

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12750 - L2 Version 3  
Chandra X-Ray Center

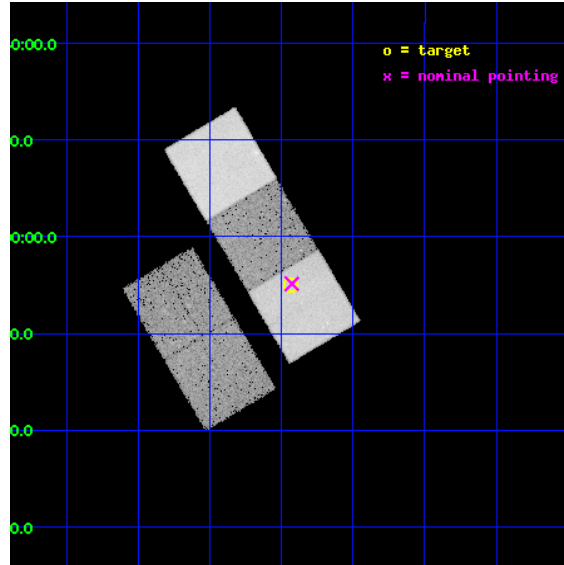
L2 Processing Date : Feb 4 2012

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# 1 Front

seq_num	702386	Sequence number
obs_id	12750	Observation id
title	X-ray and HST Imaging of Kpc-Scale Binary AGNs	Proposal title
observer	Dr Yue Shen	Principal investigator
object	SDSSJ1131-0204	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	172.85875	Observer's specified target RA [deg]
dec_targ	-2.083111	Observer's specified target Dec [deg]
ra_nom	172.85694669839	Nominal RA [deg]
dec_nom	-2.0811276323466	Nominal Dec [deg]
roll_nom	59.296560741581	Nominal Roll [deg]
revision	3	Processing version of data
ontime	24037.40018487	Sum of GTIs [s]
livetime	23723.333855378	Livetime [s]
ontime2	24034.259154618	Sum of GTIs [s]
ontime3	24037.40018487	Sum of GTIs [s]
ontime5	24037.40018487	Sum of GTIs [s]
ontime6	24037.40018487	Sum of GTIs [s]
ontime7	24037.40018487	Sum of GTIs [s]
l2events	265407	Number of level 2 events

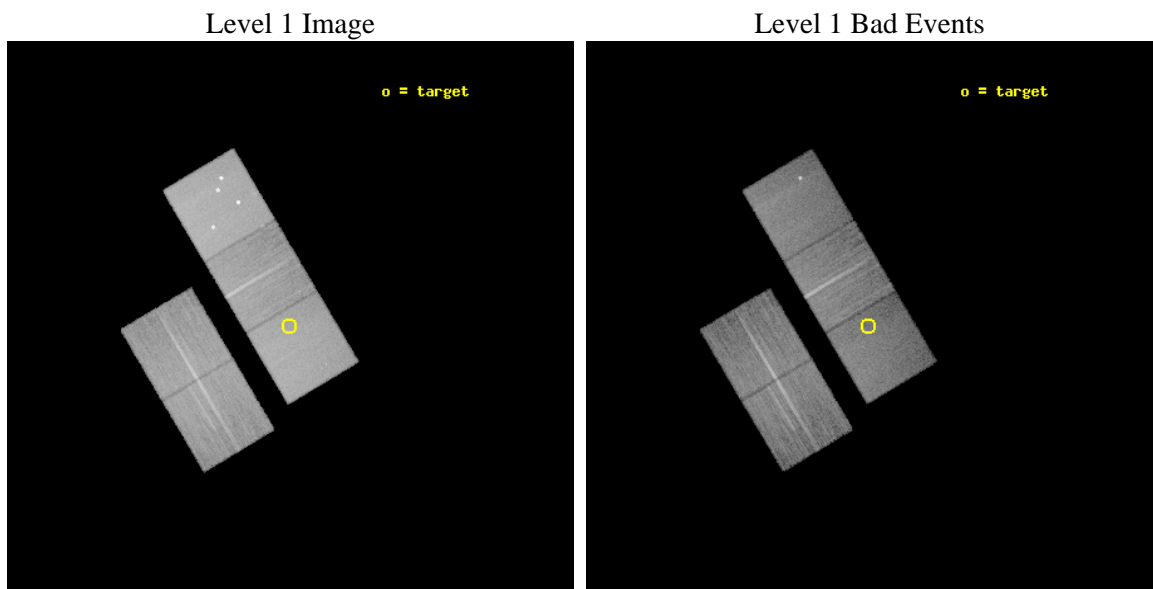




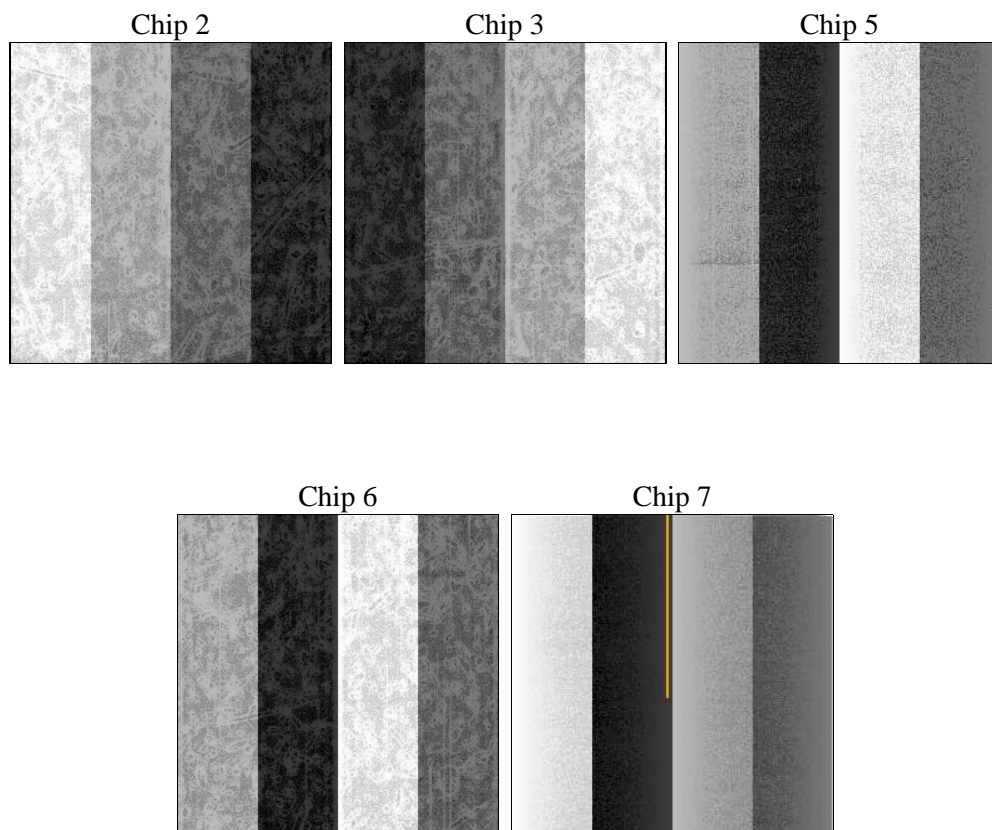
## 2 OBI

### 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	8.4.3	Processing system revision	ontime	24037.40018487	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime2	24034.259154618	Sum of GTIs [s]
date	2012-02-04T12:39:52	Date and time of file creation	ontime3	24037.40018487	Sum of GTIs [s]
revision	3	Processing version of data	ontime5	24037.40018487	Sum of GTIs [s]
			ontime6	24037.40018487	Sum of GTIs [s]
			ontime7	24037.40018487	Sum of GTIs [s]
			l1events	1011679	Number of level 1 events

