

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 6214 - L2 Version 5  
Chandra X-Ray Center

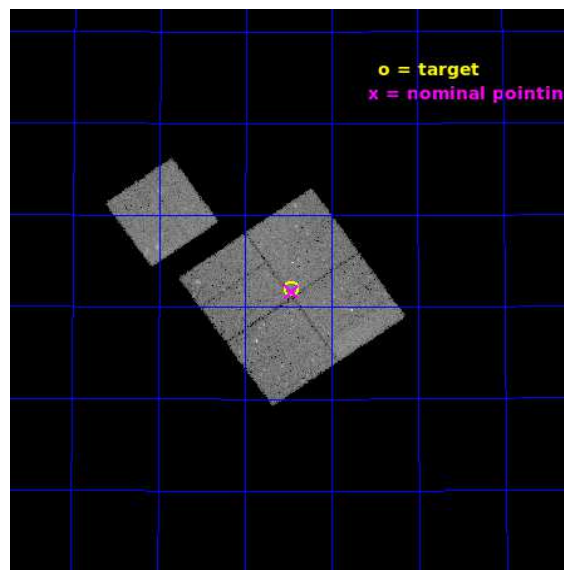
L2 Processing Date : Oct 10 2020

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# 1 Front

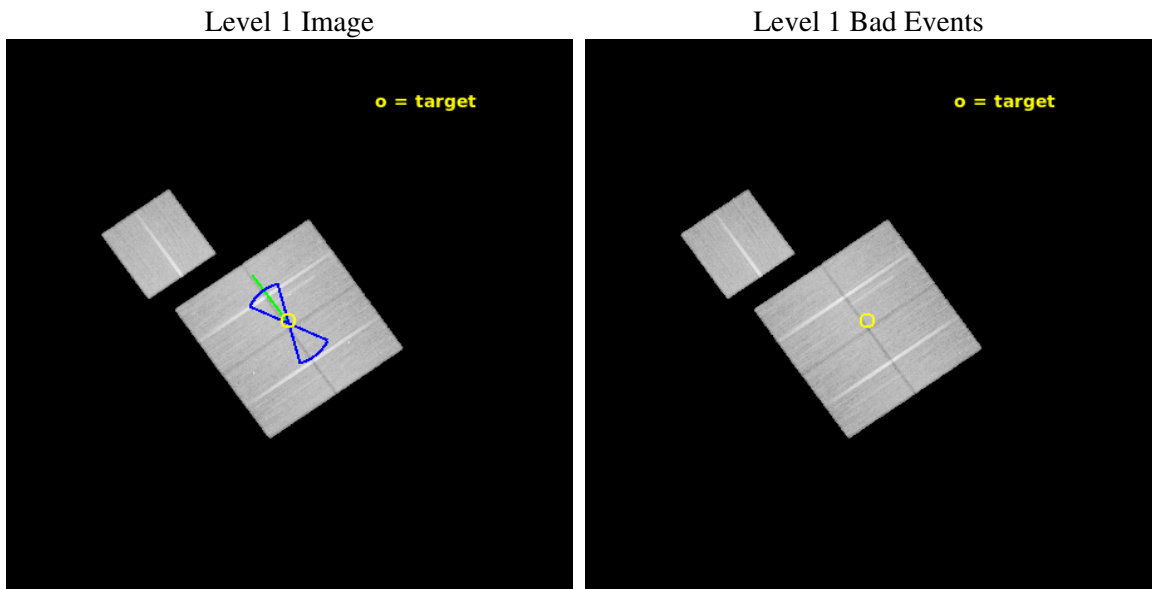
seq_num	900350	Sequence number
obs_id	6214	Observation id
title	Deep Chandra Imaging of the Extended Groth Strip: The Co-evolution of Black Holes and Galaxies	Proposal title
observer	Prof Kirpal Nandra	Principal investigator
object	Extended Groth Strip (EGS)	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	215.116653	Observer's specified target RA [deg]
dec_targ	53.033695	Observer's specified target Dec [deg]
ra_nom	215.1148432085	Nominal RA [deg]
dec_nom	53.028131221173	Nominal Dec [deg]
roll_nom	324.86932030568	Nominal Roll [deg]
revision	5	Processing version of data
ontime	48133.658917278	Sum of GTIs [s]
livetime	47504.75722804	Livetime [s]
ontime0	48136.799907416	Sum of GTIs [s]
ontime1	48127.376976728	Sum of GTIs [s]
ontime2	48127.376986802	Sum of GTIs [s]
ontime3	48133.658917278	Sum of GTIs [s]
ontime6	48133.658907264	Sum of GTIs [s]
l2events	124232	Number of level 2 events



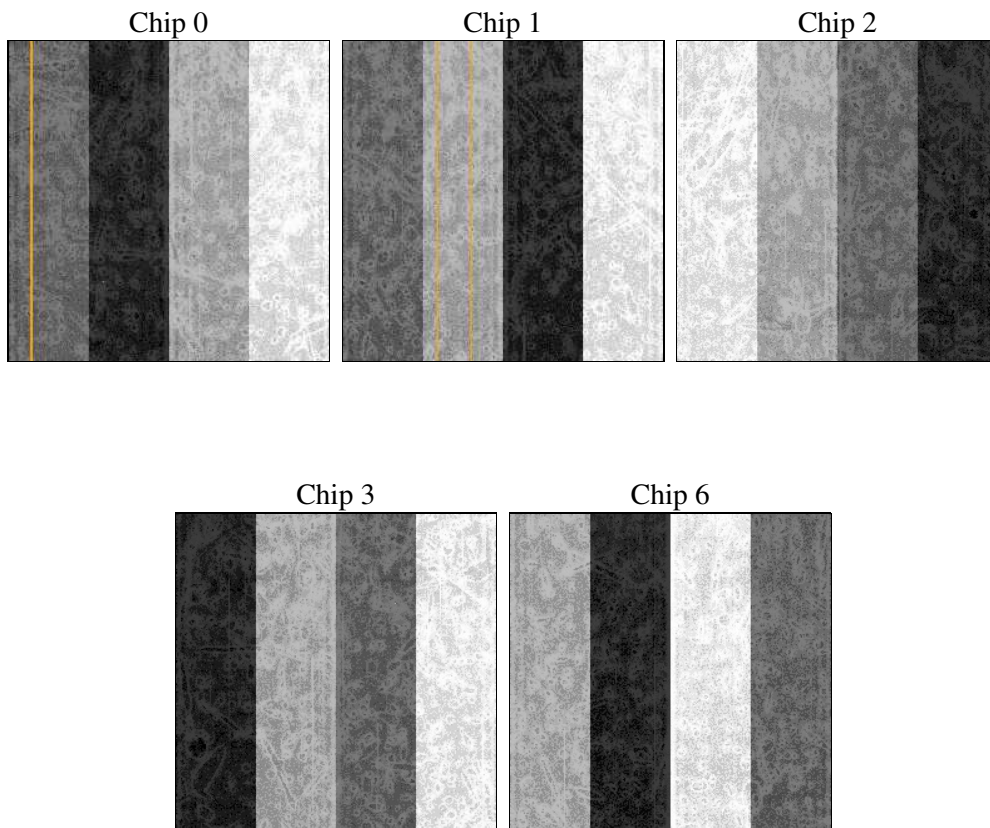
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	48000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	48133.658917278	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime0	48136.799907416	Sum of GTIs [s]
date	2020-10-10T14:26:33	Date and time of file creation	ontime1	48127.376976728	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	48127.376986802	Sum of GTIs [s]
			ontime3	48133.658917278	Sum of GTIs [s]
			ontime6	48133.658907264	Sum of GTIs [s]
			l1events	1427420	Number of level 1 events

