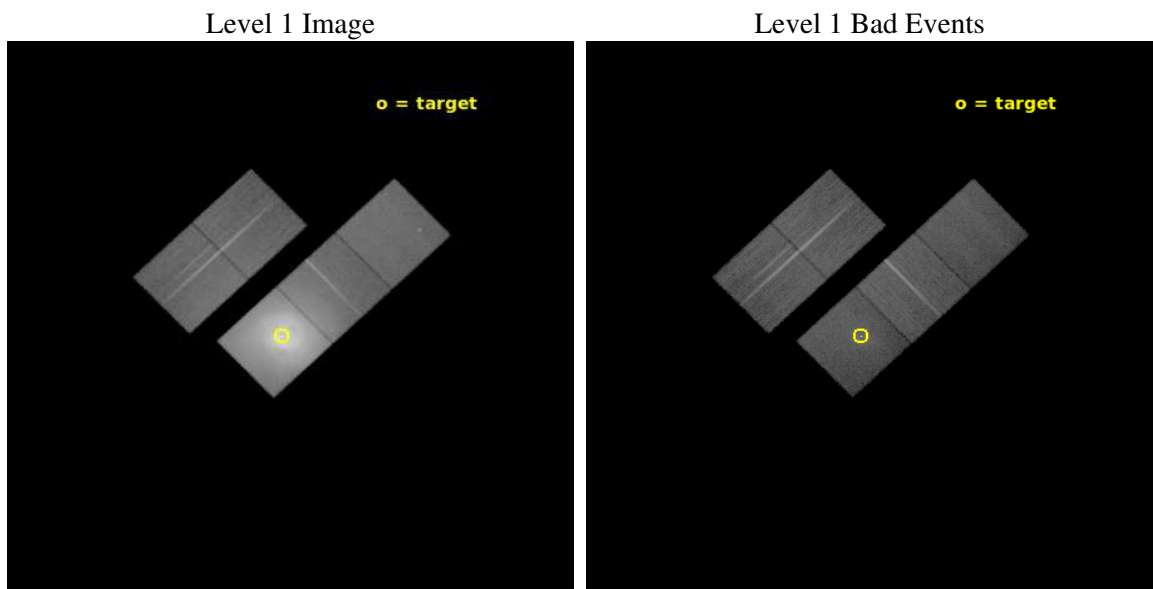




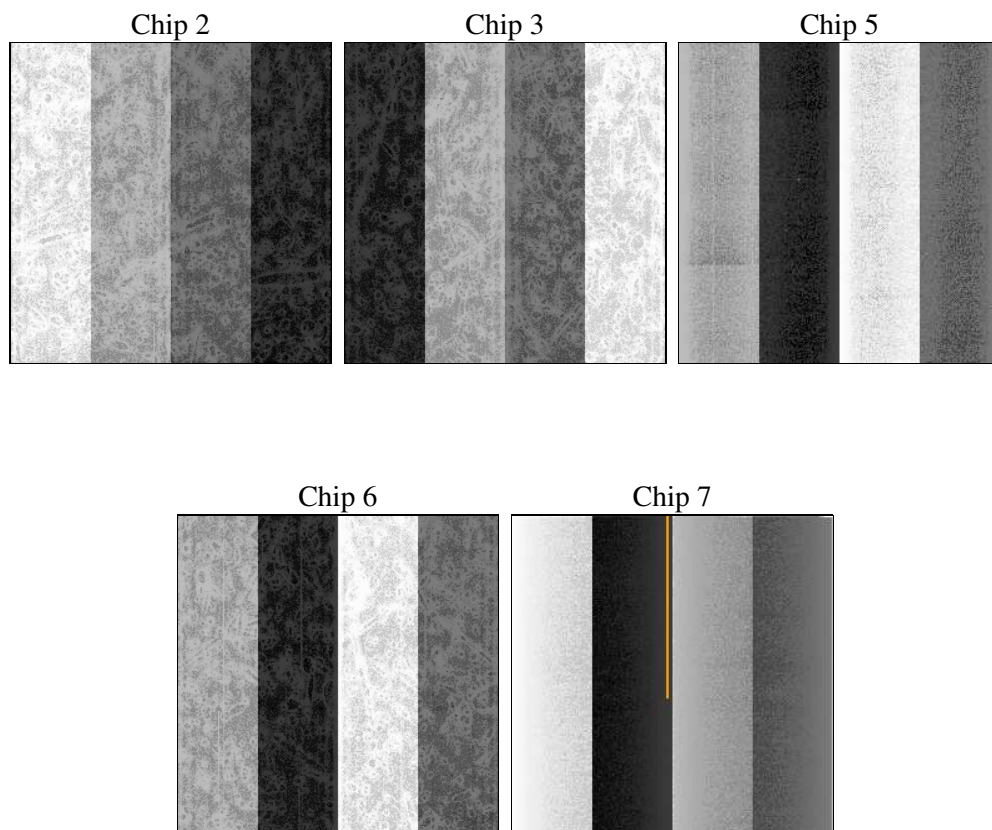
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	30703.276000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	30475.934998304	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime2	30472.629867971	Sum of GTIs [s]
date	2020-10-03T16:07:04	Date and time of file creation	ontime3	30475.811888218	Sum of GTIs [s]
revision	4	Processing version of data	ontime5	30475.8939583	Sum of GTIs [s]
			ontime6	30475.852928221	Sum of GTIs [s]
			ontime7	30475.934998304	Sum of GTIs [s]
			l1events	3907098	Number of level 1 events

### 2.1.4 Events

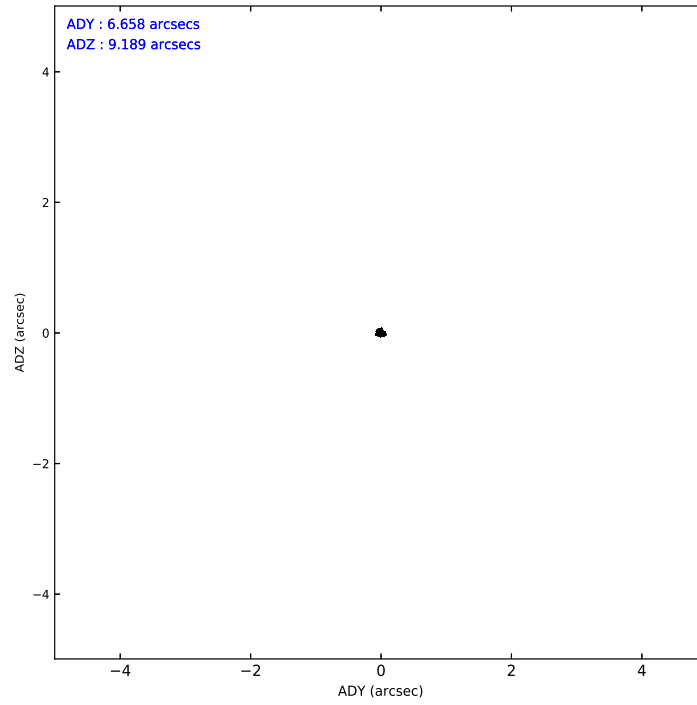
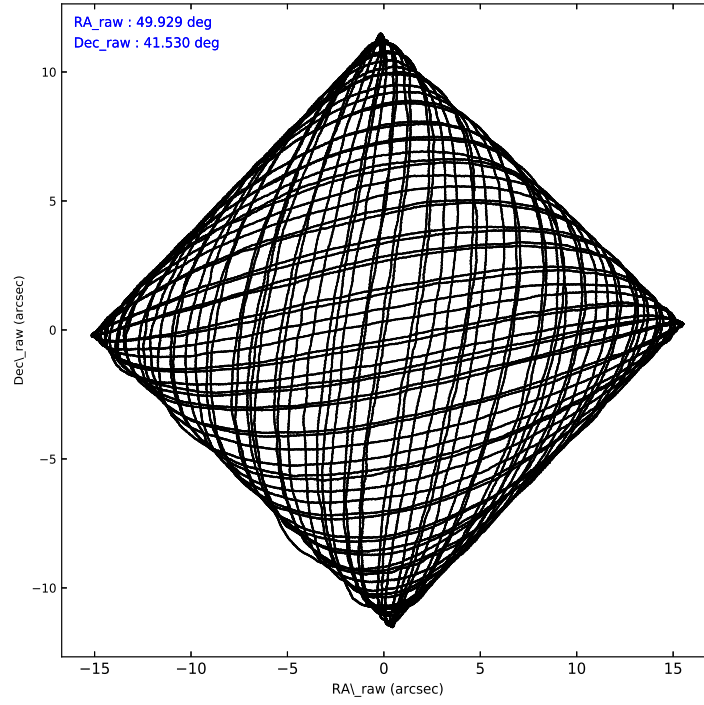
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
level 1 events	270934	313122	310321	465123	2547598
rejected events	193661	184258	138427	190401	150785
rejected %	71%	58%	44%	40%	5%

