

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 1576 - L2 Version 5  
Chandra X-Ray Center

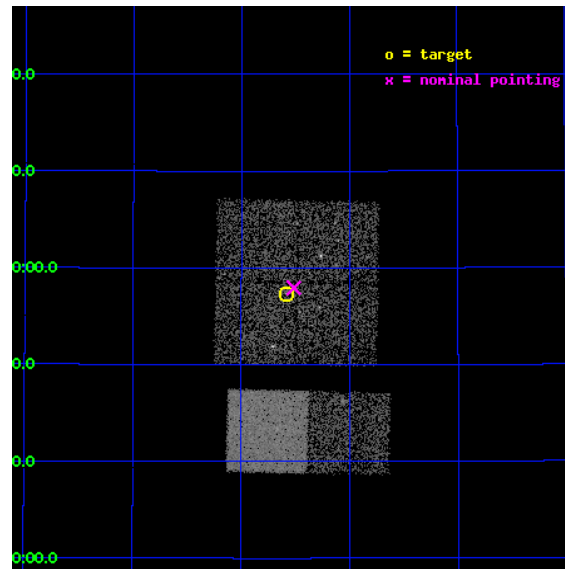
L2 Processing Date : Oct 2 2012

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# 1 Front

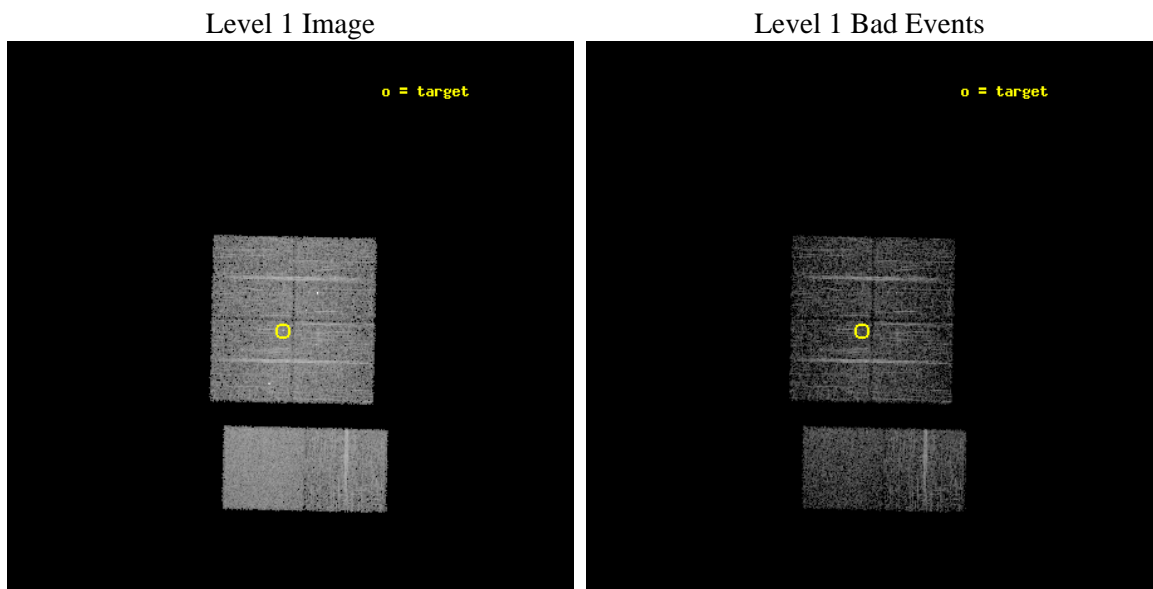
seq_num	600133	Sequence number
obs_id	1576	Observation id
title	M31 NUCLEAR REGION	Proposal title
observer	Dr. Stephen Murray	Principal investigator
object	M31 NUCLEUS	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	10.645375	Observer's specified target RA [deg]
dec_targ	40.955836	Observer's specified target Dec [deg]
ra_nom	10.628454780195	Nominal RA [deg]
dec_nom	40.965739828737	Nominal Dec [deg]
roll_nom	181.24187516403	Nominal Roll [deg]
revision	5	Processing version of data
ontime	4950.4000045955	Sum of GTIs [s]
livetime	4887.7150589643	Livetime [s]
ontime0	4950.4000045955	Sum of GTIs [s]
ontime1	4950.4000045955	Sum of GTIs [s]
ontime2	4950.4000045955	Sum of GTIs [s]
ontime3	4950.4000045955	Sum of GTIs [s]
ontime6	4950.4000045955	Sum of GTIs [s]
ontime7	4950.4000045955	Sum of GTIs [s]
l2events	33588	Number of level 2 events



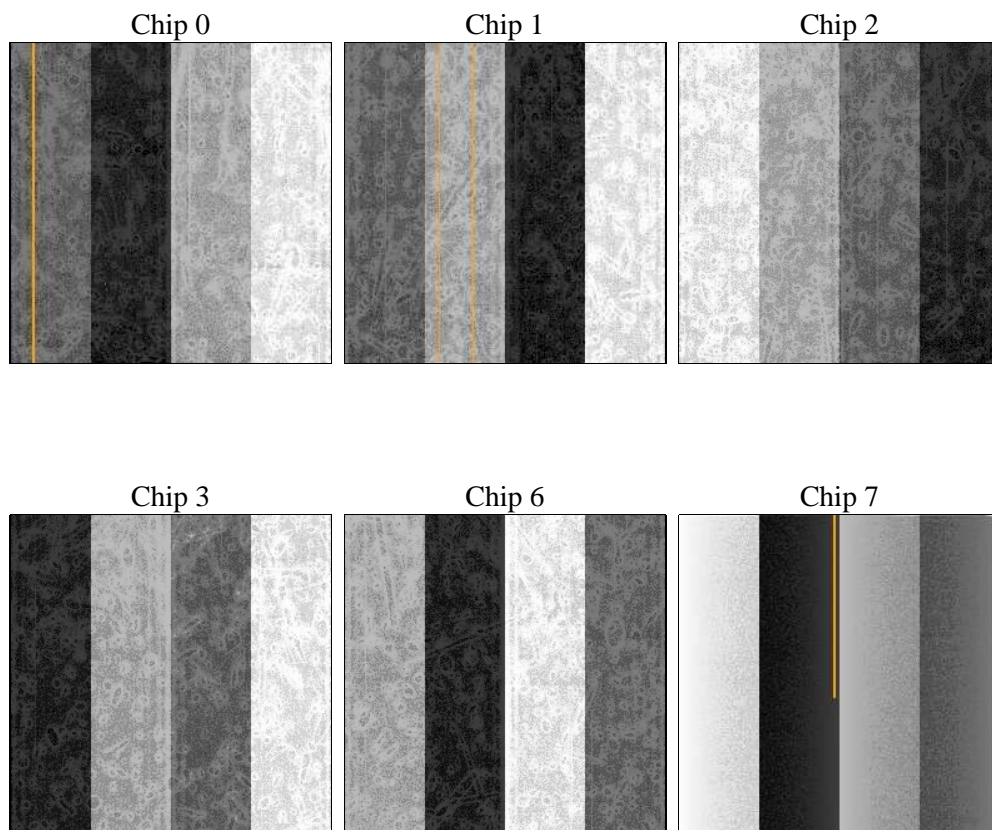
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	4950.4000045955	Sum of GTIs [s]
caldbver	4.5.2	&#160	ontime0	4950.4000045955	Sum of GTIs [s]
date	2012-10-02T16:22:36	Date and time of file creation	ontime1	4950.4000045955	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	4950.4000045955	Sum of GTIs [s]
			ontime3	4950.4000045955	Sum of GTIs [s]
			ontime6	4950.4000045955	Sum of GTIs [s]
			ontime7	4950.4000045955	Sum of GTIs [s]
			l1events	187289	Number of level 1 events

