

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 10088 - L2 Version 3  
Chandra X-Ray Center

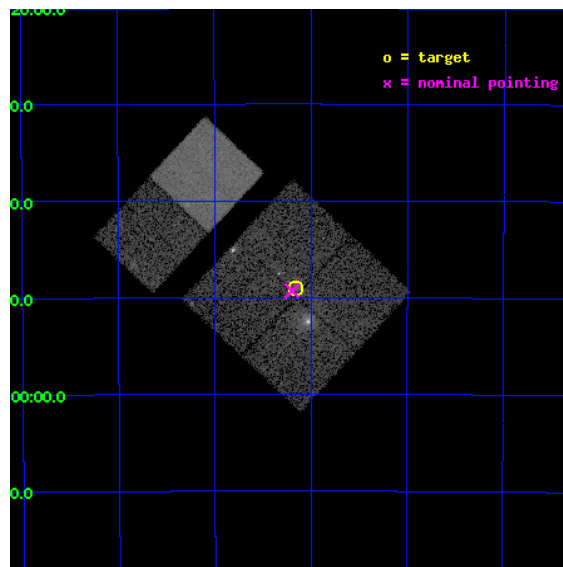
L2 Processing Date : Jun 11 2012

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# 1 Front

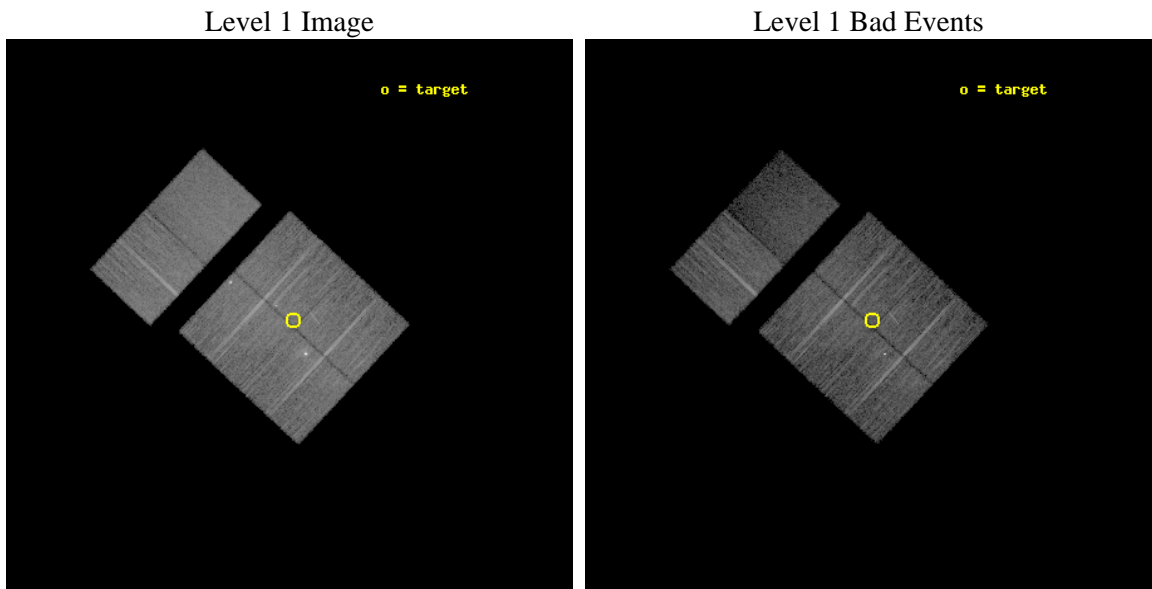
seq_num	501020	Sequence number
obs_id	10088	Observation id
title	New Pulsar Identifications of TeV Gamma-ray Sources	Proposal title
observer	Prof. Jules Halpern	Principal investigator
object	HESS J1632-478	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	248.039167	Observer's specified target RA [deg]
dec_targ	-47.817556	Observer's specified target Dec [deg]
ra_nom	248.04971764118	Nominal RA [deg]
dec_nom	-47.821538762982	Nominal Dec [deg]
roll_nom	313.03361002624	Nominal Roll [deg]
revision	3	Processing version of data
ontime	9753.2758325338	Sum of GTIs [s]
livetime	9629.7739812247	Livetime [s]
ontime0	9753.1527324319	Sum of GTIs [s]
ontime1	9743.4707614779	Sum of GTIs [s]
ontime2	9753.2347925305	Sum of GTIs [s]
ontime3	9753.2758325338	Sum of GTIs [s]
ontime6	9753.3579125404	Sum of GTIs [s]
ontime7	9753.3168725371	Sum of GTIs [s]
l2events	81941	Number of level 2 events



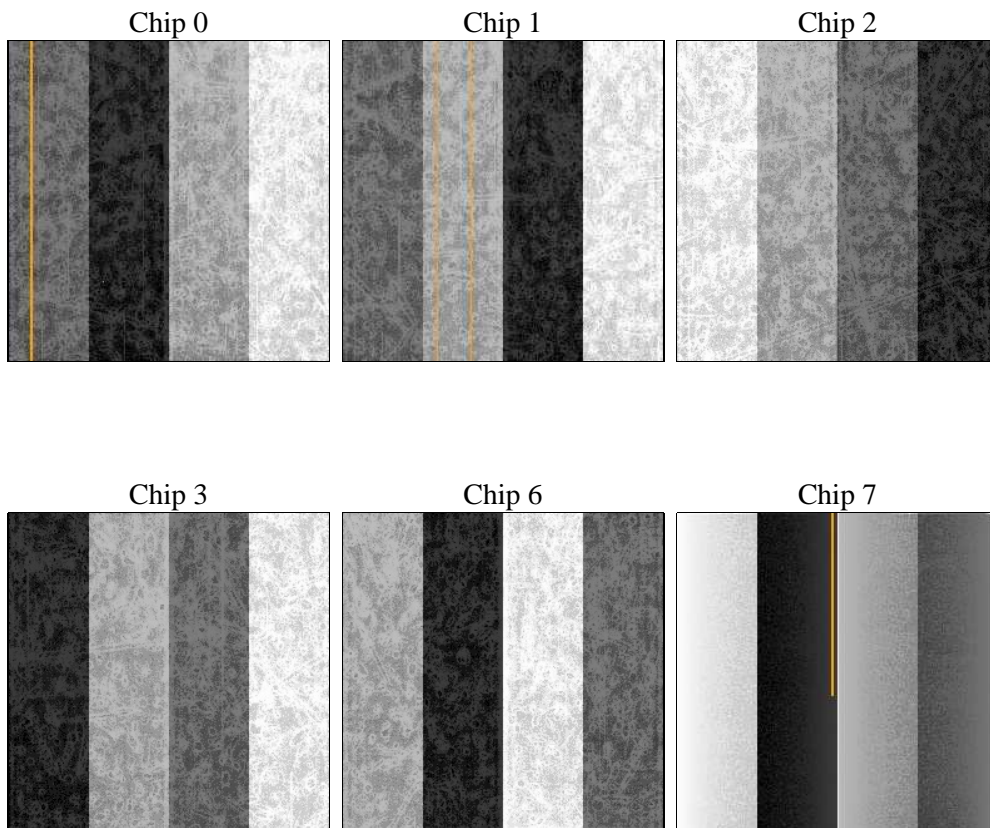
## 2 OBI

### 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	8.4.5	Processing system revision	ontime	9753.2758325338	Sum of GTIs [s]
caldsver	4.4.10	&#160	ontime0	9753.1527324319	Sum of GTIs [s]
date	2012-06-11T16:44:51	Date and time of file creation	ontime1	9743.4707614779	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	9753.2347925305	Sum of GTIs [s]
			ontime3	9753.2758325338	Sum of GTIs [s]
			ontime6	9753.3579125404	Sum of GTIs [s]
			ontime7	9753.3168725371	Sum of GTIs [s]
			l1events	482930	Number of level 1 events

