V&V Reference Report
L2 ASCDS Version : 7.6.9

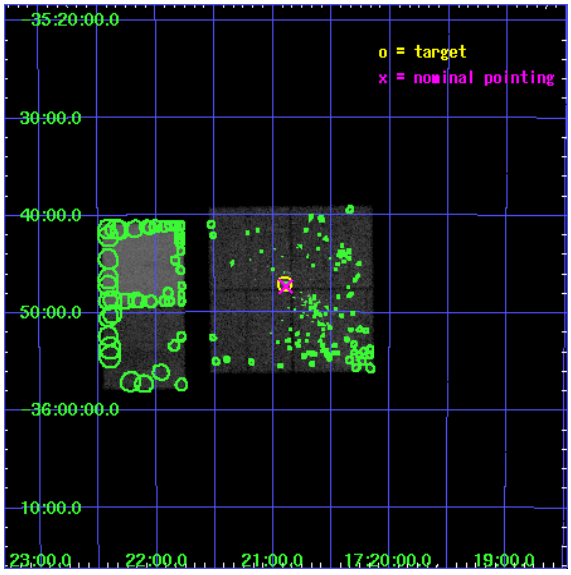
Observation 2574 - L2 Version 001
Chandra X-Ray Center

L2 Processing Date : Oct 2 2006

Contents

1 Front

seq_num	200182
obs_id	2574
title	TRACING THE CHRONICLE OF MASSIVE YOUNG STARS IN A GIANT MOLECULAR CLOUD NGC 6334
observer	Dr Yuichiro Ezoe
object	NGC 6334 REGION 1
dtycycle	0
cycle	P
ra_targ	260.225
dec_targ	-35.784444
ra_nom	260.22270144307
dec_nom	-35.788703952707
roll_nom	269.37198758621
revision	2
ontime	40156.799850404
livetime	39648.310271177
ontime0	40156.799850404
ontime1	40156.799850404
ontime2	40156.799850404
ontime3	40156.799850404
ontime6	40156.799850404
ontime7	40156.799850404
l2events	278231

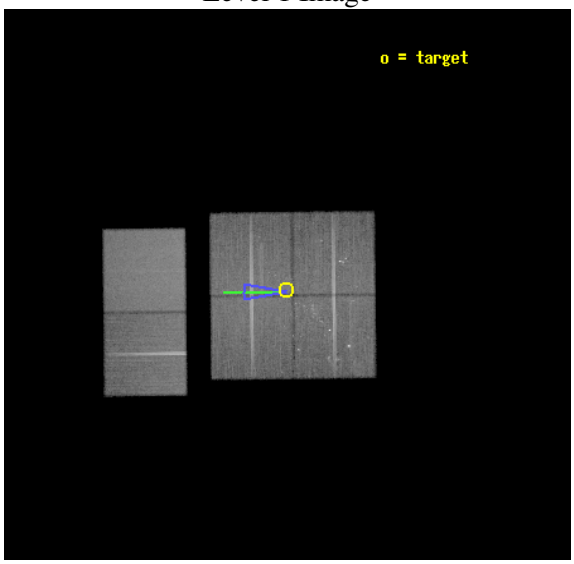


2 OBI

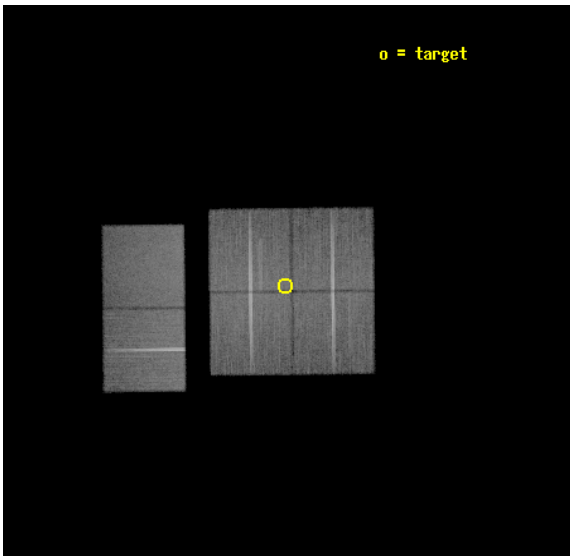
2.1 OBI

2.1.1 Images

Level 1 Image

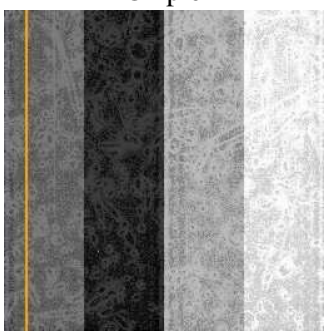


Level 1 Bad Events

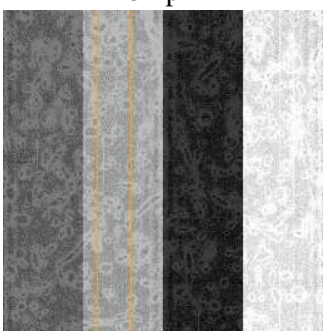


2.1.2 Bias

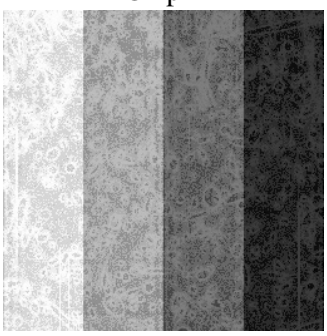
Chip 0



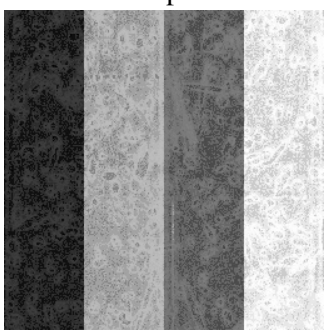
Chip 1



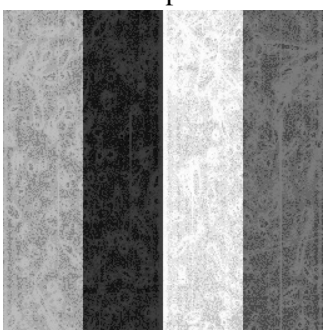
Chip 2



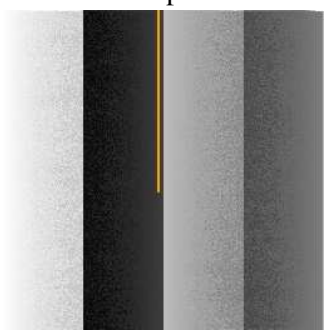
Chip 3



Chip 6



Chip 7



2.1.3 Parameters

obi_num	1
ascdsver	7.6.9
caldbver	3.2.3
date	2006-10-02T20:11:42
revision	2

sched_exp_time	40000.000000
ontime	40969.492370844
ontime0	40969.492370844
ontime1	40969.492370844
ontime2	40969.492370844
ontime3	40969.492370844
ontime6	40969.492370844
ontime7	40969.492390722
l1events	1560365

2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	246964	235720	246172	247989	256313	327207
rejected events	197161	197410	214884	216899	226469	204372
rejected %	79%	83%	87%	87%	88%	62%

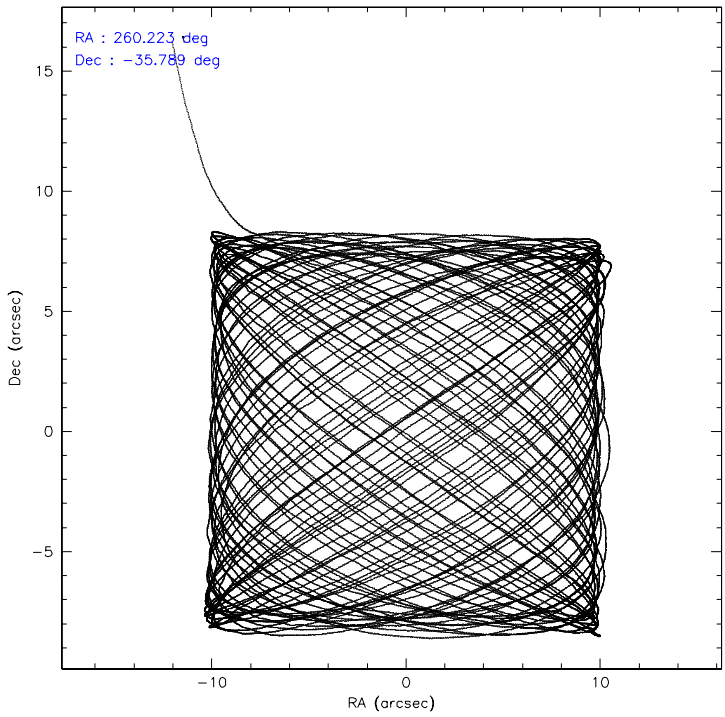
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	28208	18624	15156	14996	12438	7484
	11%	7%	6%	6%	4%	2%
grade 1 events	212	137	155	174	143	171
	0%	0%	0%	0%	0%	0%
grade 2 events	8800	7316	6218	5843	6249	30934
	3%	3%	2%	2%	2%	9%
grade 3 events	3883	3437	2912	2913	2870	6681
	1%	1%	1%	1%	1%	2%
grade 4 events	3469	3364	2826	2849	2851	6601
	1%	1%	1%	1%	1%	2%
grade 5 events	9738	10064	9262	10694	11455	22050
	3%	4%	3%	4%	4%	6%
grade 6 events	6148	6184	4792	5095	6027	73568
	2%	2%	1%	2%	2%	22%
grade 7 events	186506	186594	204851	205425	214280	179718
	75%	79%	83%	82%	83%	54%

