

# V&V Reference Report

## L2 ASCDS Version : 10.4.1

Observation 17528 - L2 Version 1  
Chandra X-Ray Center

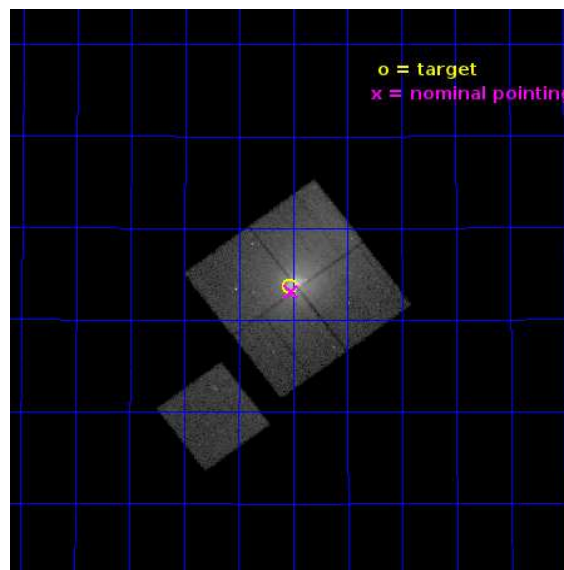
L2 Processing Date : Aug 31 2015

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# 1 Front

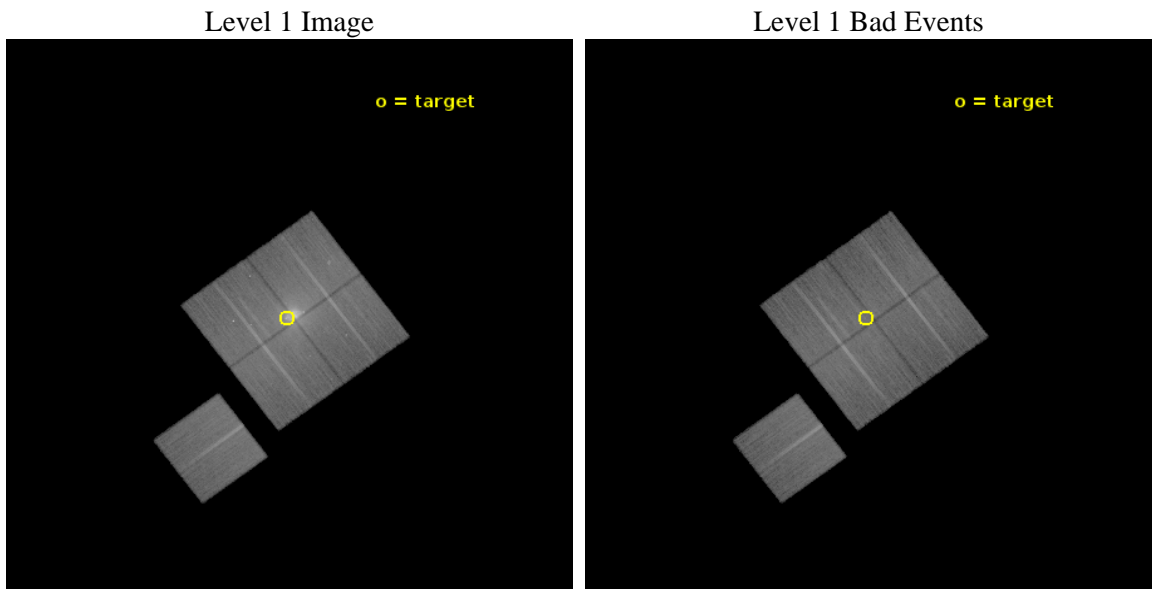
seq_num	703133	Sequence number
obs_id	17528	Observation id
title	The Rise to Power: Half a Billion Years of Intense AGN Activity in the Merging Cluster Cygnus A	Proposal title
observer	Dr. Michael Wise	Principal investigator
object	Cygnus A - E Hotspot	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	299.883333	Observer's specified target RA [deg]
dec_targ	40.727889	Observer's specified target Dec [deg]
ra_nom	299.87929842155	Nominal RA [deg]
dec_nom	40.718337008156	Nominal Dec [deg]
roll_nom	233.21132031641	Nominal Roll [deg]
revision	1	Processing version of data
ontime	49970.672131062	Sum of GTIs [s]
livetime	49317.768511796	Livetime [s]
ontime0	49970.549011111	Sum of GTIs [s]
ontime1	49970.590051055	Sum of GTIs [s]
ontime2	49967.490050912	Sum of GTIs [s]
ontime3	49970.672131062	Sum of GTIs [s]
ontime6	49970.507971048	Sum of GTIs [s]
l2events	365974	Number of level 2 events



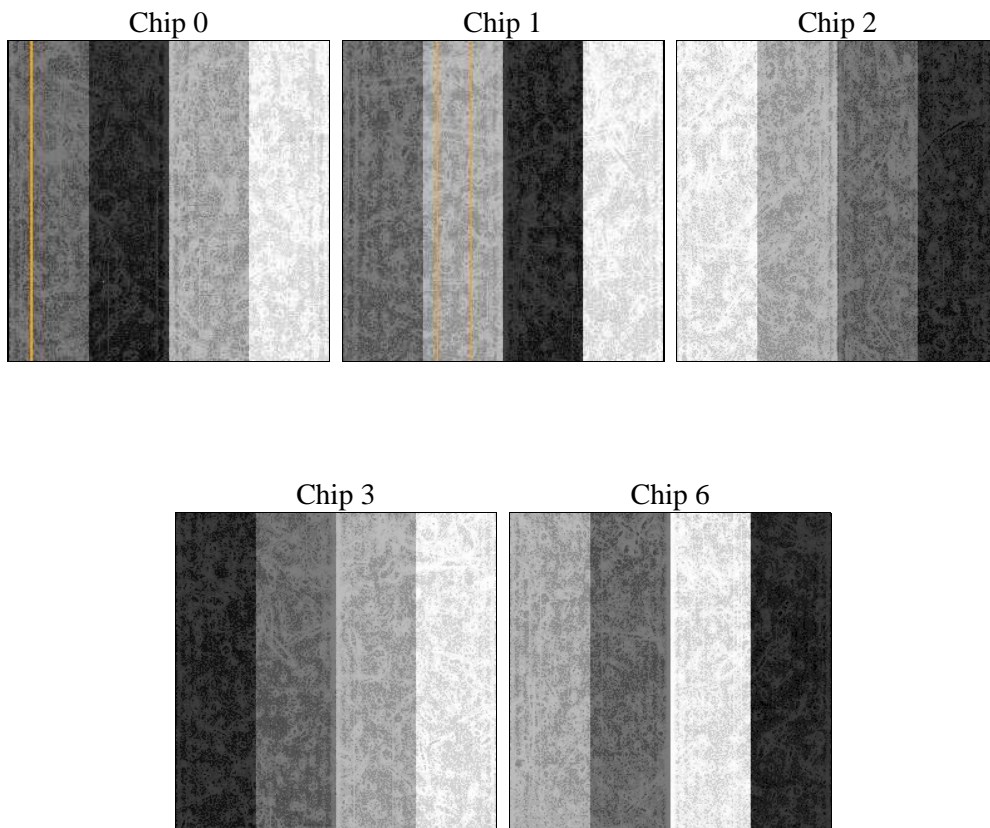
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	49902.000000	[s] Scheduled observation exposure time
ascdsver	10.4.1	Processing system revision	ontime	49970.672131062	Sum of GTIs [s]
caldbver	4.6.8	&#160	ontime0	49970.549011111	Sum of GTIs [s]
date	2015-08-31T12:54:44	Date and time of file creation	ontime1	49970.590051055	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	49967.490050912	Sum of GTIs [s]
			ontime3	49970.672131062	Sum of GTIs [s]
			ontime6	49970.507971048	Sum of GTIs [s]
			l1events	1602405	Number of level 1 events

