

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 7136 - L2 Version 2  
Chandra X-Ray Center

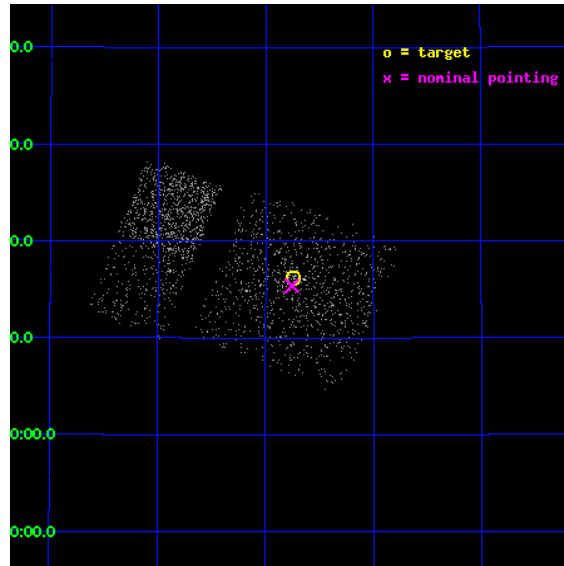
L2 Processing Date : Mar 21 2012

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# 1 Front

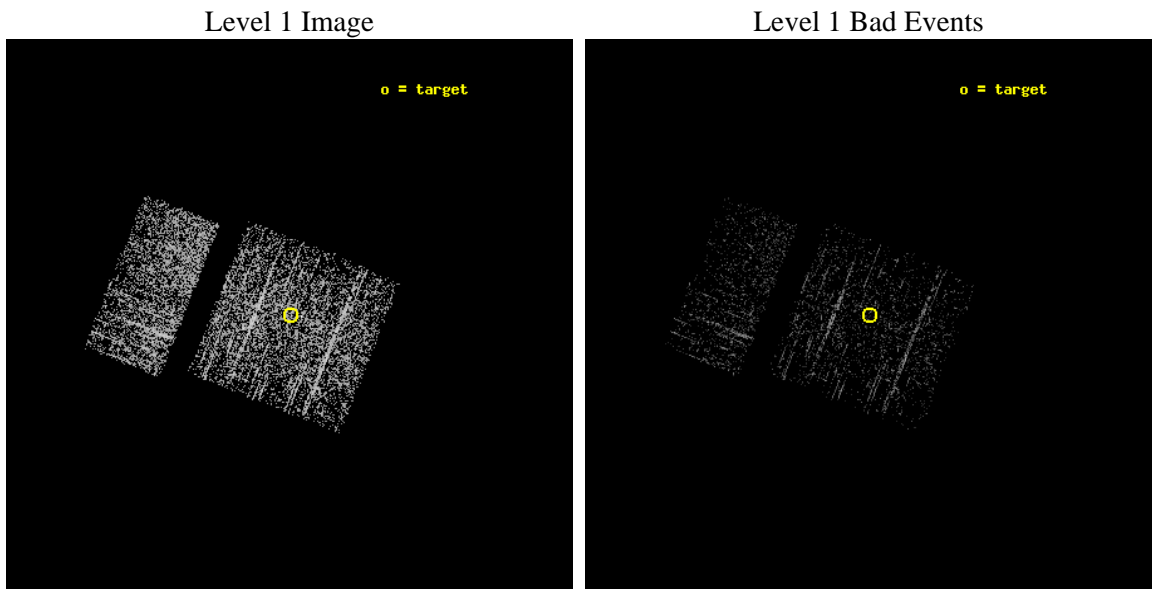
seq_num	600574	Sequence number
obs_id	7136	Observation id
title	Black Hole X-ray Novae in M31	Proposal title
observer	Dr Michael Garcia	Principal investigator
object	M31	Source name
dtcycle	0	&#160
cycle	P	events are from which exps? P[rimary] S[econdar
ra_targ	10.685	Observer's specified target RA [deg]
dec_targ	41.268972	Observer's specified target Dec [deg]
ra_nom	10.689042137133	Nominal RA [deg]
dec_nom	41.256687996565	Nominal Dec [deg]
roll_nom	291.71537947277	Nominal Roll [deg]
revision	2	Processing version of data
ontime	920.15885305405	Sum of GTIs [s]
livetime	123.96518433325	Livetime [s]
ontime0	920.1588729322	Sum of GTIs [s]
ontime1	920.1588331461	Sum of GTIs [s]
ontime2	920.15885305405	Sum of GTIs [s]
ontime3	920.15885305405	Sum of GTIs [s]
ontime6	920.1588729322	Sum of GTIs [s]
ontime7	920.15885302424	Sum of GTIs [s]
l2events	2514	Number of level 2 events



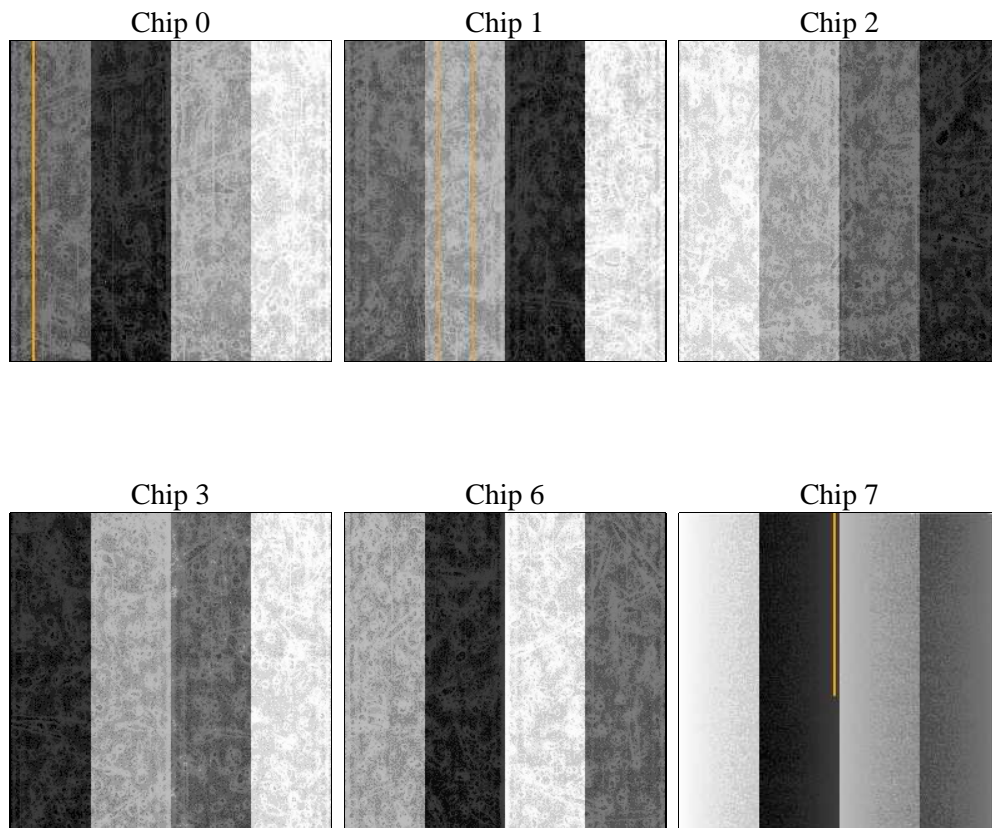
## 2 OBI Primary

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	920.15885305405	Sum of GTIs [s]
caldsver	4.4.8	&#160	ontime0	920.1588729322	Sum of GTIs [s]
date	2012-03-22T00:48:25	Date and time of file creation	ontime1	920.1588331461	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	920.15885305405	Sum of GTIs [s]
			ontime3	920.15885305405	Sum of GTIs [s]
			ontime6	920.1588729322	Sum of GTIs [s]
			ontime7	920.15885302424	Sum of GTIs [s]
			l1events	22123	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	3495	3324	4011	3677	3871	3745
rejected events	3120	2850	3658	3286	3572	2764
rejected %	89%	85%	91%	89%	92%	73%

