V&V Reference Report
L2 ASCDS Version : 7.6.8

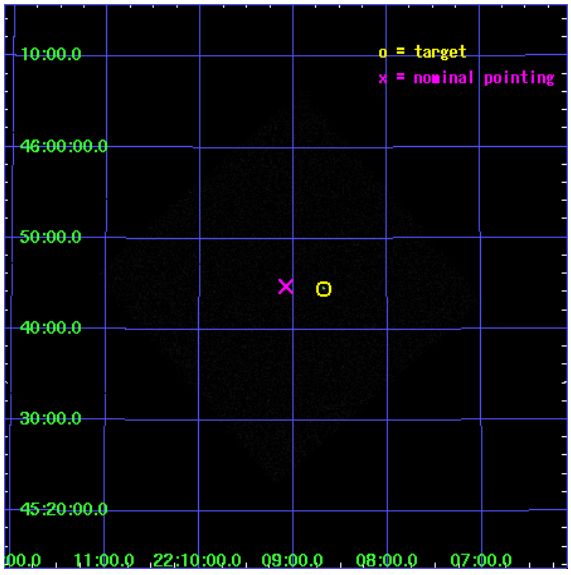
Observation 4307 - L2 Version 3
Chandra X-Ray Center

L2 Processing Date : Nov 22 2007

Contents

1 Front

seq_num	290267
obs_id	4307
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	332.27022322314
dec_nom	45.745971869906
roll_nom	3.8106410658775
revision	3
ontime	1186.1812998652
livetime	1179.5170392504
l2events	38628

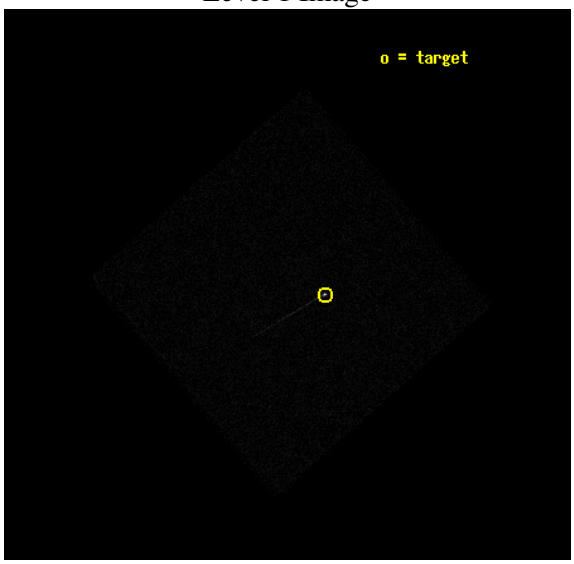


2 OBI

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	2007-11-22T04:47:44
revision	3

sched_exp_time	1000.000000
ontime	1186.1812998652
l1events	69008

2.1.3 Events

Level 1 Events

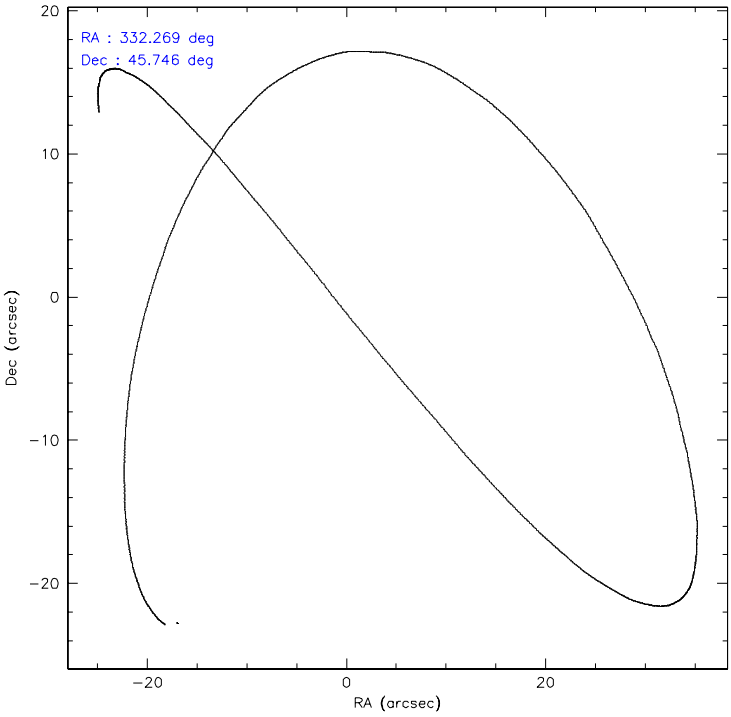
	segment 0
level 1 events	69008
rejected events	14281
rejected %	20%