### 2.1.4 Events

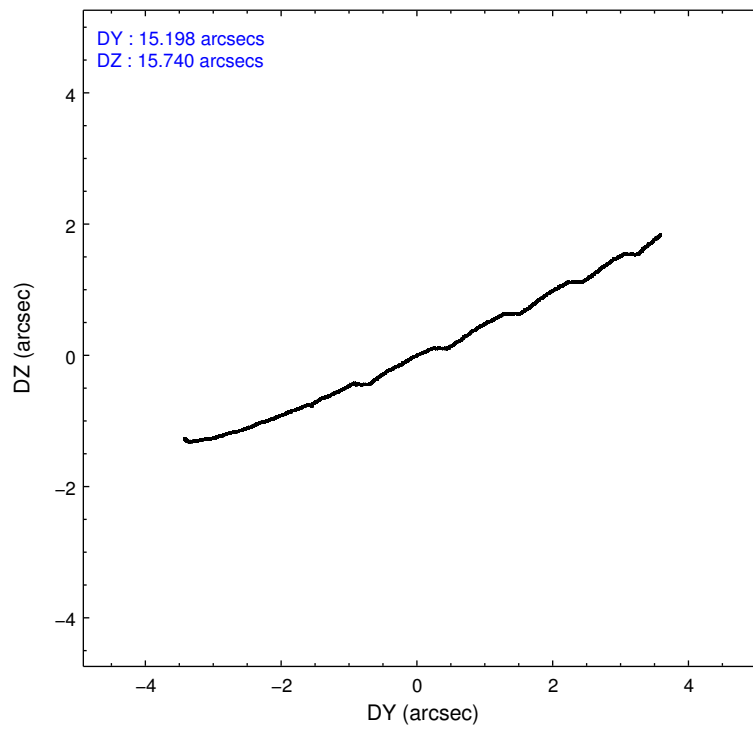
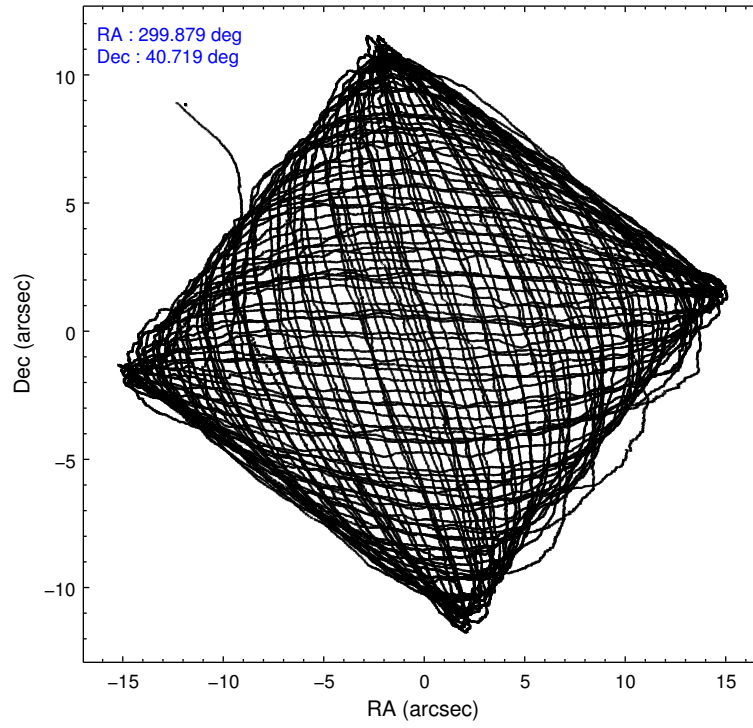
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	293176	389896	307004	332928	279401
rejected events	223928	227700	252612	245148	246612
rejected %	76%	58%	82%	73%	88%

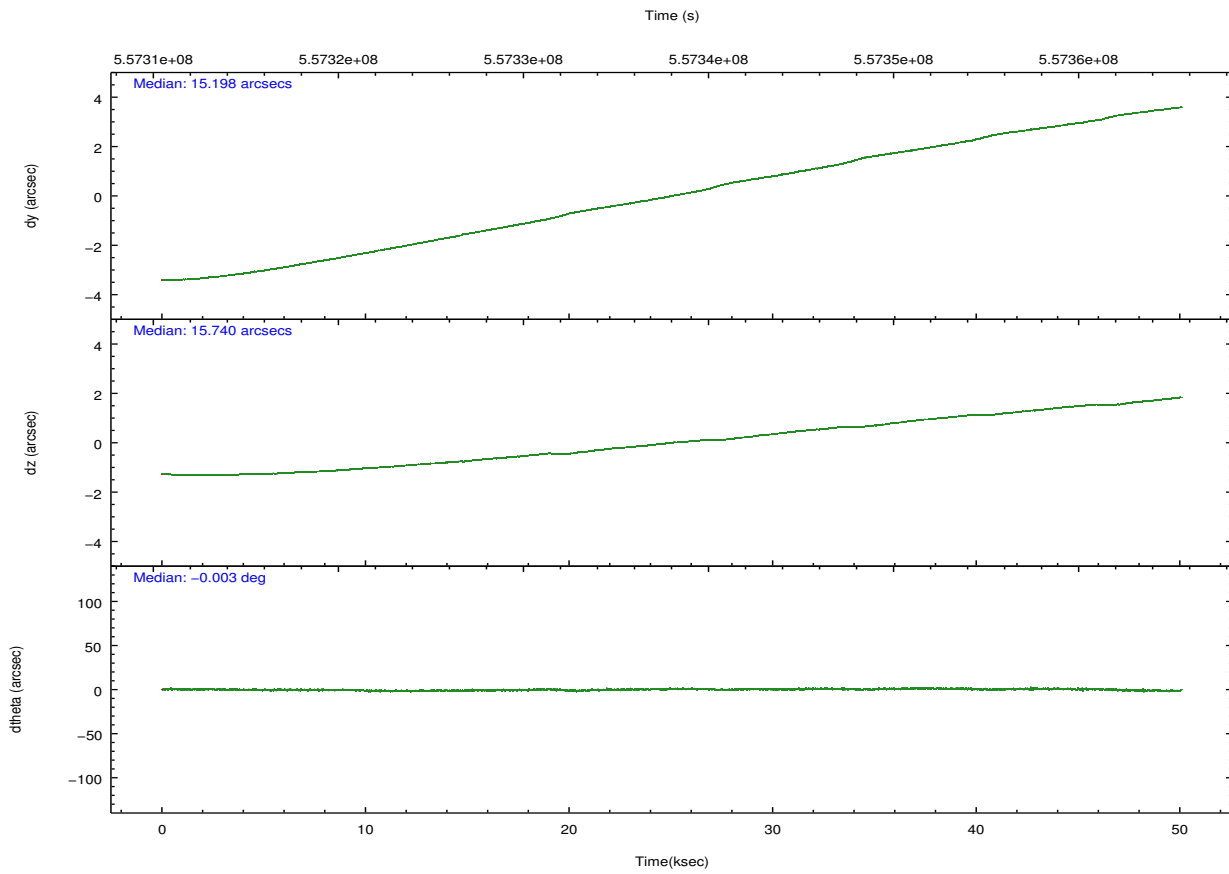
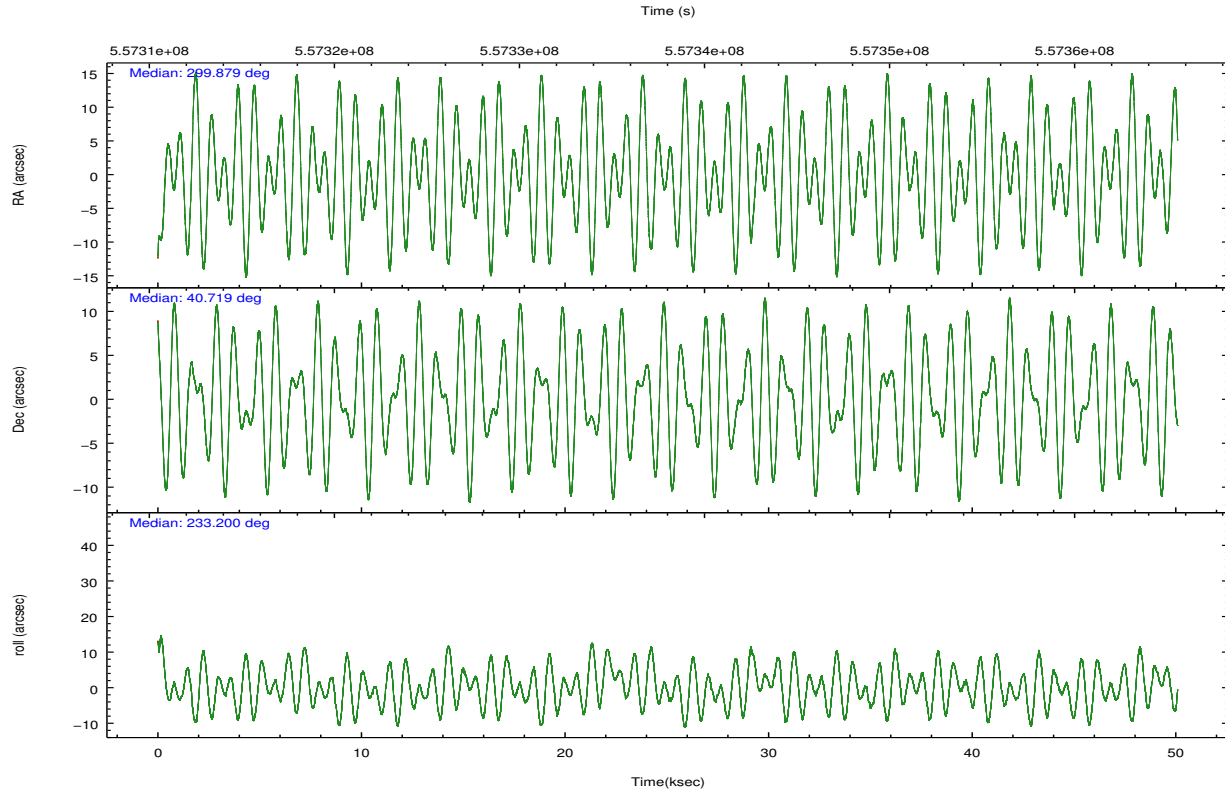
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	40530	103979	30357	56640	11429
	13%	26%	9%	17%	4%
grade 1 events	243	868	236	390	147
	0%	0%	0%	0%	0%
grade 2 events	11969	28834	9846	12714	7430
	4%	7%	3%	3%	2%
grade 3 events	4454	7462	3749	5008	3092
	1%	1%	1%	1%	1%
grade 4 events	4335	7368	3820	5198	3105
	1%	1%	1%	1%	1%
grade 5 events	12217	14281	11244	14136	13019
	4%	3%	3%	4%	4%
grade 6 events	7970	14563	6630	8227	7738
	2%	3%	2%	2%	2%
grade 7 events	211458	212541	241122	230615	233441
	72%	54%	78%	69%	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	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	299.883470	299.8792984215522	CCD I2 on	Y	Y
[deg] Pointing Dec	40.745751	40.71833700815601	CCD I3 on	Y	Y
[deg] Pointing Roll	232.999914	233.2113203164057	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)	557313152.184000	557312129.5213701	CCD S5 on	N	N
Observation start date	2015-08-30T09:11:24	2015-08-30T08:55:29	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	557363054.184000	557363902.27429	On-chip summing requested	N	N
Observation end date	2015-08-30T23:03:06	2015-08-30T23:18:22	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



