V&V Reference Report
L2 ASCDS Version : 7.6.8

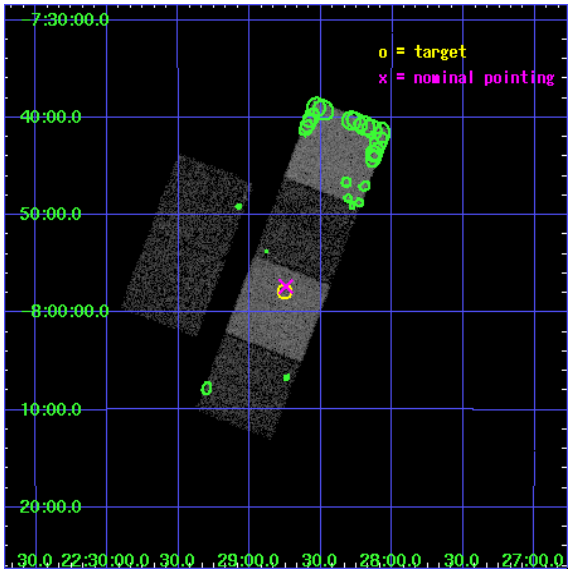
Observation 3963 - L2 Version 001
Chandra X-Ray Center

L2 Processing Date : Aug 1 2006

Contents

1 Front

seq_num	700642
obs_id	3963
title	A CHANDRA AND XMM-NEWTON STUDY OF THE MOST DISTANT QUASARS: X-RAYING THE FIRST MASSIVE BLACK HOLES
observer	Prof. William Brandt
object	SDSS J222845-075755
dtycycle	0
cycle	P
ra_targ	337.188333
dec_targ	-7.965361
ra_nom	337.18647177571
dec_nom	-7.9558766075976
roll_nom	111.04682191783
revision	2
ontime	7126.3999734521
livetime	7036.1612059853
ontime2	7126.3999734521
ontime3	7126.3999734521
ontime5	7126.3999734521
ontime6	7126.3999734521
ontime7	7126.3999734521
ontime8	7126.3999734521
l2events	66437

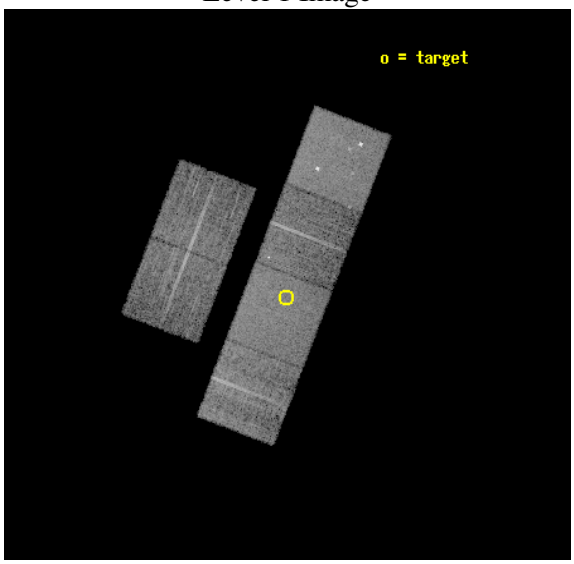


2 OBI

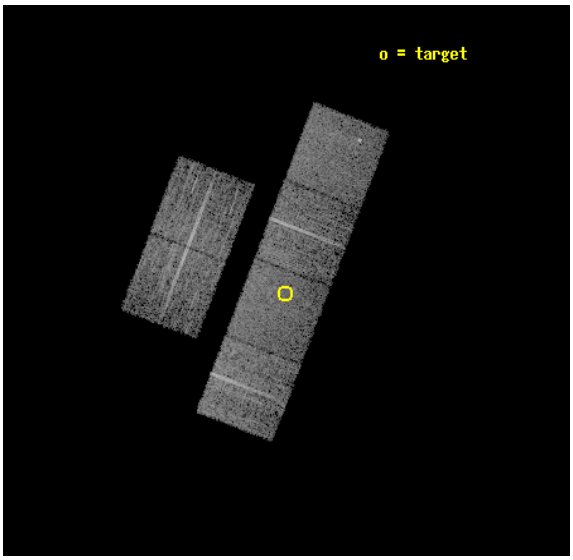
2.1 OBI

2.1.1 Images

Level 1 Image

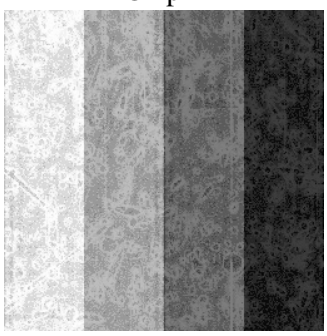


Level 1 Bad Events

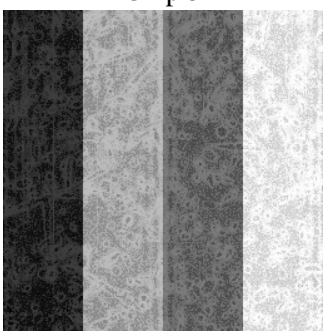


2.1.2 Bias

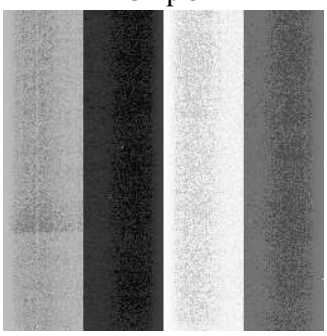
Chip 2



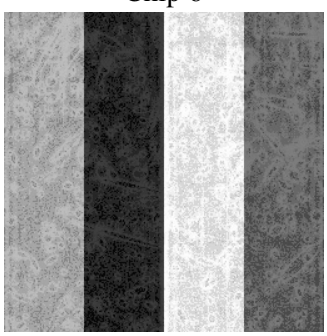
Chip 3



Chip 5



Chip 6



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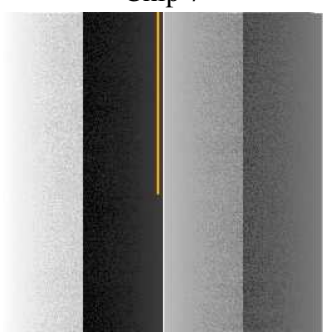
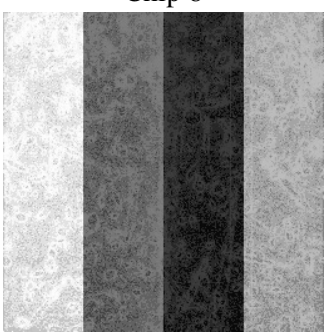


Chip 8



2.1.3 Parameters

obi_num	0
ascdsver	7.6.8
caldbver	3.2.2
date	2006-08-01T09:11:18
revision	2

sched_exp_time	7000.000000
ontime	7373.280751735
ontime2	7373.280751735
ontime3	7373.280751735
ontime5	7373.280751735
ontime6	7373.280751735
ontime7	7373.280751735
ontime8	7373.280751735
l1events	319276

2.1.4 Events

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	44804	42734	67773	45449	60159	58357
rejected events	39626	37683	38479	39682	38237	46812
rejected %	88%	88%	56%	87%	63%	80%

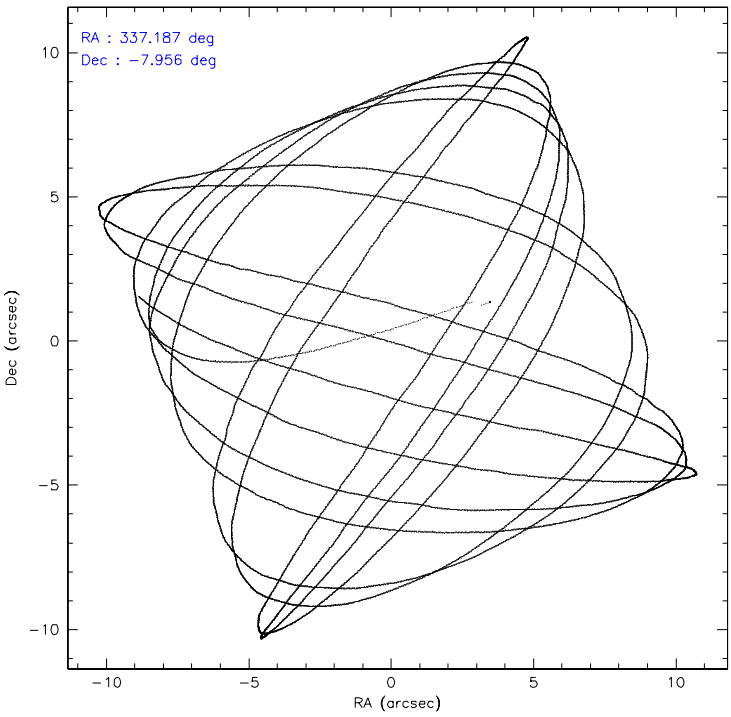
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	2436	2264	3477	2644	1331	3906
	5%	5%	5%	5%	2%	6%
grade 1 events	25	25	58	19	41	34
	0%	0%	0%	0%	0%	0%
grade 2 events	1078	988	9096	1158	5488	2529
	2%	2%	13%	2%	9%	4%
grade 3 events	481	510	648	577	1139	1342
	1%	1%	0%	1%	1%	2%
grade 4 events	493	480	627	545	1077	1197
	1%	1%	0%	1%	1%	2%
grade 5 events	1818	1967	3212	2041	3892	2750
	4%	4%	4%	4%	6%	4%
grade 6 events	858	980	16461	1045	13642	3023
	1%	2%	24%	2%	22%	5%
grade 7 events	37615	35520	34194	37420	33549	43576
	83%	83%	50%	82%	55%	74%

