V&V Reference Report
L2 ASCDS Version : 8.4.5

Observation 4745 - L2 Version 3
Chandra X-Ray Center

L2 Processing Date : Nov 10 2012

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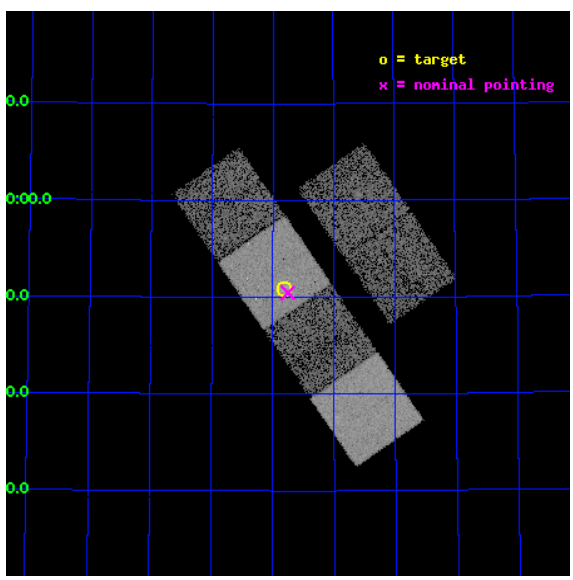
1 Front

seq_num	600400	Sequence number
obs_id	4745	Observation id
title	The discrete X-ray source populations in an age sequence of nearby starburst galaxies	Proposal title
observer	Dr Andreas Zezas	Principal investigator
object	NGC1569	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	67.704167	Observer's specified target RA [deg]
dec_targ	64.848056	Observer's specified target Dec [deg]
ra_nom	67.688298468714	Nominal RA [deg]
dec_nom	64.841135672314	Nominal Dec [deg]
roll_nom	235.53367150308	Nominal Roll [deg]
revision	3	Processing version of data
ontime	10153.599962175	Sum of GTIs [s]
livetime	10025.02896569	Livetime [s]
ontime2	10153.599962175	Sum of GTIs [s]
ontime3	10153.599962175	Sum of GTIs [s]
ontime5	10153.599962175	Sum of GTIs [s]
ontime6	10153.599962175	Sum of GTIs [s]
ontime7	10153.599962175	Sum of GTIs [s]
ontime8	10153.599962175	Sum of GTIs [s]
l2events	92796	Number of level 2 events

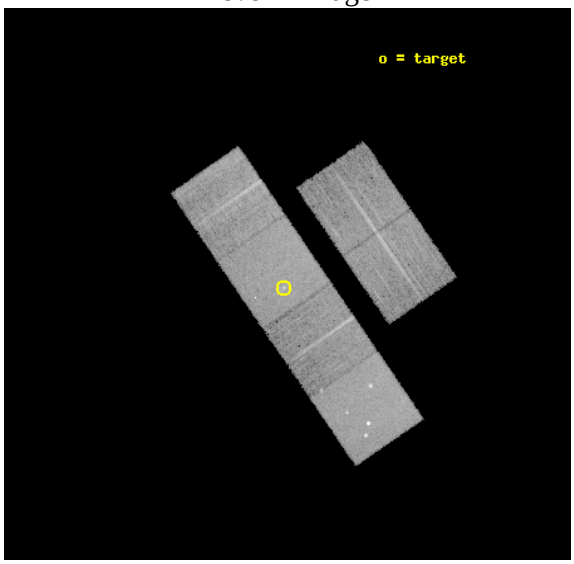


2 OBI

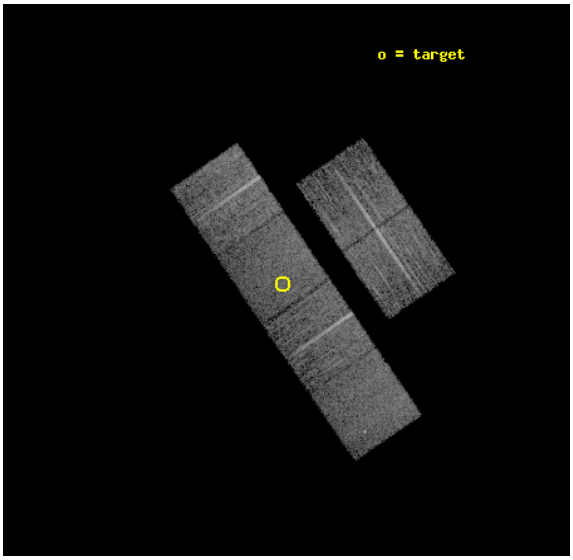
2.1 OBI

2.1.1 Images

Level 1 Image

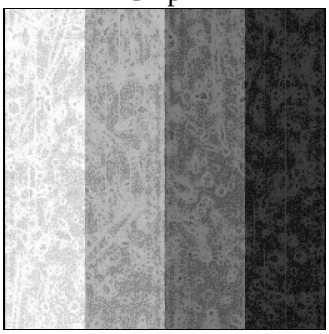


Level 1 Bad Events

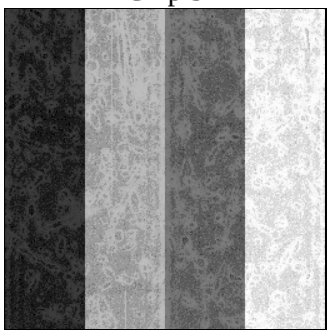


2.1.2 Bias

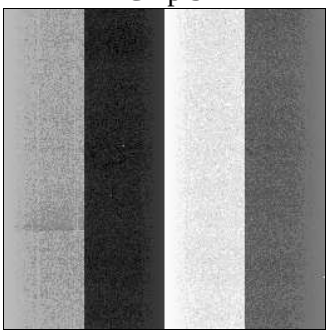
Chip 2



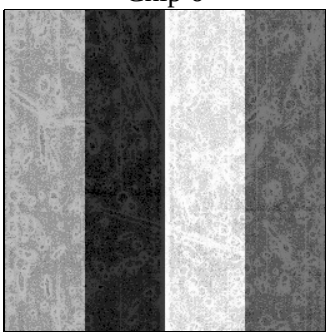
Chip 3



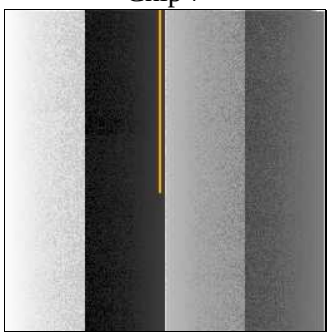
Chip 5



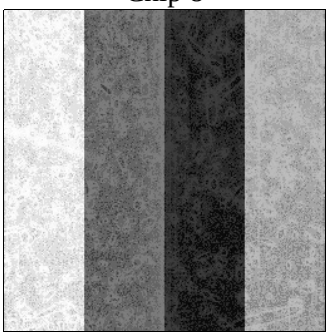
Chip 6



Chip 7



Chip 8



2.1.3 Parameters

obi_num	2	Obi number
ascdsver	8.4.5	Processing system revision
caldbver	4.5.2	
date	2012-11-10T05:52:36	Date and time of file creation
revision	3	Processing version of data

sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ontime	10153.599962175	Sum of GTIs [s]
ontime2	10153.599962175	Sum of GTIs [s]
ontime3	10153.599962175	Sum of GTIs [s]
ontime5	10153.599962175	Sum of GTIs [s]
ontime6	10153.599962175	Sum of GTIs [s]
ontime7	10153.599962175	Sum of GTIs [s]
ontime8	10153.599962175	Sum of GTIs [s]
l1events	410521	Number of level 1 events

2.1.4 Events

	ccd 2	**ccd 3**	**ccd 5**	**ccd 6**	**ccd 7**	**ccd 8**
level 1 events	59199	54518	88977	56236	79228	72363
rejected events	52328	47766	47369	49322	45878	57173
rejected %	88%	87%	53%	87%	57%	79%

