

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 6218 - L2 Version 5  
Chandra X-Ray Center

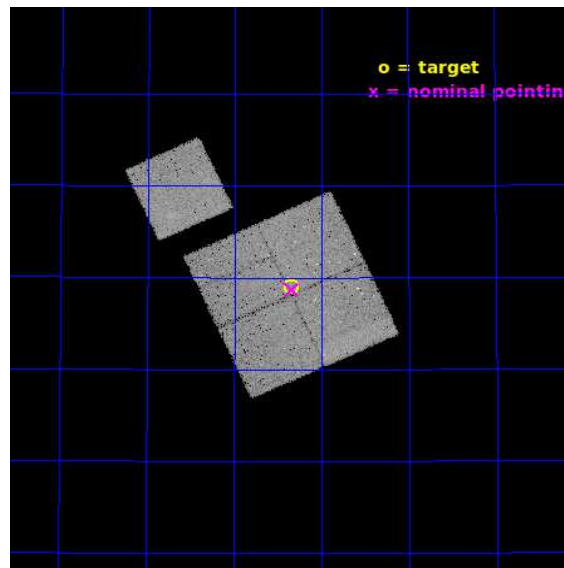
L2 Processing Date : Oct 10 2020

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# 1 Front

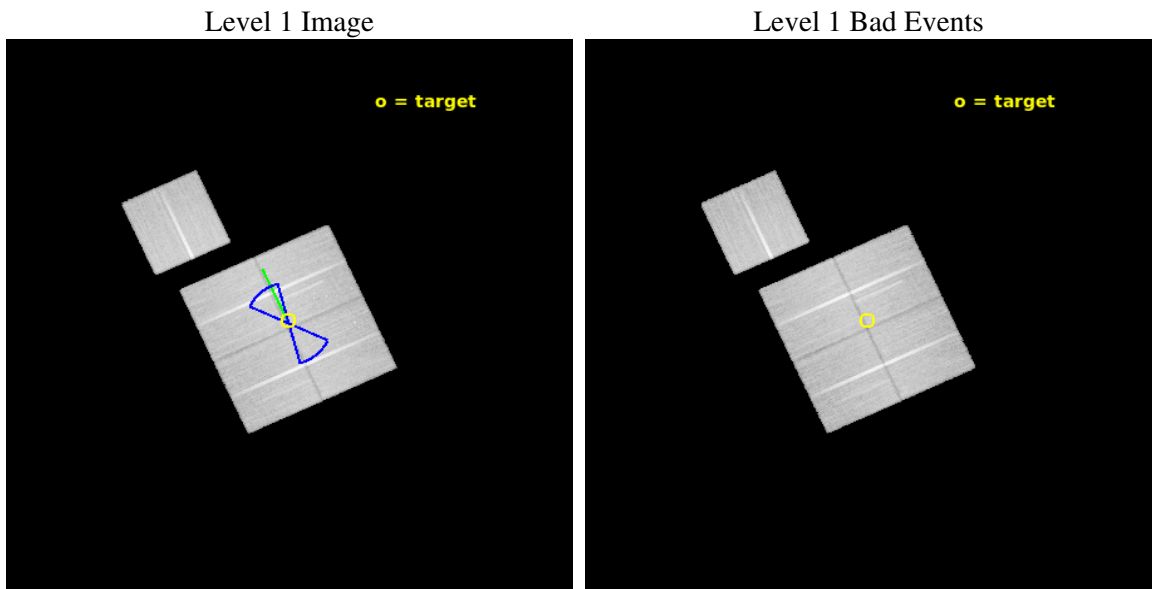
seq_num	900352	Sequence number
obs_id	6218	Observation id
title	Deep Chandra Imaging of the Extended Groth Strip: The Co-evolution of Black Holes and Galaxies	Proposal title
observer	Prof Kirpal Nandra	Principal investigator
object	Extended Groth Strip (EGS)	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	214.584915	Observer's specified target RA [deg]
dec_targ	52.65052	Observer's specified target Dec [deg]
ra_nom	214.5849118095	Nominal RA [deg]
dec_nom	52.644881601996	Nominal Dec [deg]
roll_nom	335.28281212505	Nominal Roll [deg]
revision	5	Processing version of data
ontime	41111.341349363	Sum of GTIs [s]
livetime	40574.191408905	Livetime [s]
ontime0	41112.158950627	Sum of GTIs [s]
ontime1	41109.017950505	Sum of GTIs [s]
ontime2	41112.158950657	Sum of GTIs [s]
ontime3	41111.341349363	Sum of GTIs [s]
ontime6	41105.877000213	Sum of GTIs [s]
l2events	109024	Number of level 2 events



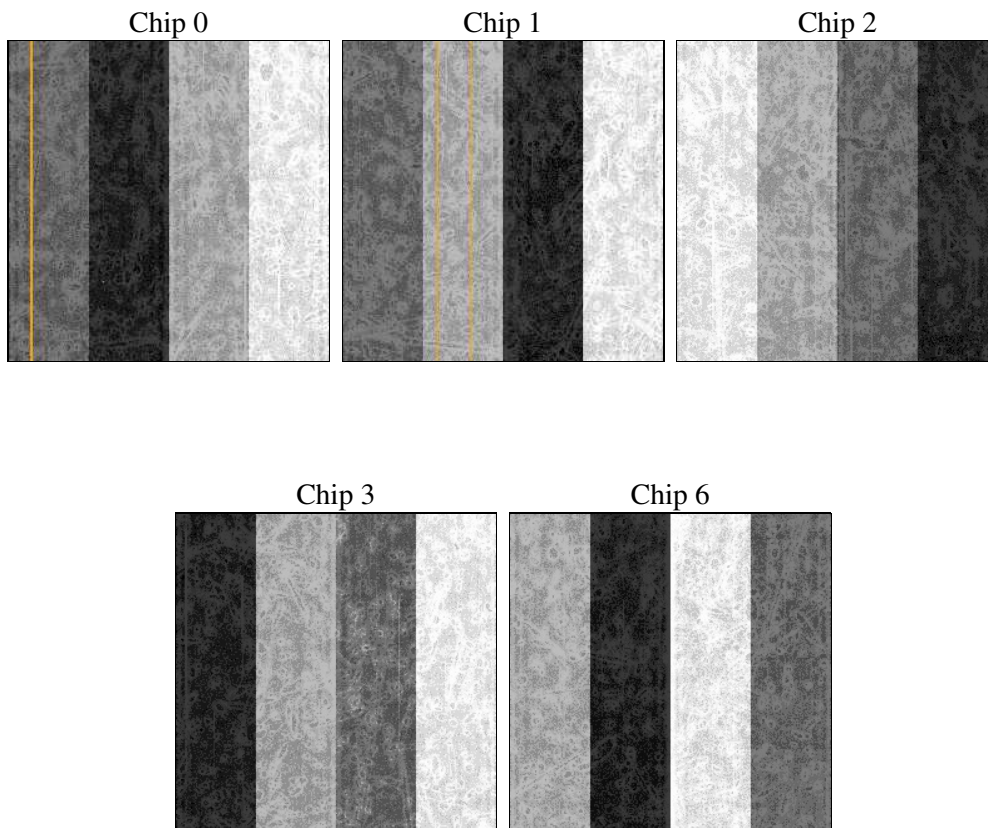
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	41000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	41111.341349363	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime0	41112.158950627	Sum of GTIs [s]
date	2020-10-11T01:06:32	Date and time of file creation	ontime1	41109.017950505	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	41112.158950657	Sum of GTIs [s]
			ontime3	41111.341349363	Sum of GTIs [s]
			ontime6	41105.877000213	Sum of GTIs [s]
			l1events	1295871	Number of level 1 events

