

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 6393 - L2 Version 5  
Chandra X-Ray Center

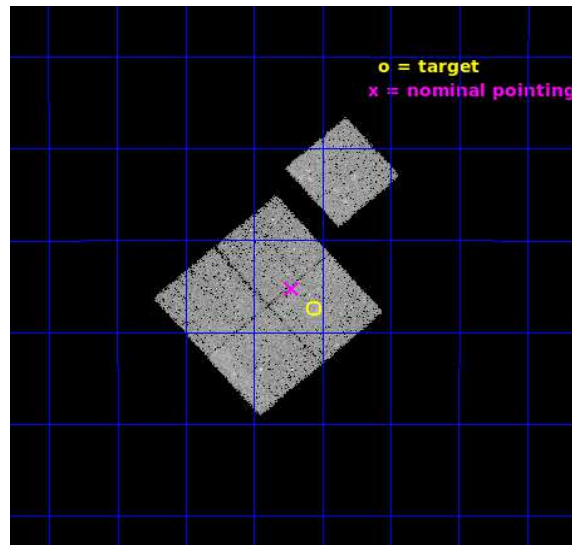
L2 Processing Date : Oct 10 2020

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# 1 Front

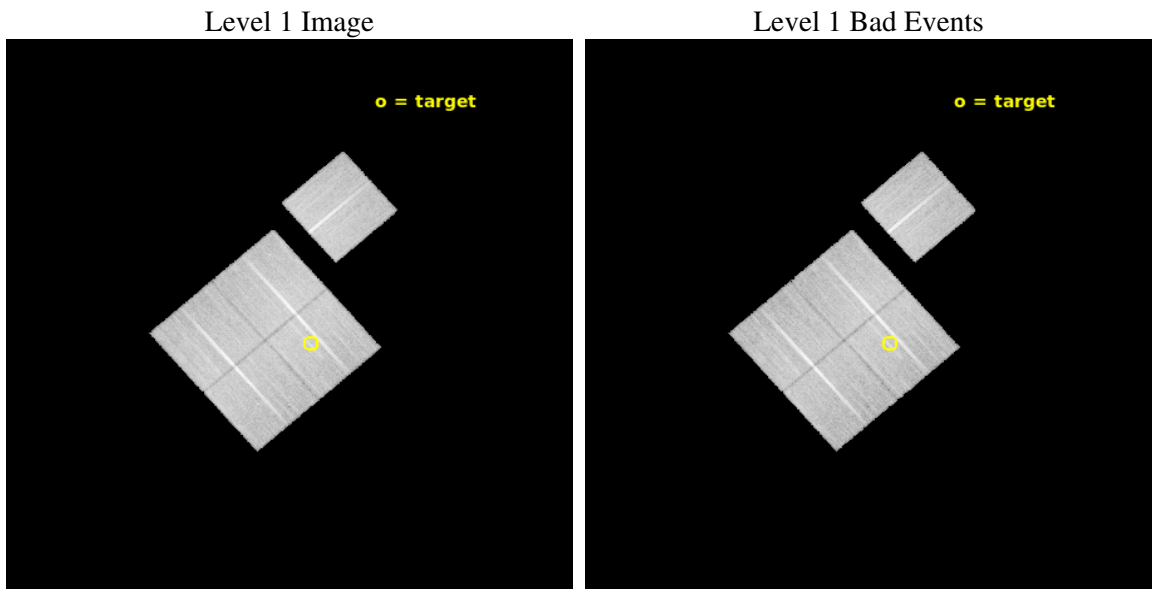
seq_num	800473	Sequence number
obs_id	6393	Observation id
title	DARK ENERGY WITH X-RAY CLUSTERS: CHANDRA OBSERVATIONS OF 41 HIGH-REDSHIFT CLUSTERS FROM THE 400 deg^2 ROSAT PSPC SURVEY	Proposal titl
observer	Dr Alexey Vikhlinin	Principal investigator
object	CIG J0216-1747	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	34.140417	Observer's specified target RA [deg]
dec_targ	-17.790833	Observer's specified target Dec [deg]
ra_nom	34.180560171175	Nominal RA [deg]
dec_nom	-17.754483812713	Nominal Dec [deg]
roll_nom	48.814996349226	Nominal Roll [deg]
revision	5	Processing version of data
ontime	26996.772165686	Sum of GTIs [s]
livetime	26644.039462607	Livetime [s]
ontime0	27006.072006553	Sum of GTIs [s]
ontime1	27002.972046316	Sum of GTIs [s]
ontime2	26999.87206623	Sum of GTIs [s]
ontime3	26996.772165686	Sum of GTIs [s]
ontime6	26999.74894619	Sum of GTIs [s]
l2events	71243	Number of level 2 events



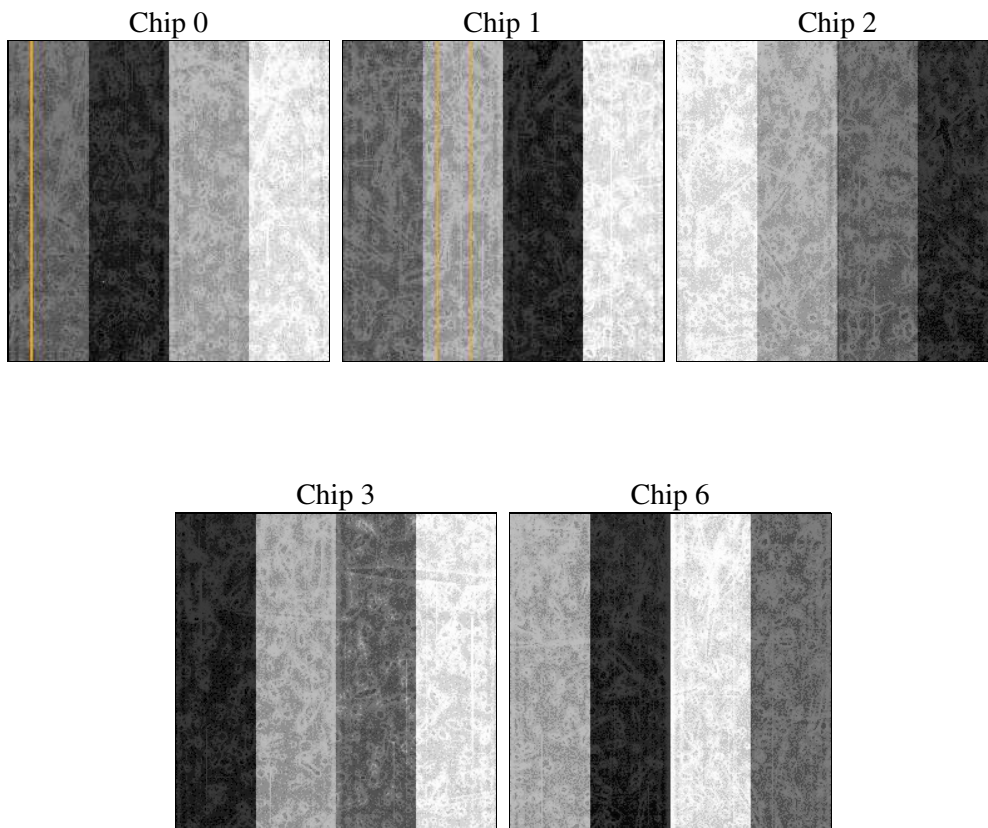
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	26950.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	26996.772165686	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime0	27006.072006553	Sum of GTIs [s]
date	2020-10-11T01:06:21	Date and time of file creation	ontime1	27002.972046316	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	26999.87206623	Sum of GTIs [s]
			ontime3	26996.772165686	Sum of GTIs [s]
			ontime6	26999.74894619	Sum of GTIs [s]
			l1events	838961	Number of level 1 events