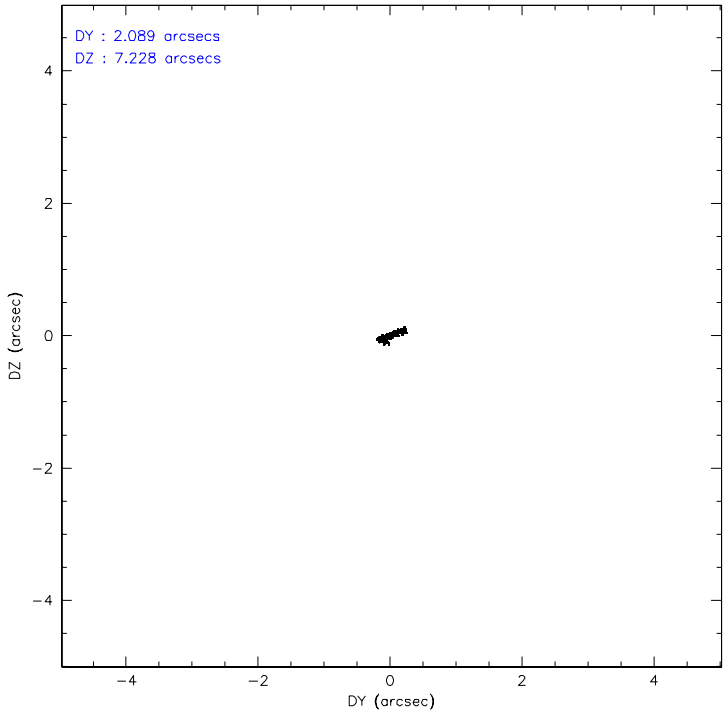
2.2 Compared Parameters

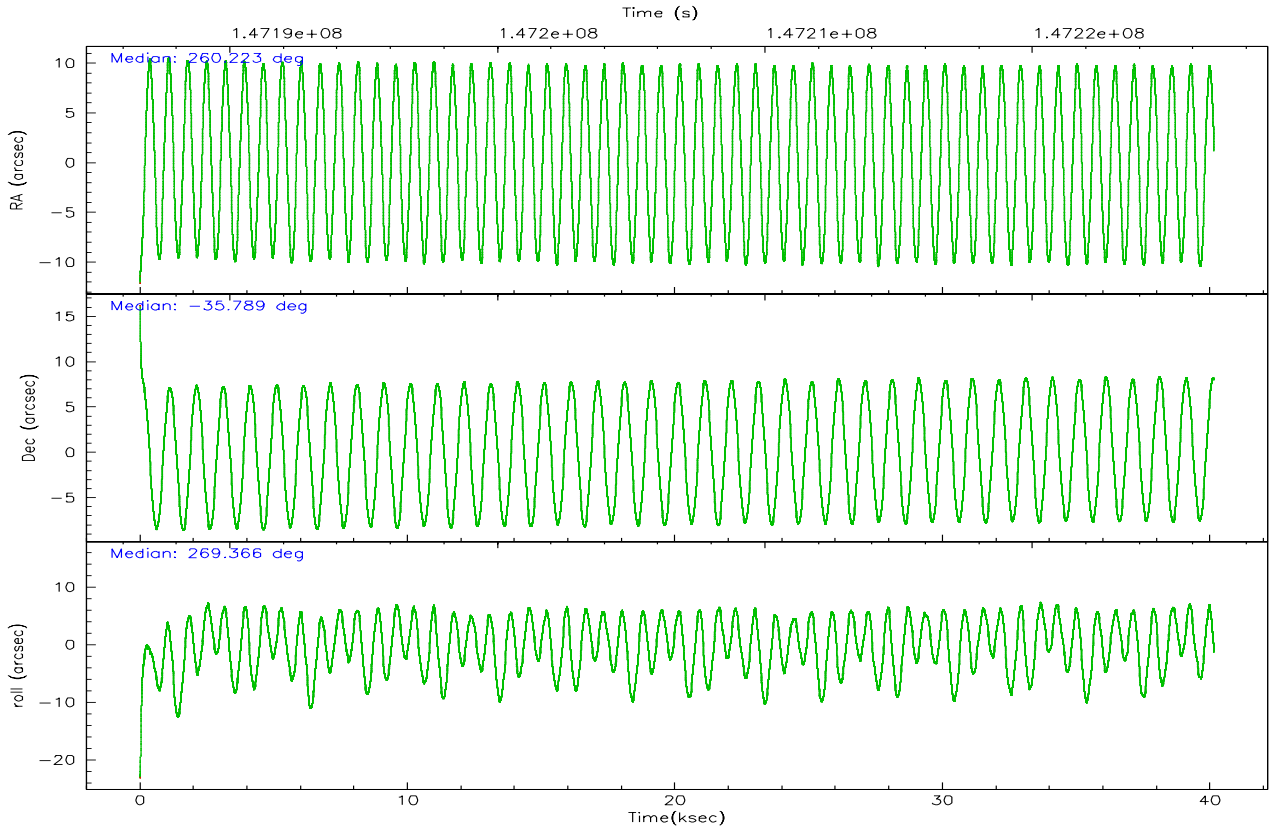
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-012367	ACIS-012367
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
Pointing RA	260.206042	260.2227014430733
Pointing Dec	-35.764881	-35.78870395270673
Pointing Roll	269.153567	269.3719875862067
Roll angle	270.000000	270.000000
Roll tolerance	10.000000	10.000000
Roll constraint allows 180D rotation	N	N
SIM focus pos (mm)	-0.782348	-0.7809083437167272
SIM defocus (mm)	0	0.001439871863259334
SIM translation stage pos (mm)	-233.592463	-233.5874344608287
SIM translation stage offset (mm)	0	-0.005018542100998502
Observation start time	147186805.184000	147185344.17769
Observation start date	2002-08-31T13:12:21	2002-08-31T12:49:04
Observation end time	147226805.184000	147227440.41693
Observation end date	2002-09-01T00:19:01	2002-09-01T00:30:40
Read mode	TIMED	TIMED

