

# V&V Reference Report

## L2 ASCDS Version : 10.3.3

Observation 17094 - L2 Version 1  
Chandra X-Ray Center

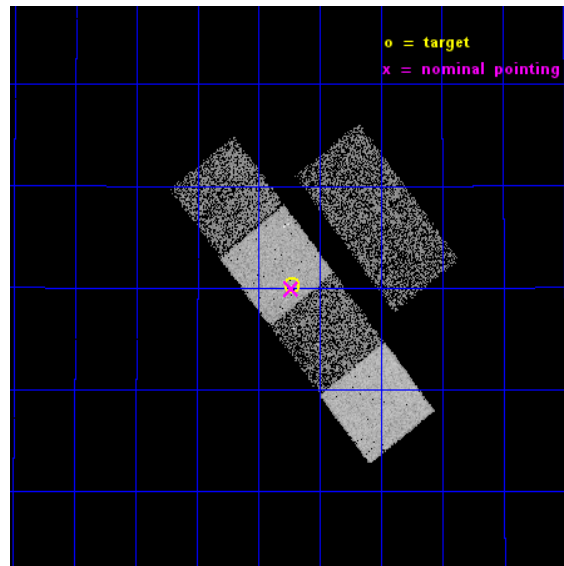
L2 Processing Date : Mar 2 2015

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# 1 Front

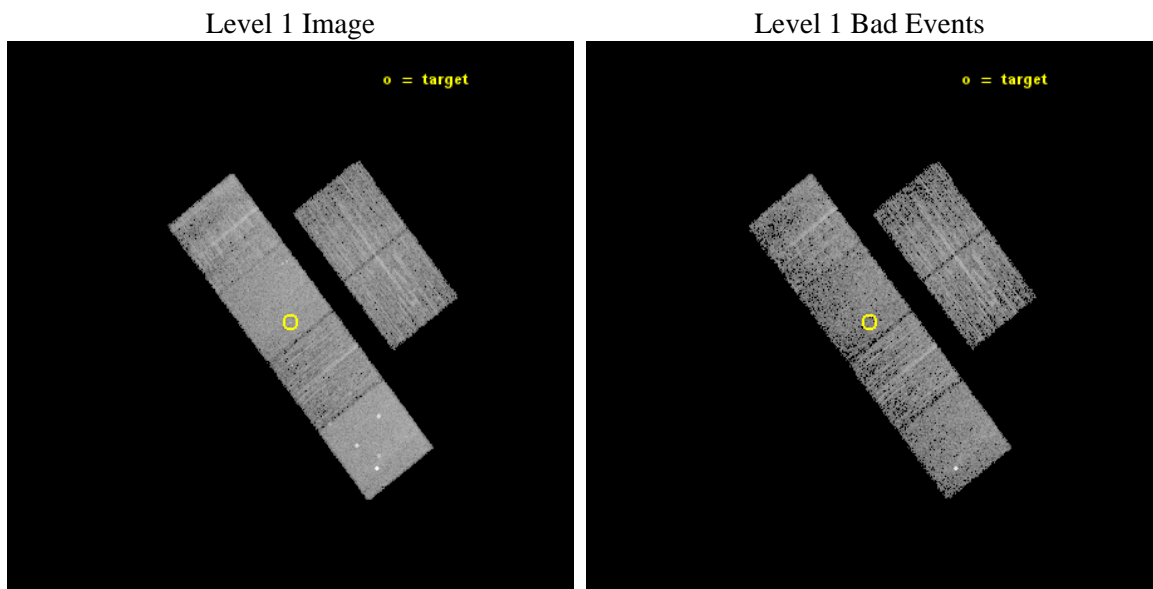
seq_num	703098	Sequence number
obs_id	17094	Observation id
title	Probing the Physics of Quasar Outflows using Mini-LoBALs	Proposal
observer	Professor Karen Leighly	Principal investigator
object	FBQS J090313.9+312015	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	135.807917	Observer's specified target RA [deg]
dec_targ	31.3375	Observer's specified target Dec [deg]
ra_nom	135.80807627119	Nominal RA [deg]
dec_nom	31.332088889067	Nominal Dec [deg]
roll_nom	232.12610570632	Nominal Roll [deg]
revision	1	Processing version of data
ontime	6930.6808071136	Sum of GTIs [s]
livetime	6842.920353579	Livetime [s]
ontime2	6930.7218470573	Sum of GTIs [s]
ontime3	6930.5576870441	Sum of GTIs [s]
ontime5	6930.6397670507	Sum of GTIs [s]
ontime6	6930.598727107	Sum of GTIs [s]
ontime7	6930.6808071136	Sum of GTIs [s]
ontime8	6930.5166471004	Sum of GTIs [s]
l2events	58134	Number of level 2 events



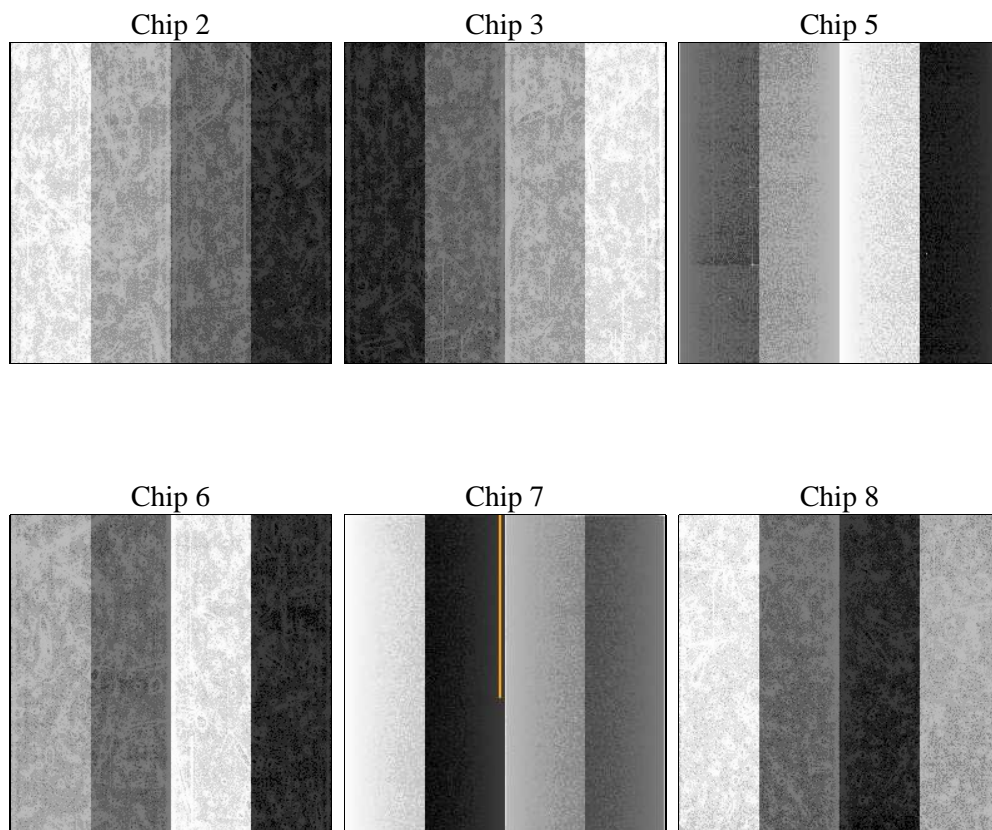
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	7000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.3	Processing system revision	ontime	6930.6808071136	Sum of GTIs [s]
caldbver	4.6.7	&#160	ontime2	6930.7218470573	Sum of GTIs [s]
date	2015-03-03T03:19:18	Date and time of file creation	ontime3	6930.5576870441	Sum of GTIs [s]
revision	1	Processing version of data	ontime5	6930.6397670507	Sum of GTIs [s]
			ontime6	6930.598727107	Sum of GTIs [s]
			ontime7	6930.6808071136	Sum of GTIs [s]
			ontime8	6930.5166471004	Sum of GTIs [s]
			l1events	244468	Number of level 1 events

