V&V Reference Report
L2 ASCDS Version : 8.4.3

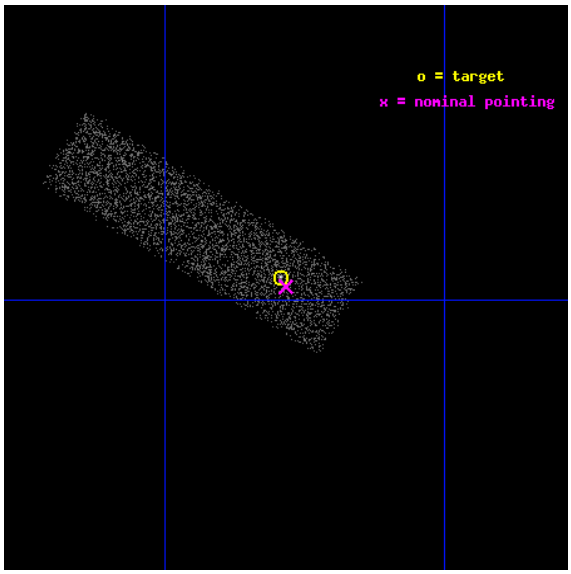
Observation 12802 - L2 Version 2
Chandra X-Ray Center

L2 Processing Date : Feb 10 2012

Contents

1 Front

seq_num	702438	Sequence number
obs_id	12802	Observation id
title	Exploring the X-ray Properties of the Highest-Luminosity Double-Peaked Emitters	Proposal title
observer	Bin Luo	Principal investigator
object	SDSS J150017.58+121036.5	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	225.073333	Observer's specified target RA [deg]
dec_targ	12.176806	Observer's specified target Dec [deg]
ra_nom	225.07104260909	Nominal RA [deg]
dec_nom	12.17252845726	Nominal Dec [deg]
roll_nom	211.30956078061	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5026.4000749588	Sum of GTIs [s]
livetime	4781.1281983818	Livetime [s]
ontime7	5026.4000749588	Sum of GTIs [s]
l2events	5339	Number of level 2 events

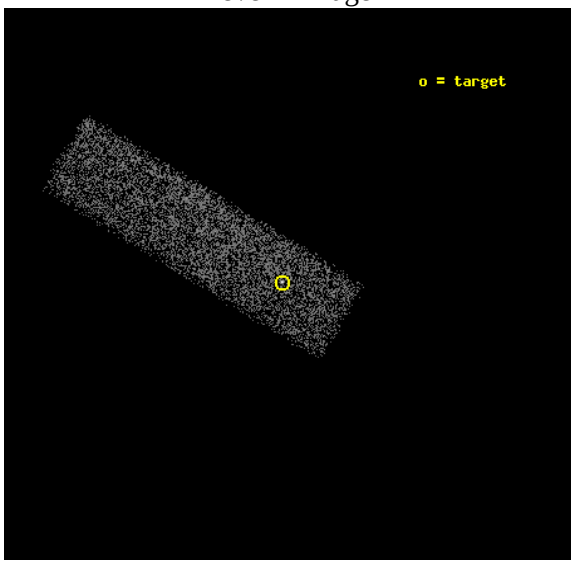


2 OBI

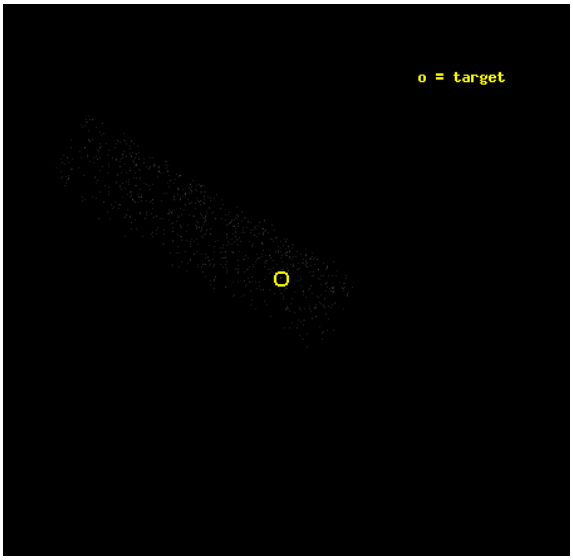
2.1 OBI

2.1.1 Images

Level 1 Image

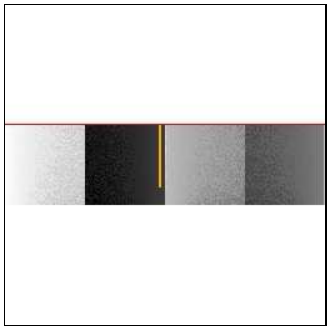


Level 1 Bad Events



2.1.2 Bias

Chip 7



2.1.3 Parameters

obi_num	0	Obi number
ascdsver	8.4.3	Processing system revision
caldbver	4.4.7	
date	2012-02-11T00:35:55	Date and time of file creation
revision	2	Processing version of data

sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ontime	5026.4000749588	Sum of GTIs [s]
ontime7	5026.4000749588	Sum of GTIs [s]
l1events	10941	Number of level 1 events

2.1.4 Events

	ccd 7
level 1 events	10941
rejected events	5421
rejected %	49%

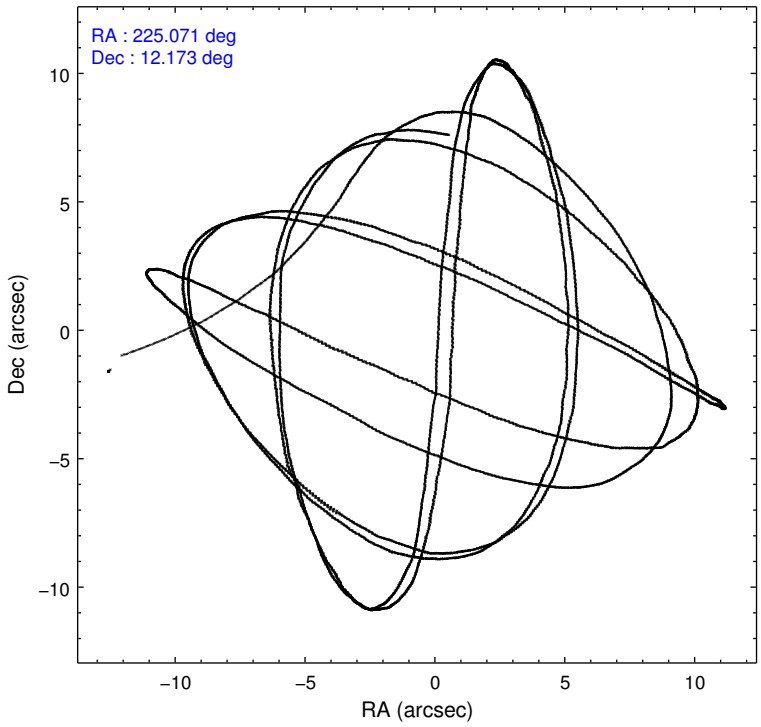
	ccd 7
grade 0 events	668
	6%
grade 1 events	14
	0%
grade 2 events	1165
	10%
grade 3 events	639
	5%
grade 4 events	577
	5%
grade 5 events	1147
	10%
grade 6 events	2473
	22%
grade 7 events	4258
	38%

