V&V Reference Report
L2 ASCDS Version : 7.6.8

Observation 4295 - L2 Version 3
Chandra X-Ray Center

L2 Processing Date : Nov 21 2007

Contents

1 Front **2**

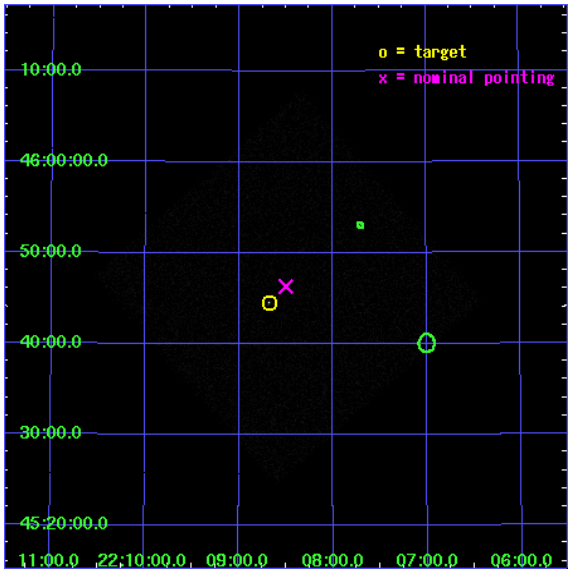
2 OBI **3**
2.1 OBI . . . 3
2.1.1 Images . . . 3
2.1.2 Parameters . . . 4
2.1.3 Events . . . 4
2.2 Compared Parameters . . . 5
2.3 Aspect . . . 6
2.4 Star Slots . . . 9
2.4.1 Slot 3 . . . 9
2.4.2 Slot 4 . . . 10
2.4.3 Slot 5 . . . 11
2.4.4 Slot 6 . . . 12
2.4.5 Slot 7 . . . 13
2.5 FID Slots . . . 14
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	290255
obs_id	4295
title	AO4 CALIBRATION OBSERVATIONS TO MONITOR SPATIAL VARIATIONS IN THE HRC-I GAIN
observer	Dr. CXC Calibration
object	ARLAC
ra_targ	332.17
dec_targ	45.742306
ra_nom	332.12498654796
dec_nom	45.772025034811
roll_nom	3.7341704199021
revision	3
ontime	1184.1312997937
livetime	1177.6563629963
l2events	36586

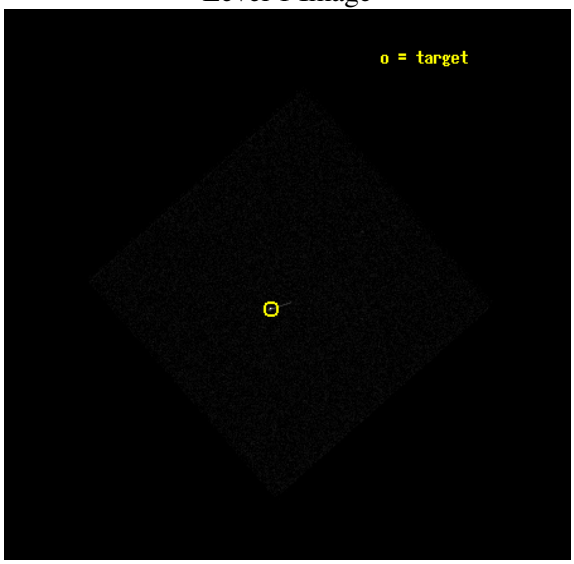


2 OBI

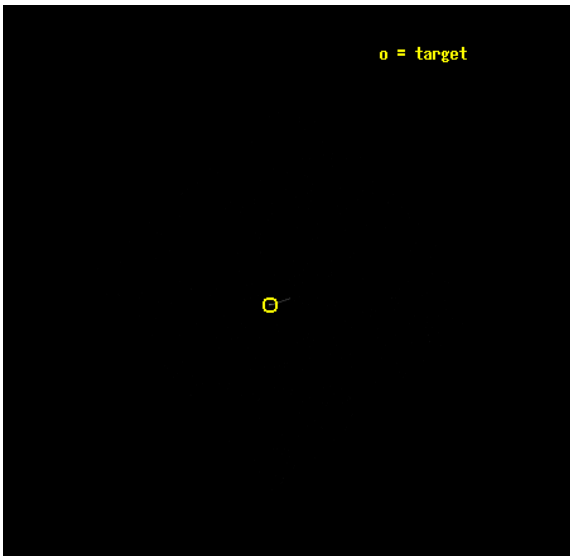
2.1 OBI

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	2007-11-22T02:25:43
revision	3

sched_exp_time	1000.000000
ontime	1184.1312997937
l1events	67397

2.1.3 Events

Level 1 Events

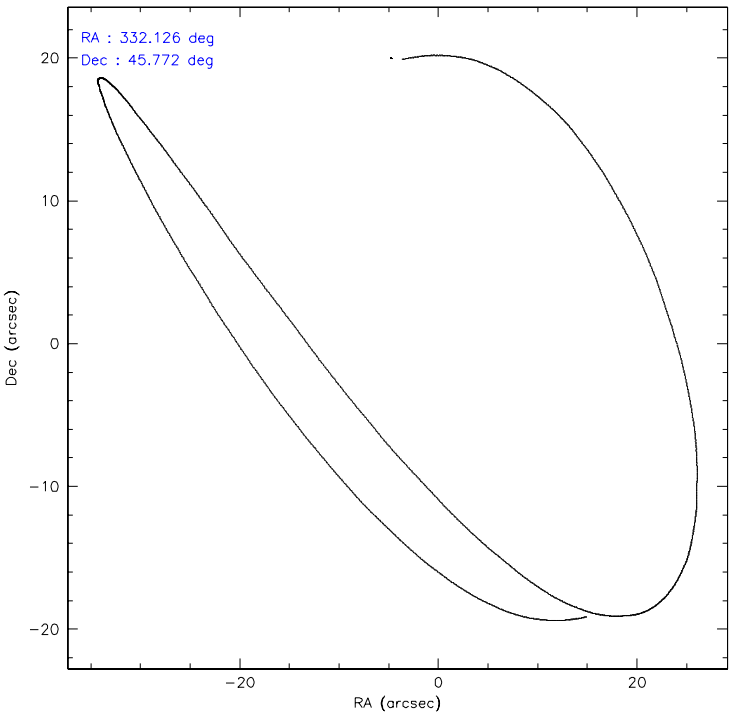
	segment 0
level 1 events	67397
rejected events	15255
rejected %	22%

