V&V Reference Report
L2 ASCDS Version : 8.4.5

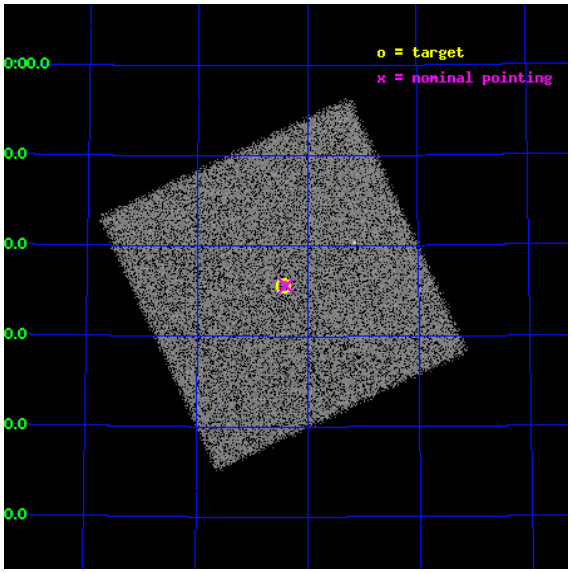
Observation 2937 - L2 Version 4
Chandra X-Ray Center

L2 Processing Date : Oct 1 2012

Contents

1 Front

seq_num	600274	Sequence number
obs_id	2937	Observation id
title	UNVEILING THE NATURE OF ULTRA LUMINOUS X-RAY SOURCES IN NEARBY SPIRAL GALAXIES - REALLY ~100 SOLAR MASS BLACK HOLES ? -	Proposal titl
observer	MR. MASAHIKO SUGIHO	Principal investigator
object	NGC2403 S3	Source name
ra_targ	114.110417	Observer's specified target RA [deg]
dec_targ	65.593611	Observer's specified target Dec [deg]
ra_nom	114.09942735501	Nominal RA [deg]
dec_nom	65.59374543863	Nominal Dec [deg]
roll_nom	199.79559971207	Nominal Roll [deg]
revision	4	Processing version of data
ontime	2766.7313614786	[s]
livetime	2752.2157928774	Ontime multiplied by DTCOR
l2events	73362	Number of level 2 events

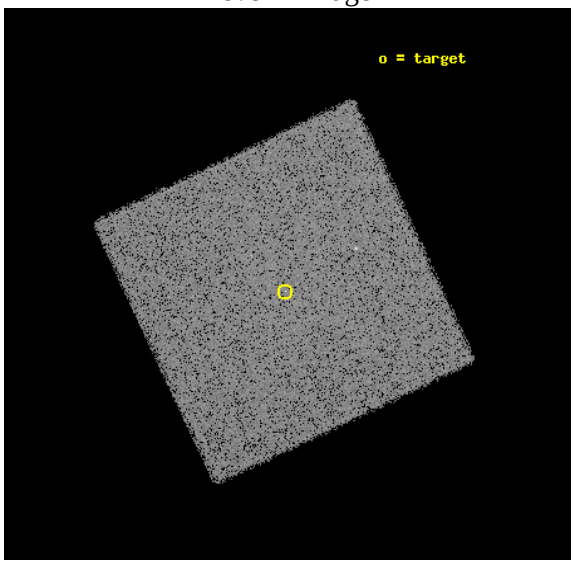


2 OBI

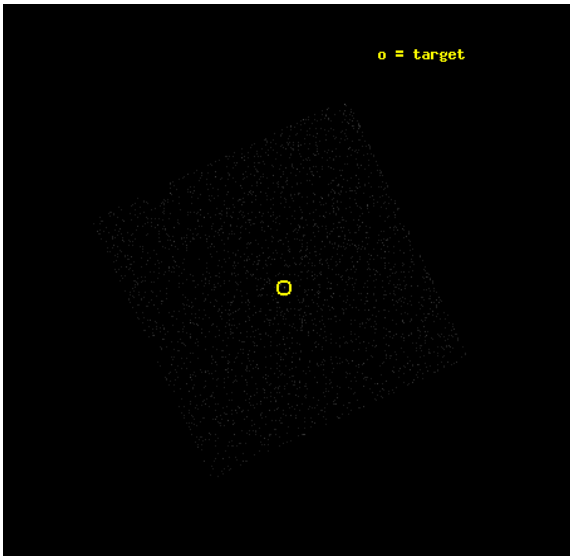
2.1 OBI

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	2012-10-01T03:14:37	Date and time of file creation
revision	4	Processing version of data

sched_exp_time	3000.000000	[s] Scheduled observation exposure time
ontime	2766.7313614786	[s]
l1events	140792	Number of level 1 events

2.1.3 Events

Level 1 Events

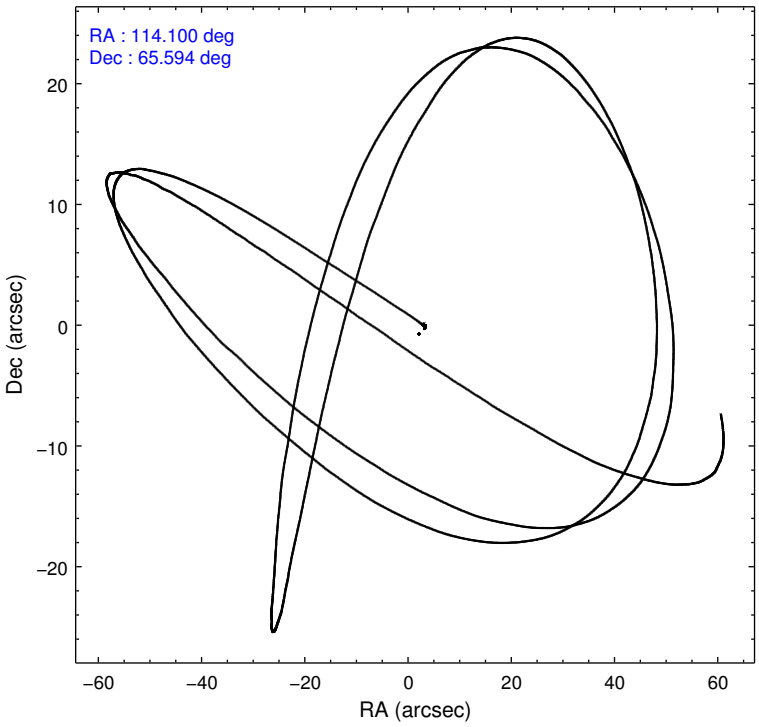
	segment 0
level 1 events	140792
rejected events	30158
rejected %	21%

