

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8125 - L2 Version 2  
Chandra X-Ray Center

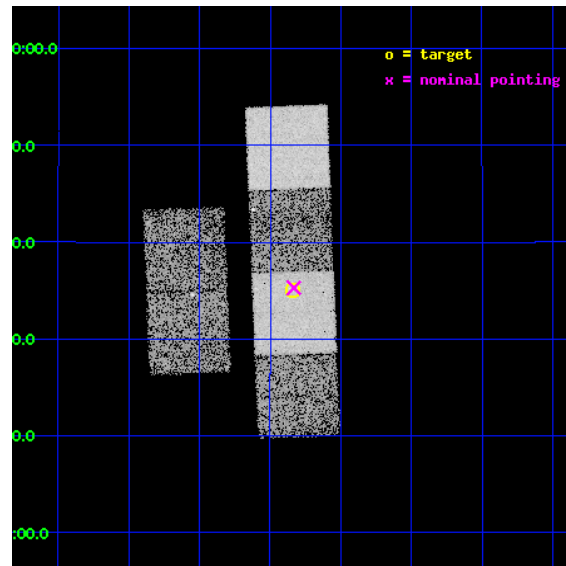
L2 Processing Date : May 10 2012

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# 1 Front

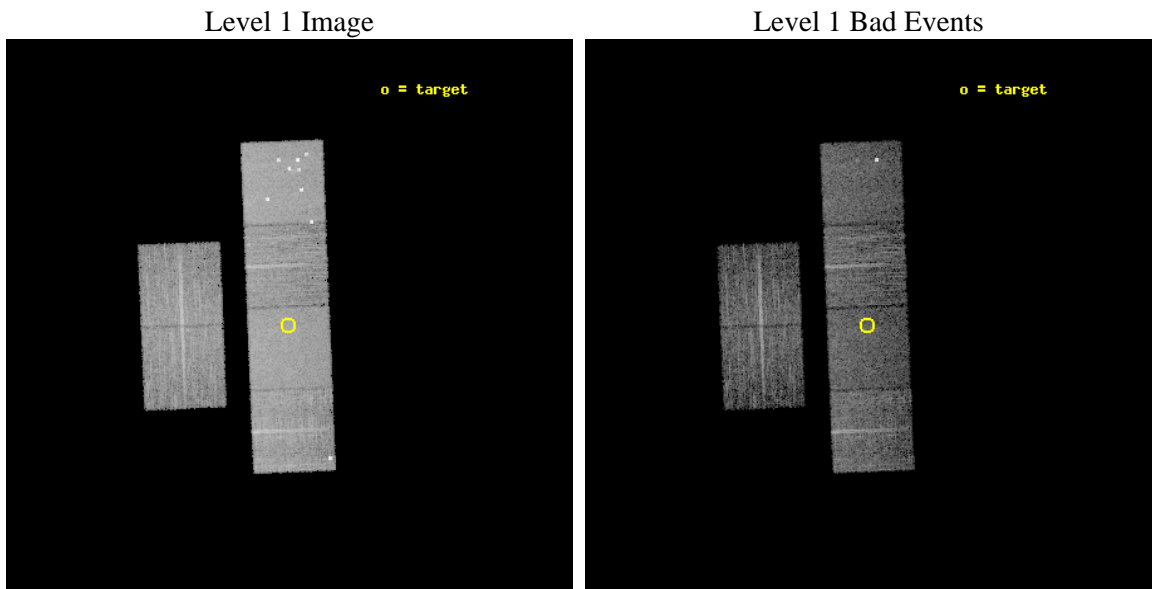
seq_num	900666	Sequence number
obs_id	8125	Observation id
title	The Duty Cycle of Supermassive Black Holes: X-raying Virgo	Proposa
observer	Prof Tommaso Treu	Principal investigator
object	944	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	186.710417	Observer's specified target RA [deg]
dec_targ	9.583889	Observer's specified target Dec [deg]
ra_nom	186.70794654853	Nominal RA [deg]
dec_nom	9.5881189720558	Nominal Dec [deg]
roll_nom	87.716112596165	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5158.165579915	Sum of GTIs [s]
livetime	5092.8497814677	Livetime [s]
ontime2	5158.2066199183	Sum of GTIs [s]
ontime3	5158.0424599051	Sum of GTIs [s]
ontime5	5158.1245399117	Sum of GTIs [s]
ontime6	5158.0834999084	Sum of GTIs [s]
ontime7	5158.165579915	Sum of GTIs [s]
ontime8	5154.7603700161	Sum of GTIs [s]
l2events	82809	Number of level 2 events



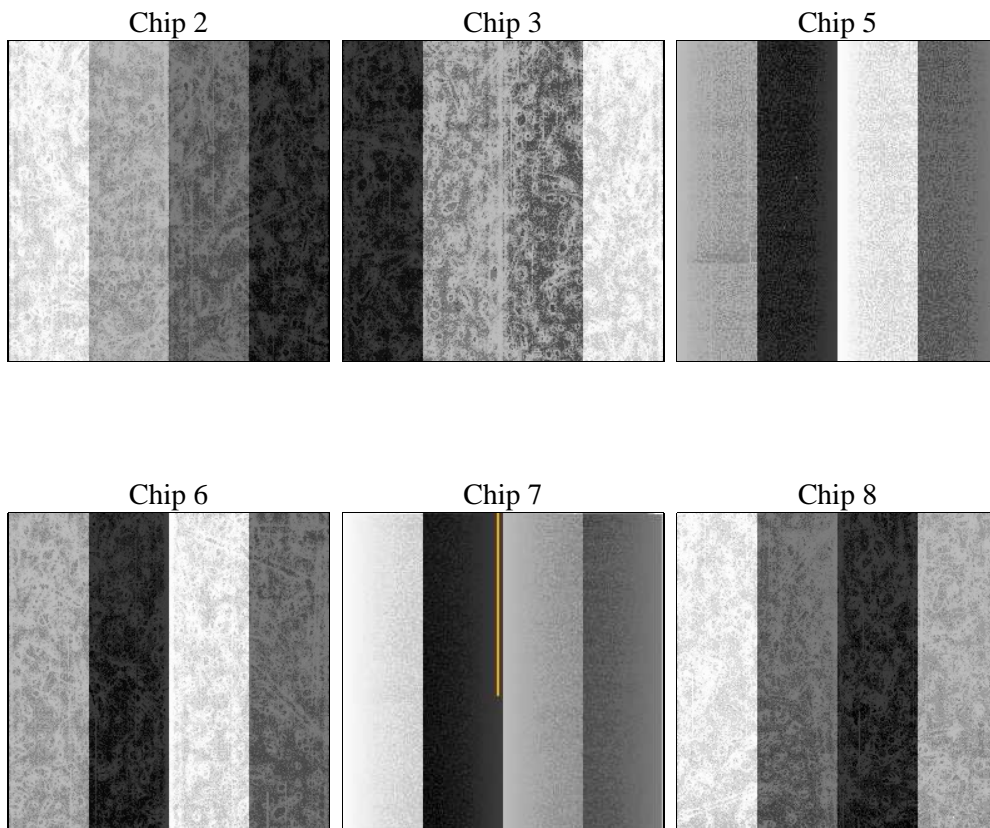
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	5400.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	5158.165579915	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime2	5158.2066199183	Sum of GTIs [s]
date	2012-05-10T08:47:17	Date and time of file creation	ontime3	5158.0424599051	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	5158.1245399117	Sum of GTIs [s]
			ontime6	5158.0834999084	Sum of GTIs [s]
			ontime7	5158.165579915	Sum of GTIs [s]
			ontime8	5154.7603700161	Sum of GTIs [s]
			l1events	376091	Number of level 1 events

