

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12972 - L2 Version 2  
Chandra X-Ray Center

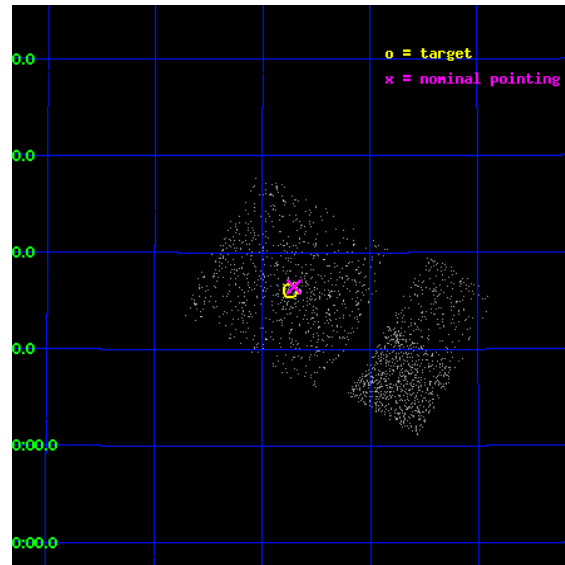
L2 Processing Date : Feb 18 2012

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# 1 Front

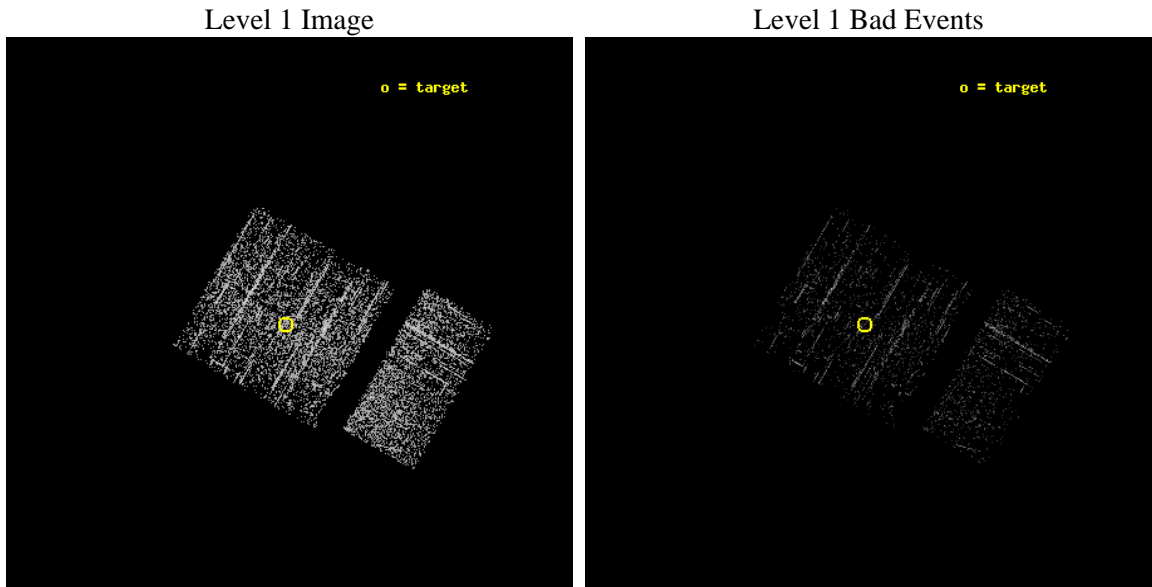
seq_num	600940	Sequence number
obs_id	12972	Observation id
title	Monitoring M31 for BHXNe	Proposal title
observer	Dr Michael Garcia	Principal investigator
object	M31	Source name
dtcycle	0	&#160
cycle	P	events are from which exps? P[rimary] S[econdar]
ra_targ	10.685	Observer's specified target RA [deg]
dec_targ	41.268972	Observer's specified target Dec [deg]
ra_nom	10.676968569172	Nominal RA [deg]
dec_nom	41.274402393431	Nominal Dec [deg]
roll_nom	120.28390568219	Nominal Roll [deg]
revision	2	Processing version of data
ontime	941.36918795109	Sum of GTIs [s]
livetime	148.19421748946	Livetime [s]
ontime0	941.36918795109	Sum of GTIs [s]
ontime1	941.36918795109	Sum of GTIs [s]
ontime2	941.36918795109	Sum of GTIs [s]
ontime3	941.36918795109	Sum of GTIs [s]
ontime6	941.36918795109	Sum of GTIs [s]
ontime7	941.36915808916	Sum of GTIs [s]
l2events	2229	Number of level 2 events



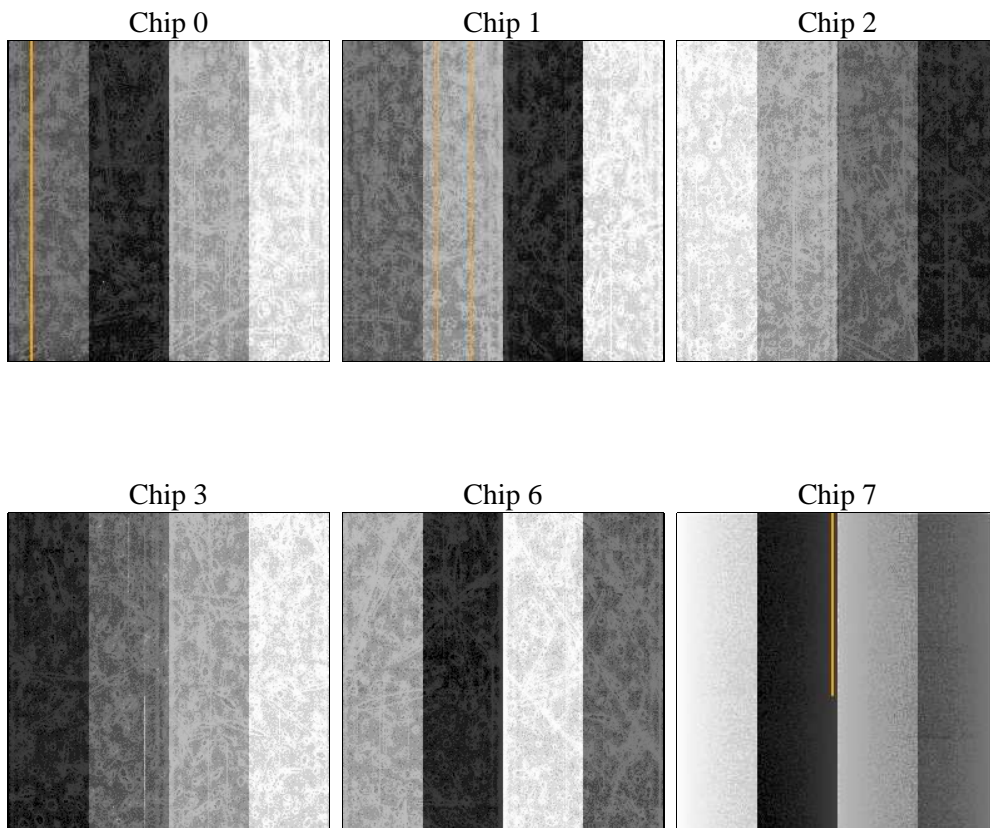
## 2 OBI Primary

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	941.36918795109	Sum of GTIs [s]
caldsver	4.4.8	&#160	ontime0	941.36918795109	Sum of GTIs [s]
date	2012-02-18T17:38:18	Date and time of file creation	ontime1	941.36918795109	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	941.36918795109	Sum of GTIs [s]
			ontime3	941.36918795109	Sum of GTIs [s]
			ontime6	941.36918795109	Sum of GTIs [s]
			ontime7	941.36915808916	Sum of GTIs [s]
			l1events	17753	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	2561	2835	3102	3029	3251	2975
rejected events	2268	2522	2741	2620	2966	2106
rejected %	88%	88%	88%	86%	91%	70%