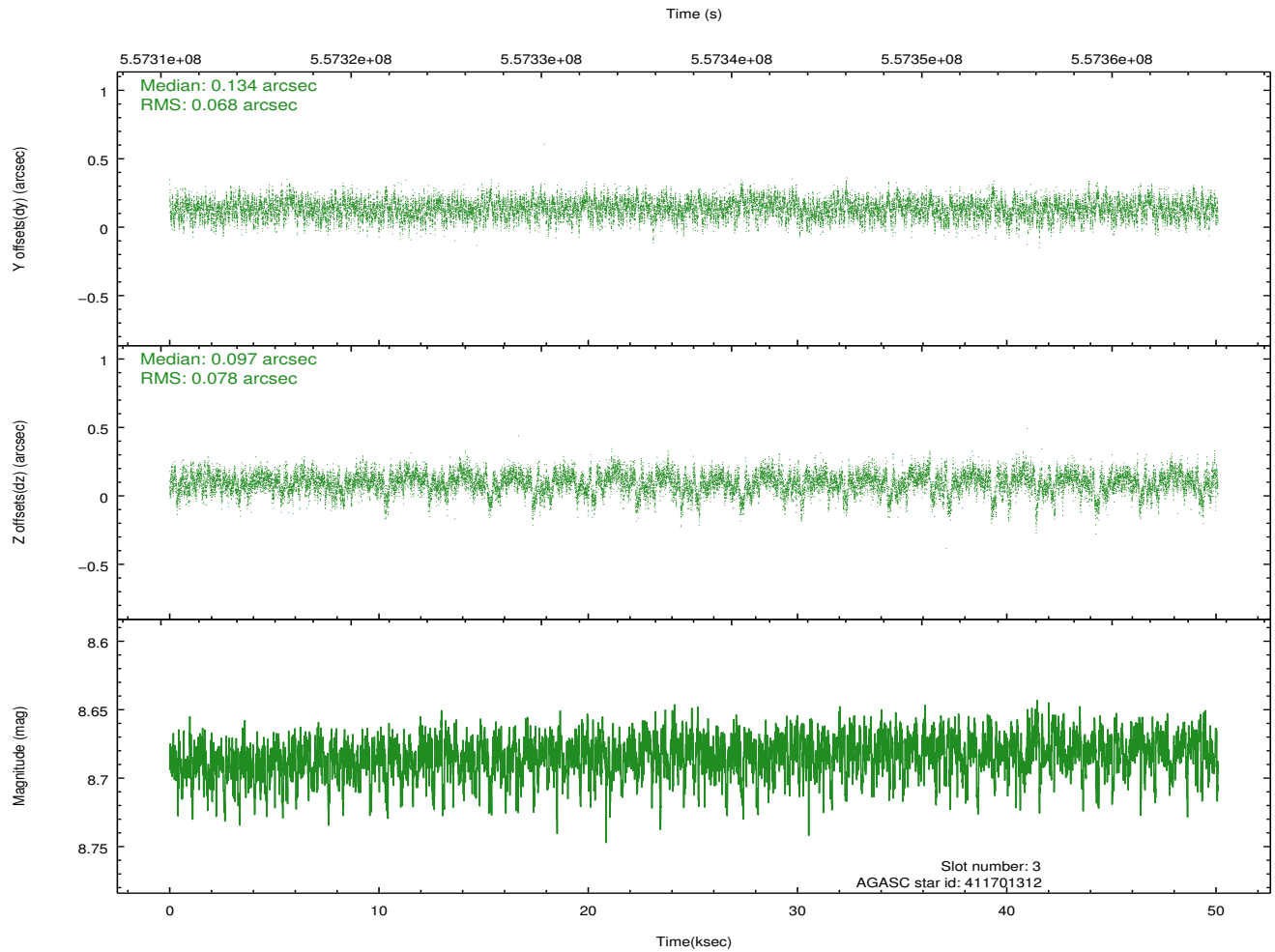
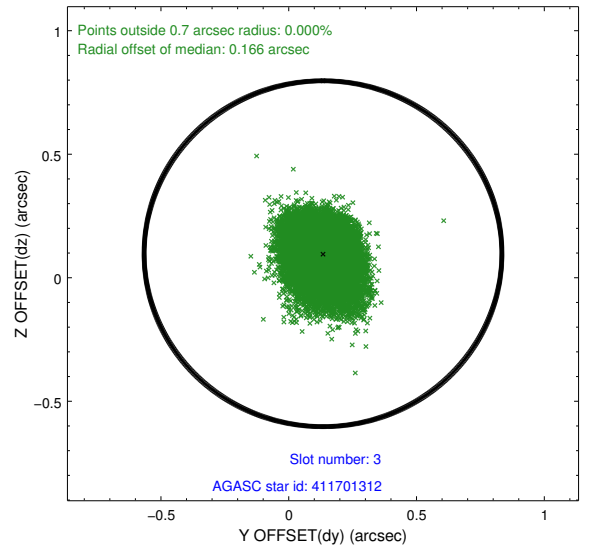
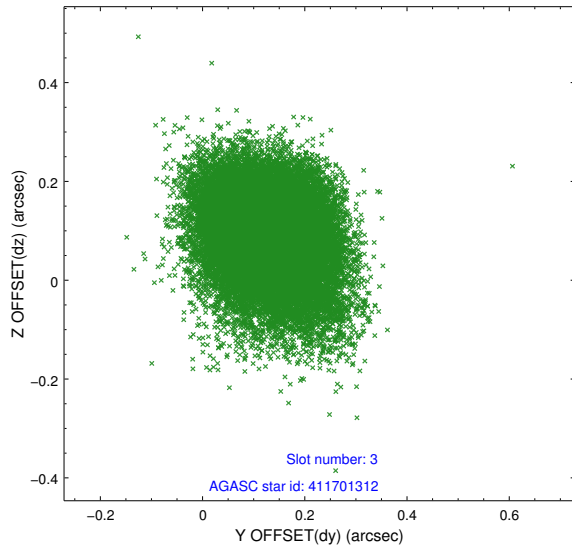


