V&V Reference Report
L2 ASCDS Version : 8.4.5

Observation 2321 - L2 Version 4
Chandra X-Ray Center

L2 Processing Date : Sep 3 2012

Contents

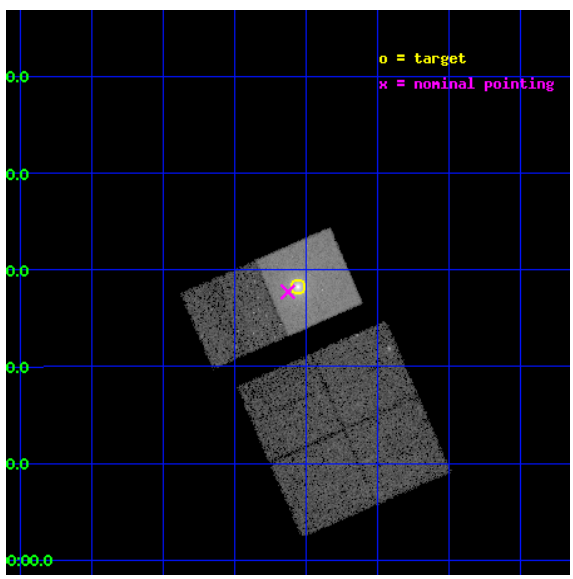
1 Front **2**

2 OBI **3**
- 2.1 OBI . . . 3
  - 2.1.1 Images . . . 3
  - 2.1.2 Bias . . . 3
  - 2.1.3 Parameters . . . 4
  - 2.1.4 Events . . . 4
- 2.2 Compared Parameters . . . 5
- 2.3 Aspect . . . 6
- 2.4 Star Slots . . . 9
  - 2.4.1 Slot 3 . . . 9
  - 2.4.2 Slot 4 . . . 10
  - 2.4.3 Slot 5 . . . 11
  - 2.4.4 Slot 6 . . . 12
  - 2.4.5 Slot 7 . . . 13
- 2.5 FID Slots . . . 14
  - 2.5.1 Slot 0 . . . 14
  - 2.5.2 Slot 1 . . . 15
  - 2.5.3 Slot 2 . . . 16

A Summary **17**
- A.1 Status . . . 17
- A.2 Comments . . . 17

1 Front

seq_num	800172	Sequence number
obs_id	2321	Observation id
title	DETERMINATION OF H0/Q0	Proposal title
observer	DR. LEON VANSPEYBROECK	Principal investigator
object	A383	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	42.01325	Observer's specified target RA [deg]
dec_targ	-3.527847	Observer's specified target Dec [deg]
ra_nom	42.031709805797	Nominal RA [deg]
dec_nom	-3.5378405265799	Nominal Dec [deg]
roll_nom	336.44960834818	Nominal Roll [deg]
revision	4	Processing version of data
ontime	19760.000018388	Sum of GTIs [s]
livetime	19509.787000112	Livetime [s]
ontime0	19760.000018388	Sum of GTIs [s]
ontime1	19760.000018388	Sum of GTIs [s]
ontime2	19760.000018388	Sum of GTIs [s]
ontime3	19760.000018388	Sum of GTIs [s]
ontime6	19760.000018388	Sum of GTIs [s]
ontime7	19760.000018388	Sum of GTIs [s]
l2events	148327	Number of level 2 events

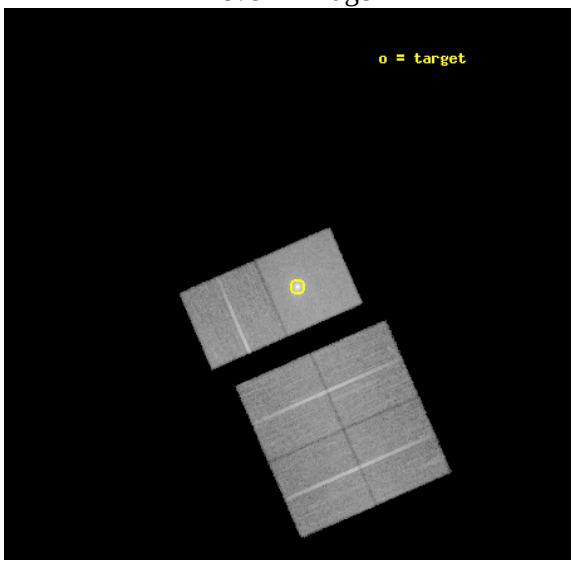


2 OBI

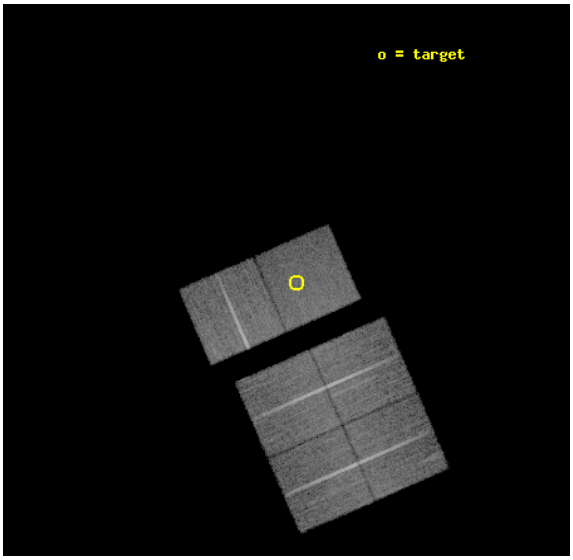
2.1 OBI

2.1.1 Images

Level 1 Image

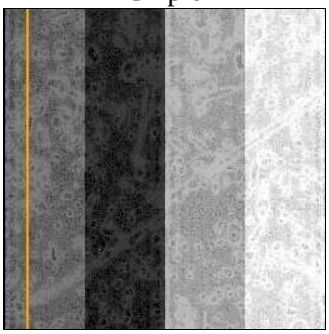


Level 1 Bad Events

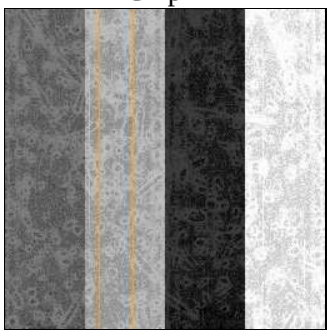


2.1.2 Bias

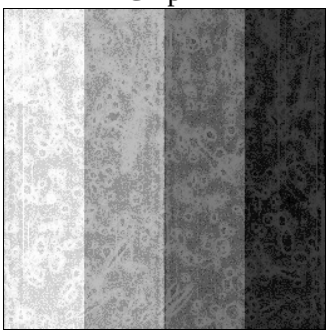
Chip 0



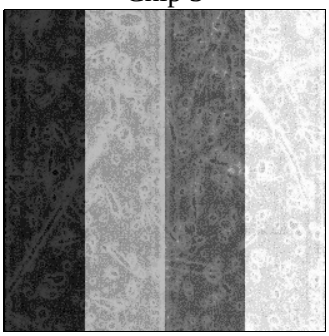
Chip 1



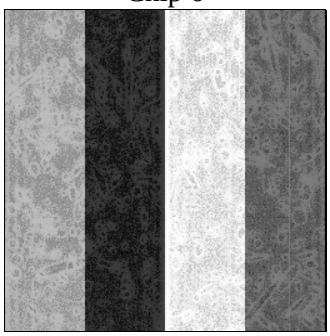
Chip 2



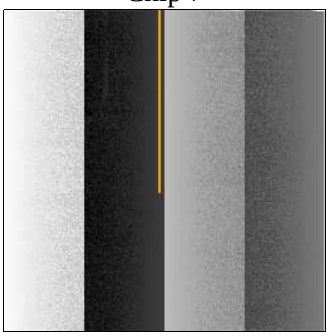
Chip 3



Chip 6



Chip 7



2.1.3 Parameters

obi_num	0	Obi number
ascdsver	8.4.5	Processing system revision
caldbver	4.5.1.1	
date	2012-09-03T16:15:01	Date and time of file creation
revision	3	Processing version of data

sched_exp_time	19650.000000	[s] Scheduled observation exposure time
ontime	19760.000018388	Sum of GTIs [s]
ontime0	19760.000018388	Sum of GTIs [s]
ontime1	19760.000018388	Sum of GTIs [s]
ontime2	19760.000018388	Sum of GTIs [s]
ontime3	19760.000018388	Sum of GTIs [s]
ontime6	19760.000018388	Sum of GTIs [s]
ontime7	19760.000018388	Sum of GTIs [s]
l1events	743487	Number of level 1 events

2.1.4 Events

	ccd 0	**ccd 1**	**ccd 2**	**ccd 3**	**ccd 6**	**ccd 7**
level 1 events	109525	105891	115700	115692	121126	175553
rejected events	95405	91241	102595	102124	106228	85852
rejected %	87%	86%	88%	88%	87%	48%

