V&V Reference Report
L2 ASCDS Version : 7.6.7.2

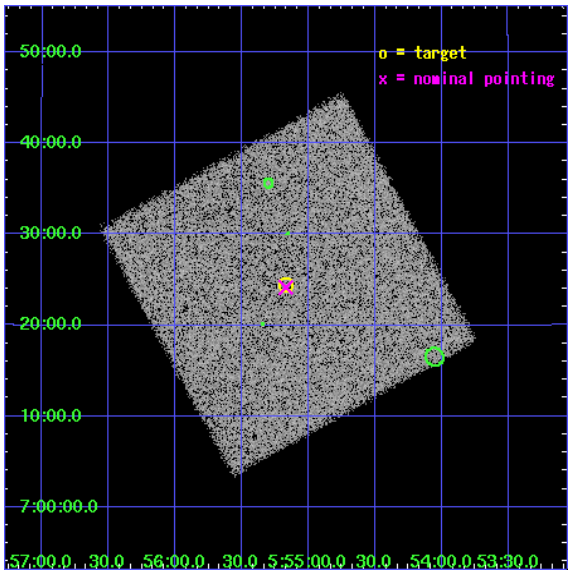
Observation 5055 - L2 Version 3
Chandra X-Ray Center

L2 Processing Date : Nov 23 2007

Contents

1 Front

seq_num	290328
obs_id	5055
title	AO5 Measurements of the optical/UV Transmission of the HRC and ACIS Filters.
observer	Dr. CXC Calibration
object	Betelgeuse
ra_targ	88.792917
dec_targ	7.407056
ra_nom	88.792437558942
dec_nom	7.4027342562046
roll_nom	286.32325357416
revision	3
ontime	2086.1313411593
livetime	2069.0530615902
l2events	89314

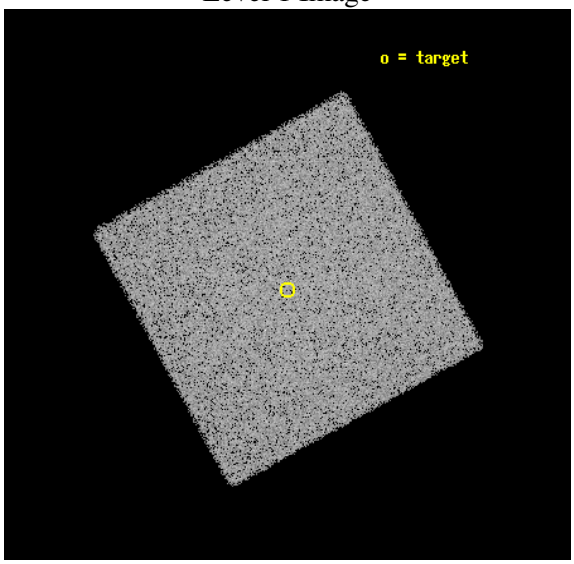


2 OBI

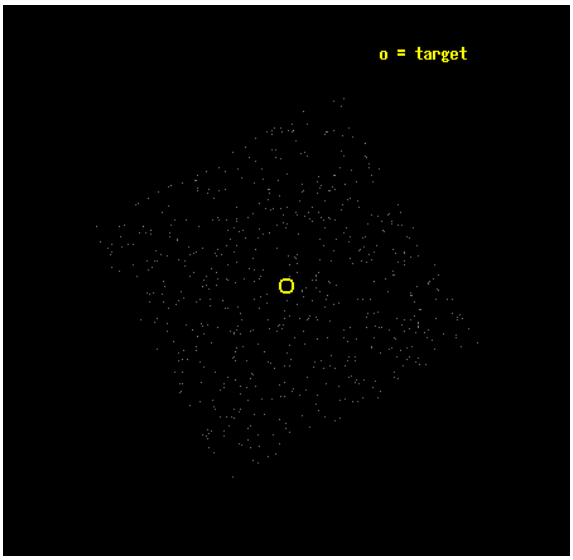
2.1 OBI

2.1.1 Images

Level 1 Image



Level 1 Bad Events



2.1.2 Parameters

obi_num	0
ascdsver	7.6.11.2
caldbver	3.4.1
date	2007-11-23T22:14:09
revision	3

sched_exp_time	2102.000000
ontime	2086.1313411593
l1events	136517

2.1.3 Events

Level 1 Events

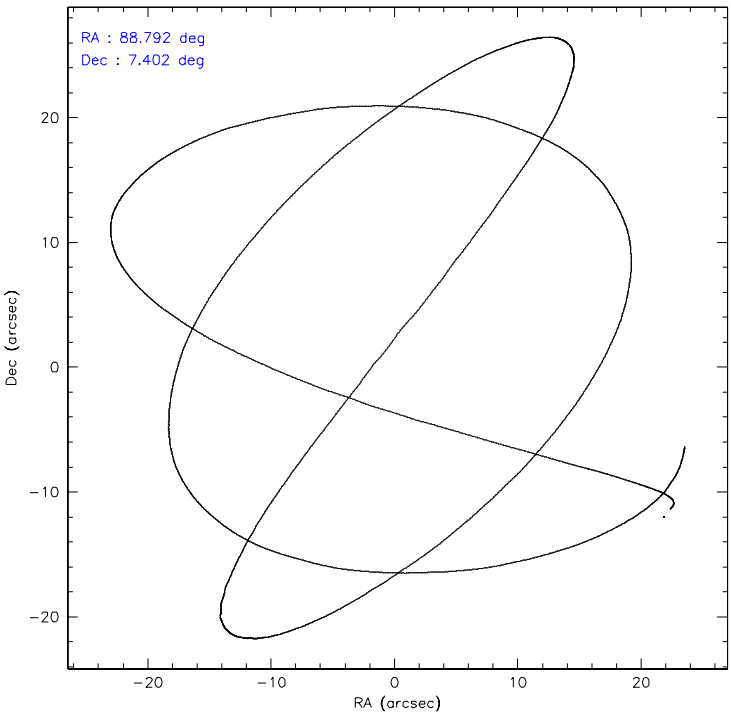
	segment 0
level 1 events	136517
rejected events	8600
rejected %	6%

