

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 10909 - L2 Version 2  
Chandra X-Ray Center

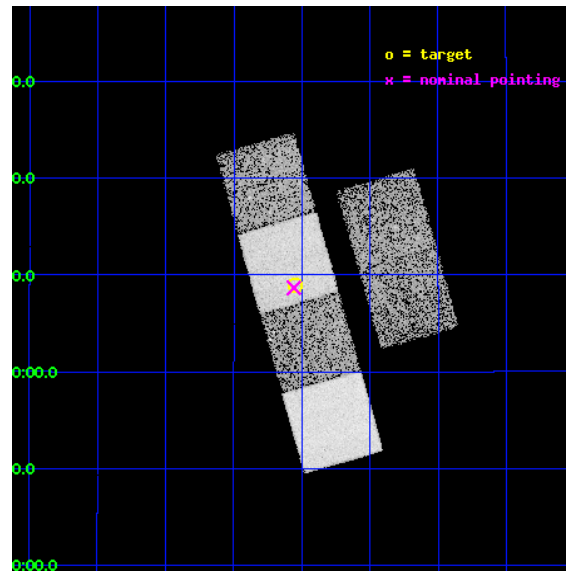
L2 Processing Date : Jun 6 2012

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# 1 Front

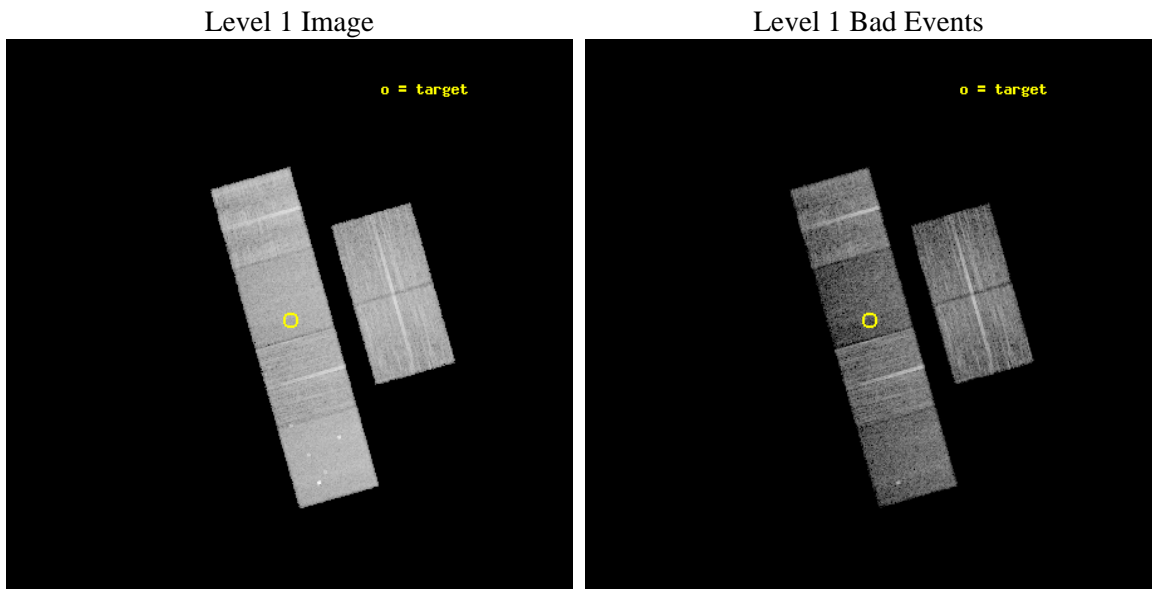
seq_num	501165	Sequence number
obs_id	10909	Observation id
title	Long GRB Jet Breaks	Proposal title
observer	Professor Gordon Garmire	Principal investigator
object	GRB 090423	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	148.8883	Observer's specified target RA [deg]
dec_targ	18.14937	Observer's specified target Dec [deg]
ra_nom	148.88970081143	Nominal RA [deg]
dec_nom	18.144690936738	Nominal Dec [deg]
roll_nom	254.15619225049	Nominal Roll [deg]
revision	2	Processing version of data
ontime	9167.9999659061	Sum of GTIs [s]
livetime	9051.909230031	Livetime [s]
ontime2	9167.9999659061	Sum of GTIs [s]
ontime3	9167.9999659061	Sum of GTIs [s]
ontime5	9167.9999659061	Sum of GTIs [s]
ontime6	9158.2770547867	Sum of GTIs [s]
ontime7	9167.9999659061	Sum of GTIs [s]
ontime8	9167.9999659061	Sum of GTIs [s]
l2events	107384	Number of level 2 events



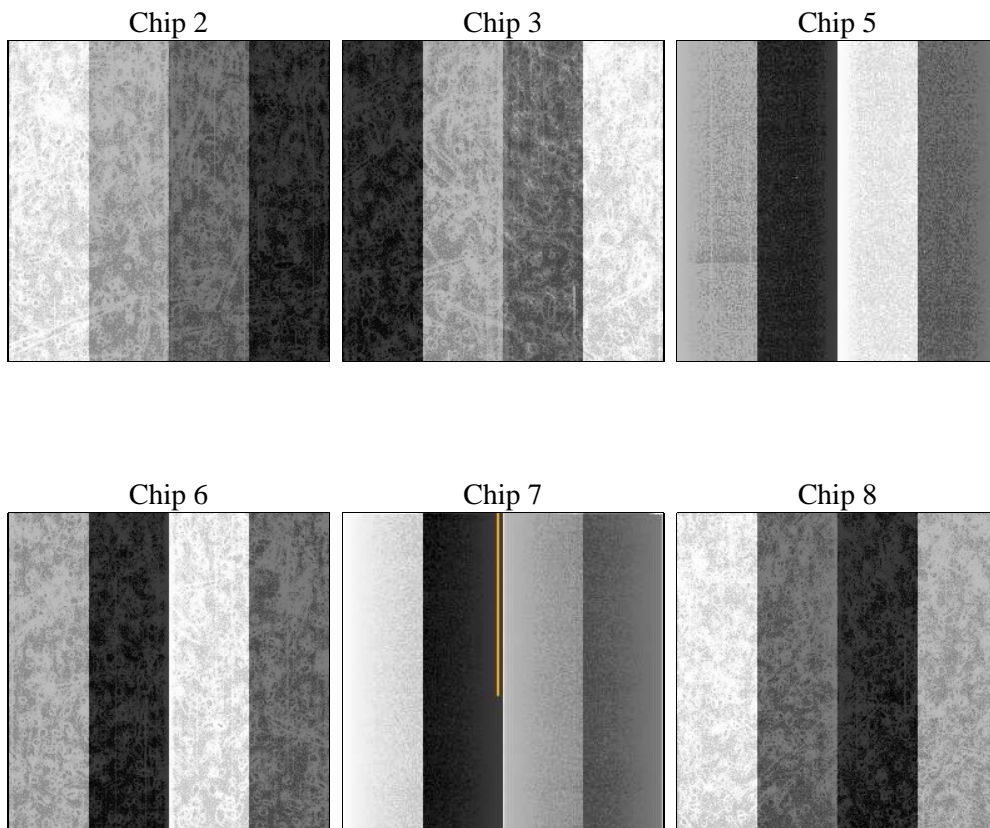
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	9000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	9167.9999659061	Sum of GTIs [s]
caldsver	4.4.10	&#160	ontime2	9167.9999659061	Sum of GTIs [s]
date	2012-06-07T00:10:09	Date and time of file creation	ontime3	9167.9999659061	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	9167.9999659061	Sum of GTIs [s]
			ontime6	9158.2770547867	Sum of GTIs [s]
			ontime7	9167.9999659061	Sum of GTIs [s]
			ontime8	9167.9999659061	Sum of GTIs [s]
			l1events	514278	Number of level 1 events

