V&V Reference Report
L2 ASCDS Version : 8.4.5

Observation 12681 - L2 Version 2
Chandra X-Ray Center

L2 Processing Date : Jul 5 2012

Contents

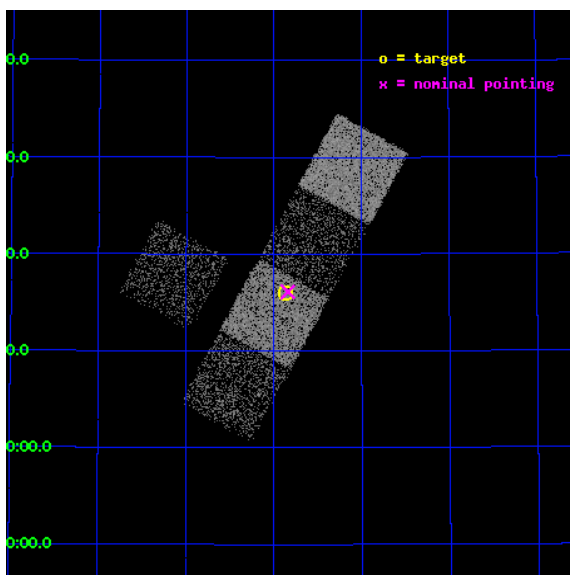
1 Front **2**

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	501514	Sequence number
obs_id	12681	Observation id
title	Completing Identification of the Nearest and Brightest Neutron Stars	
observer	Prof. Derek Fox	Principal investigator
object	1RXSJ053051.9+521606	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	82.717083	Observer's specified target RA [deg]
dec_targ	52.266194	Observer's specified target Dec [deg]
ra_nom	82.710316627251	Nominal RA [deg]
dec_nom	52.268483151497	Nominal Dec [deg]
roll_nom	118.8444577134	Nominal Roll [deg]
revision	2	Processing version of data
ontime	2039.6079670191	Sum of GTIs [s]
livetime	2012.9589873924	Livetime [s]
ontime3	2039.4848470092	Sum of GTIs [s]
ontime5	2039.5669270158	Sum of GTIs [s]
ontime6	2039.5258870125	Sum of GTIs [s]
ontime7	2039.6079670191	Sum of GTIs [s]
ontime8	2039.4438070059	Sum of GTIs [s]
l2events	22269	Number of level 2 events

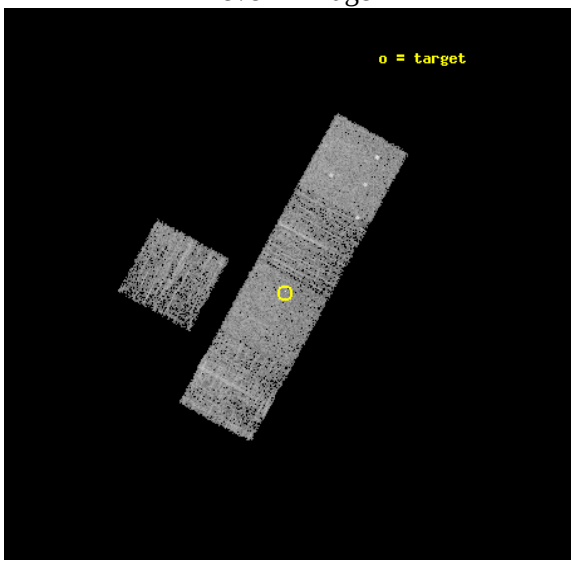


2 OBI

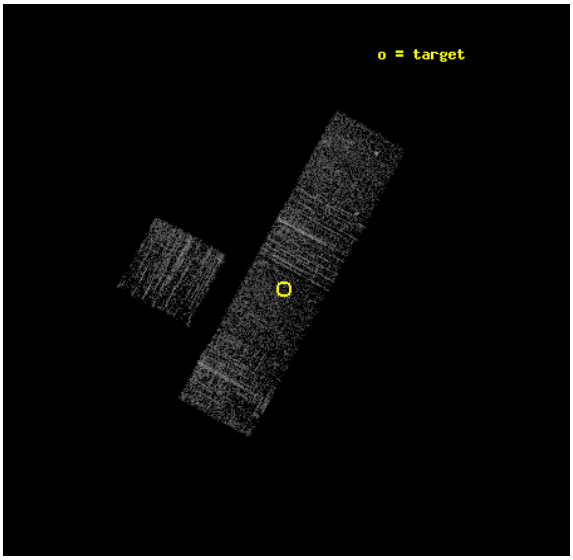
2.1 OBI

2.1.1 Images

Level 1 Image

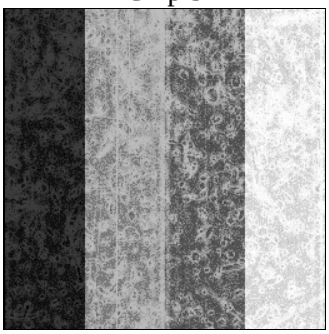


Level 1 Bad Events

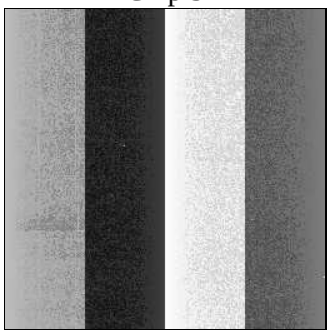


2.1.2 Bias

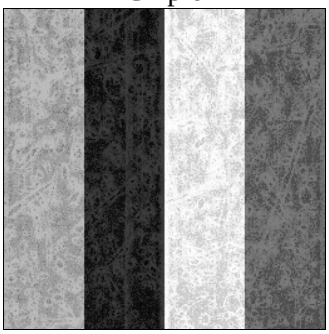
Chip 3



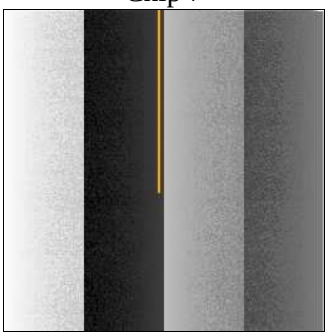
Chip 5



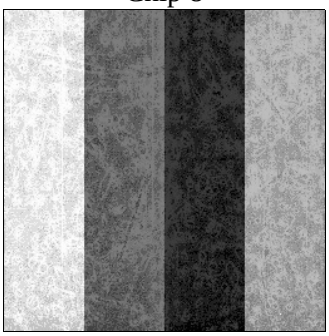
Chip 6



Chip 7



Chip 8



2.1.3 Parameters

obi_num	0	Obi number
ascdsver	8.4.5	Processing system revision
caldbver	4.5.0	
date	2012-07-05T21:00:54	Date and time of file creation
revision	2	Processing version of data

sched_exp_time	2000.000000	[s] Scheduled observation exposure time
ontime	2039.6079670191	Sum of GTIs [s]
ontime3	2039.4848470092	Sum of GTIs [s]
ontime5	2039.5669270158	Sum of GTIs [s]
ontime6	2039.5258870125	Sum of GTIs [s]
ontime7	2039.6079670191	Sum of GTIs [s]
ontime8	2039.4438070059	Sum of GTIs [s]
l1events	90461	Number of level 1 events

2.1.4 Events

	ccd 3	**ccd 5**	**ccd 6**	**ccd 7**	**ccd 8**
level 1 events	14287	23191	16094	18170	18719
rejected events	12862	11657	14473	10107	13961
rejected %	90%	50%	89%	55%	74%

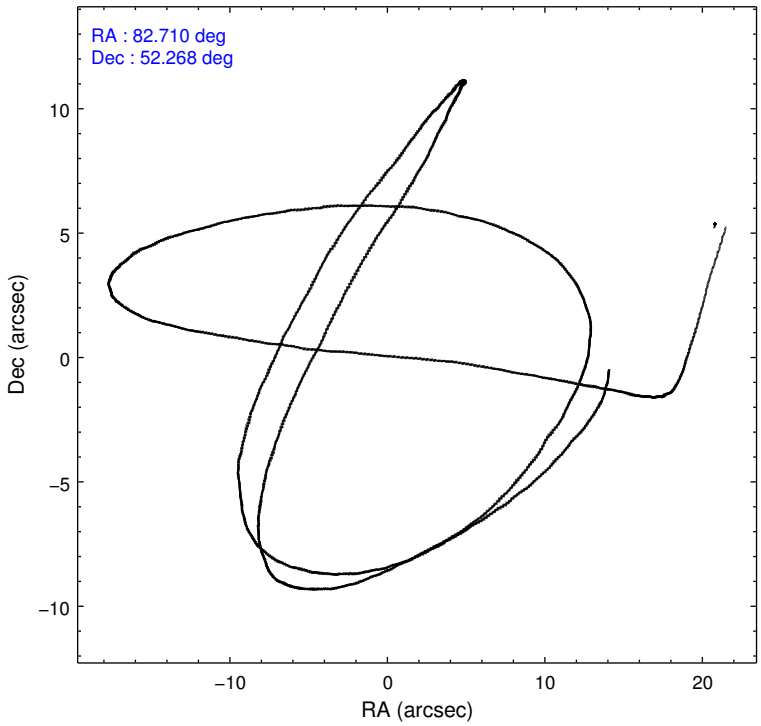
	ccd 3	**ccd 5**	**ccd 6**	**ccd 7**	**ccd 8**
grade 0 events	533	1498	591	803	1459
	3%	6%	3%	4%	7%
grade 1 events	6	82	9	20	18
	0%	0%	0%	0%	0%
grade 2 events	311	3500	348	1650	1034
	2%	15%	2%	9%	5%
grade 3 events	159	421	172	739	495
	1%	1%	1%	4%	2%
grade 4 events	153	395	171	704	472
	1%	1%	1%	3%	2%
grade 5 events	689	1720	694	1808	959
	4%	7%	4%	9%	5%
grade 6 events	277	5757	344	4207	1305
	1%	24%	2%	23%	6%
grade 7 events	12159	9818	13765	8239	12977
	85%	42%	85%	45%	69%

