

# V&V Reference Report

## L2 ASCDS Version : 10.1.1

Observation 16301 - L2 Version 2  
Chandra X-Ray Center

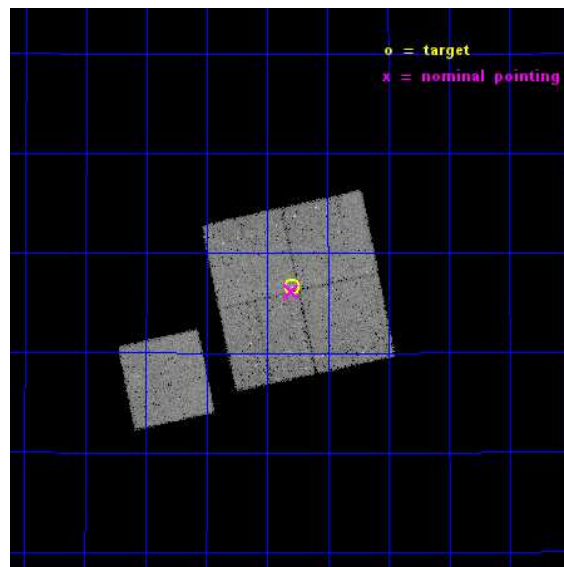
L2 Processing Date : Dec 7 2014

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# 1 Front

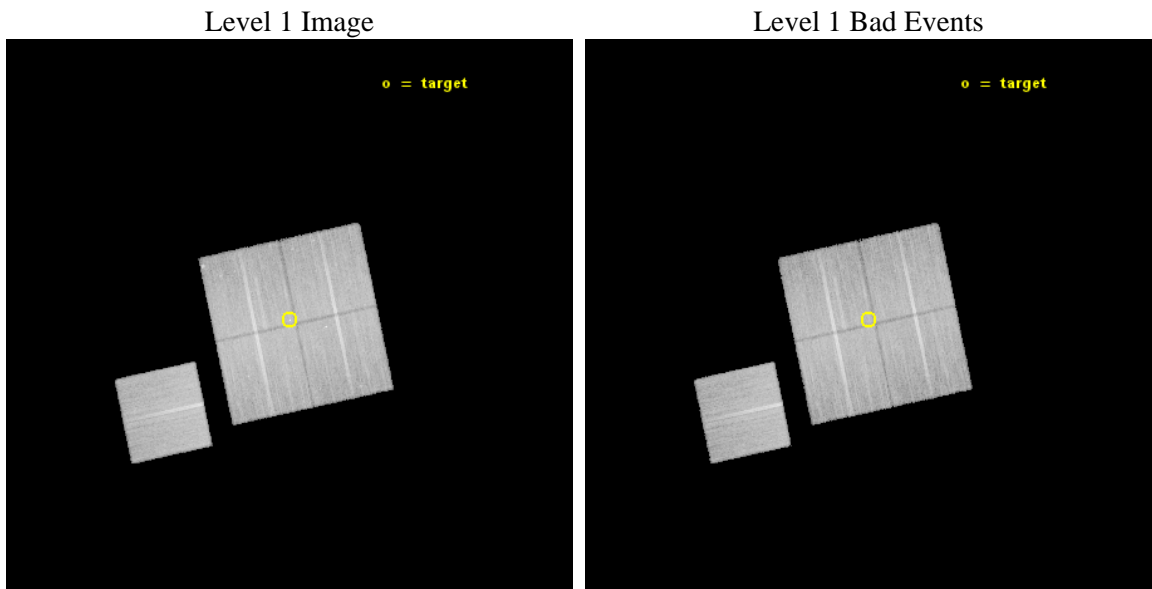
seq_num	601143	Sequence number
obs_id	16301	Observation id
title	Hot X-ray coronae around massive spiral galaxies: probing galaxy formation models	Proposal title
observer	Dr Stephen Murray	Principal investigator
object	NGC266	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	12.449167	Observer's specified target RA [deg]
dec_targ	32.277722	Observer's specified target Dec [deg]
ra_nom	12.450026064763	Nominal RA [deg]
dec_nom	32.269682943026	Nominal Dec [deg]
roll_nom	257.92186118394	Nominal Roll [deg]
revision	2	Processing version of data
ontime	42084.451367319	Sum of GTIs [s]
livetime	41534.587028082	Livetime [s]
ontime0	42081.187187016	Sum of GTIs [s]
ontime1	42078.087156594	Sum of GTIs [s]
ontime2	42084.410327315	Sum of GTIs [s]
ontime3	42084.451367319	Sum of GTIs [s]
ontime6	42084.287207305	Sum of GTIs [s]
l2events	101589	Number of level 2 events



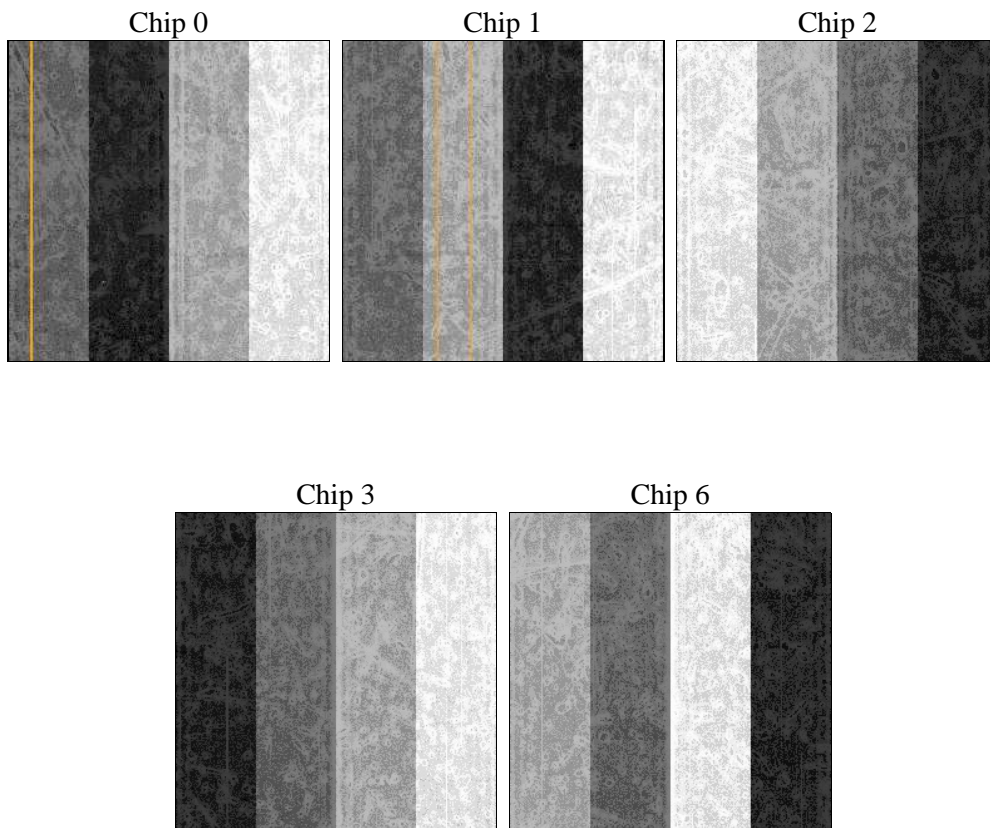
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	42000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	42084.451367319	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime0	42081.187187016	Sum of GTIs [s]
date	2014-12-08T03:15:43	Date and time of file creation	ontime1	42078.087156594	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	42084.410327315	Sum of GTIs [s]
			ontime3	42084.451367319	Sum of GTIs [s]
			ontime6	42084.287207305	Sum of GTIs [s]
			l1events	978728	Number of level 1 events