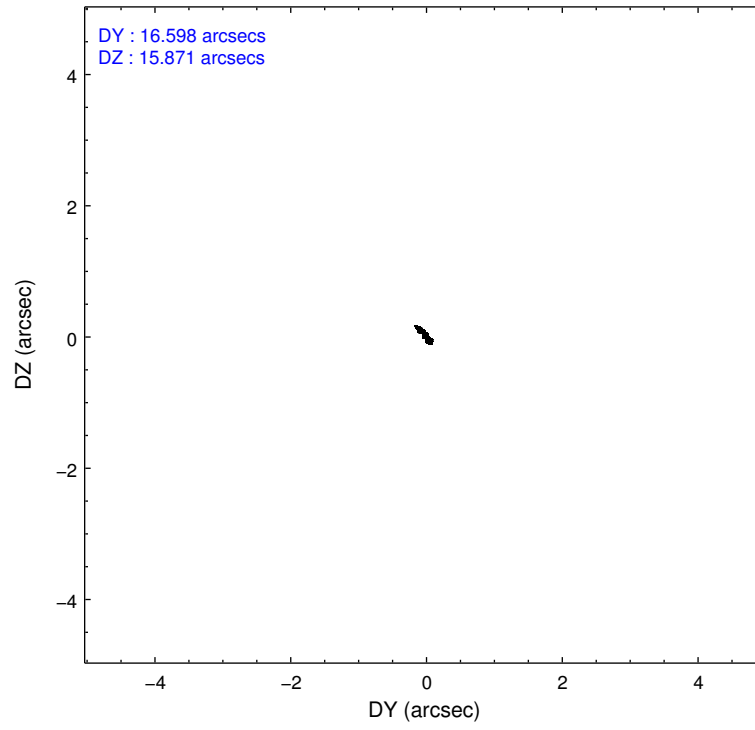
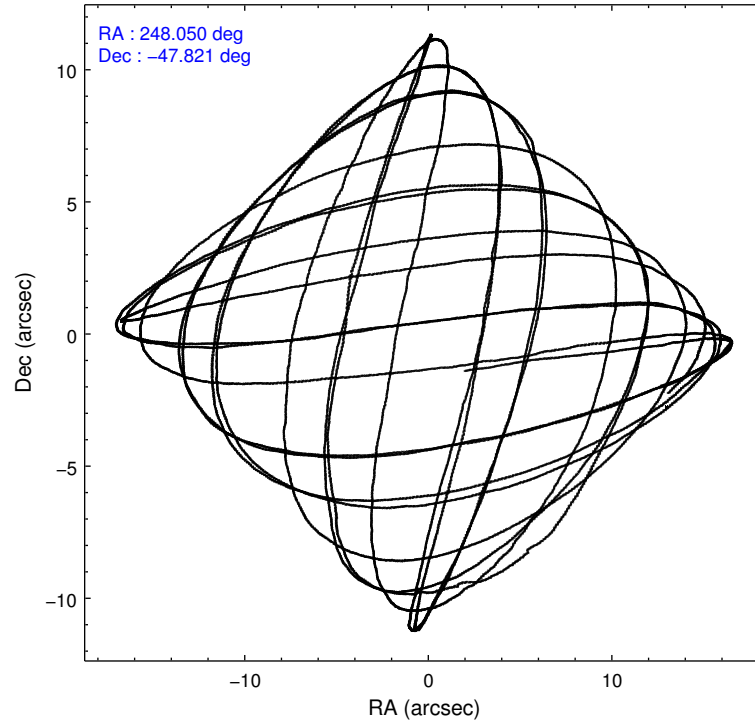
### 2.1.4 Events