### 2.1.4 Events

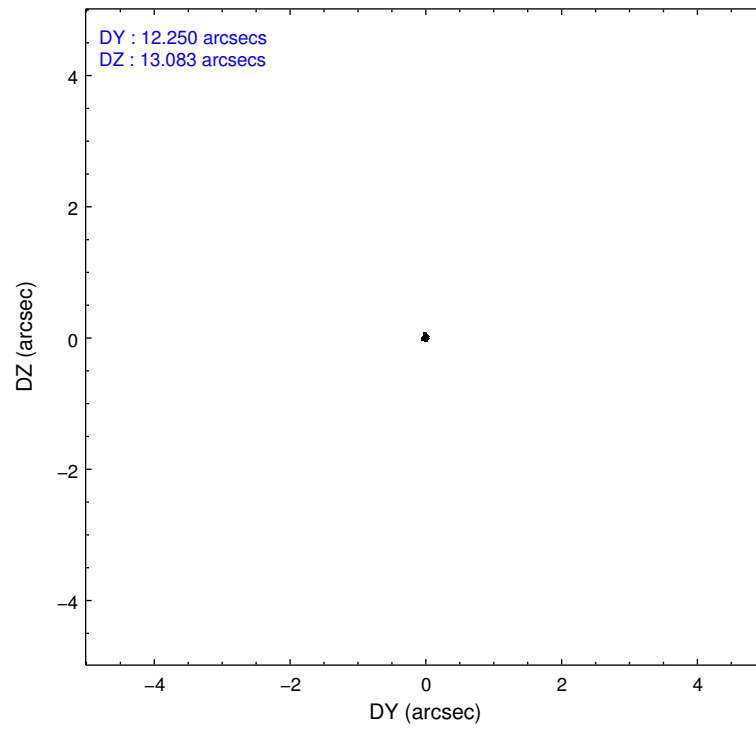
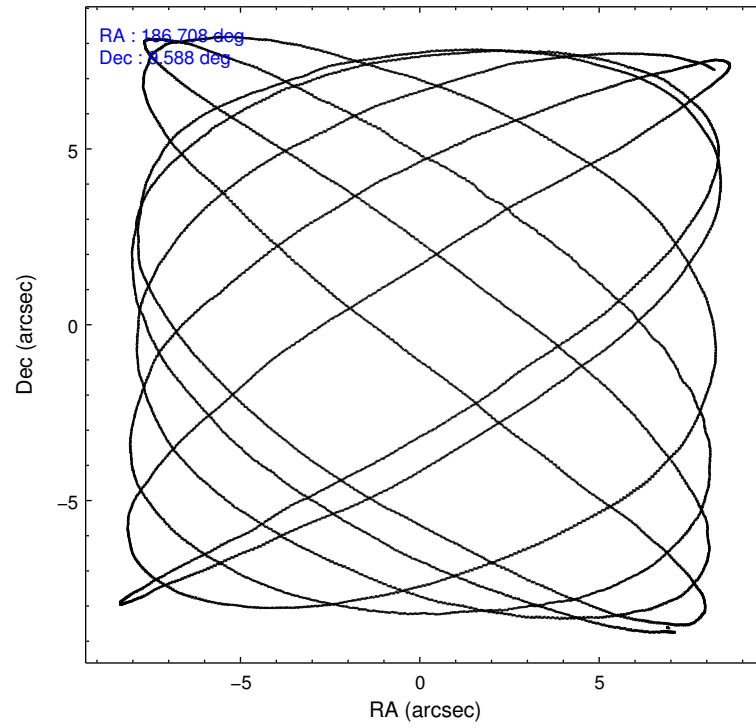
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	51395	48418	87133	53841	69099	66205	grade 0 events	2516	2702	8305	2511	2497	5746
rejected events	45486	42319	43933	47552	40477	51100		4%	5%	9%	4%	3%	8%
rejected %	88%	87%	50%	88%	58%	77%	grade 1 events	36	44	111	28	70	60
								0%	0%	0%	0%	0%	0%
							grade 2 events	1305	1220	11912	1358	5833	3188
								2%	2%	13%	2%	8%	4%
							grade 3 events	566	614	1405	596	2451	1301
								1%	1%	1%	1%	3%	1%
							grade 4 events	510	547	1189	568	2321	1299
								0%	1%	1%	1%	3%	1%
							grade 5 events	1927	2267	5225	2271	6241	3083
								3%	4%	5%	4%	9%	4%
							grade 6 events	1015	1019	20416	1261	15540	3580
								1%	2%	23%	2%	22%	5%
							grade 7 events	43520	40005	38570	45248	34146	47948
								84%	82%	44%	84%	49%	72%