### 2.1.4 Events

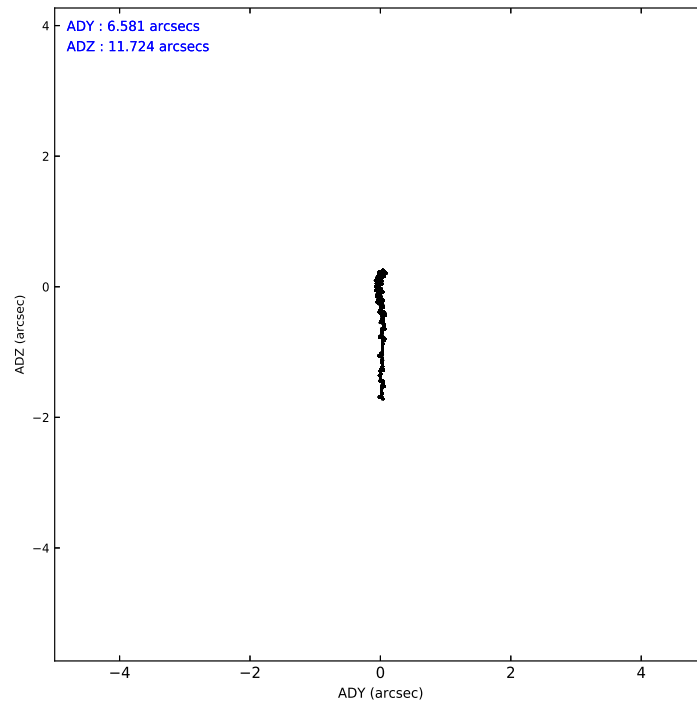
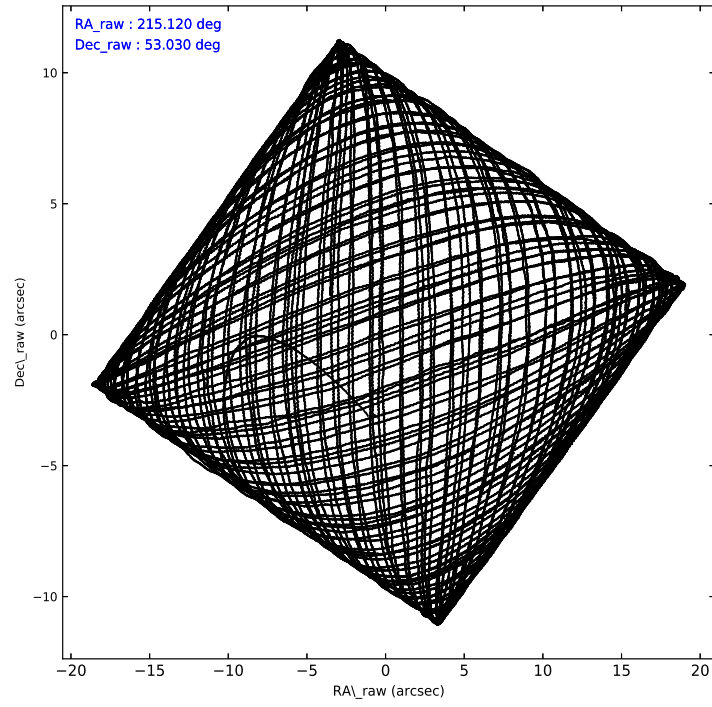
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	274229	272781	301952	288680	289778
rejected events	244199	239675	273388	260627	259226
rejected %	89%	87%	90%	90%	89%

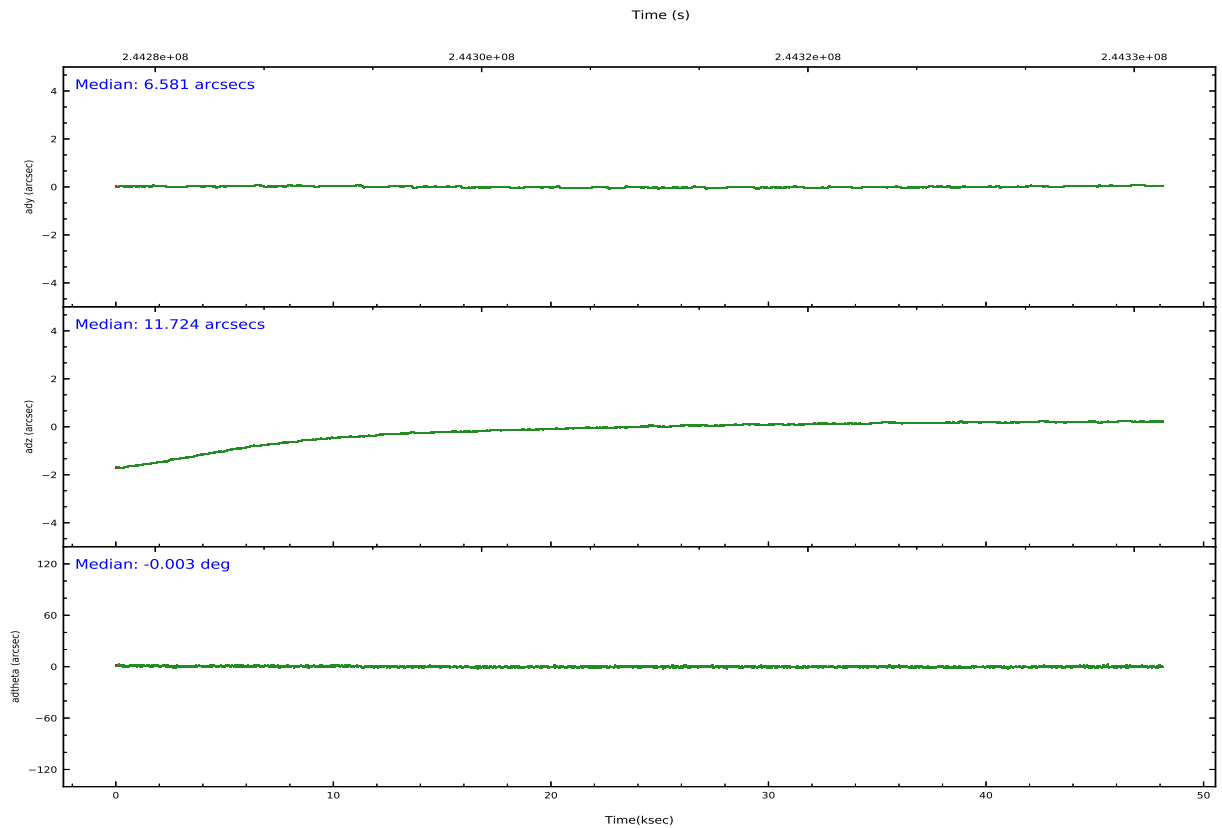
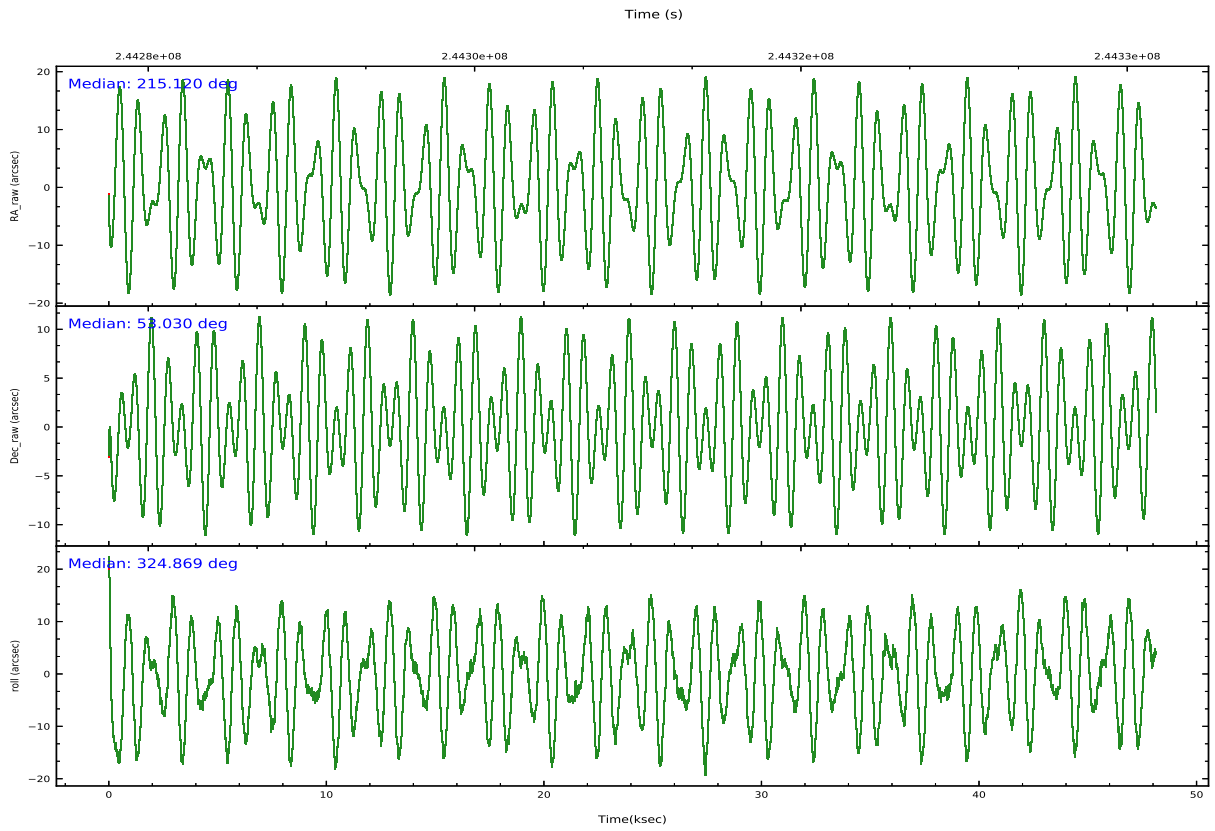
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	10887	12433	10227	10181	10692
	3%	4%	3%	3%	3%
grade 1 events	129	132	155	193	124
	0%	0%	0%	0%	0%
grade 2 events	7206	7244	6801	6134	6830
	2%	2%	2%	2%	2%
grade 3 events	3386	3520	3147	3259	3426
	1%	1%	1%	1%	1%
grade 4 events	3199	3658	3239	3259	3322
	1%	1%	1%	1%	1%
grade 5 events	9870	11385	9563	11954	11795
	3%	4%	3%	4%	4%
grade 6 events	5606	6569	5352	5465	6549
	2%	2%	1%	1%	2%
grade 7 events	233946	227840	263468	248235	247040
	85%	83%	87%	85%	85%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-01236	ACIS-01236	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	215.075357	215.1148432085	Subarray requested	NONE	NONE
[deg] Pointing Dec	53.032088	53.028131221173	Alternating exposures requested	N	N
[deg] Pointing Roll	324.699246	324.86932030568	[s] Primary exposure time	0.000000	3.1
[deg] Roll angle	50.756000	50.756000			
[deg] Roll tolerance	25.000000	25.000000			
Roll constraint allows 180D rotation	Y	Y			
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-233.592463	-233.5874344608287			
[mm] SIM translation stage offset	0	-0.005018542100998502			
[s] Observation start time (MET)	244283328.184000	244282143.95091			
Observation start date	2005-09-28T08:27:44	2005-09-28T08:09:03			
[s] Observation end time (MET)	244331328.184000	244332183.94072			
Observation end date	2005-09-28T21:47:44	2005-09-28T22:03:03			
Read mode	TIMED	TIMED			

