

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 6212 - L2 Version 5  
Chandra X-Ray Center

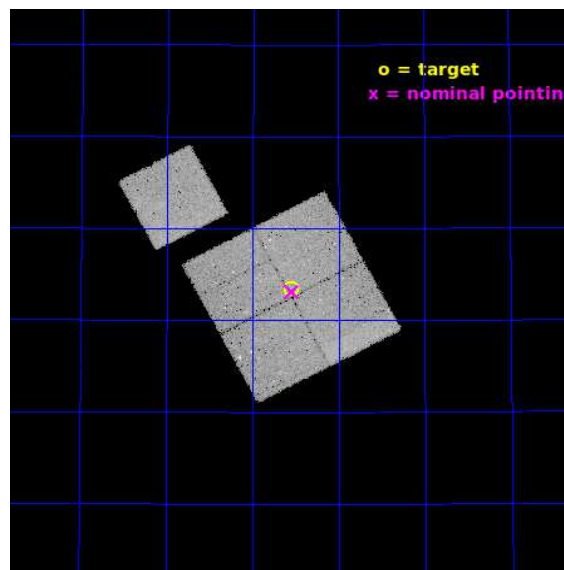
L2 Processing Date : Oct 10 2020

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# 1 Front

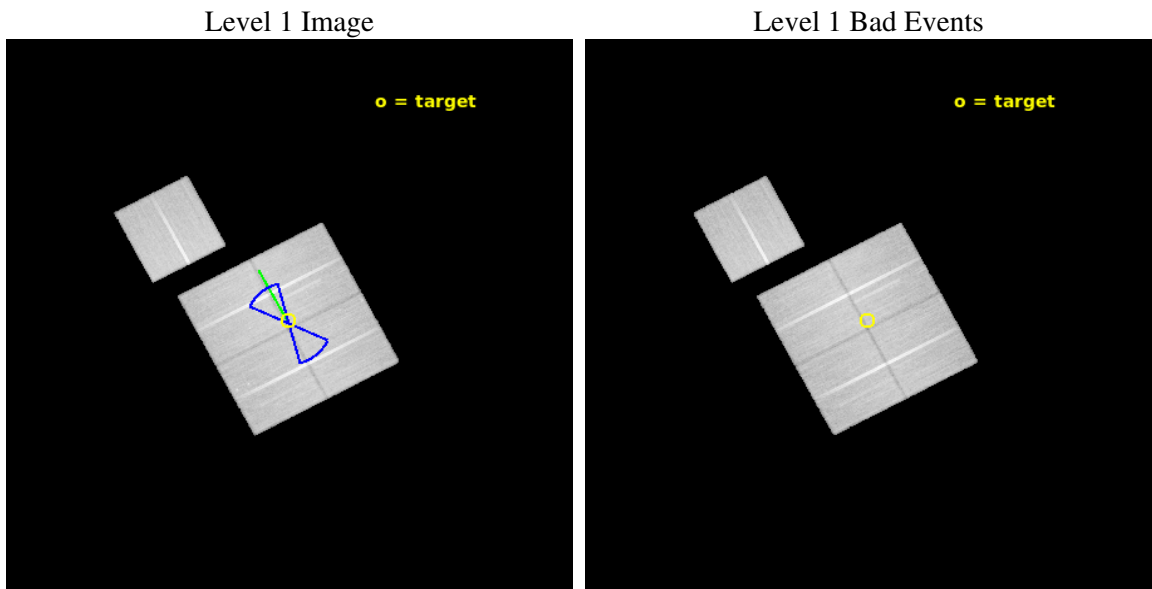
seq_num	900349	Sequence number
obs_id	6212	Observation id
title	Deep Chandra Imaging of the Extended Groth Strip: The Co-evolution of Black Holes and Galaxies	Proposal title
observer	Prof Kirpal Nandra	Principal investigator
object	Extended Groth Strip (EGS)	Source name
dtcycle	0	&#160
cycle	P	events 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	215.38577697903	Nominal RA [deg]
dec_nom	53.218757724996	Nominal Dec [deg]
roll_nom	331.9954651931	Nominal Roll [deg]
revision	5	Processing version of data
ontime	46896.717929363	Sum of GTIs [s]
livetime	46283.977784755	Livetime [s]
ontime0	46896.717979223	Sum of GTIs [s]
ontime1	46902.999909788	Sum of GTIs [s]
ontime2	46899.858949542	Sum of GTIs [s]
ontime3	46896.717929363	Sum of GTIs [s]
ontime6	46896.717959374	Sum of GTIs [s]
l2events	124796	Number of level 2 events



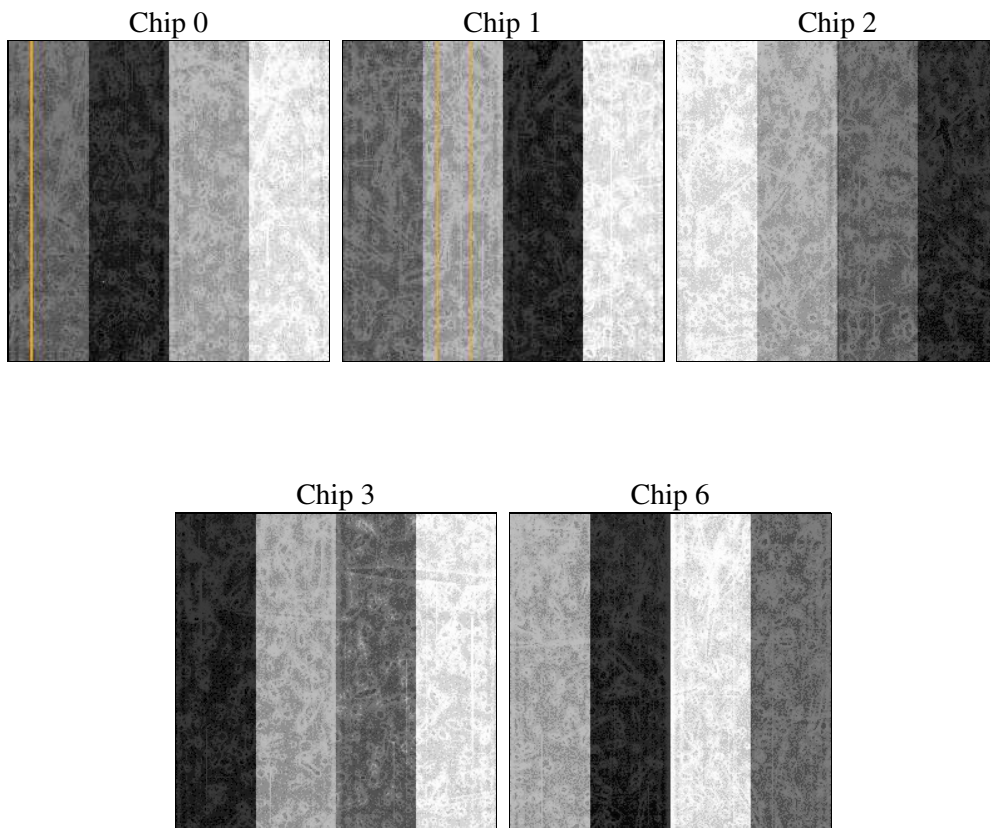
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	47130.219000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	46896.717929363	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime0	46896.717979223	Sum of GTIs [s]
date	2020-10-11T01:48:22	Date and time of file creation	ontime1	46902.999909788	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	46899.858949542	Sum of GTIs [s]
			ontime3	46896.717929363	Sum of GTIs [s]
			ontime6	46896.717959374	Sum of GTIs [s]
			l1events	1443595	Number of level 1 events

