V&V Reference Report
L2 ASCDS Version : 8.5.1.1

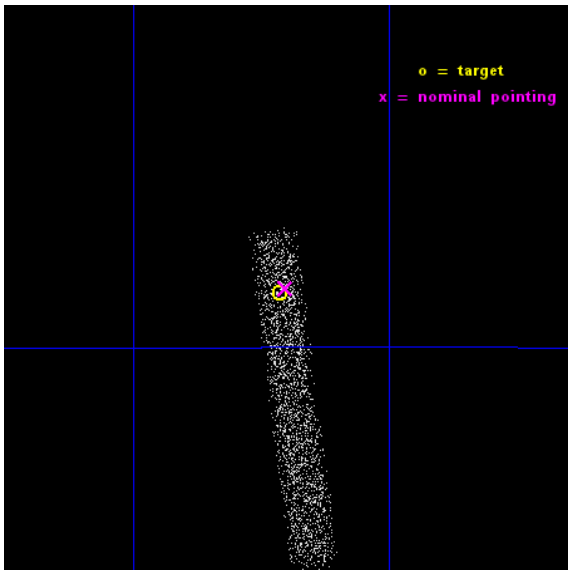
Observation 14643 - L2 Version 2
Chandra X-Ray Center

L2 Processing Date : Dec 3 2014

Contents

1 Front

seq_num	401476	Sequence number
obs_id	14643	Observation id
title	A snap-shot survey of Galatic neutron-star Be/X-ray transients in quiescence	Proposal title
observer	Dr. Rudy Wijnands	Principal investigator
object	GRO J1750-27	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	267.303333	Observer's specified target RA [deg]
dec_targ	-26.644111	Observer's specified target Dec [deg]
ra_nom	267.30063158716	Nominal RA [deg]
dec_nom	-26.642082379425	Nominal Dec [deg]
roll_nom	82.476553490163	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5068.3996978998	Sum of GTIs [s]
livetime	4596.7709939233	Livetime [s]
ontime7	5068.3996978998	Sum of GTIs [s]
l2events	2239	Number of level 2 events

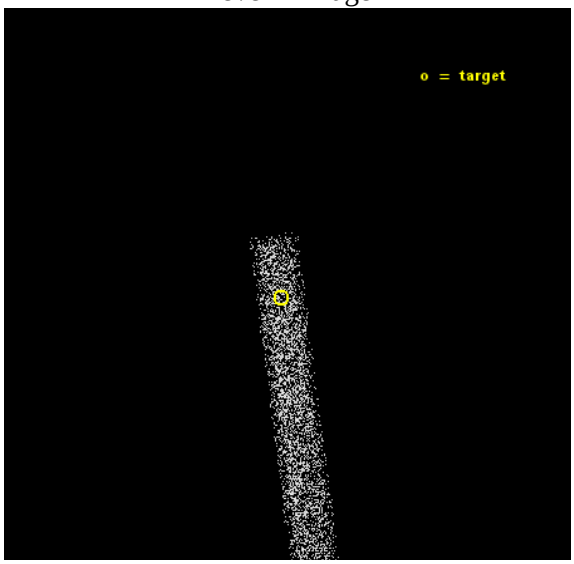


2 OBI

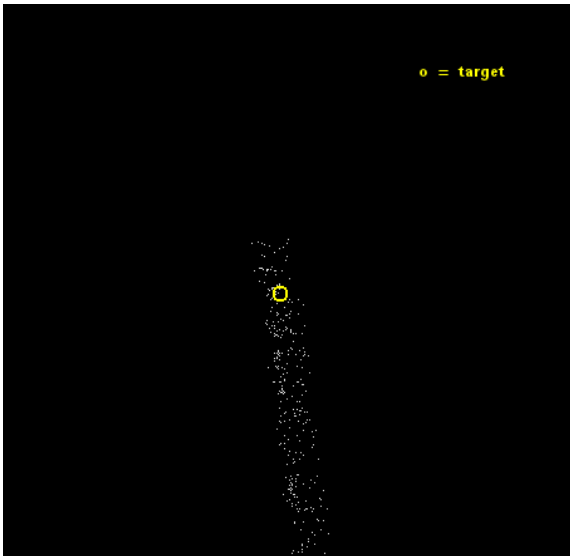
2.1 OBI

2.1.1 Images

Level 1 Image

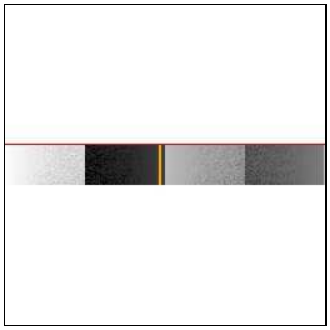


Level 1 Bad Events



2.1.2 Bias

Chip 7



2.1.3 Parameters

obi_num	0	Obi number
ascdsver	10.3	Processing system revision
caldbver	4.6.4	
date	2014-12-03T09:06:31	Date and time of file creation
revision	2	Processing version of data

sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ontime	5068.3996978998	Sum of GTIs [s]
ontime7	5068.3996978998	Sum of GTIs [s]
l1events	4597	Number of level 1 events

2.1.4 Events

	ccd 7
level 1 events	4597
rejected events	2245
rejected %	48%

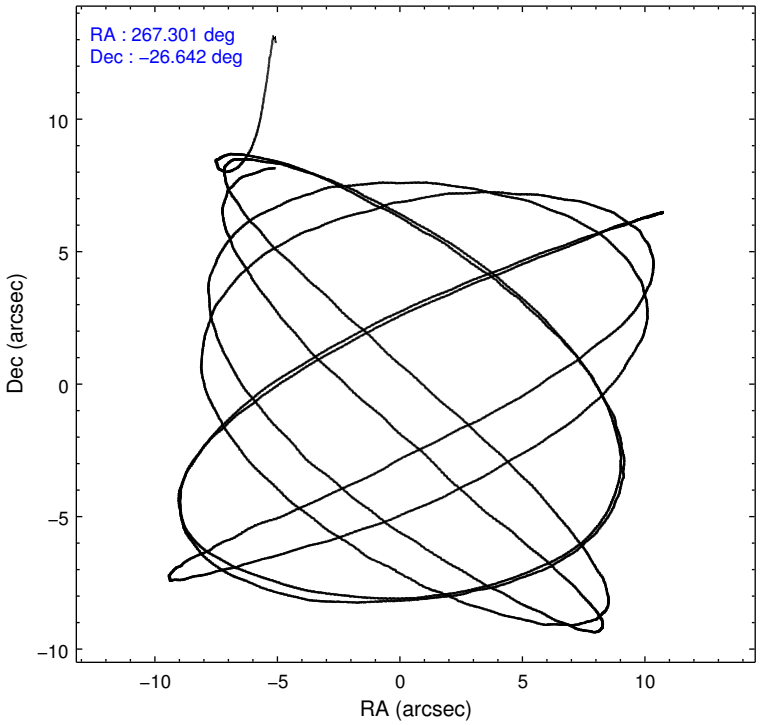
	ccd 7
grade 0 events	291
	6%
grade 1 events	8
	0%
grade 2 events	496
	10%
grade 3 events	294
	6%
grade 4 events	296
	6%
grade 5 events	449
	9%
grade 6 events	976
	21%
grade 7 events	1787
	38%