### 2.1.4 Events

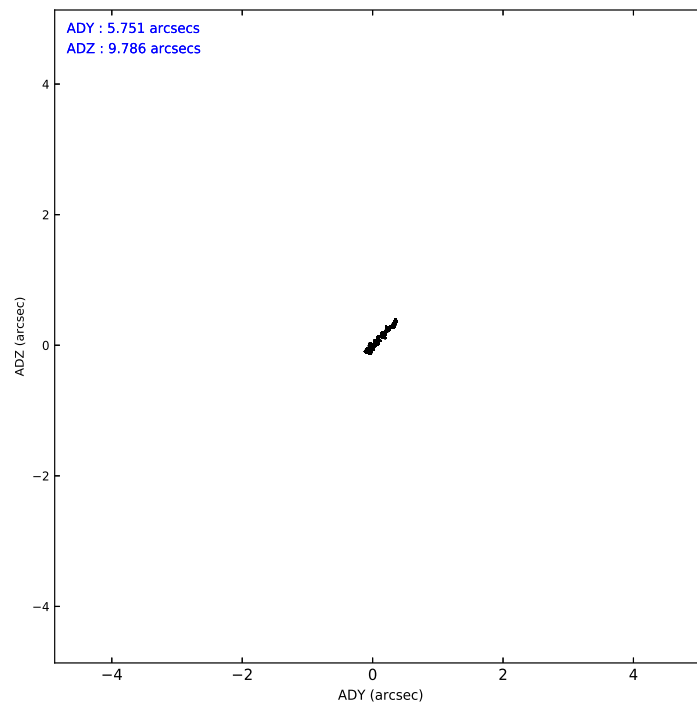
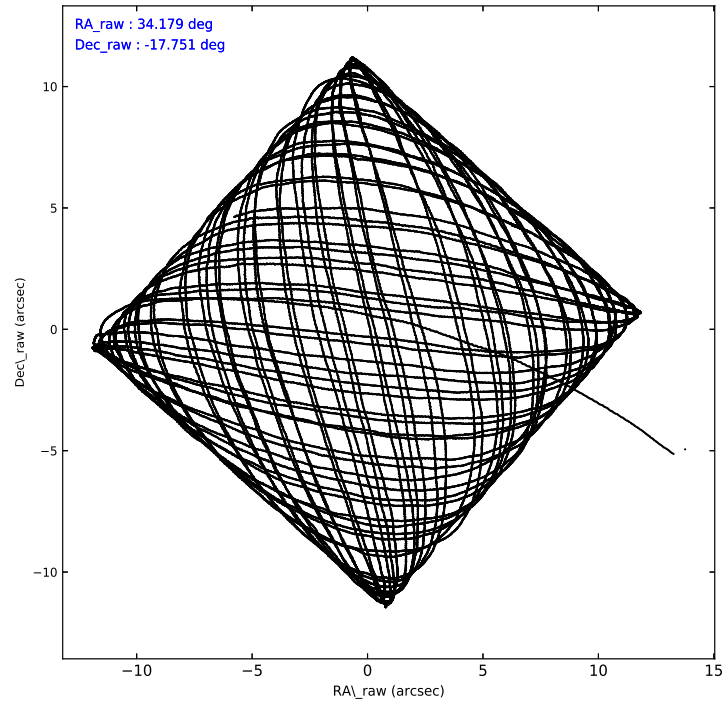
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	161869	158510	175716	171806	171060
rejected events	145406	139259	159292	155317	153449
rejected %	89%	87%	90%	90%	89%

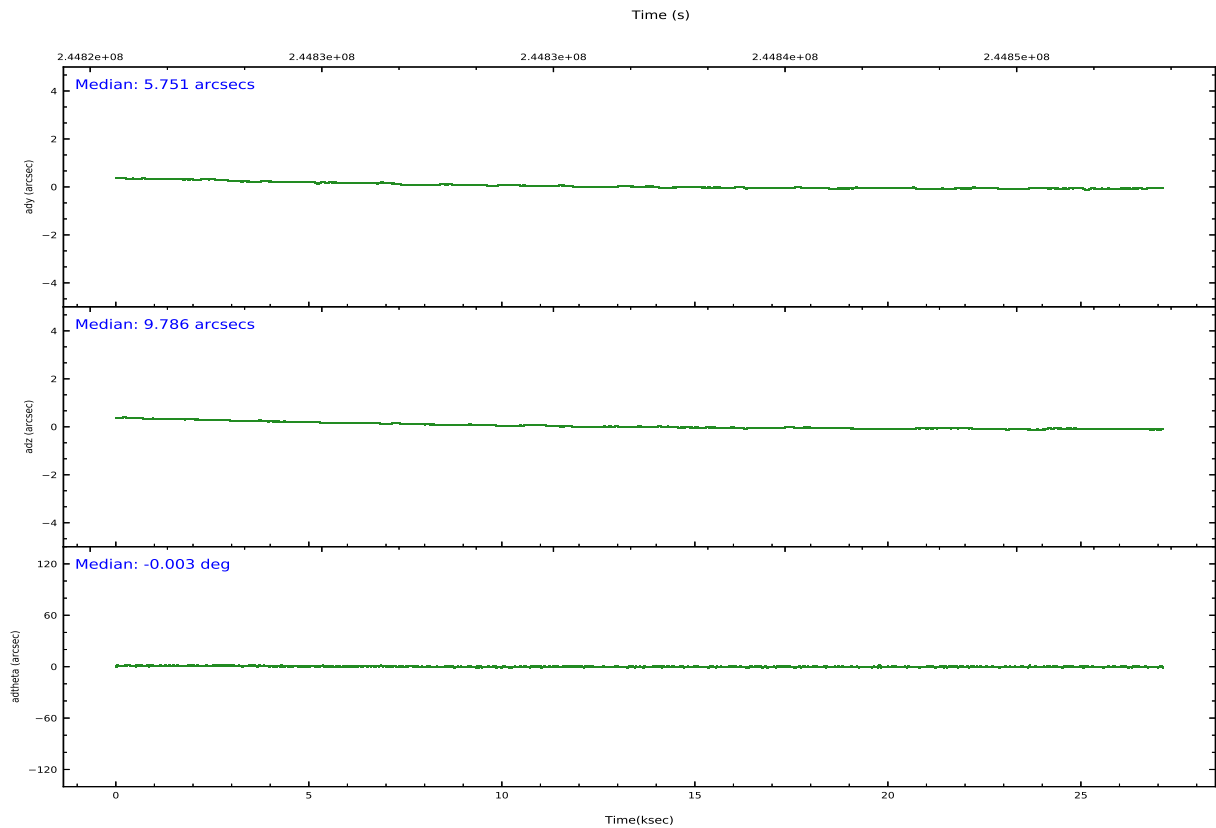
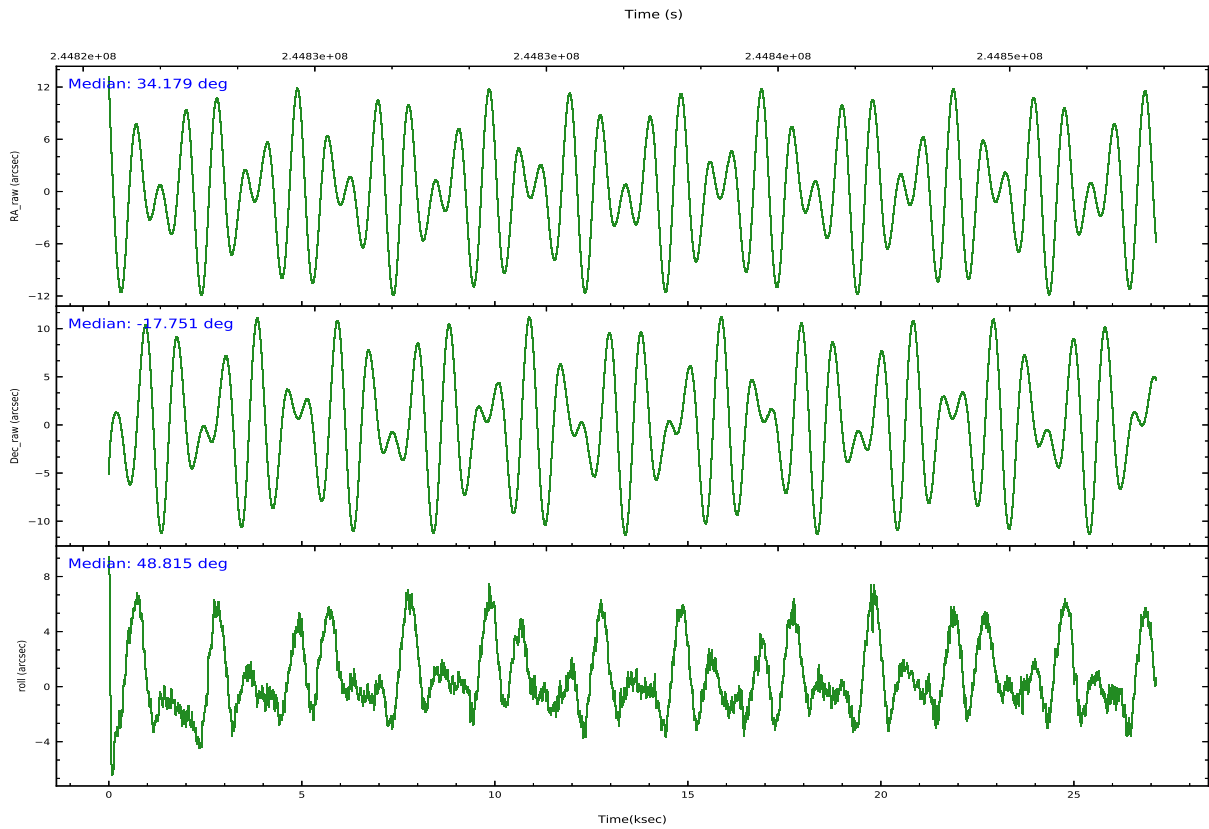
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	5568	7015	5991	6161	6142
	3%	4%	3%	3%	3%
grade 1 events	85	87	80	92	66
	0%	0%	0%	0%	0%
grade 2 events	3963	4286	3856	3522	3786
	2%	2%	2%	2%	2%
grade 3 events	1889	2076	1768	1817	1999
	1%	1%	1%	1%	1%
grade 4 events	1712	2095	1803	1834	1924
	1%	1%	1%	1%	1%
grade 5 events	5934	6592	5476	6956	6994
	3%	4%	3%	4%	4%
grade 6 events	3331	3782	3010	3158	3761
	2%	2%	1%	1%	2%
grade 7 events	139387	132577	153732	148266	146388
	86%	83%	87%	86%	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	34.174055	34.180560171175	Subarray requested	NONE	NONE
[deg] Pointing Dec	-17.778182	-17.754483812713	Alternating exposures requested	N	N
[deg] Pointing Roll	48.610048	48.814996349226	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-225.840463	-225.8433433320239			
[mm] SIM translation stage offset	-7.752	-7.749109670905796			
[s] Observation start time (MET)	244822844.184000	244821766.50074			
Observation start date	2005-10-04T14:19:40	2005-10-04T14:02:46			
[s] Observation end time (MET)	244849794.184000	244851137.36459			
Observation end date	2005-10-04T21:48:50	2005-10-04T22:12:17			
Read mode	TIMED	TIMED			