### 2.1.4 Events

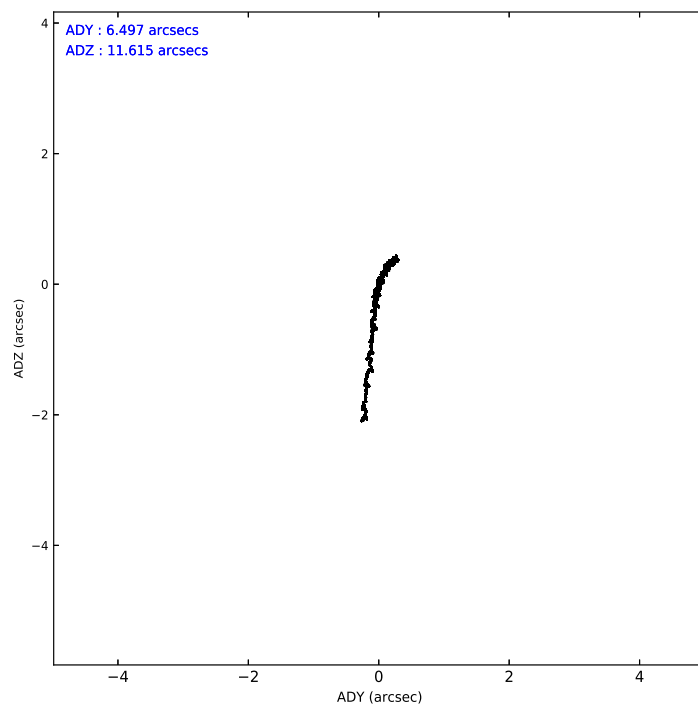
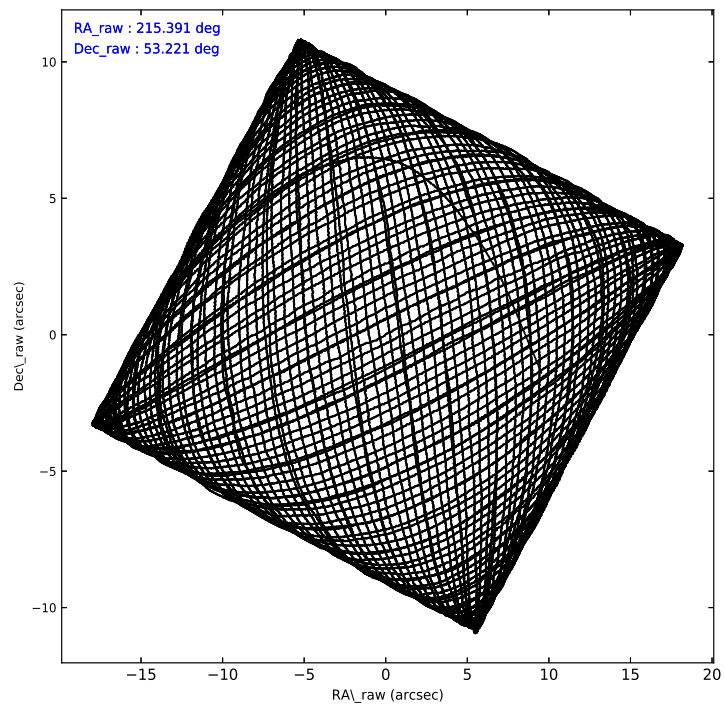
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	278841	279070	305800	288789	291095
rejected events	248796	245927	276424	260678	260736
rejected %	89%	88%	90%	90%	89%

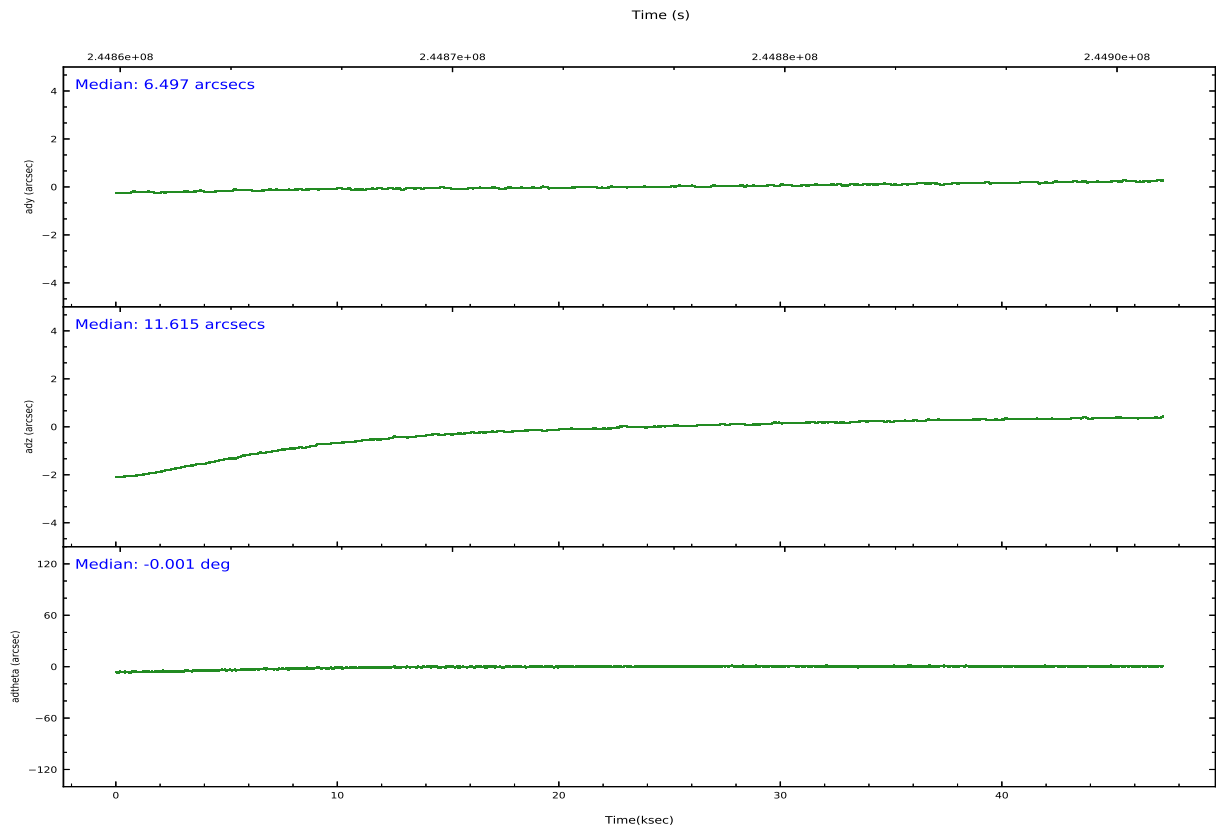
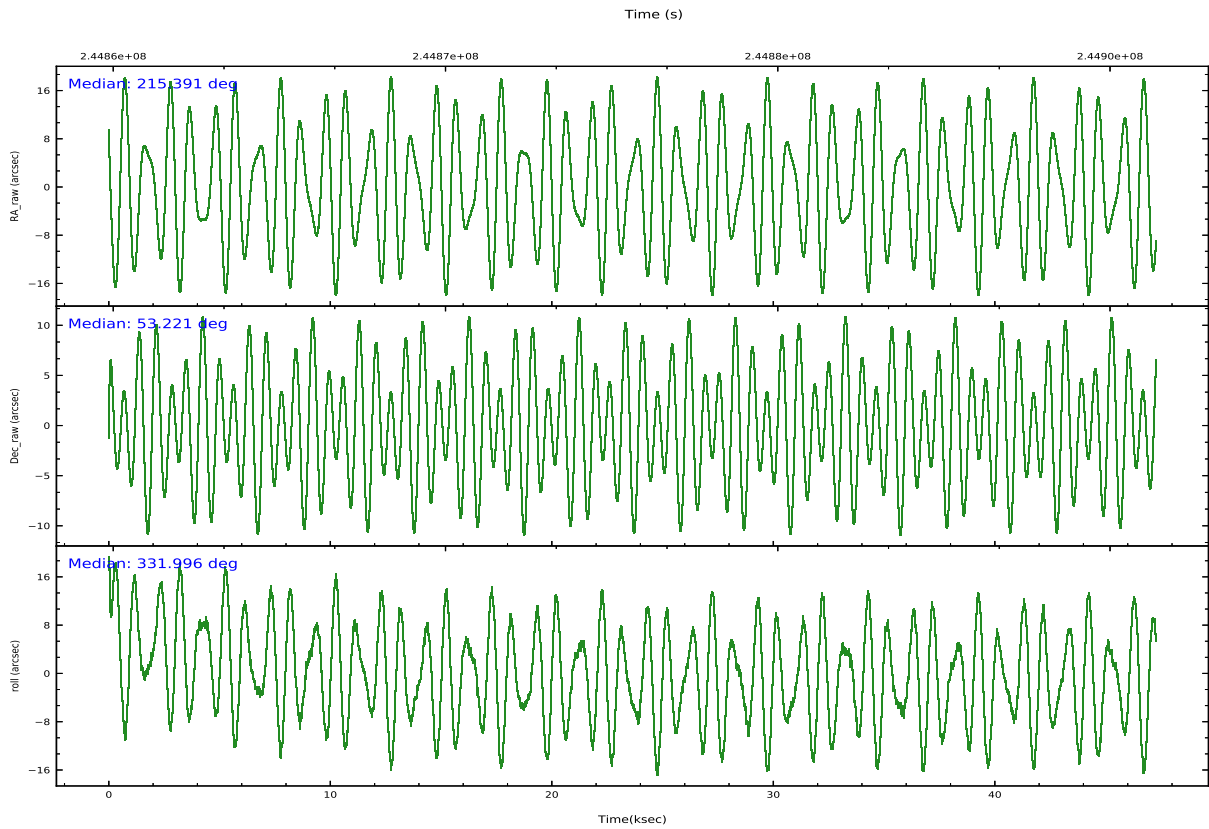
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	10641	12061	10692	9918	10427
	3%	4%	3%	3%	3%
grade 1 events	140	164	151	142	125
	0%	0%	0%	0%	0%
grade 2 events	7223	7339	6867	6268	6619
	2%	2%	2%	2%	2%
grade 3 events	3359	3568	3200	3107	3415
	1%	1%	1%	1%	1%
grade 4 events	3130	3532	3206	3100	3421
	1%	1%	1%	1%	1%
grade 5 events	9831	11471	9632	11897	11949
	3%	4%	3%	4%	4%
grade 6 events	5695	6650	5414	5719	6478
	2%	2%	1%	1%	2%
grade 7 events	238822	234285	266638	248638	248661
	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	215.345428	215.38577697903	Subarray requested	NONE	NONE
[deg] Pointing Dec	53.219694	53.218757724996	Alternating exposures requested	N	N
[deg] Pointing Roll	331.826444	331.9954651931	[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)	244854952.184000	244853766.48972			
Observation start date	2005-10-04T23:14:48	2005-10-04T22:56:06			
[s] Observation end time (MET)	244902082.184000	244902308.44195			
Observation end date	2005-10-05T12:20:18	2005-10-05T12:25:08			
Read mode	TIMED	TIMED			

