V&V Reference Report
L2 ASCDS Version : 7.6.7.2

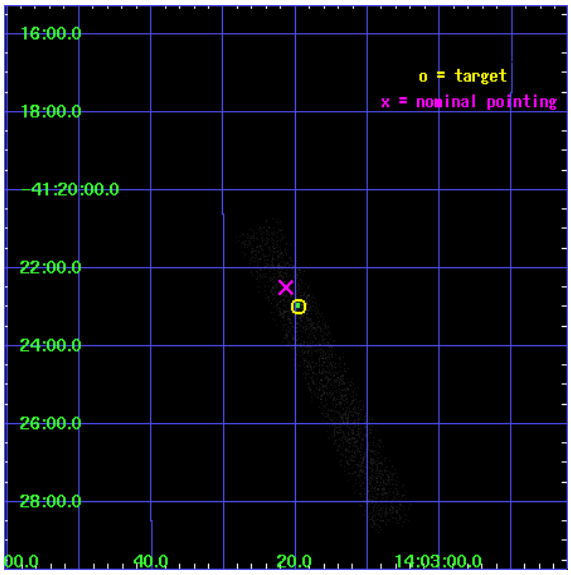
Observation 4556 - L2 Version 001
Chandra X-Ray Center

L2 Processing Date : Jun 4 2006

Contents

1 Front

seq_num	400339
obs_id	4556
title	Monitoring the ultraluminous x-ray source in NGC 5408
observer	Prof. Philip Kaaret
object	NGC 5408 ULX
dtycycle	0
cycle	P
ra_targ	210.831667
dec_targ	-41.382972
ra_nom	210.83903463018
dec_nom	-41.375131465771
roll_nom	64.74016222922
revision	2
ontime	4904.8000730872
livetime	4448.3947697145
ontime7	4904.8000730872
l2events	3994

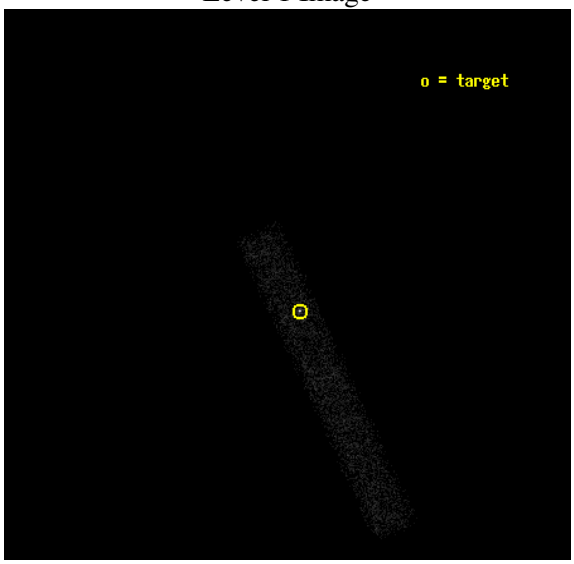


2 OBI

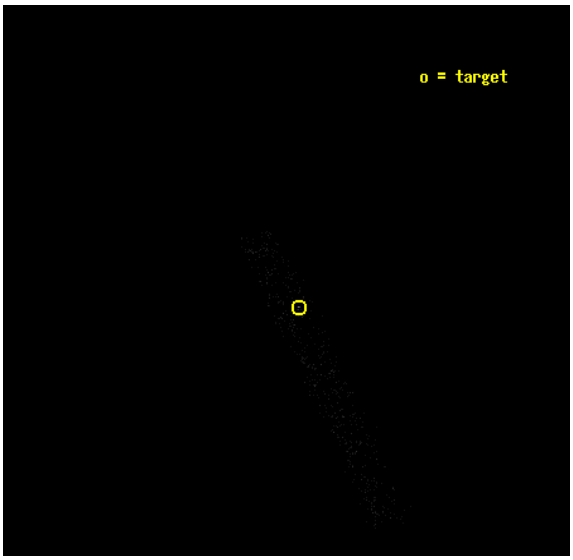
2.1 OBI

2.1.1 Images

Level 1 Image

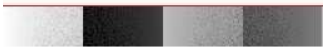


Level 1 Bad Events



2.1.2 Bias

Chip 7



2.1.3 Parameters

obi_num	0
ascdsver	7.6.7.2
caldbver	3.2.2
date	2006-06-04T16:17:26
revision	2

sched_exp_time	4728.000000
ontime	6242.8467829525
ontime7	6242.8467829525
l1events	8976

2.1.4 Events

	ccd 7
level 1 events	8976
rejected events	4876
rejected %	54%

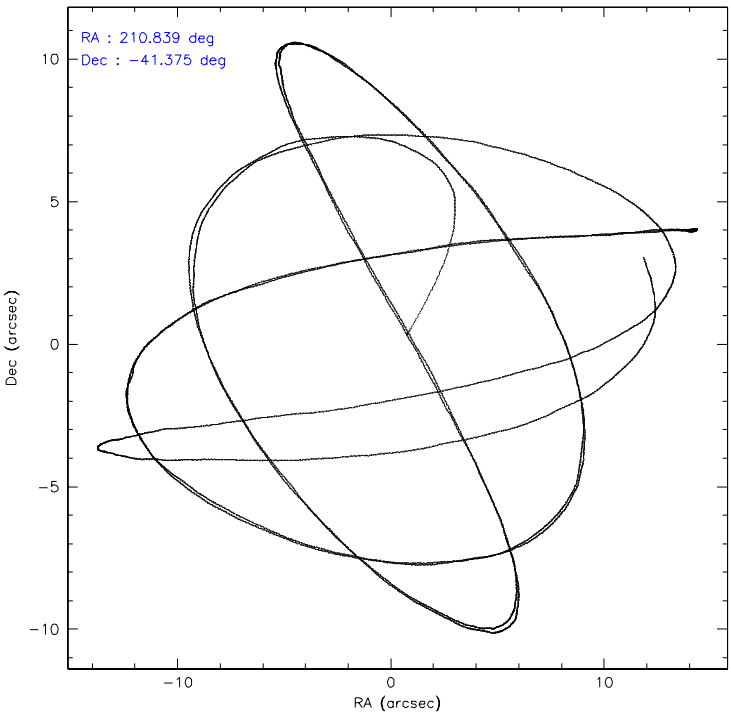
	ccd 7
grade 0 events	802
	8%
grade 1 events	11
	0%
grade 2 events	1126
	12%
grade 3 events	526
	5%
grade 4 events	463
	5%
grade 5 events	575
	6%
grade 6 events	1862
	20%
grade 7 events	3611
	40%