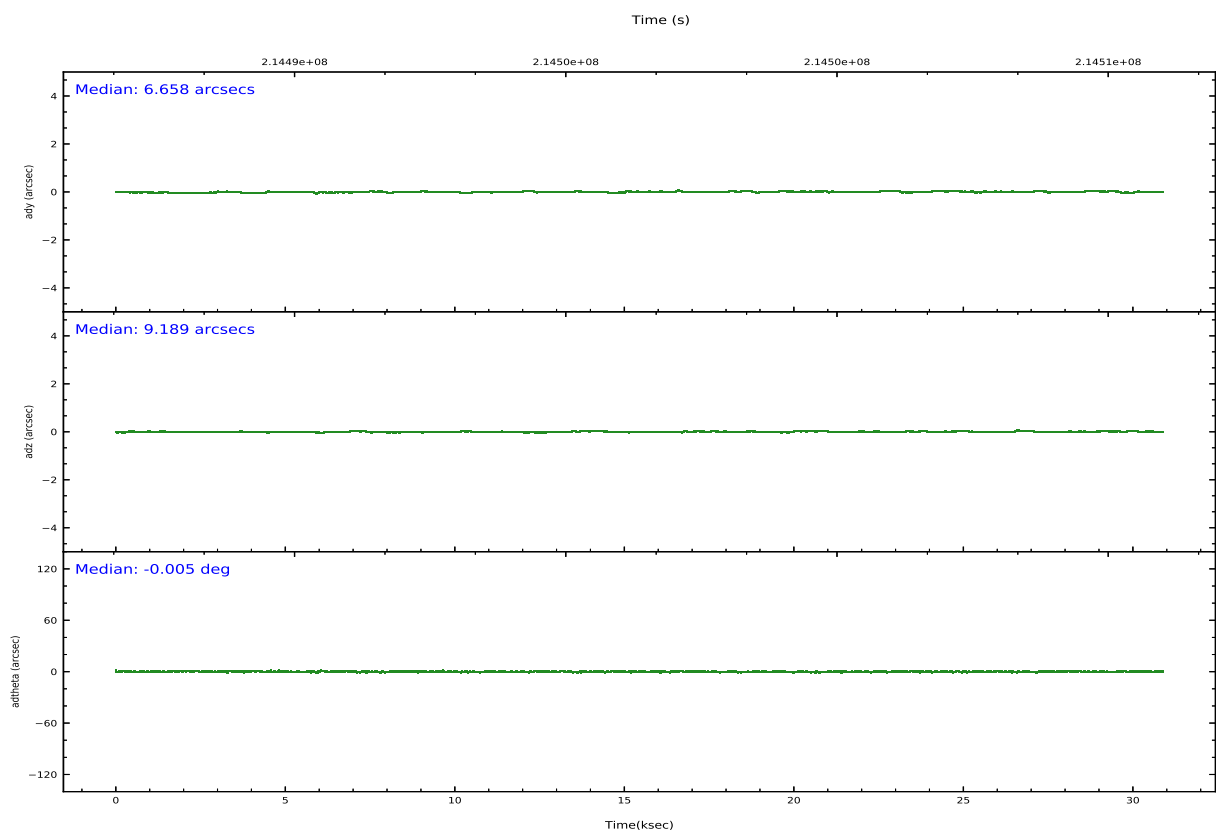
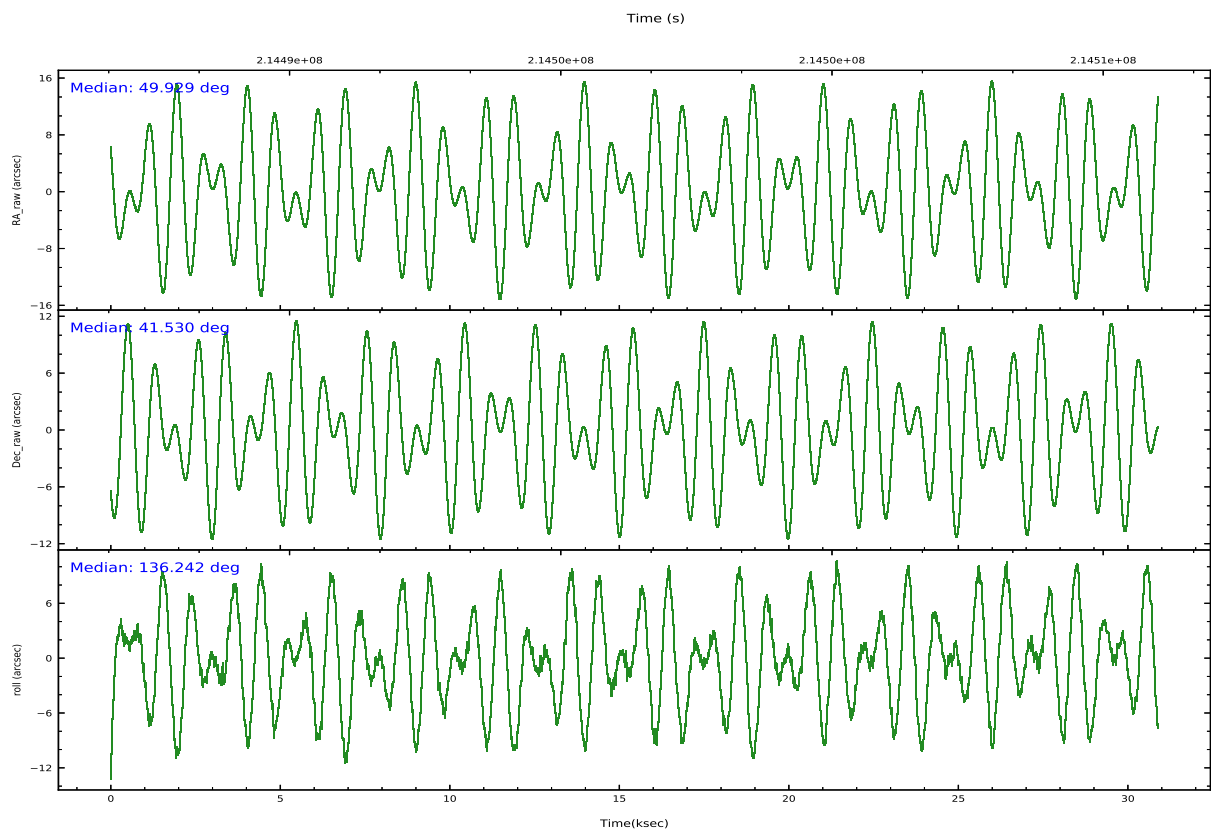
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
grade 0 events	54023	95748	23713	211210	660301
	19%	30%	7%	45%	25%
grade 1 events	362	553	247	940	1835
	0%	0%	0%	0%	0%
grade 2 events	10102	15052	51501	31251	629950
	3%	4%	16%	6%	24%
grade 3 events	3968	5810	9848	10231	279476
	1%	1%	3%	2%	10%
grade 4 events	3987	5720	9558	10443	276184
	1%	1%	3%	2%	10%
grade 5 events	6589	8097	22095	8852	40097
	2%	2%	7%	1%	1%
grade 6 events	5204	6547	77295	11621	551146
	1%	2%	24%	2%	21%
grade 7 events	186699	175595	116064	180575	108609
	68%	56%	37%	38%	4%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-23567	ACIS-23567	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	49.963912	49.932801940688	Subarray requested	NONE	NONE
[deg] Pointing Dec	41.524049	41.530742733195	Alternating exposures requested	N	N
[deg] Pointing Roll	136.064614	136.24165018878	[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)	214482917.184000	214482536.43512			
Observation start date	2004-10-18T10:34:13	2004-10-18T10:28:56			
[s] Observation end time (MET)	214513621.184000	214513839.42403			
Observation end date	2004-10-18T19:05:57	2004-10-18T19:10:39			
Read mode	TIMED	TIMED			