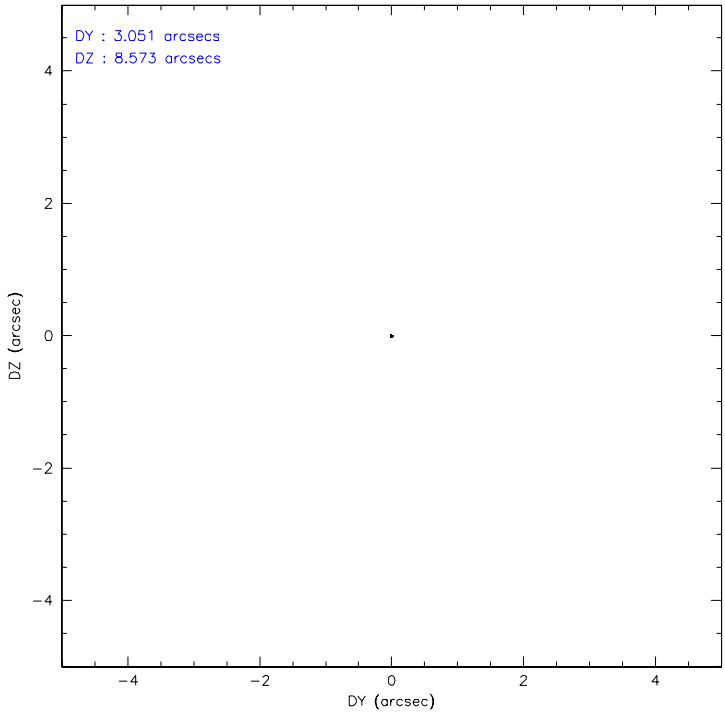
2.2 Compared Parameters

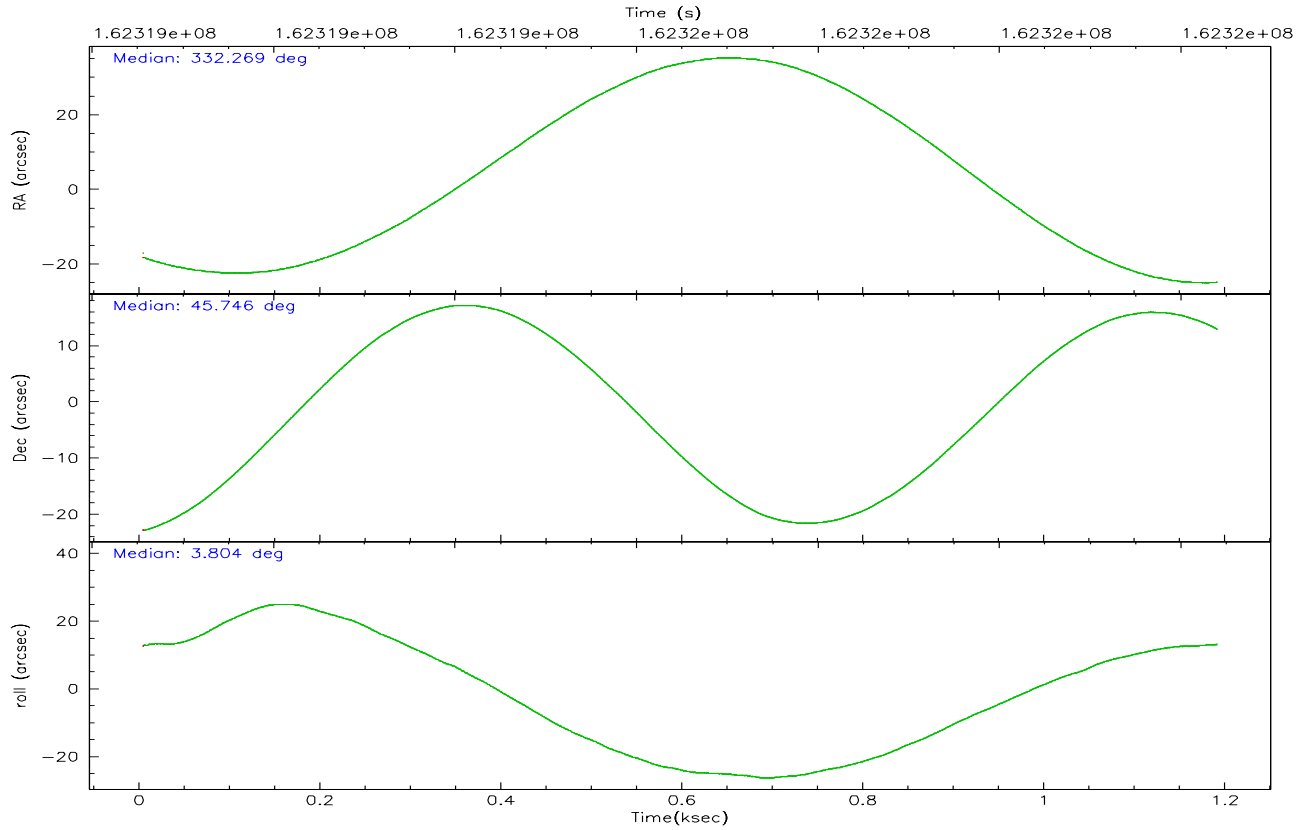
Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-I	HRC-I
Grating	NONE	NONE
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
Pointing RA	332.239196	332.2702232231375
Pointing Dec	45.729936	45.74597186990614
Pointing Roll	3.928373	3.8106410658775
Window start time	161654464.184000	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	162319248.184000	162318871.72062
Observation start date	2003-02-22T16:39:44	2003-02-22T16:34:31
Observation end time	162320248.184000	162320381.54568
Observation end date	2003-02-22T16:56:24	2003-02-22T16:59:41

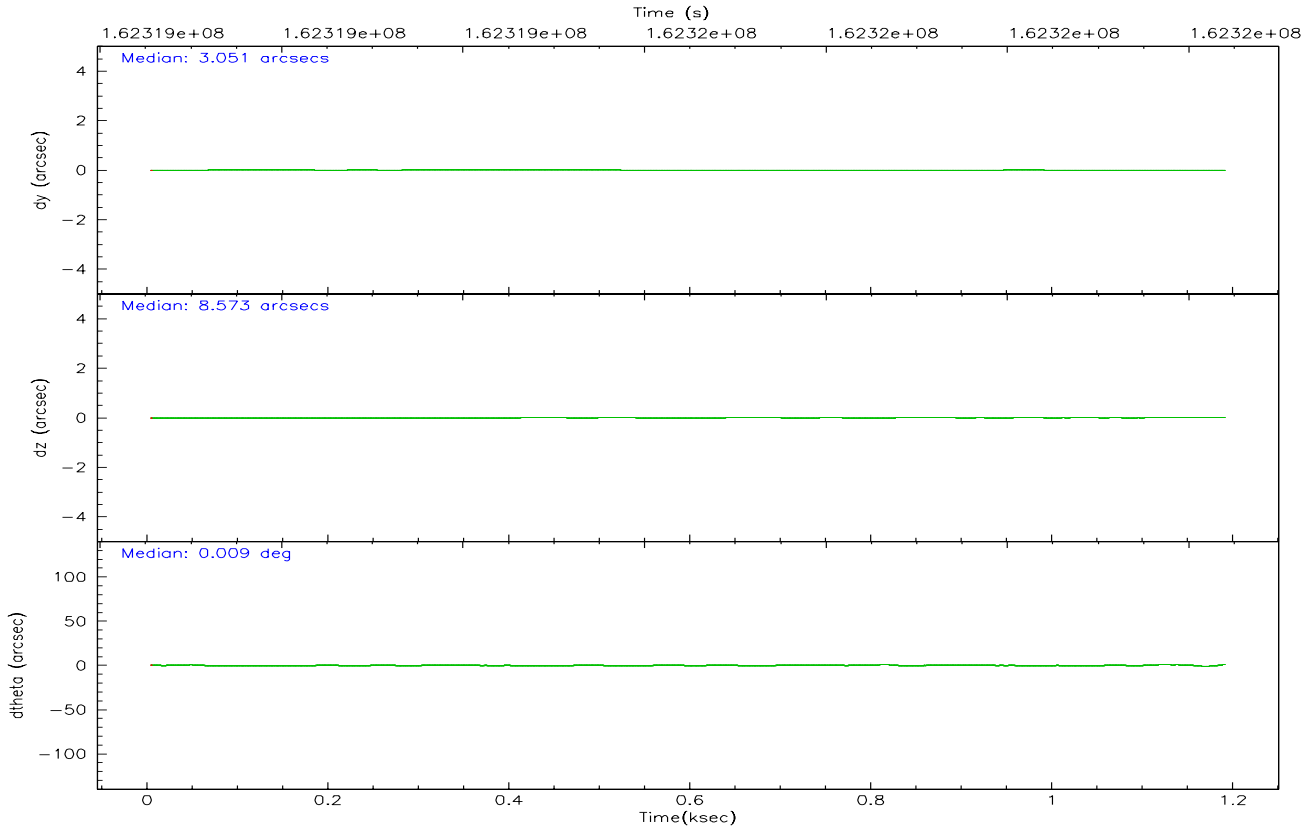
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED

2.3 Aspect


RA : 332.269 deg
Dec : 45.746 deg
20
10
0
−10
−20
Dec (arcsec)
−20
0
20
RA (arcsec)


DY : 3.051 arcsecs
DZ : 8.573 arcsecs
4
2
0
−2
−4
DZ (arcsec)
−4
−2
0
2
4
DY (arcsec)


Time (s)
1.62319e+08
1.62319e+08
1.62319e+08
1.6232e+08
1.6232e+08
1.6232e+08
1.6232e+08
Median: 332.269 deg
RA (arcsec)
Median: 45.746 deg
Dec (arcsec)
Median: 3.804 deg
roll (arcsec)
Time(ksec)

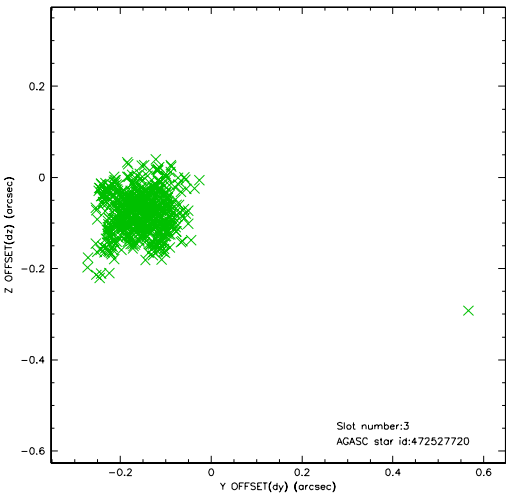

Time (s)
1.62319e+08
1.62319e+08
1.62319e+08
1.6232e+08
1.6232e+08
1.6232e+08
1.6232e+08
Median: 3.051 arcsecs
dy (arcsec)
Median: 8.573 arcsecs
dz (arcsec)
Median: 0.009 deg
dtheta (arcsec)
Time(ksec)

