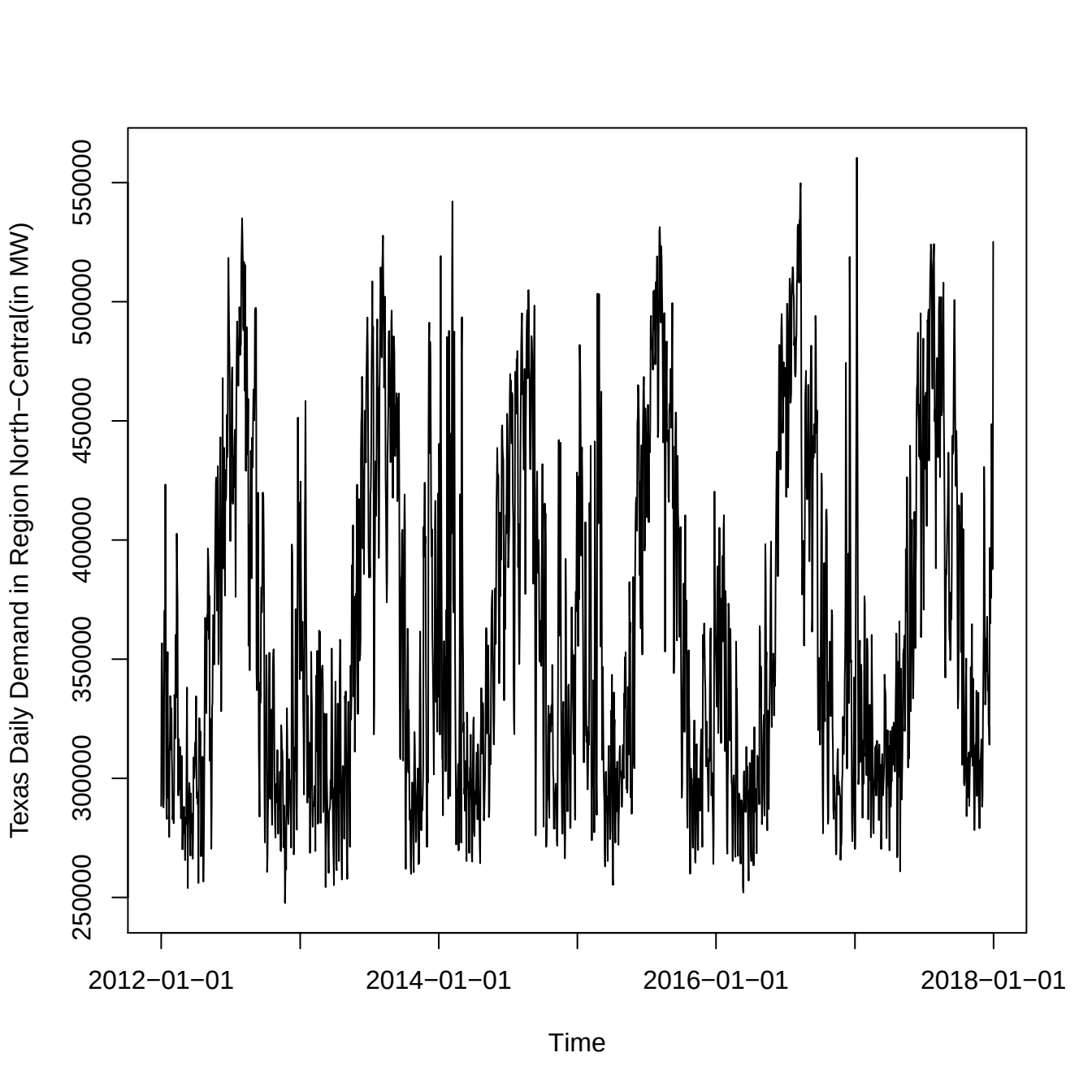
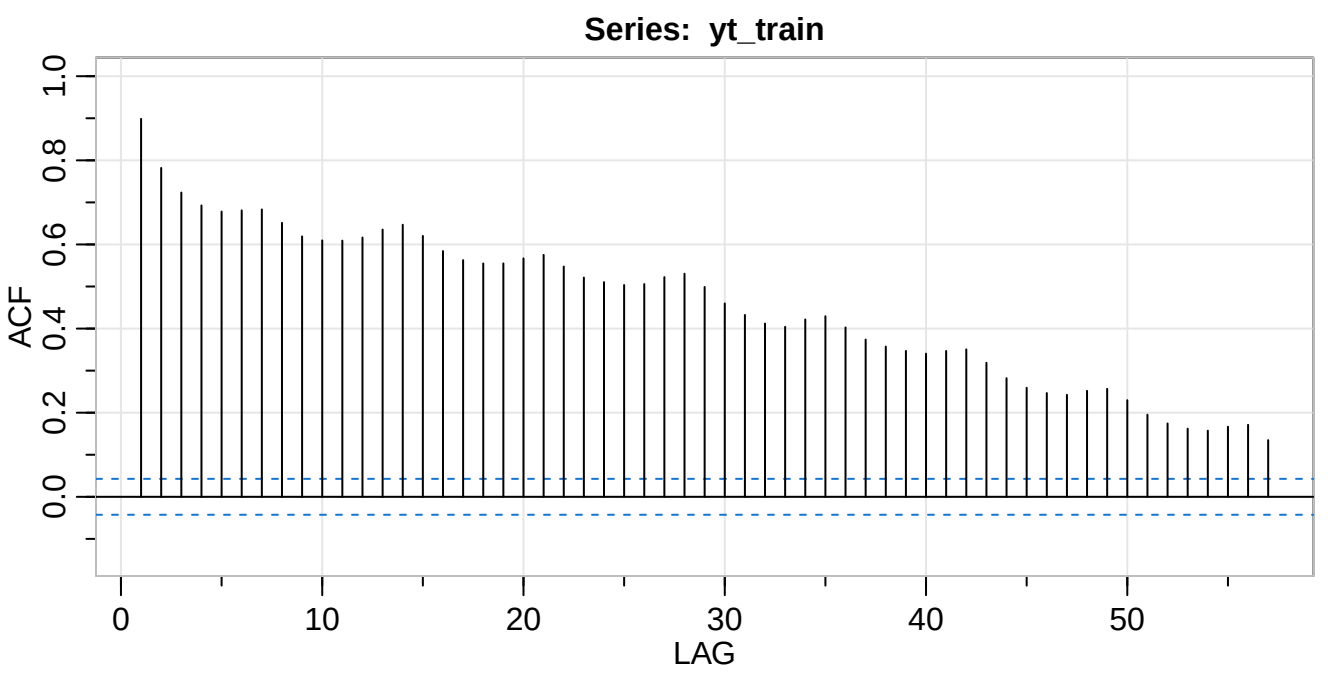
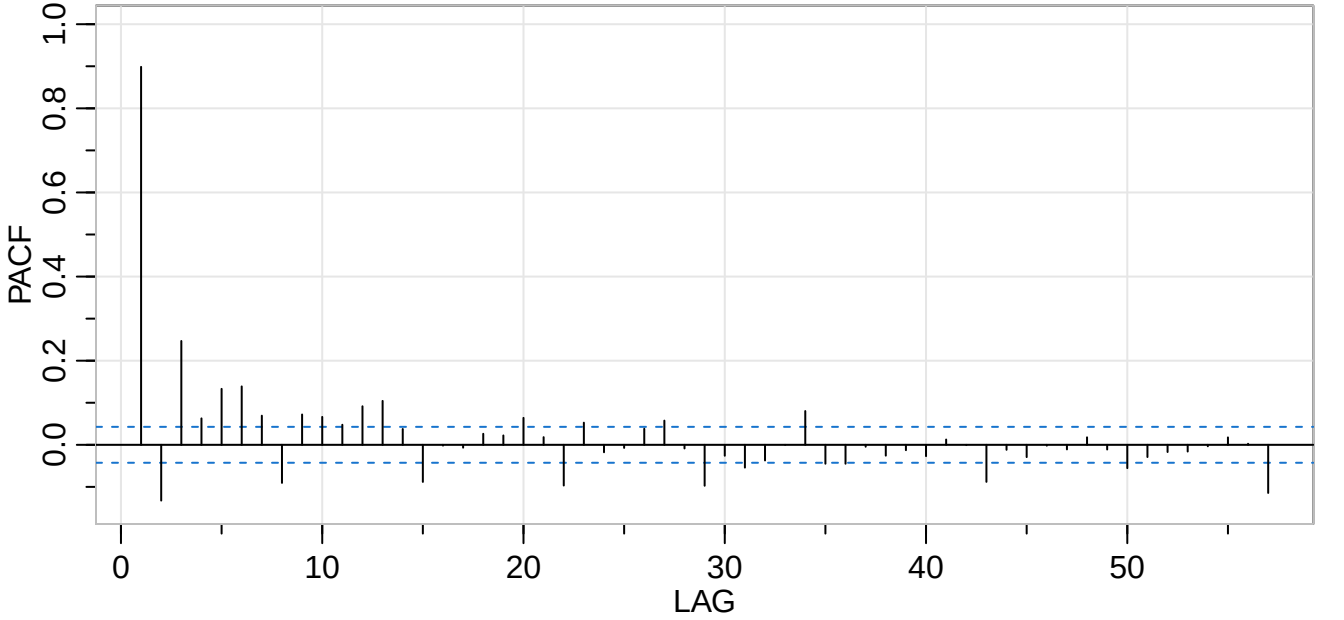