## 2.3 Aspect



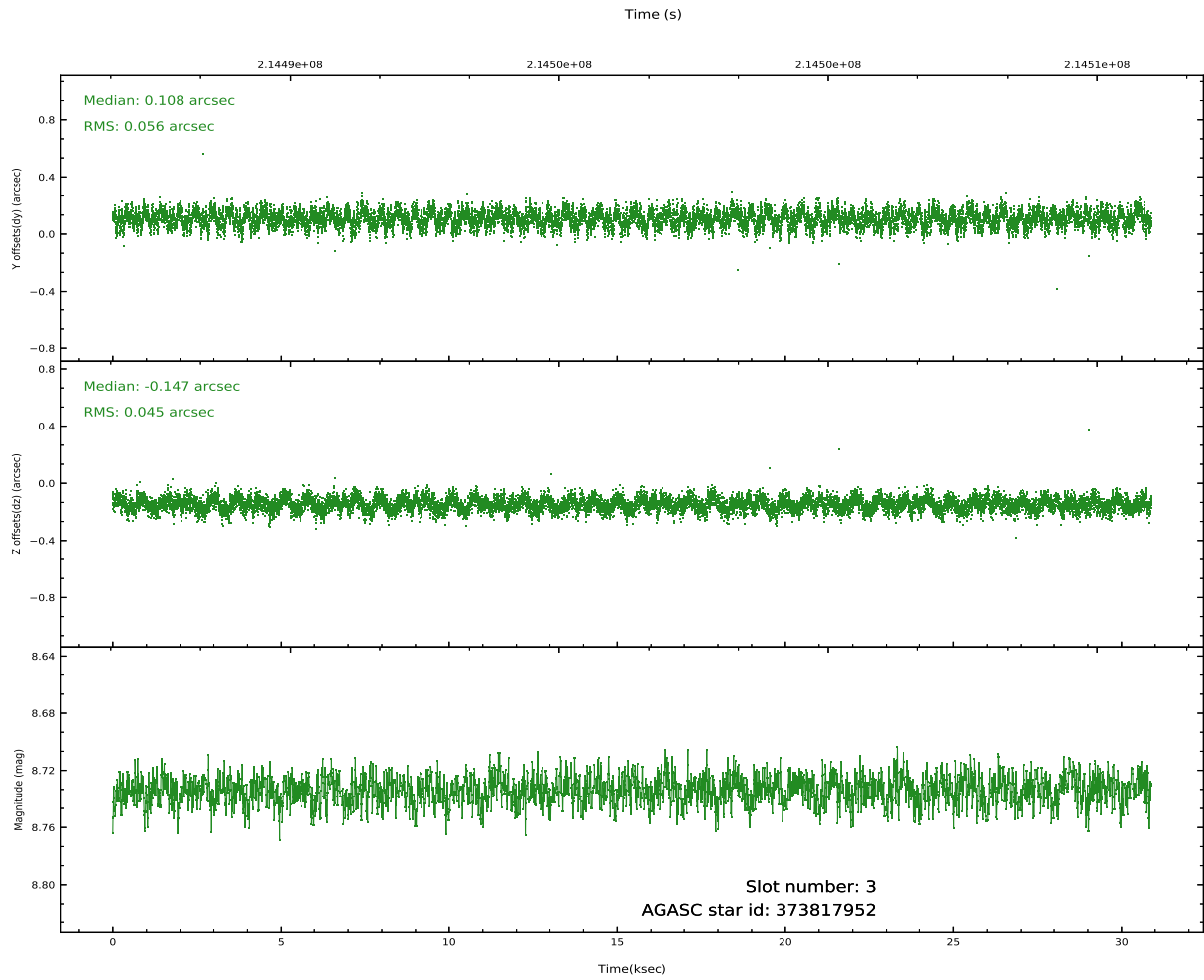
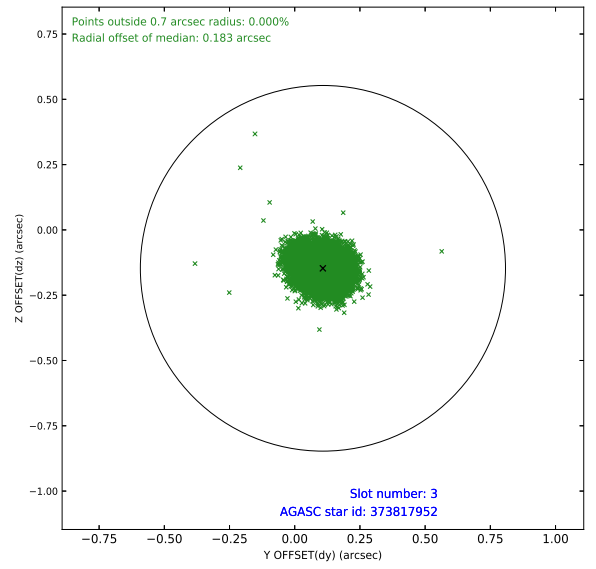
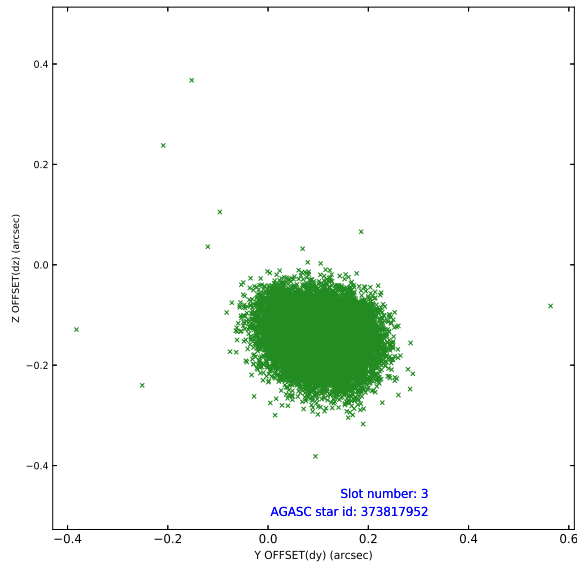


Slot Statistics

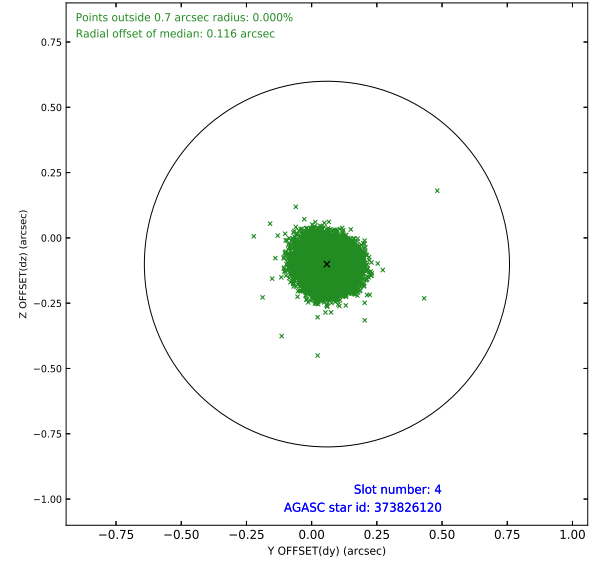
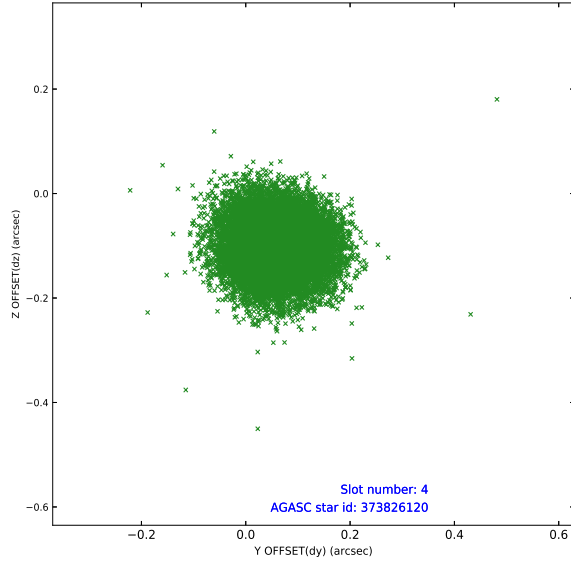
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.19	7533	1.000	0.047	-0.036	0.006	0.011	0.000000	0.000000	936.68	-1726
1	FID		ACIS-S-5	7.24	7535	1.000	-0.106	0.027	0.006	0.011	0.000000	0.000000	-1812.43	171
2	FID		ACIS-S-6	7.35	7534	1.000	0.038	0.020	0.007	0.011	0.000000	0.000000	402.16	815
3	GUIDE	used	373817952	8.73	15069	1.000	0.108	-0.147	0.076	0.121	49.913424	40.978510	-1263.81	1509
4	GUIDE	used	373826120	8.90	15065	1.000	0.059	-0.100	0.077	0.123	49.738165	41.186341	-402.57	1299
5	GUIDE	used	374352808	8.77	15069	1.000	-0.048	0.096	0.069	0.112	49.969955	42.208621	1698.75	-1785
6	GUIDE	used	374357808	8.67	15066	1.000	-0.138	0.079	0.080	0.132	49.921429	42.176083	1710.72	-1611
7	GUIDE	used	376057824	8.35	15065	1.000	0.020	0.076	0.089	0.132	50.665569	41.926280	-342.84	-2352