### 2.1.4 Events

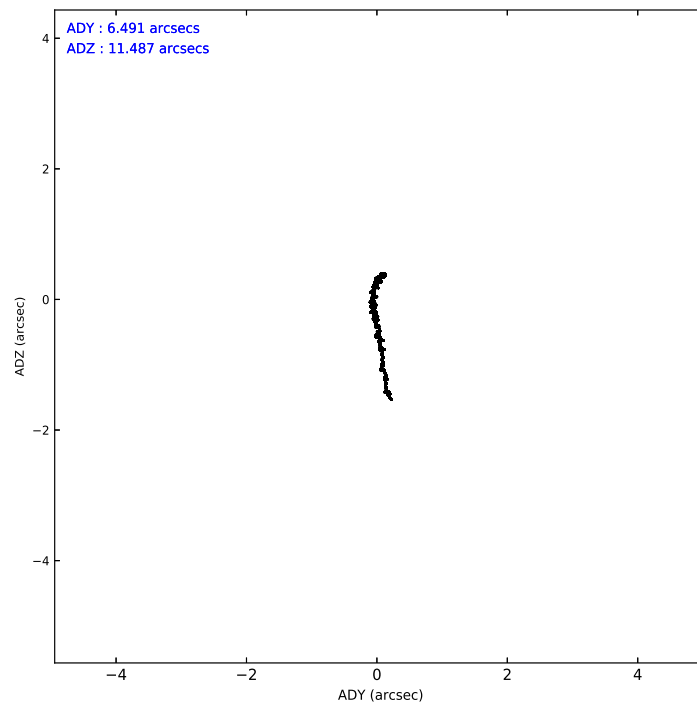
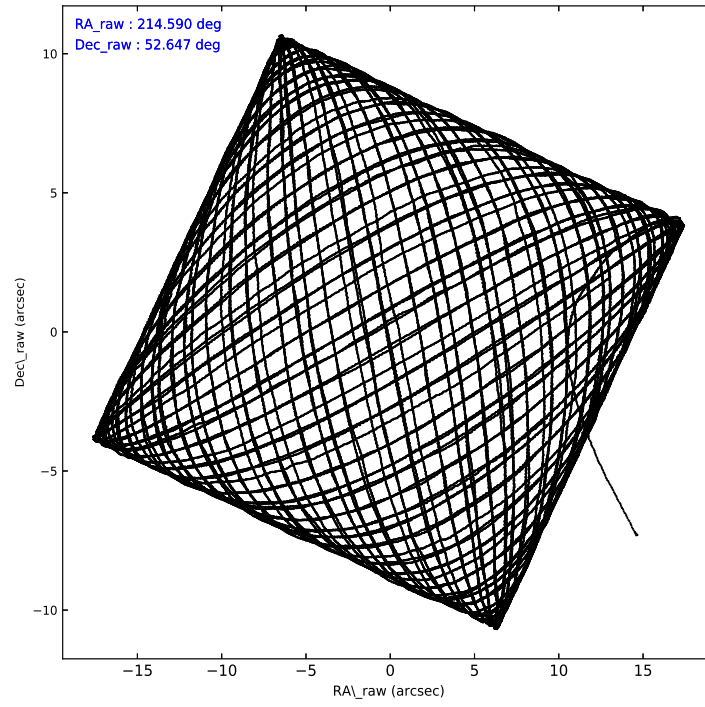
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	243904	247739	276384	264507	263337
rejected events	218789	218420	251167	238837	236682
rejected %	89%	88%	90%	90%	89%

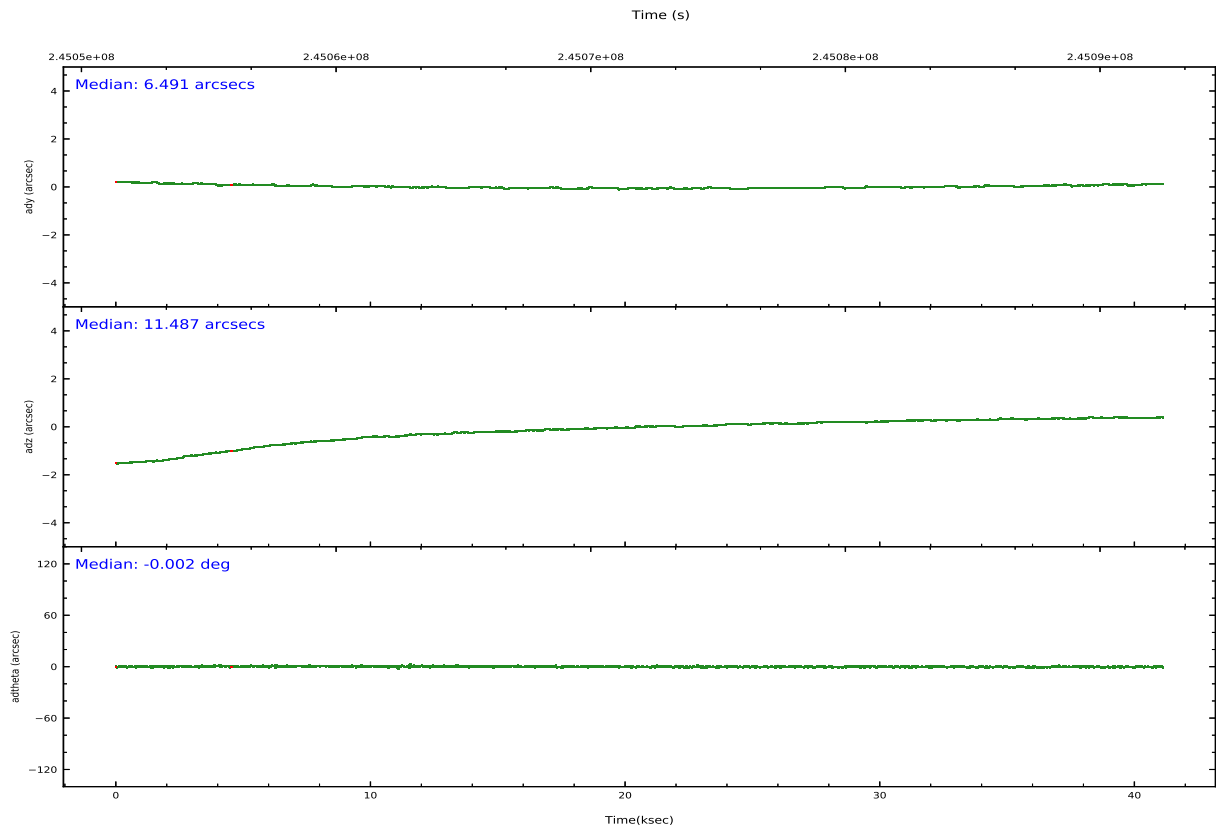
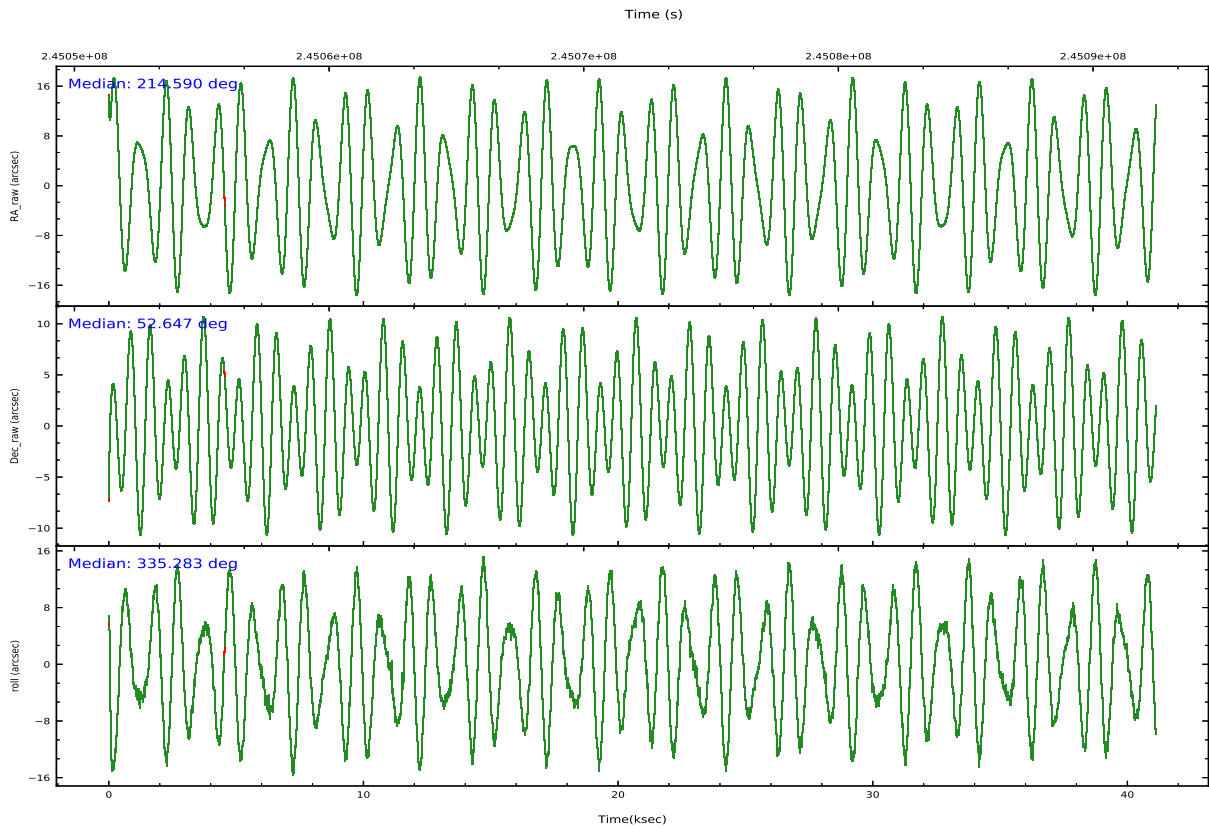
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	8465	10702	9052	9555	9161
	3%	4%	3%	3%	3%
grade 1 events	101	124	144	134	101
	0%	0%	0%	0%	0%
grade 2 events	6217	6537	5963	5466	5863
	2%	2%	2%	2%	2%
grade 3 events	2898	3253	2788	2984	3012
	1%	1%	1%	1%	1%
grade 4 events	2778	3183	2875	2780	2964
	1%	1%	1%	1%	1%
grade 5 events	9180	10146	8849	10700	10567
	3%	4%	3%	4%	4%
grade 6 events	4967	5883	4747	5091	5858
	2%	2%	1%	1%	2%
grade 7 events	209298	207911	241966	227797	225811
	85%	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	214.545137	214.5849118095	Subarray requested	NONE	NONE
[deg] Pointing Dec	52.644450	52.644881601996	Alternating exposures requested	N	N
[deg] Pointing Roll	335.114450	335.28281212505	[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)	245051478.184000	245050296.92376			
Observation start date	2005-10-07T05:50:14	2005-10-07T05:31:36			
[s] Observation end time (MET)	245092478.184000	245094091.07578			
Observation end date	2005-10-07T17:13:34	2005-10-07T17:41:31			
Read mode	TIMED	TIMED			

