V&V Reference Report
L2 ASCDS Version : 7.6.7

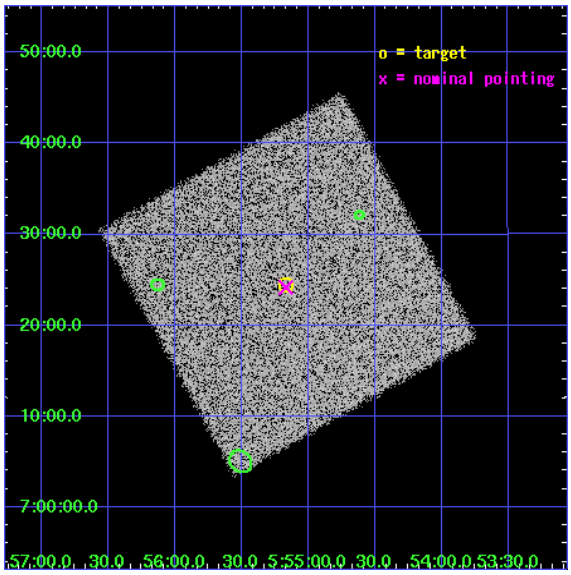
Observation 5970 - L2 Version 3
Chandra X-Ray Center

L2 Processing Date : Nov 24 2007

Contents

1 Front

seq_num	290462
obs_id	5970
title	AO6 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	88.792187876564
dec_nom	7.4029652267568
roll_nom	285.76059095019
revision	3
ontime	2143.531346947
livetime	2129.4222484798
l2events	75397

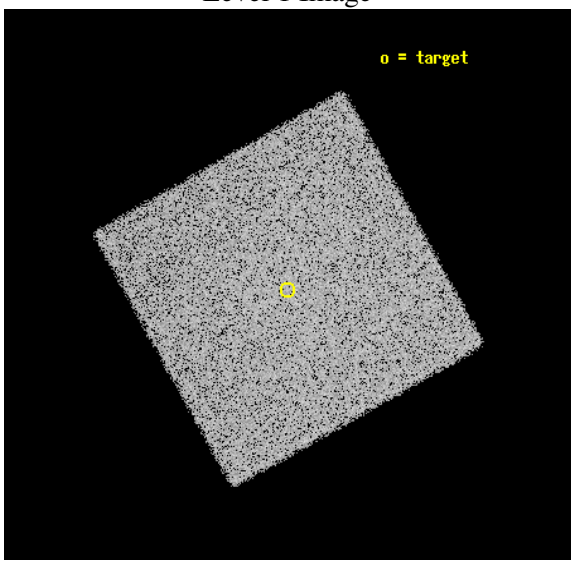


2 OBI

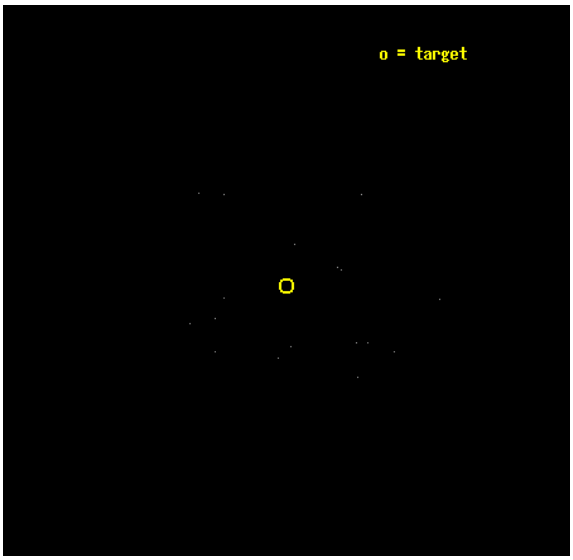
2.1 OBI

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	2007-11-24T06:02:18
revision	3

sched_exp_time	2000.000000
ontime	2143.531346947
l1events	162155

2.1.3 Events

Level 1 Events

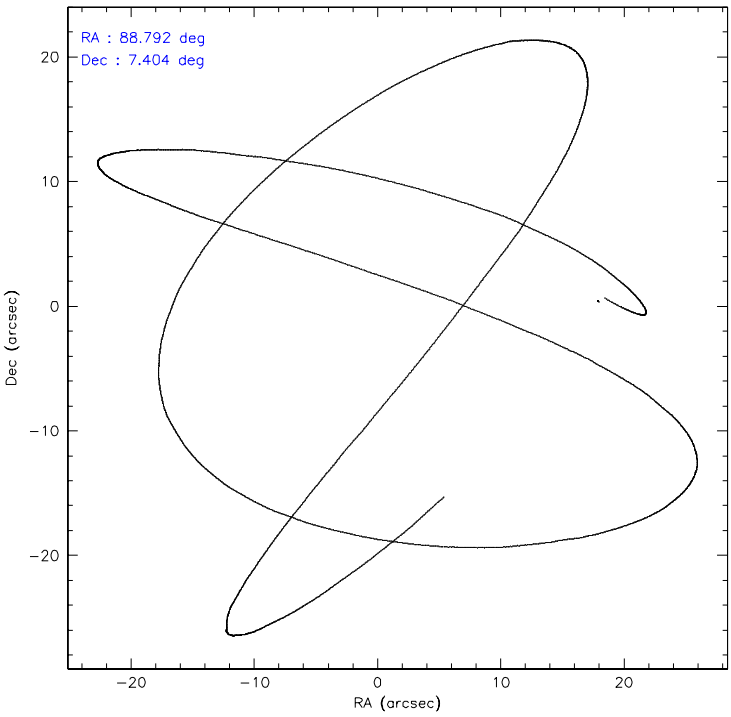
	segment 0
level 1 events	162155
rejected events	49800
rejected %	30%