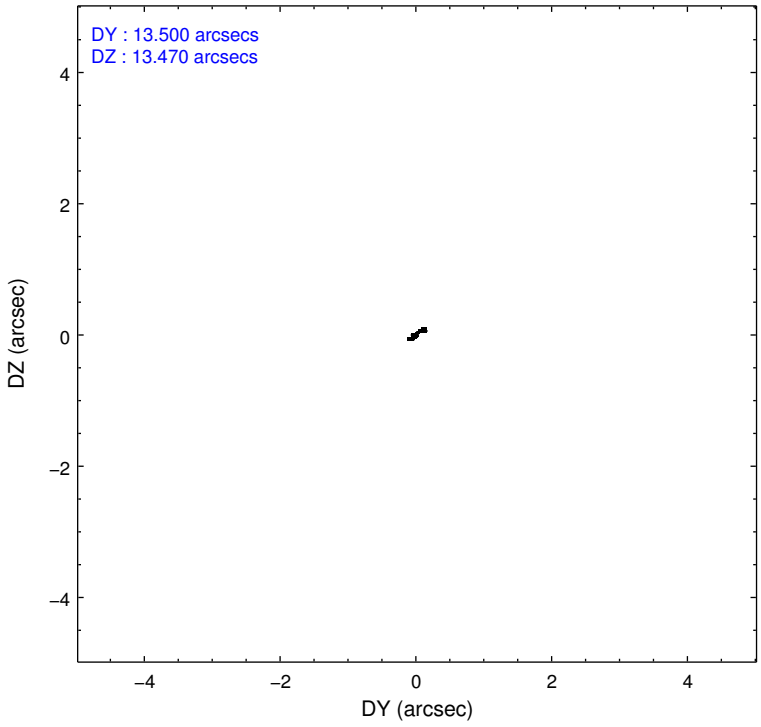
2.2 Compared Parameters

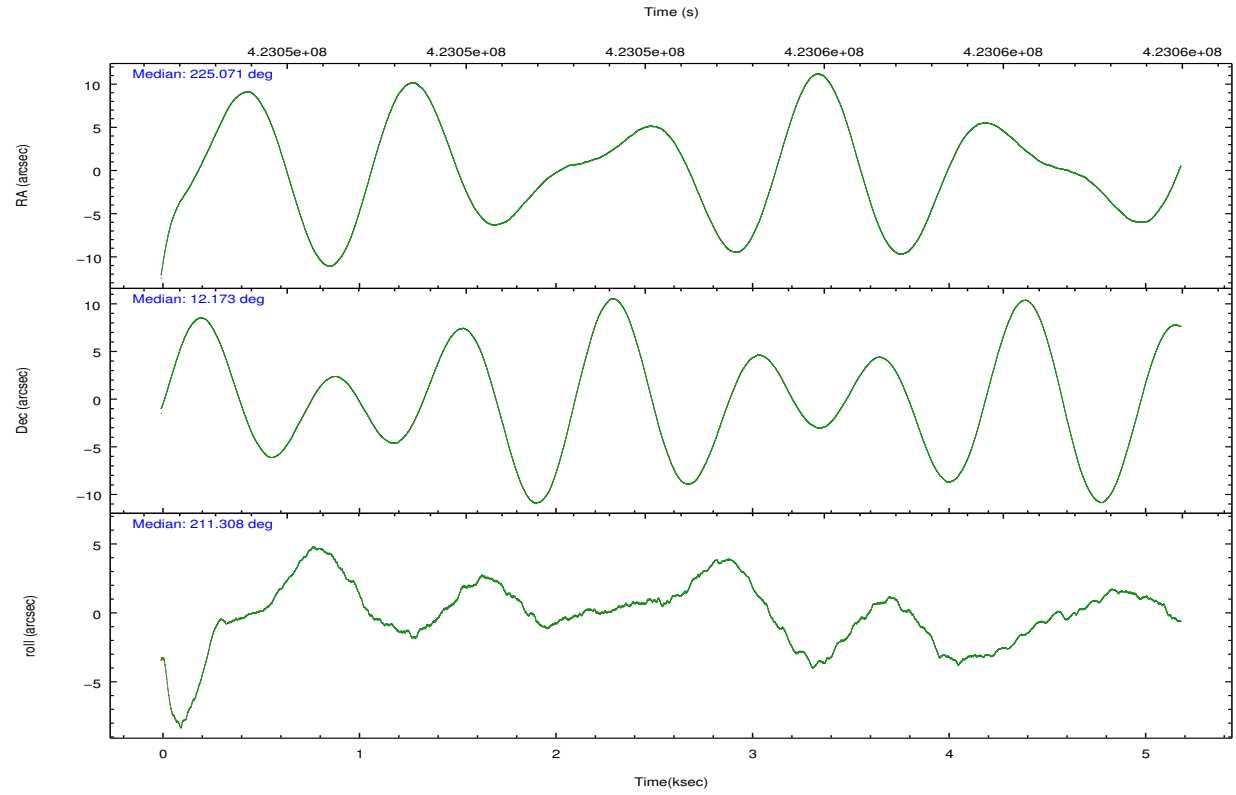
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-7	ACIS-7
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	225.084172	225.0710426090879
[deg] Pointing Dec	12.196647	12.17252845725955
[deg] Pointing Roll	211.150144	211.3095607806109
[mm] SIM focus 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)	423051732.184000	423050376.062
Observation start date	2011-05-29T10:21:06	2011-05-29T09:59:36
[s] Observation end time (MET)	423056732.184000	423057201.02486
Observation end date	2011-05-29T11:44:26	2011-05-29T11:53:21
Read mode	TIMED	TIMED

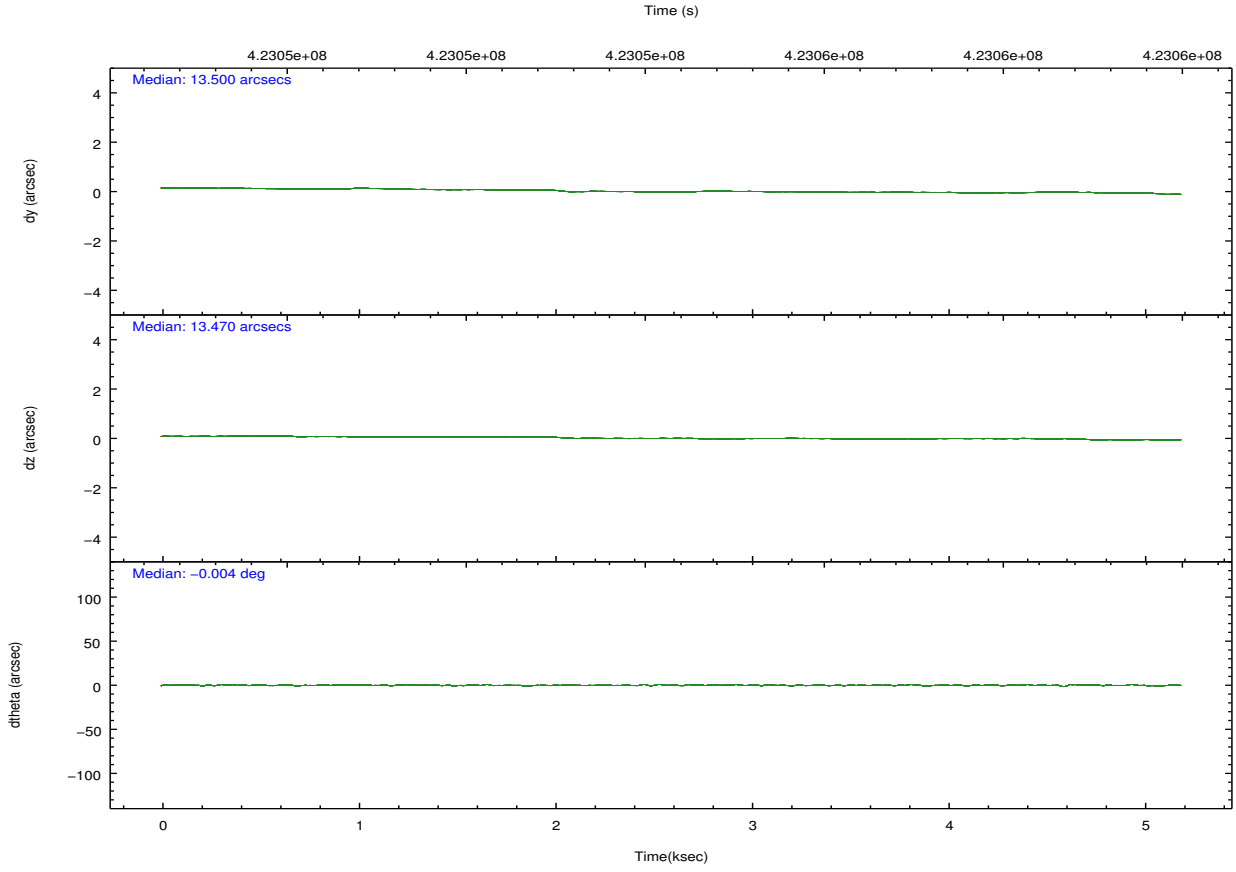
Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	CUSTOM	1/4
Subarray start row	385	385
Subarray row count	256	256
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	0.8

2.3 Aspect


RA : 225.071 deg
Dec : 12.173 deg
Dec (arcsec)
RA (arcsec)
10
5
0
−5
−10
−10
−5
0
5
10


DY : 13.500 arcsecs
DZ : 13.470 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
4.2305e+08
4.2305e+08
4.2305e+08
4.2306e+08
4.2306e+08
4.2306e+08
Median: 225.071 deg
RA (arcsec)
Median: 12.173 deg
Dec (arcsec)
Median: 211.308 deg
roll (arcsec)
Time(ksec)

