

# V&V Reference Report

## L2 ASCDS Version : 7.6.11.1

Observation 785 - L2 Version 4  
Chandra X-Ray Center

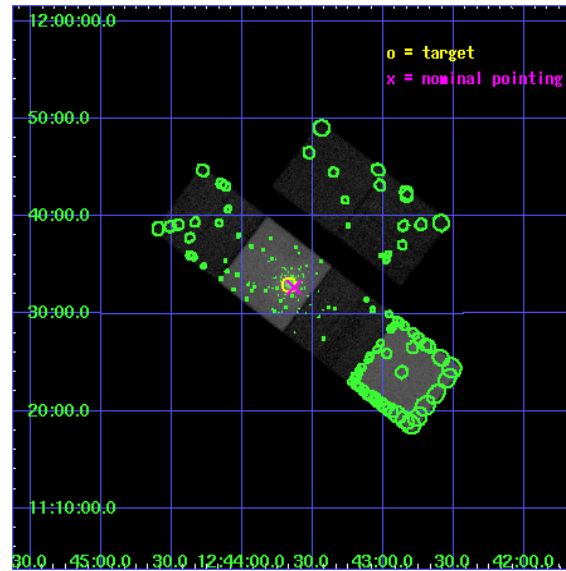
L2 Processing Date : Oct 10 2007

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# 1 Front

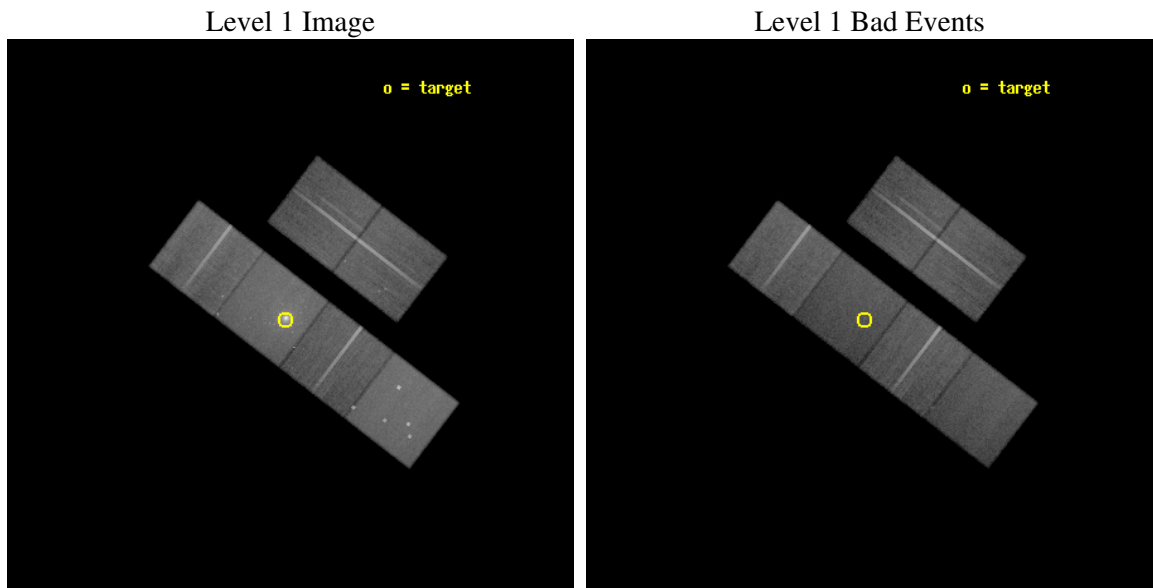
seq_num	600088
obs_id	785
title	STELLAR MASS LOSS VERSUS EXTERNAL ACCRETION IN X-RAY BRIGHT ELLIPTICALS
observer	Dr. Craig Sarazin
object	NGC 4649
dtcycle	0
cycle	P
ra_targ	190.917917
dec_targ	11.549444
ra_nom	190.90877773214
dec_nom	11.544920260878
roll_nom	217.46395873314
revision	4
ontime	38604.14463219
livetime	38115.315708232
ontime2	38626.831274092
ontime3	38639.795164898
ontime5	38613.867532834
ontime6	38649.518225148
ontime7	38604.14463219
ontime8	38643.036244839
l2events	527729



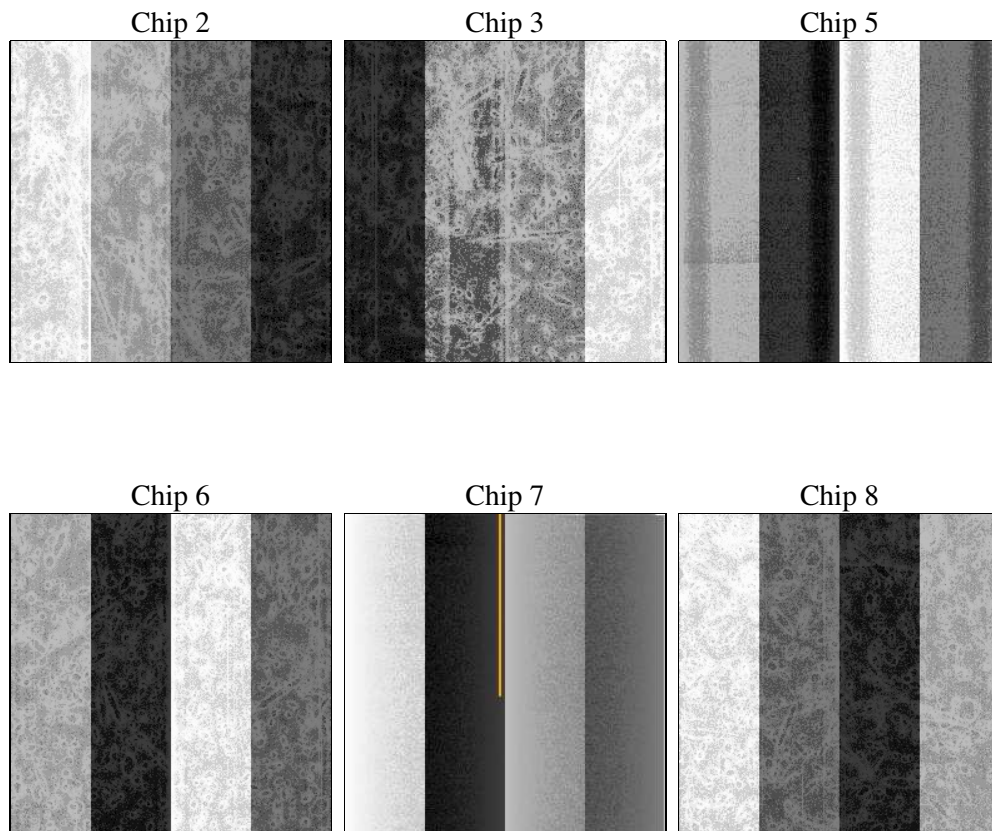
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.11.1
caldsver	3.4.1
date	2007-10-10T16:06:45
revision	4

sched_exp_time	38500.000000
ontime	38604.14463219
ontime2	38626.831274092
ontime3	38639.795164898
ontime5	38613.867532834
ontime6	38649.518225148
ontime7	38604.14463219
ontime8	38643.036244839
l1events	2030855