## 2.3 Aspect





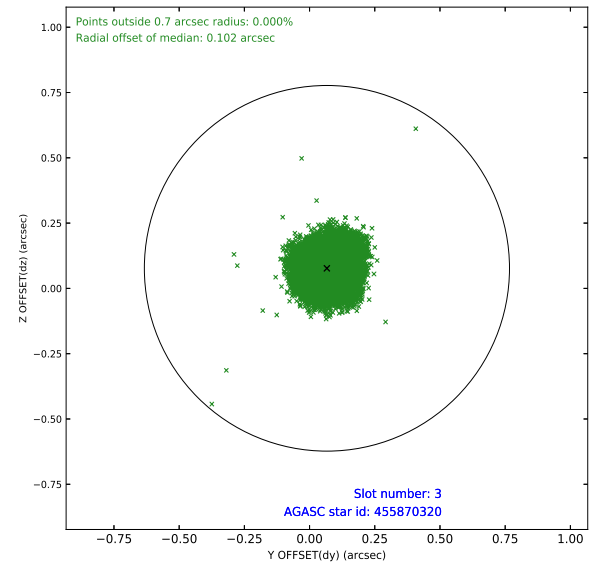
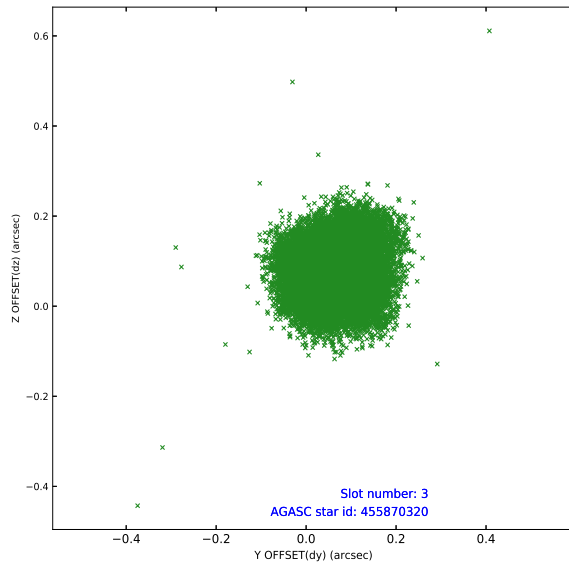
### Slot Statistics

pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-2	7.15	11741	1.000	-0.111	-0.144	0.012	0.030	0.000000	0.000000	-761.16	-841
1	FID		ACIS-I-4	7.17	11741	1.000	0.179	0.103	0.009	0.018	0.000000	0.000000	2153.17	1064
2	FID		ACIS-I-5	7.22	11743	1.000	-0.168	0.109	0.013	0.026	0.000000	0.000000	-1815.09	1062
3	GUIDE	used	455870320	8.40	23469	1.000	0.067	0.077	0.086	0.133	214.874440	52.401638	951.77	-2106
4	GUIDE	used	455876704	9.70	23463	1.000	-0.546	0.123	0.143	0.235	215.615051	52.388297	2304.59	-1202
5	GUIDE	used	505809632	8.06	23473	1.000	0.195	-0.064	0.072	0.121	215.499426	53.521185	-277.85	1963
6	GUIDE	used	505812088	8.14	23414	1.000	0.151	-0.067	0.061	0.097	214.186617	53.263562	-2049.73	-416
7	GUIDE	used	505812376	7.72	23482	1.000	0.133	-0.068	0.059	0.095	214.039537	52.937930	-1647.24	-1562

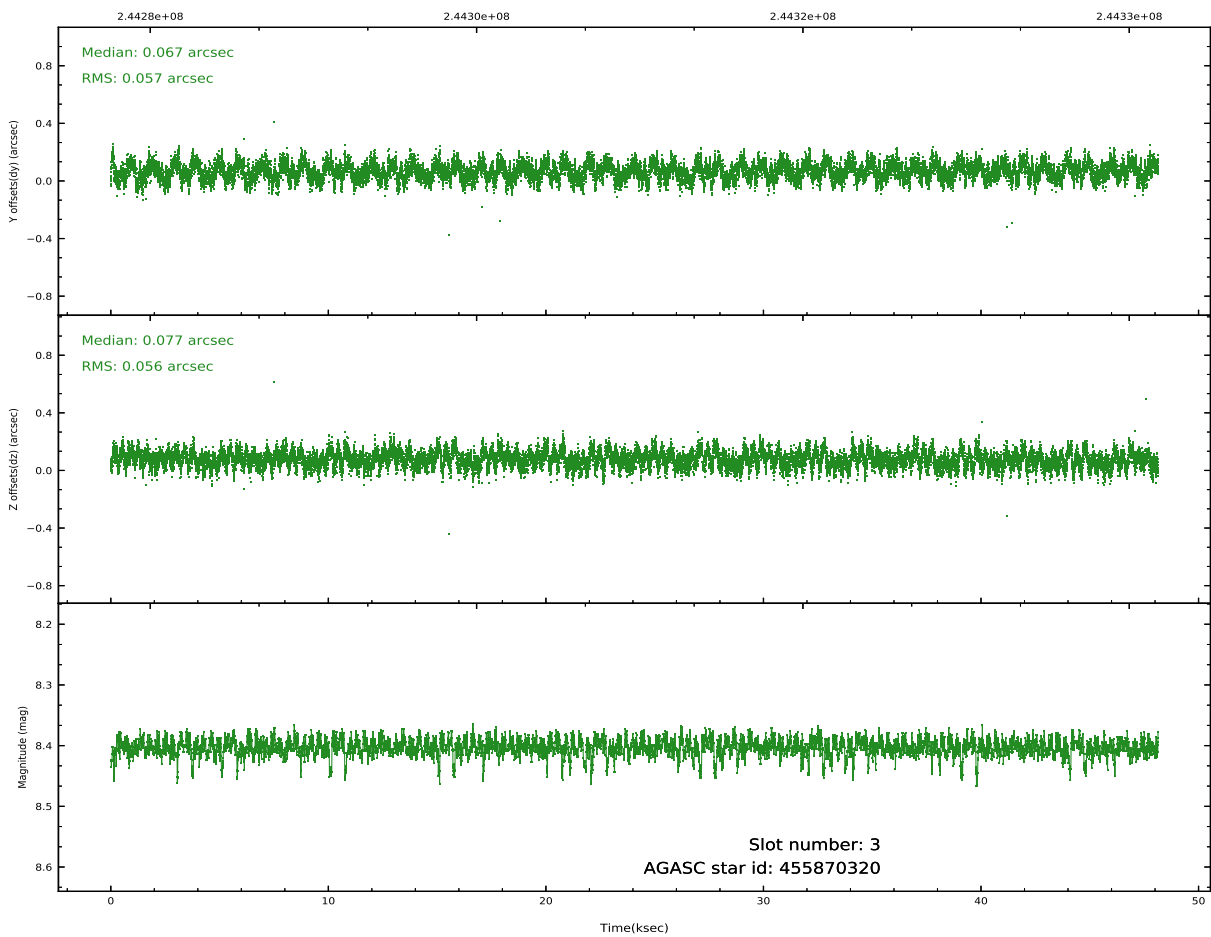
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## 2.4 Star Slots

