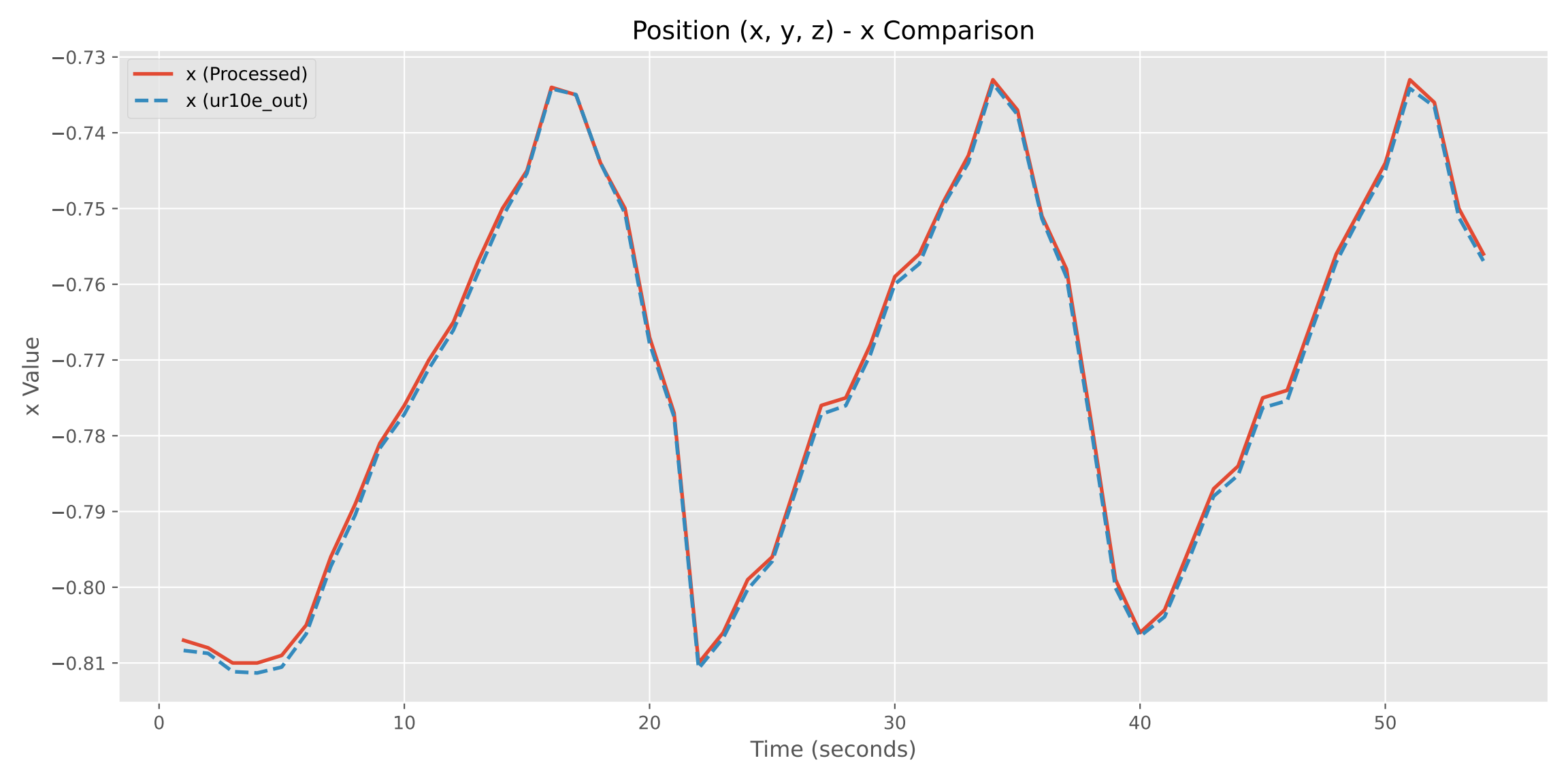
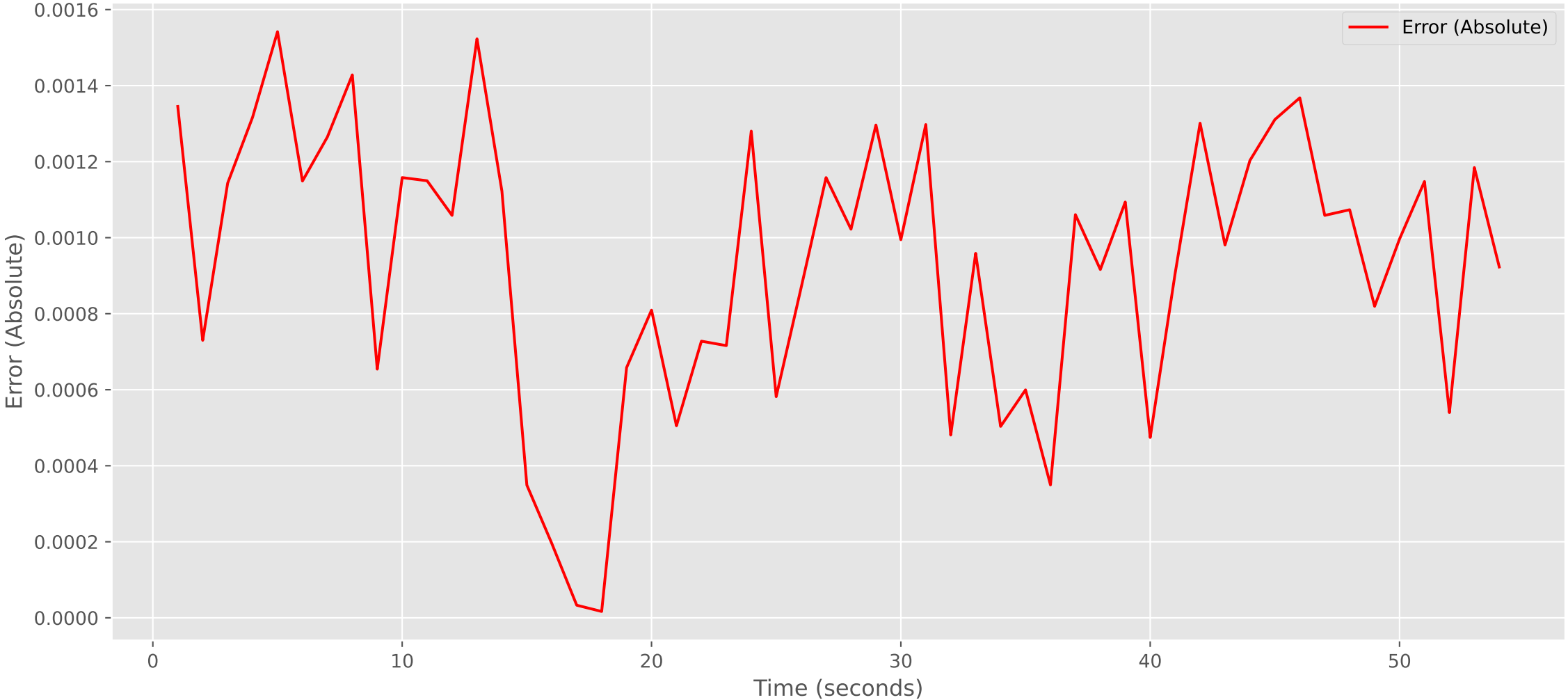
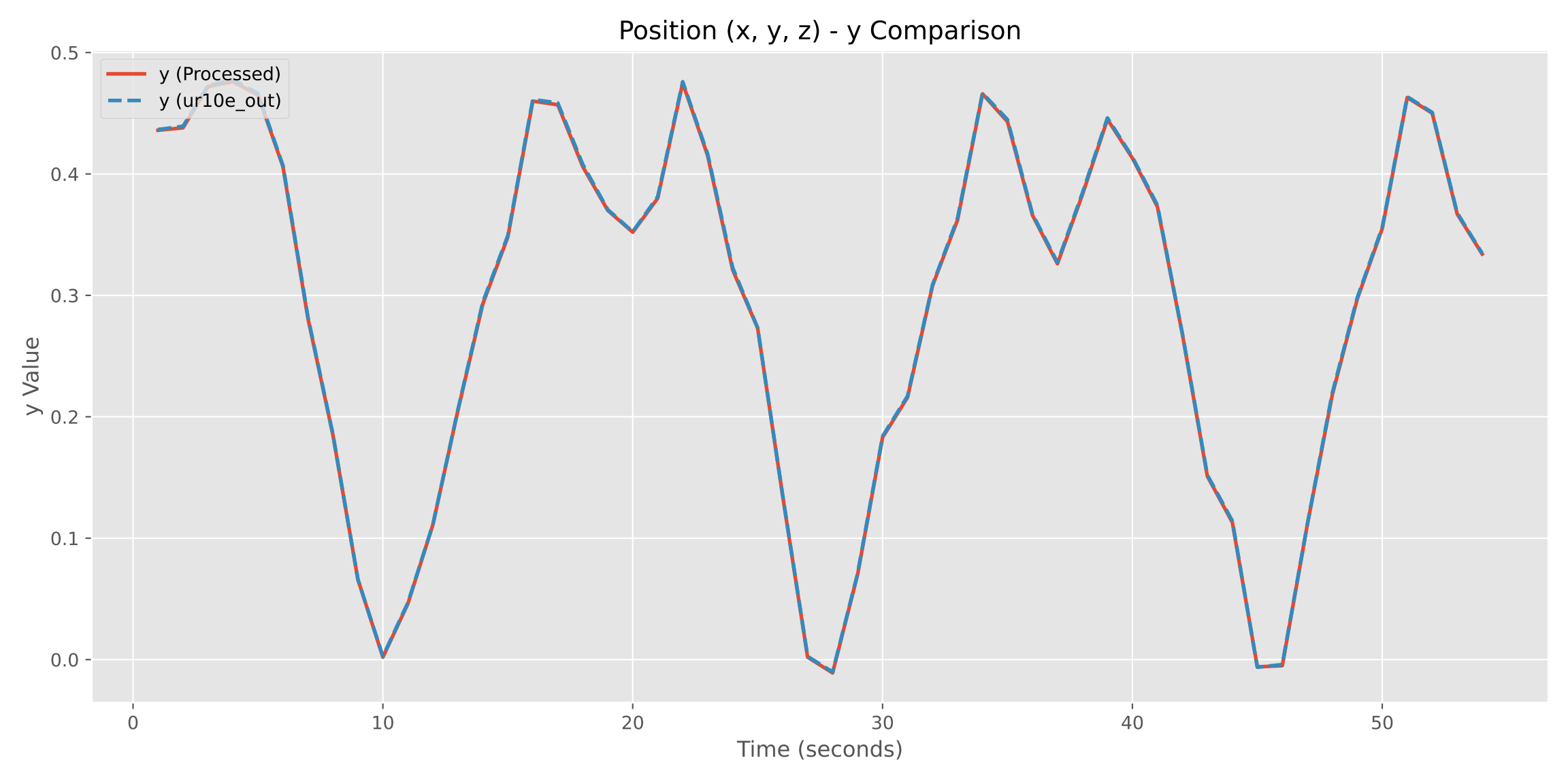
