

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 7067 - L2 Version 2  
Chandra X-Ray Center

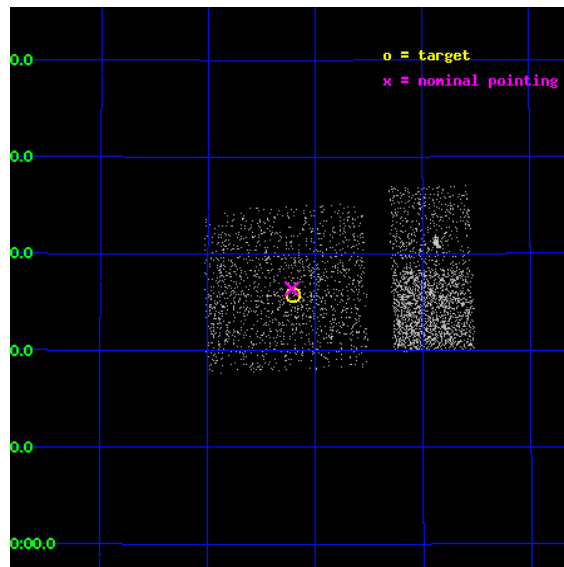
L2 Processing Date : Apr 25 2012

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# 1 Front

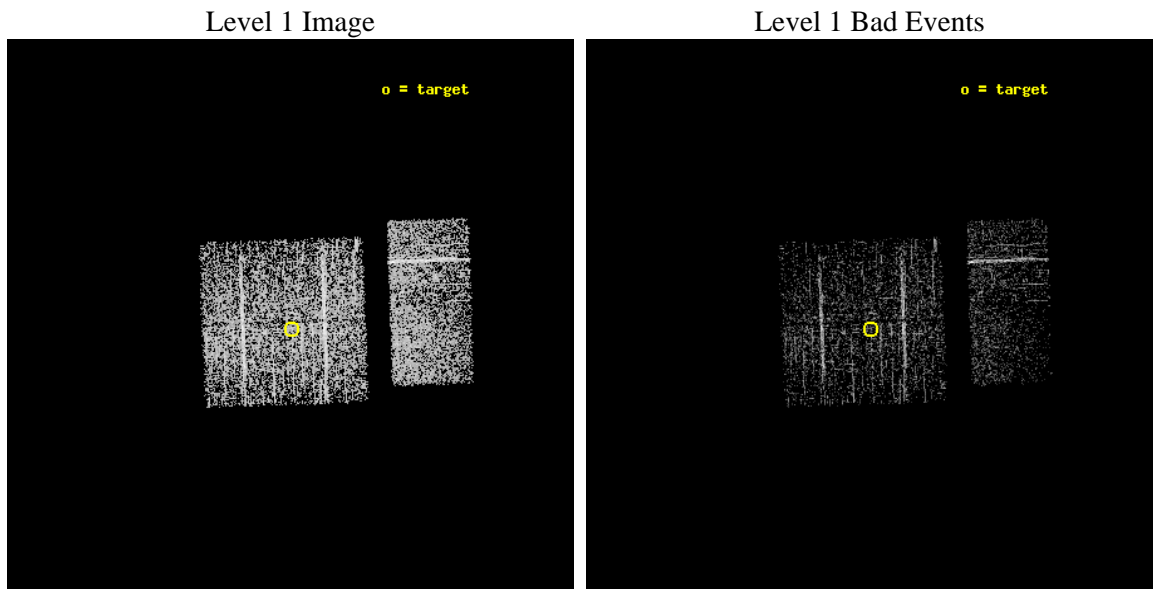
seq_num	600505	Sequence number
obs_id	7067	Observation id
title	Black Hole X-ray Nova in M31	Proposal title
observer	Dr. Stephen Murray	Principal investigator
object	M31-Center	Source name
dtcycle	0	&#160
cycle	P	events are from which exps? P[rimary] S[econdar
ra_targ	11.051667	Observer's specified target RA [deg]
dec_targ	41.430056	Observer's specified target Dec [deg]
ra_nom	11.054505559869	Nominal RA [deg]
dec_nom	41.439890092229	Nominal Dec [deg]
roll_nom	87.989267023222	Nominal Roll [deg]
revision	2	Processing version of data
ontime	1924.7000991702	Sum of GTIs [s]
livetime	302.99422240411	Livetime [s]
ontime0	1924.7000693083	Sum of GTIs [s]
ontime1	1924.7000991702	Sum of GTIs [s]
ontime2	1924.7000693083	Sum of GTIs [s]
ontime3	1924.7000991702	Sum of GTIs [s]
ontime6	1924.7000991702	Sum of GTIs [s]
ontime7	1924.7000991702	Sum of GTIs [s]
l2events	4136	Number of level 2 events



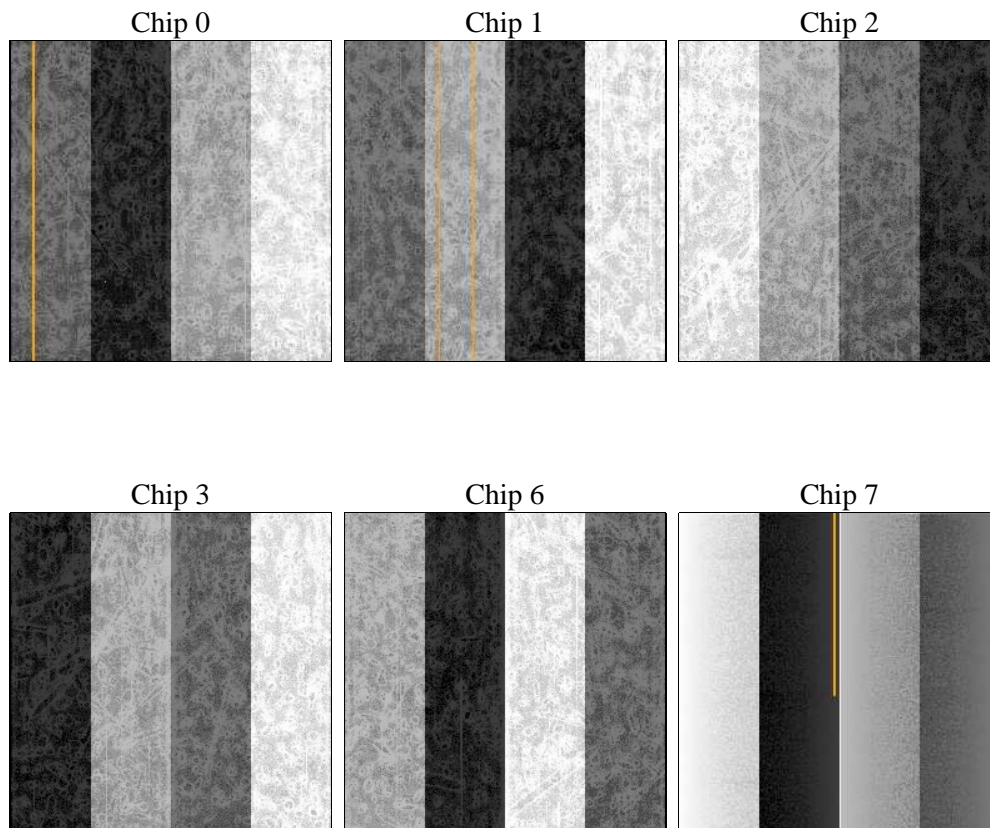
## 2 OBI Primary

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	1924.7000991702	Sum of GTIs [s]
caldbver	4.4.9	&#160	ontime0	1924.7000693083	Sum of GTIs [s]
date	2012-04-25T20:48:07	Date and time of file creation	ontime1	1924.7000991702	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	1924.7000693083	Sum of GTIs [s]
			ontime3	1924.7000991702	Sum of GTIs [s]
			ontime6	1924.7000991702	Sum of GTIs [s]
			ontime7	1924.7000991702	Sum of GTIs [s]
			l1events	42429	Number of level 1 events