### 2.1.4 Events

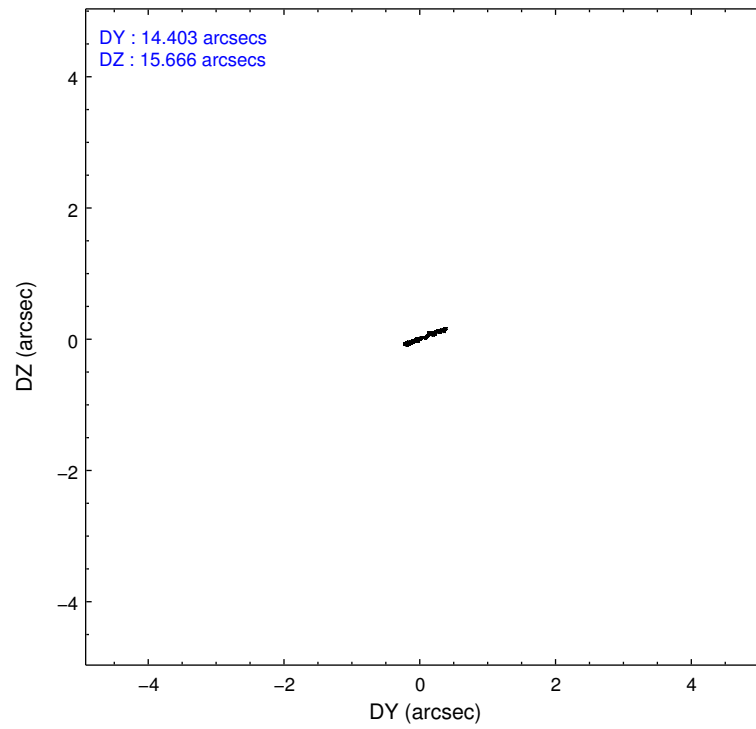
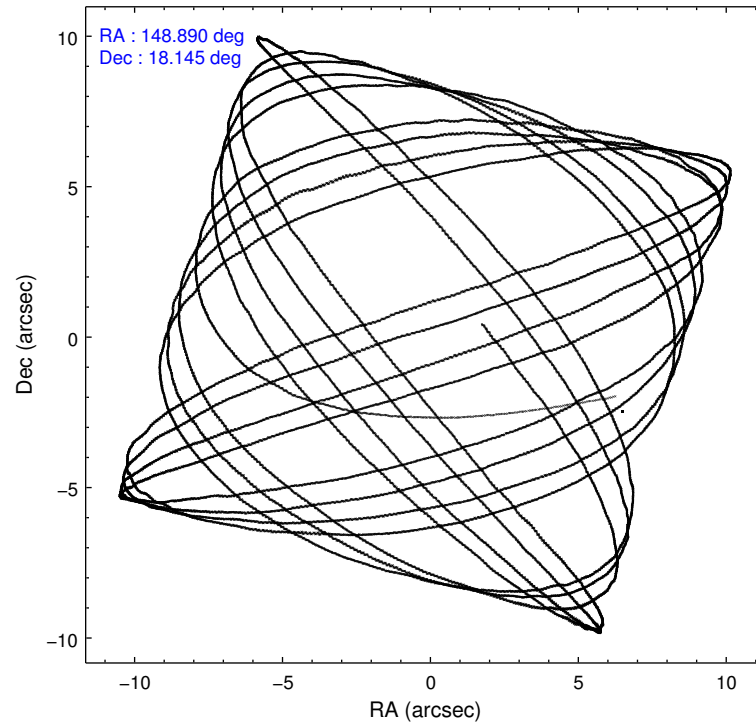
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	85390	75850	101425	77917	76210	97486	grade 0 events	2825	2647	5865	3020	3784	6989
rejected events	78027	68991	50348	70215	40720	73563		3%	3%	5%	3%	4%	7%
rejected %	91%	90%	49%	90%	53%	75%	grade 1 events	52	44	270	46	136	68
								0%	0%	0%	0%	0%	0%
							grade 2 events	1942	1620	16635	1757	7961	5882
								2%	2%	16%	2%	10%	6%
							grade 3 events	803	819	2298	883	3461	2824
								0%	1%	2%	1%	4%	2%
							grade 4 events	825	777	2190	816	3420	2632
								0%	1%	2%	1%	4%	2%
							grade 5 events	2302	2683	7971	2759	8175	4151
								2%	3%	7%	3%	10%	4%
							grade 6 events	1389	1386	26966	1666	18863	6725
								1%	1%	26%	2%	24%	6%
							grade 7 events	75252	65874	39230	66970	30410	68215
								88%	86%	38%	85%	39%	69%

