V&V Reference Report
L2 ASCDS Version : 7.6.7.1

Observation 5113 - L2 Version 002
Chandra X-Ray Center

L2 Processing Date : Apr 10 2006

Contents

1 Front **2**

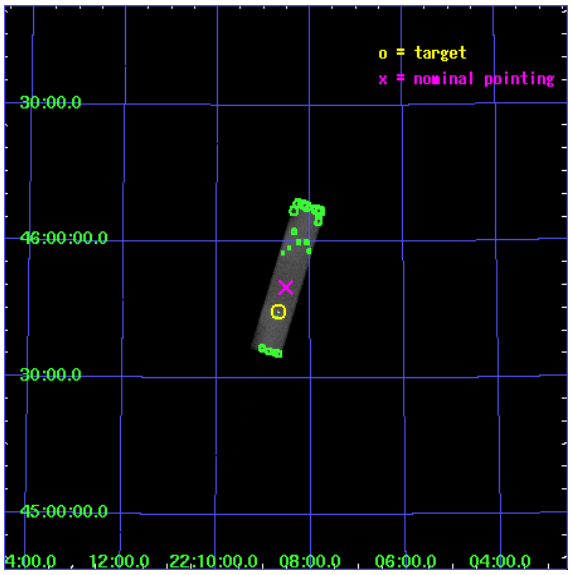
2 OBI **3**
2.1 OBI . . . 3
2.1.1 Images . . . 3
2.1.2 Parameters . . . 4
2.1.3 Events . . . 4
2.2 Compared Parameters . . . 5
2.3 Aspect . . . 6
2.4 Star Slots . . . 9
2.4.1 Slot 3 . . . 9
2.4.2 Slot 4 . . . 10
2.4.3 Slot 5 . . . 11
2.4.4 Slot 6 . . . 12
2.4.5 Slot 7 . . . 13
2.5 FID Slots . . . 14
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	290386
obs_id	5113
title	AO5B 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	332.13085948025
dec_nom	45.833631441179
roll_nom	287.00987731443
revision	2
ontime	1050.6250472069
livetime	1025.4923981139
l2events	135835

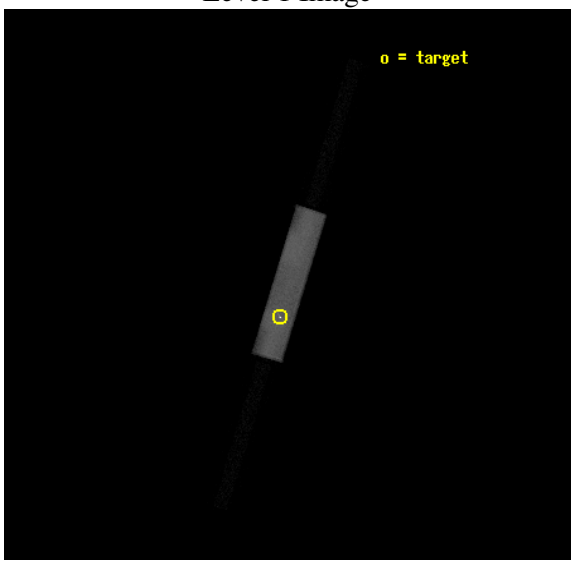


2 OBI

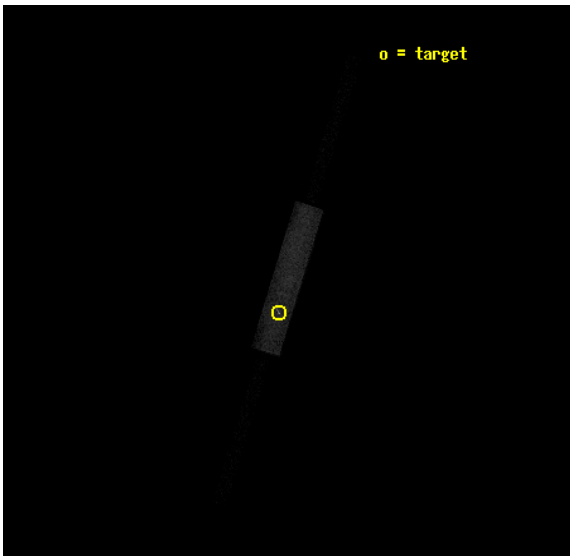
2.1 OBI

2.1.1 Images

Level 1 Image



Level 1 Bad Events



2.1.2 Parameters

obi_num	1
ascdsver	7.6.7.1
caldbver	3.2.1
date	2006-04-10T19:41:24
revision	2

sched_exp_time	900.000000
ontime	1079.3250485063
l1events	199417

2.1.3 Events

Level 1 Events

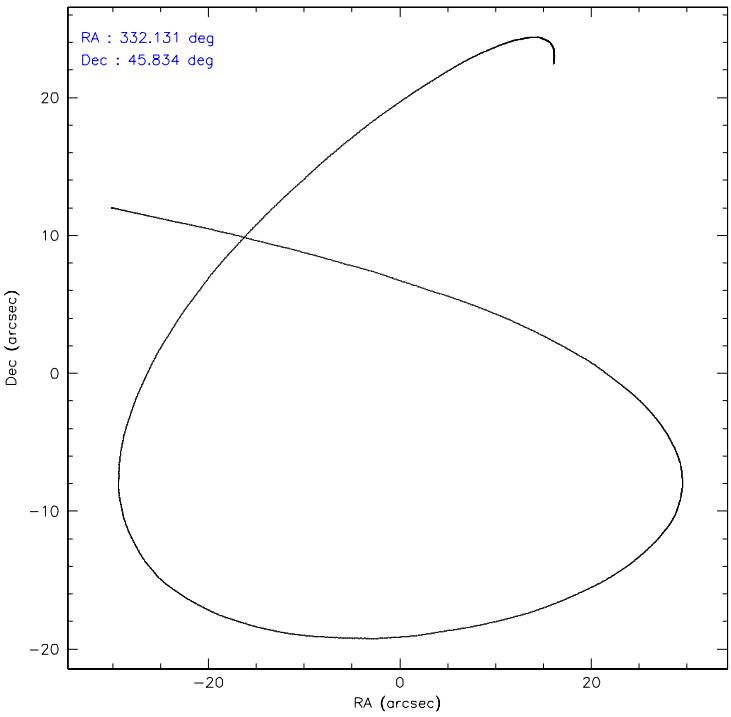
	segment 1	**segment 2**	**segment 3**
level 1 events	1647	196275	1495
rejected events	1647	56399	1437
rejected %	100%	28%	96%

