V&V Reference Report
L2 ASCDS Version : 7.6.7.1

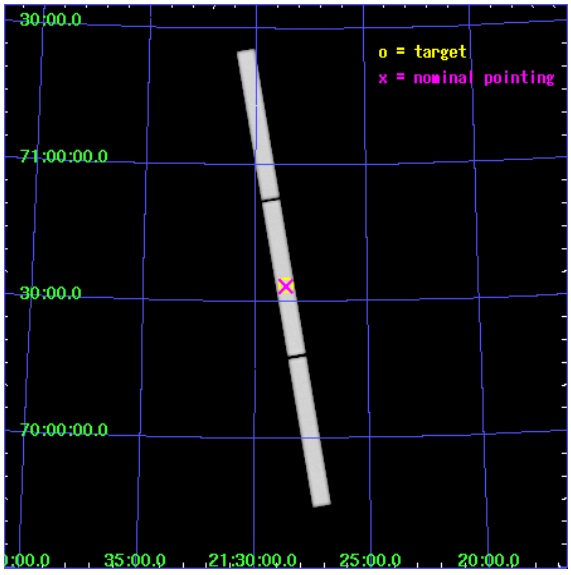
Observation 5395 - L2 Version 002
Chandra X-Ray Center

L2 Processing Date : Apr 4 2006

Contents

1 Front

seq_num	200330
obs_id	5395
title	The location and spatial structure of the X-ray emitting plasma in the magnetically confined environment of beta Cep
observer	Dr Coralie Neiner
object	beta Cep
ra_targ	322.165
dec_targ	70.560717
ra_nom	322.16235995827
dec_nom	70.55610634982
roll_nom	260.26982962963
revision	2
ontime	36432.601681203
livetime	36181.960434713
l2events	2039397

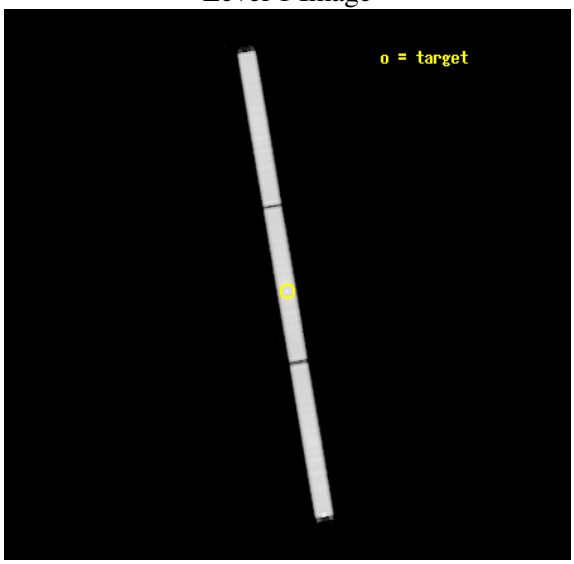


2 OBI

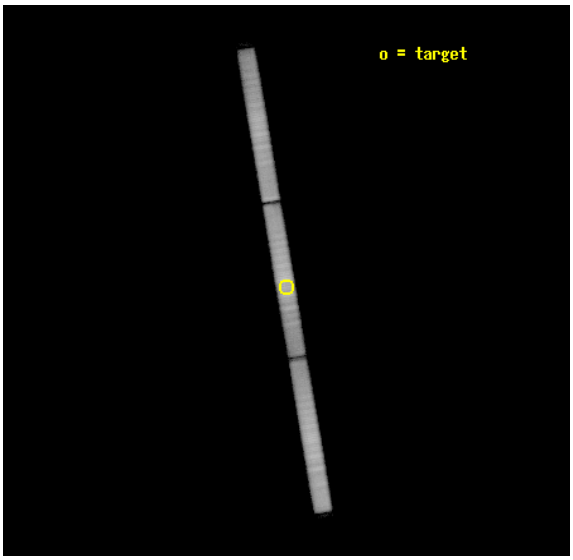
2.1 OBI

2.1.1 Images

Level 1 Image



Level 1 Bad Events



2.1.2 Parameters

obi_num	0
ascdsver	7.6.7.1
caldbver	3.2.1
date	2006-04-04T12:20:32
revision	2

sched_exp_time	36245.000000
ontime	36434.651679963
l1events	3029217

2.1.3 Events

Level 1 Events

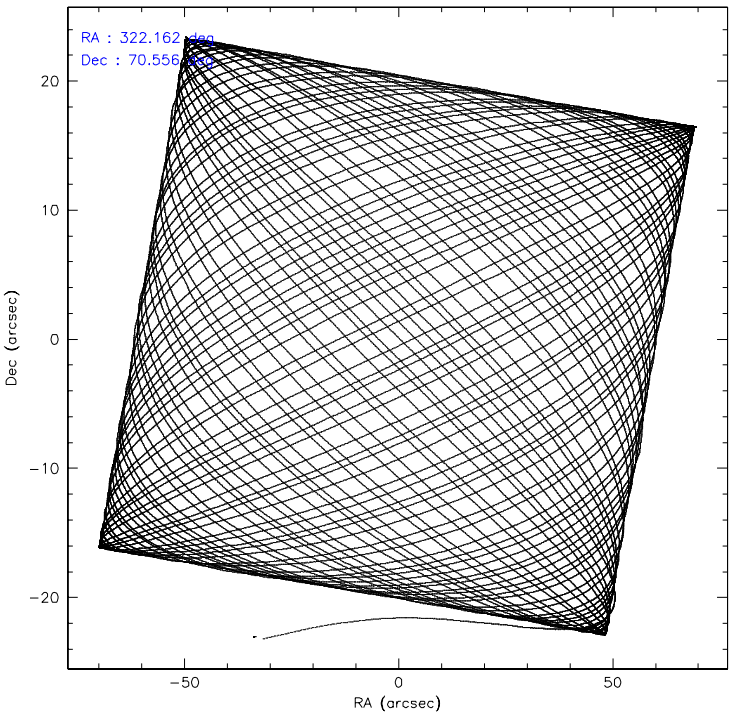
	segment 1	**segment 2**	**segment 3**
level 1 events	1011057	994233	1023927
rejected events	210975	231864	254991
rejected %	20%	23%	24%