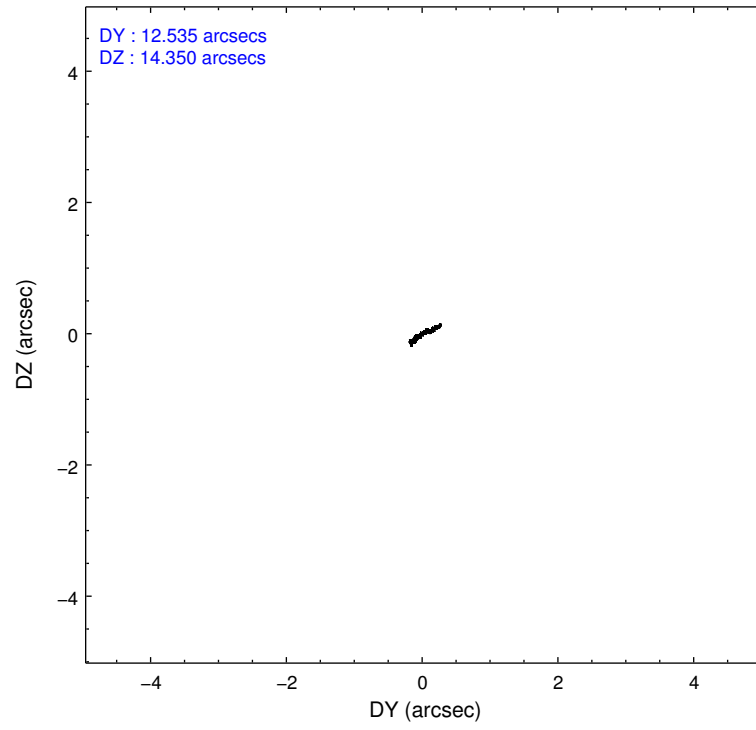
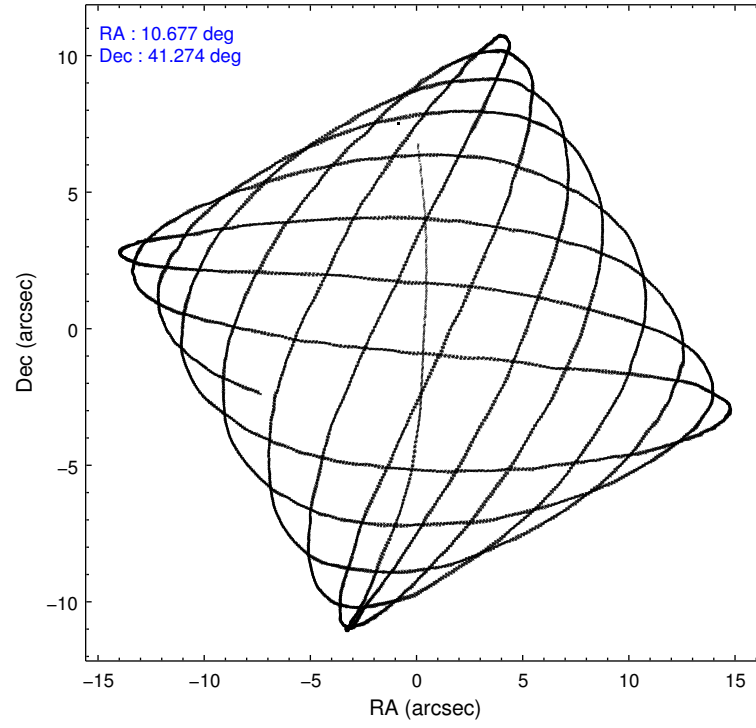
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	99	119	187	217	76	86
	3%	4%	6%	7%	2%	2%
grade 1 events	0	0	2	3	0	3
	0%	0%	0%	0%	0%	0%
grade 2 events	73	68	63	70	76	198
	2%	2%	2%	2%	2%	6%
grade 3 events	39	39	25	37	41	93
	1%	1%	0%	1%	1%	3%
grade 4 events	36	34	34	33	40	81
	1%	1%	1%	1%	1%	2%
grade 5 events	108	116	88	130	105	243
	4%	4%	2%	4%	3%	8%
grade 6 events	47	56	54	56	56	424
	1%	1%	1%	1%	1%	14%
grade 7 events	2159	2403	2649	2483	2857	1847
	84%	84%	85%	81%	87%	62%

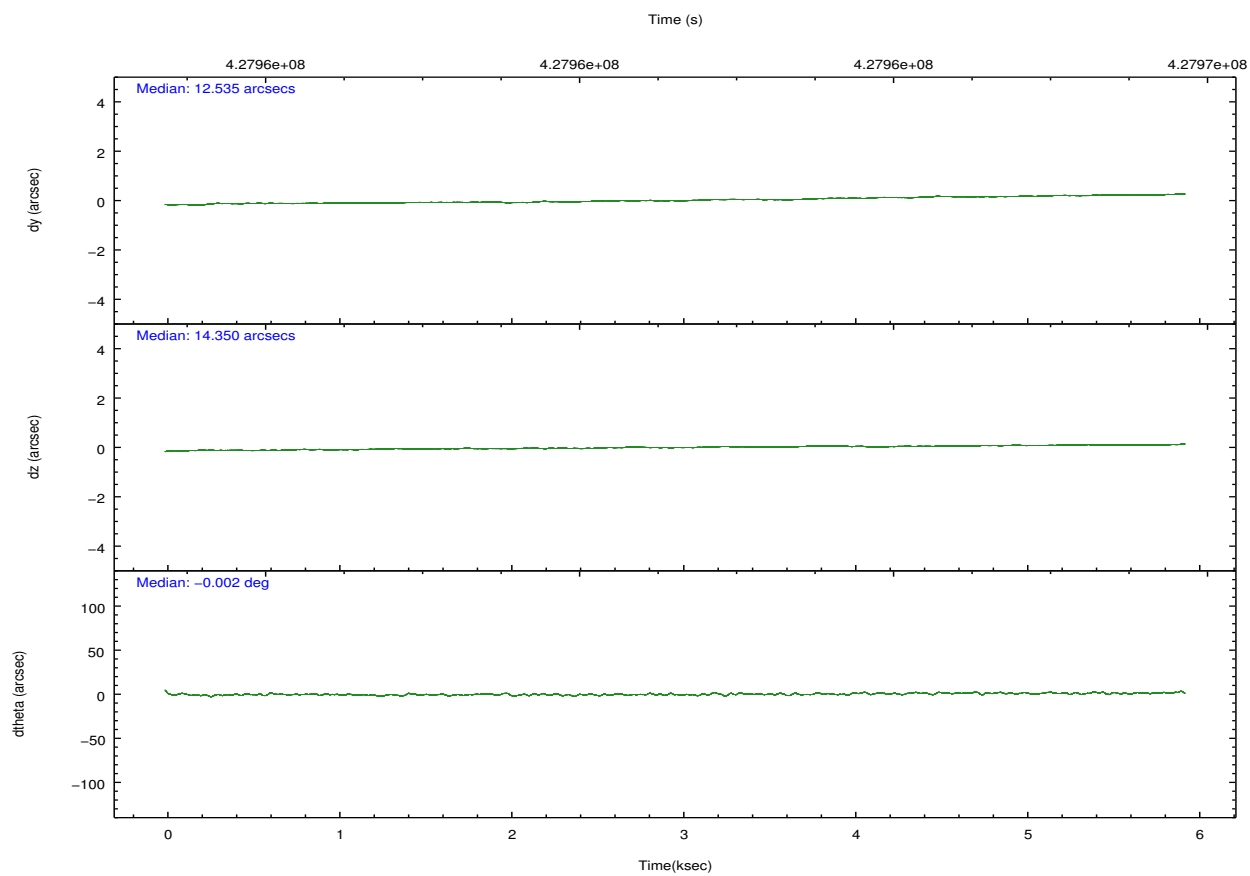
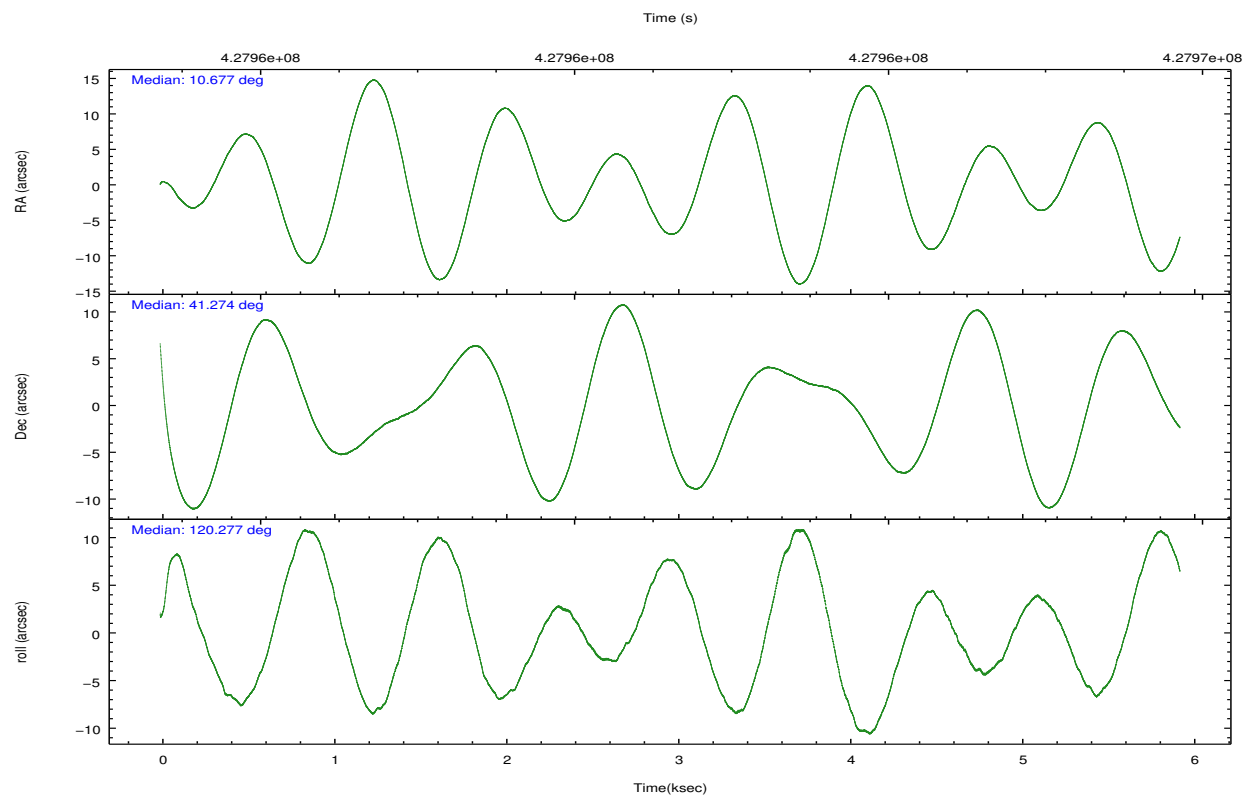