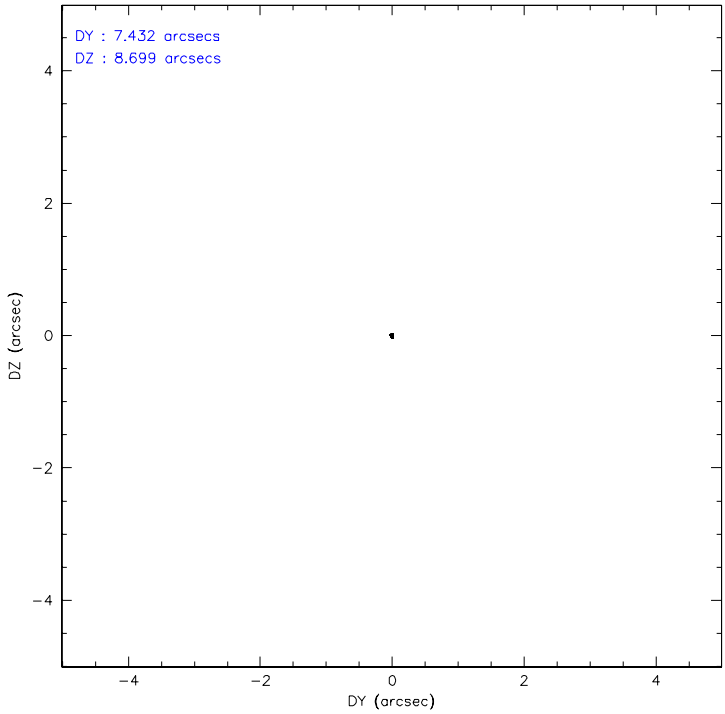
2.2 Compared Parameters

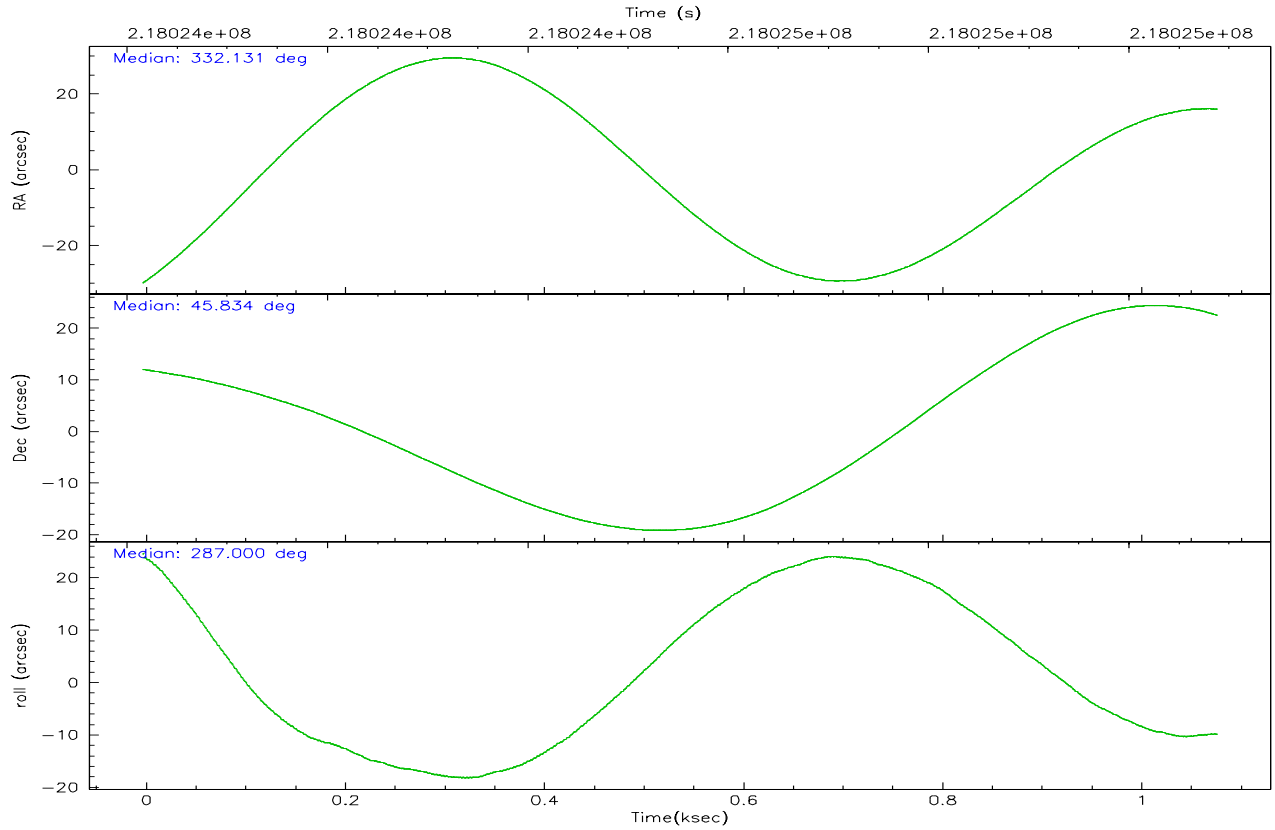
Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-S	HRC-S
Grating	NONE	NONE
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
Pointing RA	332.098631	332.1308594802494
Pointing Dec	45.851891	45.83363144117865
Pointing Roll	286.965668	287.0098773144315
SIM focus pos (mm)	-1.429586	-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	218024193.184000	218023816.78143
Observation start date	2004-11-28T10:15:29	2004-11-28T10:10:16
Observation end time	218025093.184000	218025226.66899
Observation end date	2004-11-28T10:30:29	2004-11-28T10:33:46

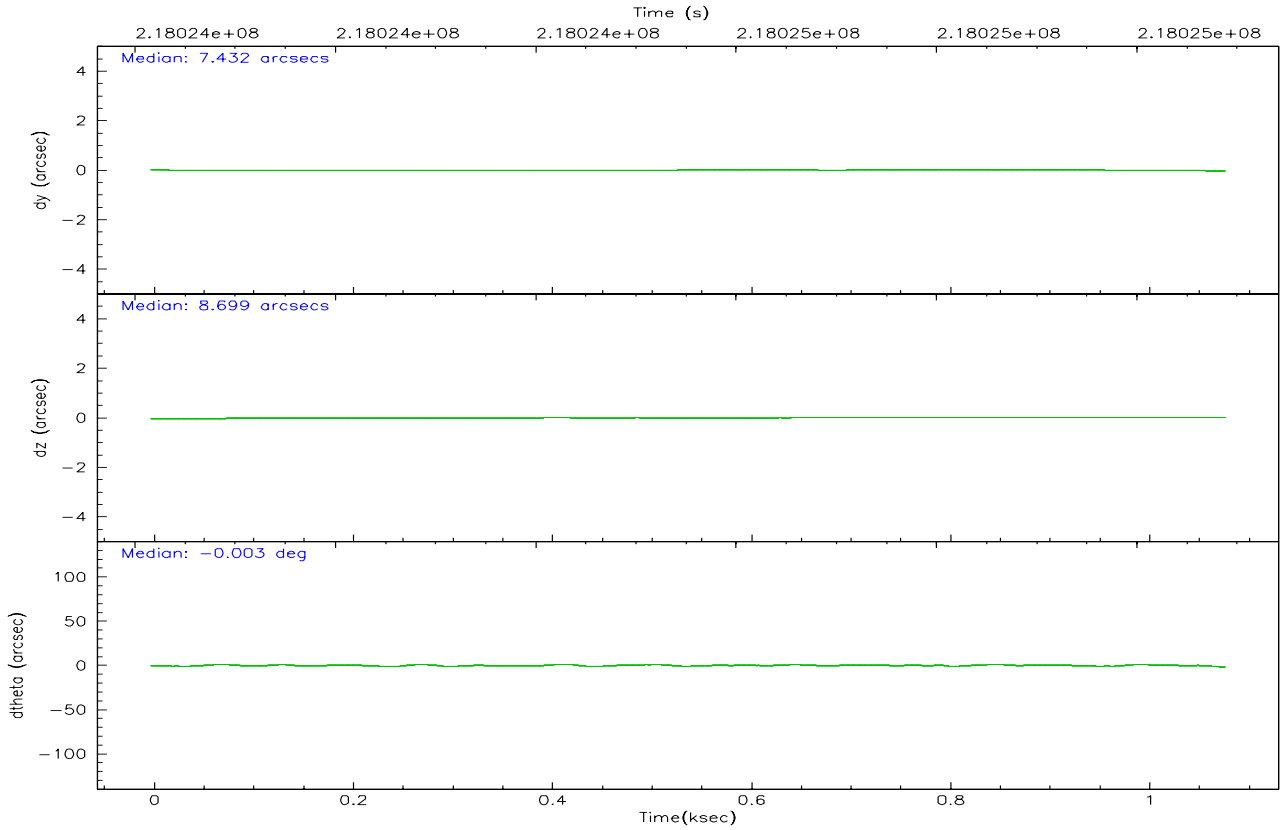
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED

2.3 Aspect


RA : 332.131 deg
Dec : 45.834 deg
20
10
0
−10
−20
Dec (arcsec)
−20
0
20
RA (arcsec)


DY : 7.432 arcsecs
DZ : 8.699 arcsecs
4
2
0
−2
−4
DZ (arcsec)
−4
−2
0
2
4
DY (arcsec)


Time (s)
2.18024e+08
2.18024e+08
2.18024e+08
2.18025e+08
2.18025e+08
2.18025e+08
Median: 332.131 deg
RA (arcsec)
Median: 45.834 deg
Dec (arcsec)
Median: 287.000 deg
roll (arcsec)
Time(ksec)