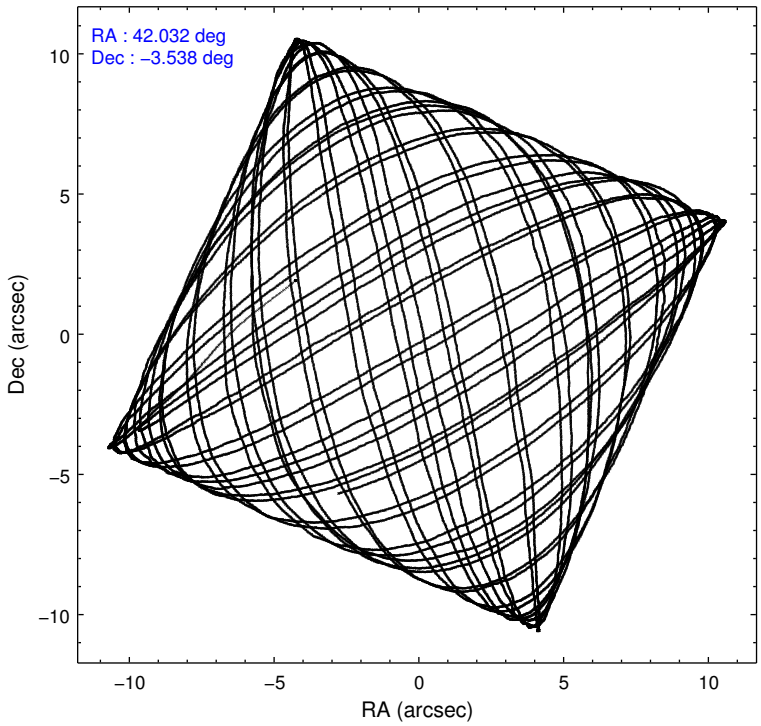
	ccd 0	**ccd 1**	**ccd 2**	**ccd 3**	**ccd 6**	**ccd 7**
grade 0 events	6101	6053	5373	6046	6483	15365
	5%	5%	4%	5%	5%	8%
grade 1 events	59	45	54	51	53	148
	0%	0%	0%	0%	0%	0%
grade 2 events	2884	2953	2860	2587	2962	19170
	2%	2%	2%	2%	2%	10%
grade 3 events	1360	1498	1255	1289	1349	8895
	1%	1%	1%	1%	1%	5%
grade 4 events	1284	1462	1255	1280	1331	8989
	1%	1%	1%	1%	1%	5%
grade 5 events	4143	4459	3778	4457	4738	14242
	3%	4%	3%	3%	3%	8%
grade 6 events	2497	2686	2363	2368	2778	37295
	2%	2%	2%	2%	2%	21%
grade 7 events	91197	86735	98762	97614	101432	71449
	83%	81%	85%	84%	83%	40%

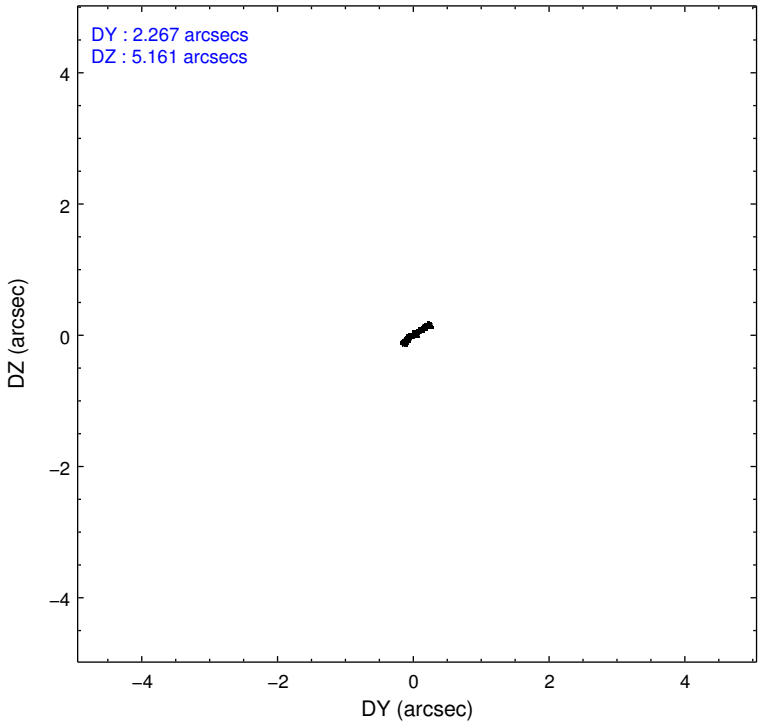
2.2 Compared Parameters

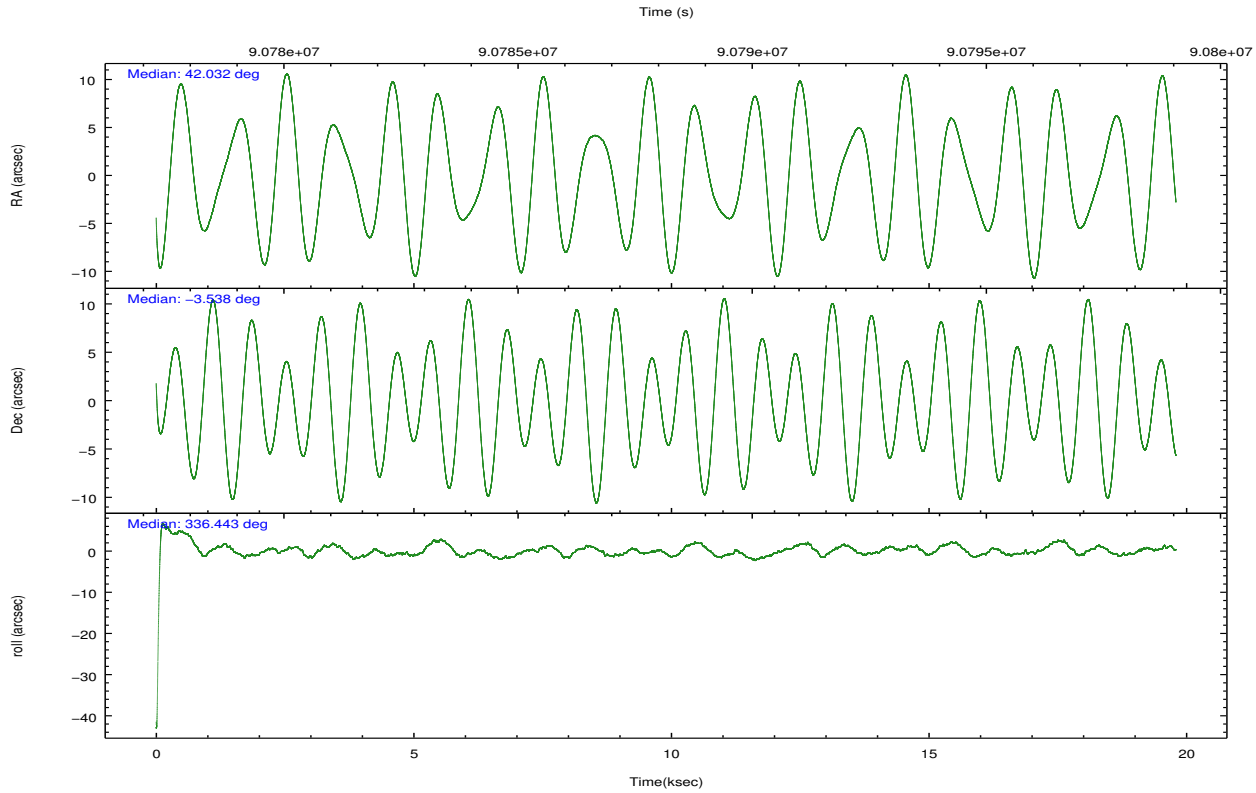
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-012367	ACIS-012367
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	42.004496	42.03170980579683
[deg] Pointing Dec	-3.541122	-3.537840526579873
[deg] Pointing Roll	336.291334	336.4496083481753
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1425803651734
[mm] SIM translation stage offset	0	0.01005778216563158
[s] Observation start time (MET)	90778406.184000	90777368.714046
Observation start date	2000-11-16T16:12:22	2000-11-16T15:56:08
[s] Observation end time (MET)	90798056.184000	90798446.814851
Observation end date	2000-11-16T21:39:52	2000-11-16T21:47:26
Read mode	TIMED	TIMED

