

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 4204 - L2 Version 3  
Chandra X-Ray Center

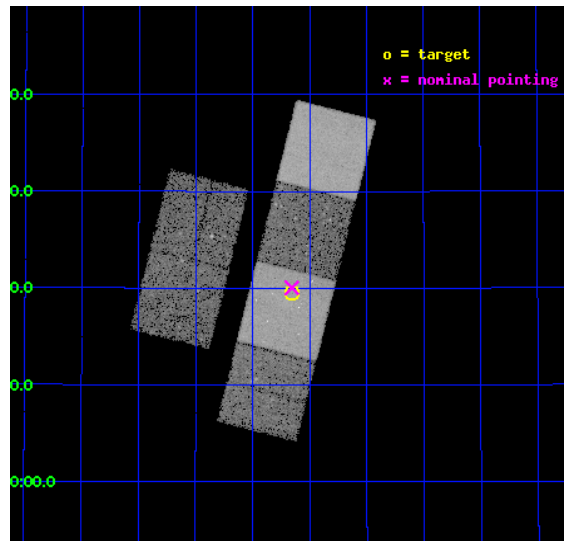
L2 Processing Date : Oct 18 2012

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# 1 Front

seq_num	800360	Sequence number
obs_id	4204	Observation id
title	THE NATURE OF LOW SURFACE BRIGHTNESS X-RAY CLUSTERS OF GALAXIES	Pr
observer	Dr. DAVID BUOTE	Principal investigator
object	1310	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	109.165	Observer's specified target RA [deg]
dec_targ	37.324389	Observer's specified target Dec [deg]
ra_nom	109.16415209796	Nominal RA [deg]
dec_nom	37.334010714039	Nominal Dec [deg]
roll_nom	104.07374458911	Nominal Roll [deg]
revision	3	Processing version of data
ontime	23919.013724357	Sum of GTIs [s]
livetime	23616.136770278	Livetime [s]
ontime2	23912.572873592	Sum of GTIs [s]
ontime3	23915.64962405	Sum of GTIs [s]
ontime5	23915.7317141	Sum of GTIs [s]
ontime6	23918.93164435	Sum of GTIs [s]
ontime7	23919.013724357	Sum of GTIs [s]
ontime8	23918.849564373	Sum of GTIs [s]
l2events	187406	Number of level 2 events

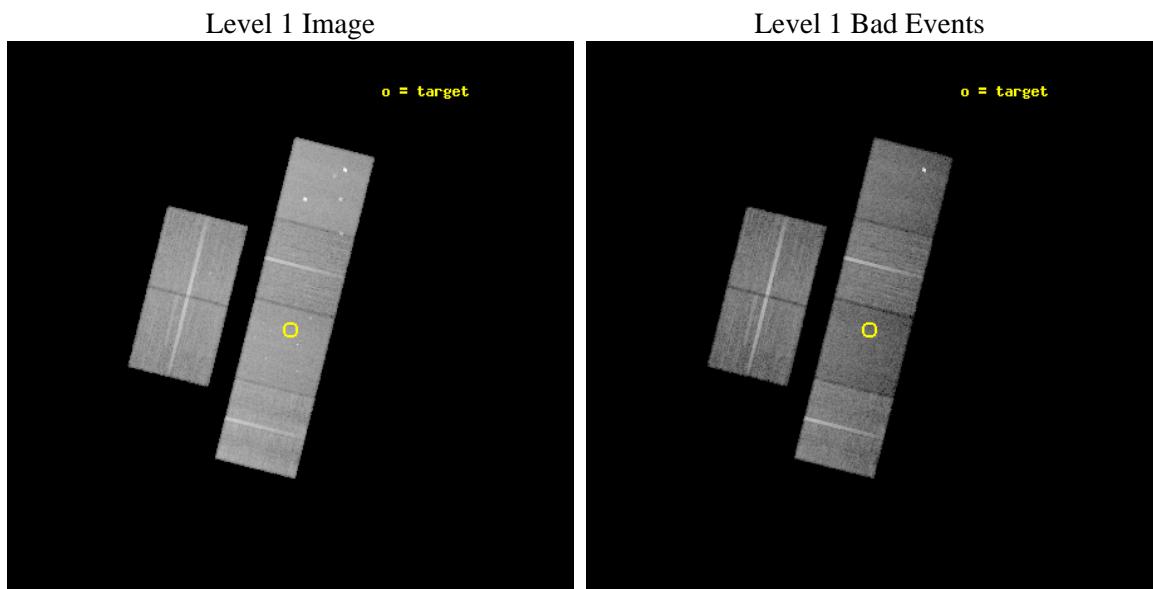




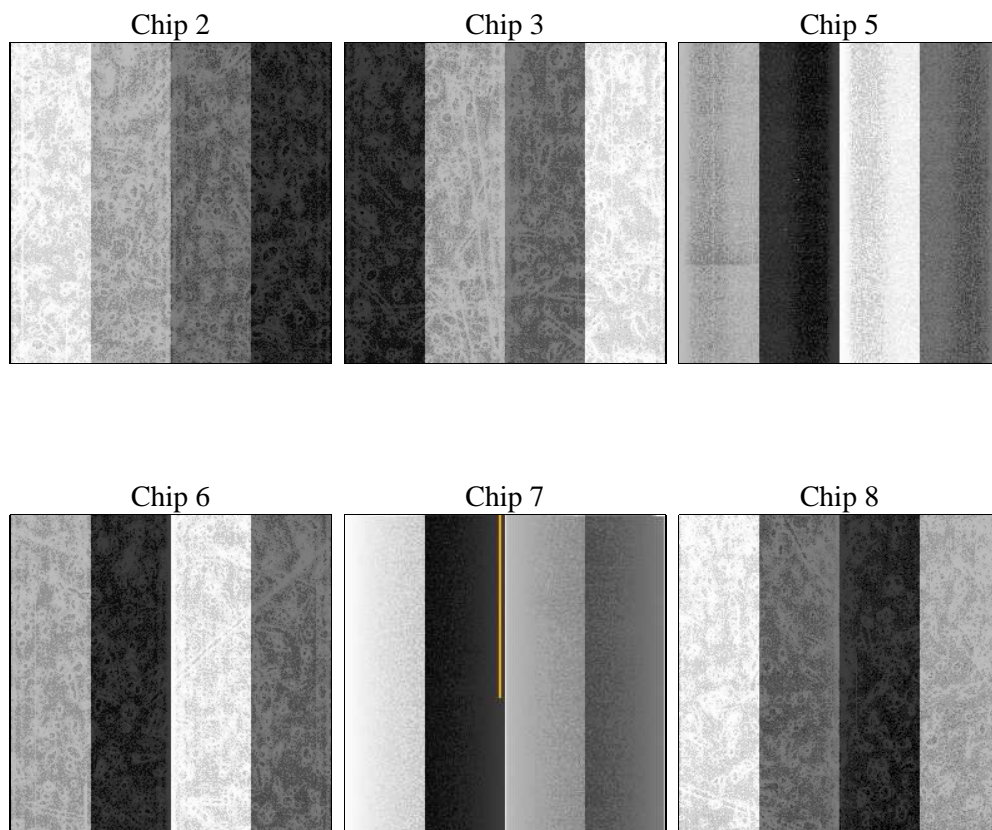
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	24000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	23919.013724357	Sum of GTIs [s]
caldsver	4.5.2	&#160	ontime2	23912.572873592	Sum of GTIs [s]
date	2012-10-18T13:58:14	Date and time of file creation	ontime3	23915.64962405	Sum of GTIs [s]
revision	3	Processing version of data	ontime5	23915.7317141	Sum of GTIs [s]
			ontime6	23918.93164435	Sum of GTIs [s]
			ontime7	23919.013724357	Sum of GTIs [s]
			ontime8	23918.849564373	Sum of GTIs [s]
			l1events	870352	Number of level 1 events