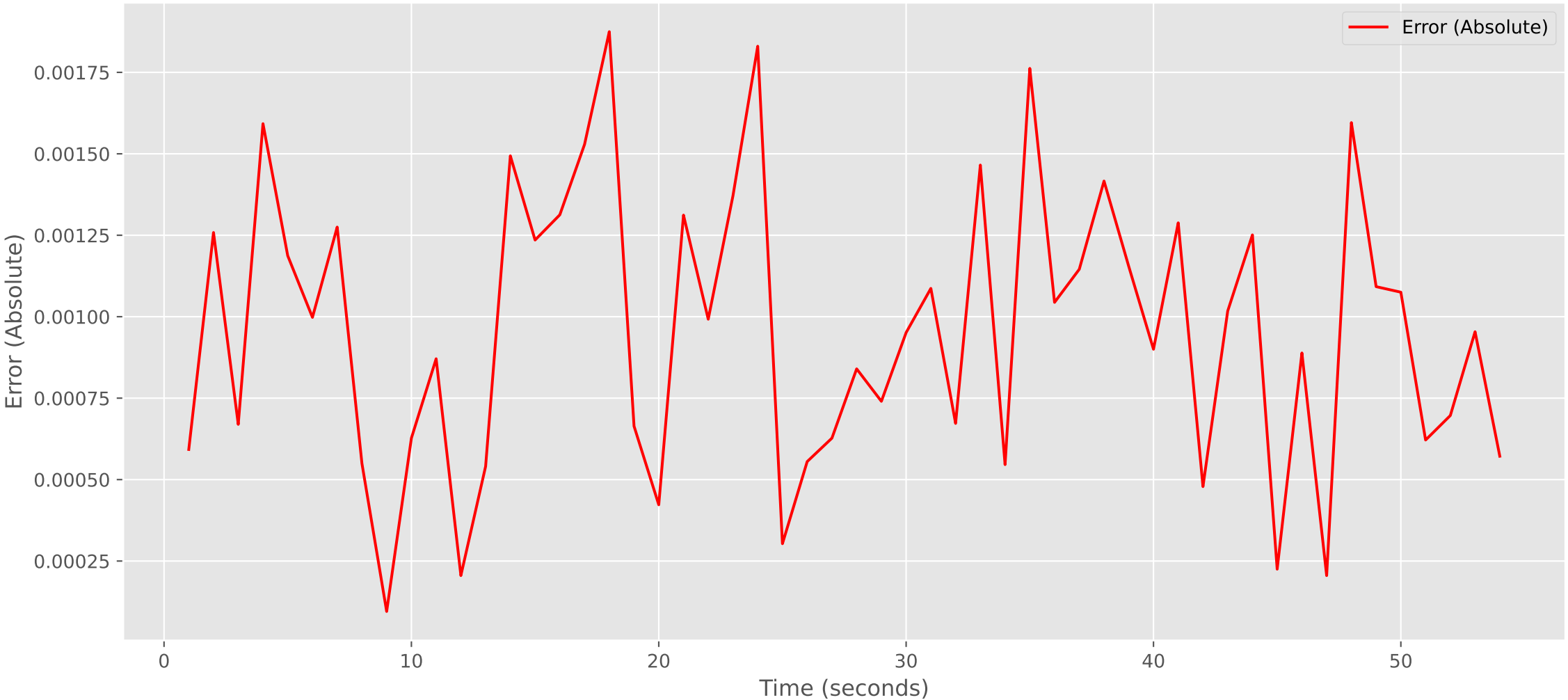
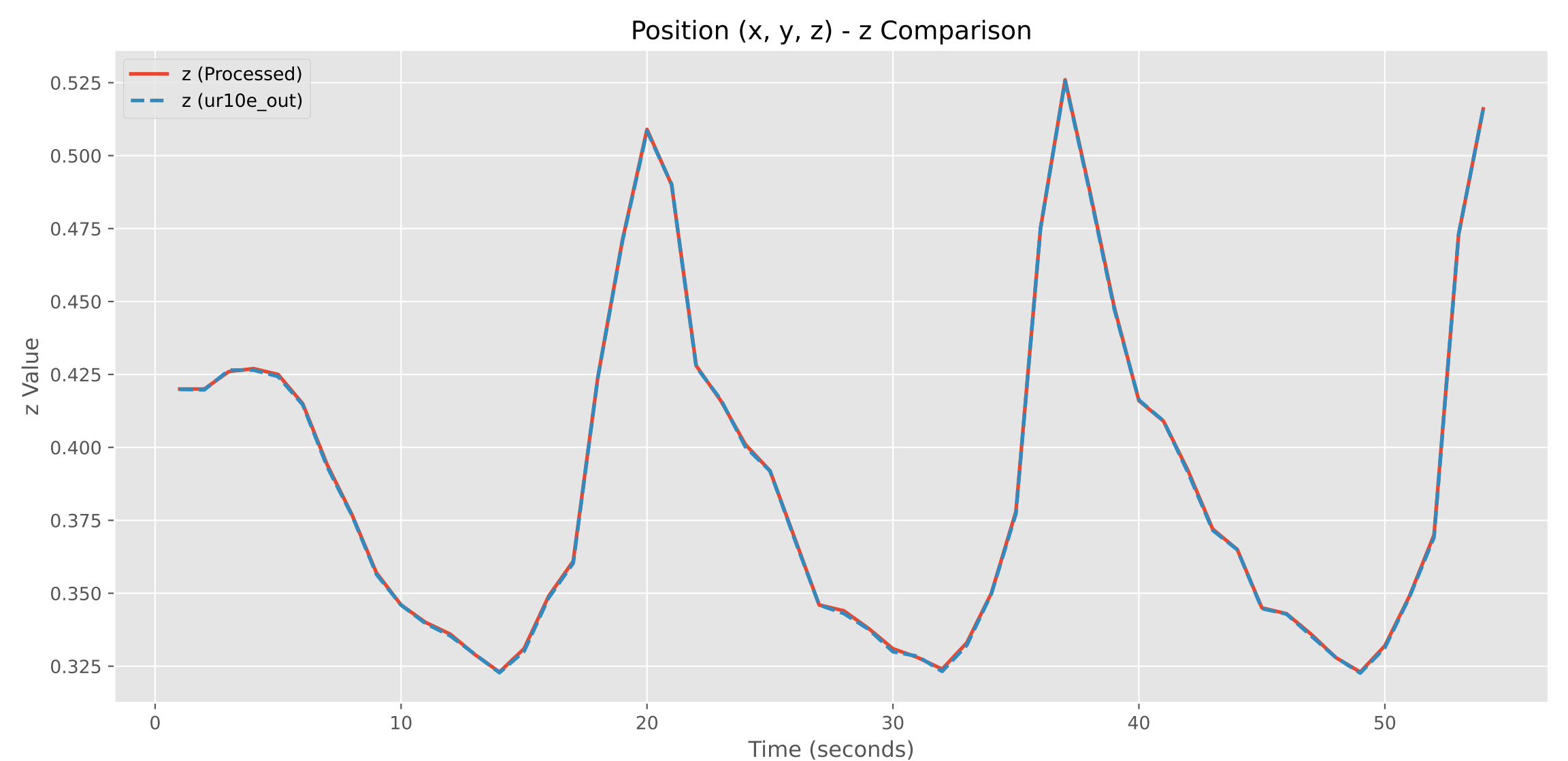
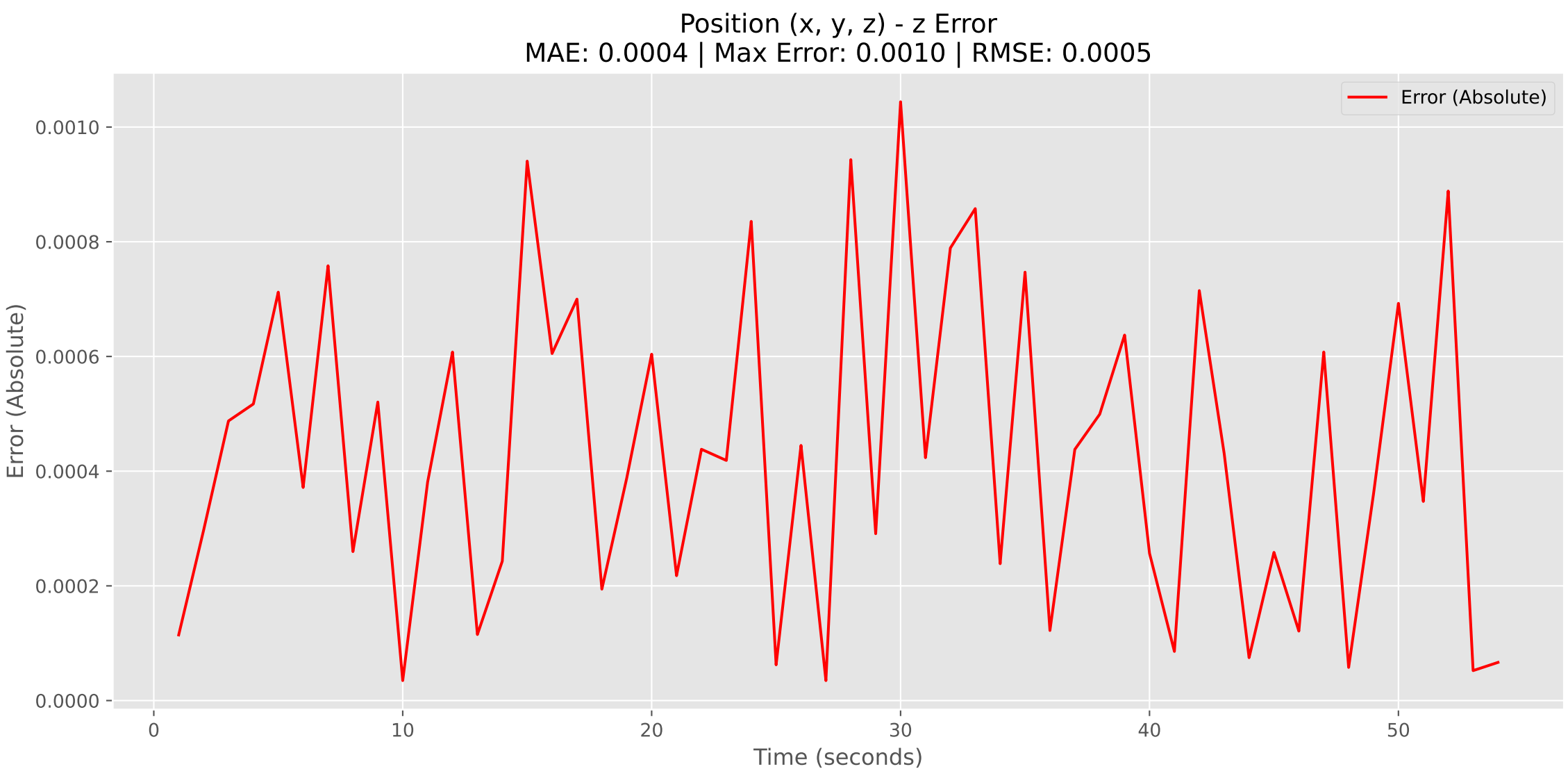

