

# V&V Reference Report

## L2 ASCDS Version : 10.5.2

Observation 17529 - L2 Version 1  
Chandra X-Ray Center

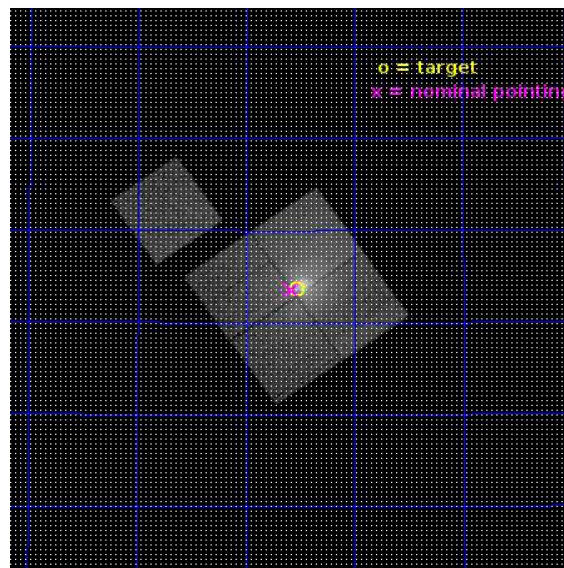
L2 Processing Date : Dec 16 2016

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# 1 Front

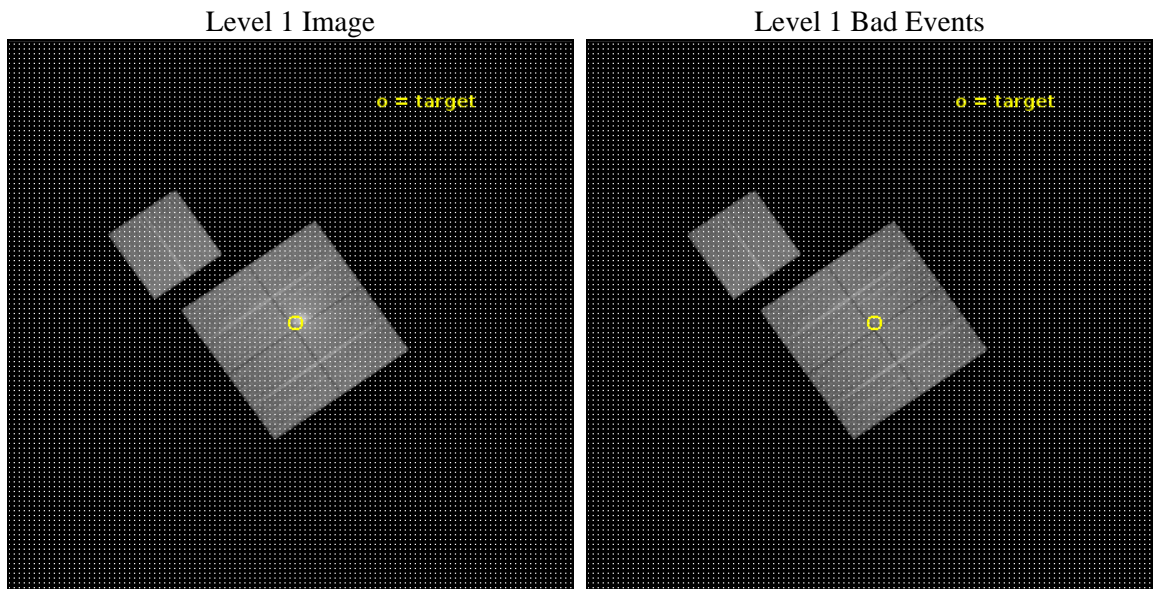
seq_num	703133	Sequence number
obs_id	17529	Observation id
title	The Rise to Power: Half a Billion Years of Intense AGN Activity in the Merging Cluster Cygnus A	Proposal title
observer	Dr. Michael Wise	Principal investigator
object	Cygnus A - E Hotspot	Source name
dtcycle	0	&#160
cycle	P	events from 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	299.89546741442	Nominal RA [deg]
dec_nom	40.72621411613	Nominal Dec [deg]
roll_nom	325.1764290474	Nominal Roll [deg]
revision	1	Processing version of data
ontime	35563.200273633	Sum of GTIs [s]
livetime	35098.540880811	Livetime [s]
ontime0	35556.918312788	Sum of GTIs [s]
ontime1	35563.200273633	Sum of GTIs [s]
ontime2	35563.200273633	Sum of GTIs [s]
ontime3	35563.200273633	Sum of GTIs [s]
ontime6	35560.059273481	Sum of GTIs [s]
l2events	291426	Number of level 2 events



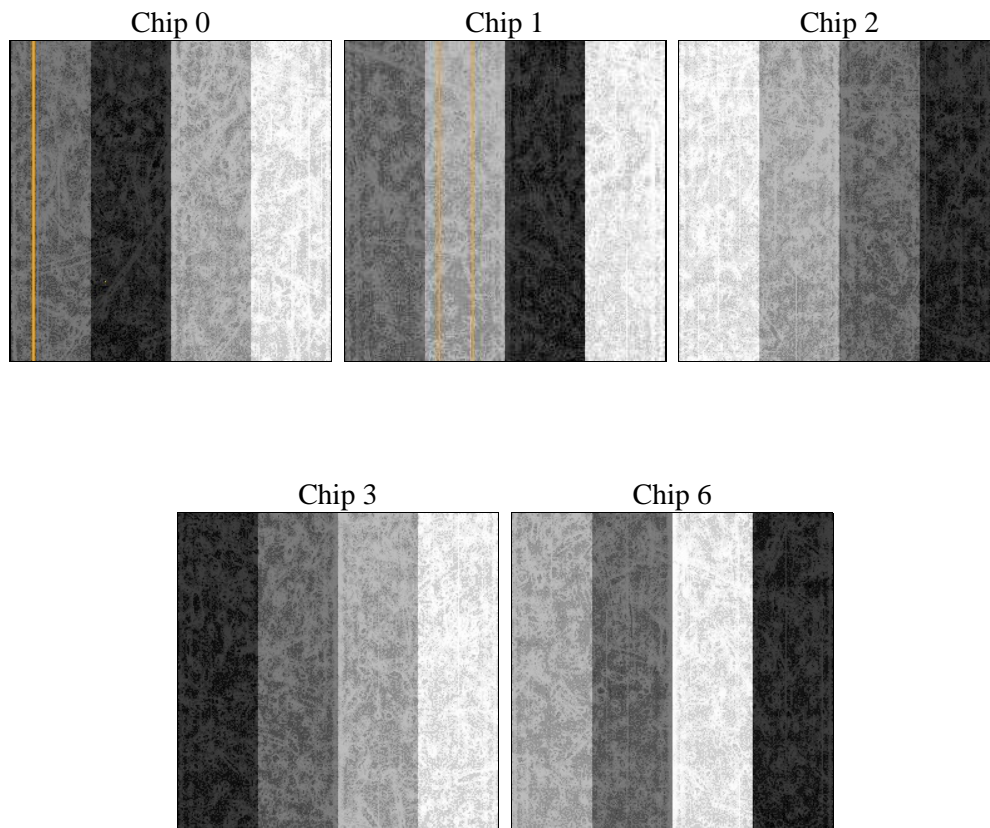
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	35500.000000	[s] Scheduled observation exposure time
ascdsver	10.5.2	Processing system revision	ontime	35563.200273633	Sum of GTIs [s]
caldbver	4.7.3	&#160	ontime0	35556.918312788	Sum of GTIs [s]
date	2016-12-16T12:22:55	Date and time of file creation	ontime1	35563.200273633	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	35563.200273633	Sum of GTIs [s]
			ontime3	35563.200273633	Sum of GTIs [s]
			ontime6	35560.059273481	Sum of GTIs [s]
			l1events	1416796	Number of level 1 events

