

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 10903 - L2 Version 2  
Chandra X-Ray Center

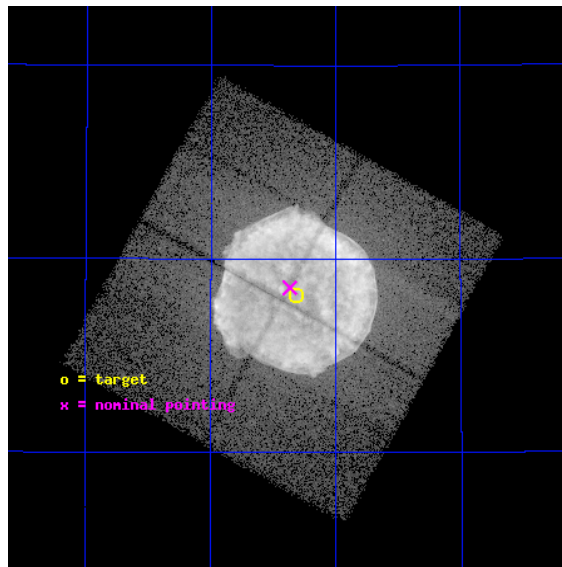
L2 Processing Date : Jun 4 2012

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# 1 Front

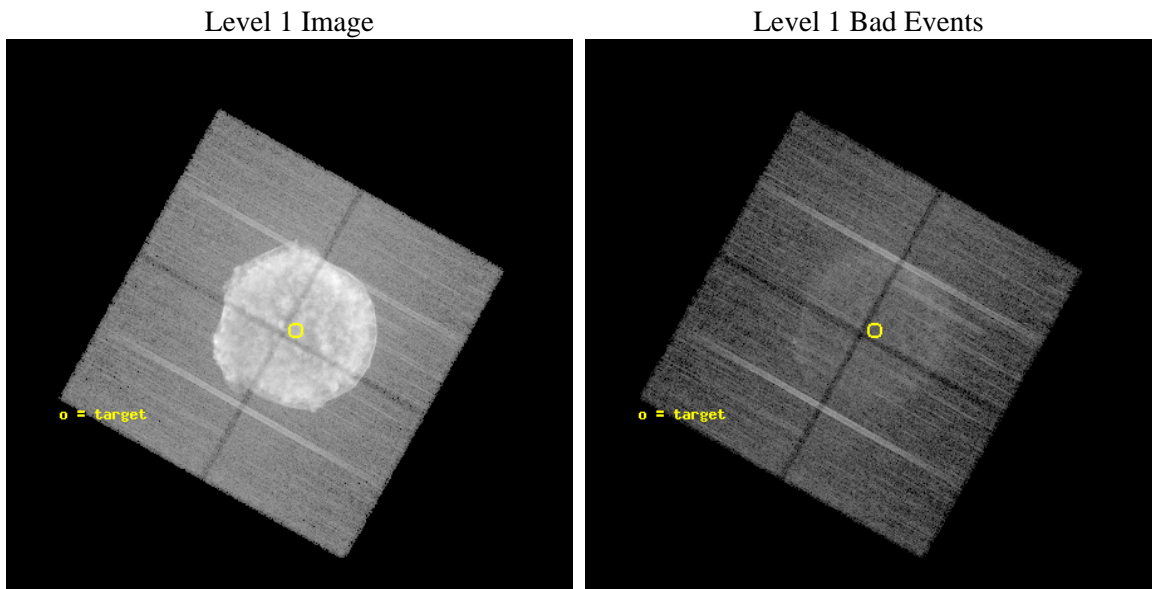
seq_num	501025	Sequence number
obs_id	10903	Observation id
title	A Deep Cycle 10 Chandra Observation of the Tycho Supernova Remnant	&#160
observer	Prof. John Hughes	Principal investigator
object	Tycho's SNR	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	6.329167	Observer's specified target RA [deg]
dec_targ	64.136111	Observer's specified target Dec [deg]
ra_nom	6.3418843354516	Nominal RA [deg]
dec_nom	64.141962623283	Nominal Dec [deg]
roll_nom	29.197252760232	Nominal Roll [deg]
revision	2	Processing version of data
ontime	24235.161355555	Sum of GTIs [s]
livetime	23918.511130779	Livetime [s]
ontime0	24238.179205835	Sum of GTIs [s]
ontime1	24238.220245838	Sum of GTIs [s]
ontime2	24231.979315341	Sum of GTIs [s]
ontime3	24235.161355555	Sum of GTIs [s]
l2events	1623019	Number of level 2 events



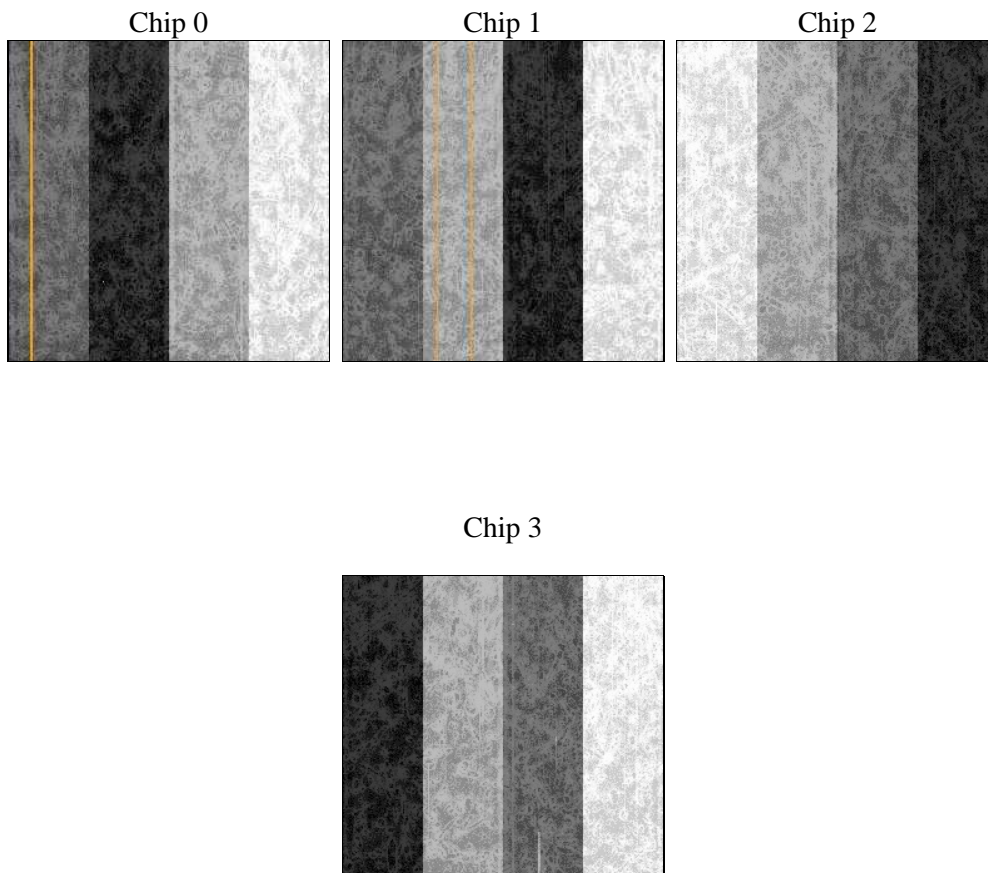
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	24138.215000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	24235.161355555	Sum of GTIs [s]
caldbver	4.4.9	&#160	ontime0	24238.179205835	Sum of GTIs [s]
date	2012-06-04T15:30:47	Date and time of file creation	ontime1	24238.220245838	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	24231.979315341	Sum of GTIs [s]
			ontime3	24235.161355555	Sum of GTIs [s]
			l1events	2442418	Number of level 1 events

