

# V&V Reference Report

## L2 ASCDS Version : 7.6.9

Observation 2494 - L2 Version <sub>e</sub>1  
Chandra X-Ray Center

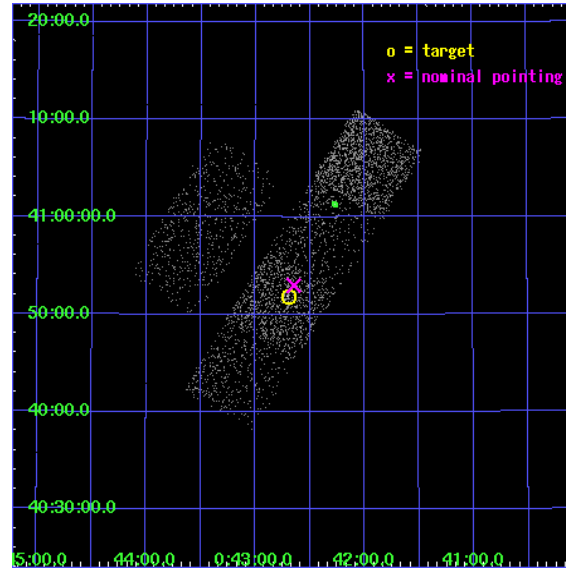
L2 Processing Date : Dec 15 2006

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# 1 Front

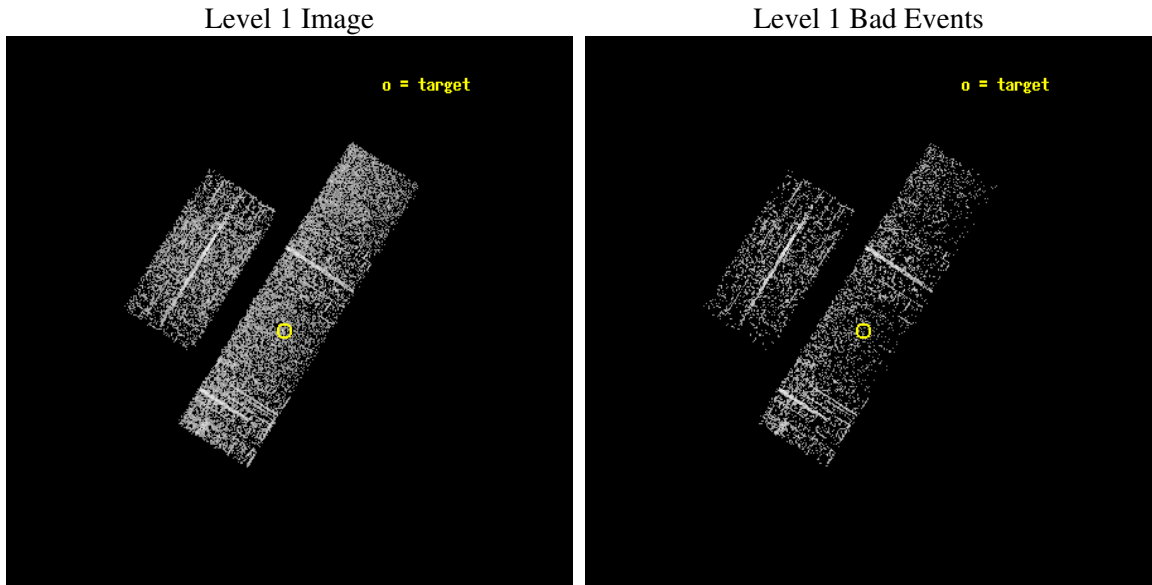
seq_num	600151
obs_id	2494
title	A DEEP SURVEY OF X-RAY SOURCES IN M32, THE NEAREST ELLIPTICAL GALAXY
observer	PROFESSOR ROBERT O'CONNELL
object	M32
dtcycle	0
cycle	P
ra_targ	10.674167
dec_targ	40.864444
ra_nom	10.661595503854
dec_nom	40.882975270374
roll_nom	122.00882879669
revision	2
ontime	1745.2193119228
livetime	149.10627038436
ontime2	1745.1782719195
ontime3	1745.258055523
ontime5	1745.2580356151
ontime6	1745.2580356151
ontime7	1745.2193119228
ontime8	1745.258055523
l2events	4082



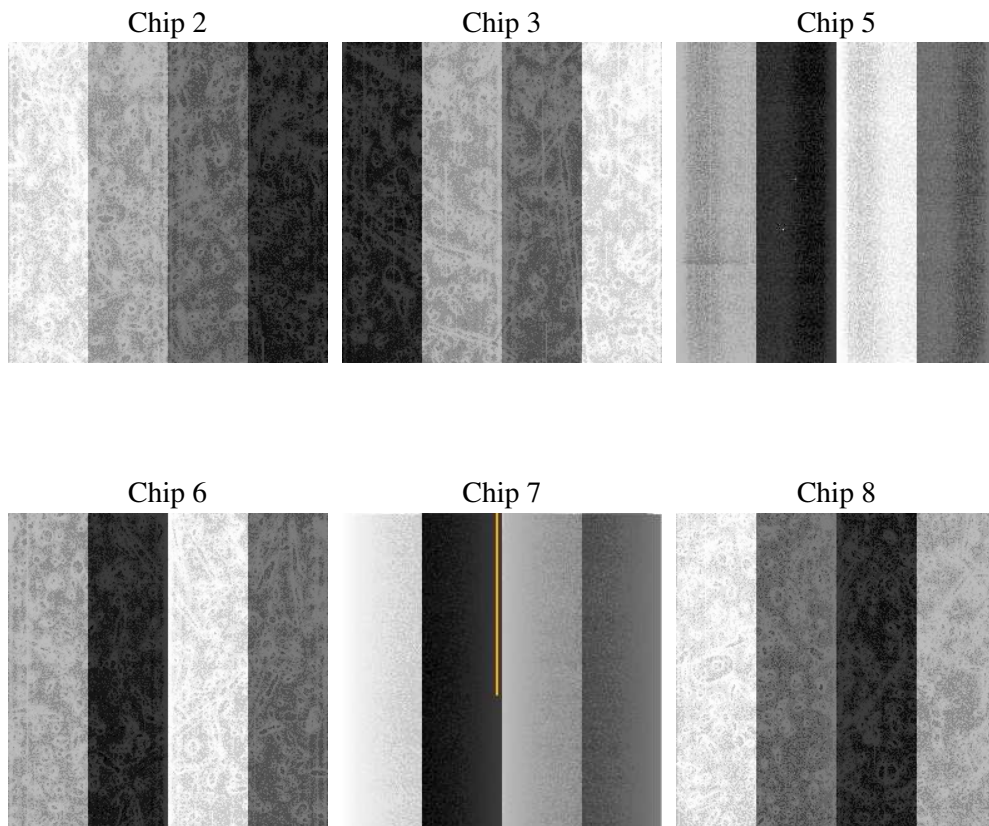
## 2 OBI Primary

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	2
ascdsver	7.6.9
caldsver	3.2.4
date	2006-12-15T21:46:54
revision	2

sched_exp_time	18000.000000
ontime	1752.1686348319
ontime2	1752.1686348319
ontime3	1752.1686348319
ontime5	1752.1686348319
ontime6	1752.1686348319
ontime7	1752.1686348319
ontime8	1752.1686348319
l1events	36886