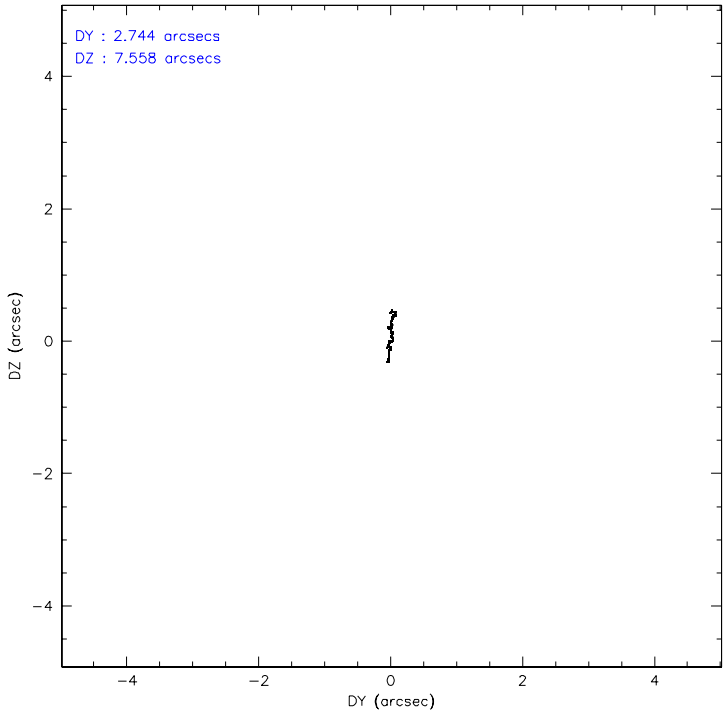
2.2 Compared Parameters

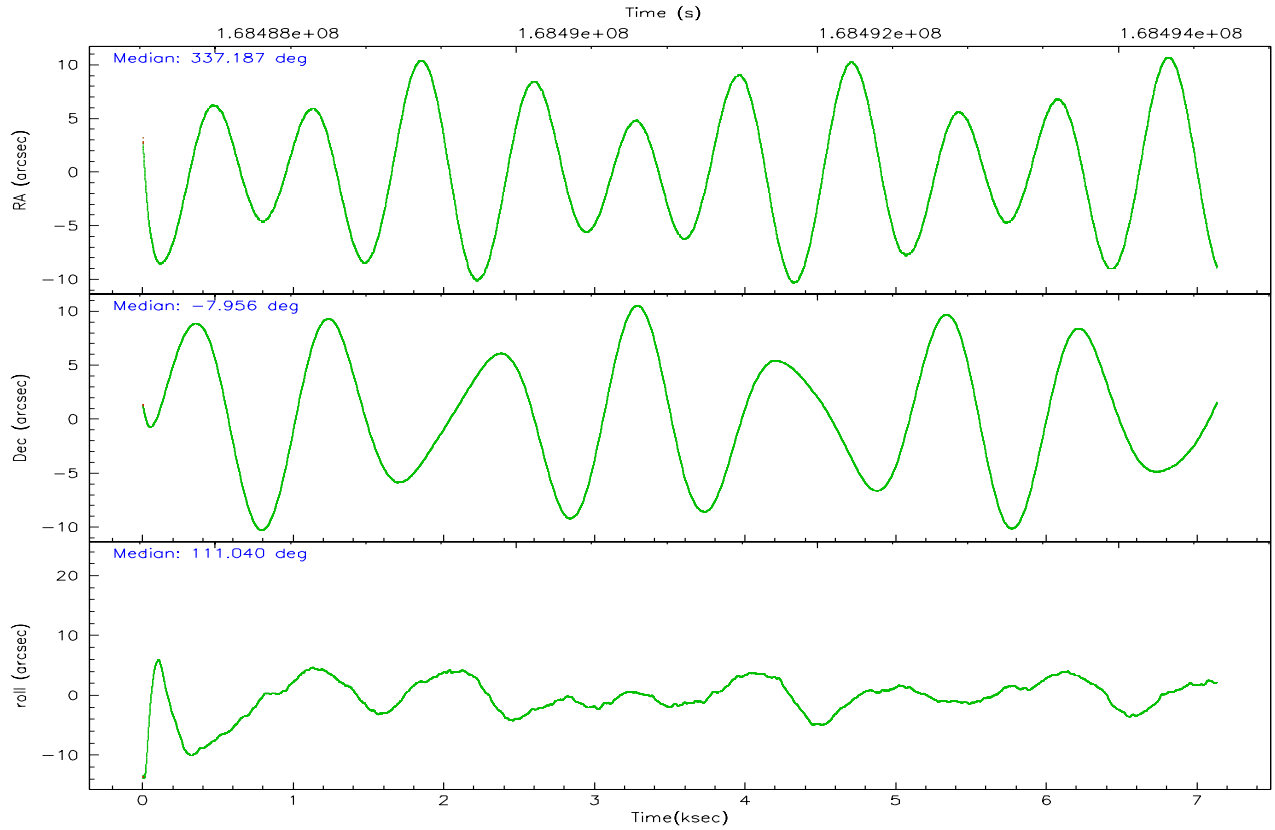
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-235678	ACIS-235678
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
Pointing RA	337.208093	337.186471775707
Pointing Dec	-7.972693	-7.955876607597625
Pointing Roll	110.893235	111.046821917834
SIM focus pos (mm)	-0.684267	-0.6828225247311905
SIM defocus (mm)	0	0.001444936568705701
SIM translation stage pos (mm)	-190.132523	-190.1425803651734
SIM translation stage offset (mm)	0	0.01005778216563158
Observation start time	168487655.184000	168486490.19325
Observation start date	2003-05-05T02:06:31	2003-05-05T01:48:10
Observation end time	168494655.184000	168495581.94363
Observation end date	2003-05-05T04:03:11	2003-05-05T04:19:41
Read mode	TIMED	TIMED