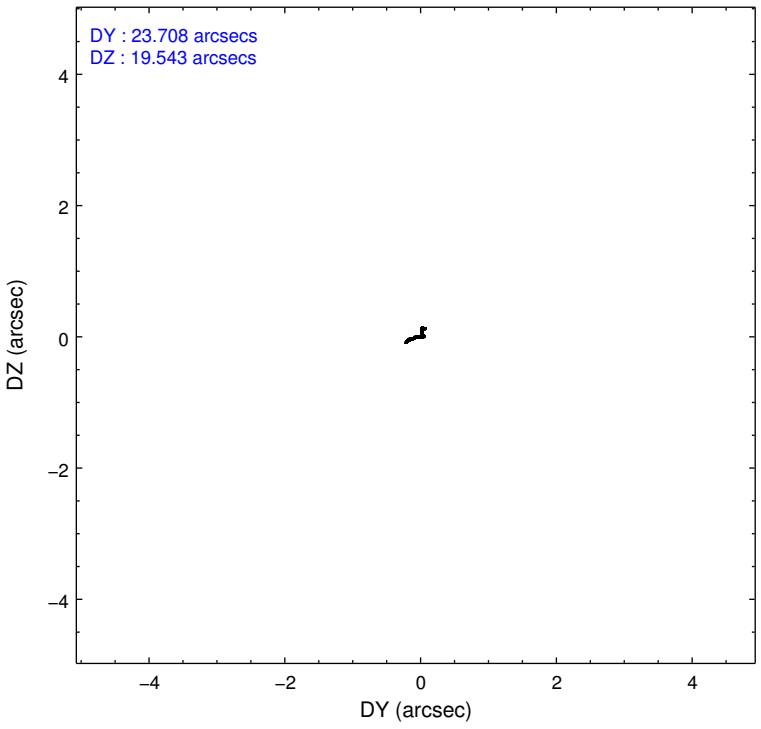
2.2 Compared Parameters

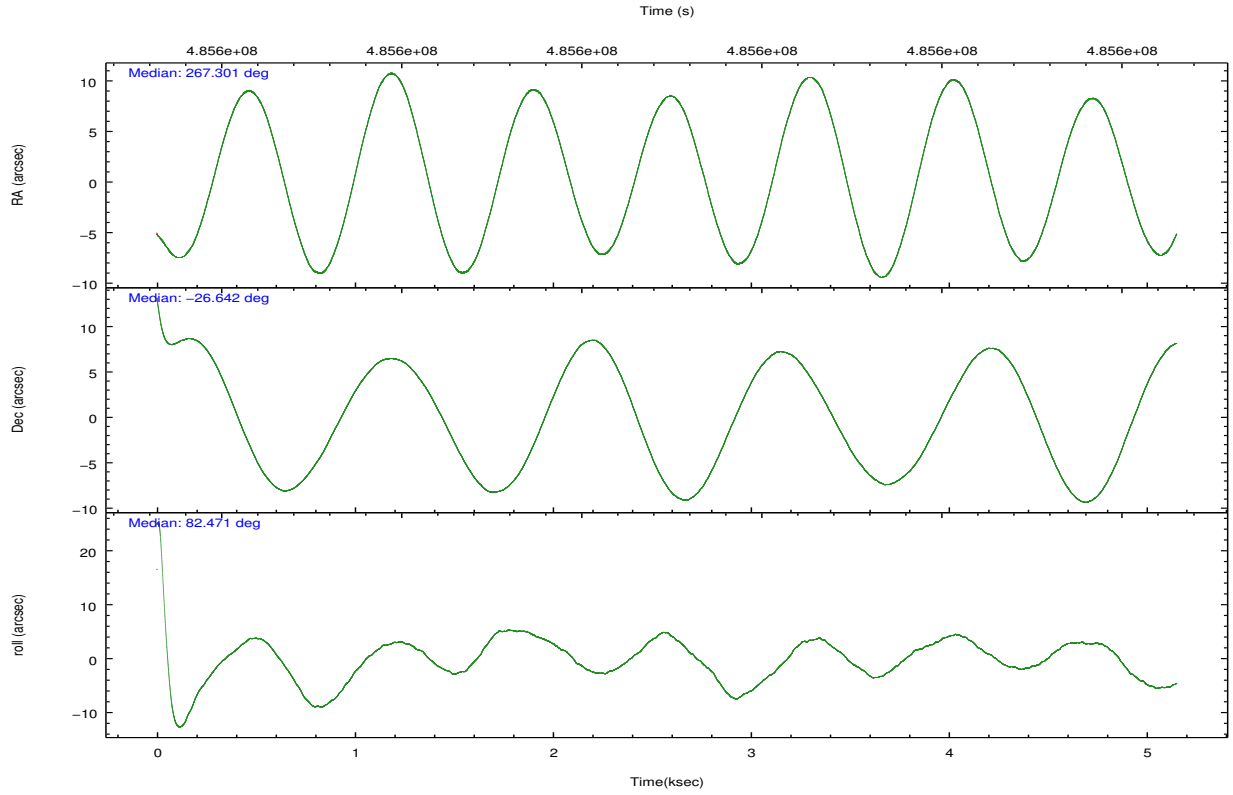
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-7	ACIS-7
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	267.312825	267.3006315871563
[deg] Pointing Dec	-26.667279	-26.64208237942527
[deg] Pointing Roll	82.325281	82.4765534901634
[mm] SIM focus 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)	485597045.184000	485595457.5265
Observation start date	2013-05-22T08:02:58	2013-05-22T07:37:37
[s] Observation end time (MET)	485602045.184000	485603320.81442
Observation end date	2013-05-22T09:26:18	2013-05-22T09:48:40
Read mode	TIMED	TIMED

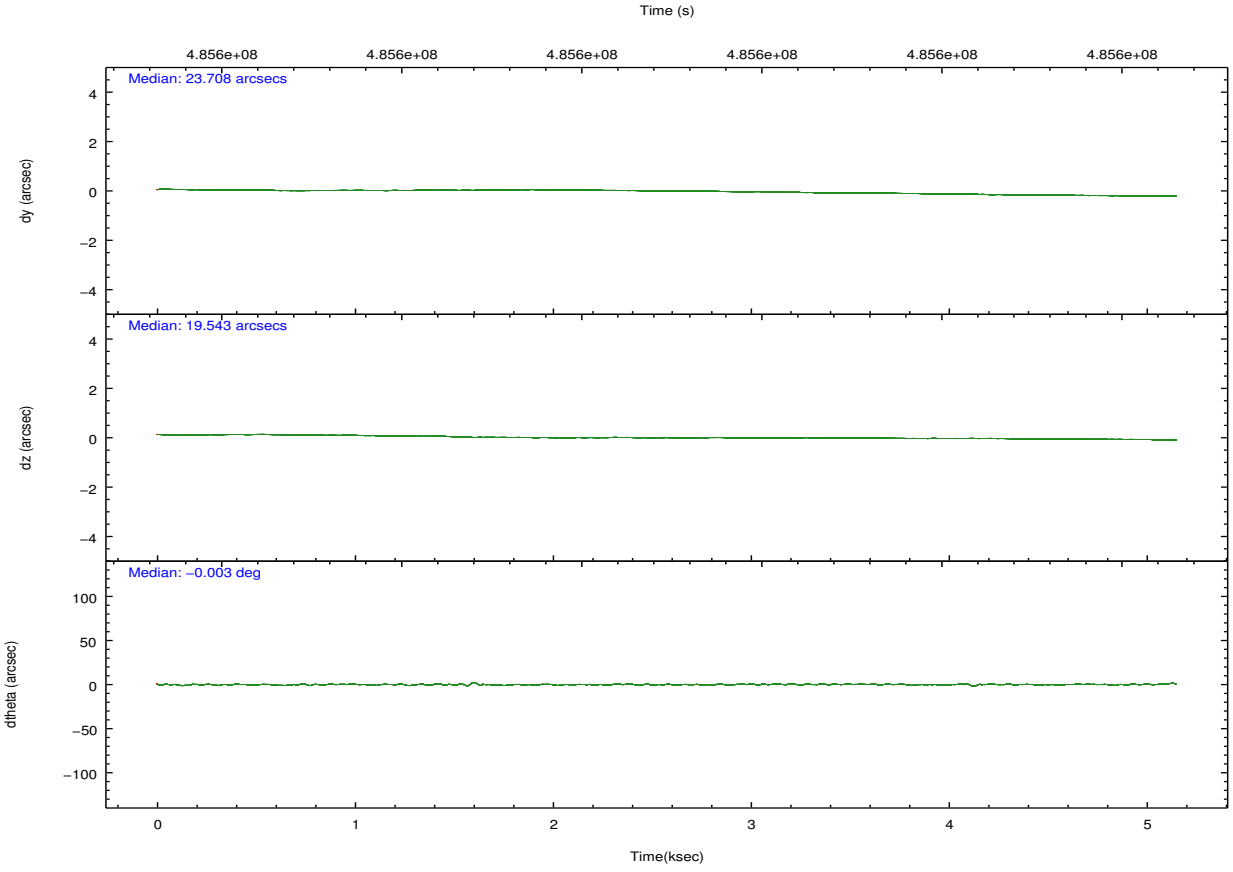
Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	CUSTOM	1/8
Subarray start row	449	449
Subarray row count	128	128
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	0.4

2.3 Aspect


RA : 267.301 deg
Dec : −26.642 deg
Dec (arcsec)
RA (arcsec)
10
5
0
−5
−10
−10
−5
0
5
10


DY : 23.708 arcsecs
DZ : 19.543 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
4.856e+08
4.856e+08
4.856e+08
4.856e+08
4.856e+08
4.856e+08
Median: 267.301 deg
RA (arcsec)
Median: −26.642 deg
Dec (arcsec)
Median: 82.471 deg
roll (arcsec)
Time(ksec)