### 2.1.4 Events

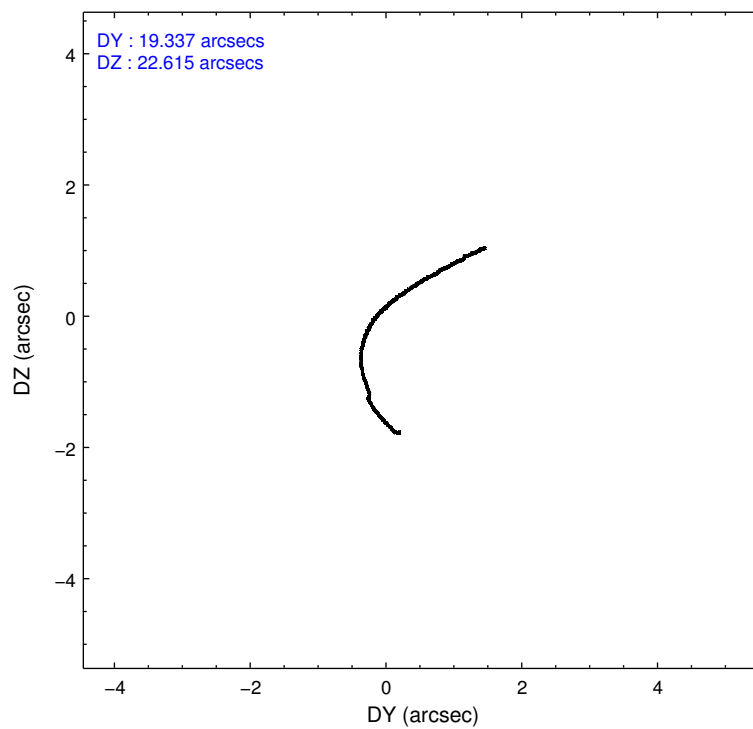
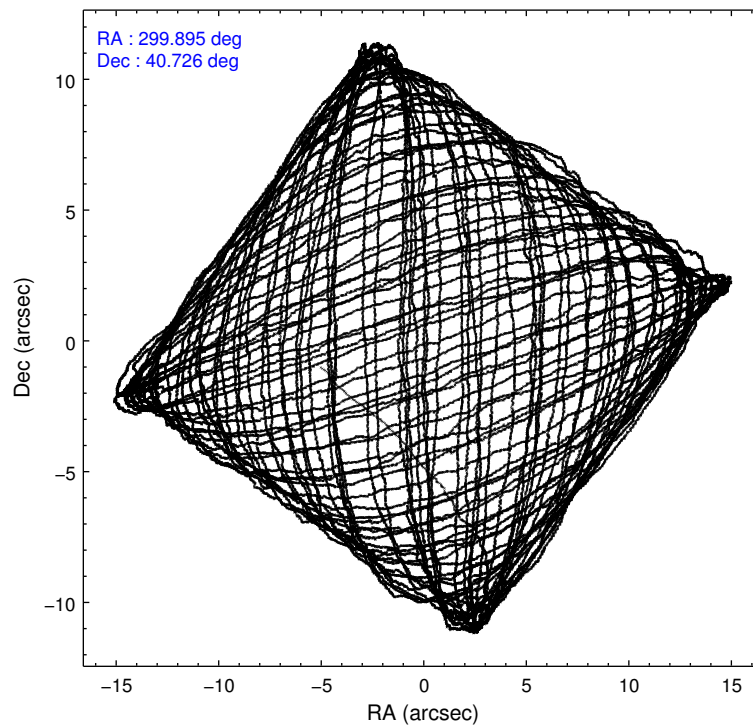
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	241744	269832	273259	374839	257122
rejected events	203364	205592	229902	230021	227880
rejected %	84%	76%	84%	61%	88%

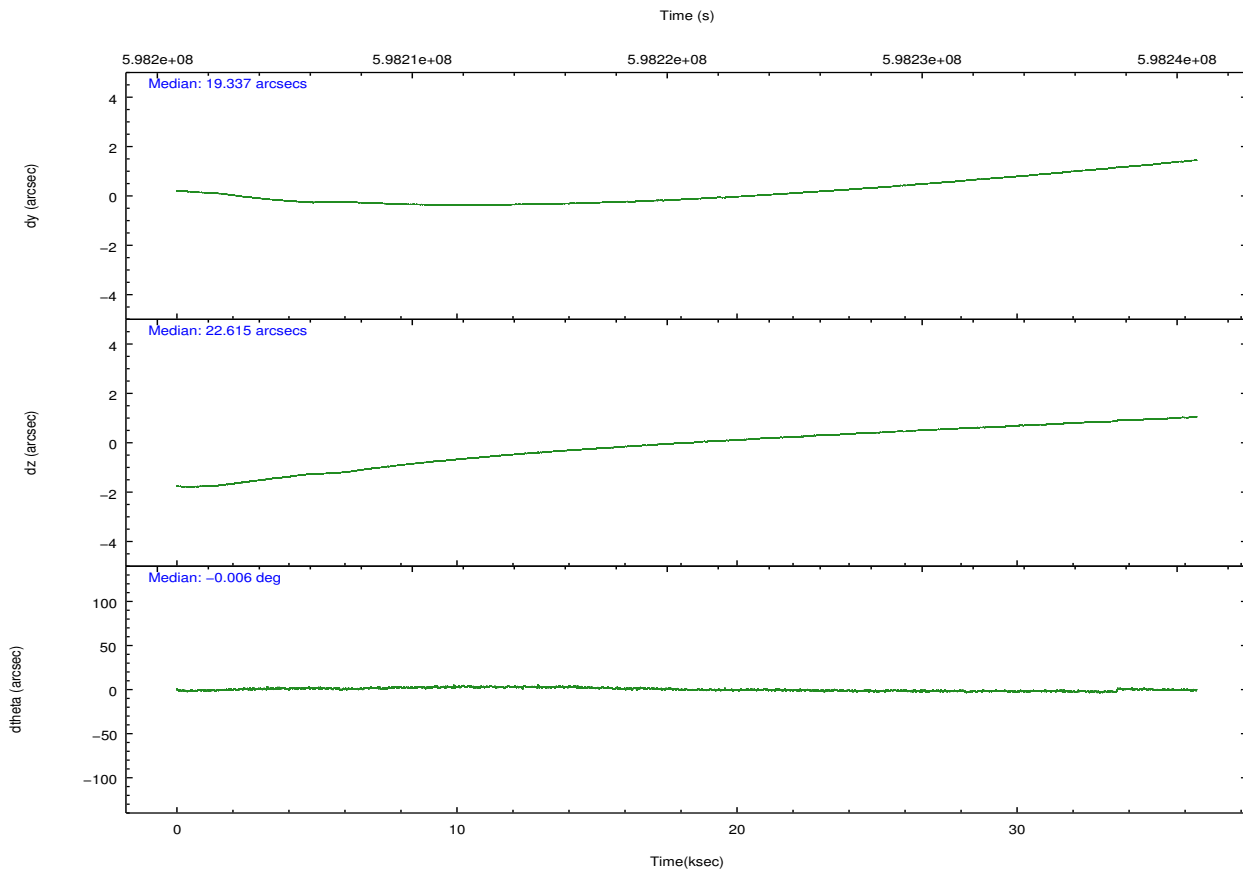
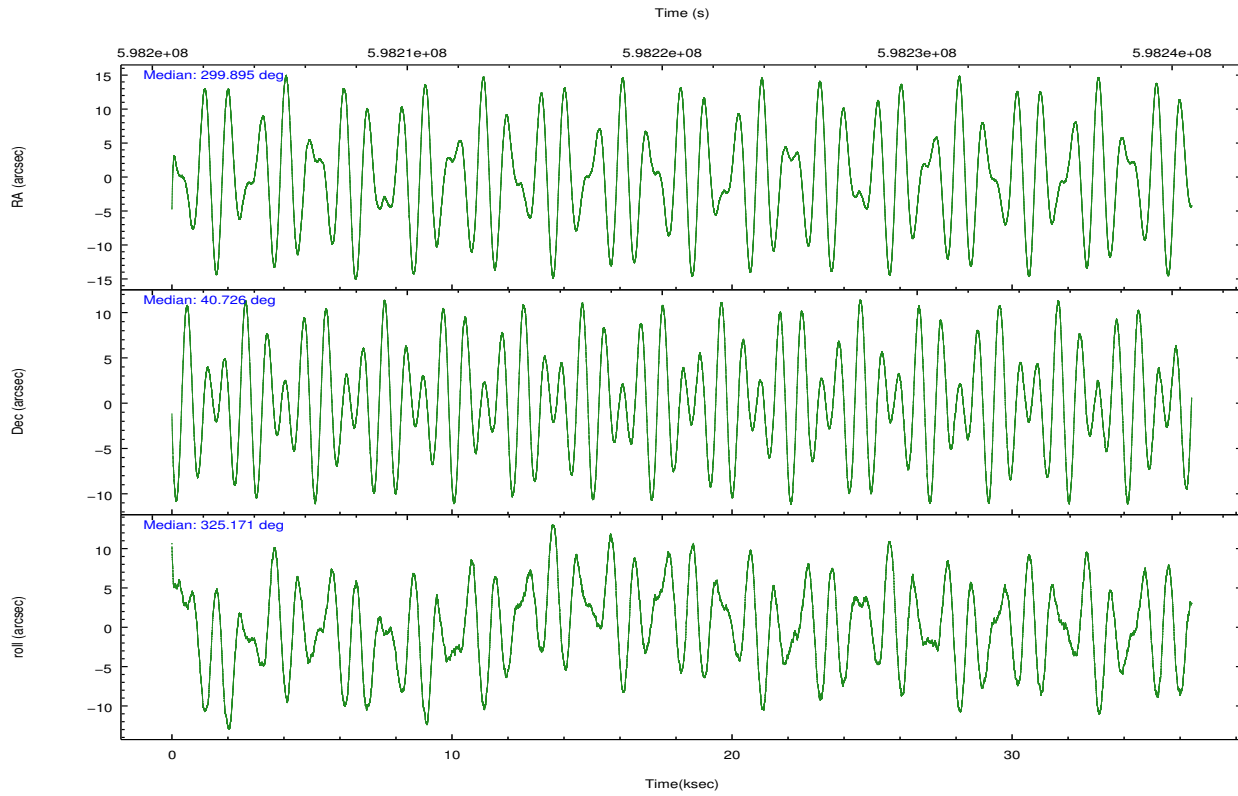
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	17514	35264	22406	99982	10183
	7%	13%	8%	26%	3%
grade 1 events	179	232	230	1166	140
	0%	0%	0%	0%	0%
grade 2 events	8336	12569	8654	19225	6670
	3%	4%	3%	5%	2%
grade 3 events	3293	4100	3237	7183	2861
	1%	1%	1%	1%	1%
grade 4 events	3071	4074	3280	7319	2824
	1%	1%	1%	1%	1%
grade 5 events	10832	11467	10290	13235	11527
	4%	4%	3%	3%	4%
grade 6 events	6182	8257	5796	11133	6712
	2%	3%	2%	2%	2%
grade 7 events	192337	193869	219366	215596	216205
	79%	71%	80%	57%	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	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	299.859165	299.8954674144161	CCD I2 on	Y	Y
[deg] Pointing Dec	40.728445	40.72621411613025	CCD I3 on	Y	Y
[deg] Pointing Roll	324.991428	325.1764290474033	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)	598203470.184000	598201587.86909	CCD S5 on	N	N
Observation start date	2016-12-15T15:36:42	2016-12-15T15:06:27	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	598238970.184000	598239493.90878	On-chip summing requested	N	N
Observation end date	2016-12-16T01:28:22	2016-12-16T01:38:13	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



