V&V Reference Report
L2 ASCDS Version : 7.6.7.2

Observation 5082 - L2 Version 001
Chandra X-Ray Center

L2 Processing Date : Jun 4 2006

Contents

1 Front **2**

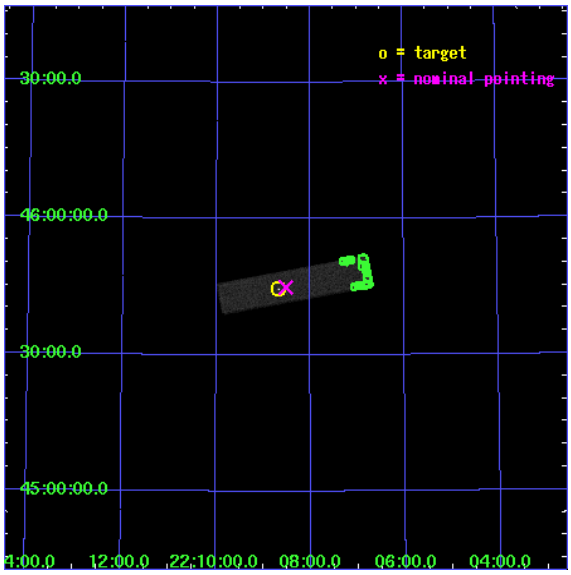
2 OBI **3**
2.1 OBI . . . 3
2.1.1 Images . . . 3
2.1.2 Parameters . . . 4
2.1.3 Events . . . 4
2.2 Compared Parameters . . . 5
2.3 Aspect . . . 6
2.4 Star Slots . . . 9
2.4.1 Slot 3 . . . 9
2.4.2 Slot 4 . . . 10
2.4.3 Slot 5 . . . 11
2.4.4 Slot 6 . . . 12
2.4.5 Slot 7 . . . 13
2.5 FID Slots . . . 14
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	290355
obs_id	5082
title	AO5A Calibration Observations to Monitor the Spatial Variations in the HRC-S Gain
observer	Dr. CXC Calibration
object	ArLac
ra_targ	332.17
dec_targ	45.742306
ra_nom	332.13008311335
dec_nom	45.748388881852
roll_nom	349.47537214768
revision	2
ontime	1088.8062976003
livetime	1083.0027028437
l2events	38949

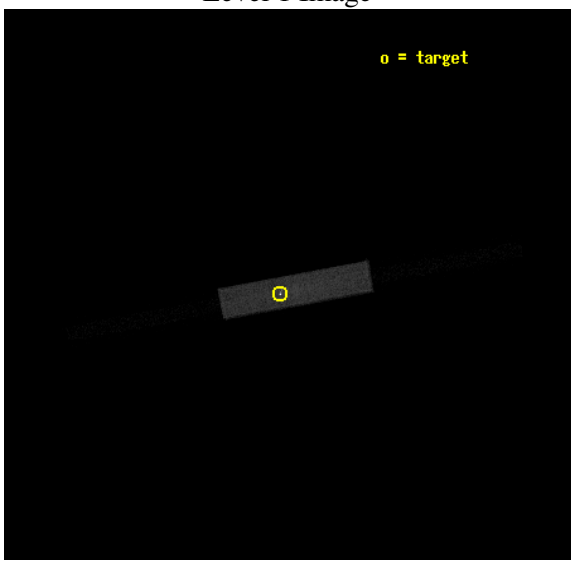


2 OBI

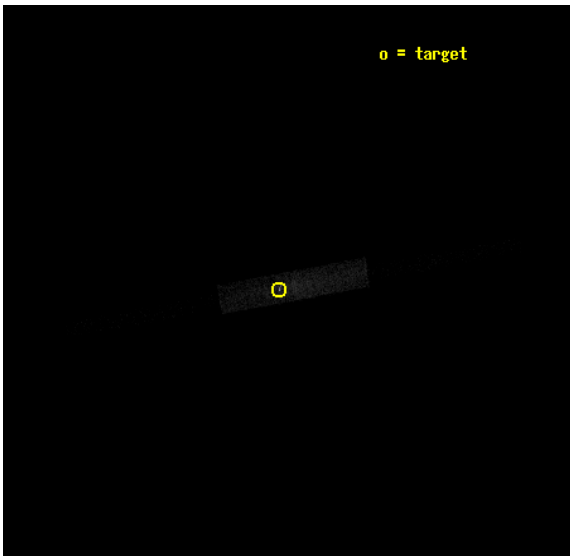
2.1 OBI

2.1.1 Images

Level 1 Image



Level 1 Bad Events



2.1.2 Parameters

obi_num	0
ascdsver	7.6.7.2
caldbver	3.2.2
date	2006-06-04T16:45:18
revision	2

sched_exp_time	946.000000
ontime	1126.7312992513
l1events	68373

2.1.3 Events

Level 1 Events

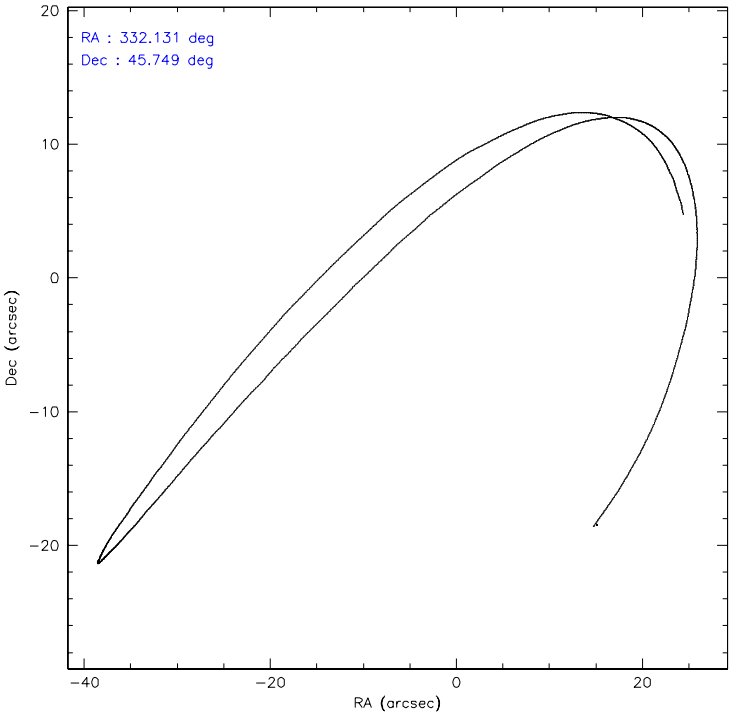
	segment 1	**segment 2**	**segment 3**
level 1 events	1148	66119	1106
rejected events	1148	24213	1106
rejected %	100%	36%	100%

