

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 4885 - L2 Version 5  
Chandra X-Ray Center

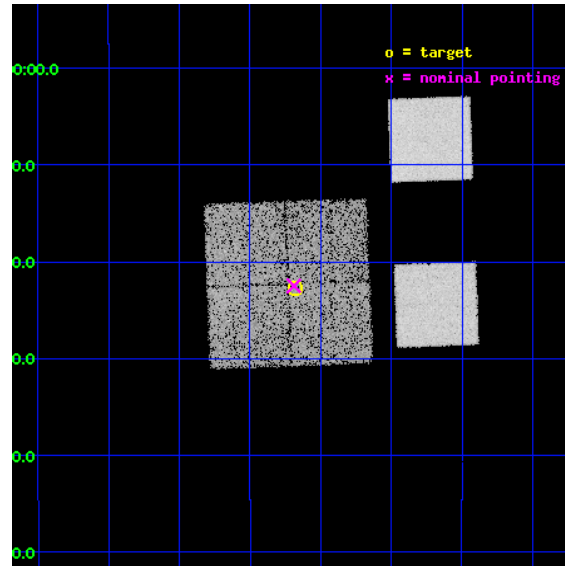
L2 Processing Date : Feb 11 2013

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# 1 Front

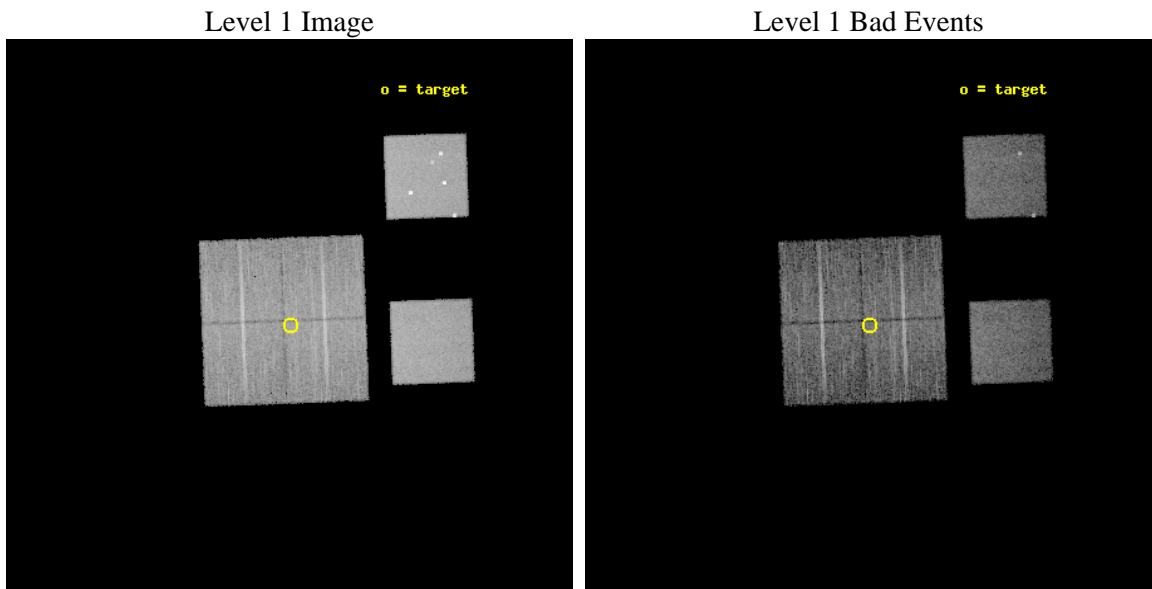
seq_num	700967	Sequence number
obs_id	4885	Observation id
title	AGN in low-redshift Clusters of Galaxies	Proposal title
observer	Prof. Paul Martini	Principal investigator
object	Abell85-P5	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	10.170417	Observer's specified target RA [deg]
dec_targ	-9.379167	Observer's specified target Dec [deg]
ra_nom	10.172404683408	Nominal RA [deg]
dec_nom	-9.3749279648084	Nominal Dec [deg]
roll_nom	87.878207996732	Nominal Roll [deg]
revision	5	Processing version of data
ontime	9758.4606335759	Sum of GTIs [s]
livetime	9634.893129194	Livetime [s]
ontime0	9758.5837535858	Sum of GTIs [s]
ontime1	9758.3785535991	Sum of GTIs [s]
ontime2	9748.6966226995	Sum of GTIs [s]
ontime3	9758.4606335759	Sum of GTIs [s]
ontime5	9758.5016536713	Sum of GTIs [s]
ontime7	9758.5427135825	Sum of GTIs [s]
l2events	117127	Number of level 2 events



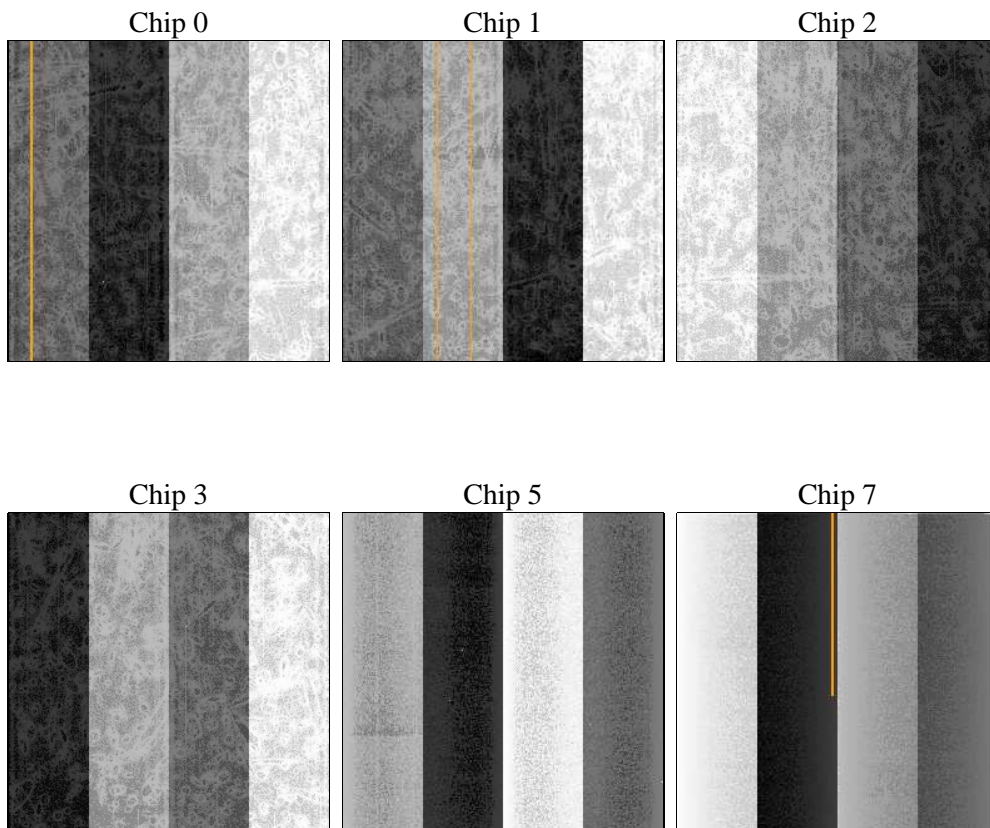
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	8.5.1.1	Processing system revision	ontime	9758.4606335759	Sum of GTIs [s]
caldsver	4.5.5	&#160	ontime0	9758.5837535858	Sum of GTIs [s]
date	2013-02-12T01:33:22	Date and time of file creation	ontime1	9758.3785535991	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	9748.6966226995	Sum of GTIs [s]
			ontime3	9758.4606335759	Sum of GTIs [s]
			ontime5	9758.5016536713	Sum of GTIs [s]
			ontime7	9758.5427135825	Sum of GTIs [s]
			l1events	497487	Number of level 1 events

