

# V&V Reference Report

## L2 ASCDS Version : 10.3.1

Observation 17145 - L2 Version 1  
Chandra X-Ray Center

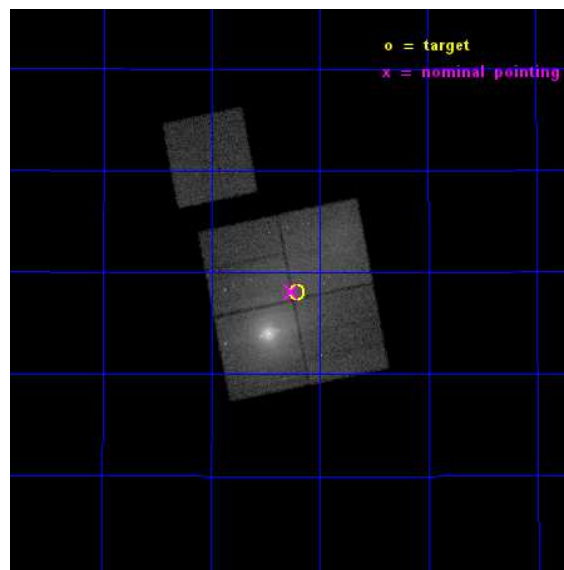
L2 Processing Date : Jan 11 2015

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# 1 Front

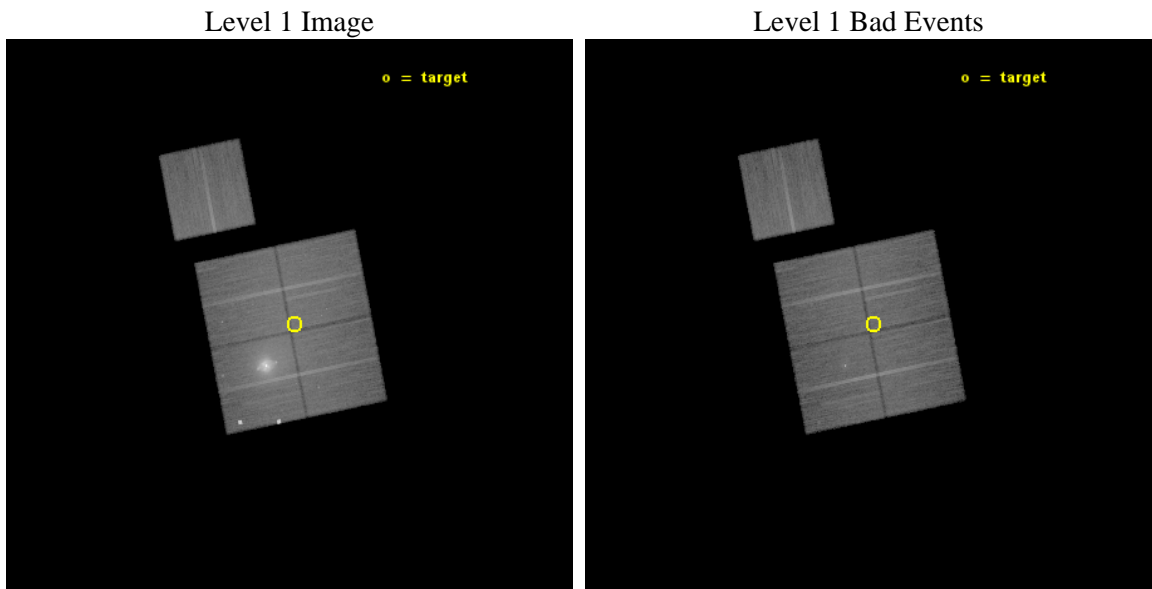
seq_num	703134	Sequence number
obs_id	17145	Observation id
title	The Rise to Power: Half a Billion Years of Intense AGN Activity in the Merging Cluster Cygnus A	Proposal title
observer	Dr. Michael Wise	Principal investigator
object	Cygnus A - Filament	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	299.8025	Observer's specified target RA [deg]
dec_targ	40.800667	Observer's specified target Dec [deg]
ra_nom	299.81563292043	Nominal RA [deg]
dec_nom	40.802016930902	Nominal Dec [deg]
roll_nom	348.70010265843	Nominal Roll [deg]
revision	1	Processing version of data
ontime	47324.559393883	Sum of GTIs [s]
livetime	46706.229185568	Livetime [s]
ontime0	47321.418423653	Sum of GTIs [s]
ontime1	47321.418423533	Sum of GTIs [s]
ontime2	47324.559343815	Sum of GTIs [s]
ontime3	47324.559393883	Sum of GTIs [s]
ontime6	47324.559403777	Sum of GTIs [s]
l2events	402391	Number of level 2 events



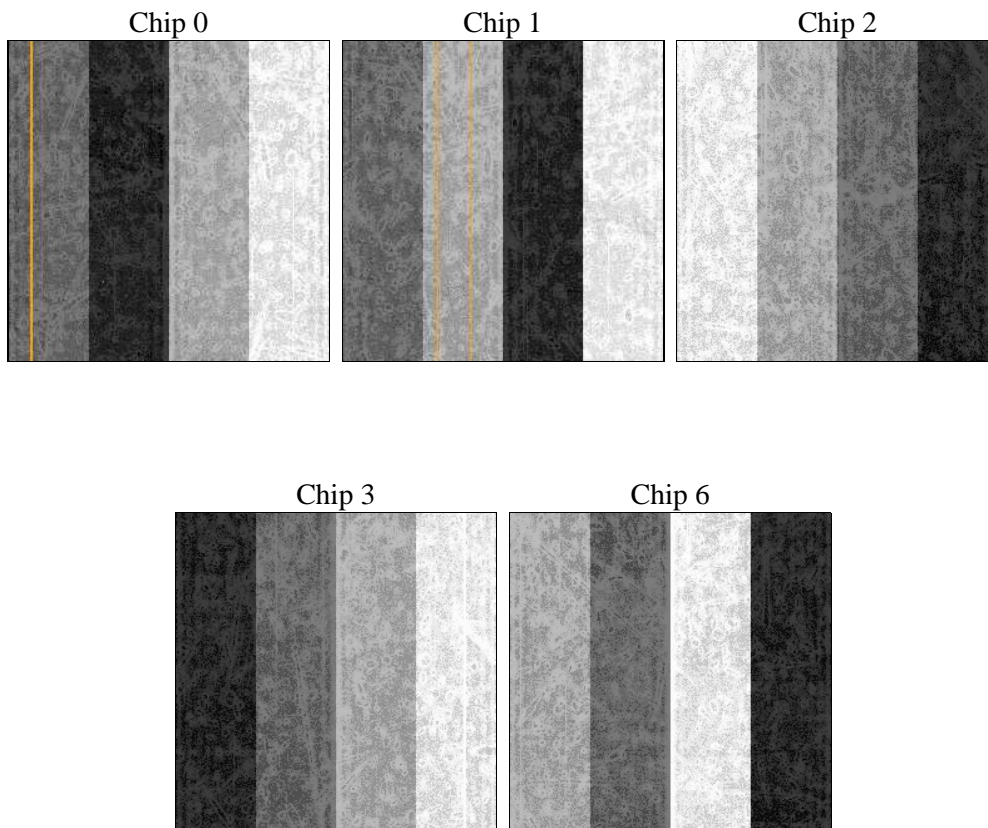
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	47245.891000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	47324.559393883	Sum of GTIs [s]
caldbver	4.6.5	&#160	ontime0	47321.418423653	Sum of GTIs [s]
date	2015-01-11T21:38:21	Date and time of file creation	ontime1	47321.418423533	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	47324.559343815	Sum of GTIs [s]
			ontime3	47324.559393883	Sum of GTIs [s]
			ontime6	47324.559403777	Sum of GTIs [s]
			l1events	1507982	Number of level 1 events

