V&V Reference Report
L2 ASCDS Version : 7.6.10

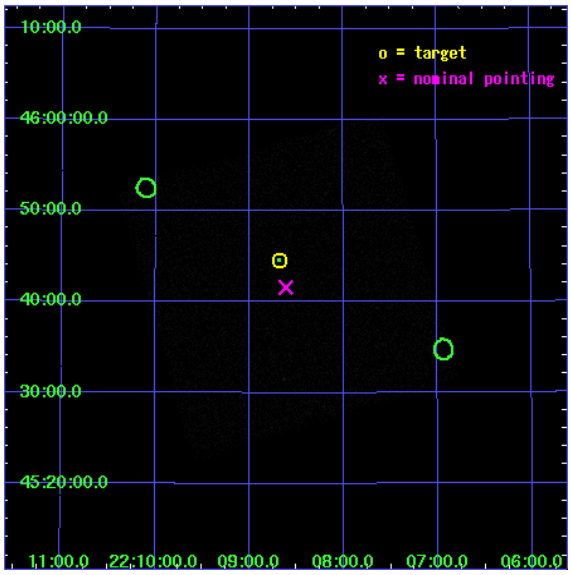
Observation 2350 - L2 Version 4
Chandra X-Ray Center

L2 Processing Date : Nov 21 2007

Contents

1 Front

seq_num	290097
obs_id	2350
title	HRC-I CALIBRATION OBSERVATIONS OF ARLAC
observer	Dr. CXC Calibration
object	ARLAC,HRC-I,AO2A
ra_targ	332.17
dec_targ	45.742306
ra_nom	332.15298976986
dec_nom	45.693402148812
roll_nom	298.67079235107
revision	4
ontime	1200.5312959105
livetime	1194.6071799963
l2events	34804

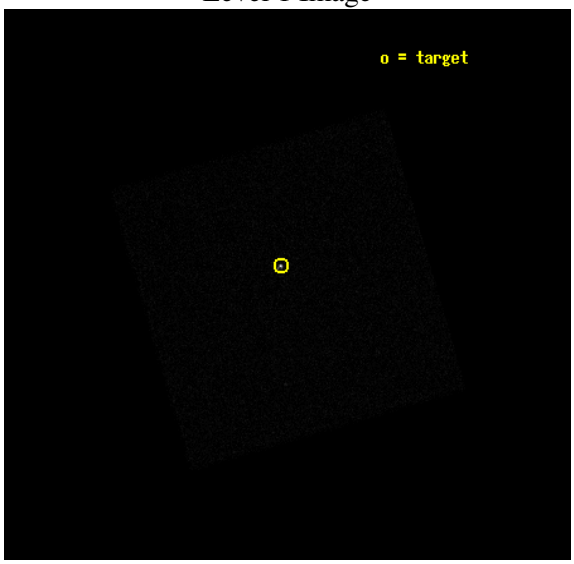


2 OBI

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	2007-11-21T04:46:44
revision	4

sched_exp_time	1000.000000
ontime	1200.5312959105
l1events	60857

2.1.3 Events

Level 1 Events

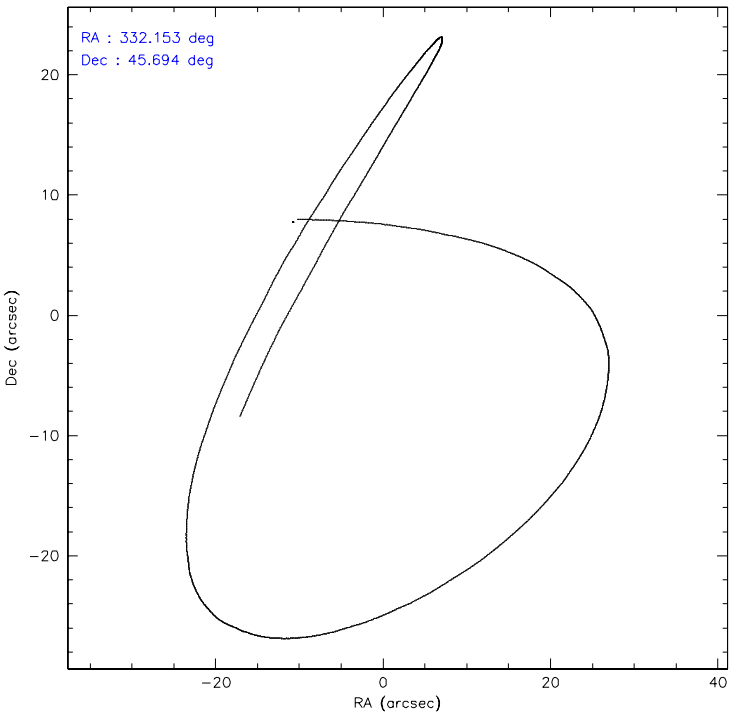
	segment 0
level 1 events	60857
rejected events	12241
rejected %	20%