### 2.1.4 Events

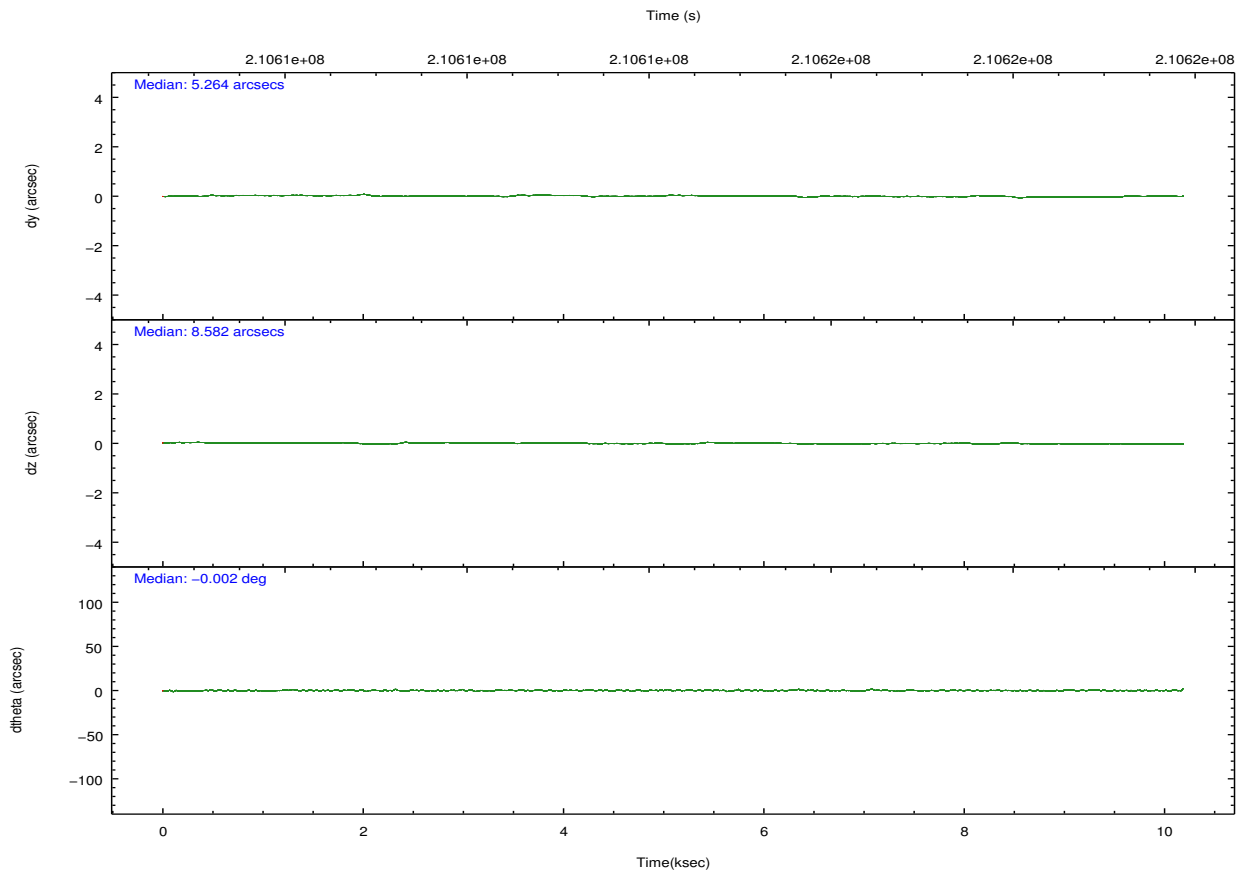
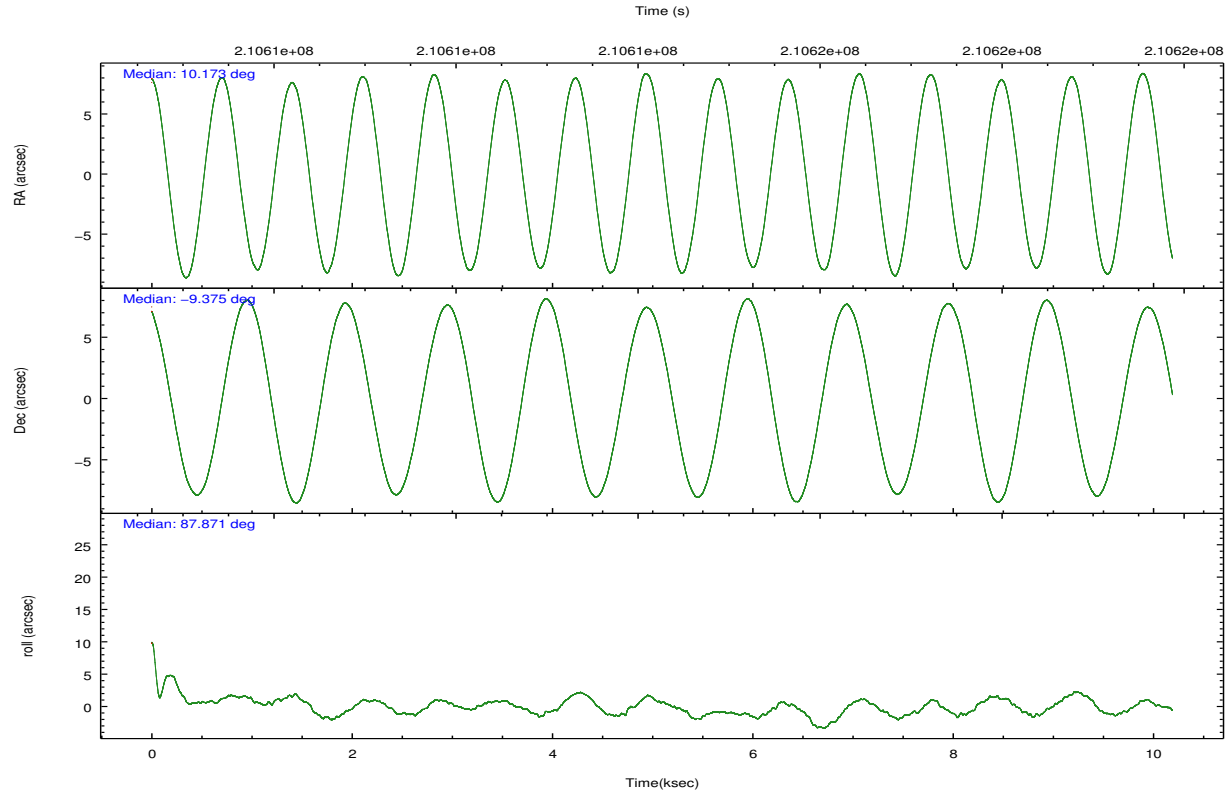
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 5	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 5	ccd 7
level 1 events	71861	66850	72650	71422	116516	98188	grade 0 events	4796	4333	3784	3851	10052	3489
rejected events	61775	56925	64084	62838	60676	58011		6%	6%	5%	5%	8%	3%
rejected %	85%	85%	88%	87%	52%	59%	grade 1 events	44	38	51	47	322	91
								0%	0%	0%	0%	0%	0%
							grade 2 events	1964	1995	1767	1639	15310	8058
								2%	2%	2%	2%	13%	8%
							grade 3 events	931	953	826	842	2022	3583
								1%	1%	1%	1%	1%	3%
							grade 4 events	844	881	812	821	1776	3462
								1%	1%	1%	1%	1%	3%
							grade 5 events	3154	2984	2816	3178	8282	9628
								4%	4%	3%	4%	7%	9%
							grade 6 events	1553	1769	1381	1431	26704	21597
								2%	2%	1%	2%	22%	21%
							grade 7 events	58575	53897	61213	59613	52048	48280
								81%	80%	84%	83%	44%	49%



## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012357	ACIS-012357	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	10.185489	10.17240468340783	Subarray requested	NONE	NONE
[deg] Pointing Dec	-9.399121	-9.374927964808407	Alternating exposures requested	N	N
[deg] Pointing Roll	87.671649	87.87820799673207	[s] Primary exposure time	0.000000	3.2
[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)	210609356.184000	210608981.31208			
Observation start date	2004-09-03T14:34:52	2004-09-03T14:29:41			
[s] Observation end time (MET)	210619356.184000	210619490.63755			
Observation end date	2004-09-03T17:21:32	2004-09-03T17:24:50			
Read mode	TIMED	TIMED			

## 2.3 Aspect

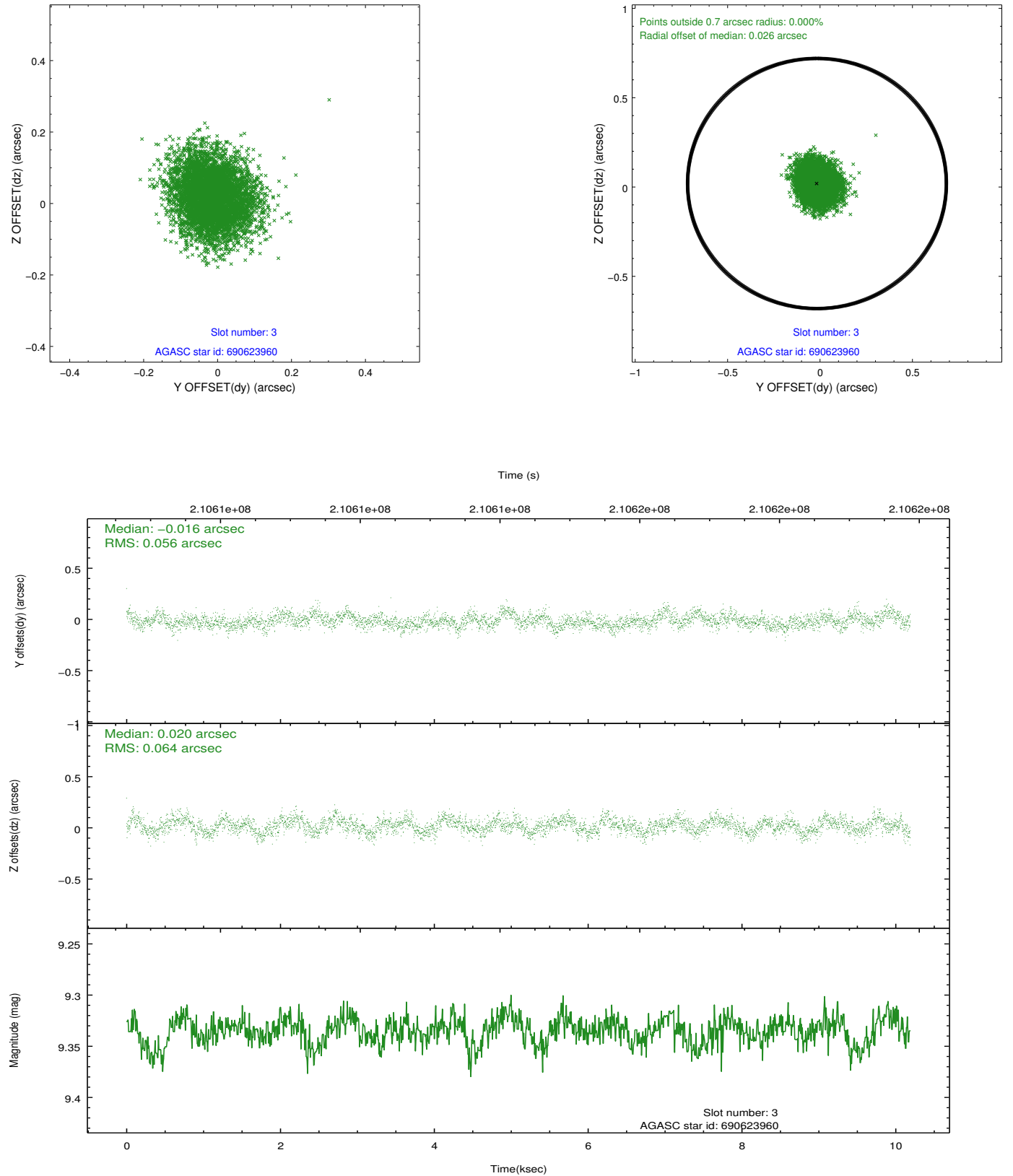


### Slot Statistics

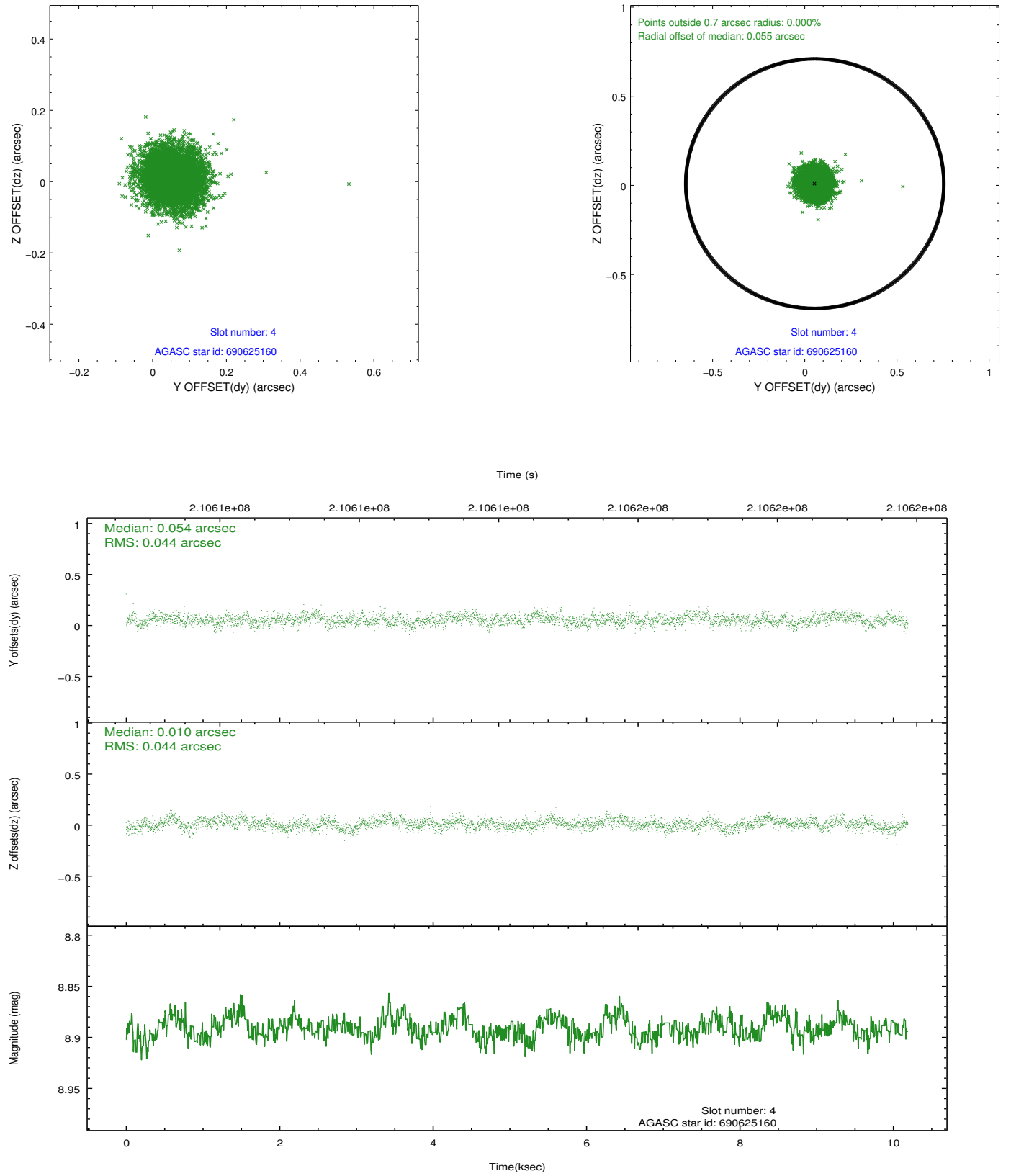
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.24	2486	0.018	0.036	0.006	0.011	0.000000	0.000000	934.49	-831.98
1	FID	ACIS-I-5	7.23	2486	-0.162	0.044	0.006	0.010	0.000000	0.000000	-1813.52	1065.25
2	FID	ACIS-I-6	7.25	2486	0.053	-0.010	0.007	0.011	0.000000	0.000000	399.49	1710.30
3	GUIDE	690623960	9.33	4965	-0.016	0.020	0.090	0.147	10.570675	-9.168103	886.23	-1333.49
4	GUIDE	690625160	8.89	4971	0.054	0.010	0.066	0.106	10.224219	-9.960066	-2011.75	-219.44
5	GUIDE	690625776	9.15	4972	-0.065	0.096	0.094	0.152	10.846019	-9.315741	393.37	-2333.58
6	GUIDE	690632656	9.26	4970	0.087	-0.050	0.099	0.158	10.397747	-9.674983	-961.60	-793.26
7	GUIDE	690637960	6.80	4902	-0.060	-0.070	0.057	0.089	10.711431	-9.921690	-1805.32	-1940.19