### 2.1.4 Events

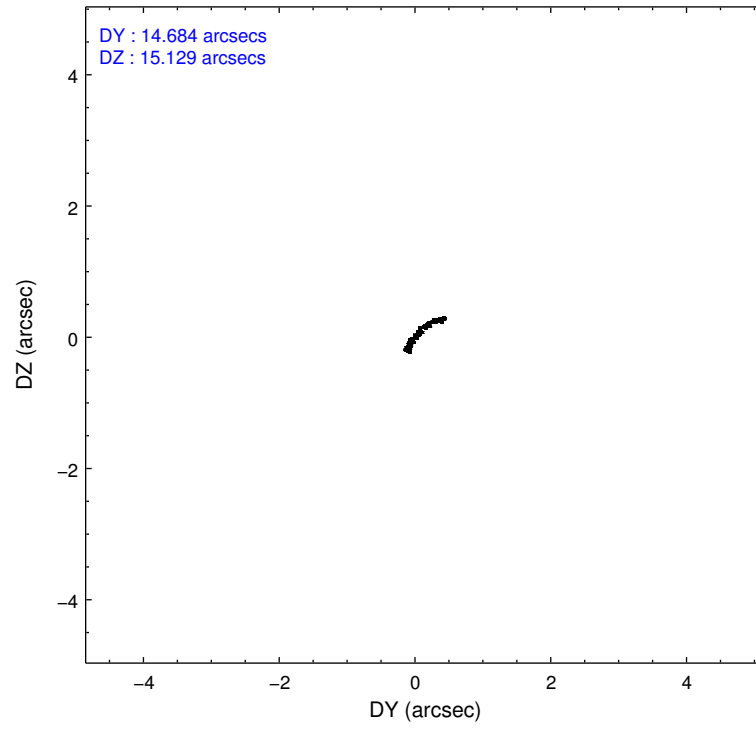
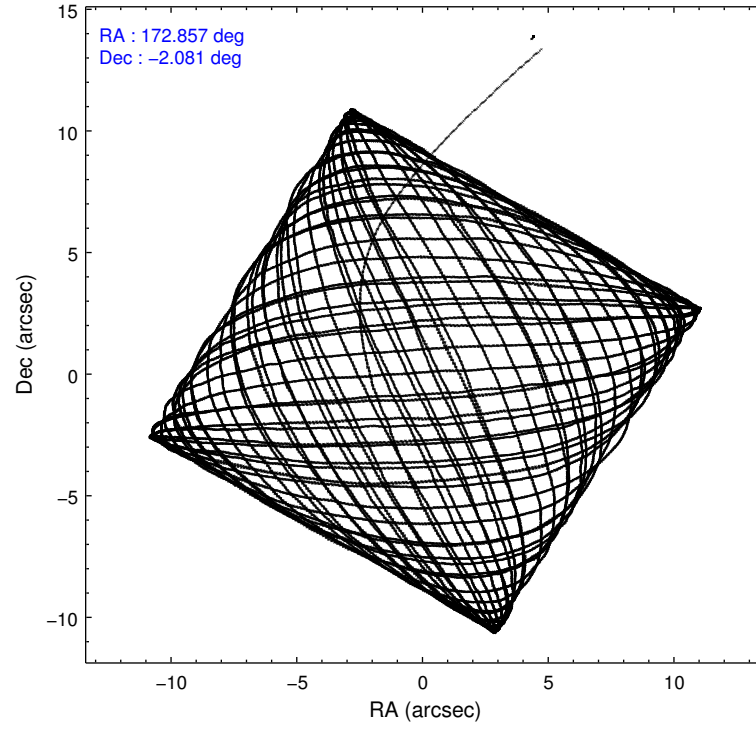
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
level 1 events	169269	166704	281223	176467	218016
rejected events	150898	149277	138139	156860	121388
rejected %	89%	89%	49%	88%	55%