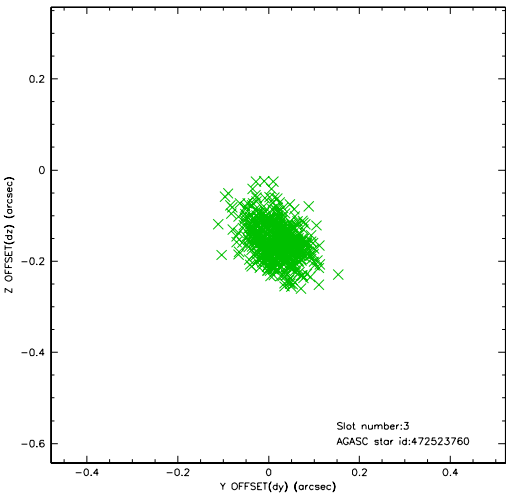

Time (s)
2.18024e+08
2.18024e+08
2.18024e+08
2.18025e+08
2.18025e+08
2.18025e+08
Median: 7.432 arcsecs
dy (arcsec)
Median: 8.699 arcsecs
dz (arcsec)
Median: −0.003 deg
dtheta (arcsec)
Time(ksec)

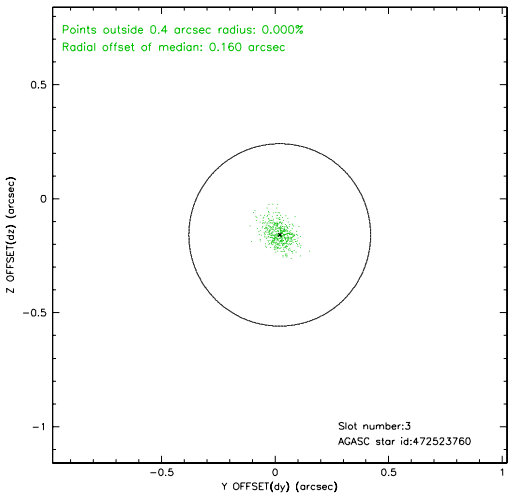
Slot Statistics

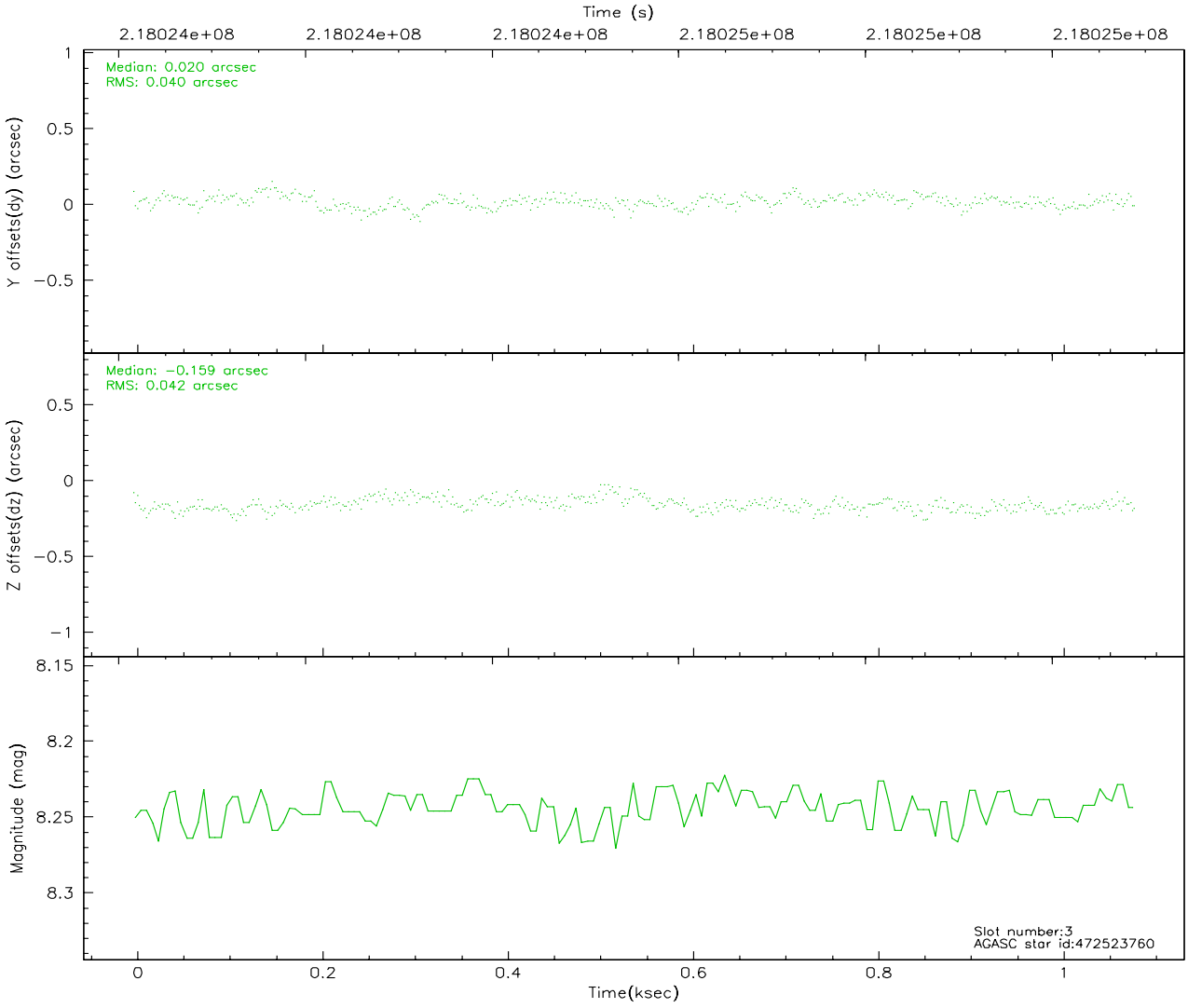
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-S-1	7.03	264	0.139	-0.148	0.007	0.013	0.000000	0.000000	-1161.59	-457.34
1	FID	HRC-S-2	7.04	264	0.160	-0.117	0.005	0.008	0.000000	0.000000	1233.72	-451.67
2	FID	HRC-S-3	7.05	264	0.091	-0.037	0.007	0.012	0.000000	0.000000	-1159.68	570.59
3	GUIDE	472523760	8.24	527	0.020	-0.159	0.059	0.102	331.645363	45.403260	1207.93	-1568.11
4	GUIDE	472525528	6.65	528	0.134	0.021	0.095	0.146	331.551102	45.248694	1670.57	-1964.26
5	GUIDE	472655152	9.43	528	-0.006	0.004	0.099	0.157	332.504239	45.862991	259.34	979.41
6	GUIDE	472659832	9.46	527	-0.025	0.020	0.116	0.197	332.780399	46.098139	-357.82	1888.49
7	GUIDE	472533912	9.16	526	-0.112	0.090	0.092	0.156	331.791136	46.368695	-2004.41	-185.81

