

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 4752 - L2 Version 5  
Chandra X-Ray Center

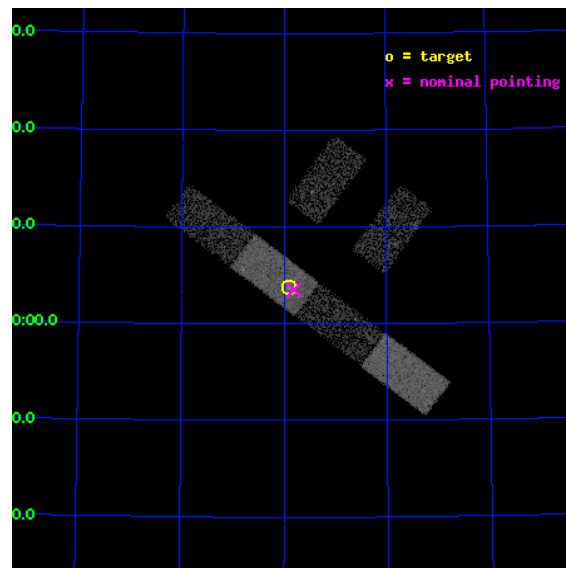
L2 Processing Date : Nov 14 2012

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# 1 Front

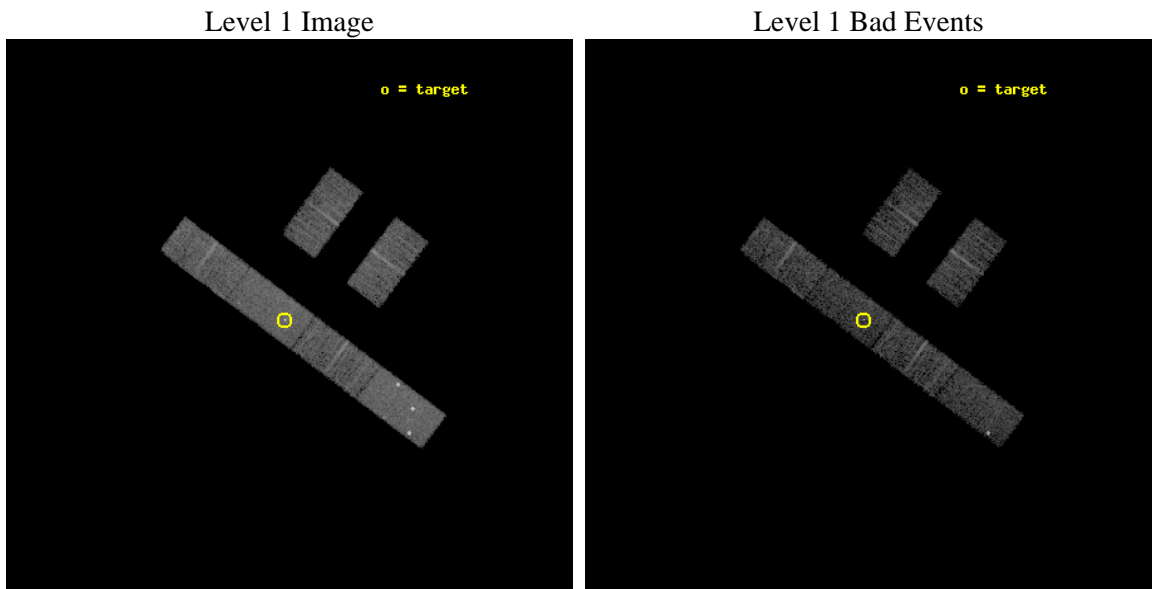
seq_num	600407	Sequence number
obs_id	4752	Observation id
title	Observations of Intermediate Mass Black Hole Candidate Ultra-Luminous X-ray Sources	Proposal title
observer	Dr Jon Miller	Principal investigator
object	M81 X-9 Obs 2	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	149.47625	Observer's specified target RA [deg]
dec_targ	69.062889	Observer's specified target Dec [deg]
ra_nom	149.45218569097	Nominal RA [deg]
dec_nom	69.058523374945	Nominal Dec [deg]
roll_nom	216.79569190837	Nominal Roll [deg]
revision	5	Processing version of data
ontime	5151.6000341177	Sum of GTIs [s]
livetime	5036.761863627	Livetime [s]
ontime2	5151.6000341177	Sum of GTIs [s]
ontime3	5151.6000341177	Sum of GTIs [s]
ontime5	5151.6000341177	Sum of GTIs [s]
ontime6	5151.6000341177	Sum of GTIs [s]
ontime7	5151.6000341177	Sum of GTIs [s]
ontime8	5151.6000341177	Sum of GTIs [s]
l2events	31811	Number of level 2 events



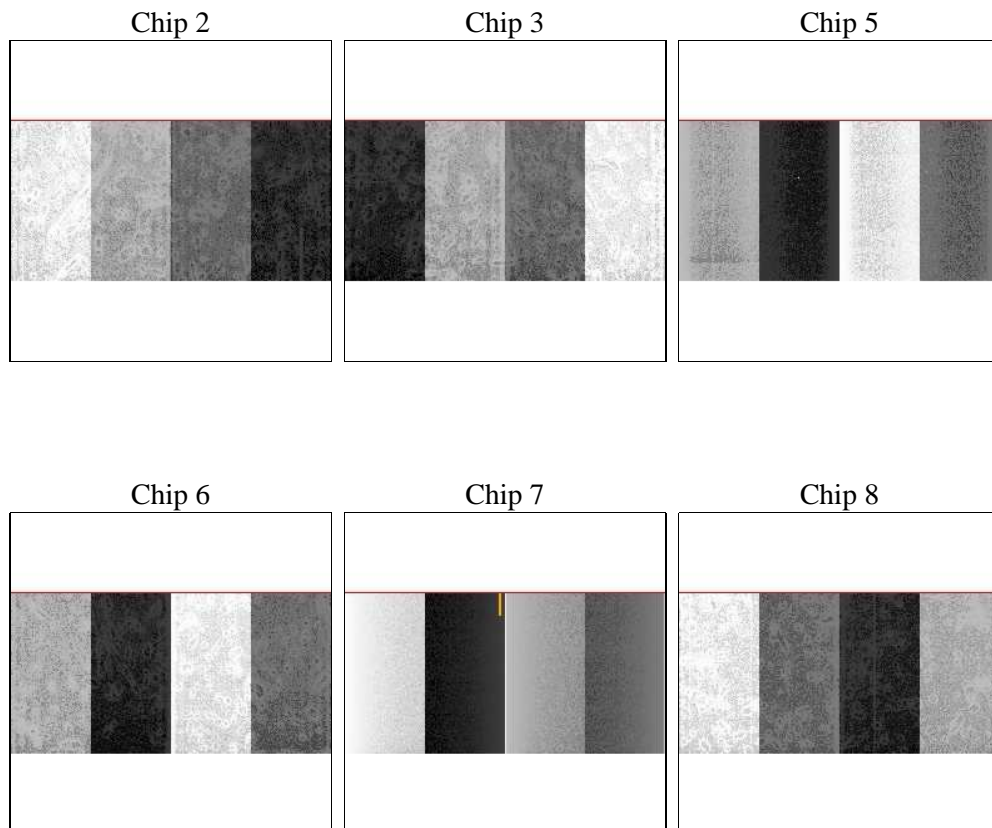
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	5151.6000341177	Sum of GTIs [s]
caldsver	4.5.2	&#160	ontime2	5151.6000341177	Sum of GTIs [s]
date	2012-11-14T10:42:53	Date and time of file creation	ontime3	5151.6000341177	Sum of GTIs [s]
revision	5	Processing version of data	ontime5	5151.6000341177	Sum of GTIs [s]
			ontime6	5151.6000341177	Sum of GTIs [s]
			ontime7	5151.6000341177	Sum of GTIs [s]
			ontime8	5151.6000341177	Sum of GTIs [s]
			l1events	169290	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	23636	22181	38779	23379	33122	28193	grade 0 events	1300	1081	6067	965	1575	1811
rejected events	21186	19950	21869	21210	20407	23433		5%	4%	15%	4%	4%	6%
rejected %	89%	89%	56%	90%	61%	83%	grade 1 events	9	14	38	13	91	13
								0%	0%	0%	0%	0%	0%
							grade 2 events	520	458	5126	513	3043	1305
								2%	2%	13%	2%	9%	4%
							grade 3 events	294	343	760	286	1408	540
								1%	1%	1%	1%	4%	1%
							grade 4 events	327	283	720	312	1407	545
								1%	1%	1%	1%	4%	1%
							grade 5 events	846	891	2809	998	3084	1239
								3%	4%	7%	4%	9%	4%
							grade 6 events	466	463	7378	494	7289	1486
								1%	2%	19%	2%	22%	5%
							grade 7 events	19874	18648	15881	19798	15225	21254
								84%	84%	40%	84%	45%	75%