### 2.1.4 Events

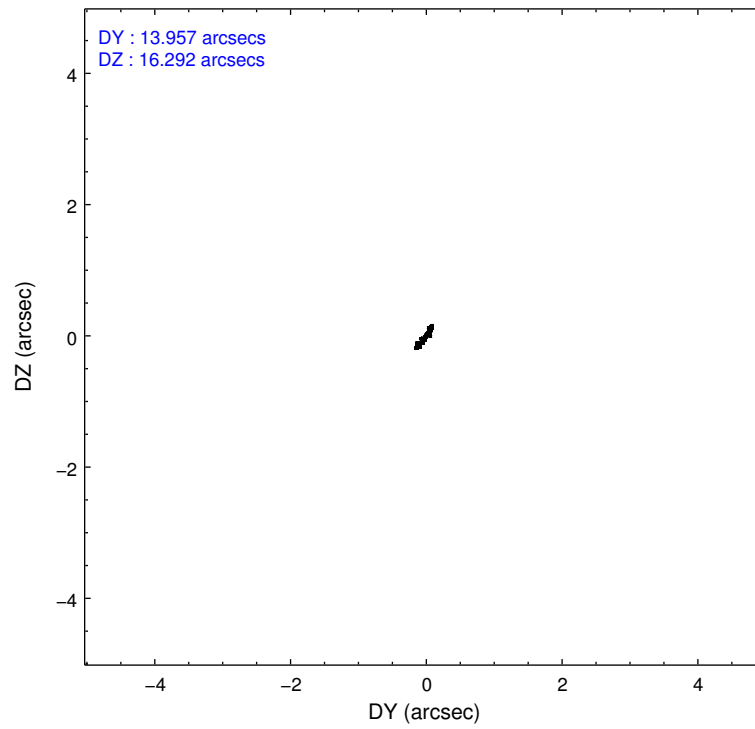
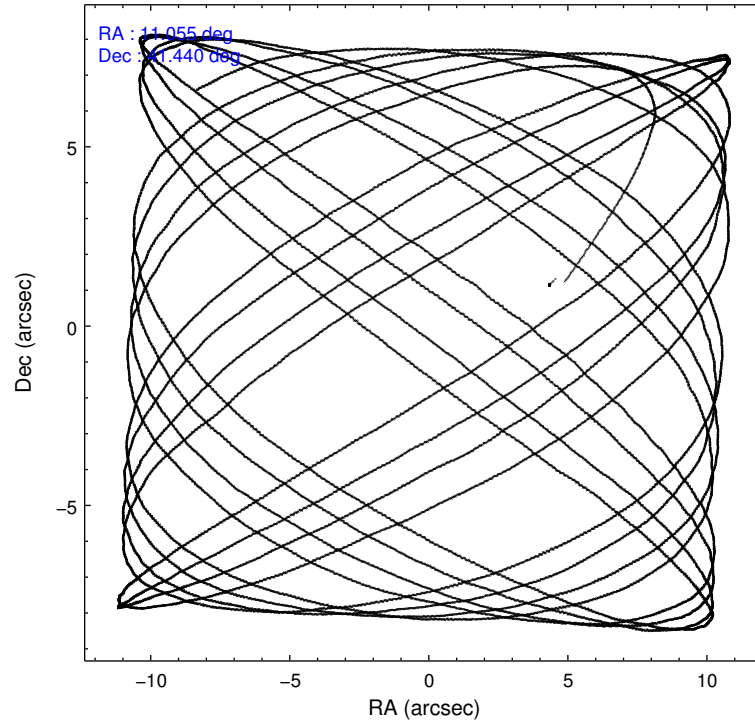
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	5829	7395	7478	7473	7753	6501
rejected events	5322	6736	6943	6967	7085	4476
rejected %	91%	91%	92%	93%	91%	68%

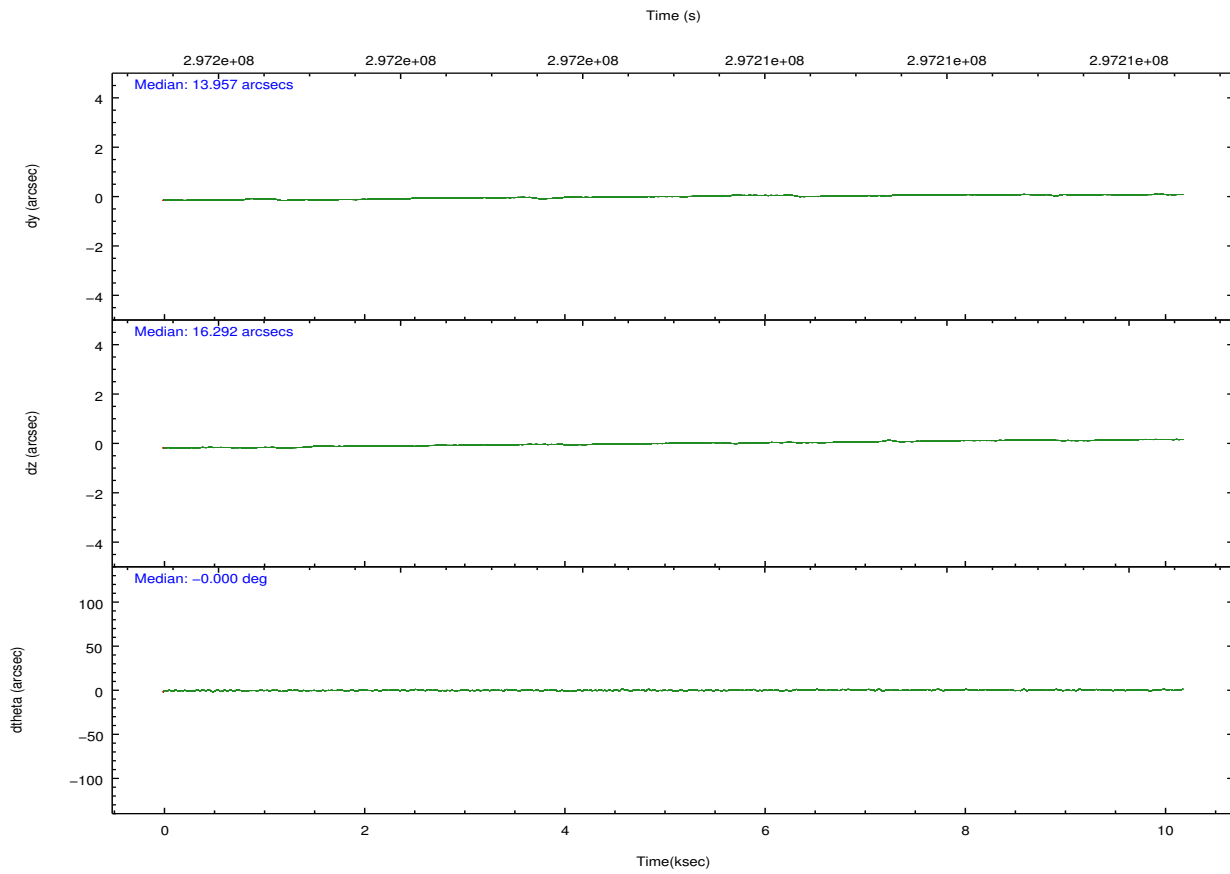
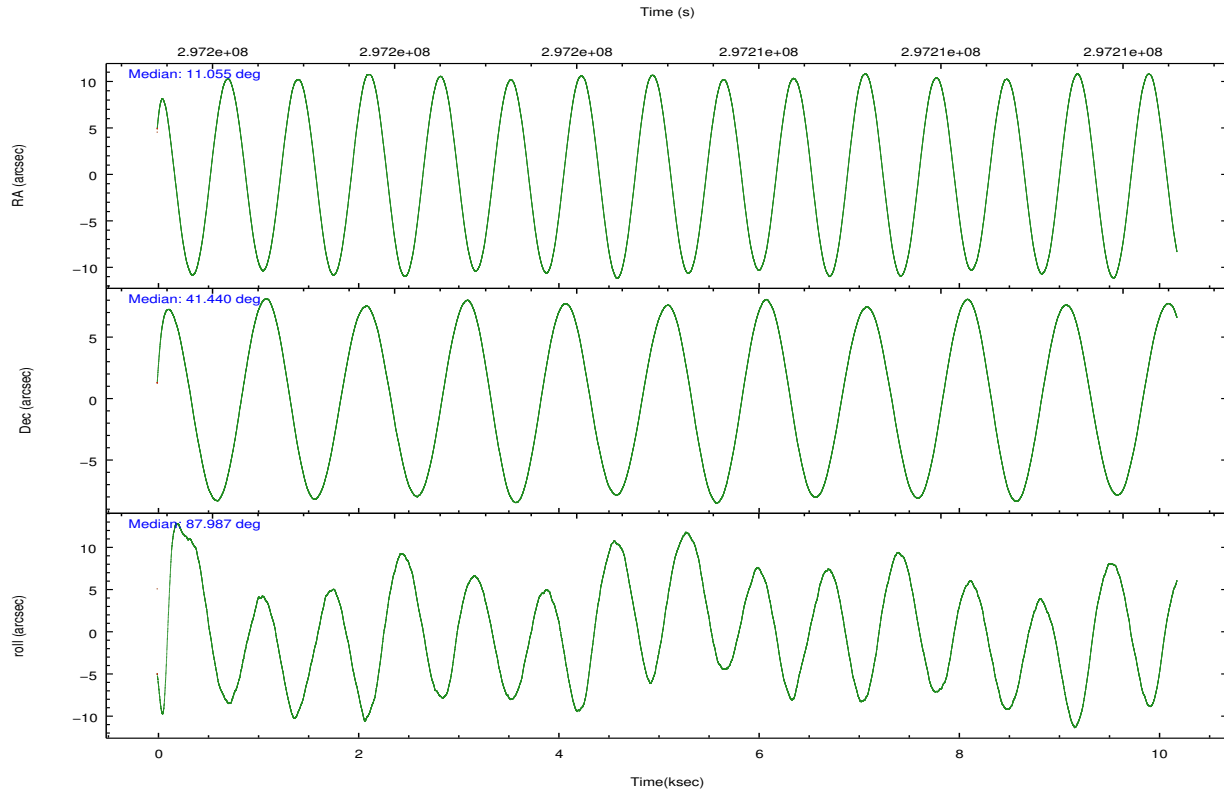
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	128	179	147	151	222	201
	2%	2%	1%	2%	2%	3%
grade 1 events	2	5	3	4	5	13
	0%	0%	0%	0%	0%	0%
grade 2 events	141	144	124	100	176	424
	2%	1%	1%	1%	2%	6%
grade 3 events	77	94	80	74	77	194
	1%	1%	1%	0%	0%	2%
grade 4 events	58	107	90	80	77	199
	0%	1%	1%	1%	0%	3%
grade 5 events	199	214	215	247	235	550
	3%	2%	2%	3%	3%	8%
grade 6 events	104	136	96	102	117	1015
	1%	1%	1%	1%	1%	15%
grade 7 events	5120	6516	6723	6715	6844	3905
	87%	88%	89%	89%	88%	60%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012367	ACIS-012367	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	11.071828	11.0545055598694	CCD I2 on	Y	Y
[deg] Pointing Dec	41.415628	41.4398900922295	CCD I3 on	Y	Y
[deg] Pointing Roll	87.769125	87.9892670232219	CCD S0 on	N	N
[s] Window start time (MET)	296697665.184000	296697665.184000	CCD S1 on	N	N
[s] Window stop time (MET)	297388865.184000	297388865.184000	CCD S2 on	O1	Y
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S3 on	O2	Y
[mm] SIM defocus	0	0.001439871863259334	CCD S4 on	N	N
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S5 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	Number of optional ACIS chips dropped	0	0
[s] Observation start time (MET)	297200078.184000	297198977.85828	On-chip summing requested	N	N
Observation start date	2007-06-02T19:33:33	2007-06-02T19:16:17	Subarray requested	NONE	NONE
[s] Observation end time (MET)	297210078.184000	297210212.37132	Alternating exposures requested	Y	Y
Observation end date	2007-06-02T22:20:13	2007-06-02T22:23:32	[s] Primary exposure time	0.600000	0.6
Read mode	TIMED	TIMED	[s] Secondary exposure time	0.000000	3.2
			Duty cycle	5	5