## 2.3 Aspect



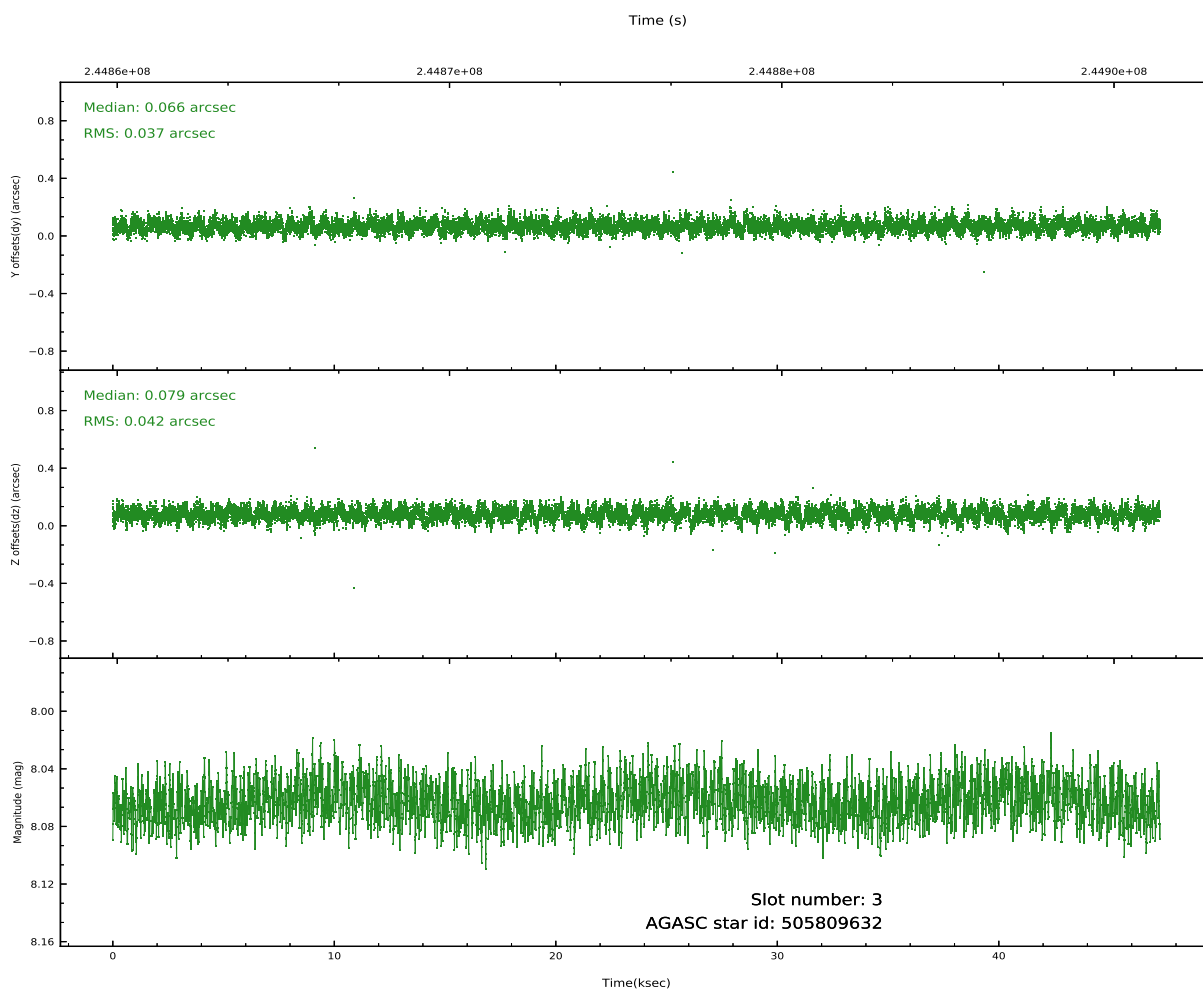
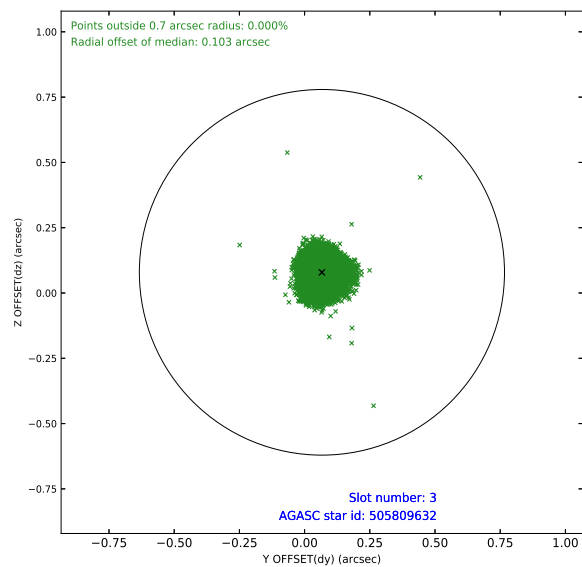
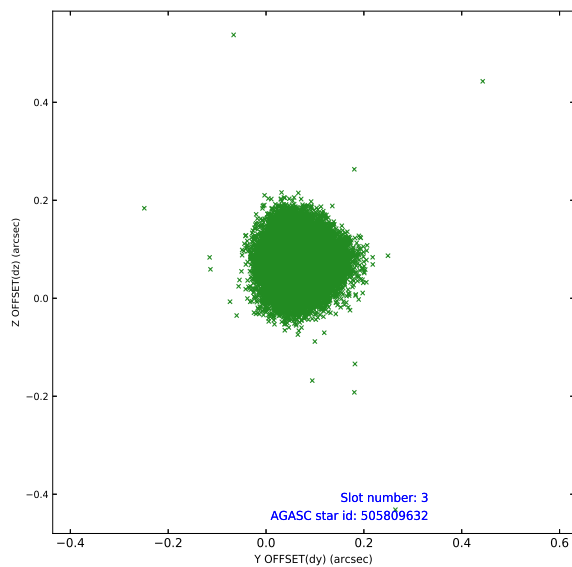