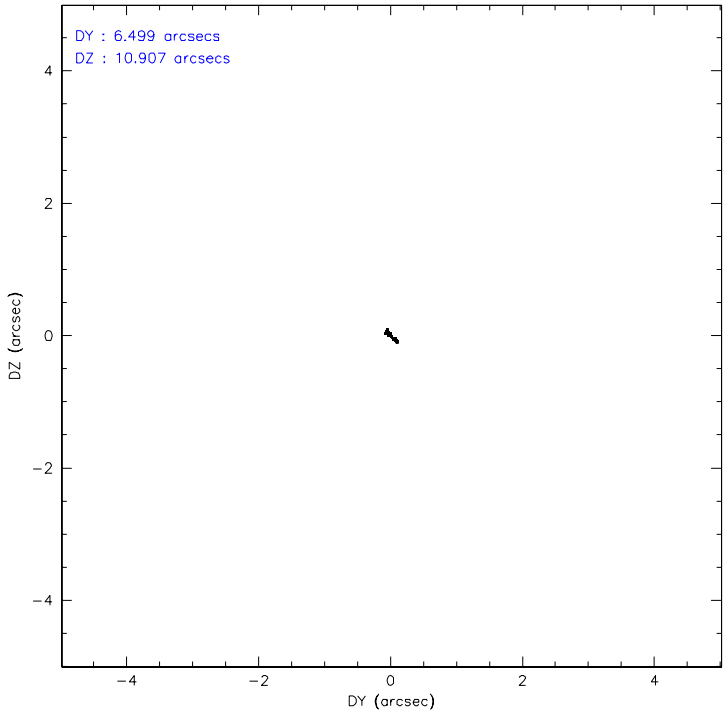
2.2 Compared Parameters

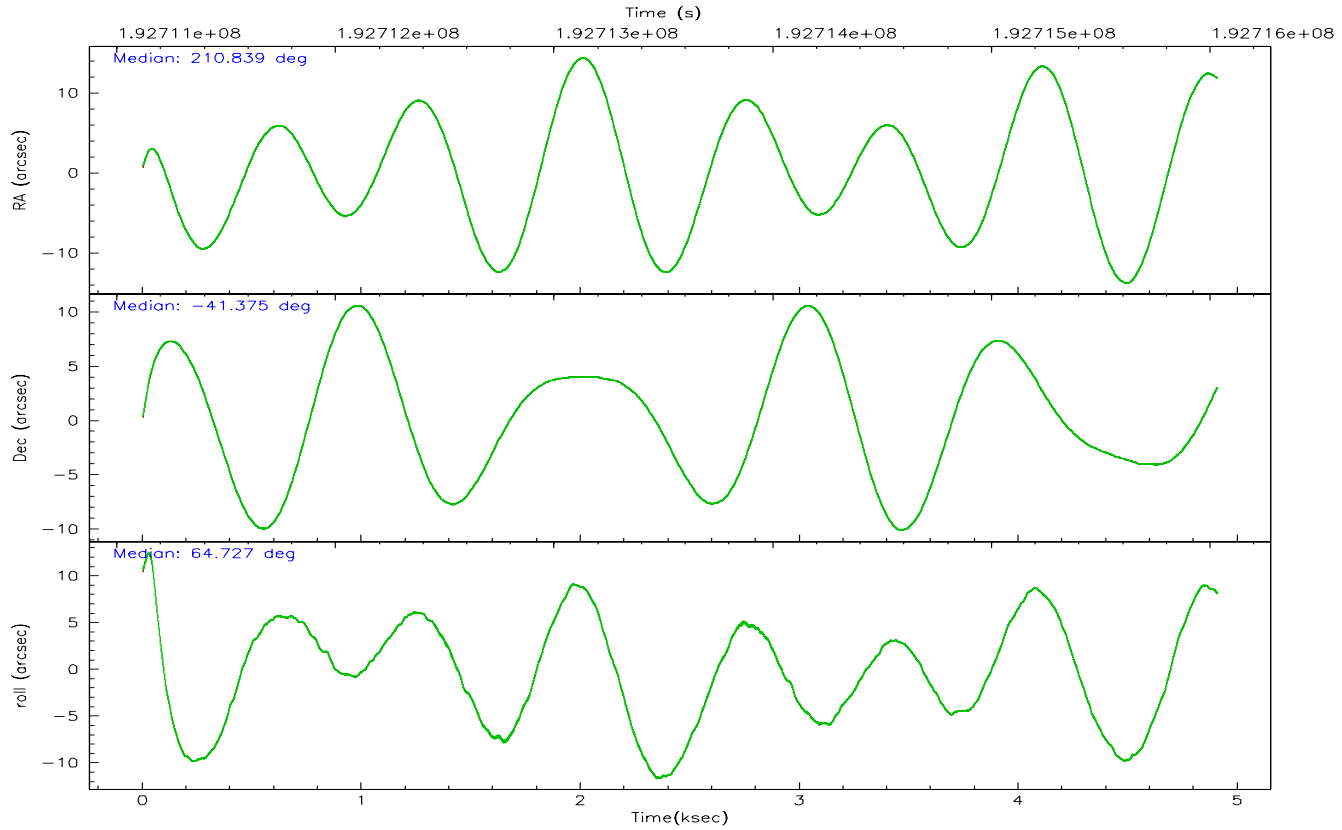
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-7	ACIS-7
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
Pointing RA	210.842620	210.8390346301824
Pointing Dec	-41.402189	-41.37513146577054
Pointing Roll	64.585882	64.74016222922047
SIM focus pos (mm)	-0.684267	-0.6828225247311905
SIM defocus (mm)	0	0.0014449365687057 01
SIM translation stage pos (mm)	-190.132523	-190.1400660498719
SIM translation stage offset (mm)	0	0.00754346686406393
Observation start time	192711302.184000	192709787.84658
Observation start date	2004-02-09T10:53:58	2004-02-09T10:29:47
Observation end time	192716030.184000	192716810.63438
Observation end date	2004-02-09T12:12:46	2004-02-09T12:26:50
Read mode	TIMED	TIMED

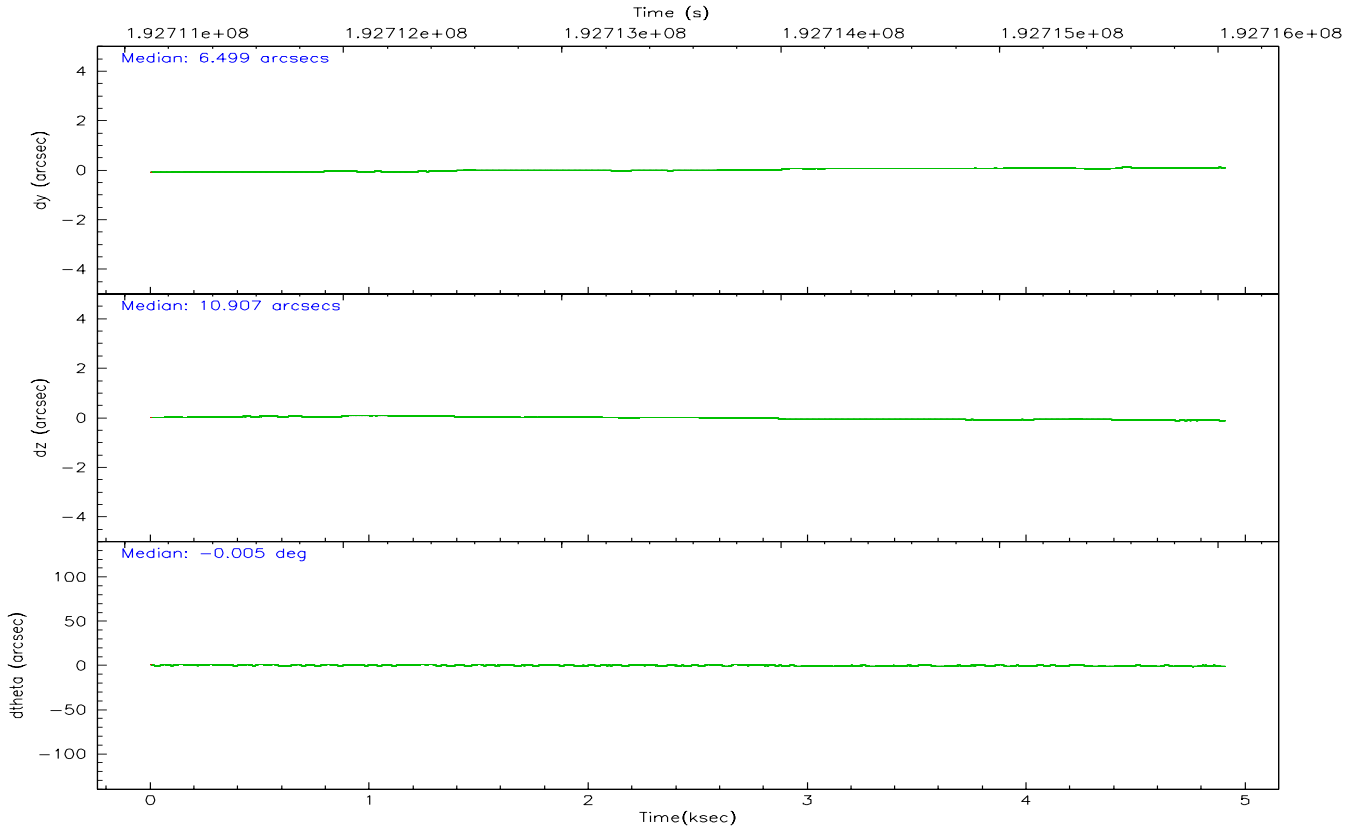
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
On-chip summing requested	N	N
Subarray requested	1/8	1/8
Subarray start row	0	449
Subarray row count	1024	128
Alternating exposures requested	N	N
Primary exposure time	0.000000	0.4

