

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5842 - L2 Version 4  
Chandra X-Ray Center

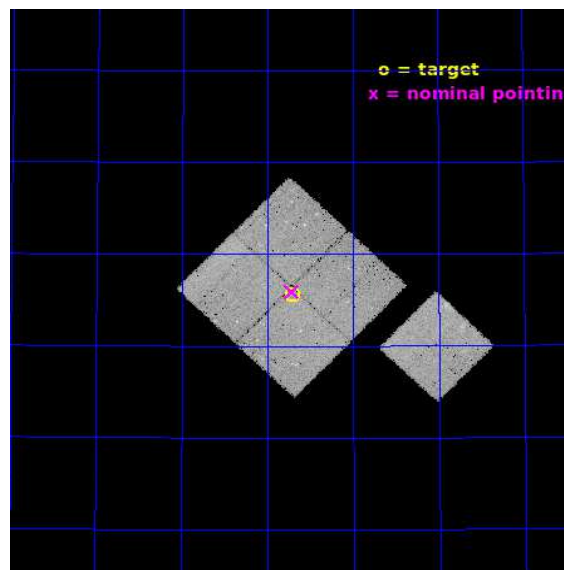
L2 Processing Date : Oct 7 2020

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# 1 Front

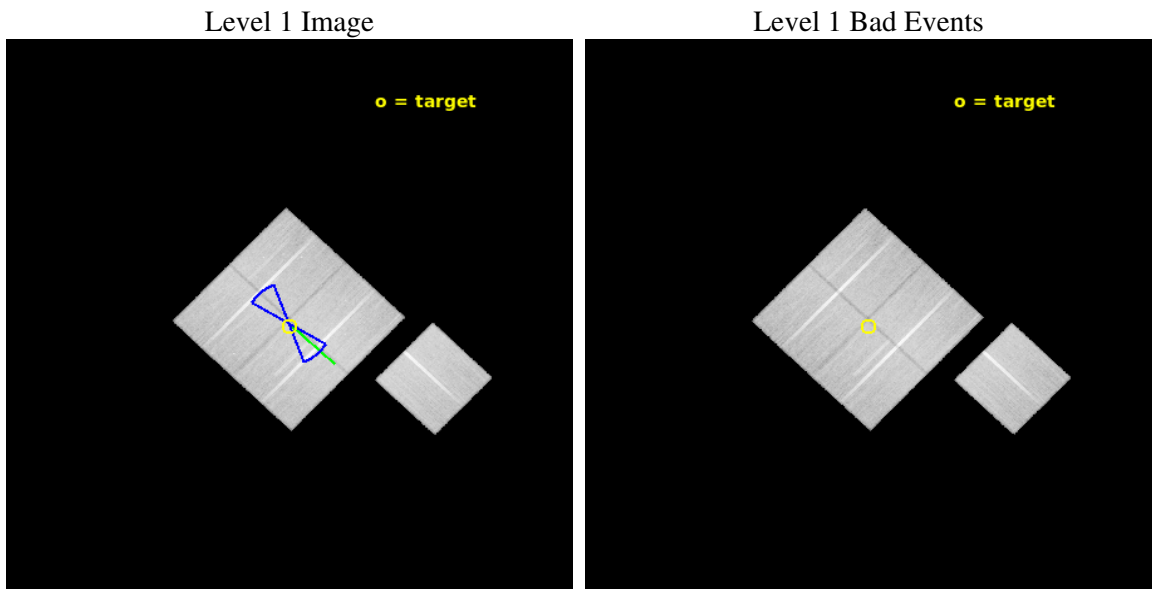
seq_num	900348	Sequence number
obs_id	5842	Observation id
title	Deep Chandra Imaging of the Extended Groth Strip: The Co-evolution of Black Holes and Galaxies	Proposal title
observer	Prof Kirpal Nandra	Principal investigator
object	Extended Groth Strip (EGS)	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	215.676254	Observer's specified target RA [deg]
dec_targ	53.427086	Observer's specified target Dec [deg]
ra_nom	215.67869305294	Nominal RA [deg]
dec_nom	53.432119772936	Nominal Dec [deg]
roll_nom	133.91232863442	Nominal Roll [deg]
revision	4	Processing version of data
ontime	47038.247436523	Sum of GTIs [s]
livetime	46423.658104711	Livetime [s]
ontime0	47050.688138068	Sum of GTIs [s]
ontime1	47041.306227416	Sum of GTIs [s]
ontime2	47050.770218074	Sum of GTIs [s]
ontime3	47038.247436523	Sum of GTIs [s]
ontime6	47050.647098064	Sum of GTIs [s]
l2events	122811	Number of level 2 events



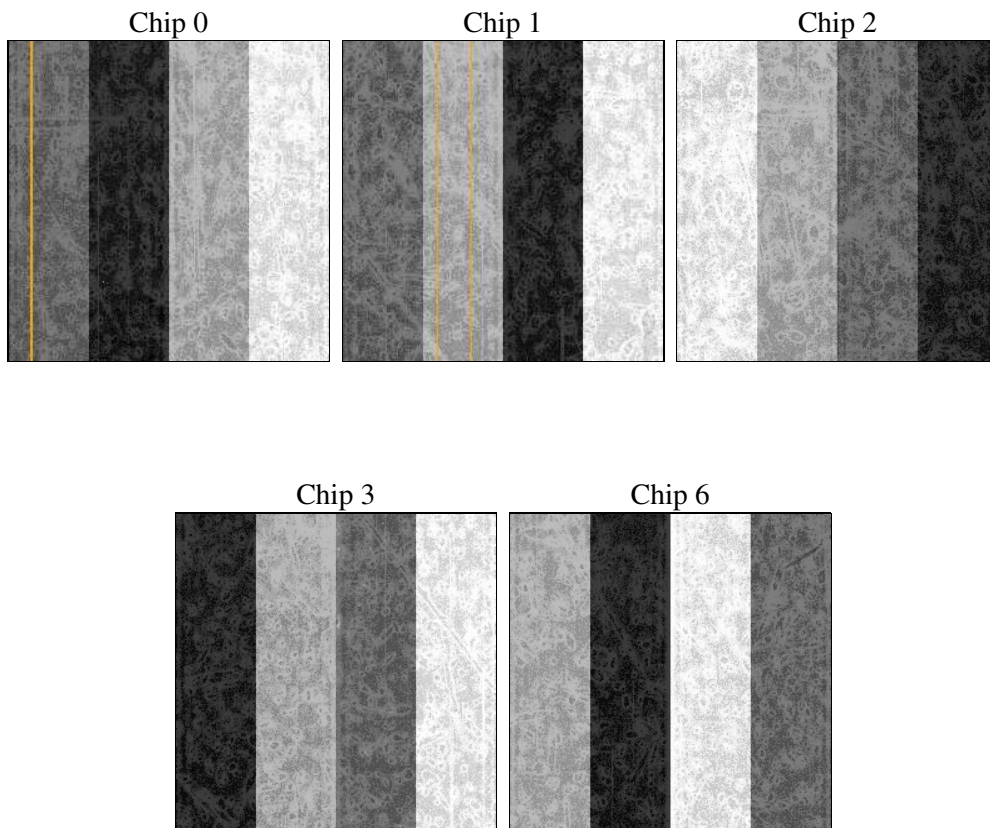
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	47000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	47038.247436523	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime0	47050.688138068	Sum of GTIs [s]
date	2020-10-07T11:18:09	Date and time of file creation	ontime1	47041.306227416	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	47050.770218074	Sum of GTIs [s]
			ontime3	47038.247436523	Sum of GTIs [s]
			ontime6	47050.647098064	Sum of GTIs [s]
			l1events	1441036	Number of level 1 events

