

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5843 - L2 Version 4  
Chandra X-Ray Center

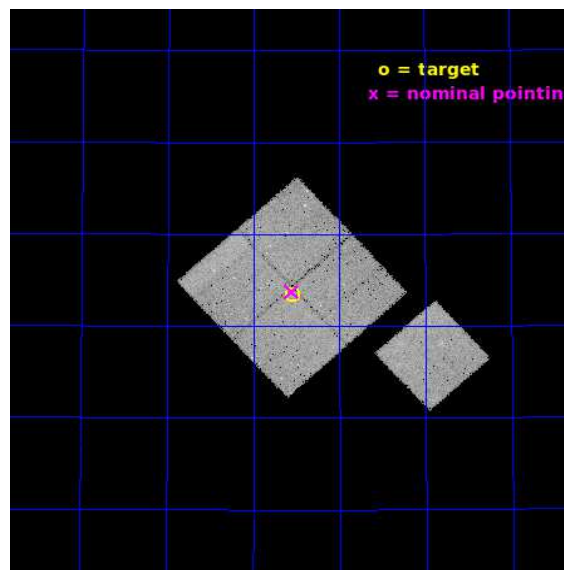
L2 Processing Date : Oct 7 2020

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# 1 Front

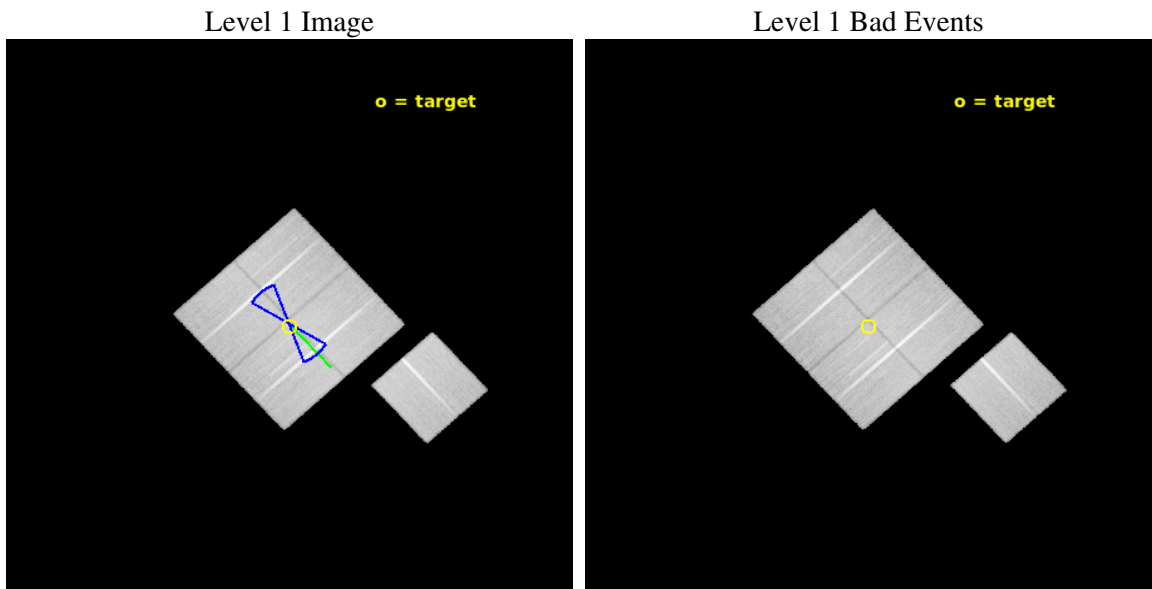
seq_num	900349	Sequence number
obs_id	5843	Observation id
title	Deep Chandra Imaging of the Extended Groth Strip: The Co-evolution of Black Holes and Galaxies	Proposal title
observer	Prof Kirpal Nandra	Principal investigator
object	Extended Groth Strip (EGS)	Source name
dtcycle	0	&#160
cycle	P	events 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	215.38804812994	Nominal RA [deg]
dec_nom	53.229266024399	Nominal Dec [deg]
roll_nom	137.62292640978	Nominal Roll [deg]
revision	4	Processing version of data
ontime	45046.058933109	Sum of GTIs [s]
livetime	44457.499010722	Livetime [s]
ontime0	45046.058923185	Sum of GTIs [s]
ontime1	45046.058943093	Sum of GTIs [s]
ontime2	45042.917922944	Sum of GTIs [s]
ontime3	45046.058933109	Sum of GTIs [s]
ontime6	45049.199913353	Sum of GTIs [s]
l2events	116661	Number of level 2 events



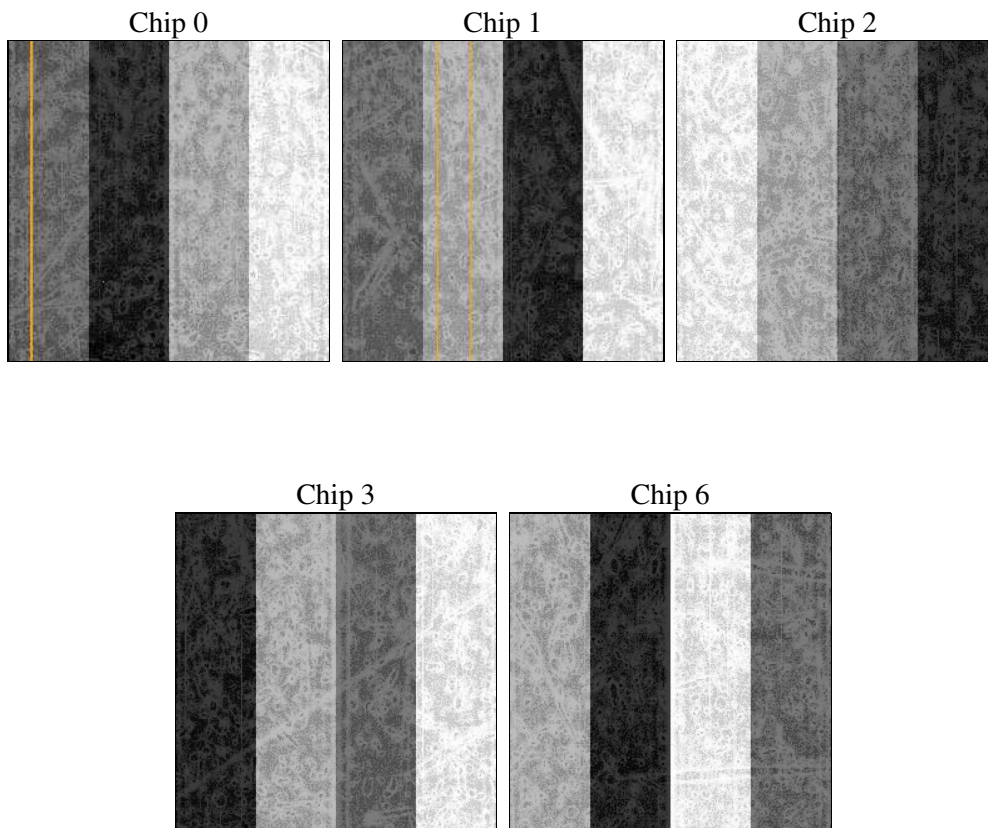
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	45000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	45046.058933109	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime0	45046.058923185	Sum of GTIs [s]
date	2020-10-07T11:22:31	Date and time of file creation	ontime1	45046.058943093	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	45042.917922944	Sum of GTIs [s]
			ontime3	45046.058933109	Sum of GTIs [s]
			ontime6	45049.199913353	Sum of GTIs [s]
			l1events	1366983	Number of level 1 events