## 2.3 Aspect



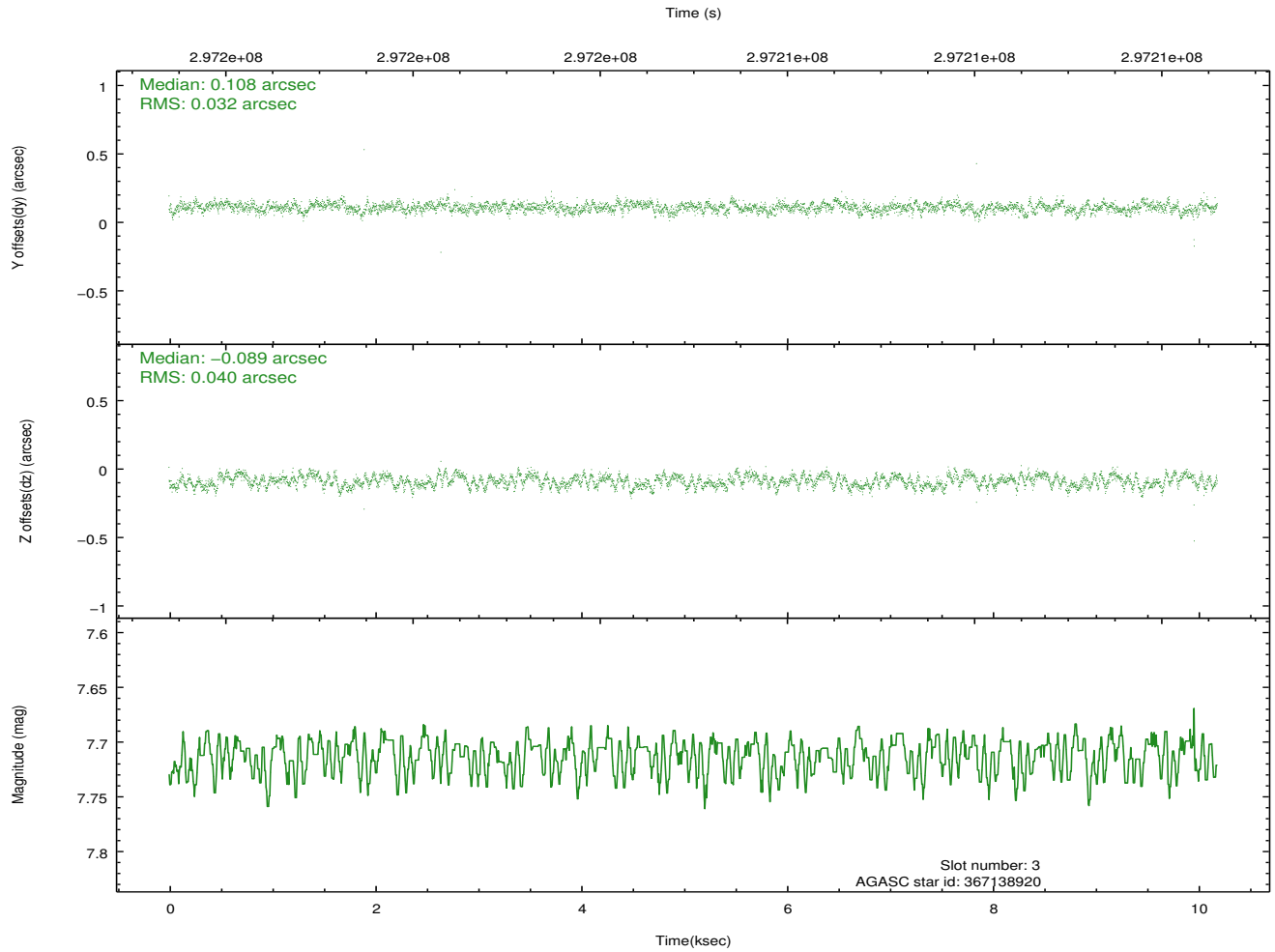
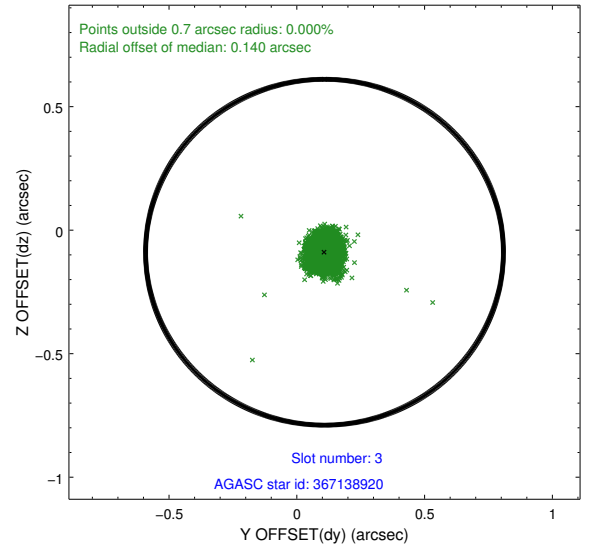
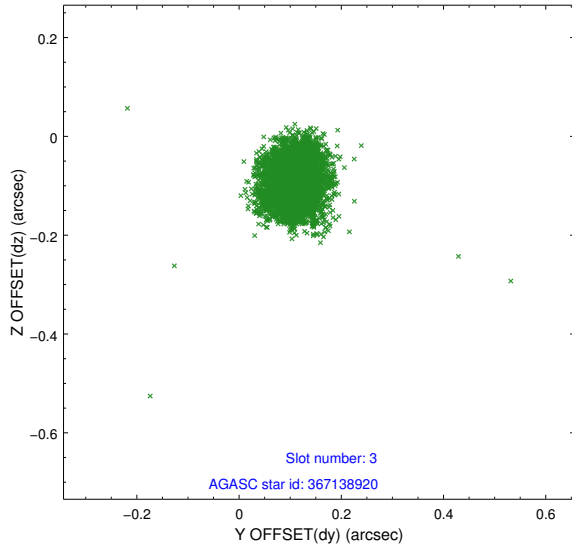