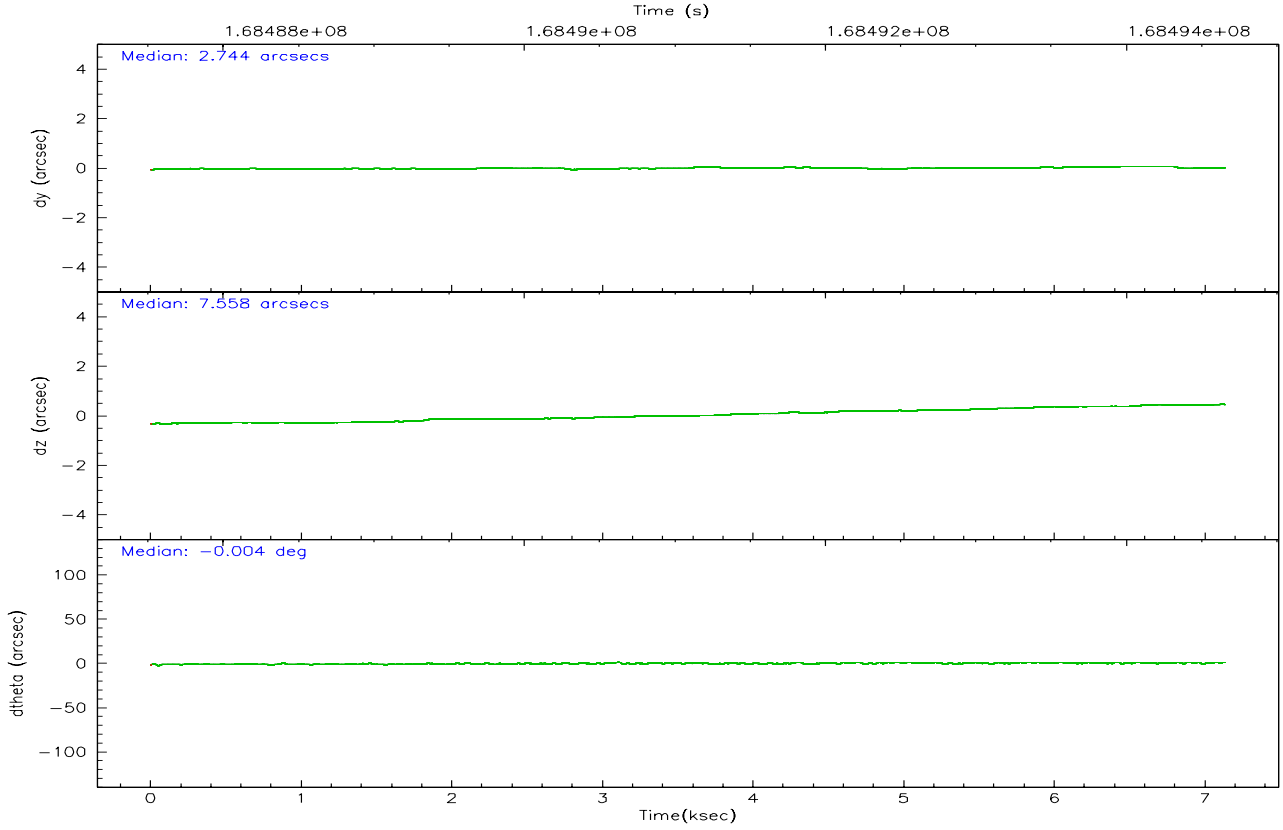
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
Primary exposure time	0.000000	3.2

2.3 Aspect


RA : 337.187 deg
Dec : −7.956 deg
Dec (arcsec)
RA (arcsec)
10
5
0
−5
−10
−10
−5
0
5
10


DY : 2.744 arcsecs
DZ : 7.558 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
1.68488e+08
1.6849e+08
1.68492e+08
1.68494e+08
Median: 337.187 deg
RA (arcsec)
Median: −7.956 deg
Dec (arcsec)
Median: 111.040 deg
roll (arcsec)
Time(ksec)

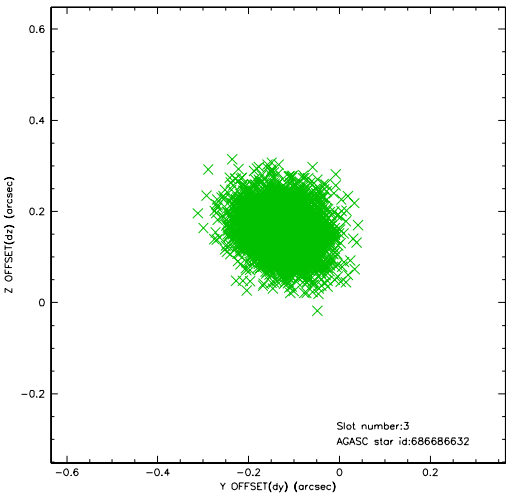

Time (s)
1.68488e+08
1.6849e+08
1.68492e+08
1.68494e+08
Median: 2.744 arcsecs
dy (arcsec)
Median: 7.558 arcsecs
dz (arcsec)
Median: −0.004 deg
dtheta (arcsec)
Time(ksec)

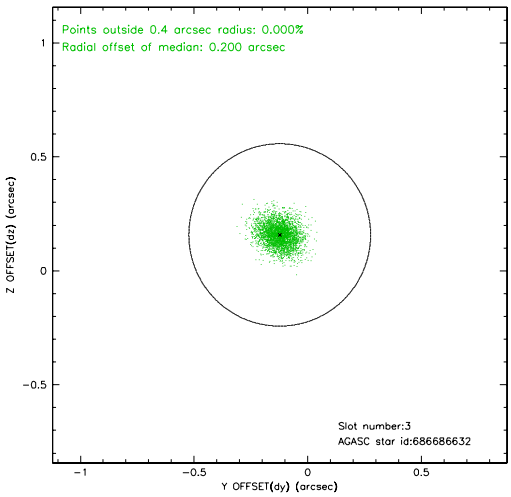
Slot Statistics

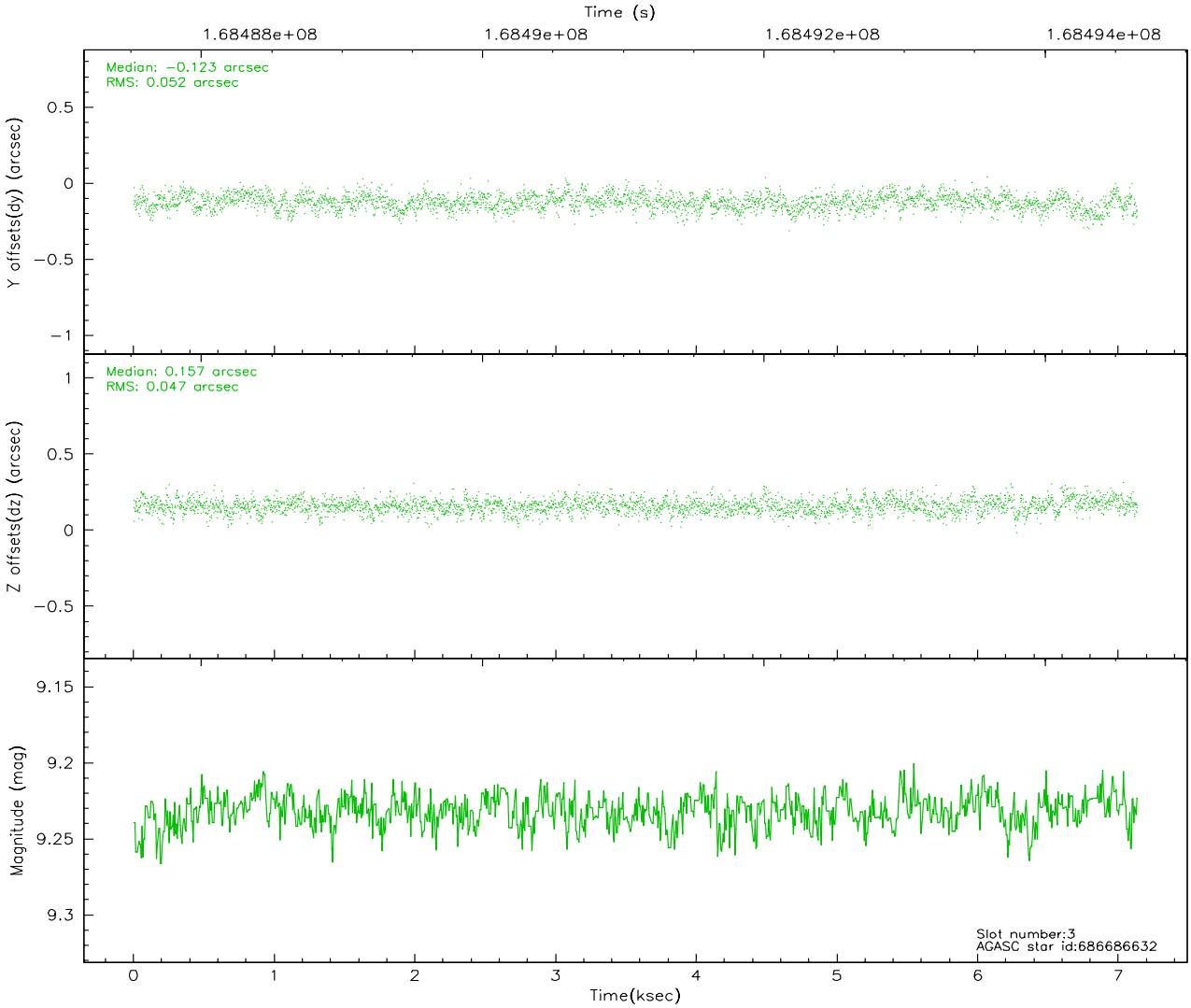
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	1740	-0.012	0.011	0.008	0.012	0.000000	0.000000	-755.39	-1728.71
1	FID	ACIS-S-4	7.20	1740	-0.038	0.003	0.005	0.009	0.000000	0.000000	2157.50	178.93
2	FID	ACIS-S-5	7.24	1740	0.019	-0.005	0.007	0.012	0.000000	0.000000	-1807.16	173.51
3	GUIDE	686686632	9.23	3478	-0.123	0.157	0.075	0.121	337.506926	-7.400375	1544.30	-1730.92
4	GUIDE	760750520	9.84	3478	-0.159	-0.186	0.099	0.163	336.433014	-7.727895	1807.27	2269.49
5	GUIDE	760751888	8.81	3480	0.113	-0.165	0.070	0.117	336.919617	-8.232937	-508.41	1295.13
6	GUIDE	761661840	8.43	3476	0.200	0.043	0.094	0.155	337.482812	-8.418958	-1849.87	-340.41
7	GUIDE	761668240	9.51	3476	-0.023	0.149	0.099	0.157	337.634705	-7.720530	304.47	-1745.06