### 2.1.4 Events

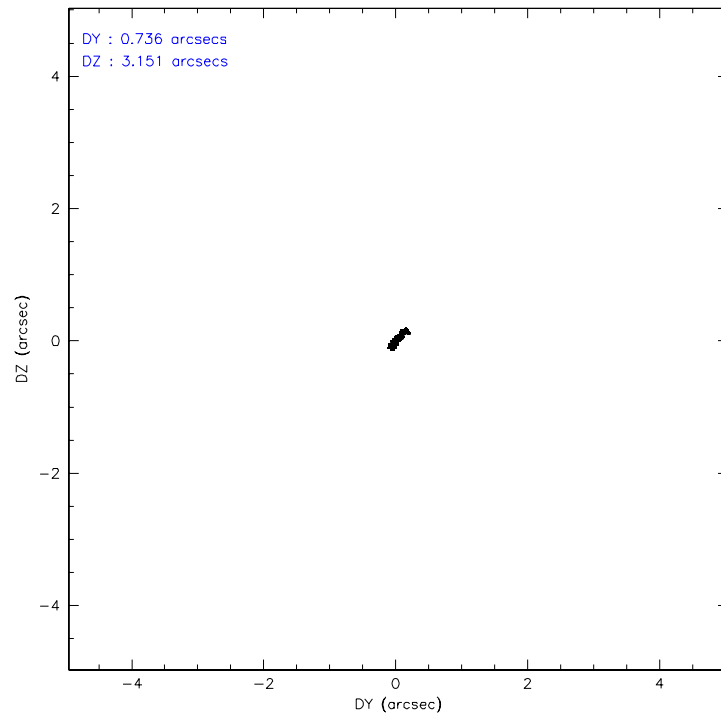
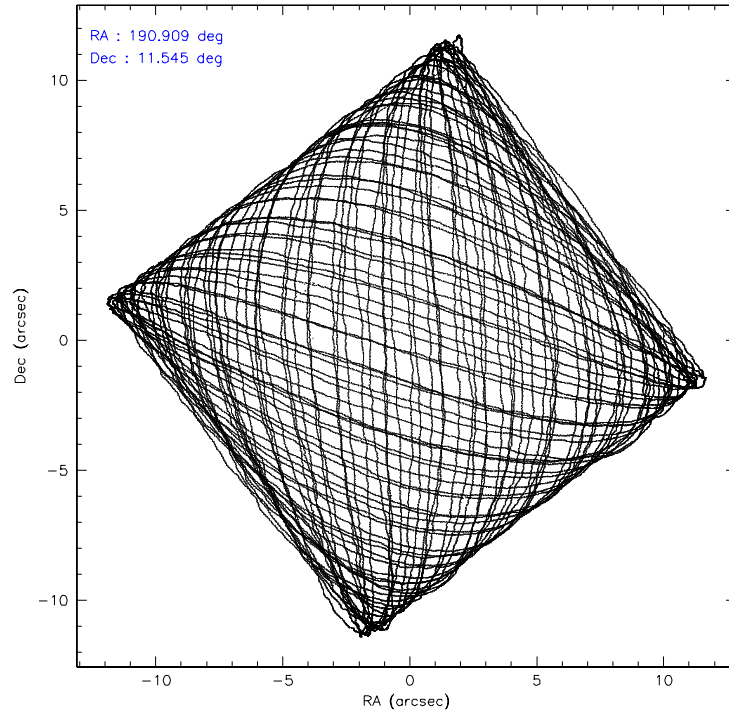
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	295634	278575	399710	285191	421241	350504
rejected events	264732	249233	192458	252487	188424	283133
rejected %	89%	89%	48%	88%	44%	80%