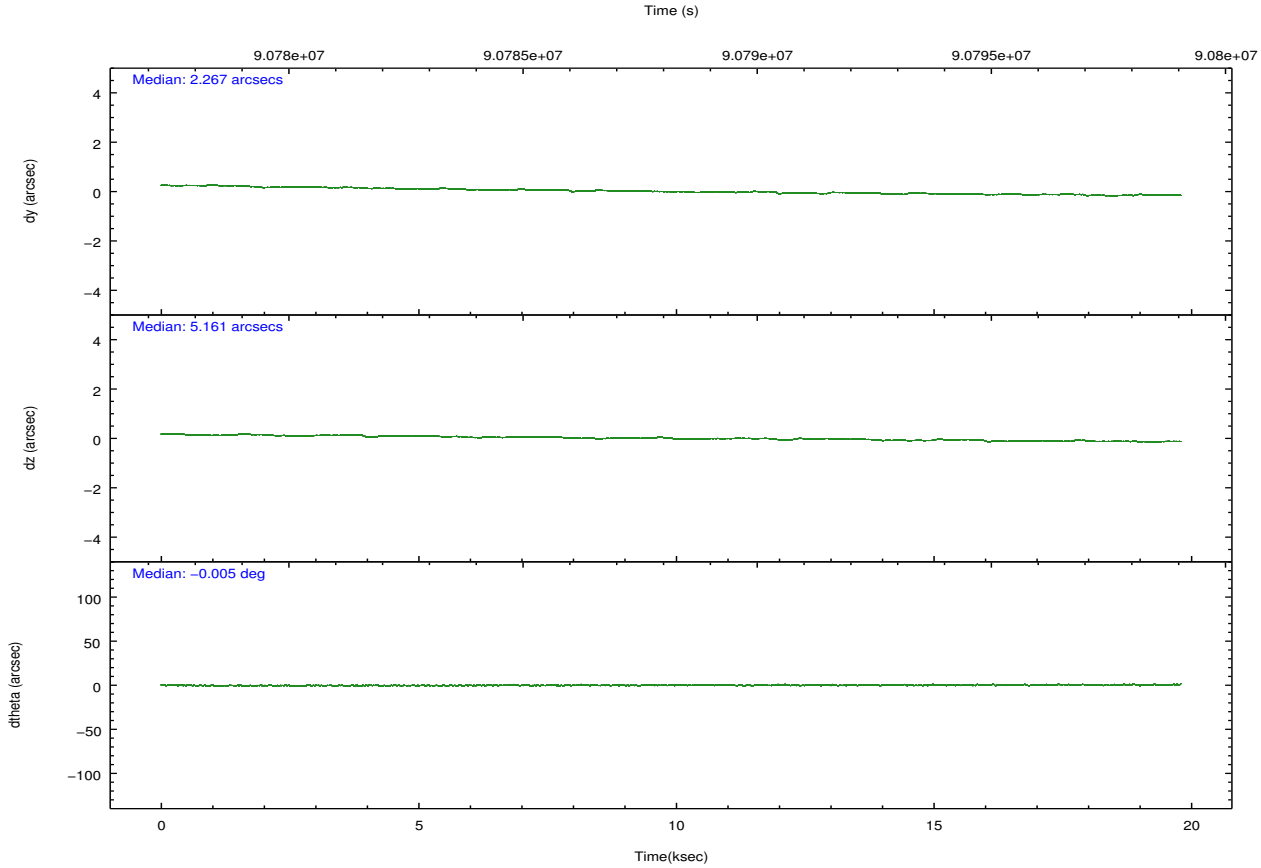
Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.2

2.3 Aspect


RA : 42.032 deg
Dec : −3.538 deg
Dec (arcsec)
RA (arcsec)
10
5
0
−5
−10
−10
−5
0
5
10


DY : 2.267 arcsecs
DZ : 5.161 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
9.078e+07
9.0785e+07
9.079e+07
9.0795e+07
9.08e+07
Median: 42.032 deg
RA (arcsec)
Median: −3.538 deg
Dec (arcsec)
Median: 336.443 deg
roll (arcsec)
Time(ksec)

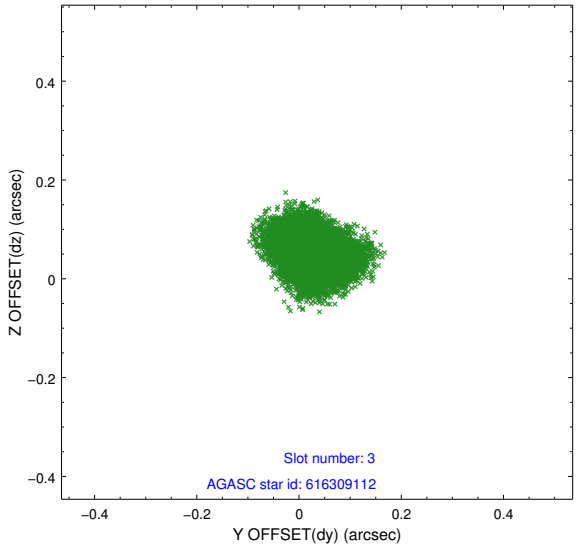

Time (s)
9.078e+07
9.0785e+07
9.079e+07
9.0795e+07
9.08e+07
Median: 2.267 arcsecs
dy (arcsec)
Median: 5.161 arcsecs
dz (arcsec)
Median: −0.005 deg
dtheta (arcsec)
Time(ksec)

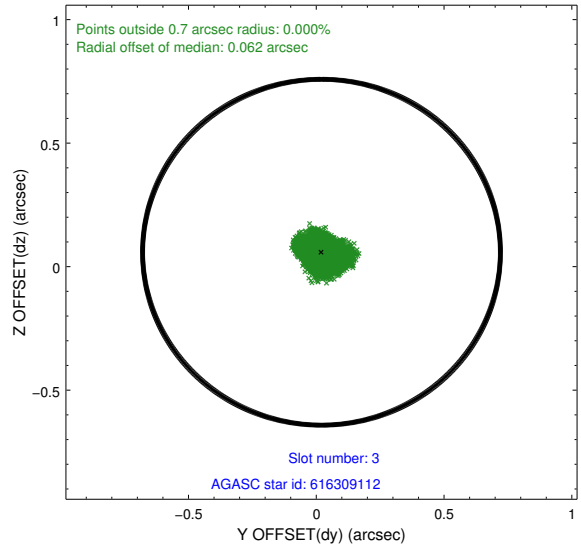
Slot Statistics

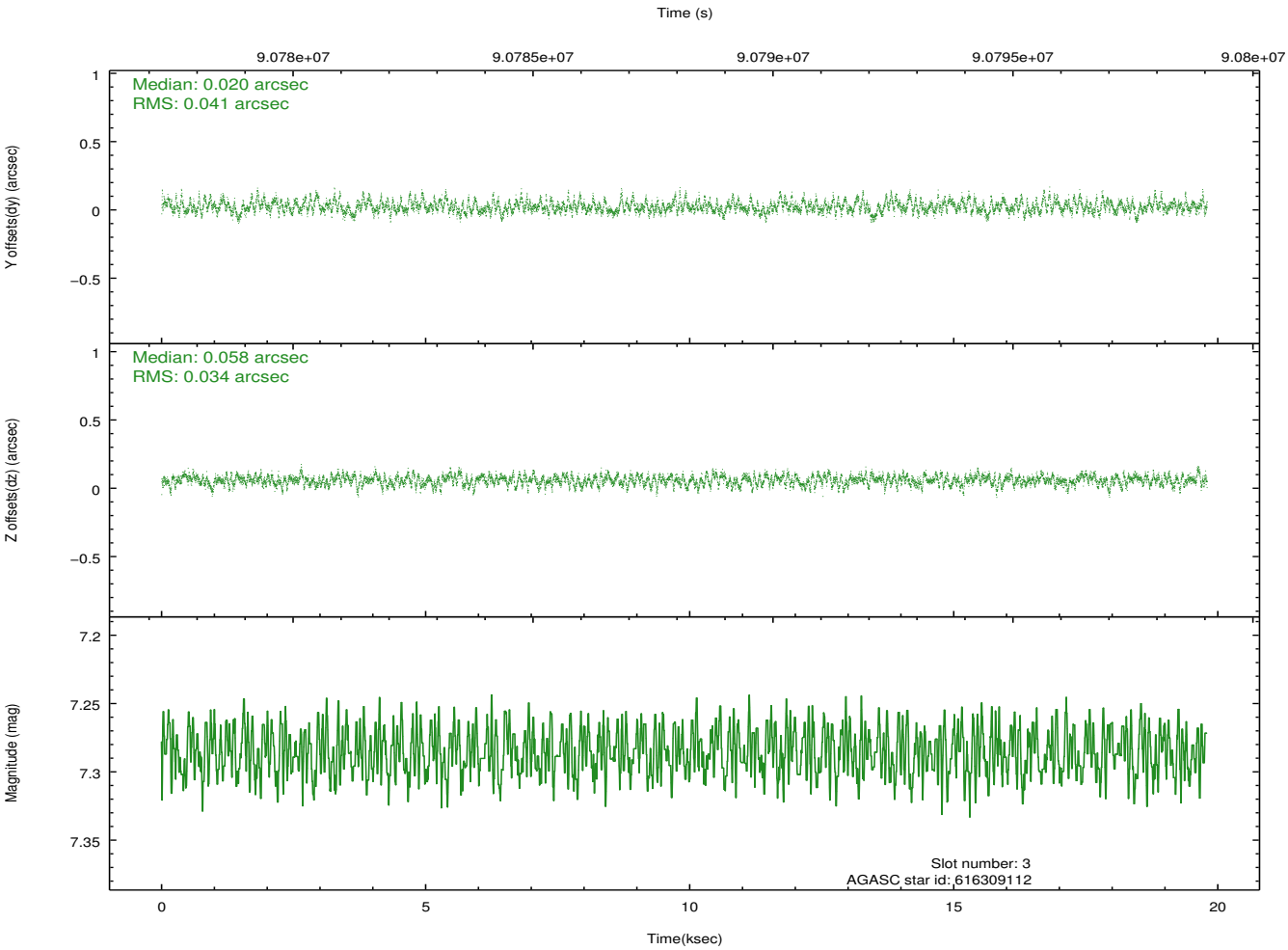
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	4829	-0.041	-0.007	0.006	0.011	0.000000	0.000000	-754.92	-1726.25
1	FID	ACIS-S-4	7.21	4829	0.002	0.021	0.006	0.012	0.000000	0.000000	2158.28	182.11
2	FID	ACIS-S-5	7.24	4829	0.007	-0.006	0.007	0.012	0.000000	0.000000	-1807.50	175.91
3	GUIDE	616309112	7.29	9658	0.020	0.058	0.057	0.092	42.055014	-3.619210	278.73	-184.37
4	GUIDE	616308896	8.16	9657	0.015	-0.081	0.051	0.083	42.427748	-3.548145	1402.17	588.04
5	GUIDE	616309048	8.82	9657	-0.040	0.027	0.065	0.106	41.784403	-3.226459	-1180.28	718.97
6	GUIDE	616302872	8.25	9658	-0.042	-0.008	0.058	0.091	41.855710	-3.296822	-844.00	590.15
7	GUIDE	616306616	8.91	9647	0.043	0.005	0.071	0.115	42.263219	-4.097260	1655.29	-1459.60