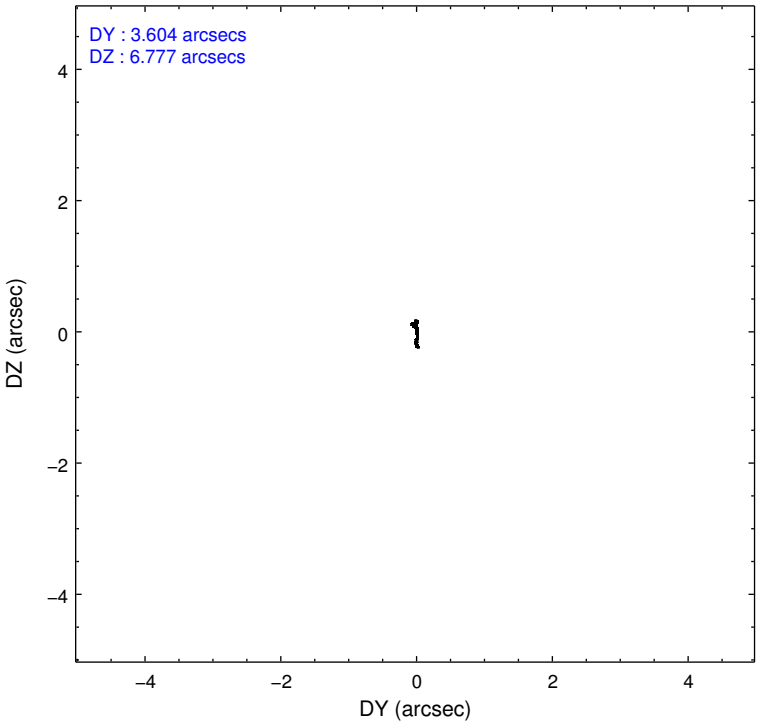
2.2 Compared Parameters

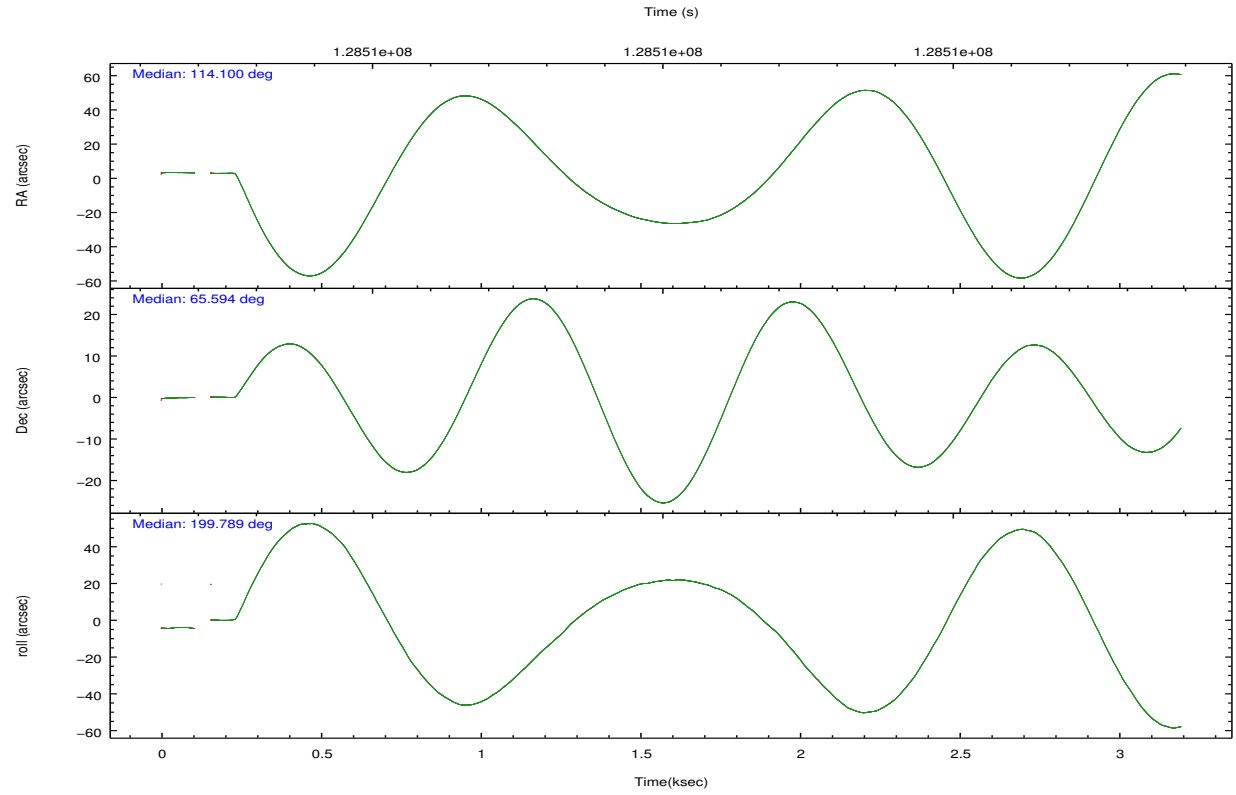
Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-I	HRC-I
Grating	NONE	NONE
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
[deg] Pointing RA	114.141550	114.0994273550127
[deg] Pointing Dec	65.614916	65.59374543863026
[deg] Pointing Roll	199.852704	199.7955997120653
[mm] SIM focus pos	-1.040293	-1.038866356238299
[mm] SIM defocus	0	0.001426264420575141
[mm] SIM translation stage pos	126.985494	126.9854943052878
[mm] SIM translation stage offset	0	-5.413686238853188e-06
[s] Observation start time (MET)	128507624.184000	128507009.80343
Observation start date	2002-01-27T08:32:40	2002-01-27T08:23:29
[s] Observation end time (MET)	128510624.184000	128511046.25359
Observation end date	2002-01-27T09:22:40	2002-01-27T09:30:46

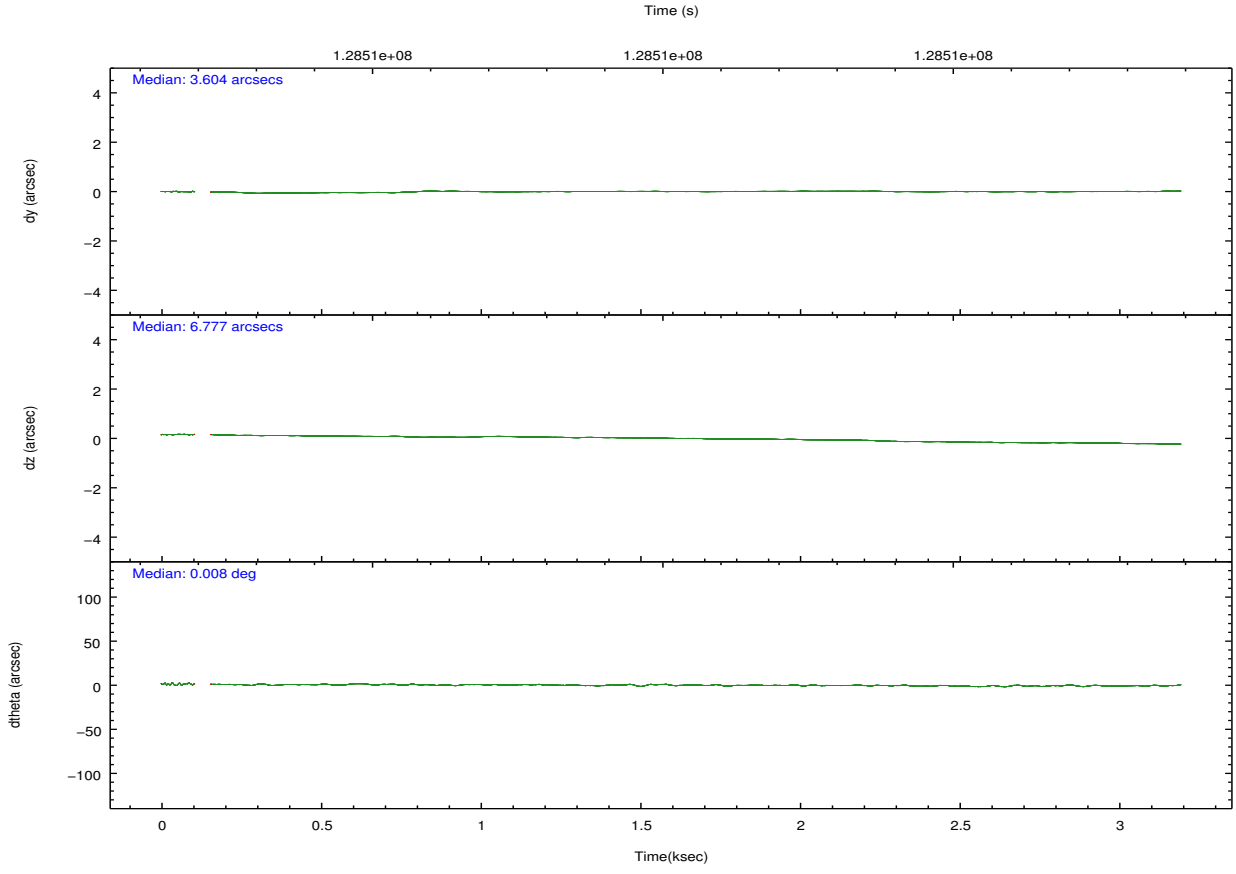
Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED

2.3 Aspect


RA : 114.100 deg
Dec : 65.594 deg
Dec (arcsec)
RA (arcsec)
20
10
0
−10
−20
−60
−40
−20
0
20
40
60


DY : 3.604 arcsecs
DZ : 6.777 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
1.2851e+08
1.2851e+08
1.2851e+08
Median: 114.100 deg
RA (arcsec)
Median: 65.594 deg
Dec (arcsec)
Median: 199.789 deg
roll (arcsec)
Time(ksec)

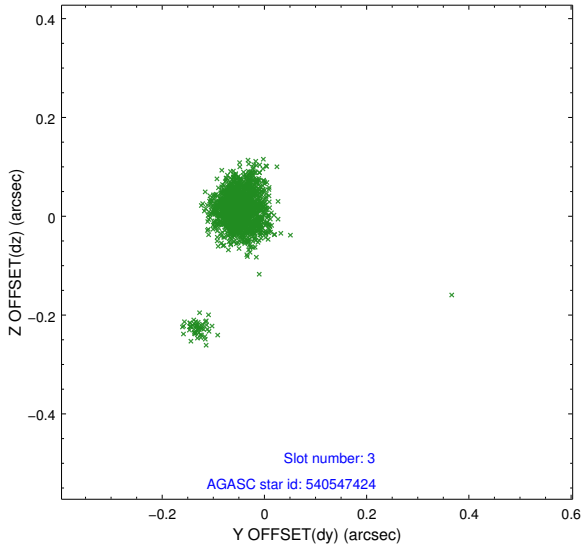

Time (s)
1.2851e+08
1.2851e+08
1.2851e+08
Median: 3.604 arcsecs
dy (arcsec)
Median: 6.777 arcsecs
dz (arcsec)
Median: 0.008 deg
dtheta (arcsec)
Time(ksec)

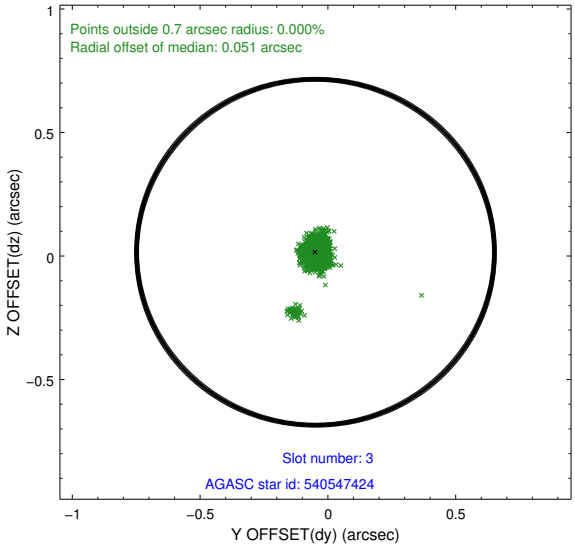
Slot Statistics

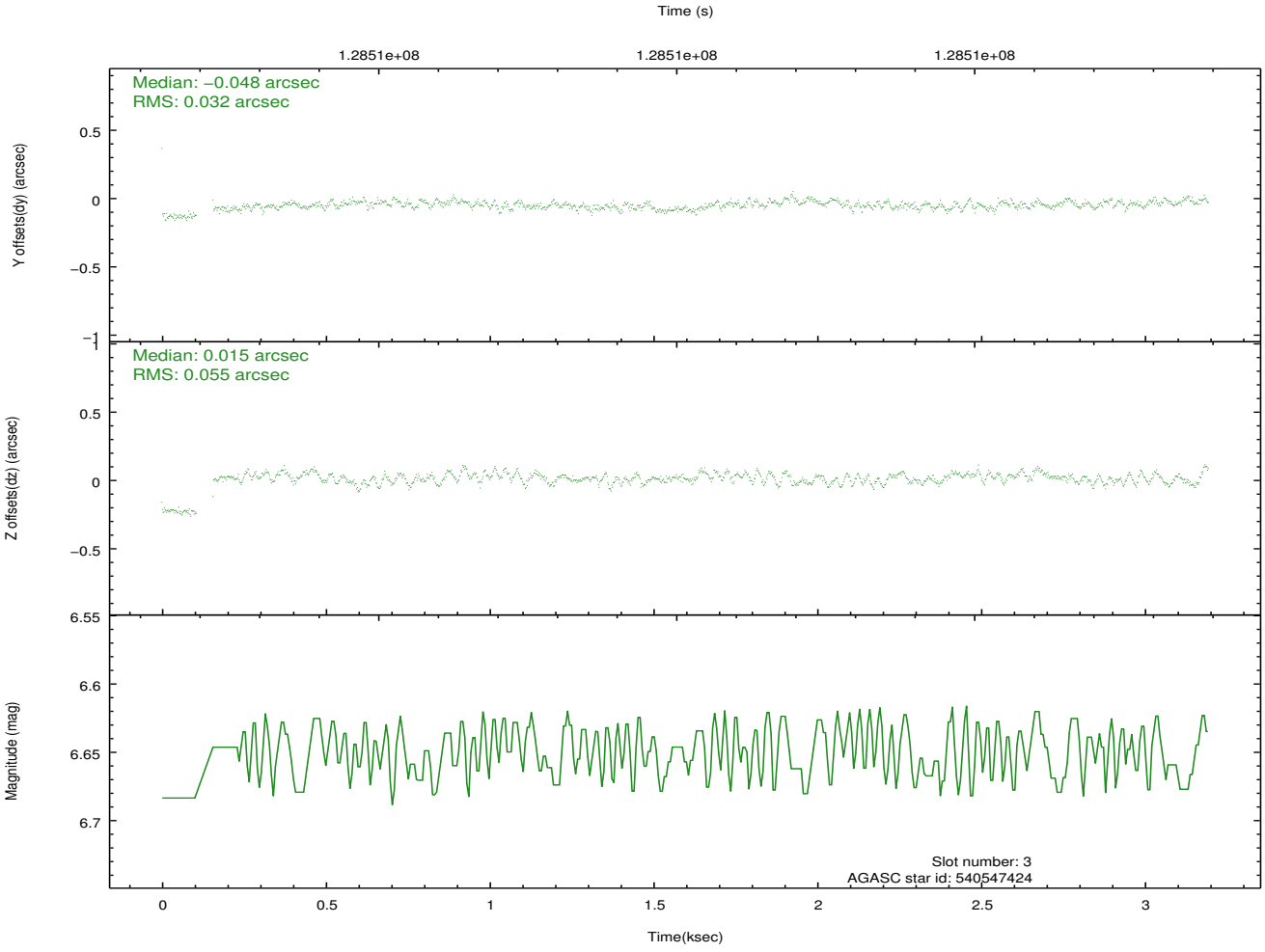
							status	id	mag	n_pts	med_dy	med_dz	dr1
							FID	HRC-I-1	6.97	768	0.023	0.028	0.007
							FID	HRC-I-2	7.00	768	0.078	-0.068	0.007
							FID	HRC-I-3	7.05	768	0.018	-0.050	0.006
							GUIDE	540547424	6.65	1535	-0.048	0.015	0.047
							GUIDE	540025600	6.93	1535	-0.017	-0.016	0.052
							GUIDE	540151824	8.51	1535	0.002	0.047	0.082
							GUIDE	540543672	9.06	1533	0.060	-0.049	0.086
0.000	0.000	0.000	0.000000	0.000000	0.00	0.00							