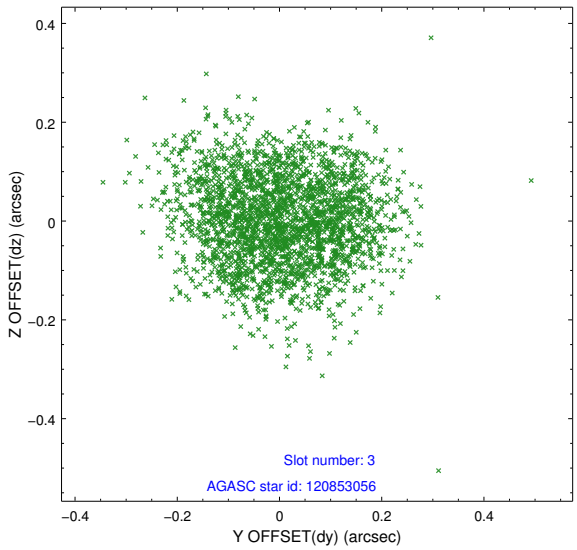

Time (s)
4.2305e+08
4.2305e+08
4.2305e+08
4.2306e+08
4.2306e+08
4.2306e+08
Median: 13.500 arcsecs
dy (arcsec)
Median: 13.470 arcsecs
dz (arcsec)
Median: −0.004 deg
dtheta (arcsec)
Time(ksec)

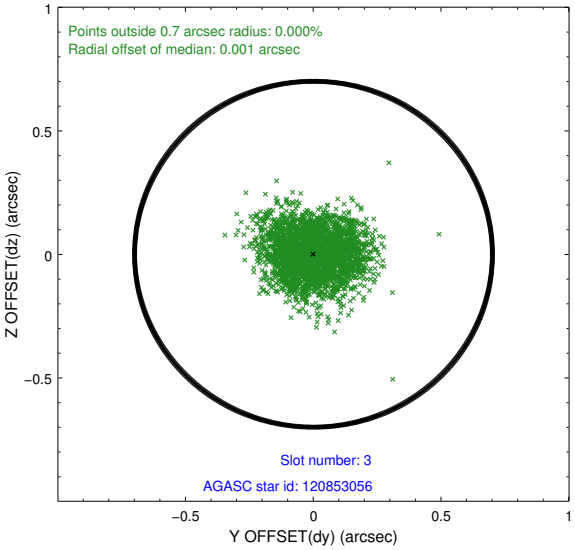
Slot Statistics

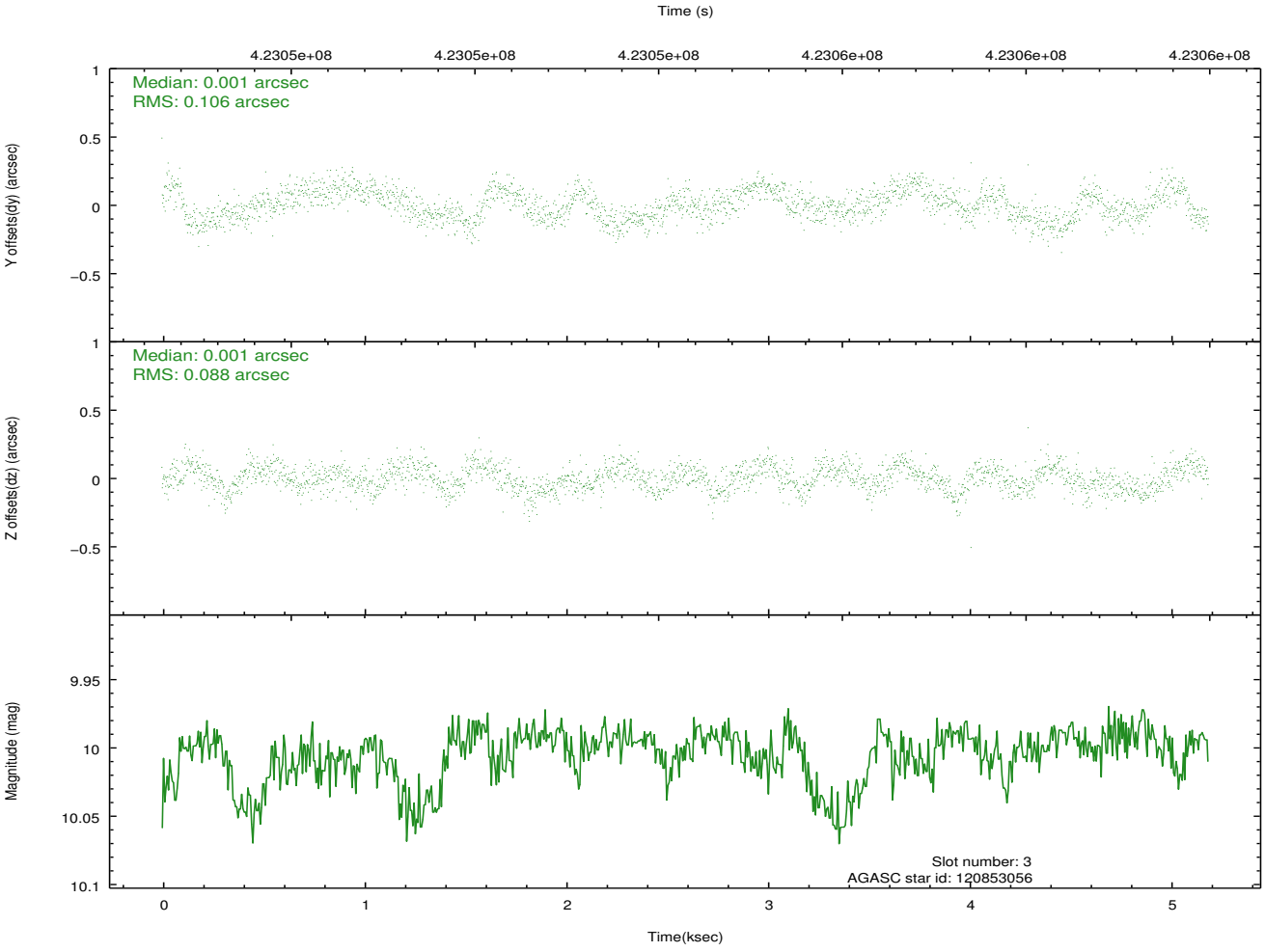
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.93	1266	-0.040	-0.060	0.008	0.013	0.000000	0.000000	-766.51	-1734.88
1	FID	ACIS-S-4	7.01	1266	0.188	0.035	0.007	0.014	0.000000	0.000000	2146.48	172.47
2	FID	ACIS-S-5	7.04	1265	-0.180	0.033	0.006	0.011	0.000000	0.000000	-1817.98	167.49
3	GUIDE	120853056	10.00	2528	0.001	0.001	0.149	0.234	225.647085	12.354846	-1989.39	535.27
4	GUIDE	120853520	8.81	2520	0.044	0.034	0.099	0.158	225.099908	12.475928	-567.43	-831.60
5	GUIDE	120855304	9.07	2528	-0.070	-0.167	0.102	0.159	224.998030	12.023951	581.56	374.87
6	GUIDE	120856736	8.67	2530	0.020	0.054	0.081	0.133	224.719299	12.079797	1316.95	-304.50
7	GUIDE	121249056	8.60	2531	-0.001	0.067	0.072	0.119	224.930750	12.590235	-270.73	-1491.04