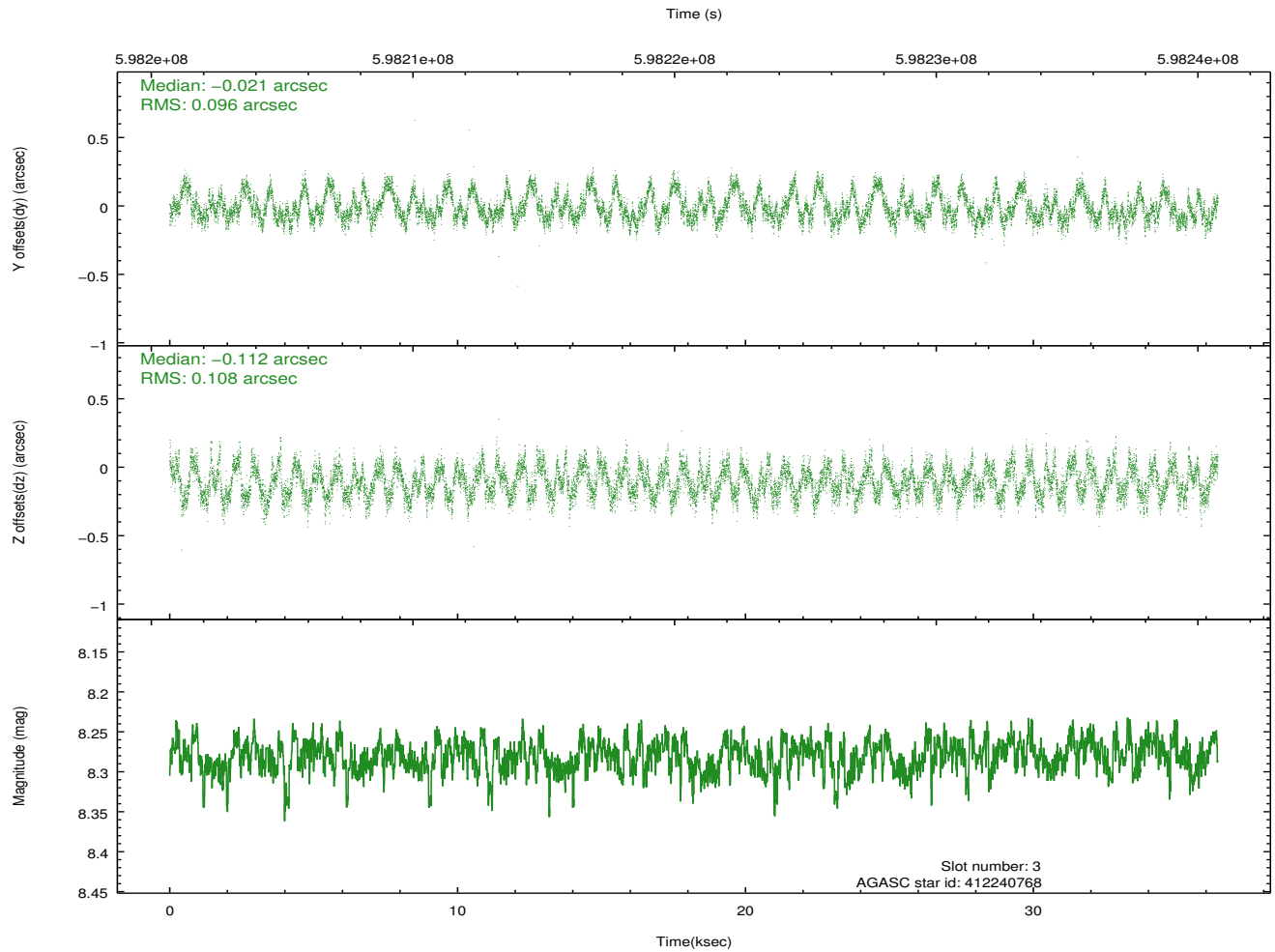
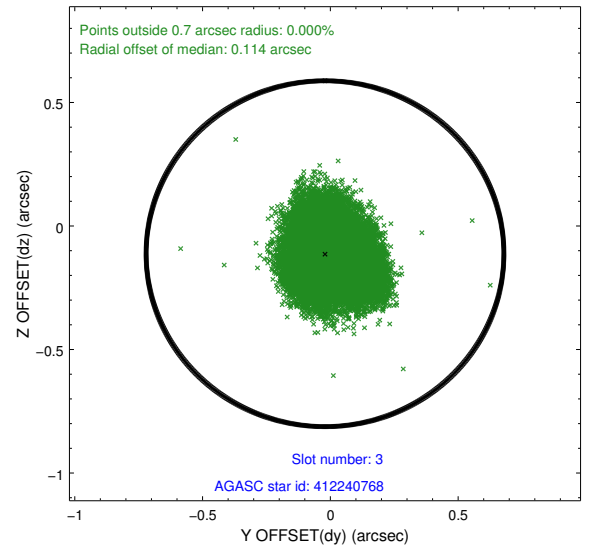
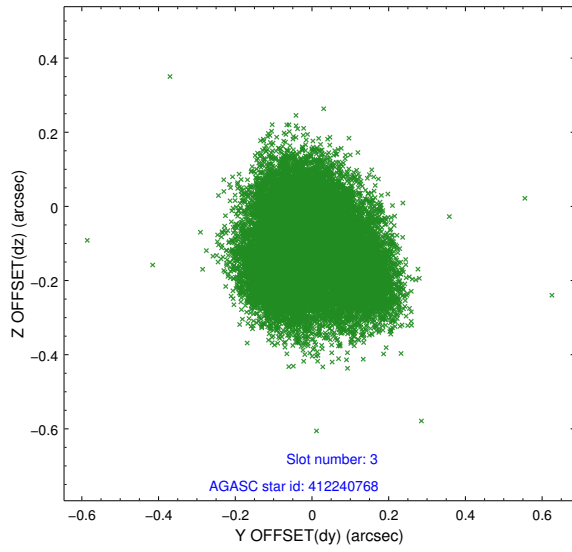