### 2.1.4 Events

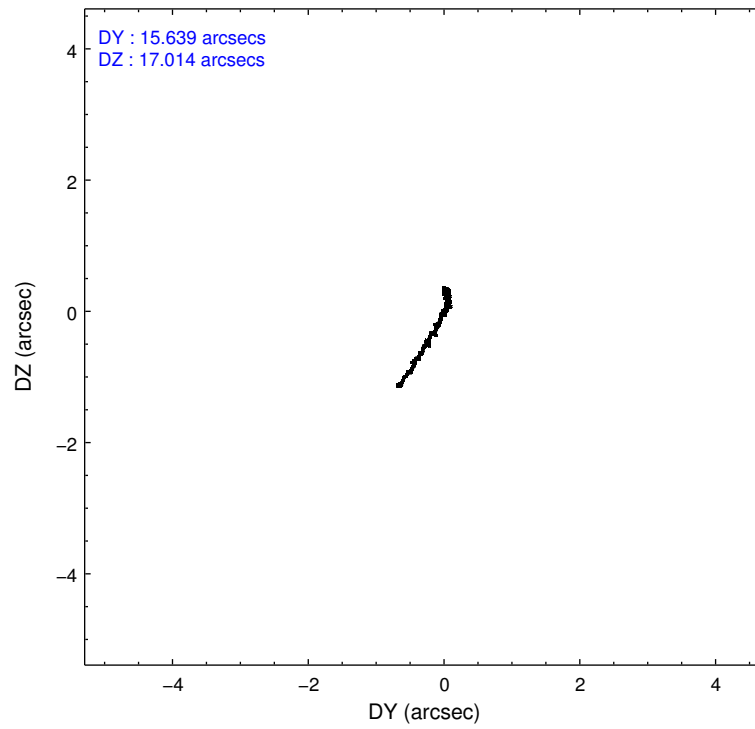
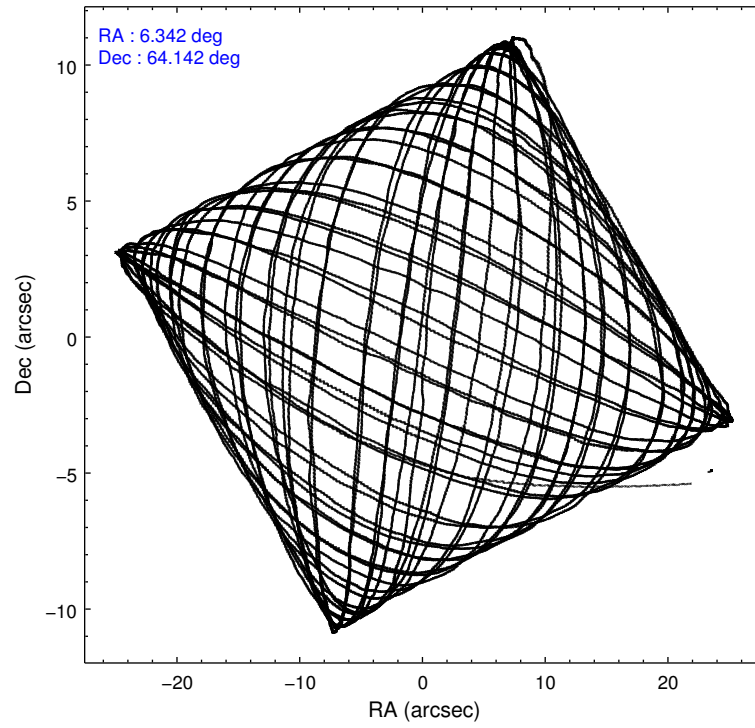
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	403431	495049	679815	864123
rejected events	167334	165630	201665	196313
rejected %	41%	33%	29%	22%

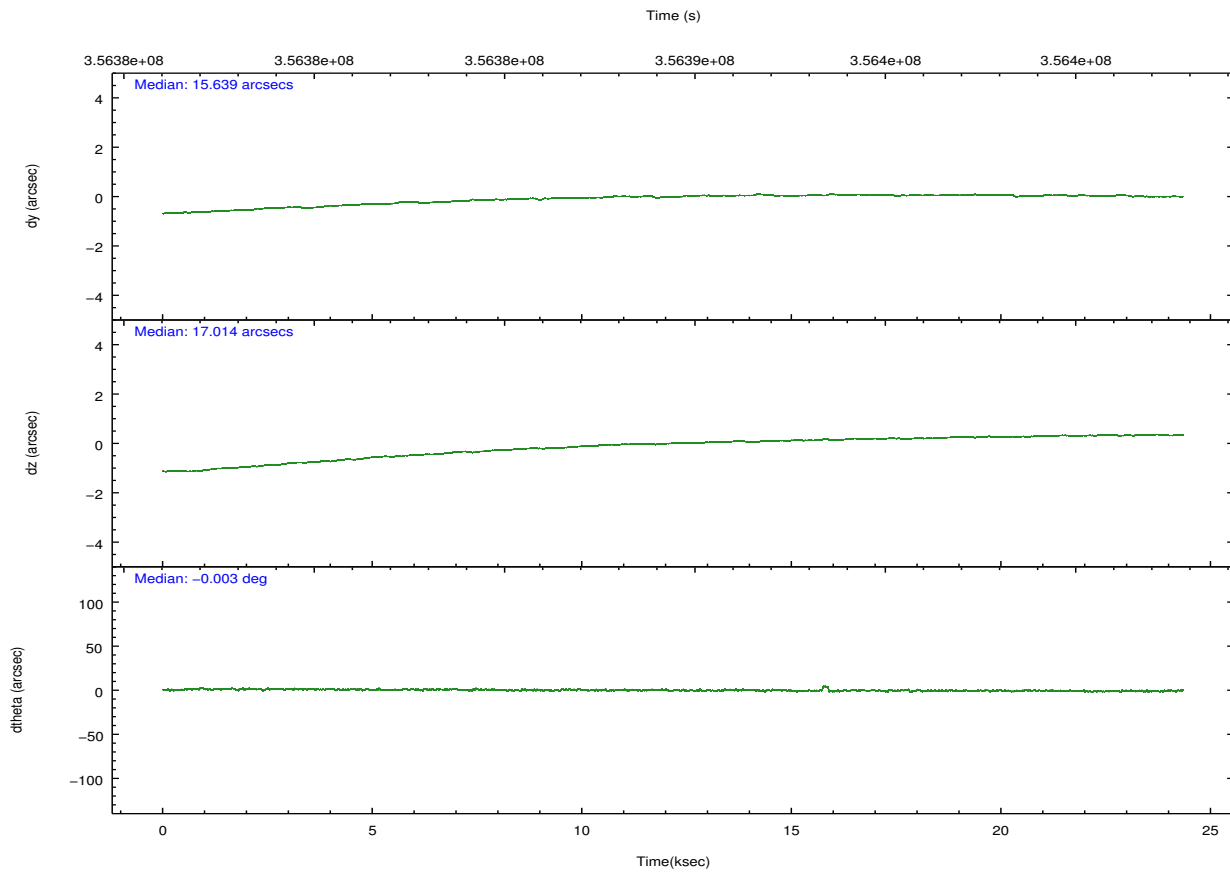
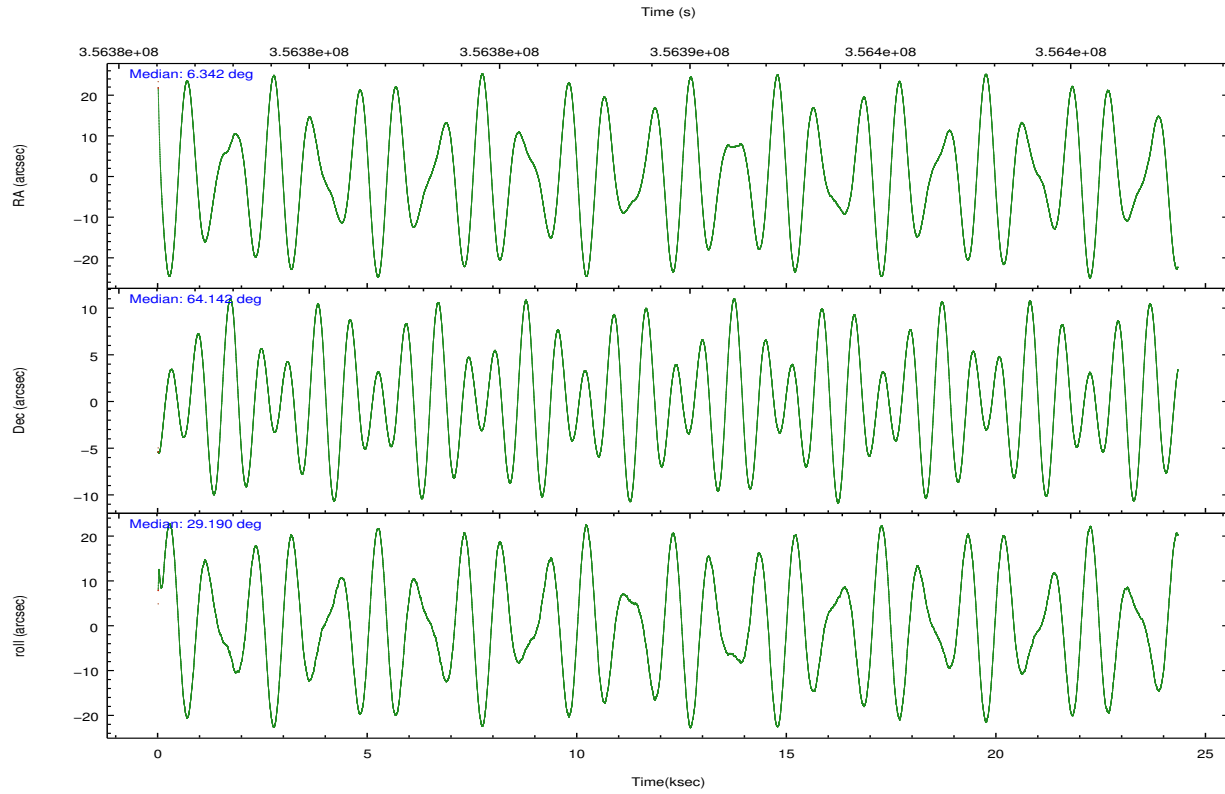
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	188296	263327	395902	555589
	46%	53%	58%	64%
grade 1 events	1453	1744	3594	4575
	0%	0%	0%	0%
grade 2 events	24890	35069	44584	61877
	6%	7%	6%	7%
grade 3 events	7930	10643	13991	18724
	1%	2%	2%	2%
grade 4 events	7762	10641	13692	18505
	1%	2%	2%	2%
grade 5 events	6824	8041	7780	9880
	1%	1%	1%	1%
grade 6 events	7256	9771	10031	13183
	1%	1%	1%	1%
grade 7 events	159020	155813	190241	181790
	39%	31%	27%	21%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-0123	ACIS-0123	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	6.309882	6.341884335451635	Subarray requested	NONE	NONE
[deg] Pointing Dec	64.118291	64.14196262328254	Alternating exposures requested	N	N
[deg] Pointing Roll	29.017354	29.19725276023241	[s] Primary exposure time	0.000000	3.1
[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)	356377453.184000	356376560.63021			
Observation start date	2009-04-17T17:43:07	2009-04-17T17:29:20			
[s] Observation end time (MET)	356401591.184000	356401825.34397			
Observation end date	2009-04-18T00:25:25	2009-04-18T00:30:25			
Read mode	TIMED	TIMED			