### Slot Statistics

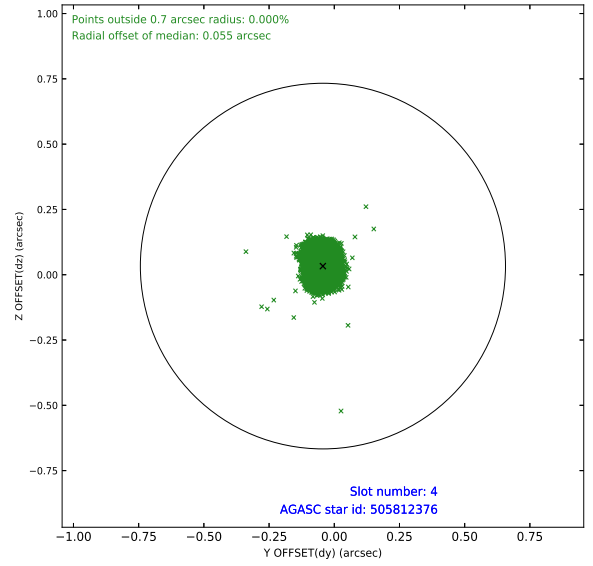
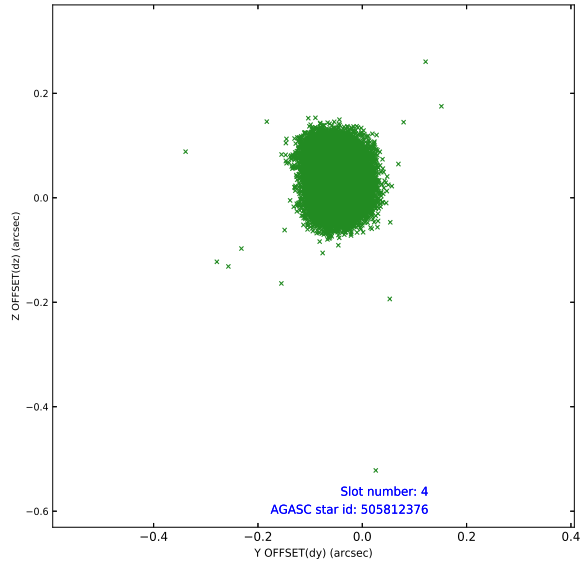
slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-I-1	7.24	11532	1.000	0.058	-0.048	0.012	0.060	0.000000	0.000000	933.22	-834
1	FID		ACIS-I-5	7.23	11533	1.000	-0.201	0.059	0.011	0.038	0.000000	0.000000	-1815.12	1062
2	FID		ACIS-I-6	7.25	11533	1.000	0.052	0.061	0.015	0.033	0.000000	0.000000	398.82	1707
3	GUIDE	used	505809632	8.06	23056	1.000	0.066	0.079	0.060	0.095	215.499426	53.521185	-221.92	1112
4	GUIDE	used	505812376	7.72	23066	1.000	-0.044	0.033	0.052	0.081	214.039537	52.937930	-2030.78	-2209
5	GUIDE	used	505815088	7.28	23065	1.000	-0.056	-0.004	0.060	0.092	216.315963	53.584954	1201.38	2150
6	GUIDE	used	505815928	8.33	23059	1.000	0.002	-0.029	0.062	0.096	216.234742	53.074559	1936.71	458
7	GUIDE	used	505812088	8.14	23062	1.000	0.026	-0.079	0.059	0.092	214.186617	53.263562	-2283.35	-1021

## 2.4 Star Slots

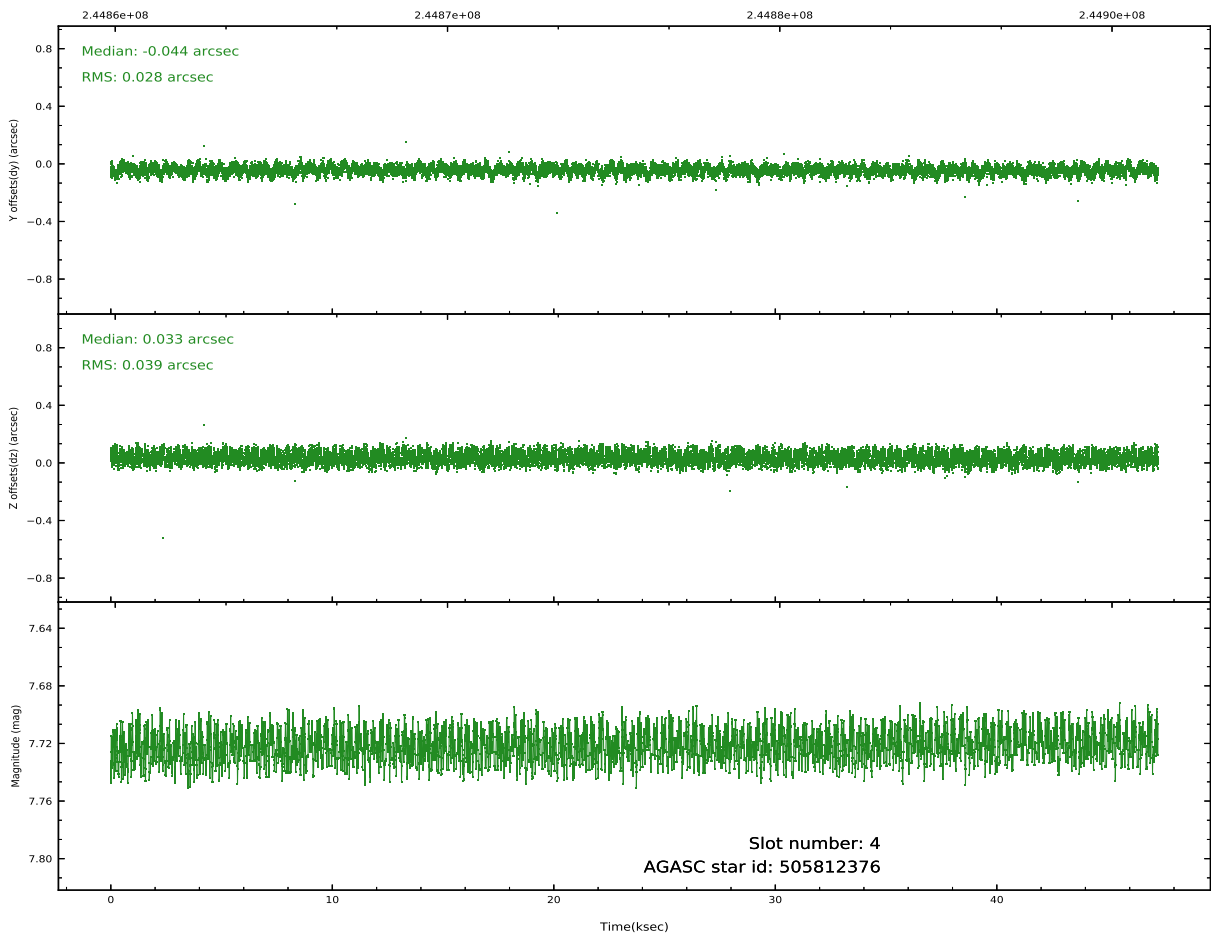
### 2.4.1 Slot 3



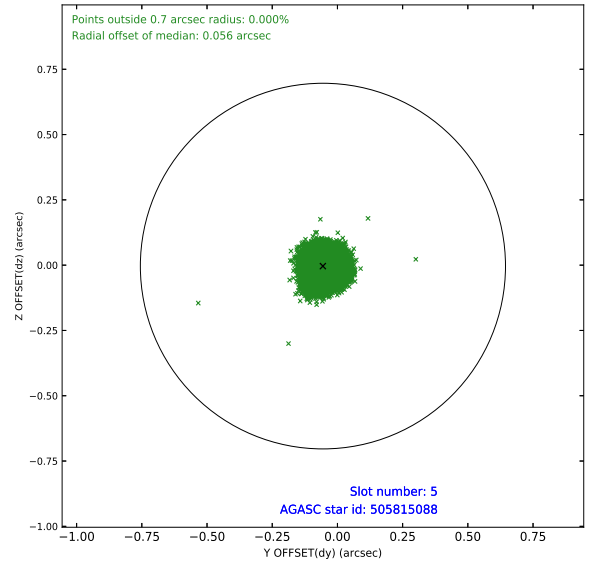
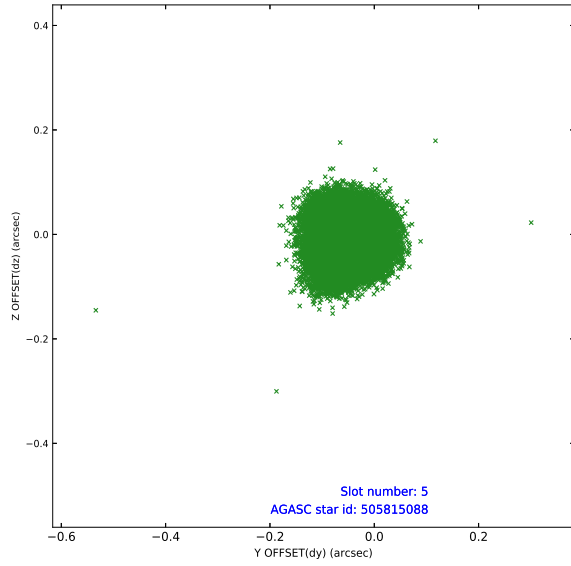
## 2.4.2 Slot 4