## 2.3 Aspect





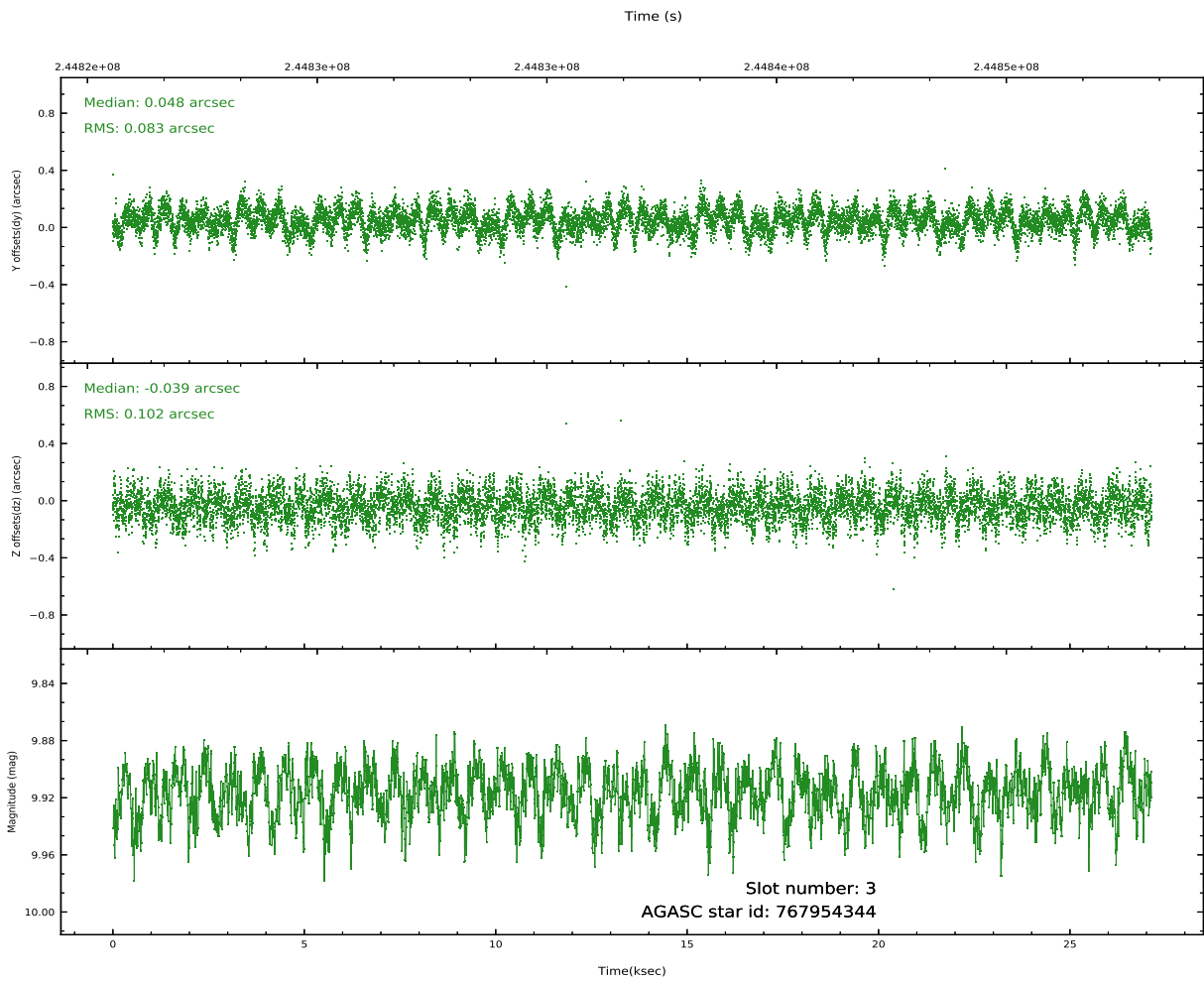
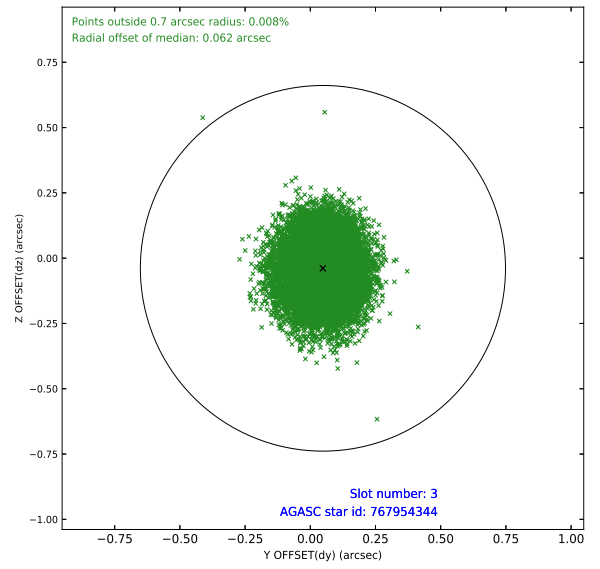
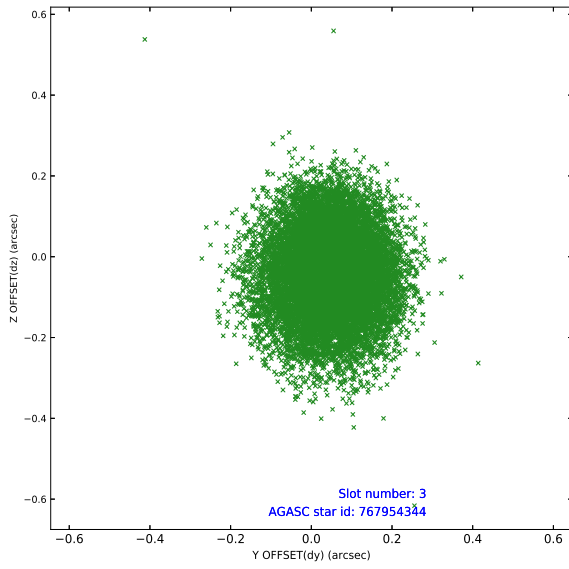
### Slot Statistics

pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.24	6612	1.000	0.113	-0.121	0.007	0.013	0.000000	0.000000	933.89	-992
1	FID		ACIS-I-5	7.22	6614	1.000	-0.297	0.076	0.011	0.016	0.000000	0.000000	-1814.59	905
2	FID		ACIS-I-6	7.26	6614	1.000	0.094	0.115	0.010	0.018	0.000000	0.000000	399.28	1549
3	GUIDE	used	767954344	9.92	13220	1.000	0.048	-0.039	0.142	0.222	34.586205	-18.281873	-429.37	-2256
4	GUIDE	used	767954496	9.60	13214	1.000	0.024	0.066	0.127	0.203	34.611505	-18.207511	-171.28	-2145
5	GUIDE	used	767955344	10.14	13220	1.000	-0.018	0.008	0.158	0.250	34.625163	-17.912842	656.87	-1480
6	GUIDE	used	767955440	9.81	13218	1.000	-0.081	-0.040	0.135	0.215	34.470038	-17.879304	397.18	-1002
7	GUIDE	used	767957440	9.16	13220	1.000	0.029	0.001	0.082	0.133	33.627958	-17.789270	-1269.27	1375