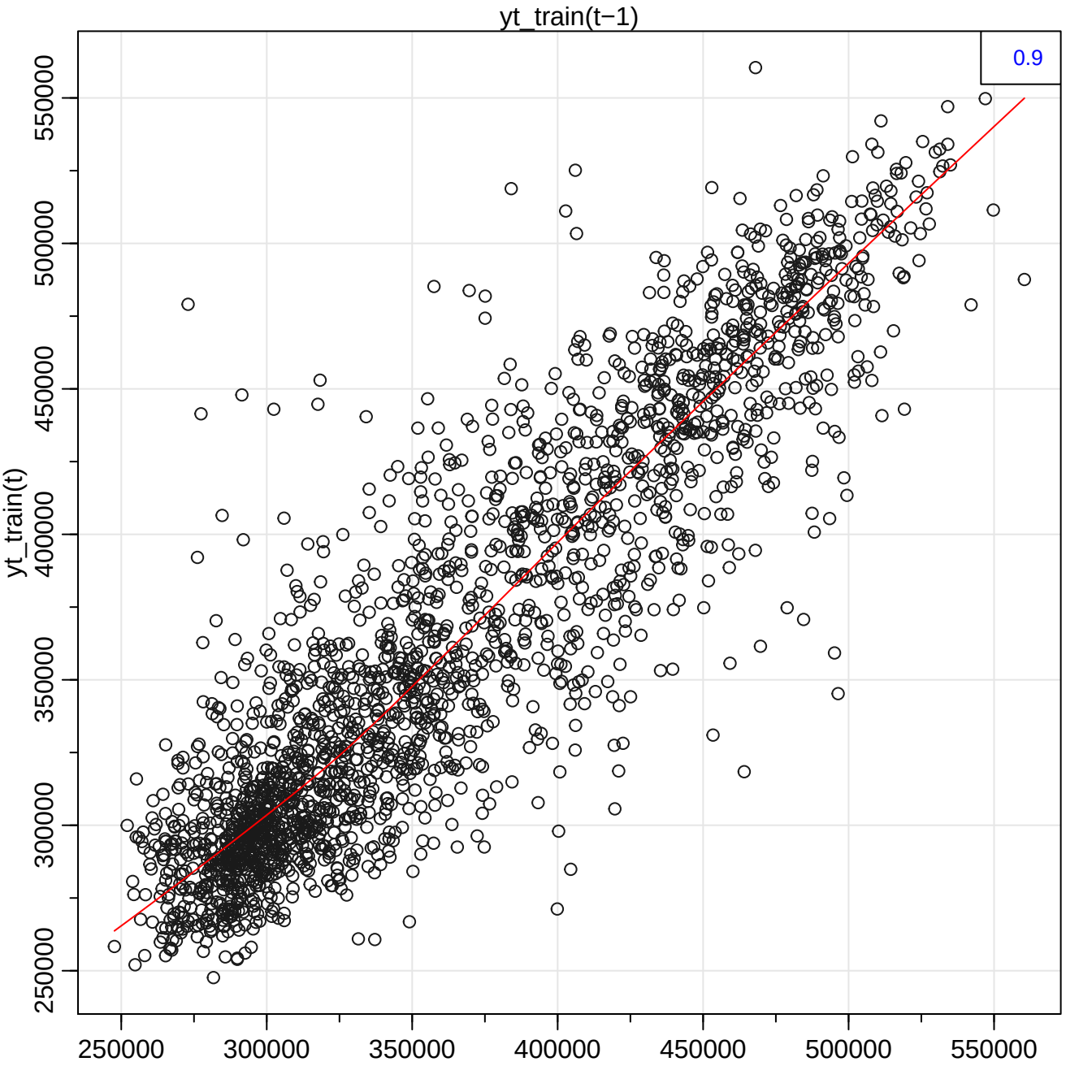
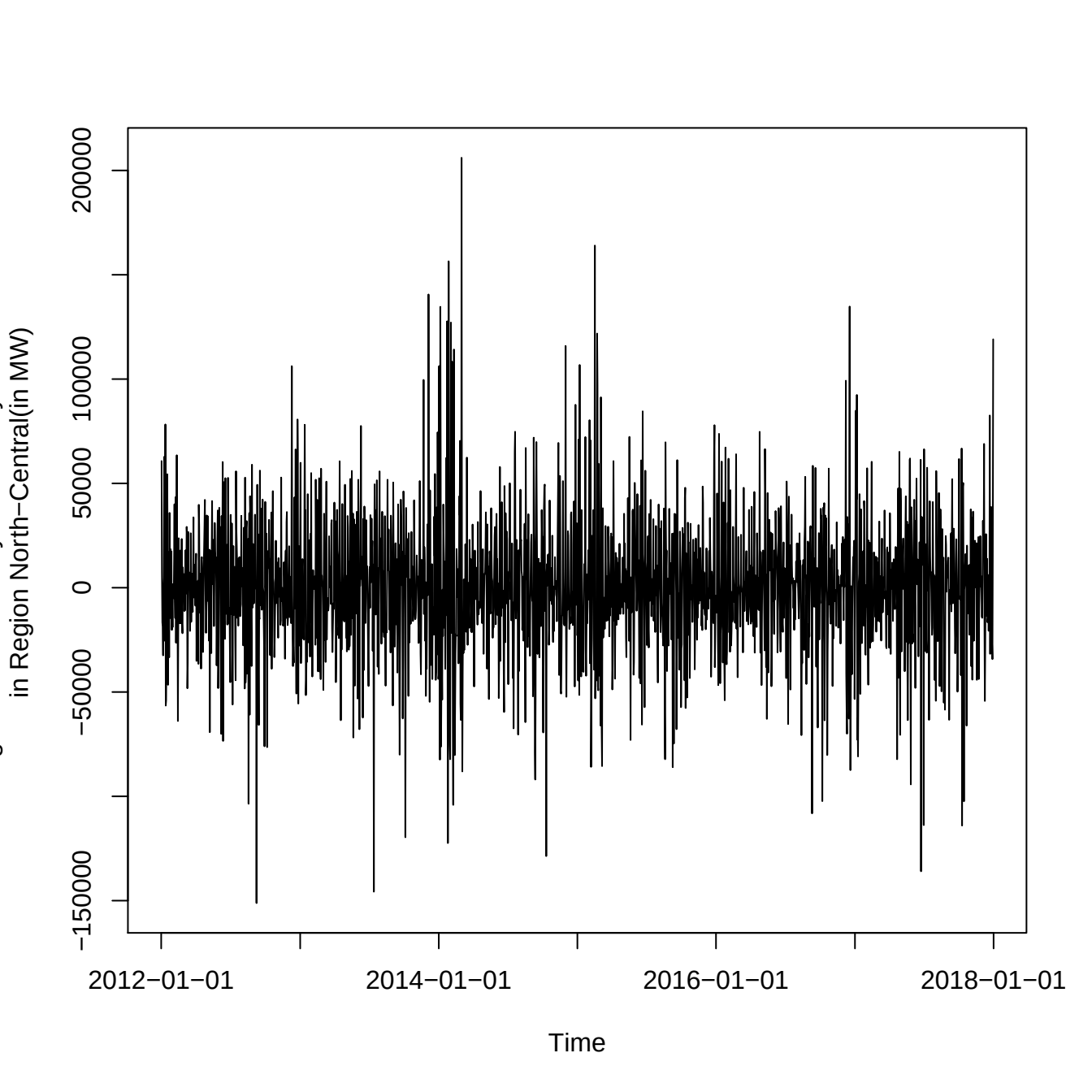
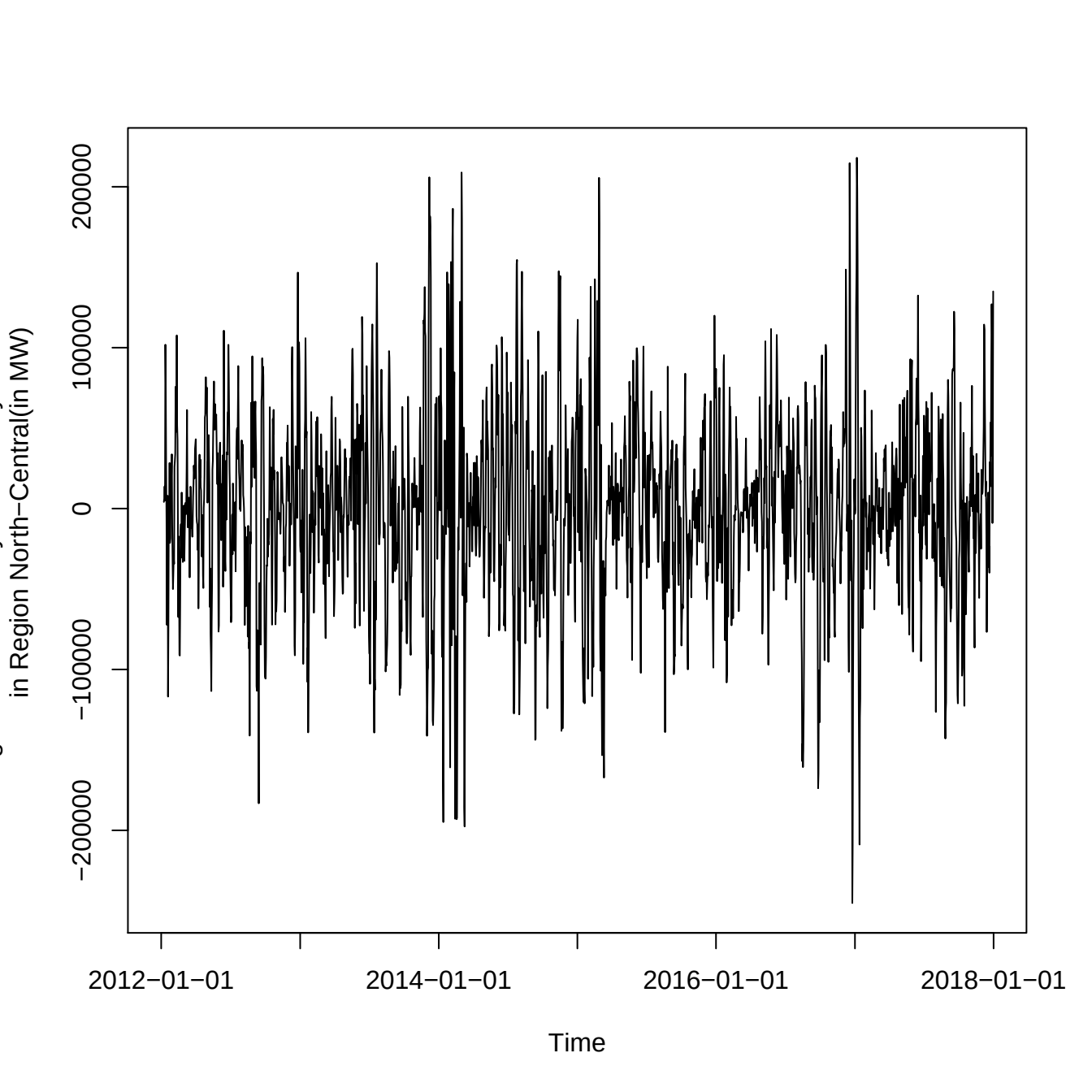

