

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 6213 - L2 Version 5  
Chandra X-Ray Center

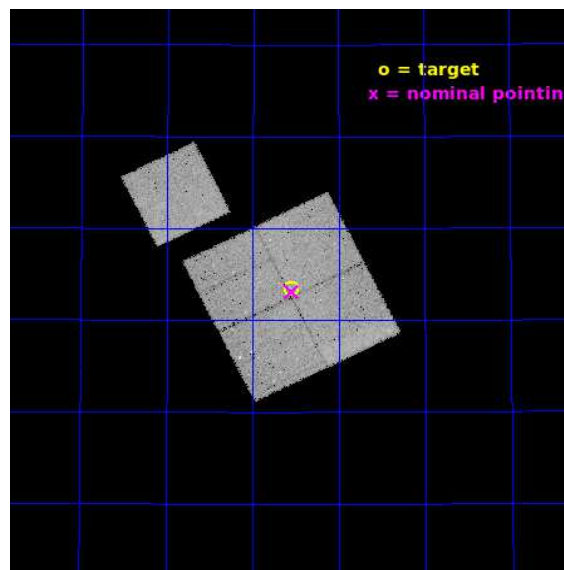
L2 Processing Date : Oct 10 2020

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# 1 Front

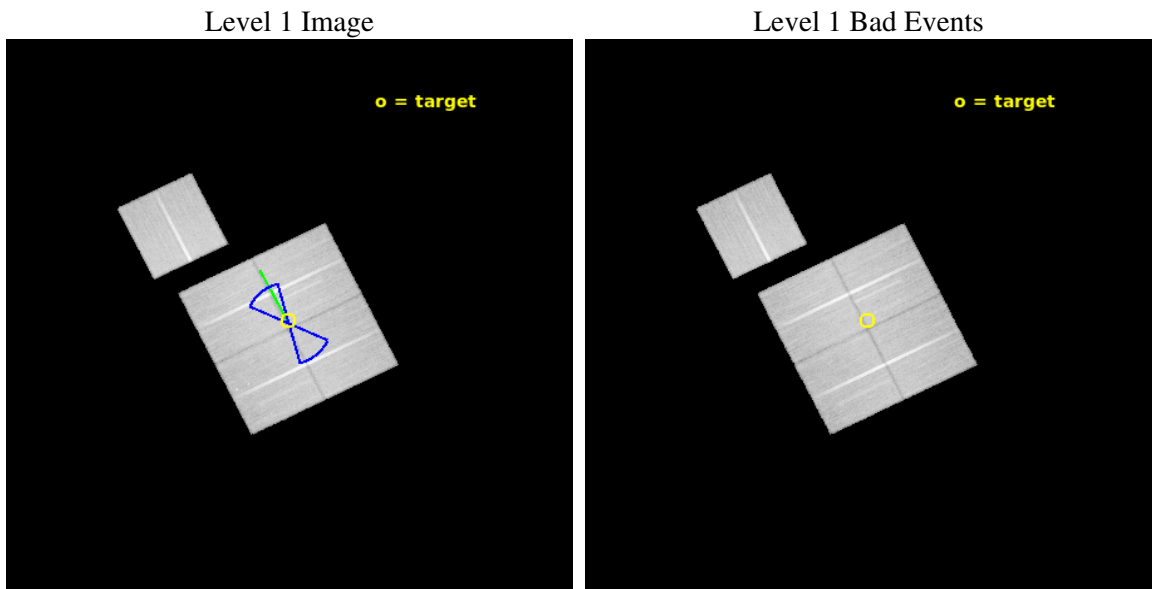
seq_num	900349	Sequence number
obs_id	6213	Observation id
title	Deep Chandra Imaging of the Extended Groth Strip: The Co-evolution of Black Holes and Galaxies	Proposal title
observer	Prof Kirpal Nandra	Principal investigator
object	Extended Groth Strip (EGS)	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	215.386246	Observer's specified target RA [deg]
dec_targ	53.224361	Observer's specified target Dec [deg]
ra_nom	215.38596075433	Nominal RA [deg]
dec_nom	53.218715191588	Nominal Dec [deg]
roll_nom	333.52803621705	Nominal Roll [deg]
revision	5	Processing version of data
ontime	48136.677006543	Sum of GTIs [s]
livetime	47507.735883746	Livetime [s]
ontime0	48130.395006359	Sum of GTIs [s]
ontime1	48136.676986724	Sum of GTIs [s]
ontime2	48142.958937109	Sum of GTIs [s]
ontime3	48136.677006543	Sum of GTIs [s]
ontime6	48142.958947152	Sum of GTIs [s]
l2events	126165	Number of level 2 events



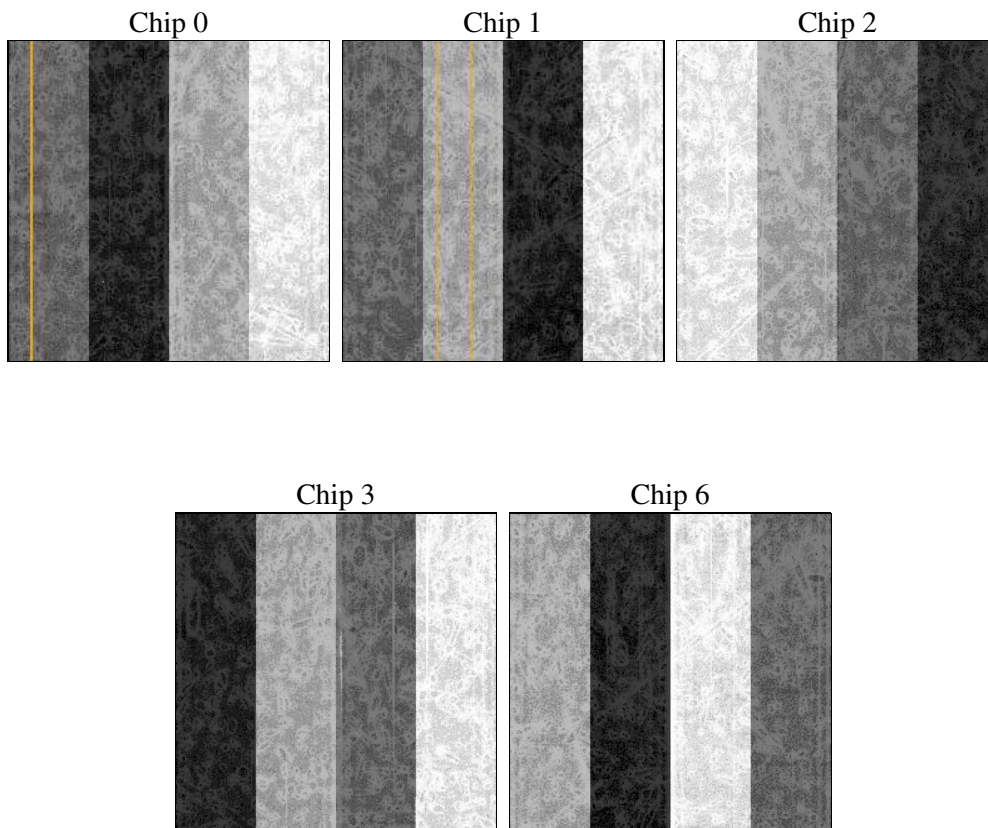
## 2 OBI

### 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	48136.677006543	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime0	48130.395006359	Sum of GTIs [s]
date	2020-10-11T01:41:20	Date and time of file creation	ontime1	48136.676986724	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	48142.958937109	Sum of GTIs [s]
			ontime3	48136.677006543	Sum of GTIs [s]
			ontime6	48142.958947152	Sum of GTIs [s]
			l1events	1511381	Number of level 1 events