2.3 Aspect


RA : 210.839 deg
Dec : −41.375 deg
10
5
0
−5
−10
Dec (arcsec)
−10
0
10
RA (arcsec)


DY : 6.499 arcsecs
DZ : 10.907 arcsecs
4
2
0
−2
−4
DZ (arcsec)
−4
−2
0
2
4
DY (arcsec)


Time (s)
1.92711e+08
1.92712e+08
1.92713e+08
1.92714e+08
1.92715e+08
1.92716e+08
Median: 210.839 deg
RA (arcsec)
Median: −41.375 deg
Dec (arcsec)
Median: 64.727 deg
roll (arcsec)
Time(ksec)

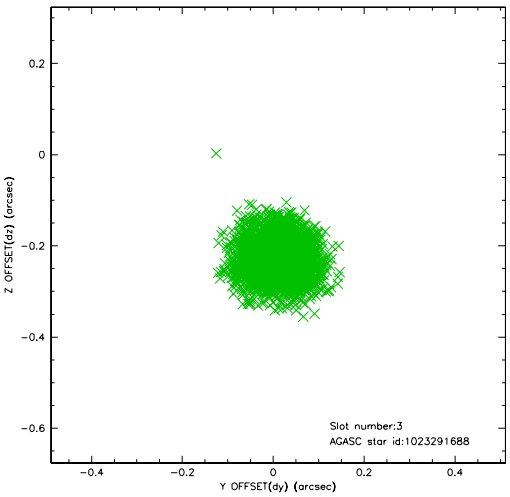

Time (s)
1.92711e+08
1.92712e+08
1.92713e+08
1.92714e+08
1.92715e+08
1.92716e+08
Median: 6.499 arcsecs
dy (arcsec)
Median: 10.907 arcsecs
dz (arcsec)
Median: −0.005 deg
dtheta (arcsec)
Time(ksec)

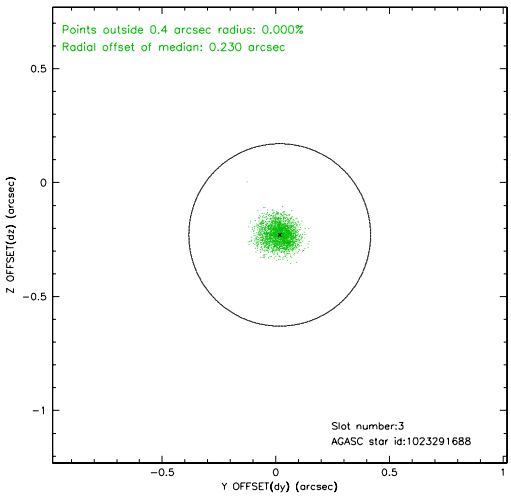
Slot Statistics

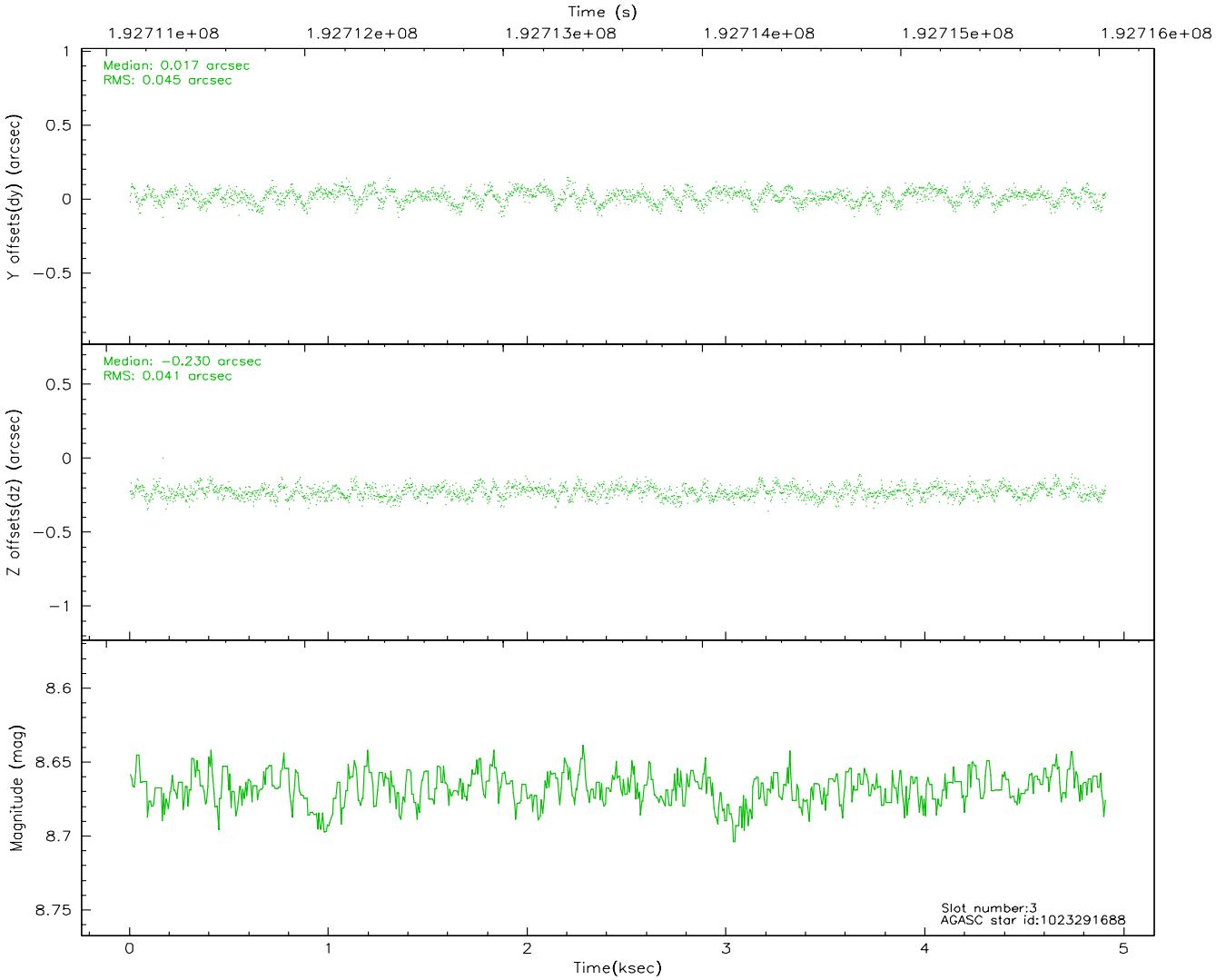
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	1197	-0.041	0.012	0.006	0.009	0.000000	0.000000	-759.26	-1732.17
1	FID	ACIS-S-4	7.20	1197	0.031	0.017	0.005	0.010	0.000000	0.000000	2153.49	175.08
2	FID	ACIS-S-5	7.23	1197	-0.021	-0.020	0.006	0.010	0.000000	0.000000	-1810.52	170.07
3	GUIDE	1023291688	8.67	2394	0.017	-0.230	0.065	0.103	210.168569	-41.185177	-84.47	1981.34
4	GUIDE	1023822680	8.88	2394	-0.075	0.119	0.060	0.099	211.176618	-41.286245	763.52	-636.56
5	GUIDE	1023824840	9.44	2392	0.062	0.034	0.101	0.158	210.682919	-41.618703	-888.06	52.99
6	GUIDE	1023829016	6.60	2393	-0.011	0.217	0.076	0.127	210.864452	-41.423345	-43.52	-85.71
7	GUIDE	1023292600	9.40	2391	0.007	-0.144	0.106	0.161	210.176441	-41.207792	-148.45	1926.68

