V&V Reference Report
L2 ASCDS Version : 7.6.7.1

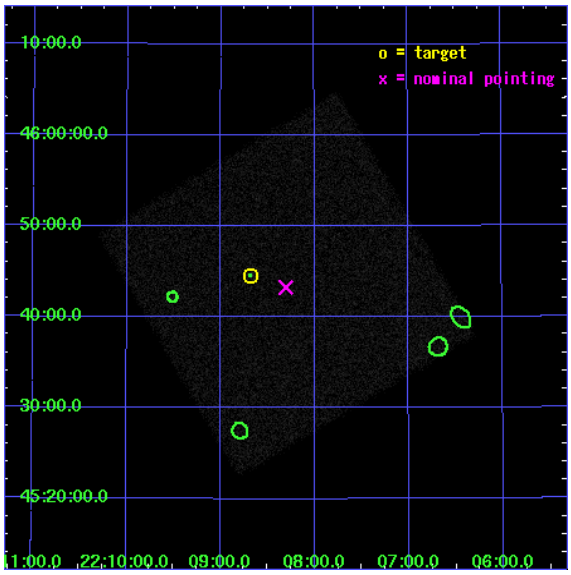
Observation 5073 - L2 Version 3
Chandra X-Ray Center

L2 Processing Date : Nov 23 2007

Contents

1 Front

seq_num	290346
obs_id	5073
title	AO5 Calibration Observations to Monitor the Spatial Variations in the HRC-I Gain
observer	Dr. CXC Calibration
object	ArLac
ra_targ	332.17
dec_targ	45.742306
ra_nom	332.07604568897
dec_nom	45.72117237616
roll_nom	284.64009263831
revision	3
ontime	1079.5812985003
livetime	1070.7998142404
l2events	55424

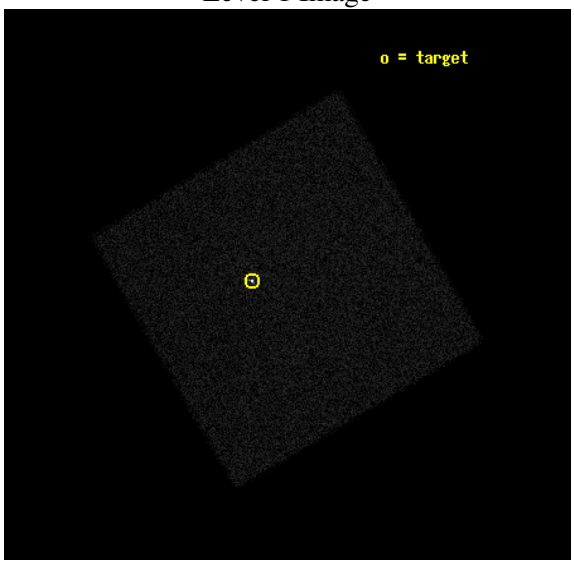


2 OBI

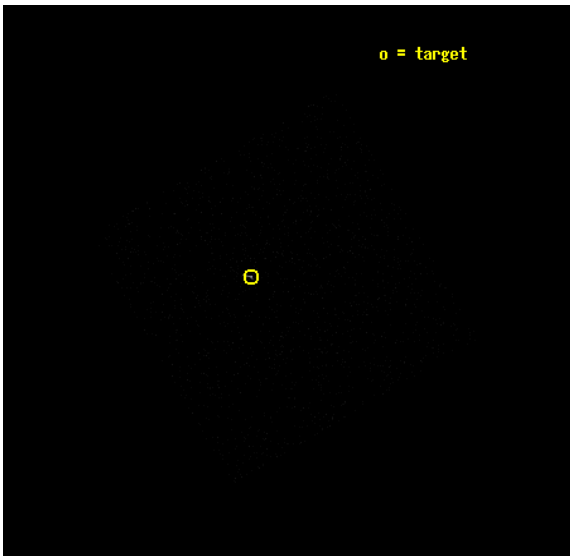
2.1 OBI

2.1.1 Images

Level 1 Image



Level 1 Bad Events



2.1.2 Parameters

obi_num	1
ascdsver	7.6.11.2
caldbver	3.4.1
date	2007-11-24T02:30:46
revision	3

sched_exp_time	900.000000
ontime	1079.5812985003
l1events	108963

2.1.3 Events

Level 1 Events

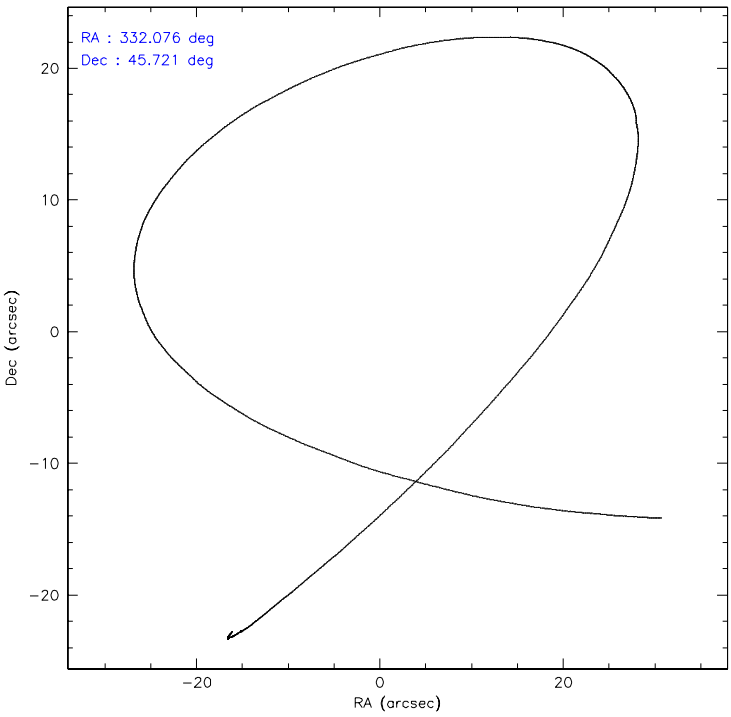
	segment 0
level 1 events	108963
rejected events	30987
rejected %	28%