### Slot Statistics

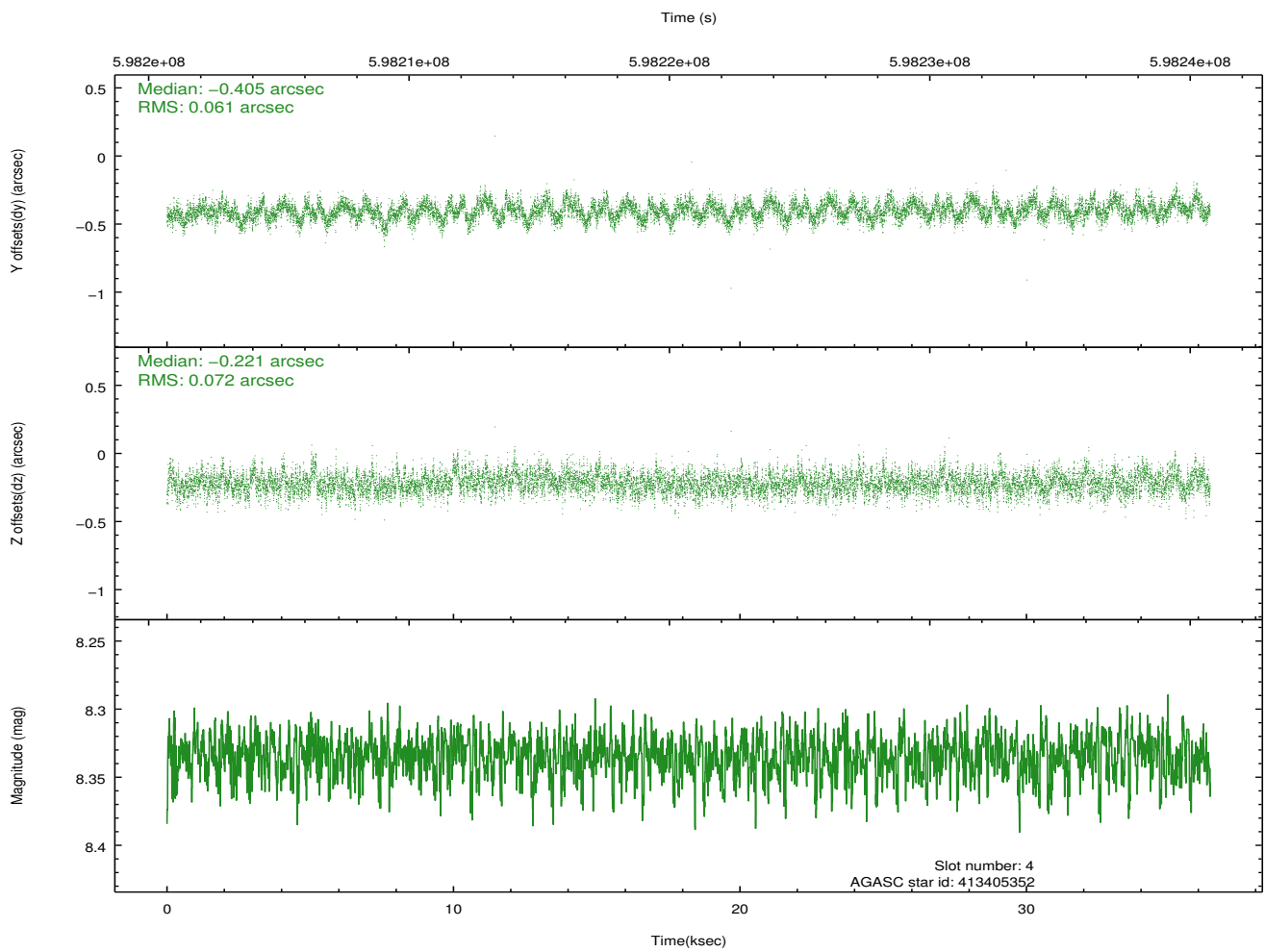
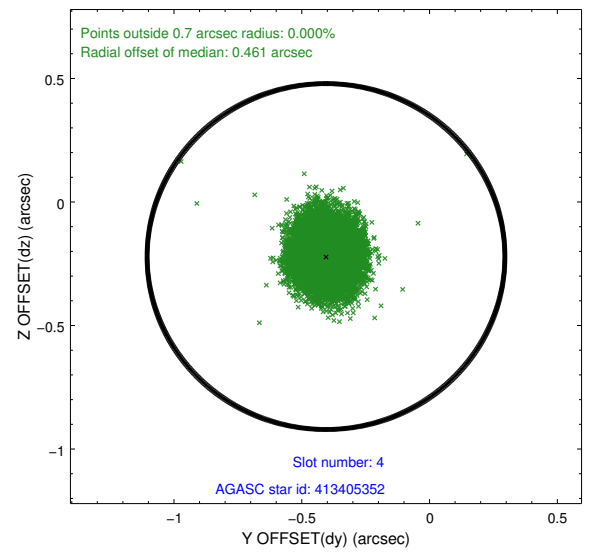
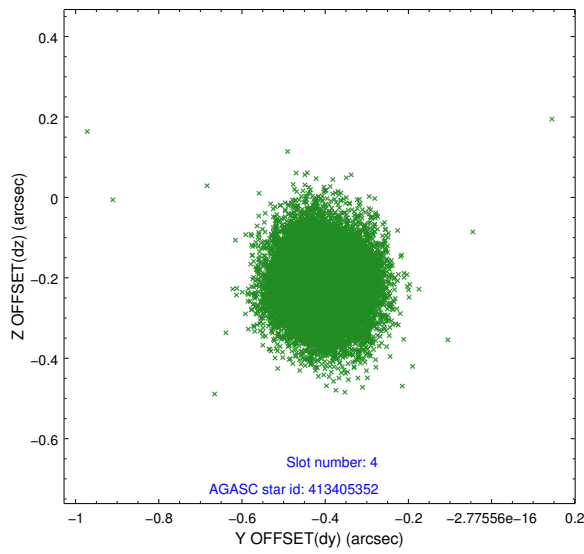
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.15	8882	-0.075	-0.071	0.043	0.071	0.000000	0.000000	919.81	-846.26
1	FID		ACIS-I-4	7.08	8879	0.419	0.114	0.033	0.061	0.000000	0.000000	2140.22	1053.80
2	FID		ACIS-I-5	7.13	8881	-0.440	0.029	0.020	0.030	0.000000	0.000000	-1828.66	1051.32
3	GUIDE	used	412240768	8.28	17757	-0.021	-0.112	0.158	0.235	299.999696	41.280279	-828.39	1845.51
4	GUIDE	used	413405352	8.33	17757	-0.405	-0.221	0.100	0.162	300.290830	41.091941	206.69	1746.11
5	GUIDE	used	411701312	8.65	17756	0.272	0.317	0.132	0.212	298.889956	40.820220	-2359.92	-1231.66
6	GUIDE	used	411722416	7.80	17755	0.282	0.306	0.109	0.182	298.936507	40.391736	-1383.67	-2433.07
7	GUIDE	used	413421016	8.71	17745	-0.145	-0.295	0.100	0.165	300.612426	40.446254	2268.04	358.78