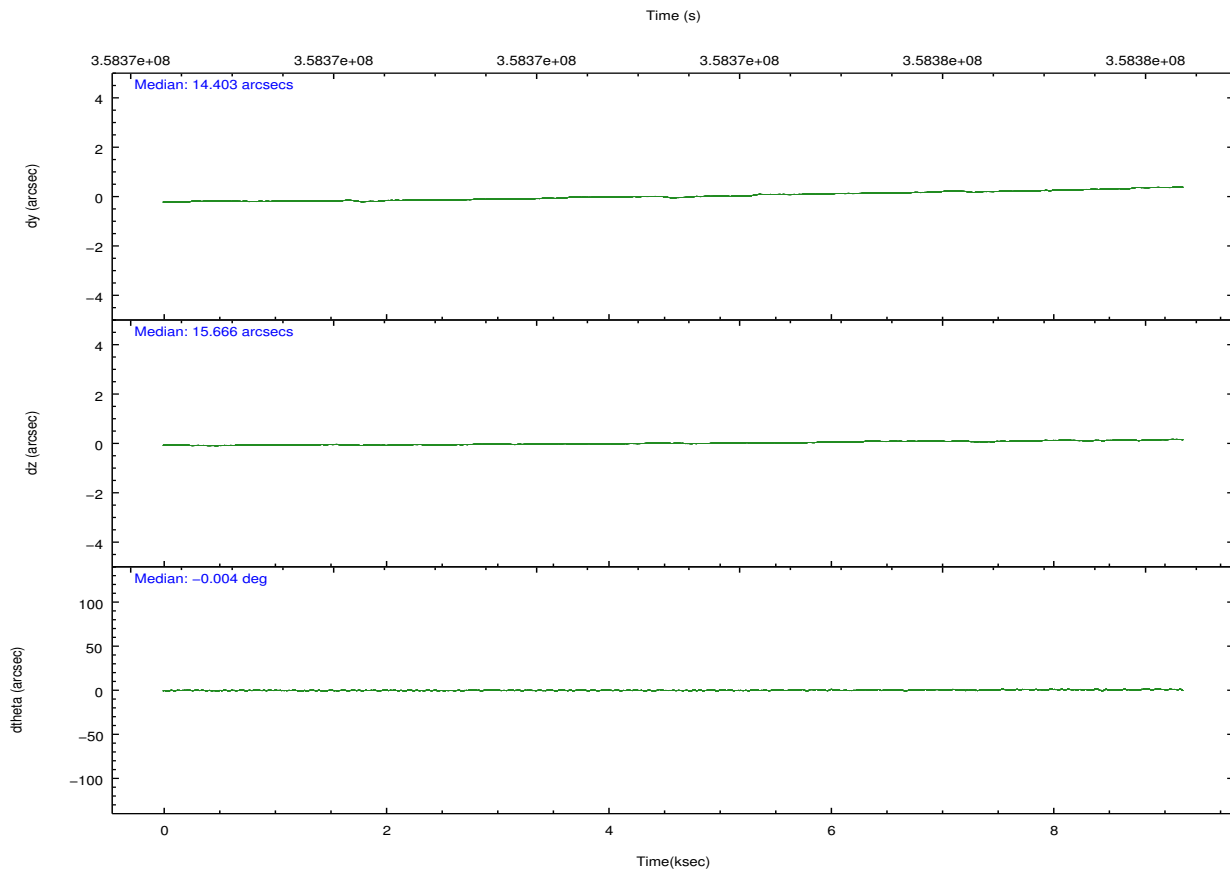
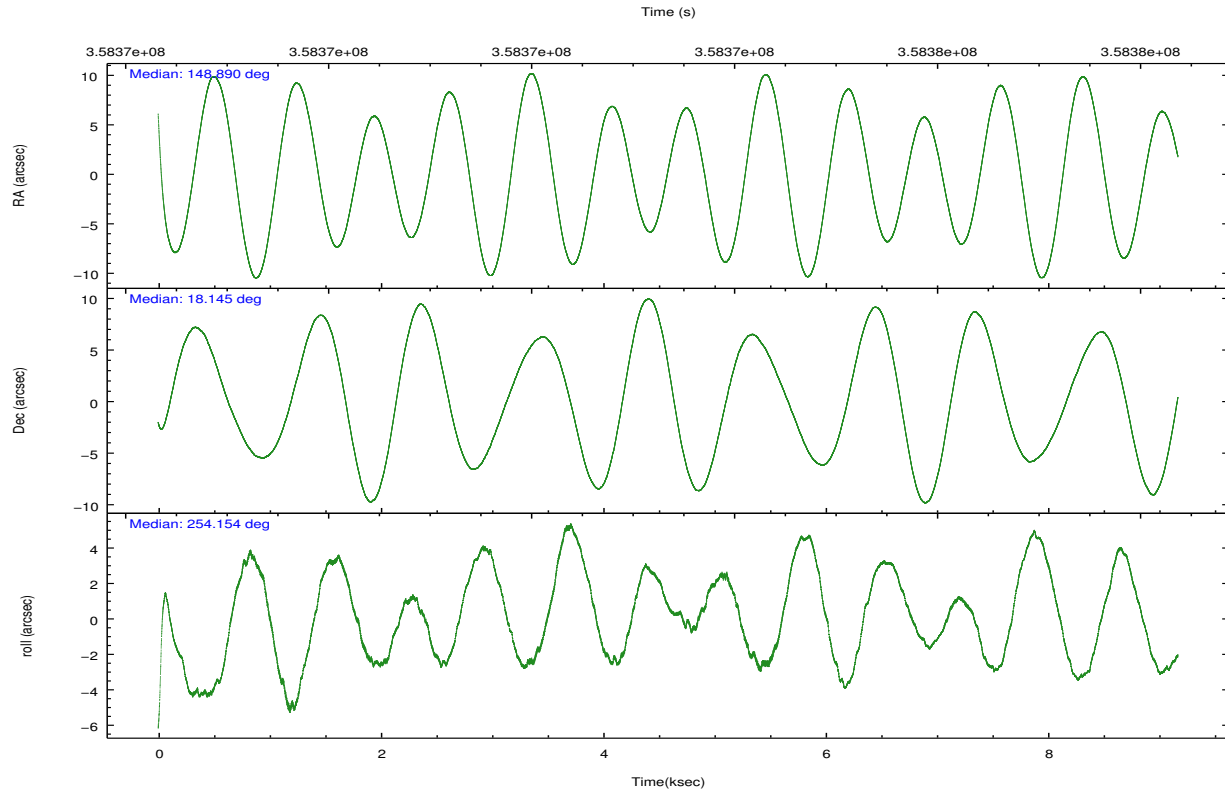


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	148.882272	148.8897008114319	CCD I2 on	O2	Y
[deg] Pointing Dec	18.171126	18.14469093673817	CCD I3 on	O3	Y
[deg] Pointing Roll	254.001886	254.1561922504852	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O5	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	O4	Y
[s] Observation start time (MET)	358368930.184000	358367609.39192	CCD S5 on	N	N
Observation start date	2009-05-10T18:54:24	2009-05-10T18:33:29	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	358377930.184000	358378703.47997	On-chip summing requested	N	N
Observation end date	2009-05-10T21:24:24	2009-05-10T21:38:23	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