2.4 Star Slots

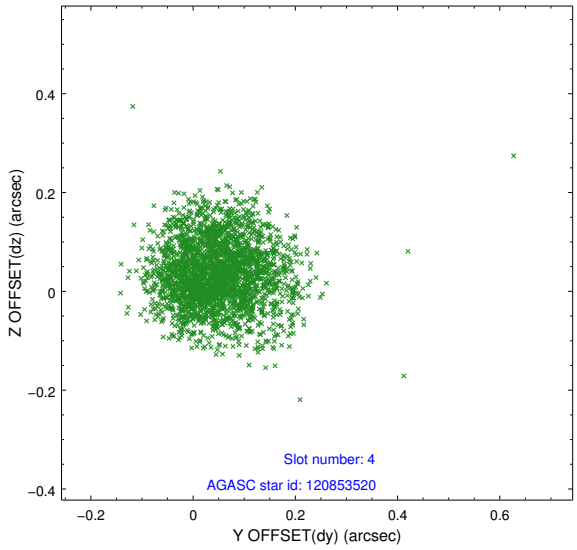
2.4.1 Slot 3

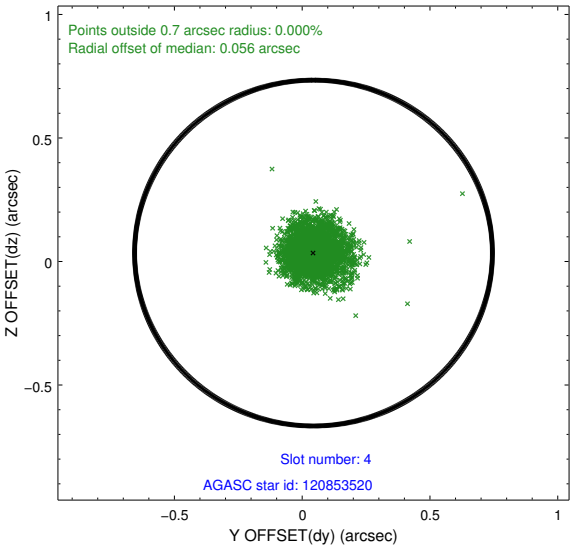


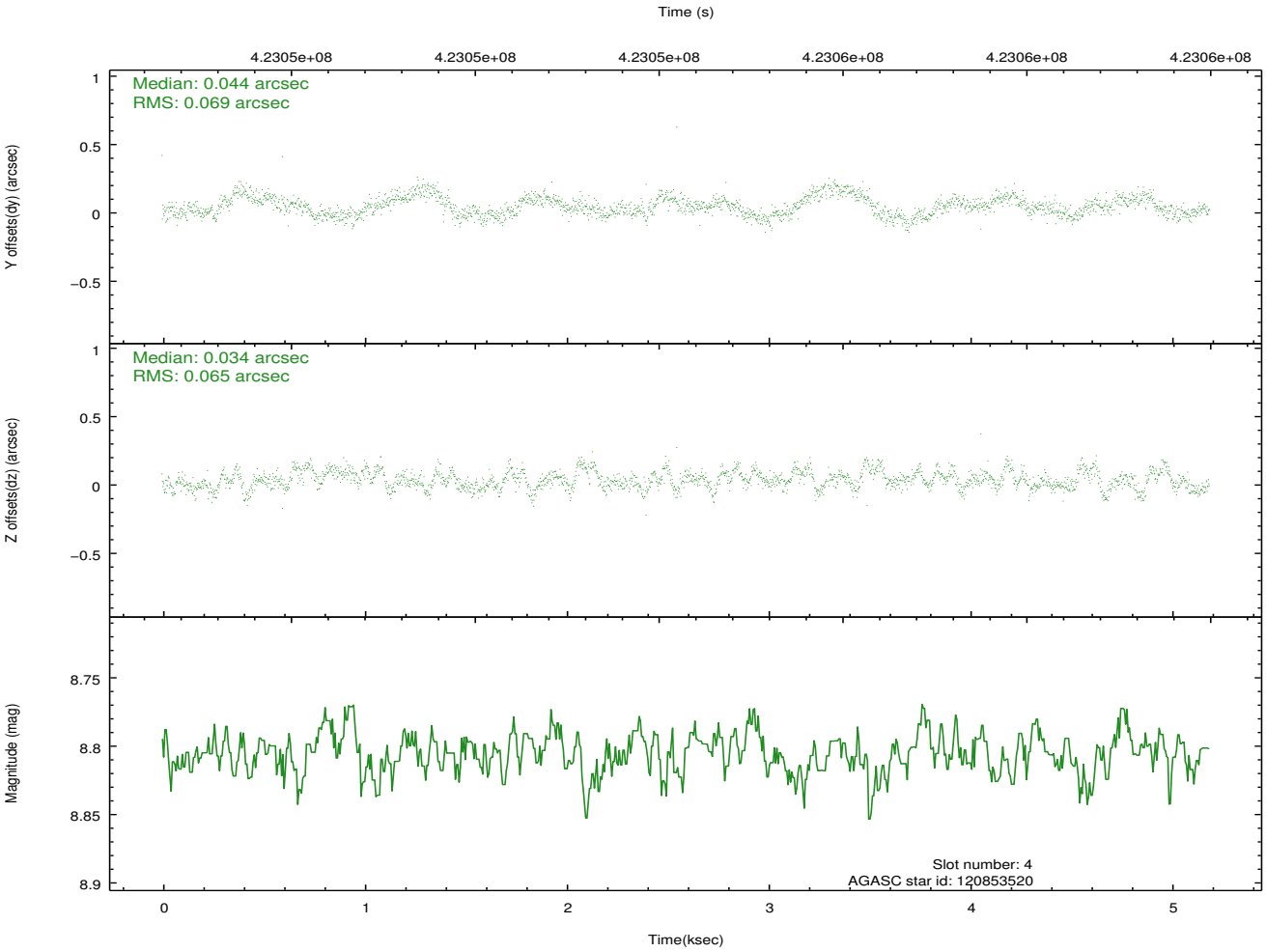




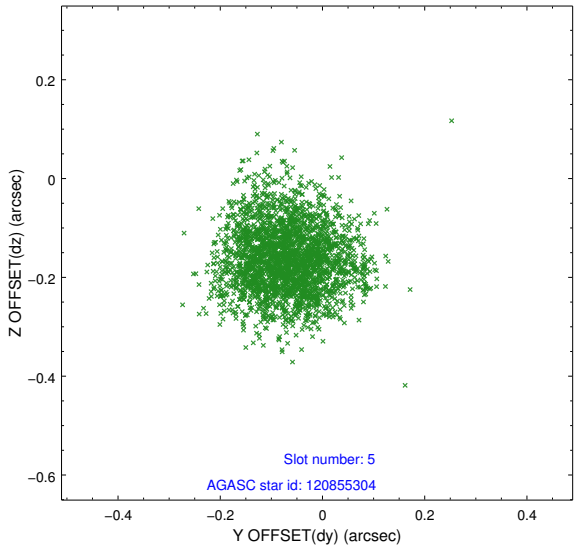
2.4.2 Slot 4

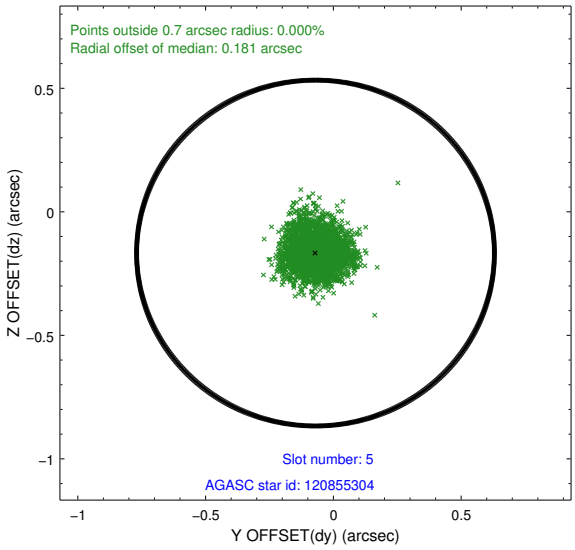

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 120853520

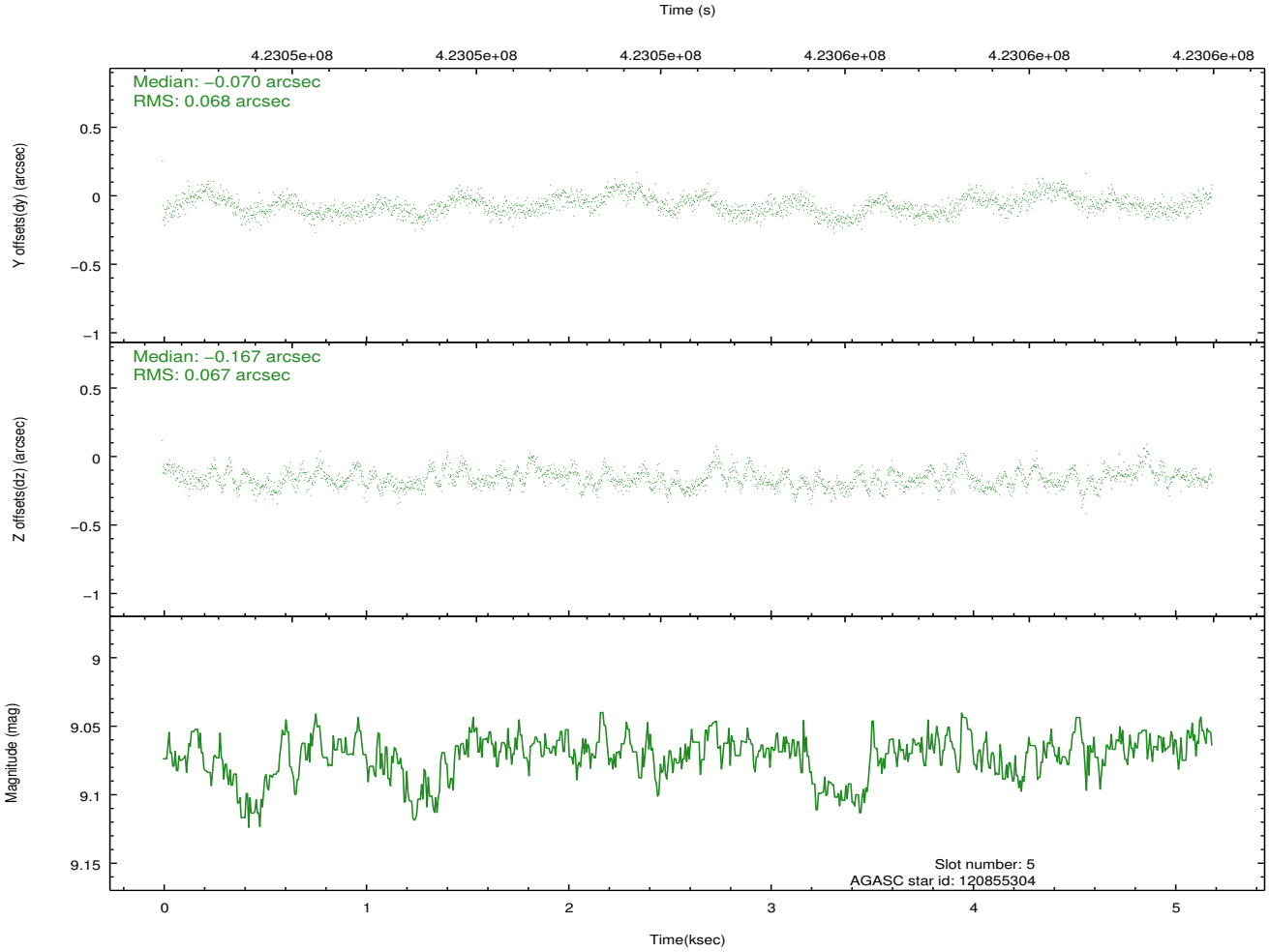

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.056 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 120853520


Time (s)