### Slot Statistics

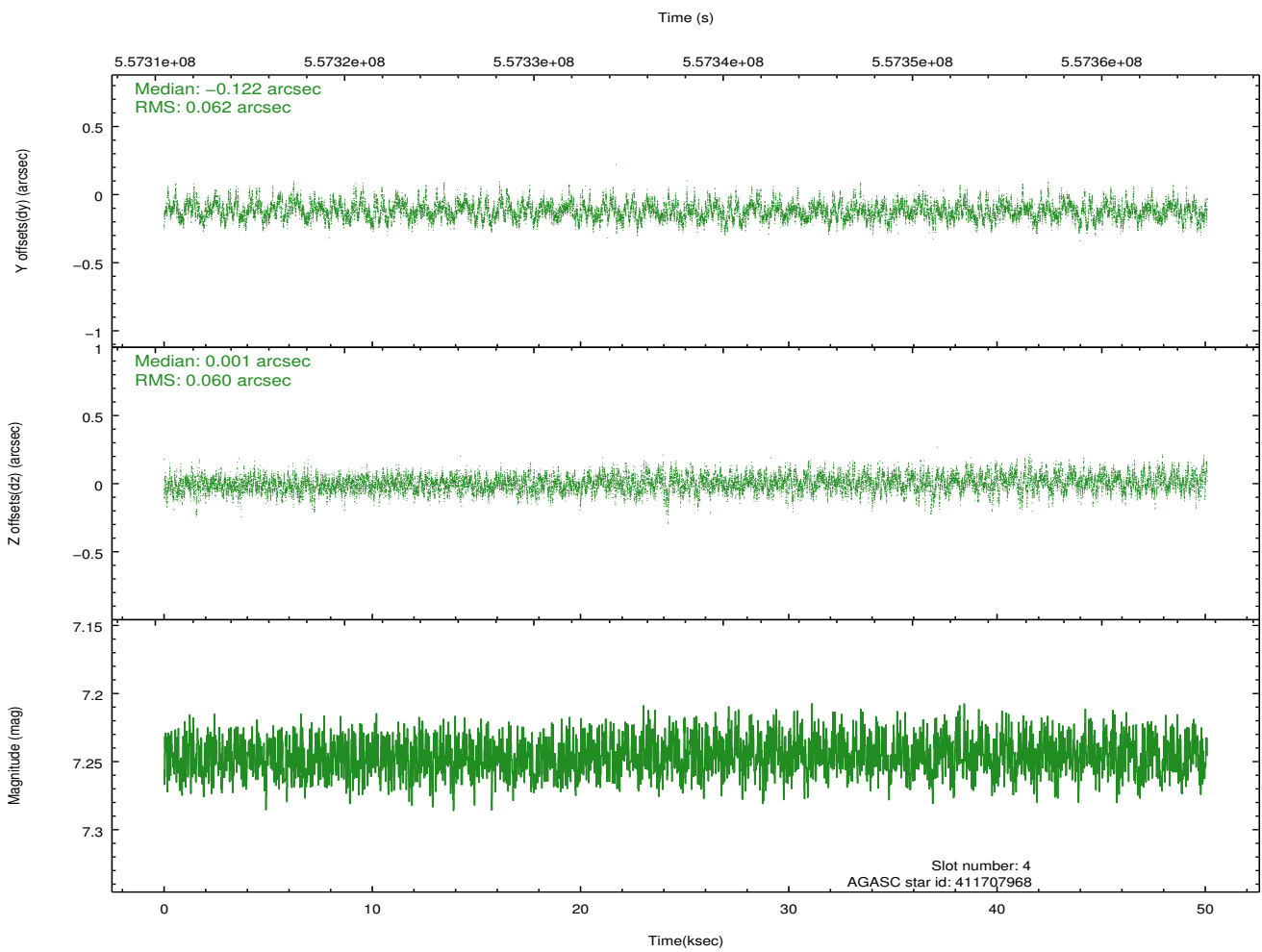
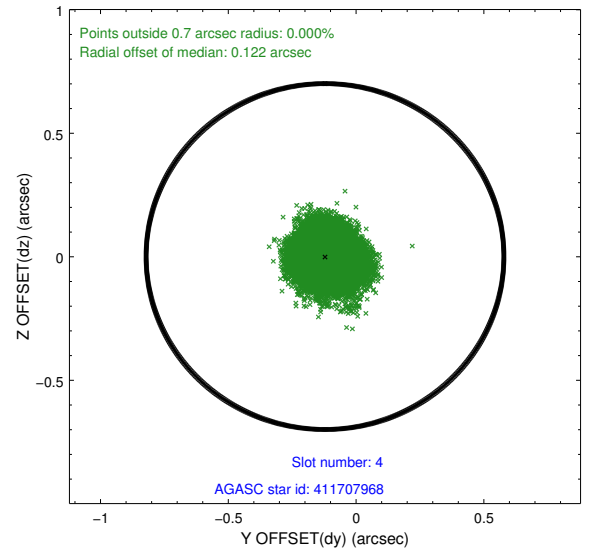
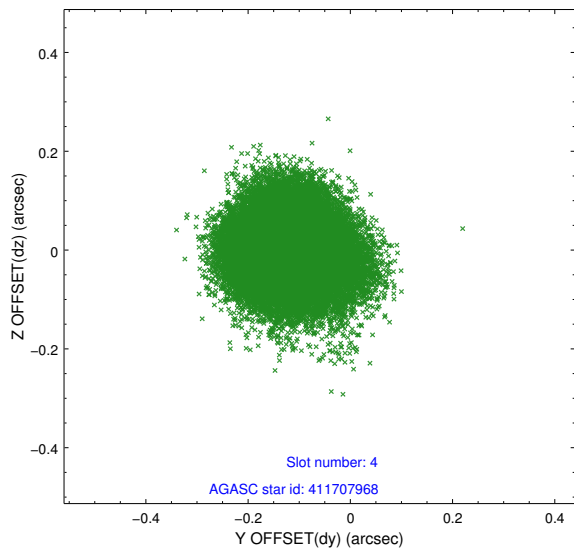
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.26	12218	0.075	-0.046	0.026	0.036	0.000000	0.000000	924.34	-839.43
1	FID		ACIS-I-5	7.26	12217	-0.277	0.055	0.044	0.058	0.000000	0.000000	-1824.18	1058.11
2	FID		ACIS-I-6	7.25	12217	0.112	0.060	0.023	0.043	0.000000	0.000000	389.88	1702.64
3	GUIDE	used	411701312	8.68	24422	0.134	0.097	0.108	0.182	298.889956	40.820220	1403.28	-2331.37
4	GUIDE	used	411707968	7.25	24433	-0.122	0.001	0.092	0.146	299.509933	40.926839	89.31	-1204.71
5	GUIDE	used	412240768	8.25	24429	-0.016	0.531	0.090	0.150	299.999696	41.280279	-1725.71	-906.50
6	GUIDE	used	413418680	9.27	24416	-0.054	-0.341	0.115	0.189	300.860298	40.740057	-1598.24	2130.99
7	GUIDE	used	413421016	8.72	24416	0.055	-0.280	0.099	0.166	300.612426	40.446254	-347.30	2239.03