### 2.1.4 Events

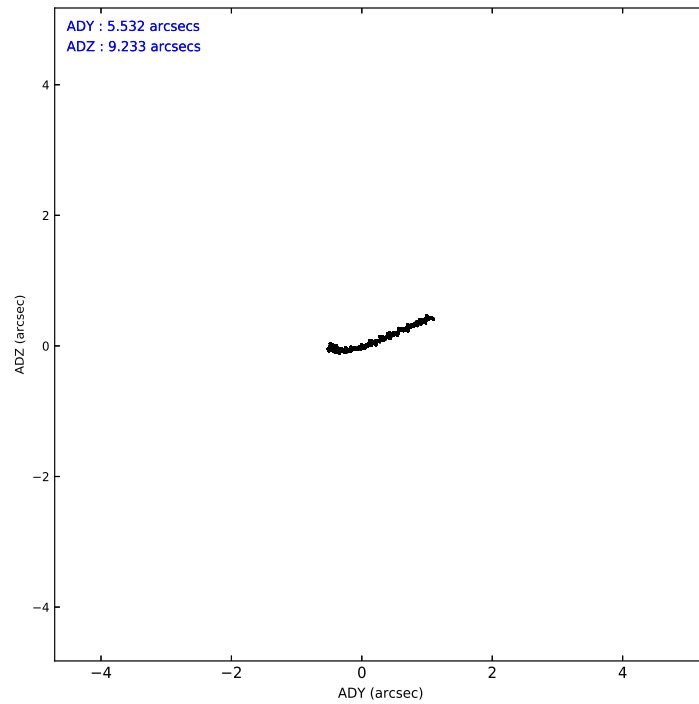
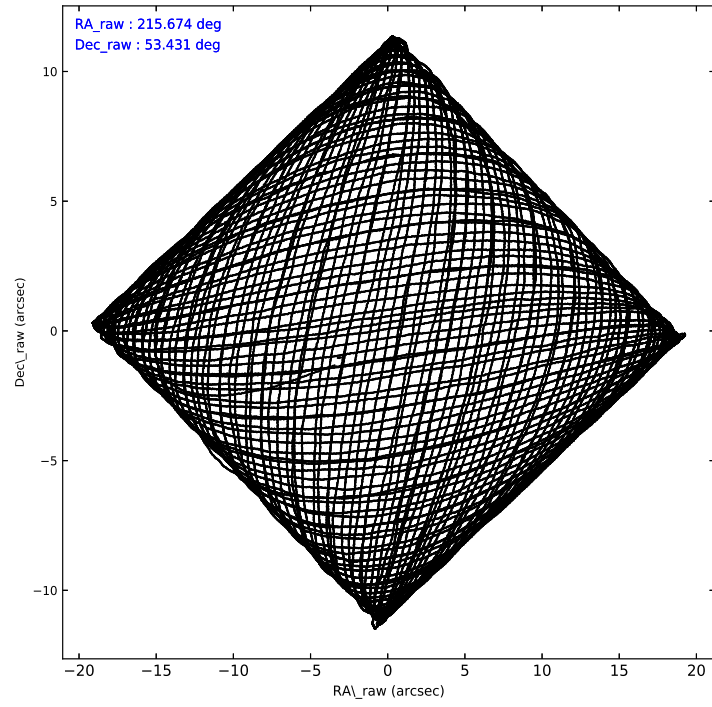
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	271777	274099	305920	291777	297463
rejected events	242014	241479	277432	264272	267080
rejected %	89%	88%	90%	90%	89%

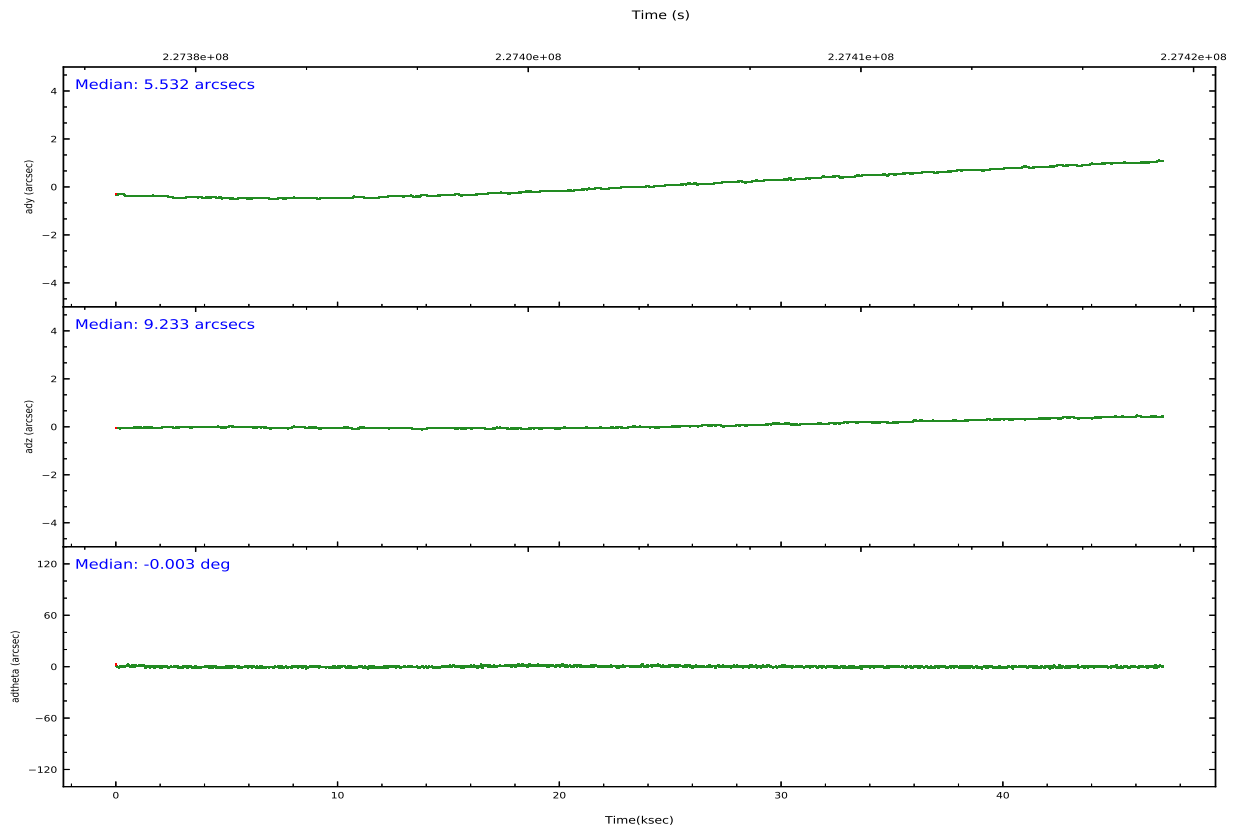
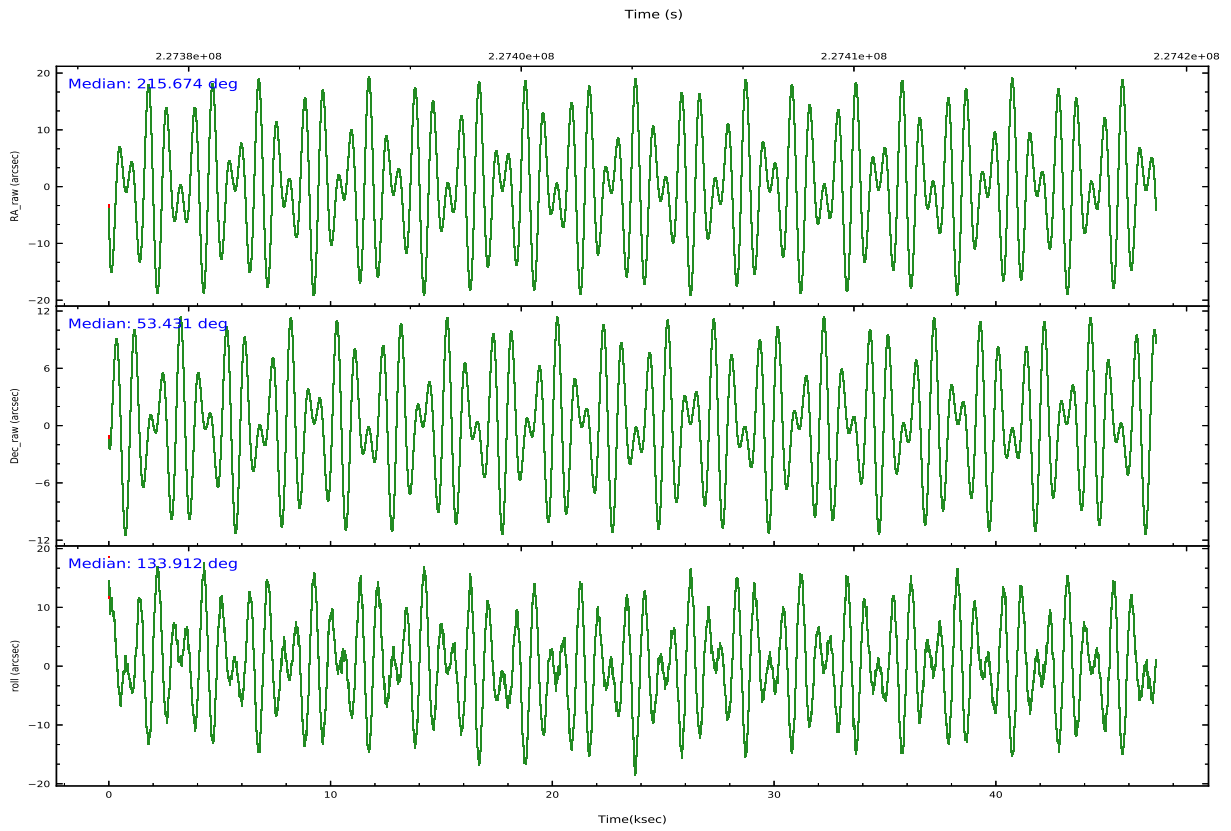
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	10613	11800	10233	9618	10664
	3%	4%	3%	3%	3%
grade 1 events	145	125	140	163	137
	0%	0%	0%	0%	0%
grade 2 events	6905	7028	6720	5872	6619
	2%	2%	2%	2%	2%
grade 3 events	3491	3623	3137	3245	3528
	1%	1%	1%	1%	1%
grade 4 events	3187	3711	3125	3307	3308
	1%	1%	1%	1%	1%
grade 5 events	10538	11325	10059	11645	11758
	3%	4%	3%	3%	3%
grade 6 events	5568	6463	5275	5465	6265
	2%	2%	1%	1%	2%
grade 7 events	231330	230024	267231	252462	255184
	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	215.717675	215.67869305294	Subarray requested	NONE	NONE
[deg] Pointing Dec	53.423929	53.432119772936	Alternating exposures requested	N	N
[deg] Pointing Roll	133.670881	133.91232863442	[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)	227376627.184000	227375674.79114			
Observation start date	2005-03-16T16:09:23	2005-03-16T15:54:34			
[s] Observation end time (MET)	227423627.184000	227424313.09335			
Observation end date	2005-03-17T05:12:43	2005-03-17T05:25:13			
Read mode	TIMED	TIMED			