Median: 0.044 arcsec
RMS: 0.069 arcsec
Y offsets(dy) (arcsec)
Median: 0.034 arcsec
RMS: 0.065 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 4
AGASC star id: 120853520
Time(ksec)

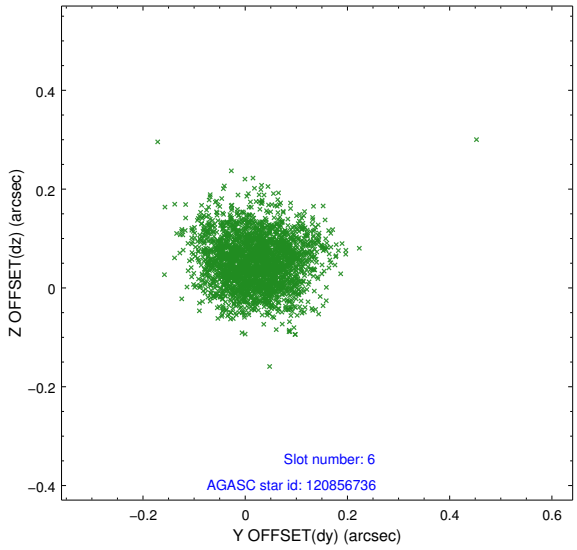
2.4.3 Slot 5

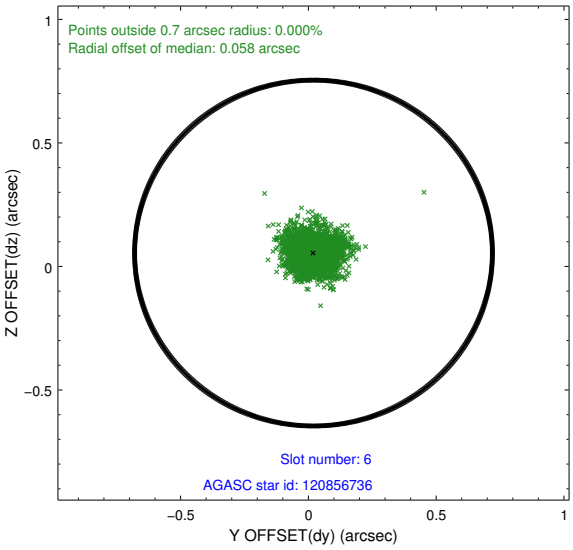

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 120855304

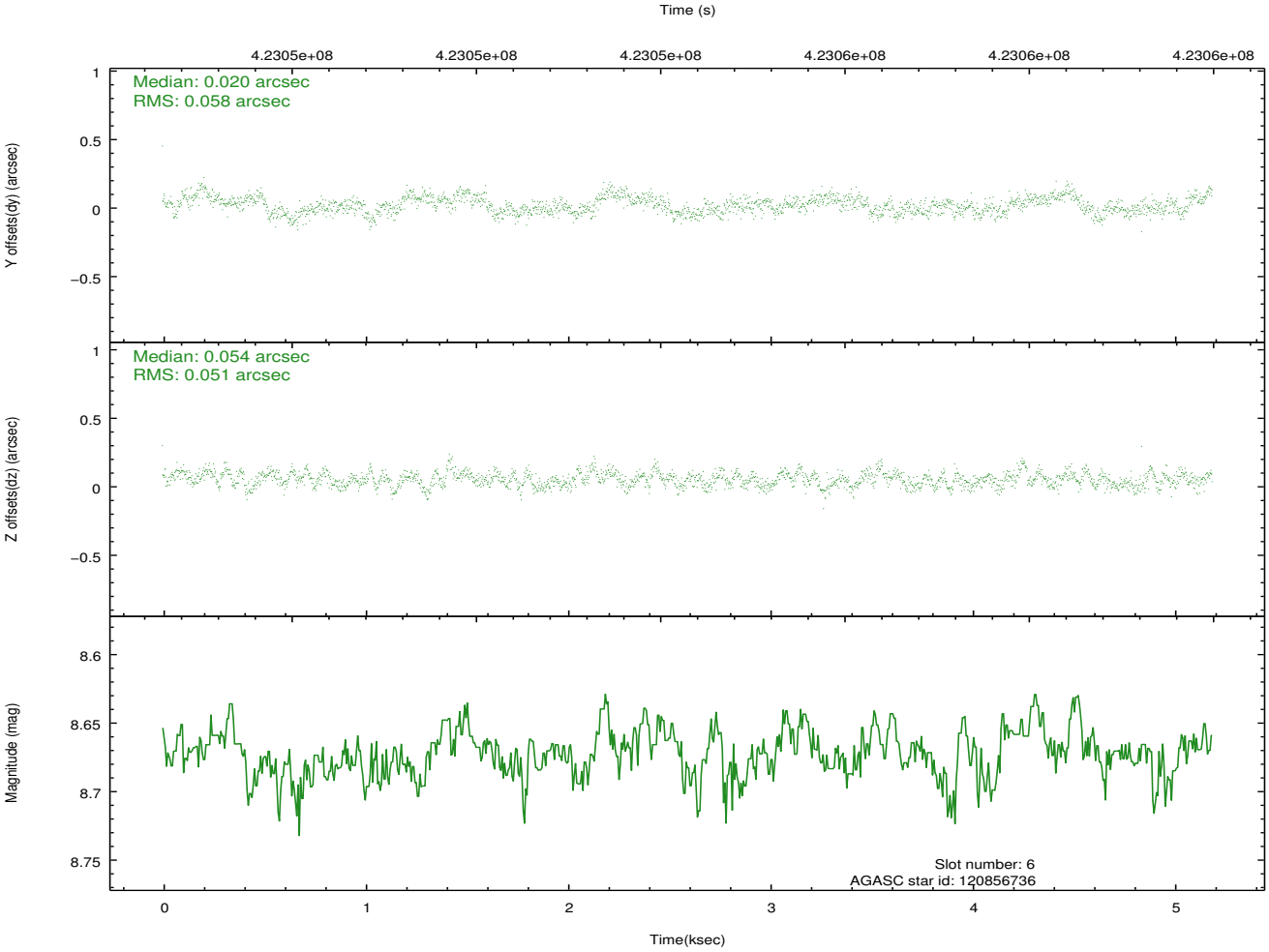

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.181 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 120855304


