

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 4947 - L2 Version 4  
Chandra X-Ray Center

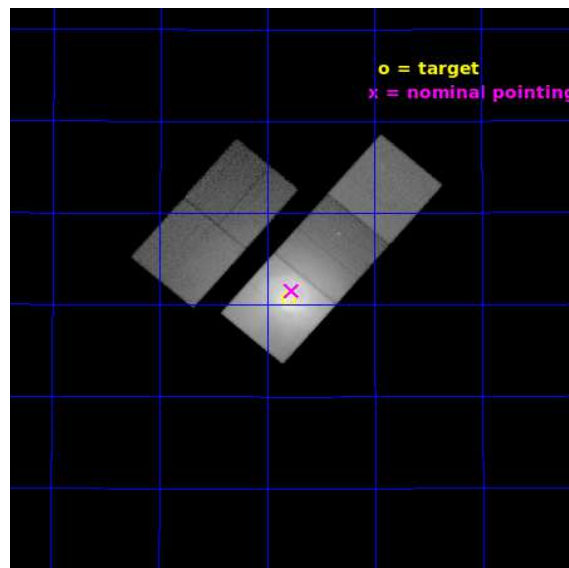
L2 Processing Date : Oct 2 2020

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# 1 Front

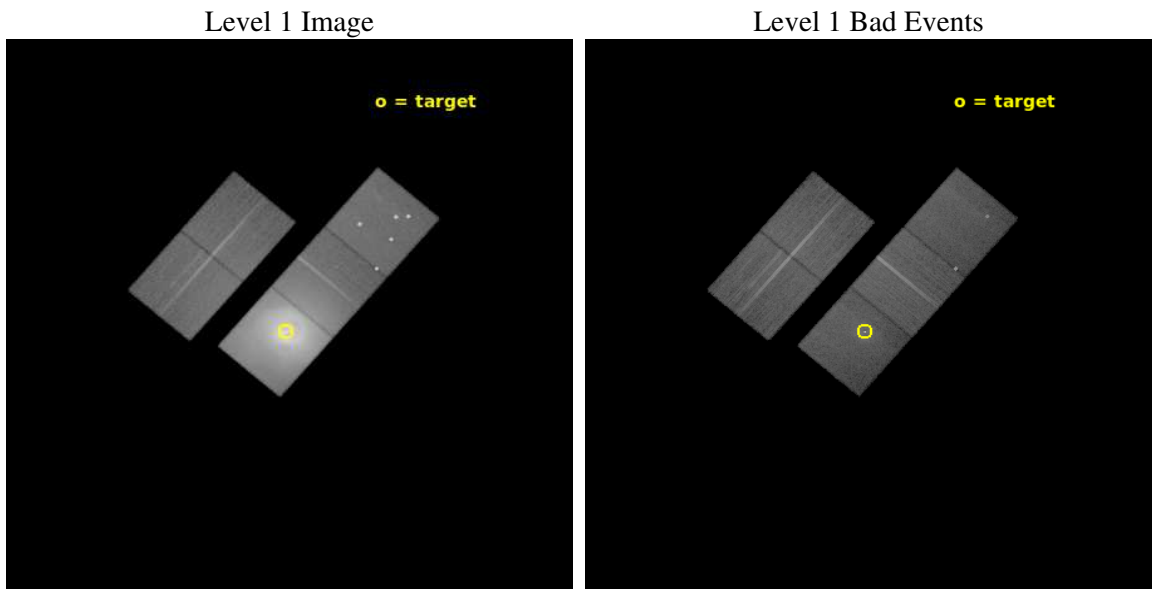
seq_num	800397	Sequence number
obs_id	4947	Observation id
title	A Megasecond Image of the Core of the Perseus Cluster	Proposal tit
observer	Andrew Fabian	Principal investigator
object	Abell 426	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	49.950833	Observer's specified target RA [deg]
dec_targ	41.511722	Observer's specified target Dec [deg]
ra_nom	49.942173836213	Nominal RA [deg]
dec_nom	41.525841003677	Nominal Dec [deg]
roll_nom	130.60436757724	Nominal Roll [deg]
revision	4	Processing version of data
ontime	30181.599941939	Sum of GTIs [s]
liveltime	29787.255119327	Livetime [s]
ontime2	30181.599941939	Sum of GTIs [s]
ontime3	30181.599941939	Sum of GTIs [s]
ontime5	30181.599941939	Sum of GTIs [s]
ontime6	30181.599941939	Sum of GTIs [s]
ontime7	30181.599941939	Sum of GTIs [s]
l2events	2973947	Number of level 2 events



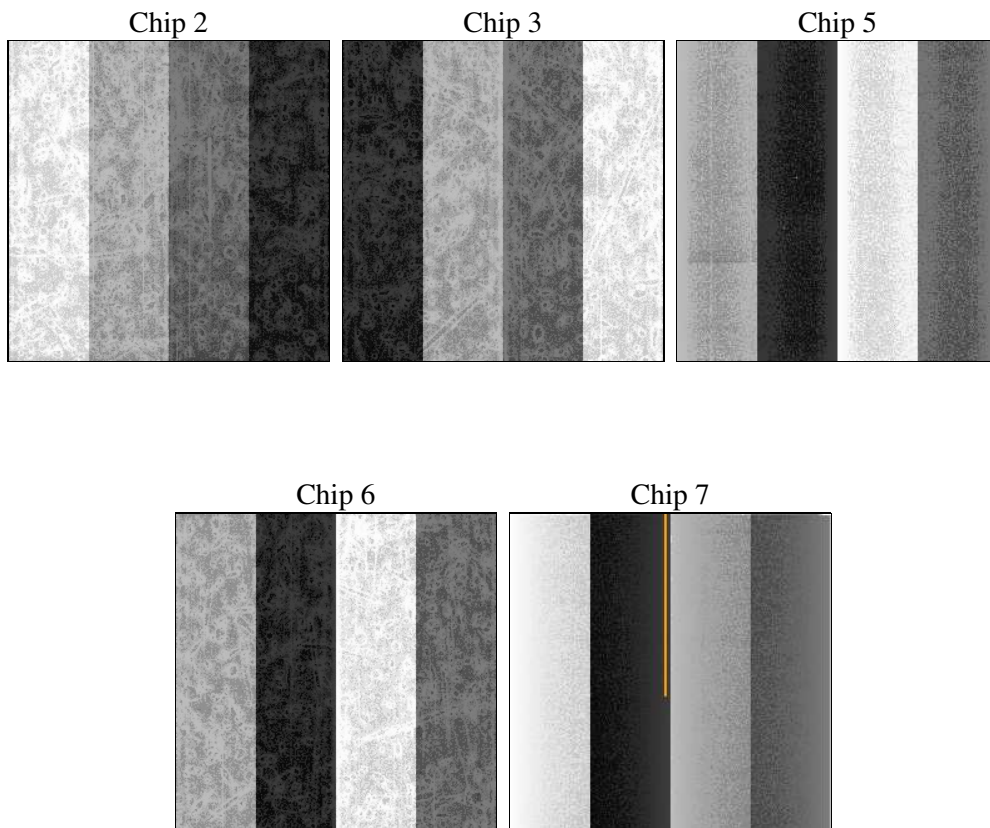
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	30181.599941939	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime2	30181.599941939	Sum of GTIs [s]
date	2020-10-03T00:41:29	Date and time of file creation	ontime3	30181.599941939	Sum of GTIs [s]
revision	4	Processing version of data	ontime5	30181.599941939	Sum of GTIs [s]
			ontime6	30181.599941939	Sum of GTIs [s]
			ontime7	30181.599941939	Sum of GTIs [s]
			l1events	3985276	Number of level 1 events