### 2.1.4 Events

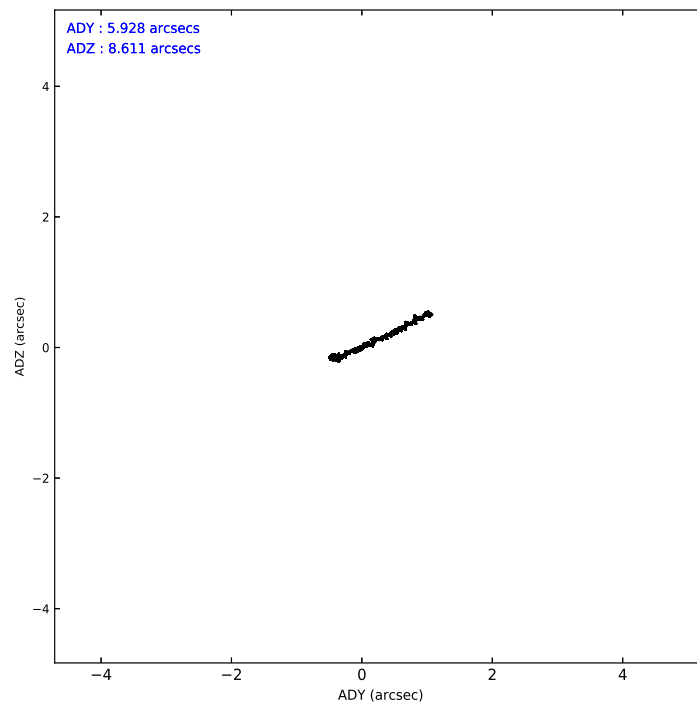
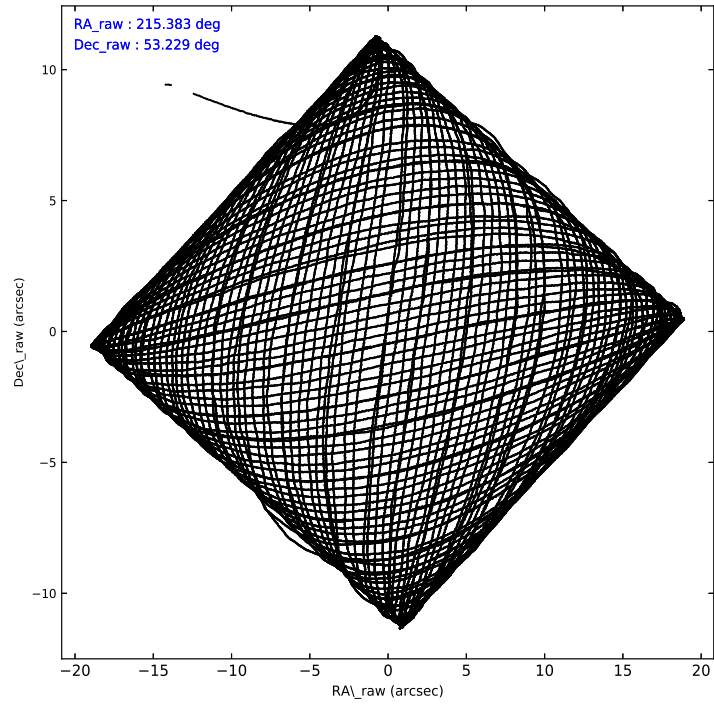
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	262640	257991	288691	280640	277021
rejected events	234146	226850	262080	254298	248458
rejected %	89%	87%	90%	90%	89%

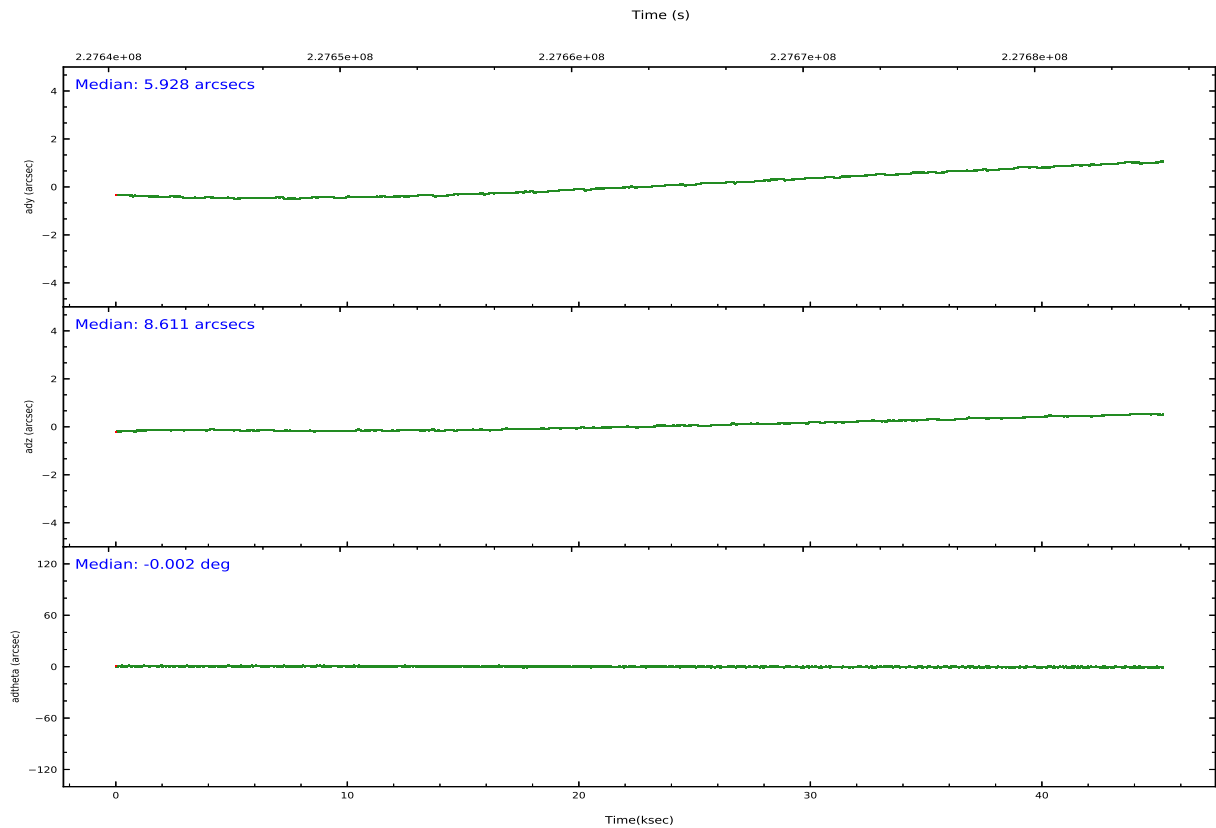
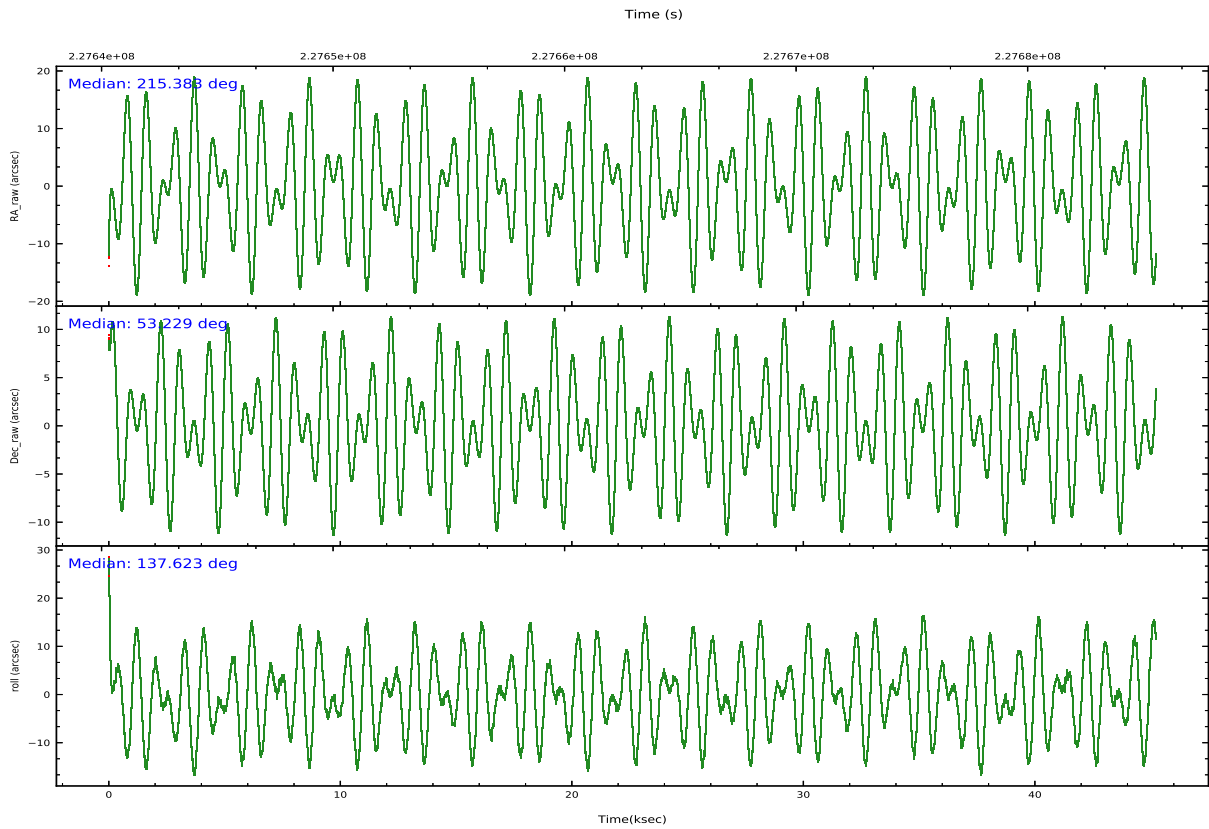
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	9928	11304	9361	9313	9798
	3%	4%	3%	3%	3%
grade 1 events	130	152	145	149	115
	0%	0%	0%	0%	0%
grade 2 events	6667	6769	6263	5721	6122
	2%	2%	2%	2%	2%
grade 3 events	3344	3523	2955	3037	3282
	1%	1%	1%	1%	1%
grade 4 events	3015	3291	3018	3059	3218
	1%	1%	1%	1%	1%
grade 5 events	10045	10878	9389	11181	11165
	3%	4%	3%	3%	4%
grade 6 events	5543	6258	5015	5212	6143
	2%	2%	1%	1%	2%
grade 7 events	223968	215816	252545	242968	237178
	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	215.427725	215.38804812994	Subarray requested	NONE	NONE
[deg] Pointing Dec	53.222802	53.229266024399	Alternating exposures requested	N	N
[deg] Pointing Roll	137.380327	137.62292640978	[s] Primary exposure time	0.000000	3.1
[deg] Roll angle	50.756000	50.756000			
[deg] Roll tolerance	20.000000	20.000000			
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)	227640551.184000	227639589.24061			
Observation start date	2005-03-19T17:28:07	2005-03-19T17:13:09			
[s] Observation end time (MET)	227685551.184000	227686027.89272			
Observation end date	2005-03-20T05:58:07	2005-03-20T06:07:07			
Read mode	TIMED	TIMED			