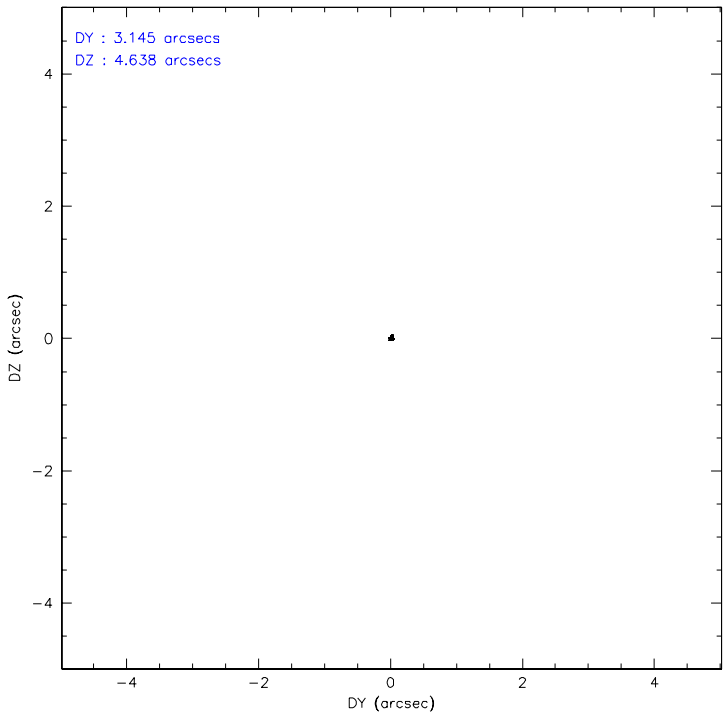
2.2 Compared Parameters

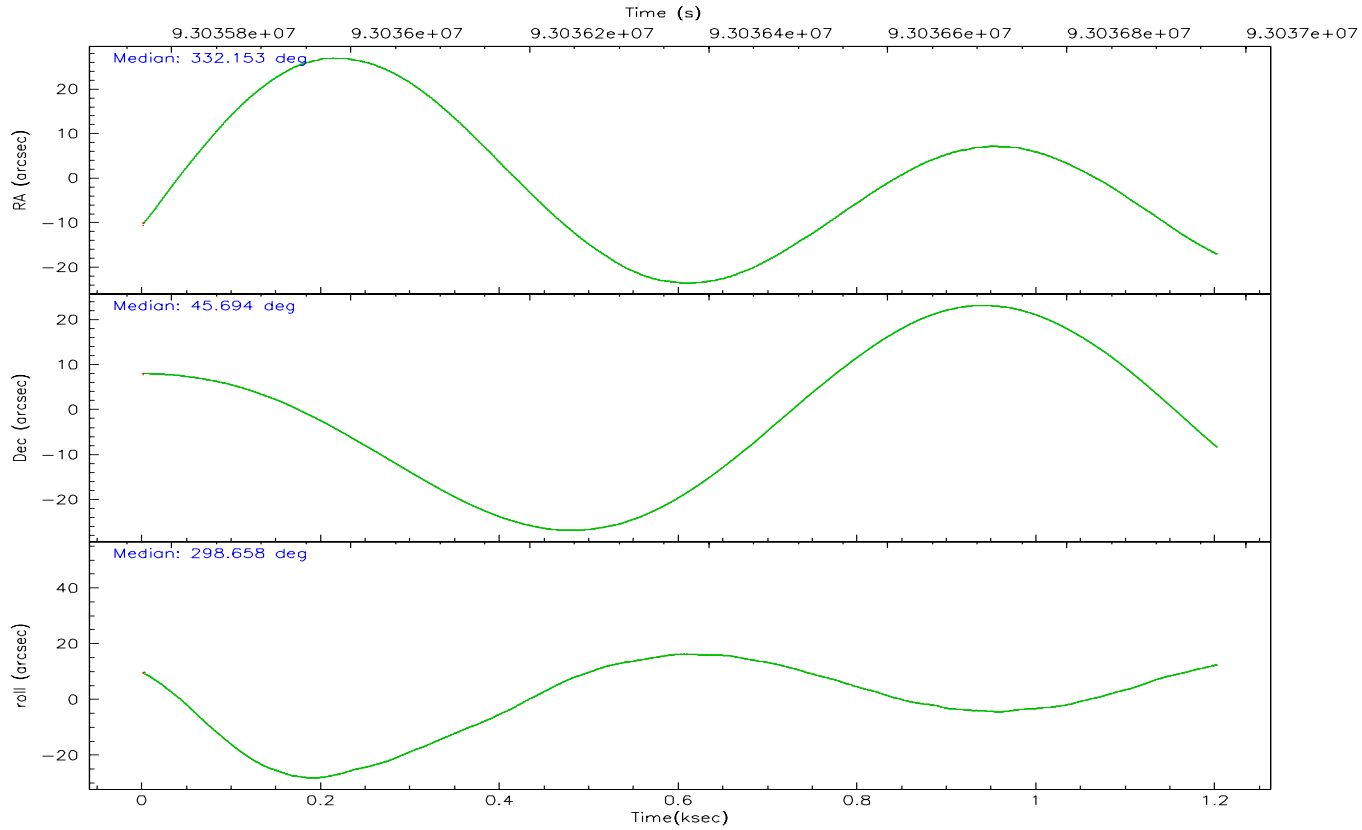
Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-I	HRC-I
Grating	NONE	NONE
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
Pointing RA	332.118124	332.1529897698622
Pointing Dec	45.706454	45.69340214881193
Pointing Roll	298.791229	298.6707923510669
SIM focus pos (mm)	-1.040293	-1.038866356238299
SIM defocus (mm)	0	0.00142626442057514 1
SIM translation stage pos (mm)	126.985494	126.9854943052878
SIM translation stage offset (mm)	0	-5.413686238853188e-06
Observation start time	93035971.184000	93035594.9878
Observation start date	2000-12-12T19:18:27	2000-12-12T19:13:14
Observation end time	93036971.184000	93037104.812858
Observation end date	2000-12-12T19:35:07	2000-12-12T19:38:24

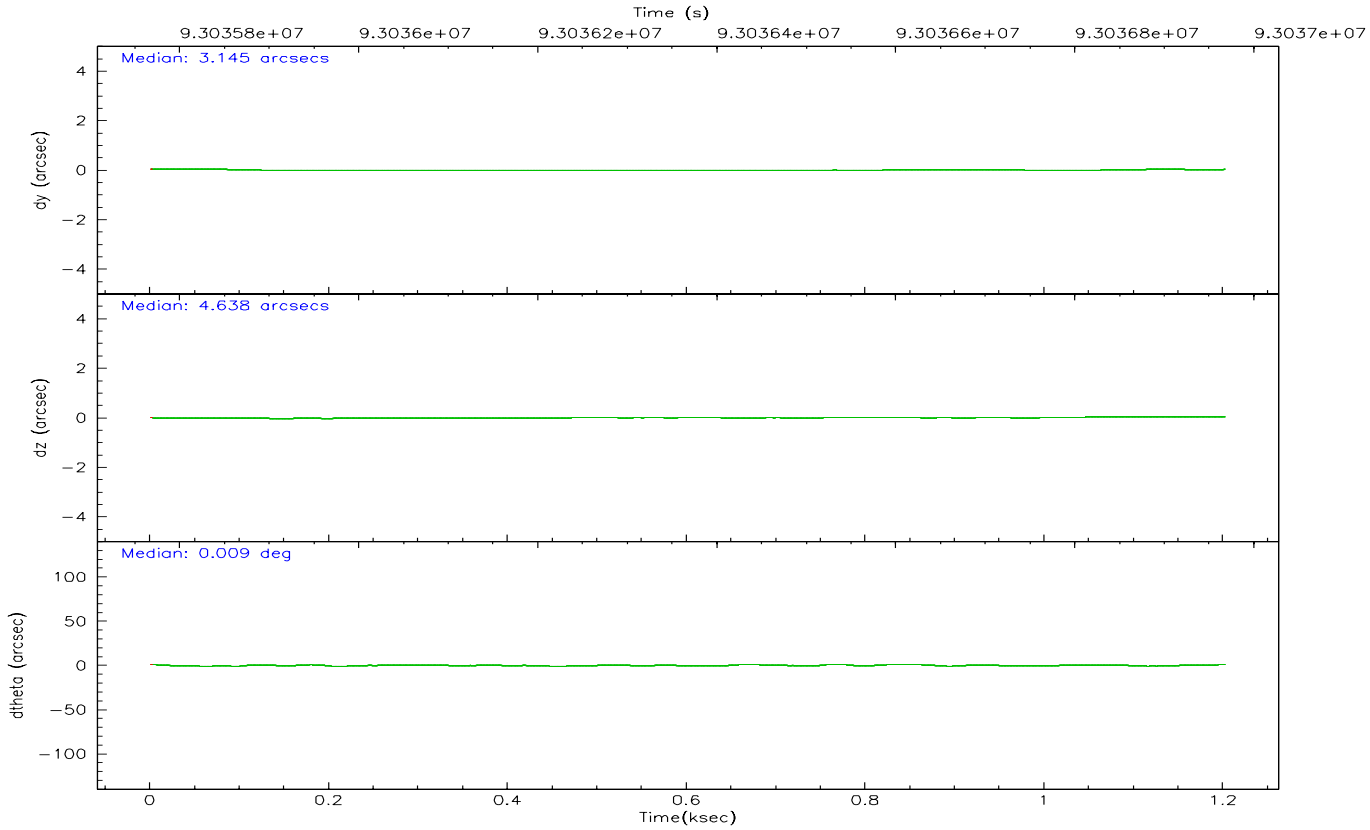
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED

2.3 Aspect


RA : 332.153 deg
Dec : 45.694 deg
20
10
0
−10
−20
Dec (arcsec)
−20
0
20
40
RA (arcsec)


DY : 3.145 arcsecs
DZ : 4.638 arcsecs
4
2
0
−2
−4
DZ (arcsec)
−4
−2
0
2
4
DY (arcsec)


Time (s)
9.30358e+07
9.3036e+07
9.30362e+07
9.30364e+07
9.30366e+07
9.30368e+07
9.3037e+07
Median: 332.153 deg
RA (arcsec)
Median: 45.694 deg
Dec (arcsec)
Median: 298.658 deg
roll (arcsec)
Time(ksec)