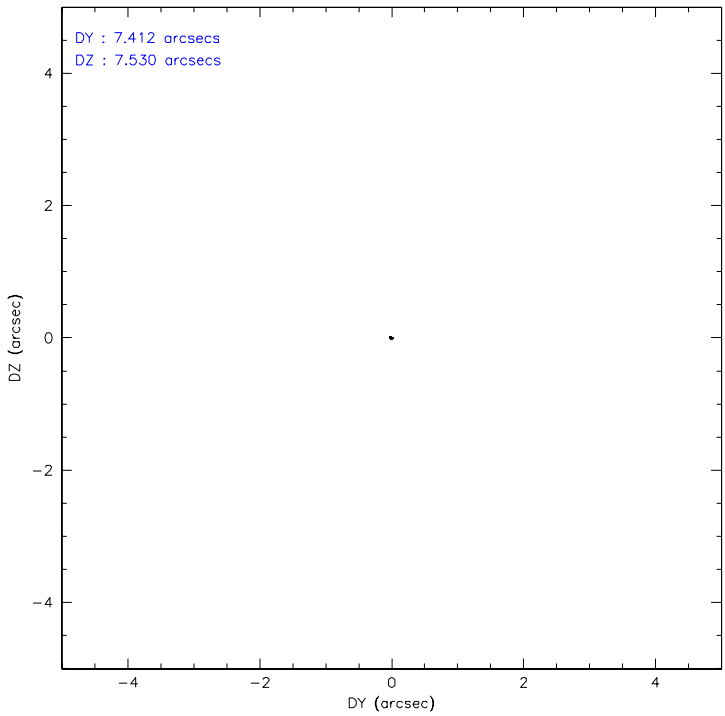
2.2 Compared Parameters

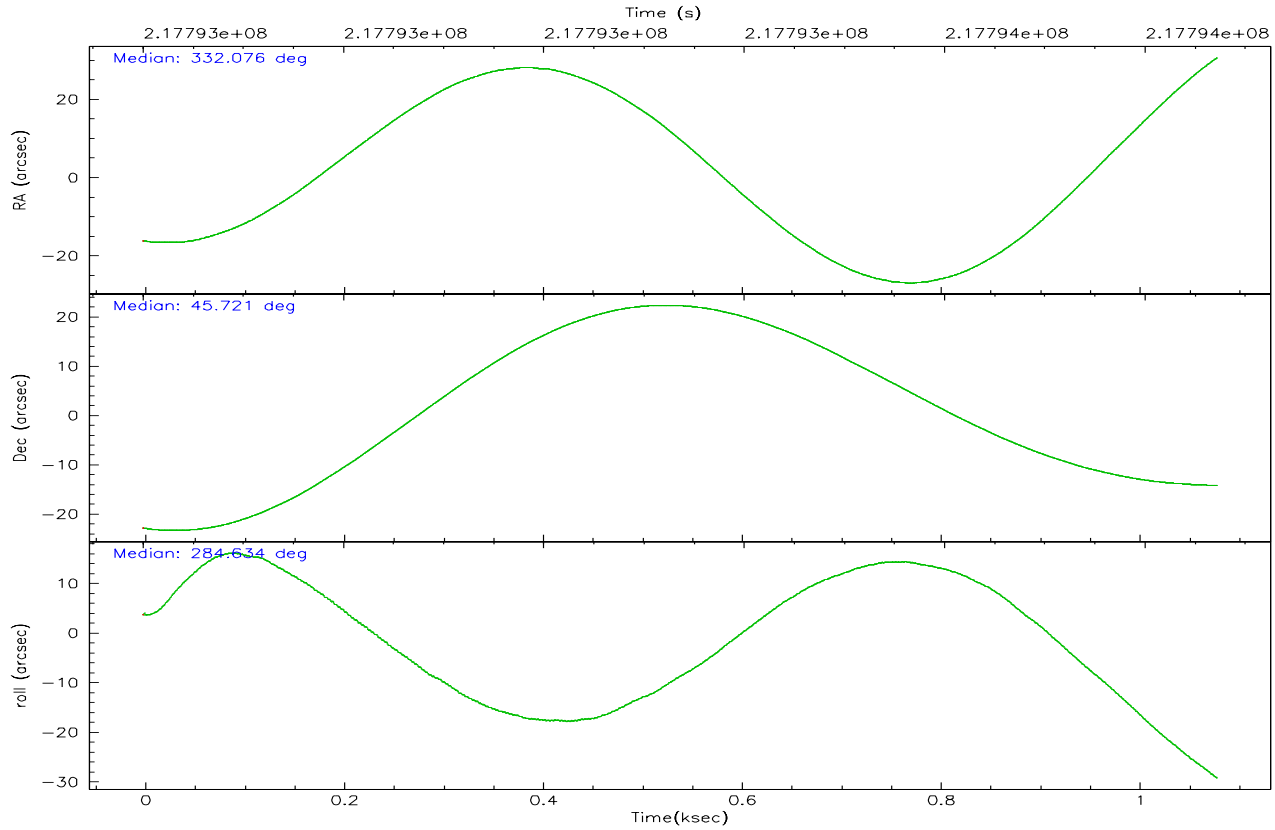
Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-I	HRC-I
Grating	NONE	NONE
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
Pointing RA	332.048850	332.0760456889744
Pointing Dec	45.740095	45.72117237616022
Pointing Roll	284.755127	284.6400926383113
SIM focus pos (mm)	-1.040293	-1.038866356238299
SIM defocus (mm)	0	0.00142626442057514 1
SIM translation stage pos (mm)	126.985494	126.9854943052878
SIM translation stage offset (mm)	0	-5.413686238853188e-06
Observation start time	217792977.184000	217792600.85853
Observation start date	2004-11-25T18:01:53	2004-11-25T17:56:40
Observation end time	217793877.184000	217794011.25859
Observation end date	2004-11-25T18:16:53	2004-11-25T18:20:11

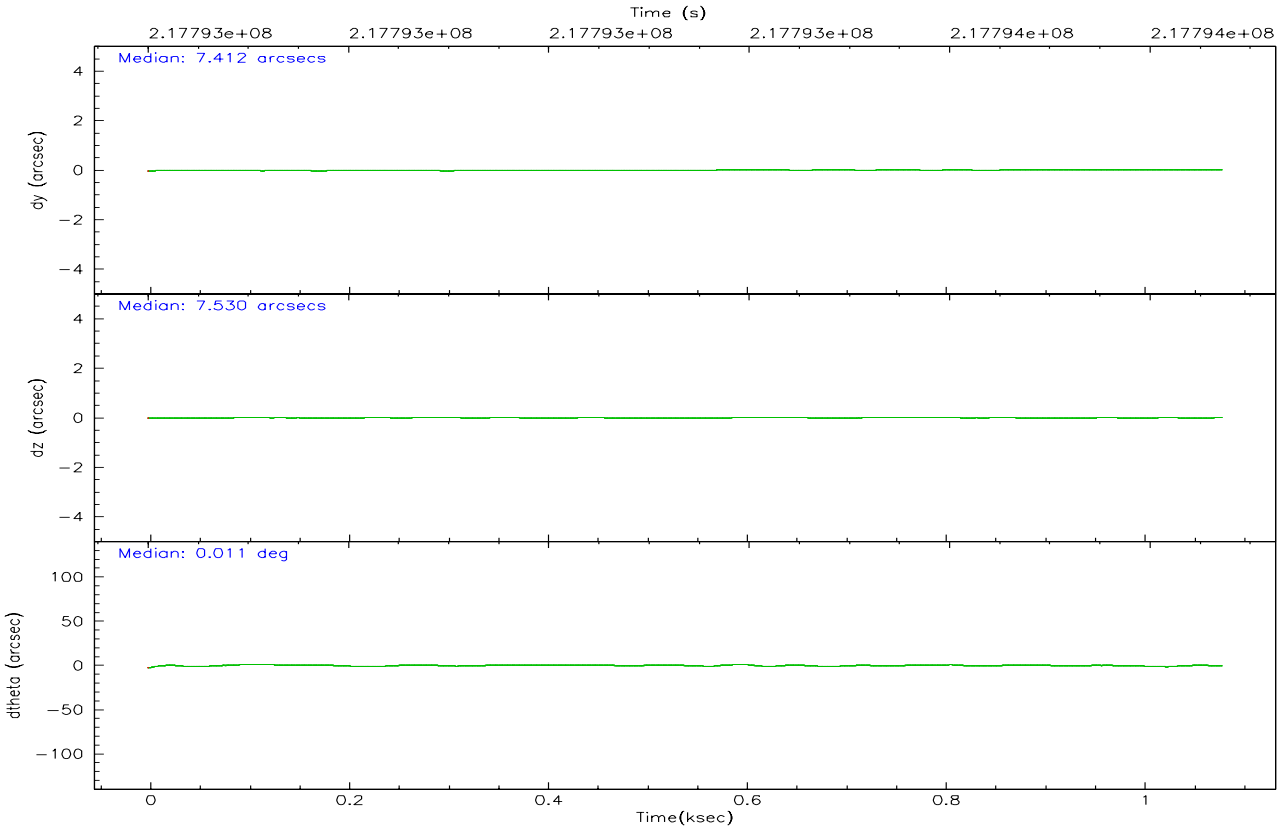
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED

2.3 Aspect


RA : 332.076 deg
Dec : 45.721 deg
20
10
0
−10
−20
Dec (arcsec)
−20
0
20
RA (arcsec)


DY : 7.412 arcsecs
DZ : 7.530 arcsecs
4
2
0
−2
−4
DZ (arcsec)
−4
−2
0
2
4
DY (arcsec)


Time (s)
2.17793e+08
2.17793e+08
2.17793e+08
2.17793e+08
2.17794e+08
2.17794e+08
Median: 332.076 deg
RA (arcsec)
Median: 45.721 deg
Dec (arcsec)
Median: 284.634 deg
roll (arcsec)
Time(ksec)