2.4 Star Slots

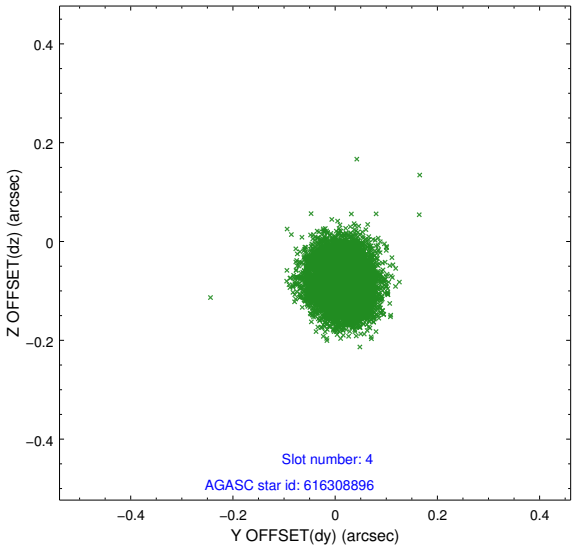
2.4.1 Slot 3

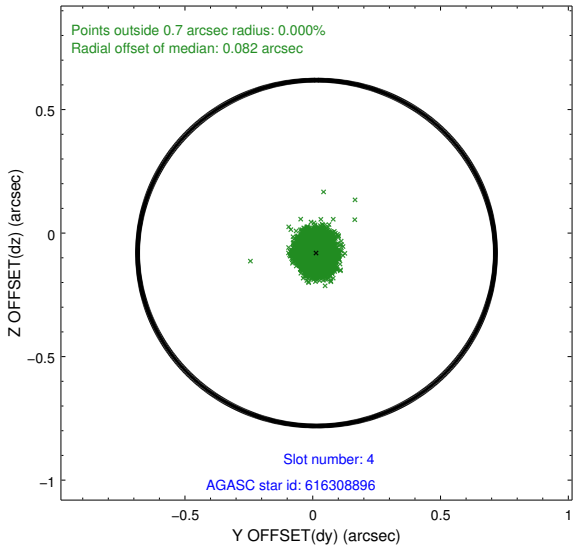


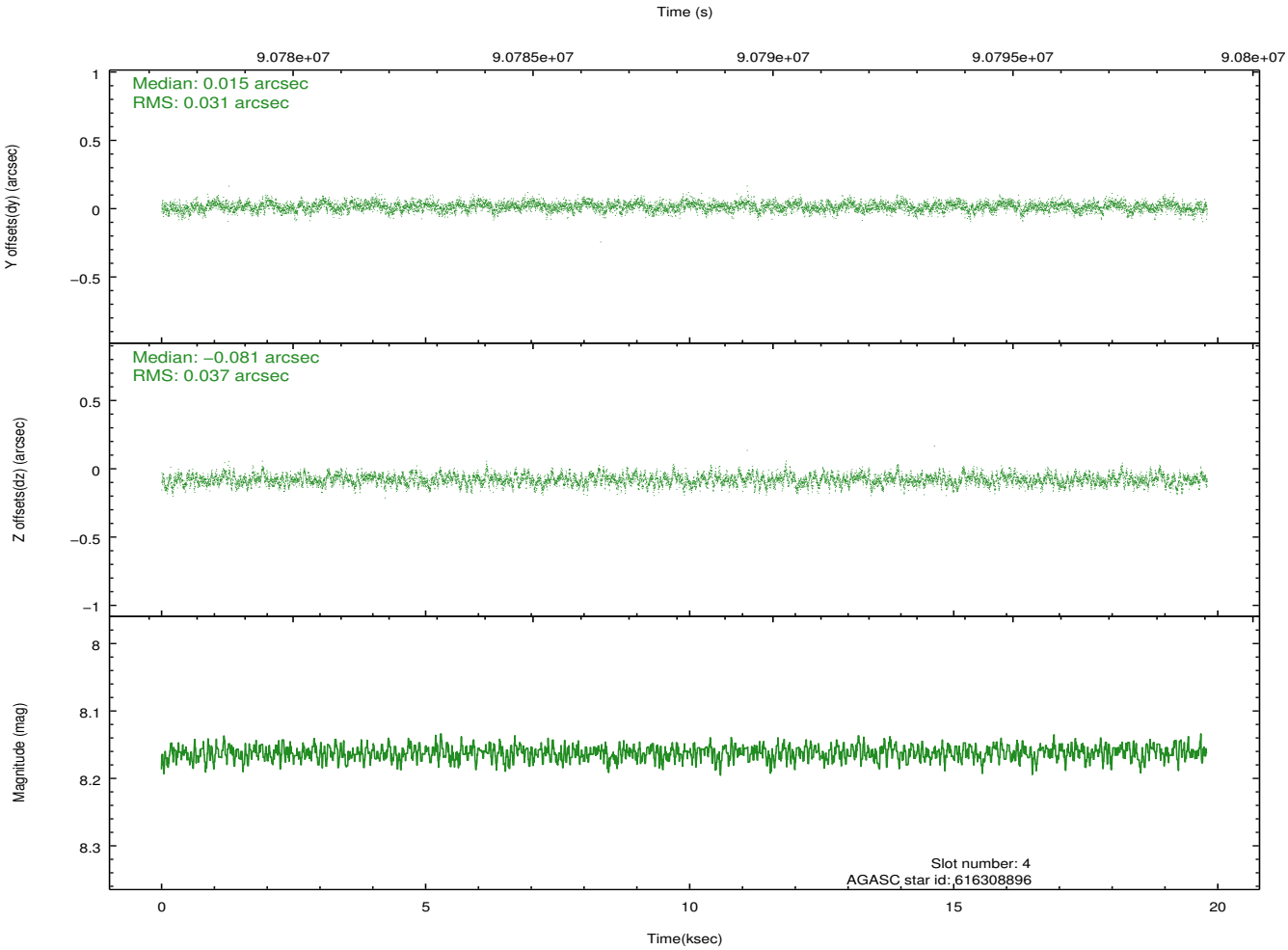




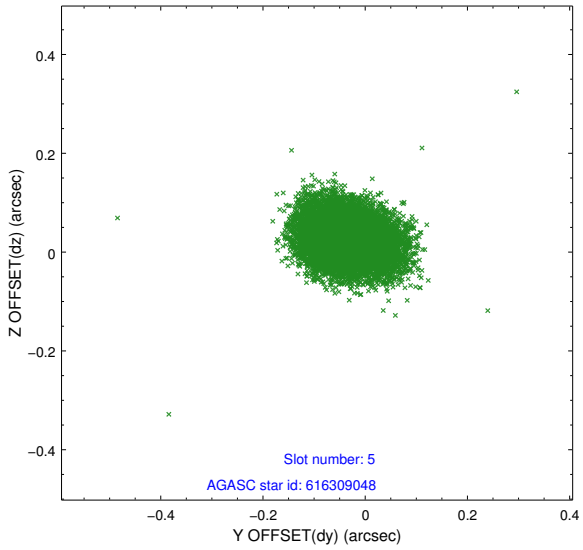
2.4.2 Slot 4

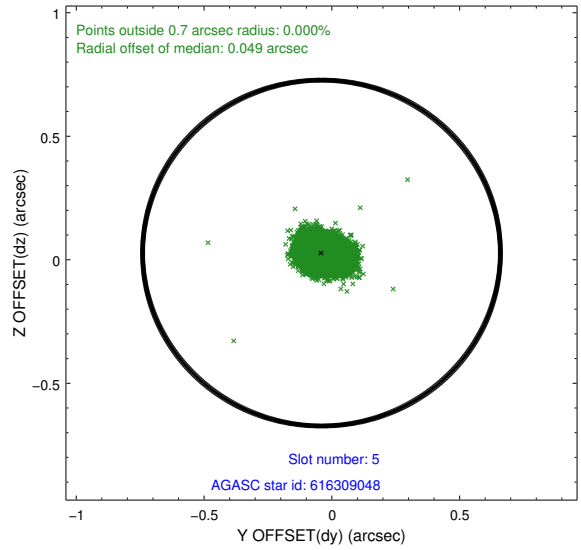

Slot number: 4
AGASC star id: 616308896
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)

