V&V Reference Report
L2 ASCDS Version : 8.4.5

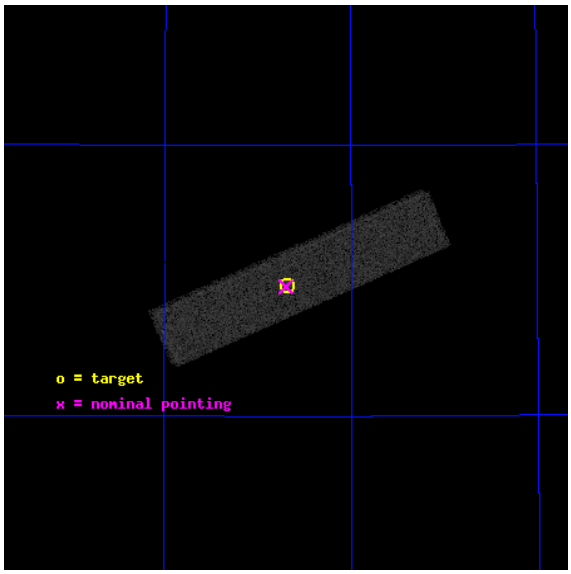
Observation 2629 - L2 Version 3
Chandra X-Ray Center

L2 Processing Date : Oct 1 2012

Contents

1 Front

seq_num	290185	Sequence number
obs_id	2629	Observation id
title	AO3A HRC-S CALIBRATION OBSERVATION: MINI-SCAN OF ARLAC	Proposal ti
observer	Dr. CXC Calibration	Principal investigator
object	ARLAC	Source name
ra_targ	332.17	Observer's specified target RA [deg]
dec_targ	45.742306	Observer's specified target Dec [deg]
ra_nom	332.1748537422	Nominal RA [deg]
dec_nom	45.739489852363	Nominal Dec [deg]
roll_nom	336.23282506114	Nominal Roll [deg]
revision	3	Processing version of data
ontime	1142.1062960178	[s]
livetime	1136.0161797118	Ontime multiplied by DTCOR
l2events	42039	Number of level 2 events

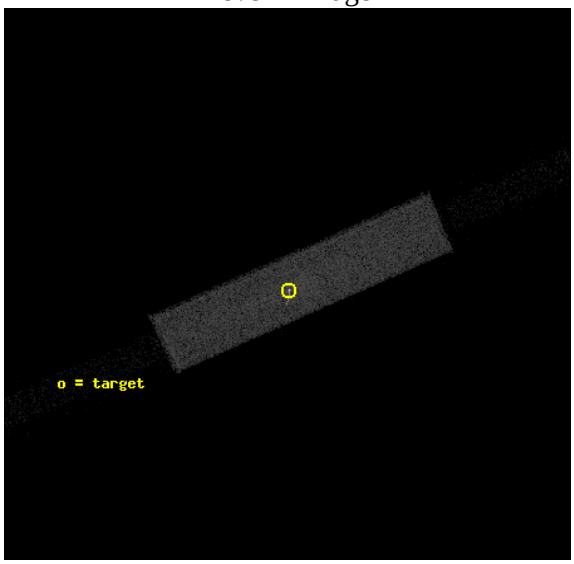


2 OBI

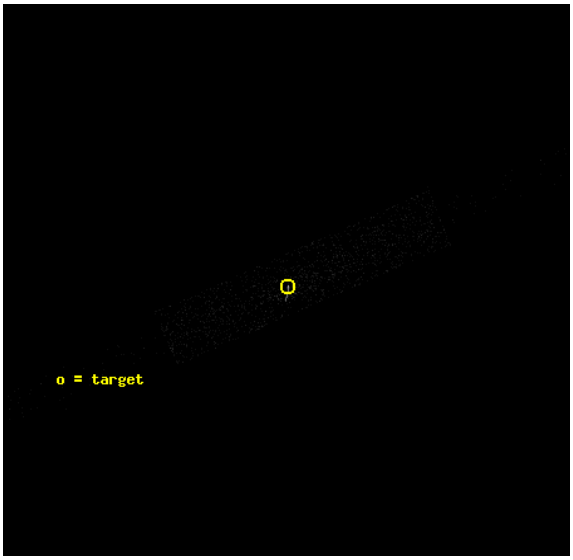
2.1 OBI

2.1.1 Images

Level 1 Image



Level 1 Bad Events



2.1.2 Parameters

obi_num	1	Obi number
ascdsver	8.4.5	Processing system revision
caldbver	4.5.2	
date	2012-10-01T03:03:05	Date and time of file creation
revision	3	Processing version of data

sched_exp_time	1000.000000	[s] Scheduled observation exposure time
ontime	1142.1062960178	[s]
l1events	69956	Number of level 1 events

2.1.3 Events

Level 1 Events

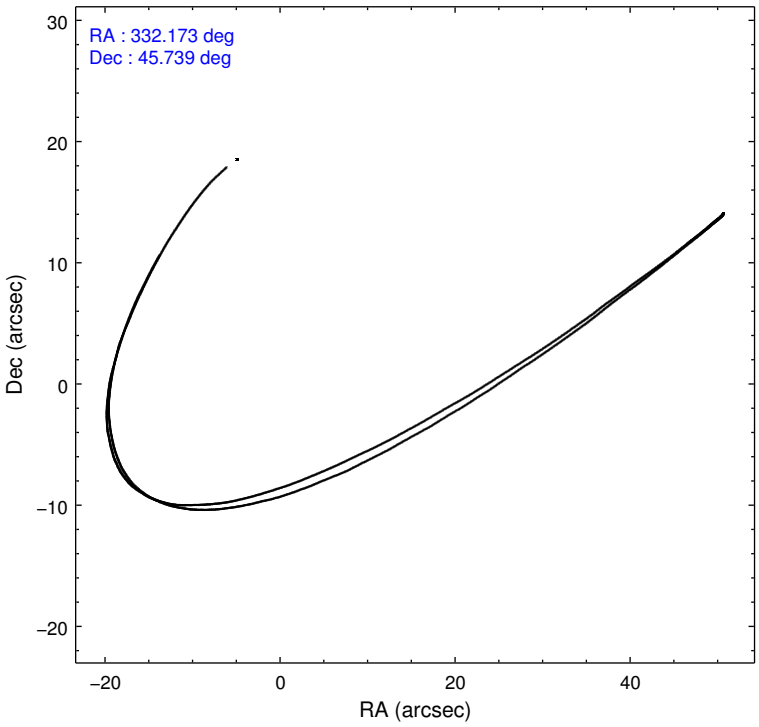
	segment 1	**segment 2**	**segment 3**
level 1 events	1167	67652	1137
rejected events	1167	15675	1137
rejected %	100%	23%	100%