### 2.1.4 Events

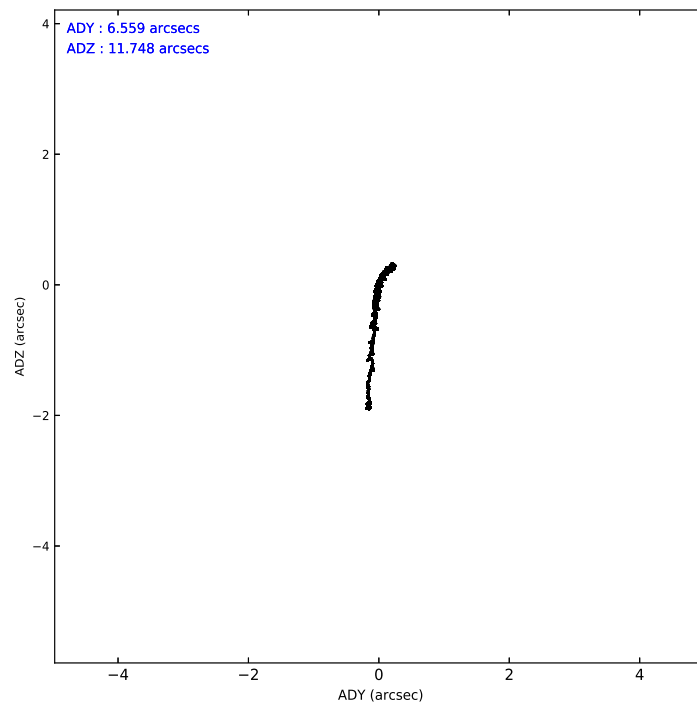
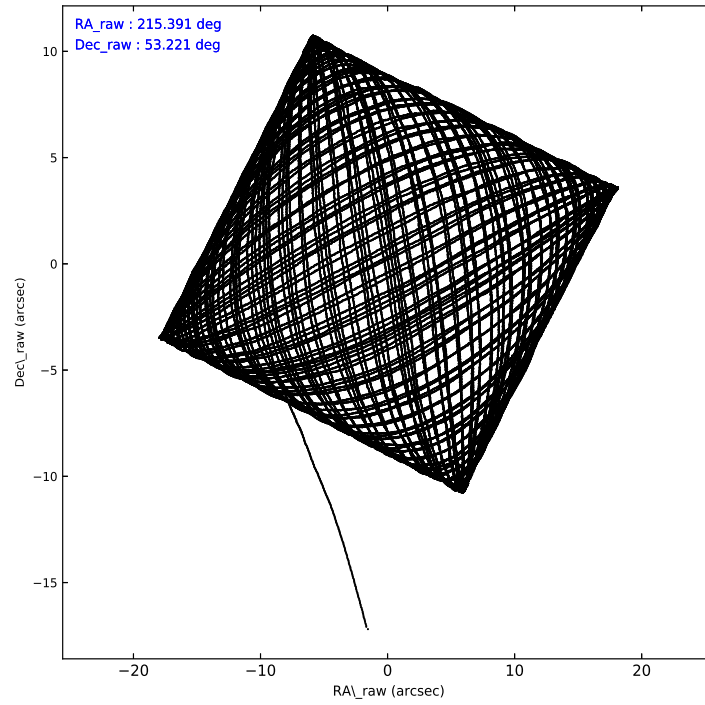
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	293506	283045	319865	310775	304190
rejected events	262863	249358	290176	282133	273613
rejected %	89%	88%	90%	90%	89%

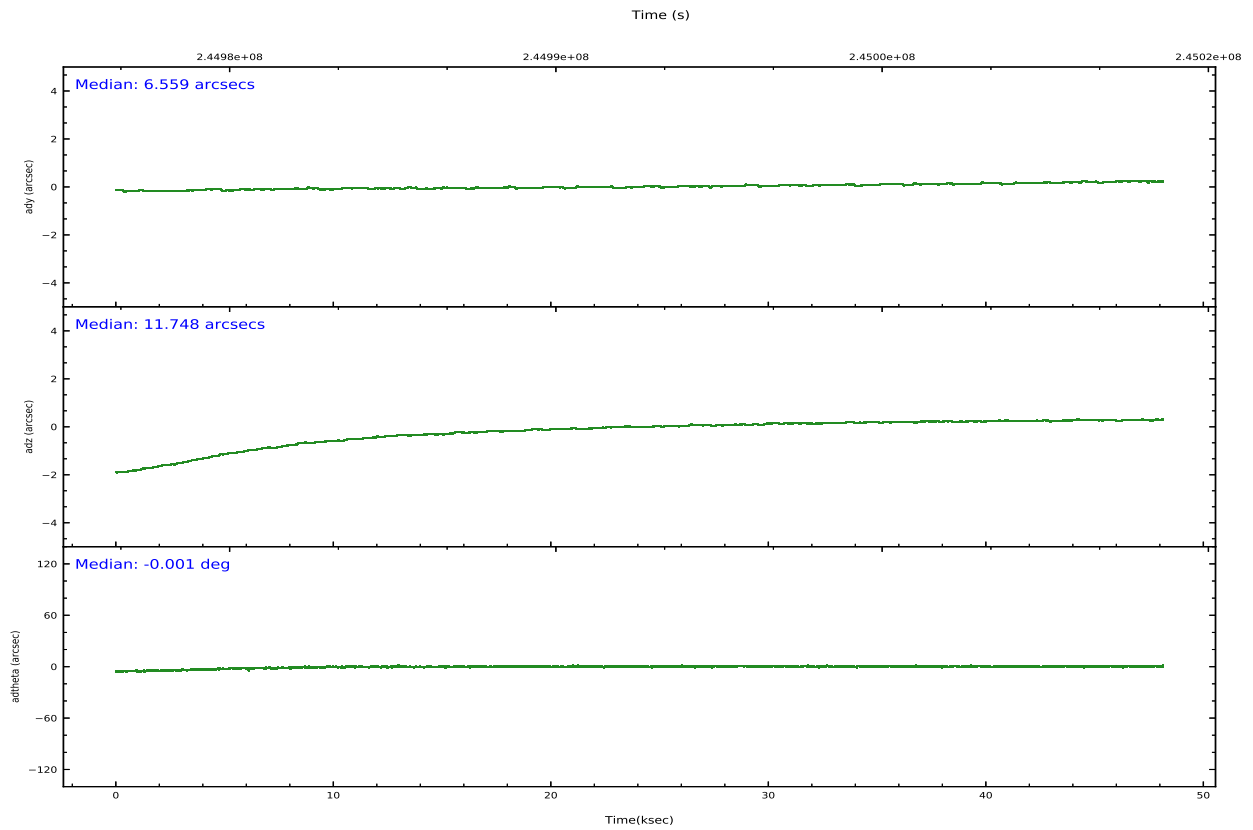
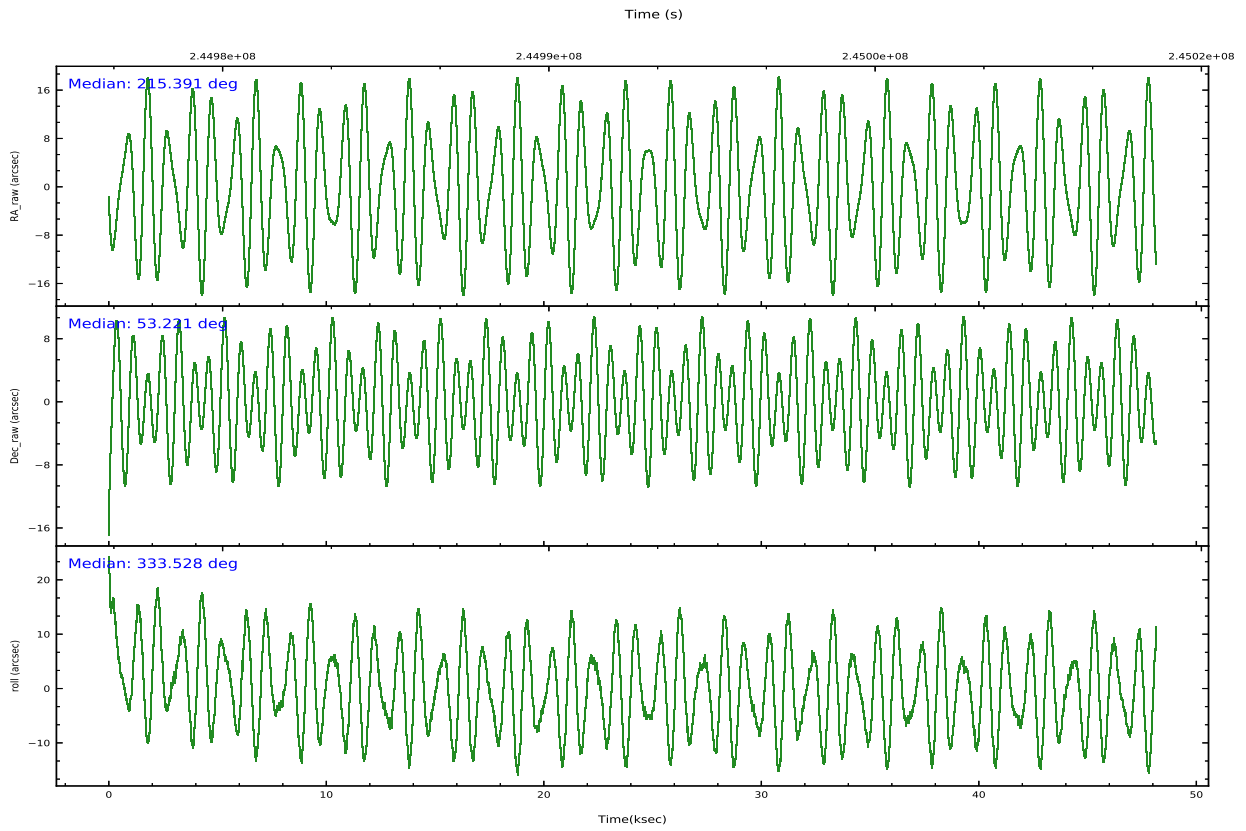
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	10781	12086	10682	10119	10401
	3%	4%	3%	3%	3%
grade 1 events	166	160	177	168	142
	0%	0%	0%	0%	0%
grade 2 events	7451	7368	7169	6336	6850
	2%	2%	2%	2%	2%
grade 3 events	3541	3854	3234	3321	3542
	1%	1%	1%	1%	1%
grade 4 events	3277	3811	3336	3269	3385
	1%	1%	1%	1%	1%
grade 5 events	10490	11855	10197	12449	12436
	3%	4%	3%	4%	4%
grade 6 events	5925	6898	5603	5891	6699
	2%	2%	1%	1%	2%
grade 7 events	251875	237013	279467	269222	260735
	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	215.345649	215.38596075433	Subarray requested	NONE	NONE
[deg] Pointing Dec	53.219043	53.218715191588	Alternating exposures requested	N	N
[deg] Pointing Roll	333.357598	333.52803621705	[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)	244969919.184000	244968733.57001			
Observation start date	2005-10-06T07:10:55	2005-10-06T06:52:13			
[s] Observation end time (MET)	245017919.184000	245018774.07231			
Observation end date	2005-10-06T20:30:55	2005-10-06T20:46:14			
Read mode	TIMED	TIMED			