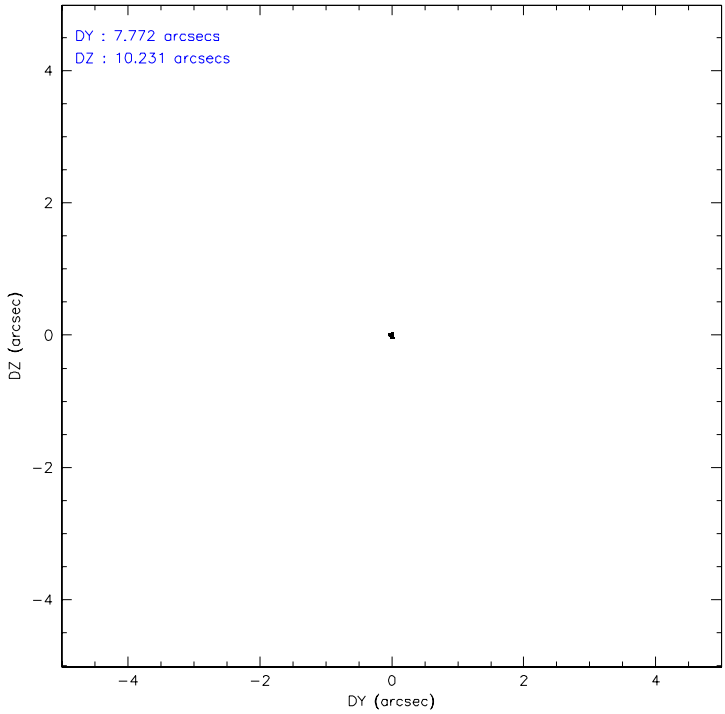
2.2 Compared Parameters

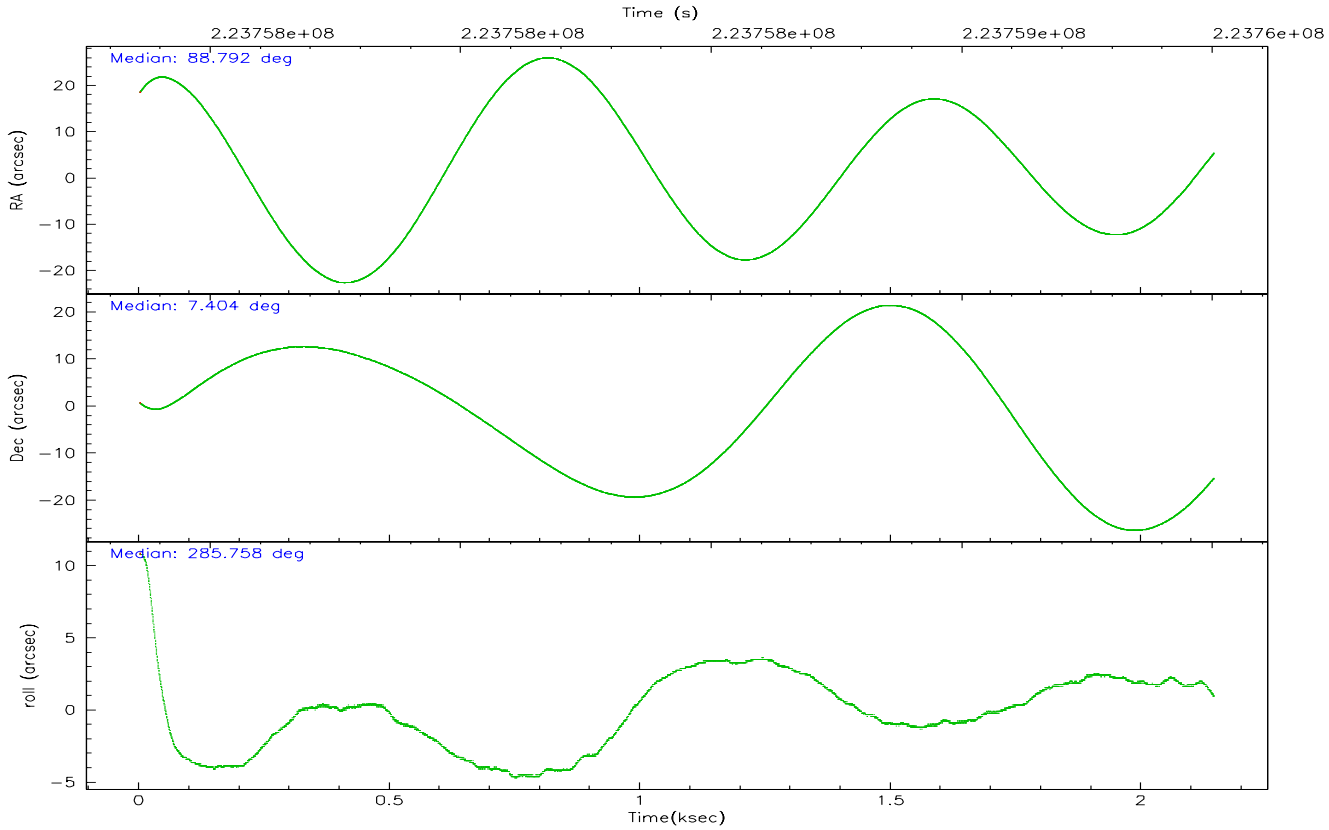
Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-I	HRC-I
Grating	NONE	NONE
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
Pointing RA	88.772392	88.79218787656433
Pointing Dec	7.421371	7.402965226756781
Pointing Roll	285.858535	285.7605909501888
Window start time	223603264.184000	223603264.184000
Window stop time	228614464.184000	228614464.184000
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	223757507.184000	223756444.21478
Observation start date	2005-02-02T18:50:43	2005-02-02T18:34:04
Observation end time	223759507.184000	223759641.18992
Observation end date	2005-02-02T19:24:03	2005-02-02T19:27:21

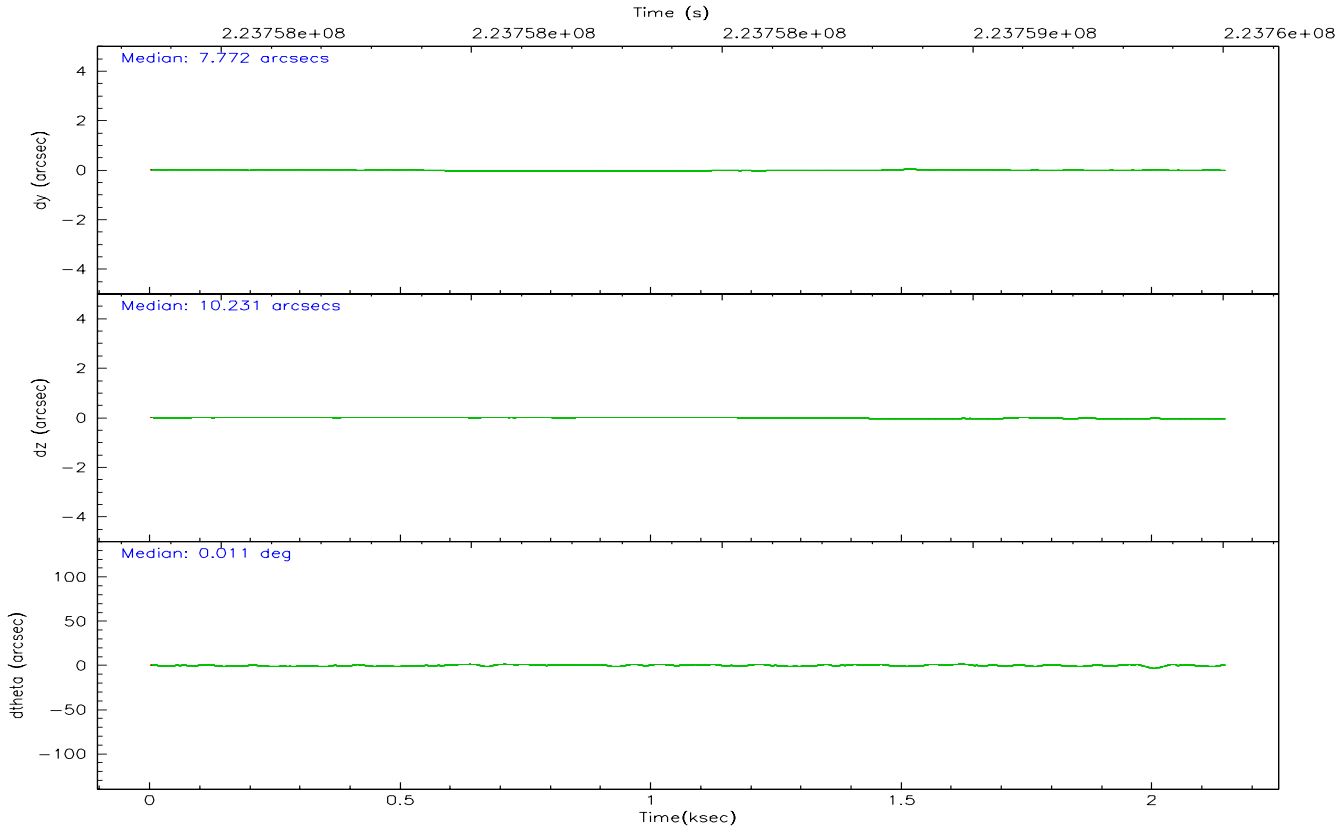
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED

2.3 Aspect


RA : 88.792 deg
Dec : 7.404 deg
Dec (arcsec)
RA (arcsec)
20
10
0
−10
−20
−20
−10
0
10
20


DY : 7.772 arcsecs
DZ : 10.231 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
2.23758e+08
2.23758e+08
2.23758e+08
2.23759e+08
2.2376e+08
Median: 88.792 deg
RA (arcsec)
Median: 7.404 deg
Dec (arcsec)
Median: 285.758 deg
roll (arcsec)
Time(ksec)

