V&V Reference Report
L2 ASCDS Version : 7.6.8

Observation 3938 - L2 Version 001
Chandra X-Ray Center

L2 Processing Date : Jul 11 2006

Contents

1 Front **2**

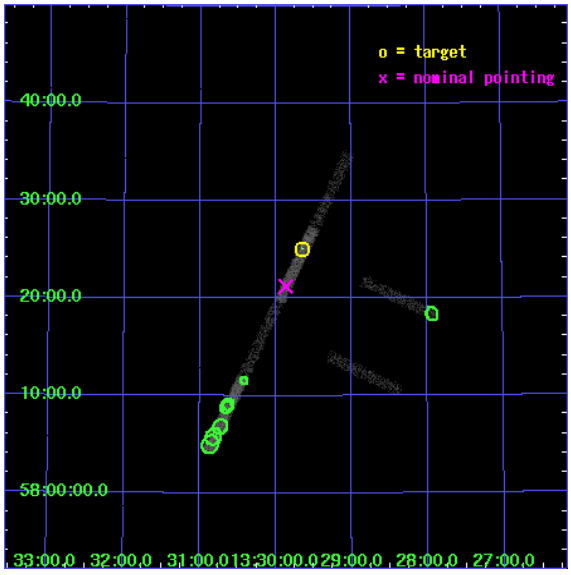
2 OBI **3**
2.1 OBI . . . 3
2.1.1 Images . . . 3
2.1.2 Bias . . . 3
2.1.3 Parameters . . . 4
2.1.4 Events . . . 4
2.2 Compared Parameters . . . 5
2.3 Aspect . . . 6
2.4 Star Slots . . . 9
2.4.1 Slot 3 . . . 9
2.4.2 Slot 4 . . . 10
2.4.3 Slot 5 . . . 11
2.4.4 Slot 6 . . . 12
2.4.5 Slot 7 . . . 13
2.5 FID Slots . . . 14
2.5.1 Slot 0 . . . 14
2.5.2 Slot 1 . . . 15
2.5.3 Slot 2 . . . 16

3 Point Sources **17**

A Summary **18**
A.1 Status . . . 18
A.2 Comments . . . 18

1 Front

seq_num	600312
obs_id	3938
title	PROBING THE SPECTRAL VARIABILITY OF THE ULTRALUMINOUS X-RAY SOURCE NGC 5204 X-1
observer	Dr Timothy Roberts
object	NGC 5204 X-1
dtycycle	0
cycle	P
ra_targ	202.410833
dec_targ	58.418333
ra_nom	202.46629672738
dec_nom	58.353850846989
roll_nom	295.72245760406
revision	2
ontime	5450.8999071717
livetime	5149.0202081132
ontime2	5450.8999071717
ontime3	5450.8999071717
ontime5	5450.8999071717
ontime6	5450.8999071717
ontime7	5450.8999071717
ontime8	5450.8999071717
l2events	7898

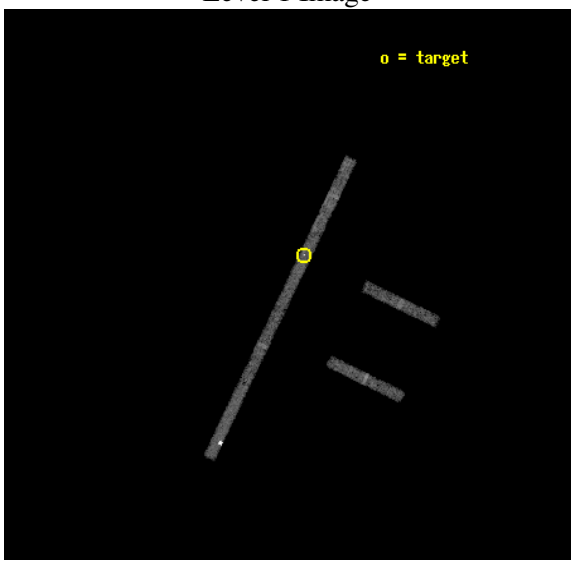


2 OBI

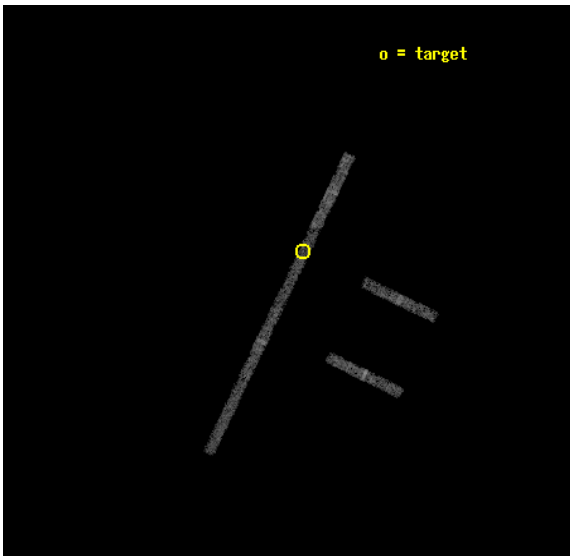
2.1 OBI

2.1.1 Images

Level 1 Image



Level 1 Bad Events



2.1.2 Bias

Chip 2

Chip 3

Chip 5

Chip 6

Chip 7

Chip 8

2.1.3 Parameters

obi_num	0
ascdsver	7.6.8
caldbver	3.2.2
date	2006-07-11T09:34:46
revision	2

sched_exp_time	4938.847000
ontime	5452.5044132769
ontime2	5452.5044132769
ontime3	5452.5044132769
ontime5	5452.5044132769
ontime6	5452.5044132769
ontime7	5452.5044132769
ontime8	5452.5044132769
l1events	45596

2.1.4 Events

	ccd 2	**ccd 3**	**ccd 5**	**ccd 6**	**ccd 7**	**ccd 8**
level 1 events	6099	5483	13414	5833	6863	7904
rejected events	5405	4855	4013	5172	3766	6593
rejected %	88%	88%	29%	88%	54%	83%

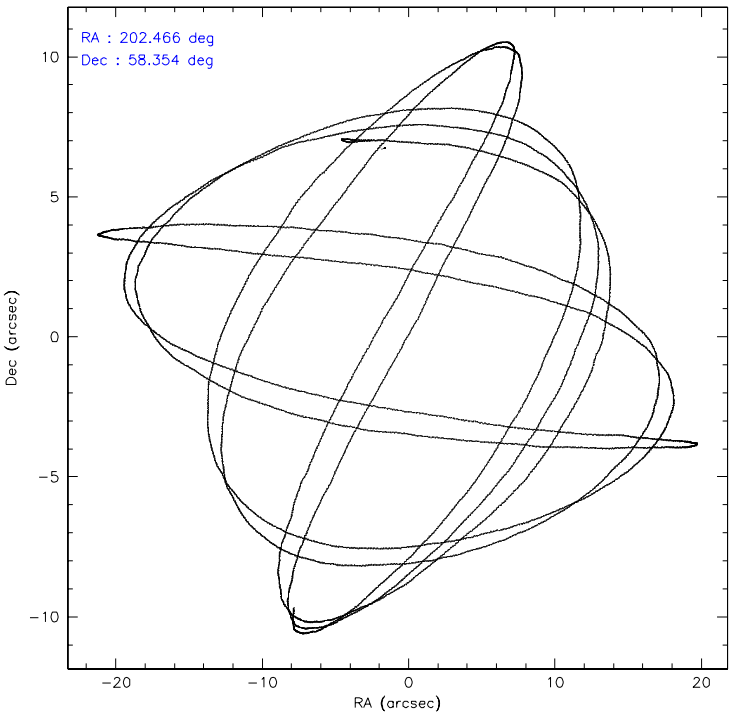
	ccd 2	**ccd 3**	**ccd 5**	**ccd 6**	**ccd 7**	**ccd 8**
grade 0 events	246	219	4775	216	427	364
	4%	3%	35%	3%	6%	4%
grade 1 events	0	0	16	0	2	0
	0%	0%	0%	0%	0%	0%
grade 2 events	151	101	2645	112	772	245
	2%	1%	19%	1%	11%	3%
grade 3 events	110	114	150	108	270	155
	1%	2%	1%	1%	3%	1%
grade 4 events	91	90	221	102	273	131
	1%	1%	1%	1%	3%	1%
grade 5 events	164	182	387	217	472	250
	2%	3%	2%	3%	6%	3%
grade 6 events	97	104	1612	123	1357	416
	1%	1%	12%	2%	19%	5%
grade 7 events	5240	4673	3608	4955	3290	6343
	85%	85%	26%	84%	47%	80%

