V&V Reference Report
L2 ASCDS Version : 7.6.7

Observation 6069 - L2 Version 3
Chandra X-Ray Center

L2 Processing Date : Nov 24 2007

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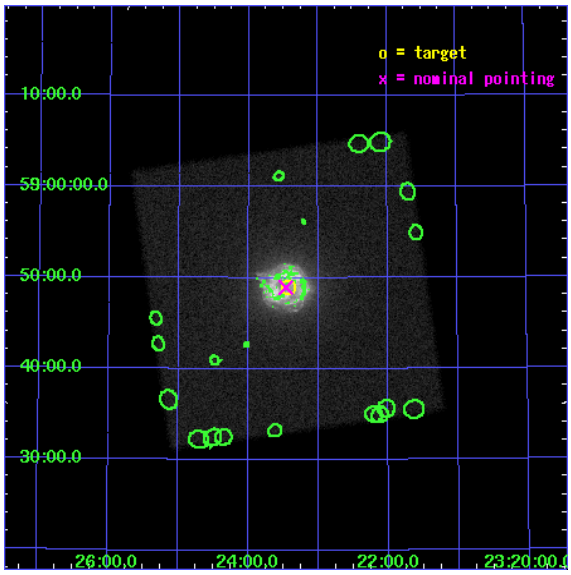
1 Front

seq_num	590396
obs_id	6069
title	AO6A Observations of the Standard Candles Cas A and G21.5-09
observer	Dr. CXC Calibration
object	Cas A
ra_targ	350.8575
dec_targ	58.814833
ra_nom	350.86573496151
dec_nom	58.815924832707
roll_nom	36.955583588521
revision	3
ontime	5150.8814840019
livetime	5081.9509645163
l2events	651038

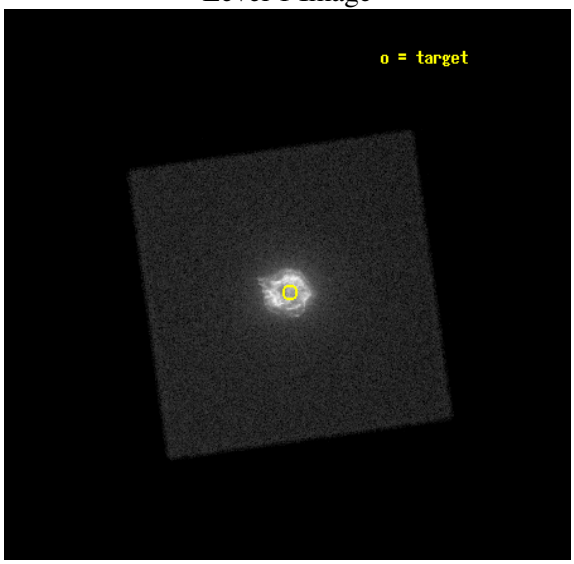


2 OBI

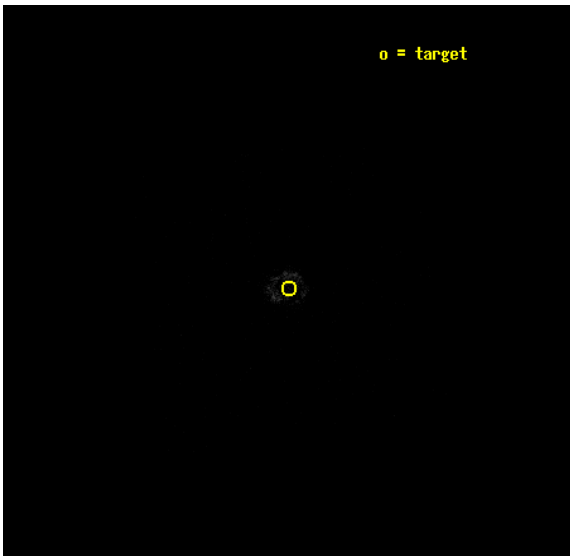
2.1 OBI

2.1.1 Images

Level 1 Image



Level 1 Bad Events



2.1.2 Parameters

obi_num	0
ascdsver	7.6.11.2
caldbver	3.4.1
date	2007-11-24T13:56:45
revision	3

sched_exp_time	5000.000000
ontime	5150.8814840019
l1events	783203

2.1.3 Events

Level 1 Events

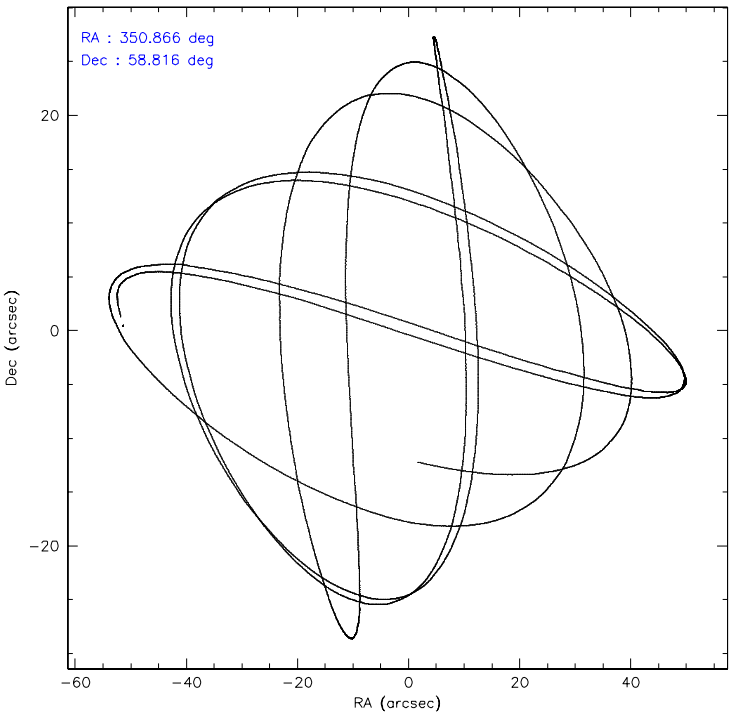
	segment 0
level 1 events	783203
rejected events	11711
rejected %	1%