Position (x, y, z) - x Comparison
x (Processed)
x (ur10e_out)
x Value
−0.73
−0.74
−0.75
−0.76
−0.77
−0.78
−0.79
−0.80
−0.81
0
10
20
30
40
50
Time (seconds)

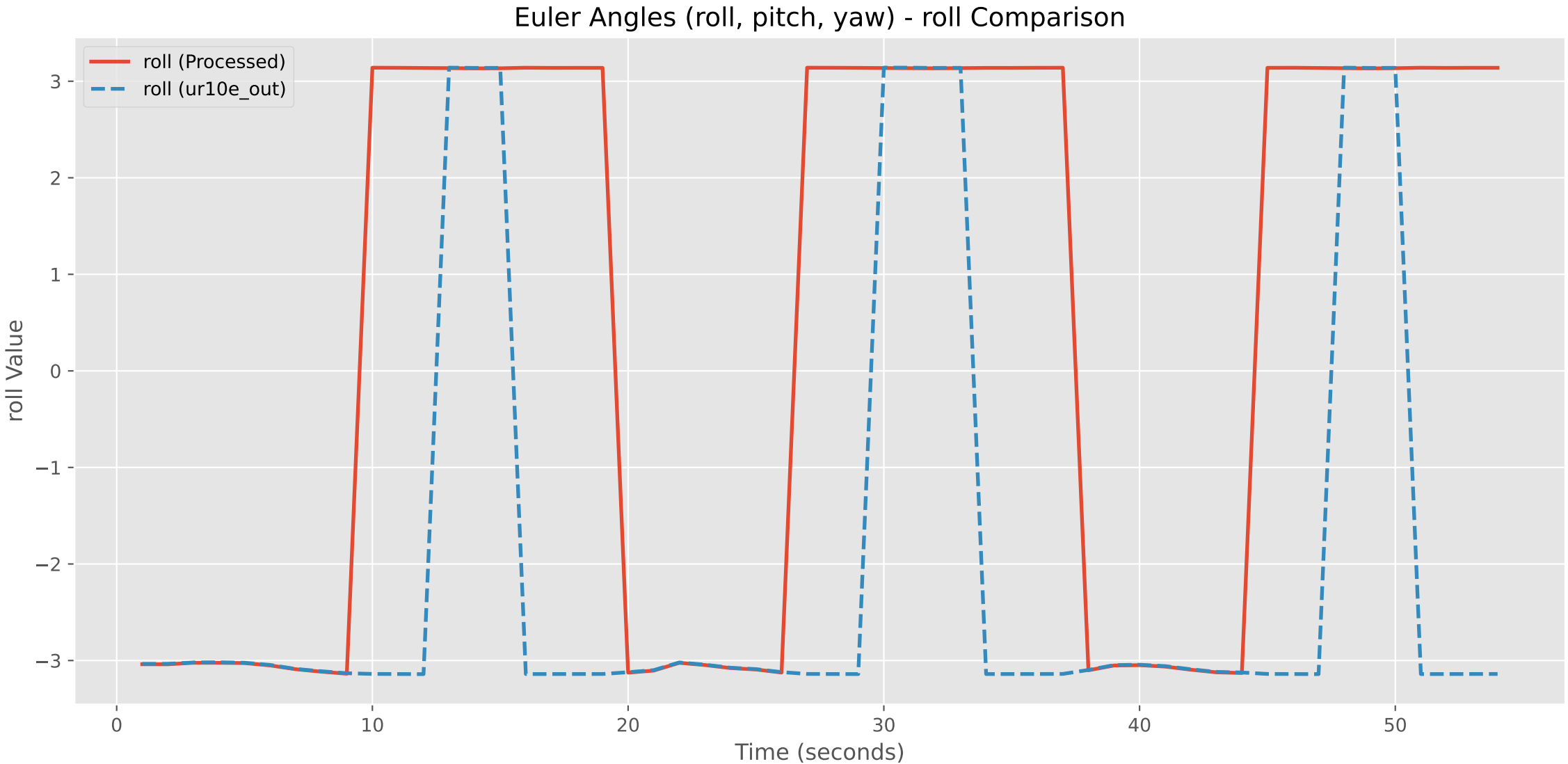

Position (x, y, z) - x Error
MAE: 0.0009 | Max Error: 0.0015 | RMSE: 0.0010
Error (Absolute)
0.0016
0.0014
0.0012
0.0010
0.0008
0.0006
0.0004
0.0002
0.0000
0
10
20
30
40
50
Time (seconds)

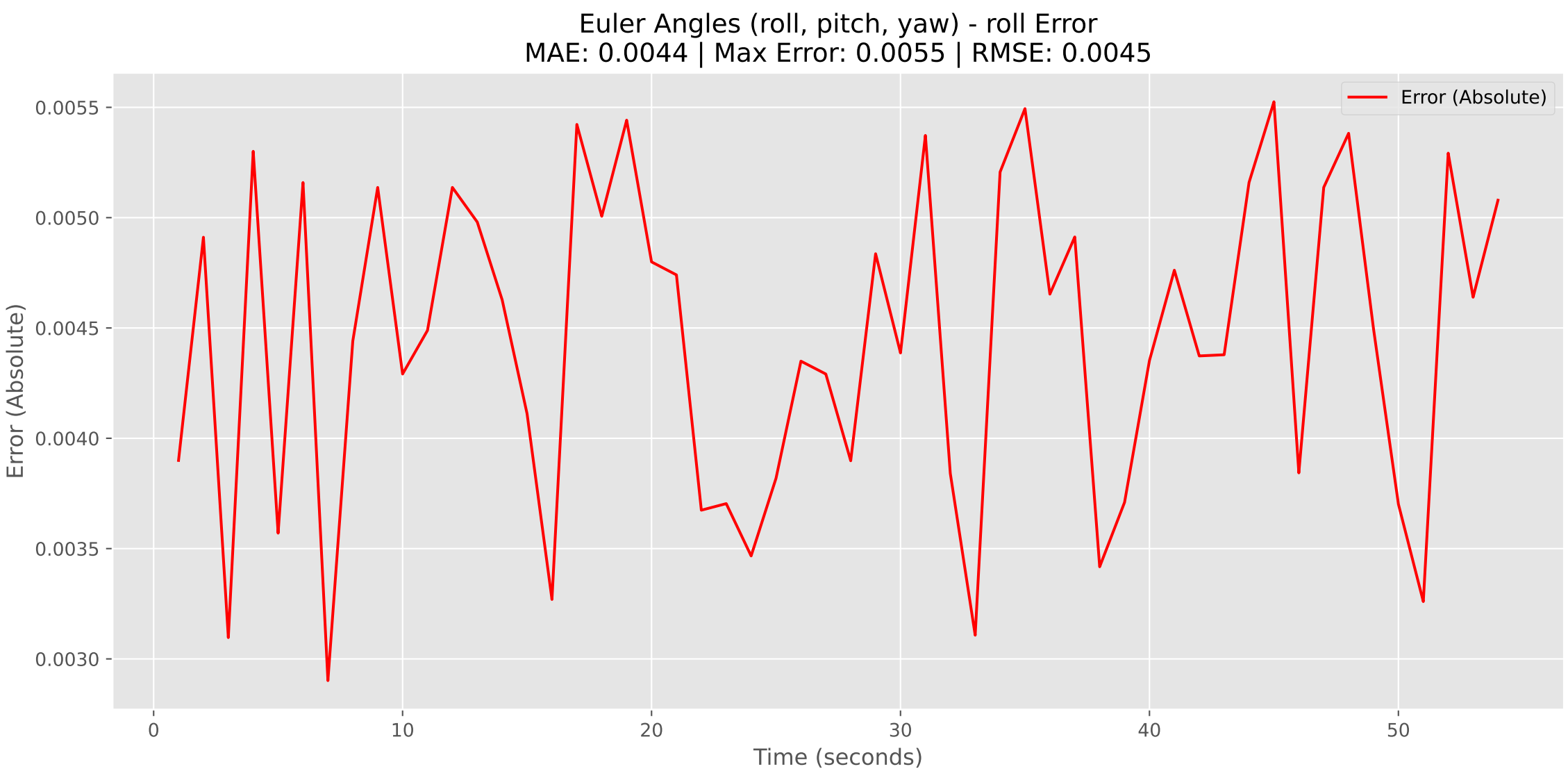

Position (x, y, z) - y Comparison
y (Processed)
y (ur10e_out)
y Value
0.5
0.4
0.3
0.2
0.1
0.0
0
10
20
30
40
50
Time (seconds)