## 2.3 Aspect



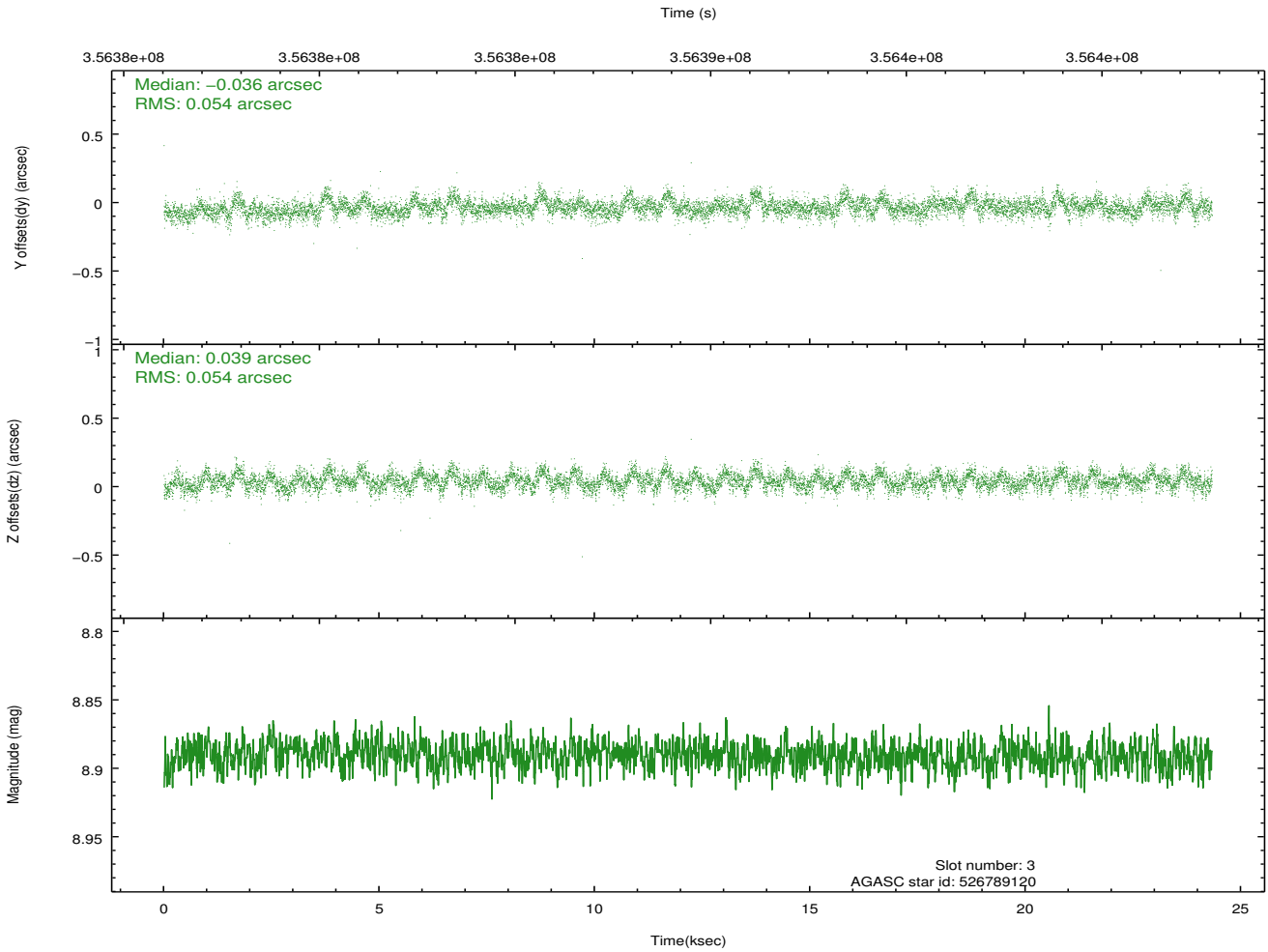
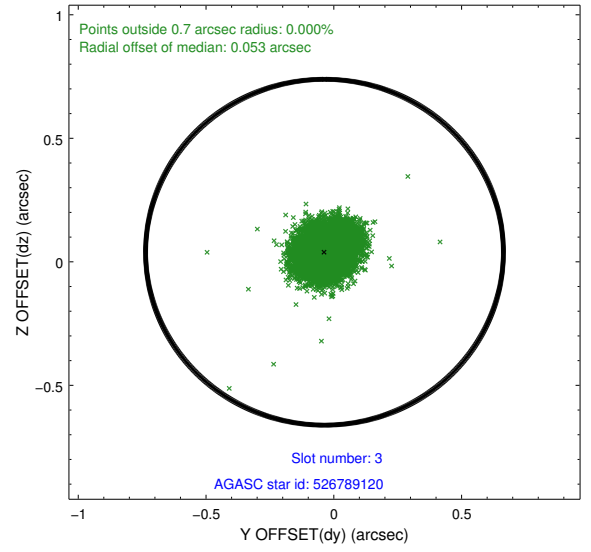
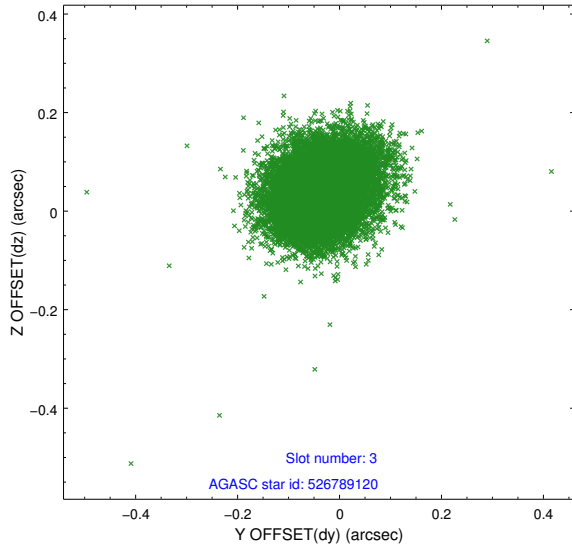