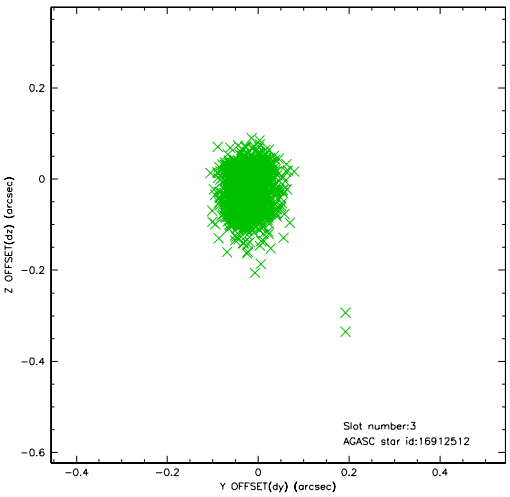

Time (s)
2.23758e+08
2.23758e+08
2.23758e+08
2.23759e+08
2.2376e+08
Median: 7.772 arcsecs
dy (arcsec)
Median: 10.231 arcsecs
dz (arcsec)
Median: 0.011 deg
dtheta (arcsec)
Time(ksec)

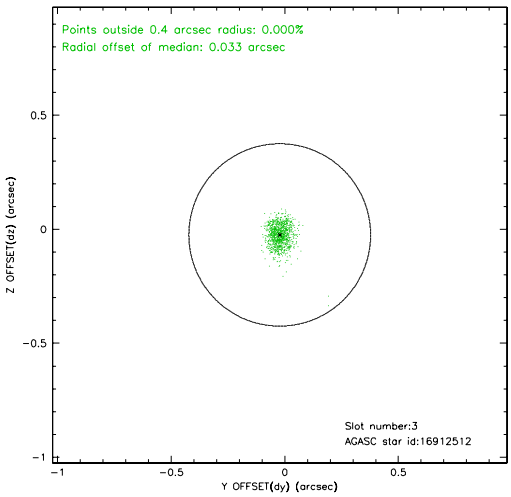
Slot Statistics

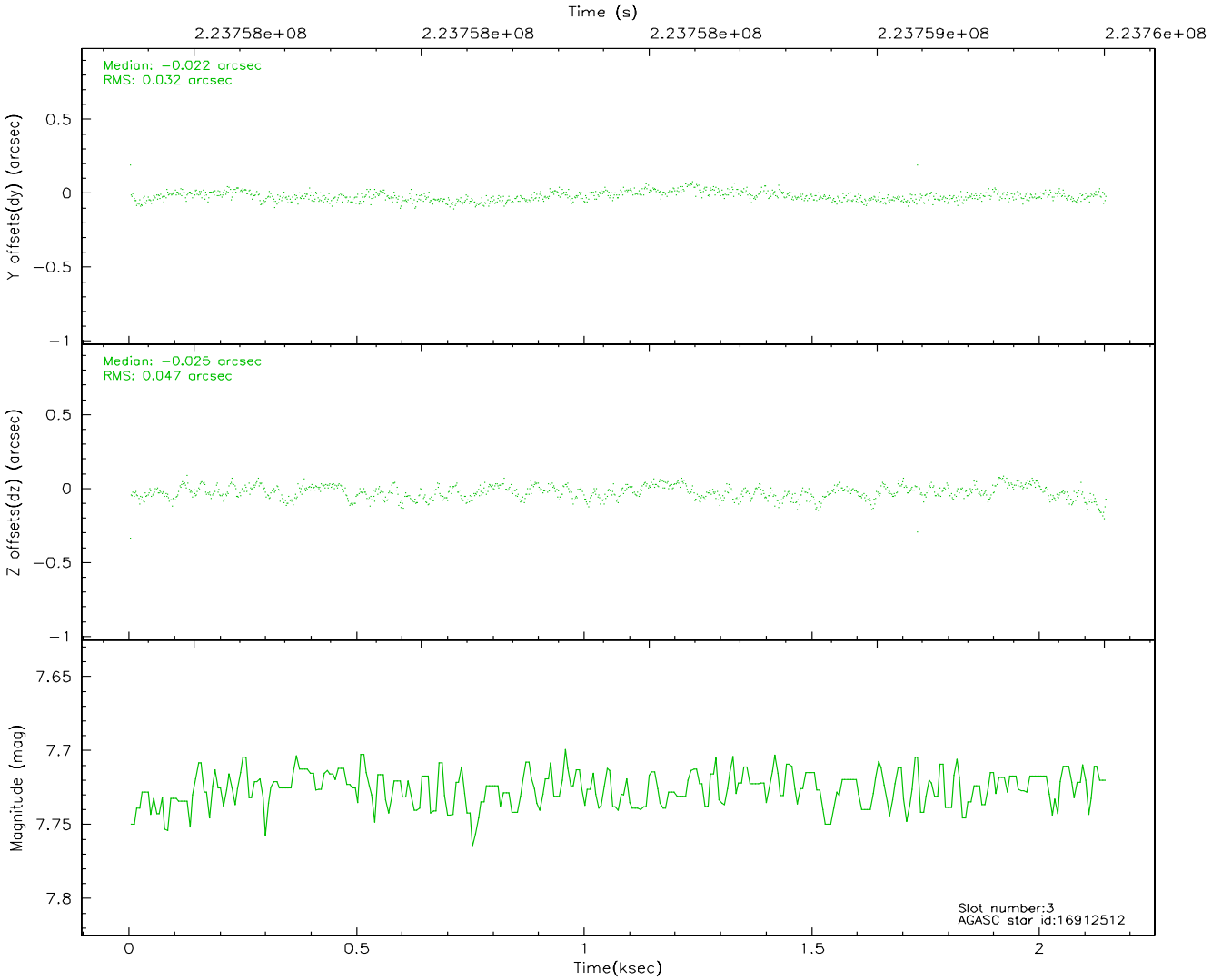
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-I-1	6.99	524	-0.045	-0.049	0.006	0.010	0.000000	0.000000	-763.46	-1298.18
1	FID	HRC-I-2	7.03	524	0.107	-0.042	0.007	0.012	0.000000	0.000000	847.86	-1302.28
2	FID	HRC-I-4	7.02	524	0.054	-0.001	0.006	0.011	0.000000	0.000000	1281.13	1001.47
3	GUIDE	16912512	7.73	1047	-0.022	-0.025	0.060	0.093	88.651510	7.129862	892.08	-701.23
4	GUIDE	16913360	8.33	1046	0.060	0.063	0.069	0.114	89.178373	7.247125	1000.49	1223.76
5	GUIDE	16918912	8.66	1047	0.166	0.177	0.069	0.117	89.257075	6.922287	2202.48	1177.90
6	GUIDE	93856056	7.98	1047	-0.024	-0.097	0.063	0.099	88.147460	7.547925	-1046.45	-2018.60
7	GUIDE	93727304	8.27	1046	-0.180	-0.112	0.070	0.117	88.040179	7.731431	-1790.10	-2208.28