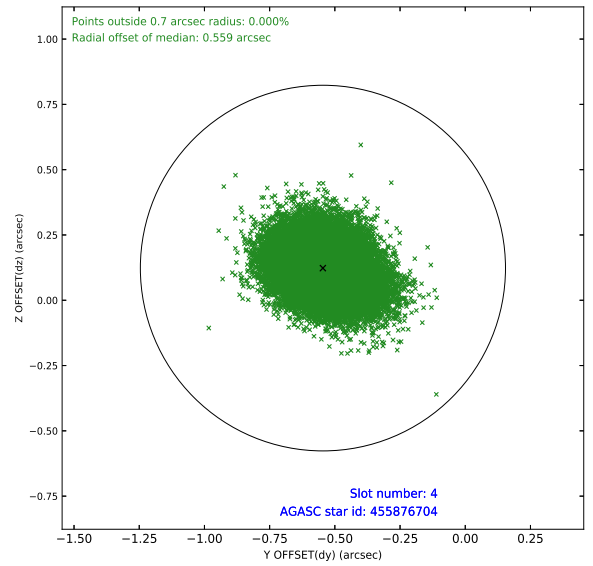
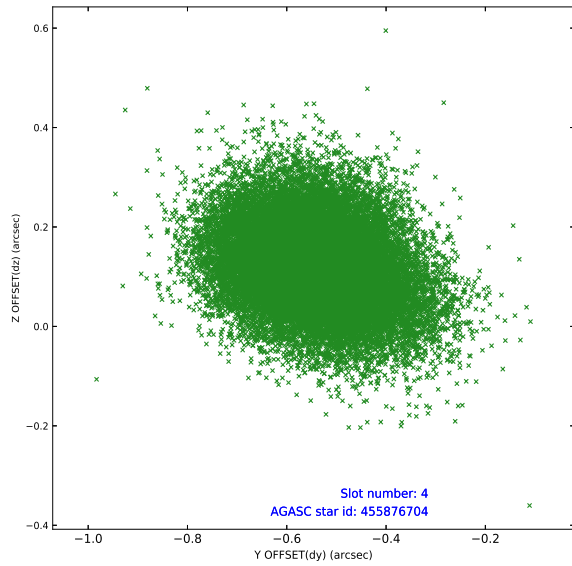
### 2.4.1 Slot 3



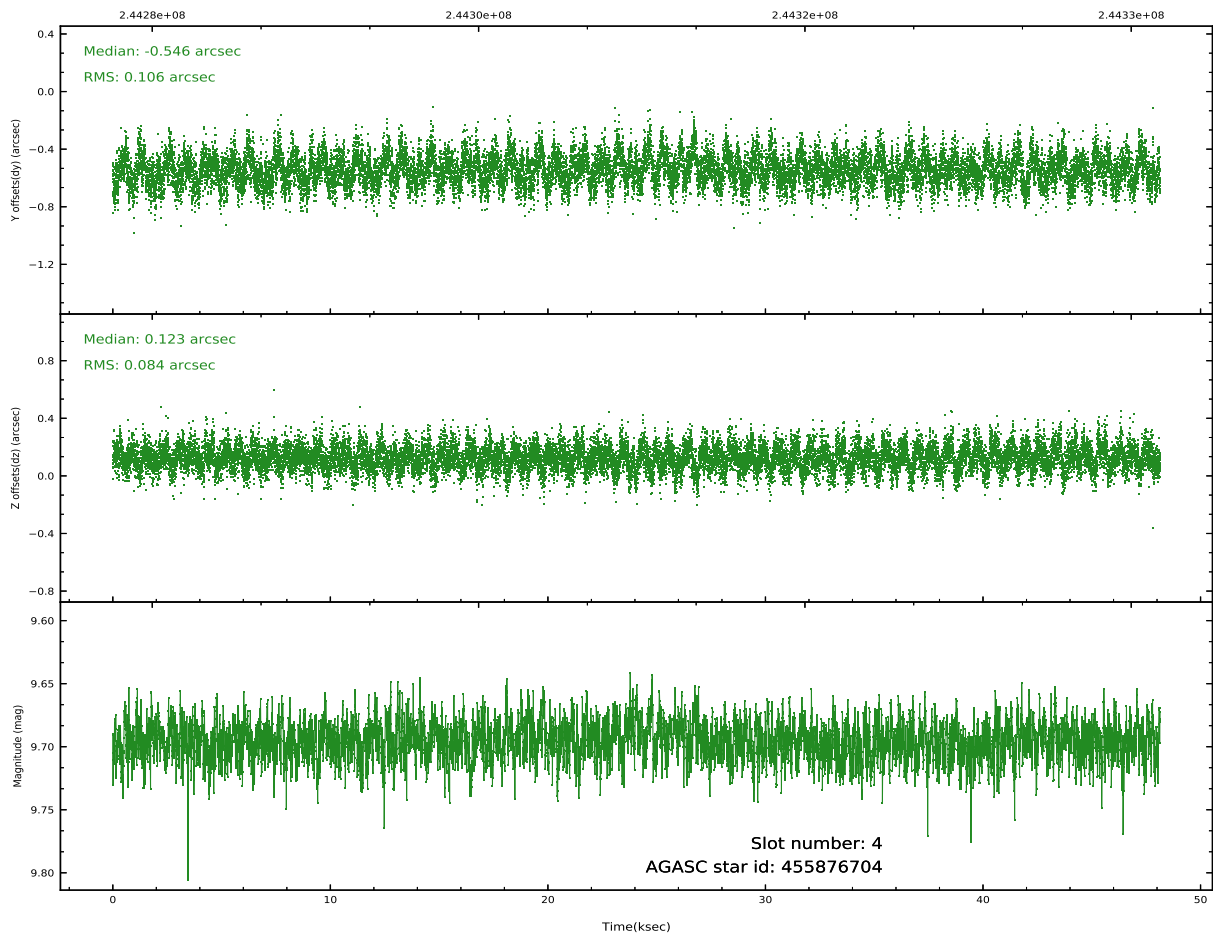
Time (s)



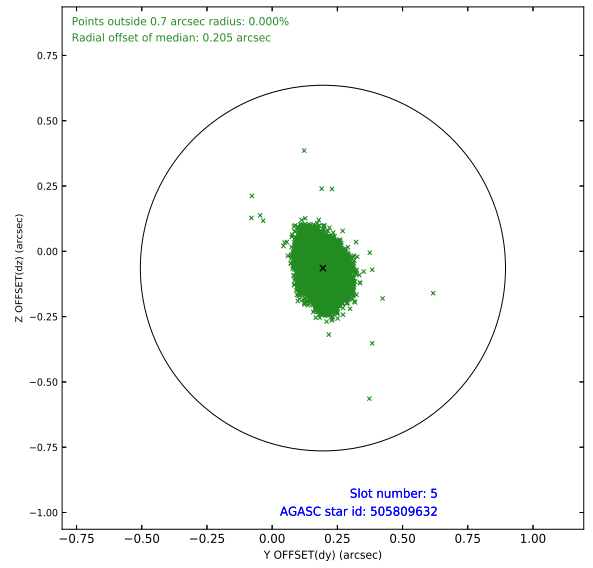
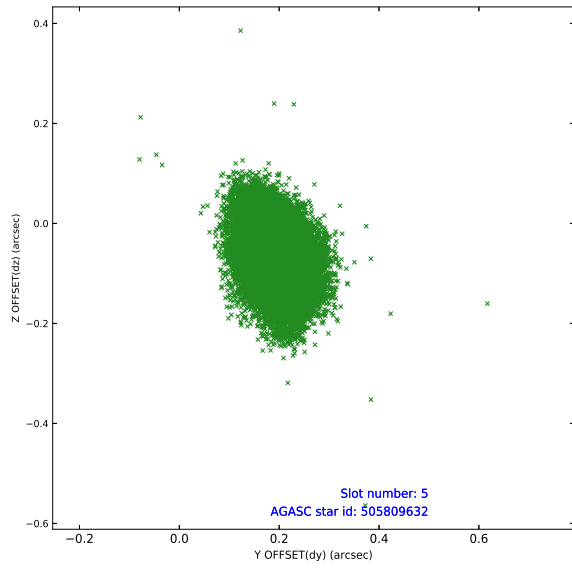
## 2.4.2 Slot 4