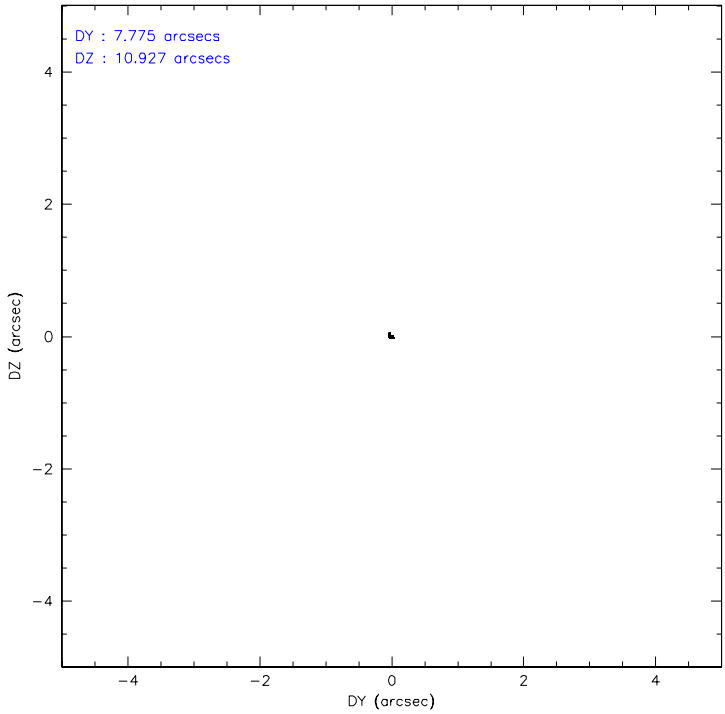
2.2 Compared Parameters

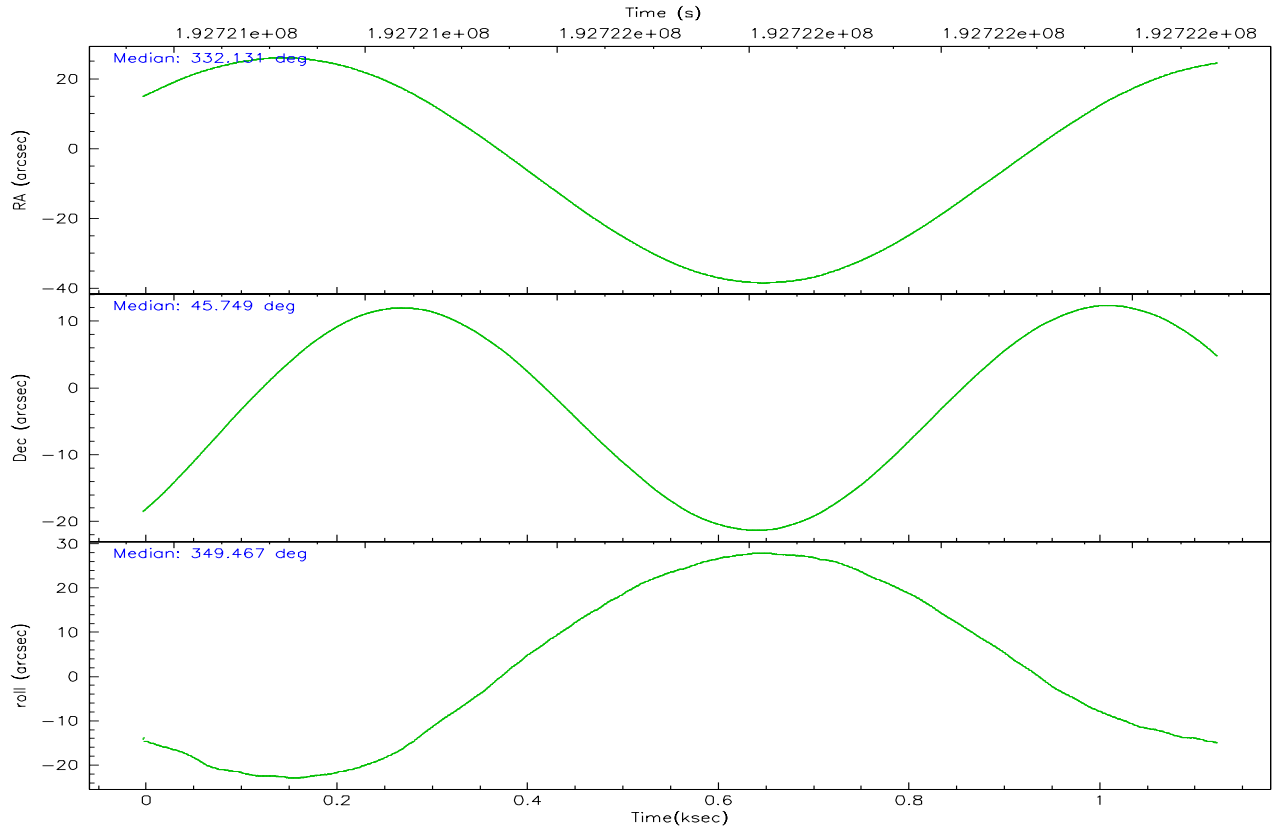
Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-S	HRC-S
Grating	NONE	NONE
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
Pointing RA	332.091689	332.1300831133533
Pointing Dec	45.736588	45.74838888185237
Pointing Roll	349.435596	349.4753721476763
SIM focus pos (mm)	-1.429586	-1.428180813131781
SIM defocus (mm)	0.1037507710433287	0.1051558262725154
SIM translation stage pos (mm)	250.455976	250.466033080201
SIM translation stage offset (mm)	0	-0.01005468664627074
Observation start time	192721345.184000	192720968.54706
Observation start date	2004-02-09T13:41:21	2004-02-09T13:36:08
Observation end time	192722291.184000	192722425.07213
Observation end date	2004-02-09T13:57:07	2004-02-09T14:00:25

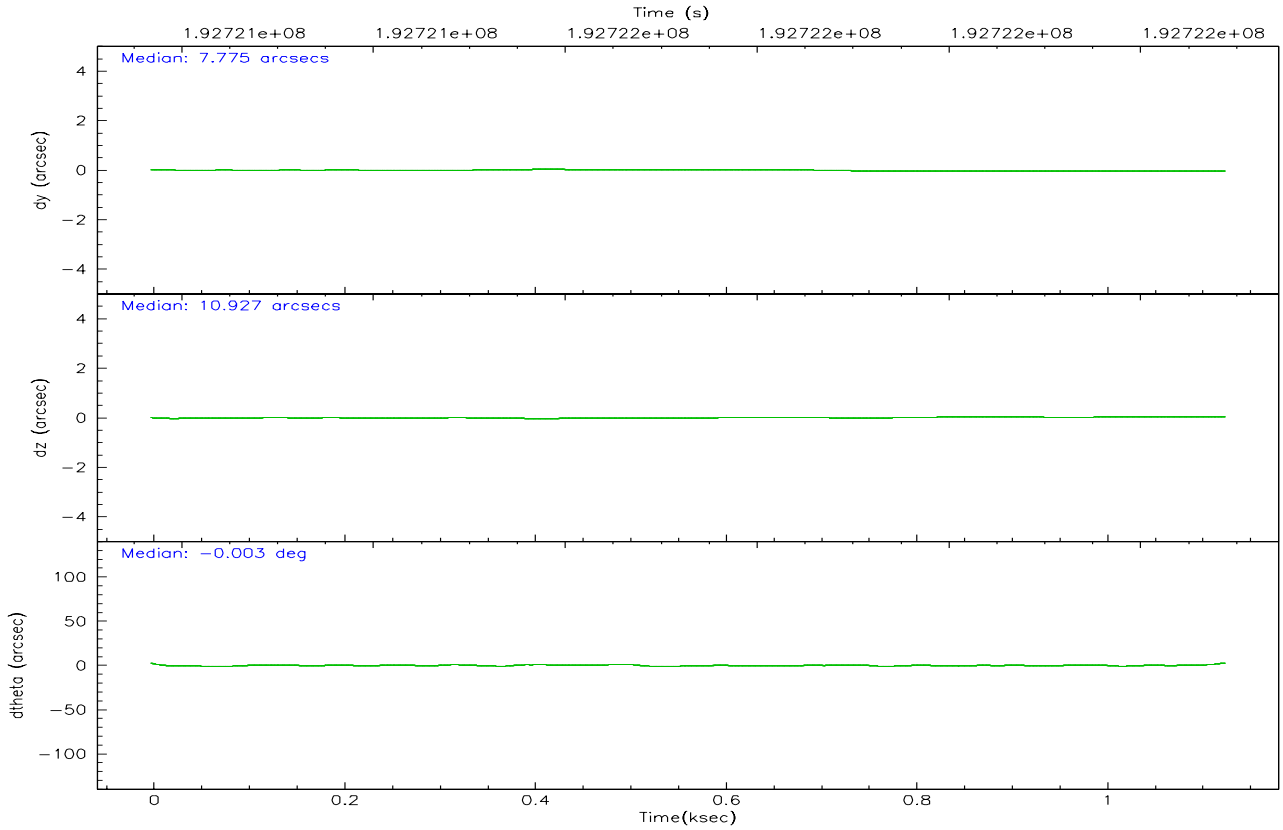
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED

2.3 Aspect


RA : 332.131 deg
Dec : 45.749 deg
Dec (arcsec)
RA (arcsec)
20
10
0
−10
−20
−40
−20
0
20


DY : 7.775 arcsecs
DZ : 10.927 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
1.92721e+08
1.92721e+08
1.92722e+08
1.92722e+08
1.92722e+08
1.92722e+08
Median: 332.131 deg
RA (arcsec)
Median: 45.749 deg
Dec (arcsec)
Median: 349.467 deg
roll (arcsec)
Time(ksec)