### 2.1.4 Events

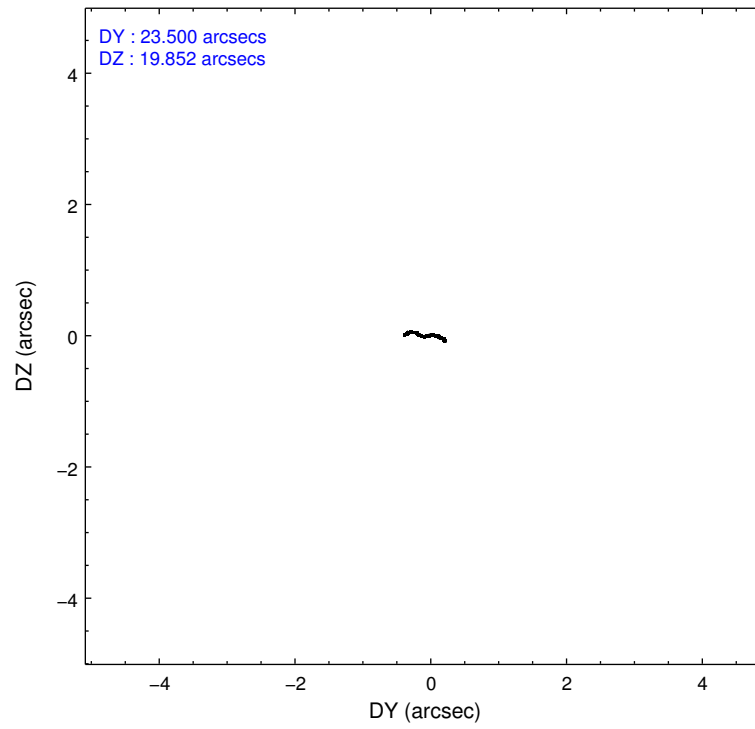
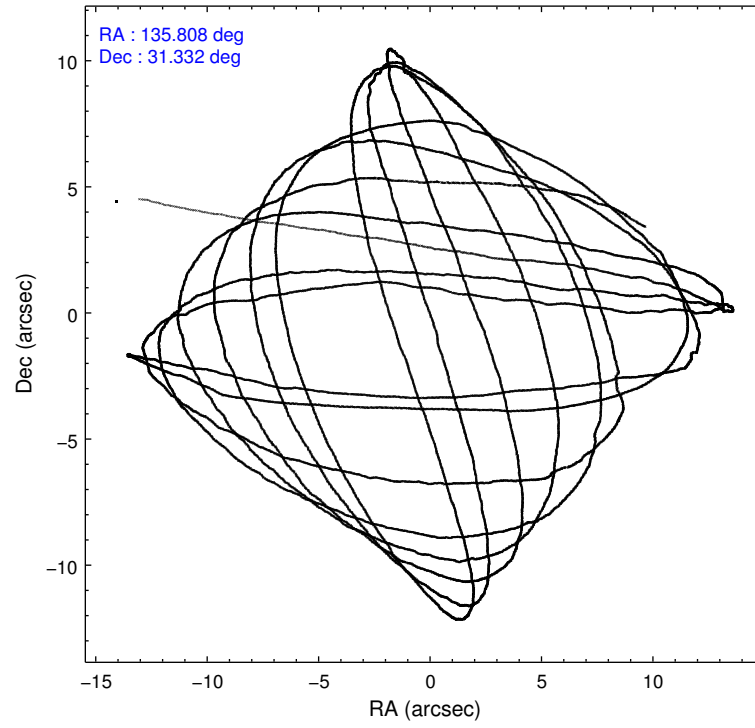
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	33747	31612	57853	33630	44978	42648	grade 0 events	1324	1289	3720	1501	1780	3289
rejected events	29907	28009	29708	29433	25331	30859		3%	4%	6%	4%	3%	7%
rejected %	88%	88%	51%	87%	56%	72%	grade 1 events	30	18	106	24	52	31
								0%	0%	0%	0%	0%	0%
							grade 2 events	962	771	8463	900	4052	2784
								2%	2%	14%	2%	9%	6%
							grade 3 events	389	384	846	409	1676	1285
								1%	1%	1%	1%	3%	3%
							grade 4 events	380	395	848	394	1638	1131
								1%	1%	1%	1%	3%	2%
							grade 5 events	1506	1735	4118	1717	4659	2472
								4%	5%	7%	5%	10%	5%
							grade 6 events	786	766	14295	1000	10516	3303
								2%	2%	24%	2%	23%	7%
							grade 7 events	28370	26254	25457	27685	20605	28353
								84%	83%	44%	82%	45%	66%