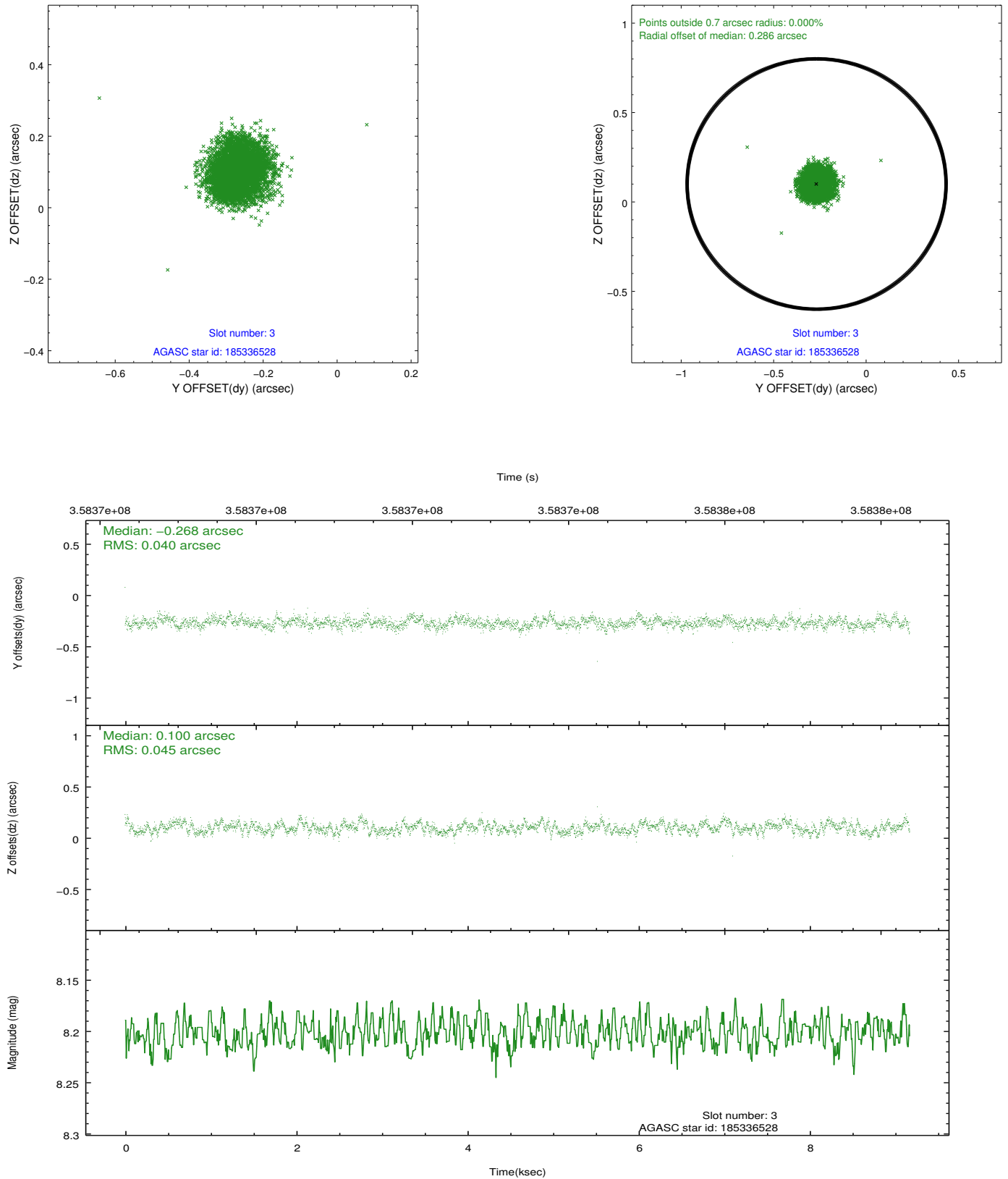


### Slot Statistics

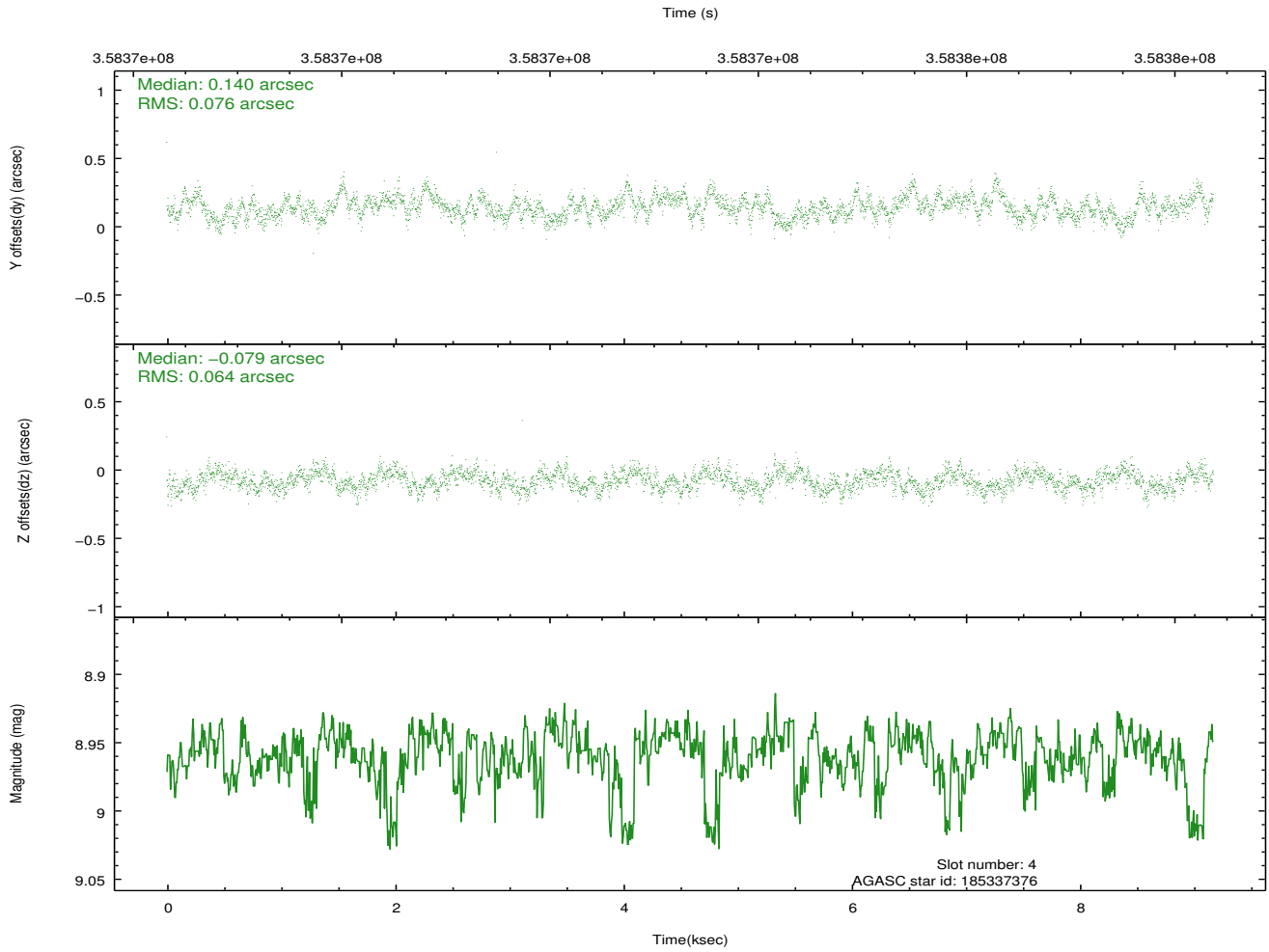
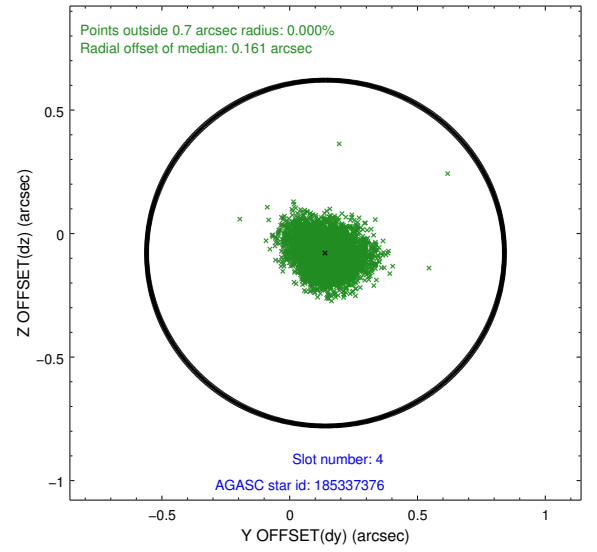
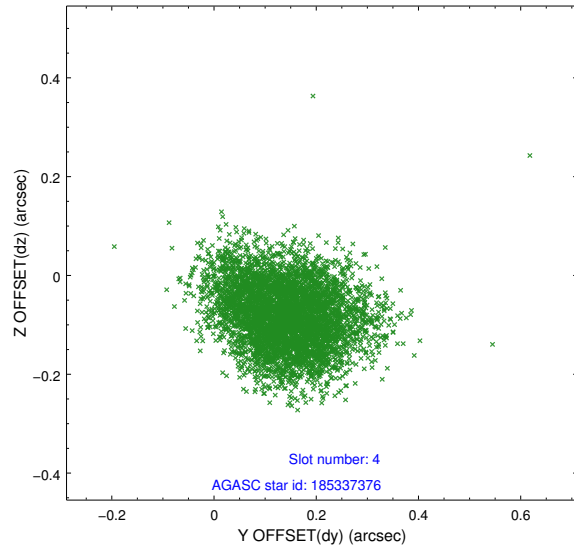
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.90	2237	-0.075	-0.008	0.008	0.013	0.000000	0.000000	-767.44	-1737.09
1	FID	ACIS-S-4	6.99	2237	0.191	0.039	0.007	0.011	0.000000	0.000000	2145.81	170.84
2	FID	ACIS-S-5	7.02	2237	-0.147	-0.022	0.007	0.013	0.000000	0.000000	-1819.61	165.10
3	GUIDE	185336528	8.20	4469	-0.268	0.100	0.065	0.101	148.892720	18.821206	-2258.91	-610.33
4	GUIDE	185337376	8.96	4466	0.140	-0.079	0.105	0.170	148.106056	17.934285	1547.21	-2322.01
5	GUIDE	185337696	8.62	4473	-0.270	-0.136	0.089	0.142	148.432118	18.944409	-2254.93	-2241.82
6	GUIDE	185339440	8.60	4475	0.128	0.100	0.064	0.102	148.983258	17.541515	2083.55	957.76
7	GUIDE	185342864	9.39	4470	0.269	0.019	0.142	0.217	148.362201	17.656961	2269.72	-1204.91