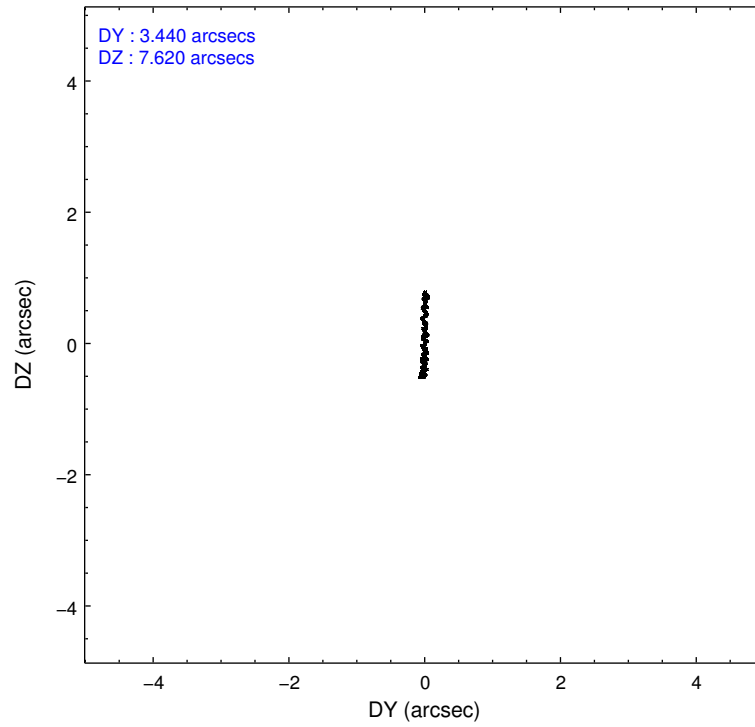
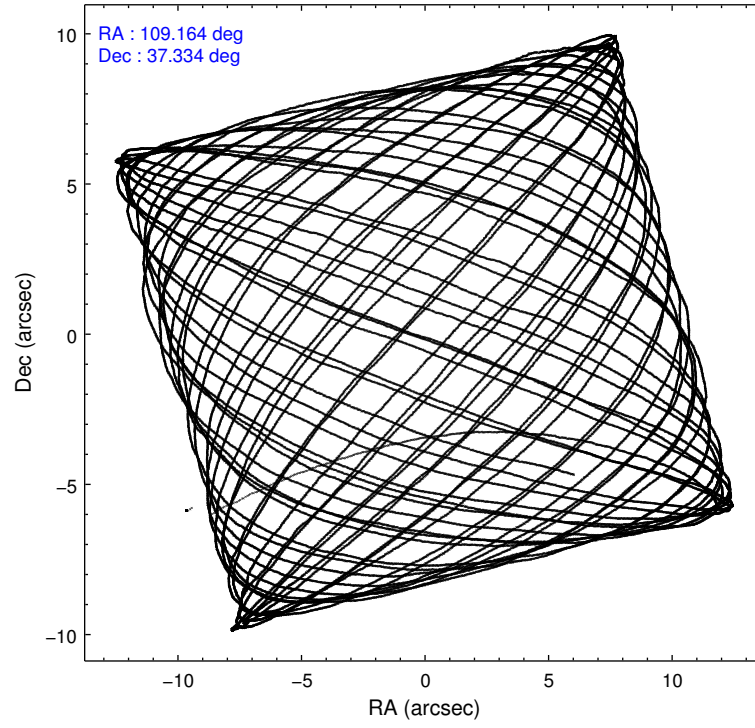
### 2.1.4 Events