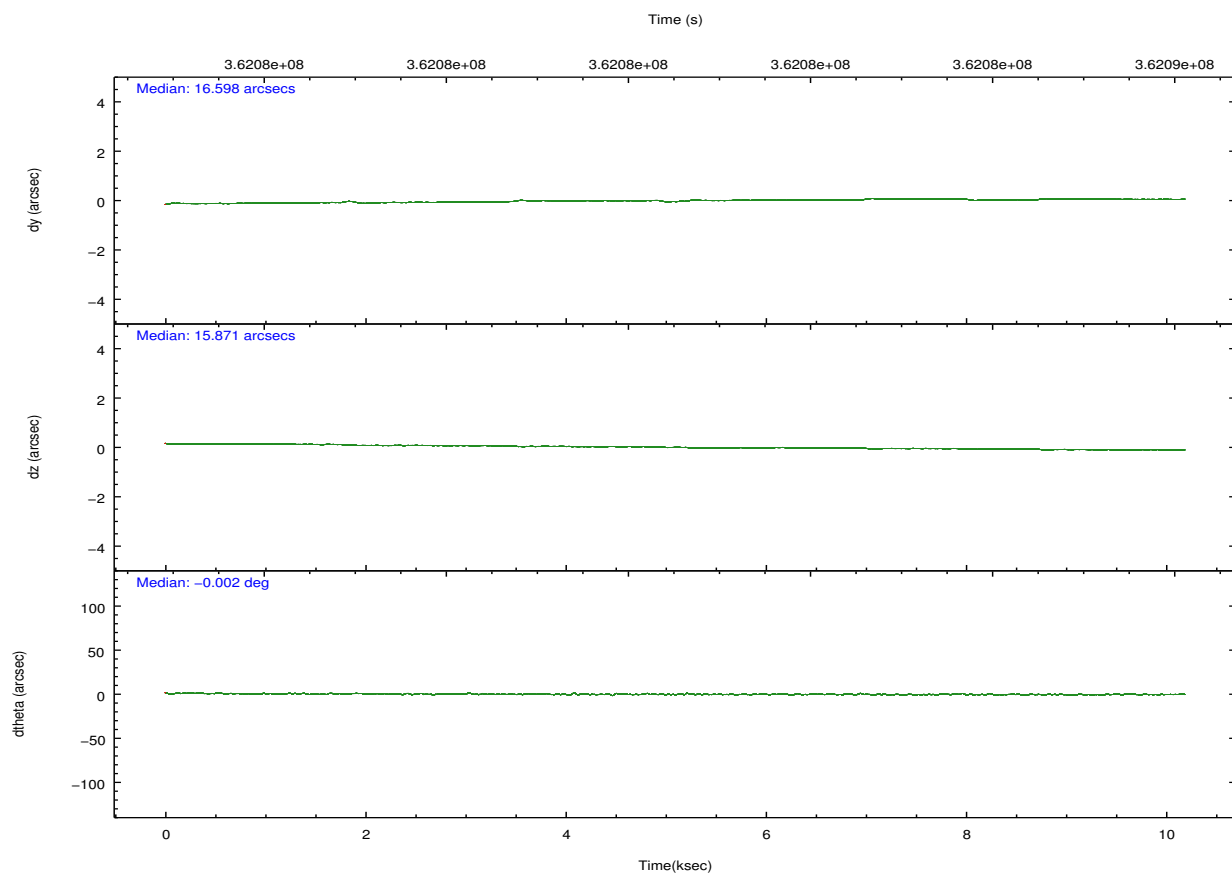
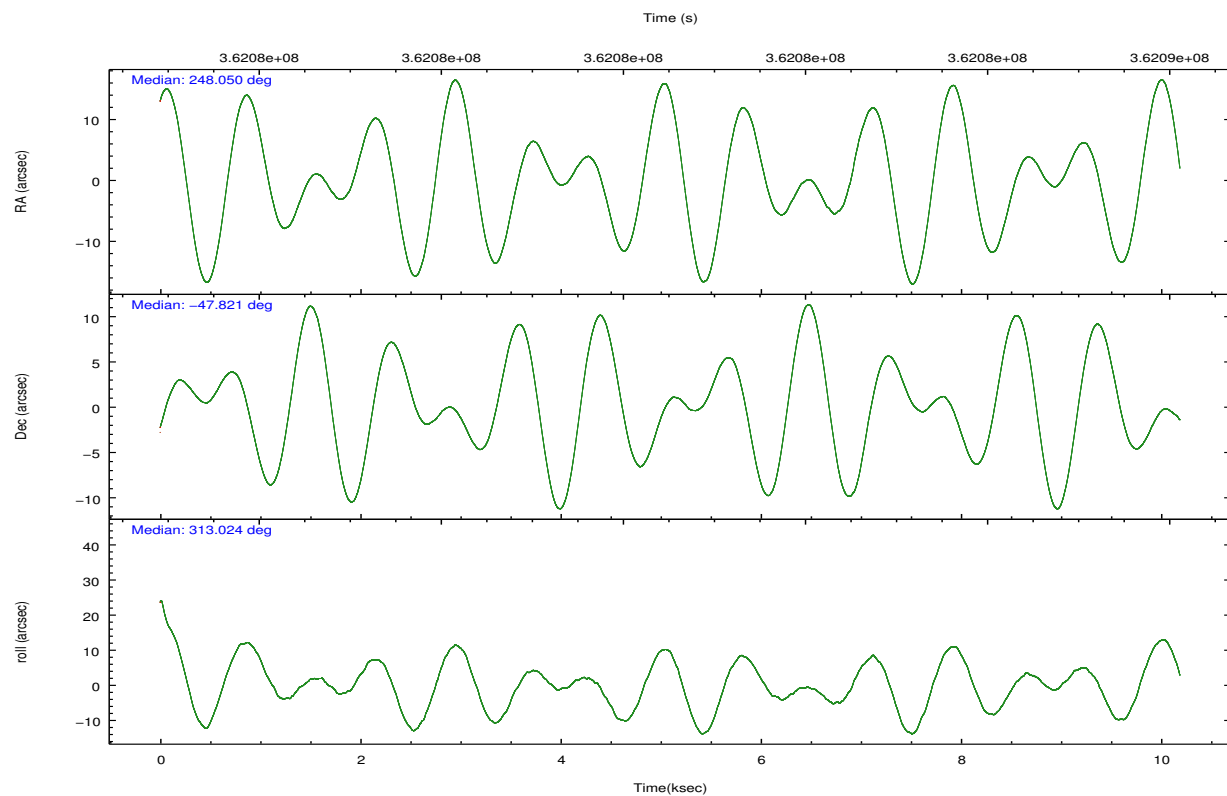
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	83276	74327	84734	78874	84223	77496	grade 0 events	6458	3418	4702	3898	3409	3995
rejected events	68352	65258	74502	69899	75371	39071		7%	4%	5%	4%	4%	5%
rejected %	82%	87%	87%	88%	89%	50%	grade 1 events	452	33	80	69	44	126
								0%	0%	0%	0%	0%	0%
							grade 2 events	3042	1990	2165	1774	1951	8243
								3%	2%	2%	2%	2%	10%
							grade 3 events	1392	951	884	886	916	3619
								1%	1%	1%	1%	1%	4%
							grade 4 events	1313	938	948	878	850	3609
								1%	1%	1%	1%	1%	4%
							grade 5 events	2814	2584	2228	2847	2762	8306
								3%	3%	2%	3%	3%	10%
							grade 6 events	2729	1778	1540	1545	1733	18981
								3%	2%	1%	1%	2%	24%
							grade 7 events	65076	62635	72187	66977	72558	30617
								78%	84%	85%	84%	86%	39%

## 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	248.010415	248.0497176411848	CCD I2 on	Y	Y
[deg] Pointing Dec	-47.813642	-47.82153876298216	CCD I3 on	Y	Y
[deg] Pointing Roll	312.795792	313.0336100262447	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)	362075607.184000	362075224.20176	CCD S5 on	N	N
Observation start date	2009-06-22T16:32:21	2009-06-22T16:27:04	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	362085607.184000	362086032.3148	On-chip summing requested	N	N
Observation end date	2009-06-22T19:19:01	2009-06-22T19:27:12	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