### Slot Statistics

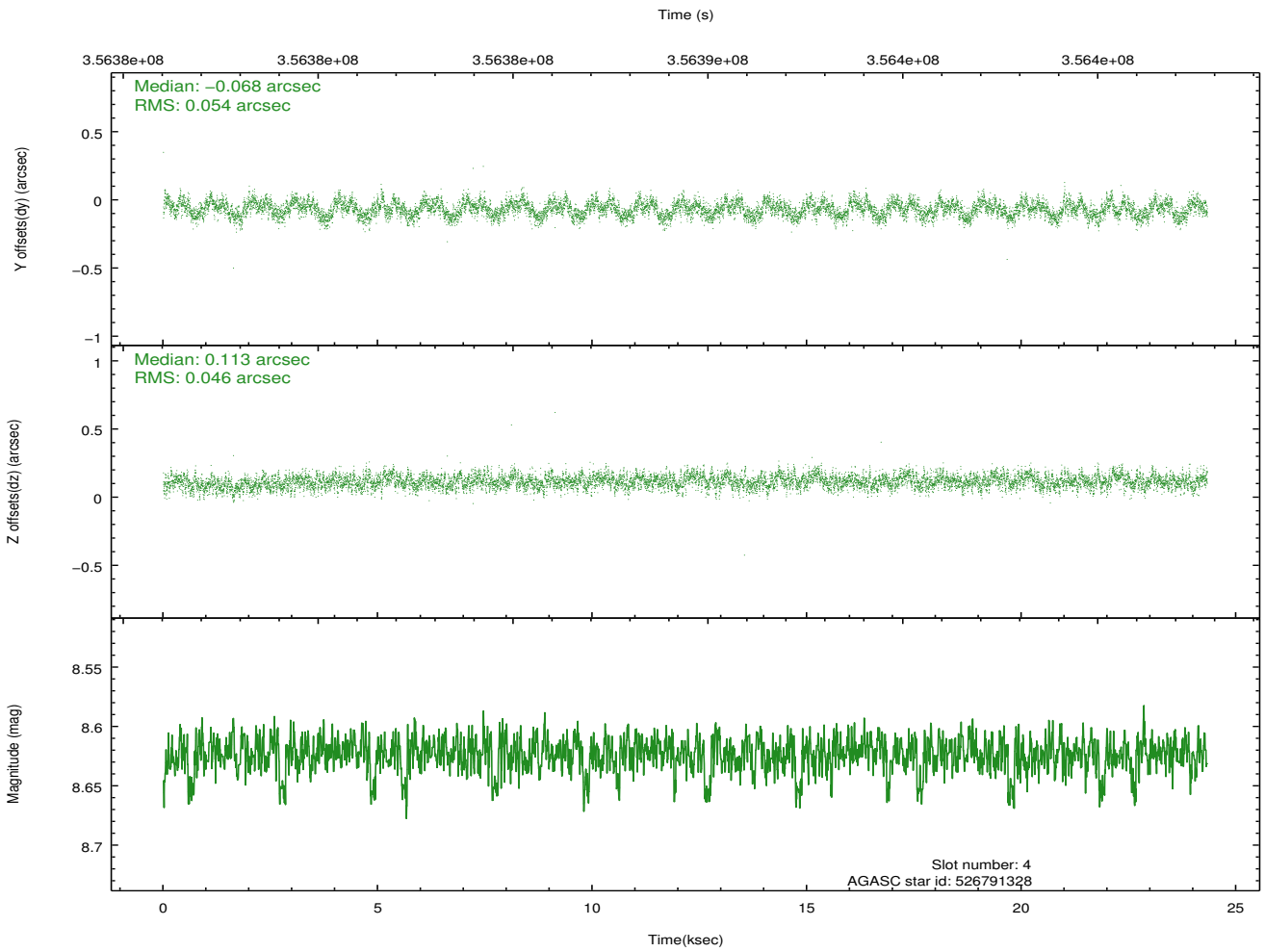
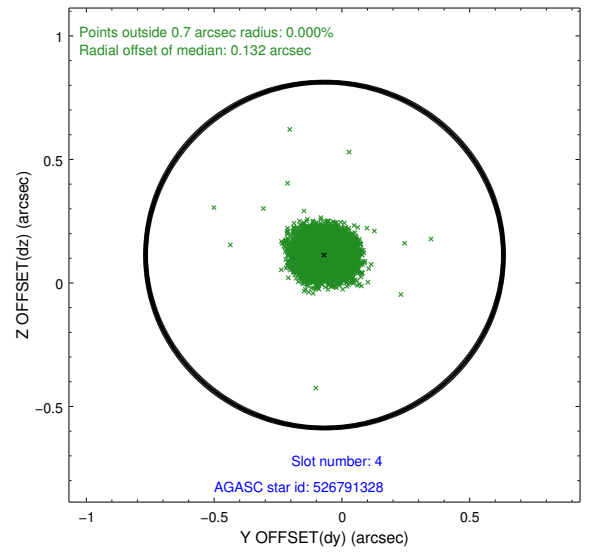
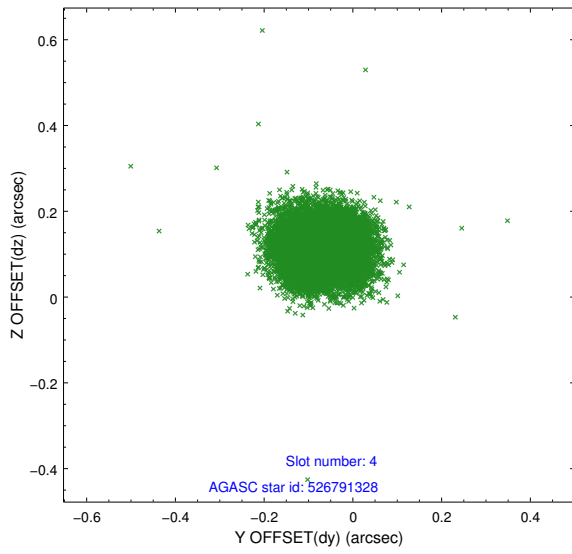
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.02	5935	-0.007	-0.086	0.012	0.021	0.000000	0.000000	923.93	-840.58
1	FID	ACIS-I-4	6.95	5933	0.127	0.086	0.010	0.017	0.000000	0.000000	2144.15	1059.34
2	FID	ACIS-I-5	7.01	5935	-0.218	0.071	0.009	0.028	0.000000	0.000000	-1824.15	1057.28
3	GUIDE	526789120	8.89	11859	-0.036	0.039	0.080	0.131	5.233481	63.667511	-2282.82	-572.76
4	GUIDE	526791328	8.62	11860	-0.068	0.113	0.075	0.118	7.600207	63.681314	1048.34	-2356.04
5	GUIDE	527307888	8.45	11864	0.047	-0.027	0.064	0.103	4.965121	64.287990	-1529.16	1572.14
6	GUIDE	527309096	8.30	11865	0.111	0.076	0.070	0.112	7.726277	64.064373	1868.41	-1229.17
7	GUIDE	527310400	7.73	11867	-0.054	-0.207	0.065	0.105	6.292387	64.638680	885.43	1651.30