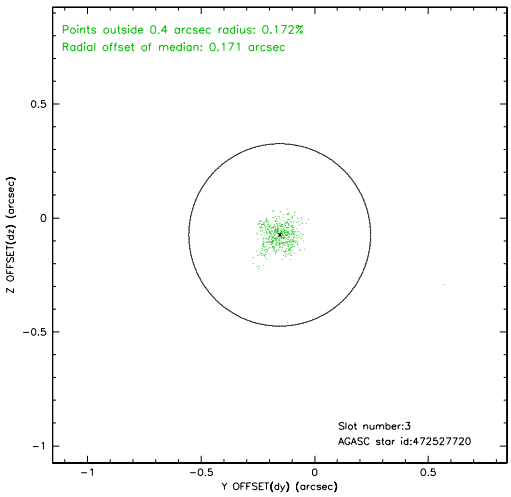
Slot Statistics

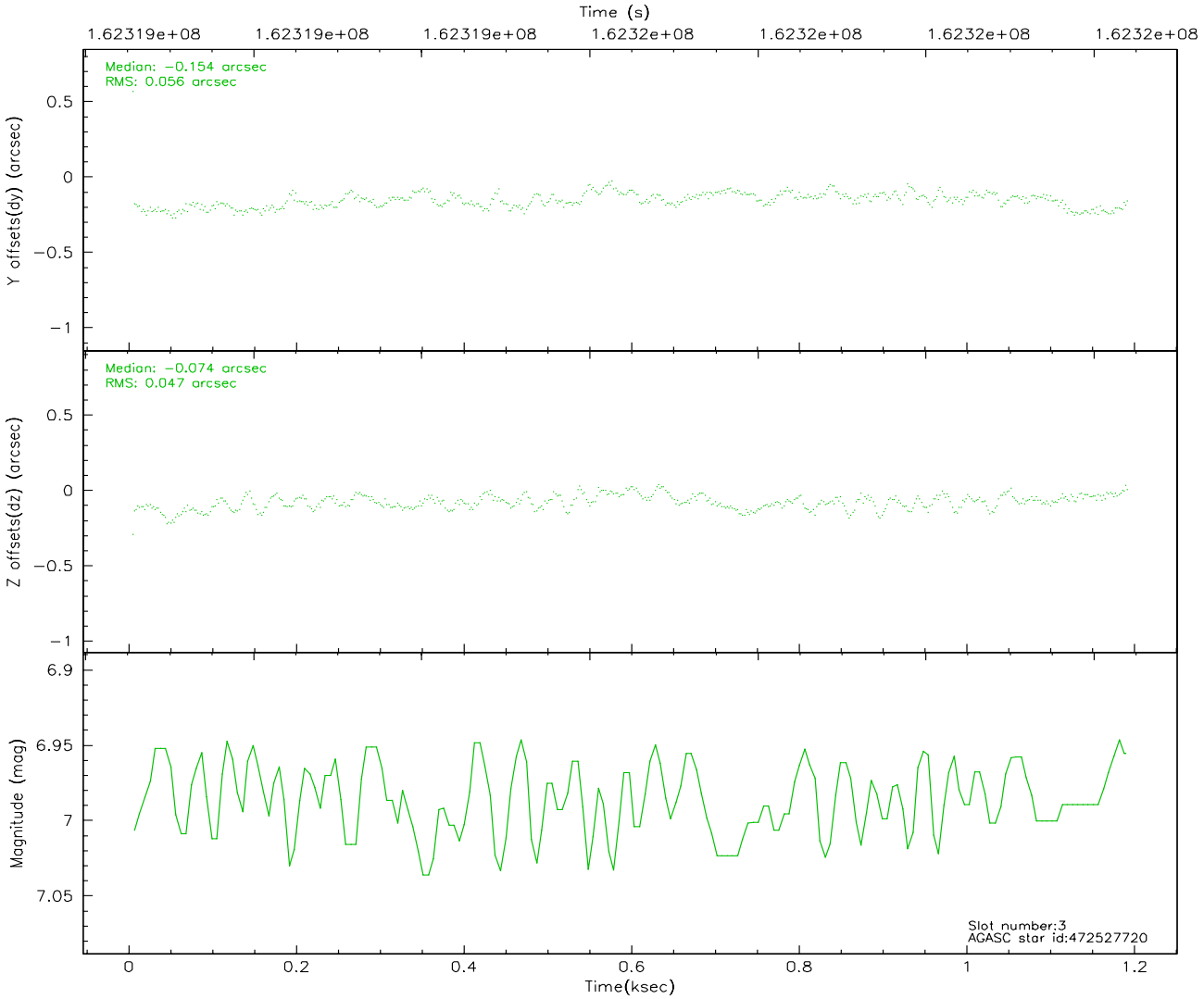
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-I-1	6.98	290	0.024	0.065	0.007	0.011	0.000000	0.000000	-758.50	-1296.44
1	FID	HRC-I-2	7.01	290	0.080	-0.078	0.006	0.010	0.000000	0.000000	851.57	-1302.63
2	FID	HRC-I-3	7.06	288	0.015	-0.076	0.007	0.011	0.000000	0.000000	-1184.04	1003.46
3	GUIDE	472527720	6.99	580	-0.154	-0.074	0.072	0.112	331.460205	45.112509	-2124.14	-2074.30
4	GUIDE	472655704	9.48	580	0.107	-0.010	0.117	0.188	332.167195	45.285228	-293.09	-1589.75
5	GUIDE	472659832	9.46	580	0.060	0.050	0.094	0.338	332.780399	46.098139	1440.27	1230.45
6	GUIDE	472533912	9.18	580	-0.012	-0.044	0.118	0.169	331.791136	46.368695	-948.65	2373.96
7	GUIDE	472654568	9.45	579	-0.017	0.063	0.117	0.186	332.194449	45.063576	-277.37	-2382.80