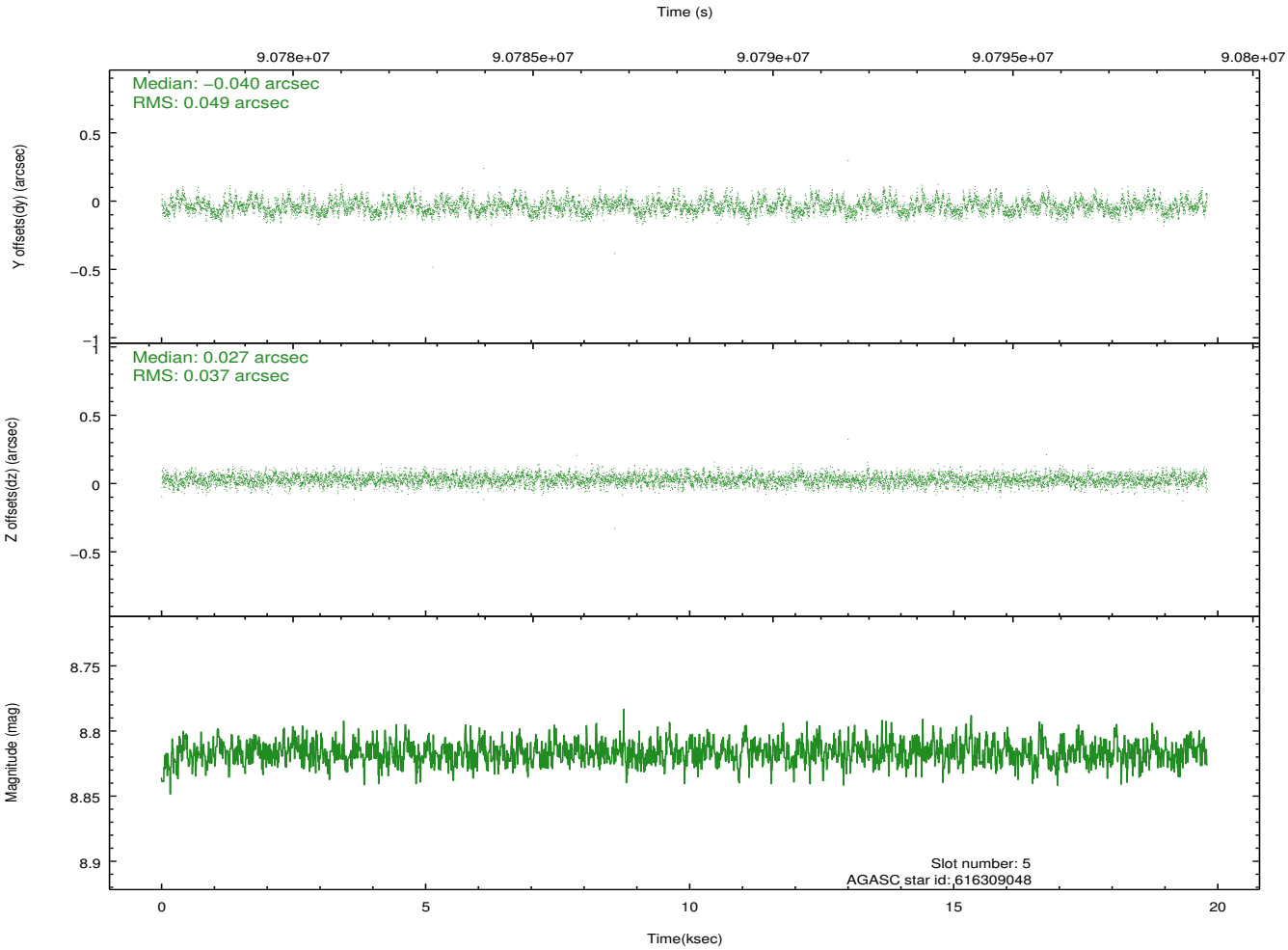

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.082 arcsec
Slot number: 4
AGASC star id: 616308896
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)


Time (s)
Median: 0.015 arcsec
RMS: 0.031 arcsec
Y offsets(dy) (arcsec)
Median: −0.081 arcsec
RMS: 0.037 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 4
AGASC star id: 616308896
Time(ksec)

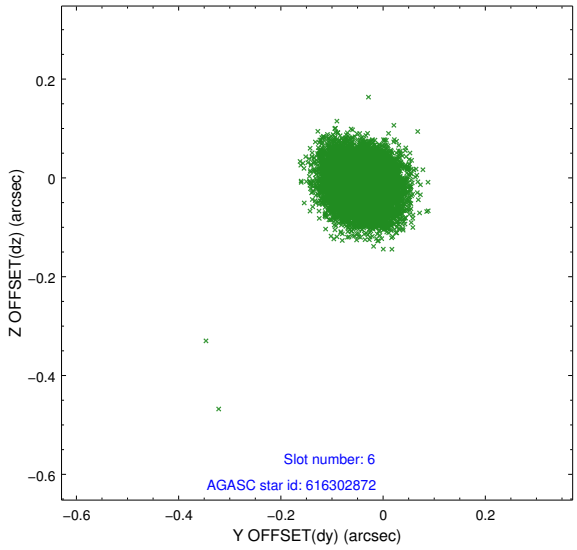
2.4.3 Slot 5

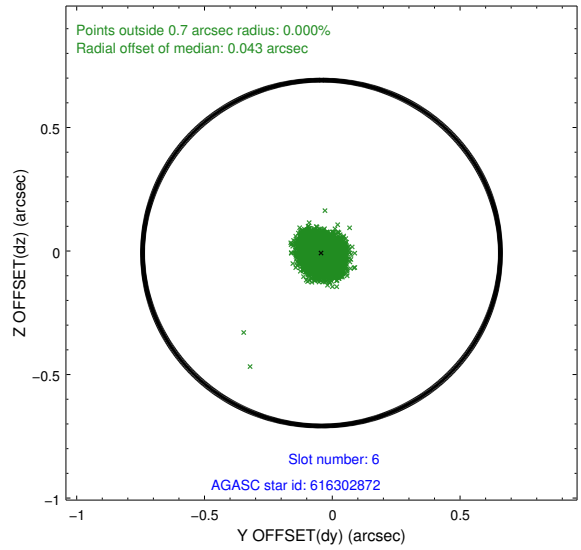

Slot number: 5
AGASC star id: 616309048
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)