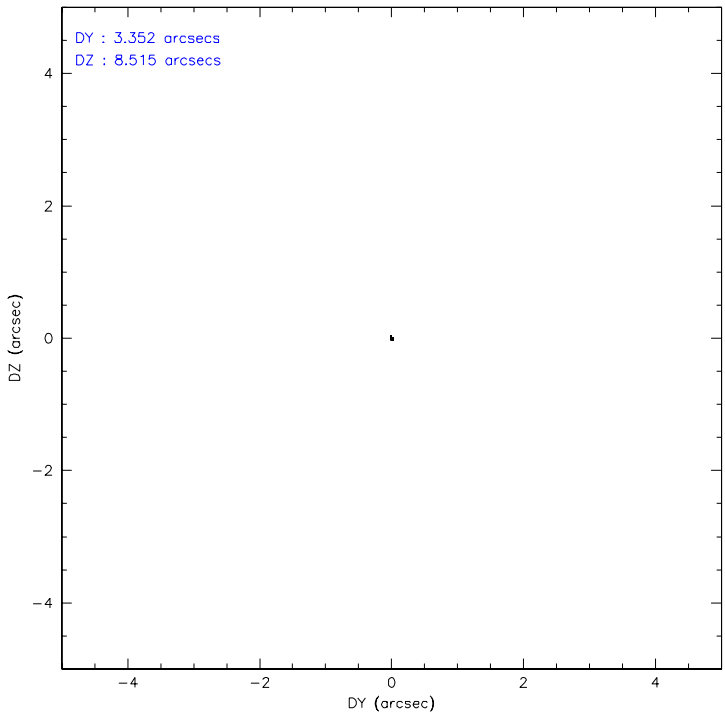
2.2 Compared Parameters

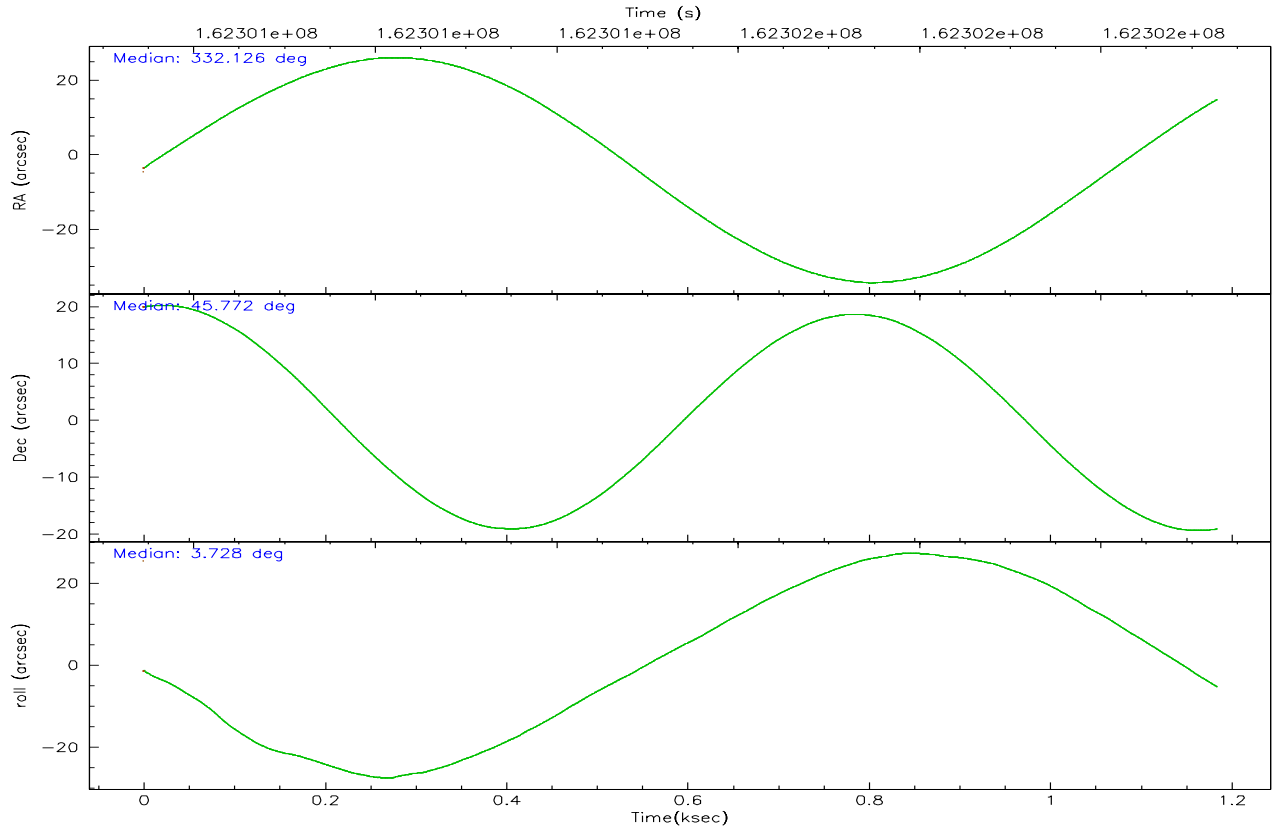
Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-I	HRC-I
Grating	NONE	NONE
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
Pointing RA	332.093007	332.1249865479575
Pointing Dec	45.756417	45.77202503481143
Pointing Roll	3.852661	3.734170419902144
Window start time	161654464.184000	161654464.184000
Window stop time	165369664.184000	165369664.184000
SIM focus pos (mm)	-1.040293	-1.038866356238299
SIM defocus (mm)	0	0.001426264420575141
SIM translation stage pos (mm)	126.985494	126.9854943052878
SIM translation stage offset (mm)	0	-5.413686238853188e-06
Observation start time	162301128.184000	162300751.76986
Observation start date	2003-02-22T11:37:44	2003-02-22T11:32:31
Observation end time	162302128.184000	162302261.59492
Observation end date	2003-02-22T11:54:24	2003-02-22T11:57:41

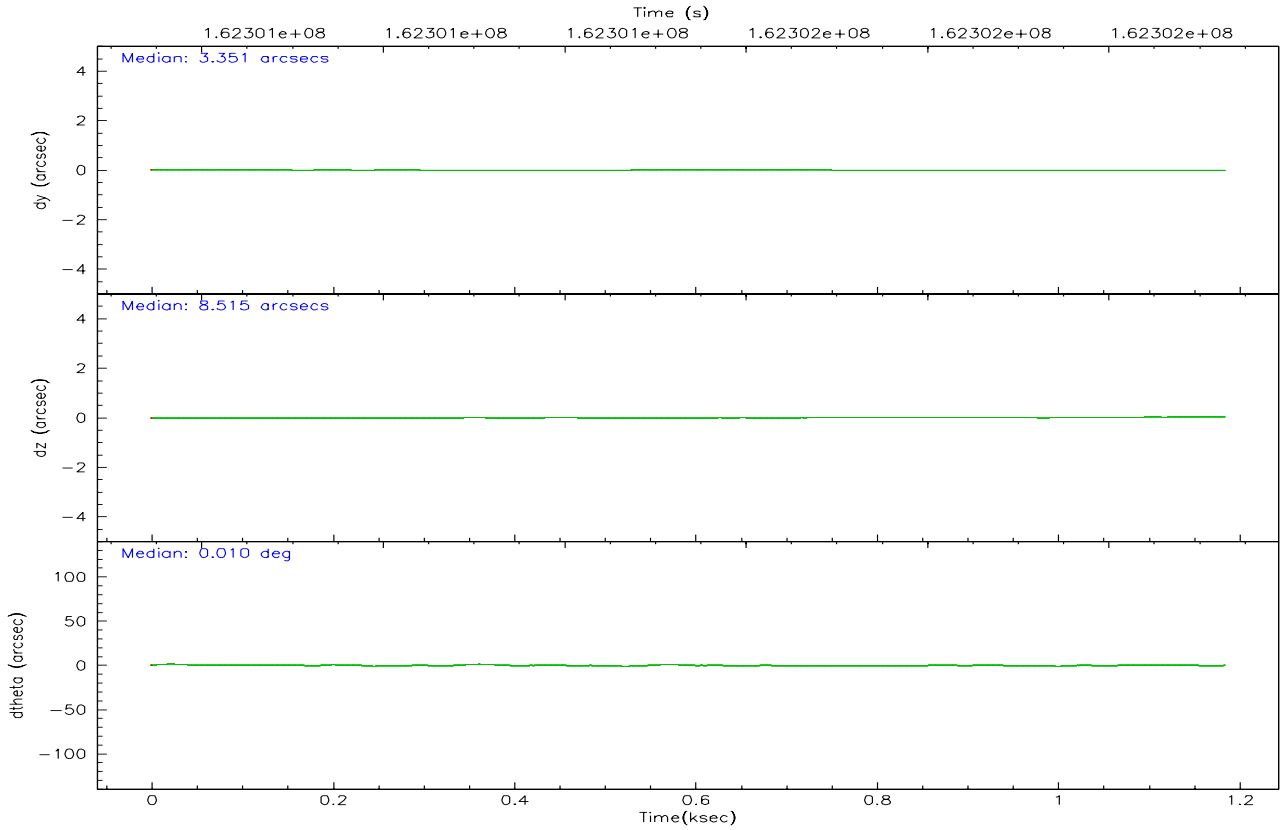
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED

2.3 Aspect


RA : 332.126 deg
Dec : 45.772 deg
20
10
0
−10
−20
Dec (arcsec)
−20
0
20
RA (arcsec)


DY : 3.352 arcsecs
DZ : 8.515 arcsecs
4
2
0
−2
−4
DZ (arcsec)
−4
−2
0
2
4
DY (arcsec)