2.4 Star Slots

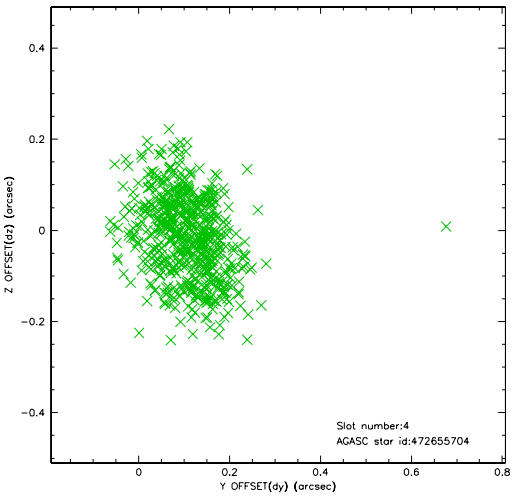
2.4.1 Slot 3

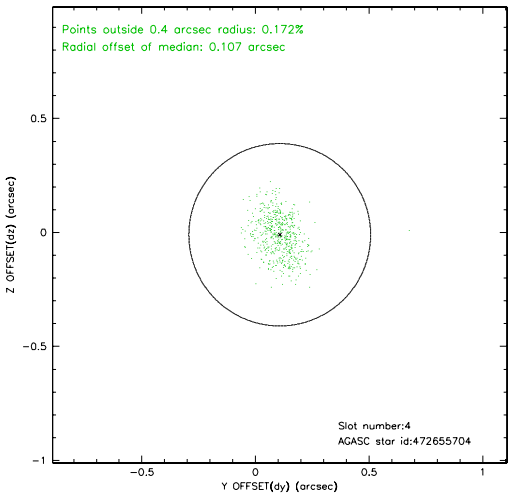


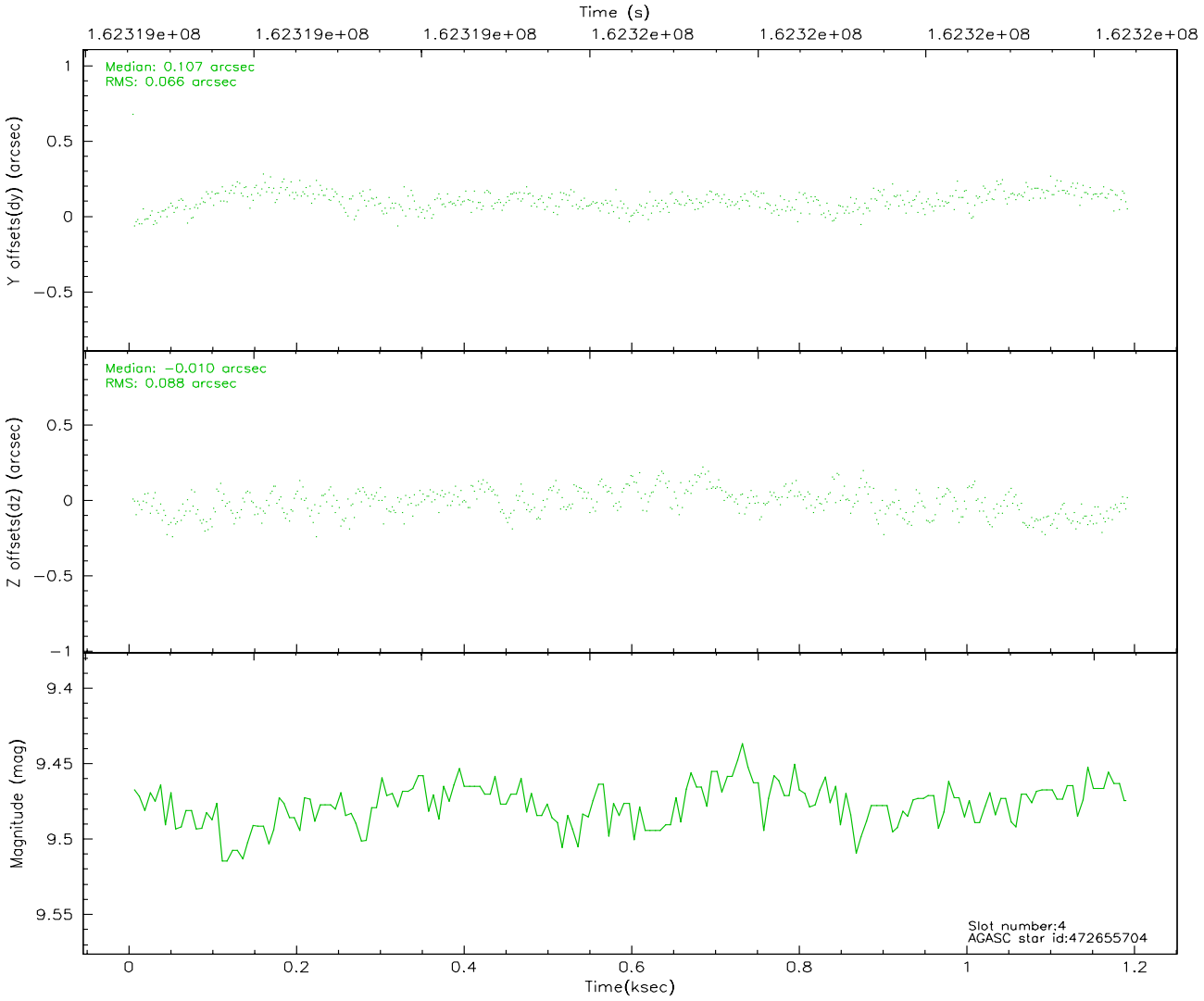




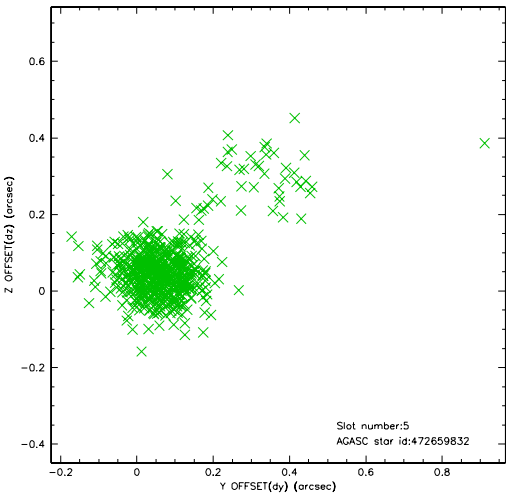
2.4.2 Slot 4

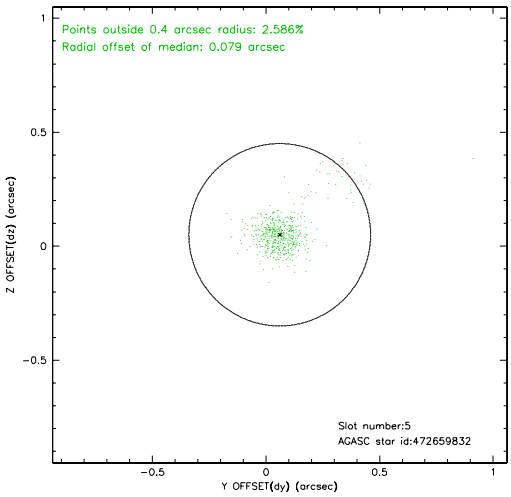

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:472655704

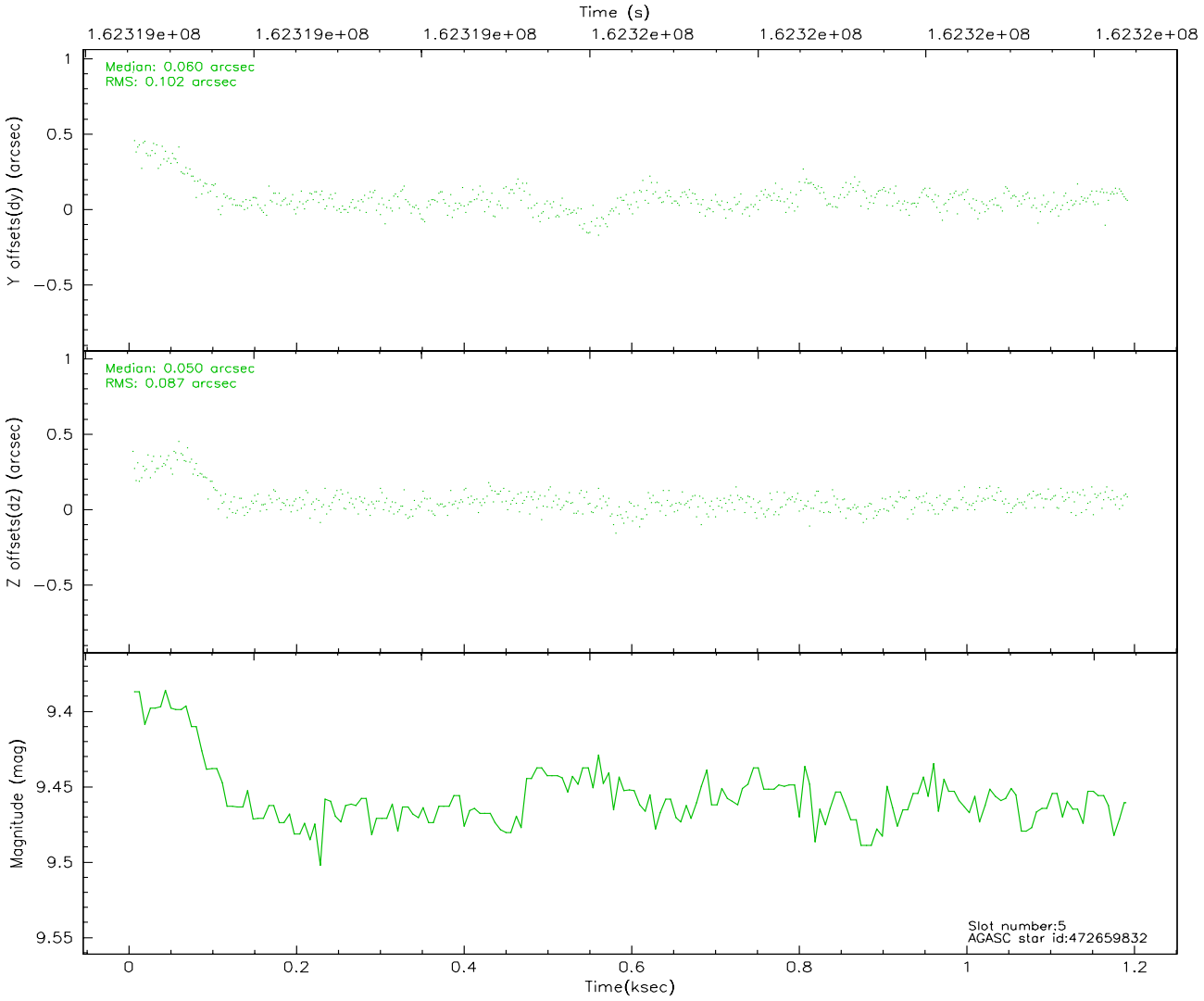

Points outside 0.4 arcsec radius: 0.172%
Radial offset of median: 0.107 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:472655704


Time (s)
Median: 0.107 arcsec
RMS: 0.066 arcsec
Y offsets(dy) (arcsec)
Median: −0.010 arcsec
RMS: 0.088 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:472655704
