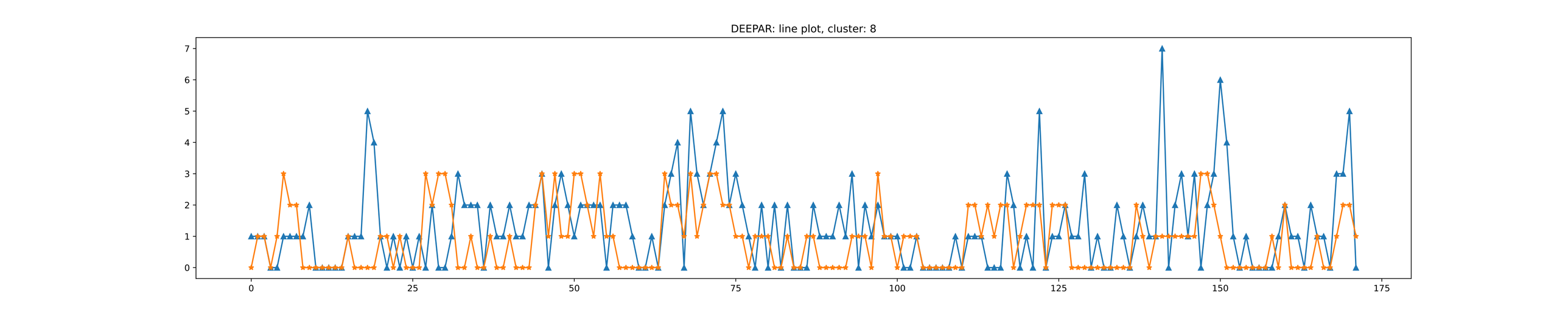
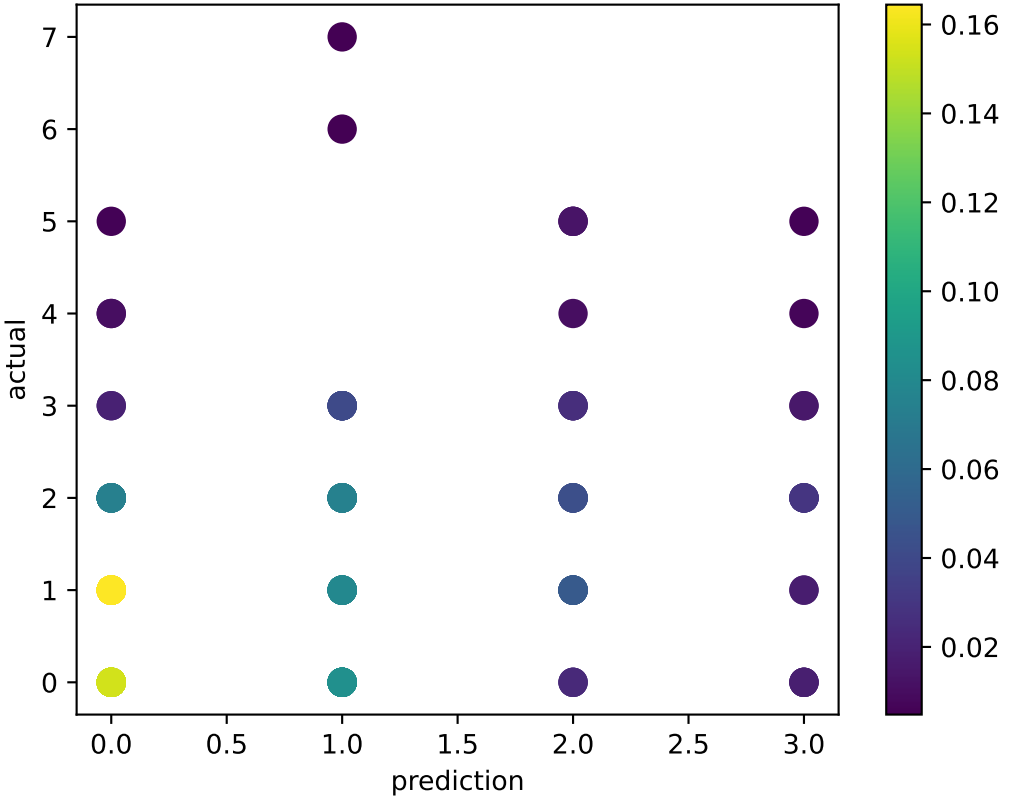
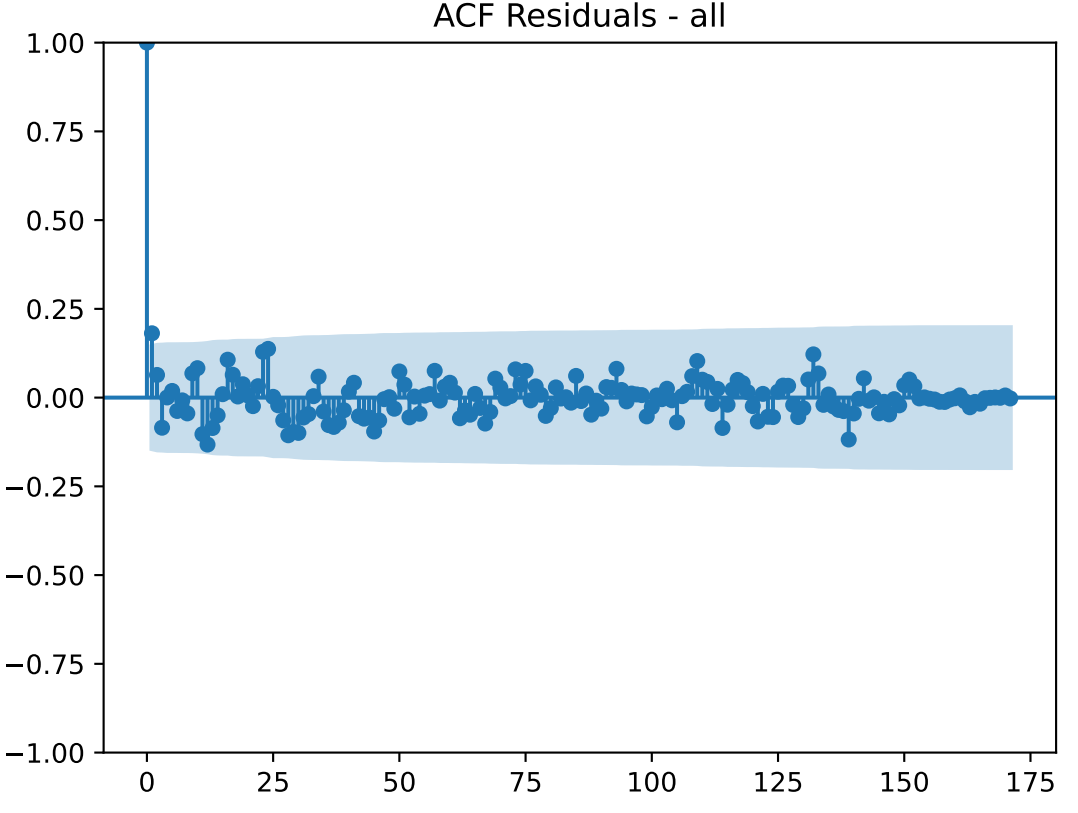