Texas Daily Demand in Region North−Central(in MW)
250000
300000
350000
400000
450000
500000
550000
2012−01−01
2014−01−01
2016−01−01
2018−01−01
Time

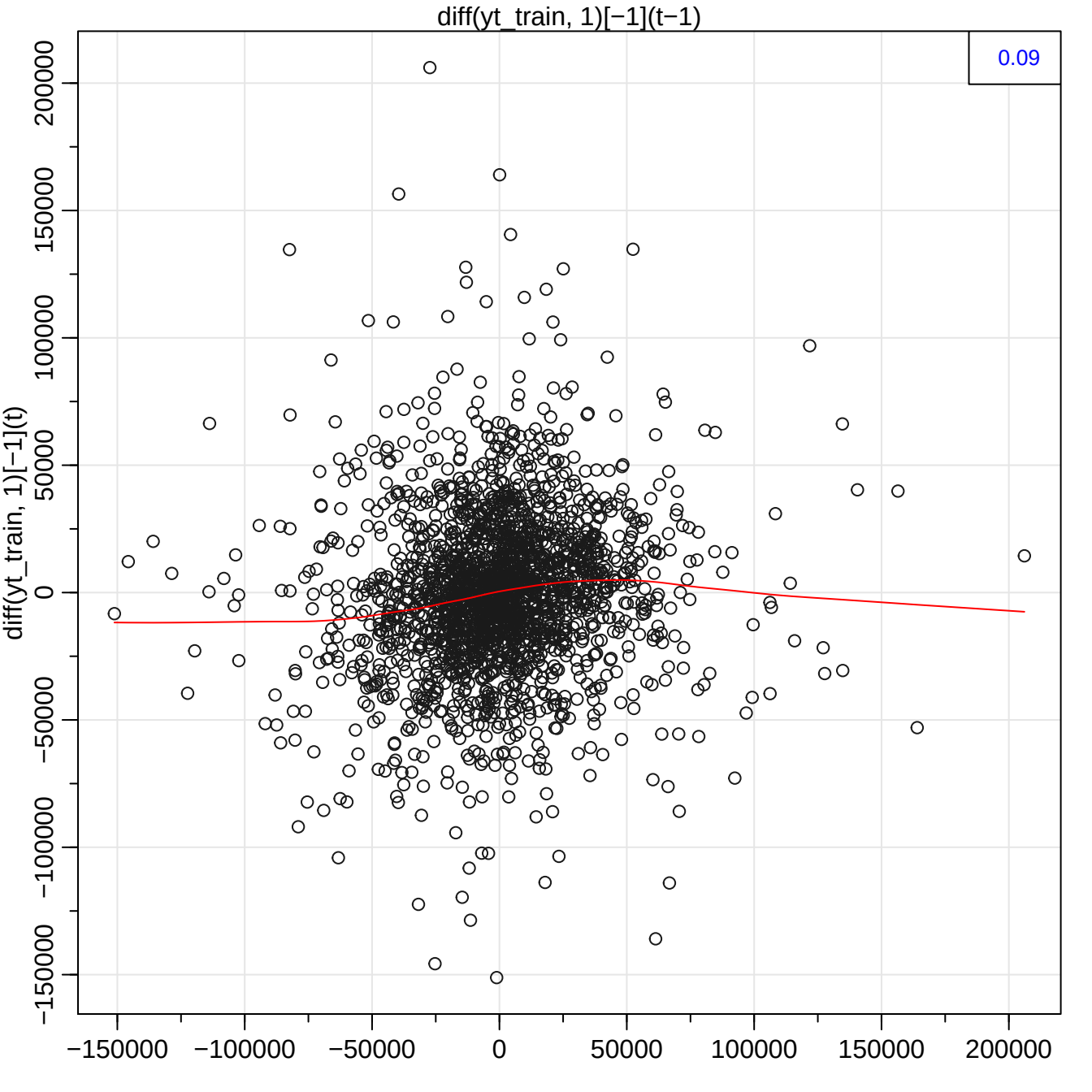

Series: yt_train
ACF
0.0
0.2
0.4
0.6
0.8
1.0
0
10
20
30
40
50
LAG

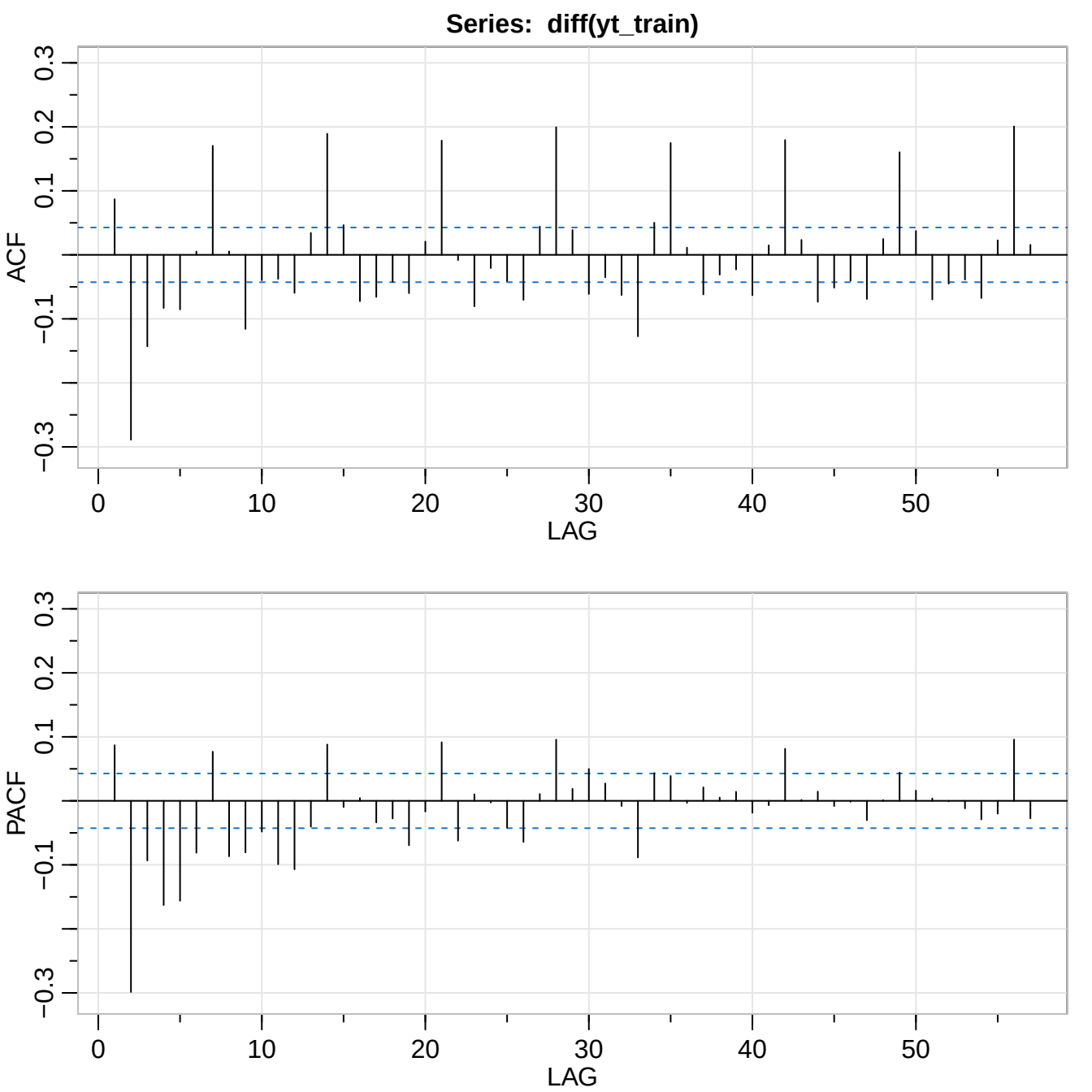

PACF
0.0
0.2
0.4
0.6
0.8
1.0
0
10
20
30
40
50
LAG

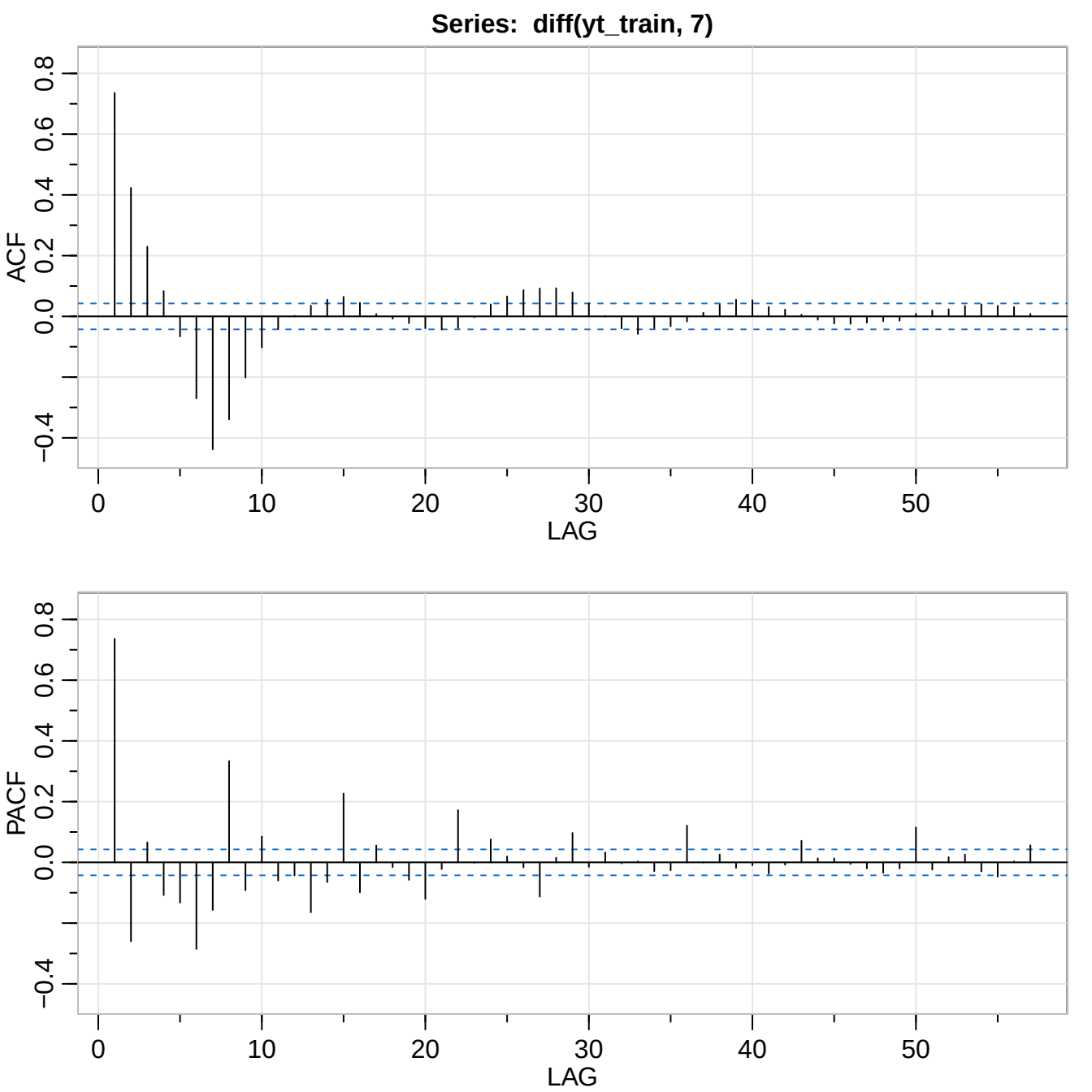

yt_train(t−1)
yt_train(t)
0.9
250000
300000
350000
400000
450000
500000
550000

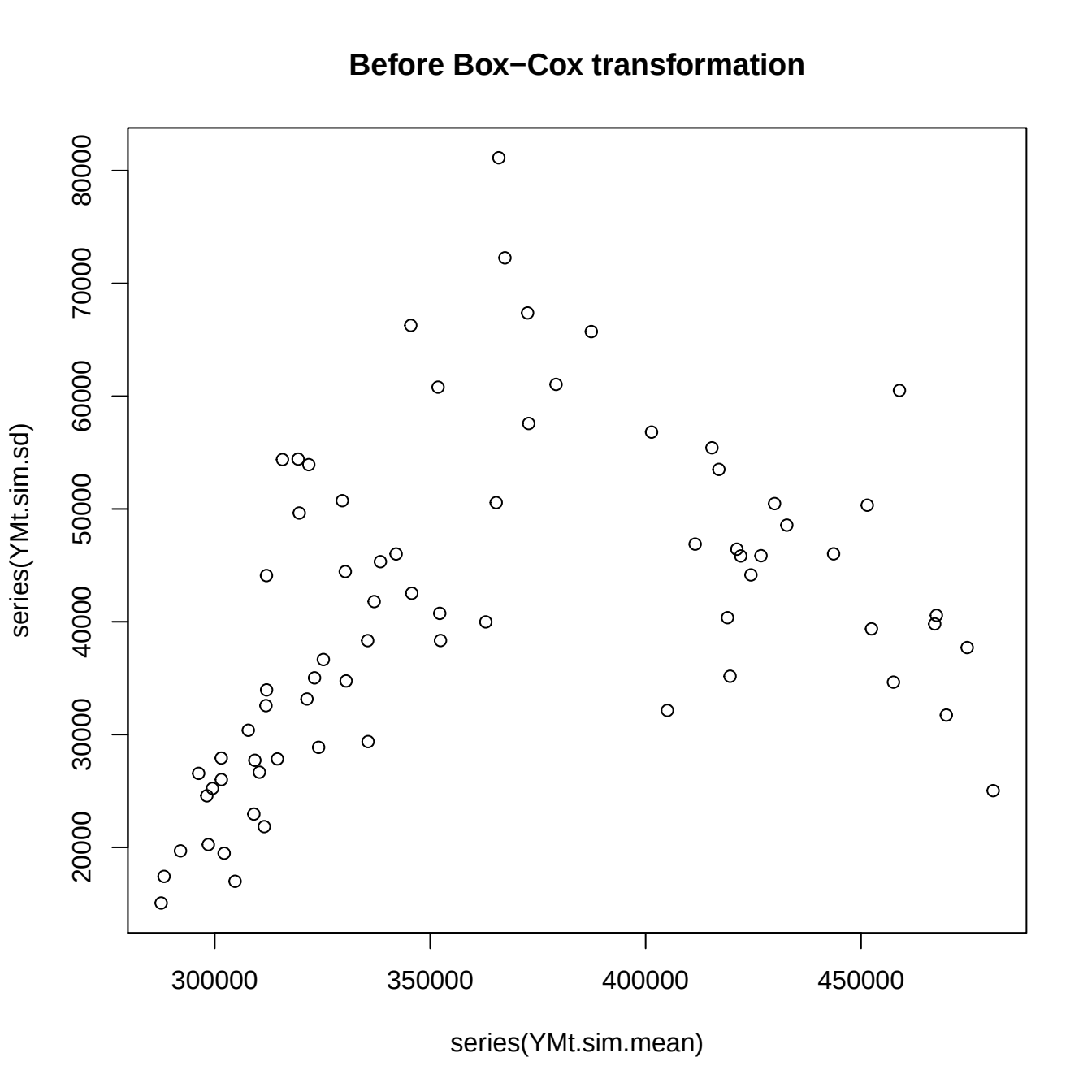

in Region North−Central(in MW)
200000
100000
50000
0
−50000
−150000
2012−01−01
2014−01−01
2016−01−01
2018−01−01
Time