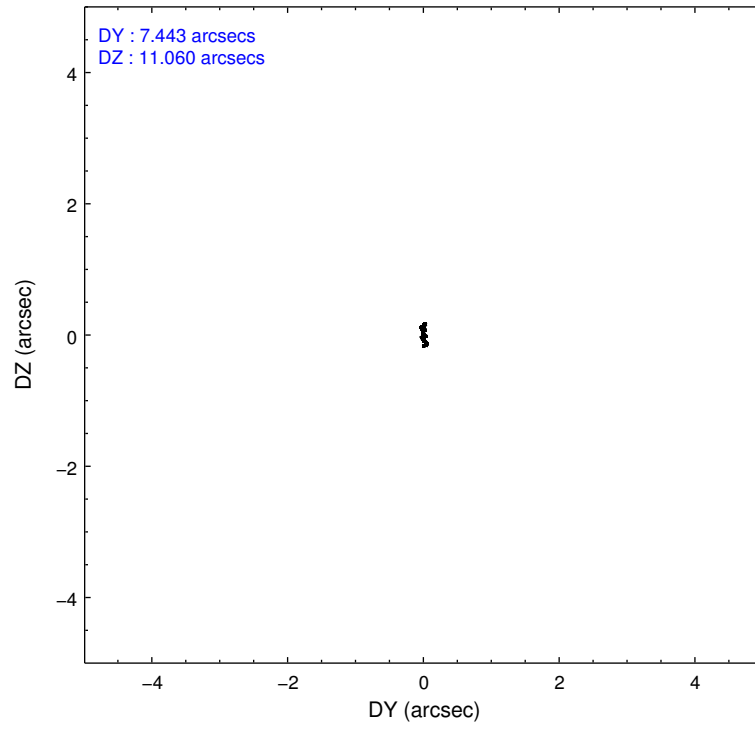
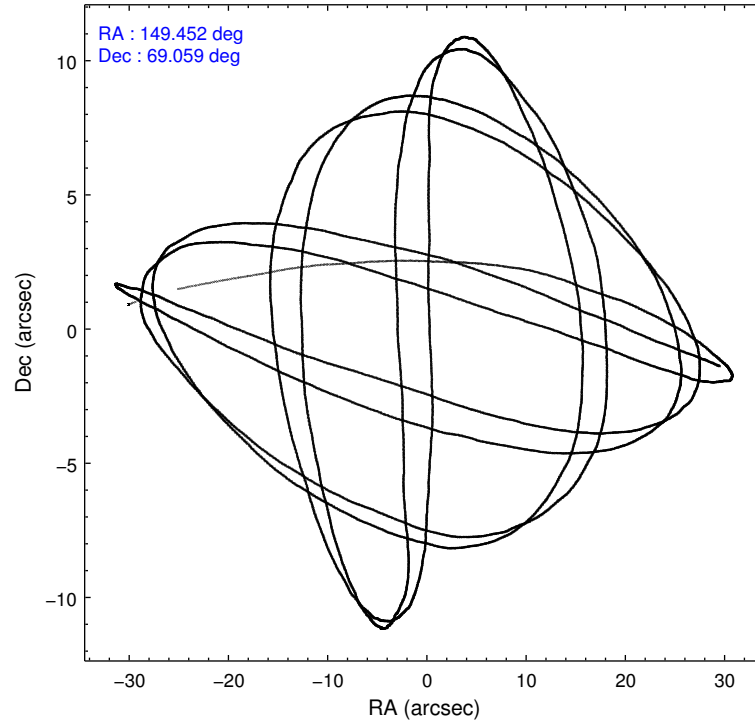