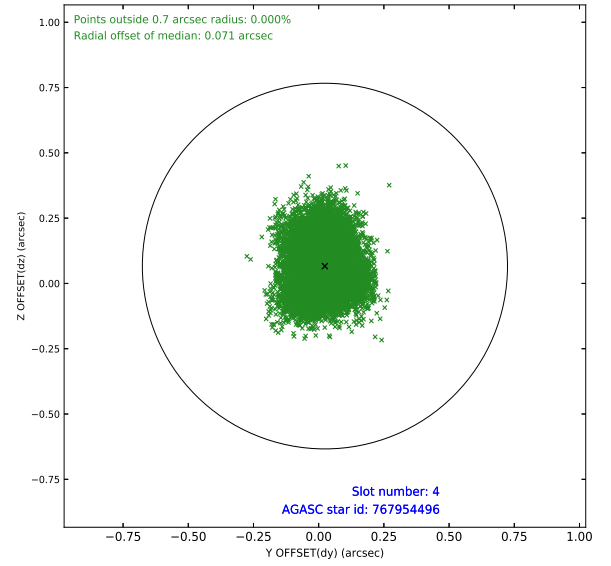
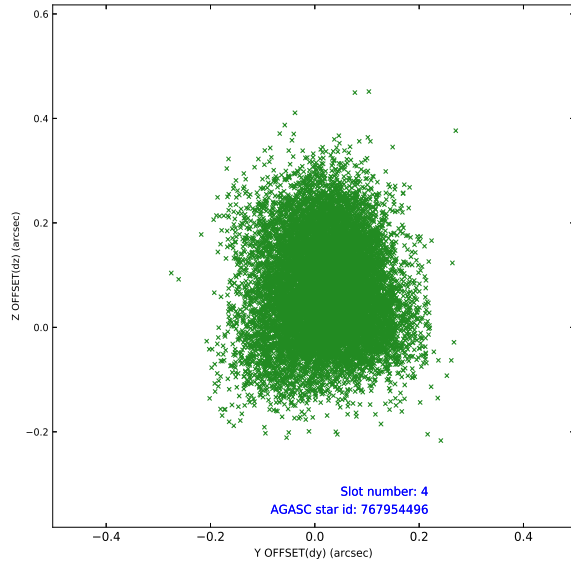
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## 2.4 Star Slots

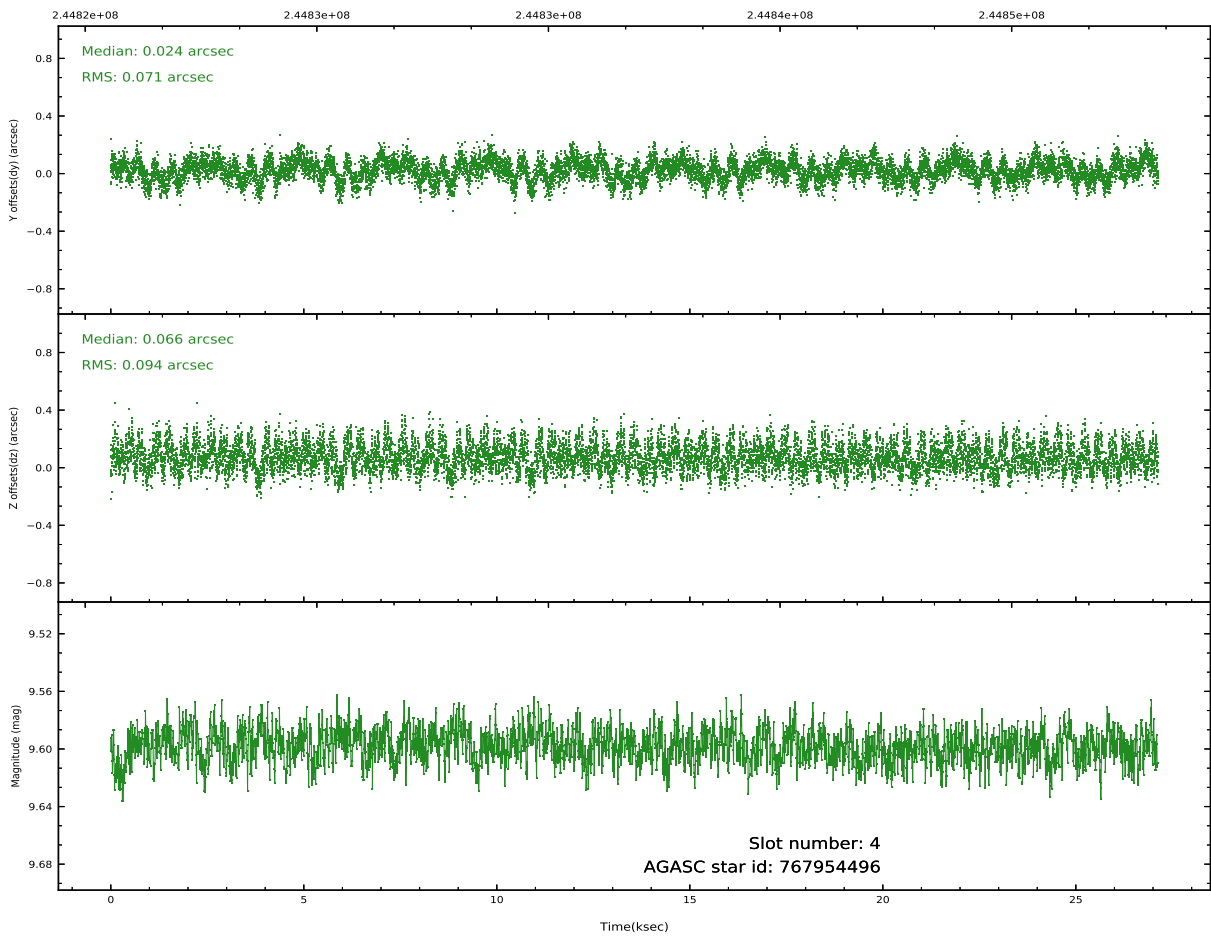
### 2.4.1 Slot 3



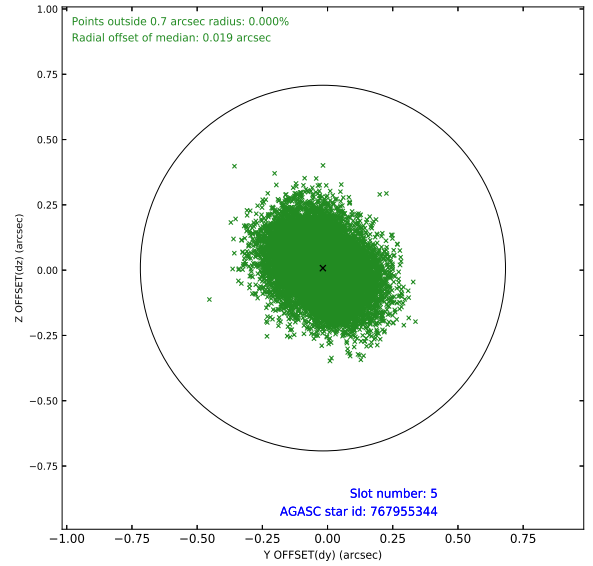
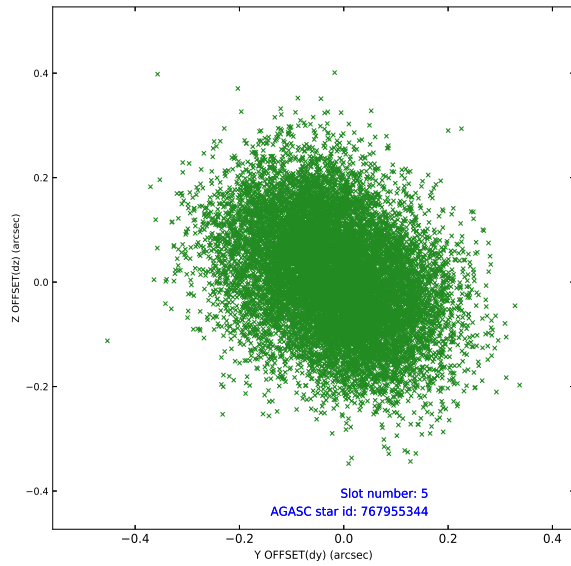
## 2.4.2 Slot 4