### 2.1.4 Events

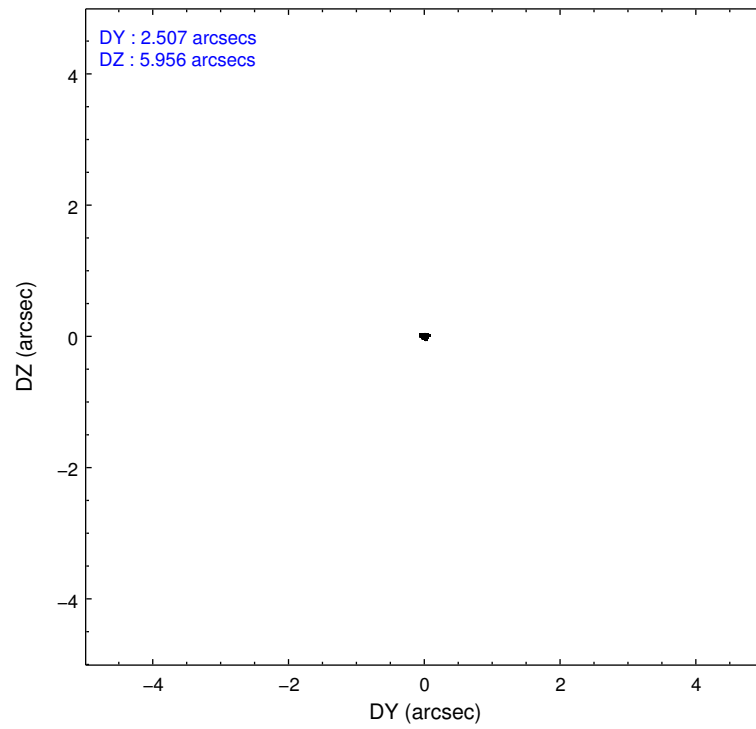
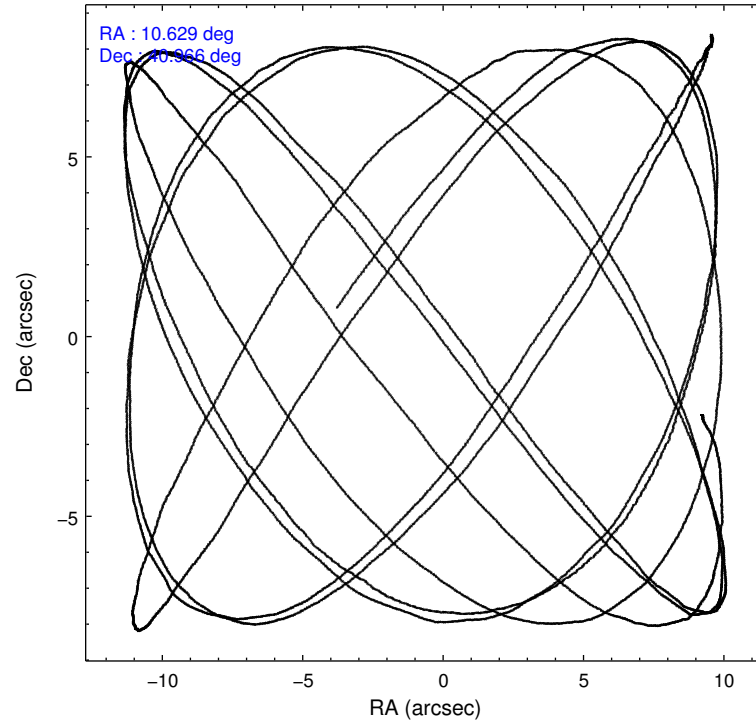
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	28498	27650	30605	29954	32576	38006	grade 0 events	2517	1693	1630	2105	1568	1609
rejected events	23502	23593	26734	25692	28726	21997		8%	6%	5%	7%	4%	4%
rejected %	82%	85%	87%	85%	88%	57%	grade 1 events	43	13	19	20	16	32
								0%	0%	0%	0%	0%	0%
							grade 2 events	997	856	846	847	818	3131
								3%	3%	2%	2%	2%	8%
							grade 3 events	390	384	325	341	348	1440
								1%	1%	1%	1%	1%	3%
							grade 4 events	390	373	369	359	394	1514
								1%	1%	1%	1%	1%	3%
							grade 5 events	1065	1130	986	1124	1278	3658
								3%	4%	3%	3%	3%	9%
							grade 6 events	704	752	705	612	724	8323
								2%	2%	2%	2%	2%	21%
							grade 7 events	22392	22449	25725	24546	27430	18299
								78%	81%	84%	81%	84%	48%