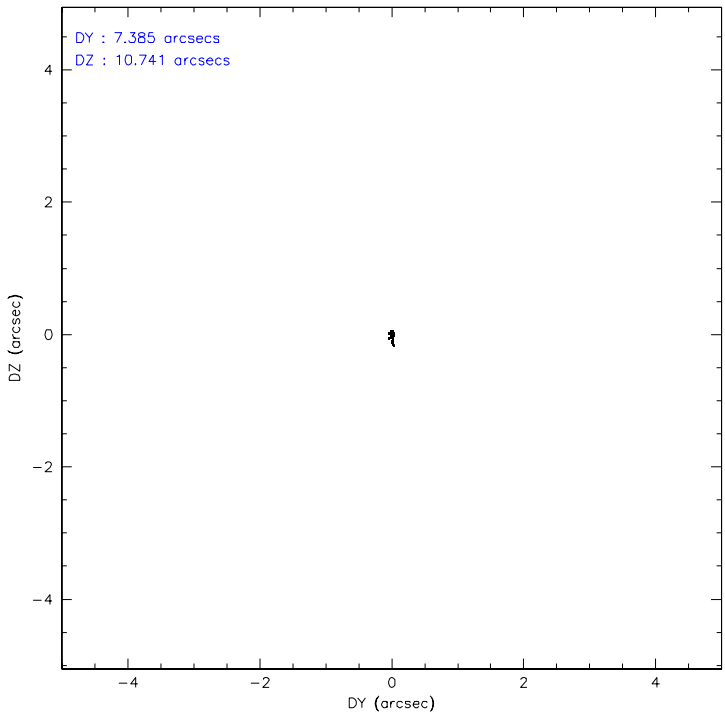
2.2 Compared Parameters

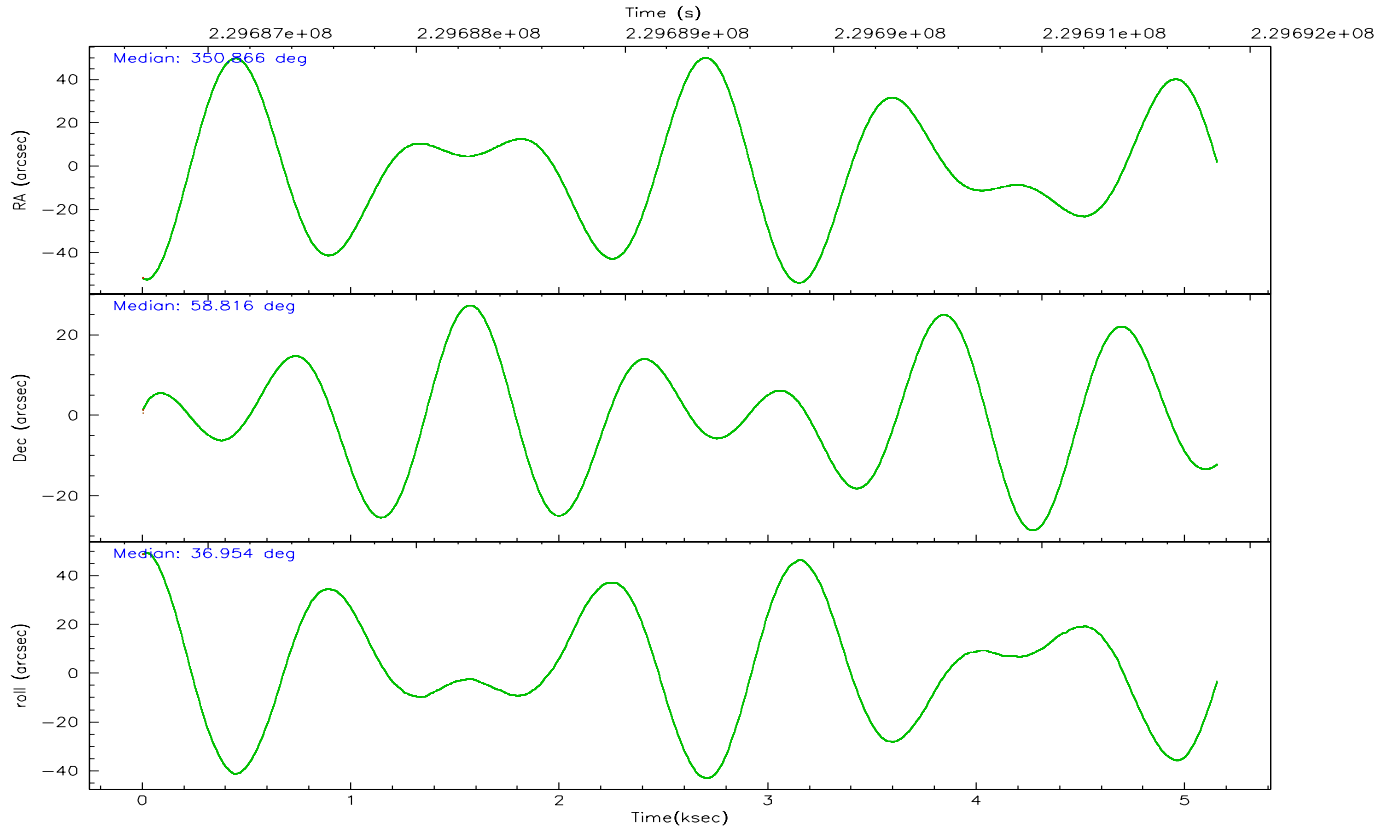
Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-I	HRC-I
Grating	NONE	NONE
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
Pointing RA	350.845938	350.8657349615077
Pointing Dec	58.790678	58.81592483270706
Pointing Roll	37.068008	36.95558358852055
Window start time	223603264.184000	223603264.184000
Window stop time	233884864.184000	233884864.184000
SIM focus pos (mm)	-1.040293	-1.038866356238299
SIM defocus (mm)	0	0.001426264420575141
SIM translation stage pos (mm)	126.985494	126.9829799899862
SIM translation stage offset (mm)	0	0.002508901615314585
Observation start time	229686845.184000	229686446.68356
Observation start date	2005-04-12T09:53:01	2005-04-12T09:47:26
Observation end time	229691845.184000	229692703.79634
Observation end date	2005-04-12T11:16:21	2005-04-12T11:31:43

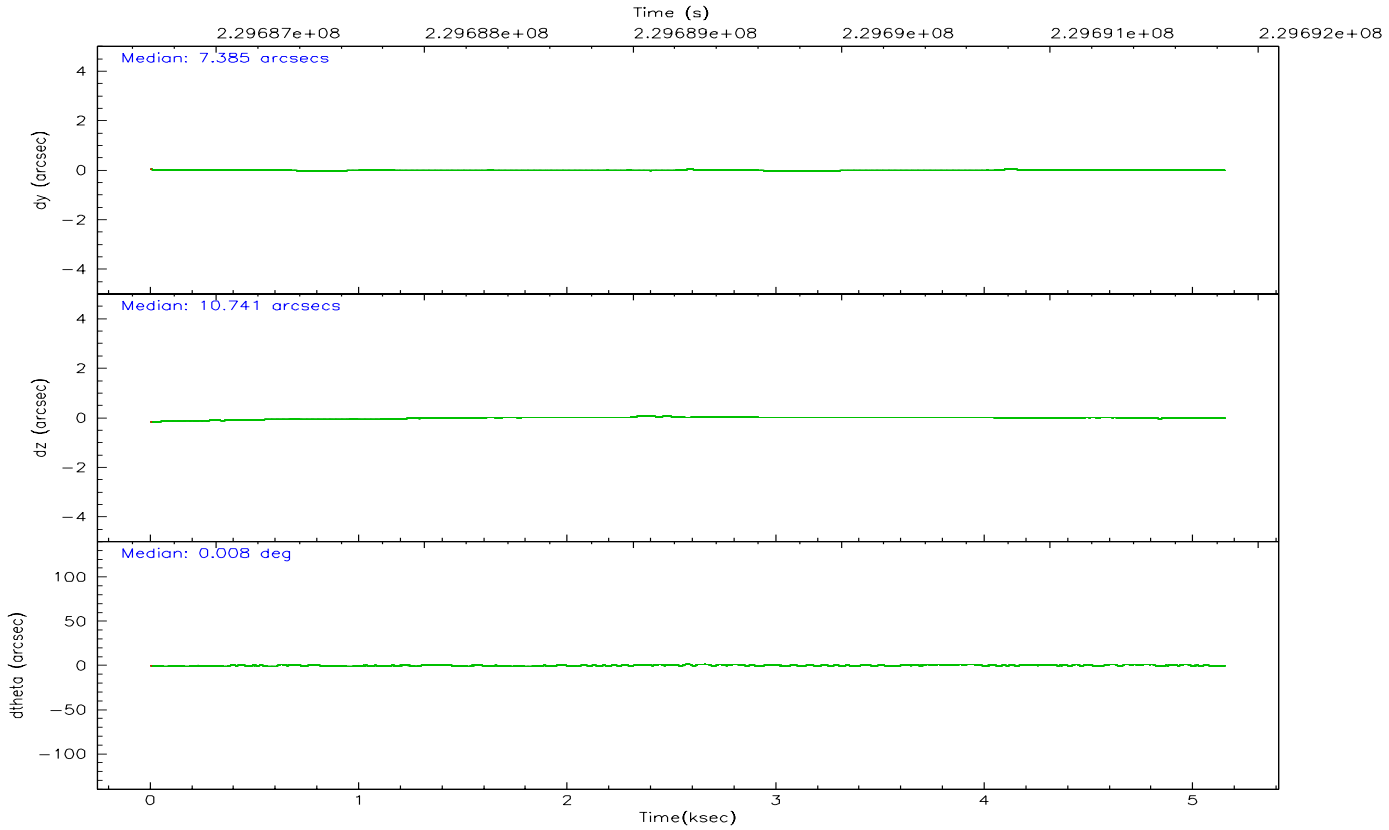
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED

2.3 Aspect


RA : 350.866 deg
Dec : 58.816 deg
Dec (arcsec)
RA (arcsec)
20
0
−20
−60
−40
−20
0
20
40


DY : 7.385 arcsecs
DZ : 10.741 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
2.29687e+08
2.29688e+08
2.29689e+08
2.2969e+08
2.29691e+08
2.29692e+08
Median: 350.866 deg
RA (arcsec)
Median: 58.816 deg
Dec (arcsec)
Median: 36.954 deg
roll (arcsec)
Time(ksec)