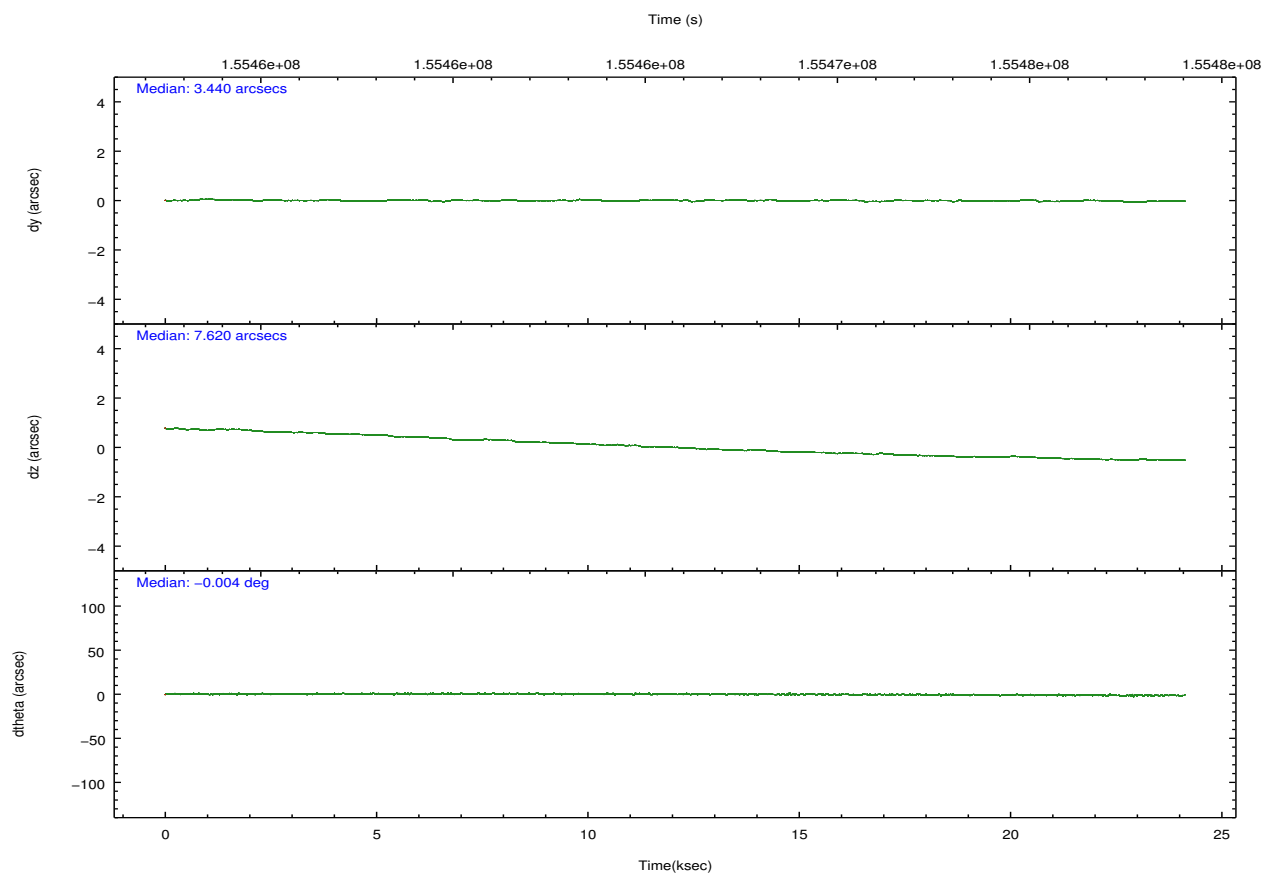
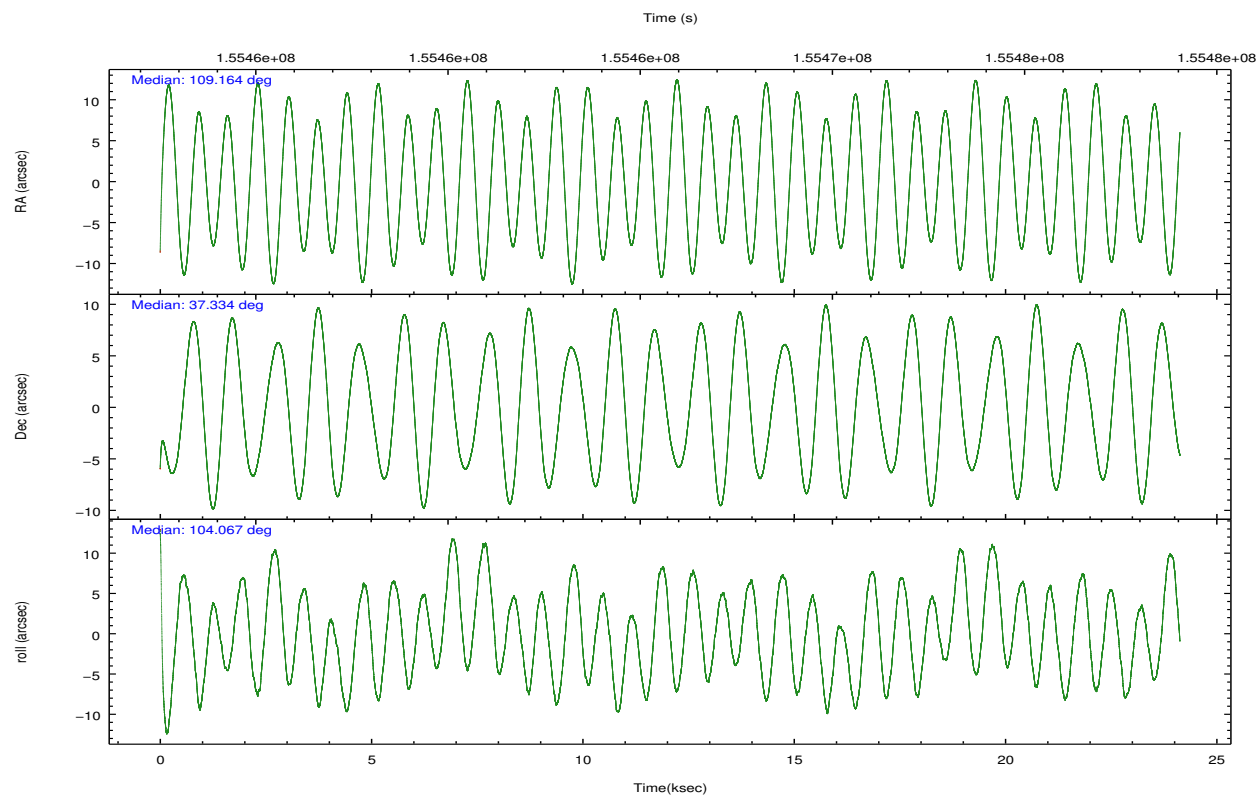
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	137076	125702	175754	130721	140386	160713	grade 0 events	4656	4227	12109	5154	6467	11138
rejected events	124556	114091	87459	117009	74717	124326		3%	3%	6%	3%	4%	6%
rejected %	90%	90%	49%	89%	53%	77%	grade 1 events	65	69	138	62	123	93
								0%	0%	0%	0%	0%	0%
							grade 2 events	2816	2381	25511	2846	13604	8015
								2%	1%	14%	2%	9%	4%
							grade 3 events	1378	1420	3929	1514	6390	3970
								1%	1%	2%	1%	4%	2%
							grade 4 events	1411	1355	3676	1458	6221	3631
								1%	1%	2%	1%	4%	2%
							grade 5 events	4132	4733	14477	4922	14840	6791
								3%	3%	8%	3%	10%	4%
							grade 6 events	2263	2232	43092	2741	33007	9639
								1%	1%	24%	2%	23%	5%
							grade 7 events	120355	109285	72822	112024	59734	117436
								87%	86%	41%	85%	42%	73%

## 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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	109.188305	109.1641520979589	Subarray requested	NONE	NONE
[deg] Pointing Dec	37.314734	37.3340107140392	Alternating exposures requested	N	N
[deg] Pointing Roll	103.902466	104.0737445891056	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	155453837.184000	155452765.4332			
Observation start date	2002-12-05T05:36:13	2002-12-05T05:19:25			
[s] Observation end time (MET)	155477837.184000	155478550.33428			
Observation end date	2002-12-05T12:16:13	2002-12-05T12:29:10			
Read mode	TIMED	TIMED			