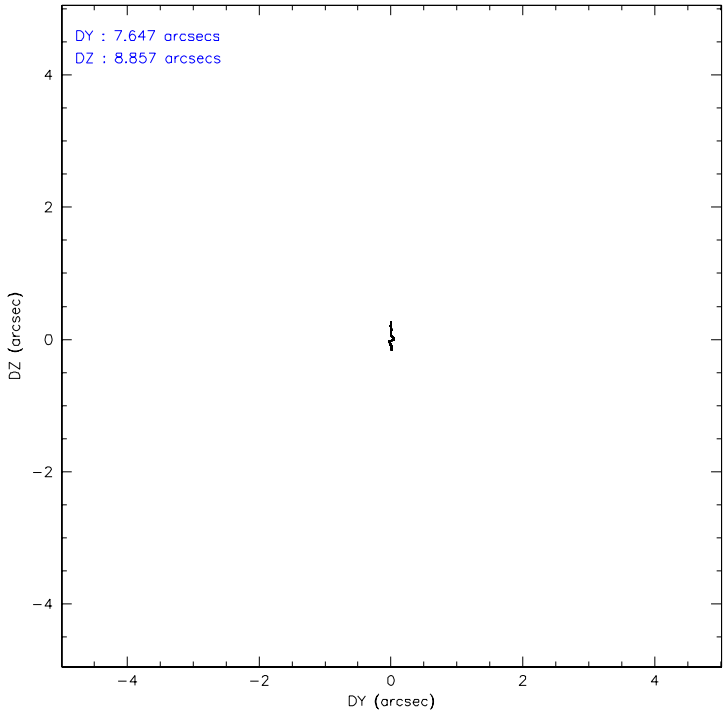
2.2 Compared Parameters

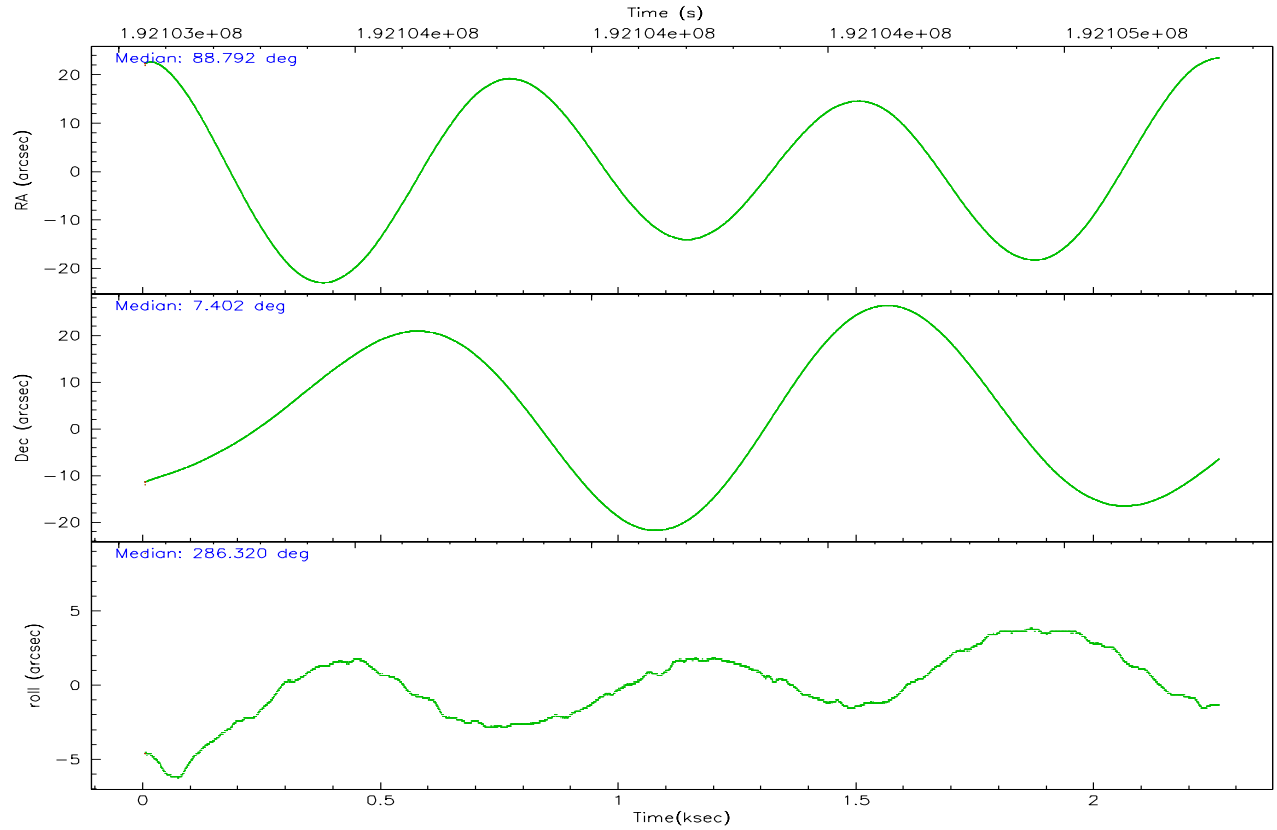
Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-I	HRC-I
Grating	NONE	NONE
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
Pointing RA	88.772252	88.79243755894164
Pointing Dec	7.421169	7.402734256204554
Pointing Roll	286.421337	286.323253574164
Window start time	191980864.184000	191980864.184000
Window stop time	197078464.184000	197078464.184000
SIM focus pos (mm)	-1.040293	-1.038866356238299
SIM defocus (mm)	0	0.001426264420575141
SIM translation stage pos (mm)	126.985494	126.9829799899862
SIM translation stage offset (mm)	0	0.002508901615314585
Observation start time	192103219.184000	192102807.93254
Observation start date	2004-02-02T09:59:15	2004-02-02T09:53:27
Observation end time	192105321.184000	192105457.04516
Observation end date	2004-02-02T10:34:17	2004-02-02T10:37:37

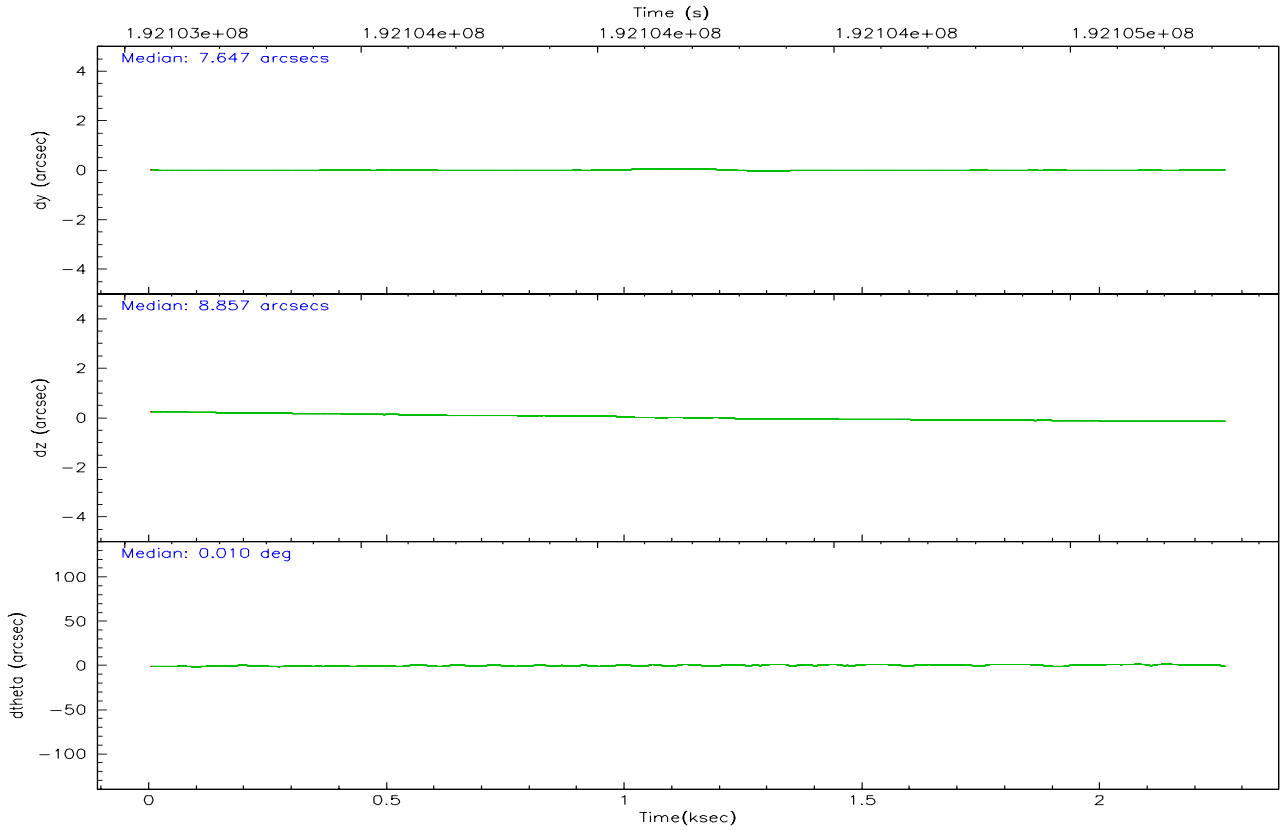
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED

2.3 Aspect


RA : 88.792 deg
Dec : 7.402 deg
Dec (arcsec)
RA (arcsec)
20
10
0
−10
−20
−20
−10
0
10
20


DY : 7.647 arcsecs
DZ : 8.857 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
1.92103e+08
1.92104e+08
1.92104e+08
1.92104e+08
1.92105e+08
Median: 88.792 deg
RA (arcsec)
Median: 7.402 deg
Dec (arcsec)
Median: 286.320 deg
roll (arcsec)
Time(ksec)