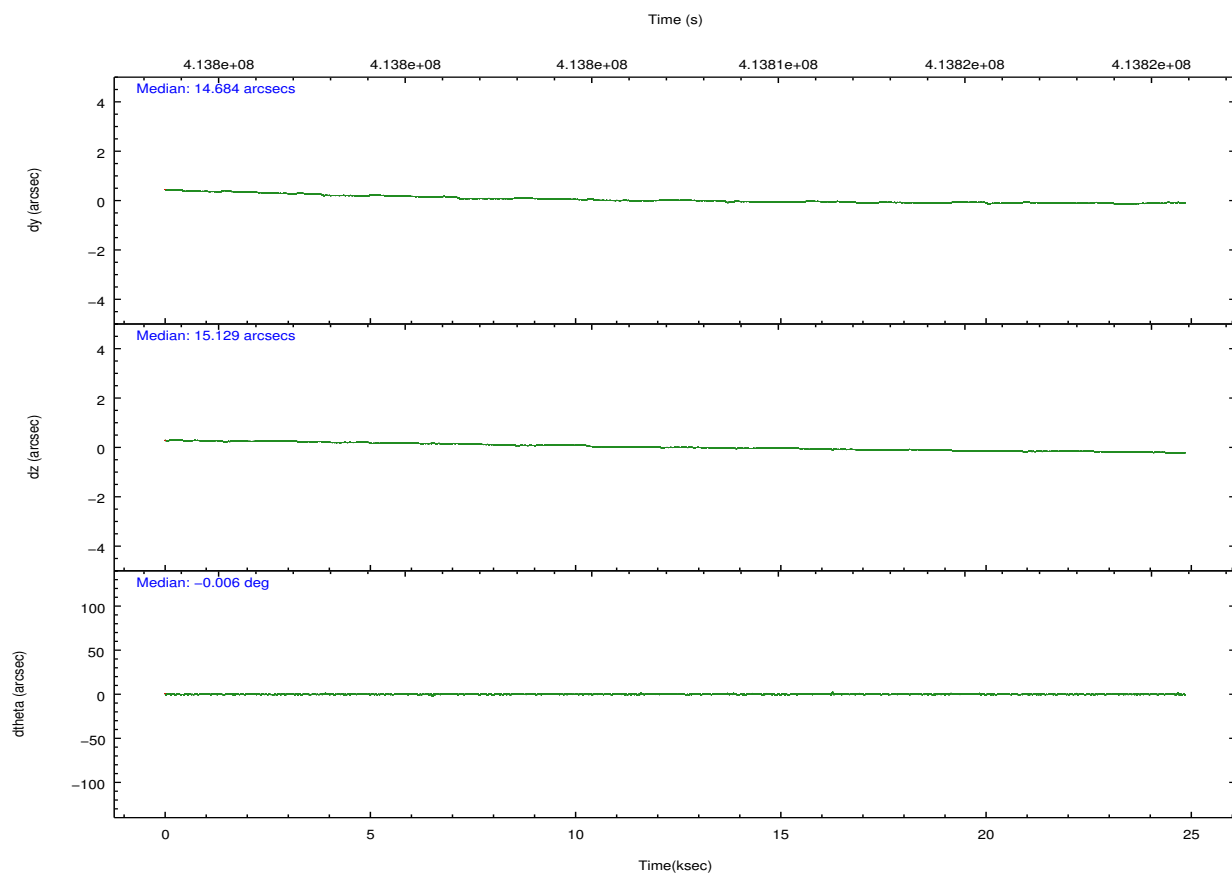
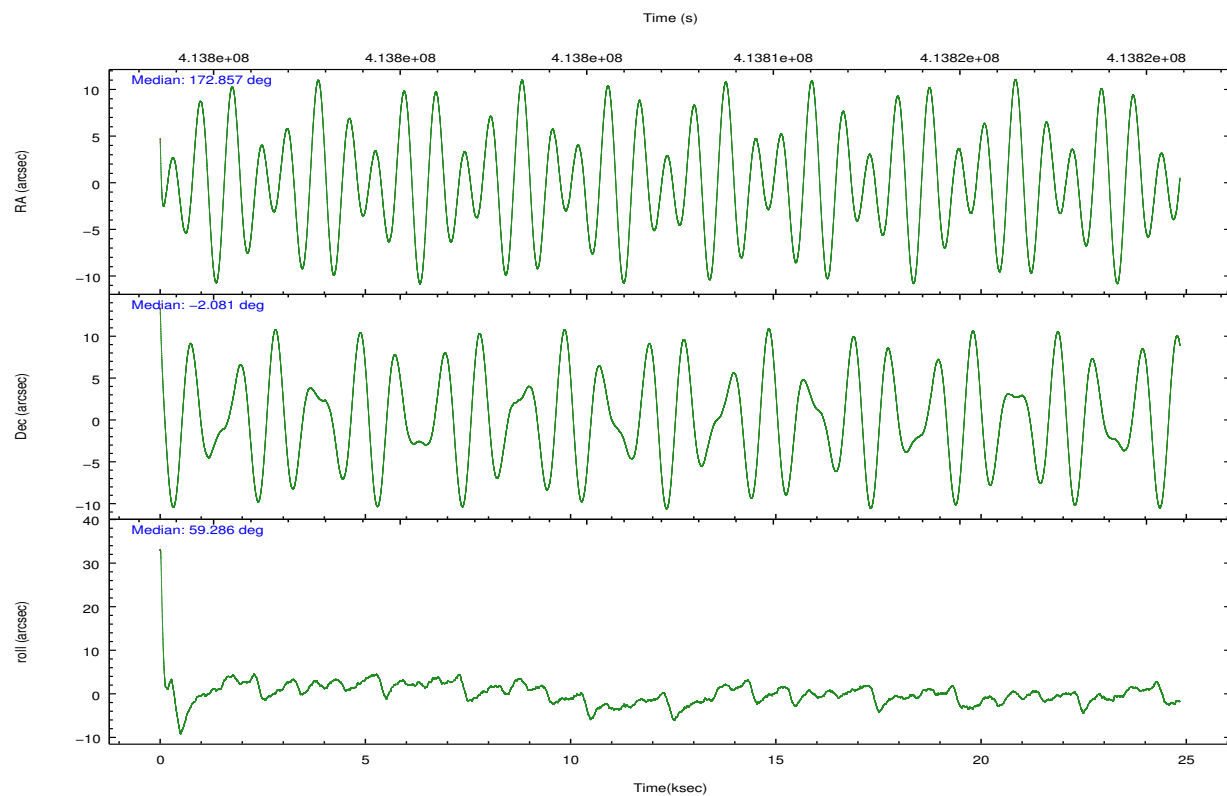
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
grade 0 events	6475	6118	22319	6665	8533
	3%	3%	7%	3%	3%
grade 1 events	89	94	652	93	260
	0%	0%	0%	0%	0%
grade 2 events	4462	3927	41416	4334	19664
	2%	2%	14%	2%	9%
grade 3 events	1930	1901	5082	2157	8454
	1%	1%	1%	1%	3%
grade 4 events	1990	1844	4621	2080	8452
	1%	1%	1%	1%	3%
grade 5 events	6555	8007	21292	8041	22669
	3%	4%	7%	4%	10%
grade 6 events	3518	3643	69680	4372	51549
	2%	2%	24%	2%	23%
grade 7 events	144250	141170	116161	148725	98435
	85%	84%	41%	84%	45%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23567	ACIS-23567	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	172.856995	172.8569466983885	CCD I2 on	Y	Y
[deg] Pointing Dec	-2.108469	-2.081127632346614	CCD I3 on	Y	Y
[deg] Pointing Roll	59.139924	59.29656074158137	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	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	N	N
[s] Observation start time (MET)	413795661.184000	413793971.63201	CCD S5 on	N	N
Observation start date	2011-02-11T07:13:15	2011-02-11T06:46:11	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	413819661.184000	413820765.1334	On-chip summing requested	N	N
Observation end date	2011-02-11T13:53:15	2011-02-11T14:12:45	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