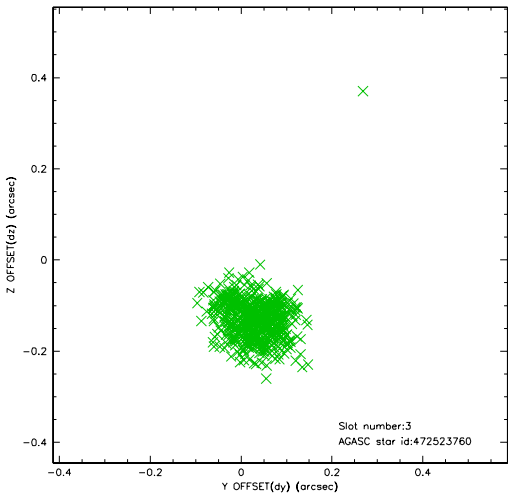

Time (s)
2.17793e+08
2.17793e+08
2.17793e+08
2.17793e+08
2.17794e+08
2.17794e+08
Median: 7.412 arcsecs
dy (arcsec)
Median: 7.530 arcsecs
dz (arcsec)
Median: 0.011 deg
dtheta (arcsec)
Time(ksec)

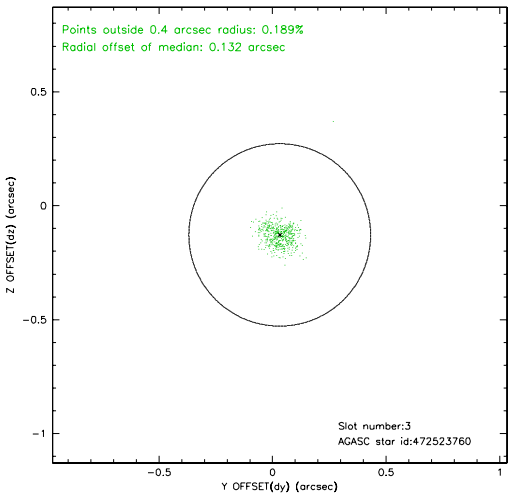
Slot Statistics

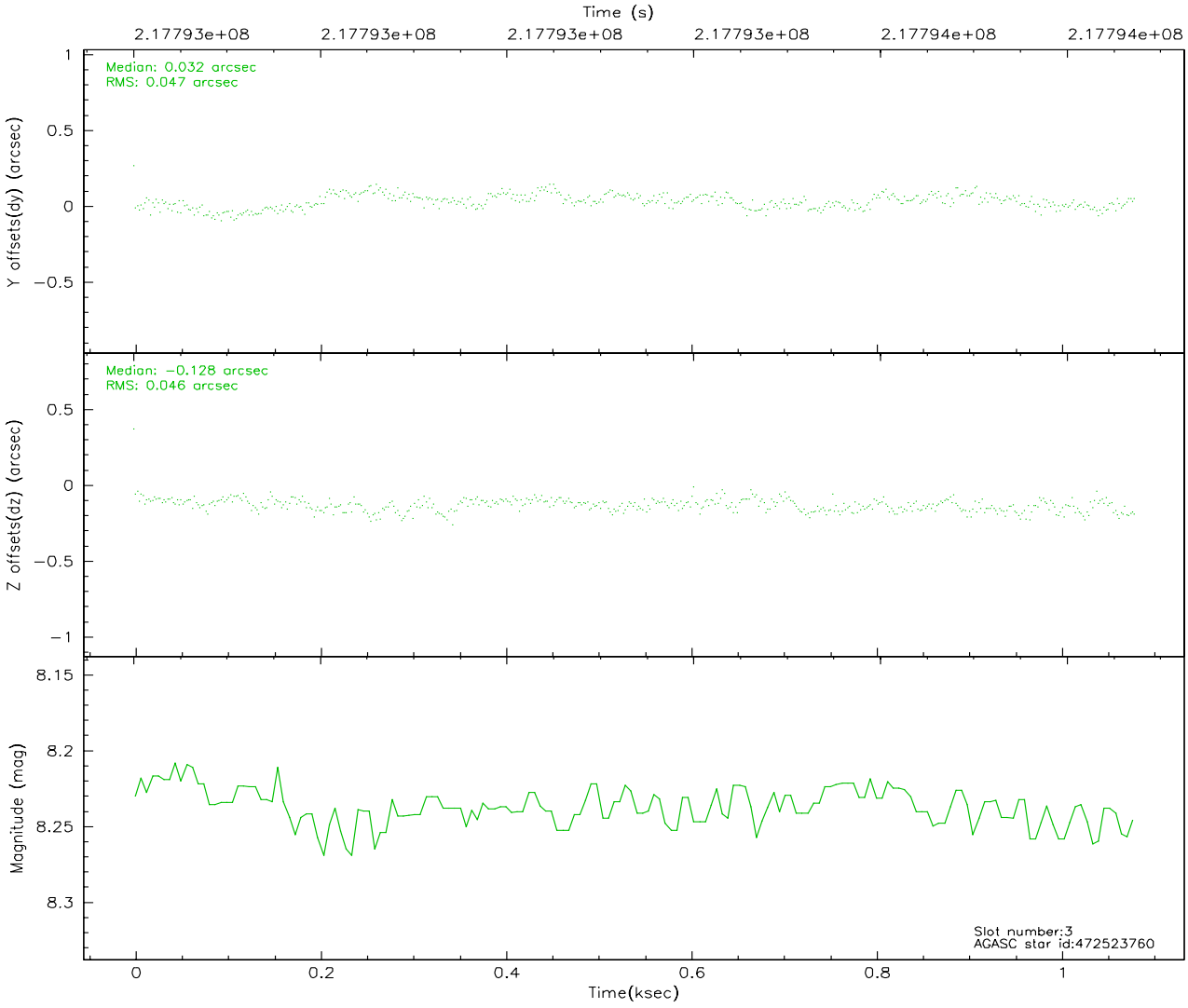
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-I-1	7.01	264	0.042	0.001	0.006	0.010	0.000000	0.000000	-763.02	-1295.41
1	FID	HRC-I-3	7.10	264	-0.070	-0.051	0.007	0.012	0.000000	0.000000	-1194.41	1004.22
2	FID	HRC-I-4	7.05	264	0.143	-0.040	0.006	0.010	0.000000	0.000000	1275.45	1010.43
3	GUIDE	472523760	8.24	528	0.032	-0.128	0.065	0.102	331.645363	45.403260	911.01	-1292.47
4	GUIDE	472655152	9.43	527	0.062	0.113	0.111	0.187	332.504239	45.862991	-138.14	1217.19
5	GUIDE	472659832	9.47	526	-0.046	0.009	0.105	0.199	332.780399	46.098139	-789.57	2100.59
6	GUIDE	472527720	7.02	528	0.113	-0.001	0.086	0.145	331.460205	45.112509	1797.95	-2014.07
7	GUIDE	472535576	7.86	527	-0.164	0.011	0.055	0.091	331.438373	46.291802	-2309.24	-963.25