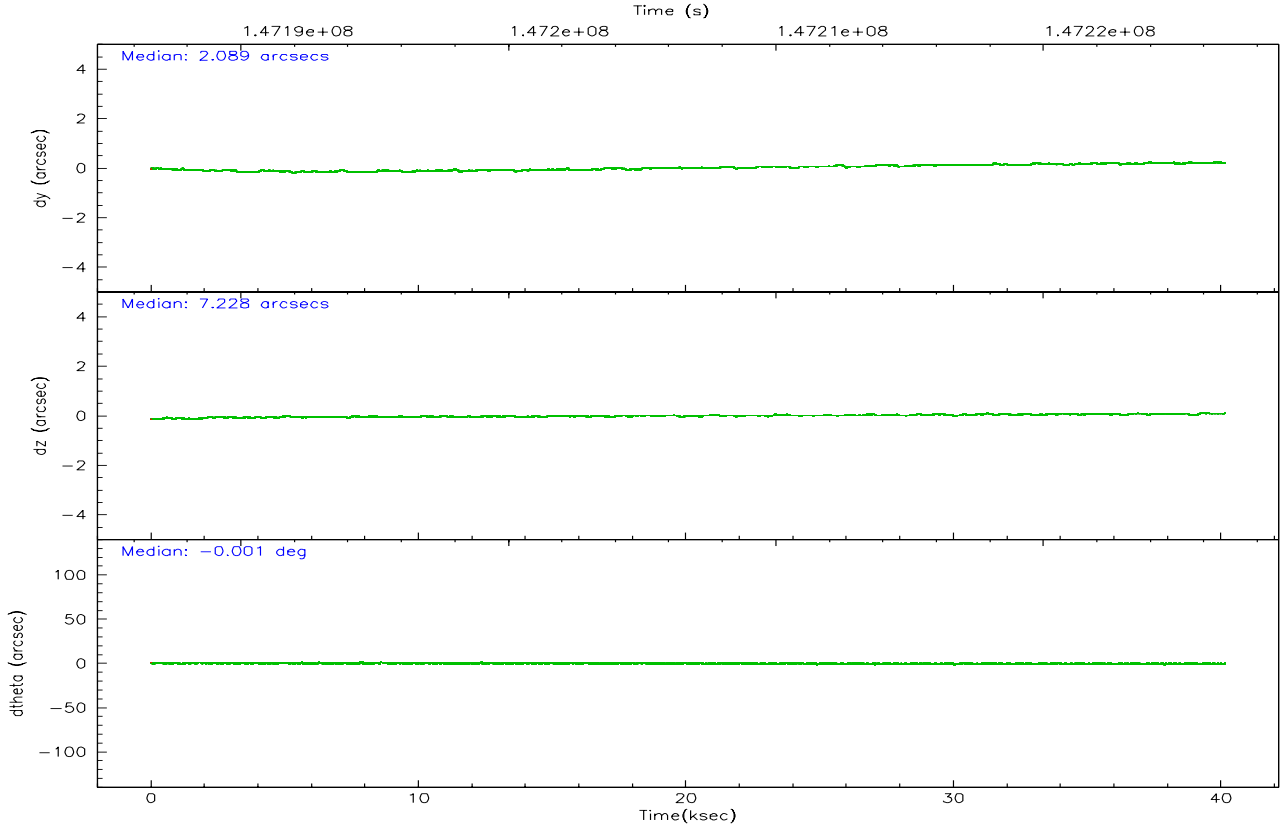
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
Primary exposure time	0.000000	3.2

2.3 Aspect


RA : 260.223 deg
Dec : −35.789 deg
15
10
5
0
−5
Dec (arcsec)
−10
0
10
RA (arcsec)


DY : 2.089 arcsecs
DZ : 7.228 arcsecs
4
2
0
−2
−4
DZ (arcsec)
−4
−2
0
2
4
DY (arcsec)


Time (s)
1.4719e+08
1.472e+08
1.4721e+08
1.4722e+08
Median: 260.223 deg
RA (arcsec)
Median: −35.789 deg
Dec (arcsec)
Median: 269.366 deg
roll (arcsec)
Time(ksec)

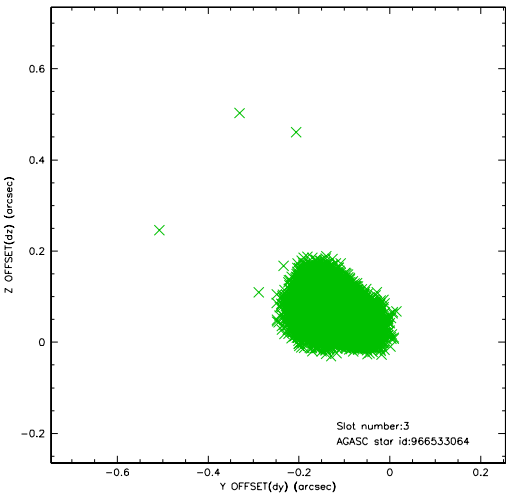

Time (s)
1.4719e+08
1.472e+08
1.4721e+08
1.4722e+08
Median: 2.089 arcsecs
dy (arcsec)
Median: 7.228 arcsecs
dz (arcsec)
Median: −0.001 deg
dtheta (arcsec)
Time(ksec)

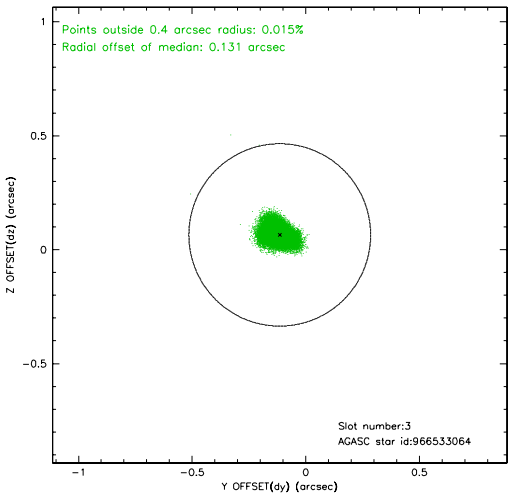
Slot Statistics

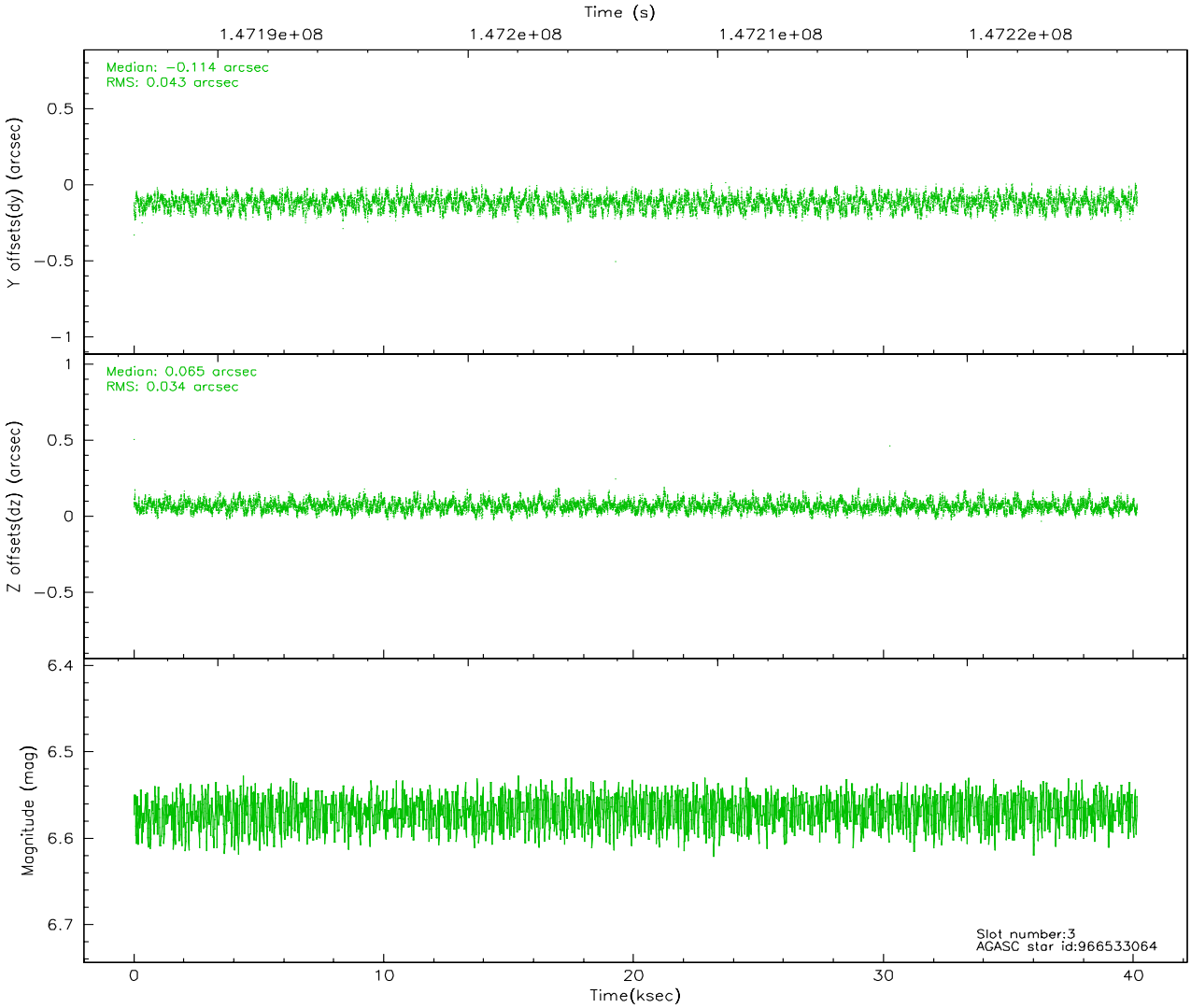
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.25	9795	-0.023	0.053	0.006	0.010	0.000000	0.000000	937.67	-830.59
1	FID	ACIS-I-5	7.24	9794	-0.022	0.042	0.006	0.010	0.000000	0.000000	-1810.39	1066.94
2	FID	ACIS-I-6	7.26	9795	-0.046	-0.025	0.007	0.011	0.000000	0.000000	403.23	1711.34
3	GUIDE	966533064	6.57	19589	-0.114	0.065	0.059	0.093	260.658145	-35.910729	507.55	1326.67
4	GUIDE	966004816	7.81	19586	-0.191	-0.114	0.063	0.101	259.439637	-35.224167	-1904.82	-2282.10
5	GUIDE	966530056	8.23	19583	0.170	-0.084	0.056	0.088	259.659669	-36.086961	1187.01	-1571.77
6	GUIDE	966530288	9.15	19567	0.170	0.082	0.078	0.124	260.563512	-35.995883	817.63	1053.96
7	GUIDE	967709784	9.06	19583	-0.038	0.052	0.089	0.146	261.025089	-35.287716	-1744.00	2381.78