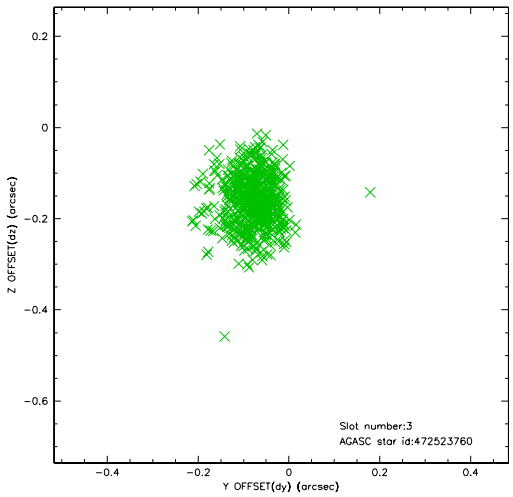

Time (s)
1.92721e+08
1.92721e+08
1.92722e+08
1.92722e+08
1.92722e+08
1.92722e+08
Median: 7.775 arcsecs
dy (arcsec)
Median: 10.927 arcsecs
dz (arcsec)
Median: −0.003 deg
dtheta (arcsec)
Time(ksec)

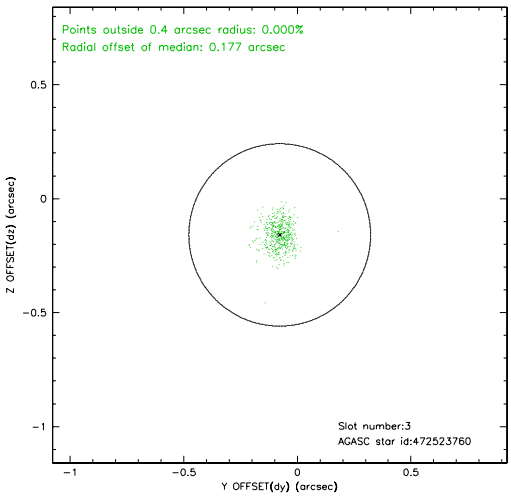
Slot Statistics

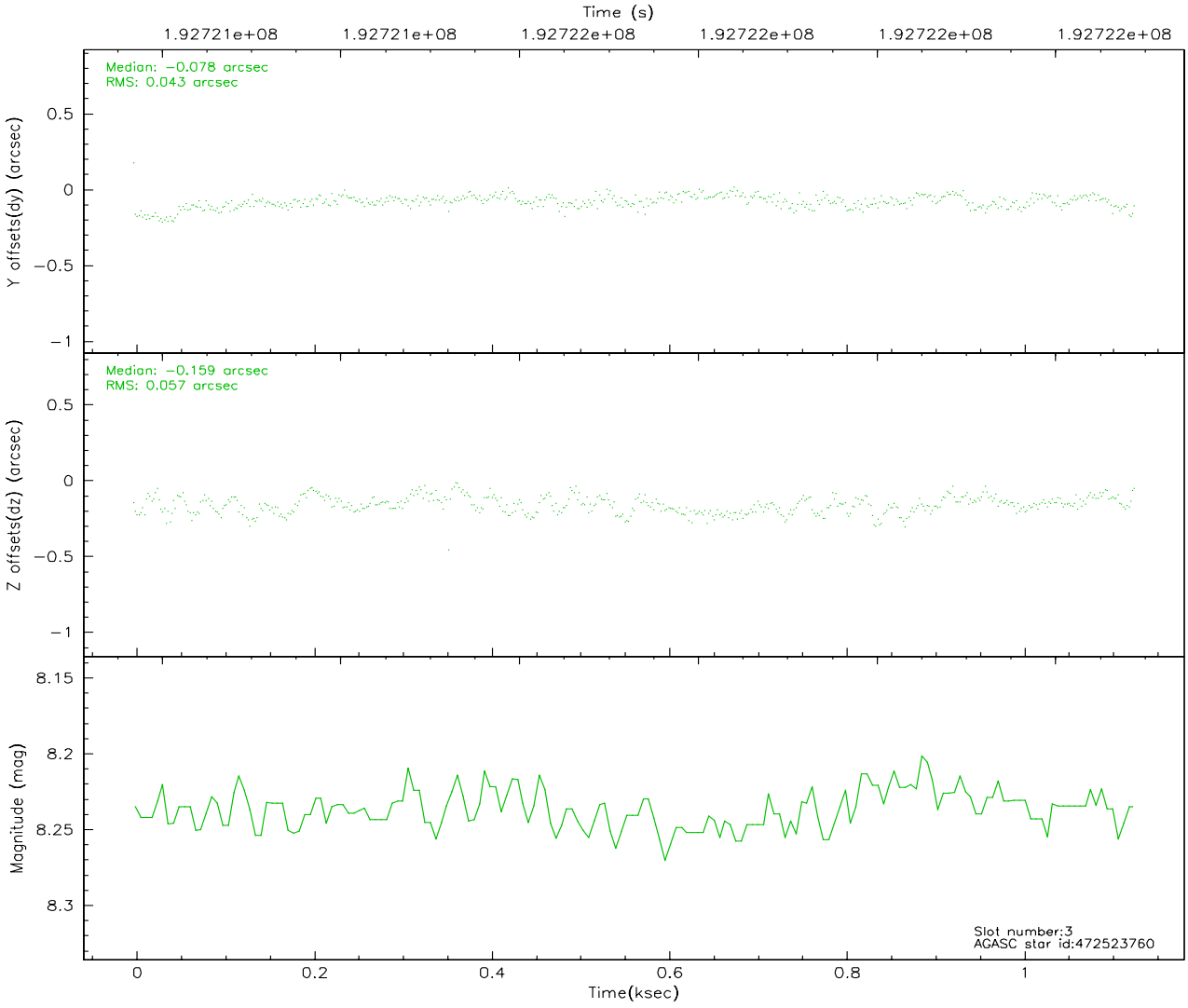
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-S-1	7.05	275	0.142	-0.175	0.008	0.014	0.000000	0.000000	-1161.92	-459.65
1	FID	HRC-S-2	7.04	275	0.144	-0.111	0.009	0.015	0.000000	0.000000	1233.53	-453.92
2	FID	HRC-S-3	7.05	275	0.106	-0.017	0.008	0.015	0.000000	0.000000	-1160.19	568.38
3	GUIDE	472523760	8.24	551	-0.078	-0.159	0.075	0.123	331.645363	45.403260	-889.93	-1387.09
4	GUIDE	472533912	9.17	551	-0.037	0.034	0.114	0.175	331.791136	46.368695	-1153.83	2095.51
5	GUIDE	472654568	9.43	551	-0.033	-0.014	0.118	0.193	332.194449	45.063576	698.86	-2333.20
6	GUIDE	472655152	9.42	550	0.091	0.043	0.098	0.202	332.504239	45.862991	933.72	632.09
7	GUIDE	472659832	9.46	550	0.047	0.087	0.104	0.158	332.780399	46.098139	1451.26	1600.14