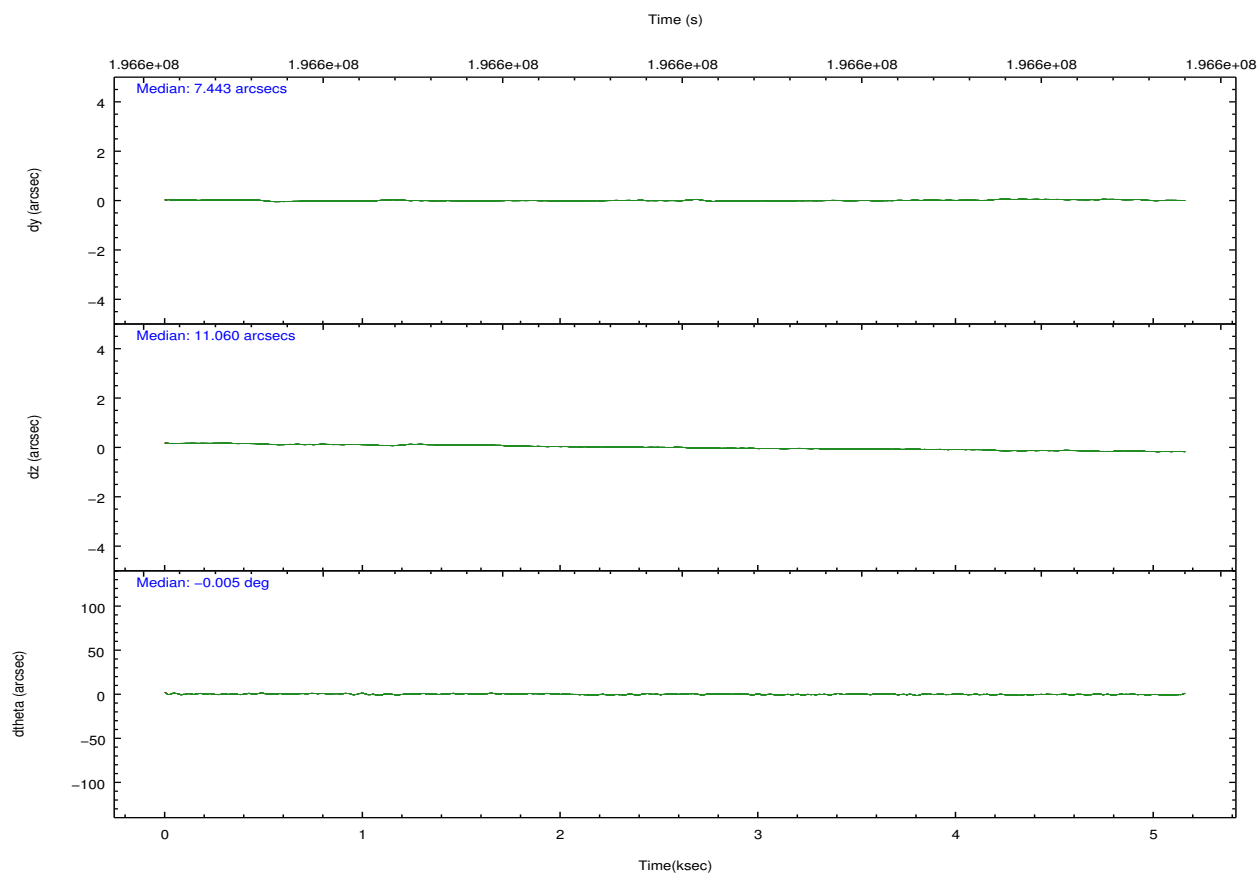
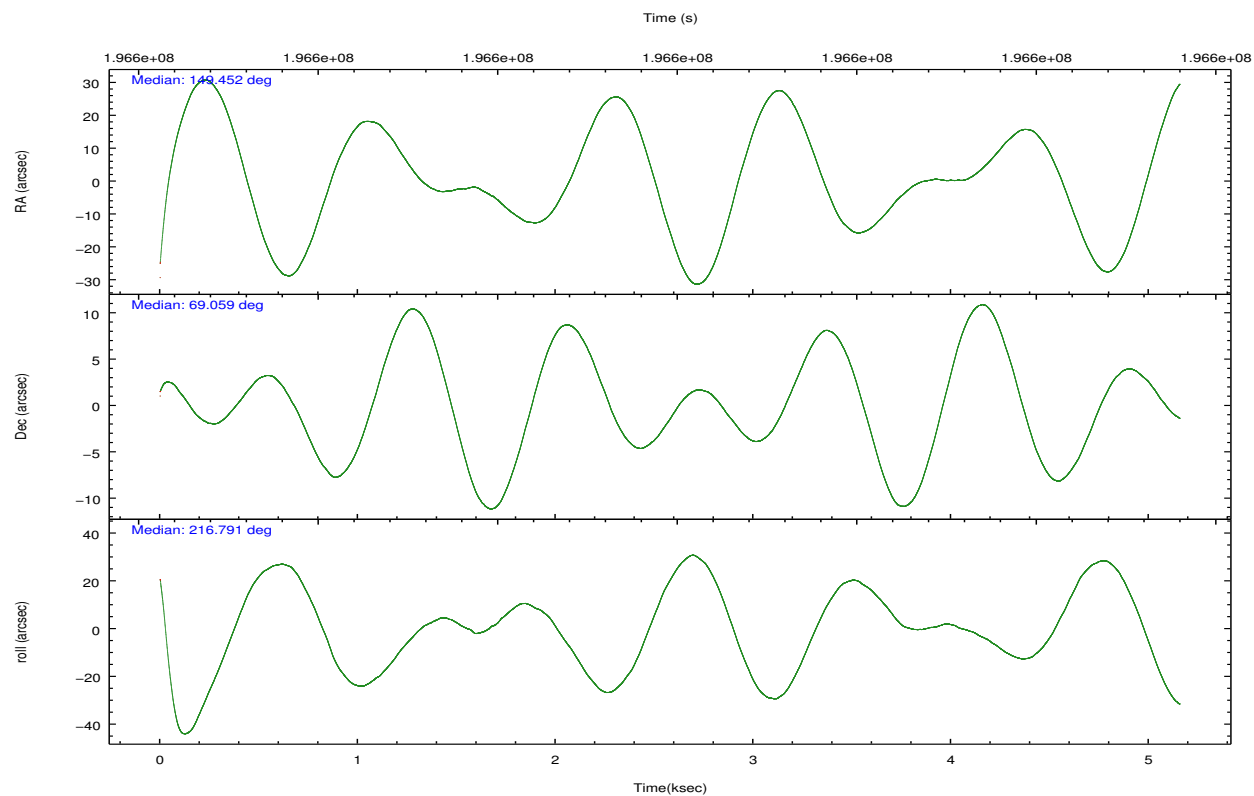
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-235678	ACIS-235678
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	149.481161	149.4521856909665
[deg] Pointing Dec	69.083713	69.05852337494483
[deg] Pointing Roll	216.611922	216.7956919083681
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1425803651734
[mm] SIM translation stage offset	0	0.01005778216563158
[s] Observation start time (MET)	196597537.184000	196596234.9044
Observation start date	2004-03-25T10:24:33	2004-03-25T10:03:54
[s] Observation end time (MET)	196602537.184000	196603286.39221
Observation end date	2004-03-25T11:47:53	2004-03-25T12:01:26
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	CUSTOM	1/2
Subarray start row	257	257
Subarray row count	512	512
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	1.8