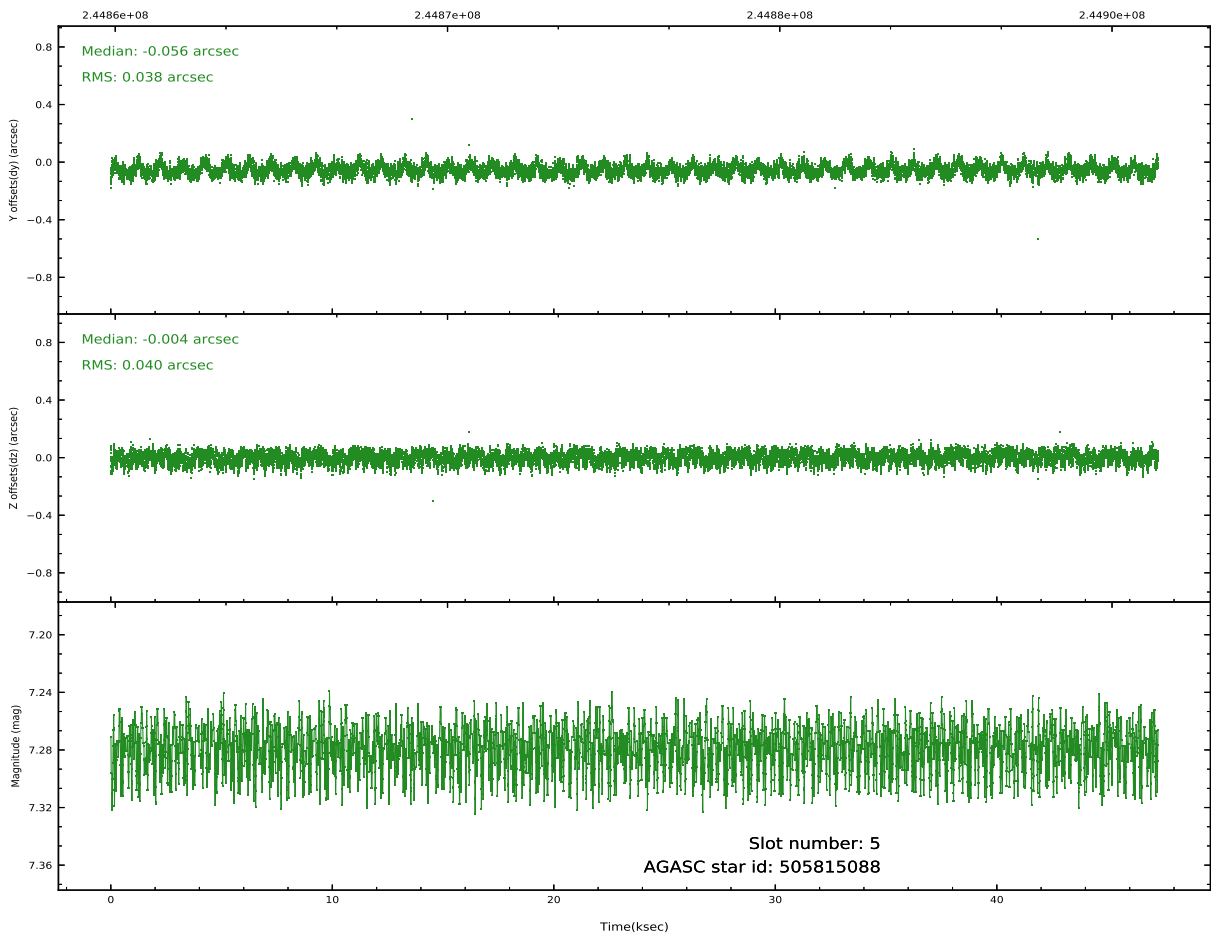
Time (s)



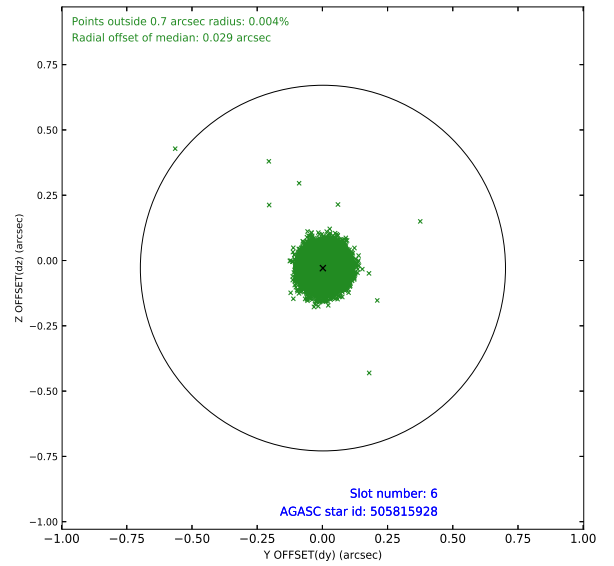
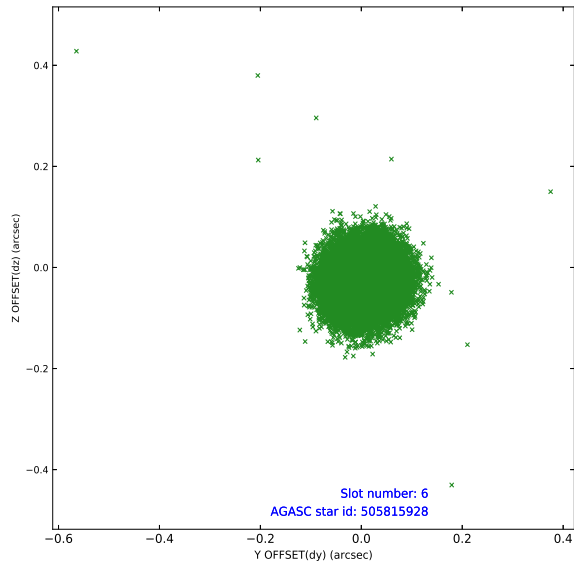
### 2.4.3 Slot 5



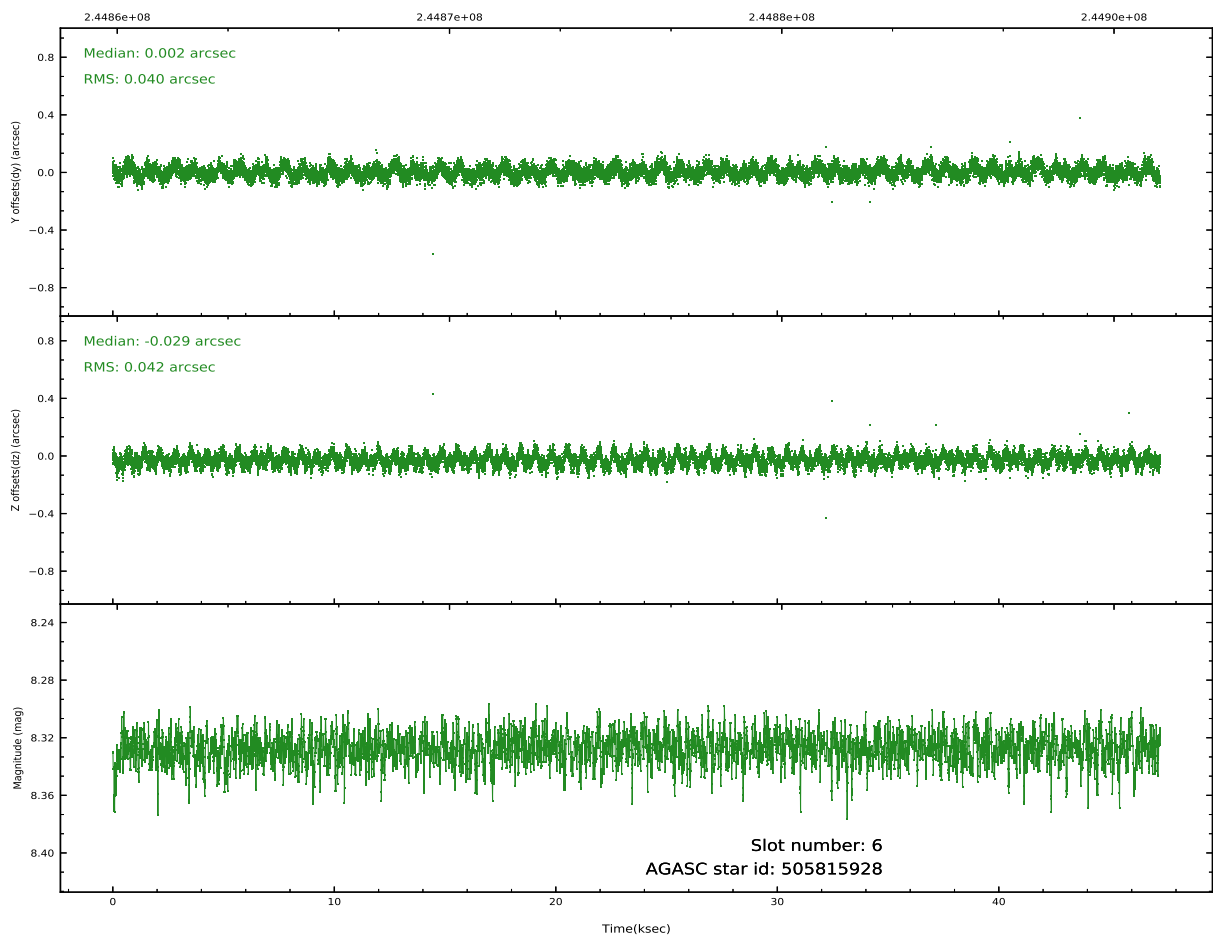
Time (s)