Time (s)
1.62301e+08
1.62301e+08
1.62301e+08
1.62302e+08
1.62302e+08
1.62302e+08
Median: 332.126 deg
RA (arcsec)
Median: 45.772 deg
Dec (arcsec)
Median: 3.728 deg
roll (arcsec)
Time(ksec)

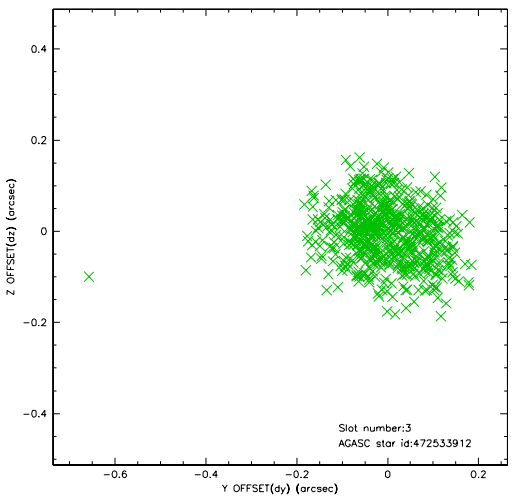

Time (s)
1.62301e+08
1.62301e+08
1.62301e+08
1.62302e+08
1.62302e+08
1.62302e+08
Median: 3.351 arcsecs
dy (arcsec)
Median: 8.515 arcsecs
dz (arcsec)
Median: 0.010 deg
dtheta (arcsec)
Time(ksec)

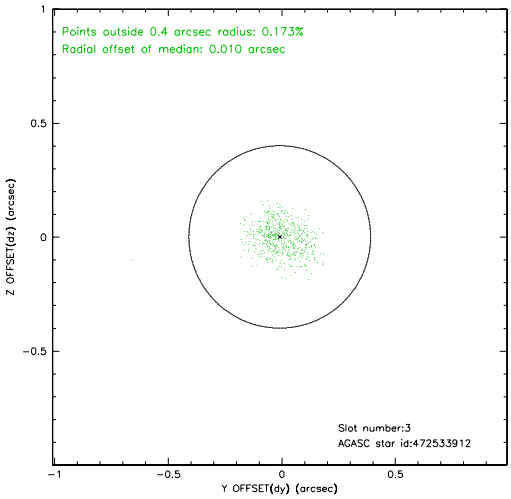
Slot Statistics

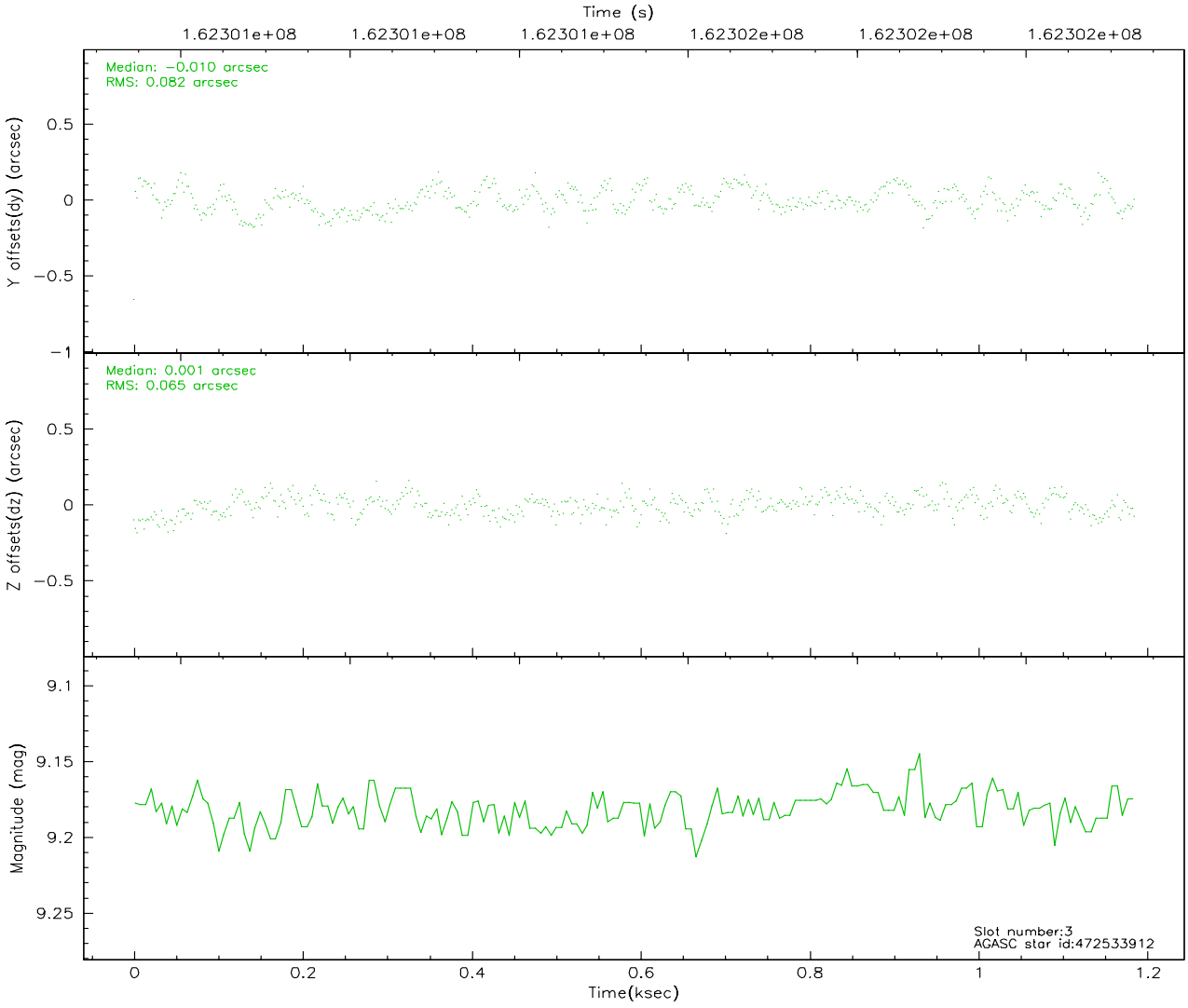
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-I-1	6.97	290	0.069	0.060	0.006	0.009	0.000000	0.000000	-758.79	-1296.38
1	FID	HRC-I-3	7.06	290	-0.007	-0.074	0.006	0.010	0.000000	0.000000	-1189.92	1003.59
2	FID	HRC-I-4	7.01	290	0.051	-0.076	0.005	0.007	0.000000	0.000000	1279.93	1009.07
3	GUIDE	472533912	9.18	579	-0.010	0.001	0.112	0.169	331.791136	46.368695	-600.65	2251.00
4	GUIDE	472659832	9.46	576	0.001	0.101	0.098	0.156	332.780399	46.098139	1793.79	1123.75
5	GUIDE	472527720	6.99	579	-0.082	-0.045	0.066	0.111	331.460205	45.112509	-1756.58	-2196.80
6	GUIDE	472523760	8.24	579	-0.100	-0.060	0.060	0.096	331.645363	45.403260	-1217.55	-1193.30
7	GUIDE	472655152	9.44	578	0.191	0.028	0.098	0.173	332.504239	45.862991	1052.26	314.24