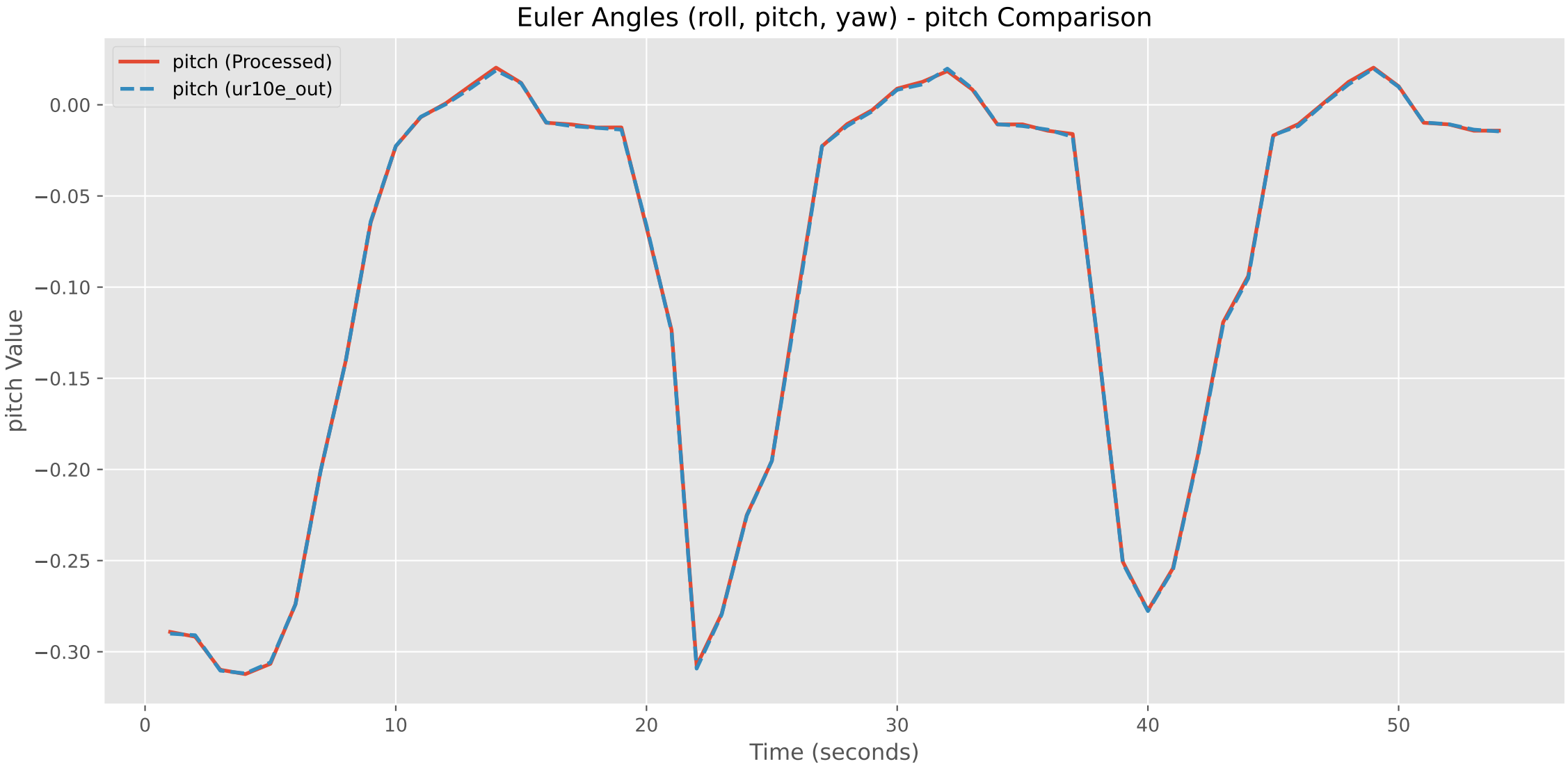

Position (x, y, z) - y Error
MAE: 0.0010 | Max Error: 0.0019 | RMSE: 0.0011
Error (Absolute)
0.00175
0.00150
0.00125
0.00100
0.00075
0.00050
0.00025
Error (Absolute)
0
10
20
30
40
50
Time (seconds)

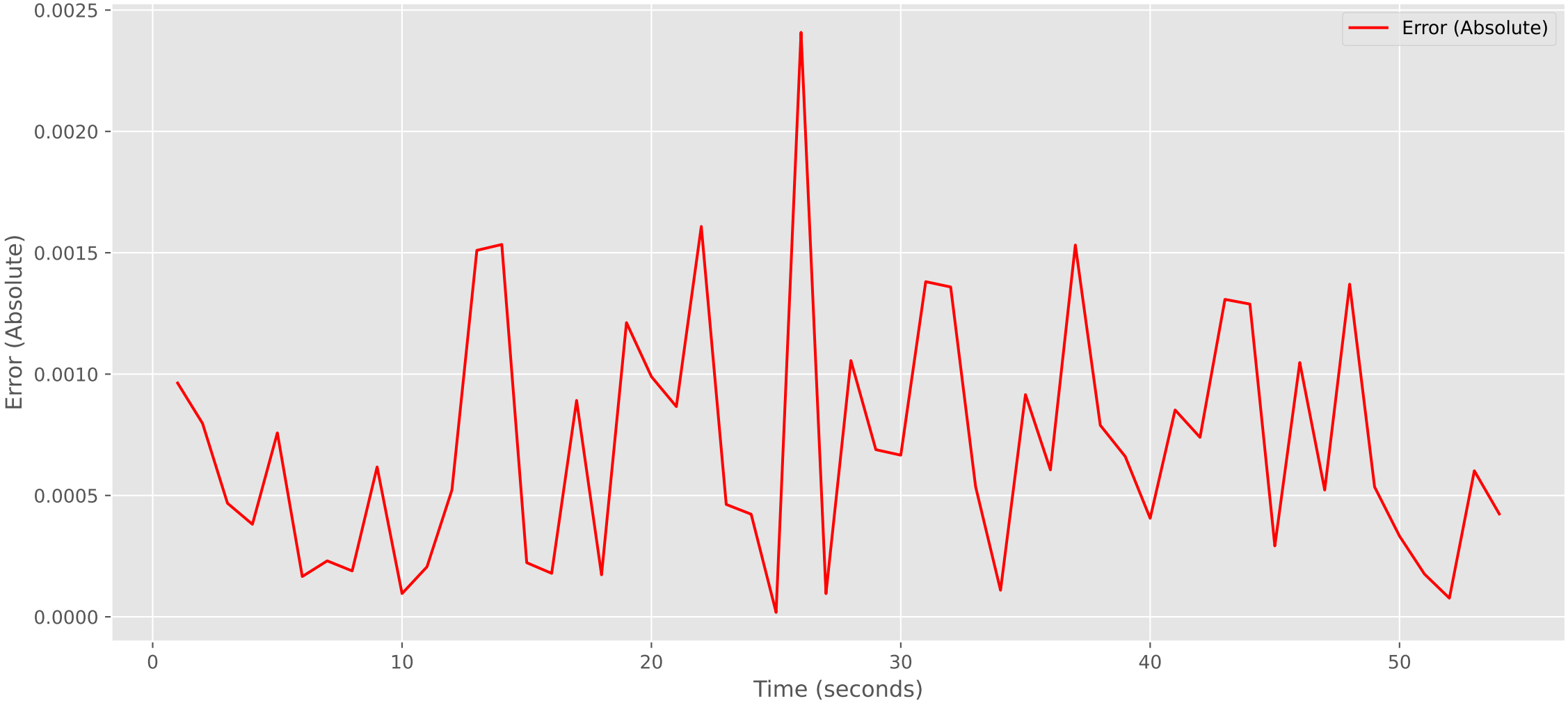

Position (x, y, z) - z Comparison
z (Processed)
z (ur10e_out)
z Value
0.525
0.500
0.475
0.450
0.425
0.400
0.375
0.350
0.325
0
10
20
30
40
50
Time (seconds)