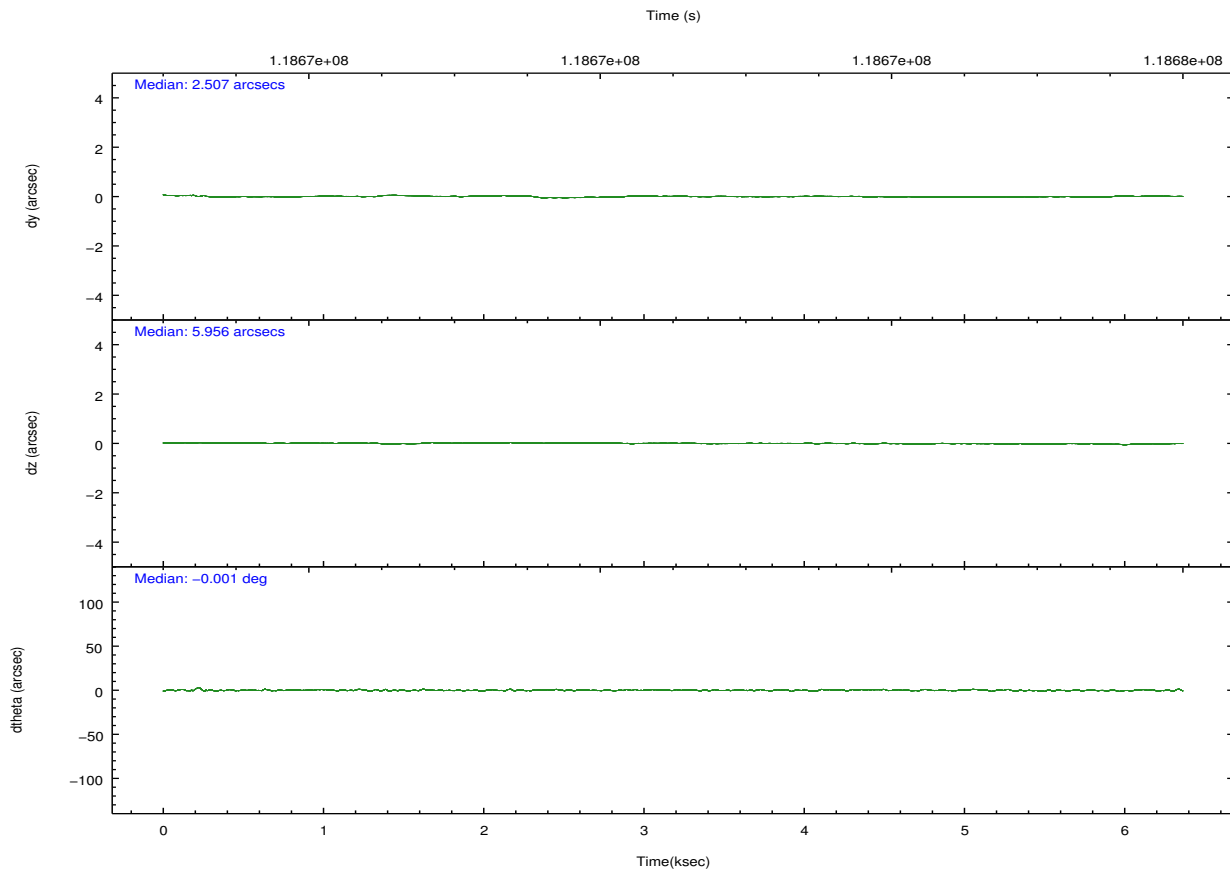
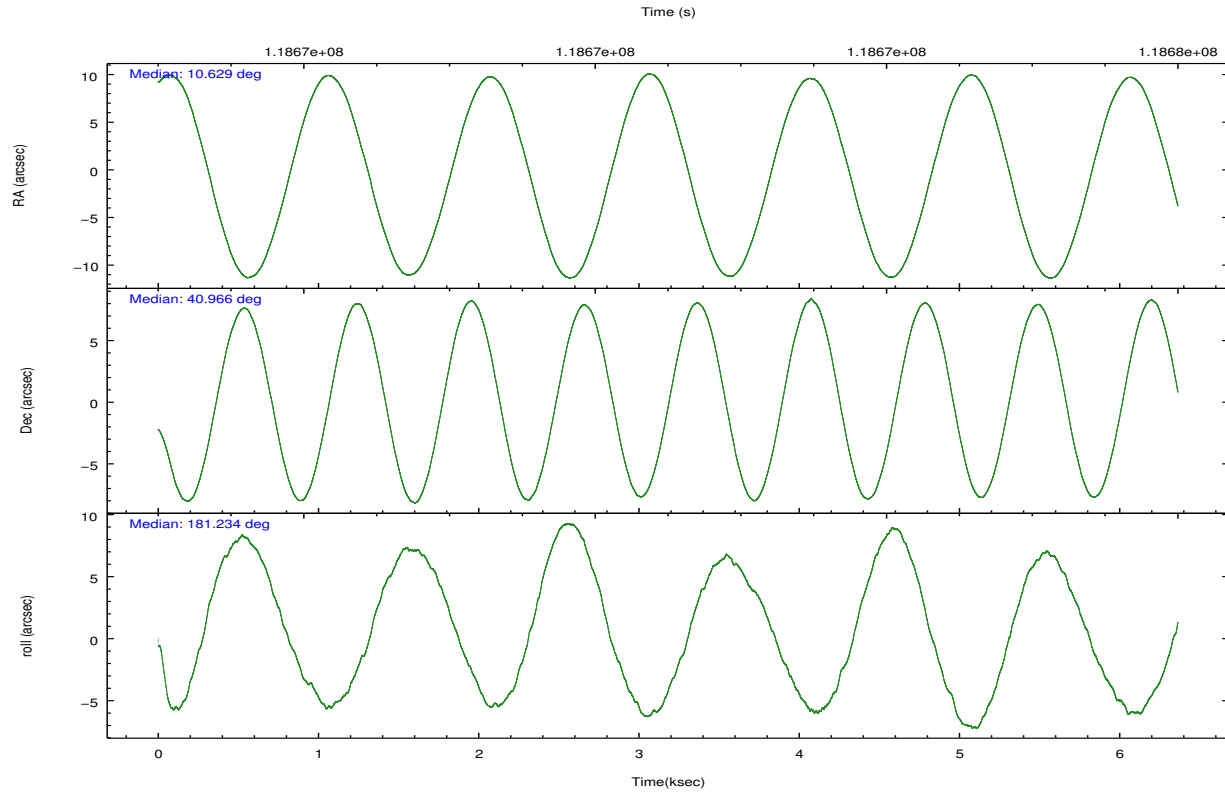


## 2.2 Compared Parameters

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	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	10.659378	10.62845478019506	Subarray requested	NONE	NONE
[deg] Pointing Dec	40.980032	40.9657398287367	Alternating exposures requested	N	N
[deg] Pointing Roll	181.012900	181.2418751640253	[s] Primary exposure time	0.000000	3.2
[s] Window start time (MET)	118281664.184000	118281664.184000			
[s] Window stop time (MET)	119491264.184000	119491264.184000			
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-233.592463	-233.5874344608287			
[mm] SIM translation stage offset	0	-0.005018542100998502			
[s] Observation start time (MET)	118670684.184000	118669138.33509			
Observation start date	2001-10-05T12:03:40	2001-10-05T11:38:58			
[s] Observation end time (MET)	118675684.184000	118676959.5979			
Observation end date	2001-10-05T13:27:00	2001-10-05T13:49:19			
Read mode	TIMED	TIMED			

