

# V&V Reference Report

## L2 ASCDS Version : 8.5.1

Observation 5831 - L2 Version 3  
Chandra X-Ray Center

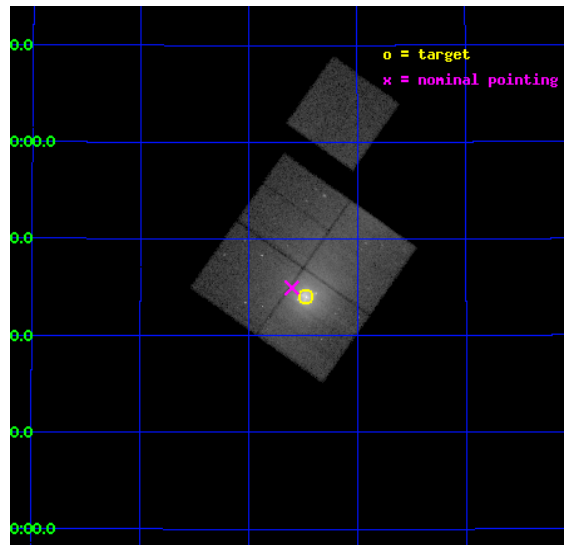
L2 Processing Date : Dec 17 2012

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# 1 Front

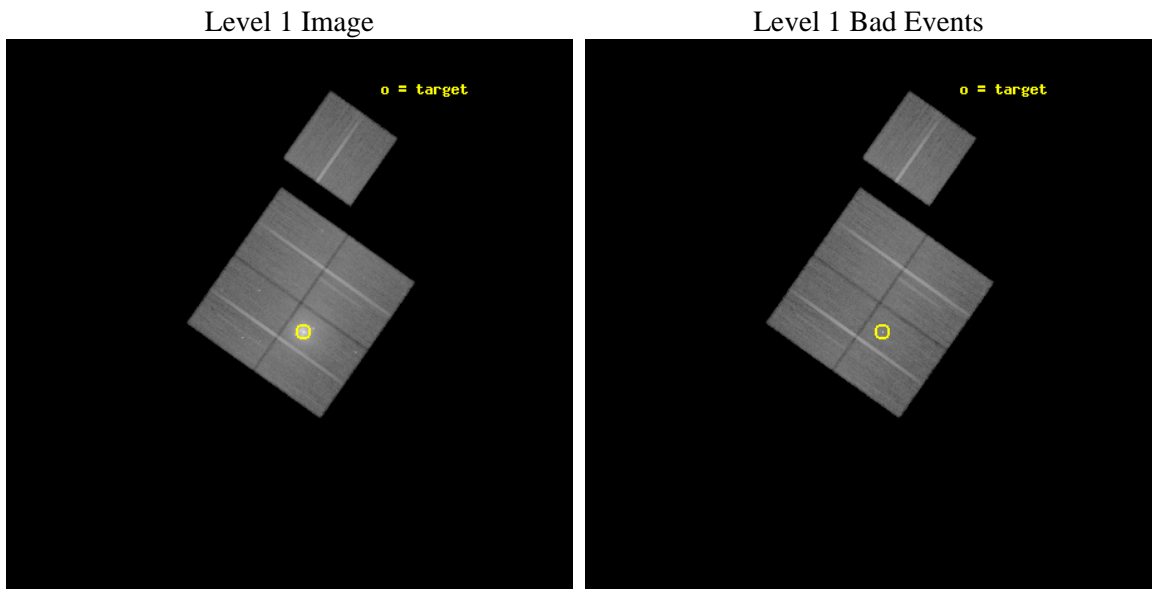
seq_num	800540	Sequence number
obs_id	5831	Observation id
title	Cygnus A --- Shock Heating of the Intra-Cluster Medium	Proposal ti
observer	Dr Andrew Young	Principal investigator
object	Cygnus A	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	299.867917	Observer's specified target RA [deg]
dec_targ	40.733889	Observer's specified target Dec [deg]
ra_nom	299.90095442943	Nominal RA [deg]
dec_nom	40.749210993161	Nominal Dec [deg]
roll_nom	35.187127729718	Nominal Roll [deg]
revision	3	Processing version of data
ontime	51768.440509588	Sum of GTIs [s]
livetime	51092.047722958	Livetime [s]
ontime0	51771.540409893	Sum of GTIs [s]
ontime1	51768.440509588	Sum of GTIs [s]
ontime2	51771.622539759	Sum of GTIs [s]
ontime3	51762.240708828	Sum of GTIs [s]
ontime6	51777.781330347	Sum of GTIs [s]
l2events	470585	Number of level 2 events



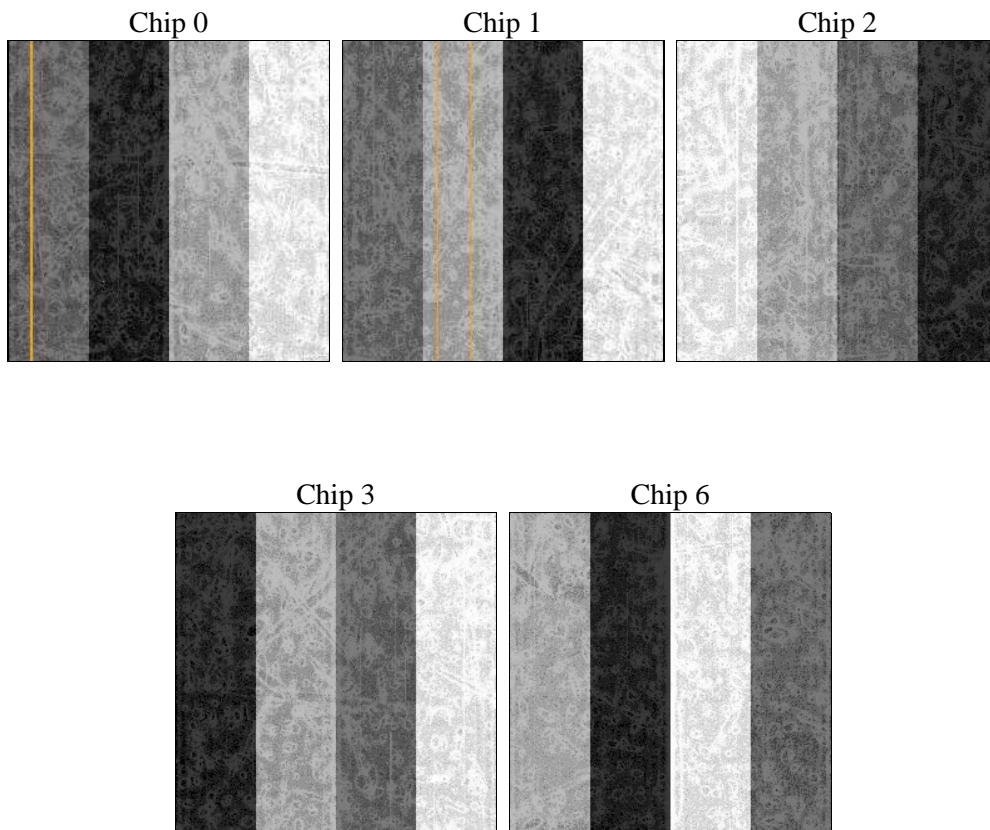
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	52000.000000	[s] Scheduled observation exposure time
ascdsver	8.5.1	Processing system revision	ontime	51768.440509588	Sum of GTIs [s]
caldbver	4.5.5	&#160	ontime0	51771.540409893	Sum of GTIs [s]
date	2012-12-17T19:46:09	Date and time of file creation	ontime1	51768.440509588	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	51771.622539759	Sum of GTIs [s]
			ontime3	51762.240708828	Sum of GTIs [s]
			ontime6	51777.781330347	Sum of GTIs [s]
			l1events	1897511	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	318439	541379	350589	374684	312420
rejected events	256497	269963	290839	286751	276137
rejected %	80%	49%	82%	76%	88%