## 2.3 Aspect



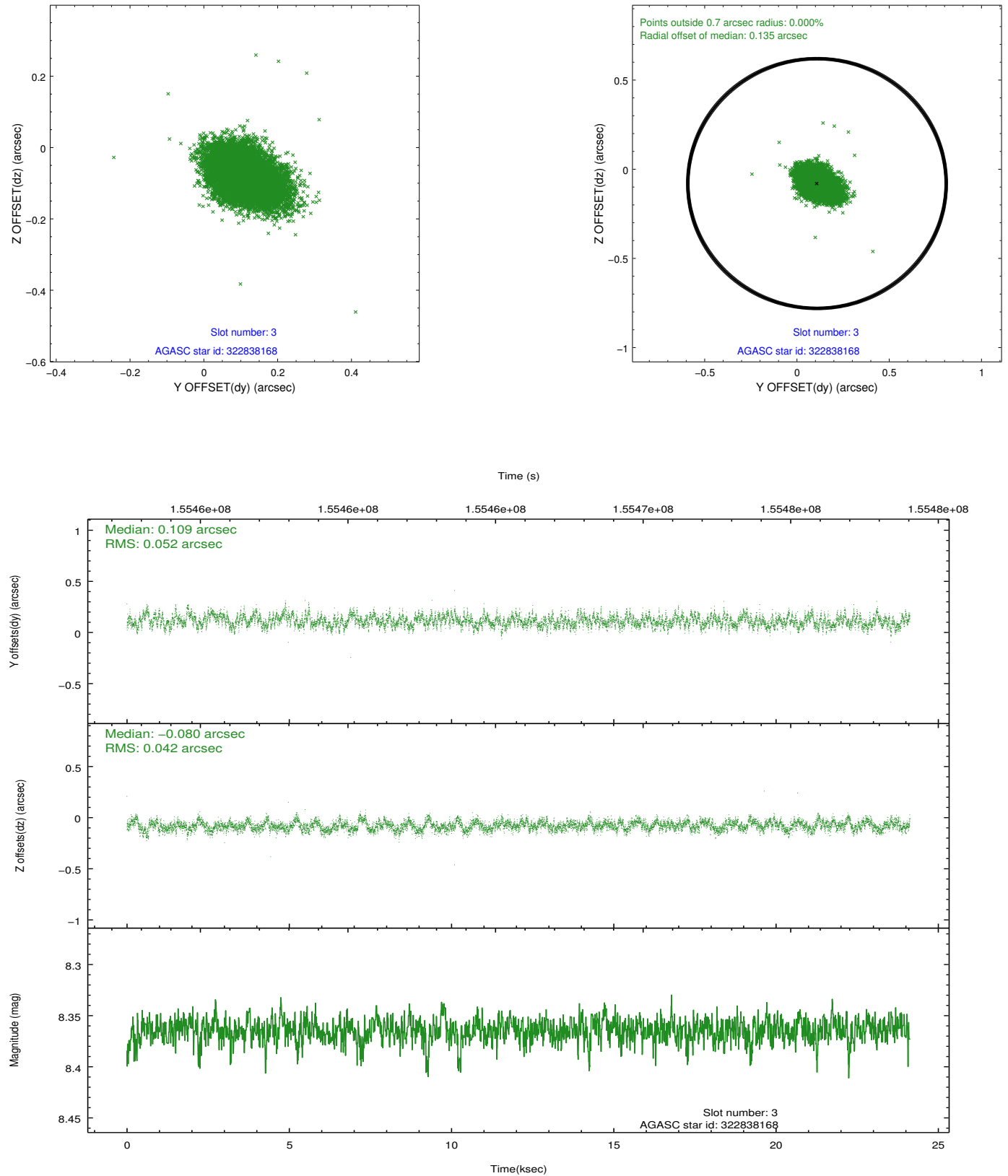


### Slot Statistics

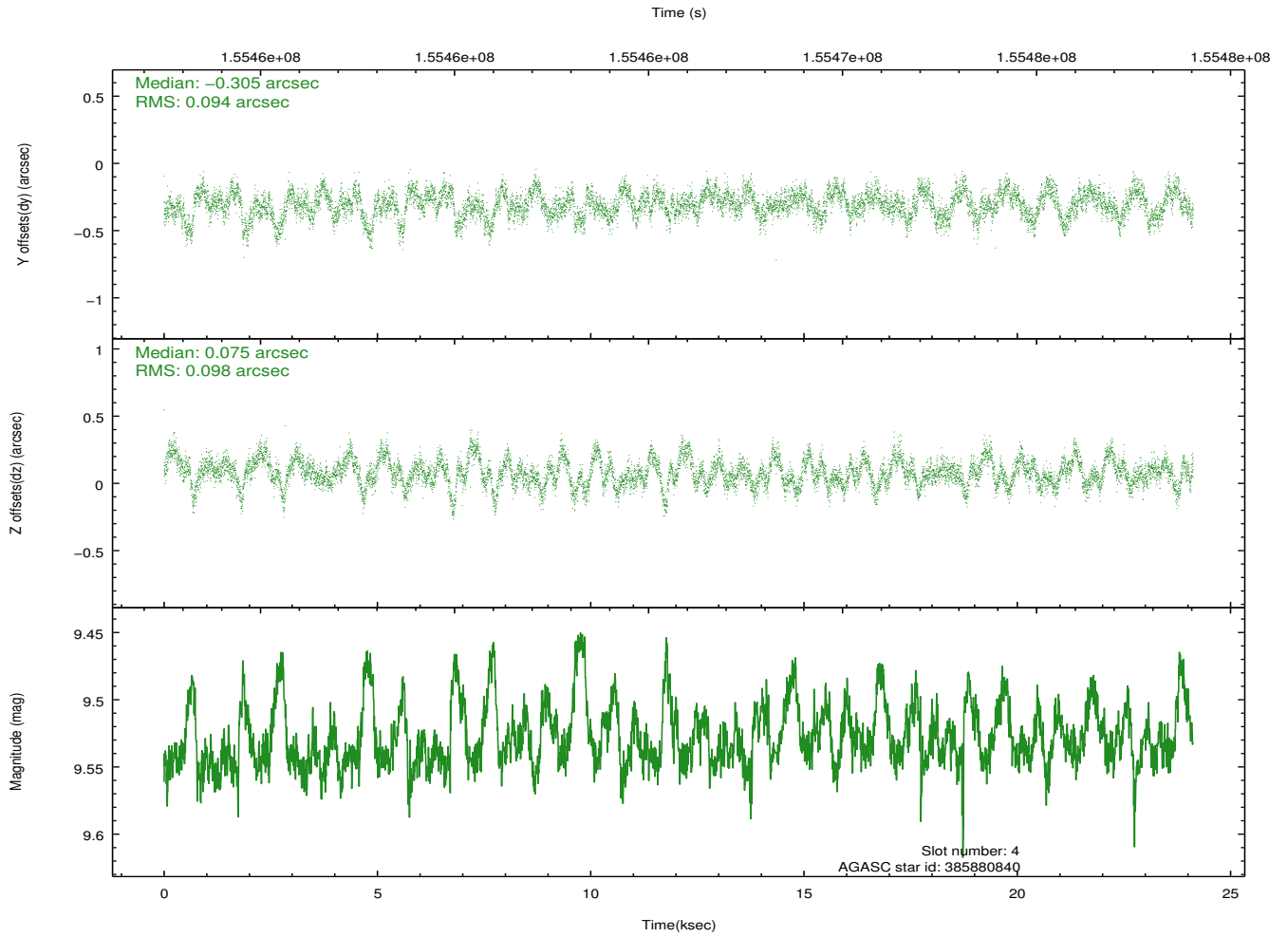
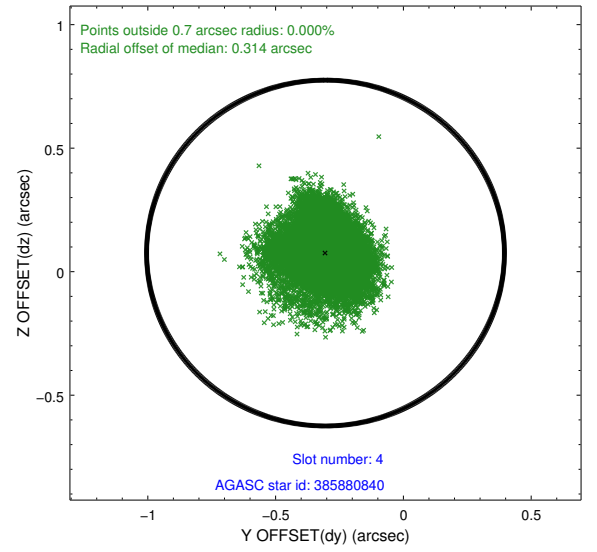
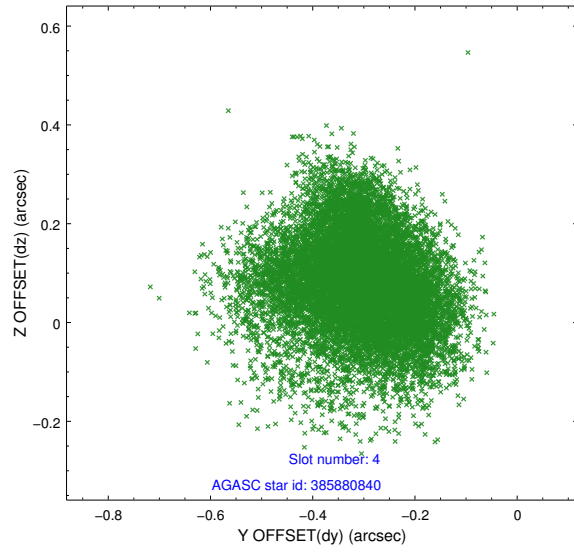
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.12	5886	-0.003	0.006	0.009	0.014	0.000000	0.000000	-756.10	-1728.84
1	FID	ACIS-S-4	7.20	5885	-0.014	0.000	0.006	0.011	0.000000	0.000000	2157.11	179.49
2	FID	ACIS-S-5	7.24	5885	-0.013	0.003	0.008	0.013	0.000000	0.000000	-1808.78	173.33
3	GUIDE	322838168	8.36	11767	0.109	-0.080	0.070	0.115	108.960114	36.785761	-1689.17	1096.14
4	GUIDE	385880840	9.53	11720	-0.305	0.075	0.145	0.233	109.189108	37.768015	1583.65	-393.62
5	GUIDE	385882952	9.62	11757	-0.055	0.042	0.135	0.216	109.757334	38.073091	2268.35	-2222.07
6	GUIDE	322838088	9.91	11765	0.039	-0.148	0.117	0.191	108.888893	36.899361	-1242.44	1195.55
7	GUIDE	322838488	9.54	11767	0.216	0.111	0.093	0.151	109.541631	36.767704	-2153.86	-516.11