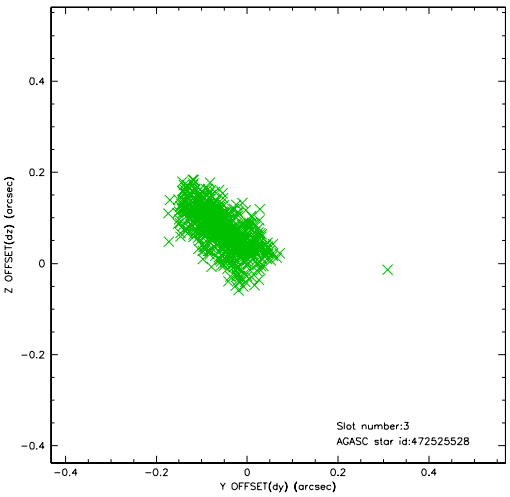

Time (s)
9.30358e+07
9.3036e+07
9.30362e+07
9.30364e+07
9.30366e+07
9.30368e+07
9.3037e+07
Median: 3.145 arcsecs
dy (arcsec)
Median: 4.638 arcsecs
dz (arcsec)
Median: 0.009 deg
dtheta (arcsec)
Time(ksec)

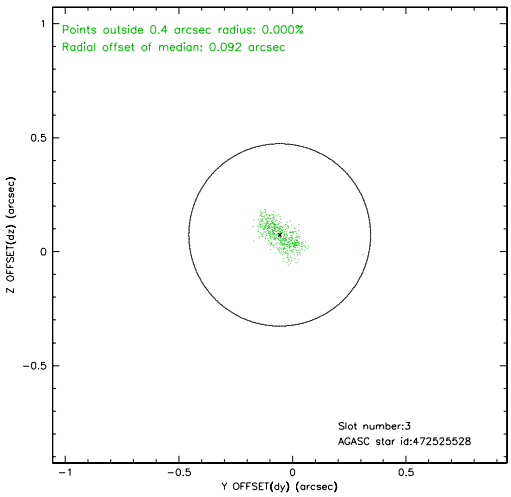
Slot Statistics

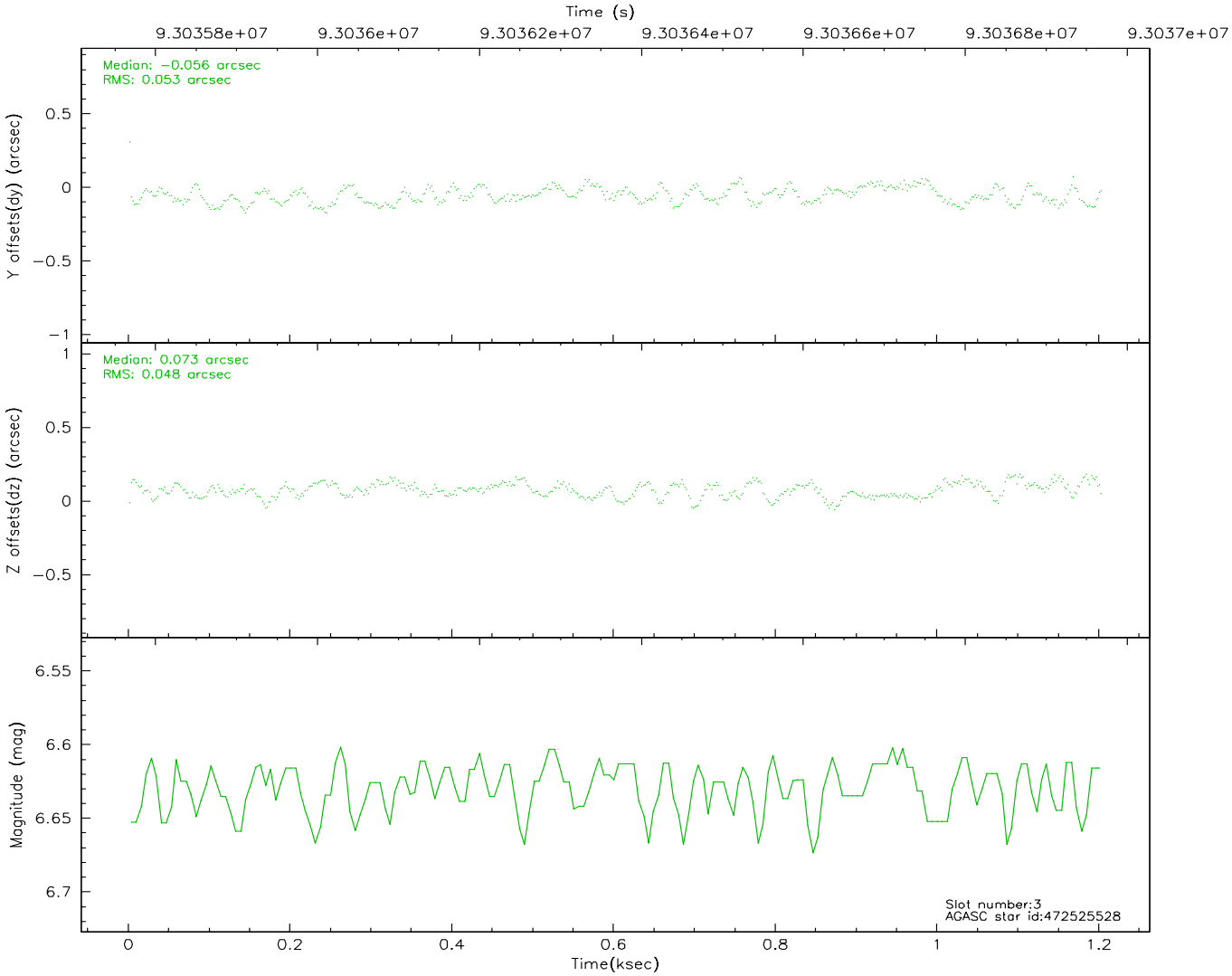
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-I-1	6.97	294	0.049	0.065	0.006	0.010	0.000000	0.000000	-758.59	-1292.40
1	FID	HRC-I-3	7.05	294	0.029	-0.095	0.007	0.011	0.000000	0.000000	-1189.66	1007.61
2	FID	HRC-I-4	6.99	294	0.035	-0.058	0.005	0.009	0.000000	0.000000	1280.16	1013.06
3	GUIDE	472525528	6.63	587	-0.056	0.073	0.077	0.119	331.551102	45.248694	748.60	-2055.36
4	GUIDE	472523760	8.23	587	-0.039	-0.059	0.062	0.101	331.645363	45.403260	380.11	-1579.61
5	GUIDE	472665256	9.02	587	-0.065	-0.047	0.081	0.129	332.808125	46.195041	-719.30	2349.81
6	GUIDE	420754040	9.09	586	0.113	-0.048	0.103	0.158	331.917939	44.882543	2352.85	-1876.13
7	GUIDE	472659832	9.47	583	0.043	0.088	0.101	0.163	332.780399	46.098139	-441.34	2123.23