2.4 Star Slots

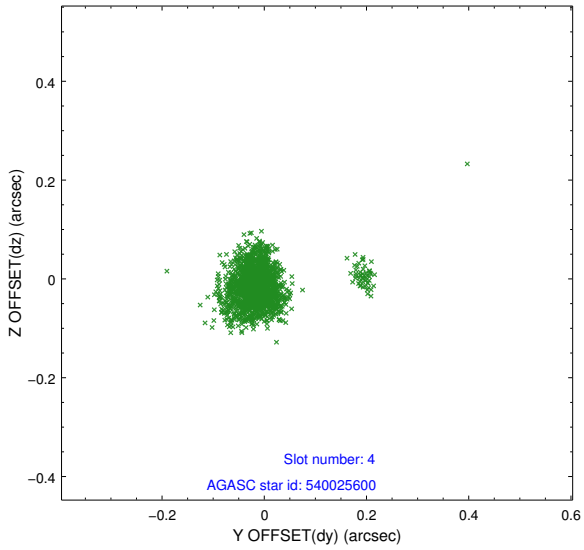
2.4.1 Slot 3

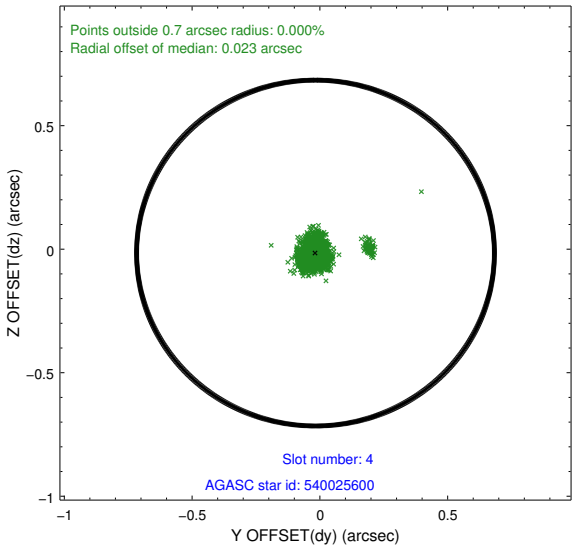


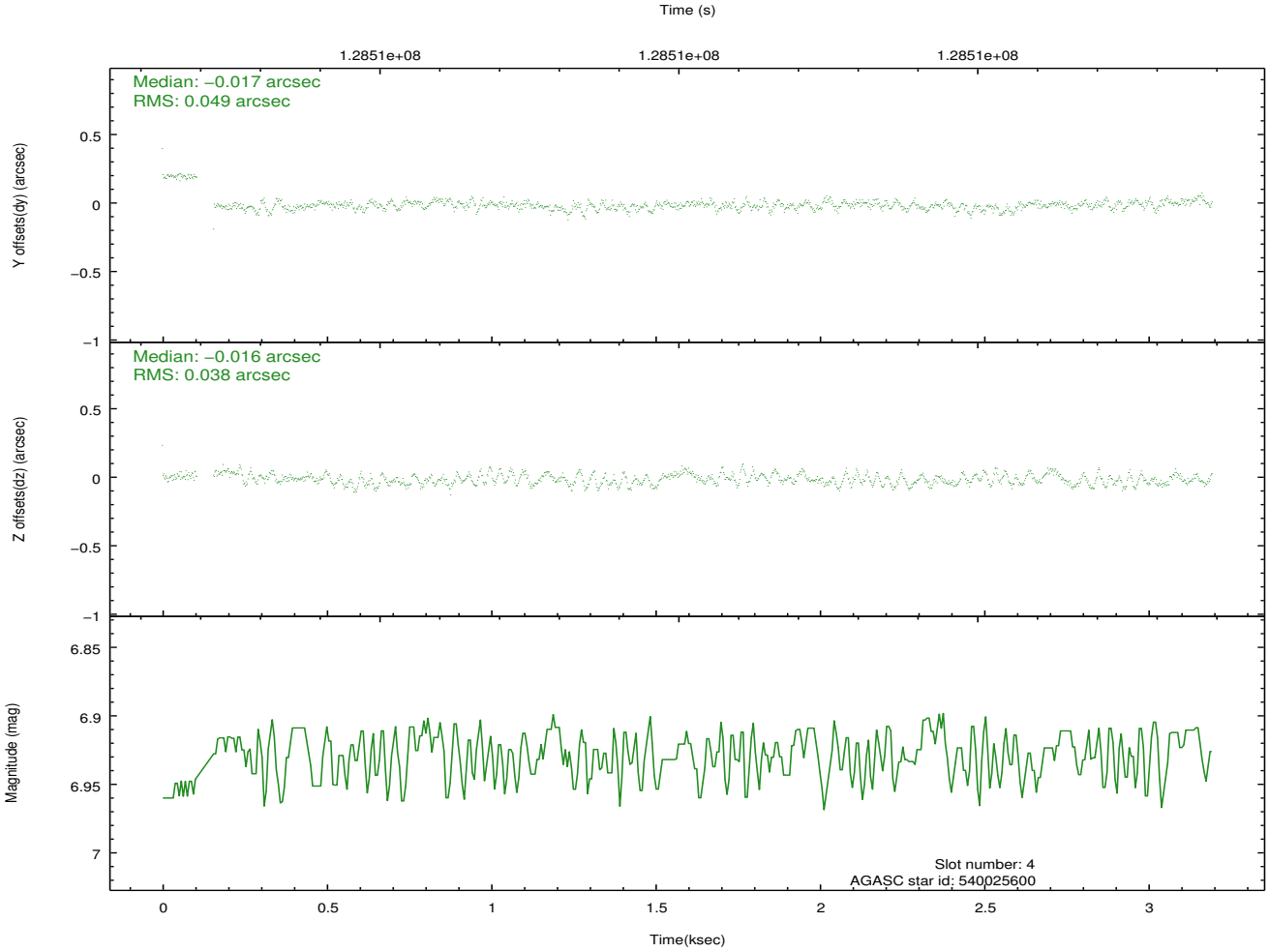




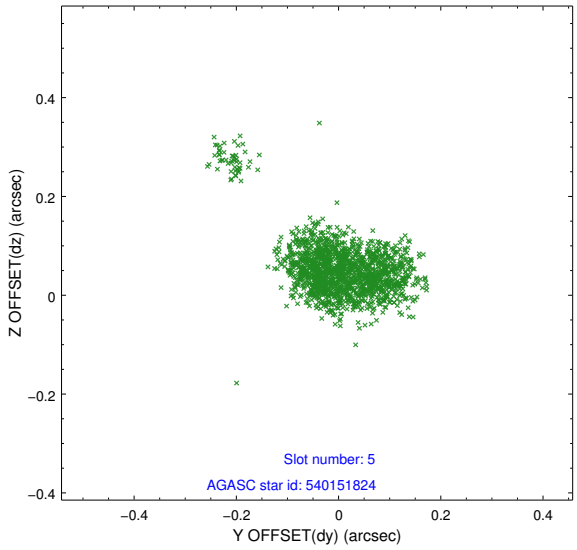
2.4.2 Slot 4

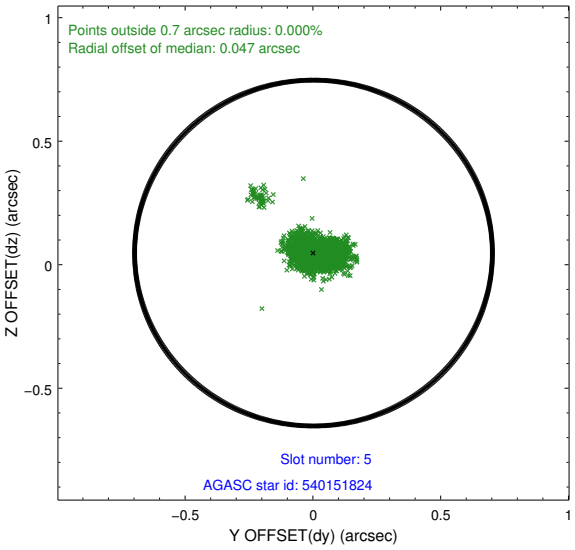

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 540025600

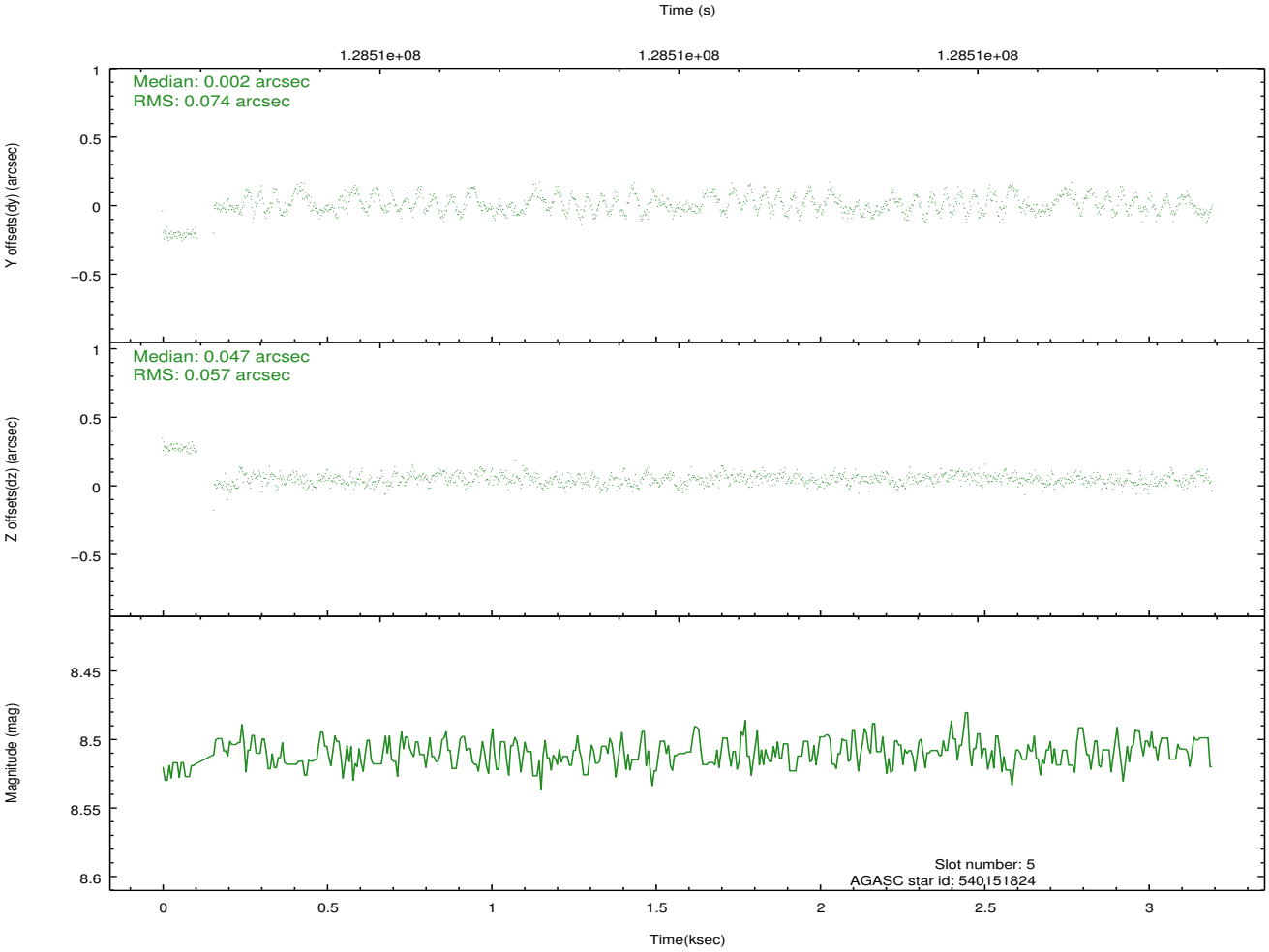

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.023 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 540025600


Time (s)
1.2851e+08
1.2851e+08
1.2851e+08
Median: –0.017 arcsec
RMS: 0.049 arcsec
Y offsets(dy) (arcsec)
Median: –0.016 arcsec
RMS: 0.038 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 4
AGASC star id: 540025600
Time(ksec)