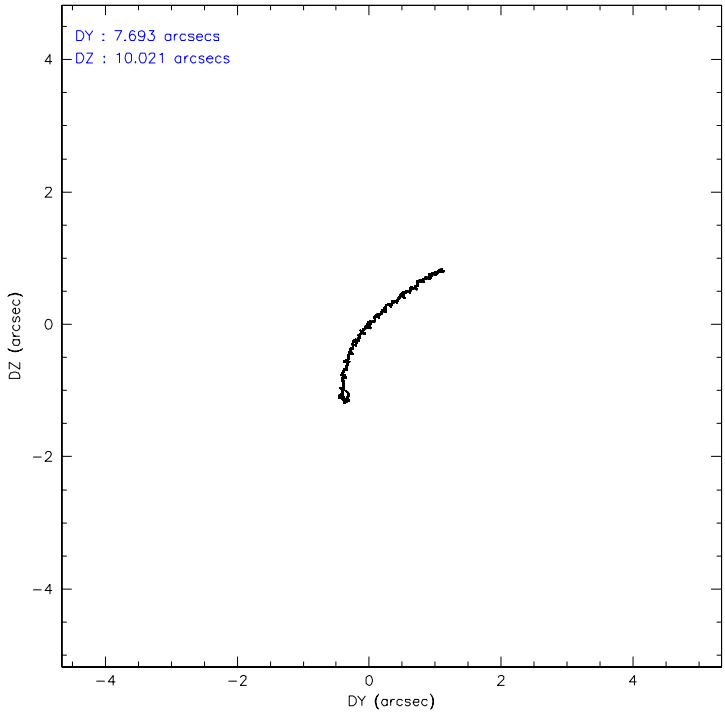
2.2 Compared Parameters

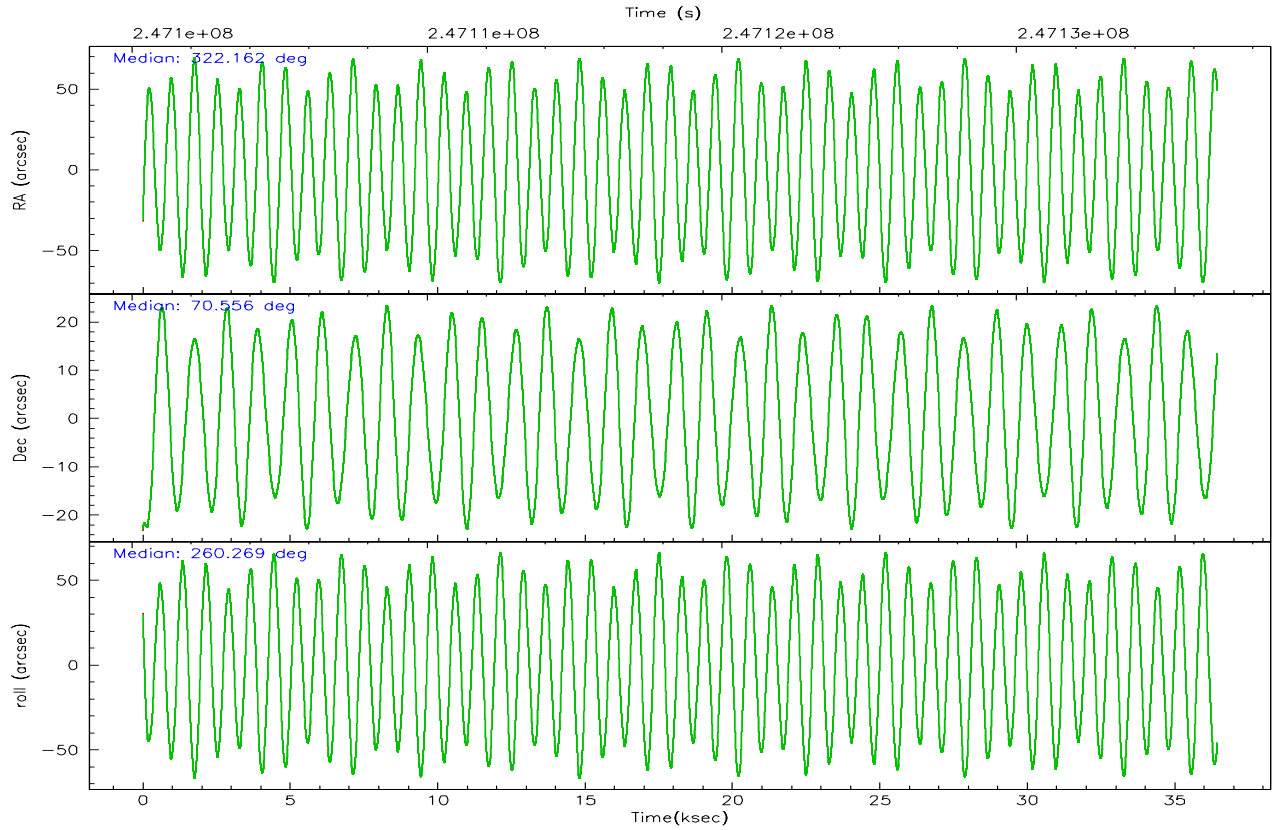
Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-S	HRC-S
Grating	LETG	LETG
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
Pointing RA	322.128446	322.1623599582726
Pointing Dec	70.582433	70.55610634982047
Pointing Roll	260.234471	260.2698296296345
SIM focus pos (mm)	-1.429586	-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
Phase constraints	Y	Y
Phase period	12.000750	12.000750
Phase epoch	53962.310000	53962.310000
Phase start	0.966245	0.966245
Phase end	0.033755	0.033755
Phase start error	0.020000	0.020000
Phase end error	0.020000	0.020000
Observation start time	247100563.184000	247099686.63067
Observation start date	2005-10-30T23:01:39	2005-10-30T22:48:06
Observation end time	247136808.184000	247137513.23241
Observation end date	2005-10-31T09:05:44	2005-10-31T09:18:33

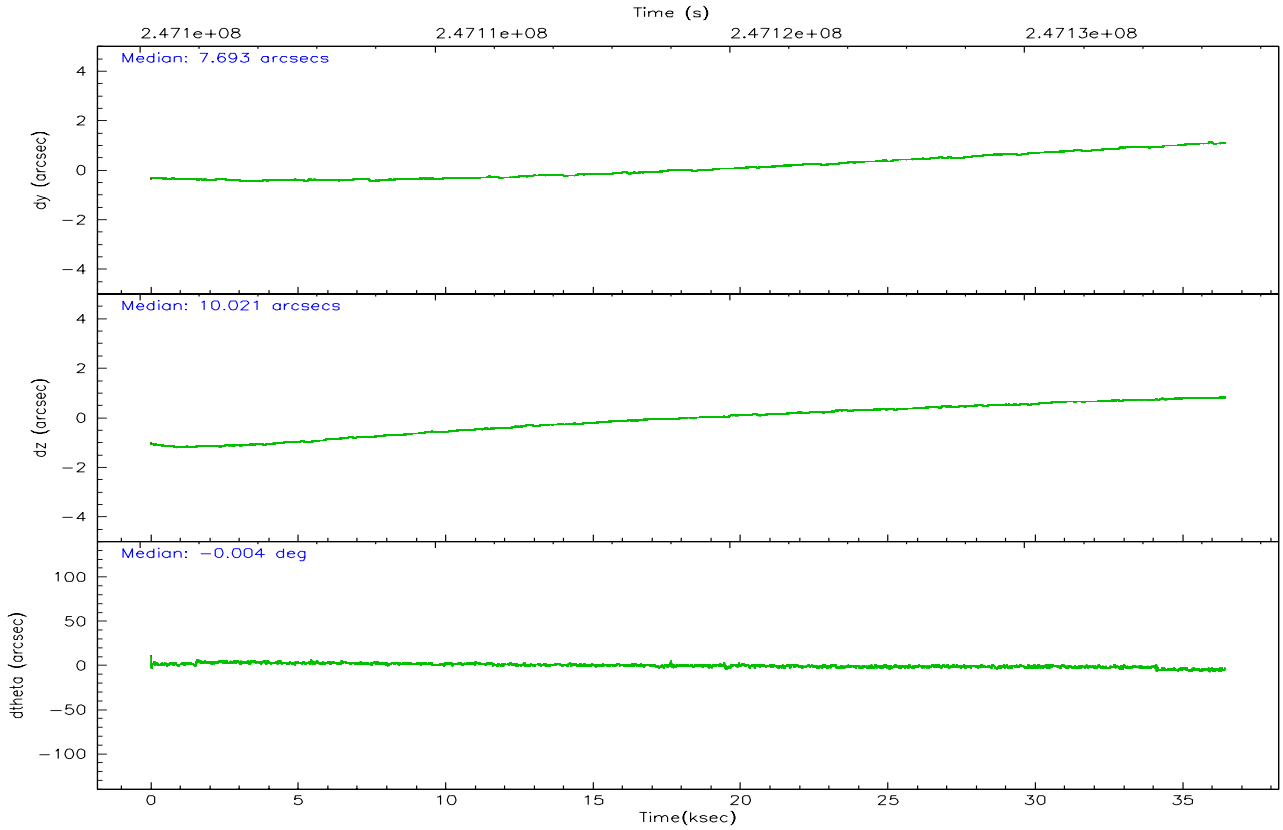
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED

2.3 Aspect


RA : 322.162 deg
Dec : 70.556 deg
20
10
0
−10
−20
Dec (arcsec)
−50
0
50
RA (arcsec)


DY : 7.693 arcsecs
DZ : 10.021 arcsecs
4
2
0
−2
−4
DZ (arcsec)
−4
−2
0
2
4
DY (arcsec)


Time (s)
2.471e+08
2.4711e+08
2.4712e+08
2.4713e+08
Median: 322.162 deg
RA (arcsec)
Median: 70.556 deg
Dec (arcsec)
Median: 260.269 deg
roll (arcsec)
Time(ksec)

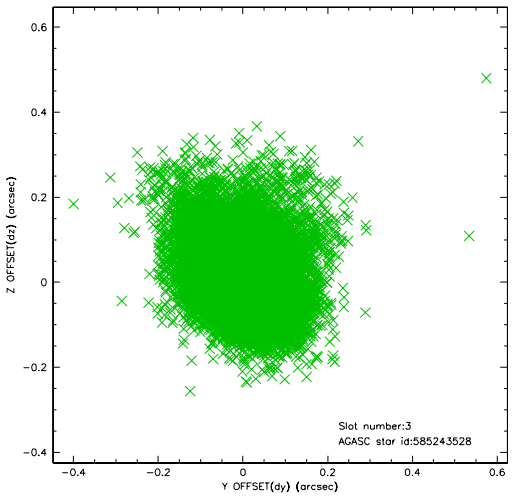

Time (s)
2.471e+08
2.4711e+08
2.4712e+08
2.4713e+08
Median: 7.693 arcsecs
dy (arcsec)
Median: 10.021 arcsecs
dz (arcsec)
Median: −0.004 deg
dtheta (arcsec)
Time(ksec)