### 2.1.4 Events

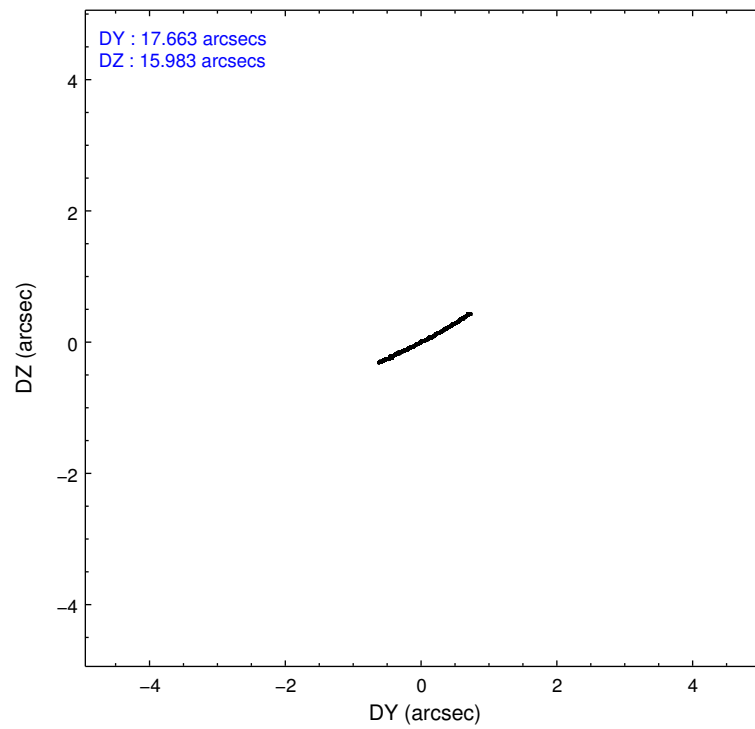
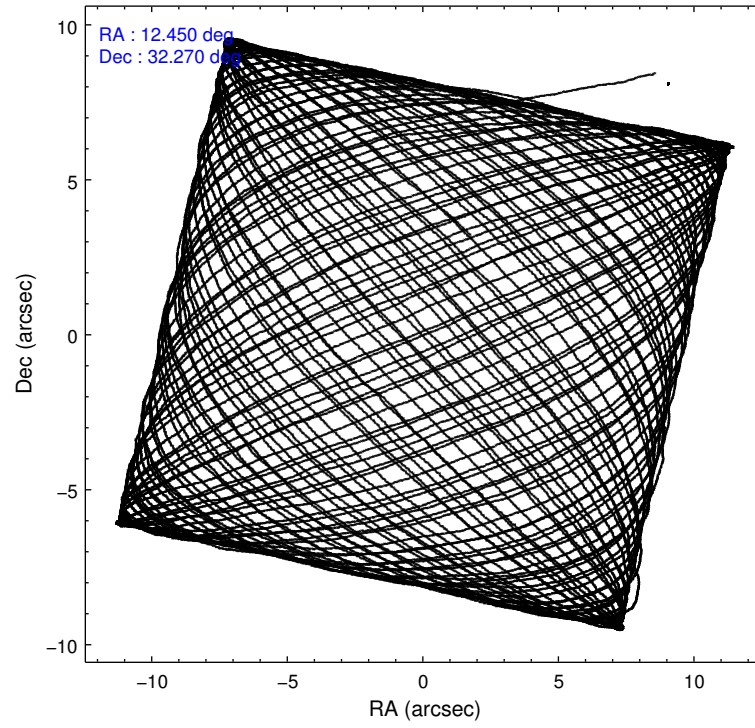
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	186417	190892	205168	193295	202956
rejected events	162304	165721	182348	169895	179057
rejected %	87%	86%	88%	87%	88%

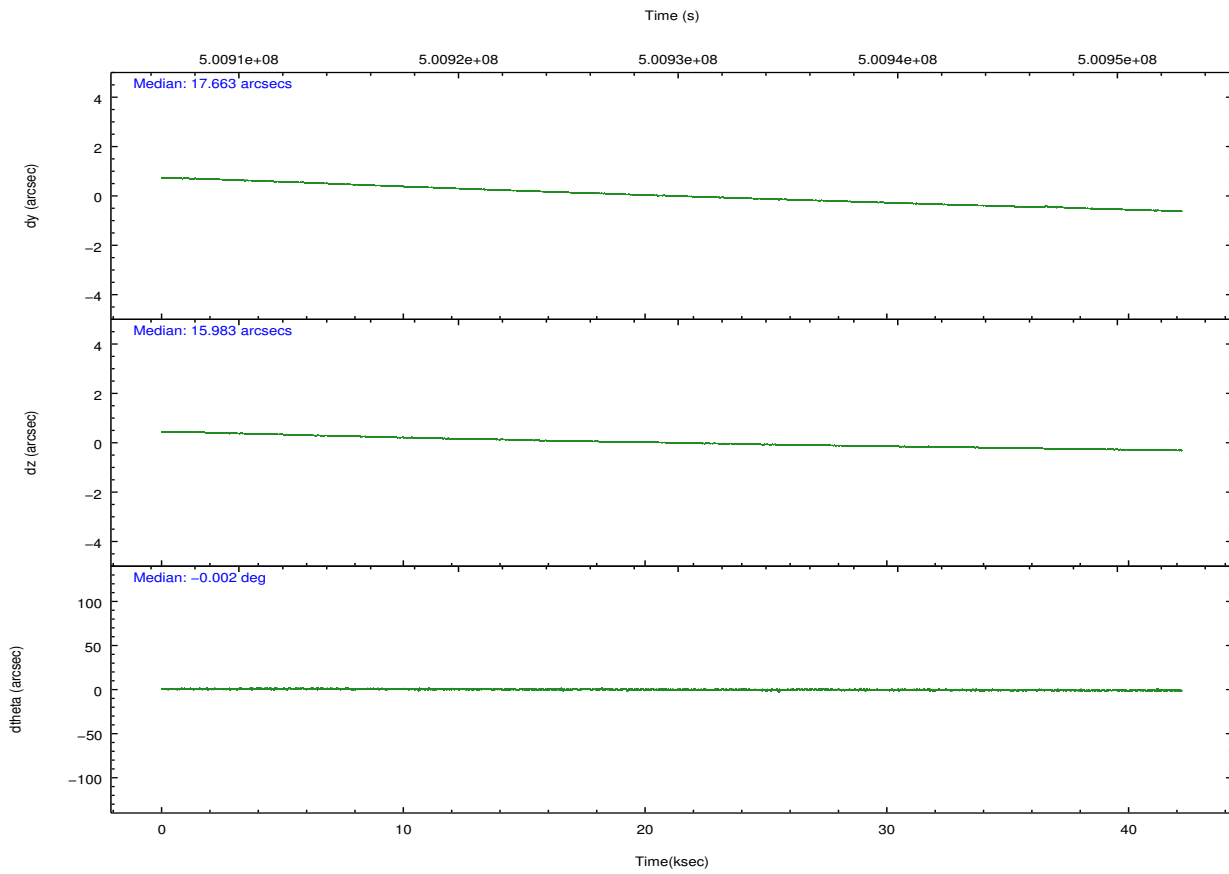
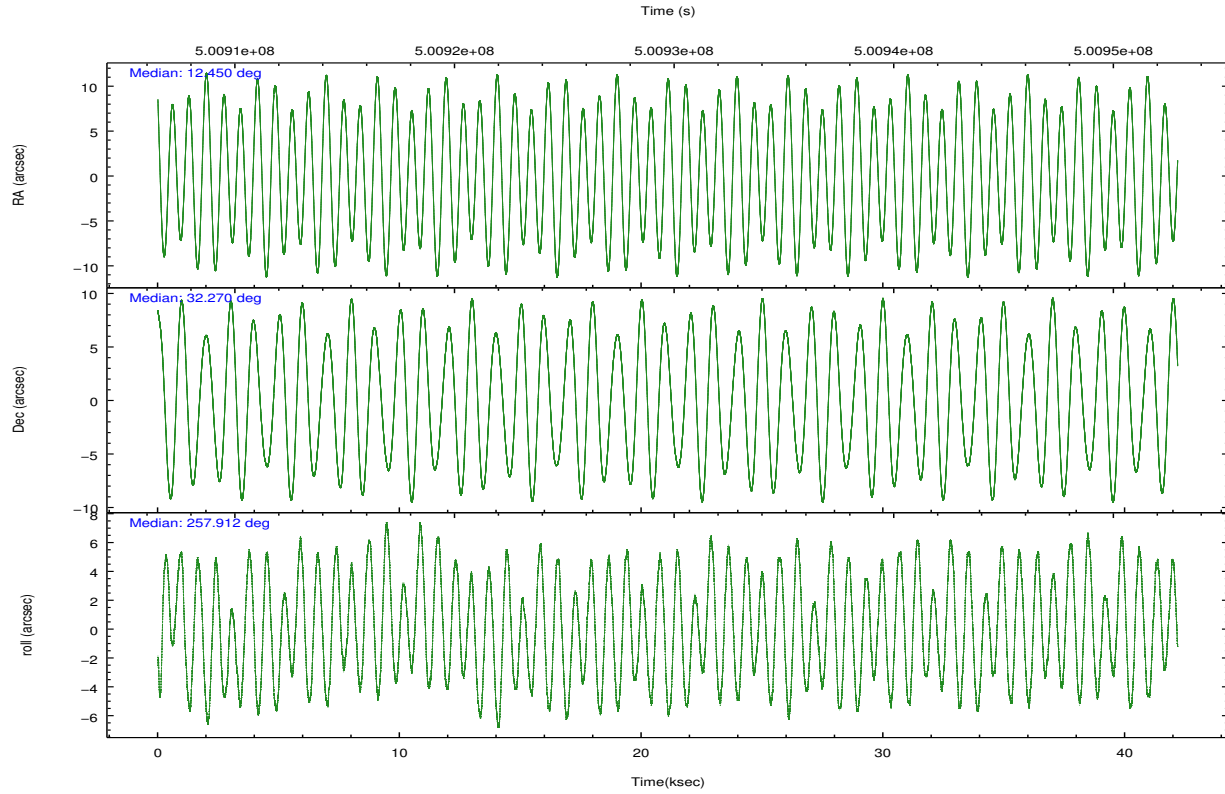
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	8511	8495	8207	8808	7880
	4%	4%	4%	4%	3%
grade 1 events	121	81	112	114	98
	0%	0%	0%	0%	0%
grade 2 events	5788	5733	5331	4939	5366
	3%	3%	2%	2%	2%
grade 3 events	2459	2463	2297	2448	2467
	1%	1%	1%	1%	1%
grade 4 events	2337	2587	2393	2338	2437
	1%	1%	1%	1%	1%
grade 5 events	9319	9975	8740	10723	10290
	4%	5%	4%	5%	5%
grade 6 events	5023	5895	4594	4870	5752
	2%	3%	2%	2%	2%
grade 7 events	152859	155663	173494	159055	168666
	81%	81%	84%	82%	83%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
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	12.439898	12.45002606476334	Subarray requested	NONE	NONE
[deg] Pointing Dec	32.295805	32.26968294302617	Alternating exposures requested	N	N
[deg] Pointing Roll	257.718585	257.9218611839376	[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)	500908805.184000	500907782.68634			
Observation start date	2013-11-15T13:18:58	2013-11-15T13:03:02			
[s] Observation end time (MET)	500950805.184000	500951767.48875			
Observation end date	2013-11-16T00:58:58	2013-11-16T01:16:07			
Read mode	TIMED	TIMED			