2.4 Star Slots

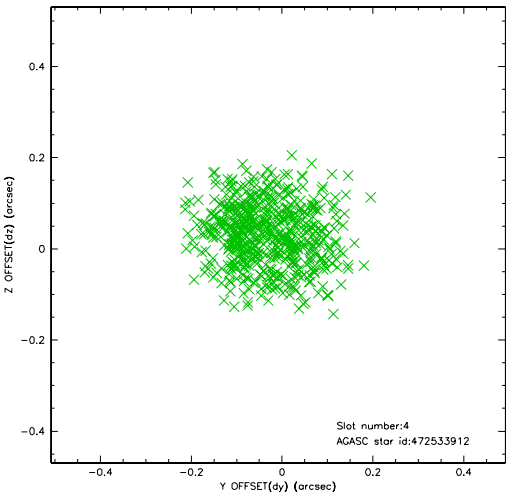
2.4.1 Slot 3

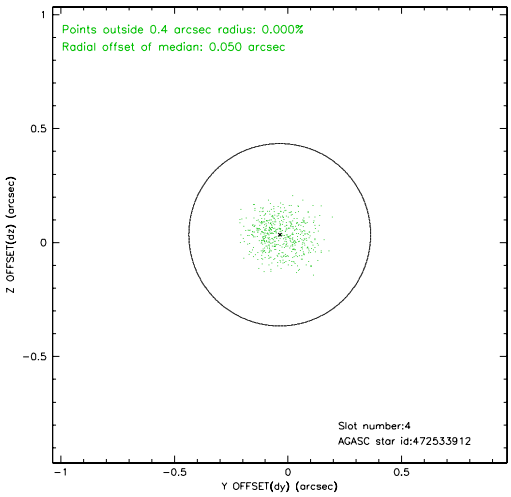


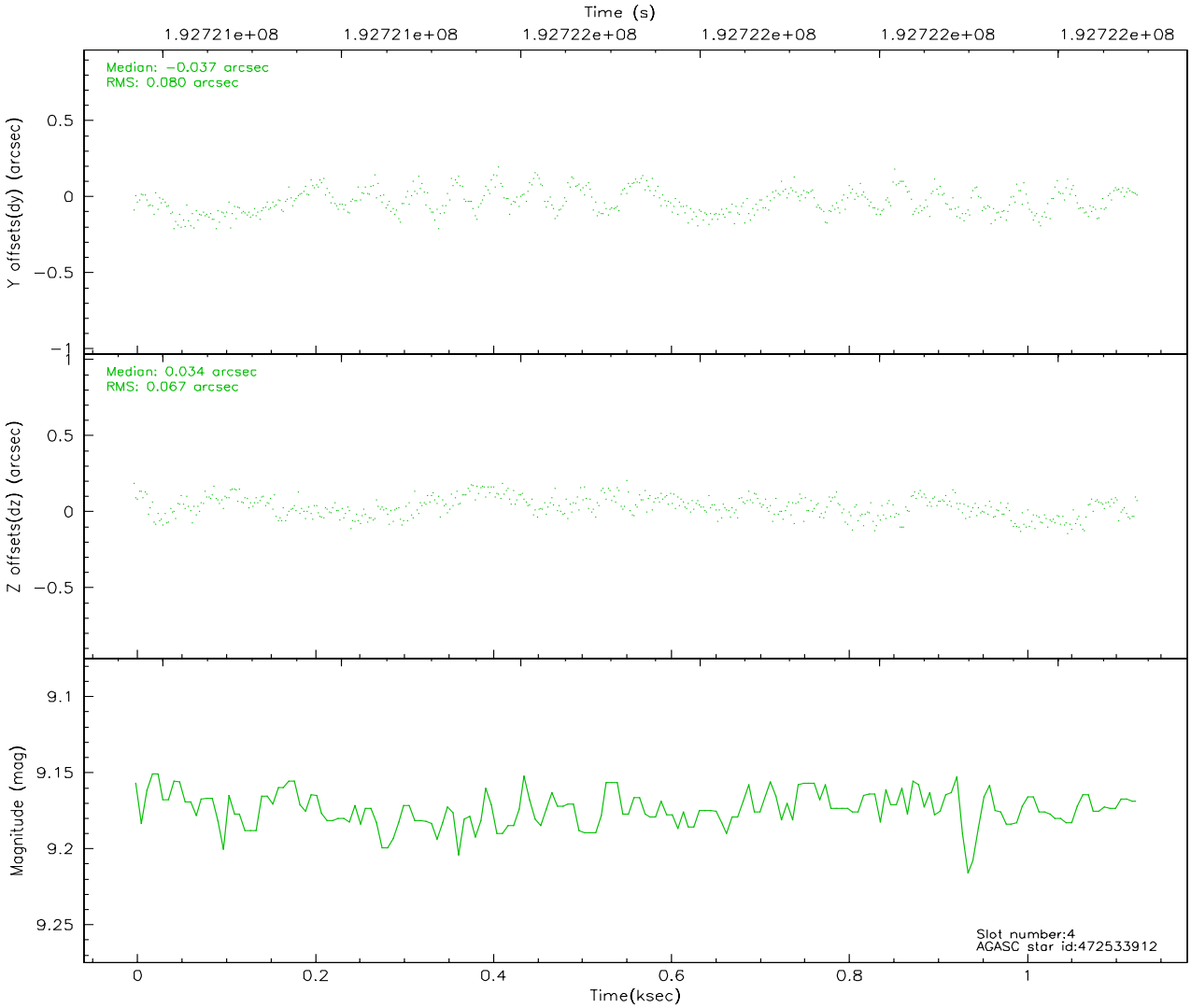




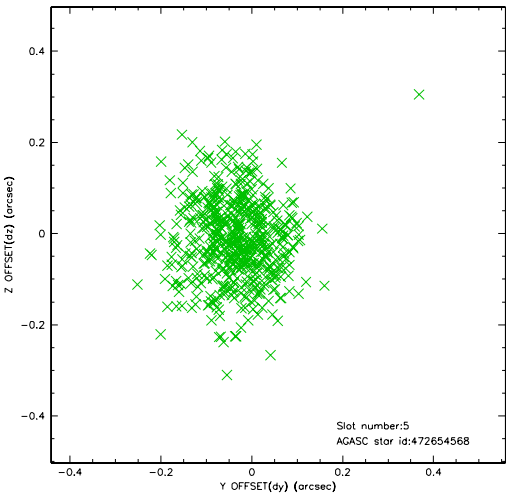
2.4.2 Slot 4

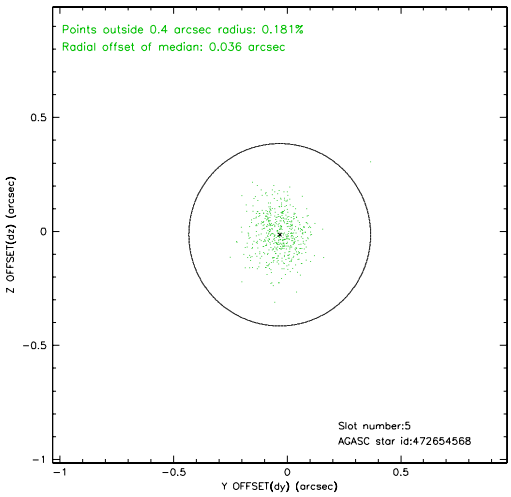

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:472533912

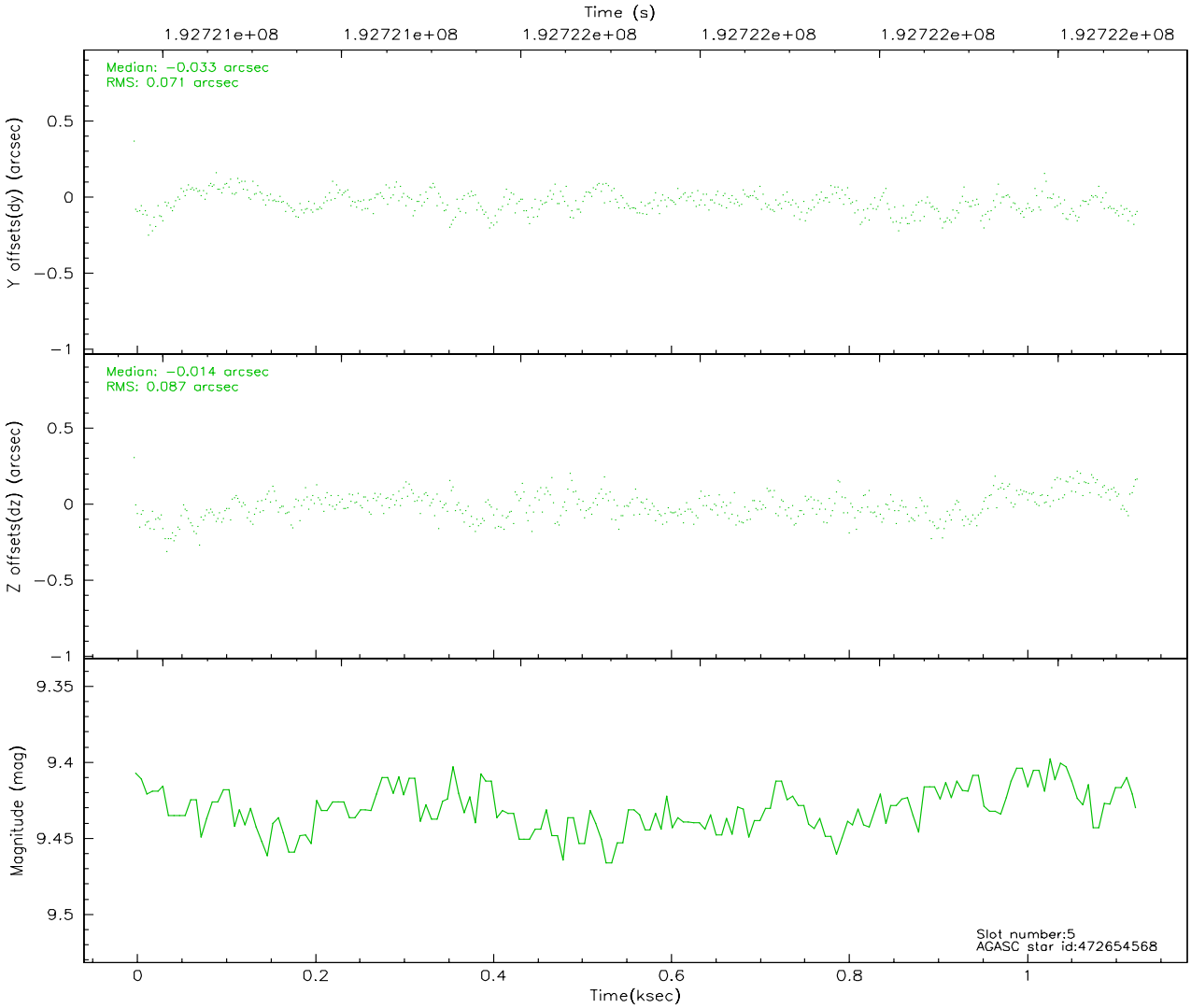

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.050 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:472533912


Time (s)
1.92721e+08
1.92721e+08
1.92722e+08
1.92722e+08
1.92722e+08
1.92722e+08
Median: −0.037 arcsec
RMS: 0.080 arcsec
Y offsets(dy) (arcsec)
Median: 0.034 arcsec