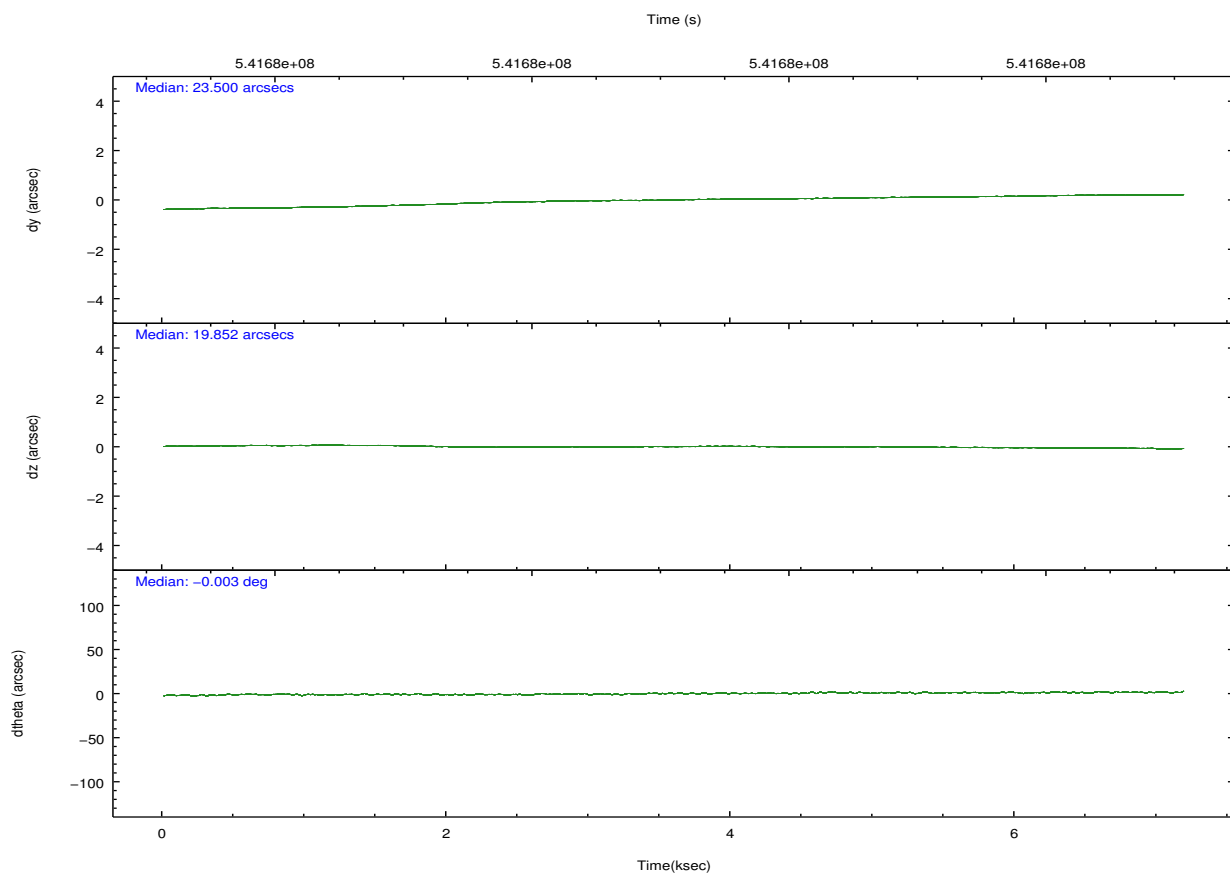
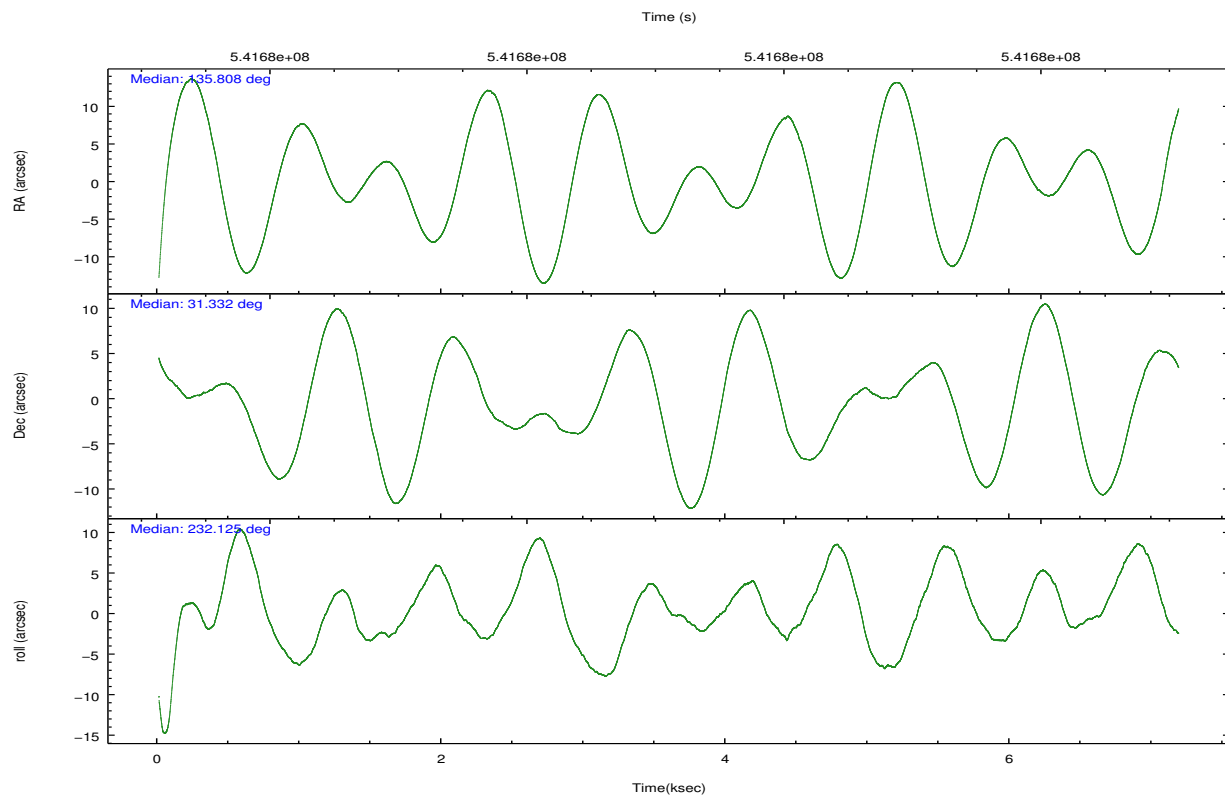


## 2.2 Compared Parameters

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	135.812033	135.8080762711876	CCD I2 on	O1	Y
[deg] Pointing Dec	31.359299	31.33208888906728	CCD I3 on	O2	Y
[deg] Pointing Roll	231.967455	232.1261057063154	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	541675717.184000	541674724.03088	CCD S5 on	N	N
Observation start date	2015-03-02T09:27:30	2015-03-02T09:12:04	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	541682717.184000	541683357.60637	On-chip summing requested	N	N
Observation end date	2015-03-02T11:24:10	2015-03-02T11:35:57	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