## 2.4 Star Slots

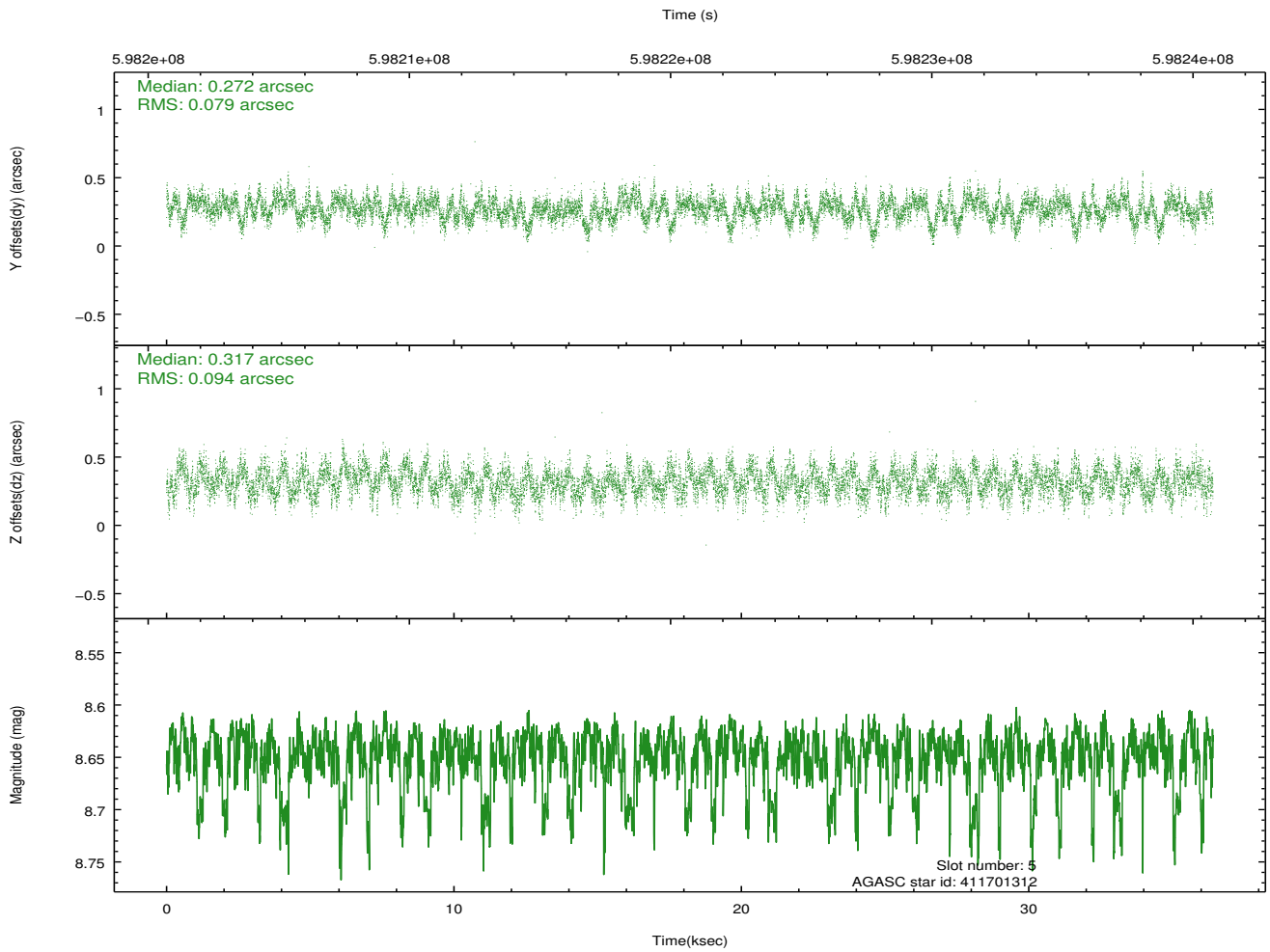
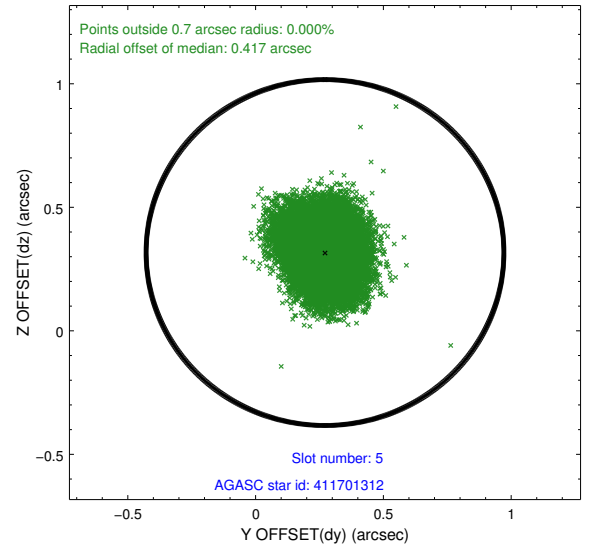
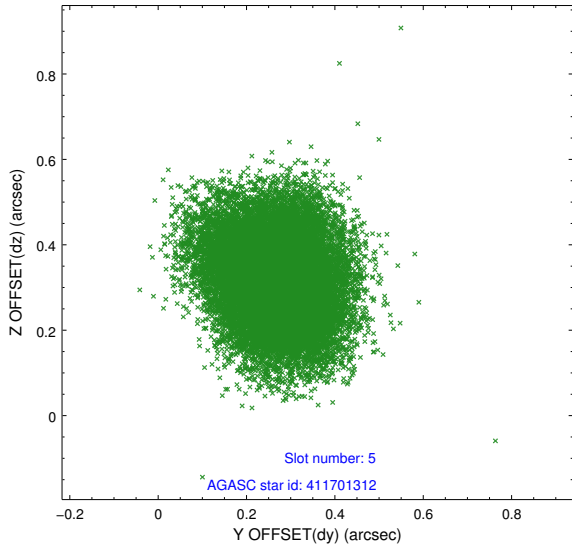
### 2.4.1 Slot 3



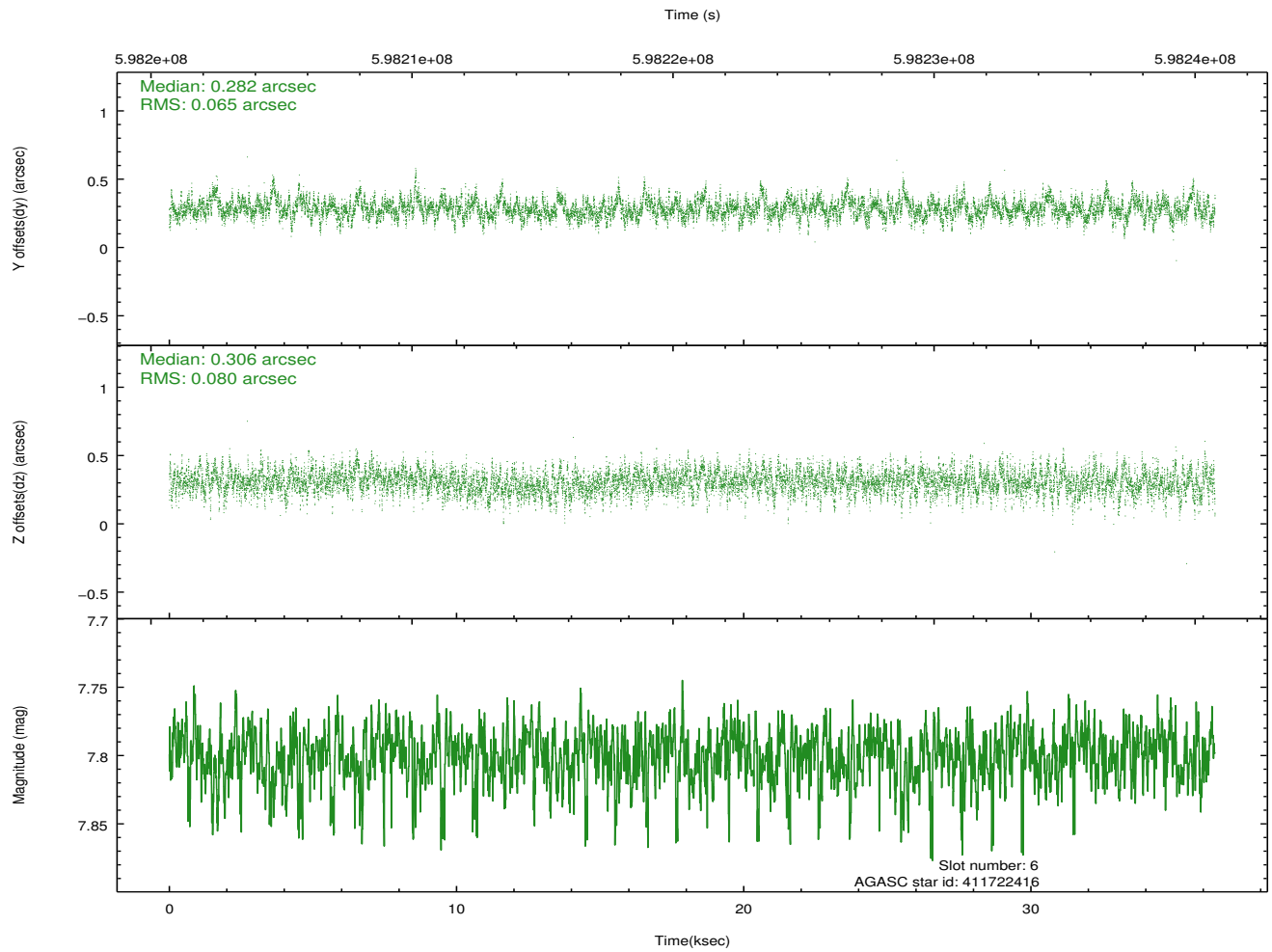
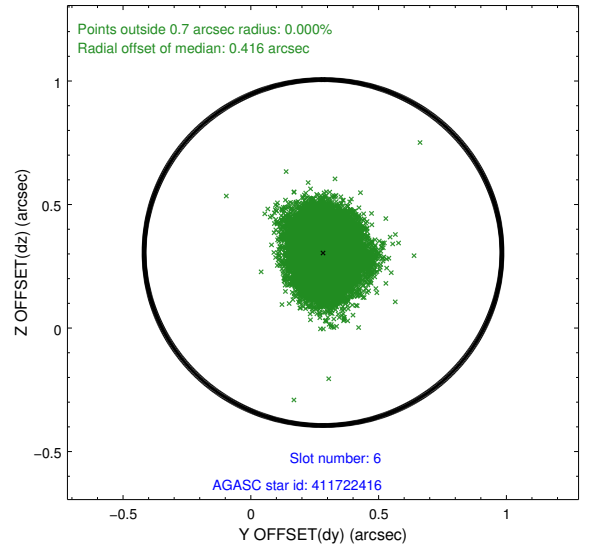
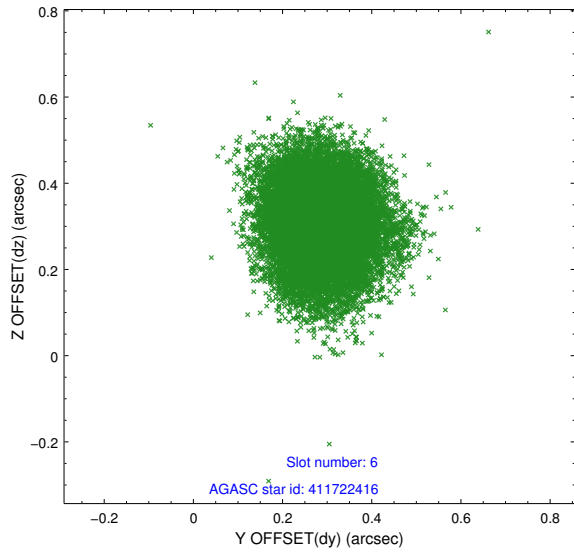
## 2.4.2 Slot 4