RMS: 0.067 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:472533912
Time(ksec)

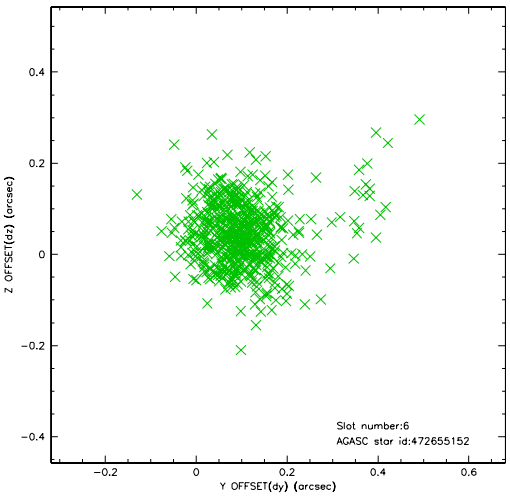
2.4.3 Slot 5

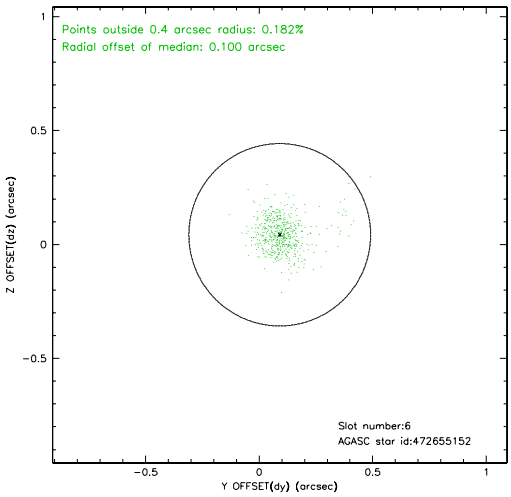

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:472654568

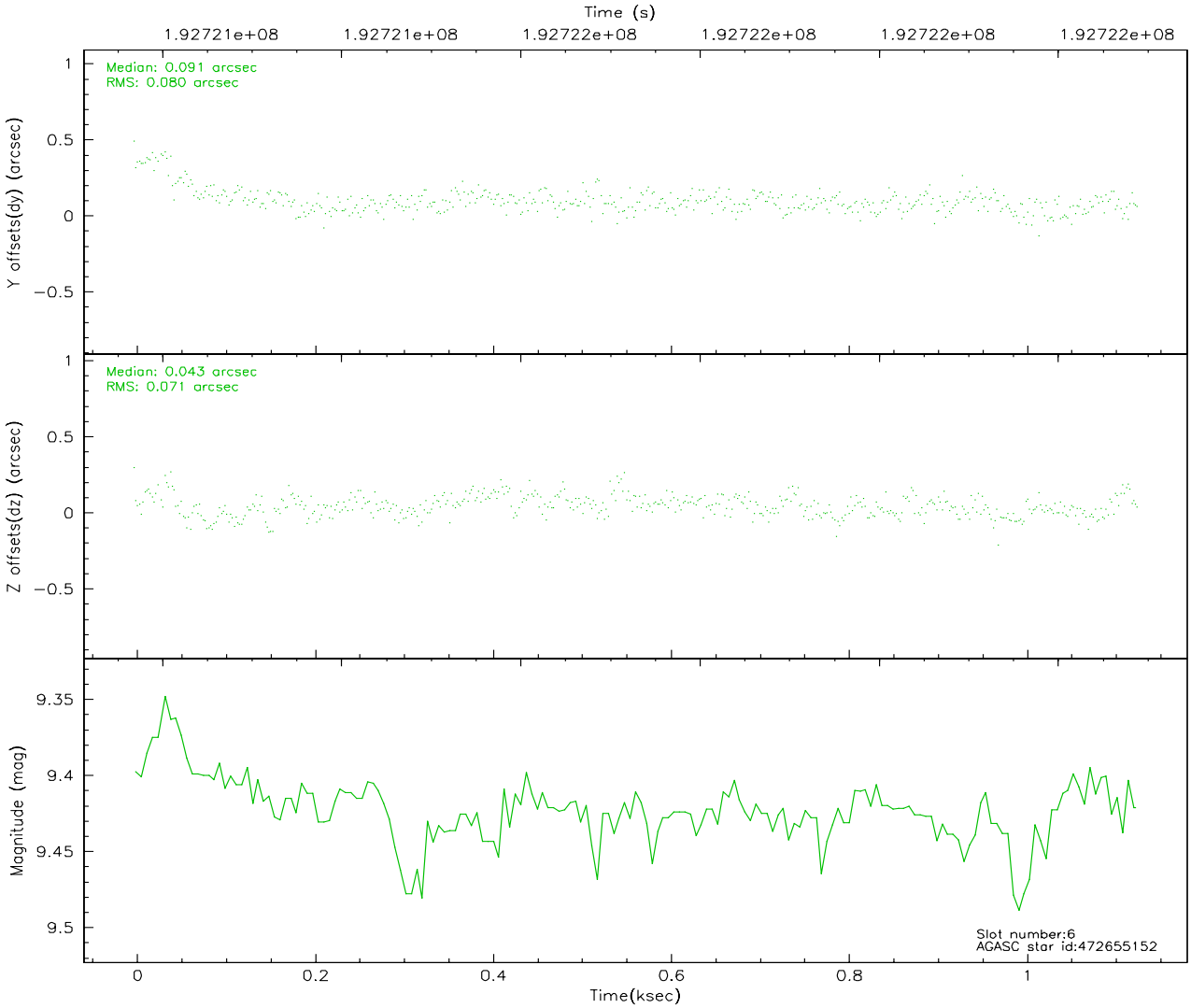

Points outside 0.4 arcsec radius: 0.181%
Radial offset of median: 0.036 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:472654568


Time (s)
1.92721e+08
1.92721e+08
1.92722e+08
1.92722e+08
1.92722e+08
1.92722e+08
Median: −0.033 arcsec
RMS: 0.071 arcsec
Y offsets(dy) (arcsec)
Median: −0.014 arcsec
RMS: 0.087 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:472654568
Time(ksec)