2.4 Star Slots

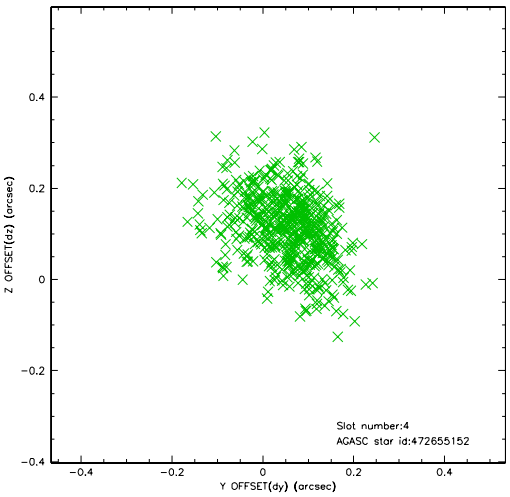
2.4.1 Slot 3

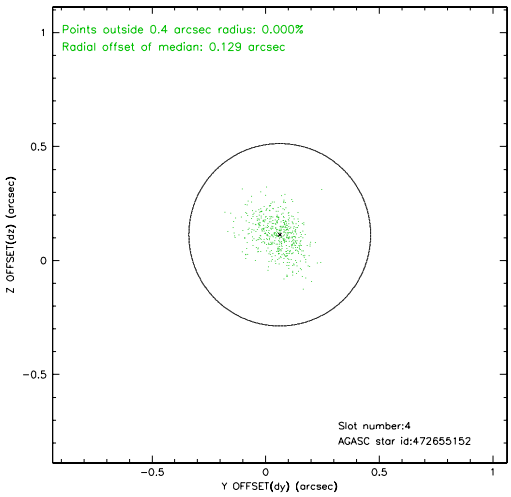


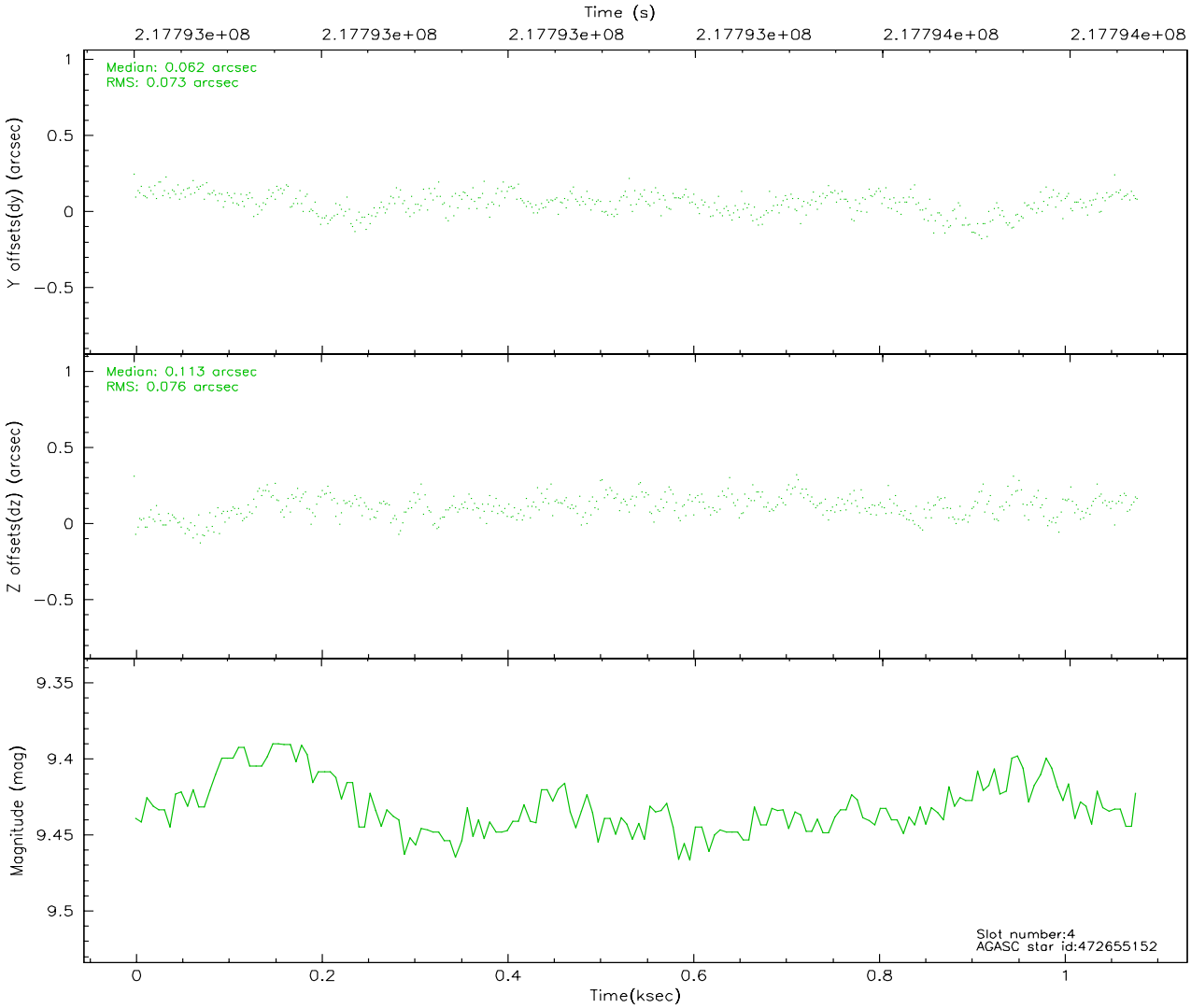




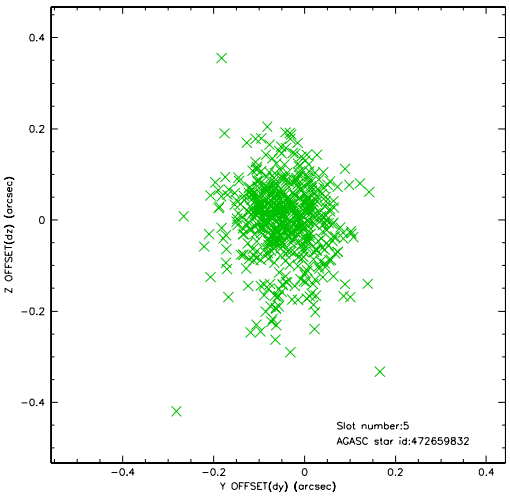
2.4.2 Slot 4

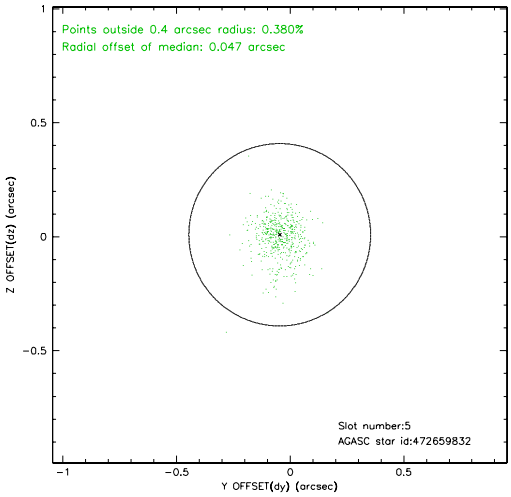

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:472655152

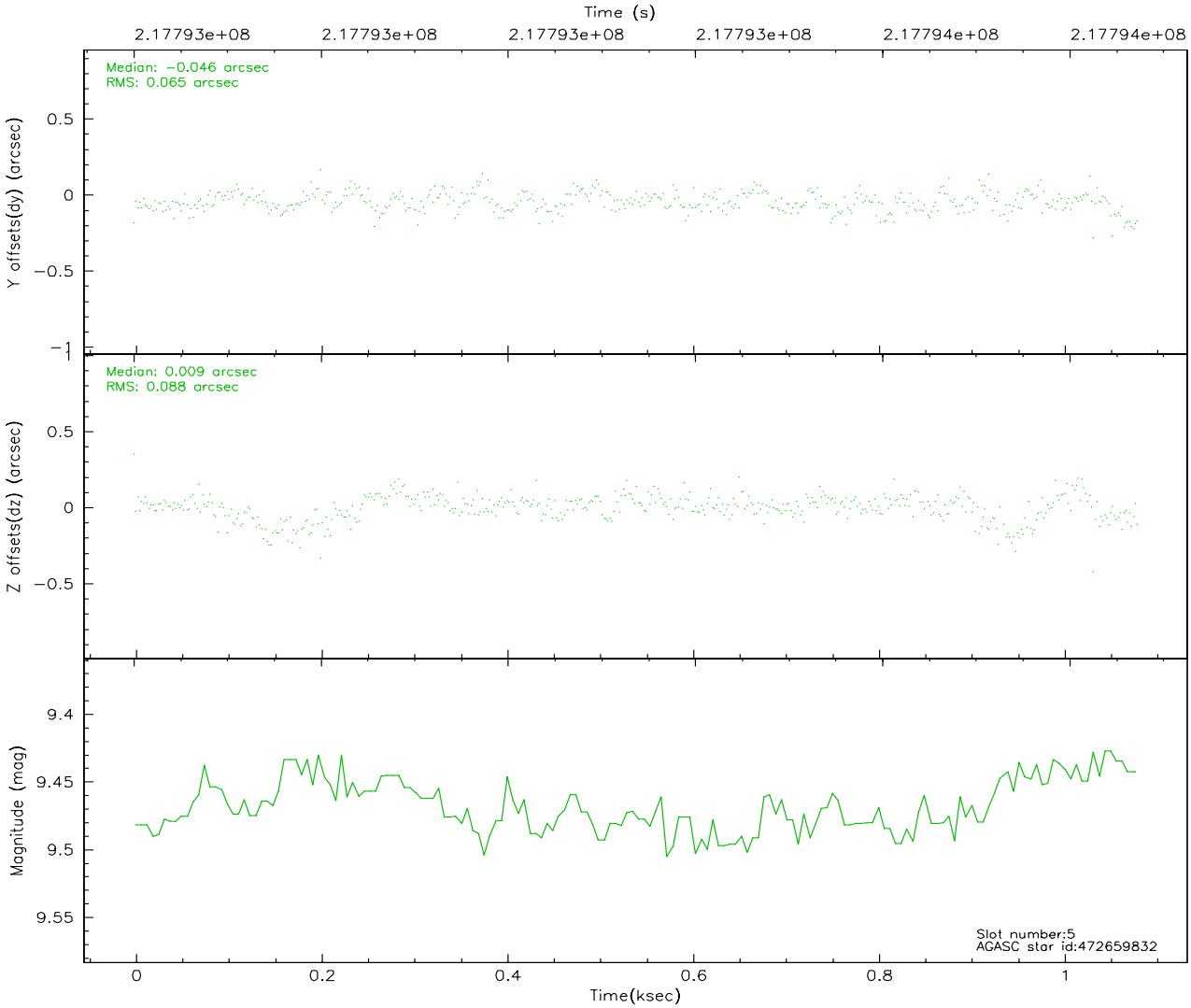

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.129 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:472655152


Time (s)