## 2.4 Star Slots

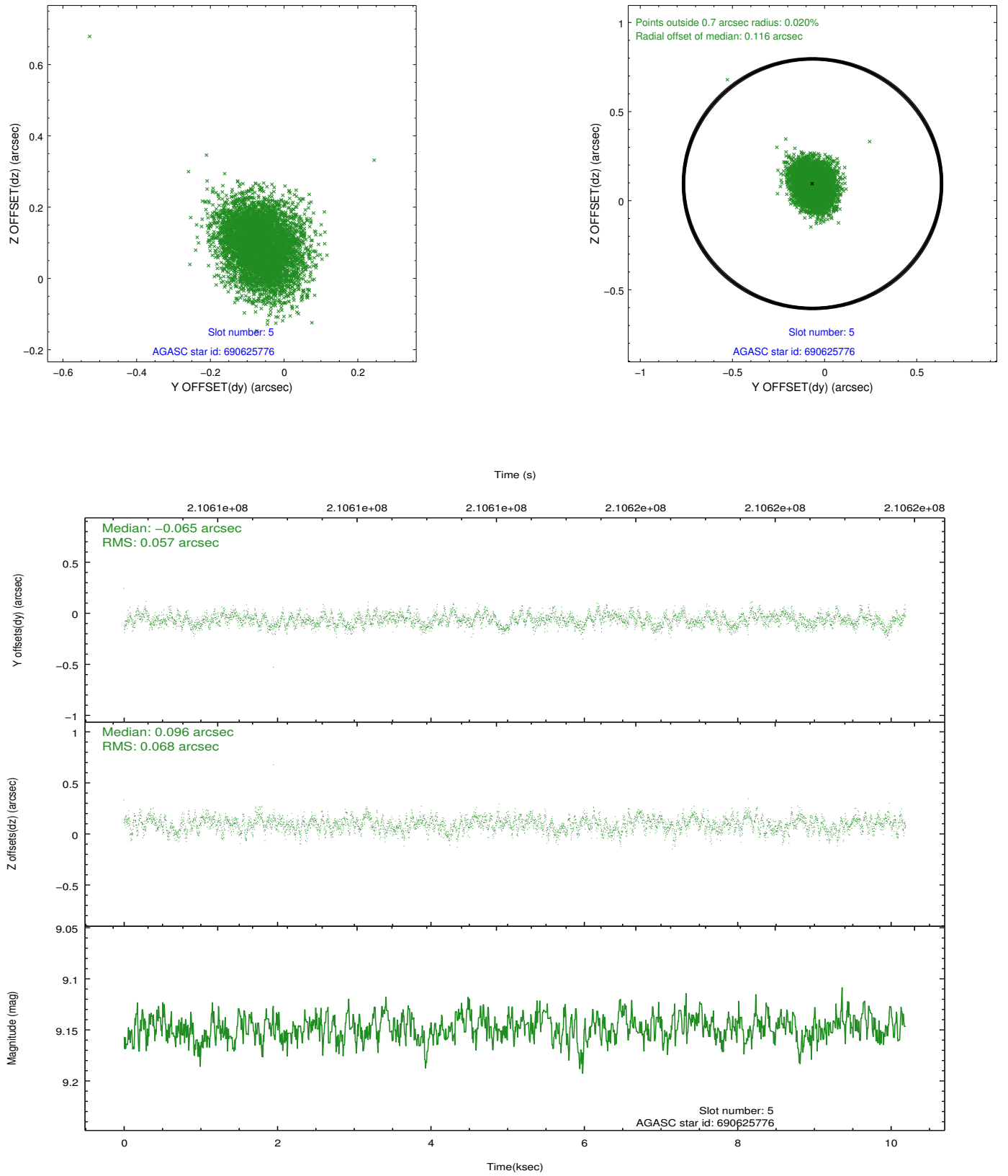
### 2.4.1 Slot 3



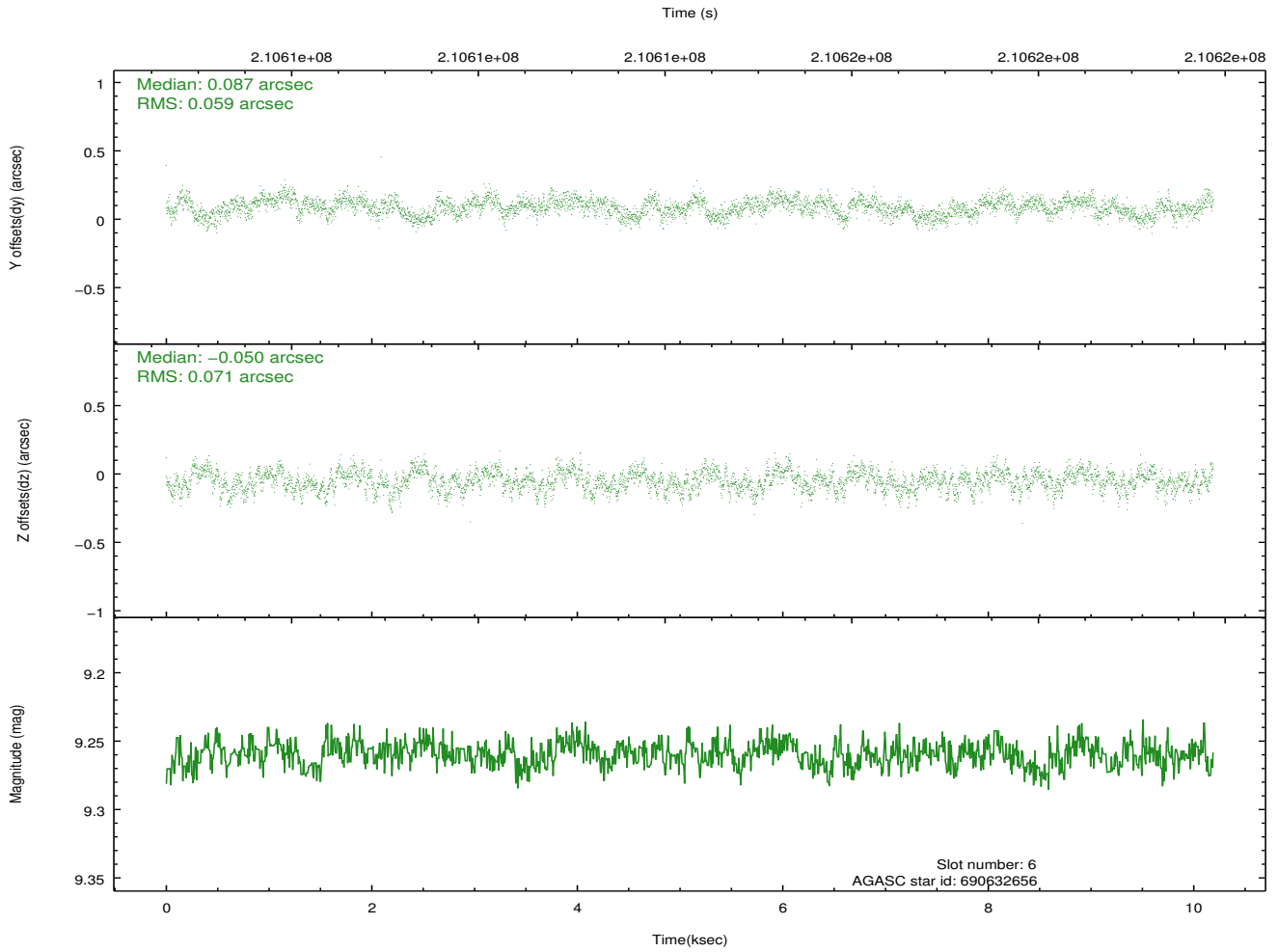