## 2.4 Star Slots

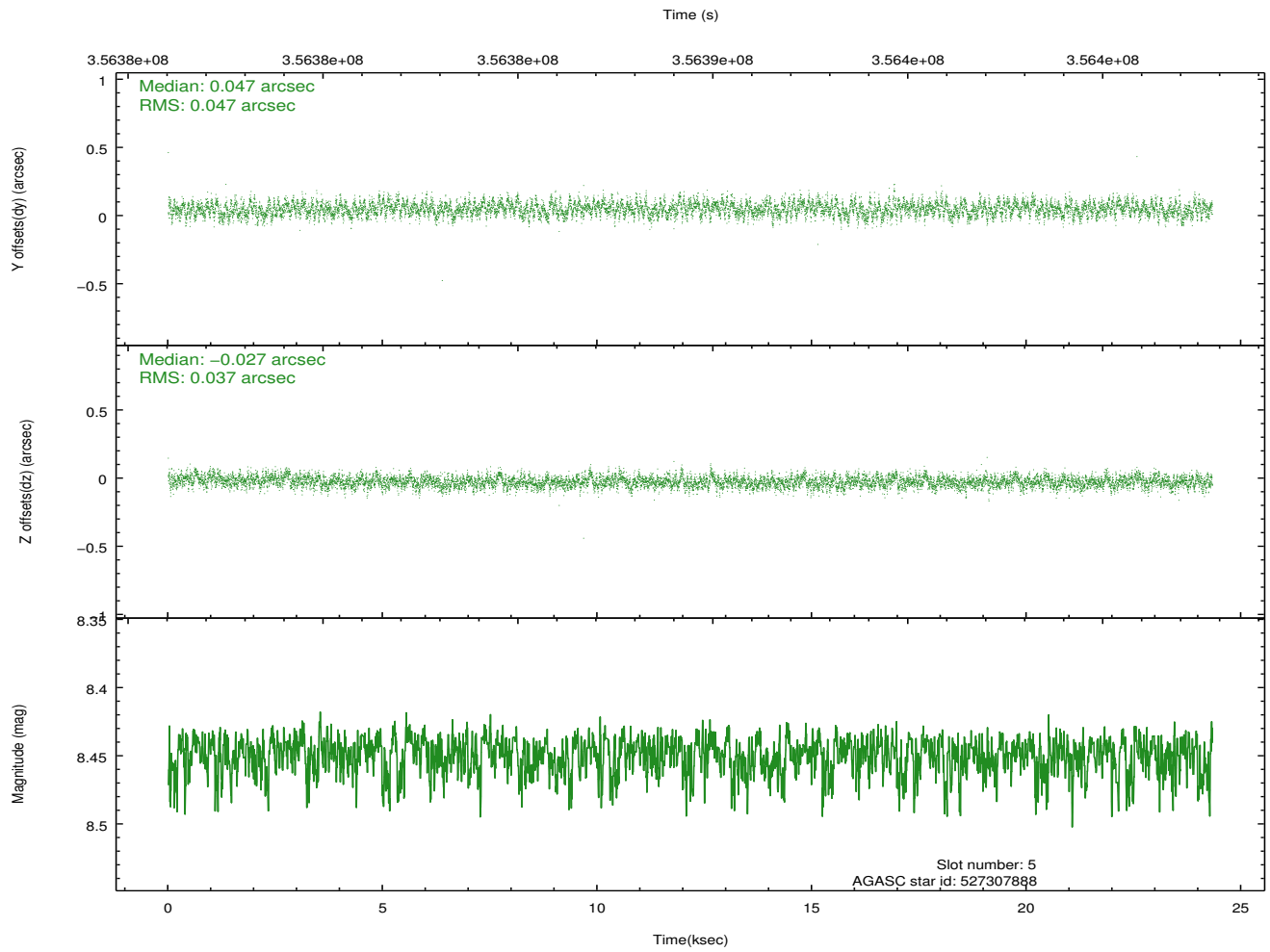
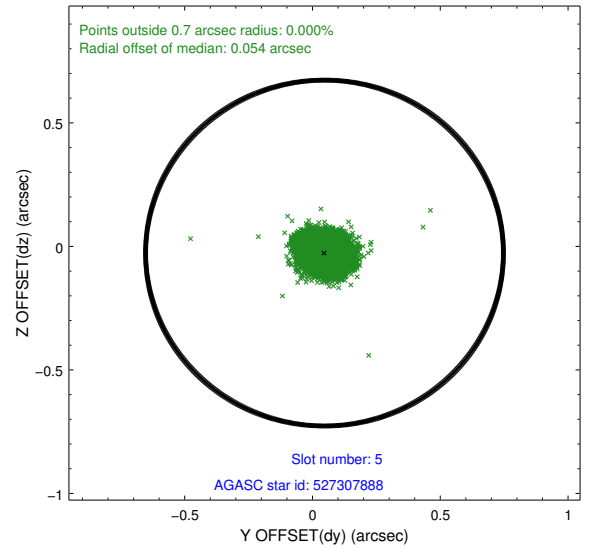
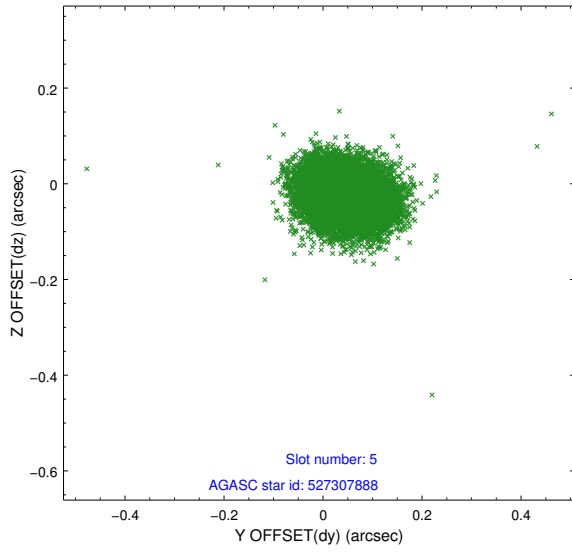
### 2.4.1 Slot 3



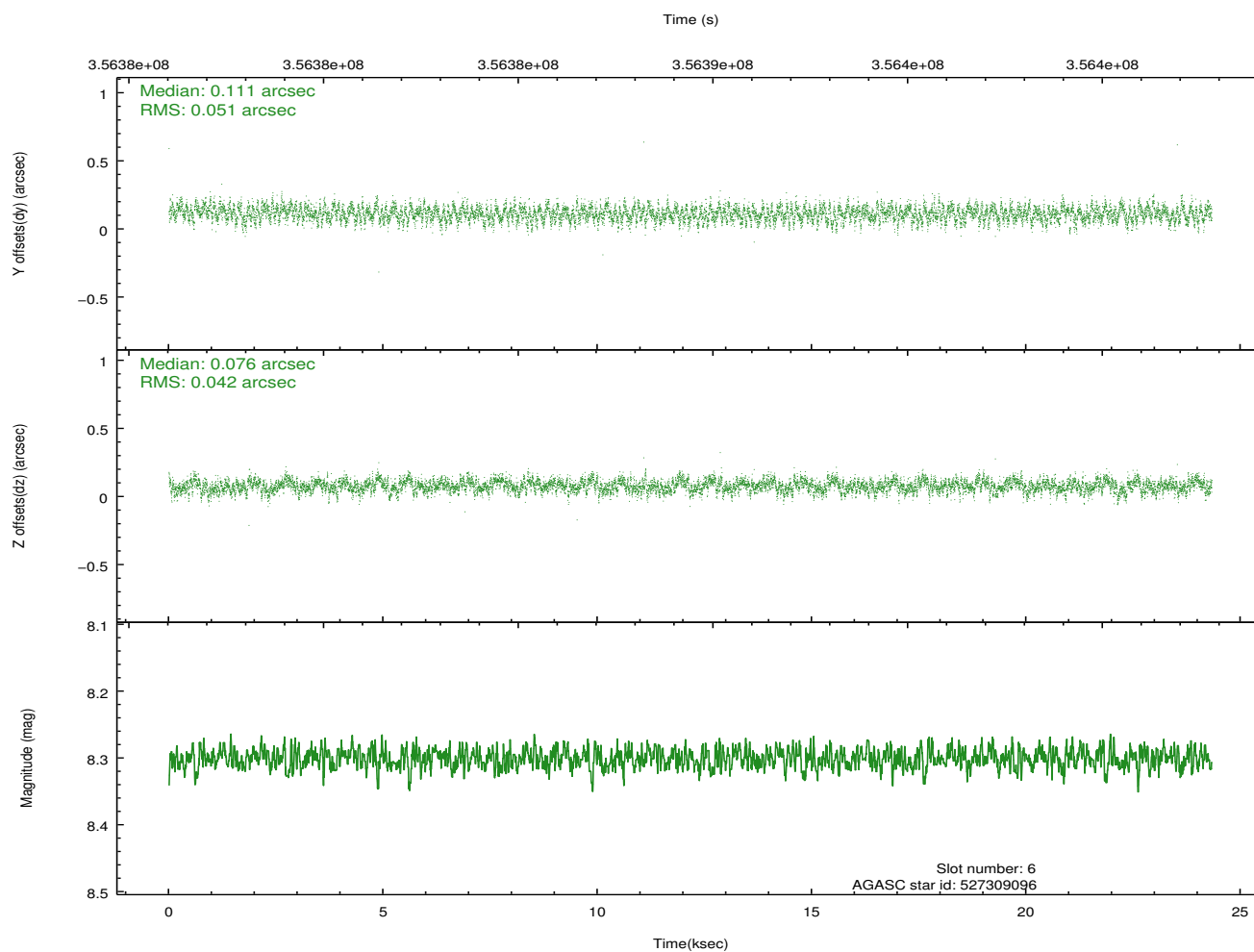
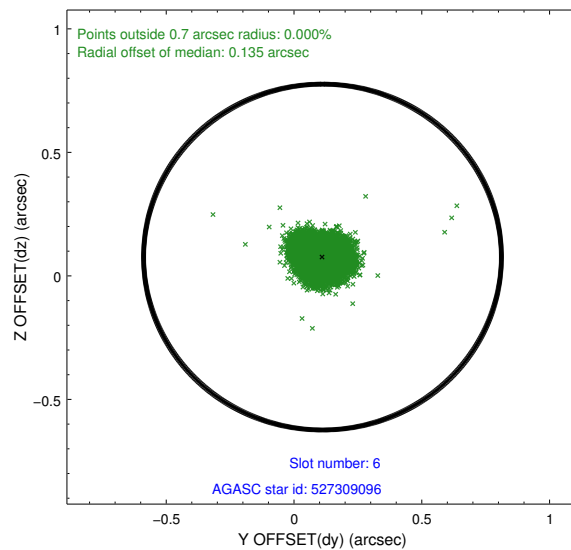
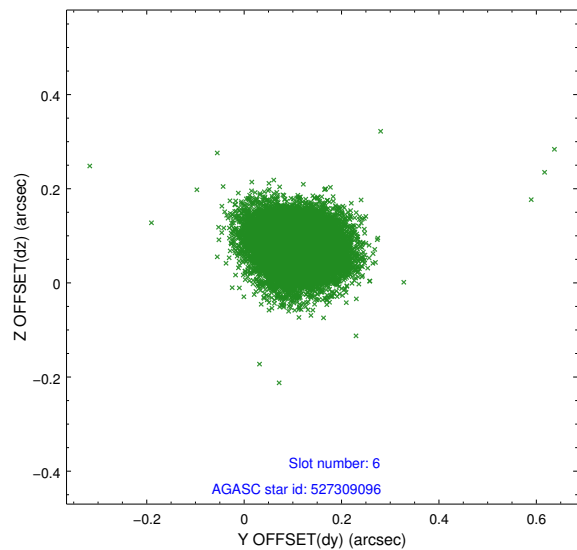
## 2.4.2 Slot 4