2.4 Star Slots

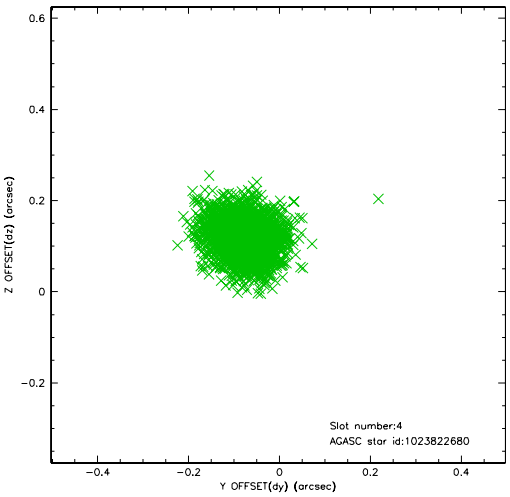
2.4.1 Slot 3

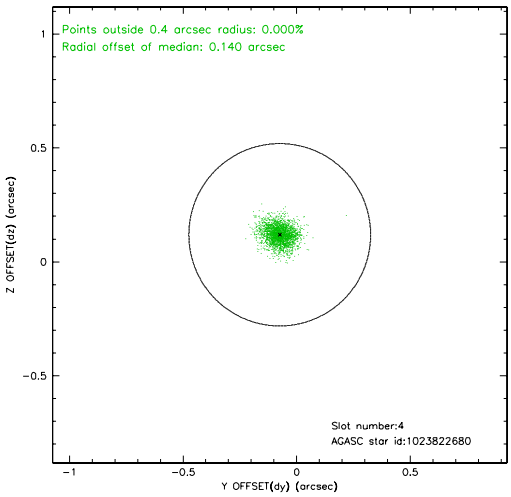


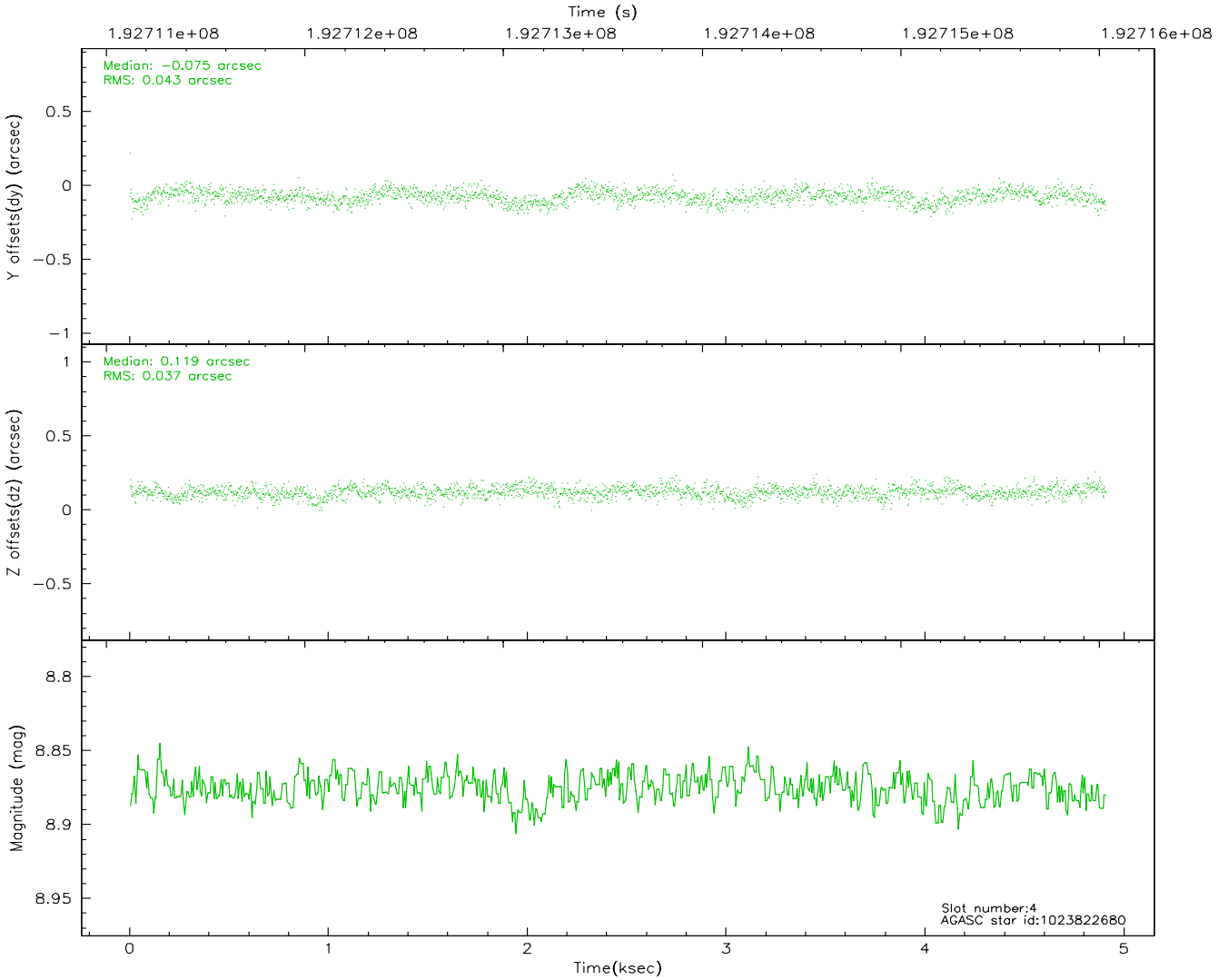




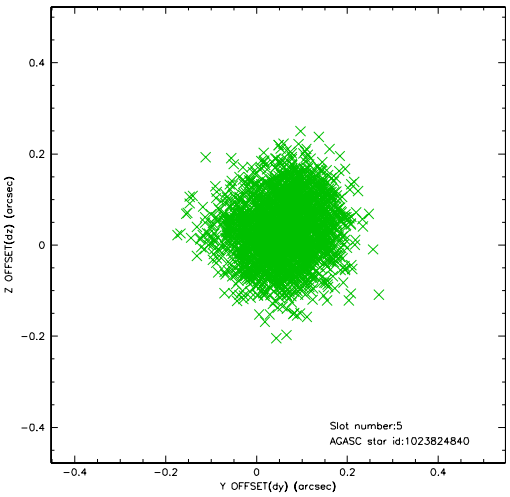
2.4.2 Slot 4

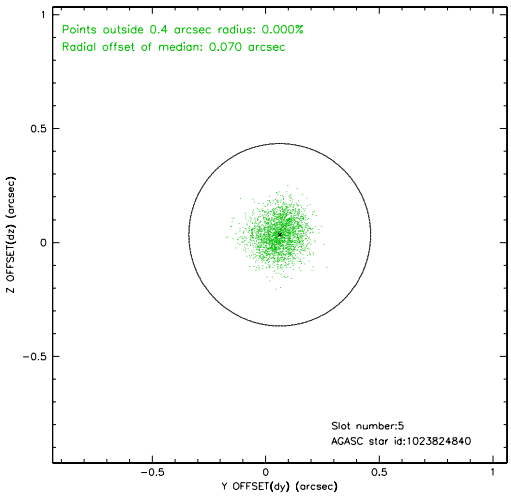

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:1023822680

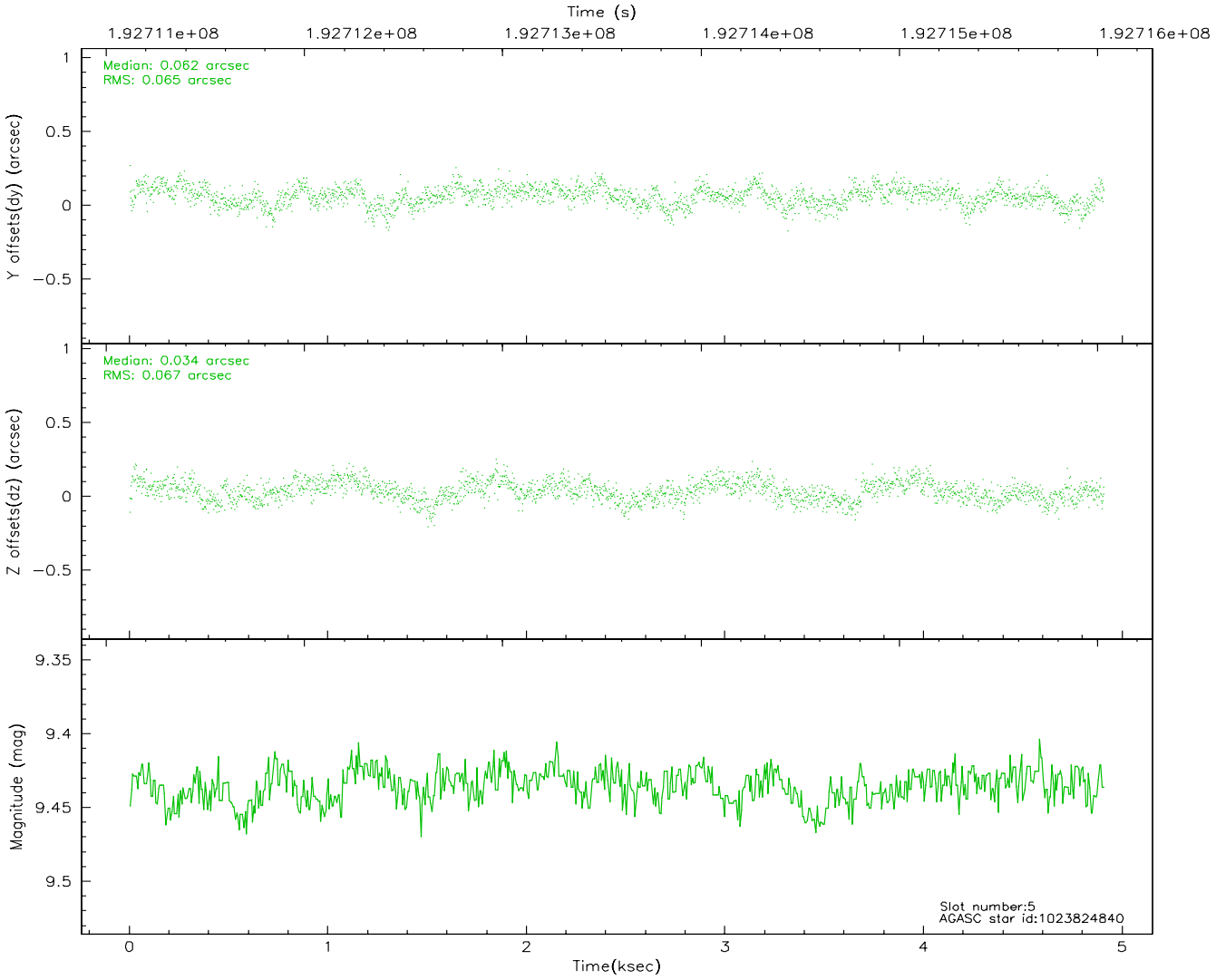

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.140 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:1023822680


Time (s)
1.92711e+08
1.92712e+08
1.92713e+08