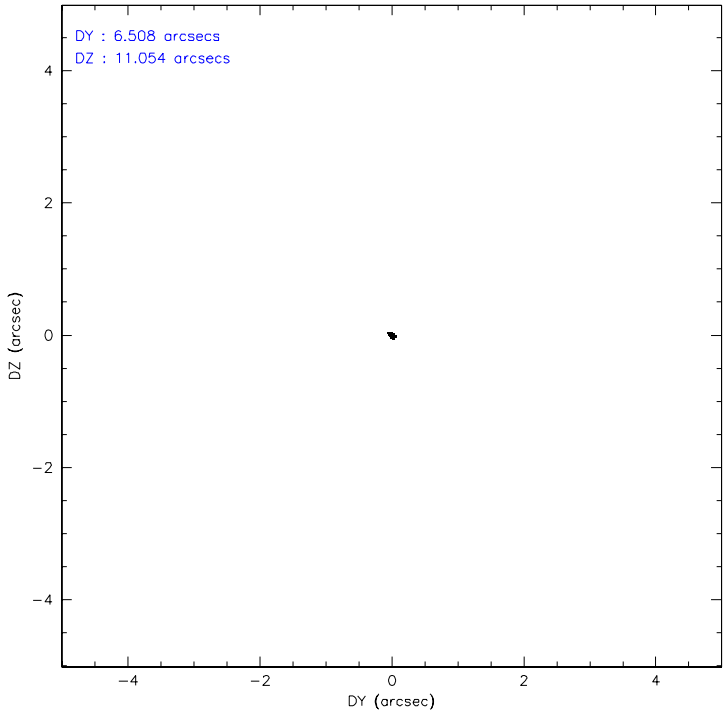
2.2 Compared Parameters

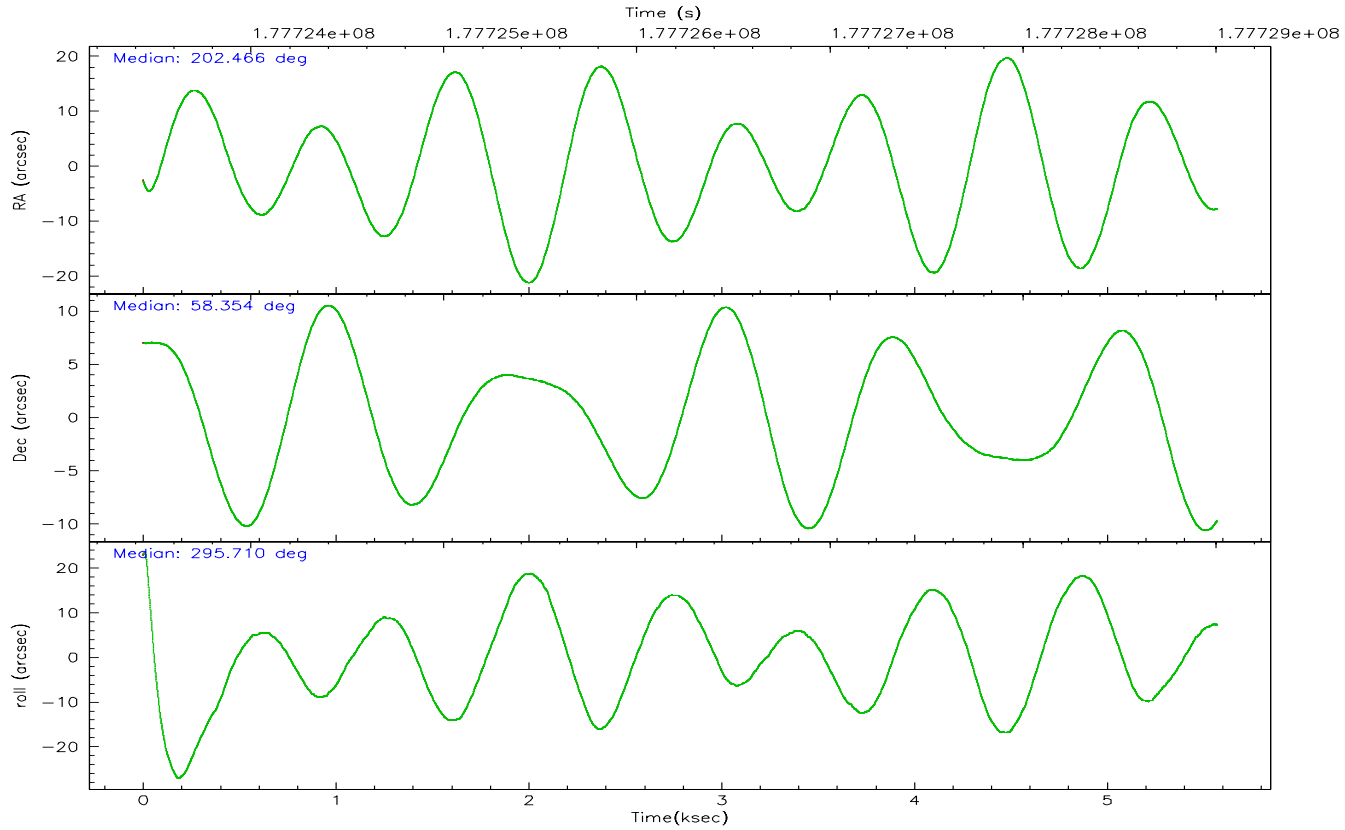
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-235678	ACIS-235678
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
Pointing RA	202.422905	202.4662967273826
Pointing Dec	58.368877	58.35385084698895
Pointing Roll	295.602691	295.7224576040609
SIM focus pos (mm)	-0.684267	-0.6828225247311905
SIM defocus (mm)	0	0.001444936568705701
SIM translation stage pos (mm)	-190.132523	-190.1400660498719
SIM translation stage offset (mm)	0	0.00754346686406393
Observation start time	177724072.184000	177722886.53605
Observation start date	2003-08-19T23:46:48	2003-08-19T23:28:06
Observation end time	177729011.184000	177729325.58632
Observation end date	2003-08-20T01:09:07	2003-08-20T01:15:25
Read mode	TIMED	TIMED

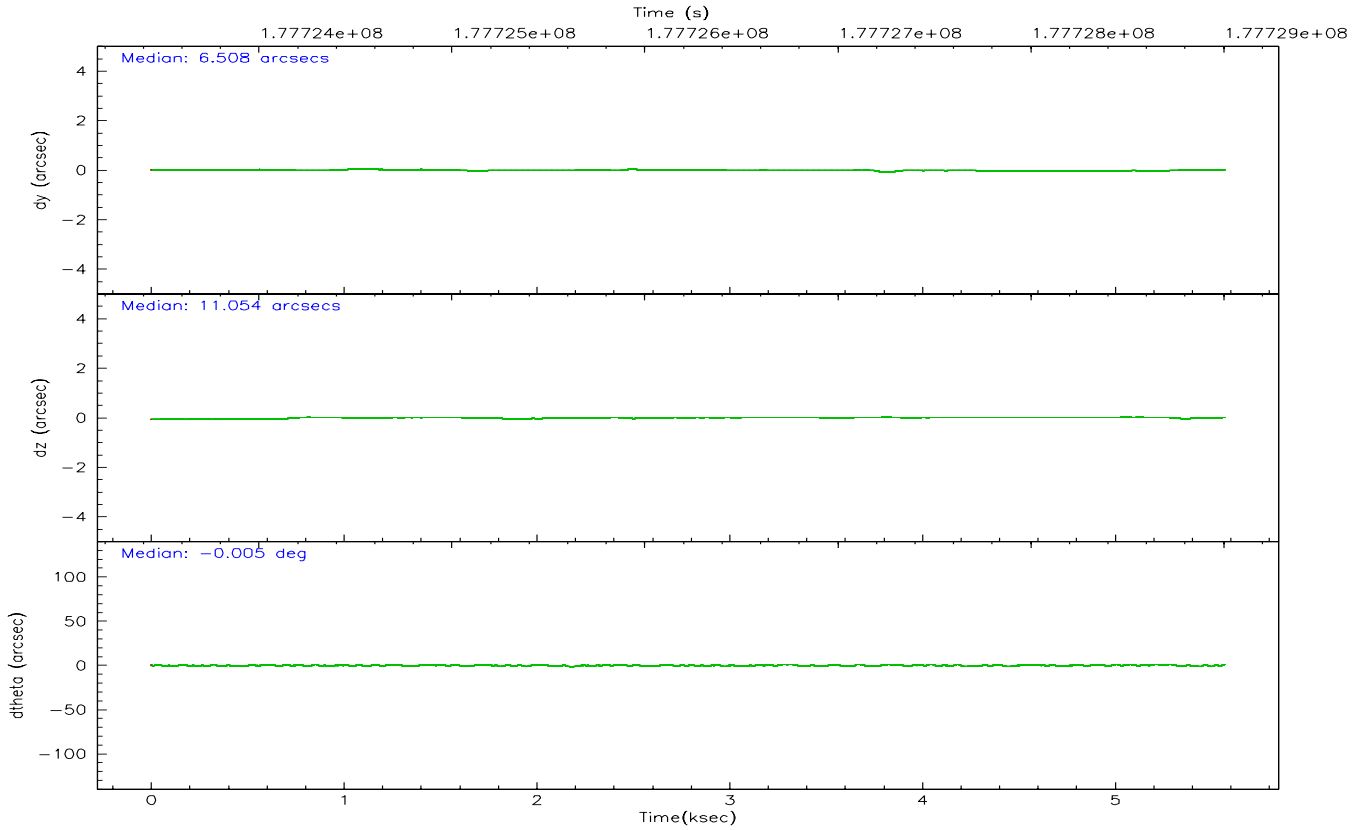
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
On-chip summing requested	N	N
Subarray requested	1/8	1/8
Subarray start row	0	449
Subarray row count	1024	128
Alternating exposures requested	N	N
Primary exposure time	0.000000	0.7