### Slot Statistics

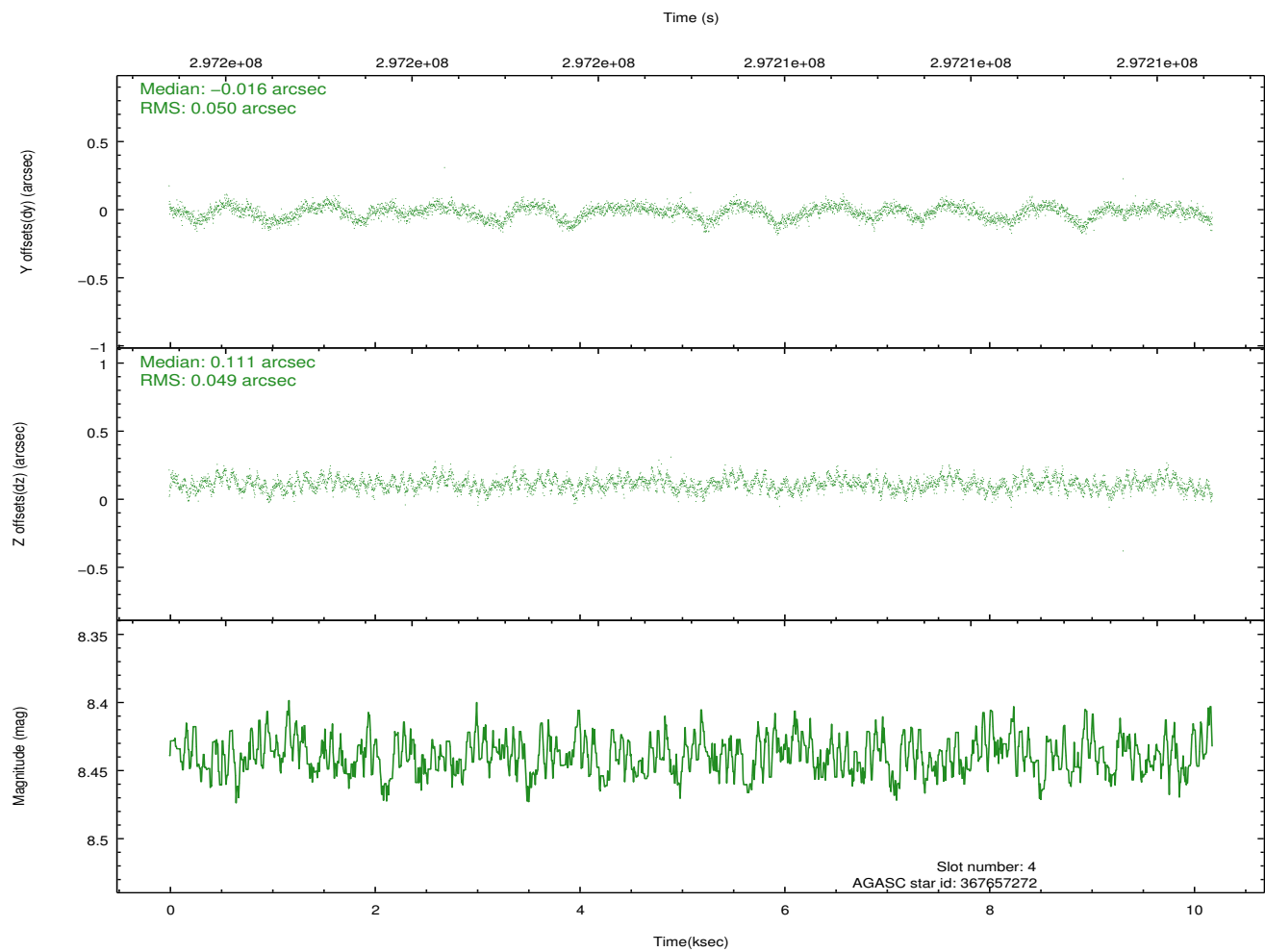
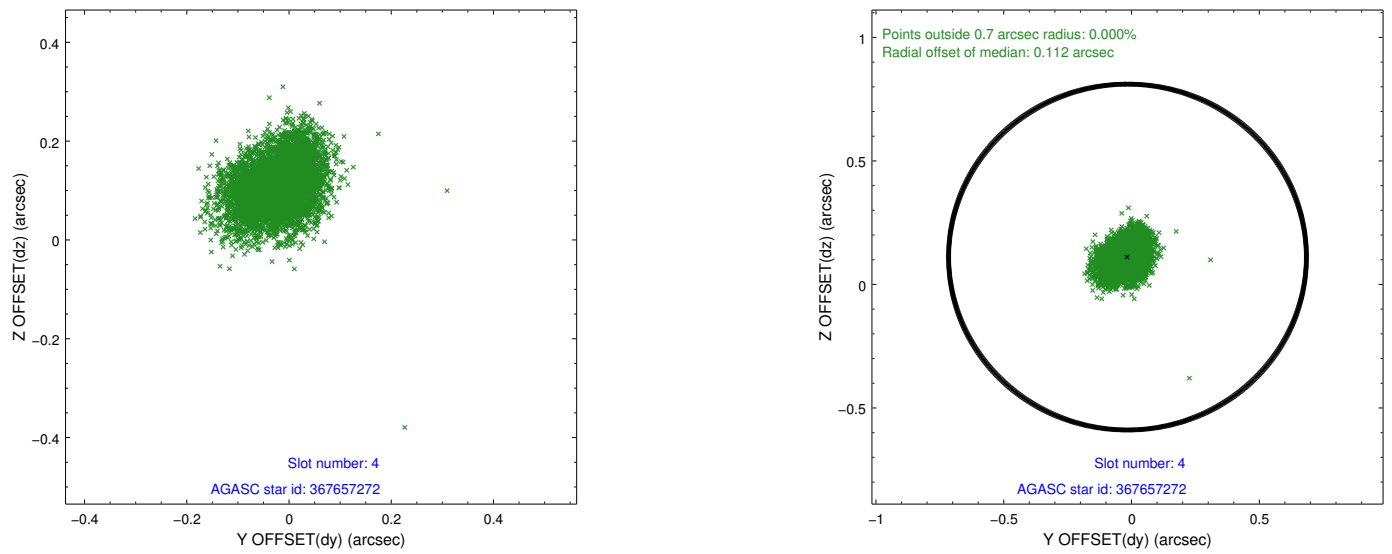
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.22	2485	0.065	-0.047	0.007	0.011	0.000000	0.000000	925.59	-839.99
1	FID	ACIS-I-5	7.22	2485	-0.213	0.063	0.006	0.011	0.000000	0.000000	-1822.47	1057.42
2	FID	ACIS-I-6	7.23	2484	0.058	0.054	0.008	0.013	0.000000	0.000000	390.62	1702.44
3	GUIDE	367138920	7.71	4969	0.108	-0.089	0.054	0.084	11.513485	40.808909	-2132.58	-1288.07
4	GUIDE	367657272	8.44	4968	-0.016	0.111	0.074	0.120	11.834471	41.298907	-330.57	-2076.96
5	GUIDE	367657896	9.02	4957	0.107	-0.012	0.076	0.123	11.197765	41.313576	-353.20	-354.75
6	GUIDE	367663272	9.26	4959	-0.140	-0.233	0.116	0.181	10.656279	41.699429	979.91	1156.57
7	GUIDE	367657368	8.67	4967	-0.058	0.225	0.076	0.124	11.928227	41.287266	-359.59	-2331.67

## 2.4 Star Slots

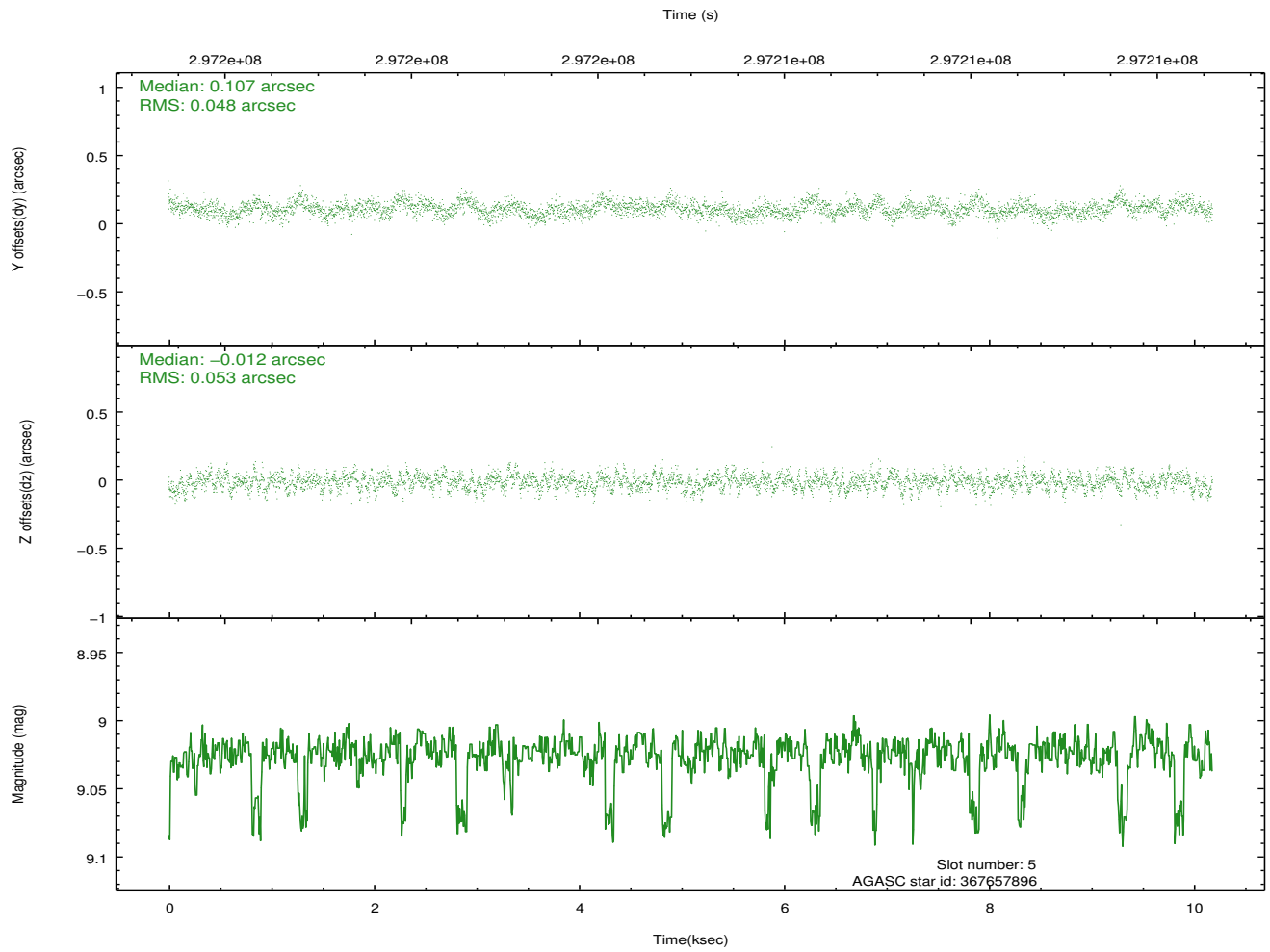
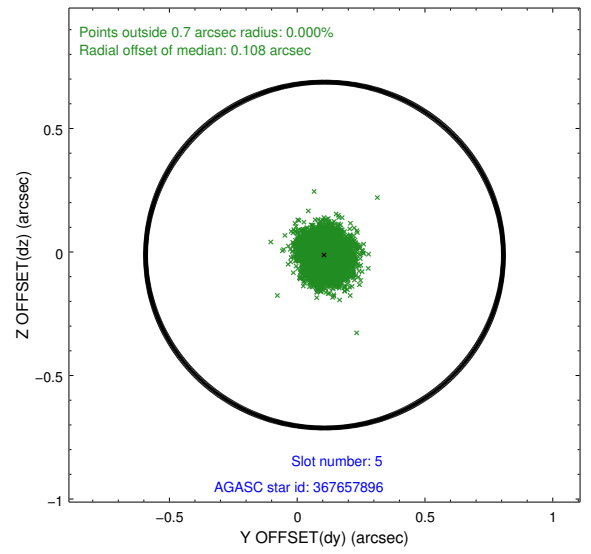
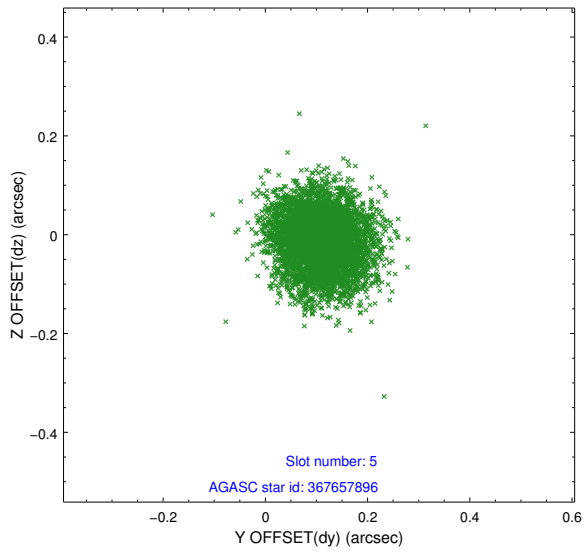
### 2.4.1 Slot 3