Time(ksec)

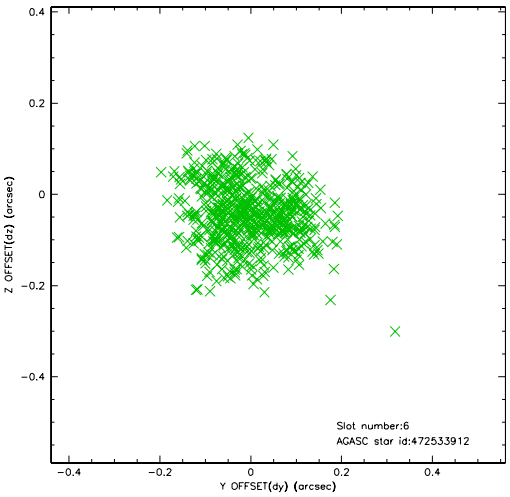
2.4.3 Slot 5

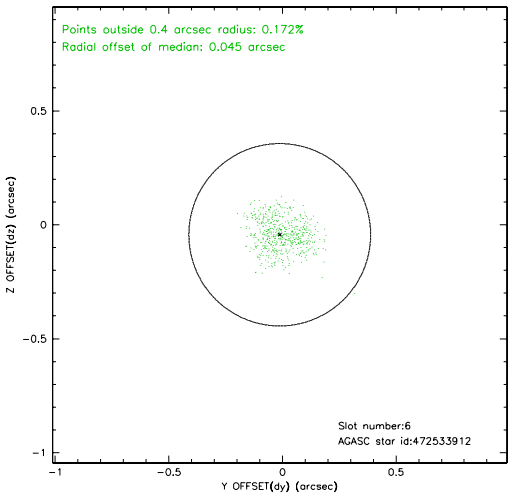

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:472659832

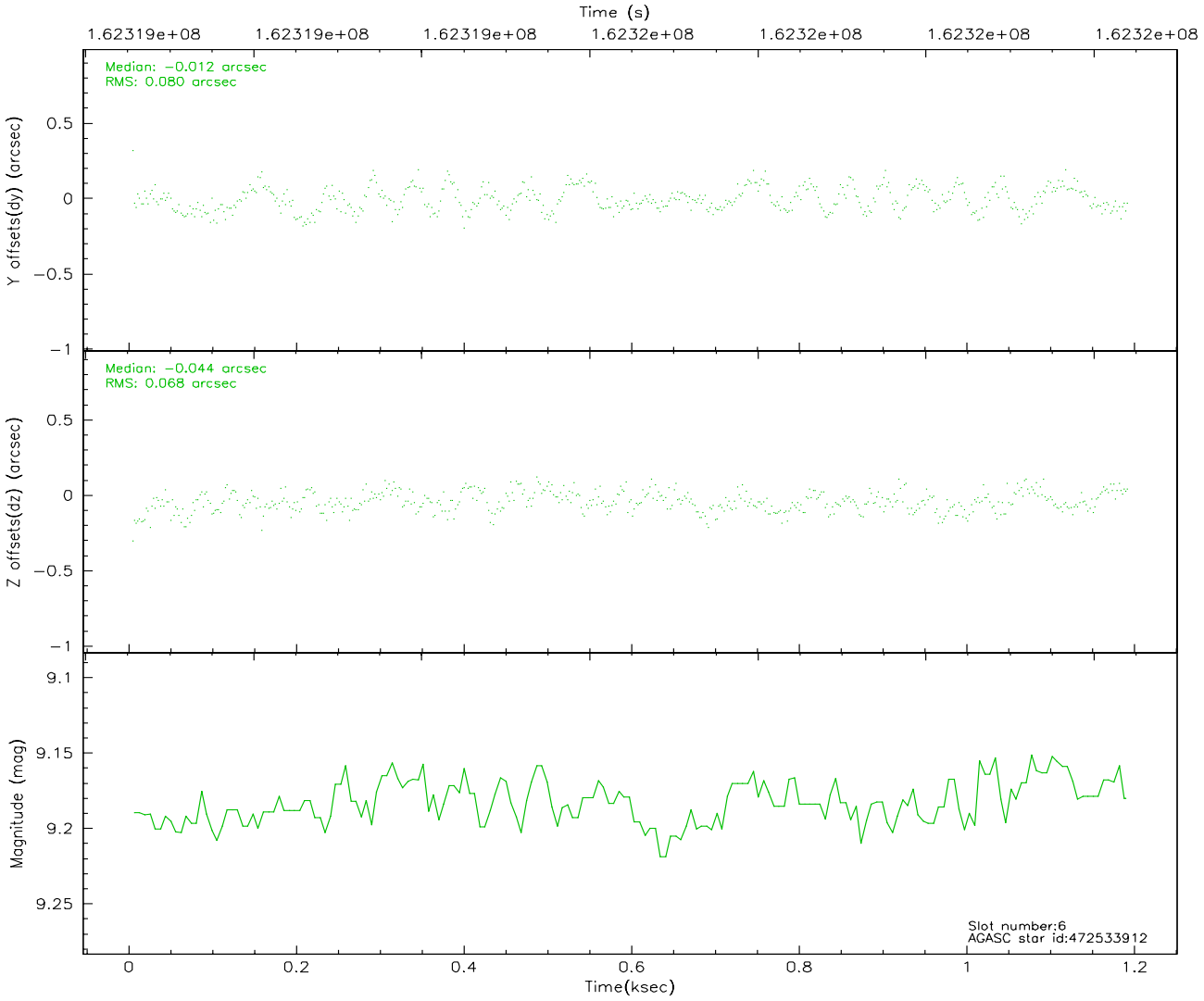

Points outside 0.4 arcsec radius: 2.586%
Radial offset of median: 0.079 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:472659832


Time (s)
1.62319e+08
1.62319e+08
1.62319e+08
1.6232e+08
1.6232e+08
1.6232e+08
1.6232e+08
Median: 0.060 arcsec
RMS: 0.102 arcsec
Y offsets(dy) (arcsec)
Median: 0.050 arcsec
RMS: 0.087 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:472659832
Time(ksec)

