

# V&V Reference Report

## L2 ASCDS Version : 7.6.7.1

Observation 4721 - L2 Version <sub>e</sub>1  
Chandra X-Ray Center

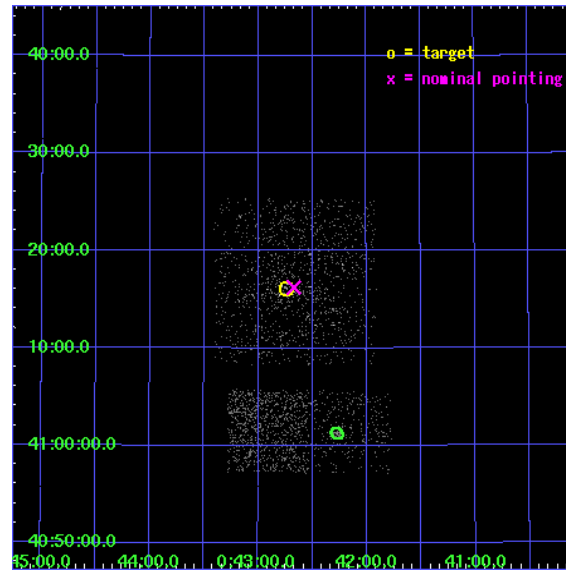
L2 Processing Date : Apr 16 2006

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# 1 Front

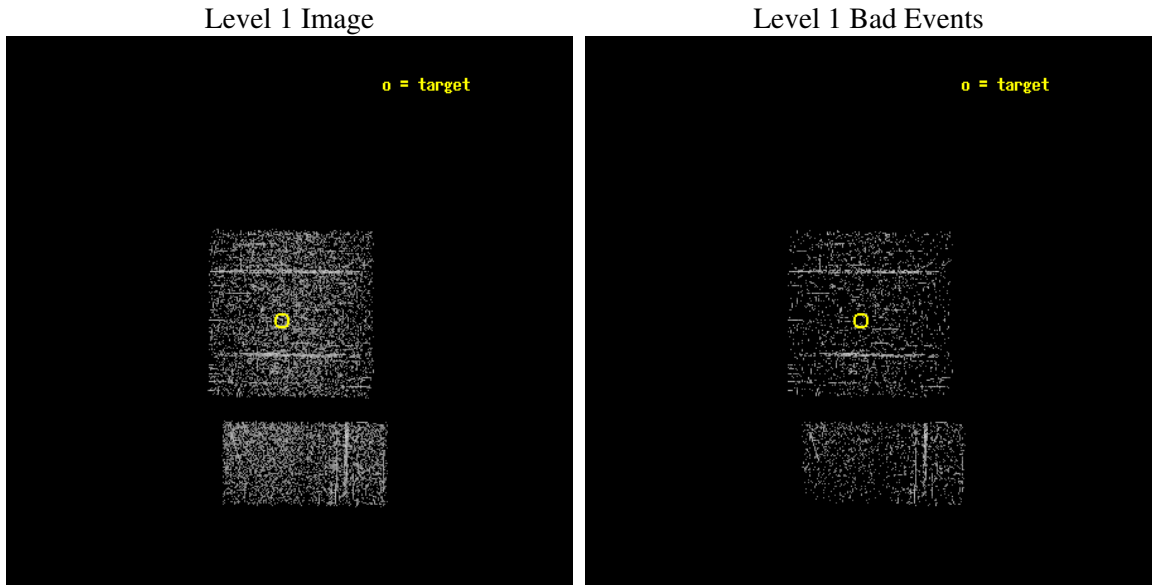
seq_num	600376
obs_id	4721
title	Black Hole X-ray Novae in M31
observer	Dr. MICHAEL GARCIA
object	M31-bulge
dtcycle	0
cycle	P
ra_targ	10.684583
dec_targ	41.269
ra_nom	10.667693169347
dec_nom	41.270613442193
roll_nom	180.54708022259
revision	2
ontime	979.32645443082
livetime	154.16960682236
ontime0	979.20333445072
ontime1	979.24437442422
ontime2	979.28541442752
ontime3	979.32645443082
ontime6	979.40853443742
ontime7	979.36749443412
l2events	2727



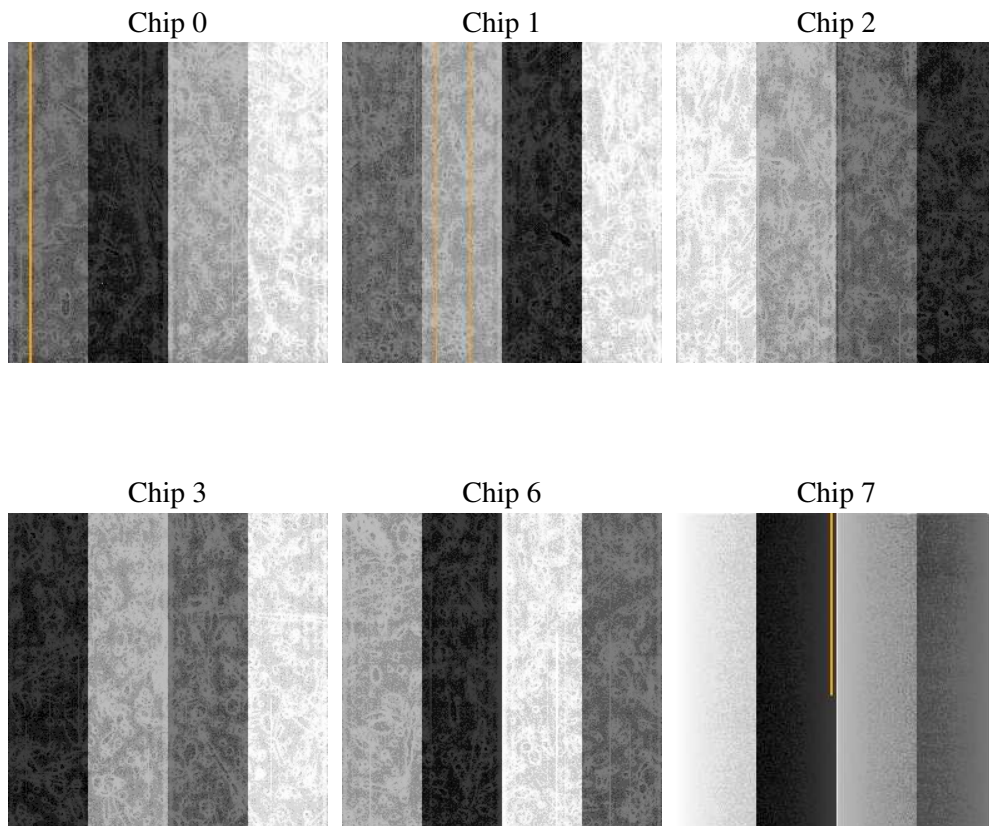
## 2 OBI Primary

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.7.1
caldsver	3.2.1
date	2006-04-16T21:43:23
revision	2

sched_exp_time	5000.000000
ontime	1109.1057604551
ontime0	1109.1057604551
ontime1	1109.1057604551
ontime2	1109.1057604551
ontime3	1109.1057604551
ontime6	1109.1057604551
ontime7	1109.1057604551
llevents	25223