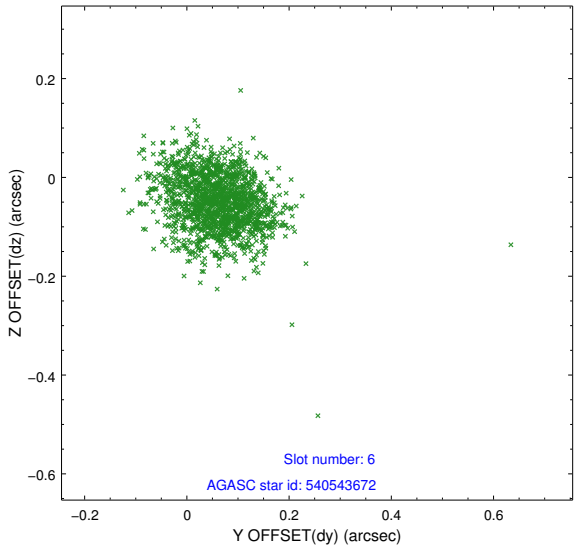
2.4.3 Slot 5

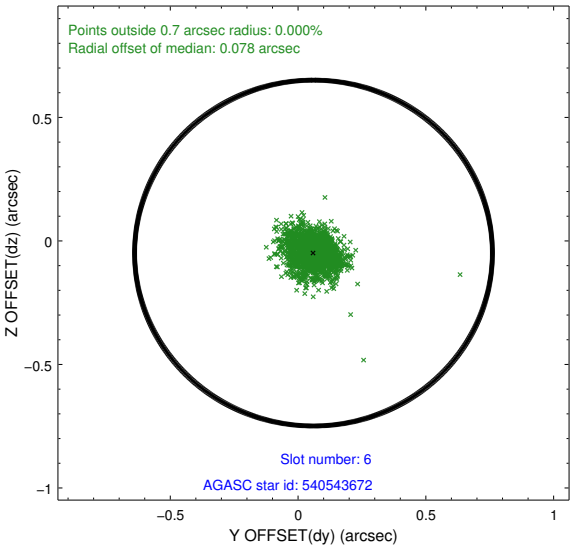

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 540151824

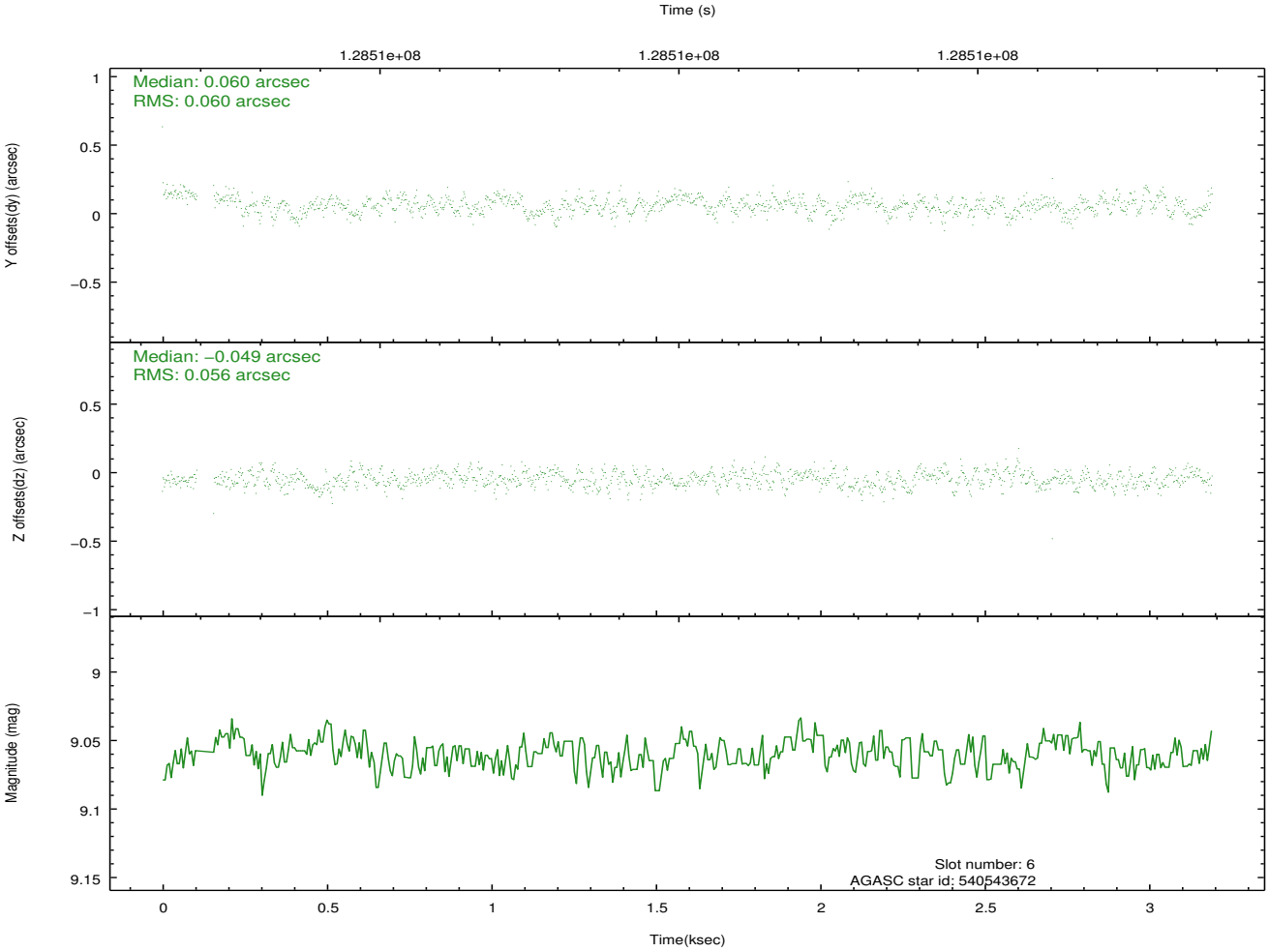

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.047 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 540151824


Time (s)
1.2851e+08
1.2851e+08
1.2851e+08
Median: 0.002 arcsec
RMS: 0.074 arcsec
Y offsets(dy) (arcsec)
Median: 0.047 arcsec
RMS: 0.057 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 5
AGASC star id: 540151824
Time(ksec)

2.4.4 Slot 6

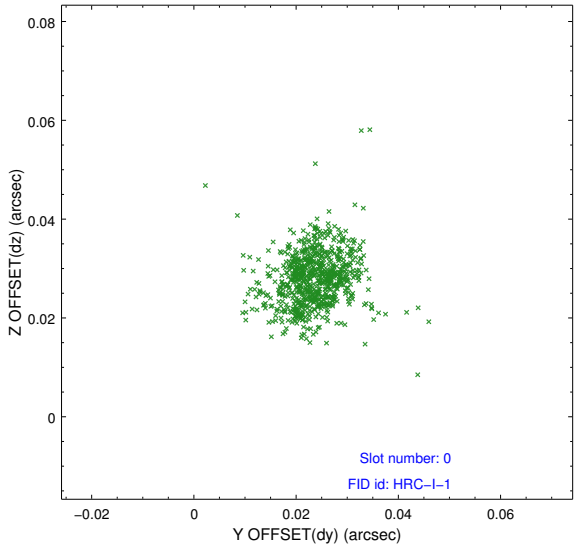

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 540543672

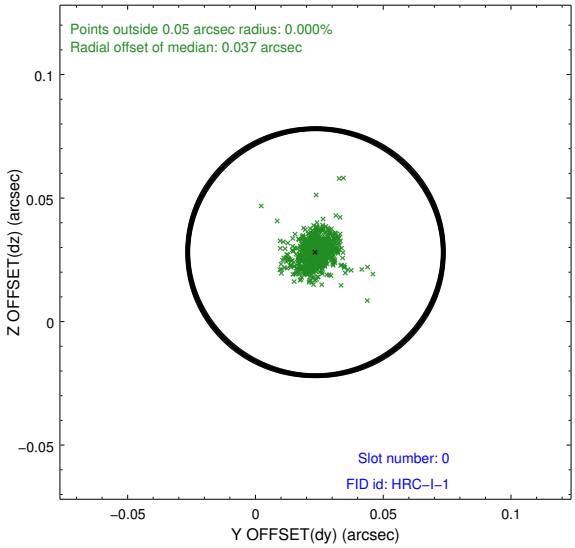

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.078 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 540543672