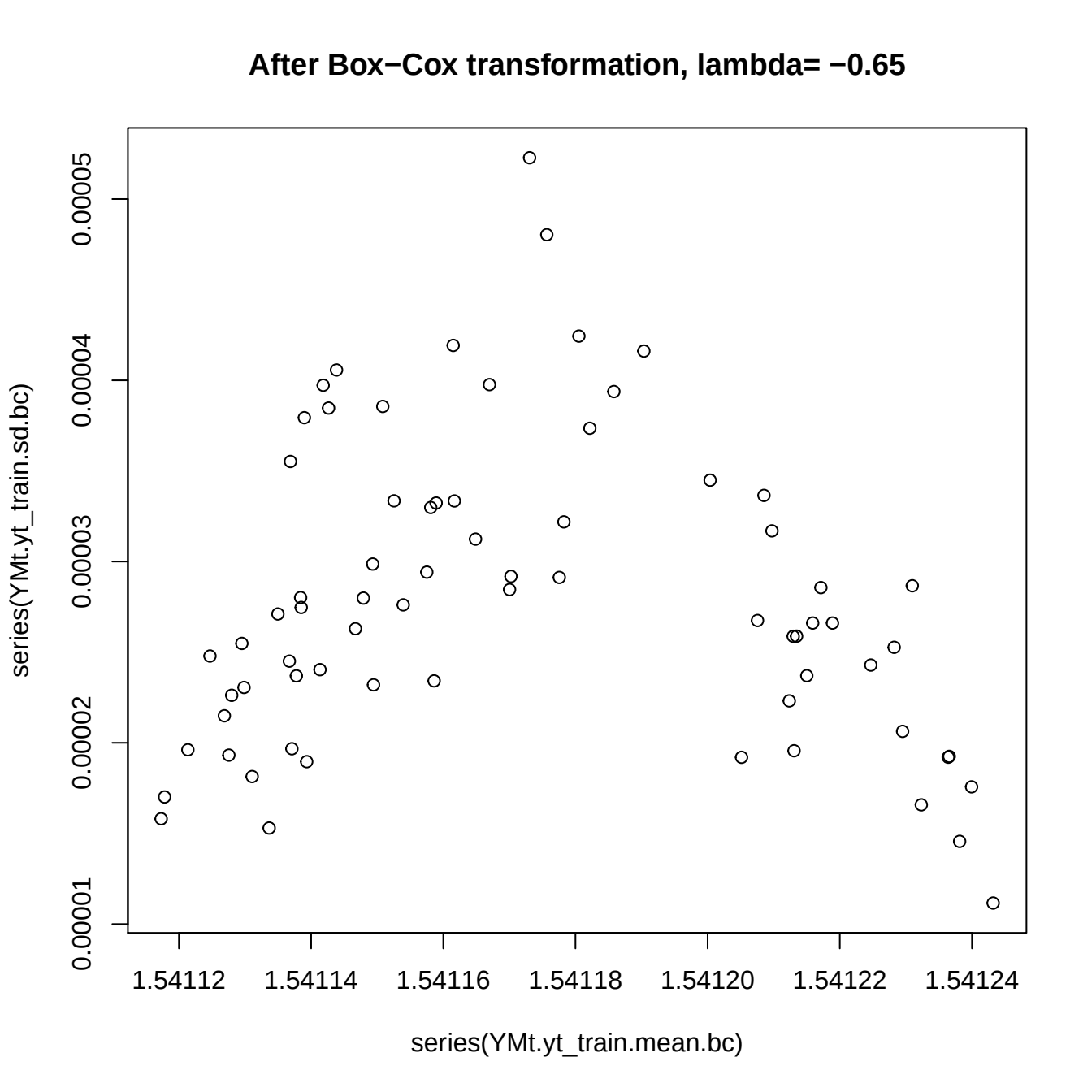

200000
100000
0
−100000
−200000
in Region North−Central(in MW)
2012−01−01
2014−01−01
2016−01−01
2018−01−01
Time

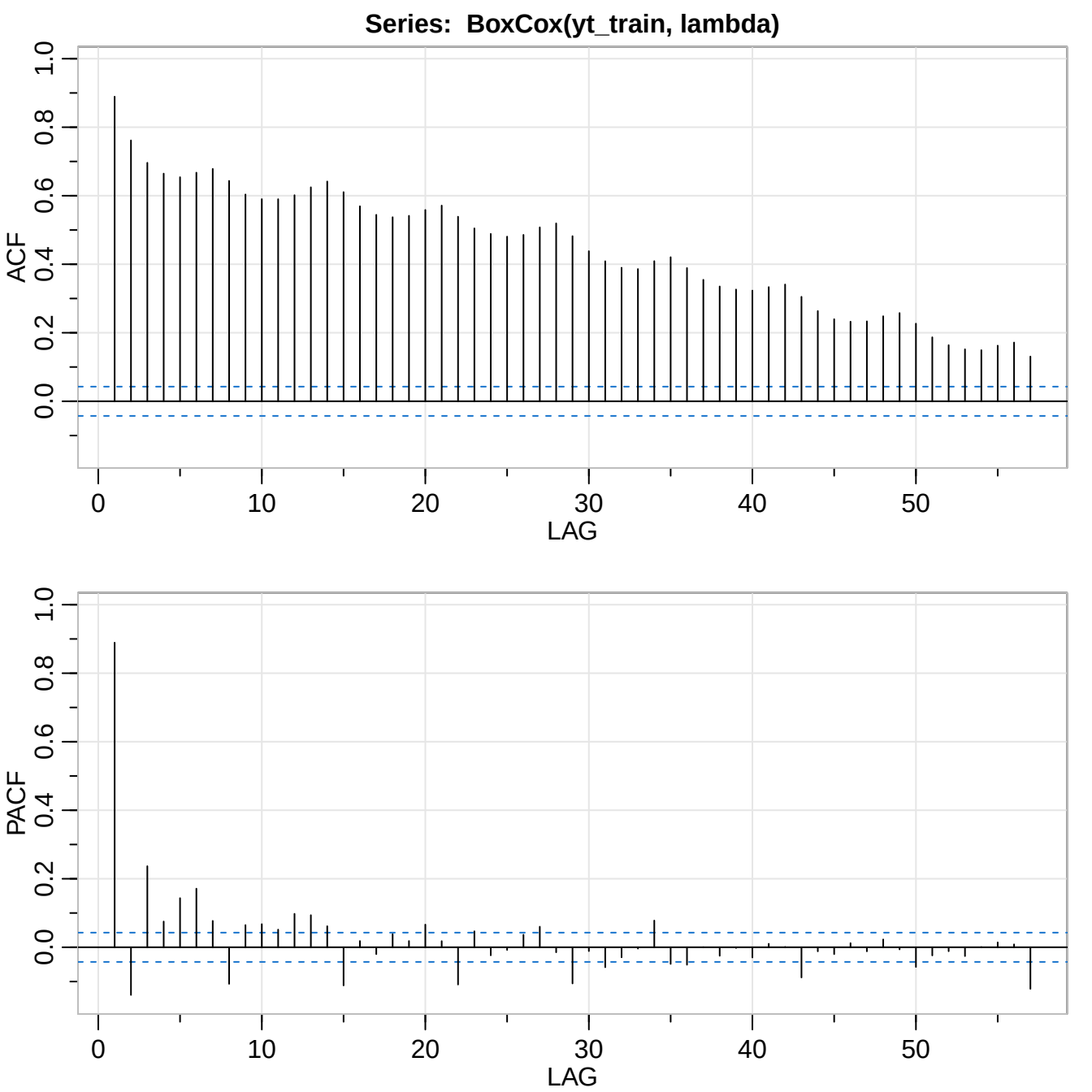

diff(yt_train, 1)[−1](t−1)
0.09
diff(yt_train, 1)[−1](t)
200000
150000
100000
50000
0
−50000
−100000
−150000
−150000
−100000
−50000
0
50000
100000
150000
200000

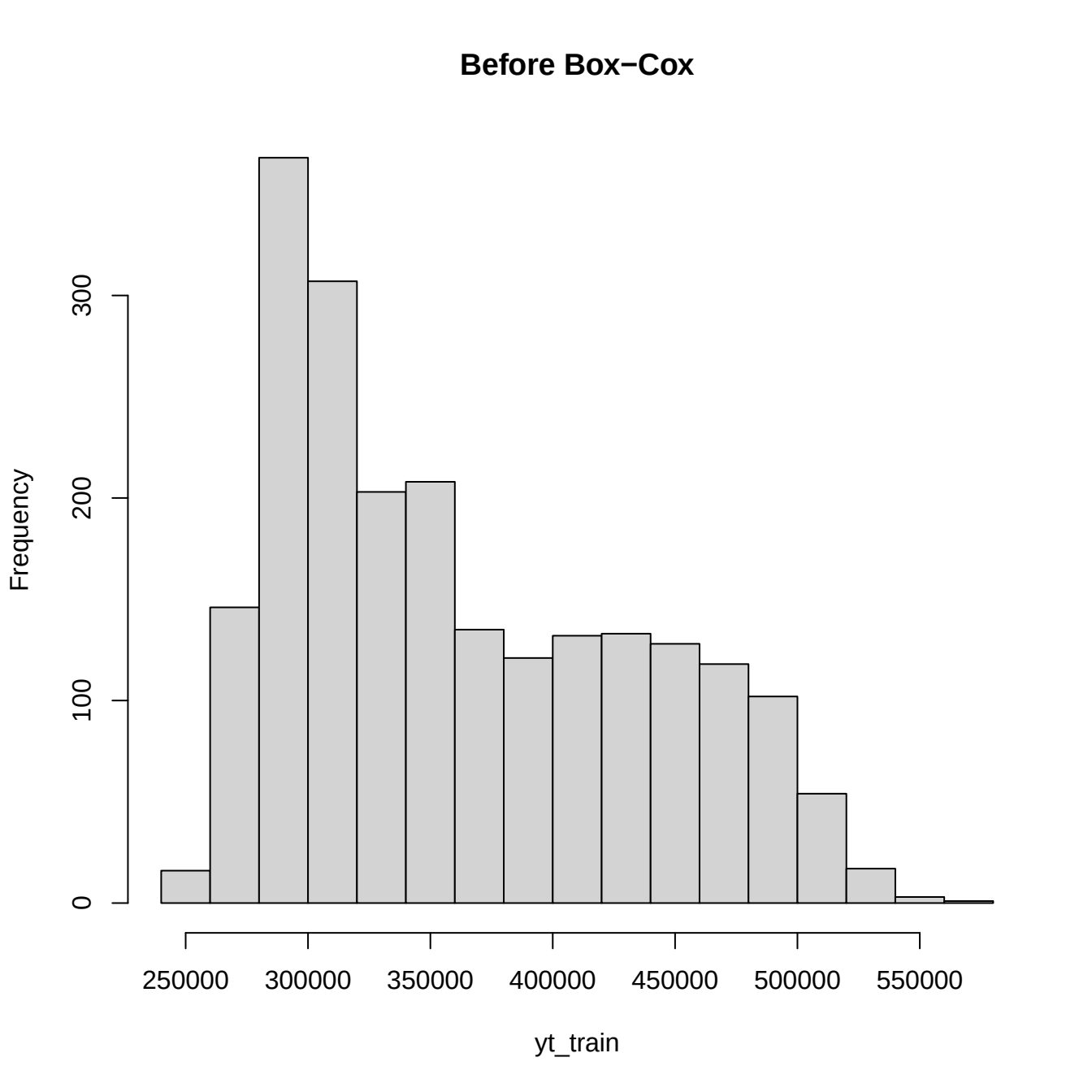

Series: diff(yt_train)
ACF
0.3
0.2
0.1
−0.1
−0.3
0
10
20
30
40
50
LAG
PACF
0.3
0.2
0.1
−0.1
−0.3
0
10
20
30
40
50
LAG