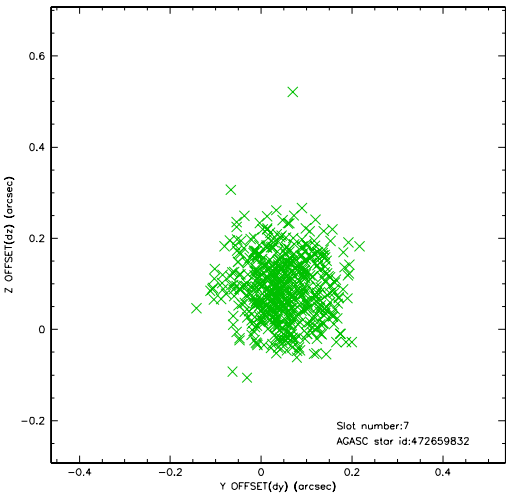
2.4.4 Slot 6

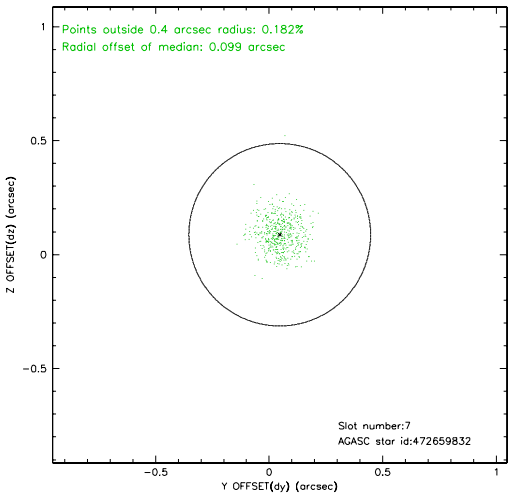

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:472655152

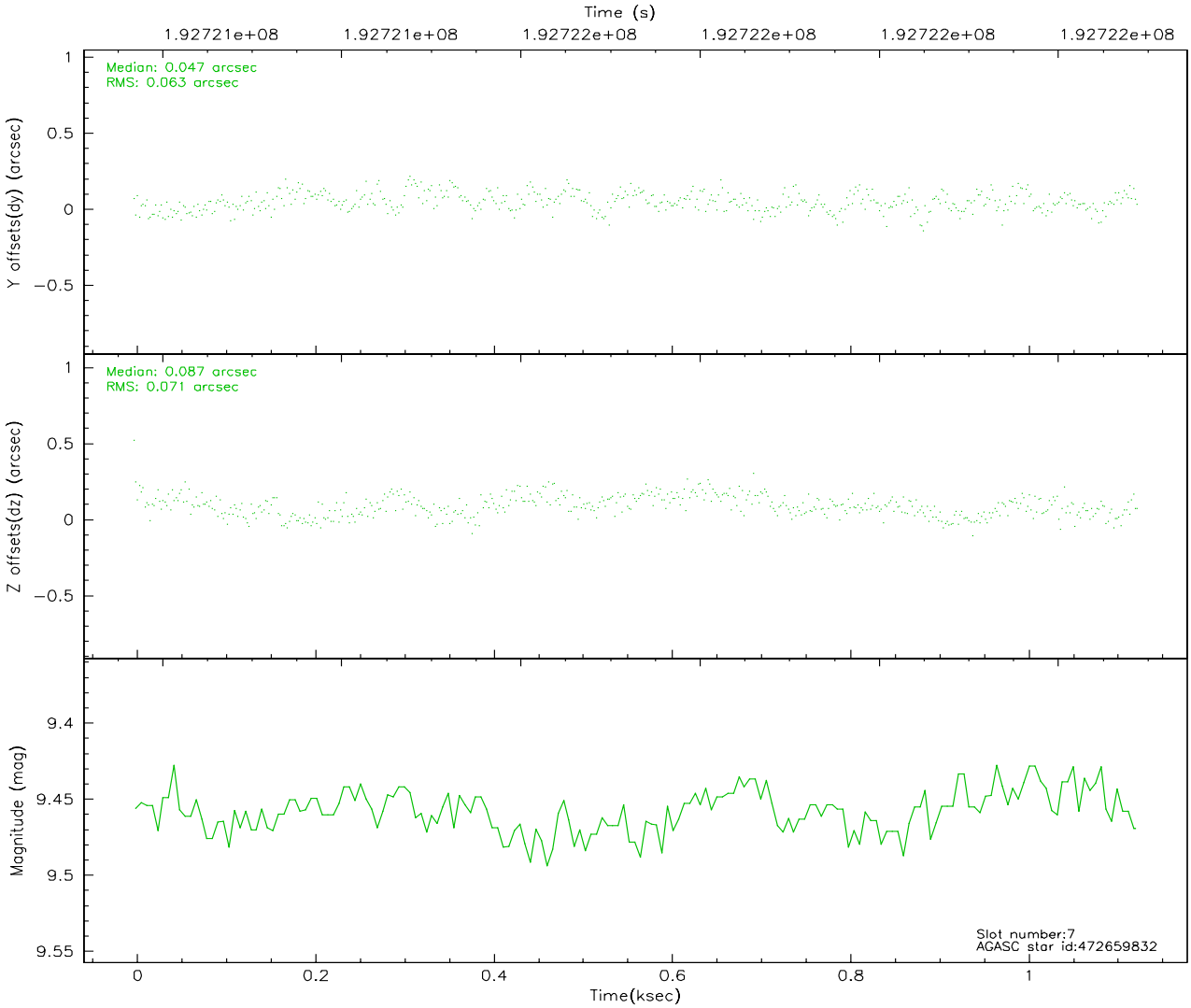

Points outside 0.4 arcsec radius: 0.182%
Radial offset of median: 0.100 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:472655152


Time (s)
1.92721e+08
1.92721e+08
1.92722e+08
1.92722e+08
1.92722e+08
1.92722e+08
Median: 0.091 arcsec
RMS: 0.080 arcsec
Y offsets(dy) (arcsec)
Median: 0.043 arcsec
RMS: 0.071 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:472655152
Time(ksec)

2.4.5 Slot 7

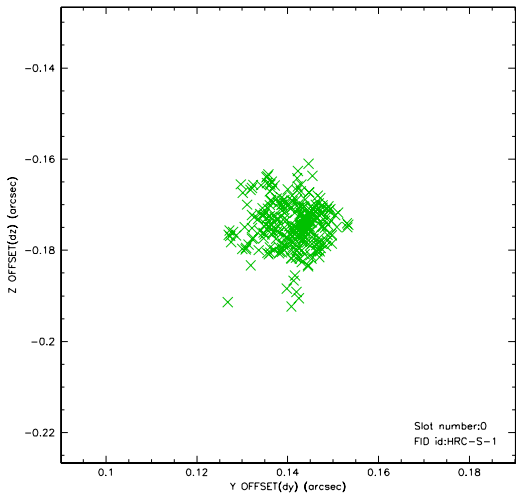

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:472659832

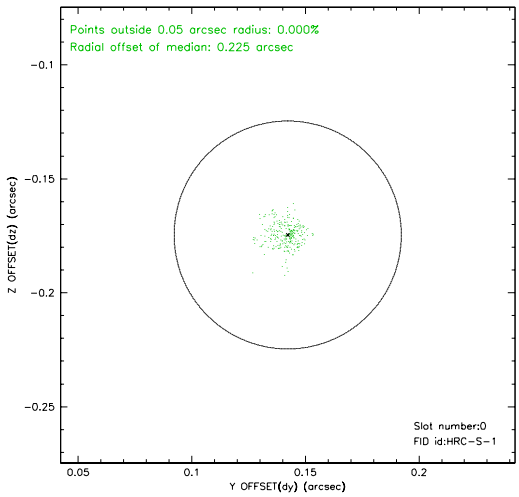

Points outside 0.4 arcsec radius: 0.182%
Radial offset of median: 0.099 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:472659832