2.4 Star Slots

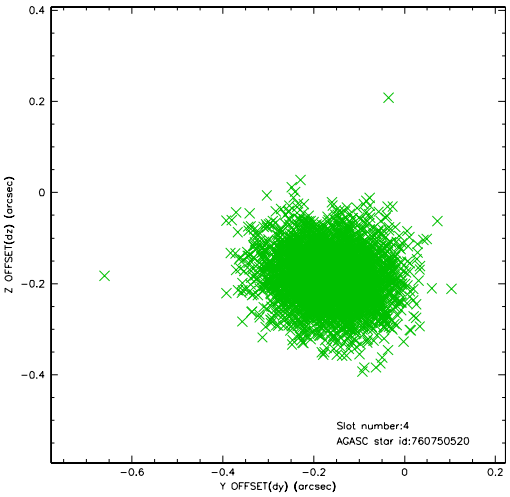
2.4.1 Slot 3

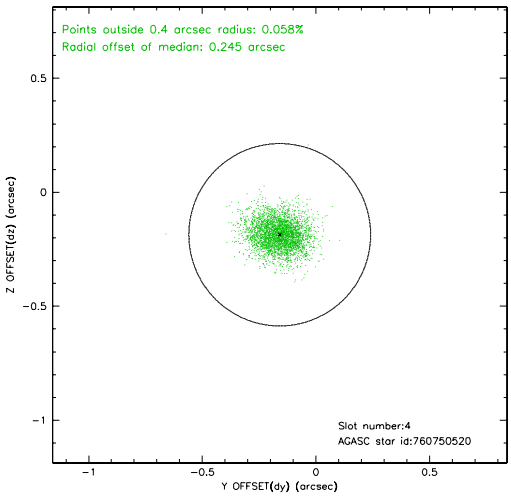


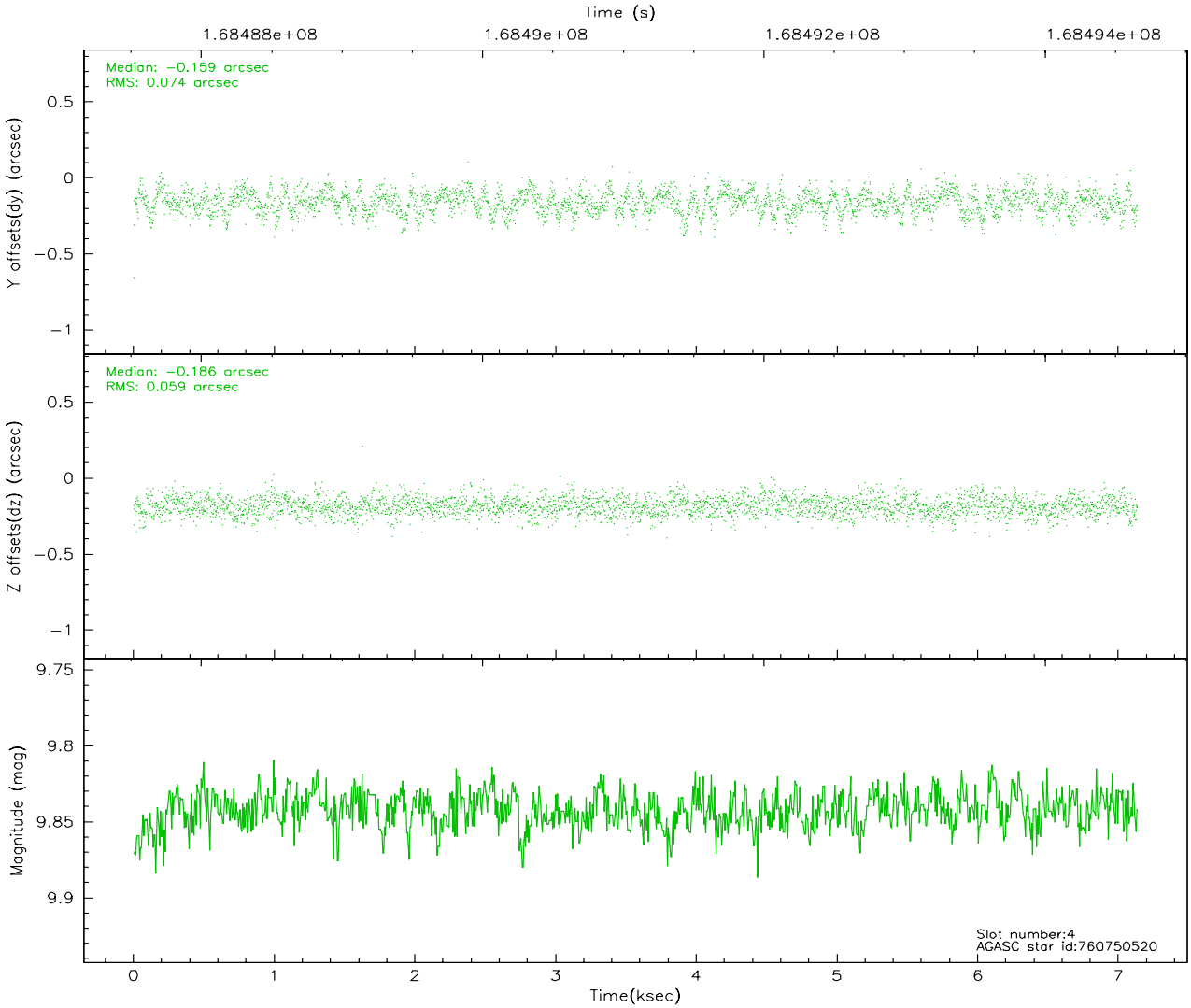




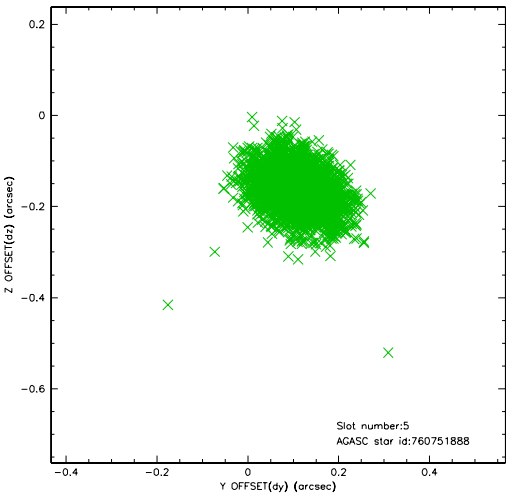
2.4.2 Slot 4

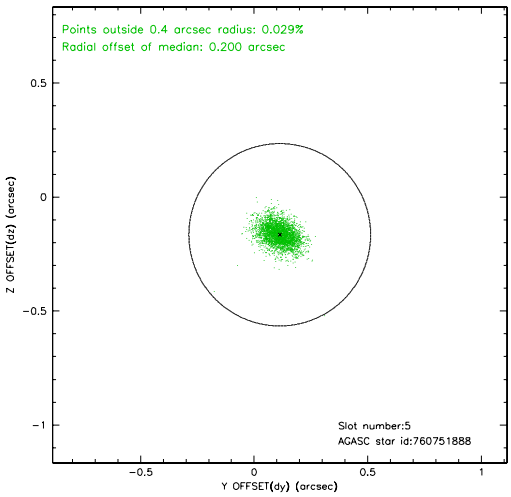

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:760750520

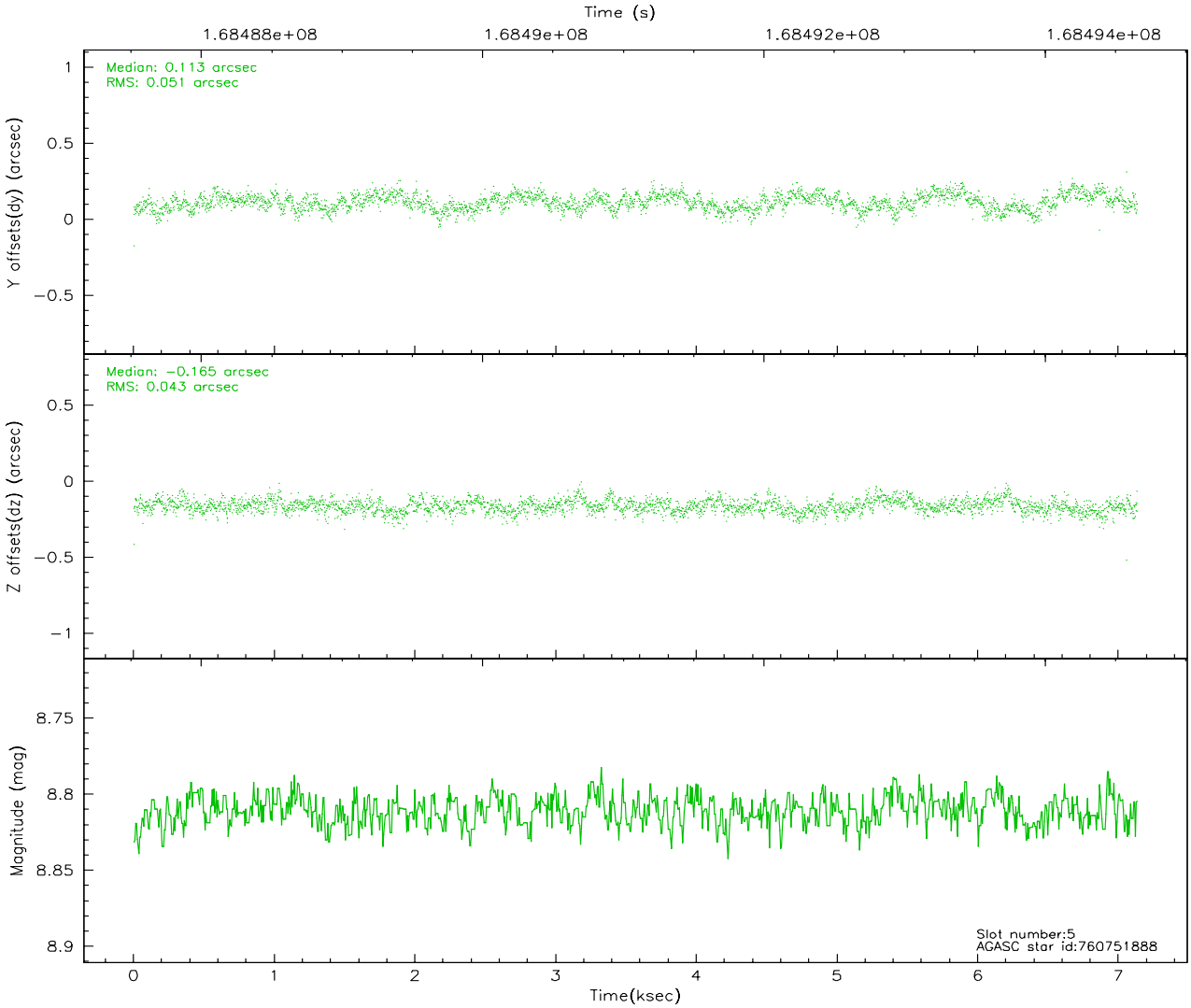

Points outside 0.4 arcsec radius: 0.058%
Radial offset of median: 0.245 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:760750520


Time (s)
1.68488e+08
1.6849e+08