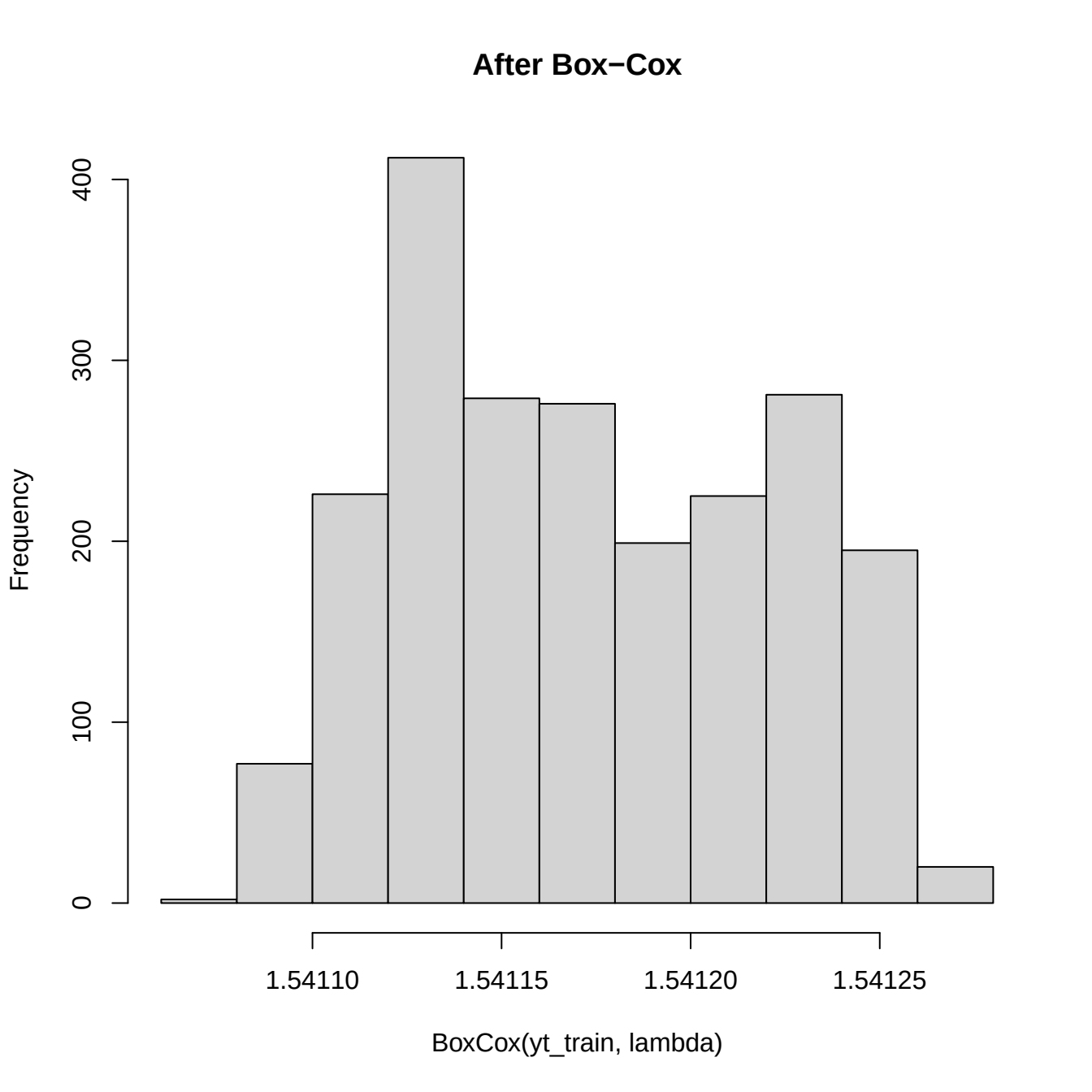

Series: diff(yt_train, 7)
ACF
0.8
0.6
0.4
0.2
0.0
−0.4
0
10
20
30
40
50
LAG
PACF
0.8
0.6
0.4
0.2
0.0
−0.4
0
10
20
30
40
50
LAG

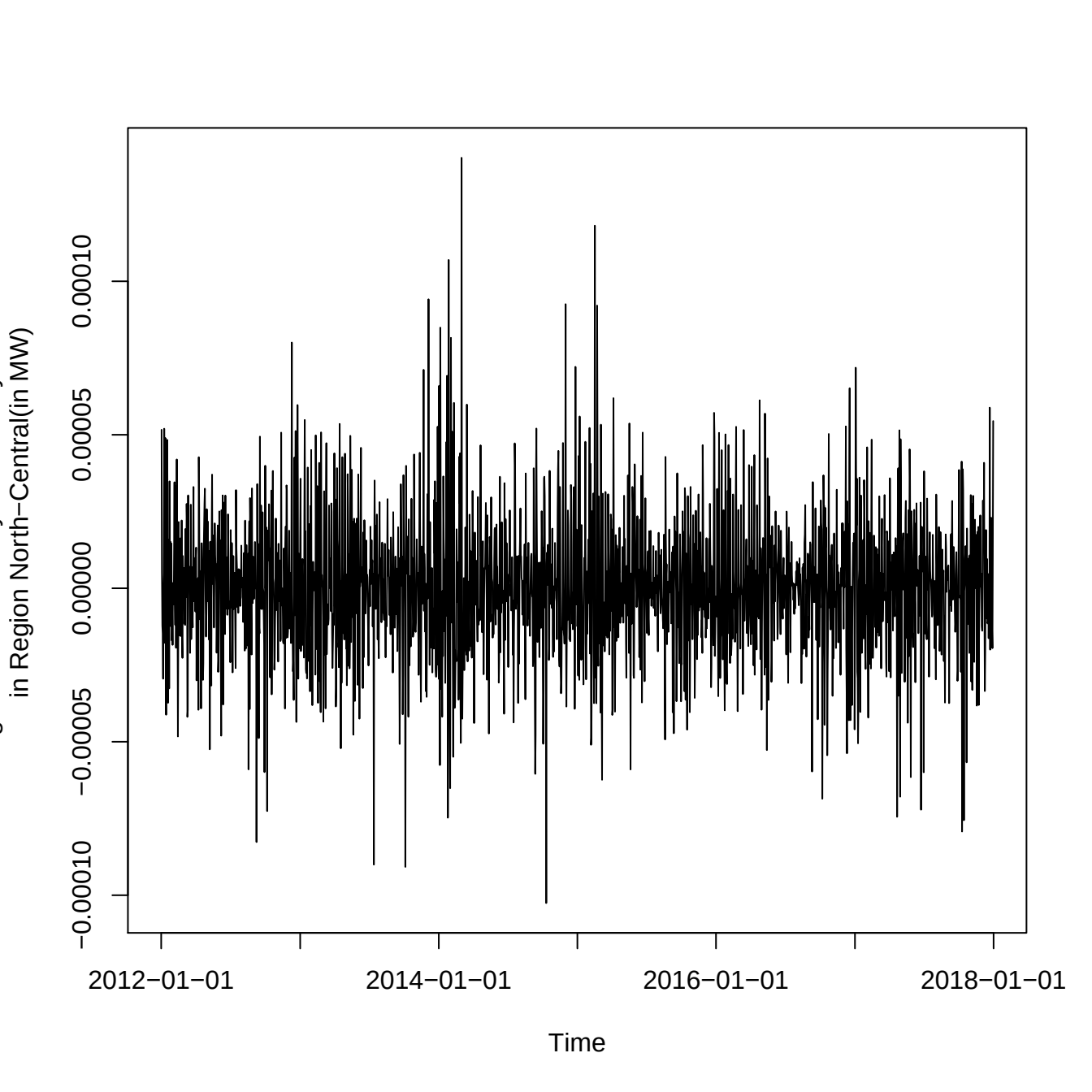

Before Box−Cox transformation
series(YMt.sim.sd)
20000
30000
40000
50000
60000
70000
80000
300000
350000
400000
450000
series(YMt.sim.mean)