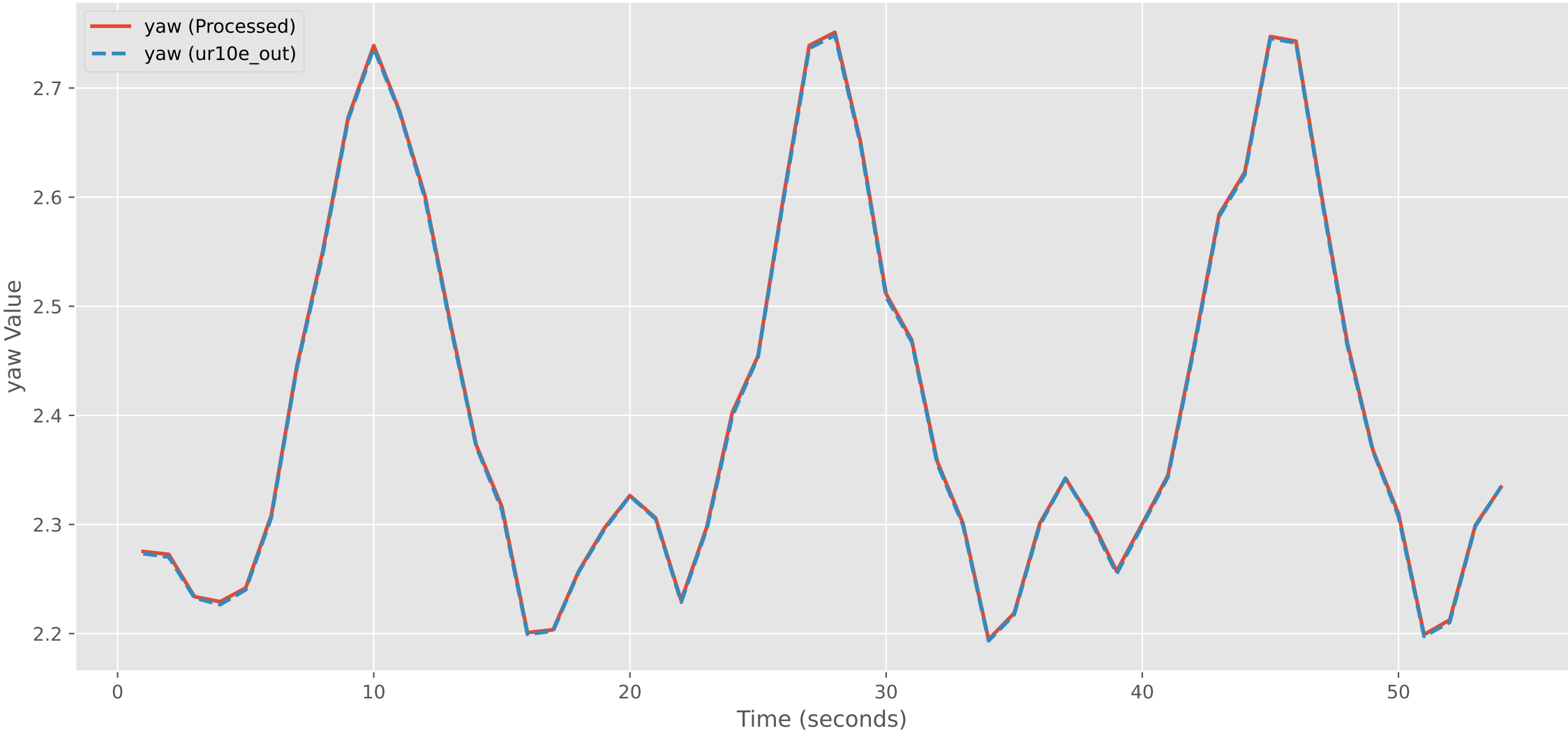

Position (x, y, z) - z Error
MAE: 0.0004 | Max Error: 0.0010 | RMSE: 0.0005
Error (Absolute)
0.0010
0.0008
0.0006
0.0004
0.0002
0.0000
Error (Absolute)
0
10
20
30
40
50
Time (seconds)

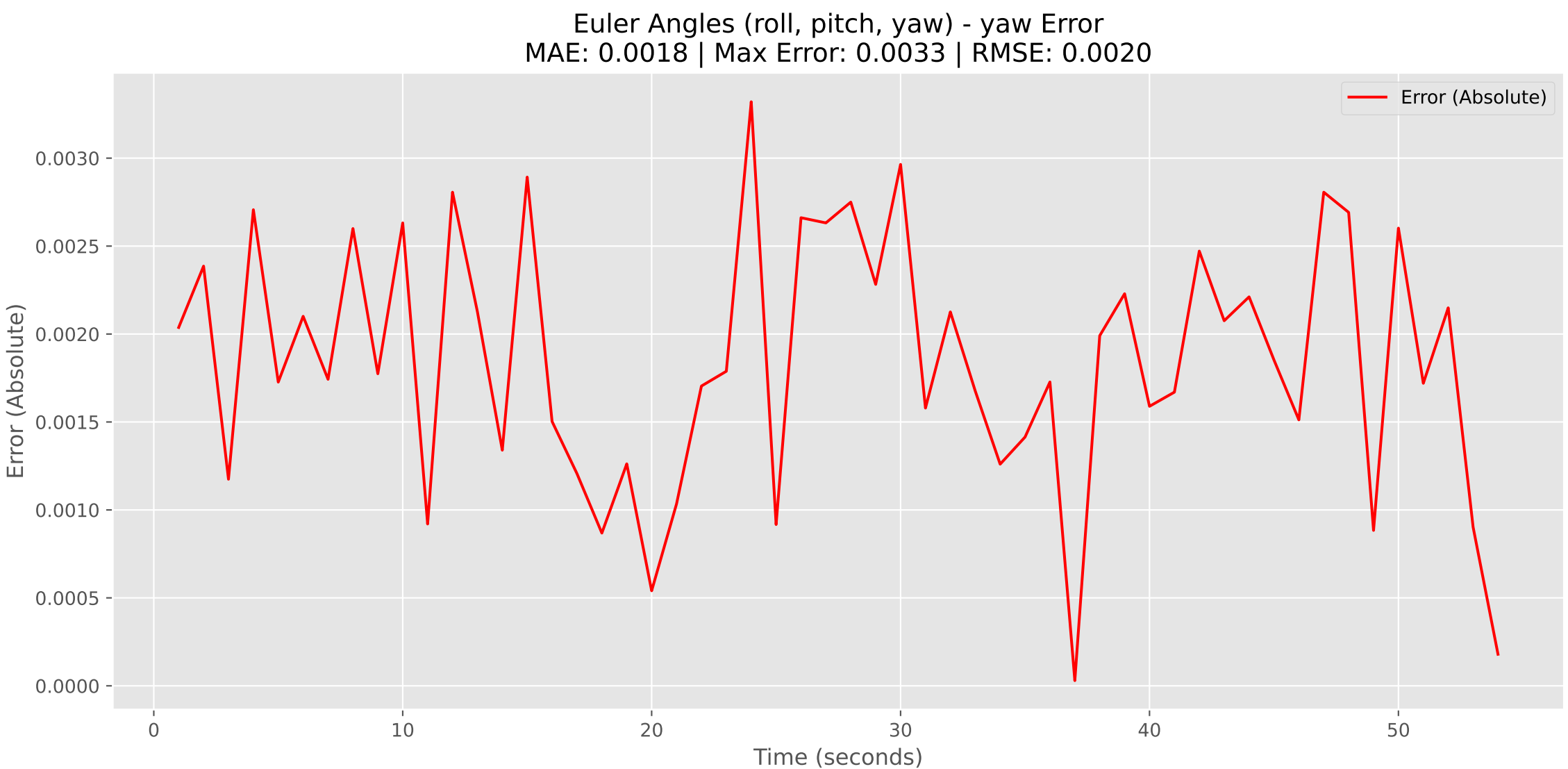

Euler Angles (roll, pitch, yaw) - roll Comparison
roll (Processed)
roll (ur10e_out)
roll Value
Time (seconds)
3
2
1
0
−1
−2
−3
0
10
20
30
40
50

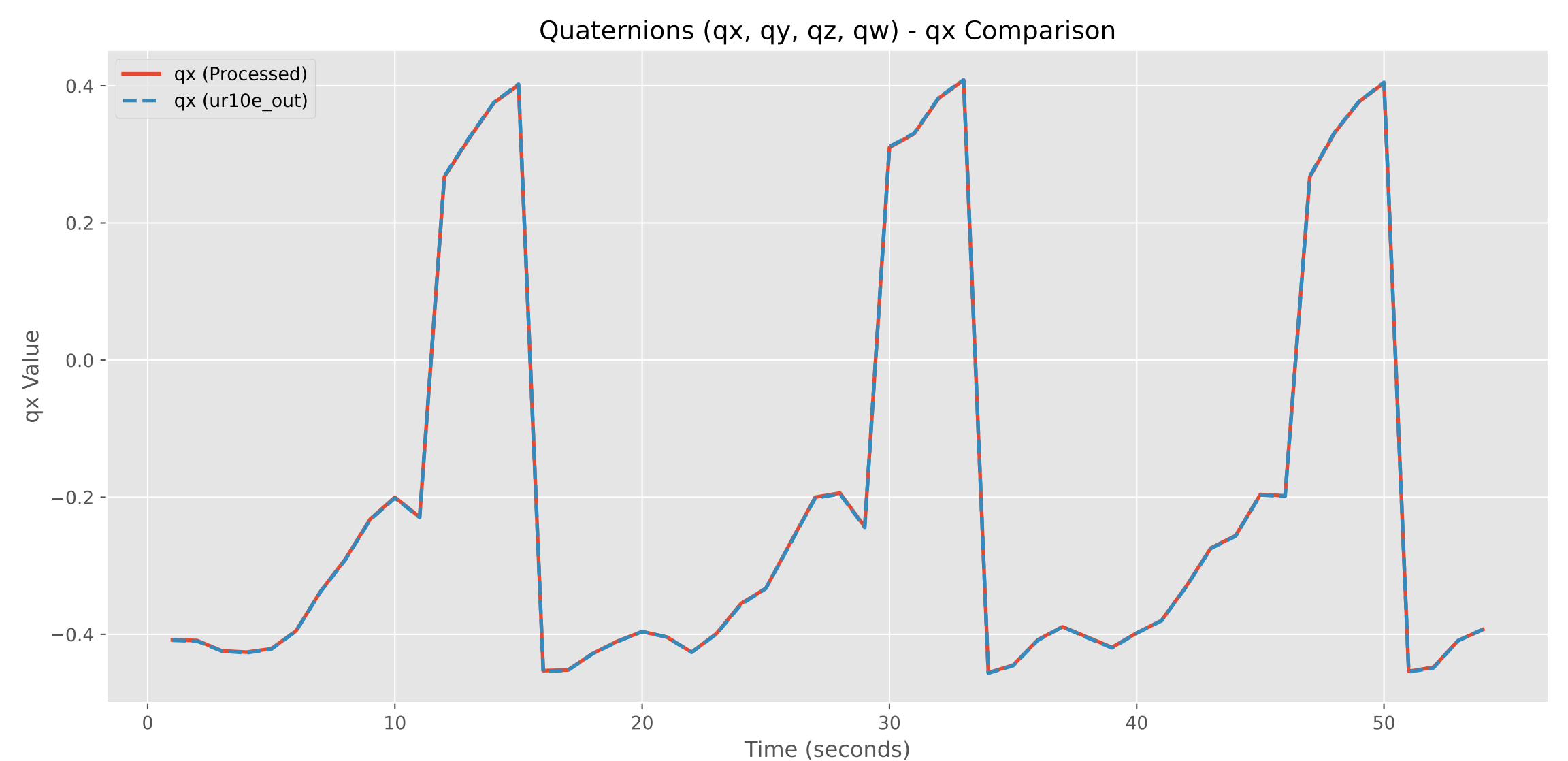

Euler Angles (roll, pitch, yaw) - roll Error
MAE: 0.0044 | Max Error: 0.0055 | RMSE: 0.0045
Error (Absolute)
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
Error (Absolute)
0
10
20
30
40
50
Time (seconds)