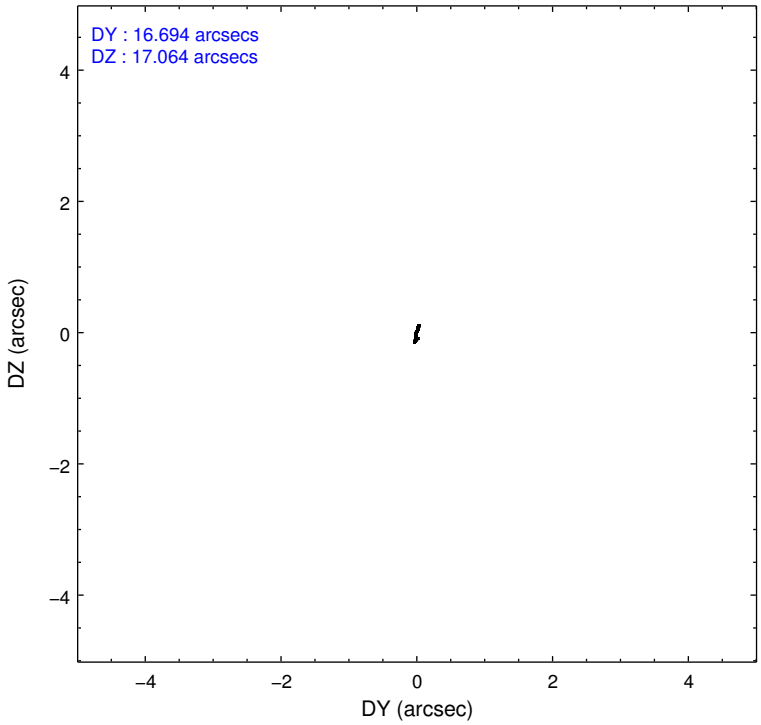
2.2 Compared Parameters

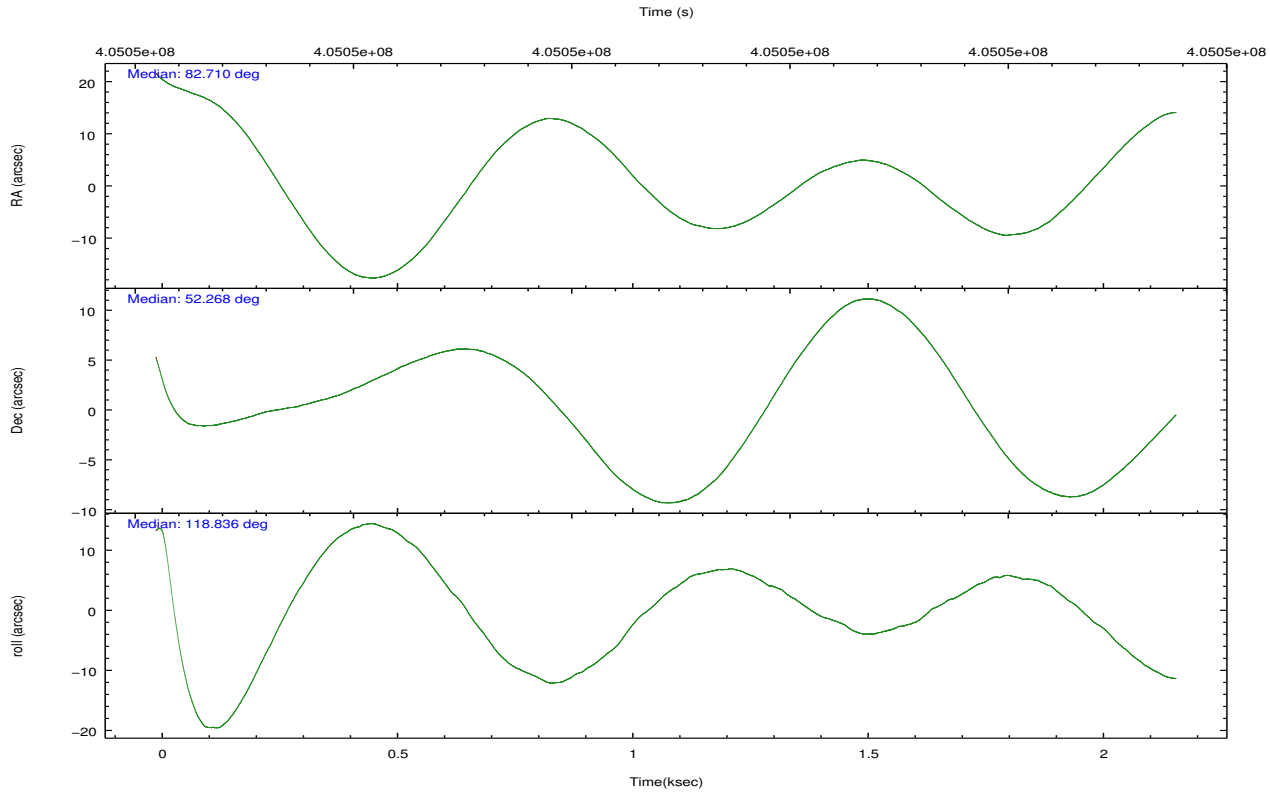
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-35678	ACIS-35678
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	82.748729	82.71031662725056
[deg] Pointing Dec	52.254756	52.26848315149704
[deg] Pointing Roll	118.657225	118.8444577134048
[mm] 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)	405050299.184000	405049326.15562
Observation start date	2010-11-02T01:57:13	2010-11-02T01:42:06
[s] Observation end time (MET)	405052299.184000	405053042.80581
Observation end date	2010-11-02T02:30:33	2010-11-02T02:44:02
Read mode	TIMED	TIMED

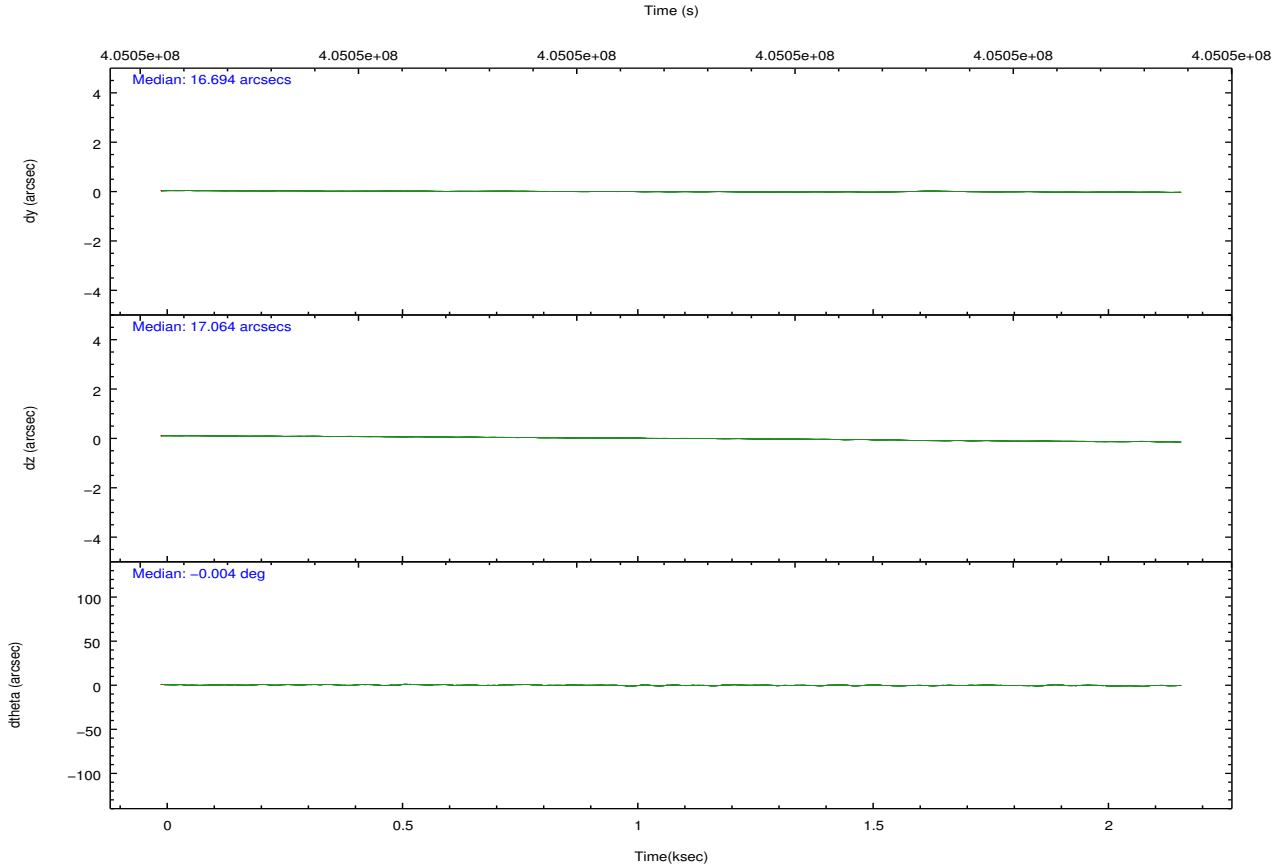
Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	N	N
CCD I1 on	N	N
CCD I2 on	N	N
CCD I3 on	Y	Y
CCD S0 on	N	N
CCD S1 on	O1	Y
CCD S2 on	Y	Y
CCD S3 on	Y	Y
CCD S4 on	Y	Y
CCD S5 on	N	N
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