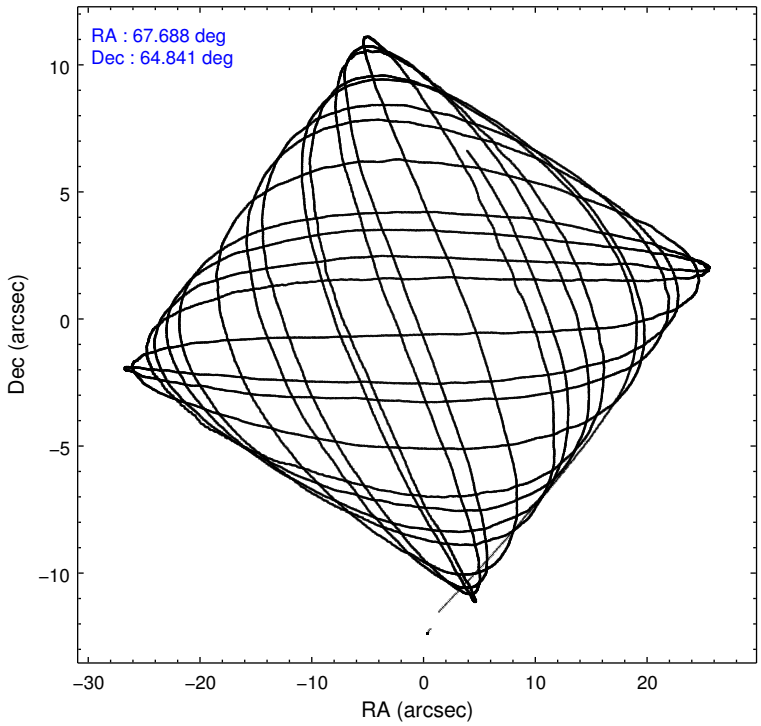
	ccd 2	**ccd 3**	**ccd 5**	**ccd 6**	**ccd 7**	**ccd 8**
grade 0 events	2986	2970	7292	2764	3496	5052
	5%	5%	8%	4%	4%	6%
grade 1 events	29	31	229	18	83	45
	0%	0%	0%	0%	0%	0%
grade 2 events	1460	1288	11489	1456	6758	3290
	2%	2%	12%	2%	8%	4%
grade 3 events	663	663	1484	658	2903	1601
	1%	1%	1%	1%	3%	2%
grade 4 events	649	634	1406	608	2978	1475
	1%	1%	1%	1%	3%	2%
grade 5 events	2285	2484	6241	2693	7487	3570
	3%	4%	7%	4%	9%	4%
grade 6 events	1171	1254	20326	1497	17549	3883
	1%	2%	22%	2%	22%	5%
grade 7 events	49956	45194	40510	46542	37974	53447
	84%	82%	45%	82%	47%	73%

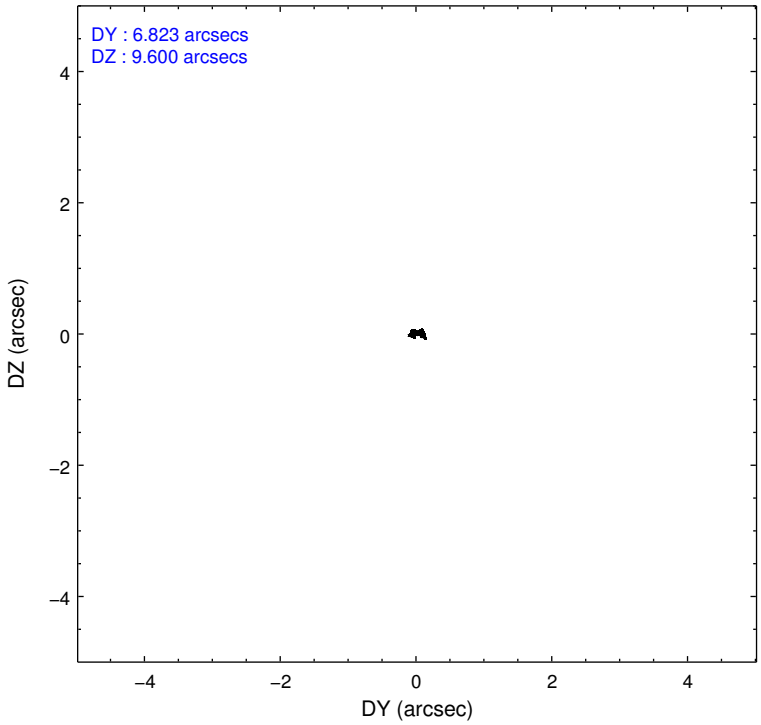
2.2 Compared Parameters

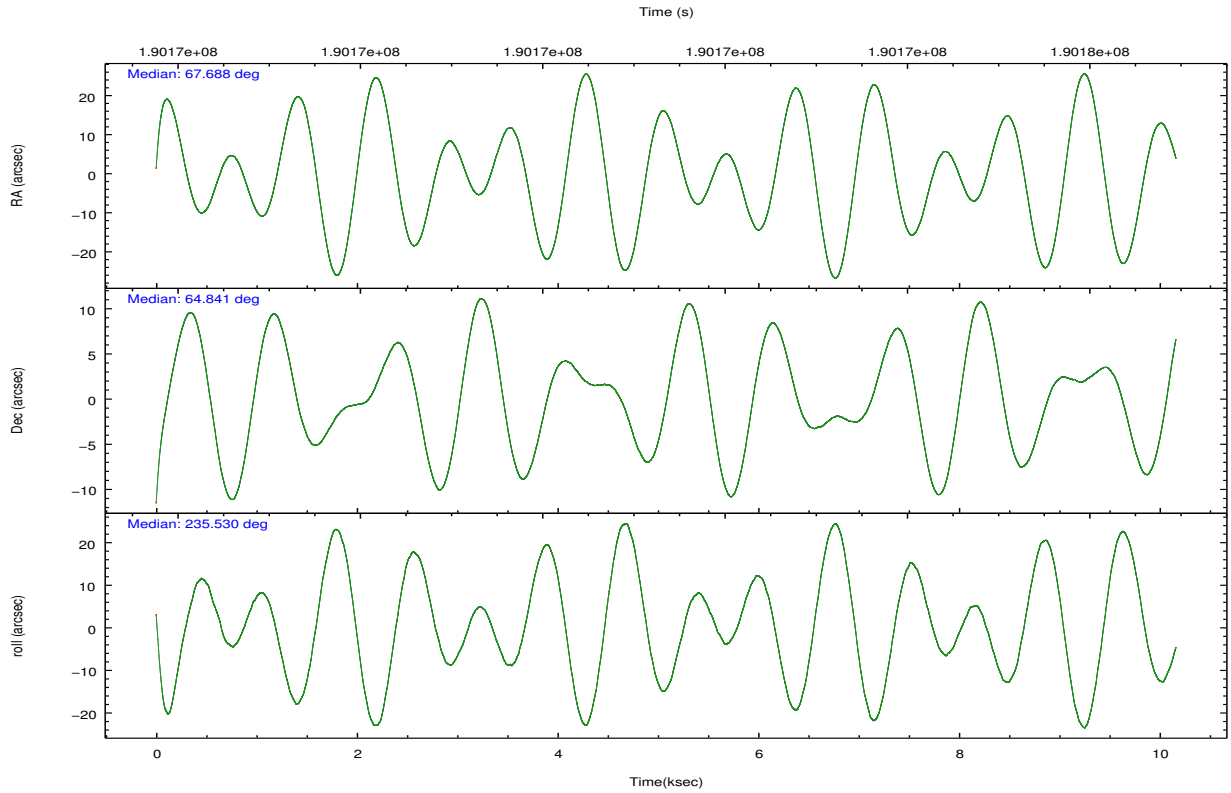
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-235678	ACIS-235678
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	67.692337	67.68829846871384
[deg] Pointing Dec	64.868326	64.84113567231424
[deg] Pointing Roll	235.373376	235.5336715030771
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1400660498719
[mm] SIM translation stage offset	0	0.00754346686406393
[s] Observation start time (MET)	190166429.184000	190165326.19801
Observation start date	2004-01-10T23:59:25	2004-01-10T23:42:06
[s] Observation end time (MET)	190176429.184000	190177131.63602
Observation end date	2004-01-11T02:46:05	2004-01-11T02:58:51
Read mode	TIMED	TIMED

