# summary for network NET9

timeperiod chosen: from 2026-11-01-00:00:00 until 2026-11-01-23:59:59

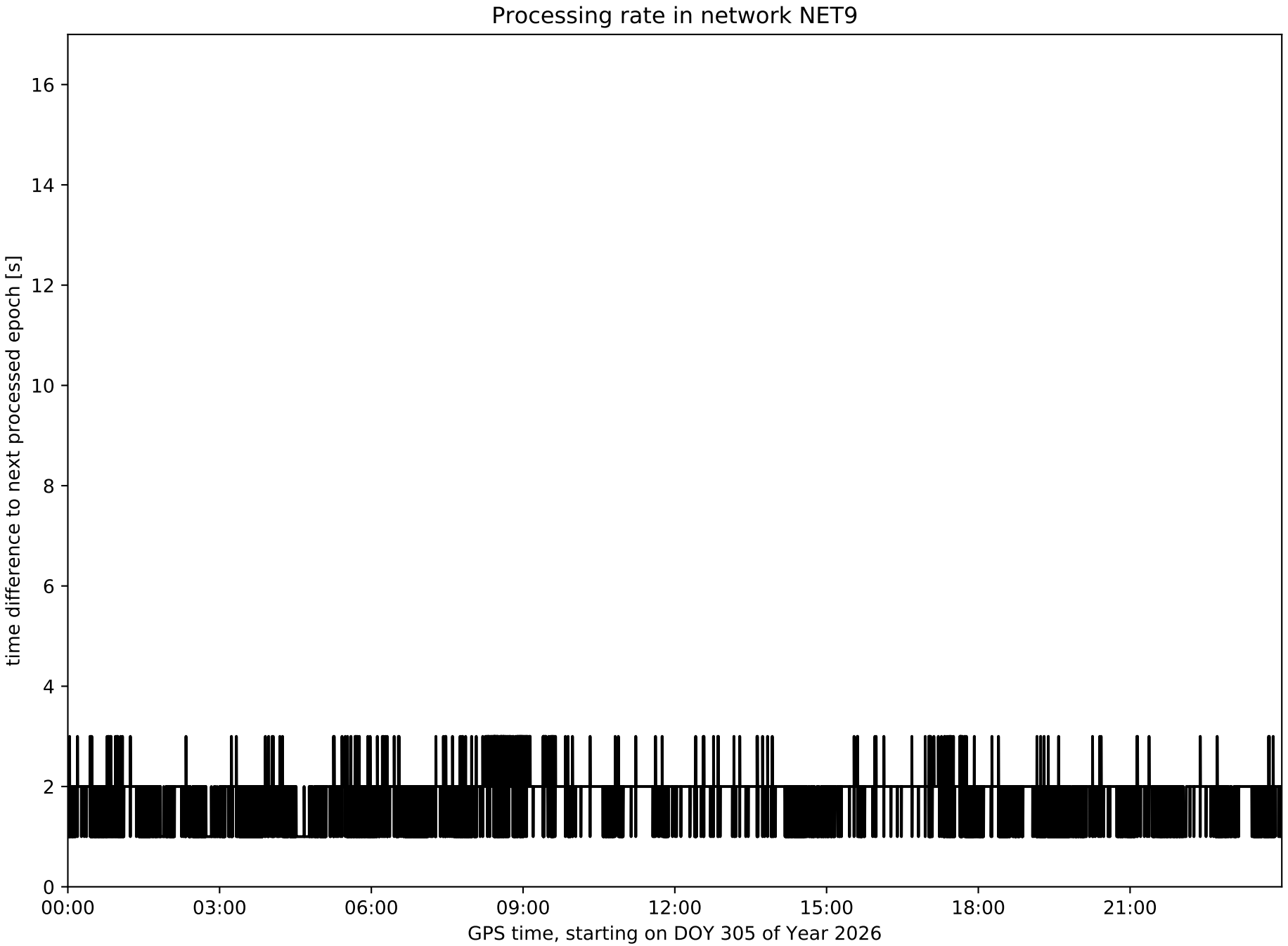
average update rate (durations larger than 15 seconds considered as observation gap): 1.5 seconds

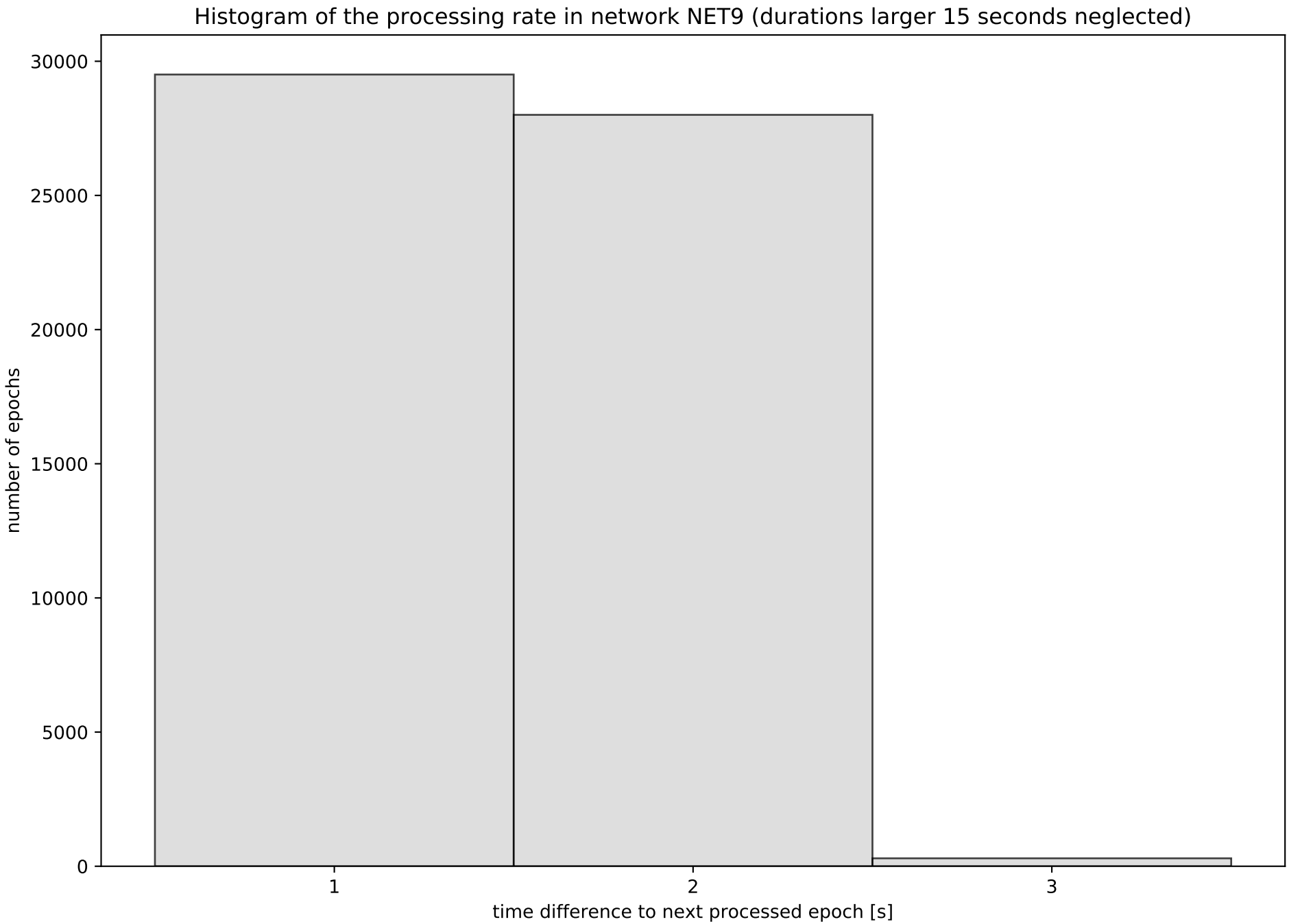
average fixing percentage with threshold set to 0.3: 95.4 percent

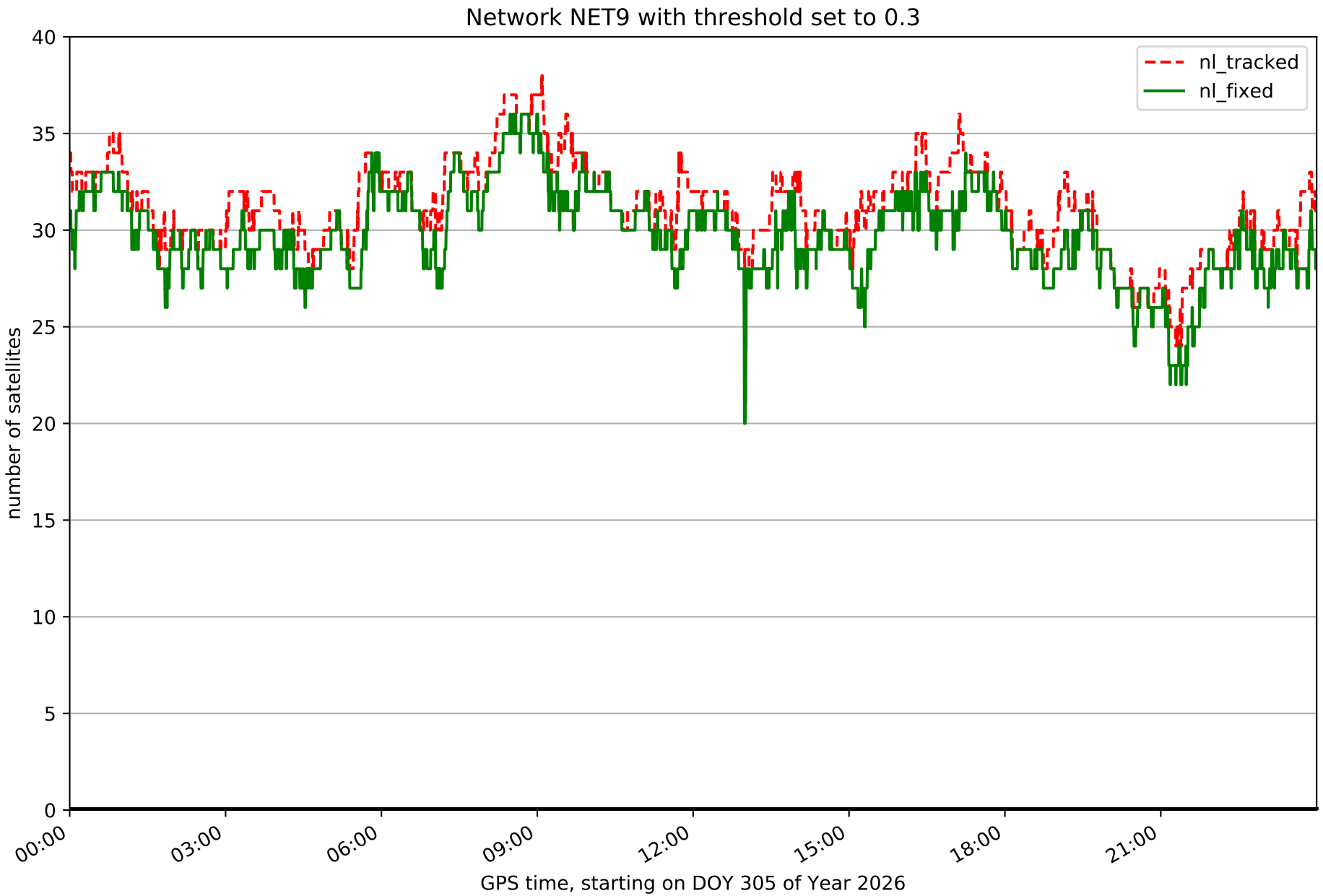
stations available: 16 of 16

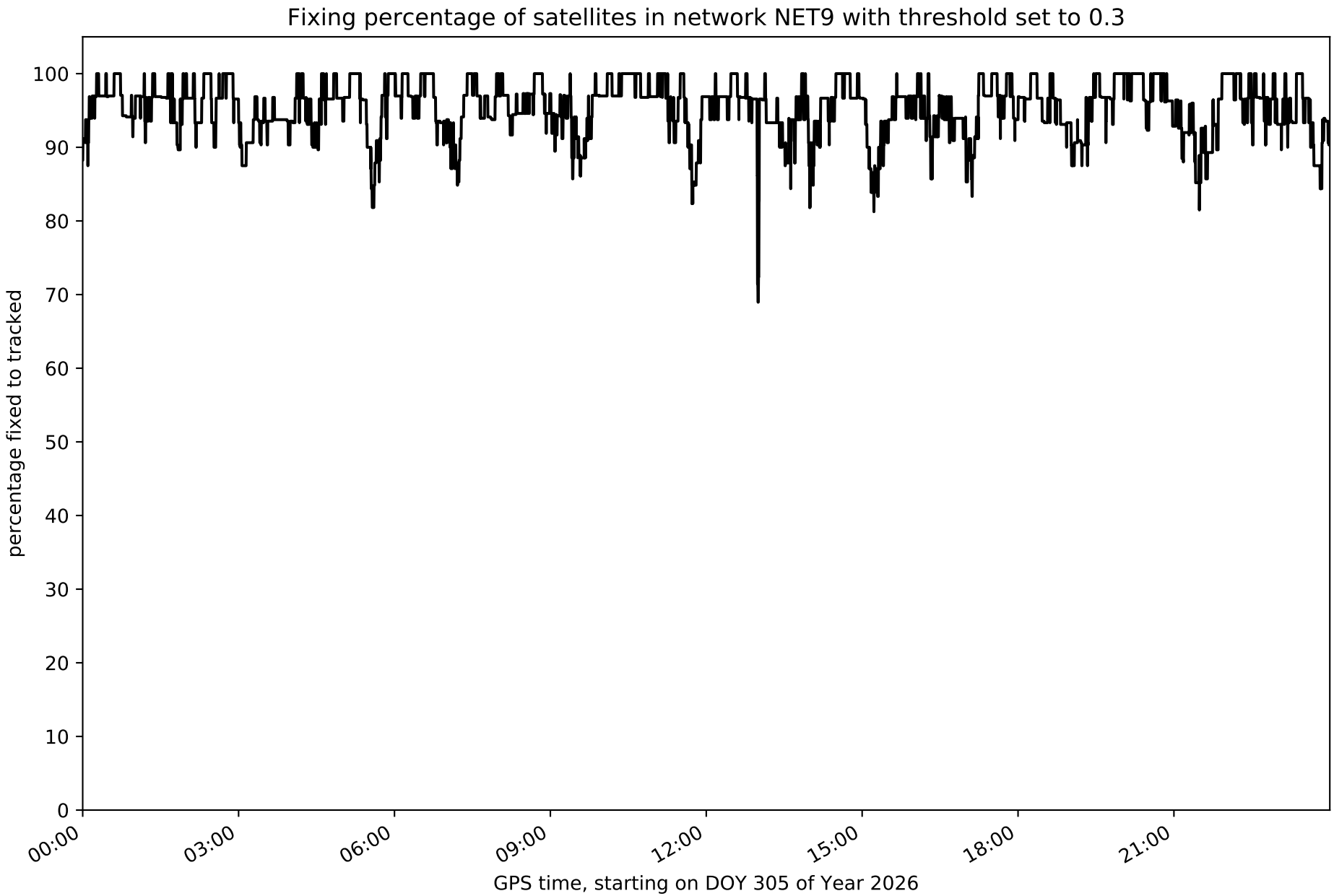
station information:

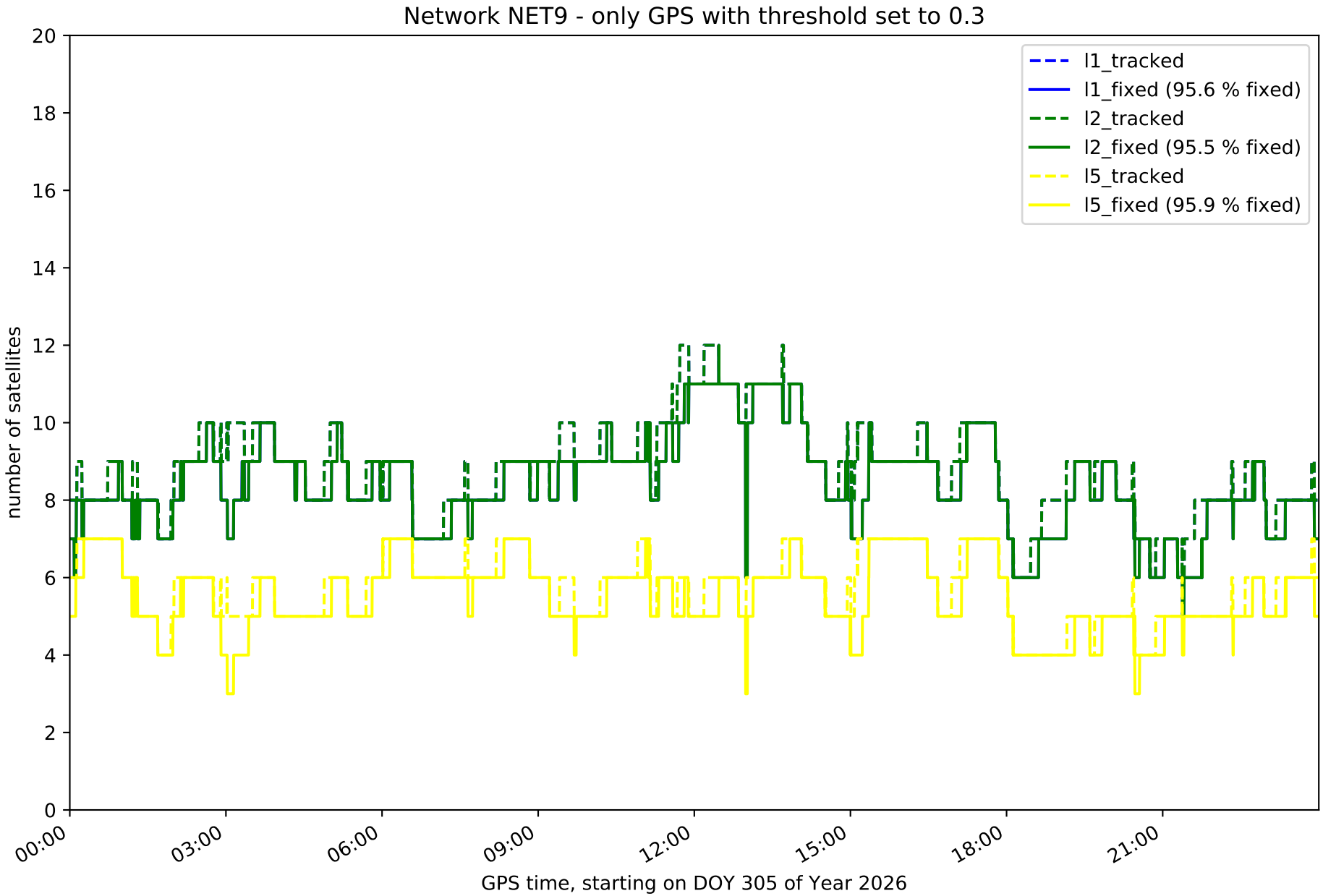
| | | | | |
|---|---|---|---|---|
| station ARIB: | antenna: GPPNULLANTENNA | NONE | receiver: LEICA GR50 | height: 1037.406 |
| station BLGU: | antenna: LEIAR20 | LEIM | receiver: LEICA GR50 | height: 1649.265 |
| station BRJA: | antenna: GPPNULLANTENNA | NONE | receiver: LEICA GR50 | height: 493.66 |
| station CARC: | antenna: GPPNULLANTENNA | NONE | receiver: LEICA GR50 | height: 420.378 |
| station CSOS: | antenna: LEIAR20 | LEIM | receiver: LEICA GR50 | height: 957.888 |
| station EJEA: | antenna: GPPNULLANTENNA | NONE | receiver: LEICA GR50 | height: 384.587 |
| station FRAG: | antenna: LEIAR25.R4 | LEIT | receiver: LEICA GR10 | height: 181.842 |
| station JACA: | antenna: LEIAR25.R3 | LEIT | receiver: LEICA GR10 | height: 738.976 |
| station OSCA: | antenna: GPPNULLANTENNA | NONE | receiver: LEICA GR30 | height: 546.705 |
| station RONL: | antenna: GPPNULLANTENNA | NONE | receiver: LEICA GR50 | height: 760.44 |
| station SABI: | antenna: GPPNULLANTENNA | NONE | receiver: LEICA GR50 | height: 850.526 |
| station SANS: | antenna: GPPNULLANTENNA | NONE | receiver: LEICA GR50 | height: 459.183 |
| station SRNA: | antenna: GPPNULLANTENNA | NONE | receiver: LEICA GR50 | height: 355.155 |
| station TUD1: | antenna: LEIAR20 | LEIM | receiver: LEICA GR50 | height: 340.792 |
| station ZARA: | antenna: TRM29659.00 | NONE | receiver: TRIMBLE NETR9 | height: 299.34 |
| station ZUER: | antenna: GPPNULLANTENNA | NONE | receiver: LEICA GR50 | height: 339.223 |