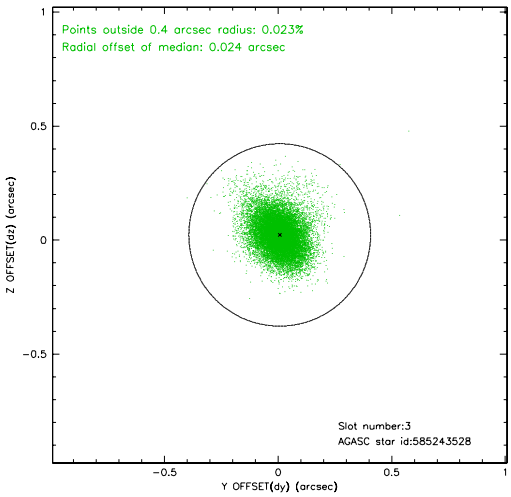
Slot Statistics

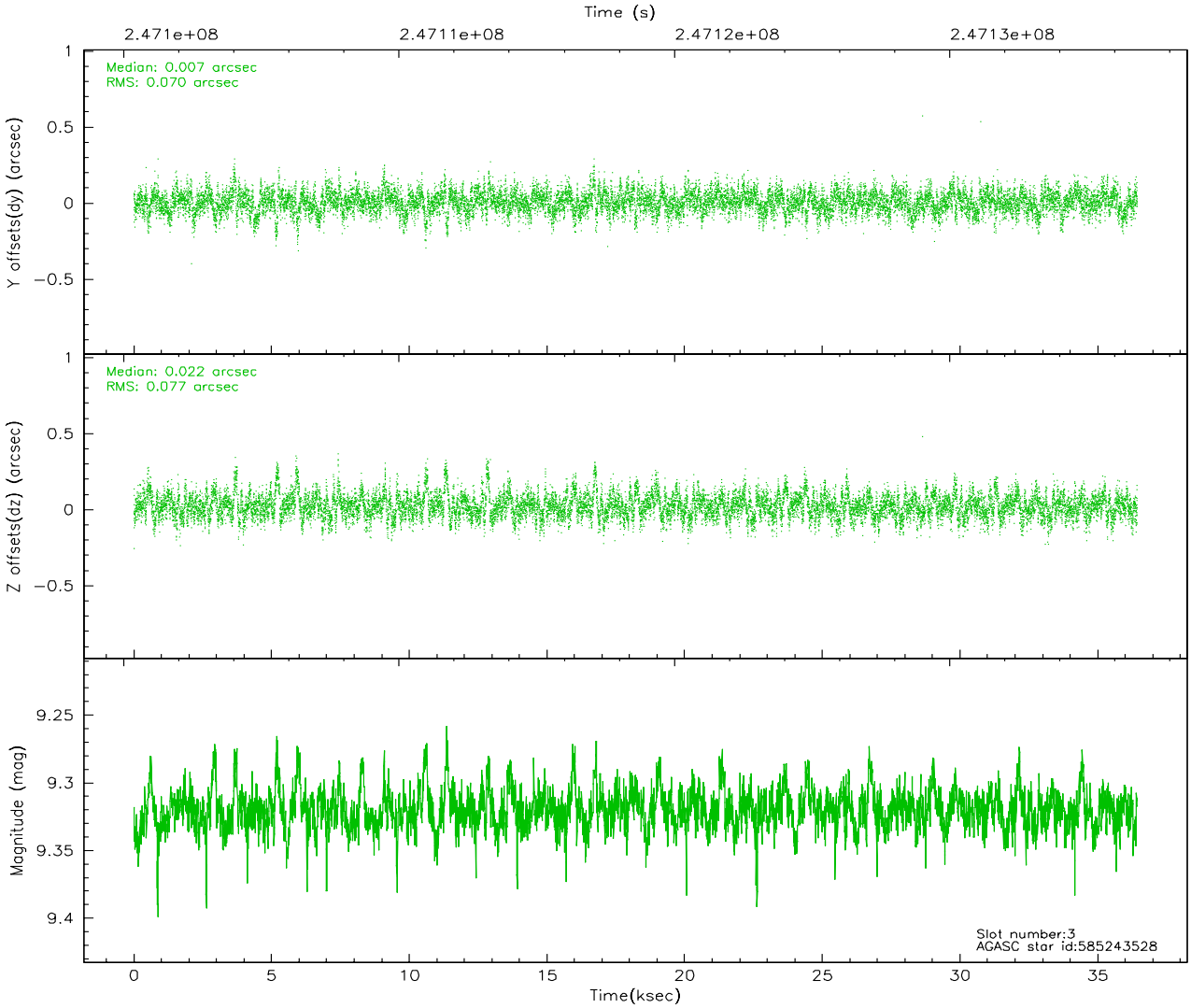
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-S-1	7.05	8887	0.078	-0.134	0.013	0.030	0.000000	0.000000	-1162.02	-458.60
1	FID	HRC-S-2	7.04	8887	0.114	-0.107	0.033	0.062	0.000000	0.000000	1237.55	-451.24
2	FID	HRC-S-4	7.02	8887	0.210	-0.061	0.028	0.057	0.000000	0.000000	1236.49	573.53
3	GUIDE	585243528	9.32	17763	0.007	0.022	0.107	0.186	323.001841	70.190189	1203.84	1288.59
4	GUIDE	585244656	7.43	17767	-0.058	-0.011	0.074	0.115	322.746463	70.823219	-981.78	572.63
5	GUIDE	585245544	7.36	17774	-0.024	-0.060	0.069	0.116	321.319997	70.477535	530.55	-895.32
6	GUIDE	585249712	9.18	17757	0.102	0.027	0.098	0.162	322.943679	70.596904	-222.84	950.70
7	GUIDE	585244168	9.02	17759	-0.029	0.021	0.079	0.129	323.050612	69.955180	2023.91	1503.15