2.4 Star Slots

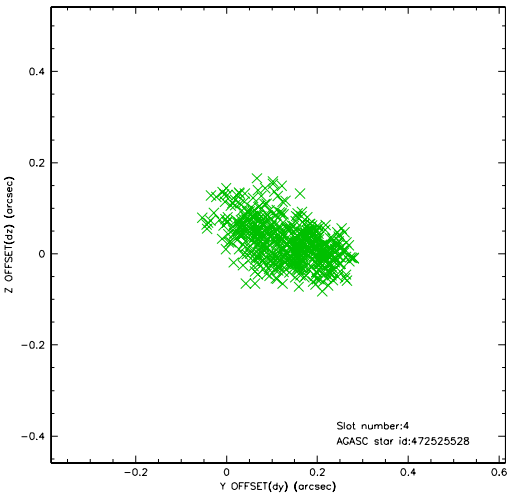
2.4.1 Slot 3

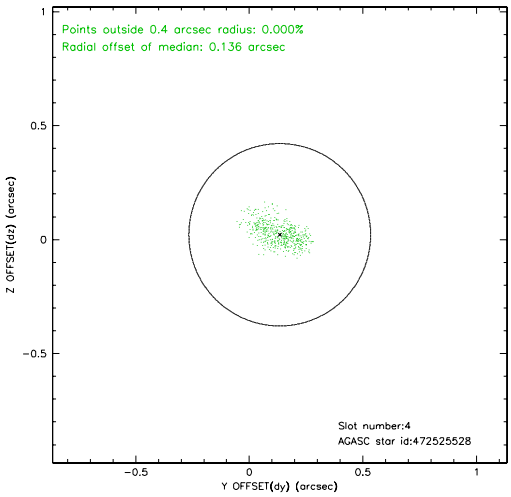


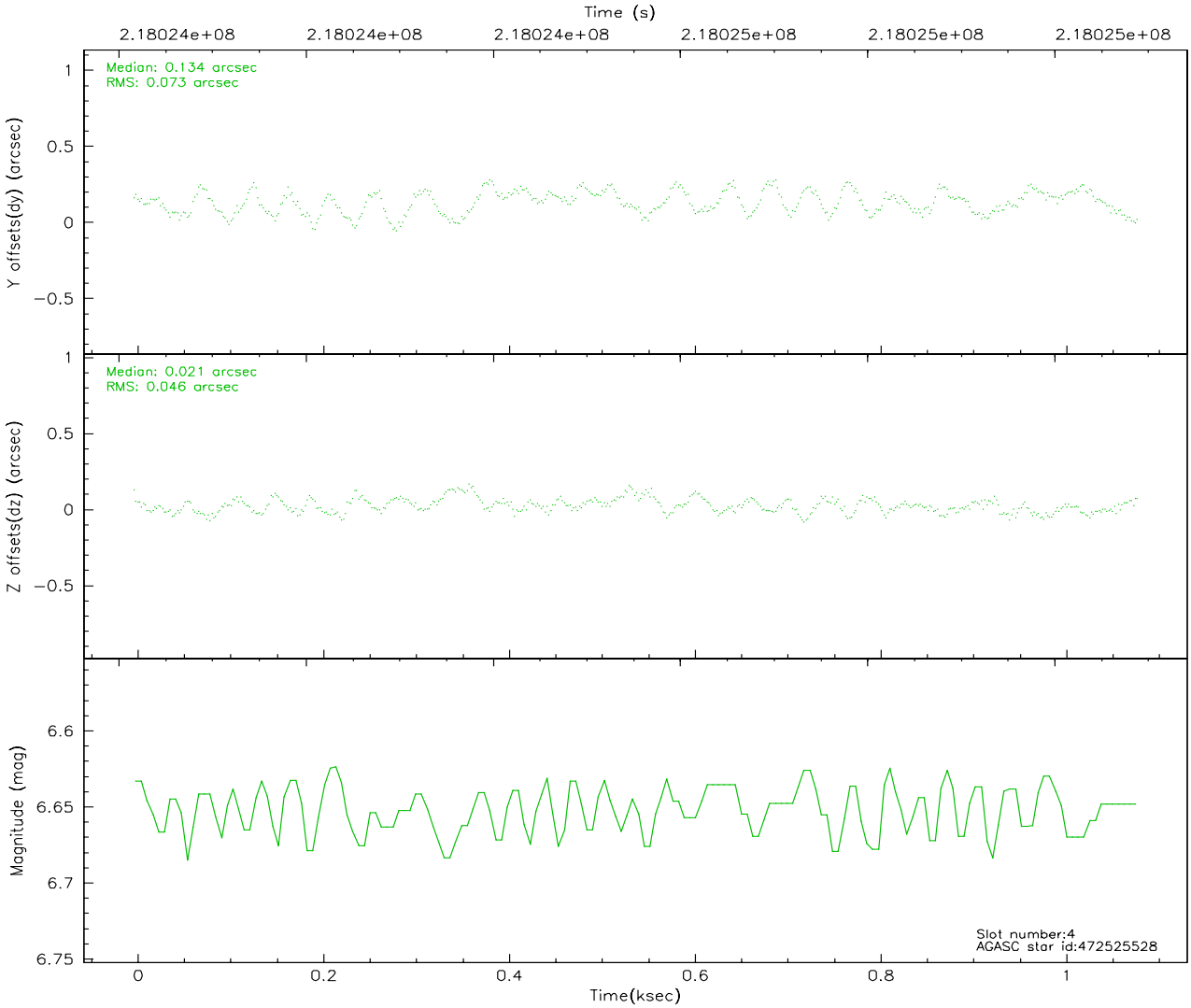




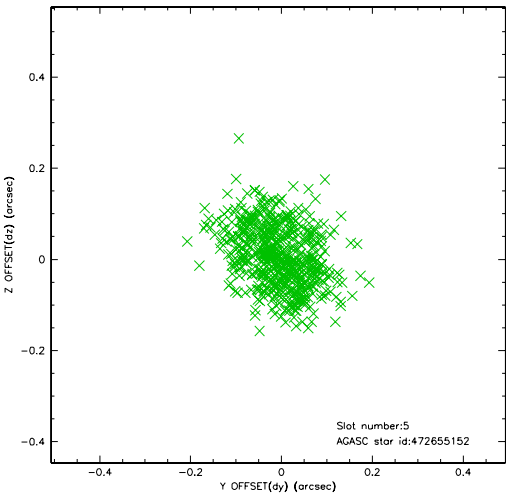
2.4.2 Slot 4

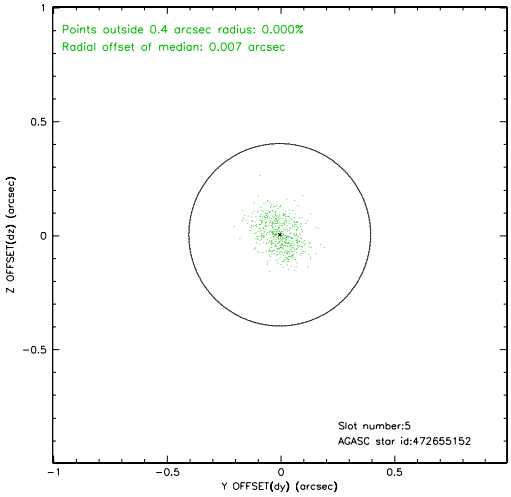

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:472525528

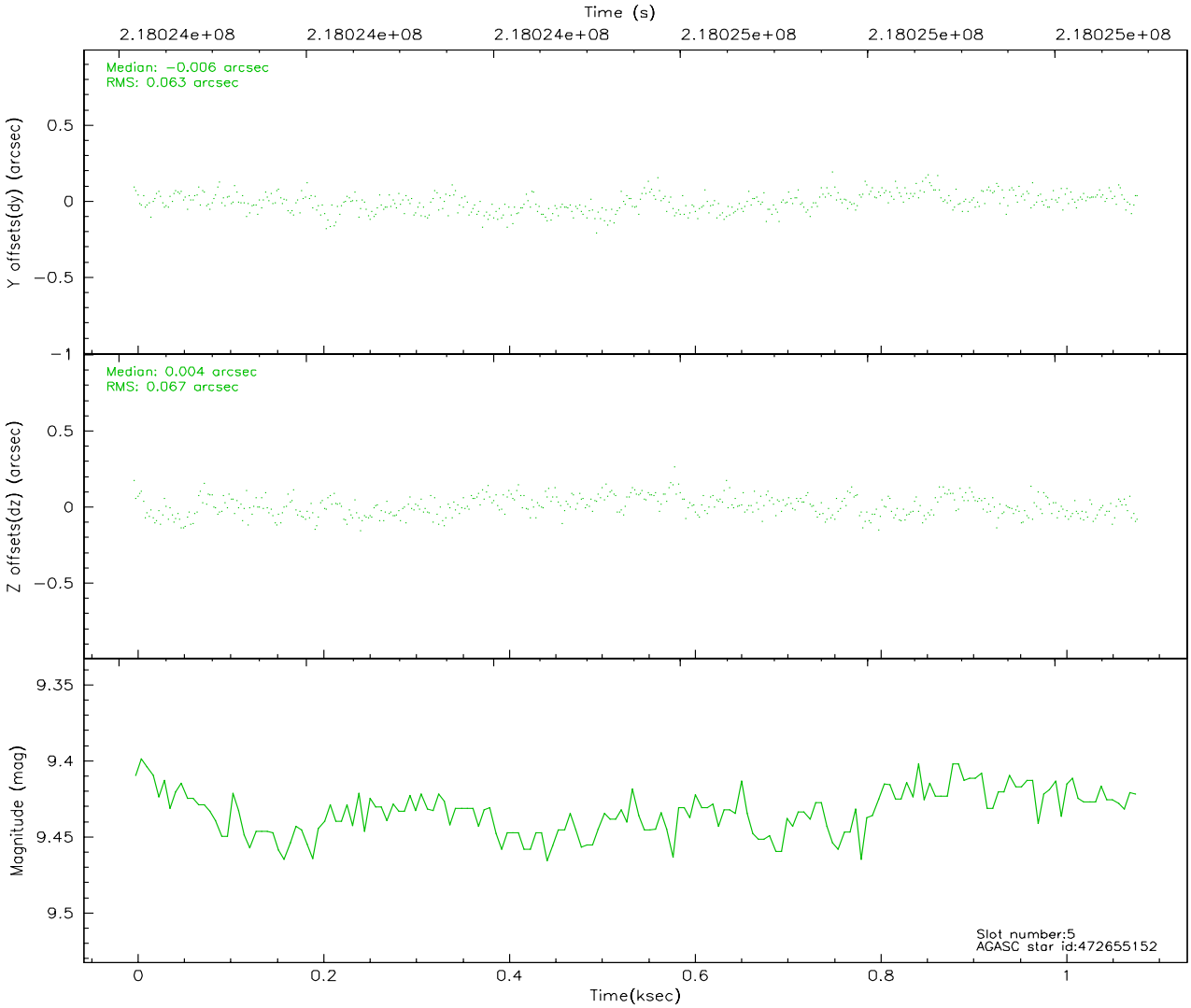

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.136 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:472525528


Time (s)
2.18024e+08
2.18024e+08
2.18024e+08
2.18025e+08
2.18025e+08
2.18025e+08
Median: 0.134 arcsec
RMS: 0.073 arcsec
Y offsets(dy) (arcsec)
Median: 0.021 arcsec