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	35242	197007	34238	56698	14728
	11%	36%	9%	15%	4%
grade 1 events	275	1689	311	387	146
	0%	0%	0%	0%	0%
grade 2 events	10651	34485	10219	12712	7231
	3%	6%	2%	3%	2%
grade 3 events	4648	12103	4414	5407	3756
	1%	2%	1%	1%	1%
grade 4 events	4438	12123	4381	5458	3655
	1%	2%	1%	1%	1%
grade 5 events	11400	13583	10683	12832	12393
	3%	2%	3%	3%	3%
grade 6 events	6973	15717	6502	7658	6917
	2%	2%	1%	2%	2%
grade 7 events	244812	254672	279841	273532	263594
	76%	47%	79%	73%	84%

## 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	299.885900	299.9009544294301	Subarray requested	NONE	NONE
[deg] Pointing Dec	40.724309	40.74921099316127	Alternating exposures requested	N	N
[deg] Pointing Roll	34.988265	35.18712772971822	[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	-242.392463	-242.3975952774949			
[mm] SIM translation stage offset	8.800000000000001	8.805142274565242			
[s] Observation start time (MET)	224947997.184000	224946073.61859			
Observation start date	2005-02-16T13:32:13	2005-02-16T13:01:13			
[s] Observation end time (MET)	224999997.184000	225001050.00858			
Observation end date	2005-02-17T03:58:53	2005-02-17T04:17:30			
Read mode	TIMED	TIMED			

## 2.3 Aspect

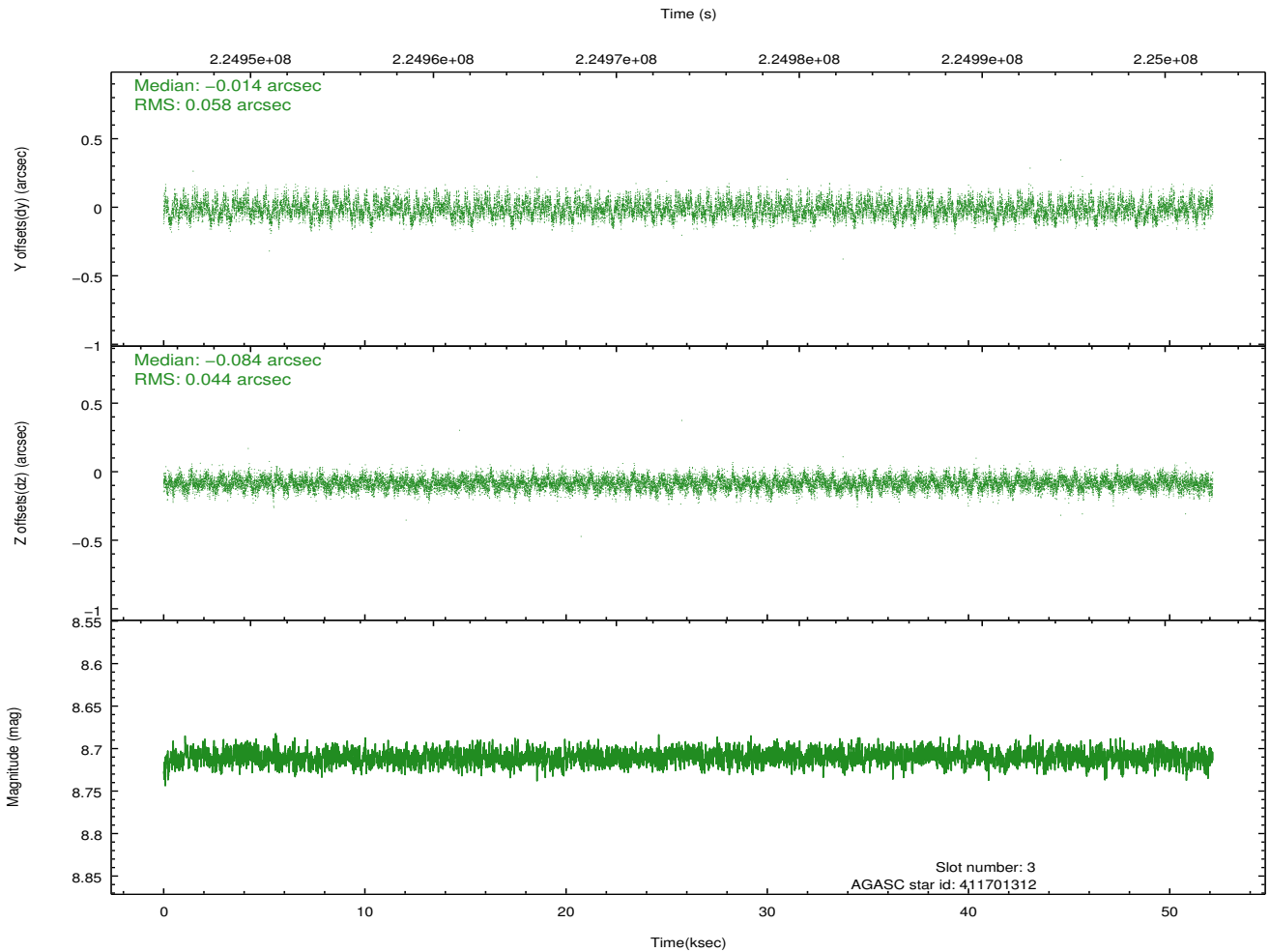
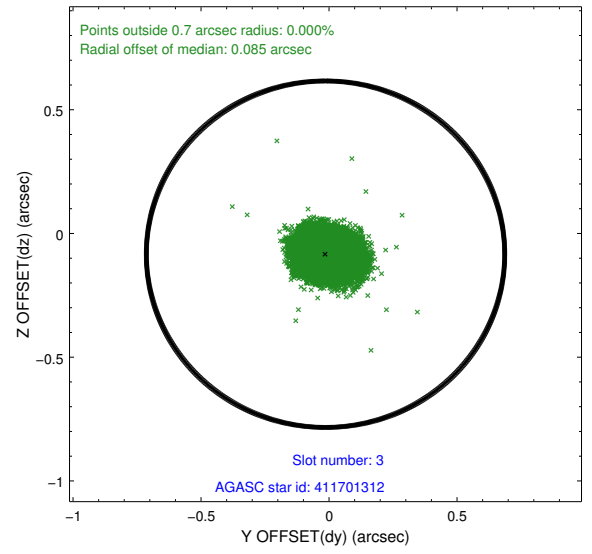
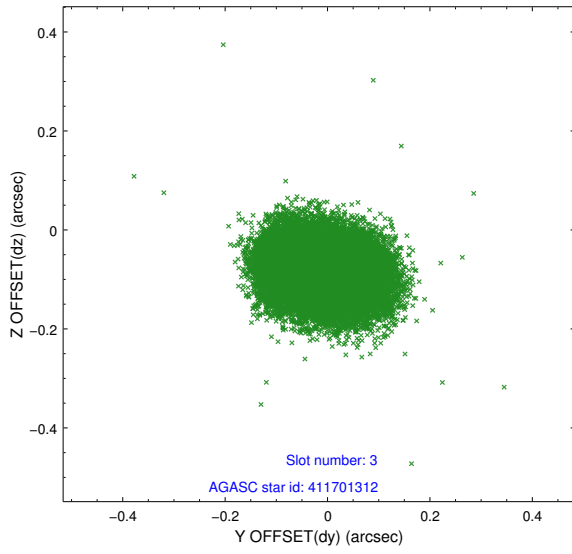