### 2.1.4 Events

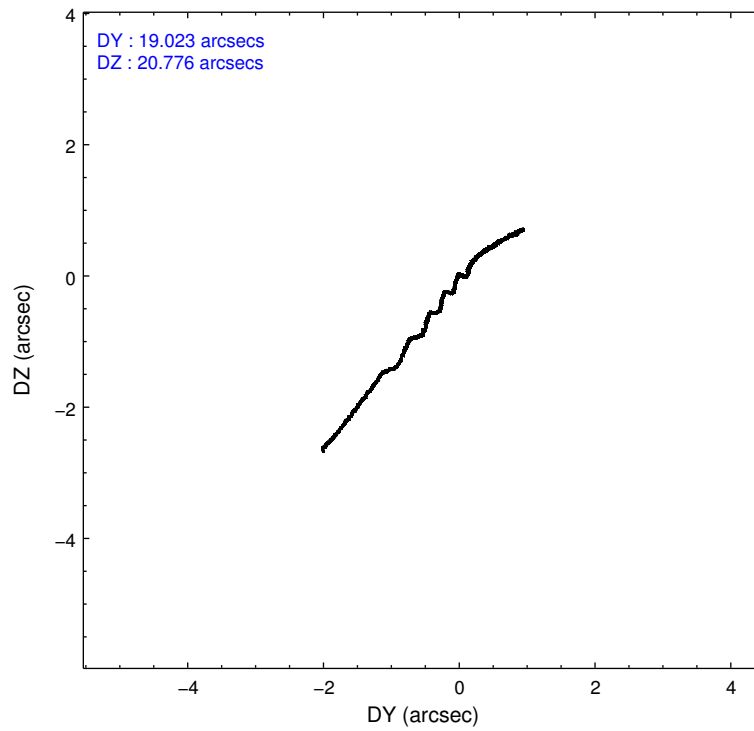
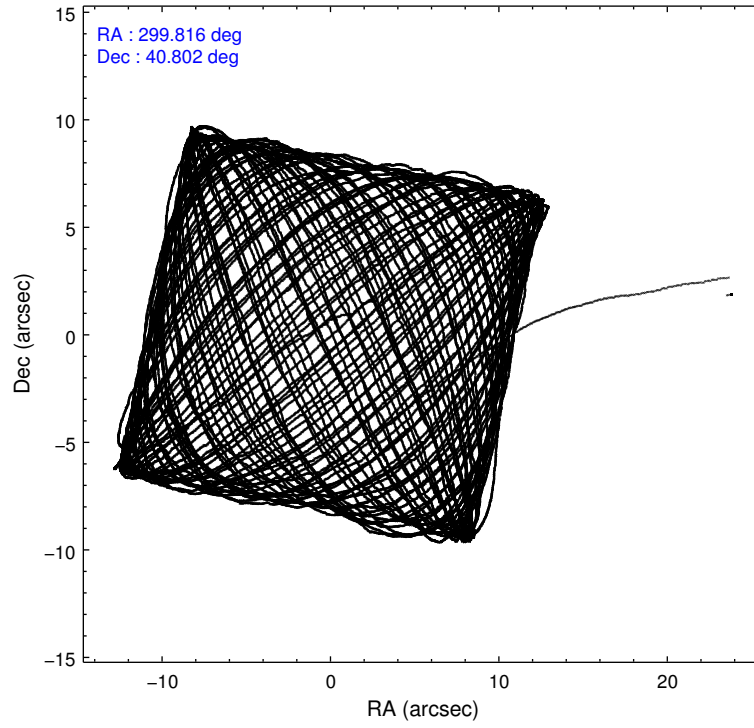
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	452570	253800	273373	282109	246130
rejected events	198364	200055	214759	213522	214971
rejected %	43%	78%	78%	75%	87%

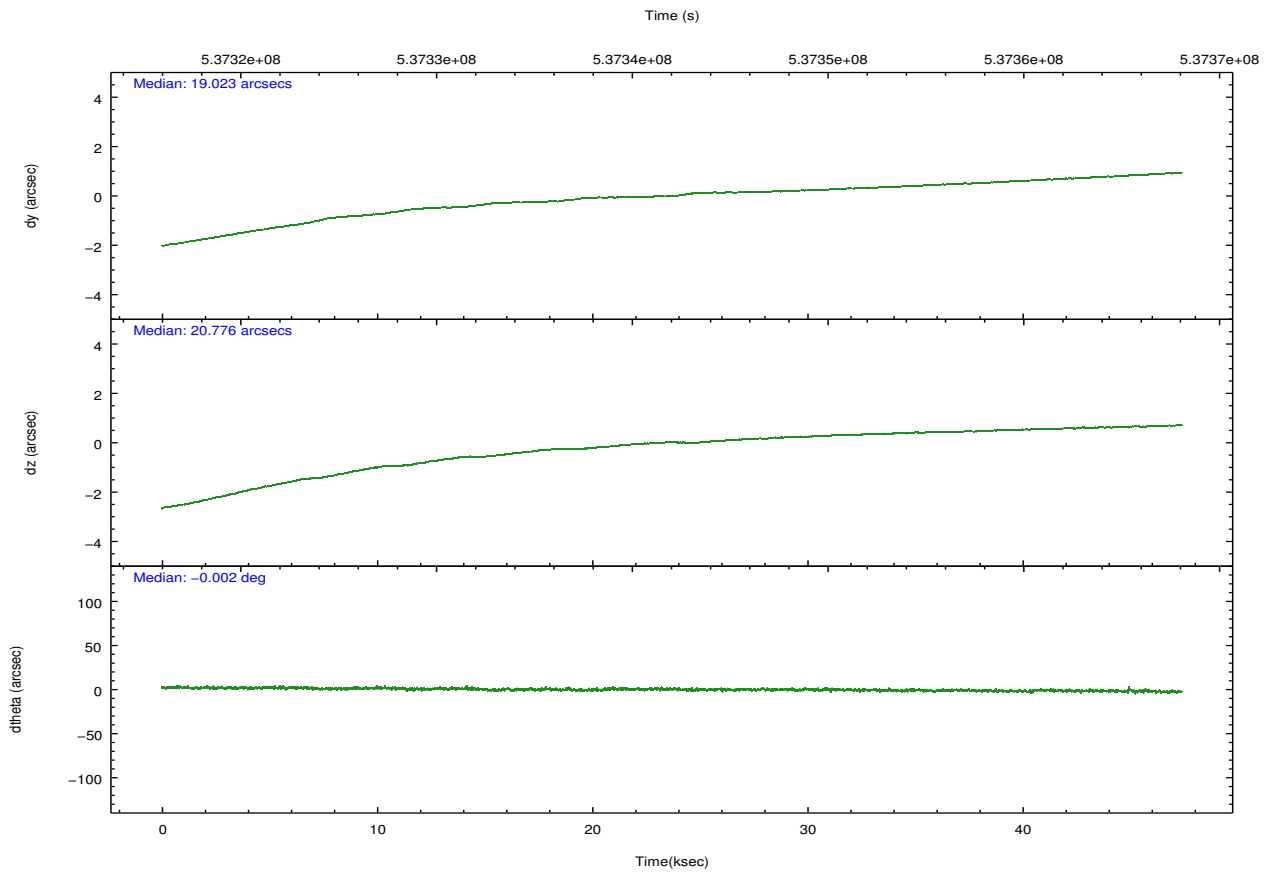
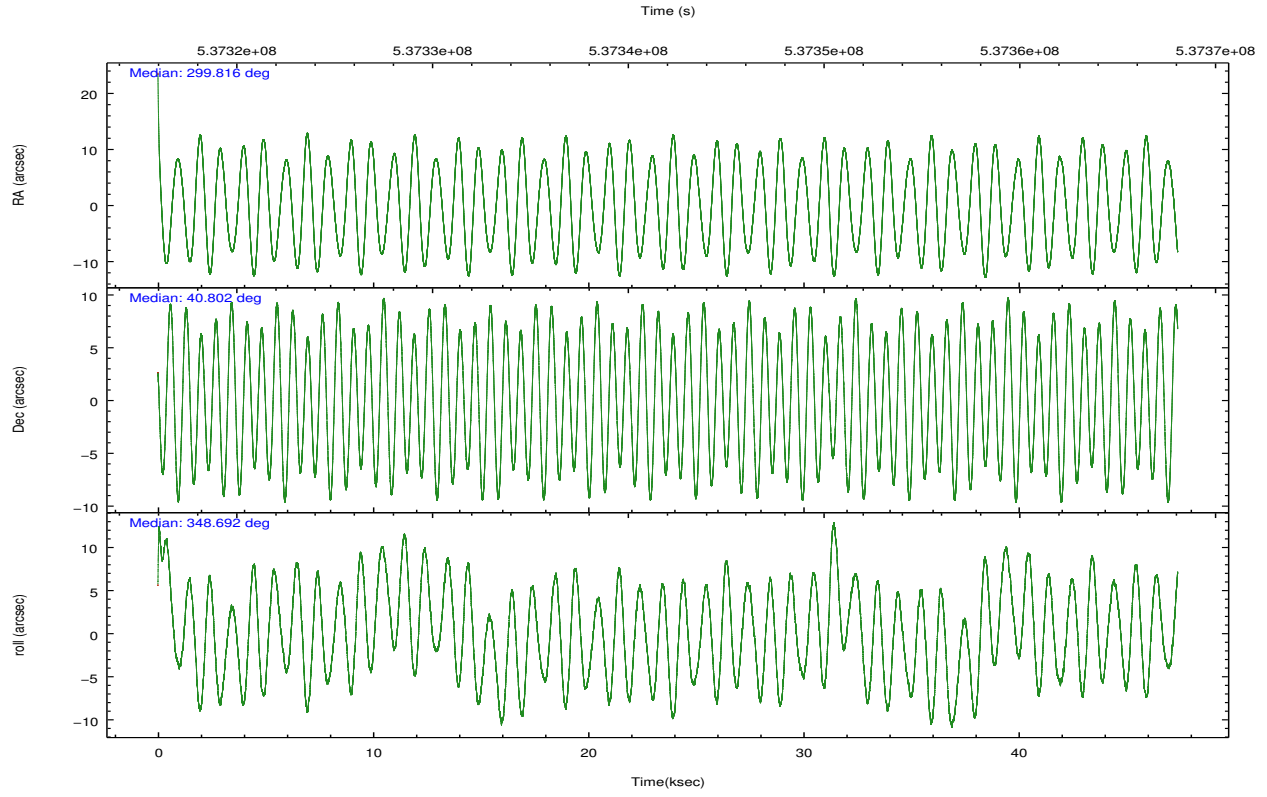
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	190051	27740	33999	41974	11401
	41%	10%	12%	14%	4%
grade 1 events	1149	181	230	254	111
	0%	0%	0%	0%	0%
grade 2 events	29986	10559	10225	10805	6973
	6%	4%	3%	3%	2%
grade 3 events	10258	3761	3704	4403	3033
	2%	1%	1%	1%	1%
grade 4 events	9895	3844	4057	4313	3027
	2%	1%	1%	1%	1%
grade 5 events	12524	12180	10998	13180	12473
	2%	4%	4%	4%	5%
grade 6 events	14053	7850	6635	7106	6730
	3%	3%	2%	2%	2%
grade 7 events	184654	187685	203525	200074	202382
	40%	73%	74%	70%	82%