2.4 Star Slots

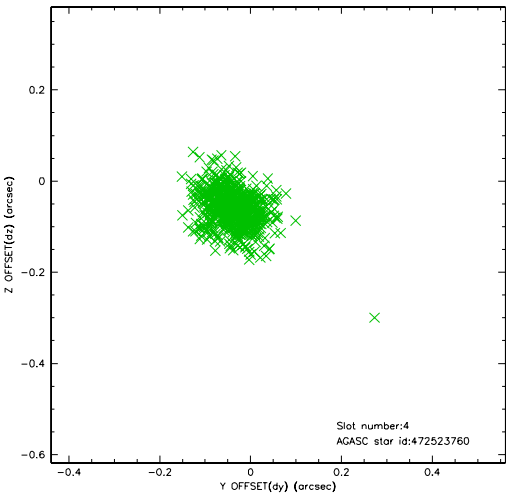
2.4.1 Slot 3

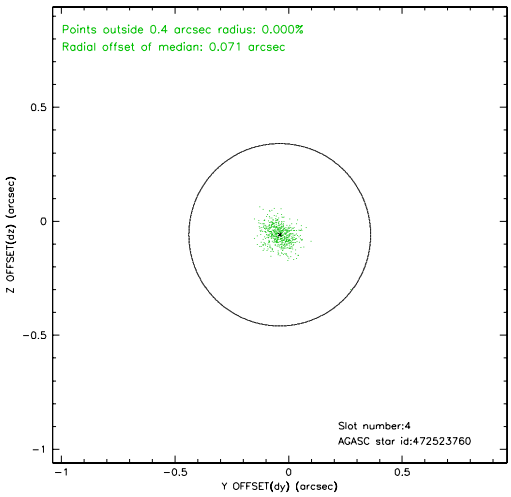


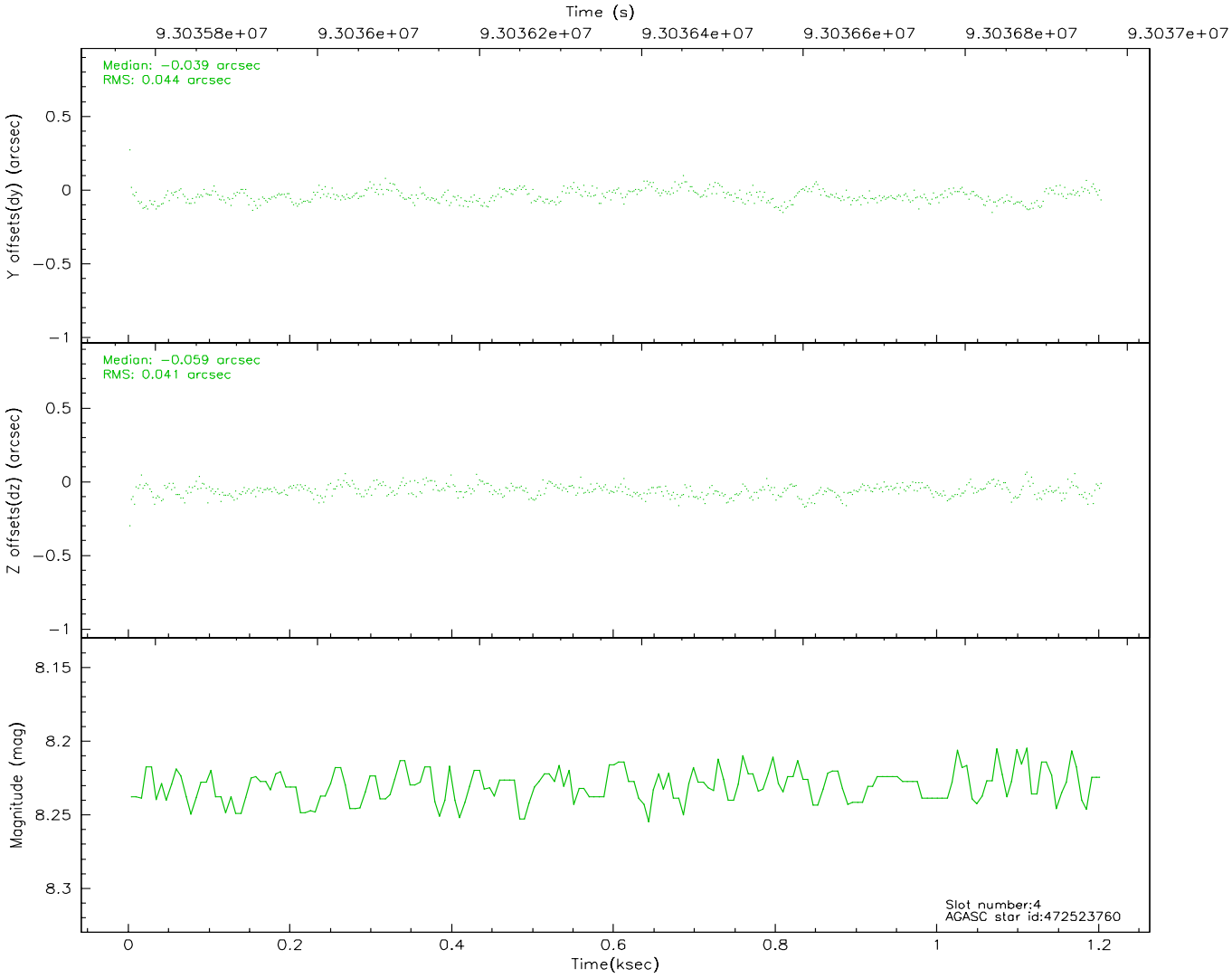




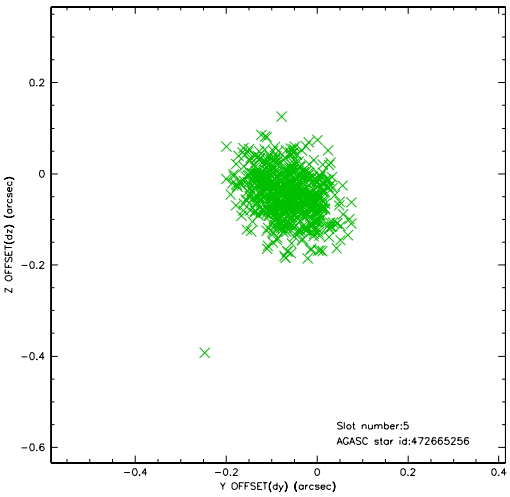
2.4.2 Slot 4

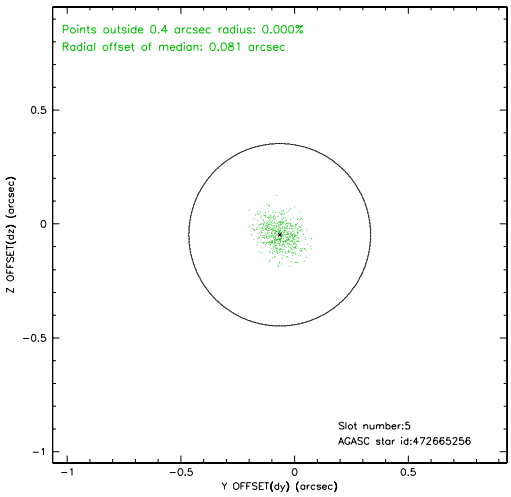

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:472523760

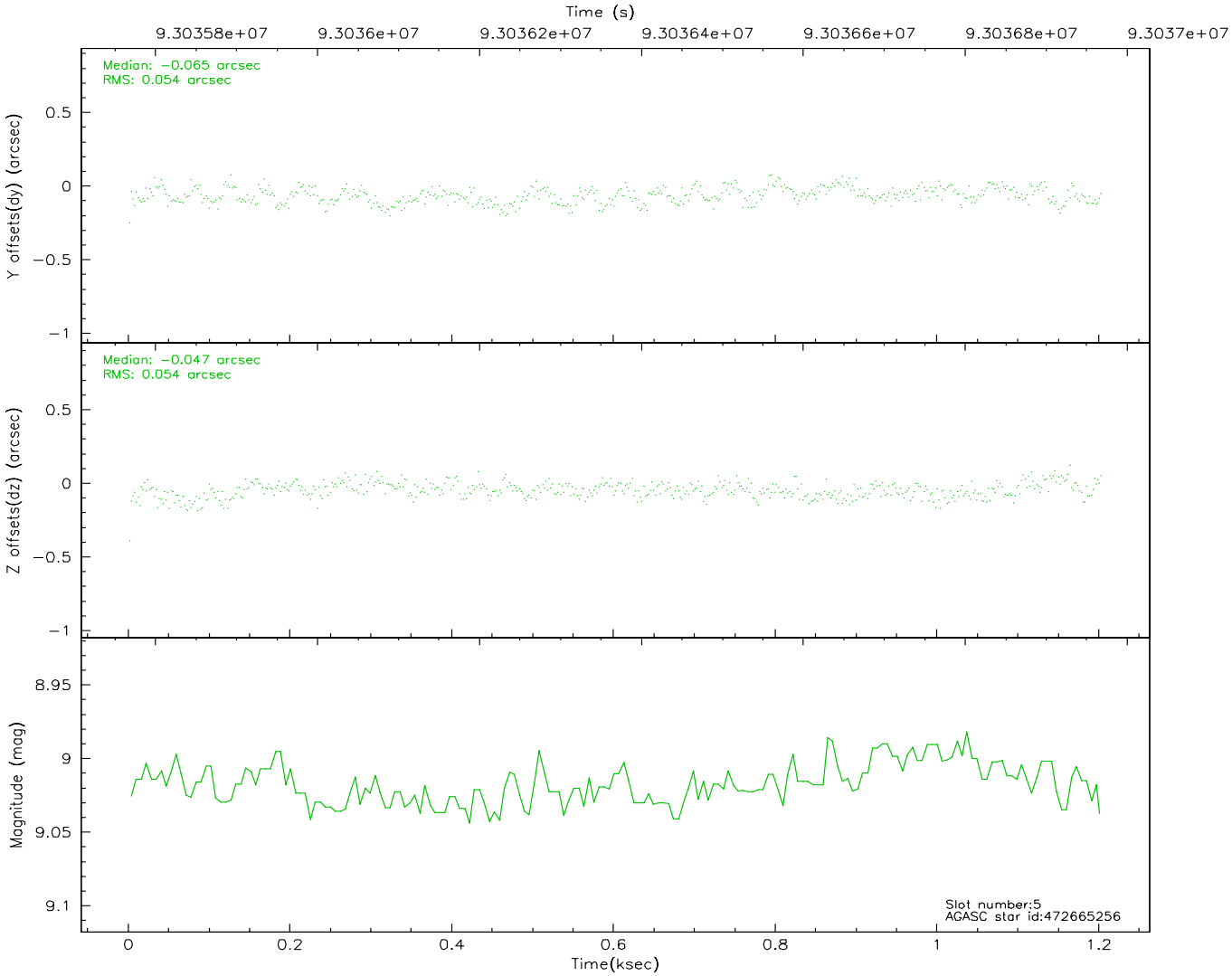

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.071 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:472523760


Time (s)
Median: −0.039 arcsec
RMS: 0.044 arcsec
Y offsets(dy) (arcsec)
Median: −0.059 arcsec