## 2.3 Aspect





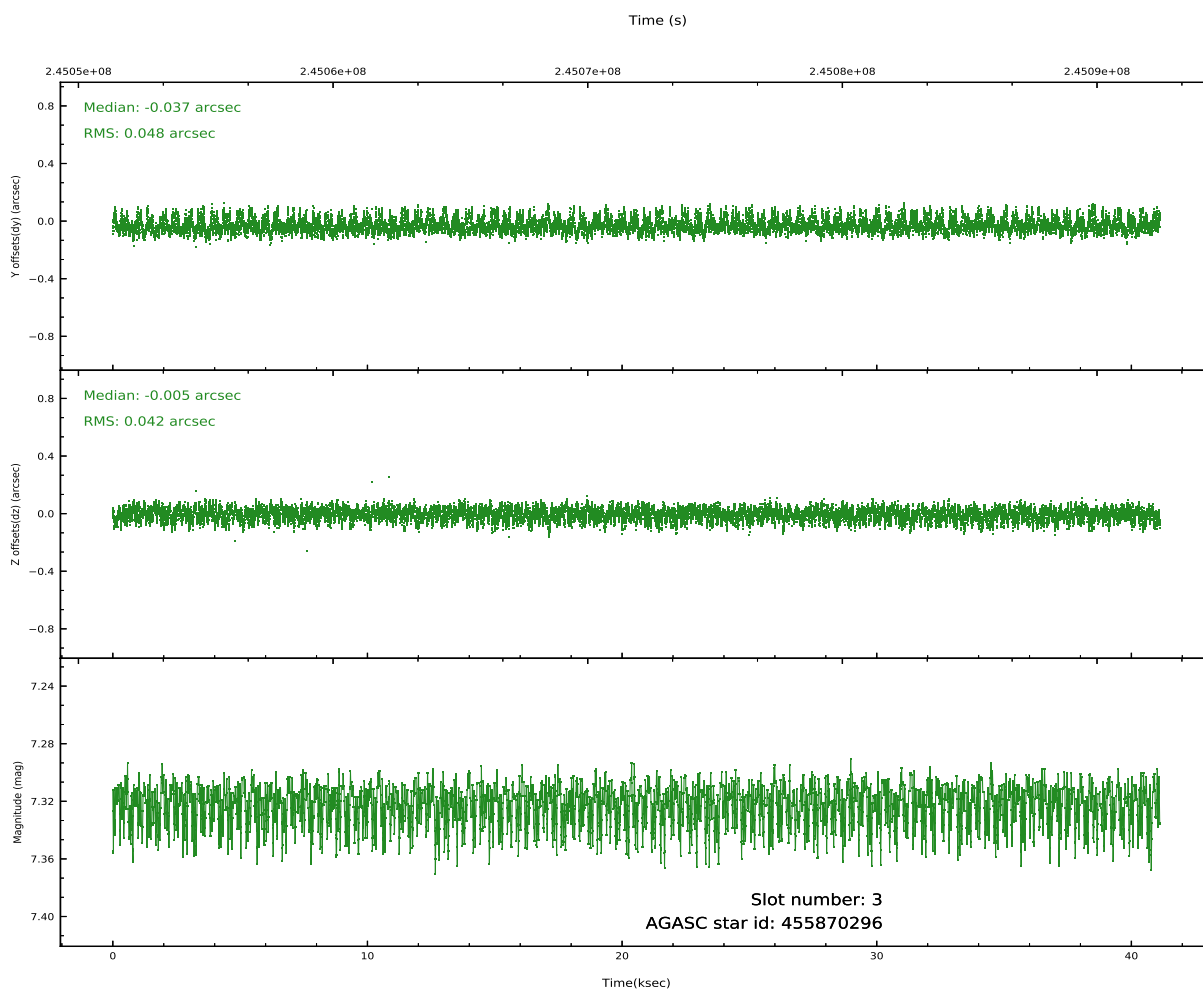
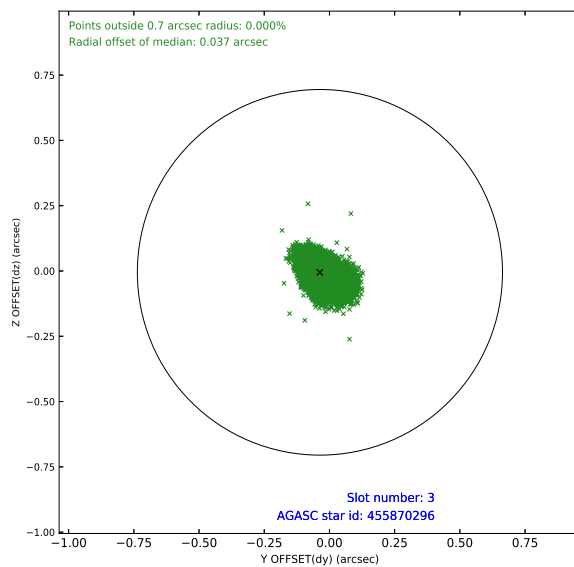
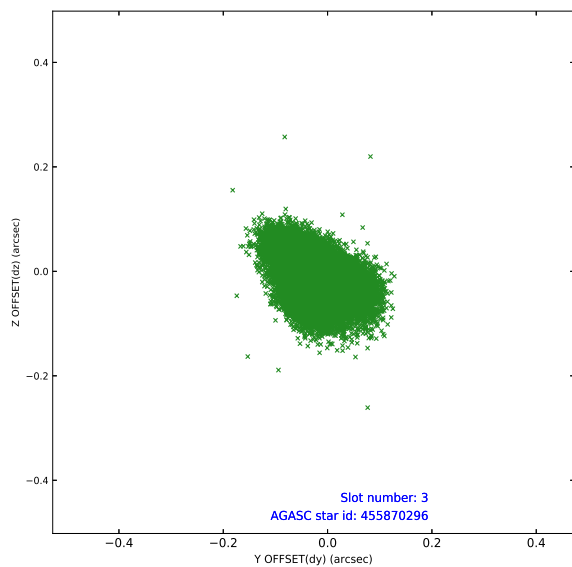
### Slot Statistics