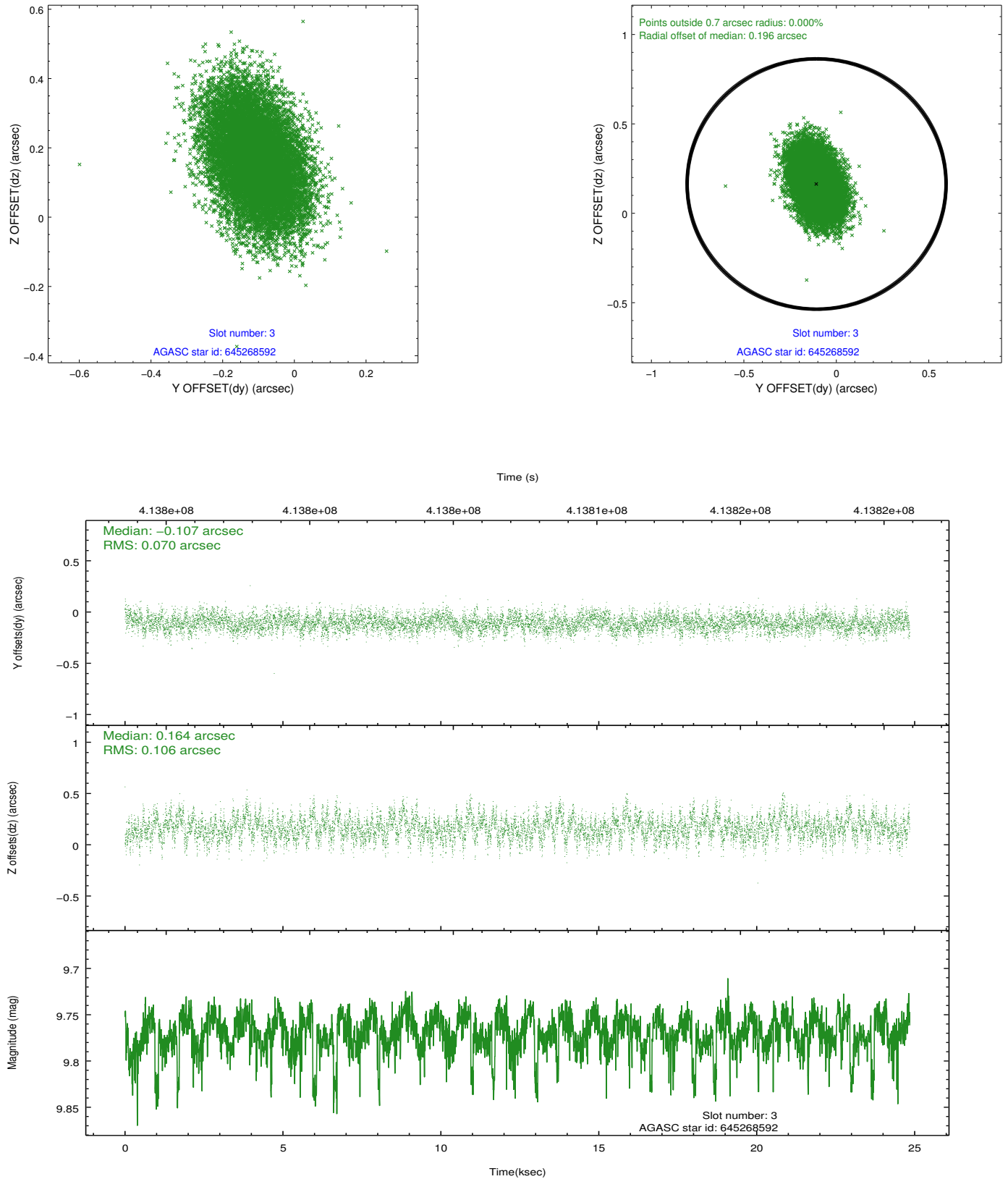


### Slot Statistics

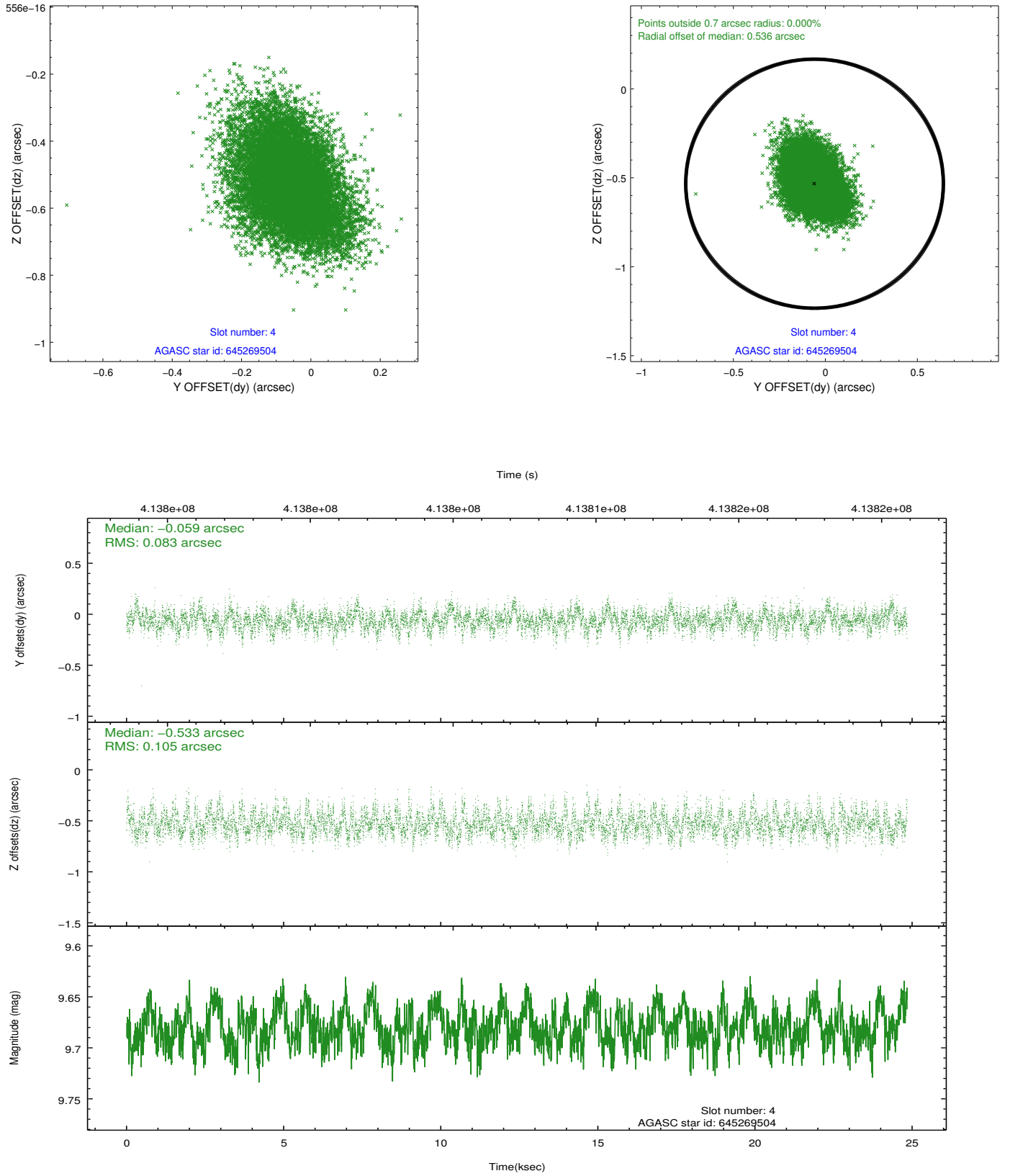
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.01	6060	0.017	-0.025	0.012	0.021	0.000000	0.000000	928.37	-1732.19
1	FID	ACIS-S-4	7.02	6058	0.158	0.014	0.010	0.015	0.000000	0.000000	2145.96	171.90
2	FID	ACIS-S-5	7.05	6060	-0.202	0.024	0.007	0.012	0.000000	0.000000	-1820.59	165.60
3	GUIDE	645268592	9.77	12105	-0.107	0.164	0.134	0.226	172.459455	-2.042920	-531.33	1349.14
4	GUIDE	645269504	9.68	12109	-0.059	-0.533	0.141	0.234	172.248737	-1.852553	-332.41	2351.00
5	GUIDE	645269536	9.84	12095	0.073	-0.182	0.136	0.237	172.133318	-2.052583	-1163.47	2338.29
6	GUIDE	646188728	10.14	12084	0.107	0.288	0.225	0.338	172.839517	-2.291109	-596.33	-282.70
7	GUIDE	646581400	9.75	12109	-0.013	0.245	0.179	0.267	173.181751	-2.609401	-948.96	-1926.89

