

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 9522 - L2 Version 2  
Chandra X-Ray Center

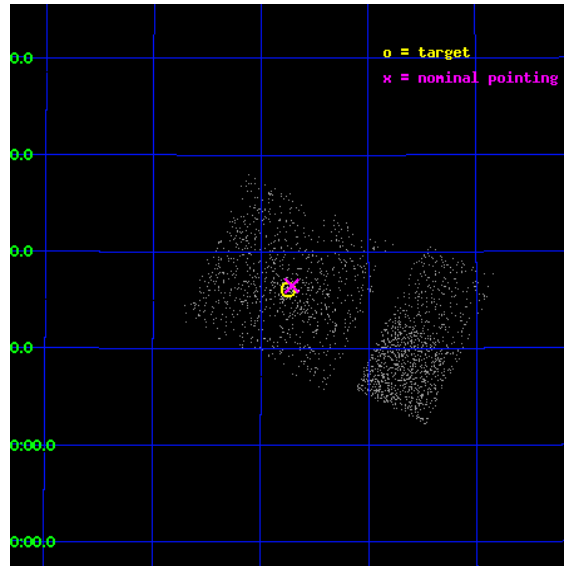
L2 Processing Date : May 18 2012

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# 1 Front

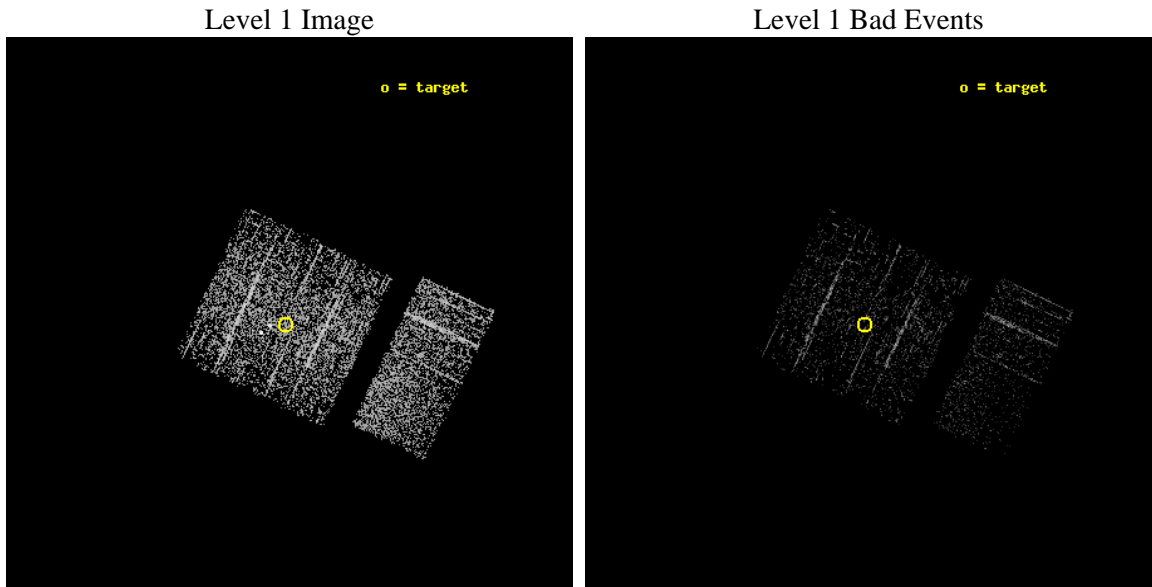
seq_num	600663	Sequence number
obs_id	9522	Observation id
title	Black Hole X-ray Novae in M31	Proposal title
observer	Dr. Stephen Murray	Principal investigator
object	M31	Source name
dtcycle	0	&#160
cycle	P	events are from which exps? P[primary] S[econdar
ra_targ	10.685	Observer's specified target RA [deg]
dec_targ	41.268972	Observer's specified target Dec [deg]
ra_nom	10.677642697312	Nominal RA [deg]
dec_nom	41.274916141901	Nominal Dec [deg]
roll_nom	115.64075346612	Nominal Roll [deg]
revision	2	Processing version of data
ontime	956.32846426964	Sum of GTIs [s]
livetime	150.54916842329	Livetime [s]
ontime0	956.32847416401	Sum of GTIs [s]
ontime1	956.32847416401	Sum of GTIs [s]
ontime2	956.32846426964	Sum of GTIs [s]
ontime3	956.32846426964	Sum of GTIs [s]
ontime6	956.38123941422	Sum of GTIs [s]
ontime7	956.34019941092	Sum of GTIs [s]
l2events	2449	Number of level 2 events



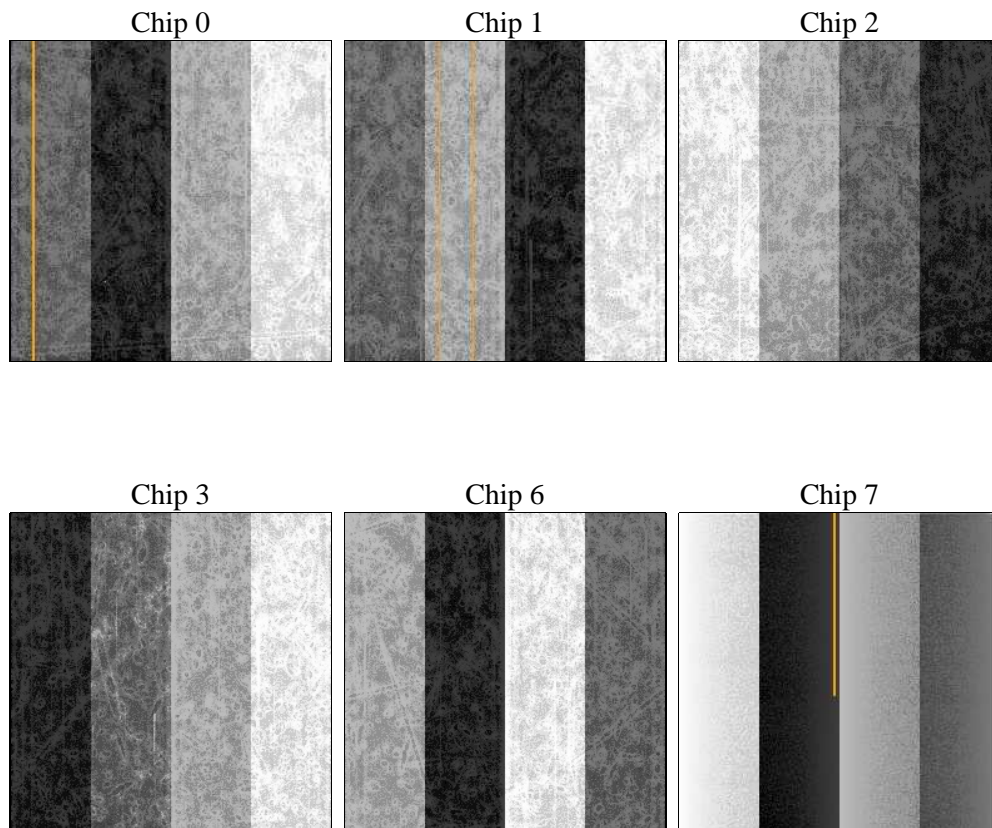
## 2 OBI Primary

### 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	8.4.4	Processing system revision	ontime	956.32846426964	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime0	956.32847416401	Sum of GTIs [s]
date	2012-05-18T02:50:39	Date and time of file creation	ontime1	956.32847416401	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	956.32846426964	Sum of GTIs [s]
			ontime3	956.32846426964	Sum of GTIs [s]
			ontime6	956.38123941422	Sum of GTIs [s]
			ontime7	956.34019941092	Sum of GTIs [s]
			l1events	22087	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	3325	4044	3968	3575	4044	3131
rejected events	2979	3208	3638	3134	3749	2133
rejected %	89%	79%	91%	87%	92%	68%