## 2.4 Star Slots

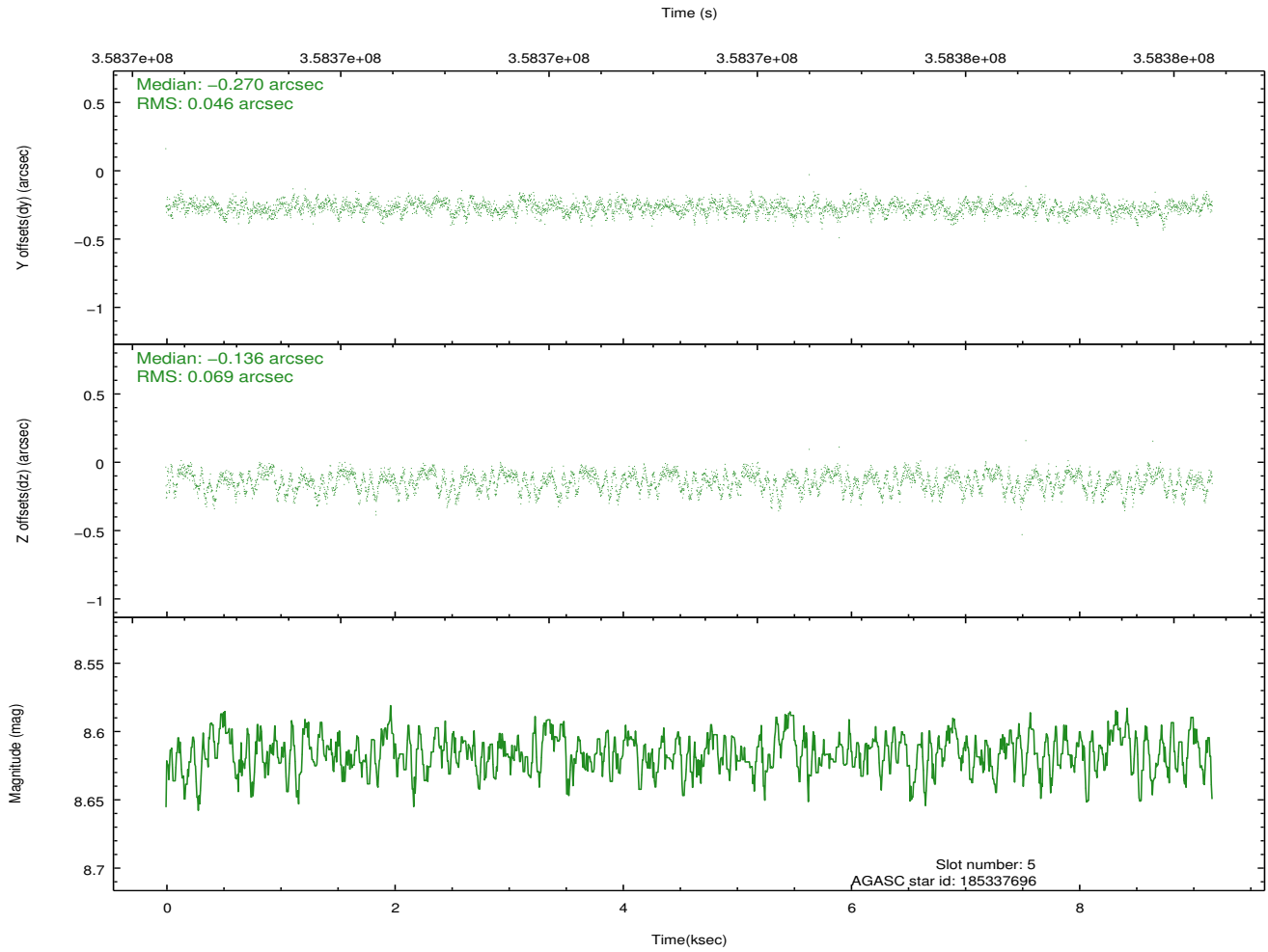
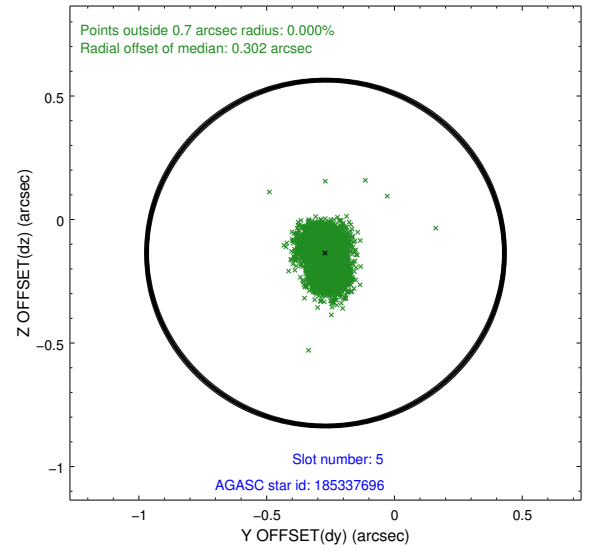
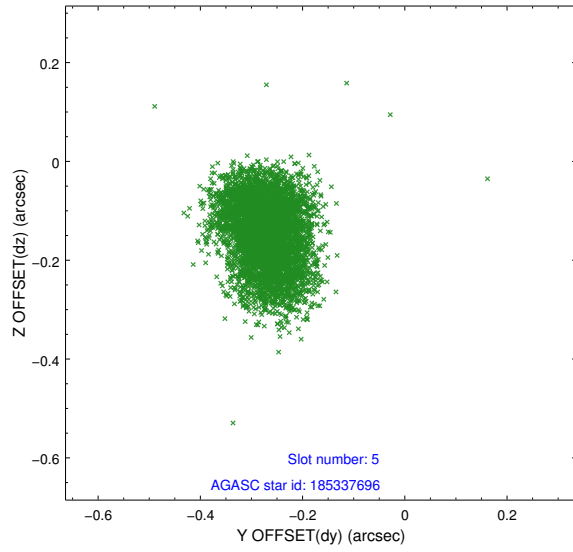
### 2.4.1 Slot 3