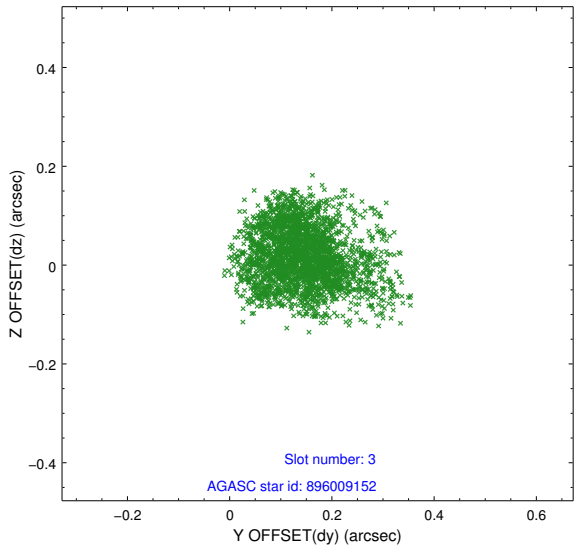

Time (s)
4.856e+08
4.856e+08
4.856e+08
4.856e+08
4.856e+08
4.856e+08
Median: 23.708 arcsecs
dy (arcsec)
Median: 19.543 arcsecs
dz (arcsec)
Median: −0.003 deg
dtheta (arcsec)
Time(ksec)

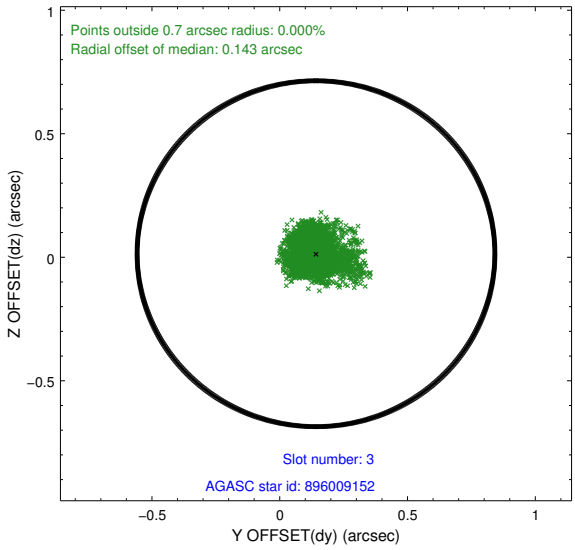
Slot Statistics

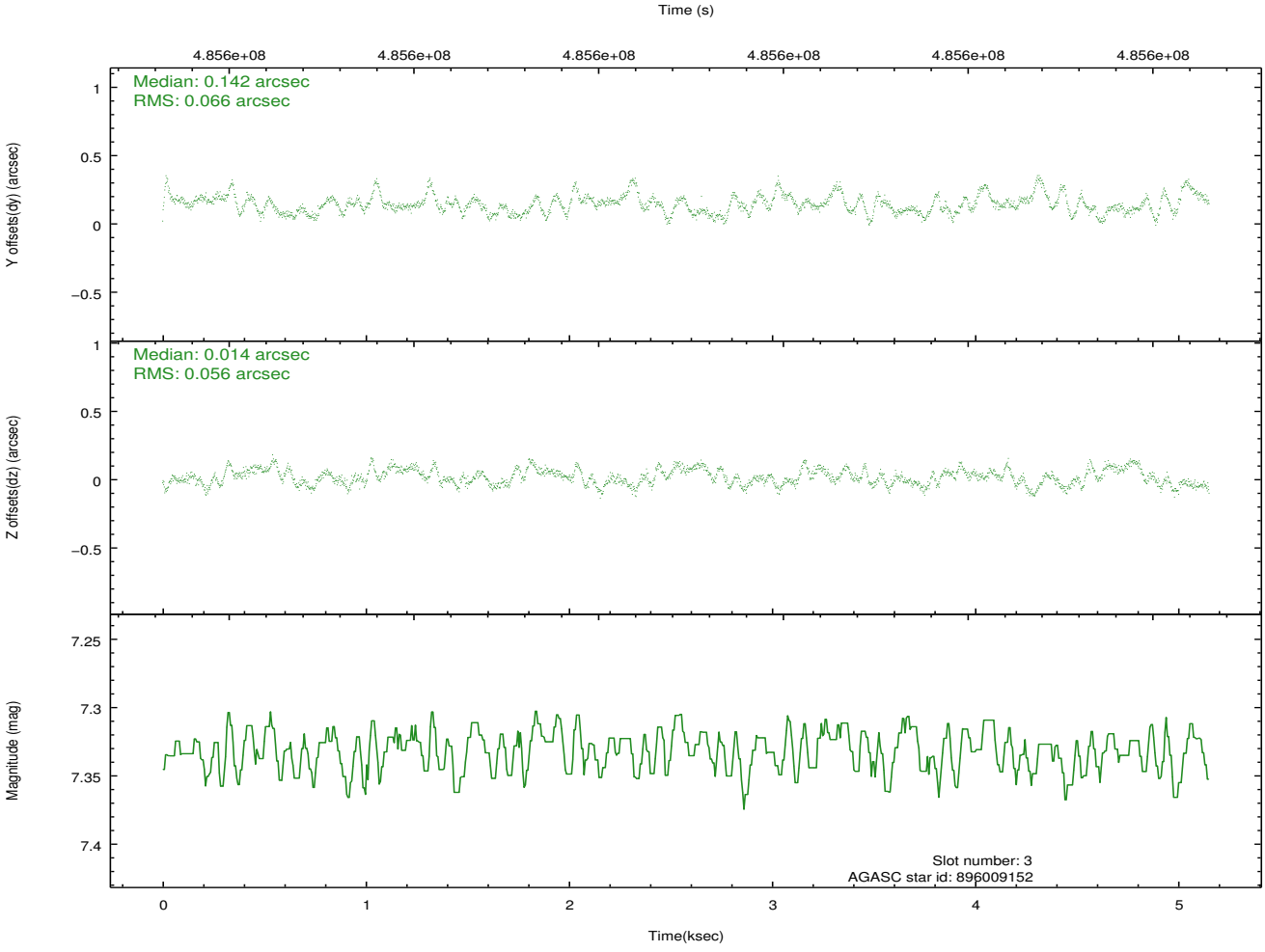
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.93	1257	-0.031	-0.032	0.007	0.012	0.000000	0.000000	-776.93	-1741.08
1	FID		ACIS-S-5	7.04	1257	-0.149	-0.043	0.007	0.013	0.000000	0.000000	-1830.68	159.68
2	FID		ACIS-S-6	7.15	1257	0.153	0.084	0.006	0.010	0.000000	0.000000	383.62	805.00
3	GUIDE	used	896009152	7.33	2514	0.142	0.014	0.092	0.147	267.588100	-27.061669	-1290.49	-1064.40
4	GUIDE	used	896011536	9.38	2504	-0.053	-0.120	0.159	0.248	267.007333	-26.766562	-487.11	924.57
5	GUIDE	used	897717296	8.26	2513	0.062	0.227	0.084	0.132	267.921819	-26.875322	-485.60	-2038.25
6	GUIDE	used	897718208	7.72	2514	-0.005	0.279	0.058	0.094	268.020133	-26.836183	-305.35	-2334.41
7	GUIDE	used	896009584	9.23	2509	-0.153	-0.403	0.150	0.228	266.891313	-26.347528	956.64	1499.74