## 2.4 Star Slots

### 2.4.1 Slot 3

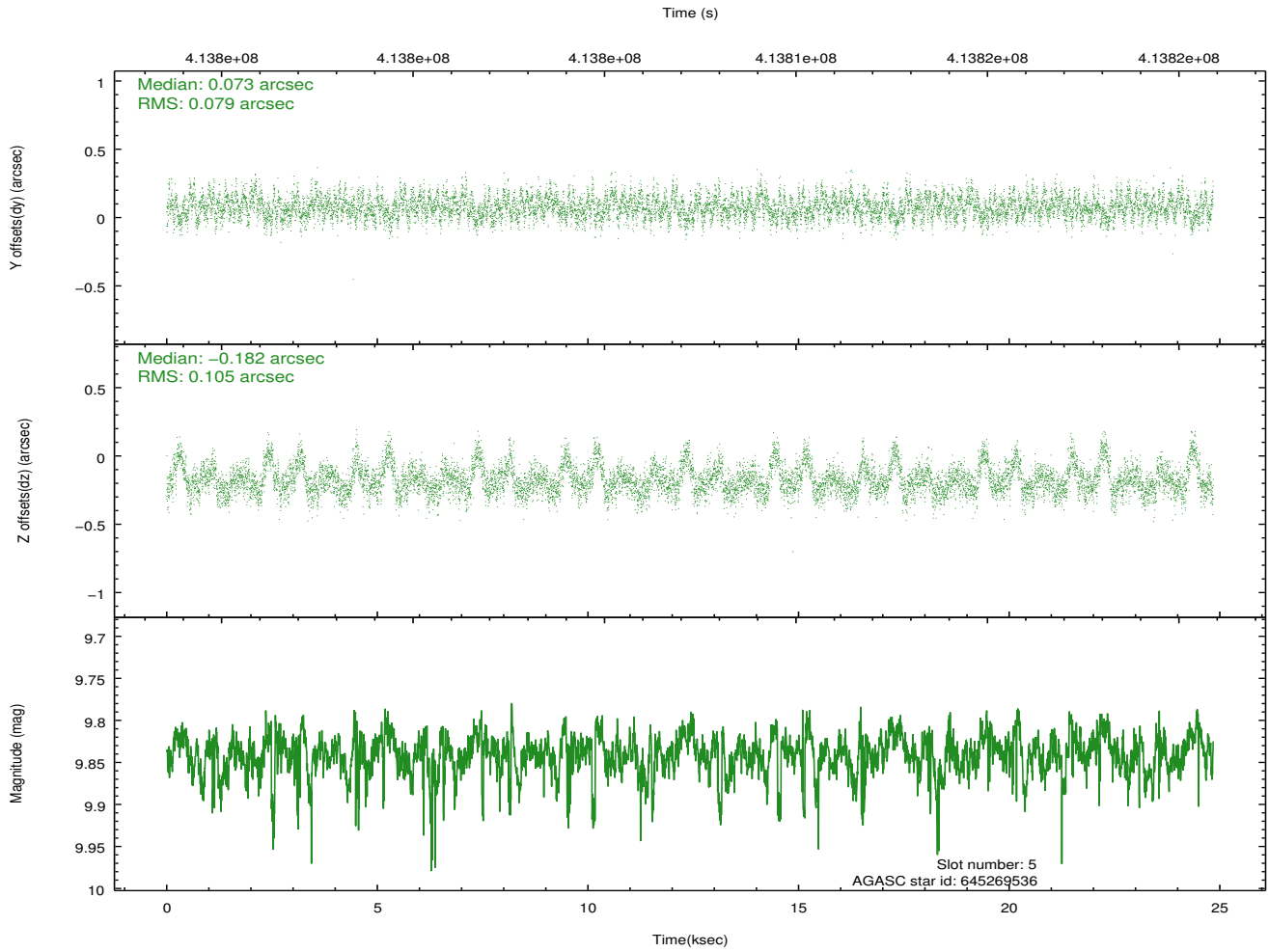
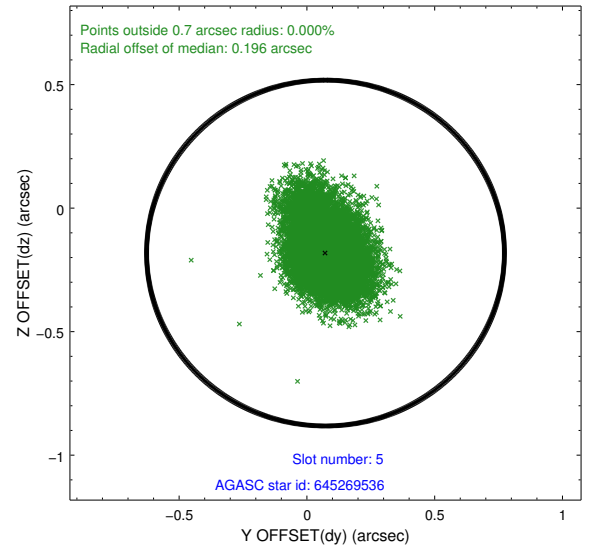
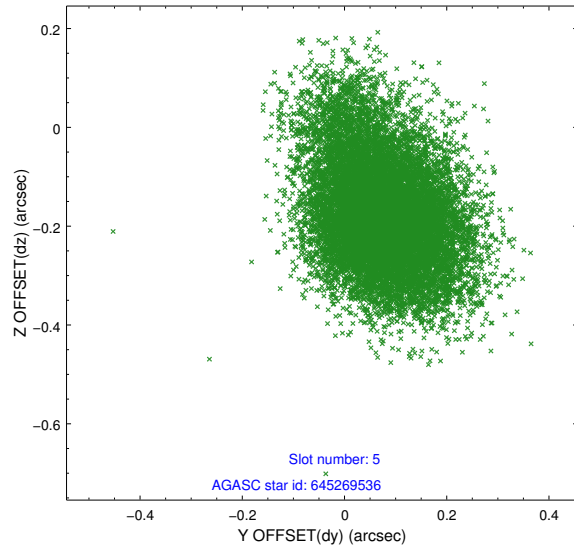