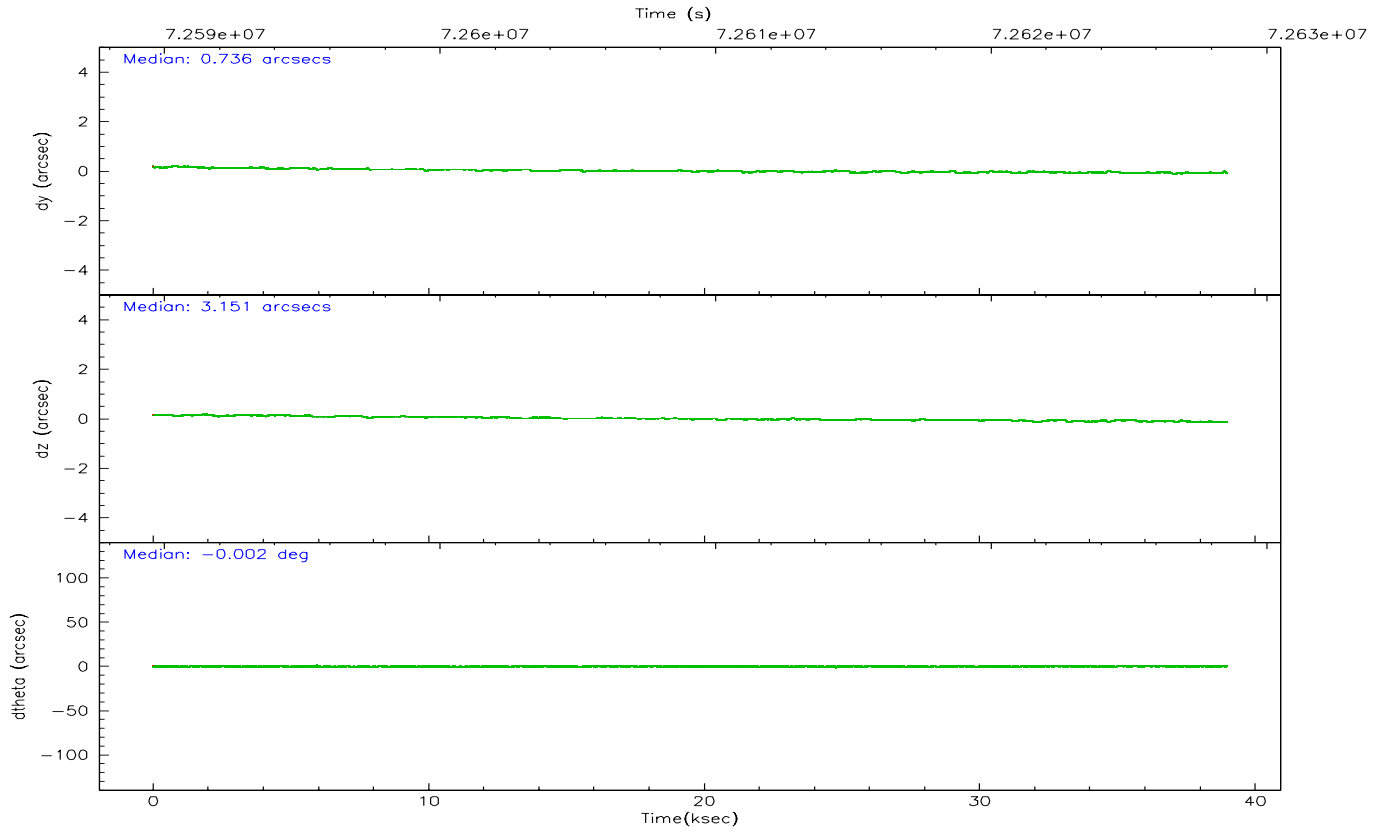
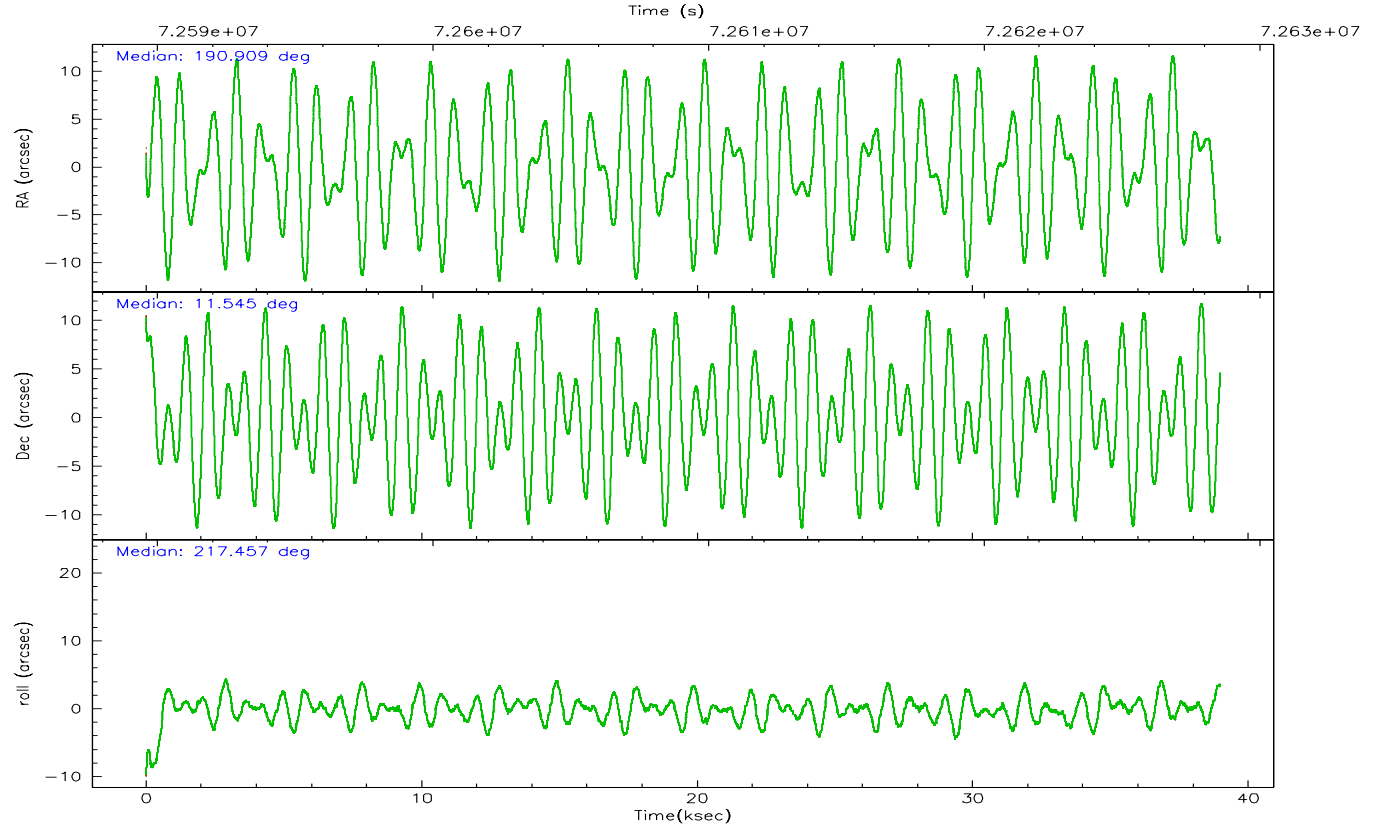
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	13836	13124	35766	14908	40784	23028
	4%	4%	8%	5%	9%	6%
grade 1 events	125	145	631	130	333	187
	0%	0%	0%	0%	0%	0%
grade 2 events	6252	5527	55628	5908	49844	13868
	2%	1%	13%	2%	11%	3%
grade 3 events	2862	2871	10110	3102	22827	7395
	0%	1%	2%	1%	5%	2%
grade 4 events	2876	2891	9964	3088	22431	6851
	0%	1%	2%	1%	5%	1%
grade 5 events	8669	8933	28021	10206	31831	13178
	2%	3%	7%	3%	7%	3%
grade 6 events	5076	4936	95815	5705	96958	16236
	1%	1%	23%	2%	23%	4%
grade 7 events	255938	240148	163775	242144	156233	269761
	86%	86%	40%	84%	37%	76%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
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
Pointing RA	190.919452	190.9087777321384	Subarray requested	NONE	NONE
Pointing Dec	11.570294	11.54492026087756	Alternating exposures requested	N	N
Pointing Roll	217.305188	217.4639587331448	Primary exposure time	3.200000	3.2
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-190.132523	-190.1425803651734			
SIM translation stage offset (mm)	0	0.01005778216563158			
Observation start time	72590070.184000	72588845.023945			
Observation start date	2000-04-20T03:53:26	2000-04-20T03:34:05			
Observation end time	72628570.184000	72629013.237918			
Observation end date	2000-04-20T14:35:06	2000-04-20T14:43:33			
Read mode	TIMED	TIMED			