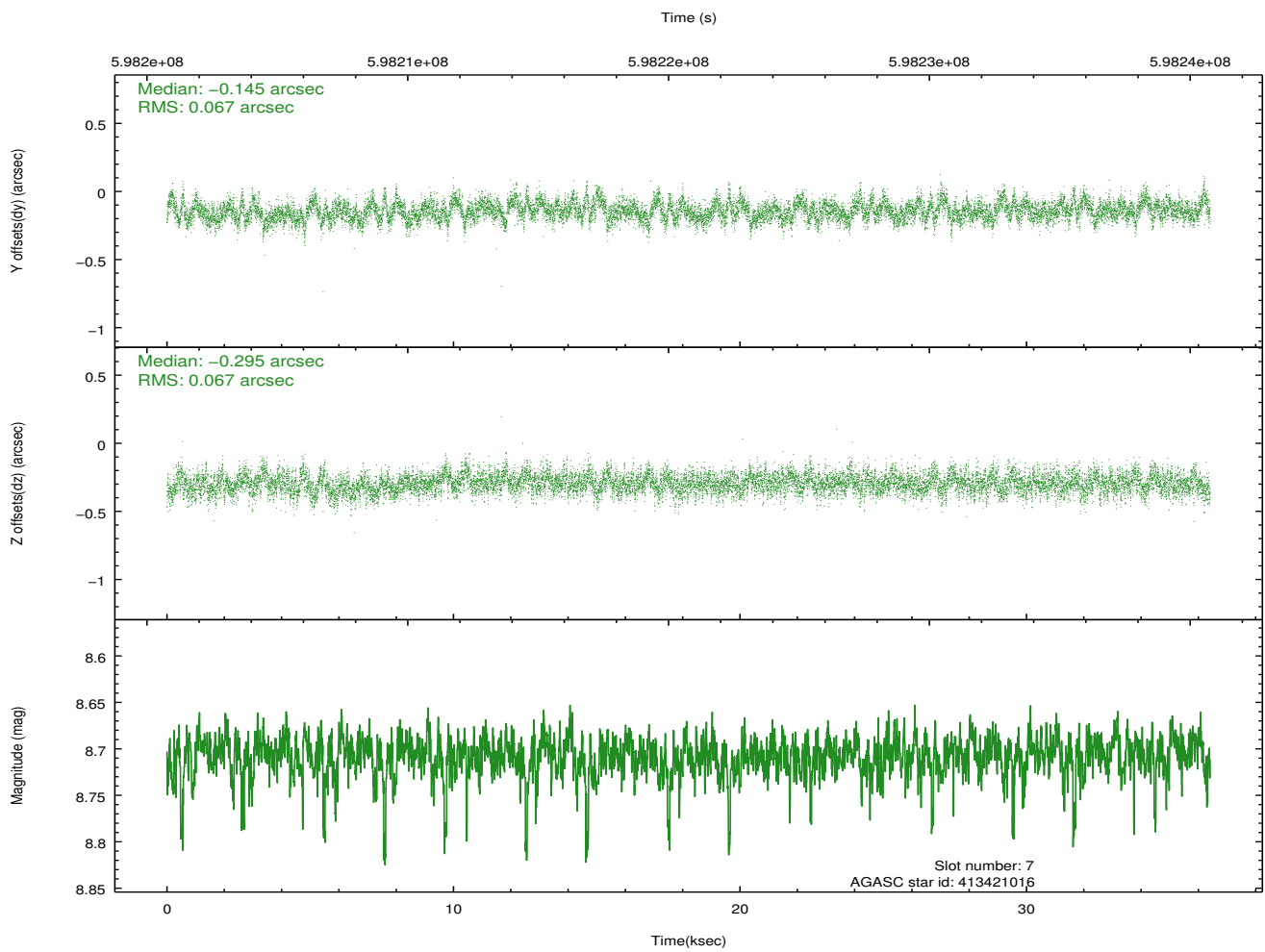
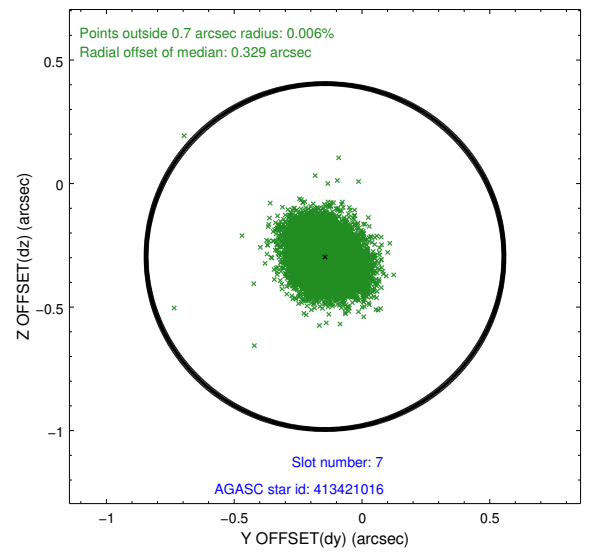
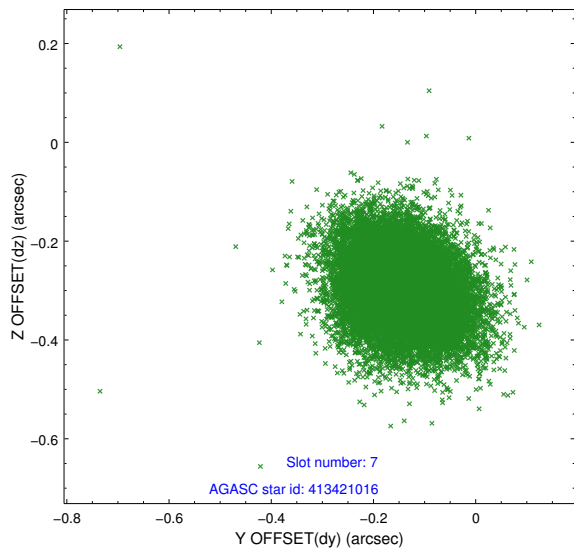
### 2.4.3 Slot 5