RMS: 0.041 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:472523760
Time(ksec)

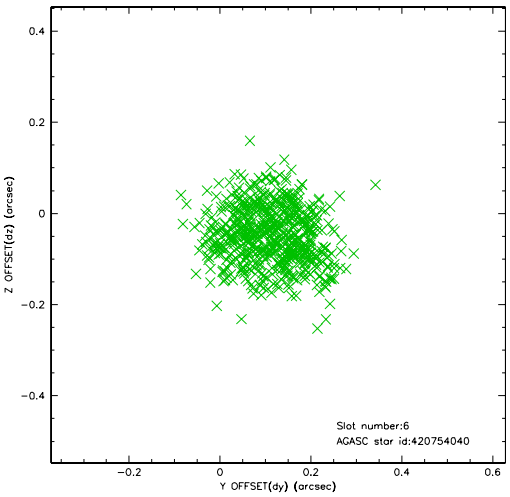
2.4.3 Slot 5

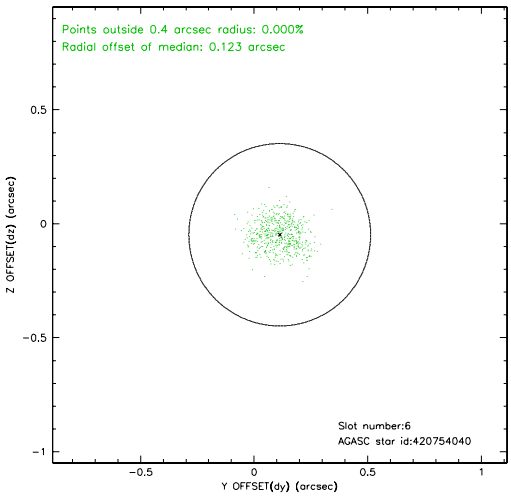

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:472665256

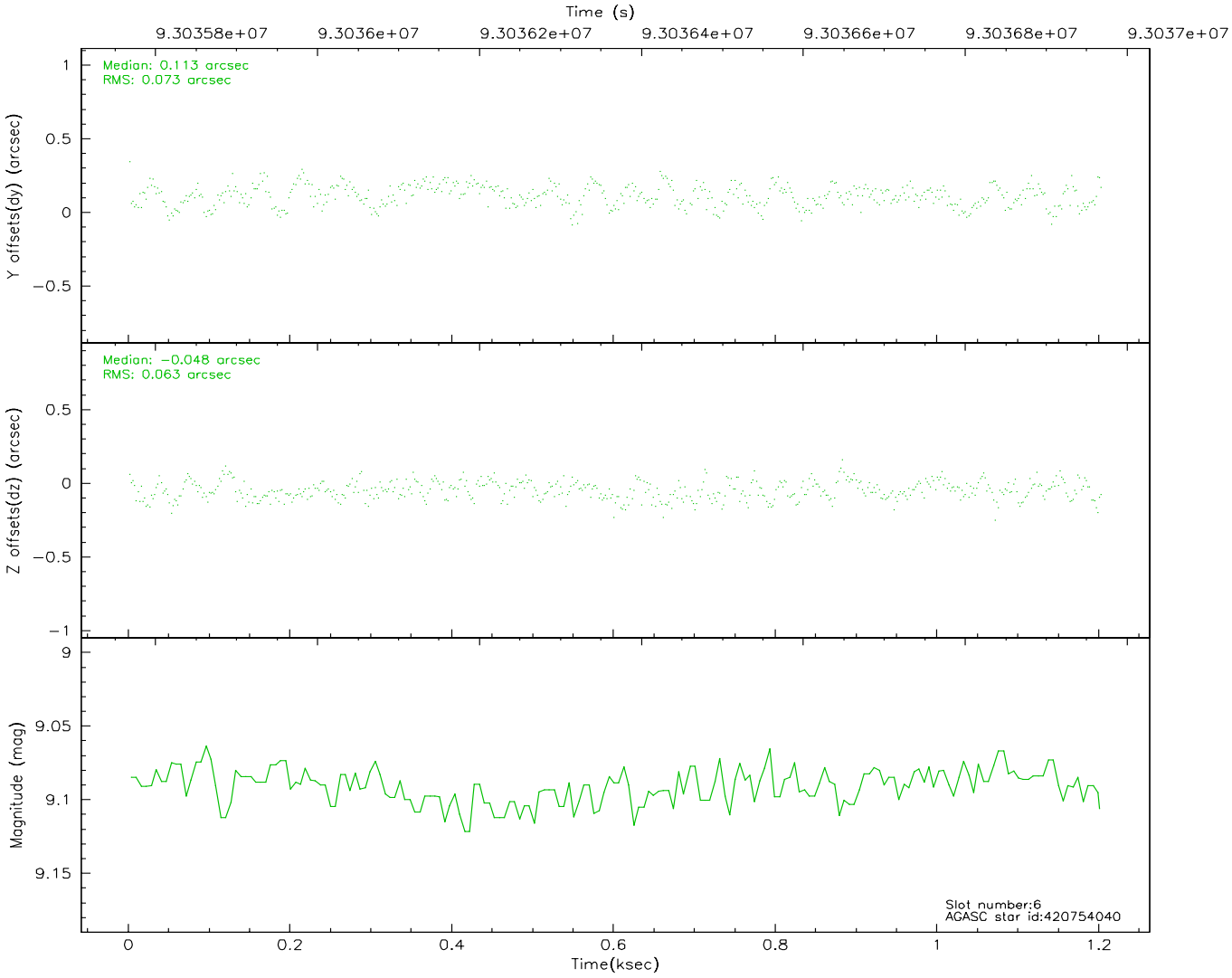

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.081 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:472665256


Time (s)
Median: −0.065 arcsec
RMS: 0.054 arcsec
Y offsets(dy) (arcsec)
Median: −0.047 arcsec
RMS: 0.054 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:472665256
Time(ksec)