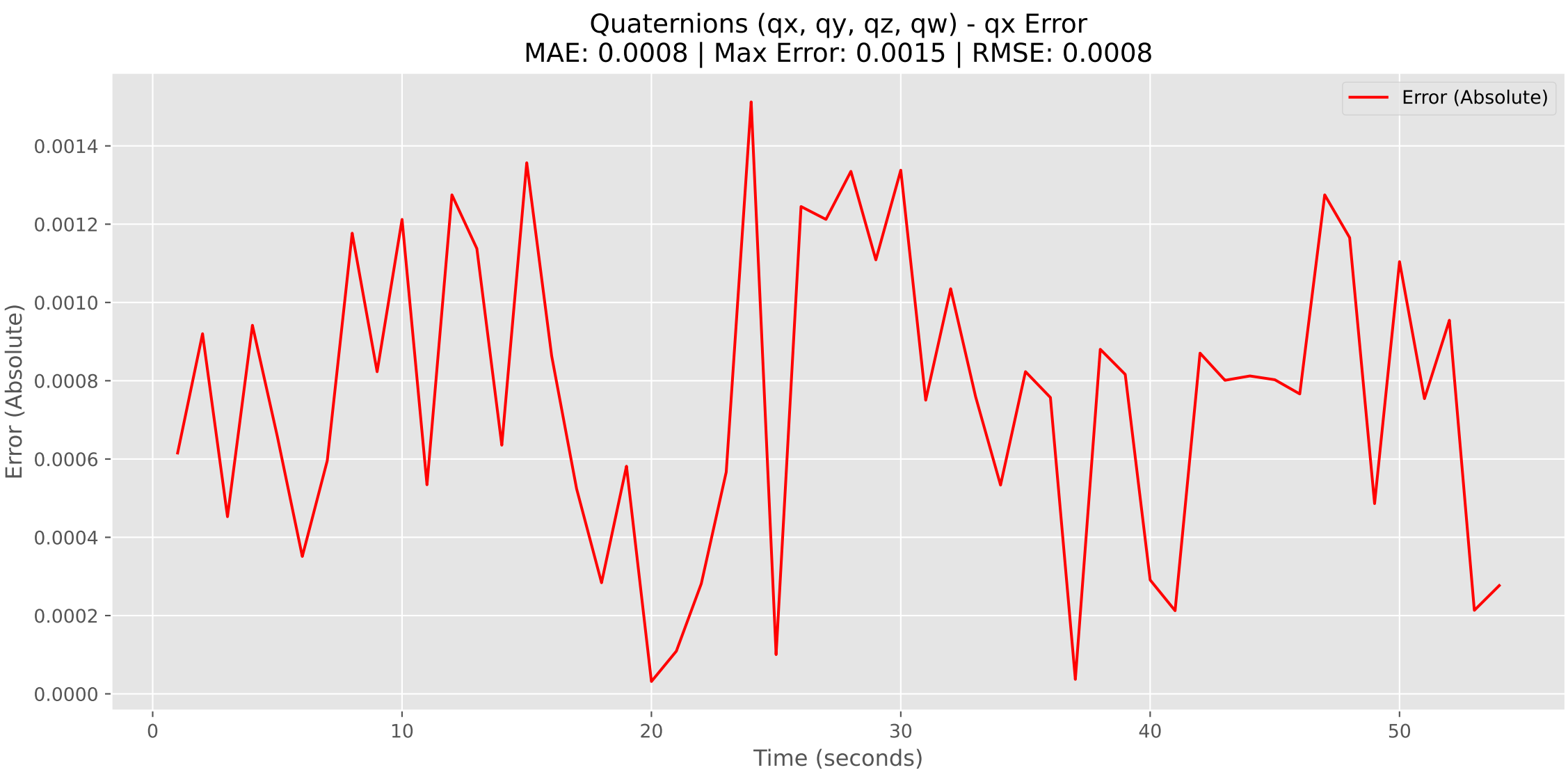

Euler Angles (roll, pitch, yaw) - pitch Comparison
pitch (Processed)
pitch (ur10e_out)
0.00
−0.05
−0.10
−0.15
−0.20
−0.25
−0.30
pitch Value
0
10
20
30
40
50
Time (seconds)

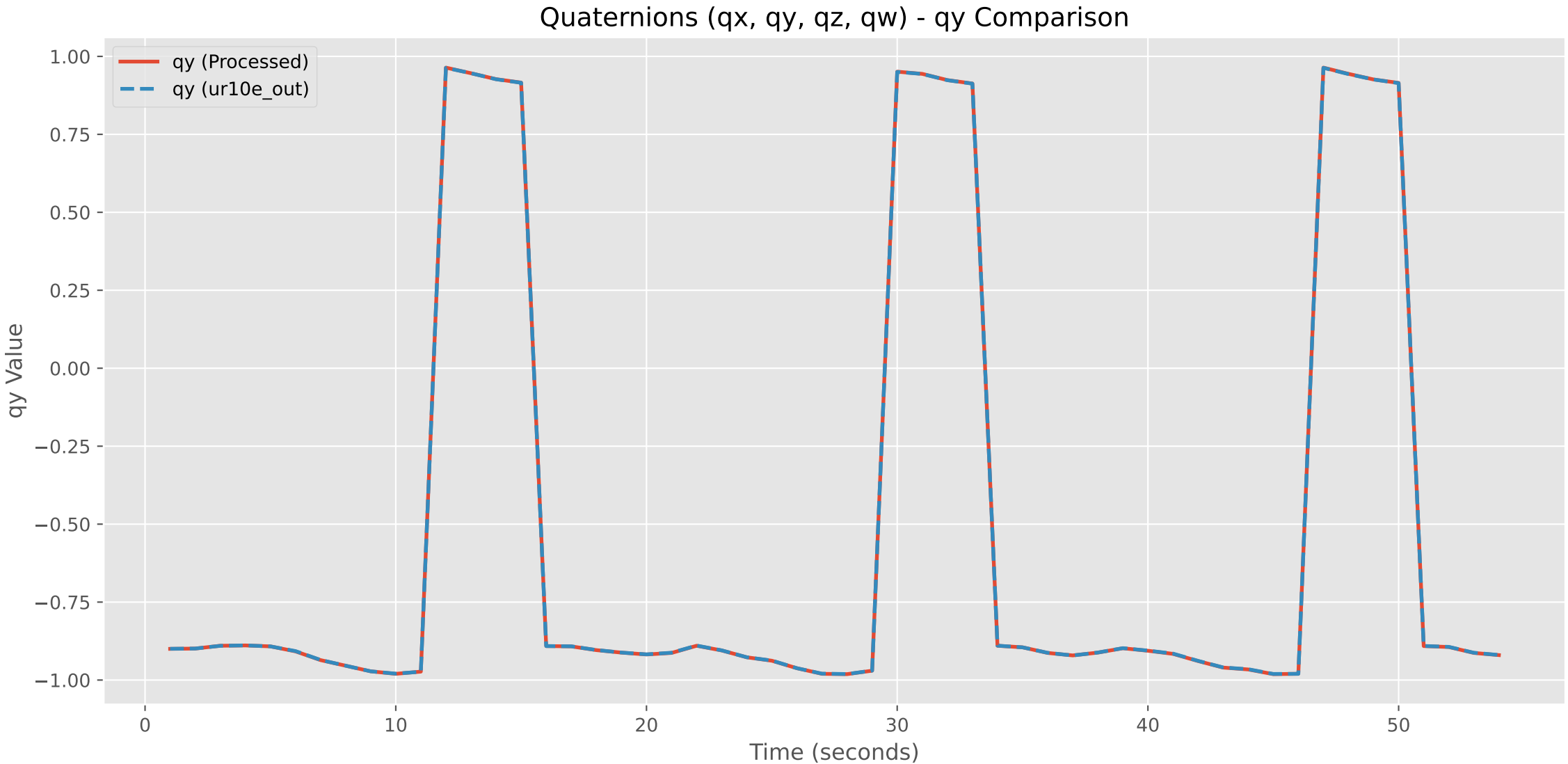

Euler Angles (roll, pitch, yaw) - pitch Error
MAE: 0.0007 | Max Error: 0.0024 | RMSE: 0.0009
Error (Absolute)
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
Error (Absolute)
0
10
20
30
40
50
Time (seconds)