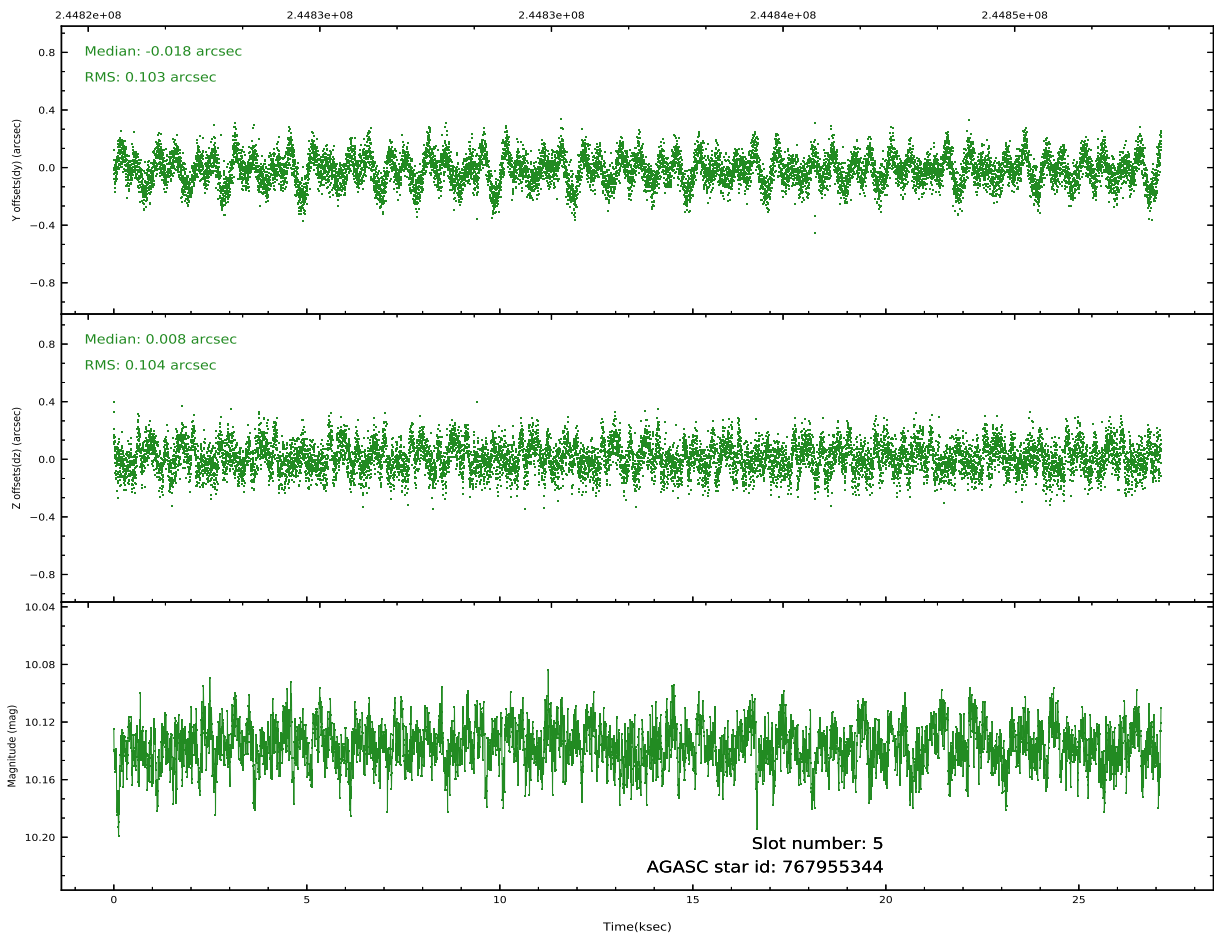
Time (s)



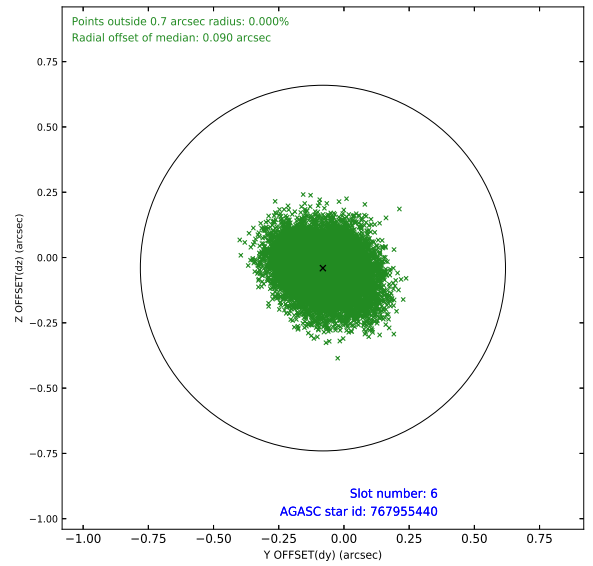
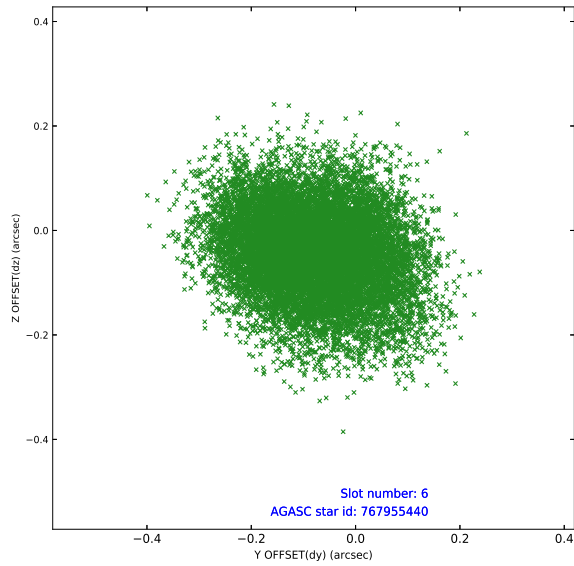
### 2.4.3 Slot 5



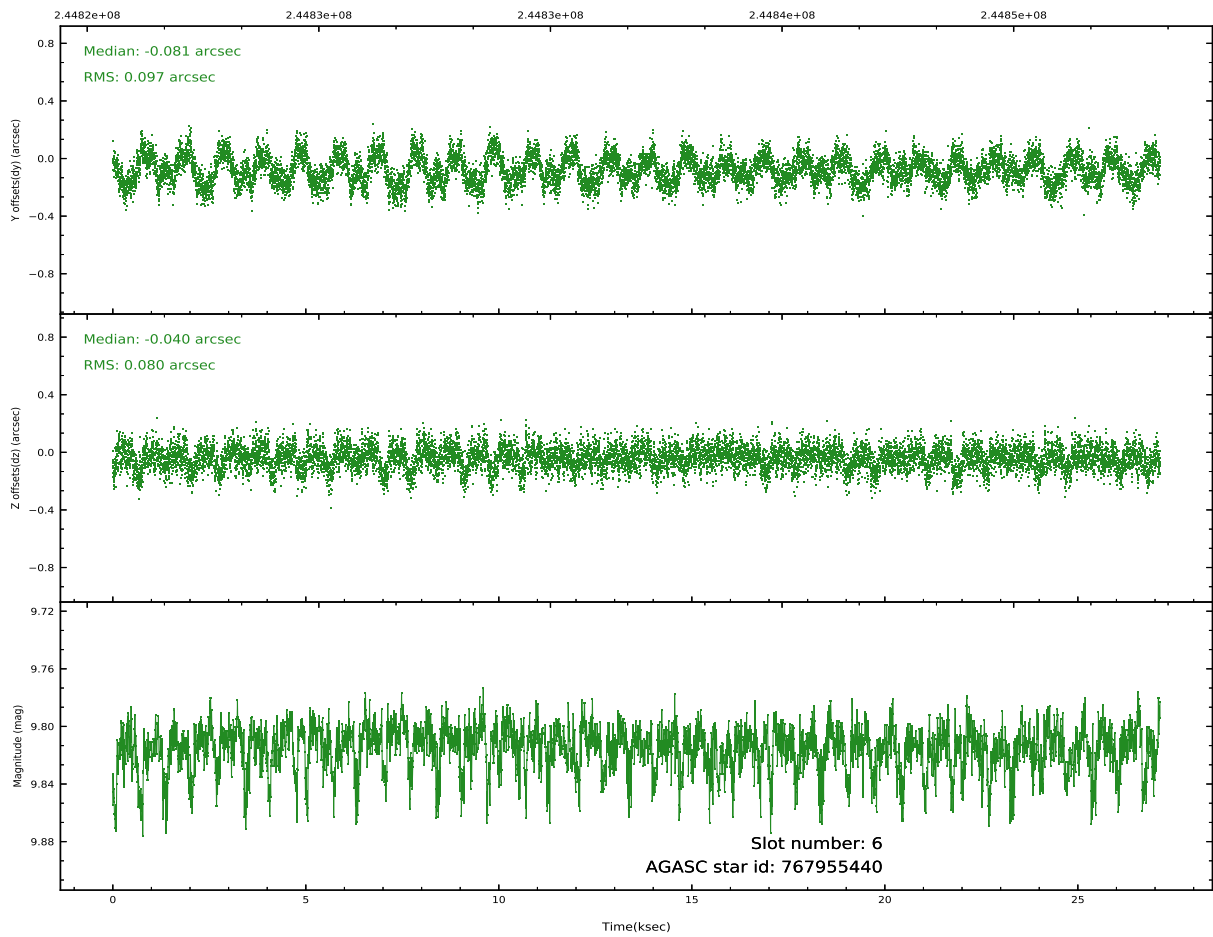
Time (s)