Median: 0.062 arcsec
RMS: 0.073 arcsec
Y offsets(dy) (arcsec)
Median: 0.113 arcsec
RMS: 0.076 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:472655152
Time(ksec)

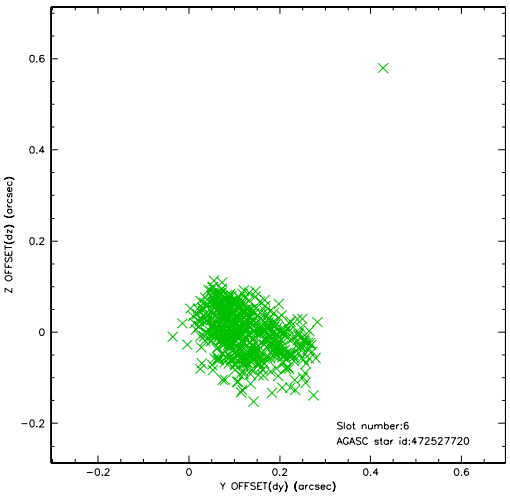
2.4.3 Slot 5

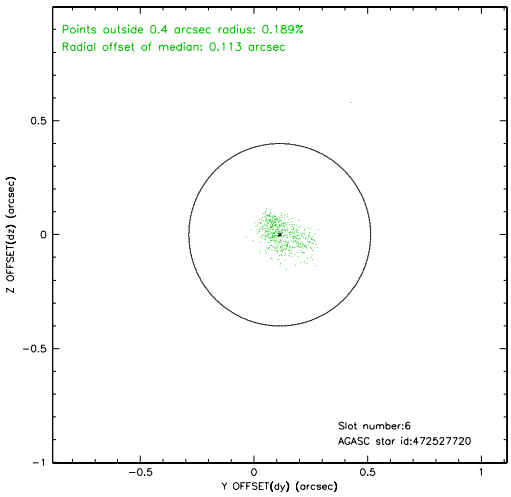

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:472659832

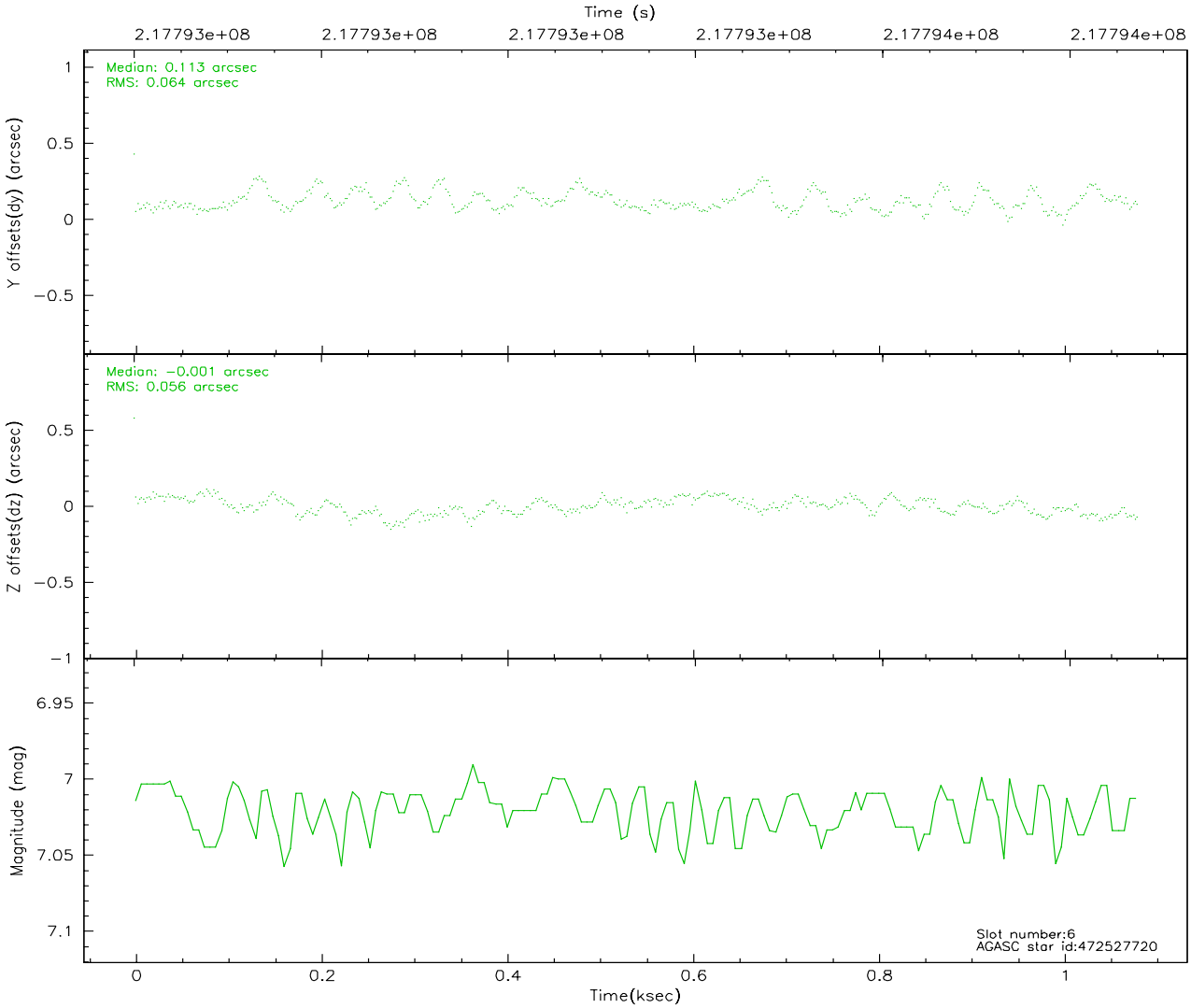

Points outside 0.4 arcsec radius: 0.380%
Radial offset of median: 0.047 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:472659832