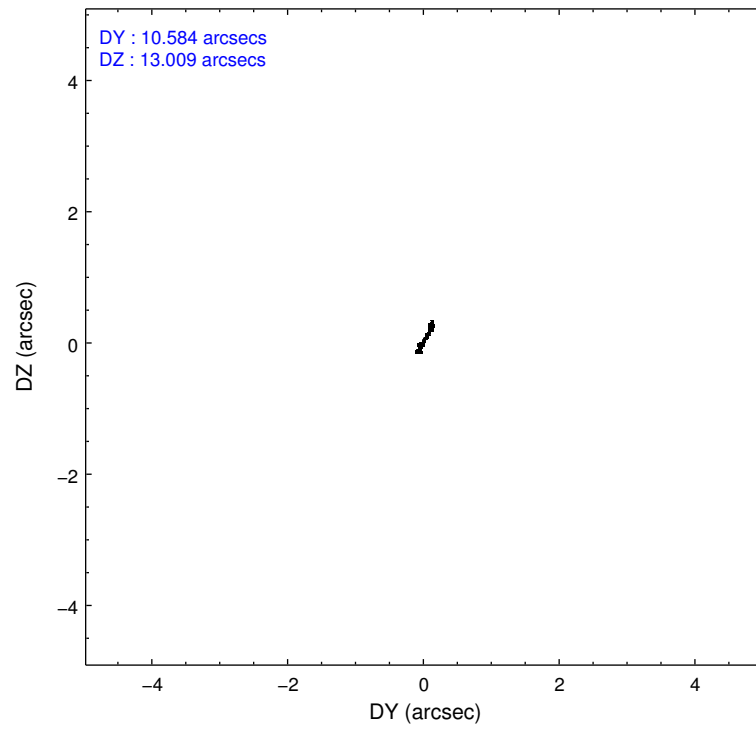
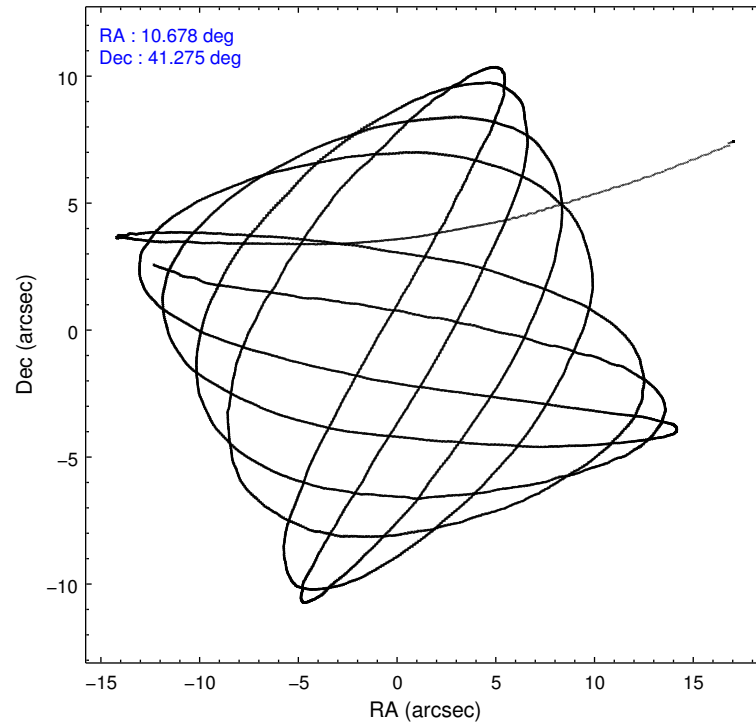
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	147	593	139	214	67	70
	4%	14%	3%	5%	1%	2%
grade 1 events	1	6	2	2	1	5
	0%	0%	0%	0%	0%	0%
grade 2 events	76	77	64	90	86	219
	2%	1%	1%	2%	2%	6%
grade 3 events	37	43	37	46	43	103
	1%	1%	0%	1%	1%	3%
grade 4 events	38	55	46	35	48	102
	1%	1%	1%	0%	1%	3%
grade 5 events	114	114	129	145	136	279
	3%	2%	3%	4%	3%	8%
grade 6 events	52	82	52	58	55	509
	1%	2%	1%	1%	1%	16%
grade 7 events	2860	3074	3499	2985	3608	1844
	86%	76%	88%	83%	89%	58%

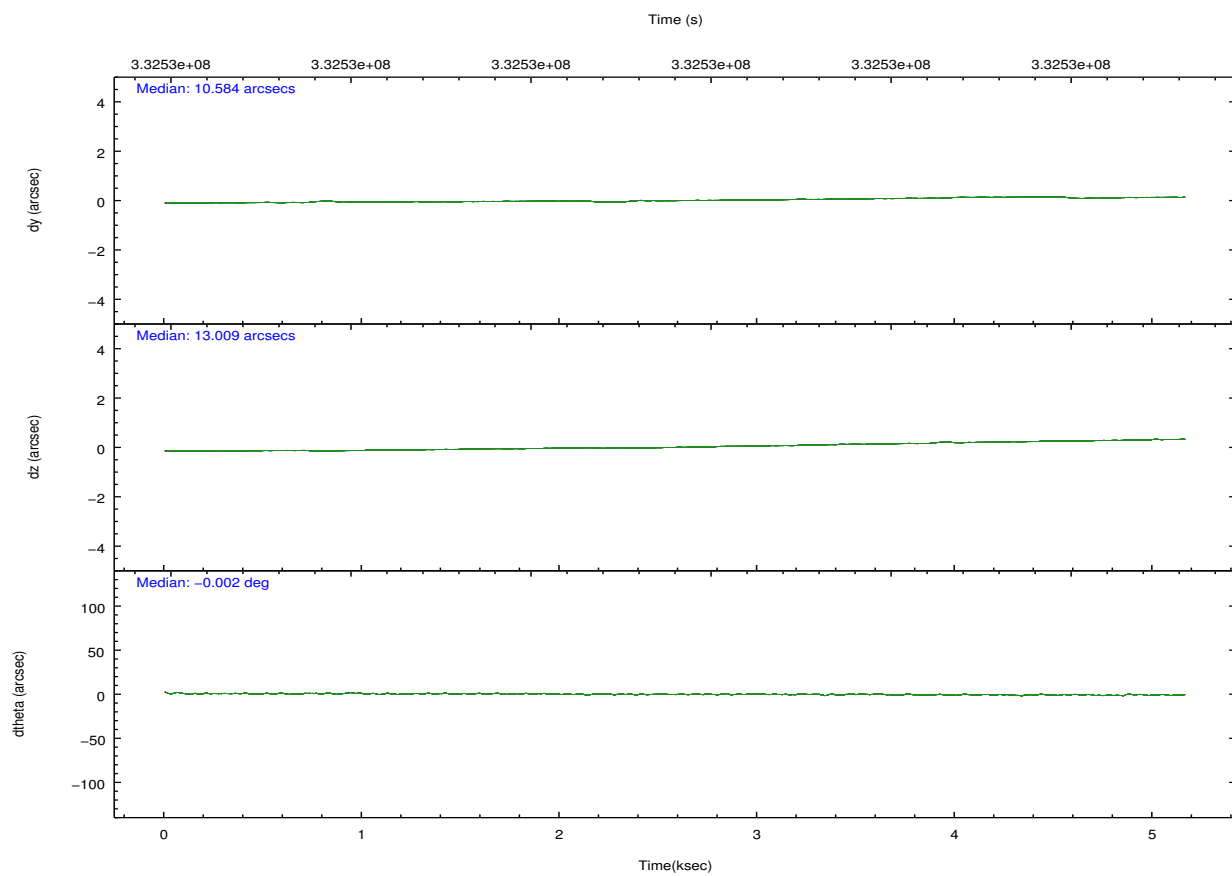
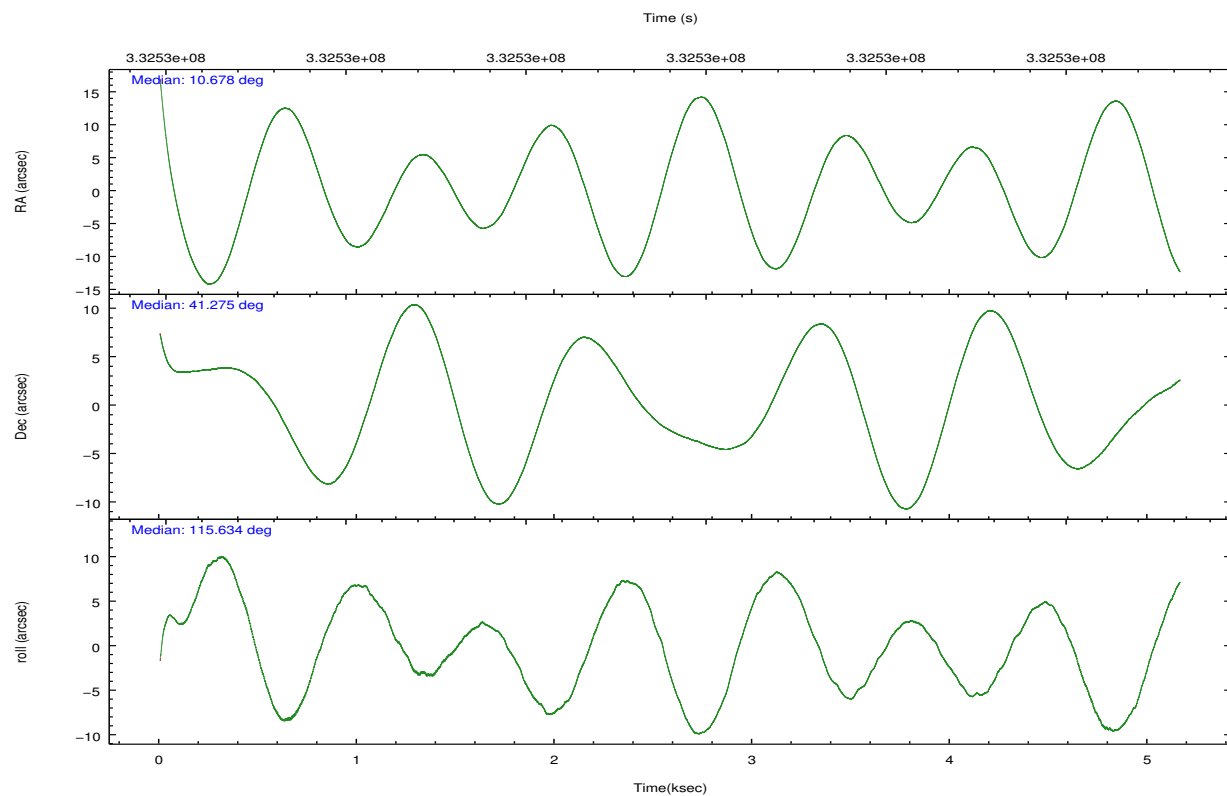