2.4 Star Slots

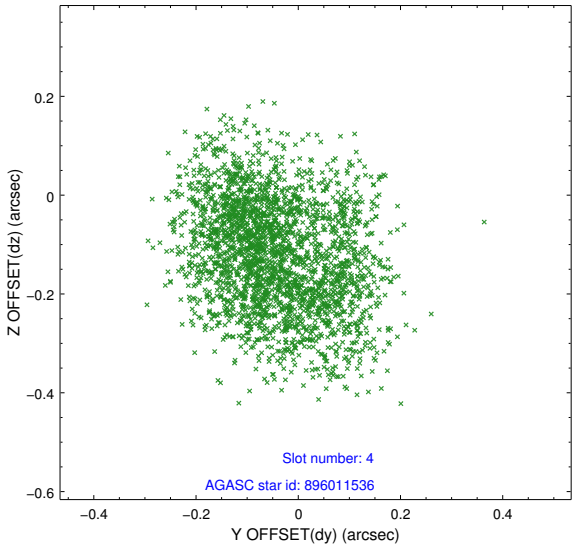
2.4.1 Slot 3

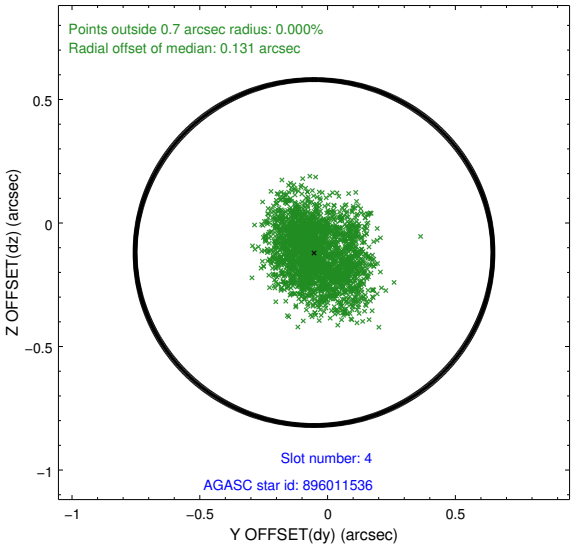


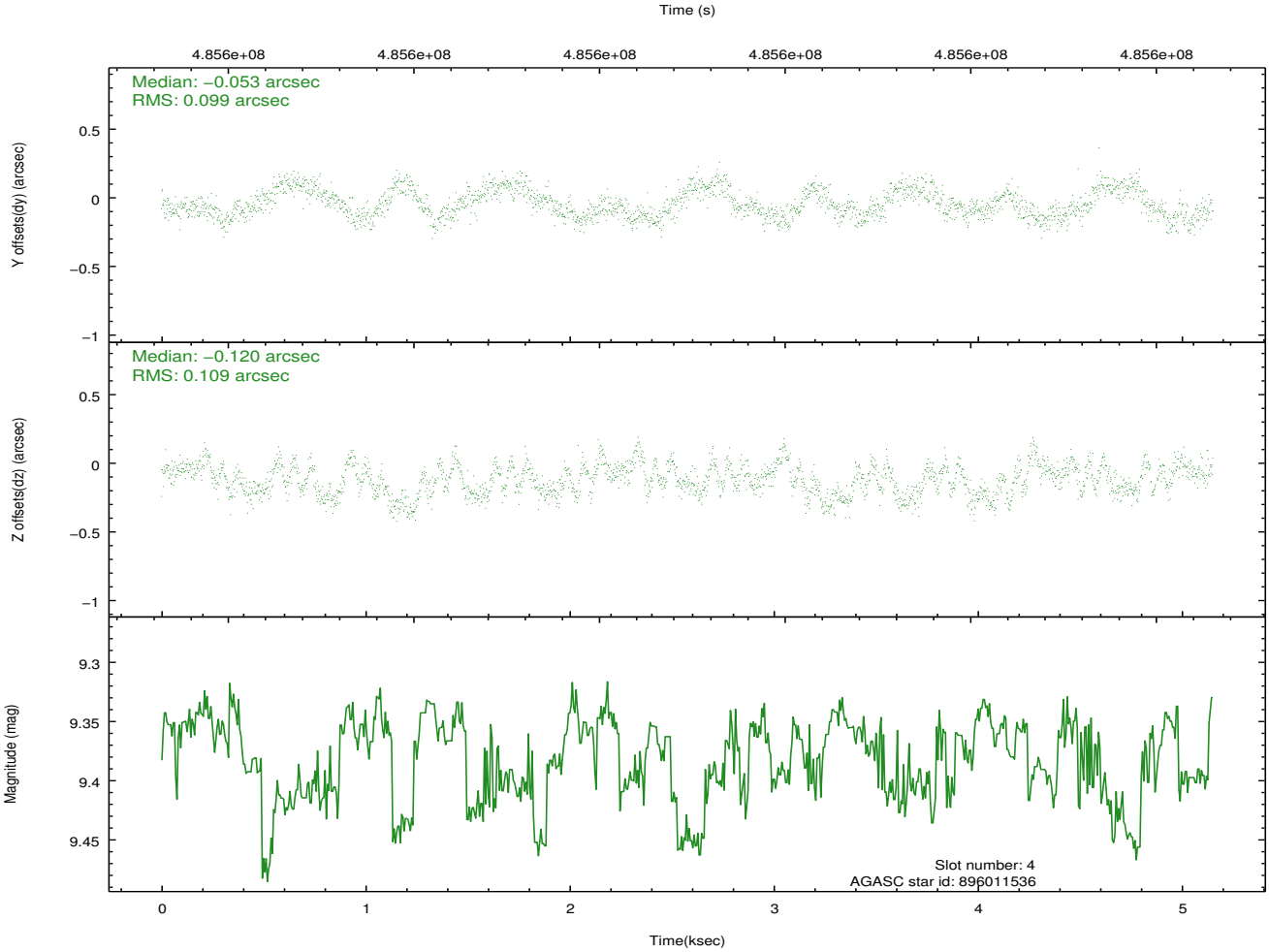




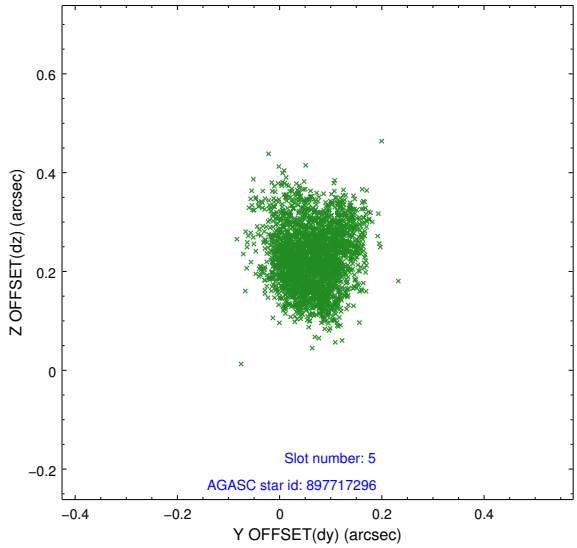
2.4.2 Slot 4

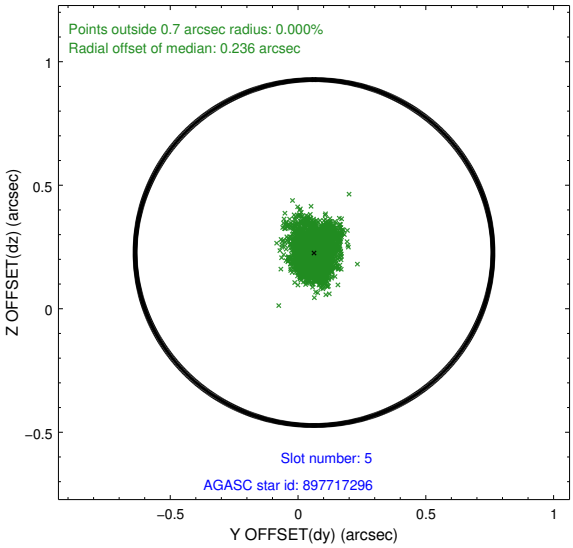

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 896011536

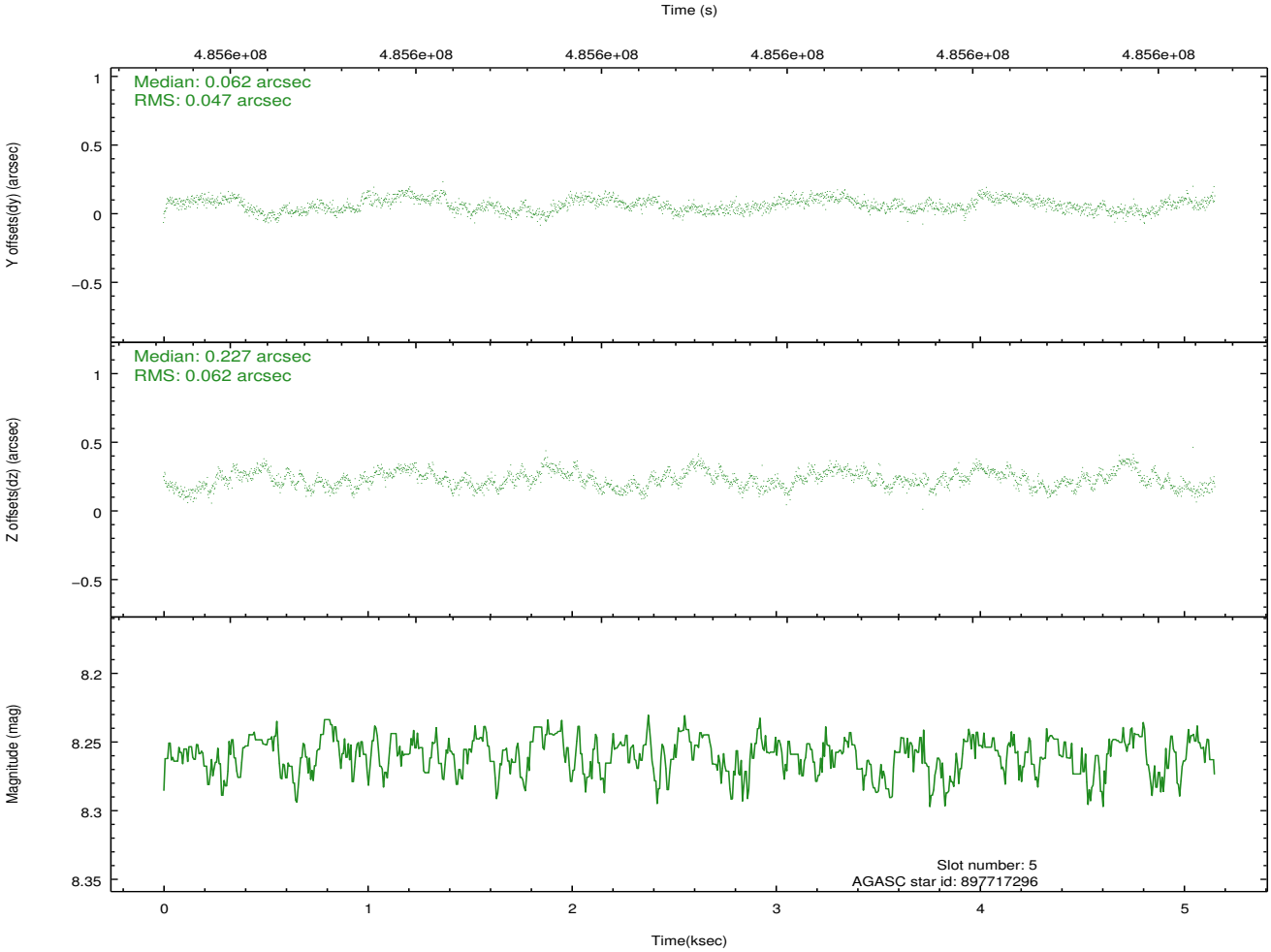

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.131 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 896011536


Time (s)