Time (s)
Median: −0.070 arcsec
RMS: 0.068 arcsec
Y offsets(dy) (arcsec)
Median: −0.167 arcsec
RMS: 0.067 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 5
AGASC star id: 120855304
Time(ksec)

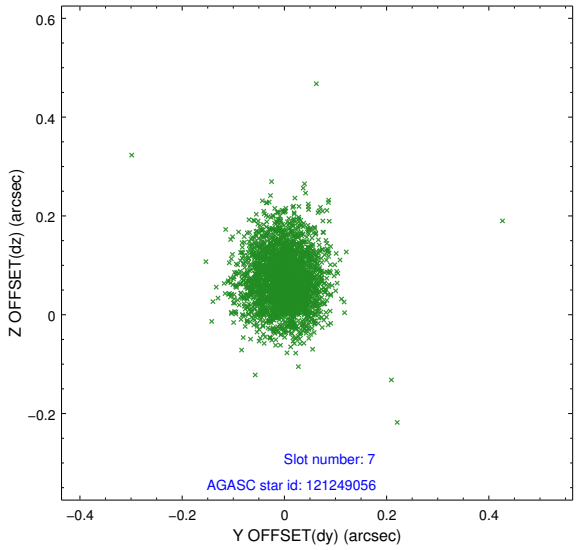
2.4.4 Slot 6

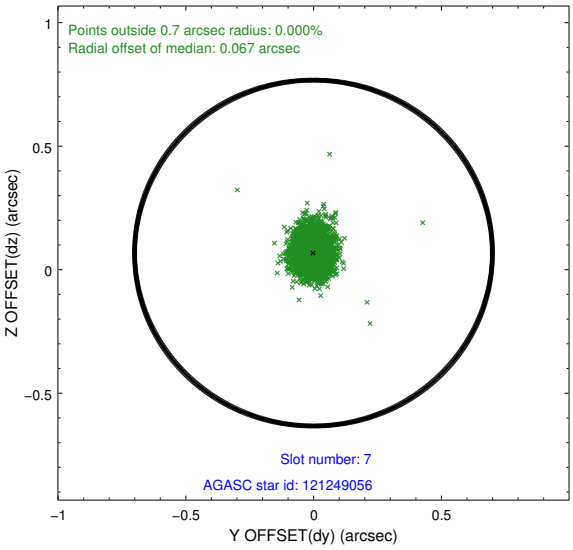

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 120856736

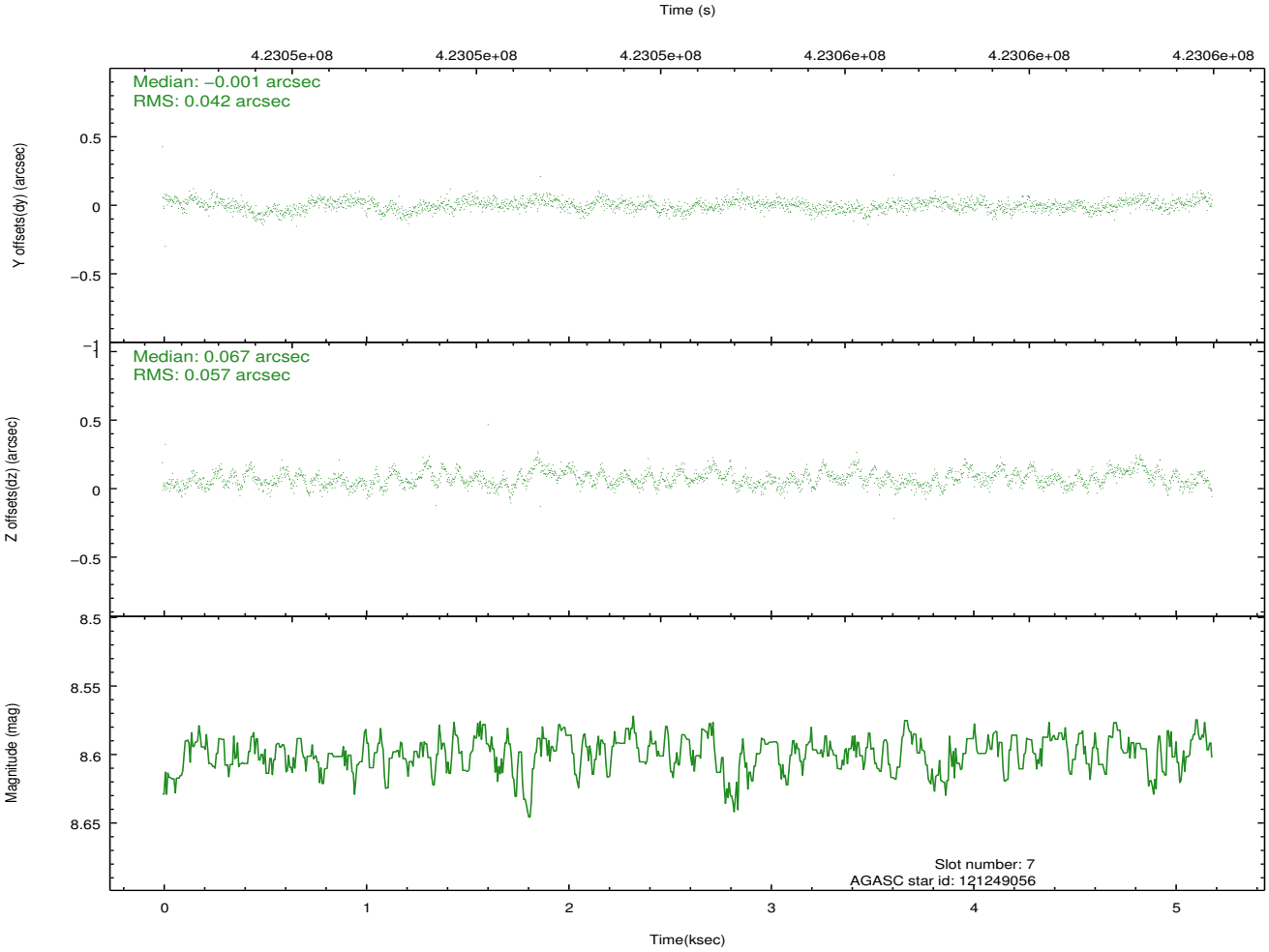

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.058 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 120856736


Time (s)
Median: 0.020 arcsec
RMS: 0.058 arcsec
Y offsets(dy) (arcsec)
Median: 0.054 arcsec
RMS: 0.051 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 6
AGASC star id: 120856736
Time(ksec)

2.4.5 Slot 7

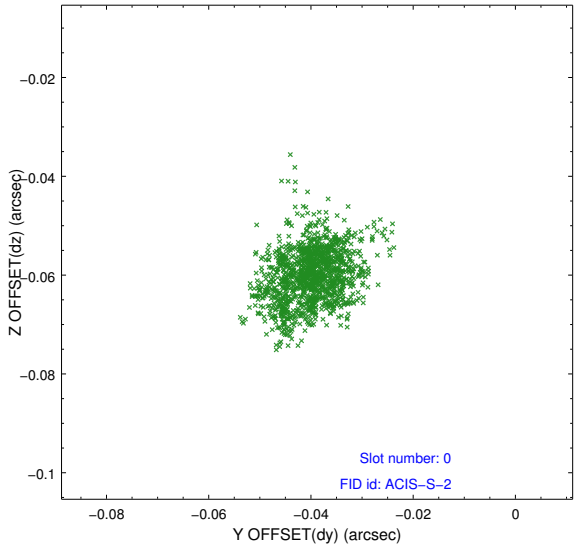

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 121249056

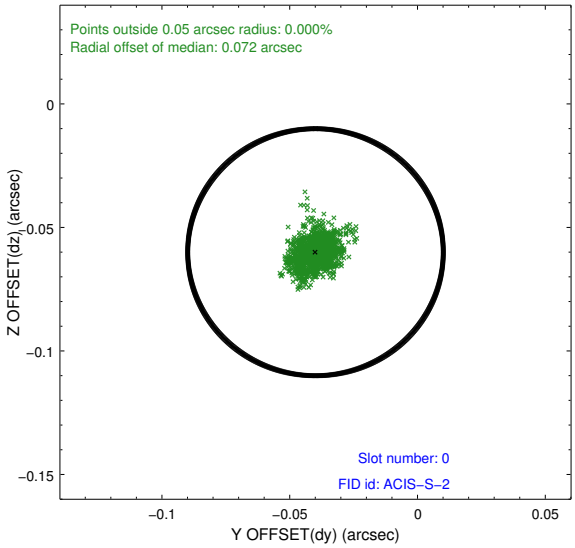

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.067 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 121249056