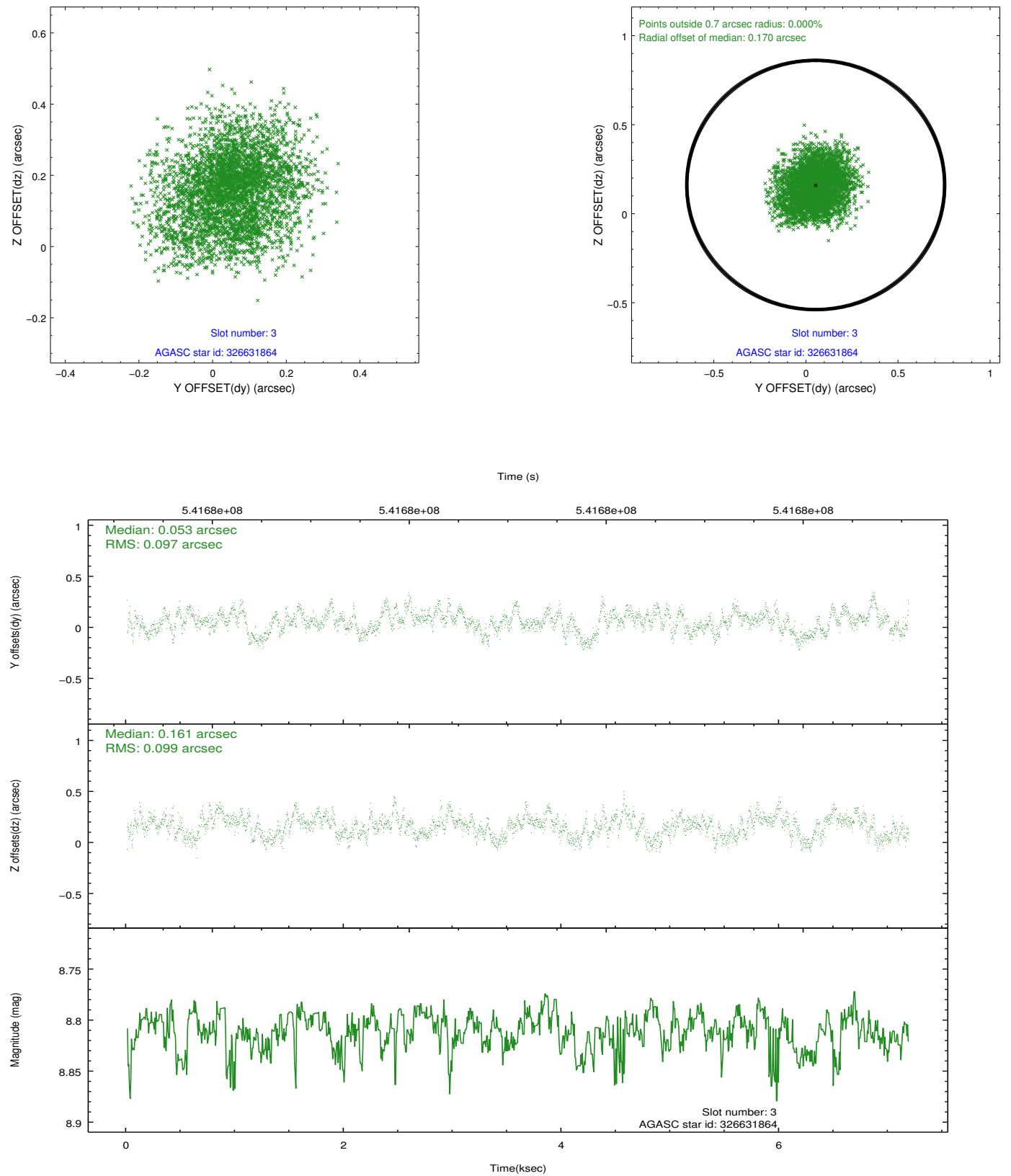


### Slot Statistics

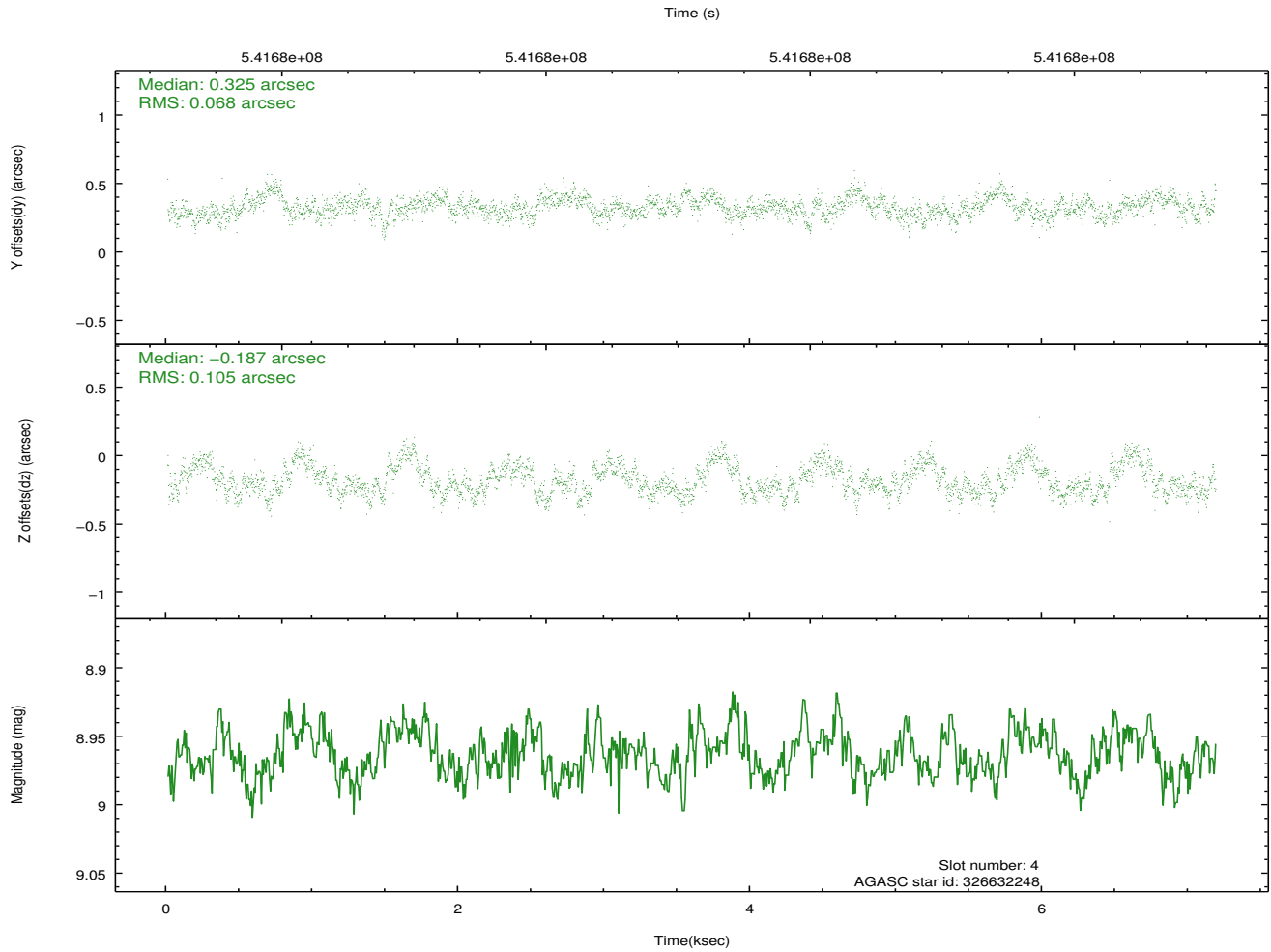
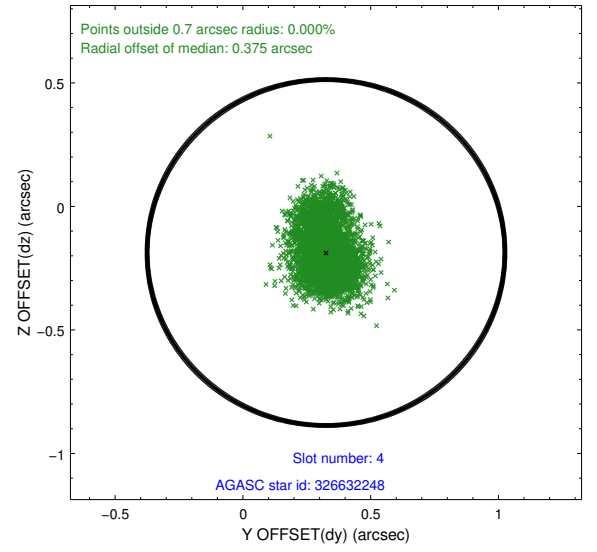
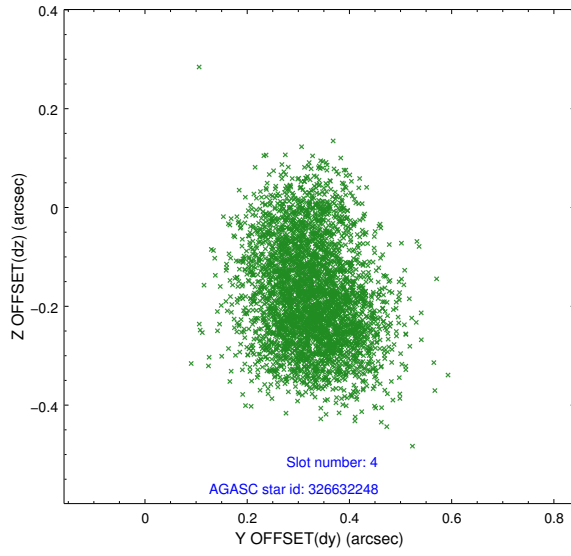
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.09	1752	0.155	0.026	0.008	0.013	0.000000	0.000000	919.46	-1736.94
1	FID		ACIS-S-2	7.00	1752	-0.203	-0.065	0.010	0.017	0.000000	0.000000	-776.36	-1742.36
2	FID		ACIS-S-6	7.23	1752	0.028	0.044	0.007	0.012	0.000000	0.000000	384.71	803.60
3	GUIDE	used	326631864	8.81	3502	0.053	0.161	0.151	0.234	135.022525	31.471499	1169.38	-2163.17
4	GUIDE	used	326632248	8.96	3503	0.325	-0.187	0.134	0.216	135.419792	31.652351	-90.66	-1598.62
5	GUIDE	used	326633960	9.53	3503	-0.074	-0.267	0.193	0.306	135.400676	30.848741	2229.86	129.74
6	GUIDE	used	326641080	9.14	3501	-0.059	0.264	0.123	0.205	136.743258	31.397636	-1880.03	2161.98
7	GUIDE	used	326638088	9.74	3500	-0.242	0.041	0.195	0.311	136.470339	31.737176	-2318.16	746.80