## 2.3 Aspect



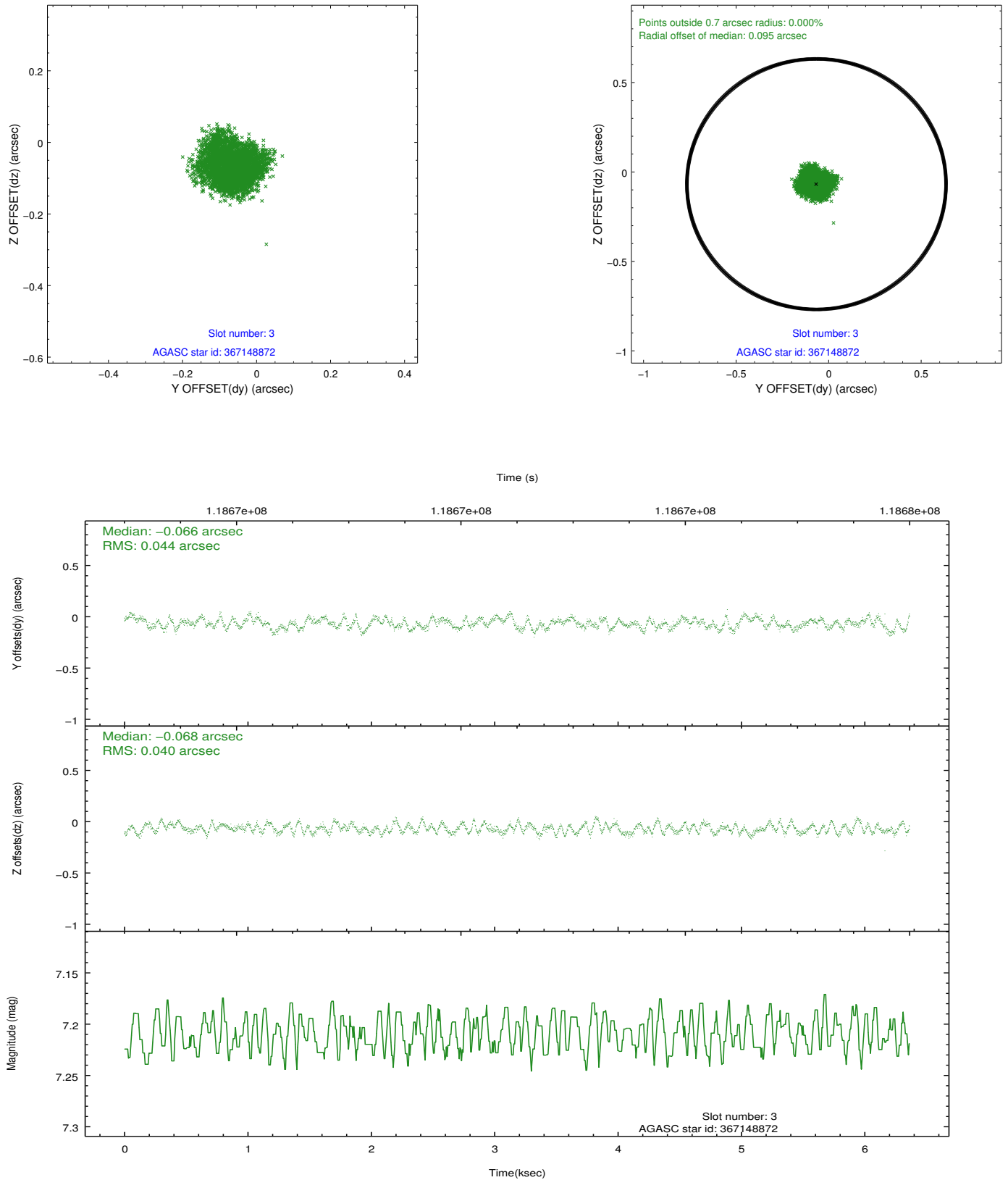


### Slot Statistics

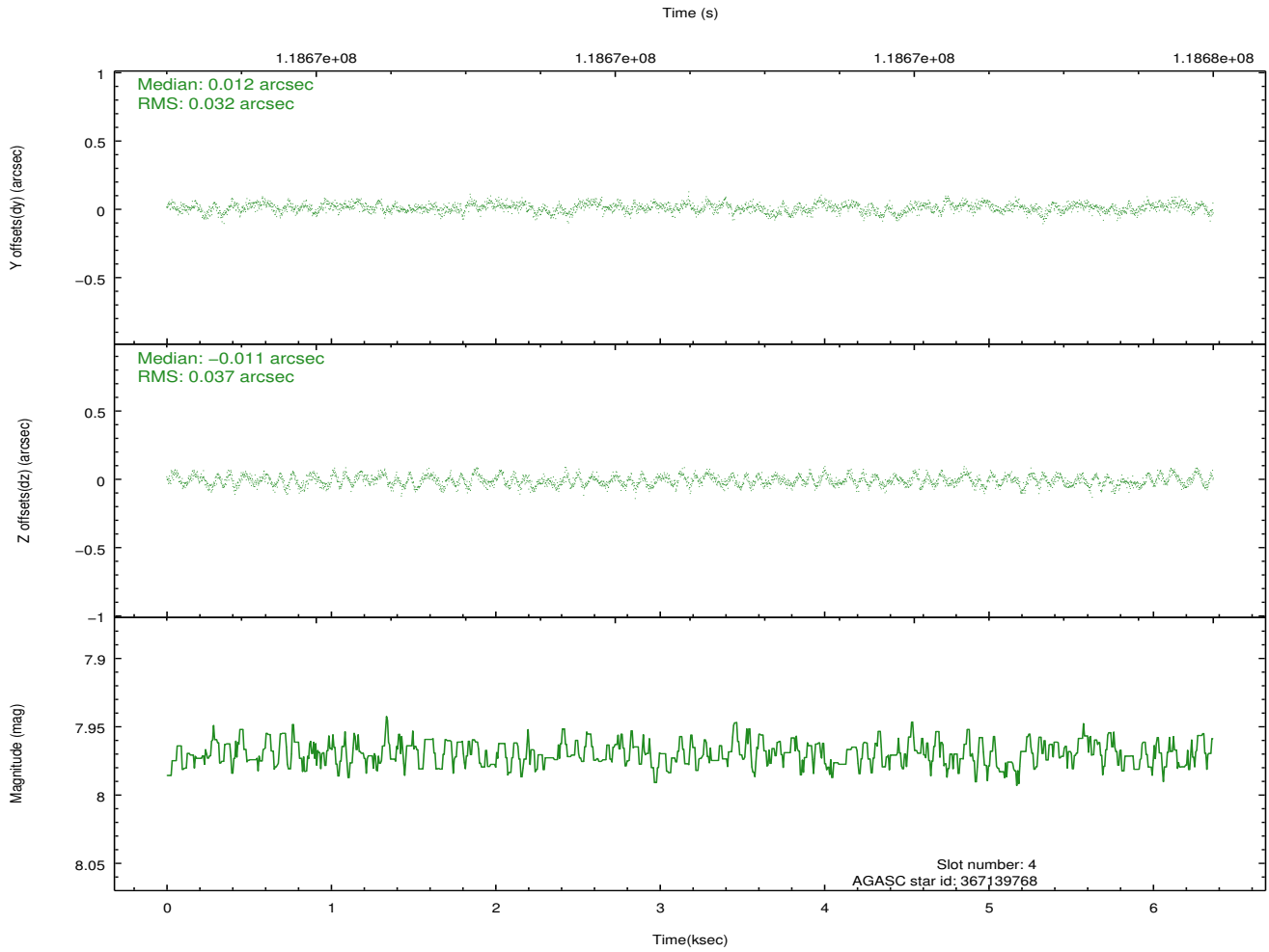
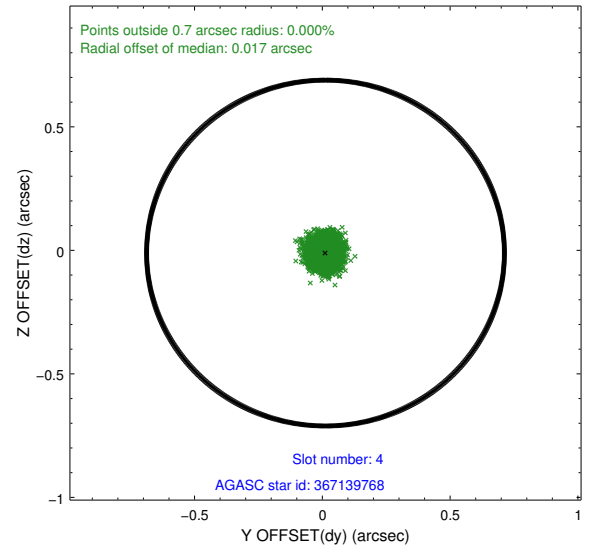
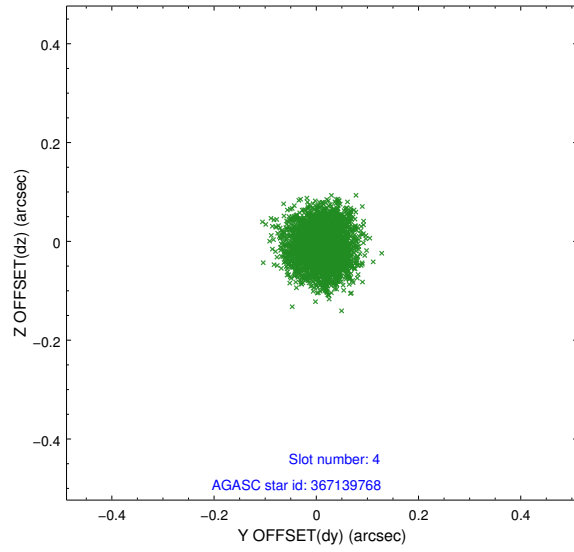
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.25	1553	-0.020	0.018	0.004	0.009	0.000000	0.000000	937.27	-829.31
1	FID	ACIS-I-5	7.24	1552	-0.041	0.032	0.004	0.009	0.000000	0.000000	-1810.32	1067.76
2	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
3	GUIDE	367148872	7.21	3106	-0.066	-0.068	0.066	0.097	10.505940	40.688258	438.31	1042.92
4	GUIDE	367139768	7.97	3105	0.012	-0.011	0.053	0.083	11.069715	40.685175	-1100.15	1079.09
5	GUIDE	367144424	8.66	3104	-0.084	-0.206	0.079	0.120	10.464515	40.309136	577.97	2405.38
6	GUIDE	367674552	8.84	3104	0.048	0.214	0.070	0.117	11.016238	41.570845	-997.04	-2110.35
7	GUIDE	367657896	9.02	3105	0.089	0.072	0.066	0.106	11.197765	41.313576	-1475.83	-1179.78