2.4 Star Slots

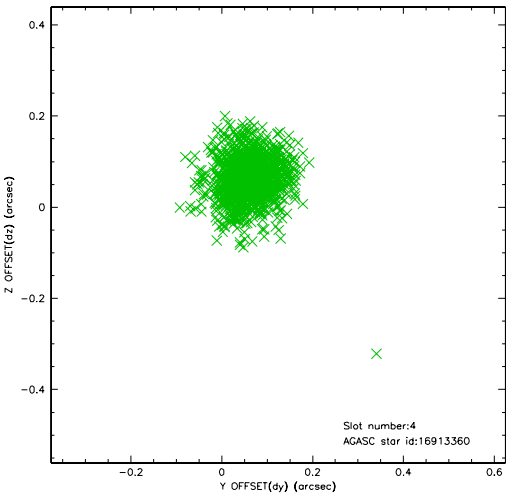
2.4.1 Slot 3

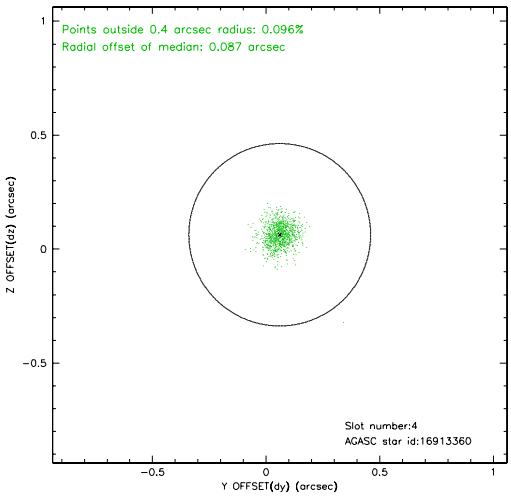


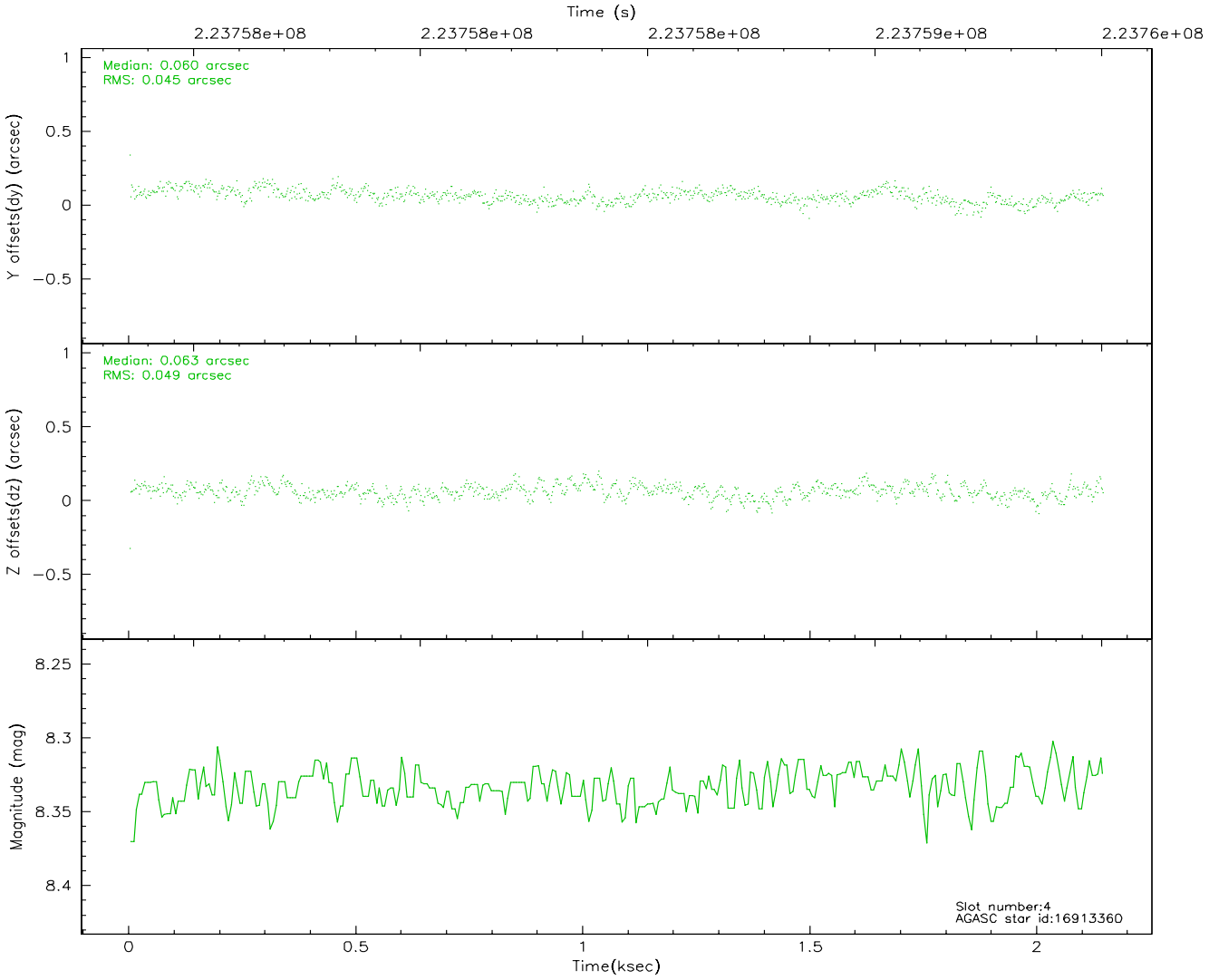




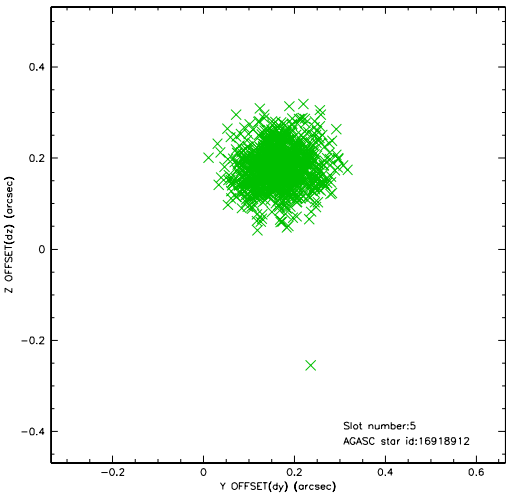
2.4.2 Slot 4

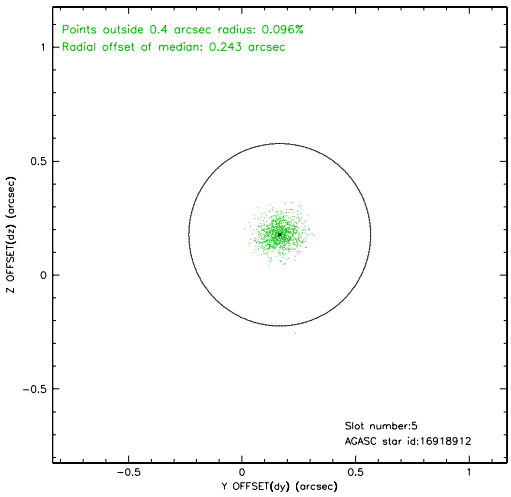

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:16913360

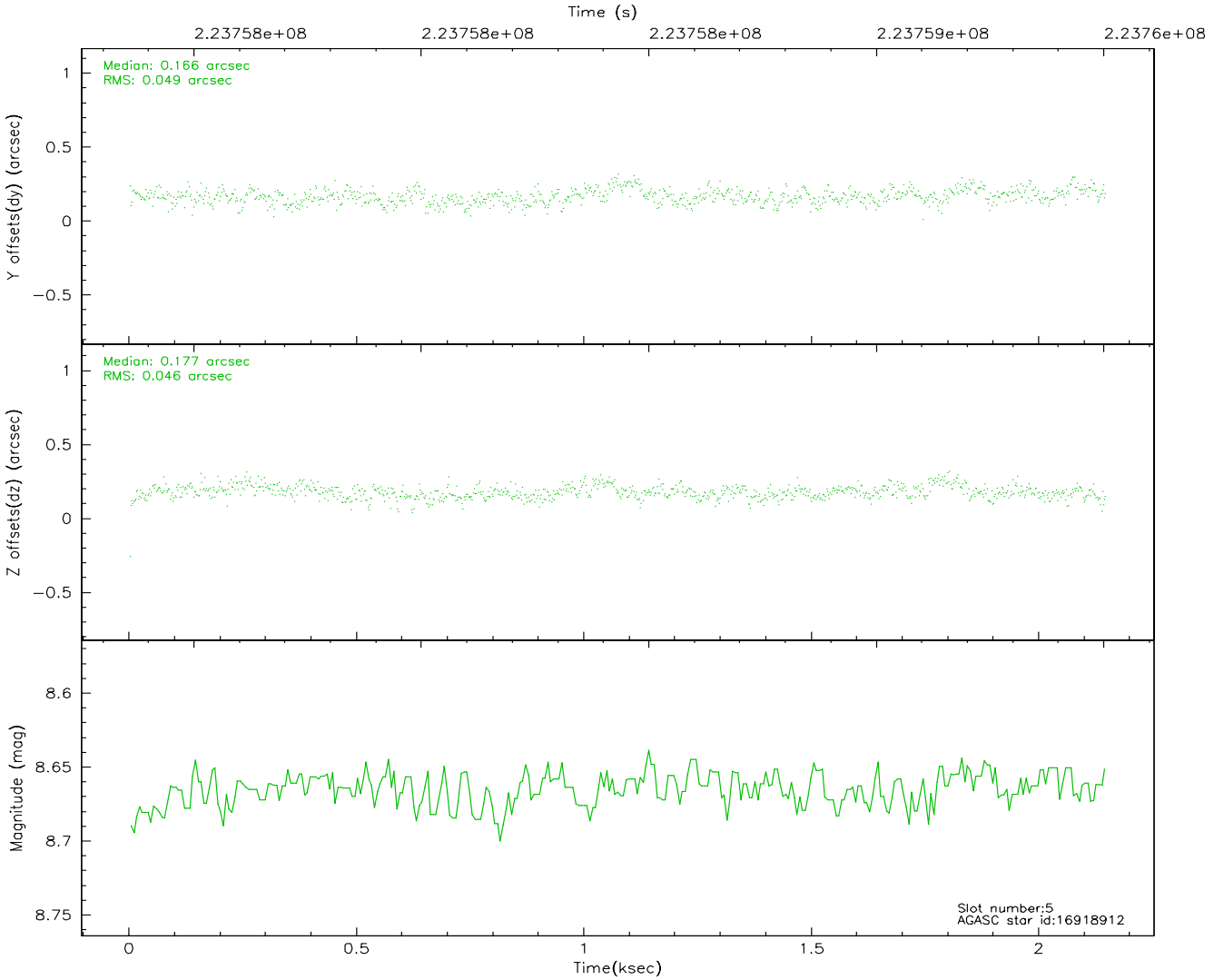

Points outside 0.4 arcsec radius: 0.096%
Radial offset of median: 0.087 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:16913360


Time (s)
2.23758e+08
2.23758e+08