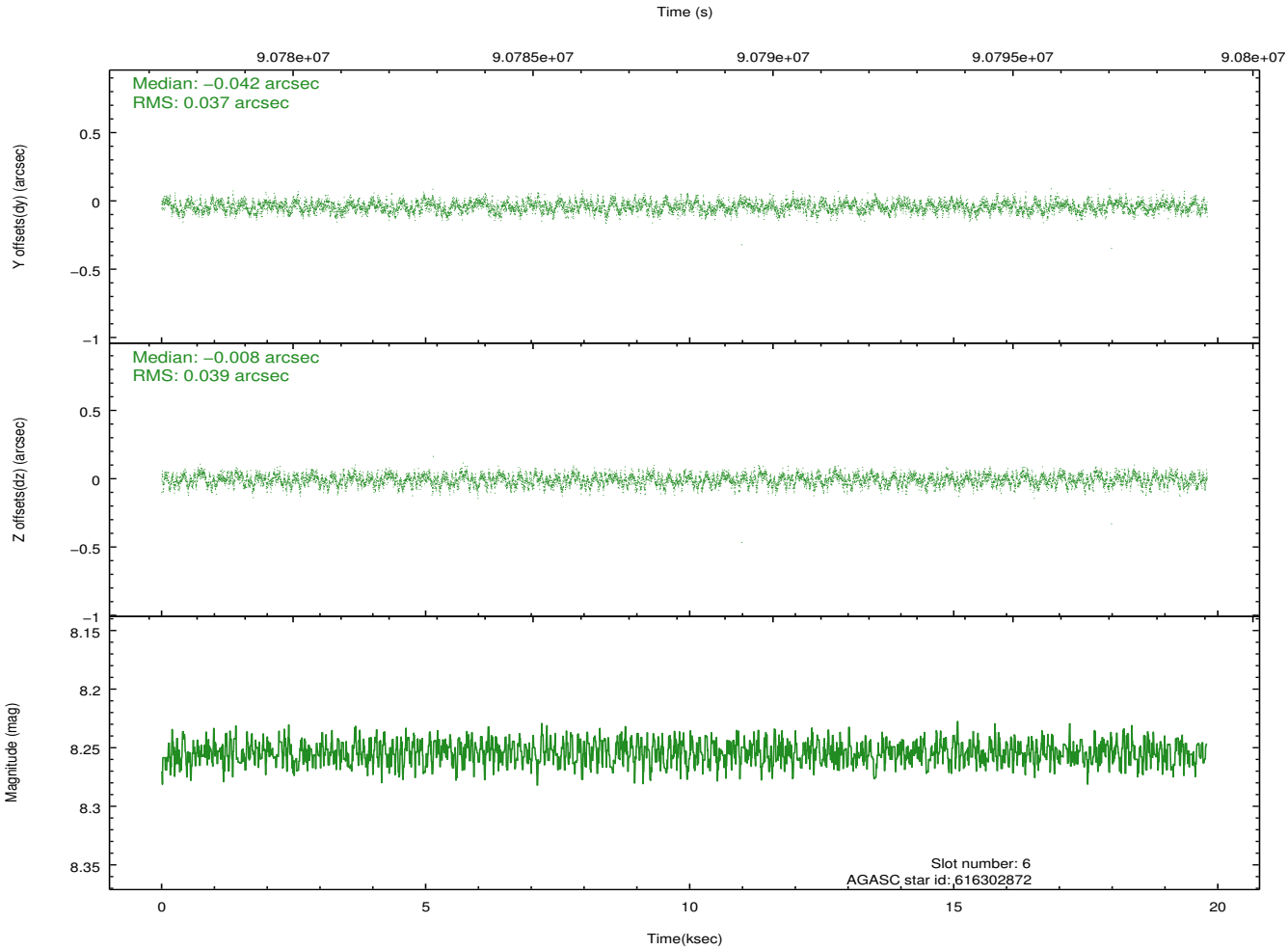

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.049 arcsec
Slot number: 5
AGASC star id: 616309048
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)


Time (s)
Median: −0.040 arcsec
RMS: 0.049 arcsec
Y offsets(dy) (arcsec)
Median: 0.027 arcsec
RMS: 0.037 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 5
AGASC star id: 616309048
Time(ksec)

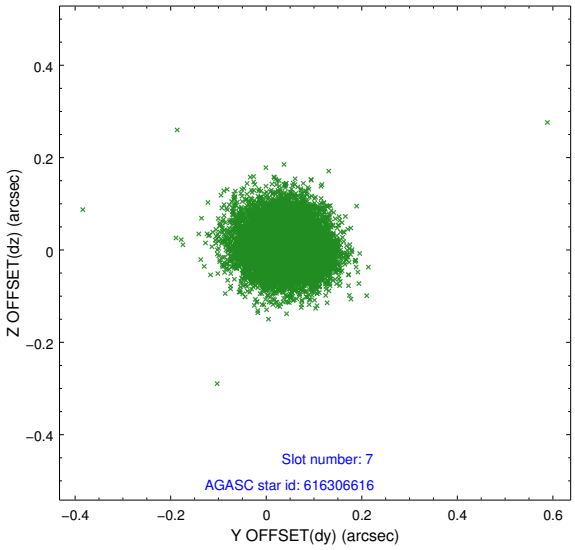
2.4.4 Slot 6

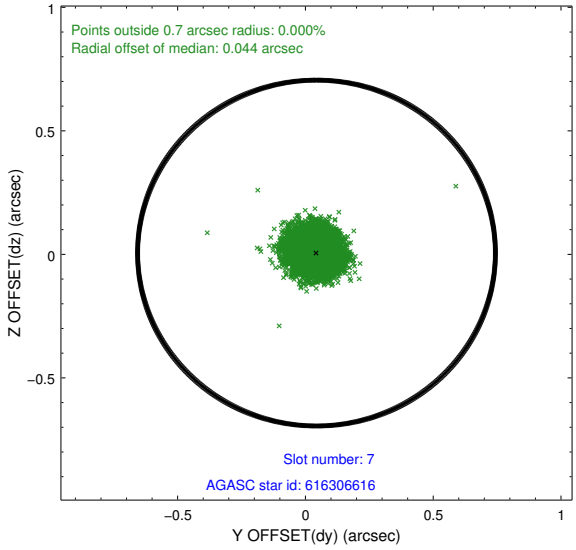

Slot number: 6
AGASC star id: 616302872
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)

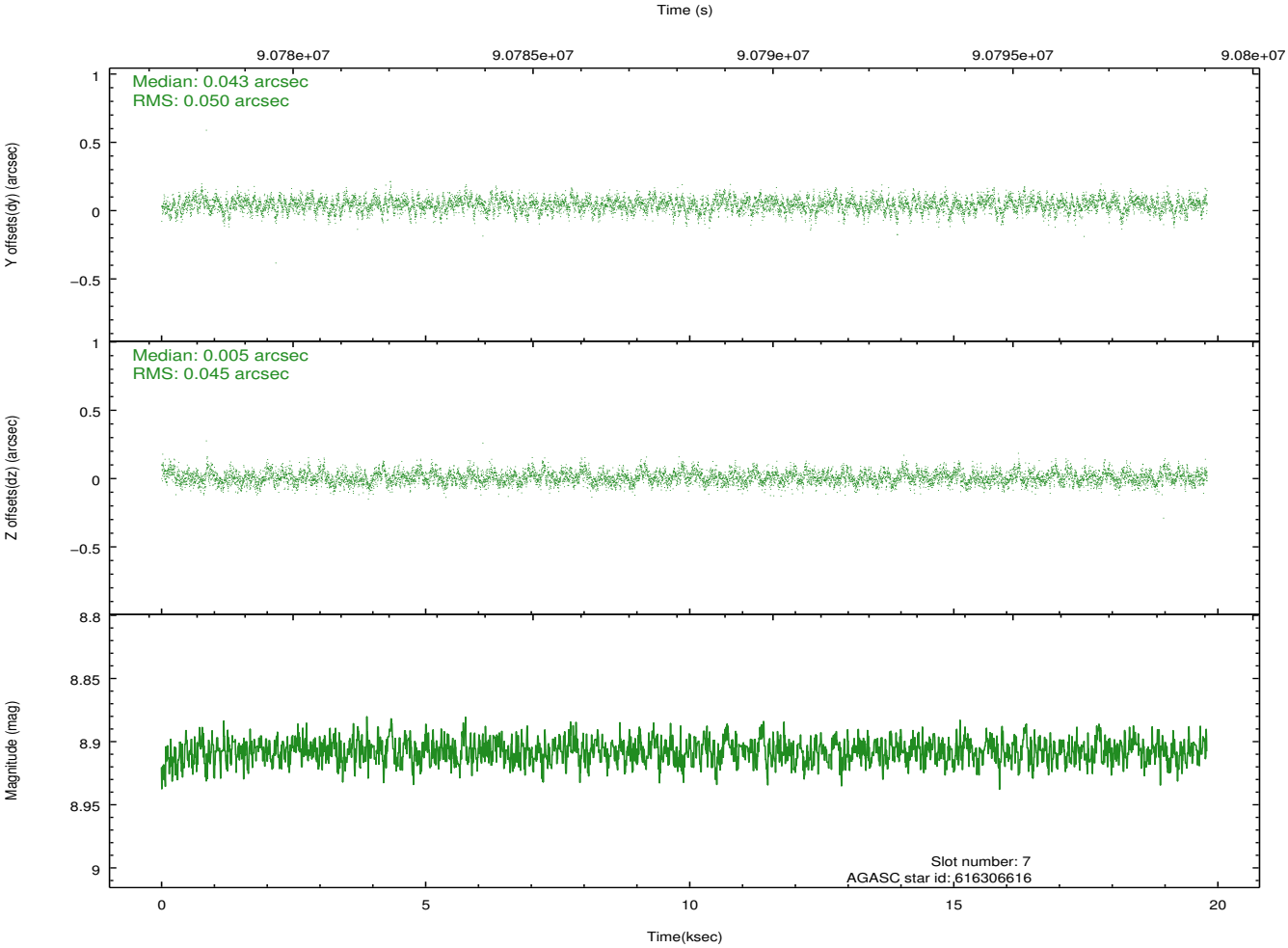

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.043 arcsec
Slot number: 6
AGASC star id: 616302872
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)


Time (s)
Median: −0.042 arcsec
RMS: 0.037 arcsec
Y offsets(dy) (arcsec)
Median: −0.008 arcsec
RMS: 0.039 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 6
AGASC star id: 616302872
Time(ksec)

2.4.5 Slot 7

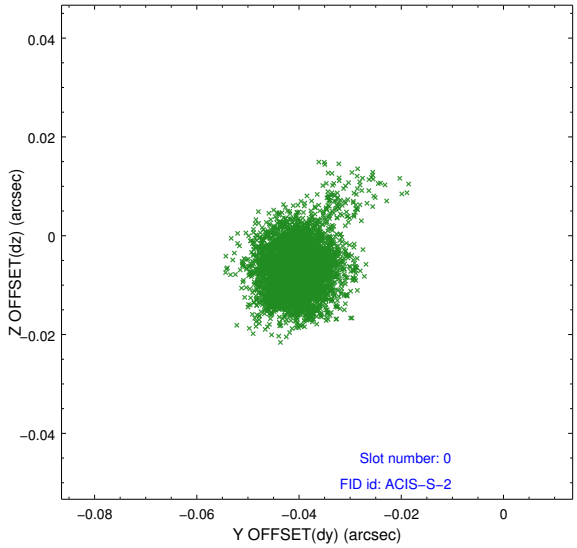

Slot number: 7
AGASC star id: 616306616
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)