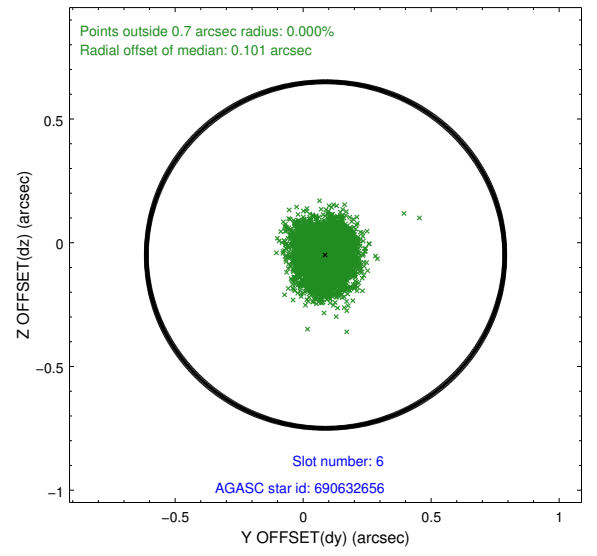
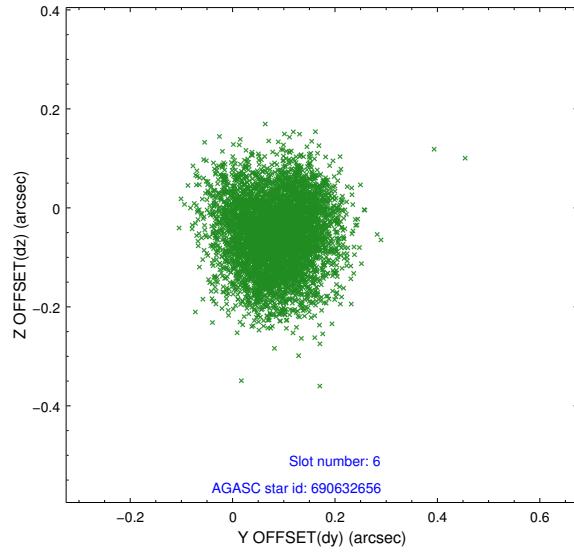
## 2.4.2 Slot 4