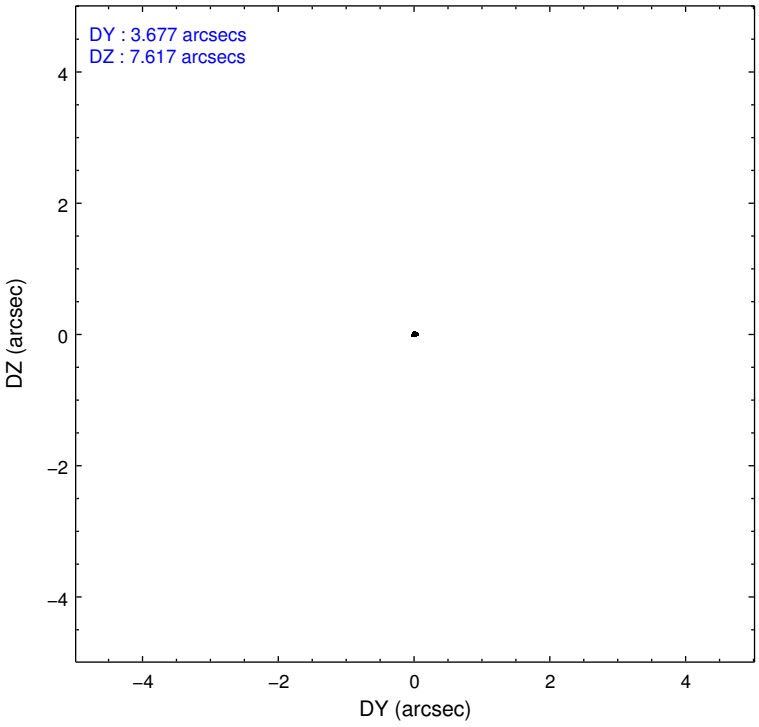
2.2 Compared Parameters

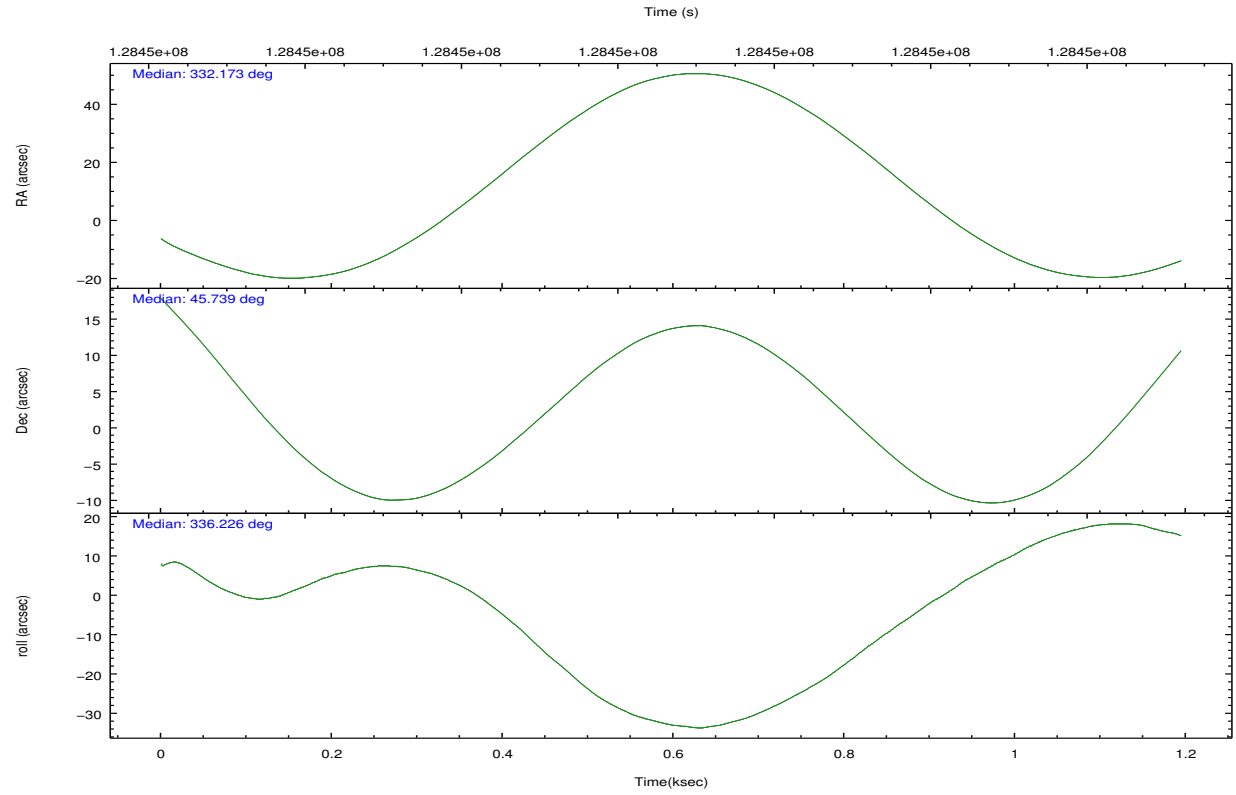
Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-S	HRC-S
Grating	NONE	NONE
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
[deg] Pointing RA	332.135599	332.1748537421985
[deg] Pointing Dec	45.735781	45.73948985236298
[deg] Pointing Roll	336.193662	336.2328250611441
[mm] SIM focus pos	-1.429586	-1.428180813131781
[mm] SIM defocus	0.1037507710433287	0.1051558262725154
[mm] SIM translation stage pos	250.455976	250.466033080201
[mm] SIM translation stage offset	0	-0.01005468664627074
[s] Observation start time (MET)	128448067.184000	128447691.00104
Observation start date	2002-01-26T16:00:03	2002-01-26T15:54:51
[s] Observation end time (MET)	128449067.184000	128449201.3386
Observation end date	2002-01-26T16:16:43	2002-01-26T16:20:01

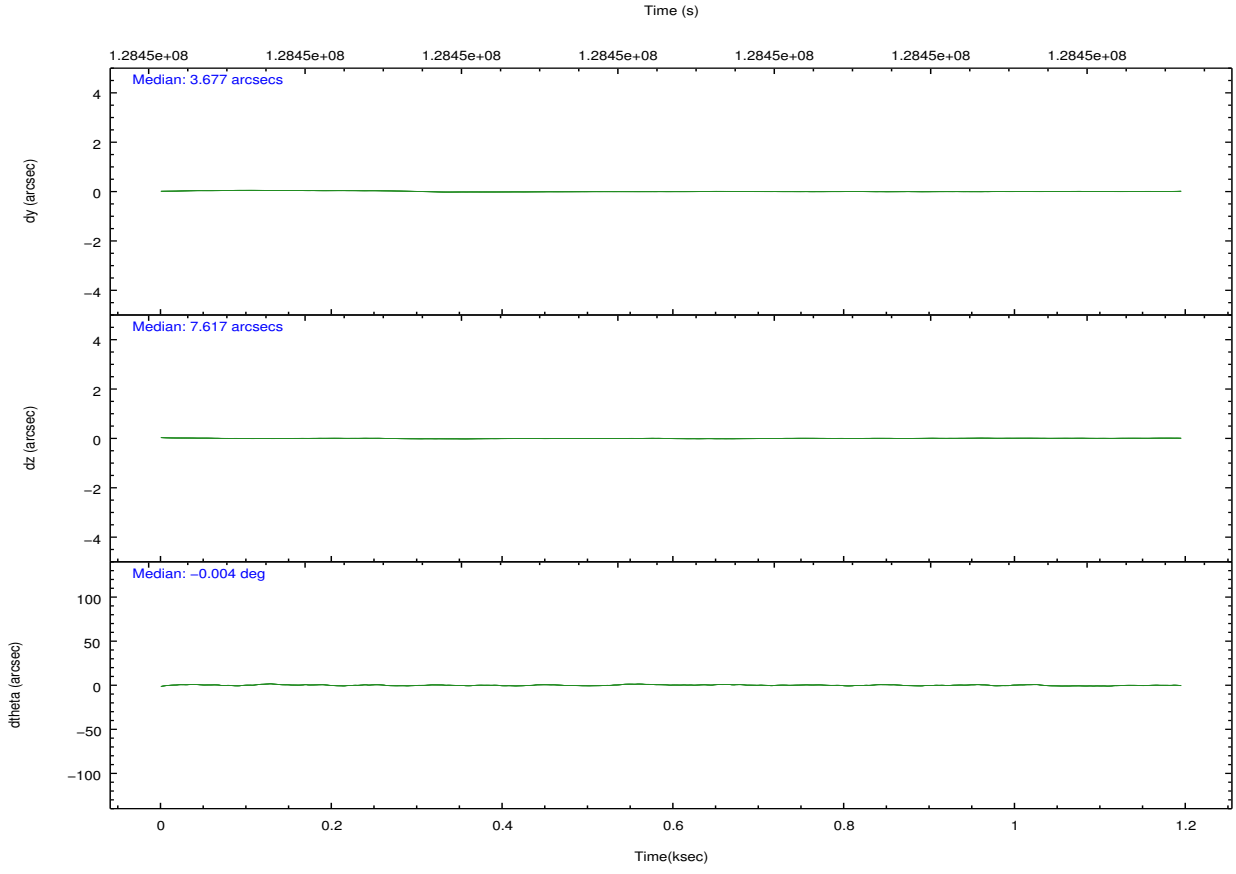
Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED

2.3 Aspect


RA : 332.173 deg
Dec : 45.739 deg
Dec (arcsec)
RA (arcsec)
30
20
10
0
−10
−20
−20
0
20
40


DY : 3.677 arcsecs
DZ : 7.617 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
1.2845e+08
1.2845e+08
1.2845e+08
1.2845e+08
1.2845e+08
1.2845e+08
1.2845e+08
Median: 332.173 deg
RA (arcsec)
40
20
0
−20
Median: 45.739 deg
Dec (arcsec)
15
10
5
0
−5
−10
Median: 336.226 deg
roll (arcsec)
20
10
0
−10
−20
−30
0
0.2
0.4
0.6
0.8
1
1.2
Time(ksec)