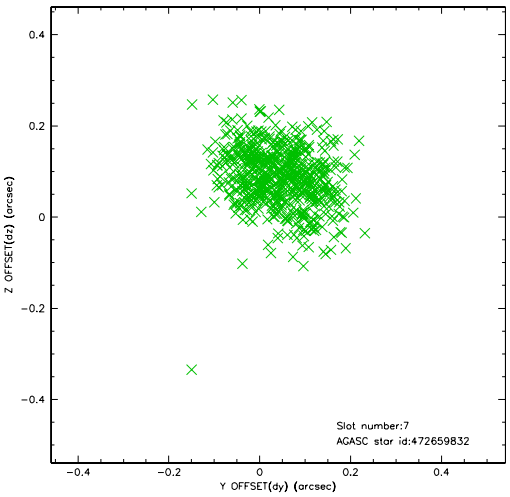
2.4.4 Slot 6

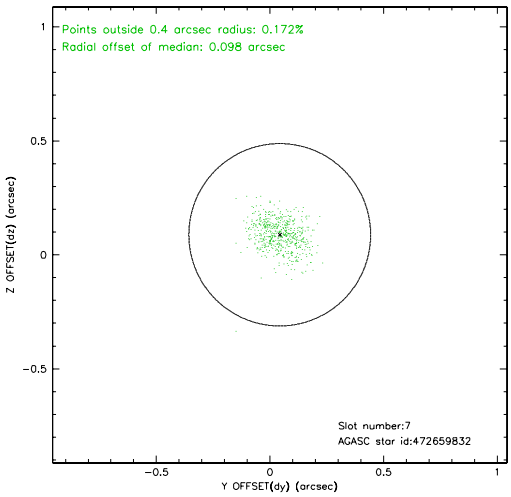

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:420754040

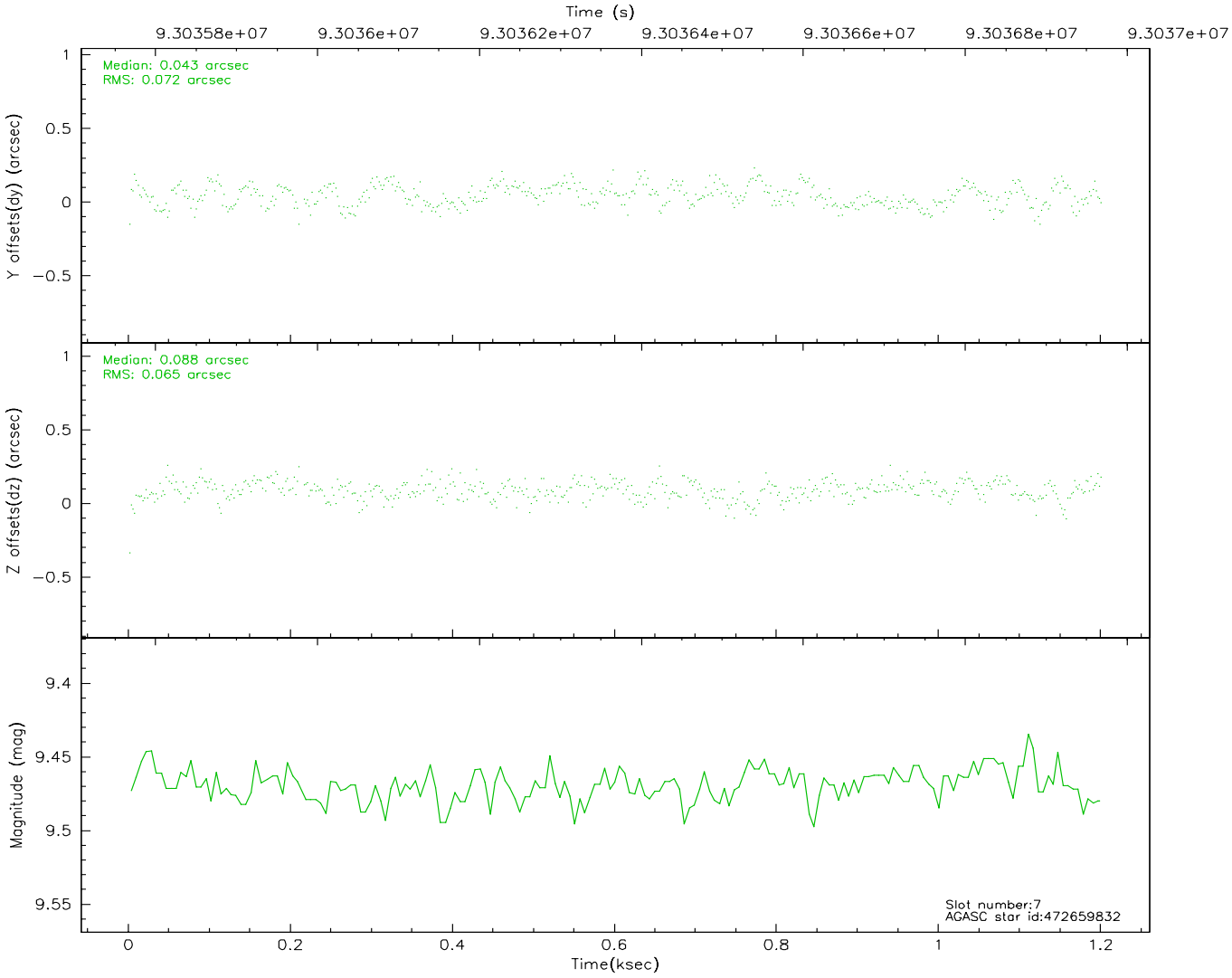

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.123 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:420754040


Time (s)
Median: 0.113 arcsec
RMS: 0.073 arcsec
Y offsets(dy) (arcsec)
Median: −0.048 arcsec
RMS: 0.063 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:420754040
Time(ksec)

2.4.5 Slot 7

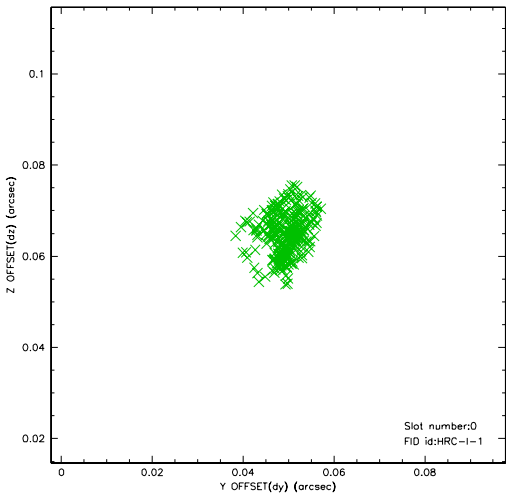

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:472659832

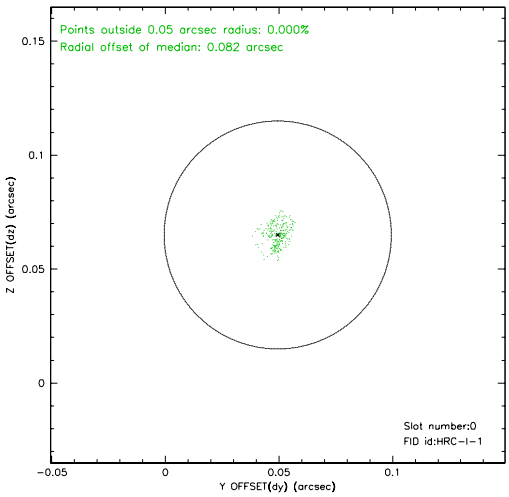

Points outside 0.4 arcsec radius: 0.172%
Radial offset of median: 0.098 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:472659832

