V&V Reference Report
L2 ASCDS Version : 7.6.9

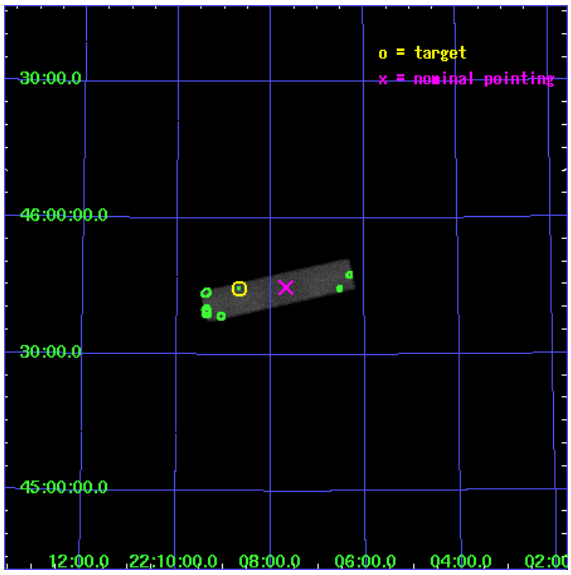
Observation 2665 - L2 Version 001
Chandra X-Ray Center

L2 Processing Date : Sep 30 2006

Contents

1 Front

seq_num	290221
obs_id	2665
title	AO3B HRC-S CALIBRATION OBSERVATION: MINI-SCAN OF ARLAC
observer	Dr. CXC Calibration
object	ARLAC
ra_targ	332.17
dec_targ	45.742306
ra_nom	331.91987886565
dec_nom	45.747670544071
roll_nom	167.37268839429
revision	2
ontime	1143.1312970817
livetime	1135.4862968033
l2events	57051

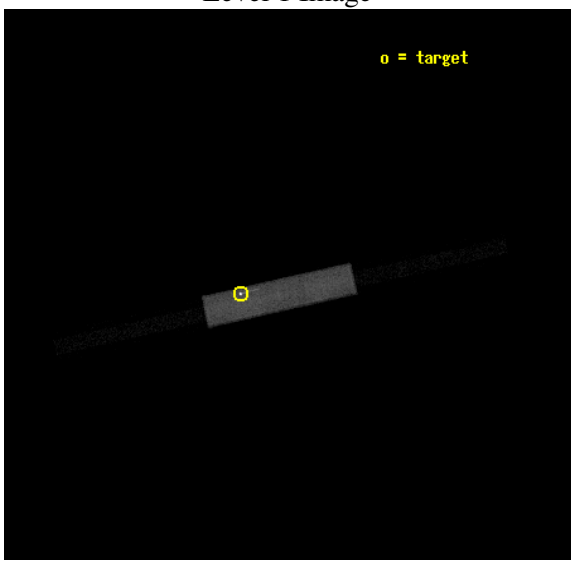


2 OBI

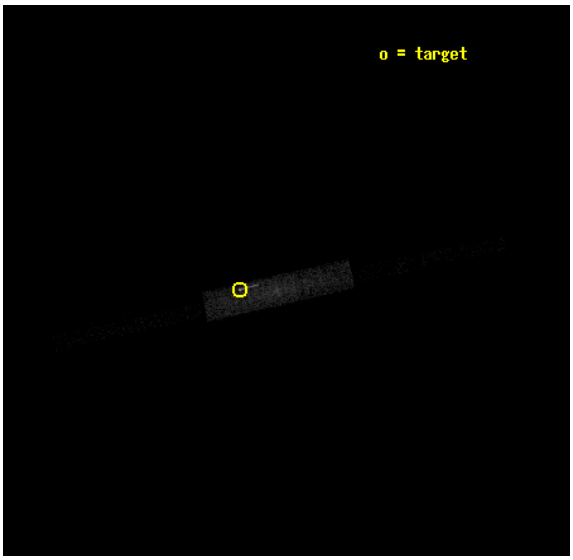
2.1 OBI

2.1.1 Images

Level 1 Image



Level 1 Bad Events



2.1.2 Parameters

obi_num	0
ascdsver	7.6.9
caldbver	3.2.3
date	2006-09-30T13:58:47
revision	2

sched_exp_time	1000.000000
ontime	1191.0500490367
l1events	87934

2.1.3 Events

Level 1 Events

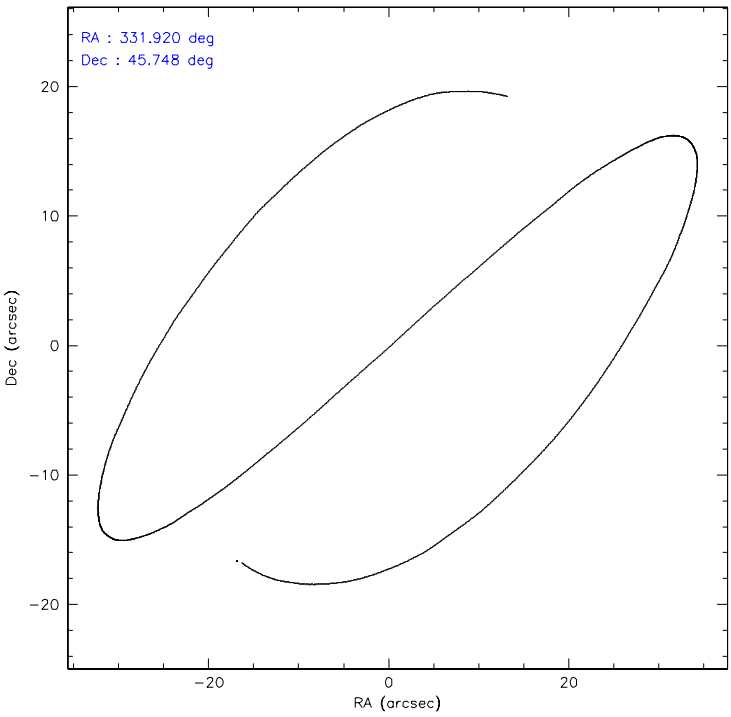
	segment 1	**segment 2**	**segment 3**
level 1 events	1419	85162	1353
rejected events	1419	25174	1353
rejected %	100%	29%	100%