2.3 Aspect


RA : 82.710 deg
Dec : 52.268 deg
Dec (arcsec)
RA (arcsec)
10
5
0
−5
−10
−10
0
10
20


DY : 16.694 arcsecs
DZ : 17.064 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
4.0505e+08
Median: 82.710 deg
RA (arcsec)
Median: 52.268 deg
Dec (arcsec)
Median: 118.836 deg
roll (arcsec)
Time(ksec)

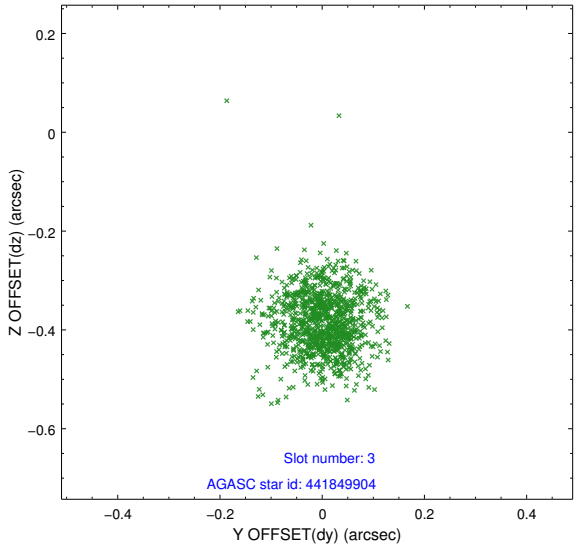

Time (s)
4.0505e+08
Median: 16.694 arcsecs
dy (arcsec)
Median: 17.064 arcsecs
dz (arcsec)
Median: −0.004 deg
dtheta (arcsec)
Time(ksec)

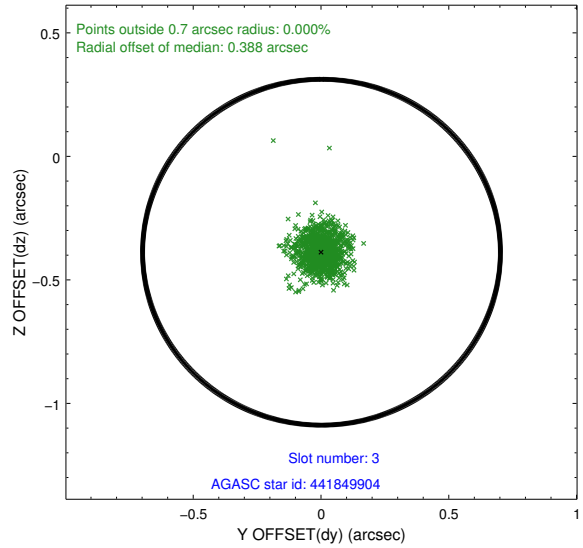
Slot Statistics

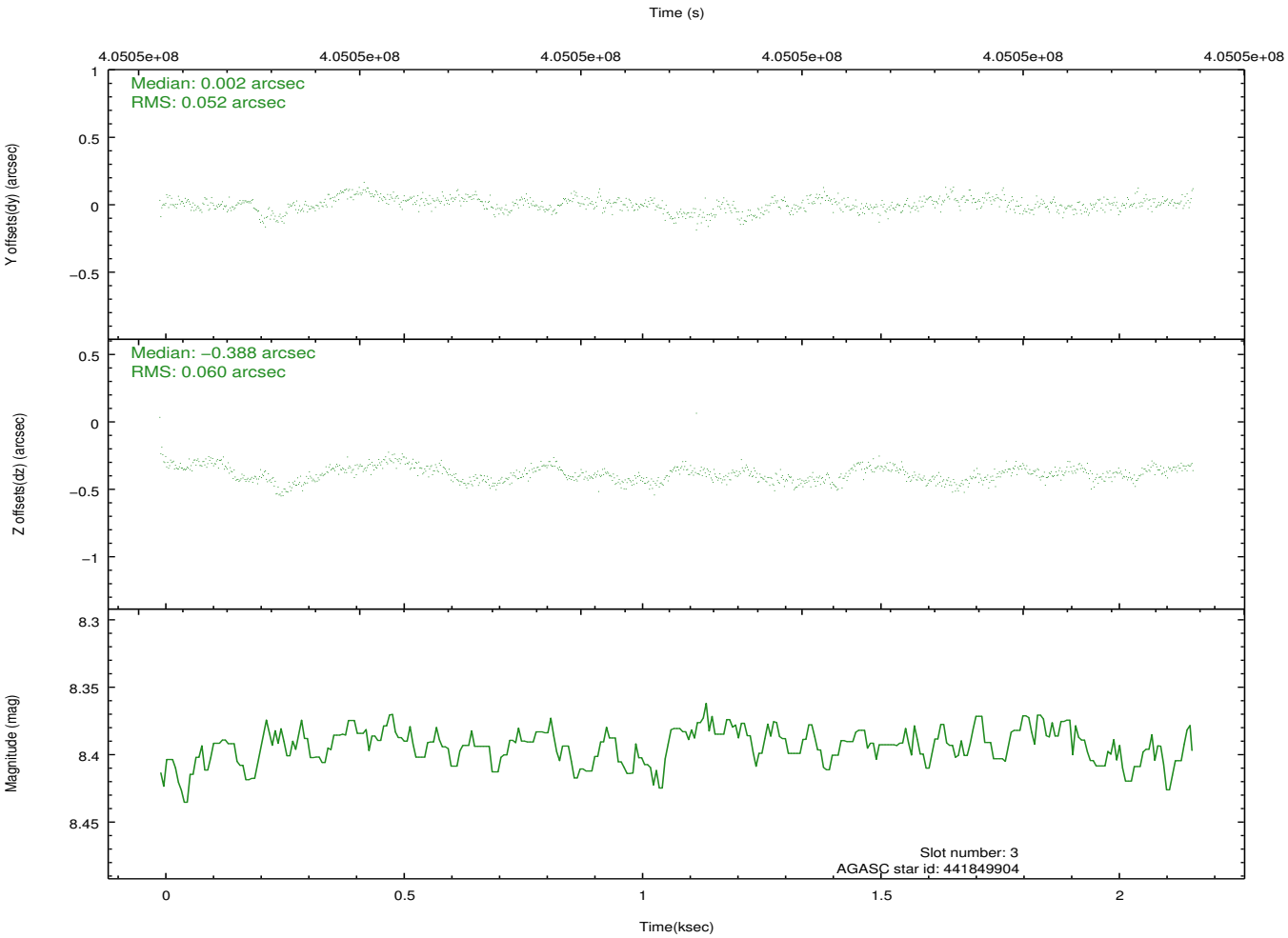
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.98	529	0.070	-0.056	0.008	0.012	0.000000	0.000000	926.36	-1734.14
1	FID	ACIS-S-4	6.98	529	0.083	0.010	0.007	0.010	0.000000	0.000000	2145.47	166.95
2	FID	ACIS-S-5	7.02	529	-0.179	0.059	0.005	0.010	0.000000	0.000000	-1818.88	164.06
3	GUIDE	441849904	8.39	1058	0.002	-0.388	0.083	0.135	82.229857	51.758224	-1009.97	1869.56
4	GUIDE	441855776	8.84	1058	0.252	0.050	0.093	0.158	83.565642	52.223645	-953.33	-1529.79
5	GUIDE	491266080	8.97	1058	-0.002	0.108	0.090	0.154	82.977156	53.007968	2142.83	-1735.83
6	GUIDE	491392704	8.63	1058	-0.646	0.126	0.090	0.153	83.449890	52.585572	318.56	-1921.68
7	GUIDE	441849872	9.81	1052	0.398	0.101	0.157	0.266	83.005474	52.327126	-39.92	-622.64