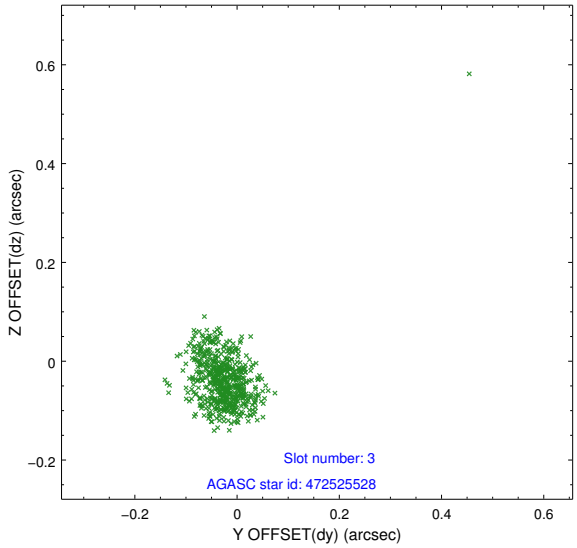

Time (s)
1.2845e+08
1.2845e+08
1.2845e+08
1.2845e+08
1.2845e+08
1.2845e+08
1.2845e+08
Median: 3.677 arcsecs
dy (arcsec)
4
2
0
−2
−4
Median: 7.617 arcsecs
dz (arcsec)
4
2
0
−2
−4
Median: −0.004 deg
dtheta (arcsec)
100
50
0
−50
−100
0
0.2
0.4
0.6
0.8
1
1.2
Time(ksec)

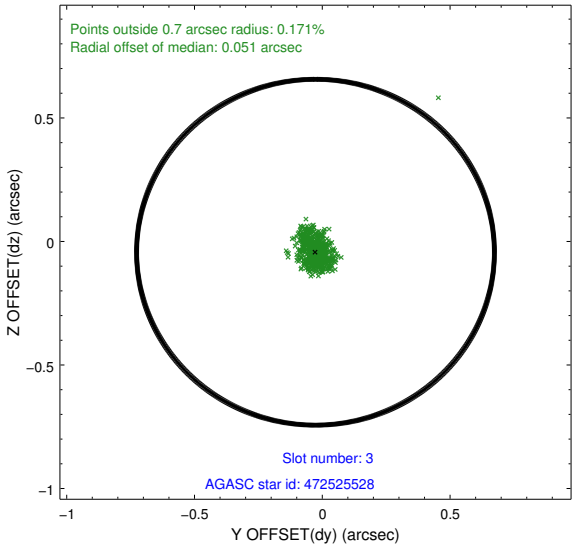
Slot Statistics

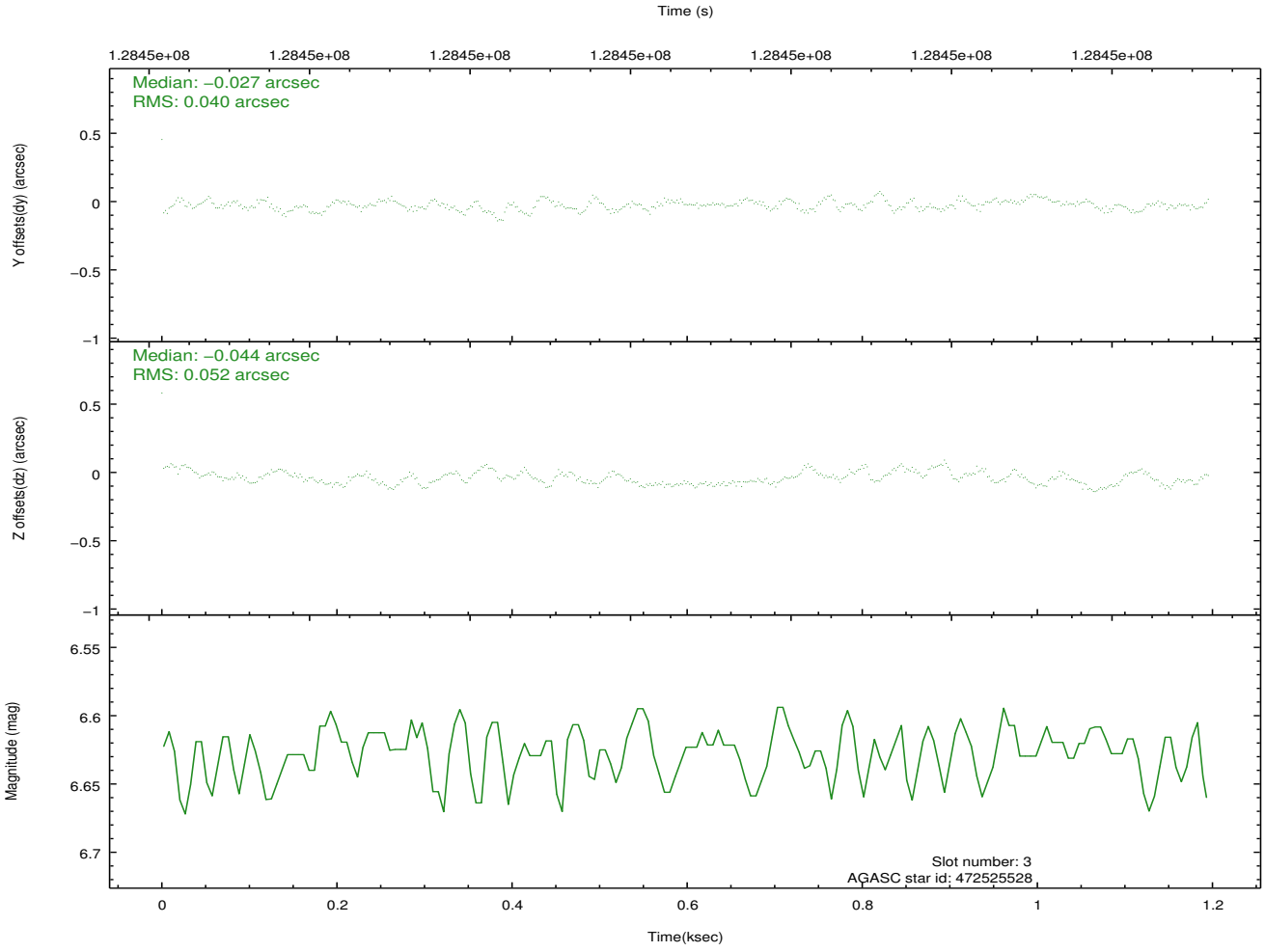
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-S-1	6.98	292	0.152	-0.084	0.007	0.011	0.000000	0.000000	-1157.72	-456.16
1	FID	HRC-S-2	6.99	292	0.079	-0.088	0.004	0.009	0.000000	0.000000	1237.93	-450.34
2	FID	HRC-S-3	7.00	292	0.160	-0.130	0.007	0.013	0.000000	0.000000	-1156.20	571.78
3	GUIDE	472525528	6.63	584	-0.027	-0.044	0.062	0.099	331.551102	45.248694	-648.55	-2194.05
4	GUIDE	472523760	8.23	584	-0.072	-0.151	0.081	0.123	331.645363	45.403260	-652.08	-1592.52
5	GUIDE	472659832	9.47	584	0.016	0.102	0.103	0.162	332.780399	46.098139	943.08	1850.12
6	GUIDE	472654568	9.43	584	-0.008	0.036	0.106	0.166	332.194449	45.063576	1116.58	-2146.82
7	GUIDE	472655152	9.43	582	0.106	0.074	0.098	0.167	332.504239	45.862991	662.66	793.87