## 2.2 Compared Parameters

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	10.707959	10.6776426973118	CCD I2 on	Y	Y
[deg] Pointing Dec	41.259456	41.27491614190131	CCD I3 on	Y	Y
[deg] Pointing Roll	115.412057	115.6407534661202	CCD S0 on	N	N
[s] Window start time (MET)	332380865.184000	332380865.184000	CCD S1 on	N	N
[s] Window stop time (MET)	332985605.184000	332985605.184000	CCD S2 on	O2	Y
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S3 on	O1	Y
[mm] SIM defocus	0	0.001439871863259334	CCD S4 on	N	N
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S5 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	Number of optional ACIS chips dropped	0	0
[s] Observation start time (MET)	332528393.184000	332527334.76776	On-chip summing requested	N	N
Observation start date	2008-07-15T16:58:48	2008-07-15T16:42:14	Subarray requested	NONE	NONE
[s] Observation end time (MET)	332533393.184000	332534923.86813	Alternating exposures requested	Y	Y
Observation end date	2008-07-15T18:22:08	2008-07-15T18:48:43	[s] Primary exposure time	0.600000	0.6
Read mode	TIMED	TIMED	[s] Secondary exposure time	0.000000	3.2
			Duty cycle	5	5

## 2.3 Aspect



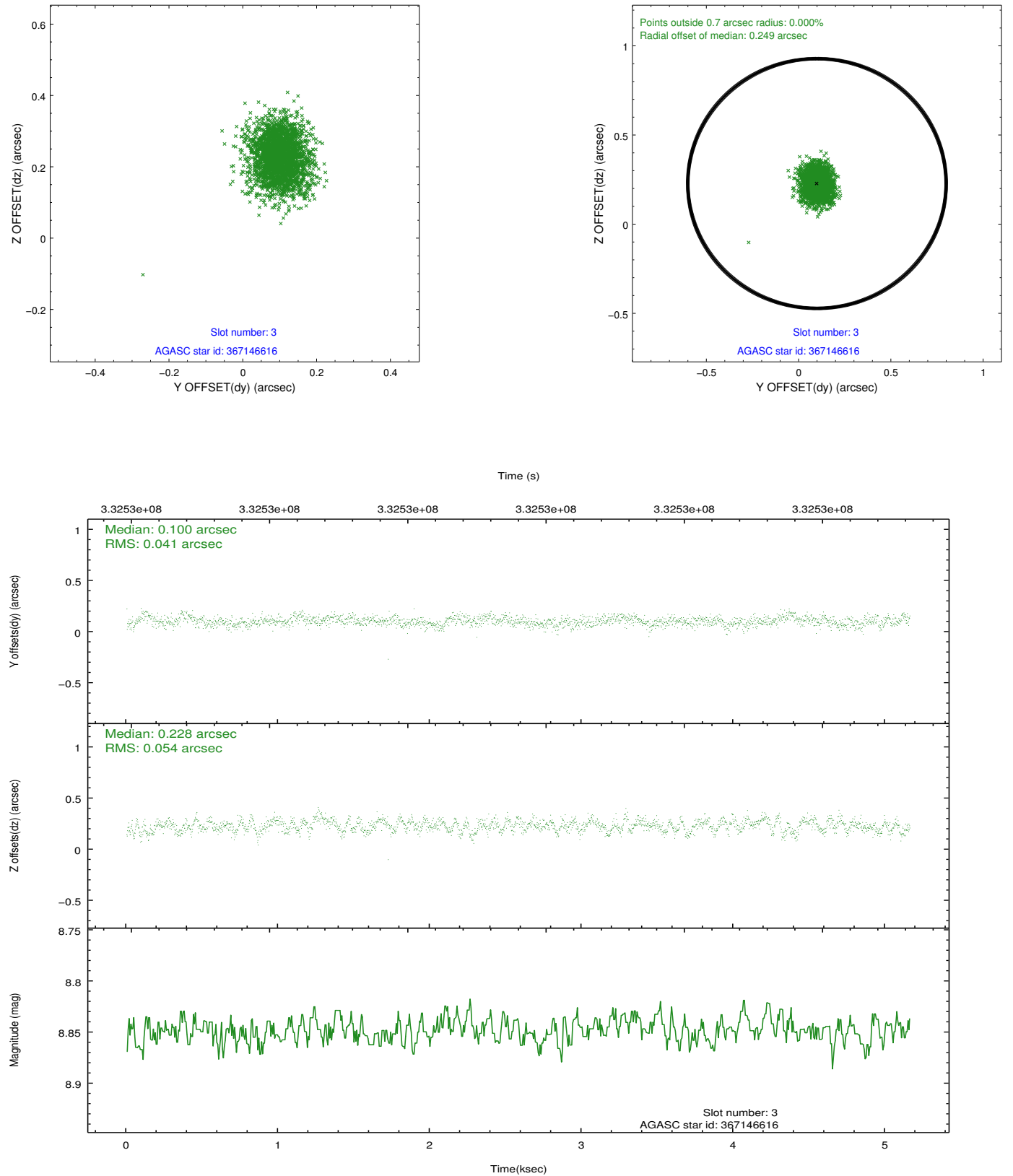


### Slot Statistics

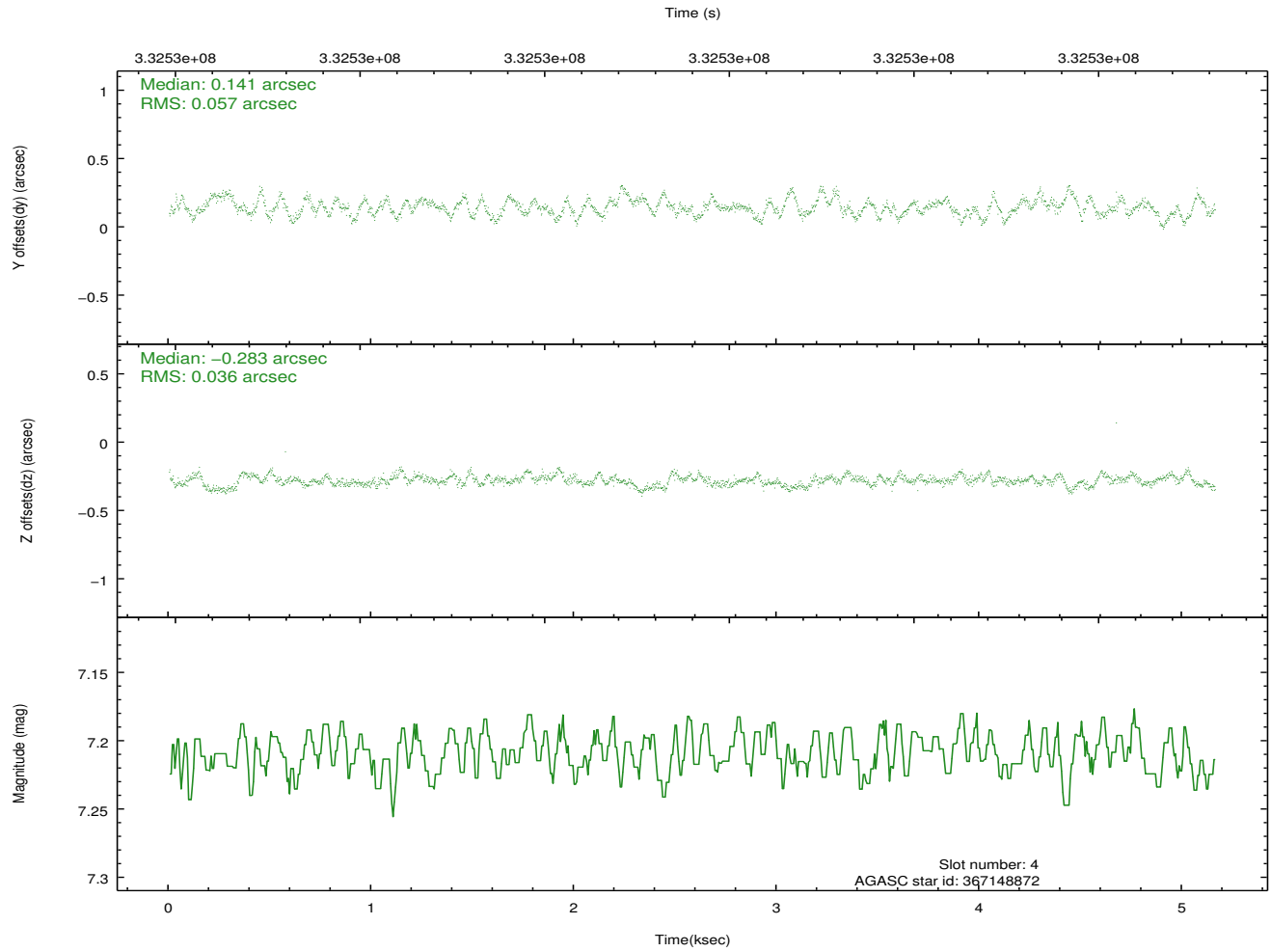
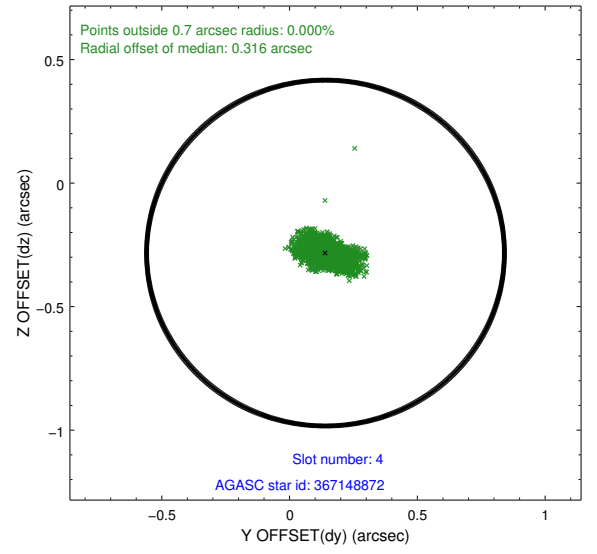
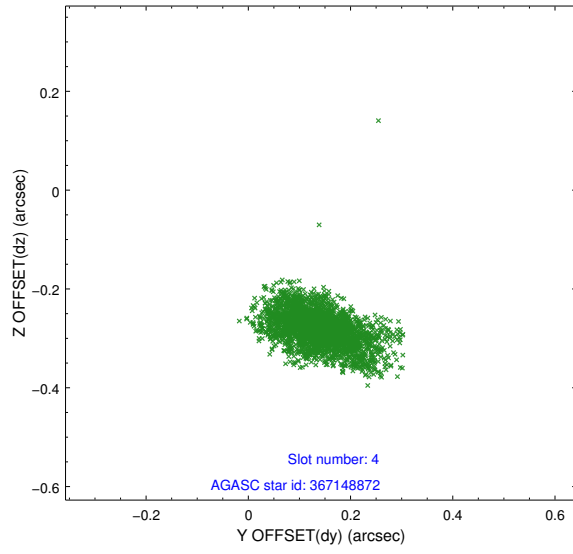
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.05	1259	0.026	0.037	0.010	0.019	0.000000	0.000000	929.00	-836.56
1	FID	ACIS-I-5	7.04	1258	-0.168	0.052	0.009	0.014	0.000000	0.000000	-1818.64	1060.35
2	FID	ACIS-I-6	7.05	1258	0.052	-0.019	0.007	0.012	0.000000	0.000000	393.30	1706.12
3	GUIDE	367146616	8.85	2513	0.100	0.228	0.072	0.118	11.418645	41.190163	-1043.91	-1635.12
4	GUIDE	367148872	7.21	2516	0.141	-0.283	0.069	0.120	10.505940	40.688258	-1620.82	1379.61
5	GUIDE	367657896	9.01	2514	0.062	0.013	0.080	0.130	11.197765	41.313576	-389.20	-1280.84
6	GUIDE	367663272	9.27	2509	-0.146	-0.025	0.106	0.166	10.656279	41.699429	1490.29	-553.72
7	GUIDE	367674552	8.84	2512	-0.154	0.063	0.063	0.103	11.016238	41.570845	658.28	-1231.65