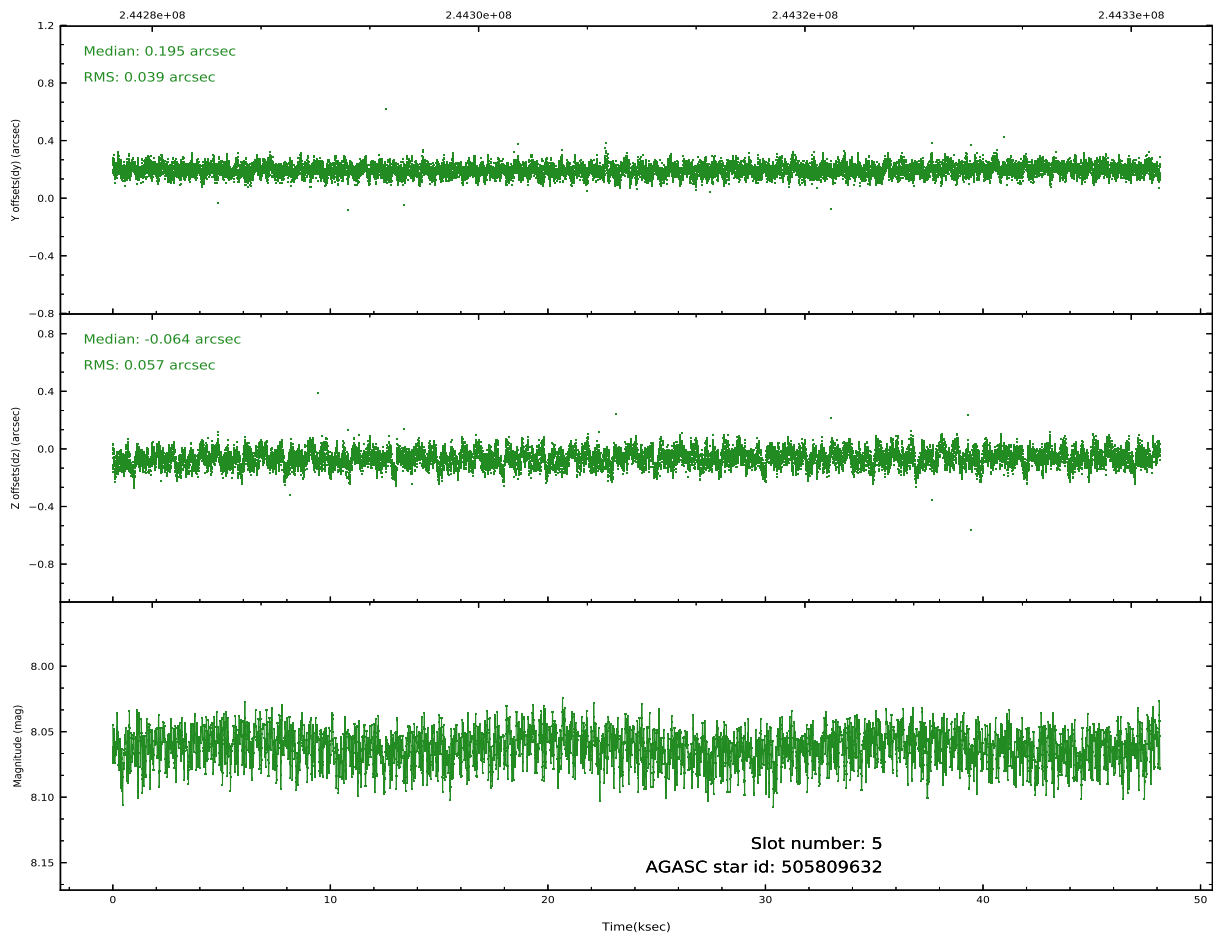
Time (s)



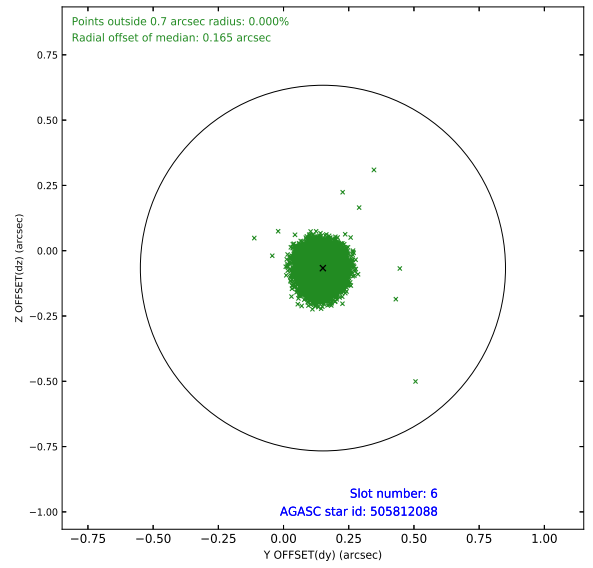
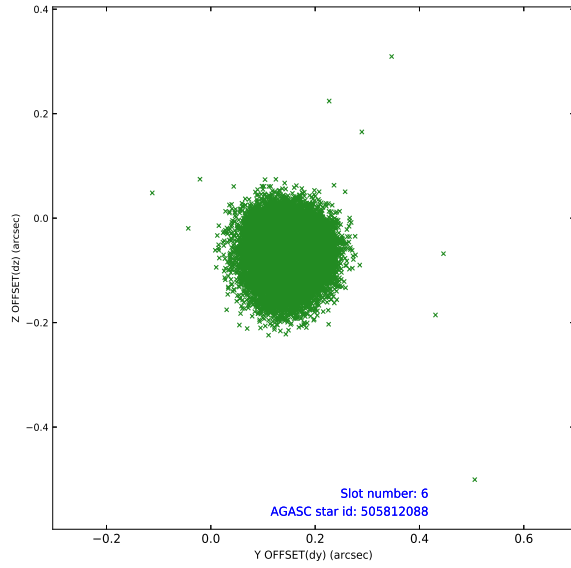
### 2.4.3 Slot 5



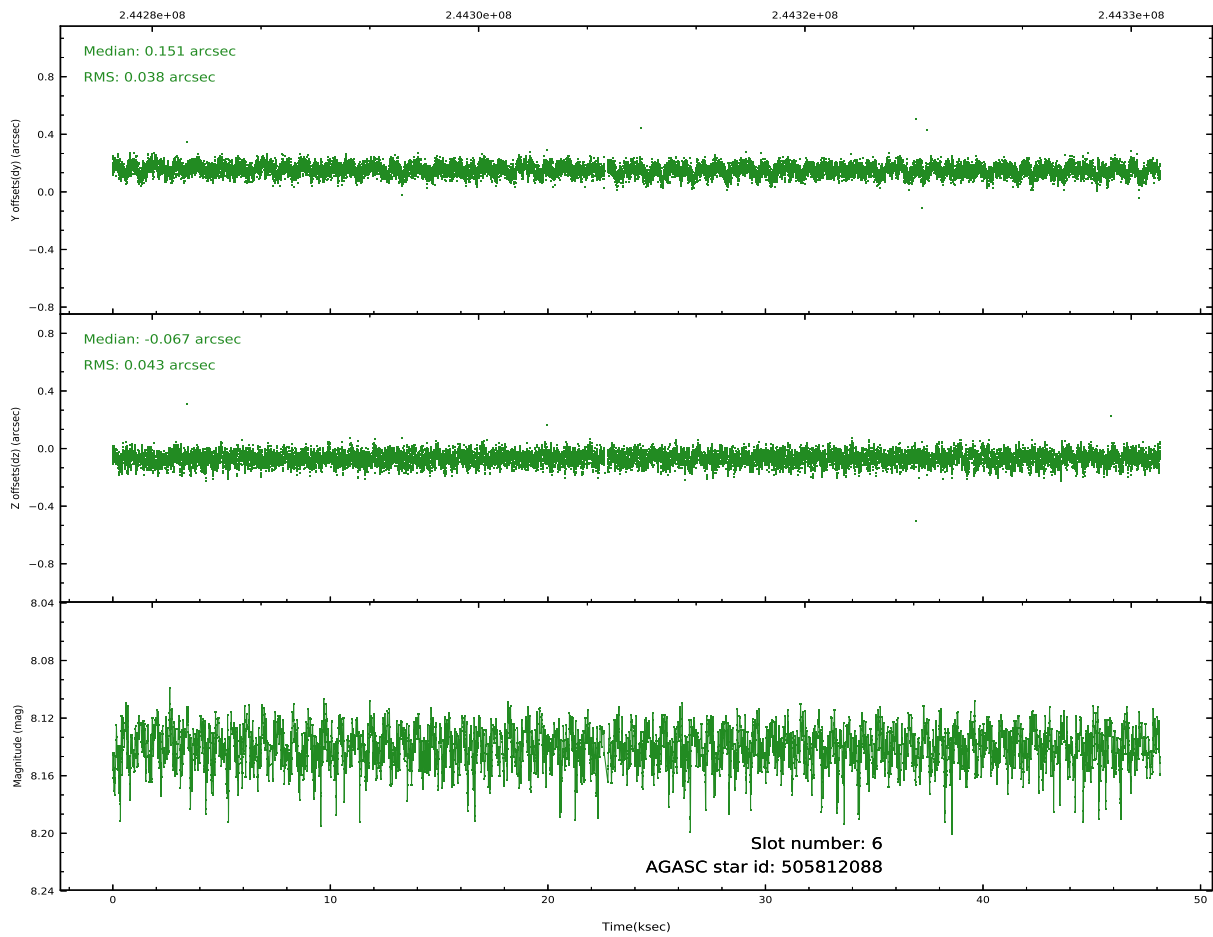
Time (s)