2.4 Star Slots

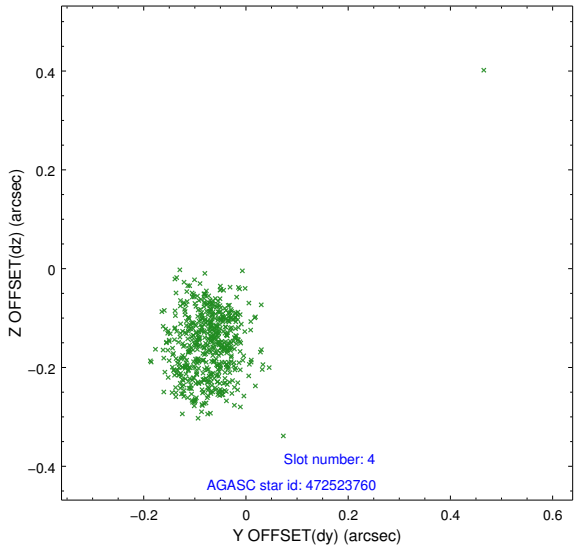
2.4.1 Slot 3

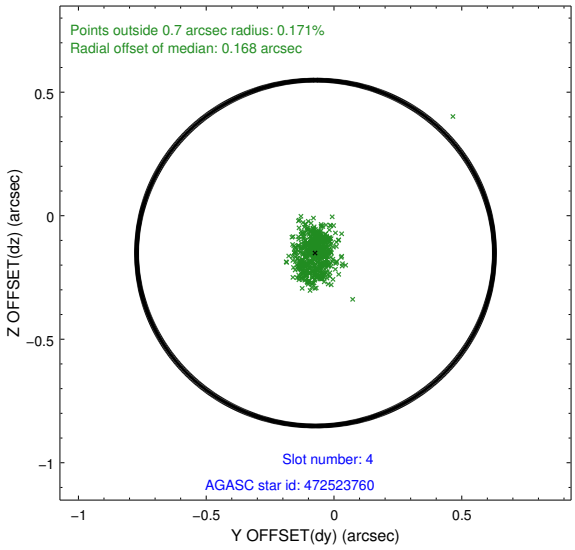


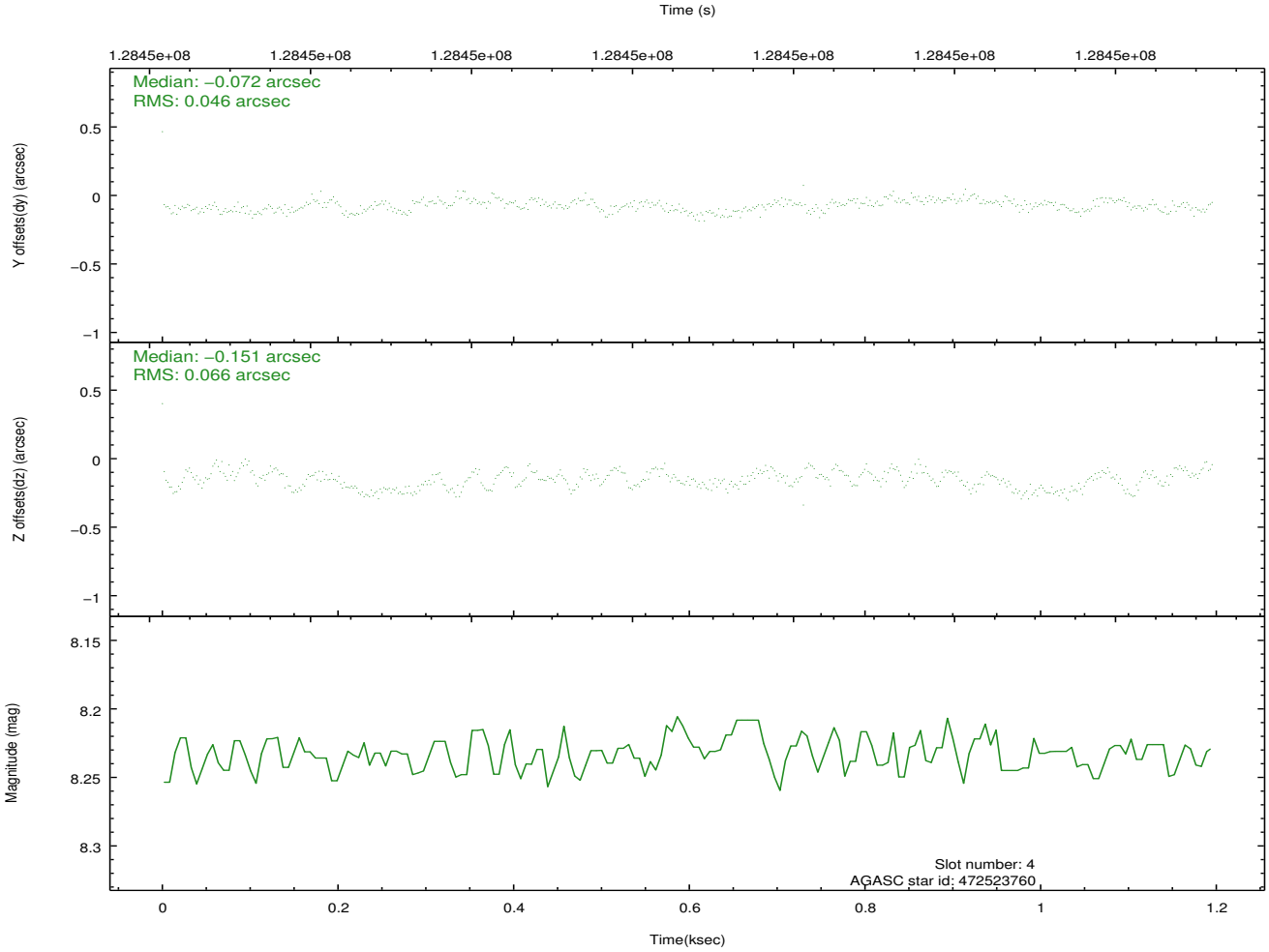




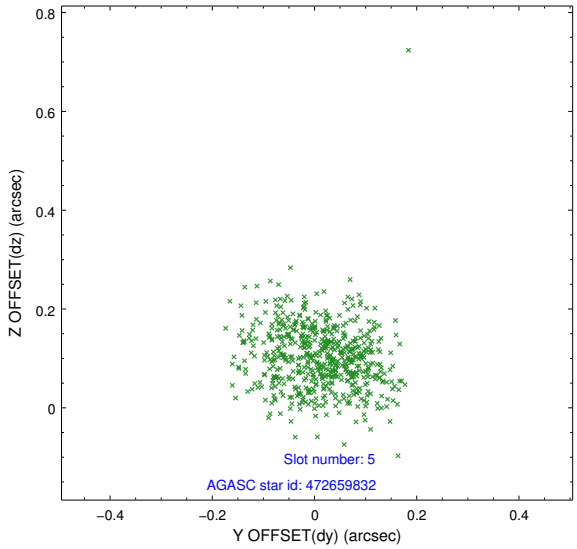
2.4.2 Slot 4

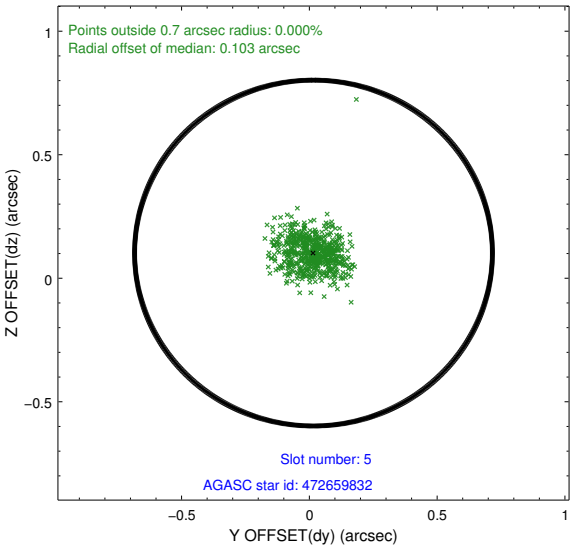

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 472523760

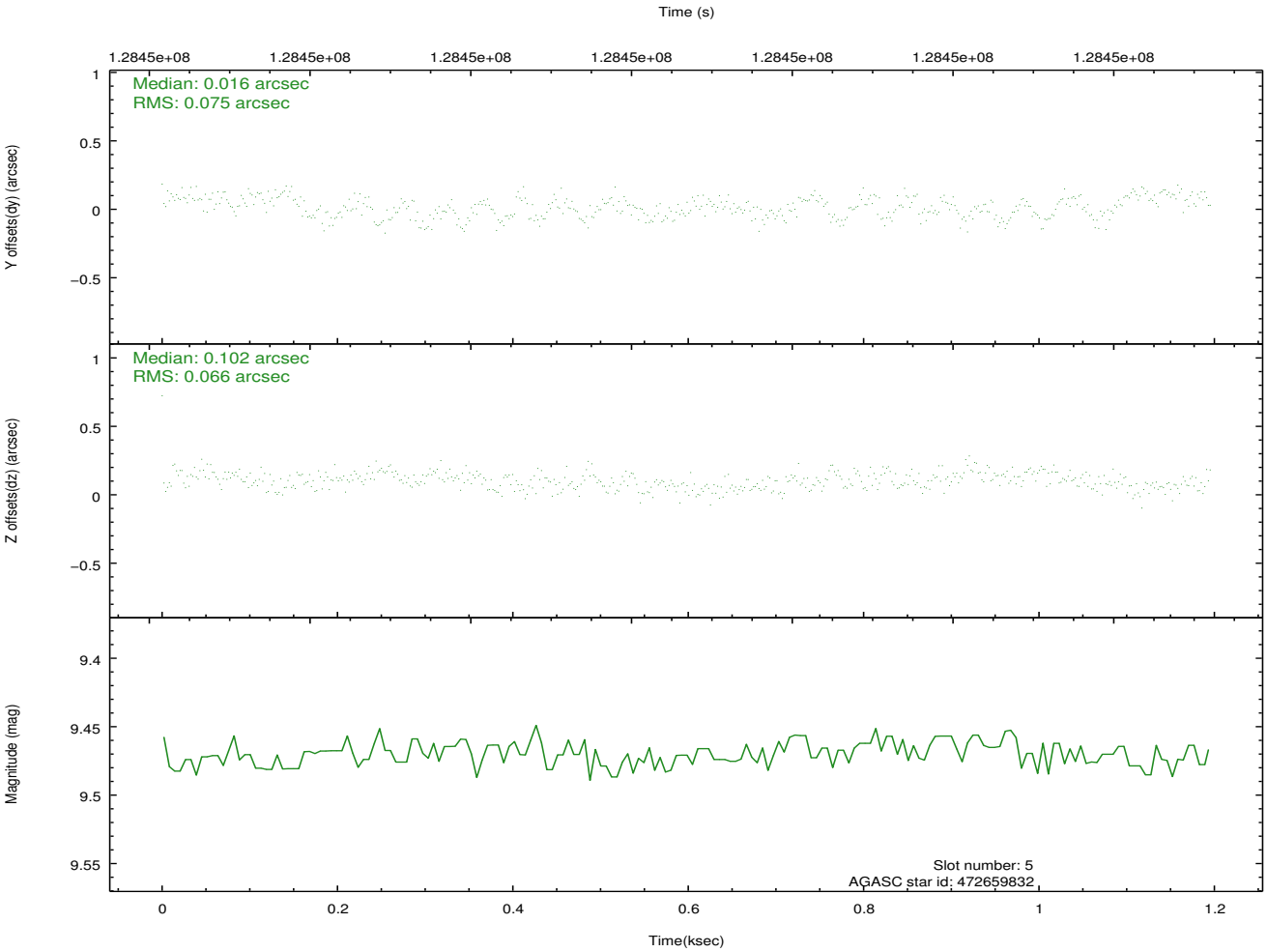

Points outside 0.7 arcsec radius: 0.171%
Radial offset of median: 0.168 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 472523760


Time (s)