## 2.4 Star Slots

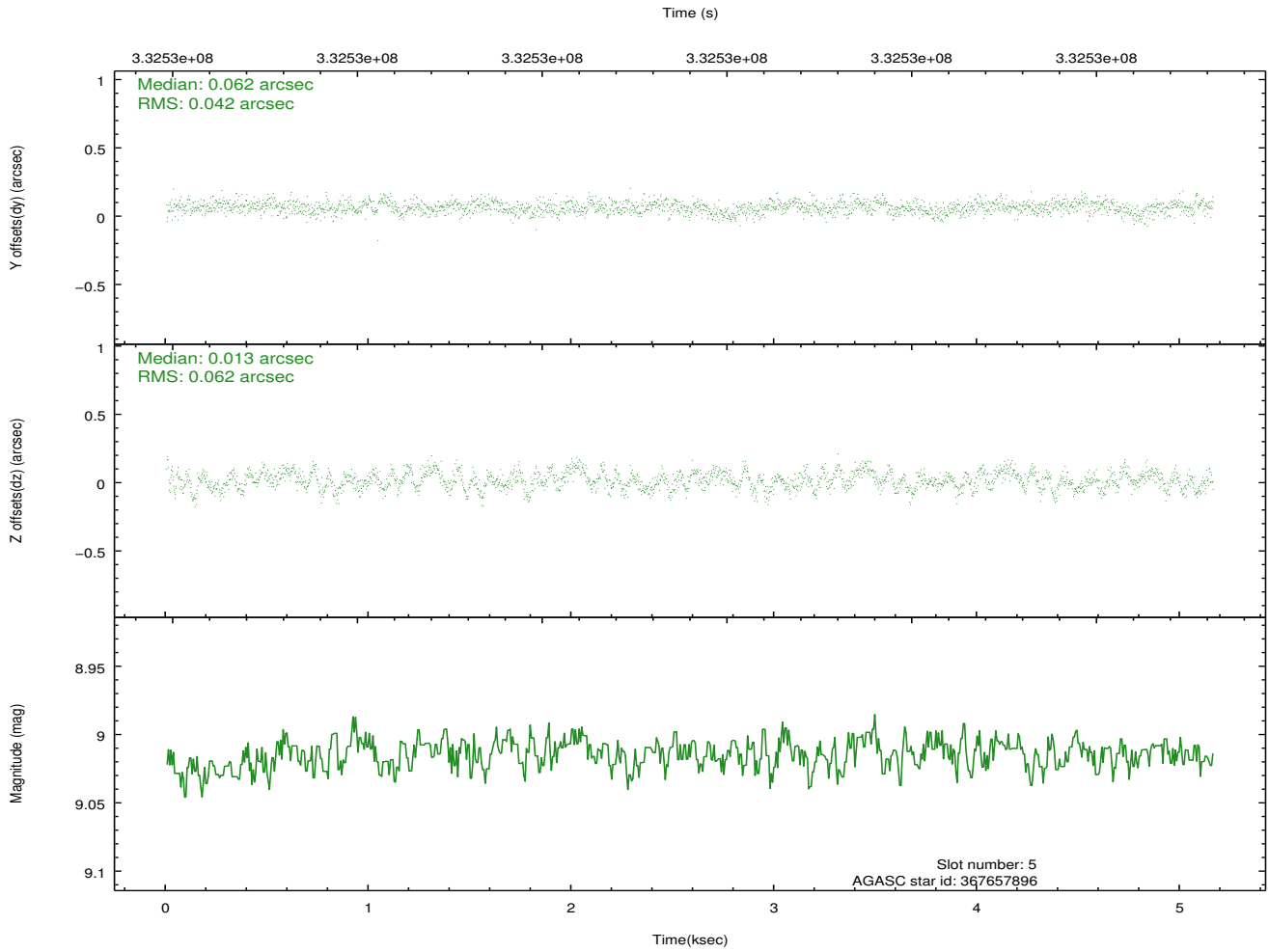
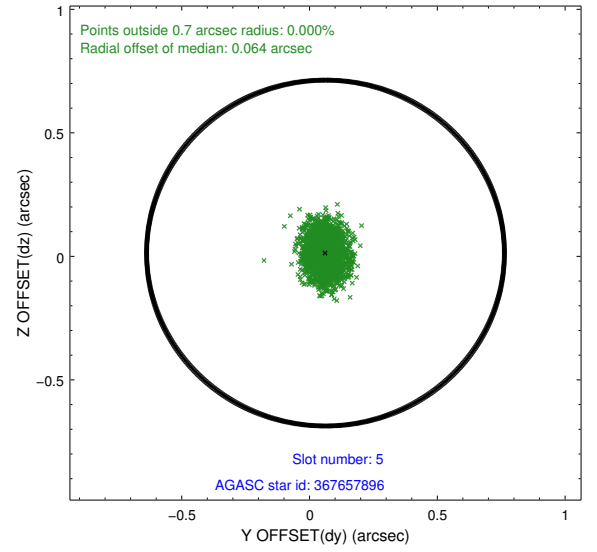
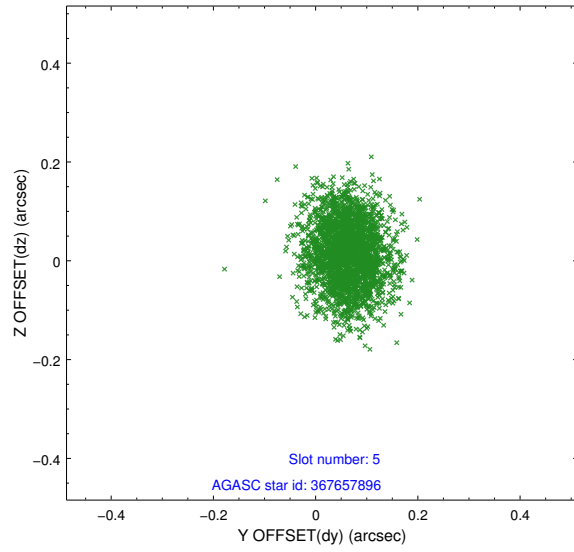
### 2.4.1 Slot 3



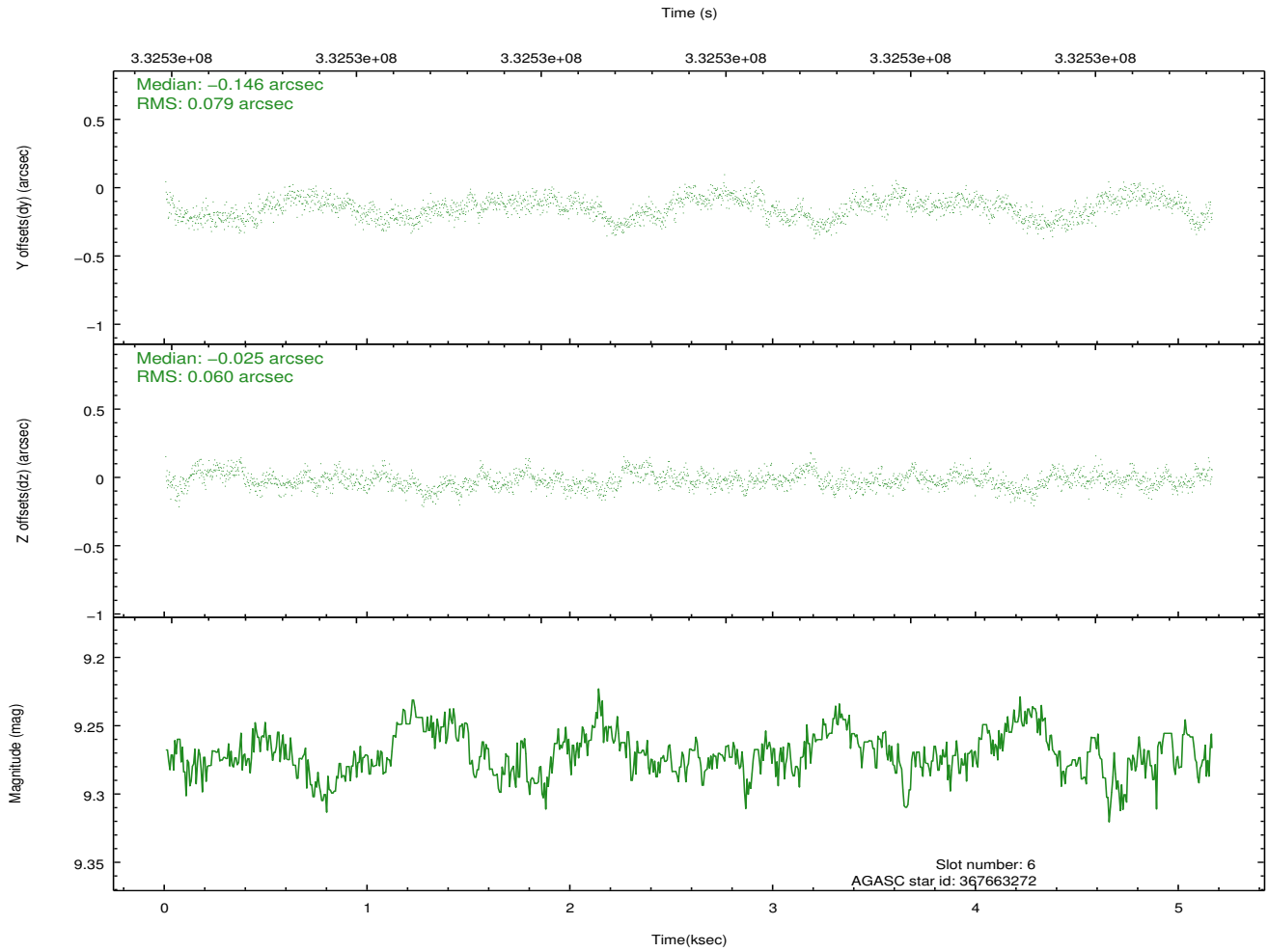
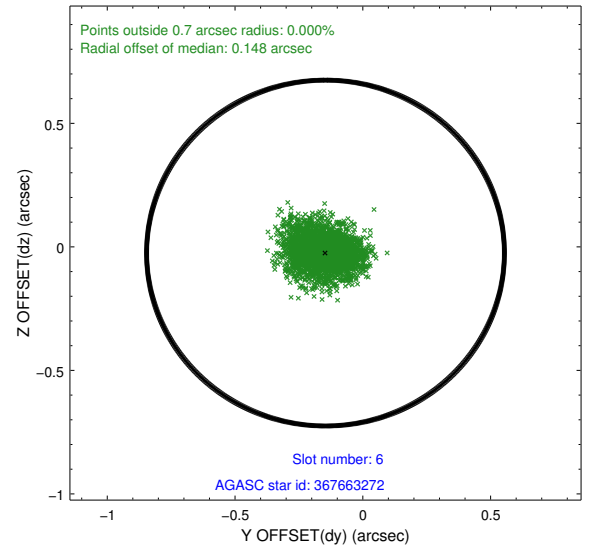
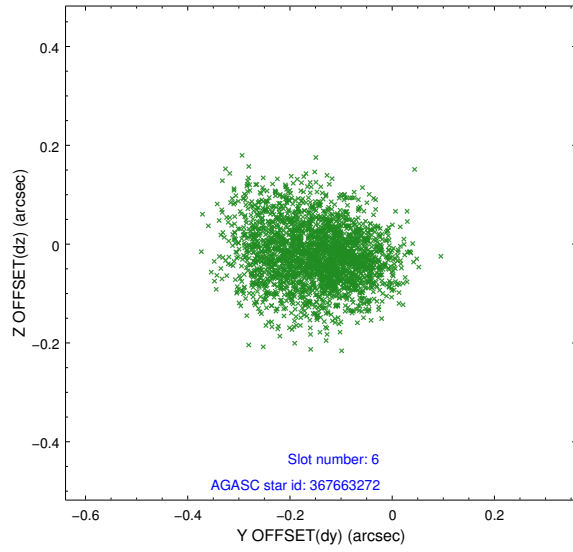
## 2.4.2 Slot 4