2.4 Star Slots

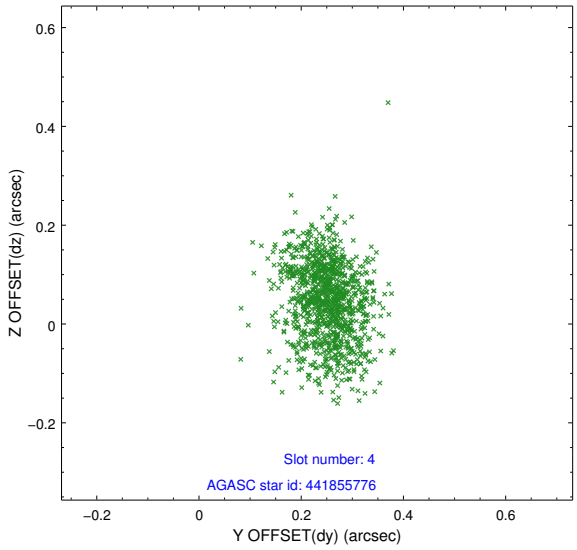
2.4.1 Slot 3

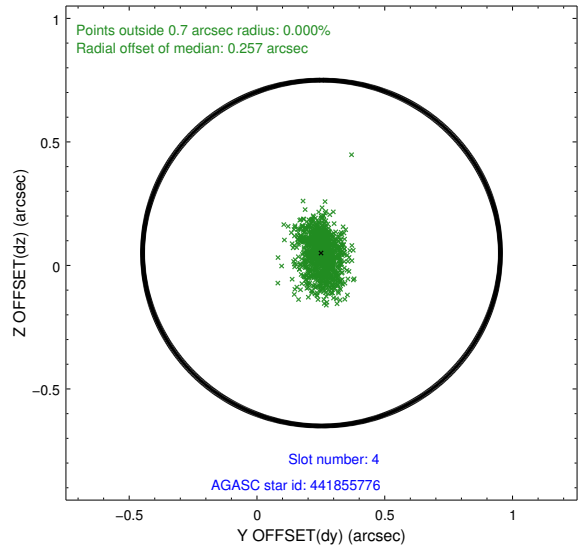


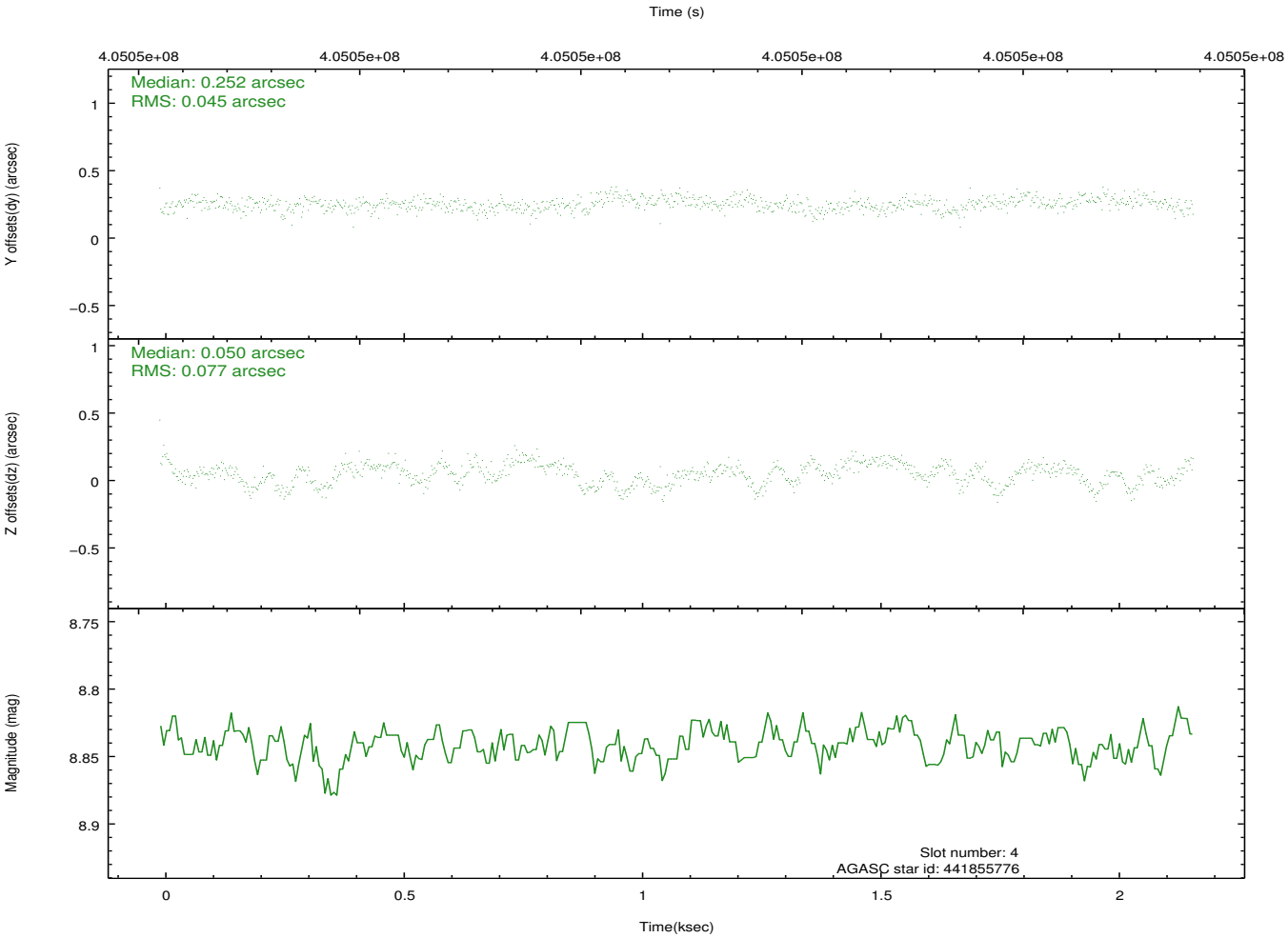




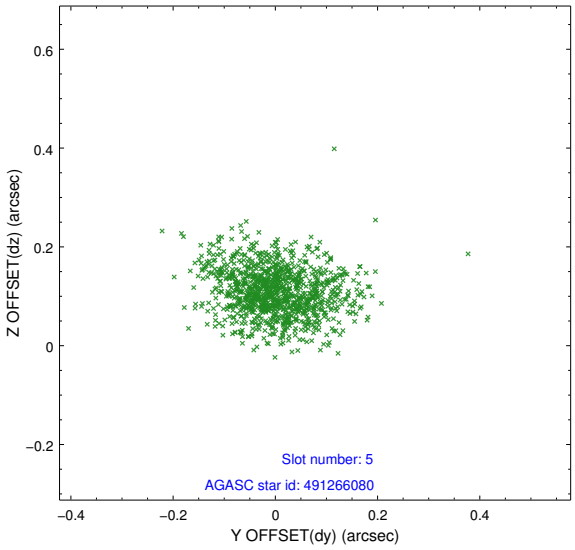
2.4.2 Slot 4

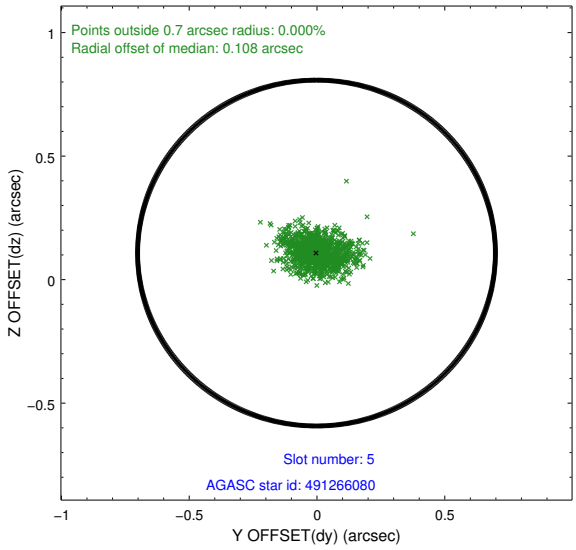

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 441855776

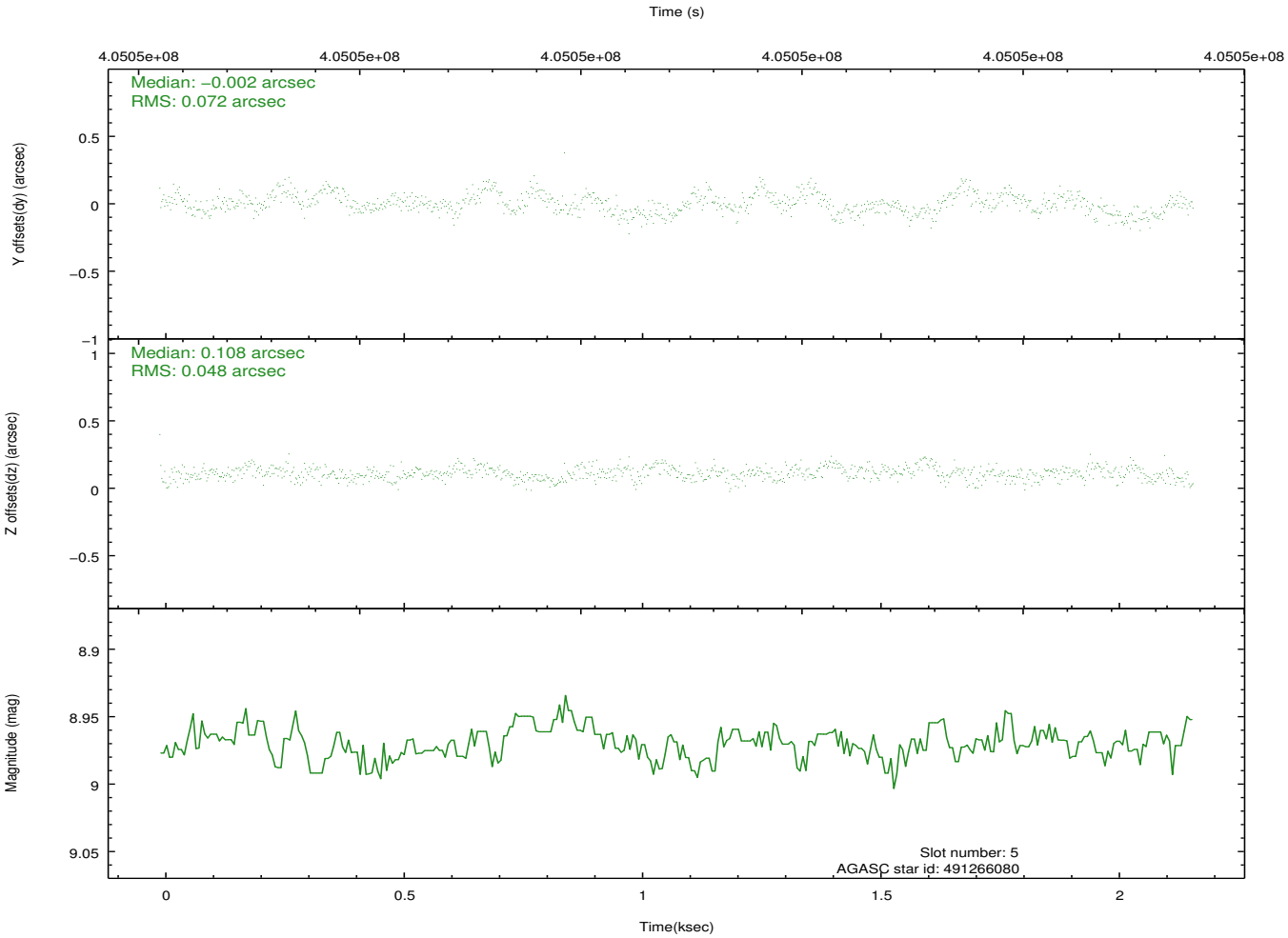

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.257 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 441855776