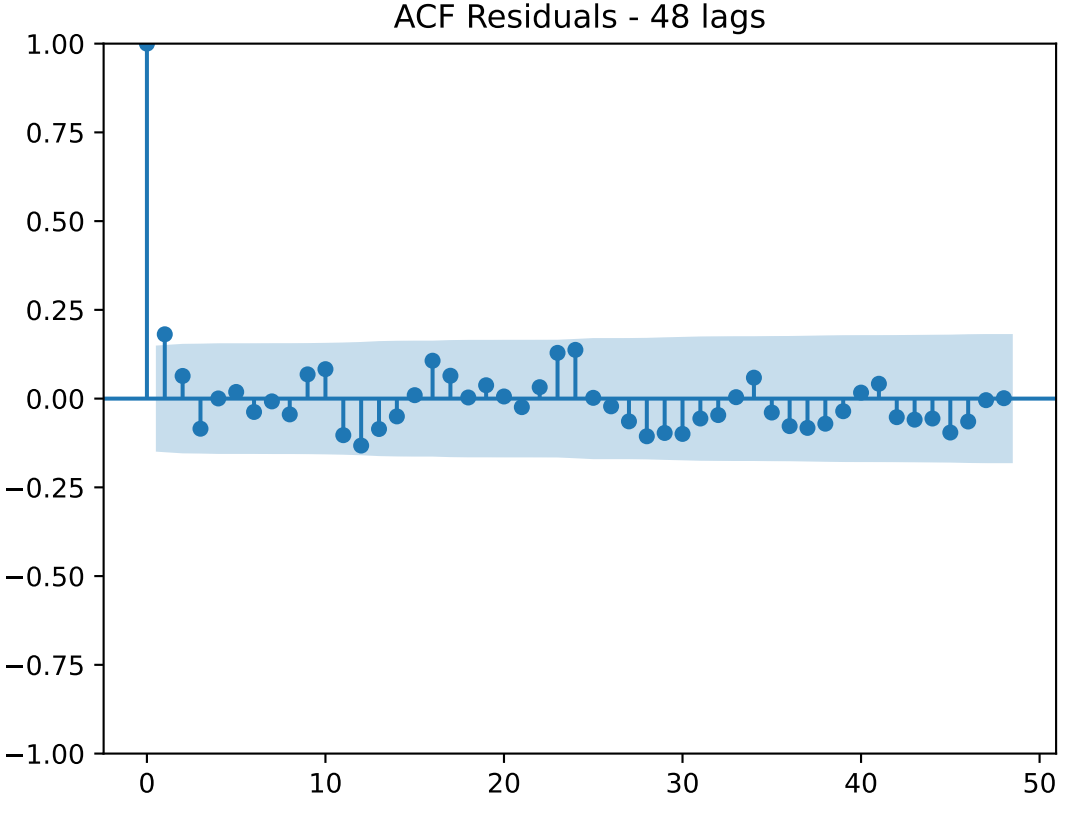
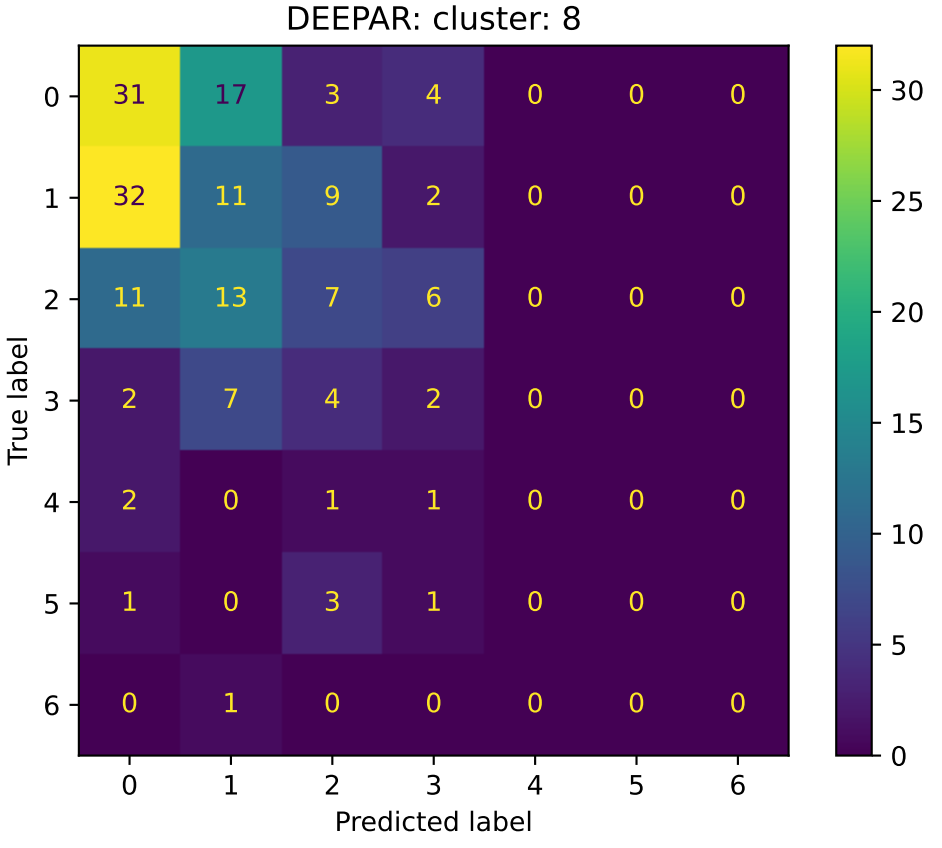