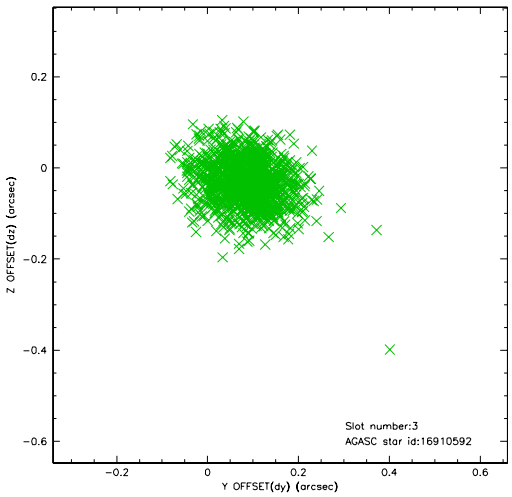

Time (s)
1.92103e+08
1.92104e+08
1.92104e+08
1.92104e+08
1.92105e+08
Median: 7.647 arcsecs
dy (arcsec)
Median: 8.857 arcsecs
dz (arcsec)
Median: 0.010 deg
dtheta (arcsec)
Time(ksec)

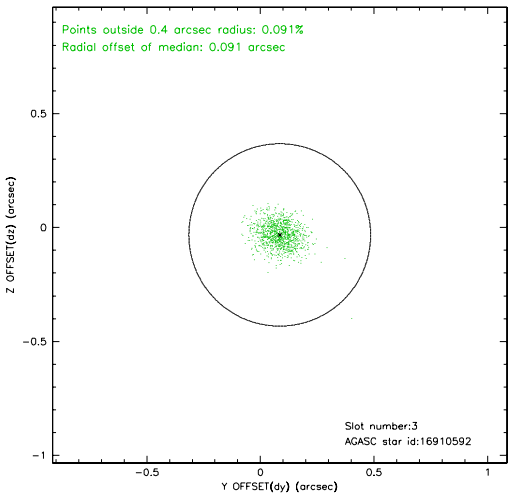
Slot Statistics

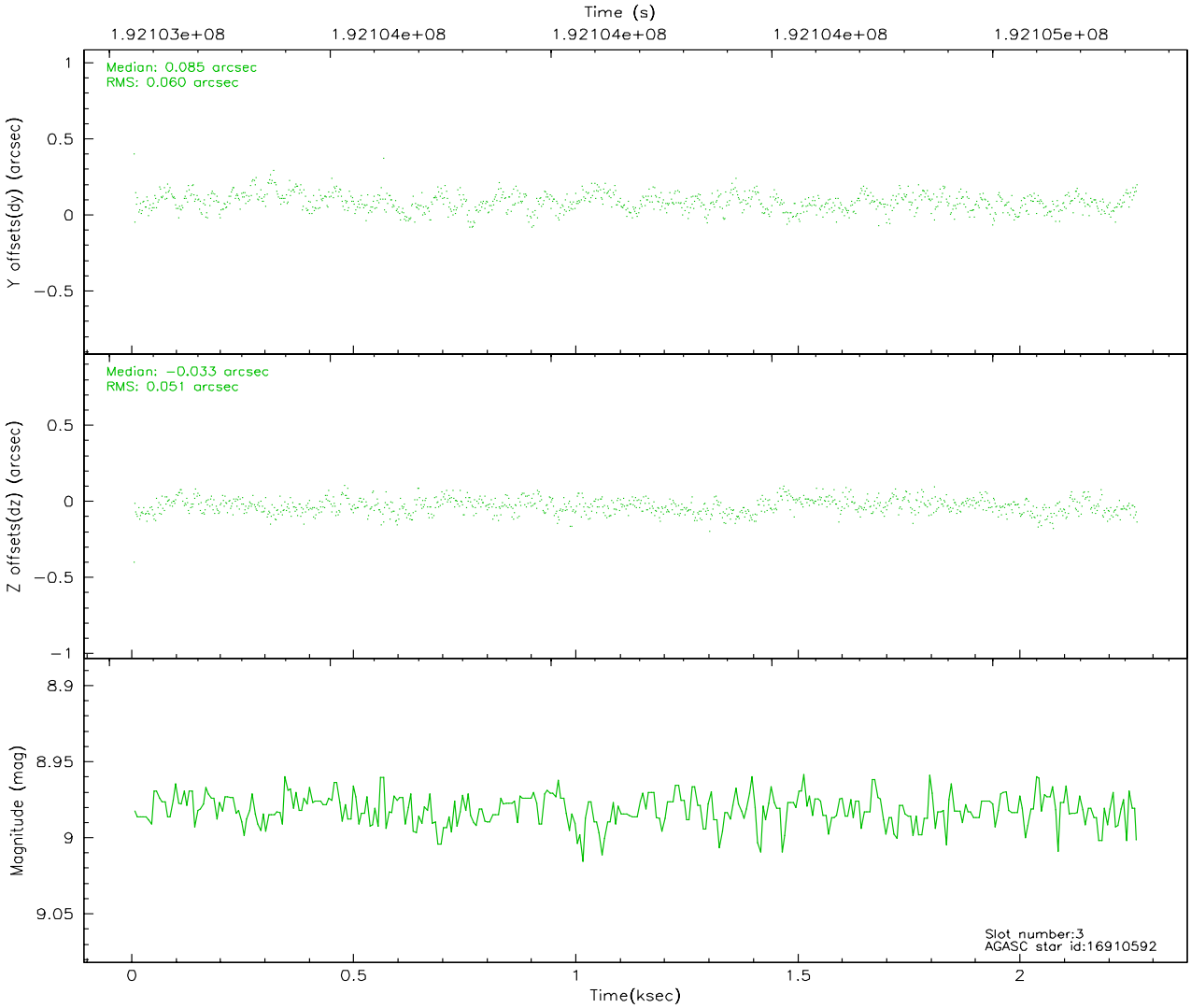
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-I-1	7.06	552	-0.010	0.041	0.008	0.013	0.000000	0.000000	-763.29	-1296.72
1	FID	HRC-I-2	7.10	552	0.157	-0.122	0.008	0.013	0.000000	0.000000	848.13	-1300.83
2	FID	HRC-I-3	7.15	552	-0.027	-0.009	0.009	0.017	0.000000	0.000000	-1190.21	1005.44
3	GUIDE	16910592	8.98	1103	0.085	-0.033	0.083	0.135	88.532936	6.726769	2155.69	-1526.99
4	GUIDE	16913360	8.33	1103	0.020	0.005	0.064	0.099	89.178373	7.247125	1012.02	1213.29
5	GUIDE	16918912	8.67	1103	0.099	0.085	0.068	0.108	89.257075	6.922287	2212.34	1156.22
6	GUIDE	93854800	7.58	1103	-0.128	-0.108	0.060	0.096	88.376308	7.655454	-1207.17	-1115.27
7	GUIDE	93855160	8.50	1102	-0.074	0.047	0.068	0.108	88.514904	7.713359	-1270.18	-583.86