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	10023	1.000	-0.011	-0.104	0.016	0.091	0.000000	0.000000	933.18	-834
1	FID		ACIS-I-4	7.18	10020	1.000	0.129	0.100	0.013	0.056	0.000000	0.000000	2153.37	1065
2	FID		ACIS-I-5	7.22	10021	1.000	-0.216	0.074	0.010	0.035	0.000000	0.000000	-1815.02	1062
3	GUIDE	used	455870296	7.32	20046	1.000	-0.037	-0.005	0.067	0.113	214.629779	52.033323	1096.24	-1916
4	GUIDE	used	455871352	8.12	20047	1.000	0.009	0.067	0.063	0.100	215.099961	52.172669	1824.44	-1020
5	GUIDE	used	505806936	7.01	20042	1.000	-0.023	-0.025	0.063	0.099	213.820815	52.535927	-1277.37	-1014
6	GUIDE	used	505812088	8.16	20036	1.000	0.094	0.018	0.071	0.119	214.186617	53.263562	-1639.04	1698
7	GUIDE	used	505812376	7.70	20046	1.000	-0.045	-0.050	0.048	0.076	214.039537	52.937930	-1441.45	500

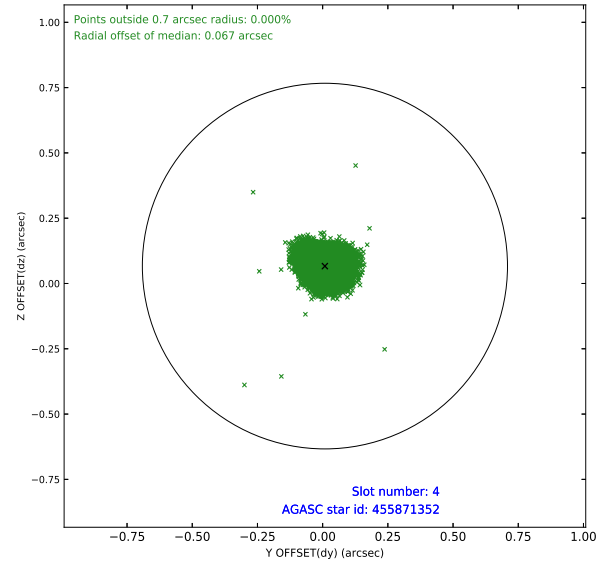
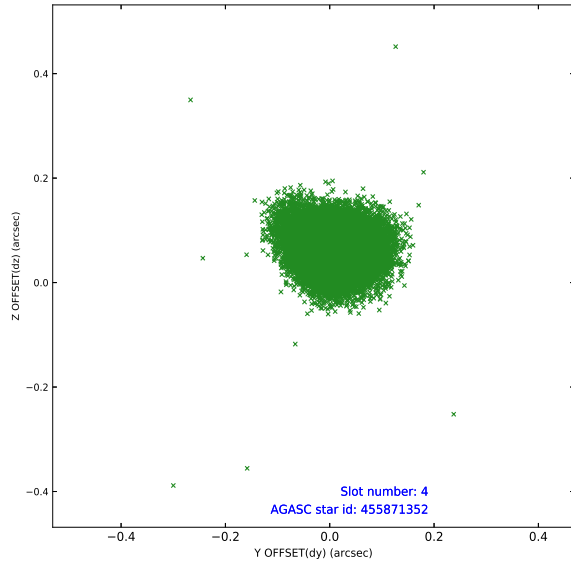
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## 2.4 Star Slots

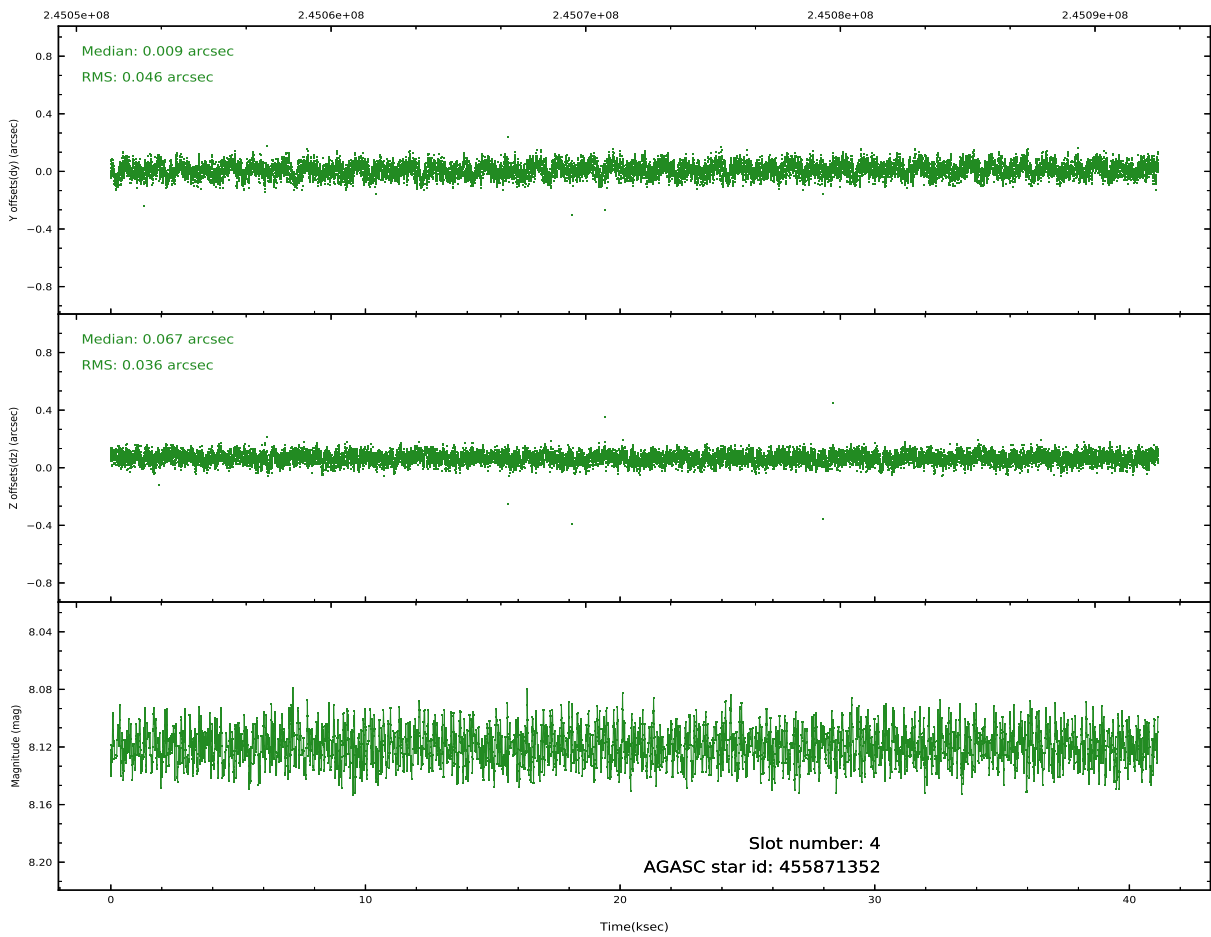
### 2.4.1 Slot 3



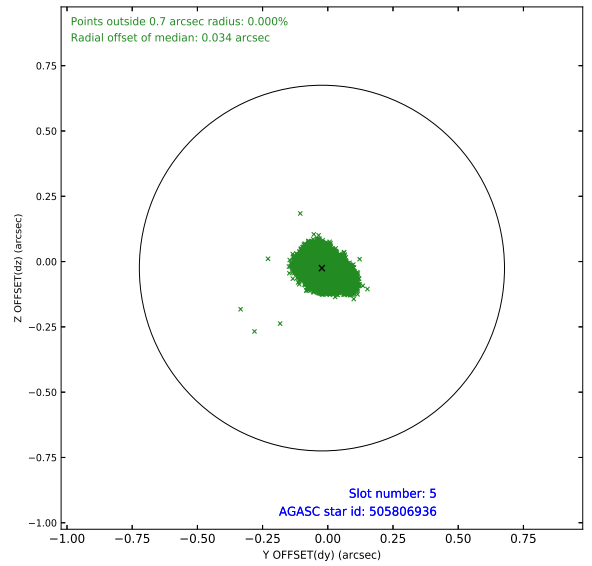
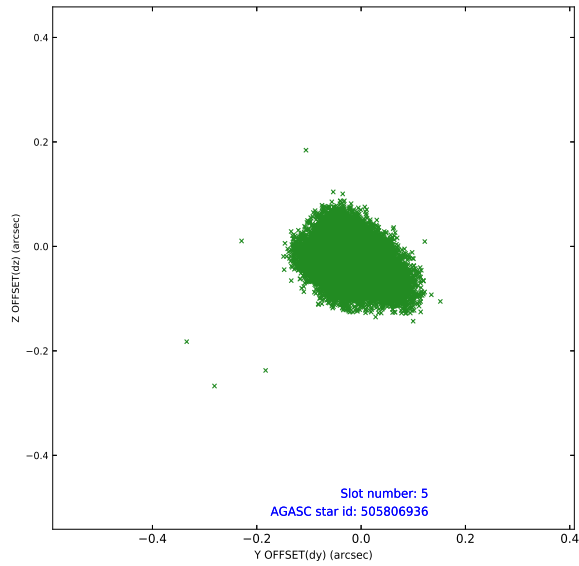
## 2.4.2 Slot 4