## 2.3 Aspect





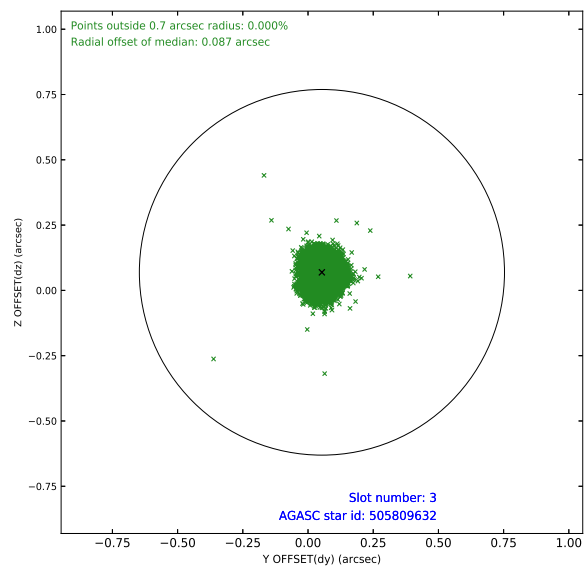
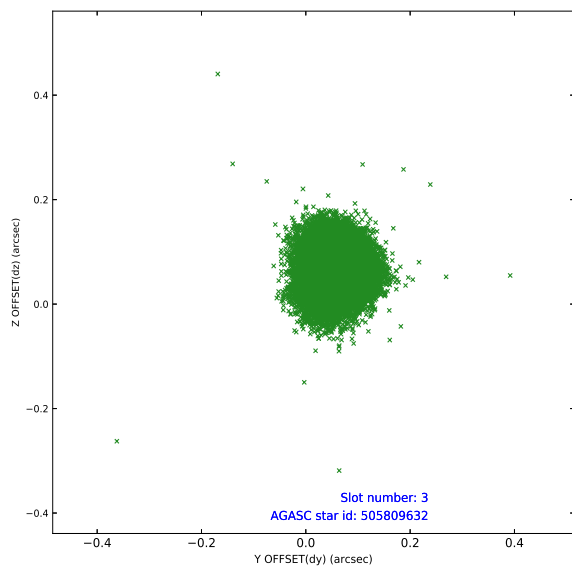
### Slot Statistics

slot	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	11745	1.000	0.055	-0.042	0.011	0.043	0.000000	0.000000	933.15	-835
1	FID		ACIS-I-5	7.23	11743	1.000	-0.196	0.059	0.009	0.034	0.000000	0.000000	-1815.18	1062
2	FID		ACIS-I-6	7.25	11745	1.000	0.050	0.055	0.014	0.032	0.000000	0.000000	398.75	1707
3	GUIDE	used	505809632	8.05	23489	1.000	0.053	0.069	0.054	0.087	215.499426	53.521185	-193.57	1120
4	GUIDE	used	505812376	7.71	23421	1.000	-0.017	0.059	0.049	0.077	214.039537	52.937930	-2090.58	-2152
5	GUIDE	used	505815088	7.28	23489	1.000	-0.074	-0.050	0.046	0.073	216.315963	53.584954	1256.98	2119
6	GUIDE	used	505815928	8.33	23486	1.000	-0.028	-0.025	0.058	0.093	216.234742	53.074559	1946.76	408
7	GUIDE	used	505812088	8.14	23485	1.000	0.067	-0.049	0.069	0.107	214.186617	53.263562	-2311.29	-957

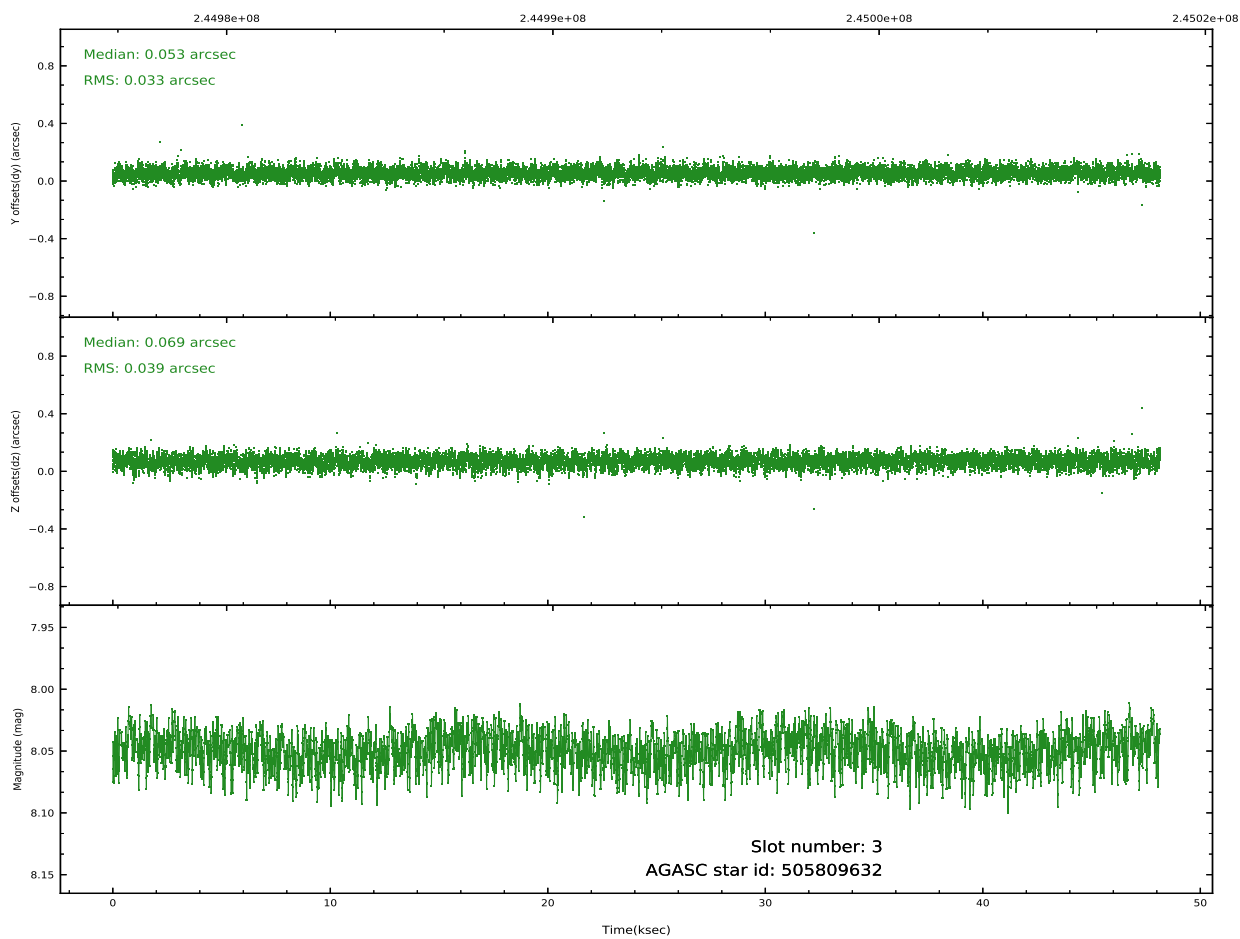
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## 2.4 Star Slots

