

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12716 - L2 Version 2  
Chandra X-Ray Center

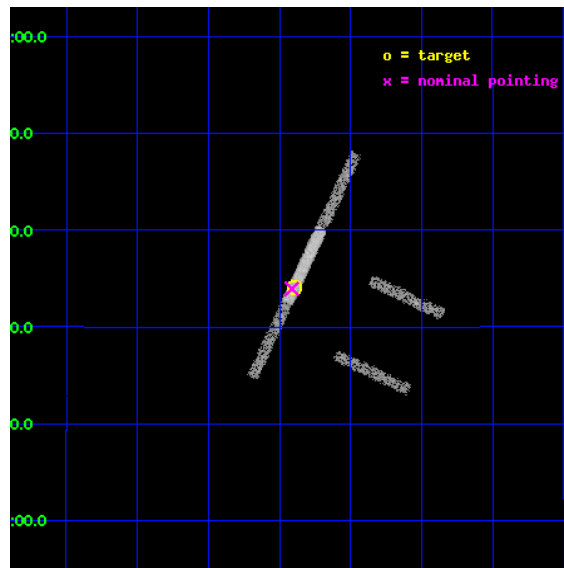
L2 Processing Date : Feb 4 2012

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# 1 Front

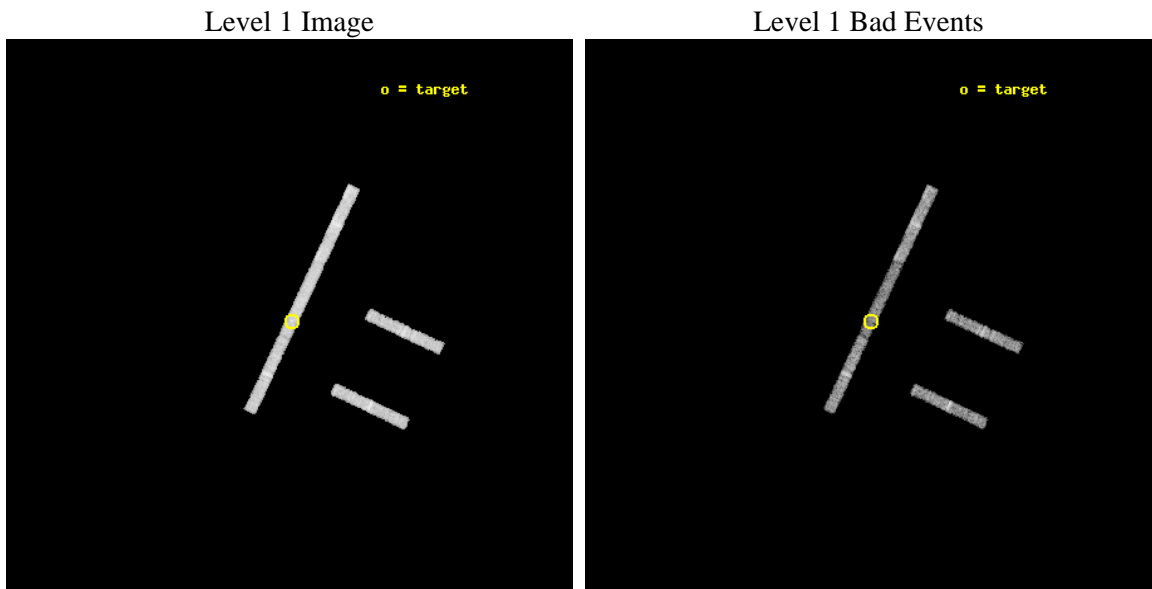
seq_num	702352	Sequence number
obs_id	12716	Observation id
title	First X-ray observations of Low-Power Compact Steep Spectrum Sources	&#160
observer	Dr Magdalena Kunert-Bajraszewska	Principal investigator
object	0810+077	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	123.349167	Observer's specified target RA [deg]
dec_targ	7.568278	Observer's specified target Dec [deg]
ra_nom	123.35326713607	Nominal RA [deg]
dec_nom	7.5656415839251	Nominal Dec [deg]
roll_nom	295.15611290821	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10064.403823674	Sum of GTIs [s]
livetime	9507.0207769777	Livetime [s]
ontime2	10064.239663661	Sum of GTIs [s]
ontime3	10064.321743667	Sum of GTIs [s]
ontime6	10064.36278367	Sum of GTIs [s]
ontime7	10064.403823674	Sum of GTIs [s]
ontime8	10064.280703664	Sum of GTIs [s]
l2events	10205	Number of level 2 events



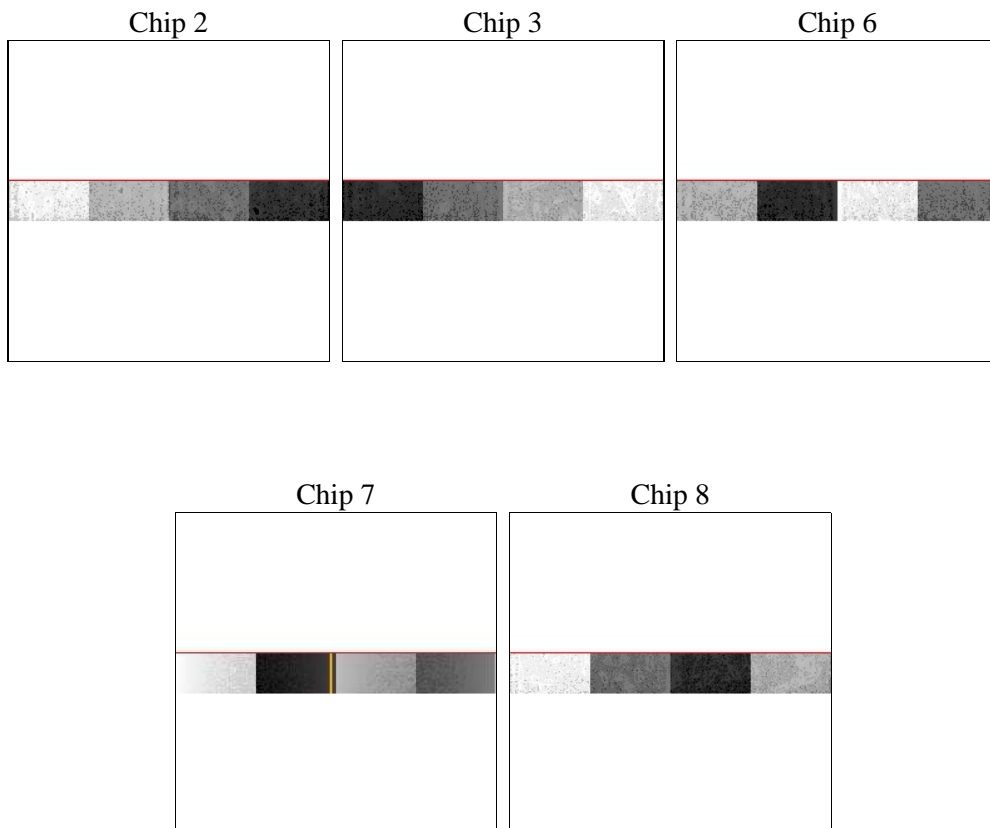
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	10064.403823674	Sum of GTIs [s]
caldsver	4.4.7	&#160	ontime2	10064.239663661	Sum of GTIs [s]
date	2012-02-04T06:08:15	Date and time of file creation	ontime3	10064.321743667	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	10064.36278367	Sum of GTIs [s]
			ontime7	10064.403823674	Sum of GTIs [s]
			ontime8	10064.280703664	Sum of GTIs [s]
			l1events	64594	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	11119	11377	12148	13156	16794
rejected events	9899	10127	10787	6908	13112
rejected %	89%	89%	88%	52%	78%