## 2.3 Aspect



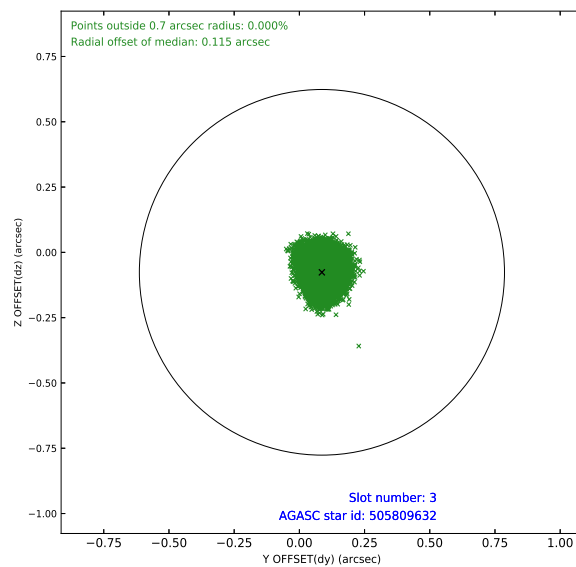
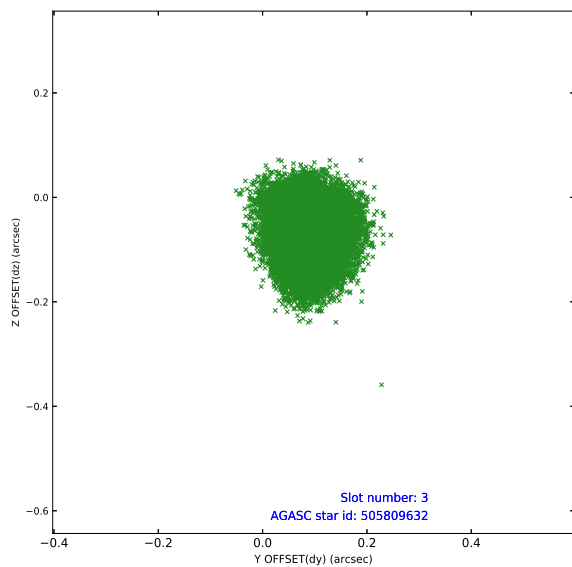


### Slot Statistics

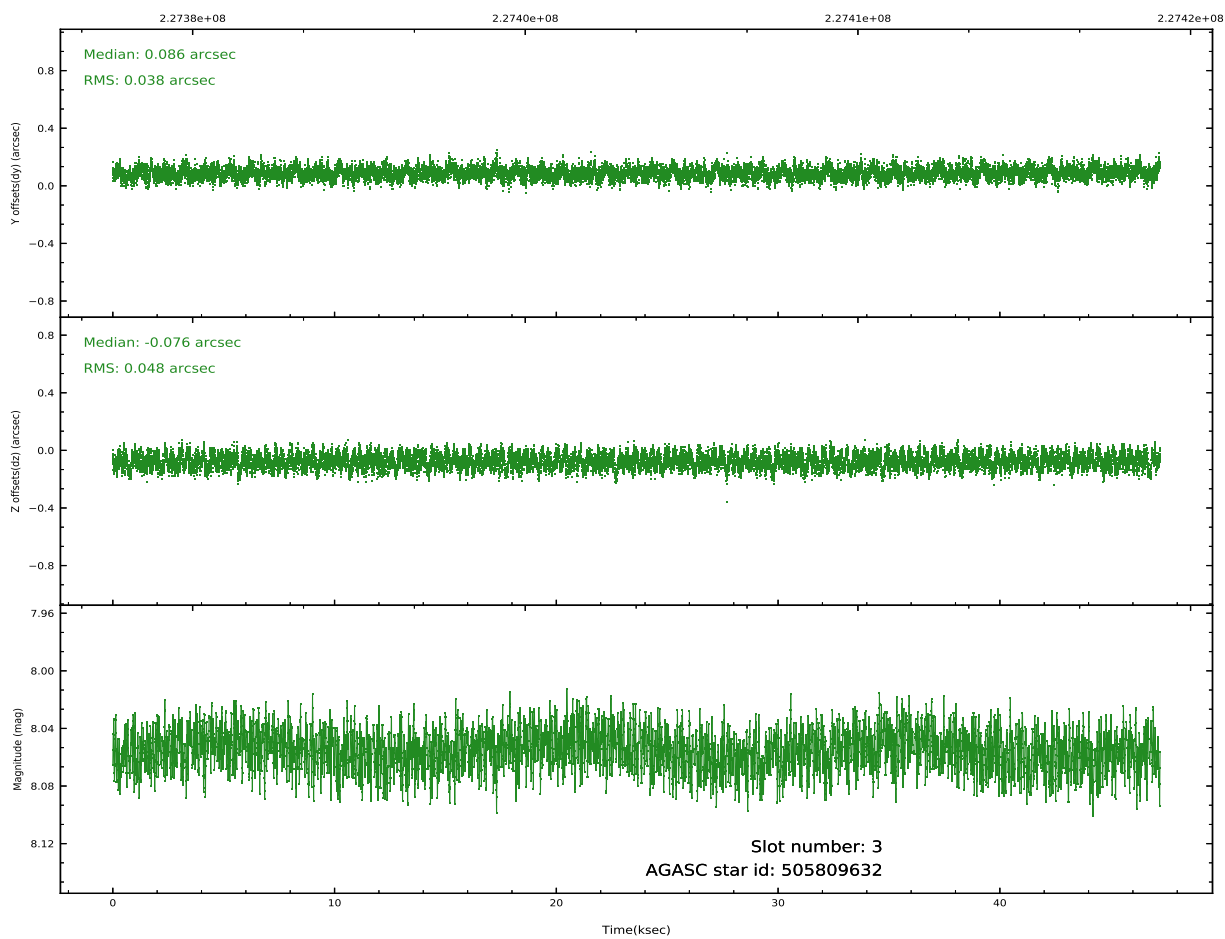
slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-I-2	7.14	11520	1.000	-0.088	-0.088	0.013	0.024	0.000000	0.000000	-760.17	-839
1	FID		ACIS-I-4	7.18	11519	1.000	0.187	0.077	0.016	0.024	0.000000	0.000000	2154.15	1067
2	FID		ACIS-I-5	7.22	11519	1.000	-0.200	0.080	0.015	0.022	0.000000	0.000000	-1814.14	1064
3	GUIDE	used	505809632	8.05	23035	1.000	0.086	-0.076	0.066	0.104	215.499426	53.521185	576.65	95
4	GUIDE	used	505815088	7.29	23039	1.000	0.014	-0.016	0.059	0.094	216.315963	53.584954	-459.88	-1328
5	GUIDE	used	505815928	8.29	23035	1.000	-0.111	-0.063	0.066	0.107	216.234742	53.074559	-1678.90	56
6	GUIDE	used	505817176	8.26	23032	1.000	0.060	0.110	0.057	0.090	216.408138	53.717379	-245.82	-1797
7	GUIDE	used	505817384	8.07	23036	1.000	-0.051	0.054	0.054	0.086	216.827424	53.311152	-1927.30	-1459