2.4 Star Slots

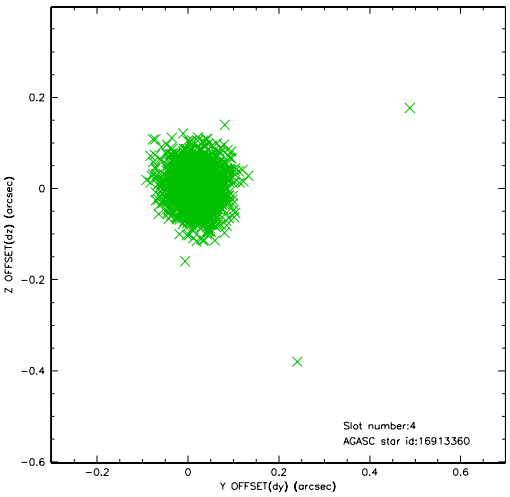
2.4.1 Slot 3

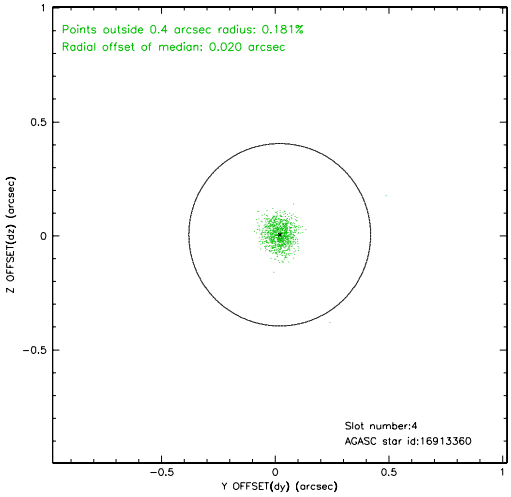


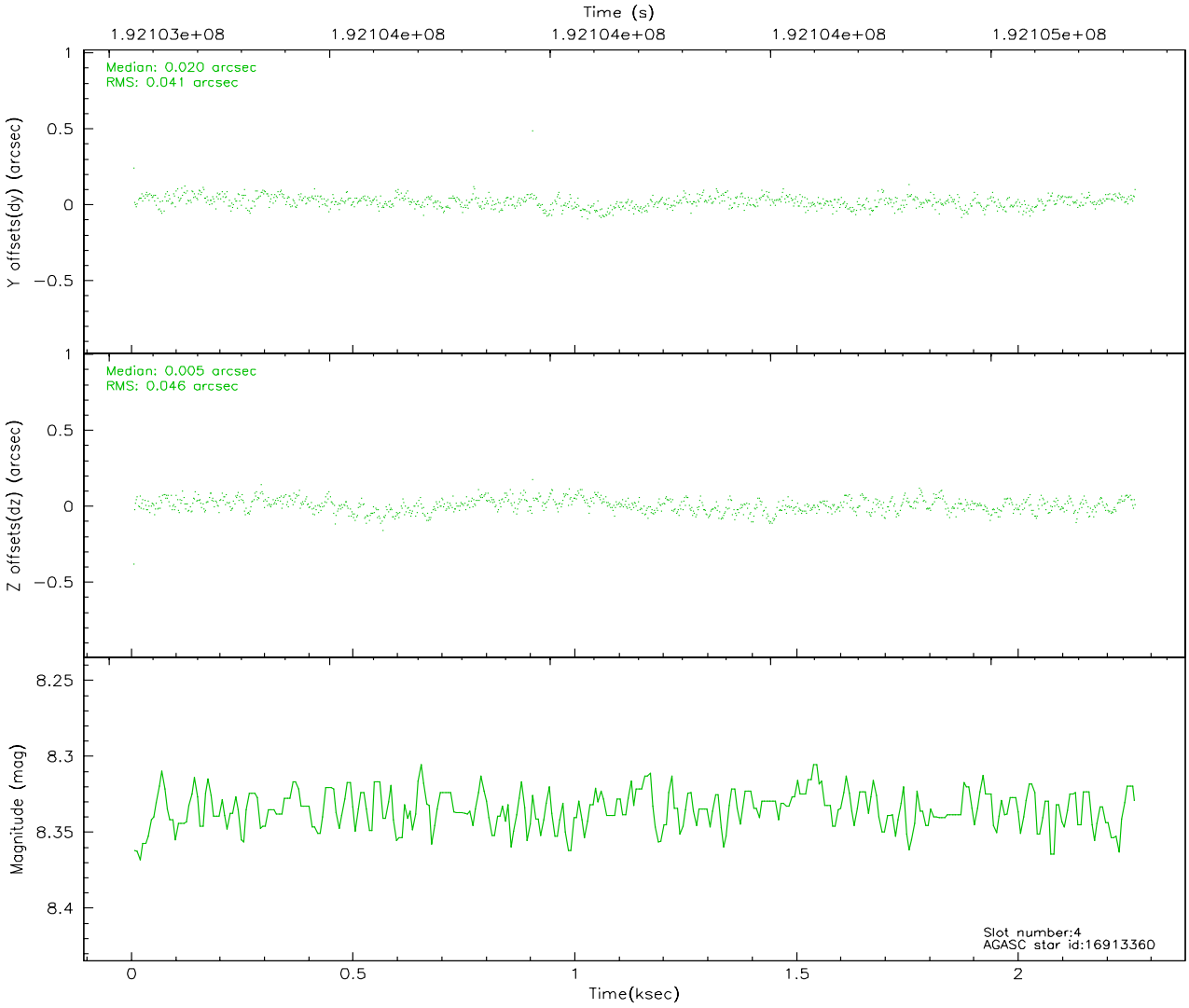




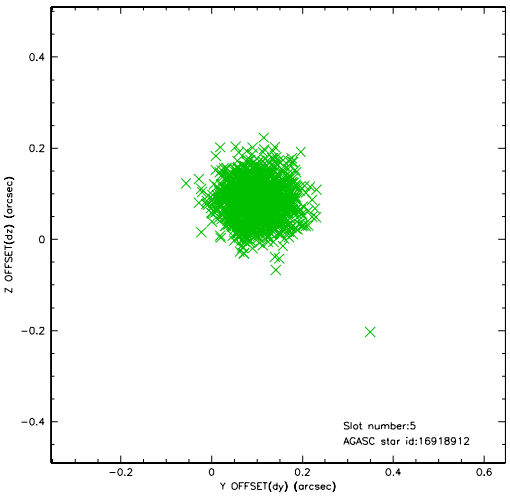
2.4.2 Slot 4

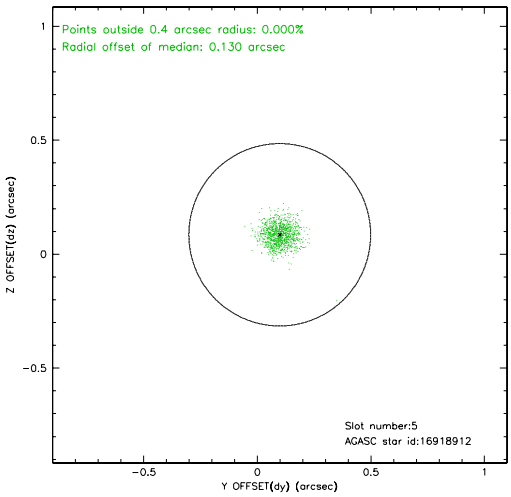

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:16913360

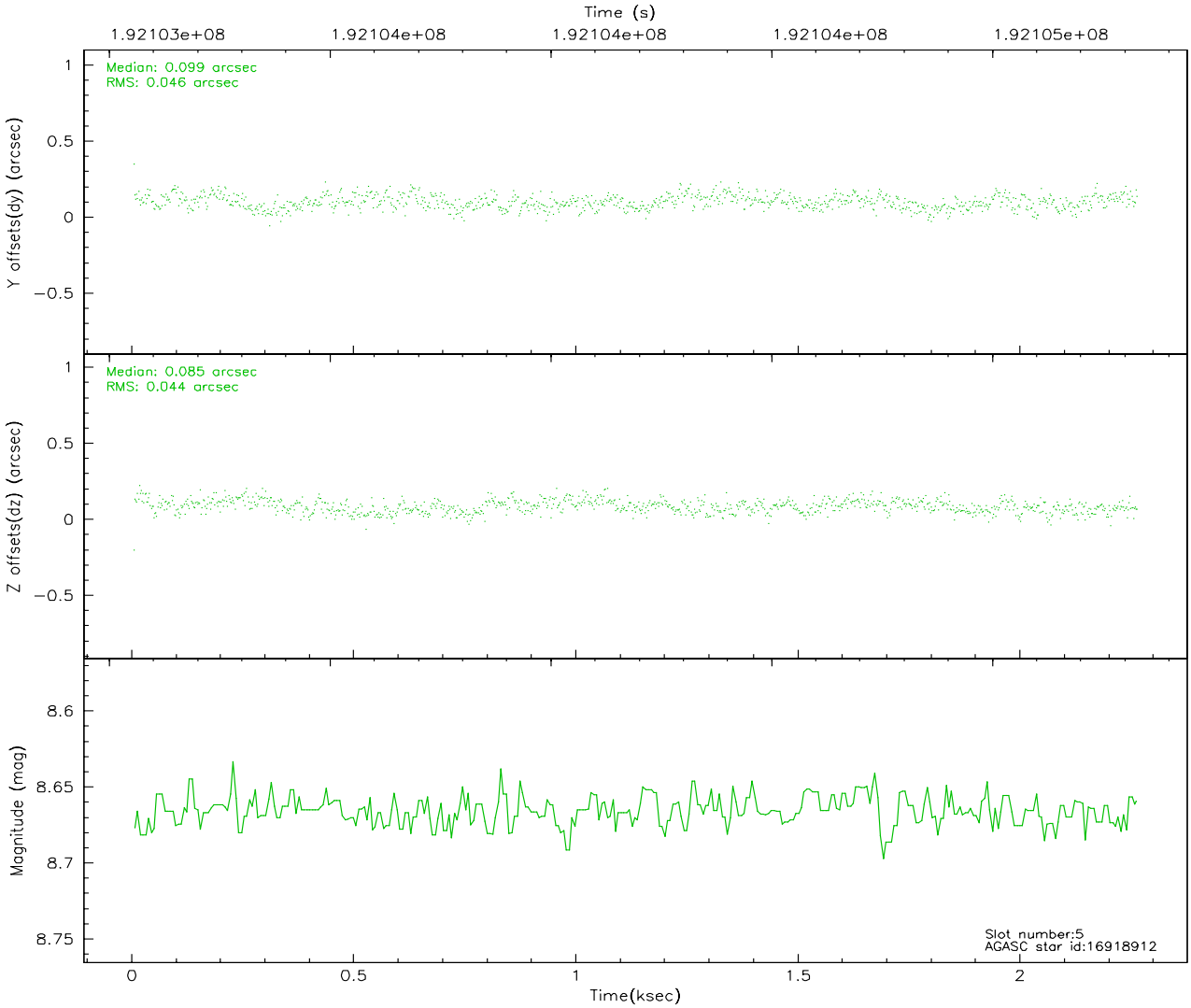

Points outside 0.4 arcsec radius: 0.181%
Radial offset of median: 0.020 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:16913360


Time (s)
1.92103e+08
1.92104e+08
1.92104e+08
1.92104e+08
1.92105e+08
Median: 0.020 arcsec
RMS: 0.041 arcsec
Y offsets(dy) (arcsec)
Median: 0.005 arcsec