## 2.3 Aspect





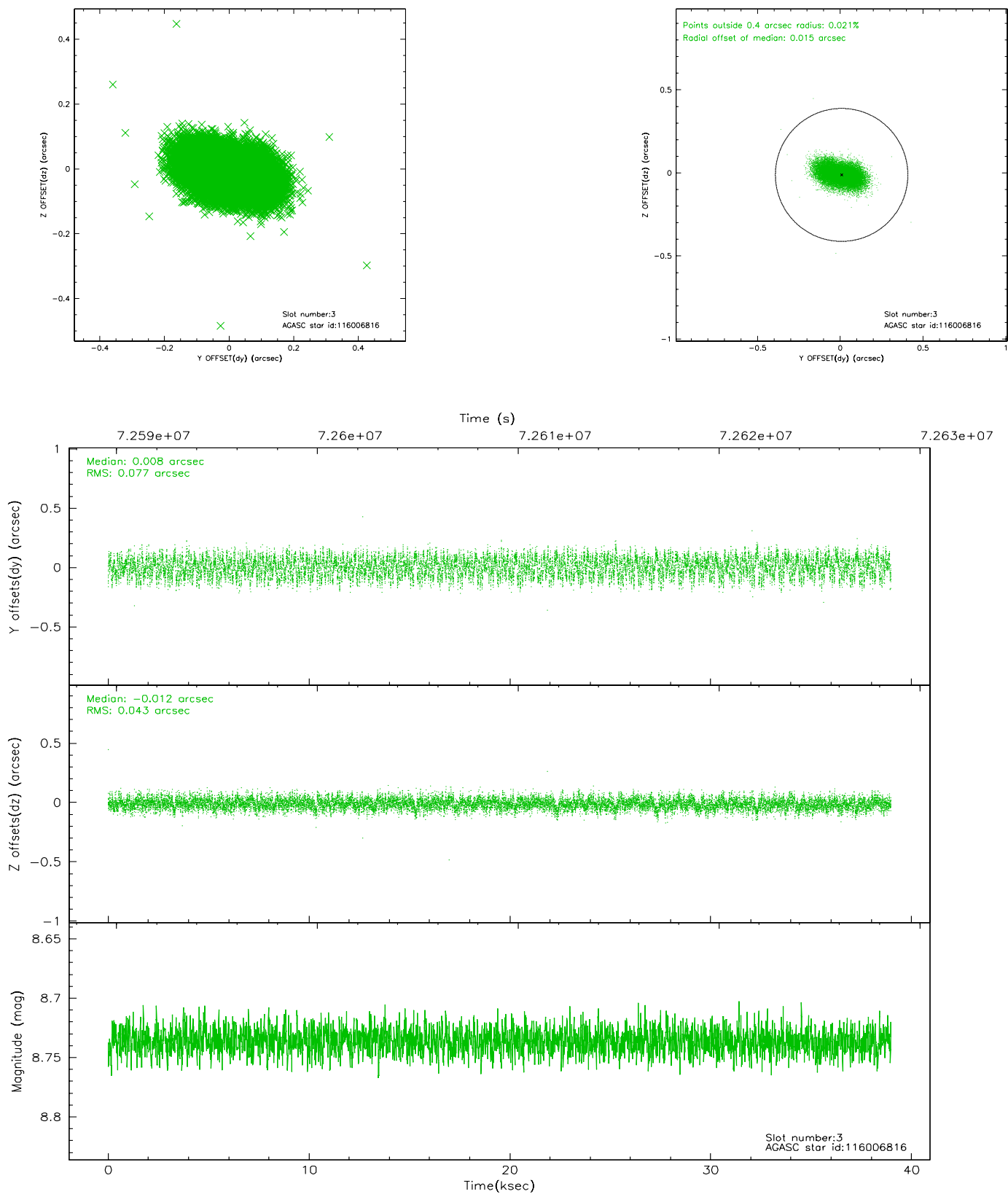
### Slot Statistics

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	9449	0.010	0.012	0.007	0.011	0.000000	0.000000	-753.37	-1724.14
1	FID	ACIS-S-4	7.21	9345	-0.040	-0.008	0.005	0.009	0.000000	0.000000	2159.90	184.22
2	FID	ACIS-S-5	7.24	9374	-0.001	0.005	0.006	0.010	0.000000	0.000000	-1806.14	178.04
3	GUIDE	116006816	8.74	18740	0.008	-0.012	0.095	0.153	191.642439	11.378493	-1612.46	2093.11
4	GUIDE	115081808	8.87	18832	0.010	0.072	0.088	0.139	191.005561	10.921316	1174.44	2043.30
5	GUIDE	115083432	9.75	18656	-0.096	0.007	0.095	0.154	190.888504	12.192141	-1269.10	-1846.54
6	GUIDE	115084280	10.15	18822	0.023	-0.045	0.108	0.175	190.781448	11.930338	-397.97	-1325.70
7	GUIDE	115089400	9.88	18821	0.053	-0.023	0.109	0.179	190.425194	11.760272	971.30	-1600.75