1.68492e+08
1.68494e+08
Median: −0.159 arcsec
RMS: 0.074 arcsec
Y offsets(dy) (arcsec)
Median: −0.186 arcsec
RMS: 0.059 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:760750520
Time(ksec)

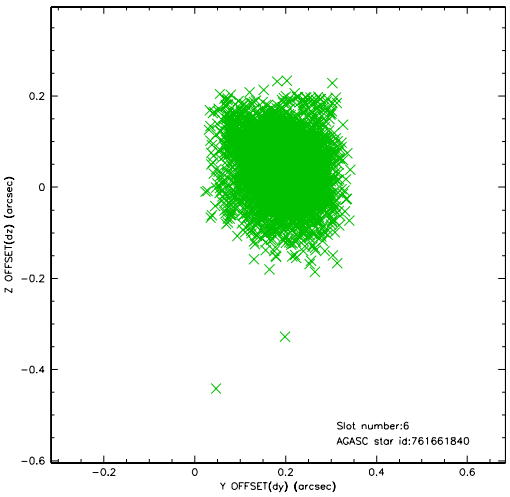
2.4.3 Slot 5

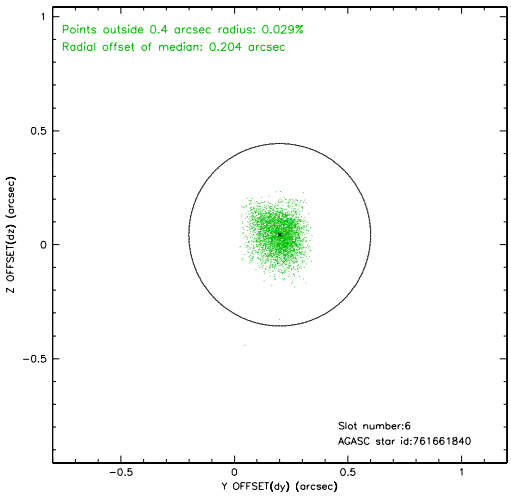

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:760751888

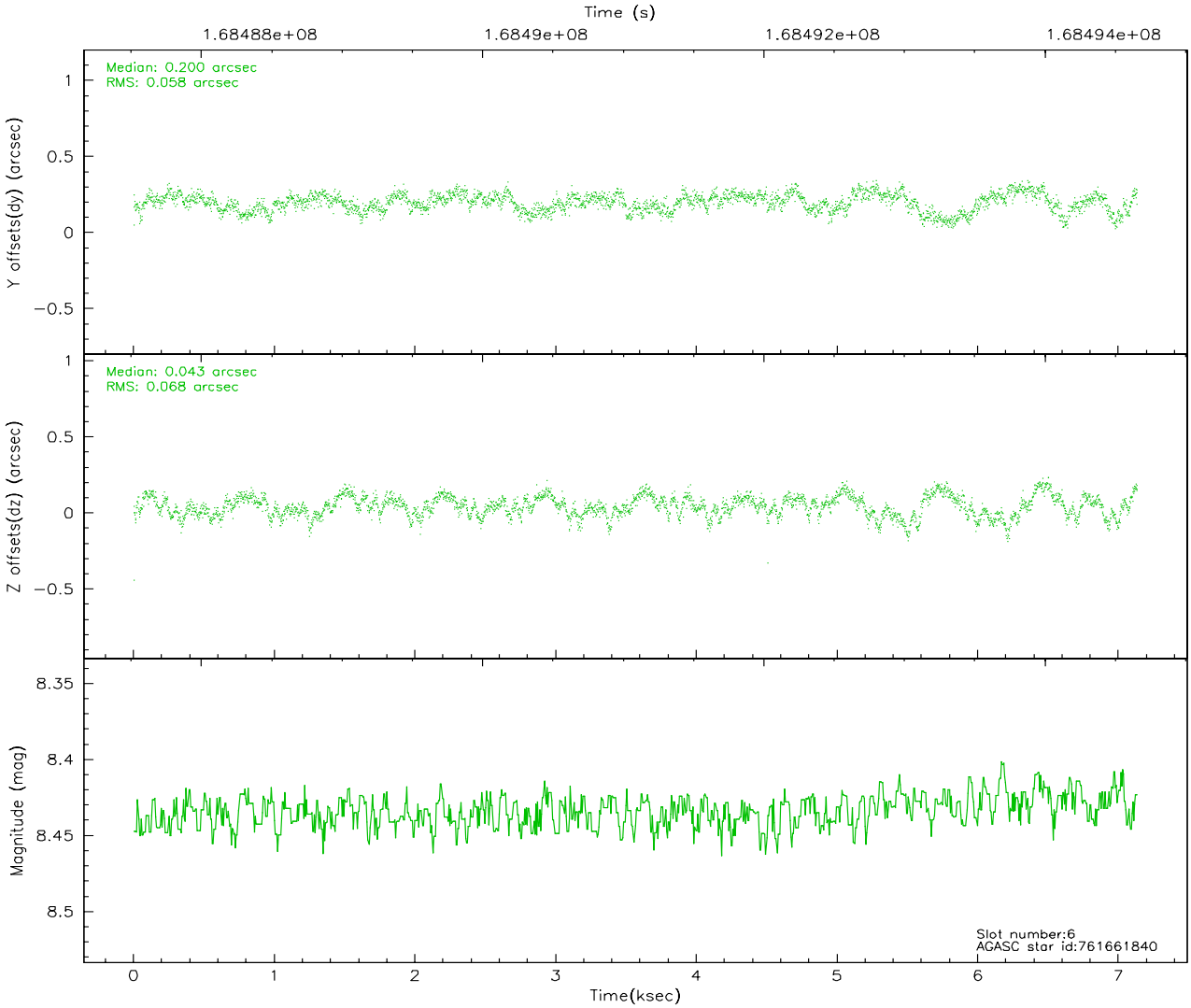

Points outside 0.4 arcsec radius: 0.029%
Radial offset of median: 0.200 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:760751888