### 2.1.4 Events

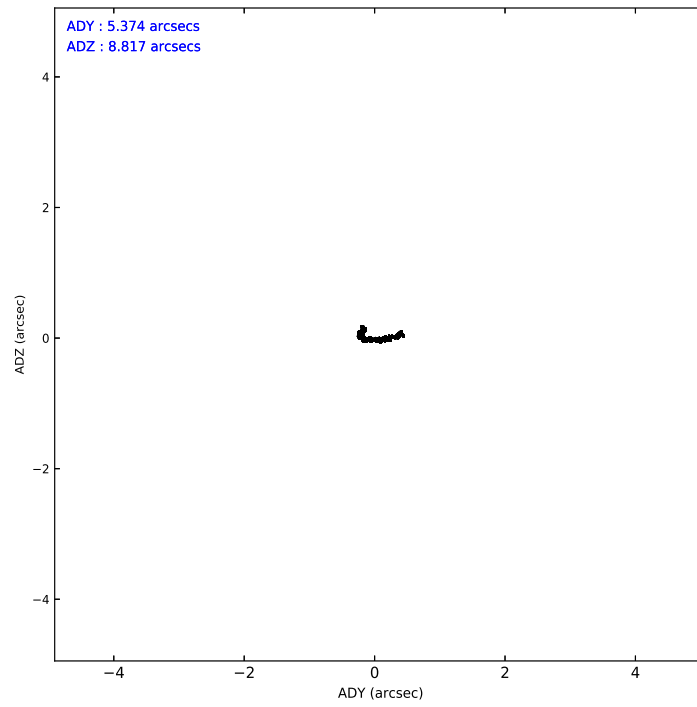
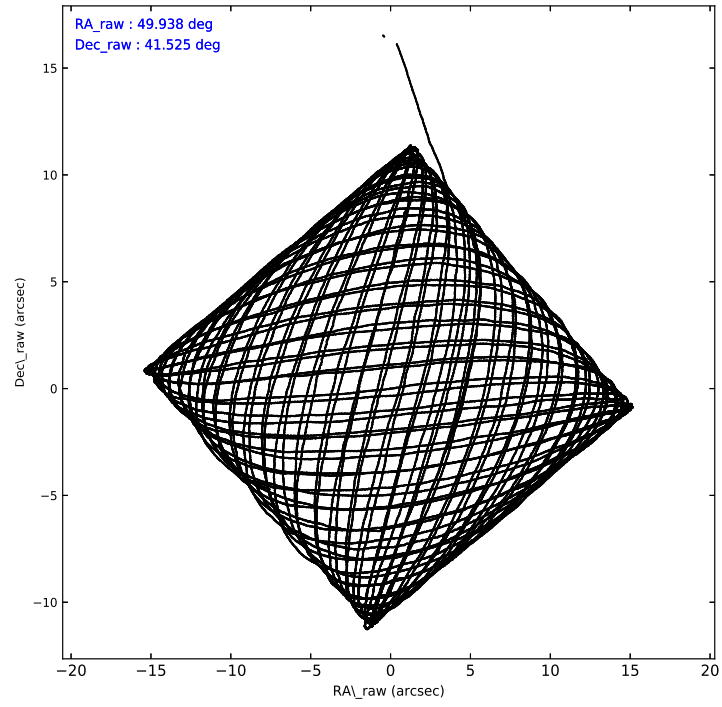
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
level 1 events	288197	326451	364994	511913	2493721
rejected events	204029	193359	150816	198085	165488
rejected %	70%	59%	41%	38%	6%

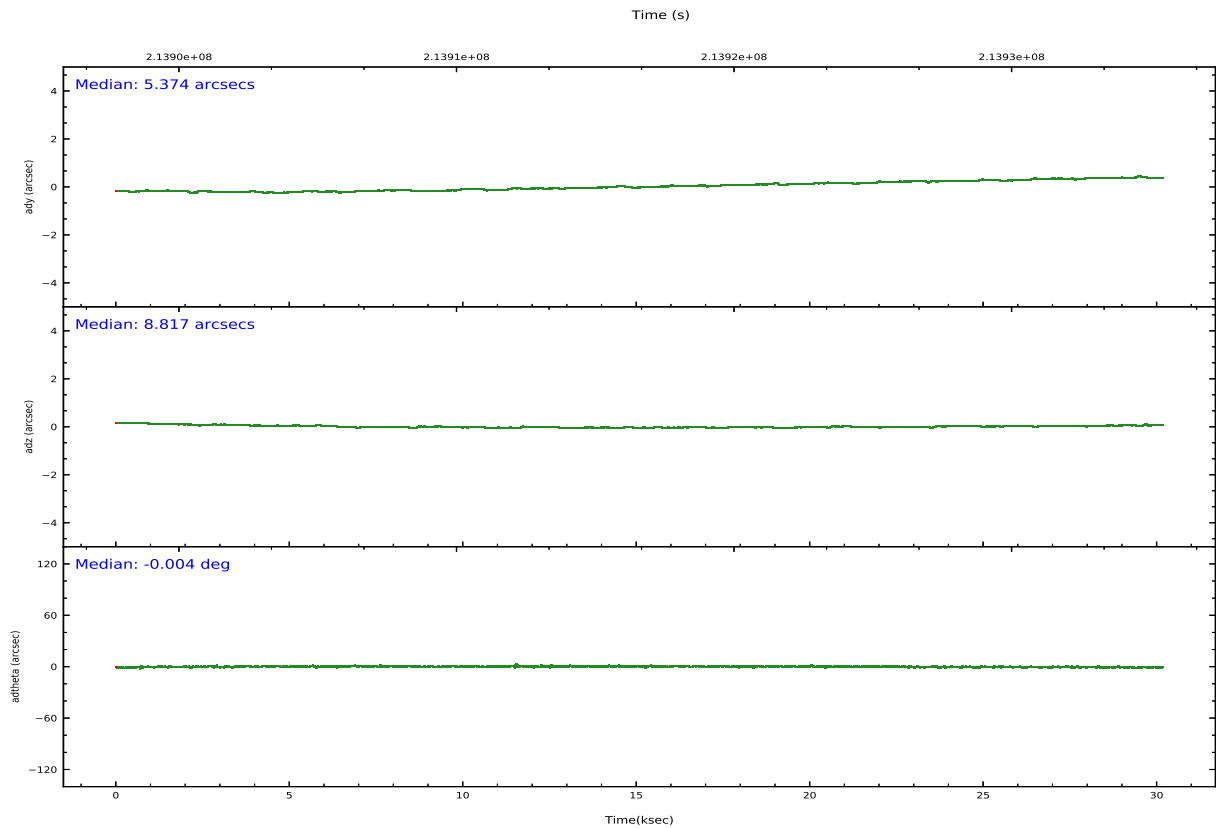
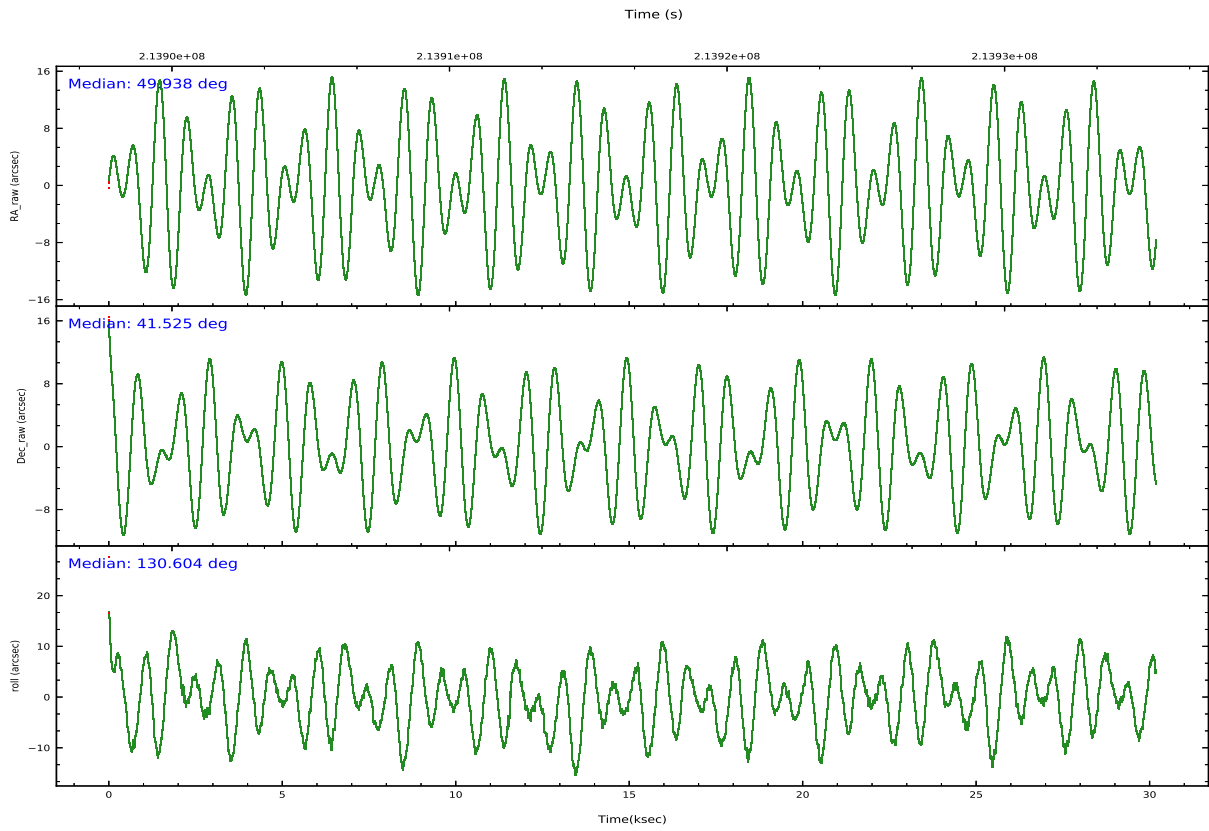
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
grade 0 events	60650	100244	54858	246874	637395
	21%	30%	15%	48%	25%
grade 1 events	367	563	1464	1037	1792
	0%	0%	0%	0%	0%
grade 2 events	10900	15718	60484	34885	617154
	3%	4%	16%	6%	24%
grade 3 events	4215	5901	11397	11586	273564
	1%	1%	3%	2%	10%
grade 4 events	4361	5903	11429	11662	270127
	1%	1%	3%	2%	10%
grade 5 events	6901	8274	24132	9113	39675
	2%	2%	6%	1%	1%
grade 6 events	5262	6600	83449	13027	544384
	1%	2%	22%	2%	21%
grade 7 events	195541	183248	117781	183729	109630
	67%	56%	32%	35%	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	49.972677	49.942173836213	Subarray requested	NONE	NONE
[deg] Pointing Dec	41.516686	41.525841003677	Alternating exposures requested	N	N
[deg] Pointing Roll	130.428440	130.60436757724	[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	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	213902368.184000	213900797.65911			
Observation start date	2004-10-11T17:18:24	2004-10-11T16:53:17			
[s] Observation end time (MET)	213932368.184000	213932501.93553			
Observation end date	2004-10-12T01:38:24	2004-10-12T01:41:41			
Read mode	TIMED	TIMED			