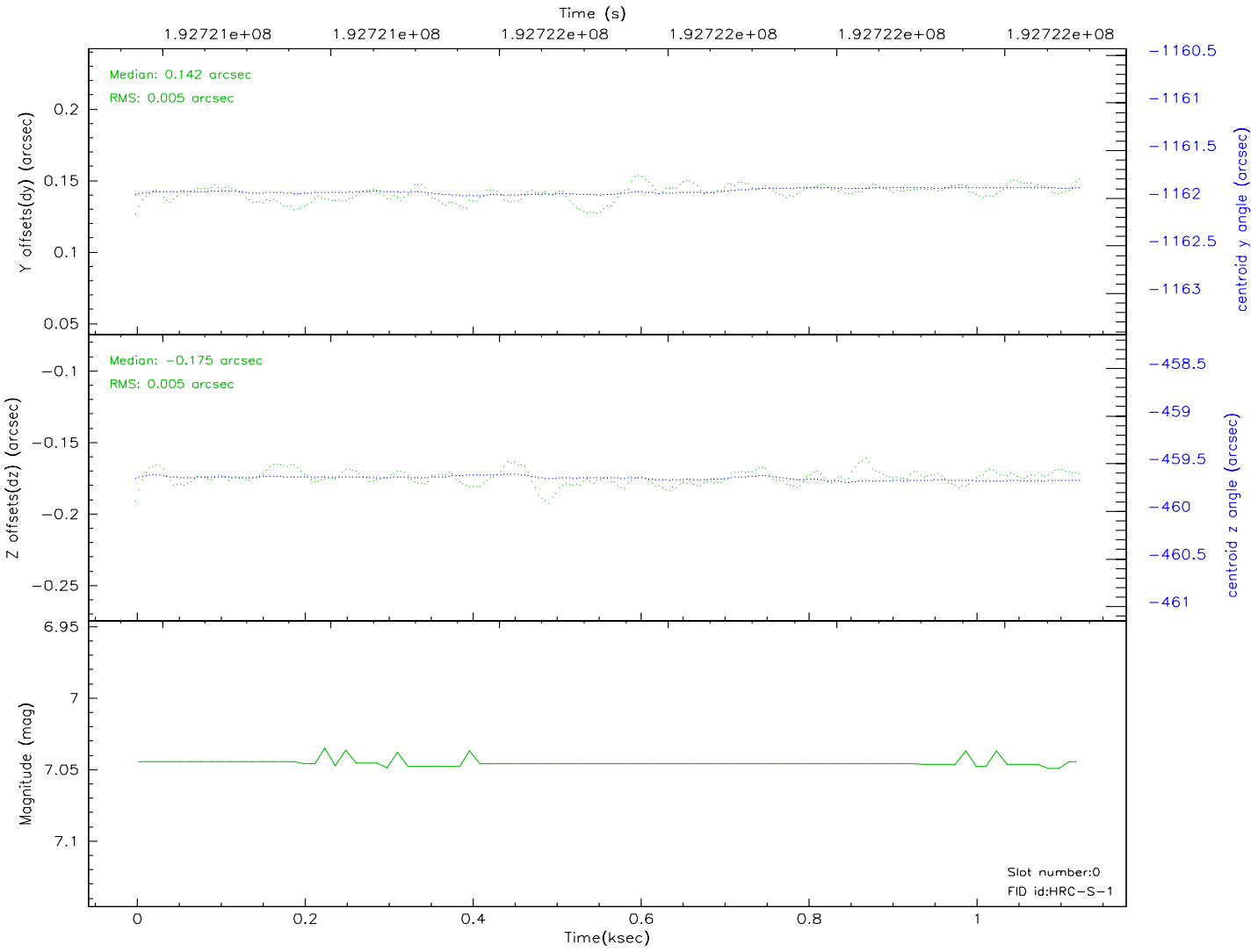

Time (s)
1.92721e+08
1.92721e+08
1.92722e+08
1.92722e+08
1.92722e+08
1.92722e+08
Median: 0.047 arcsec
RMS: 0.063 arcsec
Y offsets(dy) (arcsec)
Median: 0.087 arcsec
RMS: 0.071 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:472659832
Time(ksec)