2.4 Star Slots

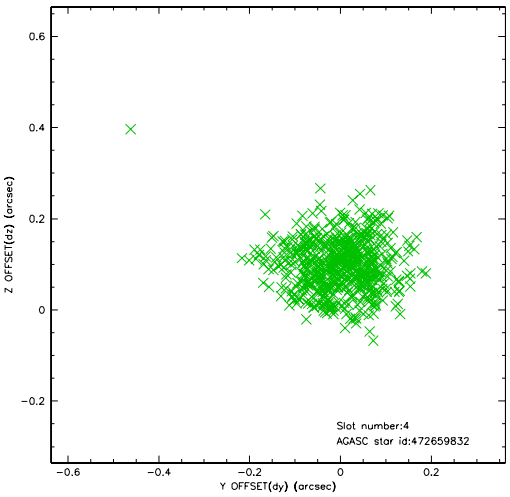
2.4.1 Slot 3

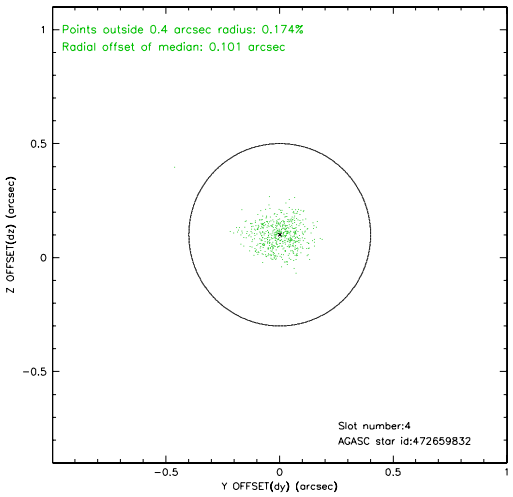


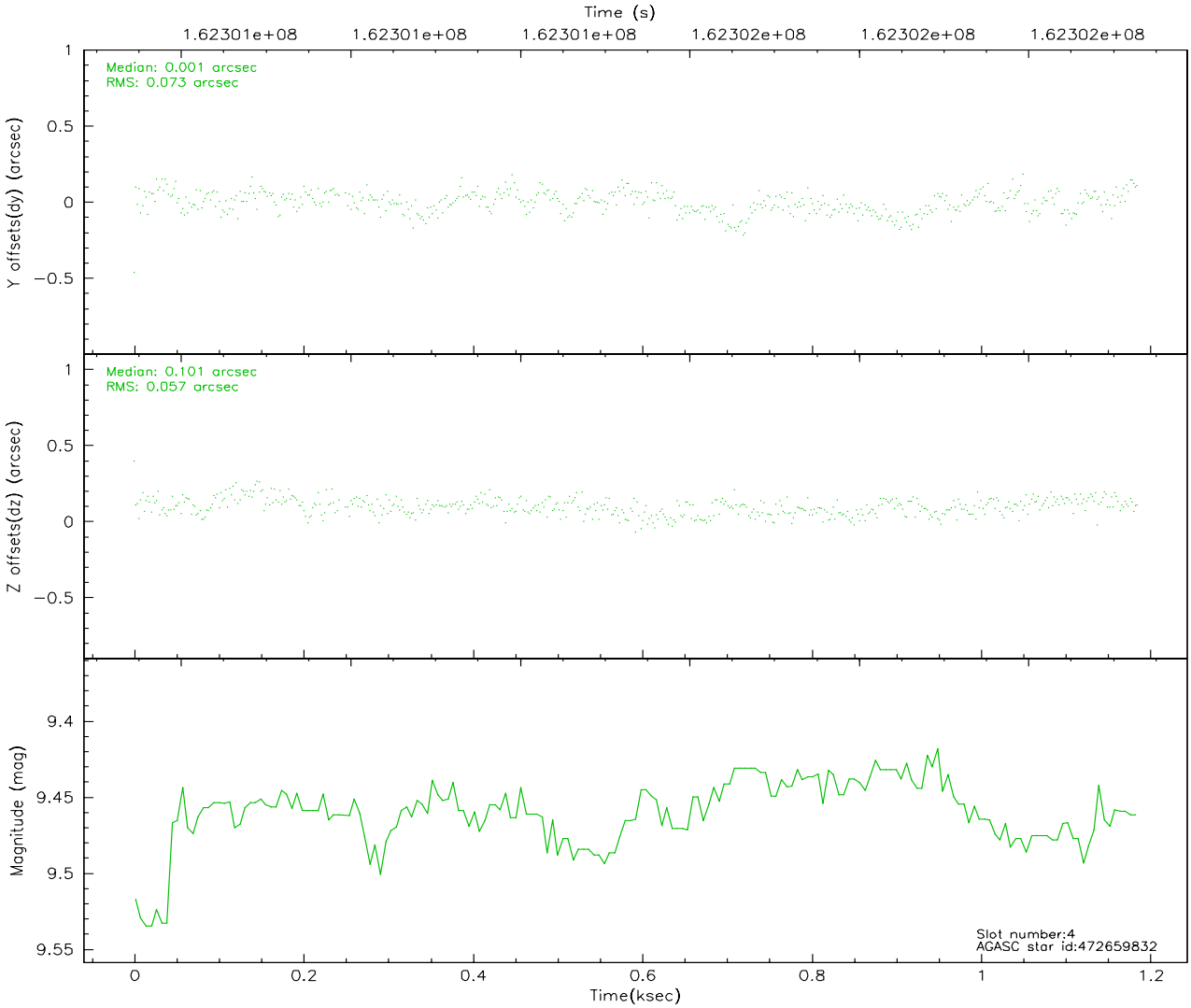




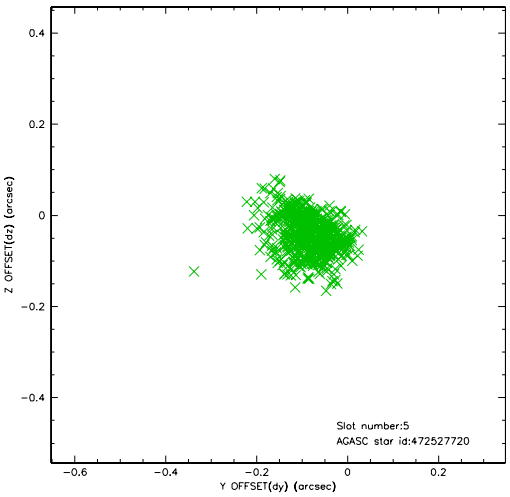
2.4.2 Slot 4

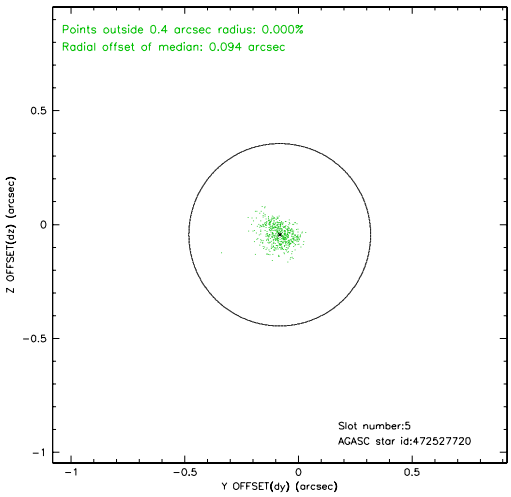

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:472659832

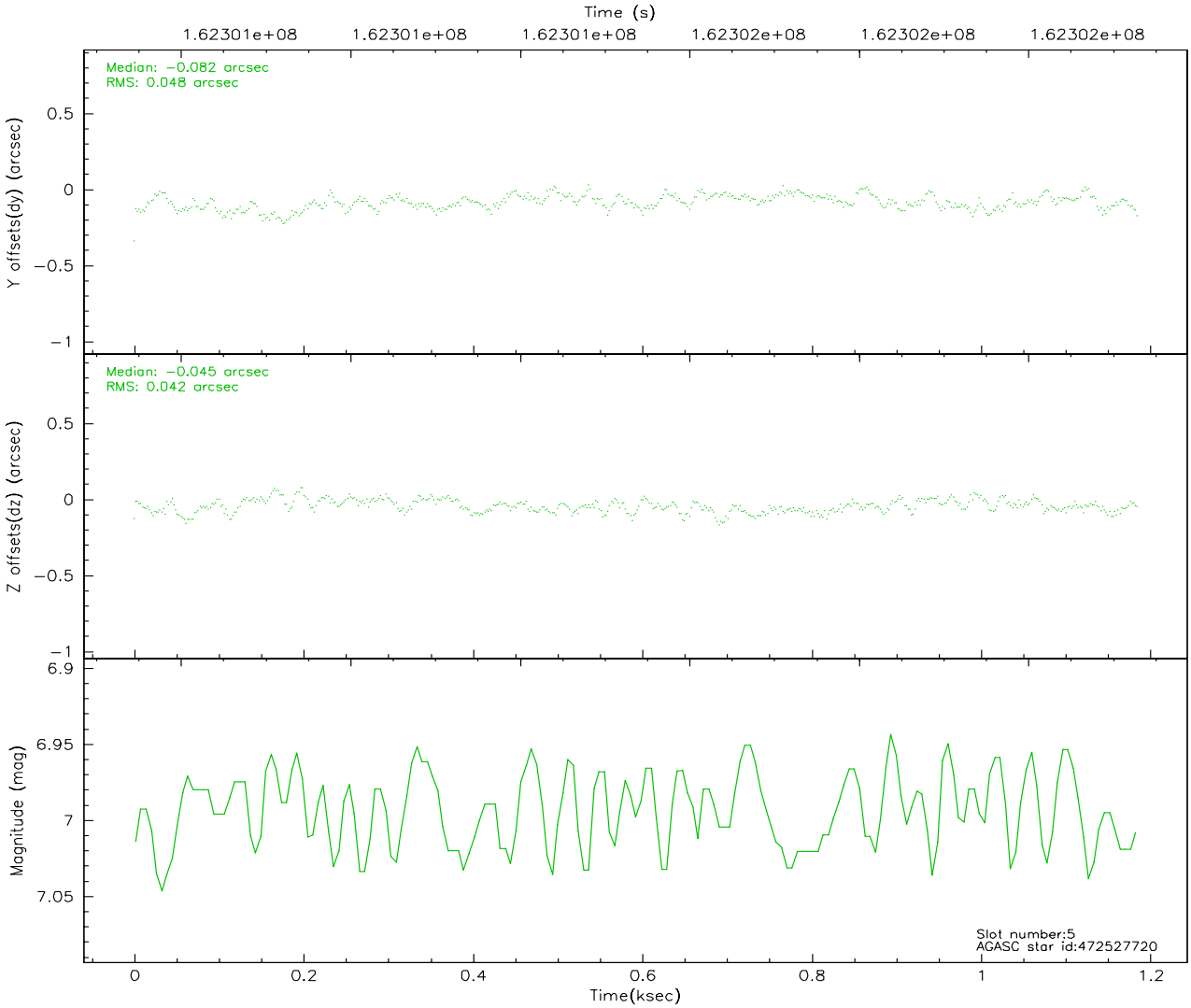

Points outside 0.4 arcsec radius: 0.174%
Radial offset of median: 0.101 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:472659832


Time (s)
1.62301e+08
1.62301e+08