## 2.4 Star Slots

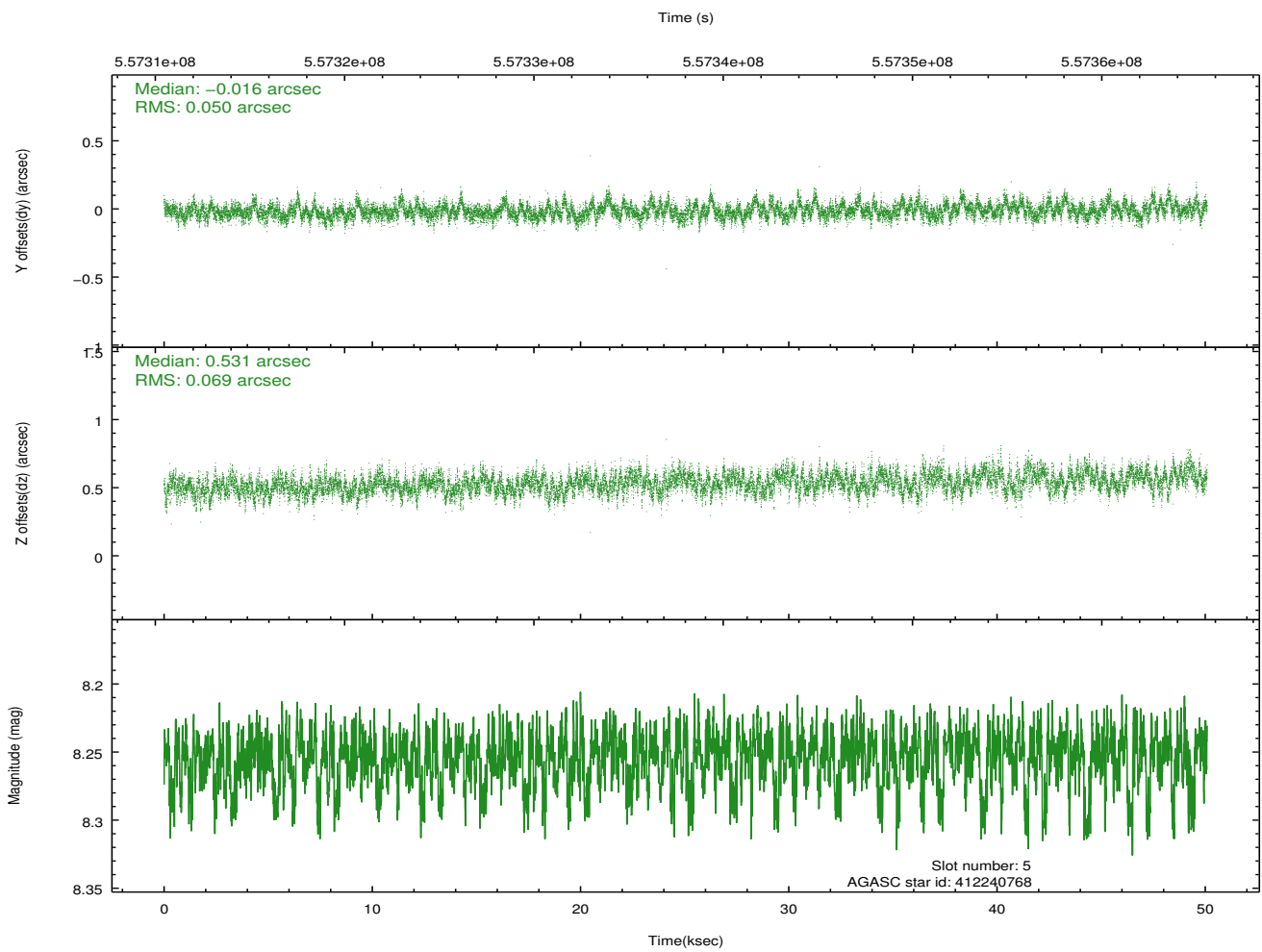
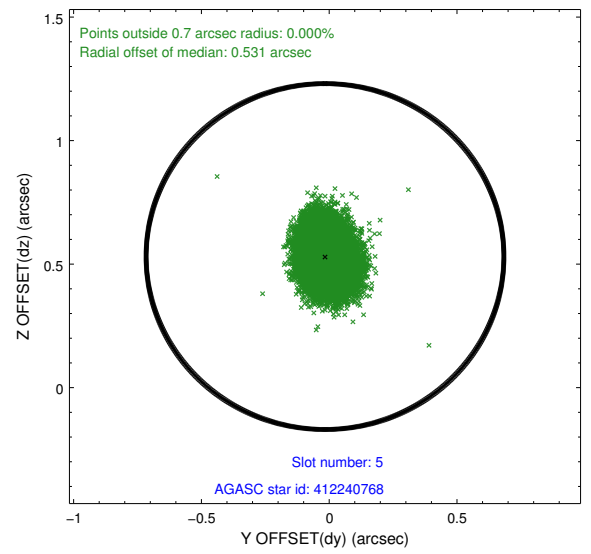
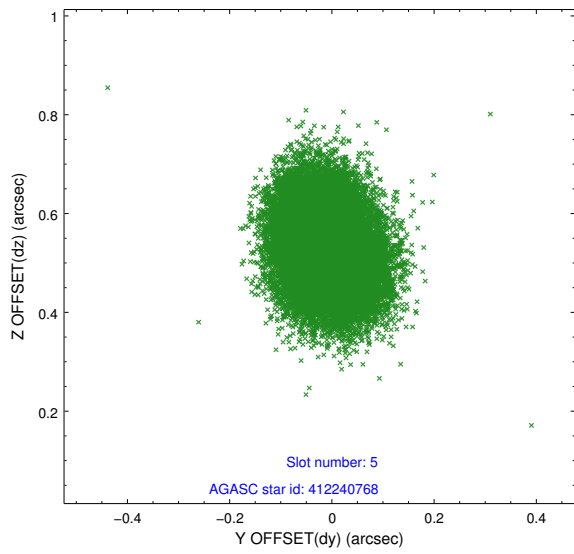
### 2.4.1 Slot 3



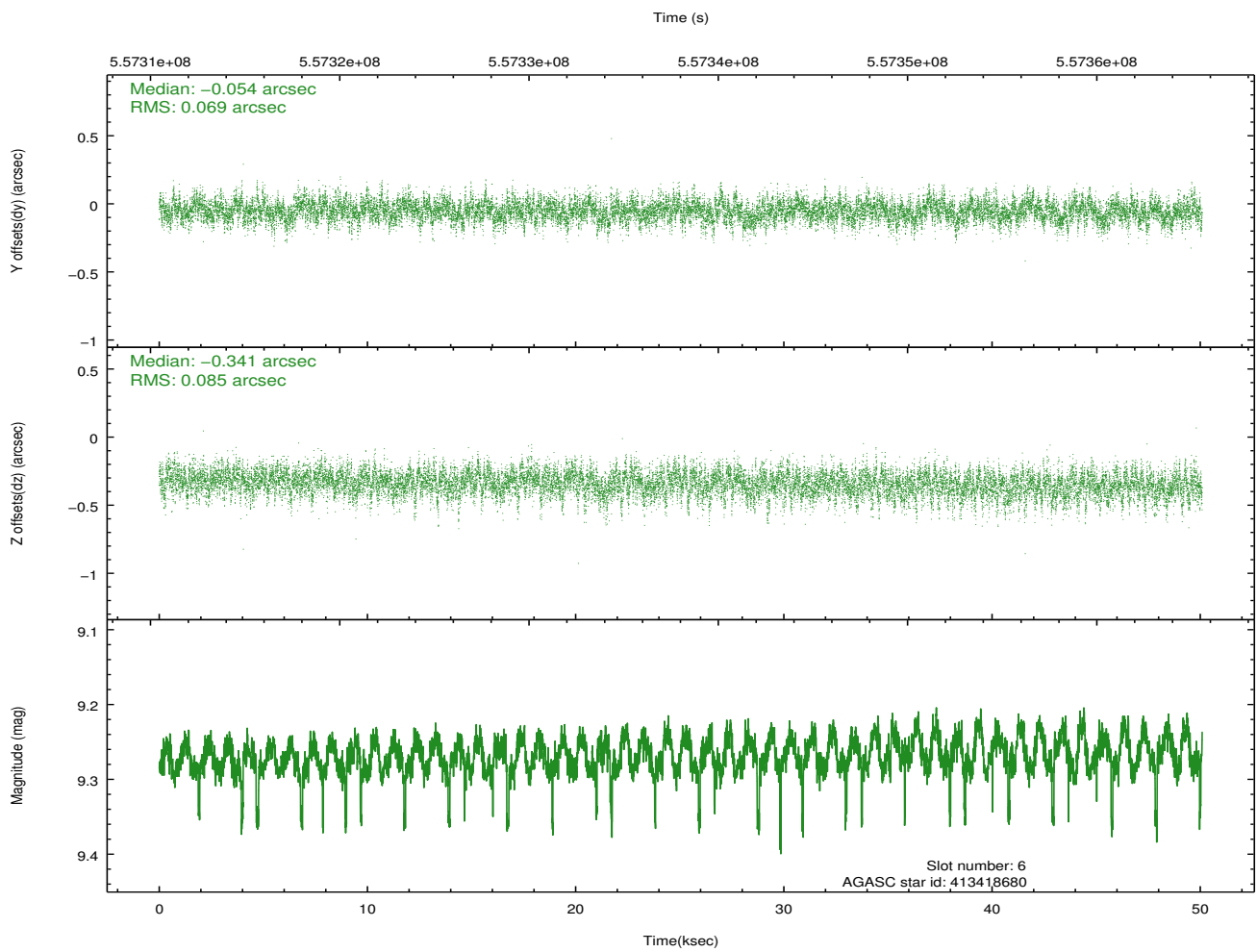
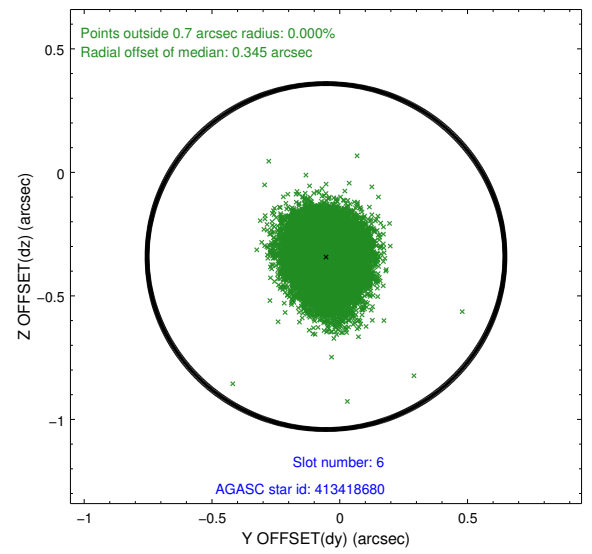
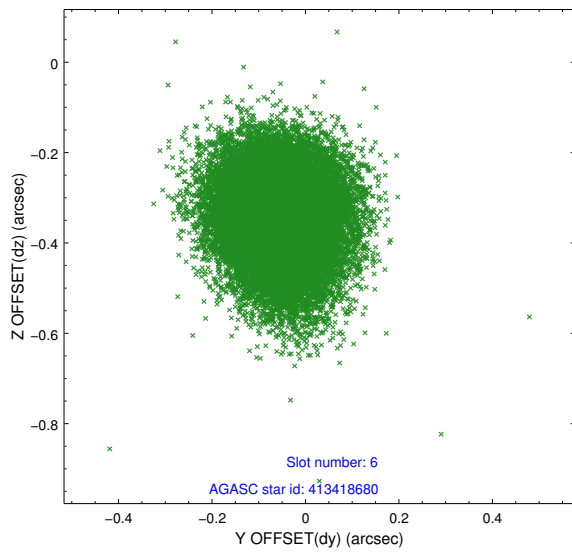
## 2.4.2 Slot 4