RMS: 0.046 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:472525528
Time(ksec)

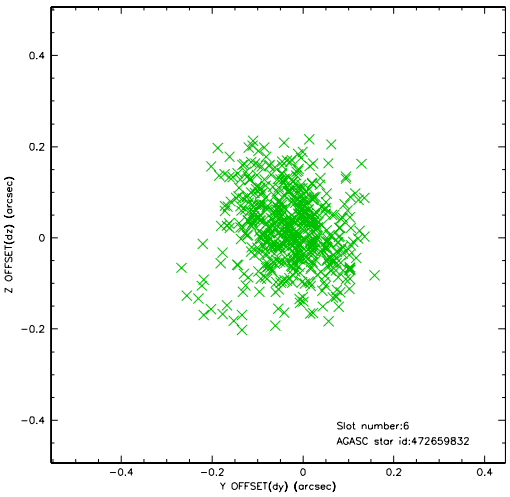
2.4.3 Slot 5

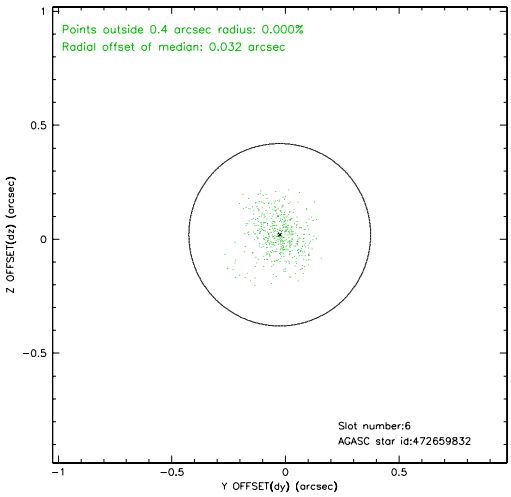

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:472655152

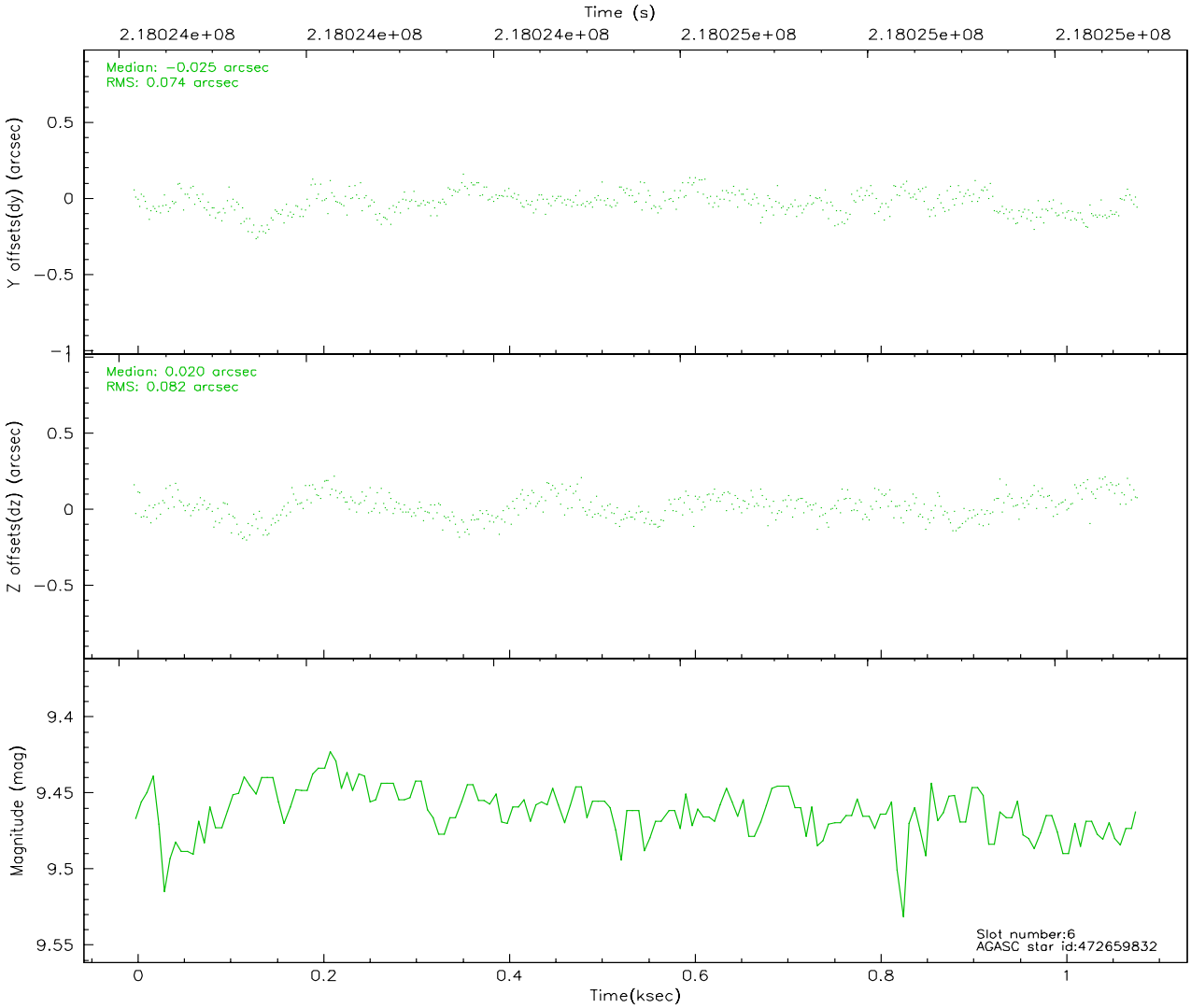

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.007 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:472655152


Time (s)
2.18024e+08
2.18024e+08
2.18024e+08
2.18025e+08
2.18025e+08
2.18025e+08
Median: −0.006 arcsec
RMS: 0.063 arcsec
Y offsets(dy) (arcsec)
Median: 0.004 arcsec
RMS: 0.067 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:472655152
Time(ksec)