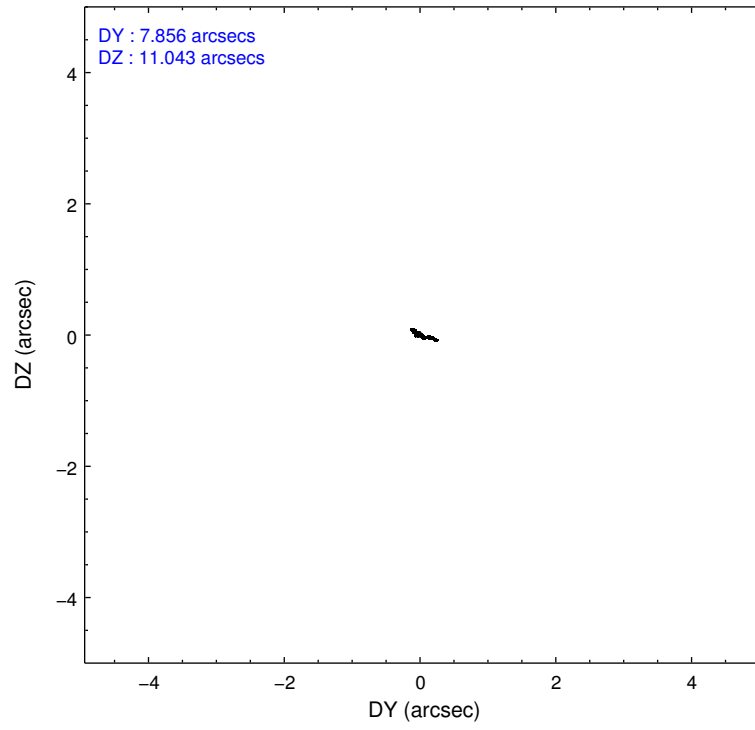
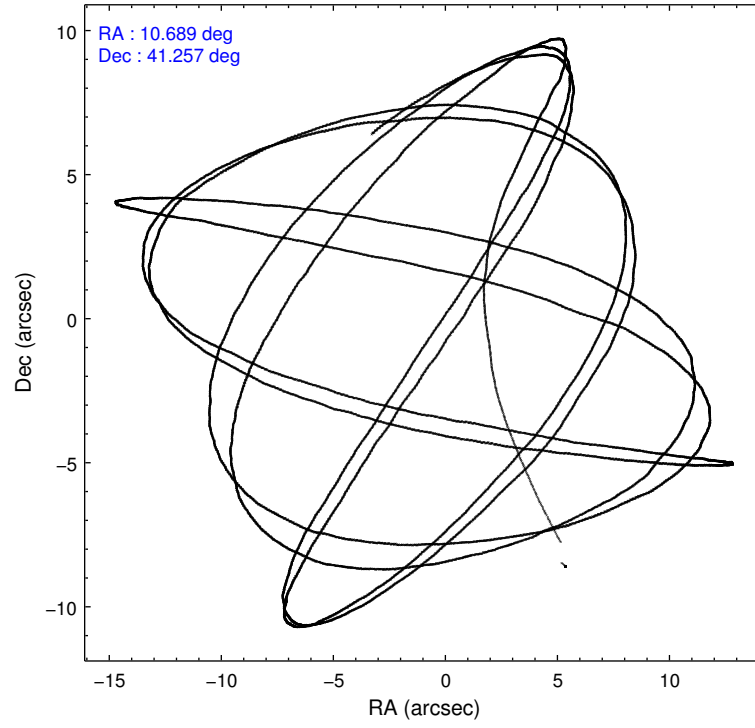
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	154	199	152	166	75	82
	4%	5%	3%	4%	1%	2%
grade 1 events	3	4	1	3	0	4
	0%	0%	0%	0%	0%	0%
grade 2 events	80	101	65	106	71	223
	2%	3%	1%	2%	1%	5%
grade 3 events	43	54	43	37	47	80
	1%	1%	1%	1%	1%	2%
grade 4 events	45	48	38	30	35	99
	1%	1%	0%	0%	0%	2%
grade 5 events	111	132	89	130	152	291
	3%	3%	2%	3%	3%	7%
grade 6 events	55	75	59	56	78	506
	1%	2%	1%	1%	2%	13%
grade 7 events	3004	2711	3564	3149	3413	2460
	85%	81%	88%	85%	88%	65%

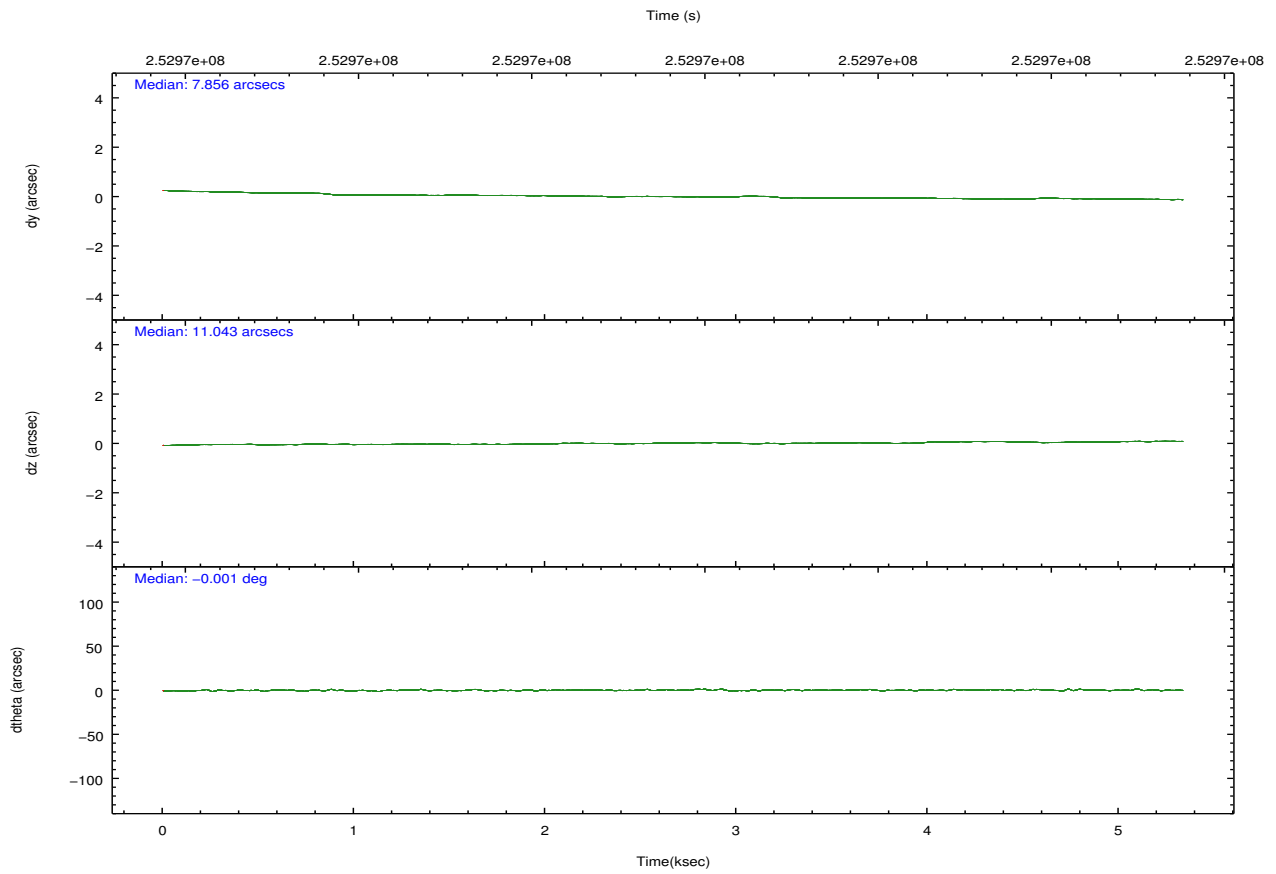
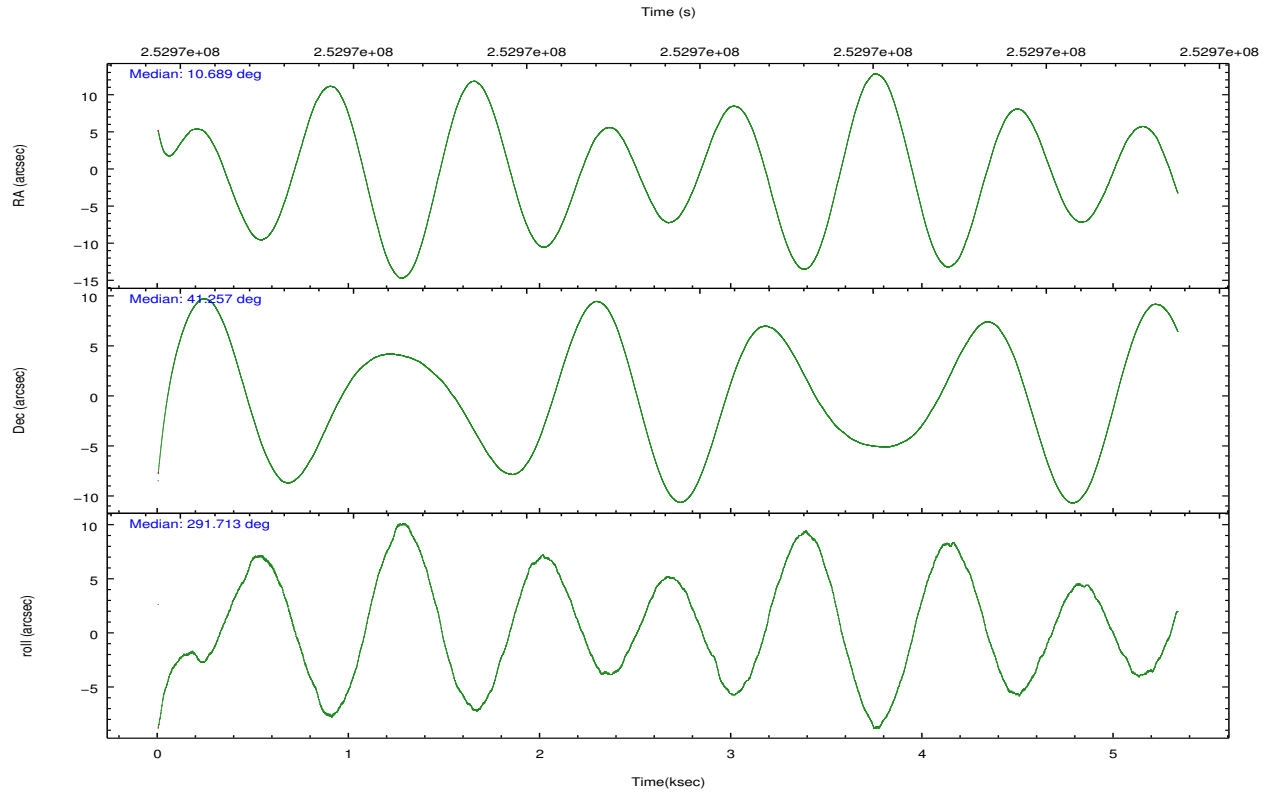