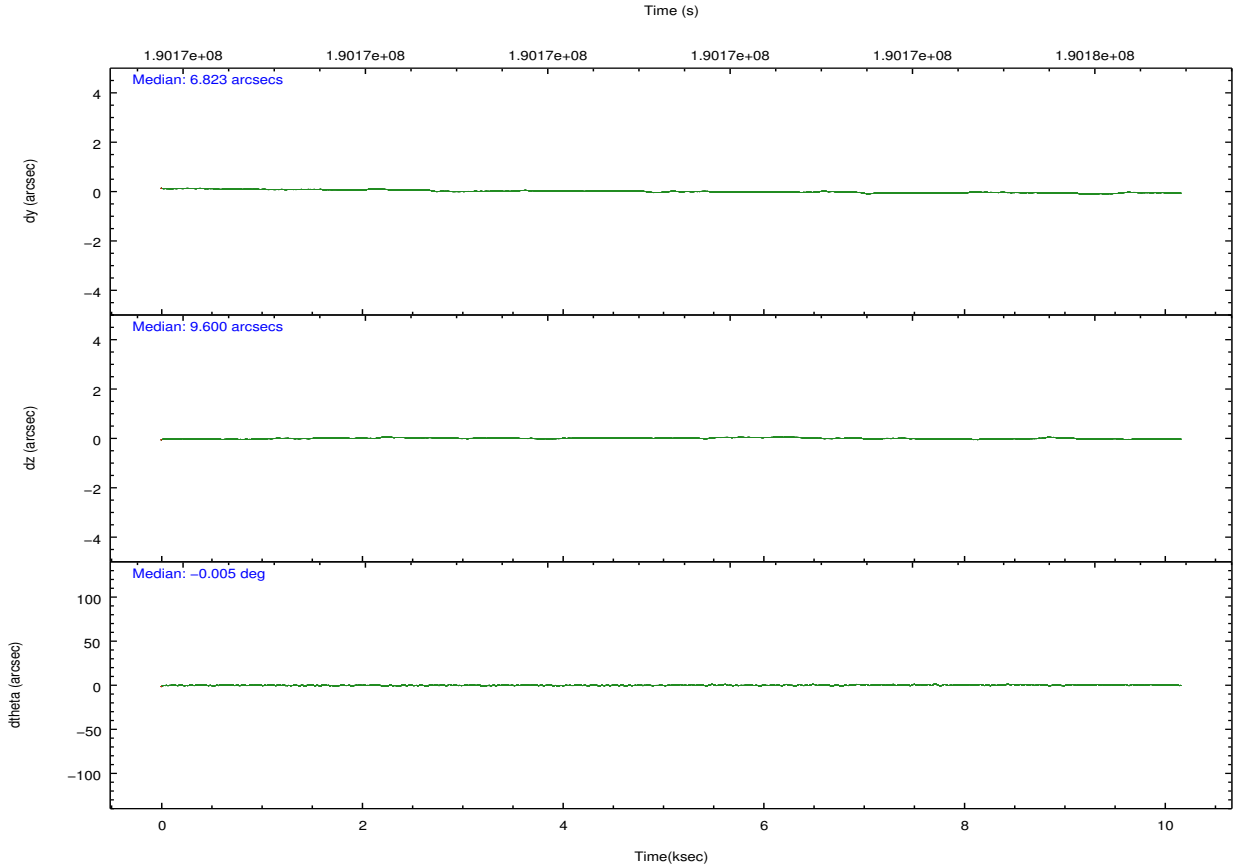
Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.2

2.3 Aspect


RA : 67.688 deg
Dec : 64.841 deg
Dec (arcsec)
RA (arcsec)
10
5
0
−5
−10
−30
−20
−10
0
10
20


DY : 6.823 arcsecs
DZ : 9.600 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
1.9017e+08
1.9017e+08
1.9017e+08
1.9017e+08
1.9017e+08
1.9018e+08
Median: 67.688 deg
RA (arcsec)
Median: 64.841 deg
Dec (arcsec)
Median: 235.530 deg
roll (arcsec)
Time(ksec)

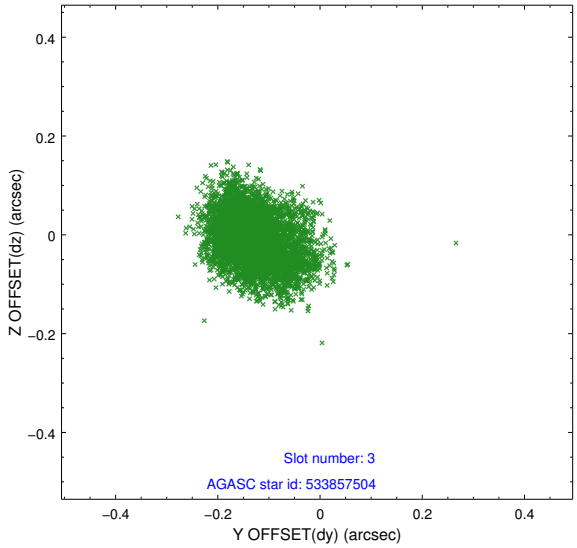

Time (s)
1.9017e+08
1.9017e+08
1.9017e+08
1.9017e+08
1.9017e+08
1.9018e+08
Median: 6.823 arcsecs
dy (arcsec)
Median: 9.600 arcsecs
dz (arcsec)
Median: −0.005 deg
dtheta (arcsec)
Time(ksec)

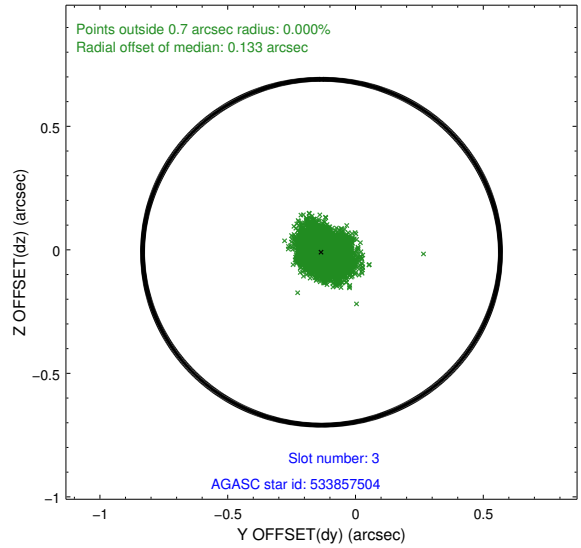
Slot Statistics

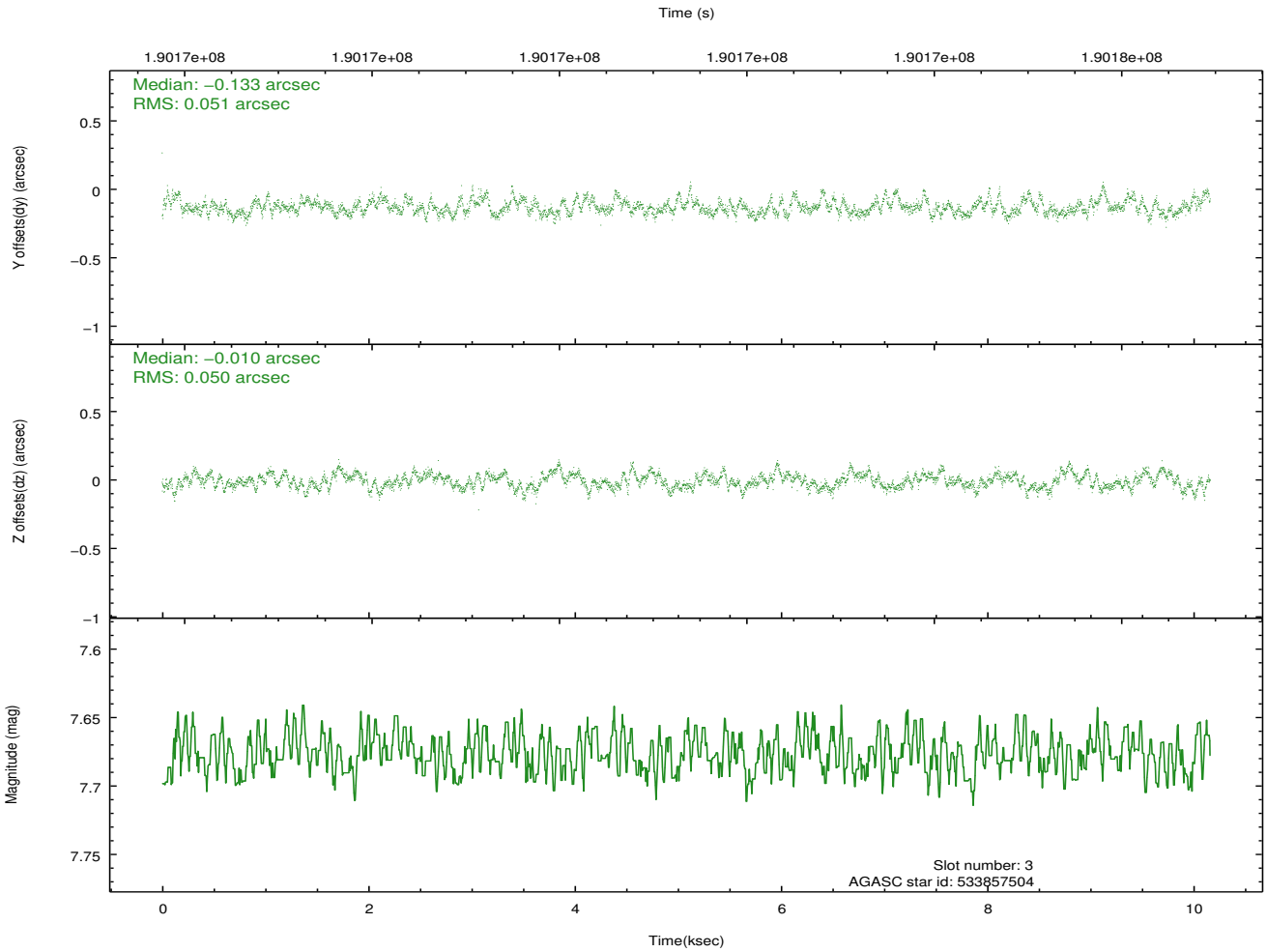
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	2479	-0.043	-0.016	0.007	0.011	0.000000	0.000000	-759.59	-1730.86
1	FID	ACIS-S-4	7.20	2479	0.063	0.025	0.006	0.010	0.000000	0.000000	2153.53	177.16
2	FID	ACIS-S-5	7.23	2478	-0.051	-0.000	0.007	0.013	0.000000	0.000000	-1811.80	171.35
3	GUIDE	533857504	7.68	4957	-0.133	-0.010	0.075	0.123	68.314378	64.988238	-896.93	531.31
4	GUIDE	533859920	7.95	4958	0.002	-0.009	0.093	0.134	67.647151	65.051129	-502.62	-430.36
5	GUIDE	535573640	8.73	4958	-0.043	-0.007	0.102	0.164	69.527040	64.863934	-1614.57	2294.07
6	GUIDE	533863240	8.95	4952	0.115	0.012	0.204	0.268	67.608757	64.239522	1936.78	1179.24
7	GUIDE	533865560	9.11	4954	0.077	0.003	0.088	0.138	68.062227	64.246964	1511.04	1746.55