1.62301e+08
1.62302e+08
1.62302e+08
1.62302e+08
Median: 0.001 arcsec
RMS: 0.073 arcsec
Y offsets(dy) (arcsec)
Median: 0.101 arcsec
RMS: 0.057 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:472659832
Time(ksec)

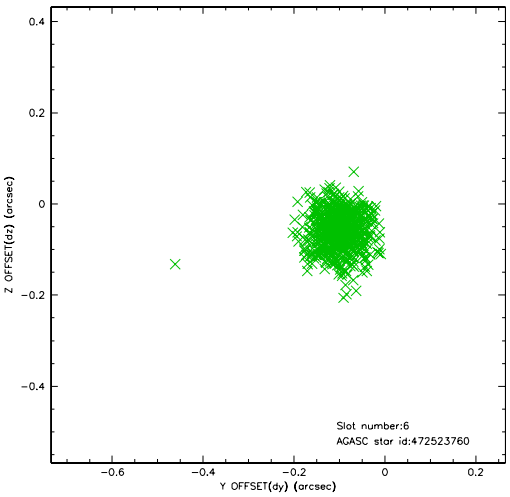
2.4.3 Slot 5

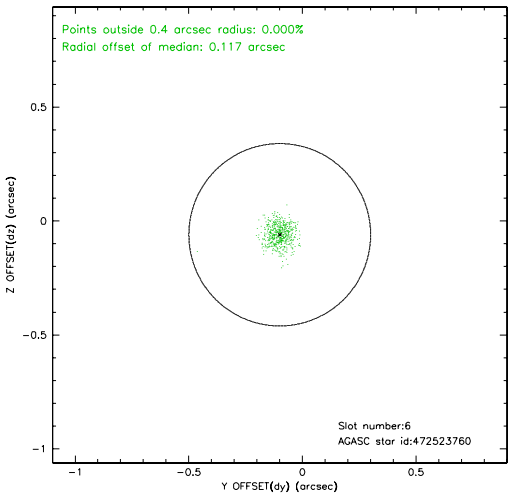

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:472527720

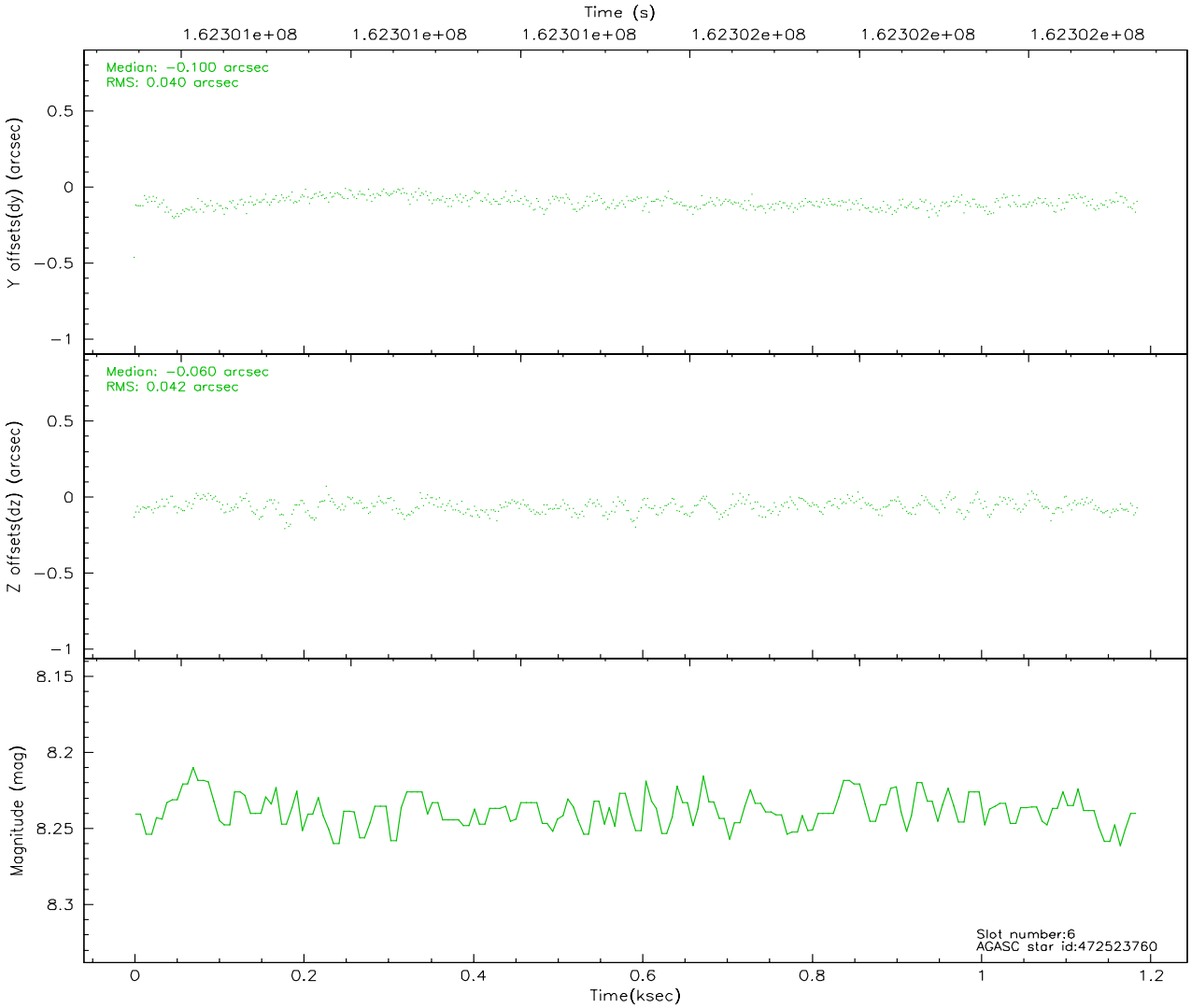

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.094 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:472527720