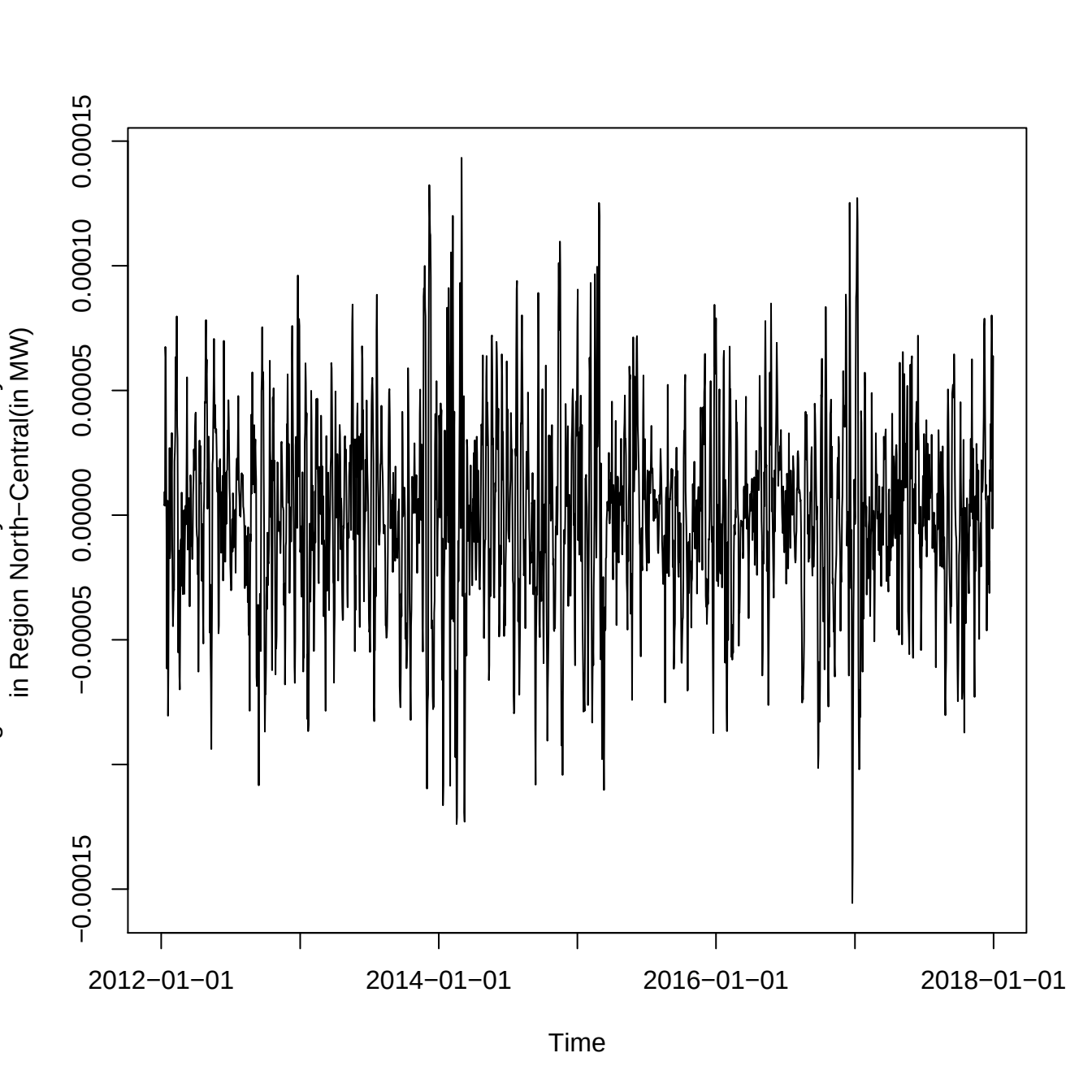

After Box−Cox transformation, lambda= −0.65
series(YMt.yt_train.sd.bc)
0.00001
0.00002
0.00003
0.00004
0.00005
1.54112
1.54114
1.54116
1.54118
1.54120
1.54122
1.54124
series(YMt.yt_train.mean.bc)

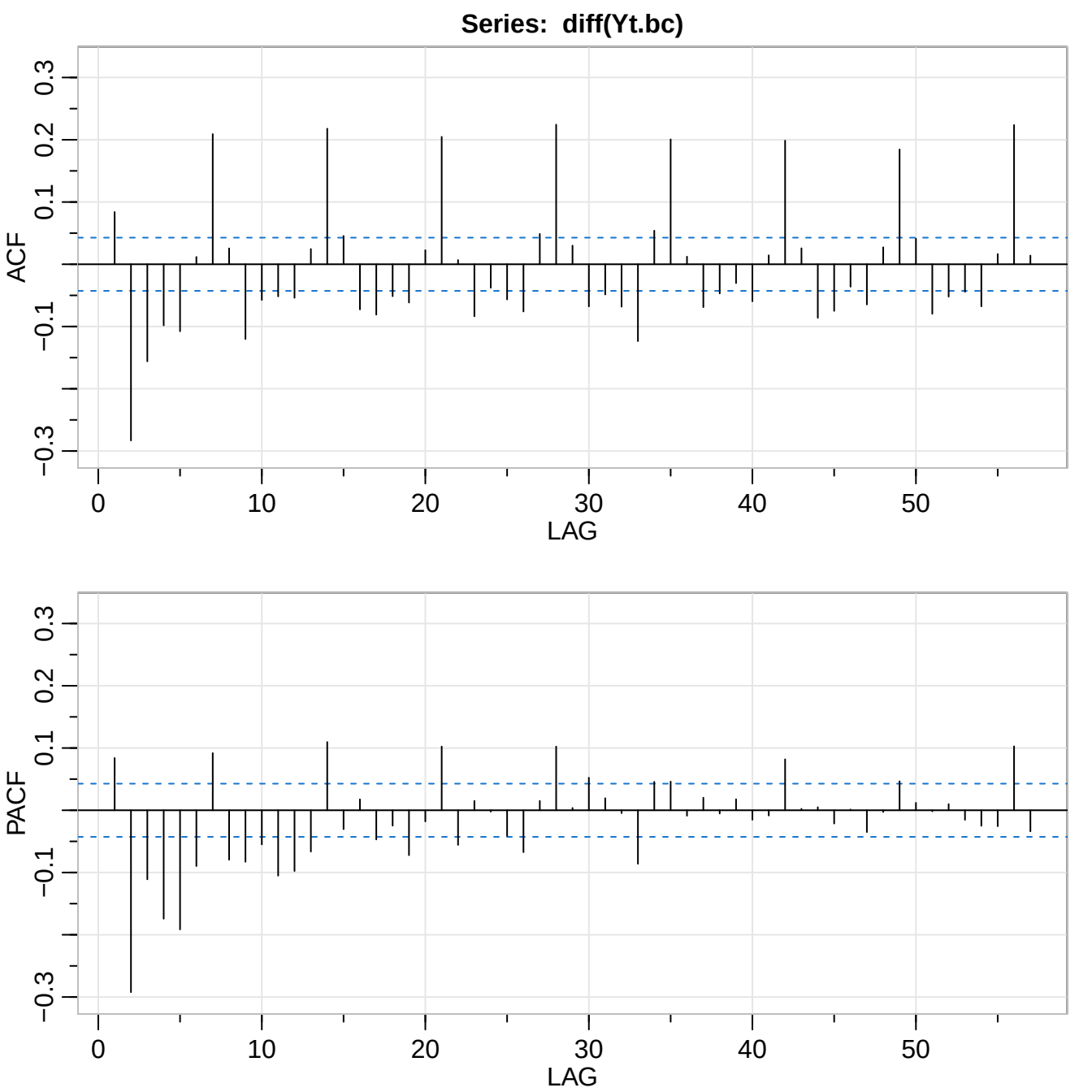

Series: BoxCox(yt_train, lambda)
ACF
1.0
0.8
0.6
0.4
0.2
0.0
0
10
20
30
40
50
LAG
PACF
1.0
0.8
0.6
0.4
0.2
0.0
0
10
20
30
40
50
LAG

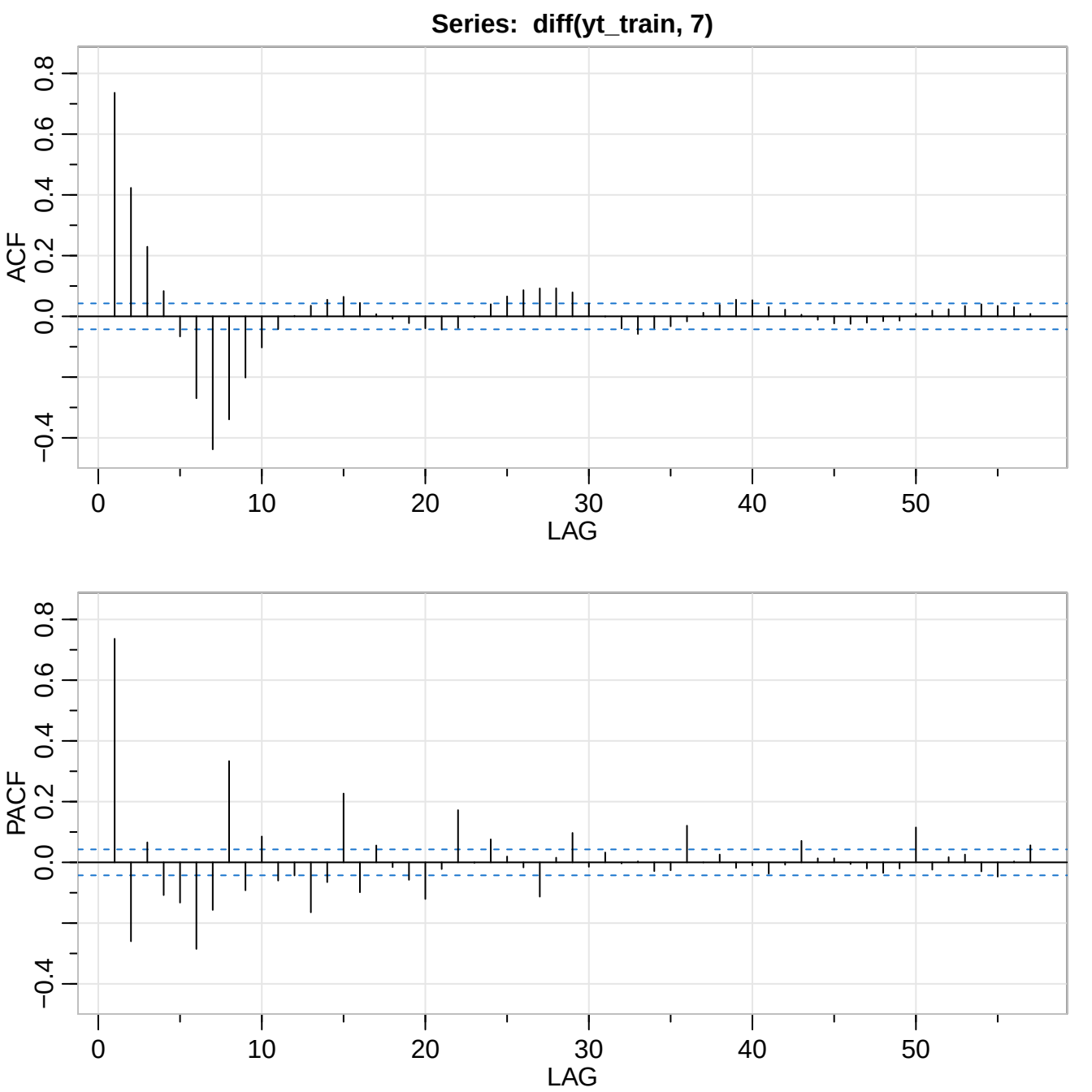

Before Box−Cox
Frequency
0
100
200
300
250000
300000
350000
400000
450000
500000
550000
yt_train