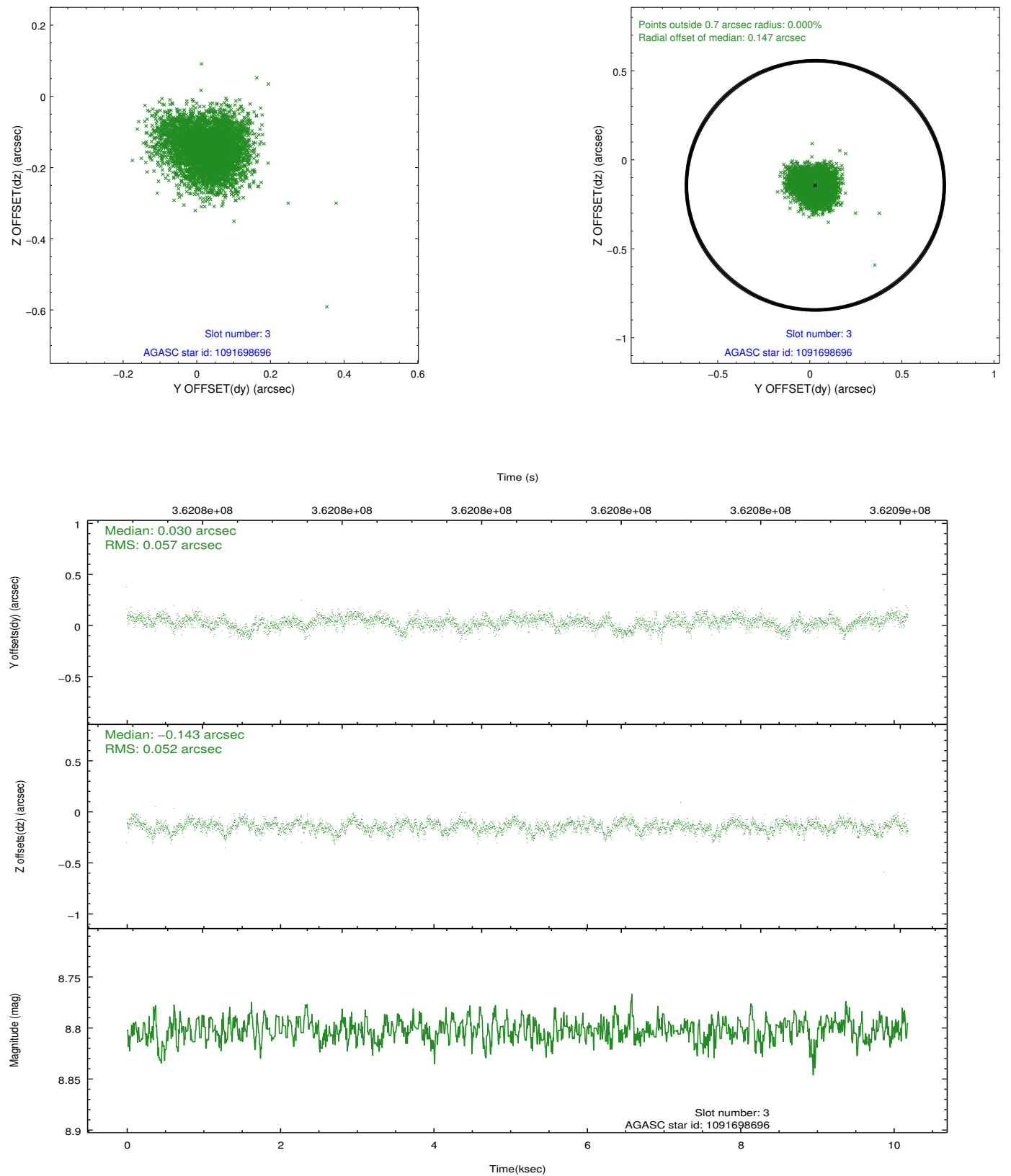


### Slot Statistics

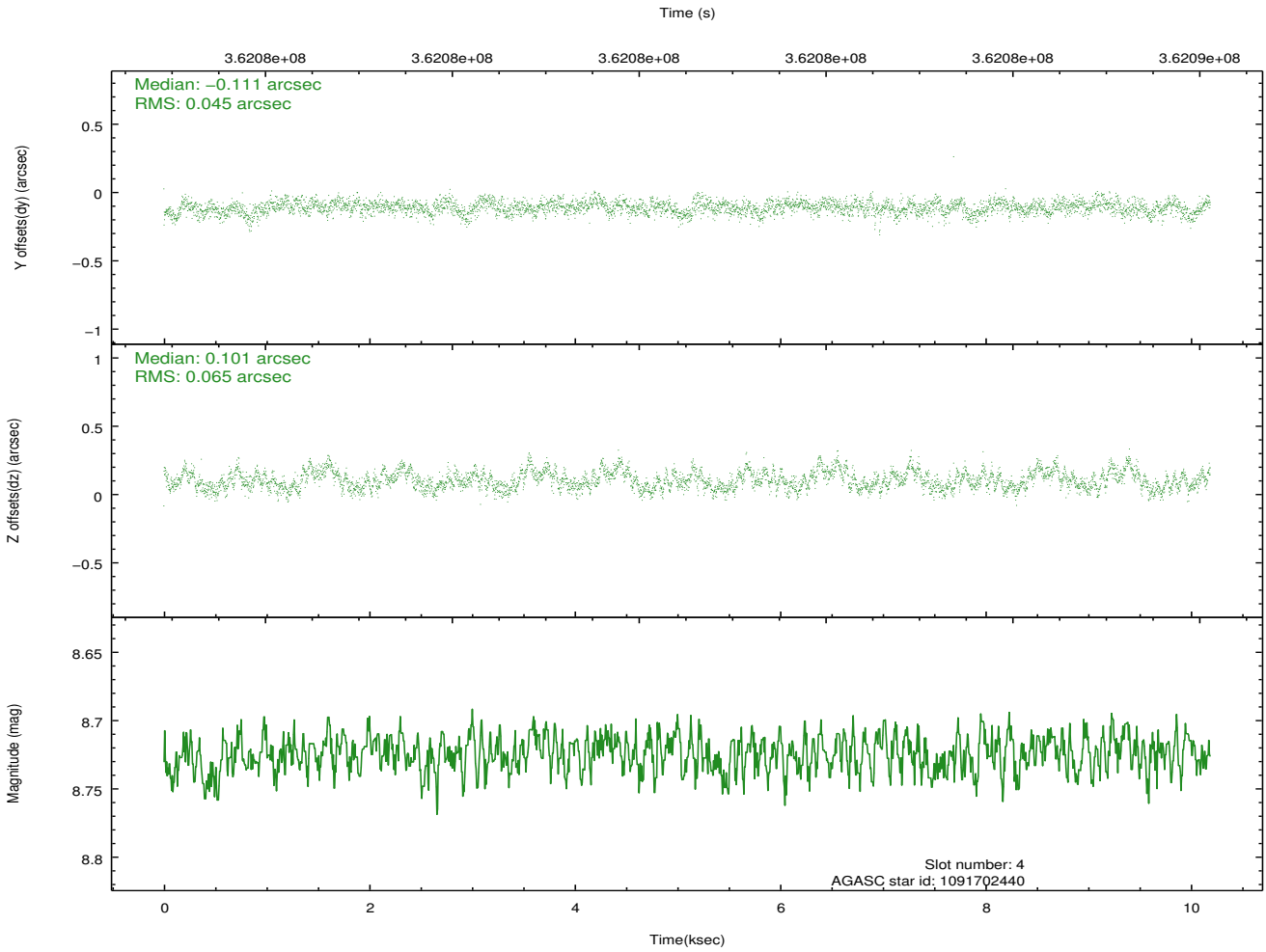
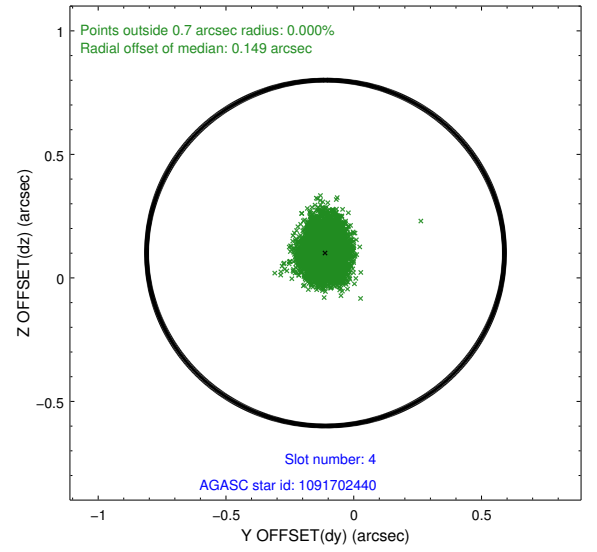
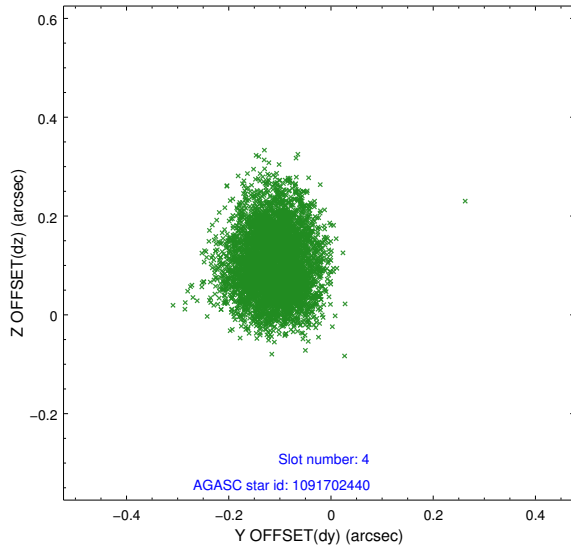
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.04	2485	0.033	-0.015	0.007	0.019	0.000000	0.000000	922.86	-839.53
1	FID	ACIS-I-5	7.03	2486	-0.199	0.038	0.007	0.014	0.000000	0.000000	-1825.19	1057.77
2	FID	ACIS-I-6	7.04	2486	0.075	0.047	0.007	0.013	0.000000	0.000000	387.89	1702.86
3	GUIDE	1091698696	8.80	4969	0.030	-0.143	0.082	0.135	248.529134	-48.079711	1553.96	261.47
4	GUIDE	1091702440	8.72	4971	-0.111	0.101	0.085	0.137	248.295809	-47.683380	127.22	824.96
5	GUIDE	1091705224	9.20	4968	-0.003	-0.092	0.096	0.154	248.613211	-47.940846	1328.09	751.59
6	GUIDE	1091706216	9.02	4965	-0.036	0.124	0.099	0.165	248.520013	-47.617493	325.34	1384.42
7	GUIDE	1091727064	9.18	4966	0.122	0.018	0.099	0.165	248.318217	-48.437445	2149.10	-986.91