## 2.3 Aspect





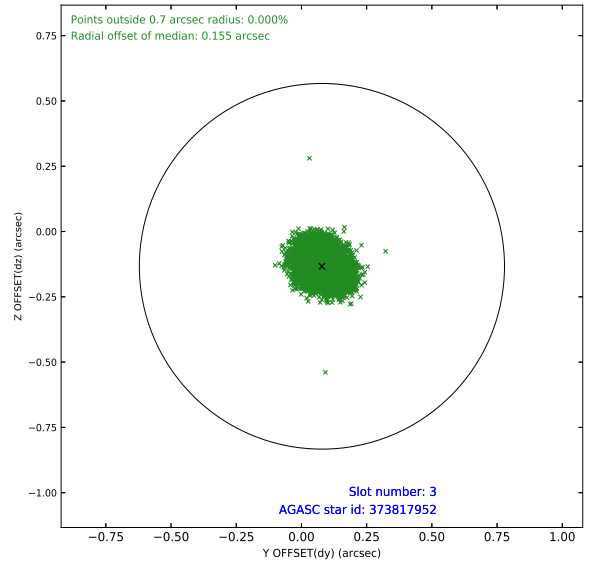
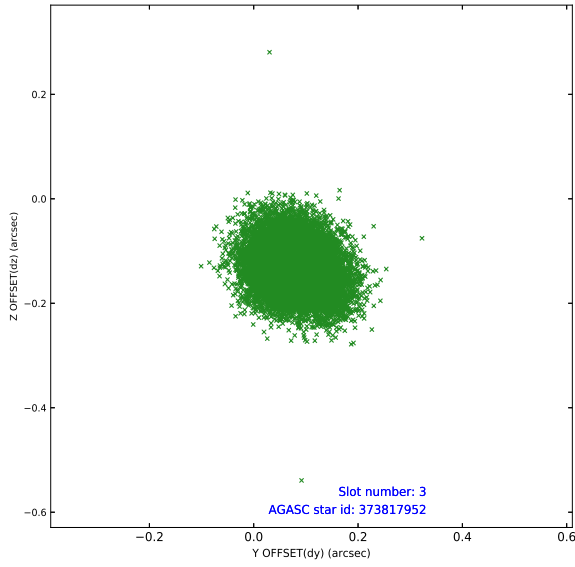
### Slot Statistics

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	7.18	7364	1.000	0.043	-0.029	0.007	0.013	0.000000	0.000000	937.93	-1725
1	FID		ACIS-S-5	7.24	7362	1.000	-0.132	0.017	0.007	0.012	0.000000	0.000000	-1811.16	171
2	FID		ACIS-S-6	7.36	7364	1.000	0.068	0.024	0.009	0.014	0.000000	0.000000	403.49	815
3	GUIDE	used	373817952	8.74	14723	1.000	0.078	-0.133	0.067	0.109	49.913424	40.978510	-1370.32	1378
4	GUIDE	used	373826120	8.90	14727	1.000	0.032	-0.068	0.074	0.115	49.738165	41.186341	-492.65	1254
5	GUIDE	used	374357808	8.68	14715	1.000	-0.160	0.051	0.065	0.107	49.921429	42.176083	1895.85	-1434
6	GUIDE	used	374345008	9.38	14715	1.000	0.030	0.038	0.092	0.151	48.768668	41.619367	2399.69	2212
7	GUIDE	used	376057824	8.35	14655	1.000	0.022	0.121	0.080	0.128	50.665569	41.926280	-74.88	-2373

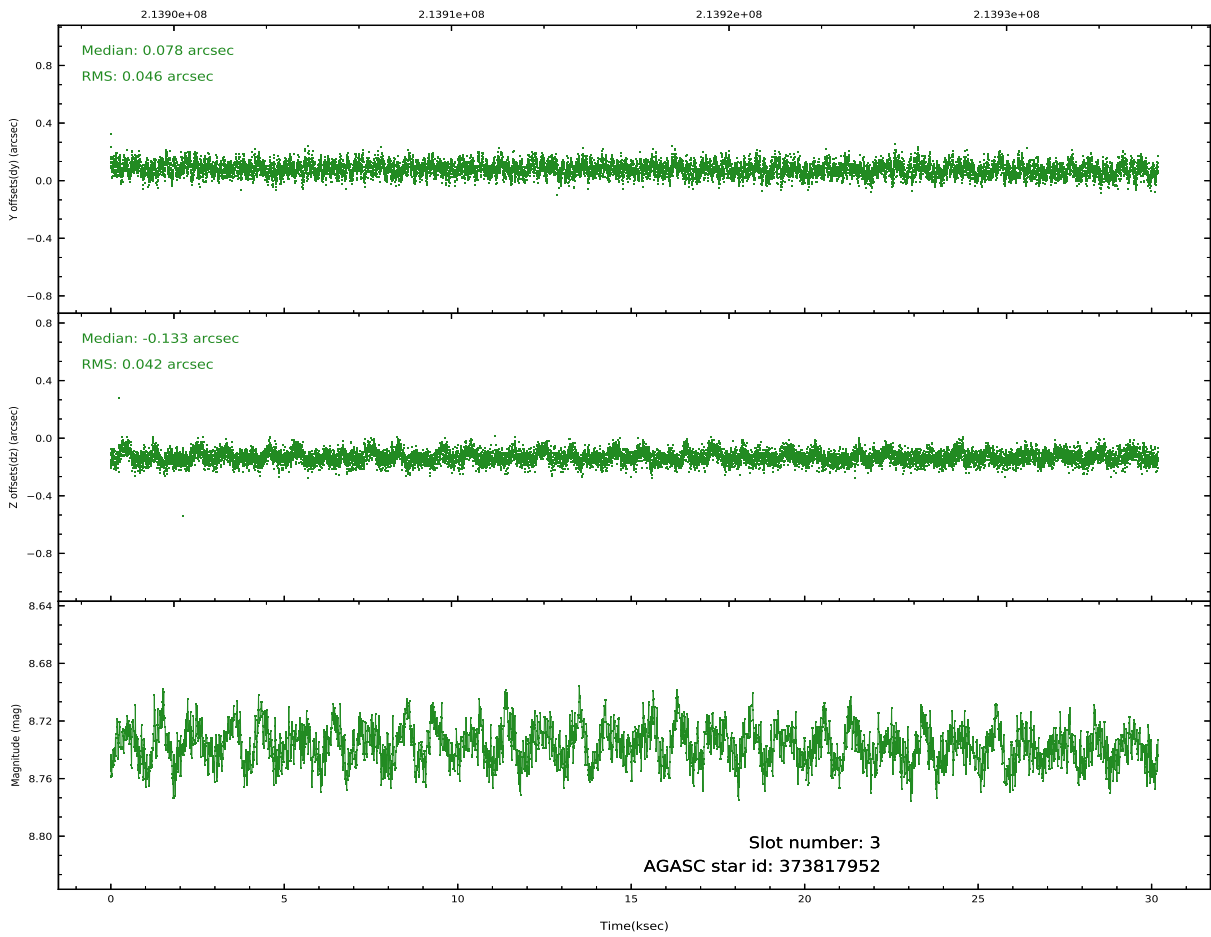
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## 2.4 Star Slots