Time (s)
Median: 0.252 arcsec
RMS: 0.045 arcsec
Y offsets(dy) (arcsec)
Median: 0.050 arcsec
RMS: 0.077 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 4
AGASC star id: 441855776
Time(ksec)

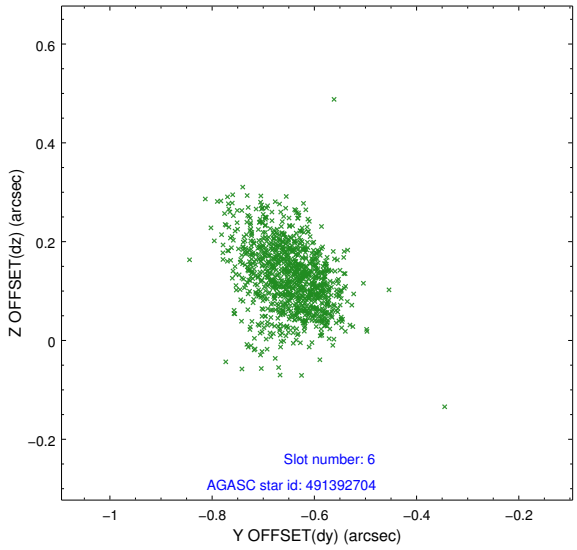
2.4.3 Slot 5

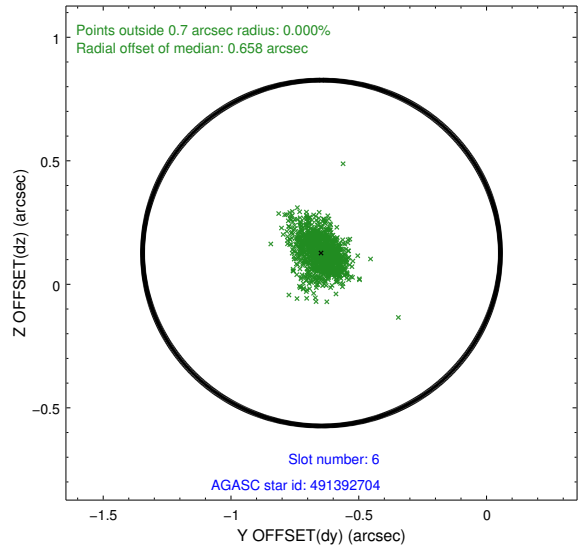

Slot number: 5
AGASC star id: 491266080
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)