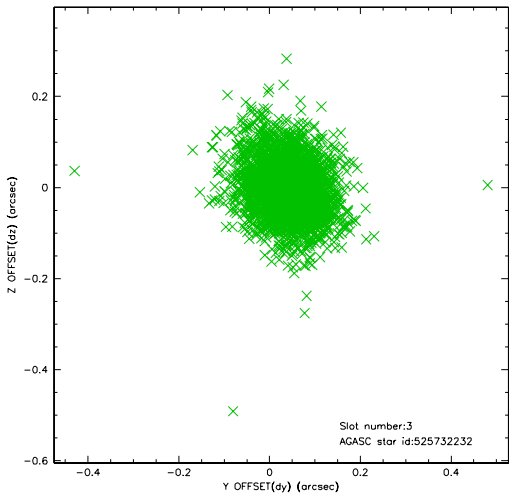

Time (s)
2.29687e+08
2.29688e+08
2.29689e+08
2.2969e+08
2.29691e+08
2.29692e+08
Median: 7.385 arcsecs
dy (arcsec)
Median: 10.741 arcsecs
dz (arcsec)
Median: 0.008 deg
dtheta (arcsec)
Time(ksec)

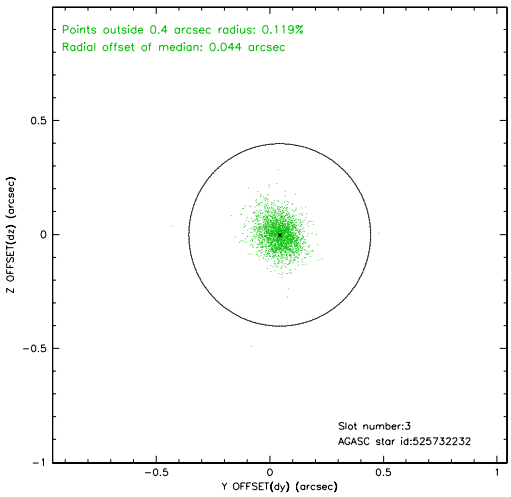
Slot Statistics

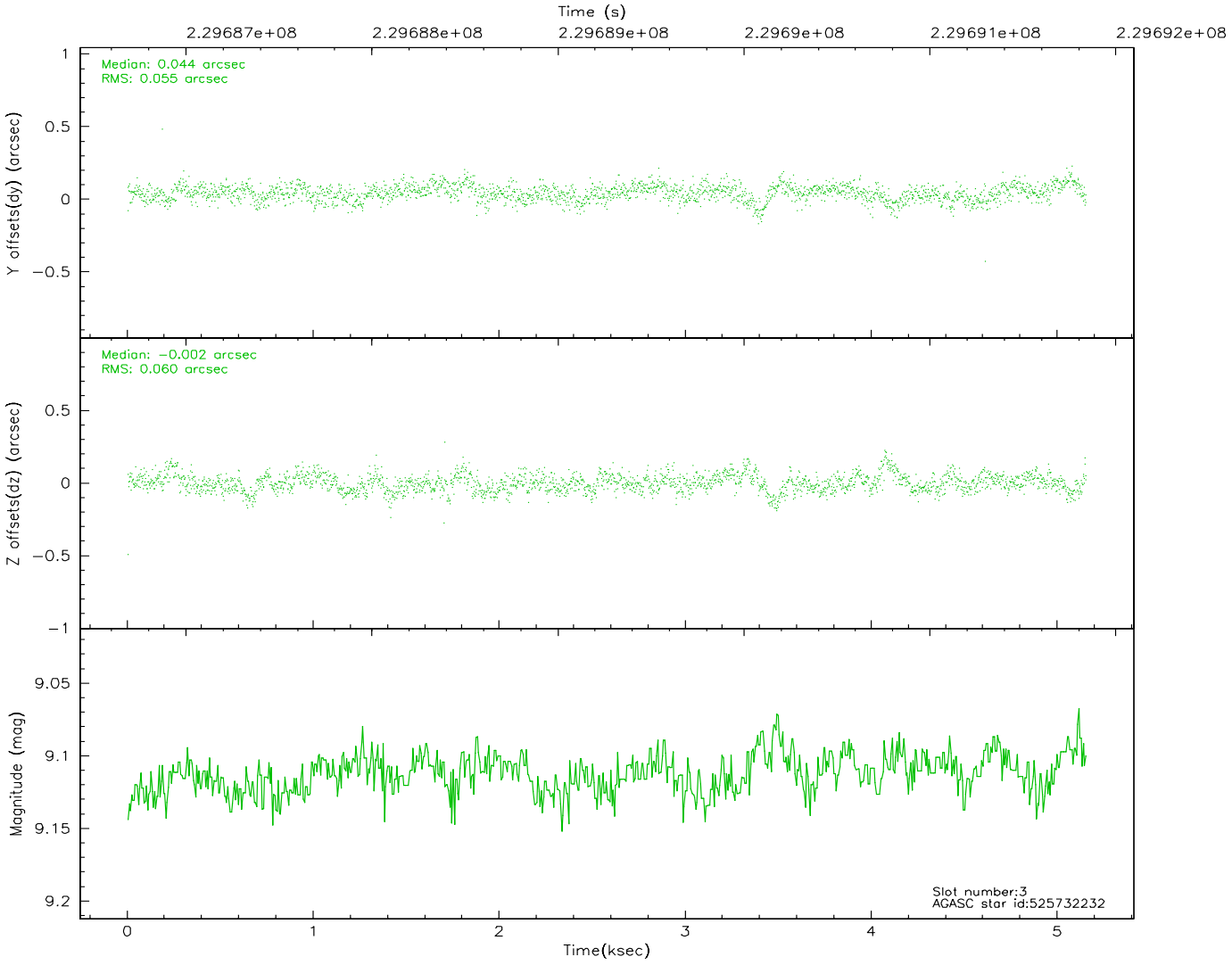
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-I-1	7.00	1257	-0.016	0.009	0.009	0.017	0.000000	0.000000	-762.97	-1298.69
1	FID	HRC-I-2	7.04	1257	0.106	-0.051	0.007	0.013	0.000000	0.000000	849.18	-1301.32
2	FID	HRC-I-3	7.08	1257	0.029	-0.047	0.006	0.012	0.000000	0.000000	-1190.77	1004.78
3	GUIDE	525732232	9.11	2514	0.044	-0.002	0.083	0.144	351.669550	58.757012	1159.24	-1016.49
4	GUIDE	525732488	8.41	2514	0.045	-0.086	0.064	0.105	350.087090	58.516915	-1727.68	79.92
5	GUIDE	525732528	9.38	2514	-0.012	0.030	0.097	0.155	351.607241	59.298932	2222.73	623.51
6	GUIDE	525735456	6.71	2514	-0.157	-0.155	0.058	0.092	350.628183	59.307249	801.99	1726.17
7	GUIDE	525735976	8.77	2511	0.080	0.218	0.068	0.111	350.142956	58.277622	-2171.22	-664.83