## 2.3 Aspect



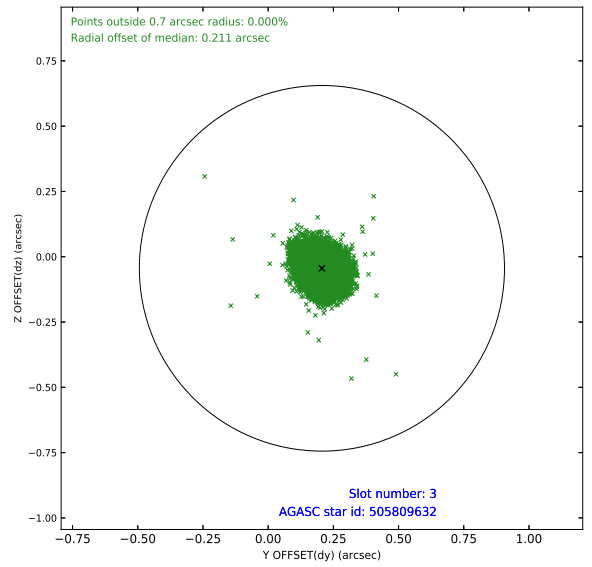
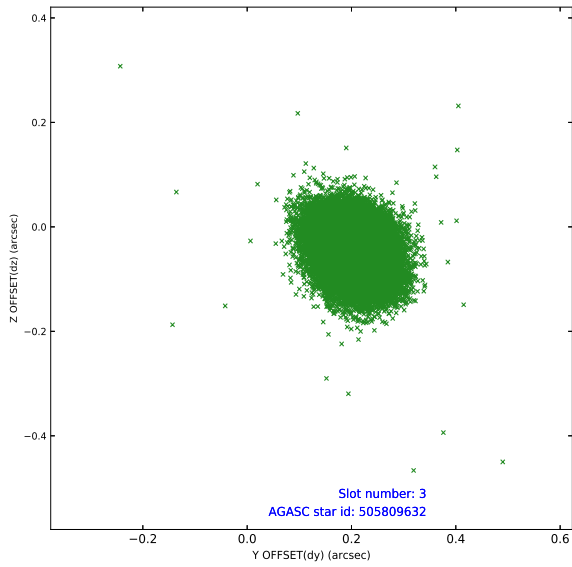


### Slot Statistics

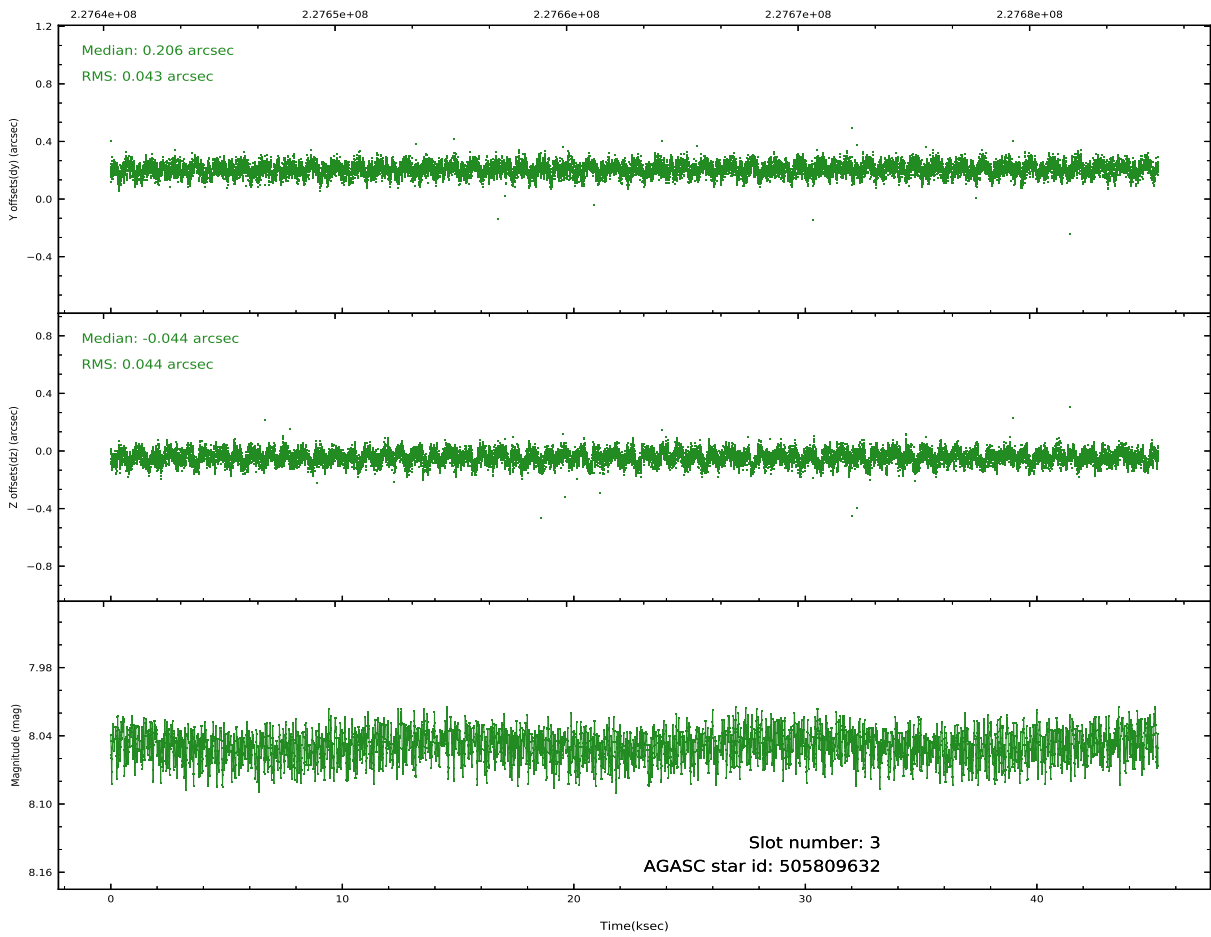
slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-I-1	7.24	11032	1.000	0.023	0.015	0.013	0.020	0.000000	0.000000	933.71	-832
1	FID		ACIS-I-5	7.23	11033	1.000	-0.199	0.036	0.013	0.020	0.000000	0.000000	-1814.64	1065
2	FID		ACIS-I-6	7.26	11031	1.000	0.084	0.020	0.010	0.018	0.000000	0.000000	399.30	1709
3	GUIDE	used	505809632	8.05	22063	1.000	0.206	-0.044	0.065	0.105	215.499426	53.521185	614.99	-894
4	GUIDE	used	505812088	8.16	22004	1.000	0.018	0.103	0.063	0.099	214.186617	53.263562	2081.74	1685
5	GUIDE	used	505815088	7.28	22054	1.000	-0.029	-0.045	0.059	0.092	216.315963	53.584954	-506.17	-2253
6	GUIDE	used	505815928	8.30	22063	1.000	-0.080	0.016	0.060	0.094	216.234742	53.074559	-1638.88	-796
7	GUIDE	used	505817384	8.07	22060	1.000	-0.114	-0.025	0.076	0.121	216.827424	53.311152	-1979.00	-2294