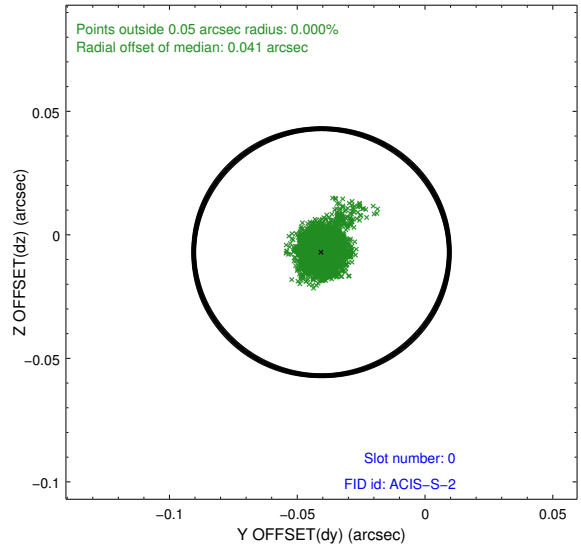

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.044 arcsec
Slot number: 7
AGASC star id: 616306616
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)

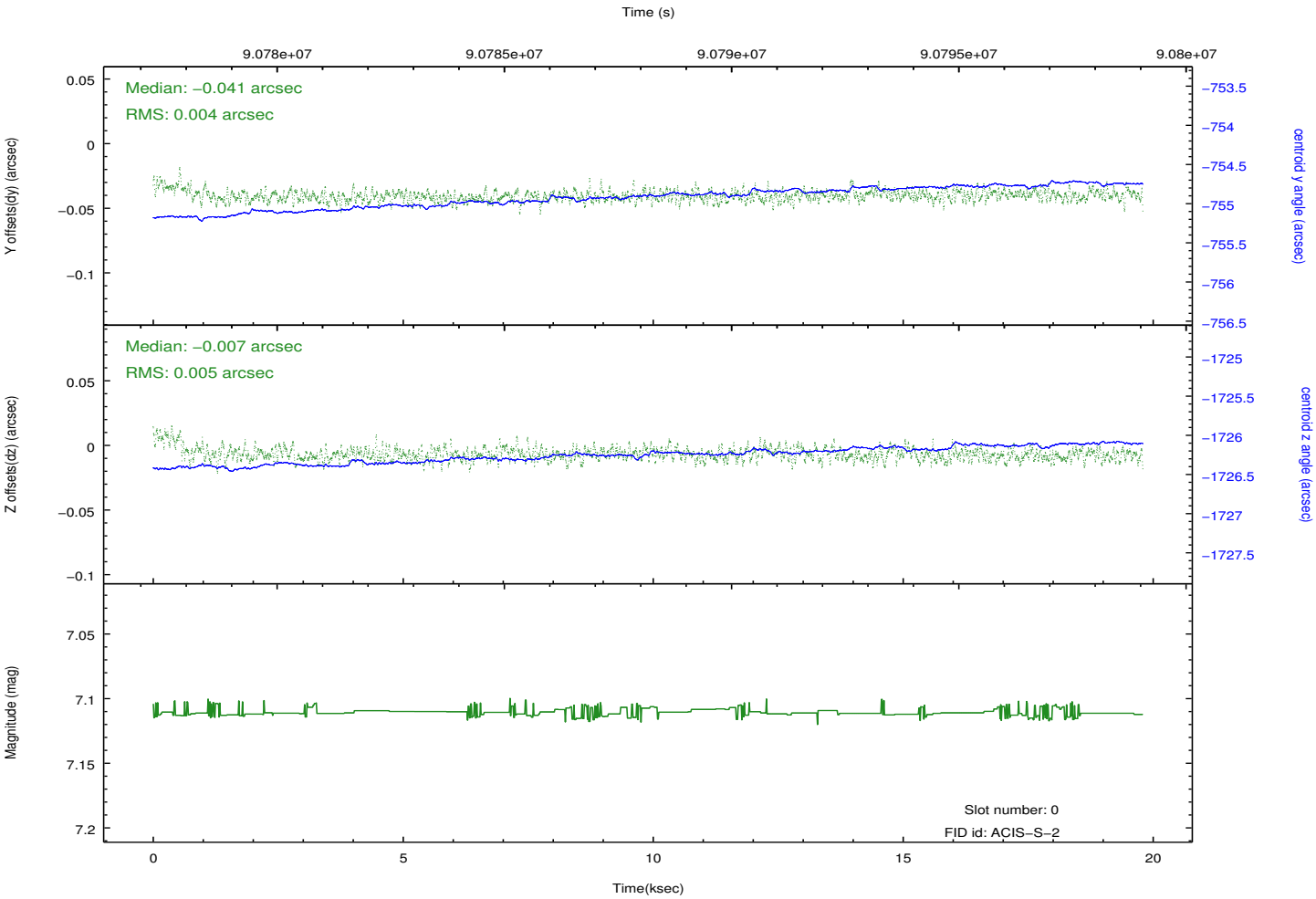

Time (s)
9.078e+07
9.0785e+07
9.079e+07
9.0795e+07
9.08e+07
Median: 0.043 arcsec
RMS: 0.050 arcsec
Y offsets(dy) (arcsec)
Median: 0.005 arcsec
RMS: 0.045 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 7
AGASC star id: 616306616
Time(ksec)