## 2.4 Star Slots

### 2.4.1 Slot 3

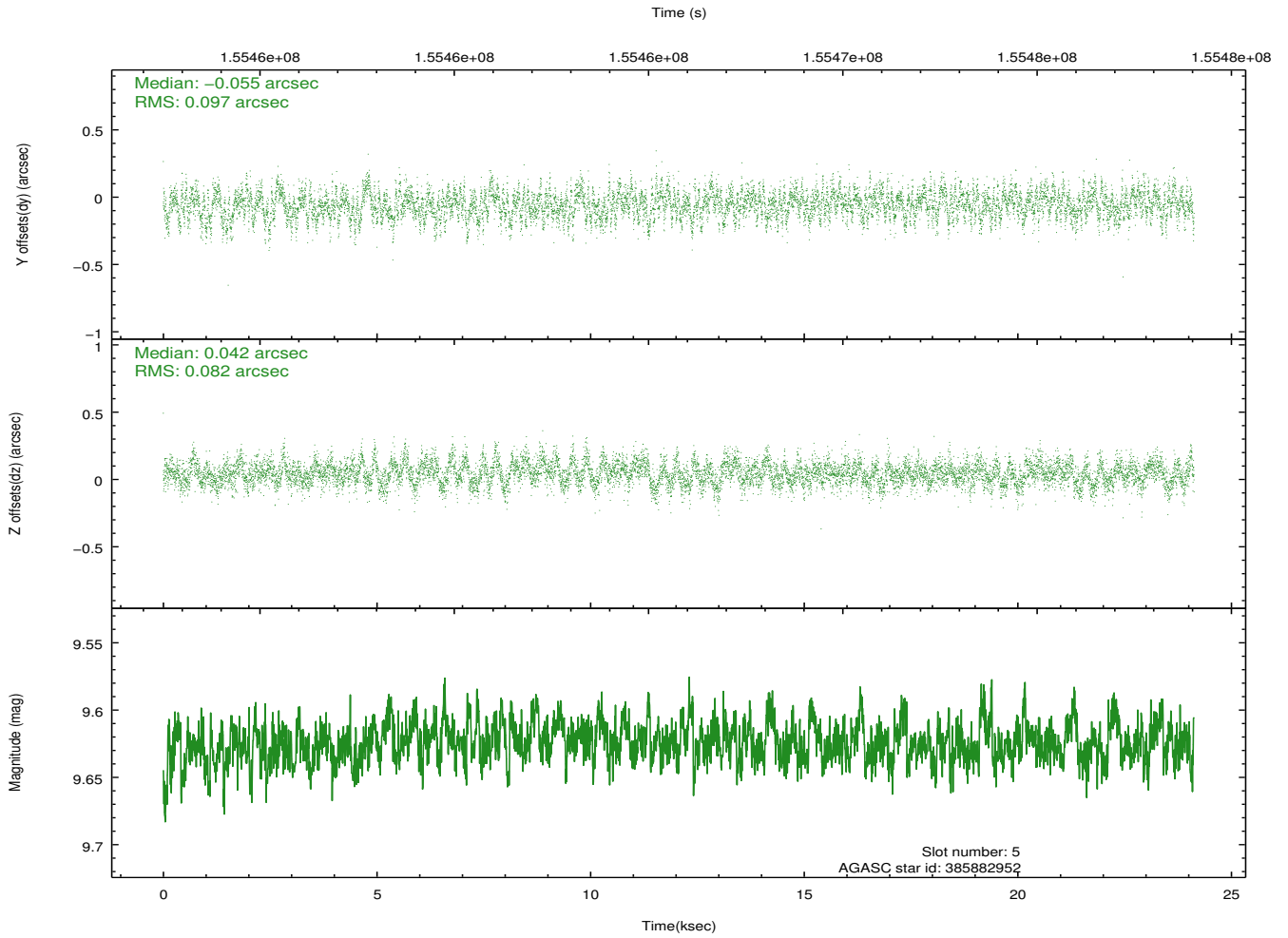
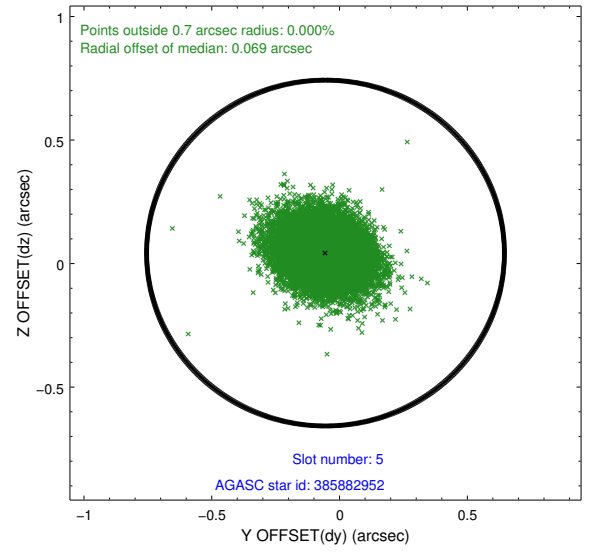
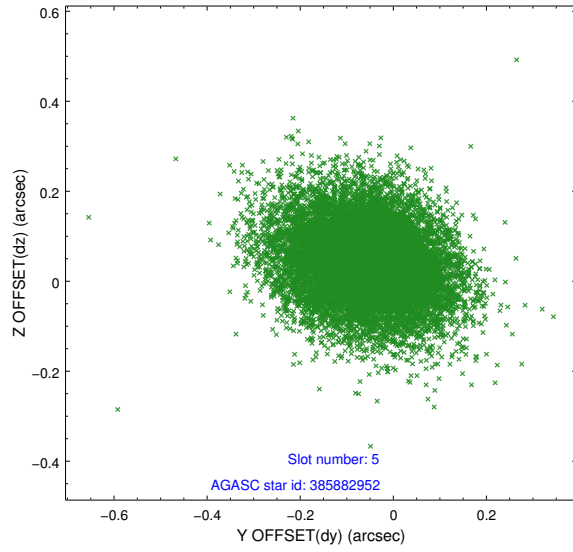