## 2.3 Aspect



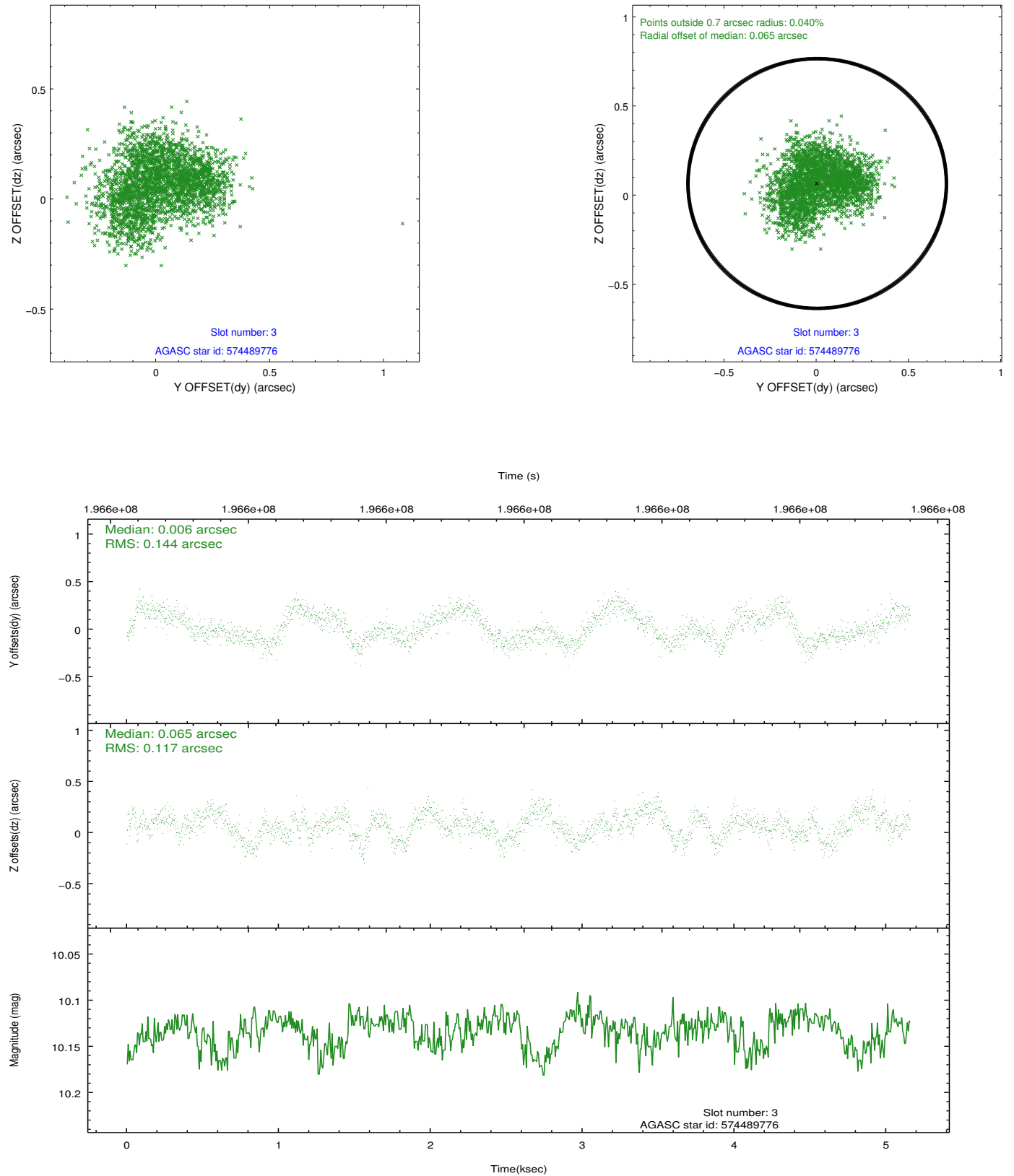


### Slot Statistics

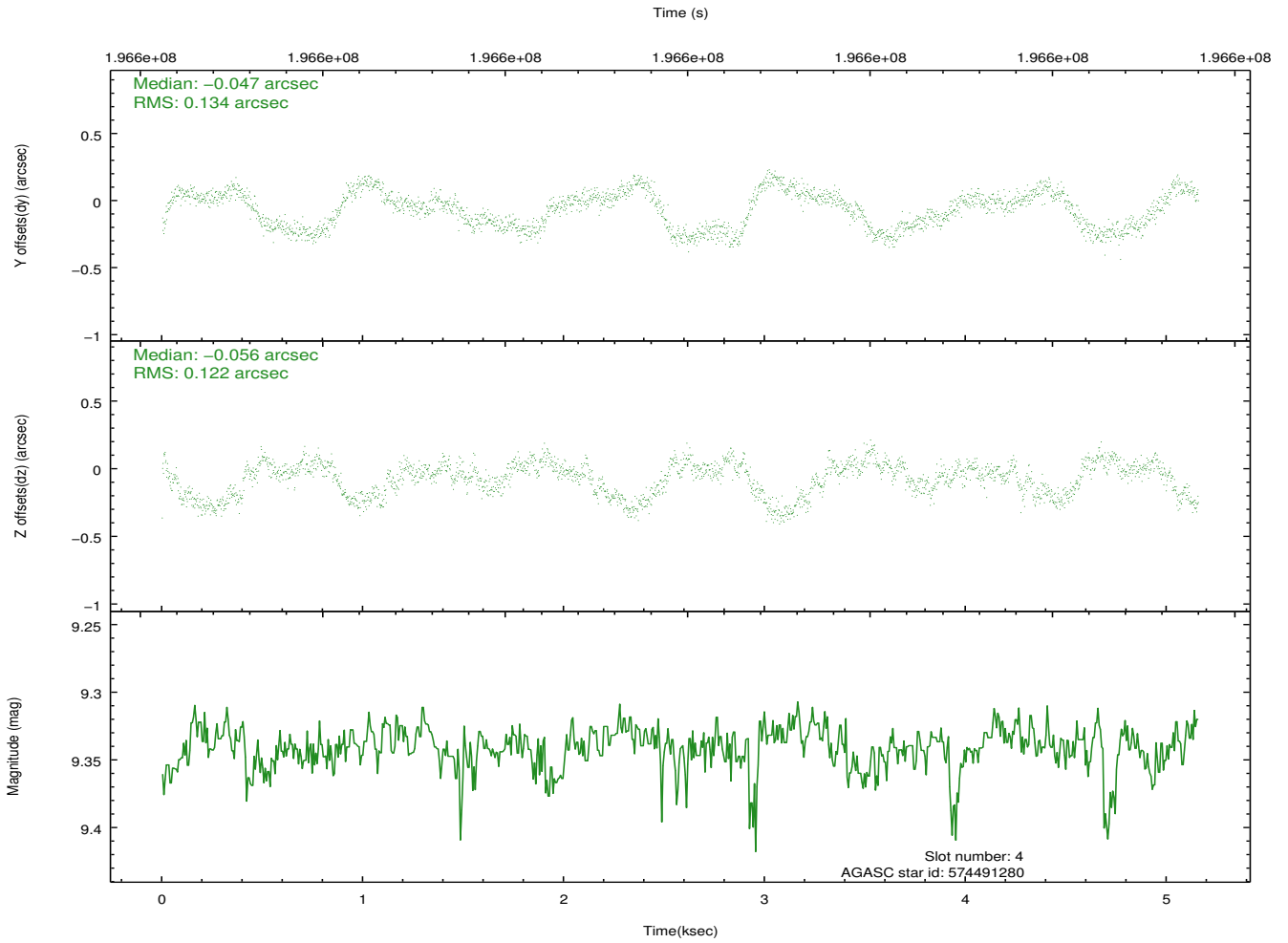
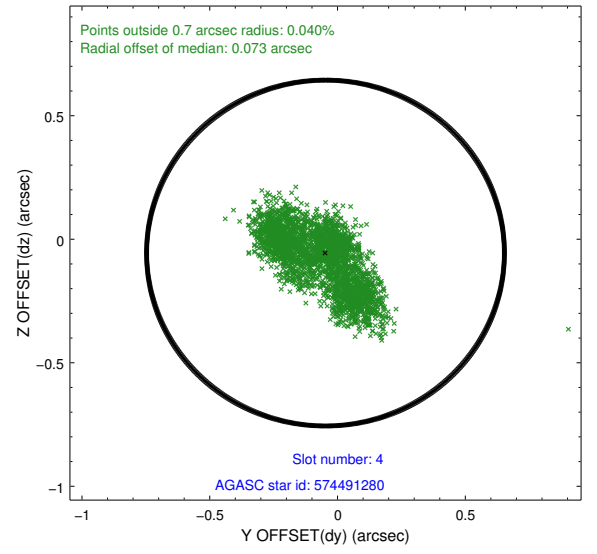
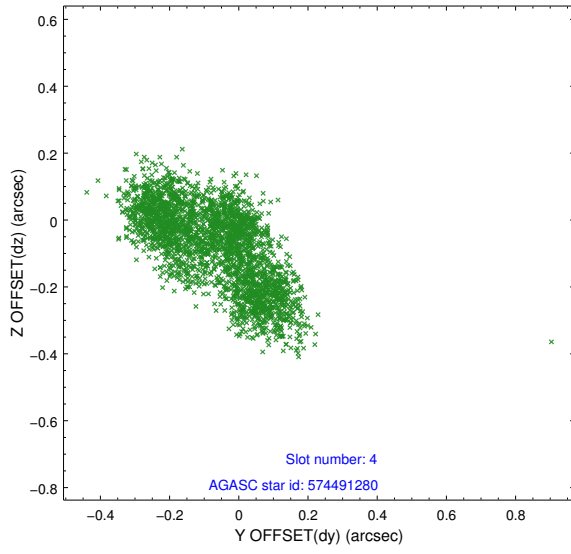
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	1259	-0.032	-0.004	0.007	0.012	0.000000	0.000000	-760.21	-1732.30
1	FID	ACIS-S-4	7.20	1259	0.064	0.017	0.006	0.012	0.000000	0.000000	2152.59	175.04
2	FID	ACIS-S-5	7.23	1259	-0.064	-0.003	0.007	0.011	0.000000	0.000000	-1811.61	169.96
3	GUIDE	574489776	10.13	2516	0.006	0.065	0.201	0.303	148.323662	69.046710	1267.87	-792.88
4	GUIDE	574491280	9.34	2517	-0.047	-0.056	0.202	0.297	148.611567	69.450135	92.58	-1720.83
5	GUIDE	574493848	10.16	2511	0.161	0.005	0.428	0.616	147.355161	69.035593	2273.66	-1532.43
6	GUIDE	574496080	9.92	2512	-0.162	-0.082	0.182	0.277	149.336129	69.802025	-1395.84	-2183.94
7	GUIDE	574496312	10.27	2511	0.050	0.083	0.155	0.249	149.547505	68.718299	715.02	1106.86