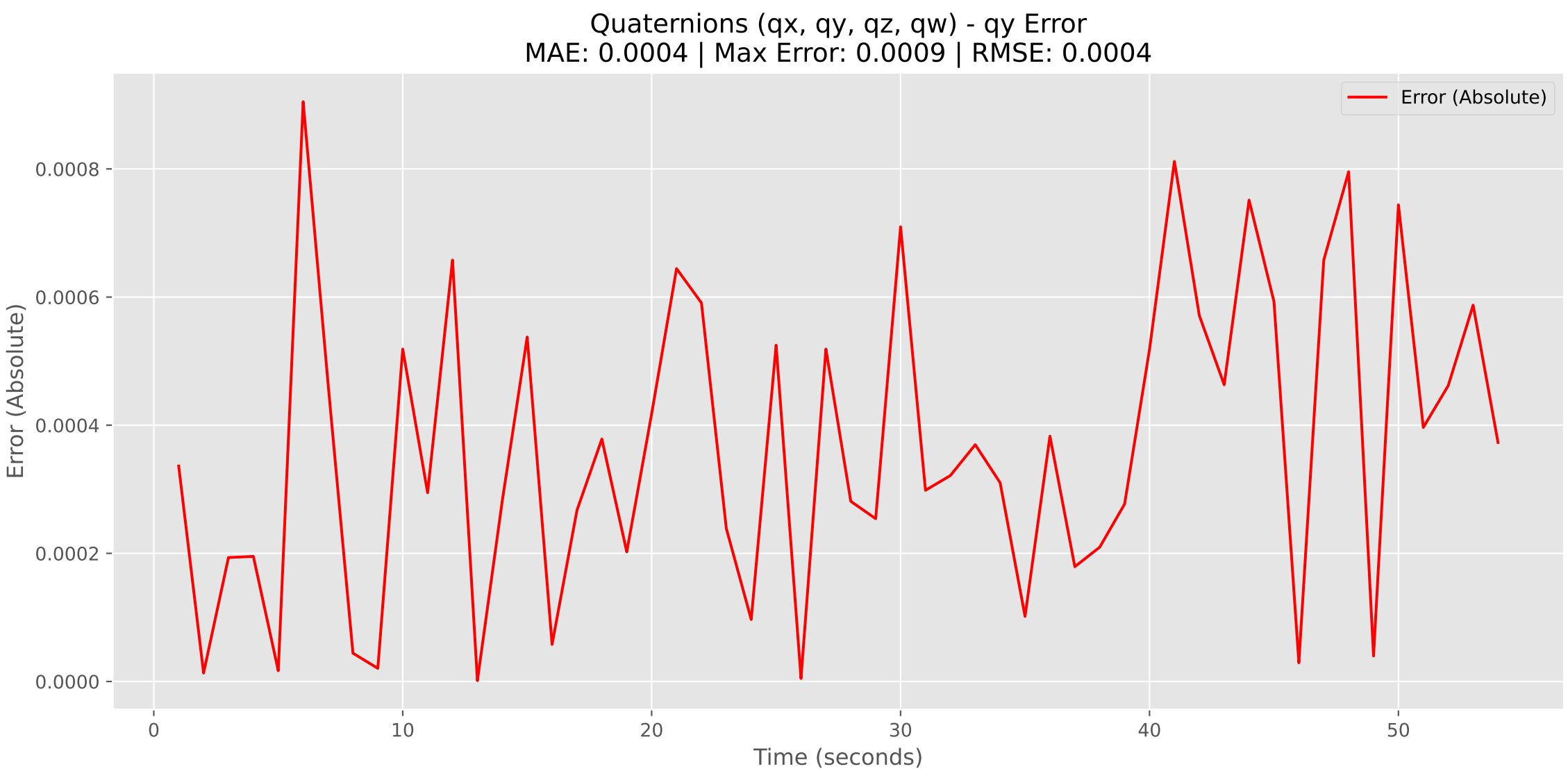

Euler Angles (roll, pitch, yaw) - yaw Comparison
yaw (Processed)
yaw (ur10e_out)
yaw Value
2.7
2.6
2.5
2.4
2.3
2.2
0
10
20
30
40
50
Time (seconds)

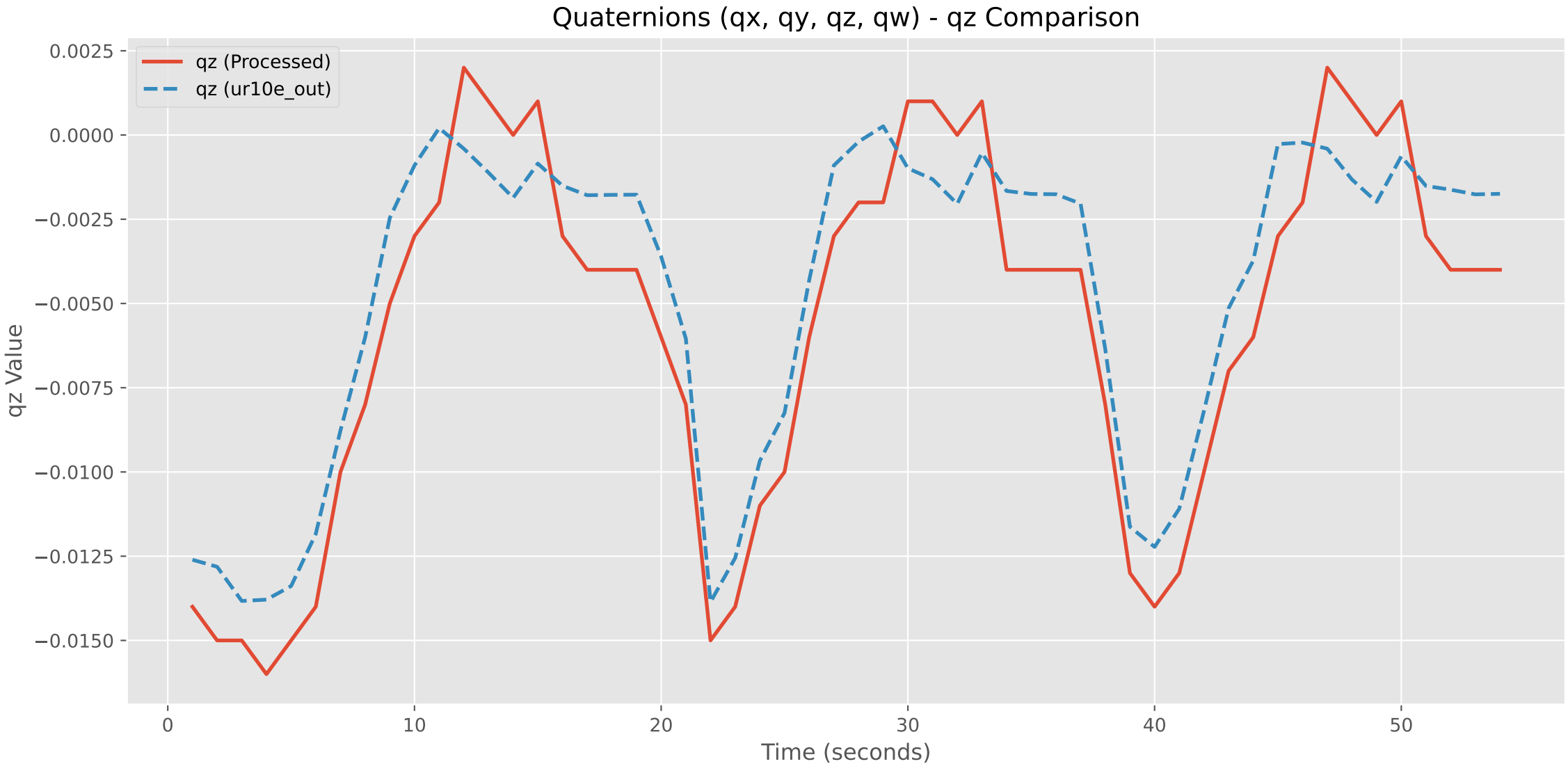

Euler Angles (roll, pitch, yaw) - yaw Error
MAE: 0.0018 | Max Error: 0.0033 | RMSE: 0.0020
Error (Absolute)
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
Error (Absolute)
0
10
20
30
40
50
Time (seconds)

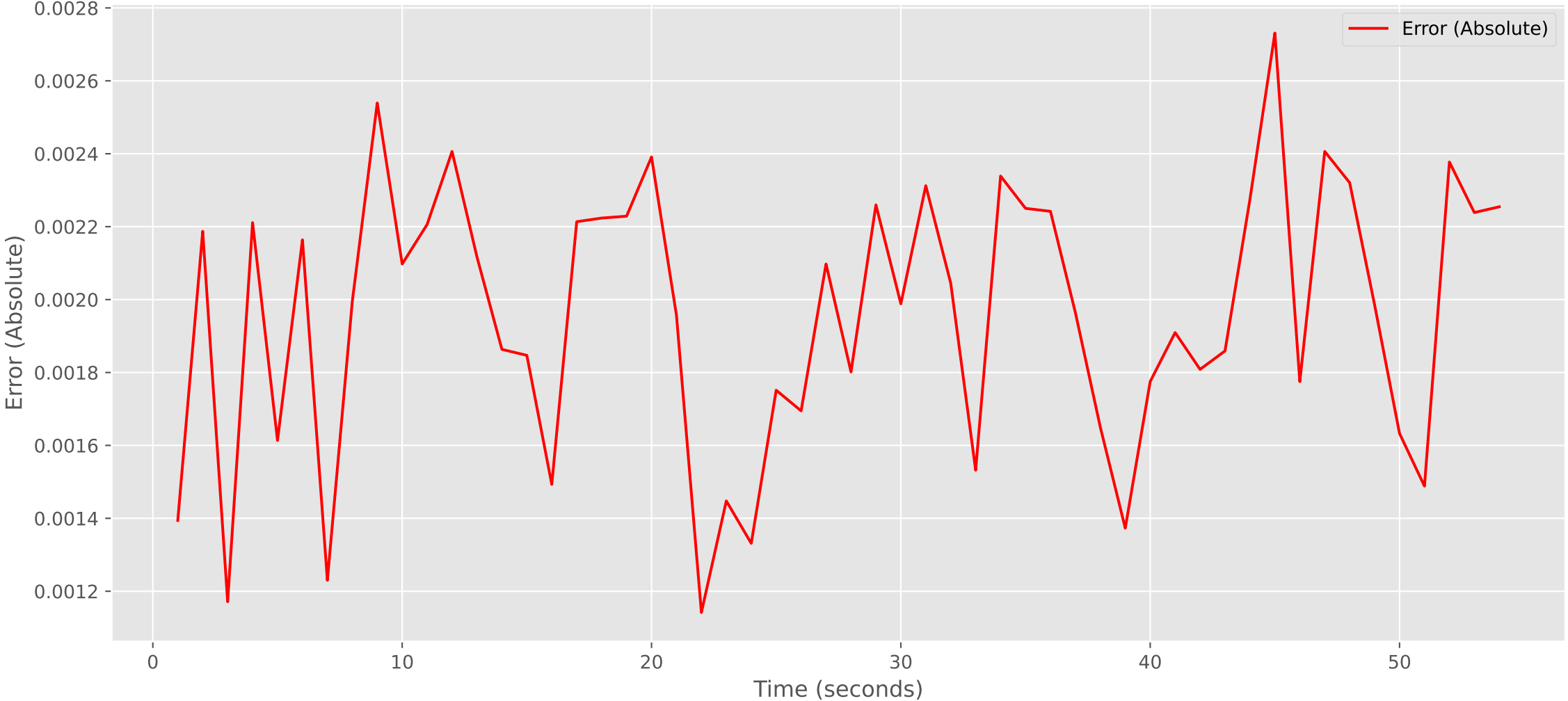

Quaternions (qx, qy, qz, qw) - qx Comparison
qx (Processed)
qx (ur10e_out)
qx Value
0.4
0.2
0.0
−0.2
−0.4
0
10
20
30
40
50
Time (seconds)