### Slot Statistics

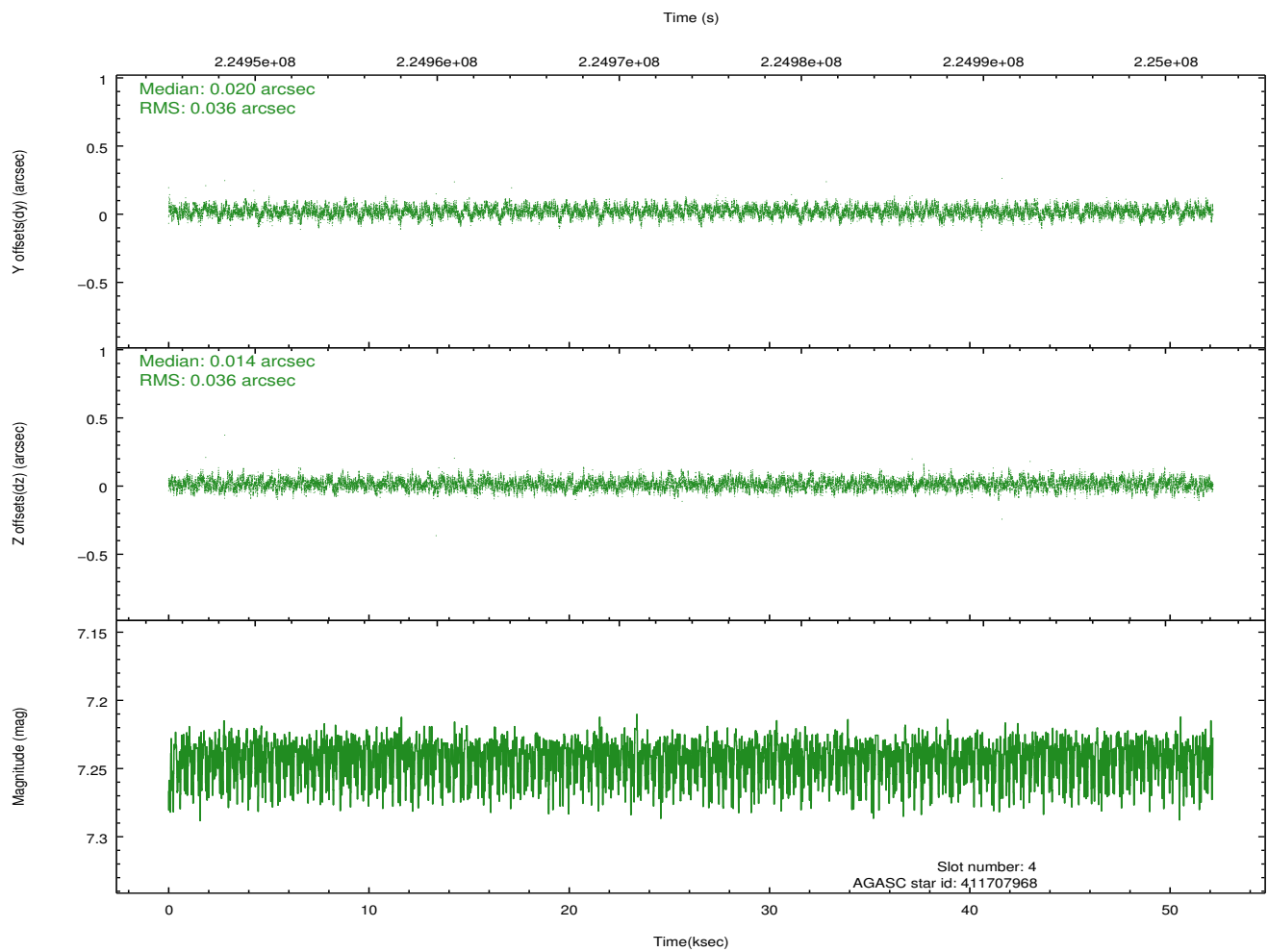
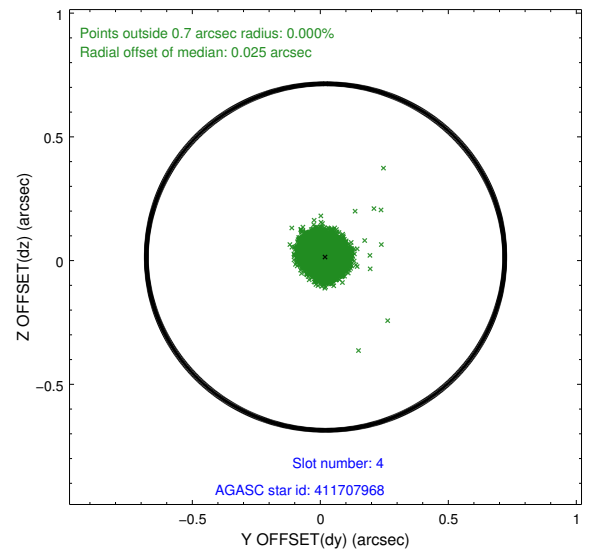
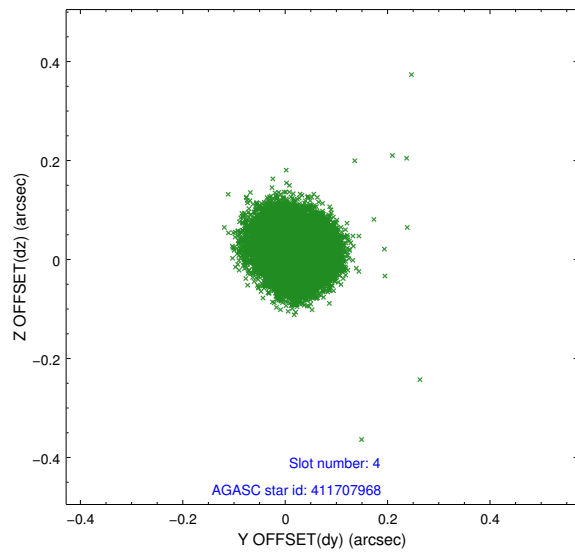
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.28	12716	-0.054	0.117	0.015	0.075	0.000000	0.000000	933.37	-653.16
1	FID	ACIS-I-5	7.24	12719	-0.096	0.002	0.009	0.021	0.000000	0.000000	-1814.81	1244.24
2	FID	ACIS-I-6	7.24	12719	0.057	-0.048	0.012	0.060	0.000000	0.000000	399.04	1888.67
3	GUIDE	411701312	8.71	25431	-0.014	-0.084	0.078	0.125	298.889956	40.820220	-2016.04	1851.28
4	GUIDE	411707968	7.24	25436	0.020	0.014	0.055	0.086	299.509933	40.926839	-418.36	1185.80
5	GUIDE	413421016	8.71	25431	-0.089	0.120	0.067	0.111	300.612426	40.446254	1061.69	-1954.23
6	GUIDE	413405352	8.36	25363	0.049	-0.136	0.065	0.102	300.290830	41.091941	1660.69	456.52
7	GUIDE	413421624	8.72	25425	0.034	0.081	0.082	0.136	300.399768	40.893051	1496.76	-300.36