RMS: 0.046 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:16913360
Time(ksec)

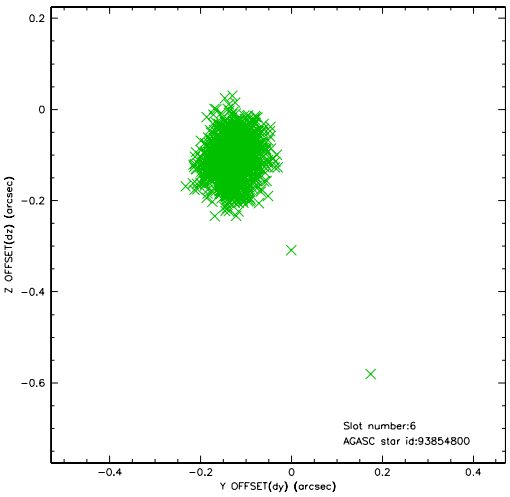
2.4.3 Slot 5

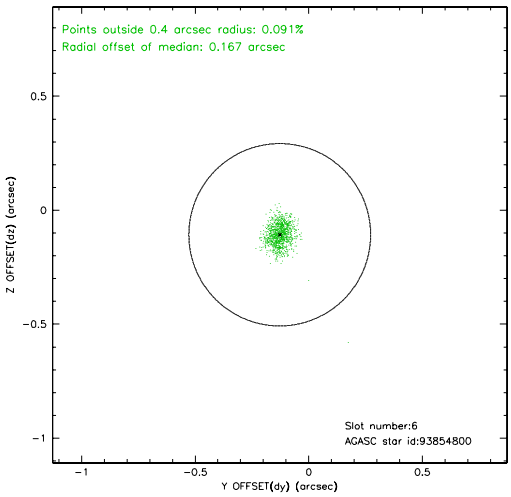

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:16918912

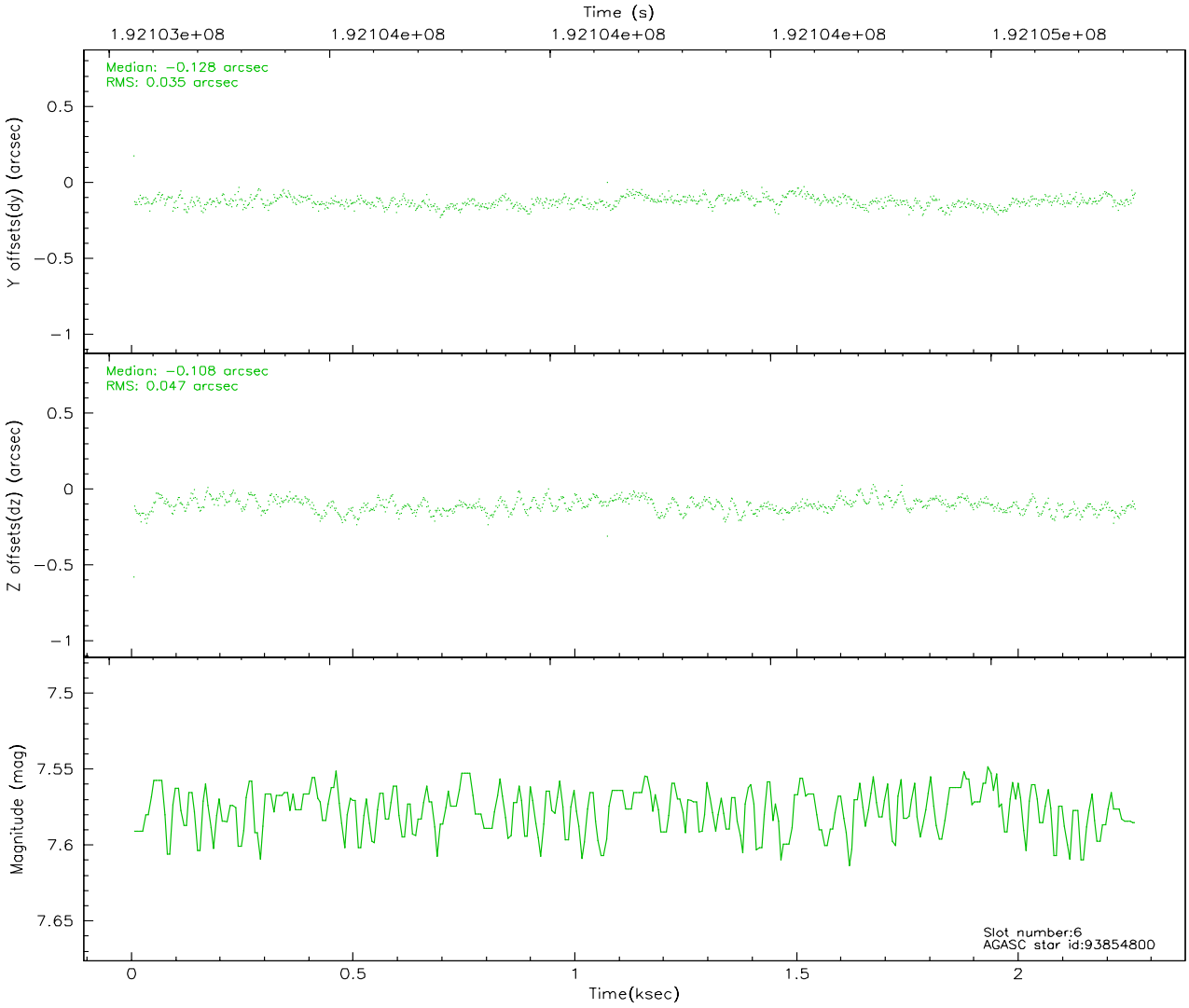

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.130 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:16918912


Time (s)
1.92103e+08
1.92104e+08
1.92104e+08
1.92104e+08
1.92105e+08
Median: 0.099 arcsec
RMS: 0.046 arcsec
Y offsets(dy) (arcsec)
Median: 0.085 arcsec
RMS: 0.044 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:16918912
Time(ksec)