### 2.1.4 Events

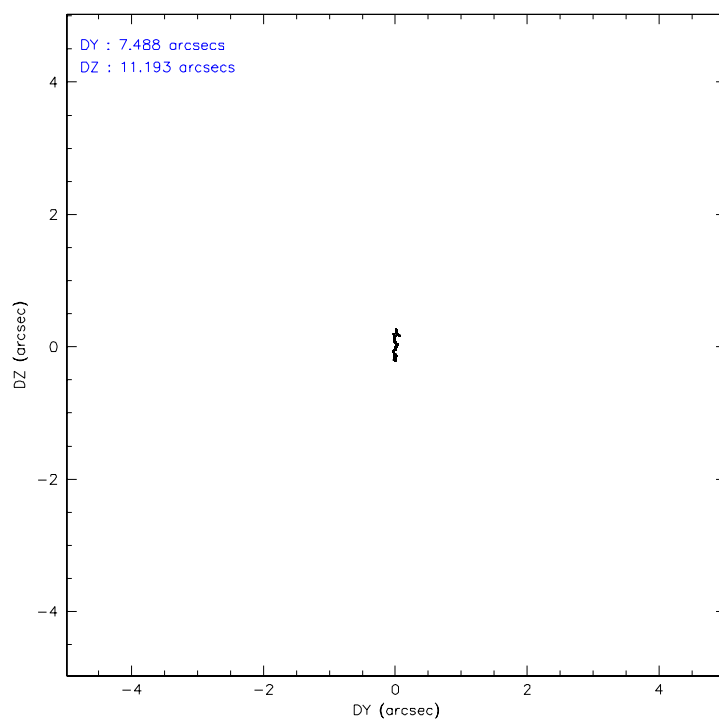
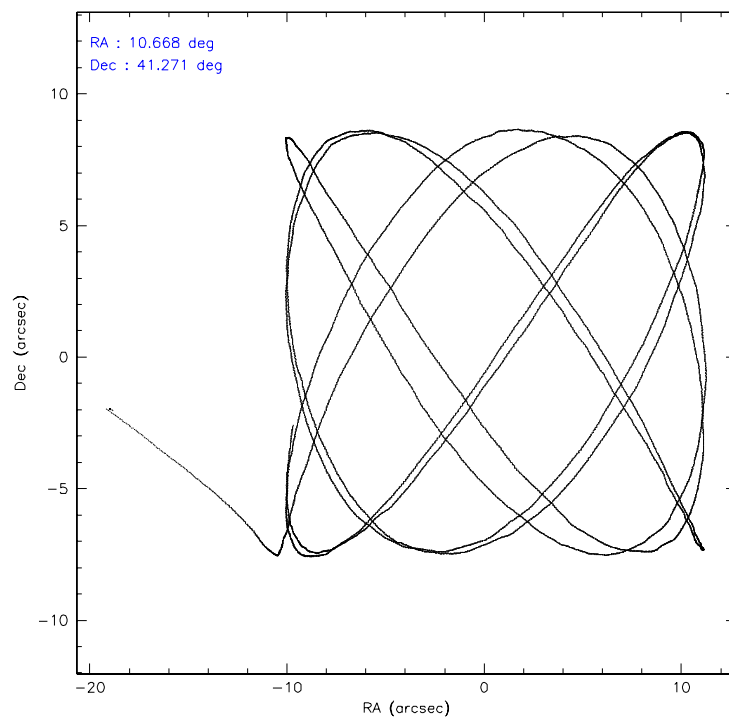
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	3906	4010	4188	4173	4653	4293
rejected events	3491	3633	3718	3647	4286	3356
rejected %	89%	90%	88%	87%	92%	78%