2.3 Aspect


RA : 202.466 deg
Dec : 58.354 deg
Dec (arcsec)
RA (arcsec)
10
5
0
−5
−10
−20
−10
0
10
20


DY : 6.508 arcsecs
DZ : 11.054 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
1.77724e+08
1.77725e+08
1.77726e+08
1.77727e+08
1.77728e+08
1.77729e+08
Median: 202.466 deg
RA (arcsec)
Median: 58.354 deg
Dec (arcsec)
Median: 295.710 deg
roll (arcsec)
Time(ksec)

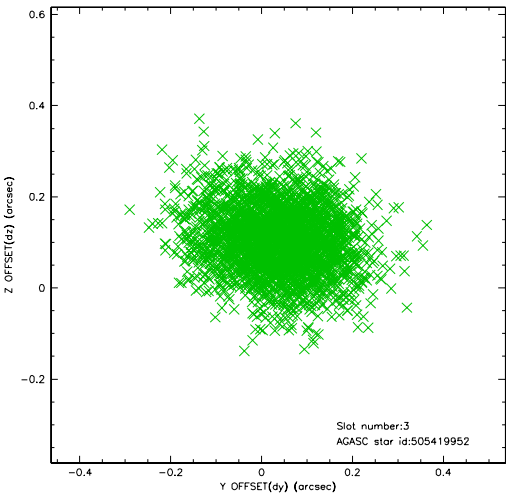

Time (s)
1.77724e+08
1.77725e+08
1.77726e+08
1.77727e+08
1.77728e+08
1.77729e+08
Median: 6.508 arcsecs
dy (arcsec)
Median: 11.054 arcsecs
dz (arcsec)
Median: −0.005 deg
dtheta (arcsec)
Time(ksec)

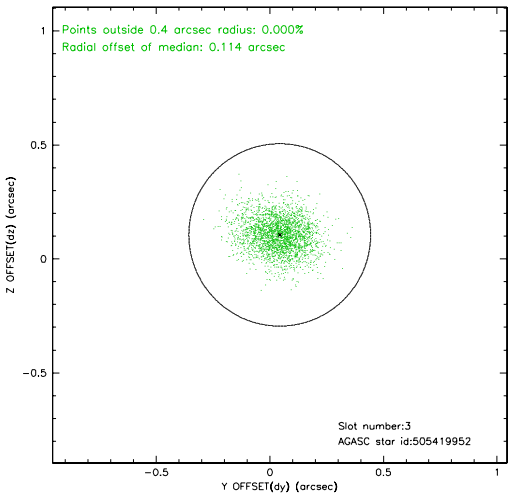
Slot Statistics

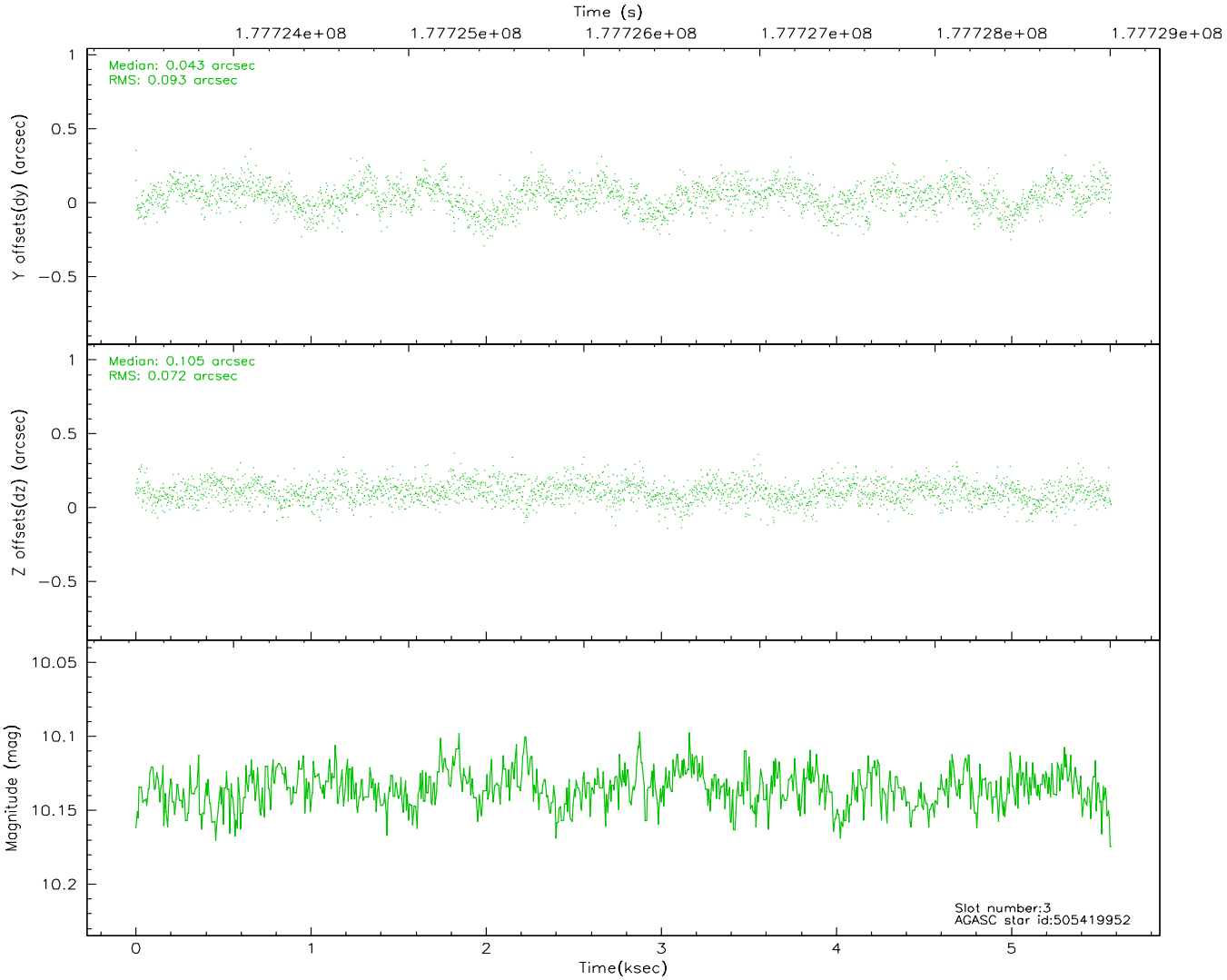
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-4	7.20	1360	0.003	-0.004	0.005	0.009	0.000000	0.000000	2154.10	176.36
1	FID	ACIS-S-5	7.23	1359	-0.008	0.004	0.005	0.008	0.000000	0.000000	-1810.71	169.90
2	FID	ACIS-S-6	7.34	1360	-0.024	0.014	0.007	0.011	0.000000	0.000000	401.17	813.68
3	GUIDE	505419952	10.13	2719	0.043	0.105	0.124	0.205	201.880700	58.804366	-1854.24	-233.01
4	GUIDE	505421936	8.86	2719	-0.080	0.034	0.069	0.110	201.854843	57.887820	1087.59	-1726.74
5	GUIDE	505421968	8.20	2718	0.008	-0.078	0.063	0.101	202.022601	58.209270	188.75	-932.87
6	GUIDE	505422344	8.62	2719	0.030	0.146	0.057	0.094	202.767077	57.846963	1978.13	-216.47
7	GUIDE	505414952	10.00	2715	0.007	-0.207	0.125	0.208	203.527988	58.651569	-38.40	2313.06