## 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	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	299.781136	299.8156329204328	CCD I2 on	Y	Y
[deg] Pointing Dec	40.793074	40.80201693090183	CCD I3 on	Y	Y
[deg] Pointing Roll	348.513957	348.7001026584282	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O1	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	537318457.184000	537316845.57491	CCD S5 on	N	N
Observation start date	2015-01-10T23:06:30	2015-01-10T22:40:45	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	537365703.184000	537365939.49015	On-chip summing requested	N	N
Observation end date	2015-01-11T12:13:56	2015-01-11T12:18:59	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





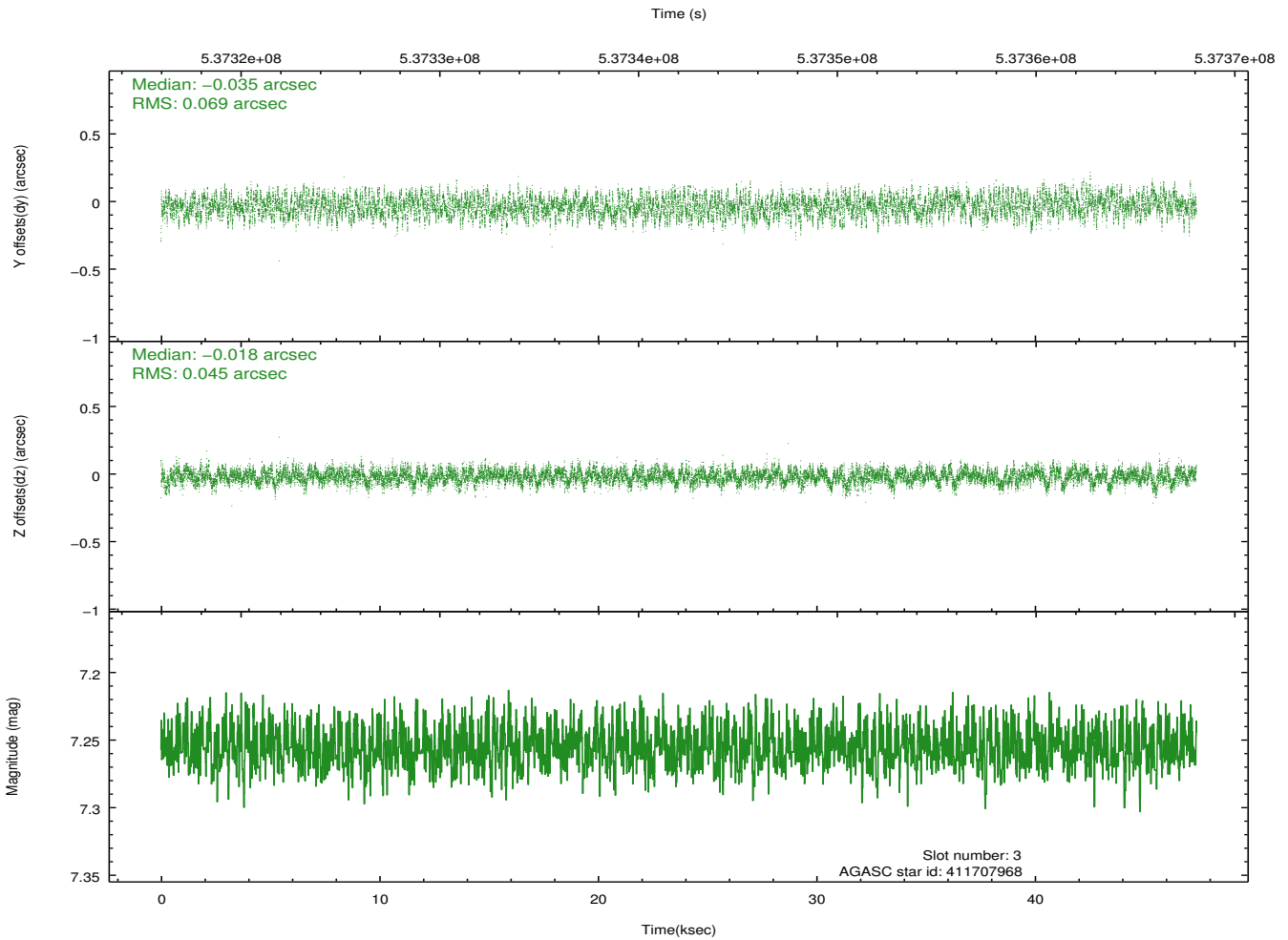
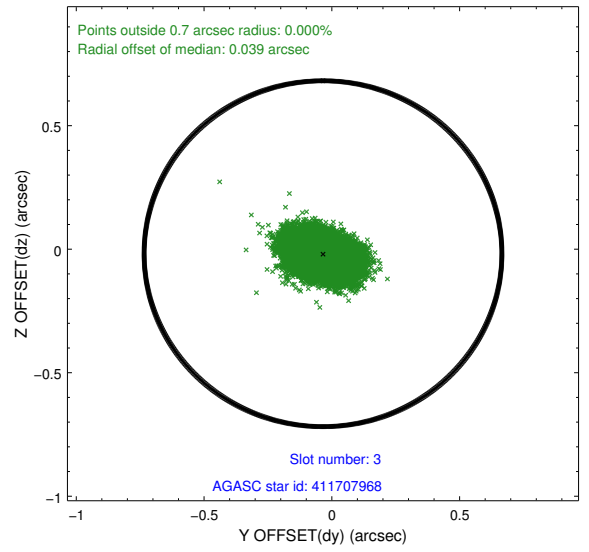
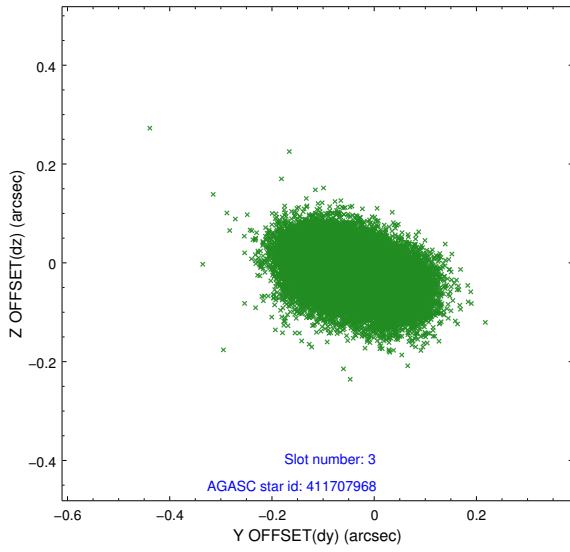
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-2	7.04	11559	-0.241	-0.105	0.016	0.028	0.000000	0.000000	-773.94	-850.68
1	FID		ACIS-I-4	7.05	11558	0.163	0.164	0.022	0.036	0.000000	0.000000	2140.52	1055.77
2	FID		ACIS-I-6	7.13	11558	-0.022	0.005	0.027	0.044	0.000000	0.000000	386.32	1697.78
3	GUIDE	used	411707968	7.25	23117	-0.035	-0.018	0.089	0.143	299.509933	40.926839	-818.77	326.23
4	GUIDE	used	411722416	7.80	23118	0.117	0.327	0.078	0.125	298.936507	40.391736	-1983.45	-1866.18
5	GUIDE	used	413425232	8.71	23108	0.115	0.046	0.137	0.223	300.417382	40.029012	2265.95	-2339.93
6	GUIDE	used	413937088	7.98	23111	-0.053	-0.136	0.093	0.145	300.780094	41.277874	2297.94	2263.78
7	GUIDE	used	412240768	8.24	23113	-0.139	-0.214	0.103	0.164	299.999696	41.280279	229.98	1837.16