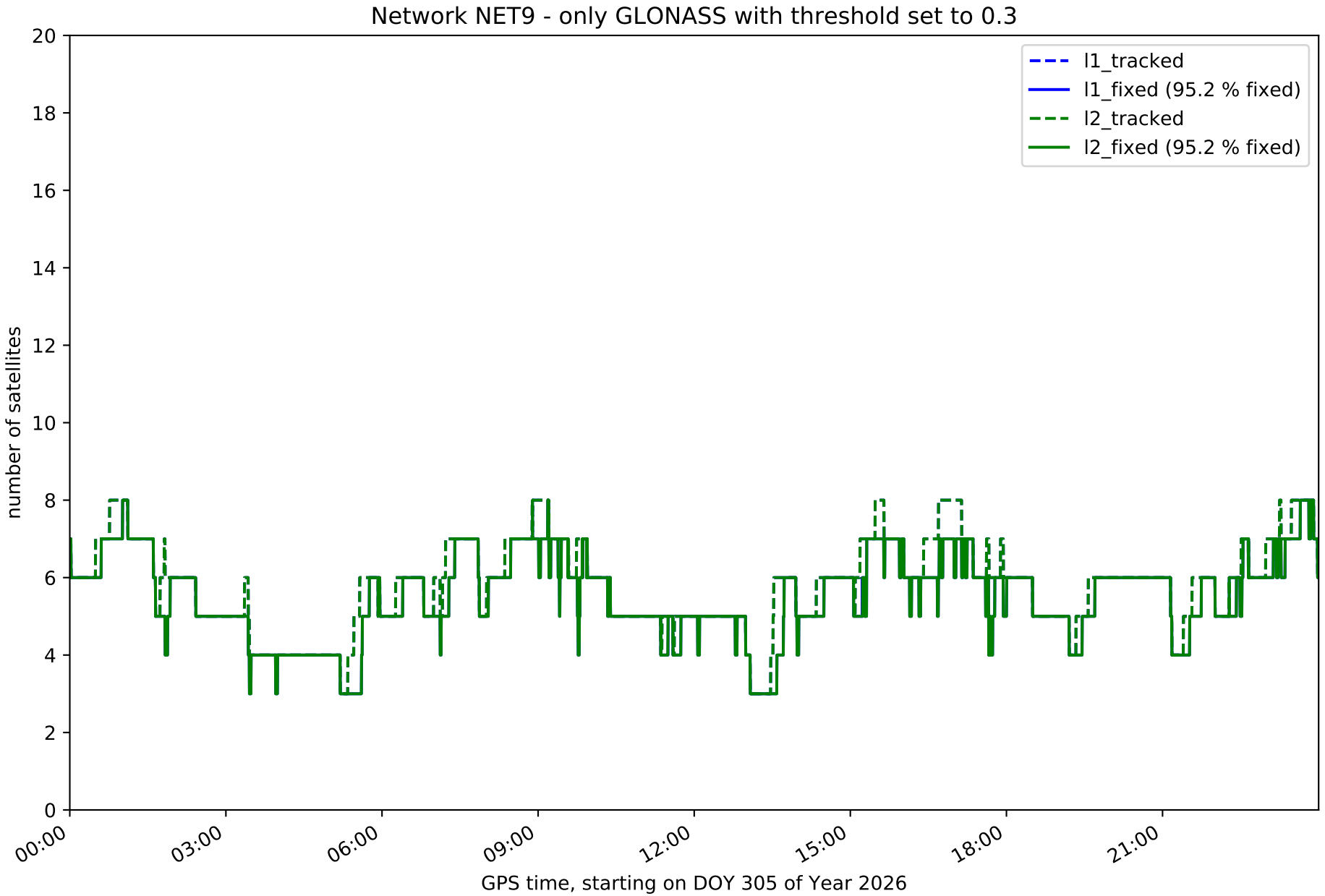

Processing rate in network NET9
time difference to next processed epoch [s]
0
2
4
6
8
10
12
14
16
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

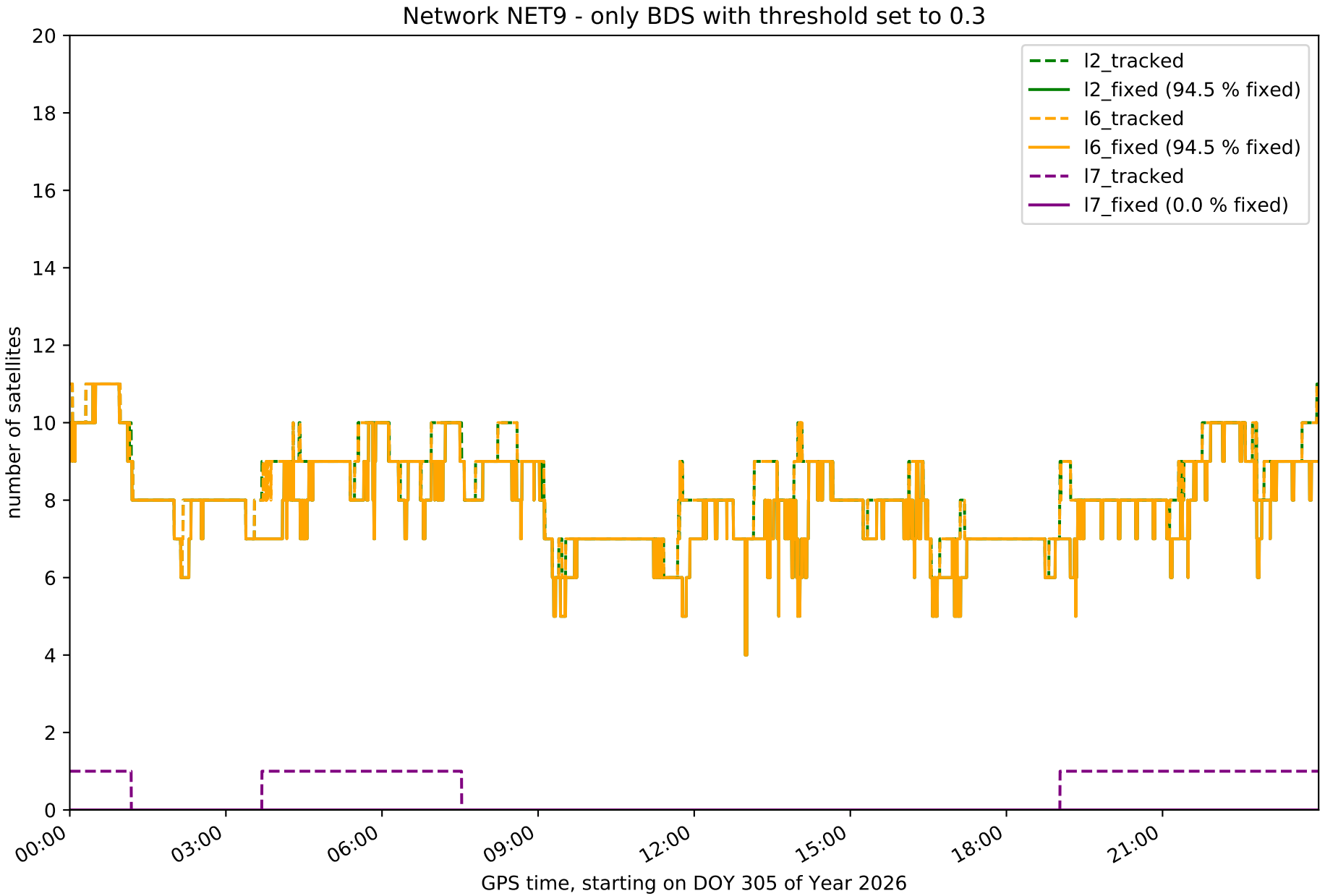

Histogram of the processing rate in network NET9 (durations larger 15 seconds neglected)
number of epochs
30000
25000
20000
15000
10000
5000
0
1
2
3
time difference to next processed epoch [s]

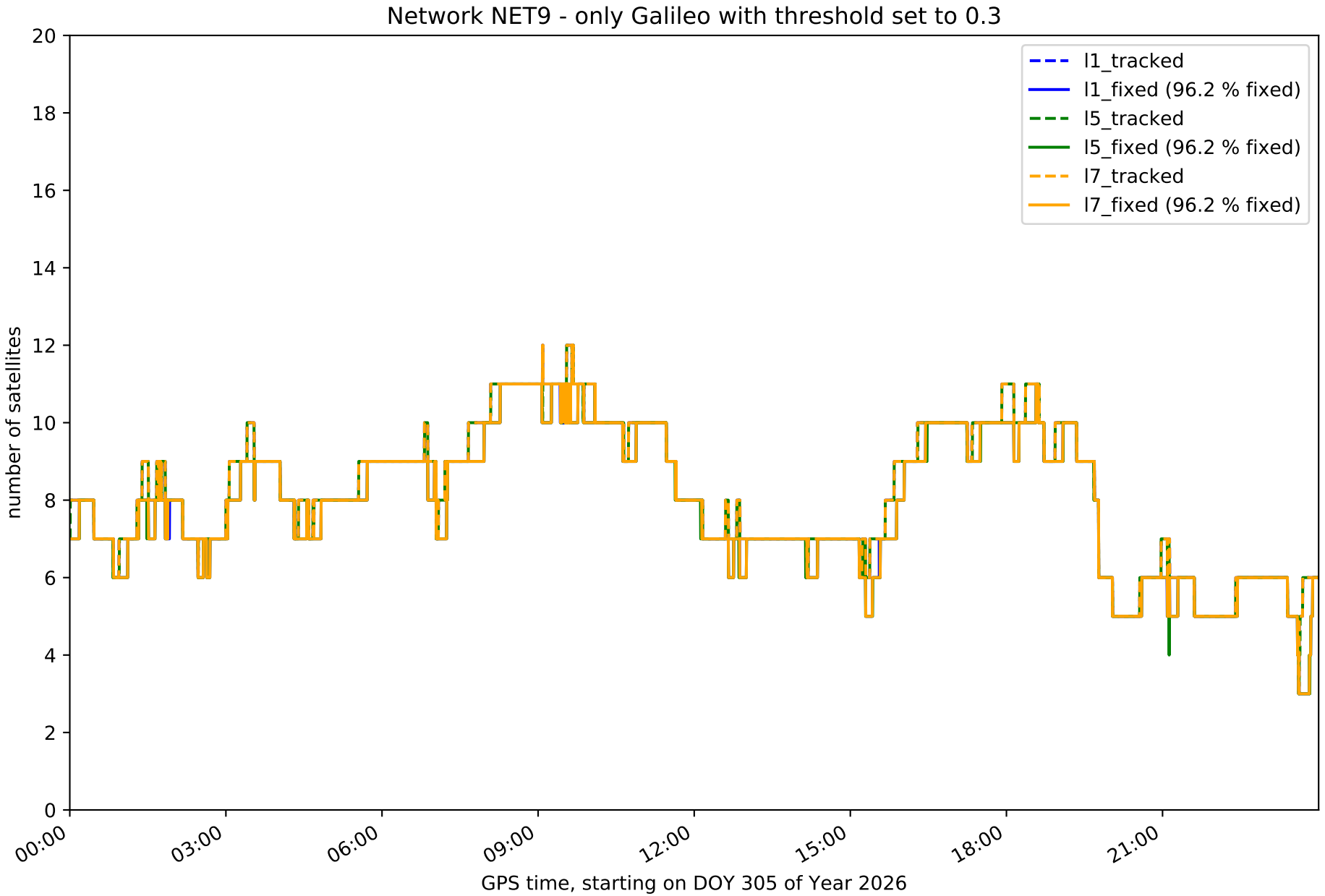

Network NET9 with threshold set to 0.3
nl_tracked
nl_fixed
number of satellites
0
5
10
15
20
25
30
35
40
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

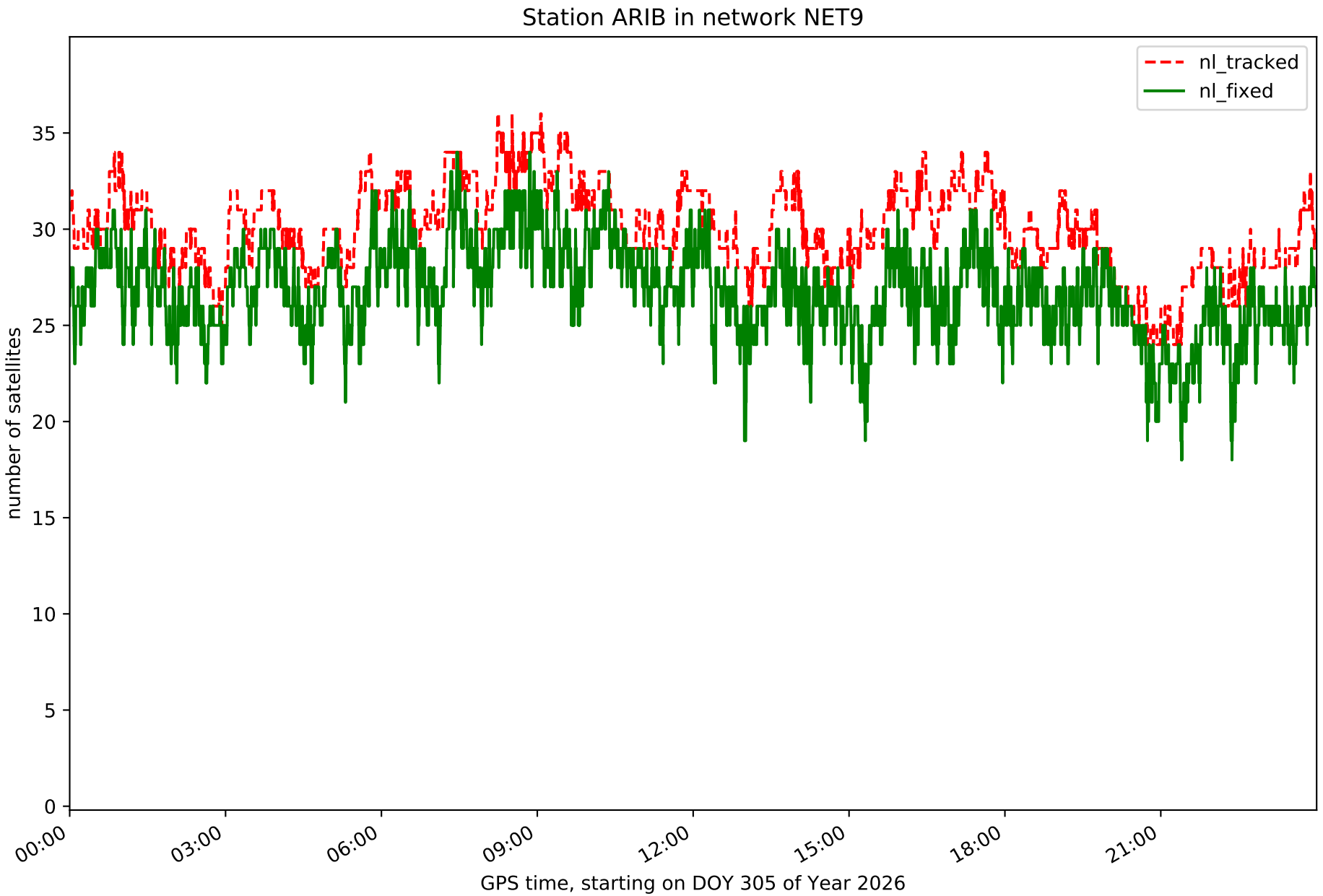

Fixing percentage of satellites in network NET9 with threshold set to 0.3
percentage fixed to tracked
100
90
80
70
60
50
40
30
20
10
0
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

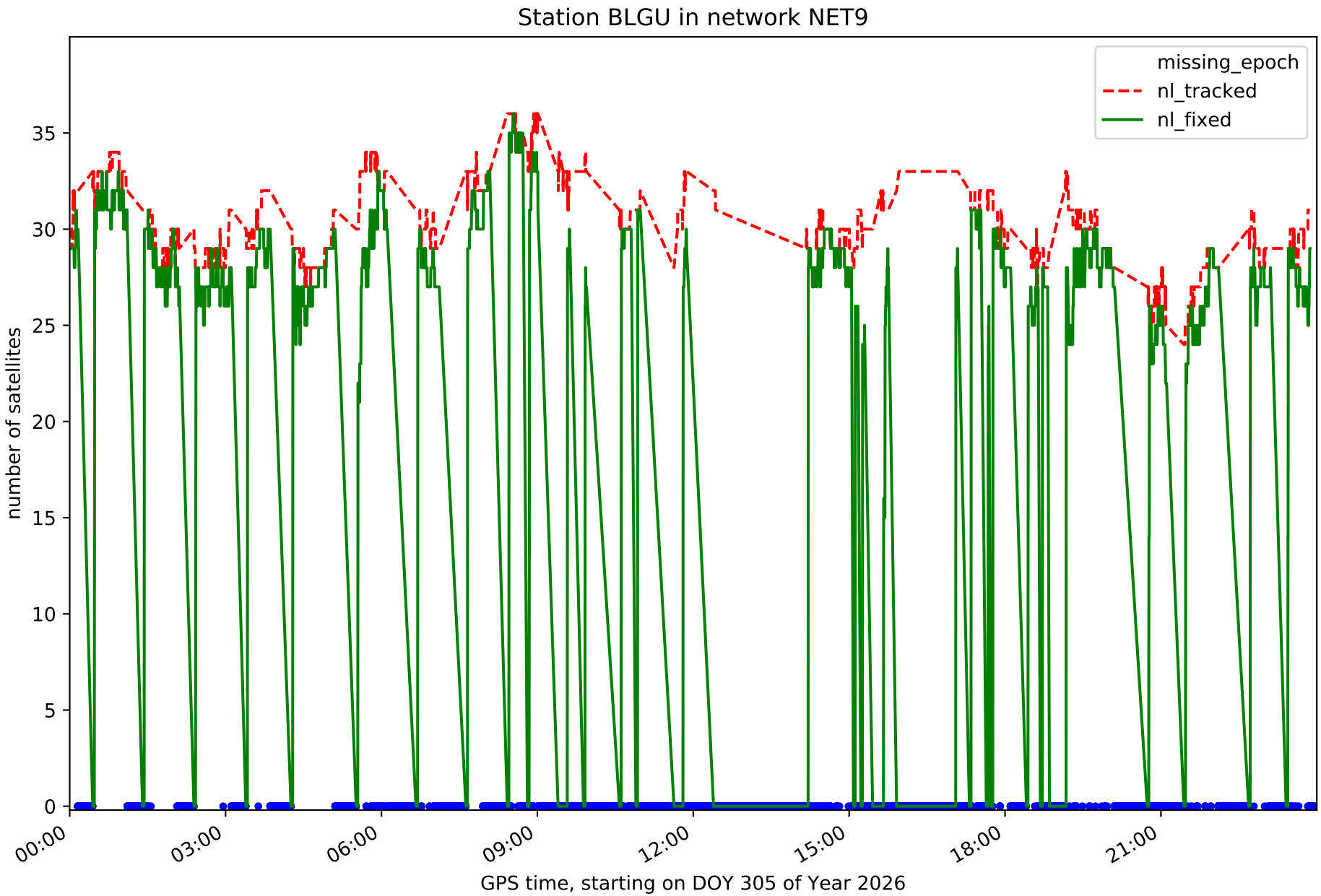

Network NET9 - only GPS with threshold set to 0.3
number of satellites
GPS time, starting on DOY 305 of Year 2026
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
0
2
4
6
8
10
12
14
16
18
20
l1_tracked
l1_fixed (95.6 % fixed)
l2_tracked
l2_fixed (95.5 % fixed)
l5_tracked
l5_fixed (95.9 % fixed)