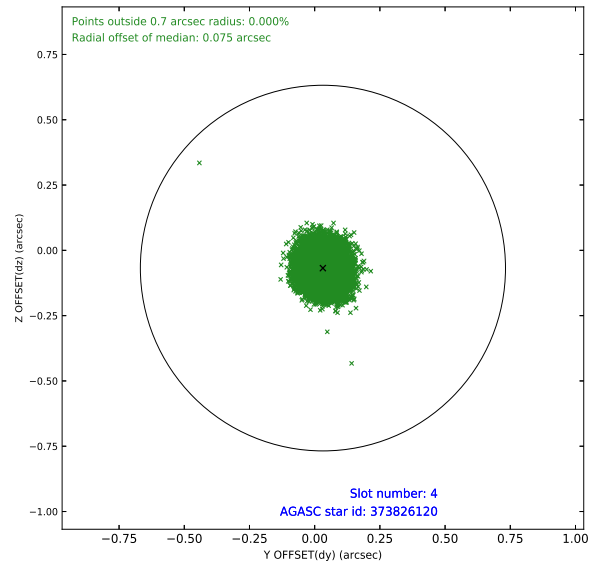
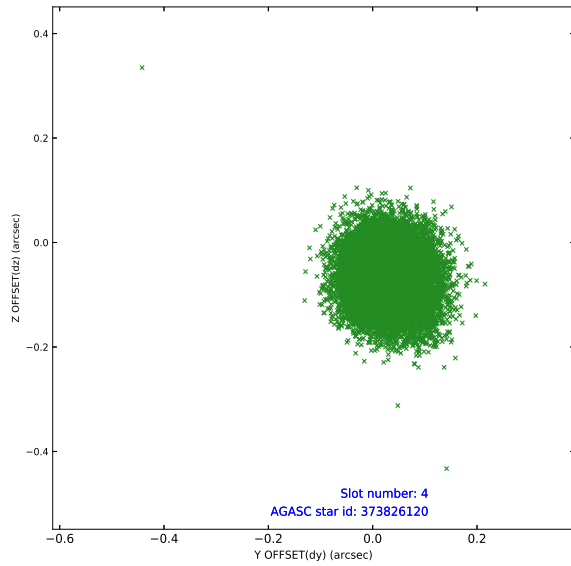
### 2.4.1 Slot 3



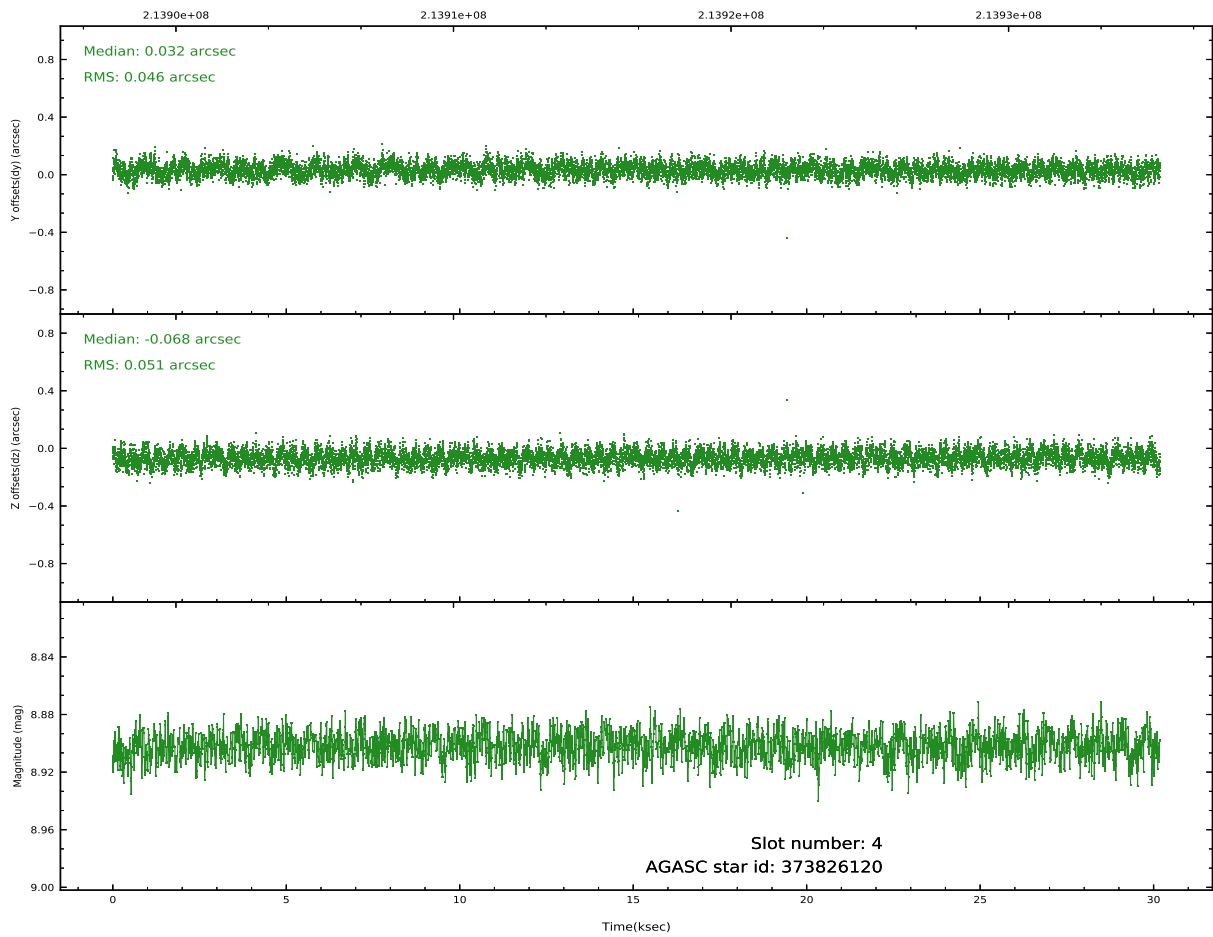
Time (s)



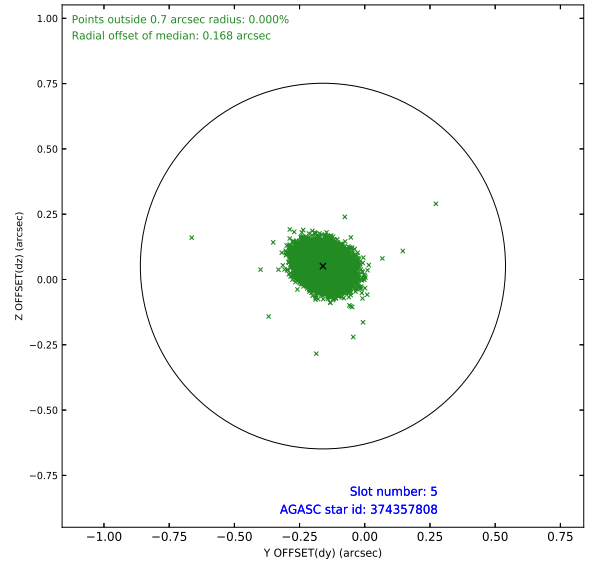
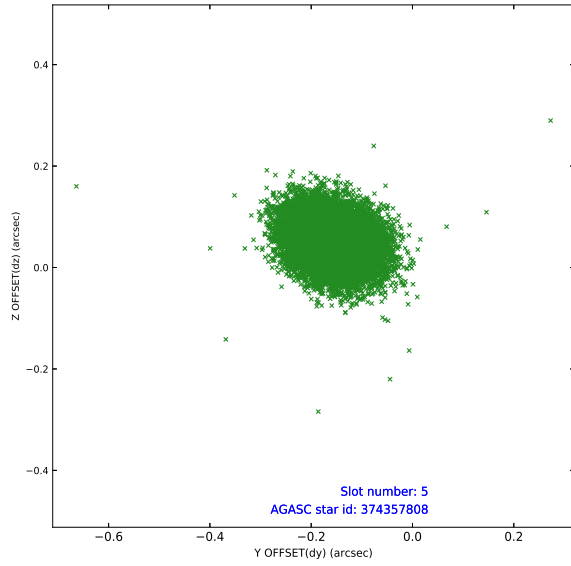
## 2.4.2 Slot 4