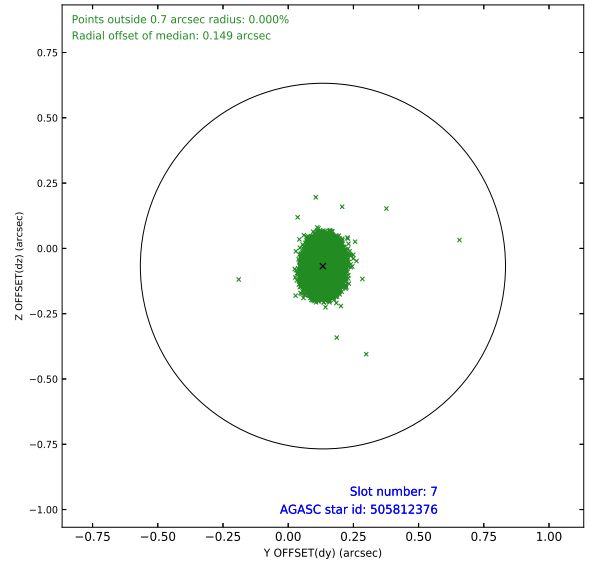
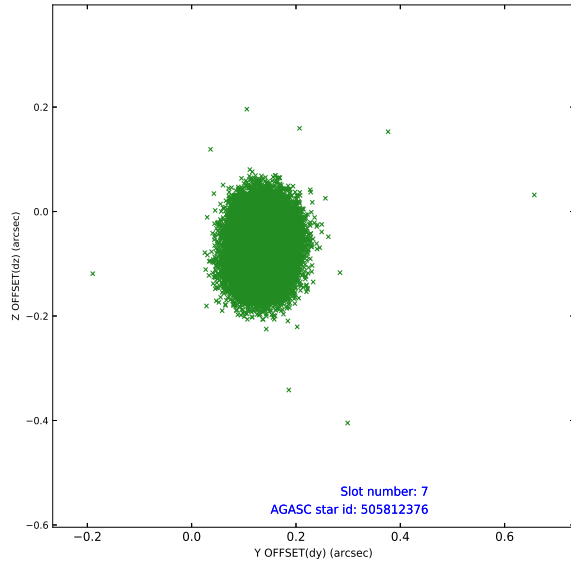
## 2.4.4 Slot 6



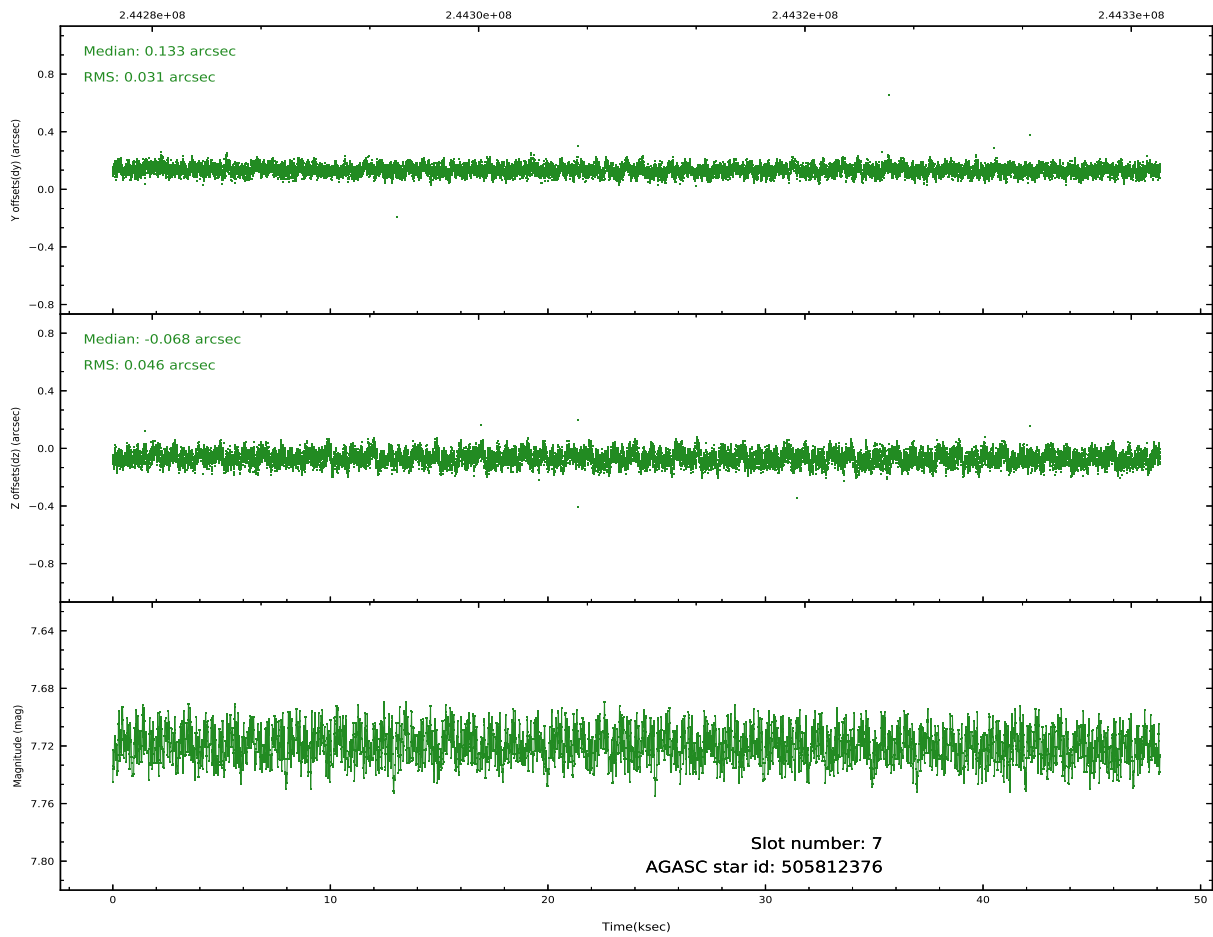
Time (s)



## 2.4.5 Slot 7

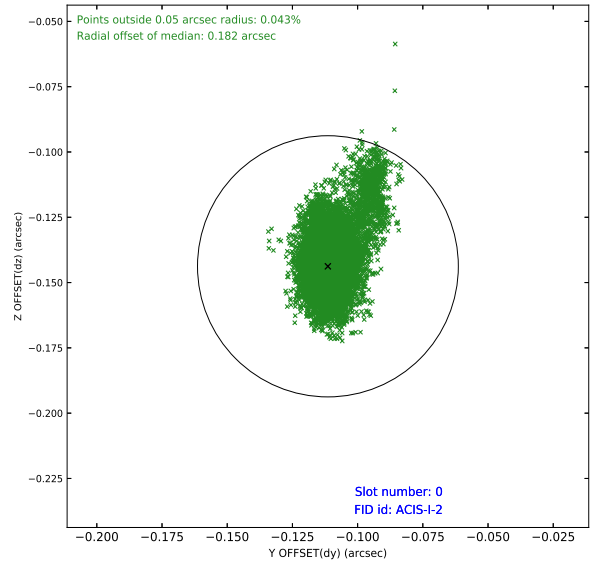
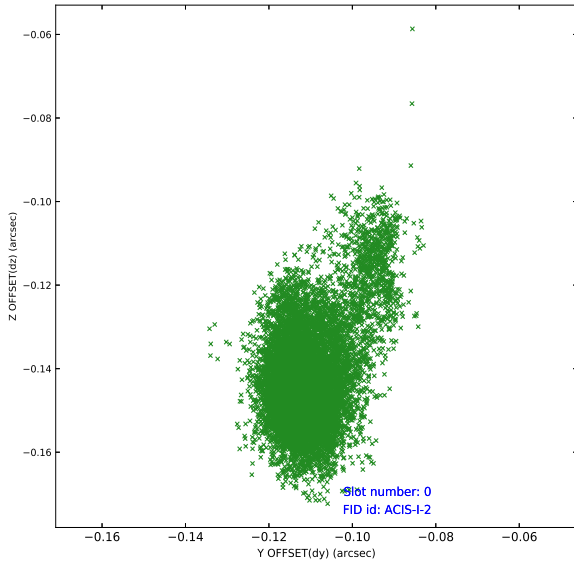