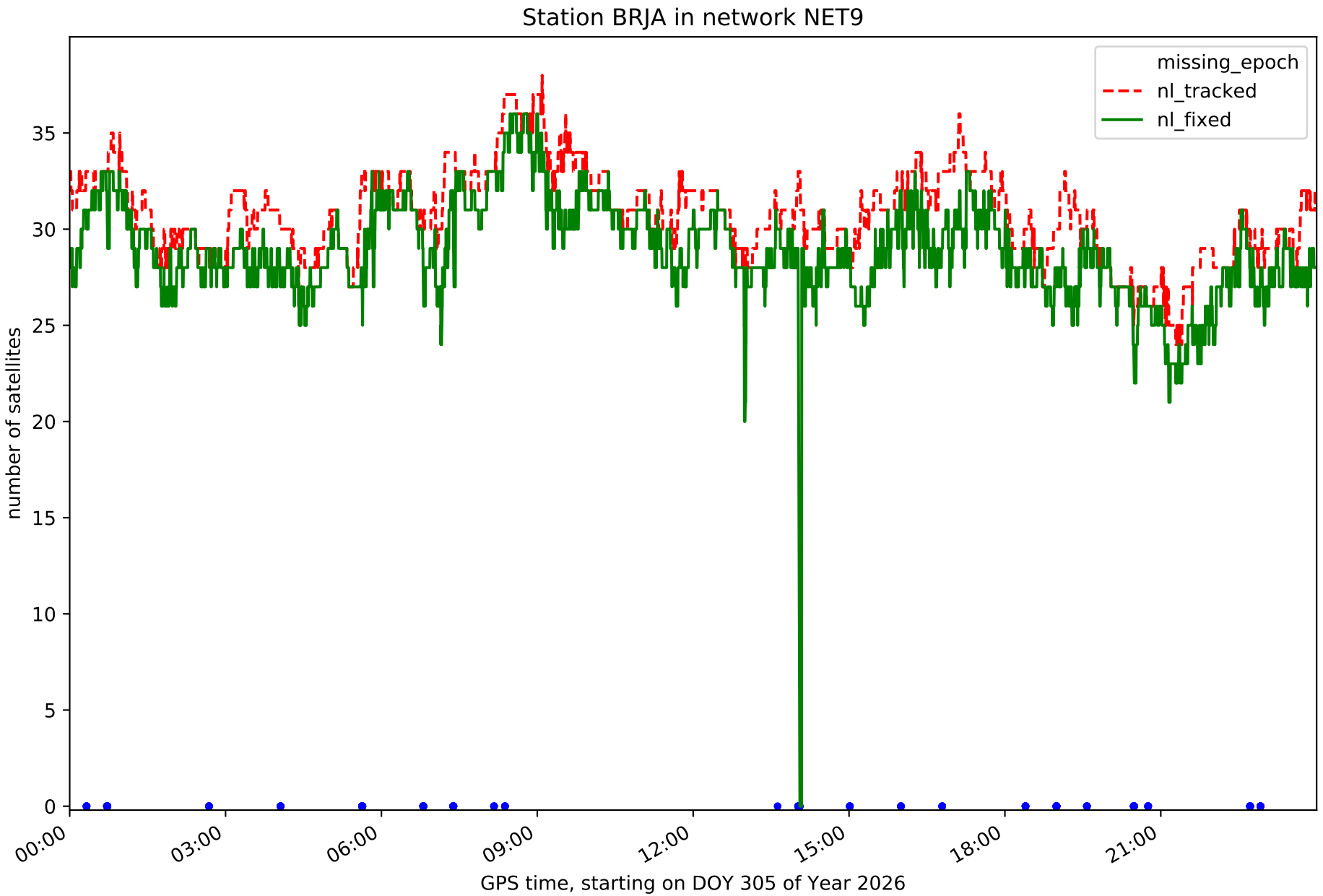

Network NET9 - only GLONASS with threshold set to 0.3
l1_tracked
l1_fixed (95.2 % fixed)
l2_tracked
l2_fixed (95.2 % fixed)
number of satellites
0
2
4
6
8
10
12
14
16
18
20
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

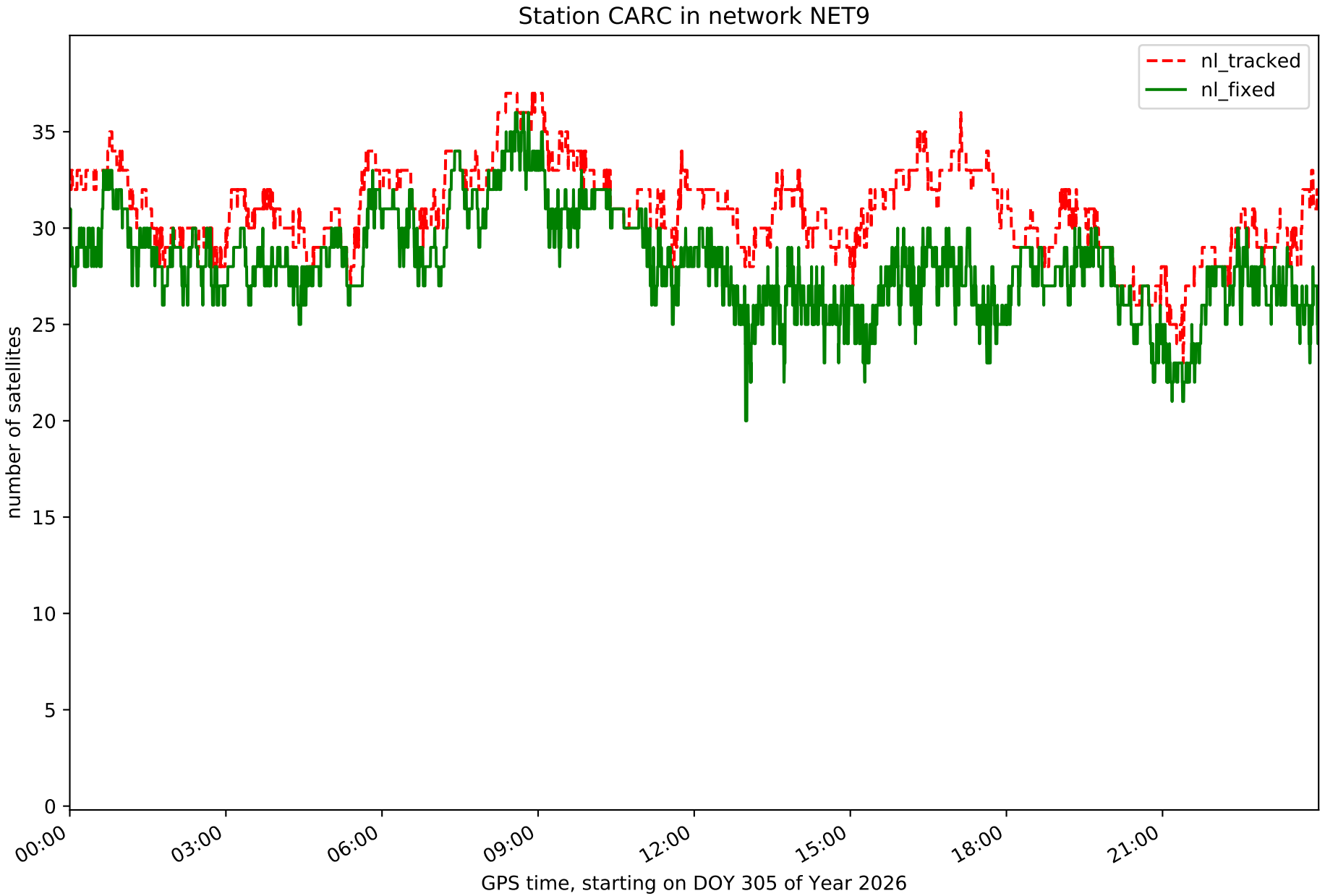

Network NET9 - only BDS with threshold set to 0.3
number of satellites
GPS time, starting on DOY 305 of Year 2026
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
0
2
4
6
8
10
12
14
16
18
20
I2_tracked
I2_fixed (94.5 % fixed)
I6_tracked
I6_fixed (94.5 % fixed)
I7_tracked
I7_fixed (0.0 % fixed)

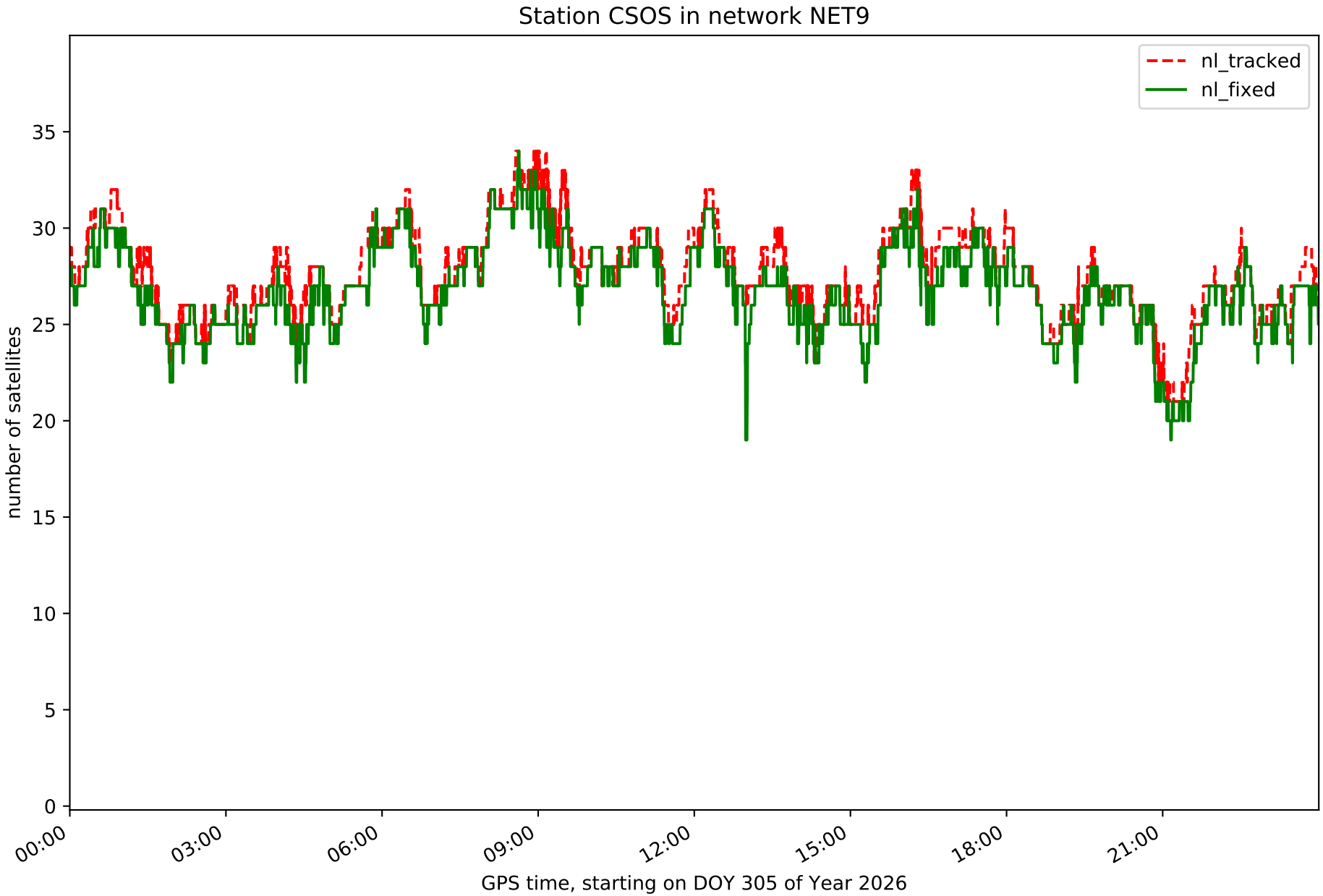

Network NET9 - only Galileo with threshold set to 0.3
number of satellites
GPS time, starting on DOY 305 of Year 2026
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
0
2
4
6
8
10
12
14
16
18
20
l1_tracked
l1_fixed (96.2 % fixed)
l5_tracked
l5_fixed (96.2 % fixed)
l7_tracked
l7_fixed (96.2 % fixed)

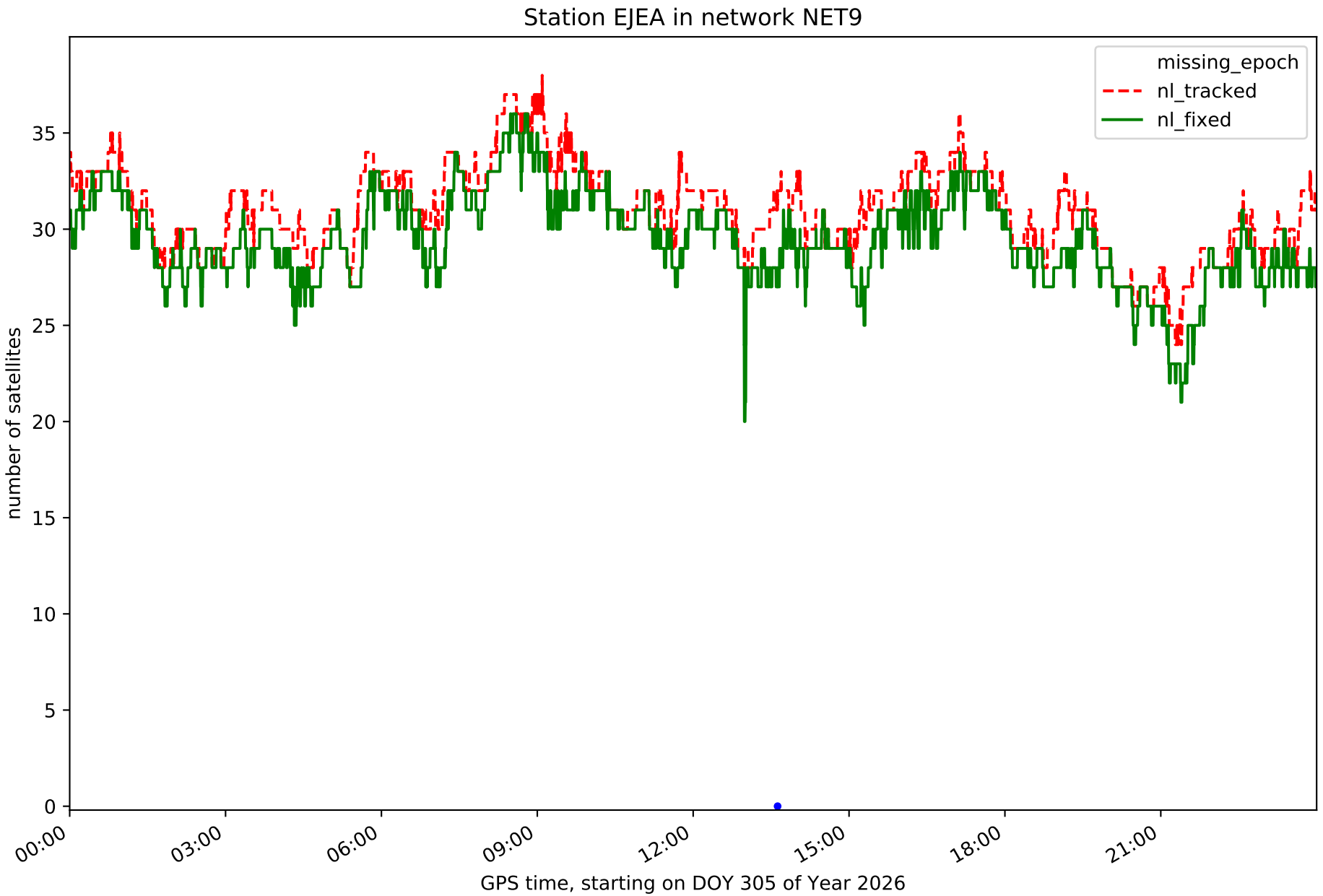

Station ARIB in network NET9
nl_tracked
nl_fixed
number of satellites
0
5
10
15
20
25
30
35
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

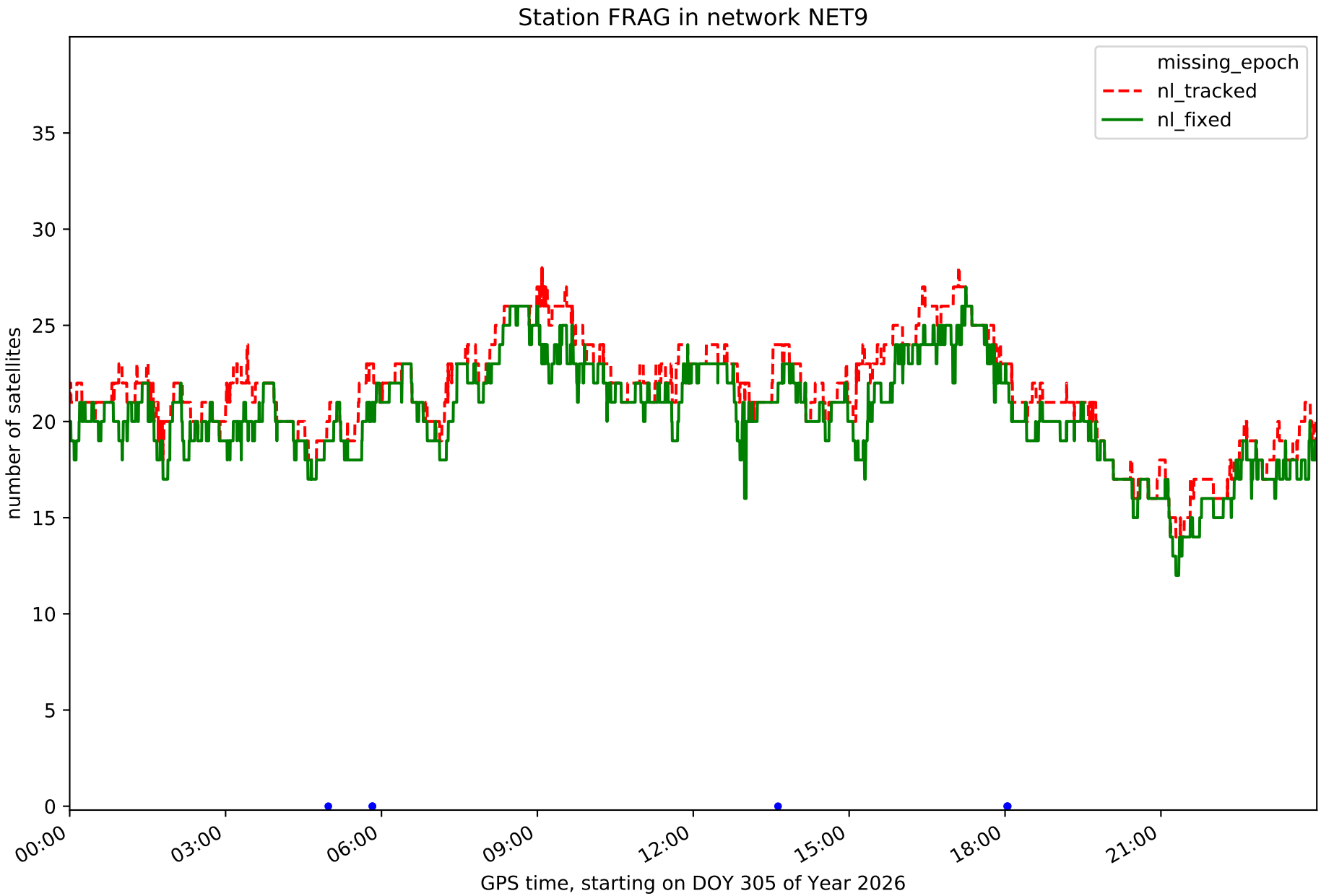

Station BLGU in network NET9
missing_epoch
nl_tracked
nl_fixed
number of satellites
0
5
10
15
20
25
30
35
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