### 2.1.4 Events

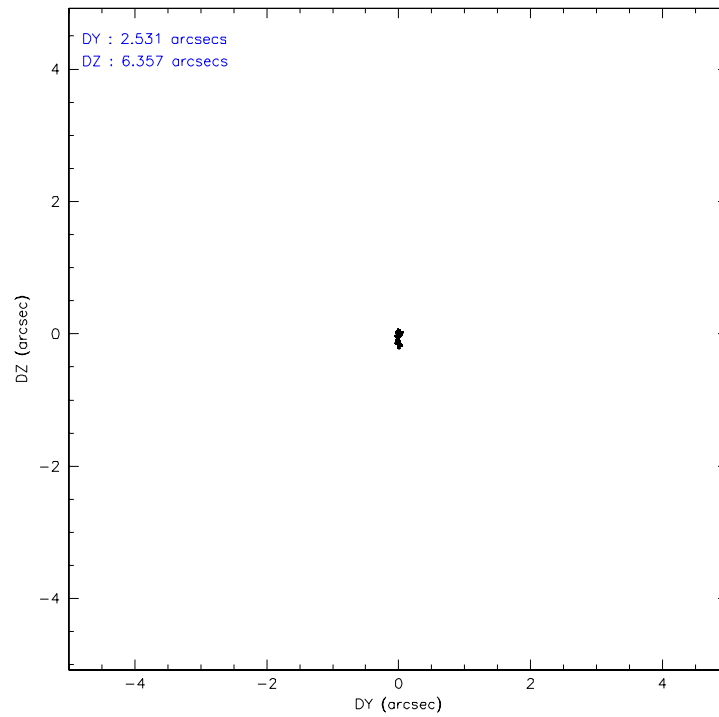
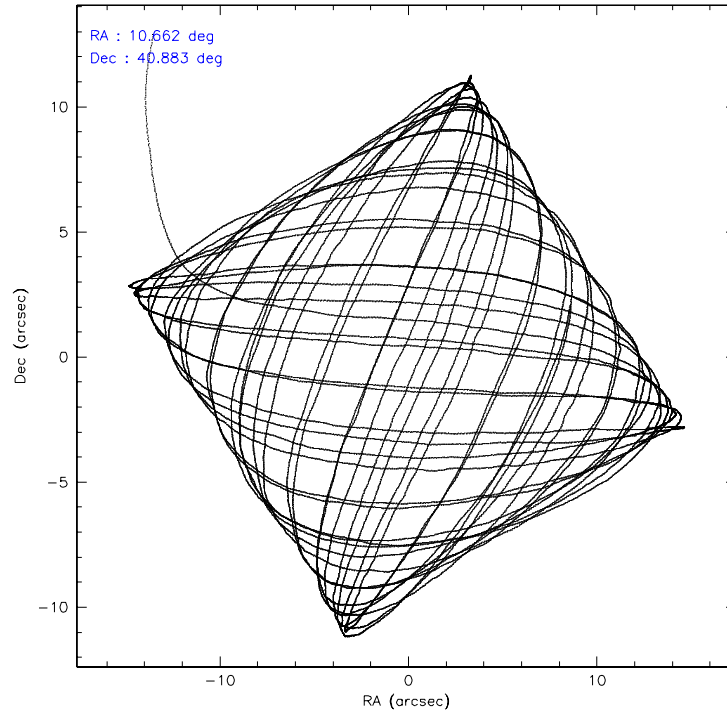
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	6451	5238	5200	6668	5023	8306
rejected events	6065	4881	3622	6147	3808	7440
rejected %	94%	93%	69%	92%	75%	89%