## 2.4 Star Slots

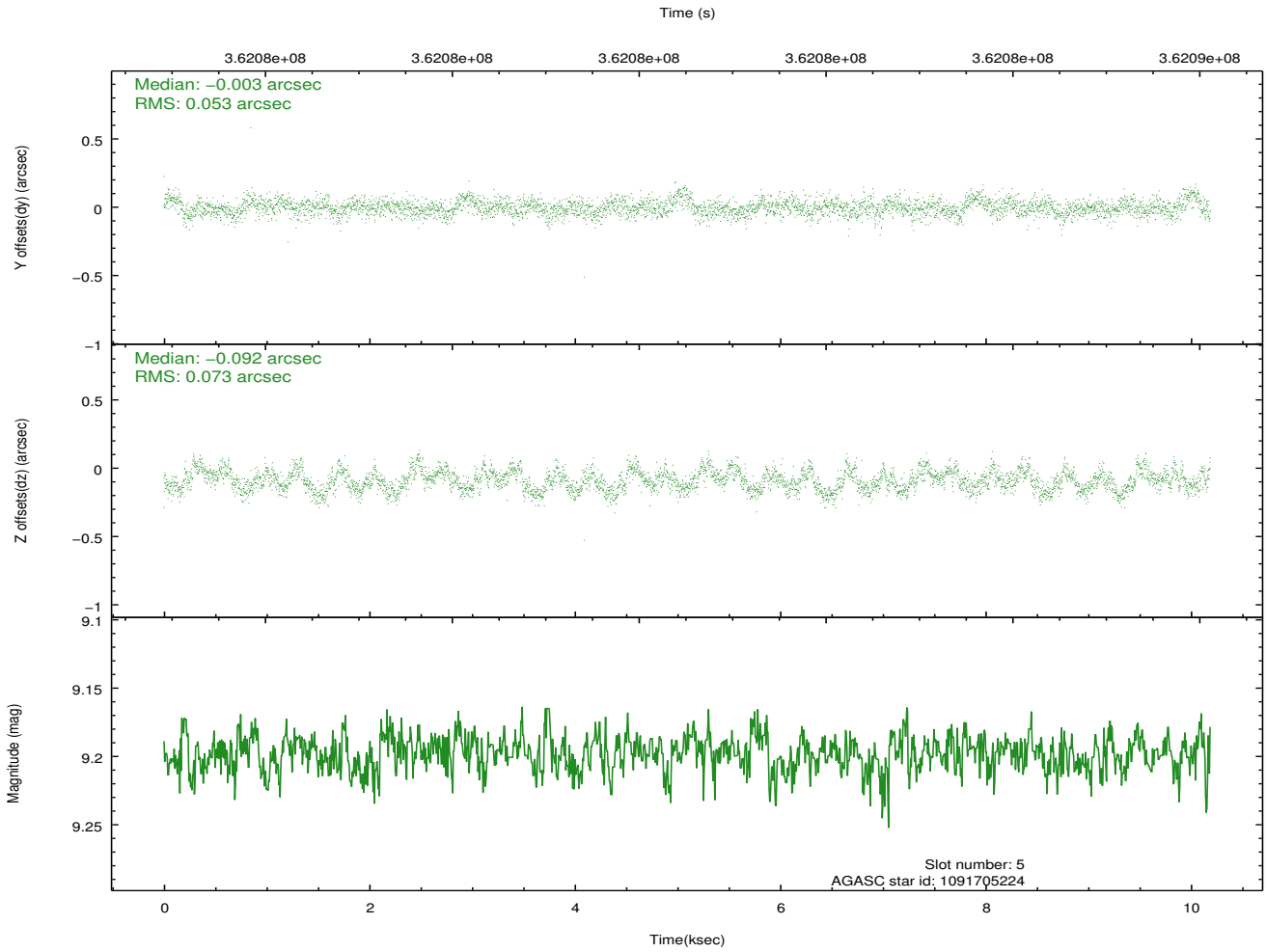
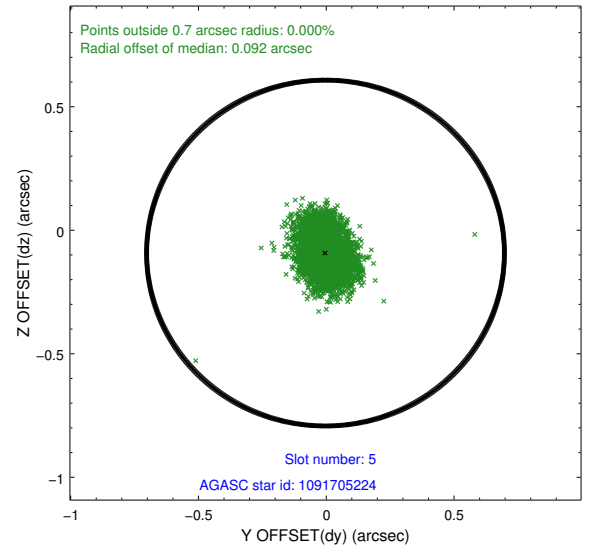
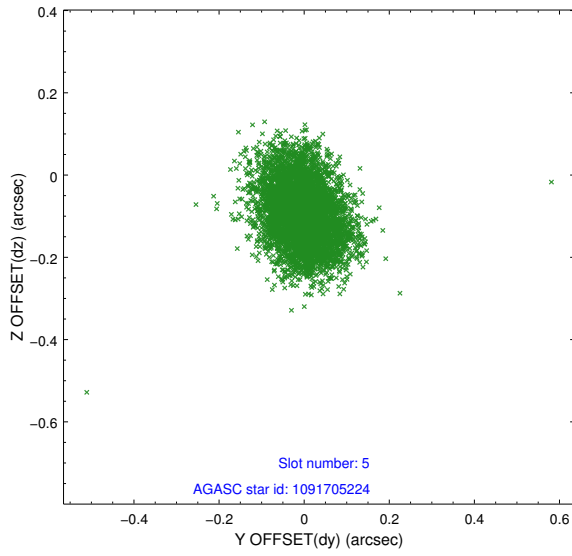
### 2.4.1 Slot 3