2.4 Star Slots

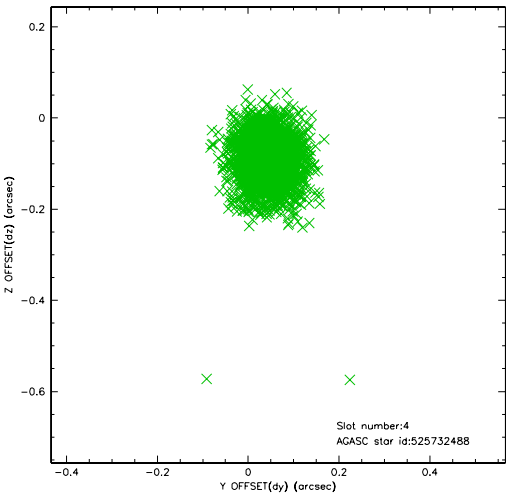
2.4.1 Slot 3

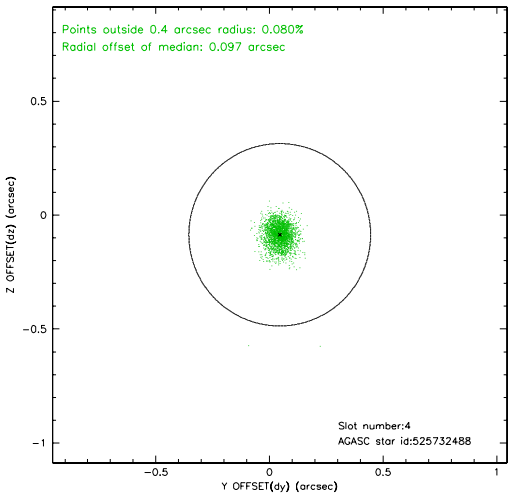


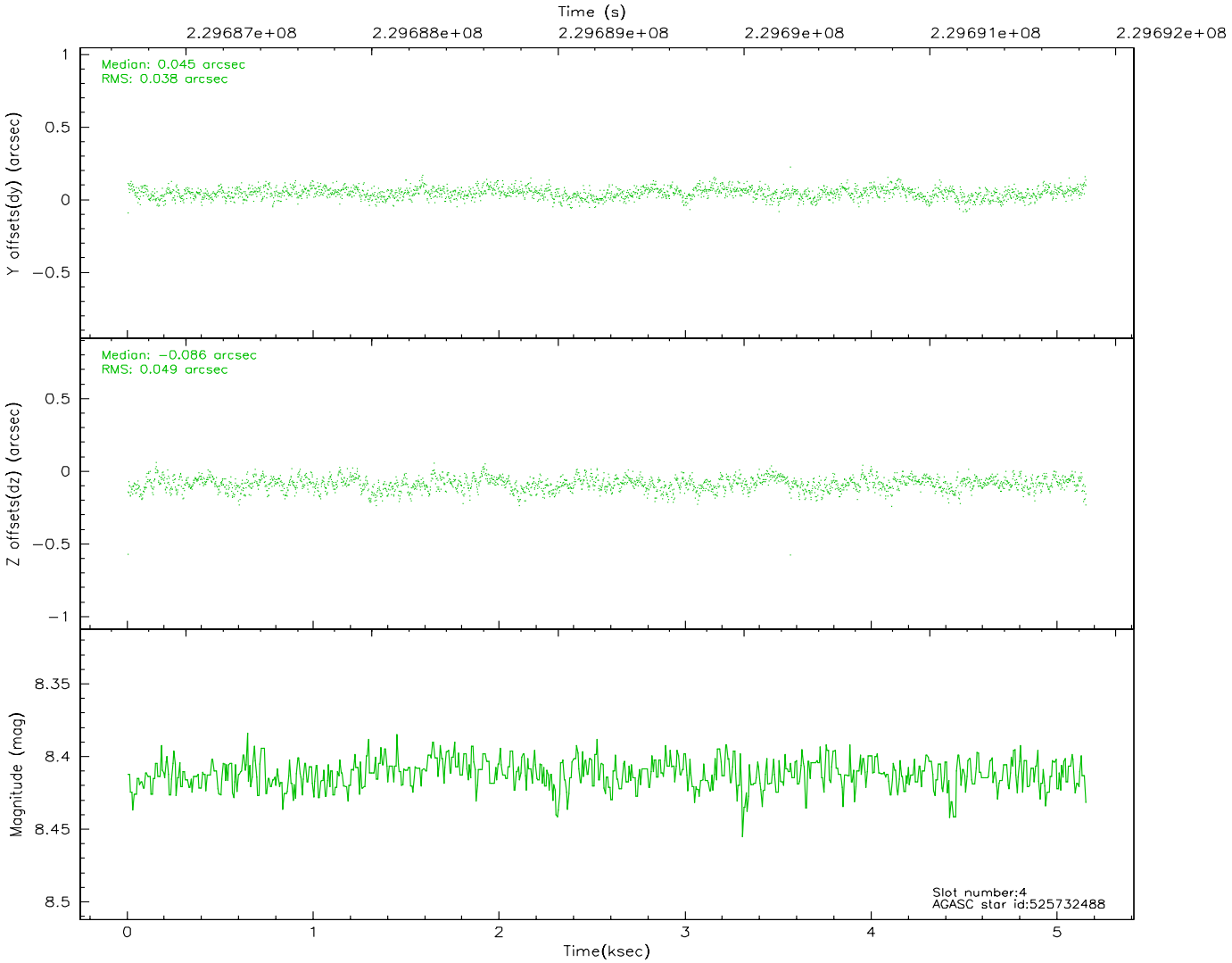




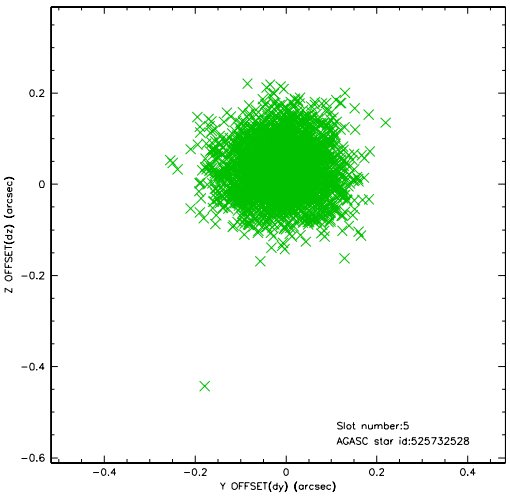
2.4.2 Slot 4

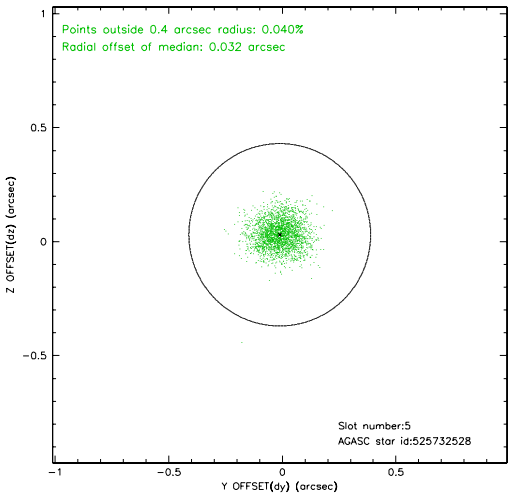

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:525732488

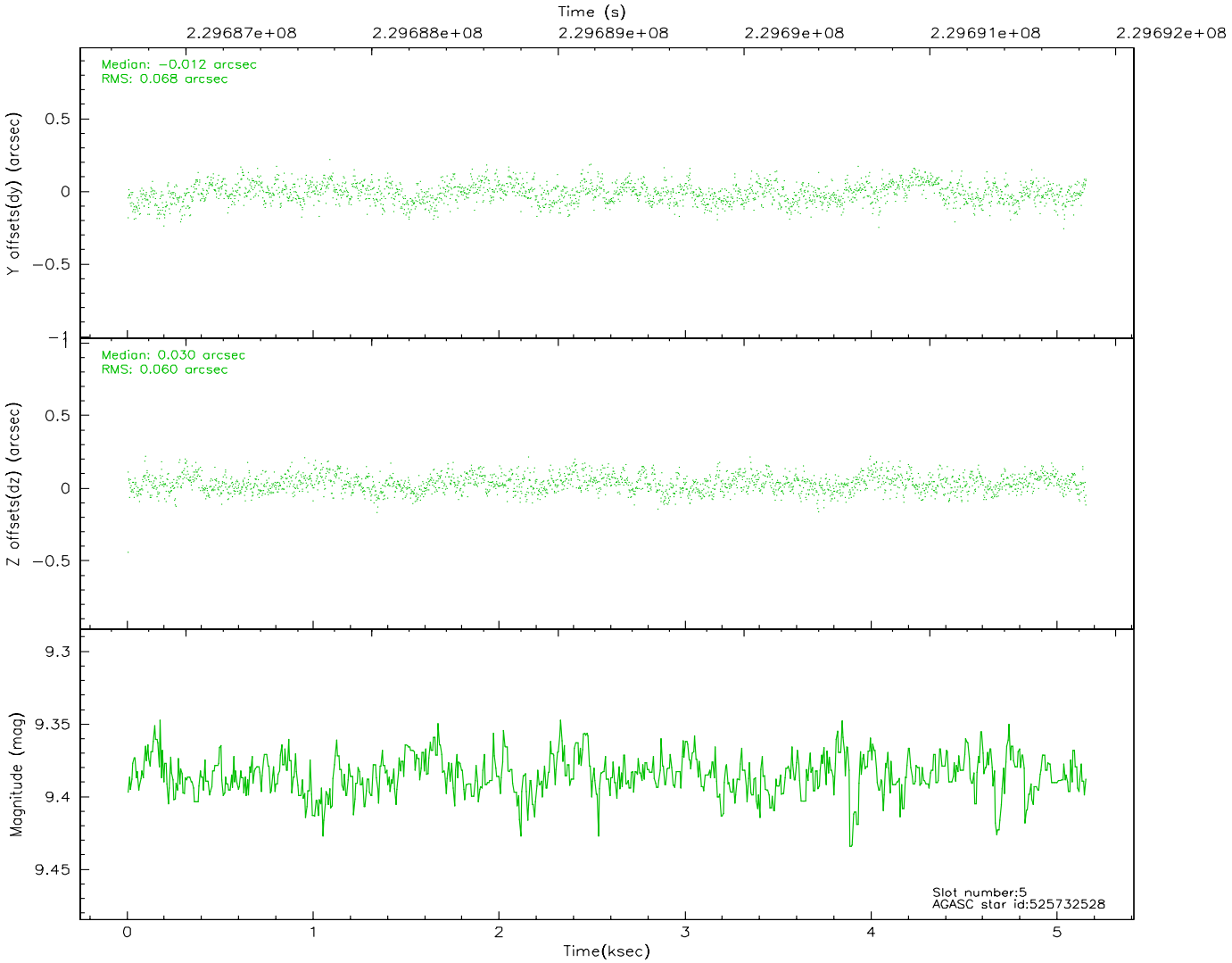

Points outside 0.4 arcsec radius: 0.080%
Radial offset of median: 0.097 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:525732488


Time (s)
Median: 0.045 arcsec
RMS: 0.038 arcsec
Y offsets(dy) (arcsec)
Median: −0.086 arcsec