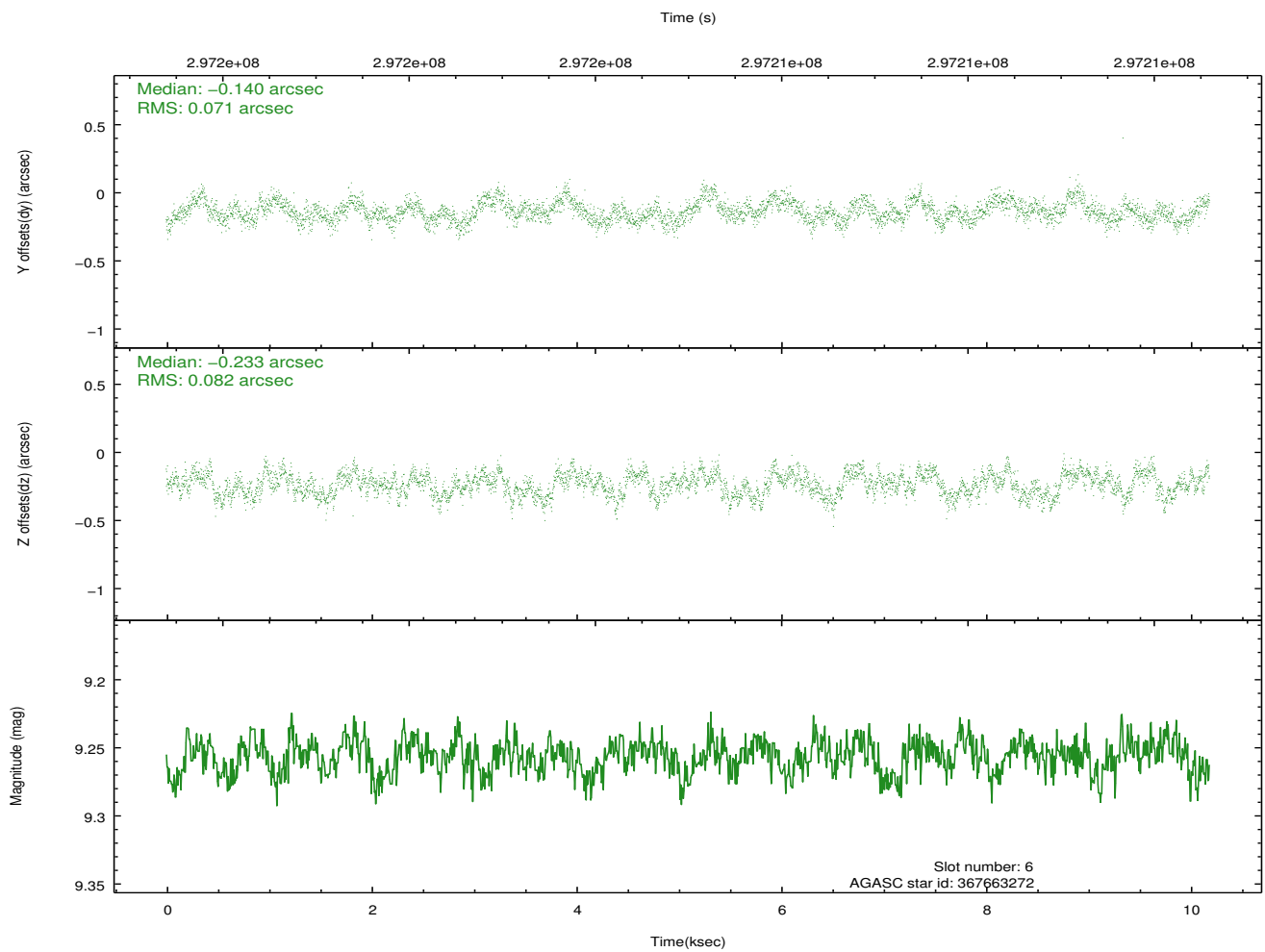
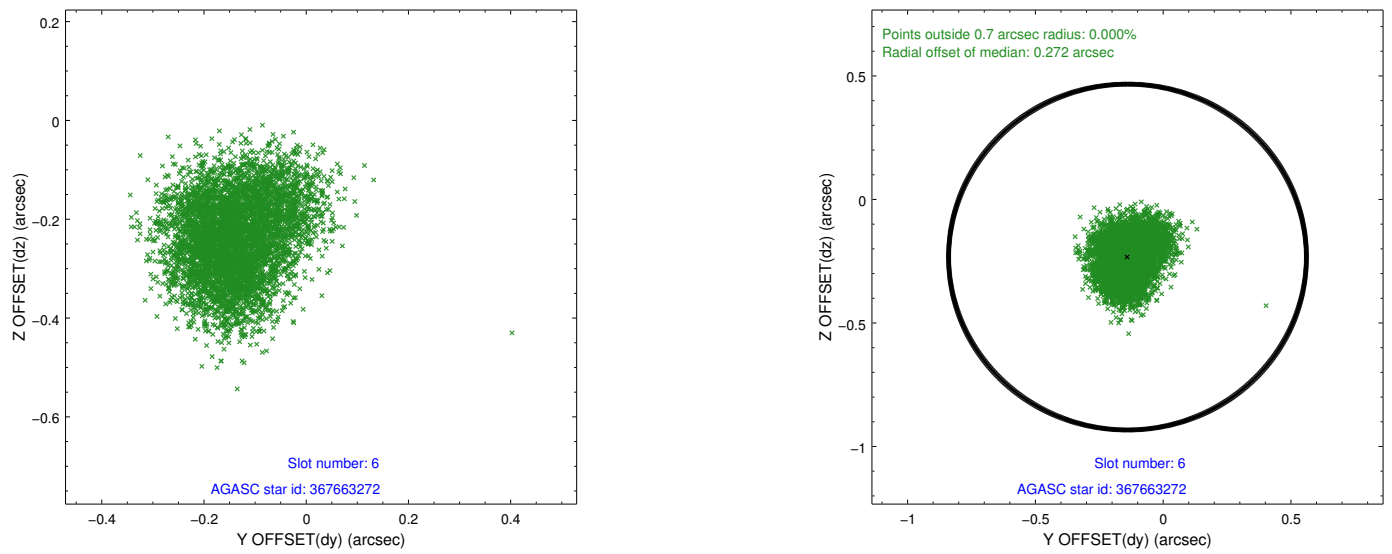
## 2.4.2 Slot 4