## 2.4 Star Slots

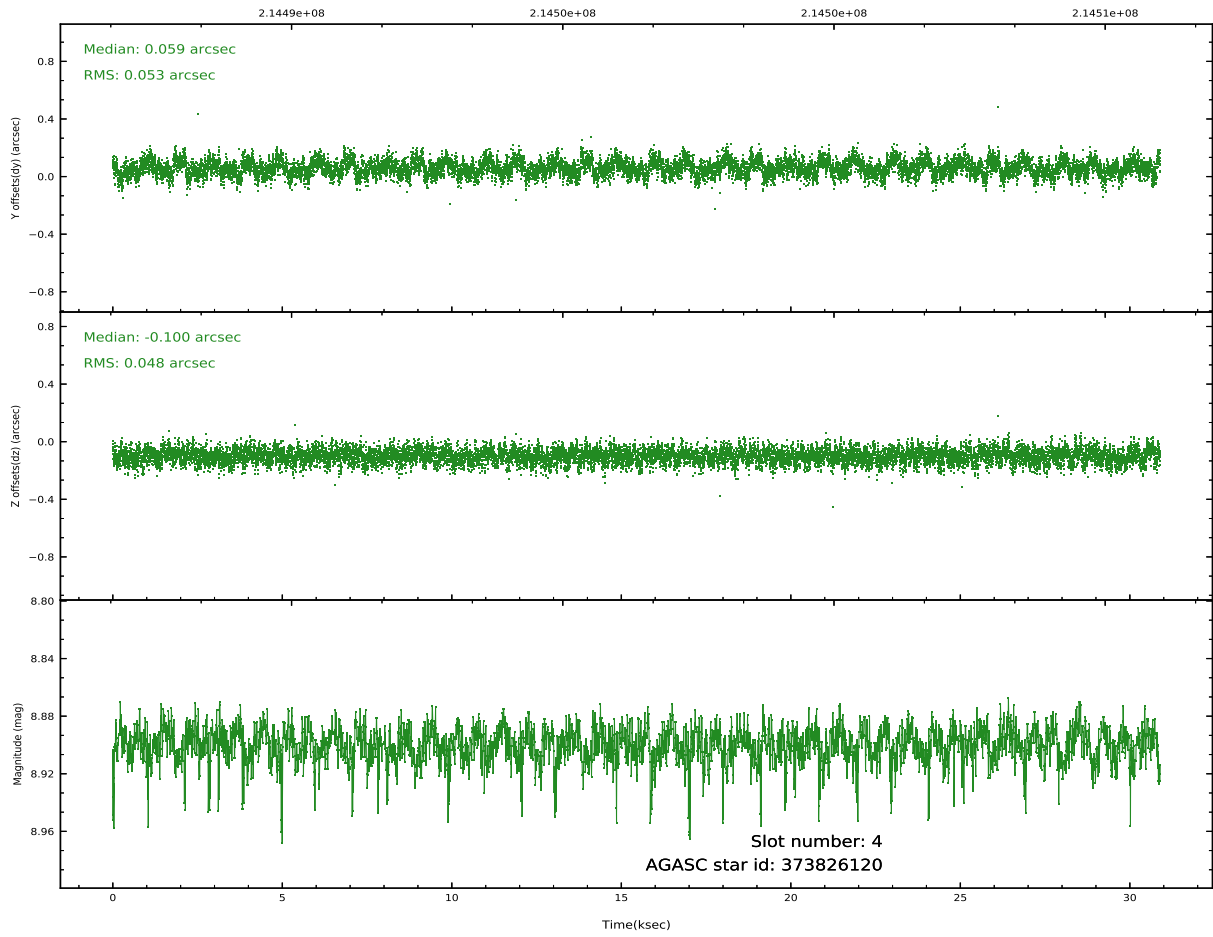
### 2.4.1 Slot 3



## 2.4.2 Slot 4

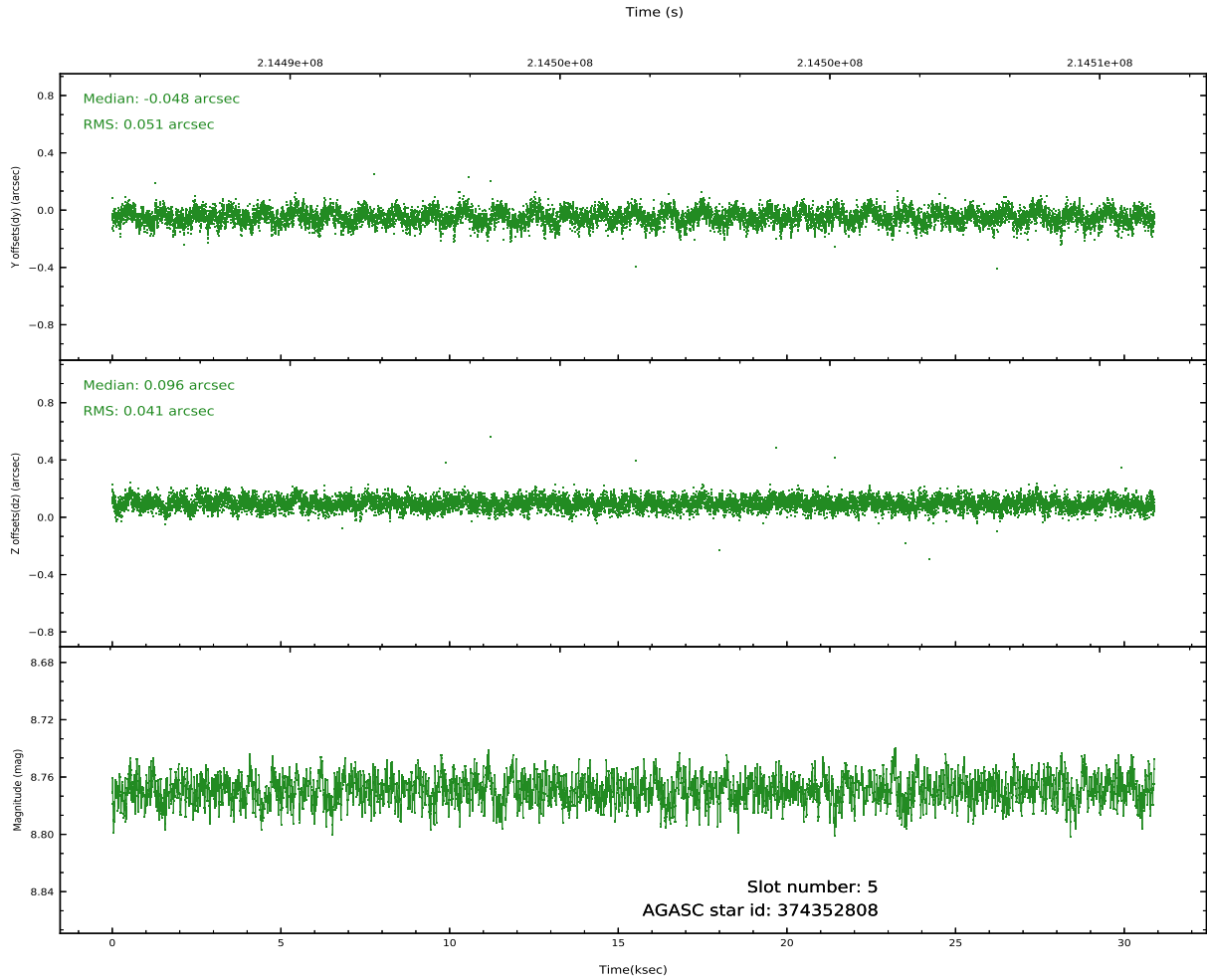
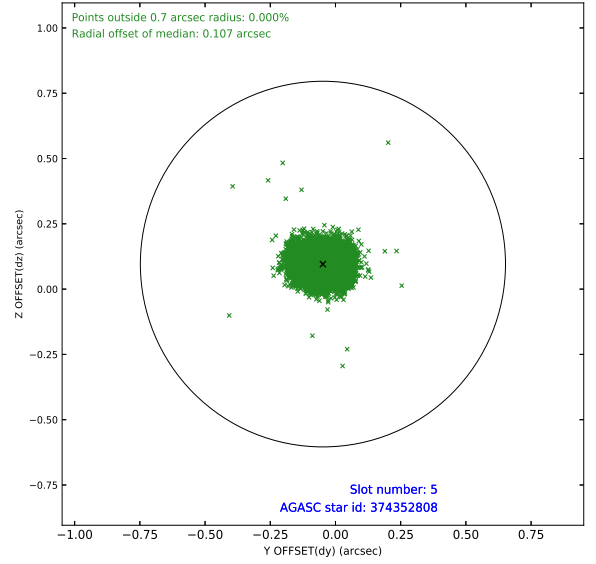
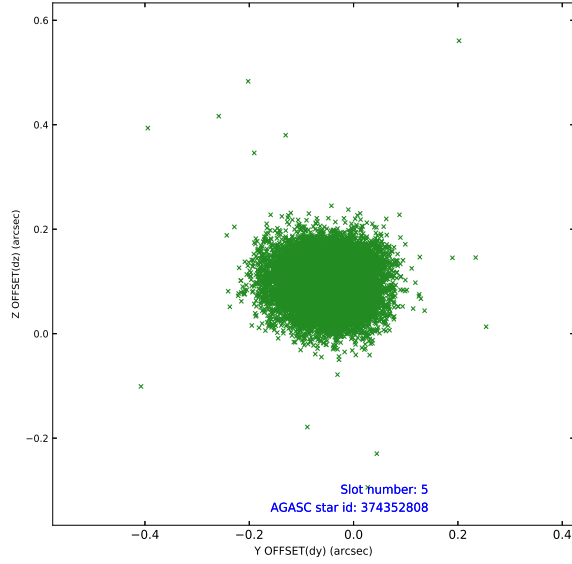