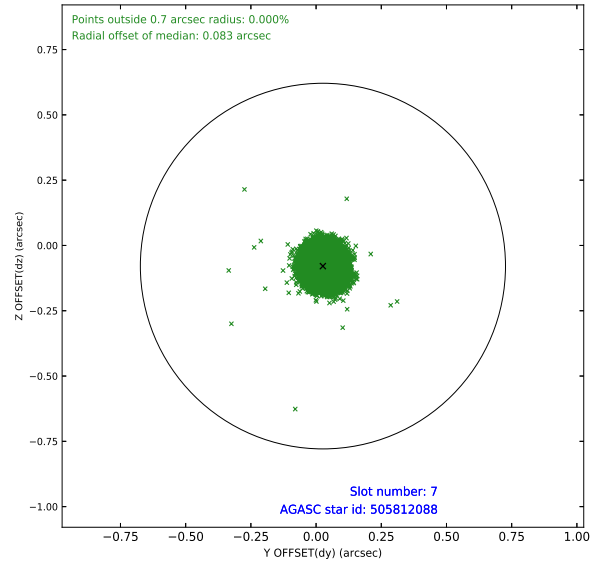
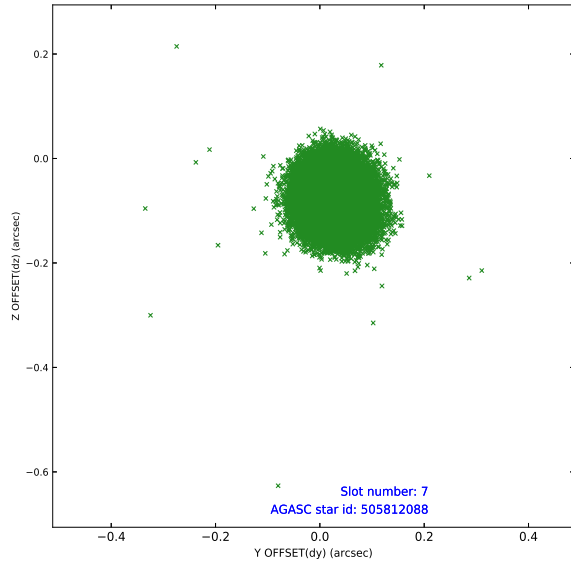
## 2.4.4 Slot 6



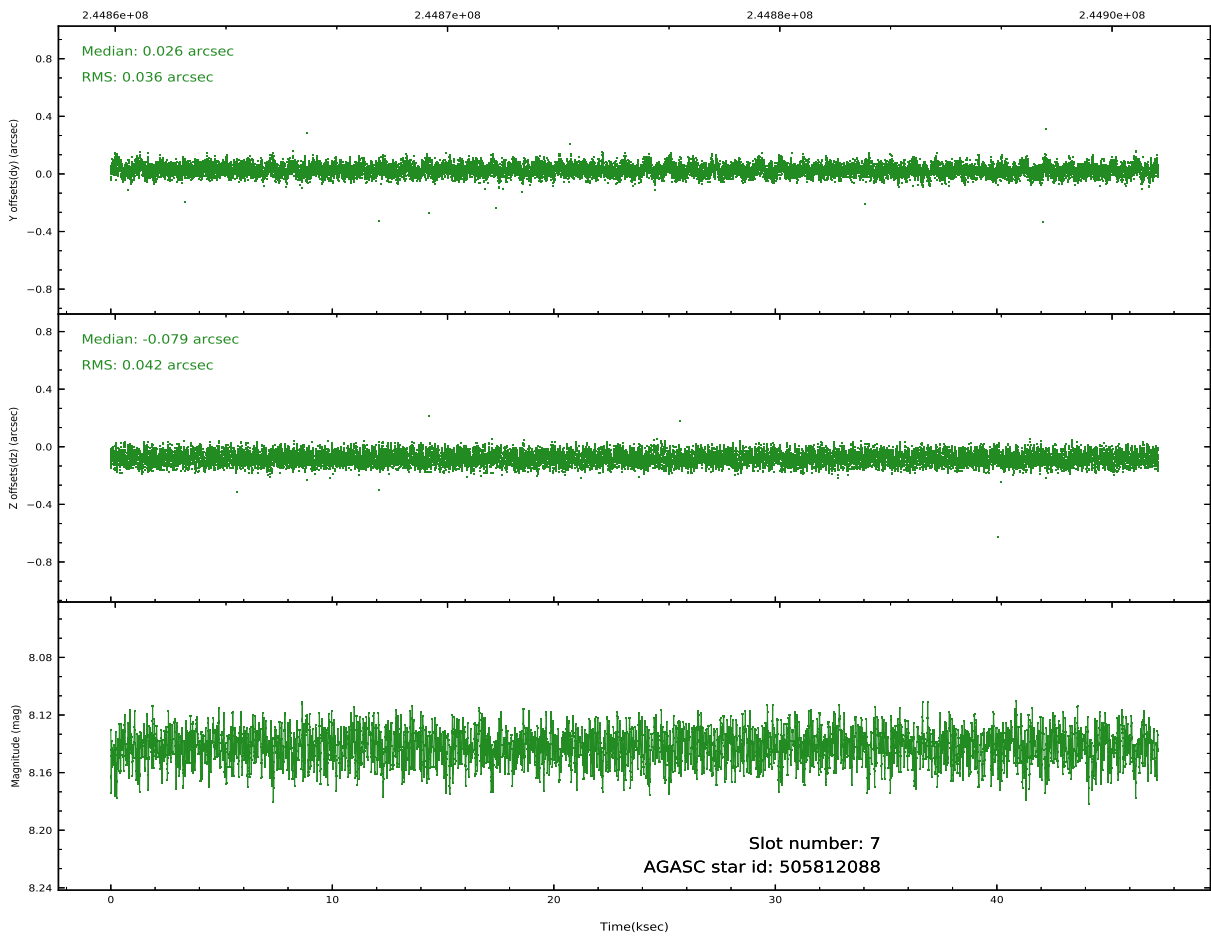
Time (s)



## 2.4.5 Slot 7

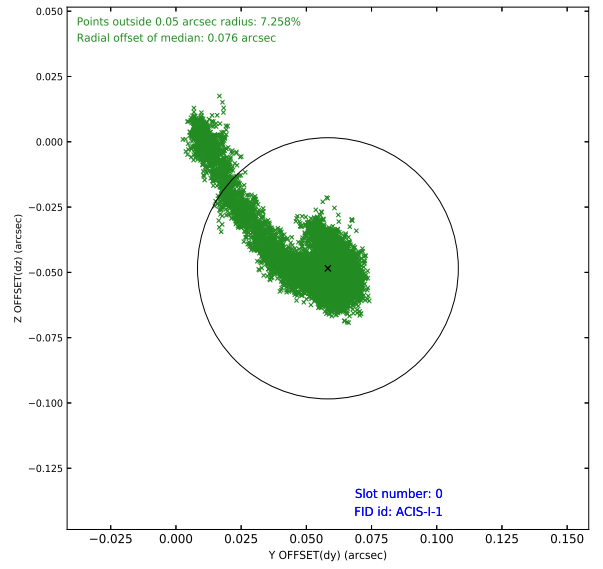
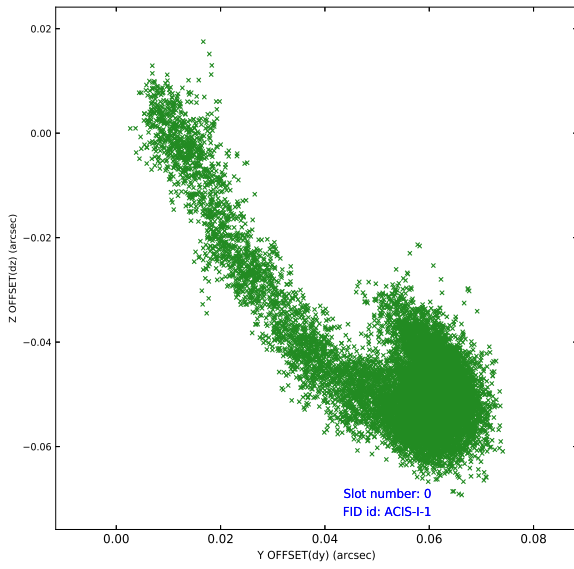