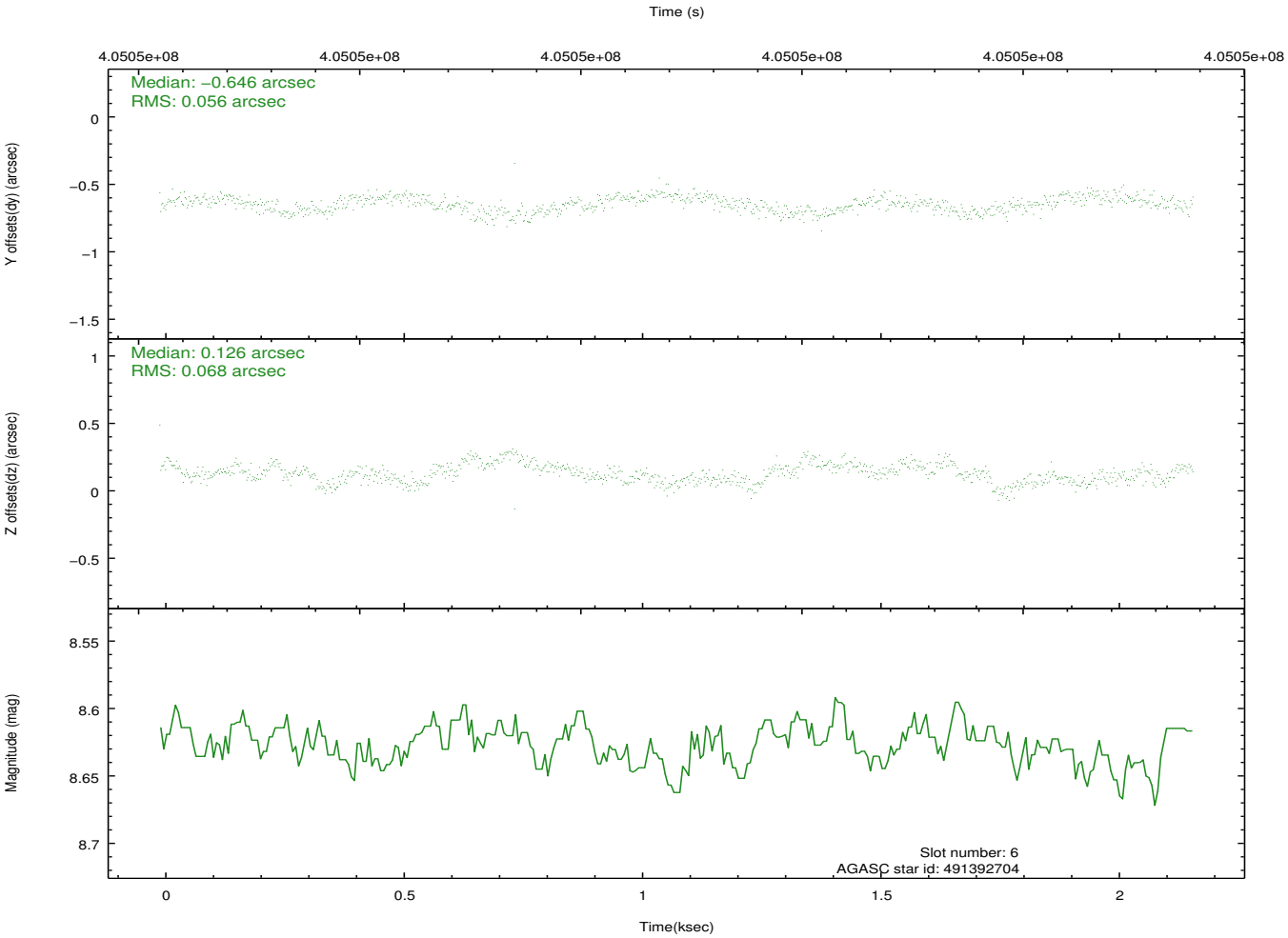

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.108 arcsec
Slot number: 5
AGASC star id: 491266080
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)


Time (s)
Median: −0.002 arcsec
RMS: 0.072 arcsec
Y offsets(dy) (arcsec)
Median: 0.108 arcsec
RMS: 0.048 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 5
AGASC star id: 491266080
Time(ksec)

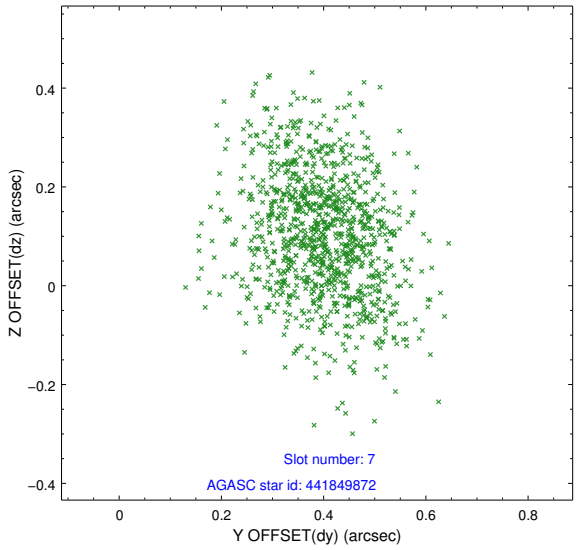
2.4.4 Slot 6

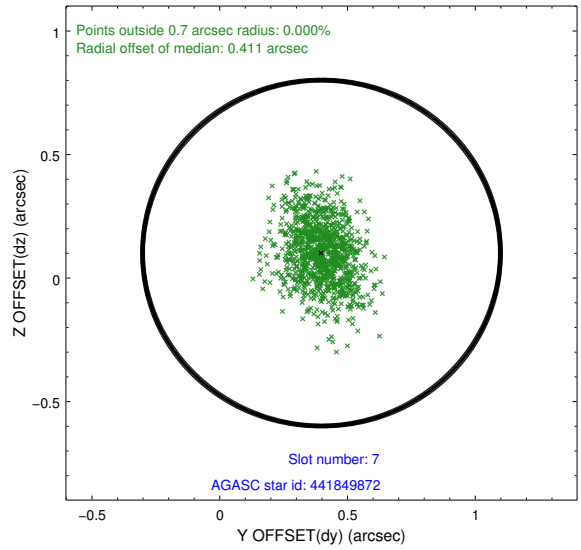

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 491392704

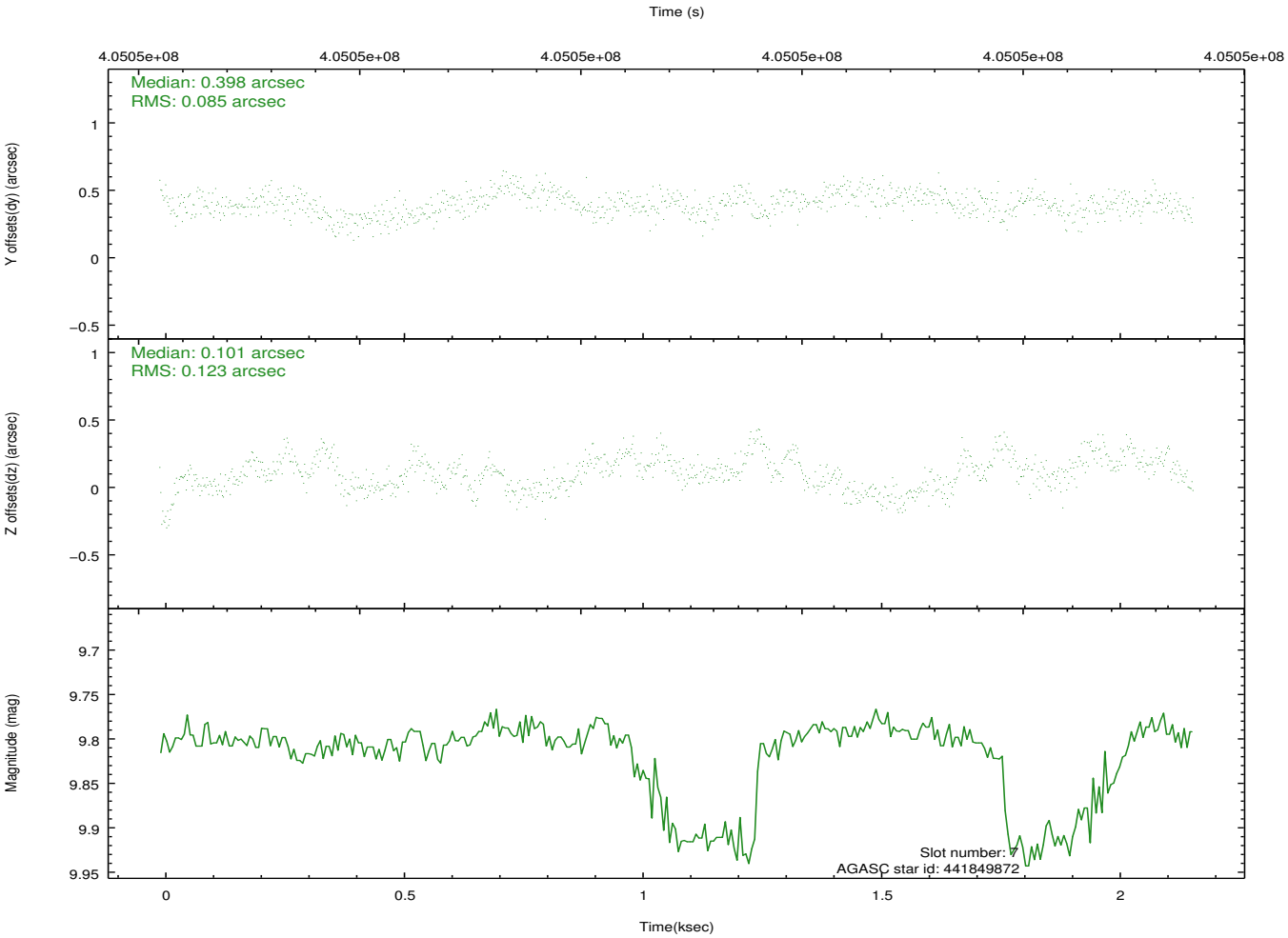

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.658 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 491392704


Time (s)
Median: −0.646 arcsec
RMS: 0.056 arcsec
Y offsets(dy) (arcsec)
Median: 0.126 arcsec
RMS: 0.068 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 6
AGASC star id: 491392704
Time(ksec)