## 2.2 Compared Parameters

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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	10.660230	10.68904213713258	Subarray requested	NONE	NONE
[deg] Pointing Dec	41.273458	41.25668799656496	Alternating exposures requested	Y	Y
[deg] Pointing Roll	291.525700	291.7153794727701	[s] Primary exposure time	0.500000	0.5
[s] Window start time (MET)	252892865.184000	252892865.184000	[s] Secondary exposure time	0.000000	3.2
[s] Window stop time (MET)	253670465.184000	253670465.184000	Duty cycle	5	5
[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)	252966485.184000	252965402.12683			
Observation start date	2006-01-06T20:27:00	2006-01-06T20:10:02			
[s] Observation end time (MET)	252971485.184000	252972594.55216			
Observation end date	2006-01-06T21:50:20	2006-01-06T22:09:54			
Read mode	TIMED	TIMED			

## 2.3 Aspect



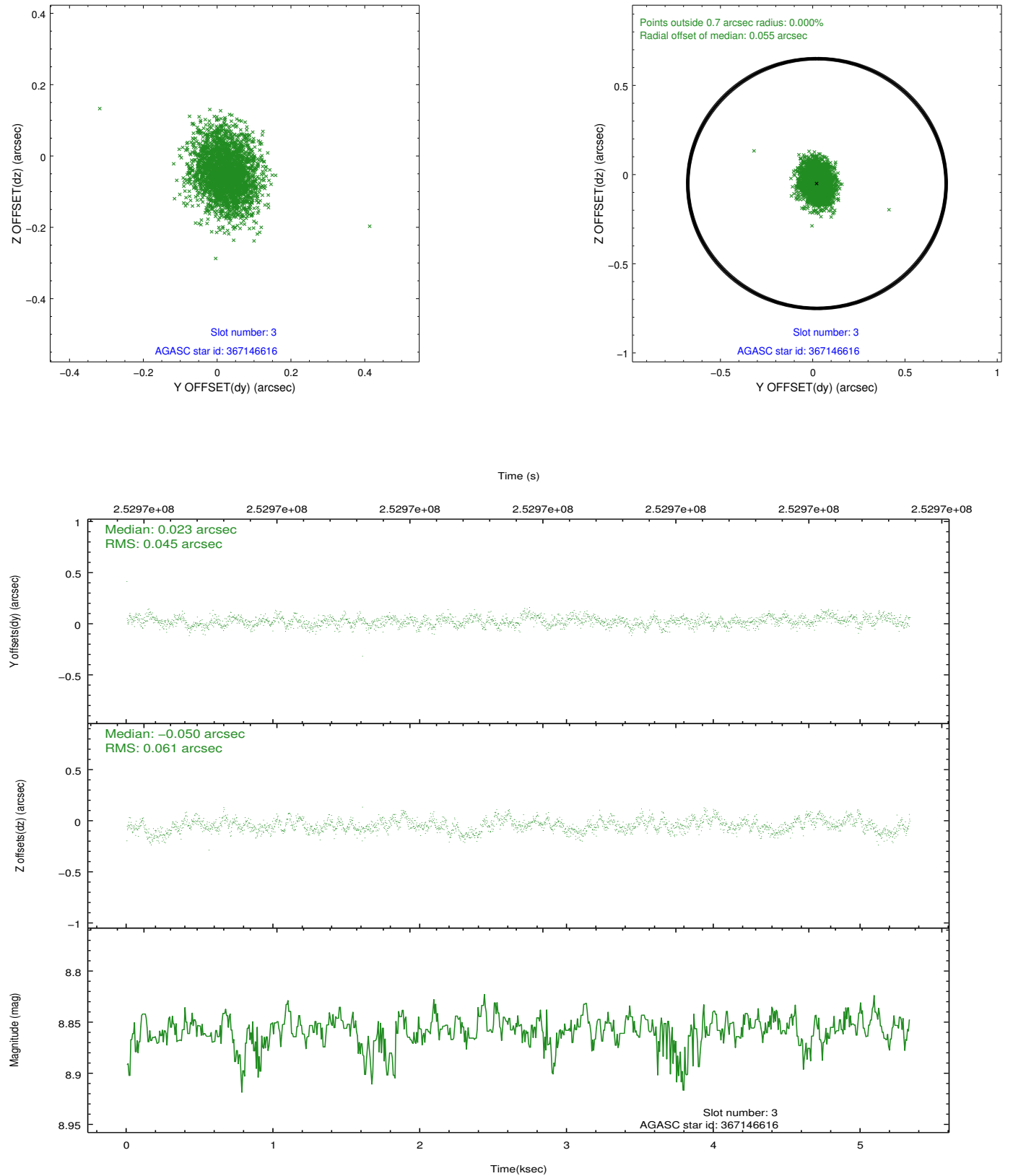