Time (s)

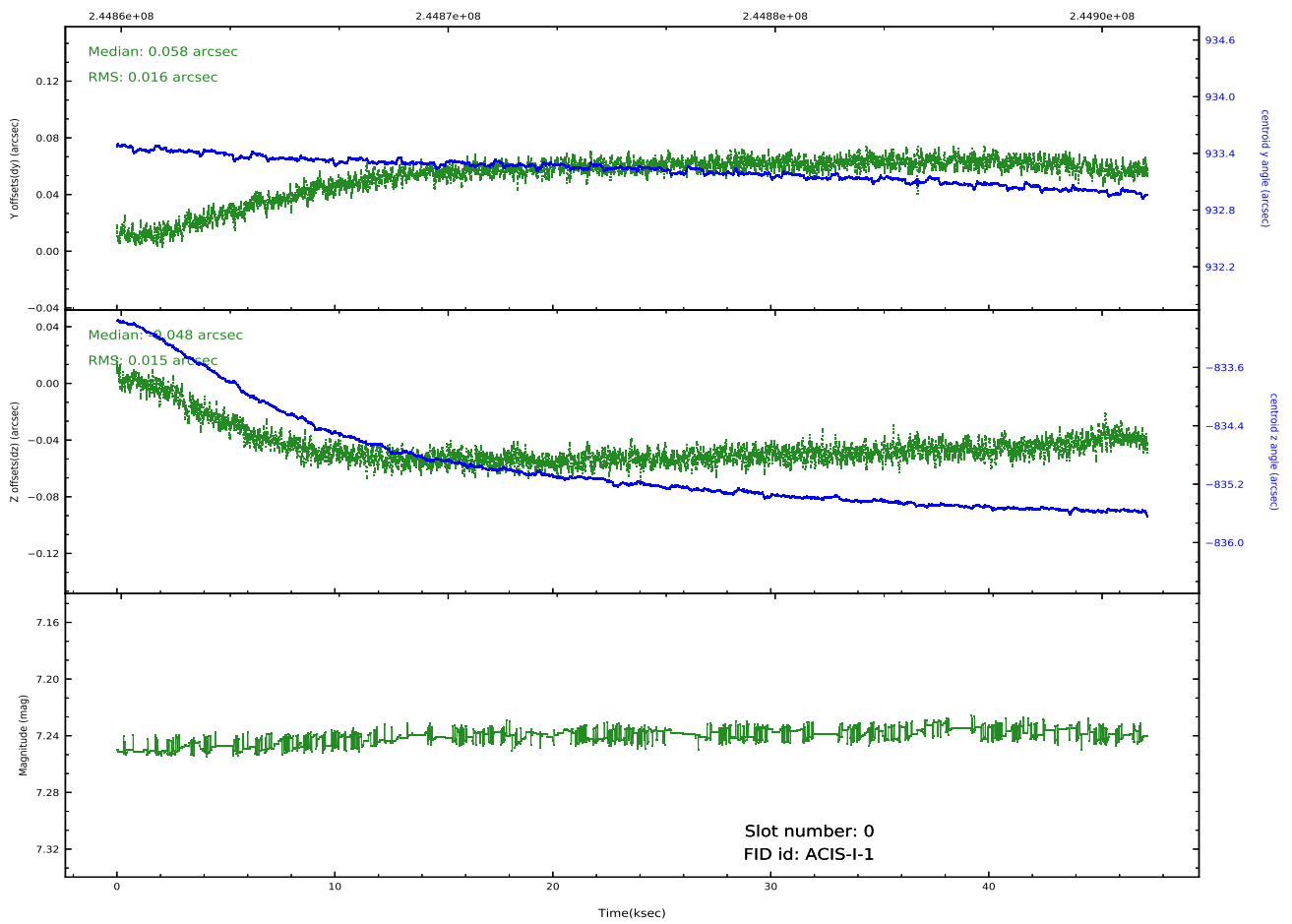


## 2.5 FID Slots

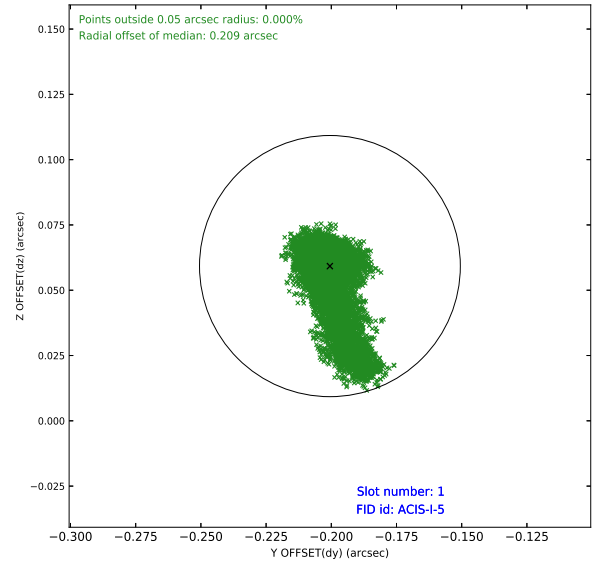
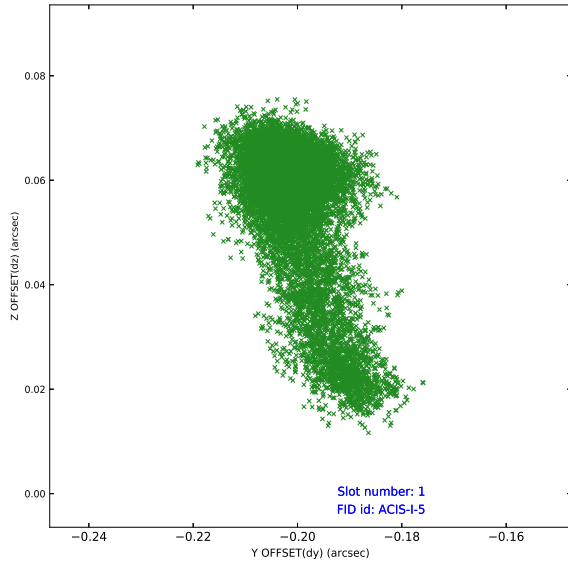
### 2.5.1 Slot 0