Time (s)

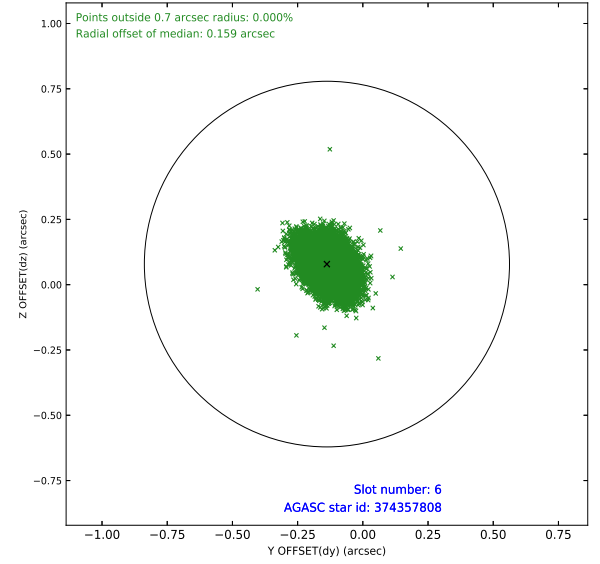
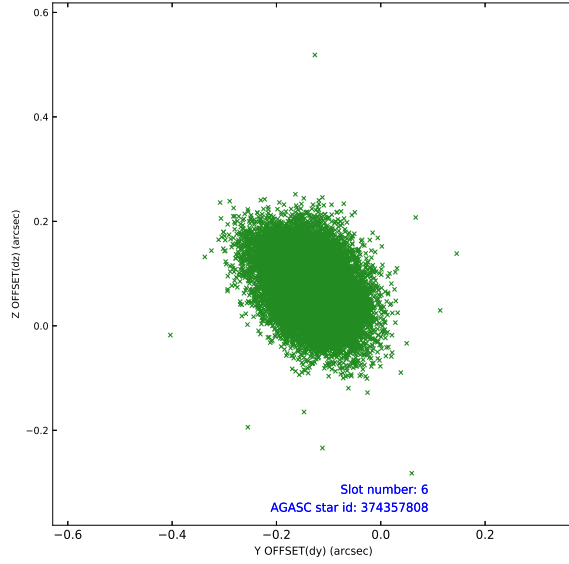