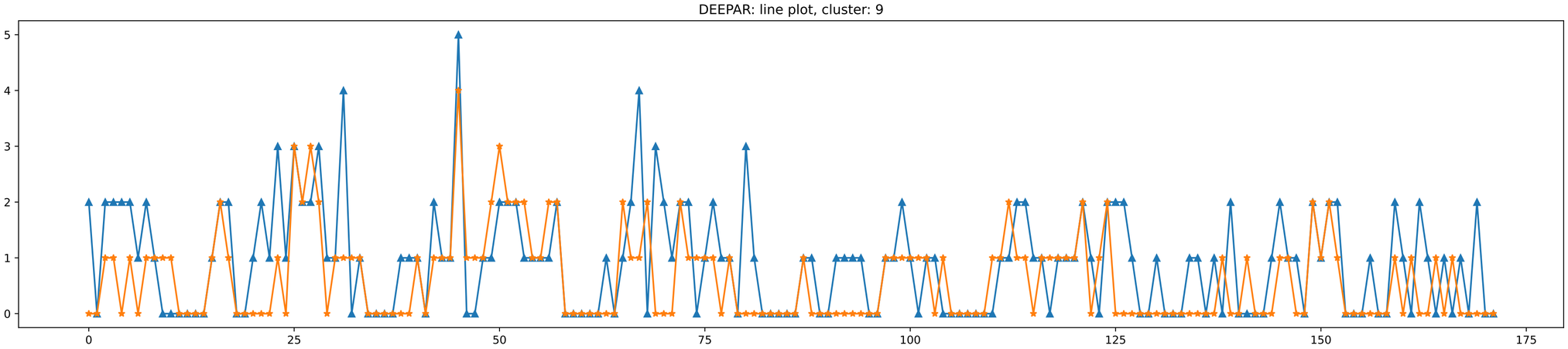

DEEPAR: line plot, cluster: 8
0
1
2
3
4
5
6
7
0
25
50
75
100
125
150
175