## 2.4 Star Slots

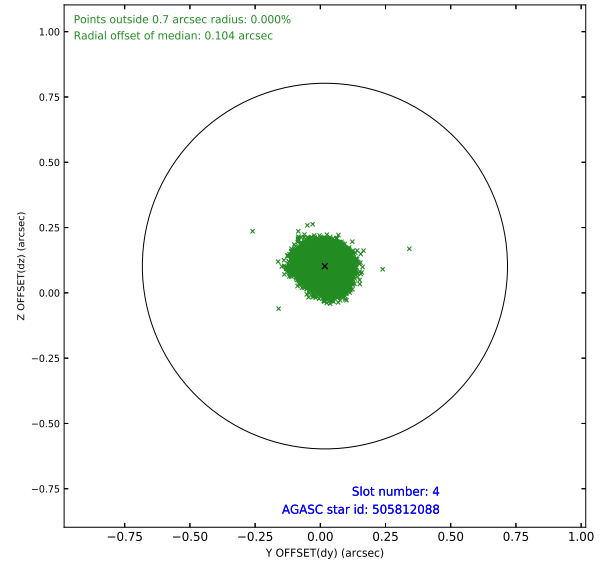
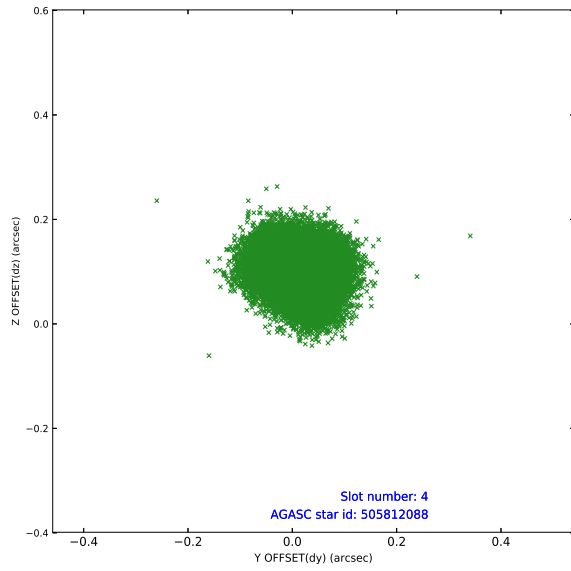
### 2.4.1 Slot 3



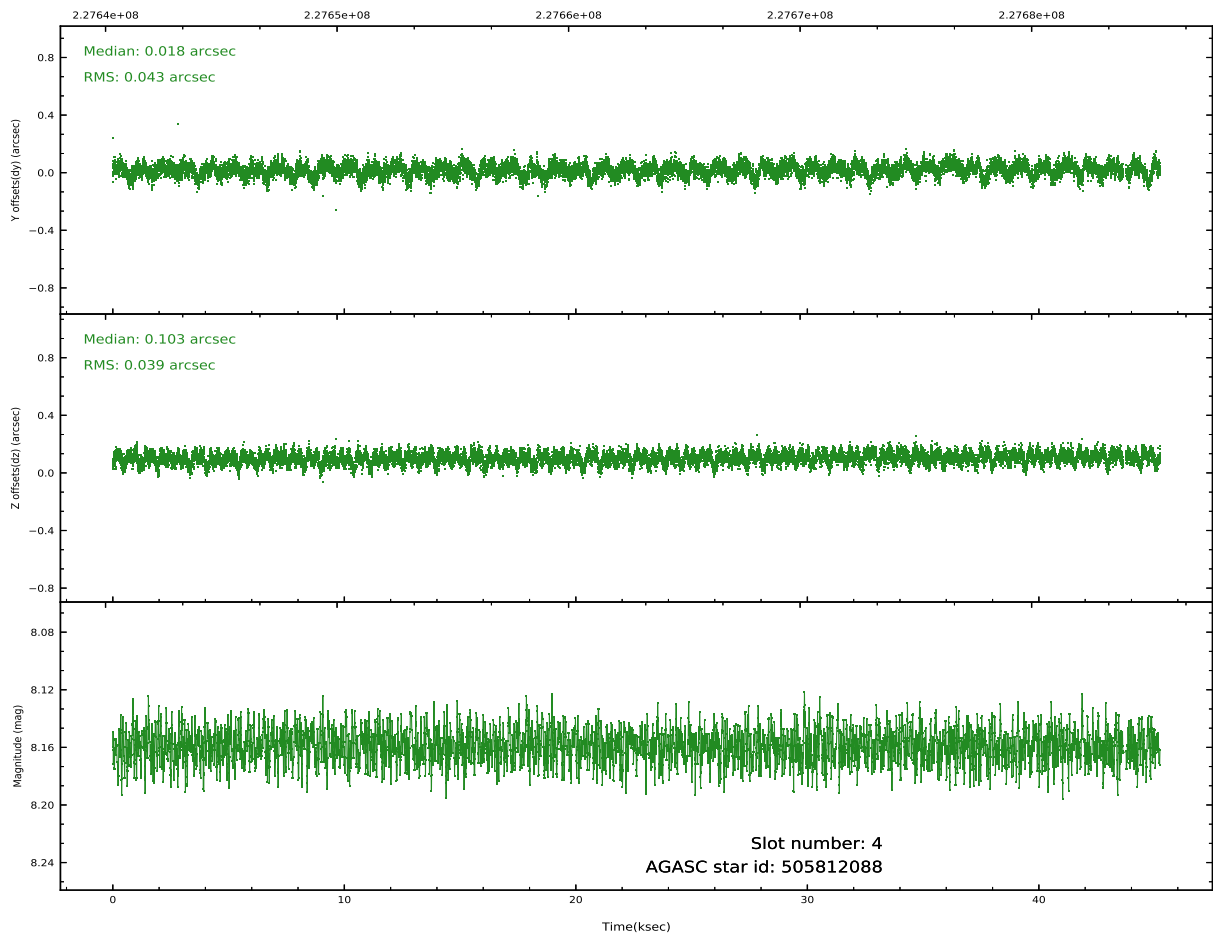
Time (s)



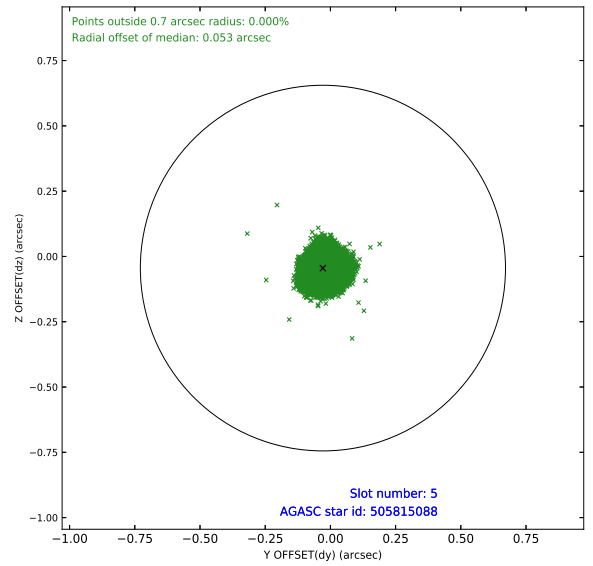
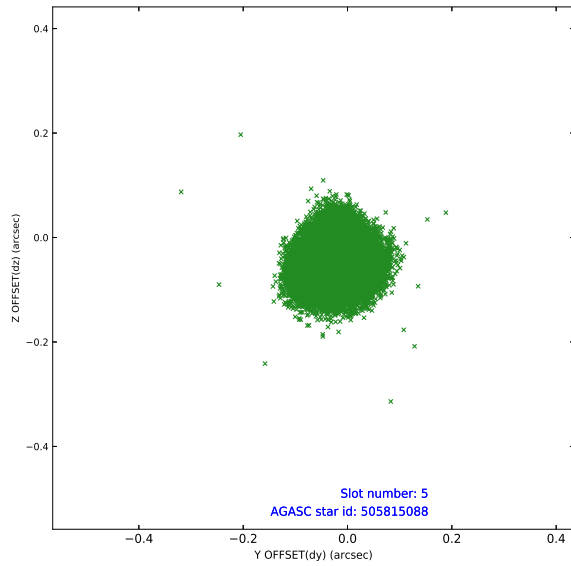
## 2.4.2 Slot 4