Median: −0.053 arcsec
RMS: 0.099 arcsec
Y offsets(dy) (arcsec)
Median: −0.120 arcsec
RMS: 0.109 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 4
AGASC star id: 896011536
Time(ksec)

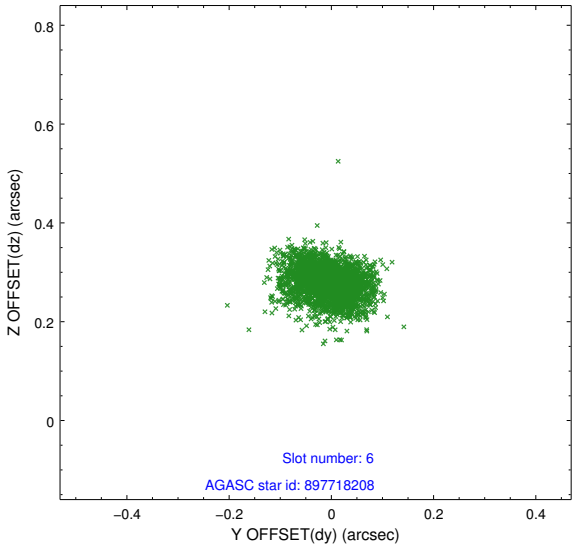
2.4.3 Slot 5

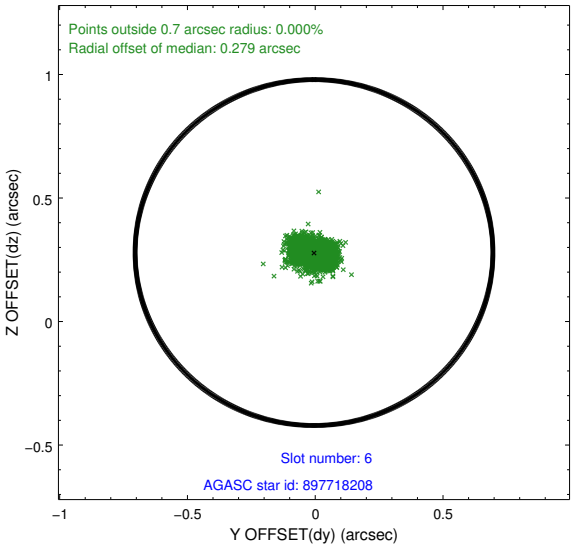

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 897717296

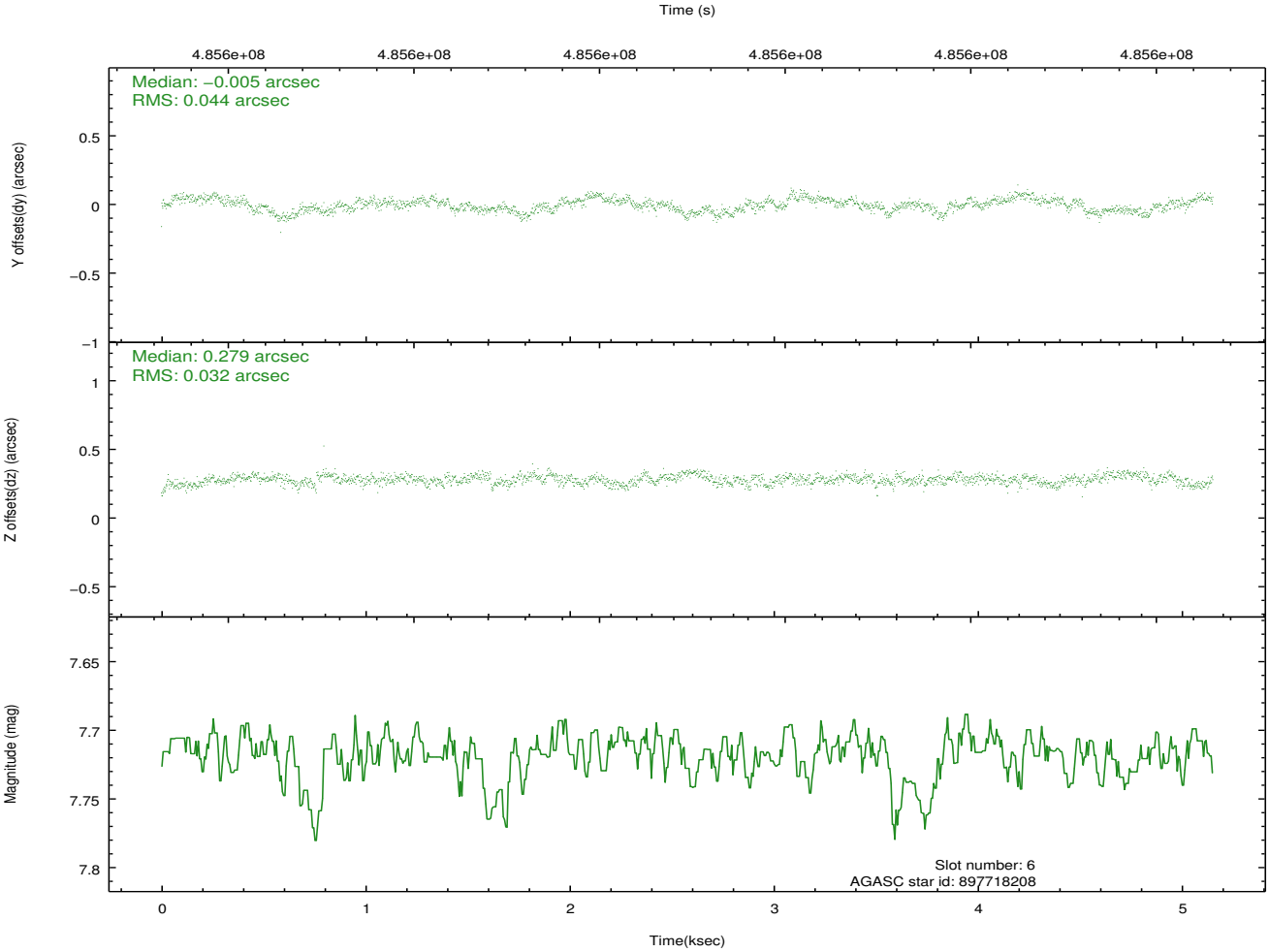

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.236 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 897717296