## 2.4 Star Slots

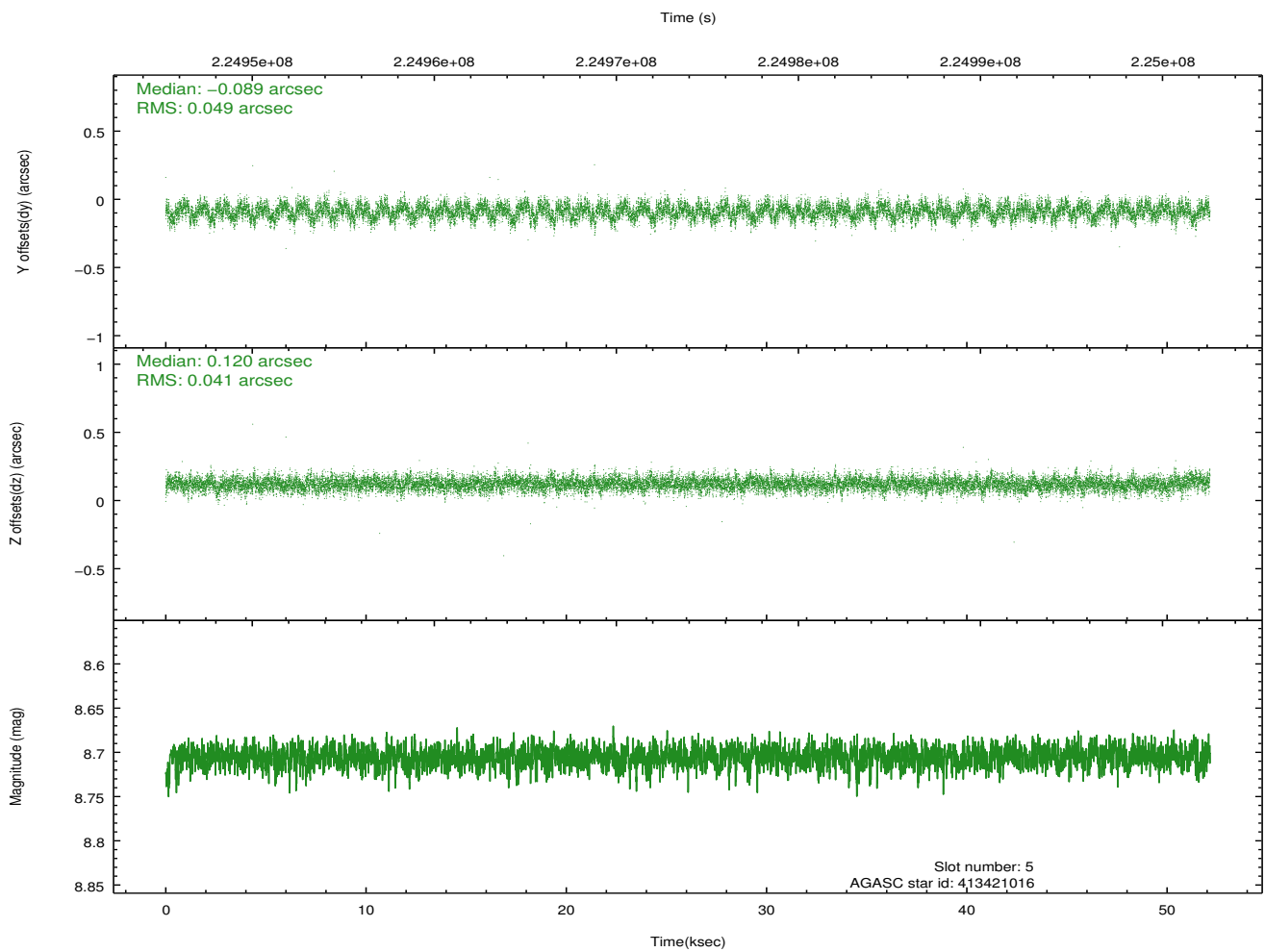
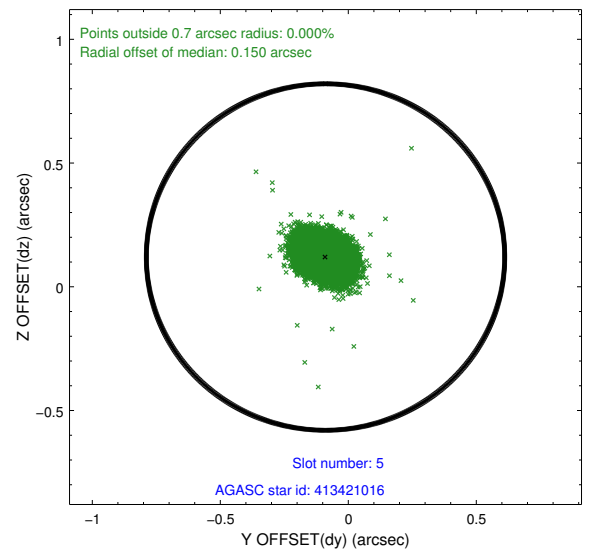
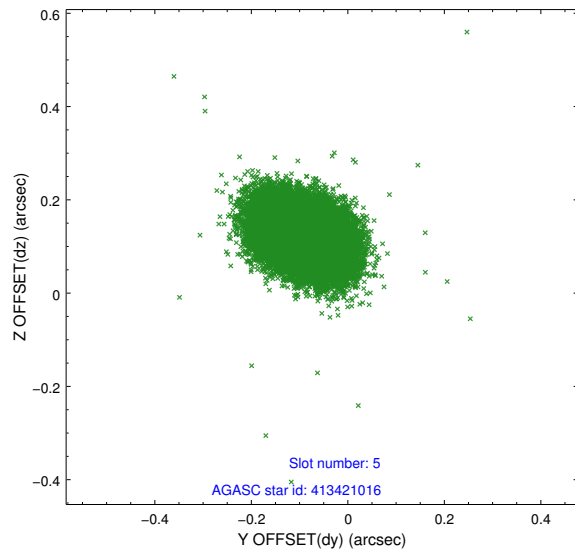
### 2.4.1 Slot 3