## 2.2 Compared Parameters

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	10.708903	10.67696856917225	CCD I2 on	Y	Y
[deg] Pointing Dec	41.260891	41.27440239343066	CCD I3 on	Y	Y
[deg] Pointing Roll	120.054171	120.2839056821863	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O2	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O1	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	427960563.184000	427958428.54552	CCD S5 on	N	N
Observation start date	2011-07-25T05:54:57	2011-07-25T05:20:28	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	427965563.184000	427966269.79593	On-chip summing requested	N	N
Observation end date	2011-07-25T07:18:17	2011-07-25T07:31:09	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	Y	Y
			[s] Primary exposure time	0.600000	0.6
			[s] Secondary exposure time	0.000000	3.2
			Duty cycle	5	5

## 2.3 Aspect



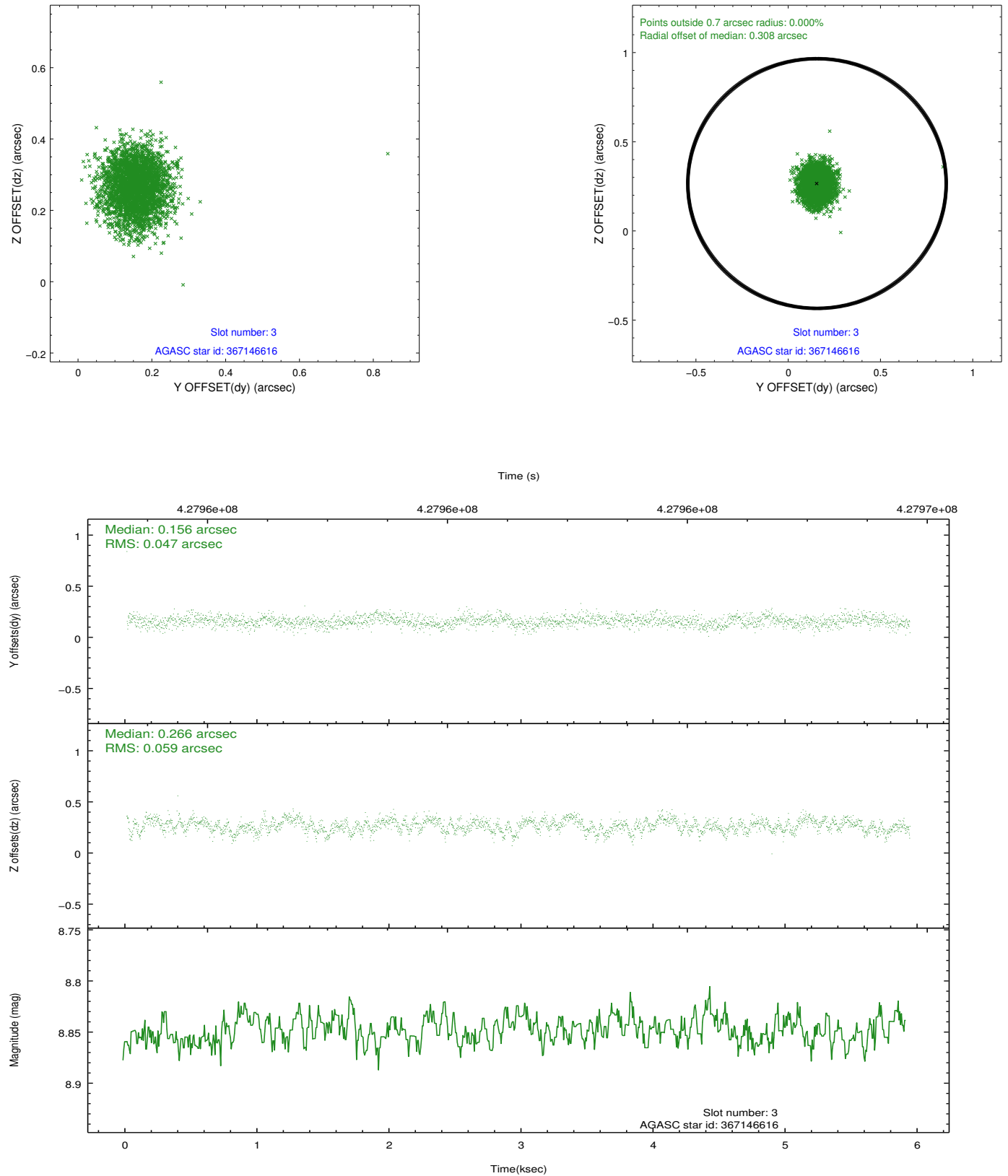


### Slot Statistics

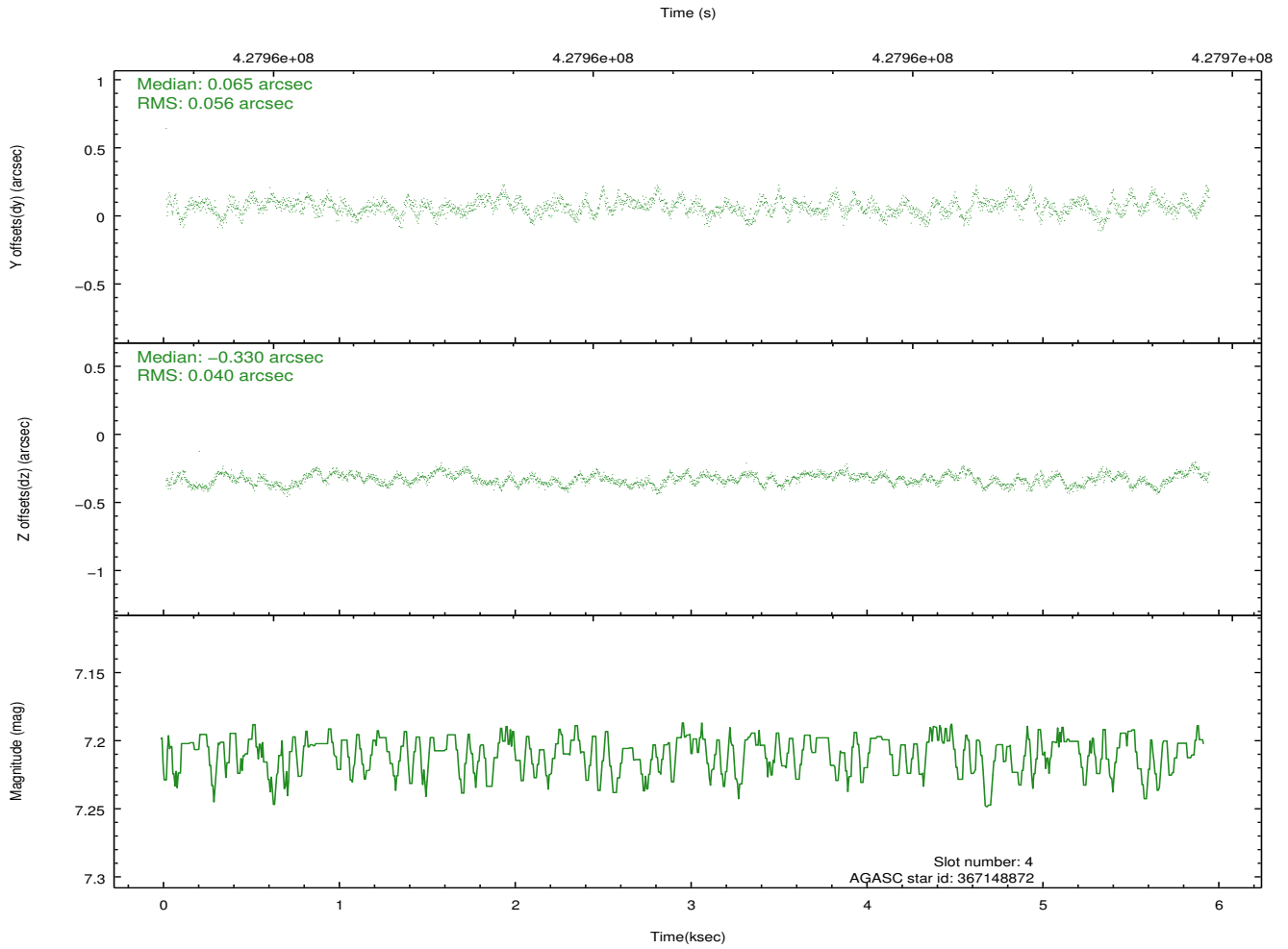
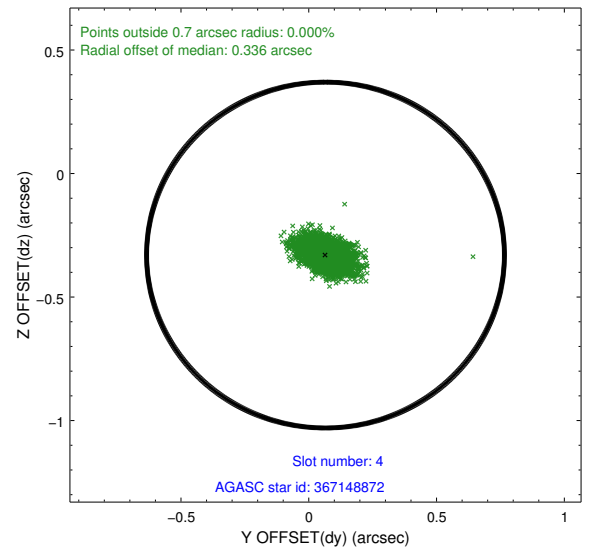
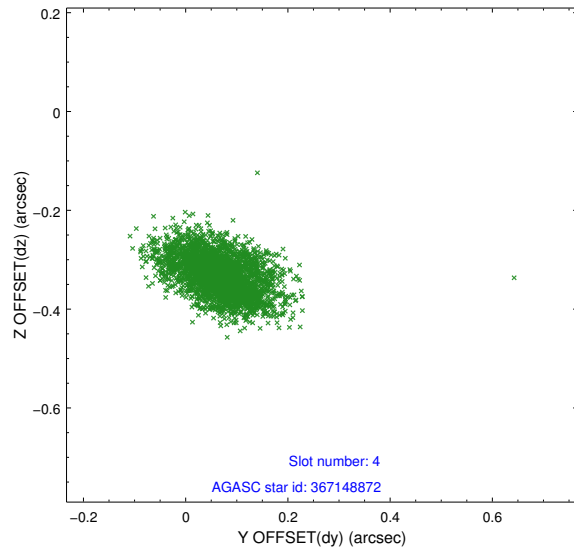
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	6.95	1446	-0.198	-0.117	0.009	0.016	0.000000	0.000000	-767.41	-844.40
1	FID	ACIS-I-4	6.95	1447	0.169	0.096	0.007	0.011	0.000000	0.000000	2146.57	1061.46
2	FID	ACIS-I-6	7.02	1447	-0.070	0.083	0.011	0.018	0.000000	0.000000	394.10	1704.78
3	GUIDE	367146616	8.85	2892	0.156	0.266	0.079	0.127	11.418645	41.190163	-1175.92	-1540.56
4	GUIDE	367148872	7.21	2894	0.065	-0.330	0.071	0.121	10.505940	40.688258	-1507.07	1511.12
5	GUIDE	367657896	9.02	2885	0.080	0.076	0.094	0.151	11.197765	41.313576	-494.64	-1240.48
6	GUIDE	367663272	9.28	2885	-0.105	-0.071	0.116	0.185	10.656279	41.699429	1437.56	-667.59
7	GUIDE	367674552	8.84	2889	-0.192	0.058	0.084	0.138	11.016238	41.570845	553.13	-1276.21