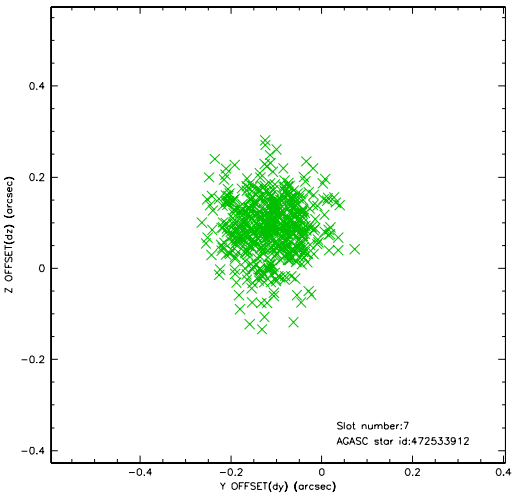
2.4.4 Slot 6

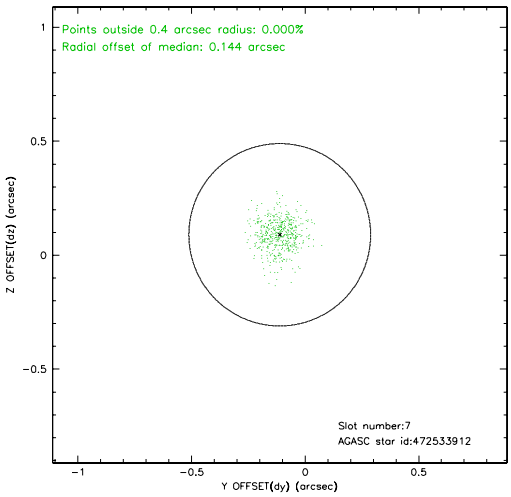

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:472659832

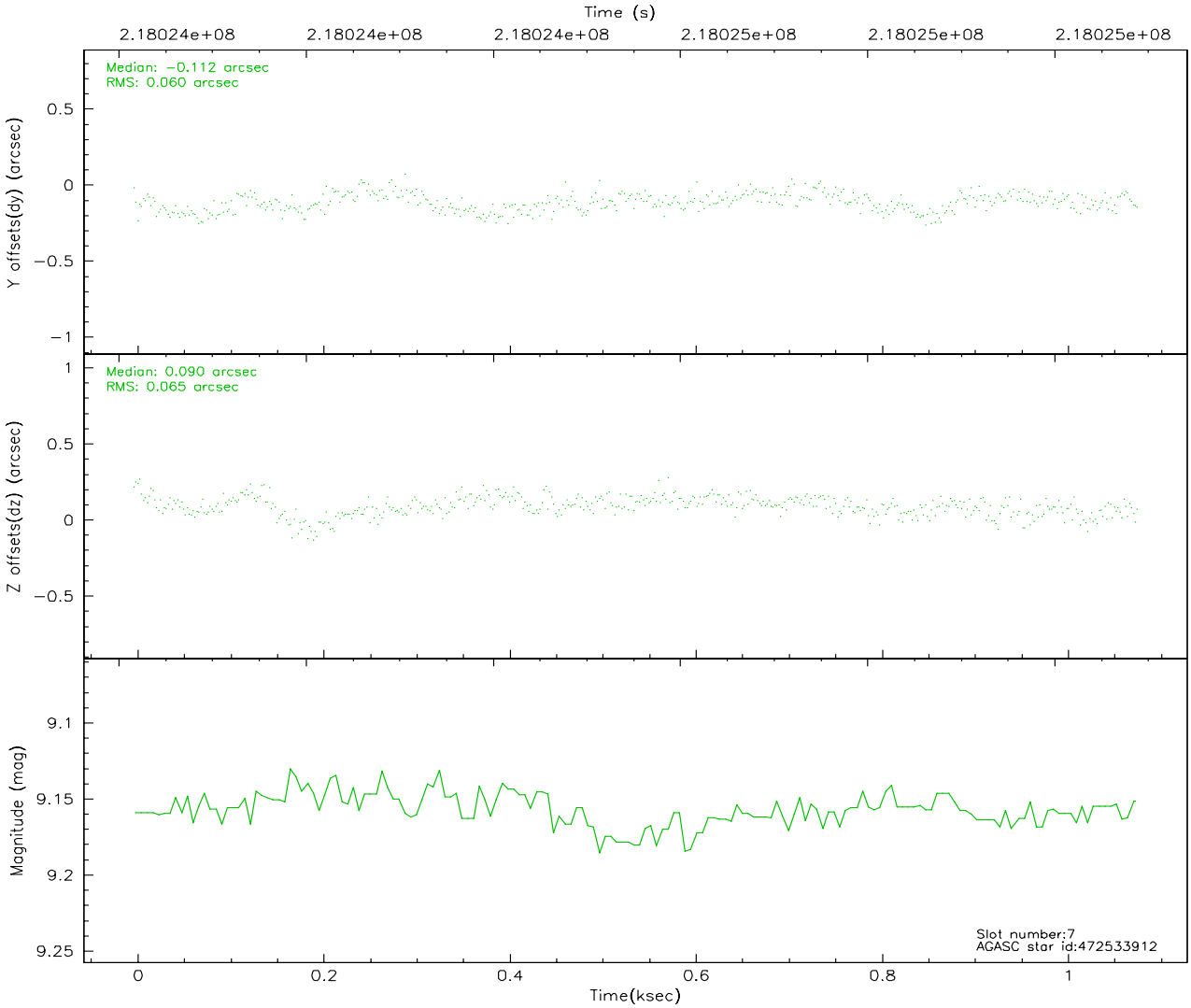

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.032 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:472659832


Time (s)
Median: −0.025 arcsec
RMS: 0.074 arcsec
Y offsets(dy) (arcsec)
Median: 0.020 arcsec
RMS: 0.082 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:472659832
Time(ksec)

2.4.5 Slot 7

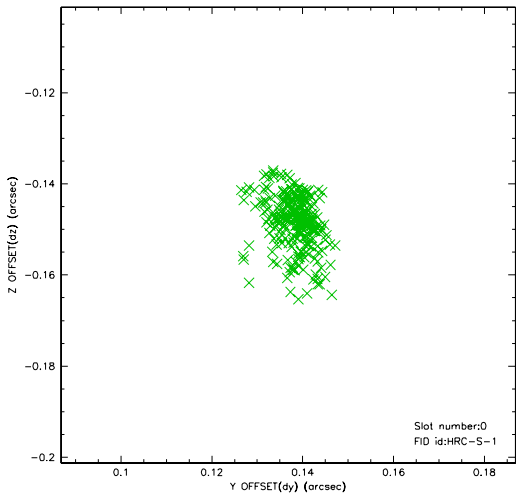

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:472533912

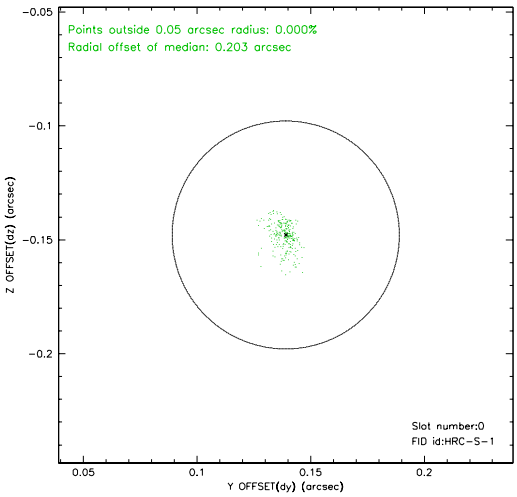

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.144 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:472533912