2.4 Star Slots

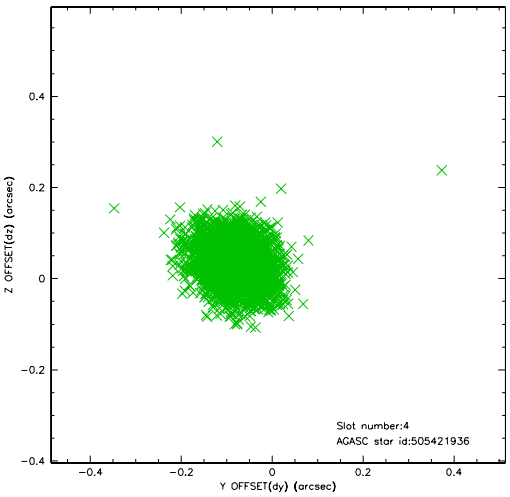
2.4.1 Slot 3

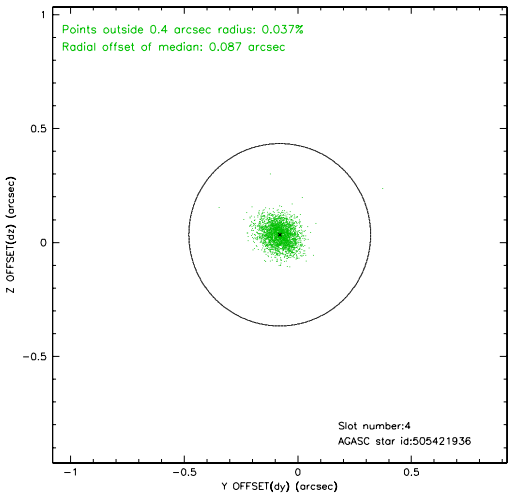


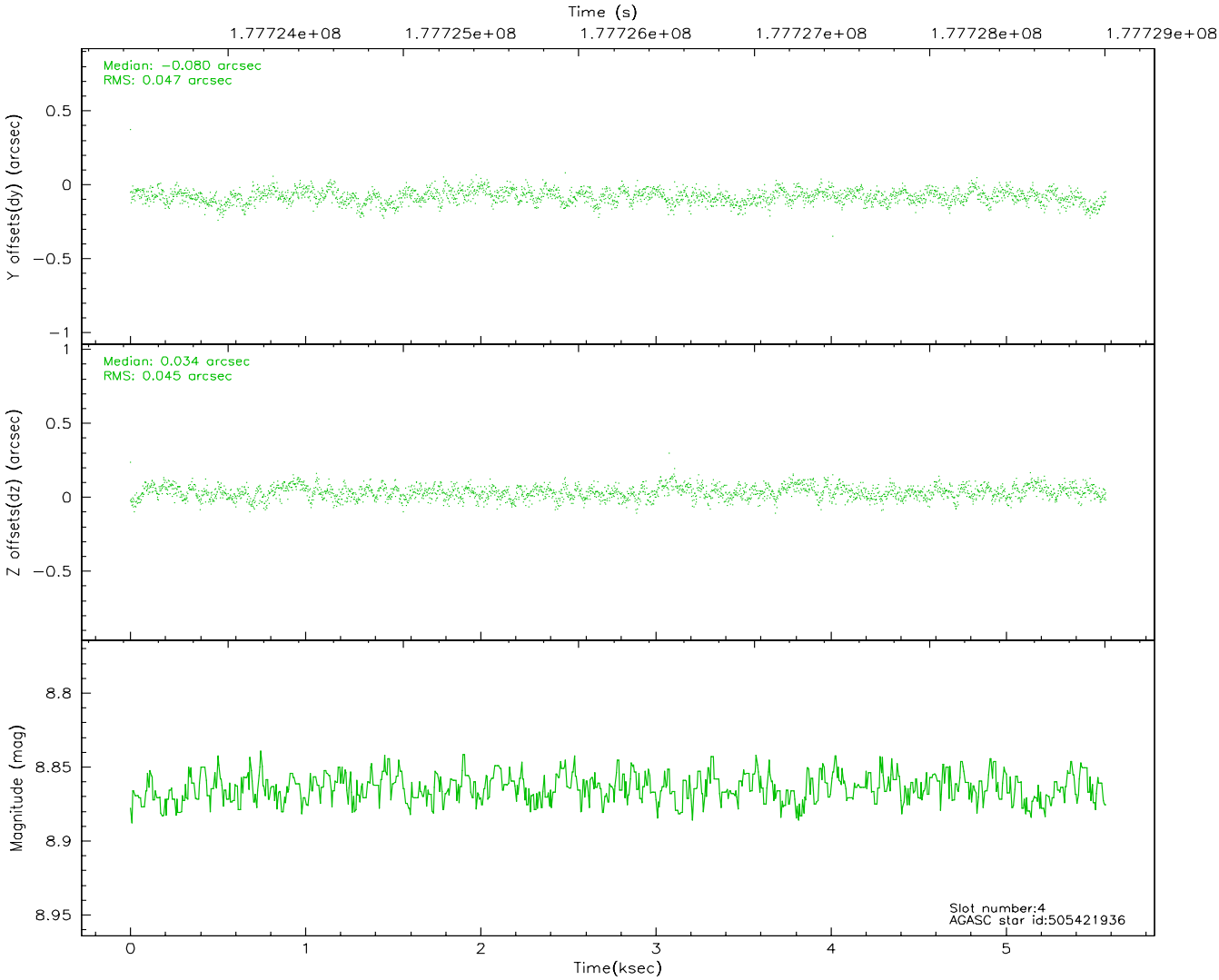




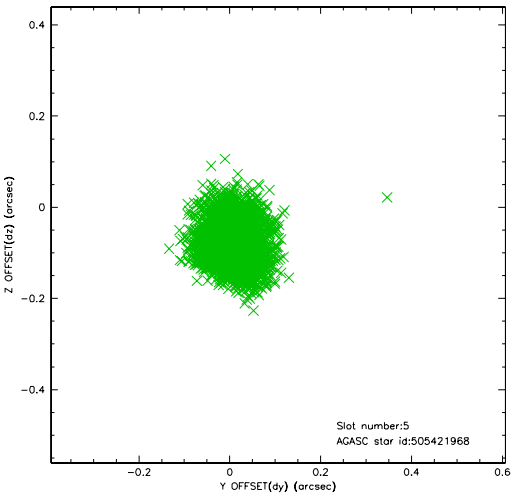
2.4.2 Slot 4

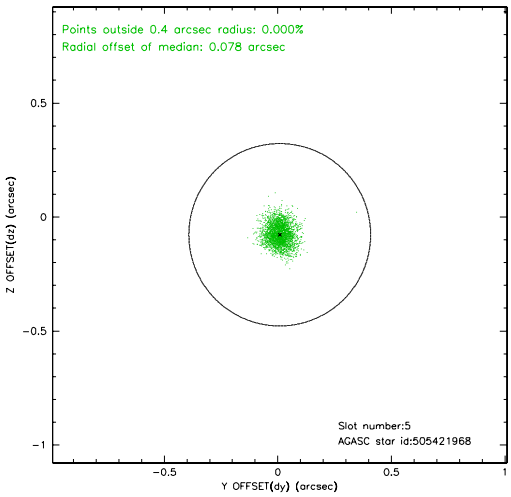

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:505421936

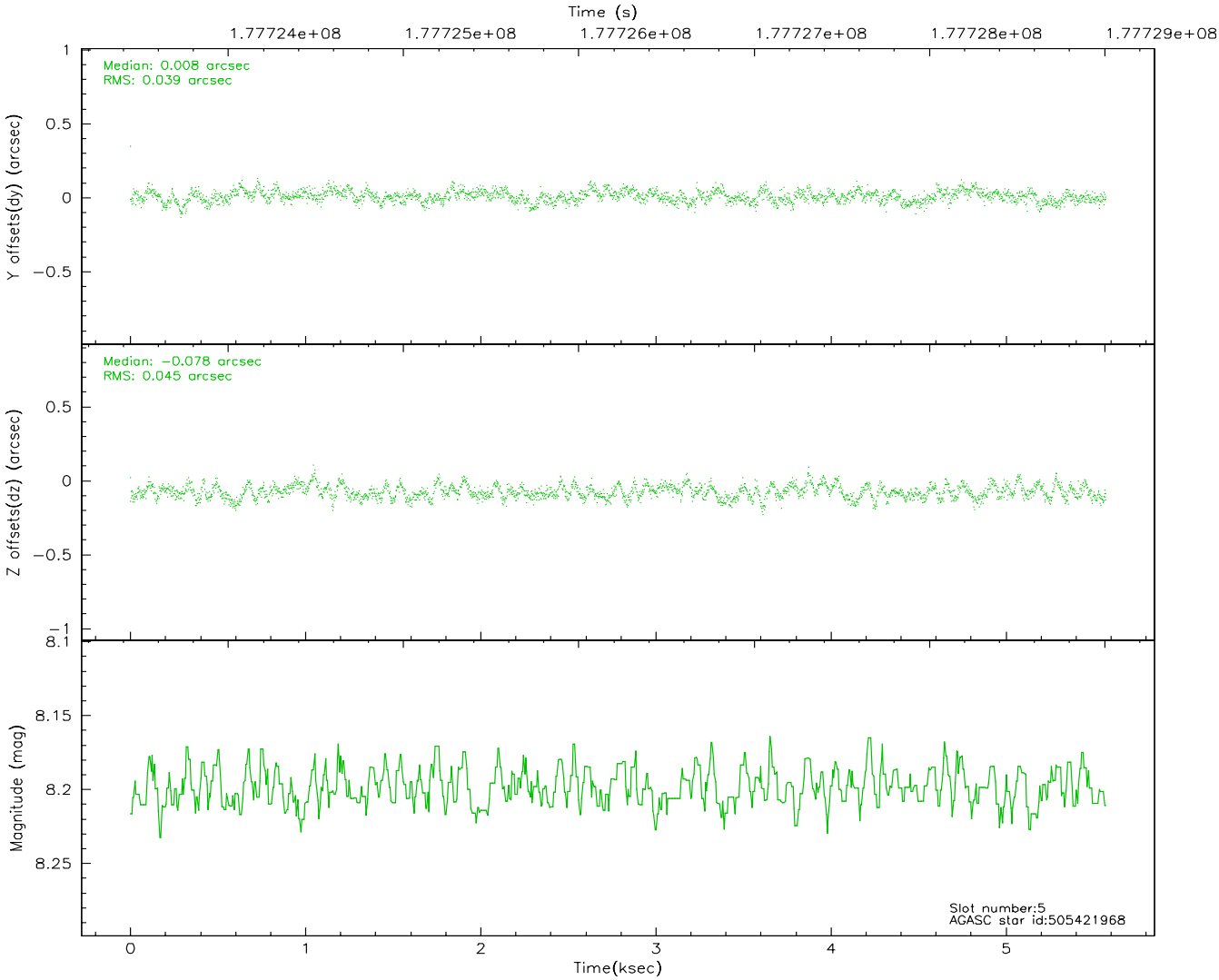

Points outside 0.4 arcsec radius: 0.037%
Radial offset of median: 0.087 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:505421936


Time (s)
1.77724e+08
1.77725e+08
1.77726e+08