2.4.5 Slot 7

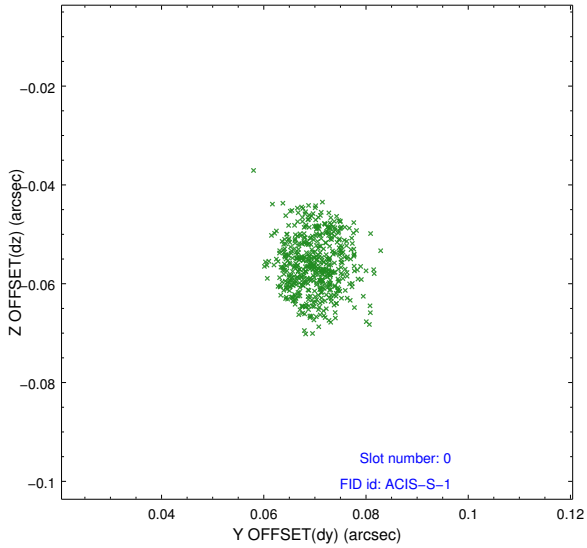

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 441849872

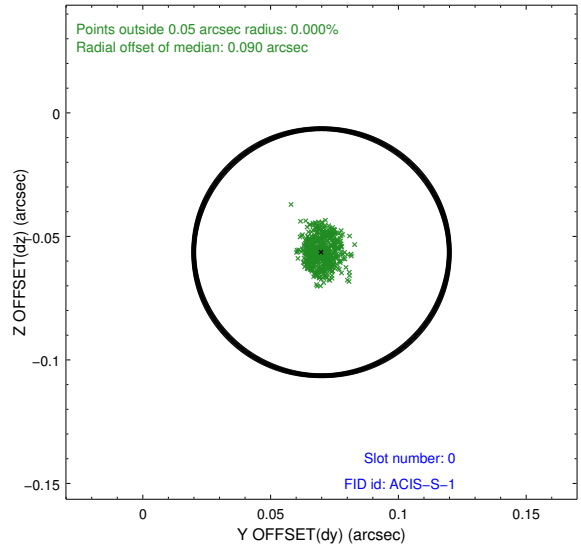

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.411 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 441849872

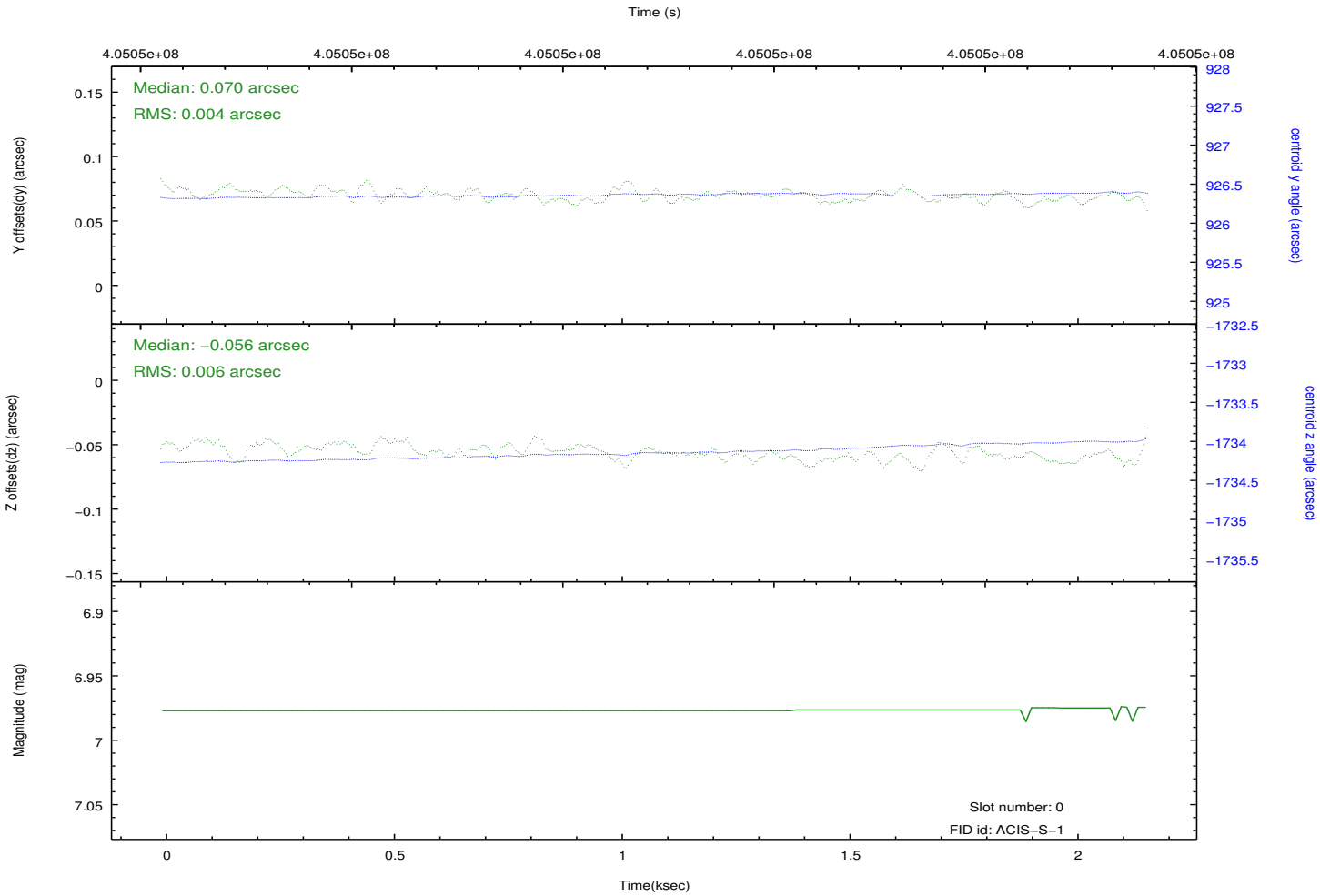

Time (s)
Median: 0.398 arcsec
RMS: 0.085 arcsec
Y offsets(dy) (arcsec)
Median: 0.101 arcsec
RMS: 0.123 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 7
AGASC star id: 441849872
Time(ksec)