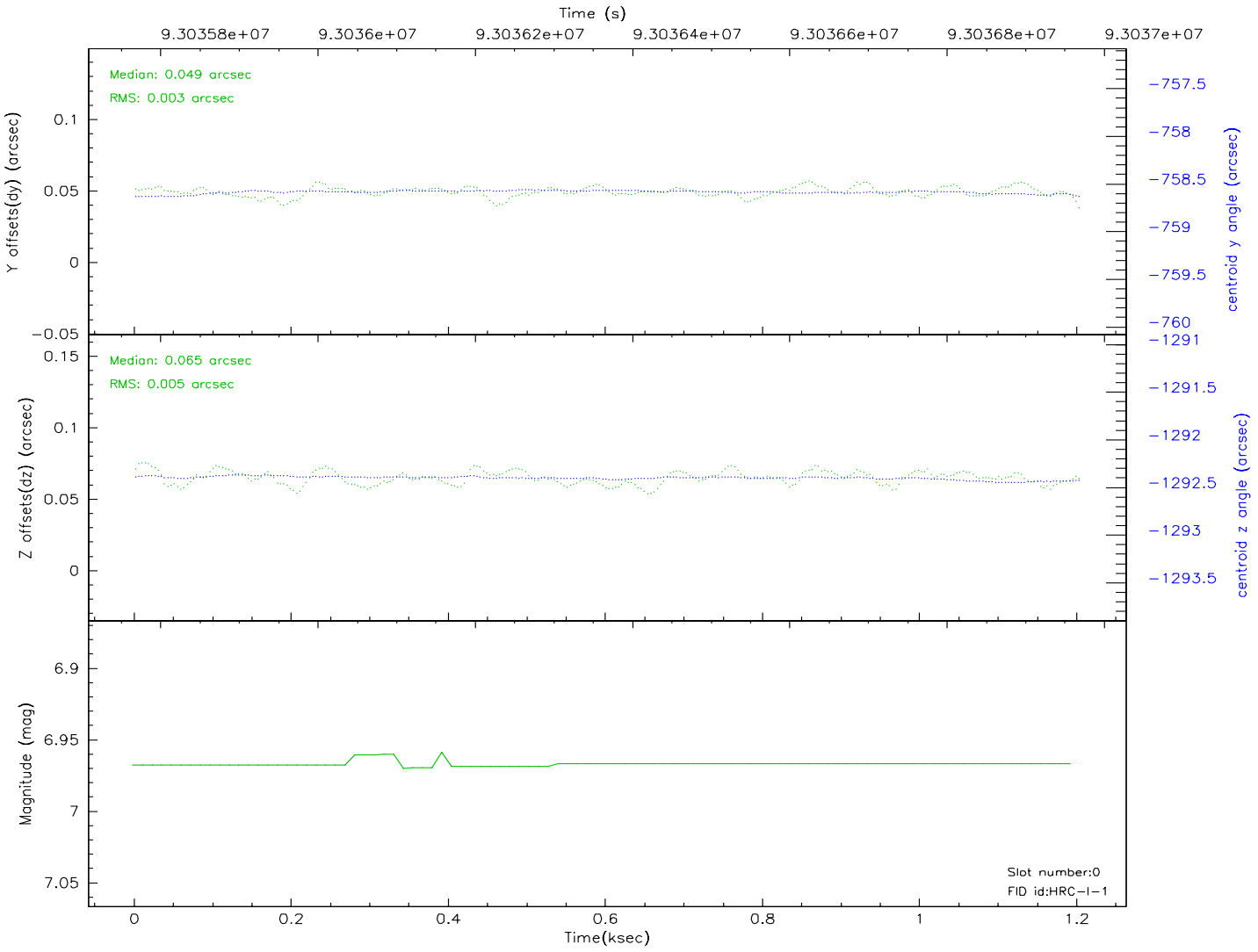

Time (s)
Median: 0.043 arcsec
RMS: 0.072 arcsec
Y offsets(dy) (arcsec)
Median: 0.088 arcsec
RMS: 0.065 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:472659832
Time(ksec)