2.4 Star Slots

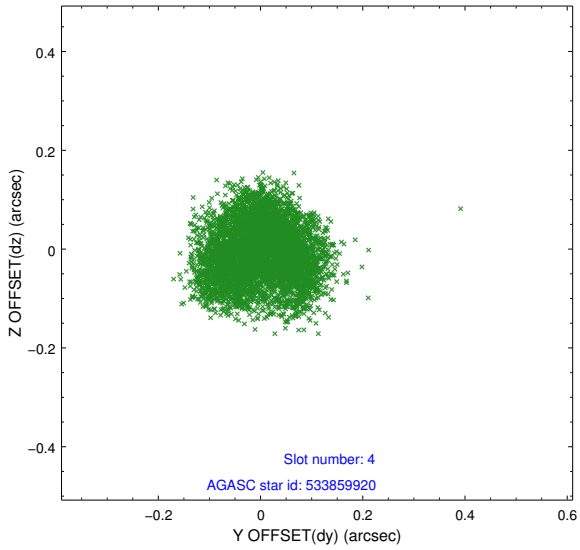
2.4.1 Slot 3

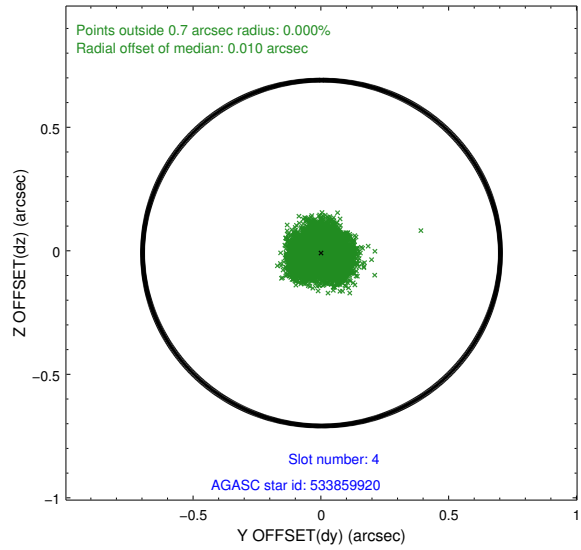


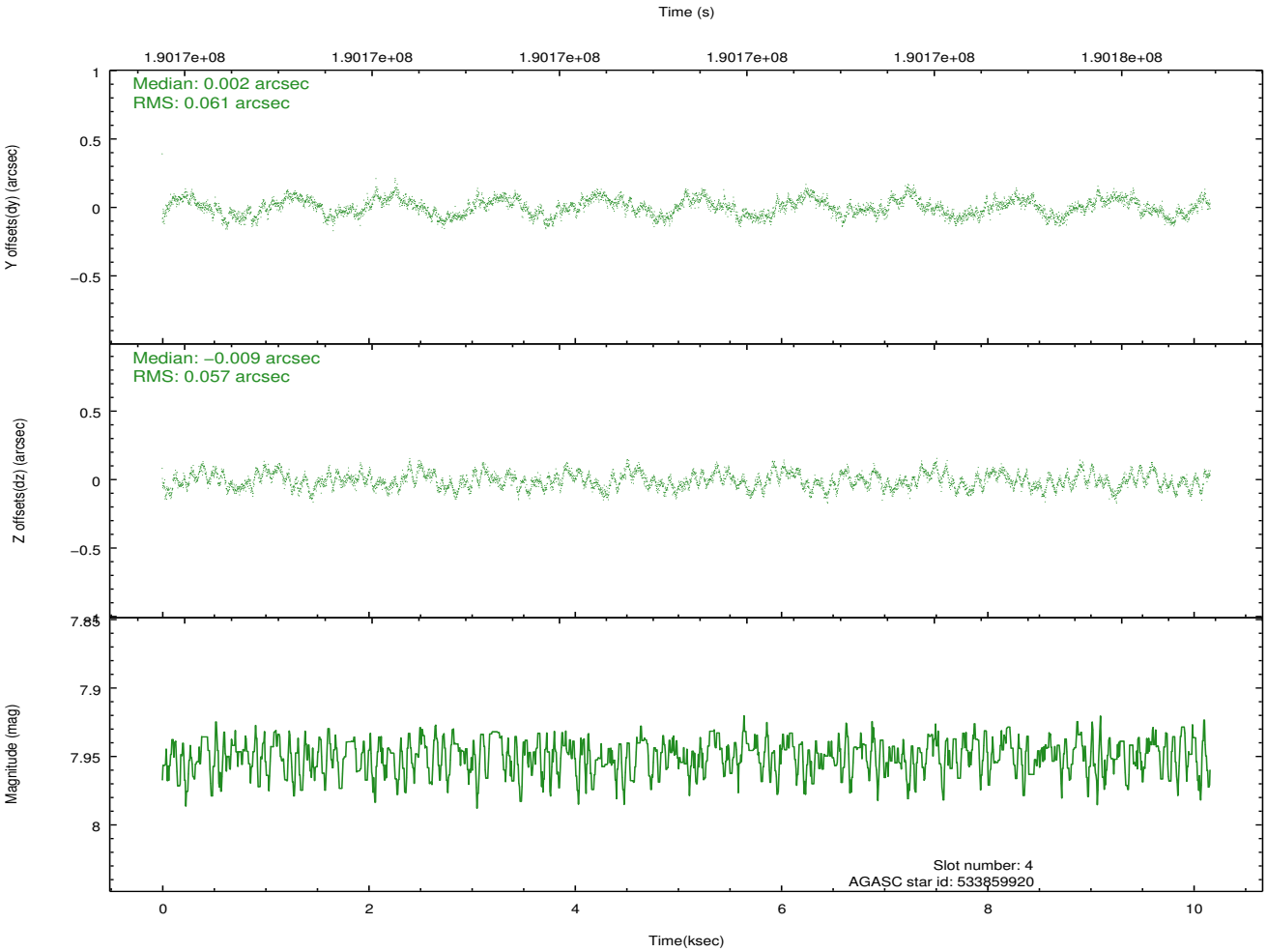




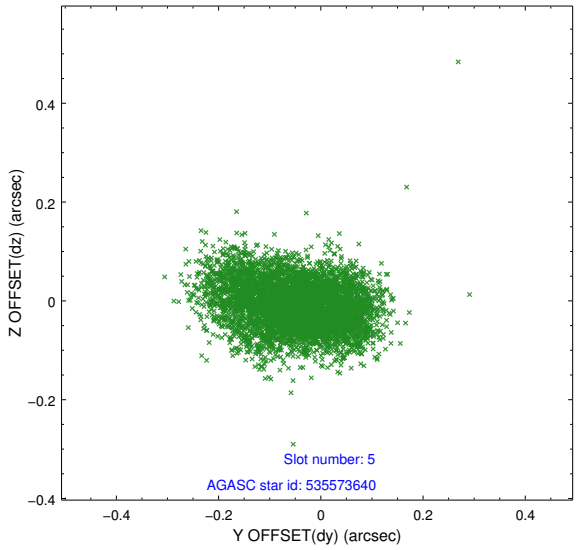
2.4.2 Slot 4

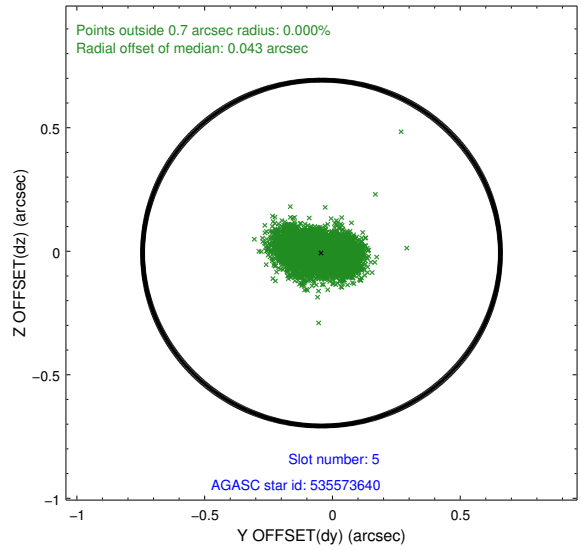

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 533859920

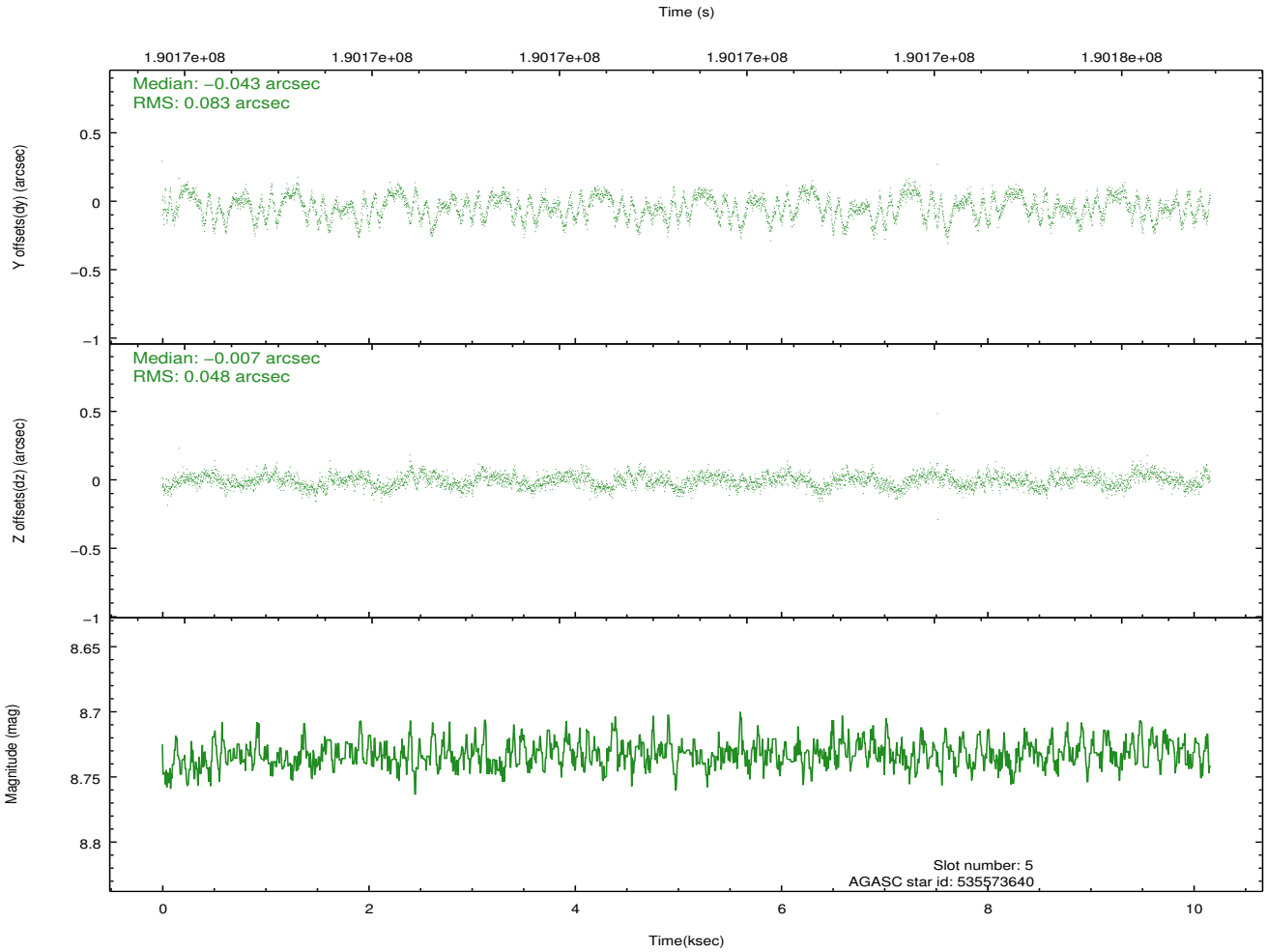

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.010 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 533859920


Time (s)
Median: 0.002 arcsec
RMS: 0.061 arcsec
Y offsets(dy) (arcsec)
Median: −0.009 arcsec
RMS: 0.057 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 4
AGASC star id: 533859920
Time(ksec)