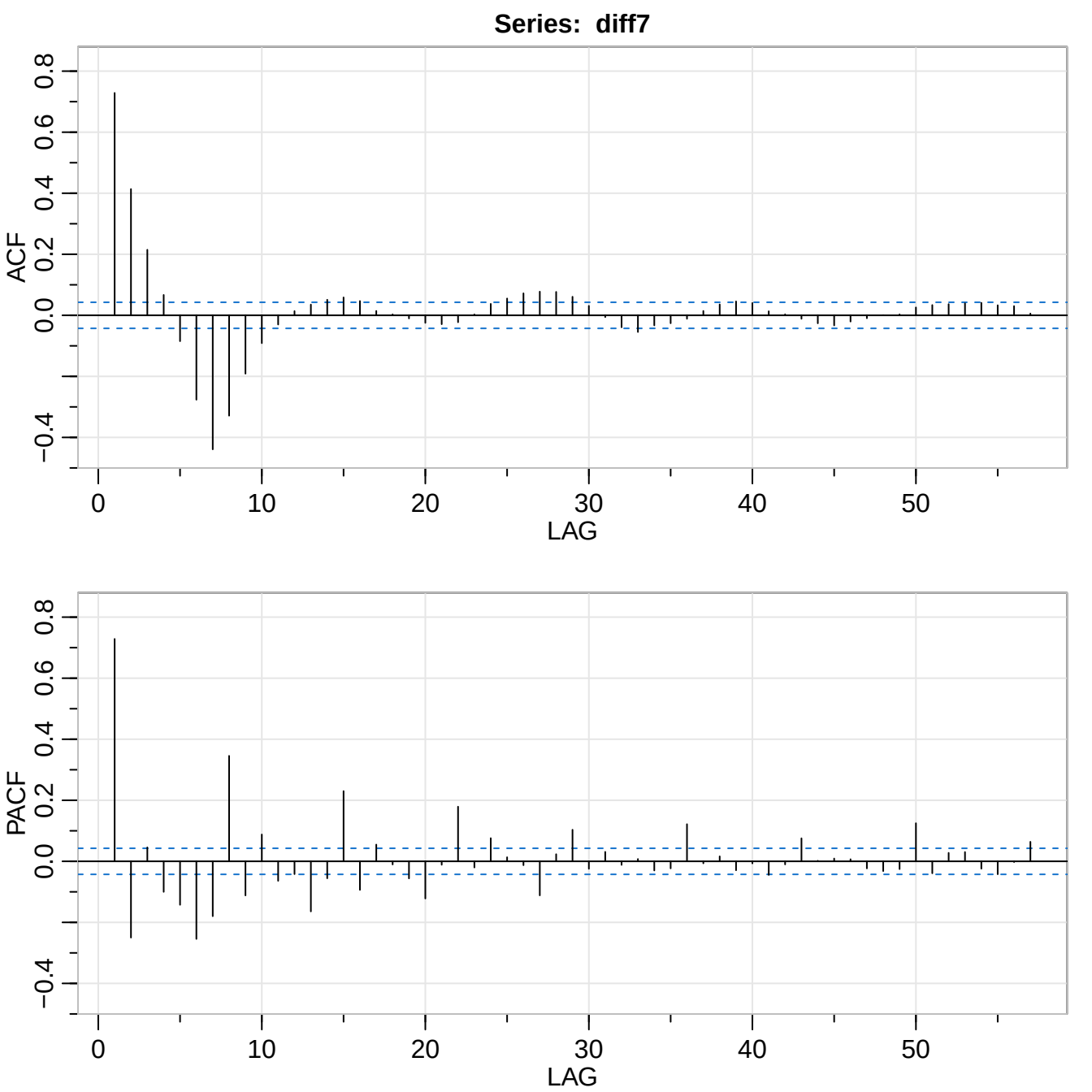

After Box−Cox
Frequency
0
100
200
300
400
1.54110
1.54115
1.54120
1.54125
BoxCox(yt_train, lambda)

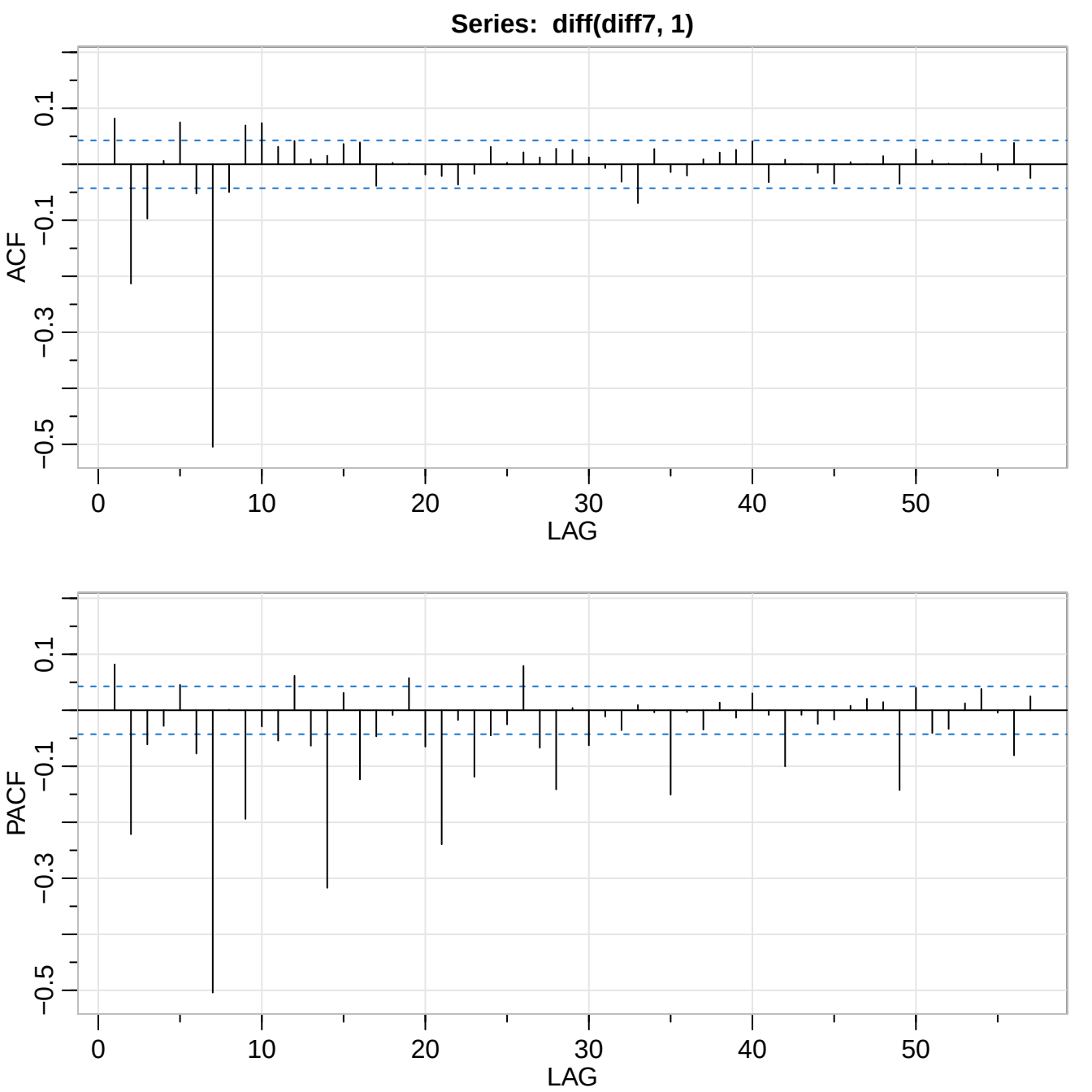

in Region North−Central(in MW)
0.00010
0.00005
0.00000
−0.00005
−0.00010
2012−01−01
2014−01−01
2016−01−01
2018−01−01
Time

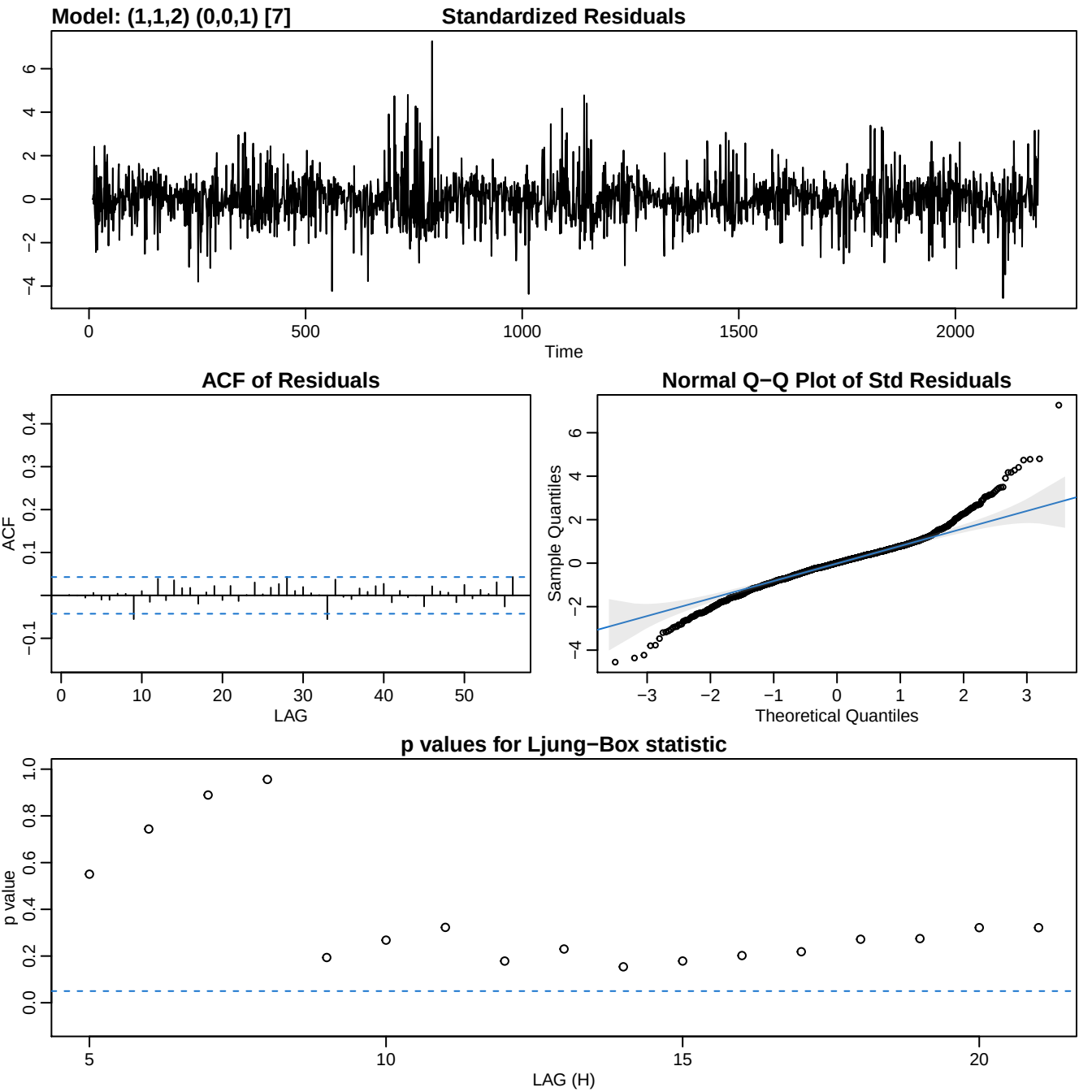

in Region North−Central(in MW)
0.00015
0.00010
0.00005
0.00000
−0.00005
−0.00015
2012−01−01
2014−01−01
2016−01−01
2018−01−01
Time