Time (s)
Median: −0.046 arcsec
RMS: 0.065 arcsec
Y offsets(dy) (arcsec)
Median: 0.009 arcsec
RMS: 0.088 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:472659832
Time(ksec)

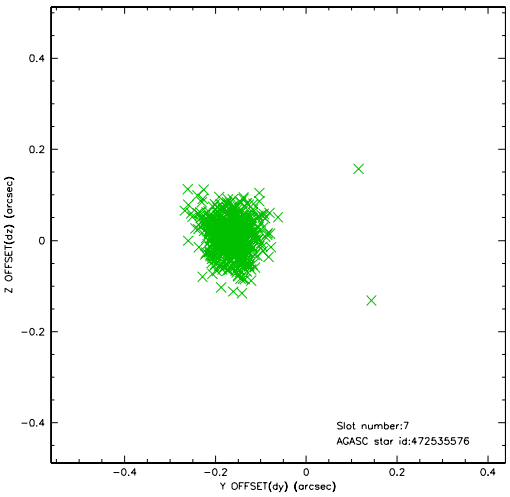
2.4.4 Slot 6

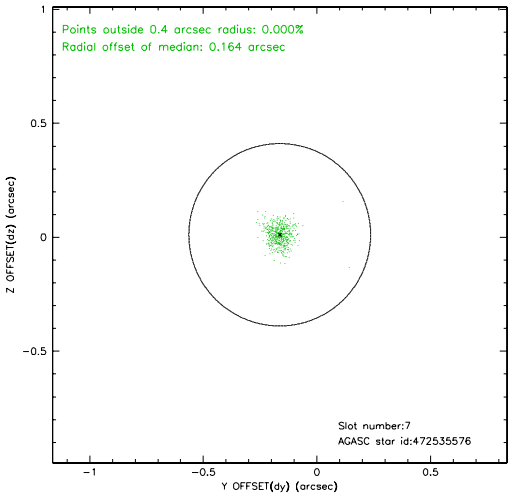

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:472527720

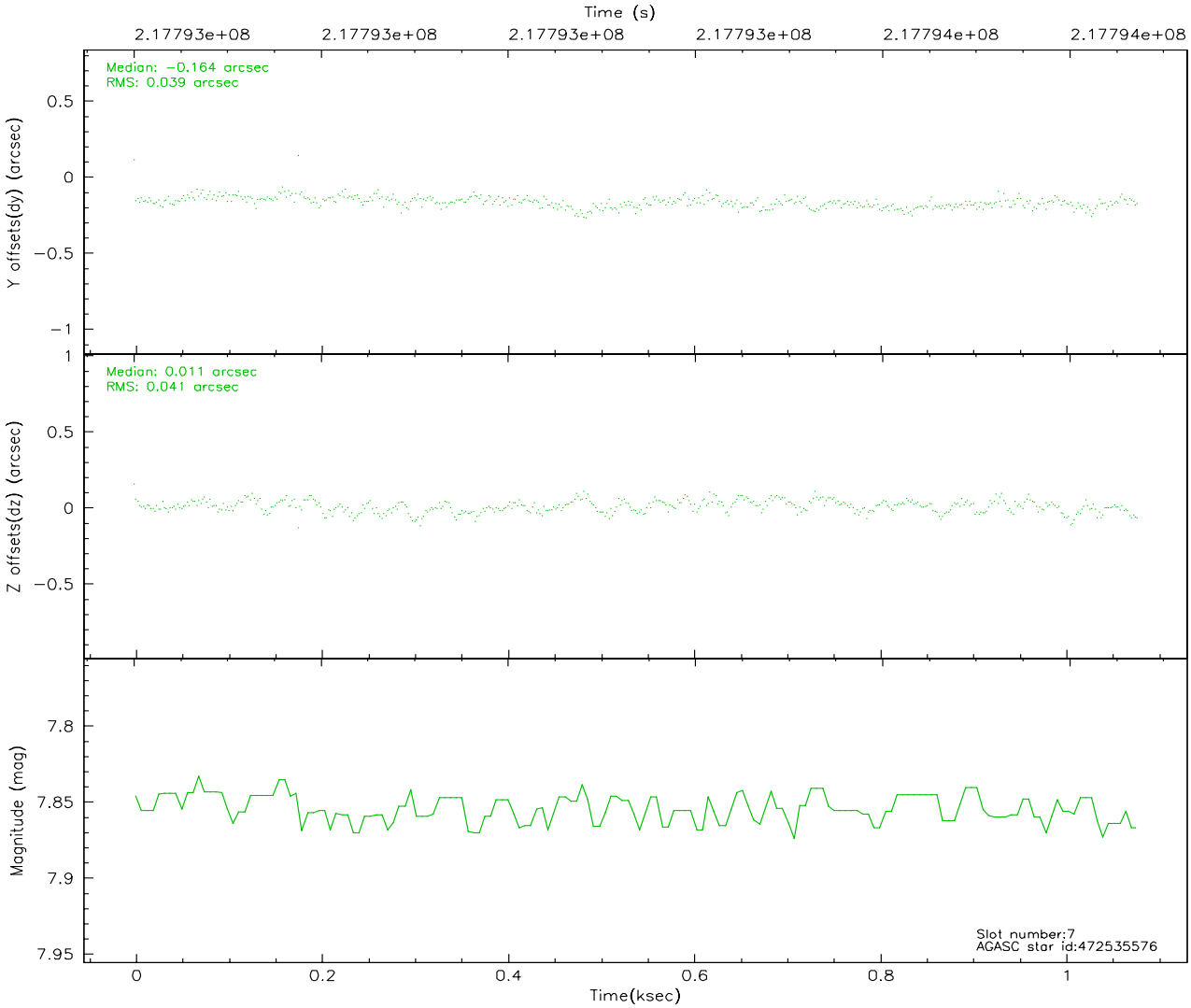

Points outside 0.4 arcsec radius: 0.189%
Radial offset of median: 0.113 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:472527720


Time (s)
Median: 0.113 arcsec
RMS: 0.064 arcsec
Y offsets(dy) (arcsec)
Median: −0.001 arcsec
RMS: 0.056 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:472527720
Time(ksec)

2.4.5 Slot 7

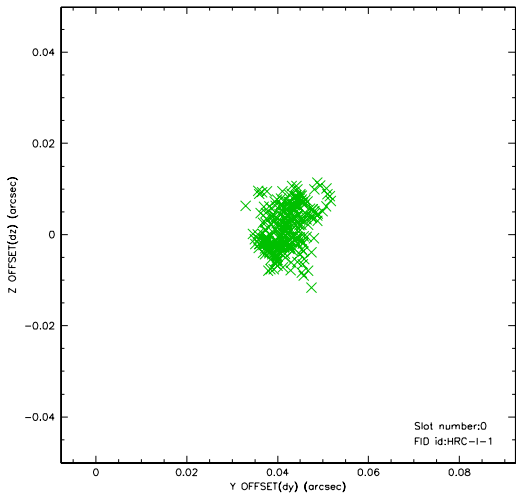

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:472535576

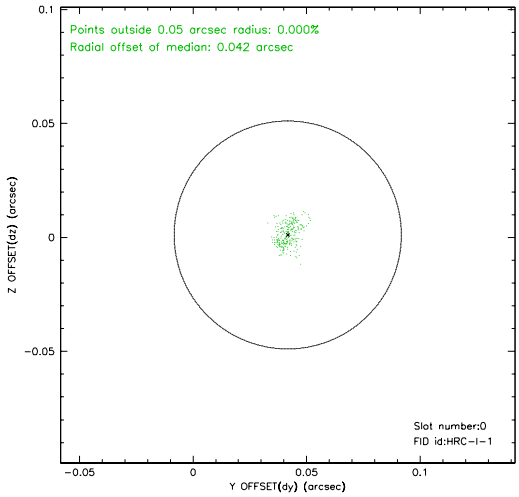

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.164 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:472535576