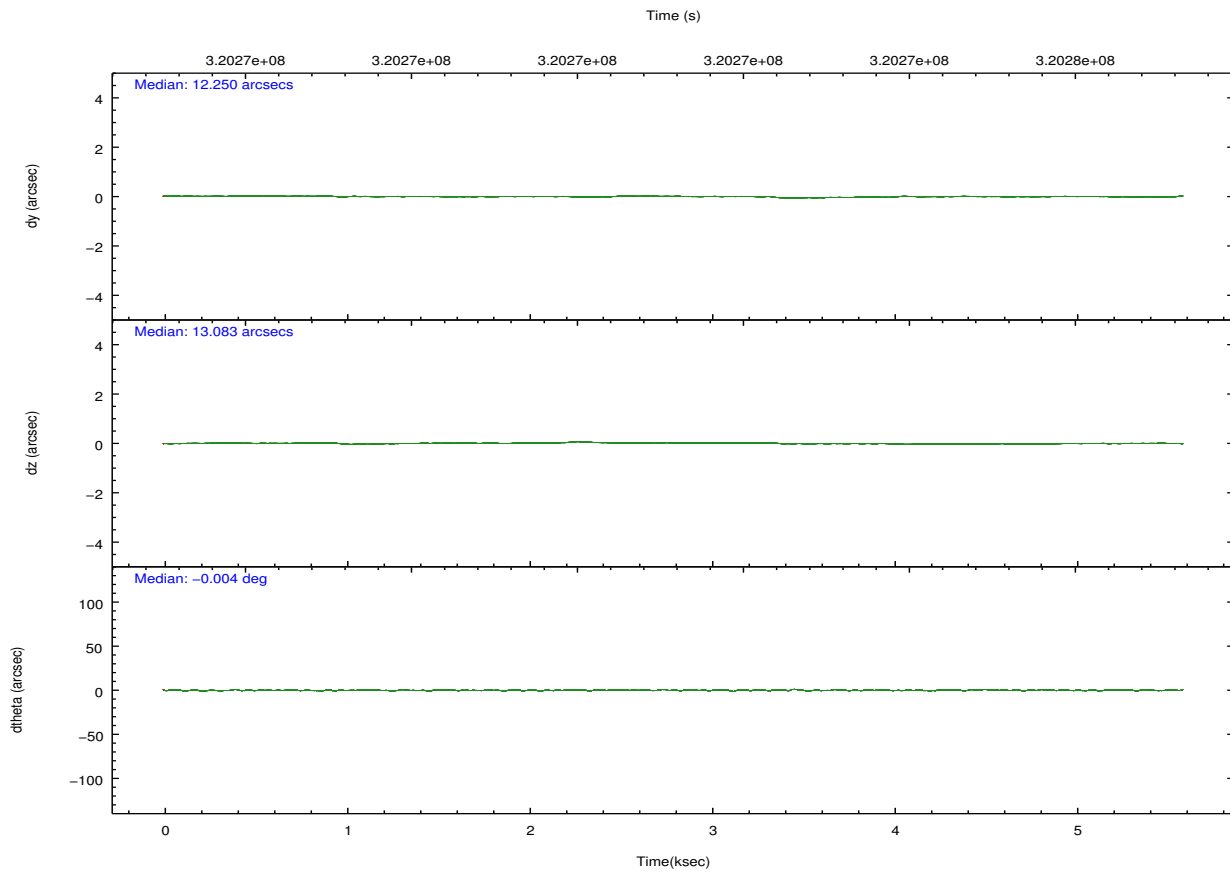
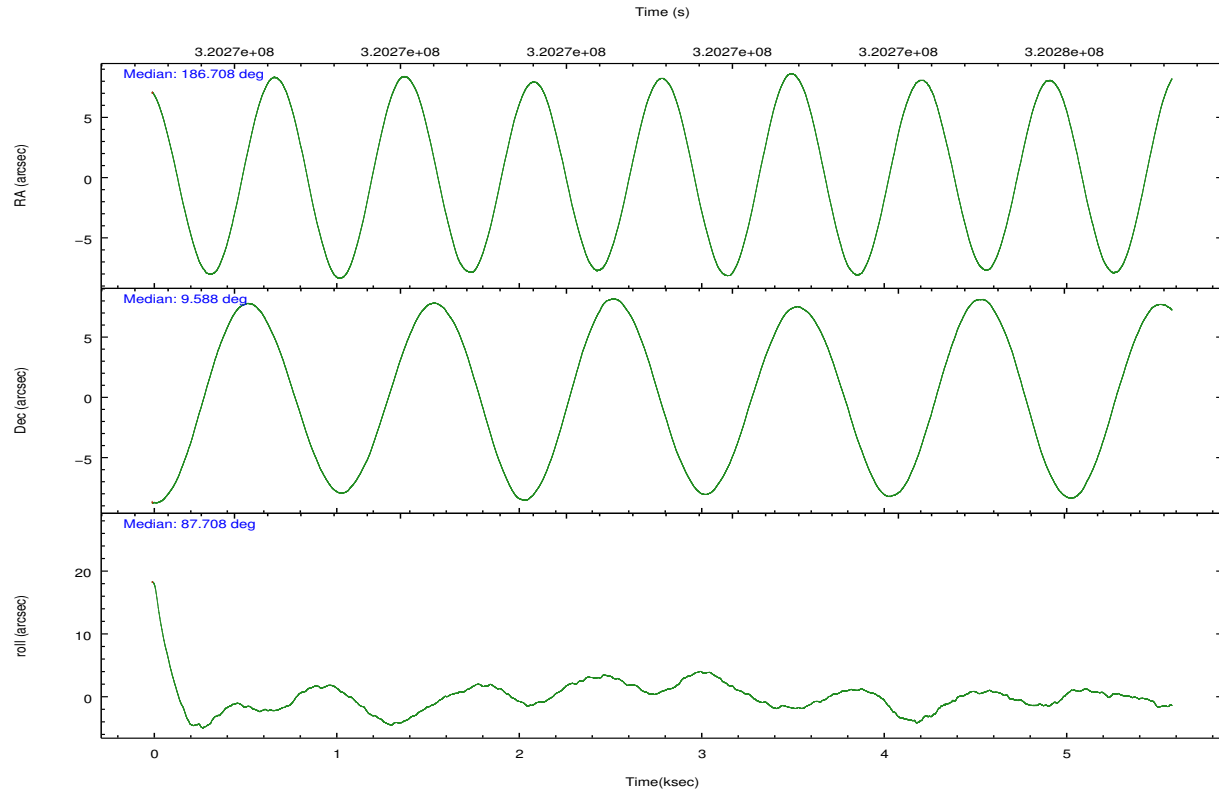


## 2.2 Compared Parameters

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	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	186.721238	186.7079465485311	CCD I2 on	O1	Y
[deg] Pointing Dec	9.564086	9.588118972055833	CCD I3 on	O2	Y
[deg] Pointing Roll	87.557248	87.71611259616475	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O3	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	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)	320269968.184000	320269521.12008	CCD S5 on	N	N
Observation start date	2008-02-24T19:51:43	2008-02-24T19:45:21	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	320275368.184000	320275508.65788	On-chip summing requested	N	N
Observation end date	2008-02-24T21:21:43	2008-02-24T21:25:08	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