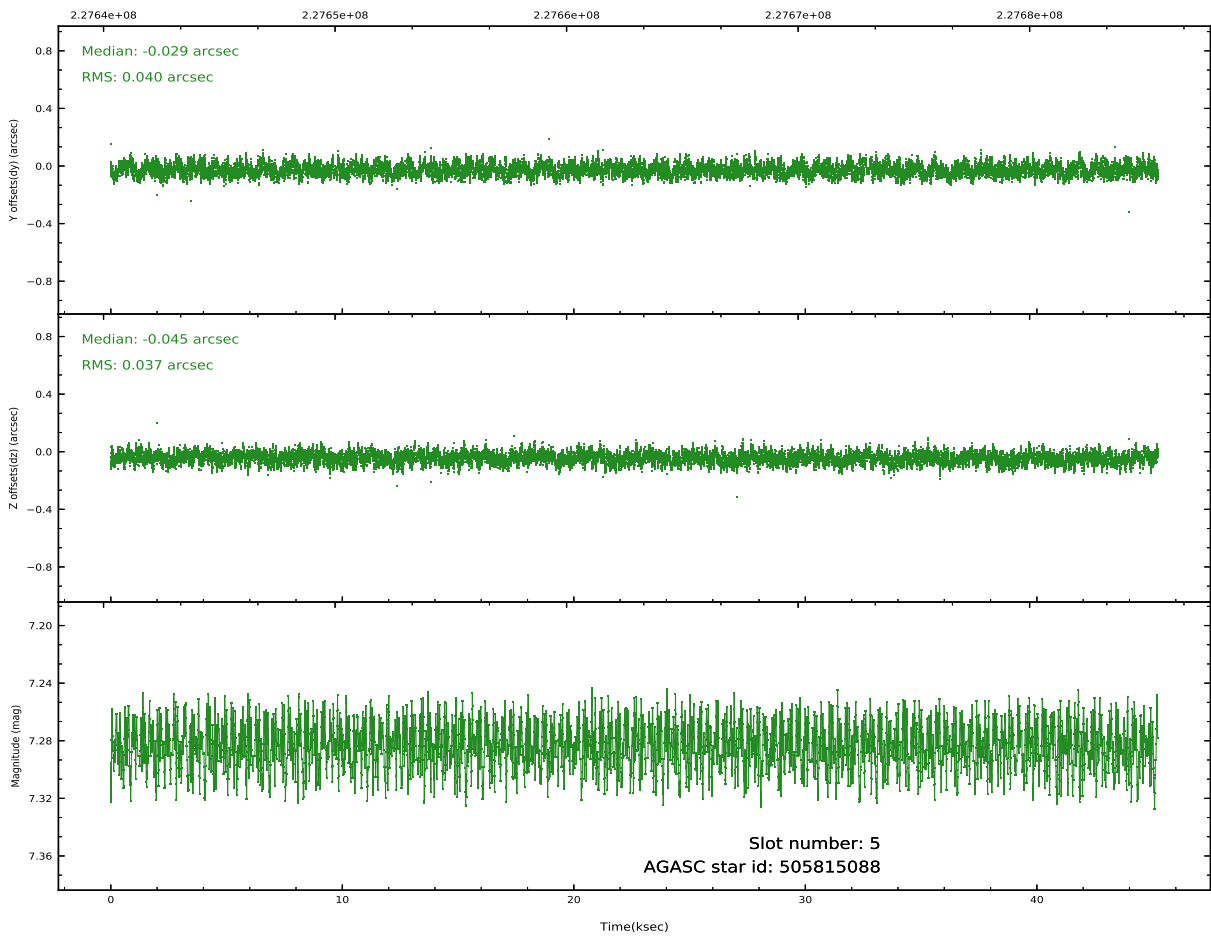
Time (s)



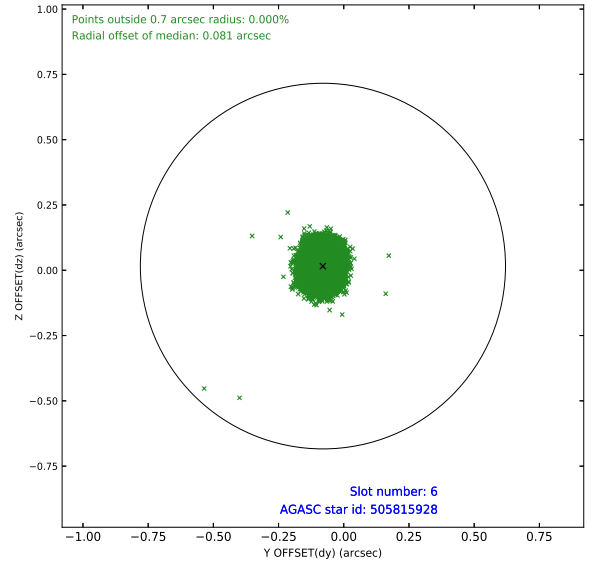
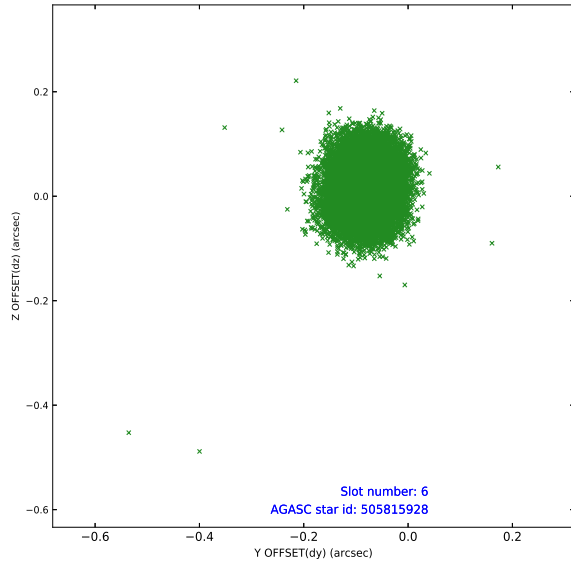
### 2.4.3 Slot 5



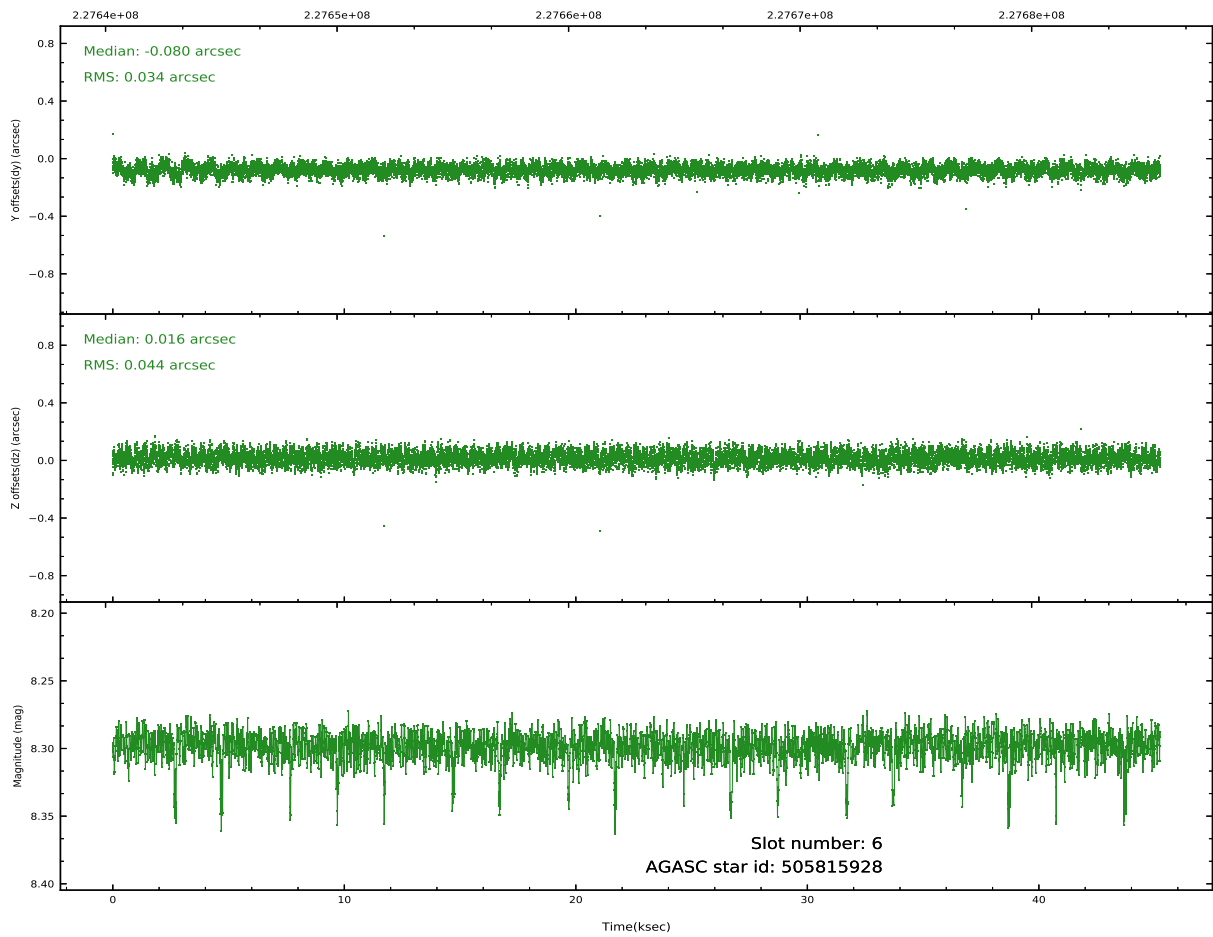
Time (s)