## 2.4.2 Slot 4

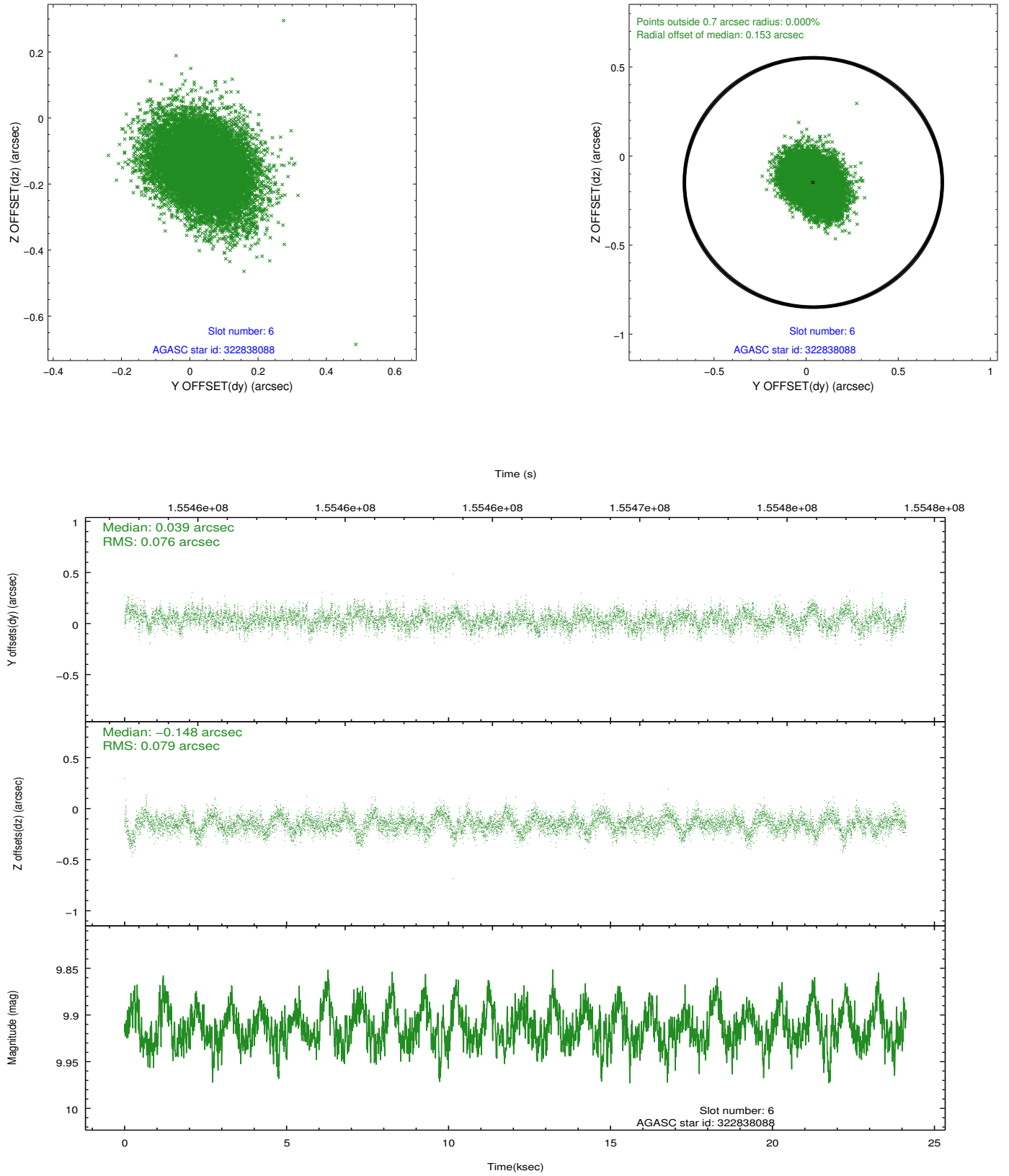




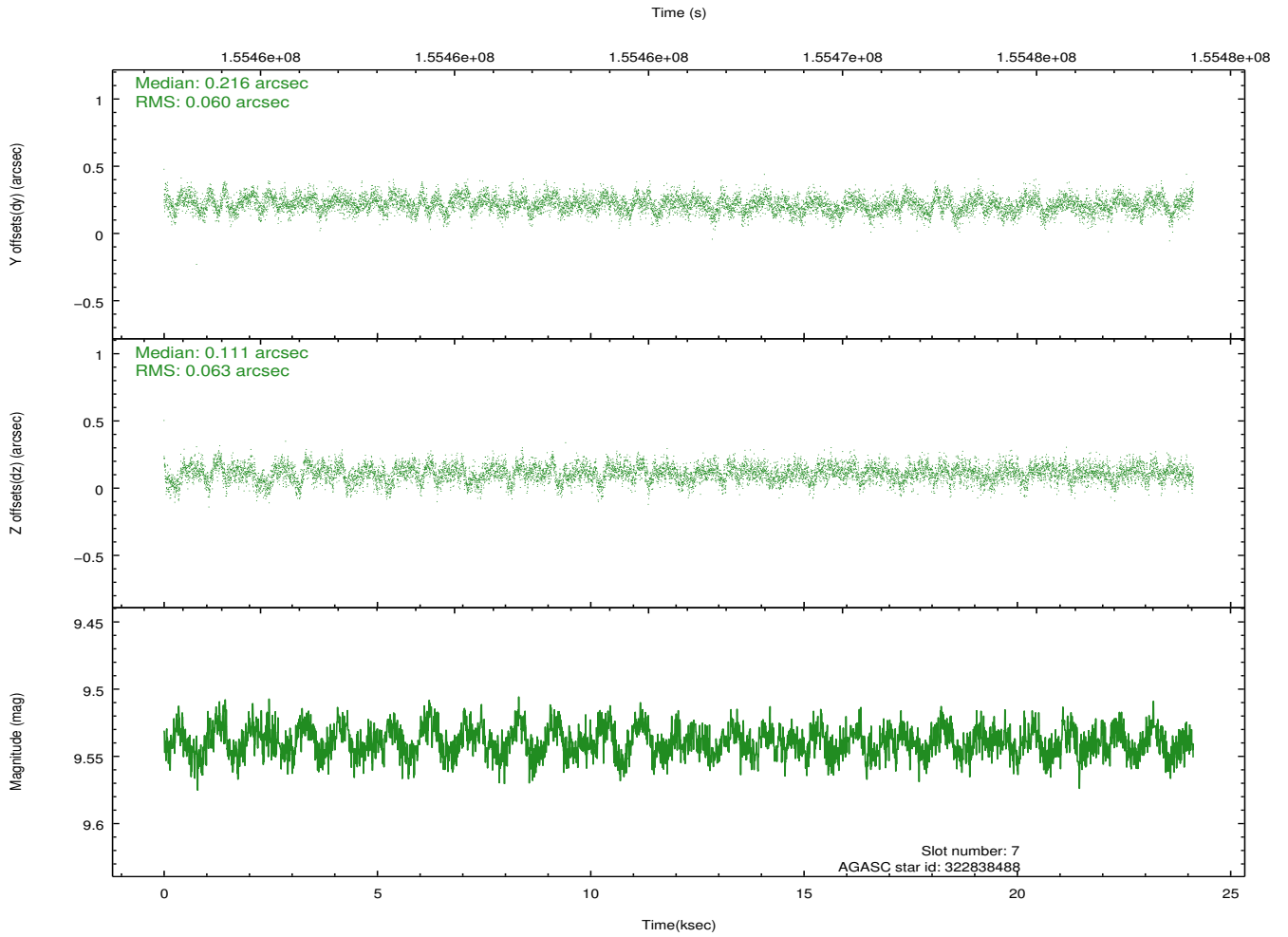
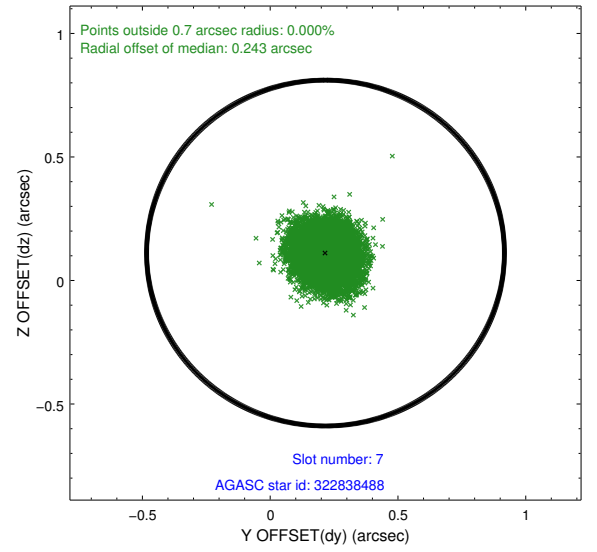
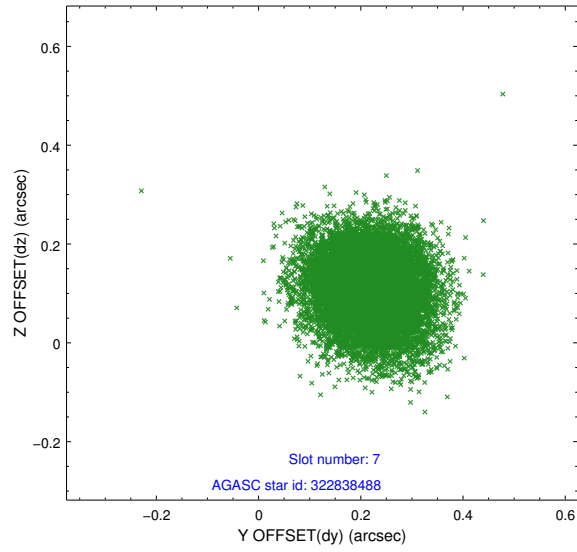
### 2.4.3 Slot 5