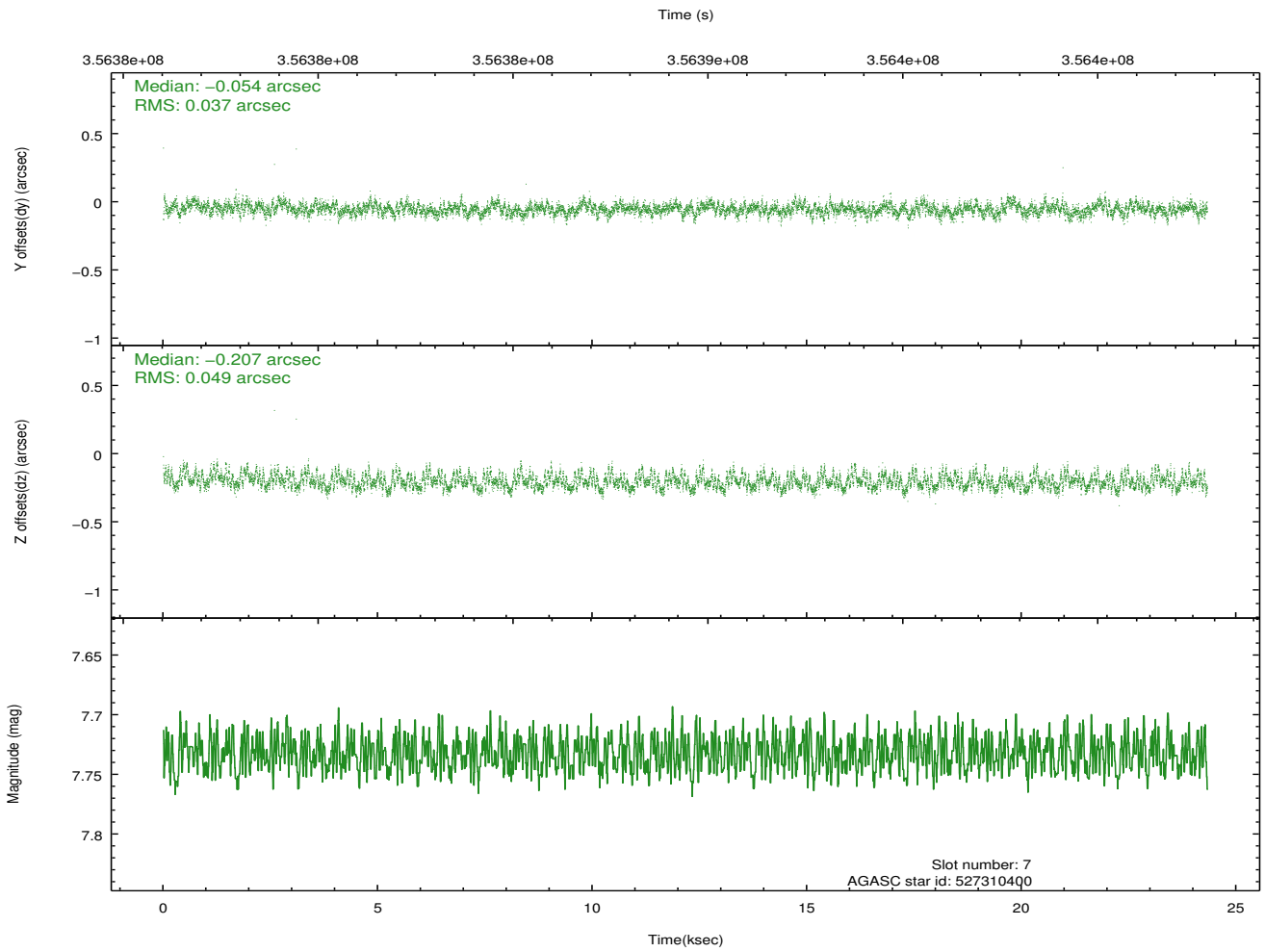
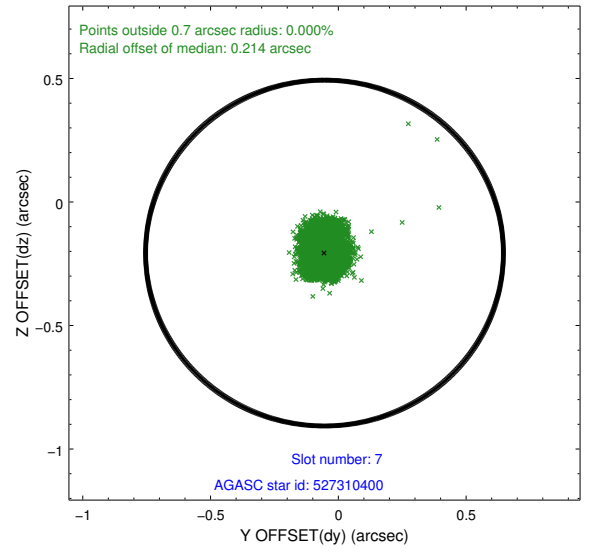
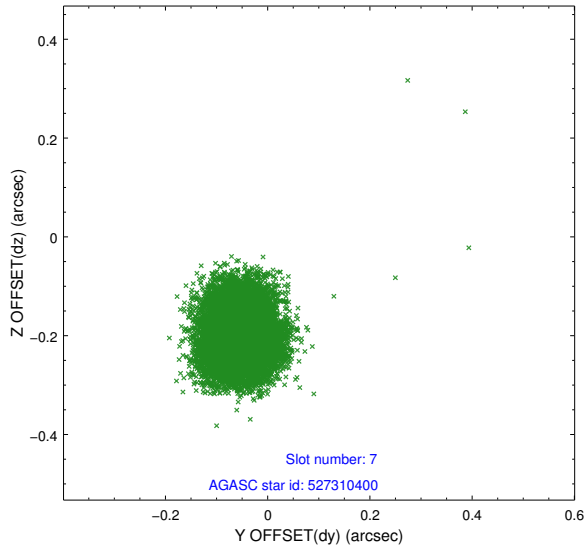
### 2.4.3 Slot 5