1.77727e+08
1.77728e+08
1.77729e+08
Median: −0.080 arcsec
RMS: 0.047 arcsec
Y offsets(dy) (arcsec)
Median: 0.034 arcsec
RMS: 0.045 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:505421936
Time(ksec)

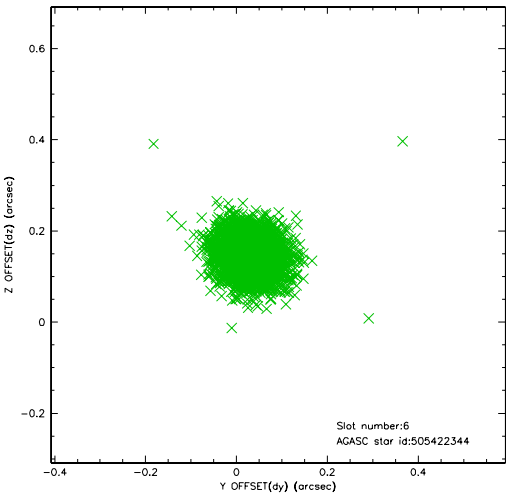
2.4.3 Slot 5

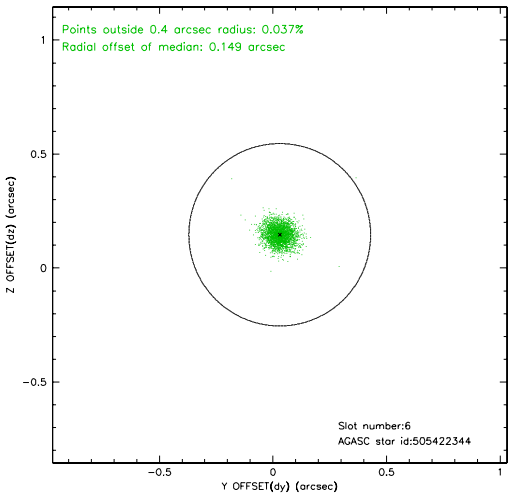

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:505421968

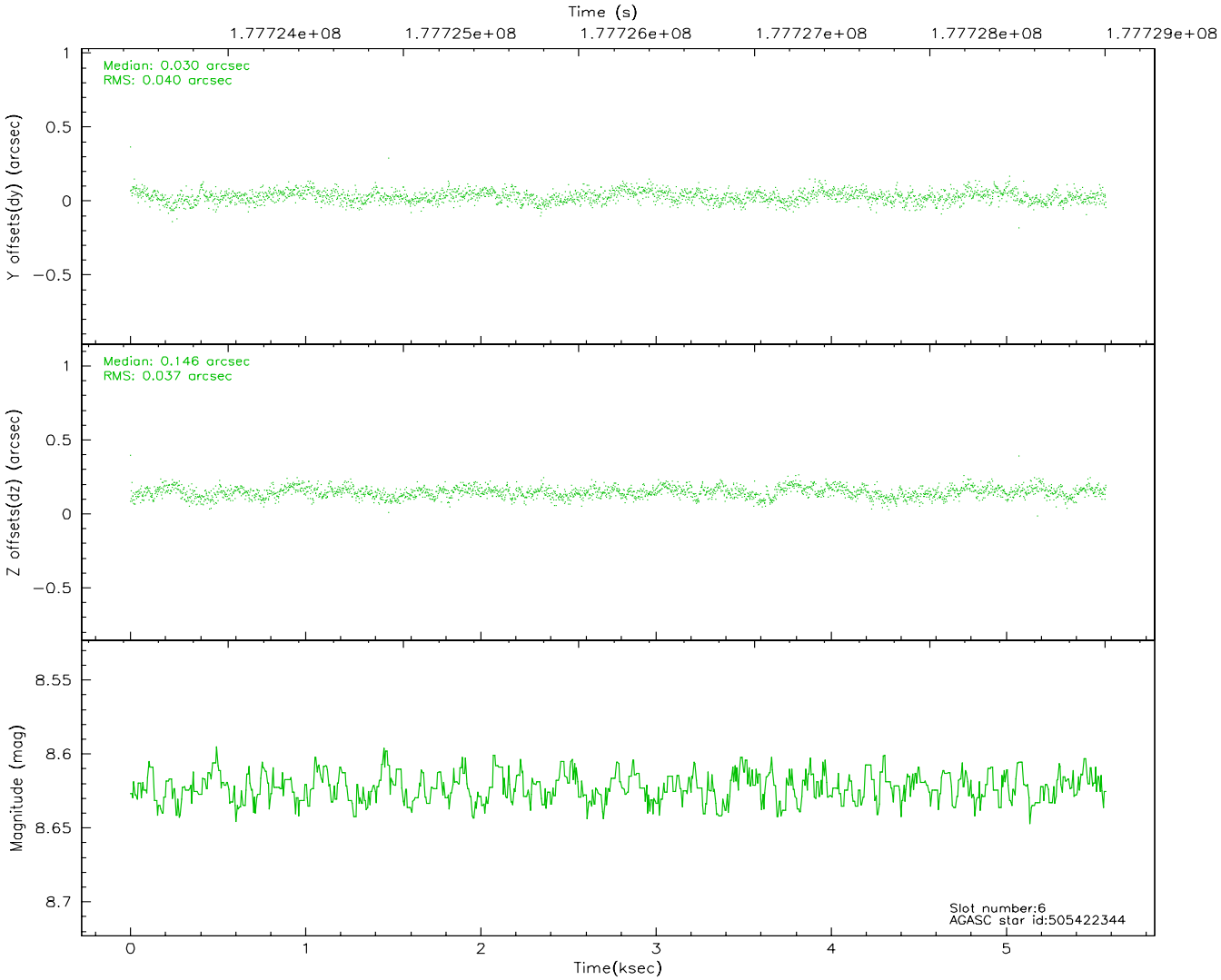

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.078 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:505421968