RMS: 0.049 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:525732488
Time(ksec)

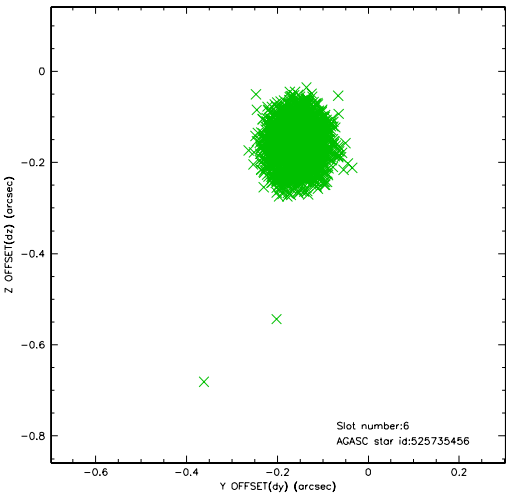
2.4.3 Slot 5

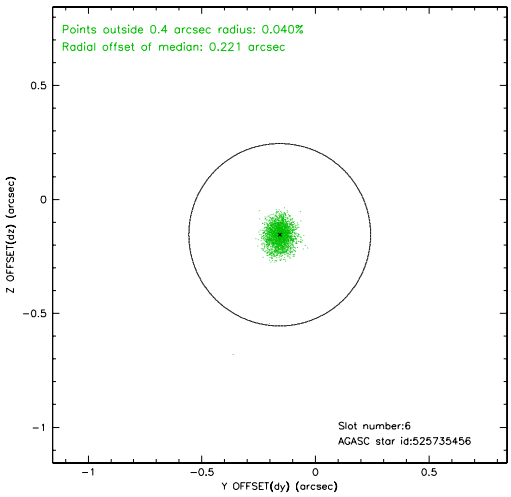

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:525732528

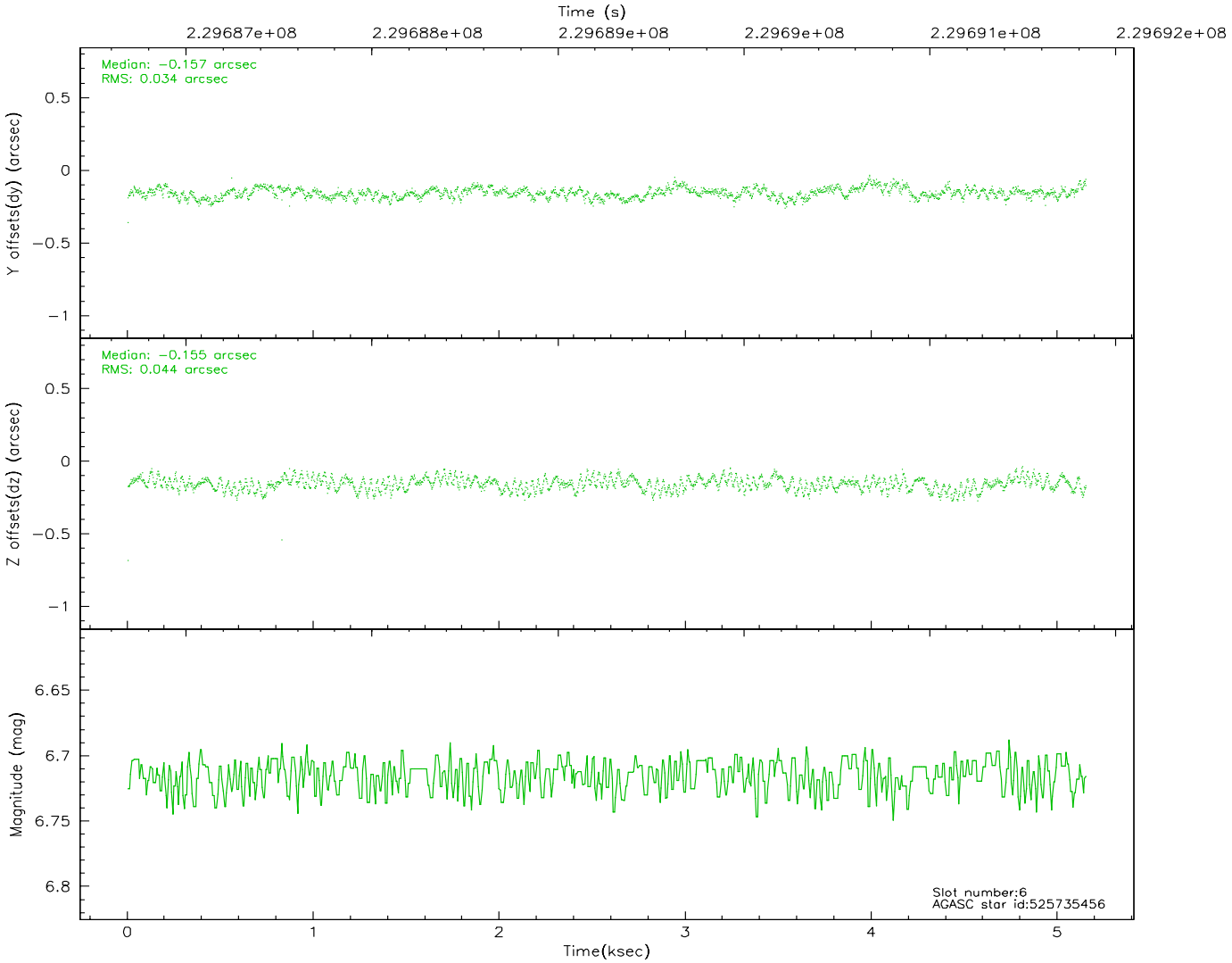

Points outside 0.4 arcsec radius: 0.040%
Radial offset of median: 0.032 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:525732528


Time (s)
Median: −0.012 arcsec
RMS: 0.068 arcsec
Y offsets(dy) (arcsec)
Median: 0.030 arcsec
RMS: 0.060 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:525732528
Time(ksec)