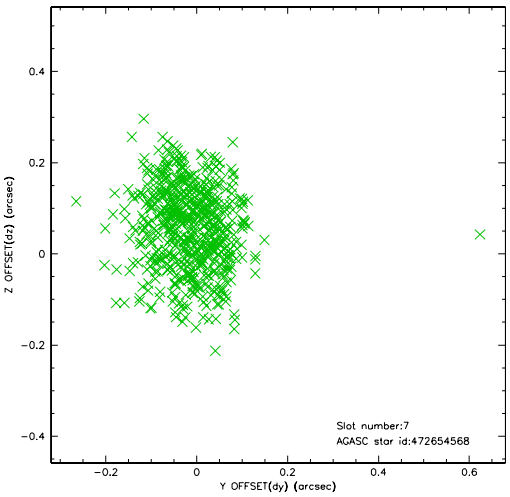
2.4.4 Slot 6

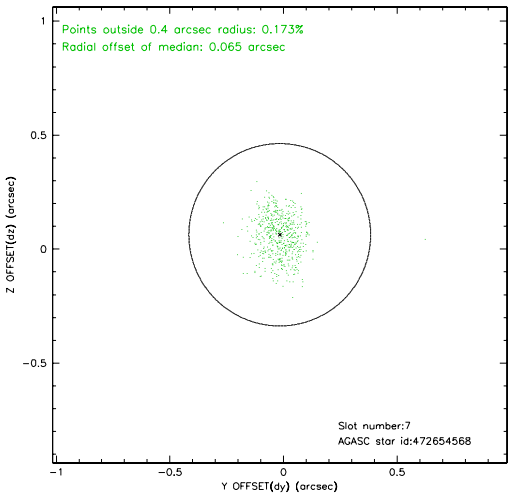

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:472533912

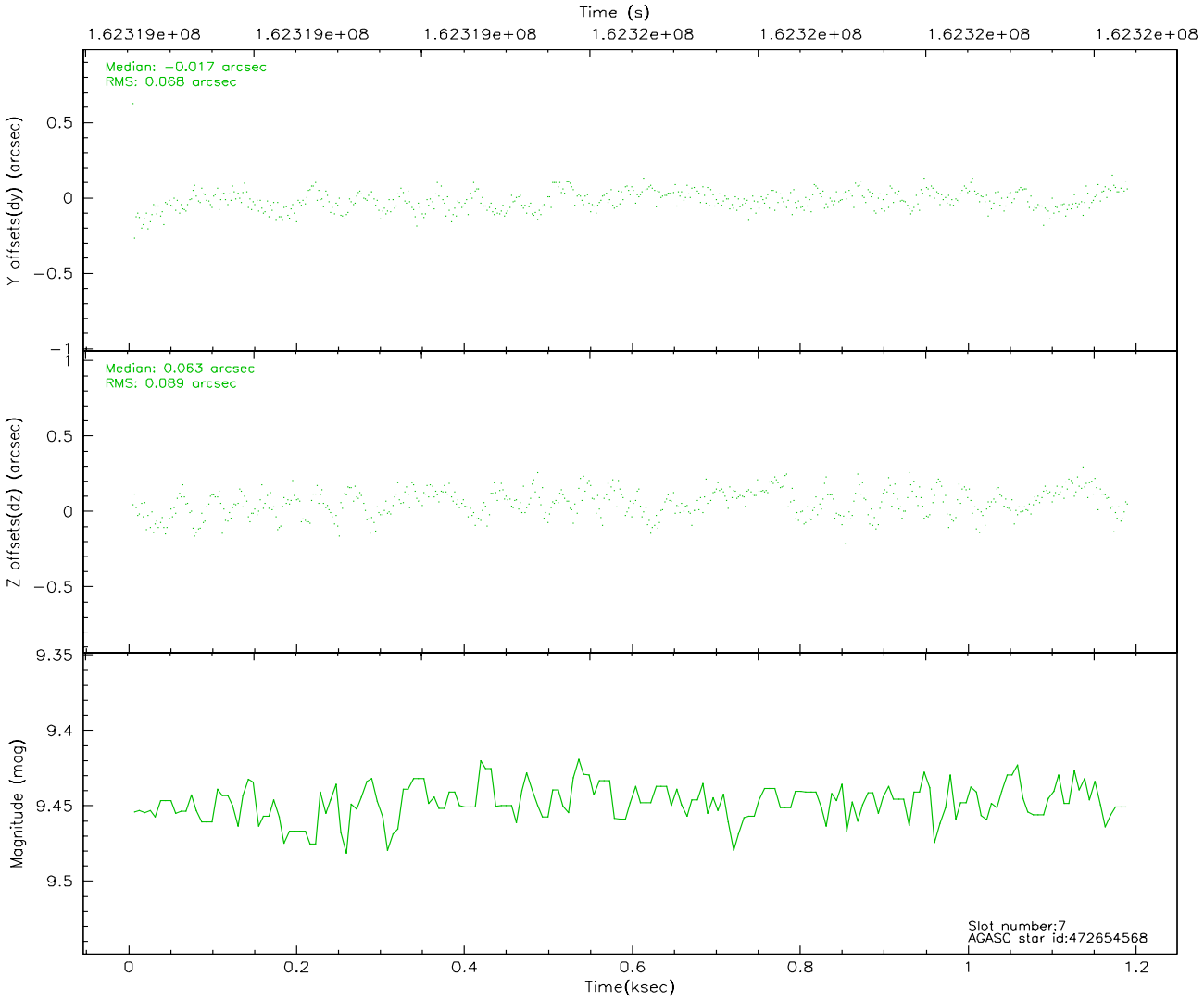

Points outside 0.4 arcsec radius: 0.172%
Radial offset of median: 0.045 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:472533912


Time (s)
Median: −0.012 arcsec
RMS: 0.080 arcsec
Y offsets(dy) (arcsec)
Median: −0.044 arcsec
RMS: 0.068 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:472533912
Time(ksec)

2.4.5 Slot 7

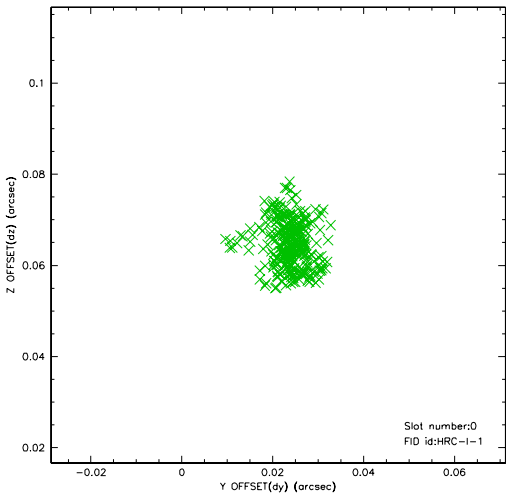

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:472654568

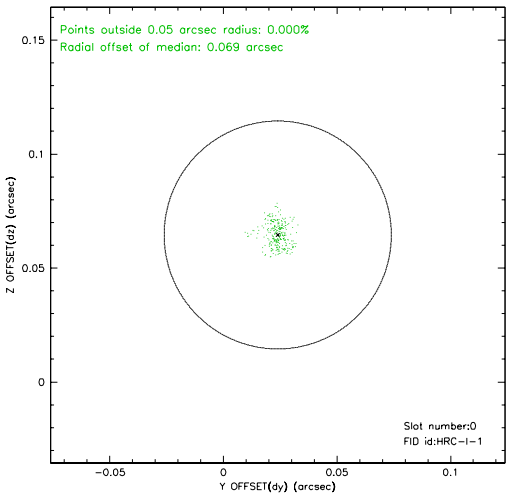

Points outside 0.4 arcsec radius: 0.173%
Radial offset of median: 0.065 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:472654568