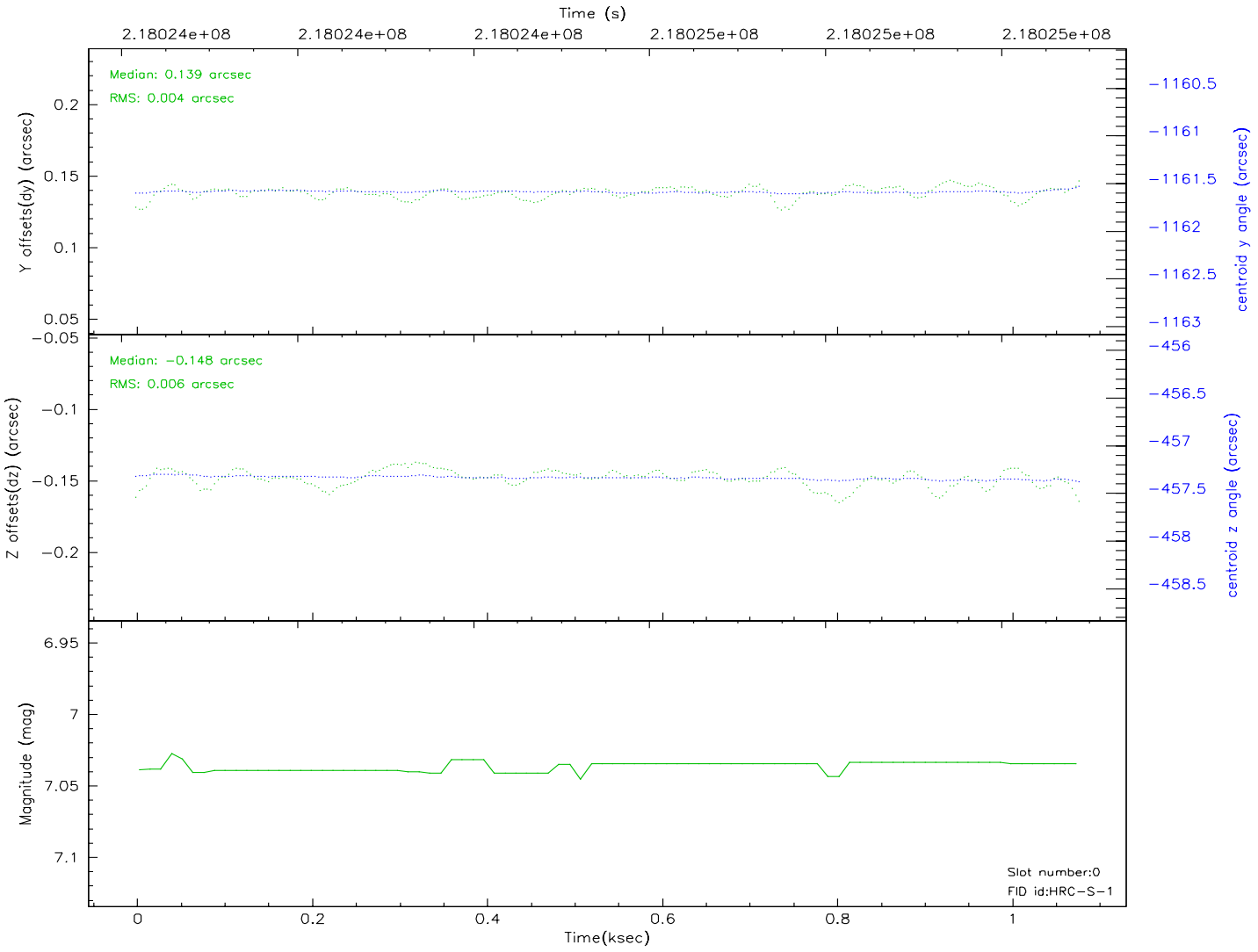

Time (s)
Median: −0.112 arcsec
RMS: 0.060 arcsec
Y offsets(dy) (arcsec)
Median: 0.090 arcsec
RMS: 0.065 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:472533912
Time(ksec)