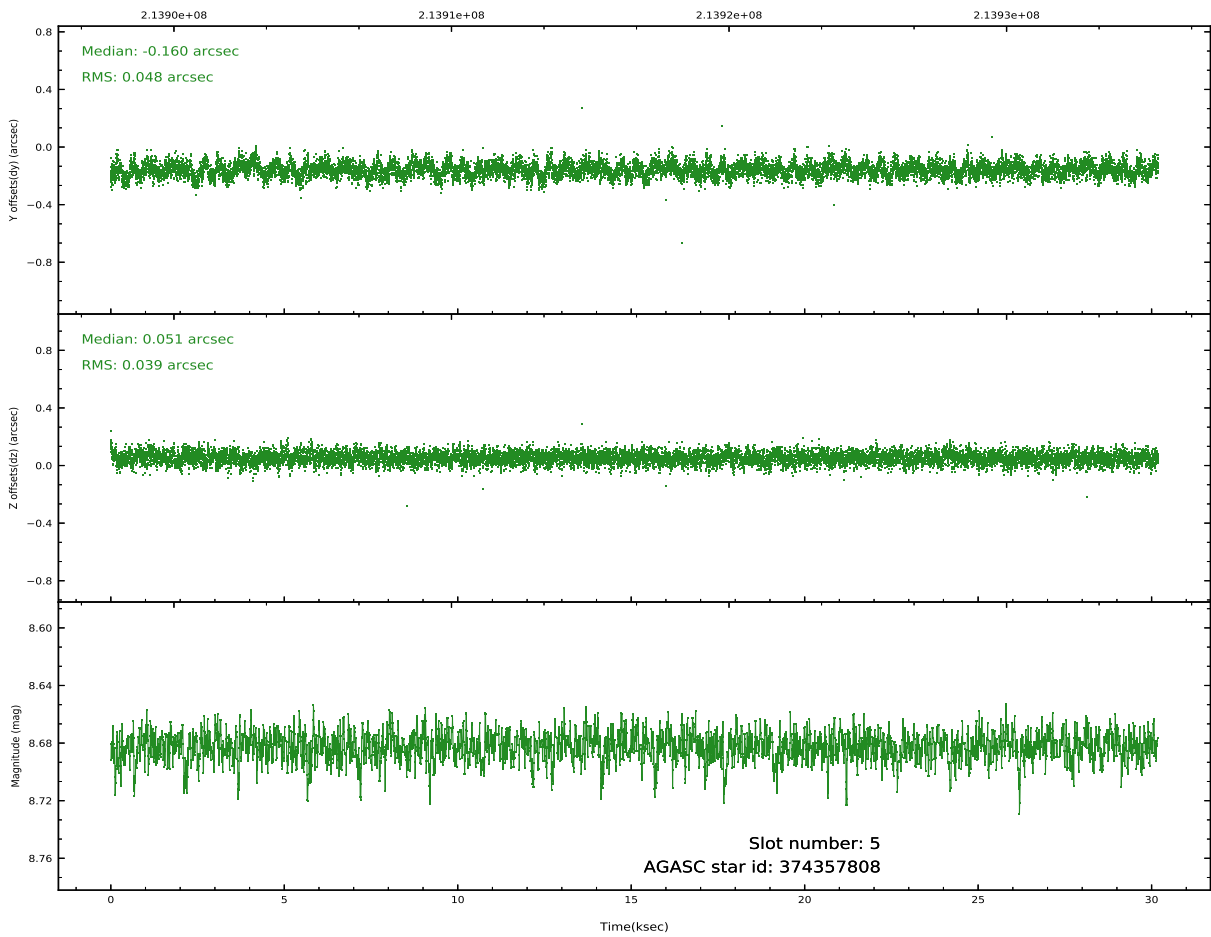
Time (s)



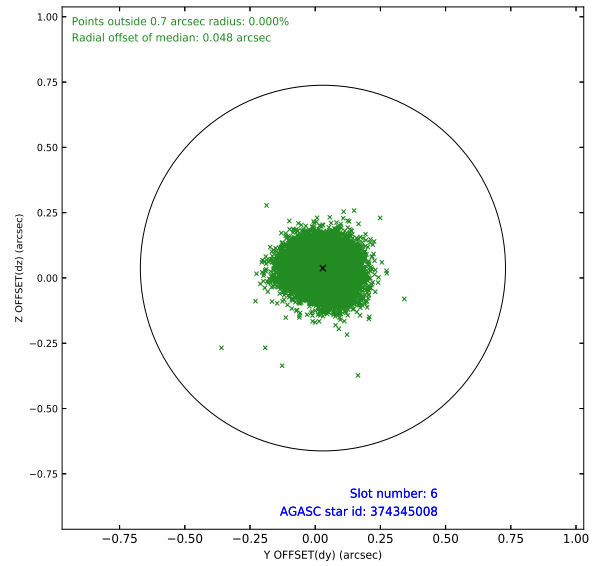
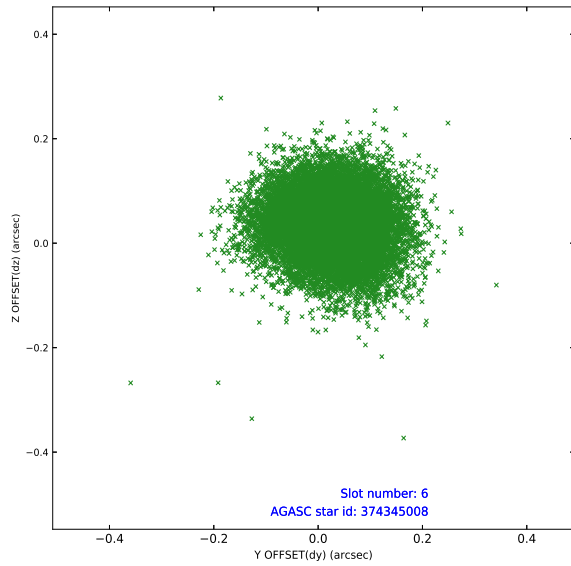
### 2.4.3 Slot 5



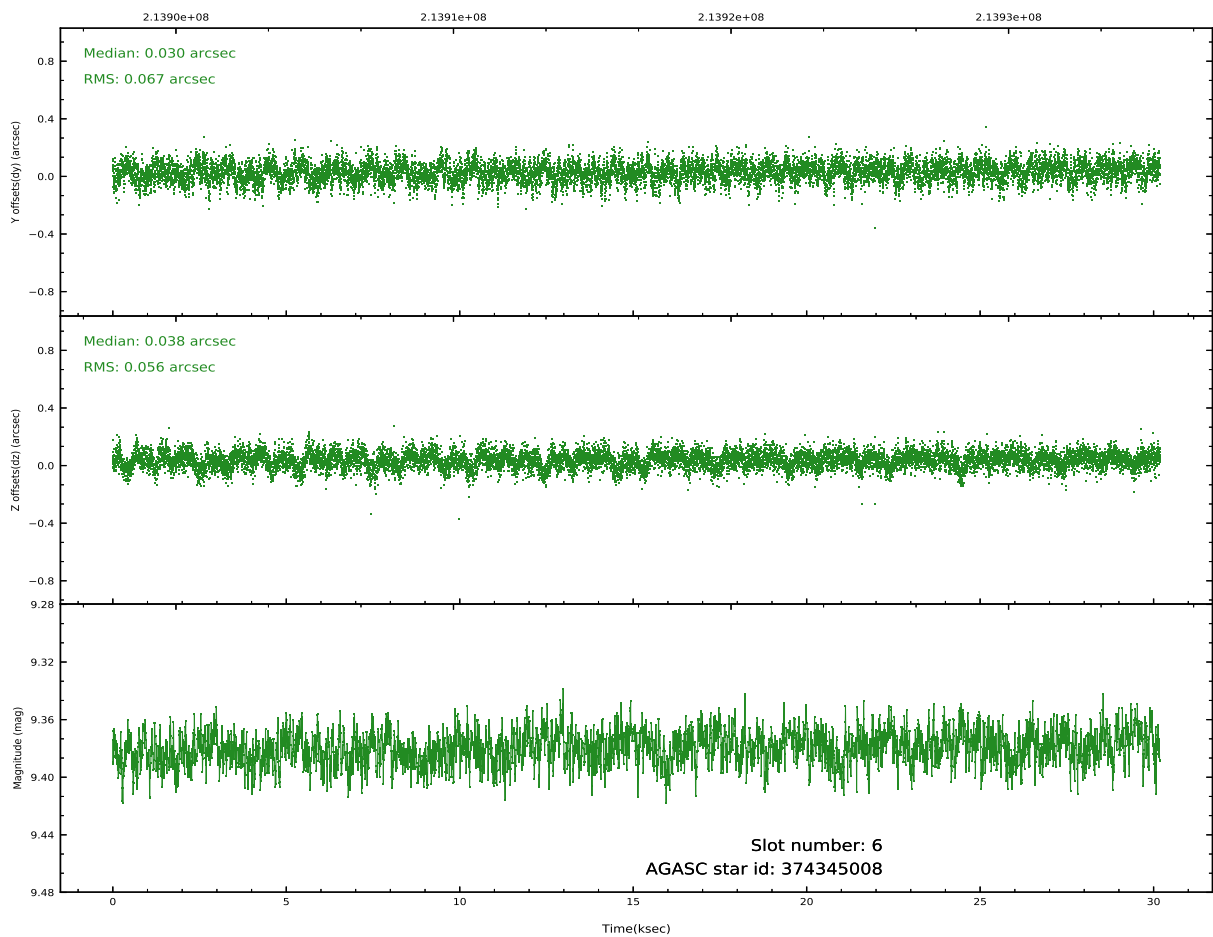
Time (s)