1.92714e+08
1.92715e+08
1.92716e+08
Median: −0.075 arcsec
RMS: 0.043 arcsec
Y offsets(dy) (arcsec)
Median: 0.119 arcsec
RMS: 0.037 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:1023822680
Time(ksec)

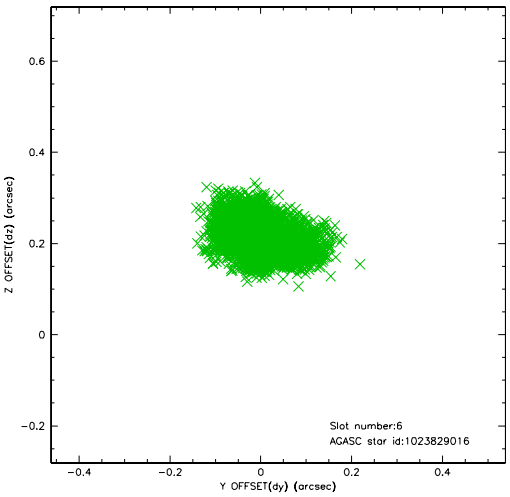
2.4.3 Slot 5

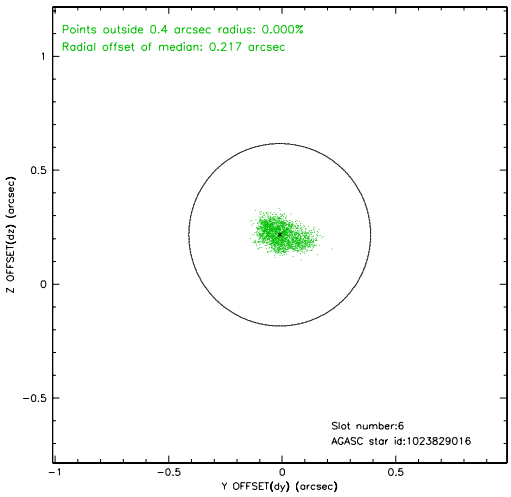

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:1023824840

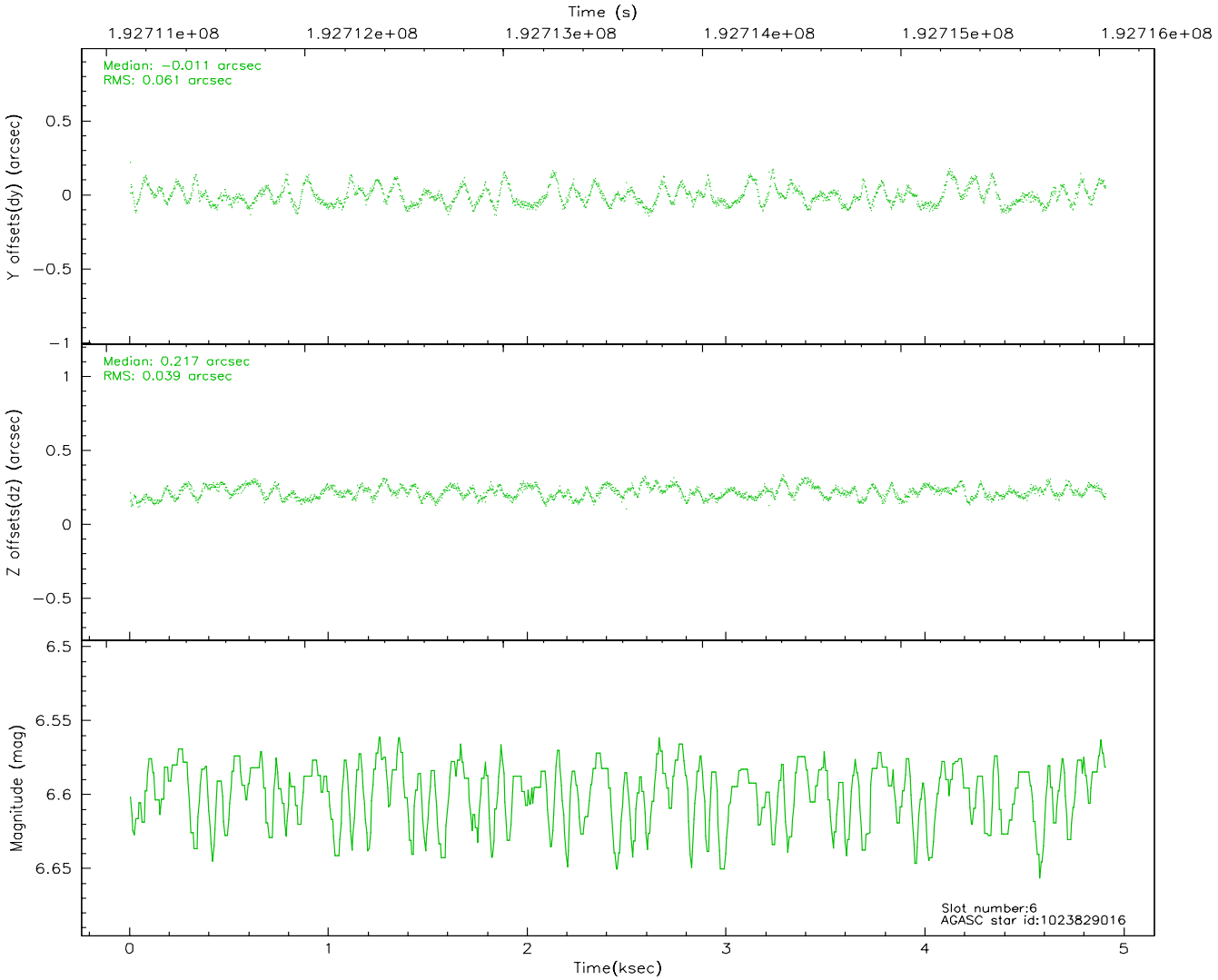

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.070 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:1023824840