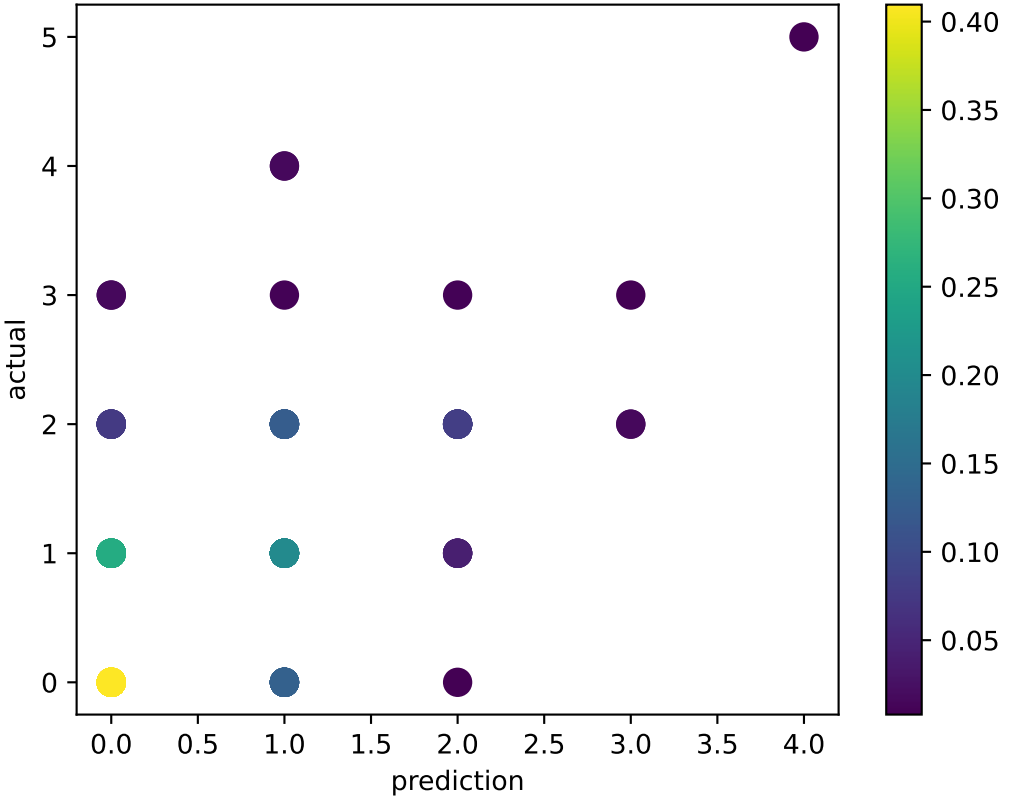

actual
prediction
0
1
2
3
4
5
6
7
0.0
0.5
1.0
1.5
2.0
2.5
3.0