2.23758e+08
2.23759e+08
2.2376e+08
Median: 0.060 arcsec
RMS: 0.045 arcsec
Y offsets(dy) (arcsec)
Median: 0.063 arcsec
RMS: 0.049 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:16913360
Time(ksec)

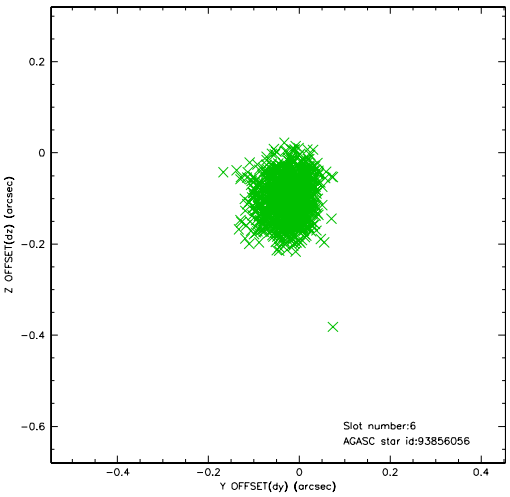
2.4.3 Slot 5

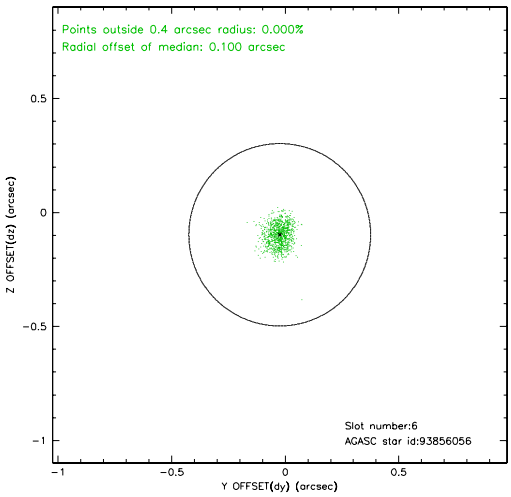

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:16918912

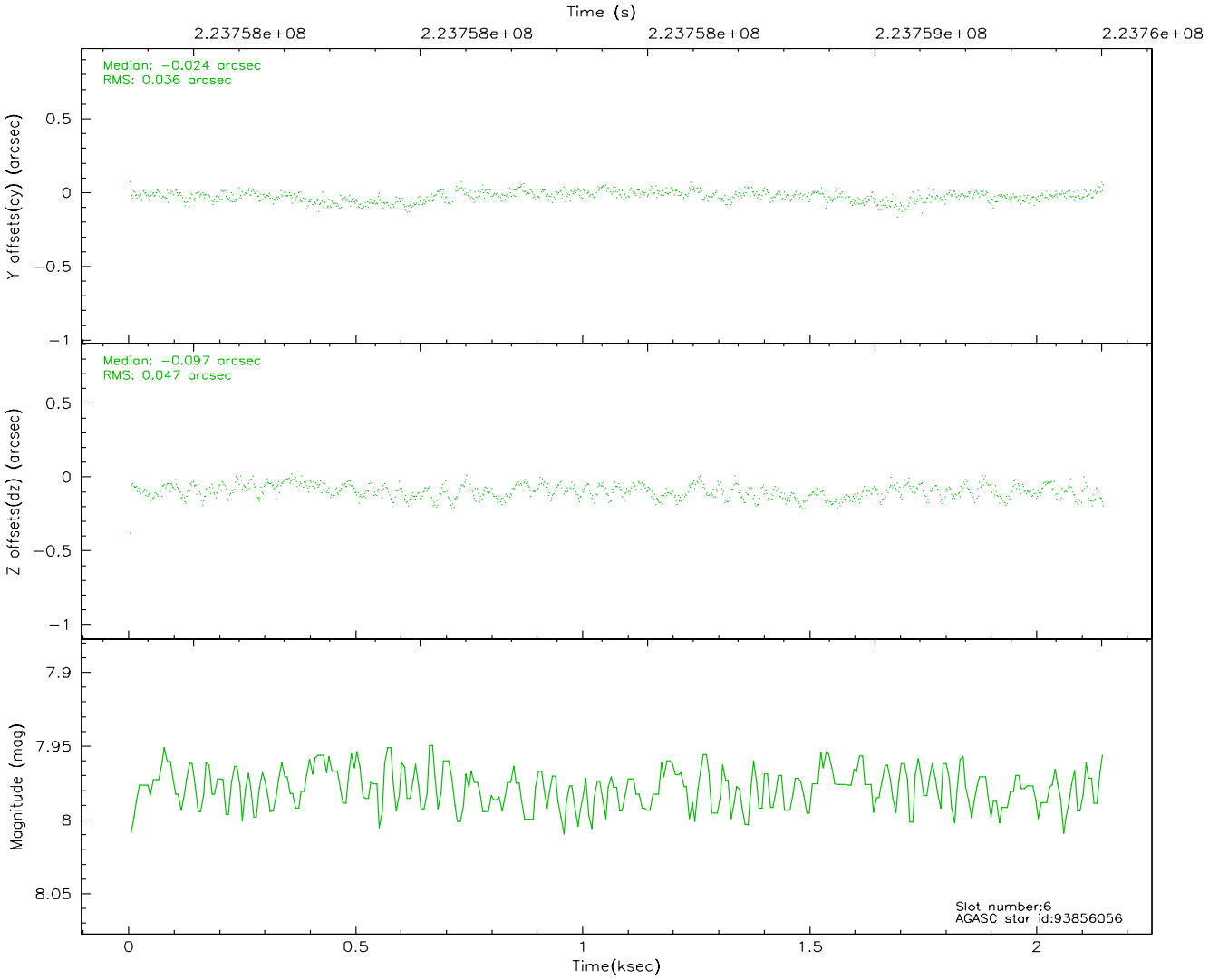

Points outside 0.4 arcsec radius: 0.096%
Radial offset of median: 0.243 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:16918912