Median: −0.072 arcsec
RMS: 0.046 arcsec
Y offsets(dy) (arcsec)
Median: −0.151 arcsec
RMS: 0.066 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 4
AGASC star id: 472523760
Time(ksec)

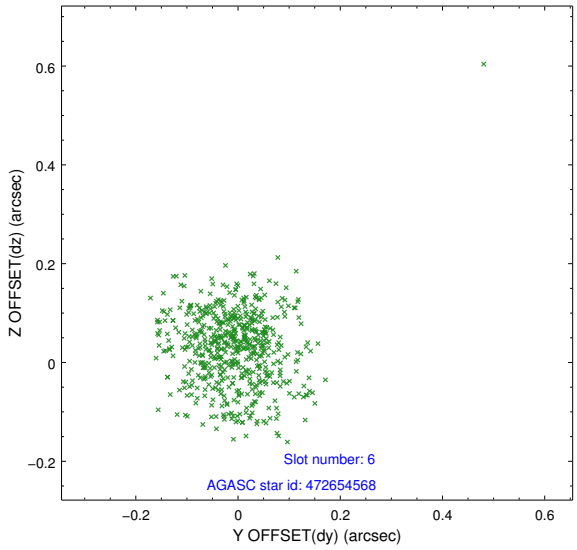
2.4.3 Slot 5

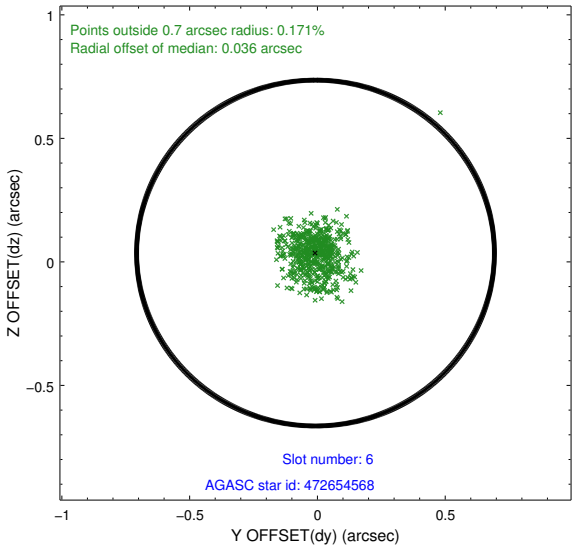

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 472659832

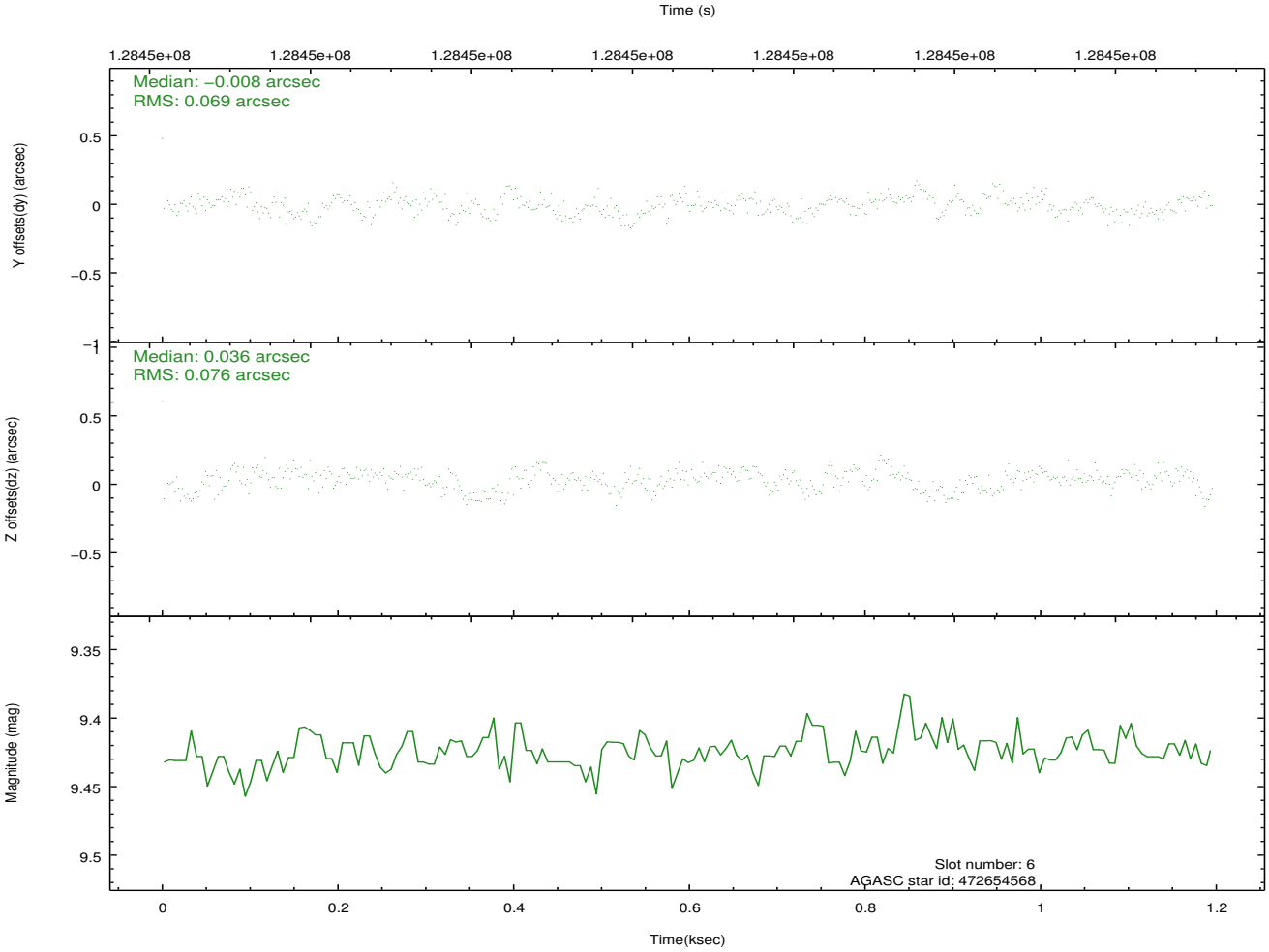

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.103 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 472659832