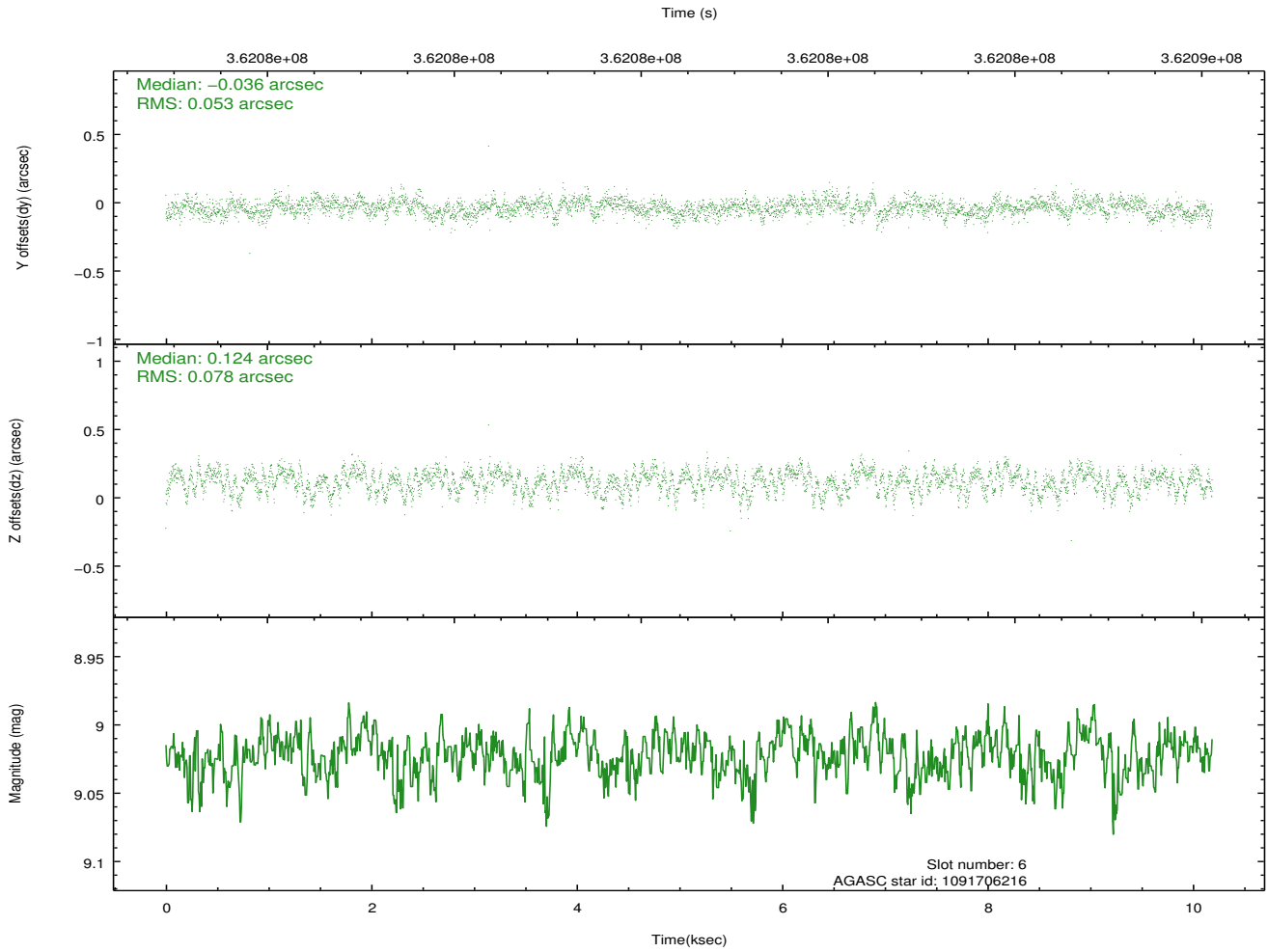
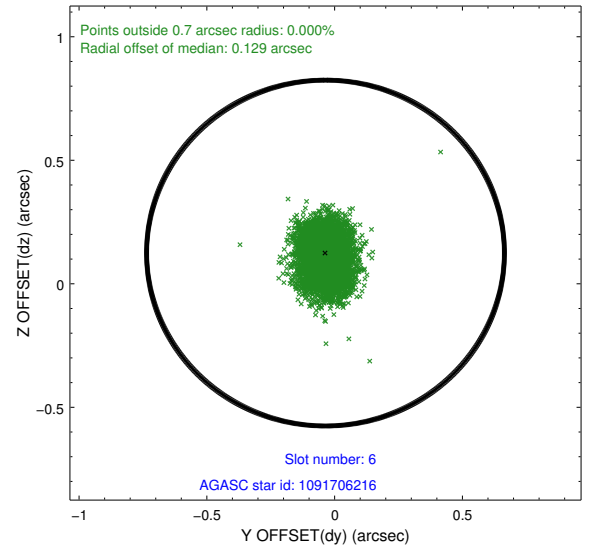
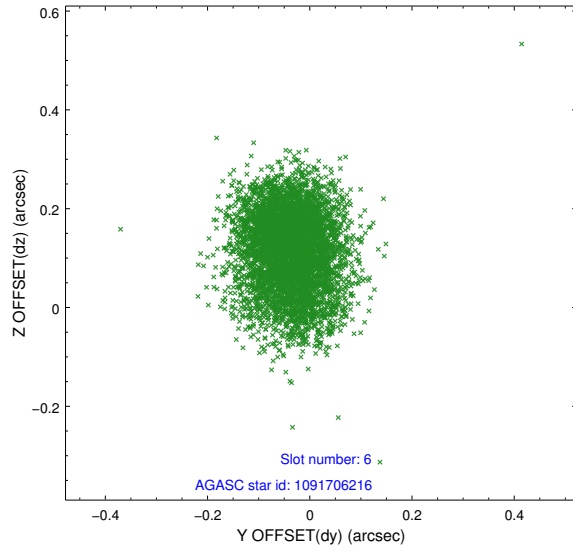
## 2.4.2 Slot 4