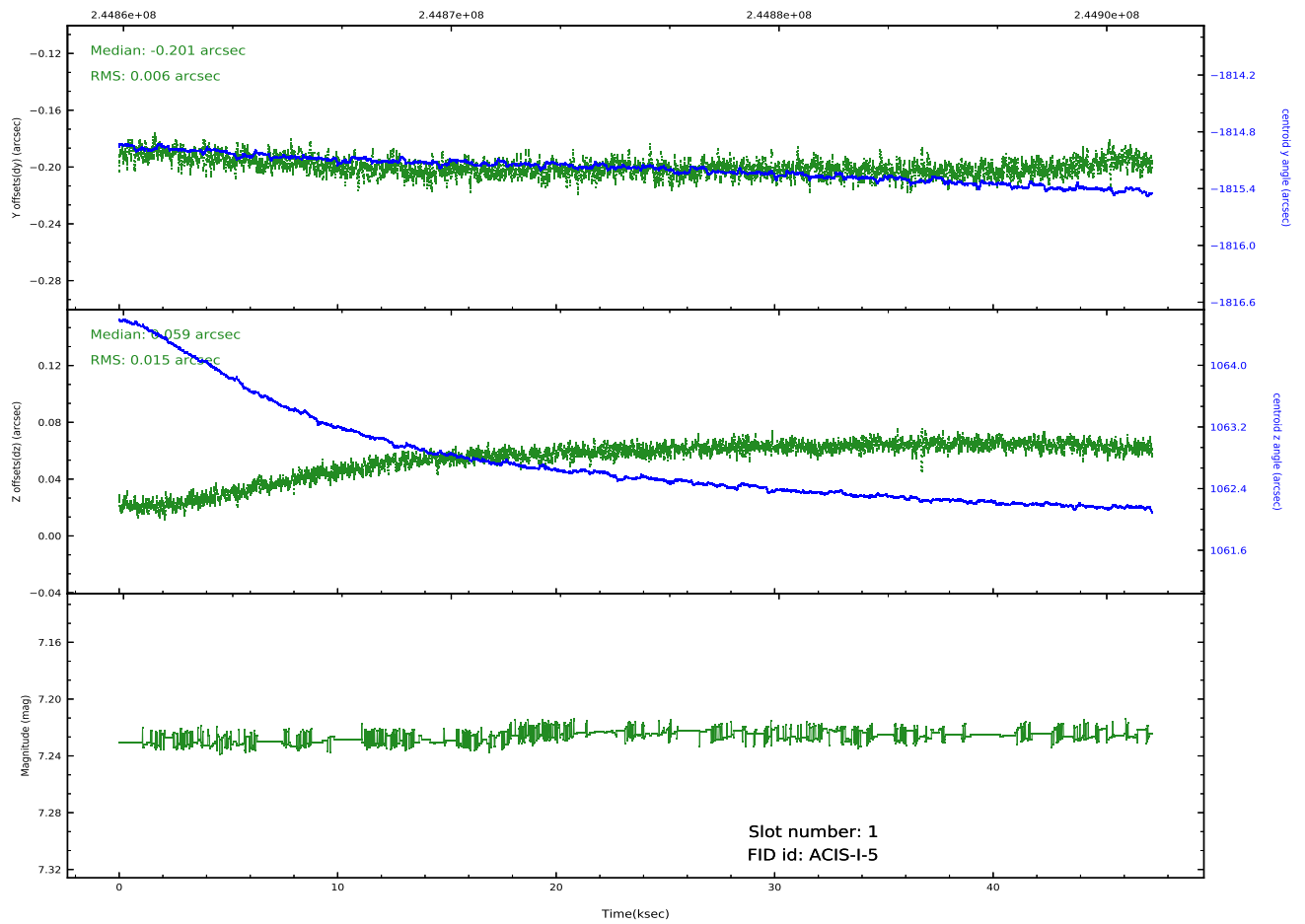
Time (s)



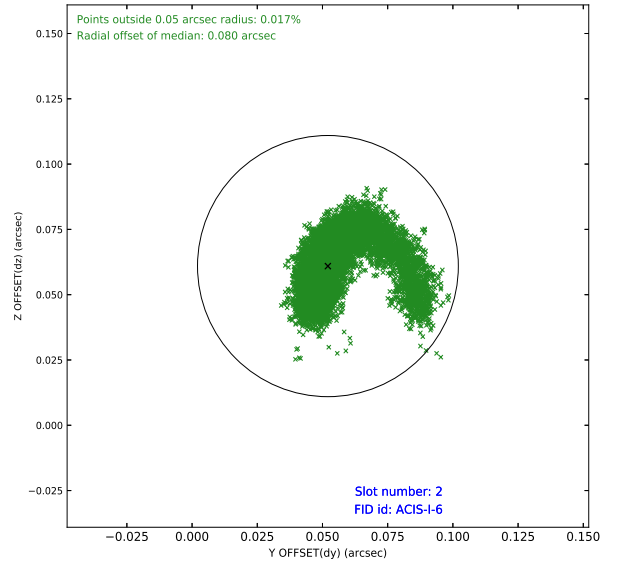
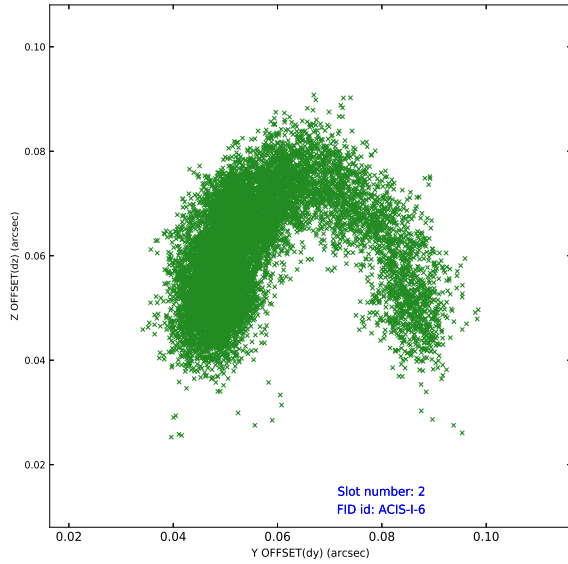
## 2.5.2 Slot 1



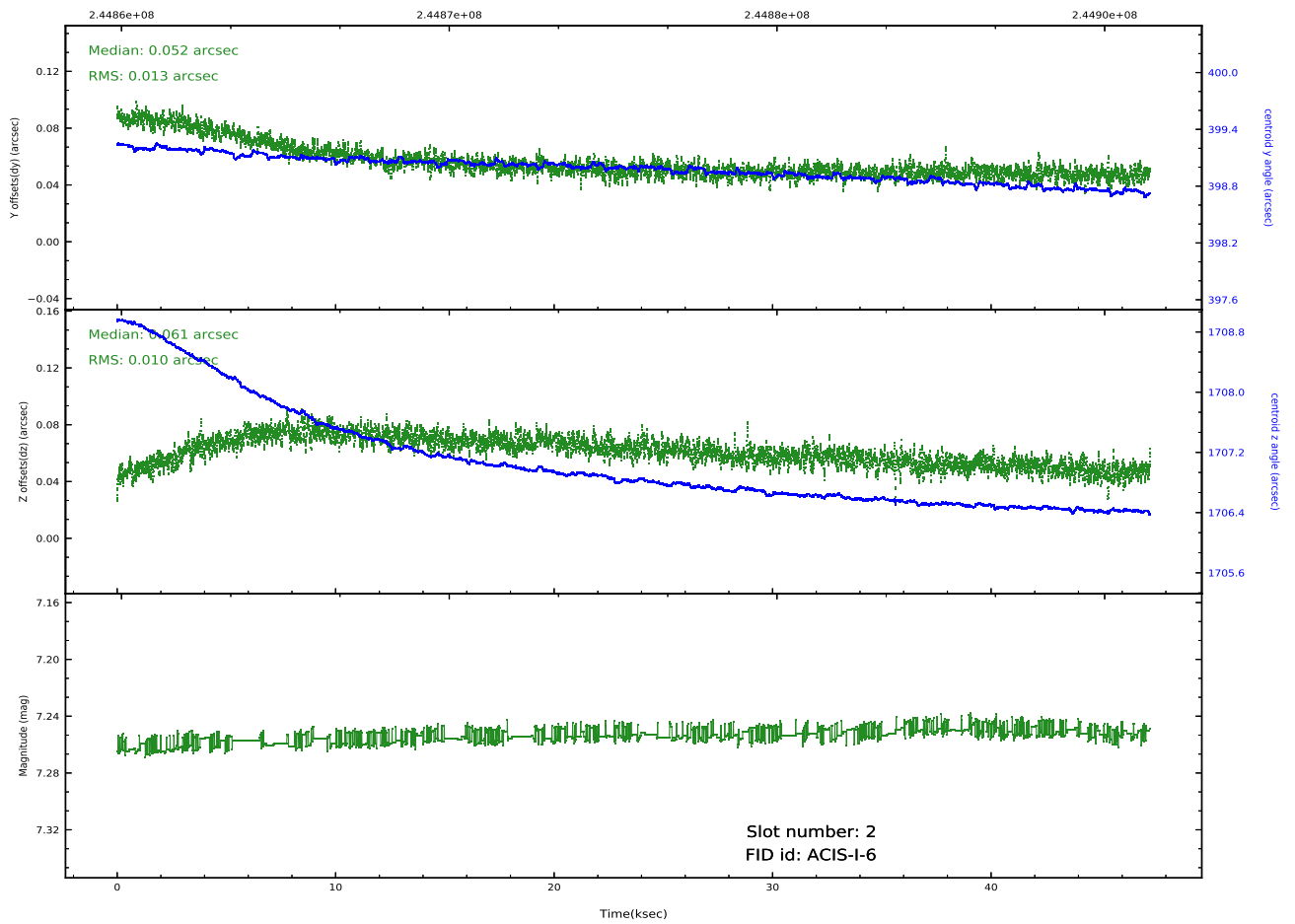
Time (s)



### 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	46.89671

## 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.