### 2.4.3 Slot 5

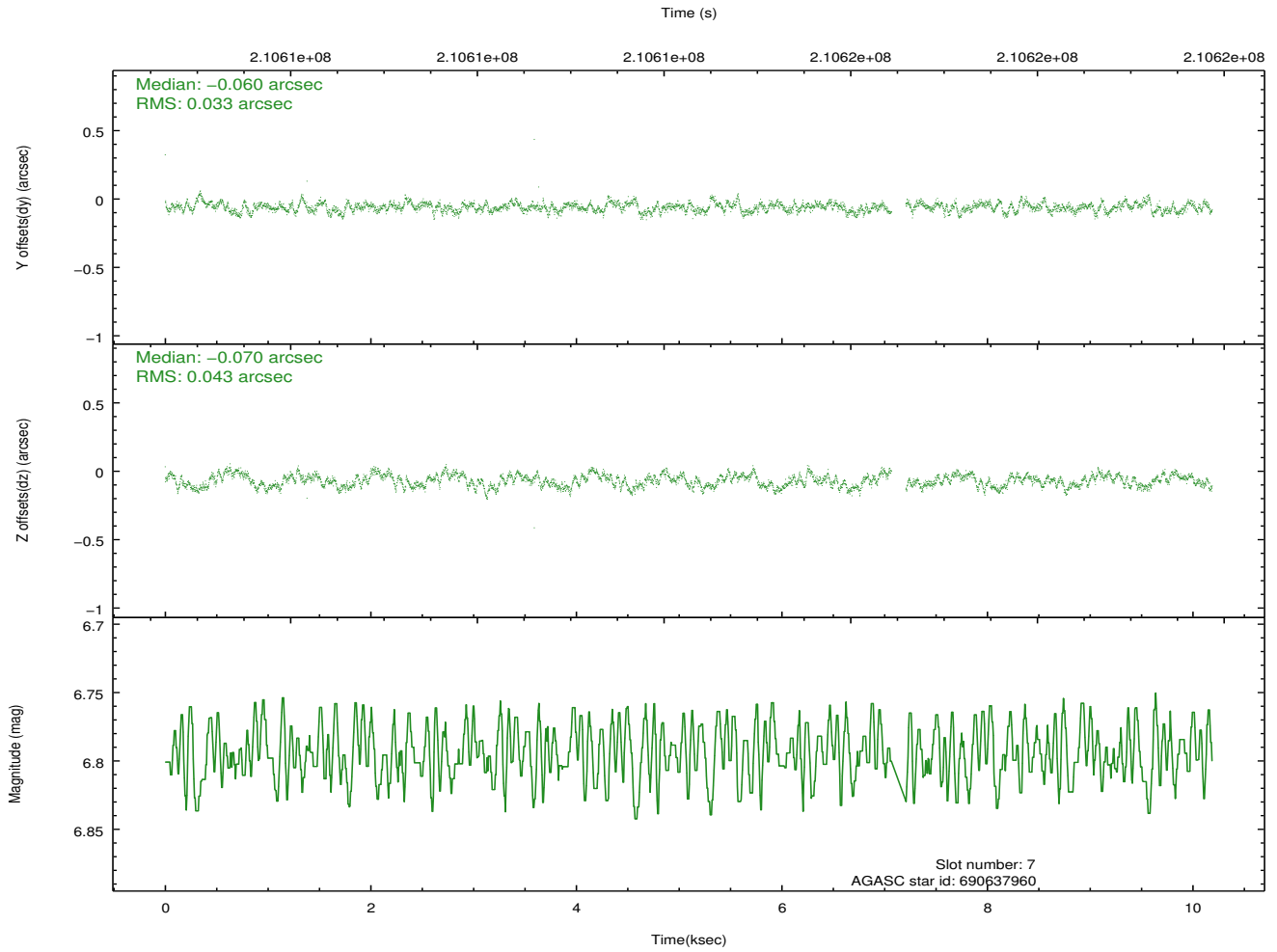
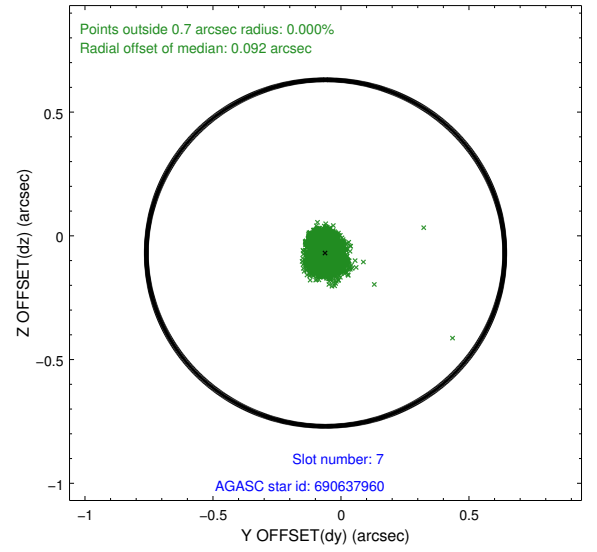
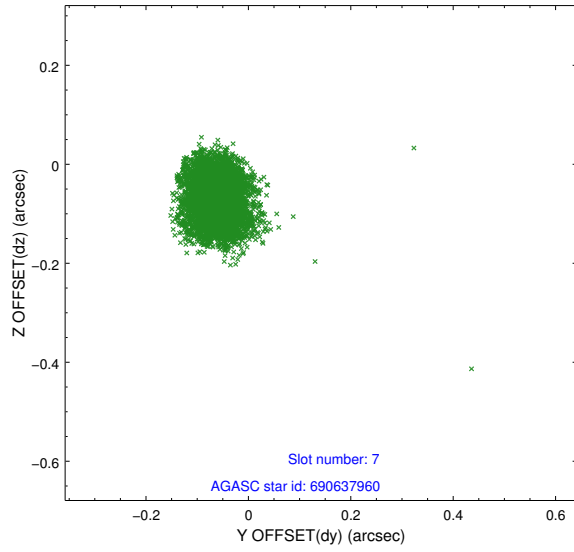