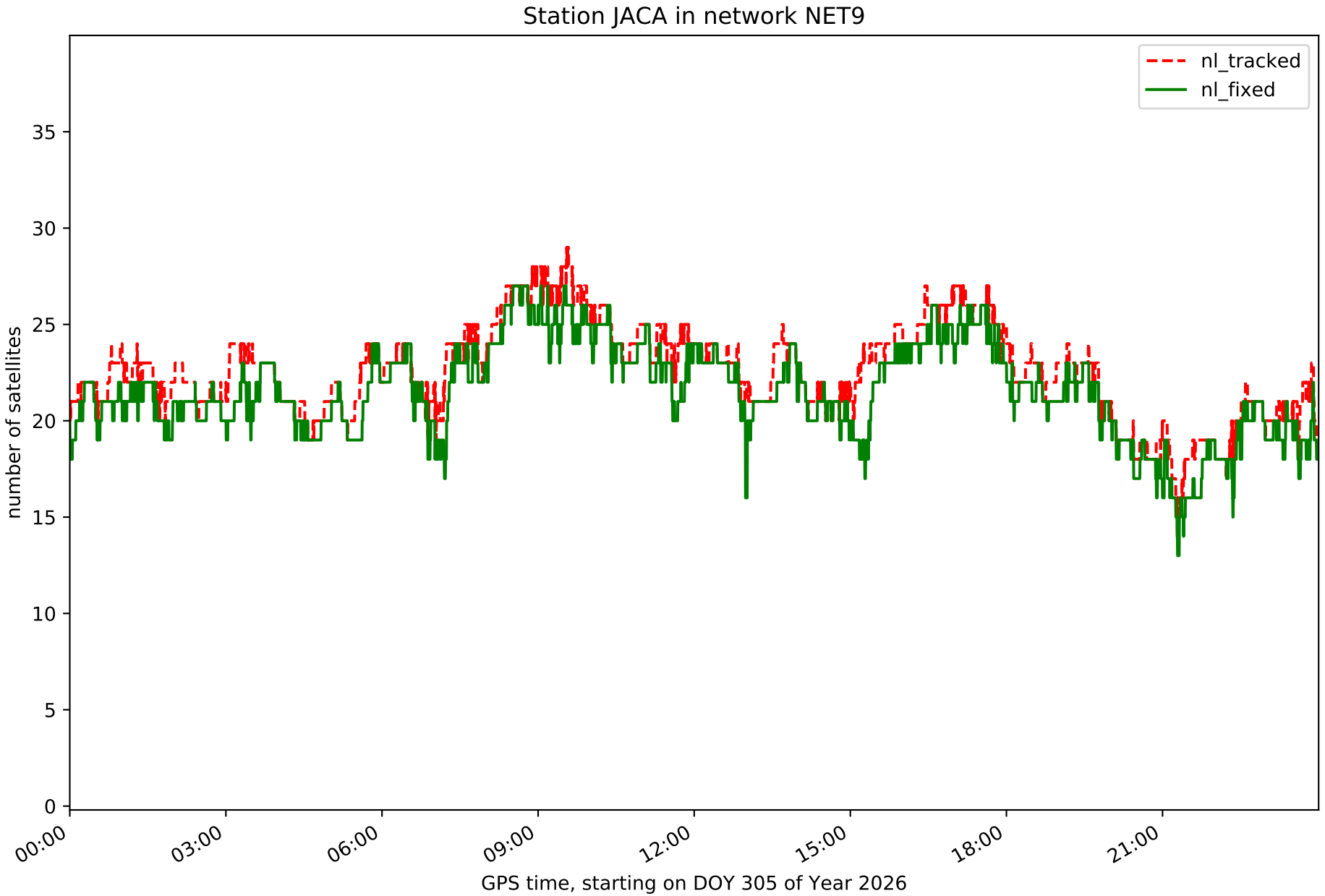

Station BRJA in network NET9
missing_epoch
nl_tracked
nl_fixed
number of satellites
0
5
10
15
20
25
30
35
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

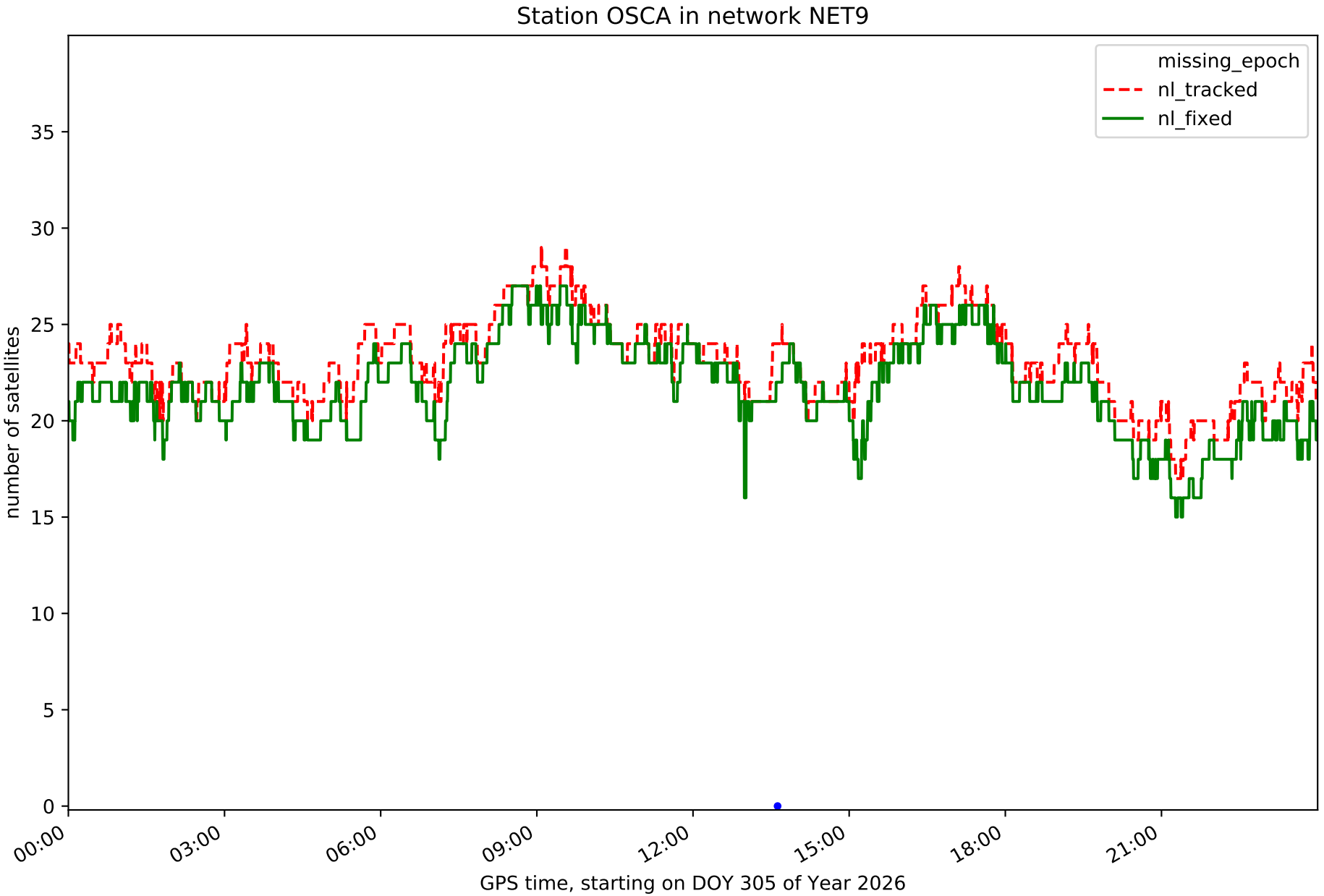

Station CARC in network NET9
nl_tracked
nl_fixed
number of satellites
0
5
10
15
20
25
30
35
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

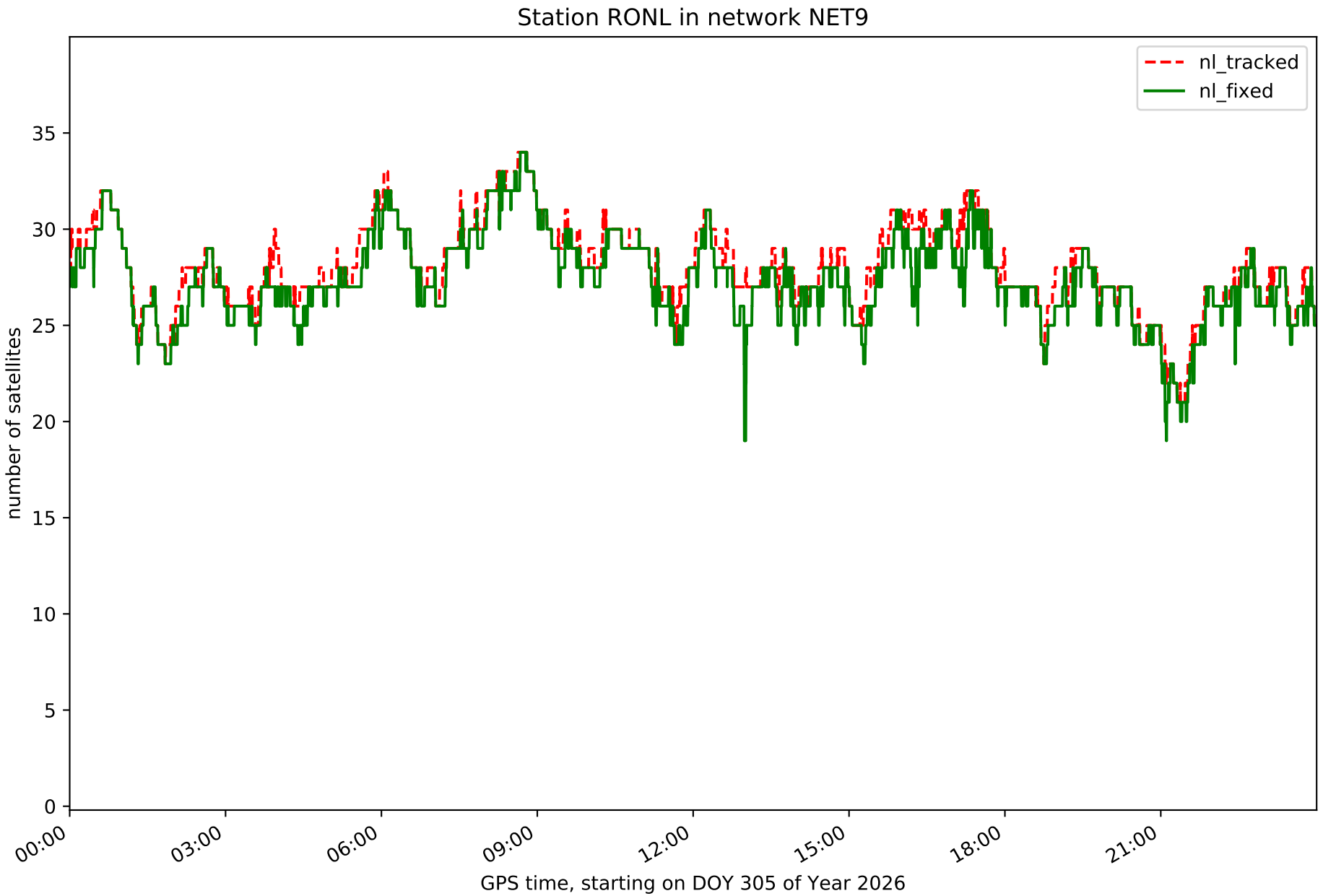

Station CSOS in network NET9
nl_tracked
nl_fixed
number of satellites
0
5
10
15
20
25
30
35
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

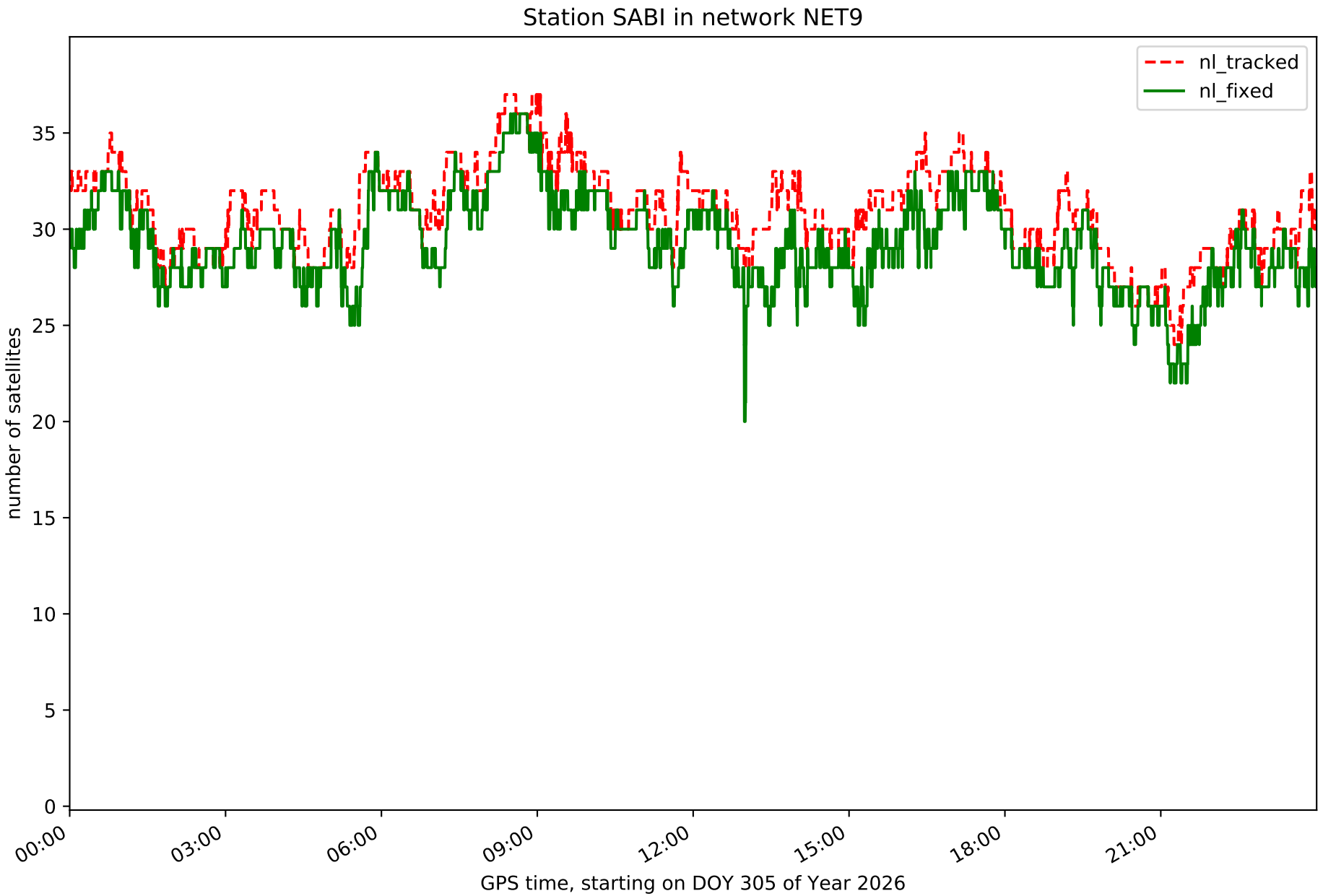

Station EJEA in network NET9
missing_epoch
nl_tracked
nl_fixed
number of satellites
0
5
10
15
20
25
30
35
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

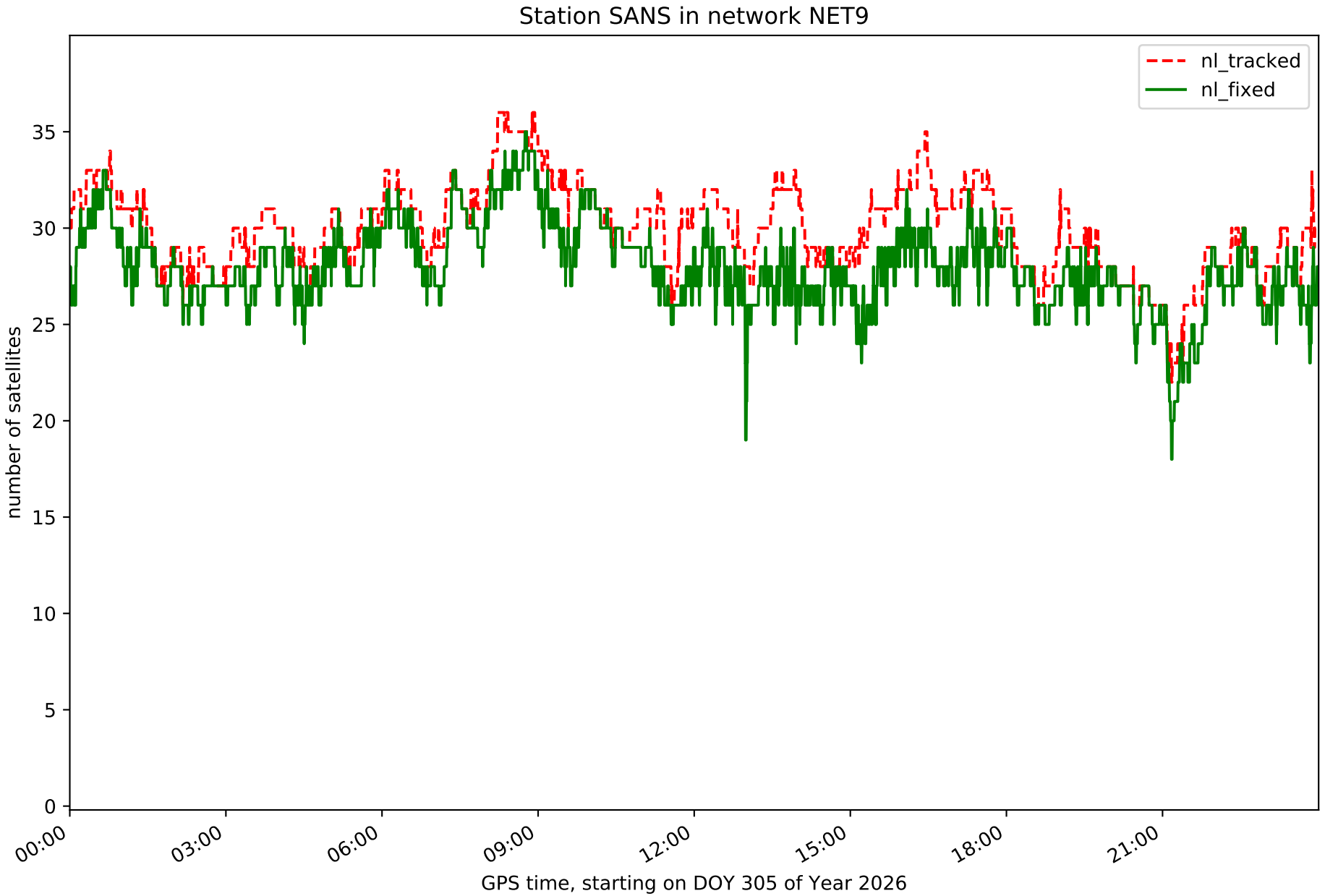

Station FRAG in network NET9
missing_epoch
nl_tracked
nl_fixed
number of satellites
0
5
10
15
20
25
30
35
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

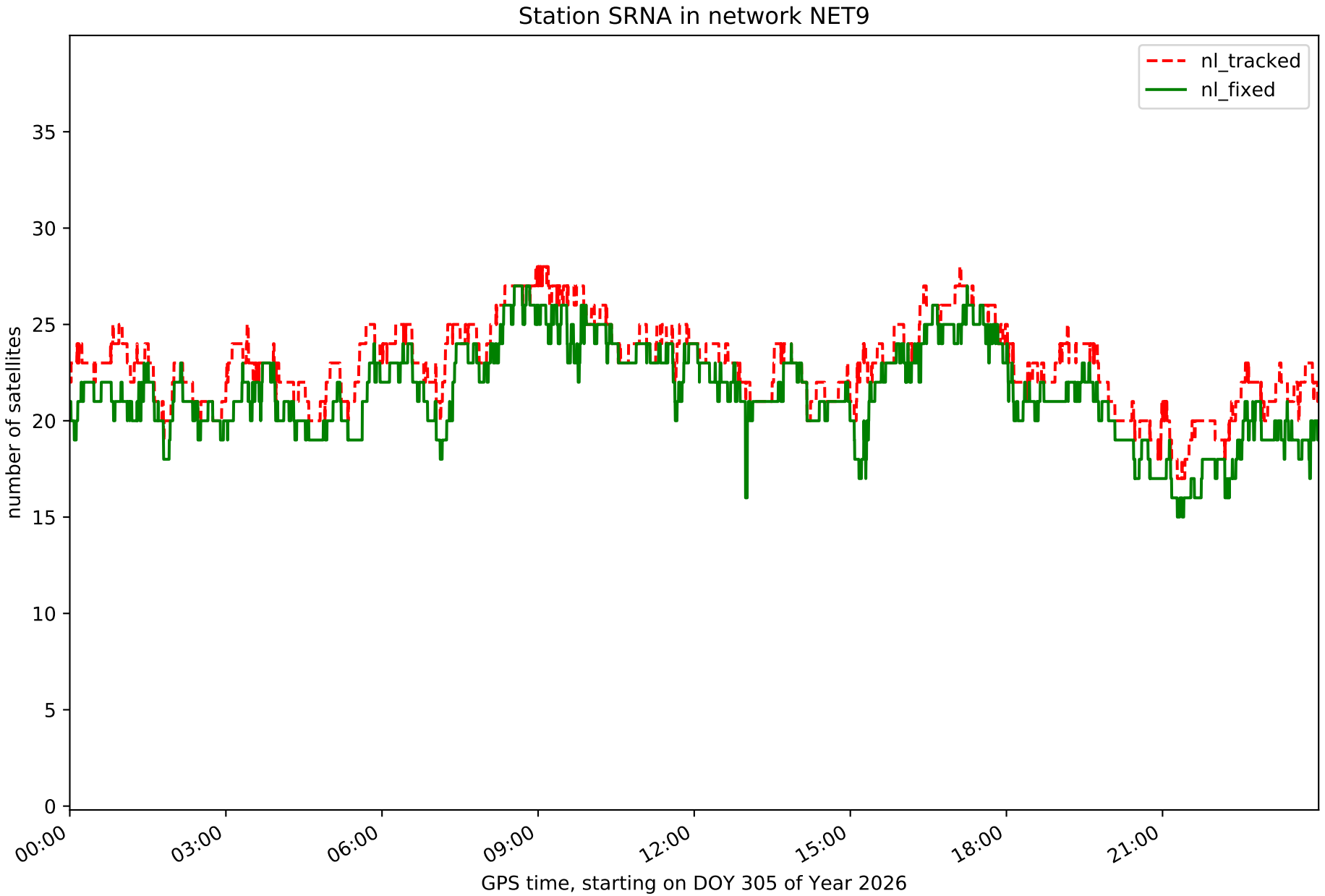

Station JACA in network NET9
nl_tracked
nl_fixed
number of satellites
0
5
10
15
20
25
30
35
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