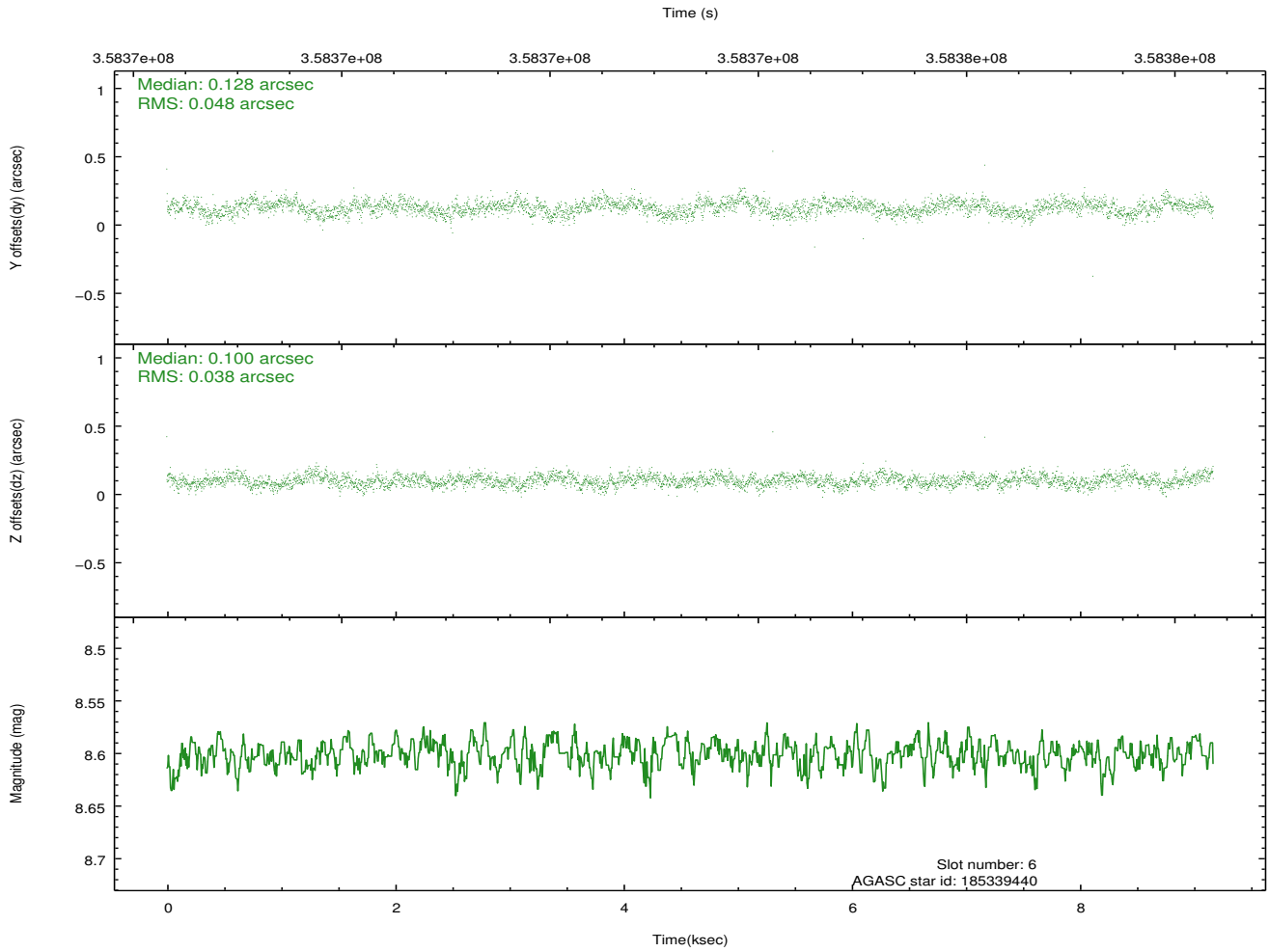
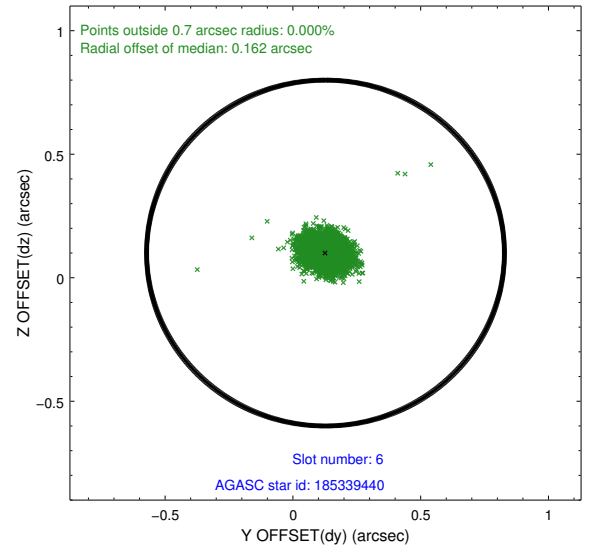
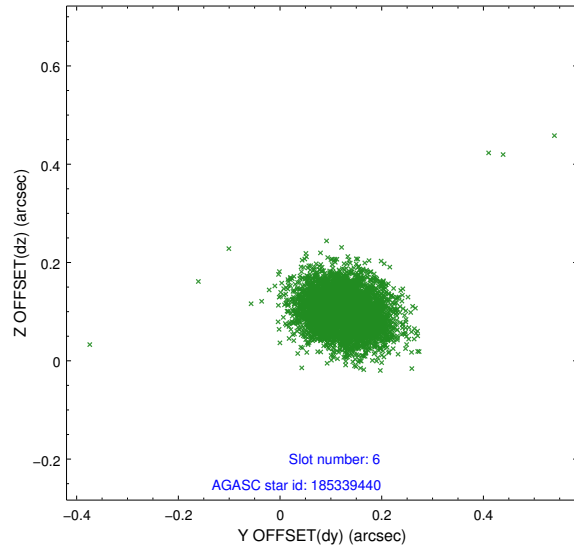
## 2.4.2 Slot 4