2.5 FID Slots

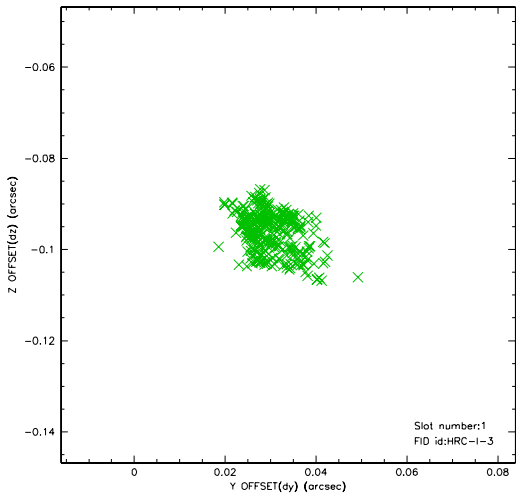
2.5.1 Slot 0

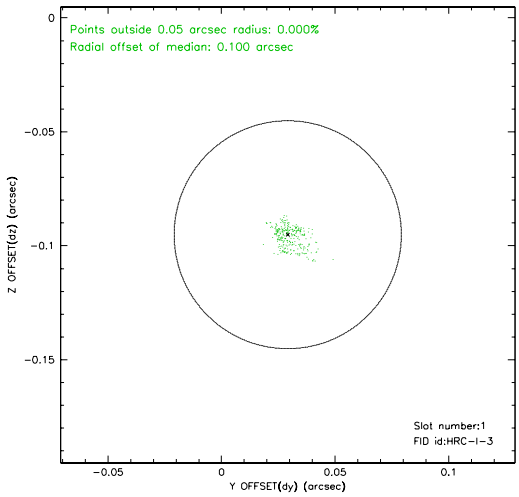


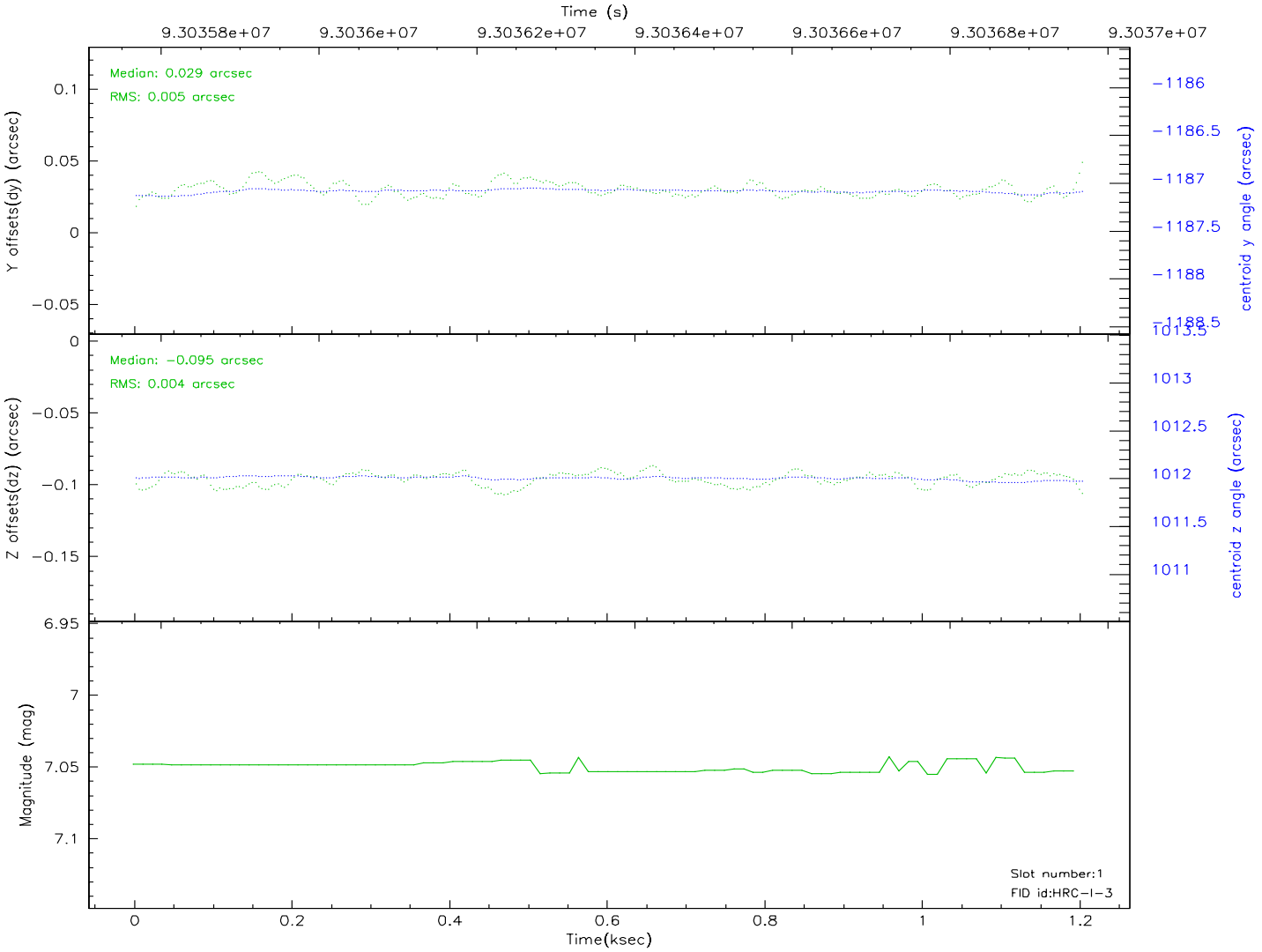




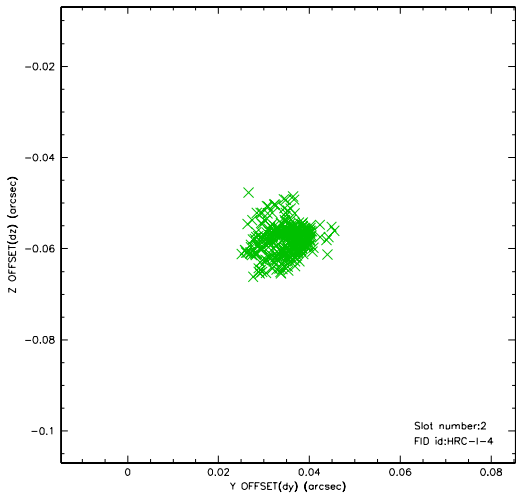
2.5.2 Slot 1

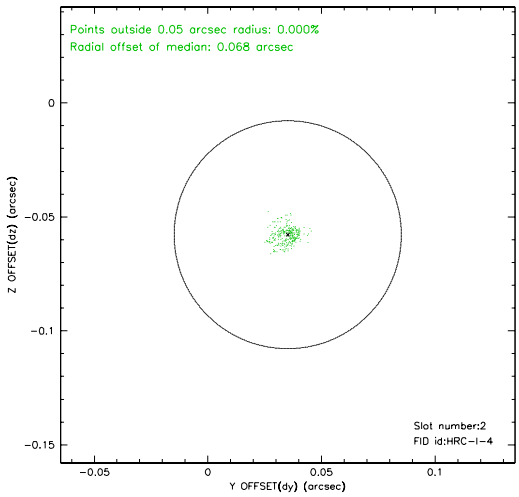

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-I-3

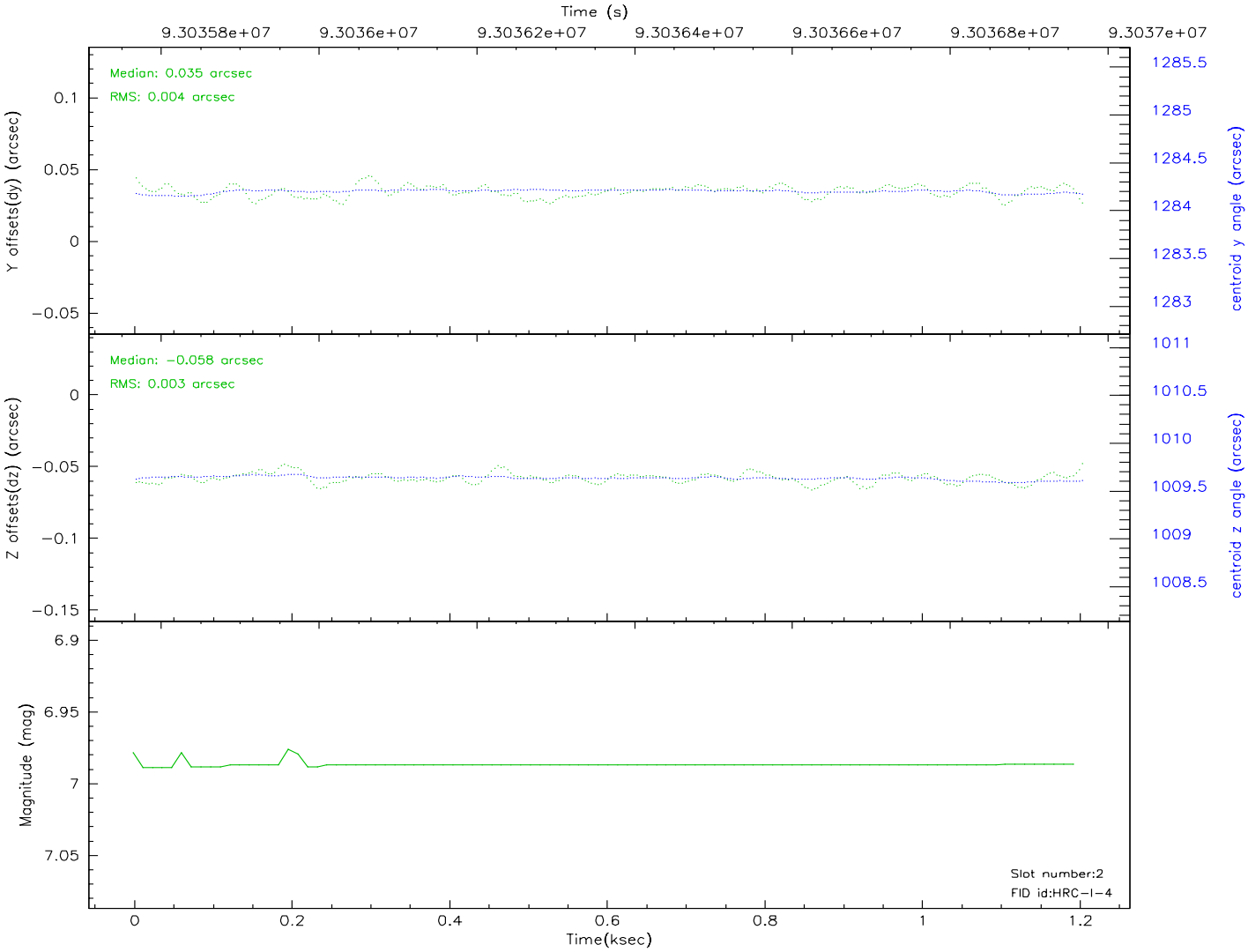

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.100 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-I-3


Time (s)
Median: 0.029 arcsec
RMS: 0.005 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.095 arcsec
RMS: 0.004 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:1
FID id:HRC-I-3
Time(ksec)

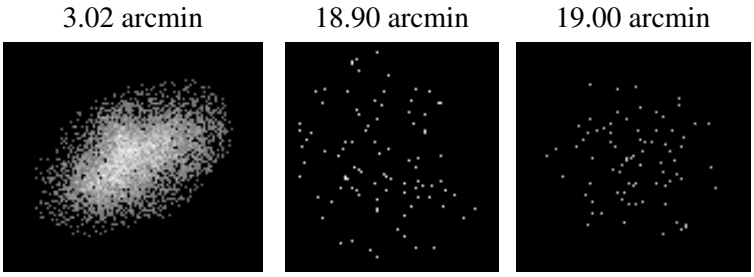
2.5.3 Slot 2


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


Time (s)
Median: 0.035 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
Median: −0.058 arcsec
RMS: 0.003 arcsec
Z offsets(dz) (arcsec)
centroid y angle (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	1.2

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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