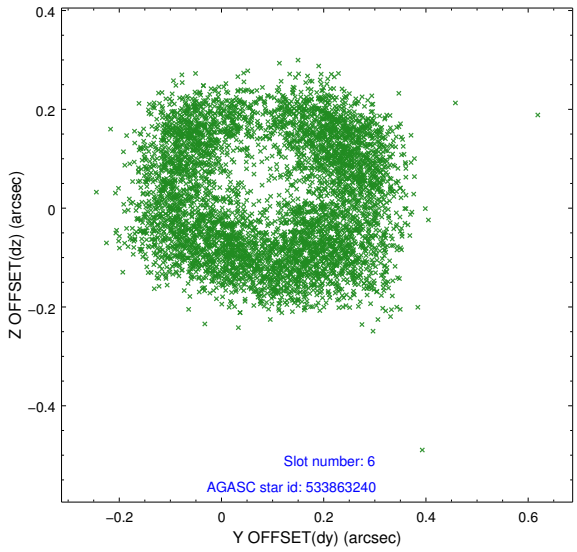
2.4.3 Slot 5

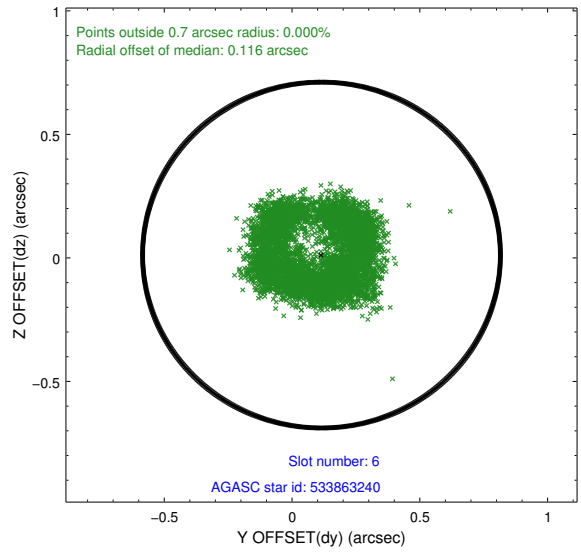

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 535573640

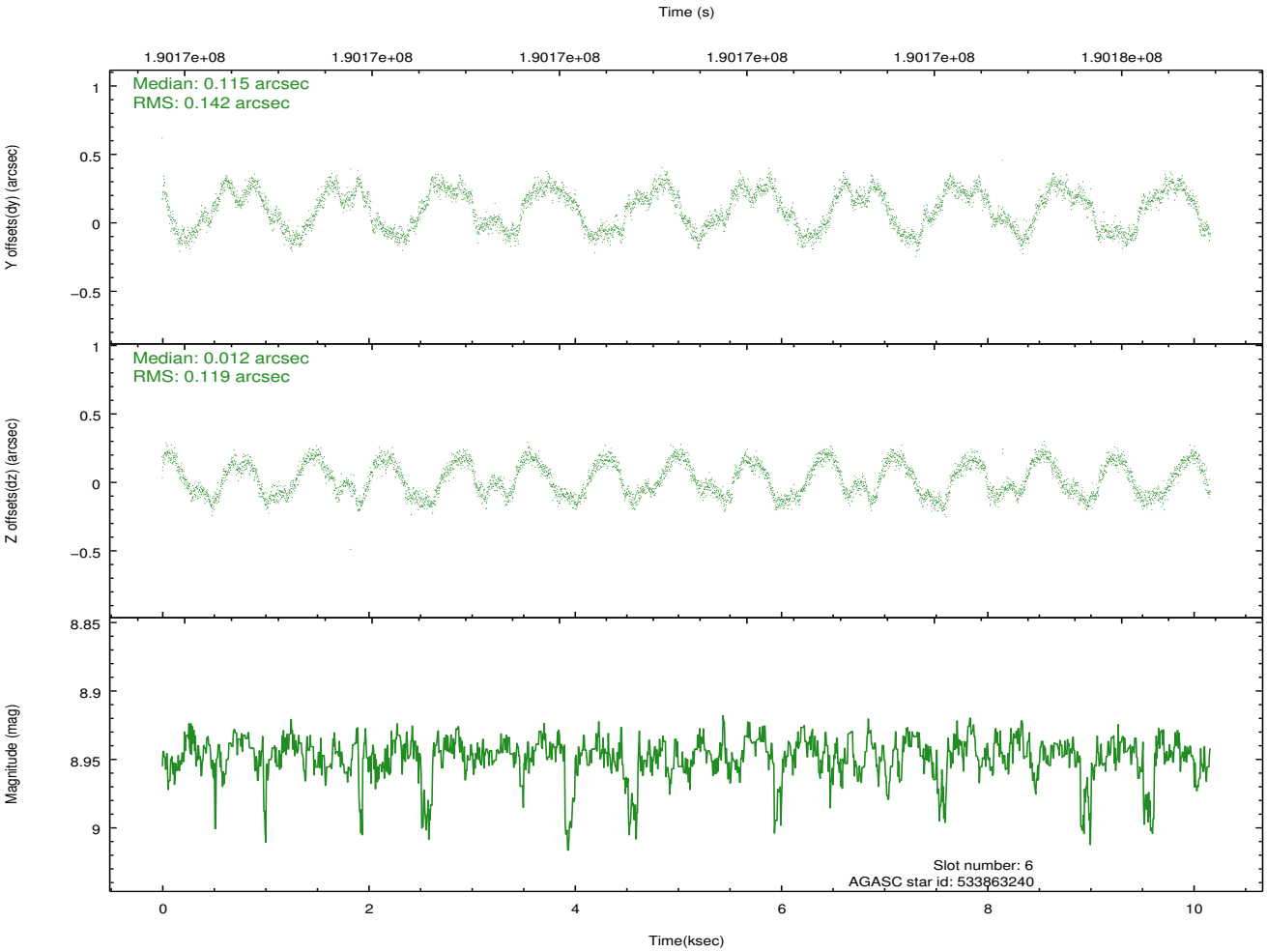

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.043 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 535573640


Time (s)
Median: −0.043 arcsec
RMS: 0.083 arcsec
Y offsets(dy) (arcsec)
Median: −0.007 arcsec
RMS: 0.048 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 5
AGASC star id: 535573640
Time(ksec)

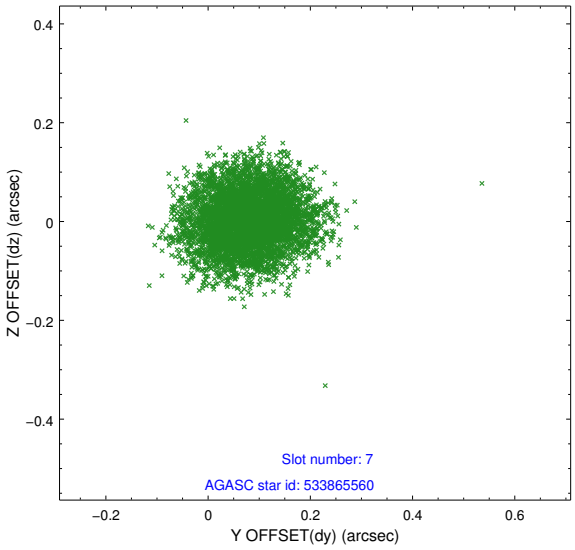
2.4.4 Slot 6

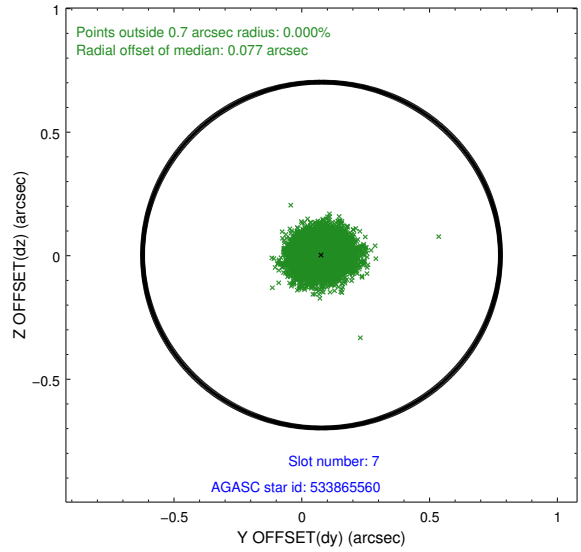

Slot number: 6