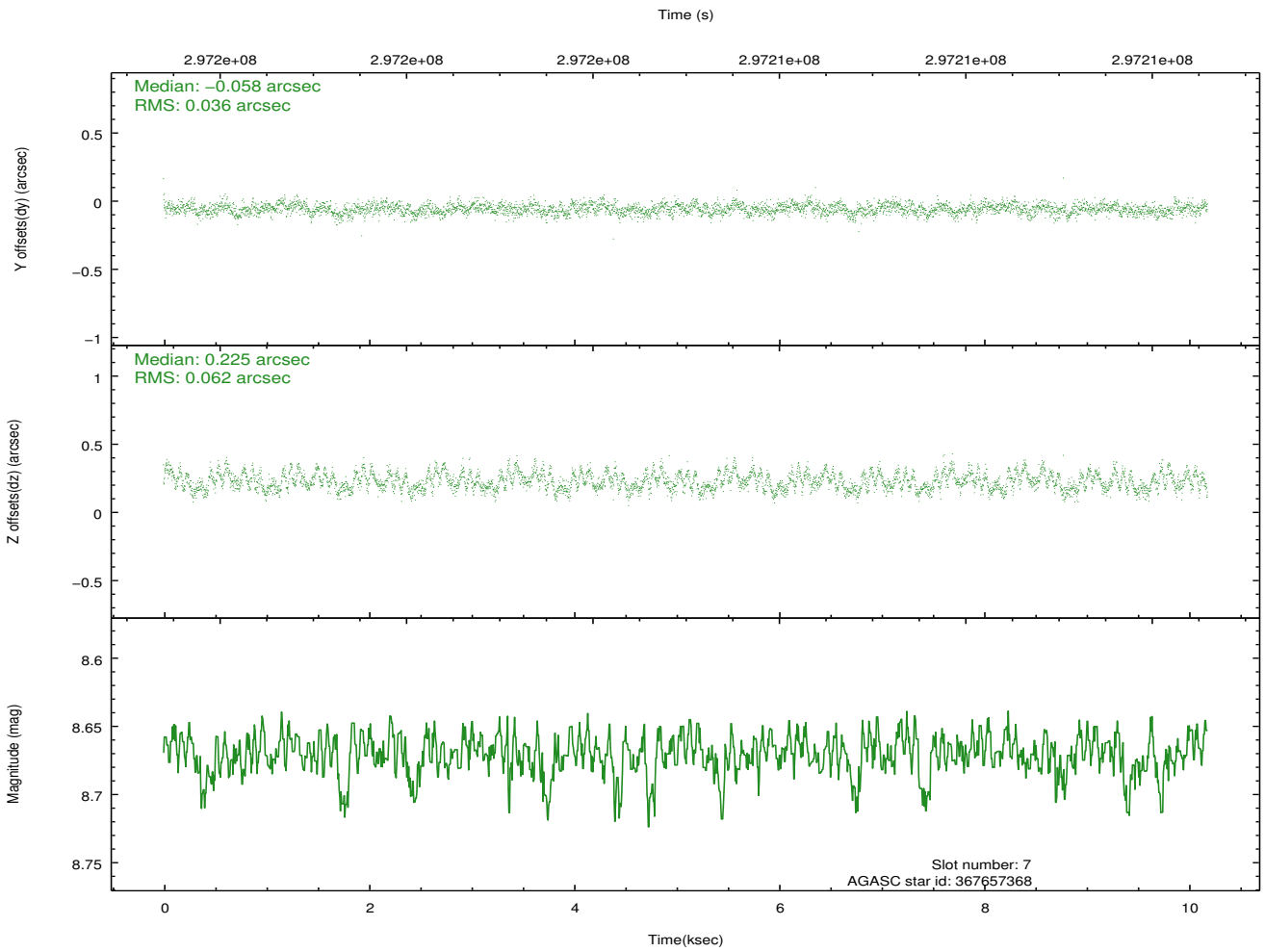
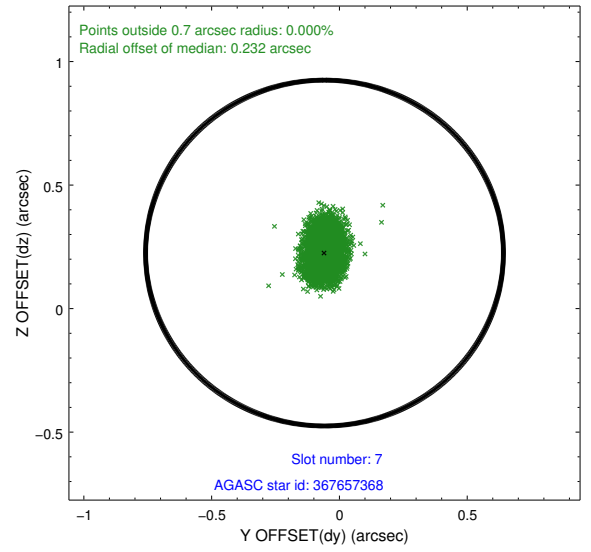
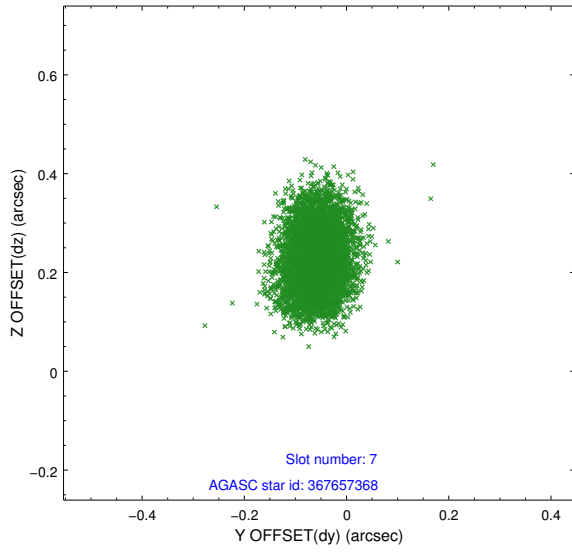
### 2.4.3 Slot 5



## 2.4.4 Slot 6

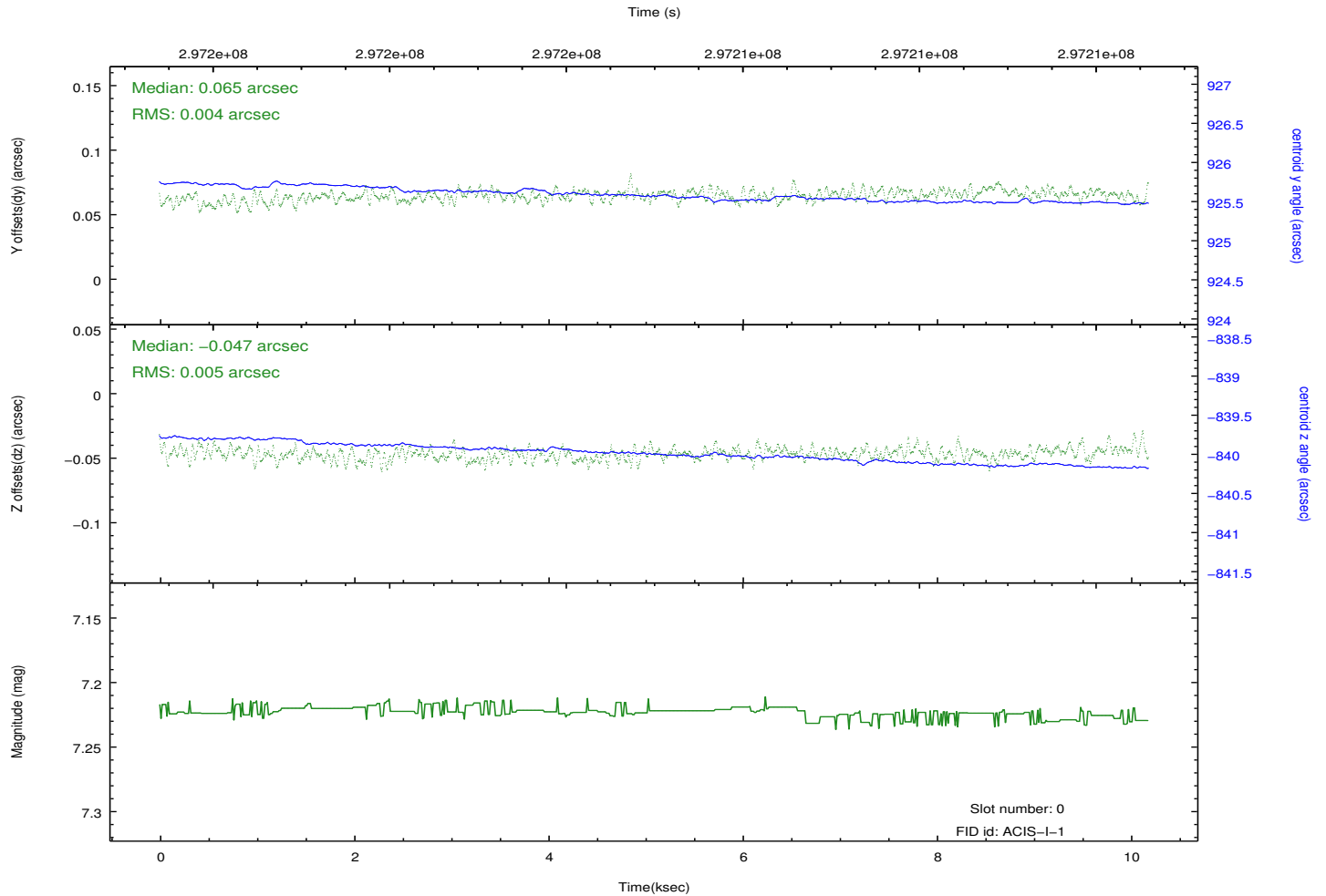
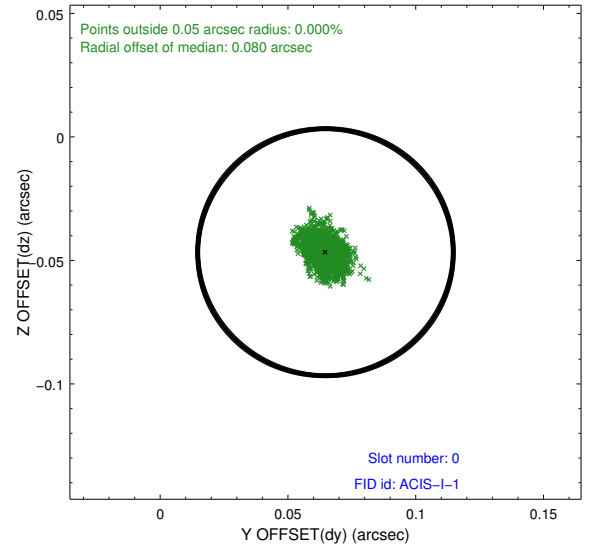
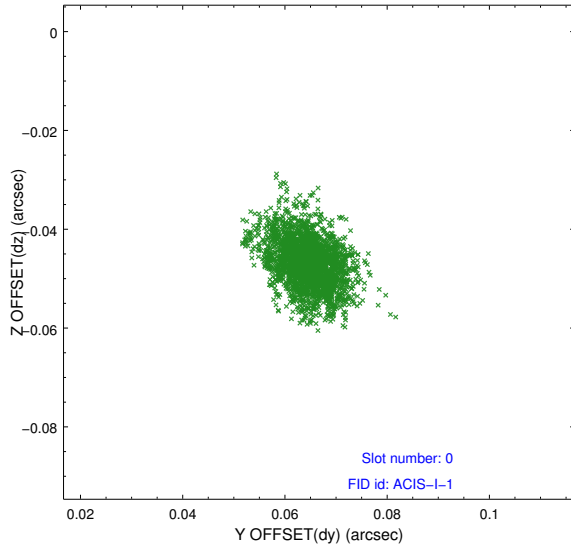