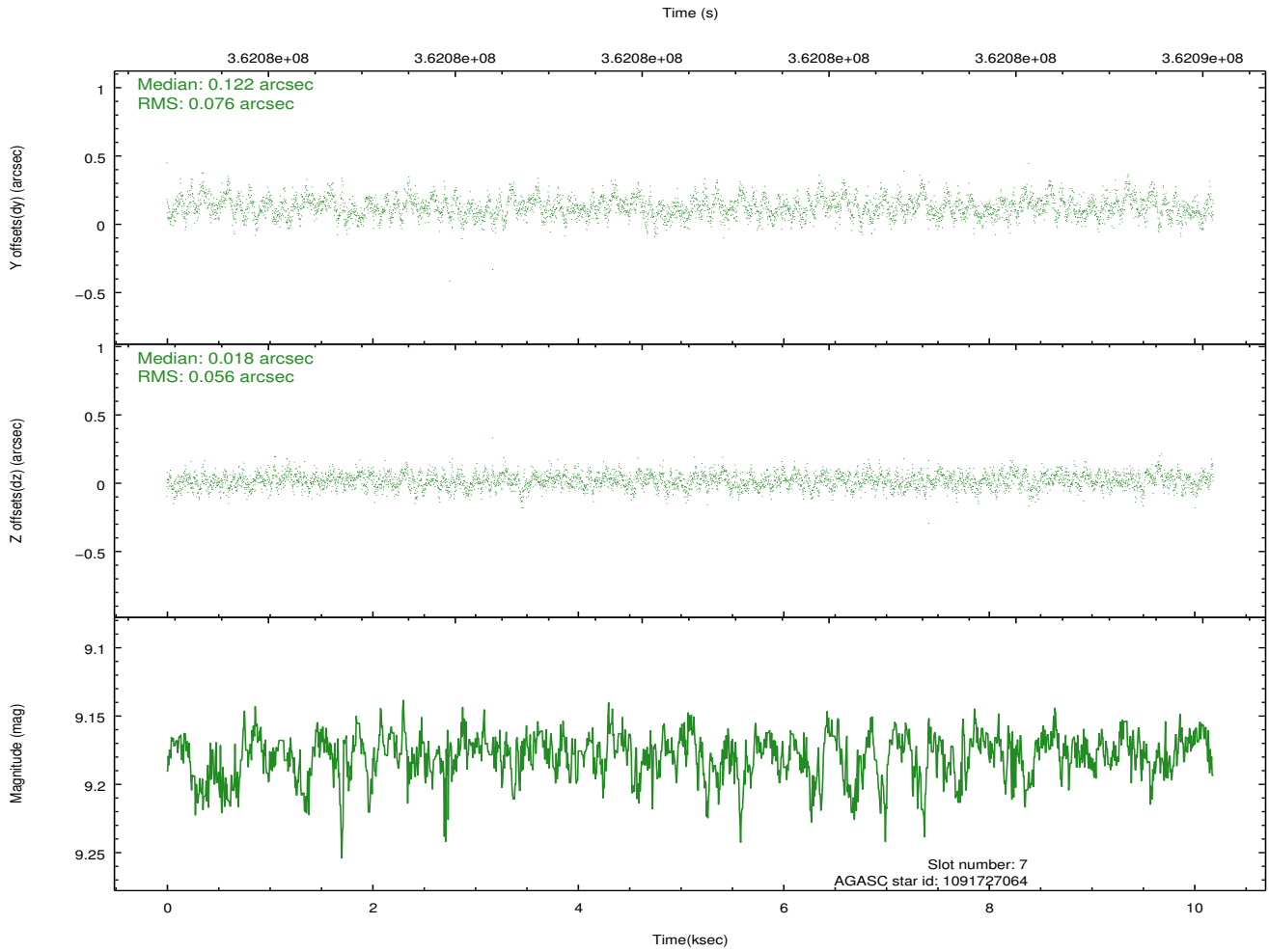
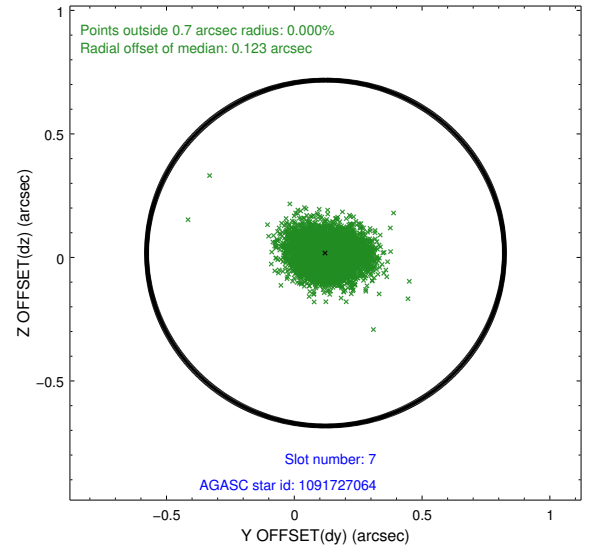
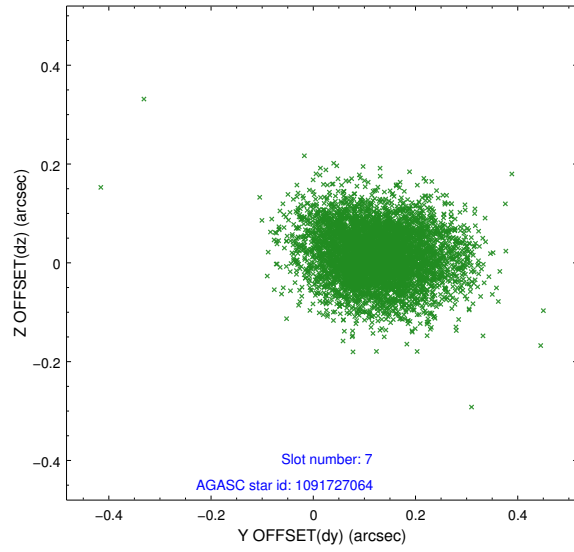
### 2.4.3 Slot 5