Time (s)
1.68488e+08
1.6849e+08
1.68492e+08
1.68494e+08
Median: 0.113 arcsec
RMS: 0.051 arcsec
Y offsets(dy) (arcsec)
Median: −0.165 arcsec
RMS: 0.043 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:760751888
Time(ksec)

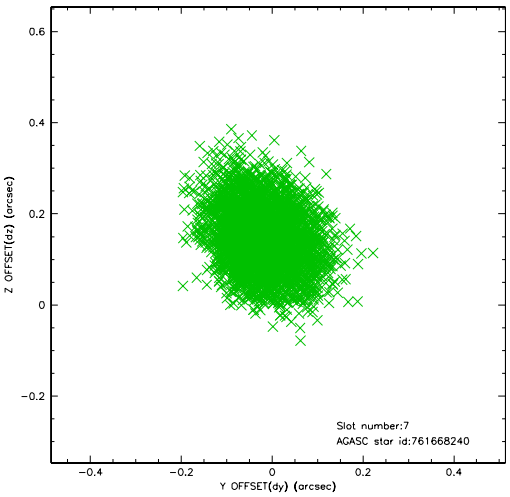
2.4.4 Slot 6

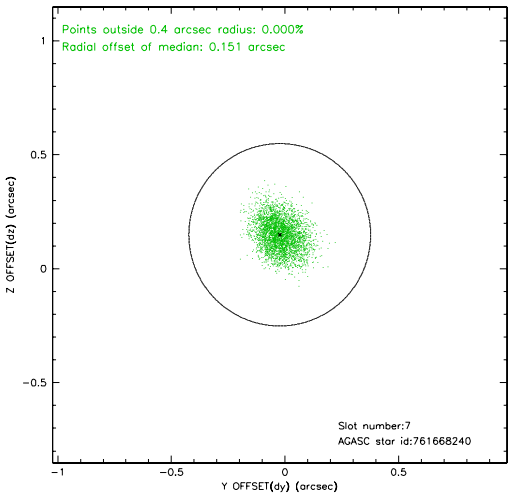

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:761661840

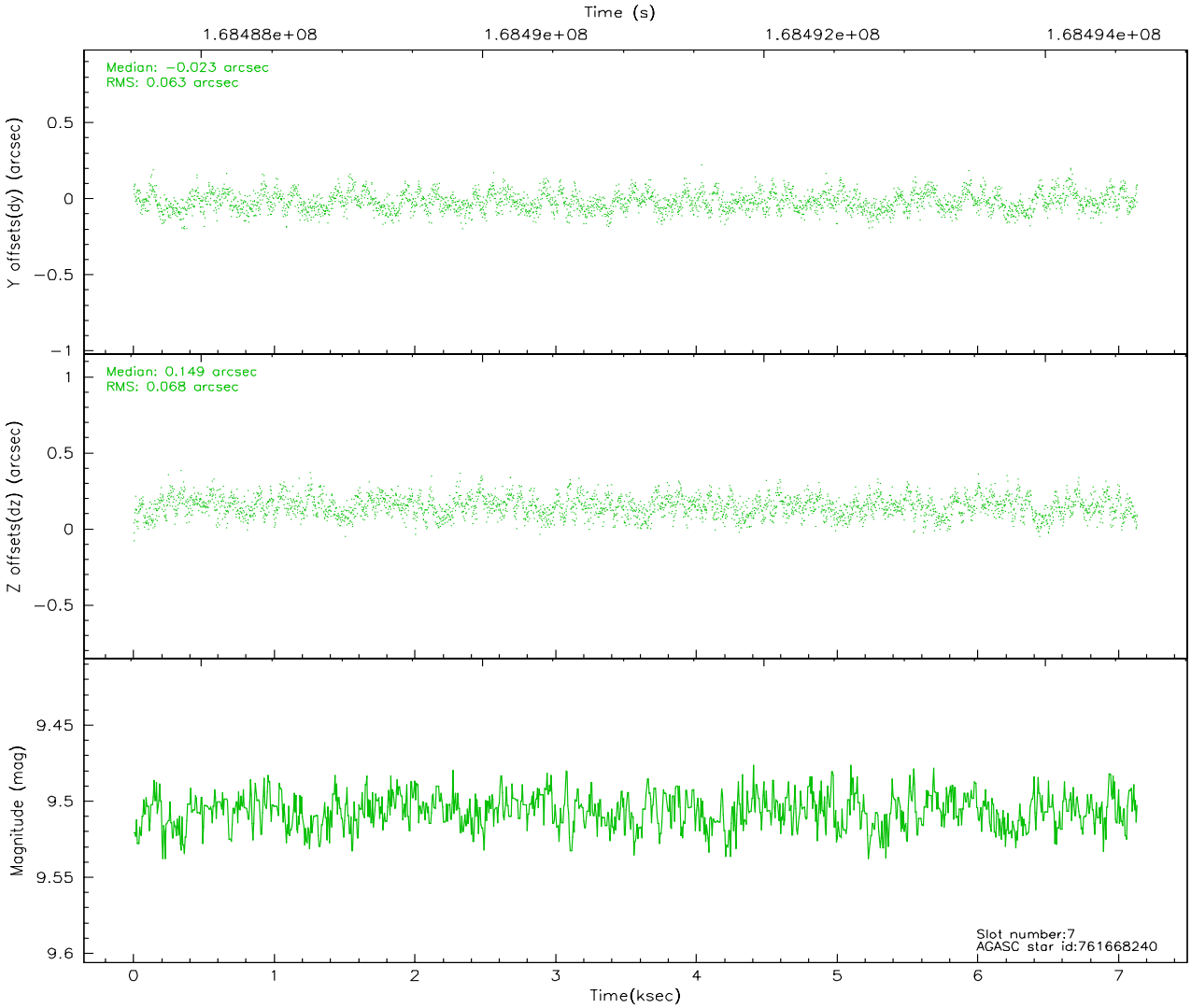

Points outside 0.4 arcsec radius: 0.029%
Radial offset of median: 0.204 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:761661840


Time (s)
1.68488e+08
1.6849e+08
1.68492e+08
1.68494e+08
Median: 0.200 arcsec
RMS: 0.058 arcsec
Y offsets(dy) (arcsec)
Median: 0.043 arcsec
RMS: 0.068 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:761661840
Time(ksec)

2.4.5 Slot 7

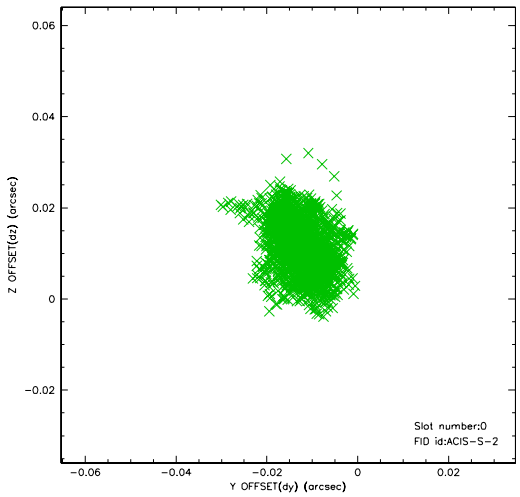

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:761668240

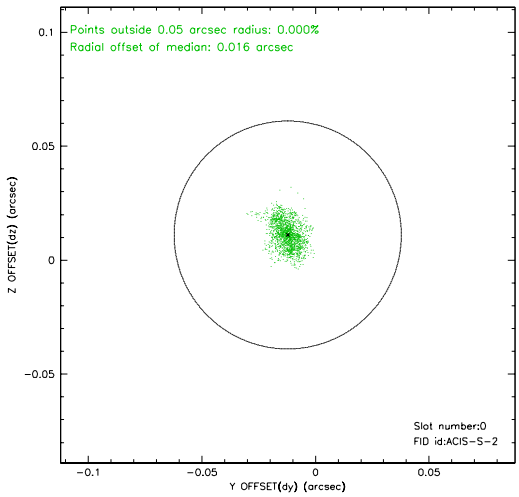

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.151 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:761668240