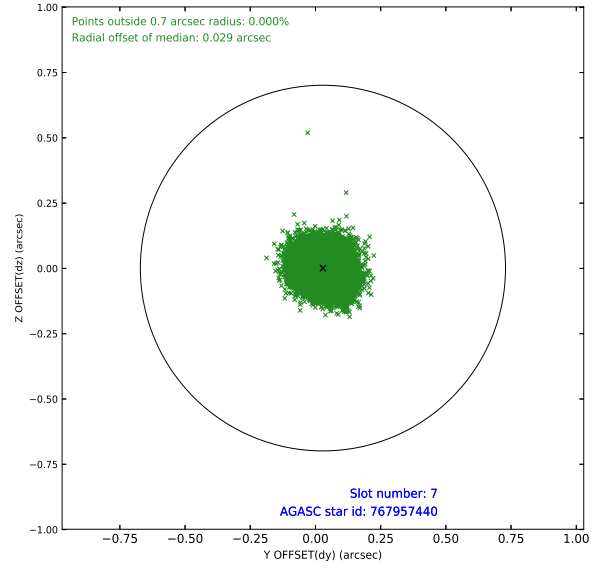
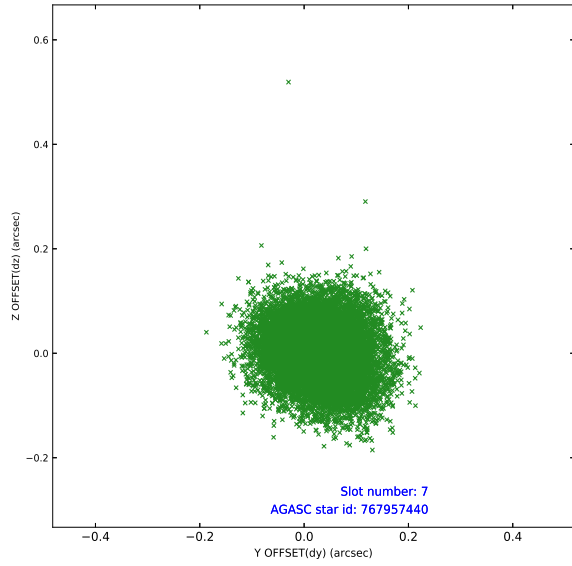
## 2.4.4 Slot 6



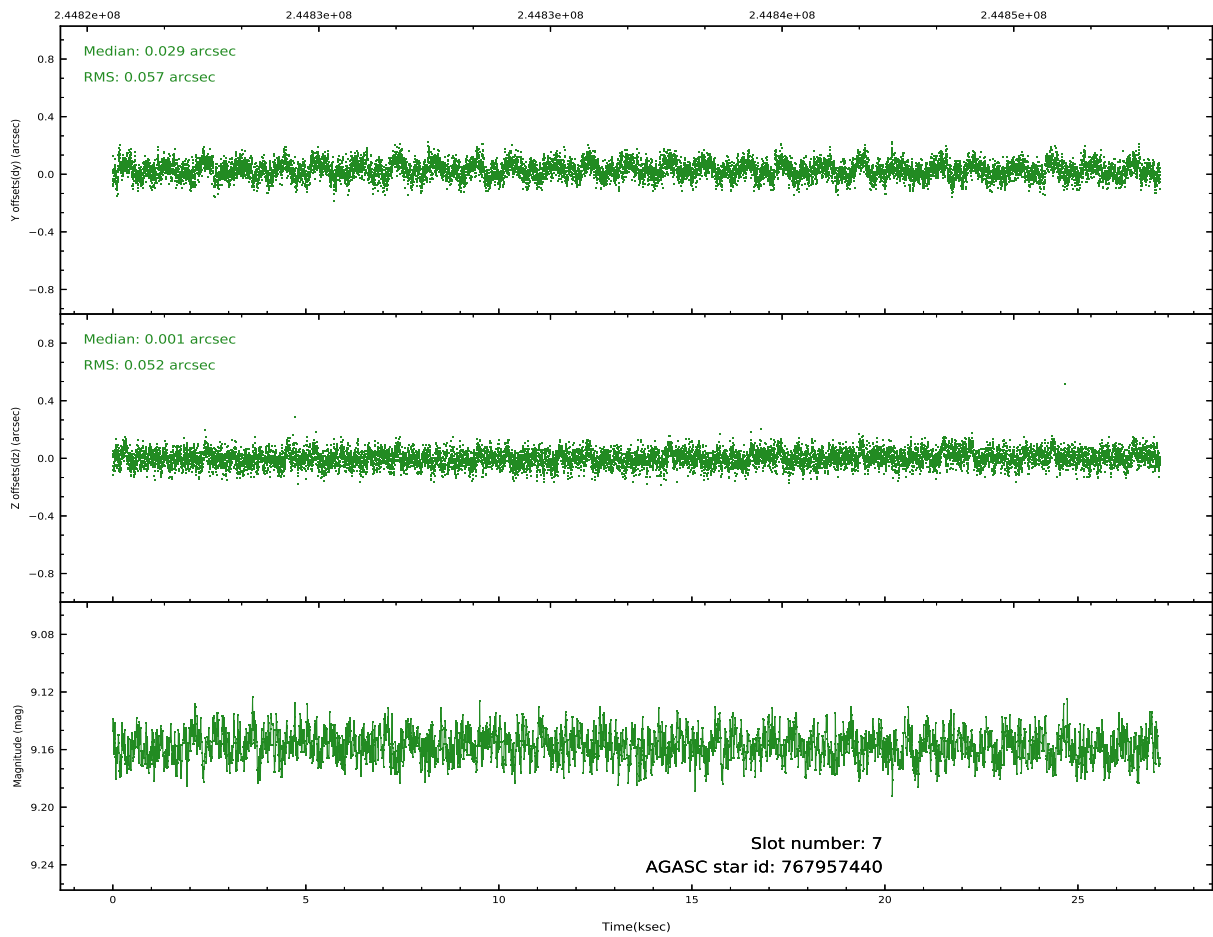
Time (s)