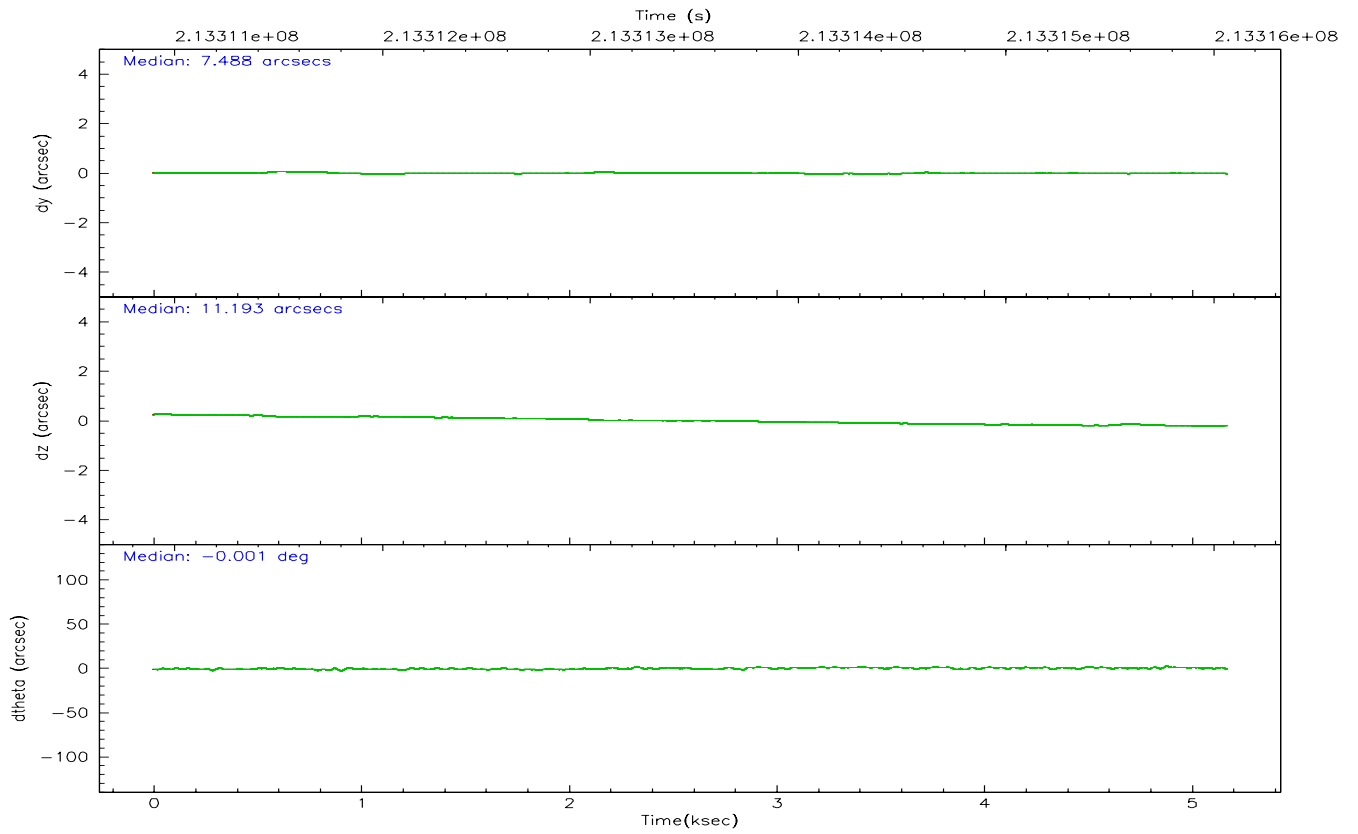
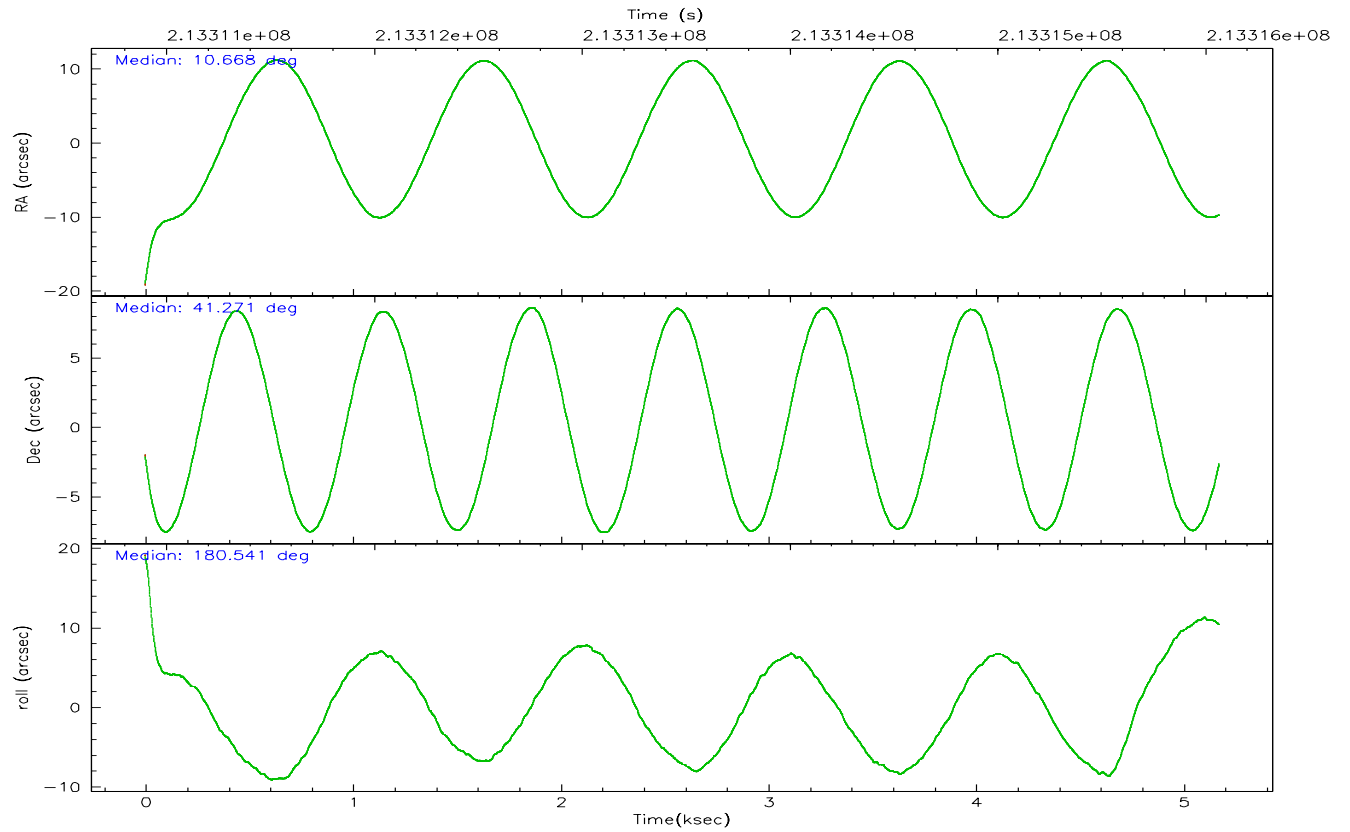
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	184	175	260	341	144	63
	4%	4%	6%	8%	3%	1%
grade 1 events	2	3	2	1	2	4
	0%	0%	0%	0%	0%	0%
grade 2 events	98	74	89	78	84	268
	2%	1%	2%	1%	1%	6%
grade 3 events	43	51	50	50	46	79
	1%	1%	1%	1%	0%	1%
grade 4 events	53	38	51	40	46	58
	1%	0%	1%	0%	0%	1%
grade 5 events	148	124	134	124	153	262
	3%	3%	3%	2%	3%	6%
grade 6 events	90	86	55	65	83	602
	2%	2%	1%	1%	1%	14%
grade 7 events	3288	3459	3547	3474	4095	2957
	84%	86%	84%	83%	88%	68%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-012367	ACIS-012367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	On-chip summing requested	N	N
Observation mode	POINTING	POINTING	Subarray requested	NONE	NONE
Pointing RA	10.699109	10.66769316934688	Alternating exposures requested	Y	Y
Pointing Dec	41.284729	41.27061344219265	Primary exposure time	0.600000	0.6
Pointing Roll	180.317643	180.54708022259	Secondary exposure time	0.000000	3.2
Window start time	213235264.184000	213235264.184000	Duty cycle	5	5
Window stop time	213840064.184000	213840064.184000			
SIM focus pos (mm)	-0.782348	-0.7809083437167272			
SIM defocus (mm)	0	0.001439871863259334			
SIM translation stage pos (mm)	-233.592463	-233.5874344608287			
SIM translation stage offset (mm)	0	-0.005018542100998502			
Observation start time	213311065.184000	213309573.02018			
Observation start date	2004-10-04T21:03:21	2004-10-04T20:39:33			
Observation end time	213316065.184000	213316677.2955			
Observation end date	2004-10-04T22:26:41	2004-10-04T22:37:57			
Read mode	TIMED	TIMED			