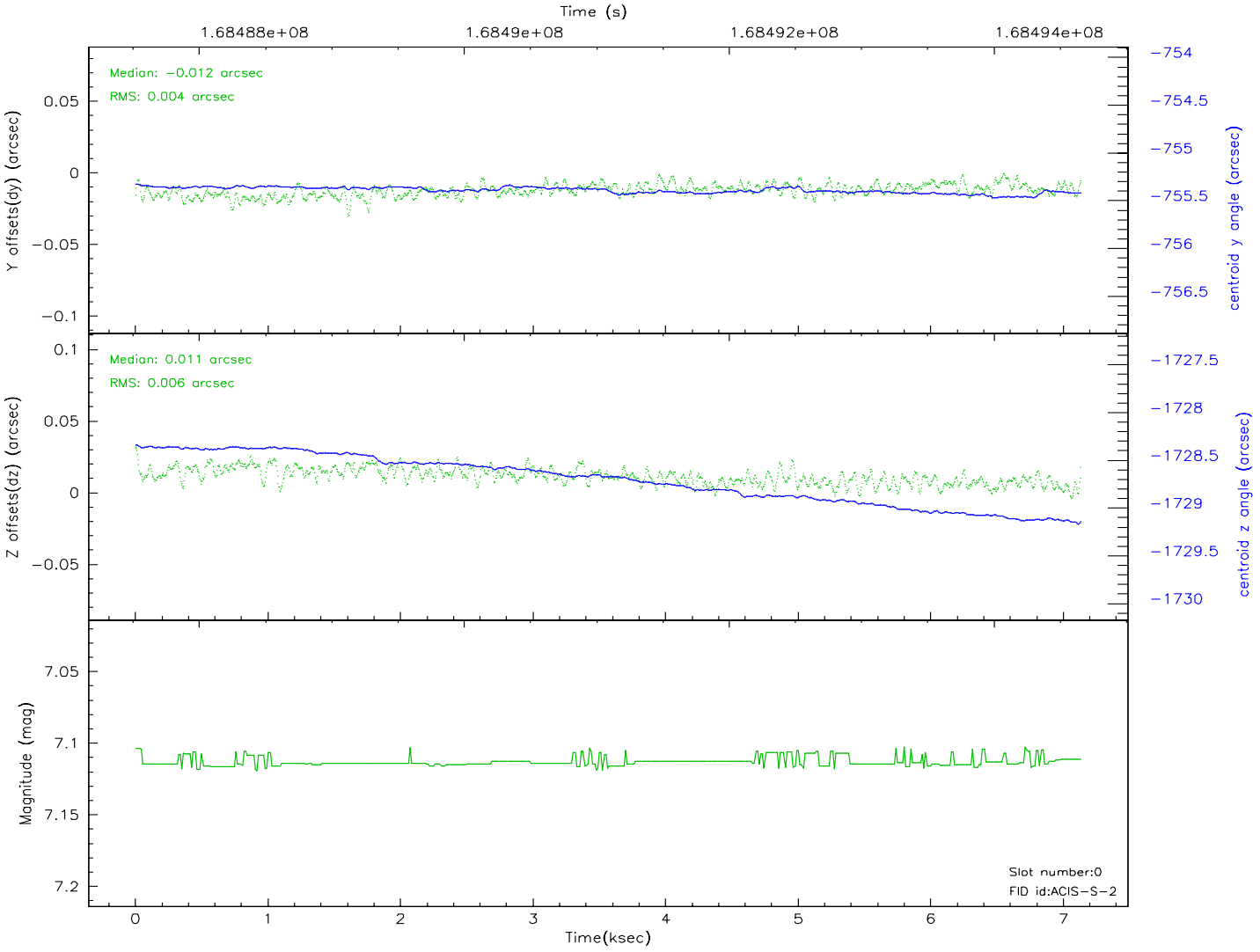

Time (s)
1.68488e+08
1.6849e+08
1.68492e+08
1.68494e+08
Median: −0.023 arcsec
RMS: 0.063 arcsec
Y offsets(dy) (arcsec)
Median: 0.149 arcsec
RMS: 0.068 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:761668240
Time(ksec)