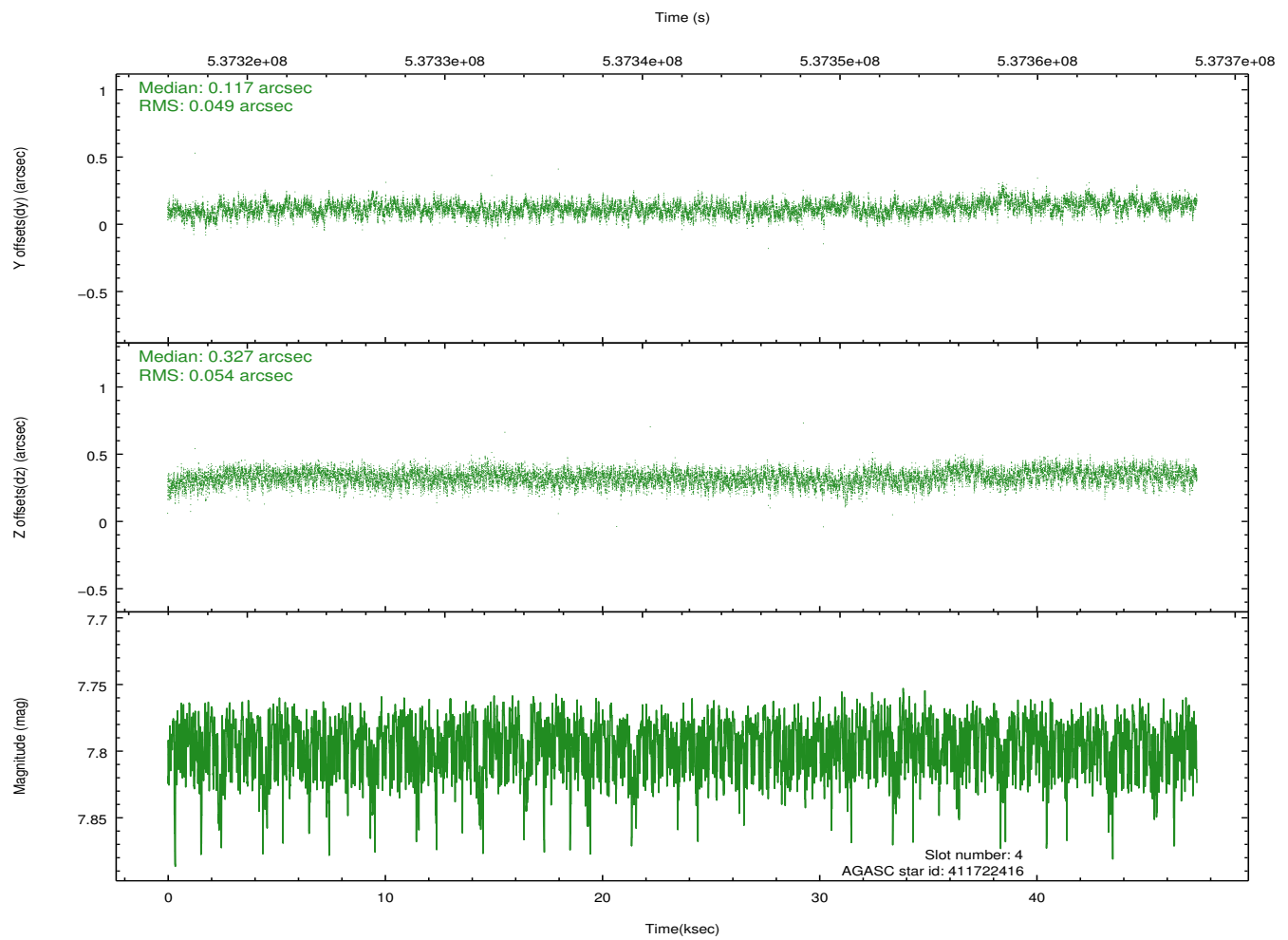
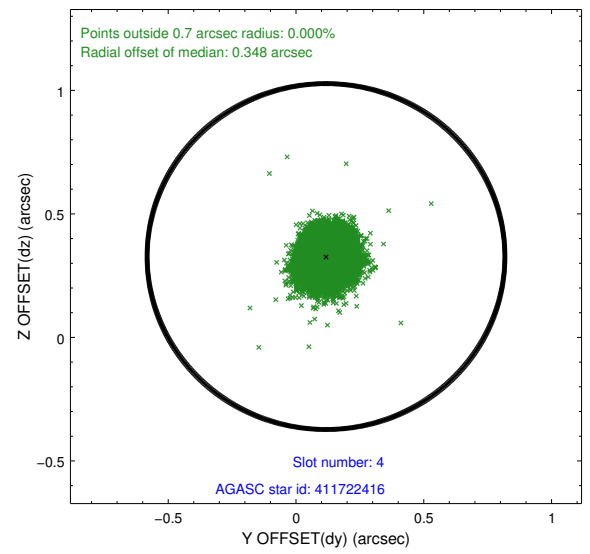
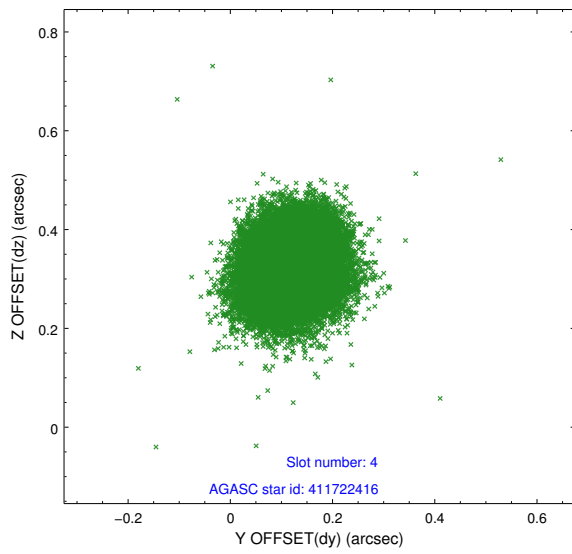
∞