## 2.4.5 Slot 7

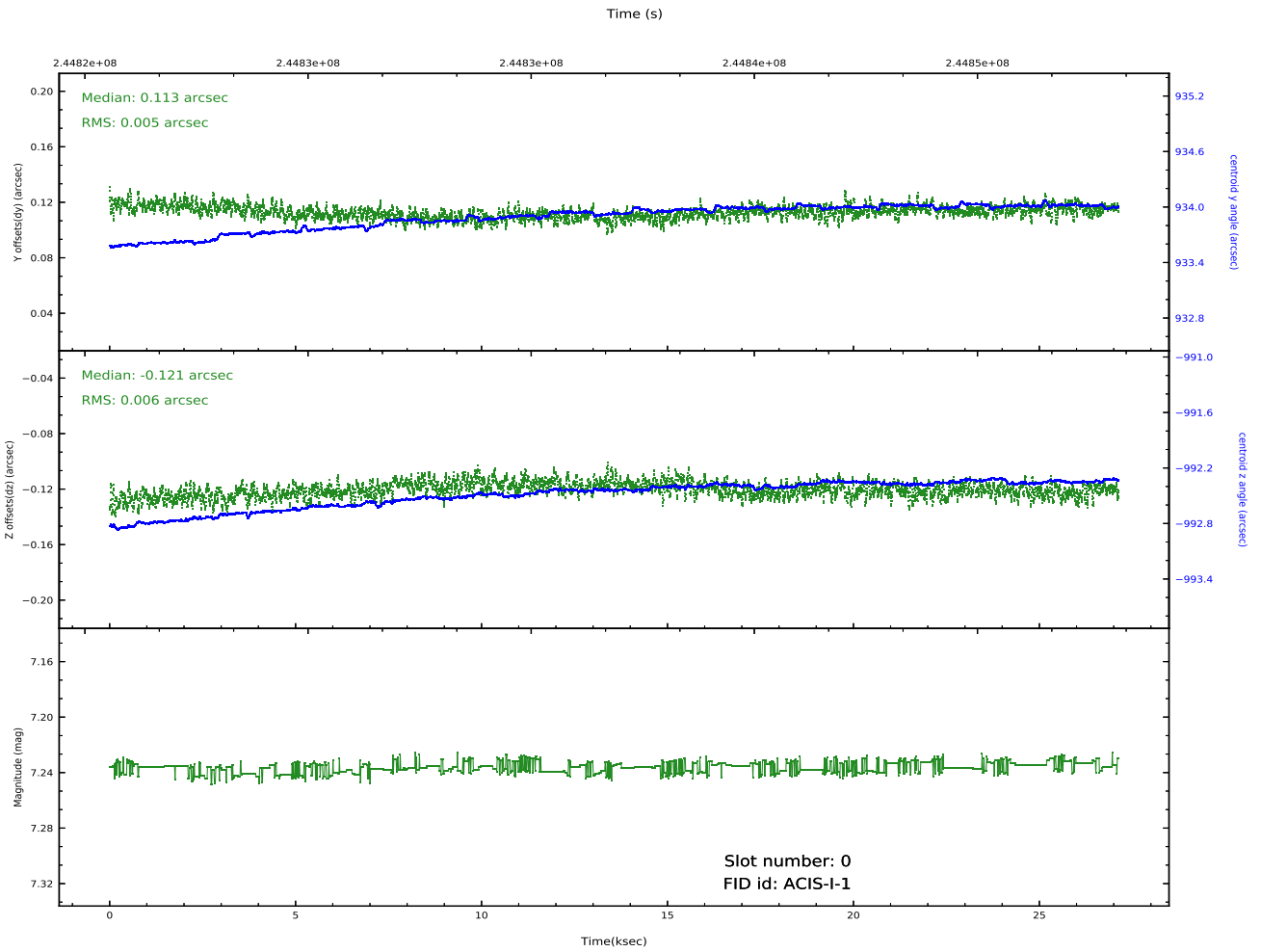
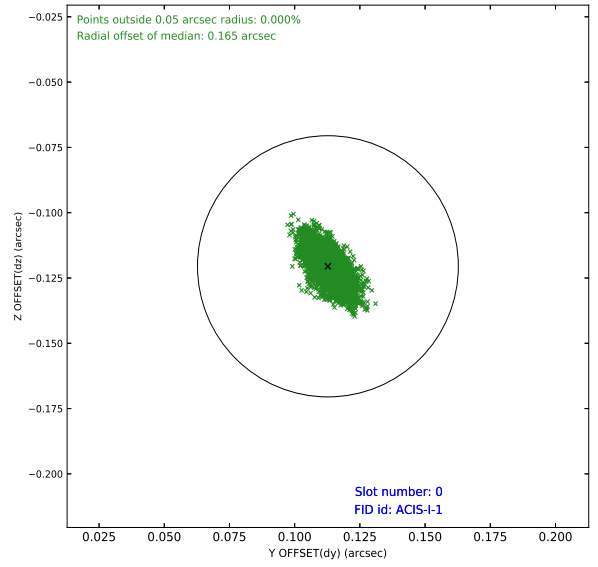
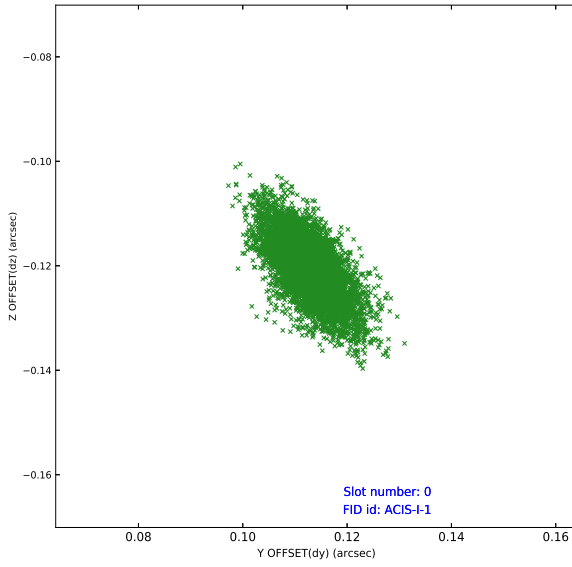


Time (s)

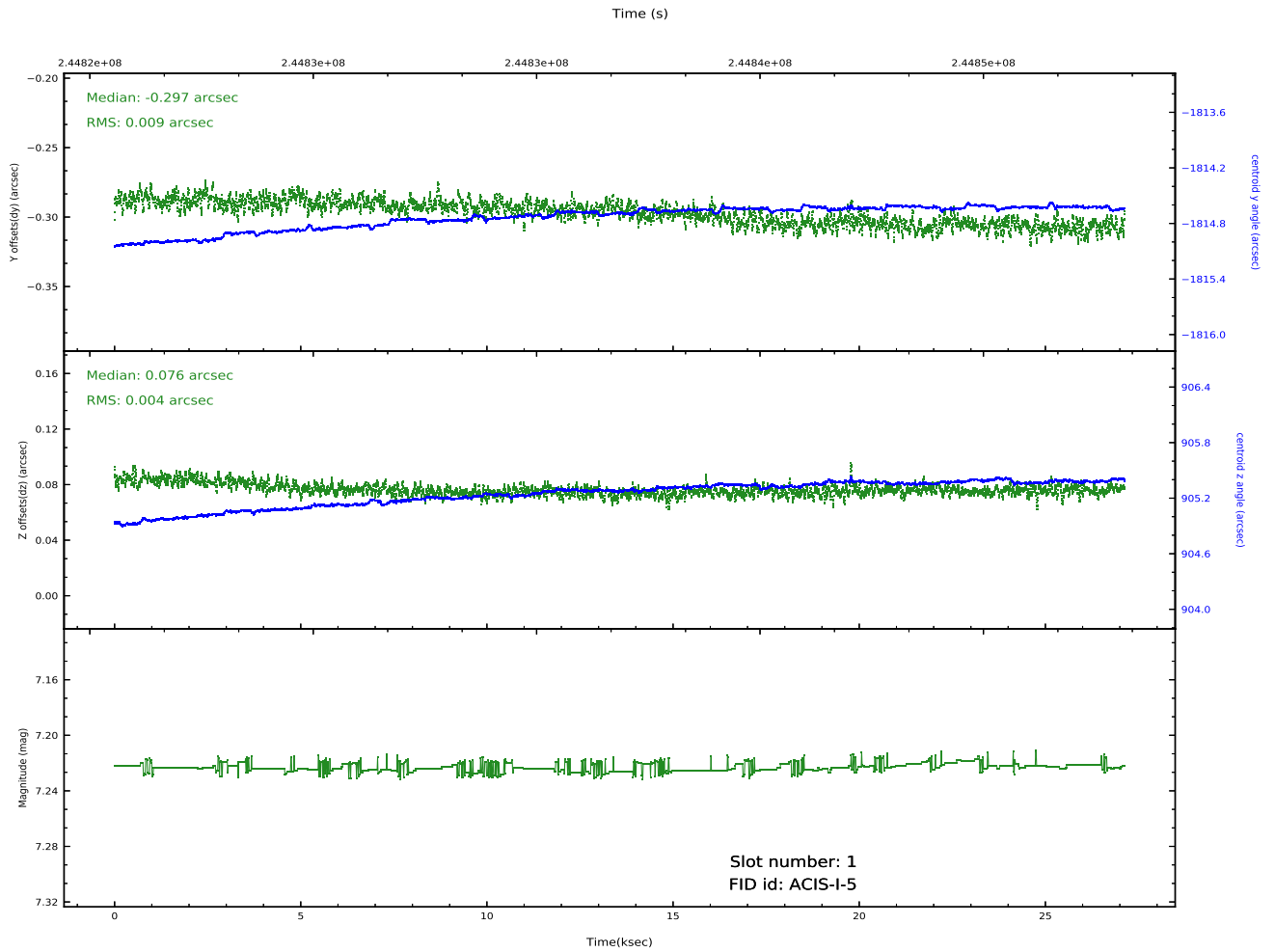
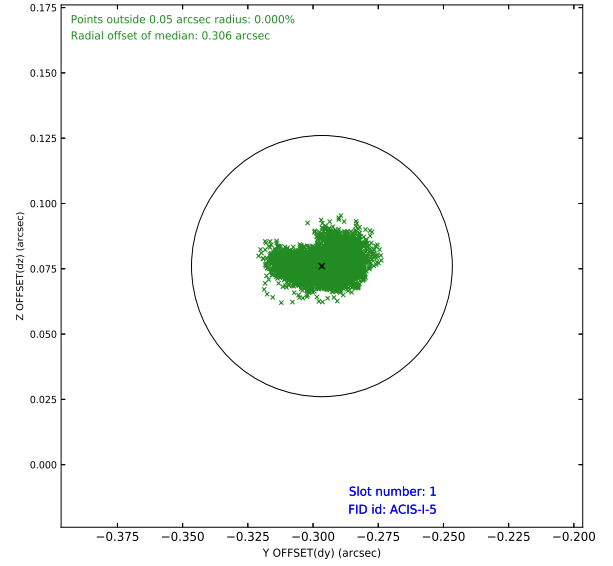
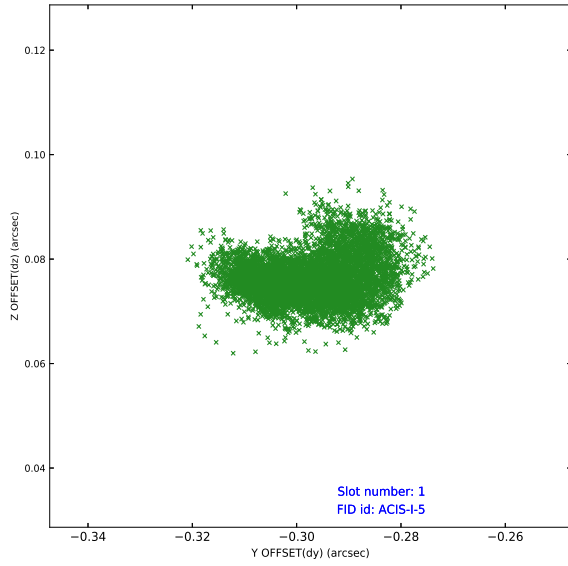