### 2.4.3 Slot 5

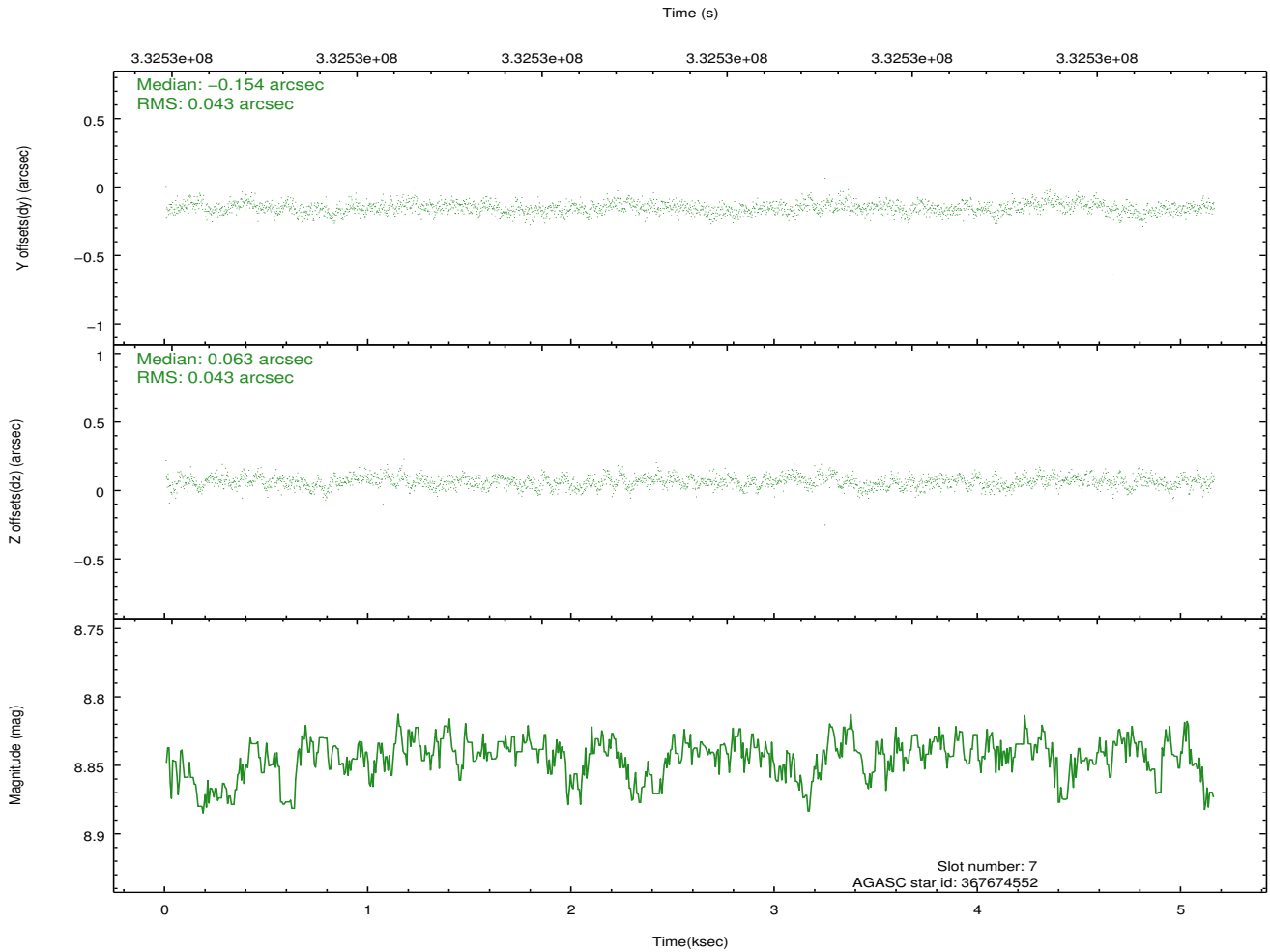
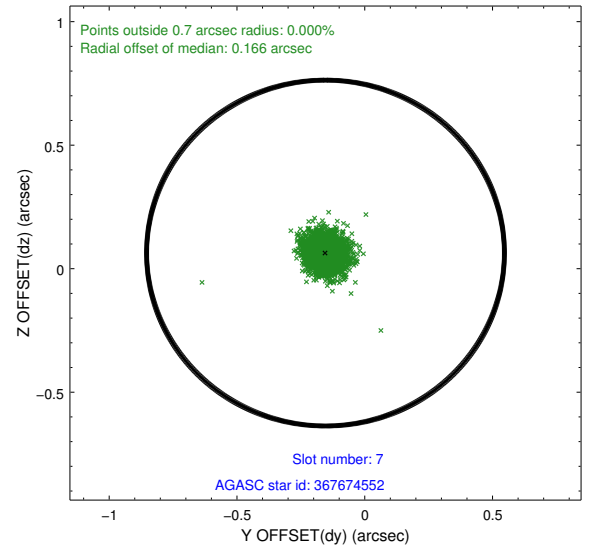
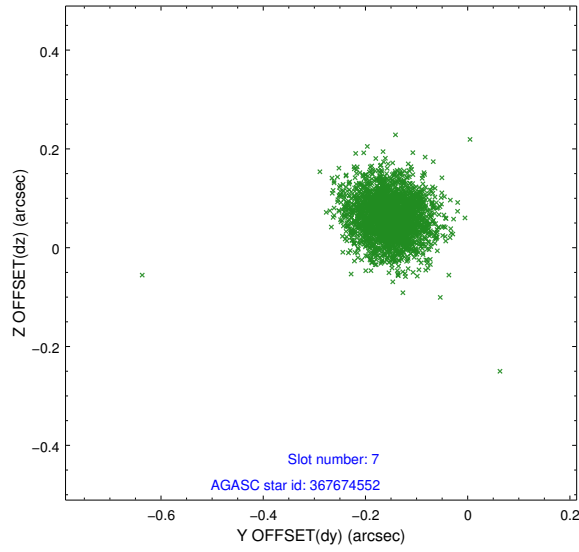