## 2.4 Star Slots

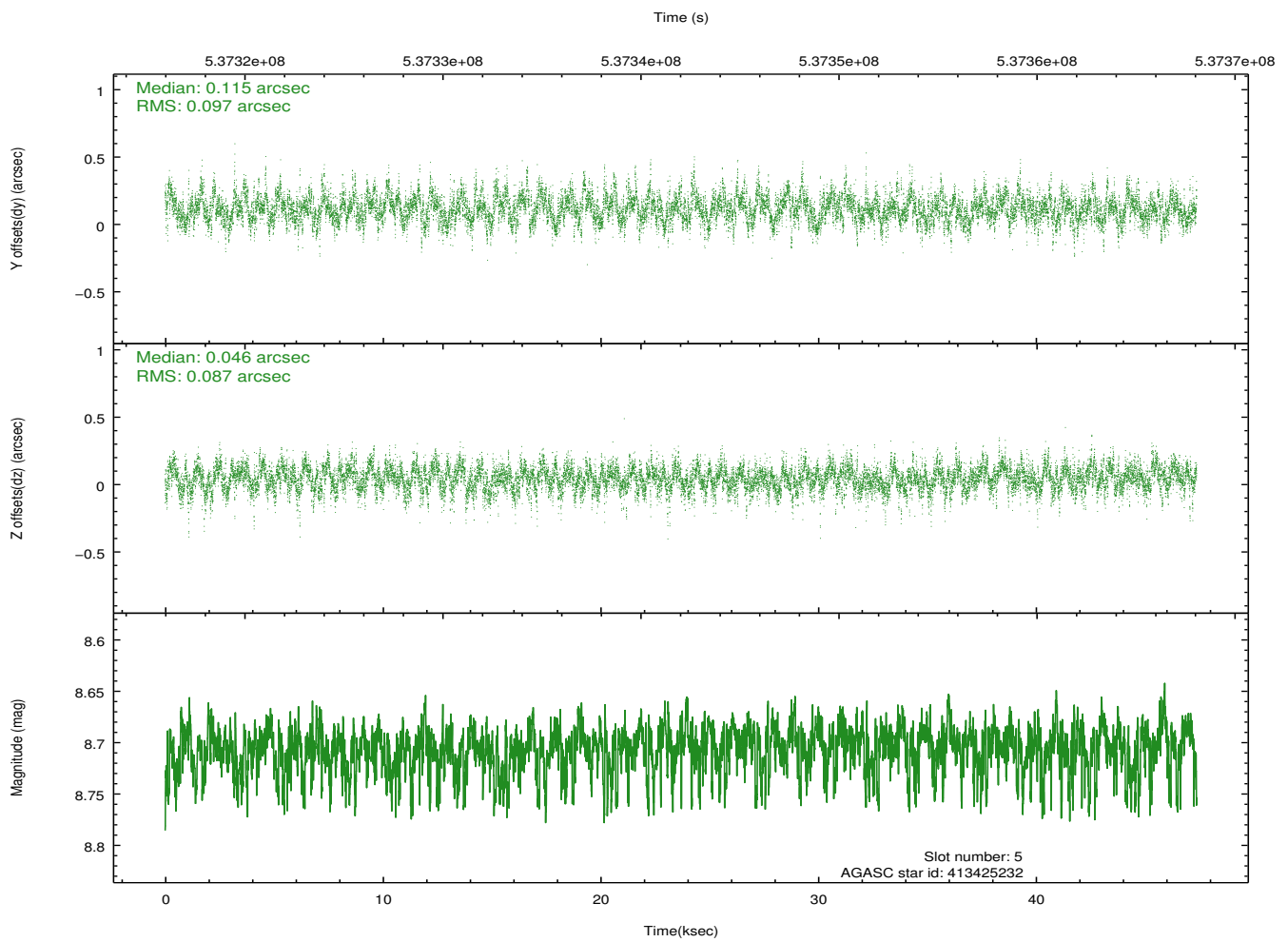
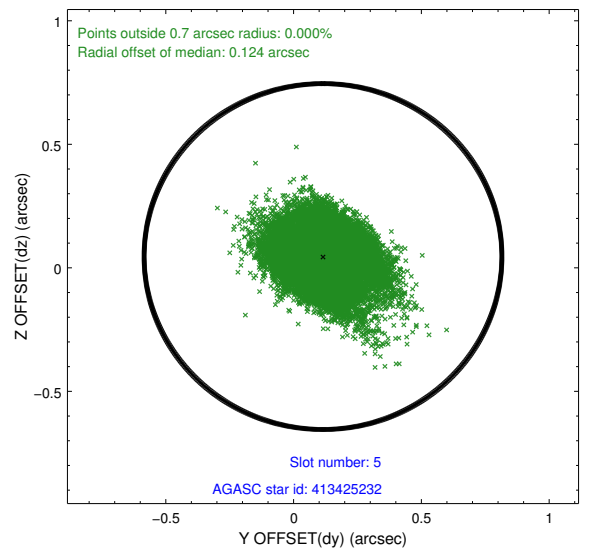
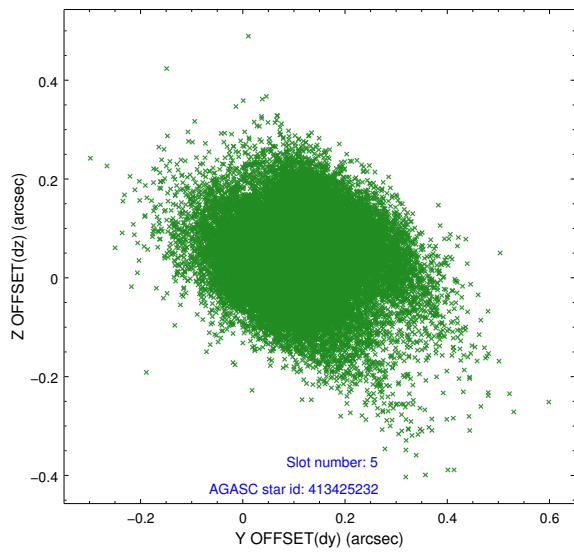
### 2.4.1 Slot 3



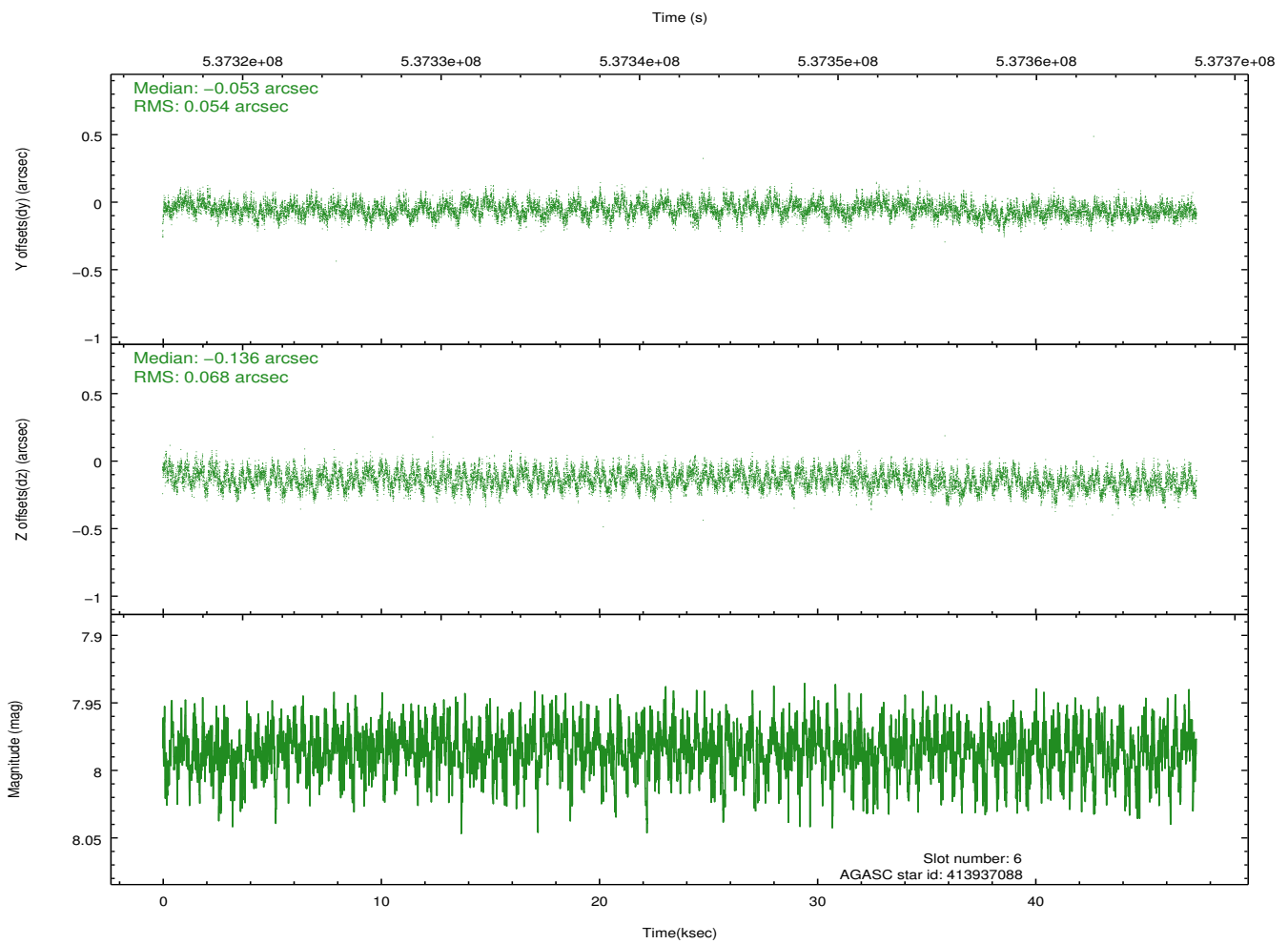
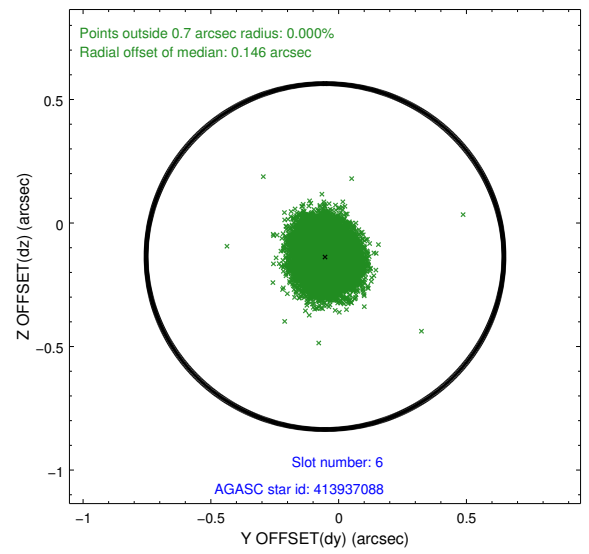
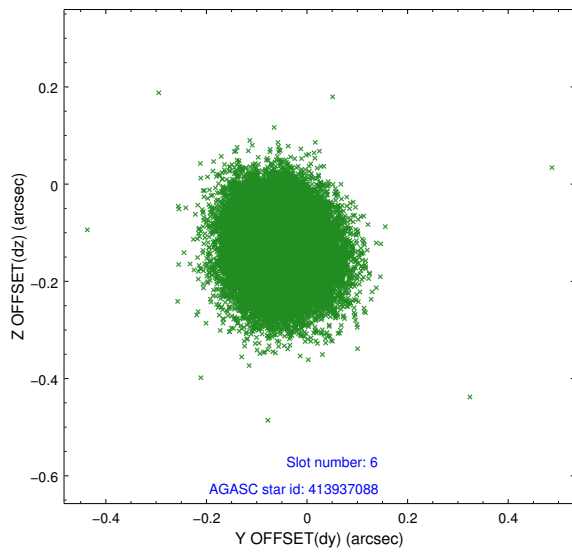
## 2.4.2 Slot 4