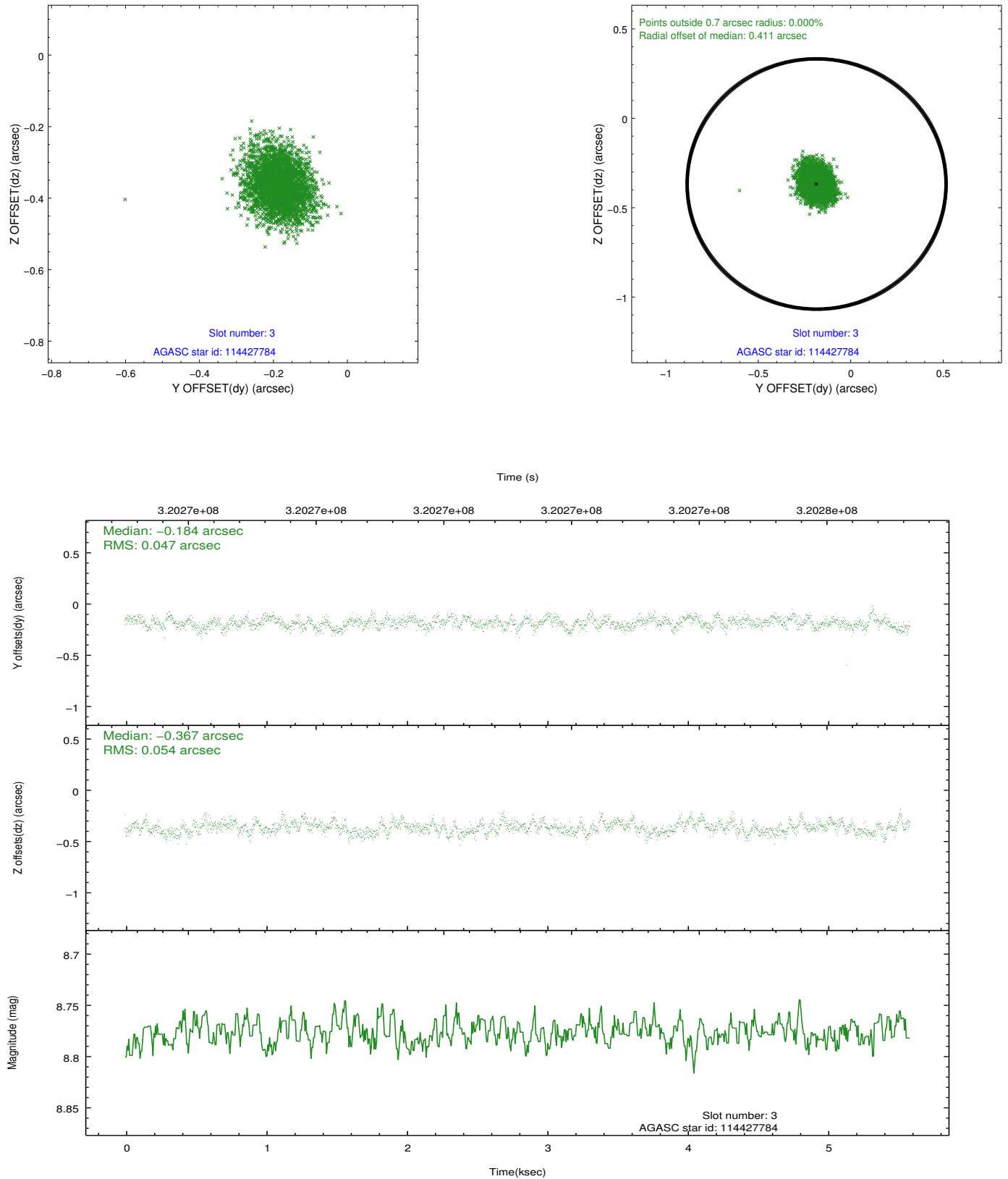


### Slot Statistics

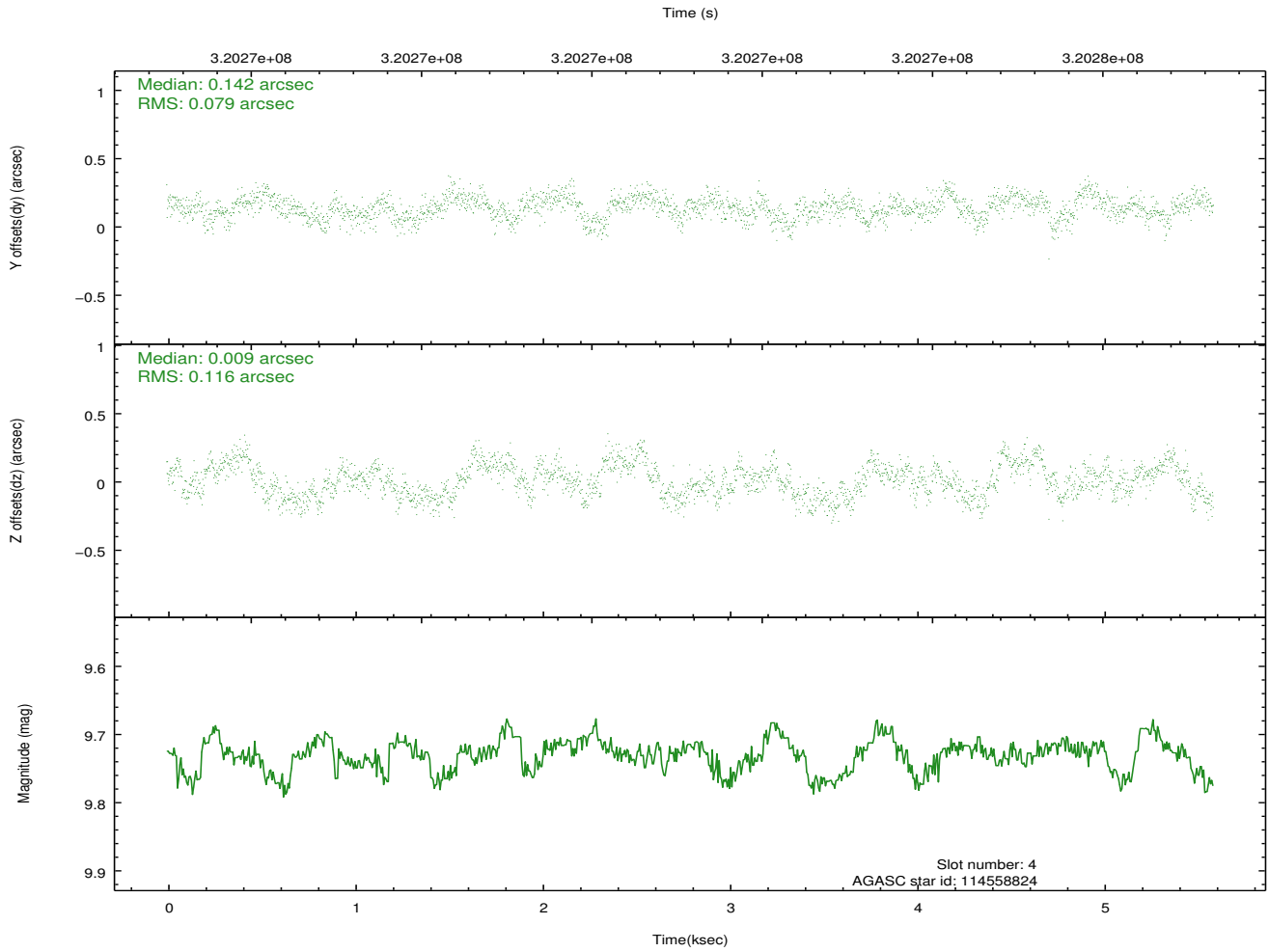
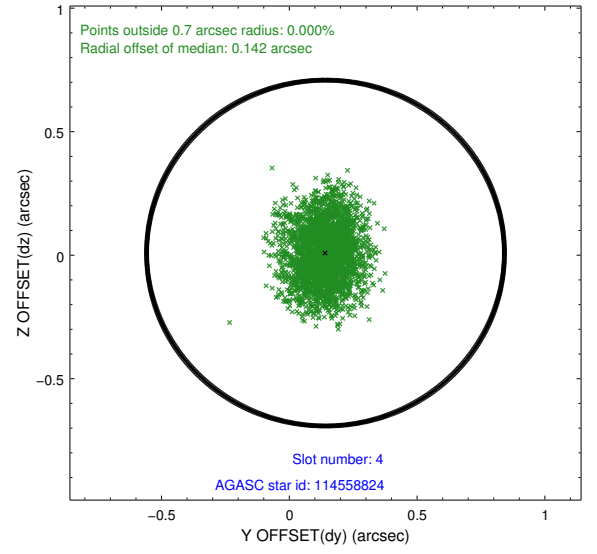
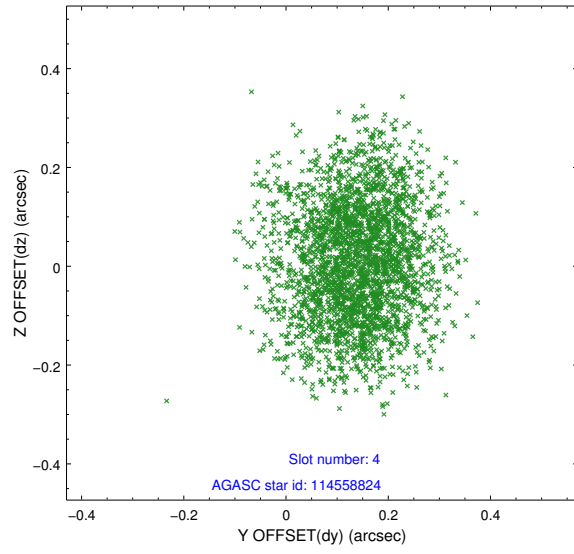
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	1364	-0.022	-0.050	0.007	0.011	0.000000	0.000000	-765.17	-1734.46
1	FID	ACIS-S-4	7.20	1364	0.115	0.024	0.005	0.010	0.000000	0.000000	2147.76	172.98
2	FID	ACIS-S-5	7.24	1363	-0.125	0.035	0.006	0.010	0.000000	0.000000	-1816.73	167.89
3	GUIDE	114427784	8.78	2726	-0.184	-0.367	0.076	0.124	186.068583	9.508052	-298.44	2306.57
4	GUIDE	114558824	9.73	2721	0.142	0.009	0.152	0.238	187.023305	9.331255	-791.00	-1107.16
5	GUIDE	114558952	9.44	2721	-0.114	0.080	0.127	0.200	186.929093	9.345397	-754.93	-771.52
6	GUIDE	114561264	9.62	2722	0.115	0.208	0.104	0.170	186.762657	8.969089	-2133.63	-238.71
7	GUIDE	114562600	8.76	2726	0.053	0.077	0.084	0.135	186.973653	8.898661	-2354.96	-999.14