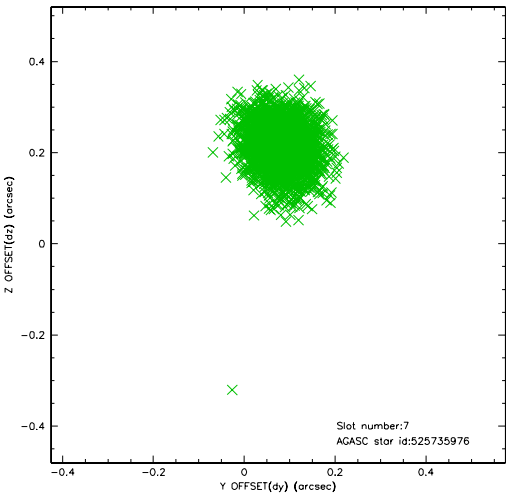
2.4.4 Slot 6

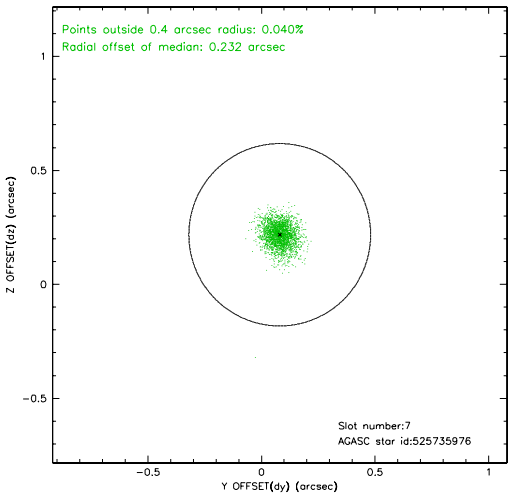

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:525735456

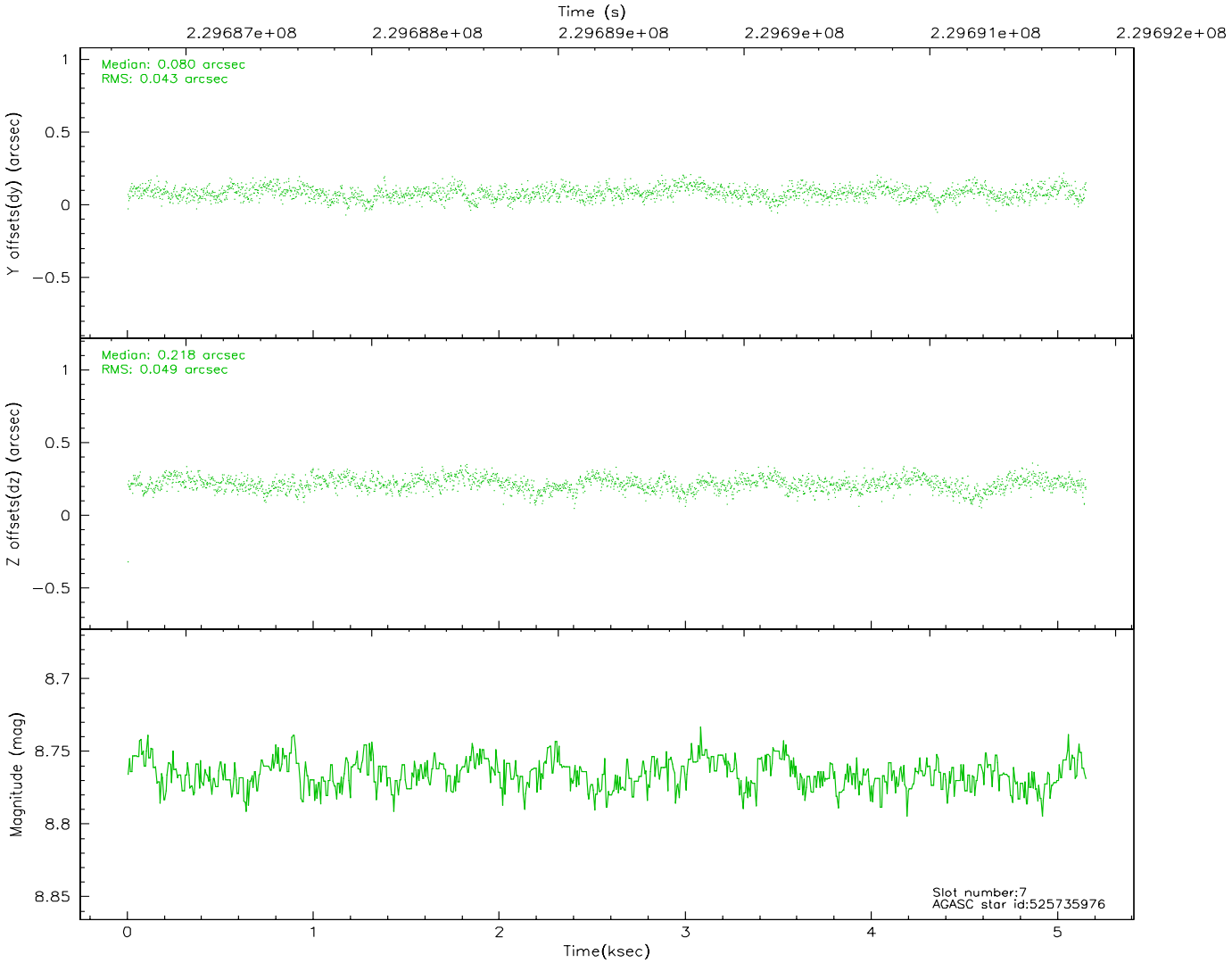

Points outside 0.4 arcsec radius: 0.040%
Radial offset of median: 0.221 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:525735456


Time (s)
Median: −0.157 arcsec
RMS: 0.034 arcsec
Y offsets(dy) (arcsec)
Median: −0.155 arcsec
RMS: 0.044 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:525735456
Time(ksec)

2.4.5 Slot 7

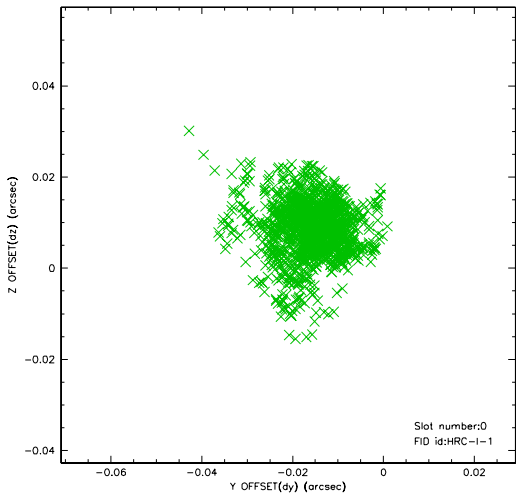

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:525735976

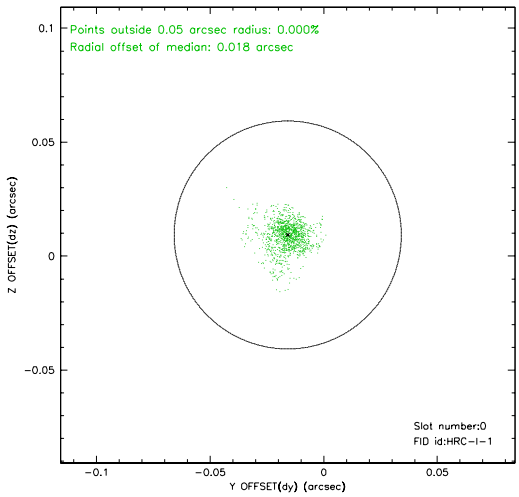

Points outside 0.4 arcsec radius: 0.040%
Radial offset of median: 0.232 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:525735976