## 2.3 Aspect



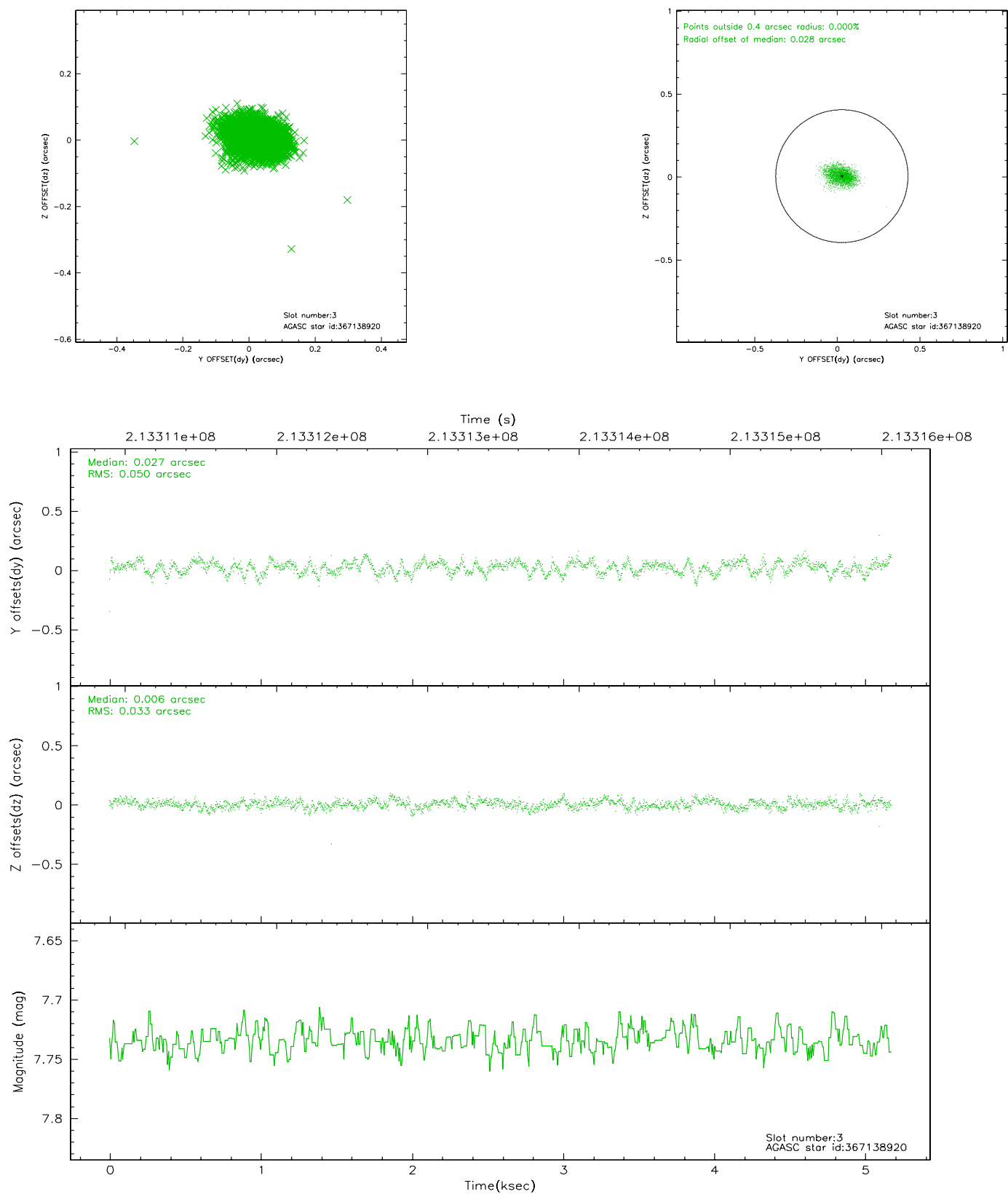


### Slot Statistics

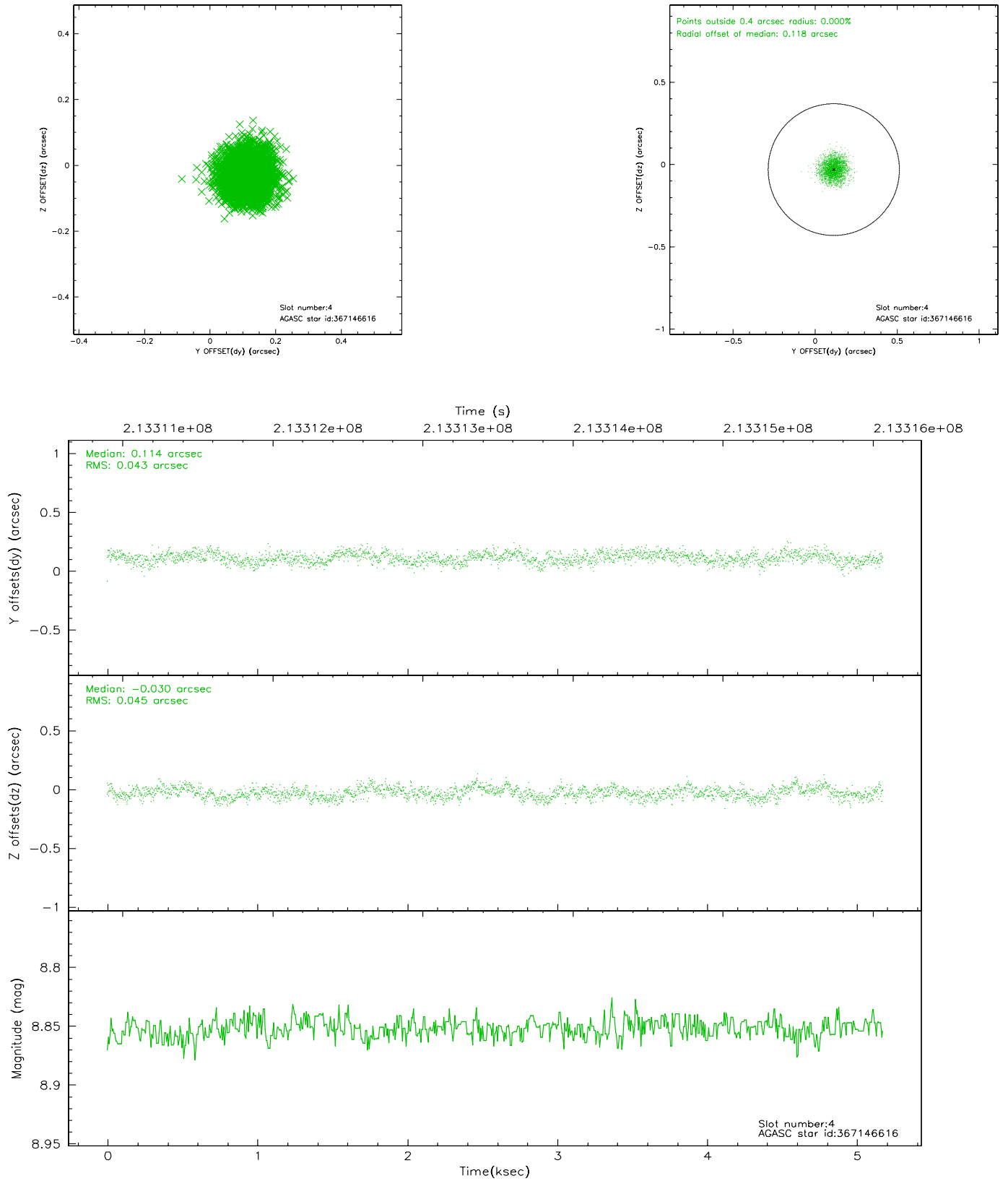
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.24	1263	-0.080	-0.018	0.009	0.014	0.000000	0.000000	932.08	-834.73
1	FID	ACIS-I-4	7.18	1263	0.036	0.081	0.010	0.016	0.000000	0.000000	2152.92	1064.57
2	FID	ACIS-I-6	7.25	1262	-0.052	0.002	0.009	0.016	0.000000	0.000000	399.57	1708.03
3	GUIDE	367138920	7.74	2525	0.027	0.006	0.063	0.103	11.513485	40.808909	-2210.33	1714.97
4	GUIDE	367146616	8.85	2525	0.114	-0.030	0.068	0.106	11.418645	41.190163	-1948.36	343.62
5	GUIDE	367663272	9.27	2524	-0.067	0.036	0.103	0.165	10.656279	41.699429	106.38	-1493.20
6	GUIDE	367674552	8.85	2524	0.059	0.135	0.069	0.110	11.016238	41.570845	-859.85	-1027.34
7	GUIDE	367148872	7.20	2524	-0.124	-0.146	0.070	0.110	10.505940	40.688258	538.45	2143.55