## 2.4 Star Slots

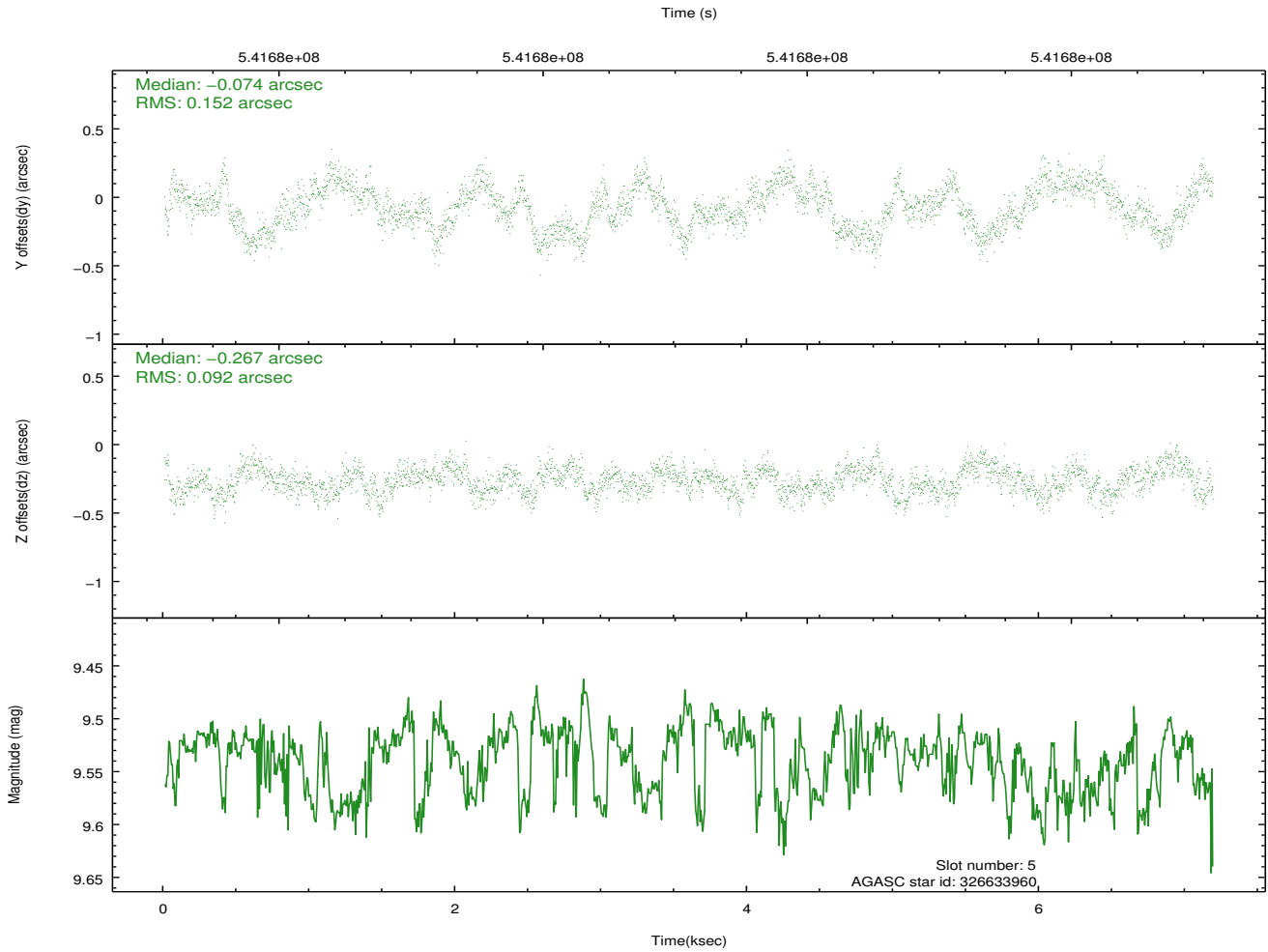
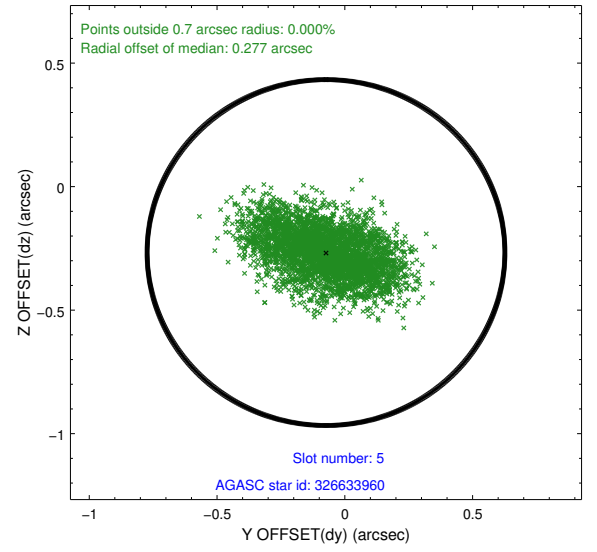
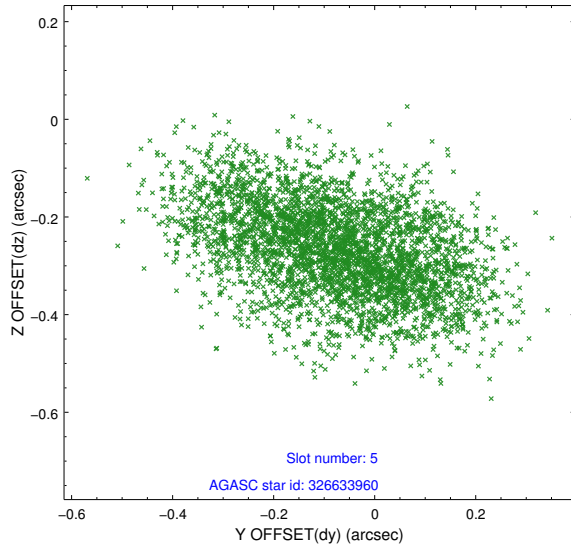
### 2.4.1 Slot 3