Time (s)
Median: 0.166 arcsec
RMS: 0.049 arcsec
Y offsets(dy) (arcsec)
Median: 0.177 arcsec
RMS: 0.046 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:16918912
Time(ksec)

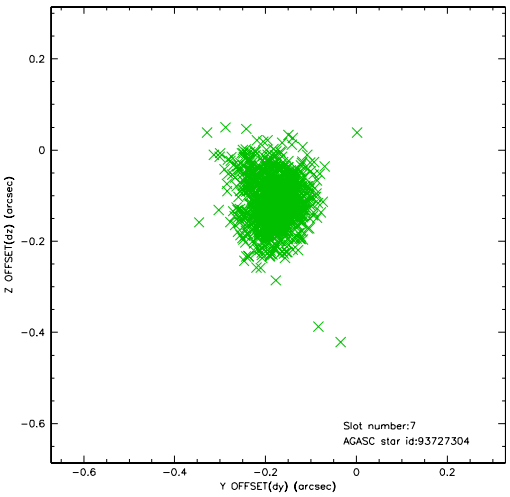
2.4.4 Slot 6

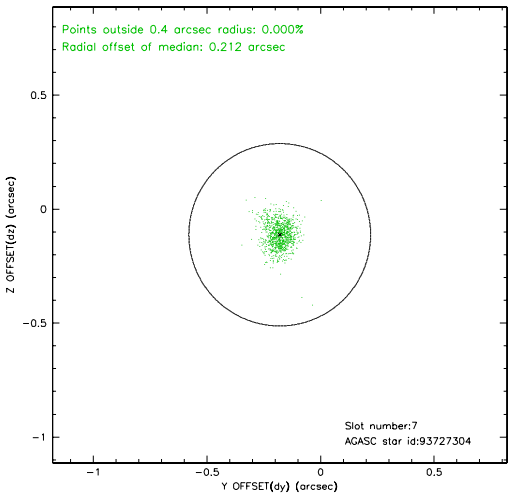

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:93856056

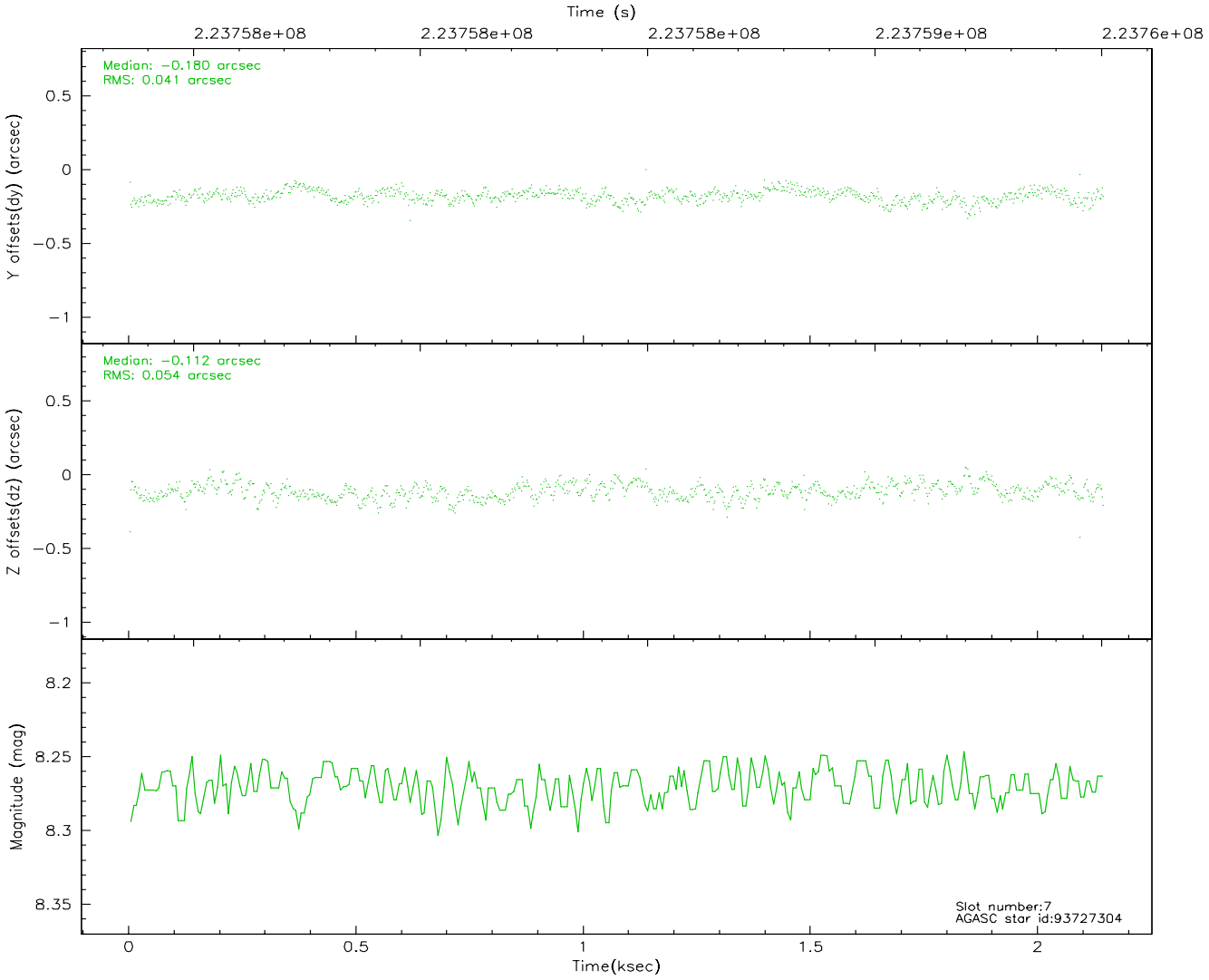

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.100 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:93856056


Time (s)
Median: −0.024 arcsec
RMS: 0.036 arcsec
Y offsets(dy) (arcsec)
Median: −0.097 arcsec
RMS: 0.047 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:93856056
Time(ksec)

2.4.5 Slot 7

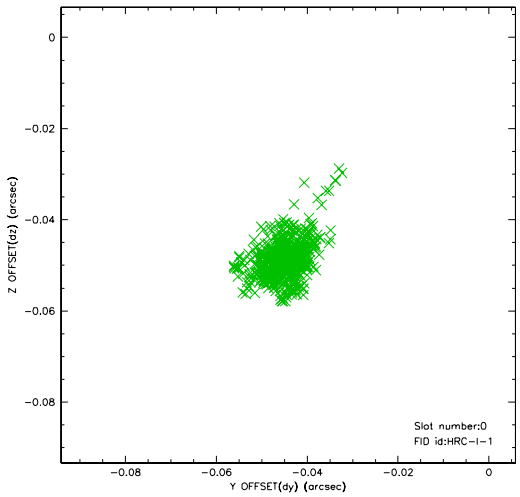

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:93727304

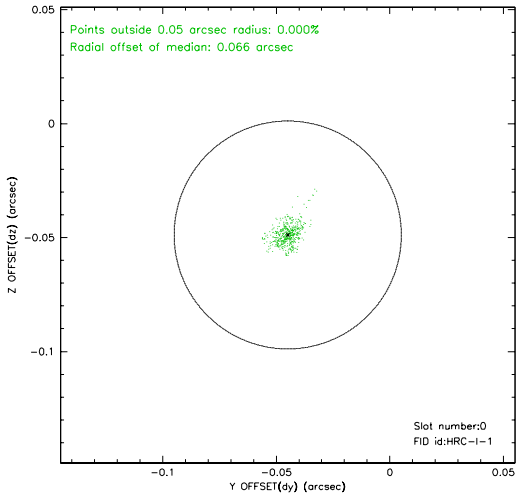

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.212 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:93727304