## 2.3 Aspect



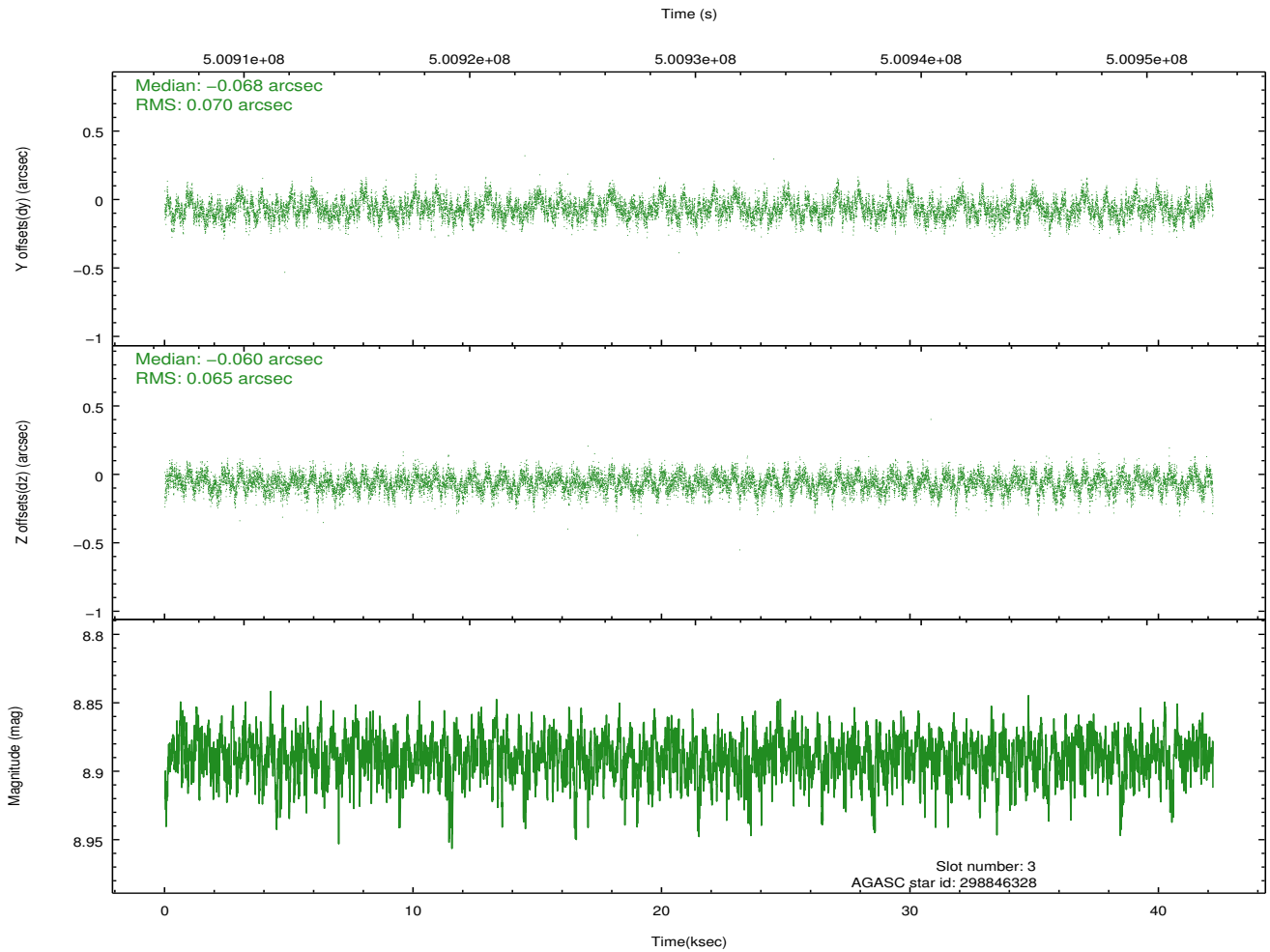
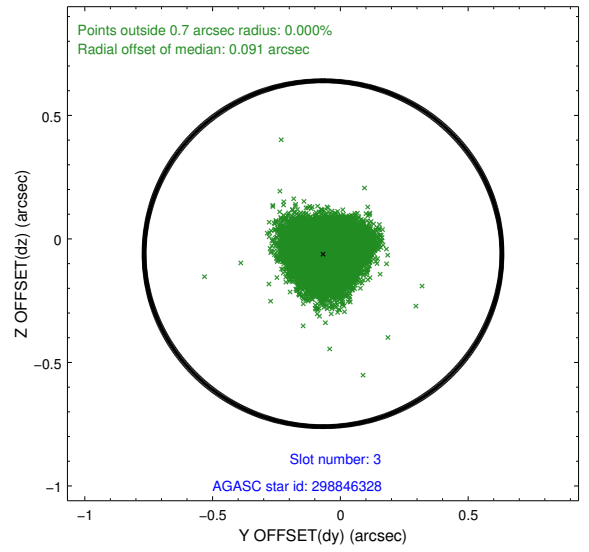
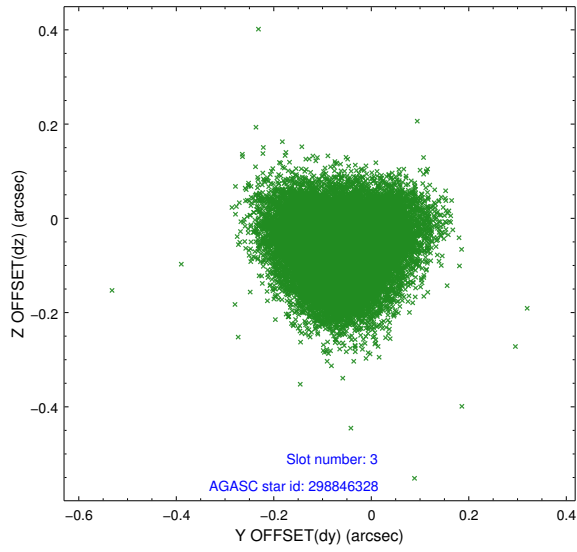