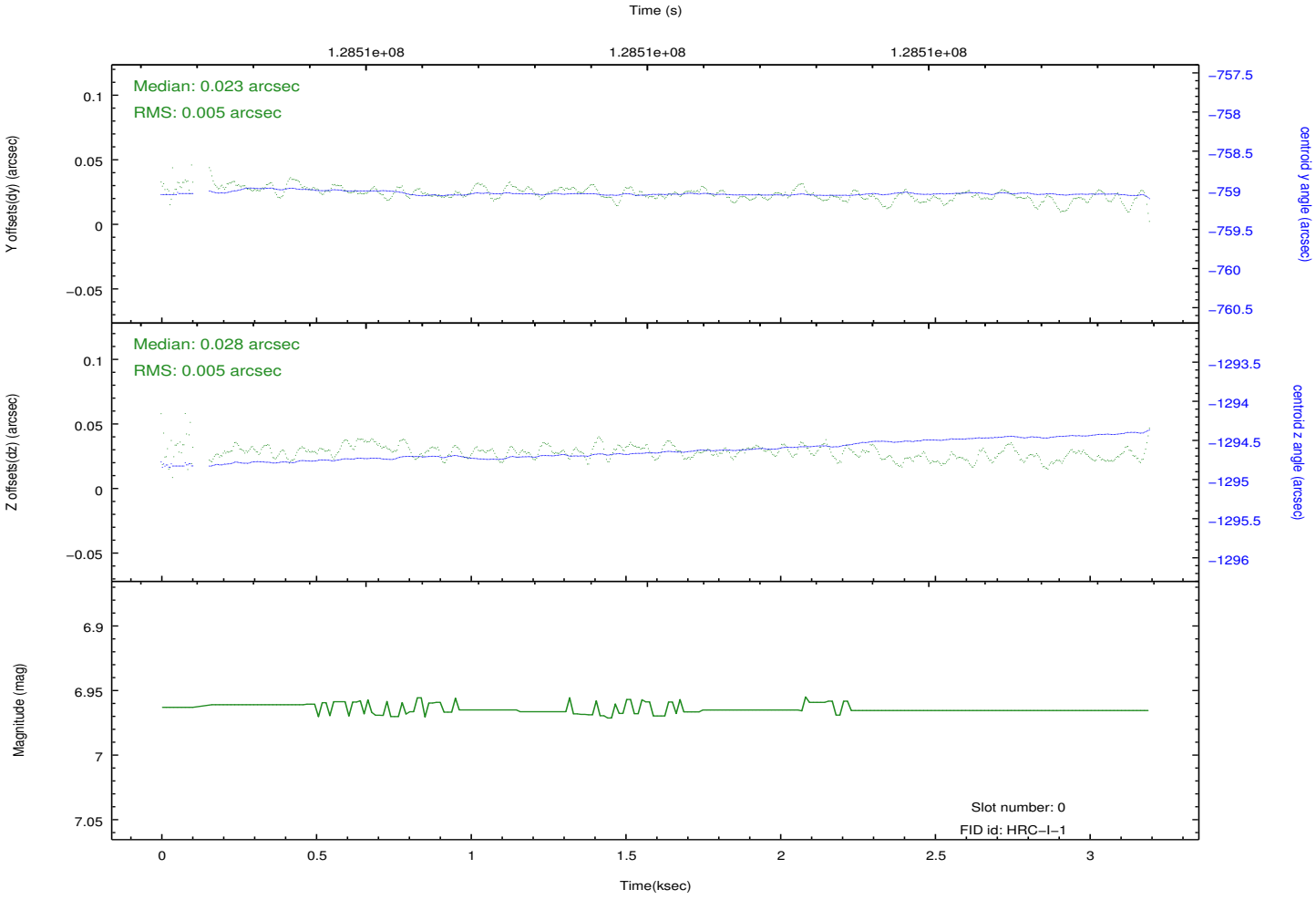

Time (s)
1.2851e+08
1.2851e+08
1.2851e+08
Median: 0.060 arcsec
RMS: 0.060 arcsec
Y offsets(dy) (arcsec)
Median: −0.049 arcsec
RMS: 0.056 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 6
AGASC star id: 540543672
Time(ksec)