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02

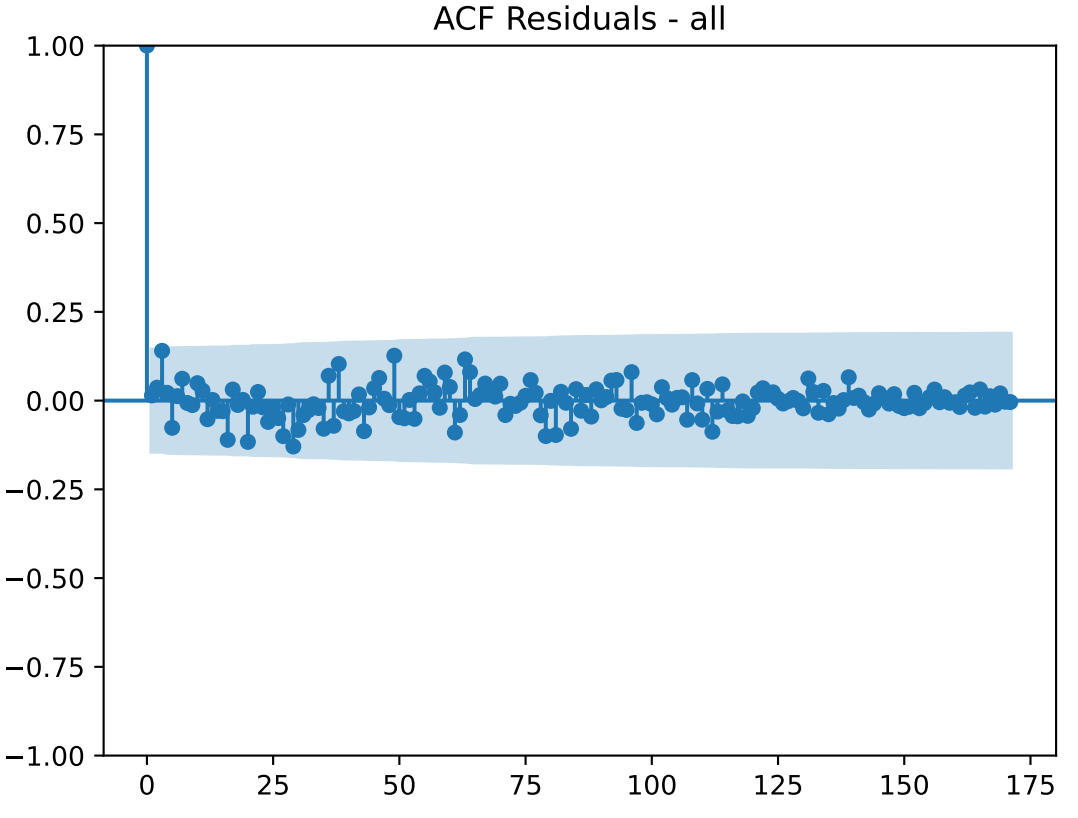

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