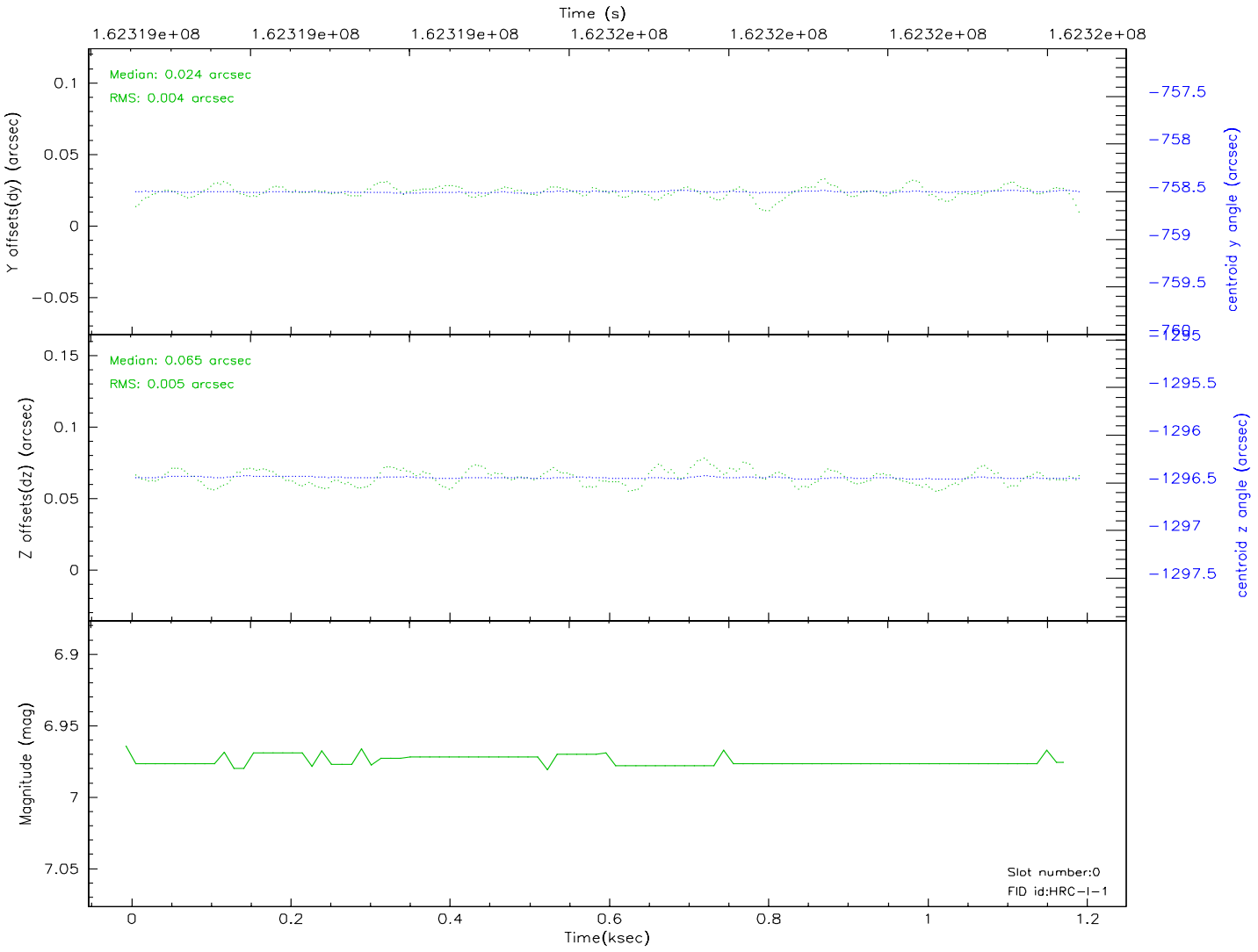

Time (s)
Median: −0.017 arcsec
RMS: 0.068 arcsec
Y offsets(dy) (arcsec)
Median: 0.063 arcsec
RMS: 0.089 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:472654568
Time(ksec)