2.5 FID Slots

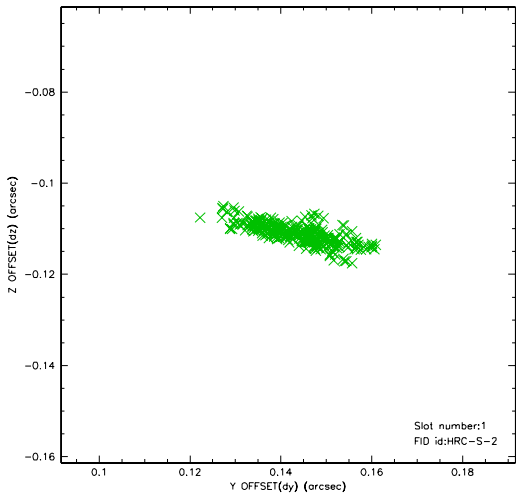
2.5.1 Slot 0

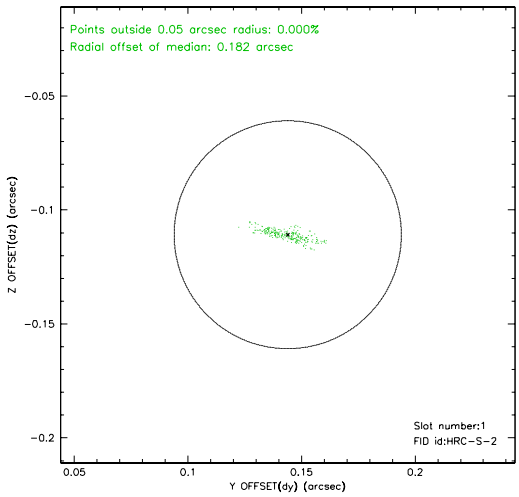


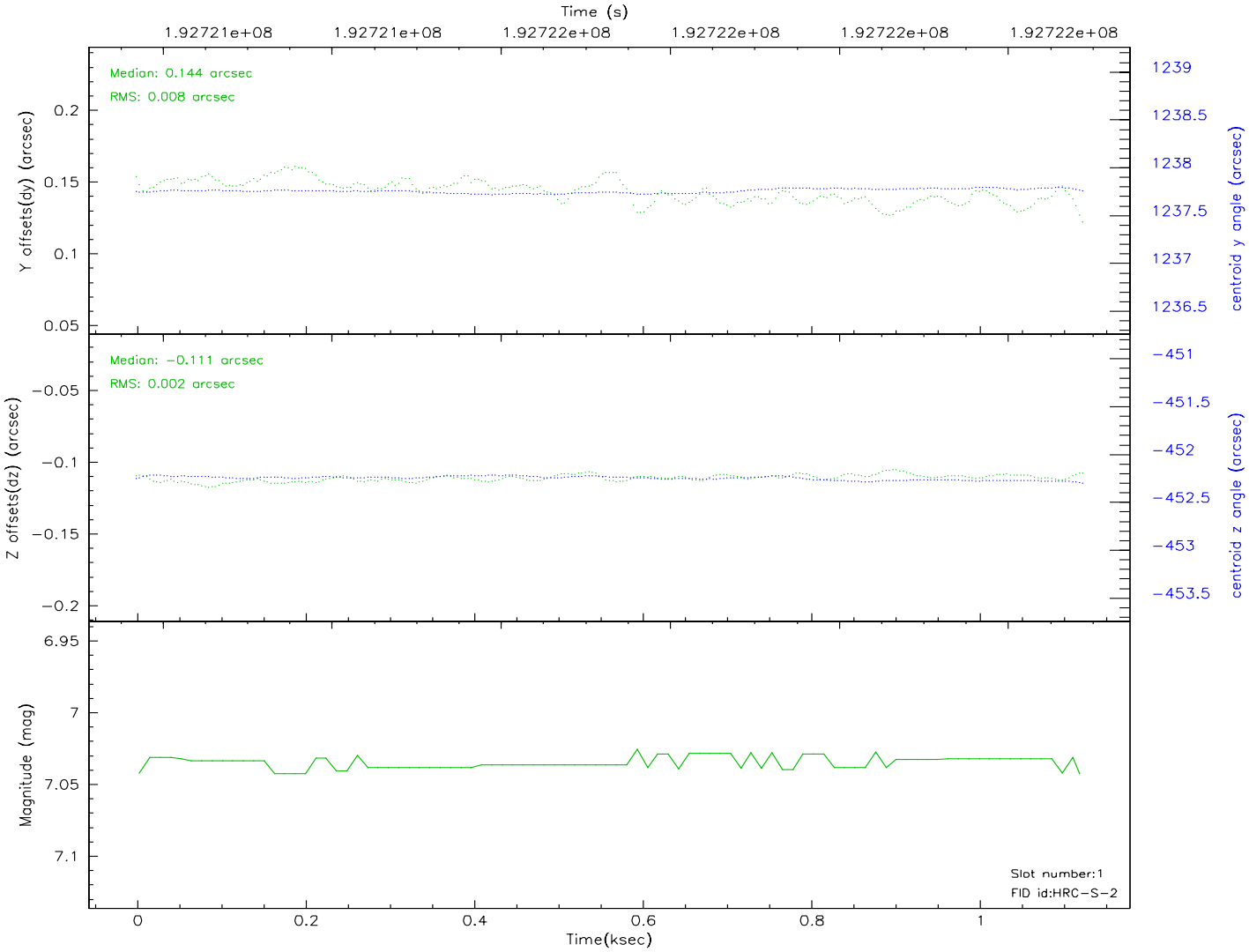




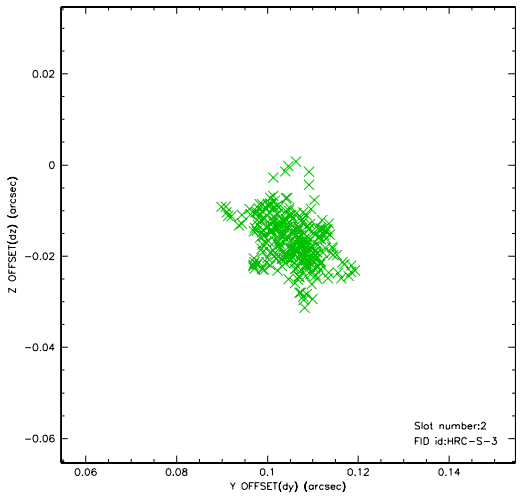
2.5.2 Slot 1

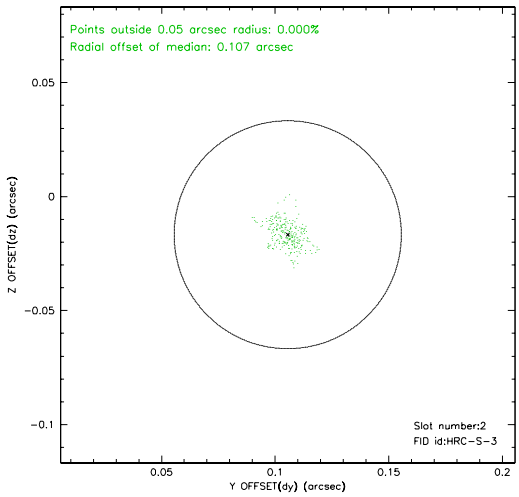

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-S-2

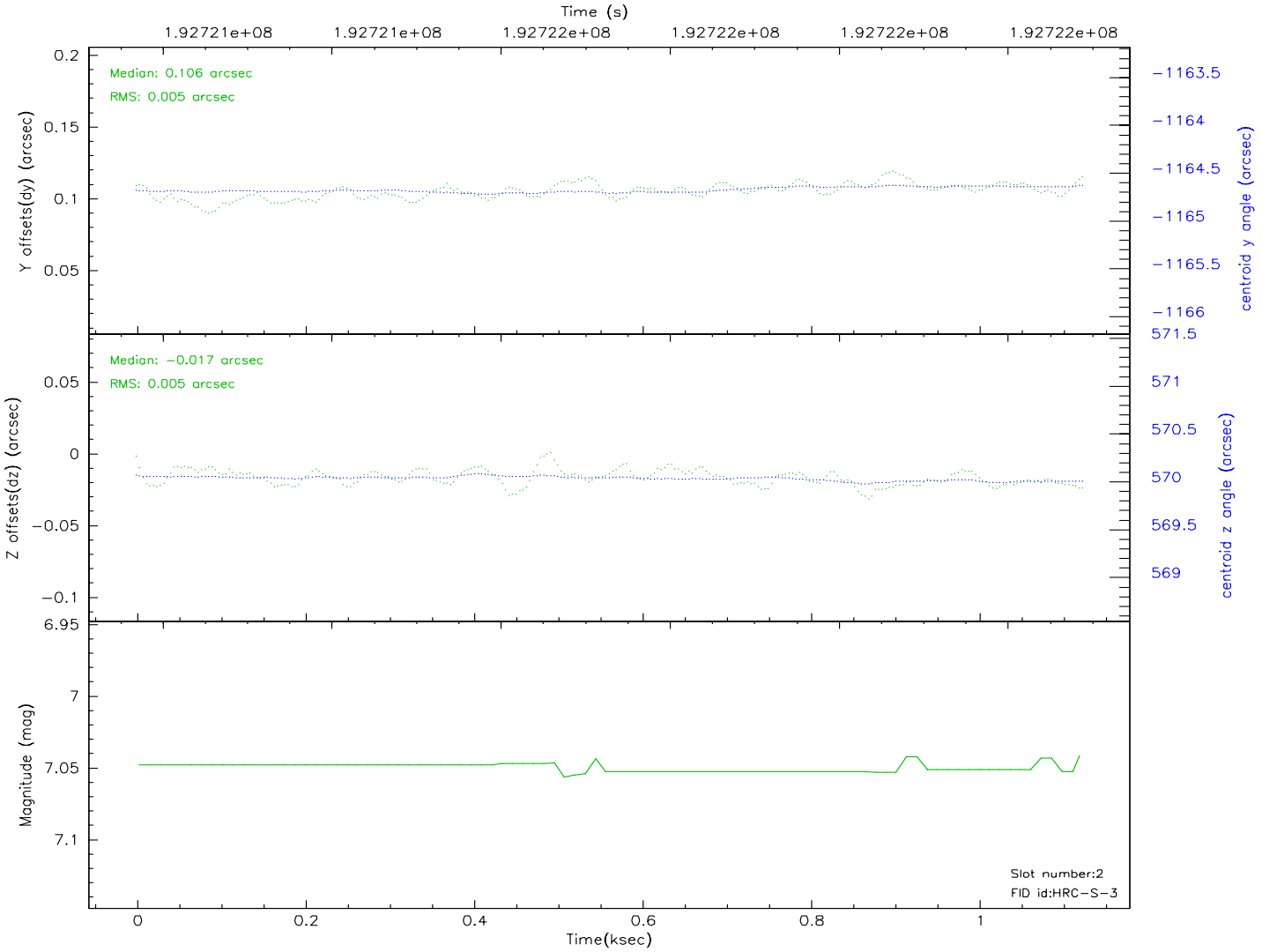

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.182 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-S-2


Time (s)
Median: 0.144 arcsec
RMS: 0.008 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.111 arcsec
RMS: 0.002 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:1
FID id:HRC-S-2
Time(ksec)

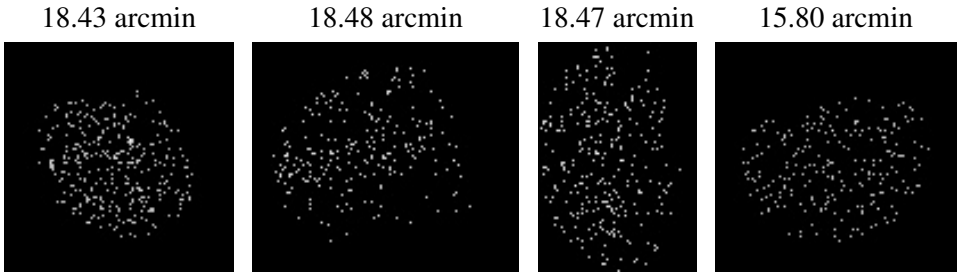
2.5.3 Slot 2


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


Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.107 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:HRC-S-3


Time (s)
Median: 0.106 arcsec
RMS: 0.005 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.017 arcsec
RMS: 0.005 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:2
FID id:HRC-S-3
Time(ksec)

3 Point Sources



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2006.06.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	1.088

A.2 Comments

The keywords DTCOR, EXPOSURE, and LIVETIME in the Level 2 event file and the
keyword DTCOR in the Level 1 event file have been incorrectly determined due to a software bug. The correct value of DTCOR can be found in the file DTFSTATS file that can be obtained by downloading the Secondary Data Products. In most cases, the difference between the correct DTCOR value and the incorrect DTCOR value in the Level 2 event file is very small and does not affect the data analysis. However, there are cases of significant differences and the user is advised to use the DTCOR in the DTFSTATS file for analysis. Corrected data products will be made available in the archive as soon as feasible.