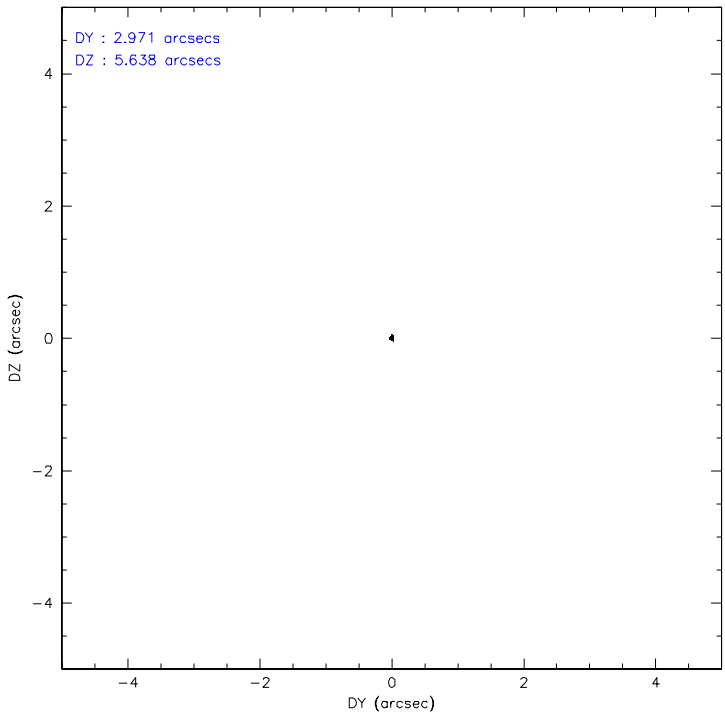
2.2 Compared Parameters

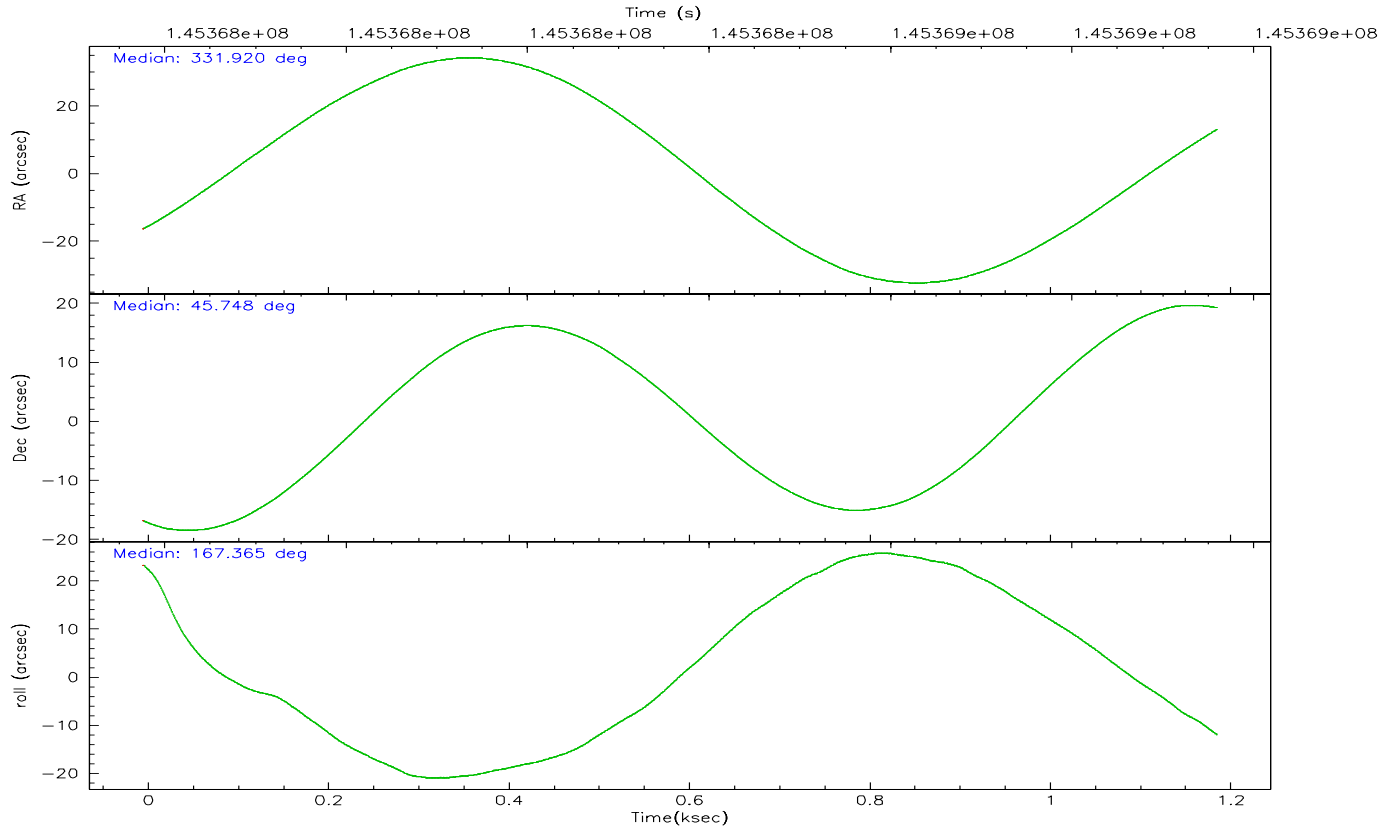
Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-S	HRC-S
Grating	NONE	NONE
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
Pointing RA	331.958496	331.9198788656475
Pointing Dec	45.757714	45.74767054407108
Pointing Roll	167.277537	167.3726883942935
SIM focus pos (mm)	-1.429586	-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	145367960.184000	145367585.01525
Observation start date	2002-08-10T11:58:16	2002-08-10T11:53:05
Observation end time	145368960.184000	145369094.84031
Observation end date	2002-08-10T12:14:56	2002-08-10T12:18:14

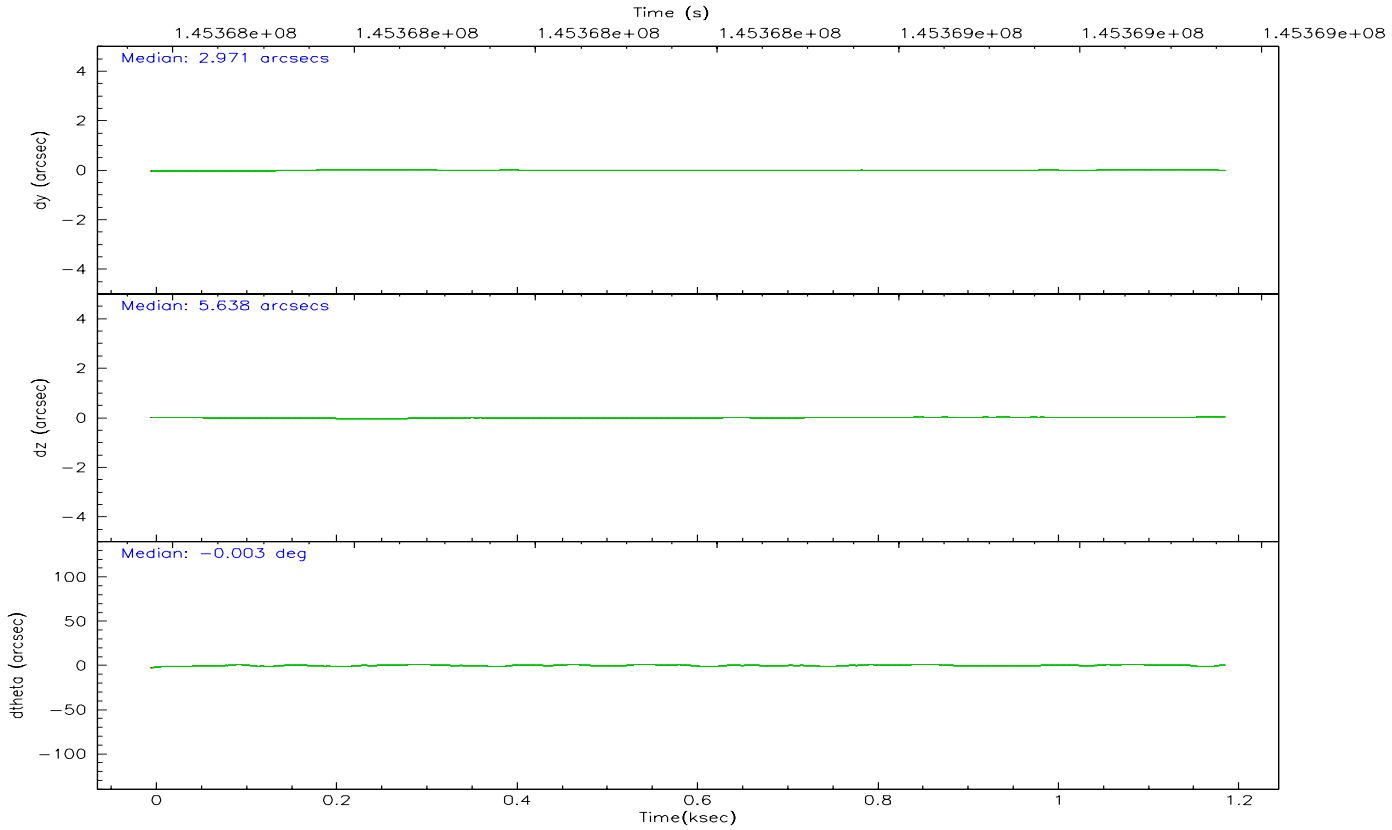
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED

2.3 Aspect


RA : 331.920 deg
Dec : 45.748 deg
20
10
0
−10
−20
Dec (arcsec)
−20
0
20
RA (arcsec)


DY : 2.971 arcsecs
DZ : 5.638 arcsecs
4
2
0
−2
−4
DZ (arcsec)
−4
−2
0
2
4
DY (arcsec)