## 2.4 Star Slots

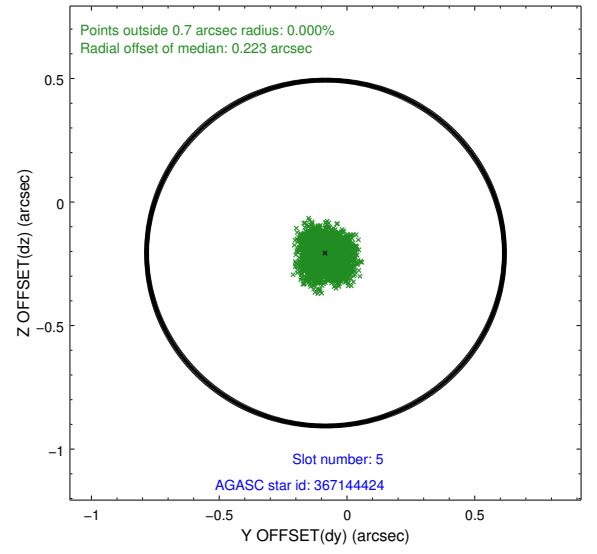
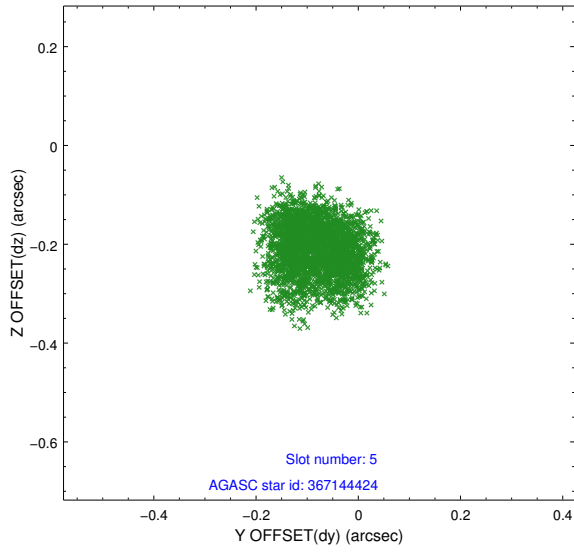
### 2.4.1 Slot 3