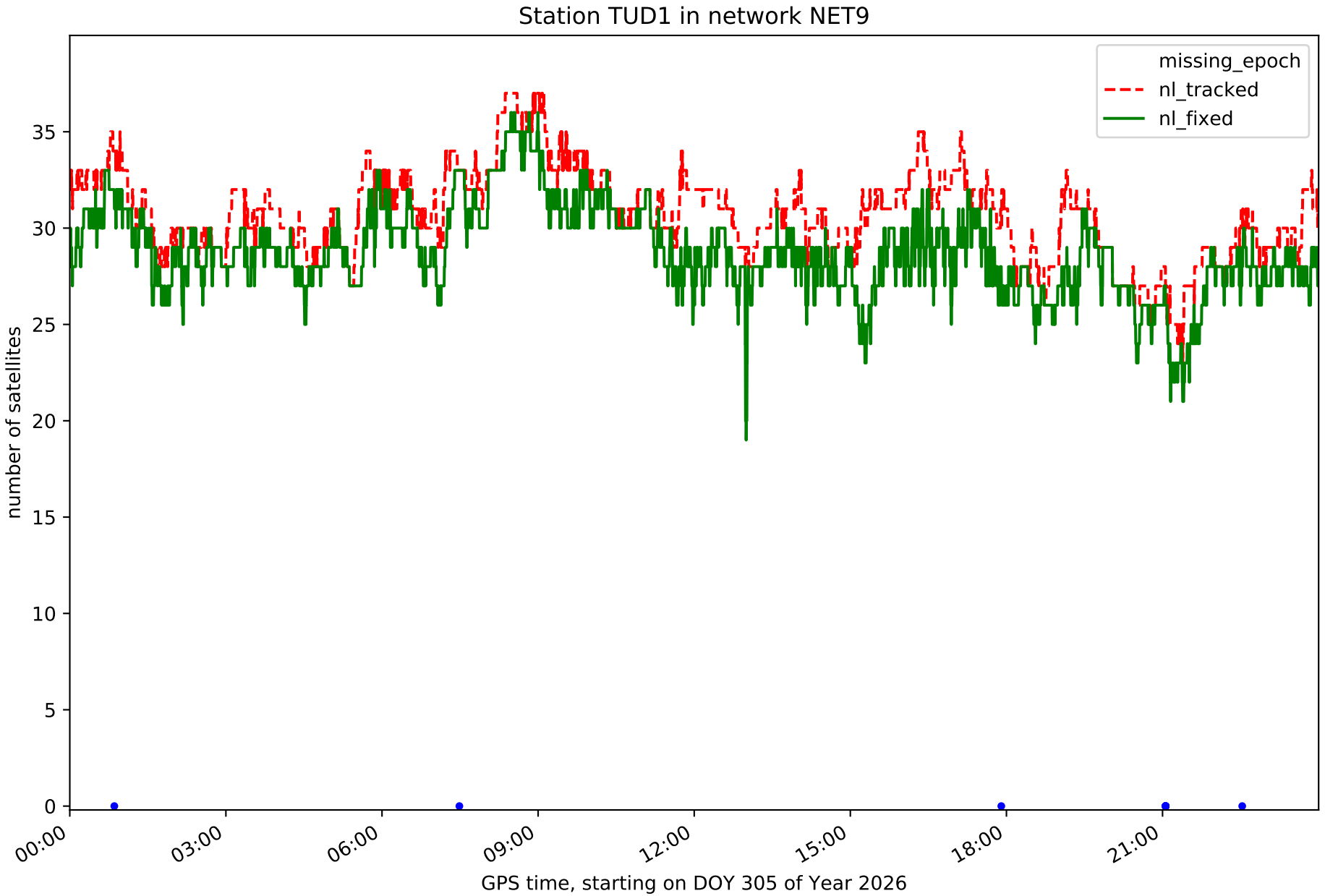

Station OSCA in network NET9
missing_epoch
nl_tracked
nl_fixed
number of satellites
0
5
10
15
20
25
30
35
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

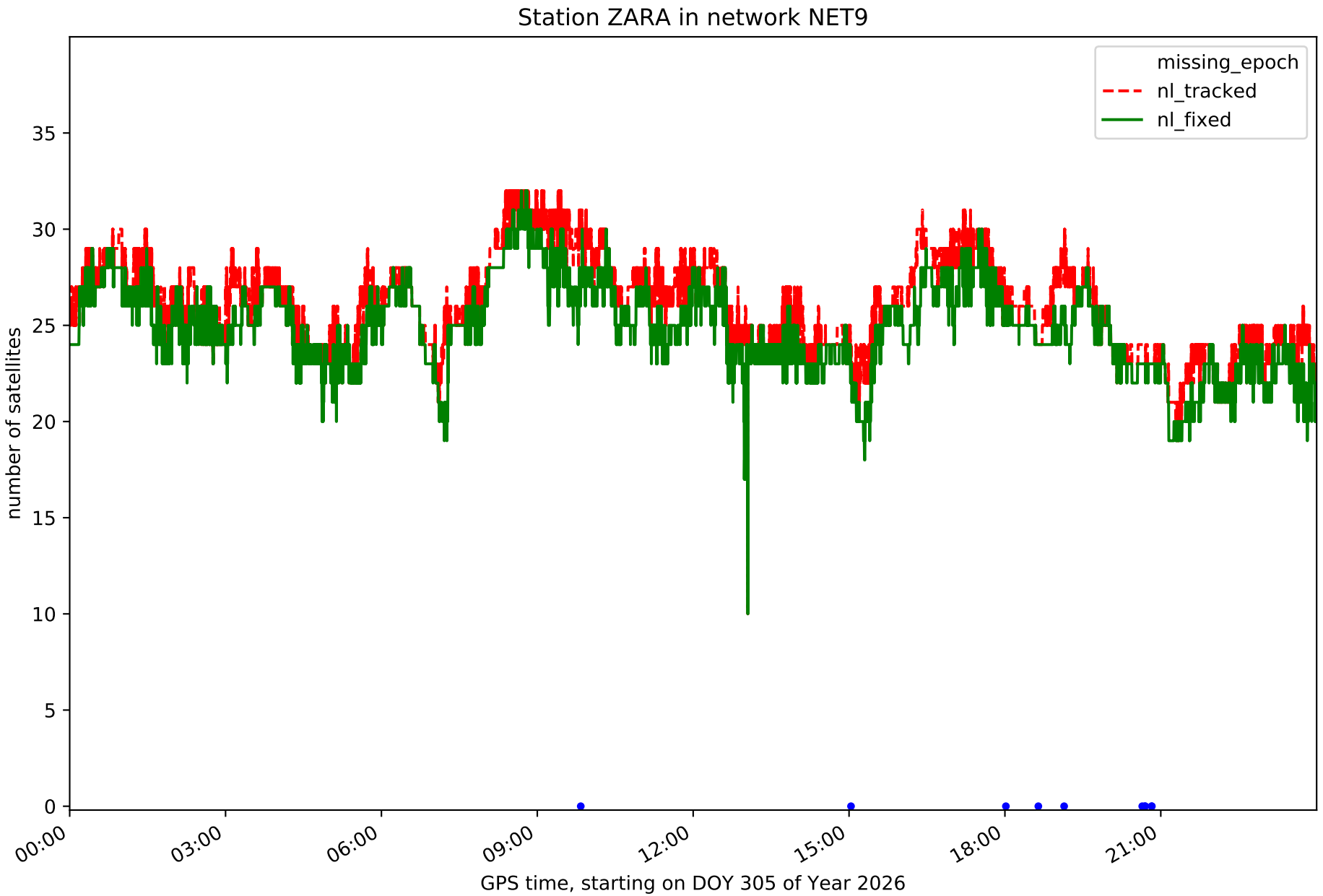

Station RONL in network NET9
nl_tracked
nl_fixed
number of satellites
0
5
10
15
20
25
30
35
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

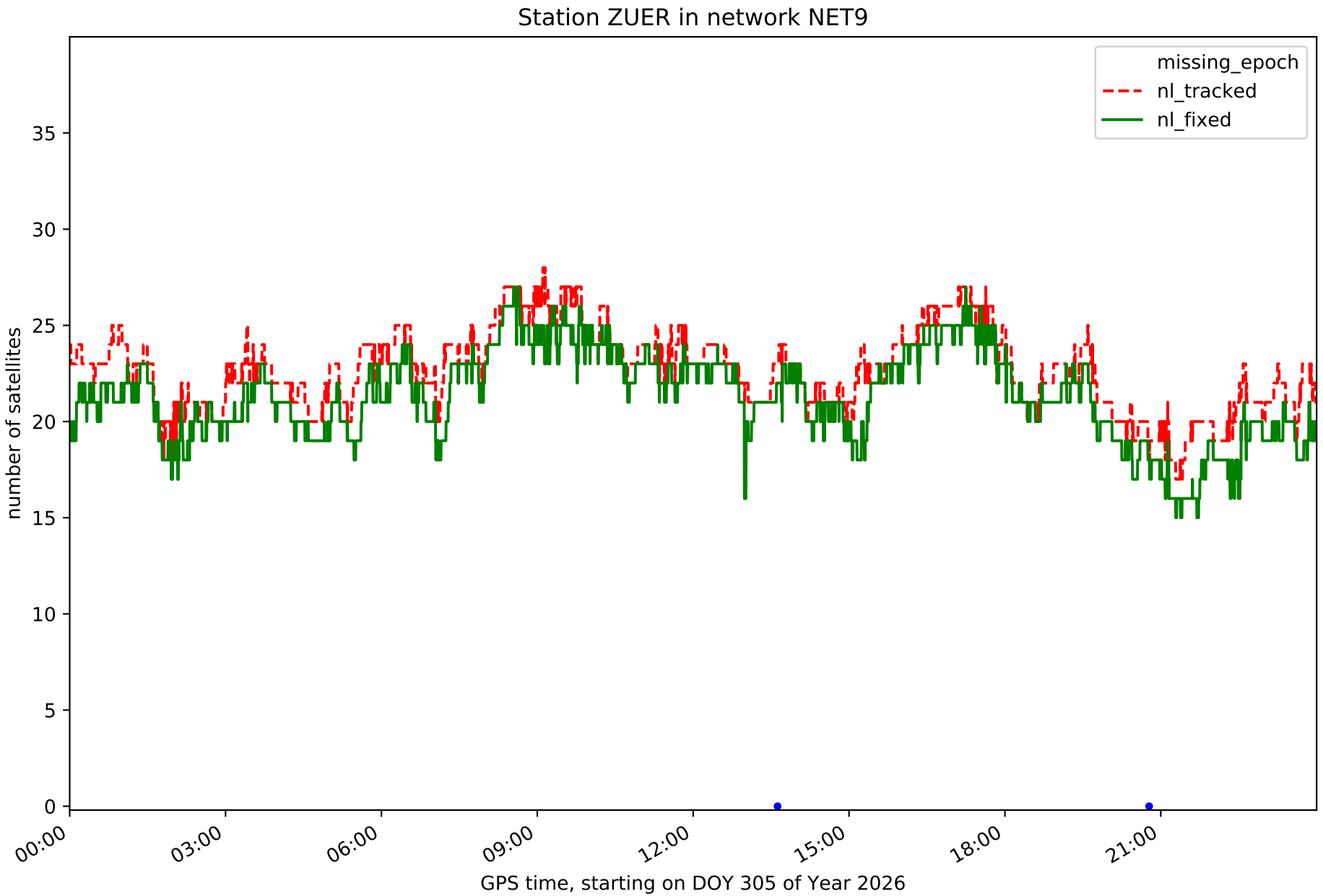

Station SABI in network NET9
nl_tracked
nl_fixed
number of satellites
0
5
10
15
20
25
30
35
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

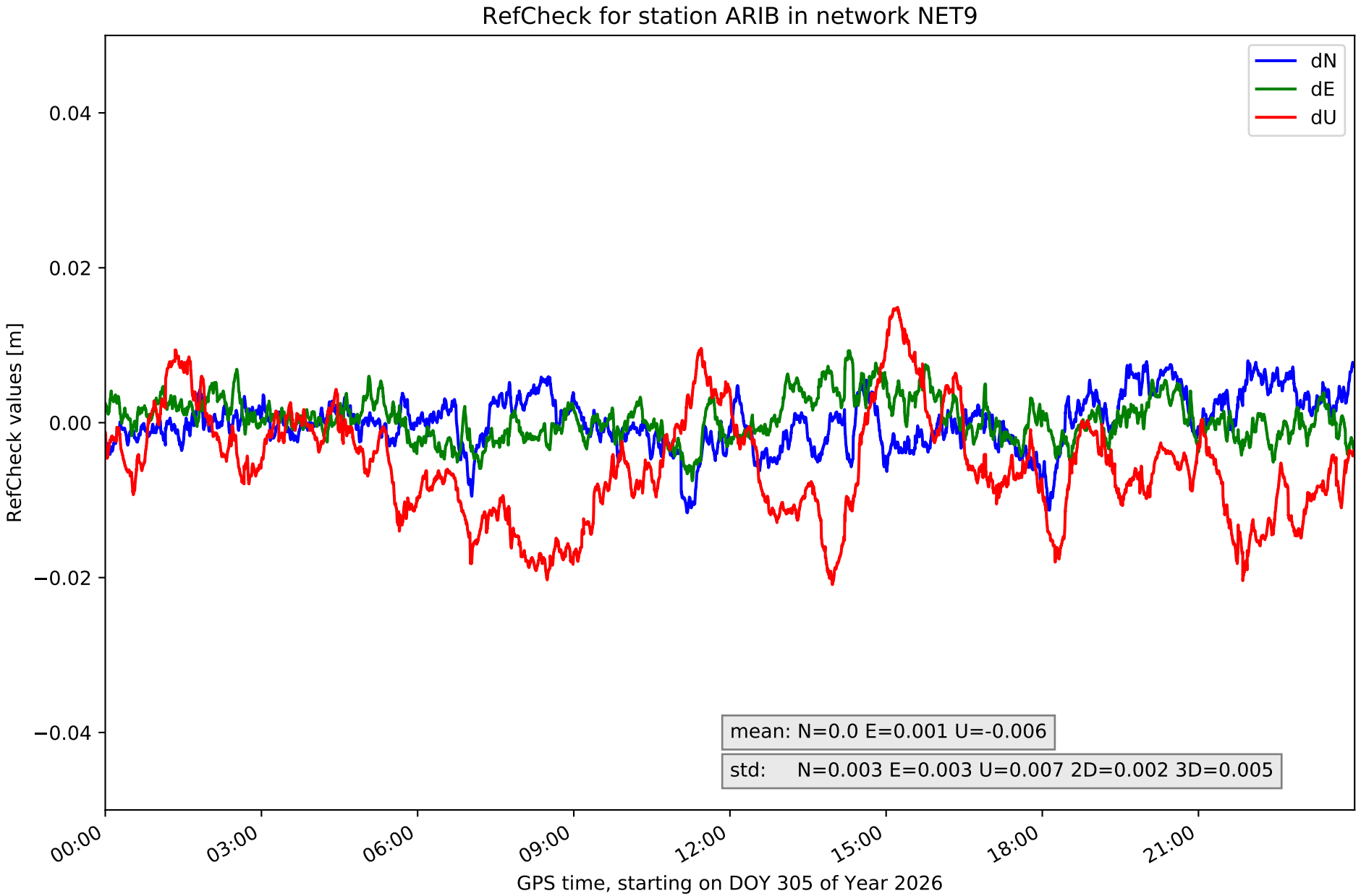

Station SANS in network NET9
nl_tracked
nl_fixed
number of satellites
0
5
10
15
20
25
30
35
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

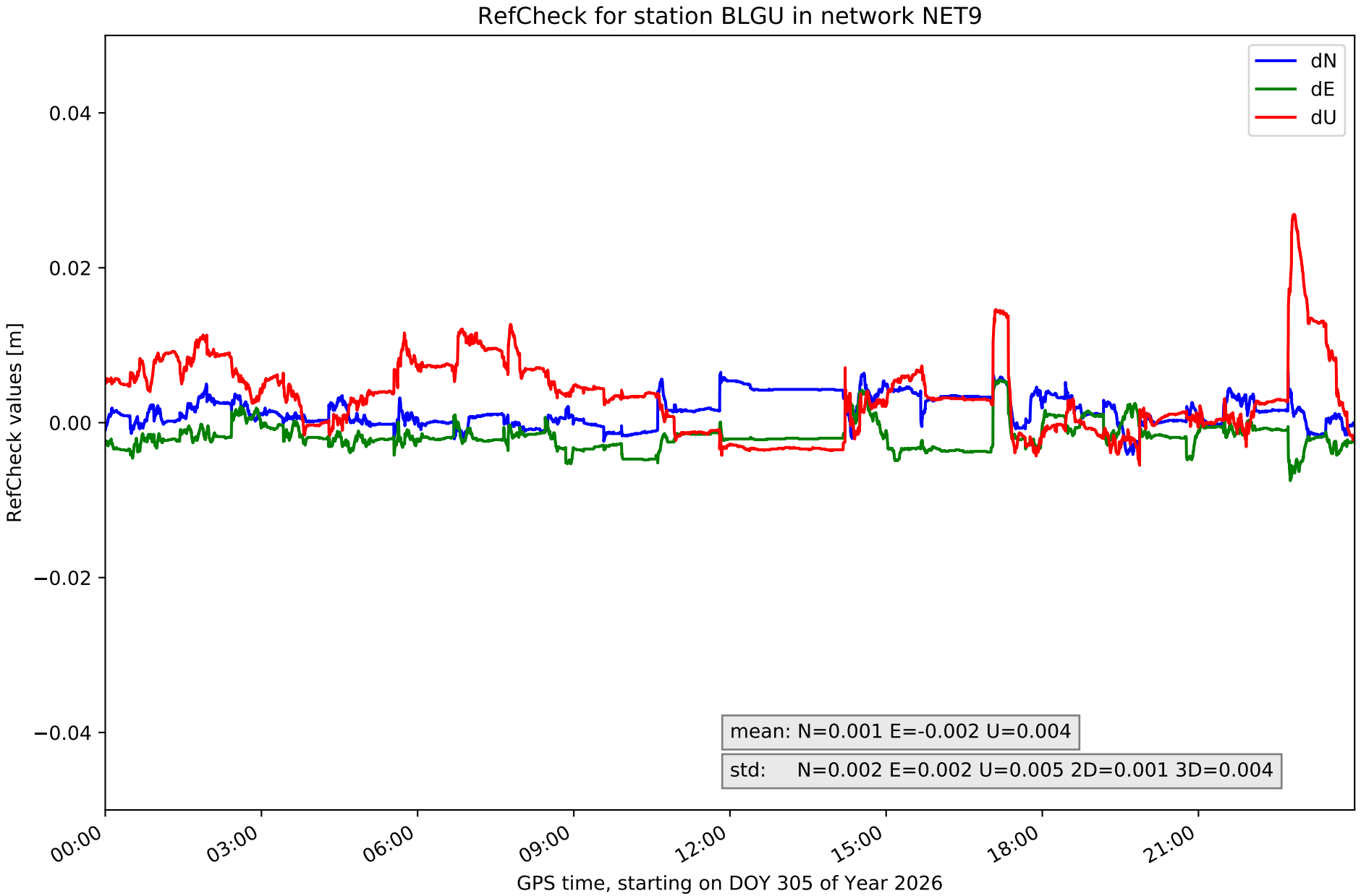

Station SRNA in network NET9
nl_tracked
nl_fixed
number of satellites
0
5
10
15
20
25
30
35
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