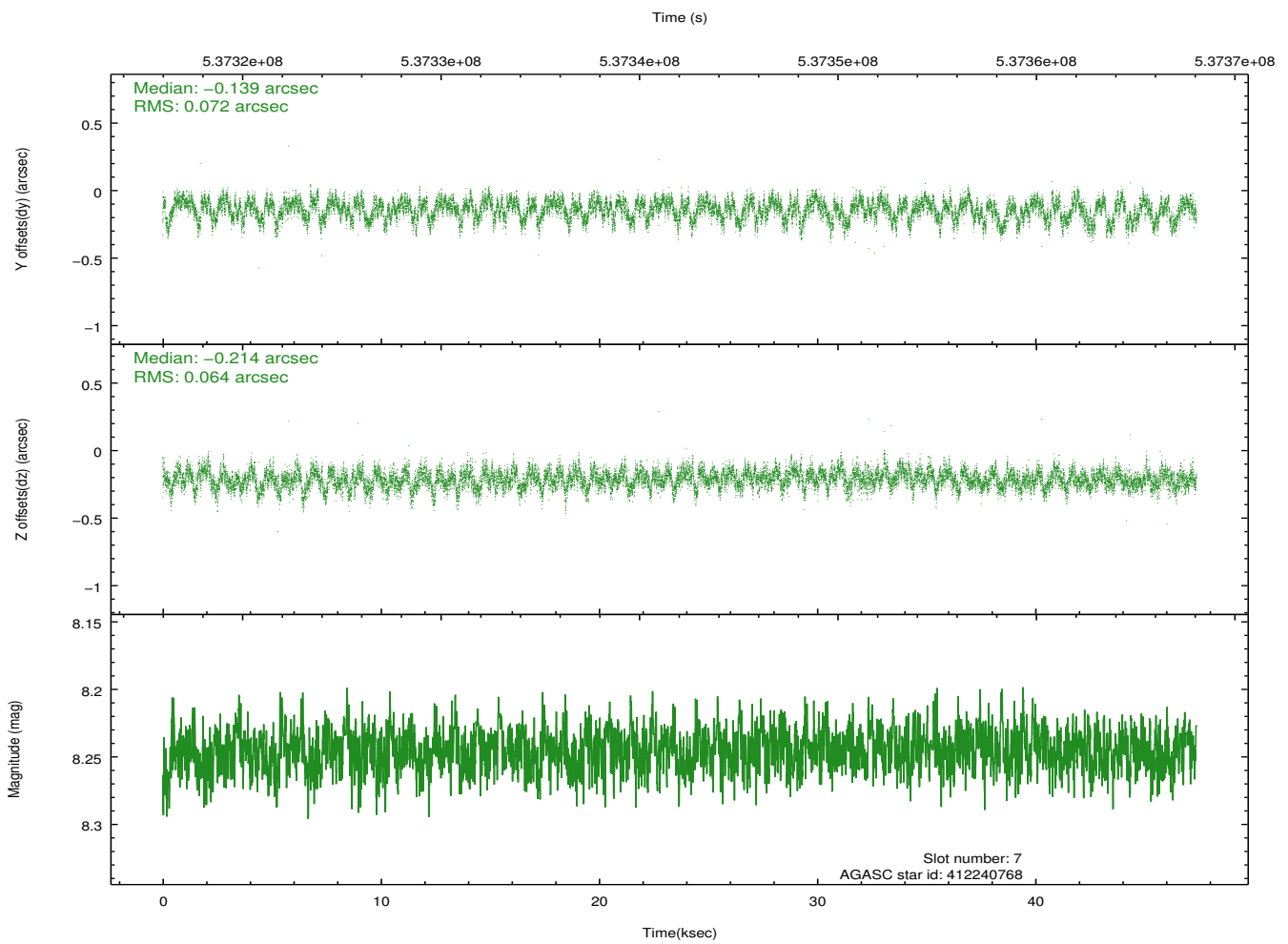
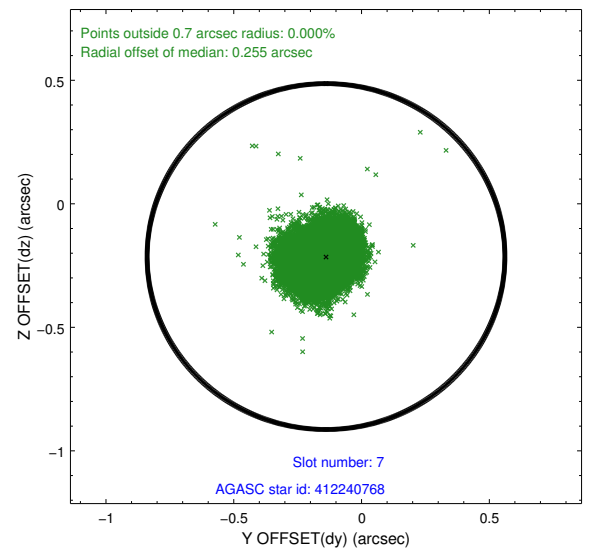
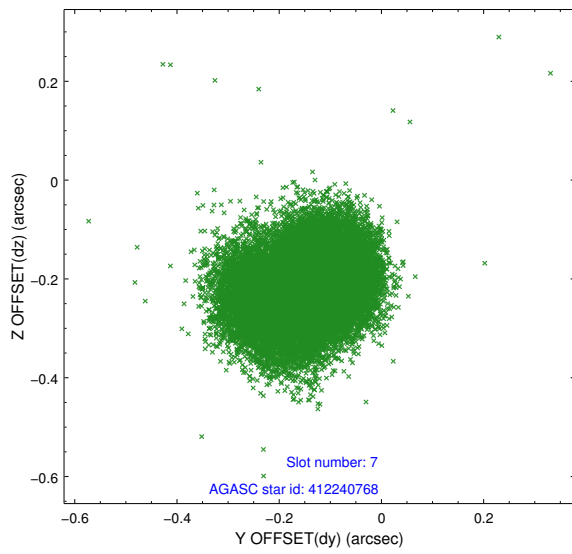
### 2.4.3 Slot 5