### 2.4.4 Slot 6

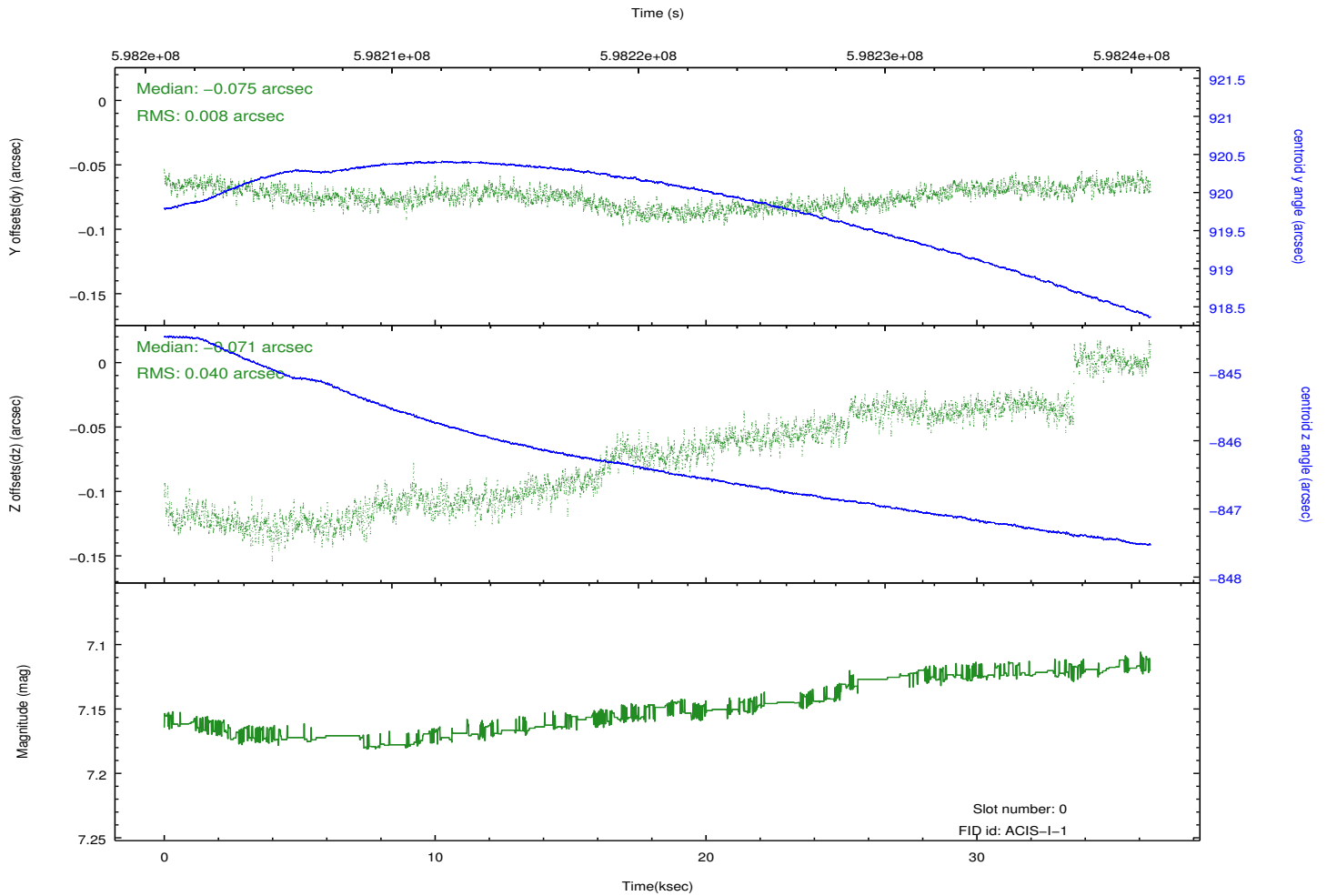
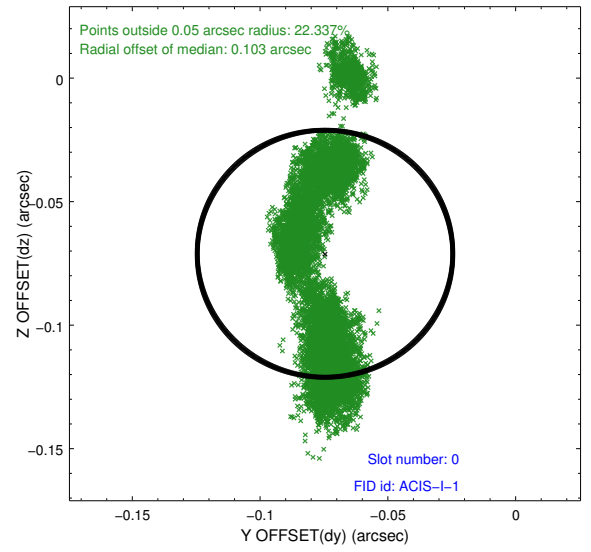
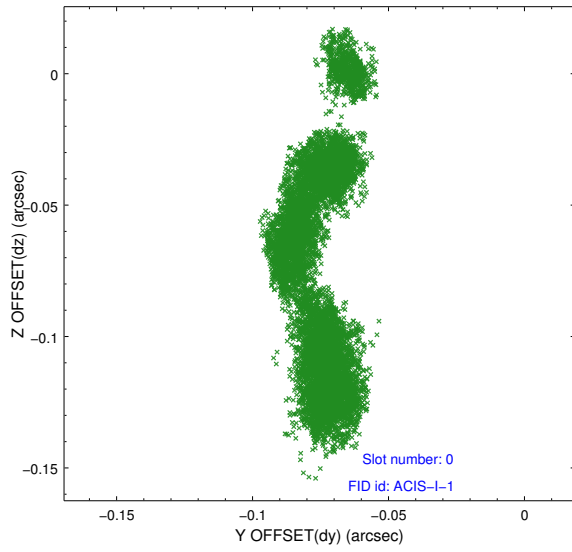


## 2.4.5 Slot 7

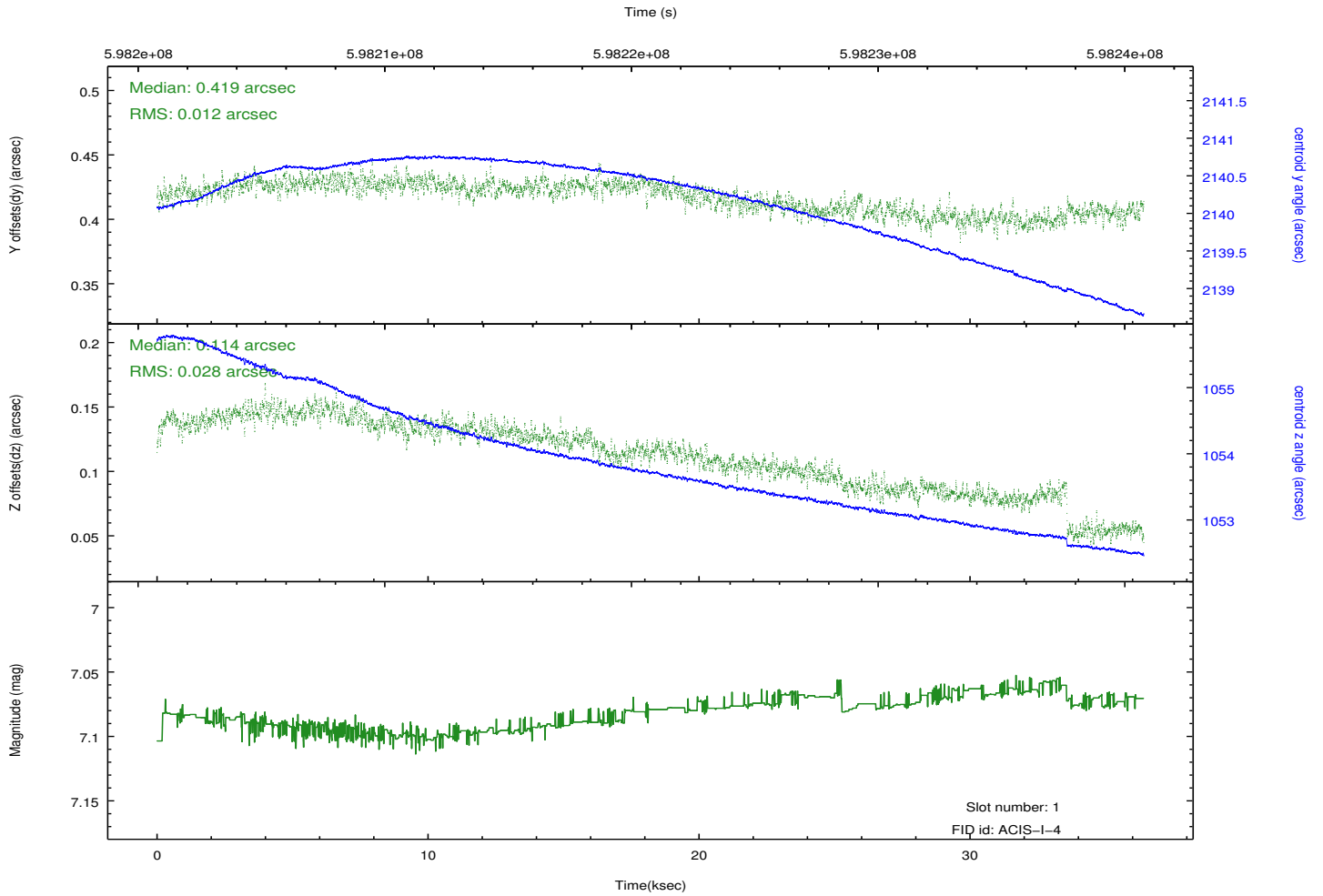
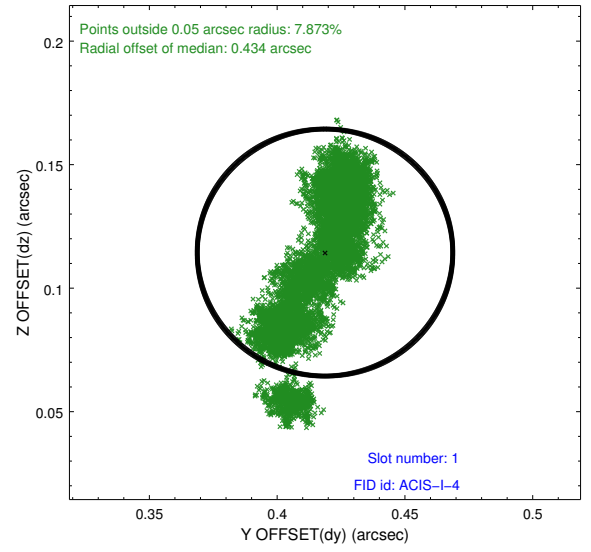
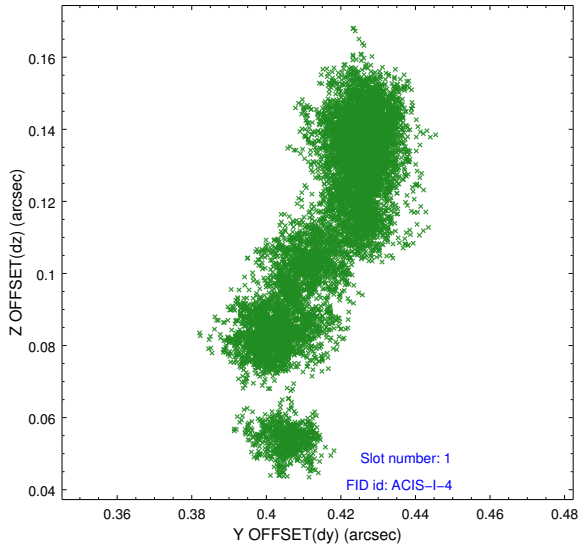