2.5 FID Slots

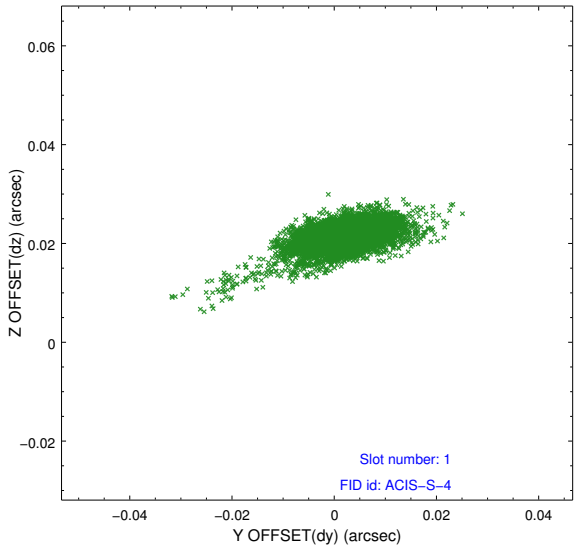
2.5.1 Slot 0

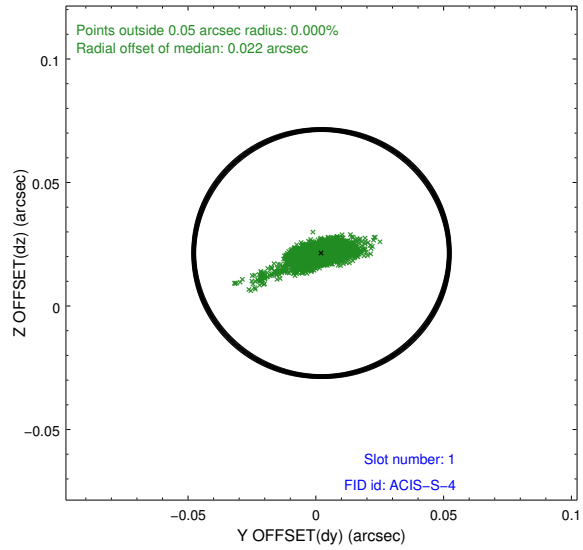


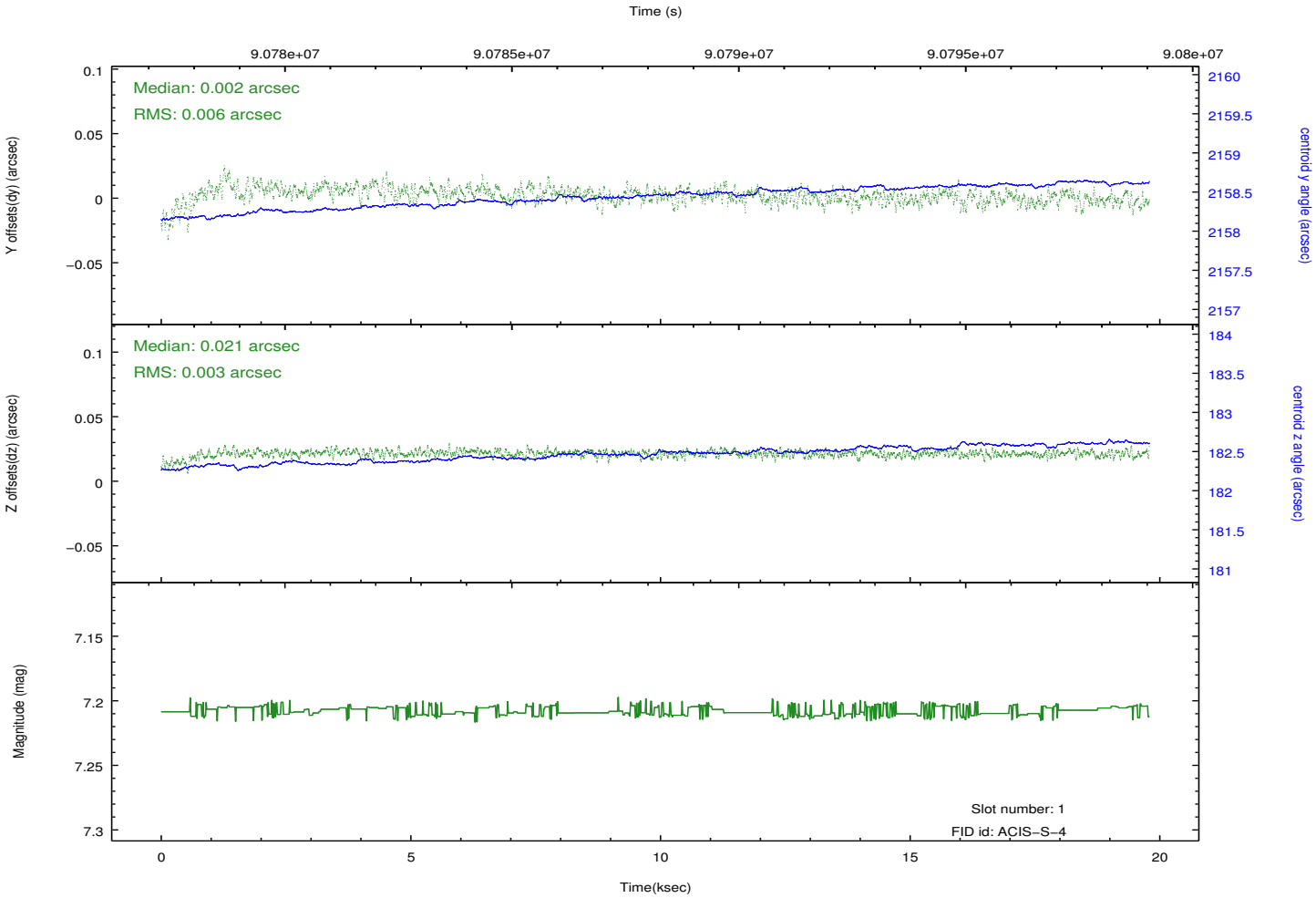




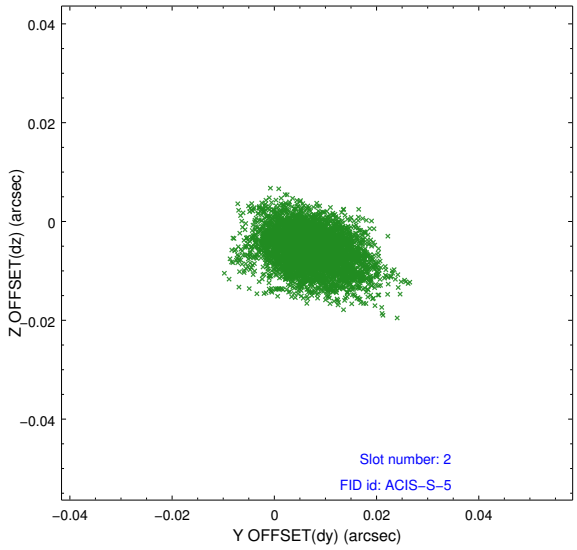
2.5.2 Slot 1

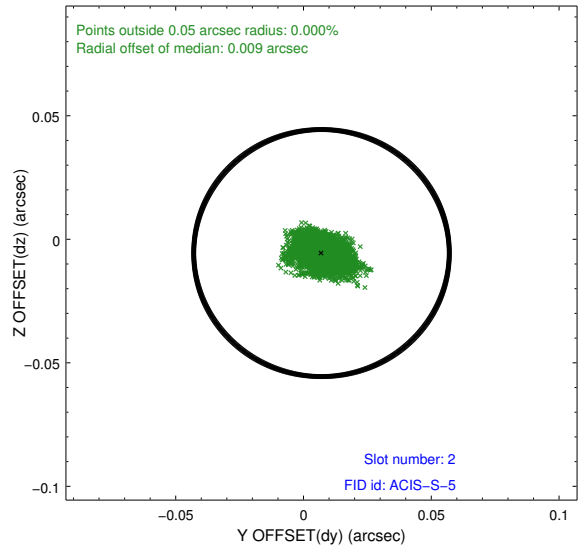

Slot number: 1
FID id: ACIS−S−4
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)

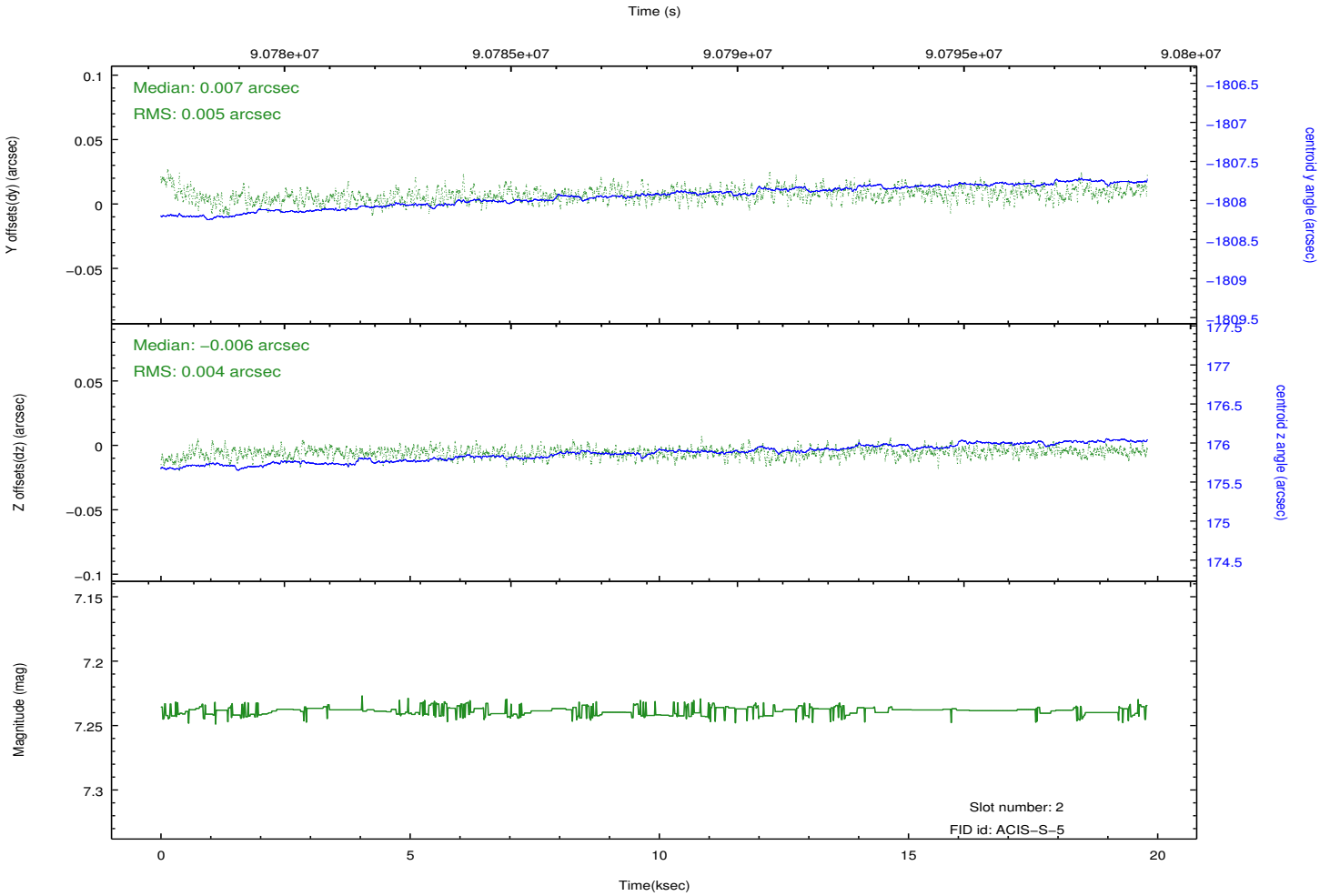

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.022 arcsec
Slot number: 1
FID id: ACIS−S−4
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)


Time (s)
Median: 0.002 arcsec
RMS: 0.006 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.021 arcsec
RMS: 0.003 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


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


Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.009 arcsec
Slot number: 2
FID id: ACIS−S−5
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)


Time (s)
Median: 0.007 arcsec
RMS: 0.005 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.006 arcsec
RMS: 0.004 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number: 2
FID id: ACIS−S−5
Time(ksec)

A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.09.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	19.763

A.2 Comments