Time (s)
1.45368e+08
1.45368e+08
1.45368e+08
1.45368e+08
1.45369e+08
1.45369e+08
1.45369e+08
Median: 331.920 deg
RA (arcsec)
Median: 45.748 deg
Dec (arcsec)
Median: 167.365 deg
roll (arcsec)
Time(ksec)

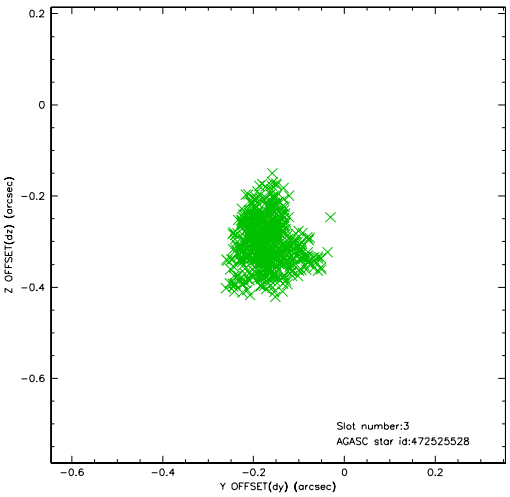

Time (s)
1.45368e+08
1.45368e+08
1.45368e+08
1.45368e+08
1.45369e+08
1.45369e+08
1.45369e+08
Median: 2.971 arcsecs
dy (arcsec)
Median: 5.638 arcsecs
dz (arcsec)
Median: −0.003 deg
dtheta (arcsec)
Time(ksec)

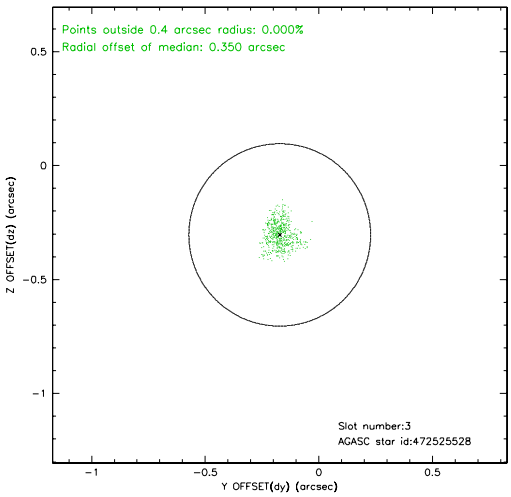
Slot Statistics

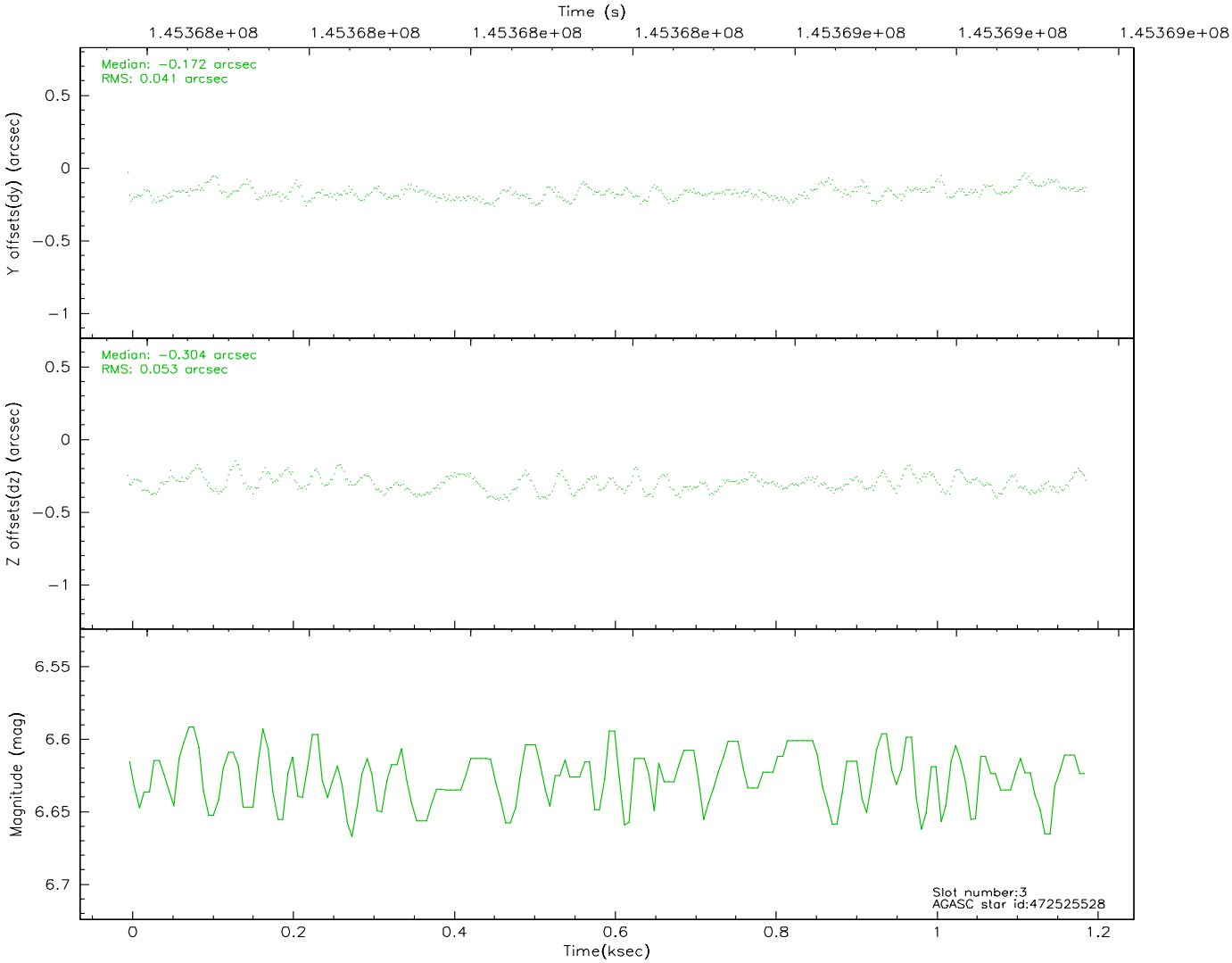
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-S-1	6.99	291	0.157	-0.157	0.007	0.010	0.000000	0.000000	-1156.99	-454.18
1	FID	HRC-S-2	7.00	291	0.098	-0.099	0.004	0.009	0.000000	0.000000	1238.65	-448.34
2	FID	HRC-S-3	7.01	291	0.134	-0.047	0.007	0.012	0.000000	0.000000	-1155.47	573.92
3	GUIDE	472525528	6.62	582	-0.172	-0.304	0.072	0.116	331.551102	45.248694	604.75	2011.87
4	GUIDE	472536328	8.13	582	-0.155	0.187	0.060	0.106	331.496671	46.454831	1672.85	-2195.43
5	GUIDE	472665256	9.02	582	0.168	0.162	0.075	0.120	332.808125	46.195041	-1711.86	-2017.08
6	GUIDE	472527656	9.16	582	0.043	-0.105	0.103	0.182	331.004689	45.273362	1974.03	2215.51
7	GUIDE	472659832	9.45	581	0.122	0.072	0.089	0.156	332.780399	46.098139	-1724.52	-1654.22