## 2.4 Star Slots

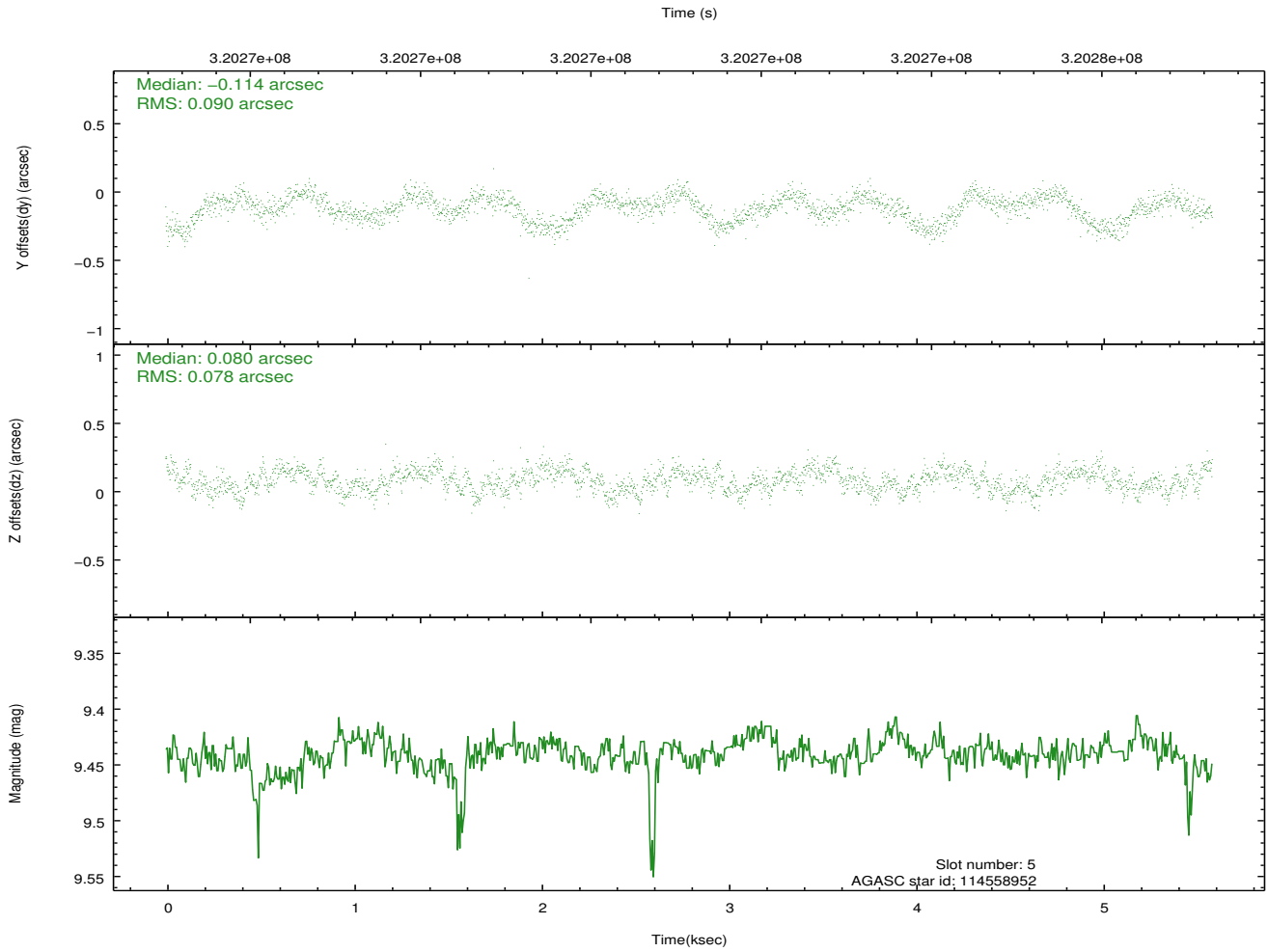
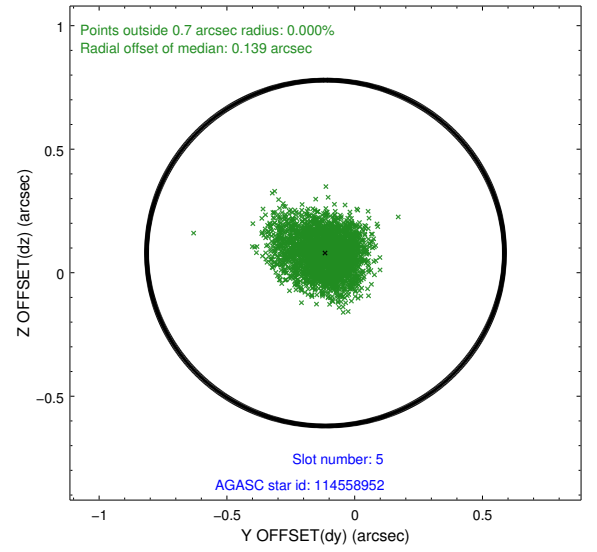
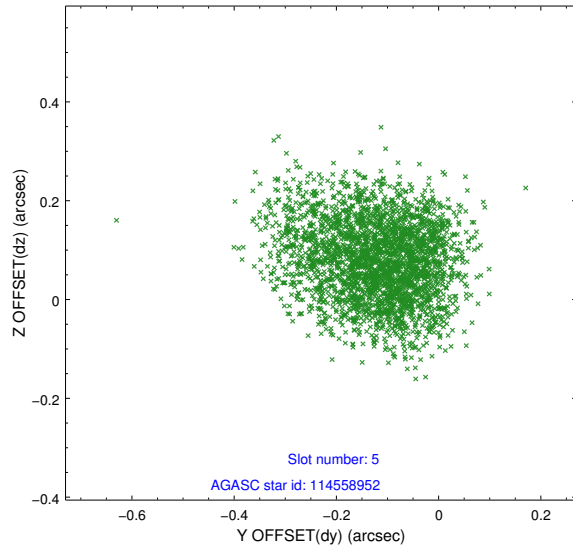
### 2.4.1 Slot 3