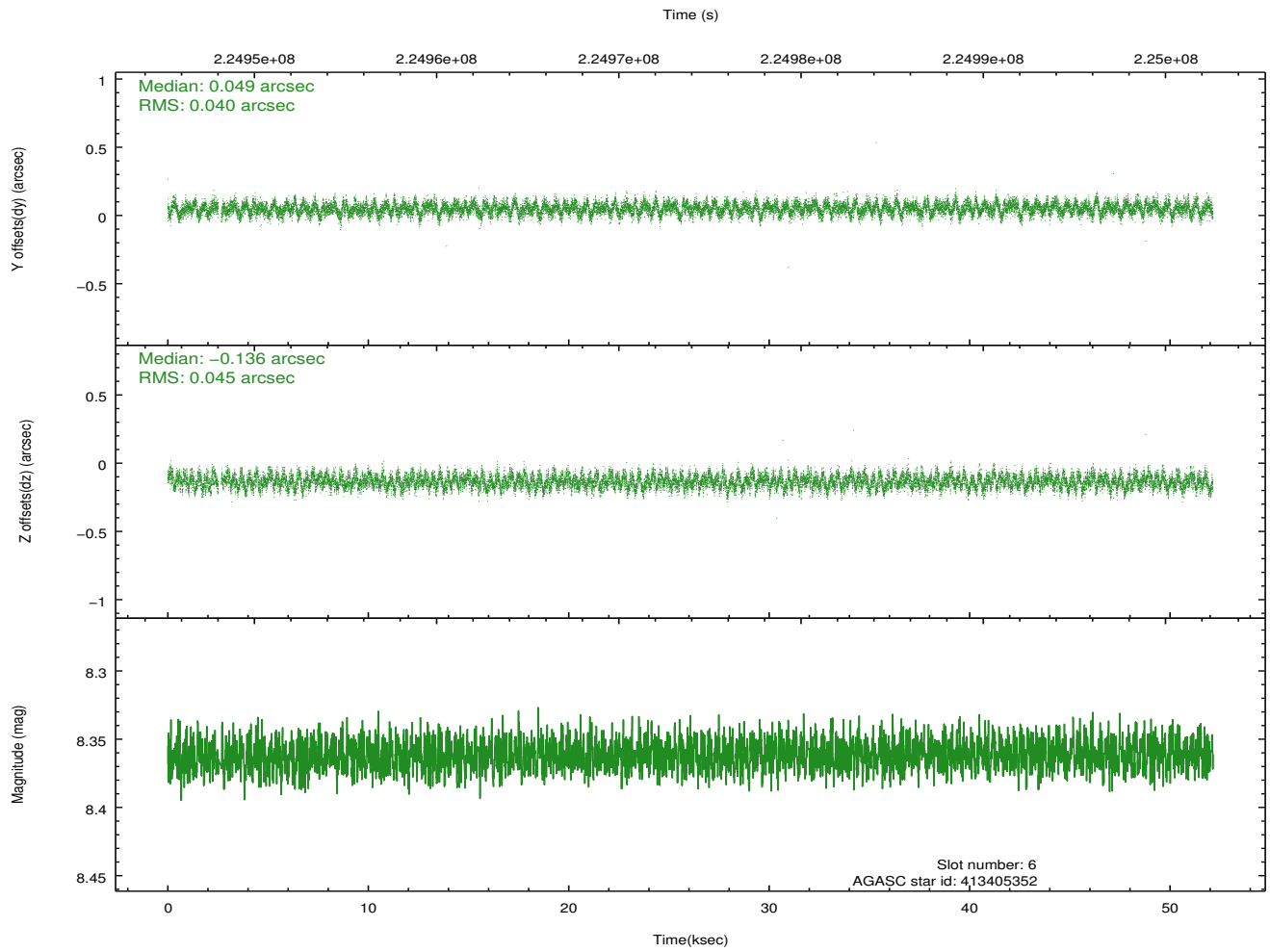
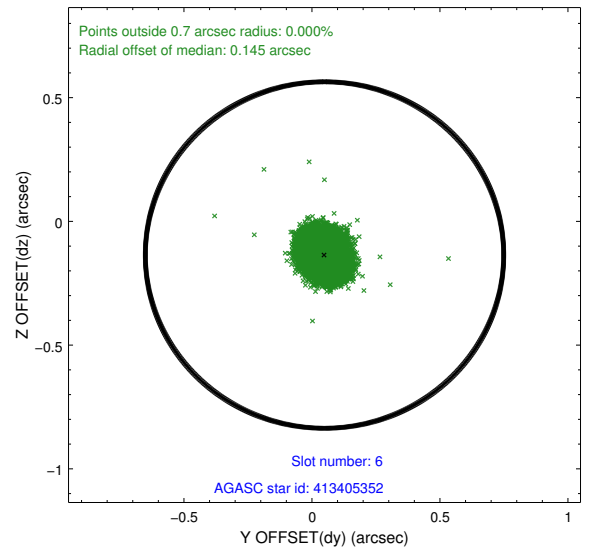
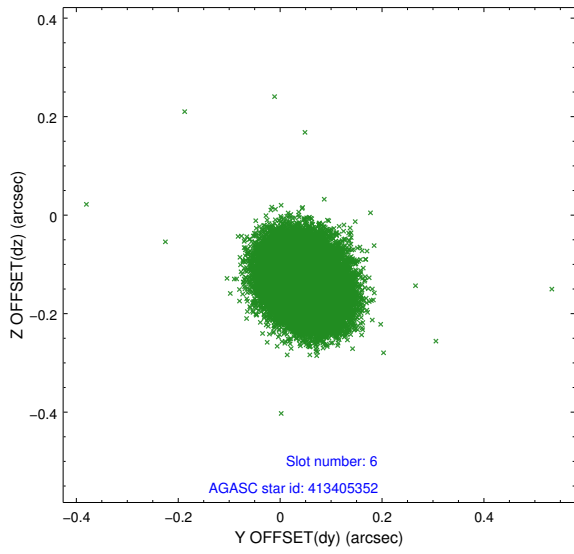
## 2.4.2 Slot 4