2.4 Star Slots

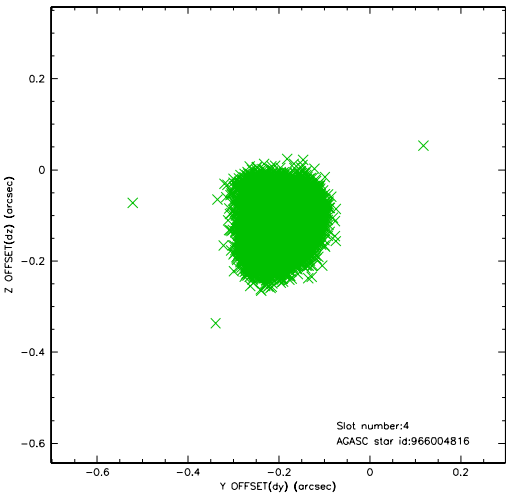
2.4.1 Slot 3

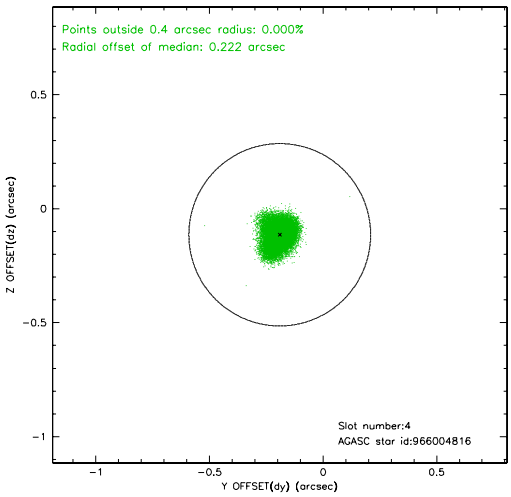


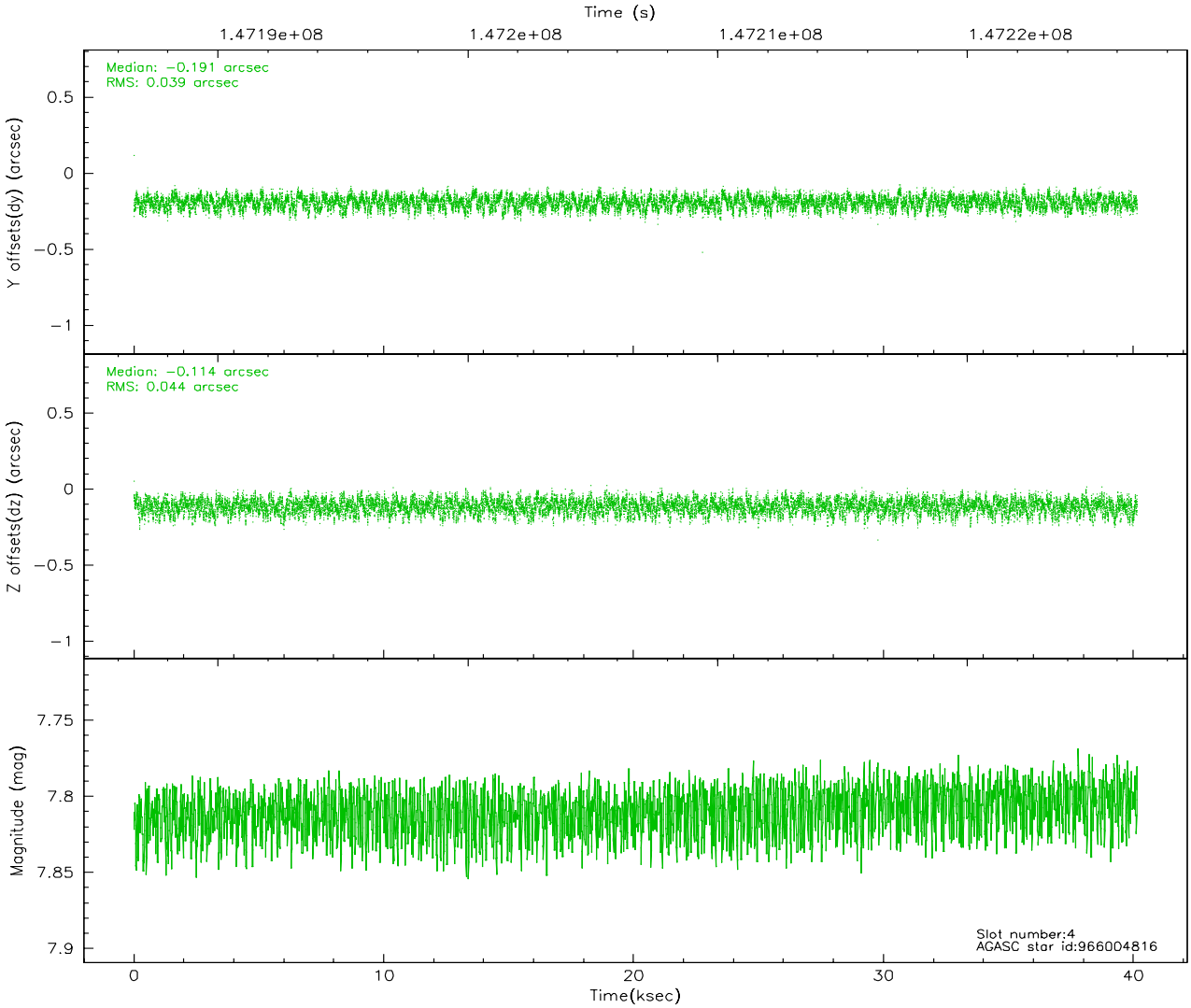




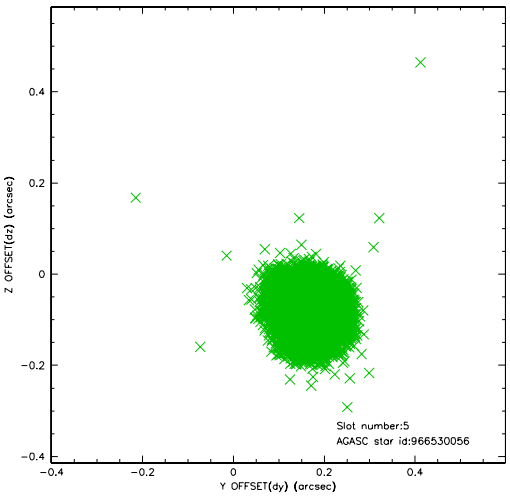
2.4.2 Slot 4

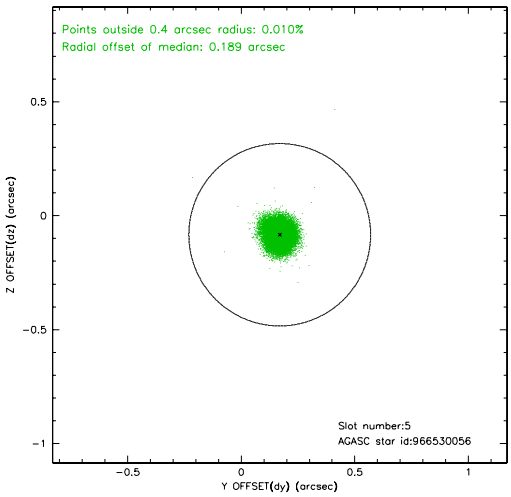

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:966004816

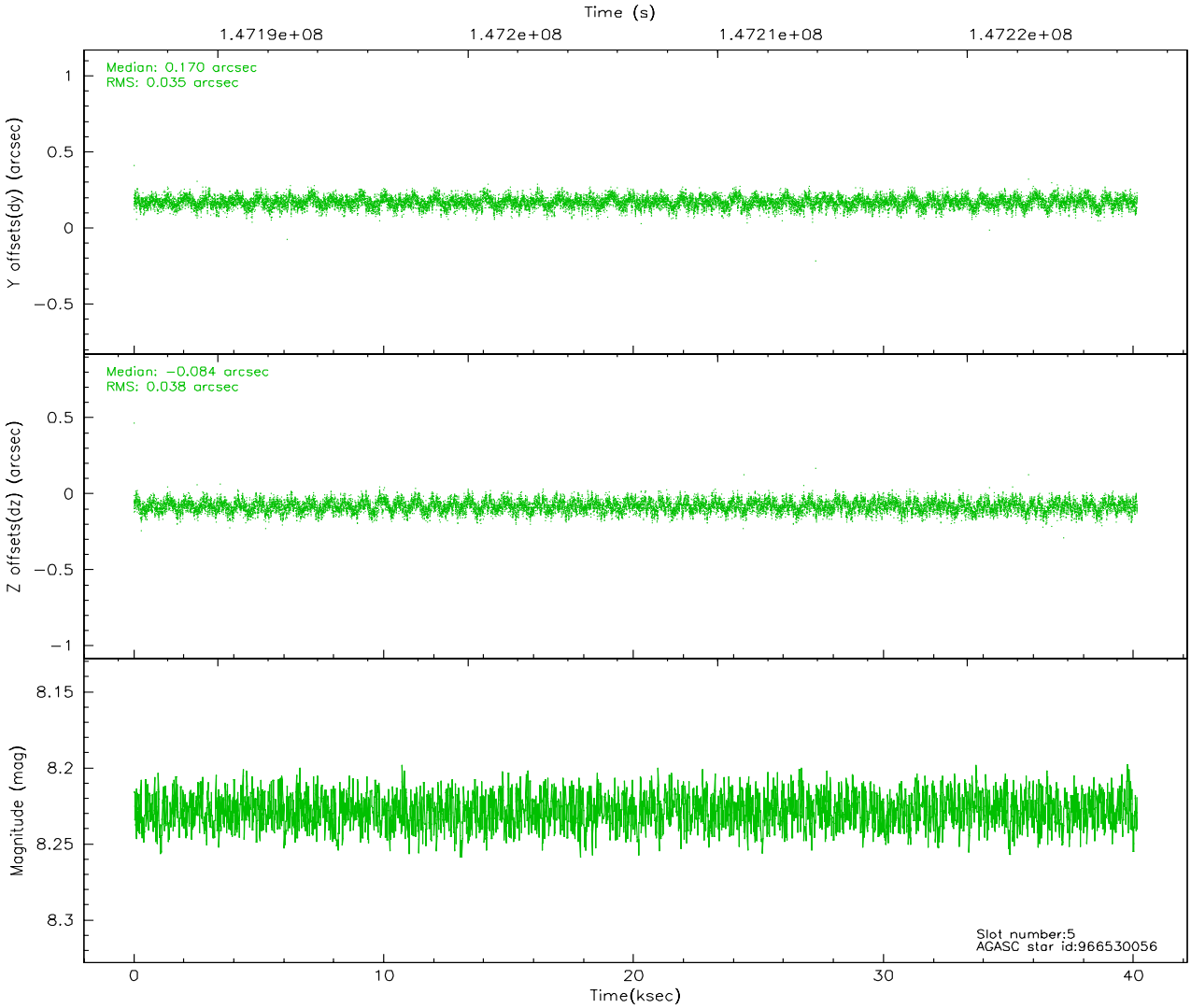

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.222 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:966004816


Time (s)
1.4719e+08
1.472e+08
1.4721e+08