2.4 Star Slots

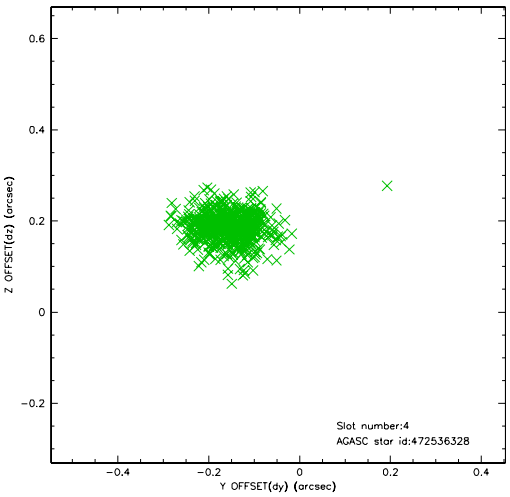
2.4.1 Slot 3

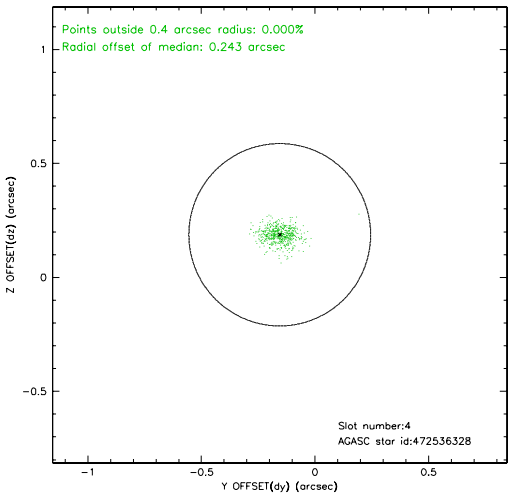


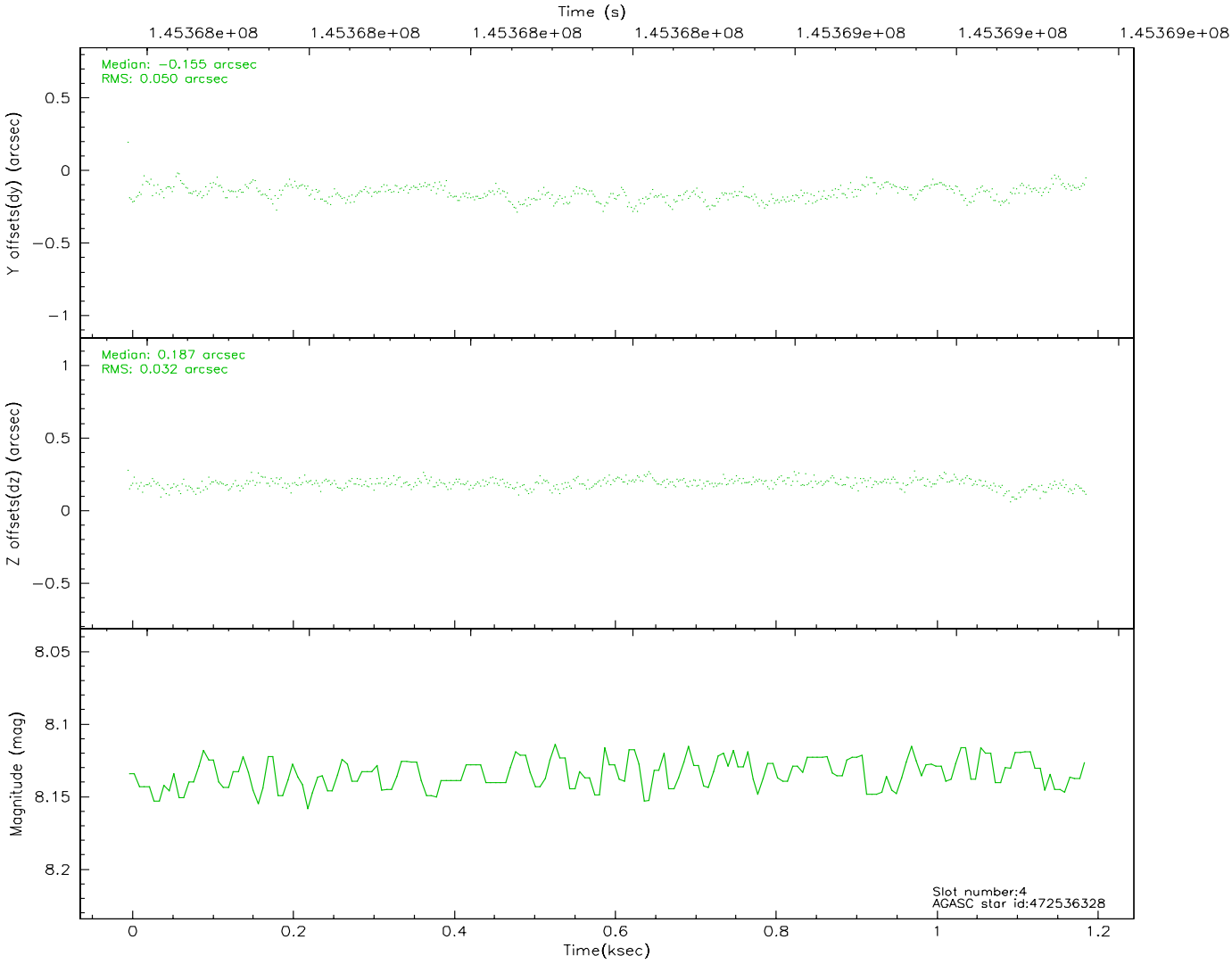




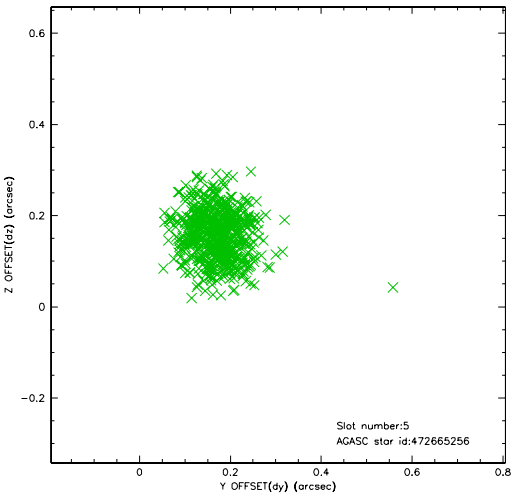
2.4.2 Slot 4

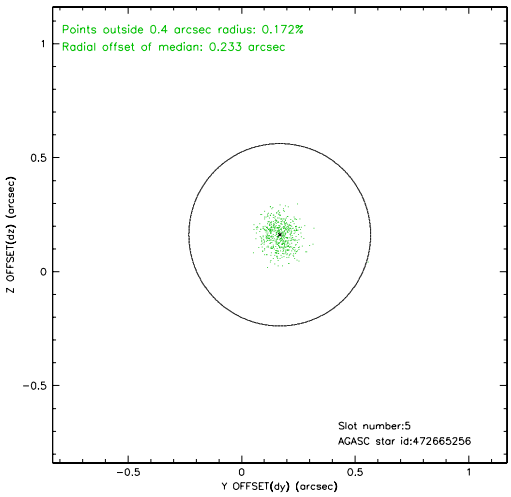

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:472536328

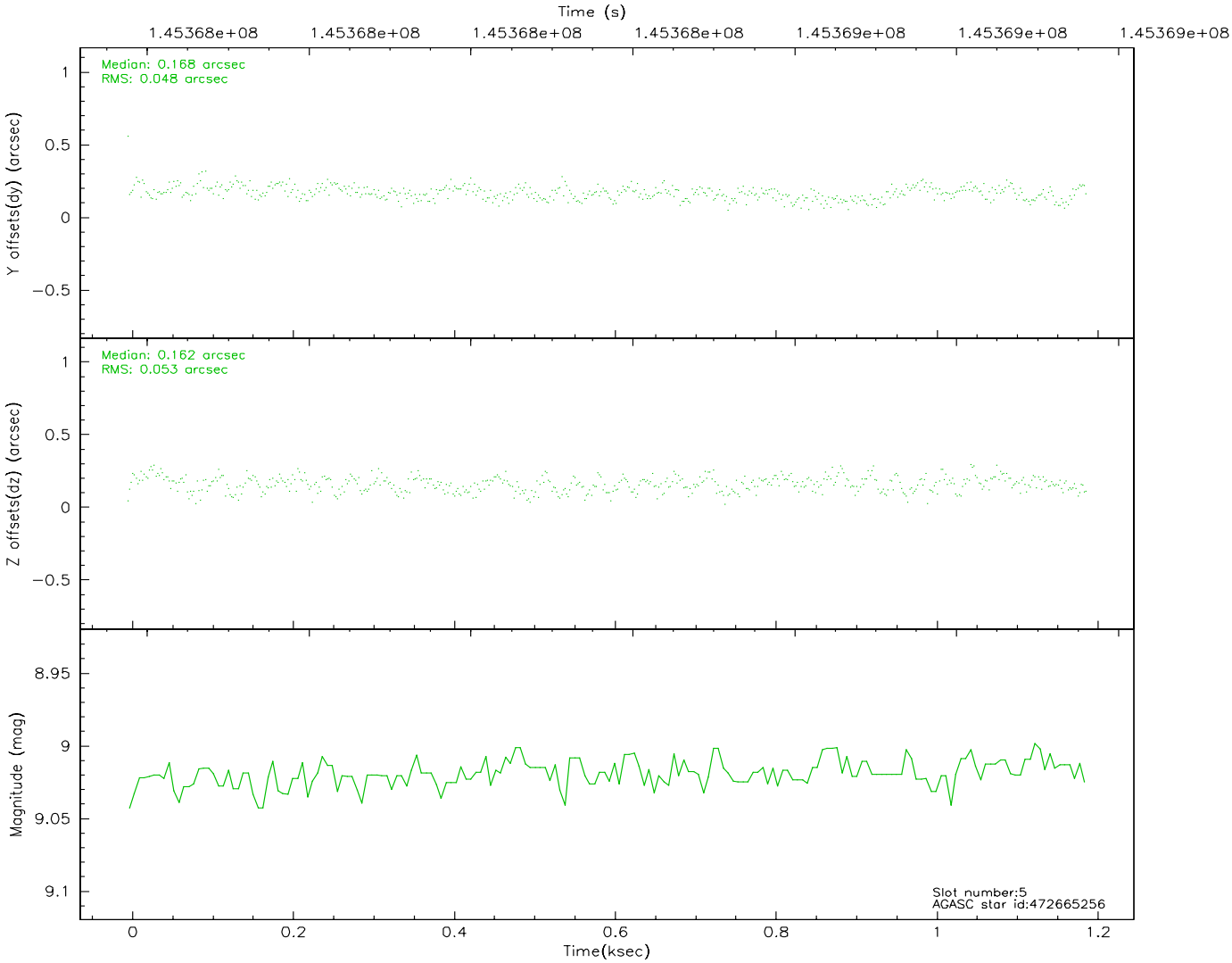

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.243 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:472536328


Time (s)