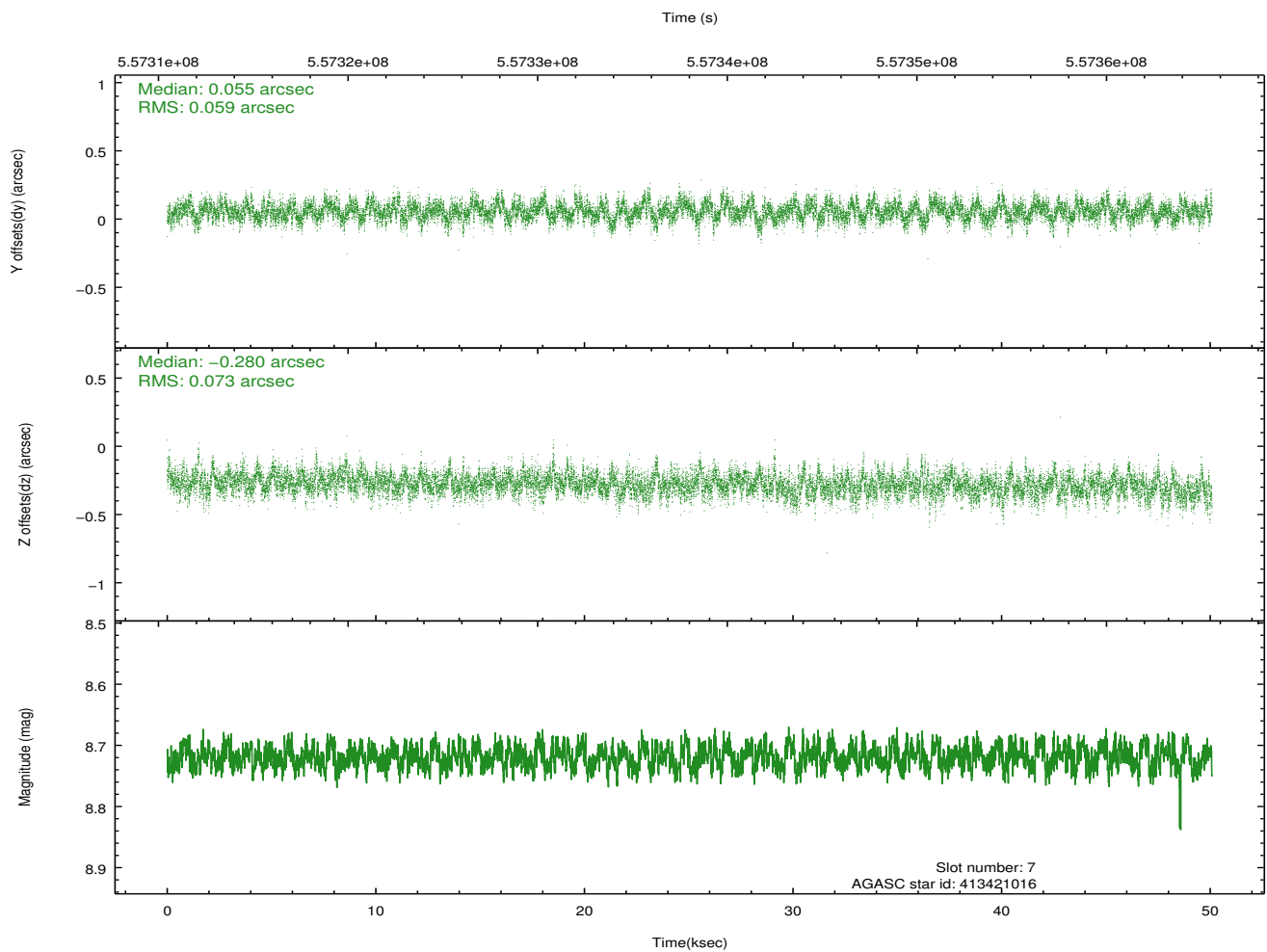
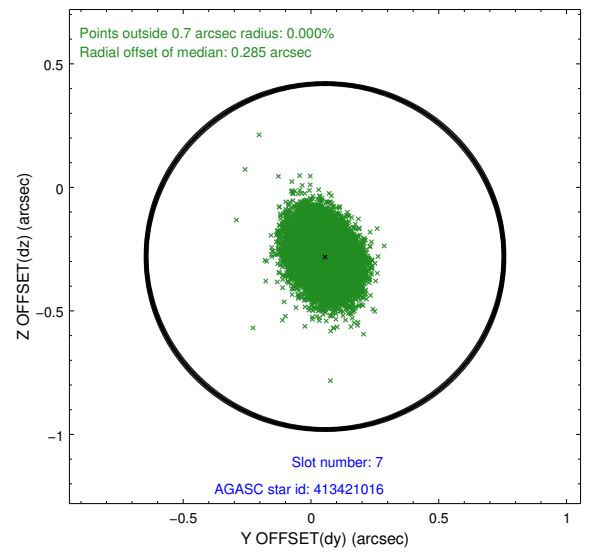
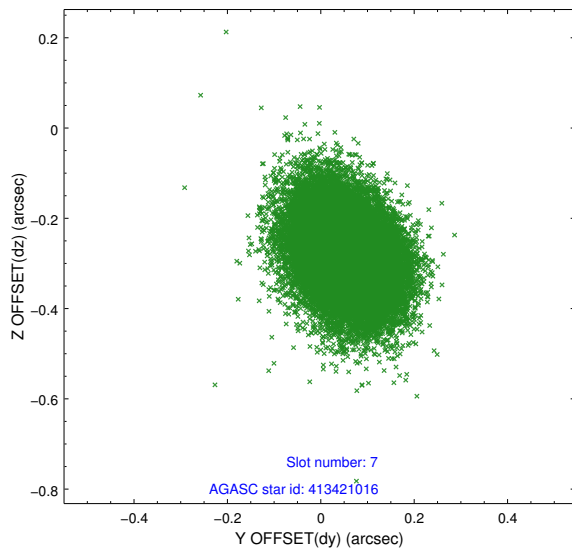
### 2.4.3 Slot 5