Time (s)
1.92711e+08
1.92712e+08
1.92713e+08
1.92714e+08
1.92715e+08
1.92716e+08
Median: 0.062 arcsec
RMS: 0.065 arcsec
Y offsets(dy) (arcsec)
Median: 0.034 arcsec
RMS: 0.067 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:1023824840
Time(ksec)

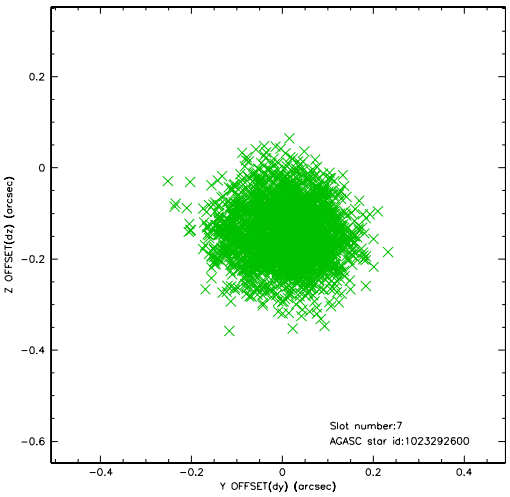
2.4.4 Slot 6

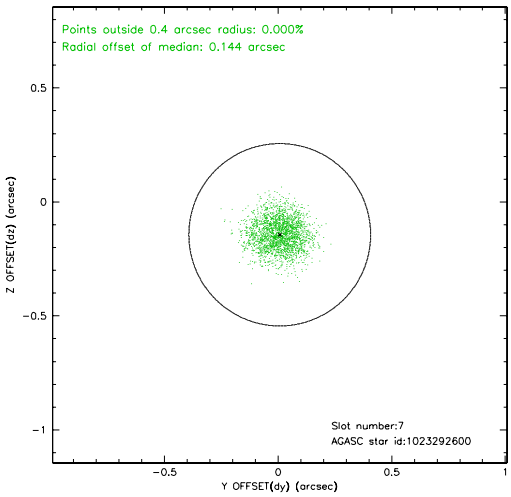

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:1023829016

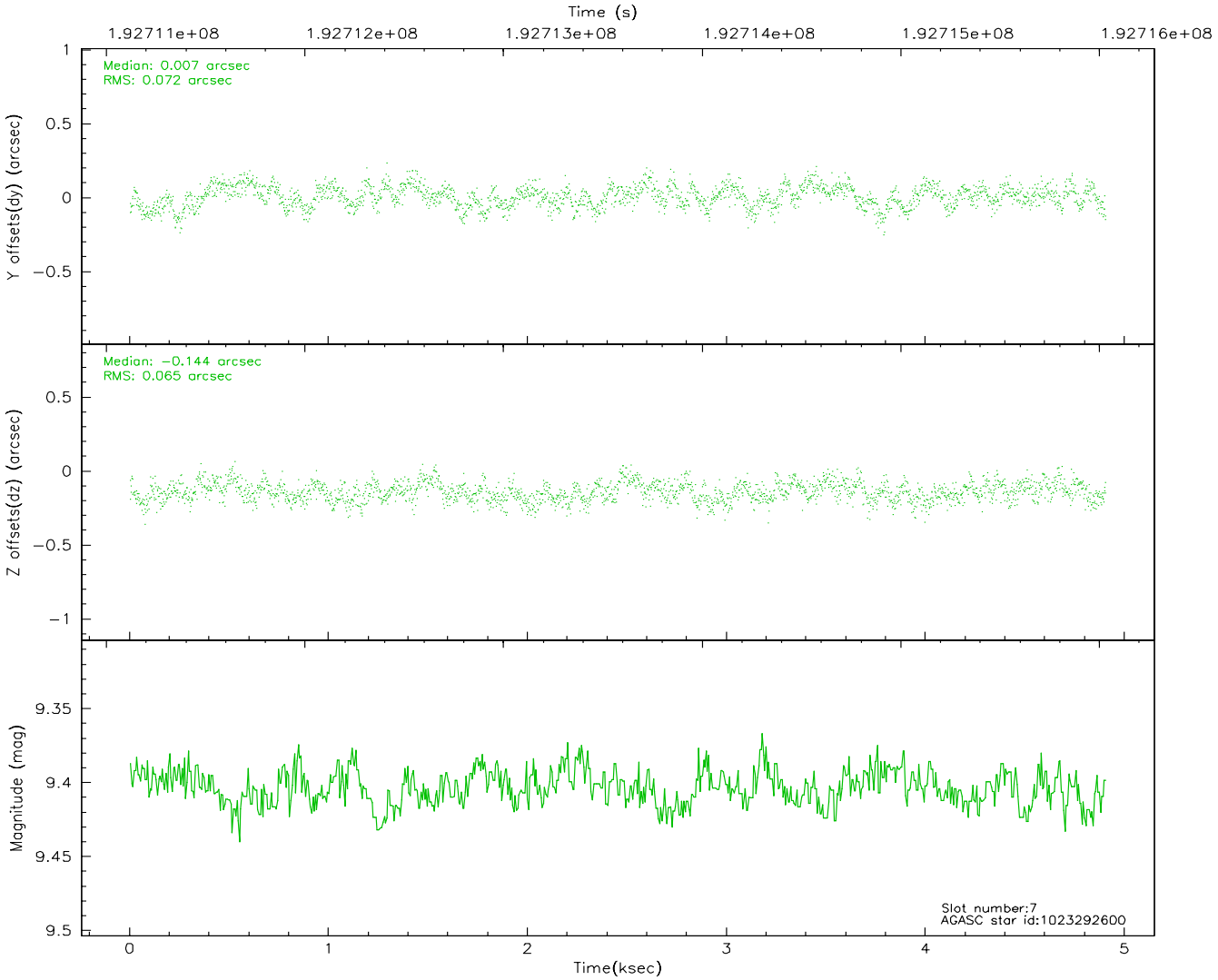

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.217 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:1023829016


Time (s)
Median: −0.011 arcsec
RMS: 0.061 arcsec
Y offsets(dy) (arcsec)
Median: 0.217 arcsec
RMS: 0.039 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:1023829016
Time(ksec)

2.4.5 Slot 7

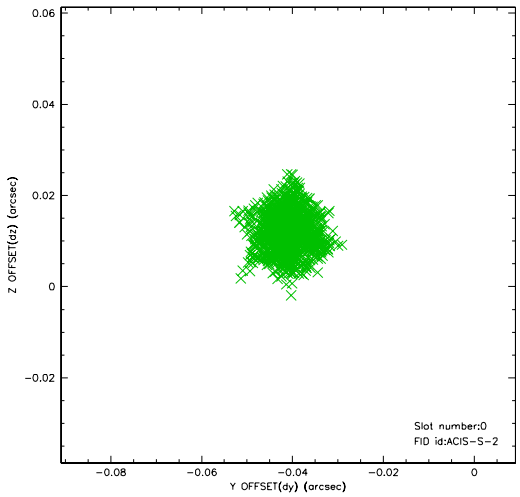

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:1023292600

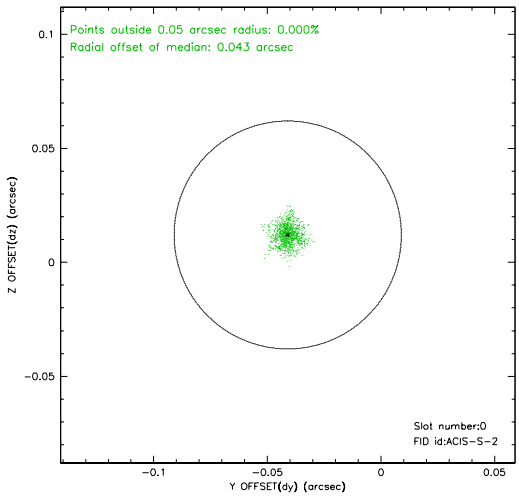

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.144 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:1023292600