Median: −0.155 arcsec
RMS: 0.050 arcsec
Y offsets(dy) (arcsec)
Median: 0.187 arcsec
RMS: 0.032 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:472536328
Time(ksec)

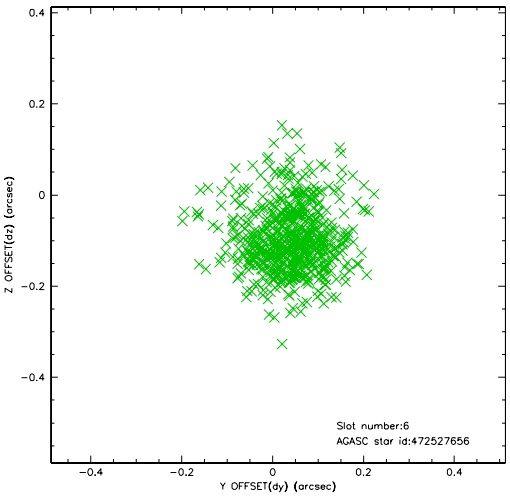
2.4.3 Slot 5

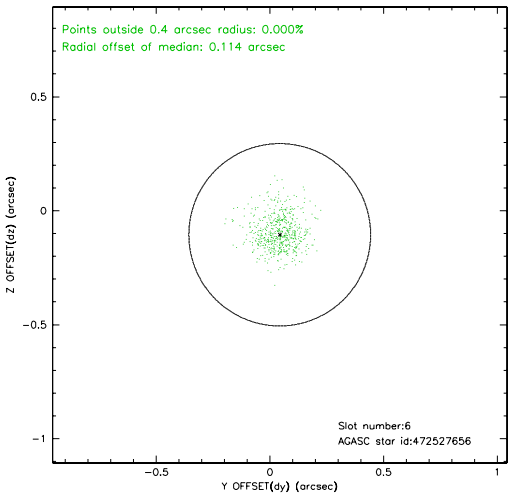

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:472665256

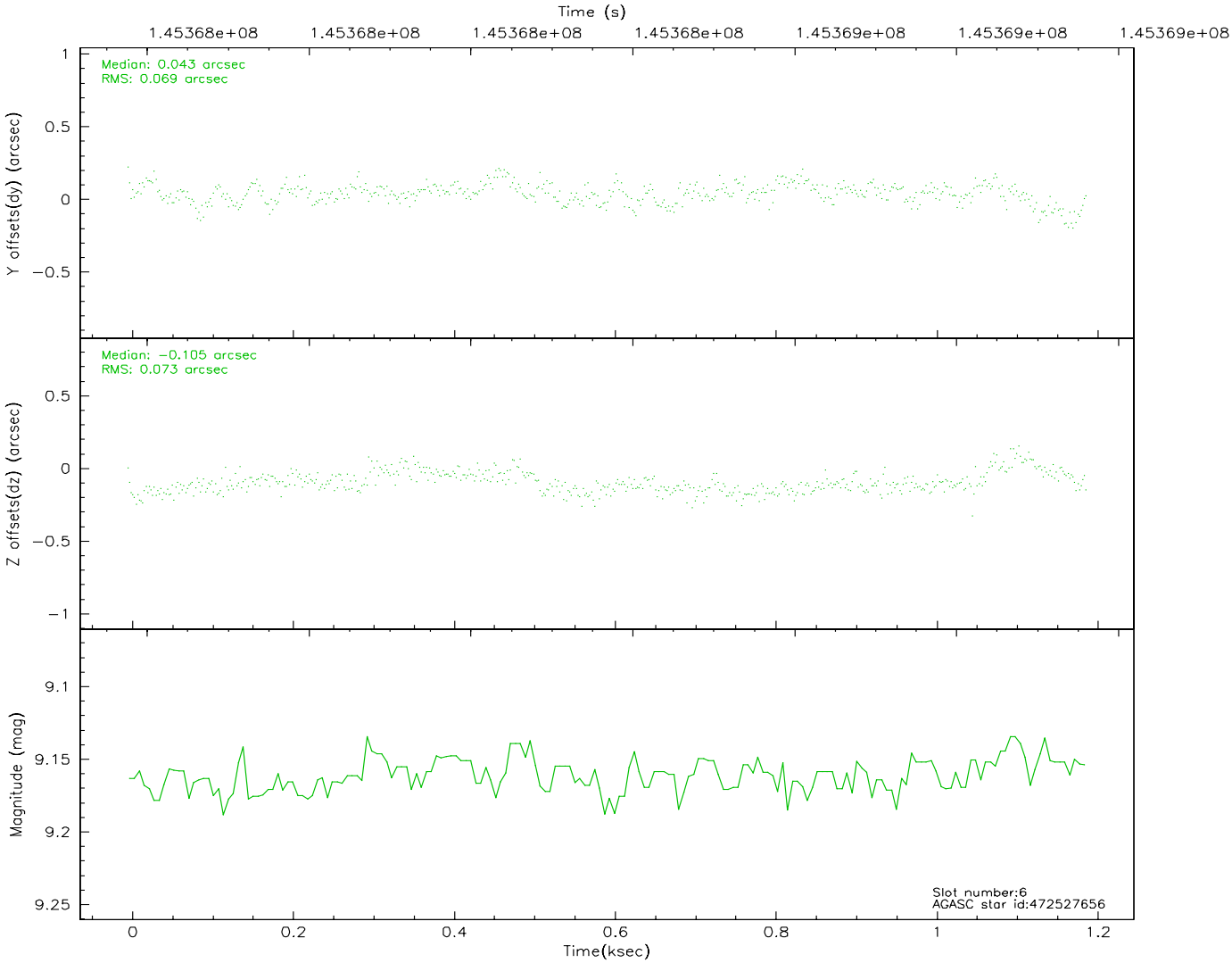

Points outside 0.4 arcsec radius: 0.172%
Radial offset of median: 0.233 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:472665256