### Slot Statistics

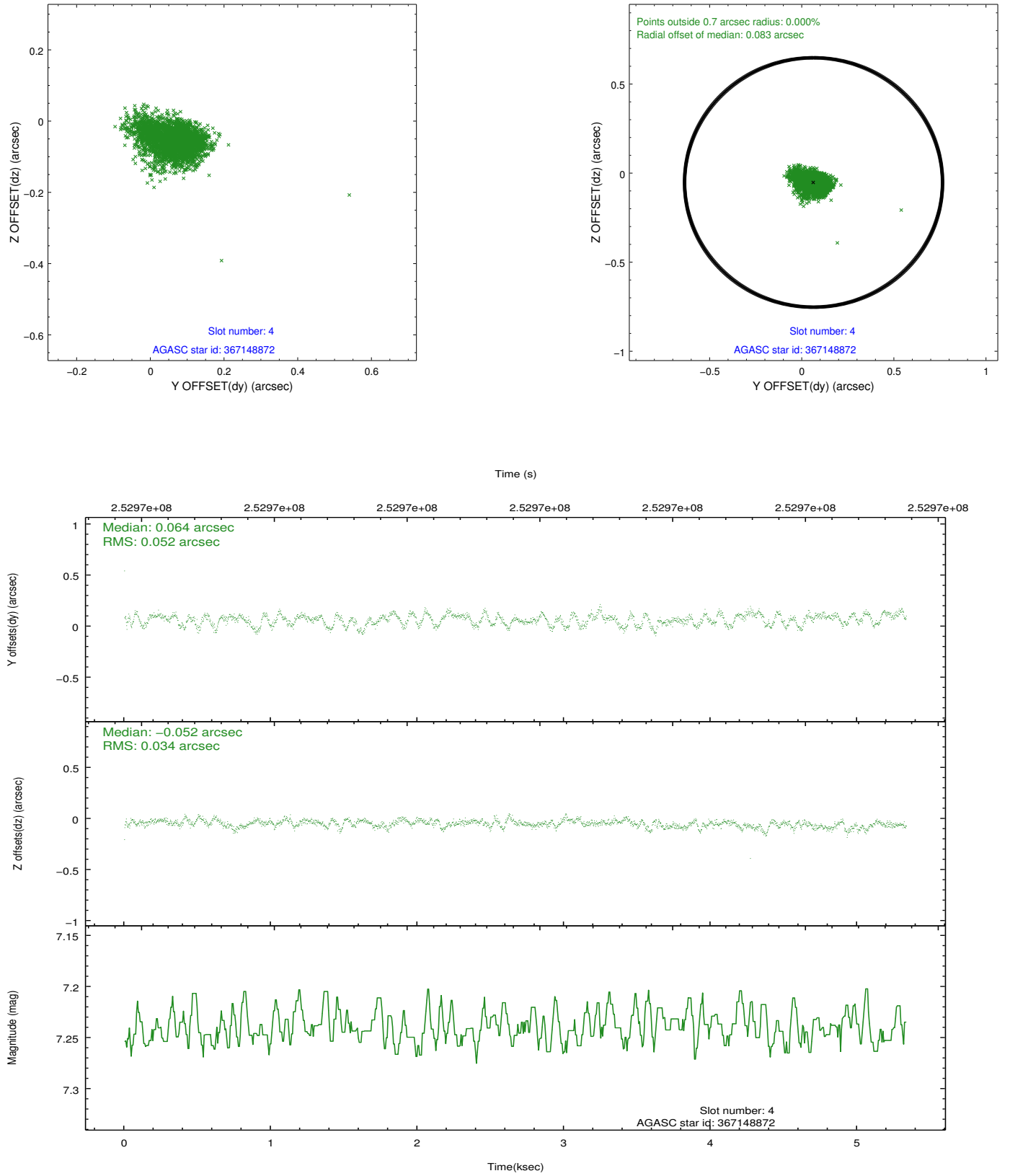
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.24	1302	0.039	-0.025	0.011	0.024	0.000000	0.000000	931.81	-834.59
1	FID	ACIS-I-5	7.22	1301	-0.179	0.050	0.009	0.017	0.000000	0.000000	-1815.85	1062.47
2	FID	ACIS-I-6	7.25	1302	0.048	0.047	0.009	0.014	0.000000	0.000000	396.19	1708.21
3	GUIDE	367146616	8.86	2599	0.023	-0.050	0.080	0.131	11.418645	41.190163	1024.93	1804.20
4	GUIDE	367148872	7.24	2603	0.064	-0.052	0.064	0.105	10.505940	40.688258	1806.19	-1164.57
5	GUIDE	367674552	8.84	2603	-0.019	0.050	0.073	0.115	11.016238	41.570845	-644.77	1284.77
6	GUIDE	367138920	7.74	2602	0.075	0.064	0.049	0.083	11.513485	40.808909	2399.02	1554.06
7	GUIDE	367663272	9.28	2600	-0.139	-0.010	0.079	0.128	10.656279	41.699429	-1429.17	552.43

## 2.4 Star Slots

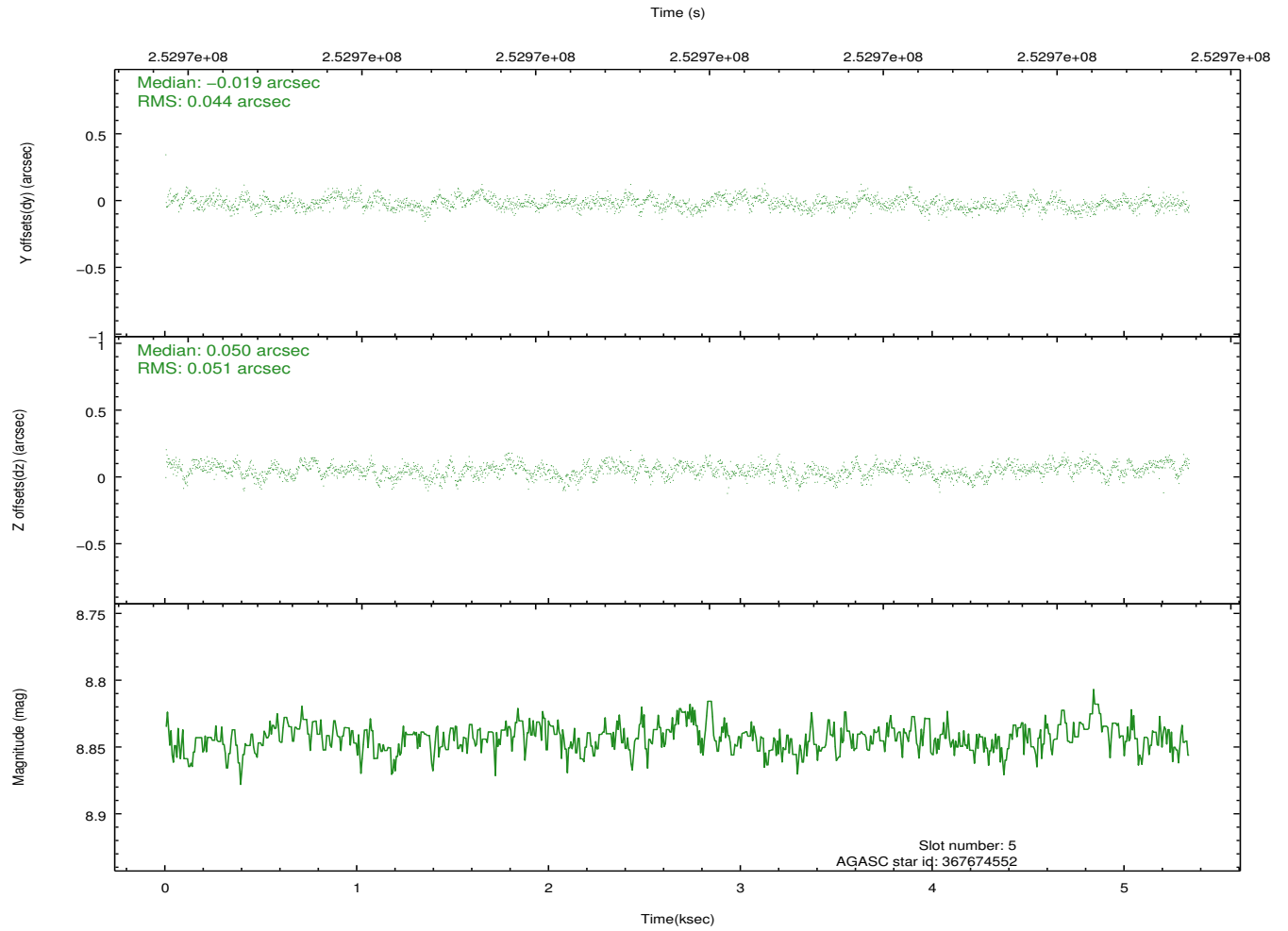
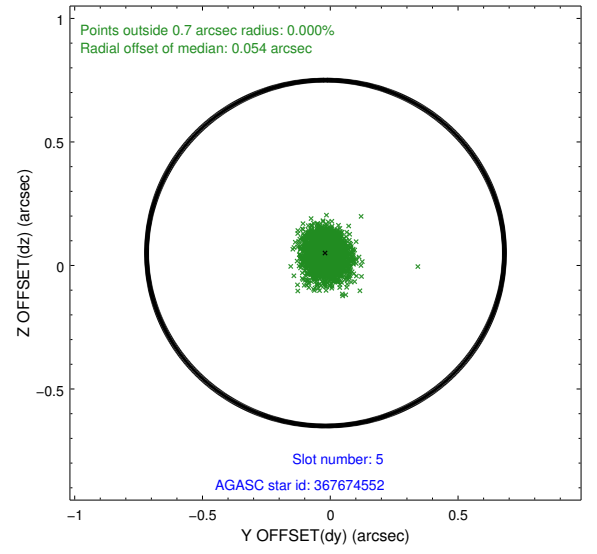
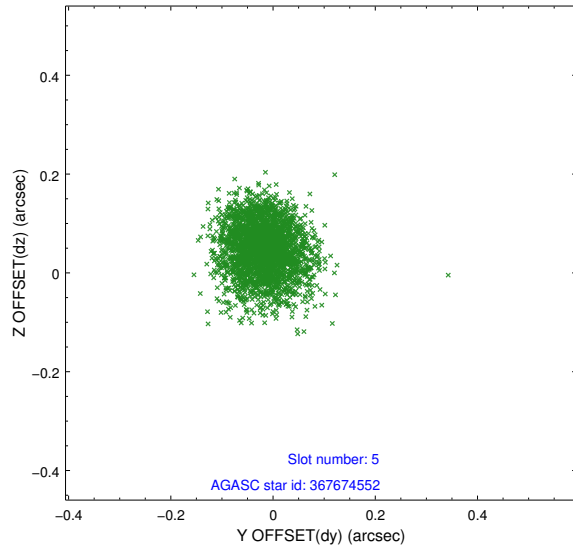
### 2.4.1 Slot 3