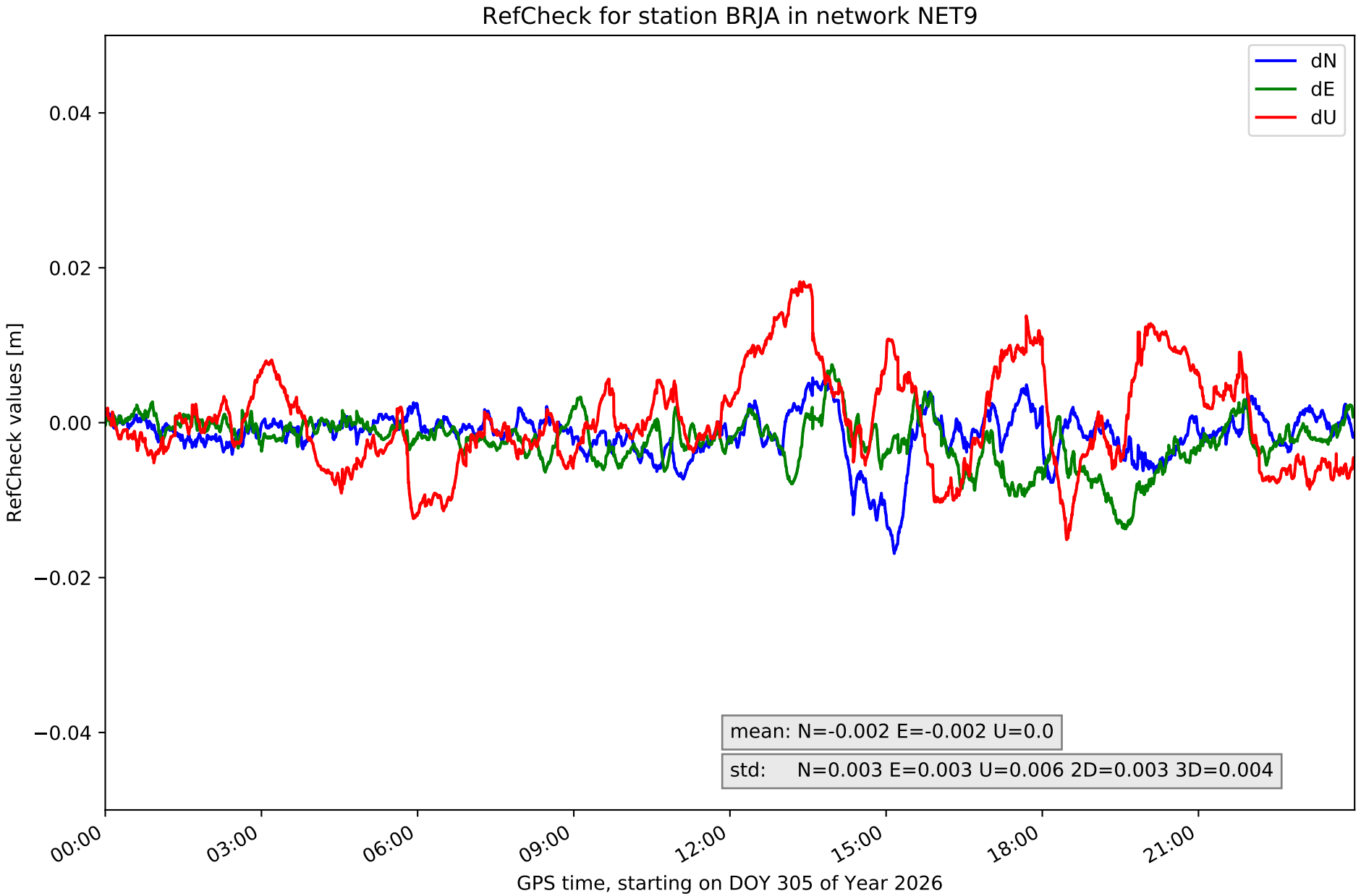

Station TUD1 in network NET9
missing_epoch
nl_tracked
nl_fixed
number of satellites
0
5
10
15
20
25
30
35
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

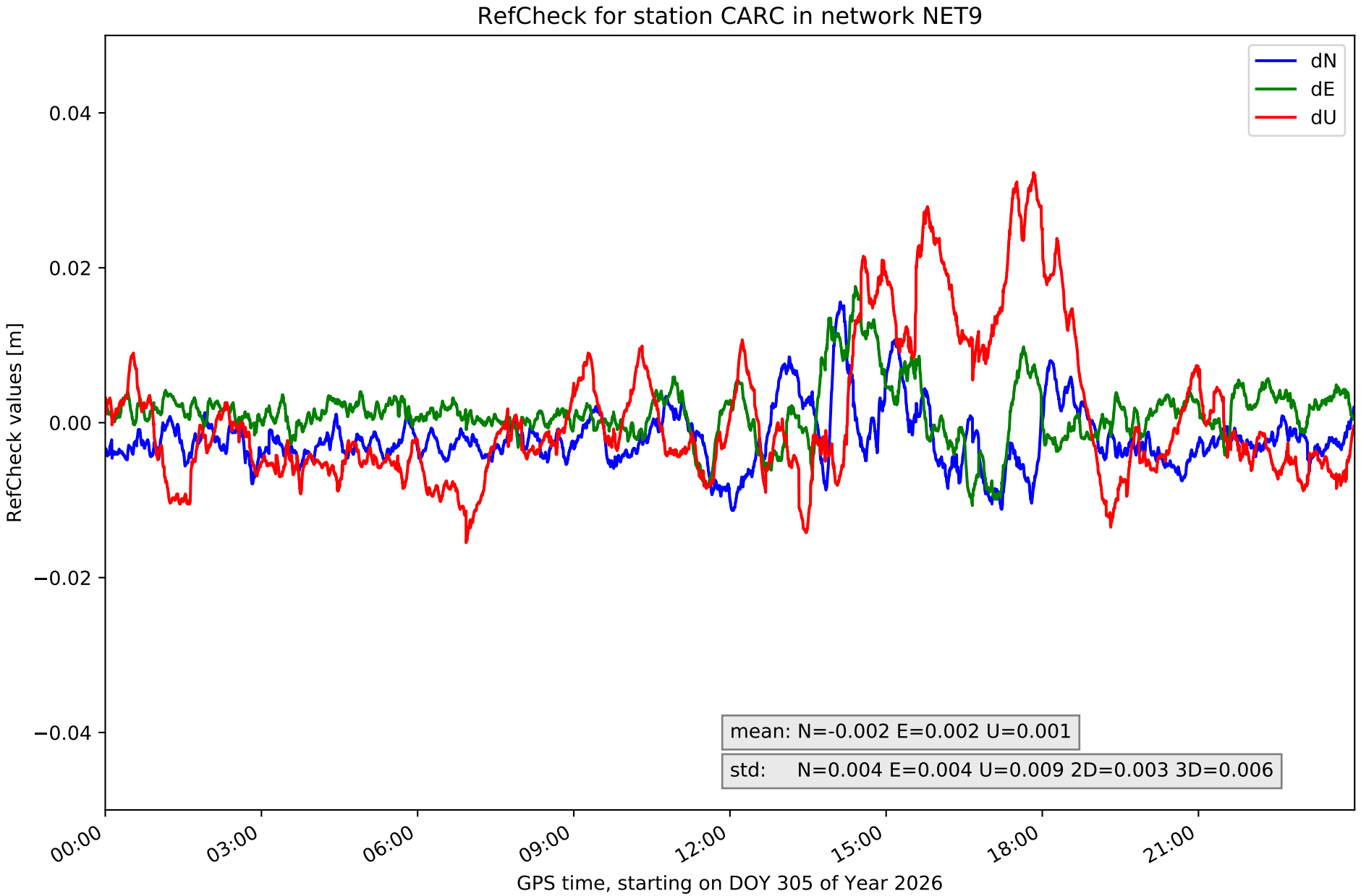

Station ZARA in network NET9
missing_epoch
nl_tracked
nl_fixed
number of satellites
0
5
10
15
20
25
30
35
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

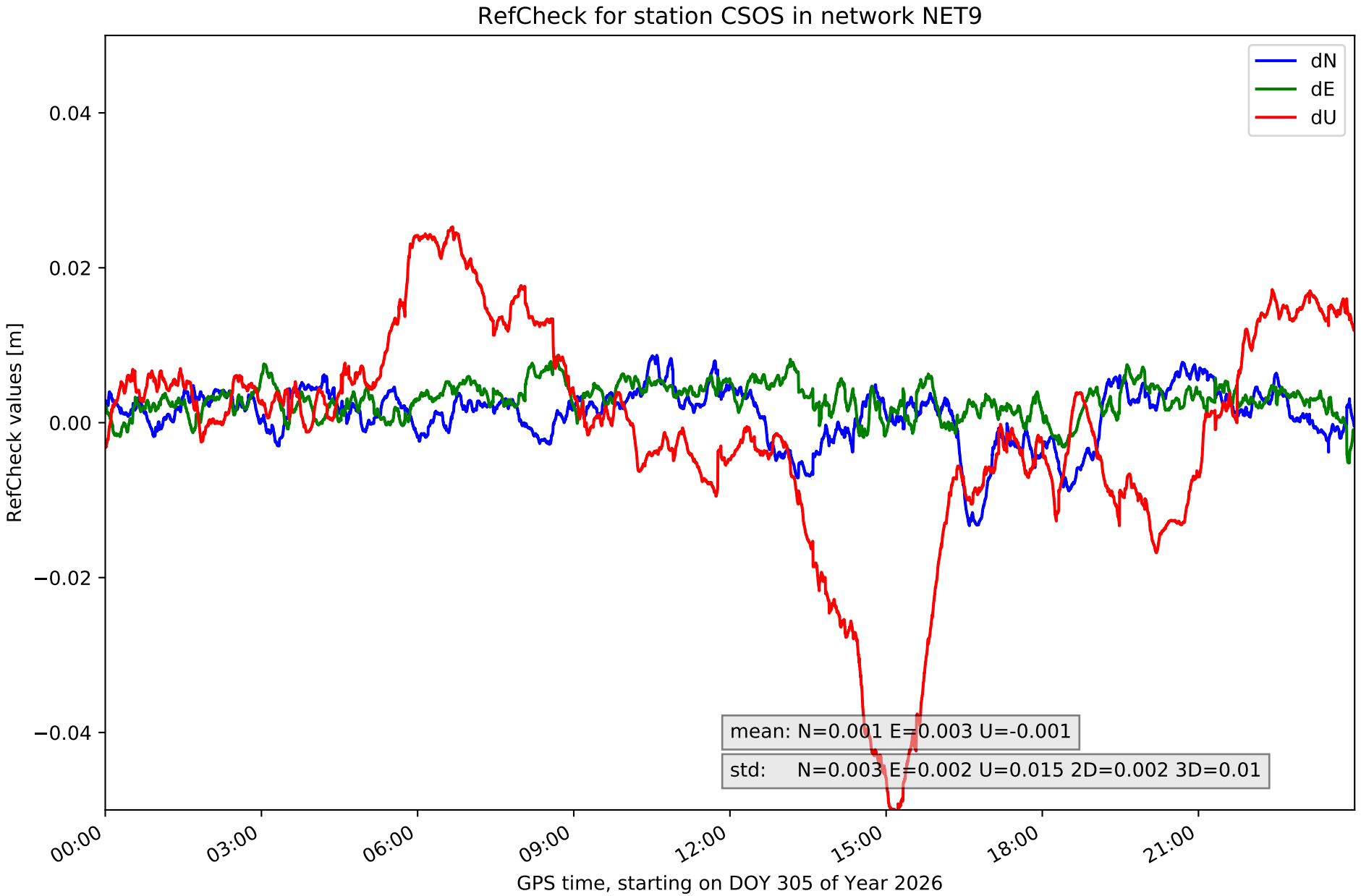

Station ZUER in network NET9
missing_epoch
nl_tracked
nl_fixed
number of satellites
0
5
10
15
20
25
30
35
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

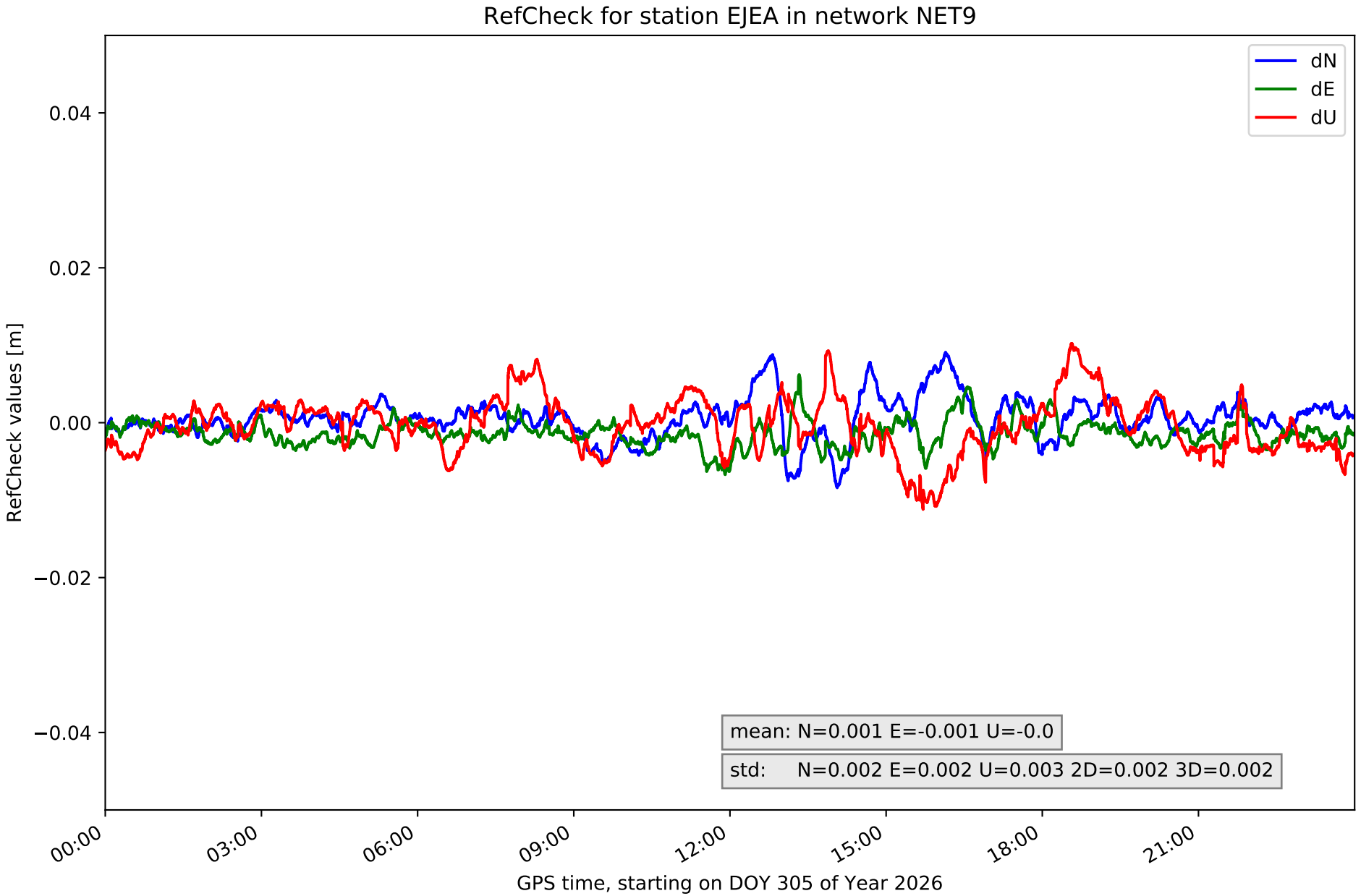

RefCheck for station ARIB in network NET9
dN
dE
dU
0.04
0.02
0.00
−0.02
−0.04
RefCheck values [m]
mean: N=0.0 E=0.001 U=-0.006
std: N=0.003 E=0.003 U=0.007 2D=0.002 3D=0.005
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

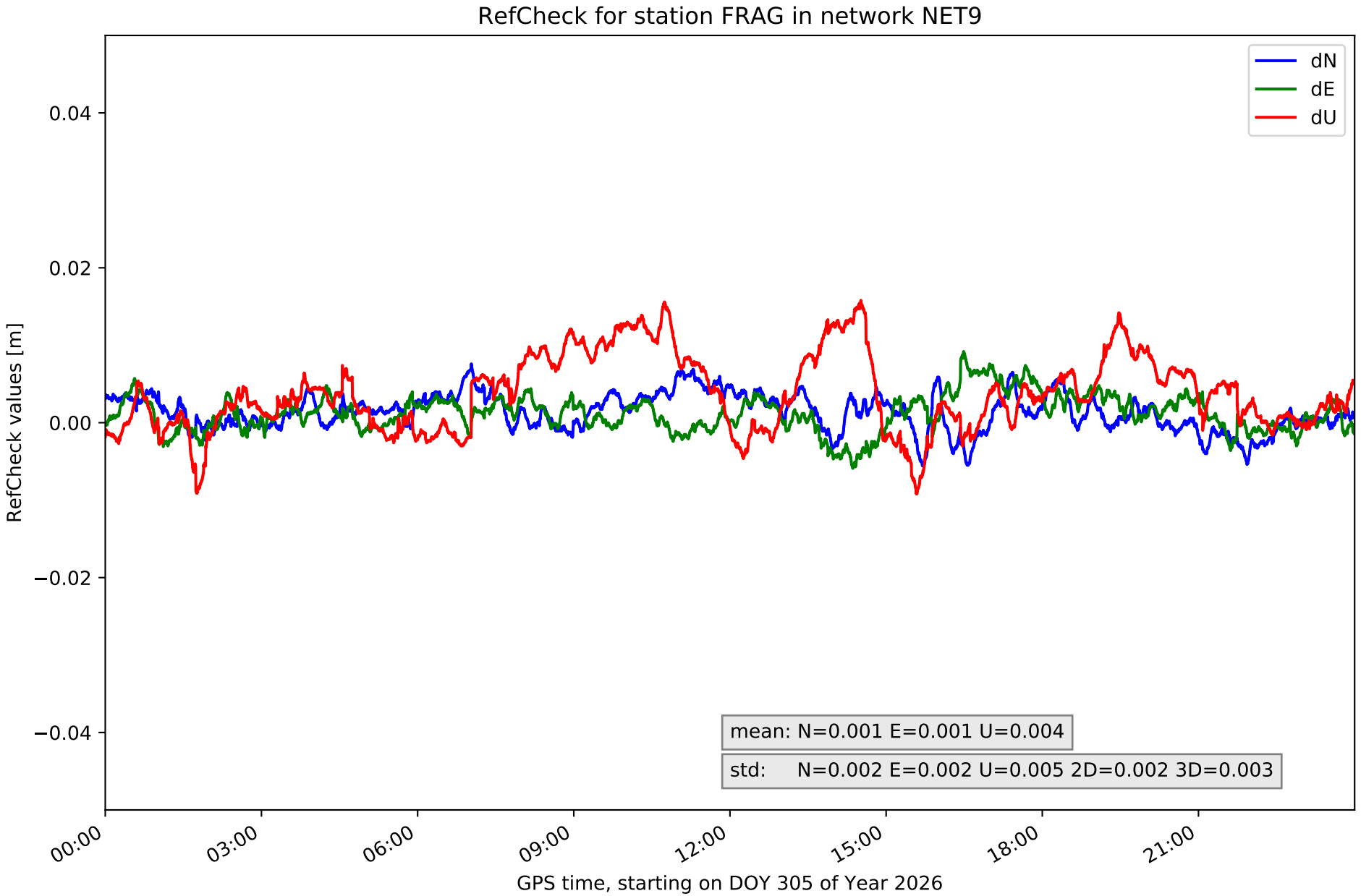

RefCheck for station BLGU in network NET9
dN
dE
dU
0.04
0.02
0.00
−0.02
−0.04
RefCheck values [m]
mean: N=0.001 E=-0.002 U=0.004
std: N=0.002 E=0.002 U=0.005 2D=0.001 3D=0.004
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