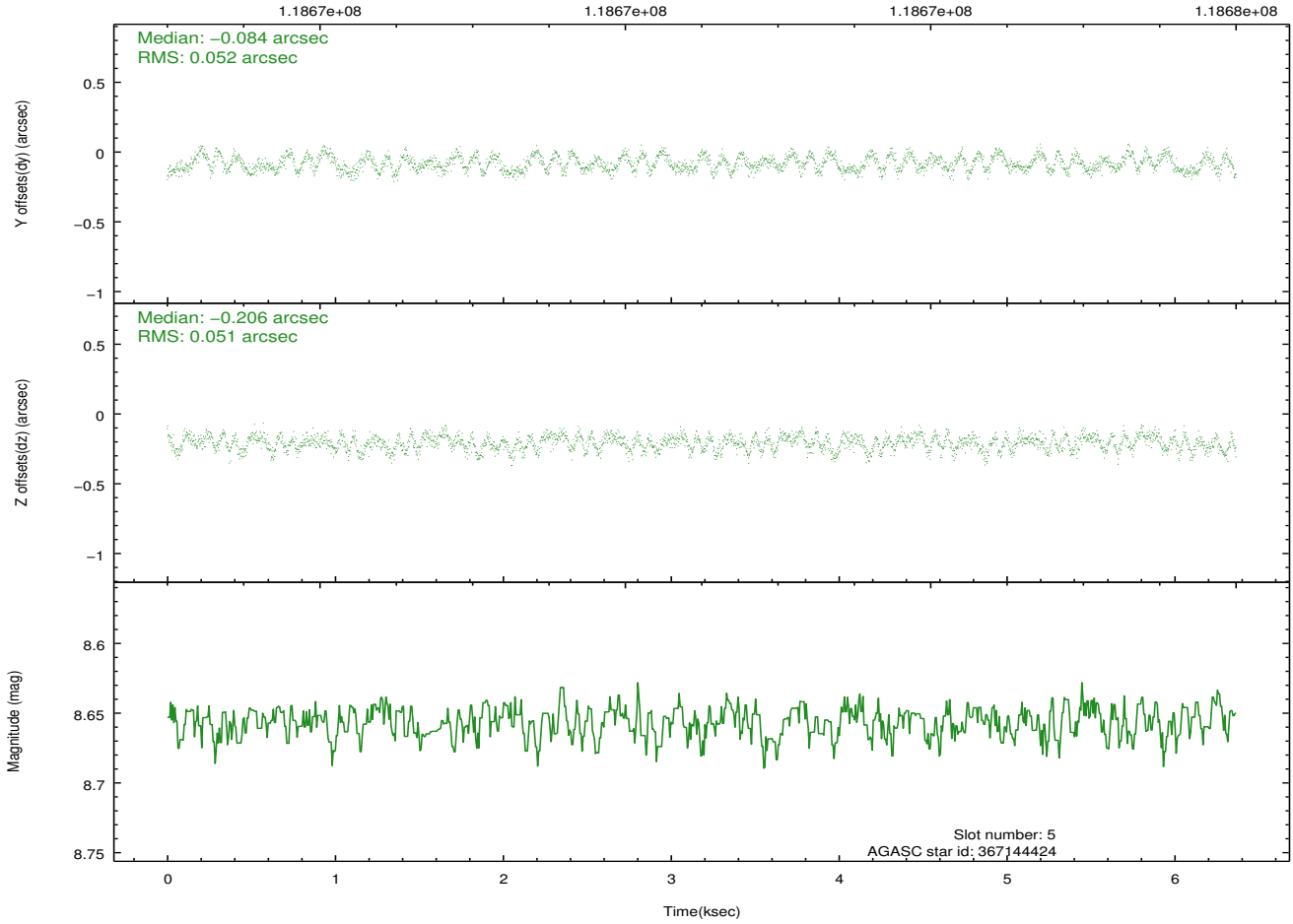
## 2.4.2 Slot 4



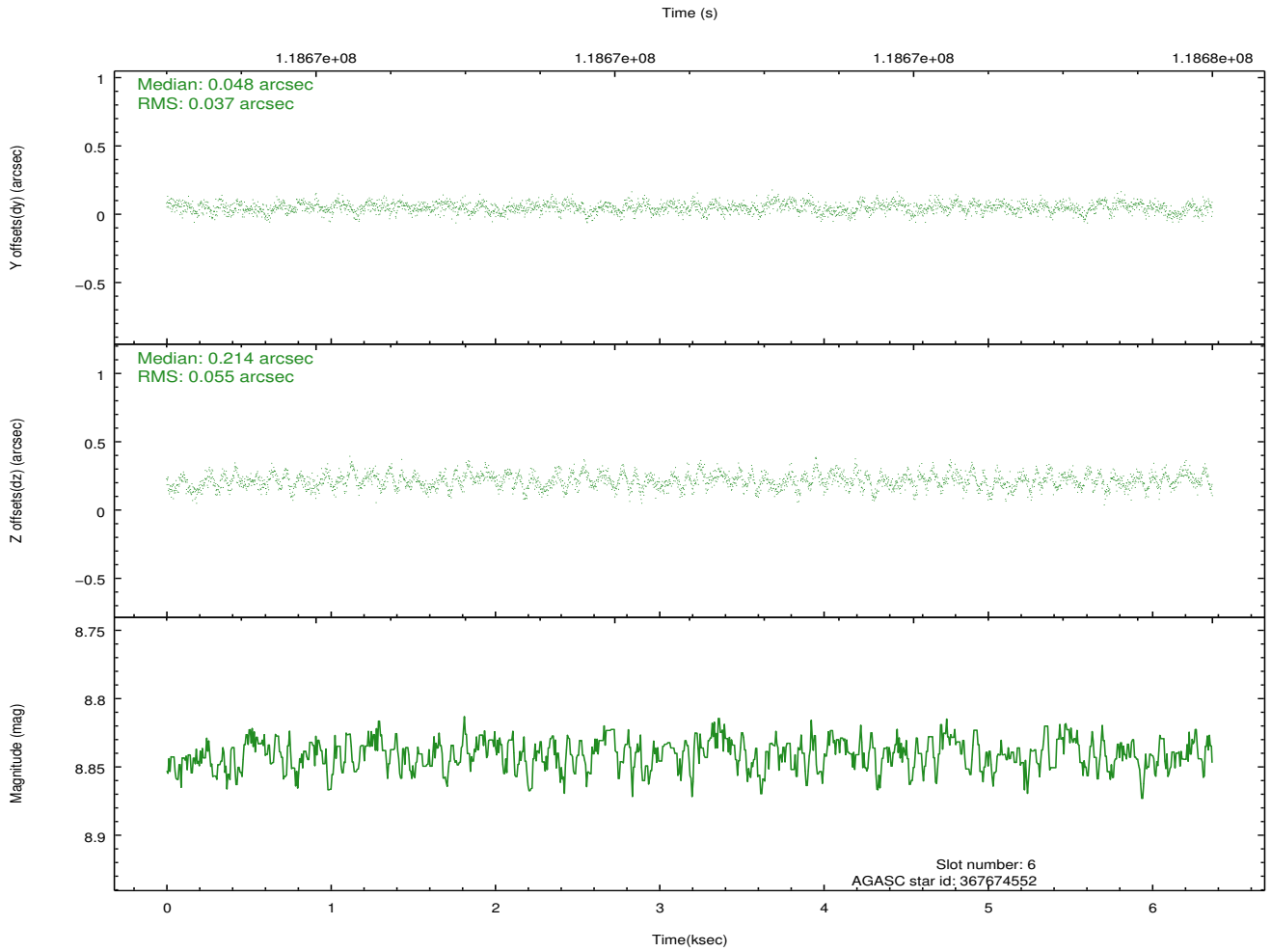
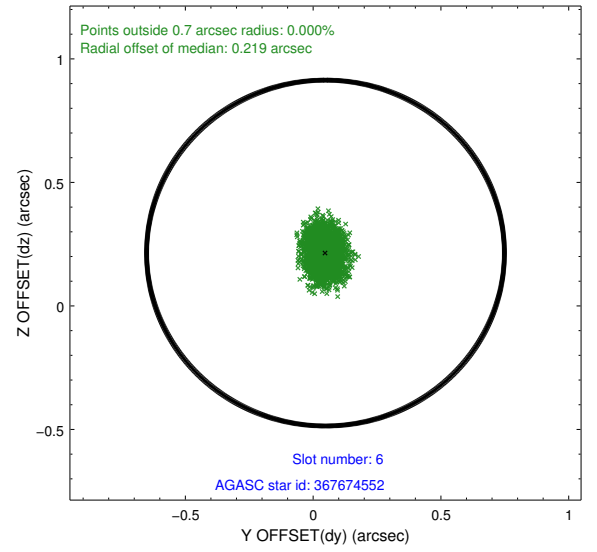
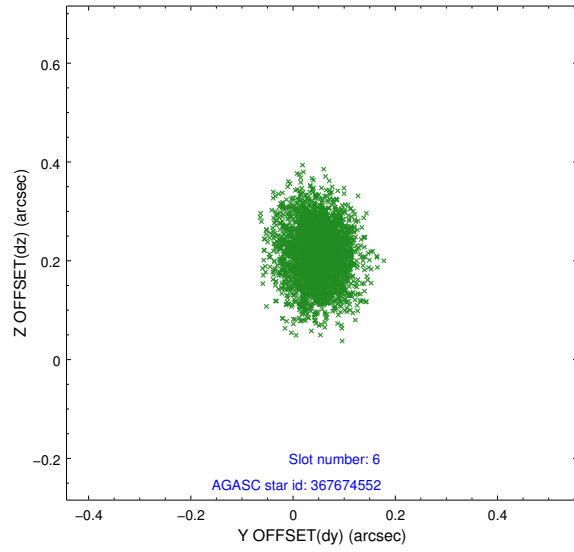
### 2.4.3 Slot 5