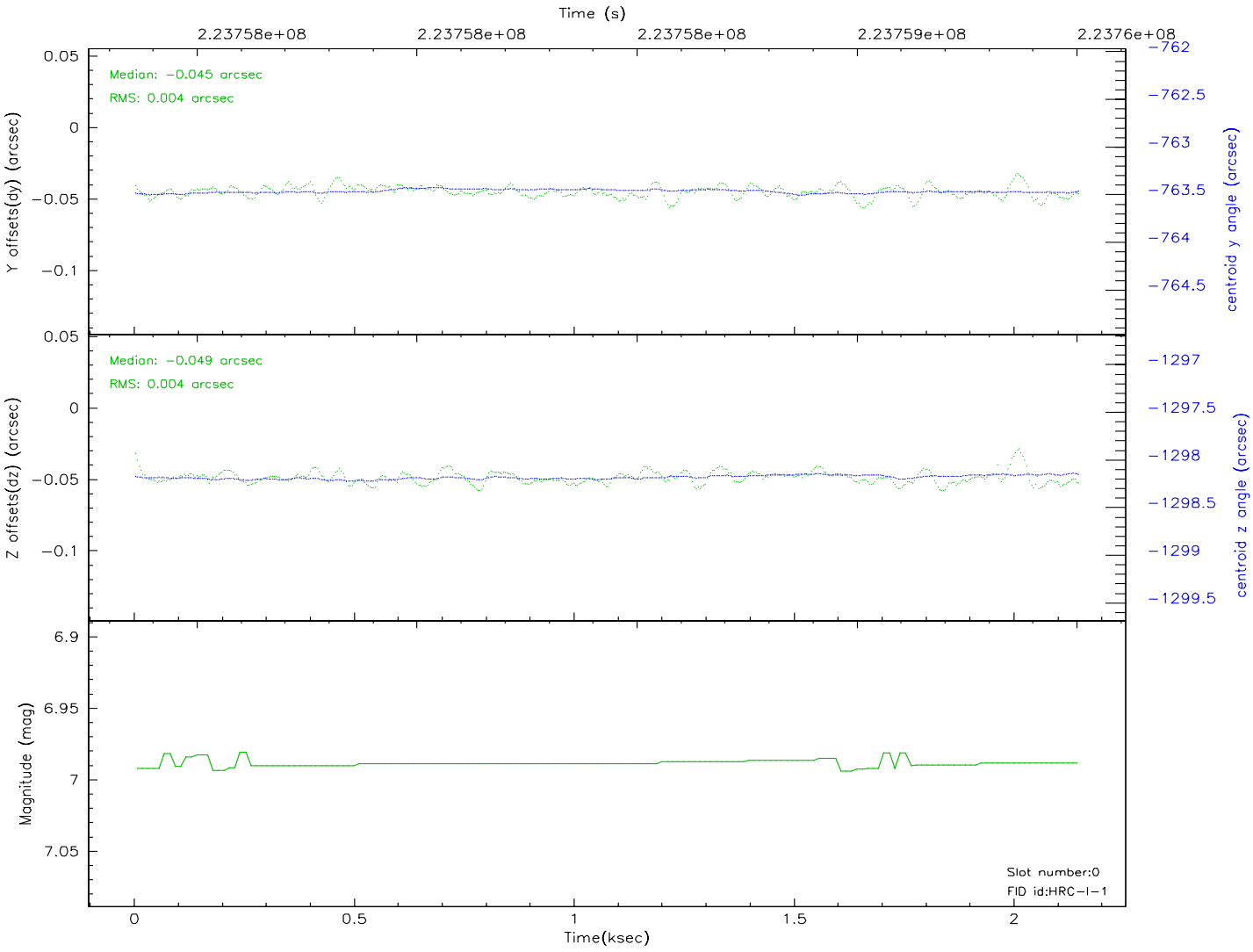

Time (s)
Median: −0.180 arcsec
RMS: 0.041 arcsec
Y offsets(dy) (arcsec)
Median: −0.112 arcsec
RMS: 0.054 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:93727304
Time(ksec)