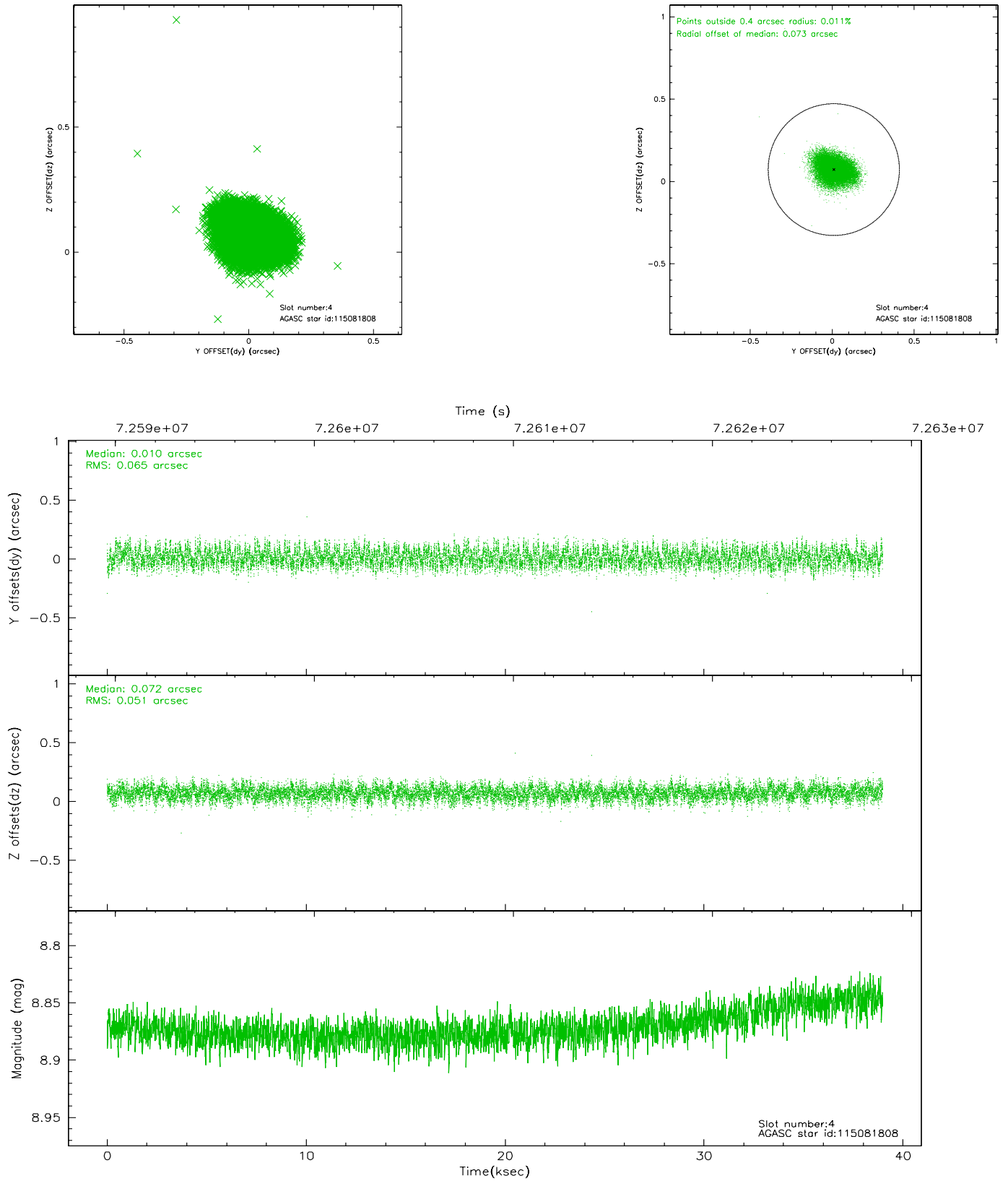


## 2.4 Star Slots

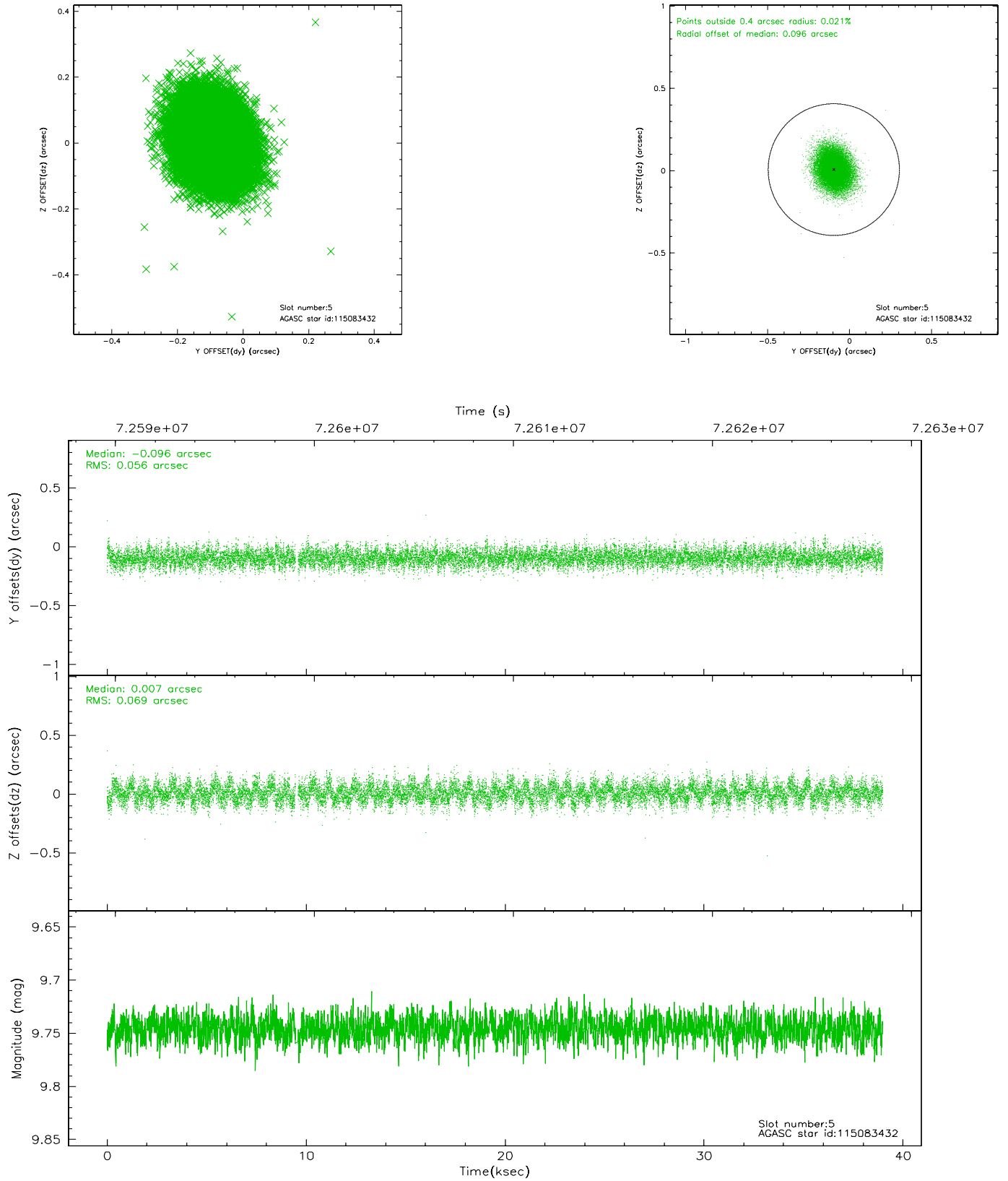
### 2.4.1 Slot 3



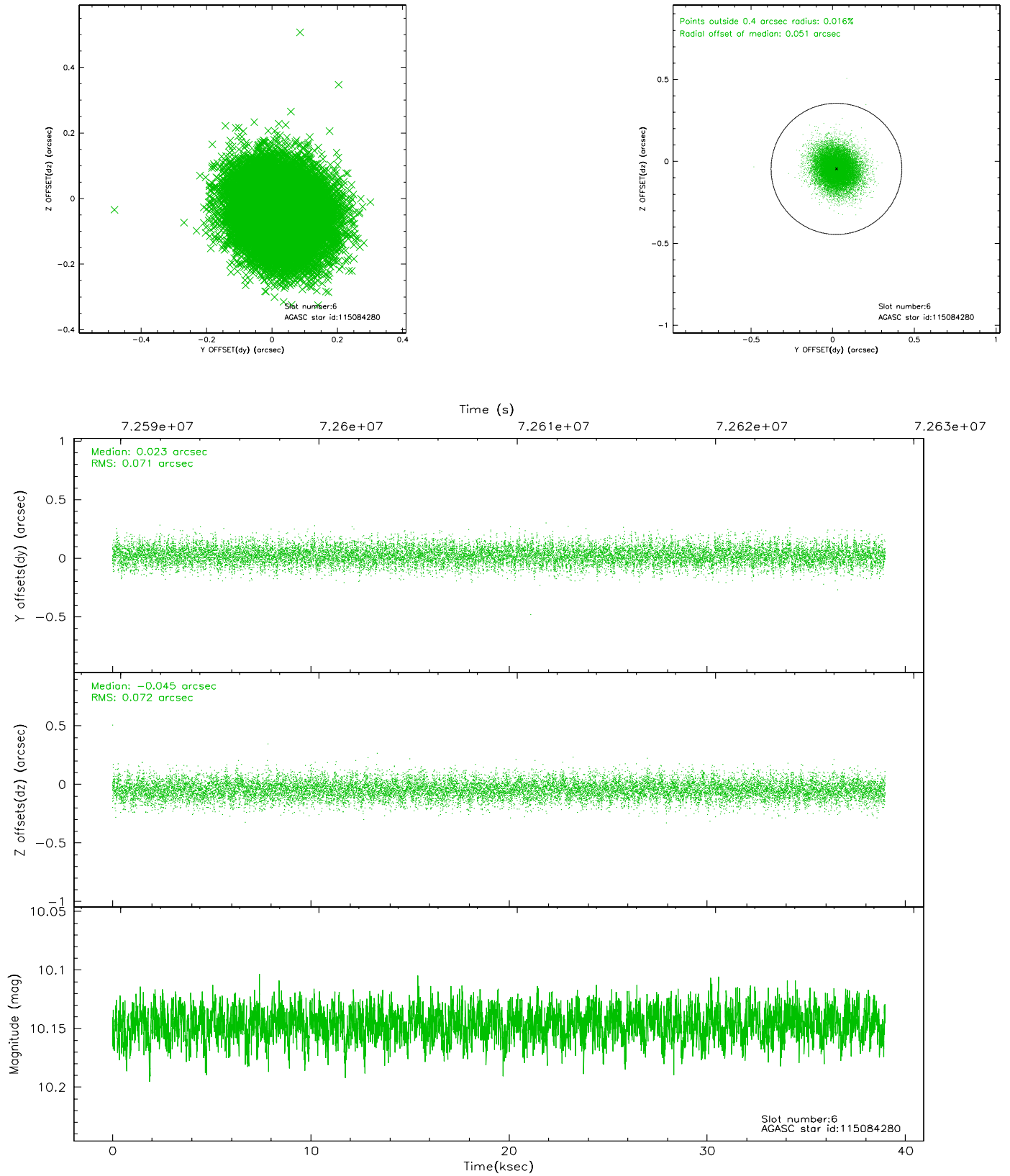
## 2.4.2 Slot 4



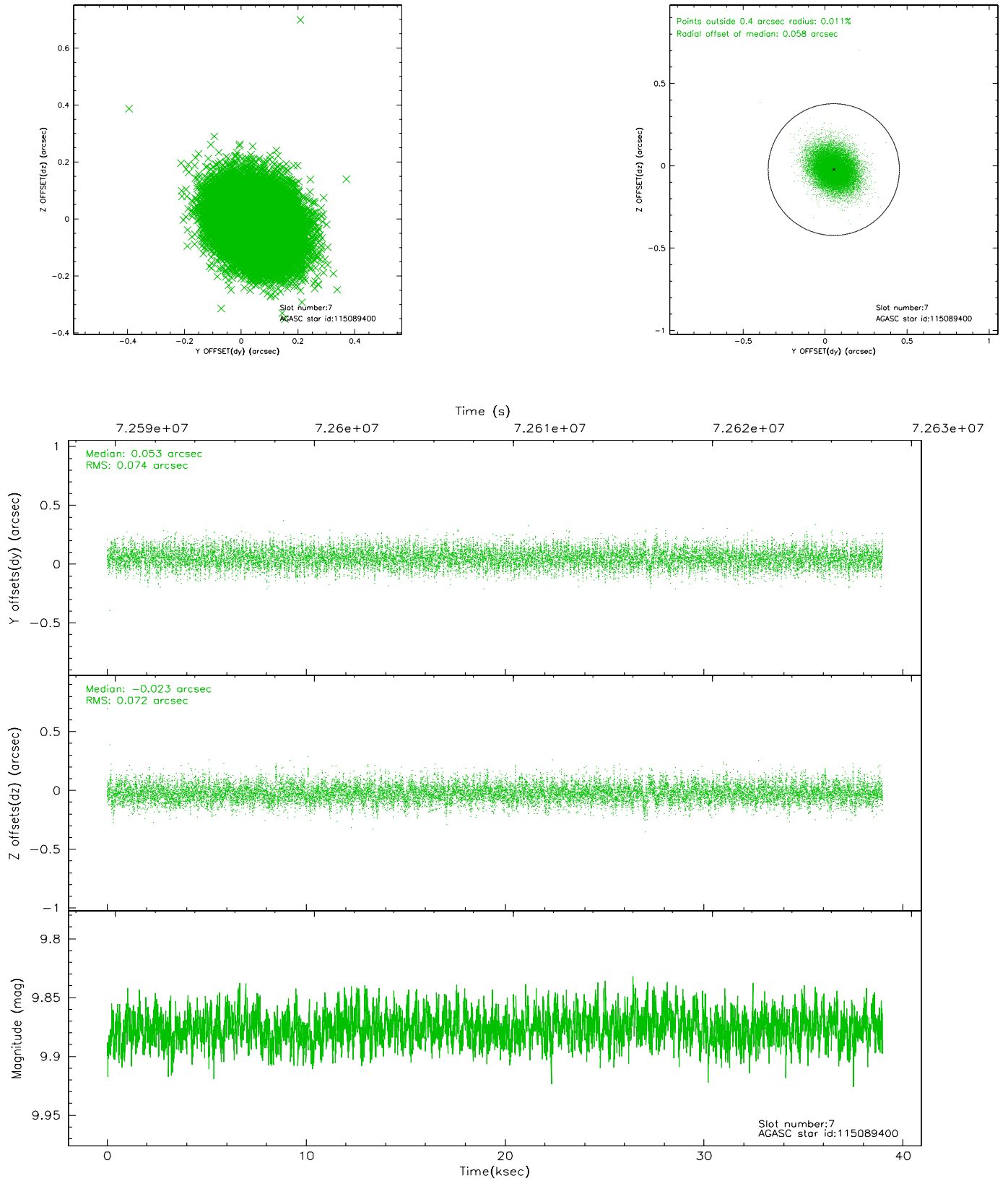
### 2.4.3 Slot 5



## 2.4.4 Slot 6

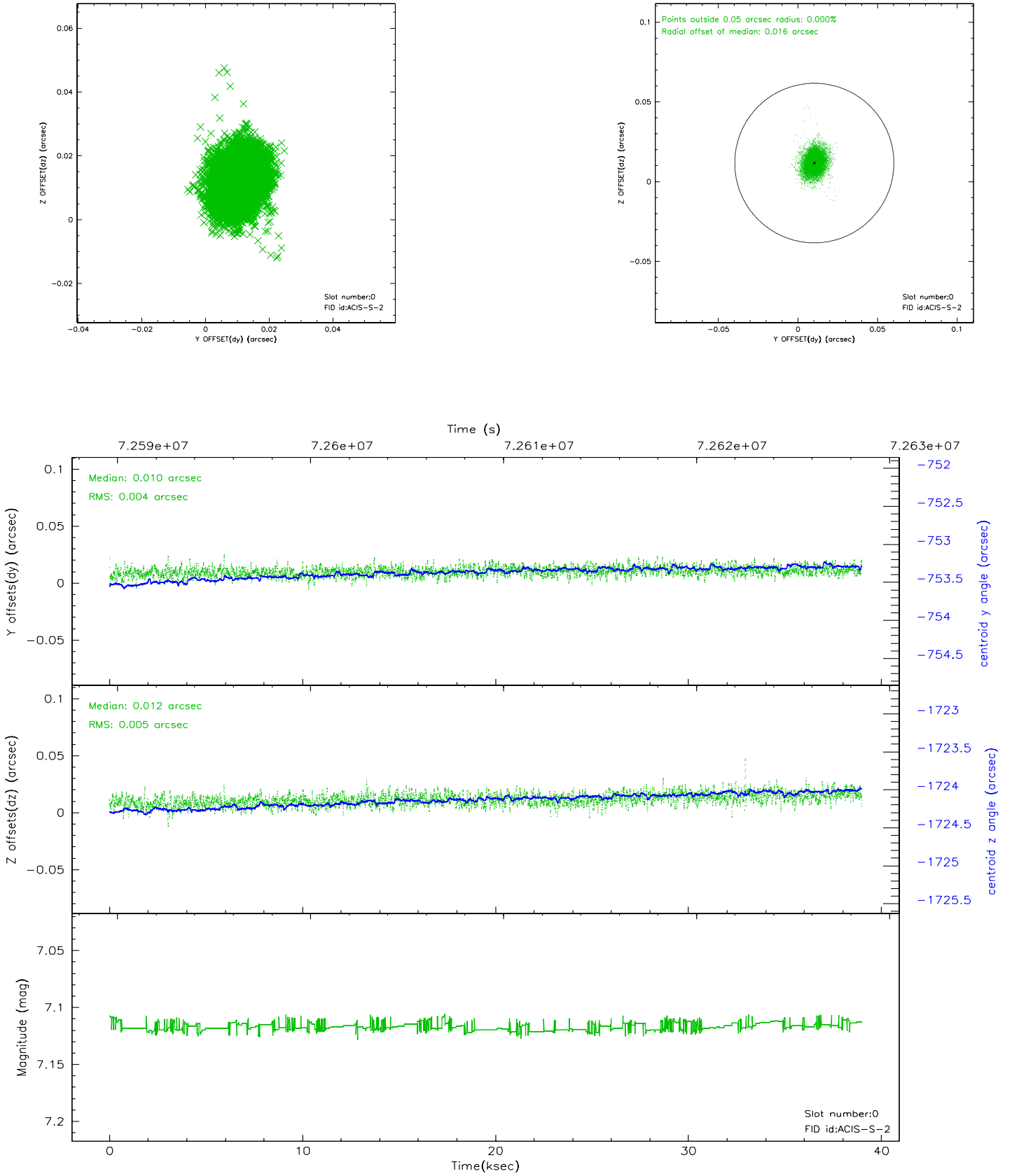


## 2.4.5 Slot 7

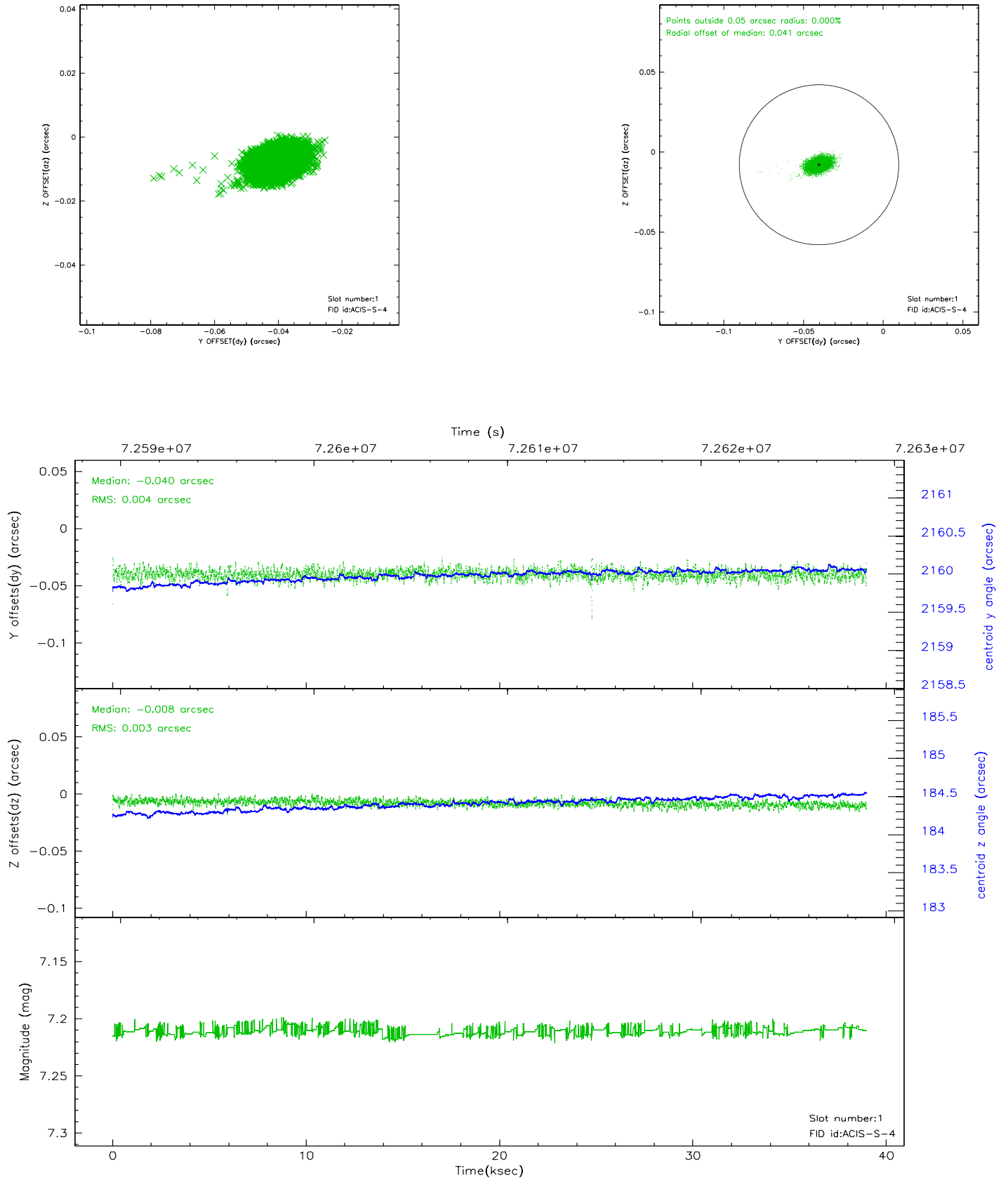