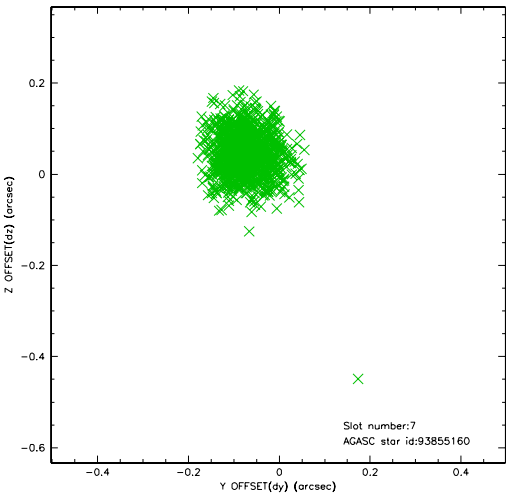
2.4.4 Slot 6

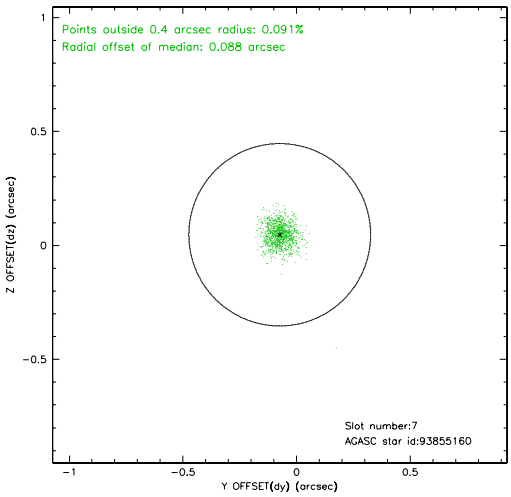

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:93854800

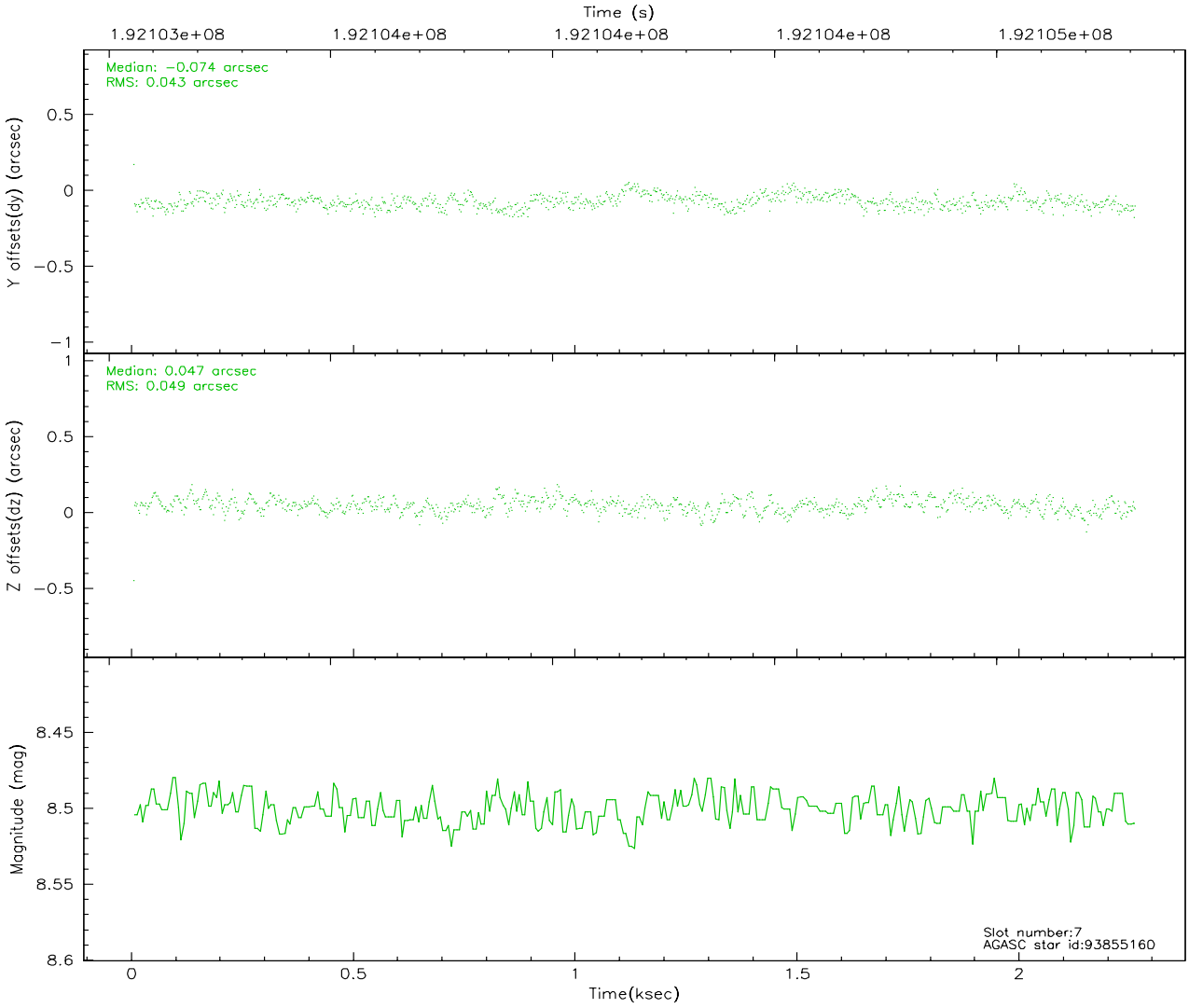

Points outside 0.4 arcsec radius: 0.091%
Radial offset of median: 0.167 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:93854800


Time (s)
1.92103e+08
1.92104e+08
1.92104e+08
1.92104e+08
1.92105e+08
Median: −0.128 arcsec
RMS: 0.035 arcsec
Y offsets(dy) (arcsec)
Median: −0.108 arcsec
RMS: 0.047 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:93854800
Time(ksec)

2.4.5 Slot 7

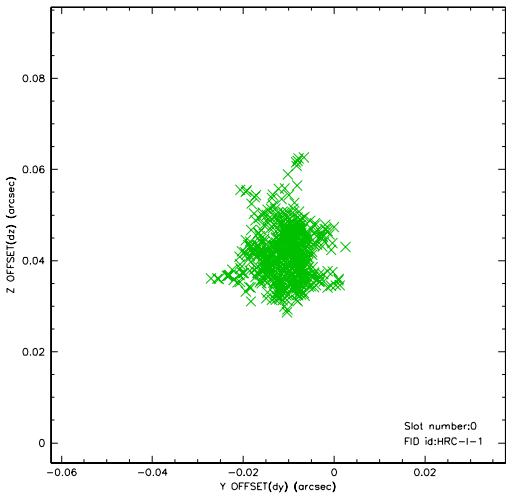

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:93855160

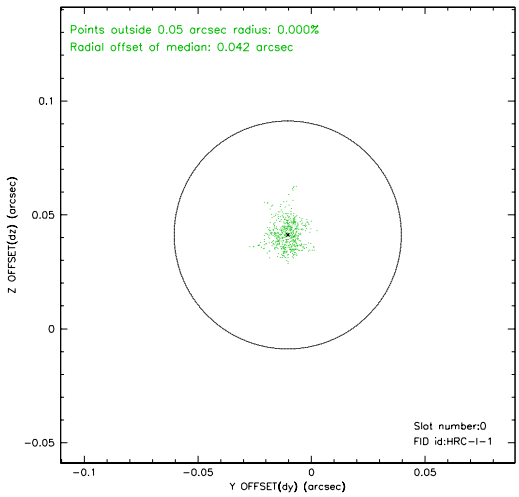

Points outside 0.4 arcsec radius: 0.091%
Radial offset of median: 0.088 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:93855160