AGASC star id: 533863240
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)

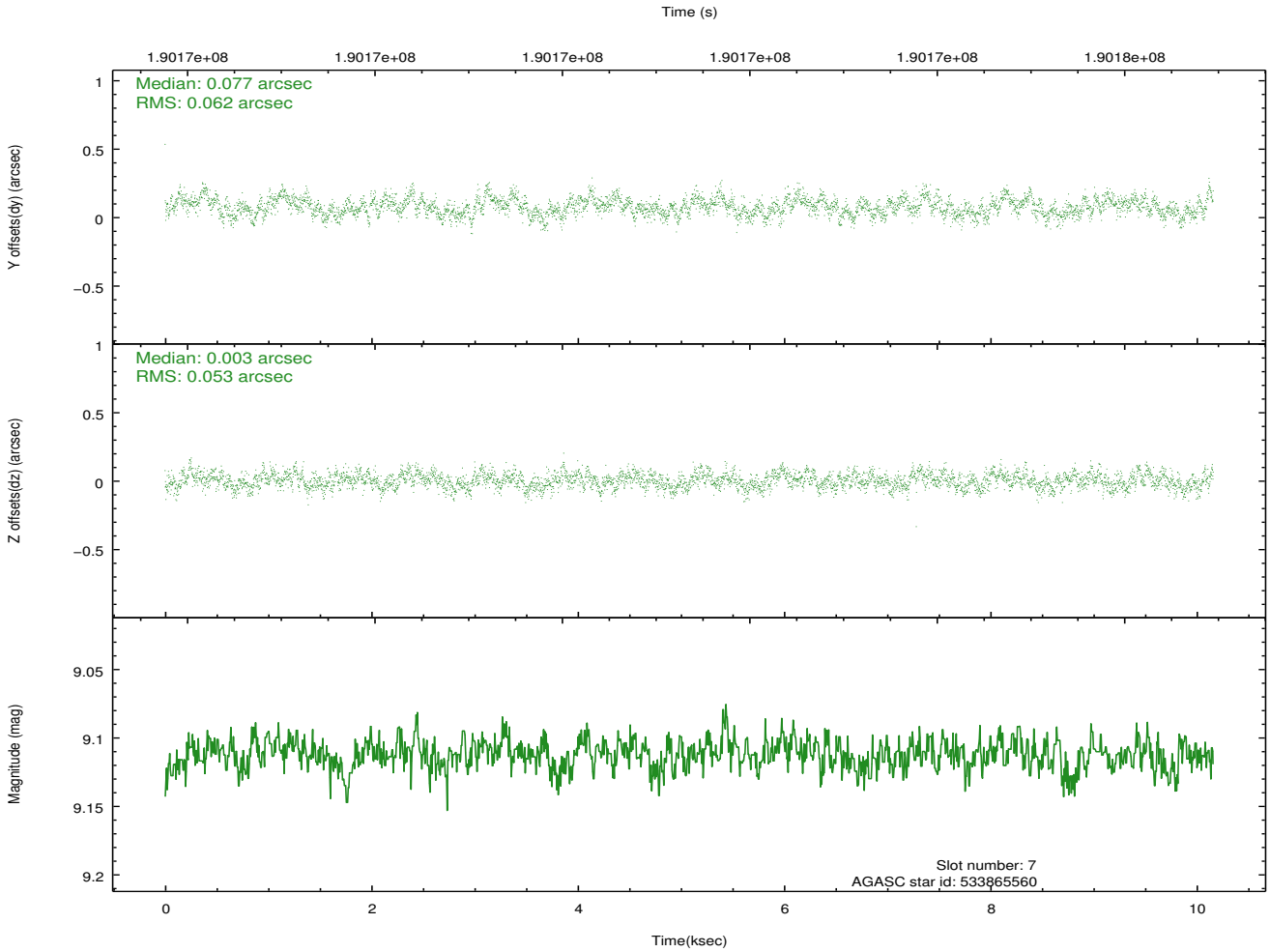

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.116 arcsec
Slot number: 6
AGASC star id: 533863240
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)


Time (s)
Median: 0.115 arcsec
RMS: 0.142 arcsec
Y offsets(dy) (arcsec)
Median: 0.012 arcsec
RMS: 0.119 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 6
AGASC star id: 533863240
Time(ksec)

2.4.5 Slot 7

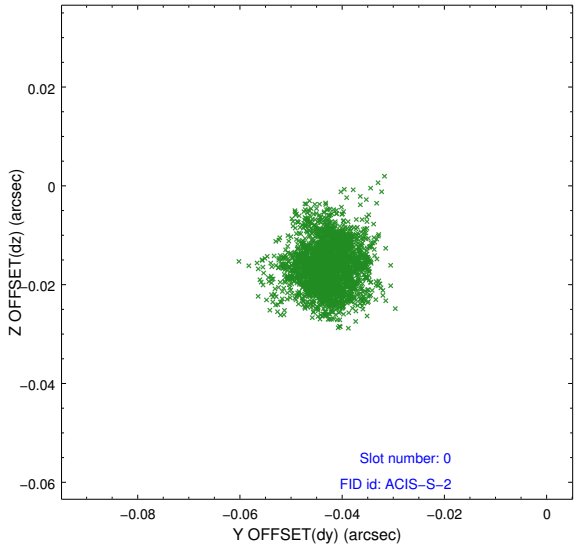

Slot number: 7
AGASC star id: 533865560
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)