## 2.4 Star Slots

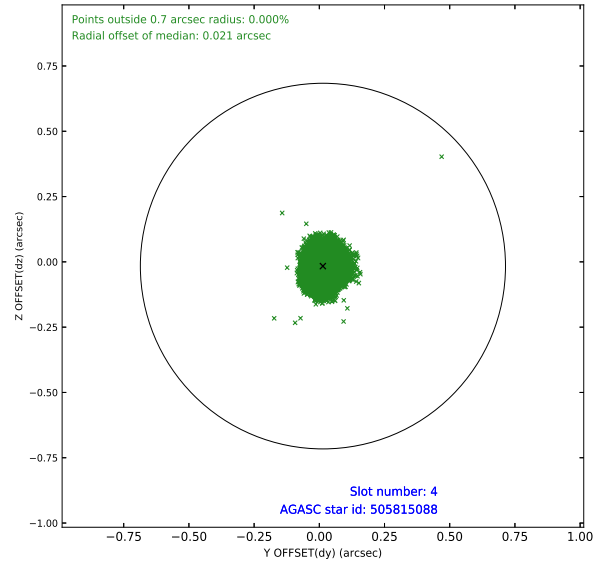
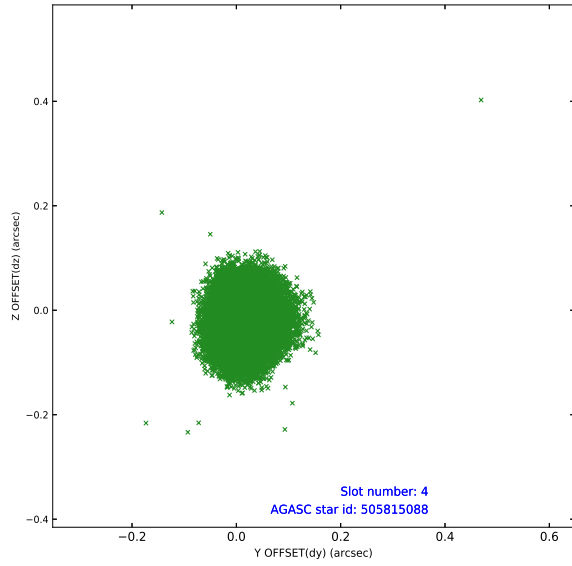
### 2.4.1 Slot 3



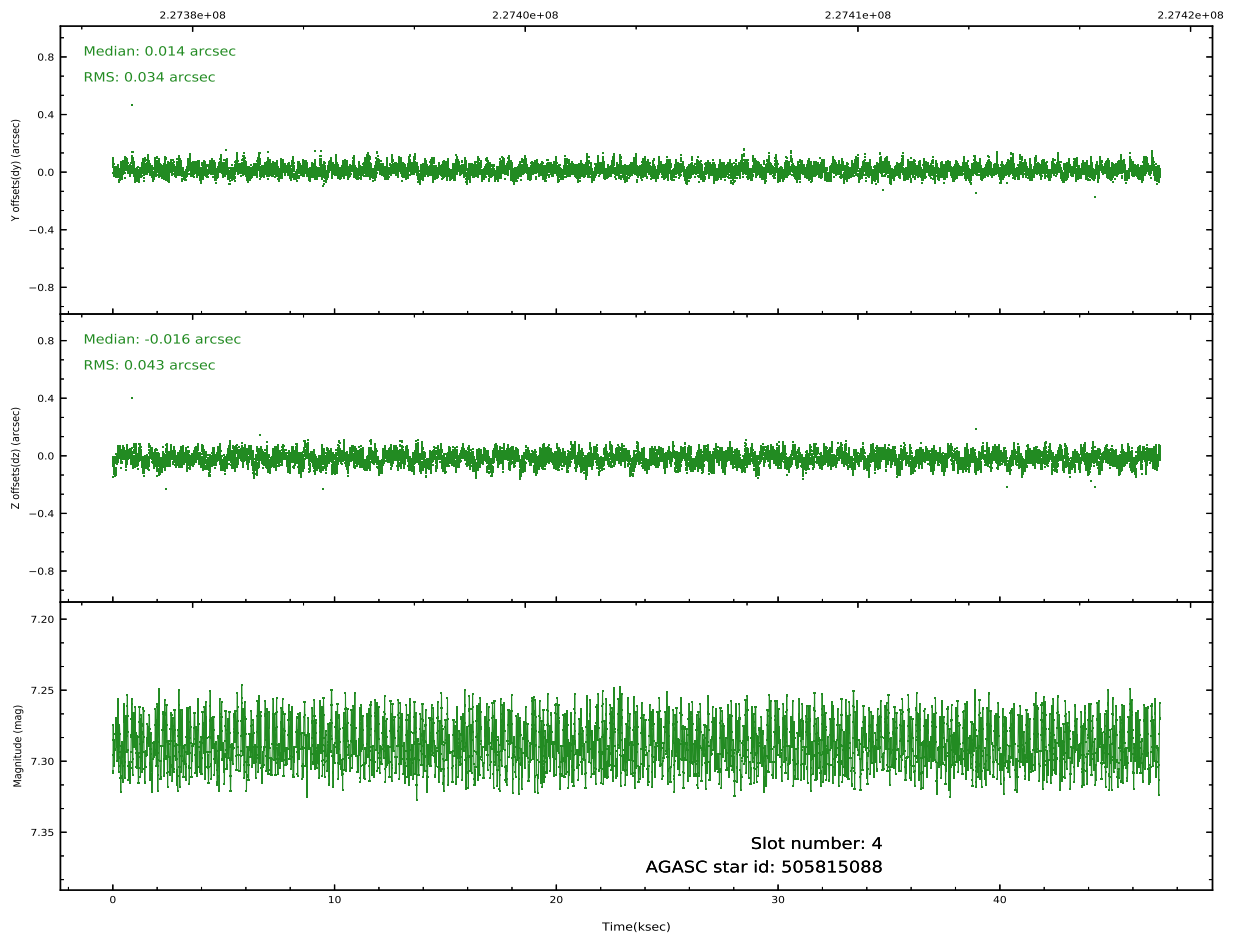
Time (s)



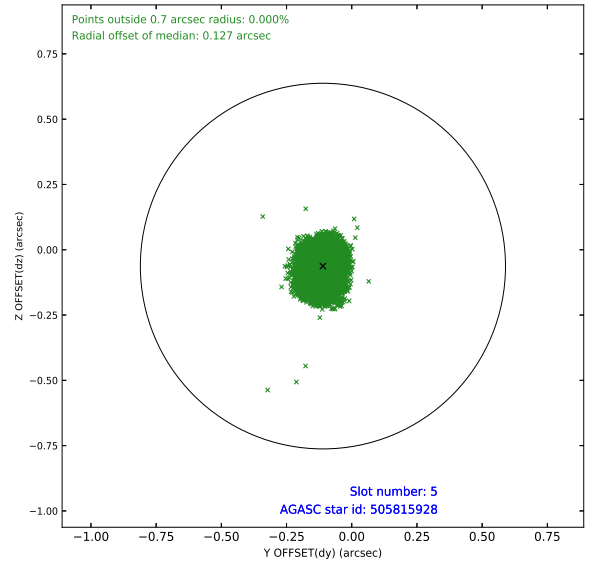
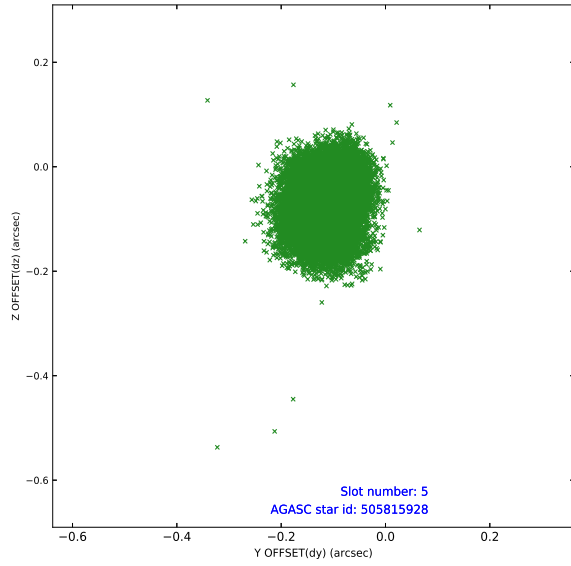
## 2.4.2 Slot 4