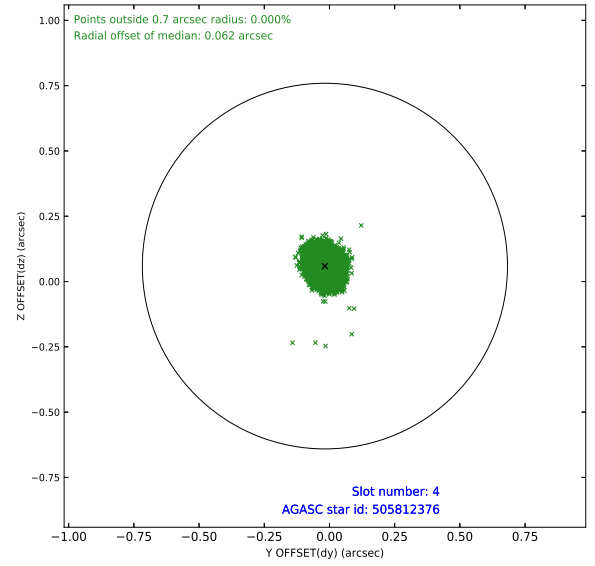
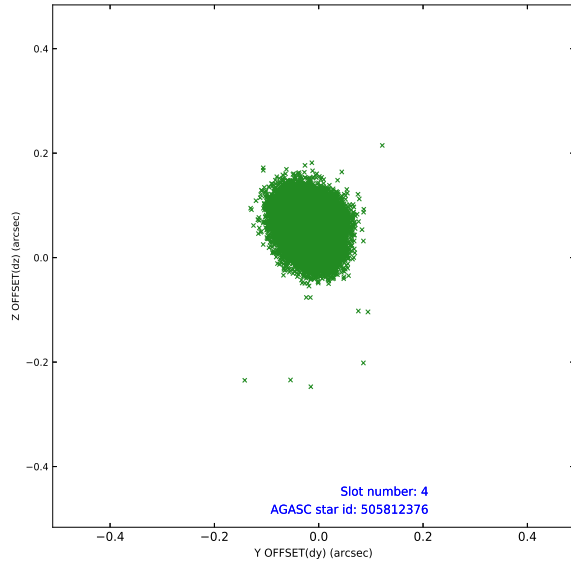
### 2.4.1 Slot 3



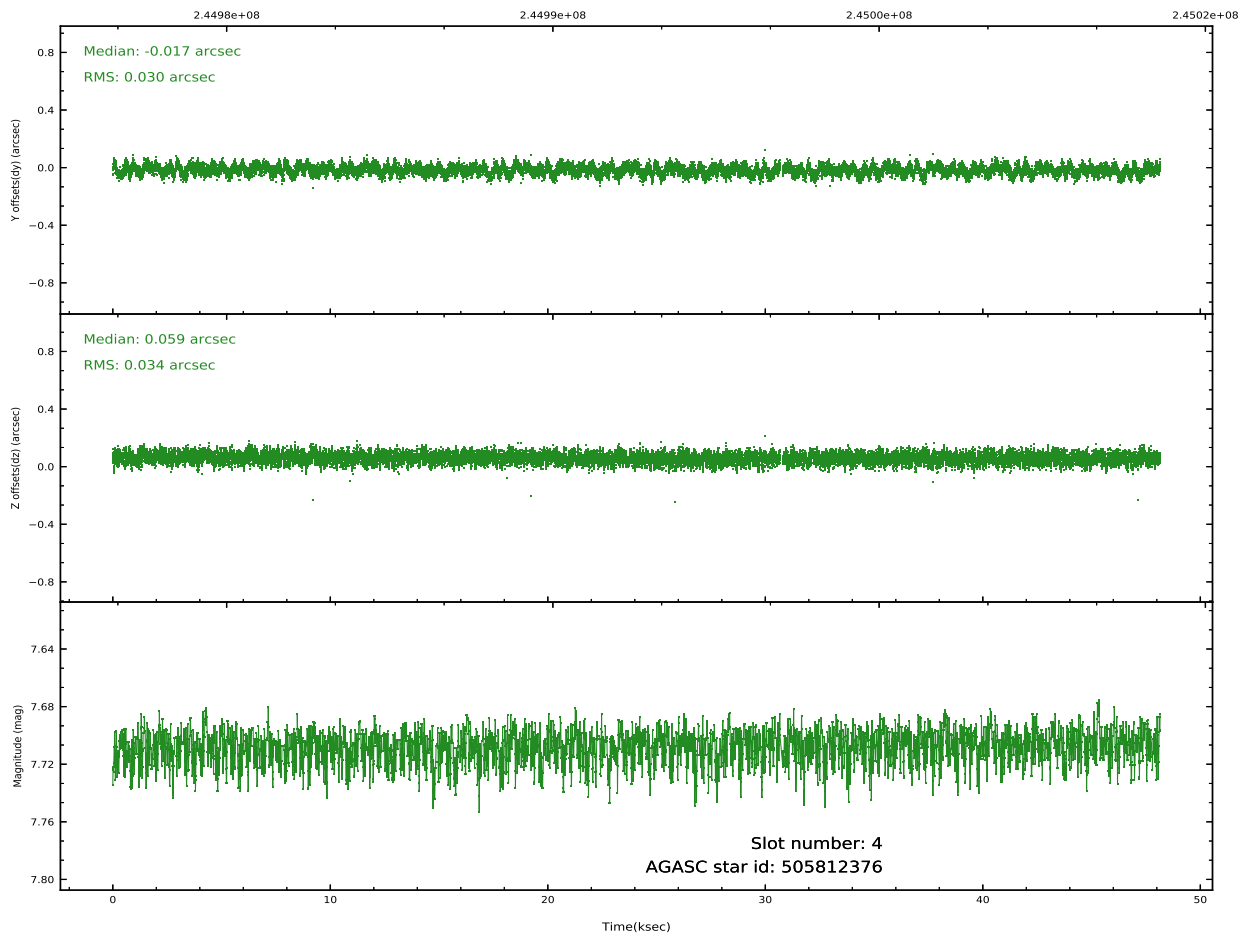
Time (s)



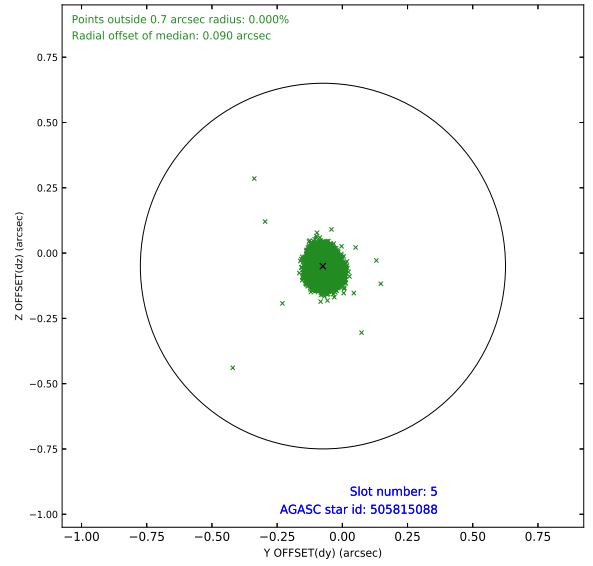
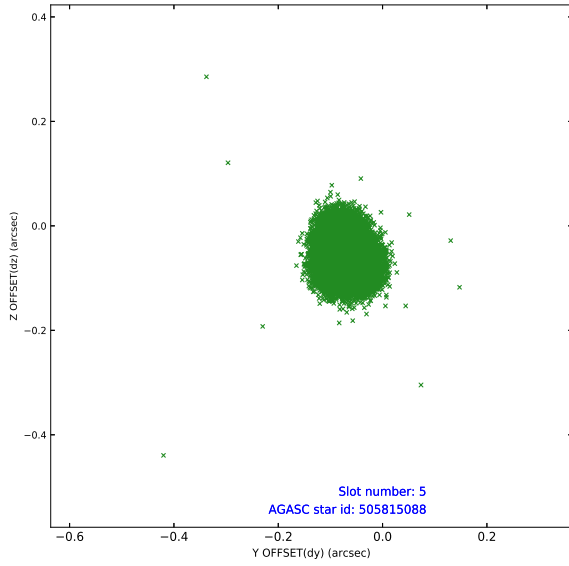
## 2.4.2 Slot 4