2.5 FID Slots

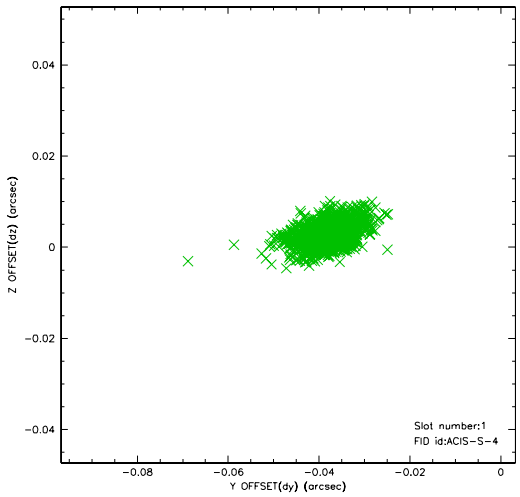
2.5.1 Slot 0

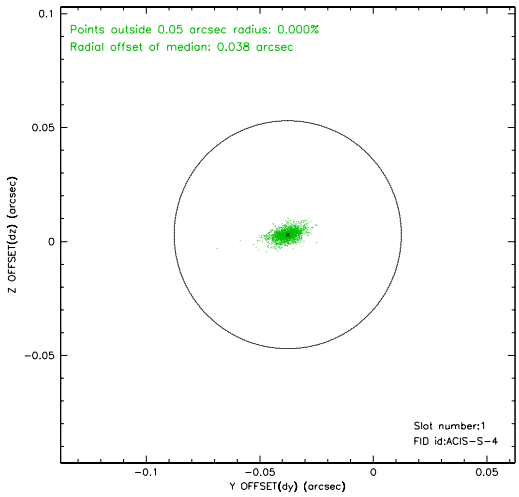


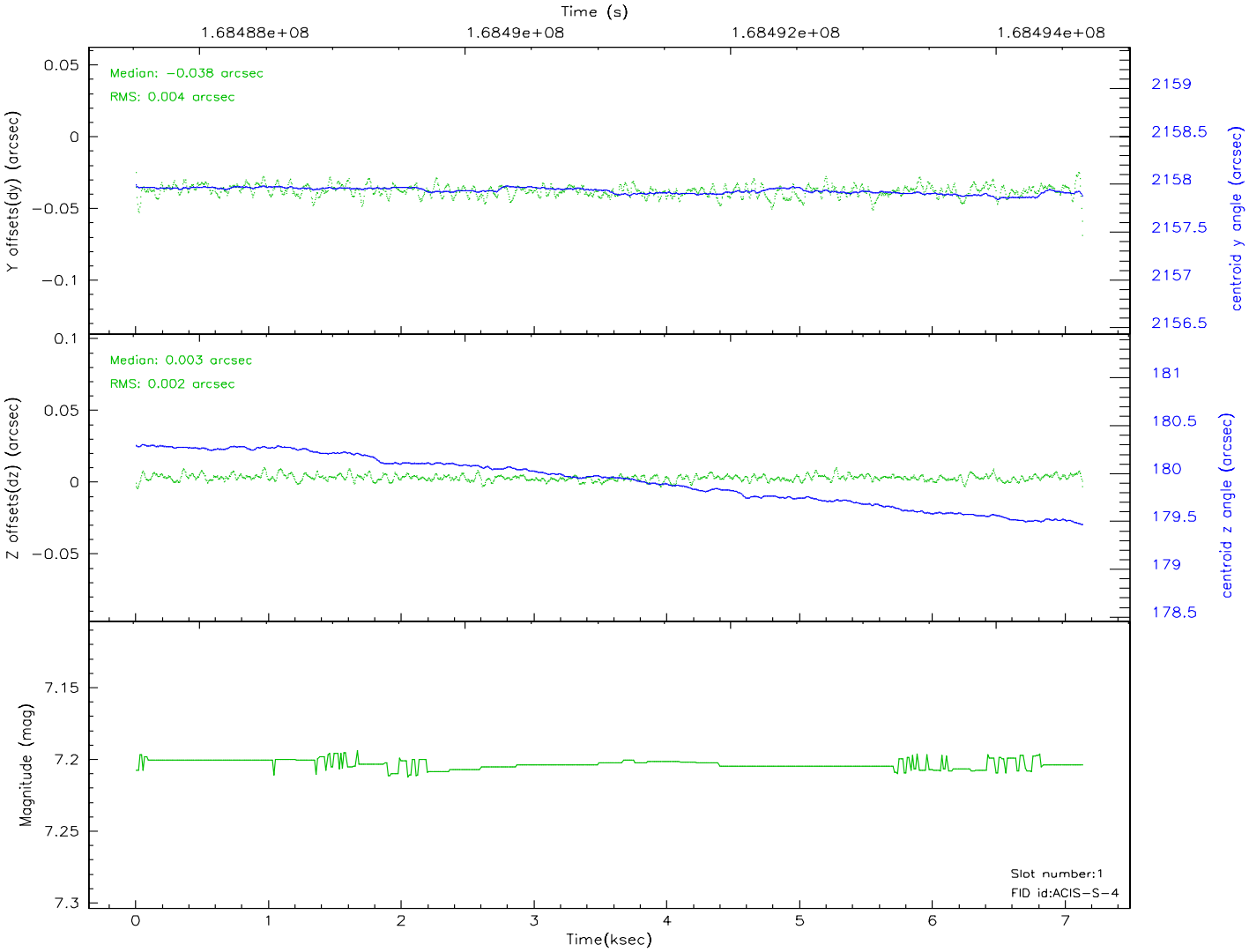




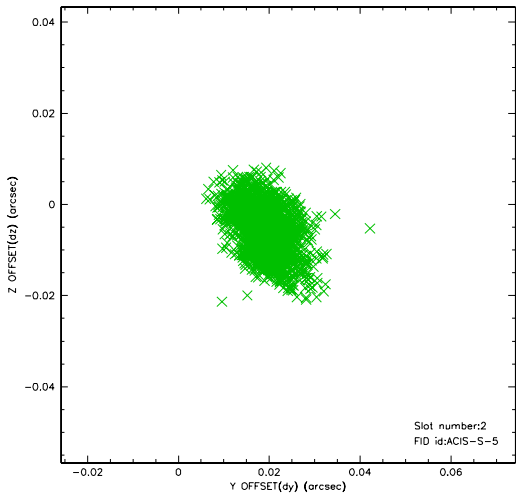
2.5.2 Slot 1

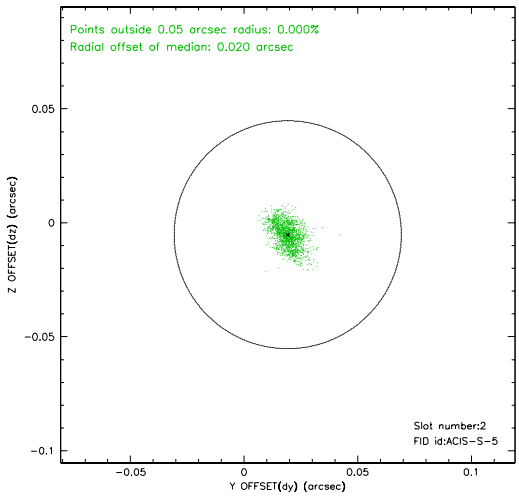

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-4

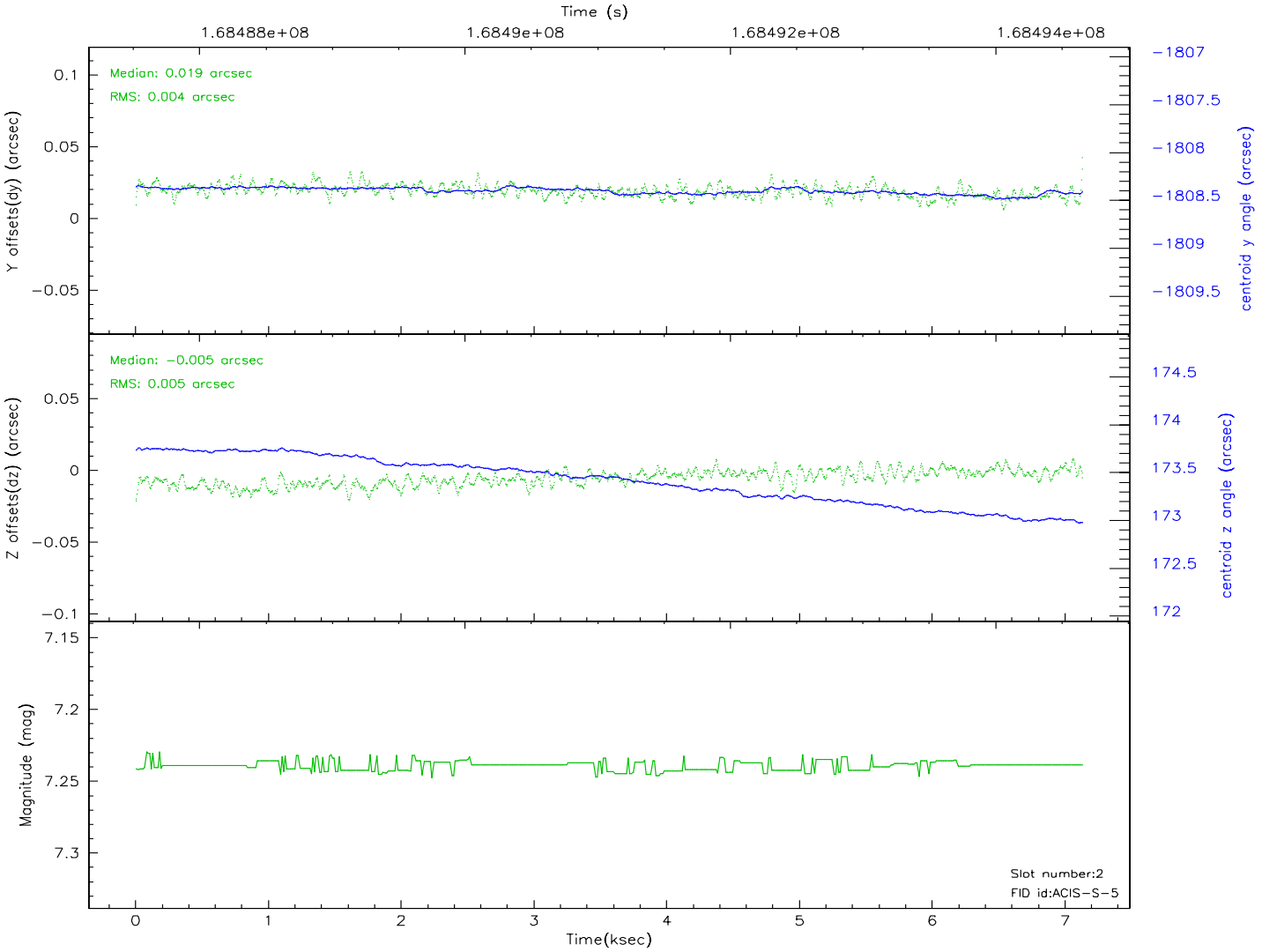

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.038 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-4


Time (s)
1.68488e+08
1.6849e+08
1.68492e+08
1.68494e+08
Median: −0.038 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.003 arcsec
RMS: 0.002 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:1
FID id:ACIS-S-4
Time(ksec)

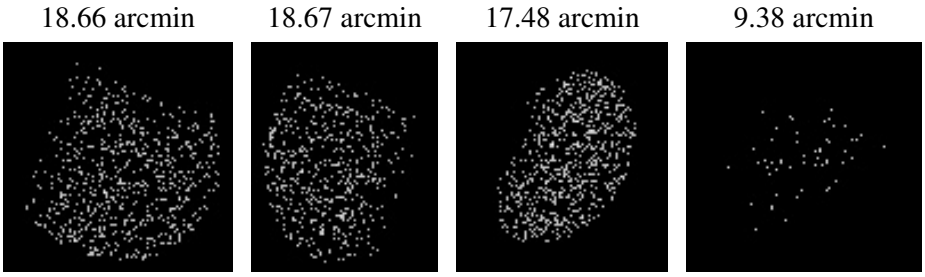
2.5.3 Slot 2


Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:ACIS-S-5


Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.020 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:ACIS-S-5


Time (s)
1.68488e+08
1.6849e+08
1.68492e+08
1.68494e+08
Median: 0.019 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.005 arcsec
RMS: 0.005 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:2
FID id:ACIS-S-5
Time(ksec)

3 Point Sources



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2006.08.01
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	7.126

A.2 Comments