Time (s)

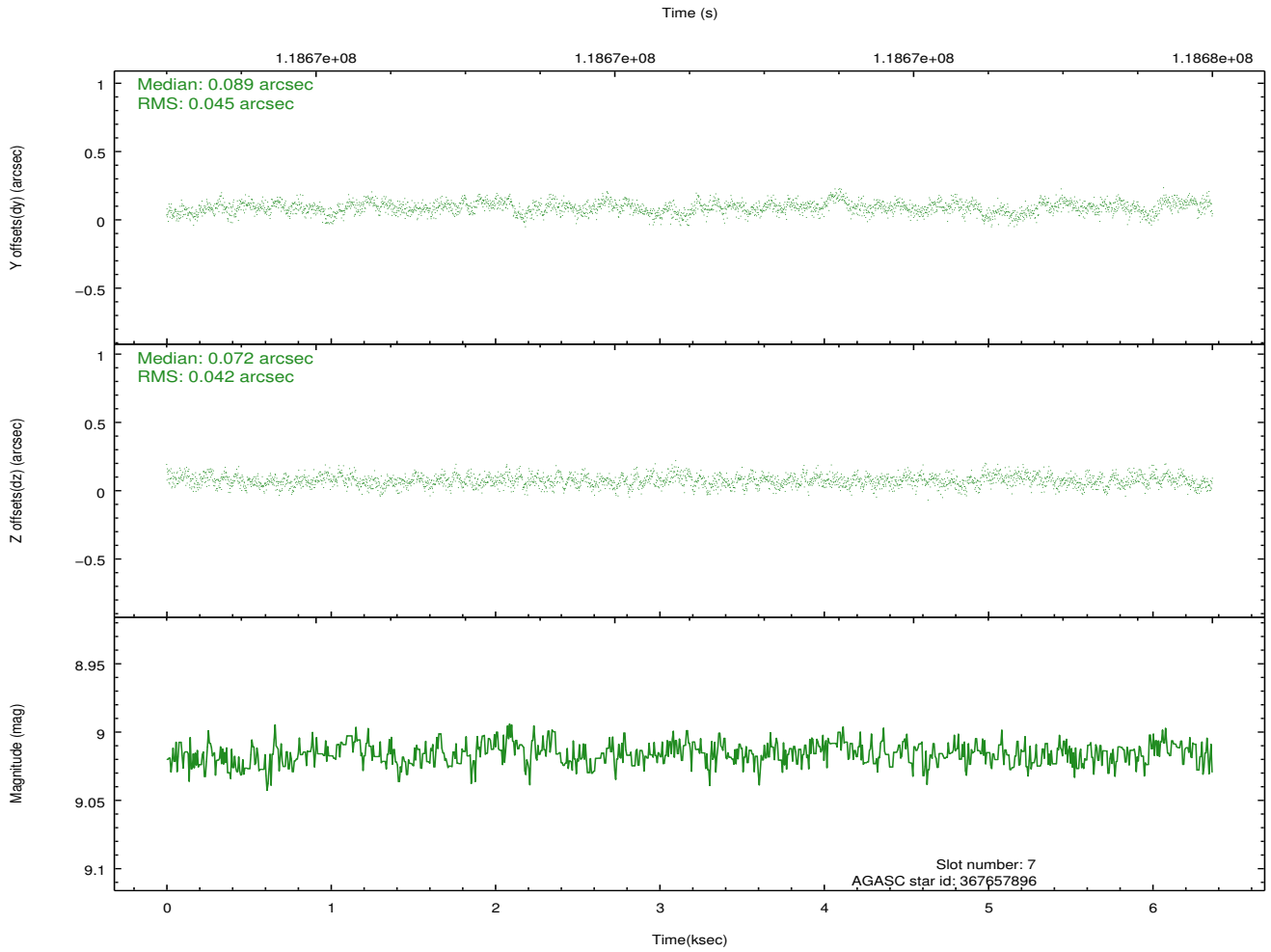
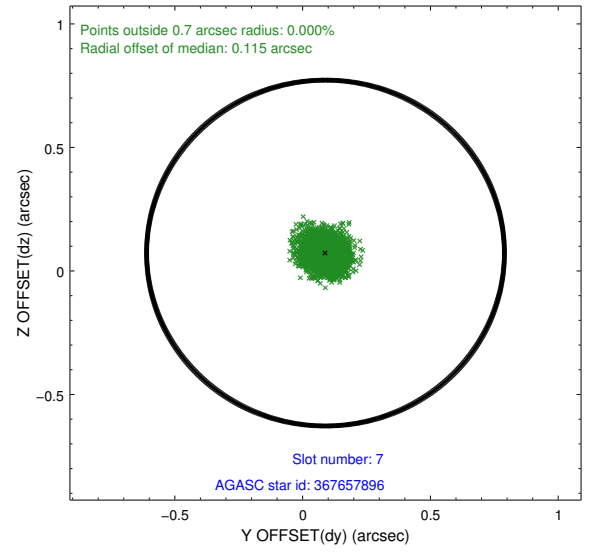
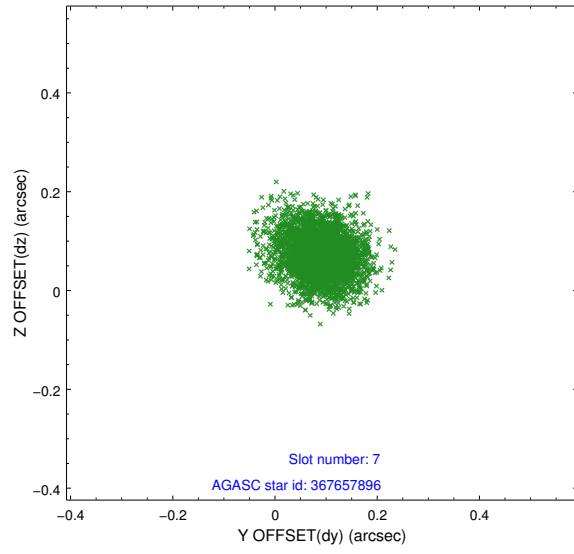