### 2.4.3 Slot 5

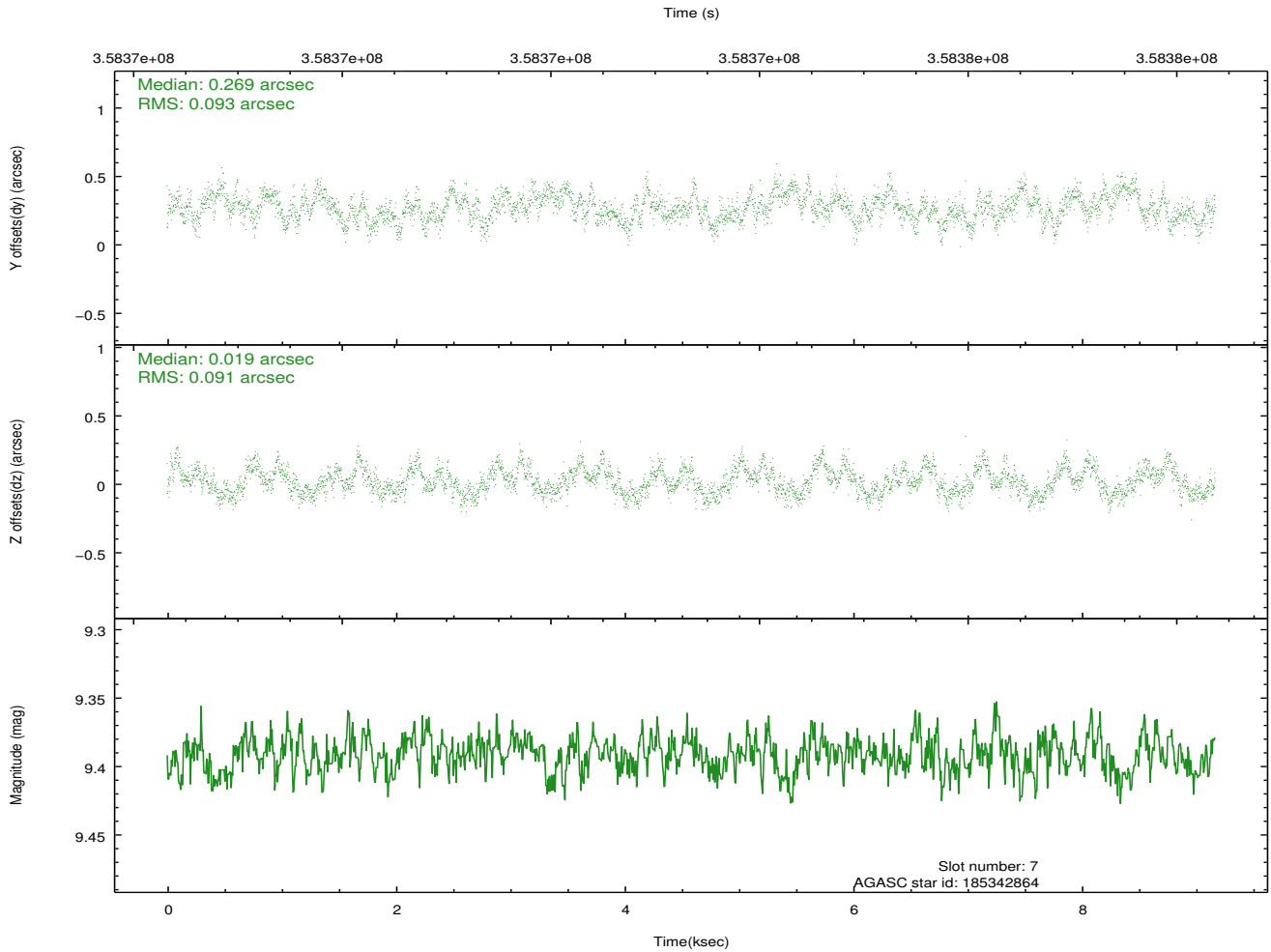
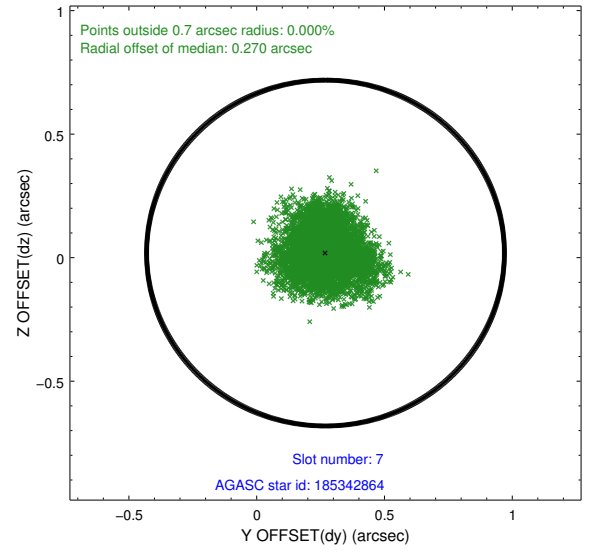
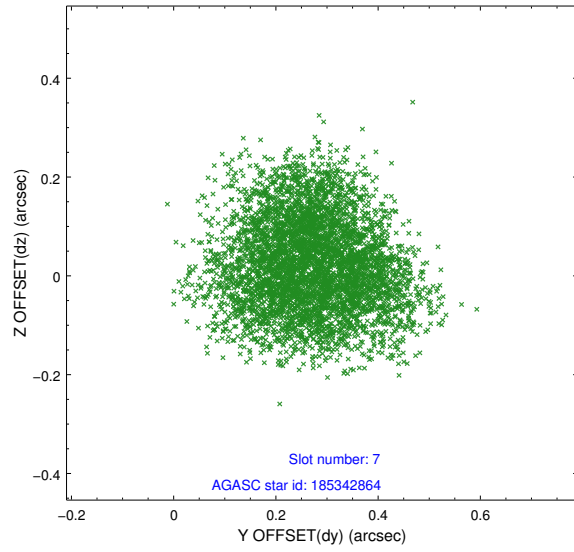