## 2.4 Star Slots

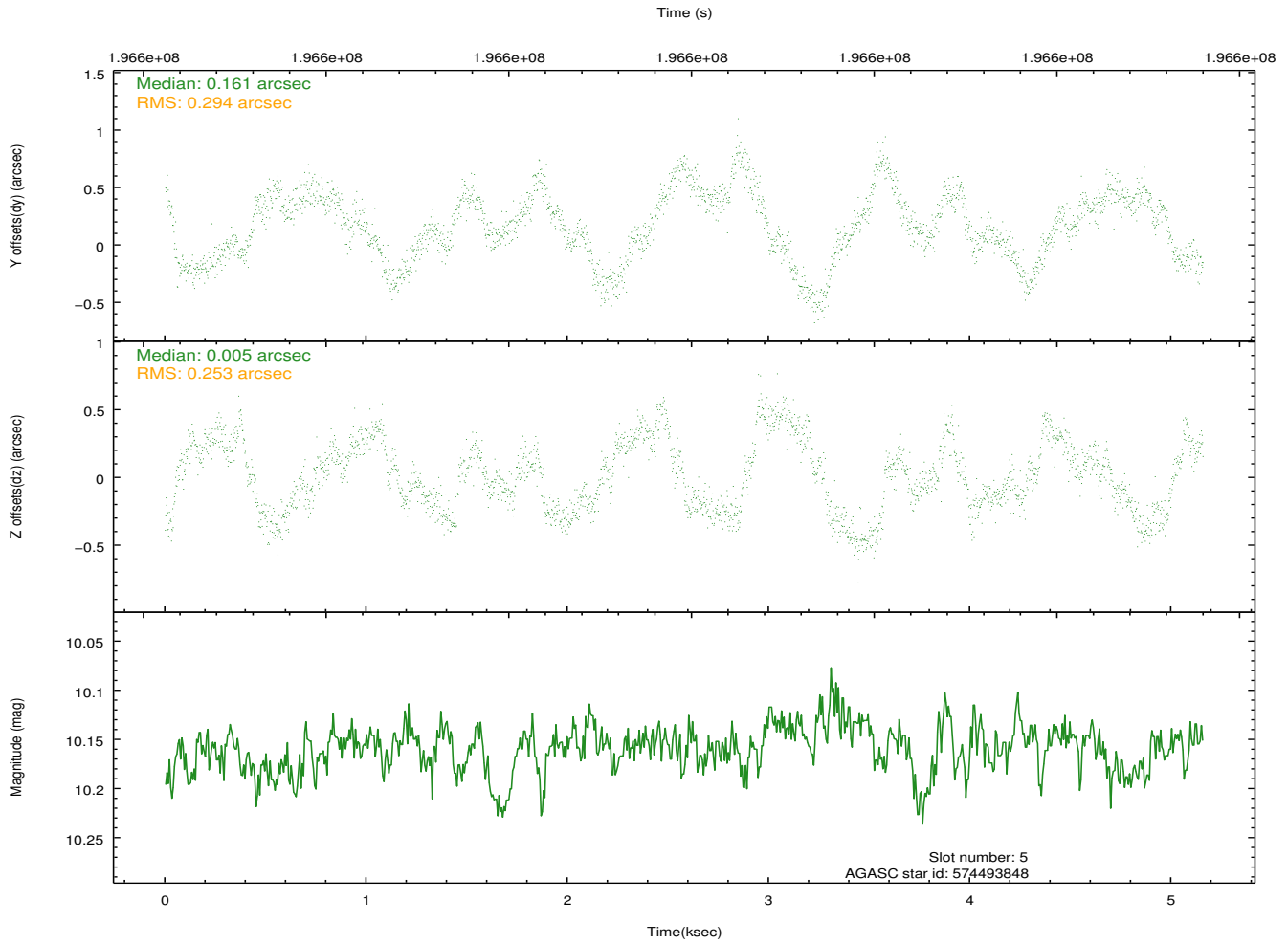
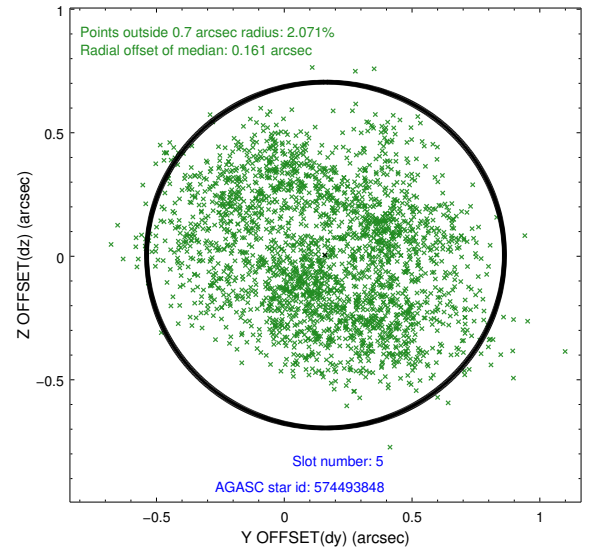
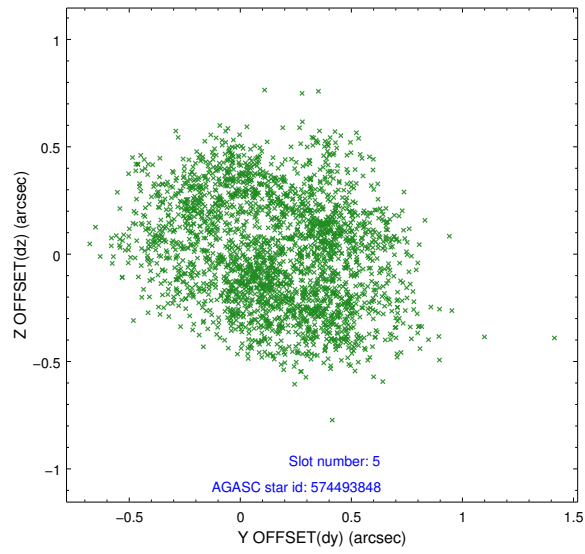
### 2.4.1 Slot 3