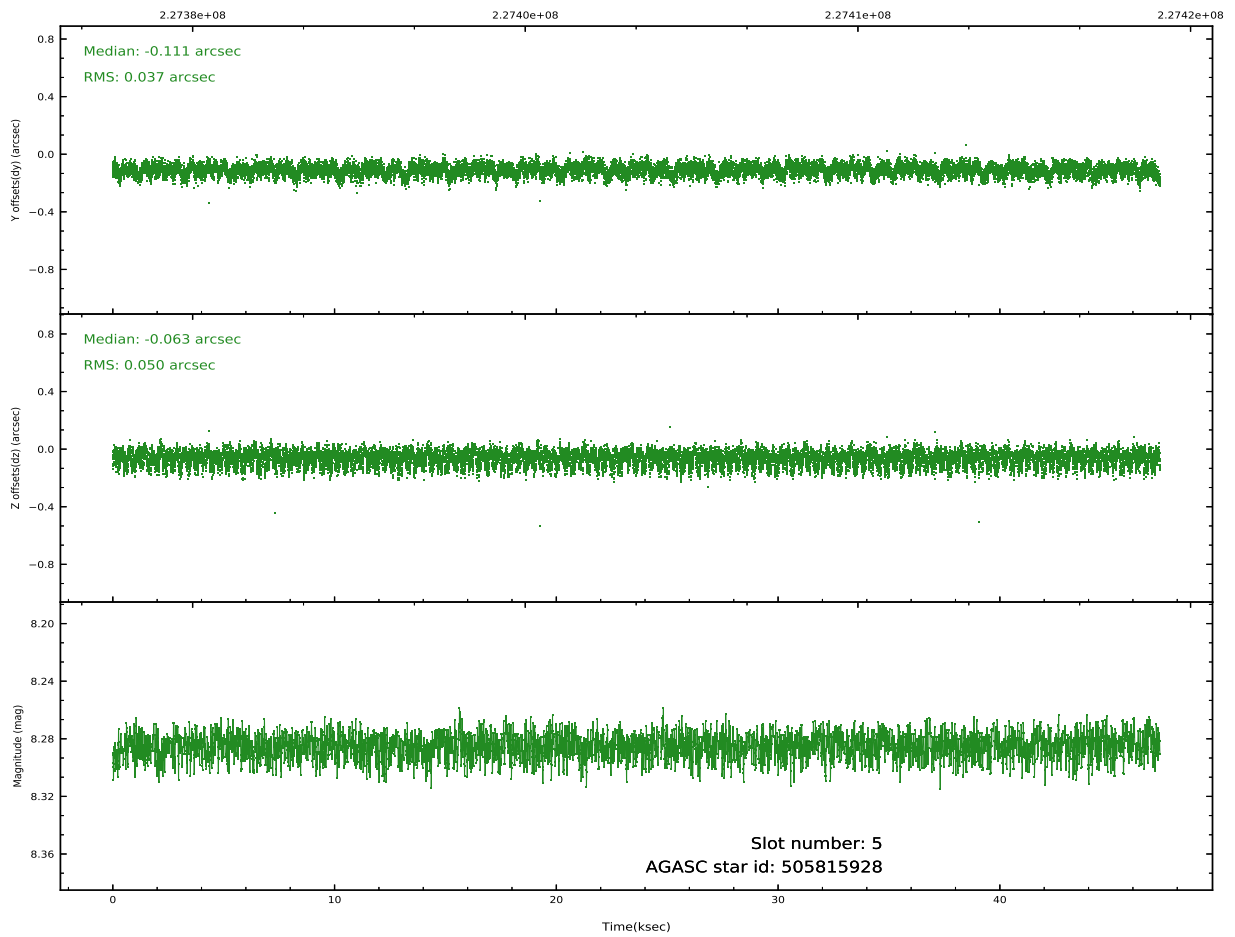
Time (s)



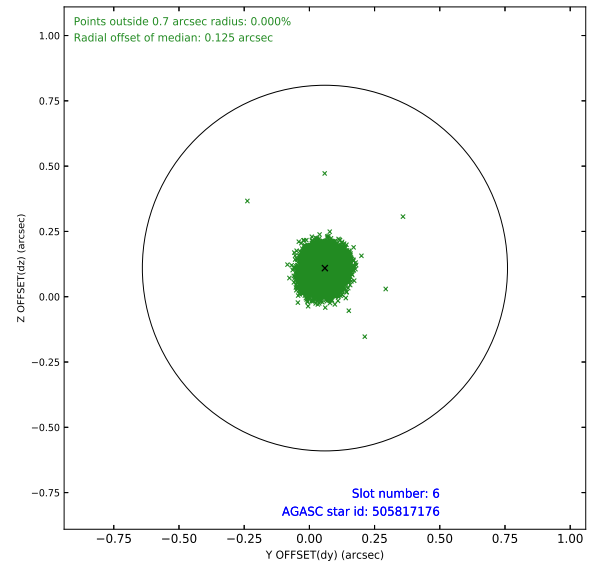
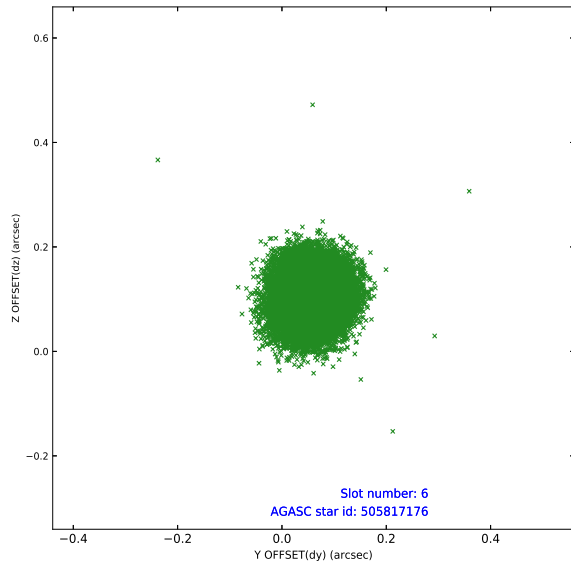
### 2.4.3 Slot 5



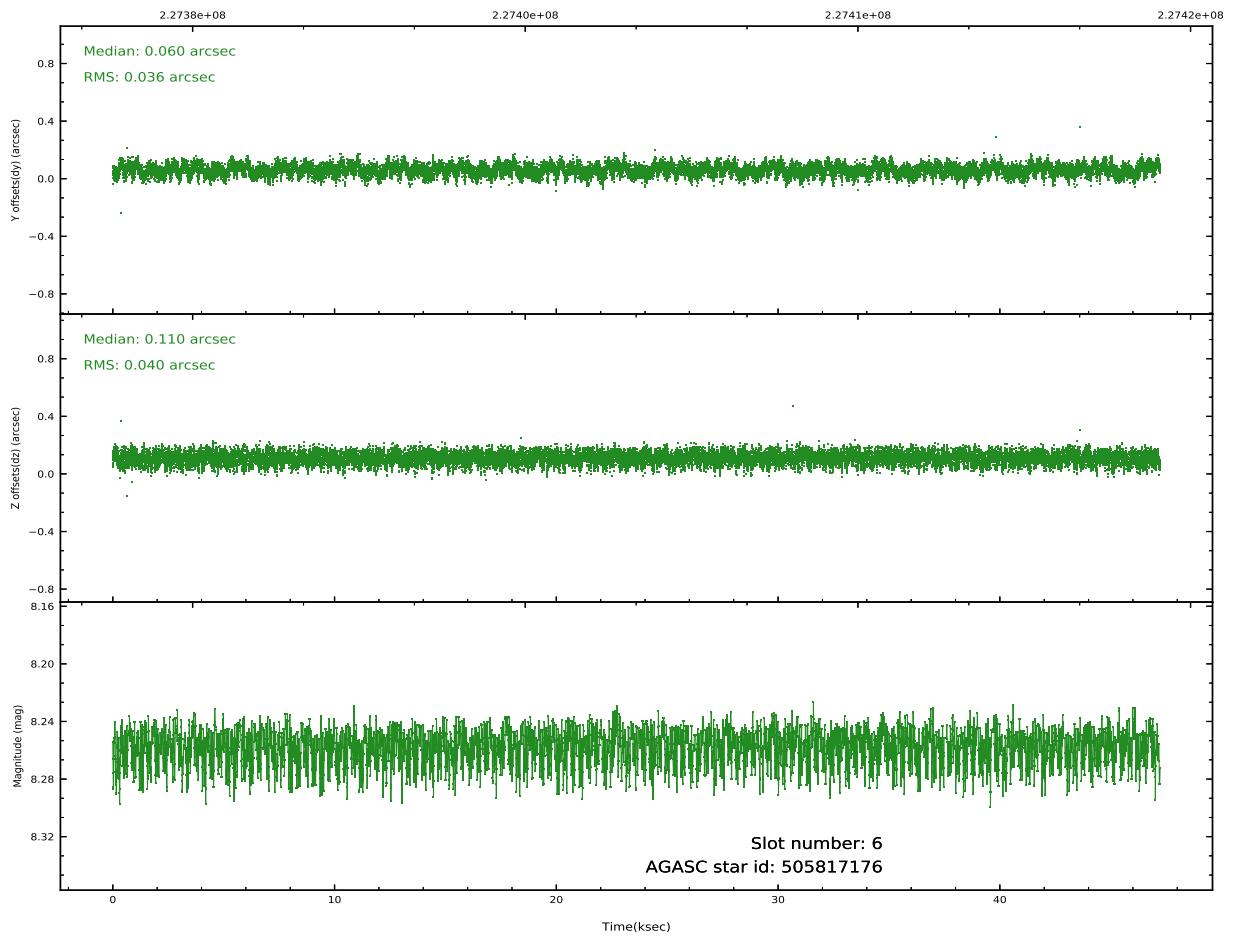
Time (s)