### 2.4.5 Slot 7

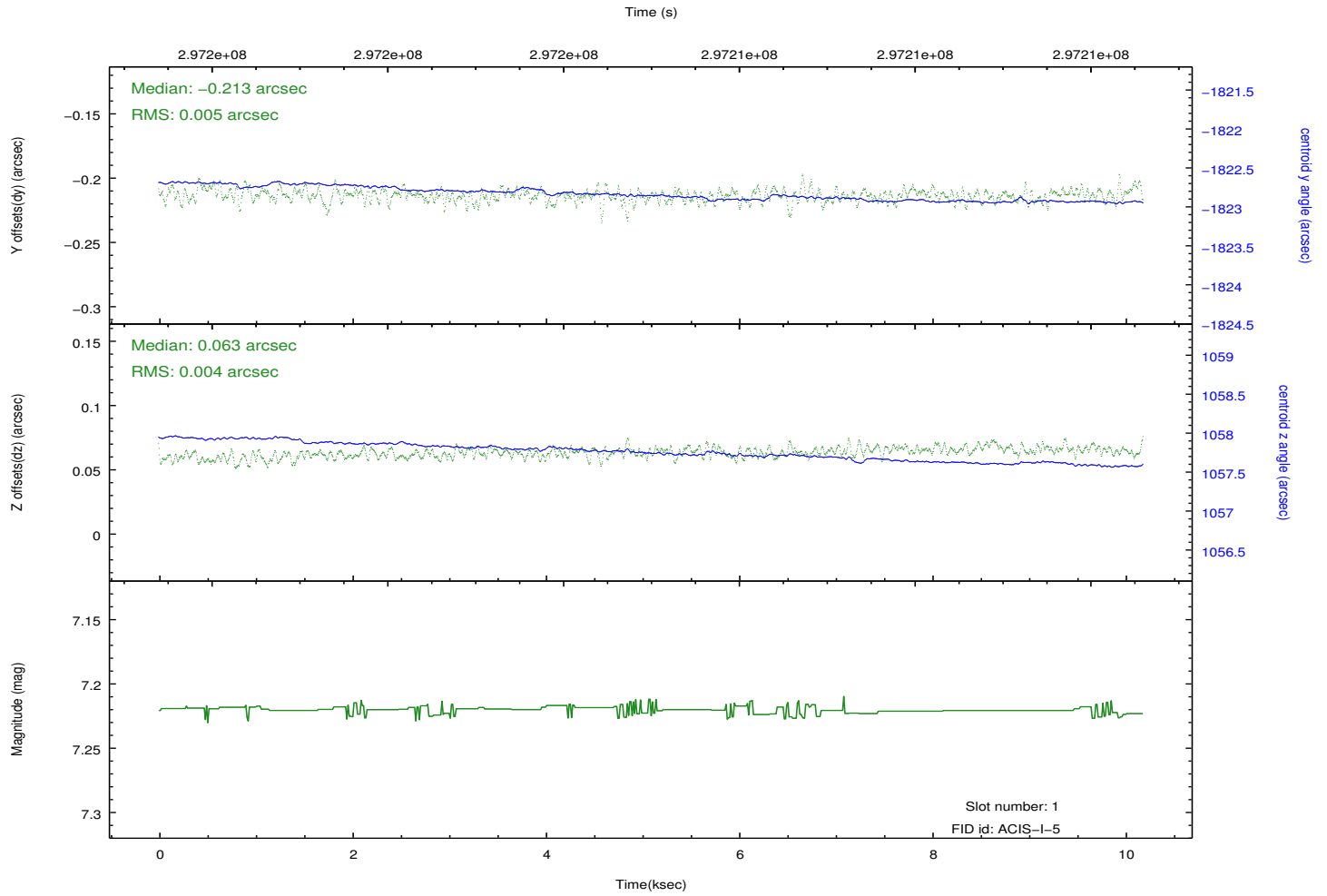
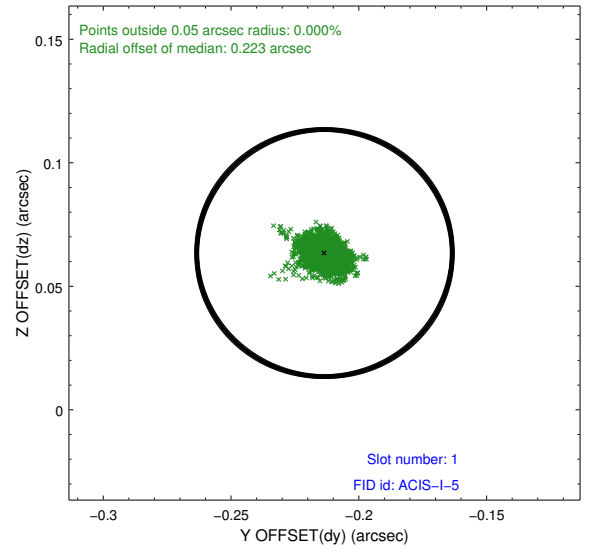
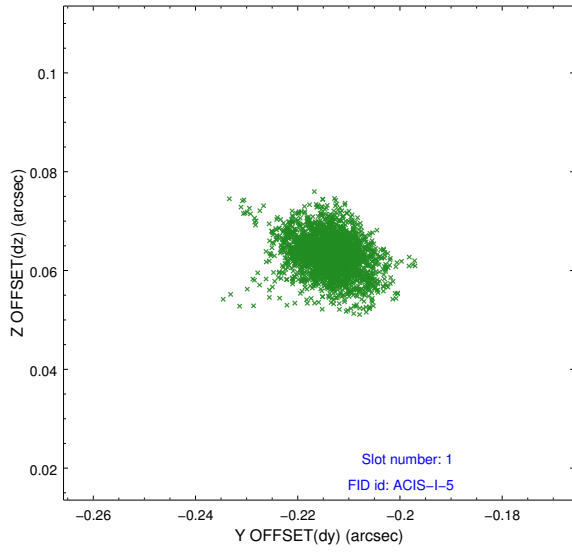


## 2.5 FID Slots

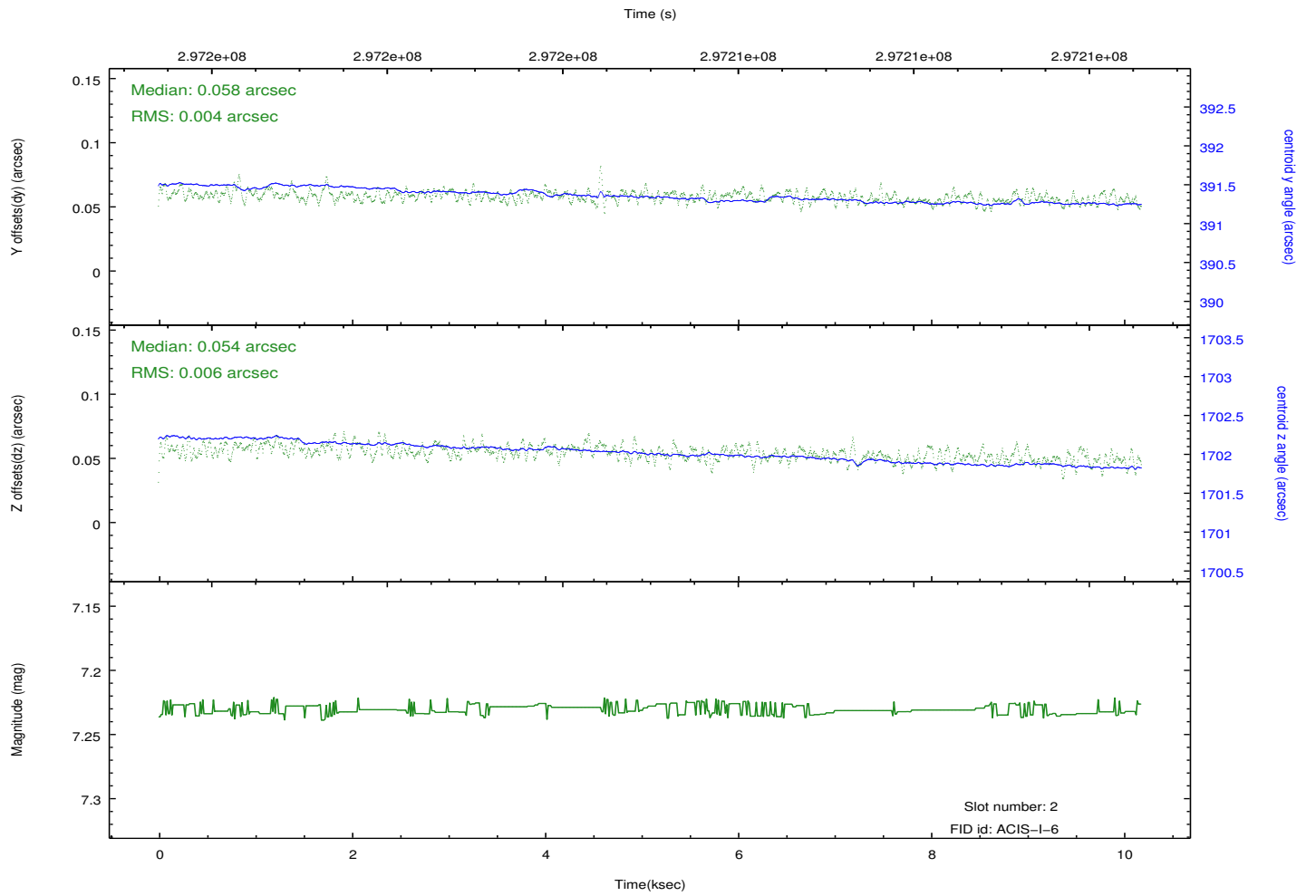
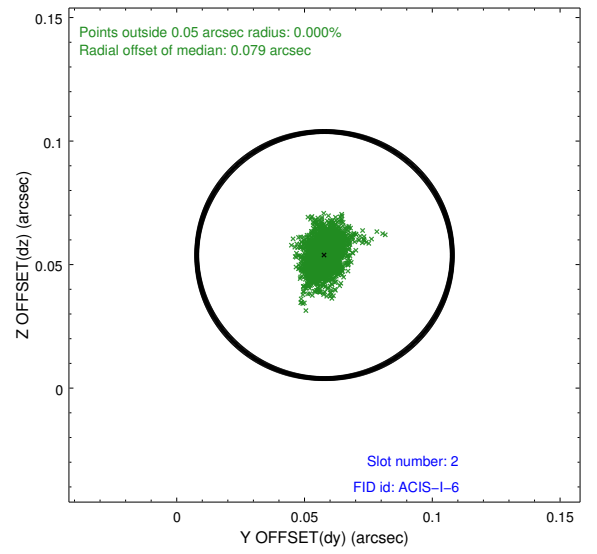
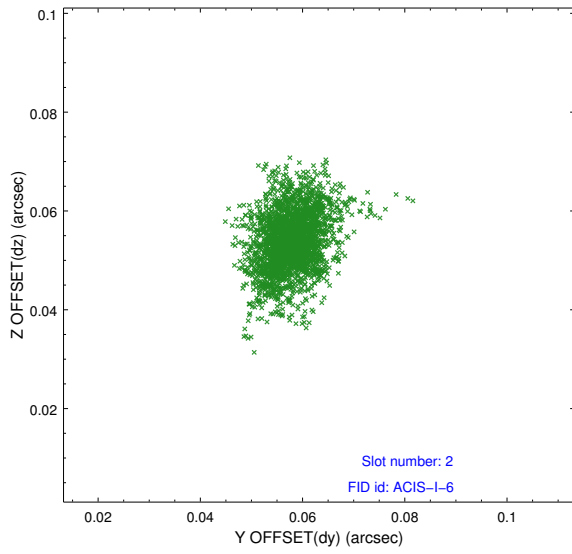
### 2.5.1 Slot 0