## 2.4.4 Slot 6

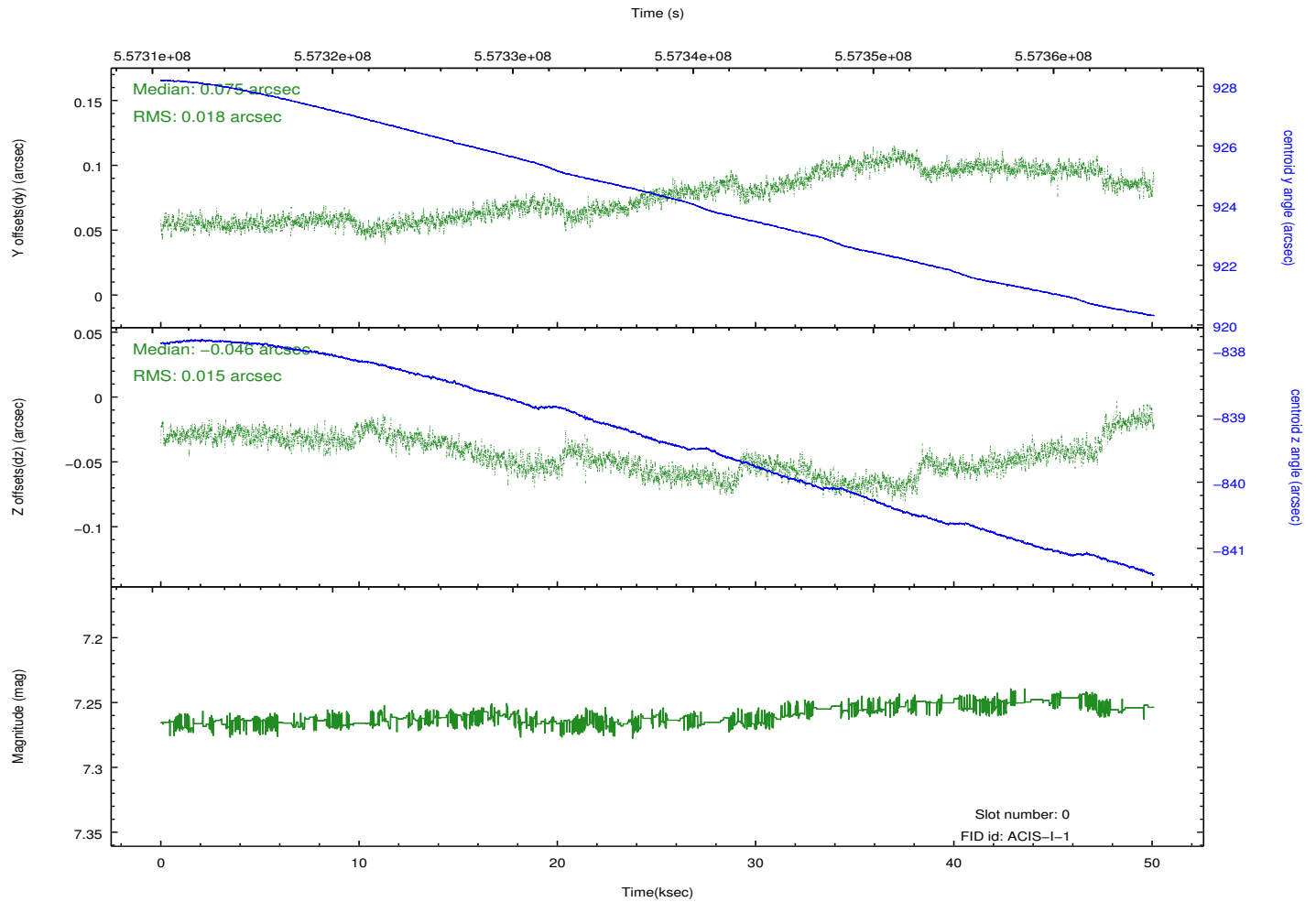
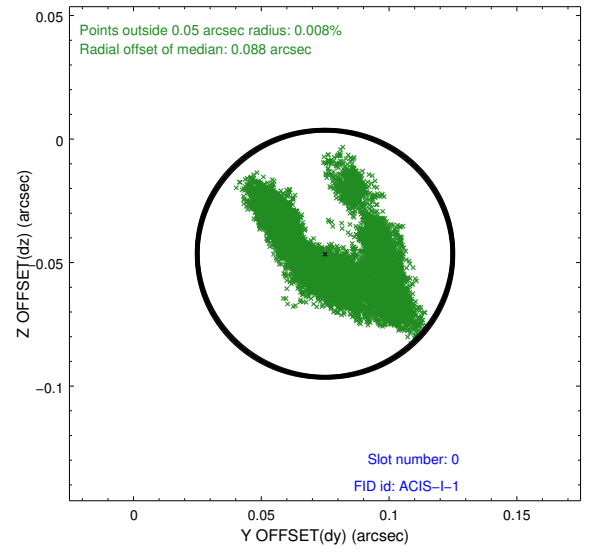
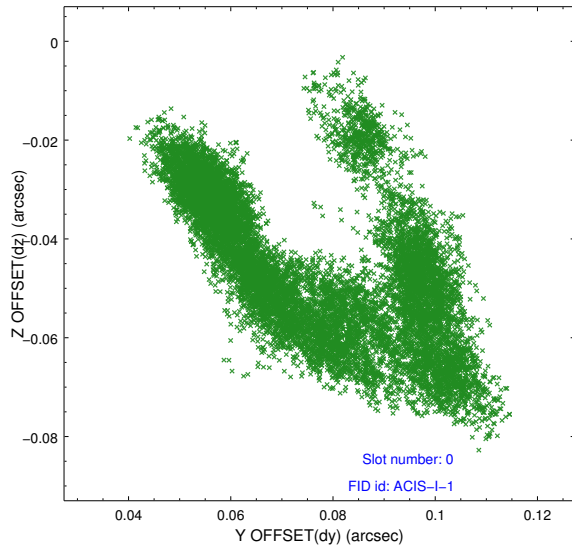


## 2.4.5 Slot 7

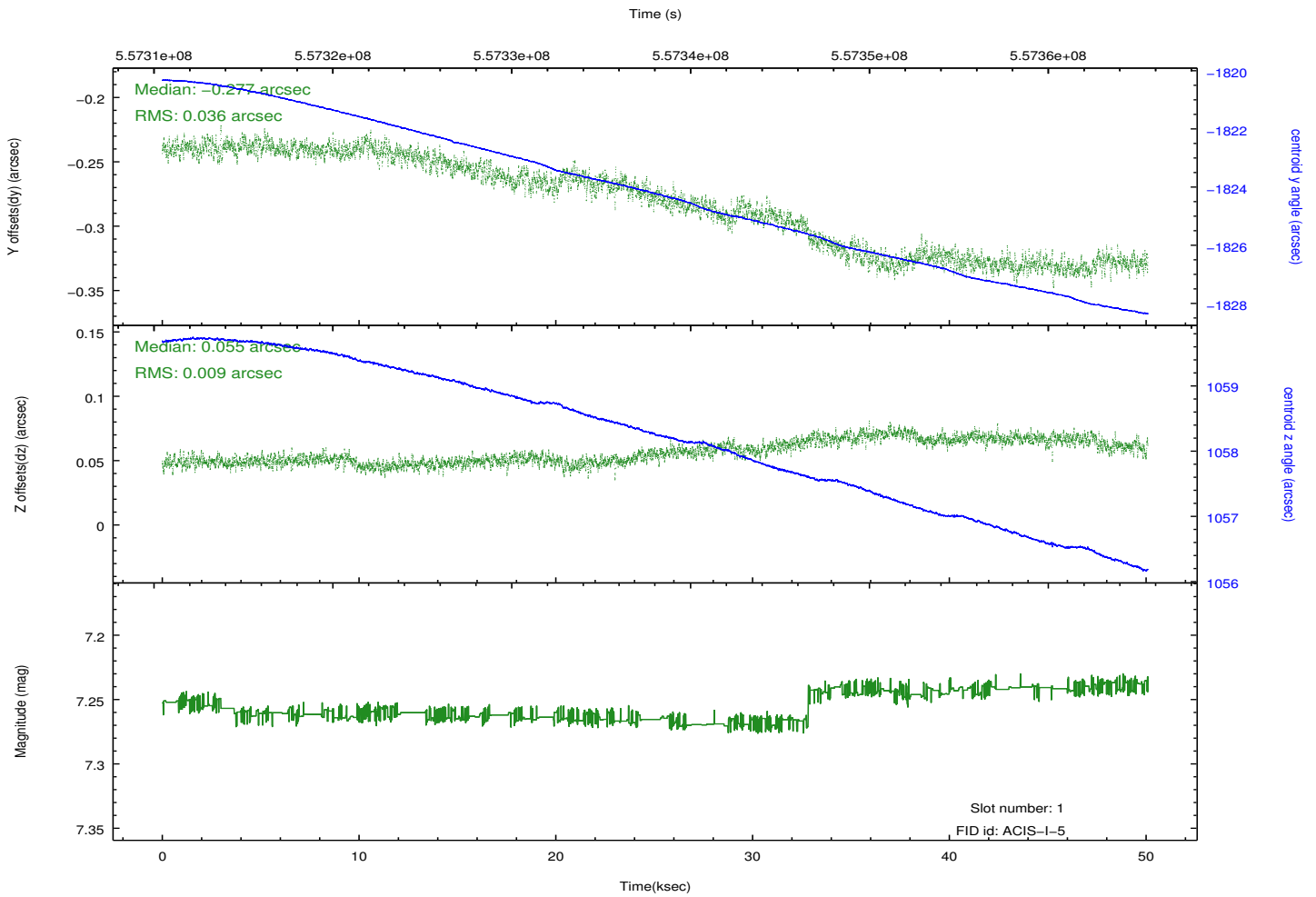
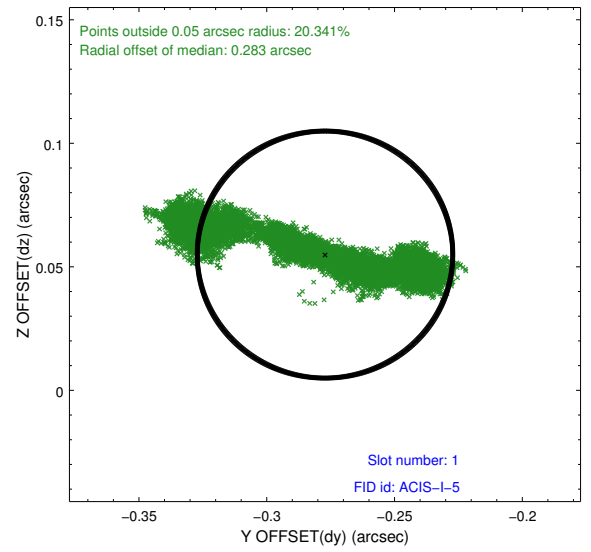
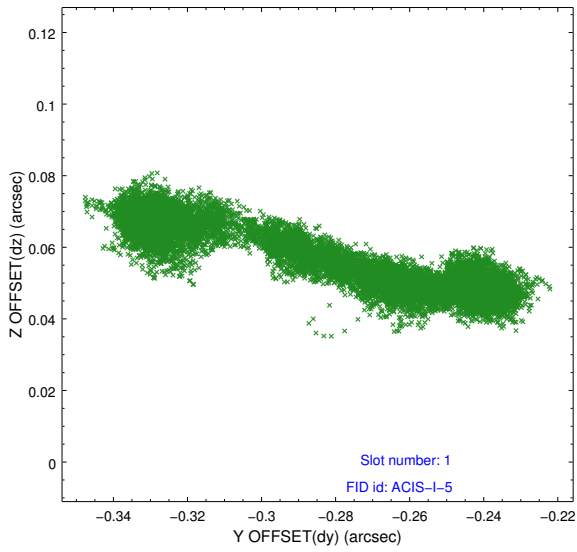