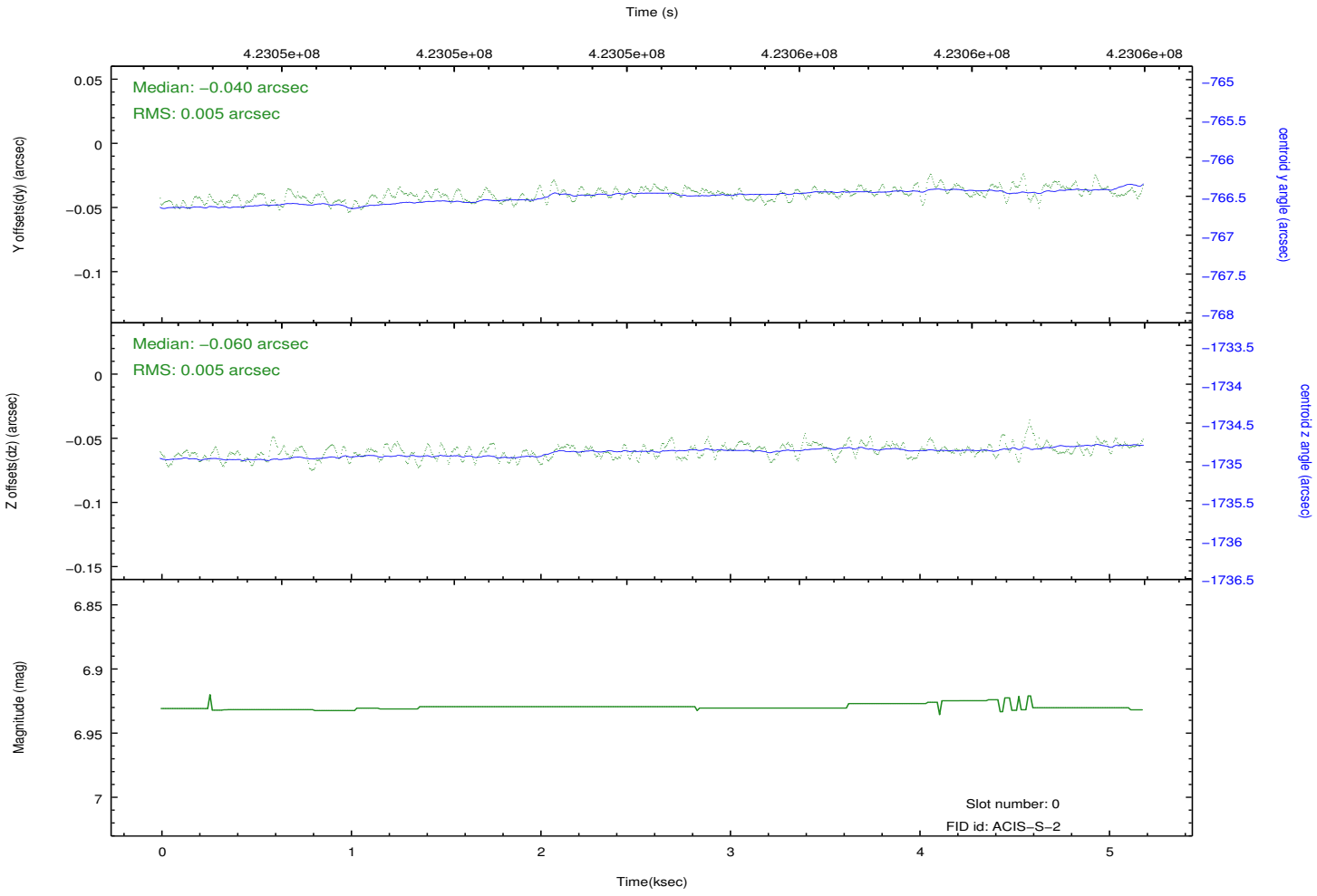

Time (s)
Median: −0.001 arcsec
RMS: 0.042 arcsec
Y offsets(dy) (arcsec)
Median: 0.067 arcsec
RMS: 0.057 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 7
AGASC star id: 121249056
Time(ksec)