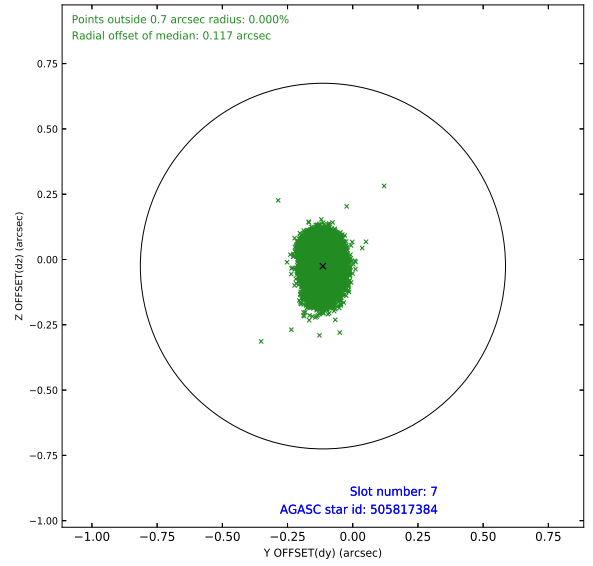
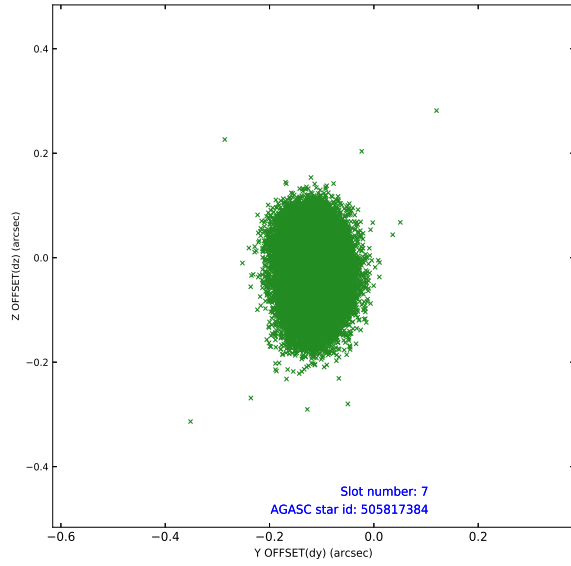
## 2.4.4 Slot 6



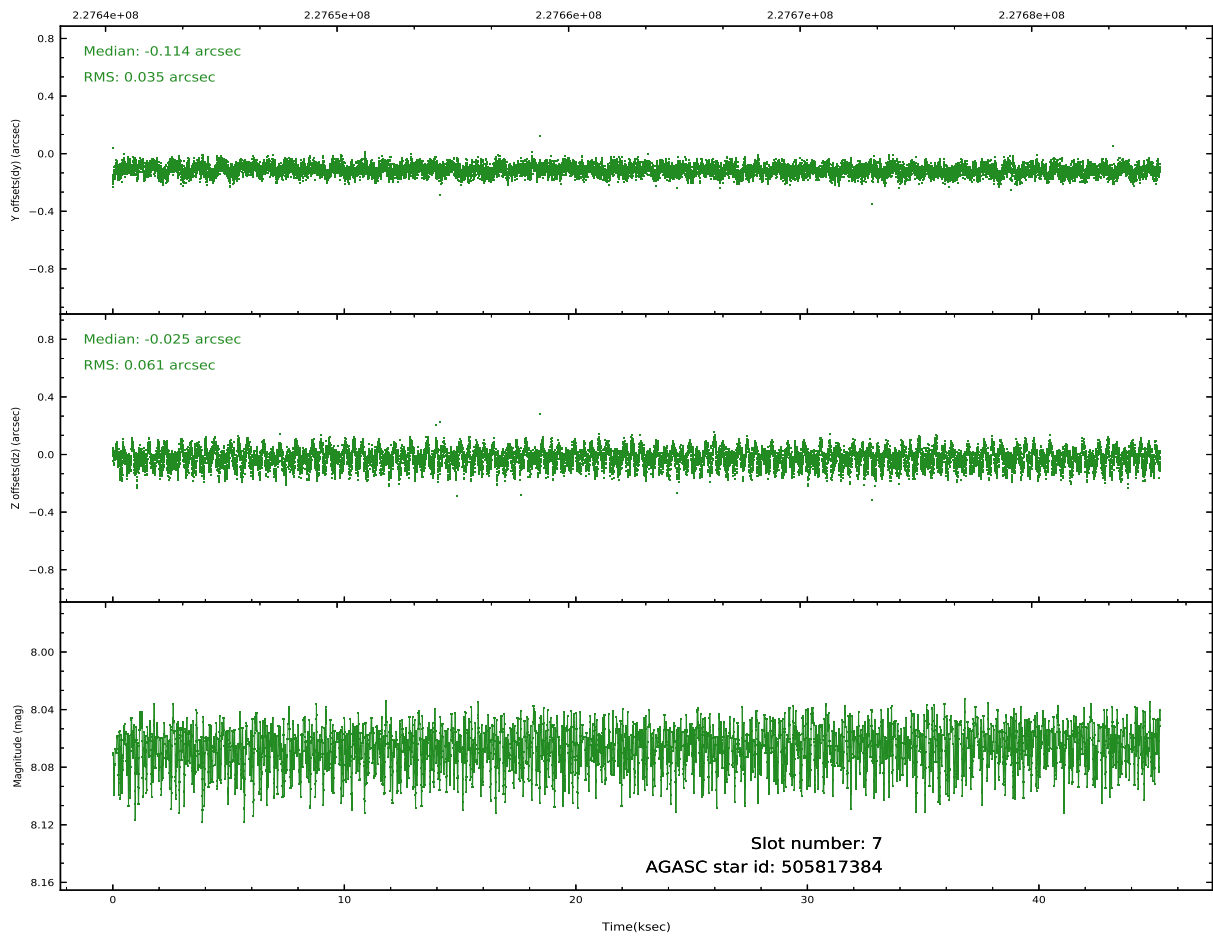
Time (s)