## 2.5 FID Slots

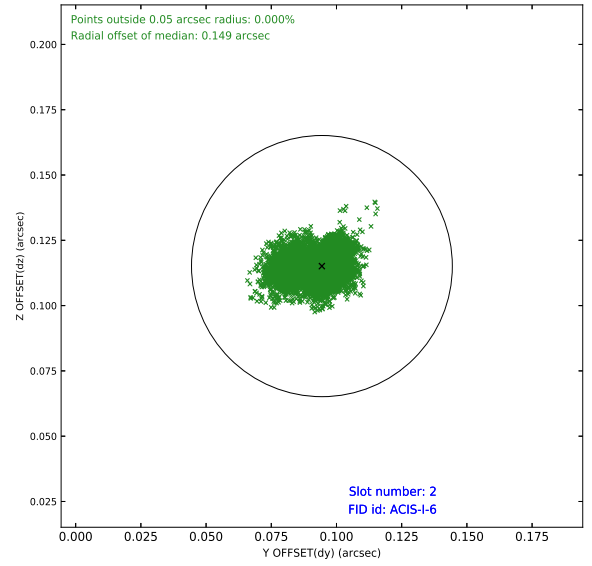
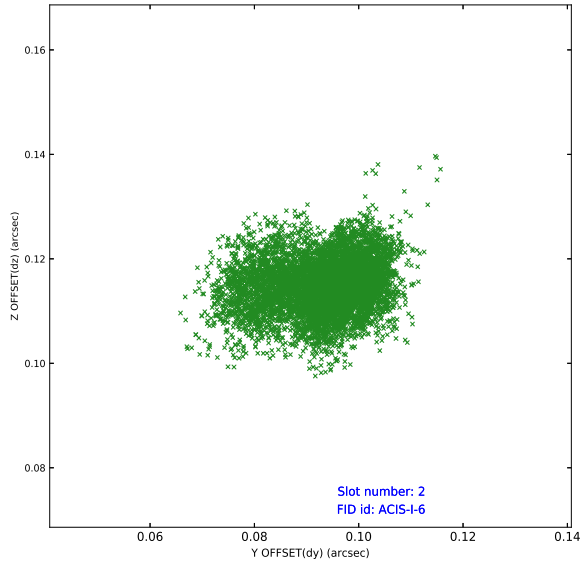
### 2.5.1 Slot 0



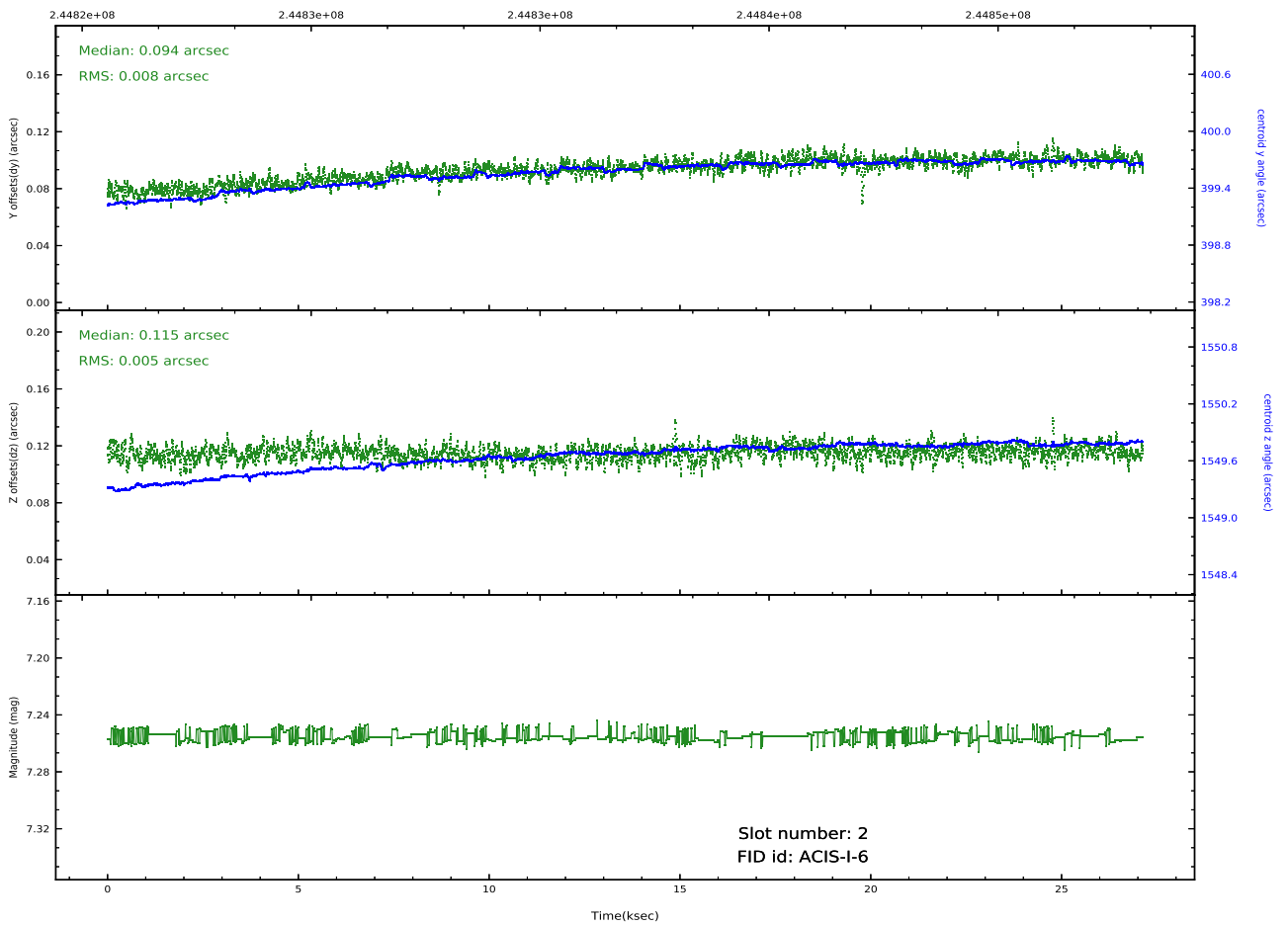
## 2.5.2 Slot 1



### 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	26.99773

## 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.