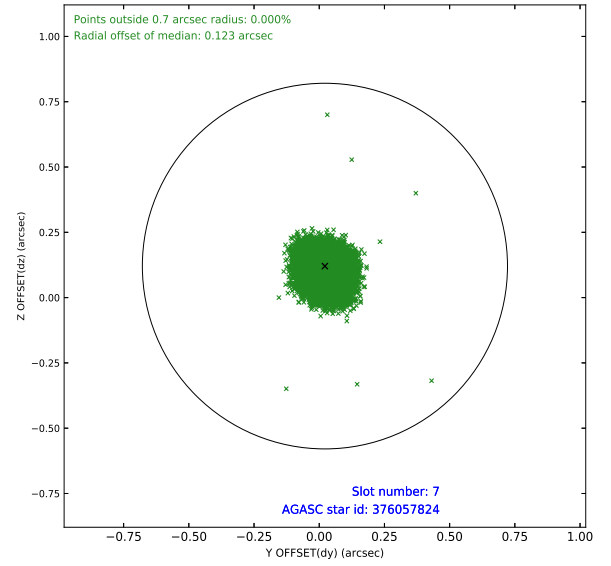
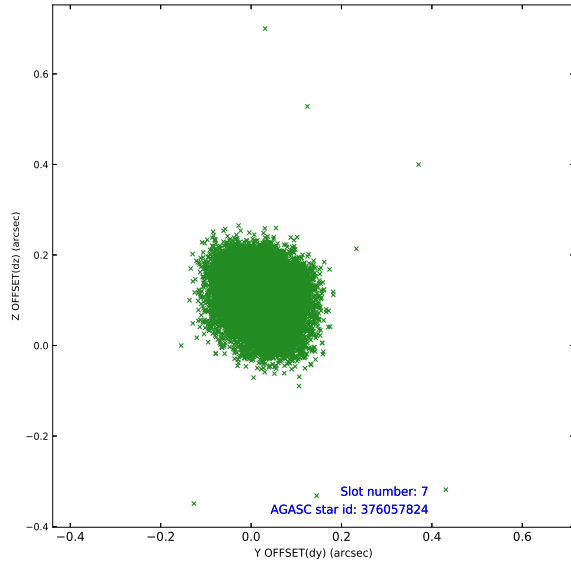
## 2.4.4 Slot 6



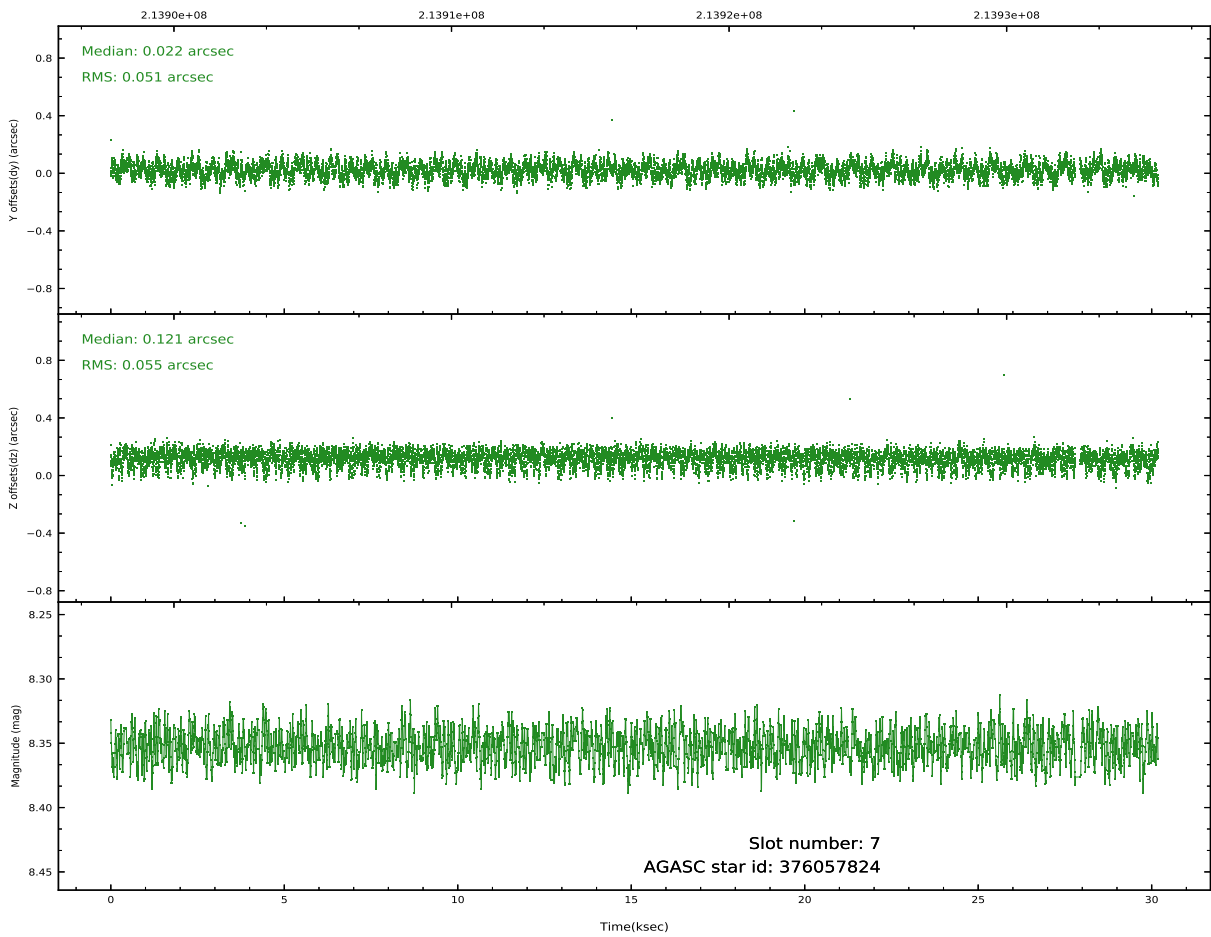
Time (s)



## 2.4.5 Slot 7

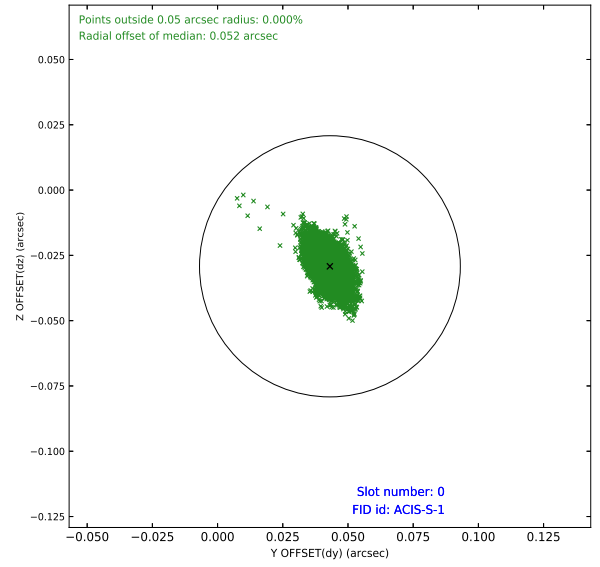
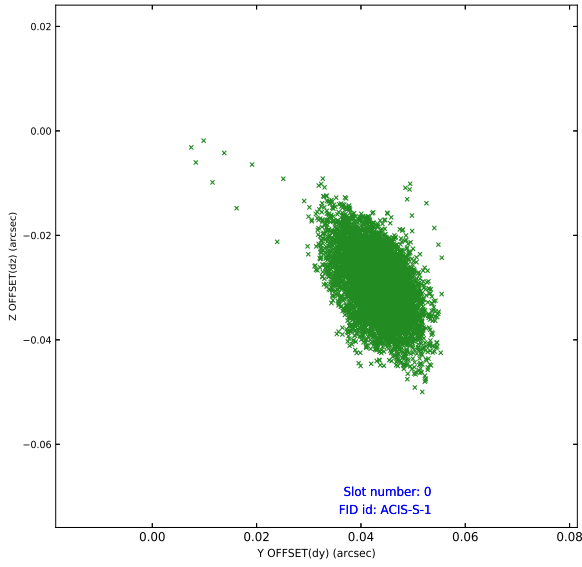