Time (s)
Median: 0.016 arcsec
RMS: 0.075 arcsec
Y offsets(dy) (arcsec)
Median: 0.102 arcsec
RMS: 0.066 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 5
AGASC star id: 472659832
Time(ksec)

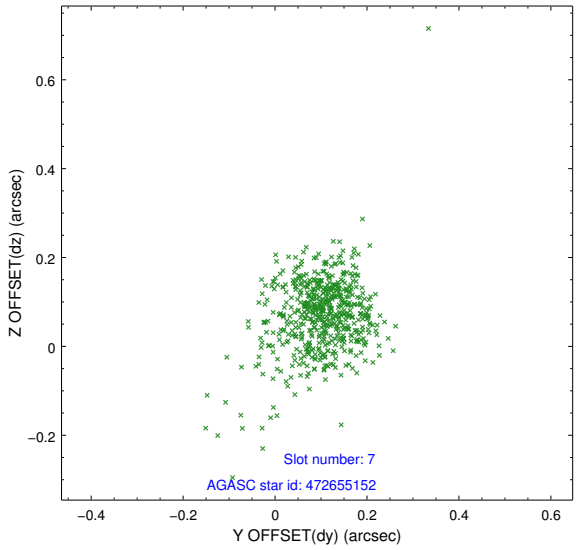
2.4.4 Slot 6

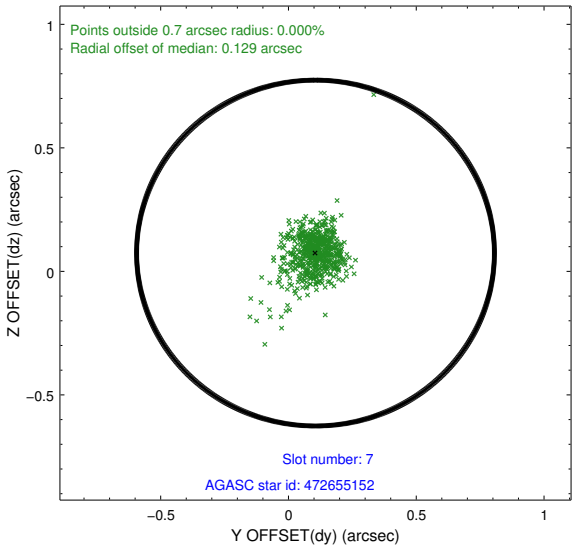

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 472654568

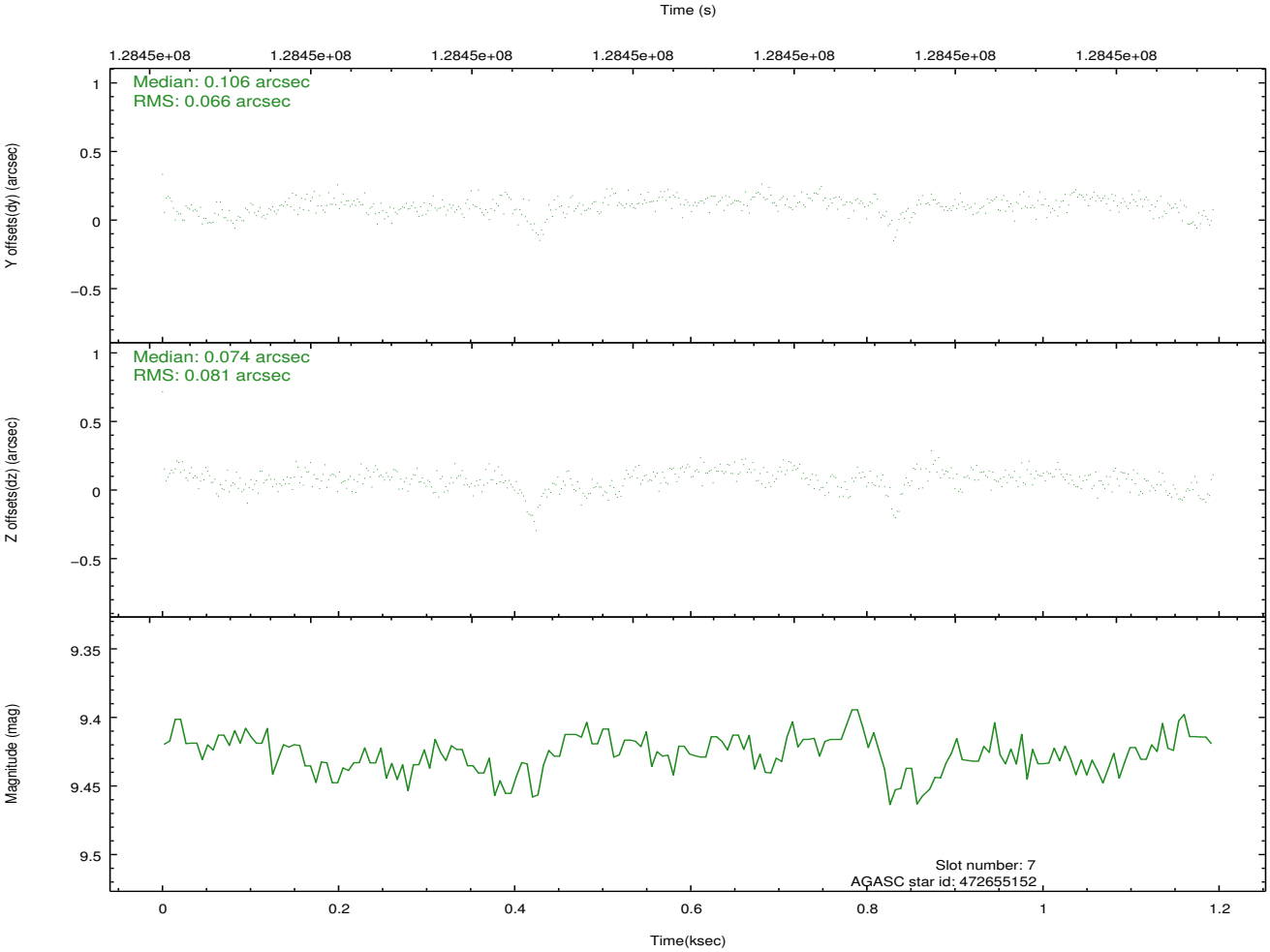

Points outside 0.7 arcsec radius: 0.171%
Radial offset of median: 0.036 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 472654568


Time (s)
Median: −0.008 arcsec
RMS: 0.069 arcsec
Y offsets(dy) (arcsec)
Median: 0.036 arcsec
RMS: 0.076 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 6
AGASC star id: 472654568
Time(ksec)

2.4.5 Slot 7

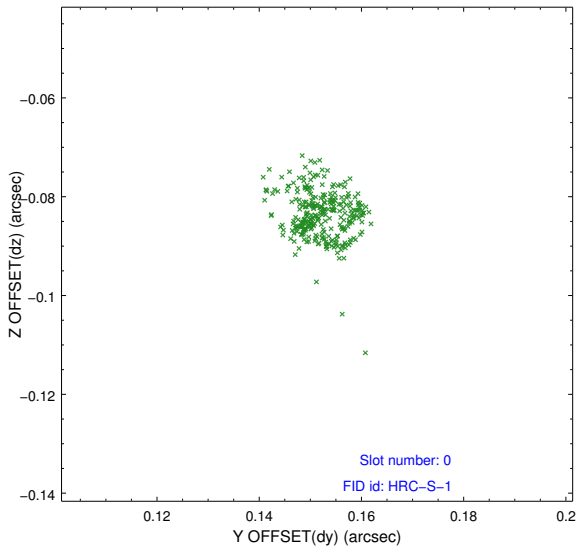

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 472655152

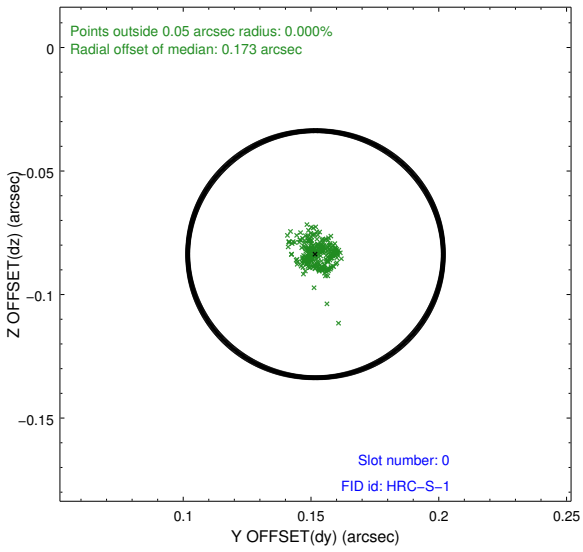

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.129 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 472655152