2.5 FID Slots

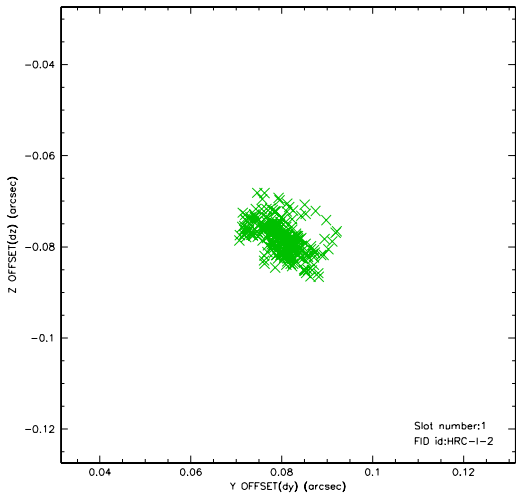
2.5.1 Slot 0

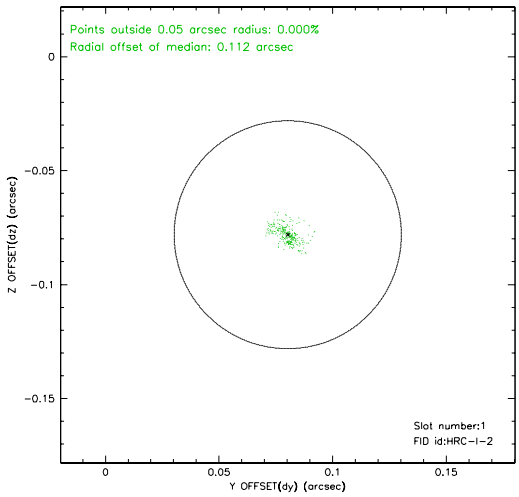


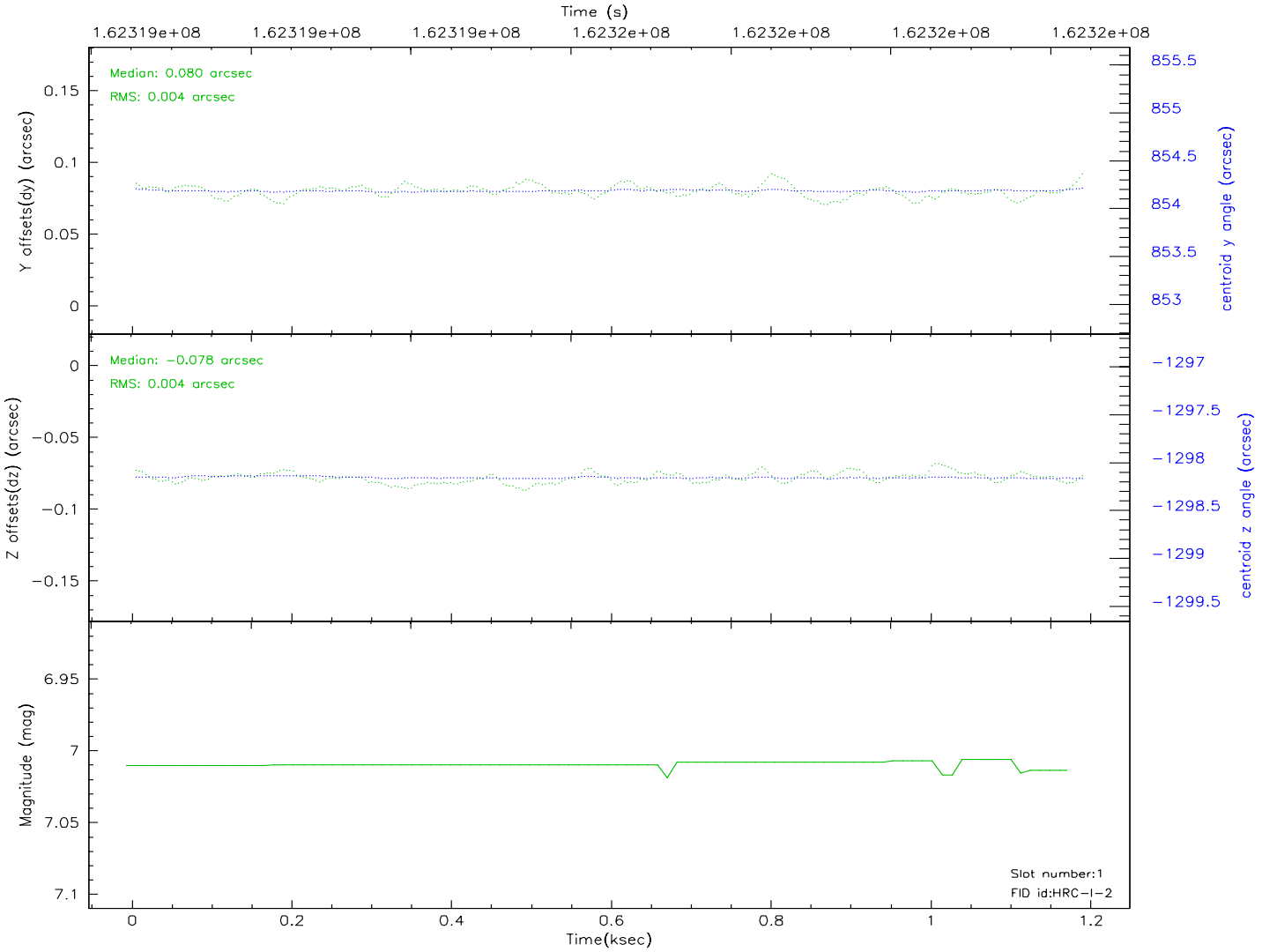




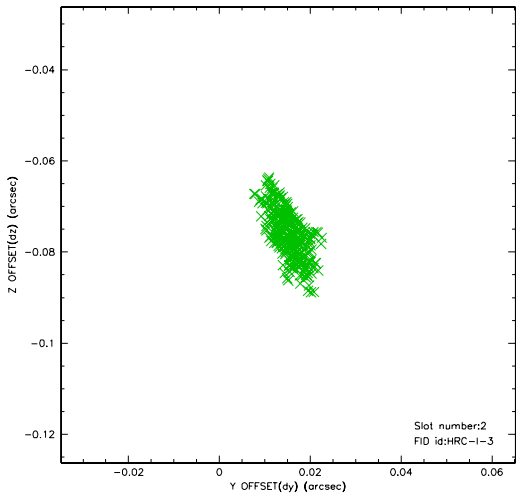
2.5.2 Slot 1

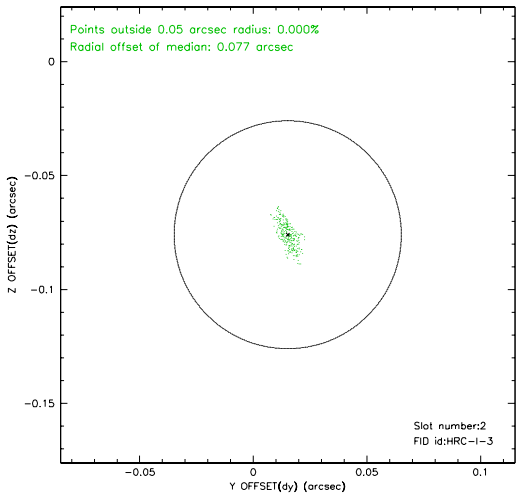

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-I-2

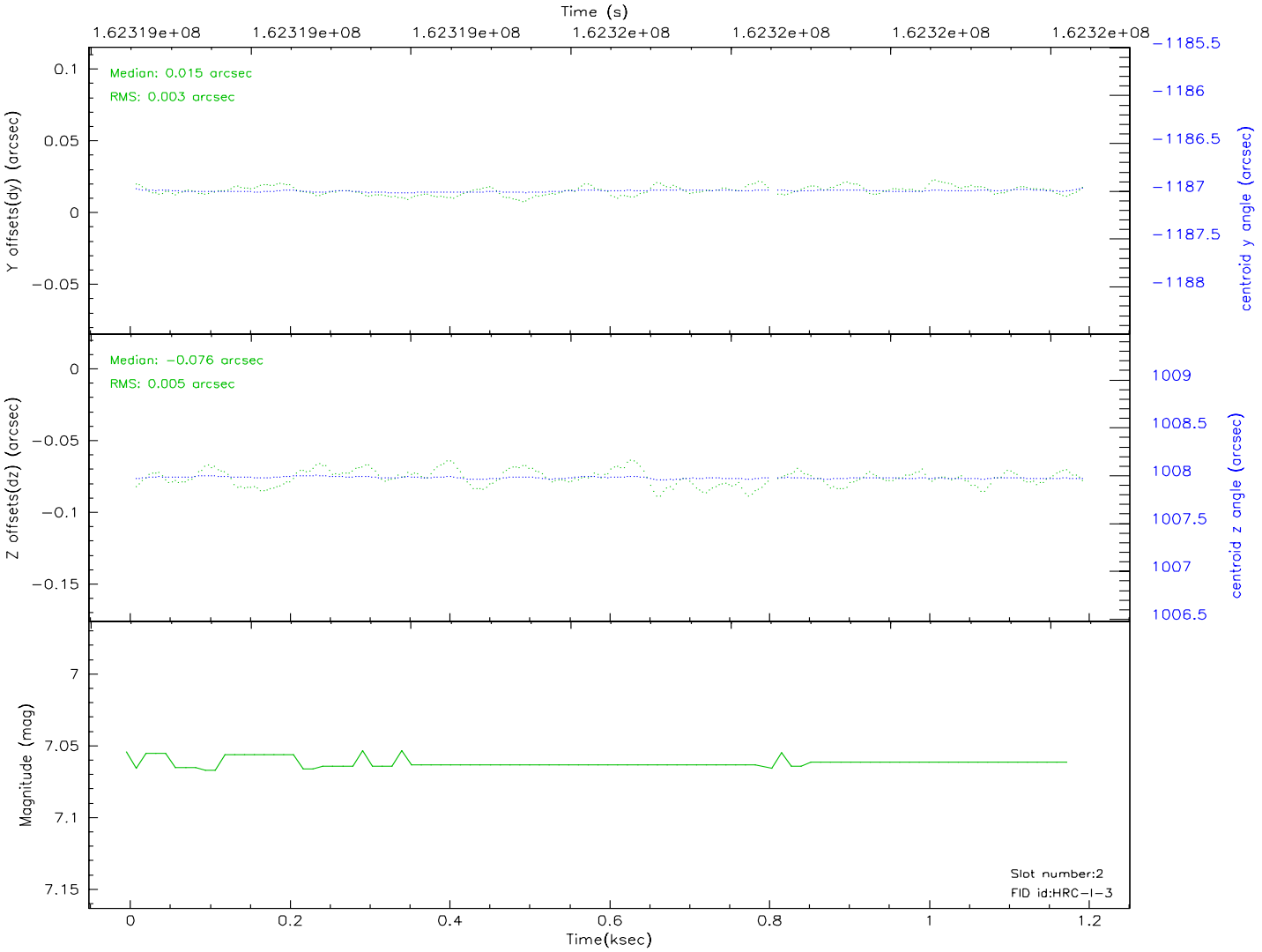

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.112 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-I-2


Time (s)
Median: 0.080 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.078 arcsec
RMS: 0.004 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

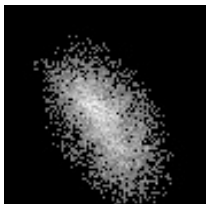

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:HRC-I-3


Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.077 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:HRC-I-3


Time (s)
Median: 0.015 arcsec
RMS: 0.003 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.076 arcsec
RMS: 0.005 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:2
FID id:HRC-I-3
Time(ksec)

3 Point Sources

4.20 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	1.186

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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