2.4 Star Slots

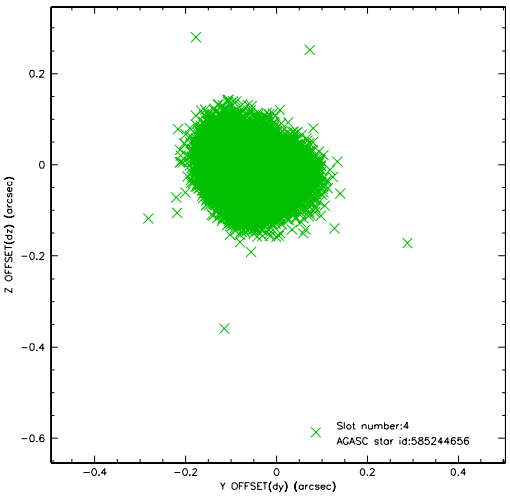
2.4.1 Slot 3

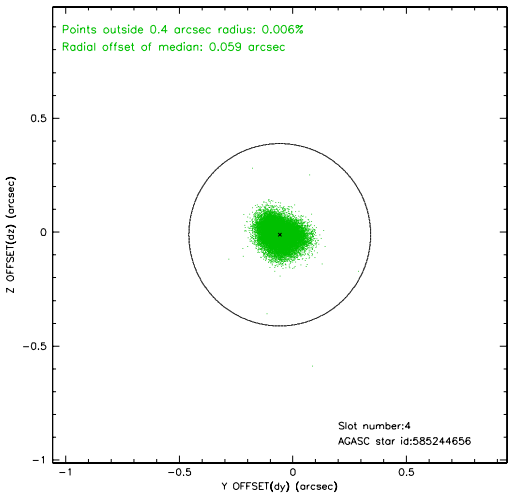


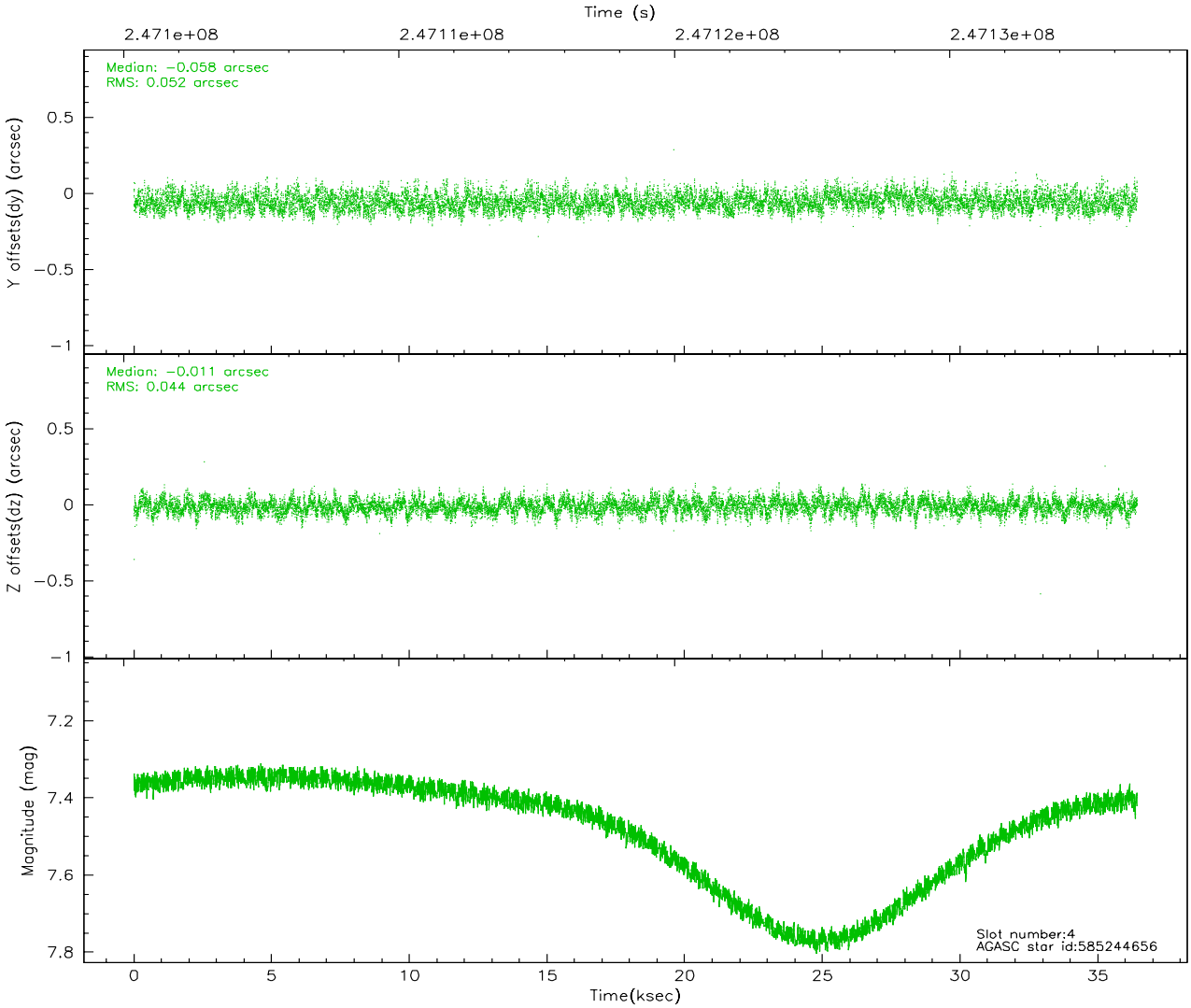




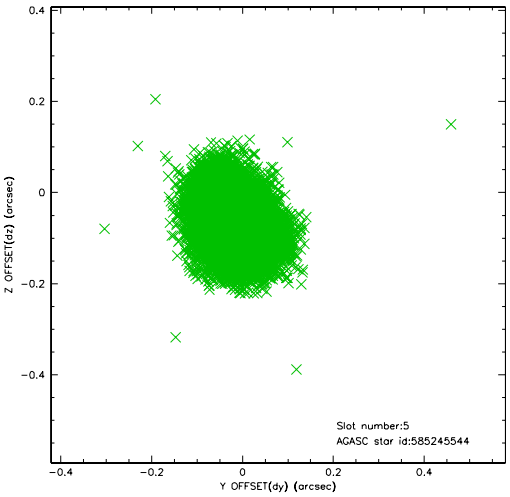
2.4.2 Slot 4

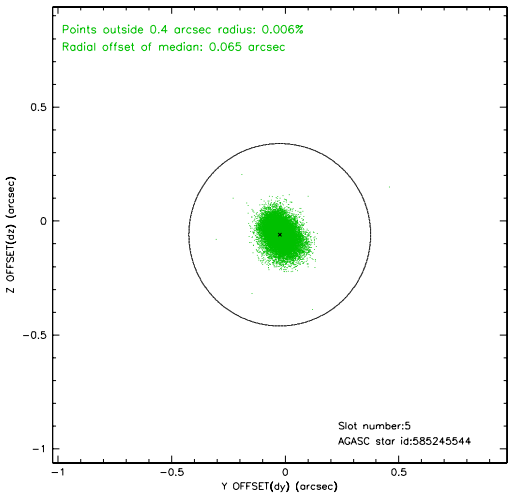

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:585244656

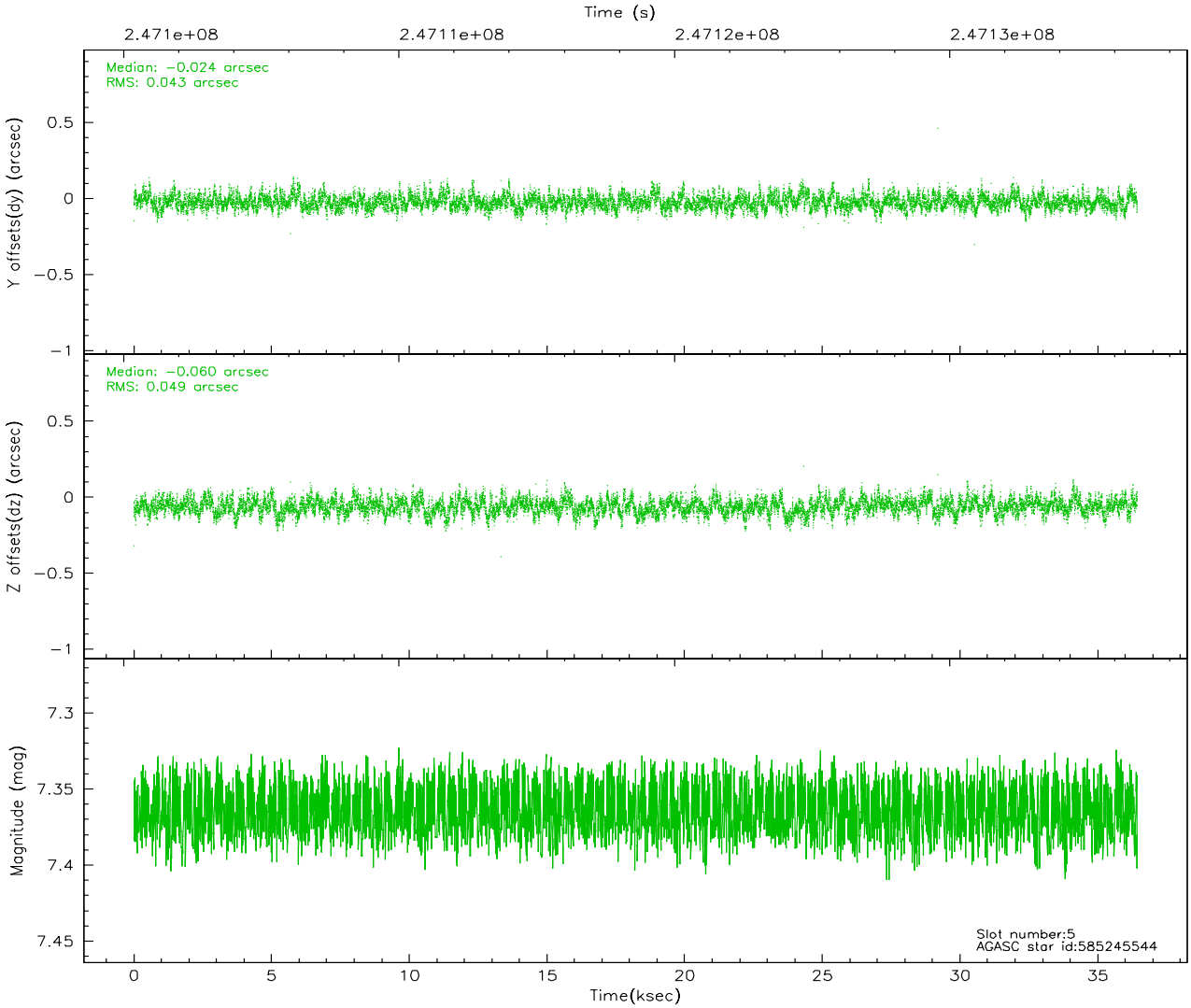

Points outside 0.4 arcsec radius: 0.006%
Radial offset of median: 0.059 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:585244656


Time (s)
2.471e+08
2.4711e+08
2.4712e+08
2.4713e+08
Median: −0.058 arcsec
RMS: 0.052 arcsec
Y offsets(dy) (arcsec)
Median: −0.011 arcsec
RMS: 0.044 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:585244656
Time(ksec)