## 2.4.4 Slot 6



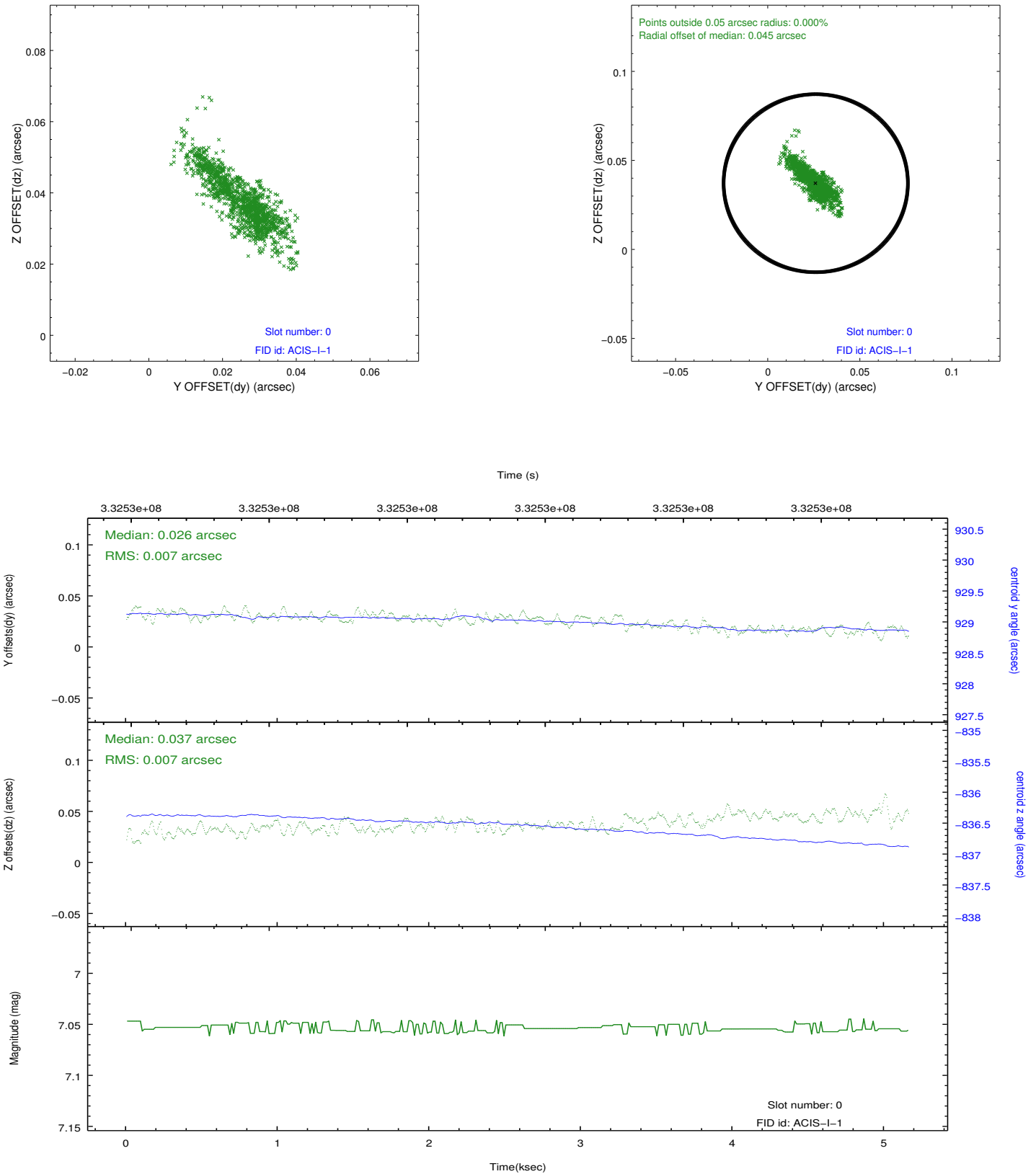


## 2.4.5 Slot 7

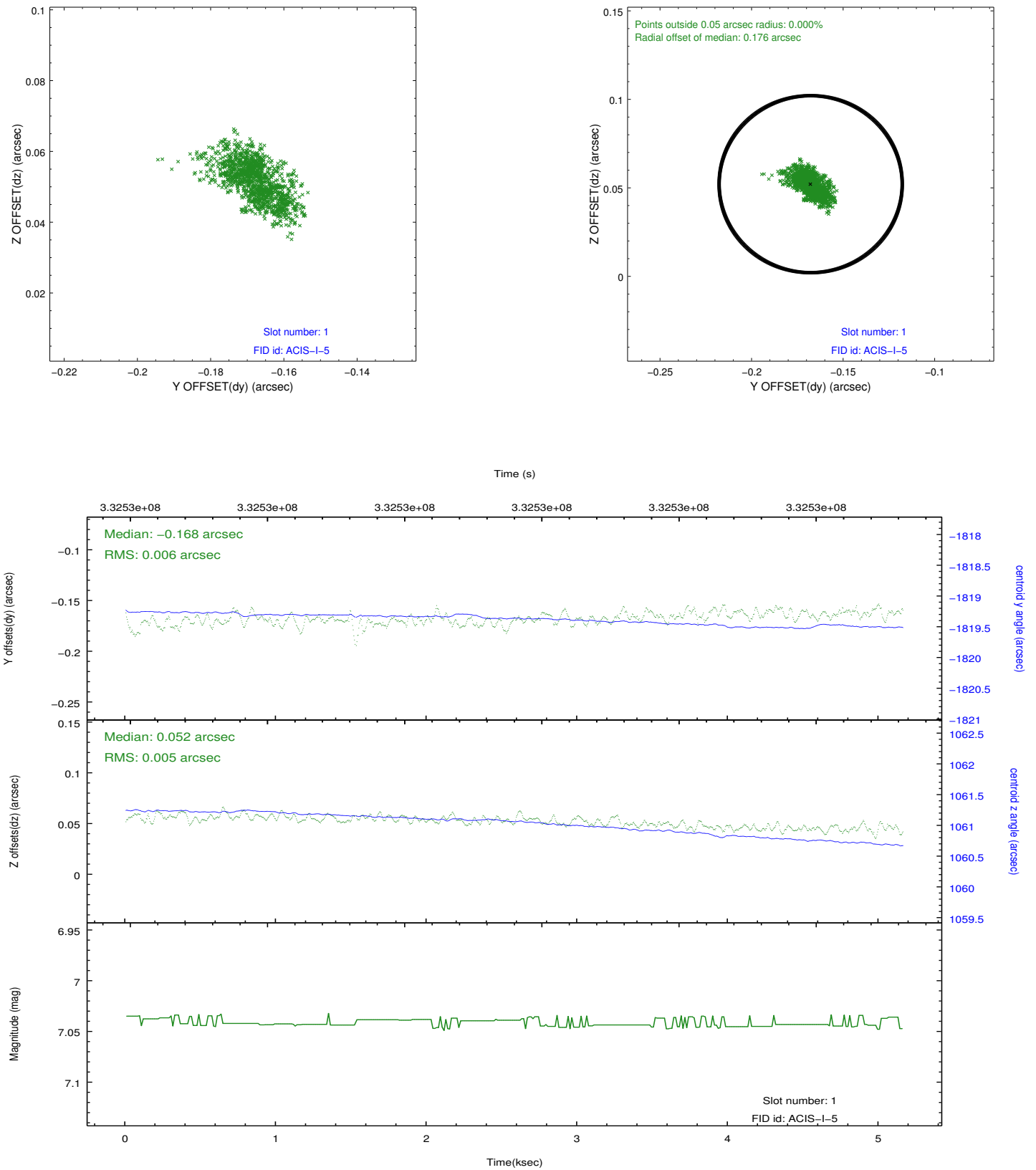


## 2.5 FID Slots

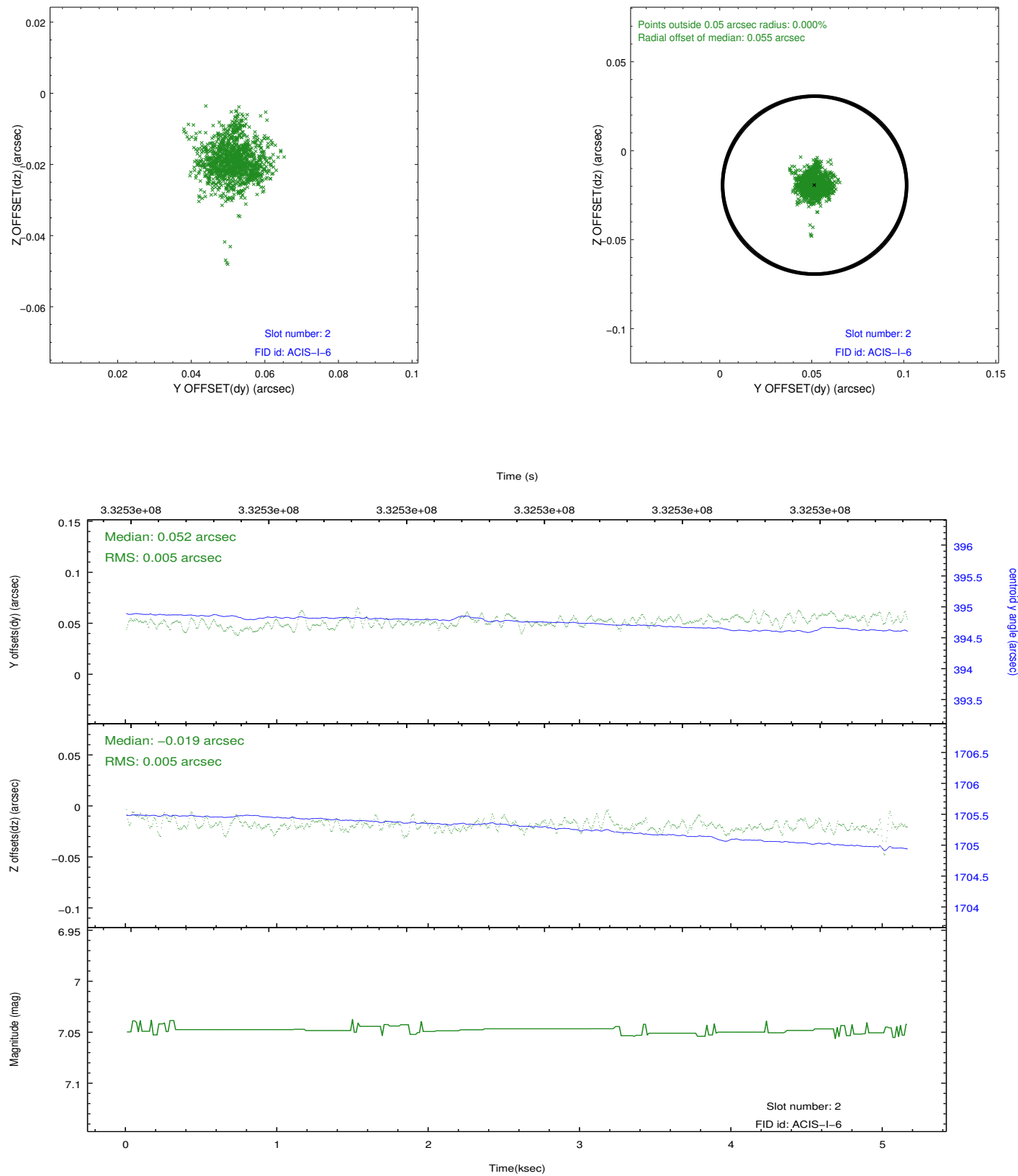
### 2.5.1 Slot 0



## 2.5.2 Slot 1



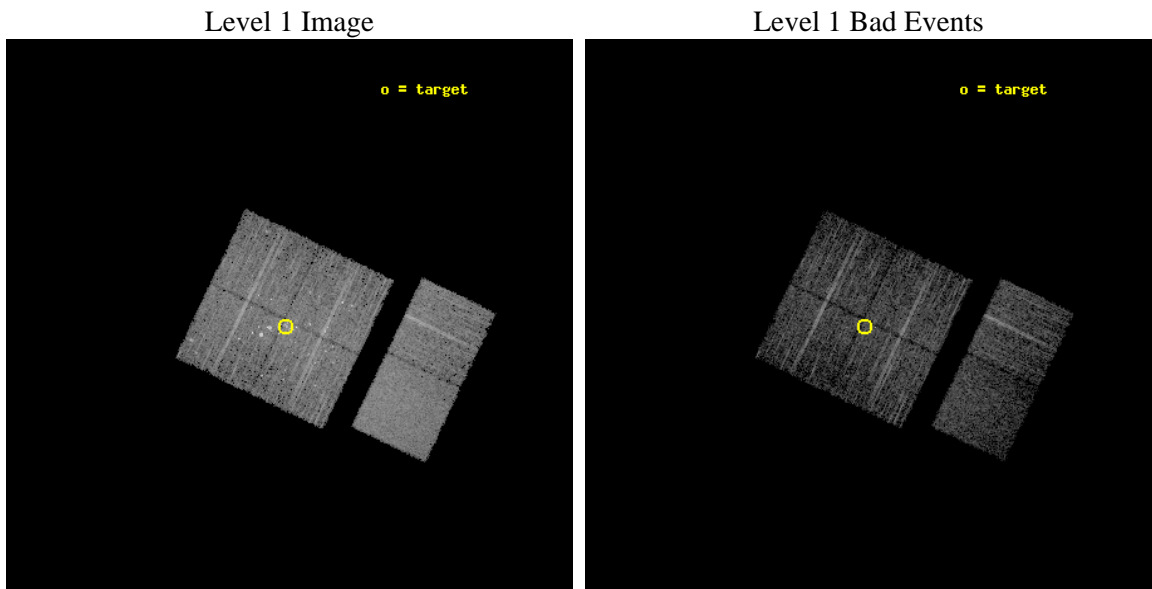
### 2.5.3 Slot 2



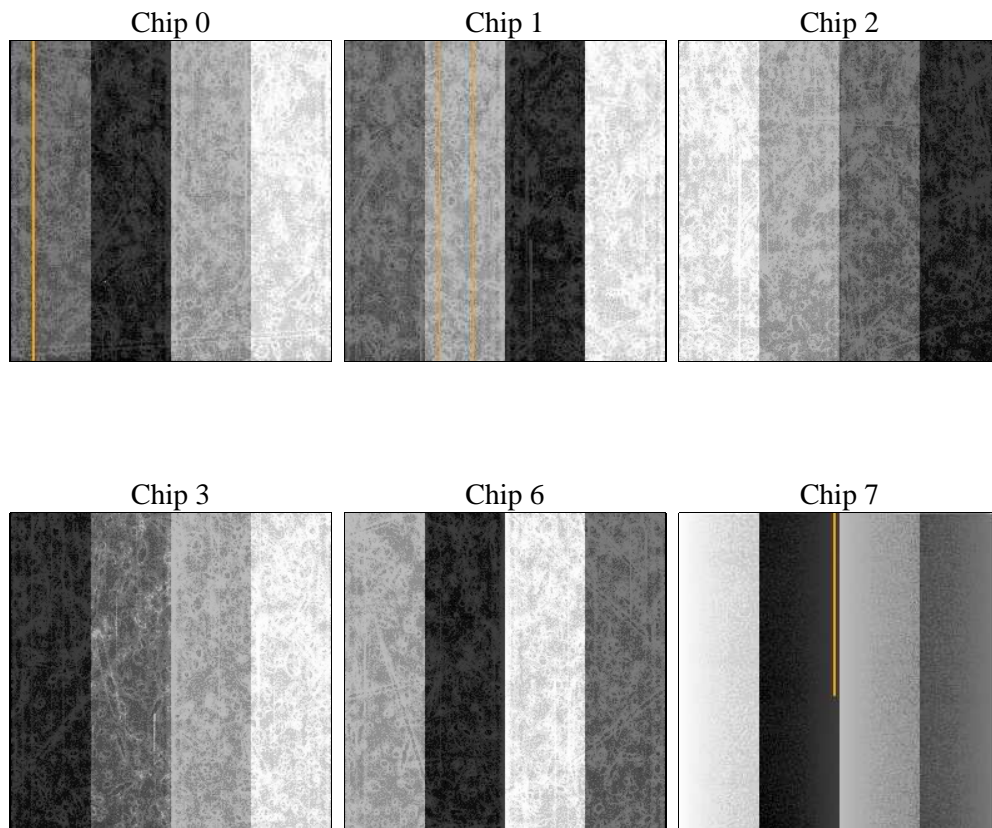
### 3 OBI Secondary

#### 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	8.4.4	Processing system revision	ontime	4100.0970314145	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime0	4103.3380912542	Sum of GTIs [s]
date	2012-05-18T02:49:19	Date and time of file creation	ontime1	4103.3380602598	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	4103.3380720019	Sum of GTIs [s]
			ontime3	4100.0970314145	Sum of GTIs [s]
			ontime6	4103.3379321694	Sum of GTIs [s]
			ontime7	4103.3380028009	Sum of GTIs [s]
			l1events	205442	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	30763	33828	35225	36151	32079	37396	grade 0 events	2235	5345	3063	4665	1257	1568
rejected events	26173	25611	29725	28533	28517	20570		7%	15%	8%	12%	3%	4%
rejected %	85%	75%	84%	78%	88%	55%	grade 1 events	33	50	49	128	19	49
								0%	0%	0%	0%	0%	0%
							grade 2 events	899	1139	944	1185	862	3415
								2%	3%	2%	3%	2%	9%
							grade 3 events	407	467	404	521	338	1574
								1%	1%	1%	1%	1%	4%
							grade 4 events	405	489	414	527	381	1525
								1%	1%	1%	1%	1%	4%
							grade 5 events	1140	1272	1135	1414	1350	3824
								3%	3%	3%	3%	4%	10%
							grade 6 events	651	782	678	724	725	8753
								2%	2%	1%	2%	2%	23%
							grade 7 events	24993	24284	28538	26987	27147	16688
								81%	71%	81%	74%	84%	44%

## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2012.05.24
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.05669618

### A.2 Comments

Window preference met.