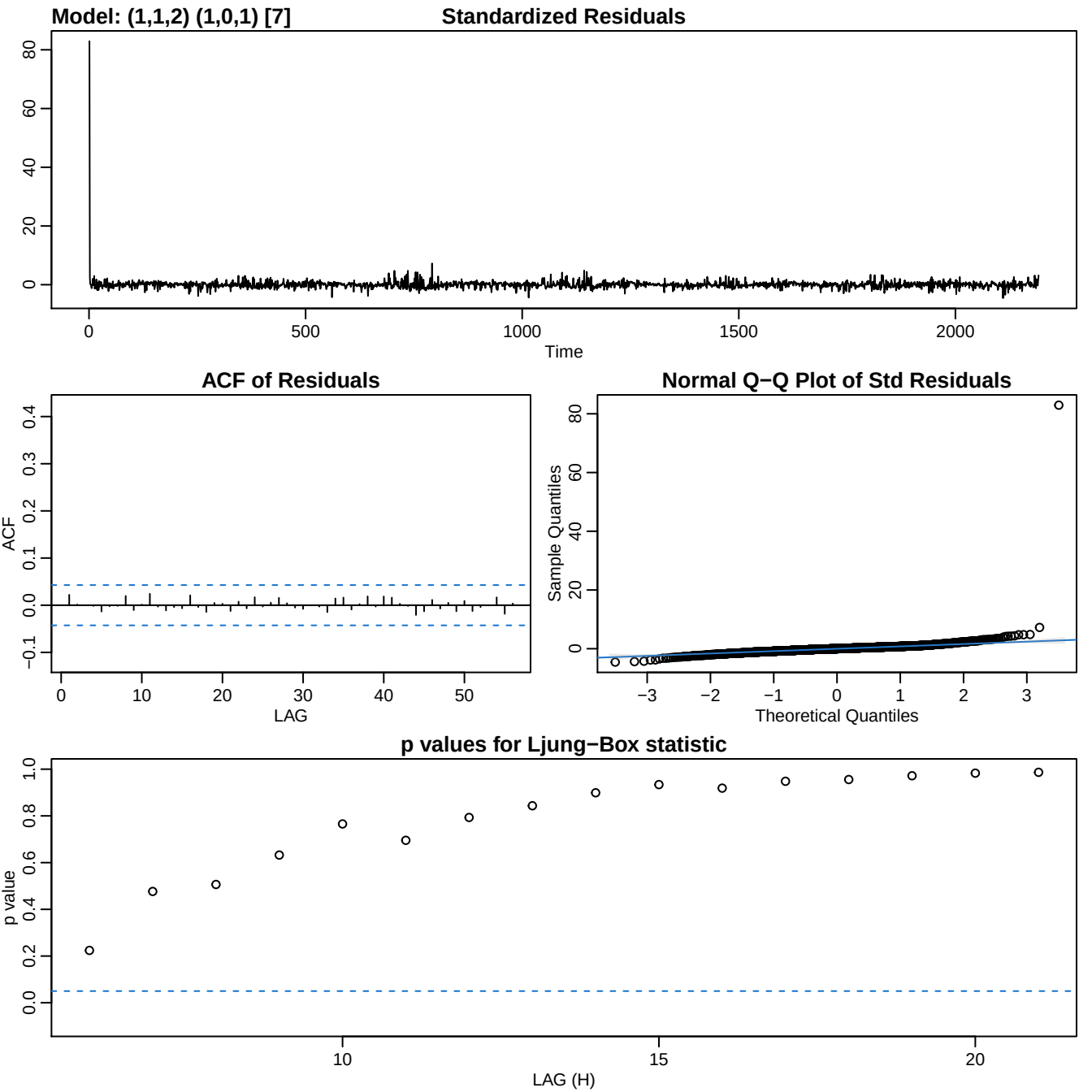

Series: diff(Yt.bc)
ACF
0.3
0.2
0.1
−0.1
−0.3
0
10
20
30
40
50
LAG
PACF
0.3
0.2
0.1
−0.1
−0.3
0
10
20
30
40
50
LAG

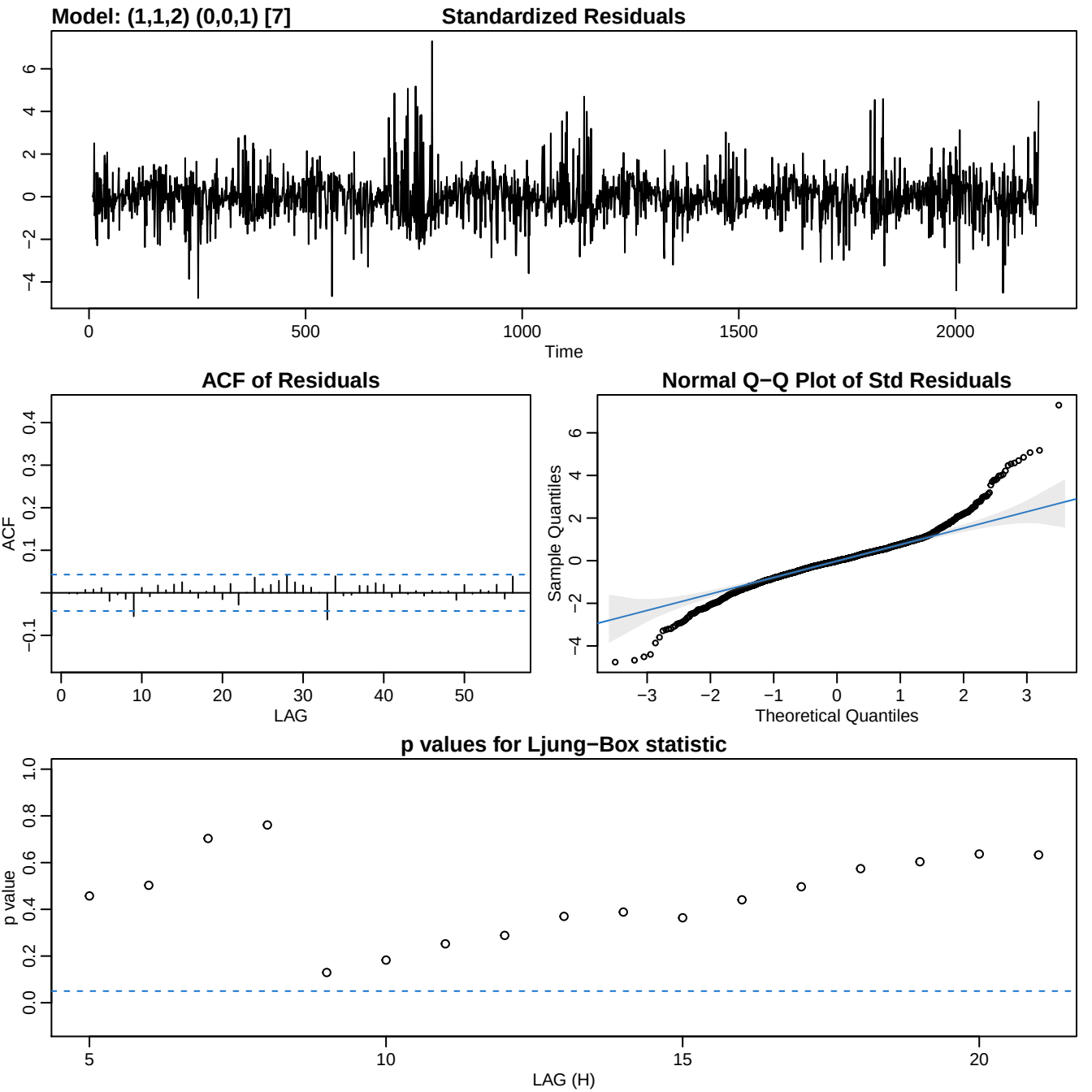

Series: diff(yt_train, 7)
ACF
0.8
0.6
0.4
0.2
0.0
−0.4
0
10
20
30
40
50
LAG
PACF
0.8
0.6
0.4
0.2
0.0
−0.4
0
10
20
30
40
50
LAG

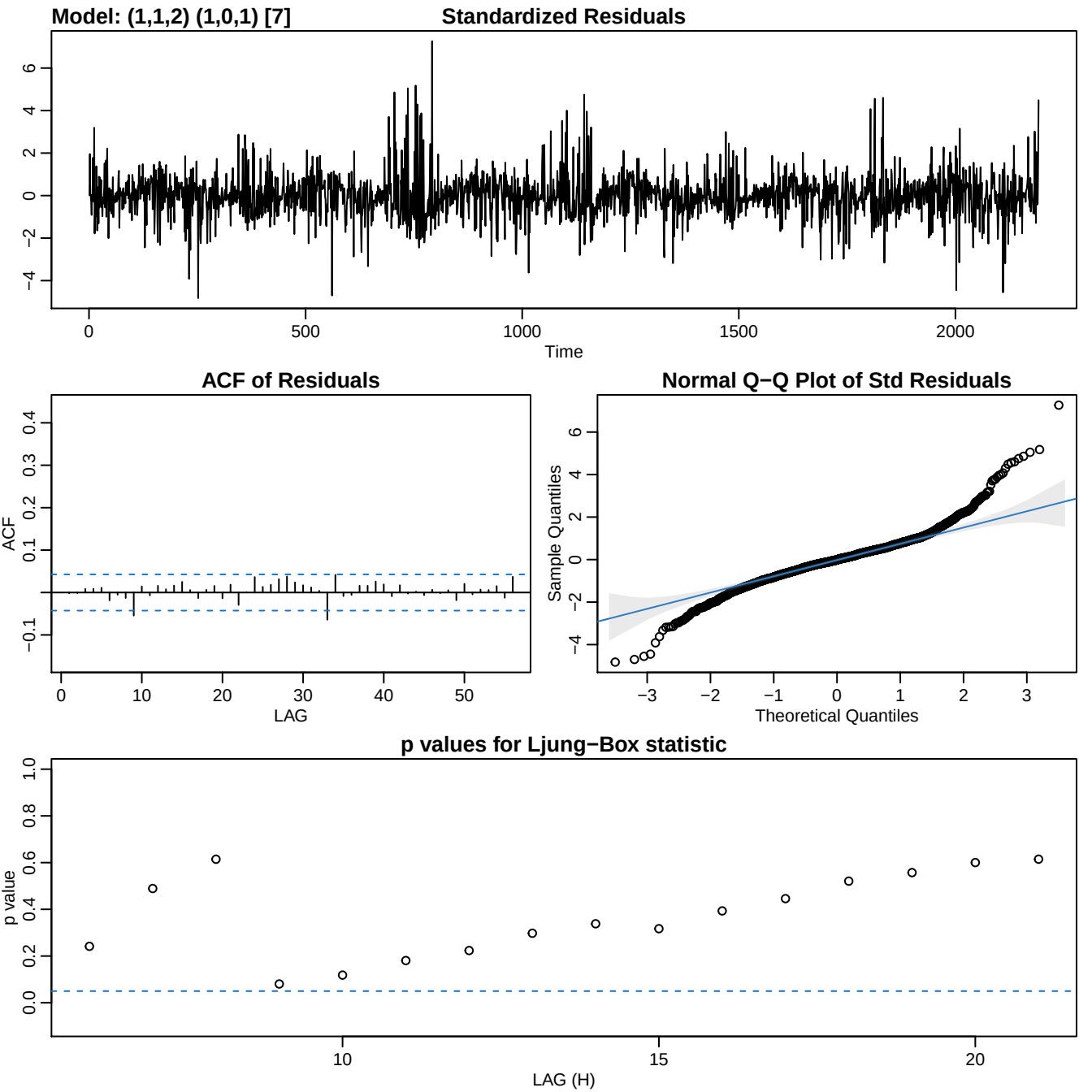

Series: diff7
ACF
0.8
0.6
0.4
0.2
0.0
−0.4
0
10
20
30
40
50
LAG
PACF
0.8
0.6
0.4
0.2
0.0
−0.4
0
10
20
30
40
50
LAG


Series: diff(diff7, 1)
ACF
0.1
−0.1
−0.3
−0.5
0
10
20
30
40
50
LAG
PACF
0.1
−0.1
−0.3
−0.5
0
10
20
30
40
50
LAG


Model: (1,1,2) (0,0,1) [7]
Standardized Residuals
Time
ACF of Residuals
ACF
LAG
Normal Q−Q Plot of Std Residuals
Sample Quantiles
Theoretical Quantiles
p values for Ljung−Box statistic
p value
LAG (H)


Model: (1,1,2) (1,0,1) [7]
Standardized Residuals
Time
ACF of Residuals
ACF
LAG
Normal Q−Q Plot of Std Residuals
Sample Quantiles
Theoretical Quantiles
p values for Ljung−Box statistic
p value
LAG (H)


Model: (1,1,2) (0,0,1) [7]
Standardized Residuals
Time
ACF of Residuals
ACF
LAG
Normal Q−Q Plot of Std Residuals
Sample Quantiles
Theoretical Quantiles
p values for Ljung−Box statistic
p value
LAG (H)


Model: (1,1,2) (1,0,1) [7]
Standardized Residuals
Time
ACF of Residuals
ACF
LAG
Normal Q−Q Plot of Std Residuals
Sample Quantiles
Theoretical Quantiles
p values for Ljung−Box statistic
p value
LAG (H)