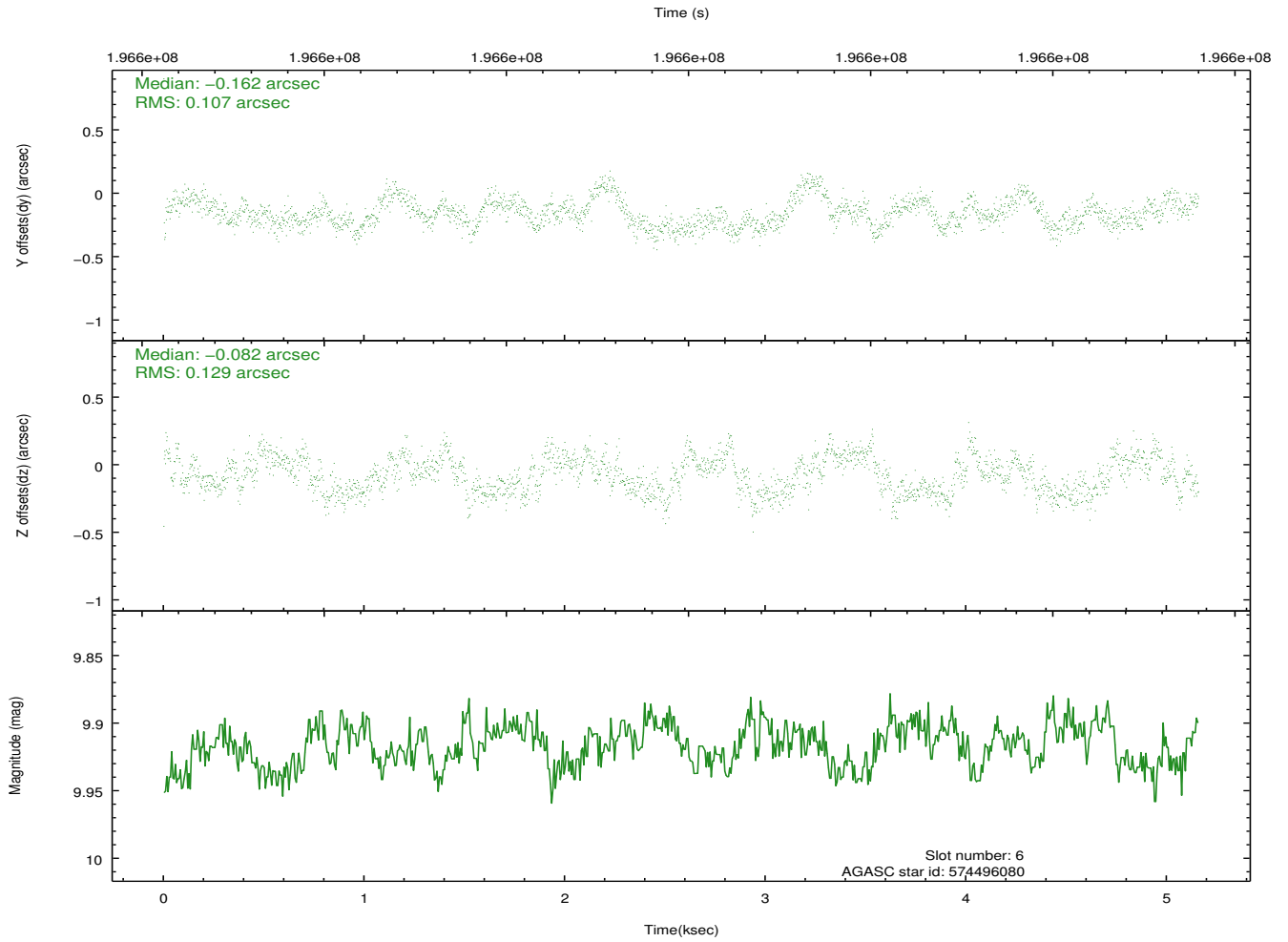
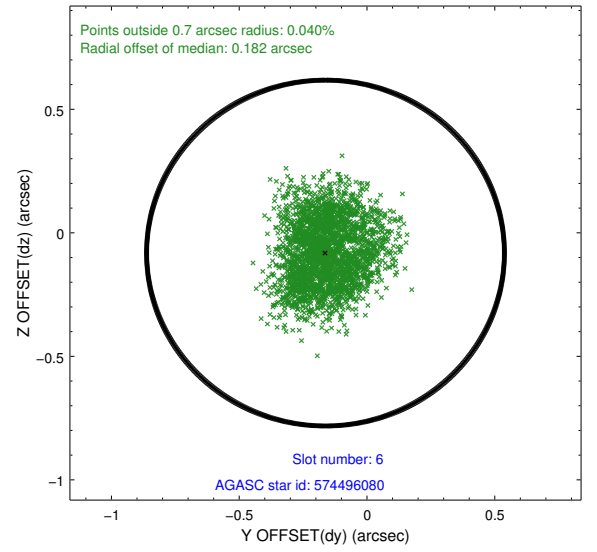
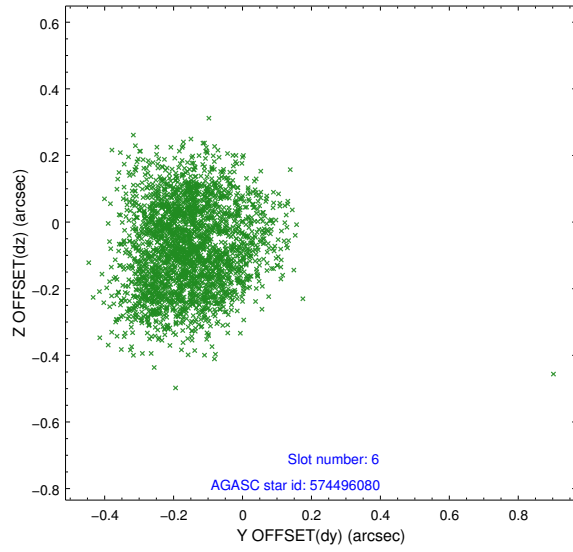
## 2.4.2 Slot 4