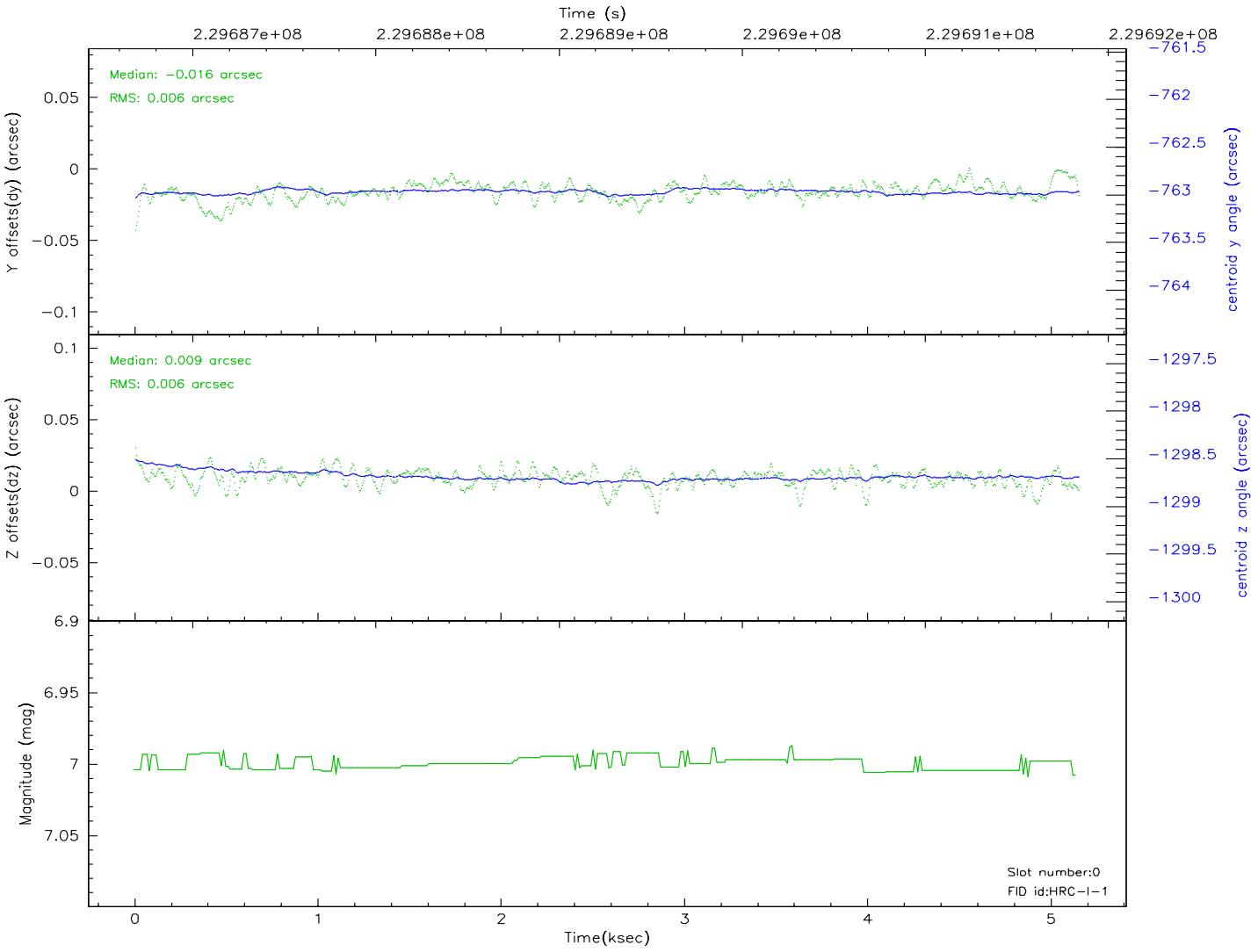

Time (s)
Median: 0.080 arcsec
RMS: 0.043 arcsec
Y offsets(dy) (arcsec)
Median: 0.218 arcsec
RMS: 0.049 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:525735976
Time(ksec)