## 2.5 FID Slots

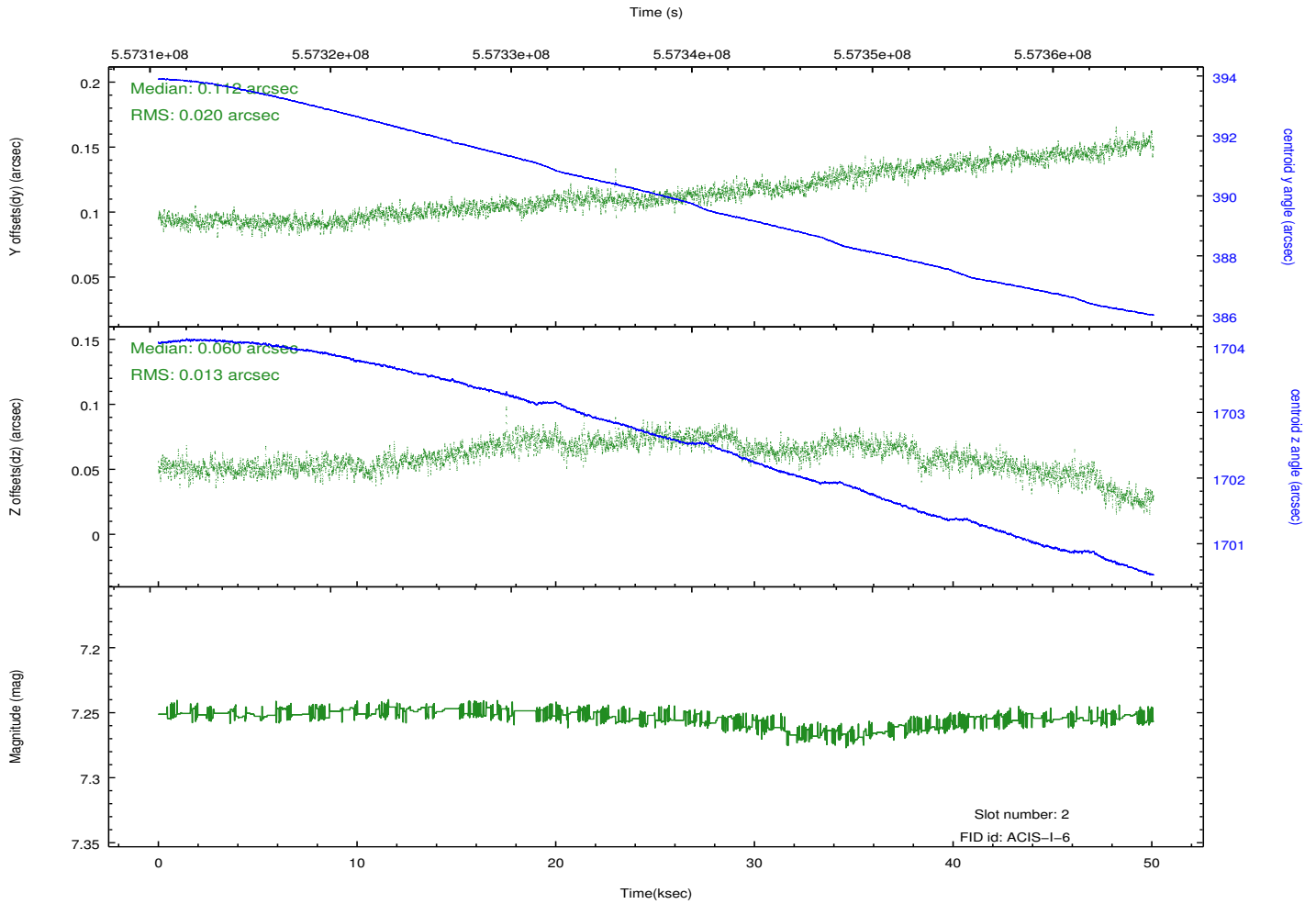
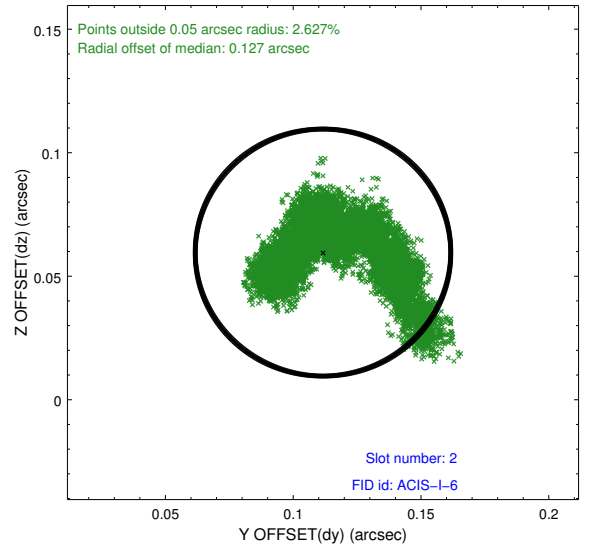
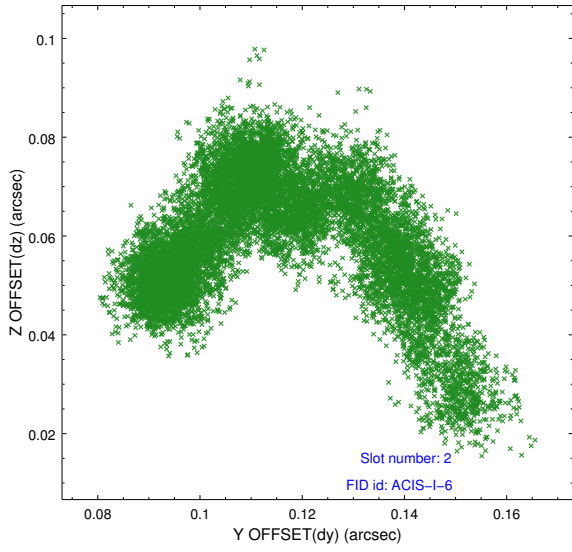
### 2.5.1 Slot 0



## 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)	2015.08.31
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	49.970672131062

## A.2 Comments