## 2.4 Star Slots

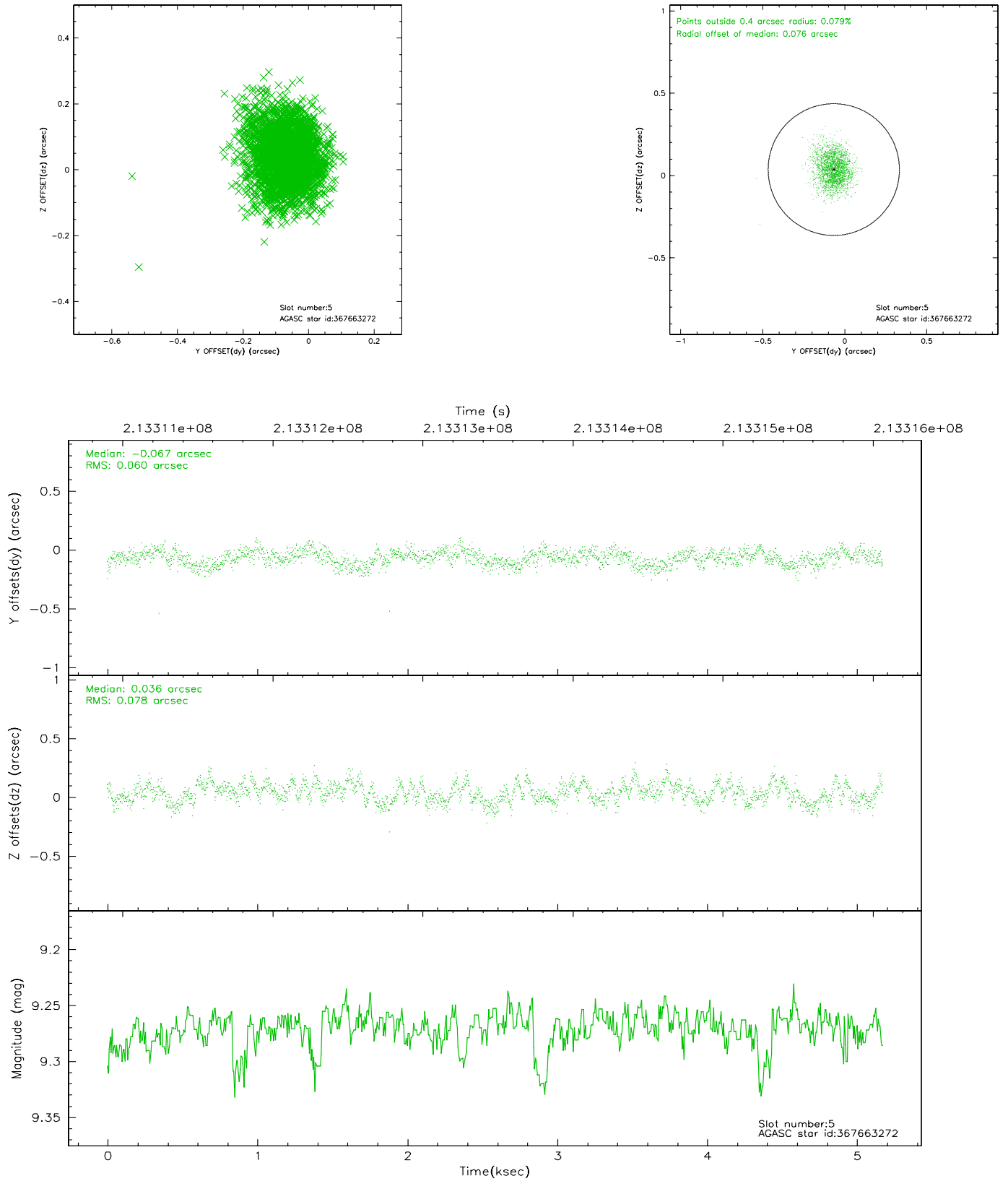
### 2.4.1 Slot 3



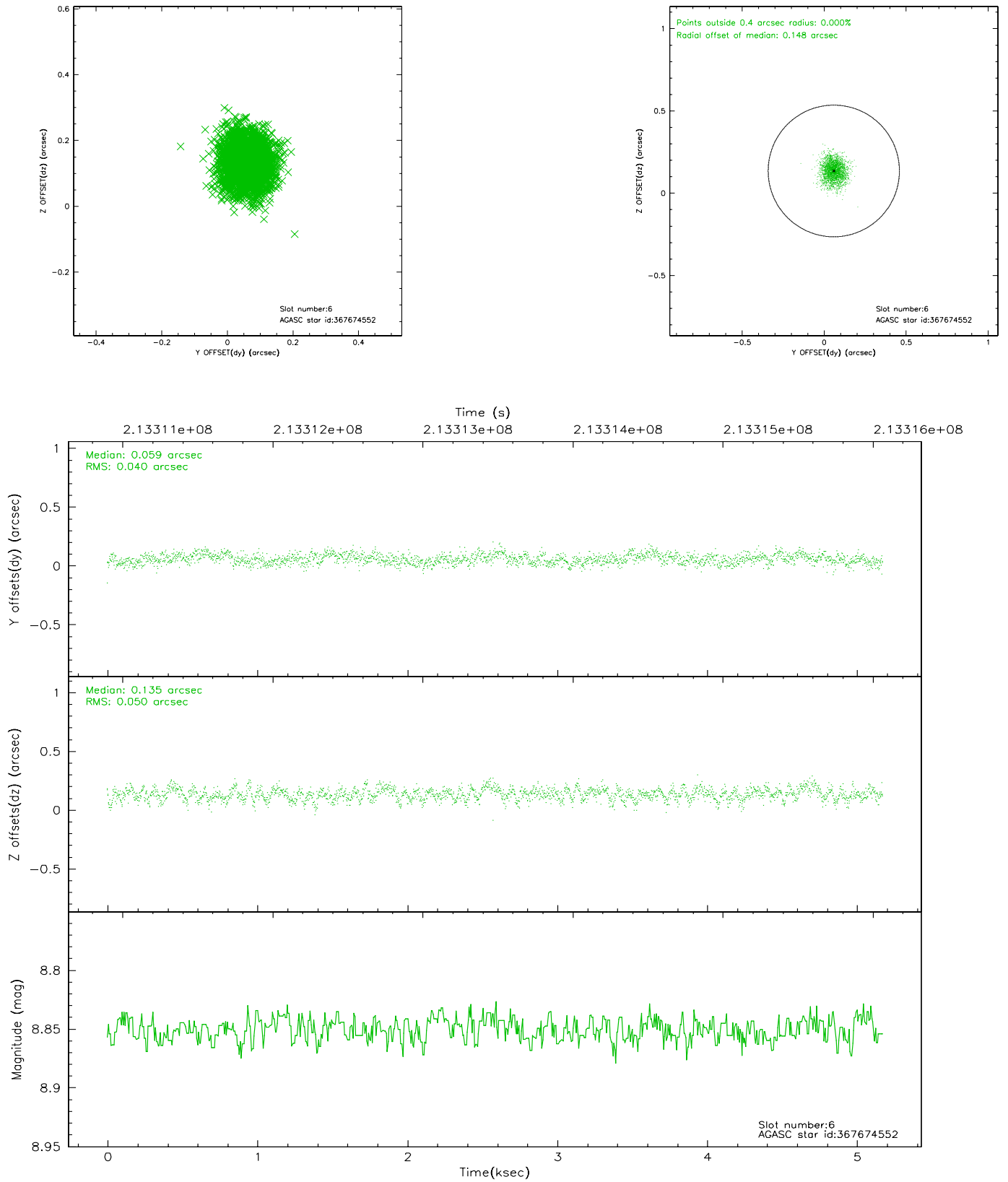
## 2.4.2 Slot 4



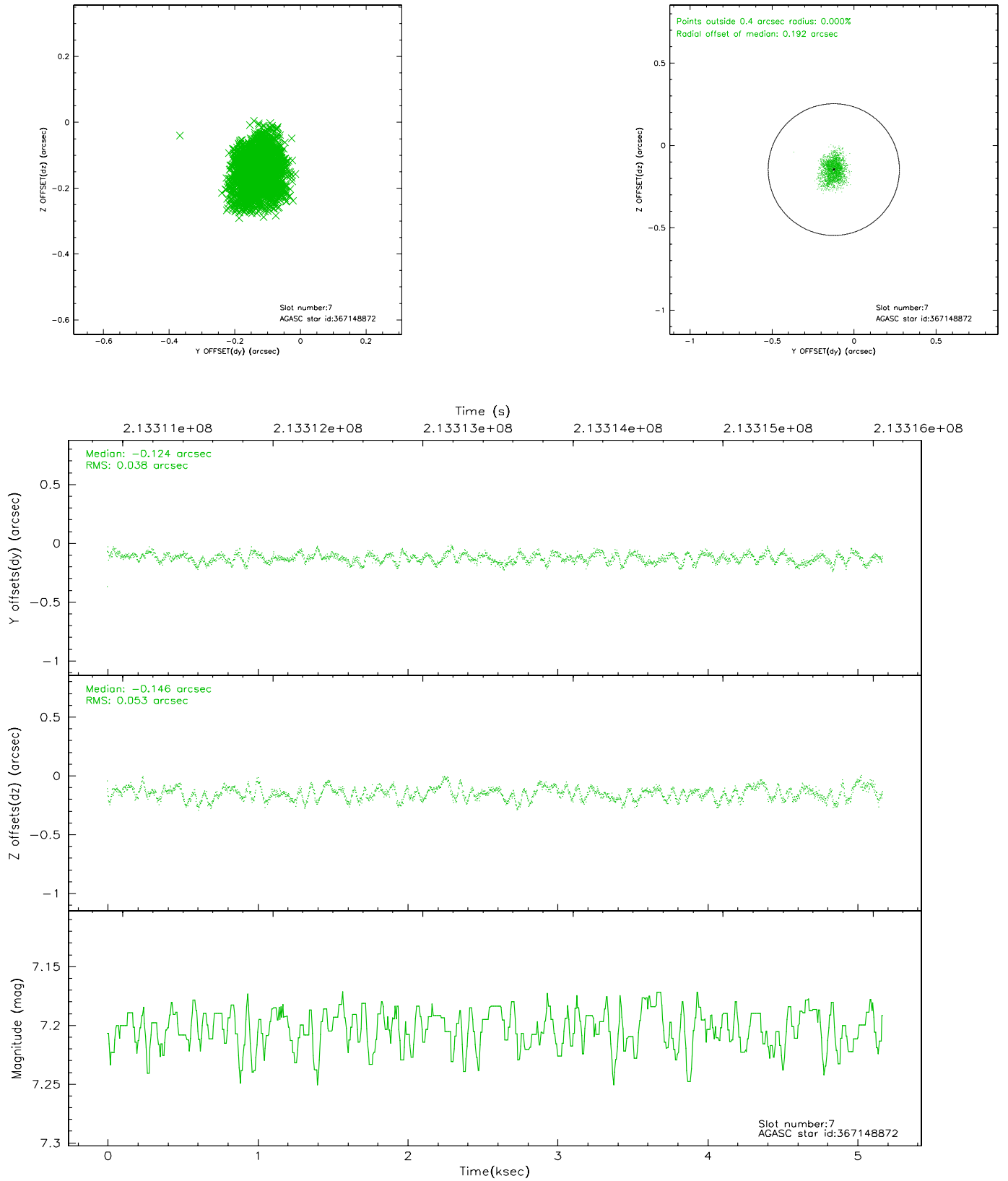
### 2.4.3 Slot 5



## 2.4.4 Slot 6

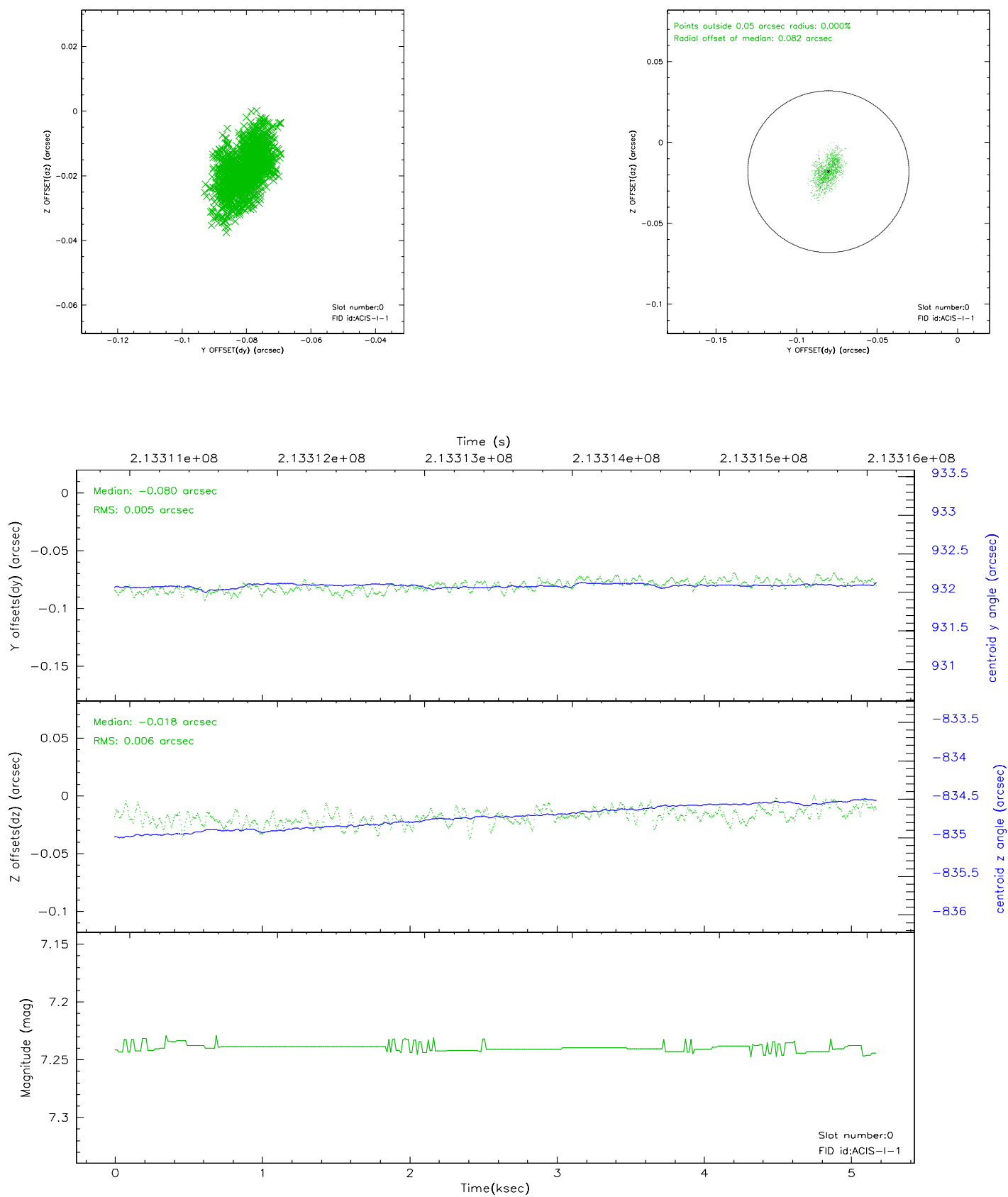


## 2.4.5 Slot 7

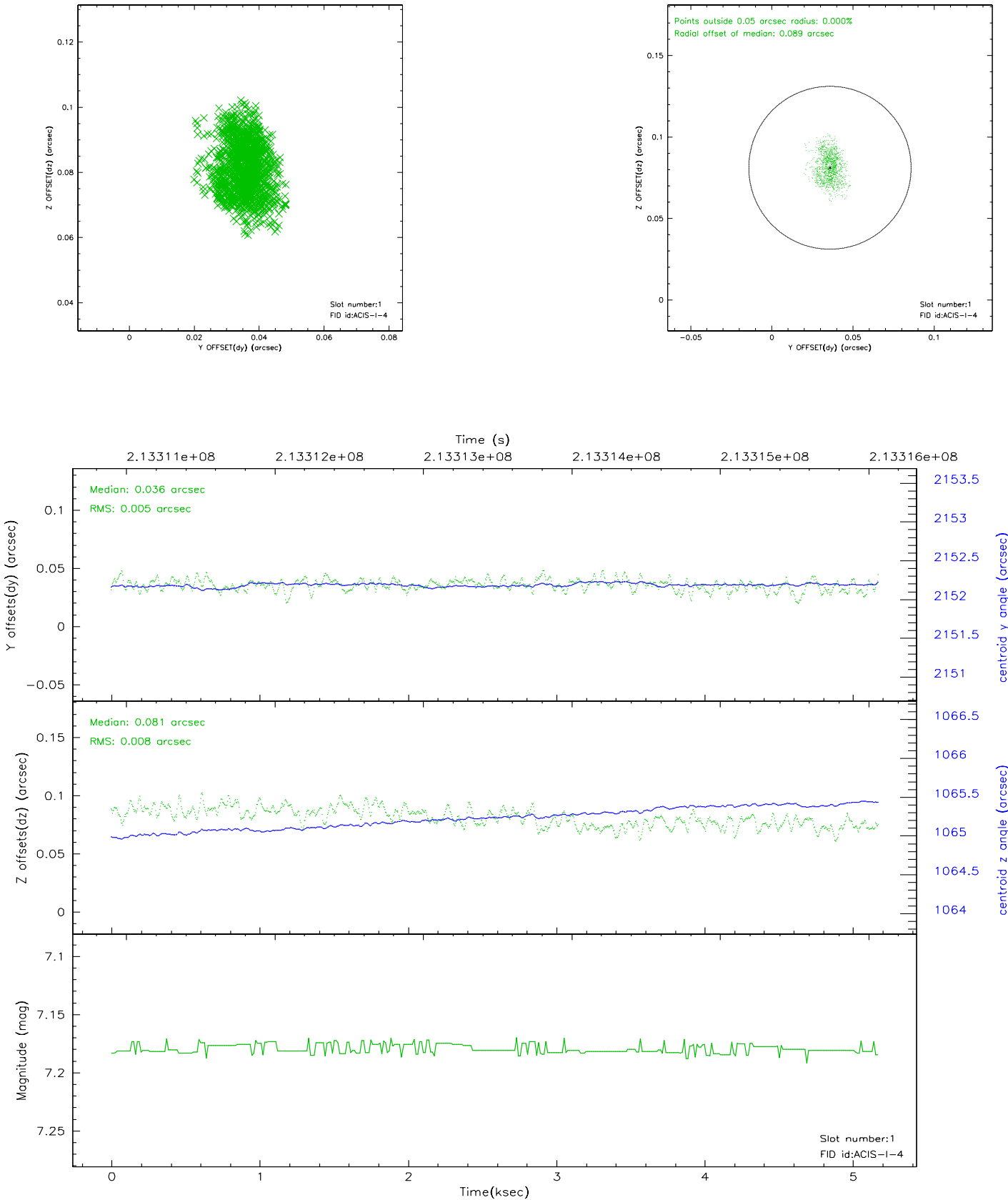


## 2.5 FID Slots

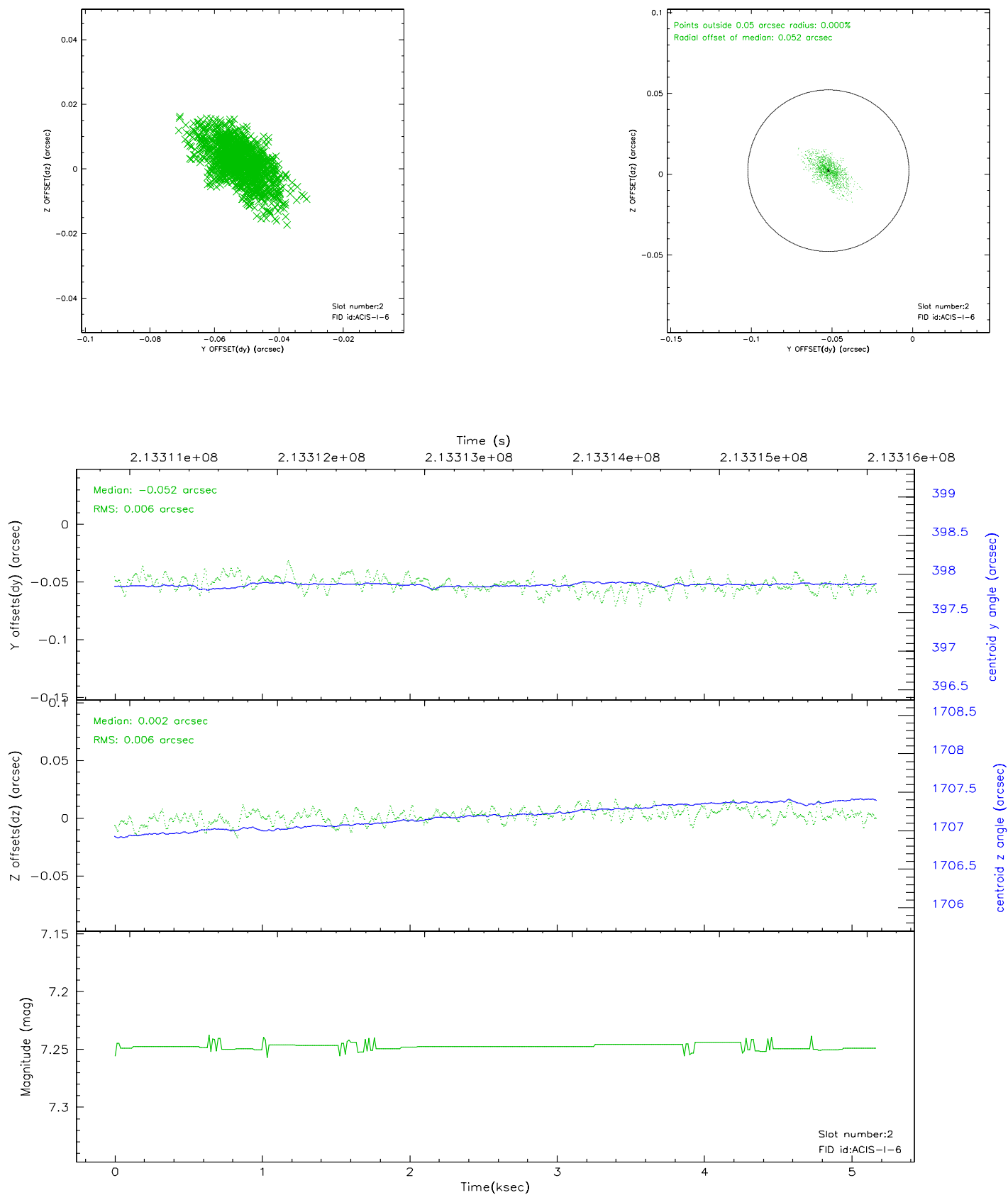
### 2.5.1 Slot 0



2.5.2 Slot 1



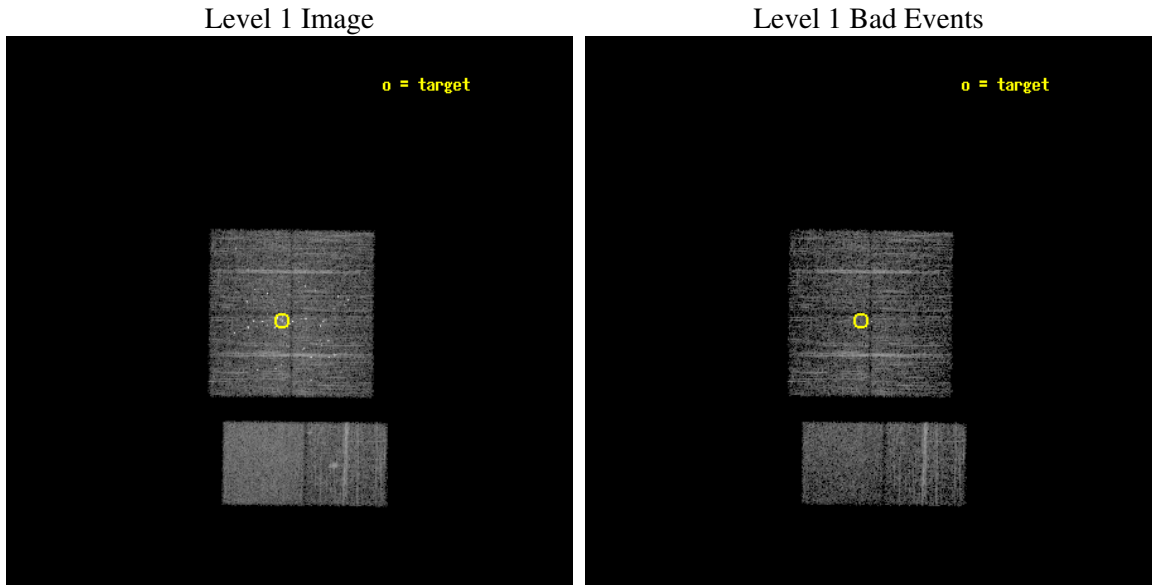