## 2.4.4 Slot 6

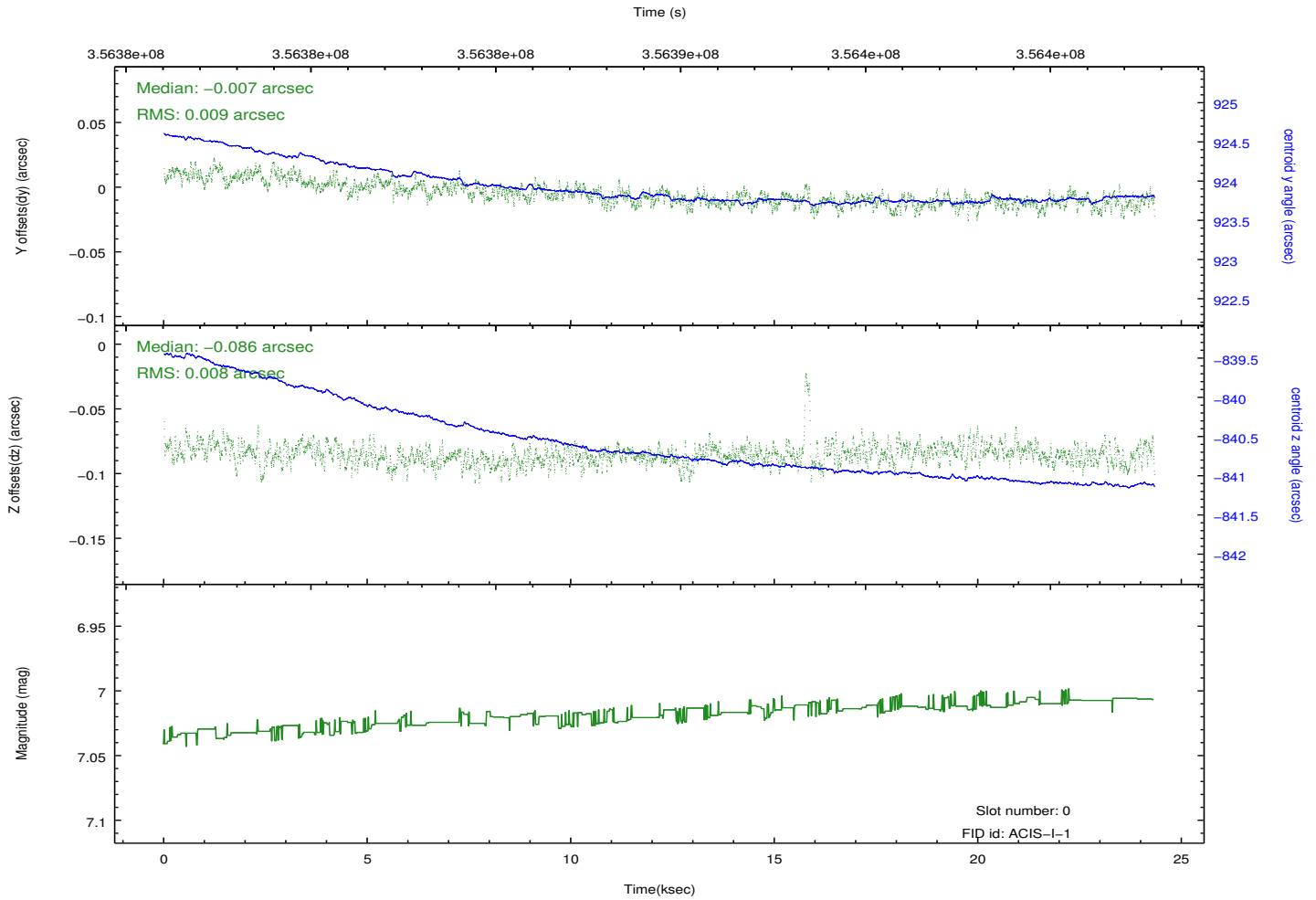
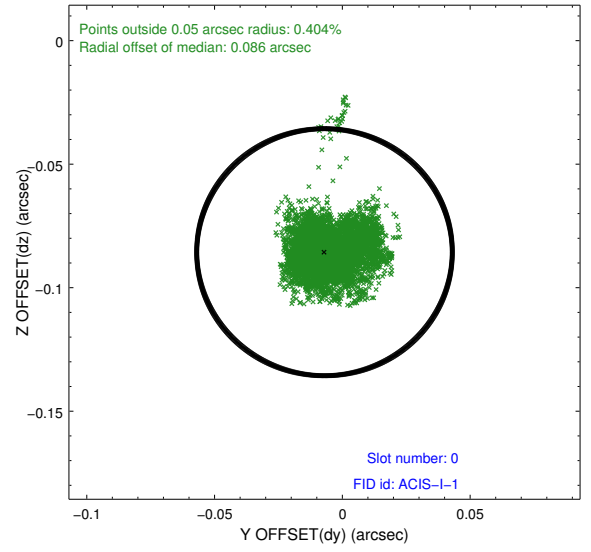
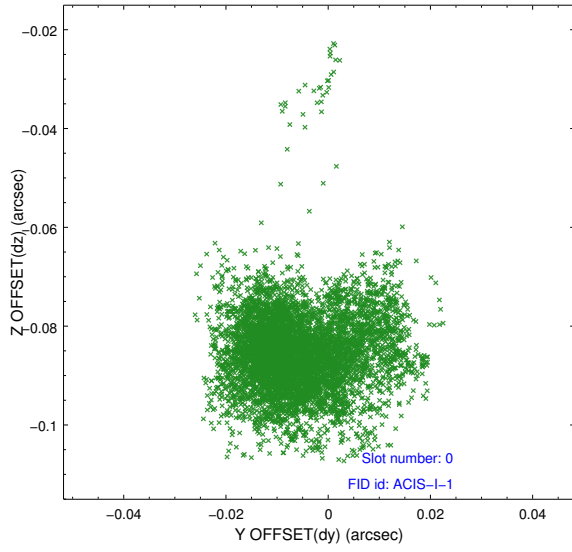


### 2.4.5 Slot 7

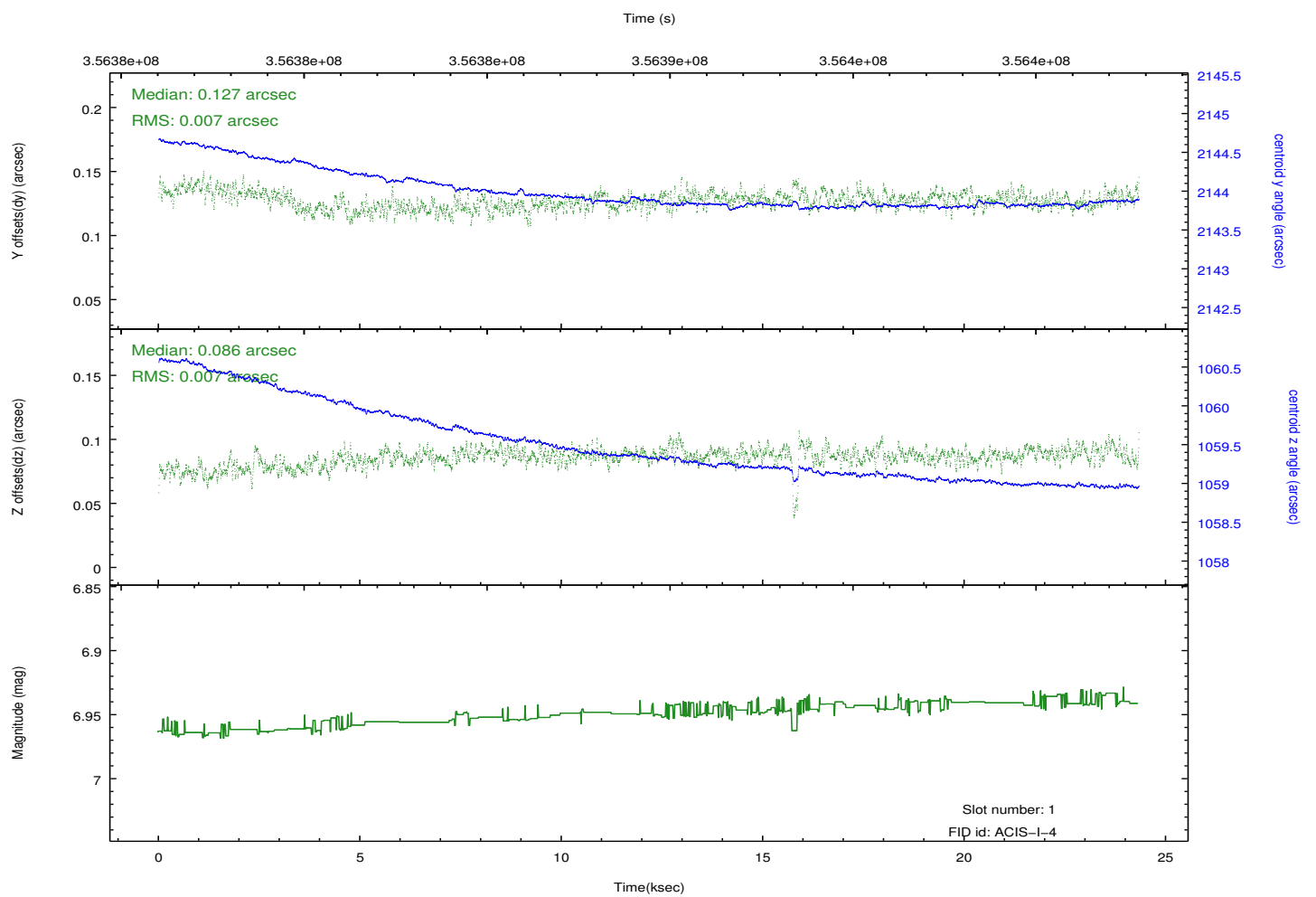
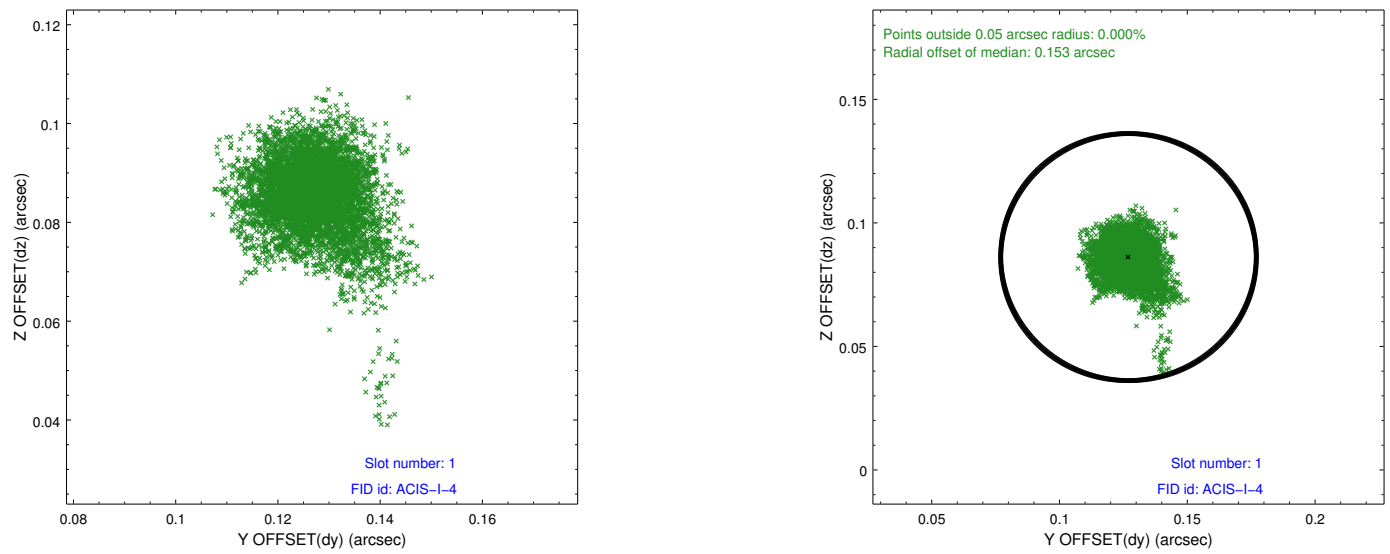