## 2.4.4 Slot 6



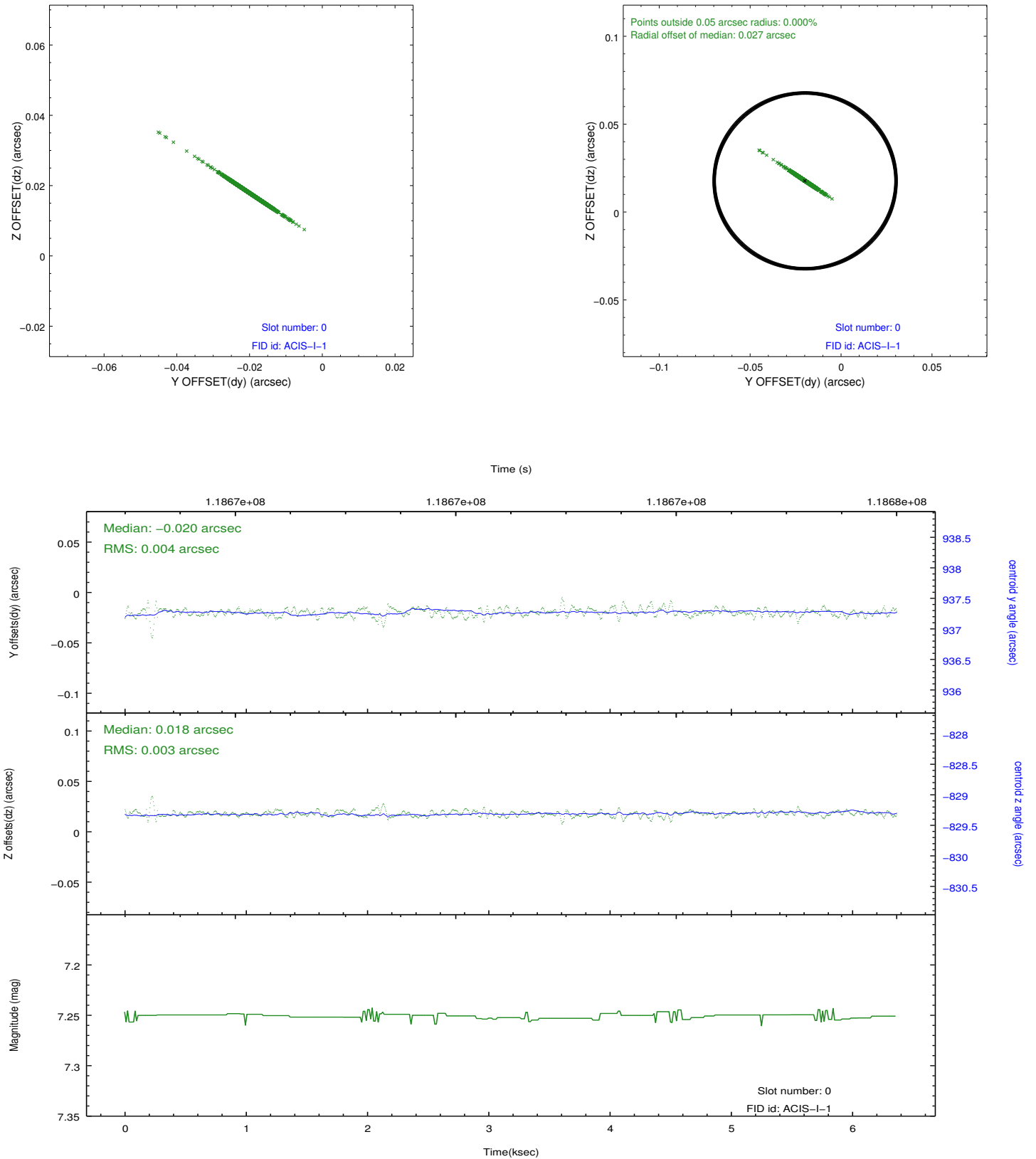


## 2.4.5 Slot 7

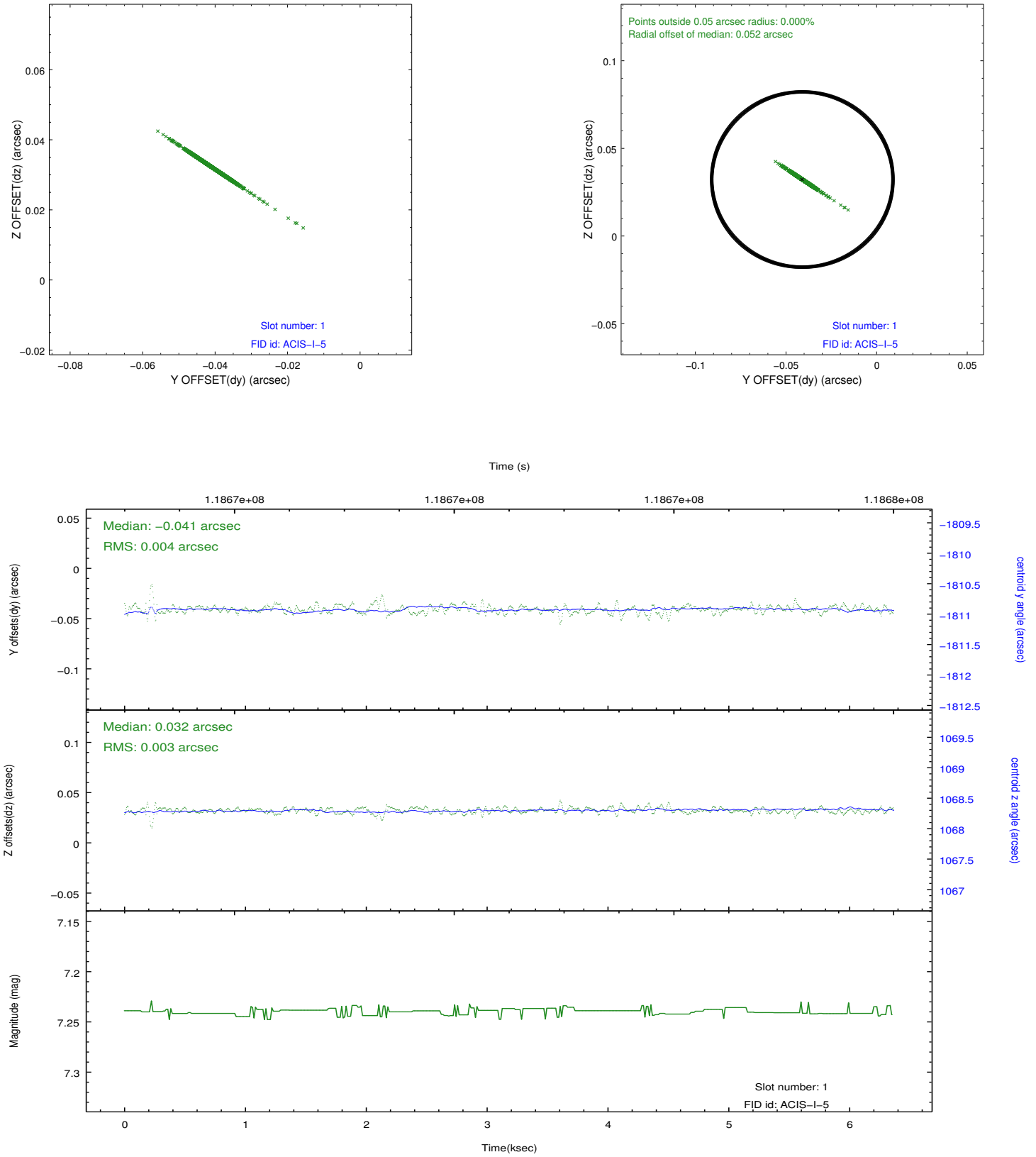


## 2.5 FID Slots

### 2.5.1 Slot 0



## 2.5.2 Slot 1



## A Summary

### A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.10.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.953

### A.2 Comments

Window constraint met.

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The fid light in slot 2 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this fid light from the solution.