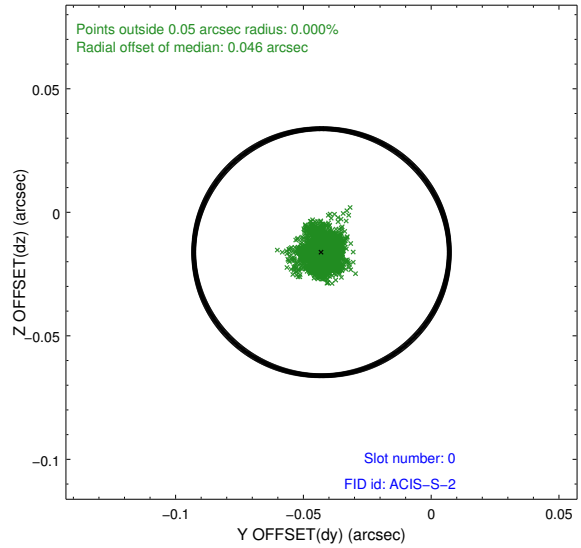

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.077 arcsec
Slot number: 7
AGASC star id: 533865560
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)

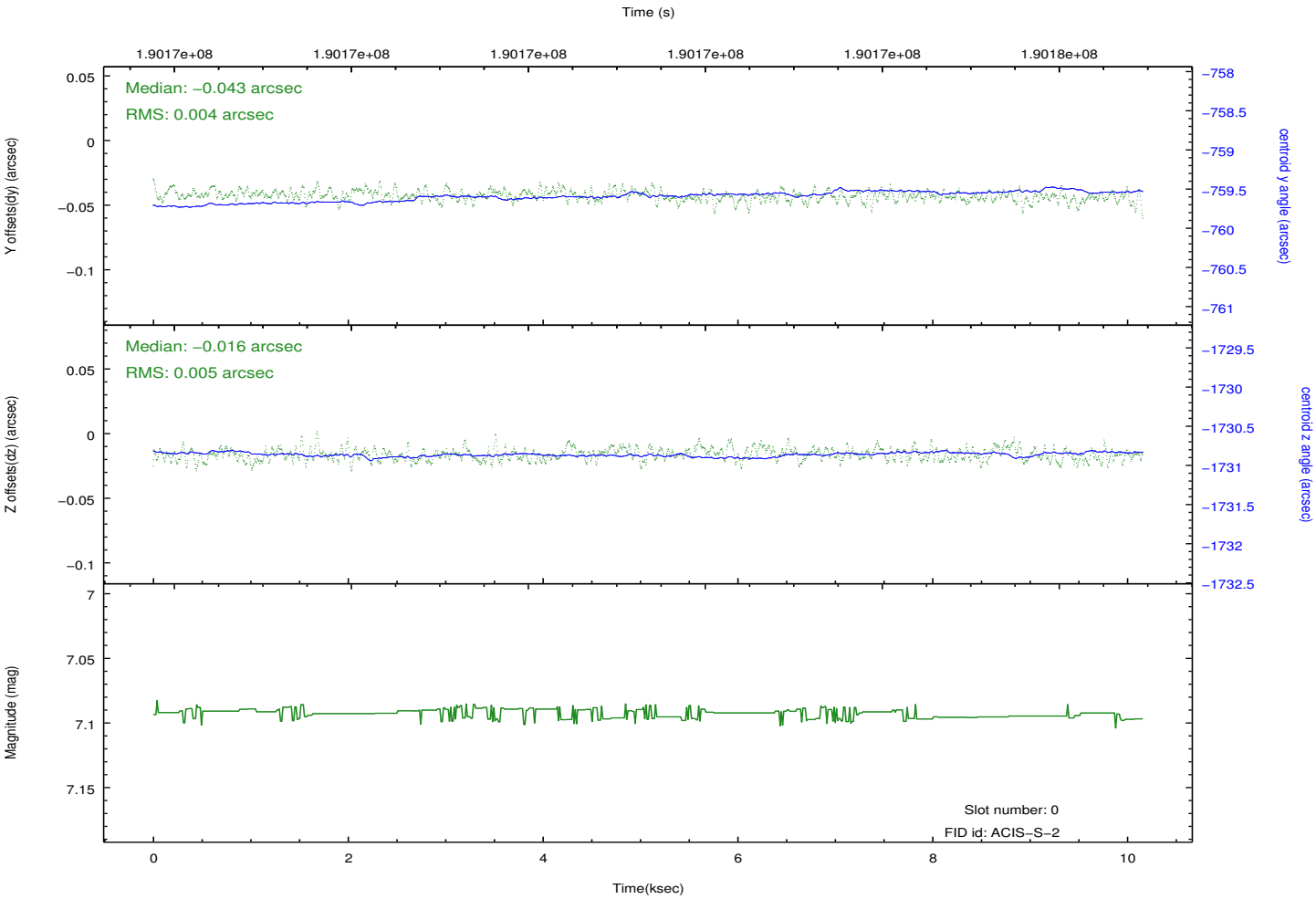

Time (s)
Median: 0.077 arcsec
RMS: 0.062 arcsec
Y offsets(dy) (arcsec)
Median: 0.003 arcsec
RMS: 0.053 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 7
AGASC star id: 533865560
Time(ksec)