## 2.4.5 Slot 7

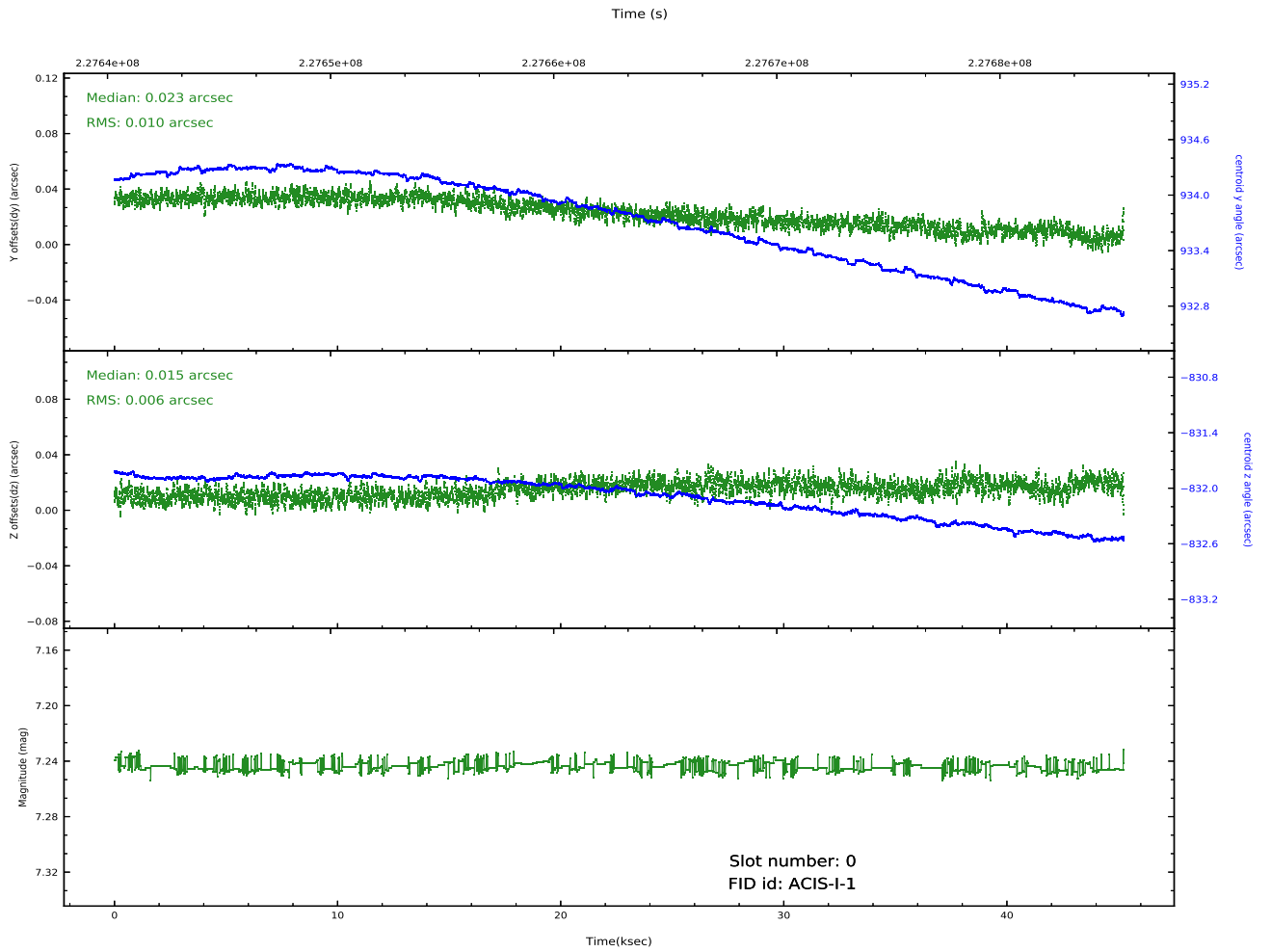
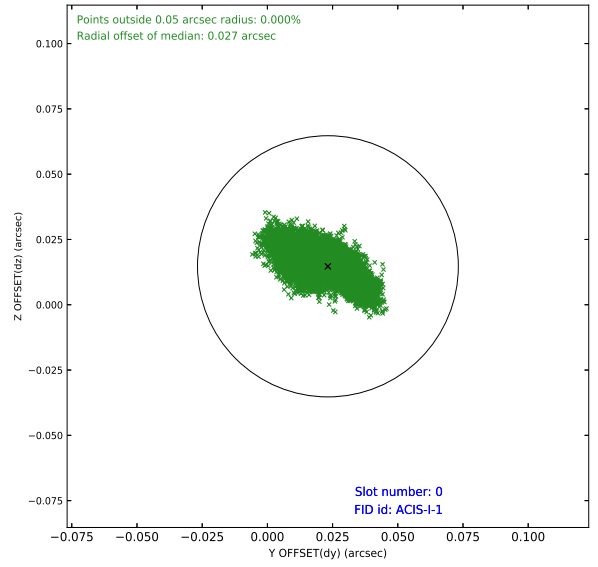
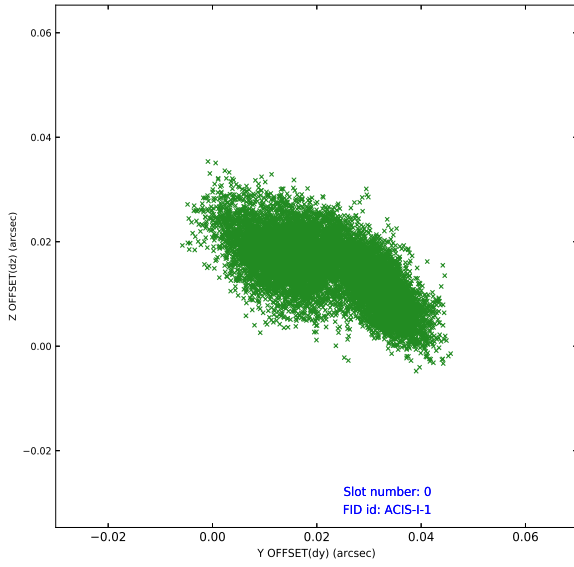


Time (s)

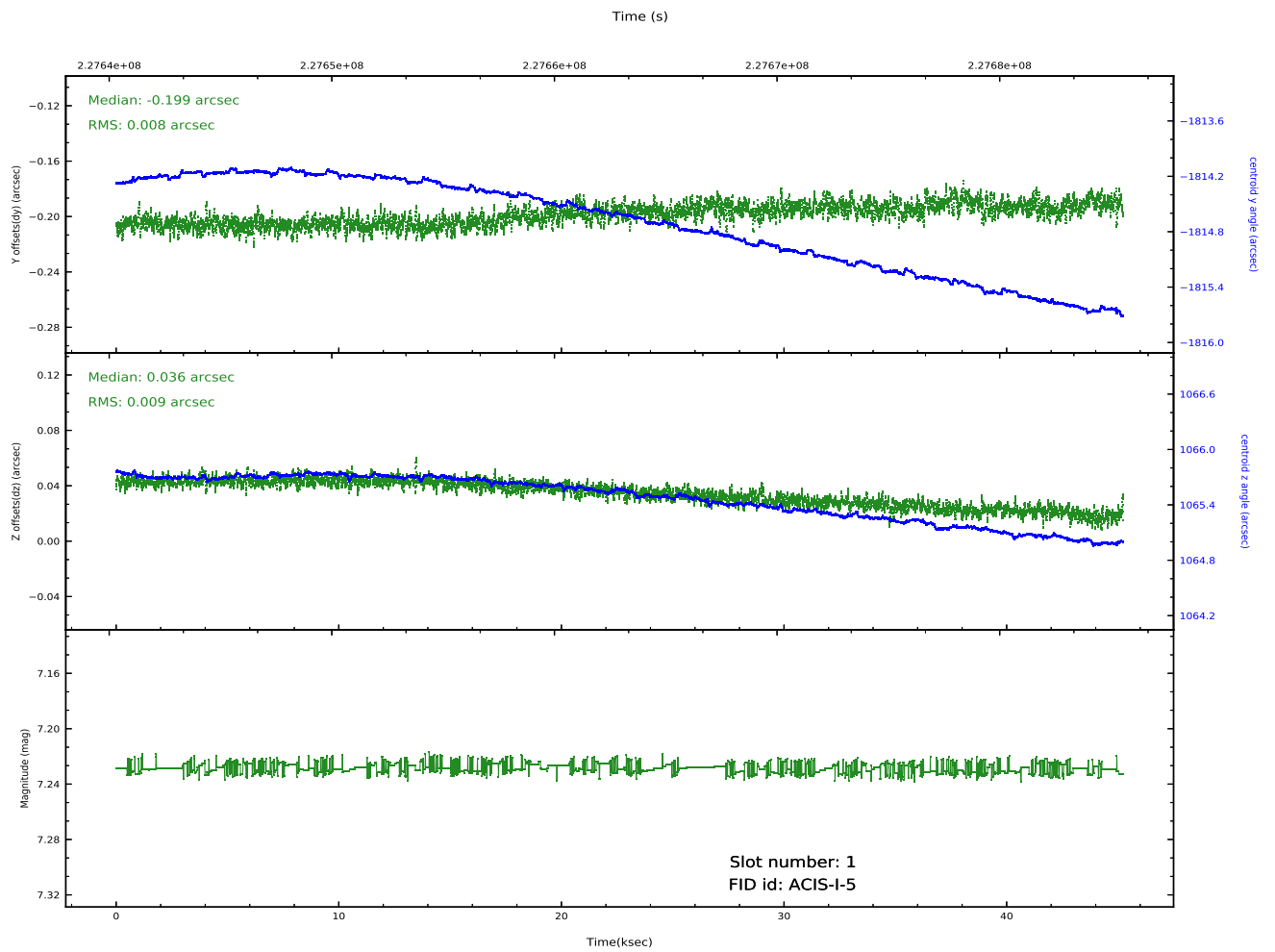
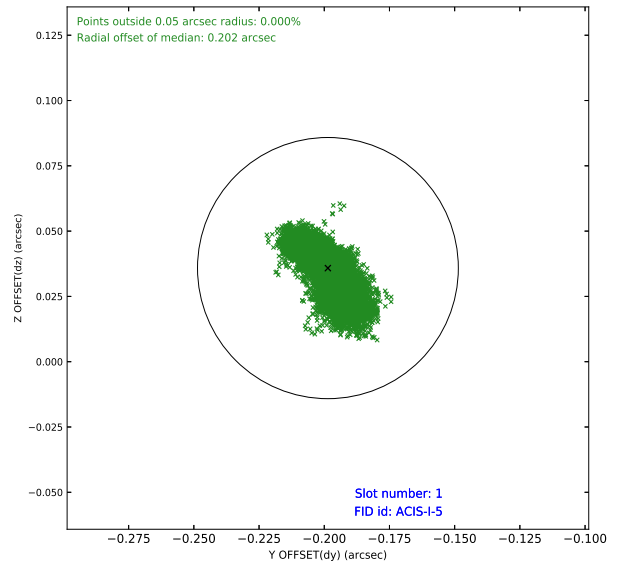
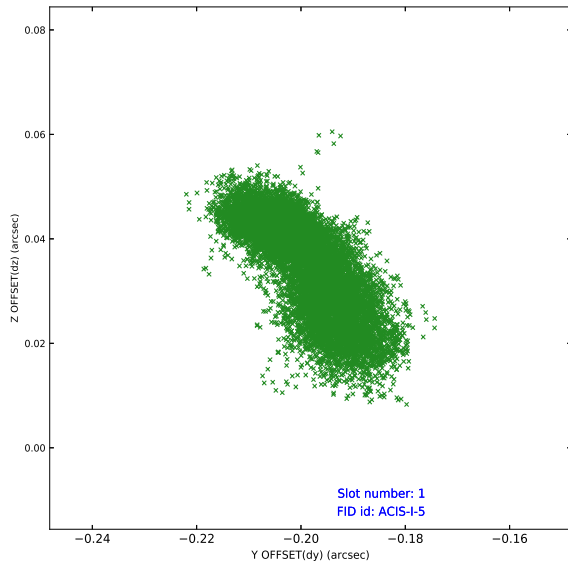