Time (s)
Median: 0.168 arcsec
RMS: 0.048 arcsec
Y offsets(dy) (arcsec)
Median: 0.162 arcsec
RMS: 0.053 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:472665256
Time(ksec)

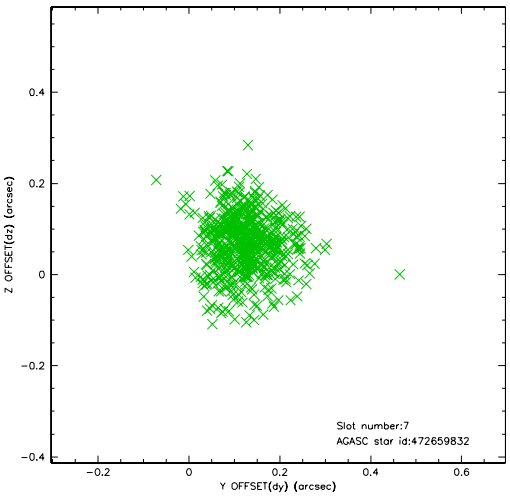
2.4.4 Slot 6

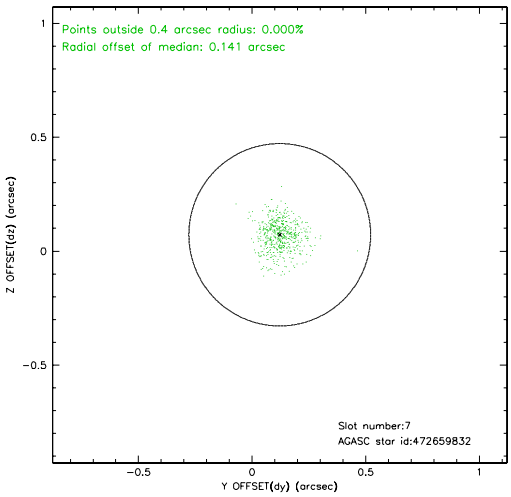

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:472527656

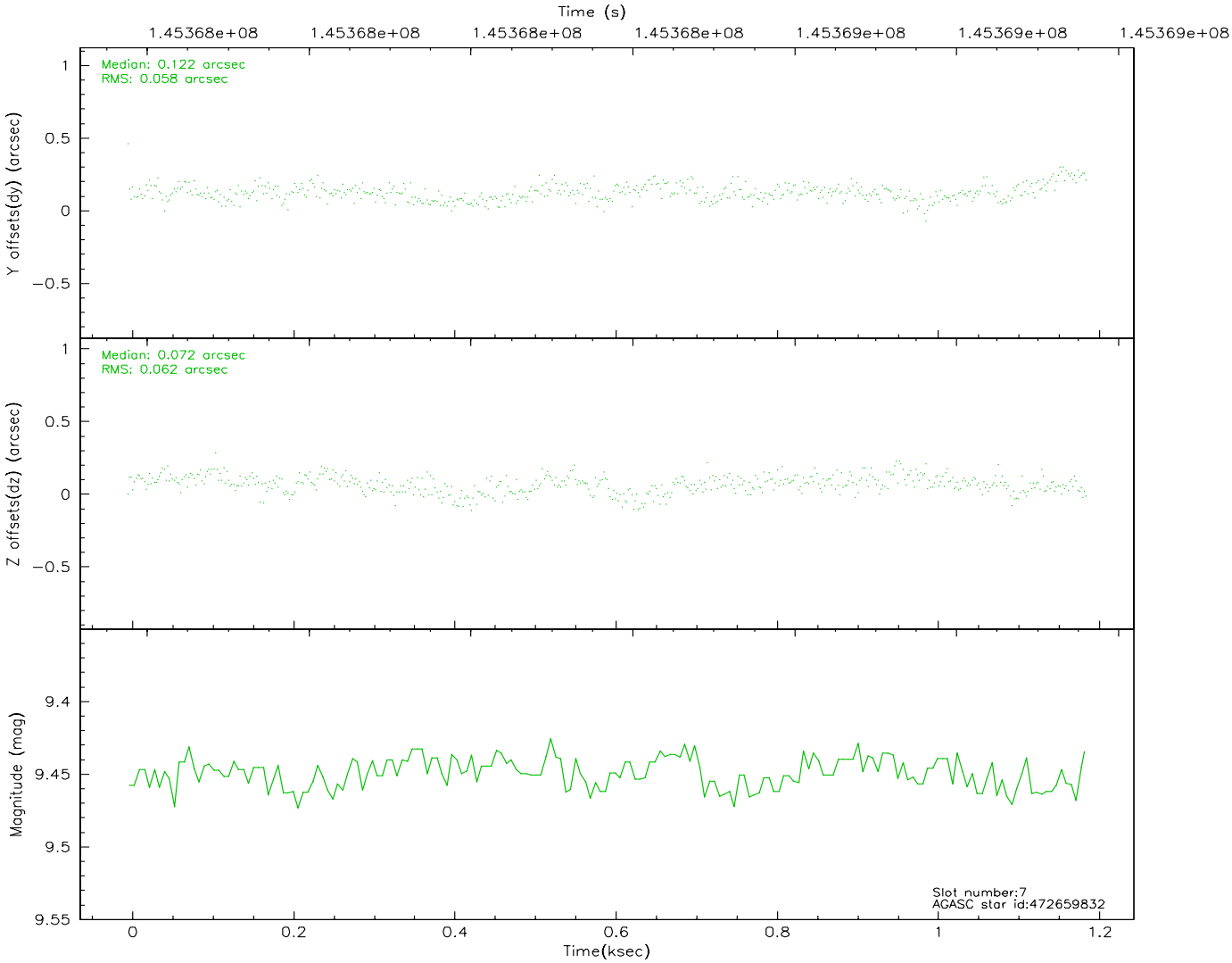

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.114 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:472527656


Time (s)
Median: 0.043 arcsec
RMS: 0.069 arcsec
Y offsets(dy) (arcsec)
Median: −0.105 arcsec
RMS: 0.073 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:472527656
Time(ksec)

2.4.5 Slot 7

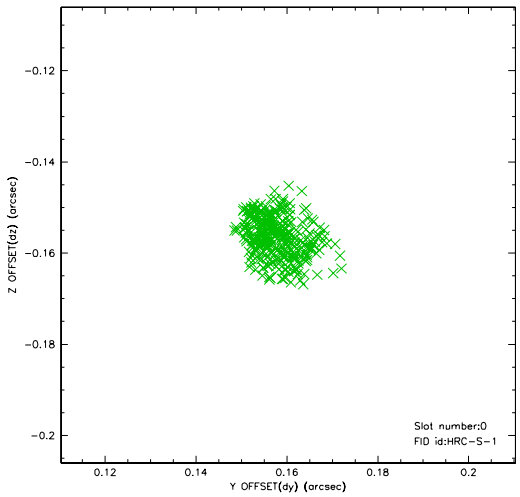

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:472659832

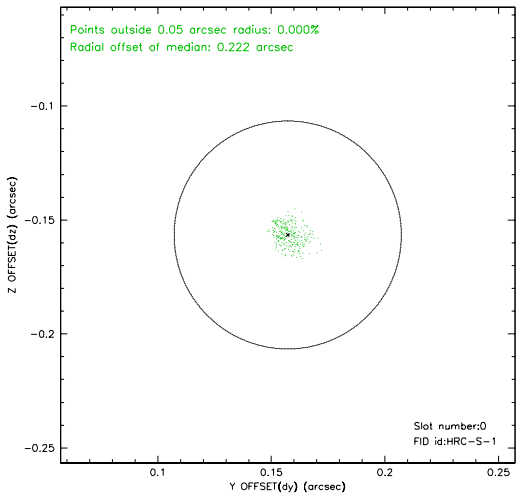

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.141 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:472659832