1.4722e+08
Median: −0.191 arcsec
RMS: 0.039 arcsec
Y offsets(dy) (arcsec)
Median: −0.114 arcsec
RMS: 0.044 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:966004816
Time(ksec)

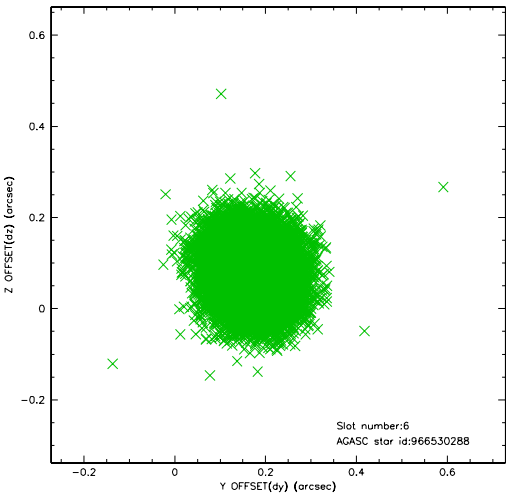
2.4.3 Slot 5

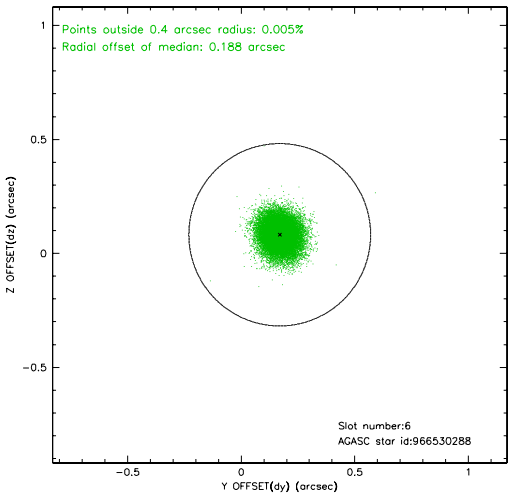

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:966530056

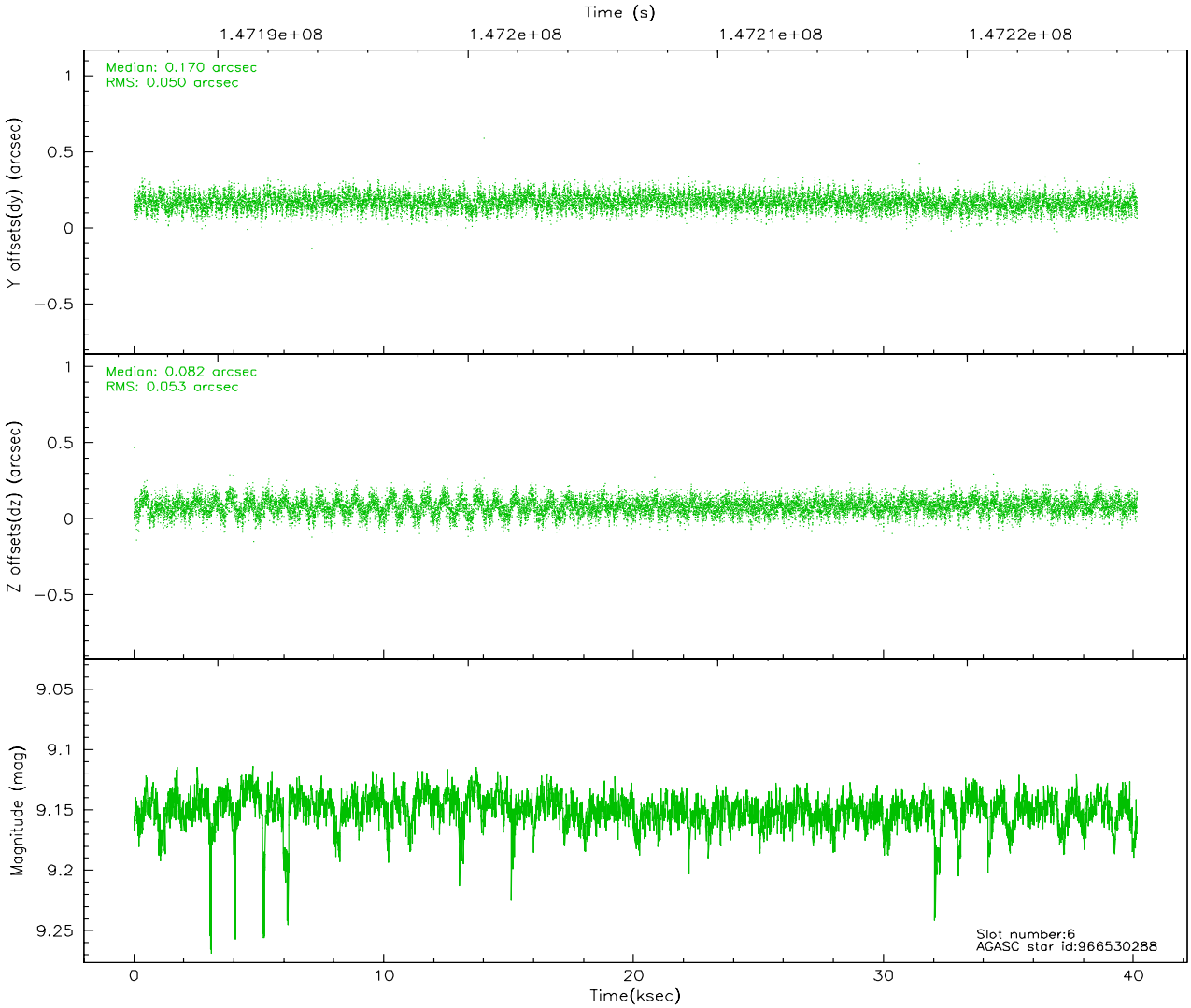

Points outside 0.4 arcsec radius: 0.010%
Radial offset of median: 0.189 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:966530056