### Slot Statistics

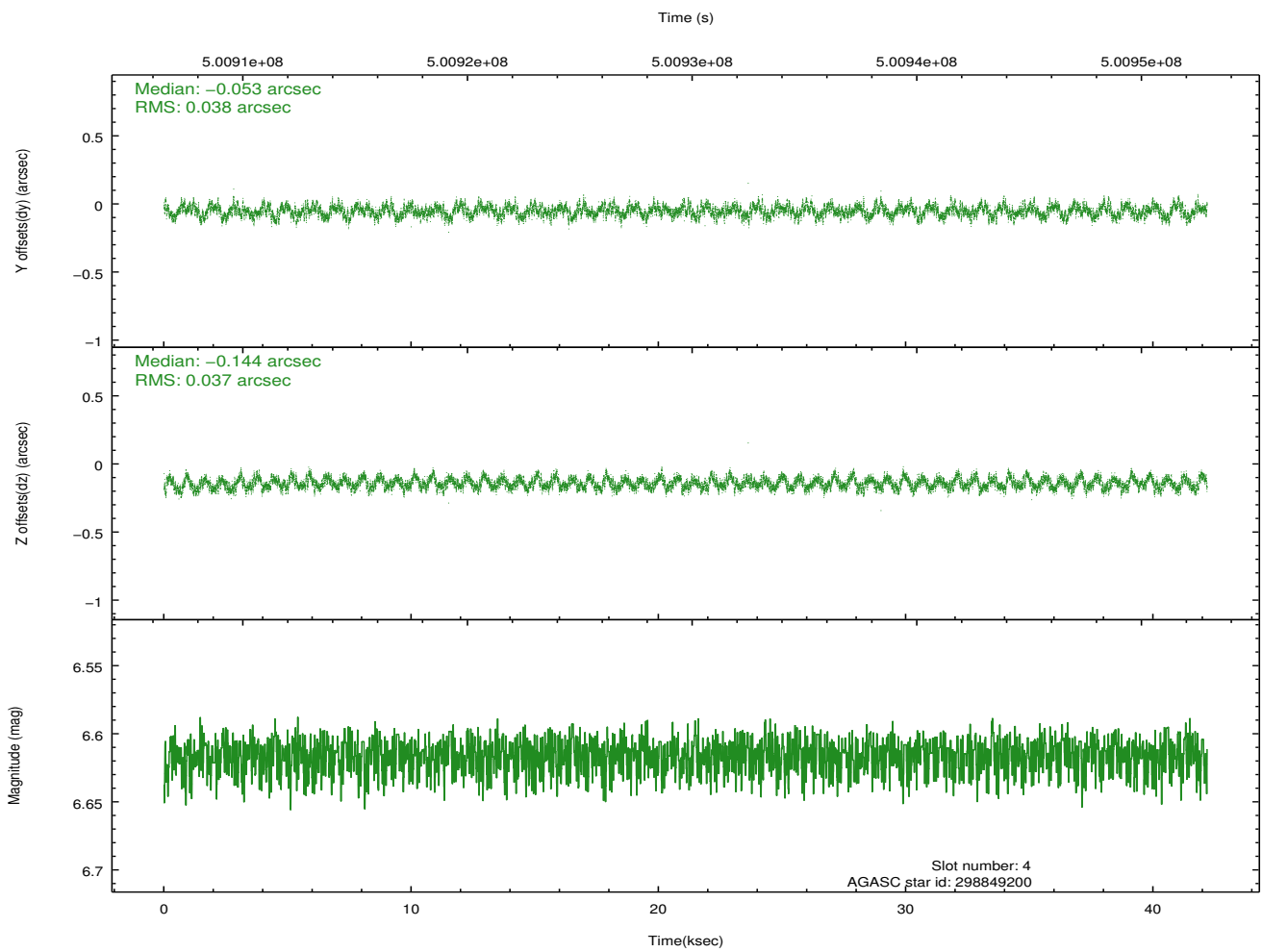
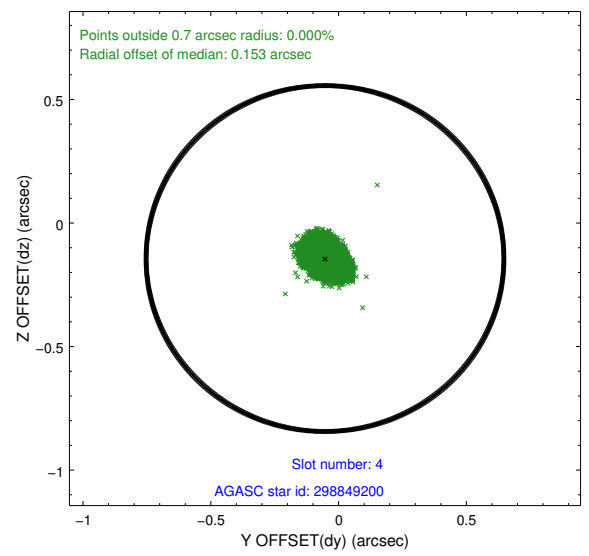
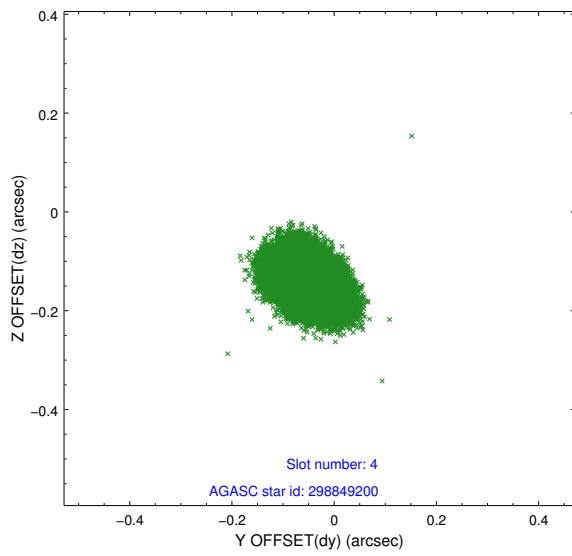
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.22	10289	0.080	-0.062	0.014	0.023	0.000000	0.000000	921.78	-839.69
1	FID		ACIS-I-5	7.21	10289	-0.283	0.058	0.013	0.021	0.000000	0.000000	-1826.70	1057.90
2	FID		ACIS-I-6	7.22	10289	0.111	0.075	0.008	0.013	0.000000	0.000000	387.33	1702.44
3	GUIDE	used	298846328	8.89	20563	-0.068	-0.060	0.103	0.162	11.741886	32.076389	1218.77	-1913.83
4	GUIDE	used	298849200	6.62	20578	-0.053	-0.144	0.058	0.090	12.977526	32.366996	-602.12	1541.91
5	GUIDE	used	298850800	8.52	20571	0.025	-0.053	0.086	0.133	12.962303	32.000872	694.67	1783.78
6	GUIDE	used	298854008	7.42	20577	0.014	-0.001	0.084	0.147	12.853740	32.657078	-1538.34	947.45
7	GUIDE	used	298846552	8.78	20567	0.078	0.260	0.153	0.229	11.679811	32.494360	-214.80	-2408.33