2.5 FID Slots

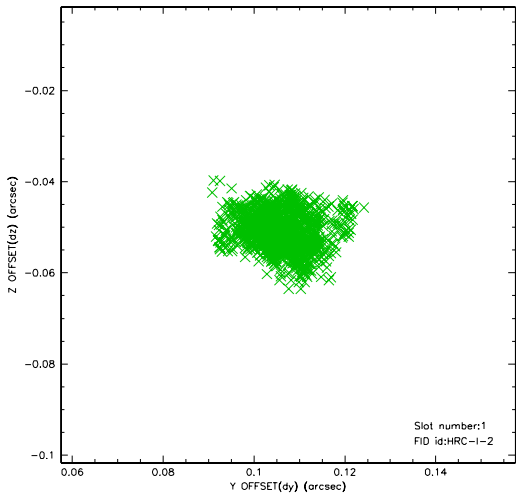
2.5.1 Slot 0

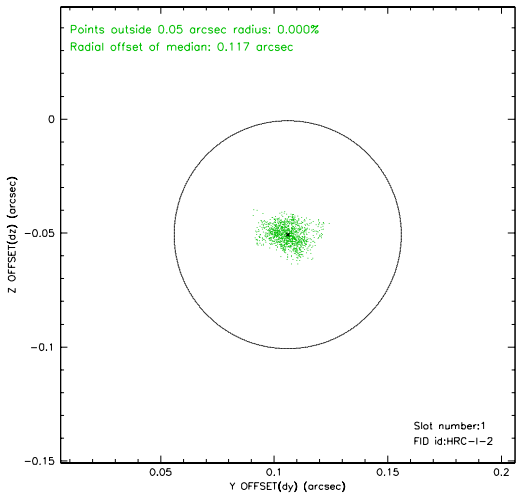


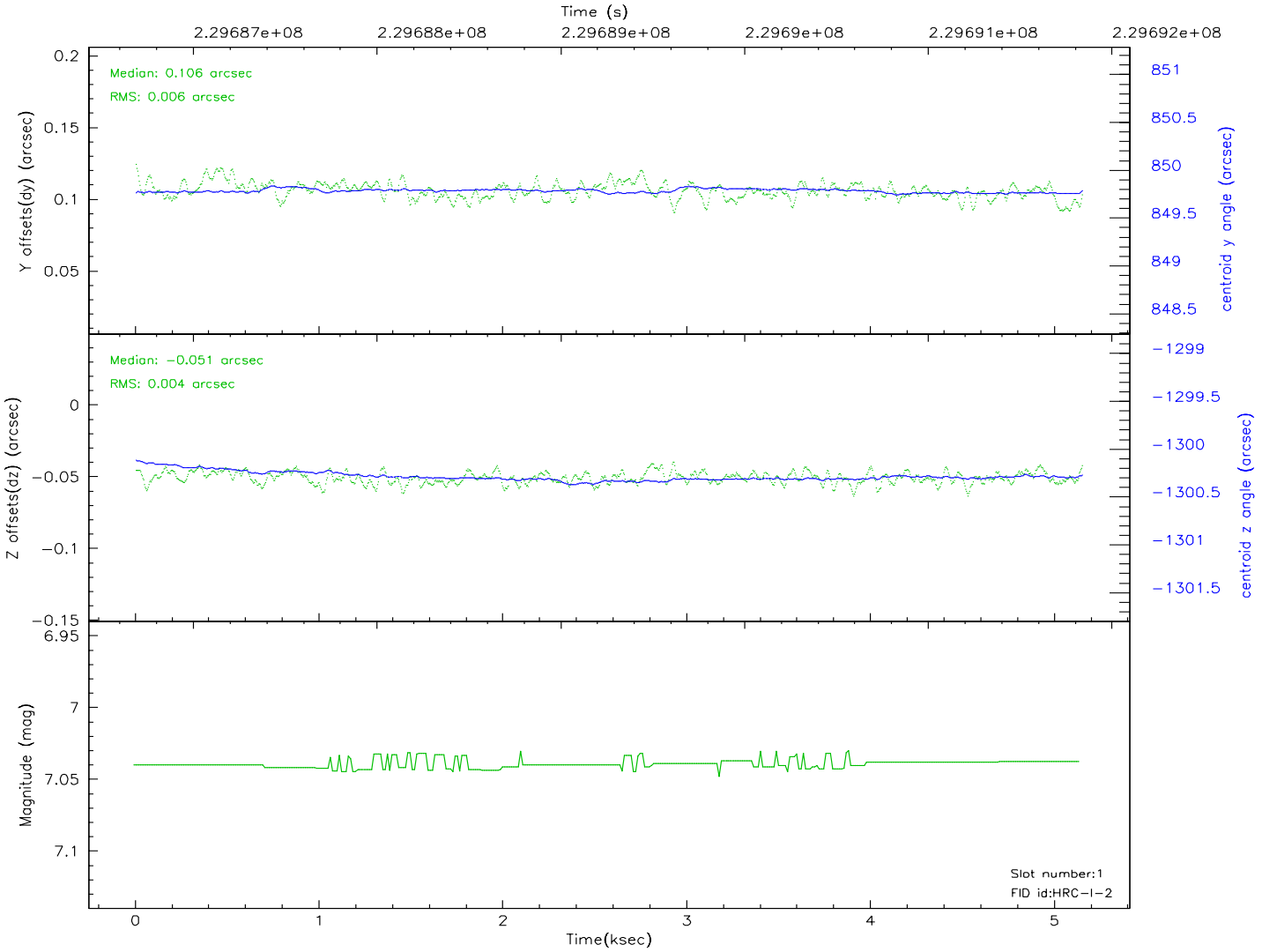




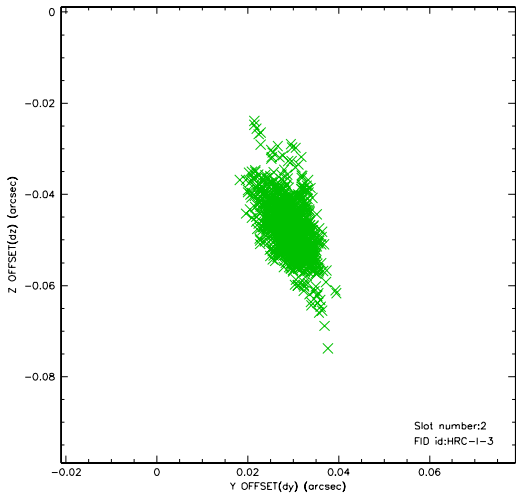
2.5.2 Slot 1

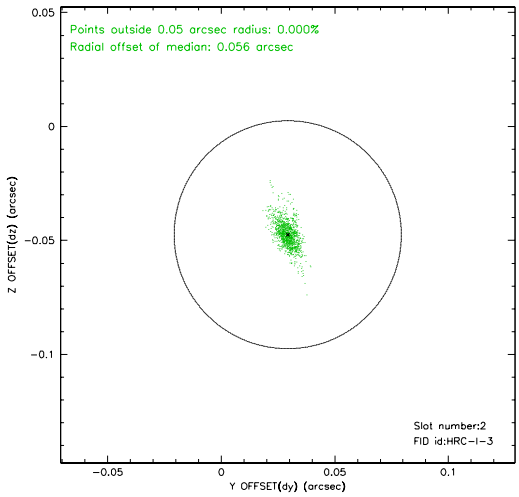

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-I-2

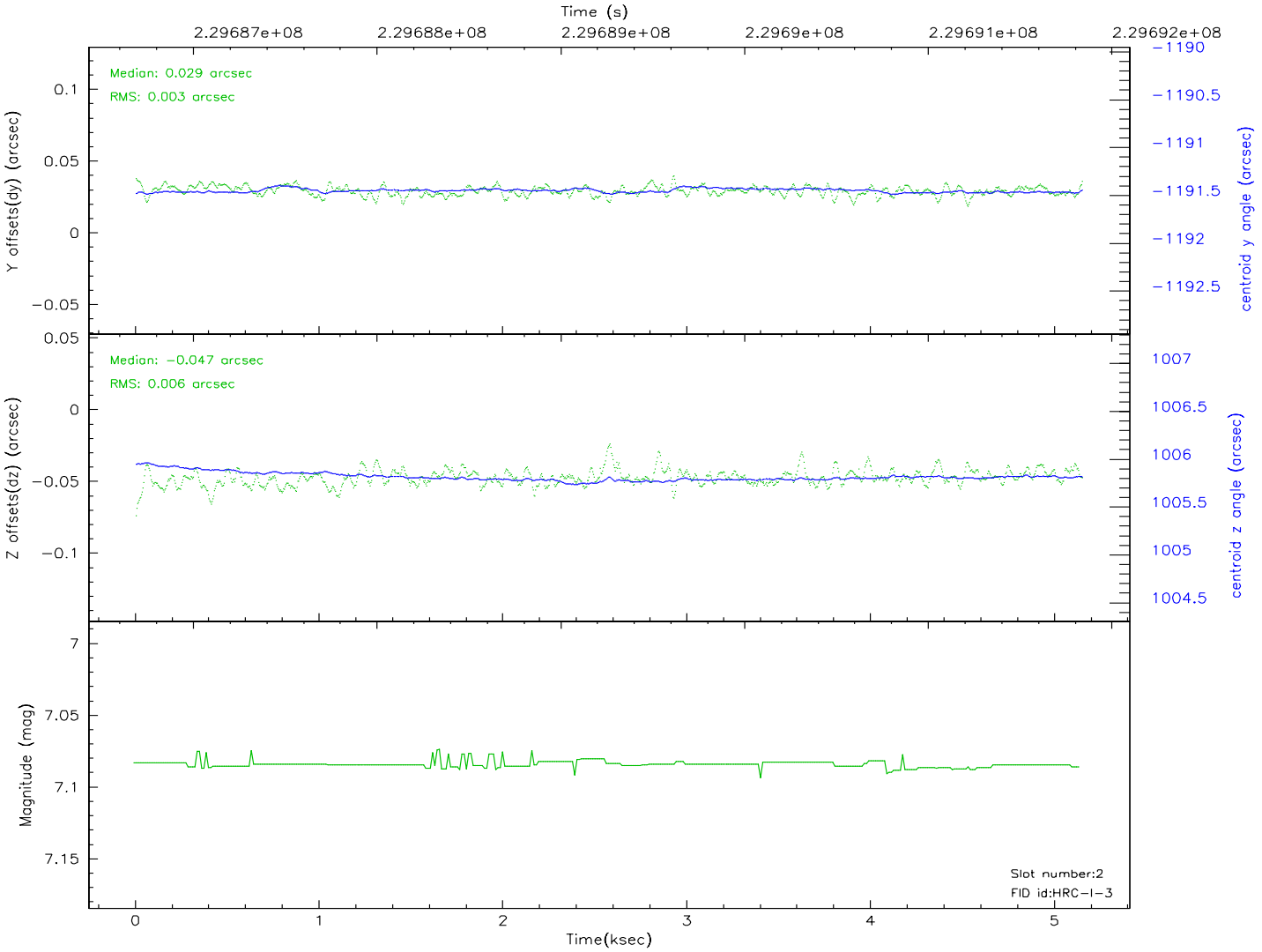

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.117 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-I-2


Time (s)
Median: 0.106 arcsec
RMS: 0.006 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.051 arcsec
RMS: 0.004 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:1
FID id:HRC-I-2
Time(ksec)

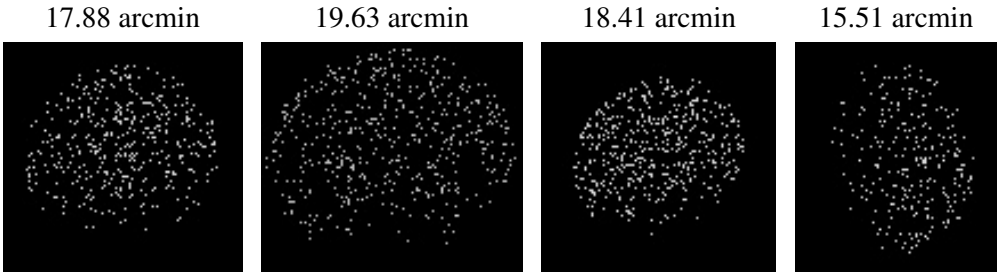
2.5.3 Slot 2


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


Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.056 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:HRC-I-3


Time (s)
Median: 0.029 arcsec
RMS: 0.003 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.047 arcsec
RMS: 0.006 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:2
FID id:HRC-I-3
Time(ksec)

3 Point Sources



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2007.12.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.150881

A.2 Comments

```
The current observation has been reprocessed as part of Repro III ('C'
supplement) the purpose of which is to update all HRC-I ObsIDs since
Jan 2000 to the latest calibrations available for that
configuration. Specifically, we are updating the DEGAP solution and
the Gain Maps applied. For more information see the Repro IIIC web page
at:

http://asc.harvard.edu/cda/repro3.html#IIIc

and the associated links.
```