## 2.4.2 Slot 4

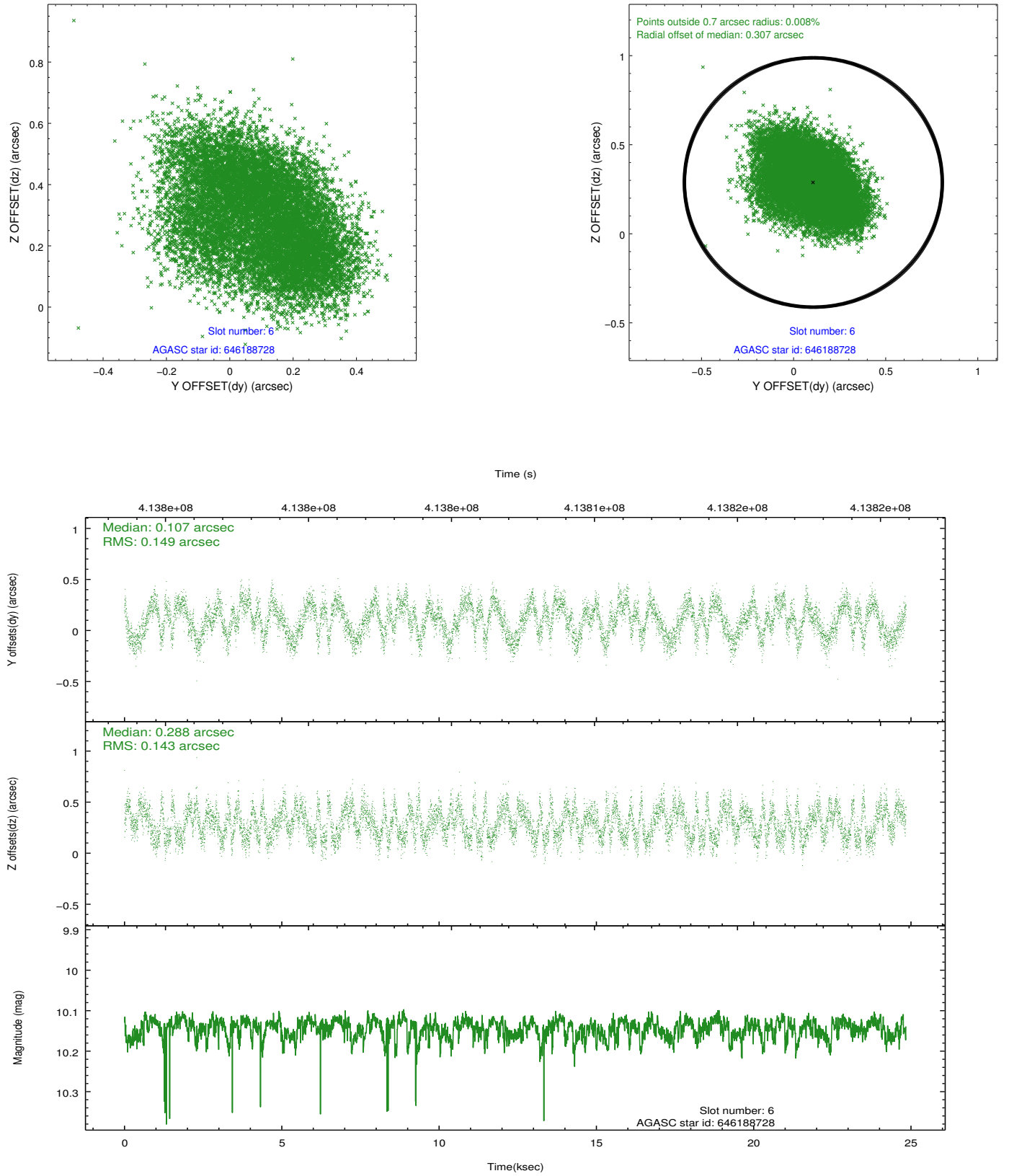




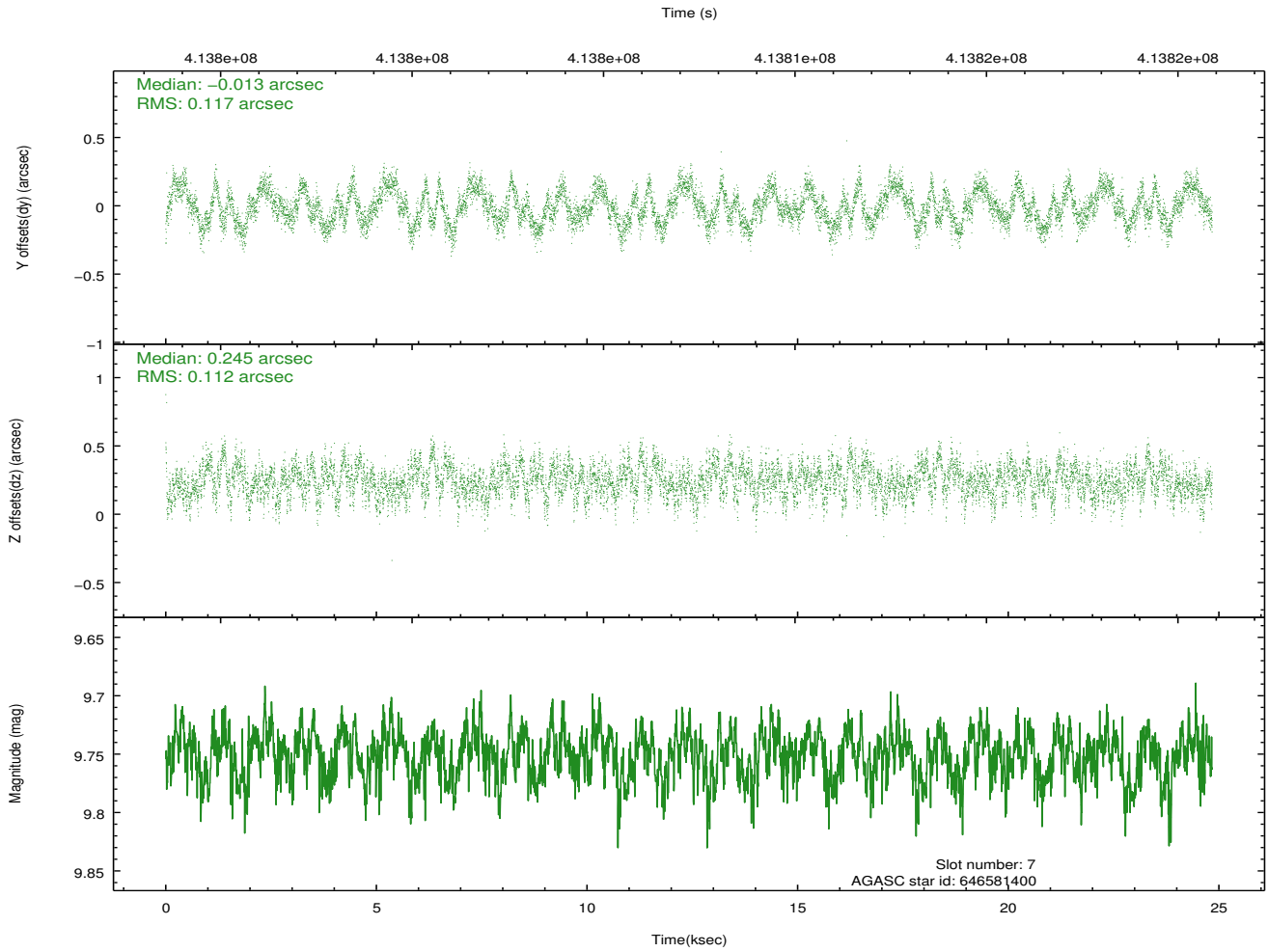
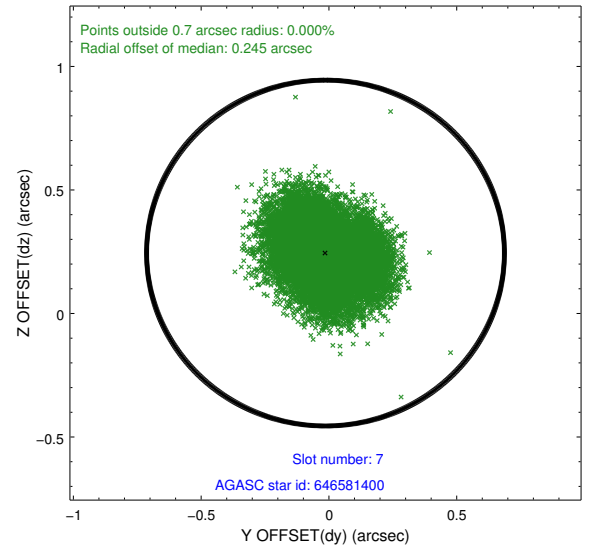
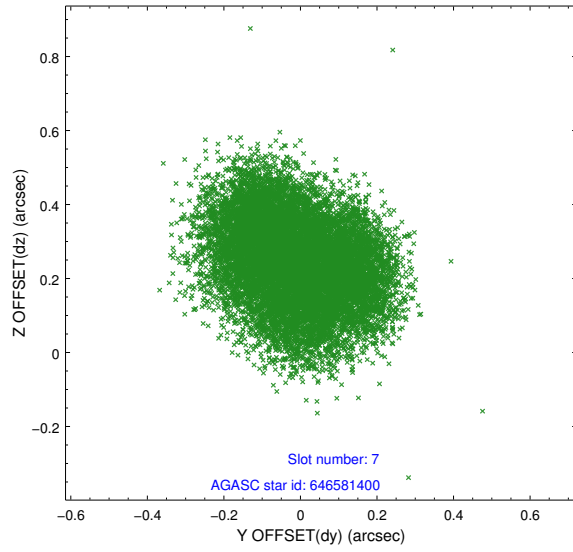
### 2.4.3 Slot 5