## 2.4 Star Slots

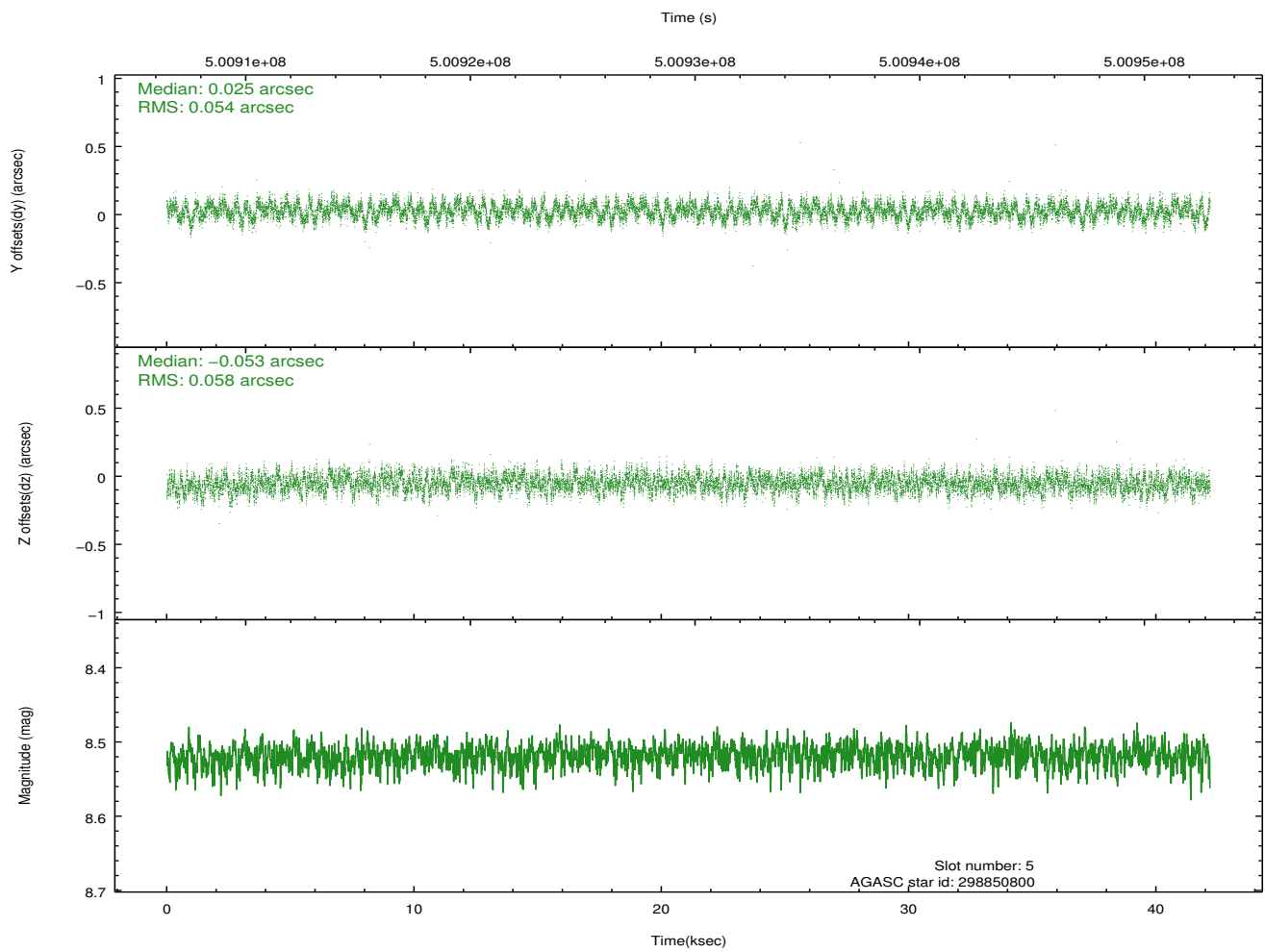
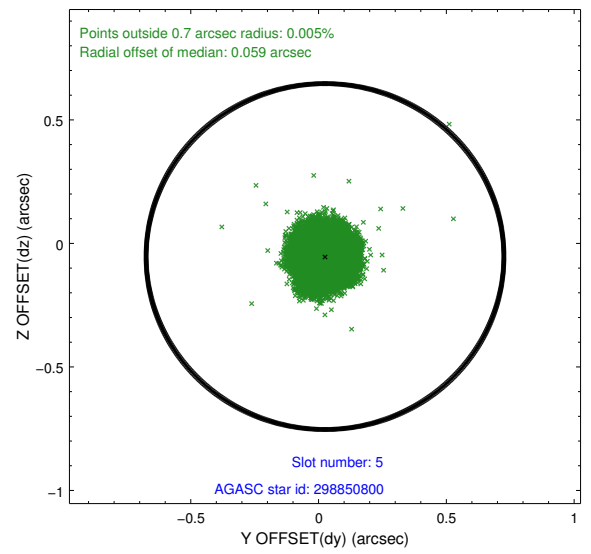
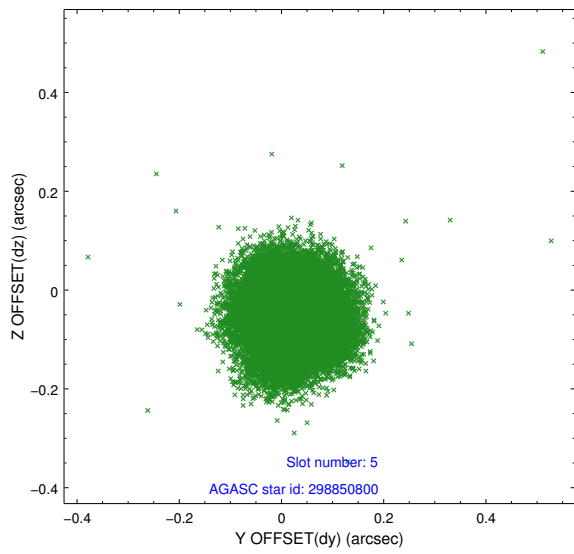
### 2.4.1 Slot 3



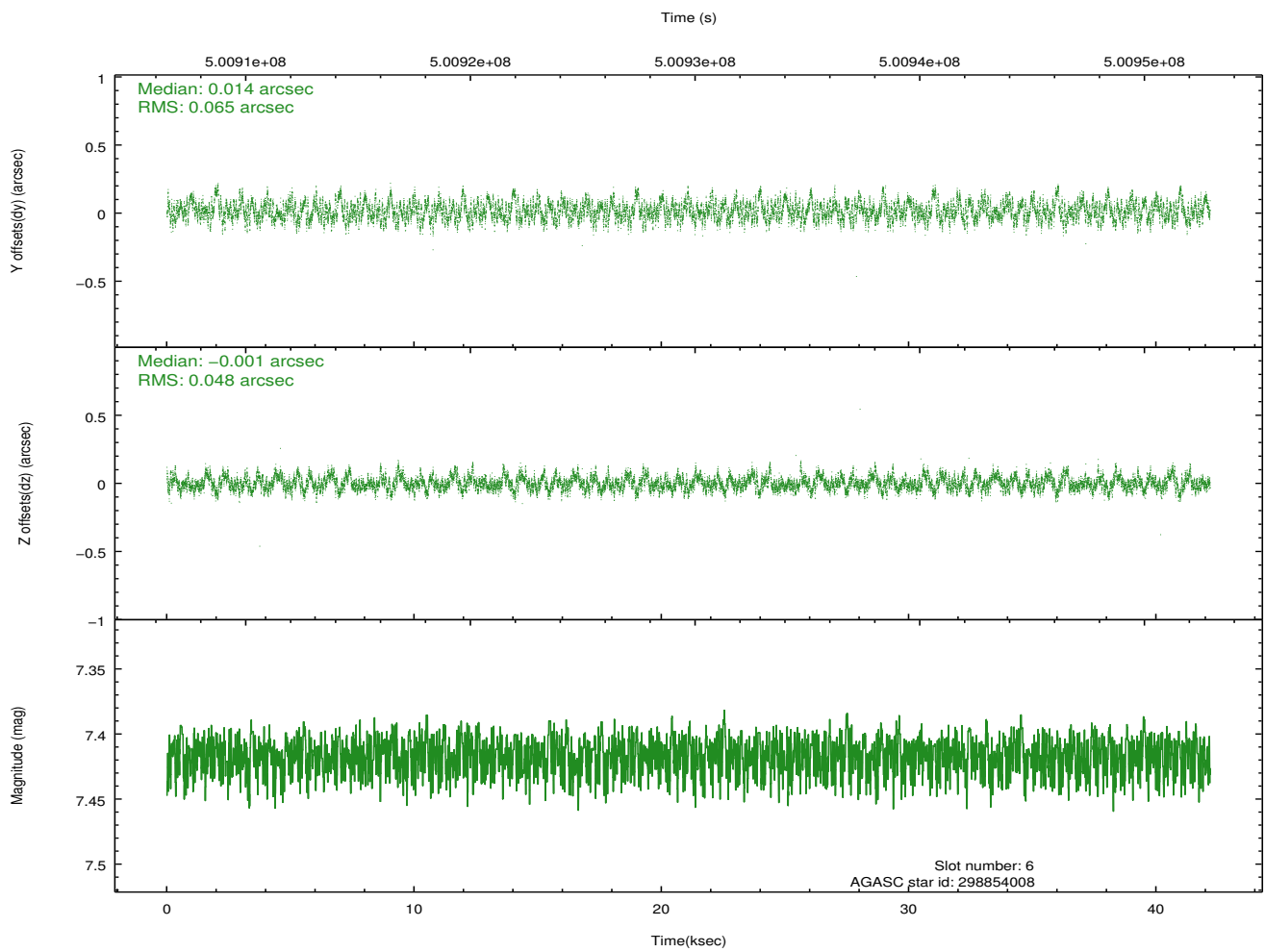
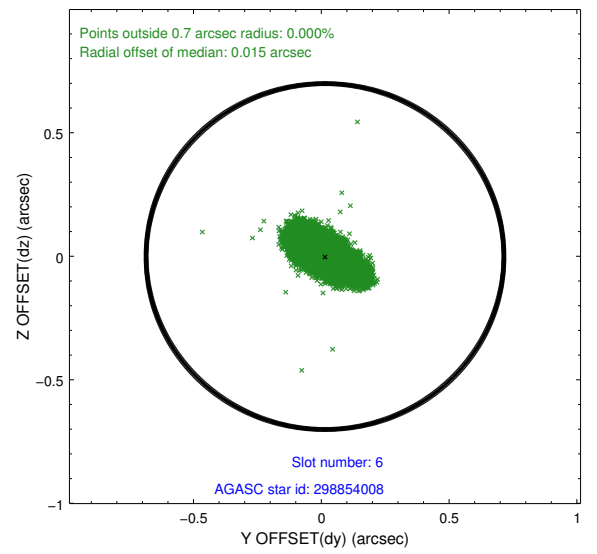
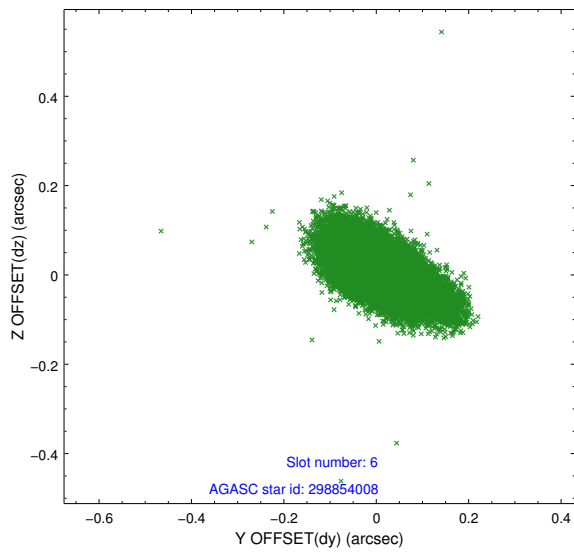
## 2.4.2 Slot 4