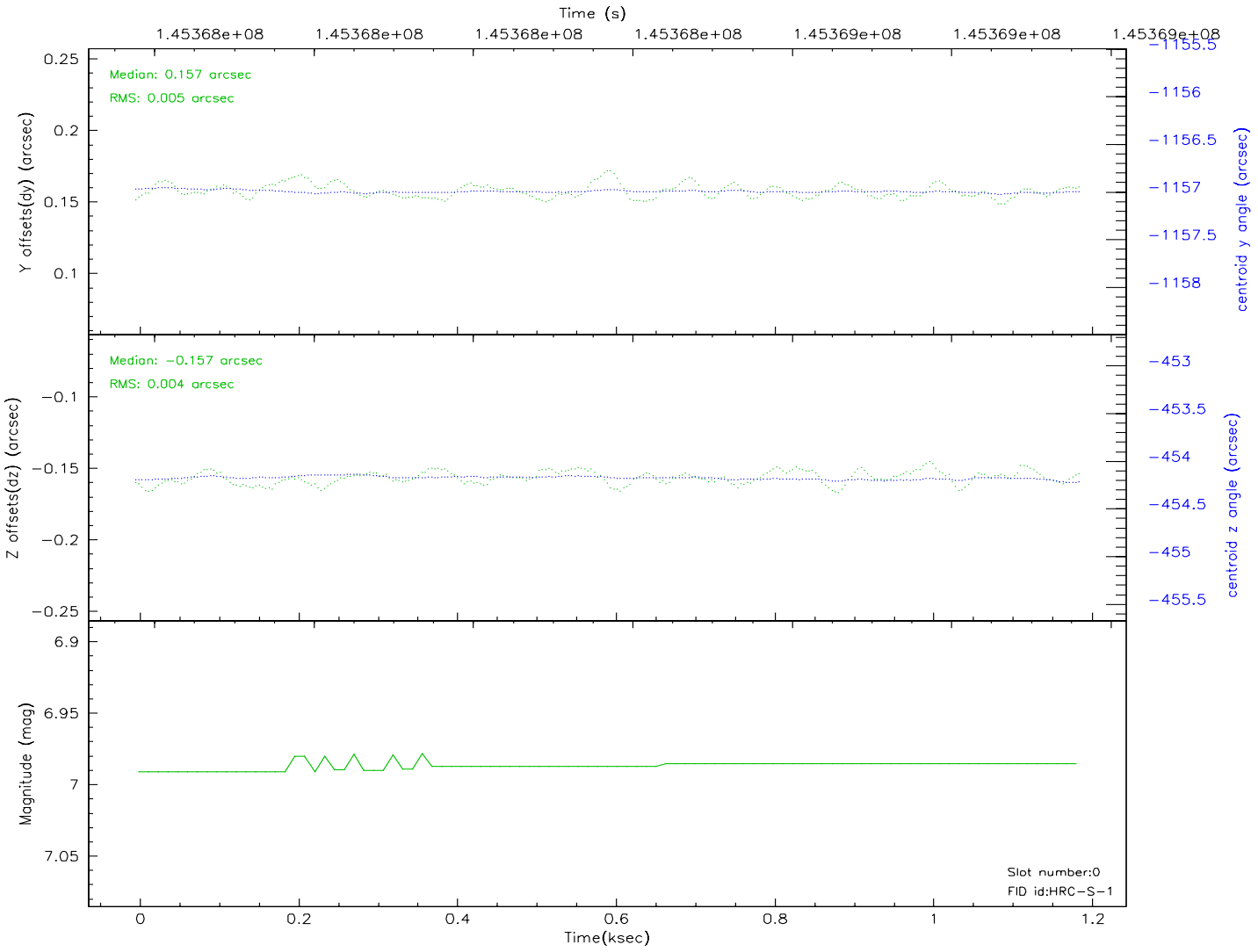

Time (s)
Median: 0.122 arcsec
RMS: 0.058 arcsec
Y offsets(dy) (arcsec)
Median: 0.072 arcsec
RMS: 0.062 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:472659832
Time(ksec)