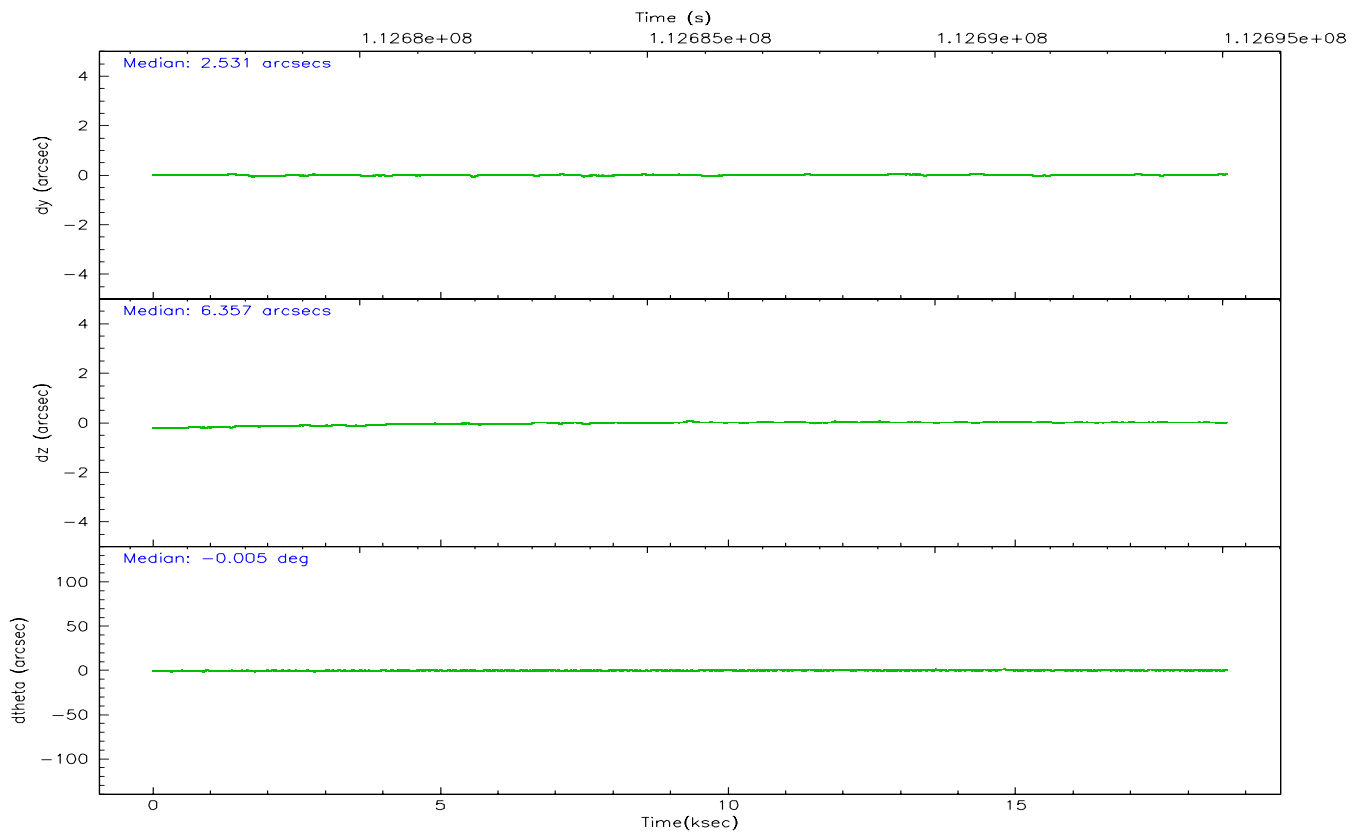
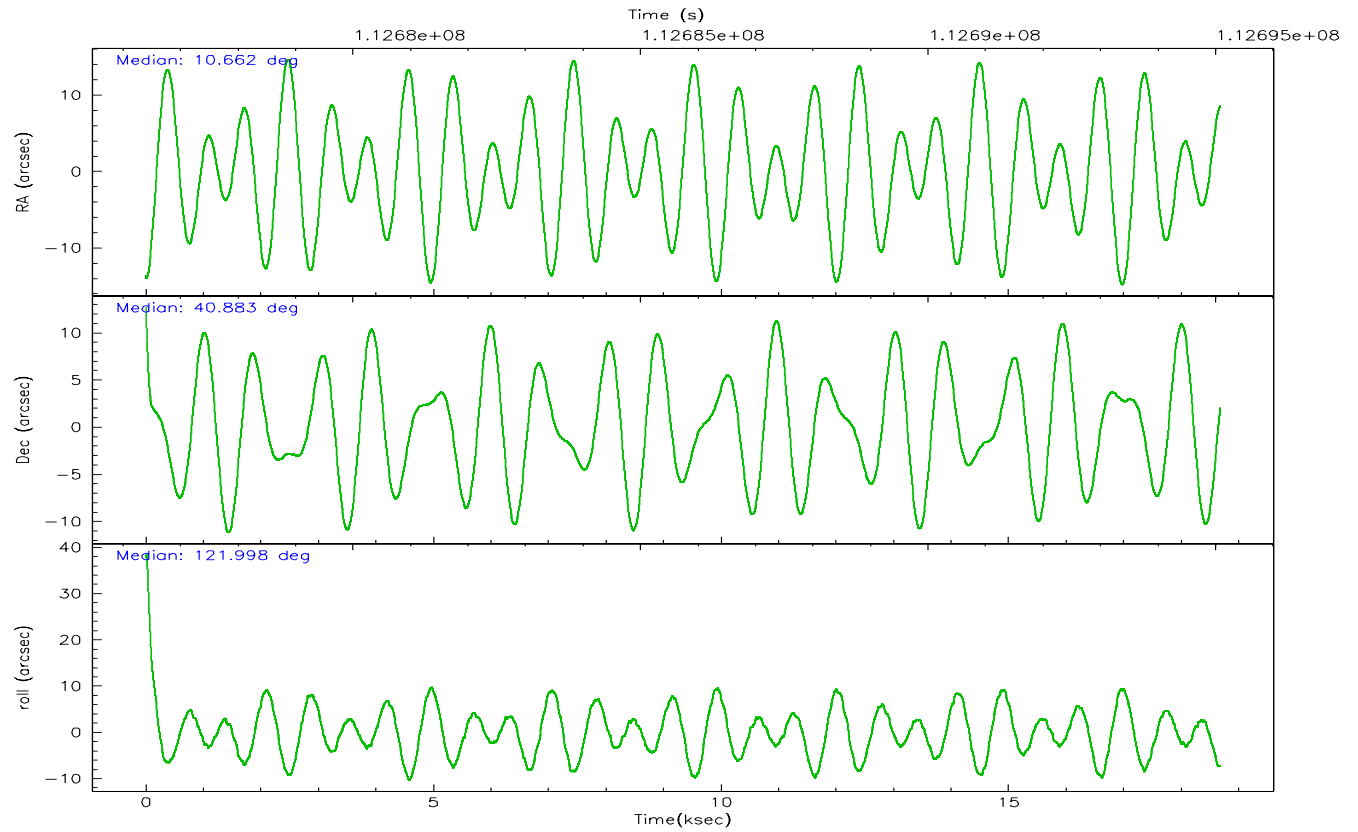
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	102	109	76	188	104	206
	1%	2%	1%	2%	2%	2%
grade 1 events	2	3	3	1	1	1
	0%	0%	0%	0%	0%	0%
grade 2 events	105	90	431	110	293	185
	1%	1%	8%	1%	5%	2%
grade 3 events	58	53	85	64	98	120
	0%	1%	1%	0%	1%	1%
grade 4 events	46	38	78	65	118	87
	0%	0%	1%	0%	2%	1%
grade 5 events	137	177	262	175	332	228
	2%	3%	5%	2%	6%	2%
grade 6 events	76	67	917	96	605	268
	1%	1%	17%	1%	12%	3%
grade 7 events	5925	4701	3348	5969	3472	7211
	91%	89%	64%	89%	69%	86%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	10.693627	10.66159550385376	Subarray requested	NONE	NONE
Pointing Dec	40.870441	40.88297527037393	Alternating exposures requested	Y	Y
Pointing Roll	121.831223	122.0088287966902	Primary exposure time	0.200000	0.3
SIM focus pos (mm)	-0.684267	-0.6828225247311905	Secondary exposure time	0.000000	3.2
SIM defocus (mm)	0	0.001444936568705701	Duty cycle	10	10
SIM translation stage pos (mm)	-190.132523	-190.1400660498719			
SIM translation stage offset (mm)	0	0.00754346686406393			