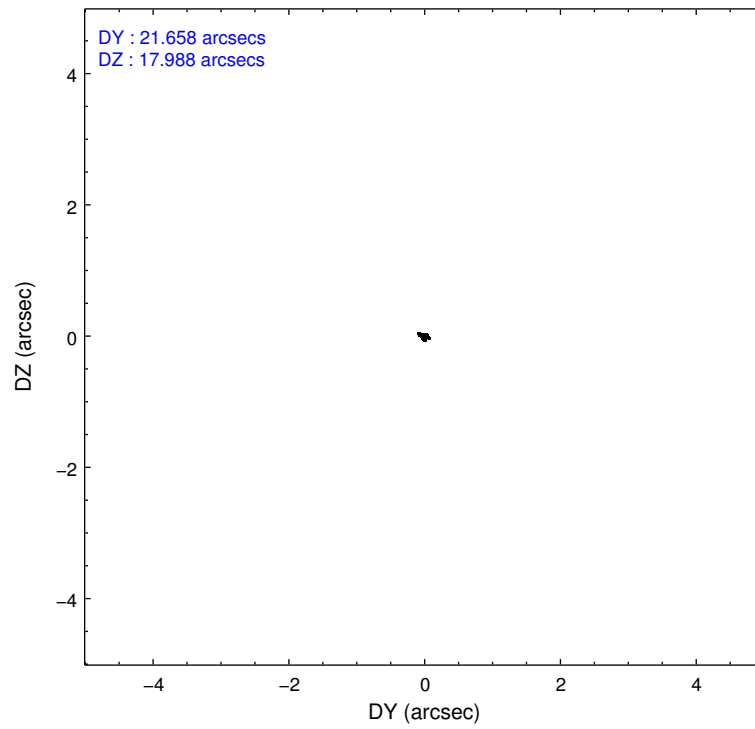
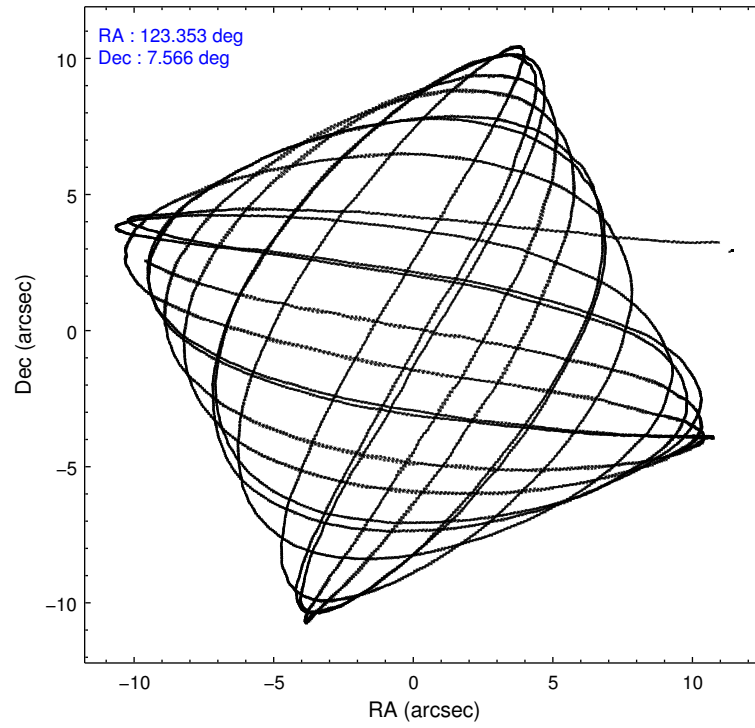
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	344	397	360	646	875
	3%	3%	2%	4%	5%
grade 1 events	6	6	2	17	5
	0%	0%	0%	0%	0%
grade 2 events	239	237	247	1324	821
	2%	2%	2%	10%	4%
grade 3 events	215	200	254	772	415
	1%	1%	2%	5%	2%
grade 4 events	228	205	221	718	401
	2%	1%	1%	5%	2%
grade 5 events	357	438	475	1312	666
	3%	3%	3%	9%	3%
grade 6 events	195	211	279	2788	1170
	1%	1%	2%	21%	6%
grade 7 events	9535	9683	10310	5579	12441
	85%	85%	84%	42%	74%