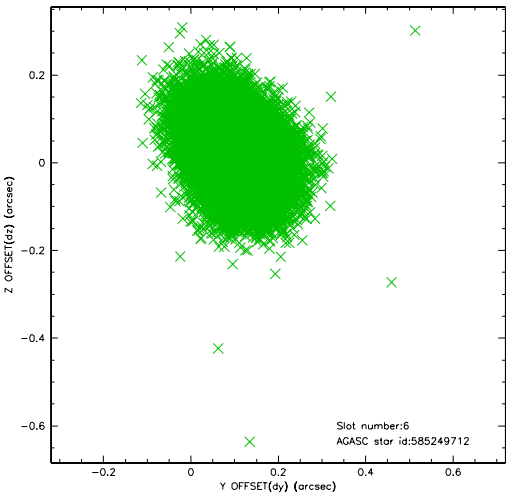
2.4.3 Slot 5

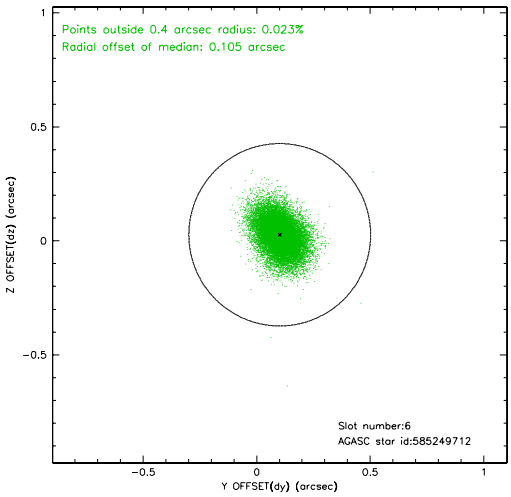

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:585245544

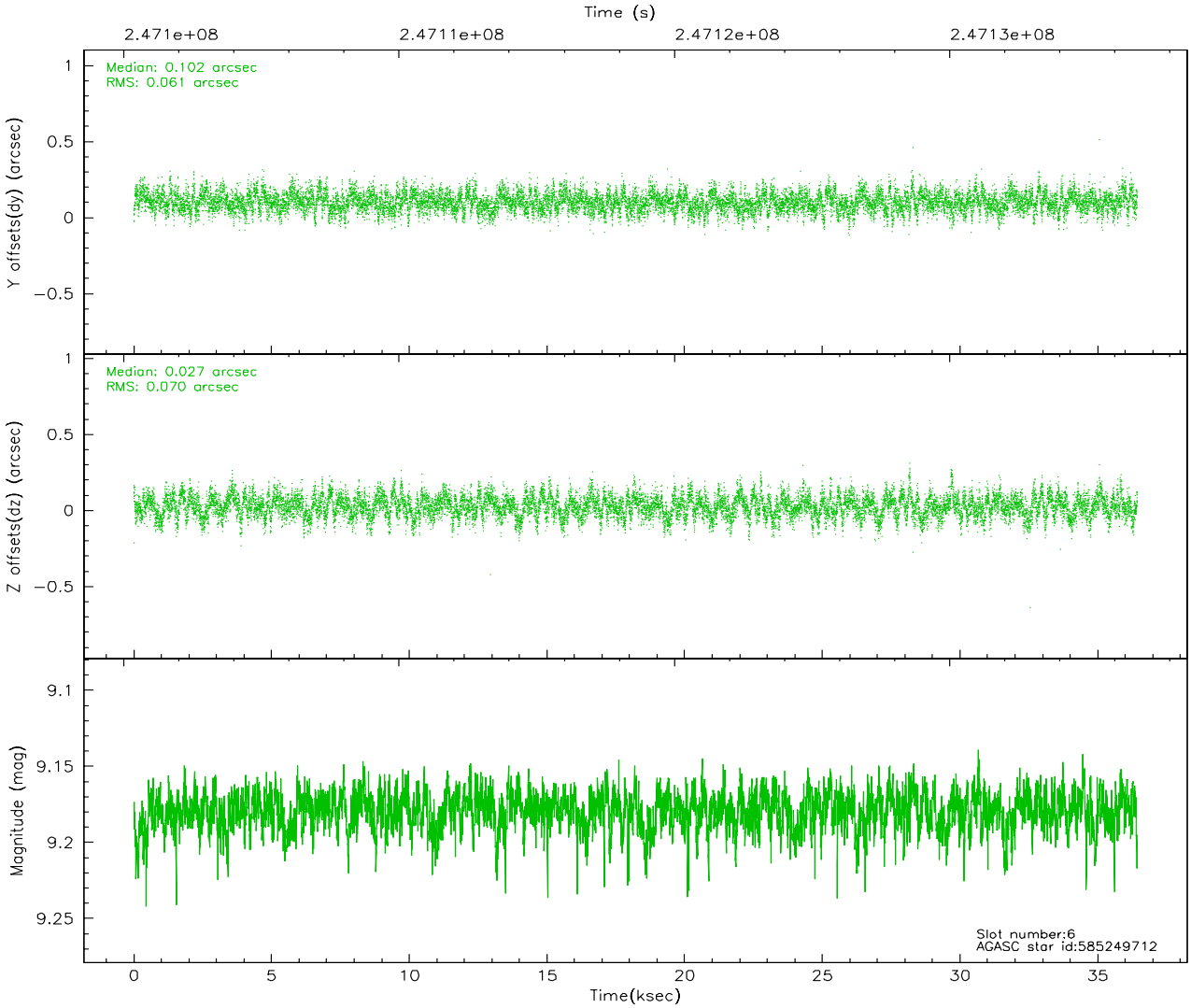

Points outside 0.4 arcsec radius: 0.006%
Radial offset of median: 0.065 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:585245544


Time (s)
2.471e+08
2.4711e+08
2.4712e+08
2.4713e+08
Median: −0.024 arcsec
RMS: 0.043 arcsec
Y offsets(dy) (arcsec)
Median: −0.060 arcsec
RMS: 0.049 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:585245544
Time(ksec)