## 2.5 FID Slots

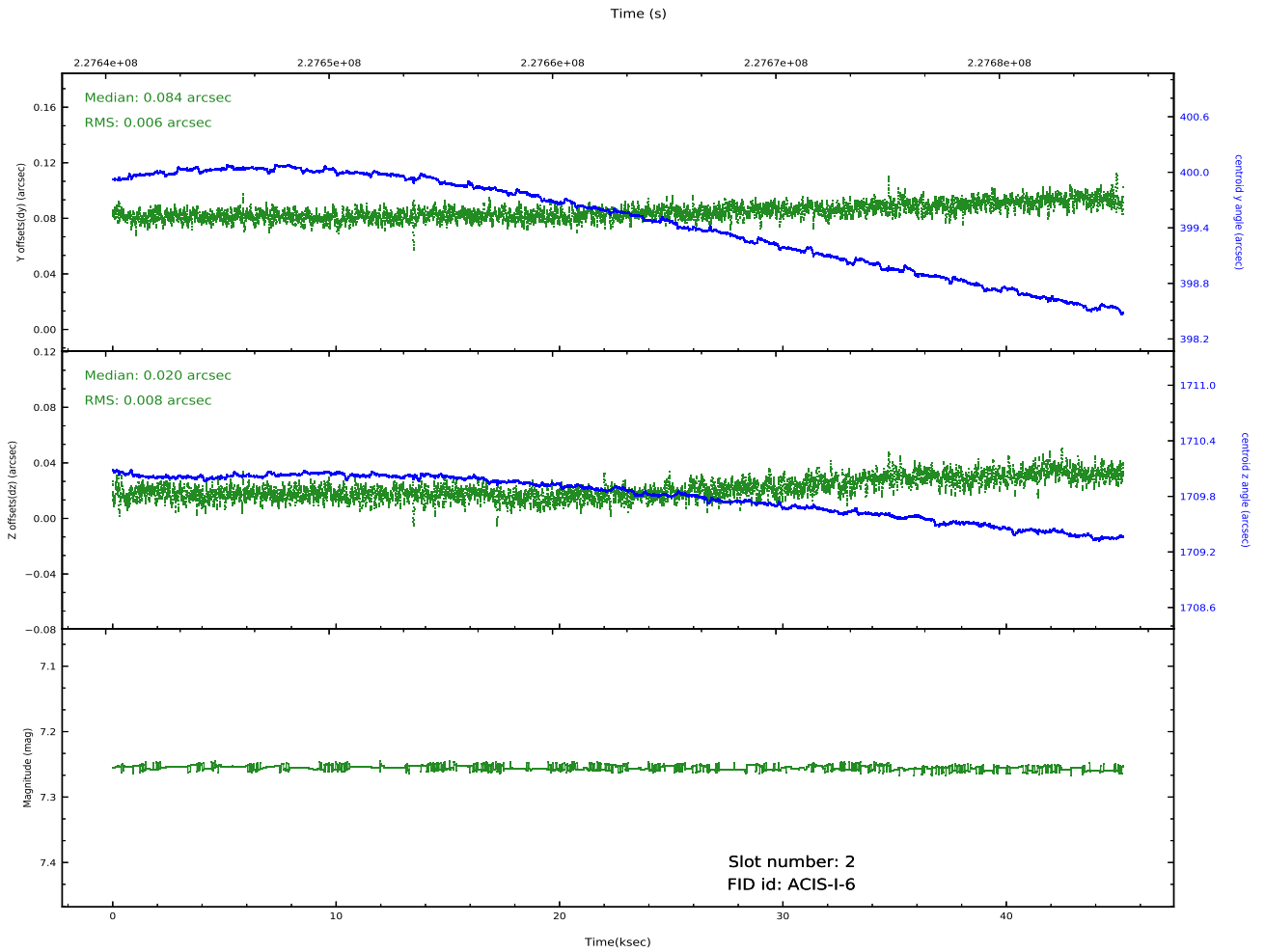
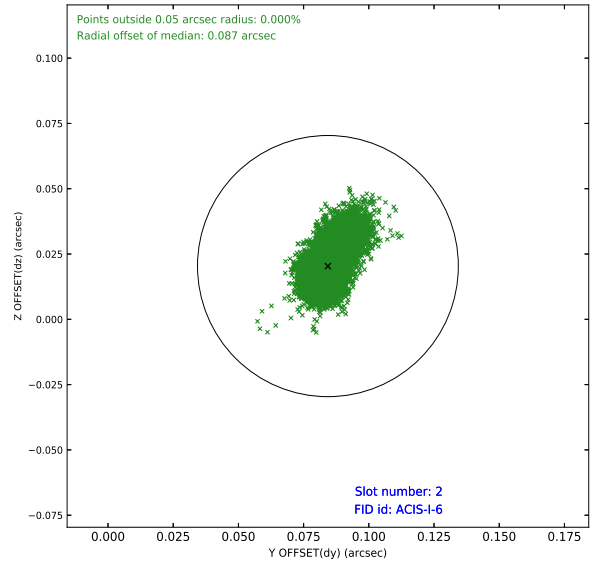
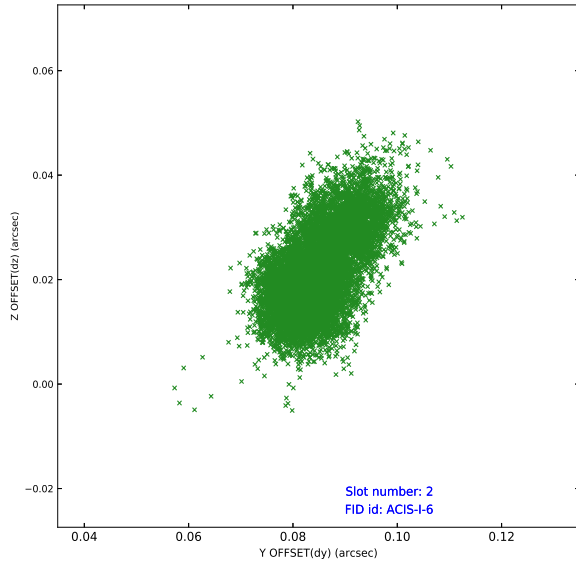
### 2.5.1 Slot 0



## 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)	2020.10.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	45.04605

## A.2 Comments

Roll constraint was met.