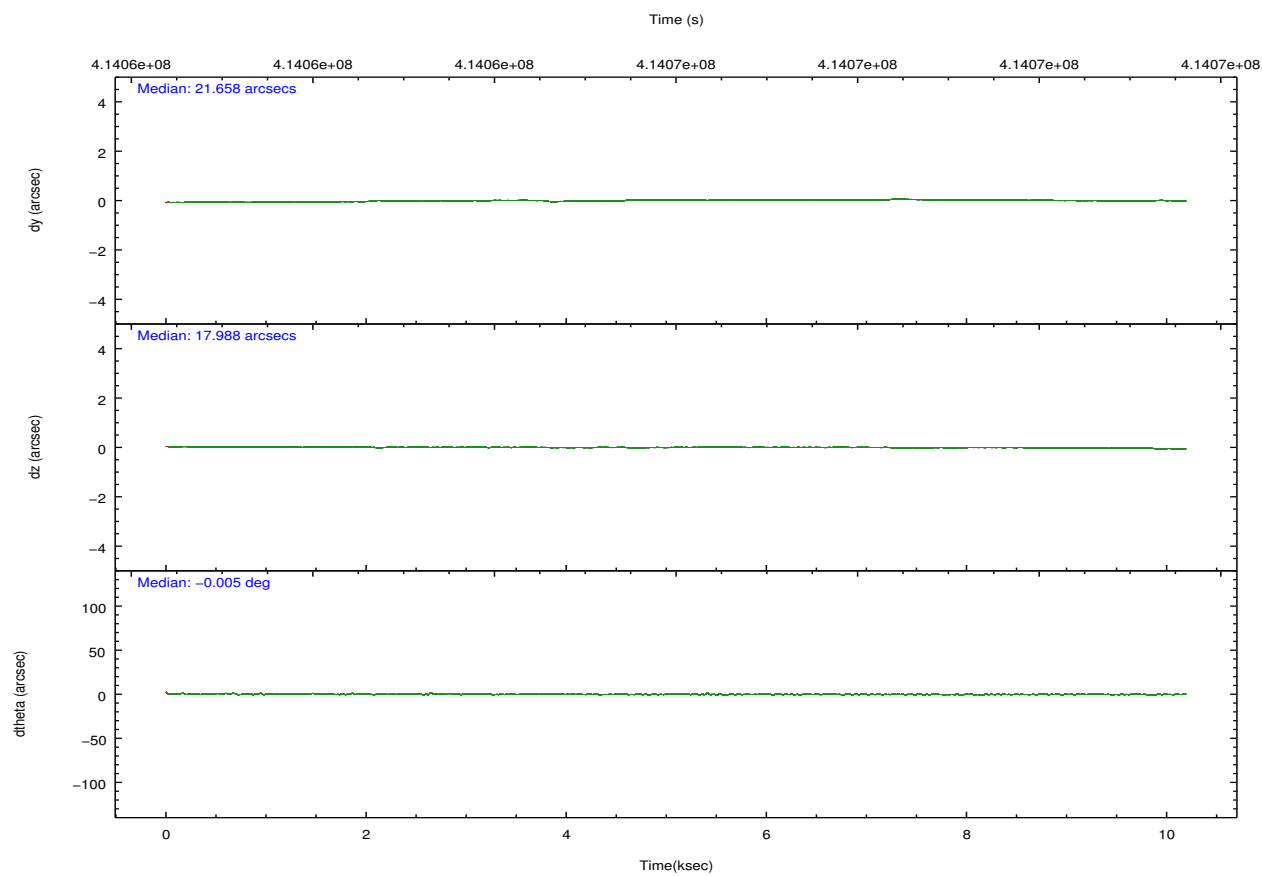
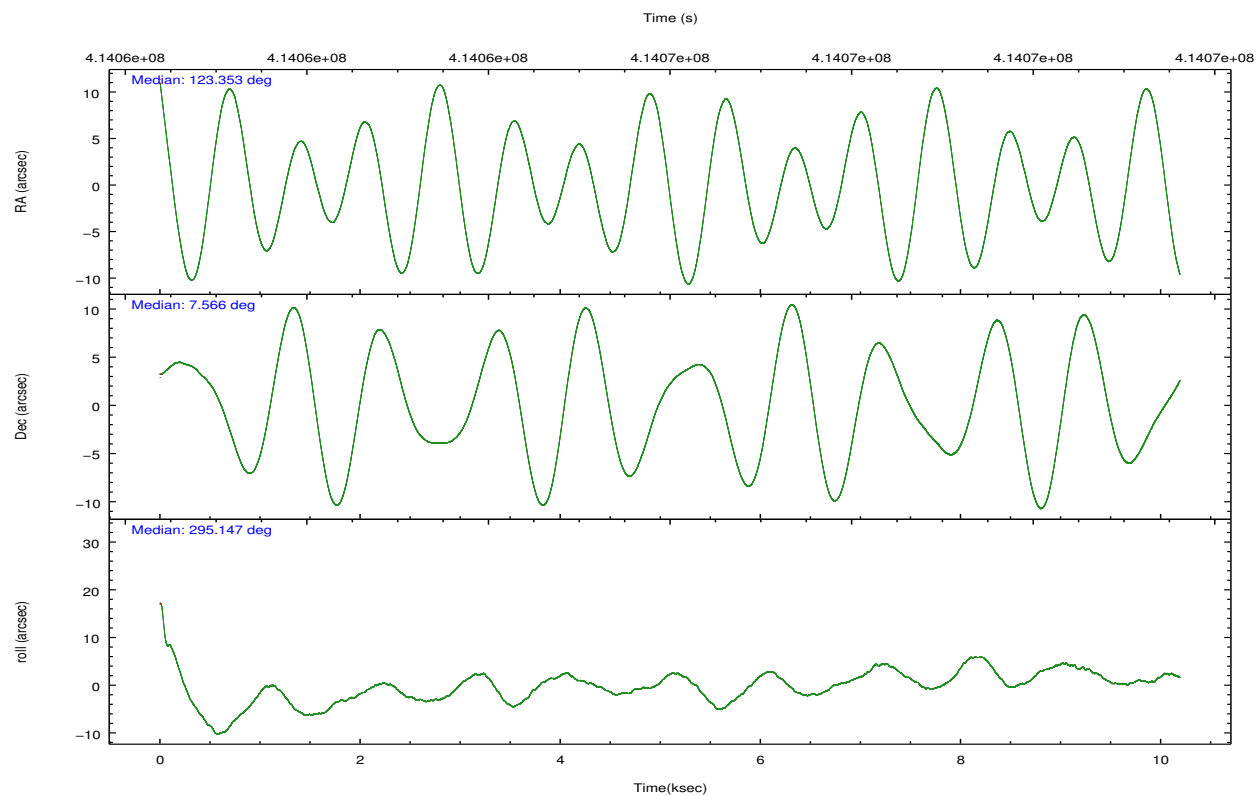


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23678	ACIS-23678	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	123.330411	123.3532671360691	CCD I2 on	O4	Y
[deg] Pointing Dec	7.580934	7.565641583925137	CCD I3 on	O2	Y
[deg] Pointing Roll	295.002475	295.1561129082074	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O1	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	O3	Y
[s] Observation start time (MET)	414061089.184000	414060318.4083	CCD S5 on	N	N
Observation start date	2011-02-14T08:57:03	2011-02-14T08:45:18	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	414071089.184000	414072484.64643	On-chip summing requested	N	N
Observation end date	2011-02-14T11:43:43	2011-02-14T12:08:04	Subarray requested	CUSTOM	1/8
Read mode	TIMED	TIMED	Subarray start row	449	449
			Subarray row count	128	128
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	0.7