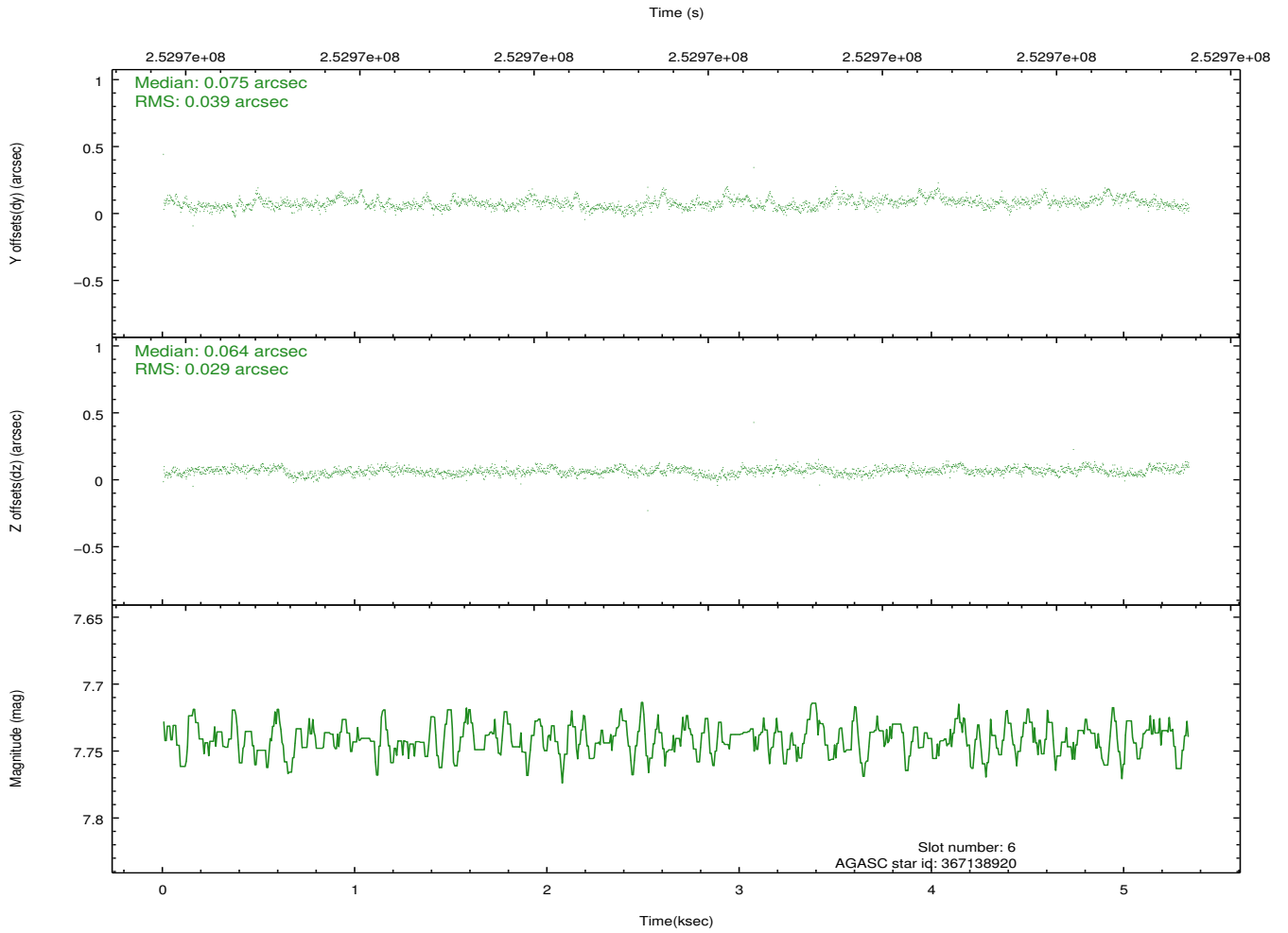
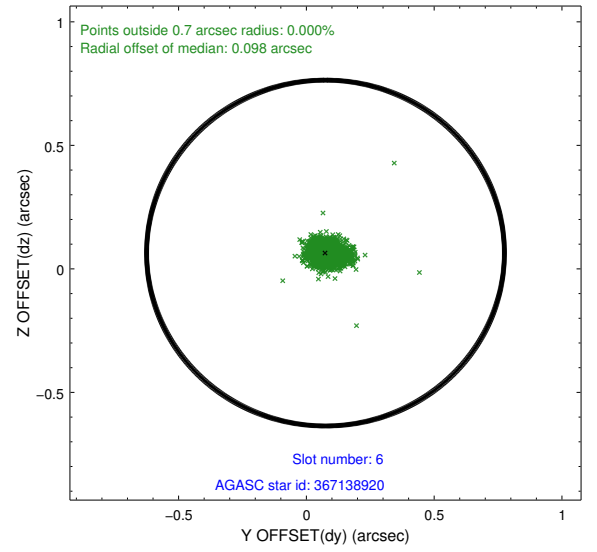
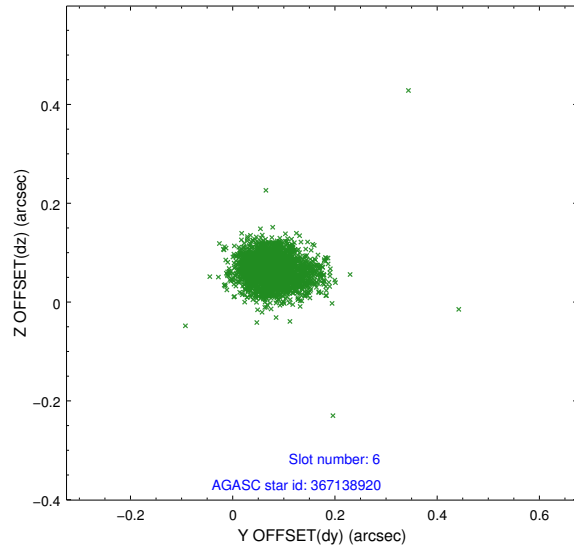
## 2.4.2 Slot 4