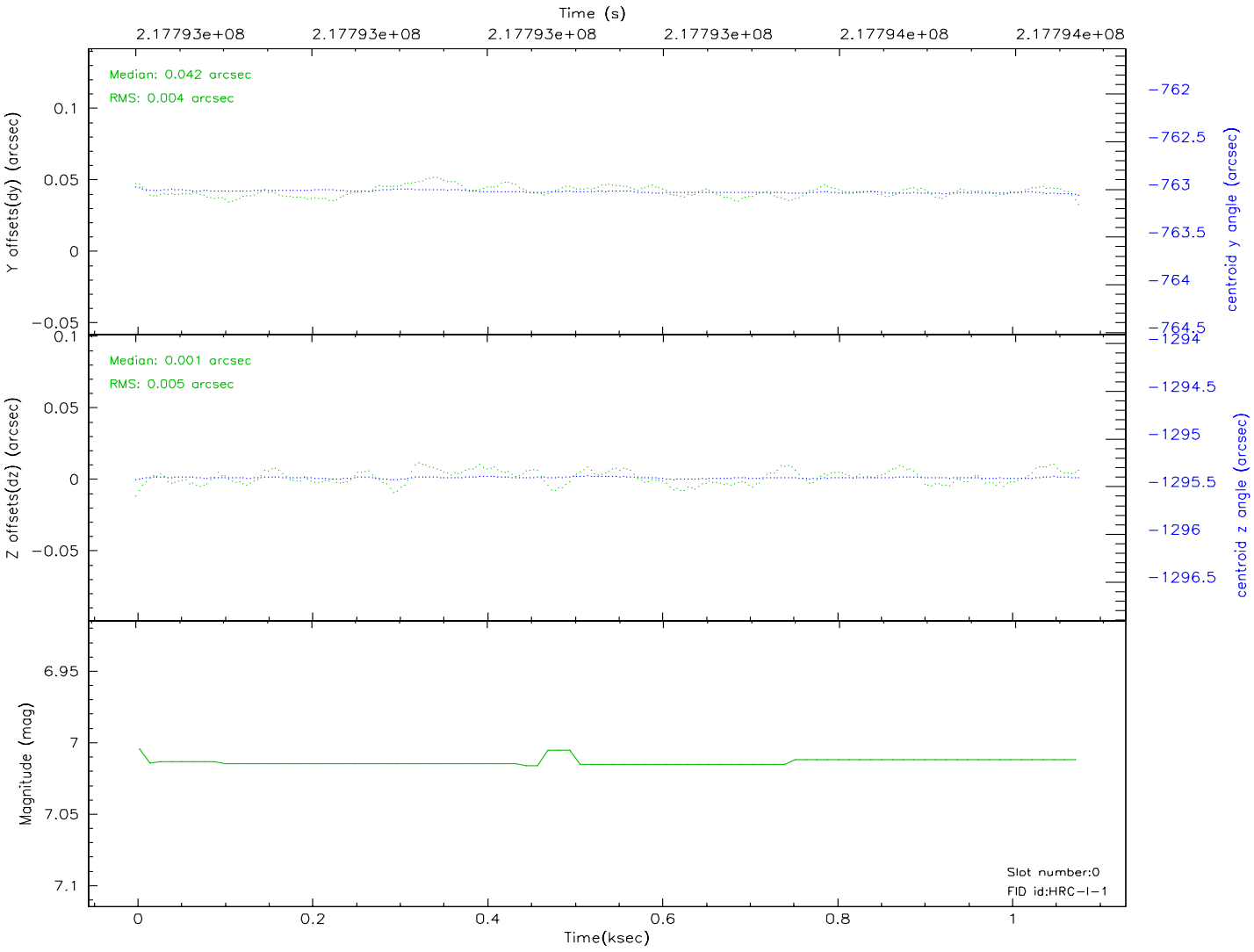

Time (s)
Median: −0.164 arcsec
RMS: 0.039 arcsec
Y offsets(dy) (arcsec)
Median: 0.011 arcsec
RMS: 0.041 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:472535576
Time(ksec)