Time (s)
1.4719e+08
1.472e+08
1.4721e+08
1.4722e+08
Median: 0.170 arcsec
RMS: 0.035 arcsec
Y offsets(dy) (arcsec)
Median: −0.084 arcsec
RMS: 0.038 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:966530056
Time(ksec)

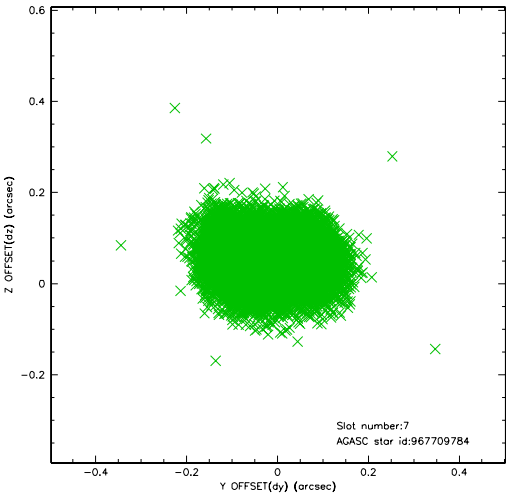
2.4.4 Slot 6

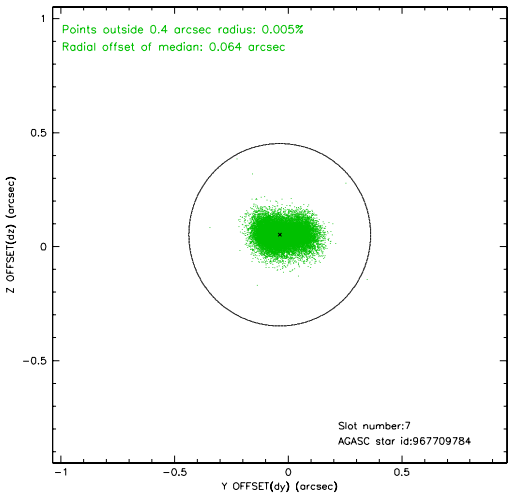

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:966530288

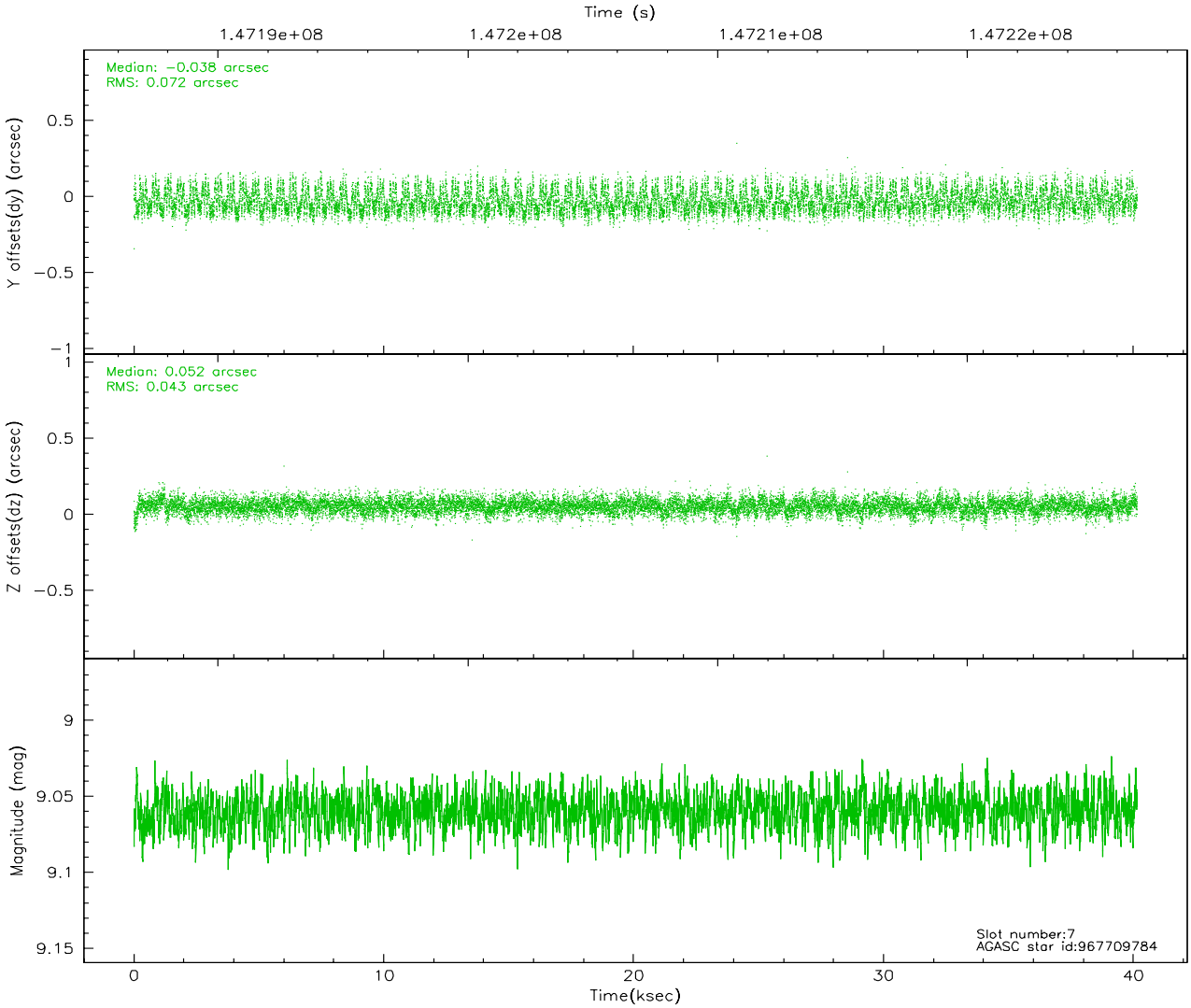

Points outside 0.4 arcsec radius: 0.005%
Radial offset of median: 0.188 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:966530288


Time (s)
1.4719e+08
1.472e+08
1.4721e+08
1.4722e+08
Median: 0.170 arcsec
RMS: 0.050 arcsec
Y offsets(dy) (arcsec)
Median: 0.082 arcsec
RMS: 0.053 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:966530288
Time(ksec)

2.4.5 Slot 7

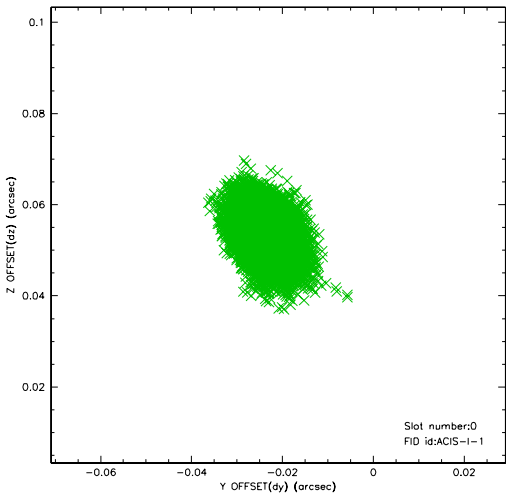

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:967709784

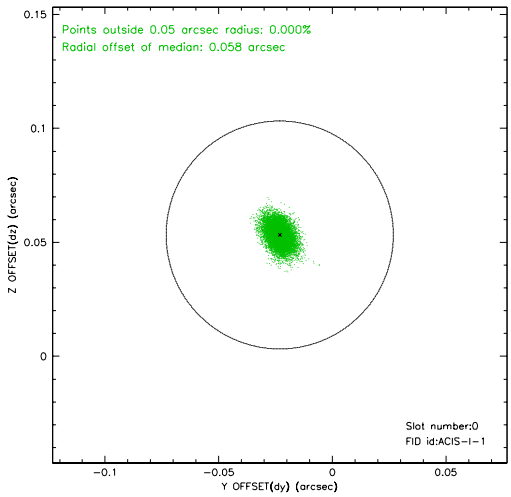

Points outside 0.4 arcsec radius: 0.005%
Radial offset of median: 0.064 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:967709784