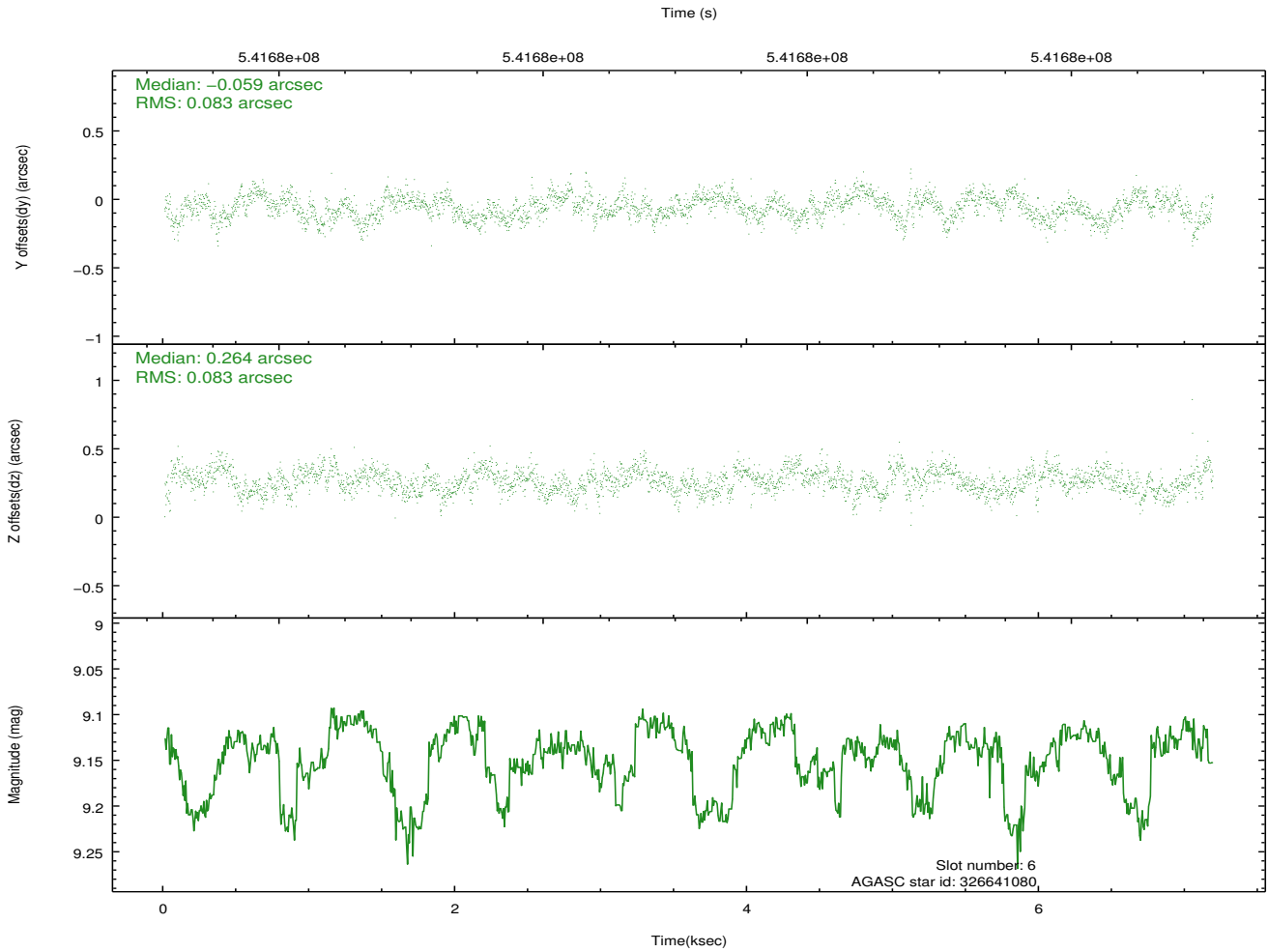
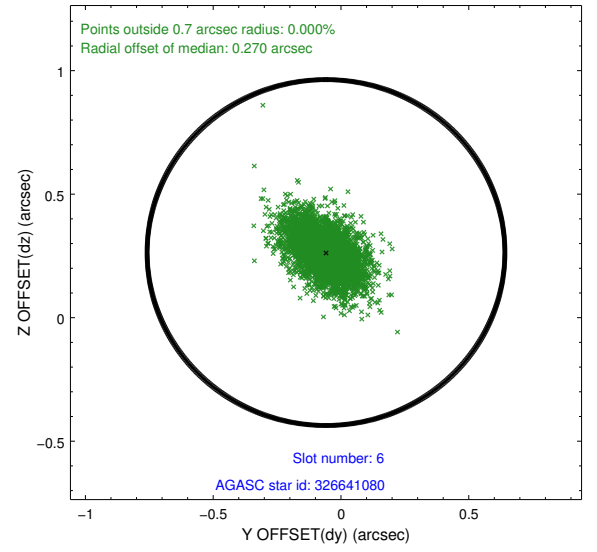
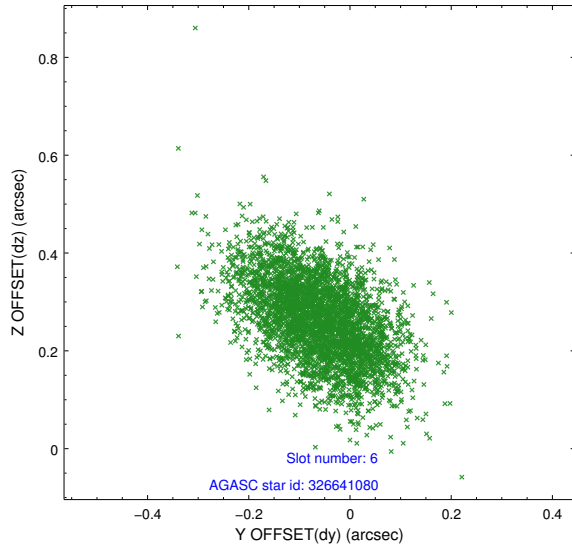
## 2.4.2 Slot 4