2.5 FID Slots

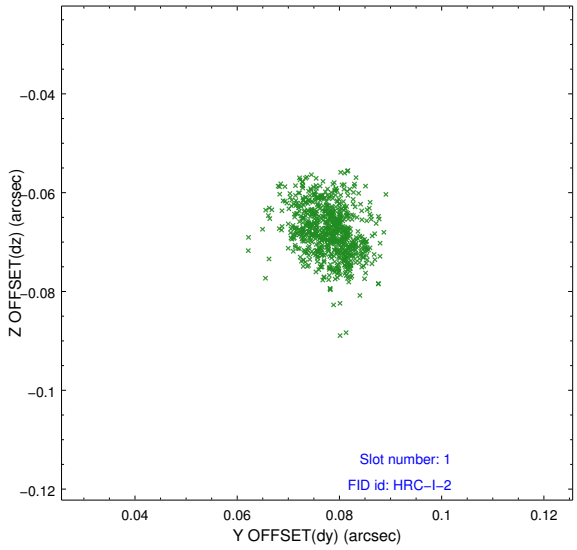
2.5.1 Slot 0

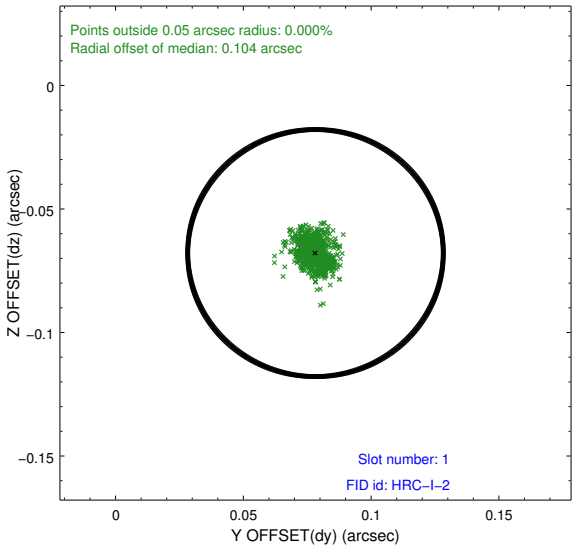


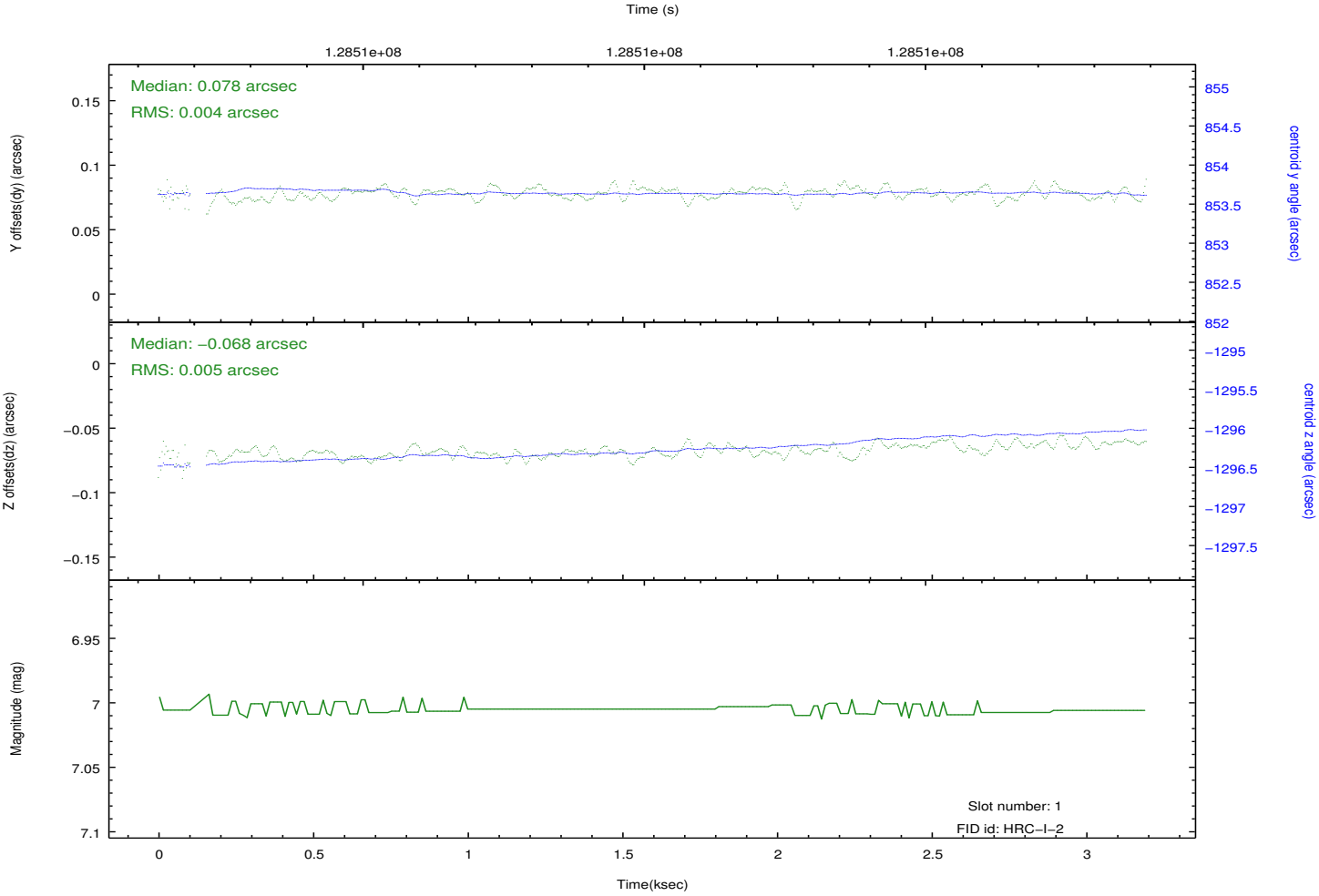




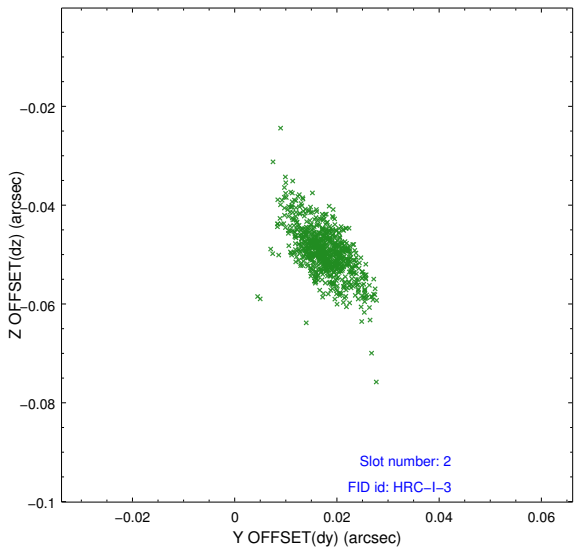
2.5.2 Slot 1

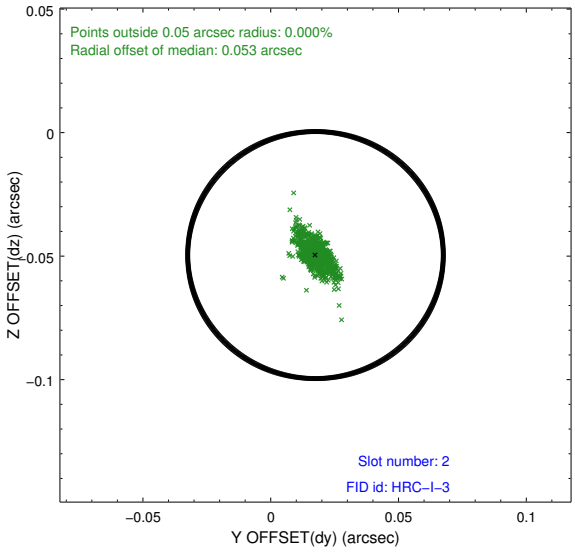

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: HRC−I−2

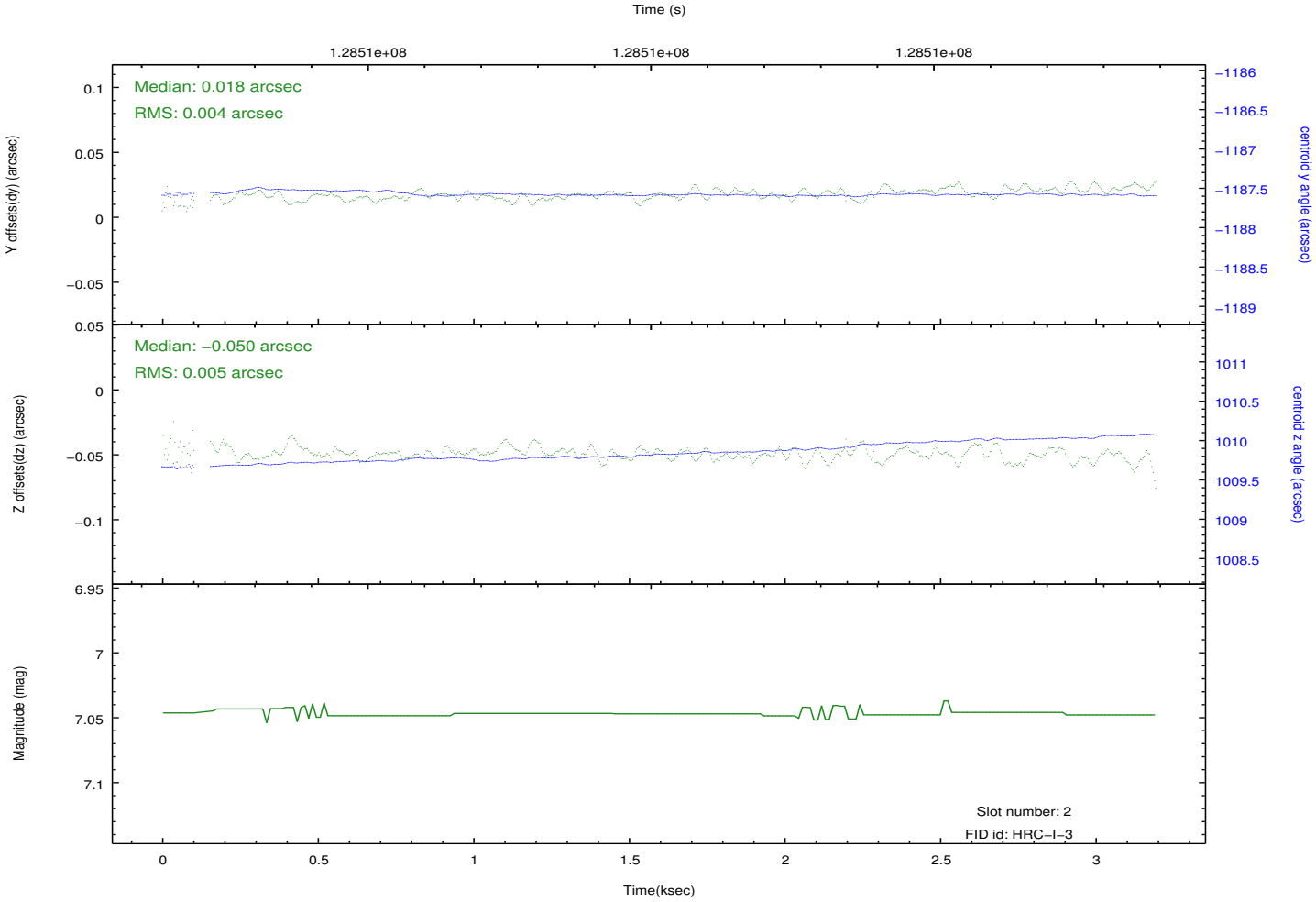

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.104 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: HRC−I−2


Time (s)
1.2851e+08
1.2851e+08
1.2851e+08
Median: 0.078 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.068 arcsec
RMS: 0.005 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: 0.053 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 2
FID id: HRC−I−3


Time (s)
1.2851e+08
1.2851e+08
1.2851e+08
Median: 0.018 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.050 arcsec
RMS: 0.005 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number: 2
FID id: HRC−I−3
Time(ksec)

A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2012.10.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	2.766

A.2 Comments

```
Gap in aspect data: start time of gap 128507534.603450 s, stop time of
gap 128507584.572199 s. Event data begins about 350 s into the
observation. The aspect gap occurs before the start of the event data.
```