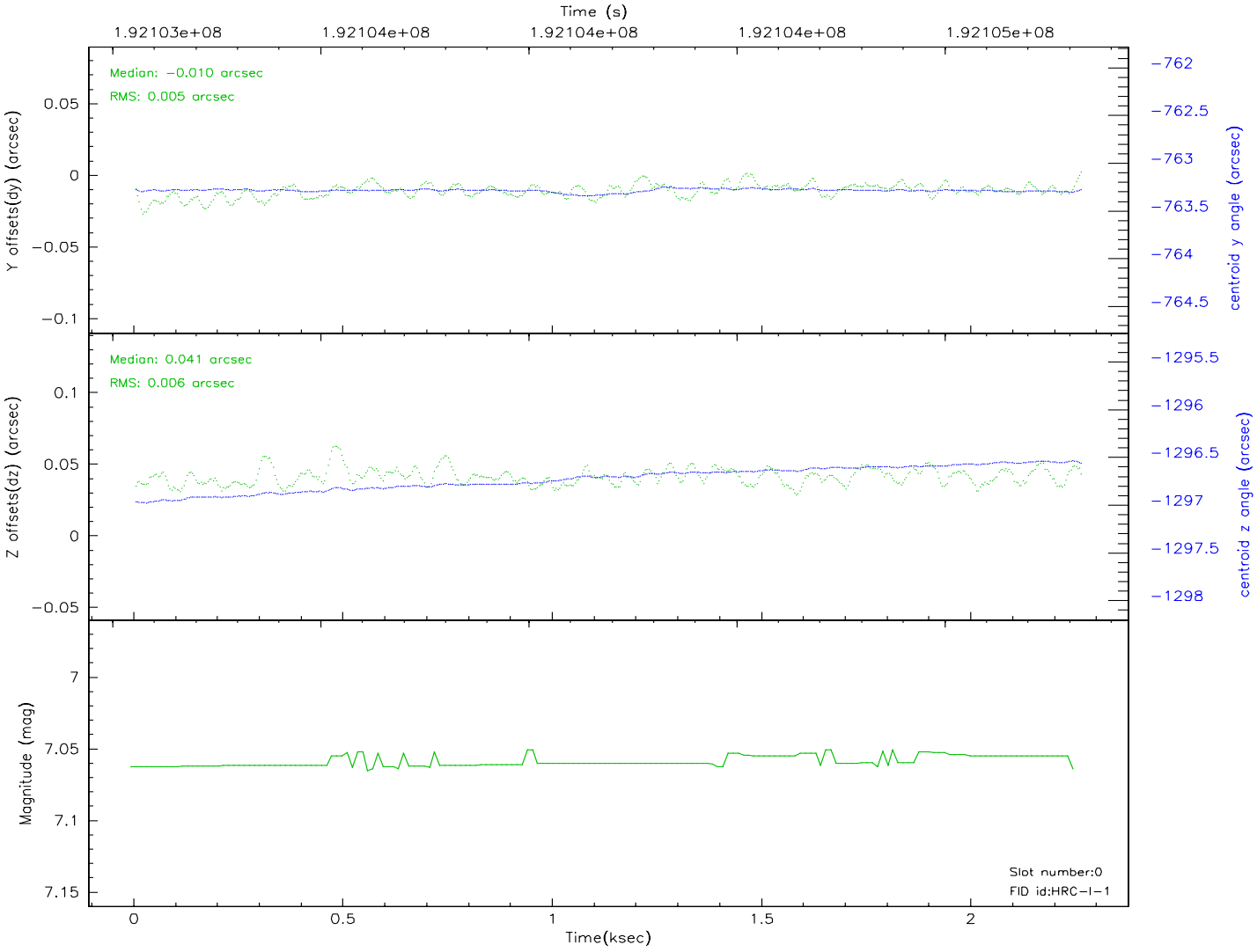

Time (s)
1.92103e+08
1.92104e+08
1.92104e+08
1.92104e+08
1.92105e+08
Median: −0.074 arcsec
RMS: 0.043 arcsec
Y offsets(dy) (arcsec)
Median: 0.047 arcsec
RMS: 0.049 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:93855160
Time(ksec)