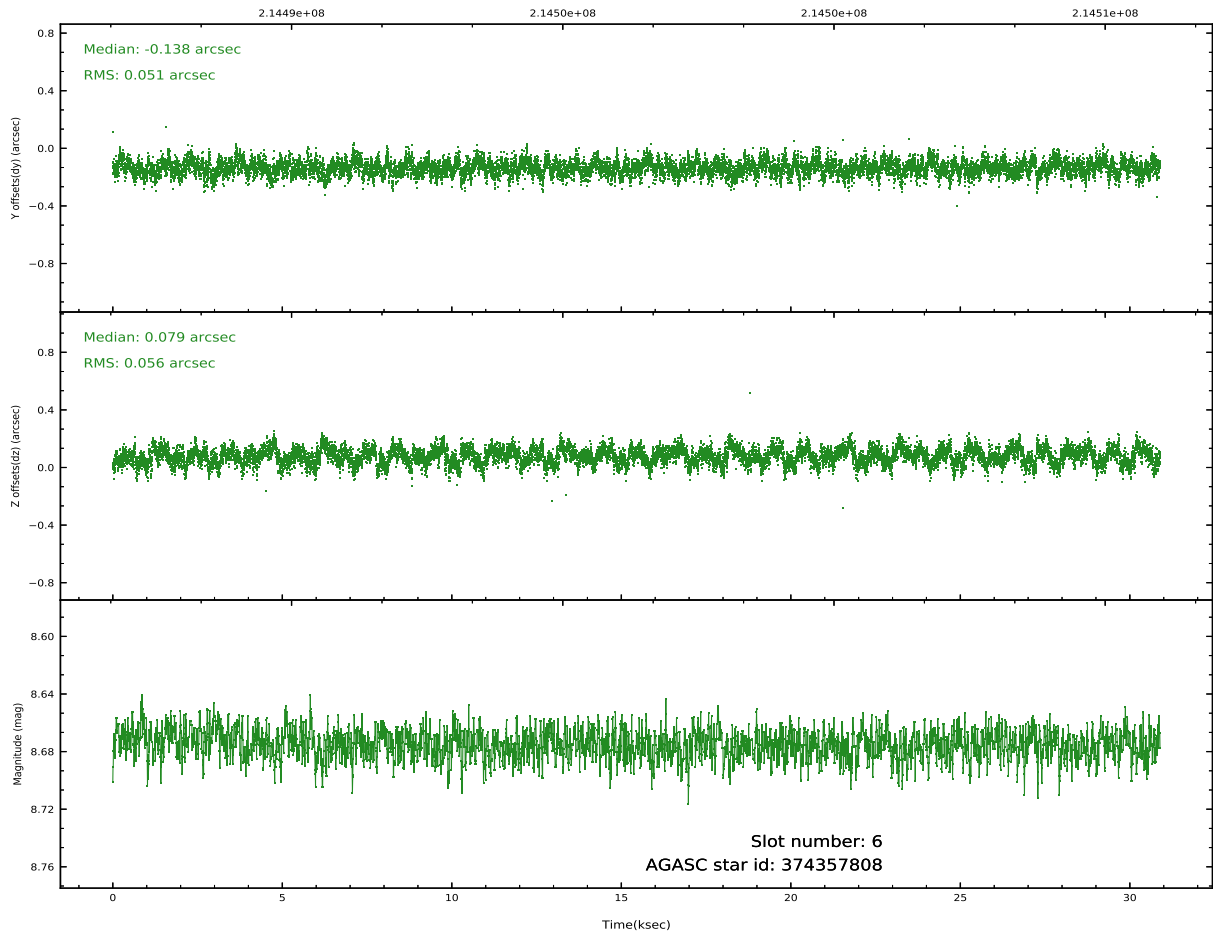
## 2.4.3 Slot 5



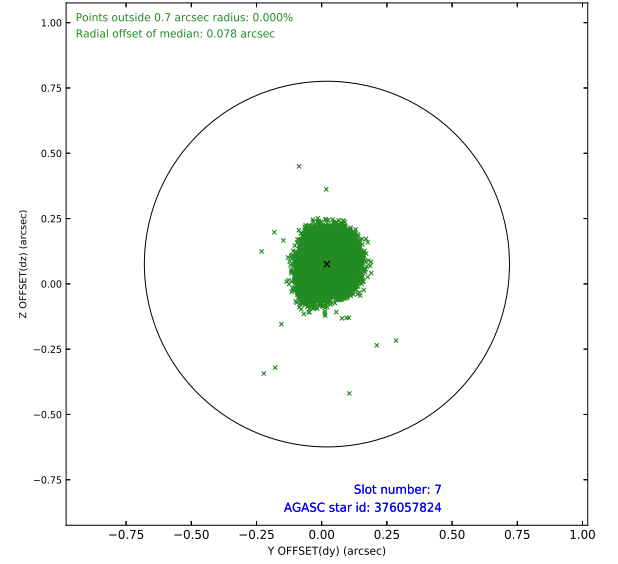
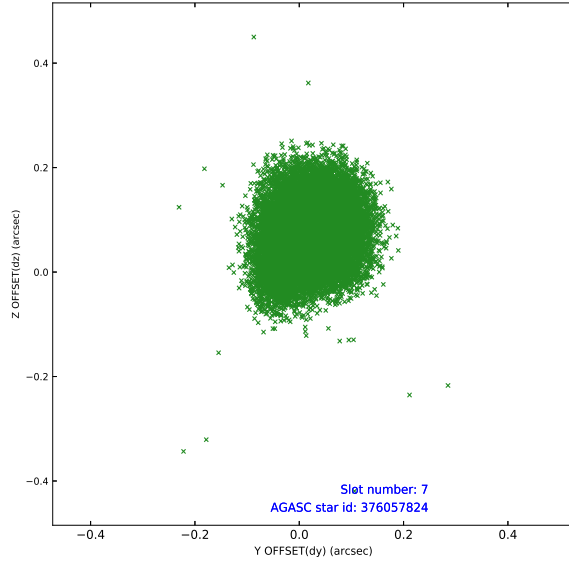
## 2.4.4 Slot 6



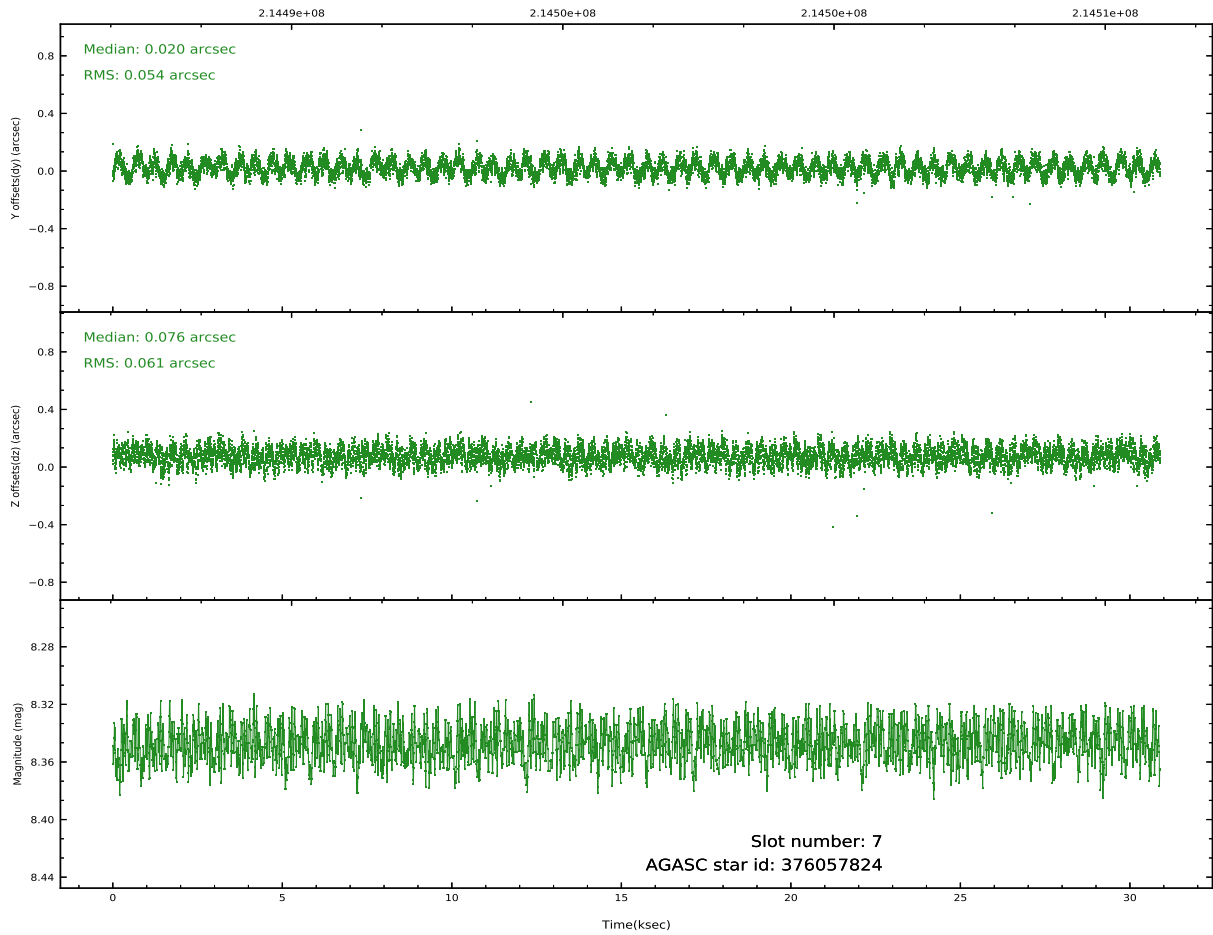
Time (s)