### 2.4.3 Slot 5

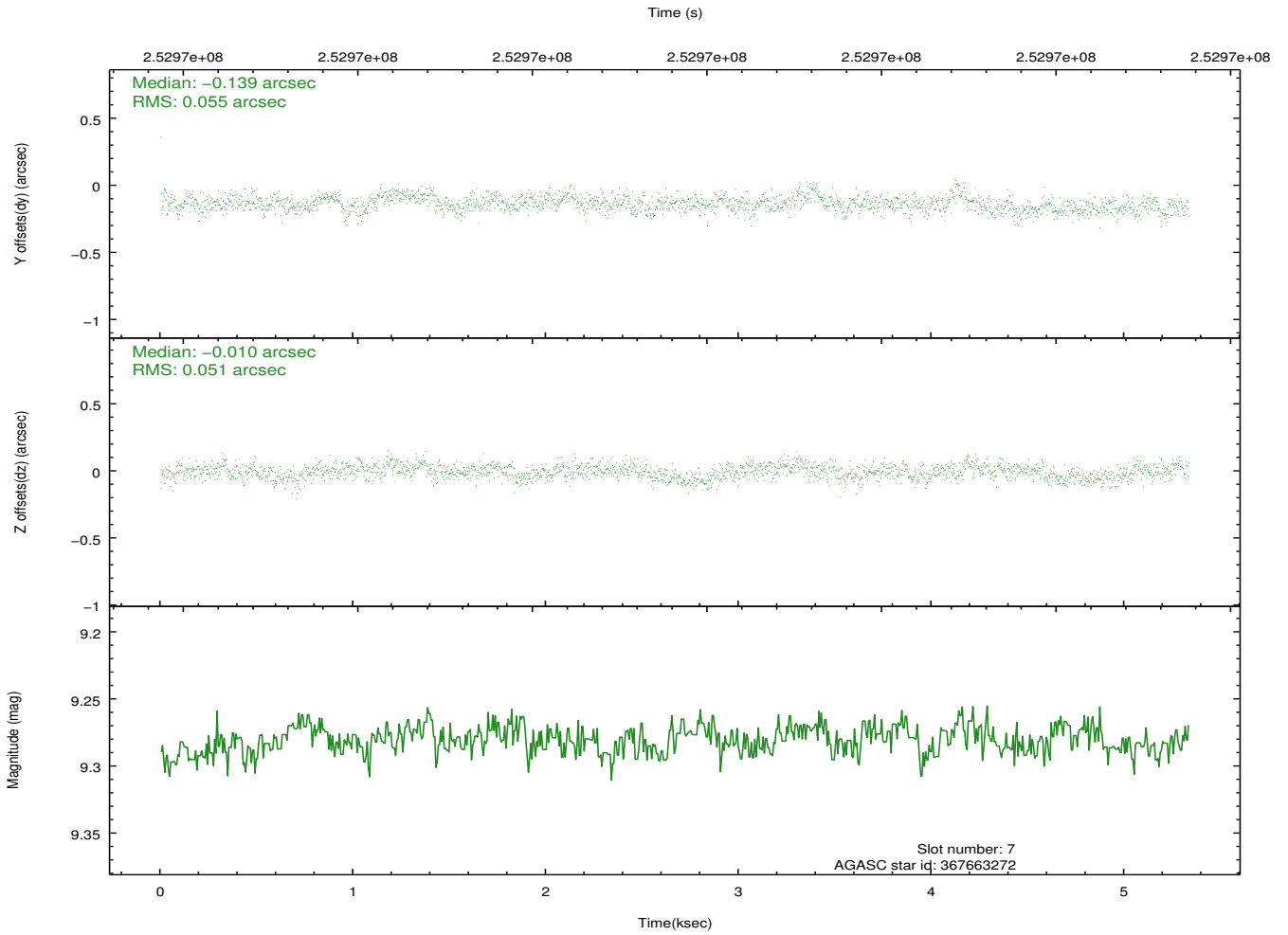
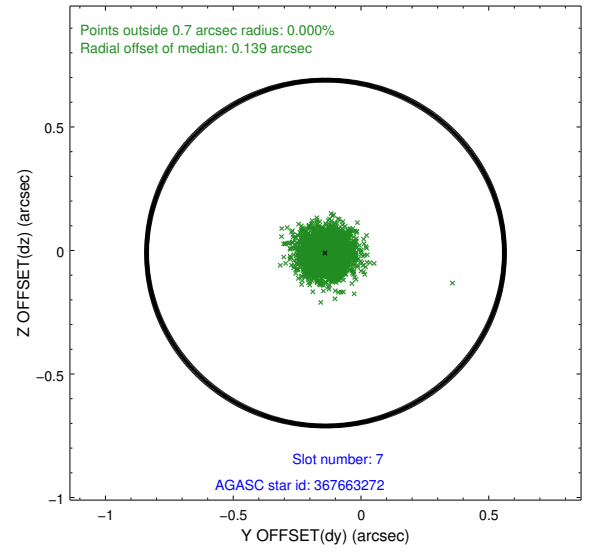
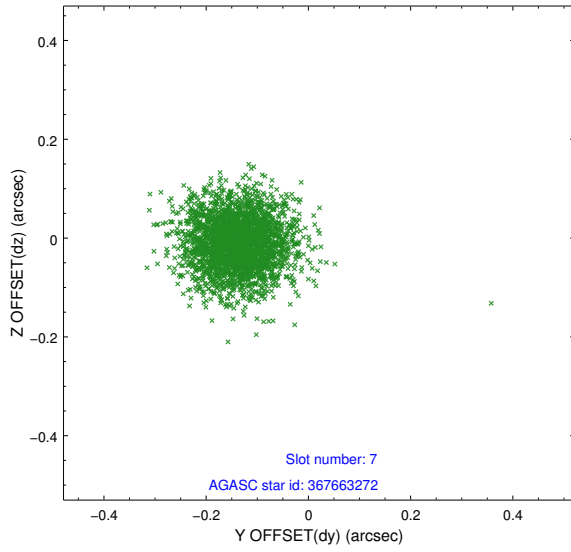