2.5 FID Slots

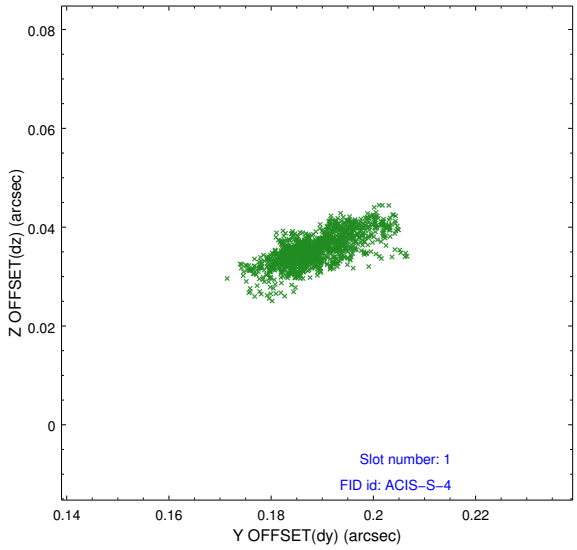
2.5.1 Slot 0

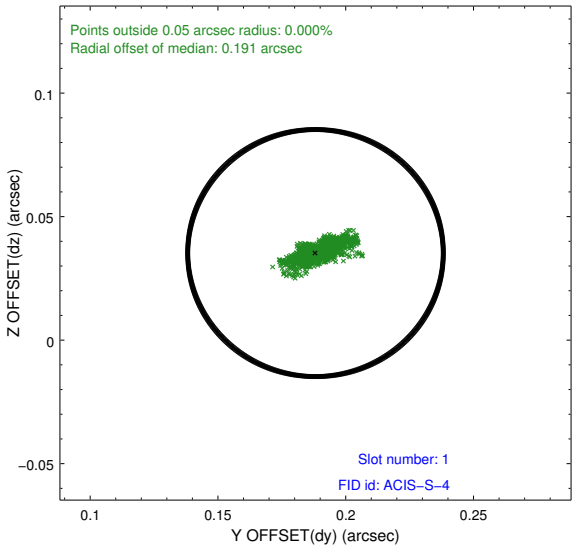


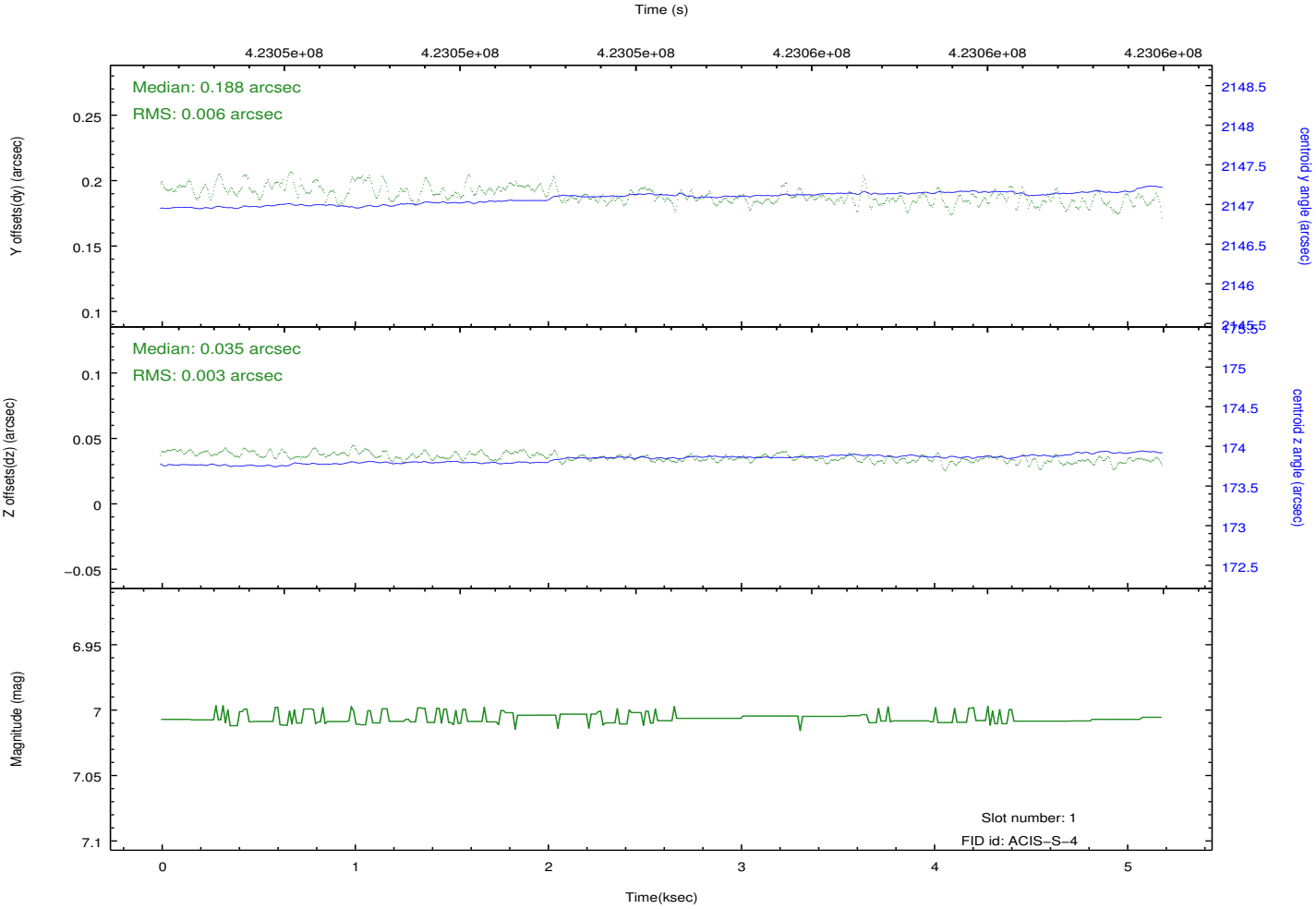




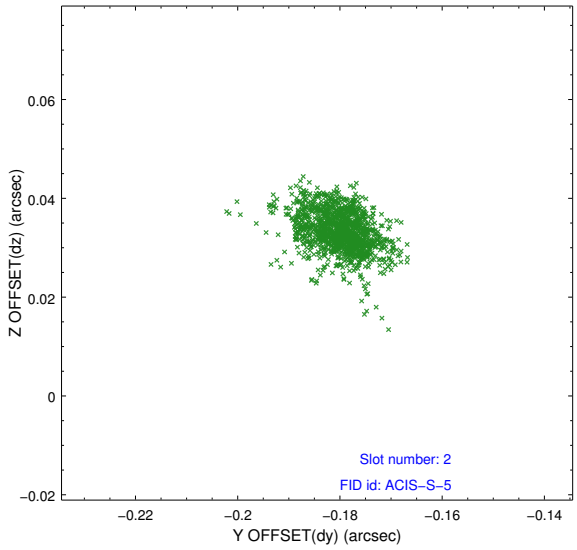
2.5.2 Slot 1

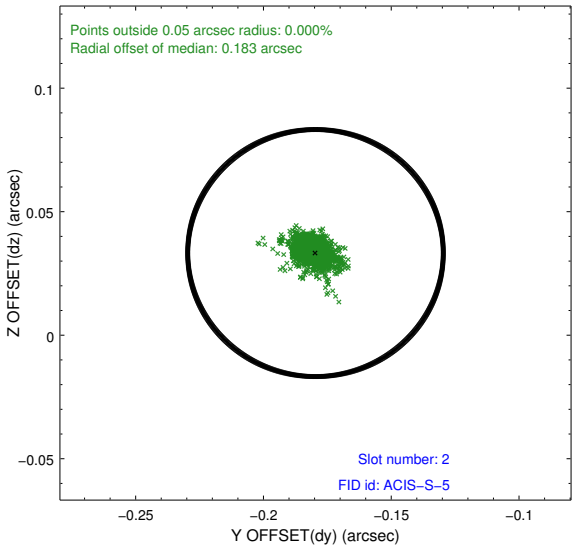

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−S−4

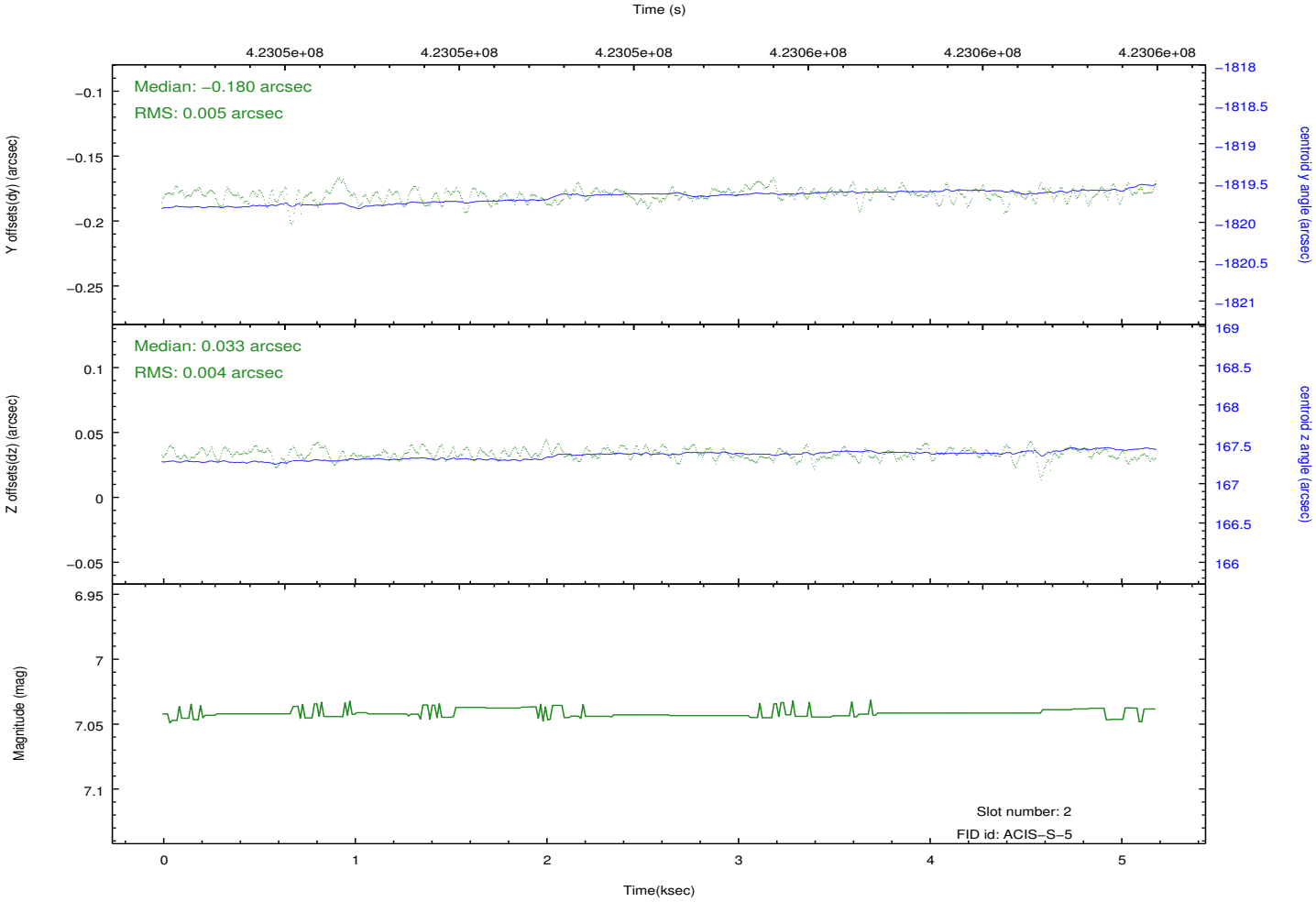

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.191 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−S−4


Time (s)
Median: 0.188 arcsec
RMS: 0.006 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.035 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


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


Time (s)
Median: −0.180 arcsec
RMS: 0.005 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.033 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)	2012.02.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.0264000749588

A.2 Comments

The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSER algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use acis_process_events to reprocess the data with the parameter pix_adj=NONE or RANDOMIZE, respectively.