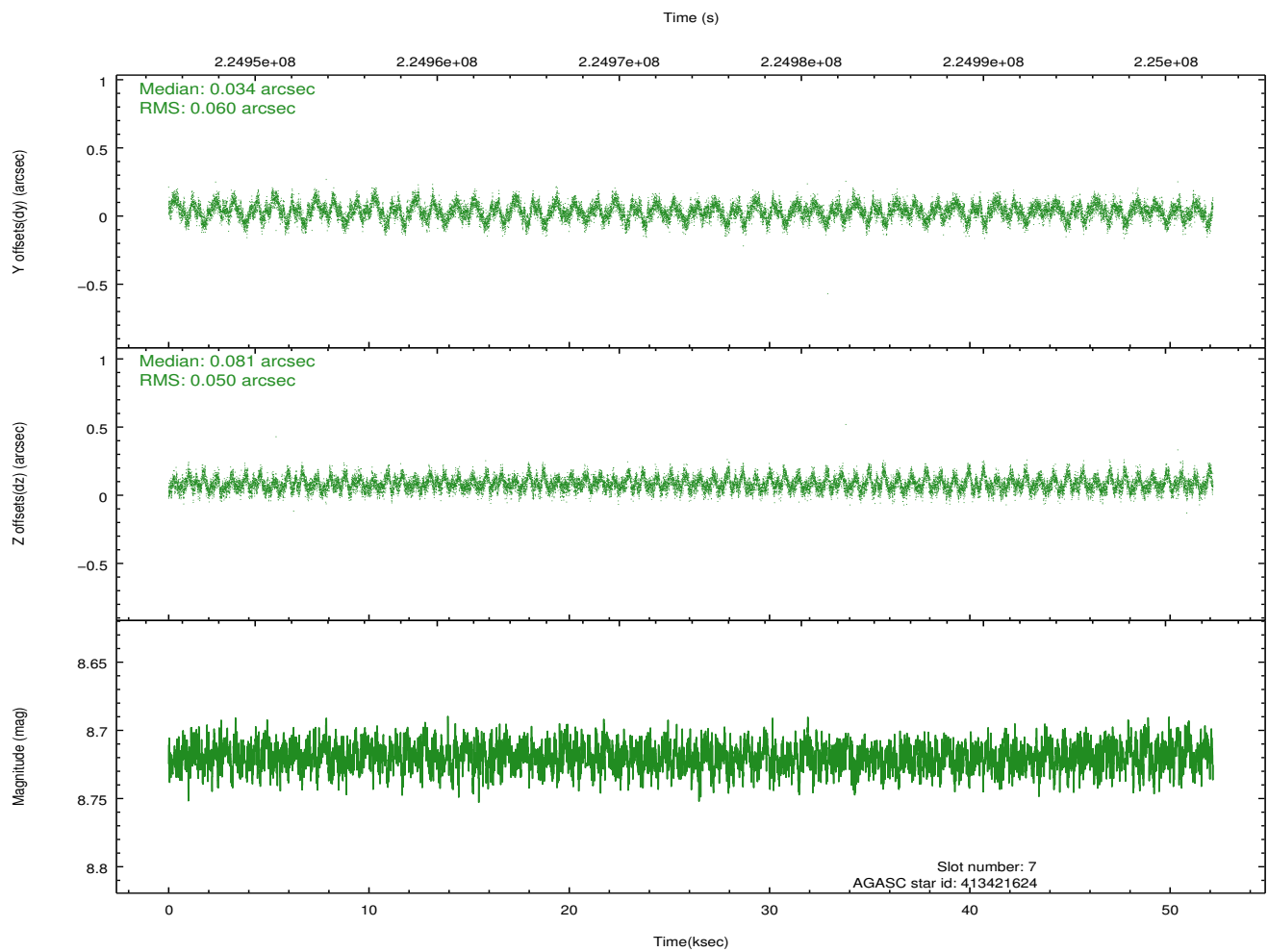
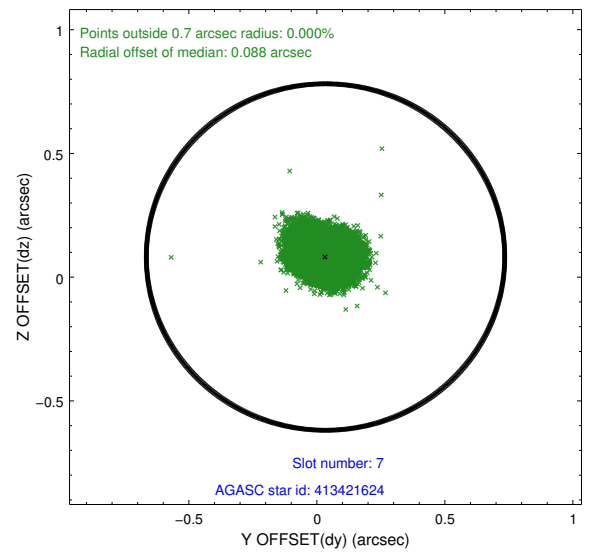
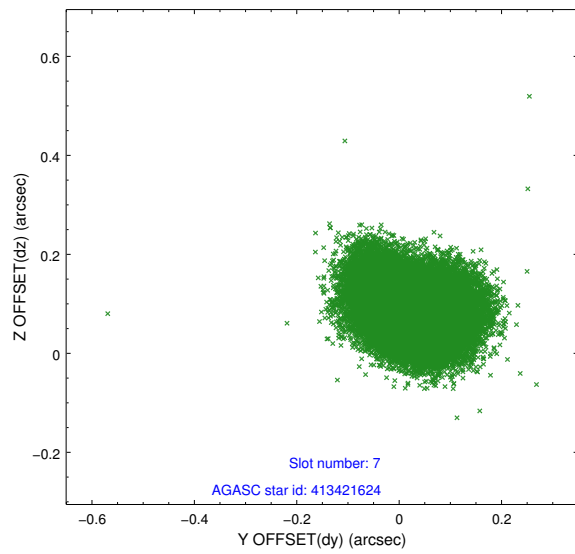
### 2.4.3 Slot 5