### 2.4.3 Slot 5

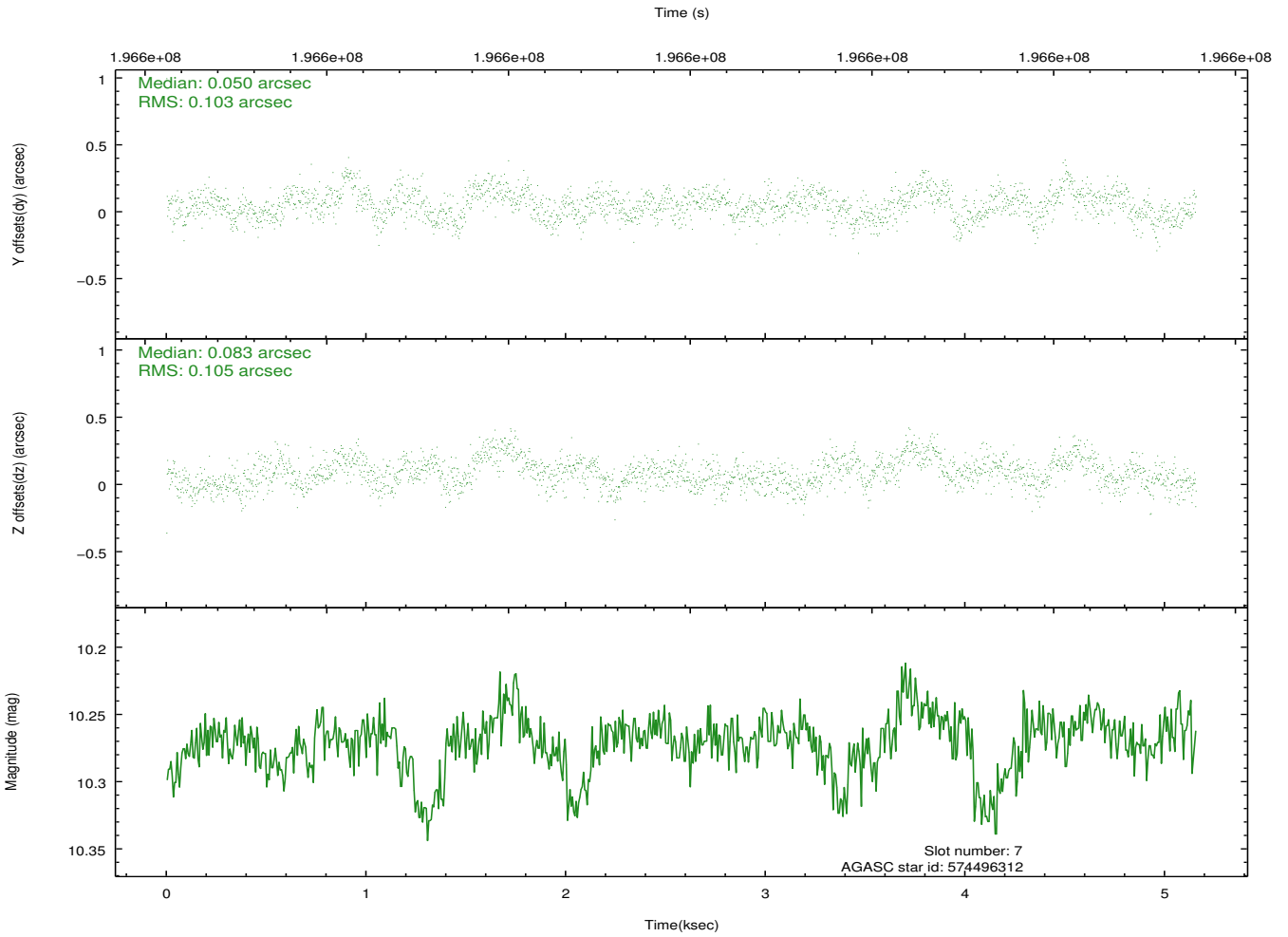
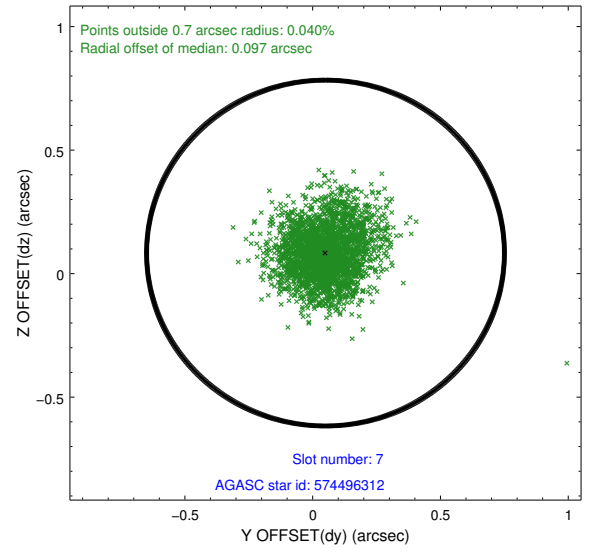
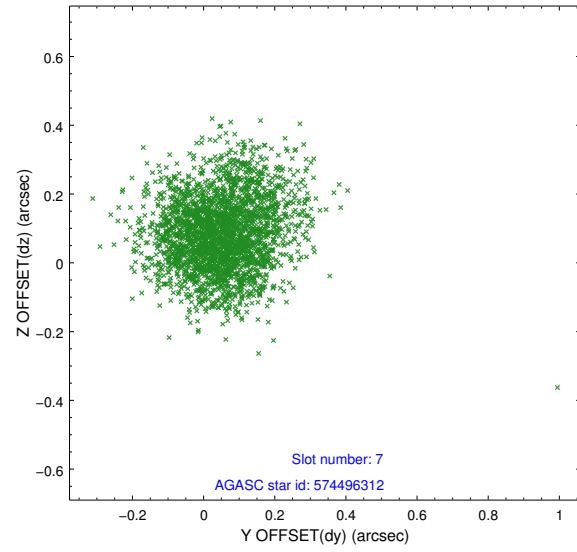