## 2.3 Aspect



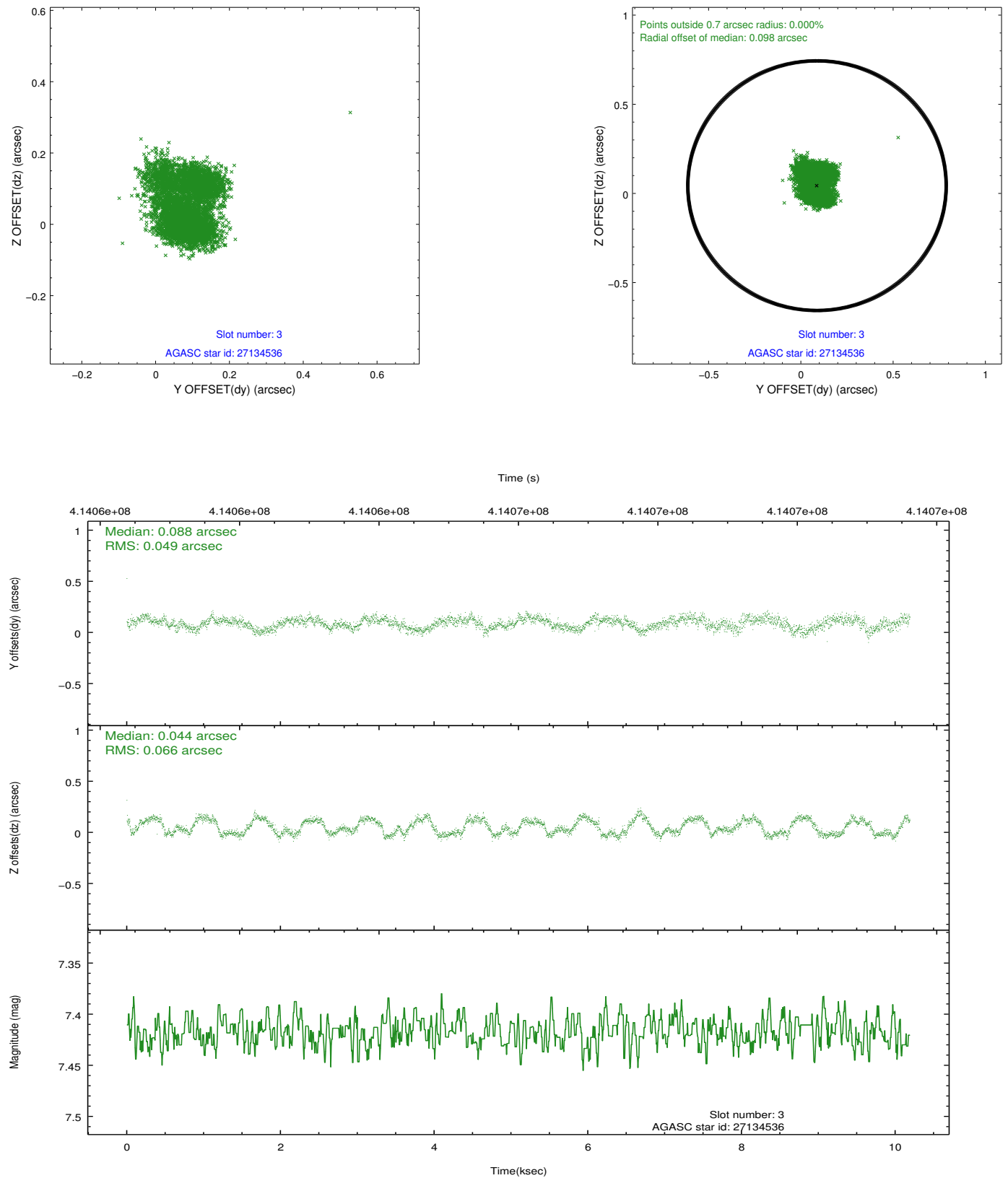


### Slot Statistics

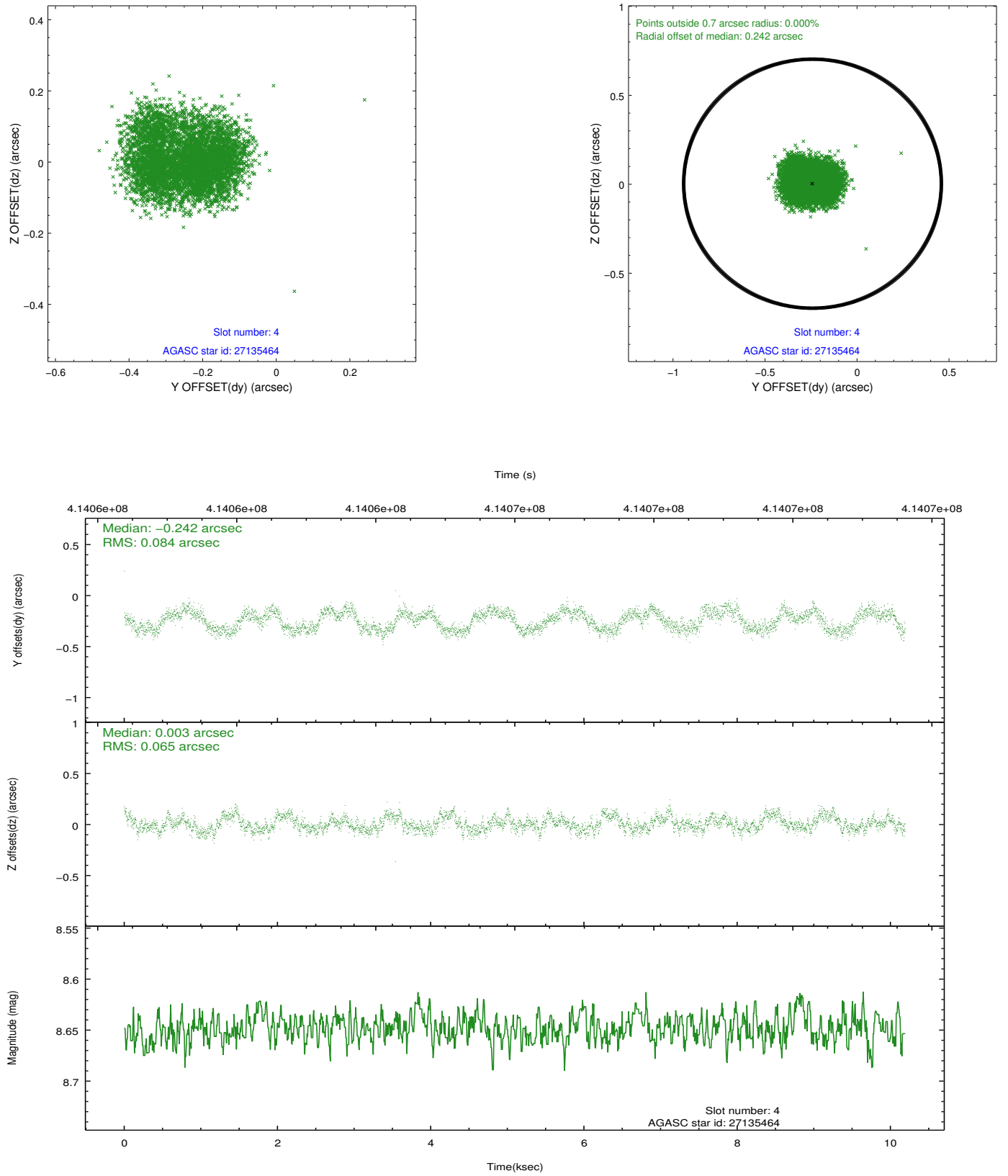
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.06	2486	0.060	-0.025	0.006	0.011	0.000000	0.000000	921.26	-1735.11
1	FID	ACIS-S-4	7.07	2486	0.139	-0.007	0.006	0.009	0.000000	0.000000	2139.05	168.51
2	FID	ACIS-S-5	7.10	2485	-0.226	0.045	0.006	0.010	0.000000	0.000000	-1827.21	162.79
3	GUIDE	27134536	7.42	4971	0.088	0.044	0.089	0.130	123.142978	6.976515	1689.67	-1526.26
4	GUIDE	27135464	8.65	4970	-0.242	0.003	0.117	0.170	122.884290	7.214249	523.15	-2001.77
5	GUIDE	104079856	8.18	4972	0.098	-0.065	0.077	0.131	123.474028	7.732748	-278.25	694.89
6	GUIDE	104081376	9.33	4967	-0.121	-0.097	0.142	0.224	123.843618	7.677499	457.90	1806.98
7	GUIDE	104082008	9.35	4969	0.174	0.107	0.153	0.236	122.934287	7.568358	-556.05	-1299.59