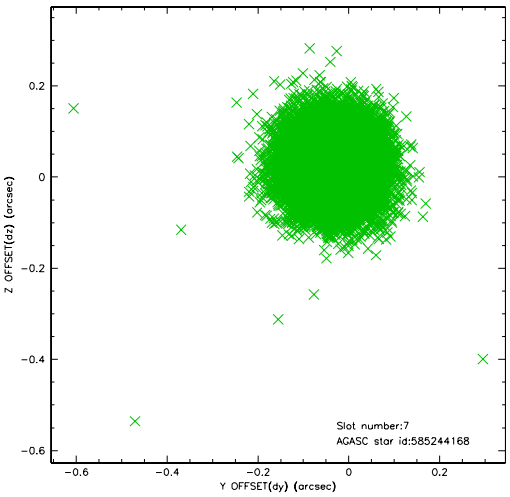
2.4.4 Slot 6

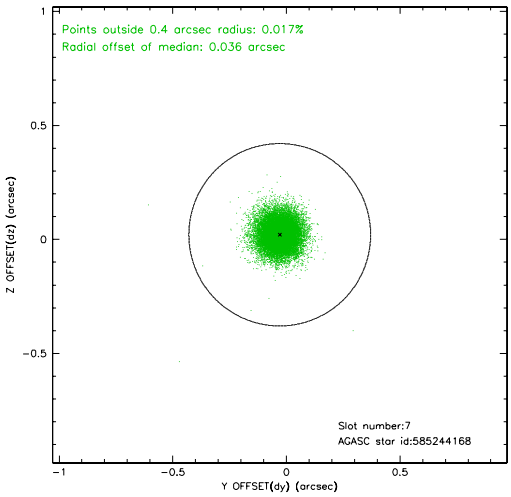

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:585249712

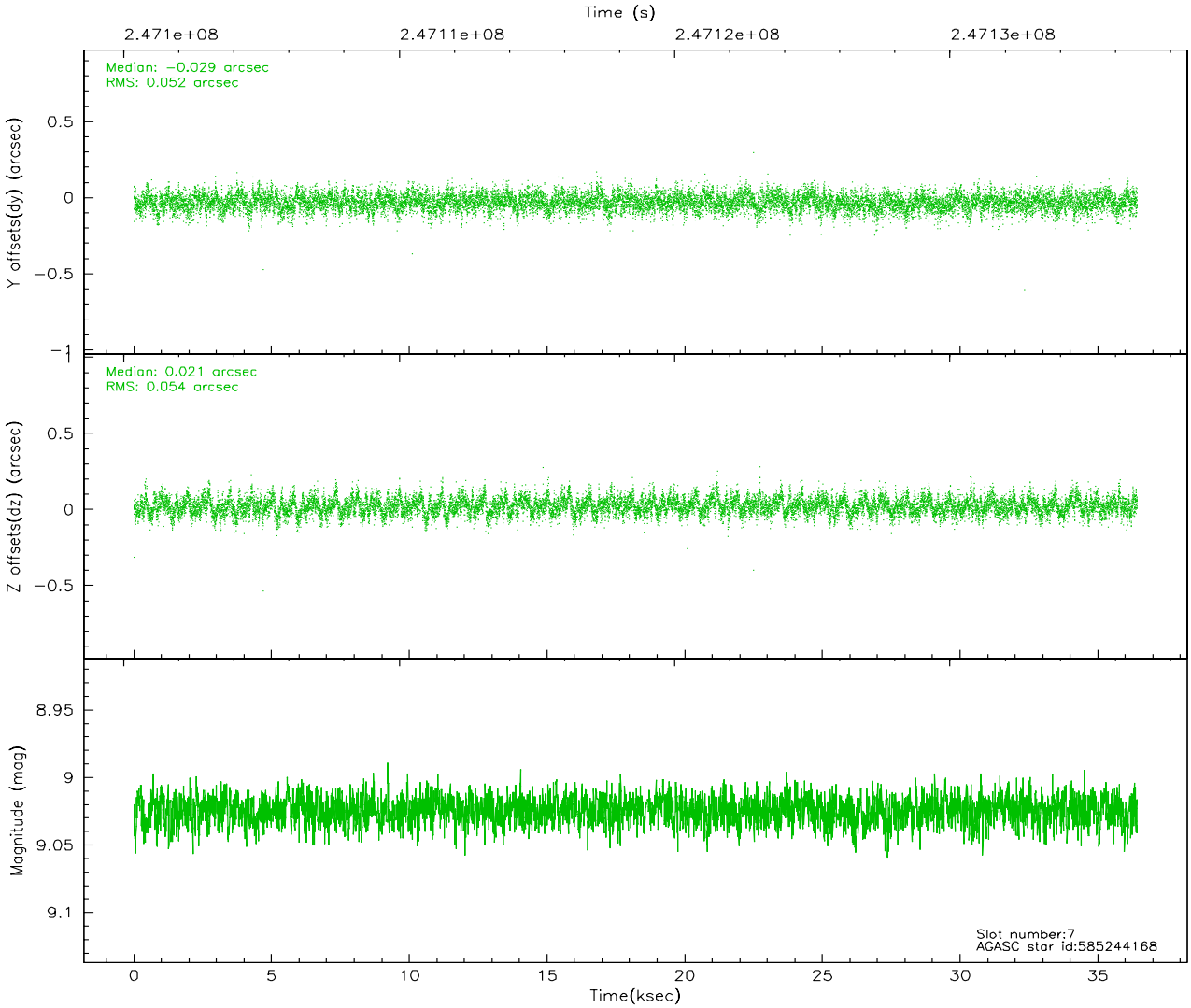

Points outside 0.4 arcsec radius: 0.023%
Radial offset of median: 0.105 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:585249712


Time (s)
2.471e+08
2.4711e+08
2.4712e+08
2.4713e+08
Median: 0.102 arcsec
RMS: 0.061 arcsec
Y offsets(dy) (arcsec)
Median: 0.027 arcsec
RMS: 0.070 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:585249712
Time(ksec)

2.4.5 Slot 7

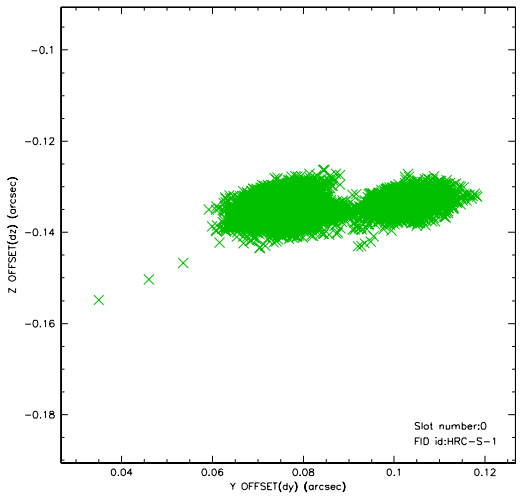

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:585244168

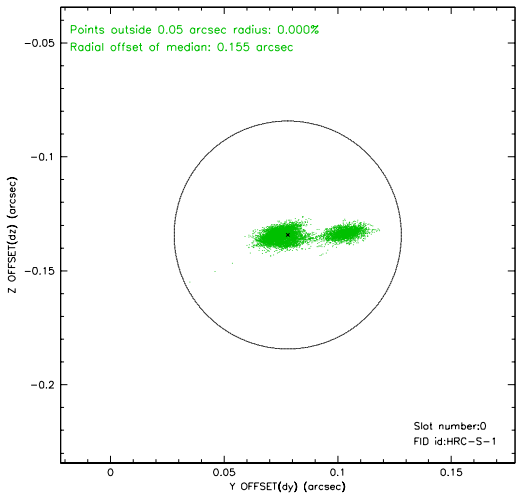

Points outside 0.4 arcsec radius: 0.017%
Radial offset of median: 0.036 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:585244168

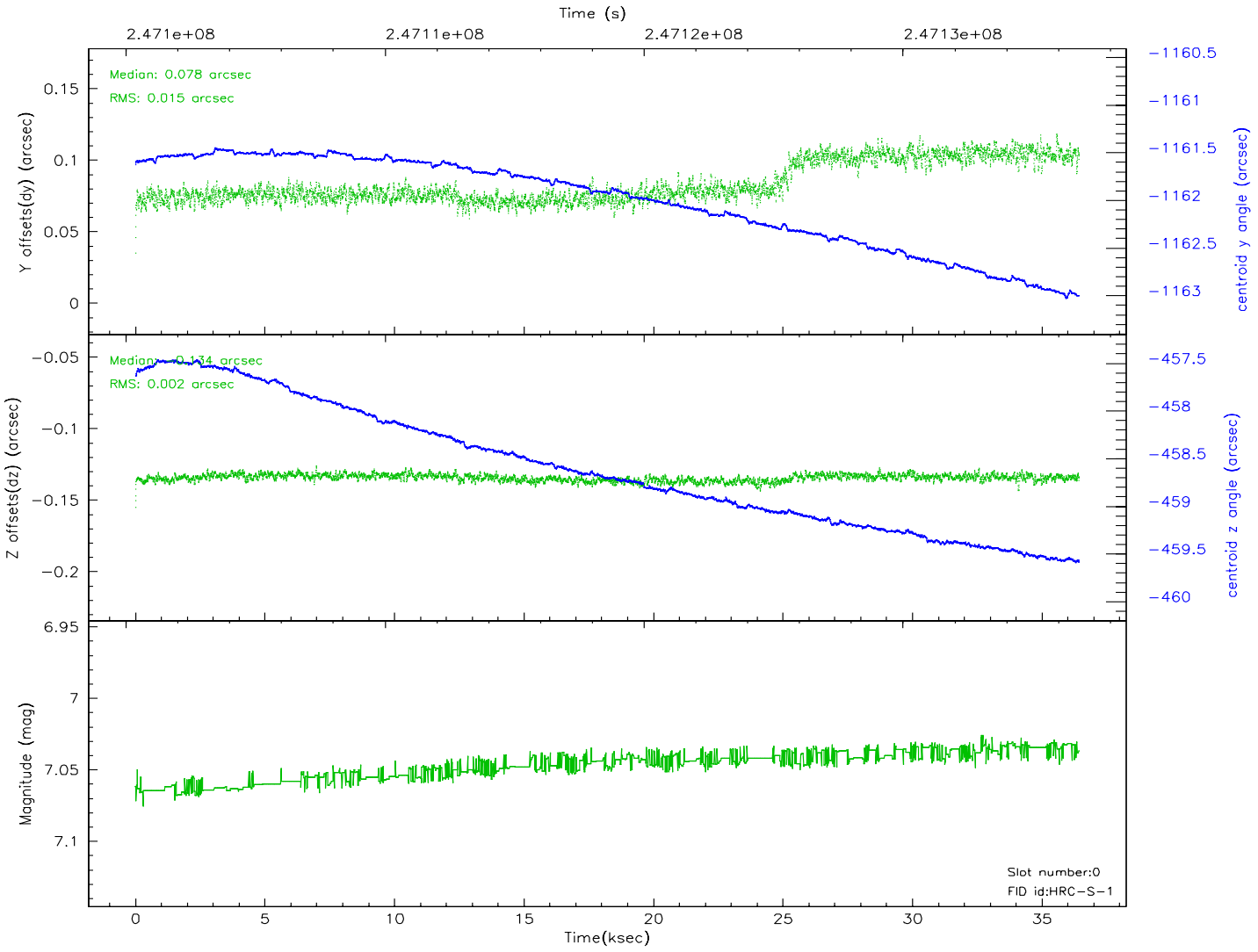

Time (s)
2.471e+08
2.4711e+08
2.4712e+08
2.4713e+08
Median: −0.029 arcsec
RMS: 0.052 arcsec
Y offsets(dy) (arcsec)
Median: 0.021 arcsec
RMS: 0.054 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:585244168
Time(ksec)