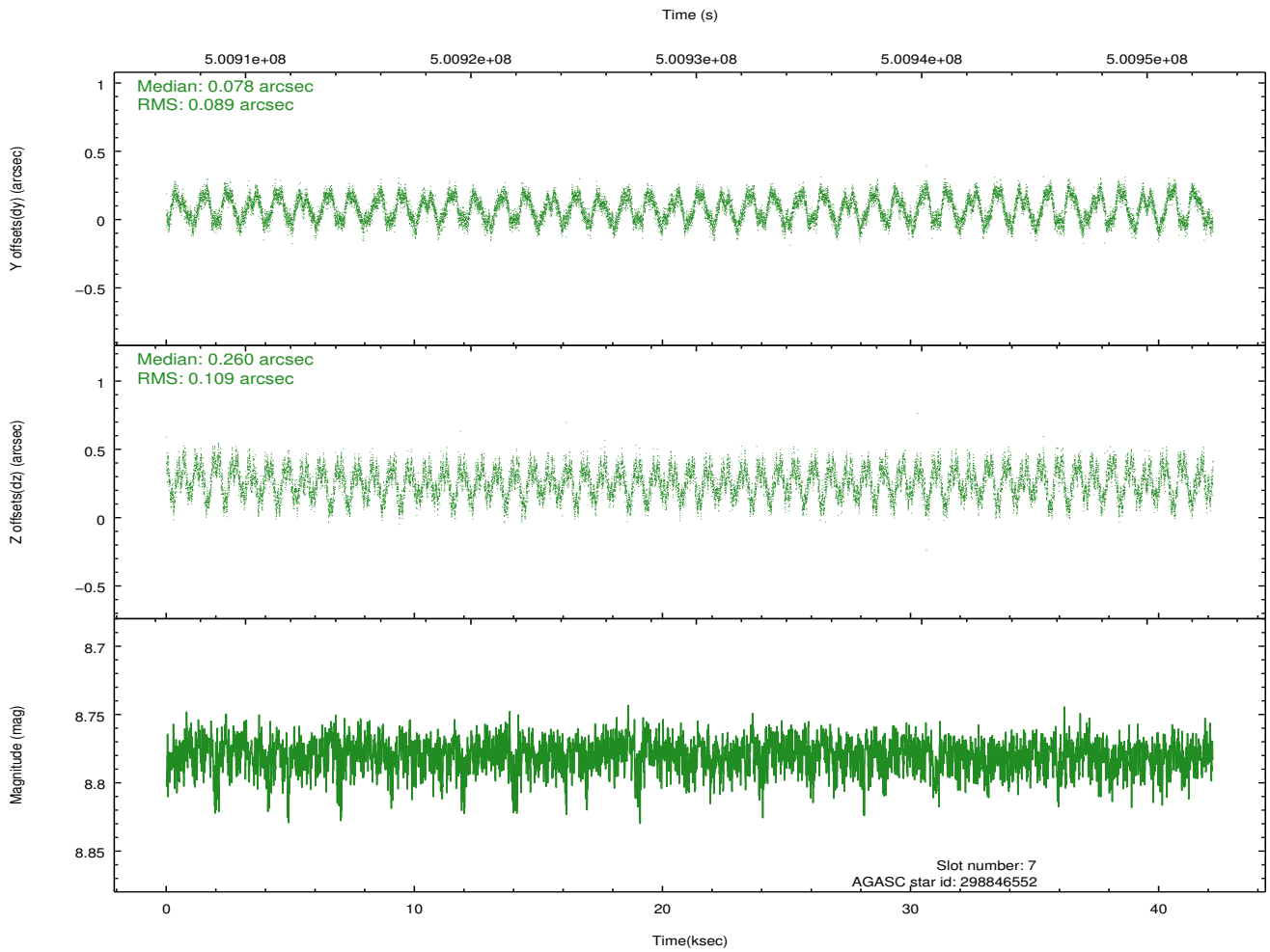
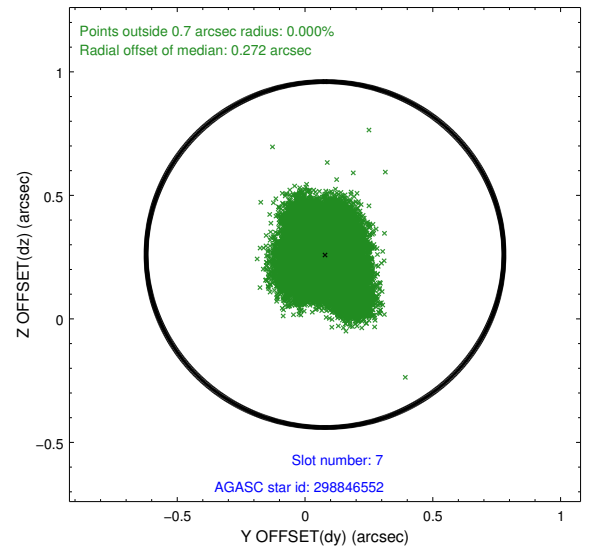
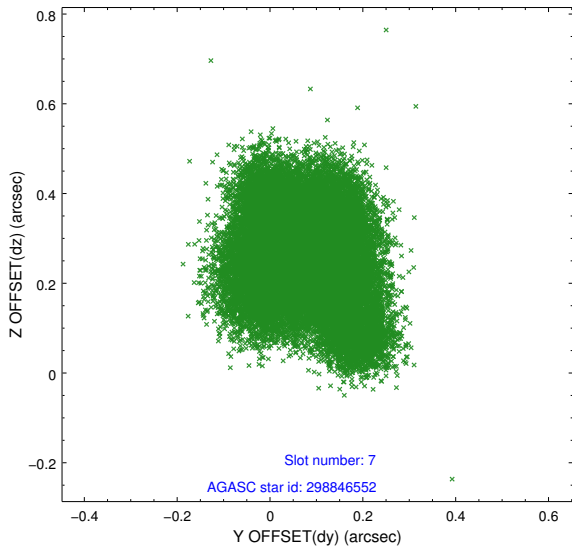
### 2.4.3 Slot 5