## 2.4 Star Slots

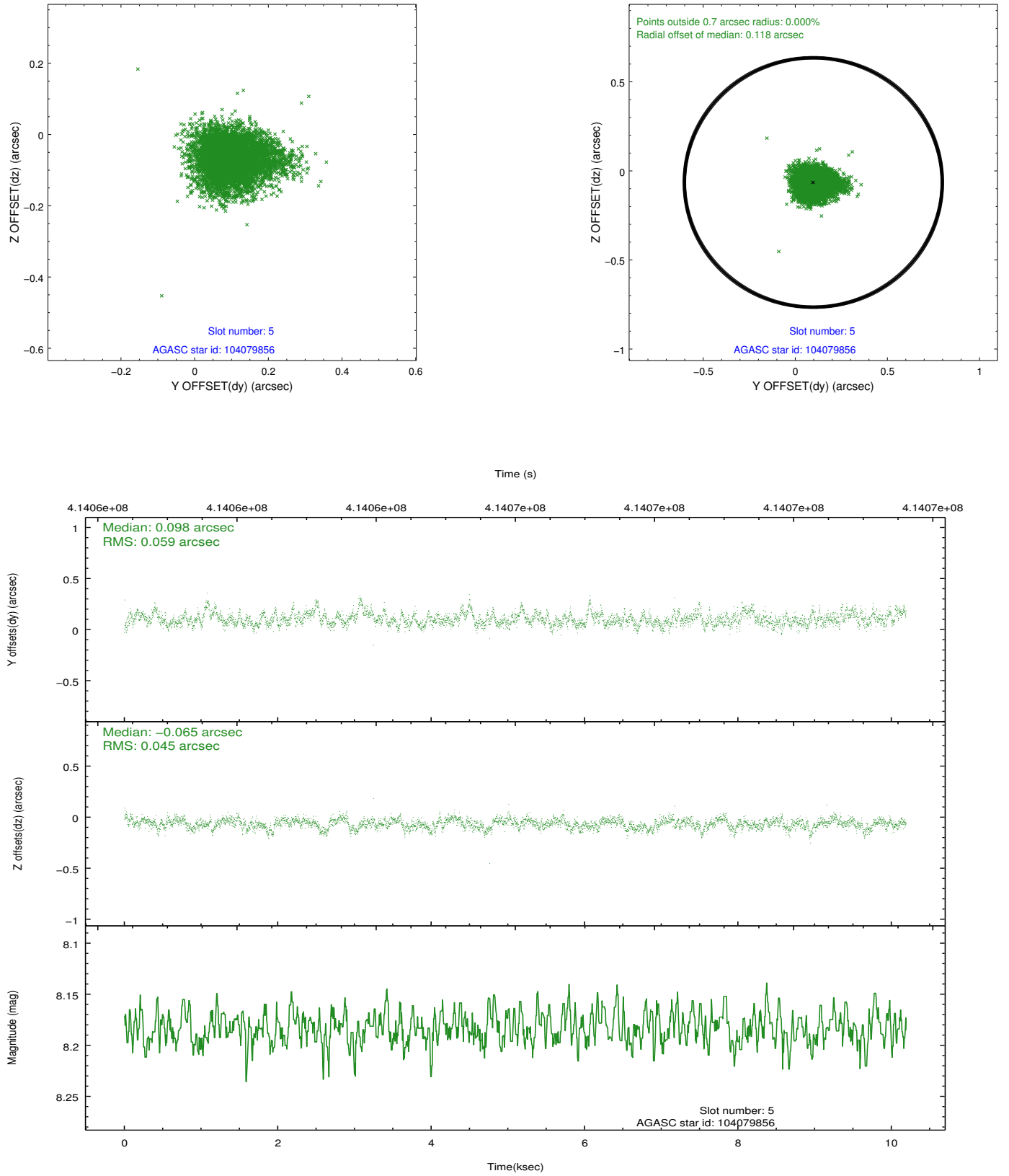
### 2.4.1 Slot 3



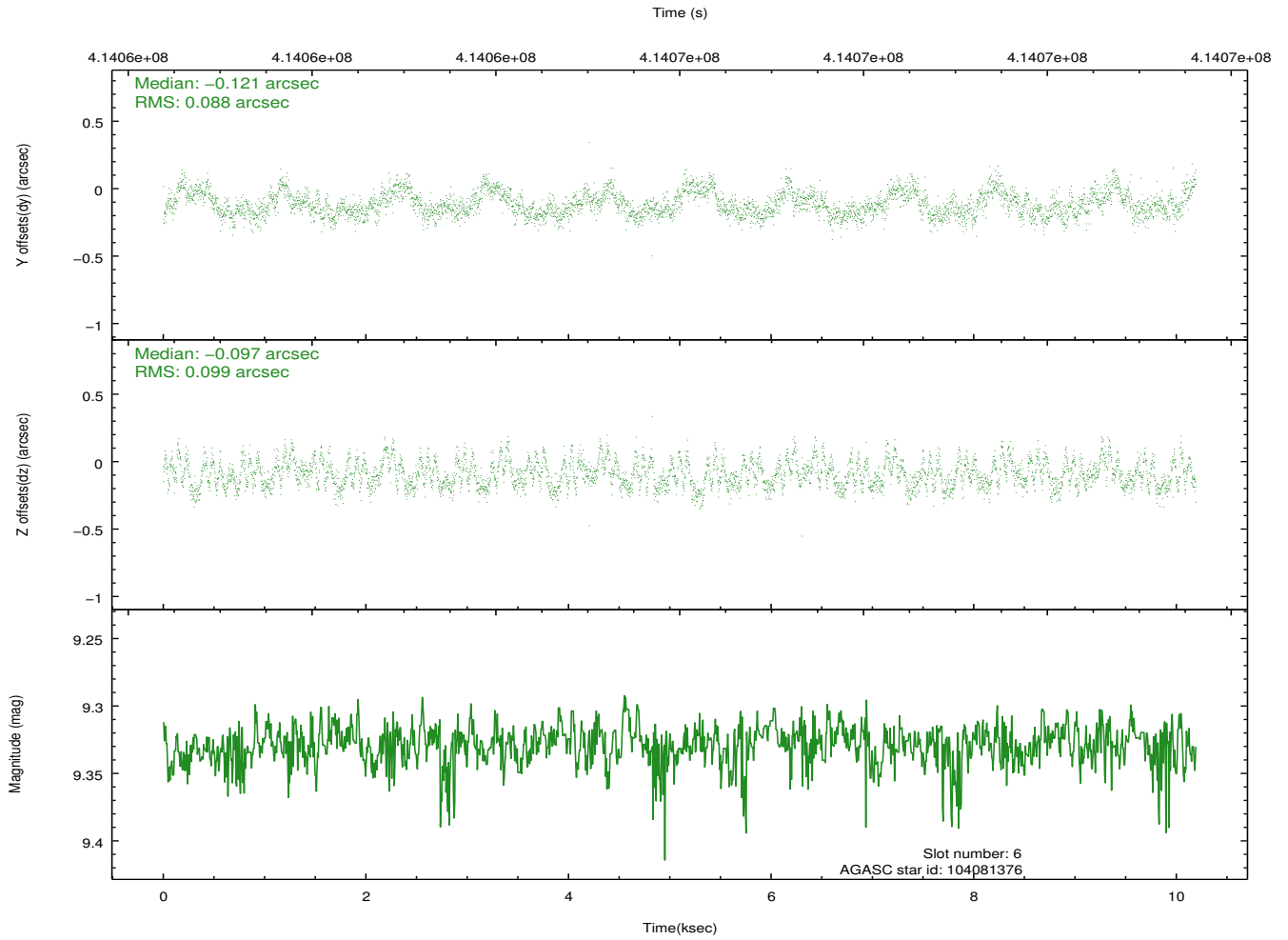
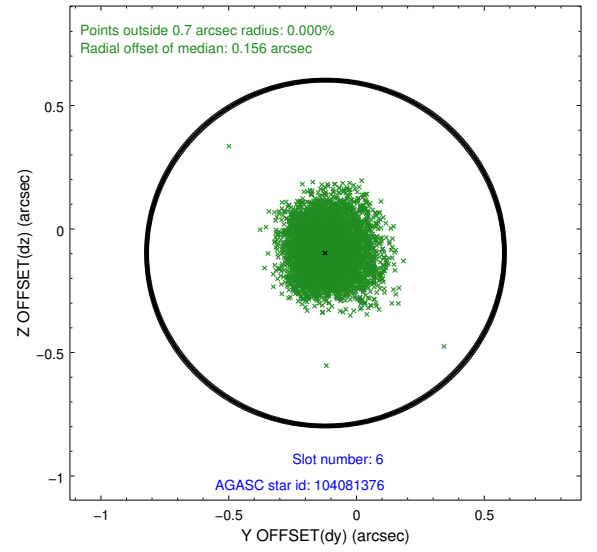