2.5 FID Slots

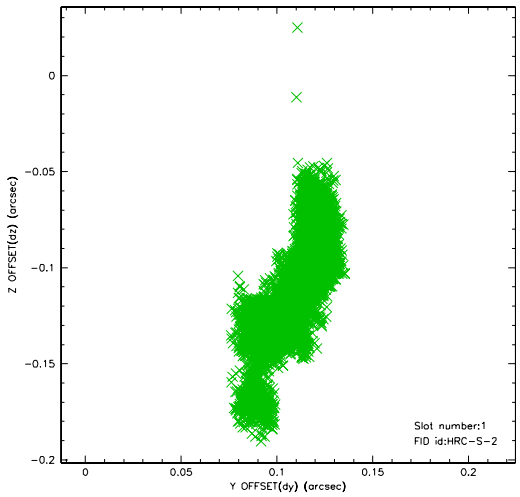
2.5.1 Slot 0

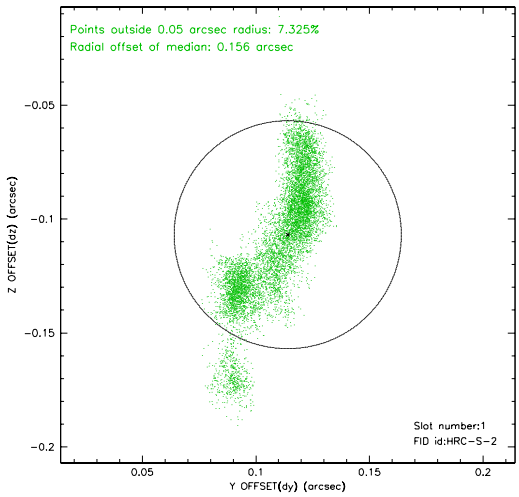


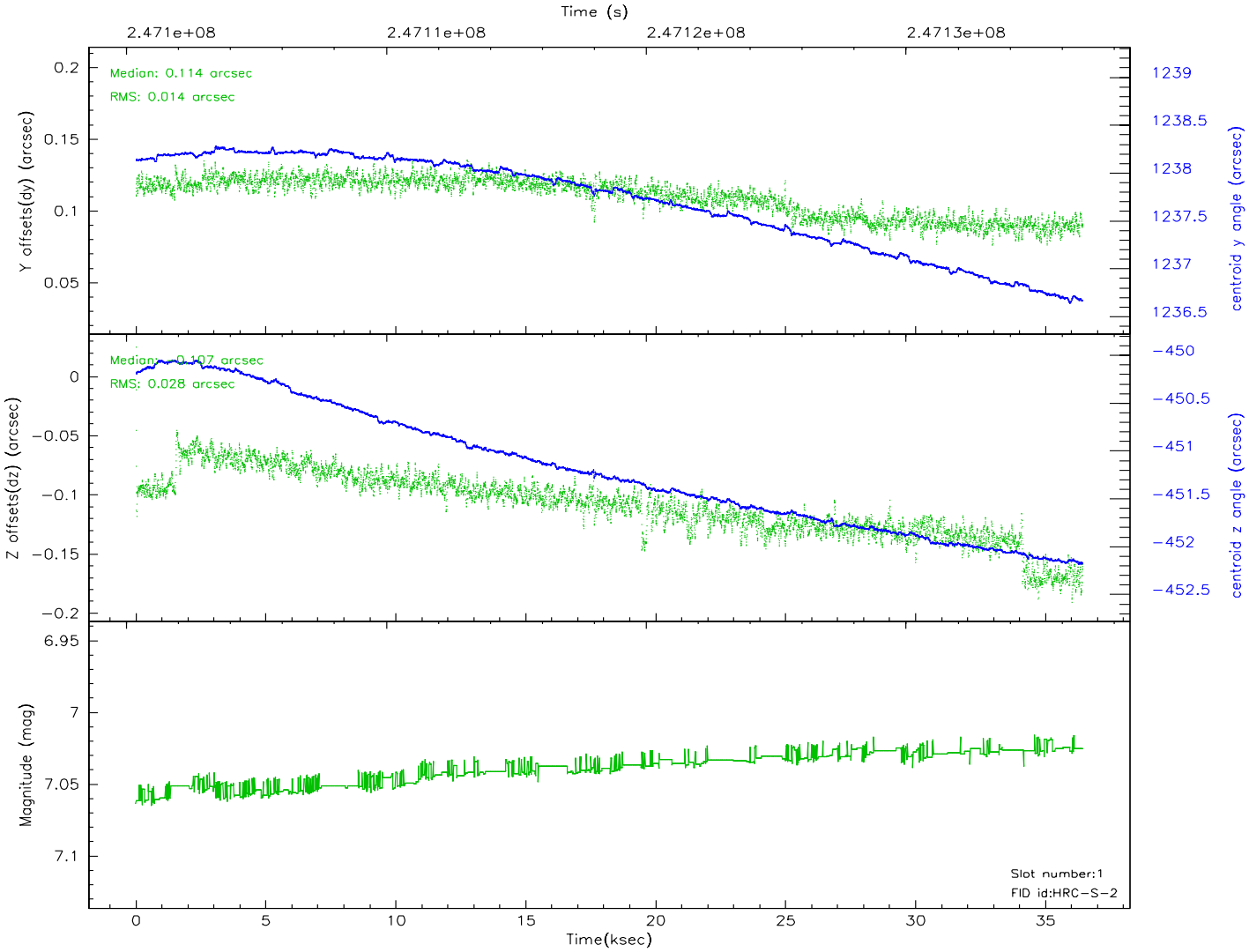




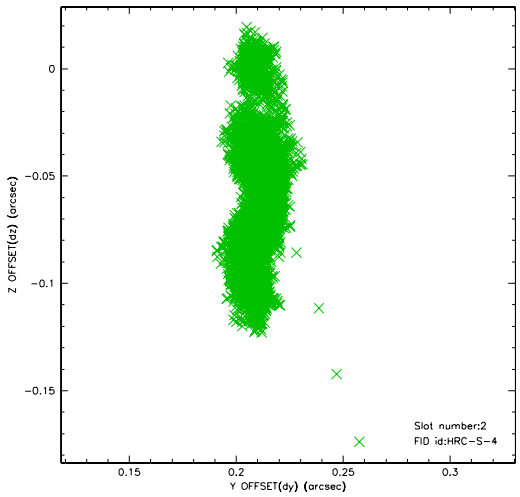
2.5.2 Slot 1

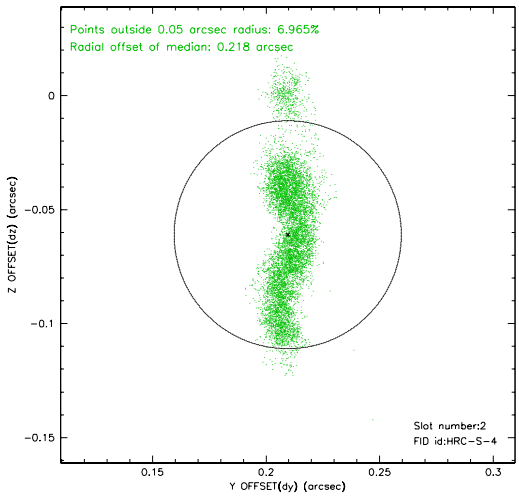

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-S-2

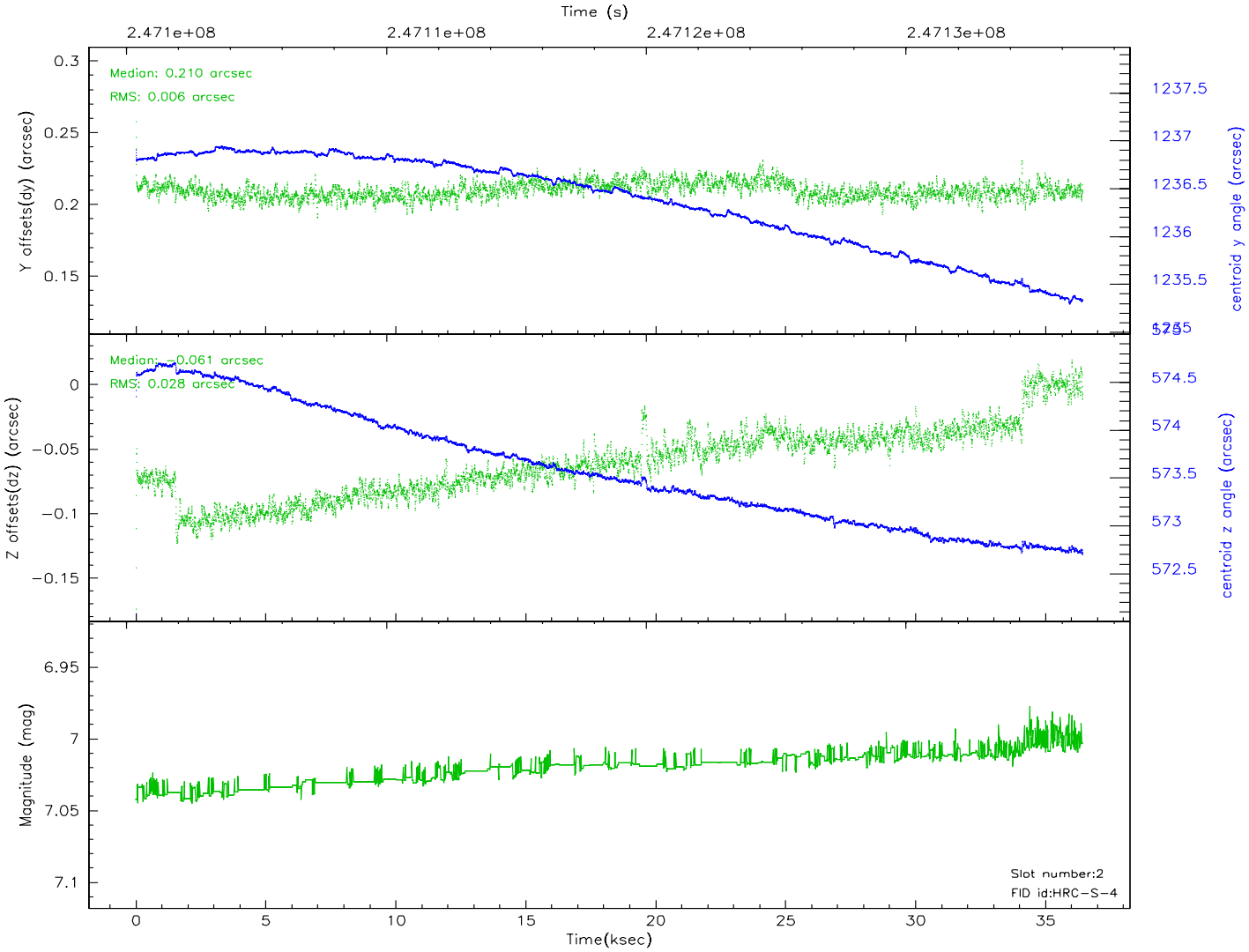

Points outside 0.05 arcsec radius: 7.325%
Radial offset of median: 0.156 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-S-2


Time (s)
2.471e+08
2.4711e+08
2.4712e+08
2.4713e+08
Median: 0.114 arcsec
RMS: 0.014 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.107 arcsec
RMS: 0.028 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

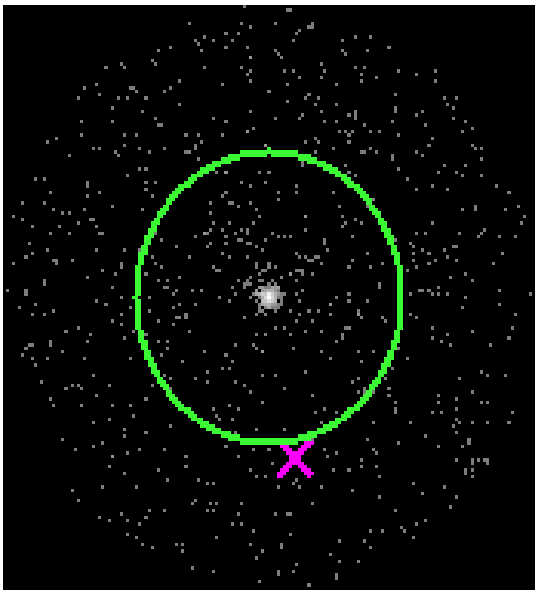