### 2.4.4 Slot 6

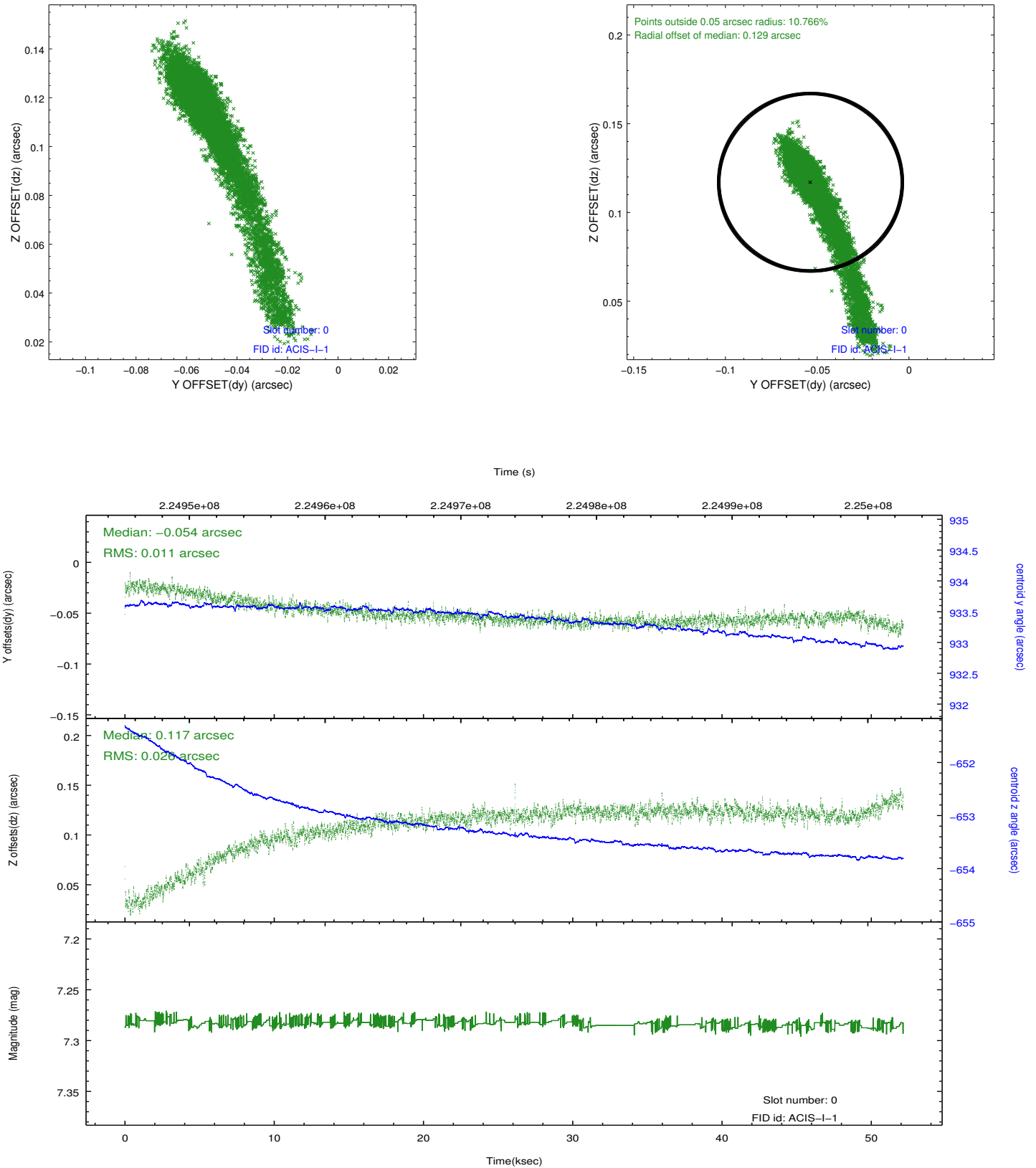


## 2.4.5 Slot 7

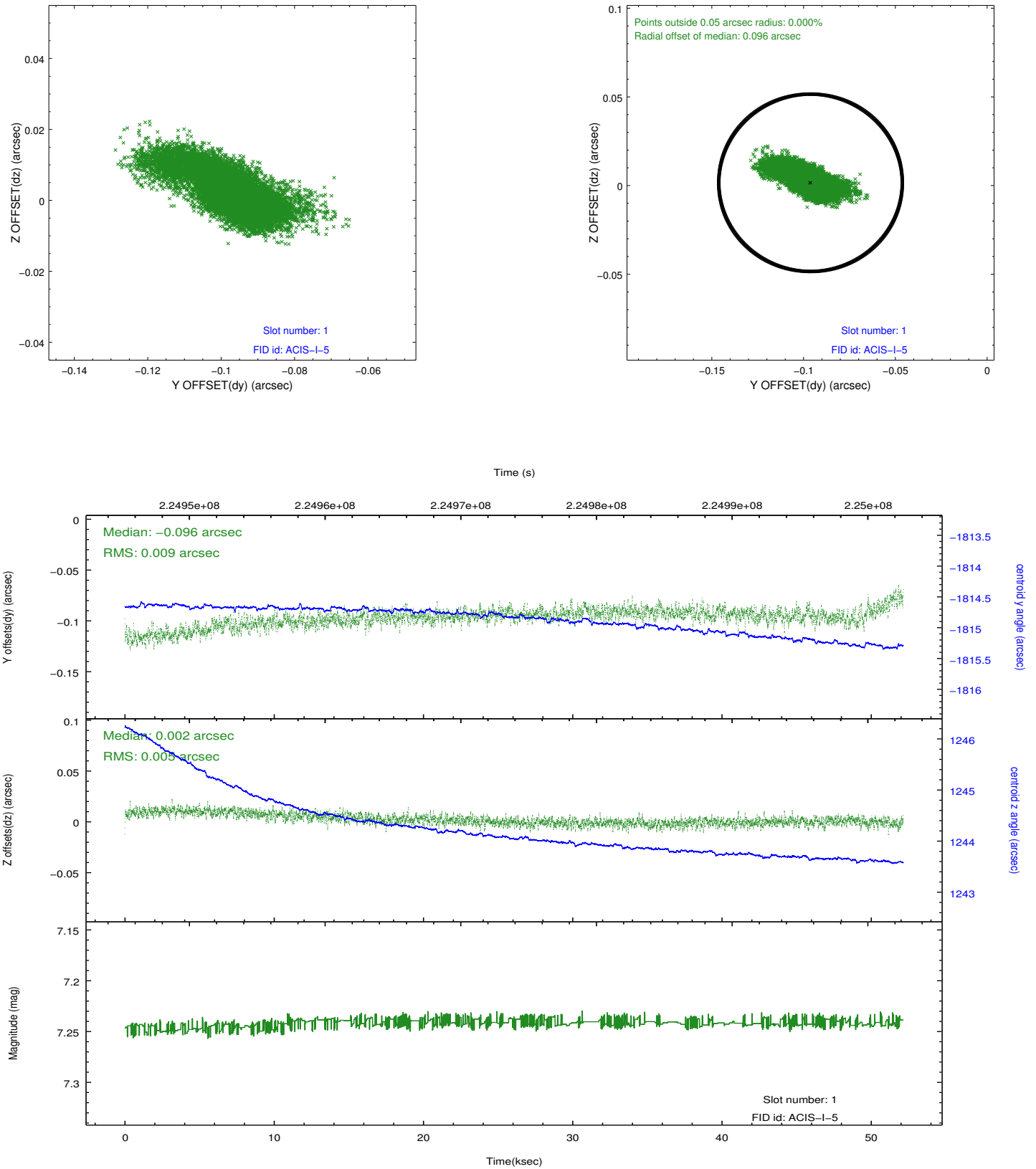


## 2.5 FID Slots

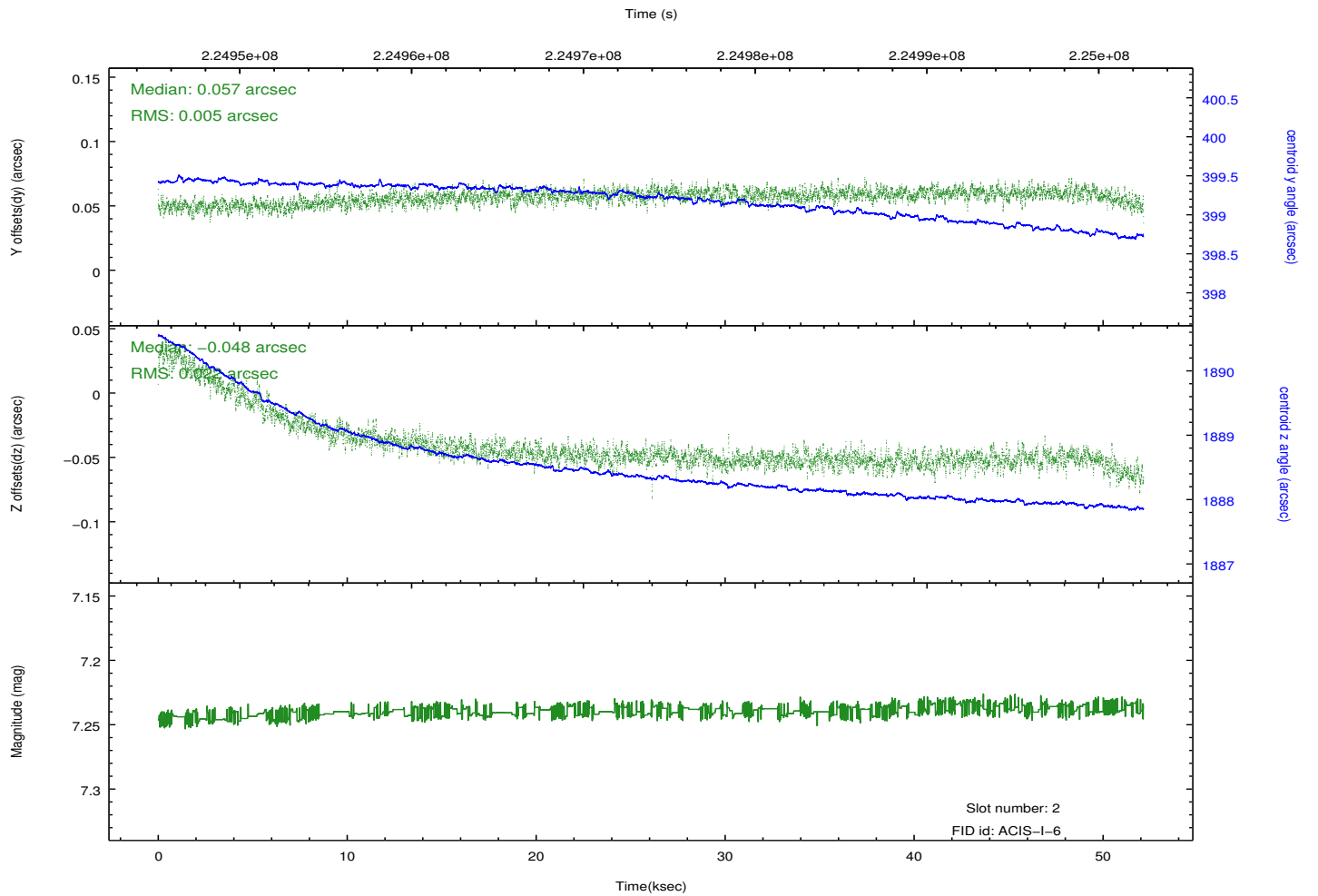
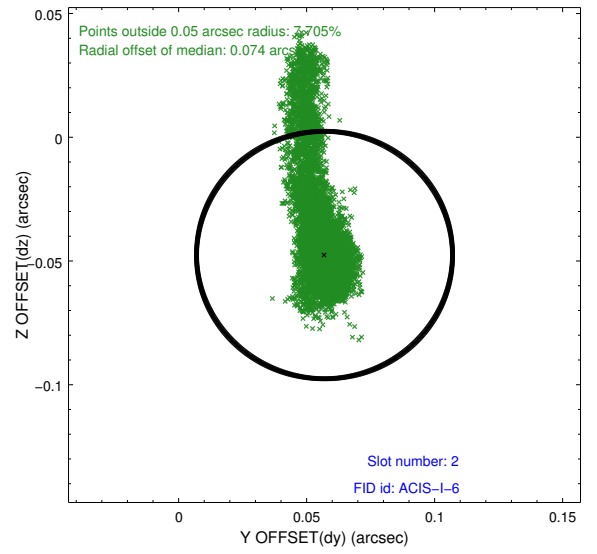
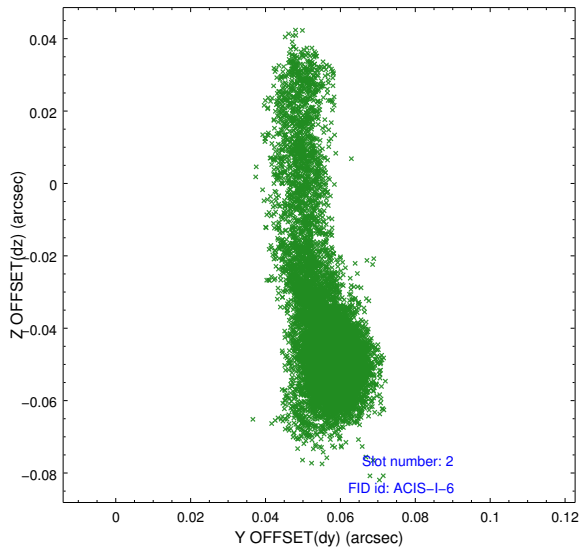
### 2.5.1 Slot 0



## 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)	2013.01.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	51.76987

### A.2 Comments