## 2.4.4 Slot 6



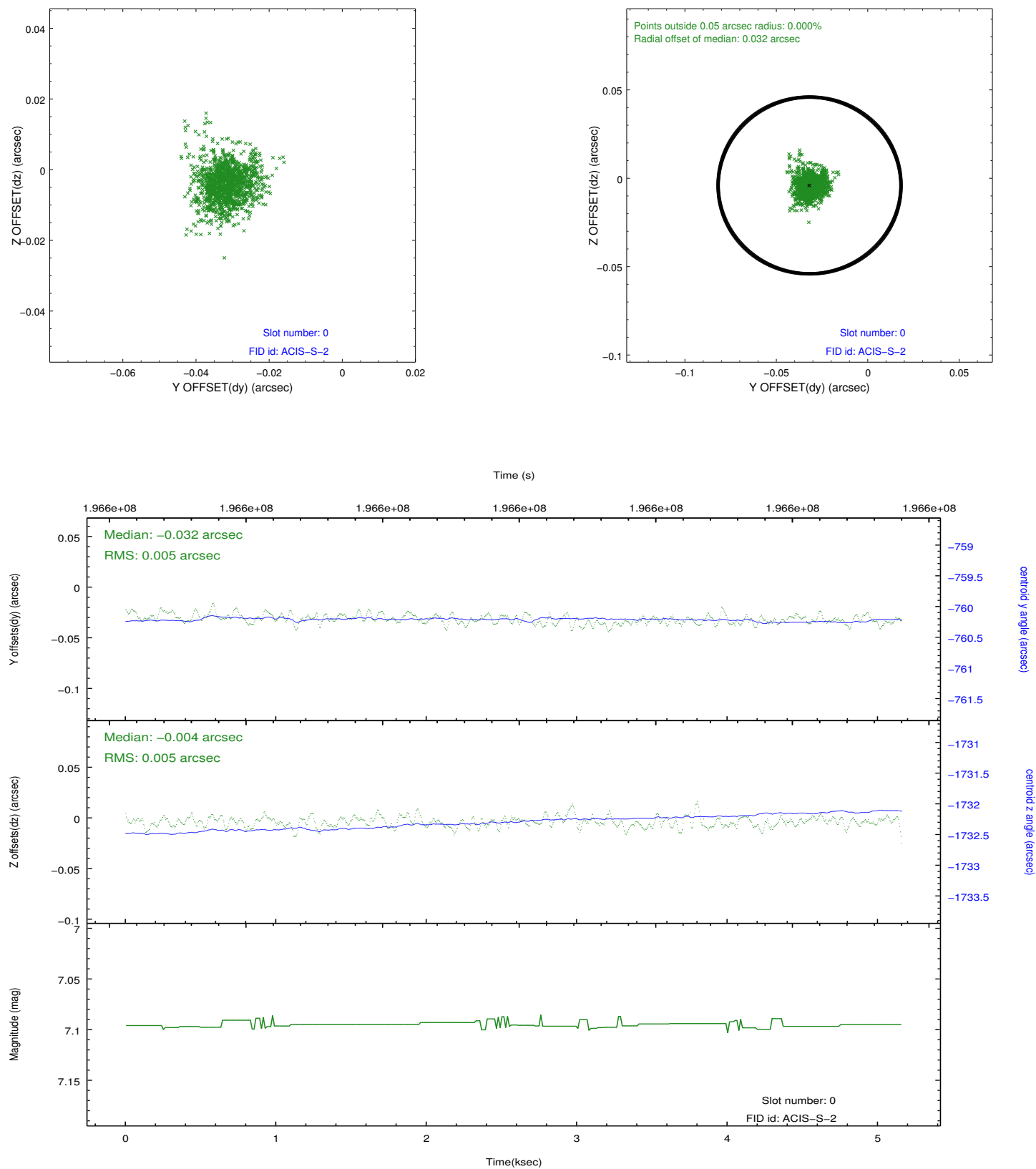


## 2.4.5 Slot 7

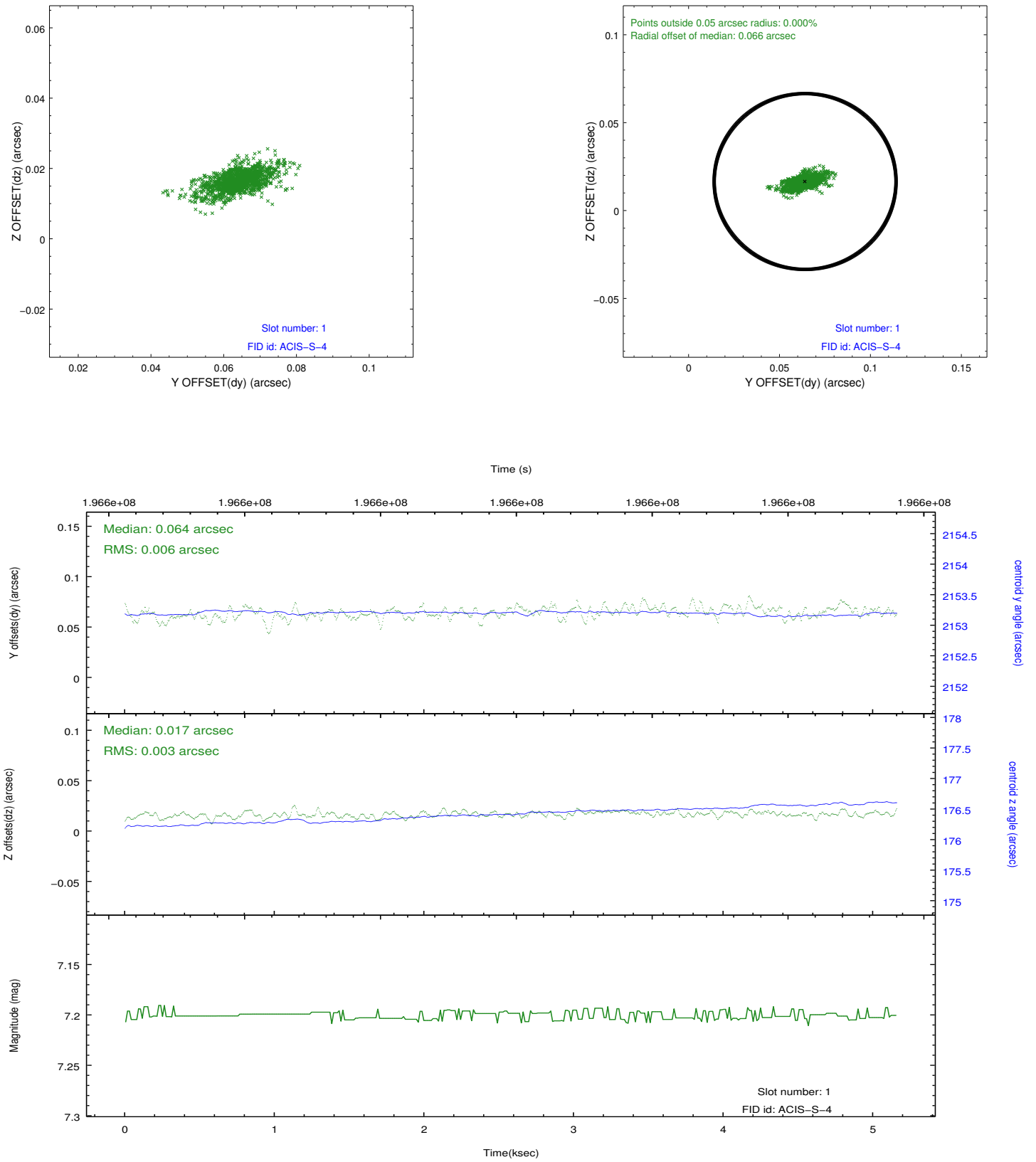


## 2.5 FID Slots

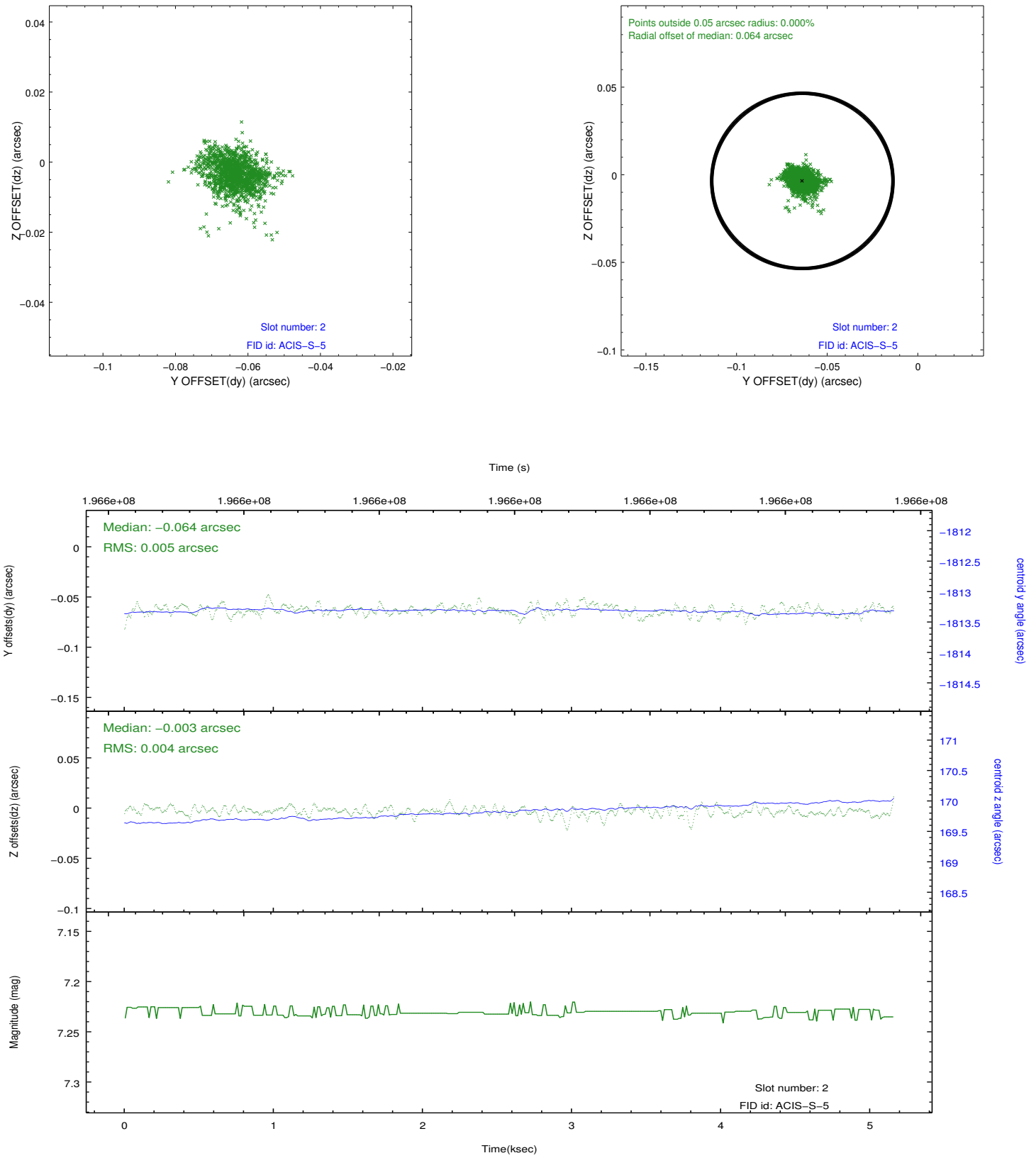
### 2.5.1 Slot 0



## 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)	2012.12.14
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.151

## A.2 Comments

Window preference not met for the first half hour of the observation.  
Joint Proposal: CX0-HST