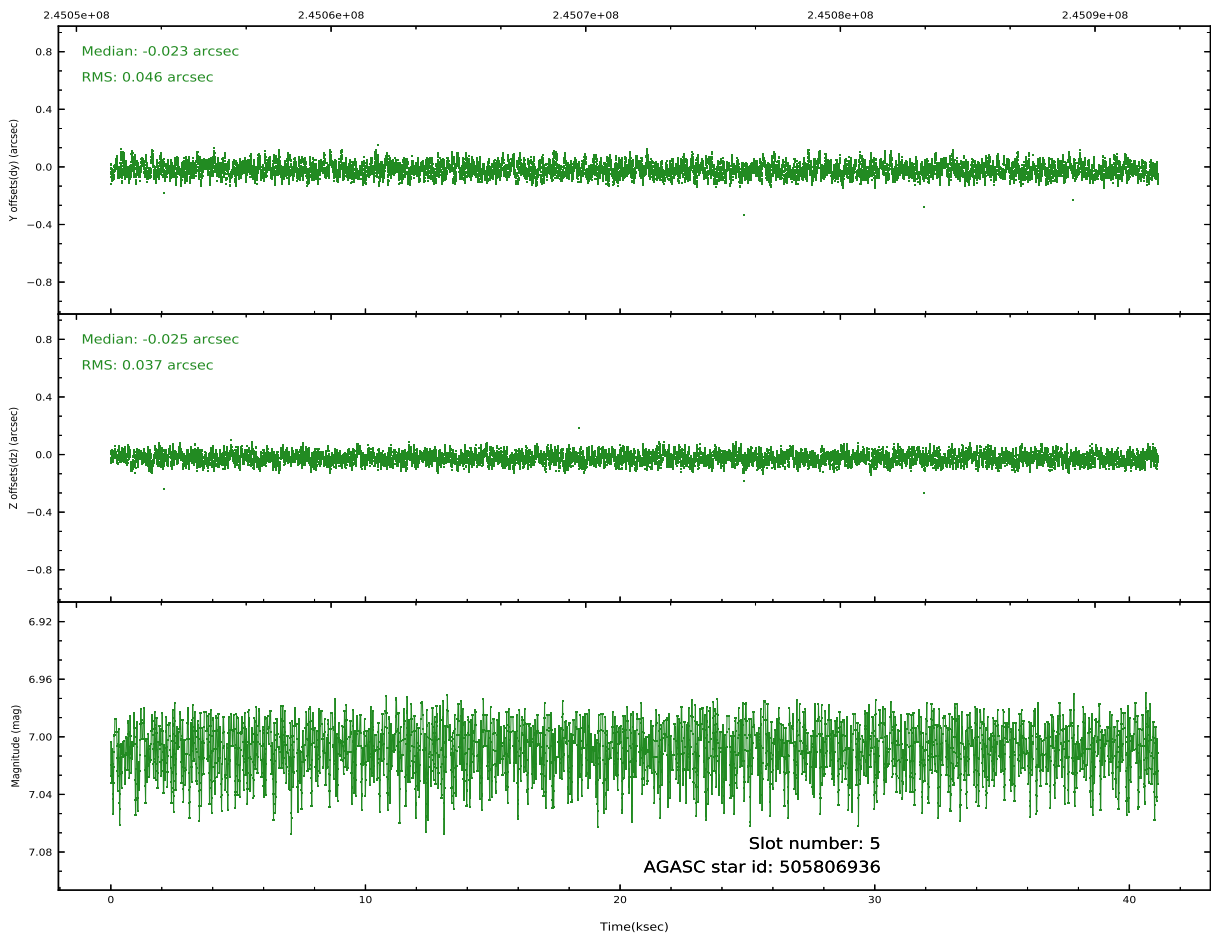
Time (s)



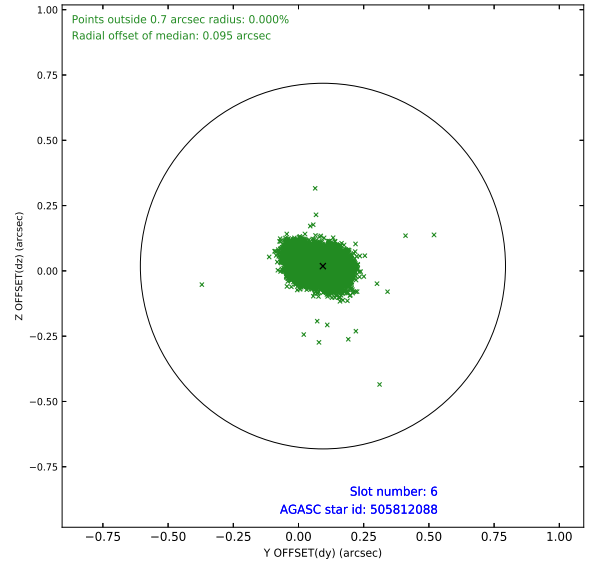
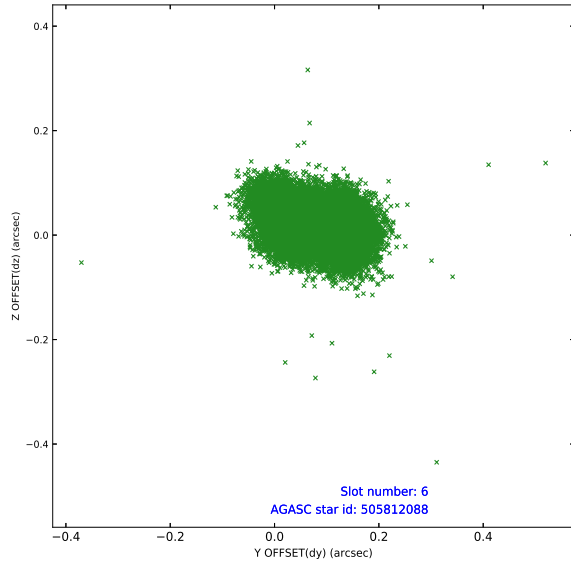
### 2.4.3 Slot 5