Observation start time	112677078.184000	112675872.89838			
Observation start date	2001-07-28T03:10:14	2001-07-28T02:51:12			
Observation end time	112695078.184000	112695738.93666			
Observation end date	2001-07-28T08:10:14	2001-07-28T08:22:18			
Read mode	TIMED	TIMED			

## 2.3 Aspect





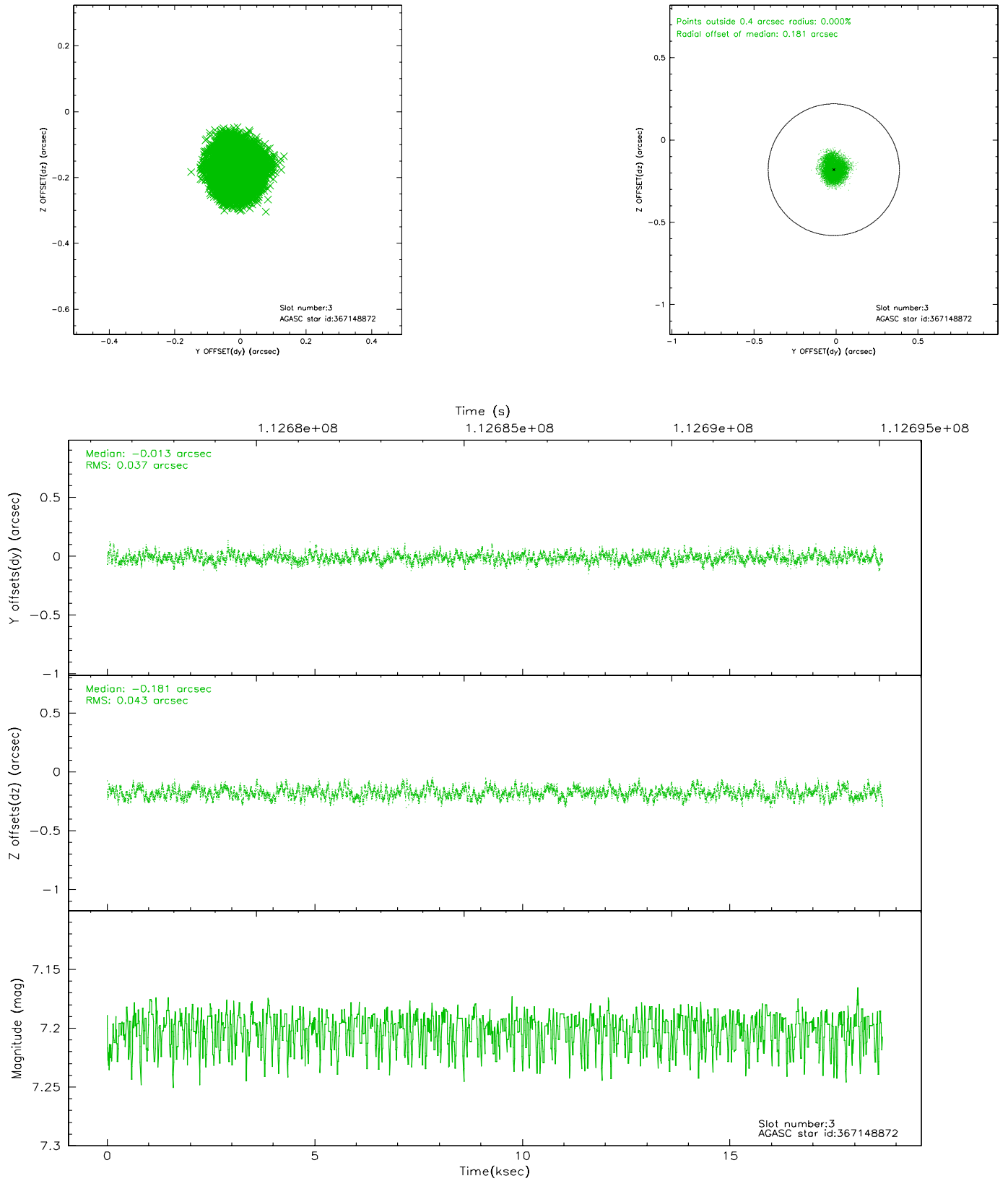
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	4555	0.008	0.006	0.005	0.009	0.000000	0.000000	-755.12	-1727.48
1	FID	ACIS-S-4	7.20	4555	-0.041	-0.005	0.006	0.010	0.000000	0.000000	2157.98	180.82
2	FID	ACIS-S-6	7.35	4556	0.005	0.006	0.007	0.011	0.000000	0.000000	407.09	818.44
3	GUIDE	367148872	7.20	9111	-0.013	-0.181	0.062	0.095	10.505940	40.688258	-285.28	781.83
4	GUIDE	367138920	7.73	9112	0.044	0.070	0.062	0.096	11.513485	40.808909	-1355.88	-1785.76
5	GUIDE	367139768	7.97	9110	0.063	0.065	0.052	0.082	11.069715	40.685175	-1104.80	-520.93
6	GUIDE	367144424	8.67	9107	0.138	-0.197	0.074	0.117	10.464515	40.309136	-1383.20	1600.29
7	GUIDE	367674552	8.86	9107	-0.232	0.243	0.074	0.121	11.016238	41.570845	1686.86	-2067.18