## 2.5.2 Slot 1



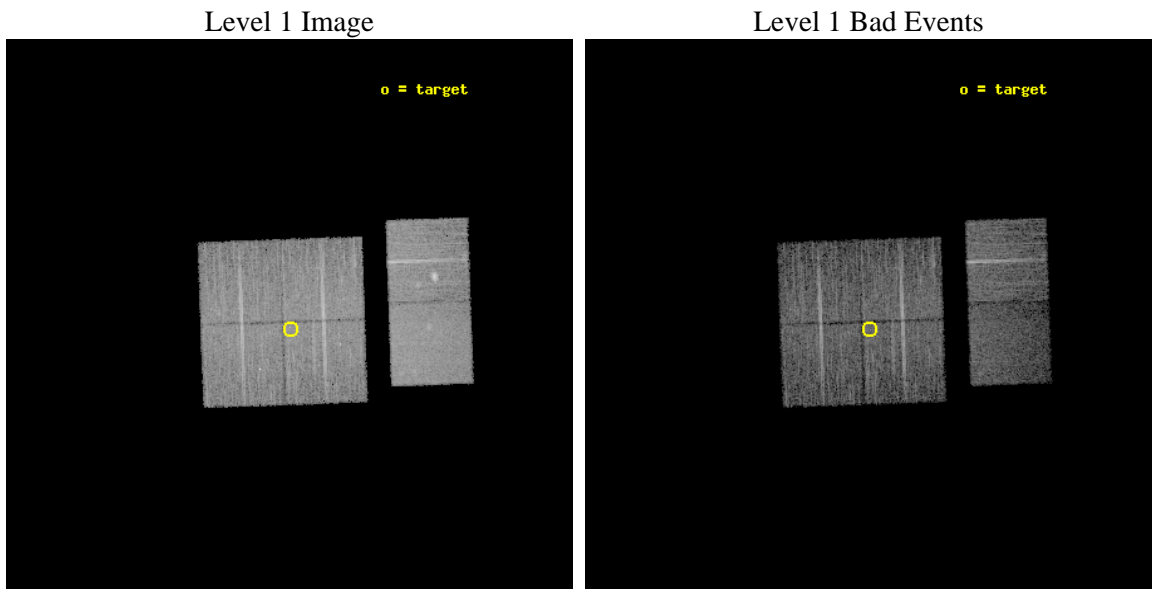
### 2.5.3 Slot 2



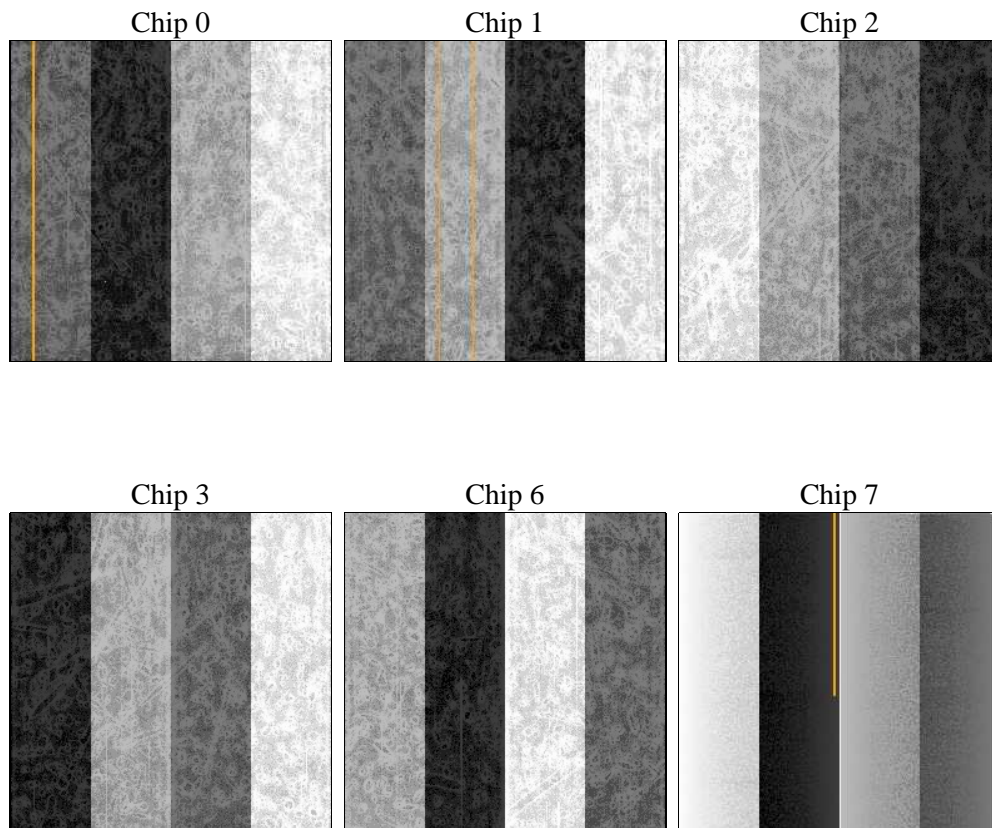
### 3 OBI Secondary

#### 3.1 OBI

##### 3.1.1 Images



##### 3.1.2 Bias



### 3.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	8219.6851396561	Sum of GTIs [s]
caldbver	4.4.9	&#160	ontime0	8219.6847599745	Sum of GTIs [s]
date	2012-04-25T20:50:30	Date and time of file creation	ontime1	8216.4437202811	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	8219.6855372787	Sum of GTIs [s]
			ontime3	8219.6851396561	Sum of GTIs [s]
			ontime6	8219.685088098	Sum of GTIs [s]
			ontime7	8219.6850188971	Sum of GTIs [s]
			l1events	394098	Number of level 1 events

### 3.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	59842	60861	67949	62487	69305	73654	grade 0 events	2293	3330	2372	2570	4596	3498
rejected events	53391	52836	61590	55998	59718	39175		3%	5%	3%	4%	6%	4%
rejected %	89%	86%	90%	89%	86%	53%	grade 1 events	40	39	34	56	39	82
								0%	0%	0%	0%	0%	0%
							grade 2 events	1544	1613	1466	1330	1782	7082
								2%	2%	2%	2%	2%	9%
							grade 3 events	726	815	697	701	806	3280
								1%	1%	1%	1%	1%	4%
							grade 4 events	711	820	691	669	829	3083
								1%	1%	1%	1%	1%	4%
							grade 5 events	2104	2521	2043	2558	2536	7645
								3%	4%	3%	4%	3%	10%
							grade 6 events	1179	1450	1135	1223	1576	17544
								1%	2%	1%	1%	2%	23%
							grade 7 events	51245	50273	59511	53380	57141	31440
								85%	82%	87%	85%	82%	42%

# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.04.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.1444219

## A.2 Comments

Window constraint met.