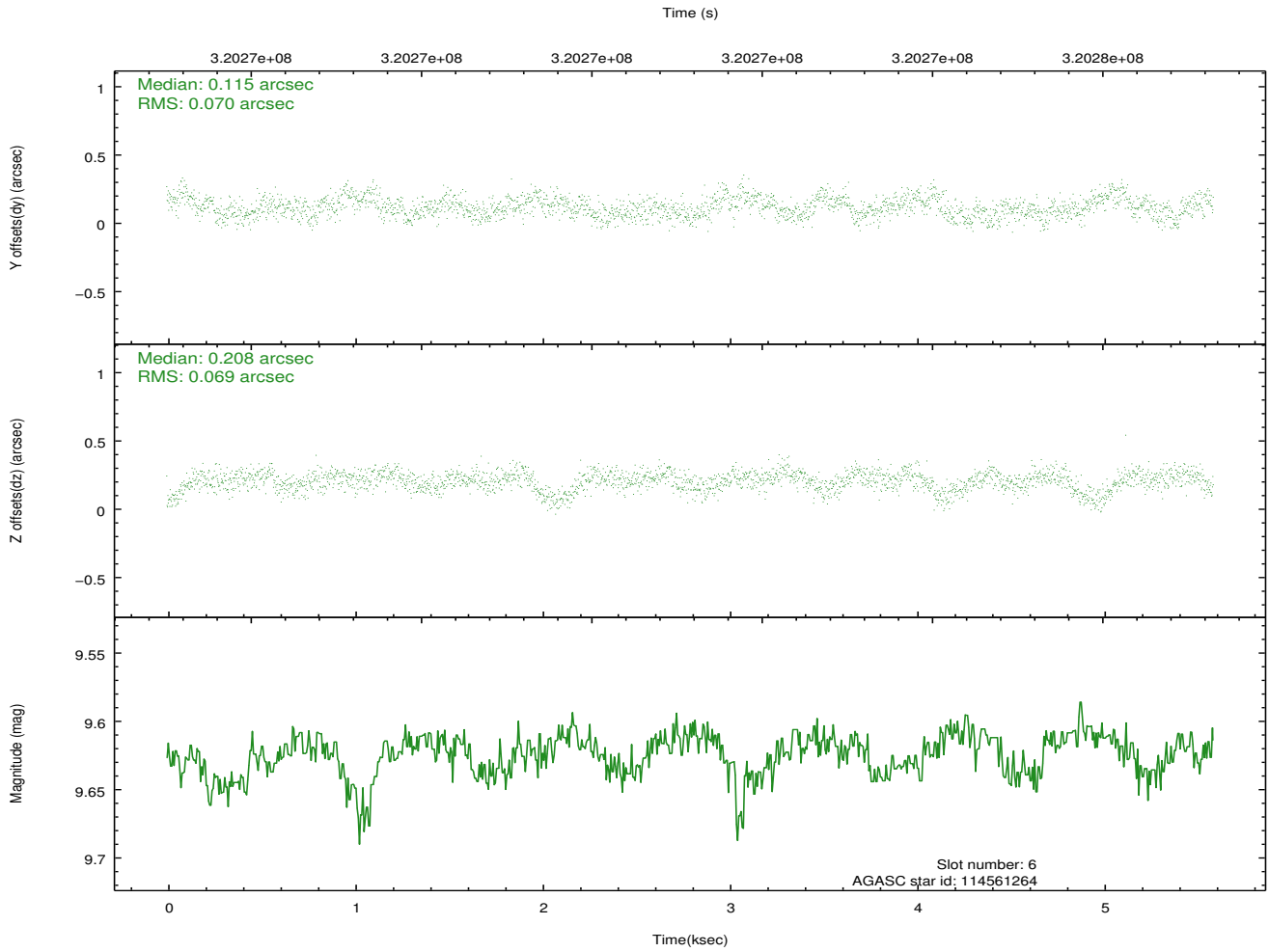
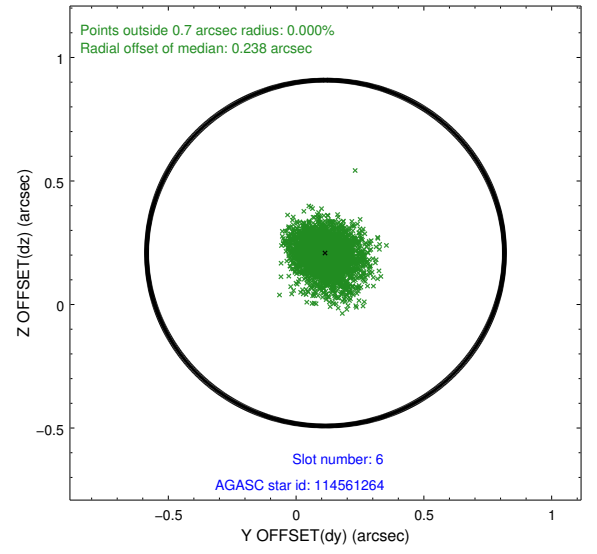
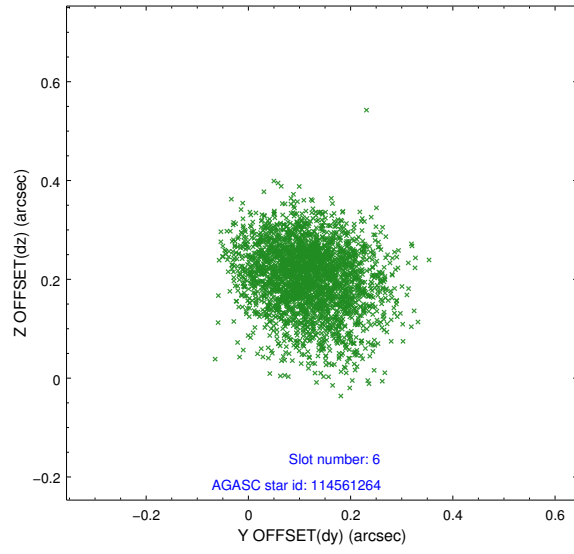
## 2.4.2 Slot 4