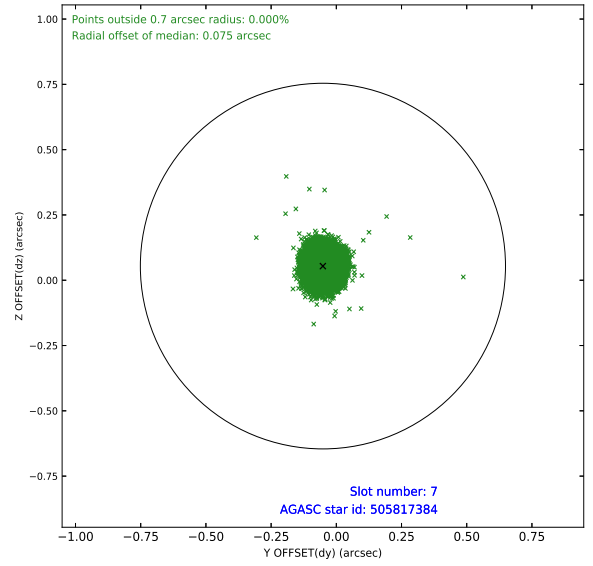
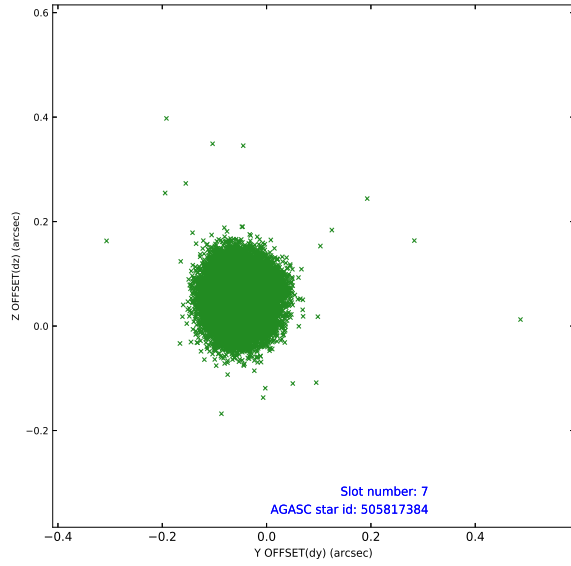
## 2.4.4 Slot 6



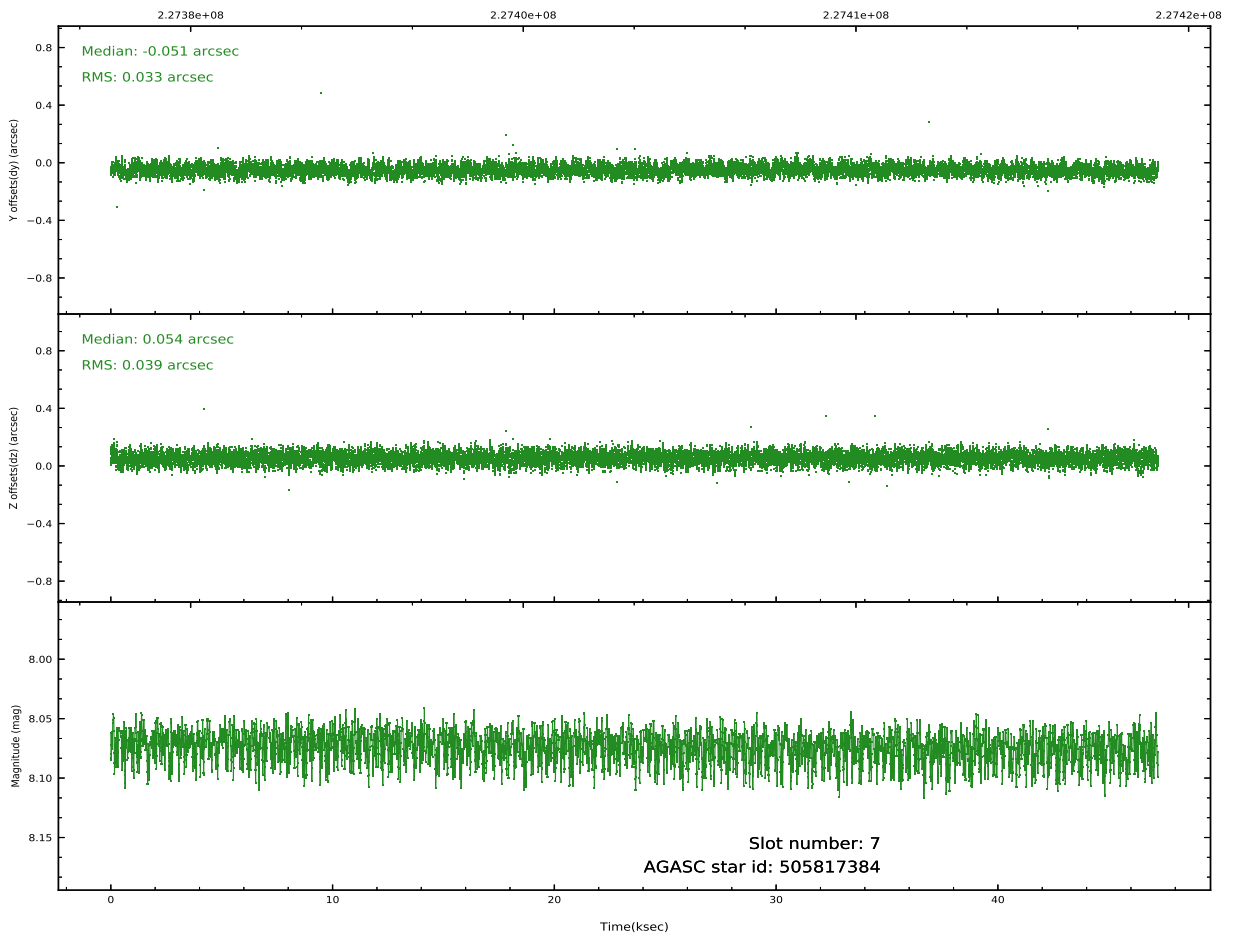
Time (s)



## 2.4.5 Slot 7

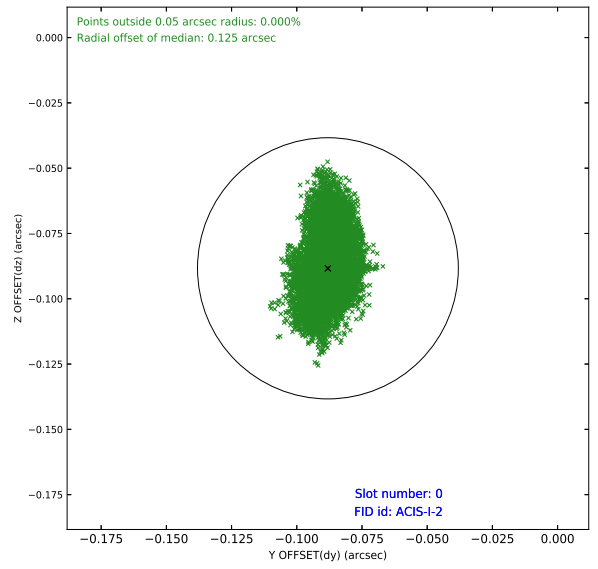
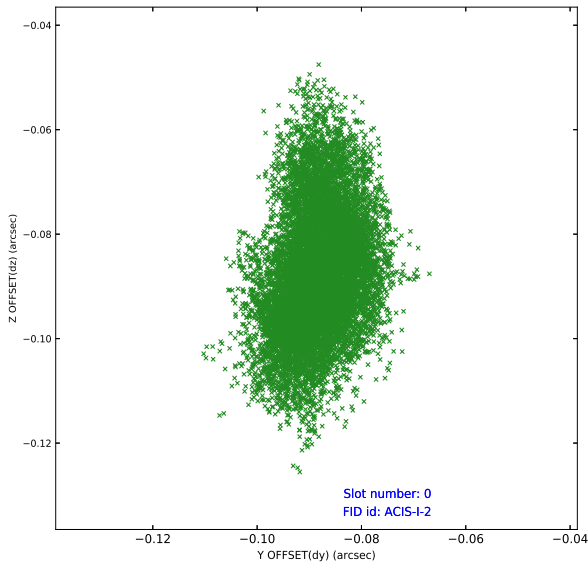