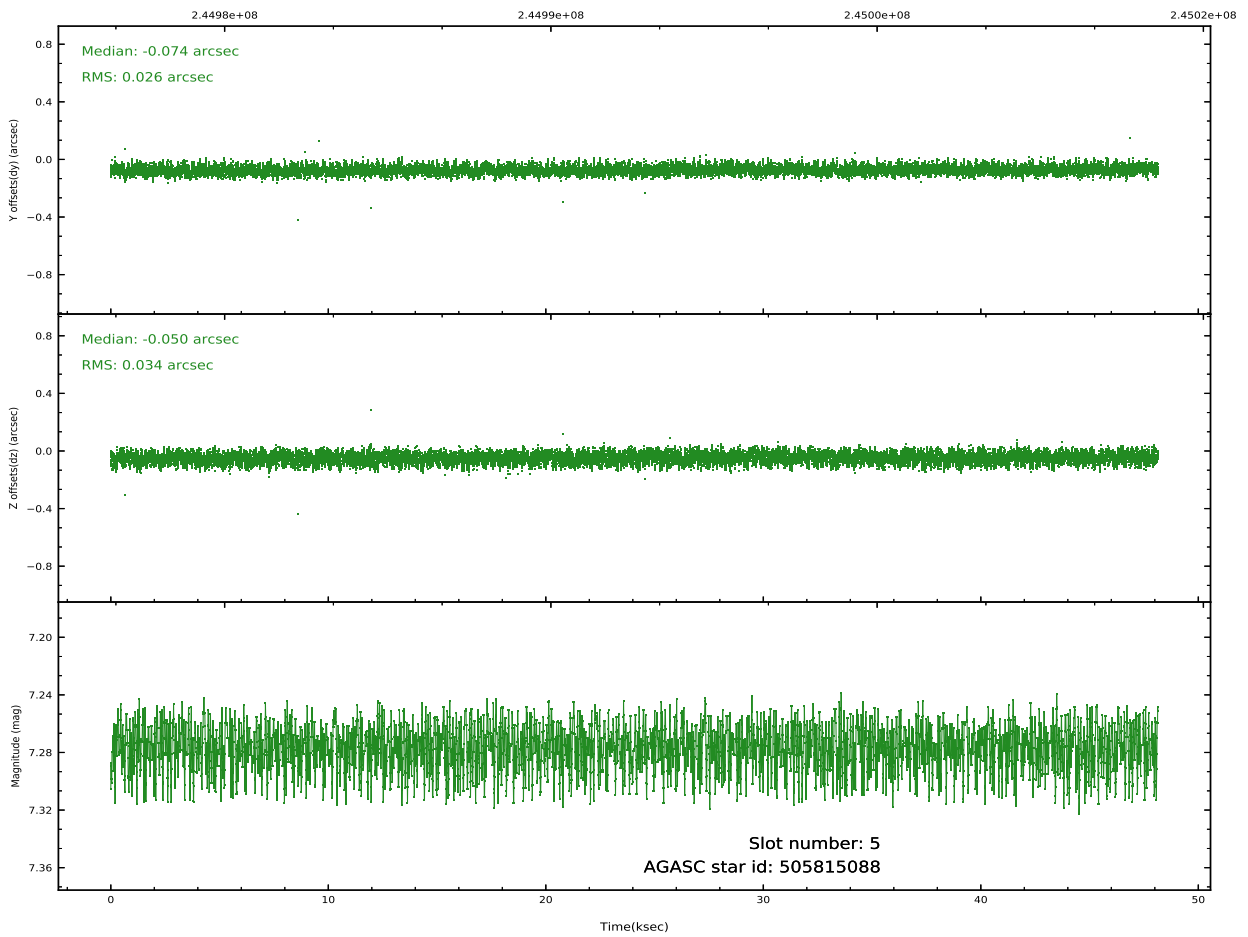
Time (s)



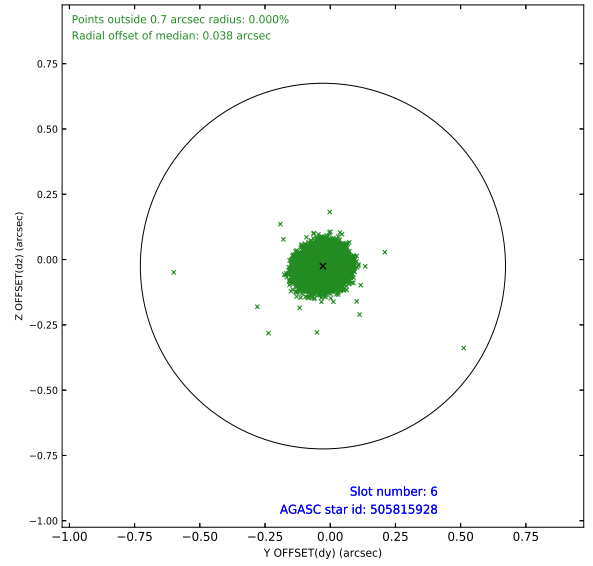
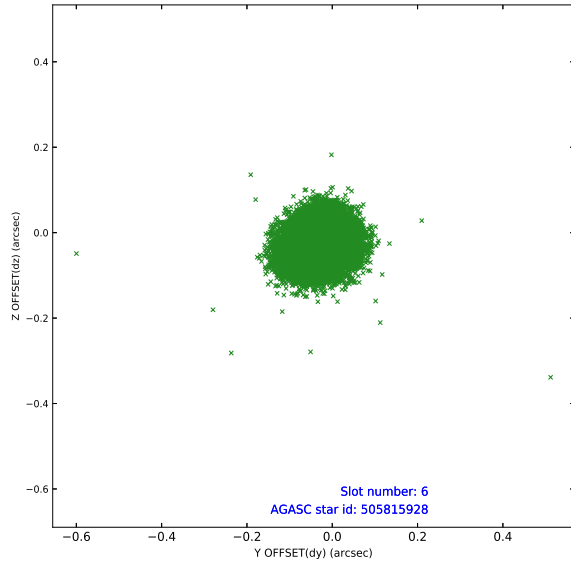
### 2.4.3 Slot 5



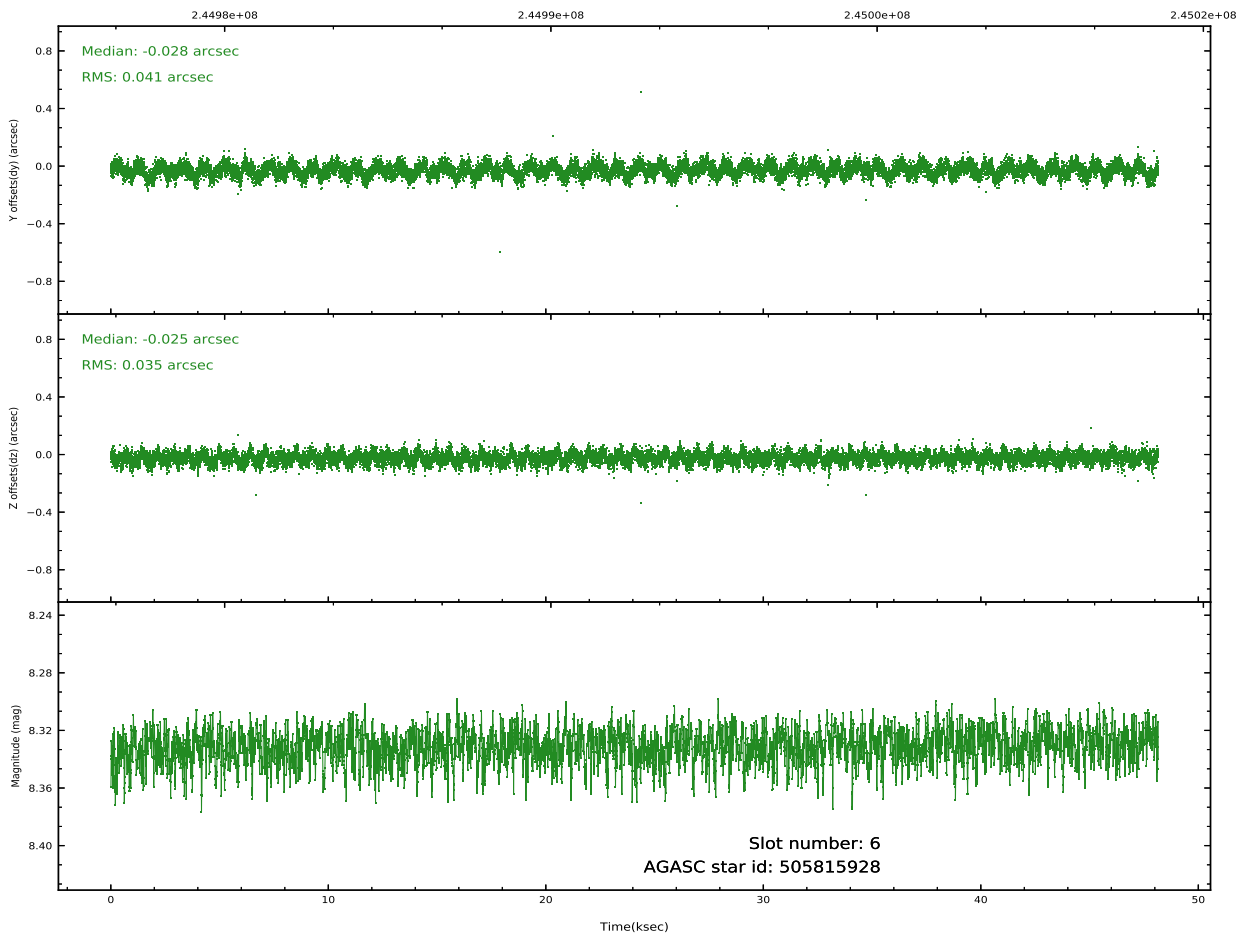
Time (s)