### 2.4.3 Slot 5

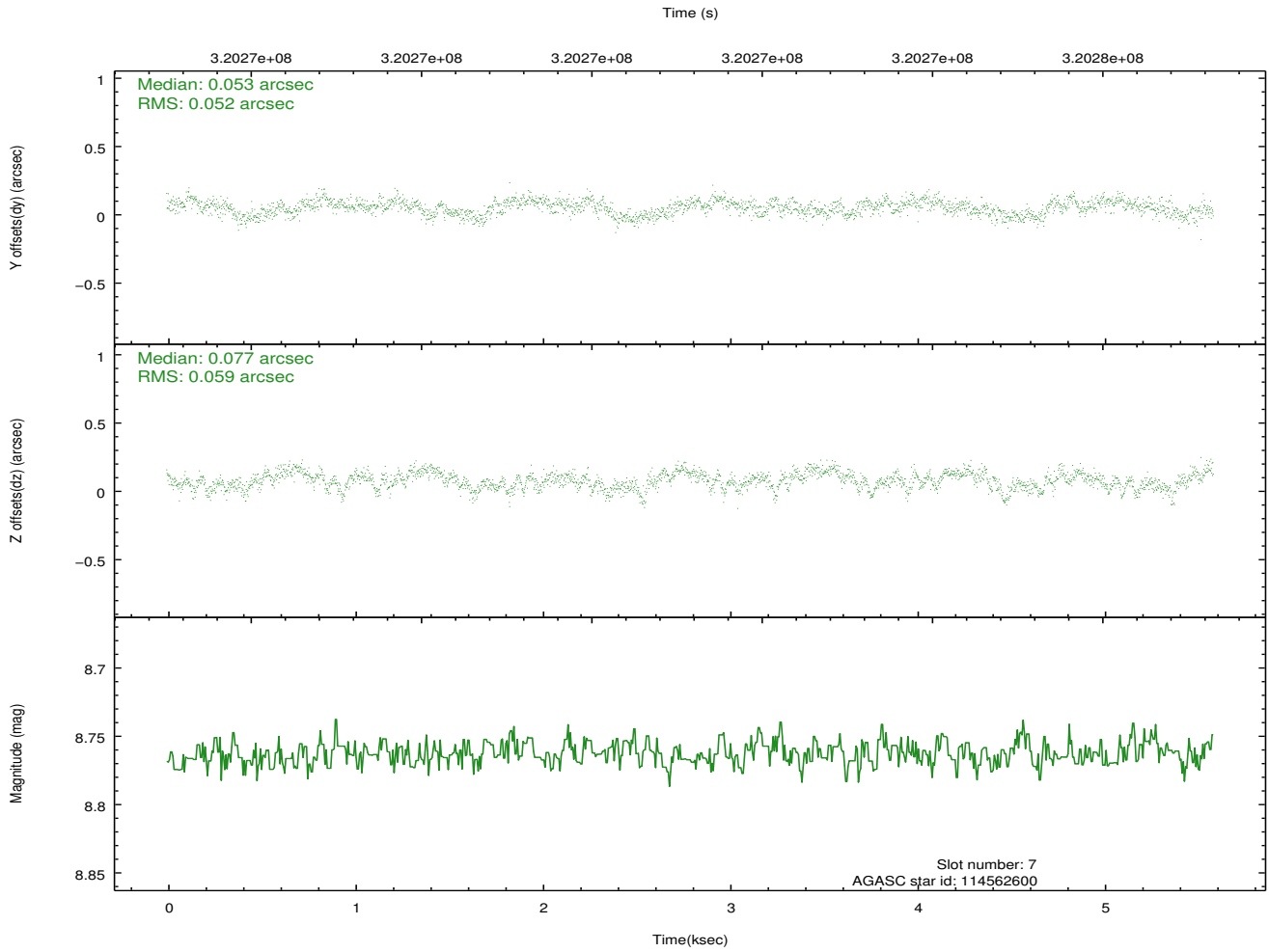
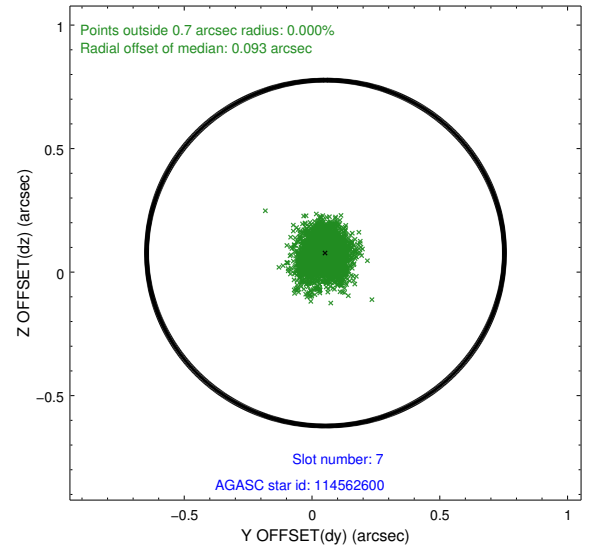
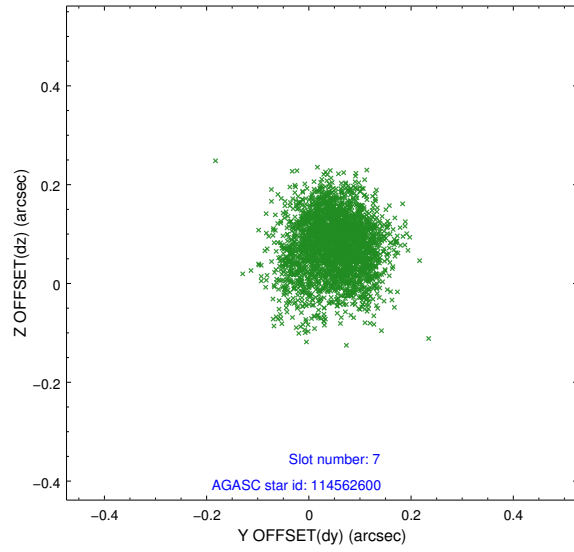