## 2.4.4 Slot 6

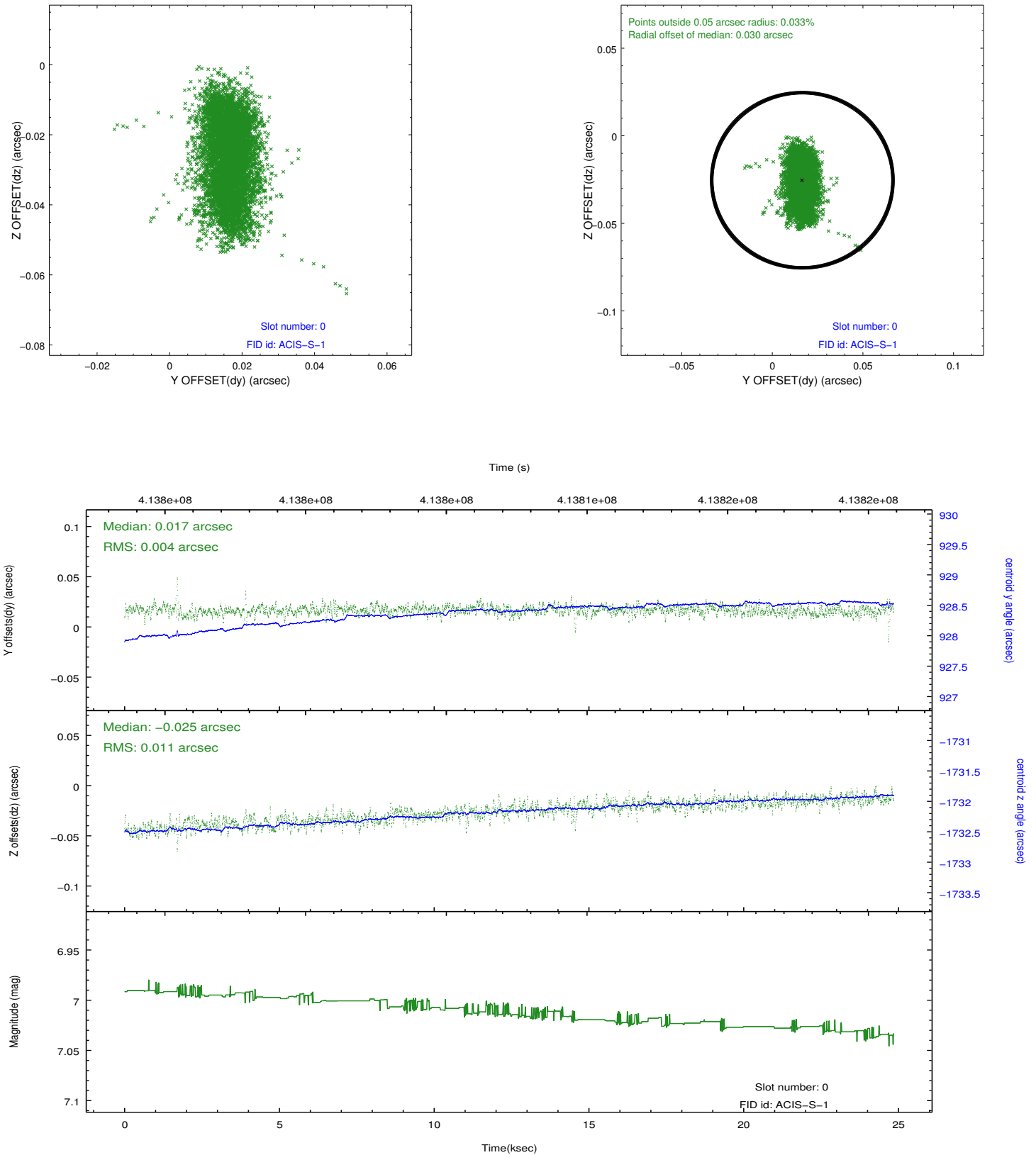


## 2.4.5 Slot 7

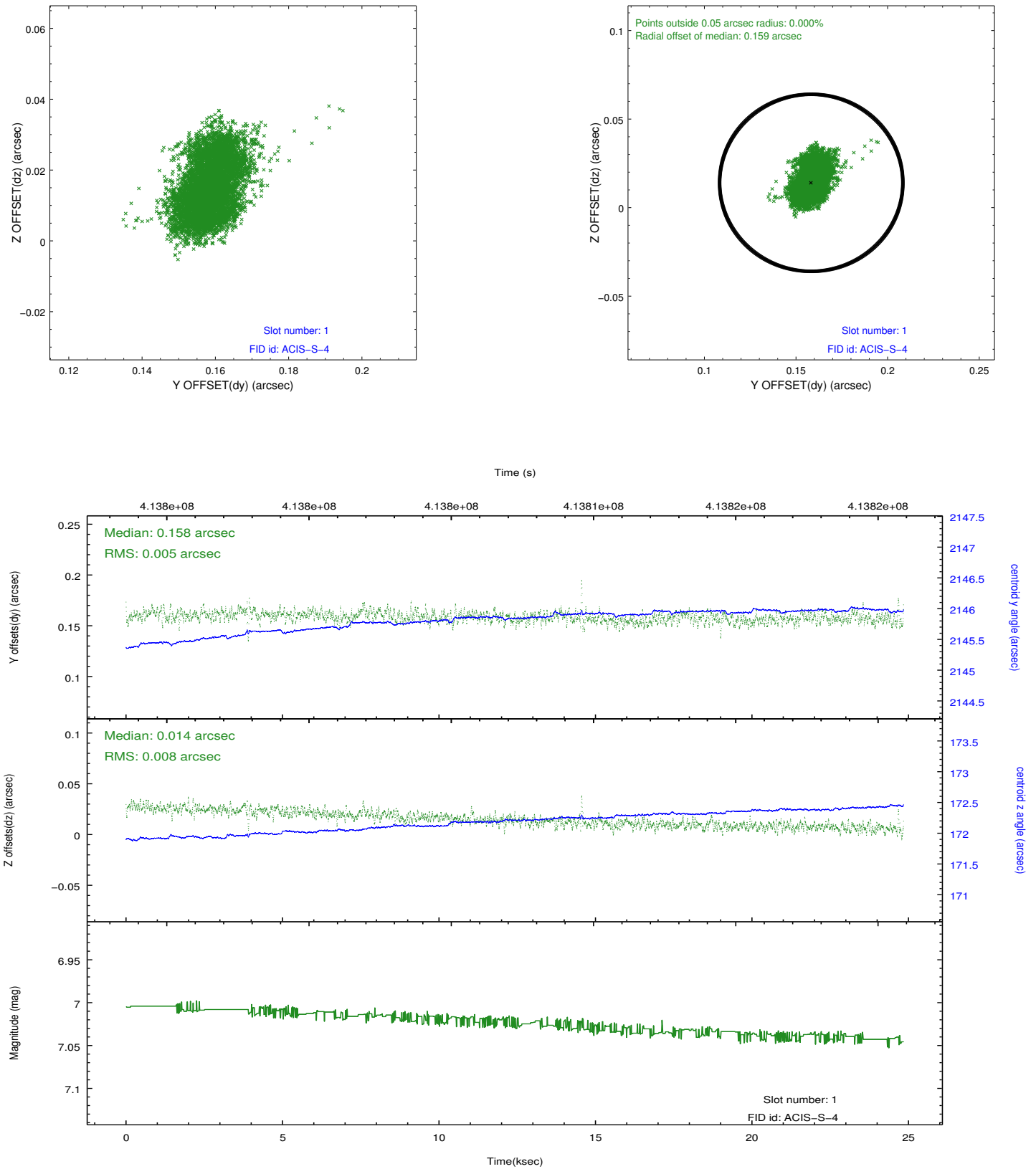


## 2.5 FID Slots

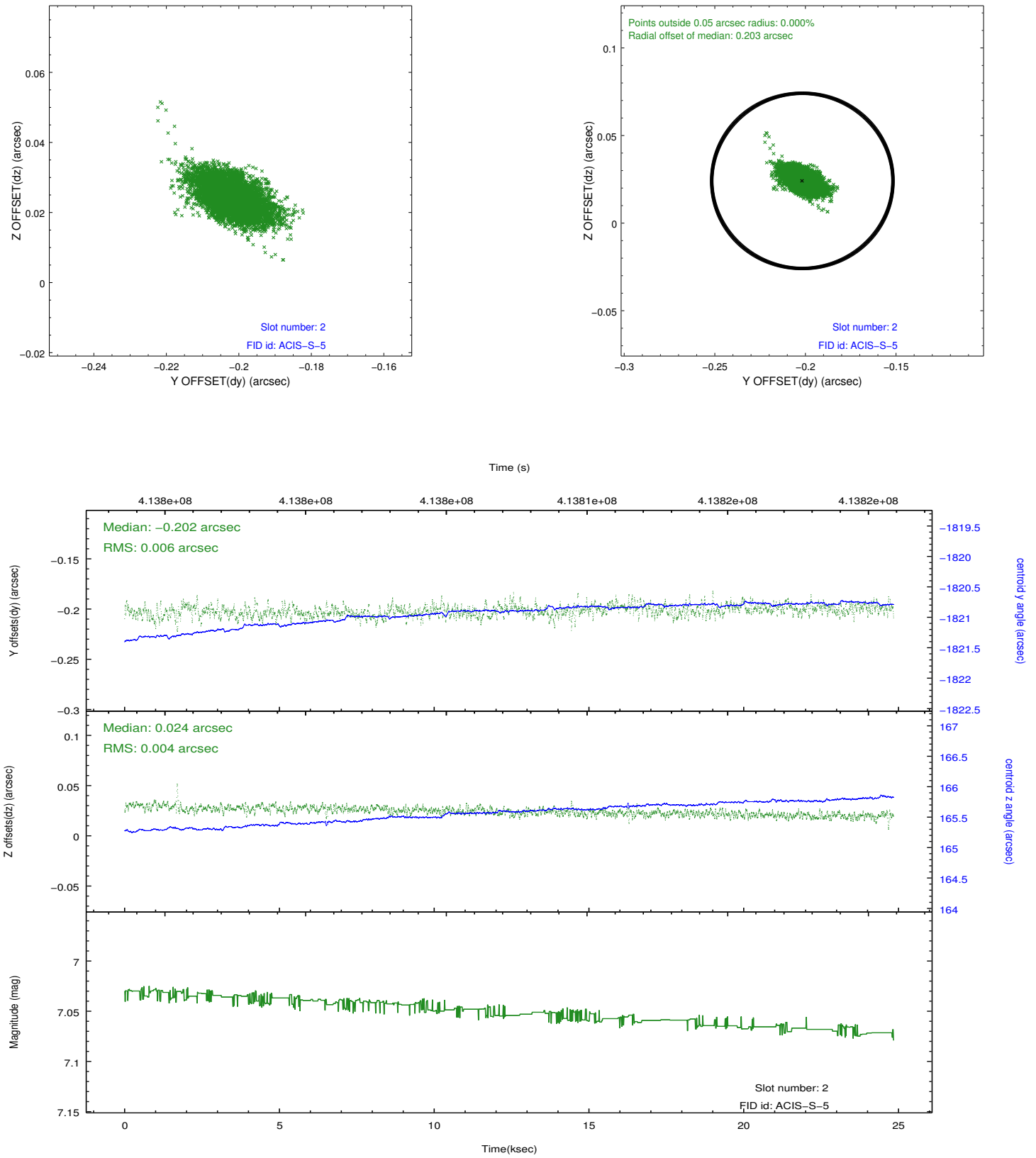
### 2.5.1 Slot 0



## 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)	2012.02.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	24.03740018487

## A.2 Comments

The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSER algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use `acis_process_events` to reprocess the data with the parameter `pix_adj=NONE` or `RANDOMIZE`, respectively.

=====

A spatial region of the original bias map for CCD = 3 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 3 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:  
(172.89392,-2.26514),(172.89673,-2.26682),(172.90996,-2.24454),(172.90715,-2.24286)

=====

Joint Proposal: HST