## 2.4.4 Slot 6

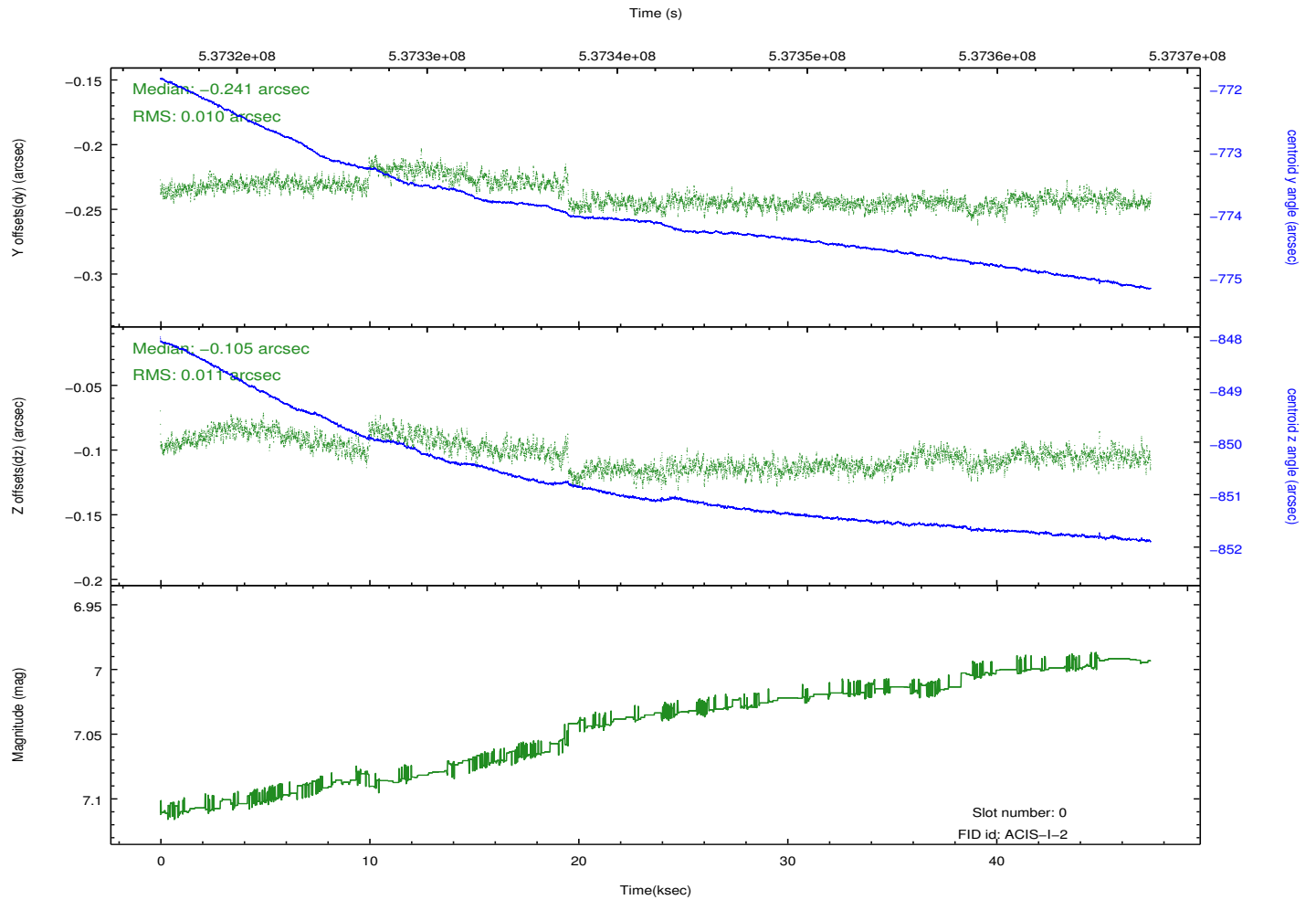
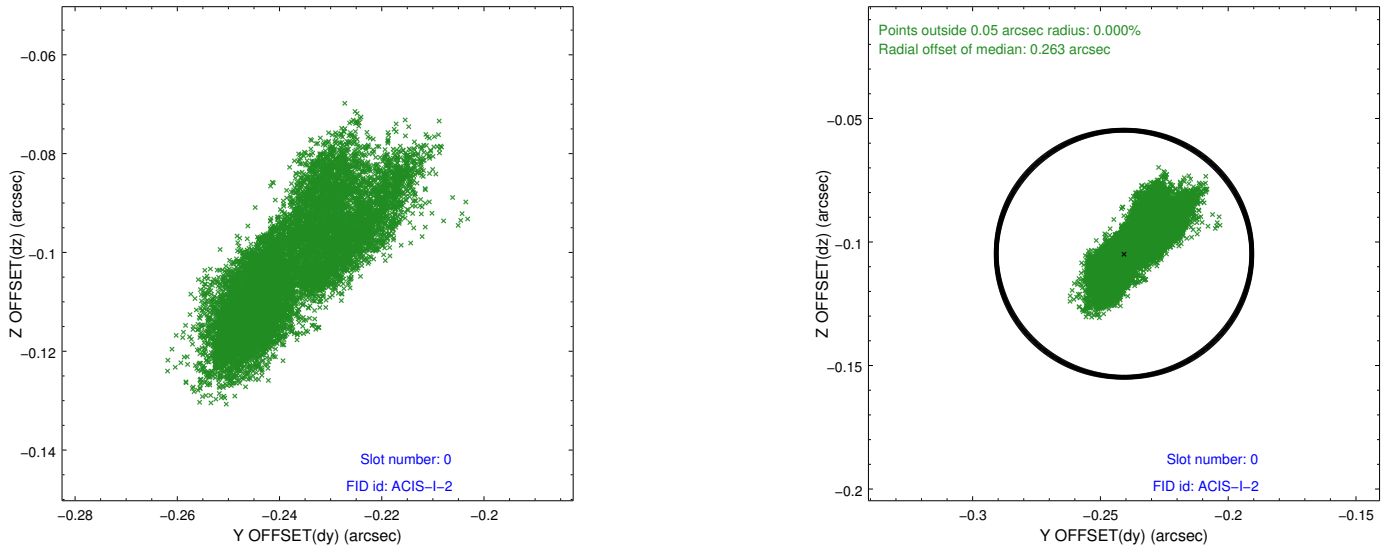


## 2.4.5 Slot 7

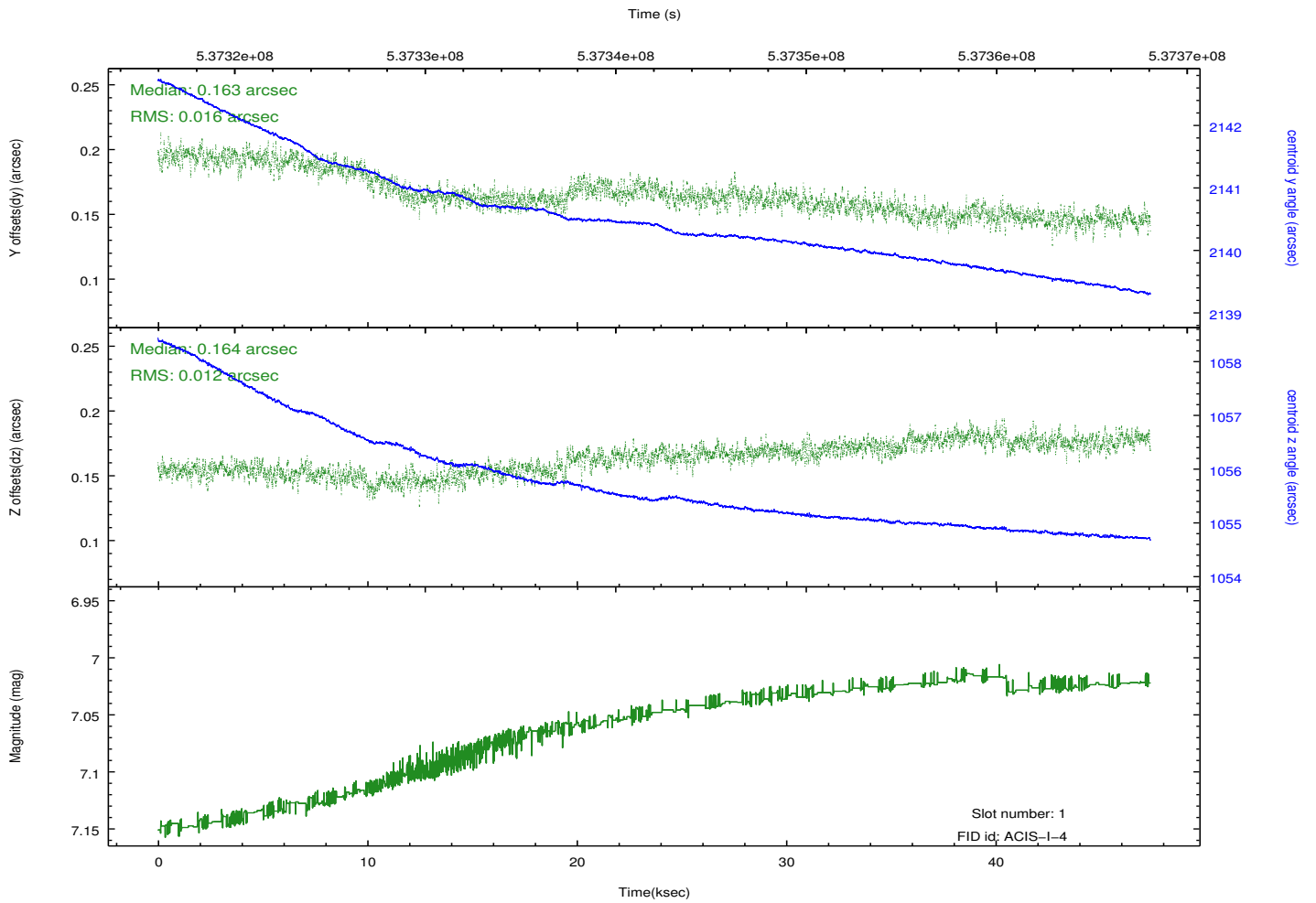
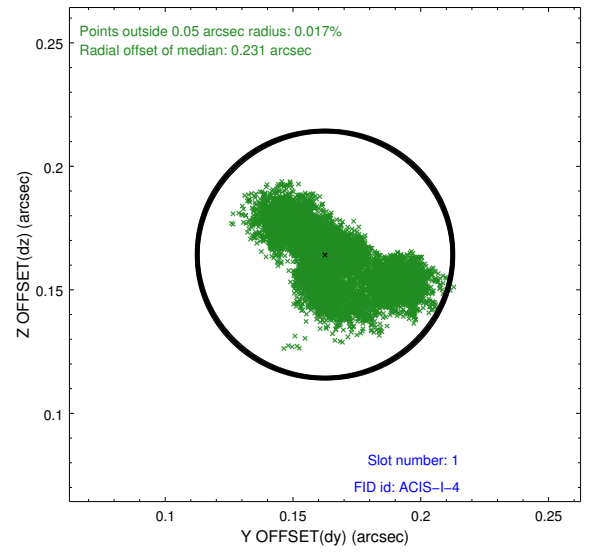
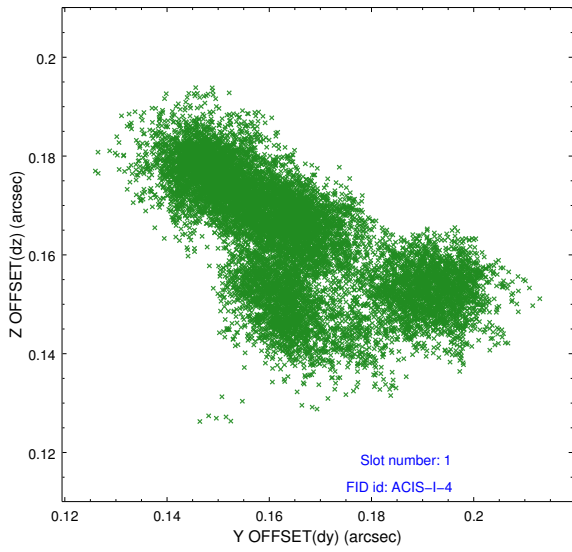