## 2.4.4 Slot 6



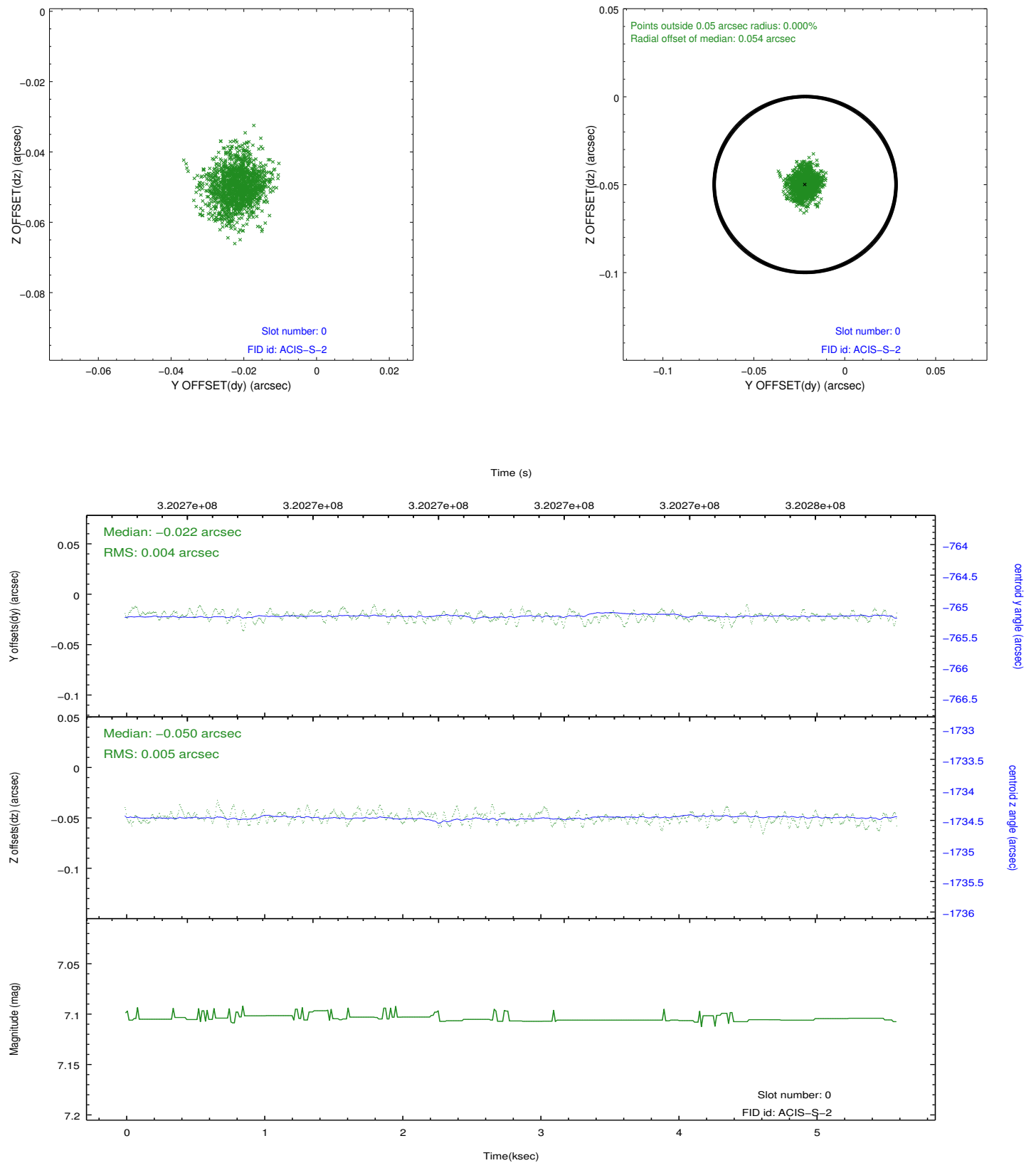


## 2.4.5 Slot 7

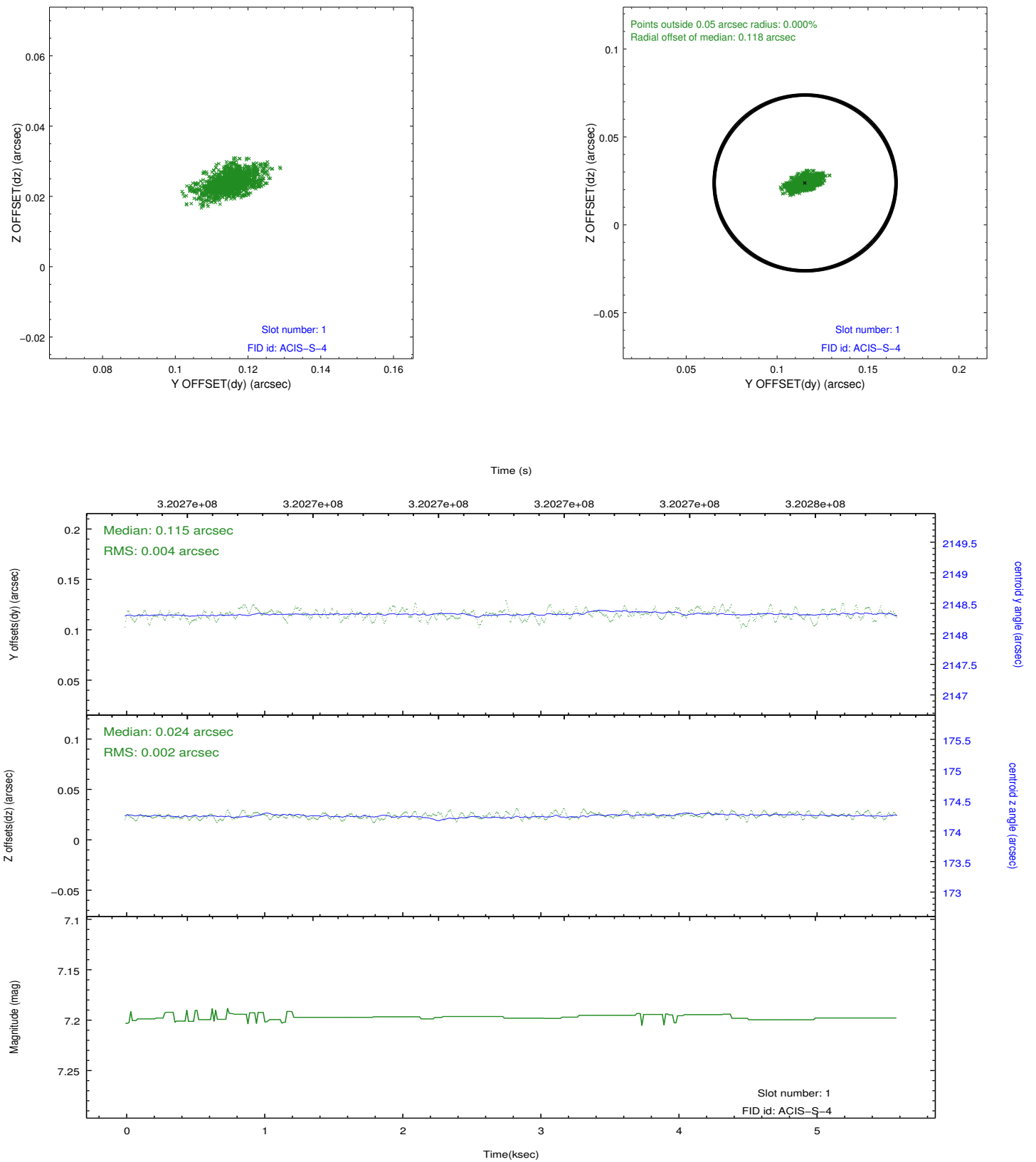


## 2.5 FID Slots

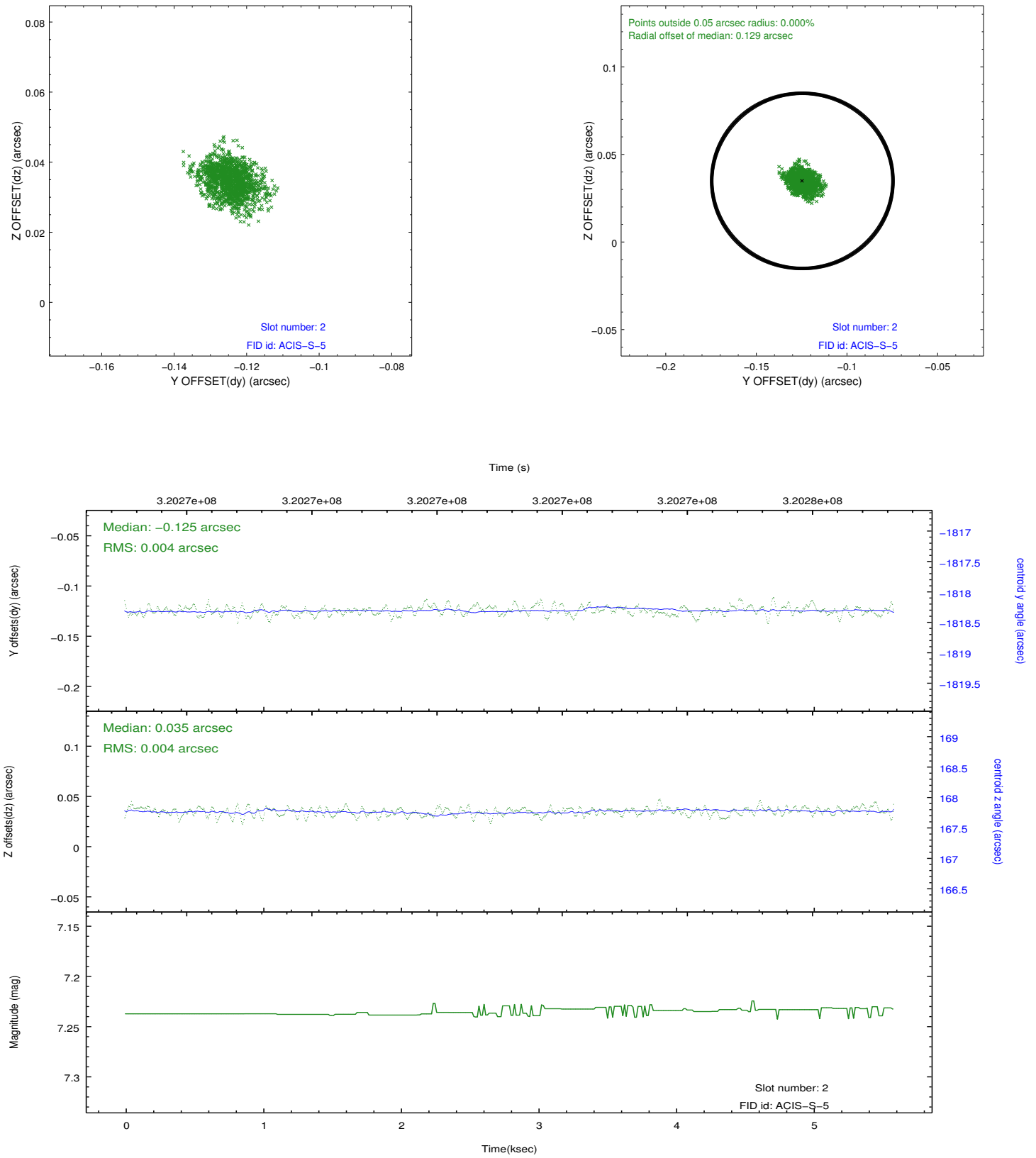
### 2.5.1 Slot 0



## 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)	2012.05.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.15839998

### A.2 Comments

Joint Proposal: Spitzer