2.5 FID Slots

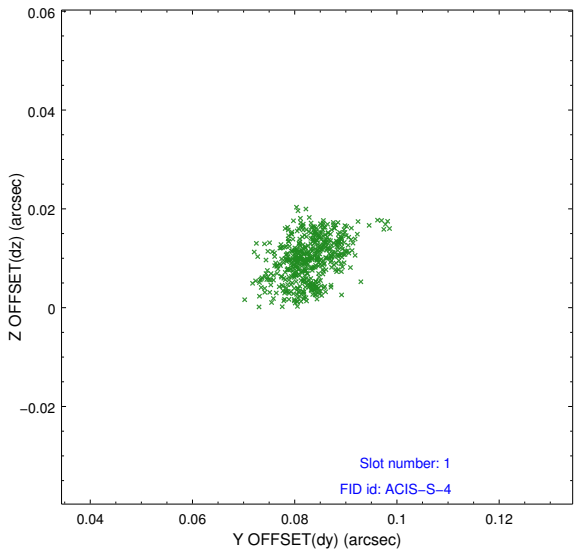
2.5.1 Slot 0

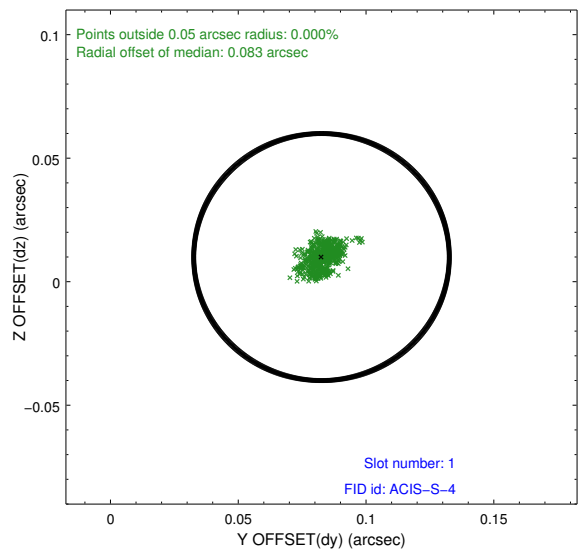


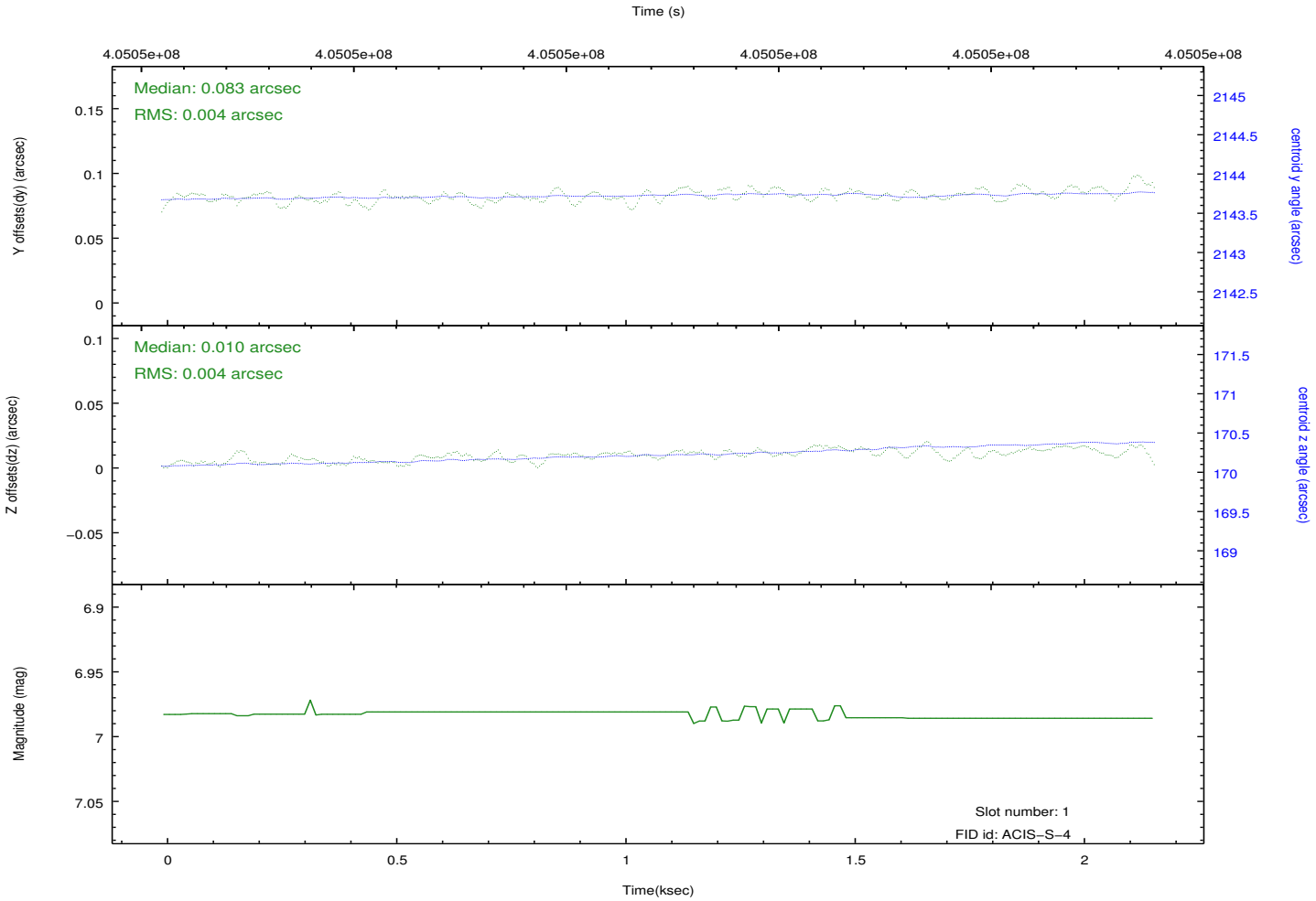




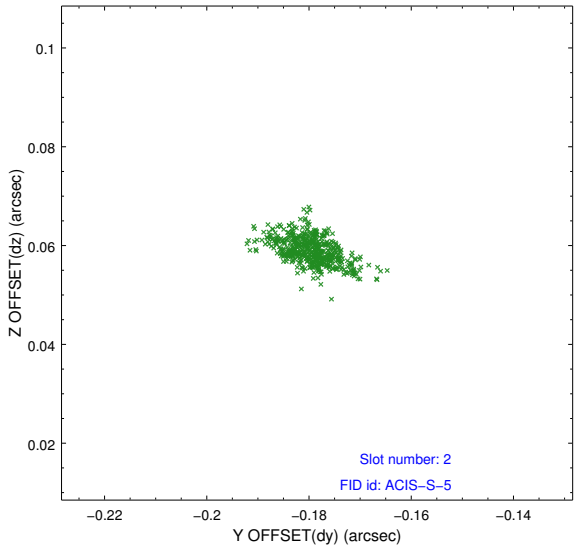
2.5.2 Slot 1

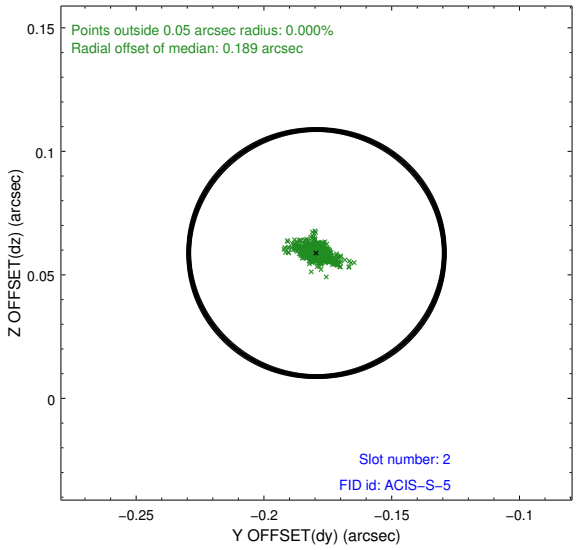

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−S−4

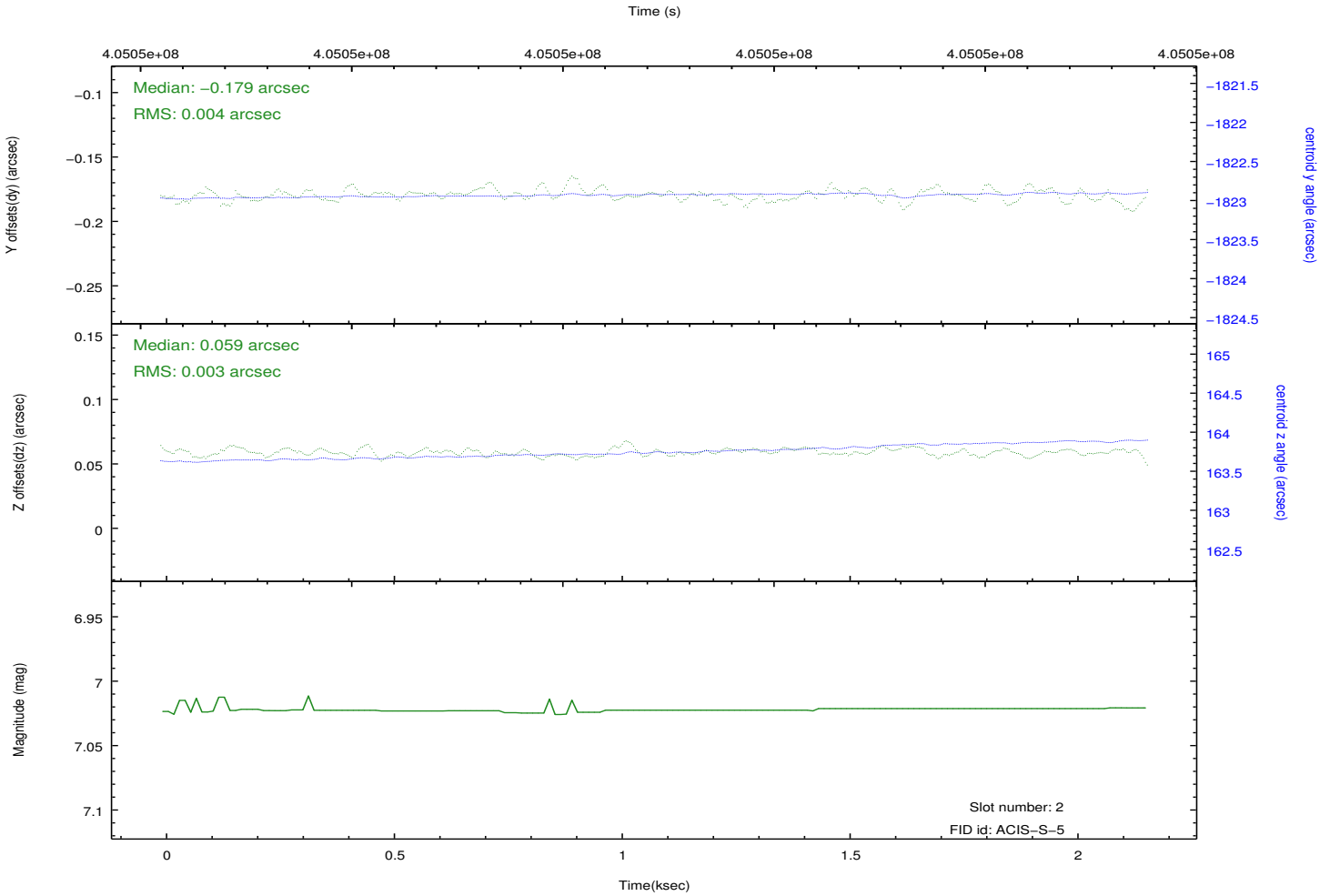

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.083 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−S−4


Time (s)
Median: 0.083 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.010 arcsec
RMS: 0.004 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: 0.189 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 2
FID id: ACIS−S−5


Time (s)
Median: −0.179 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.059 arcsec
RMS: 0.003 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)	2012.07.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	2.0396079629064

A.2 Comments