## 2.4 Star Slots

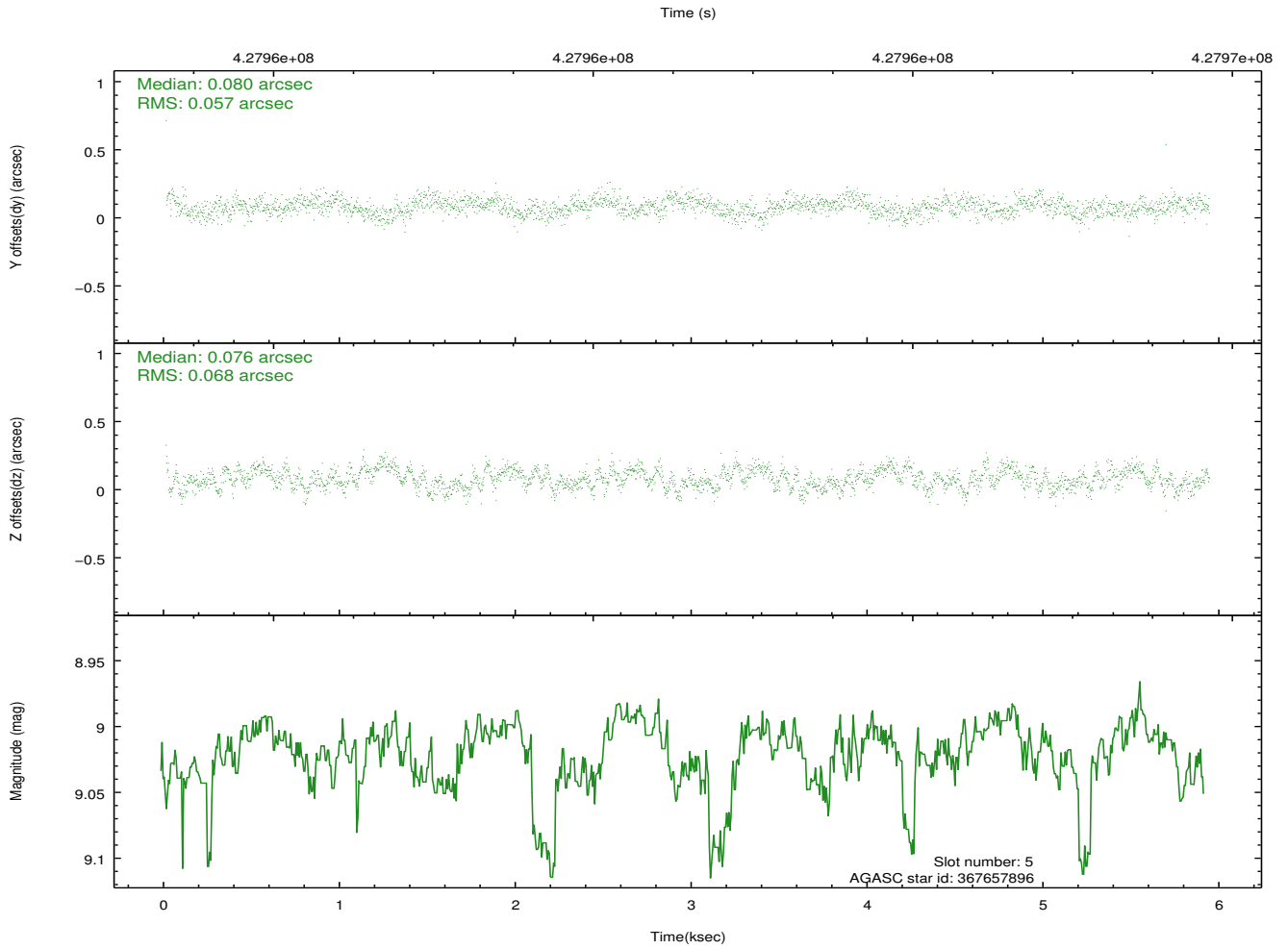
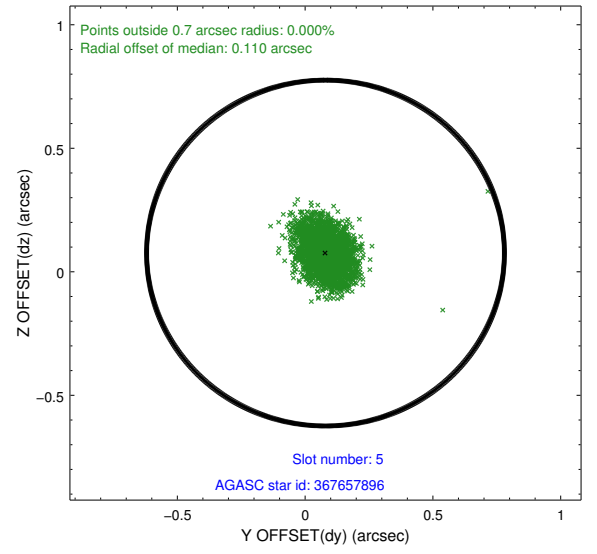
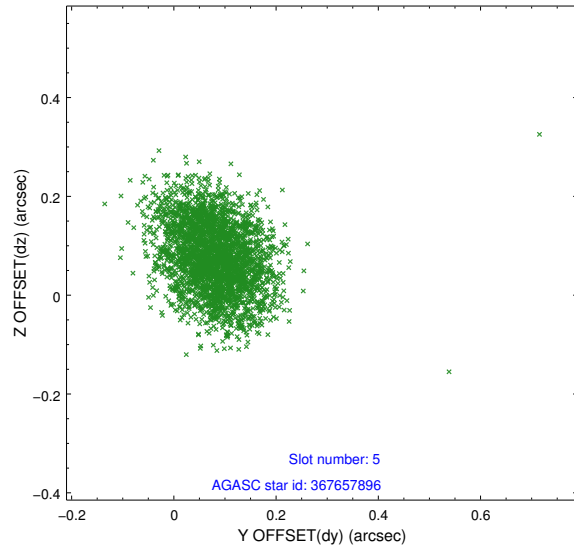