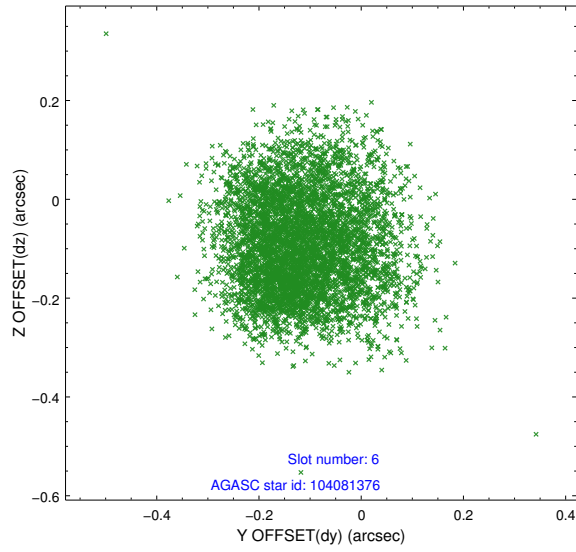
## 2.4.2 Slot 4



### 2.4.3 Slot 5

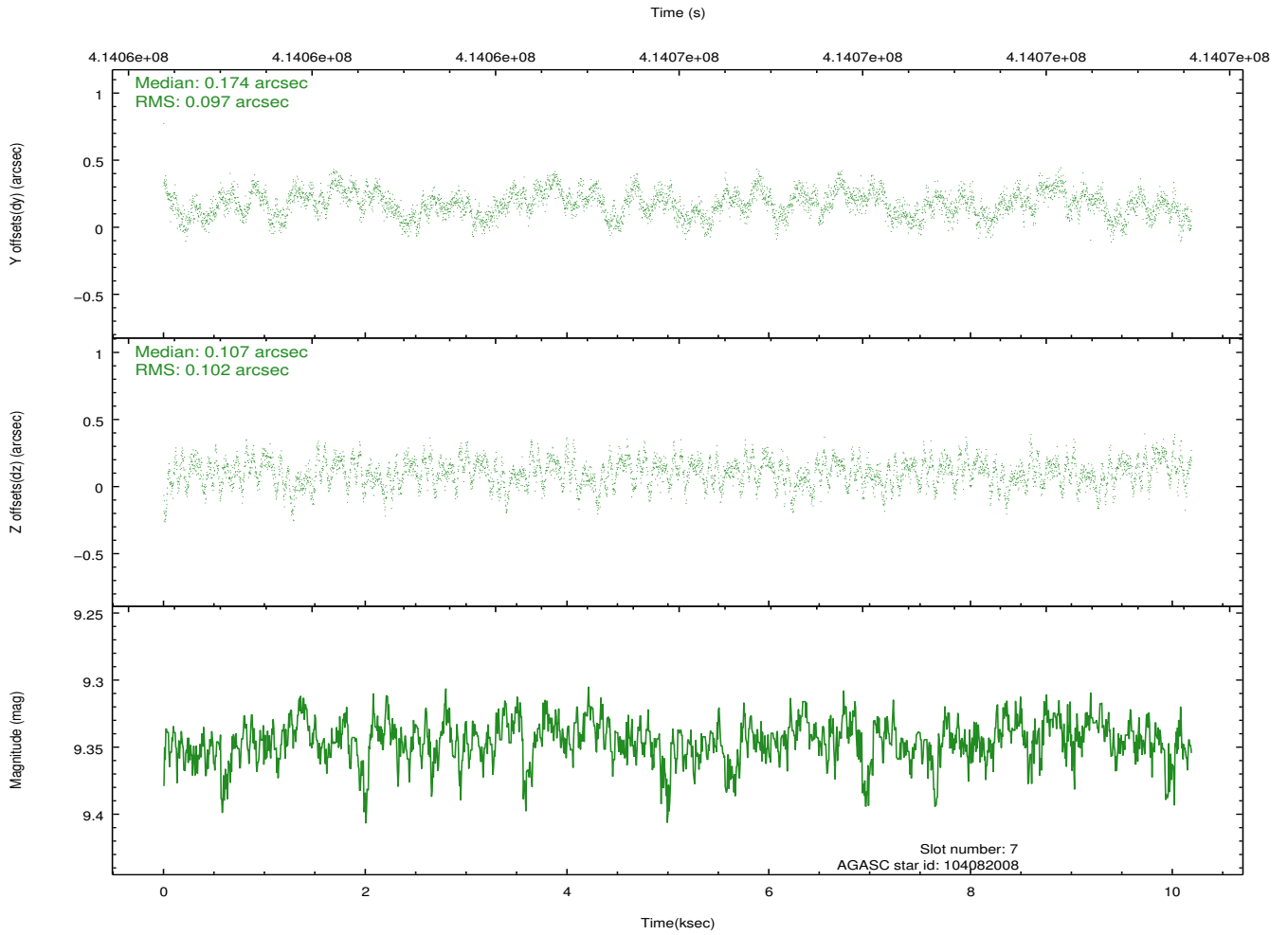
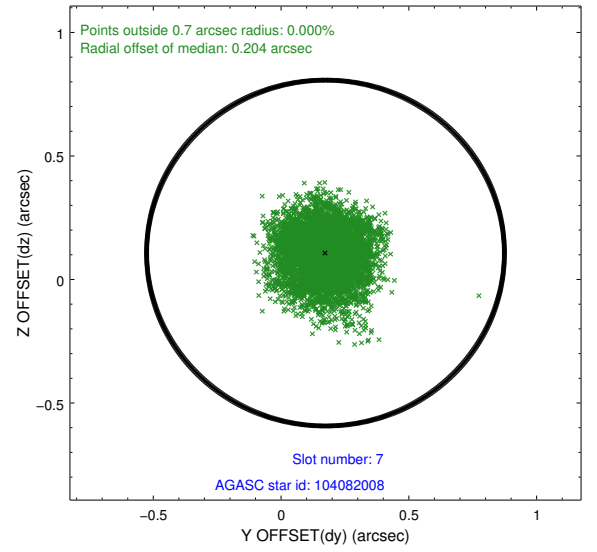
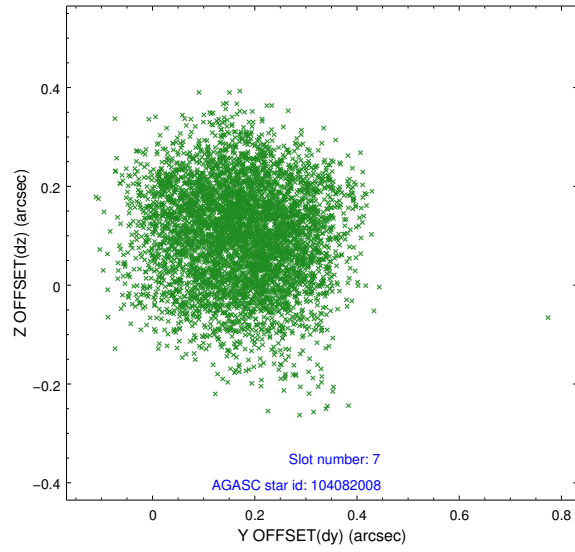