Time (s)
1.77724e+08
1.77725e+08
1.77726e+08
1.77727e+08
1.77728e+08
1.77729e+08
Median: 0.008 arcsec
RMS: 0.039 arcsec
Y offsets(dy) (arcsec)
Median: −0.078 arcsec
RMS: 0.045 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:505421968
Time(ksec)

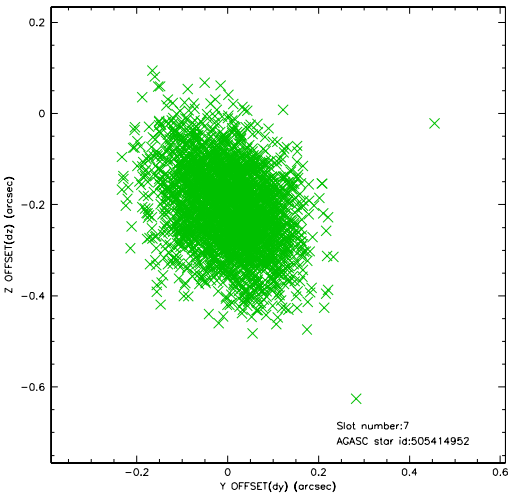
2.4.4 Slot 6

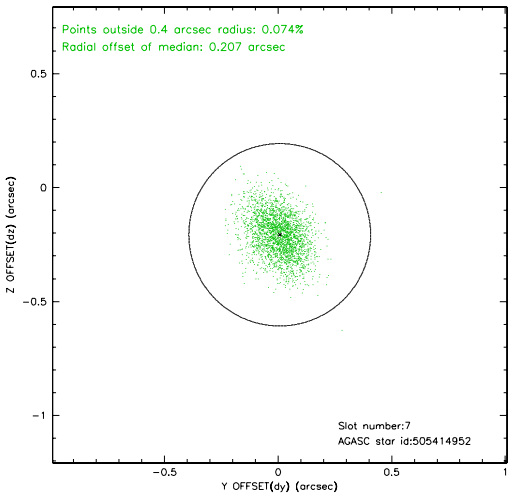

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:505422344

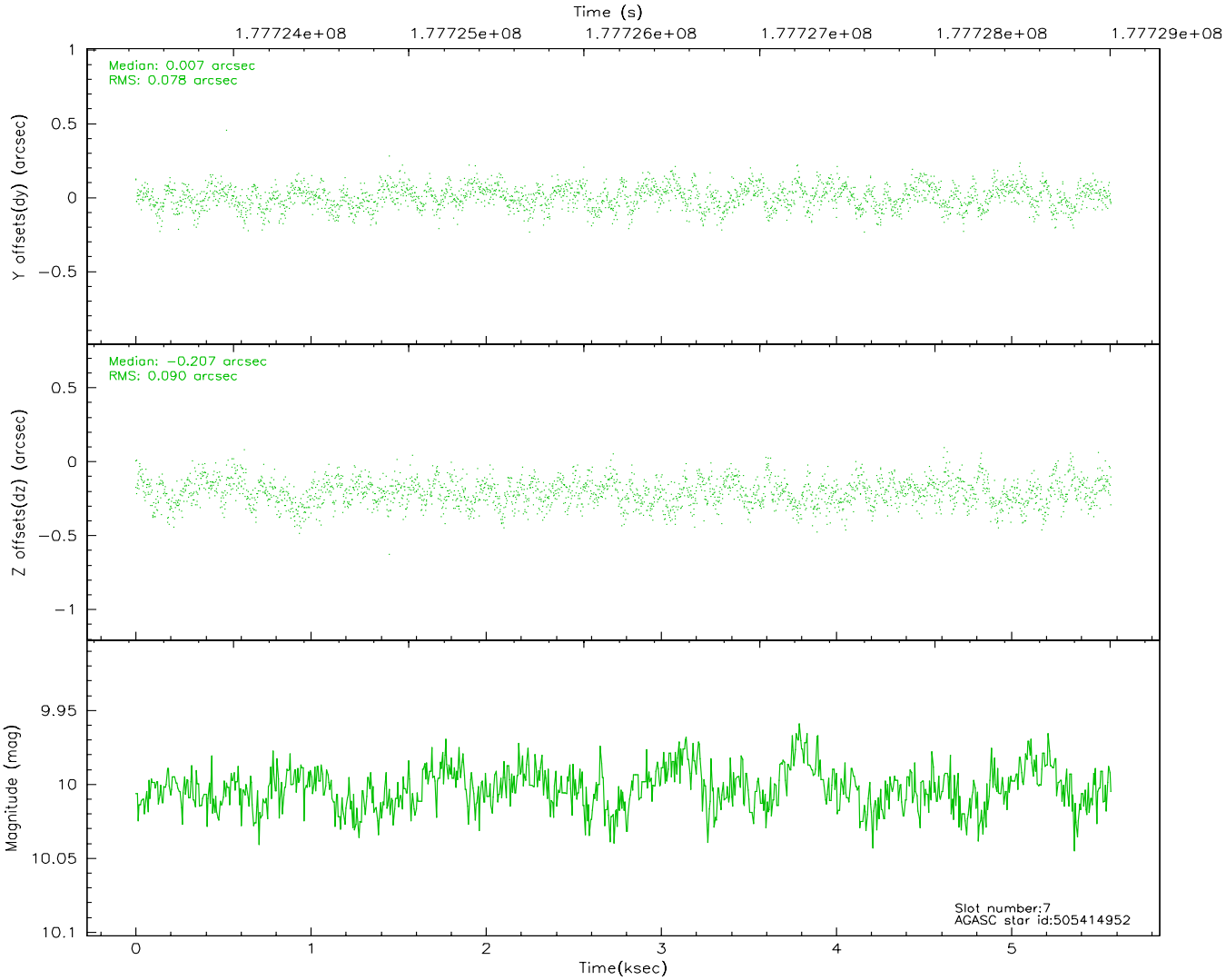

Points outside 0.4 arcsec radius: 0.037%
Radial offset of median: 0.149 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:505422344


Time (s)
1.77724e+08
1.77725e+08
1.77726e+08
1.77727e+08
1.77728e+08
1.77729e+08
Median: 0.030 arcsec
RMS: 0.040 arcsec
Y offsets(dy) (arcsec)
Median: 0.146 arcsec
RMS: 0.037 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:505422344
Time(ksec)

2.4.5 Slot 7

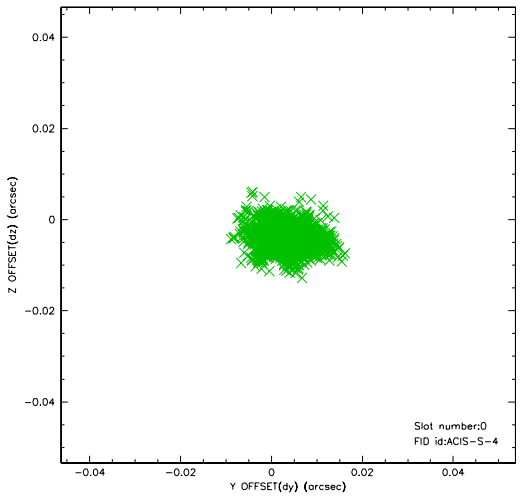

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:505414952

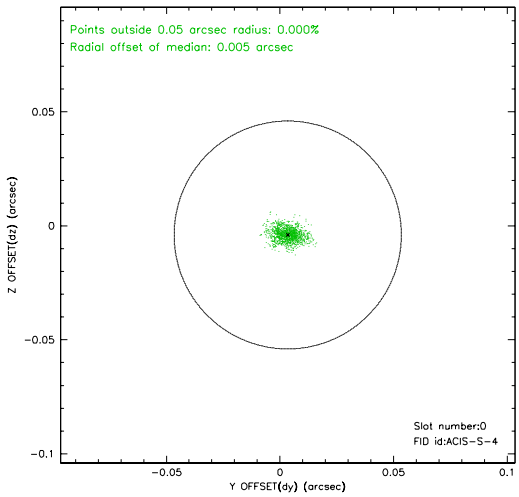

Points outside 0.4 arcsec radius: 0.074%
Radial offset of median: 0.207 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:505414952