## 2.4.5 Slot 7

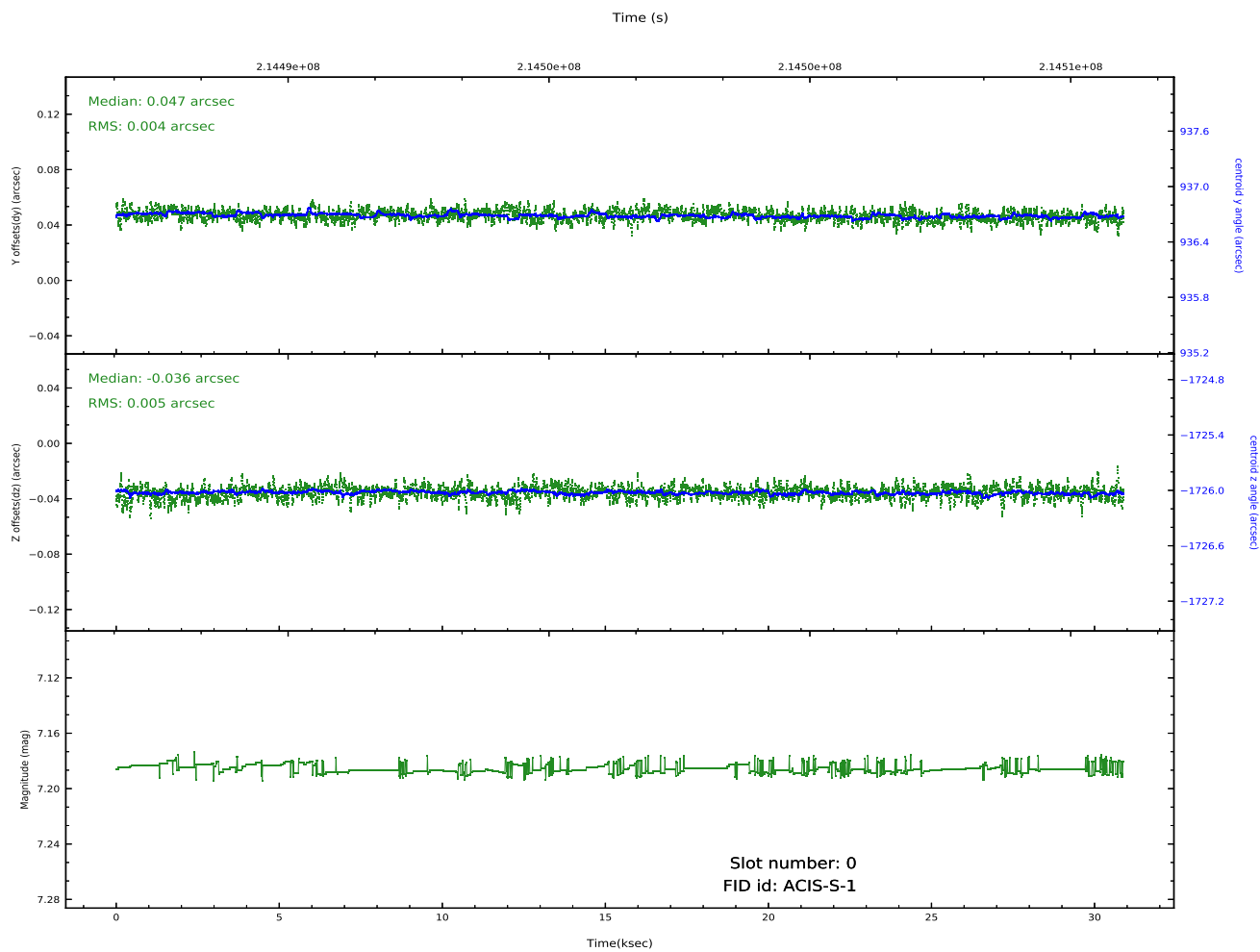
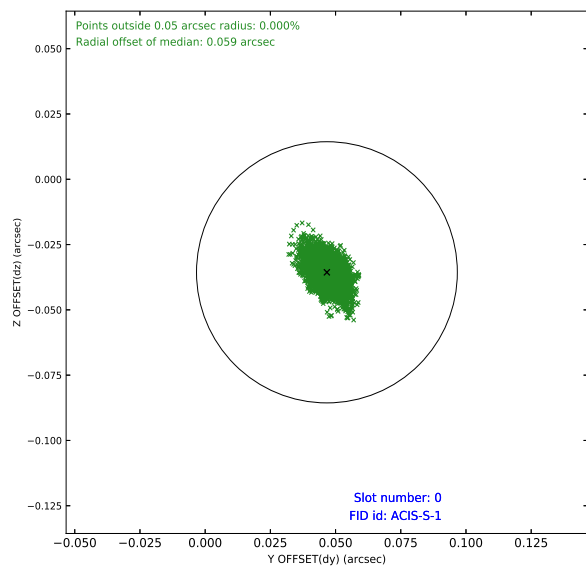
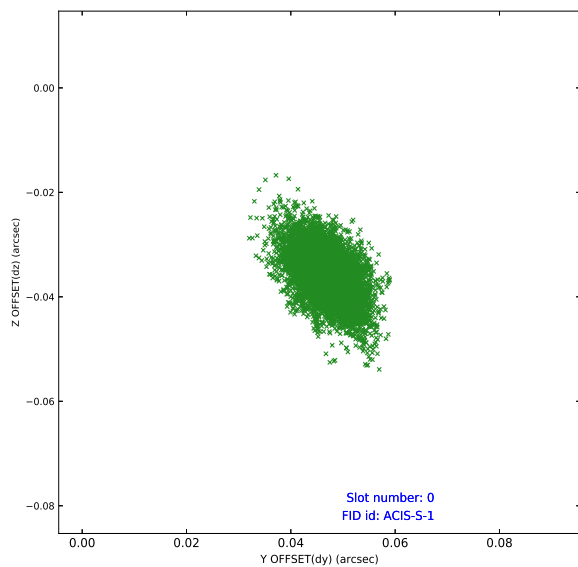


Time (s)

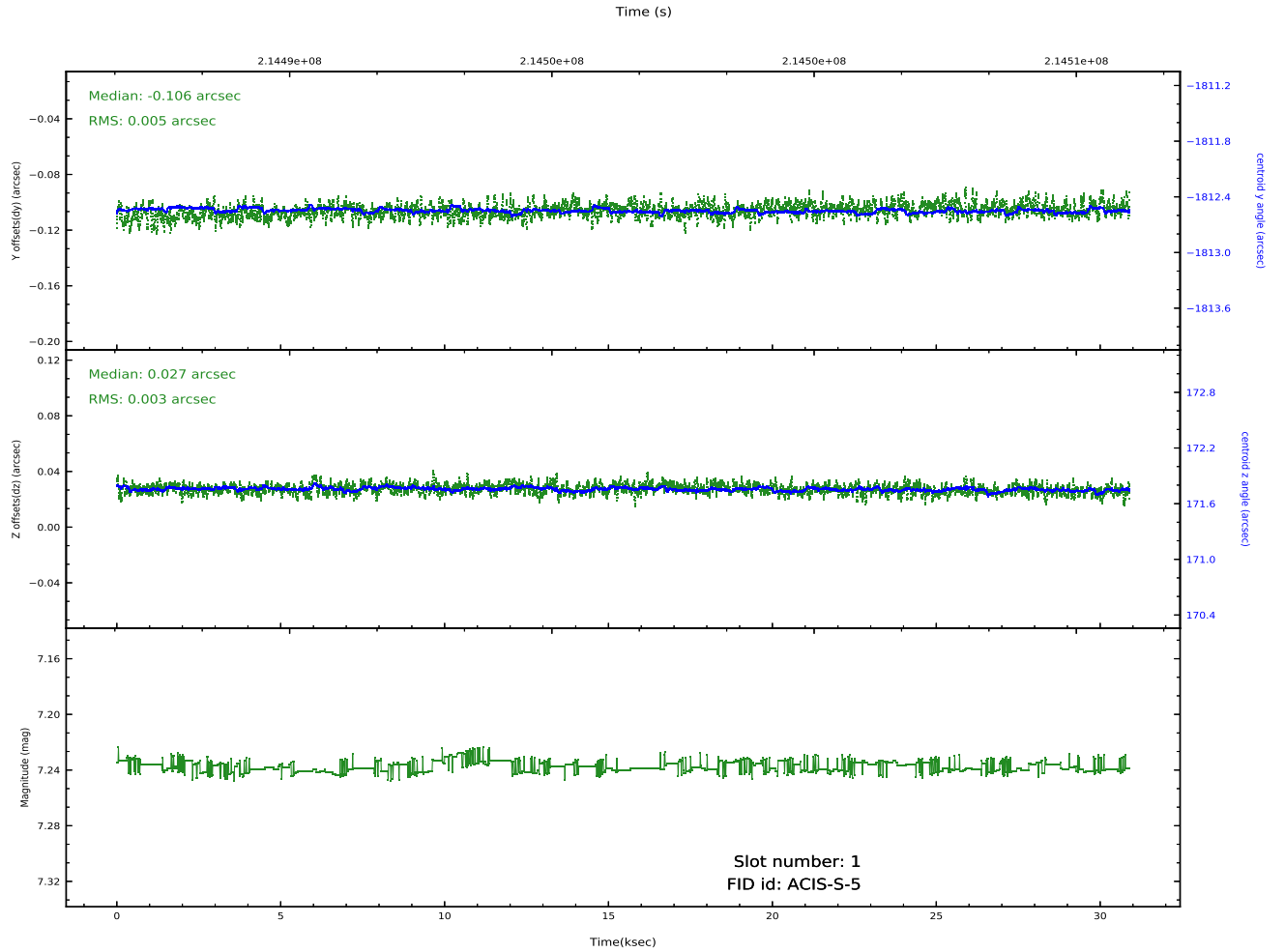
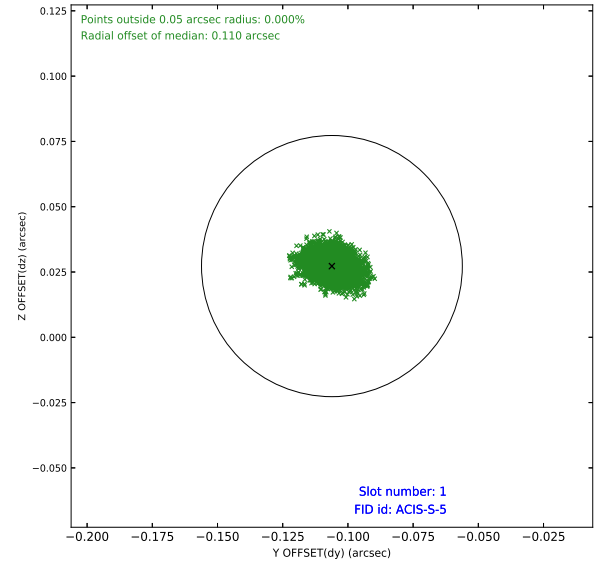
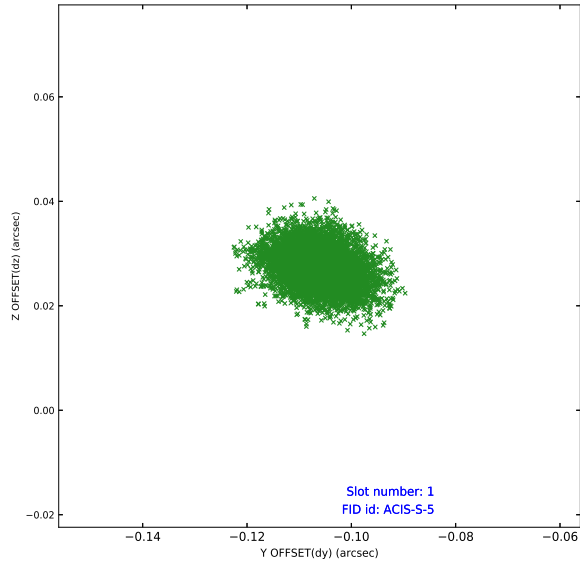