Time (s)
Median: −0.082 arcsec
RMS: 0.048 arcsec
Y offsets(dy) (arcsec)
Median: −0.045 arcsec
RMS: 0.042 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:472527720
Time(ksec)

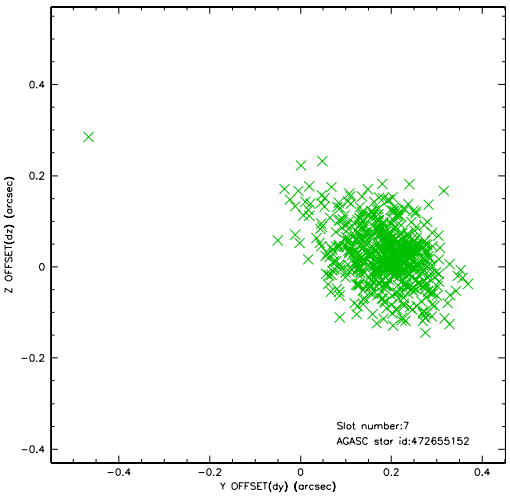
2.4.4 Slot 6

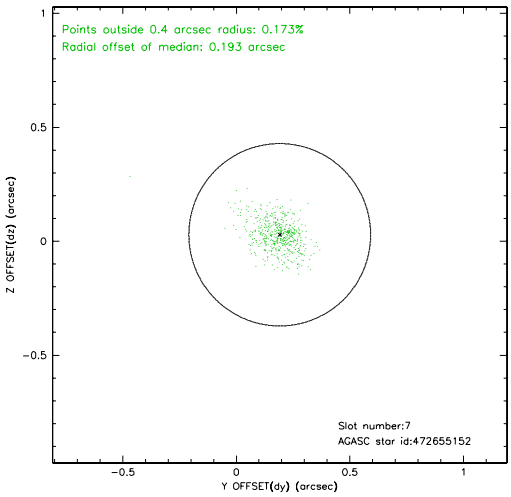

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:472523760

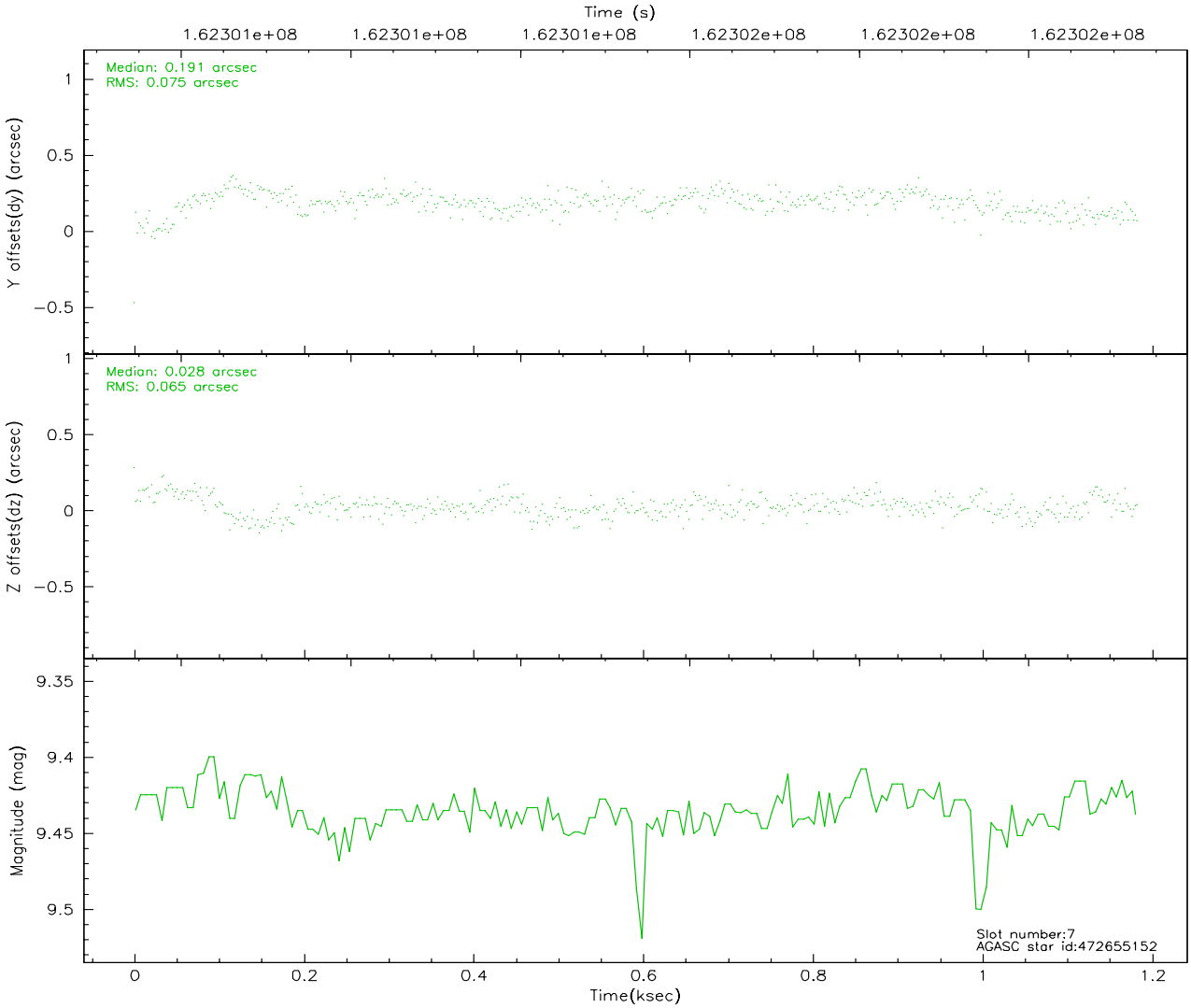

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.117 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:472523760


Time (s)
Median: −0.100 arcsec
RMS: 0.040 arcsec
Y offsets(dy) (arcsec)
Median: −0.060 arcsec
RMS: 0.042 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:472523760
Time(ksec)

2.4.5 Slot 7

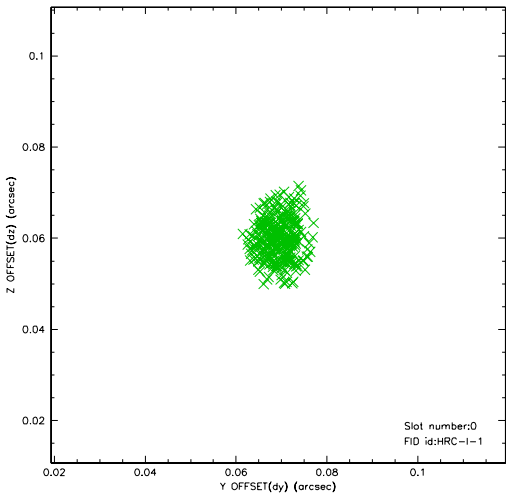

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:472655152

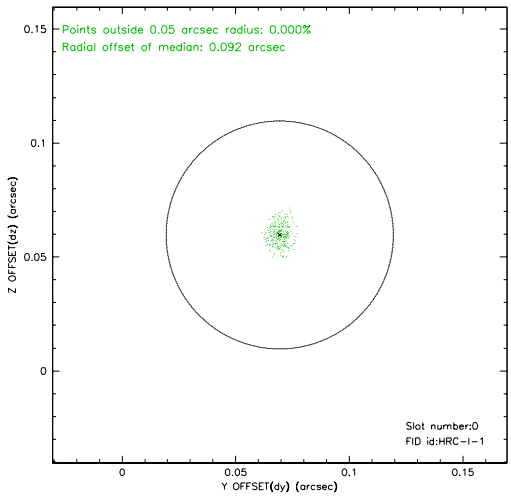

Points outside 0.4 arcsec radius: 0.173%
Radial offset of median: 0.193 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:472655152