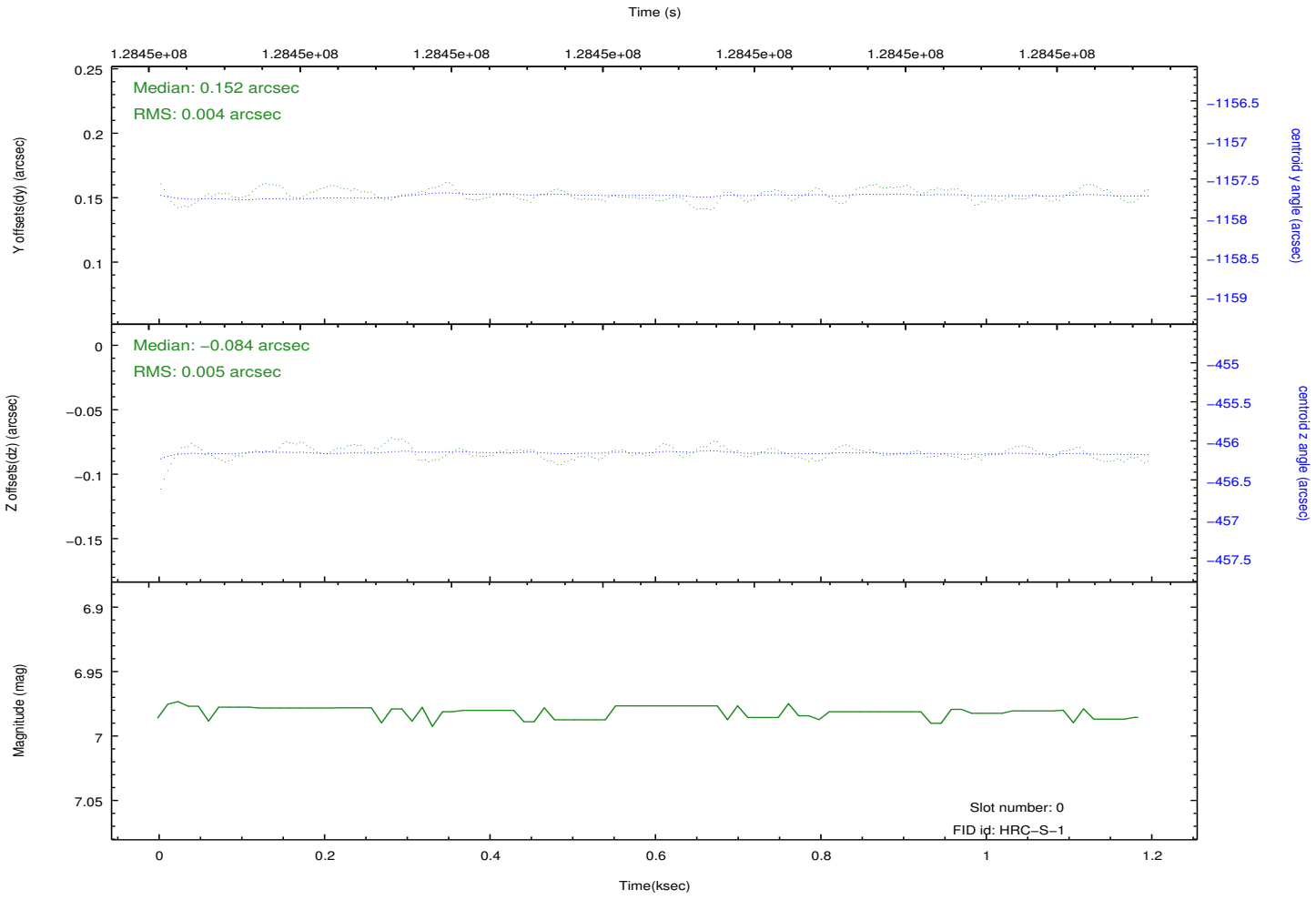

Time (s)
Median: 0.106 arcsec
RMS: 0.066 arcsec
Y offsets(dy) (arcsec)
Median: 0.074 arcsec
RMS: 0.081 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 7
AGASC star id: 472655152
Time(ksec)