## 2.4.4 Slot 6

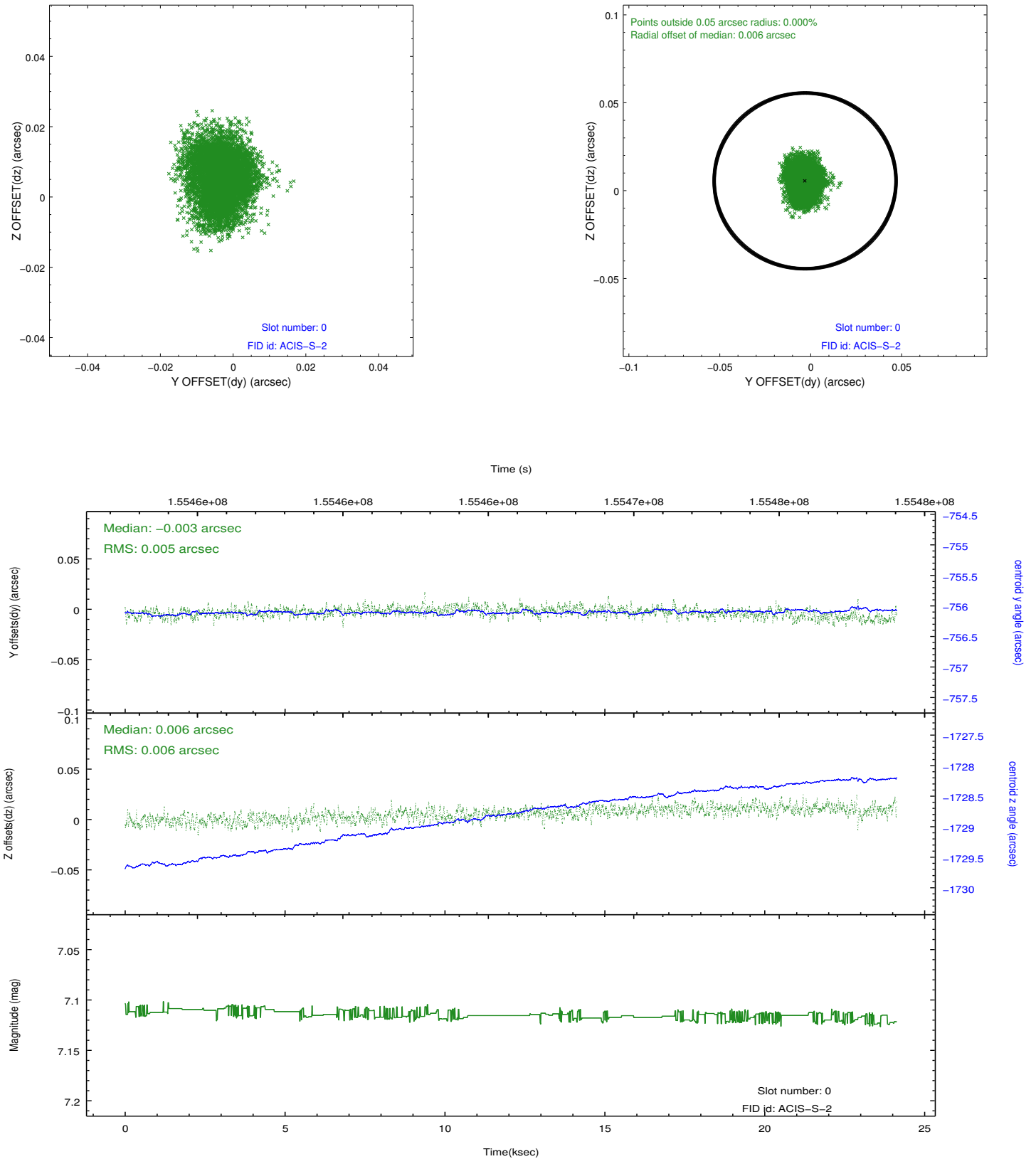


## 2.4.5 Slot 7

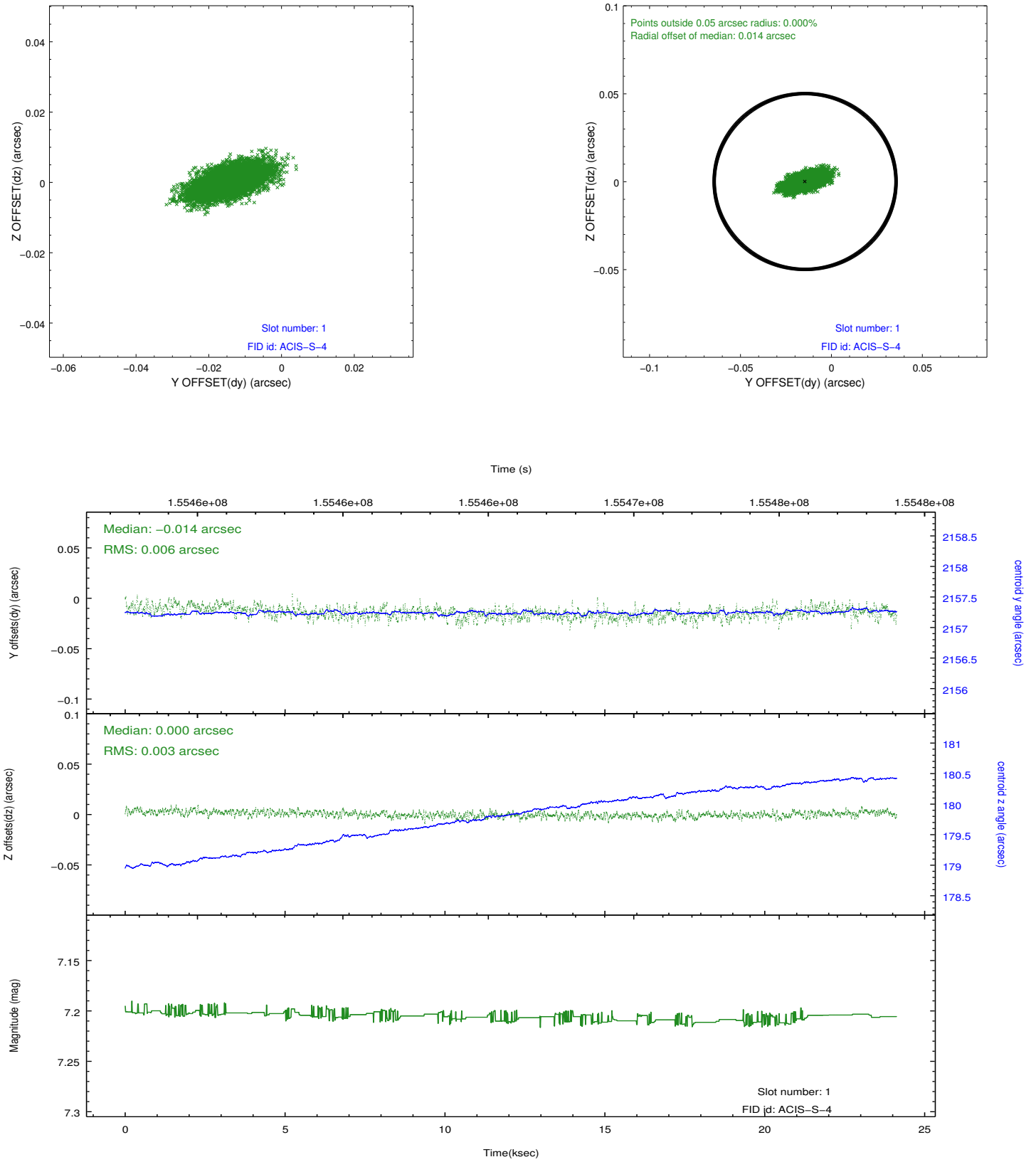


## 2.5 FID Slots

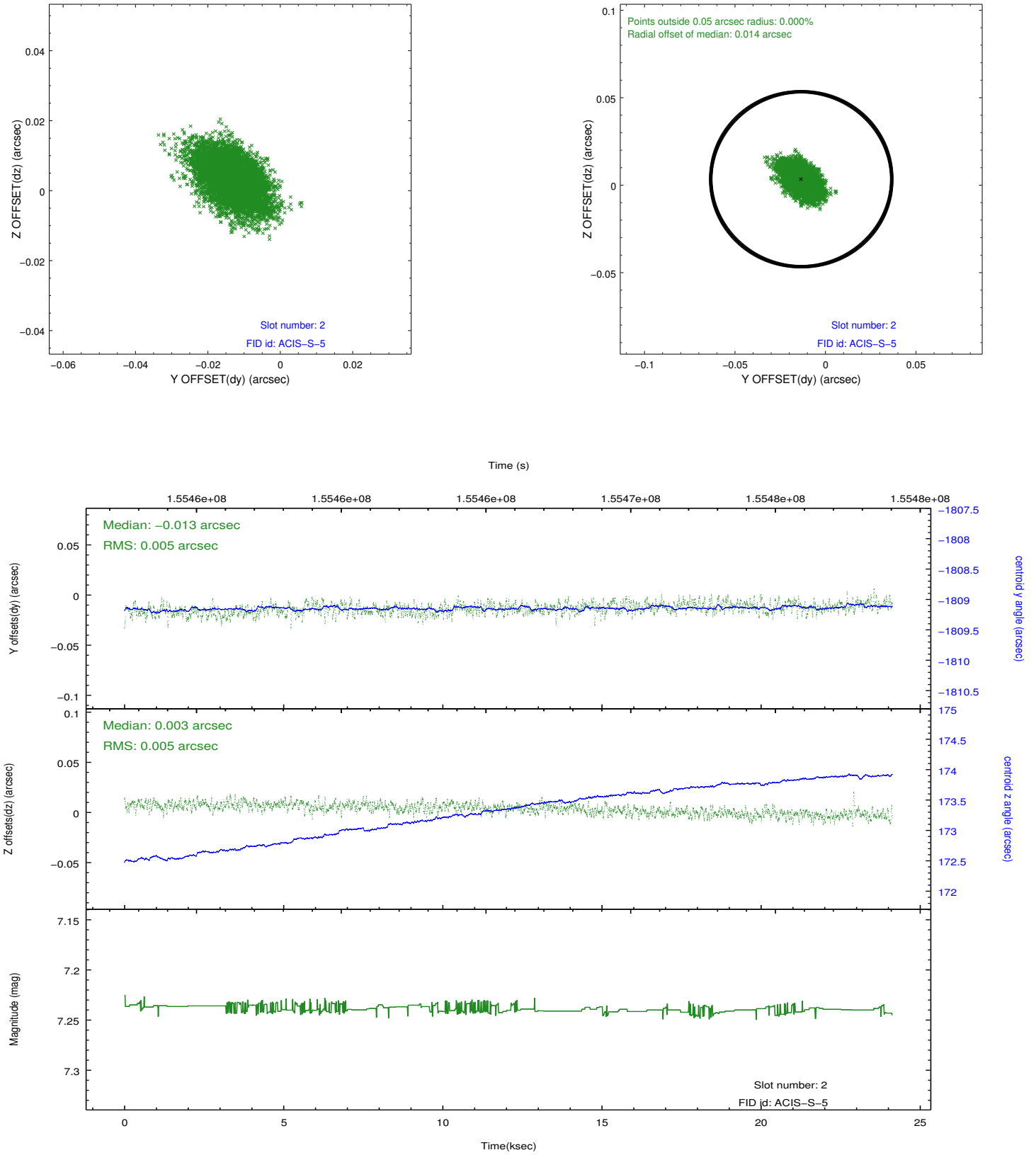
### 2.5.1 Slot 0



## 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)	2012.10.30
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	23.919

### A.2 Comments