Time (s)

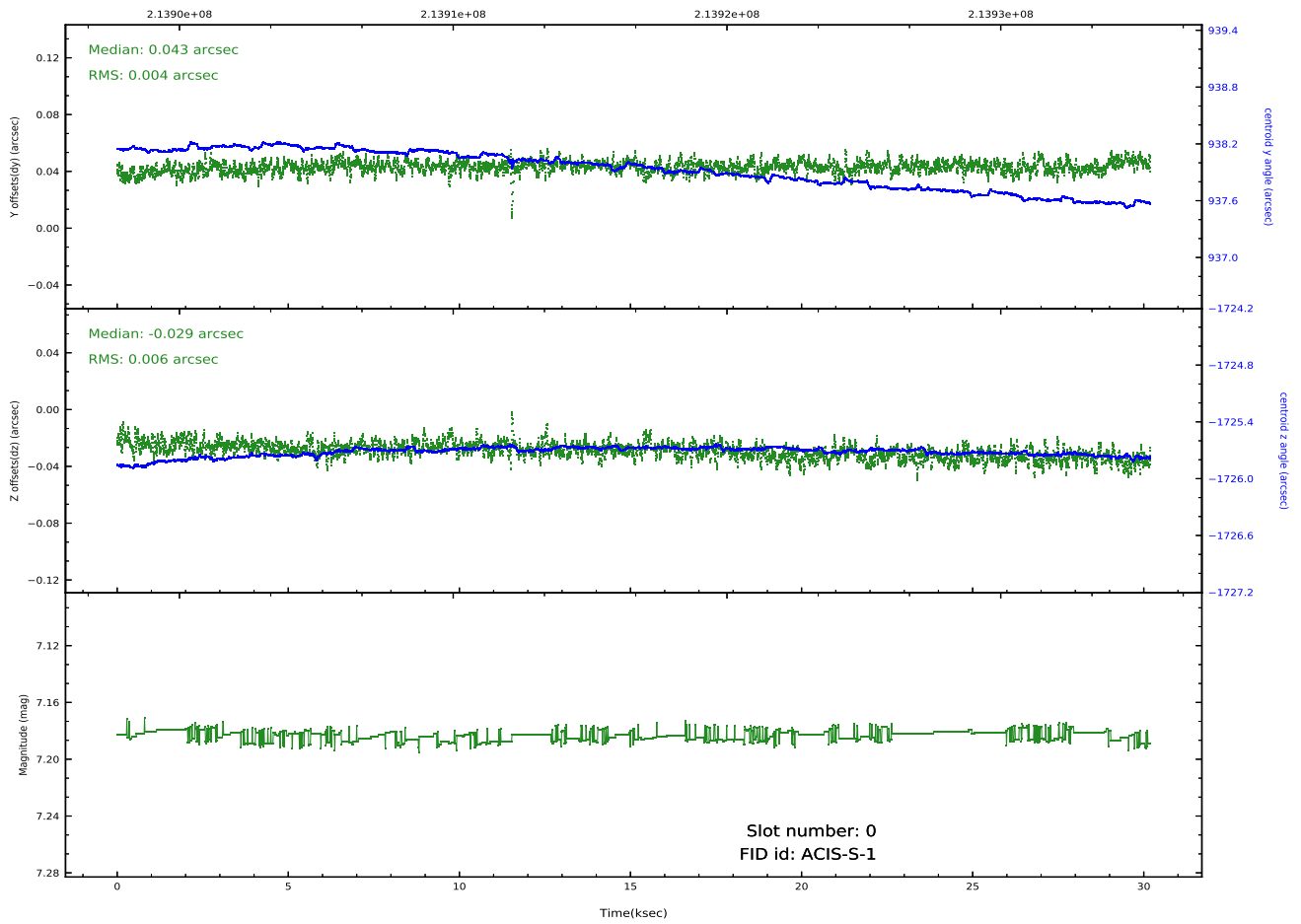


## 2.5 FID Slots

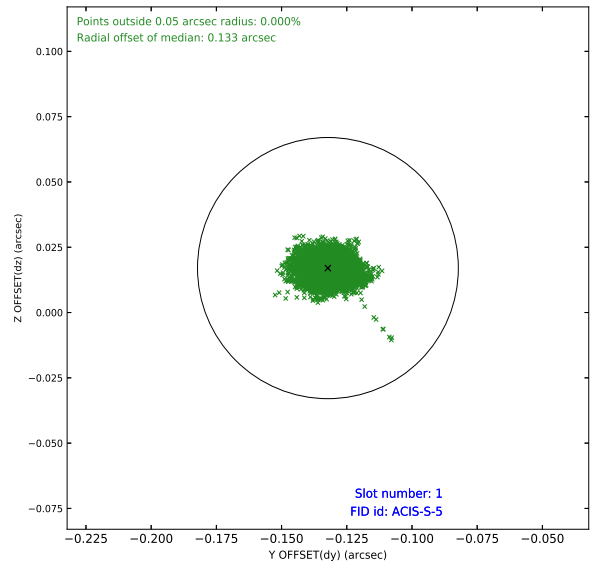
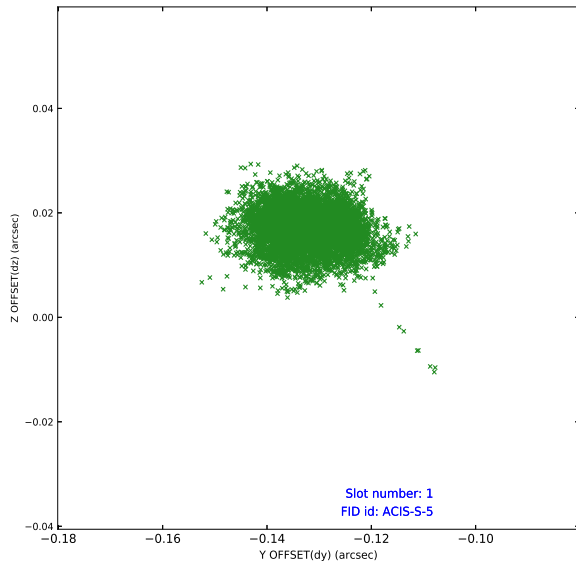
### 2.5.1 Slot 0