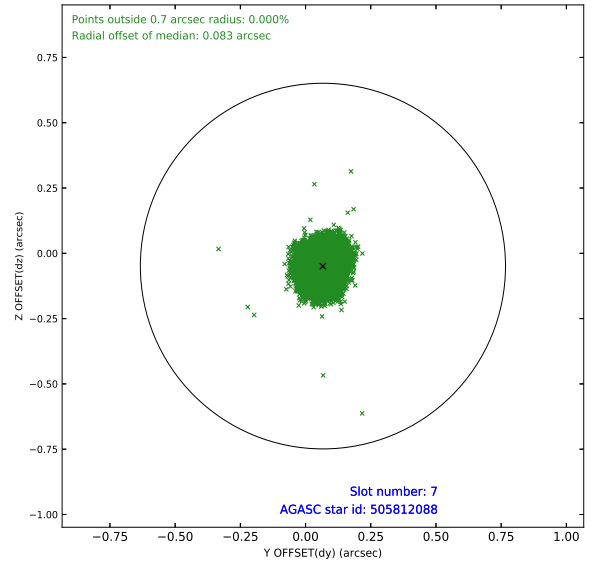
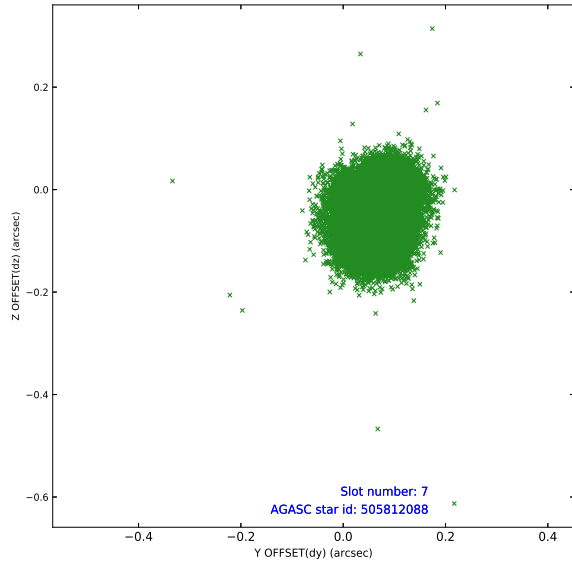
## 2.4.4 Slot 6



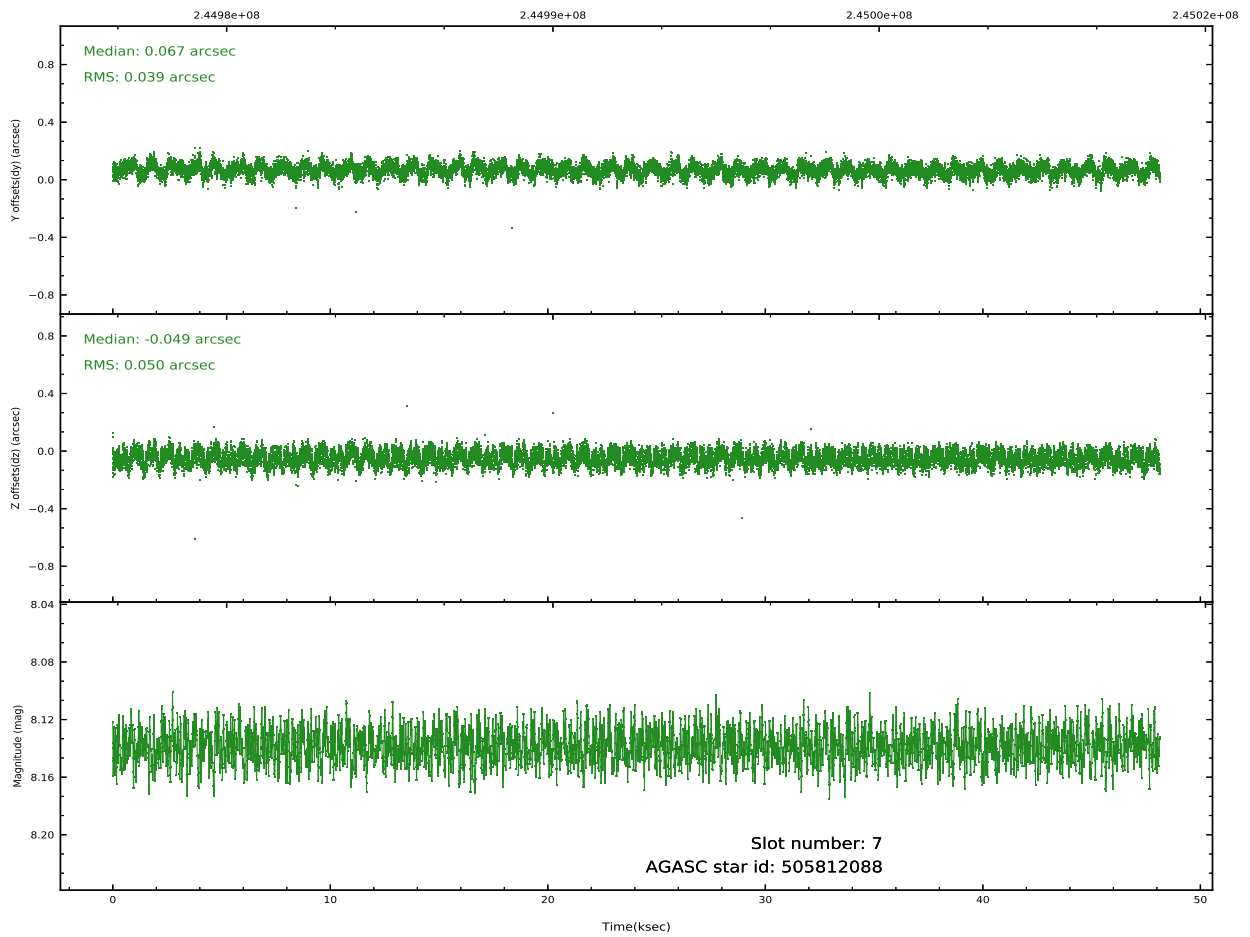
Time (s)



## 2.4.5 Slot 7

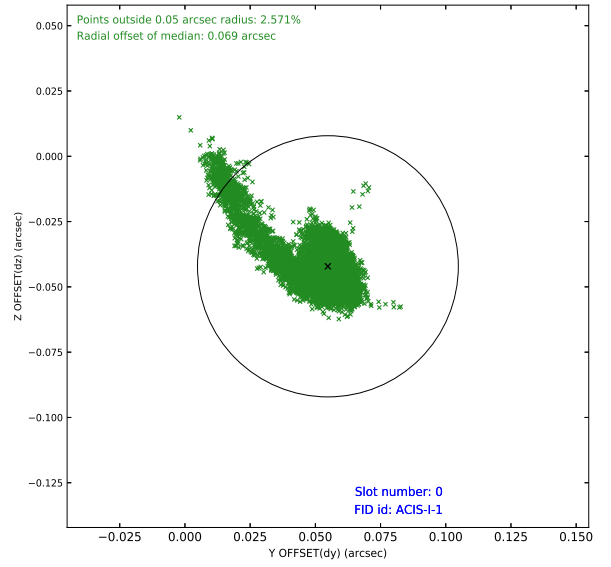
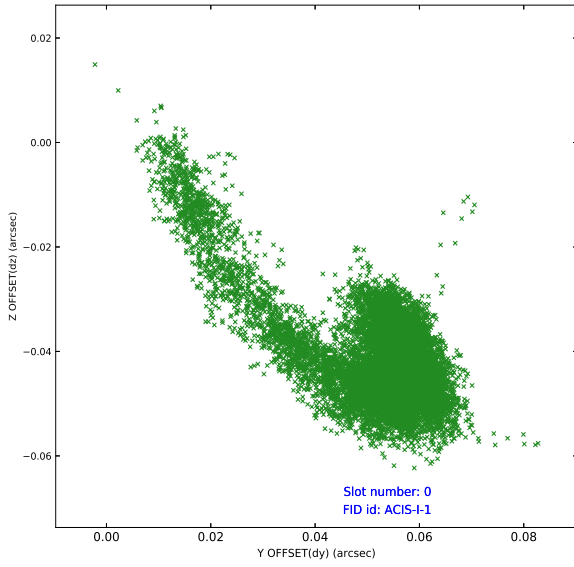