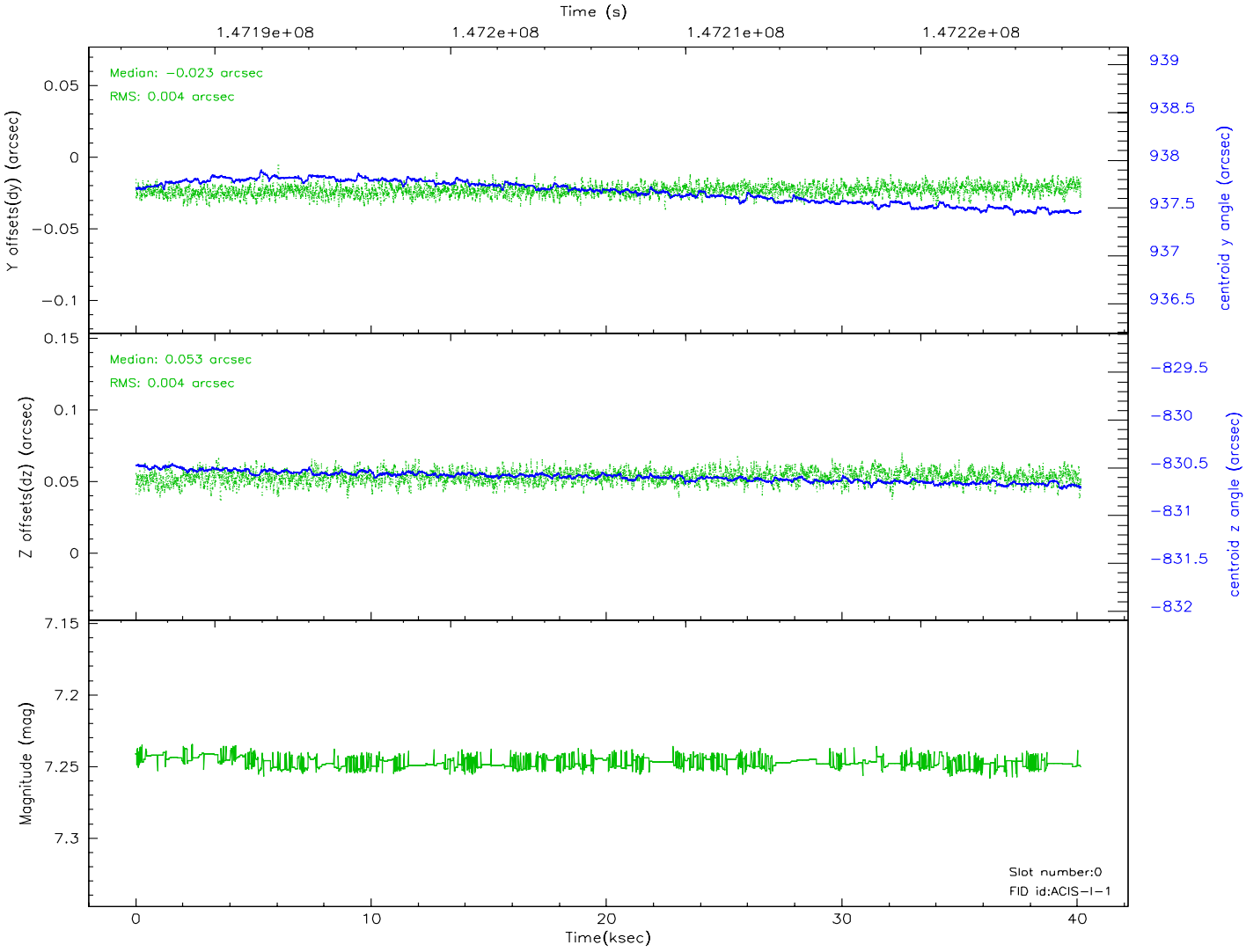

Time (s)
1.4719e+08
1.472e+08
1.4721e+08
1.4722e+08
Median: −0.038 arcsec
RMS: 0.072 arcsec
Y offsets(dy) (arcsec)
Median: 0.052 arcsec
RMS: 0.043 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:967709784
Time(ksec)