### 2.5.3 Slot 2



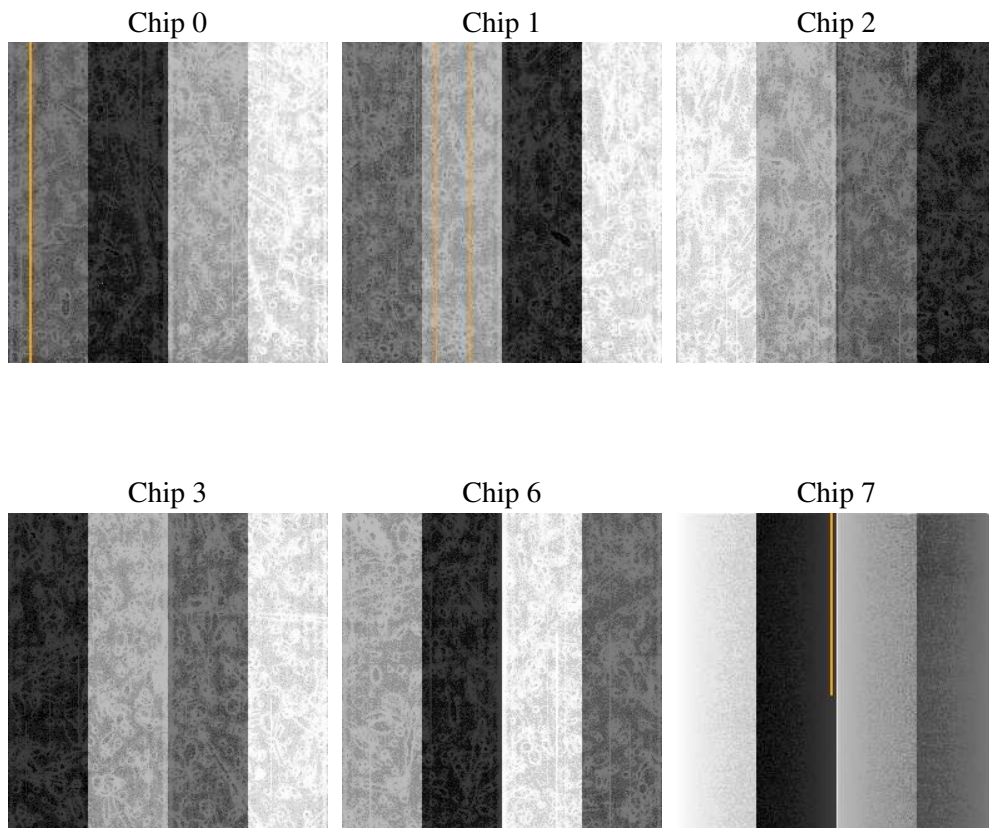
## 3 OBI Secondary

### 3.1 OBI

#### 3.1.1 Images



#### 3.1.2 Bias



### 3.1.3 Parameters

obi_num	0
ascdsver	7.6.7.1
caldsver	3.2.1
date	2006-04-16T22:01:56
revision	2

sched_exp_time	5000.000000
ontime	4722.1543956101
ontime0	4722.1540870965
ontime1	4722.154355973
ontime2	4722.1542665362
ontime3	4722.1543956101
ontime6	4722.1541466713
ontime7	4722.1543660164
l1events	245085

### 3.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	36601	35791	41199	41973	40177	49344
rejected events	31594	30117	34007	32714	35166	32850
rejected %	86%	84%	82%	77%	87%	66%

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	2850	3253	4613	6635	2618	981
	7%	9%	11%	15%	6%	1%
grade 1 events	35	24	105	104	23	27
	0%	0%	0%	0%	0%	0%
grade 2 events	1019	1132	1248	1284	1007	4659
	2%	3%	3%	3%	2%	9%
grade 3 events	461	457	531	584	490	891
	1%	1%	1%	1%	1%	1%
grade 4 events	438	464	526	585	491	843
	1%	1%	1%	1%	1%	1%
grade 5 events	1467	1572	1436	1636	1757	3179
	4%	4%	3%	3%	4%	6%
grade 6 events	766	904	828	920	936	11189
	2%	2%	2%	2%	2%	22%
grade 7 events	29565	27985	31912	30225	32855	27575
	80%	78%	77%	72%	81%	55%

## 4 Point Sources

15.70 arcmin



## A Summary

### A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2006.04.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.164

### A.2 Comments

Window constraint met.