## 2.4.4 Slot 6



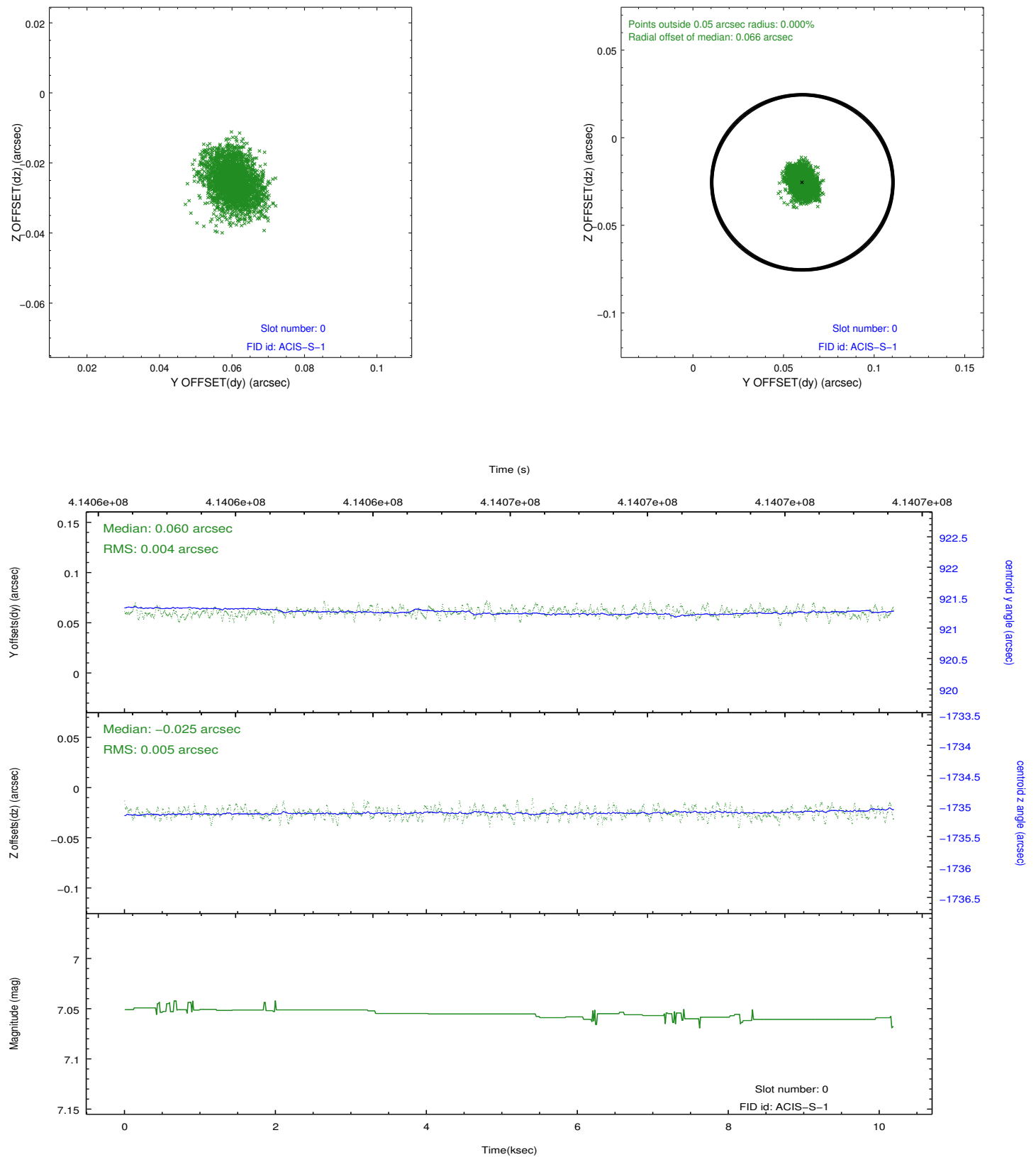


## 2.4.5 Slot 7

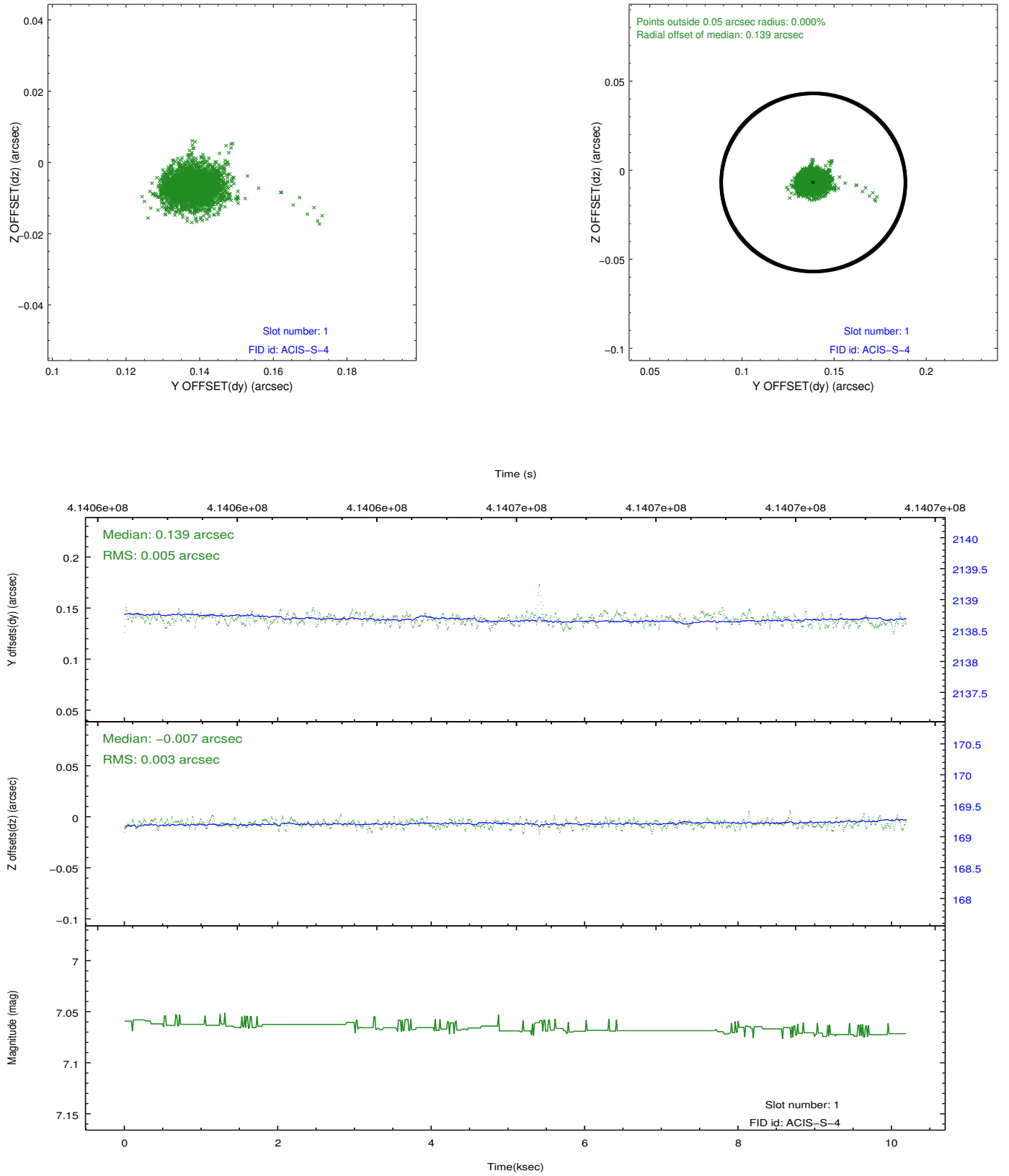


## 2.5 FID Slots

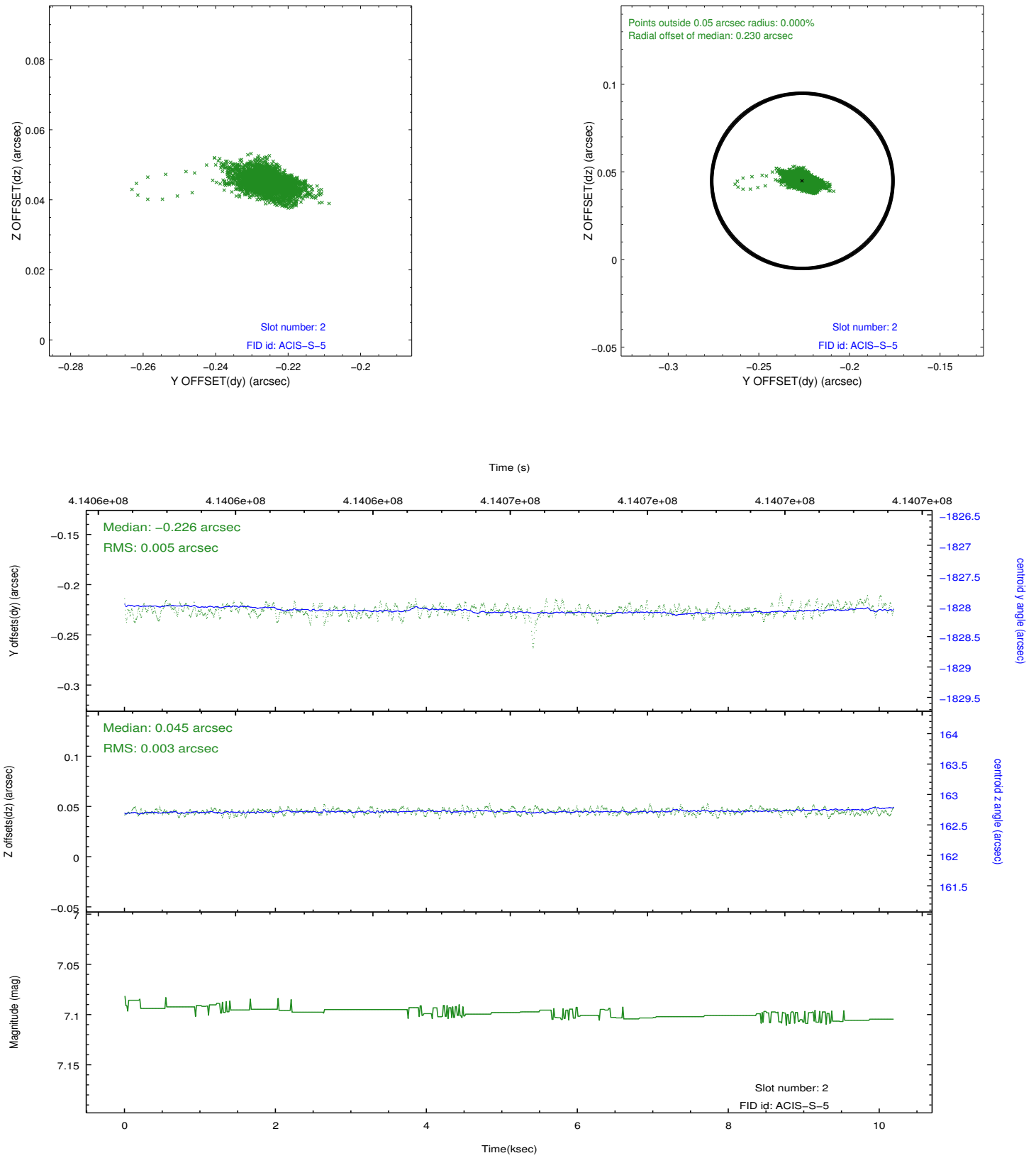
### 2.5.1 Slot 0



## 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)	2012.02.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.064403824568

## 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.