### 2.4.3 Slot 5

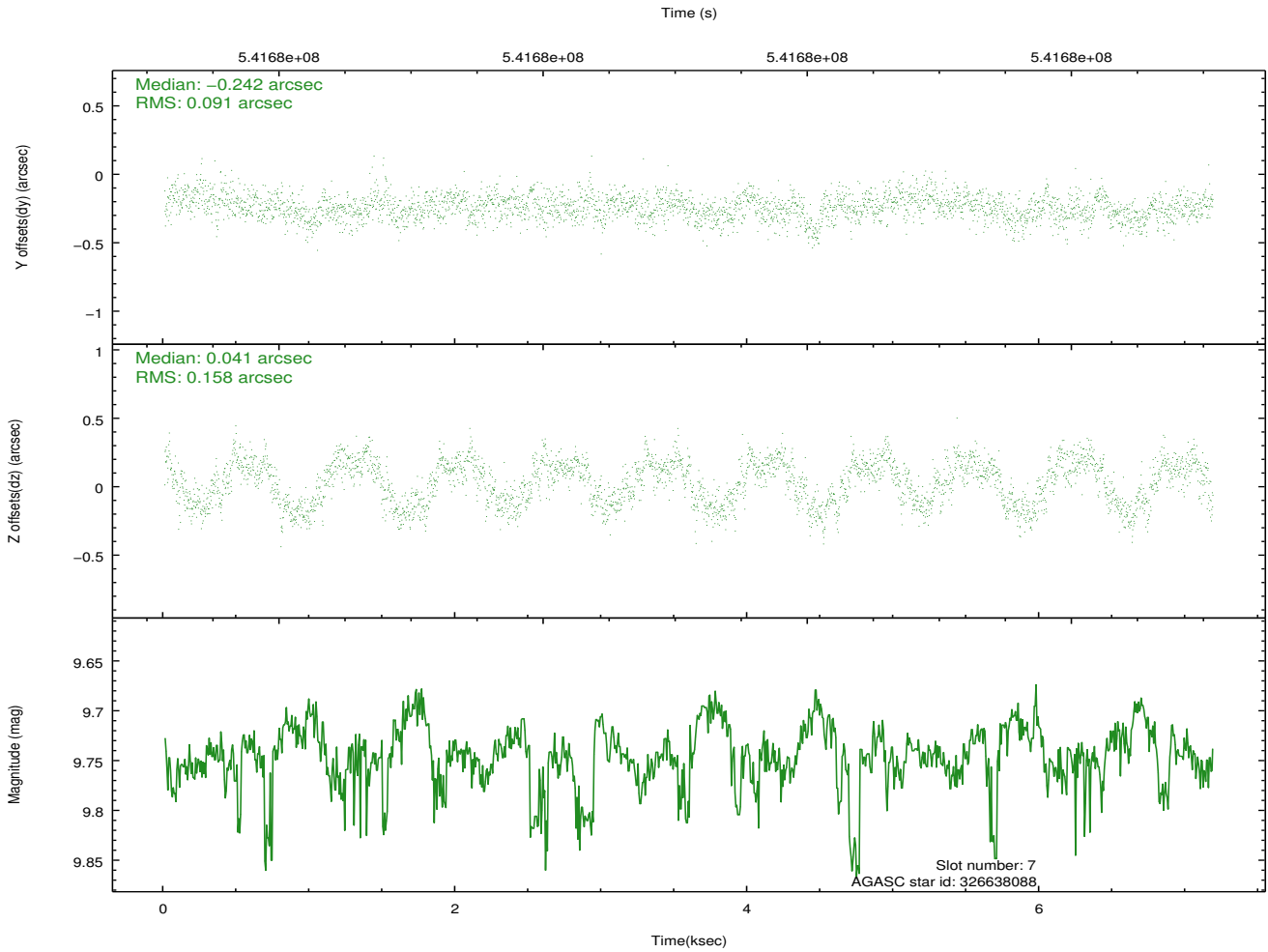
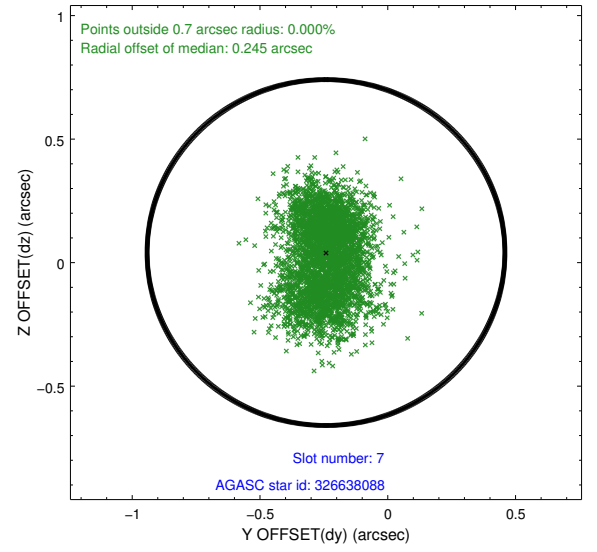
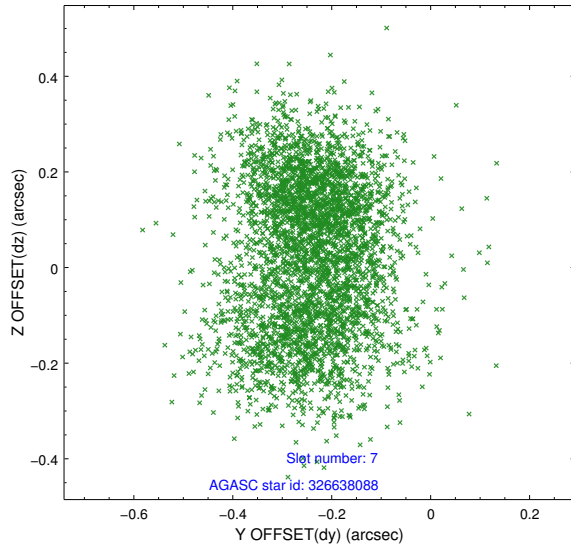