## 2.5 FID Slots

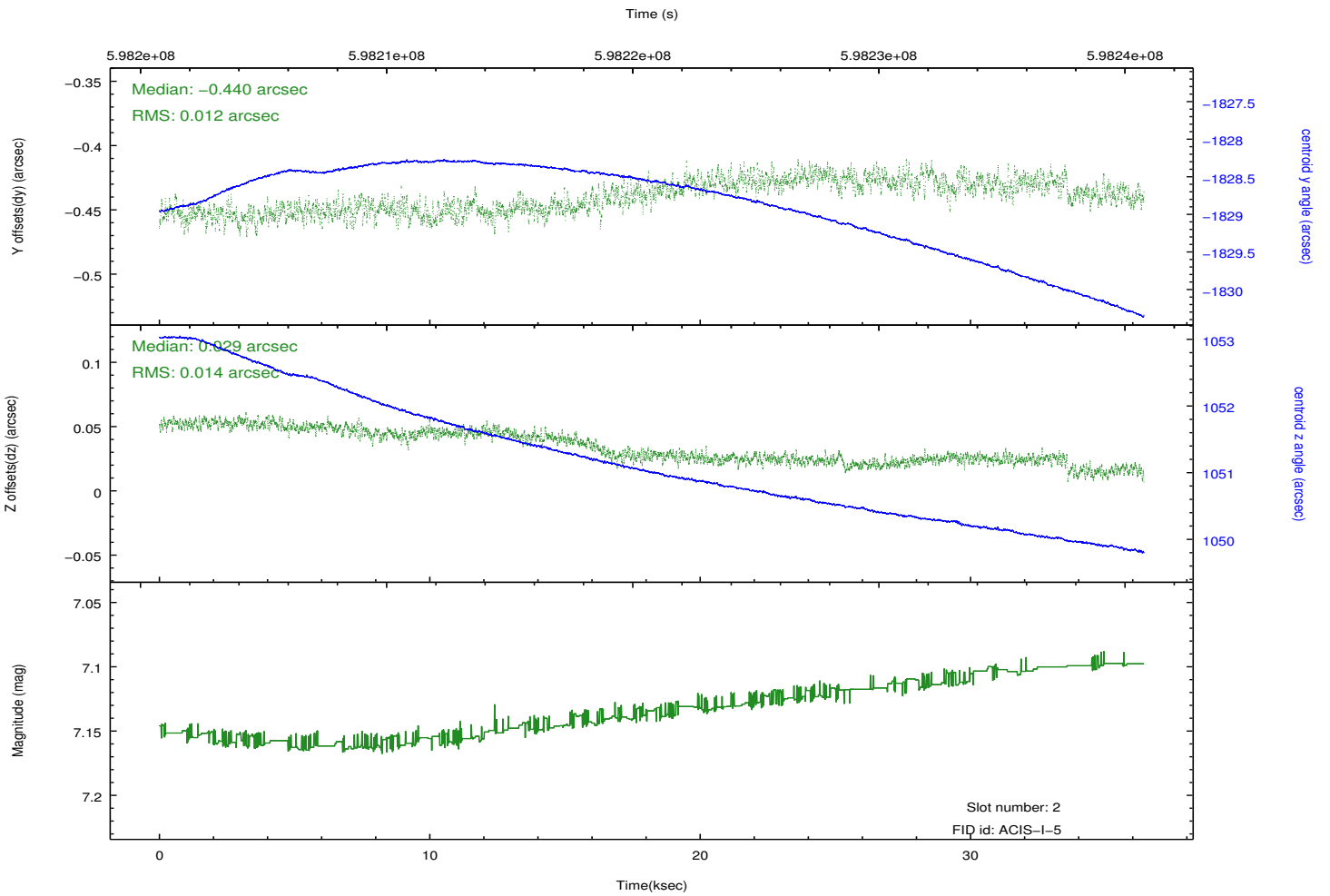
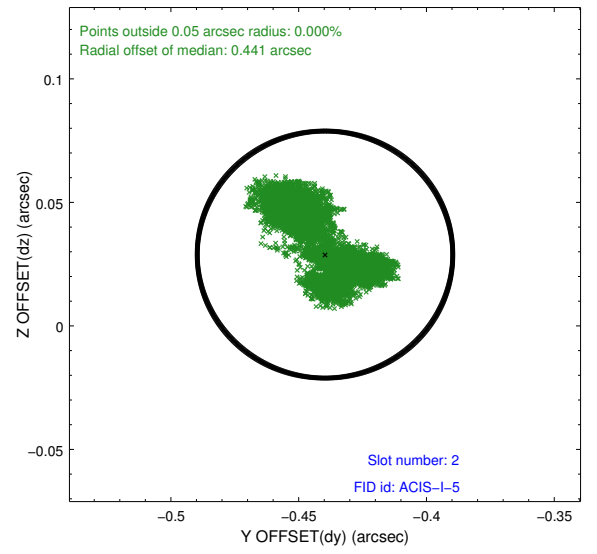
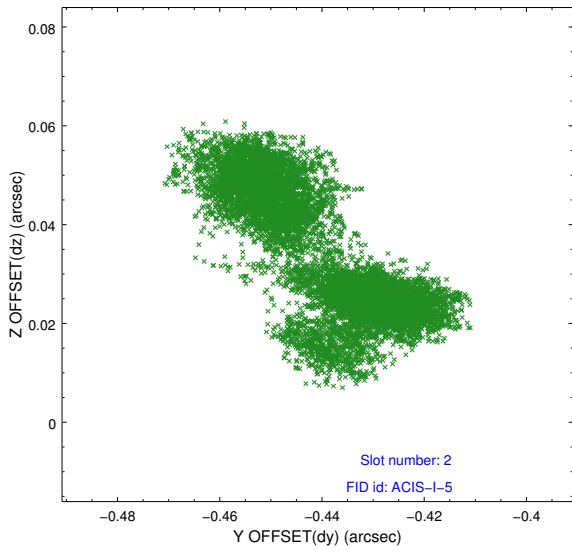
### 2.5.1 Slot 0



## 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)	2016.12.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	35.563200273633

## A.2 Comments