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:HRC-S-4


Points outside 0.05 arcsec radius: 6.965%
Radial offset of median: 0.218 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:HRC-S-4


Time (s)
2.471e+08
2.4711e+08
2.4712e+08
2.4713e+08
Median: 0.210 arcsec
RMS: 0.006 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.061 arcsec
RMS: 0.028 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:2
FID id:HRC-S-4
Time(ksec)

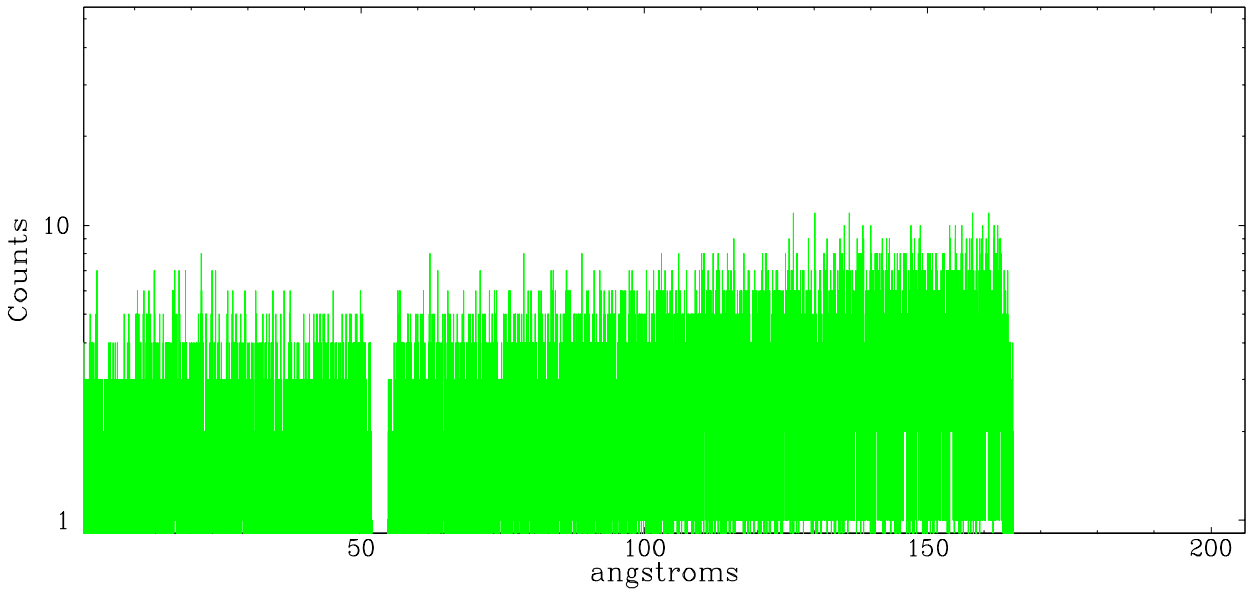
3 Gratings

3.1 LETG Arm

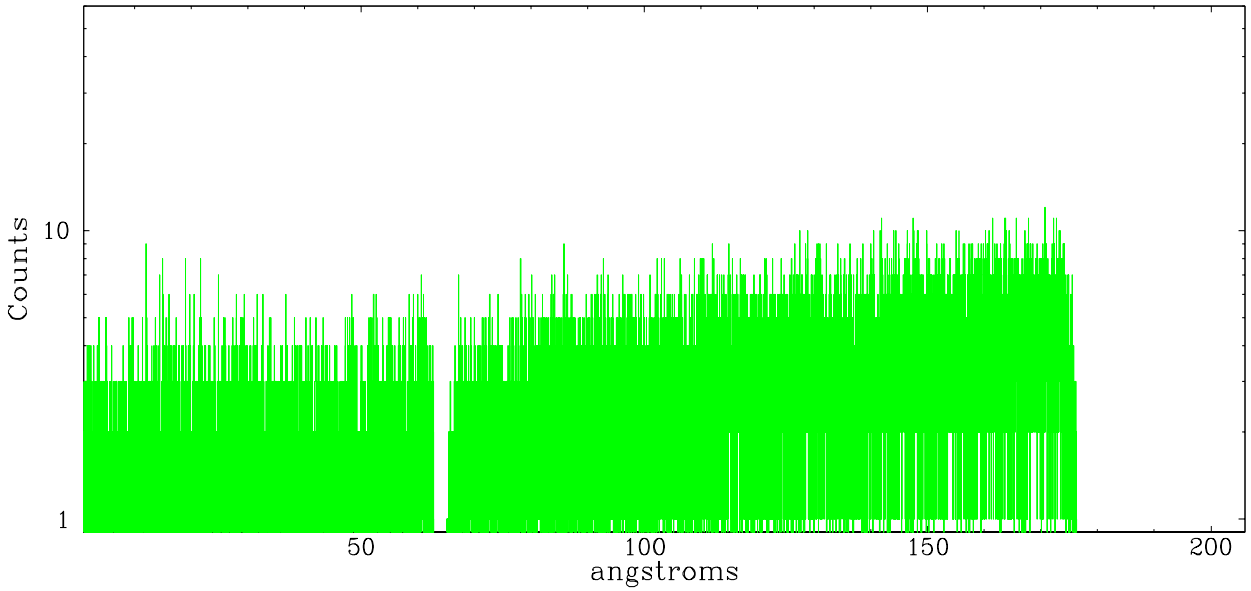


LETG Zero Order

leg order −1



leg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2006.04.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	36.4326

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.
```