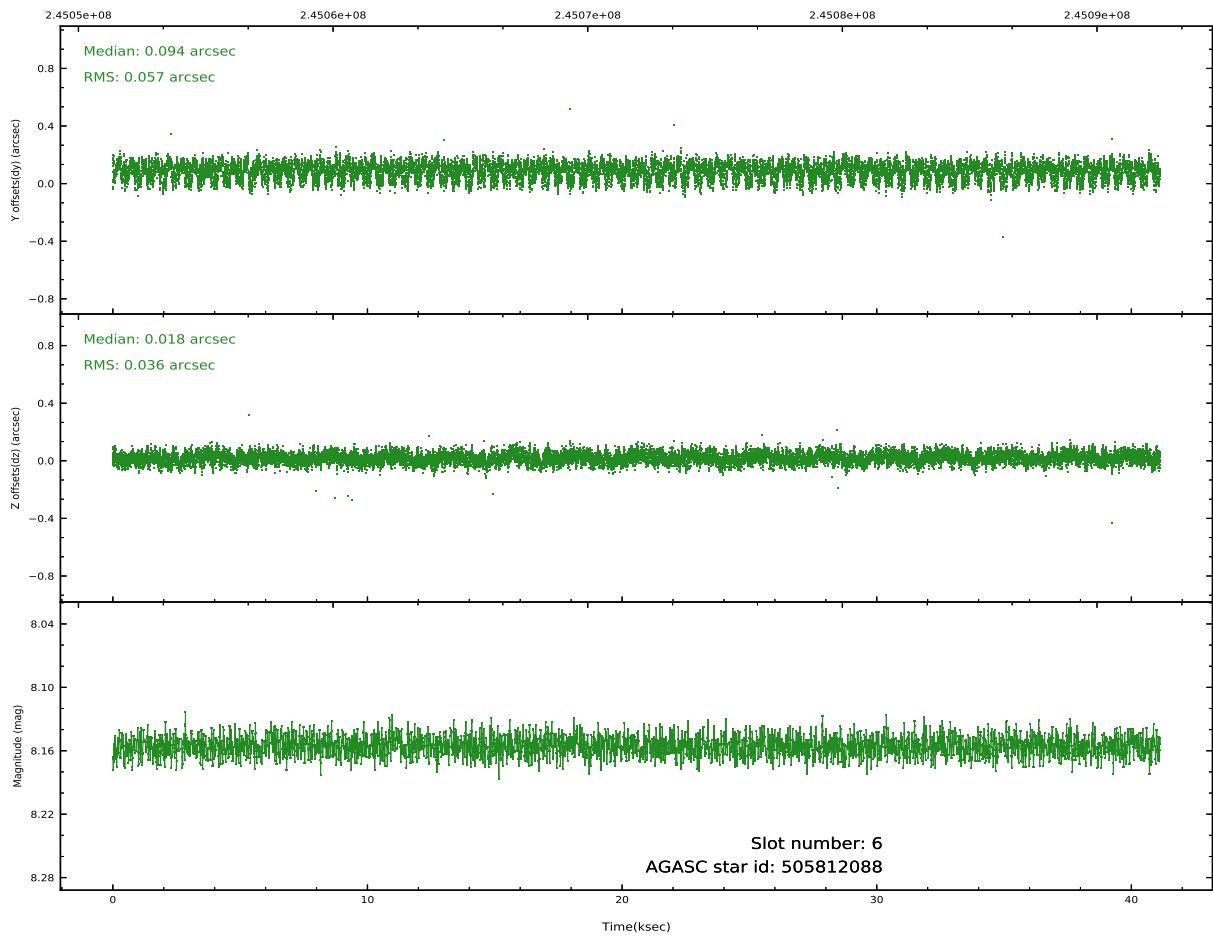
Time (s)



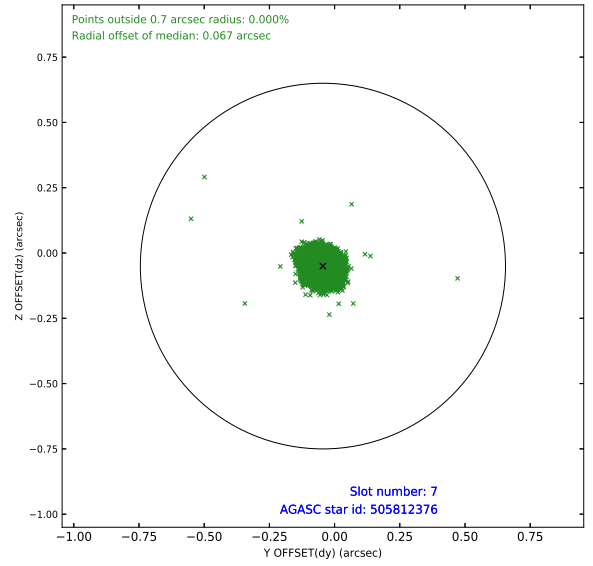
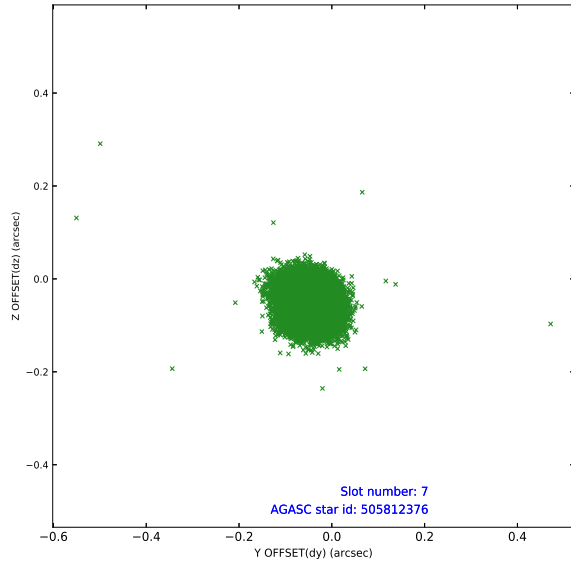
## 2.4.4 Slot 6



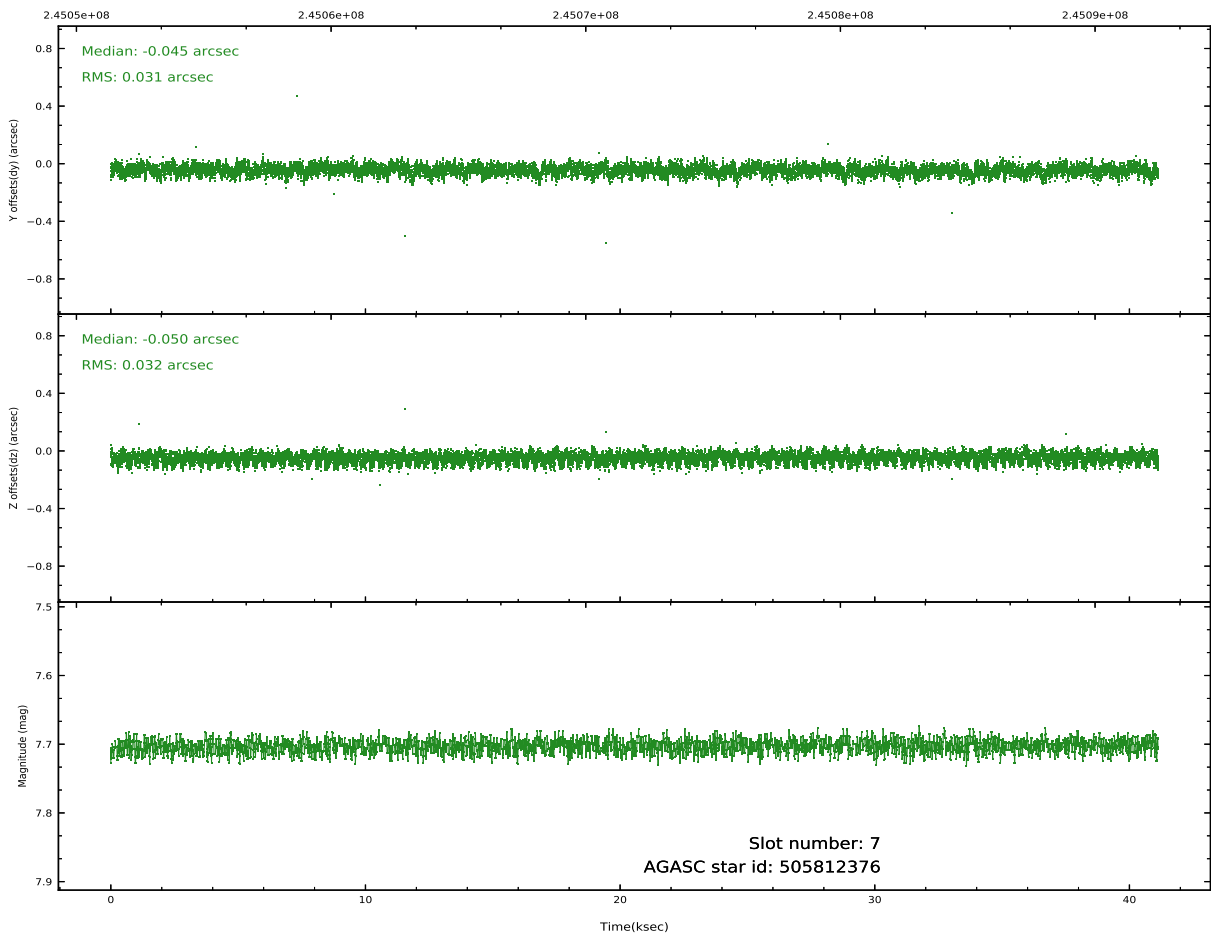
Time (s)