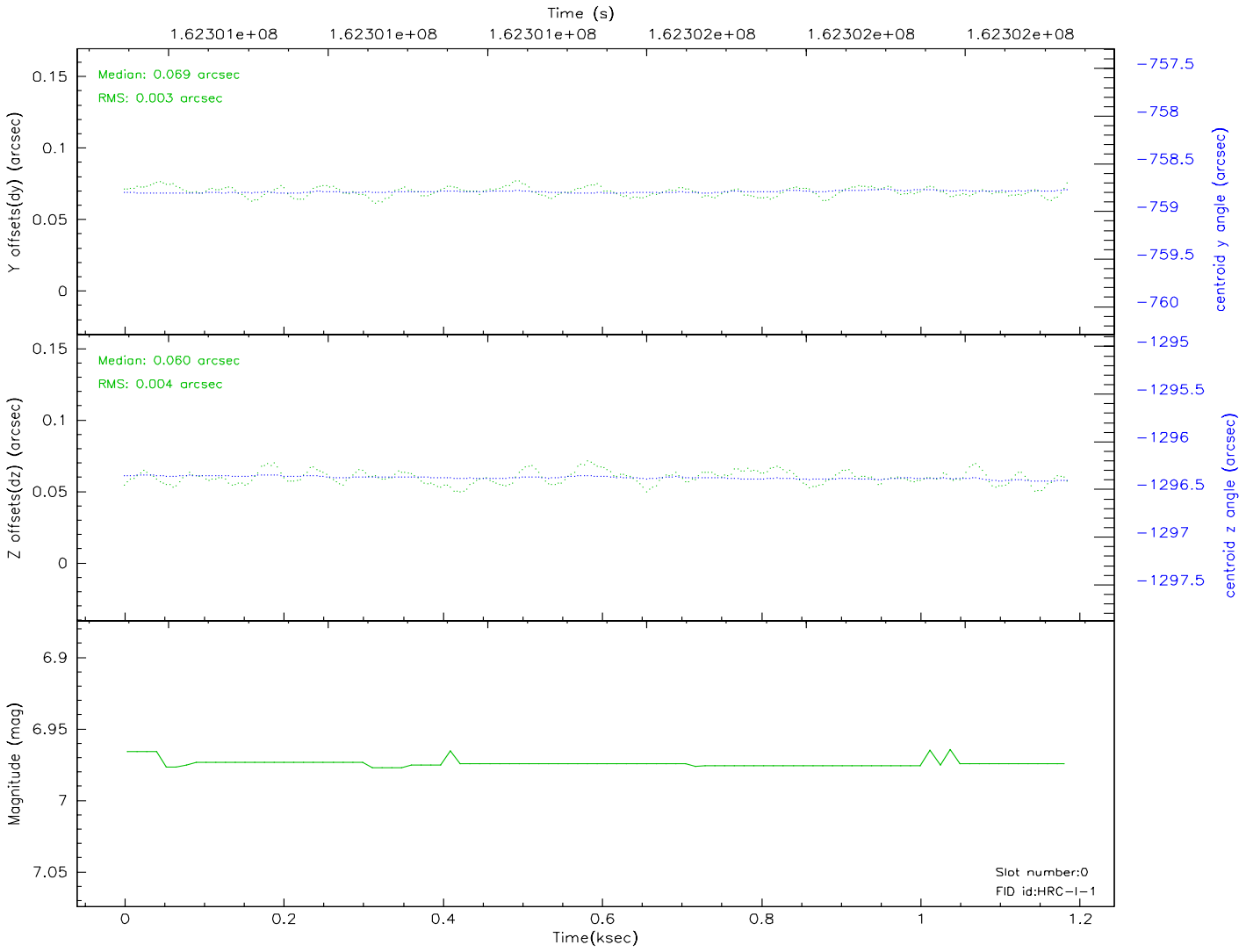

Time (s)
1.62301e+08
1.62301e+08
1.62301e+08
1.62302e+08
1.62302e+08
1.62302e+08
Median: 0.191 arcsec
RMS: 0.075 arcsec
Y offsets(dy) (arcsec)
Median: 0.028 arcsec
RMS: 0.065 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:472655152
Time(ksec)