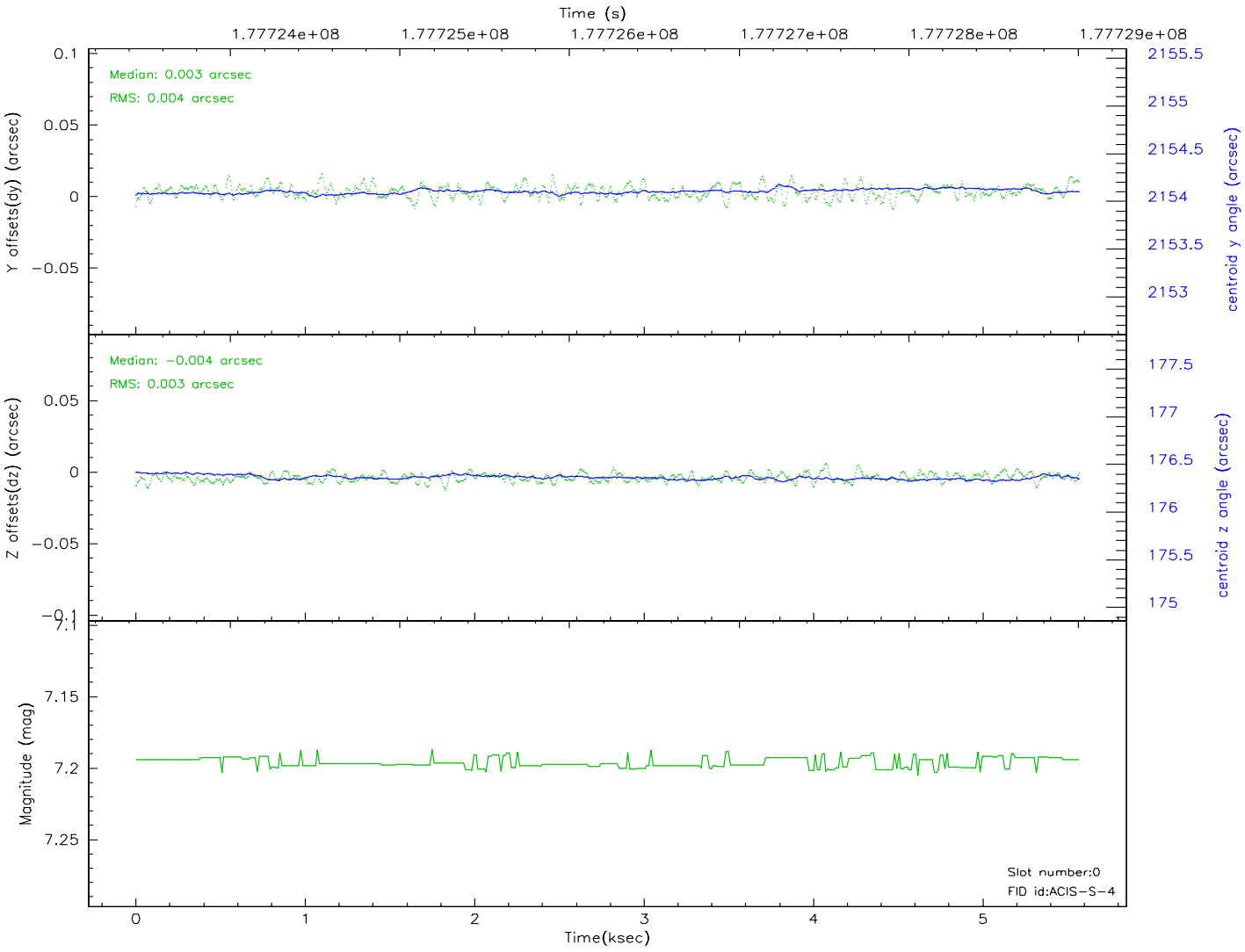

Time (s)
Median: 0.007 arcsec
RMS: 0.078 arcsec
Y offsets(dy) (arcsec)
Median: −0.207 arcsec
RMS: 0.090 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:505414952
Time(ksec)