Time (s)

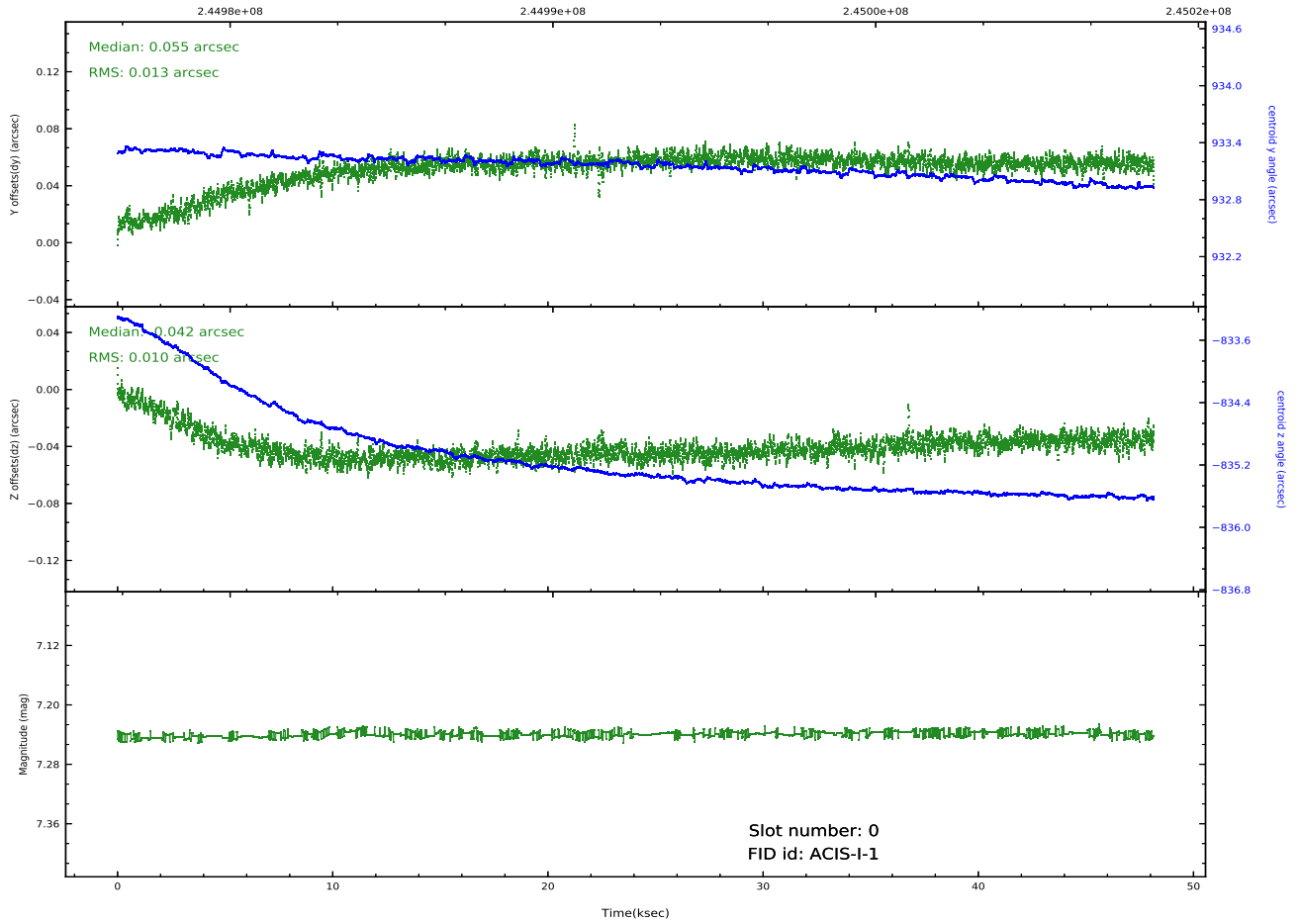


## 2.5 FID Slots

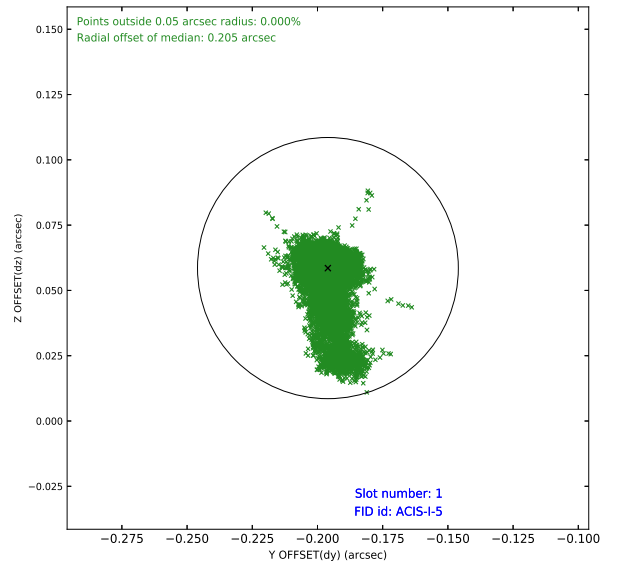
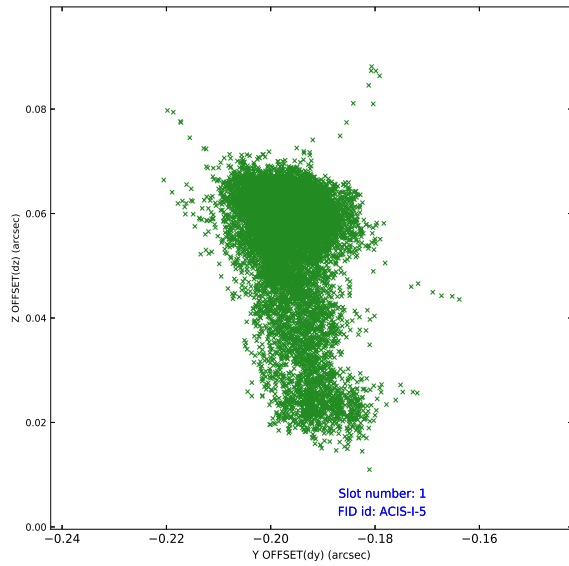
### 2.5.1 Slot 0