2.5 FID Slots

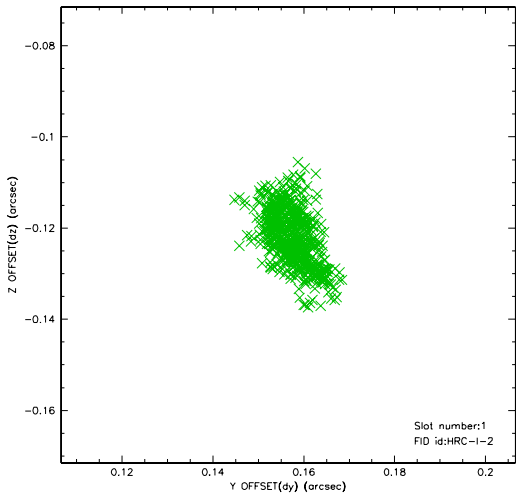
2.5.1 Slot 0

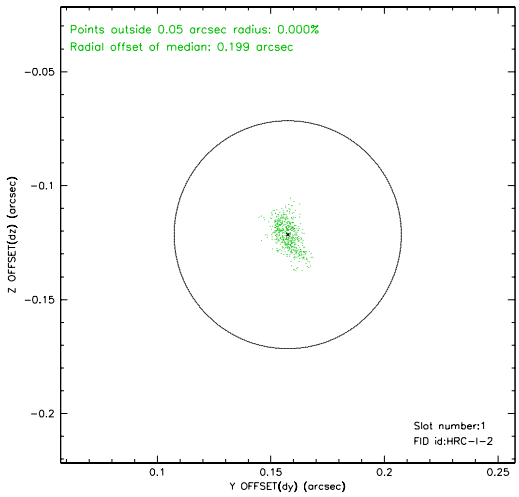


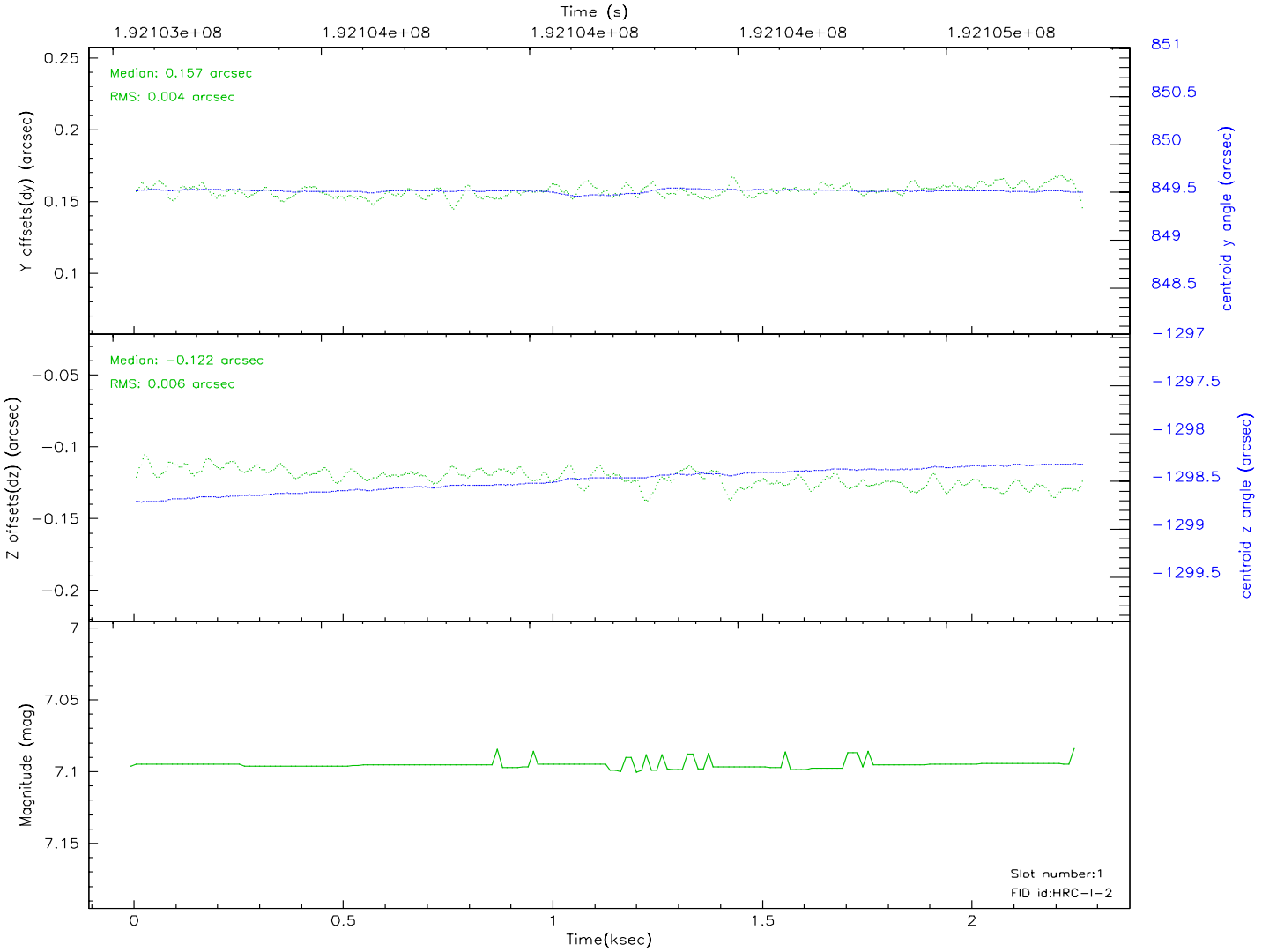




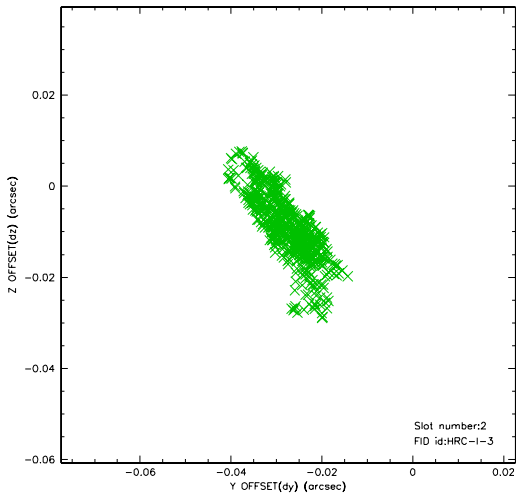
2.5.2 Slot 1

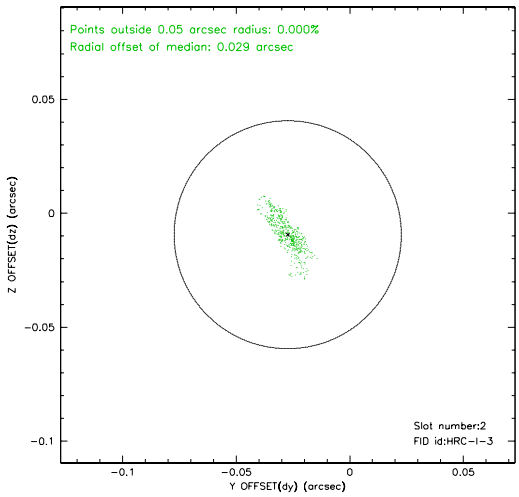

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-I-2

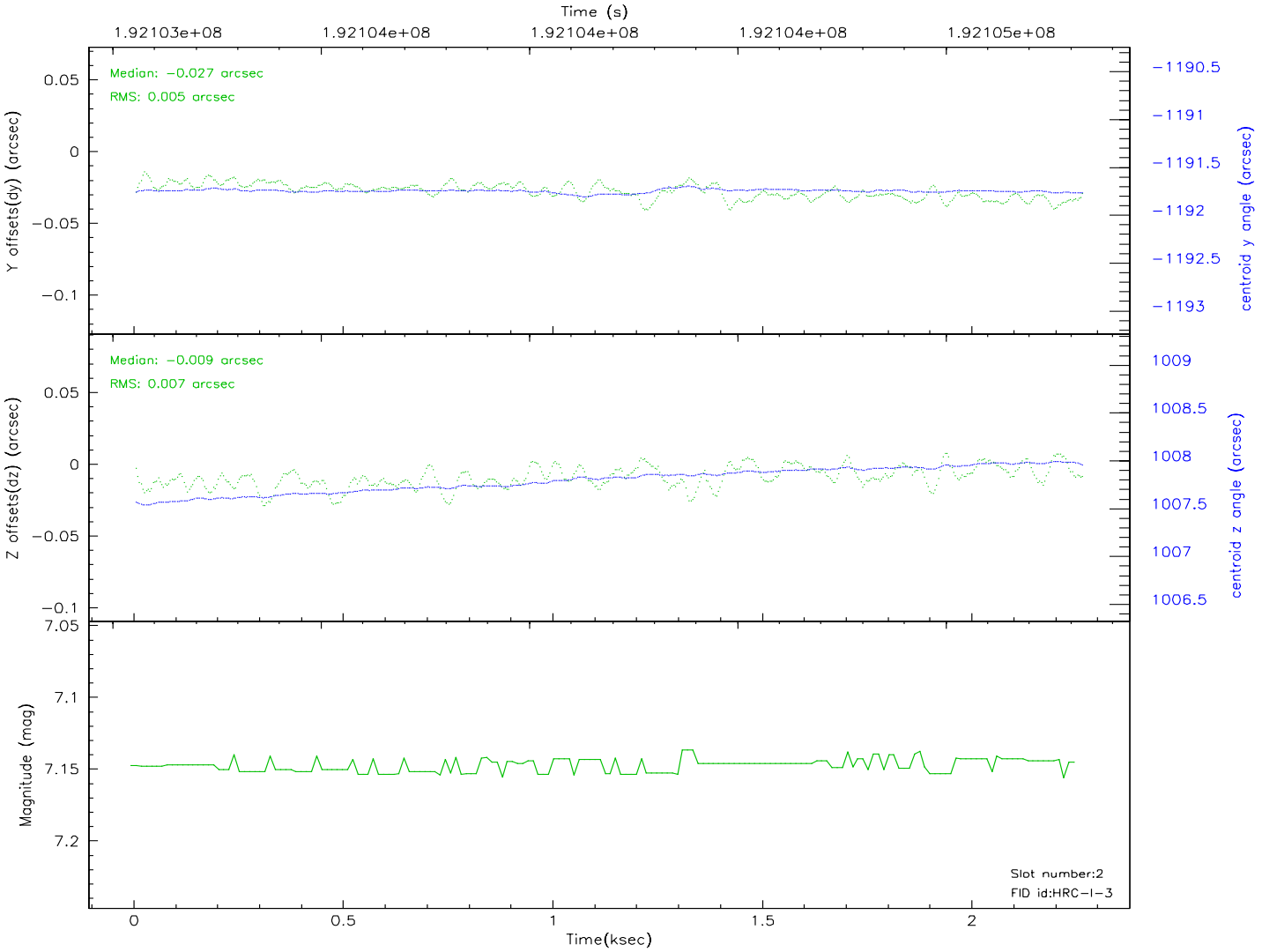

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.199 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-I-2


Time (s)
Median: 0.157 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
Median: −0.122 arcsec
RMS: 0.006 arcsec
Z offsets(dz) (arcsec)
centroid y angle (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:1
FID id:HRC-I-2
Time(ksec)

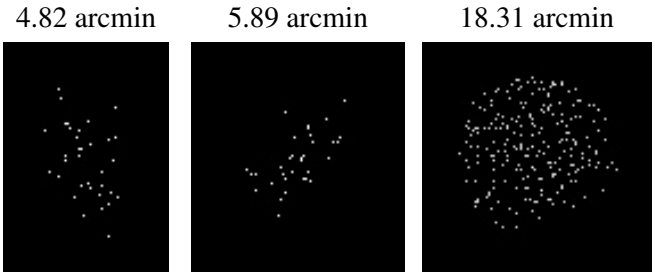
2.5.3 Slot 2


Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:HRC-I-3


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:HRC-I-3


Time (s)
Median: −0.027 arcsec
RMS: 0.005 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.009 arcsec
RMS: 0.007 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:2
FID id:HRC-I-3
Time(ksec)

3 Point Sources



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2007.12.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	2.086

A.2 Comments

```
Window constraint met.

The current observation has been reprocessed as part of Repro III ('C'
supplement) the purpose of which is to update all HRC-I ObsIDs since Jan
2000 to the latest calibrations available for that configuration.
Specifically, we are updating the DEGAP solution and the Gain Maps
applied. For more information see the Repro IIIC web page at

http://asc.harvard.edu/cda/repro3.html#IIIc

and the associated links.
```