2.5 FID Slots

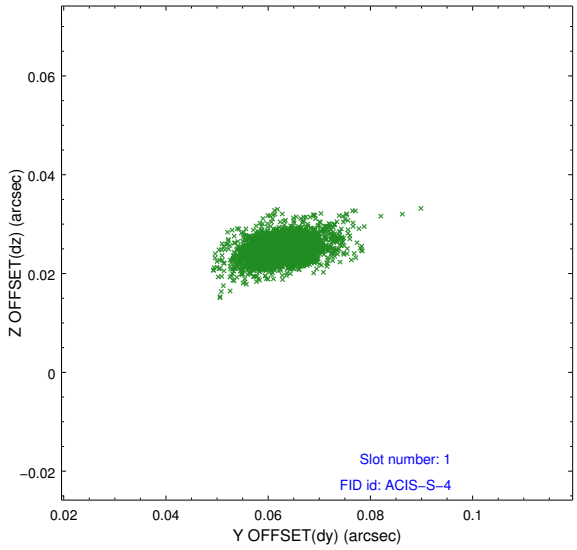
2.5.1 Slot 0

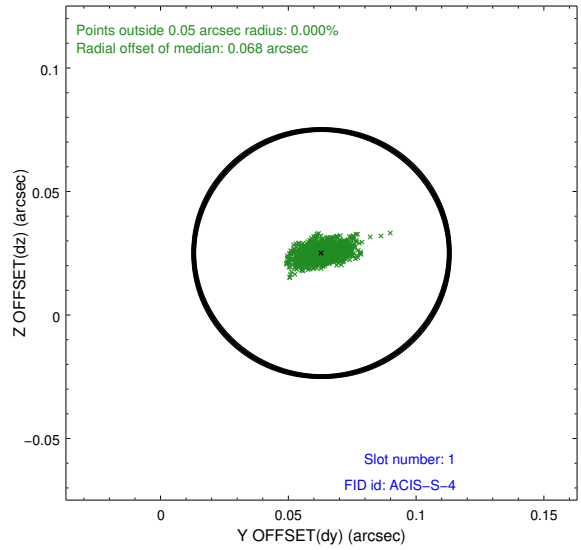


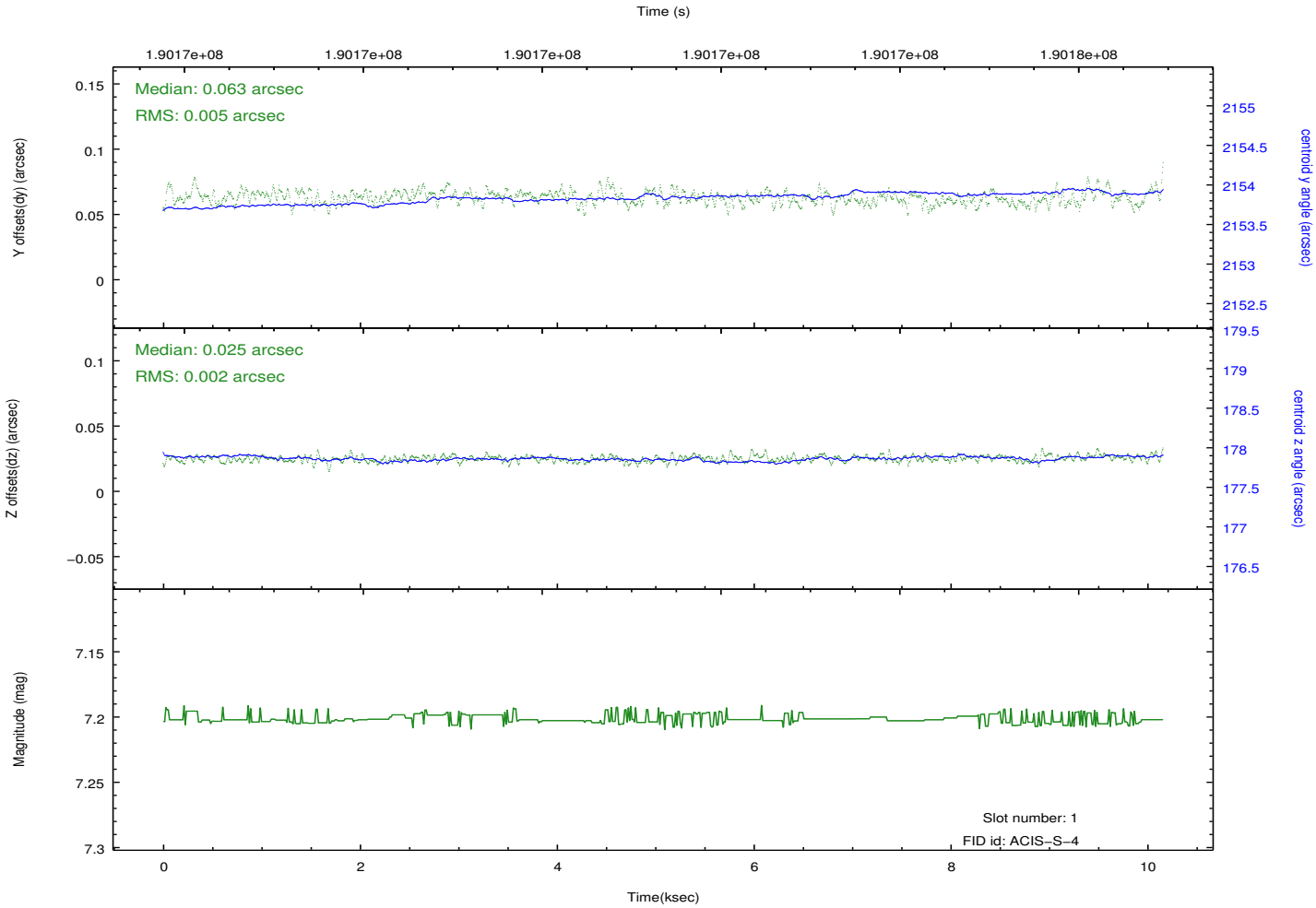




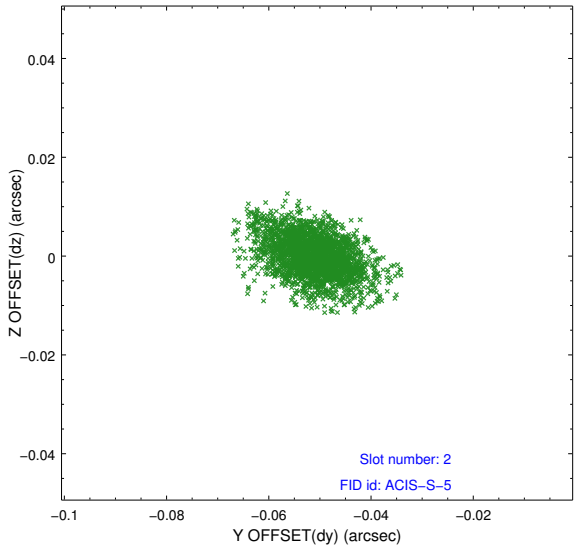
2.5.2 Slot 1

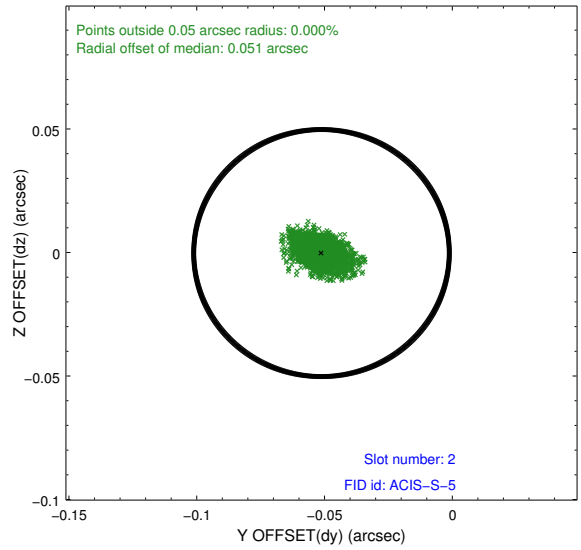

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−S−4

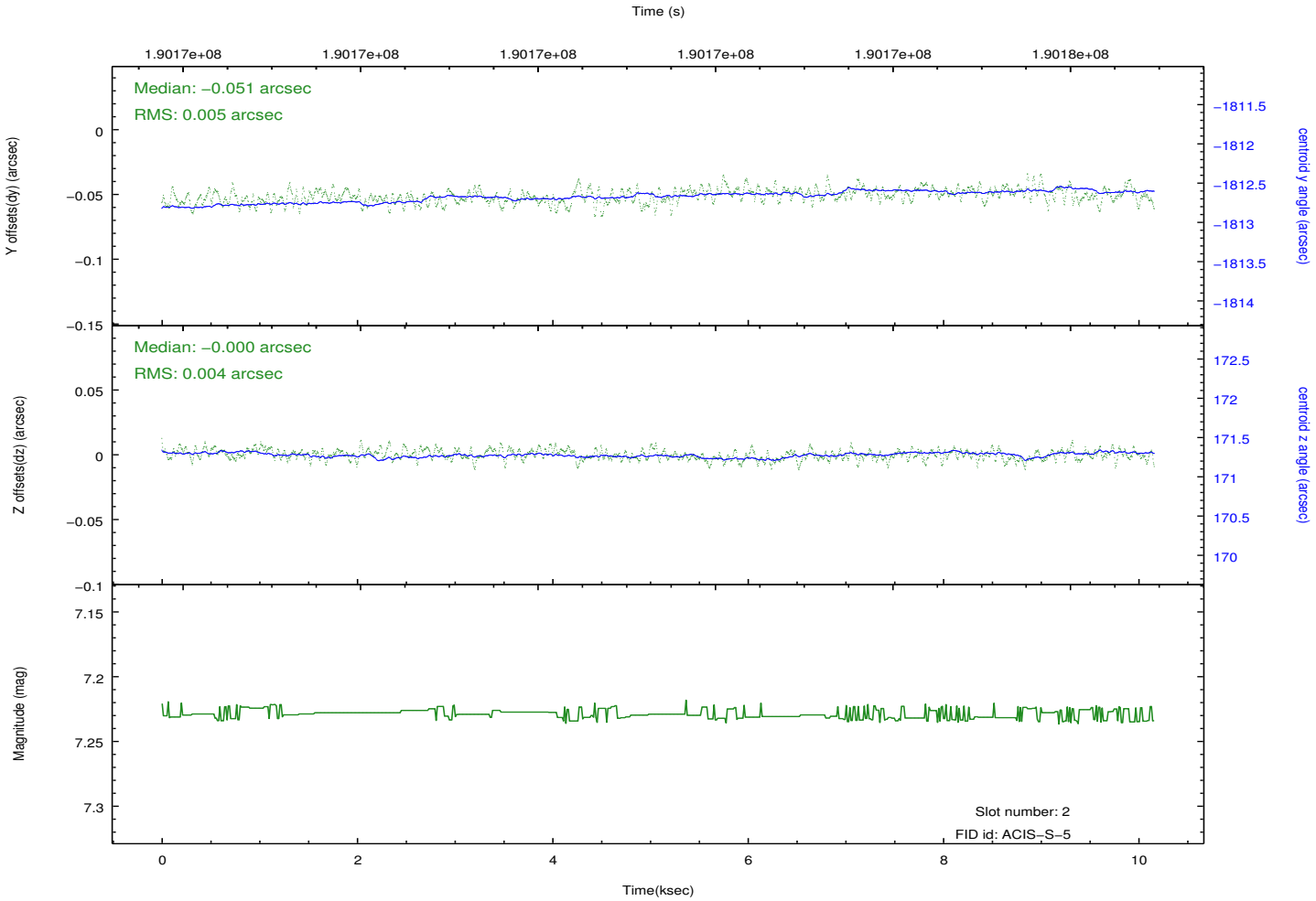

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.068 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−S−4


Time (s)
Median: 0.063 arcsec
RMS: 0.005 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.025 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


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


Time (s)
Median: −0.051 arcsec
RMS: 0.005 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.000 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)	2012.12.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.153

A.2 Comments