Time (s)

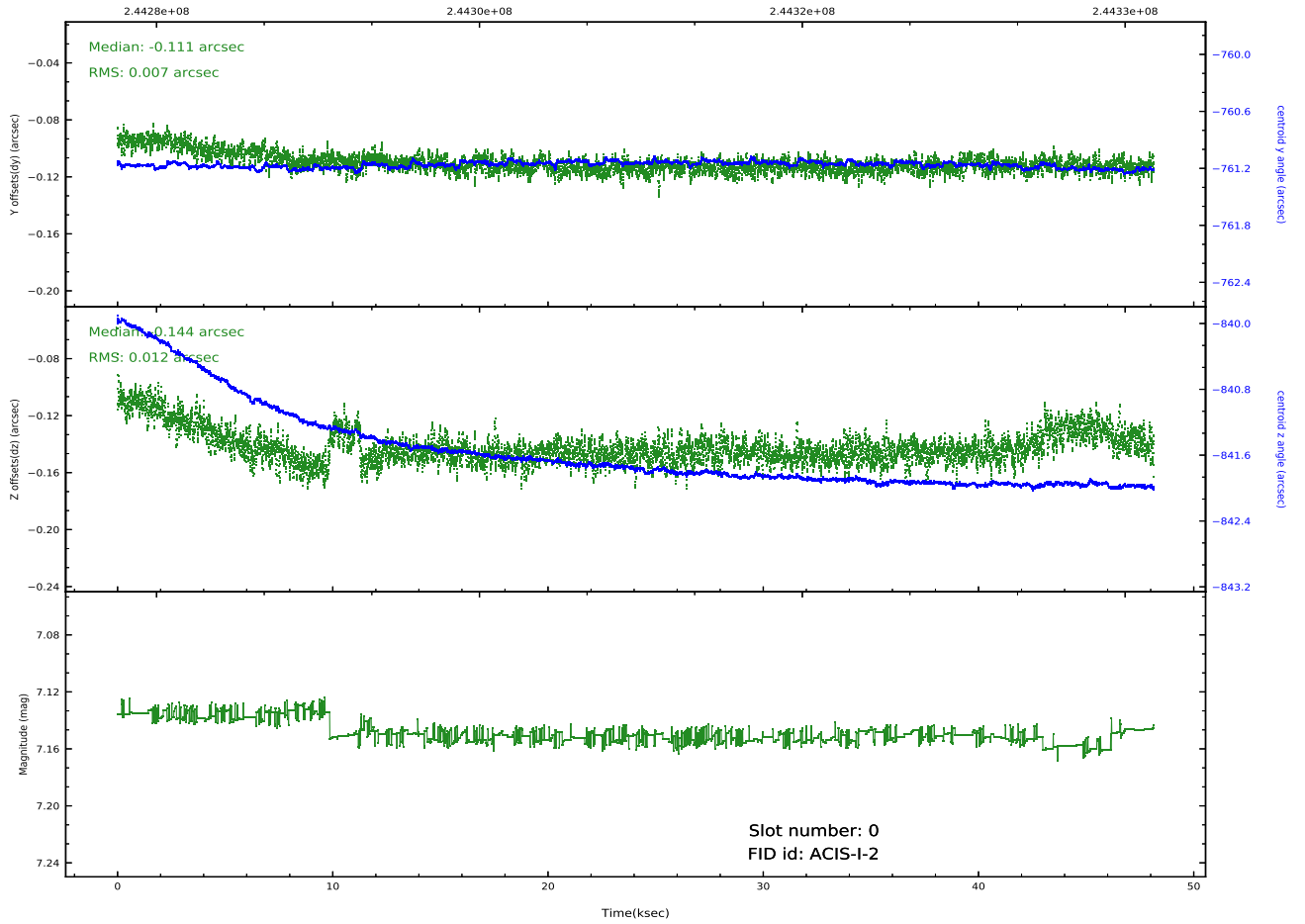


## 2.5 FID Slots

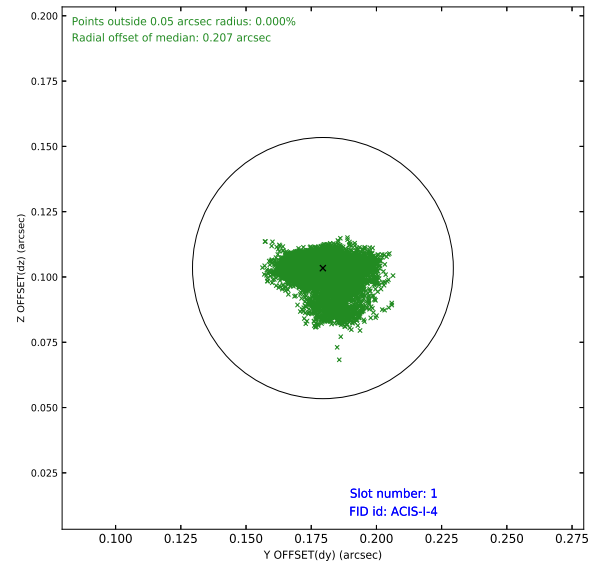
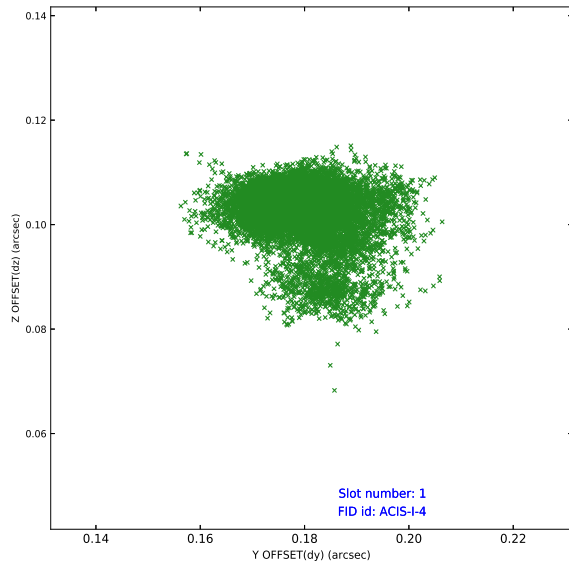
### 2.5.1 Slot 0