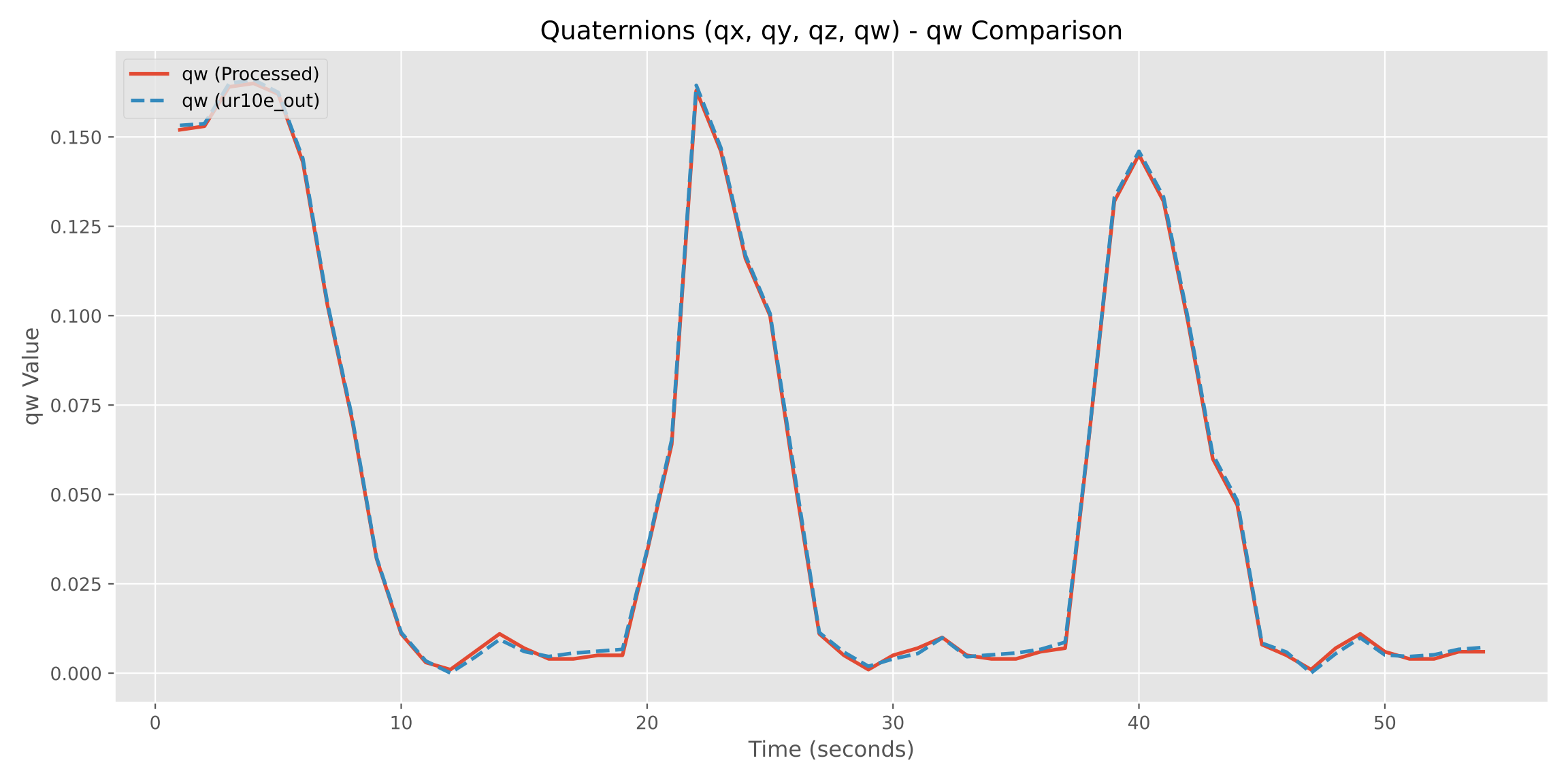

Quaternions (qx, qy, qz, qw) - qx Error
MAE: 0.0008 | Max Error: 0.0015 | RMSE: 0.0008
Error (Absolute)
0.0014
0.0012
0.0010
0.0008
0.0006
0.0004
0.0002
0.0000
Error (Absolute)
0
10
20
30
40
50
Time (seconds)

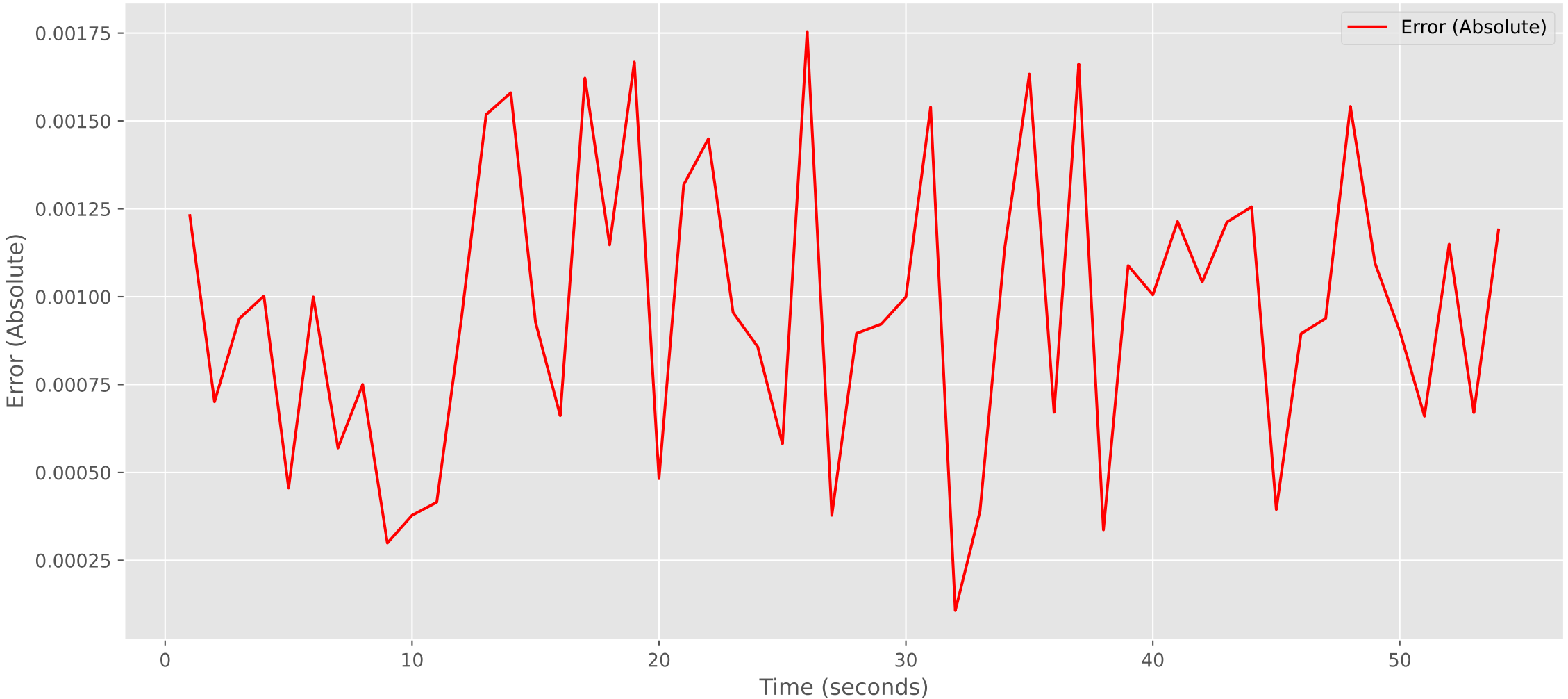

Quaternions (qx, qy, qz, qw) - qy Comparison
qy (Processed)
qy (ur10e_out)
qy Value
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50
Time (seconds)


Quaternions (qx, qy, qz, qw) - qy Error
MAE: 0.0004 | Max Error: 0.0009 | RMSE: 0.0004
Error (Absolute)
0.0008
0.0006
0.0004
0.0002
0.0000
Error (Absolute)
0
10
20
30
40
50
Time (seconds)


Quaternions (qx, qy, qz, qw) - qz Comparison
qz (Processed)
qz (ur10e_out)
qz Value
Time (seconds)
0.0025
0.0000
−0.0025
−0.0050
−0.0075
−0.0100
−0.0125
−0.0150
0
10
20
30
40
50


Quaternions (qx, qy, qz, qw) - qz Error
MAE: 0.0020 | Max Error: 0.0027 | RMSE: 0.0020
Error (Absolute)
0.0028
0.0026
0.0024
0.0022
0.0020
0.0018
0.0016
0.0014
0.0012
Error (Absolute)
0
10
20
30
40
50
Time (seconds)


Quaternions (qx, qy, qz, qw) - qw Comparison
qw (Processed)
qw (ur10e_out)
qw Value
0.150
0.125
0.100
0.075
0.050
0.025
0.000
0
10
20
30
40
50
Time (seconds)


Quaternions (qx, qy, qz, qw) - qw Error
MAE: 0.0010 | Max Error: 0.0018 | RMSE: 0.0010
Error (Absolute)
0.00175
0.00150
0.00125
0.00100
0.00075
0.00050
0.00025
Error (Absolute)
0
10
20
30
40
50
Time (seconds)