## 2.4.4 Slot 6



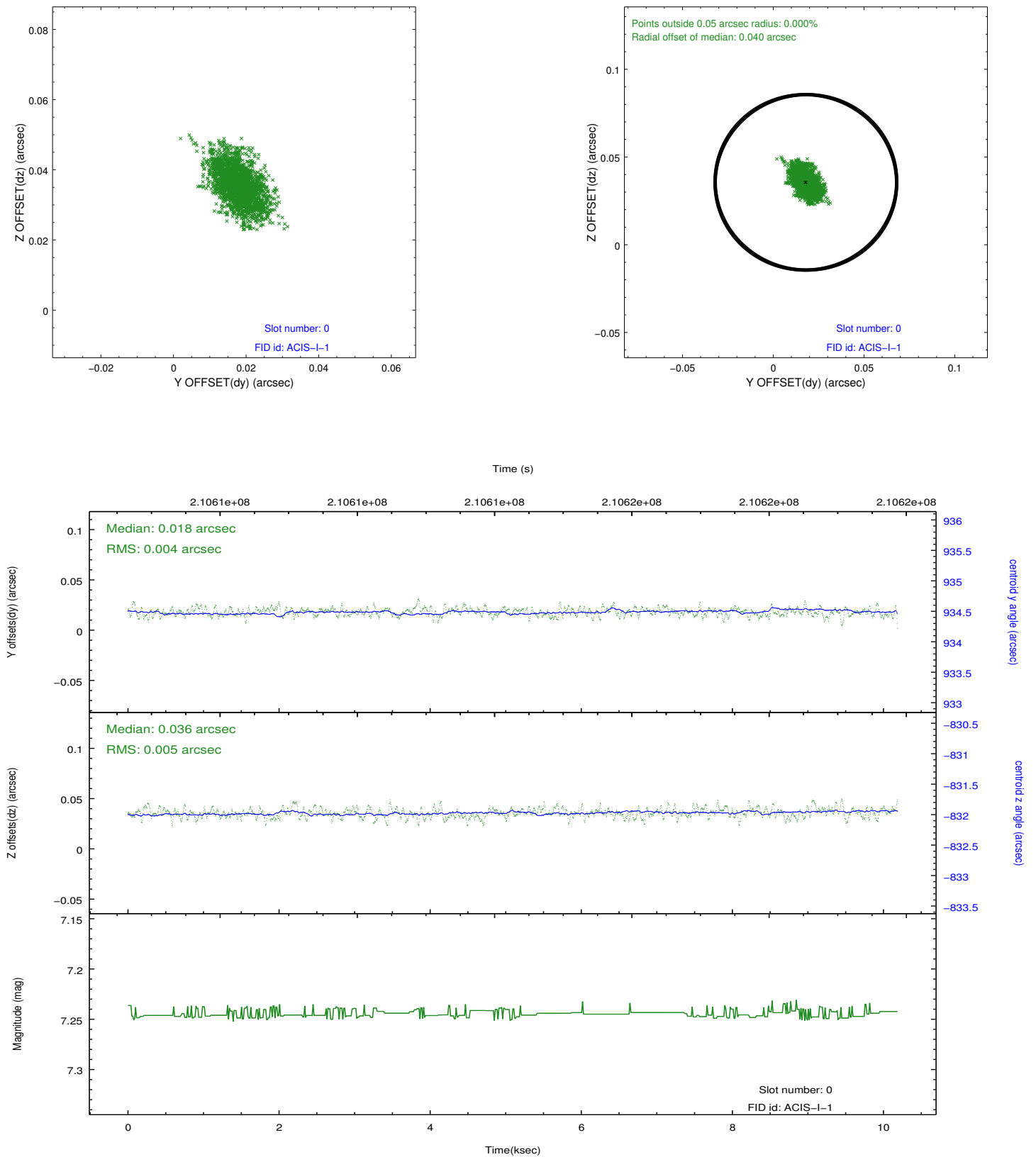


## 2.4.5 Slot 7

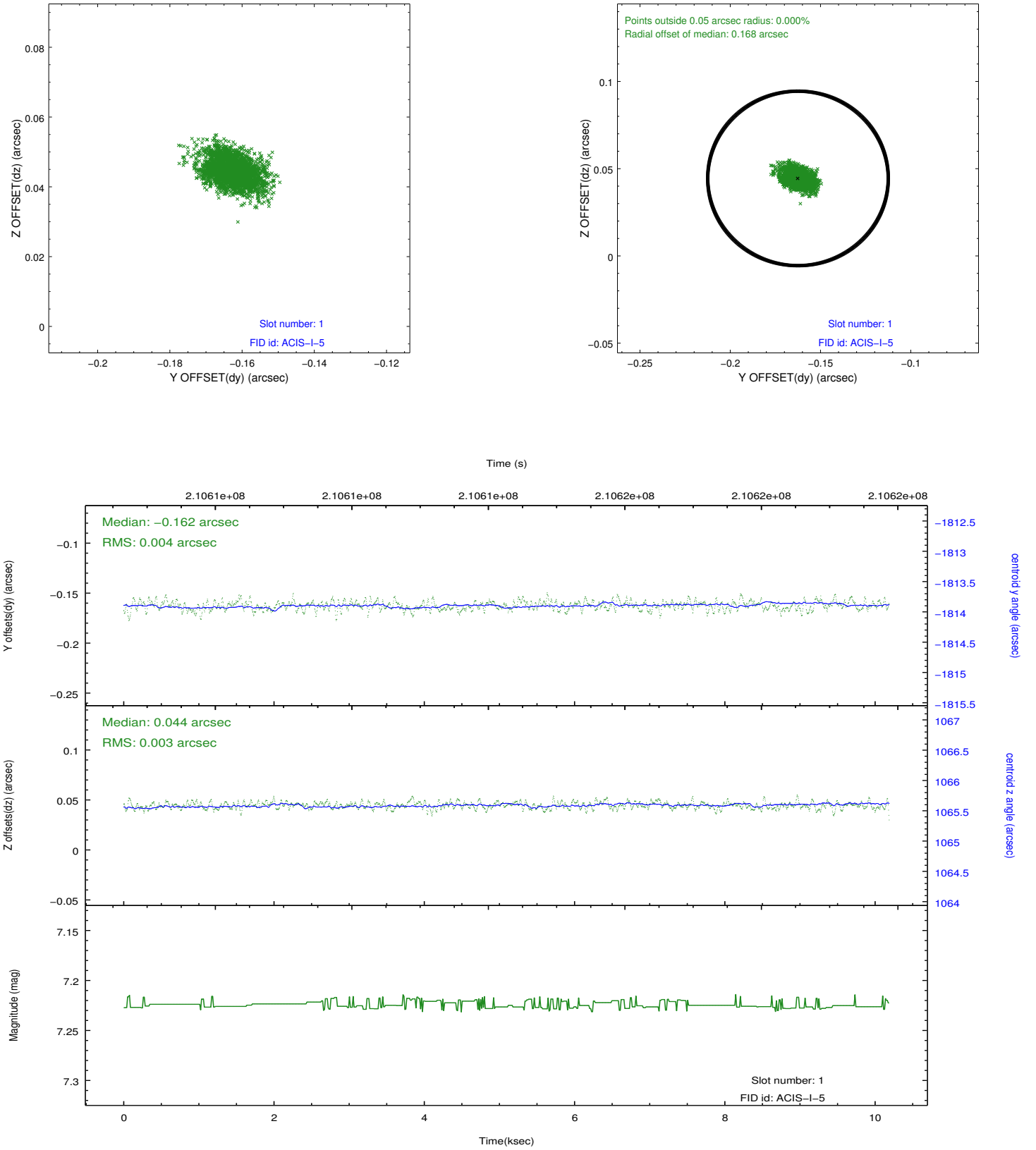


## 2.5 FID Slots

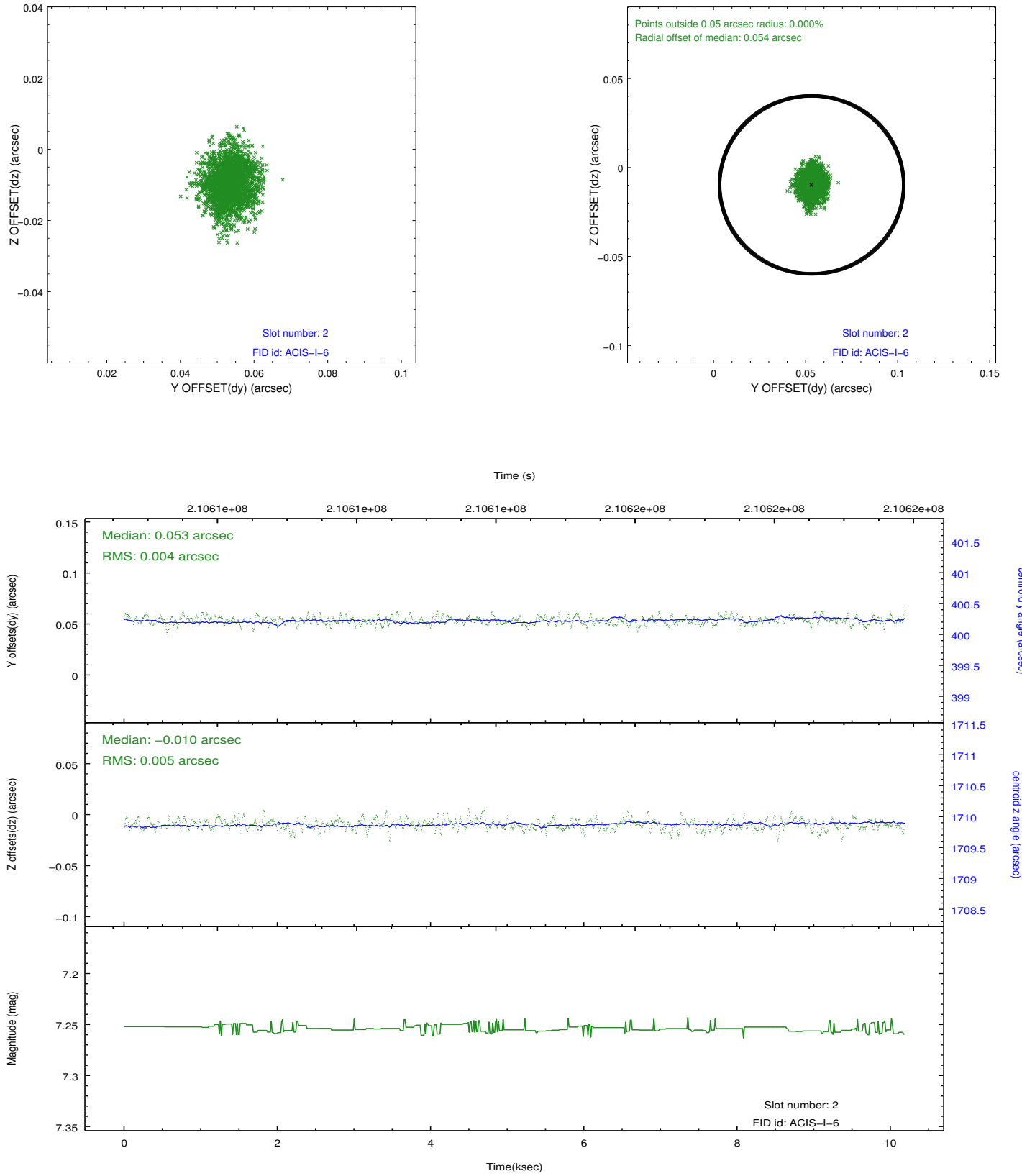
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2013.02.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.759

## A.2 Comments

A spatial region of the original bias map for CCD = 1 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small ( $\sim 20$  eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 1 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:  
(10.26933,-9.51535),(10.27362,-9.51549),(10.27499,-9.47857),(10.27070,-9.47843)