## 2.4.4 Slot 6

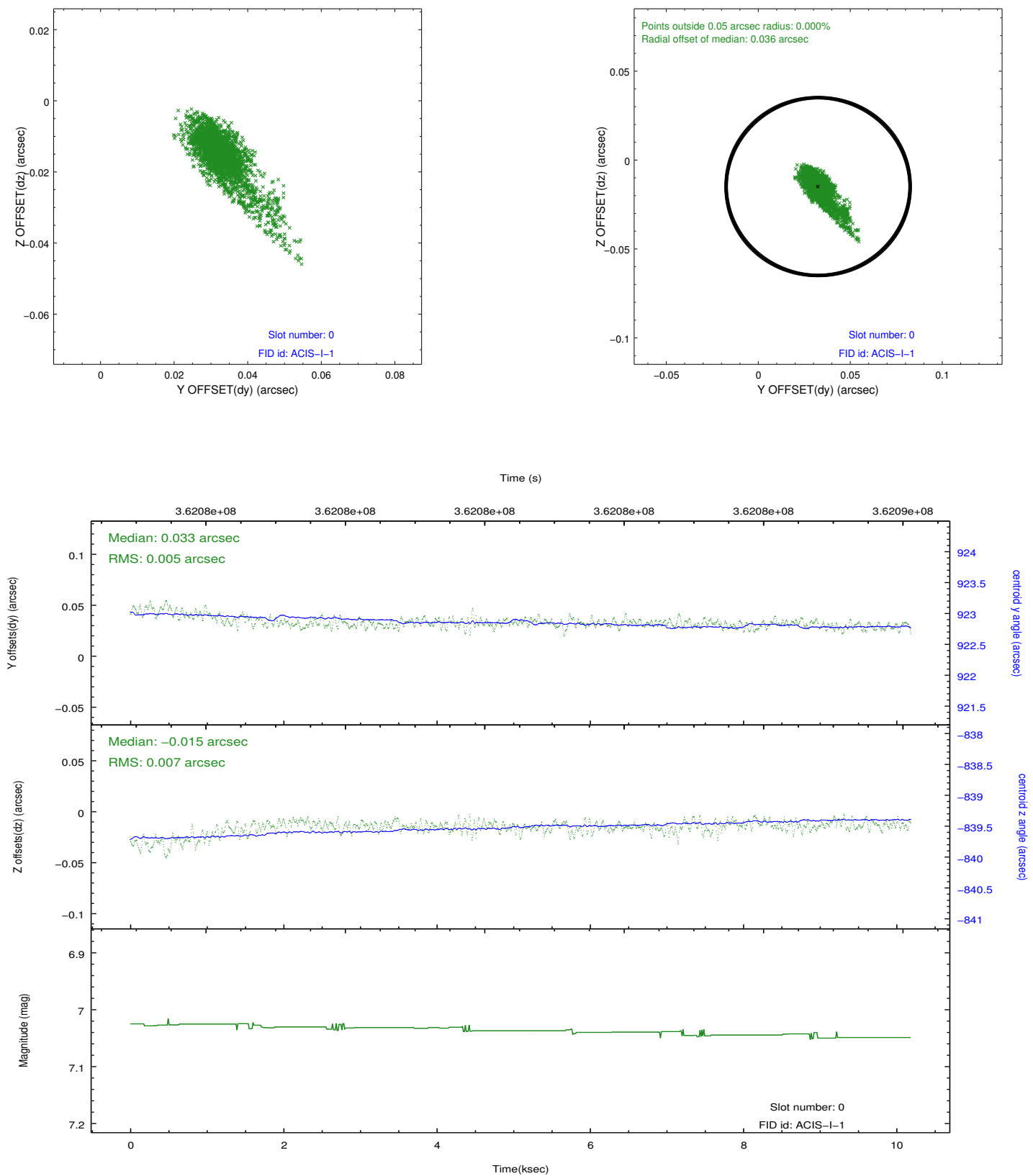


## 2.4.5 Slot 7

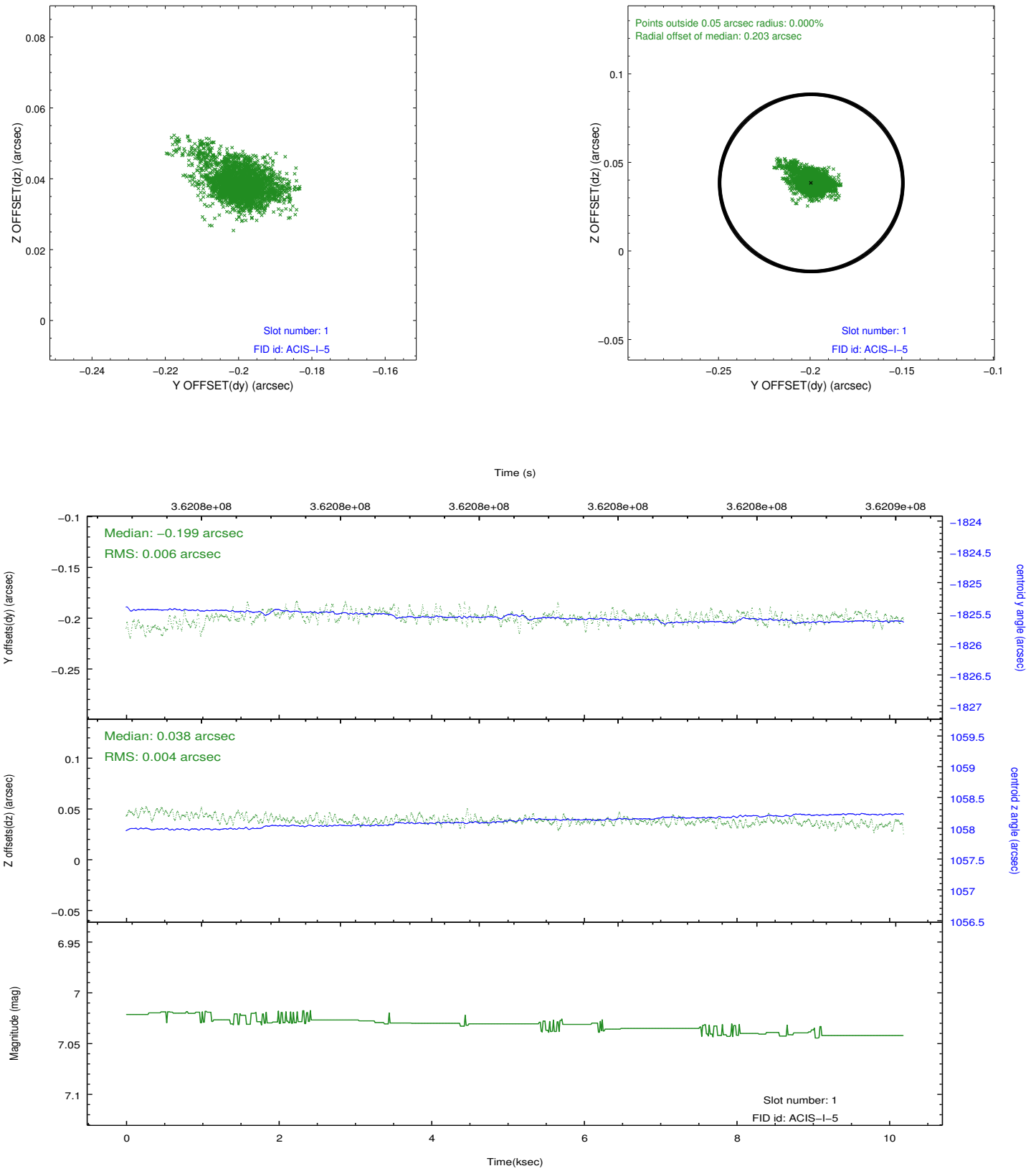


## 2.5 FID Slots

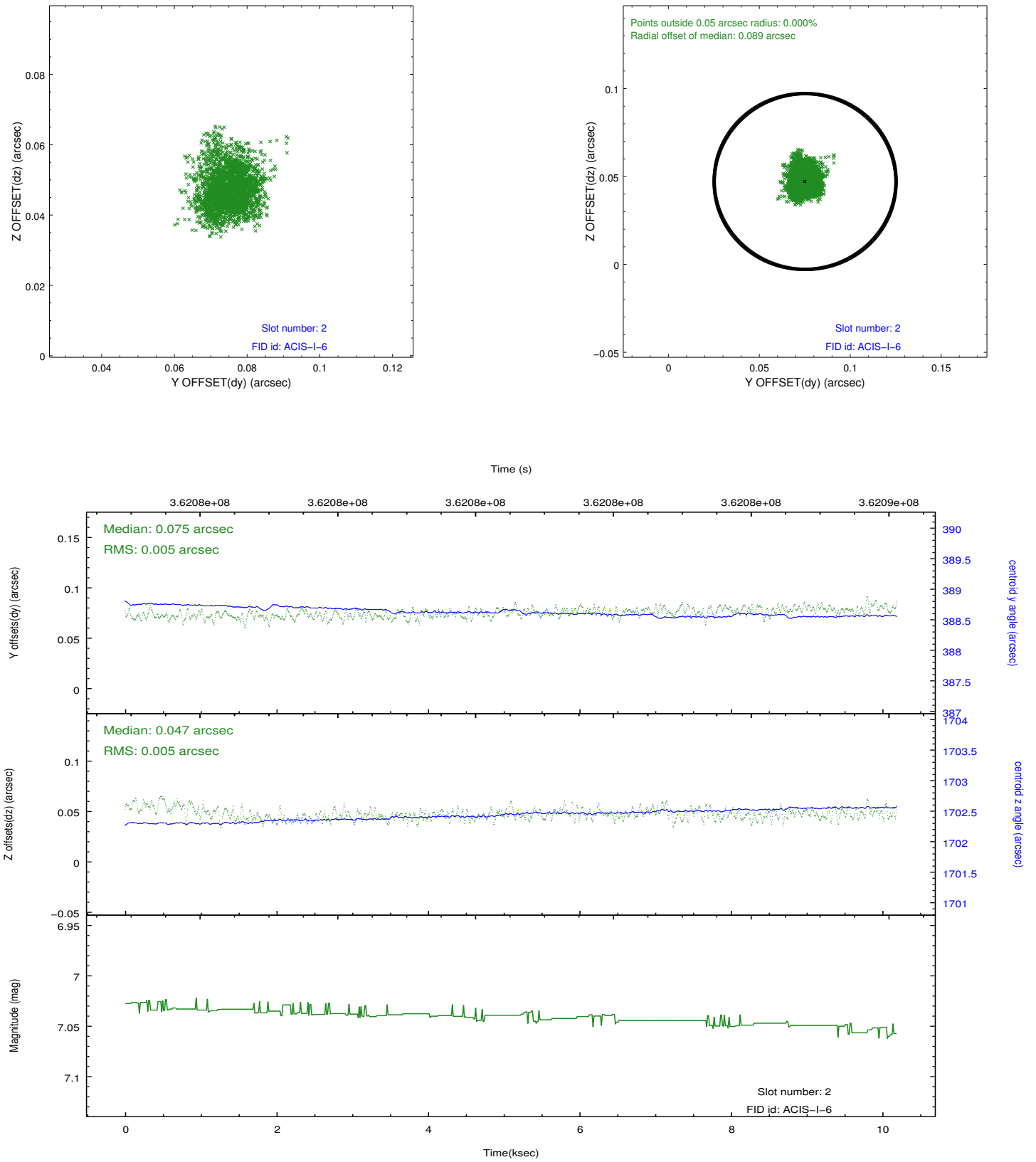
### 2.5.1 Slot 0



## 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)	2012.06.14
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.75359996

## A.2 Comments

A spatial region of the original bias map for CCD = 0 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 = 0 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:  
(248.13635, -47.96147), (248.14008, -47.95915), (248.09073, -47.92380), (248.08867, -47.92732)