## 2.4.4 Slot 6

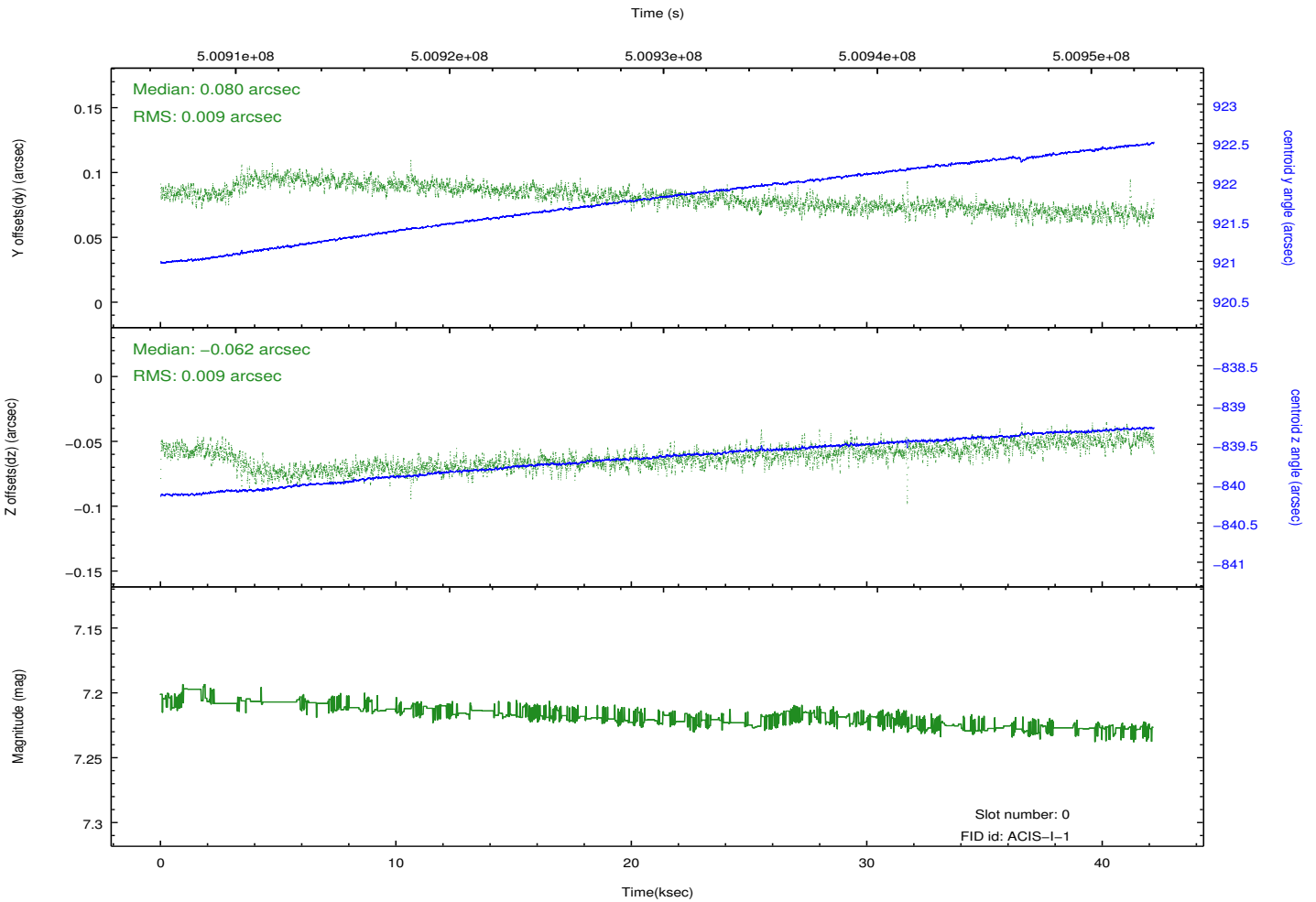
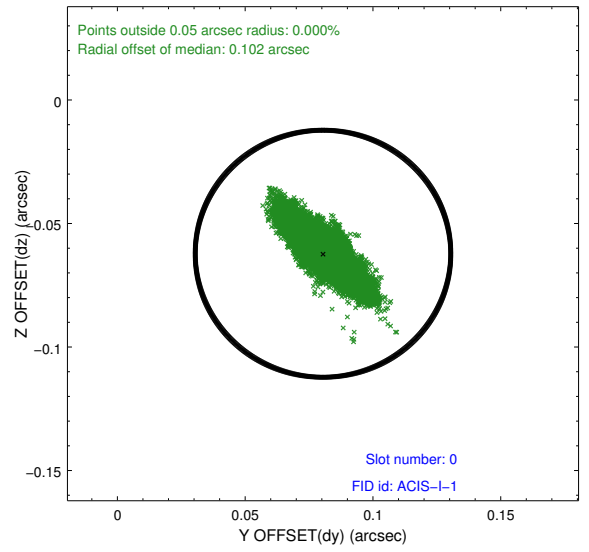
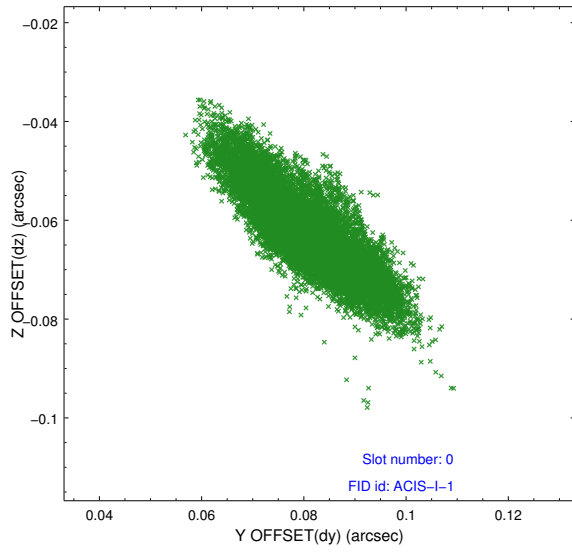


### 2.4.5 Slot 7

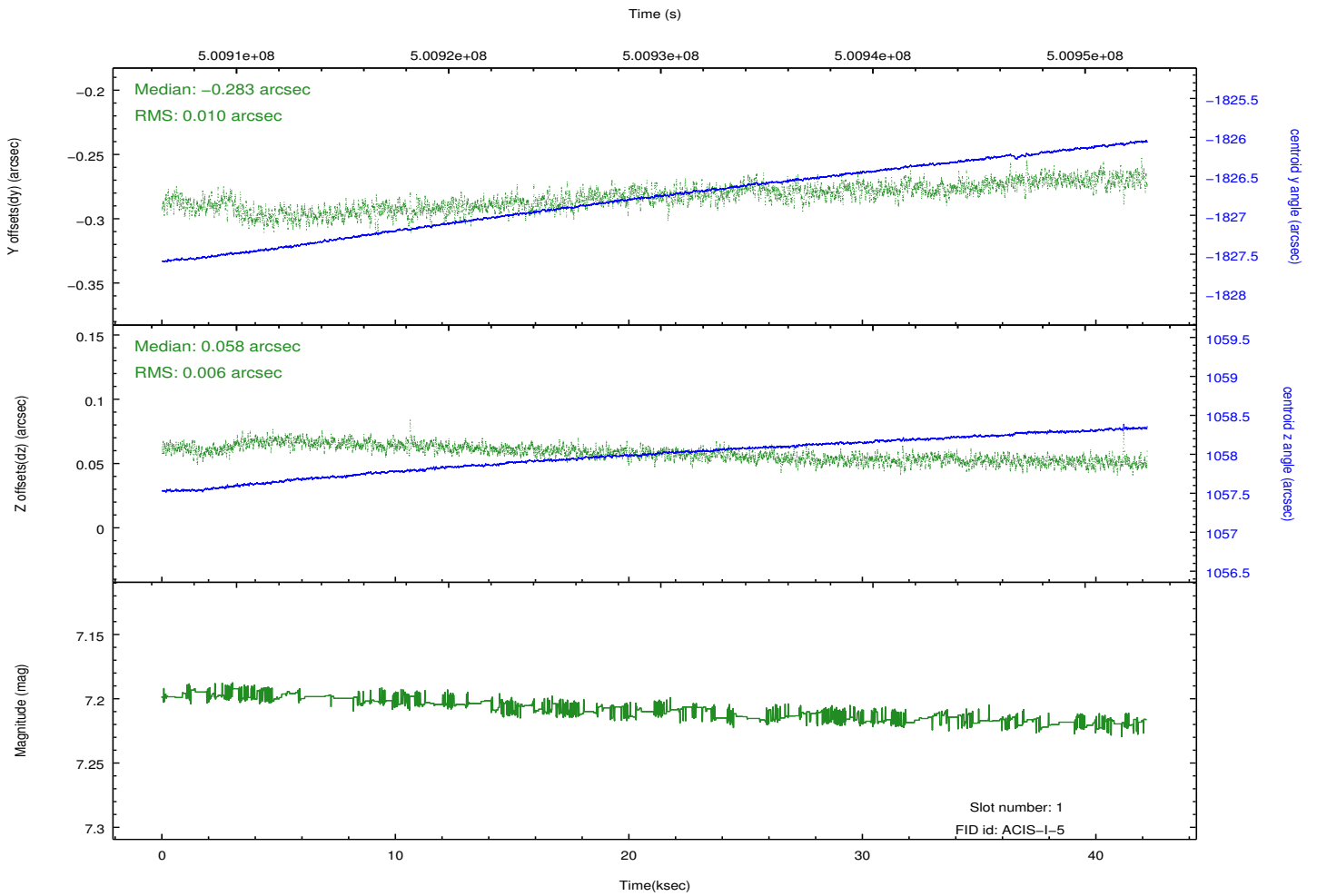
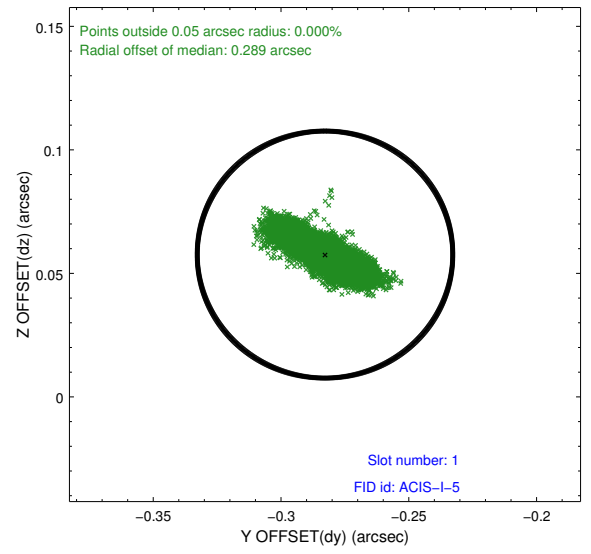
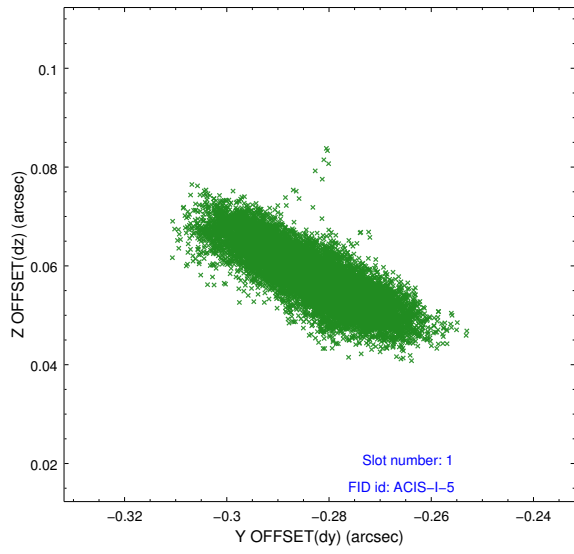