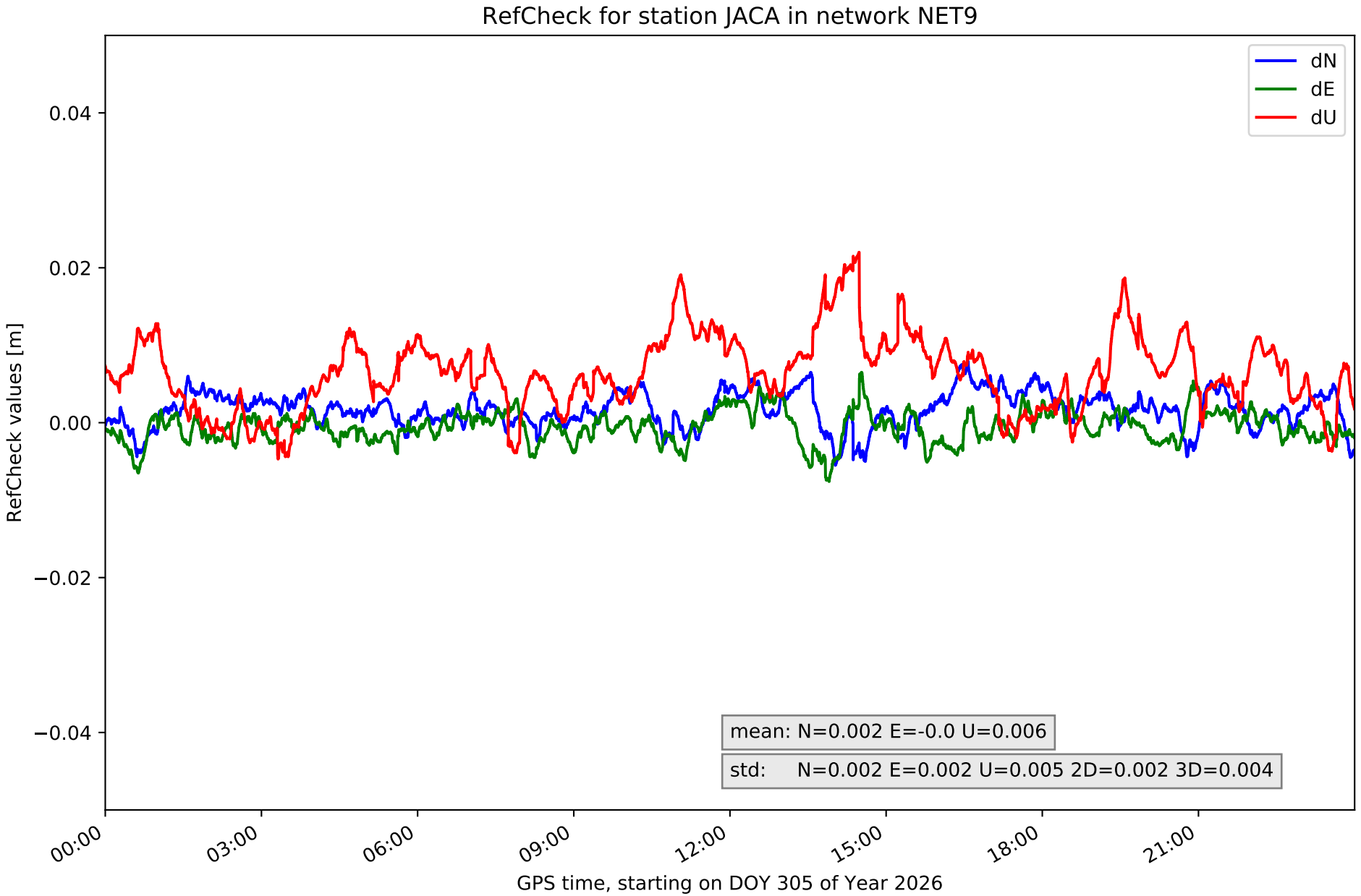

RefCheck for station BRJA in network NET9
dN
dE
dU
0.04
0.02
0.00
−0.02
−0.04
RefCheck values [m]
mean: N=-0.002 E=-0.002 U=0.0
std: N=0.003 E=0.003 U=0.006 2D=0.003 3D=0.004
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

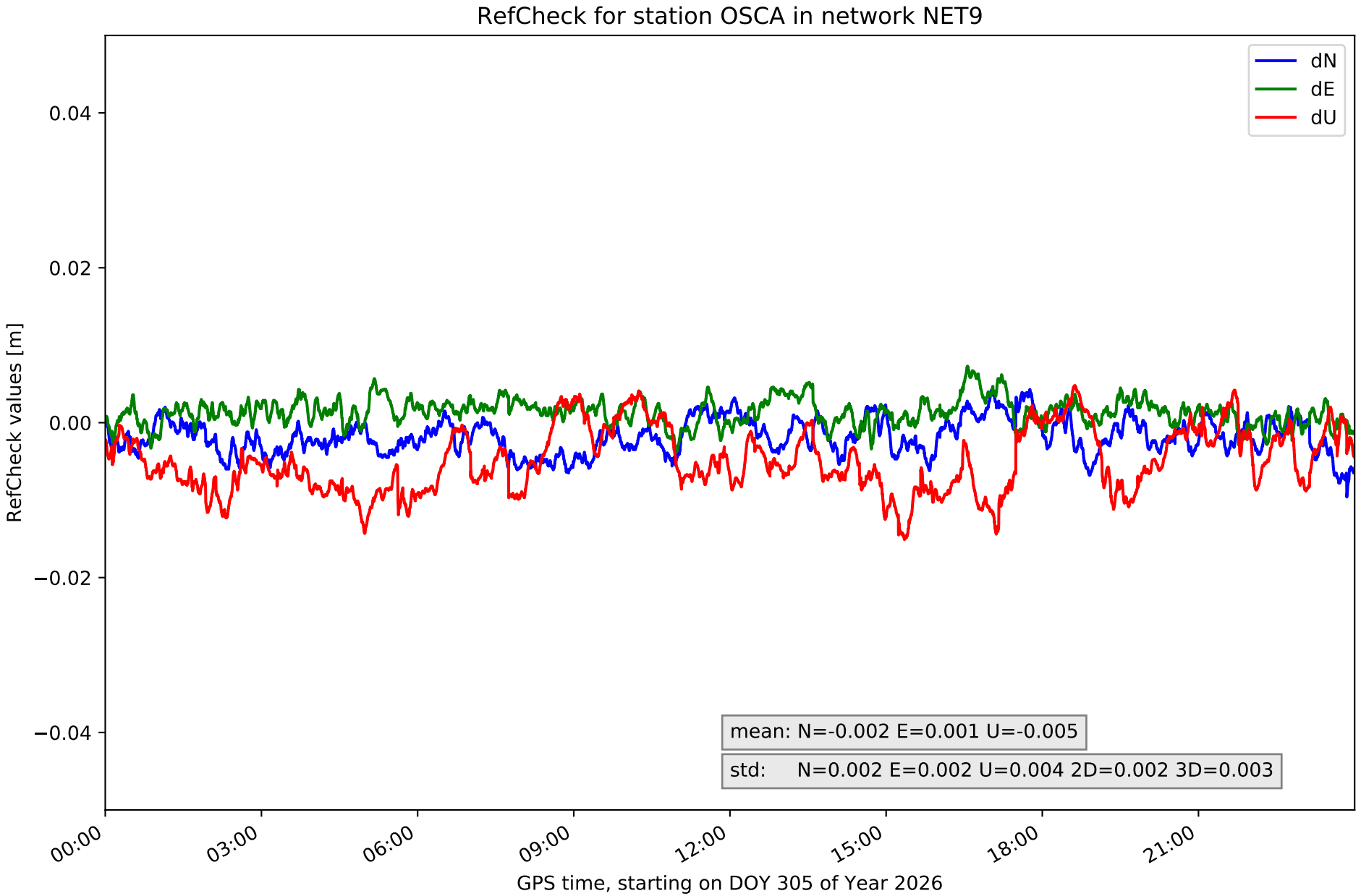

RefCheck for station CARC in network NET9
dN
dE
dU
0.04
0.02
0.00
−0.02
−0.04
RefCheck values [m]
mean: N=-0.002 E=0.002 U=0.001
std: N=0.004 E=0.004 U=0.009 2D=0.003 3D=0.006
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

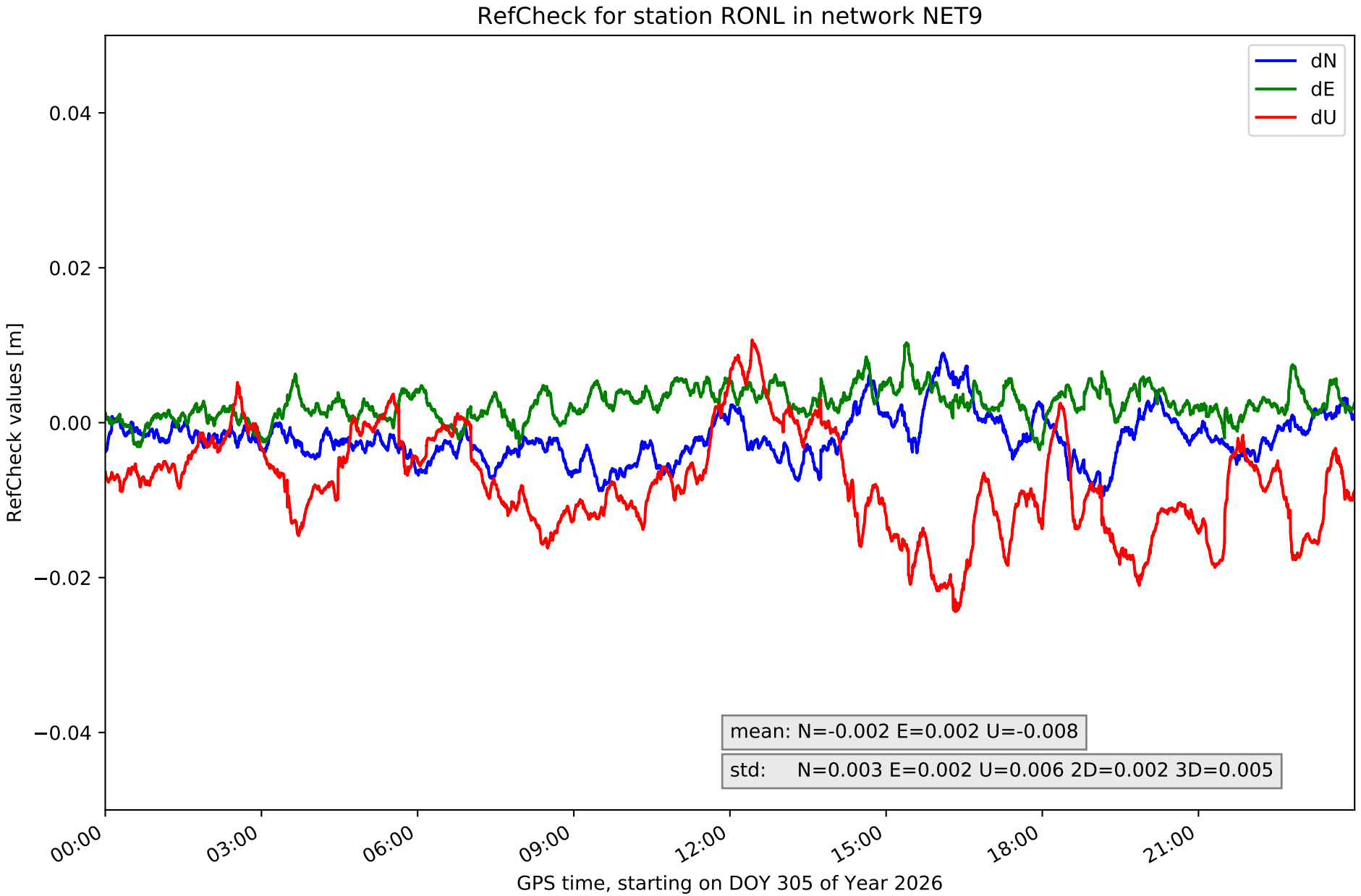

RefCheck for station CSOS in network NET9
dN
dE
dU
0.04
0.02
0.00
−0.02
−0.04
RefCheck values [m]
mean: N=0.001 E=0.003 U=-0.001
std: N=0.003 E=0.002 U=0.015 2D=0.002 3D=0.01
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

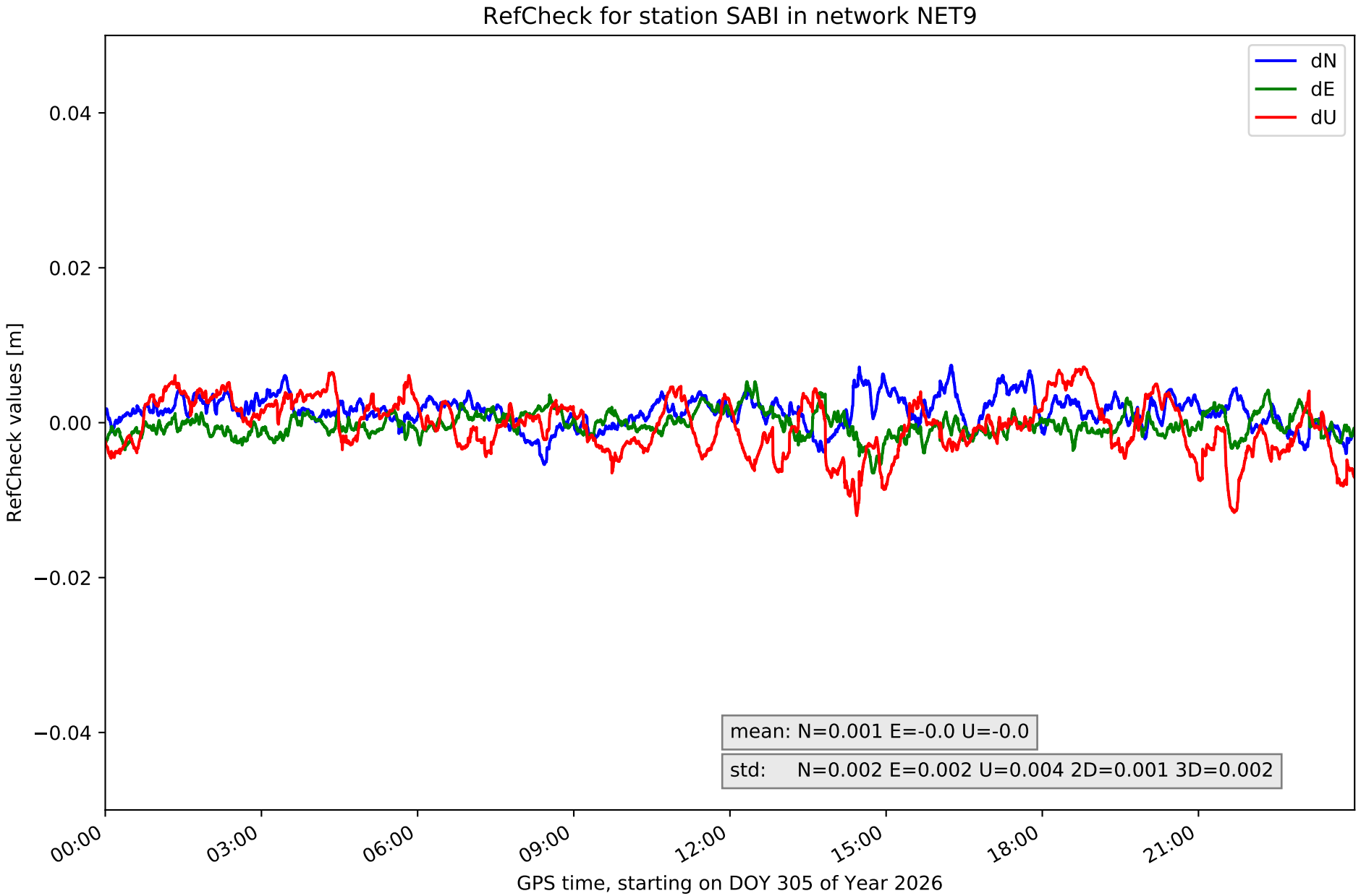

RefCheck for station EJEA in network NET9
dN
dE
dU
0.04
0.02
0.00
−0.02
−0.04
RefCheck values [m]
mean: N=0.001 E=-0.001 U=-0.0
std: N=0.002 E=0.002 U=0.003 2D=0.002 3D=0.002
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

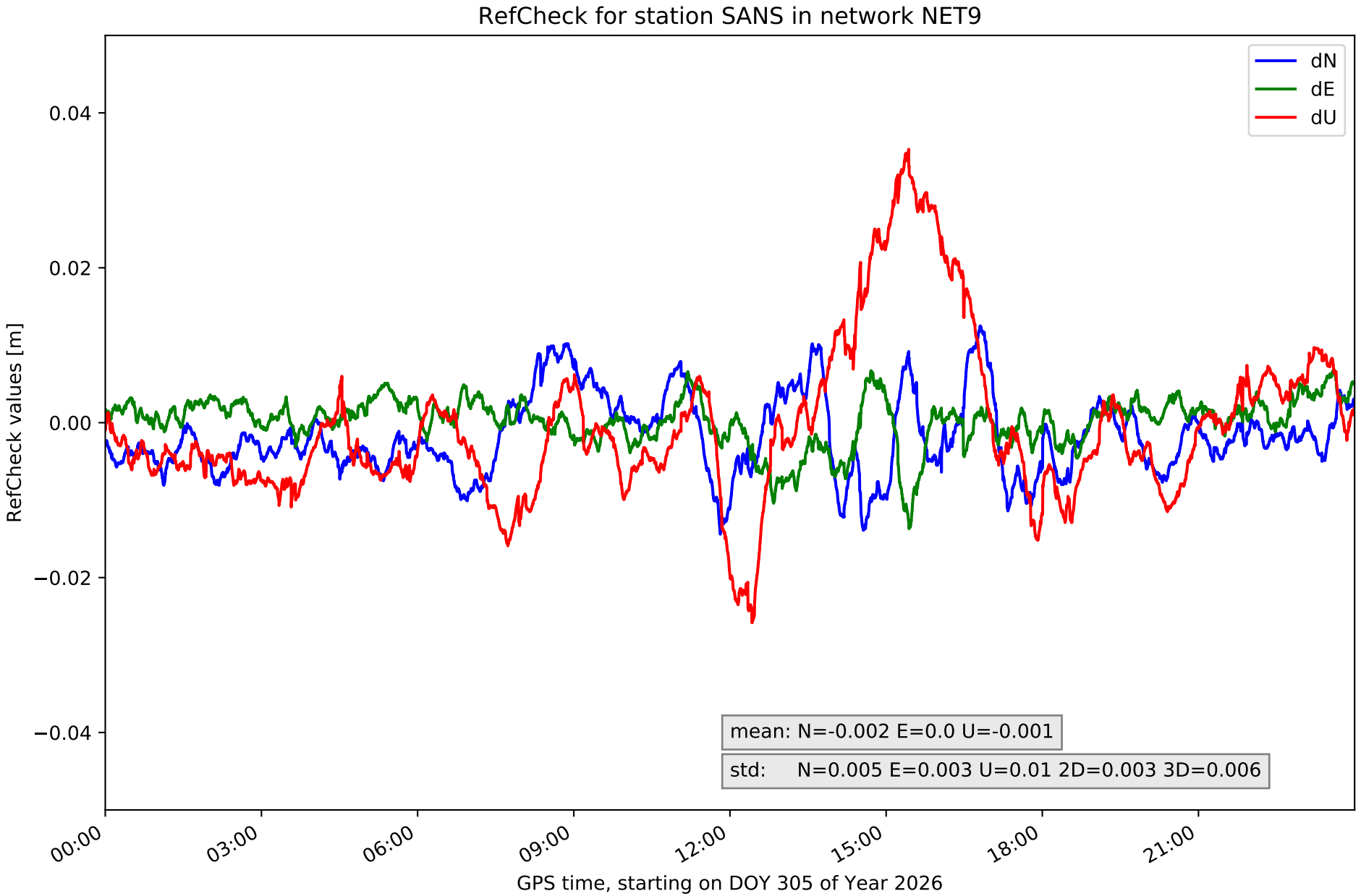

RefCheck for station FRAG in network NET9
dN
dE
dU
0.04
0.02
0.00
−0.02
−0.04
RefCheck values [m]
mean: N=0.001 E=0.001 U=0.004
std: N=0.002 E=0.002 U=0.005 2D=0.002 3D=0.003
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