2.5 FID Slots

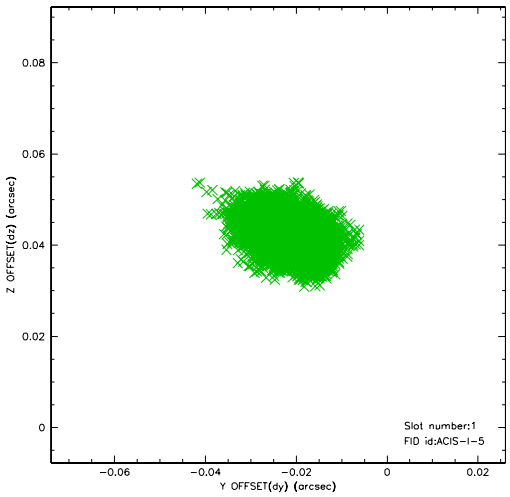
2.5.1 Slot 0

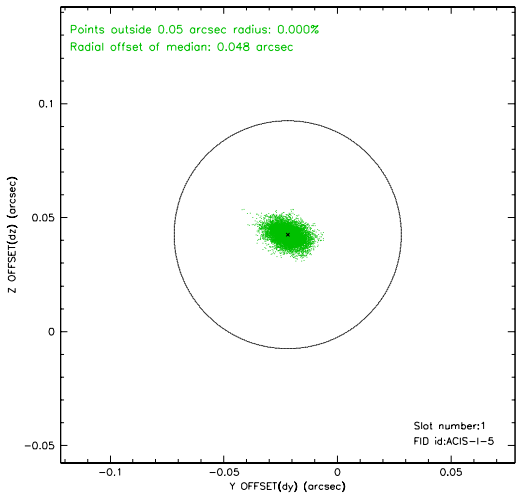


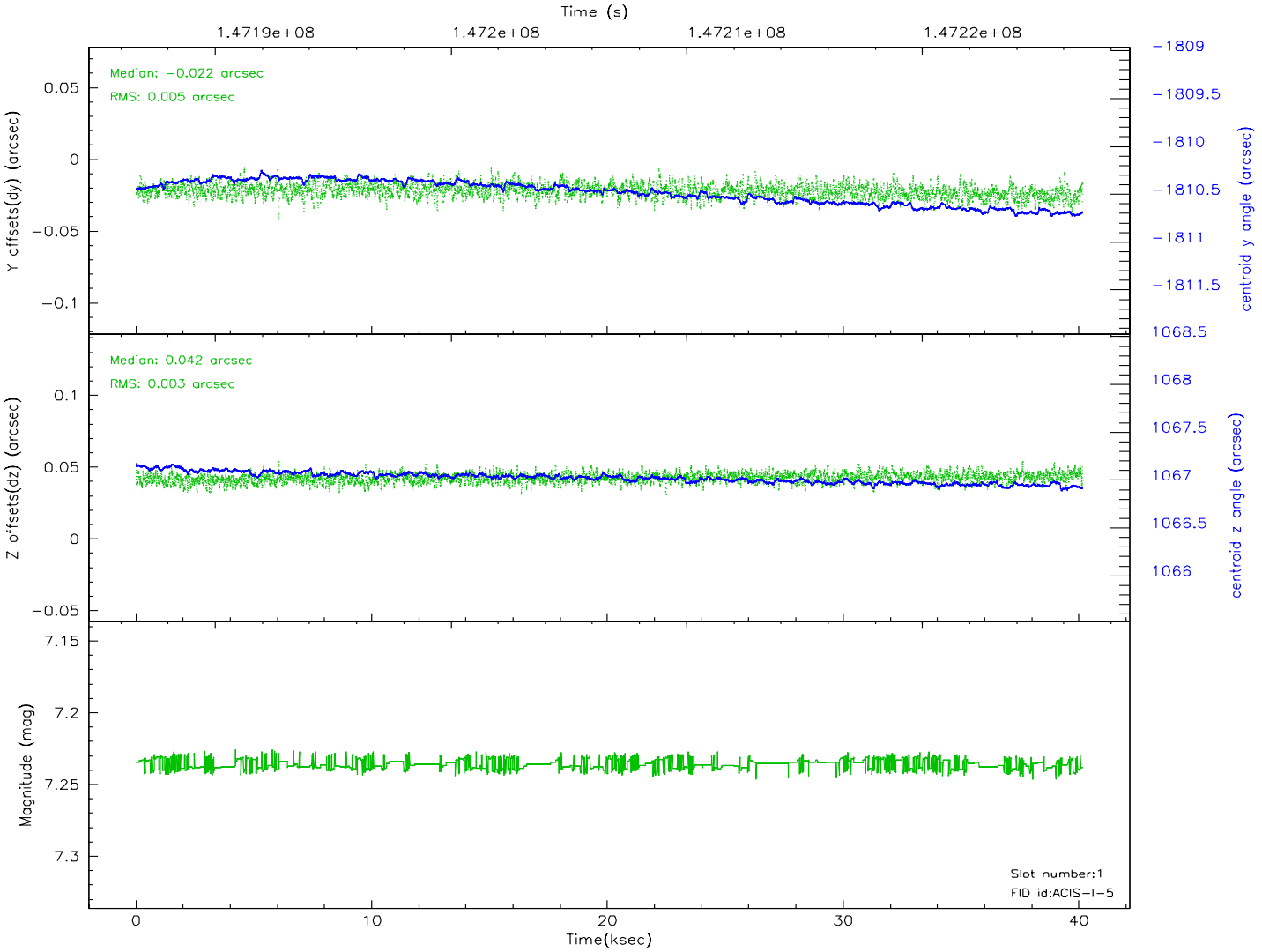




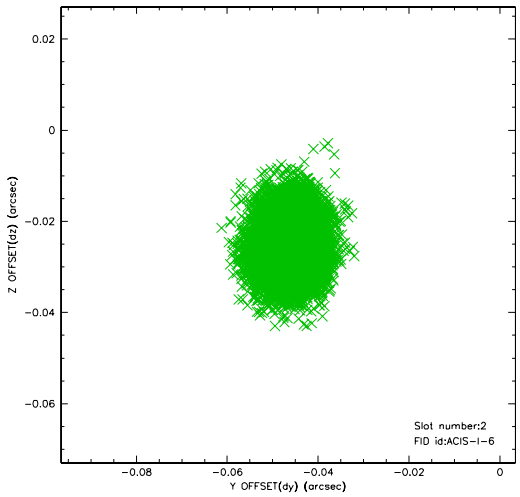
2.5.2 Slot 1

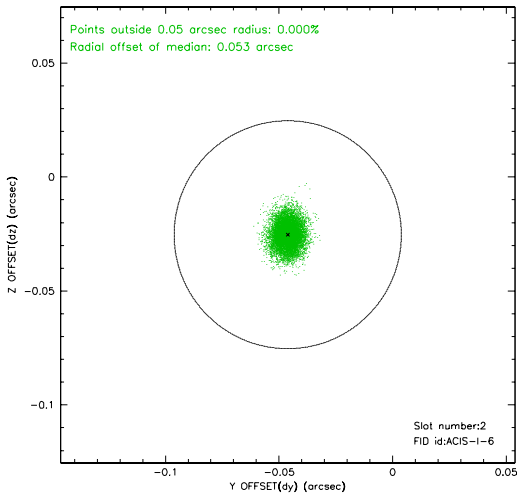

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-I-5

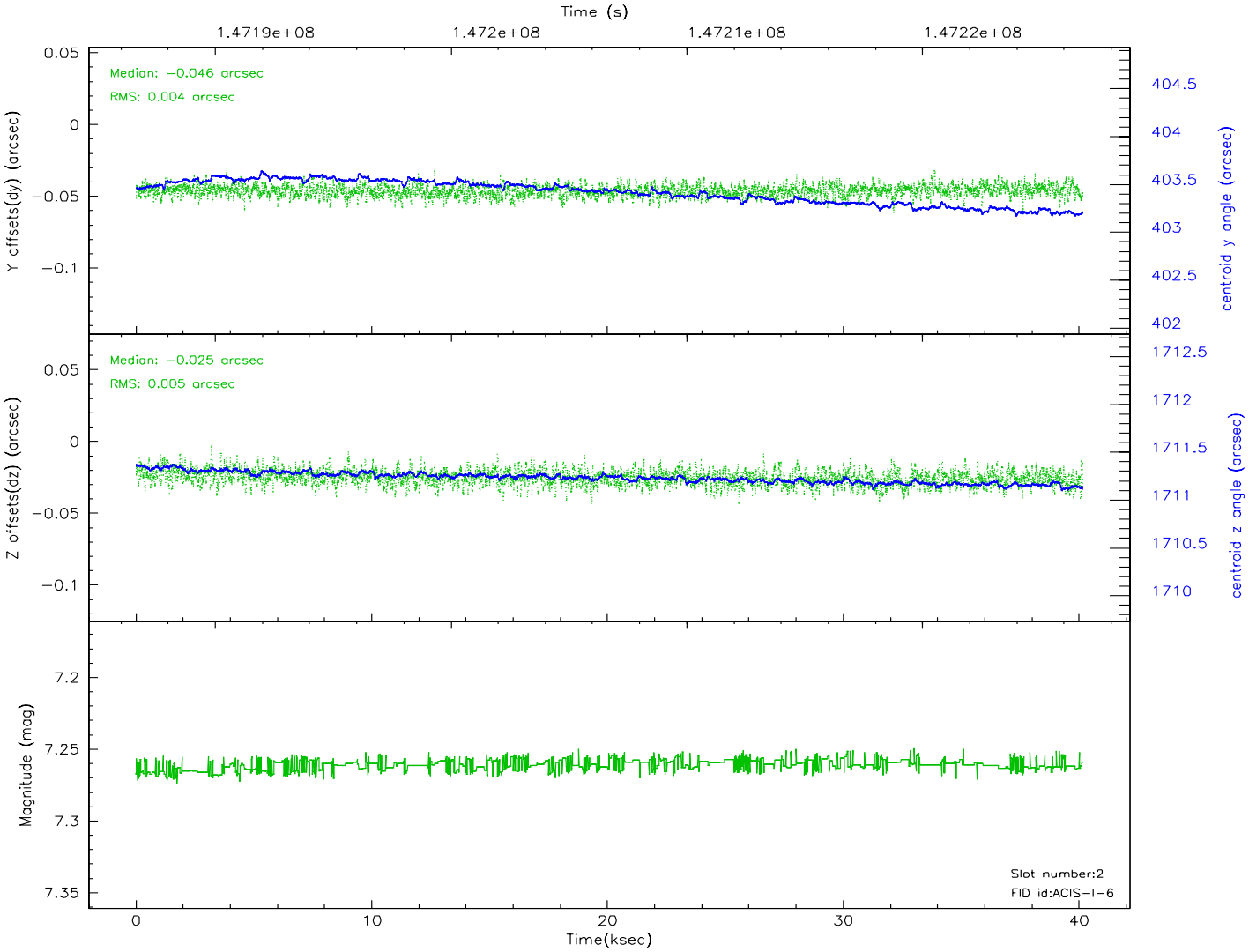

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.048 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-I-5


Time (s)
1.4719e+08
1.472e+08
1.4721e+08
1.4722e+08
Median: −0.022 arcsec
RMS: 0.005 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.042 arcsec
RMS: 0.003 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:1
FID id:ACIS-I-5
Time(ksec)

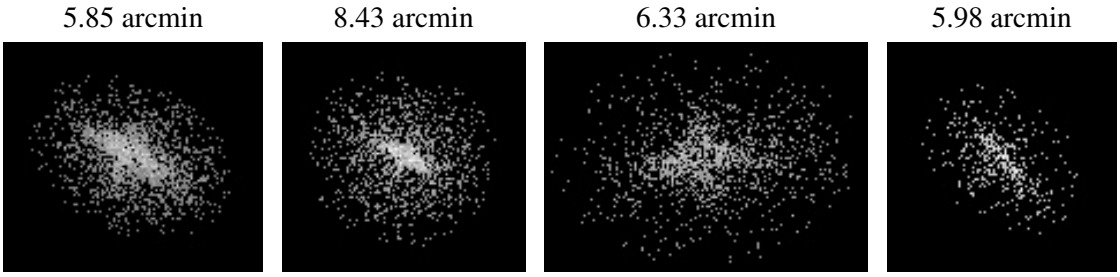
2.5.3 Slot 2


Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:ACIS-I-6


Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.053 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:ACIS-I-6


Time (s)
1.4719e+08
1.472e+08
1.4721e+08
1.4722e+08
Median: −0.046 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.025 arcsec
RMS: 0.005 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:2
FID id:ACIS-I-6
Time(ksec)

3 Point Sources



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2006.10.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	40.156

A.2 Comments

```
Roll constraint met.

Focal plane temperature is warmer than -118.7 C degrees during the first
8 ksec of this observation. The ACIS spectral response calibration for
the front-illuminated chips is less accurate at these warmer
temperatures than it is at -119.7 C. The back-illuminated chips are not
affected at the focal plane temperatures recorded for this observation.
Users whose science objectives depend on the most accurate spectral
response (i.e.: fitting line-rich spectra) may notice an effect. Users
whose science objectives do not depend on the most accurate spectral
response should not notice an effect.
```