## 2.5 FID Slots

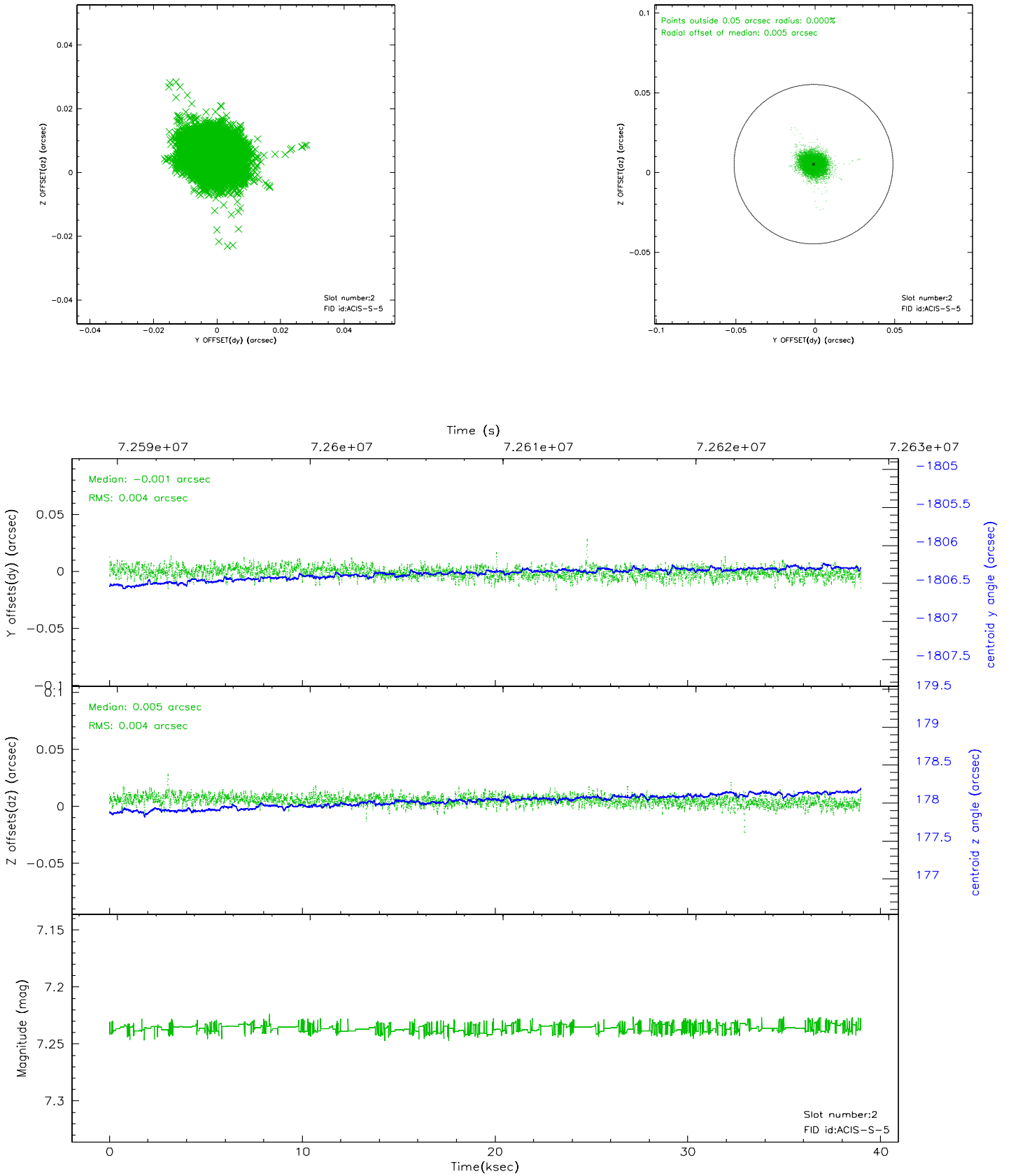
### 2.5.1 Slot 0



## 2.5.2 Slot 1

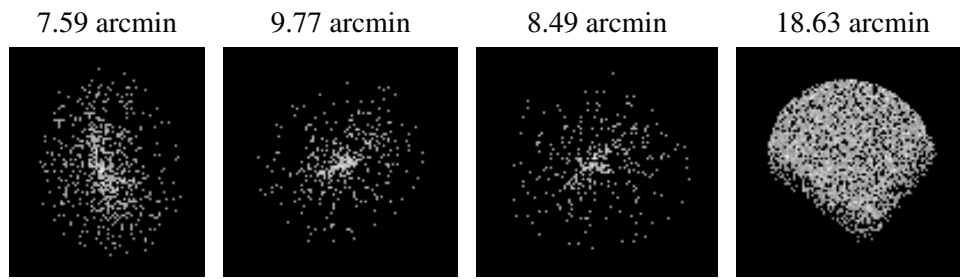


### 2.5.3 Slot 2





### 3 Point Sources



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.10.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	37.35

## A.2 Comments

Charge time for this ObsId remains at original value of 37.35 ks,  
although  
with the current processing the charge time would have been 38.60 ksec.  
=====

The bias maps for CCD\_ID = 2 and 3 suffer from anomalously high bias values in an 'exacto-knife'-shaped area of the bias file. Pixels in the event data that have been bias-corrected by one of the 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 maps for CCD\_ID=2 and 3 have been recreated  
recreated for this processing to remove this anomaly. Bias maps for chips 2 and 3 were reconstructed using scaled data  
from a comparable bias map for another observation to replace pixels affected  
by the anomaly.