Time (s)

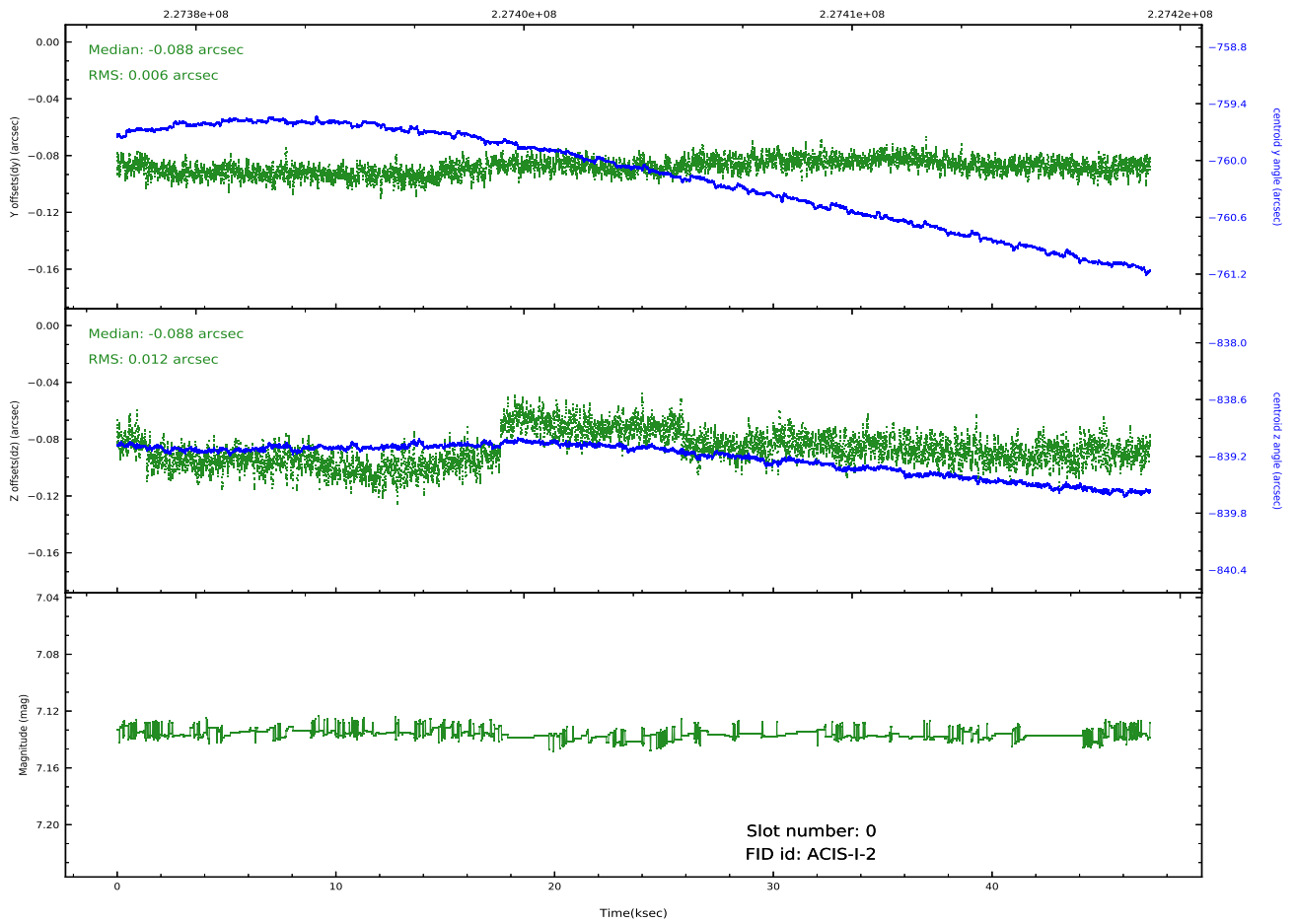


## 2.5 FID Slots

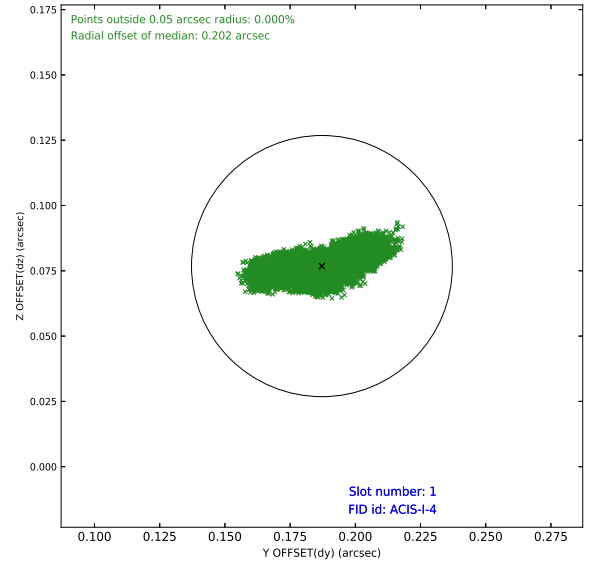
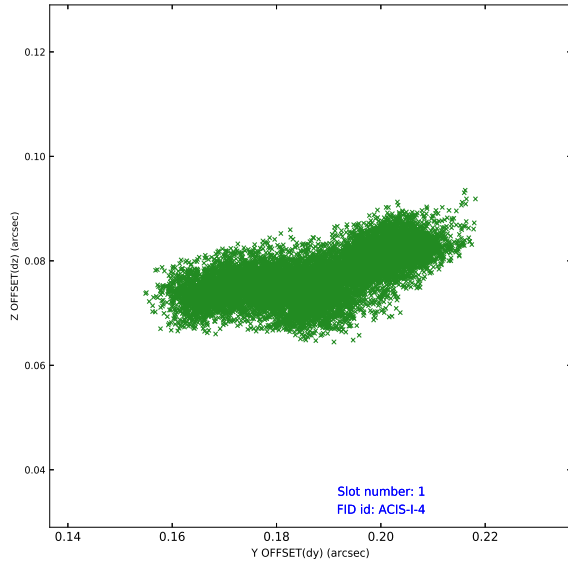
### 2.5.1 Slot 0