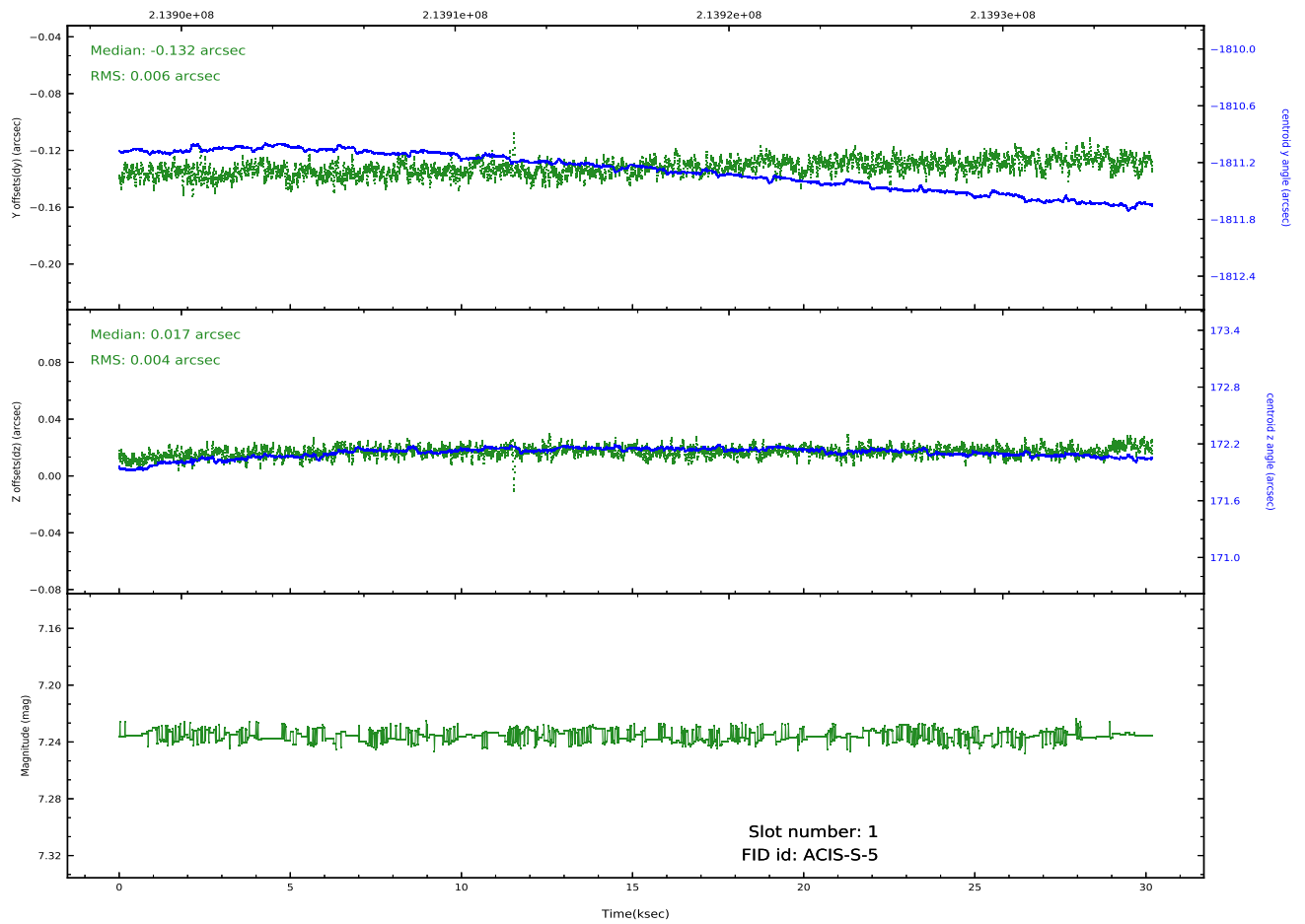
Time (s)



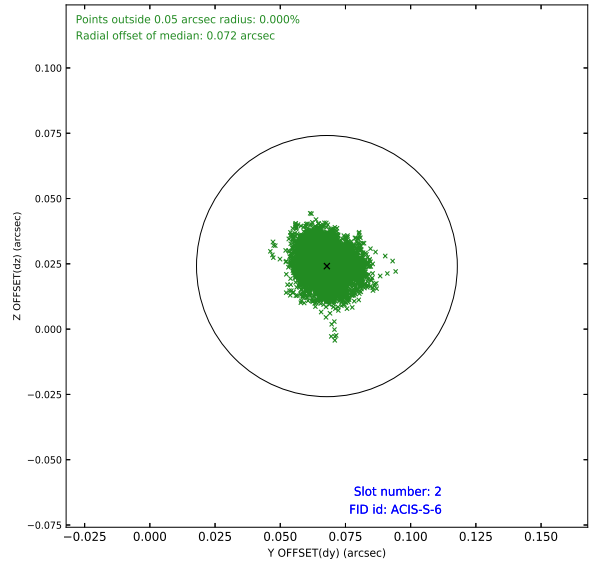
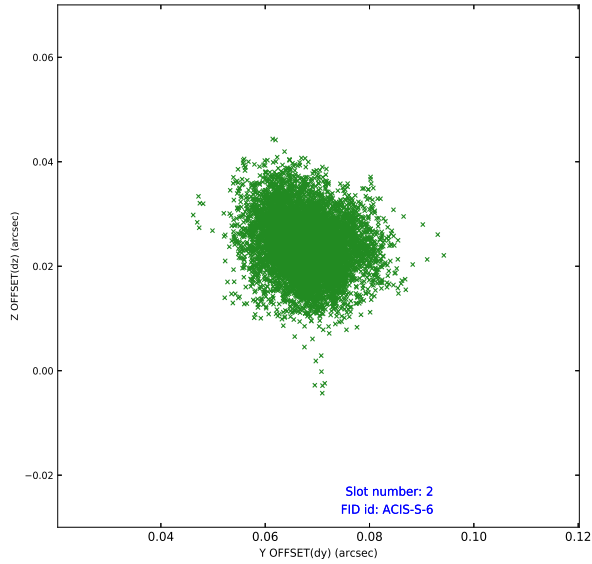
## 2.5.2 Slot 1



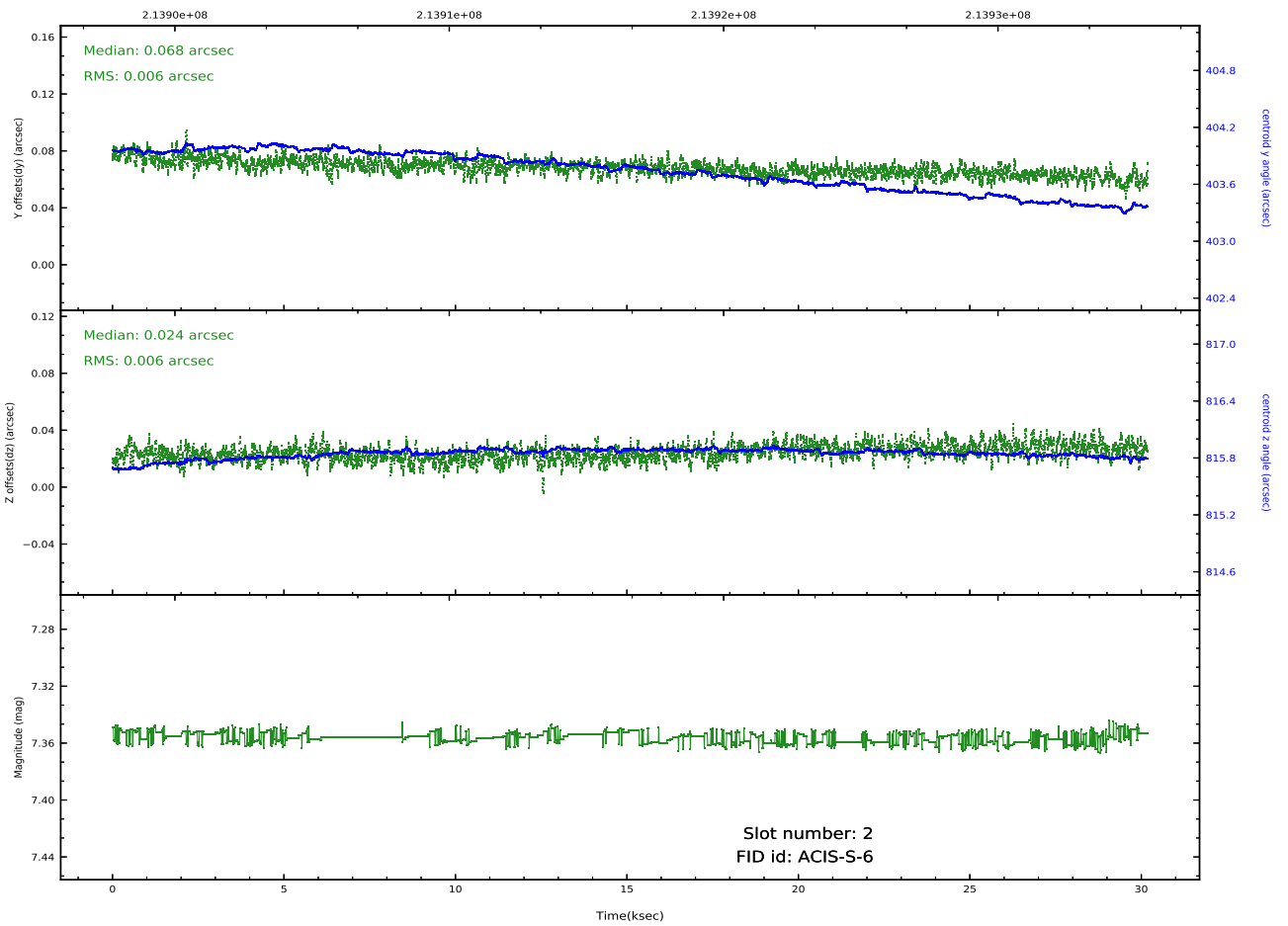
Time (s)



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.181

## A.2 Comments