Time (s)
Median: 0.062 arcsec
RMS: 0.047 arcsec
Y offsets(dy) (arcsec)
Median: 0.227 arcsec
RMS: 0.062 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 5
AGASC star id: 897717296
Time(ksec)

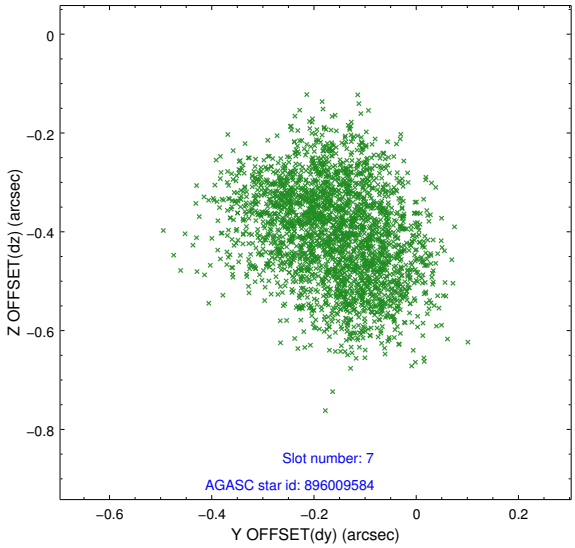
2.4.4 Slot 6

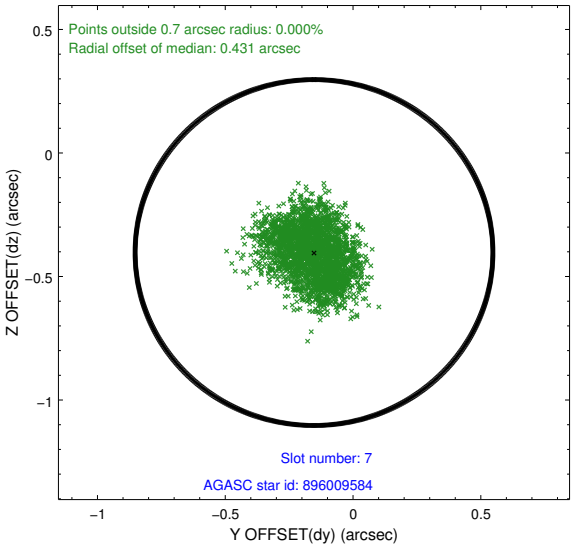

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 897718208

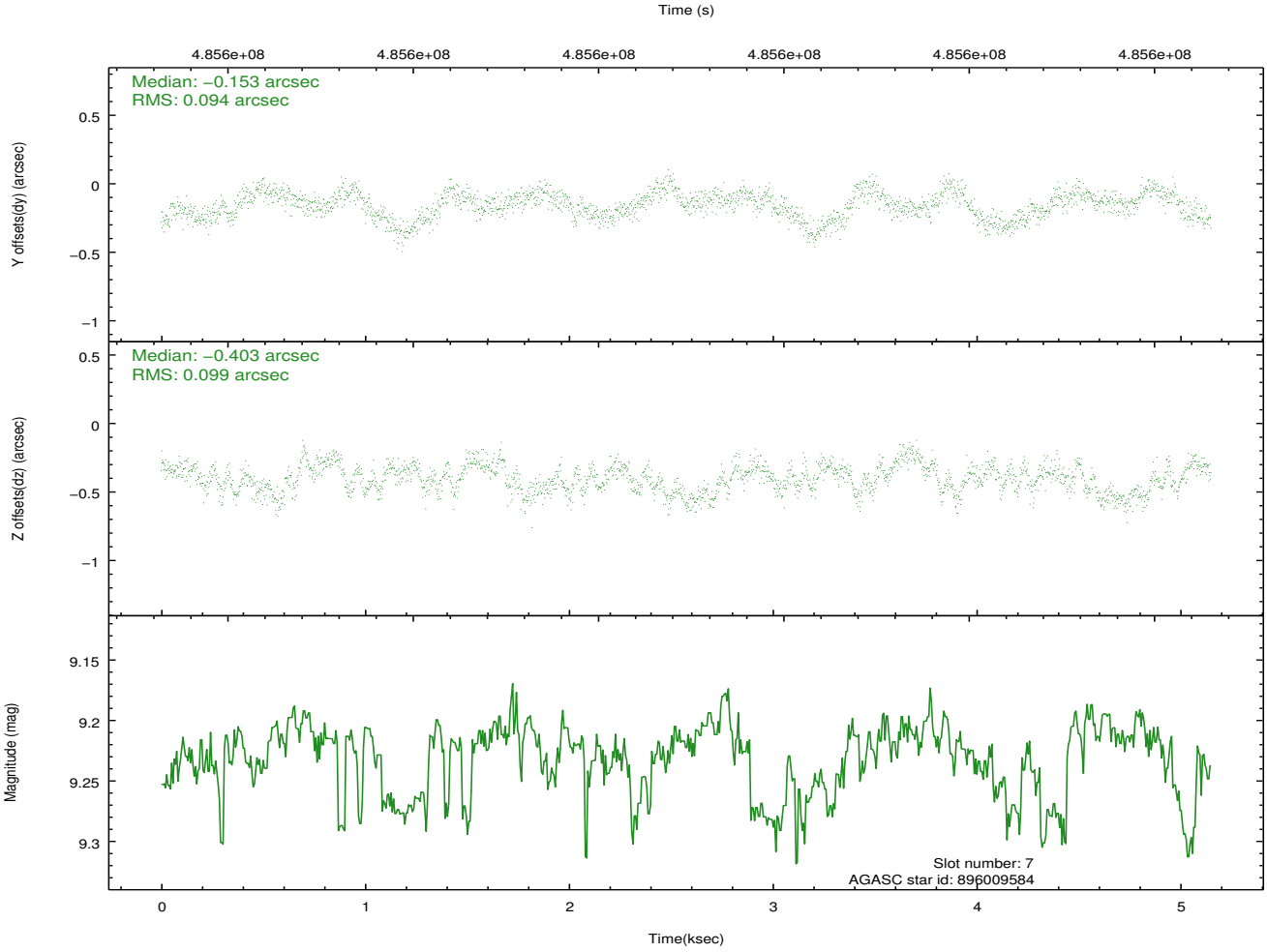

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.279 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 897718208


Time (s)
Median: −0.005 arcsec
RMS: 0.044 arcsec
Y offsets(dy) (arcsec)
Median: 0.279 arcsec
RMS: 0.032 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 6
AGASC star id: 897718208
Time(ksec)

2.4.5 Slot 7

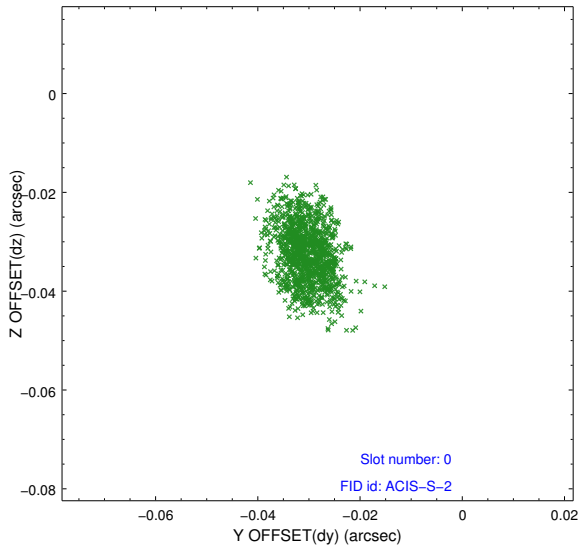

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 896009584

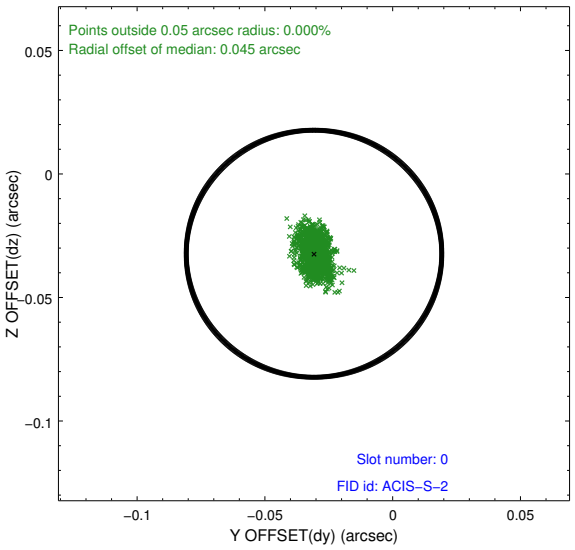

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.431 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 896009584