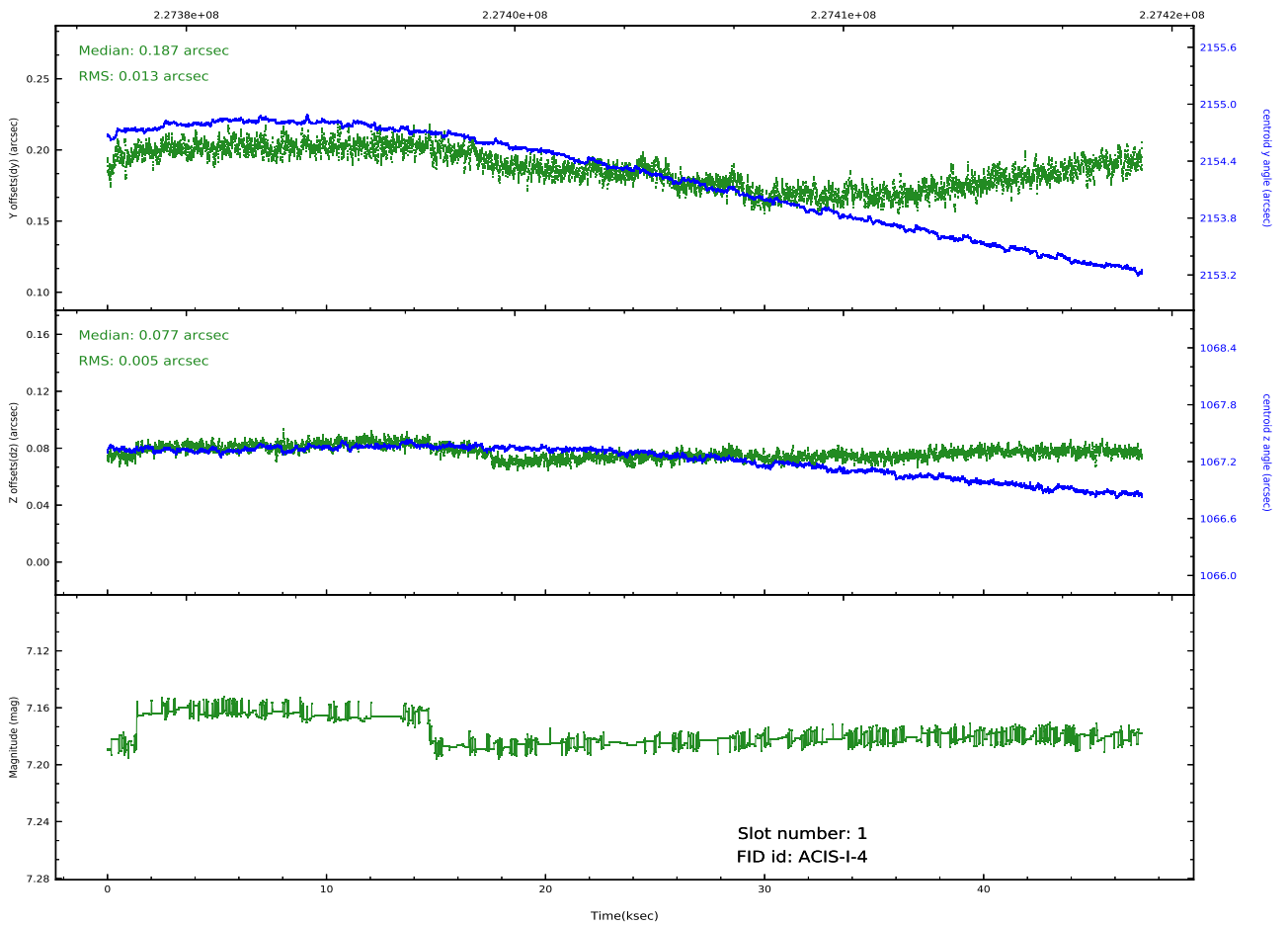
Time (s)



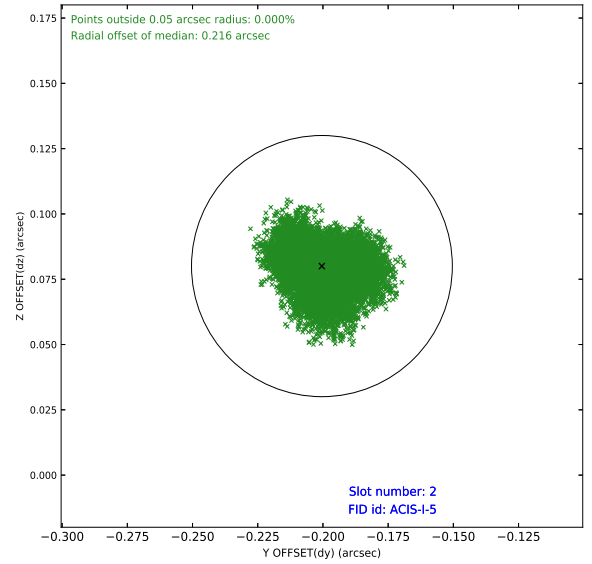
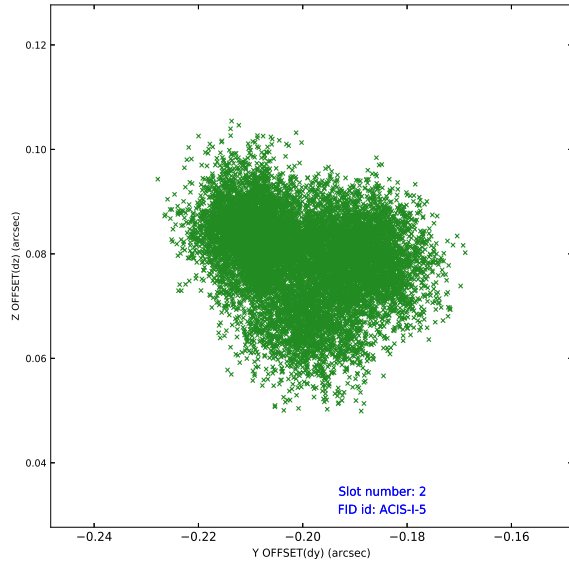
## 2.5.2 Slot 1



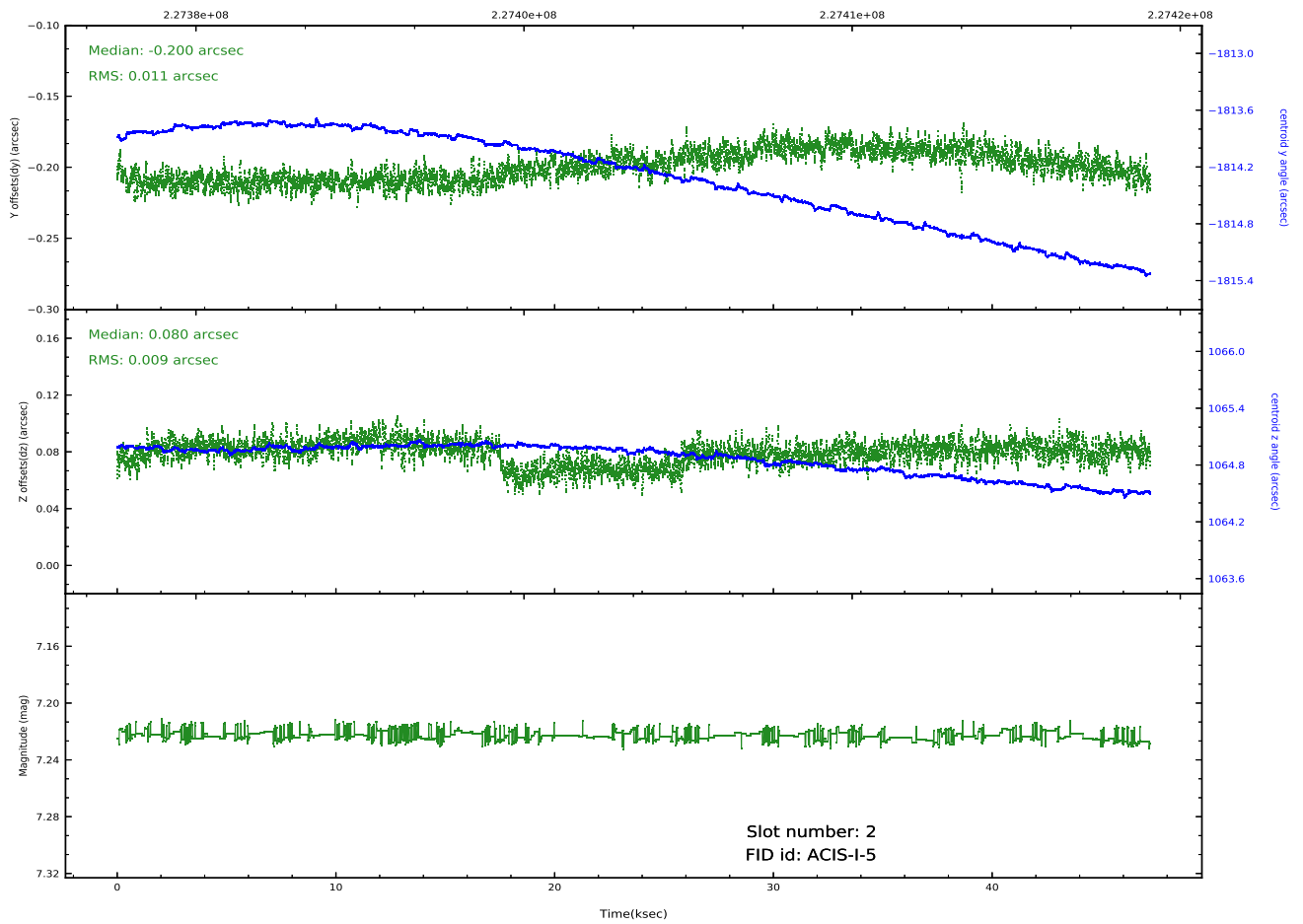
Time (s)



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	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	47.03923

## A.2 Comments

Roll constraint was met.