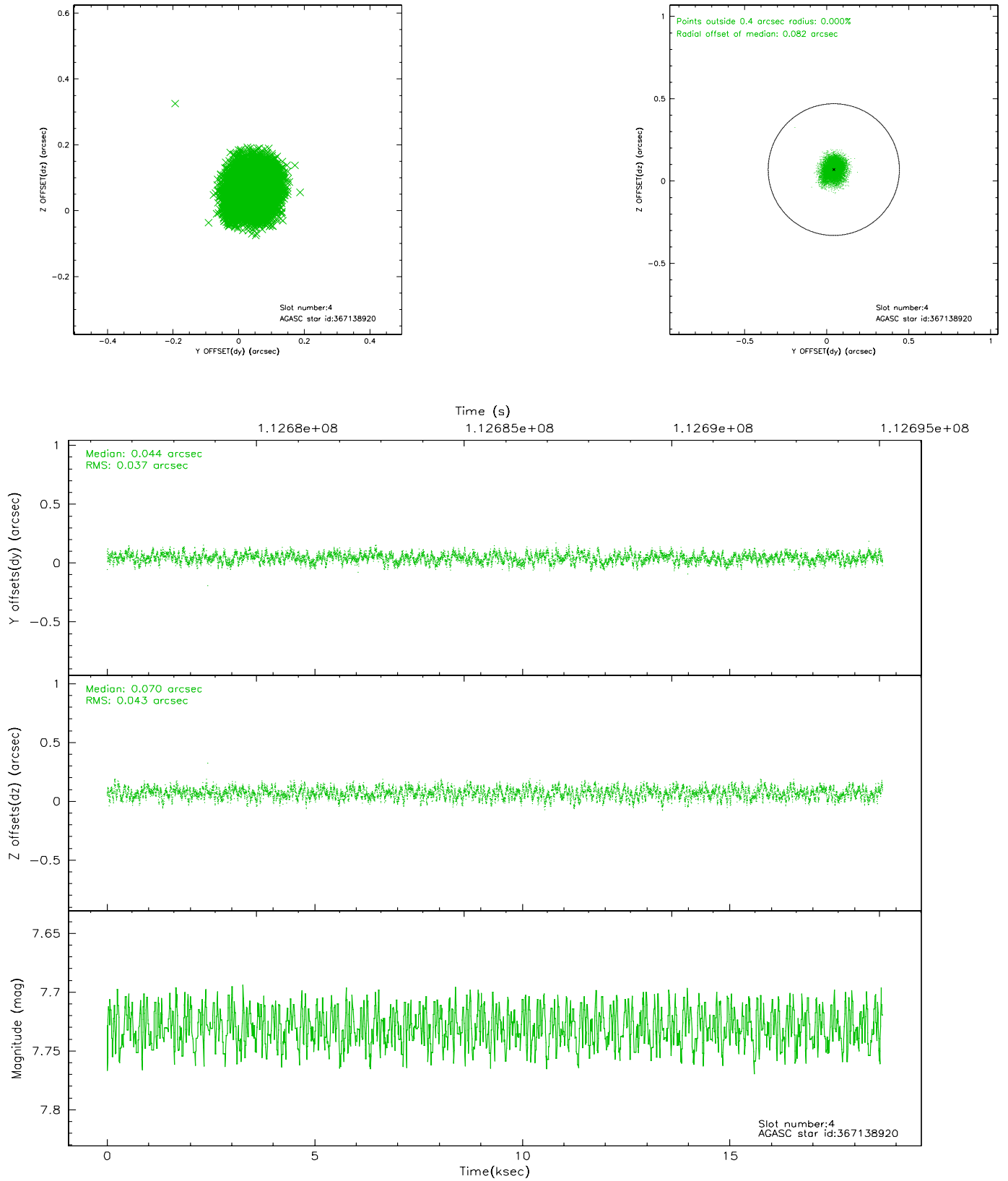


## 2.4 Star Slots

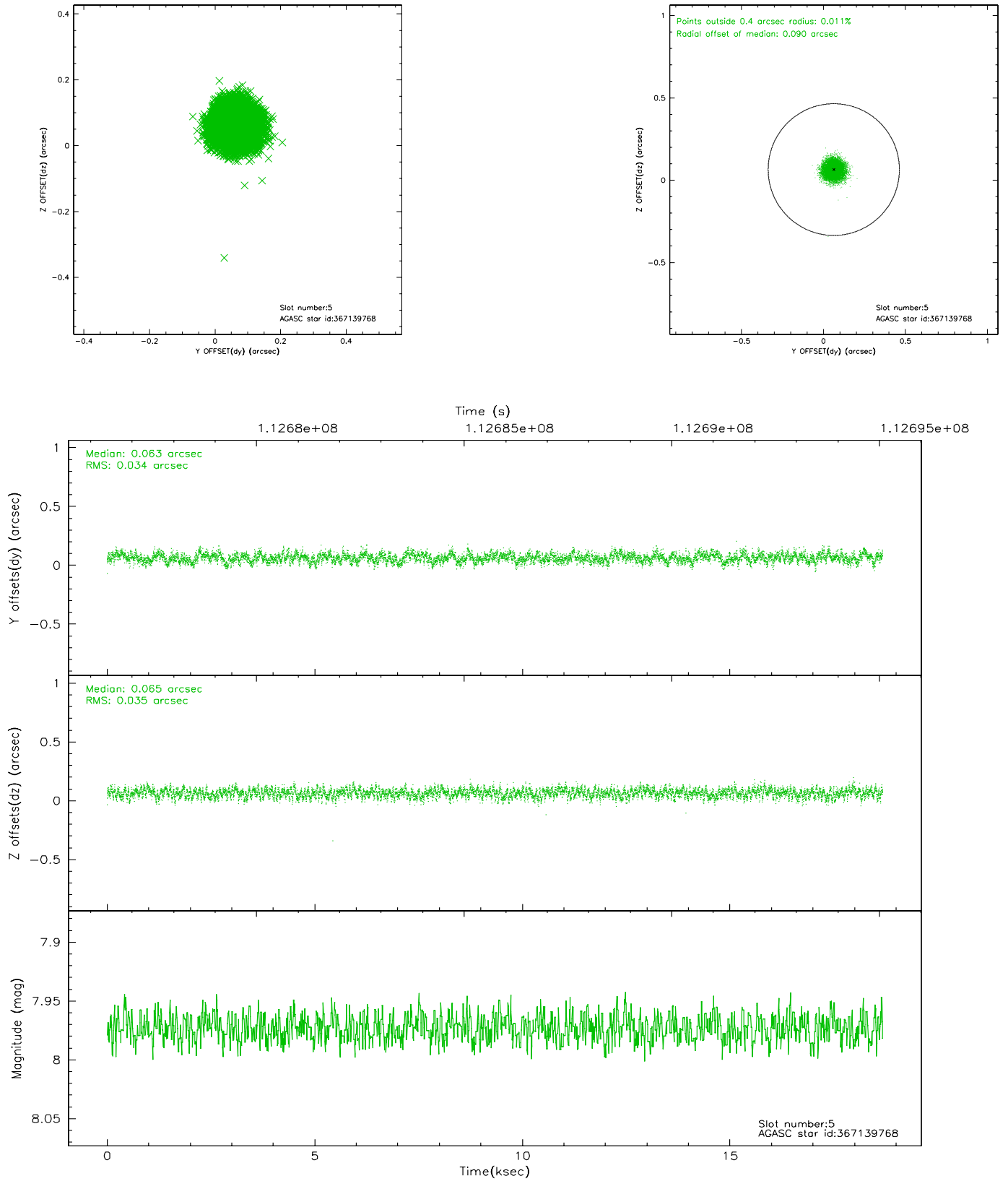
### 2.4.1 Slot 3



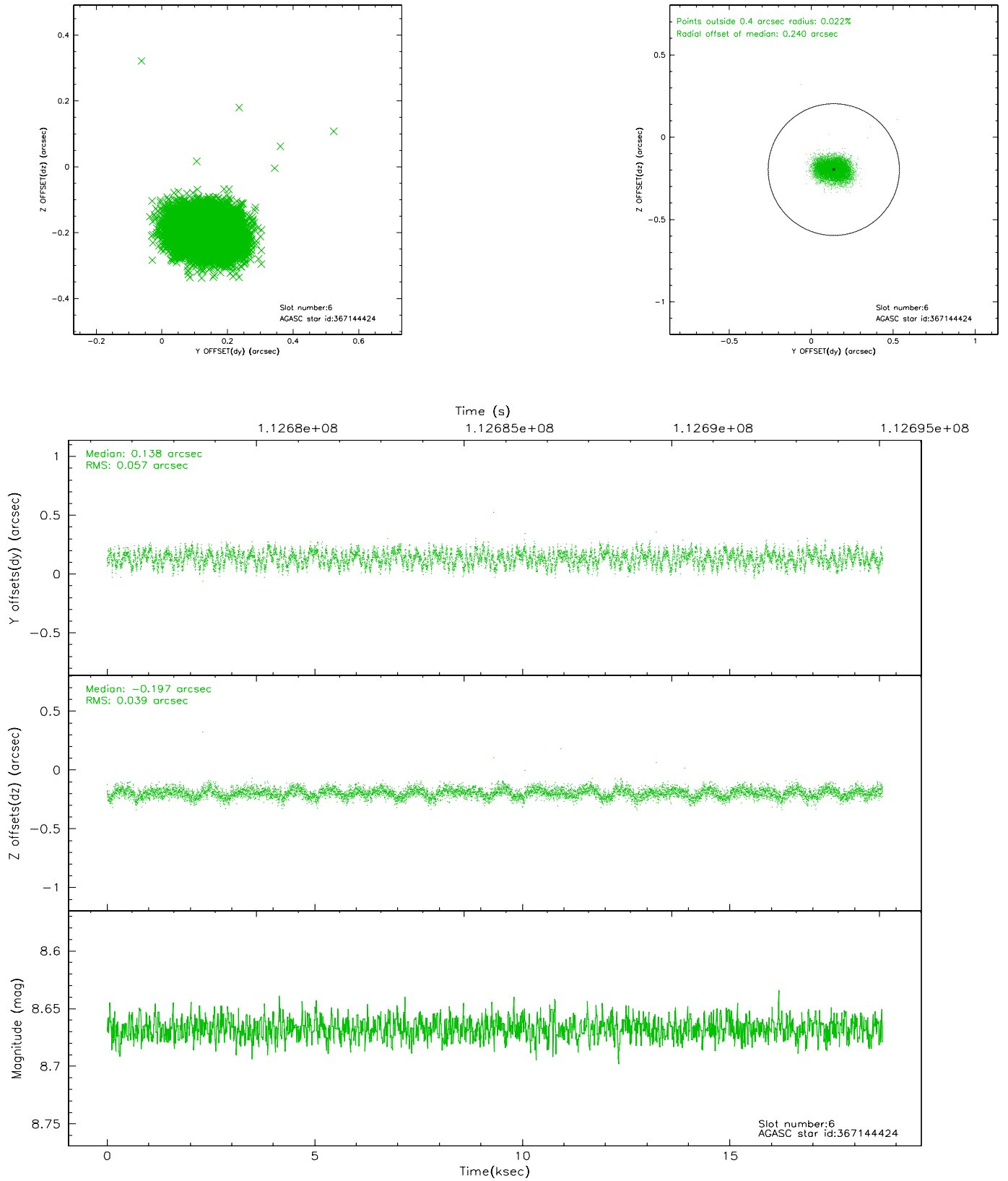