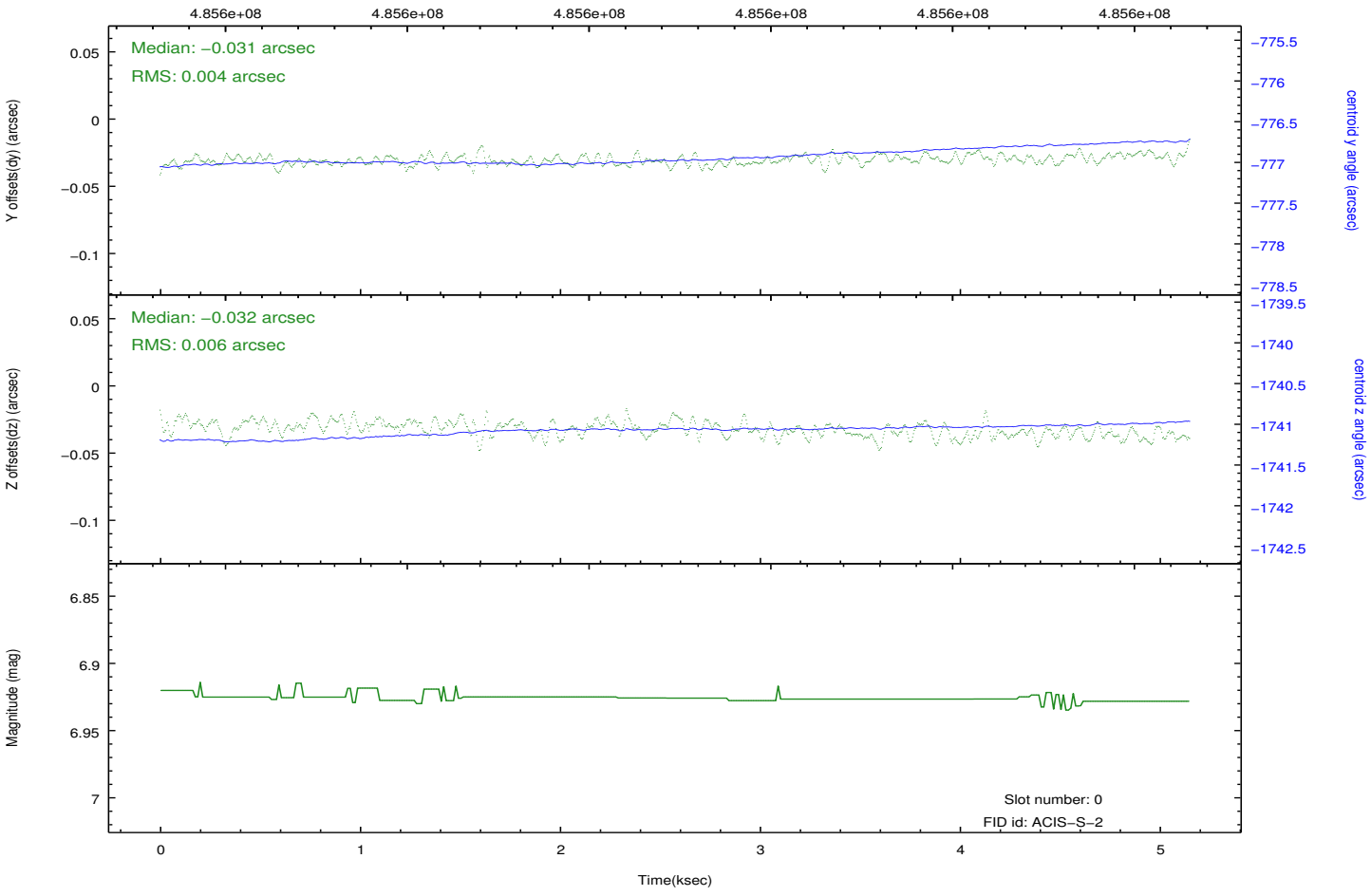

Time (s)
Median: −0.153 arcsec
RMS: 0.094 arcsec
Y offsets(dy) (arcsec)
Median: −0.403 arcsec
RMS: 0.099 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 7
AGASC star id: 896009584
Time(ksec)