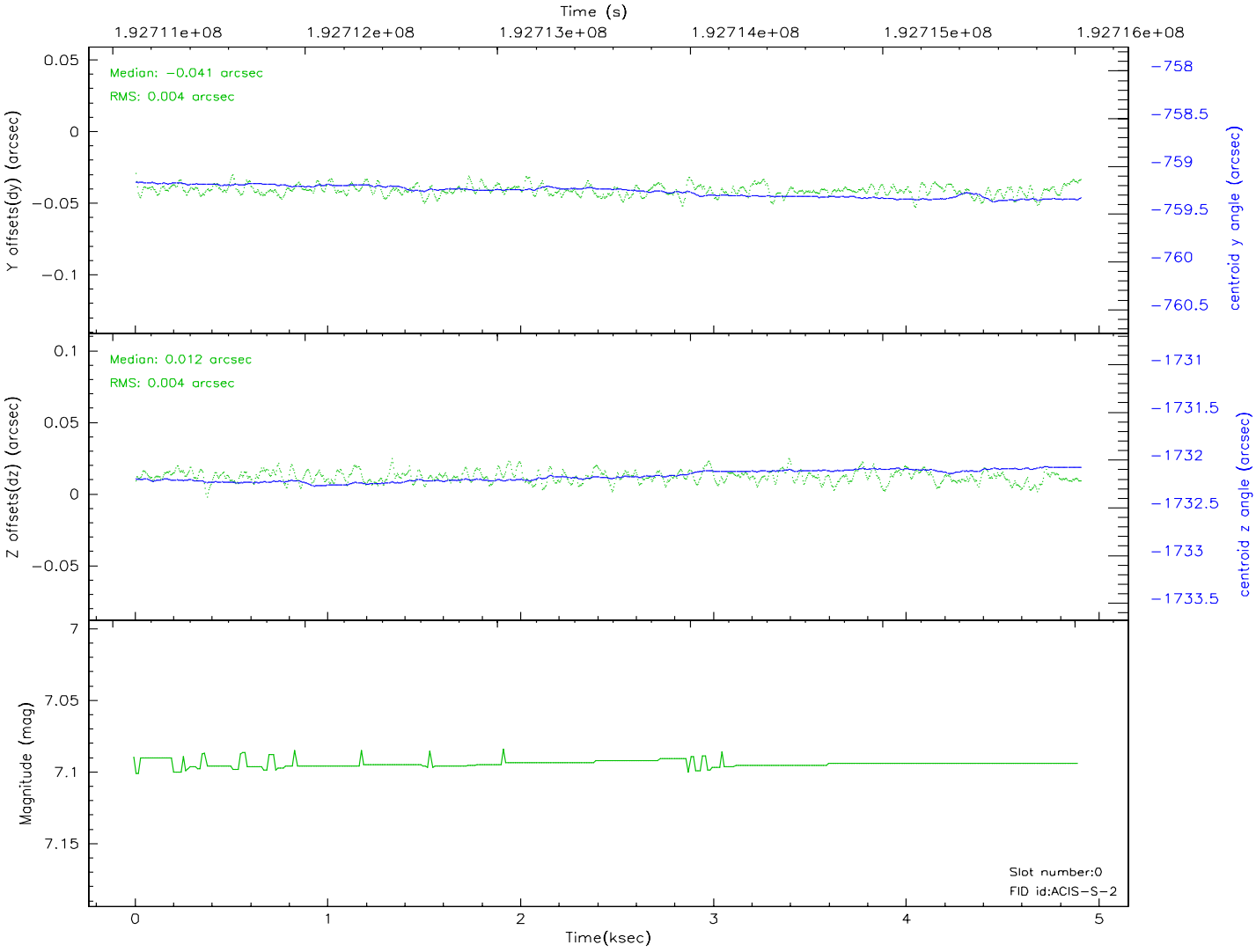

Time (s)
1.92711e+08
1.92712e+08
1.92713e+08
1.92714e+08
1.92715e+08
1.92716e+08
Median: 0.007 arcsec
RMS: 0.072 arcsec
Y offsets(dy) (arcsec)
Median: −0.144 arcsec
RMS: 0.065 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:1023292600
Time(ksec)