## 2.4.4 Slot 6



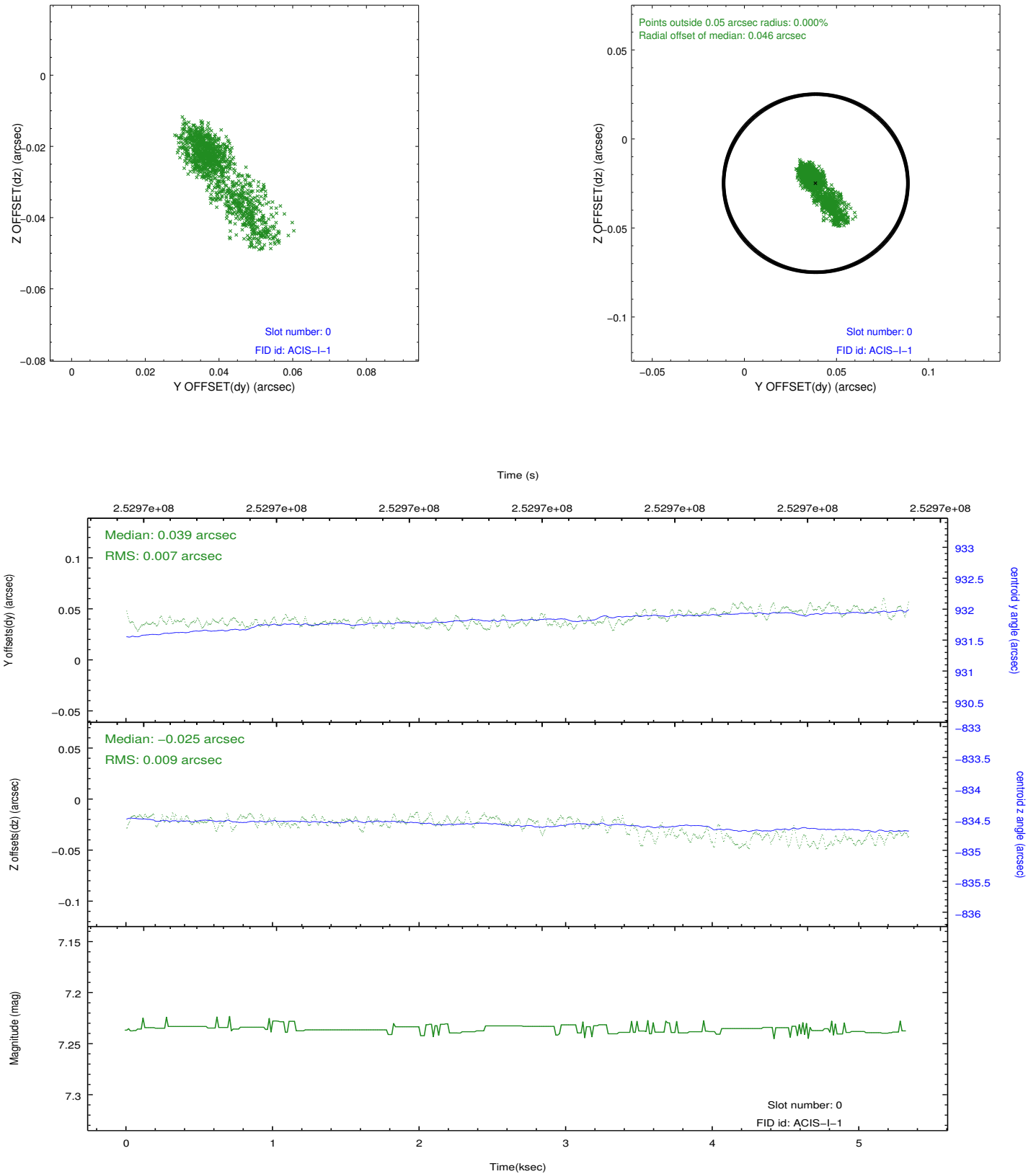


### 2.4.5 Slot 7

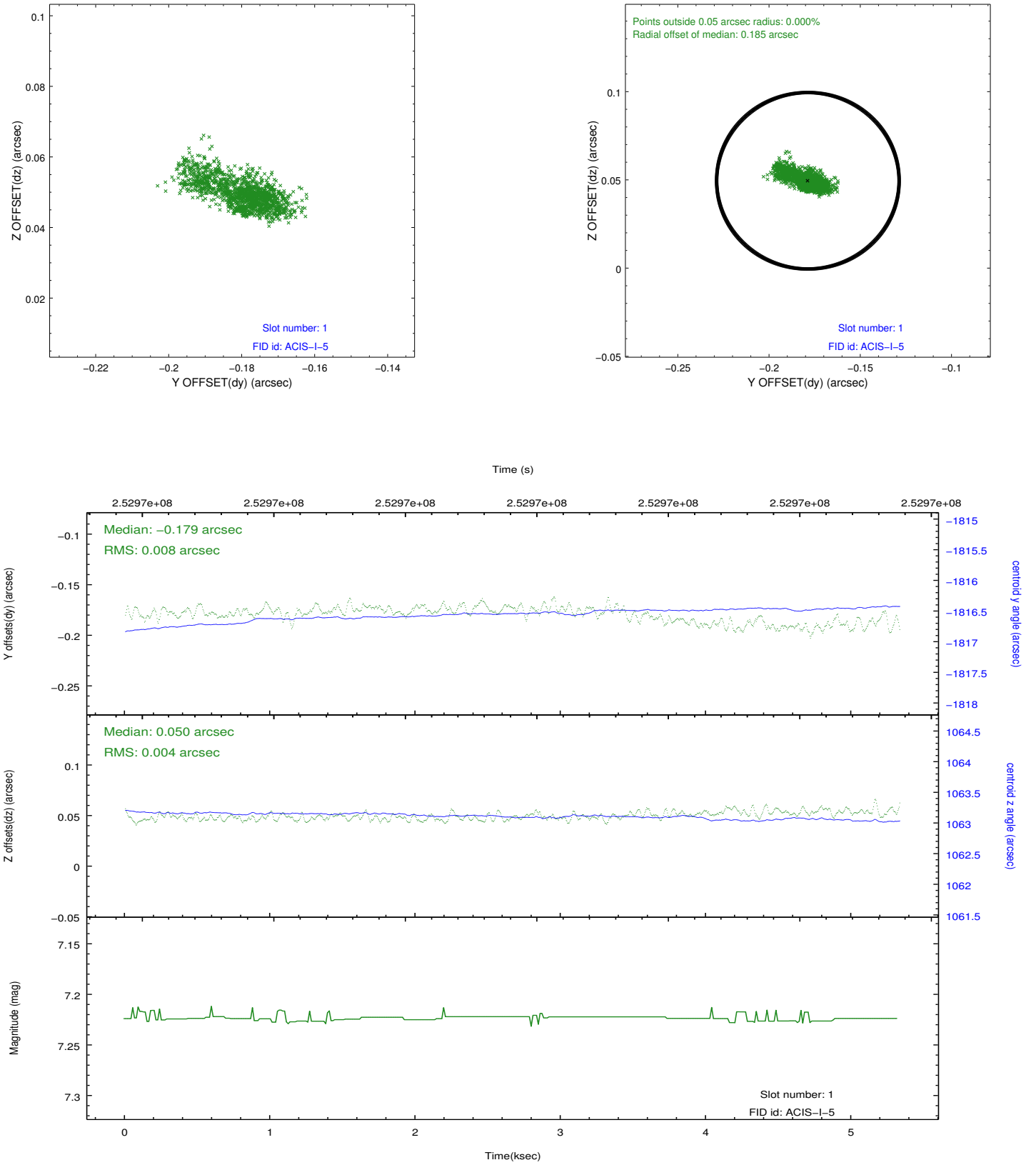


## 2.5 FID Slots

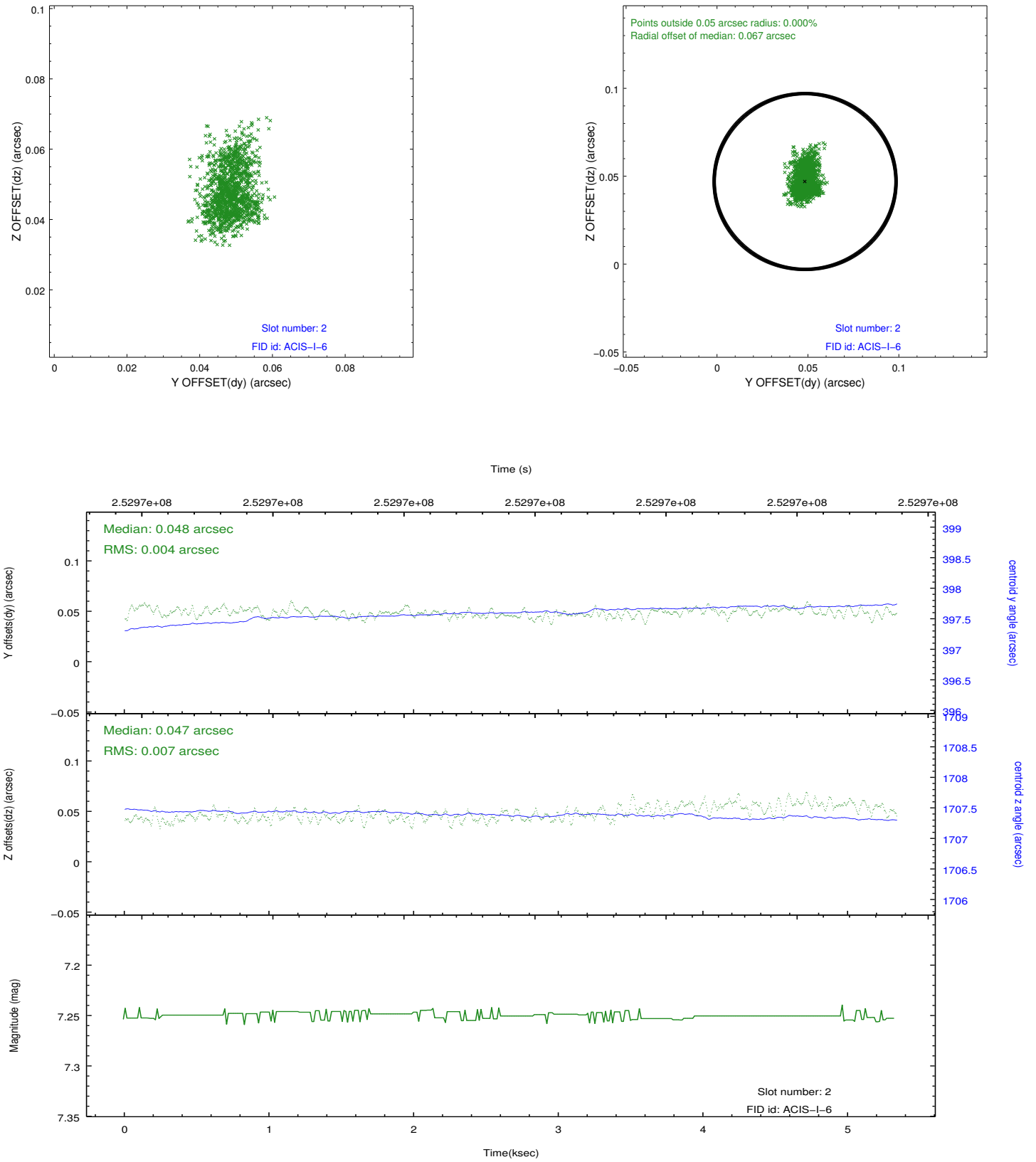
### 2.5.1 Slot 0



## 2.5.2 Slot 1



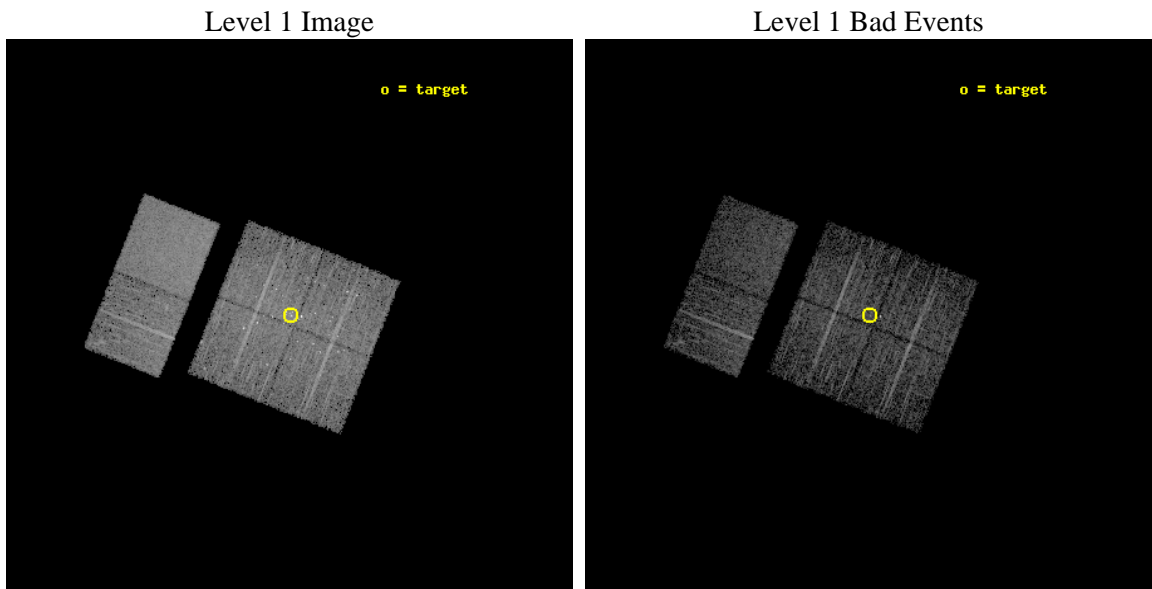
### 2.5.3 Slot 2



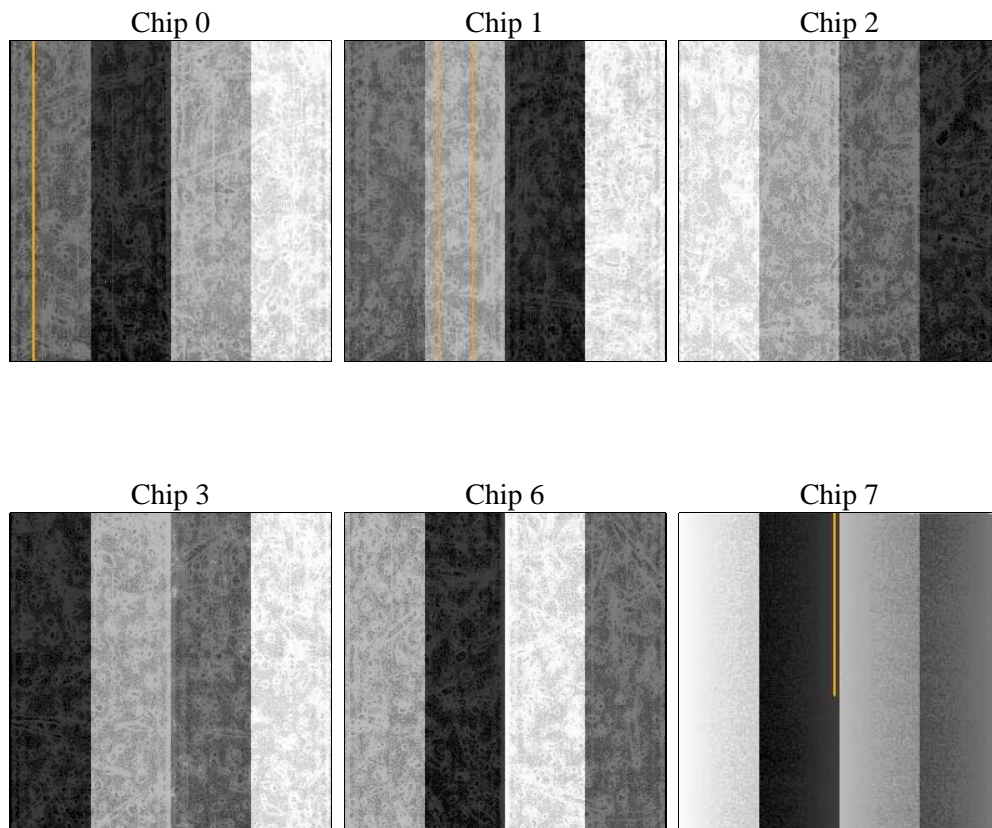
### 3 OBI Secondary

#### 3.1 OBI

##### 3.1.1 Images



##### 3.1.2 Bias



### 3.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3.1	Processing system revision	ontime	4041.8880489767	Sum of GTIs [s]
caldsver	4.4.8	&#160	ontime0	4041.8884872496	Sum of GTIs [s]
date	2012-03-22T00:50:03	Date and time of file creation	ontime1	4041.8880991638	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	4041.8879996836	Sum of GTIs [s]
			ontime3	4041.8880489767	Sum of GTIs [s]
			ontime6	4041.888576448	Sum of GTIs [s]
			ontime7	4041.8880186975	Sum of GTIs [s]
			l1events	215187	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	31189	34941	34381	36206	33138	45332	grade 0 events	2855	4444	3566	5012	1746	1768
rejected events	25822	26983	28392	28323	28956	26415		9%	12%	10%	13%	5%	3%
rejected %	82%	77%	82%	78%	87%	58%	grade 1 events	22	163	48	95	17	52
								0%	0%	0%	0%	0%	0%
							grade 2 events	971	1379	943	1157	863	3809
								3%	3%	2%	3%	2%	8%
							grade 3 events	469	582	401	487	387	1657
								1%	1%	1%	1%	1%	3%
							grade 4 events	388	547	440	477	326	1655
								1%	1%	1%	1%	0%	3%
							grade 5 events	1323	1539	1250	1502	1586	4415
								4%	4%	3%	4%	4%	9%
							grade 6 events	690	1017	648	762	862	10060
								2%	2%	1%	2%	2%	22%
							grade 7 events	24471	25270	27085	26714	27351	21916
								78%	72%	78%	73%	82%	48%

## A Summary

### A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.03.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.962074

### A.2 Comments

Window constraint satisfied.