## 2.5 FID Slots

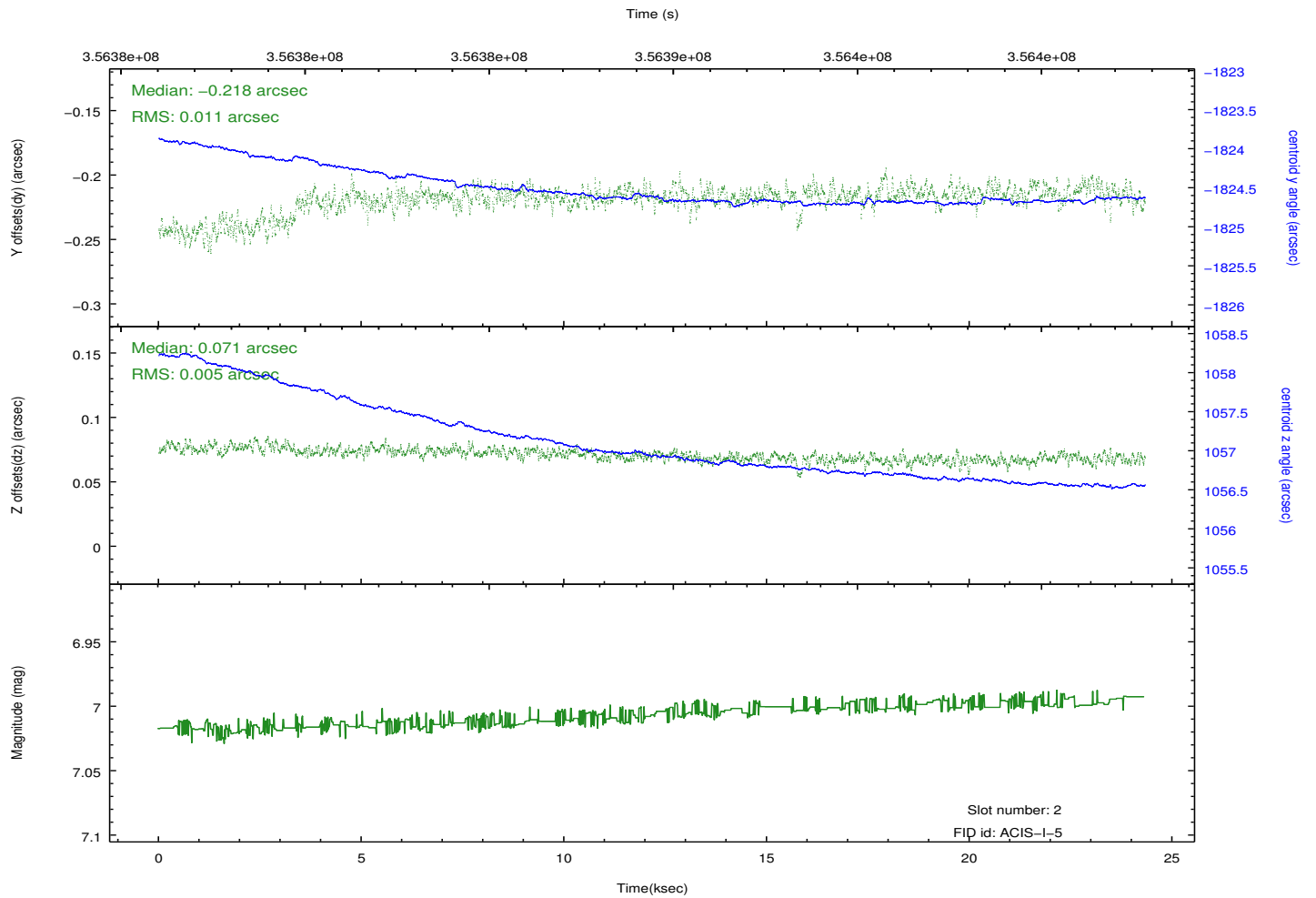
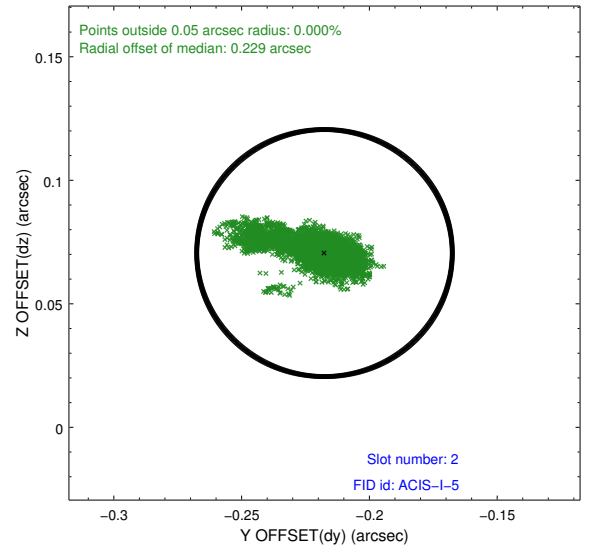
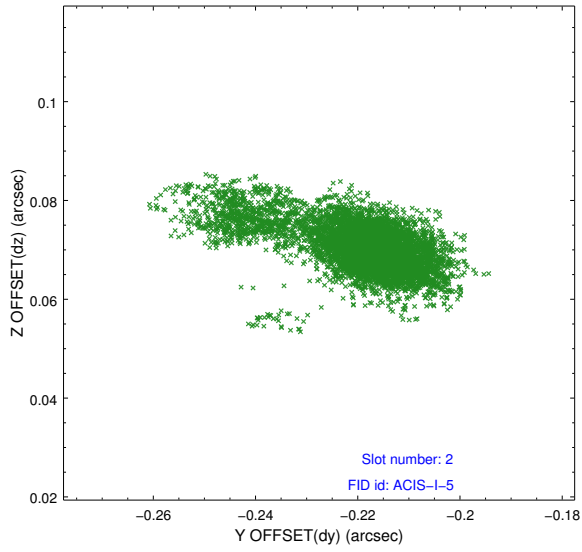
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.06.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	24.2357592

## A.2 Comments

Roll preference met.