2.5 FID Slots

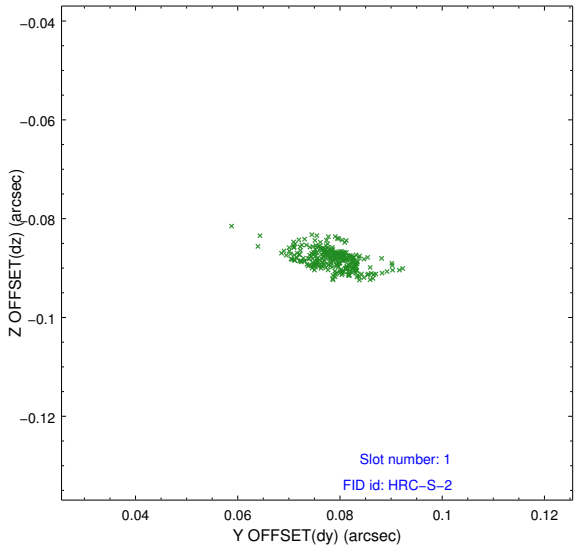
2.5.1 Slot 0

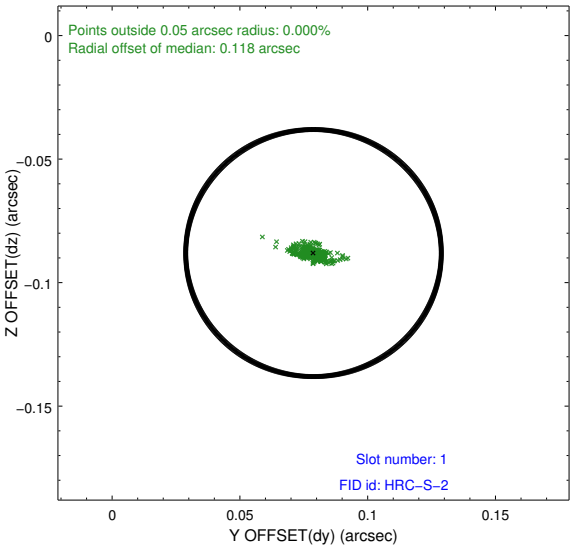


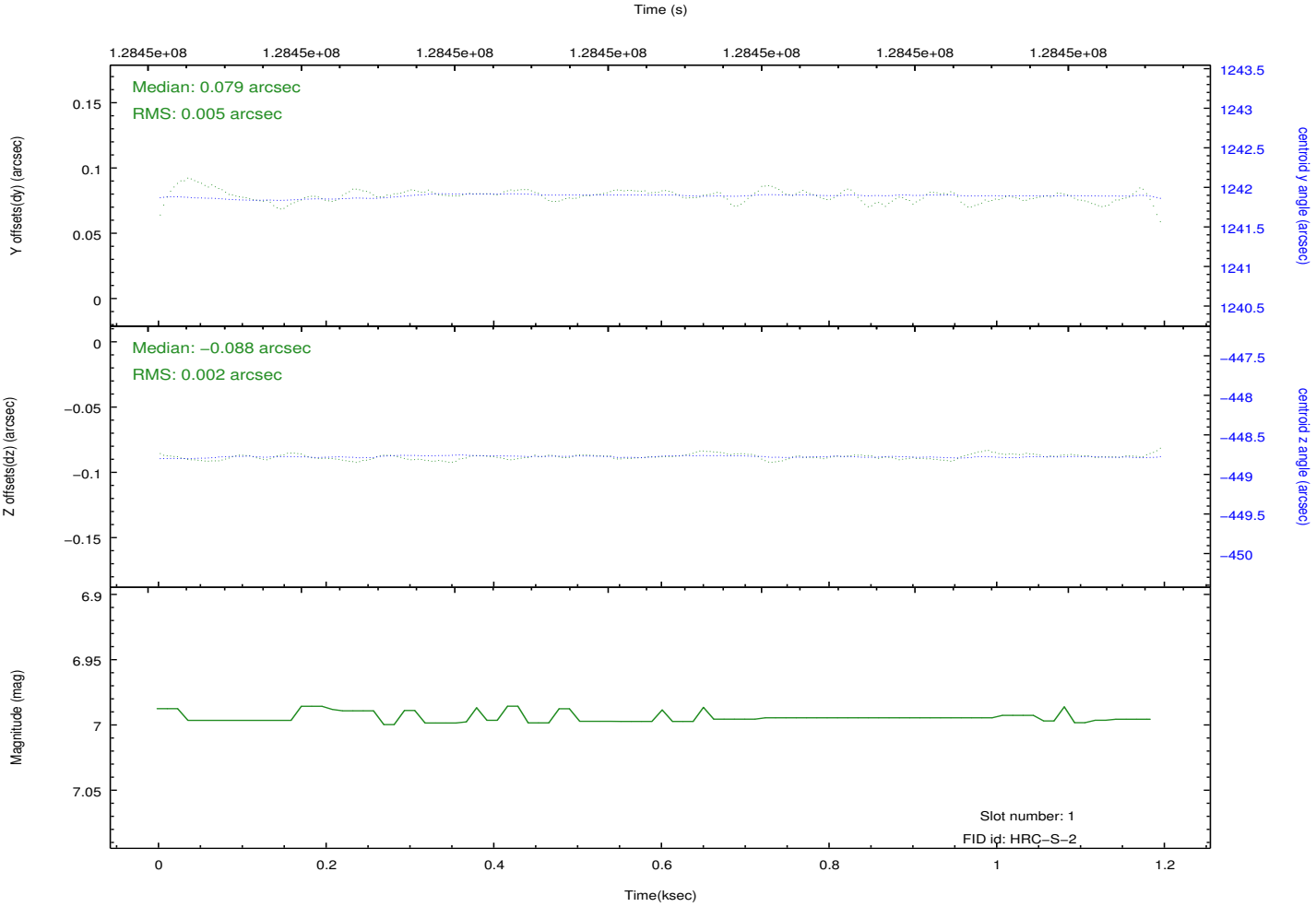




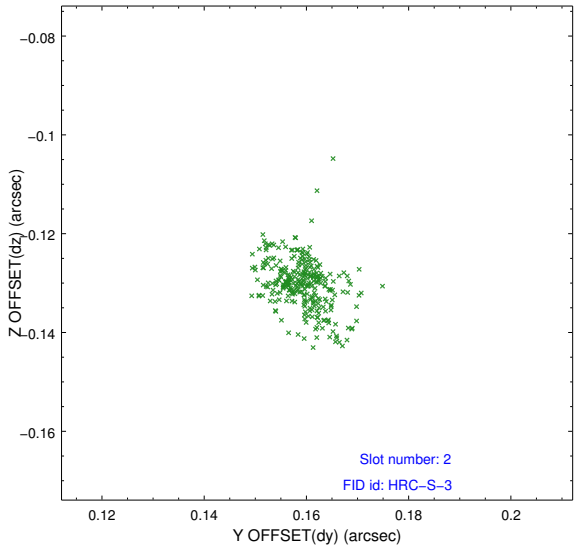
2.5.2 Slot 1

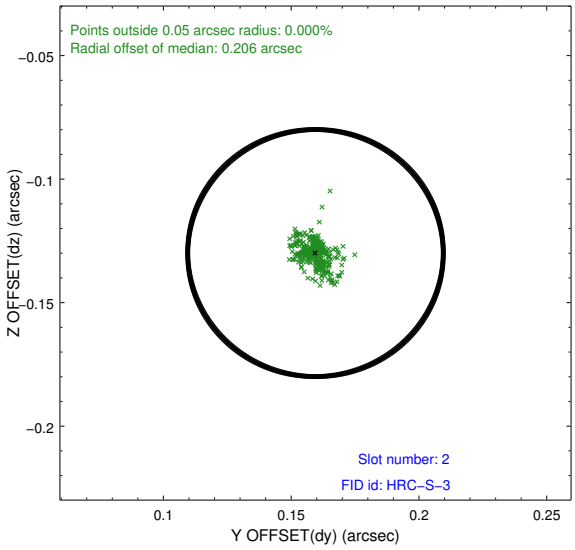

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: HRC−S−2

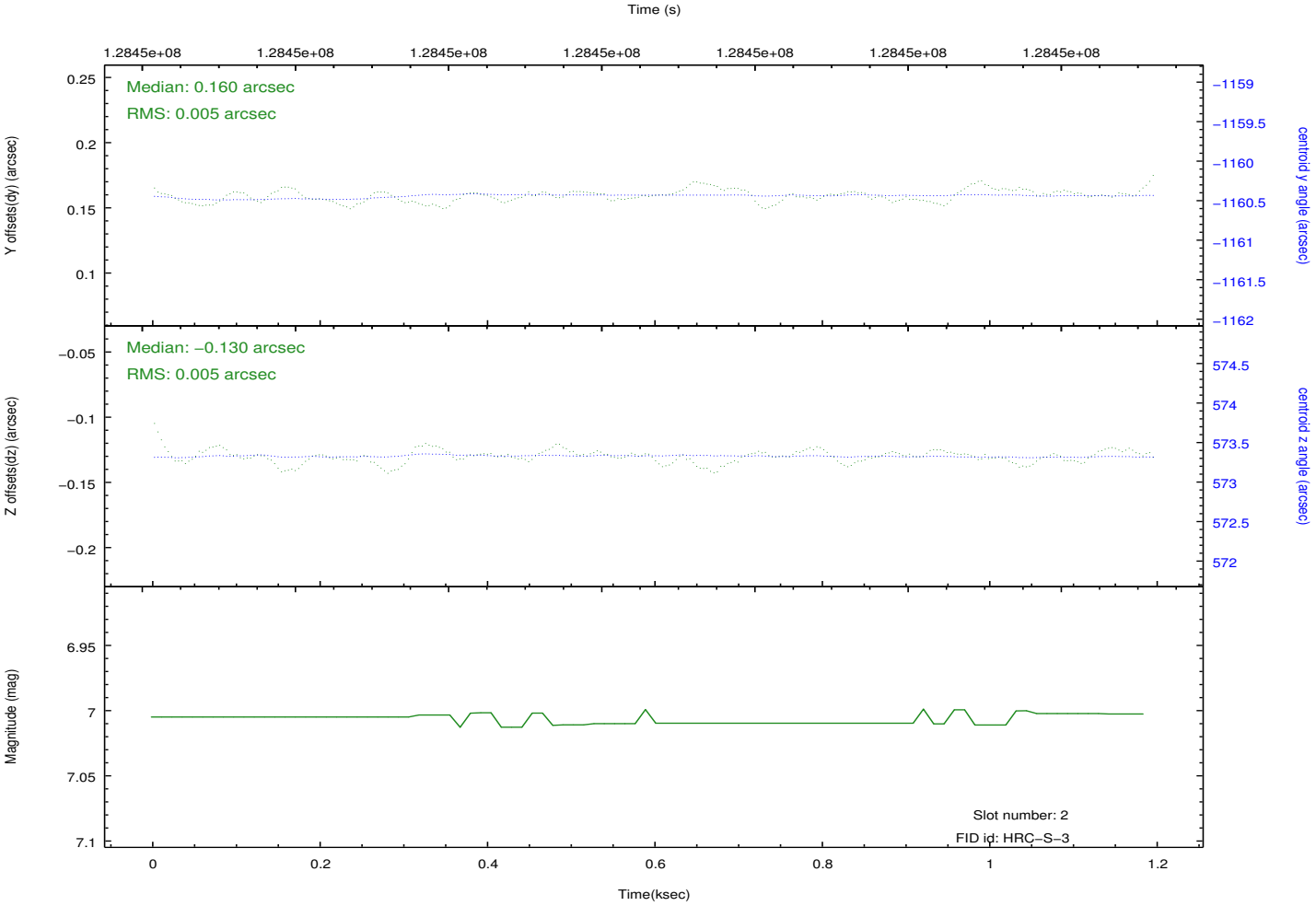

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.118 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: HRC−S−2


Time (s)
Median: 0.079 arcsec
RMS: 0.005 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.088 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: 0.206 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 2
FID id: HRC−S−3


Time (s)
Median: 0.160 arcsec
RMS: 0.005 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.130 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)

A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.10.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	1.192

A.2 Comments

```
Charge time for this ObsId remains at previous value of 1.192 ks
although with the current processing the charge time would have been
1.14 ksec.
```