2.5 FID Slots

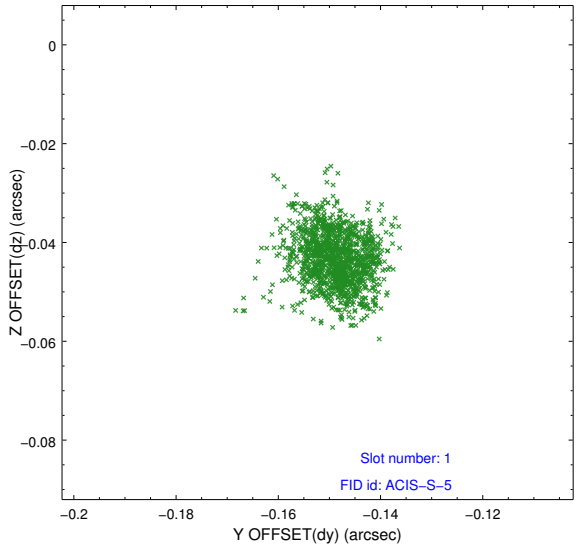
2.5.1 Slot 0

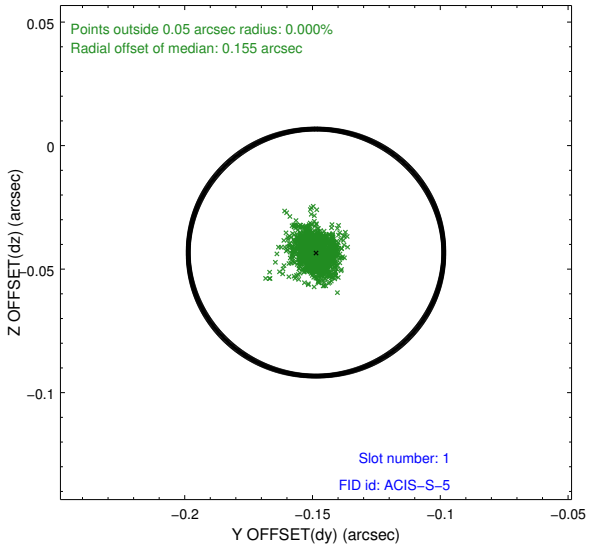


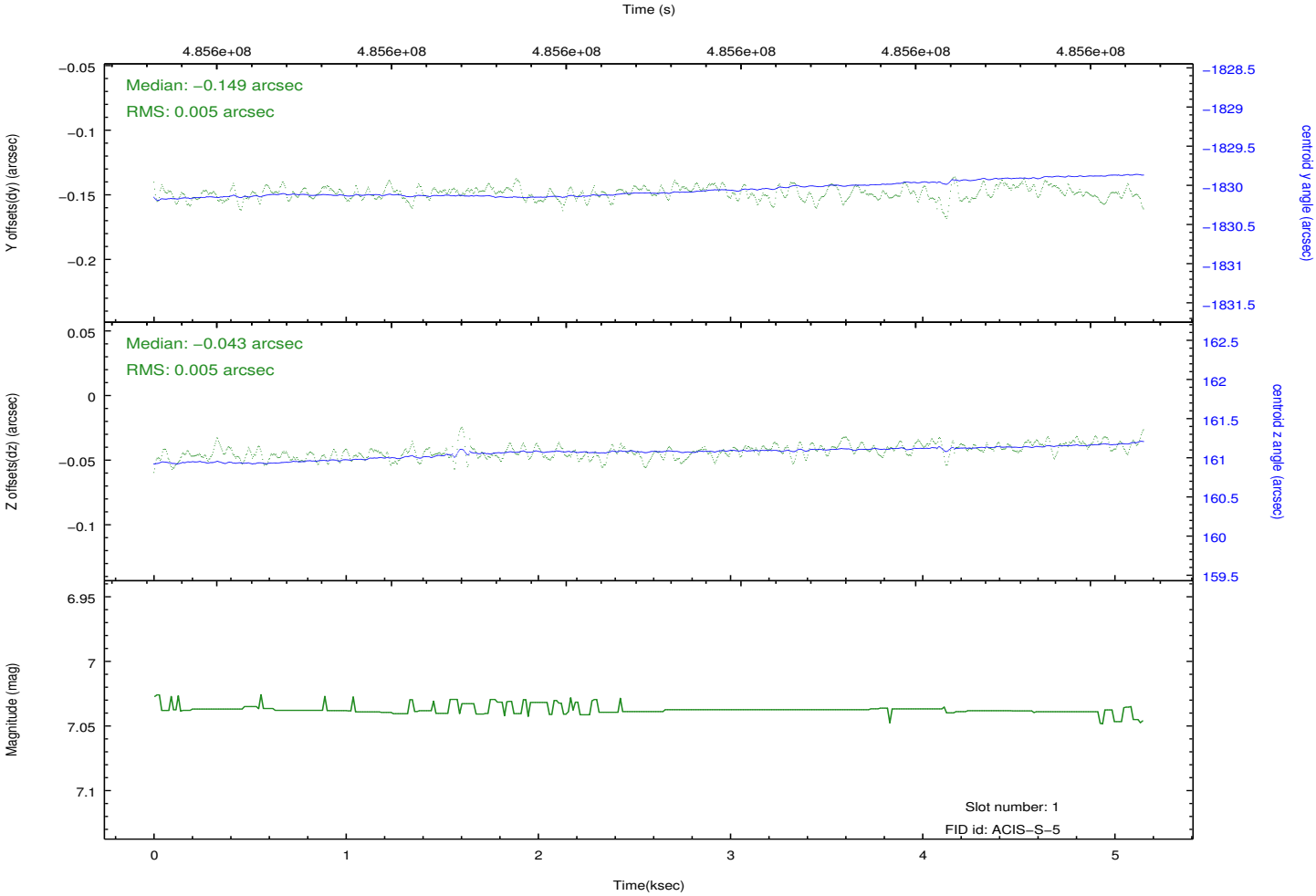




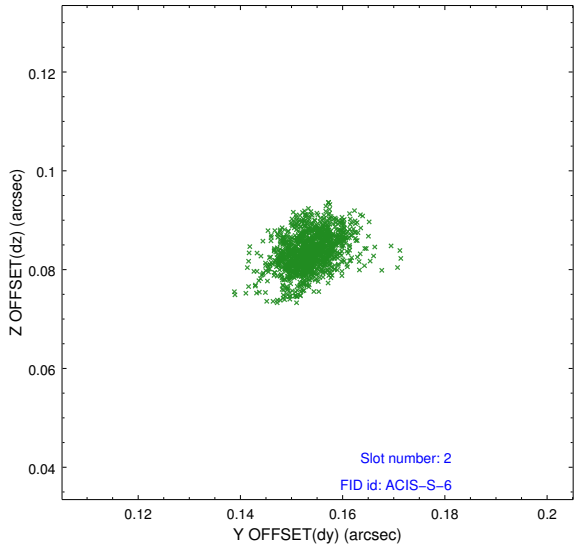
2.5.2 Slot 1

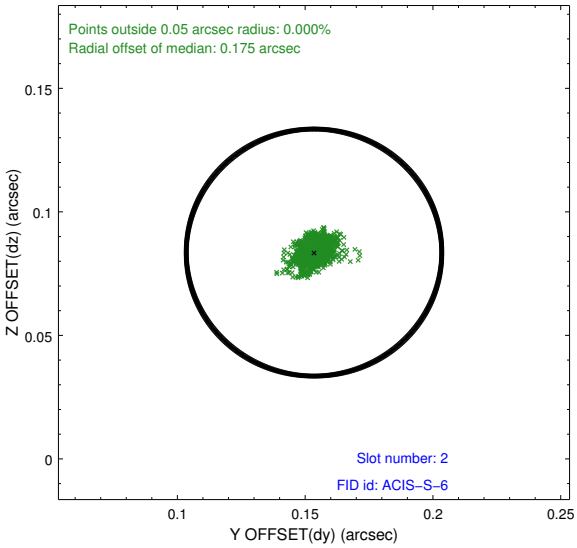

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−S−5

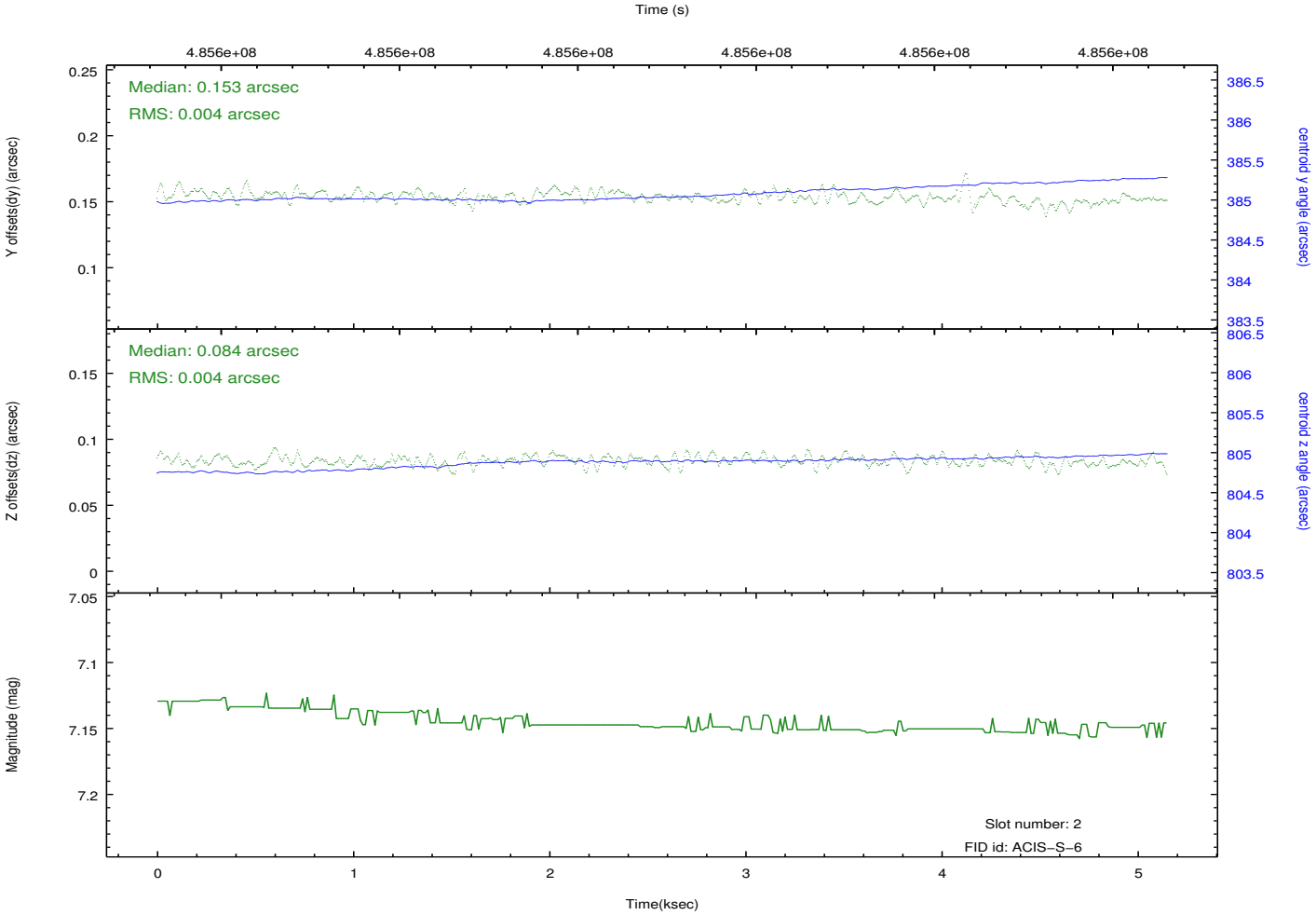

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.155 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−S−5


Time (s)
Median: −0.149 arcsec
RMS: 0.005 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.043 arcsec
RMS: 0.005 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number: 1
FID id: ACIS−S−5
Time(ksec)

2.5.3 Slot 2


Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 2
FID id: ACIS−S−6


Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.175 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 2
FID id: ACIS−S−6


Time (s)
Median: 0.153 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.084 arcsec
RMS: 0.004 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number: 2
FID id: ACIS−S−6
Time(ksec)

A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.0683996978998

A.2 Comments

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.