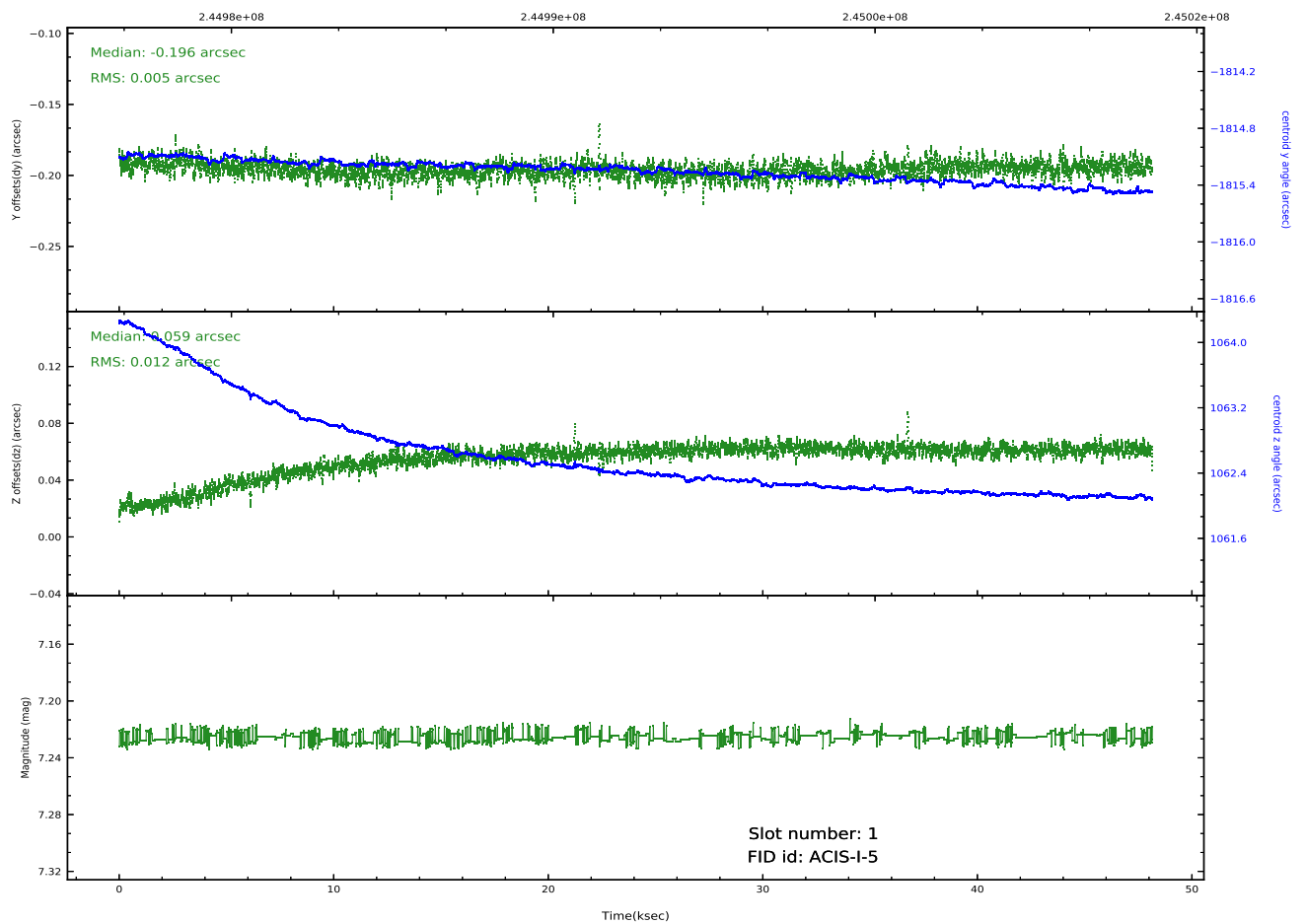
Time (s)



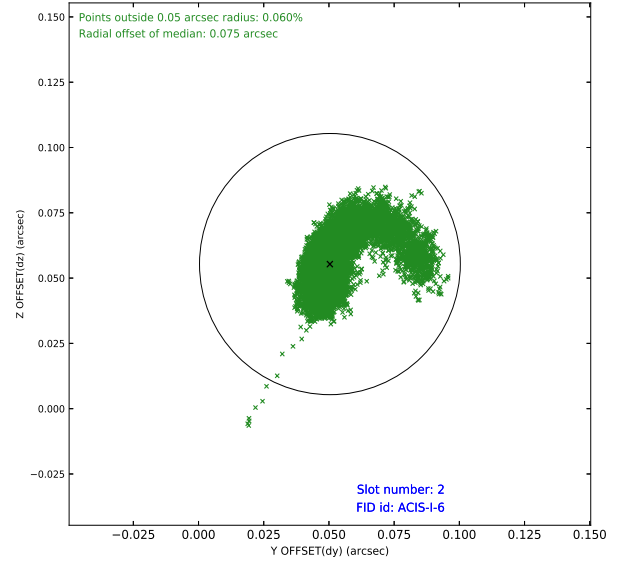
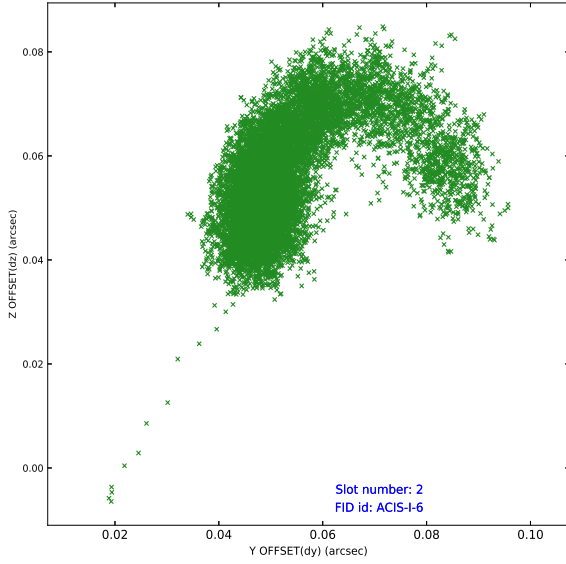
## 2.5.2 Slot 1



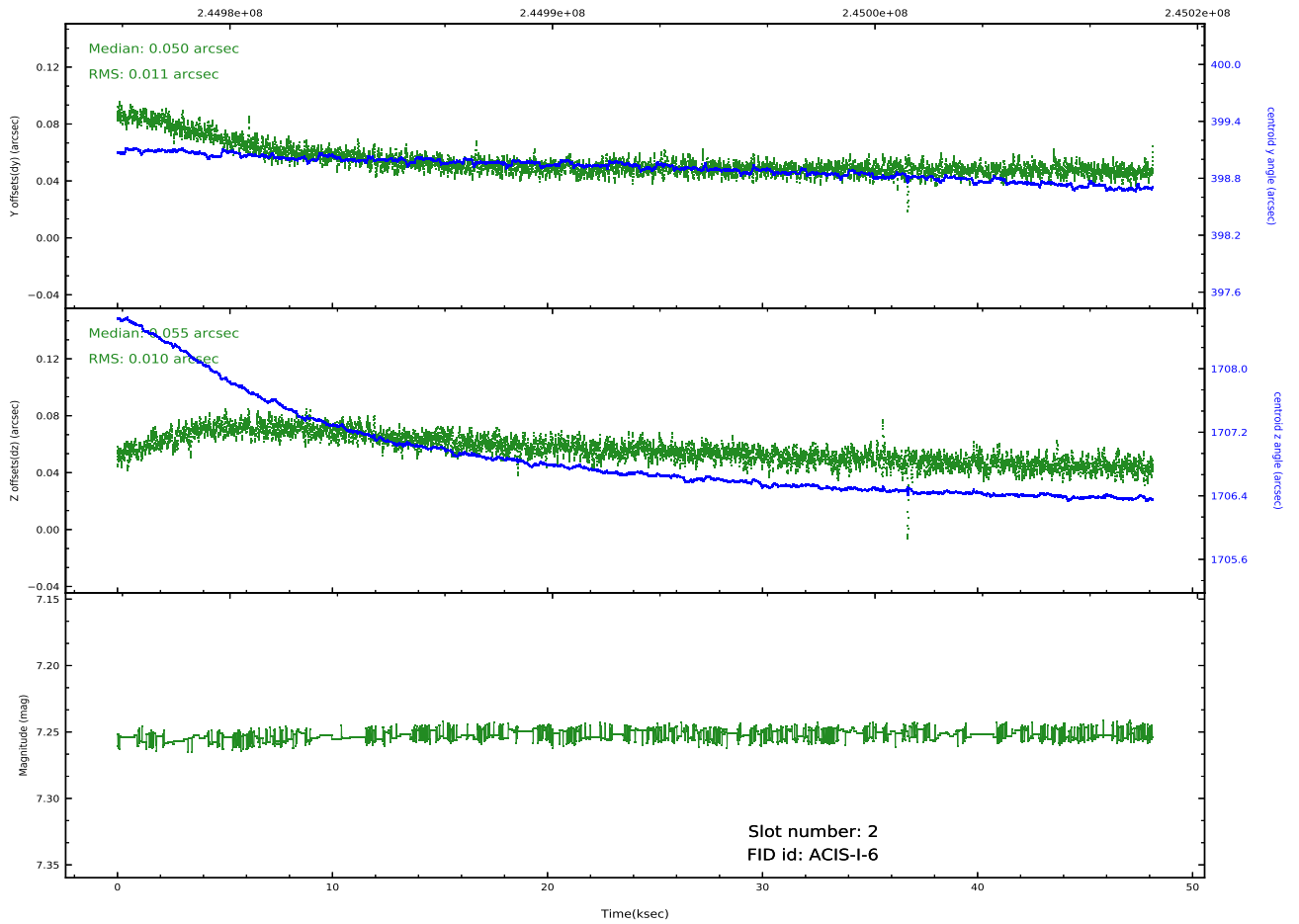
Time (s)



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2020.10.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	48.13667

## 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 met.