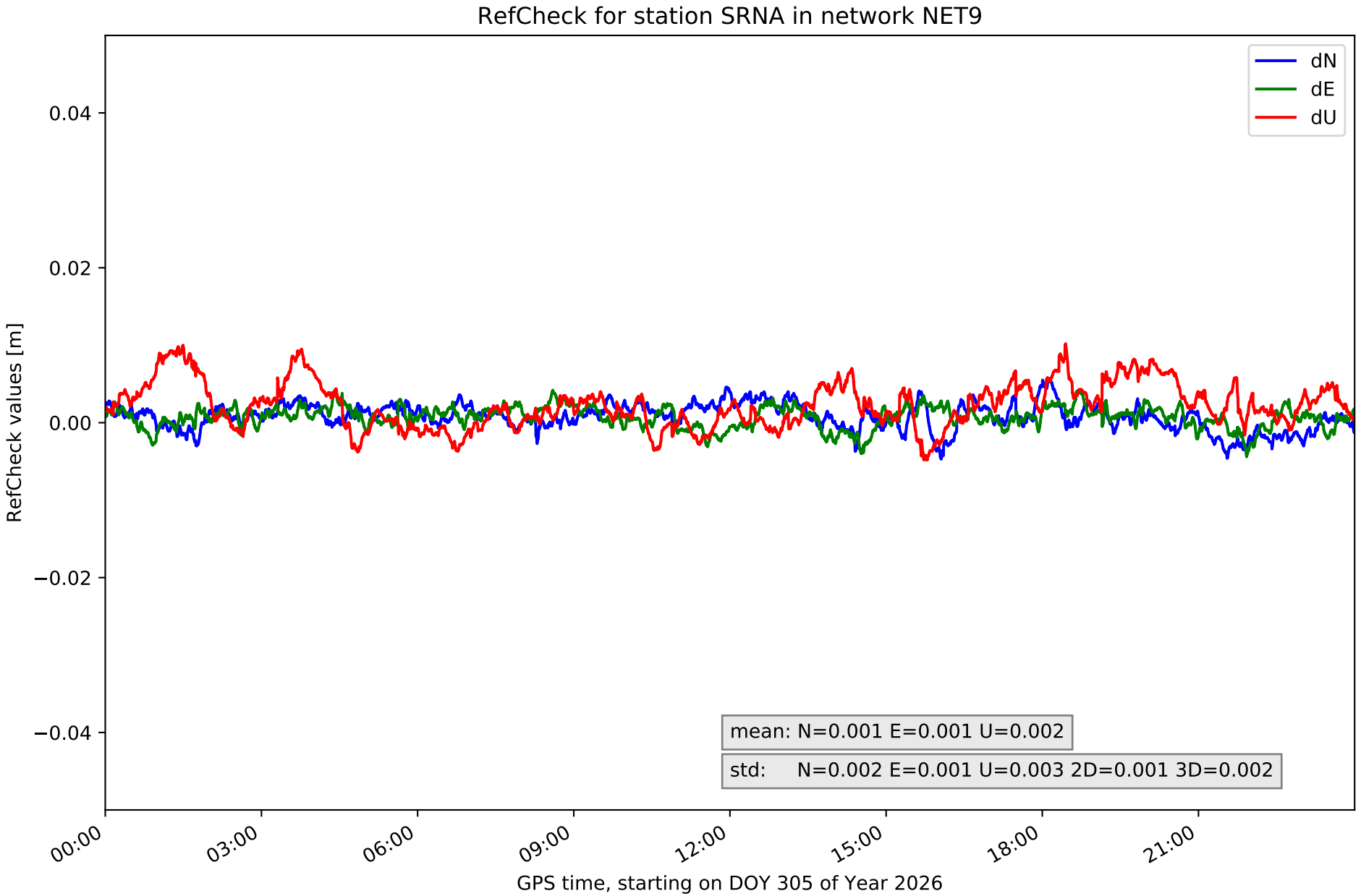

RefCheck for station JACA in network NET9
dN
dE
dU
0.04
0.02
0.00
−0.02
−0.04
RefCheck values [m]
mean: N=0.002 E=-0.0 U=0.006
std: N=0.002 E=0.002 U=0.005 2D=0.002 3D=0.004
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

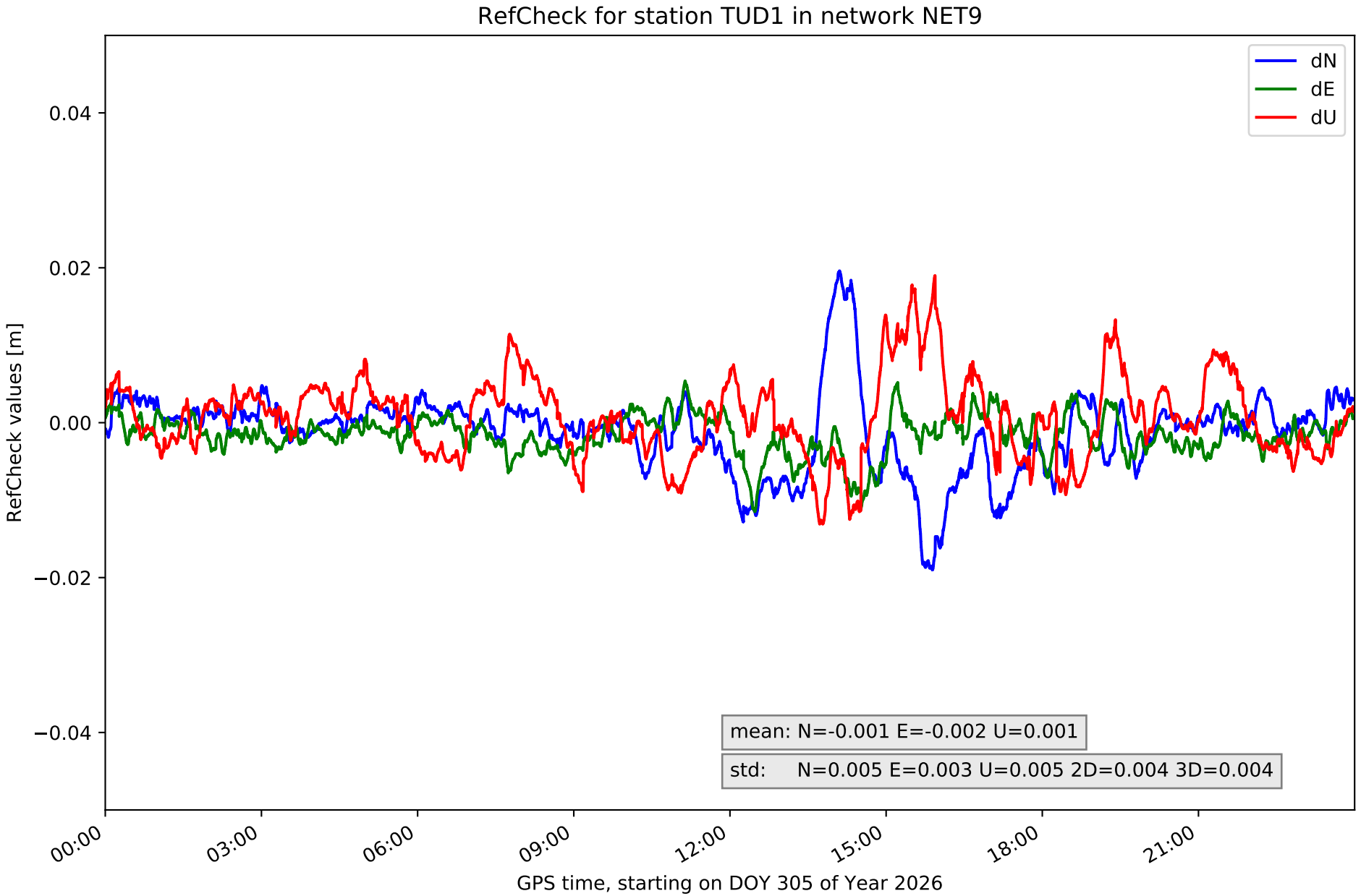

RefCheck for station OSCA in network NET9
dN
dE
dU
0.04
0.02
0.00
−0.02
−0.04
RefCheck values [m]
mean: N=-0.002 E=0.001 U=-0.005
std: N=0.002 E=0.002 U=0.004 2D=0.002 3D=0.003
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

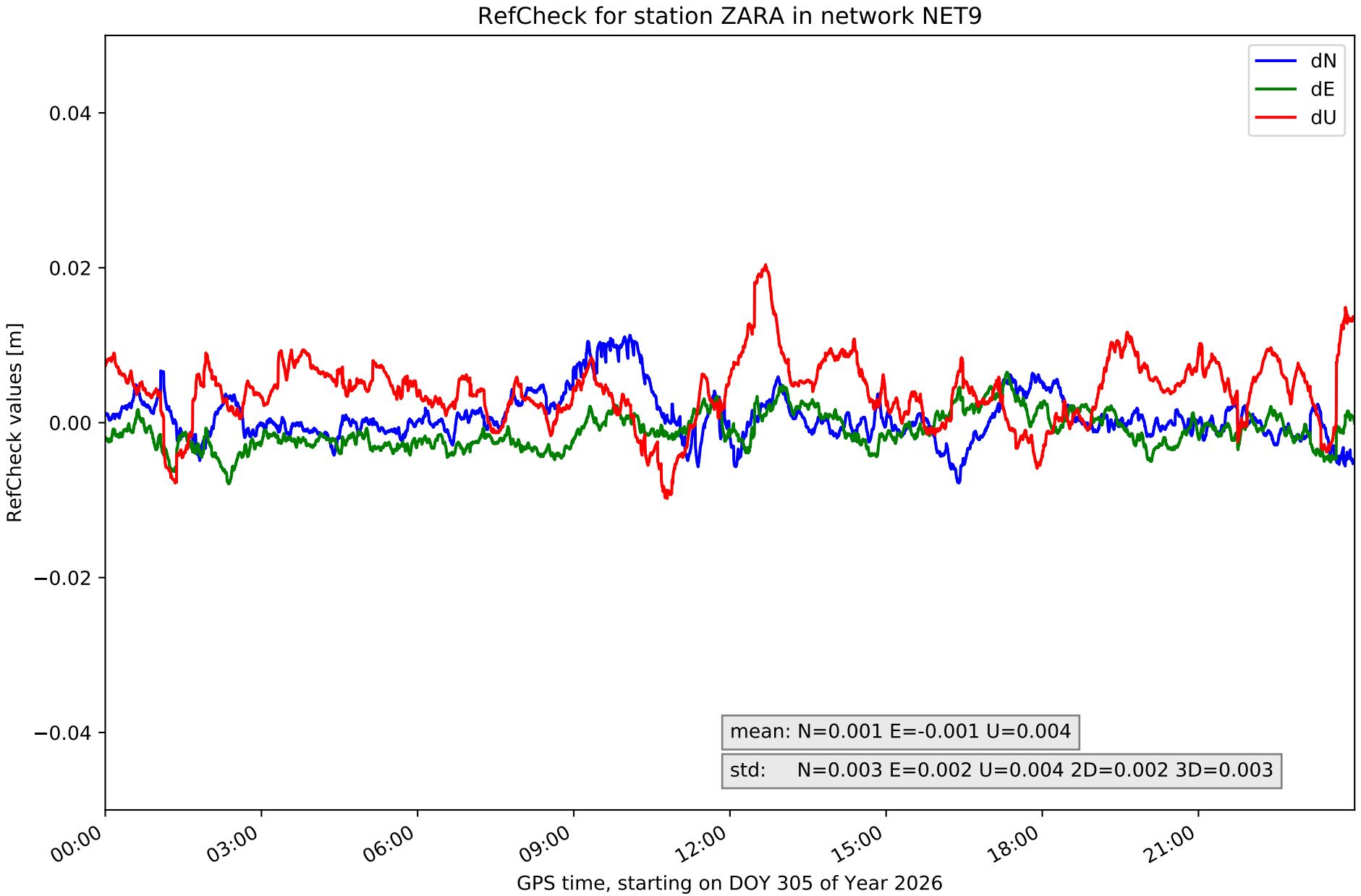

RefCheck for station RONL in network NET9
dN
dE
dU
0.04
0.02
0.00
−0.02
−0.04
RefCheck values [m]
mean: N=-0.002 E=0.002 U=-0.008
std: N=0.003 E=0.002 U=0.006 2D=0.002 3D=0.005
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

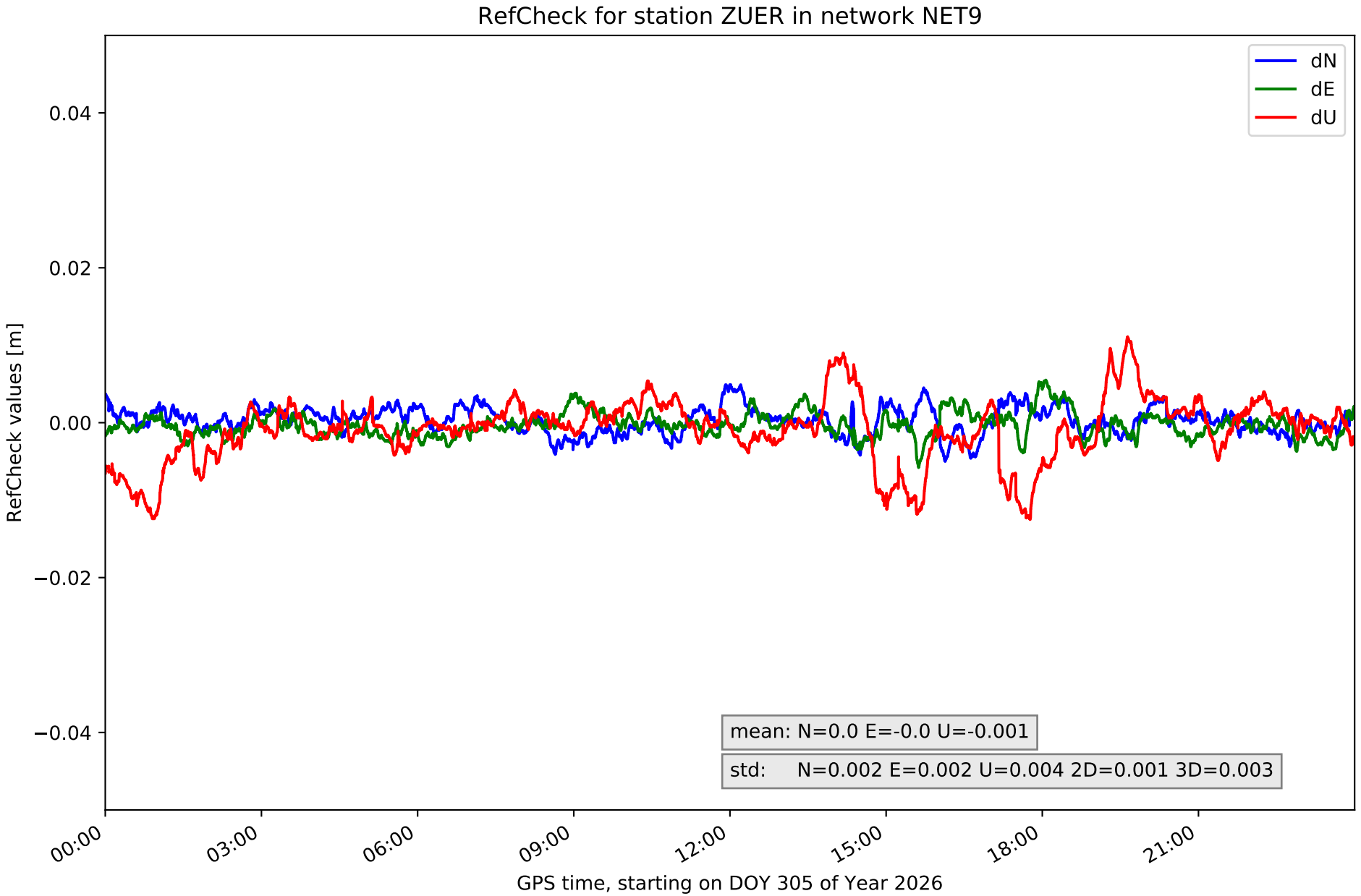

RefCheck for station SABI in network NET9
dN
dE
dU
0.04
0.02
0.00
−0.02
−0.04
RefCheck values [m]
mean: N=0.001 E=-0.0 U=-0.0
std: N=0.002 E=0.002 U=0.004 2D=0.001 3D=0.002
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026


RefCheck for station SANS in network NET9
dN
dE
dU
0.04
0.02
0.00
−0.02
−0.04
RefCheck values [m]
mean: N=-0.002 E=0.0 U=-0.001
std: N=0.005 E=0.003 U=0.01 2D=0.003 3D=0.006
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026


RefCheck for station SRNA in network NET9
dN
dE
dU
0.04
0.02
0.00
−0.02
−0.04
RefCheck values [m]
mean: N=0.001 E=0.001 U=0.002
std: N=0.002 E=0.001 U=0.003 2D=0.001 3D=0.002
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026


RefCheck for station TUD1 in network NET9
dN
dE
dU
0.04
0.02
0.00
−0.02
−0.04
RefCheck values [m]
mean: N=-0.001 E=-0.002 U=0.001
std: N=0.005 E=0.003 U=0.005 2D=0.004 3D=0.004
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026


RefCheck for station ZARA in network NET9
dN
dE
dU
0.04
0.02
0.00
−0.02
−0.04
RefCheck values [m]
mean: N=0.001 E=-0.001 U=0.004
std: N=0.003 E=0.002 U=0.004 2D=0.002 3D=0.003
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026


RefCheck for station ZUER in network NET9
dN
dE
dU
0.04
0.02
0.00
−0.02
−0.04
RefCheck values [m]
mean: N=0.0 E=-0.0 U=-0.001
std: N=0.002 E=0.002 U=0.004 2D=0.001 3D=0.003
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
GPS time, starting on DOY 305 of Year 2026

# RefCheck values for network NET9

| Station | Nmin | Nmax | Nstd | Emin | Emax | Estd | Umin | Umax | Ustd | std2D | std3D | #2D > 0.01 | % 2D > 0.01 | #3D > 0.02 | % 3D > 0.02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ARIB | -0.012 | 0.008 | 0.003 | -0.007 | 0.009 | 0.003 | -0.021 | 0.015 | 0.007 | 0.002 | 0.005 | 801 | 1.4 | 523 | 0.9 |
| BLGU | -0.004 | 0.007 | 0.002 | -0.007 | 0.005 | 0.002 | -0.005 | 0.027 | 0.005 | 0.001 | 0.004 | 0 | 0.0 | 809 | 1.4 |
| BRJA | -0.017 | 0.006 | 0.003 | **-0.014** | 0.007 | 0.003 | -0.015 | 0.018 | 0.006 | 0.003 | 0.004 | 4068 | 7.0 | 0 | 0.0 |
| CARC | -0.011 | 0.016 | 0.004 | -0.011 | **0.018** | **0.004** | -0.015 | 0.032 | 0.009 | 0.003 | 0.006 | 5196 | 9.0 | 5709 | 9.9 |
| CSOS | -0.013 | 0.009 | 0.003 | -0.005 | 0.009 | 0.002 | **-0.051** | 0.025 | **0.015** | 0.002 | **0.01** | 784 | 1.4 | **8911** | **15.4** |
| EJEA | -0.008 | 0.009 | 0.002 | -0.007 | 0.006 | 0.002 | -0.011 | 0.01 | 0.003 | 0.002 | 0.002 | 0 | 0.0 | 0 | 0.0 |
| FRAG | -0.006 | 0.008 | 0.002 | -0.006 | 0.009 | 0.002 | -0.009 | 0.016 | 0.005 | 0.002 | 0.003 | 0 | 0.0 | 0 | 0.0 |
| JACA | -0.005 | 0.008 | 0.002 | -0.008 | 0.006 | 0.002 | -0.005 | 0.022 | 0.005 | 0.002 | 0.004 | 0 | 0.0 | 649 | 1.1 |
| OSCA | -0.01 | 0.004 | 0.002 | -0.004 | 0.007 | 0.002 | -0.015 | 0.005 | 0.004 | 0.002 | 0.003 | 0 | 0.0 | 0 | 0.0 |
| RONL | -0.009 | 0.009 | 0.003 | -0.004 | 0.01 | 0.002 | -0.024 | 0.011 | 0.006 | 0.002 | 0.005 | 250 | 0.4 | 1919 | 3.3 |
| SABI | -0.005 | 0.007 | 0.002 | -0.006 | 0.005 | 0.002 | -0.012 | 0.007 | 0.004 | 0.001 | 0.002 | 0 | 0.0 | 0 | 0.0 |
| SANS | -0.014 | 0.013 | **0.005** | **-0.014** | 0.007 | 0.003 | -0.026 | **0.035** | 0.01 | 0.003 | 0.006 | 4844 | 8.4 | 5499 | 9.5 |
| SRNA | -0.005 | 0.006 | 0.002 | -0.004 | 0.004 | 0.001 | -0.005 | 0.01 | 0.003 | 0.001 | 0.002 | 0 | 0.0 | 0 | 0.0 |
| TUD1 | **-0.019** | **0.02** | **0.005** | -0.011 | 0.005 | 0.003 | -0.013 | 0.019 | 0.005 | **0.004** | 0.004 | **5492** | **9.5** | 1289 | 2.2 |
| ZARA | -0.008 | 0.011 | 0.003 | -0.008 | 0.006 | 0.002 | -0.01 | 0.02 | 0.004 | 0.002 | 0.003 | 1051 | 1.8 | 77 | 0.1 |
| ZUER | -0.005 | 0.005 | 0.002 | -0.006 | 0.005 | 0.002 | -0.013 | 0.011 | 0.004 | 0.001 | 0.003 | 0 | 0.0 | 0 | 0.0 |
| **Mean** | **-0.009** | **0.009** | **0.003** | **-0.008** | **0.007** | **0.002** | **-0.016** | **0.018** | **0.006** | **0.002** | **0.004** | **1405.4** | **2.4** | **1586.6** | **2.7** |
| **Min/Max** | **-0.019** | **0.02** | **0.005** | **-0.014** | **0.018** | **0.004** | **-0.051** | **0.035** | **0.015** | **0.004** | **0.01** | **5492** | **9.5** | **8911** | **15.4** |

# fixing statistic for network NET9

| fixing percentage of | all GNSS | G | R | E | C |
|---|---|---|---|---|---|
| using threshold 0.3 | 95.4 | 95.5 | 95.2 | 96.1 | 94.5 |
| considering satellites with dual-frequency fixed | 93.5 | 94.0 | 93.6 | 94.7 | 91.0 |
| considering all signals separately | 93.3 | 94.0 | 93.6 | 94.7 | 88.8 |