## 2.4.4 Slot 6



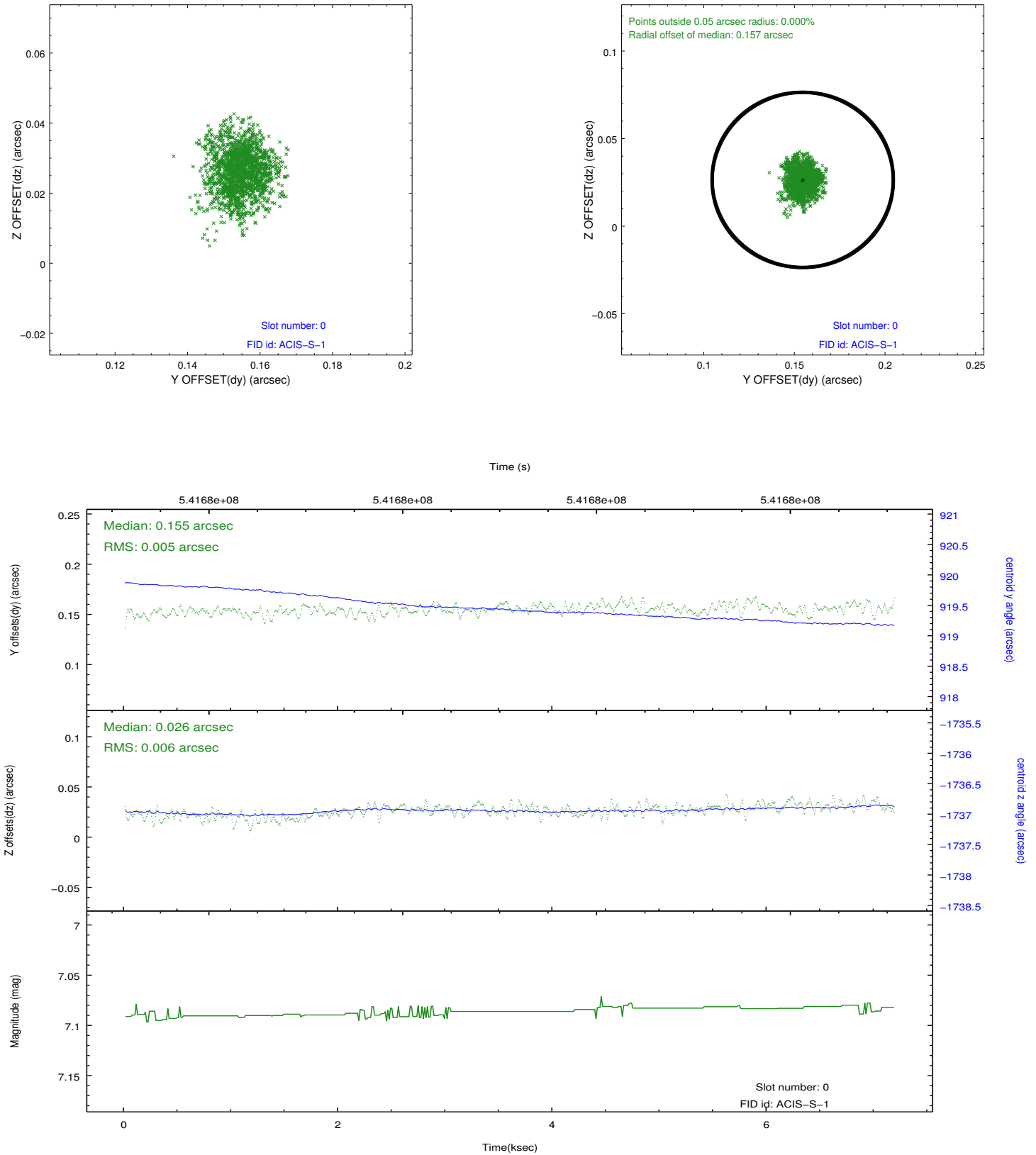


## 2.4.5 Slot 7

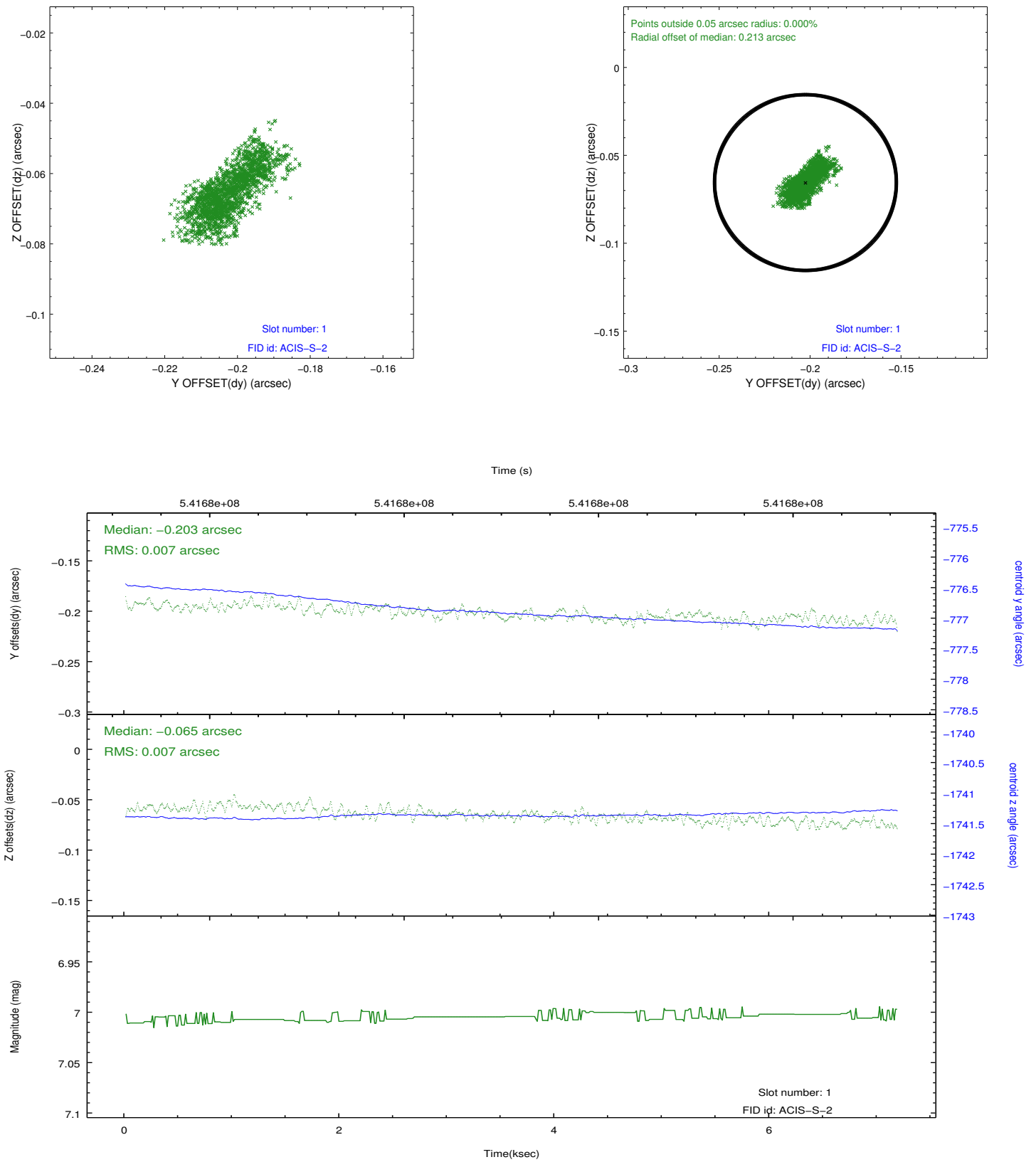


## 2.5 FID Slots

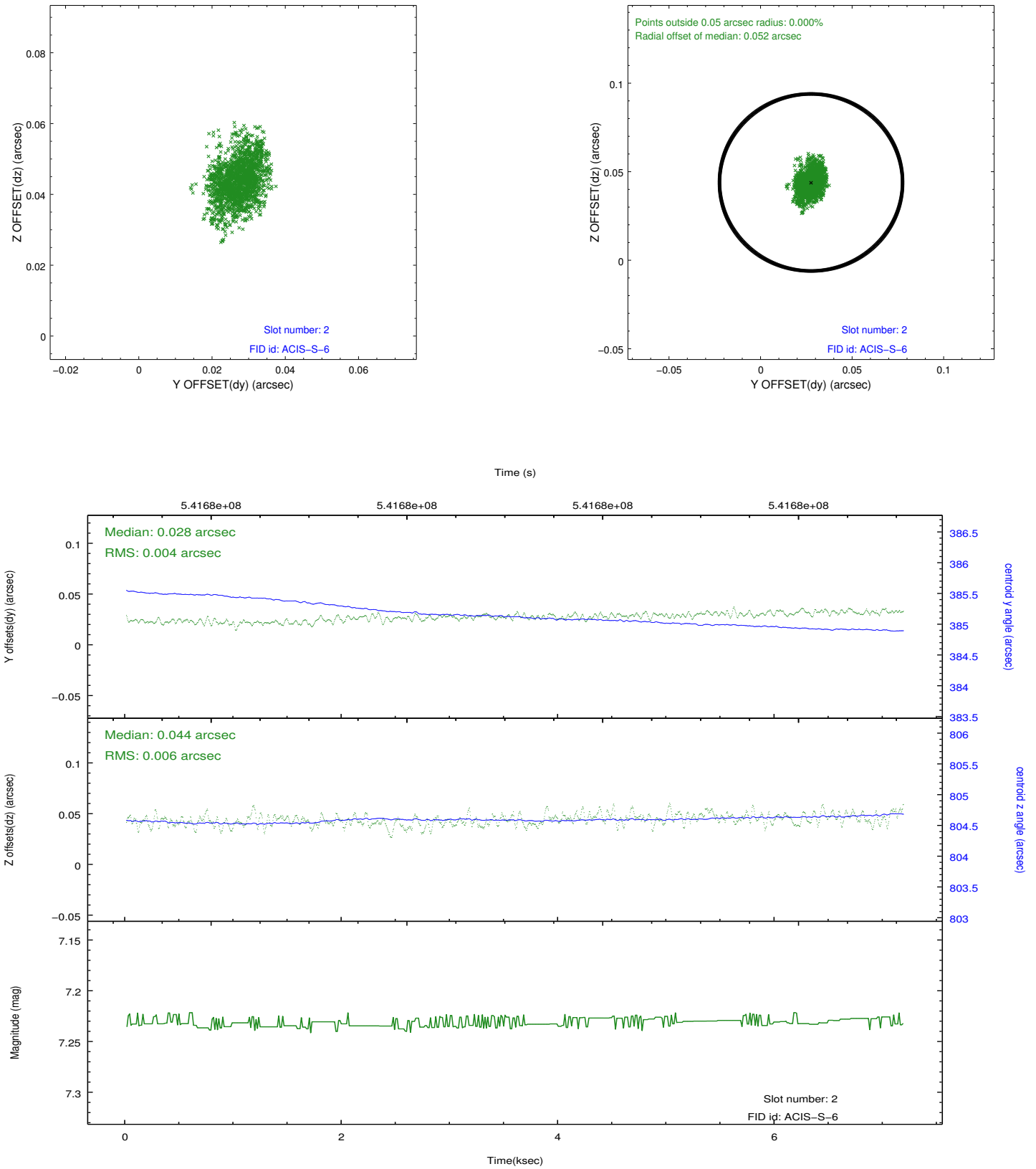
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2015.03.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	6.9306808071136

### A.2 Comments