## 2.4.4 Slot 6



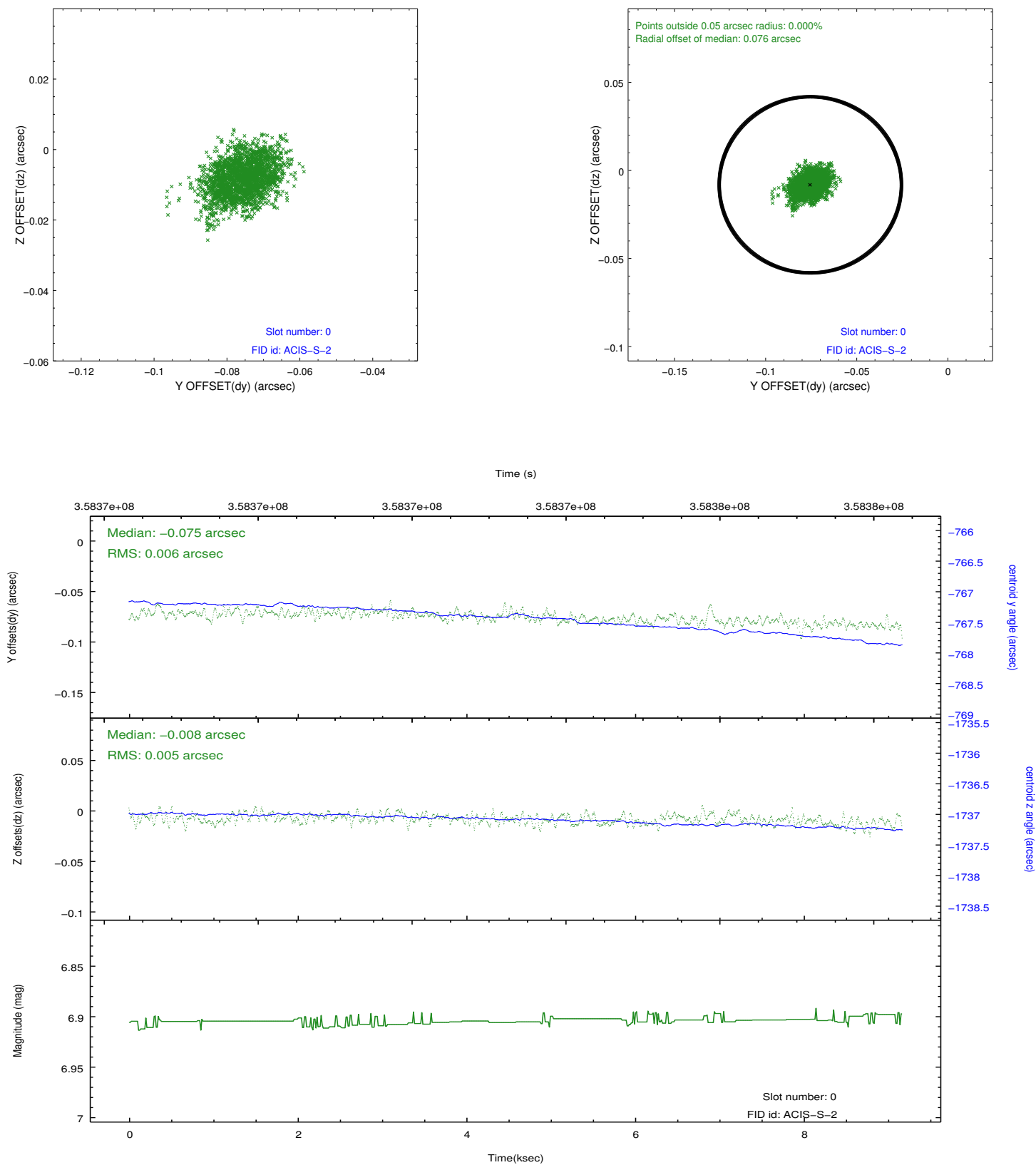


## 2.4.5 Slot 7

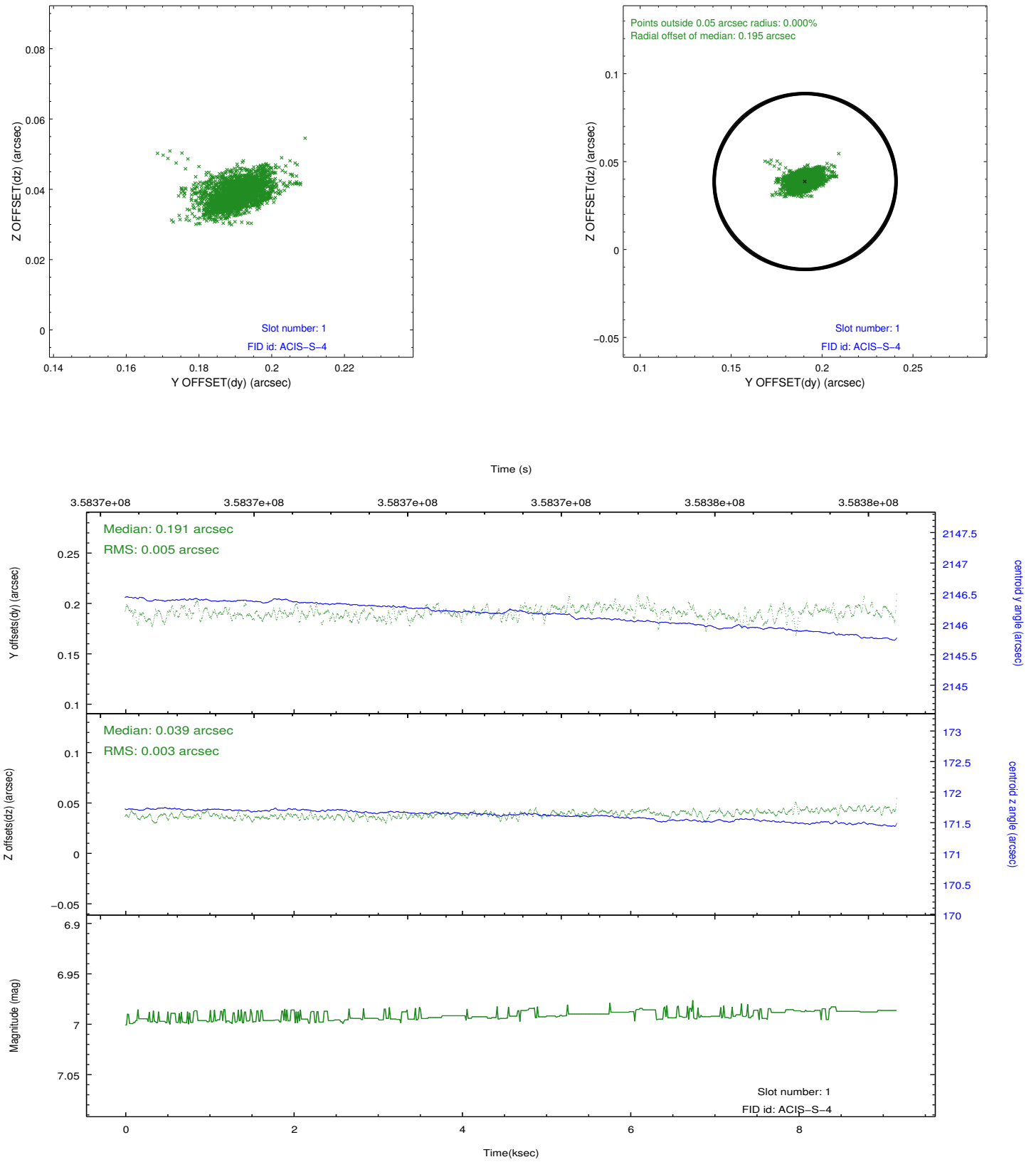


## 2.5 FID Slots

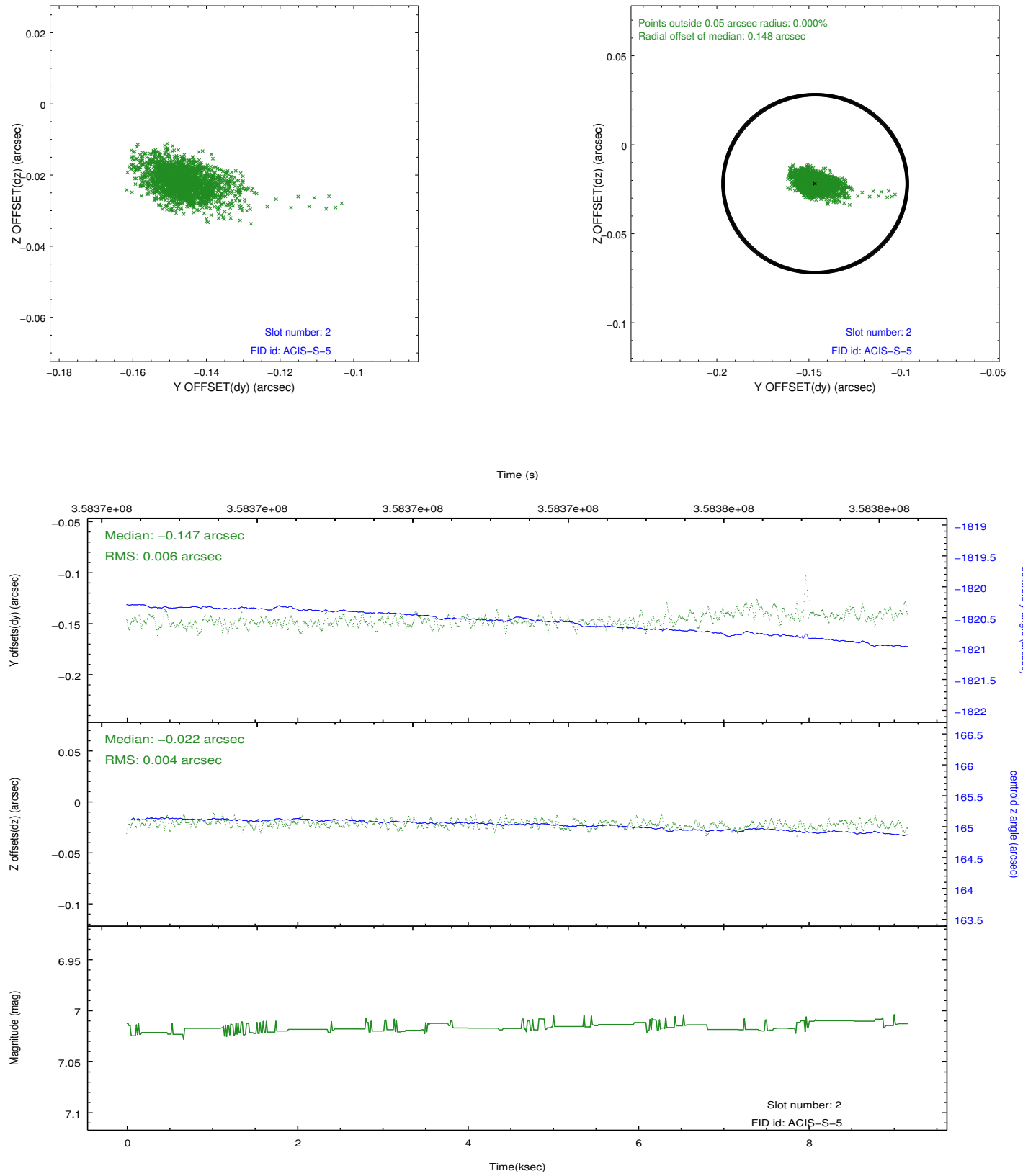
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2012.06.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.16799996

### A.2 Comments