### 2.4.1 Slot 3



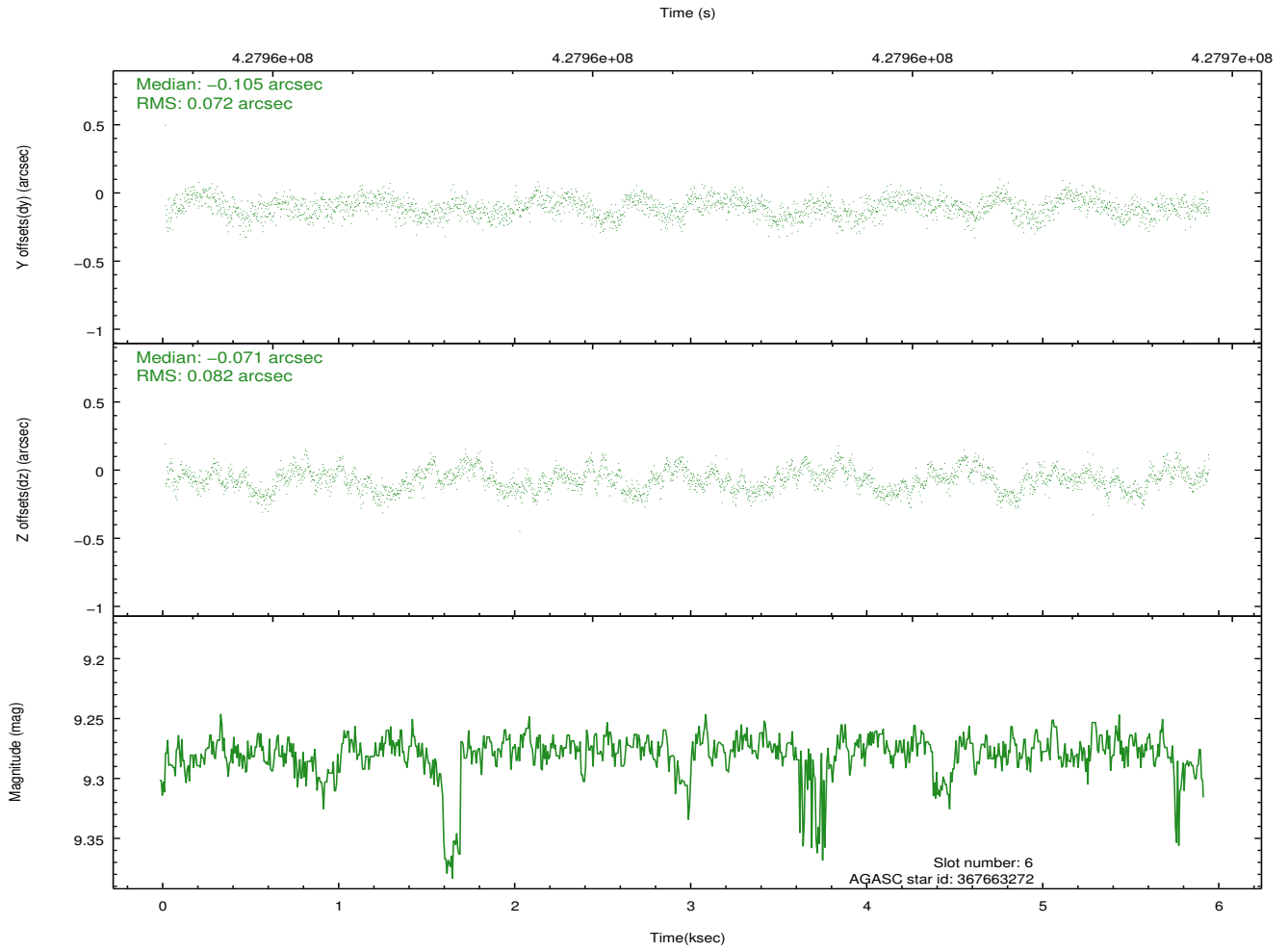
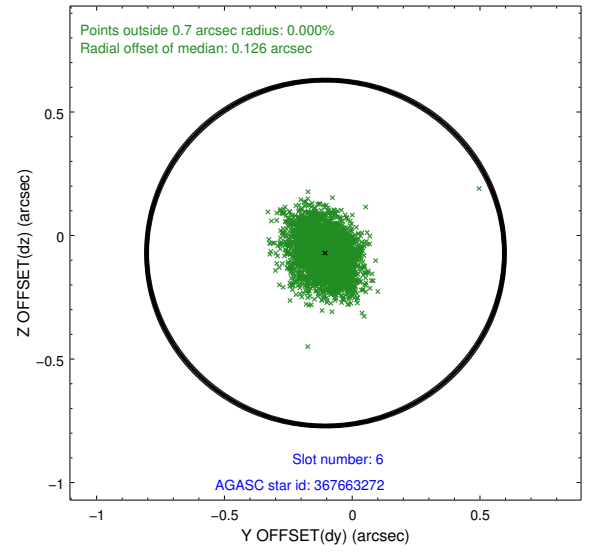
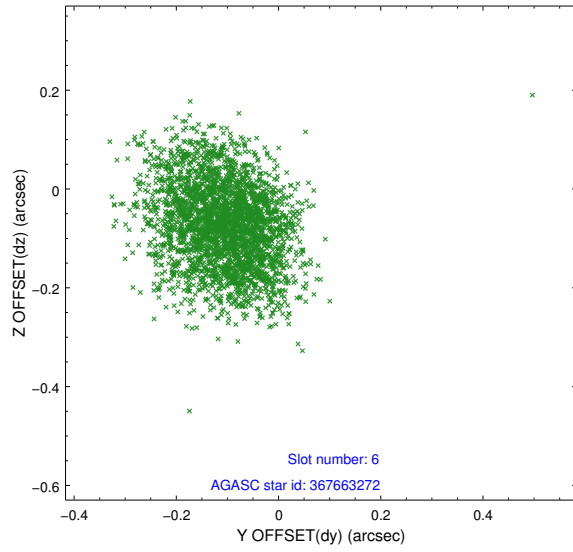
## 2.4.2 Slot 4