2.5 FID Slots

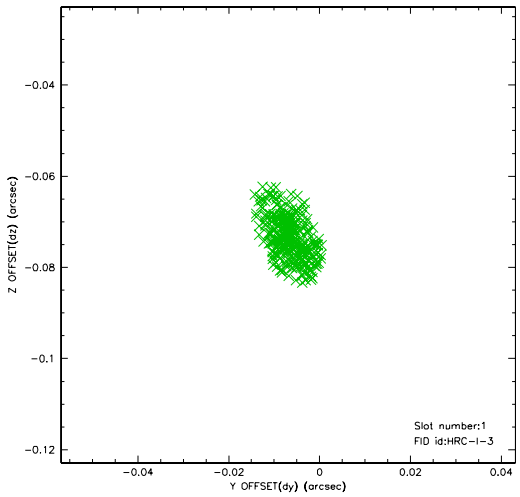
2.5.1 Slot 0

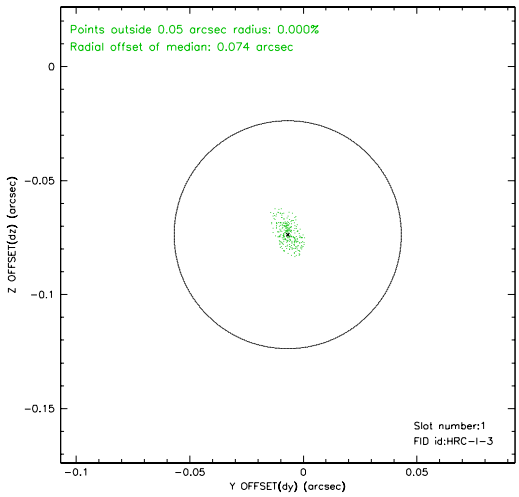


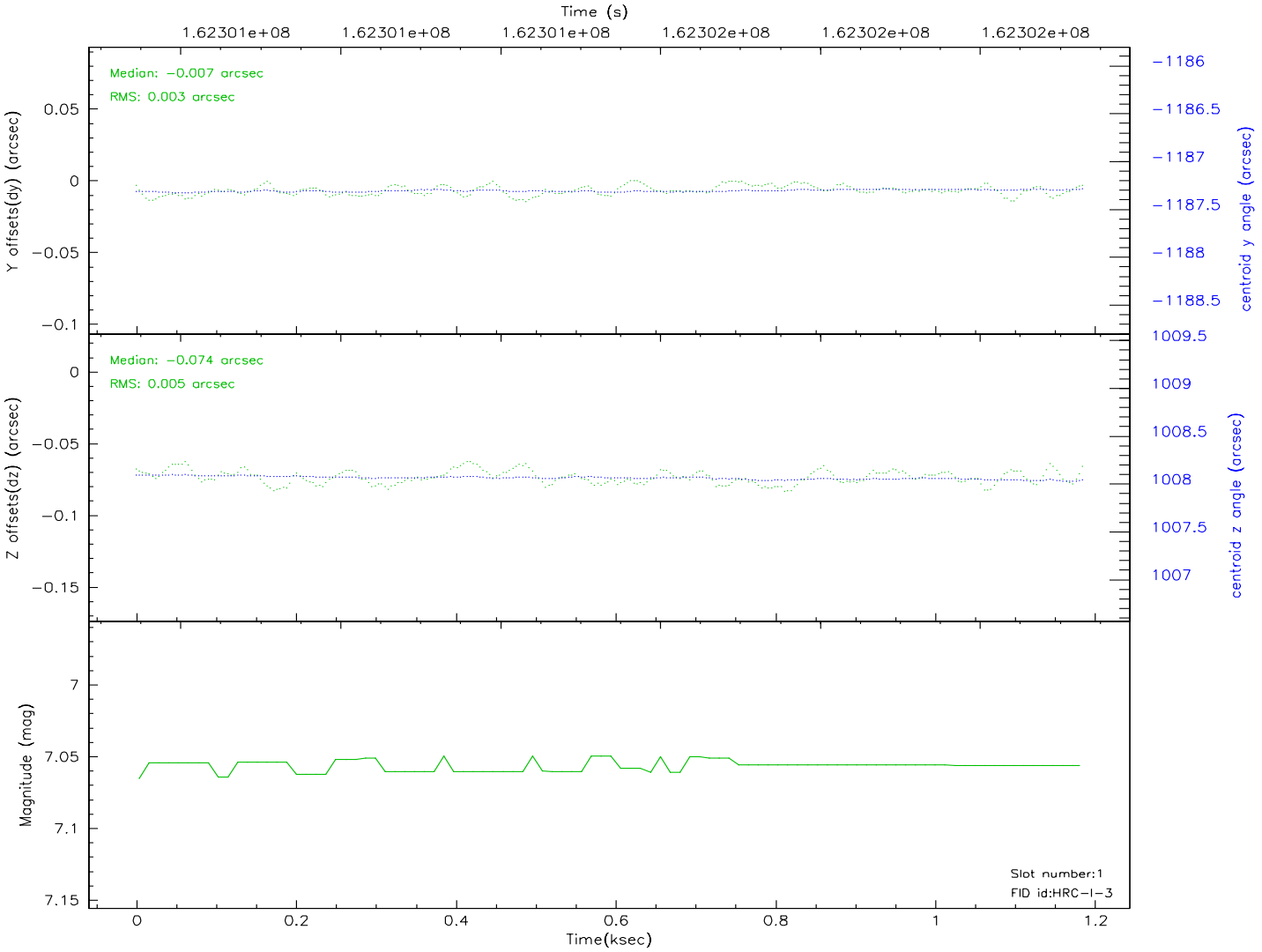




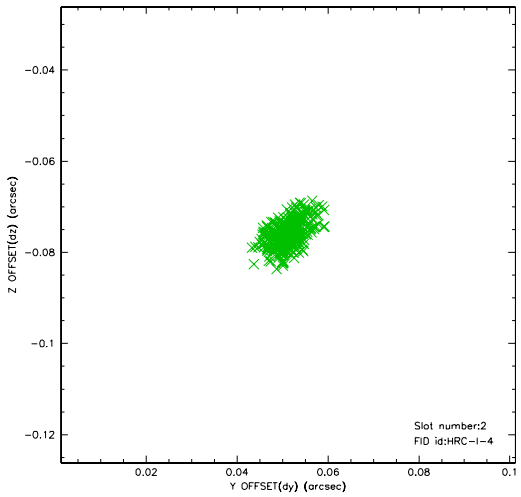
2.5.2 Slot 1

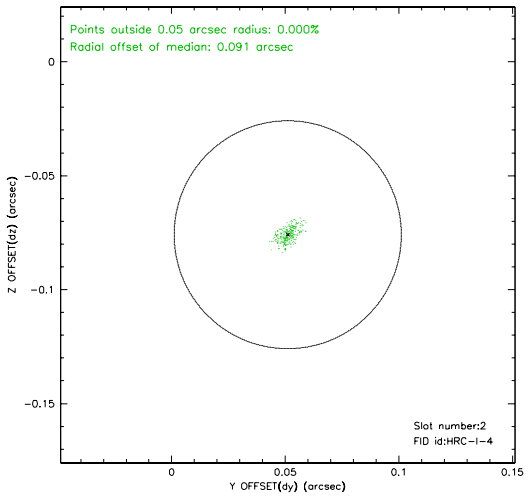

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-I-3

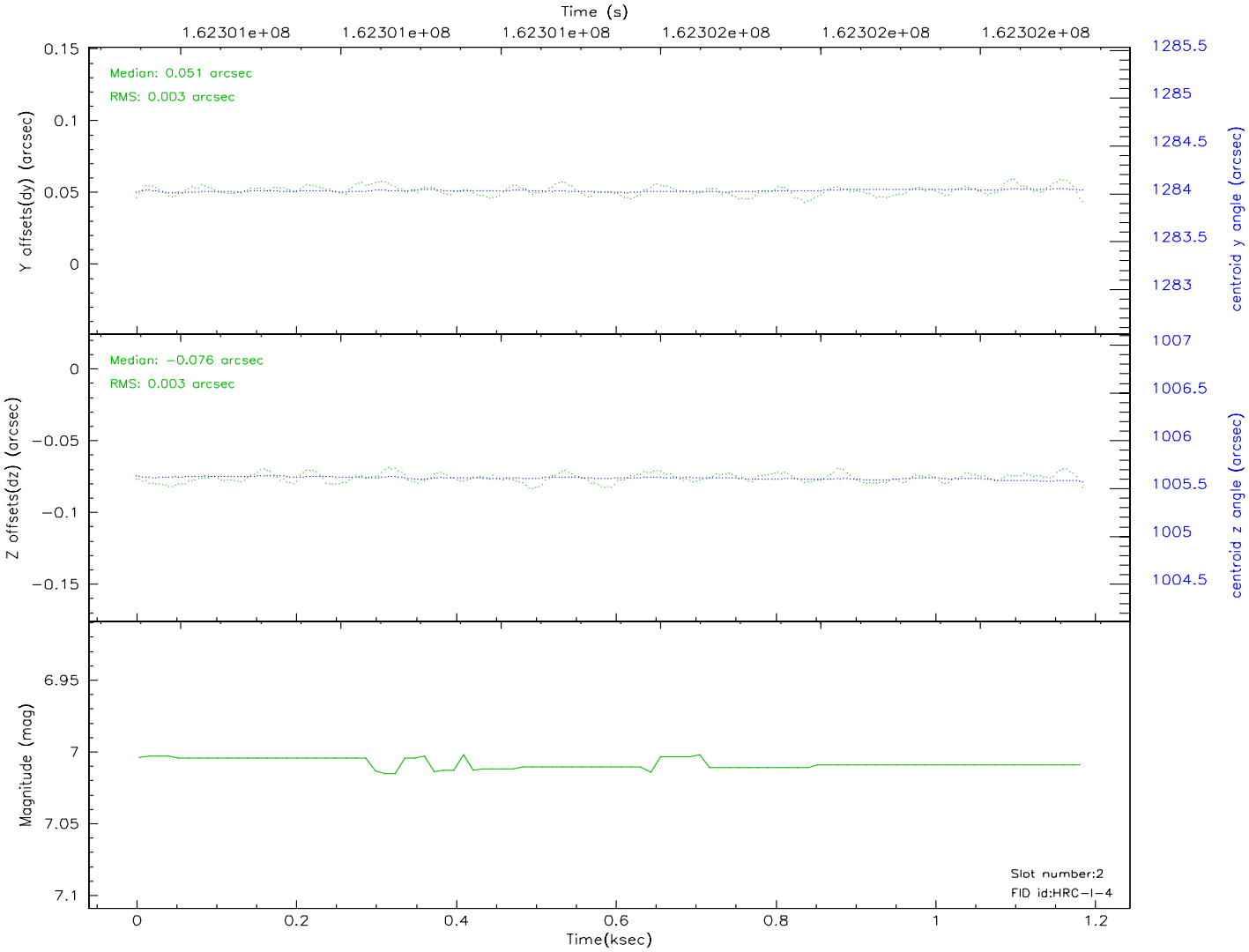

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.074 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-I-3


Time (s)
Median: −0.007 arcsec
RMS: 0.003 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.074 arcsec
RMS: 0.005 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:1
FID id:HRC-I-3
Time(ksec)

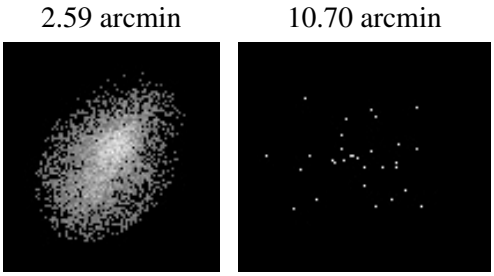
2.5.3 Slot 2


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


Time (s)
Median: 0.051 arcsec
RMS: 0.003 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.076 arcsec
RMS: 0.003 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:2
FID id:HRC-I-4
Time(ksec)

3 Point Sources



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2007.12.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	1.184

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.
```