## 2.4.5 Slot 7

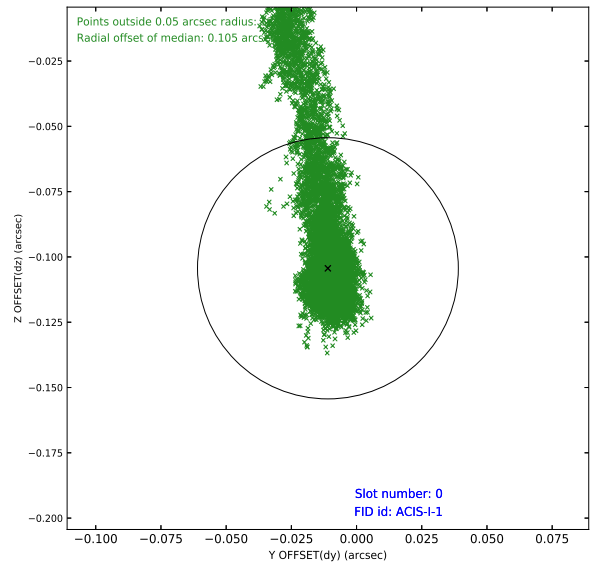
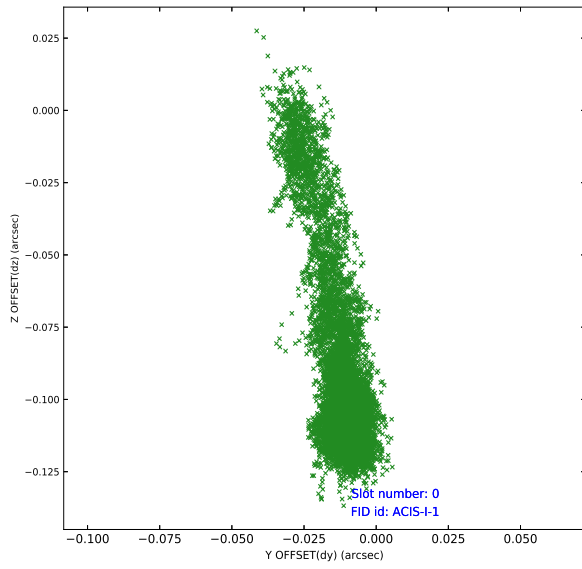


Time (s)