### 2.4.3 Slot 5

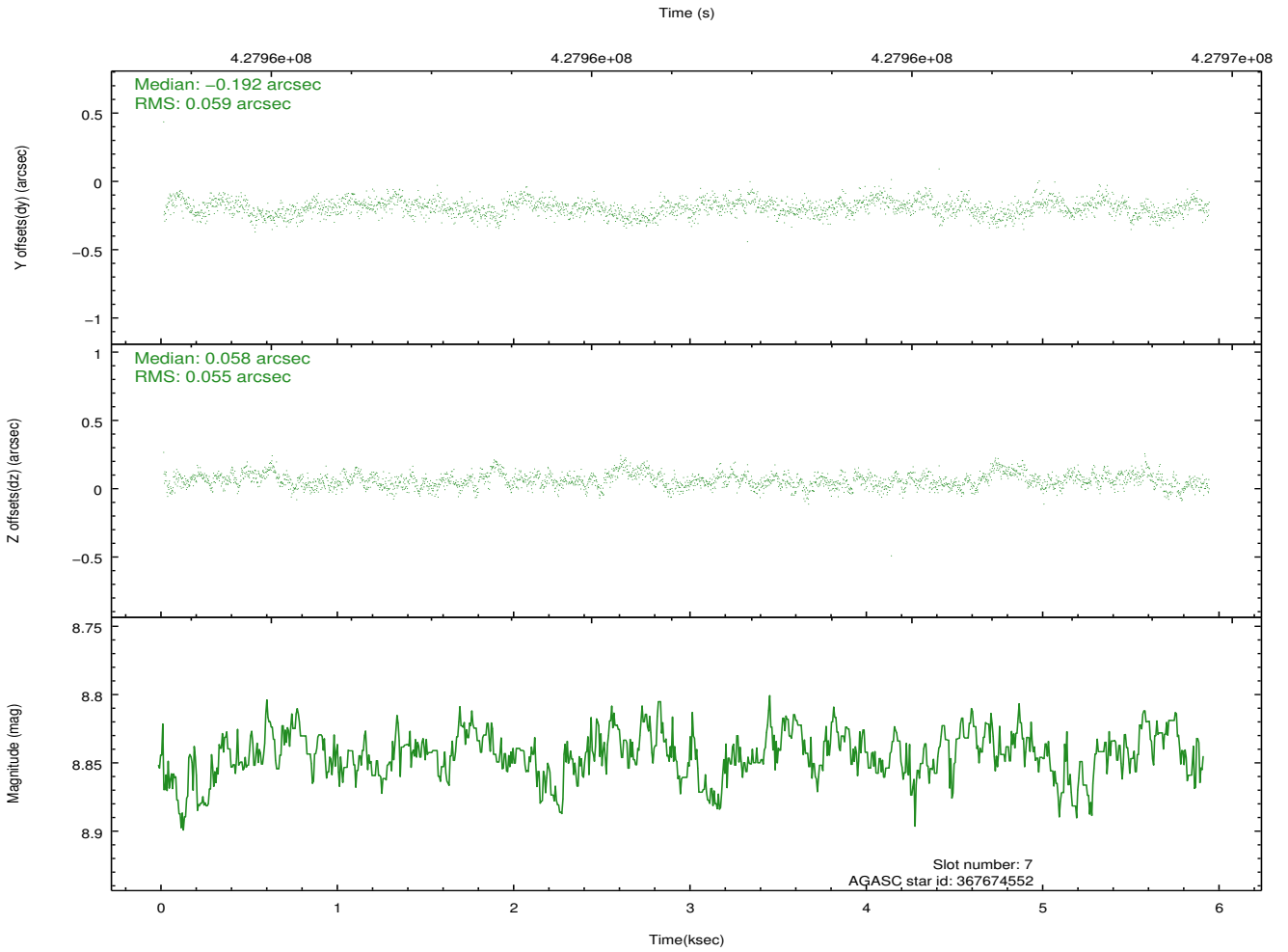
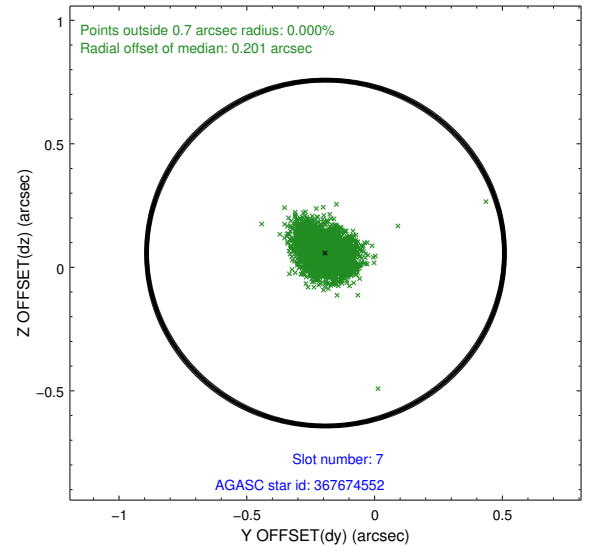
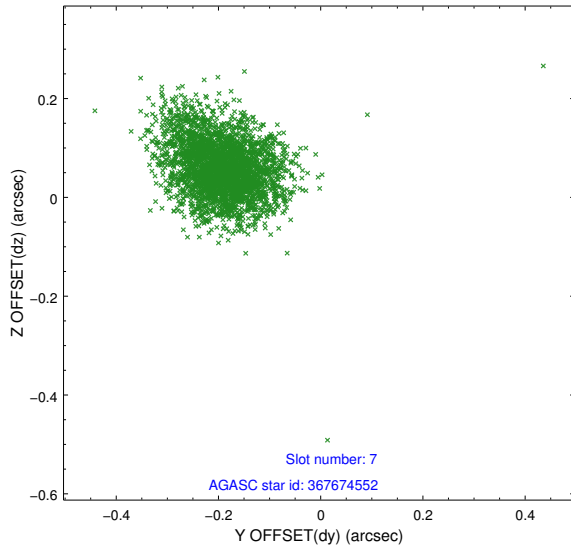