2.5 FID Slots

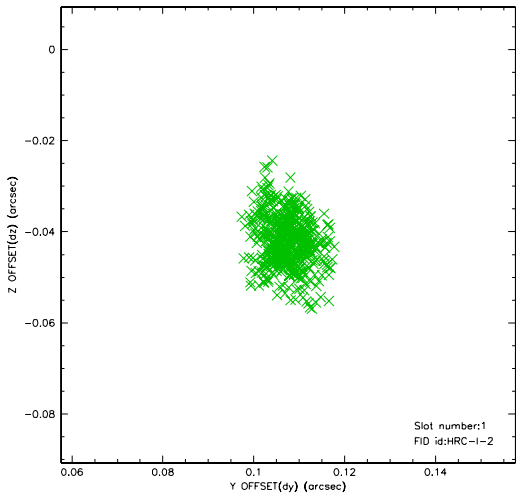
2.5.1 Slot 0

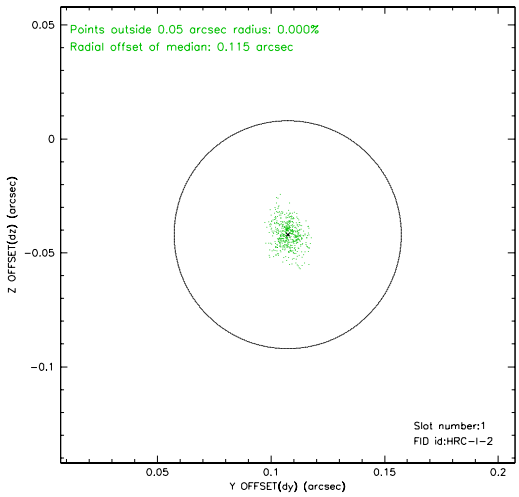


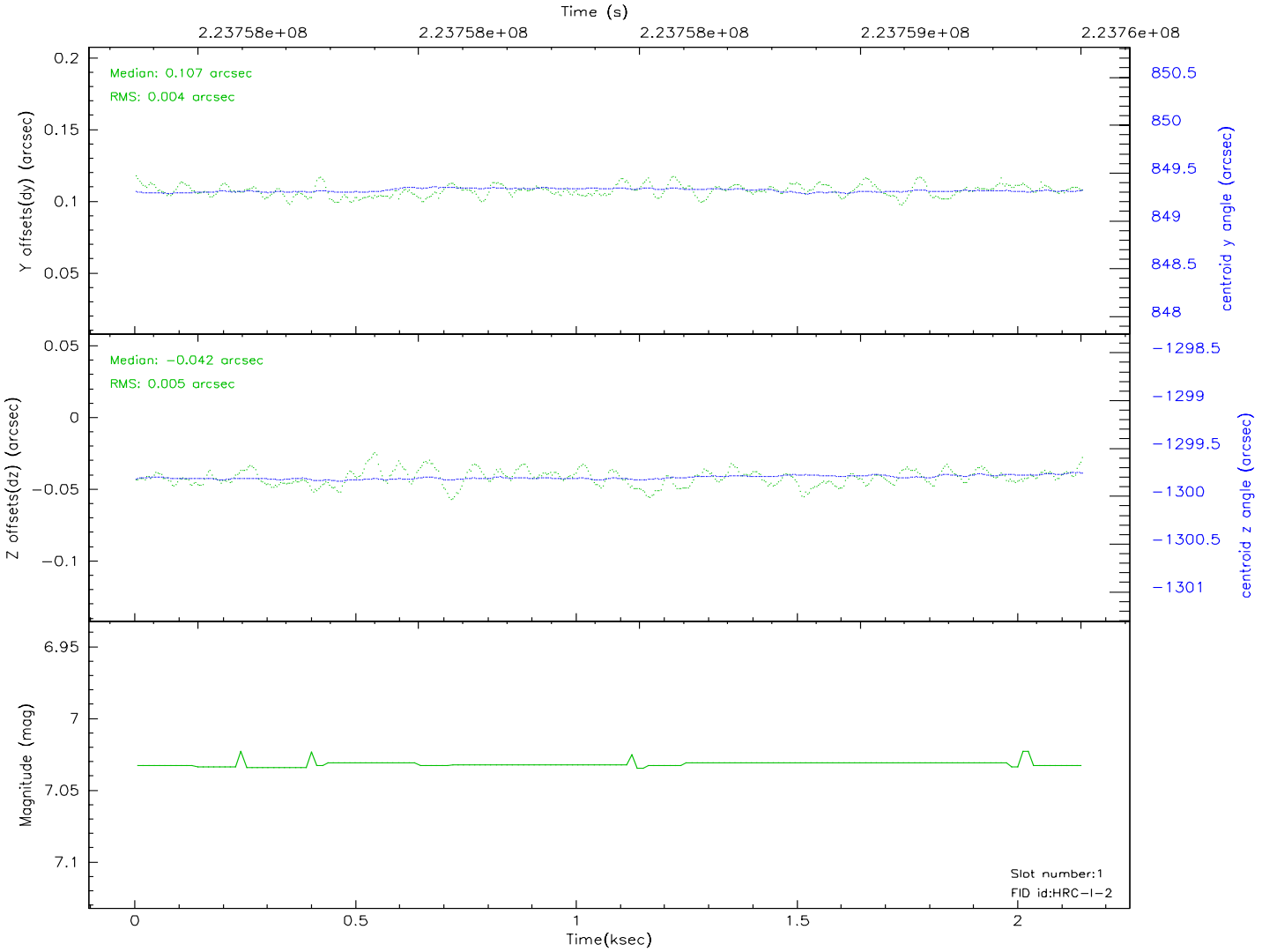




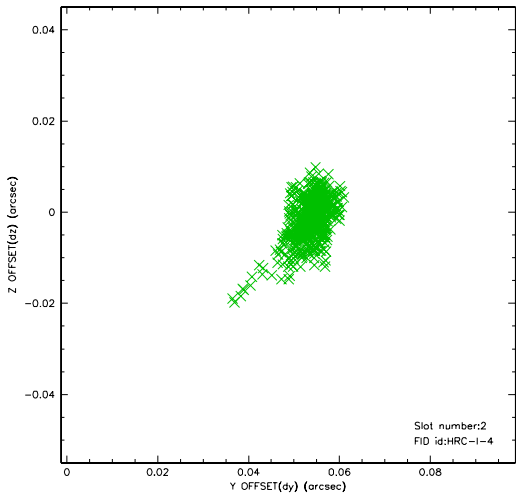
2.5.2 Slot 1

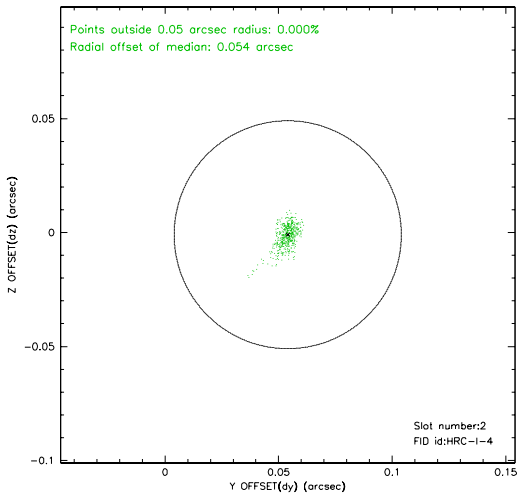

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-I-2

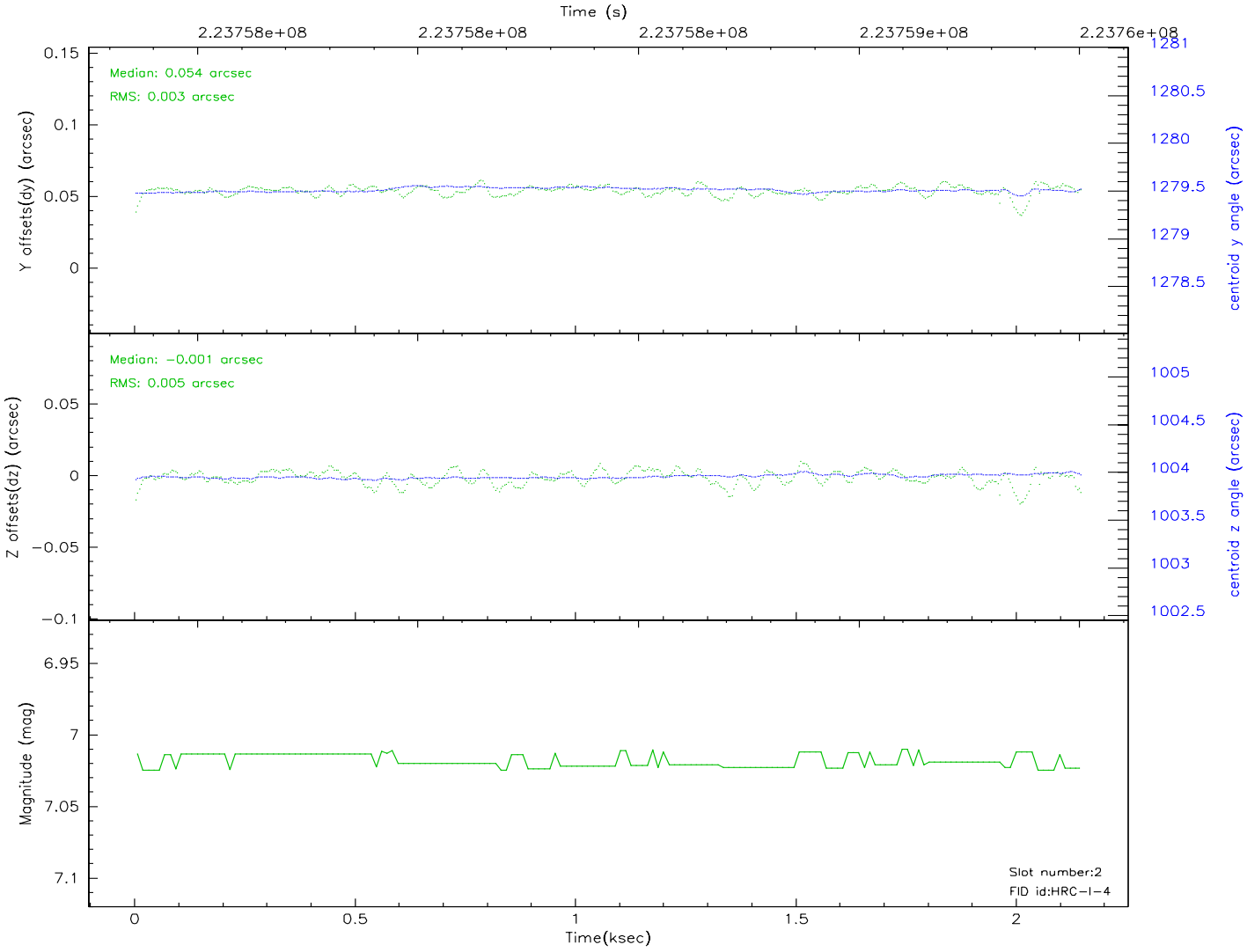

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.115 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-I-2


Time (s)
Median: 0.107 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.042 arcsec
RMS: 0.005 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:1
FID id:HRC-I-2
Time(ksec)

2.5.3 Slot 2

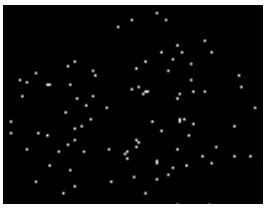

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:HRC-I-4


Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.054 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:HRC-I-4


Time (s)
Median: 0.054 arcsec
RMS: 0.003 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.001 arcsec
RMS: 0.005 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:2
FID id:HRC-I-4
Time(ksec)

3 Point Sources

14.27 arcmin



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2007.12.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	2.143531

A.2 Comments

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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.
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