2.5 FID Slots

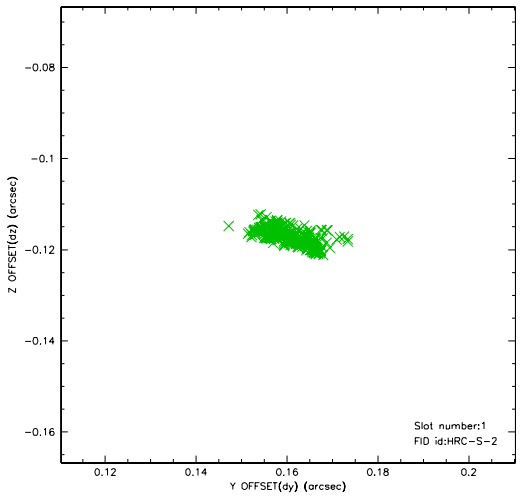
2.5.1 Slot 0

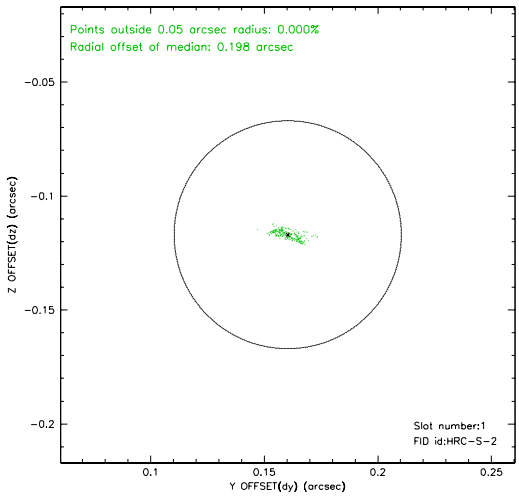


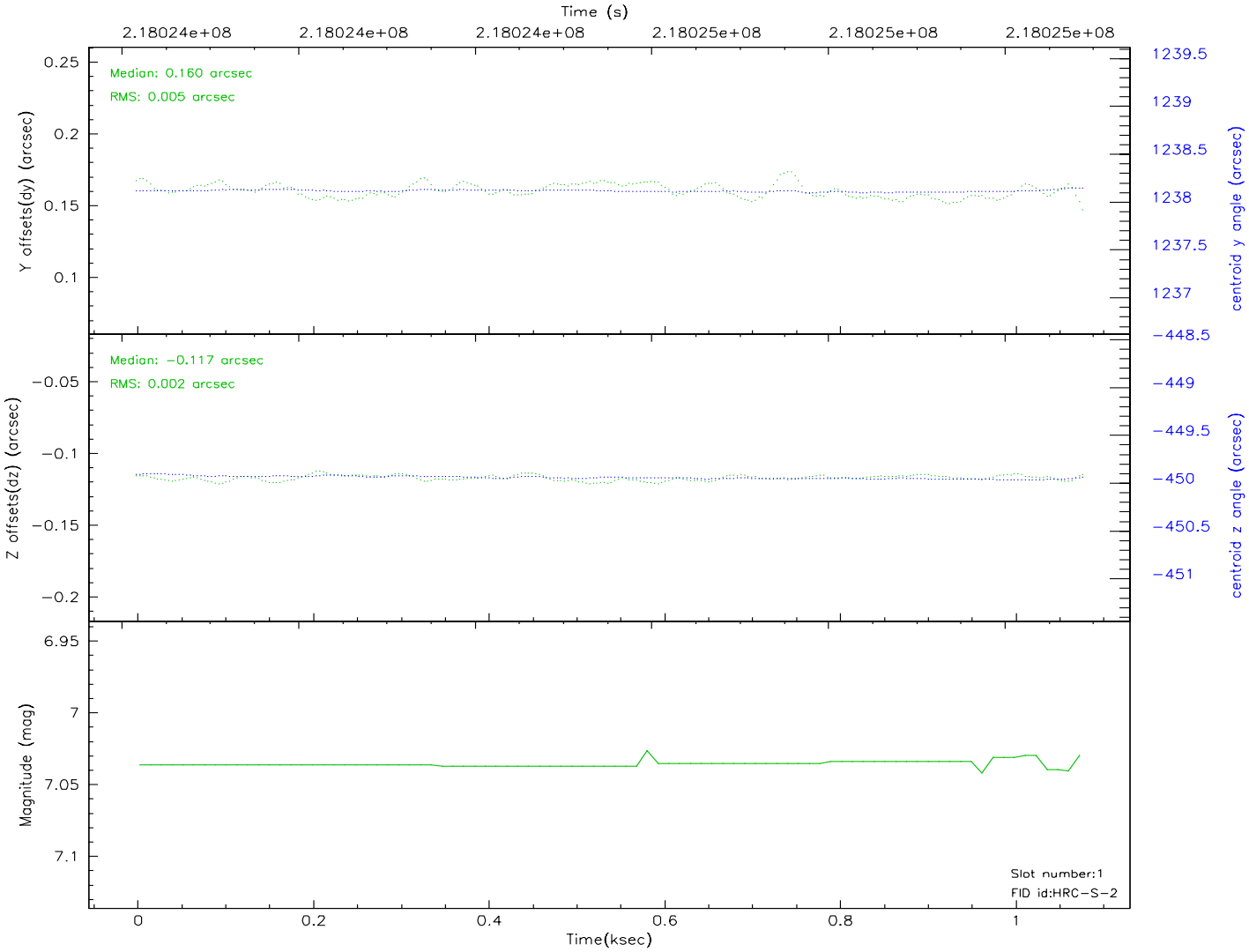




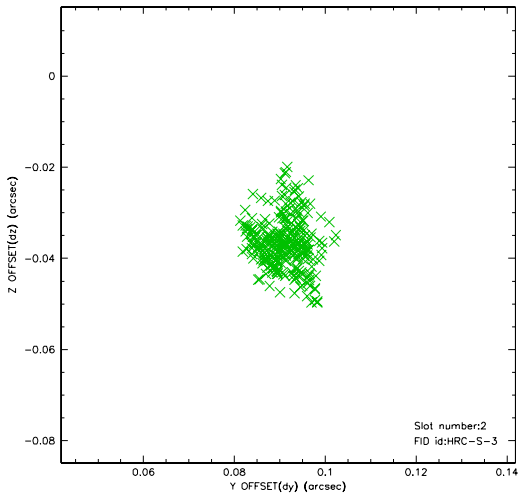
2.5.2 Slot 1

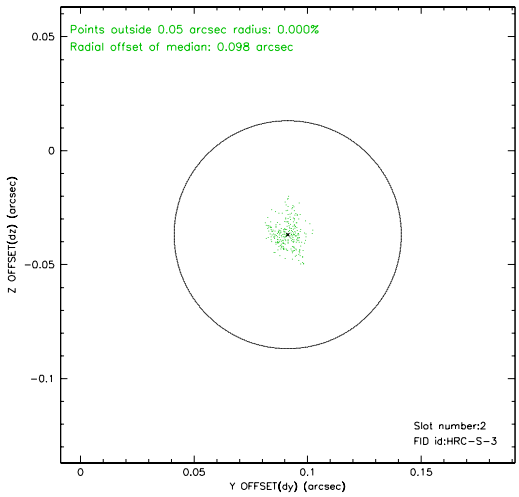

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-S-2

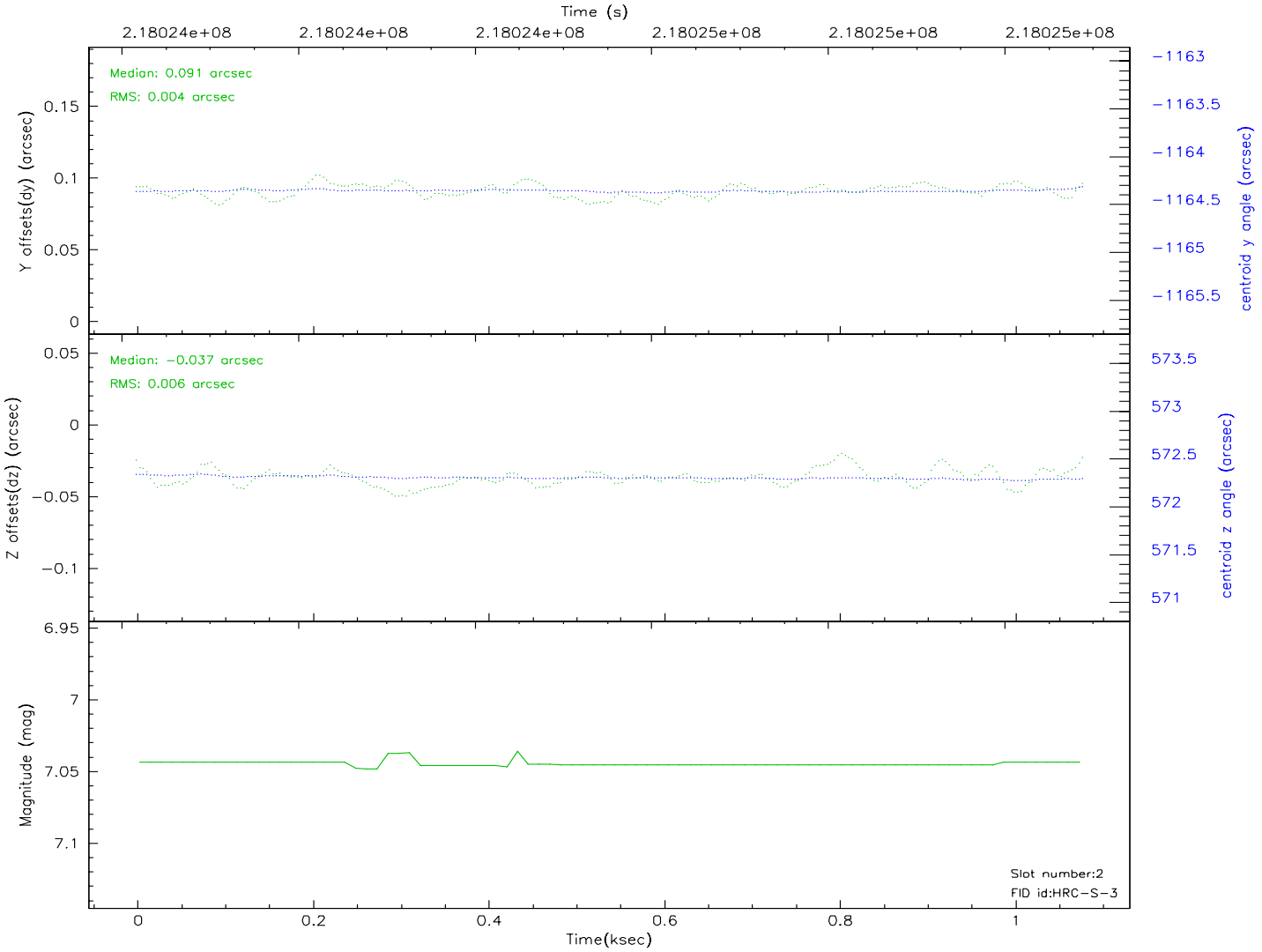

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.198 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-S-2


Time (s)
Median: 0.160 arcsec
RMS: 0.005 arcsec
Y offsets(dy) (arcsec)
Median: −0.117 arcsec
RMS: 0.002 arcsec
Z offsets(dz) (arcsec)
centroid y angle (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:1
FID id:HRC-S-2
Time(ksec)

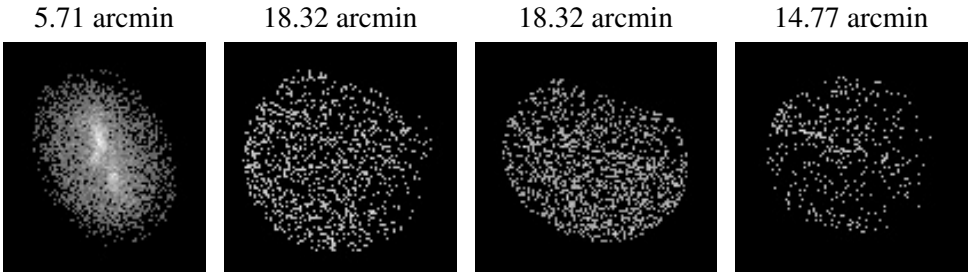
2.5.3 Slot 2


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


Time (s)
Median: 0.091 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.037 arcsec
RMS: 0.006 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	Beth Sundheim
V&V Date (YYYY-MM-DD)	2006.04.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	1.050881

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.