2.5 FID Slots

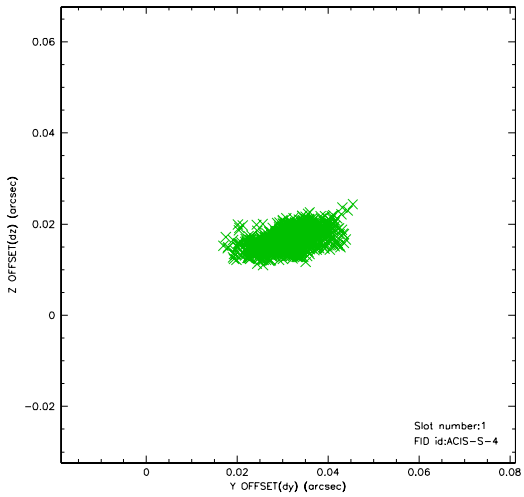
2.5.1 Slot 0

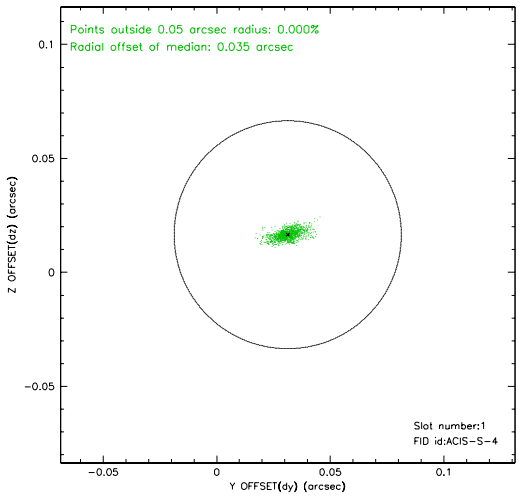


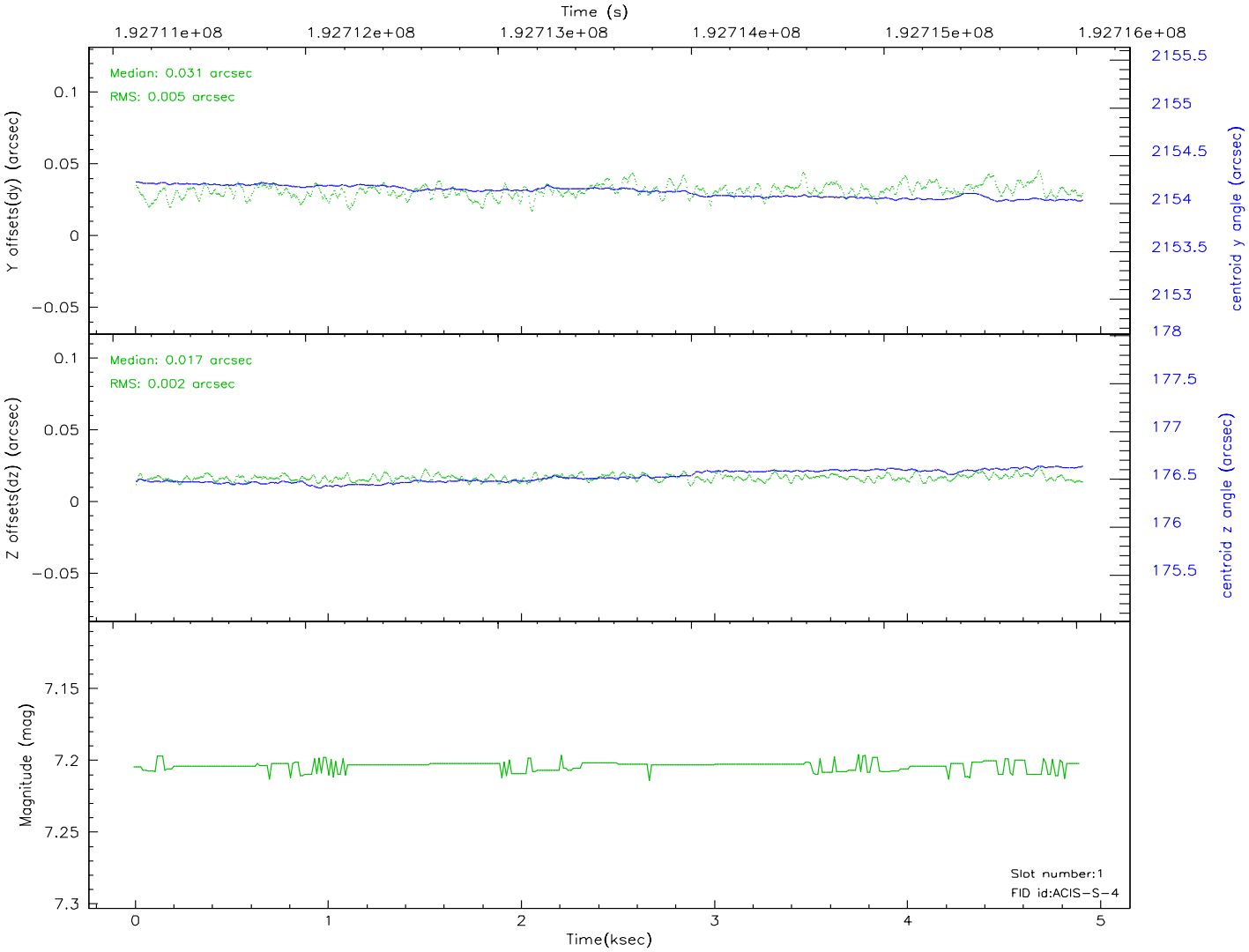




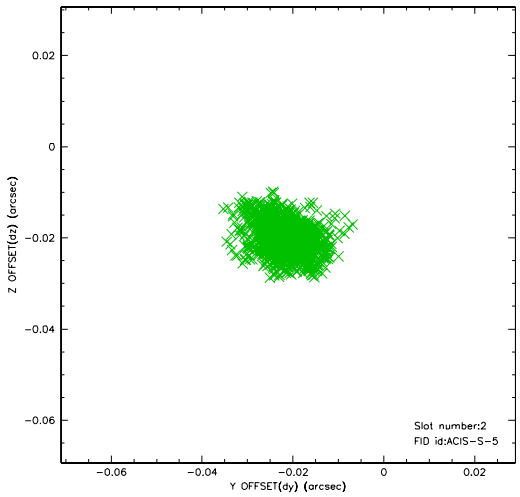
2.5.2 Slot 1

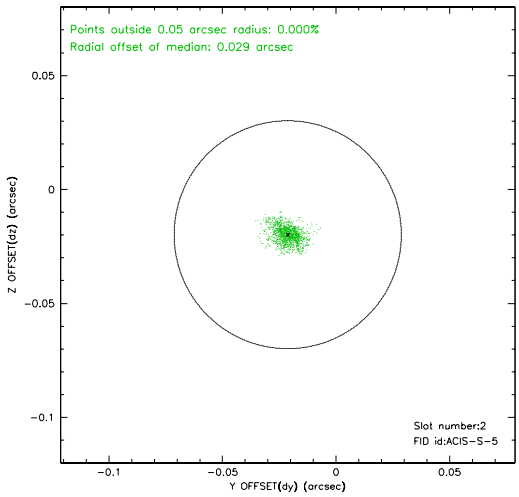

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-4

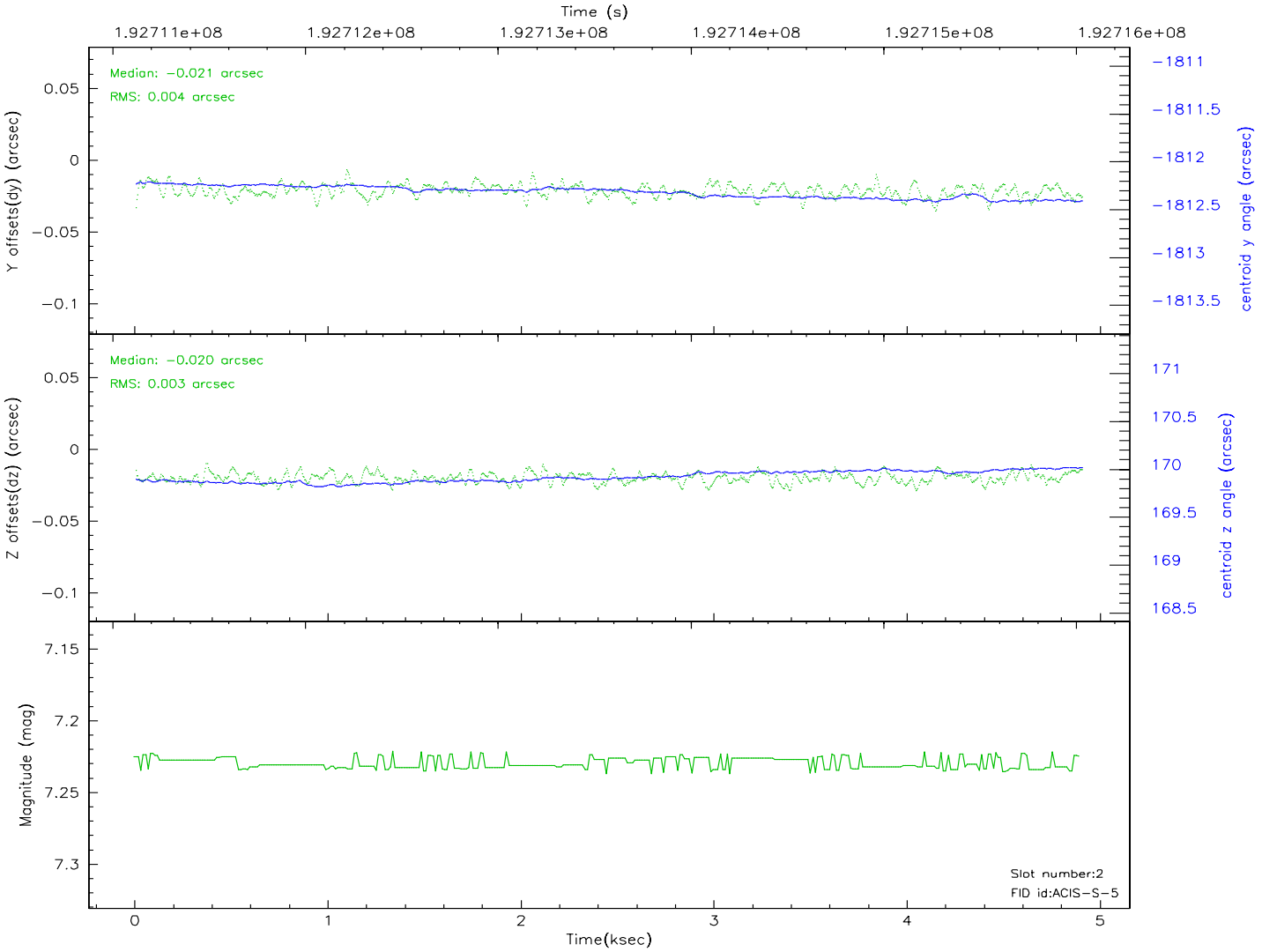

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.035 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-4


Time (s)
Median: 0.031 arcsec
RMS: 0.005 arcsec
Y offsets(dy) (arcsec)
Median: 0.017 arcsec
RMS: 0.002 arcsec
Z offsets(dz) (arcsec)
centroid y angle (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:1
FID id:ACIS-S-4
Time(ksec)

2.5.3 Slot 2


Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:ACIS-S-5


Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.029 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:ACIS-S-5


Time (s)
Median: −0.021 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.020 arcsec
RMS: 0.003 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:2
FID id:ACIS-S-5
Time(ksec)

3 Point Sources

A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2006.06.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.904

A.2 Comments

```
Monitor constraint met.
```