## 2.4.2 Slot 4



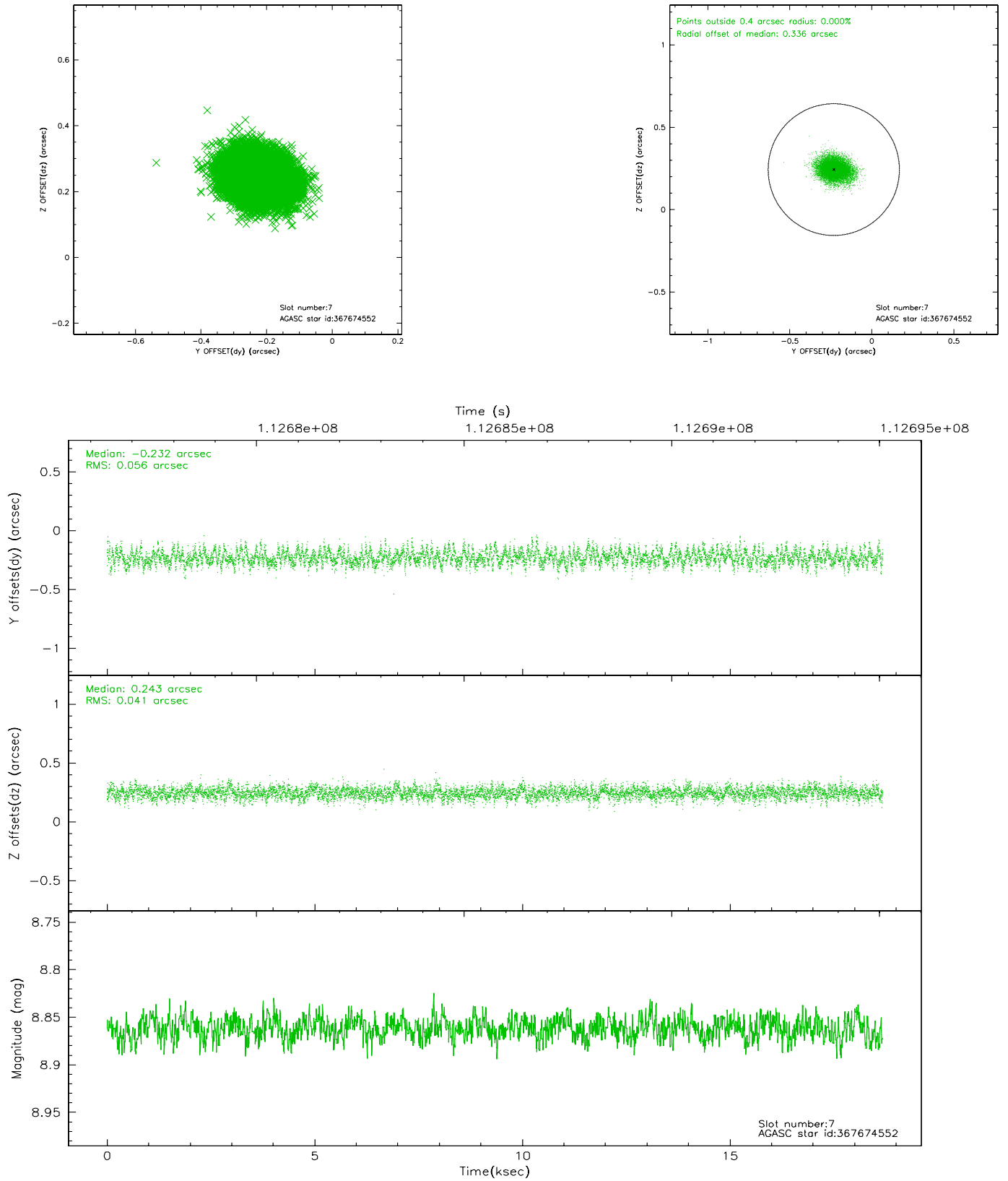
### 2.4.3 Slot 5



## 2.4.4 Slot 6

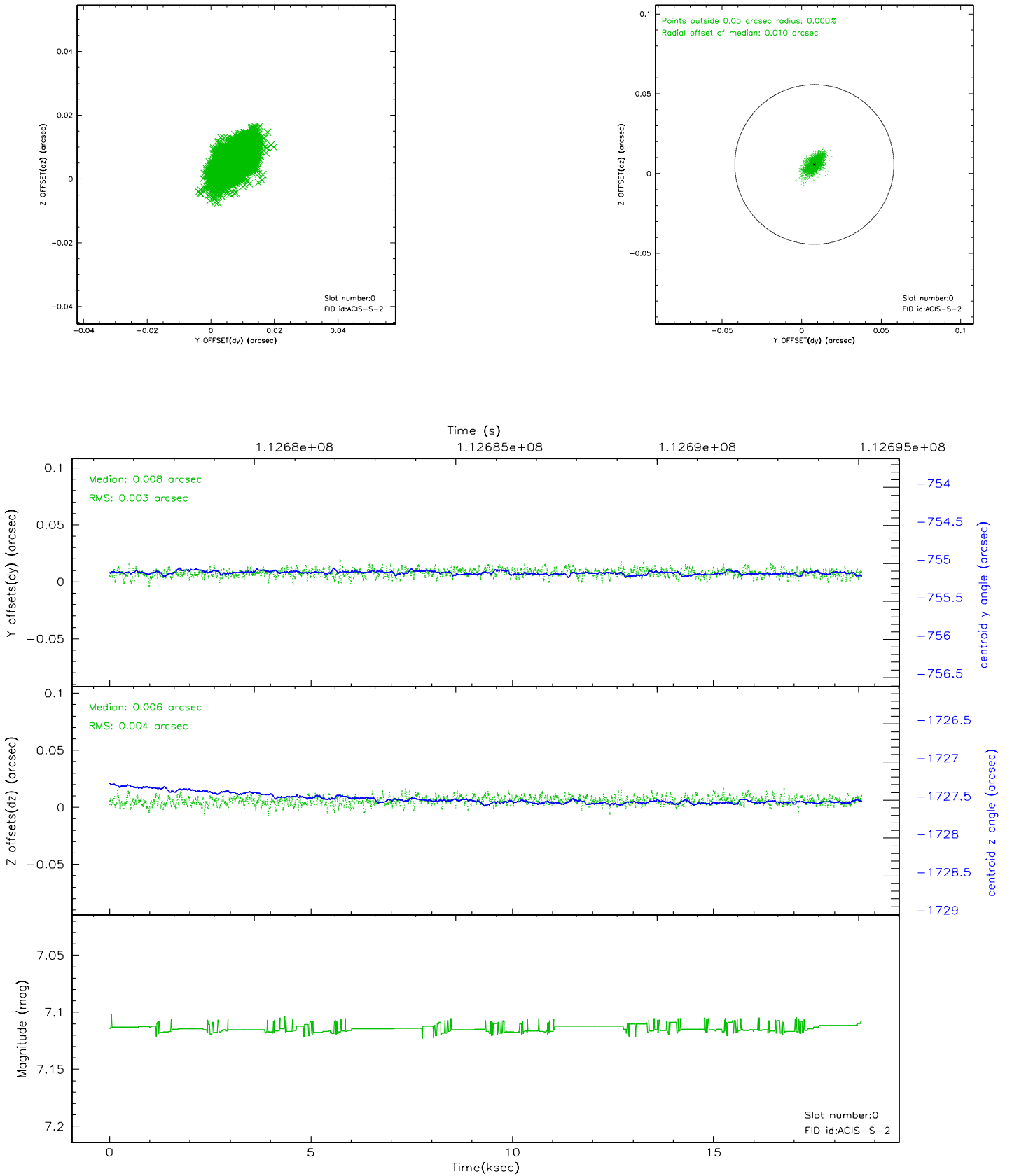


## 2.4.5 Slot 7

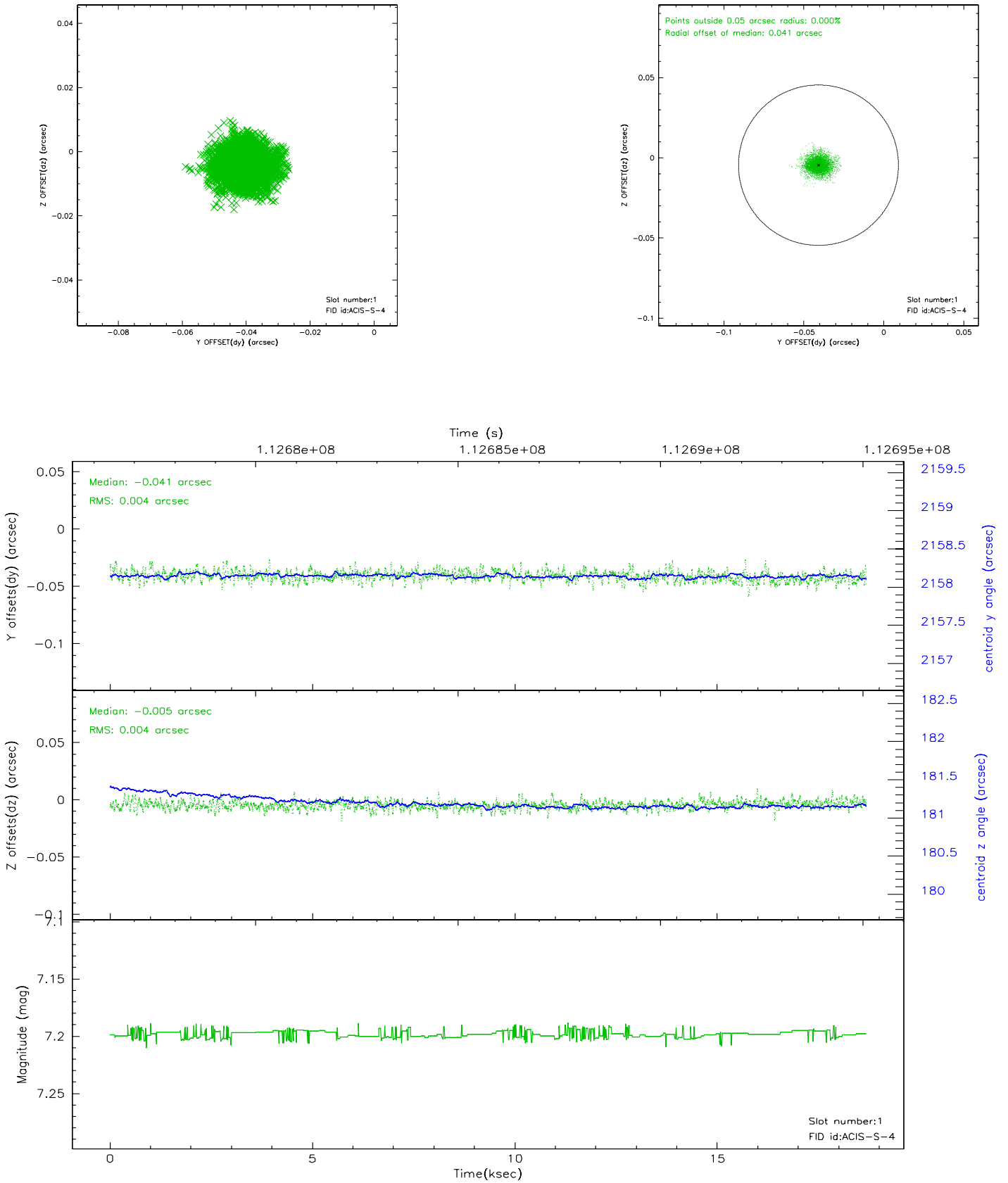