2.5 FID Slots

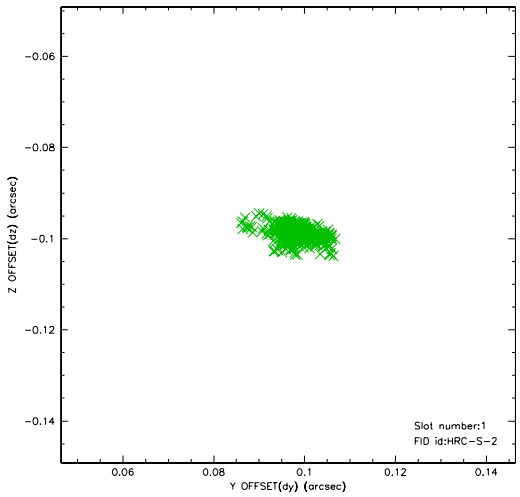
2.5.1 Slot 0

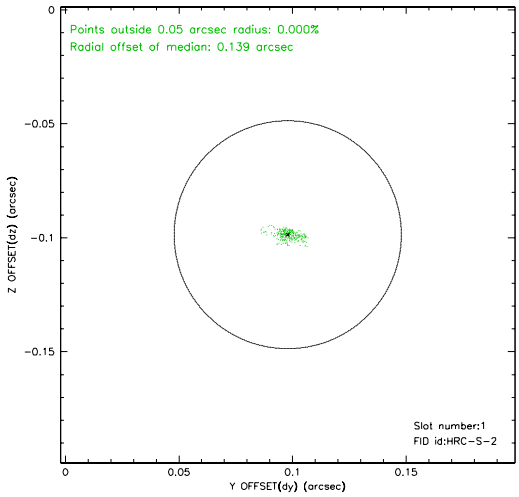


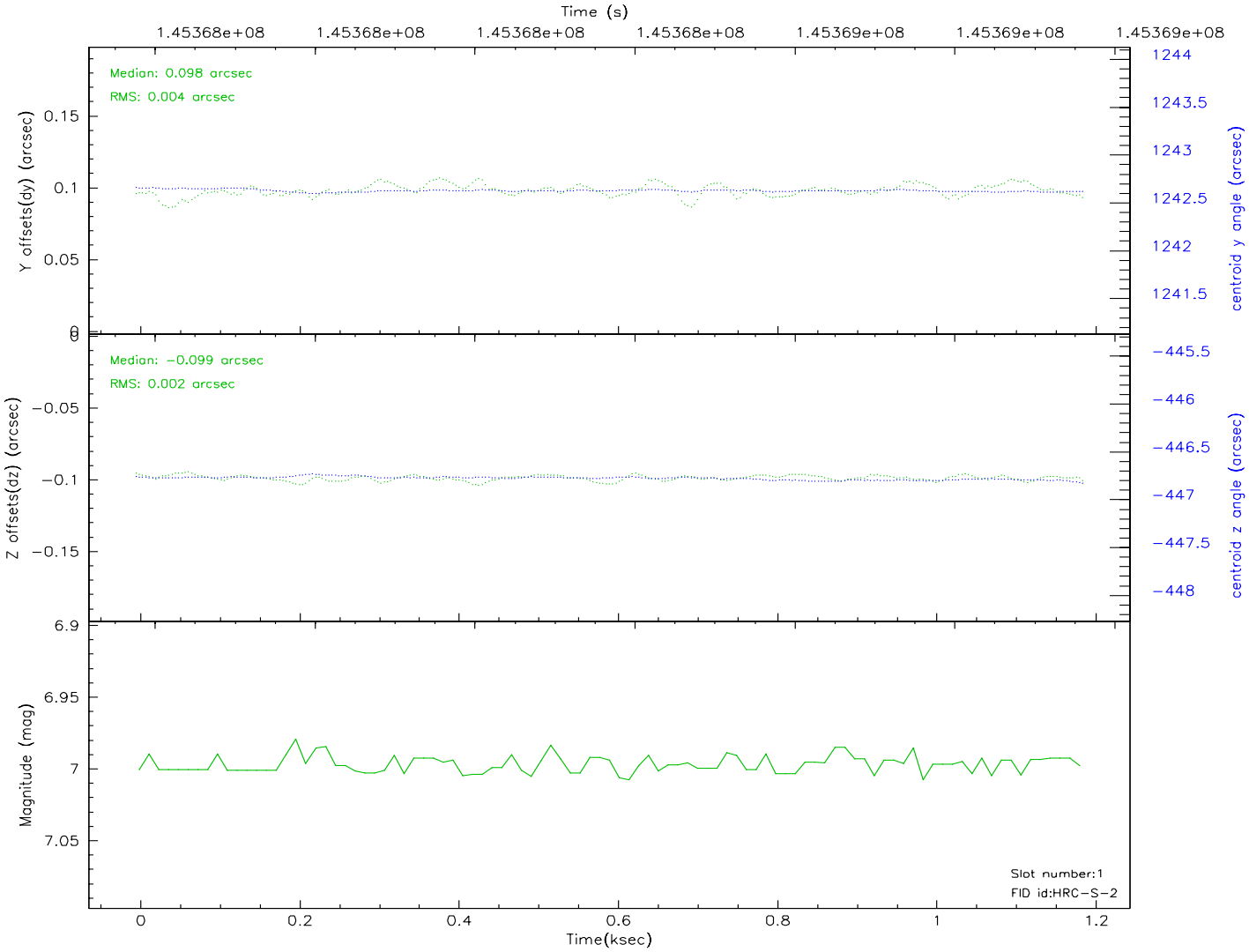




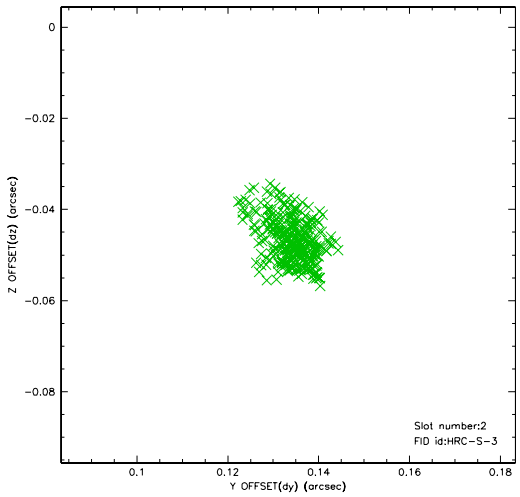
2.5.2 Slot 1

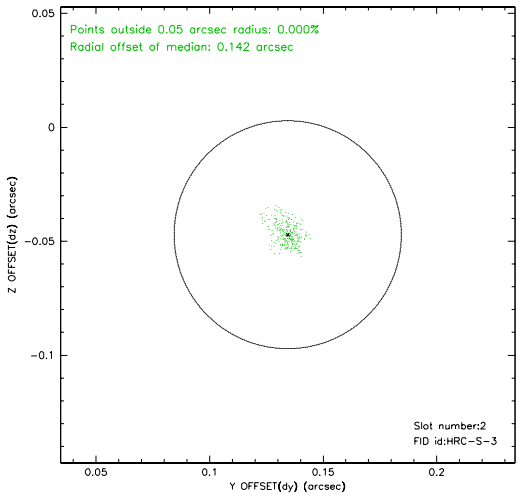

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-S-2

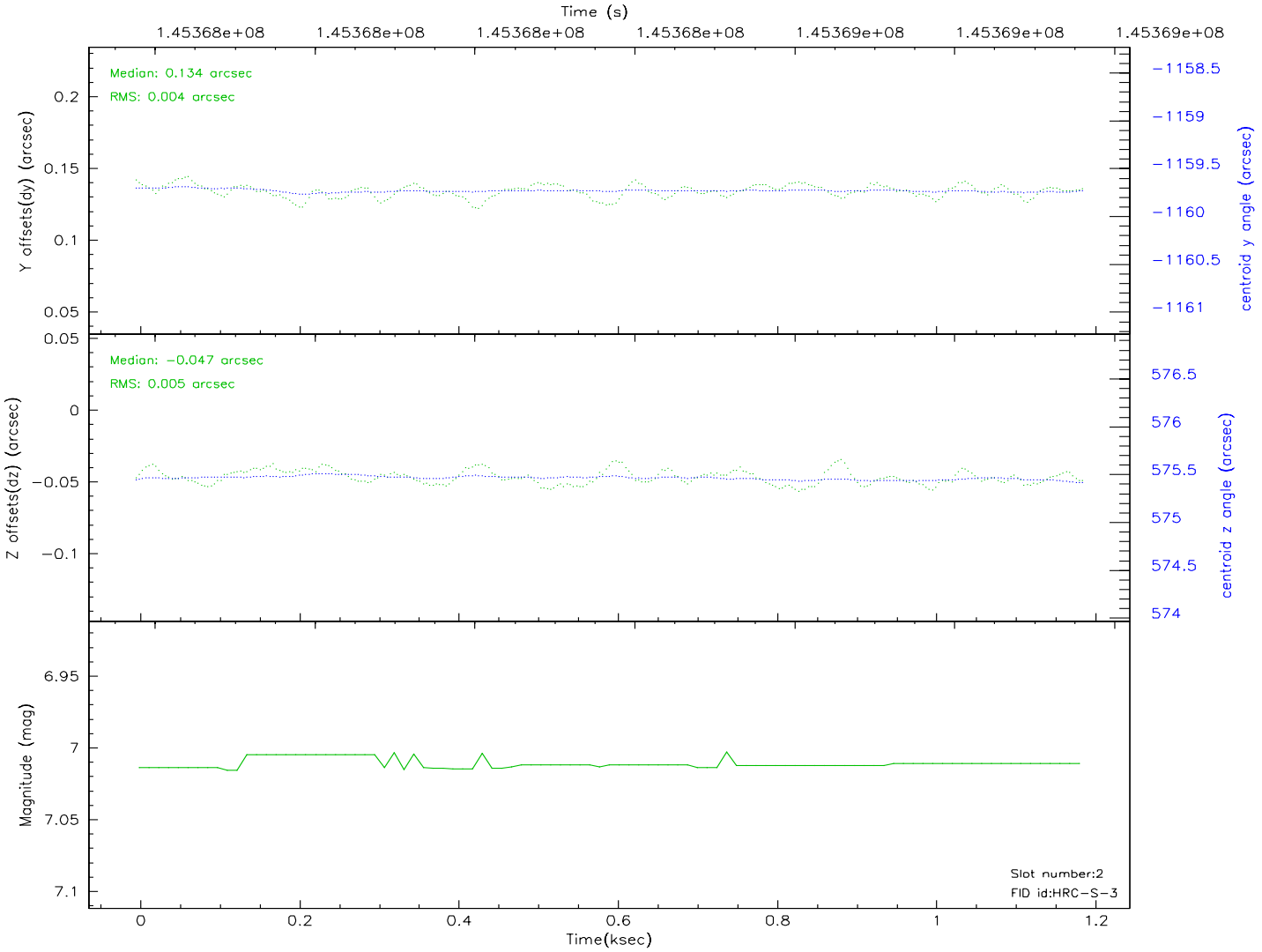

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.139 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-S-2


Time (s)
Median: 0.098 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.099 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)

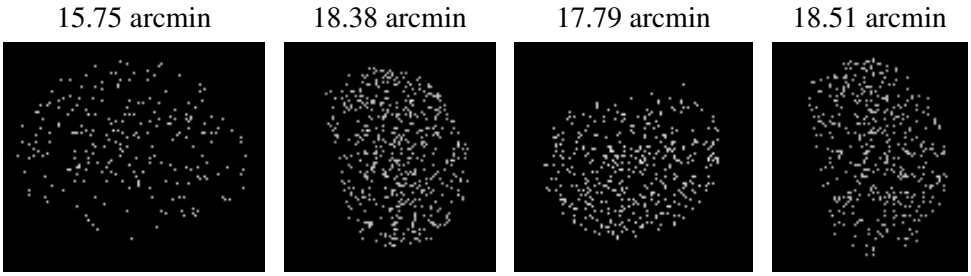
2.5.3 Slot 2


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


Time (s)
Median: 0.134 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.047 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)	2006.10.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	1.19

A.2 Comments

```
Charge time:
Charge time for this ObsId remains at previous value of 1.19 ks although
with the current processing the charge time would have veen 1.14 ksec.

Monitor constraint met.

The source is away from the aim point of the chip, and therefore is
extended and asymmetric.
```