2.5 FID Slots

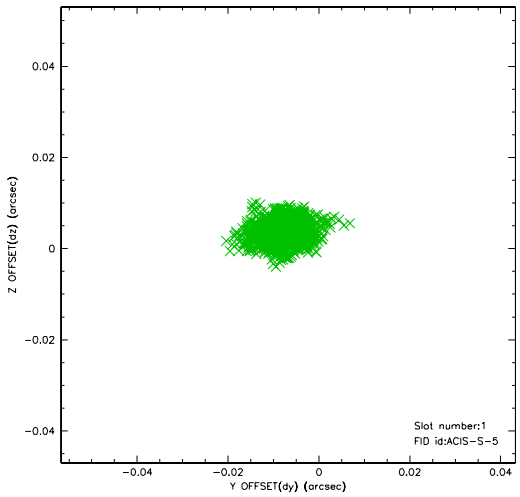
2.5.1 Slot 0

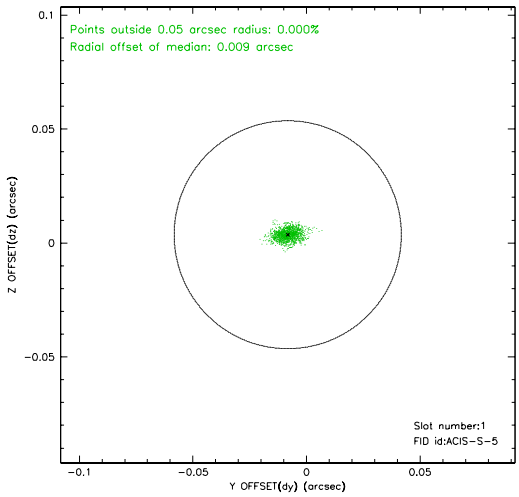


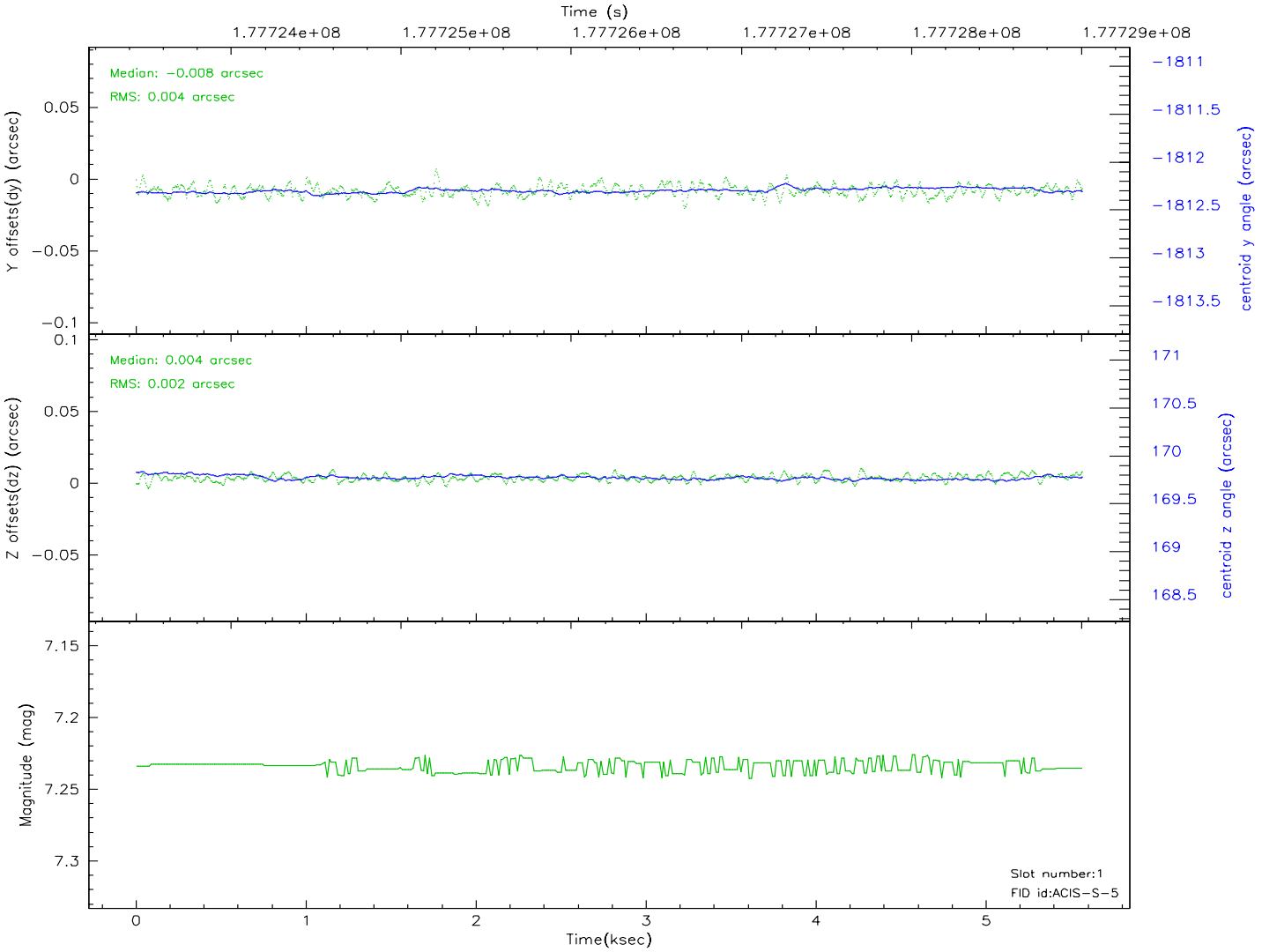




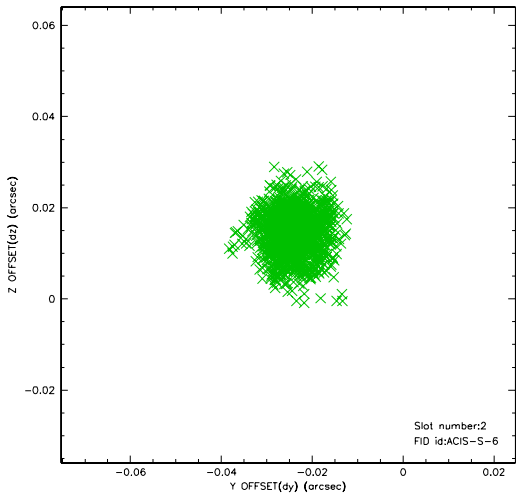
2.5.2 Slot 1

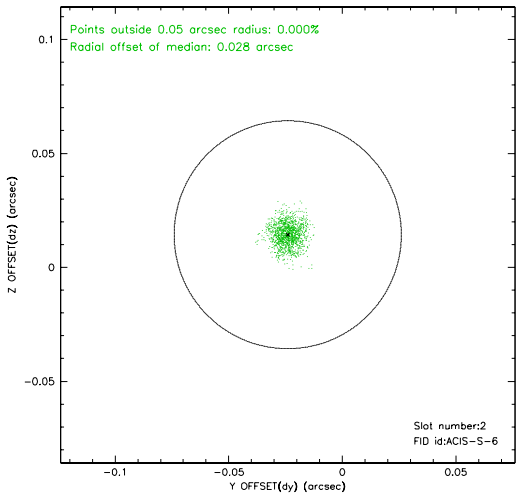

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-5

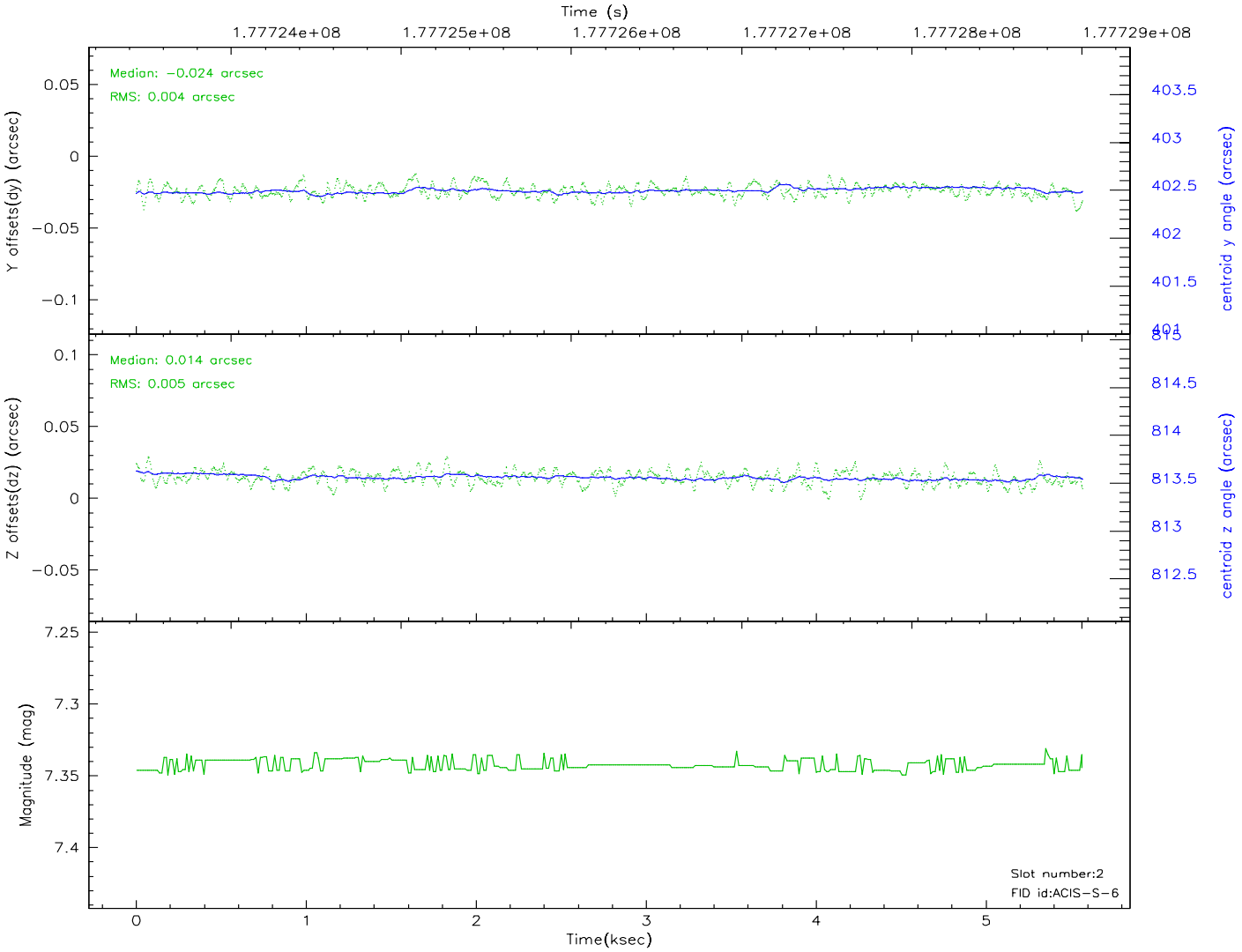

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.009 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-5


Time (s)
Median: −0.008 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.004 arcsec
RMS: 0.002 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:1
FID id:ACIS-S-5
Time(ksec)

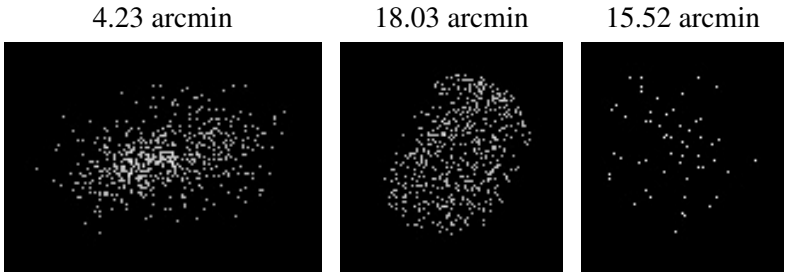
2.5.3 Slot 2


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


Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.028 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:ACIS-S-6


Time (s)
Median: −0.024 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.014 arcsec
RMS: 0.005 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:2
FID id:ACIS-S-6
Time(ksec)

3 Point Sources



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2006.07.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.451

A.2 Comments

```
Monitor constraint met.
```