## 2.4.4 Slot 6



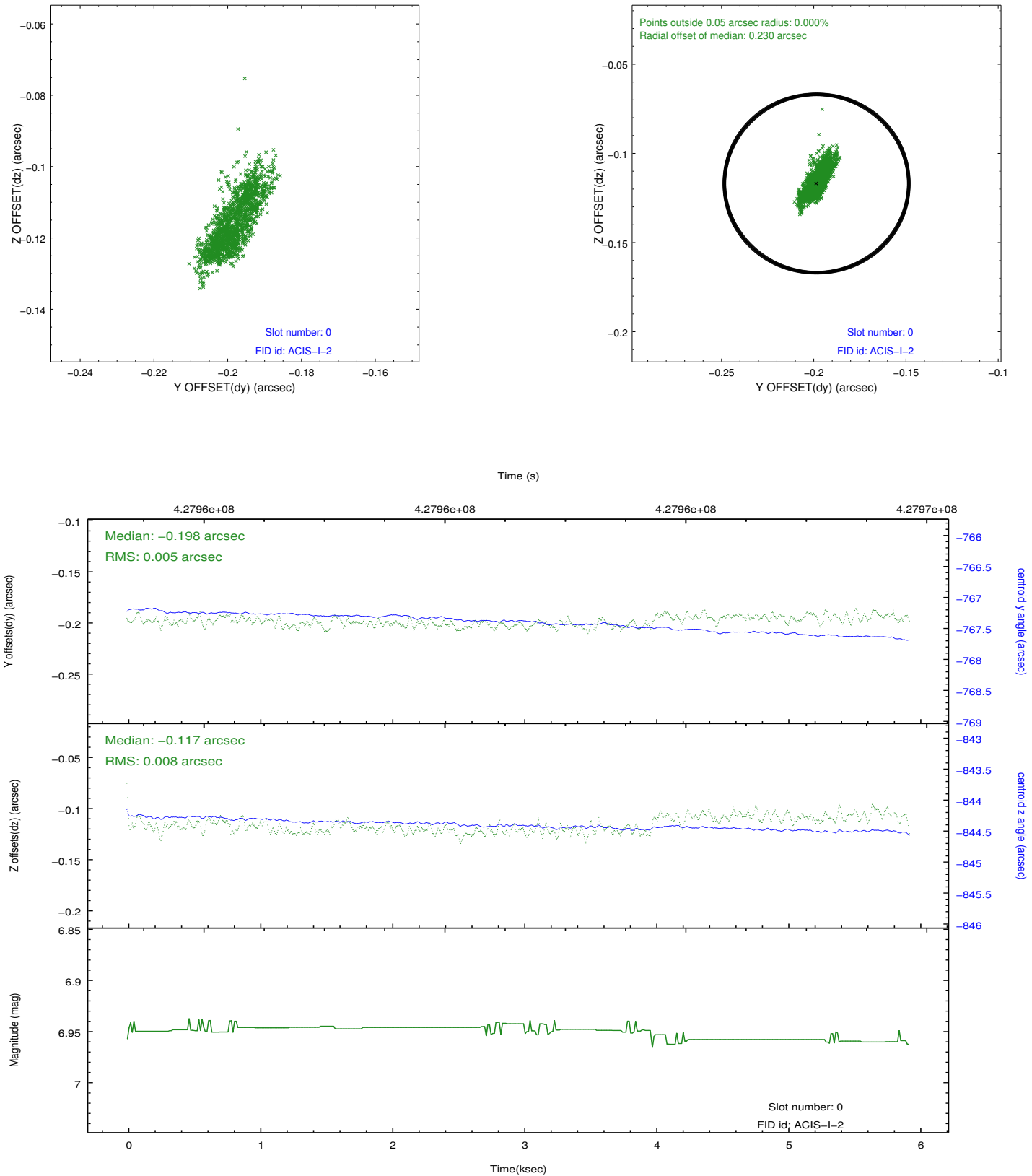


## 2.4.5 Slot 7

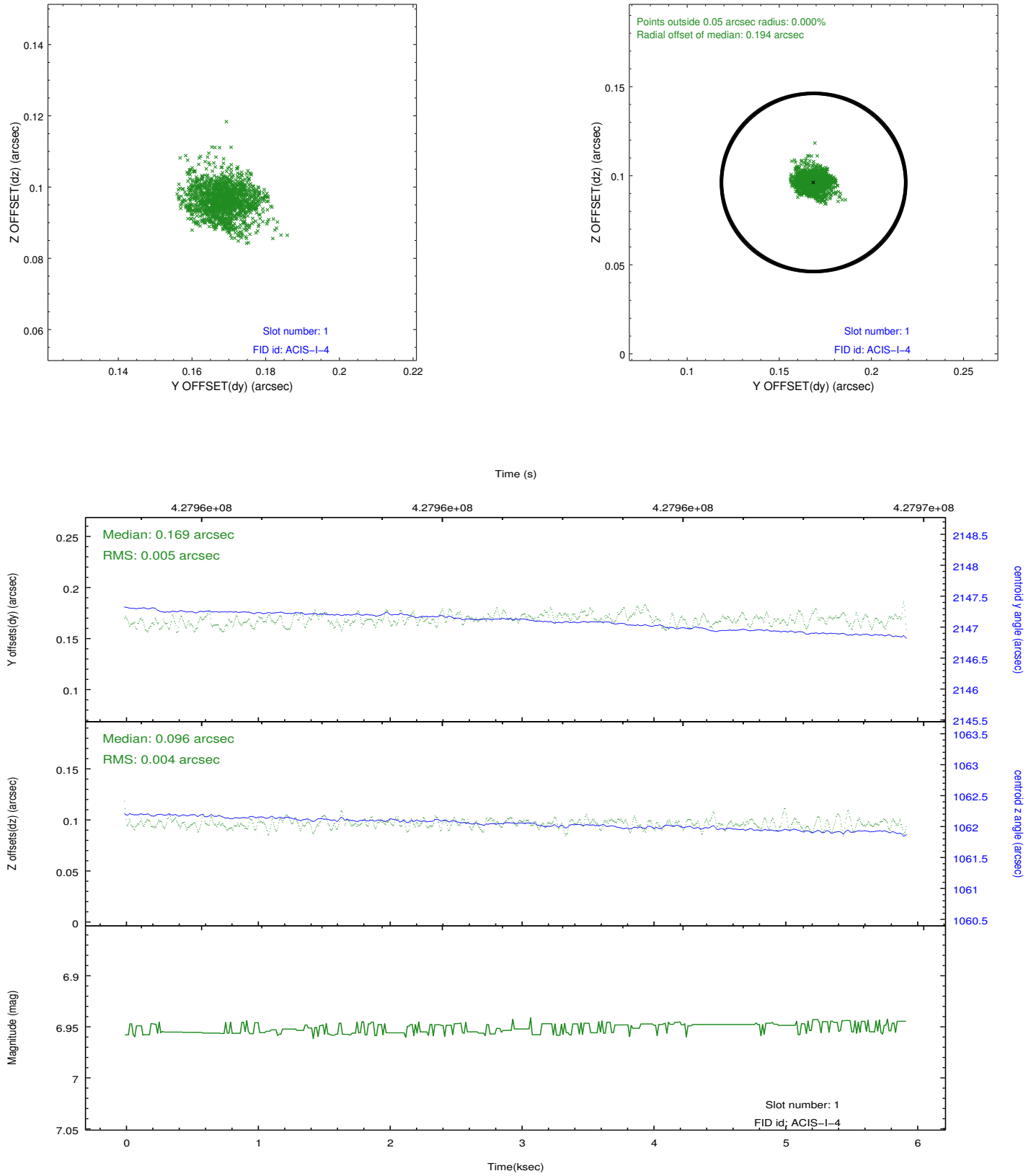


## 2.5 FID Slots

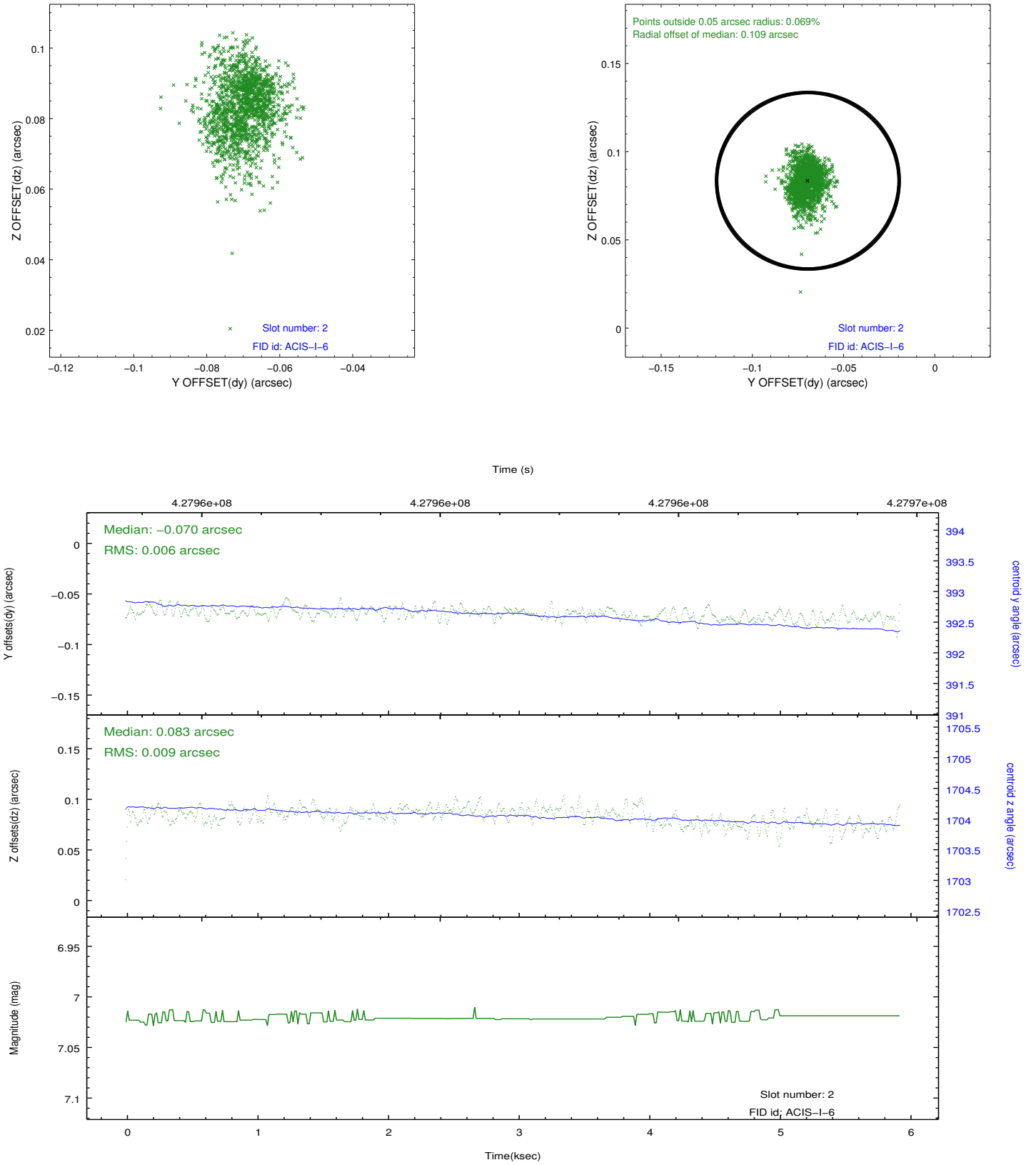
### 2.5.1 Slot 0



## 2.5.2 Slot 1



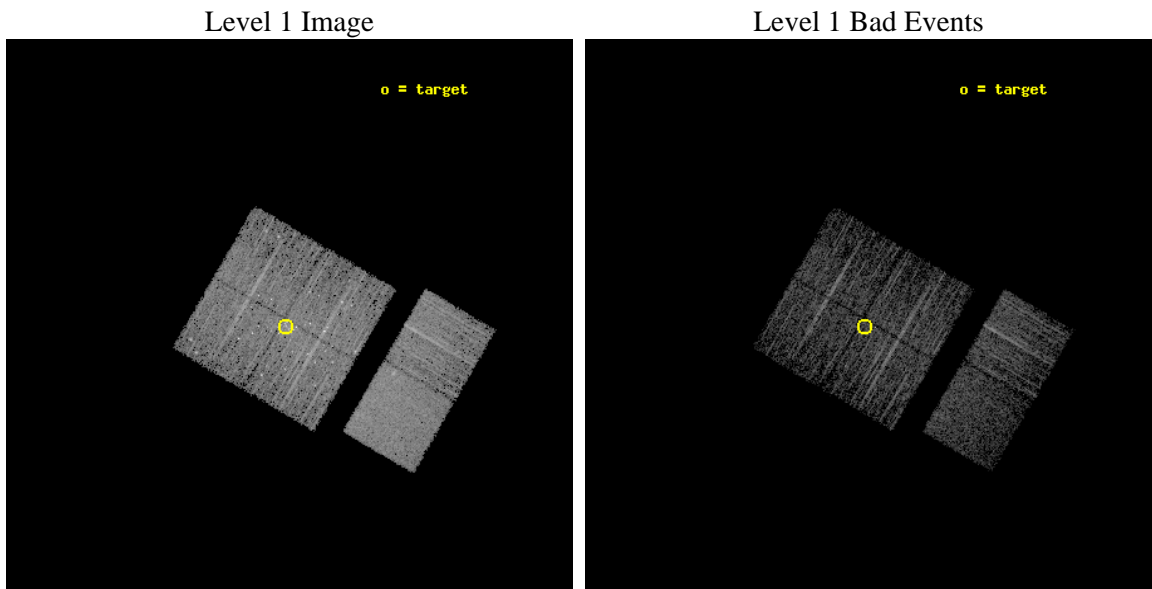
### 2.5.3 Slot 2



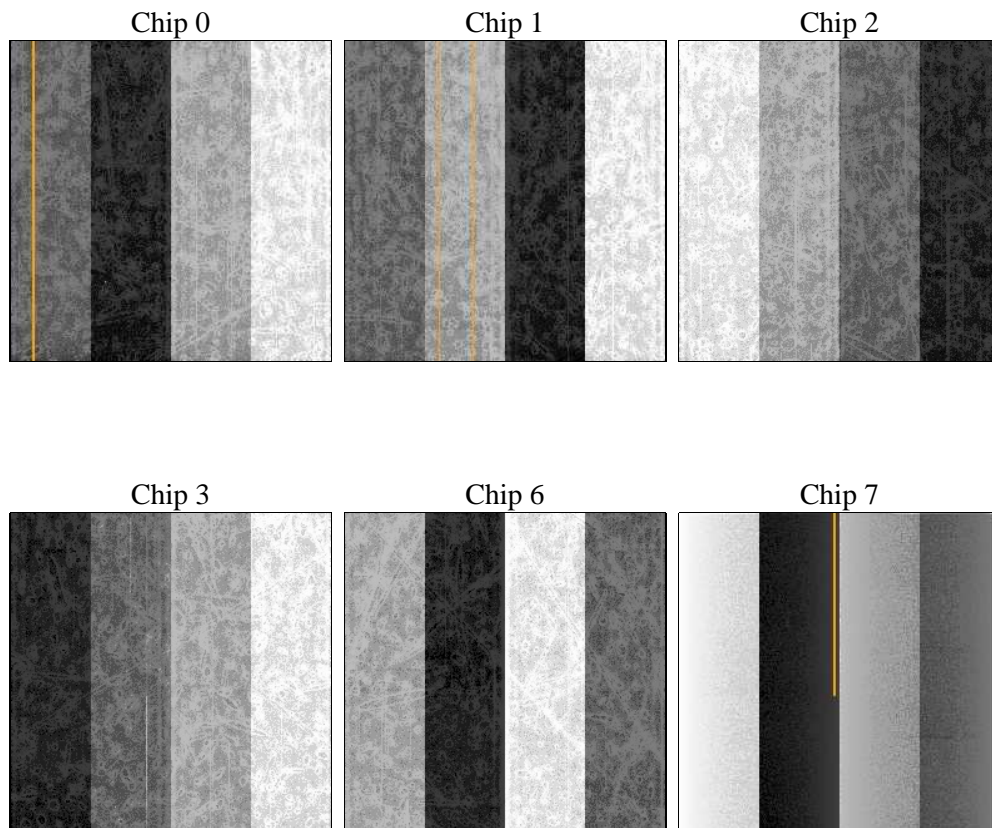
## 3 OBI Secondary

### 3.1 OBI

#### 3.1.1 Images



#### 3.1.2 Bias



### 3.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	4025.802092433	Sum of GTIs [s]
caldsver	4.4.8	&#160	ontime0	4025.8021327257	Sum of GTIs [s]
date	2012-02-18T17:39:35	Date and time of file creation	ontime1	4025.8016259074	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	4022.5606845021	Sum of GTIs [s]
			ontime3	4025.802092433	Sum of GTIs [s]
			ontime6	4025.8020827174	Sum of GTIs [s]
			ontime7	4025.8017844558	Sum of GTIs [s]
			l1events	163736	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	23653	24530	27504	29182	26610	32257	grade 0 events	2126	2905	3305	4283	1018	1403
rejected events	19388	19189	21829	22286	23691	17731		8%	11%	12%	14%	3%	4%
rejected %	81%	78%	79%	76%	89%	54%	grade 1 events	35	25	63	105	13	47
								0%	0%	0%	0%	0%	0%
							grade 2 events	858	945	998	1056	669	3043
								3%	3%	3%	3%	2%	9%
							grade 3 events	360	422	391	448	288	1259
								1%	1%	1%	1%	1%	3%
							grade 4 events	311	408	405	410	305	1324
								1%	1%	1%	1%	1%	4%
							grade 5 events	1049	1100	1002	1290	1231	3307
								4%	4%	3%	4%	4%	10%
							grade 6 events	617	667	585	707	642	7510
								2%	2%	2%	2%	2%	23%
							grade 7 events	18297	18058	20755	20883	22444	14364
								77%	73%	75%	71%	84%	44%

## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2012.02.21
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.96717128217218

### A.2 Comments

Joint proposal with HST.