## 2.5 FID Slots

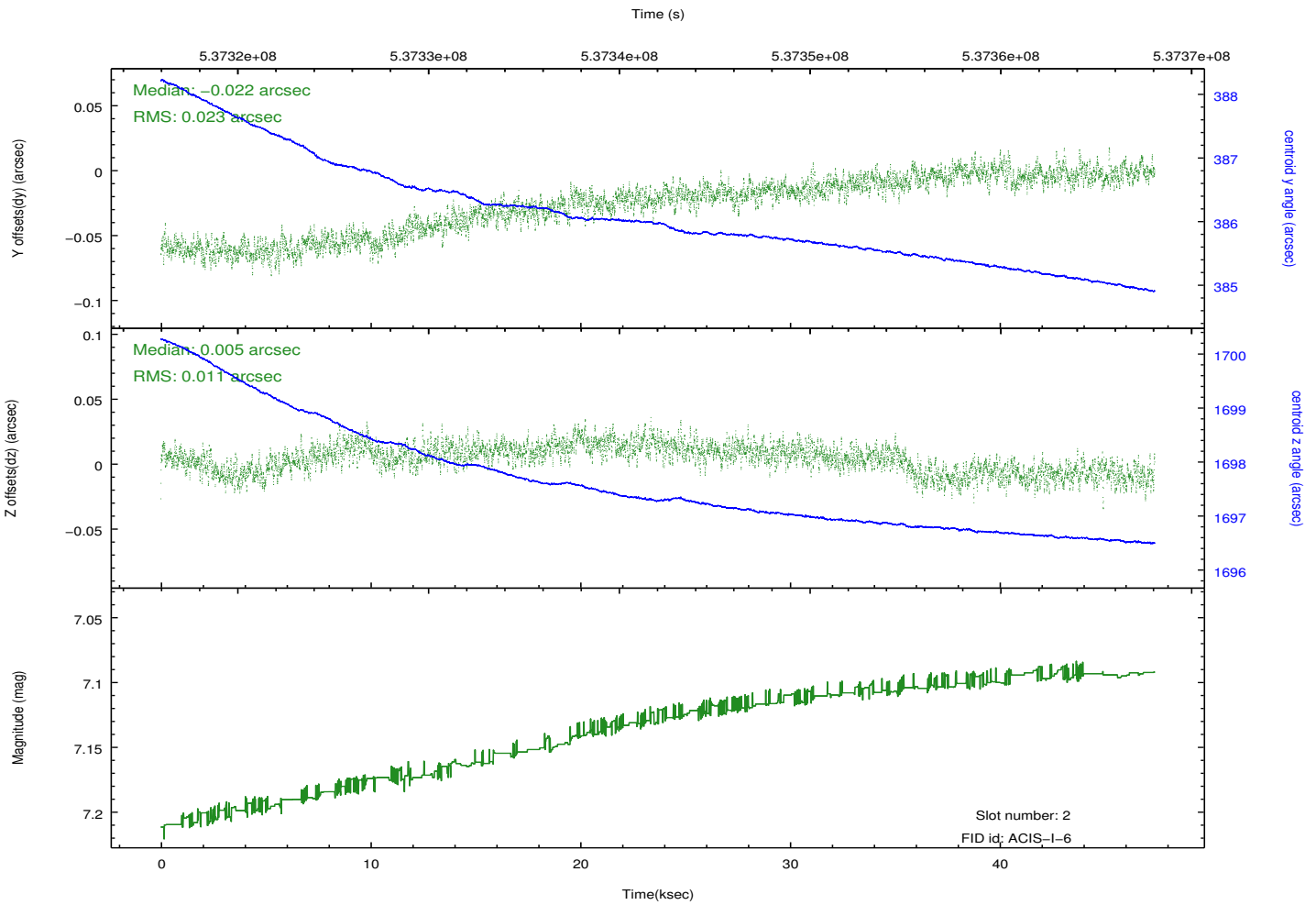
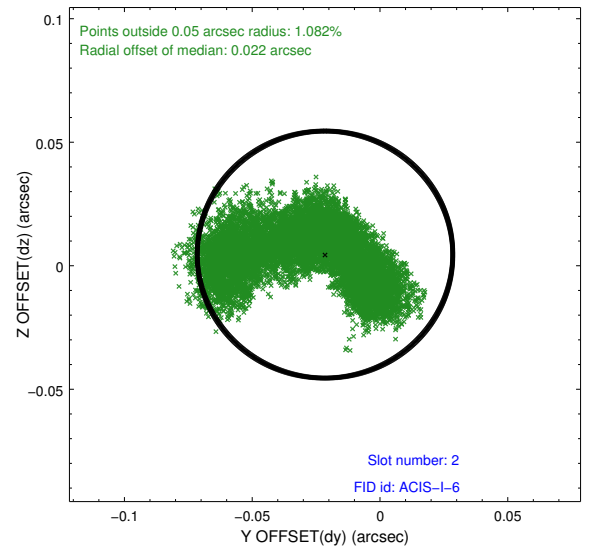
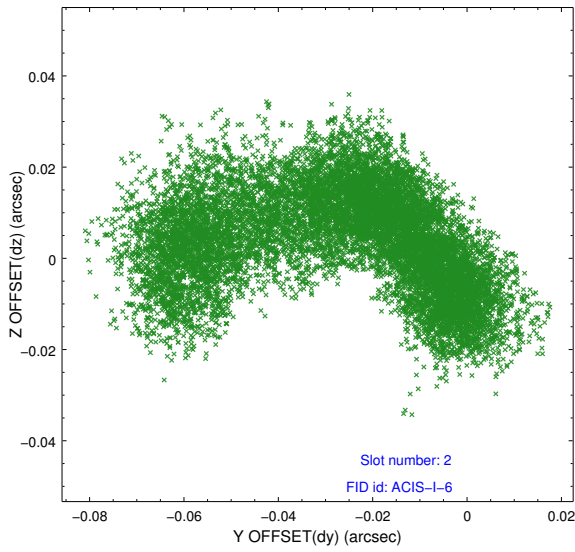
### 2.5.1 Slot 0



## 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)	2015.01.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	47.324559393883

### A.2 Comments