2.5 FID Slots

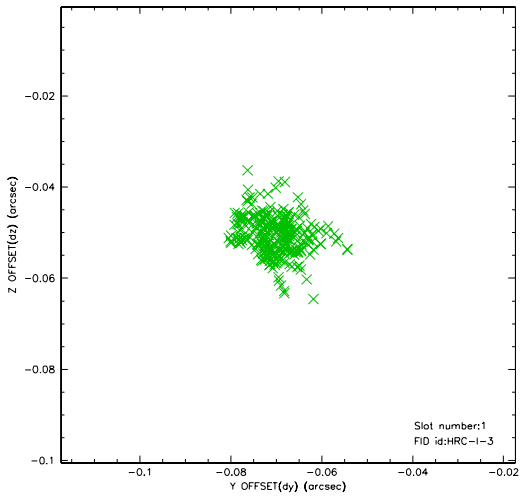
2.5.1 Slot 0

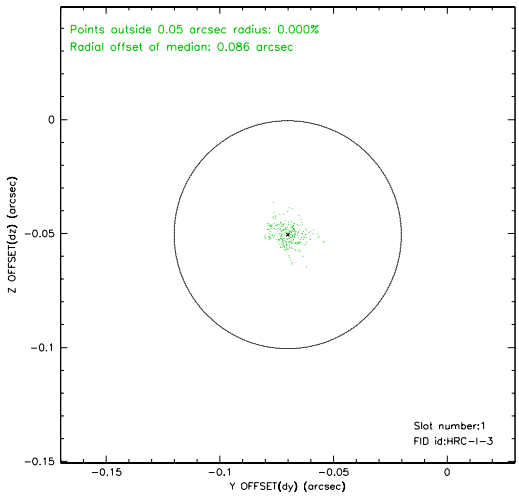


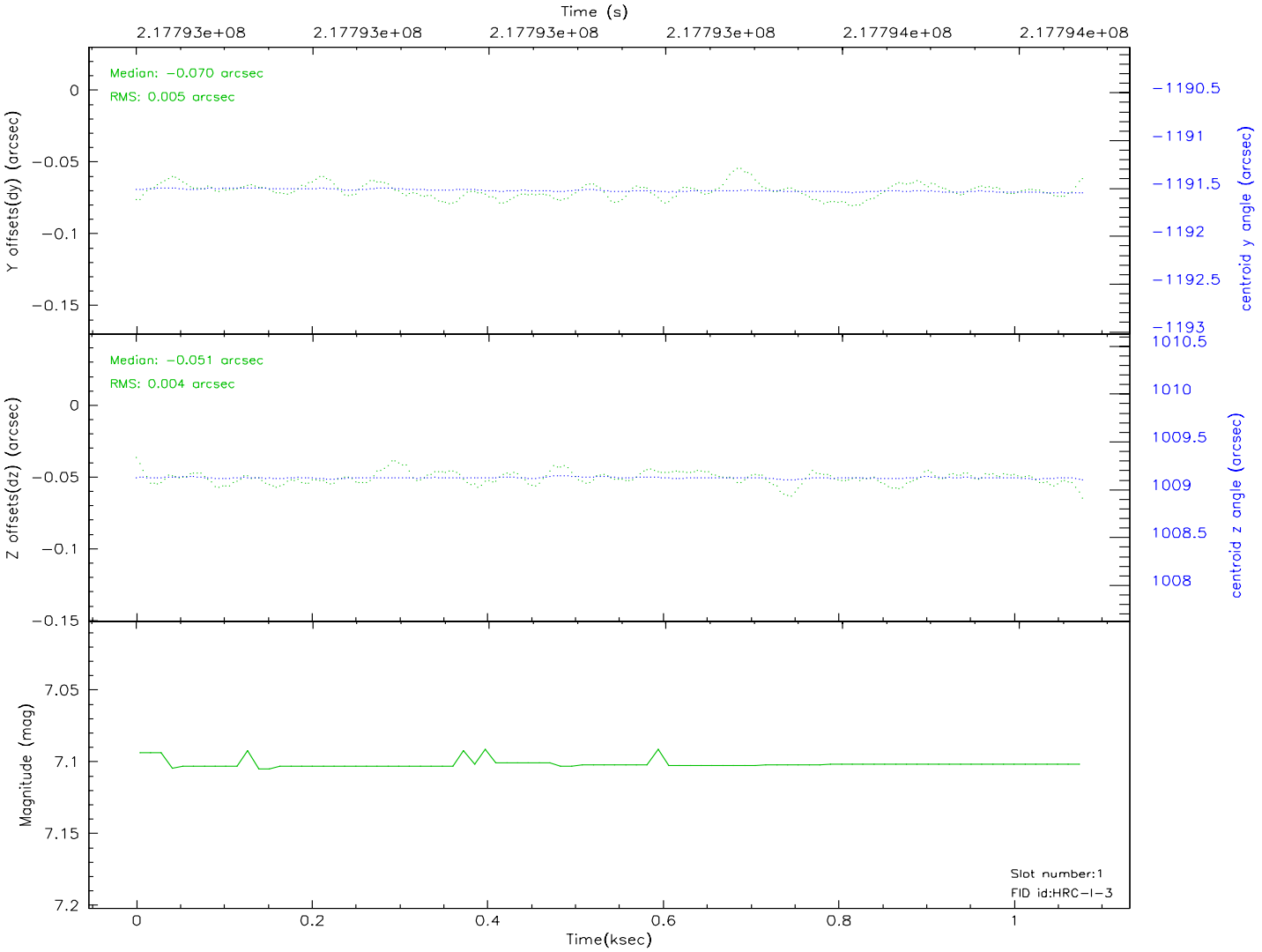




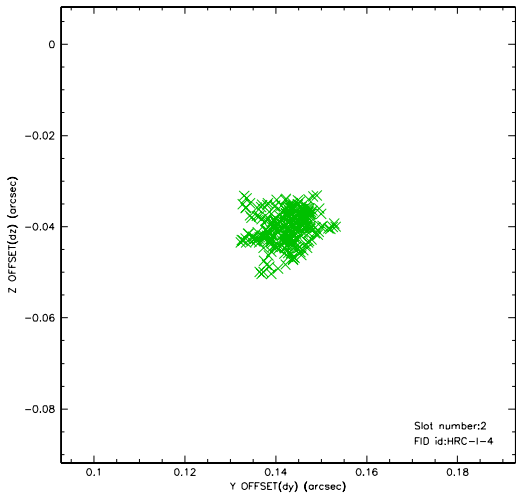
2.5.2 Slot 1

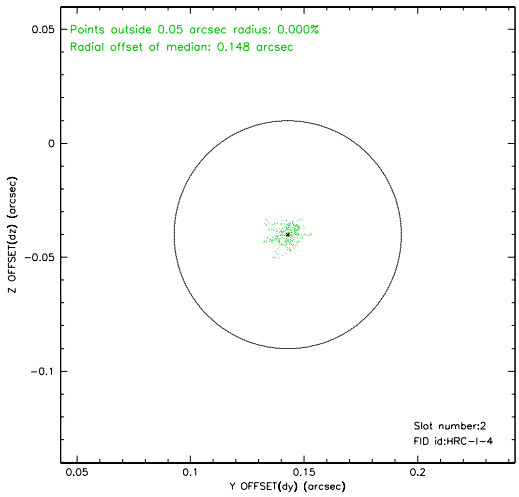

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-I-3

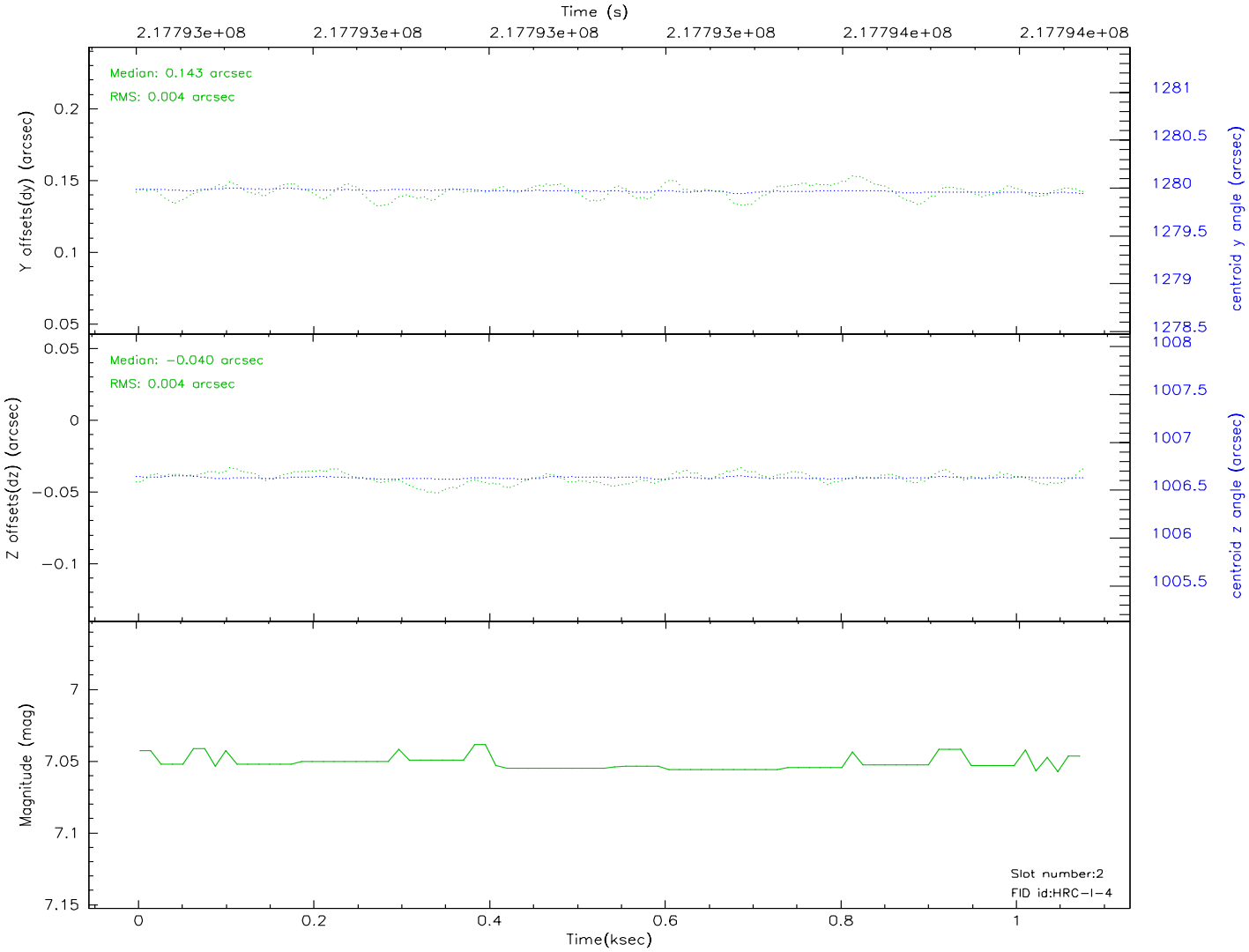

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.086 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:HRC-I-3


Time (s)
Median: −0.070 arcsec
RMS: 0.005 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-3
Time(ksec)

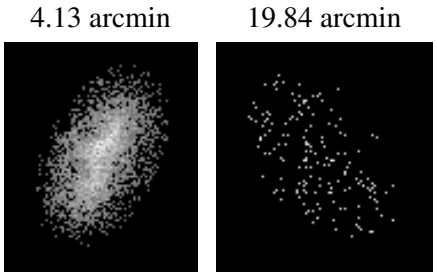
2.5.3 Slot 2


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


Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.148 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:HRC-I-4


Time (s)
Median: 0.143 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.040 arcsec
RMS: 0.004 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:2
FID id:HRC-I-4
Time(ksec)

3 Point Sources



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2007.12.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	1.079581

A.2 Comments

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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.
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