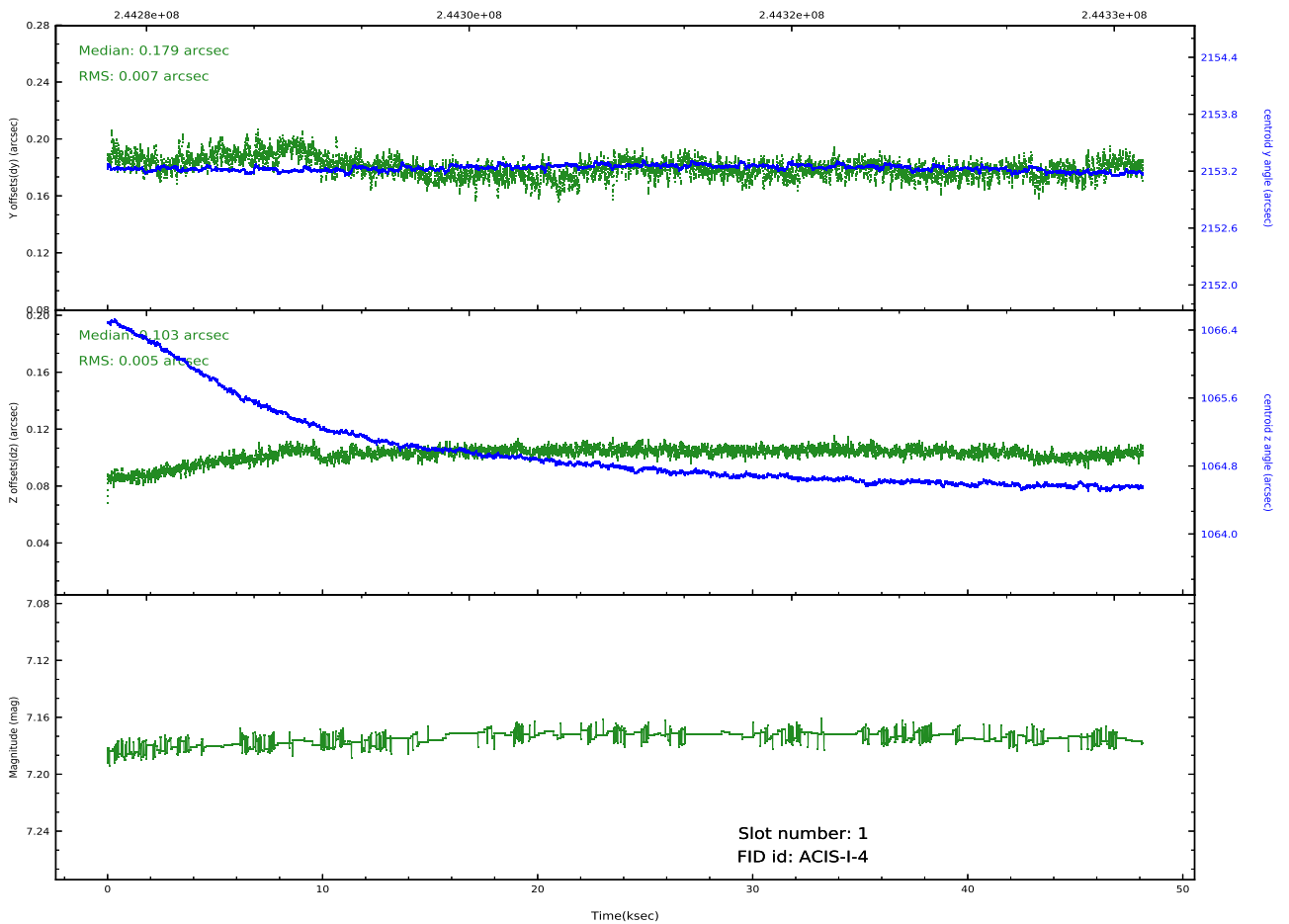
Time (s)



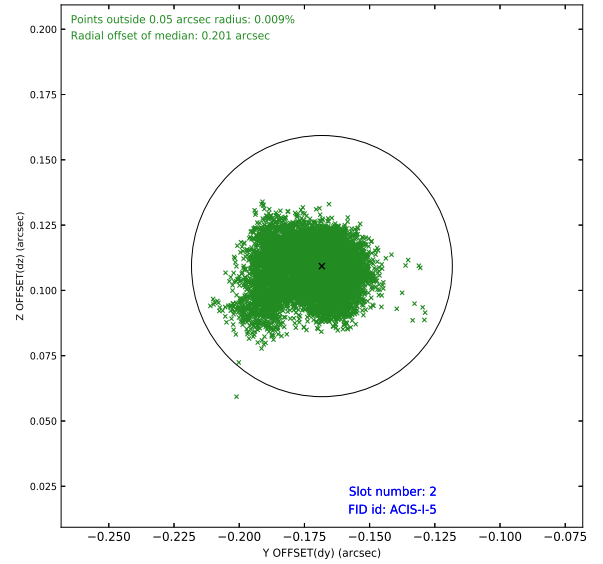
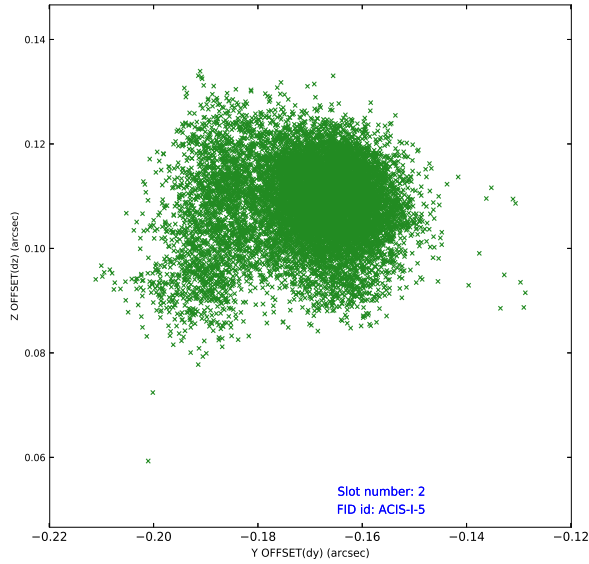
## 2.5.2 Slot 1



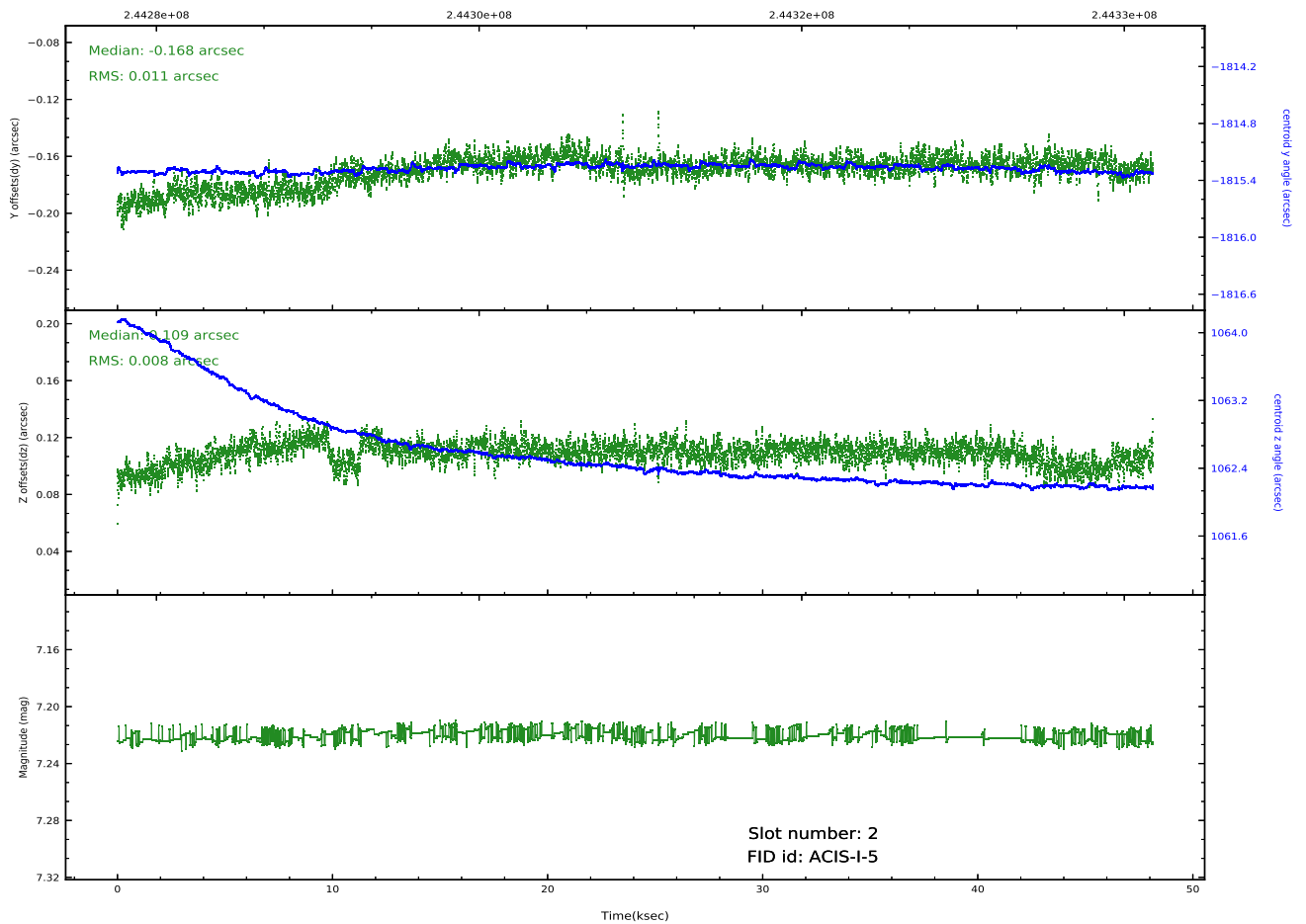
Time (s)



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	48.13365

## A.2 Comments

As a consequence of the DEA-A shutdown anomaly on Sep 15th (DOY258), the reported value of the ACIS FP temperature was ~1.3 degrees warmer than the actual temperature. The value for FP temperature reported in the headers of the Level 2 event file and the Mission Timeline files ARE INCORRECT by this amount for this processing. However, the temperature is corrected in the processing in order to obtain the correct temperature for the CTI correction. So the calibrated data are correct.

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Roll constraint was met.