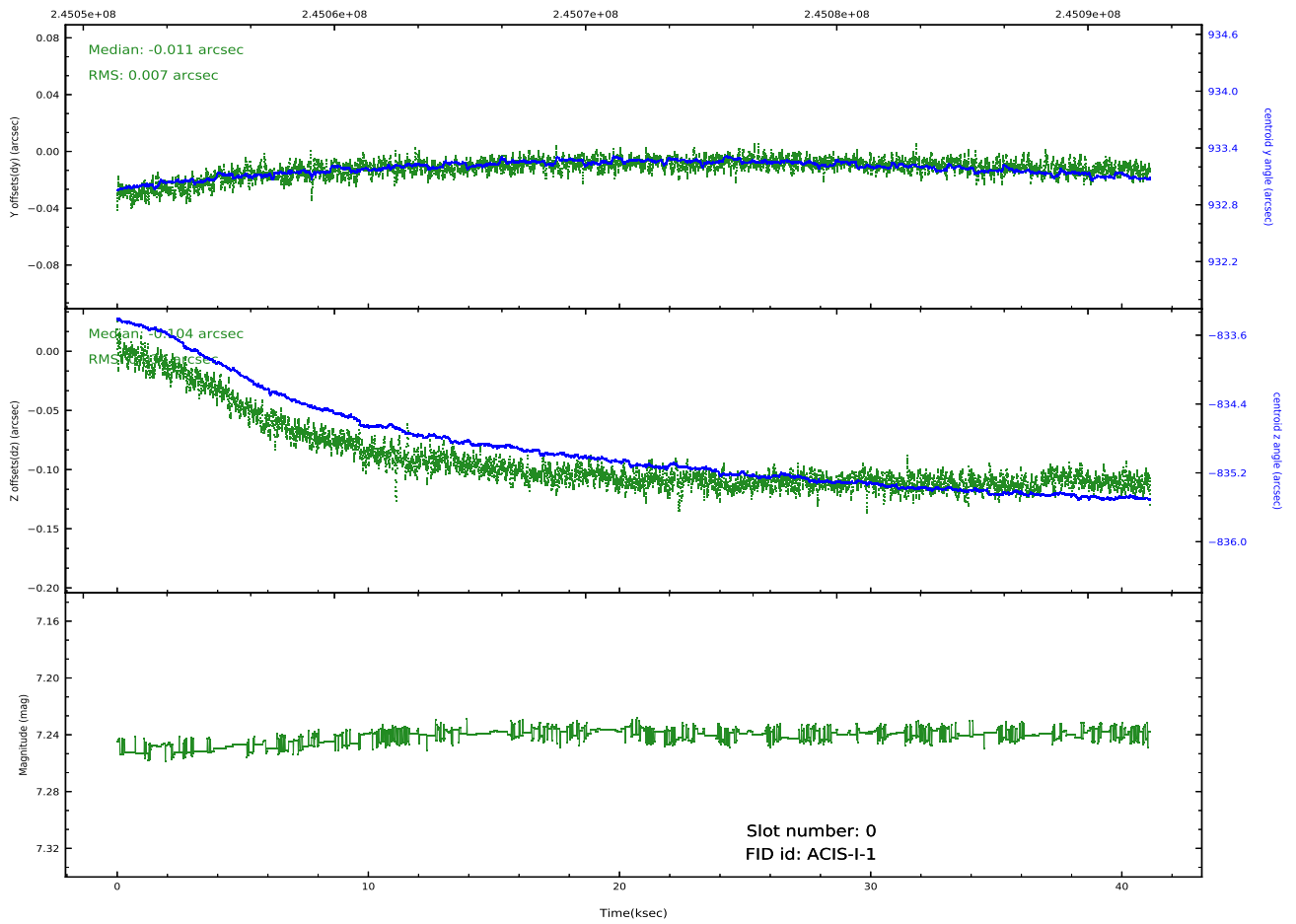


## 2.5 FID Slots

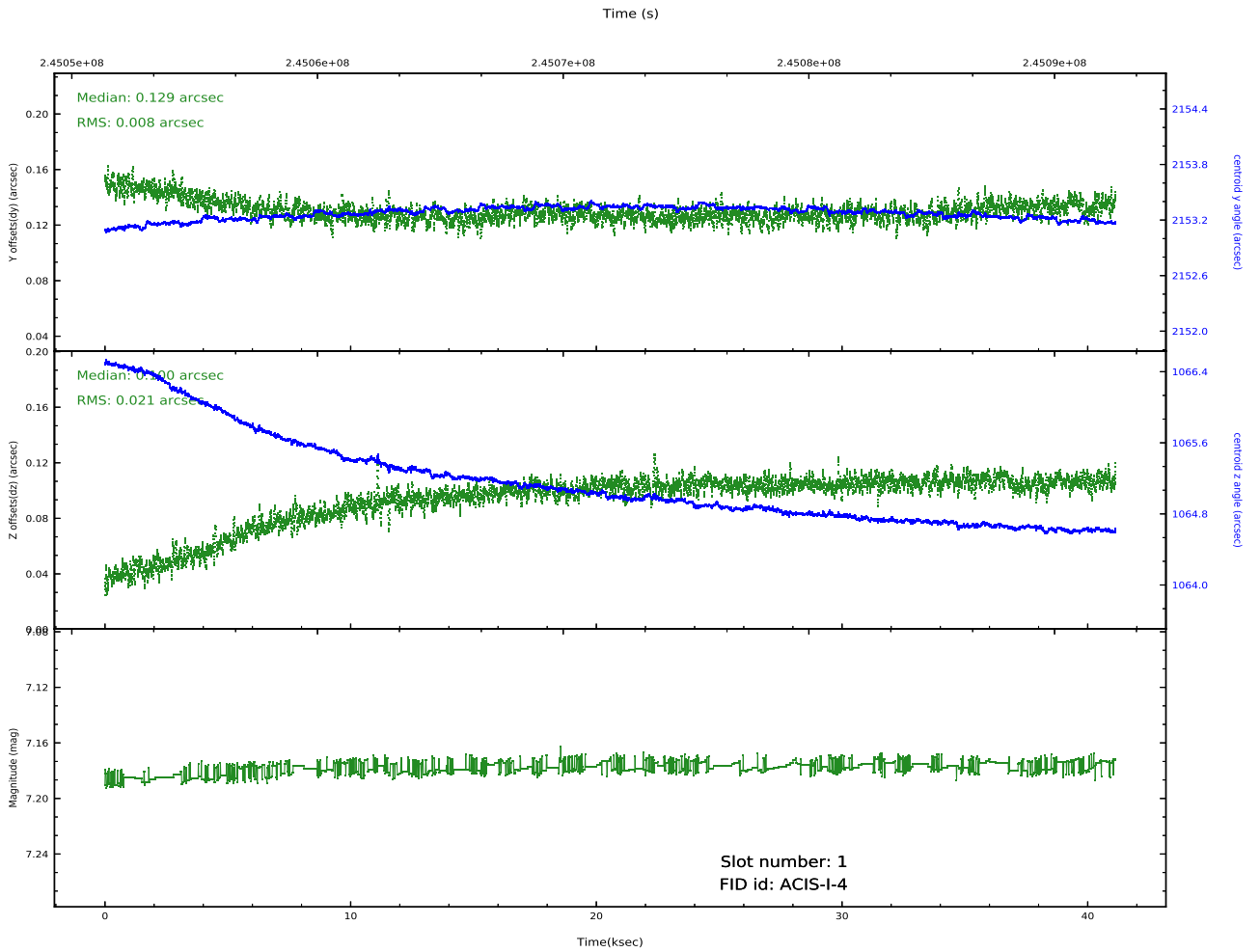
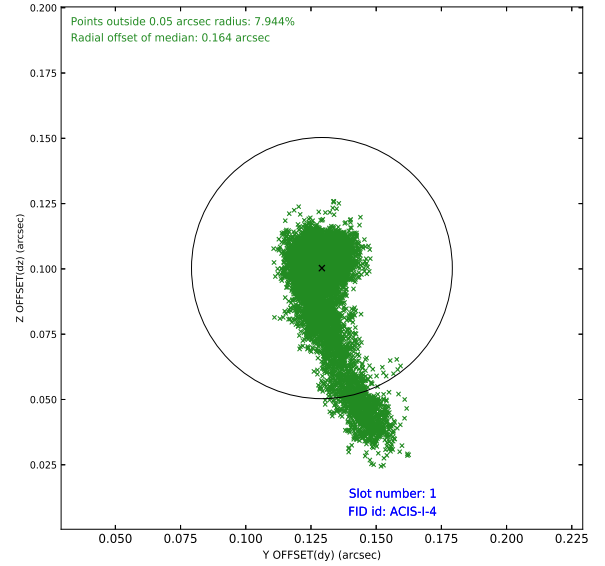
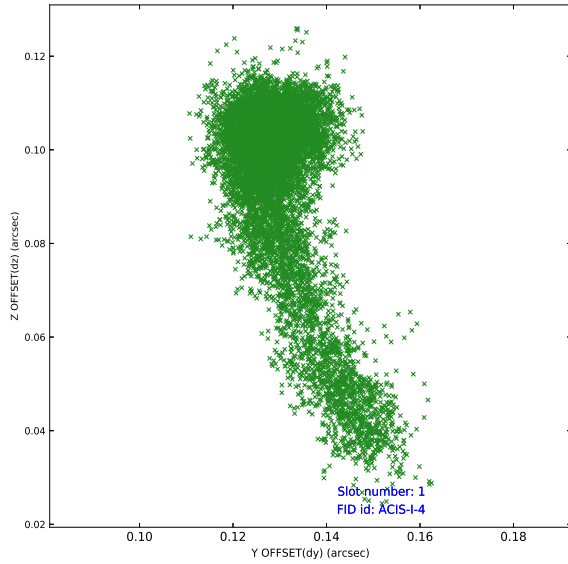
### 2.5.1 Slot 0



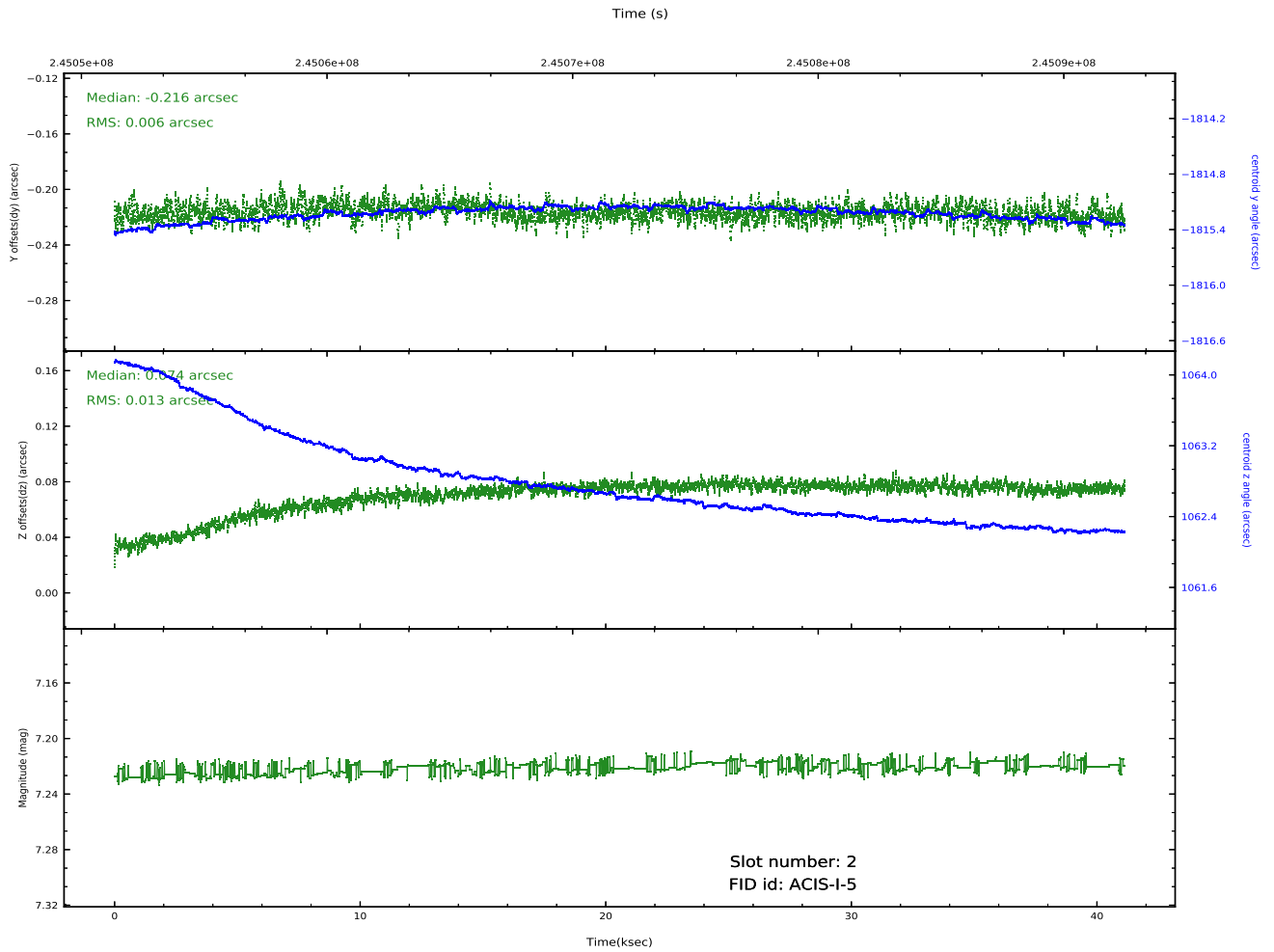
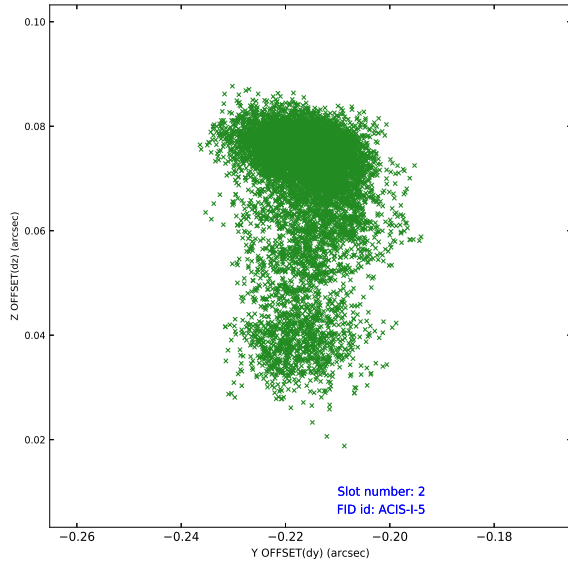
Time (s)



## 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)	2020.10.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	41.11289

## 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.