## 2.5 FID Slots

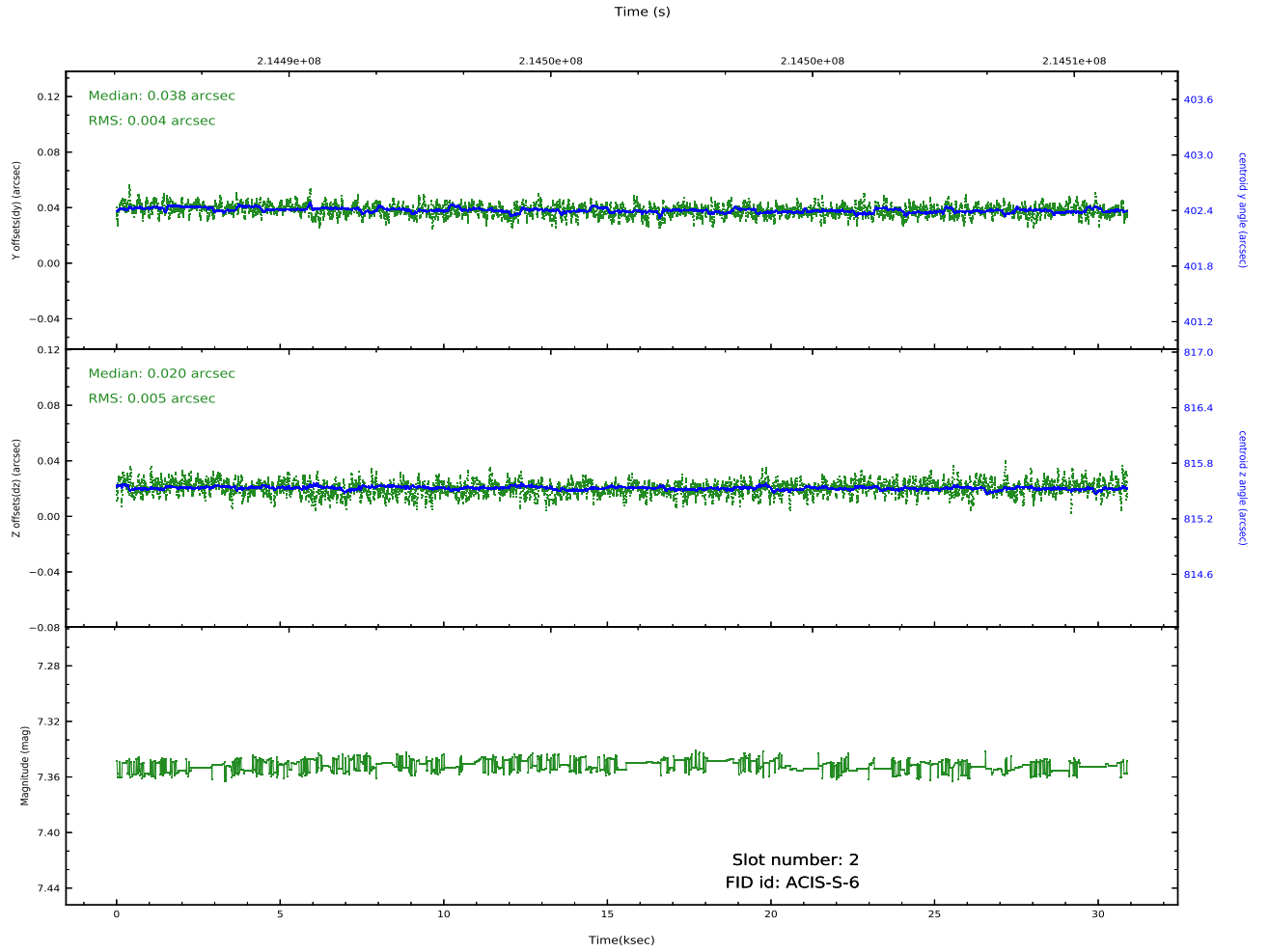
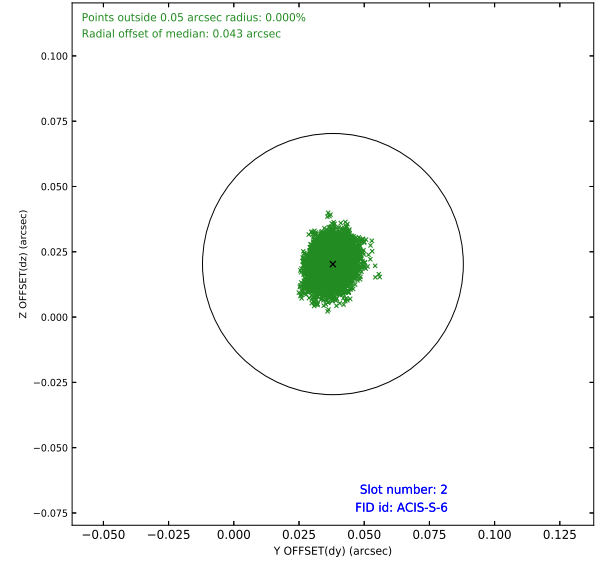
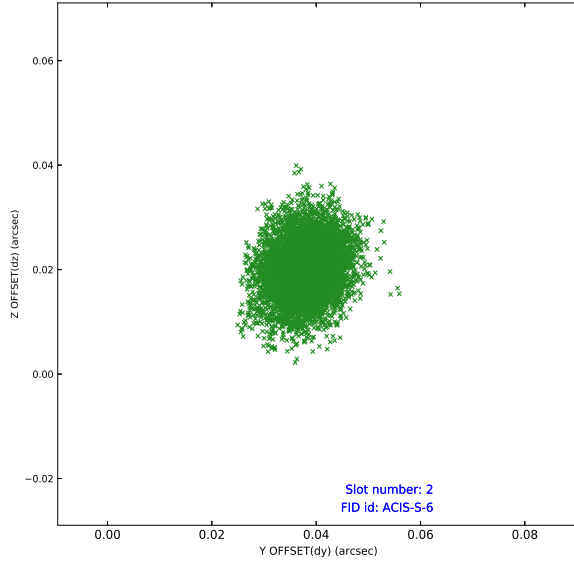
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.476

### A.2 Comments