## 2.5 FID Slots

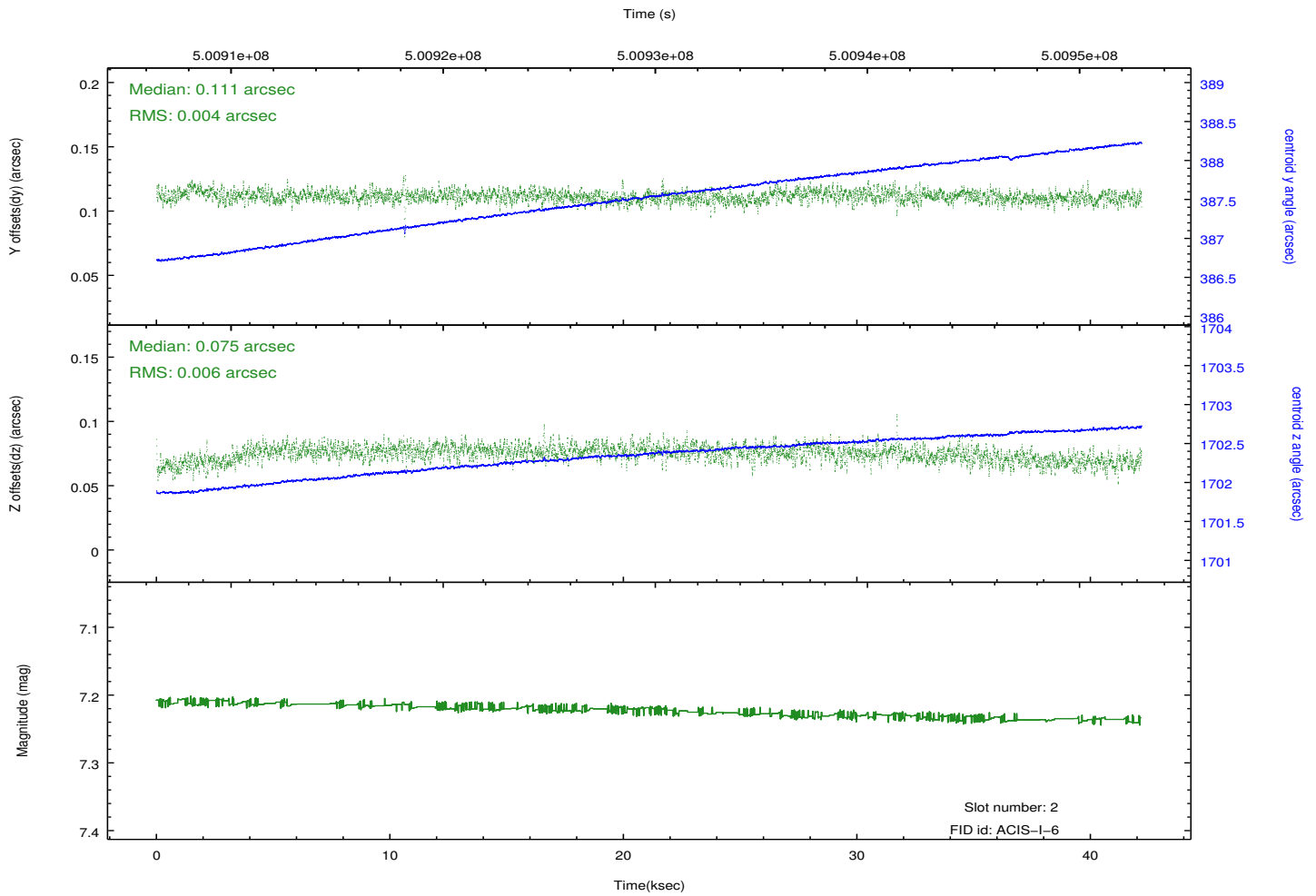
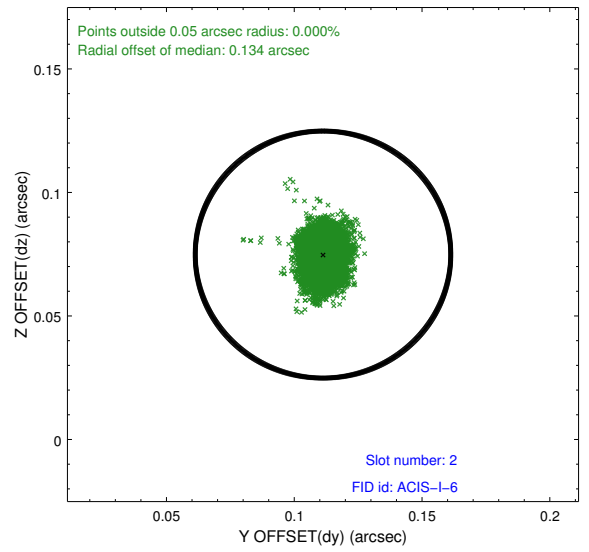
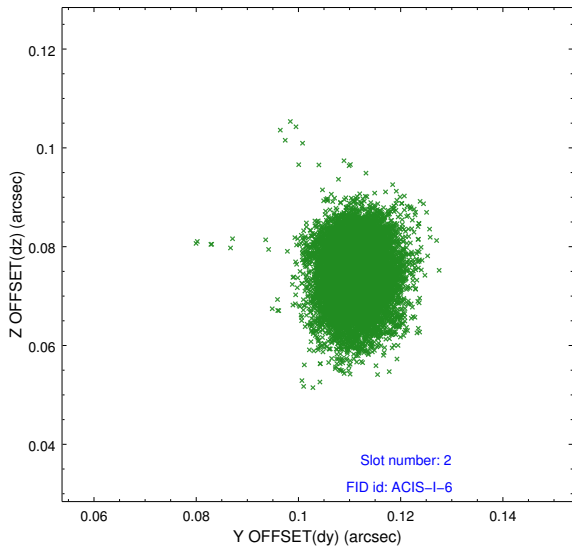
### 2.5.1 Slot 0



## 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)	2014.12.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	42.084451367319

## A.2 Comments

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.