## 2.5 FID Slots

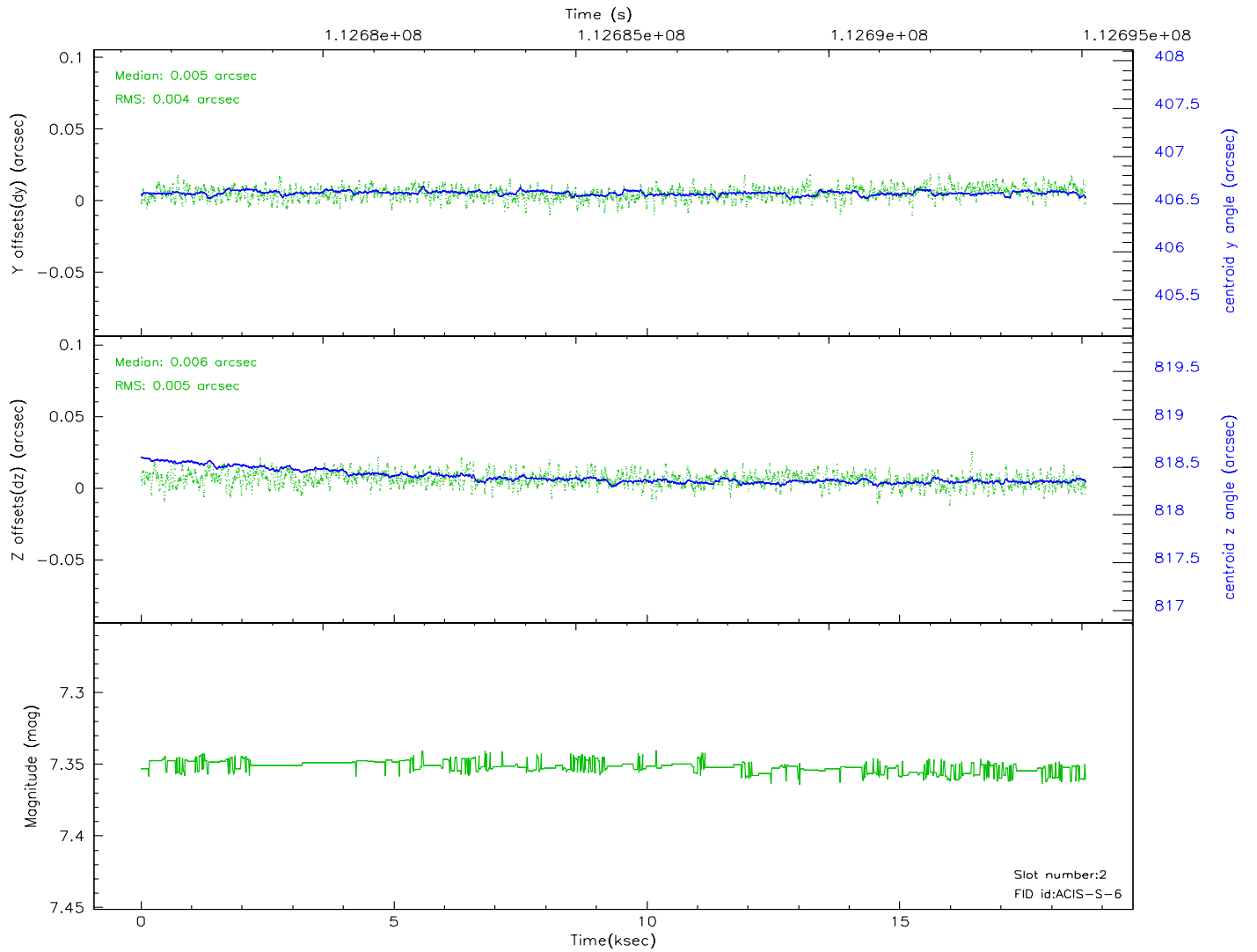
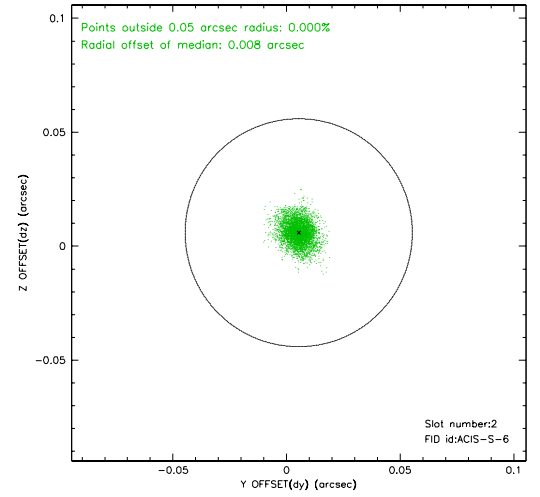
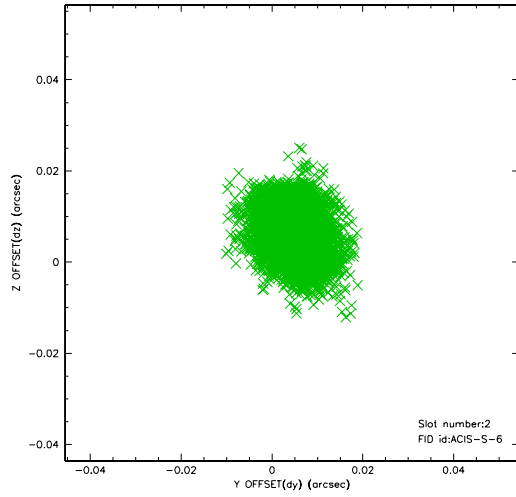
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

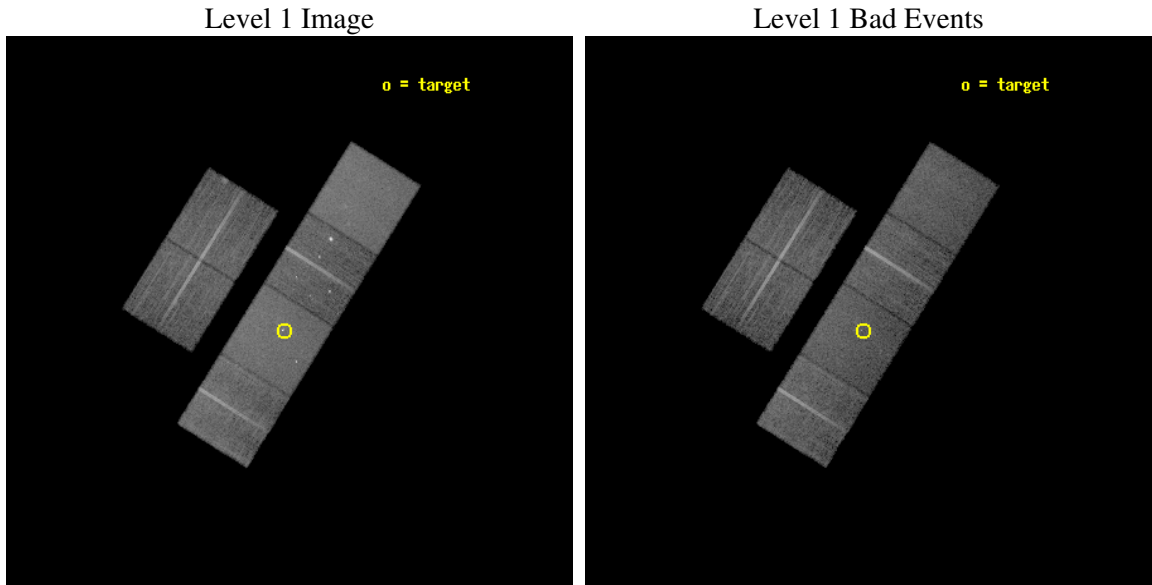




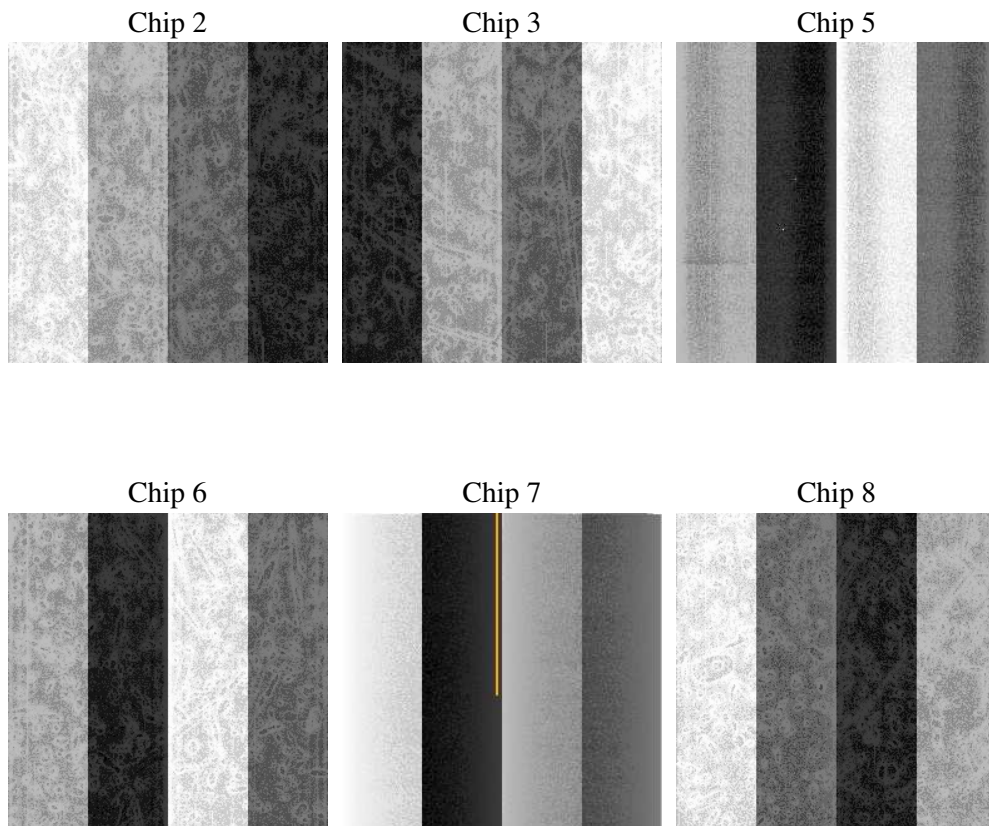
## 3 OBI Secondary

### 3.1 OBI

#### 3.1.1 Images



#### 3.1.2 Bias



### 3.1.3 Parameters

obi_num	2
ascdsver	7.6.9
caldsver	3.2.4
date	2006-12-15T22:12:18
revision	2

sched_exp_time	18000.000000
ontime	16166.122308552
ontime2	16159.640966356
ontime3	16169.36381717
ontime5	16169.363468155
ontime6	16169.363767371
ontime7	16166.122308552
ontime8	16169.363219067
l1events	780209

### 3.1.4 Events

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	114350	108460	156676	116251	147813	136659
rejected events	101052	95736	85900	98261	86191	107545
rejected %	88%	88%	54%	84%	58%	78%

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	6013	5550	4126	9442	4768	9254
	5%	5%	2%	8%	3%	6%
grade 1 events	59	48	109	83	101	81
	0%	0%	0%	0%	0%	0%
grade 2 events	2800	2499	22052	3083	14960	6776
	2%	2%	14%	2%	10%	4%
grade 3 events	1200	1241	1865	1383	3487	2970
	1%	1%	1%	1%	2%	2%
grade 4 events	1181	1248	1745	1385	3434	2788
	1%	1%	1%	1%	2%	2%
grade 5 events	3779	4044	7319	4558	9526	5671
	3%	3%	4%	3%	6%	4%
grade 6 events	2112	2201	41031	2705	35000	7335
	1%	2%	26%	2%	23%	5%
grade 7 events	97206	91629	78429	93612	76537	101784
	85%	84%	50%	80%	51%	74%

## 4 Point Sources

9.32 arcmin



## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2006.12.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	17.9048044

### A.2 Comments

Focal plane temperature is warmer than -118.7 C degrees during the first ~3 ksec of this observation.