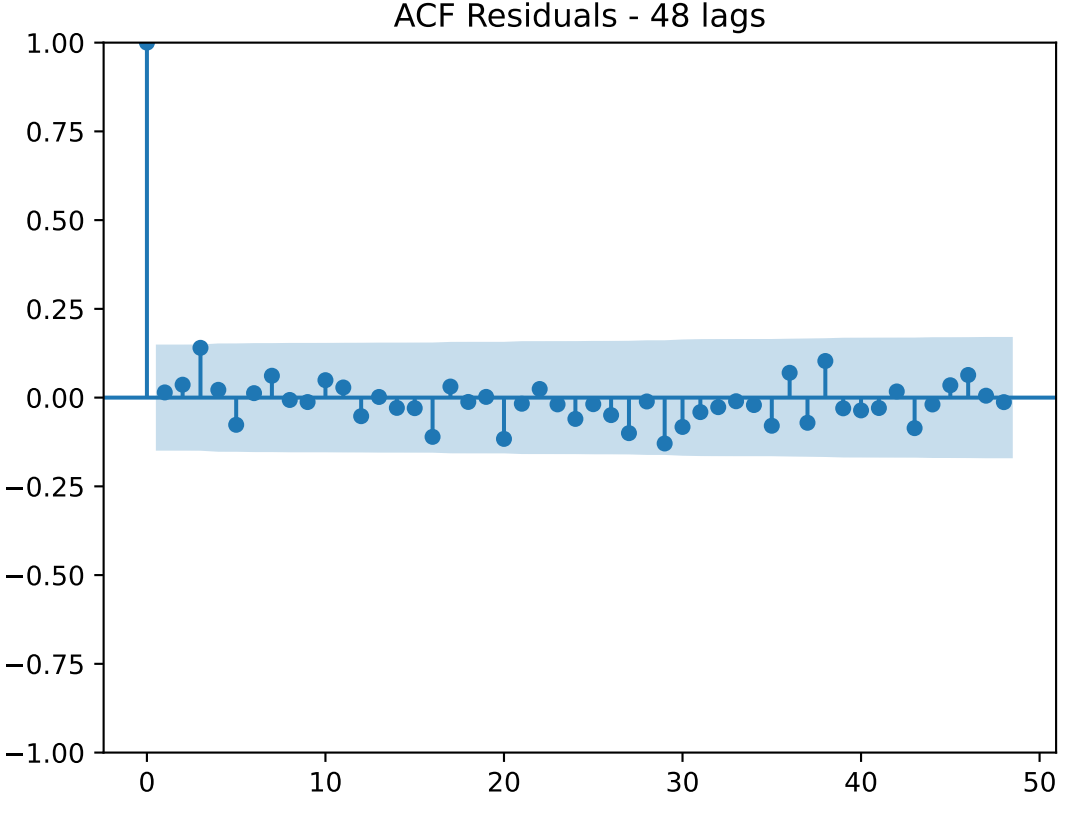

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

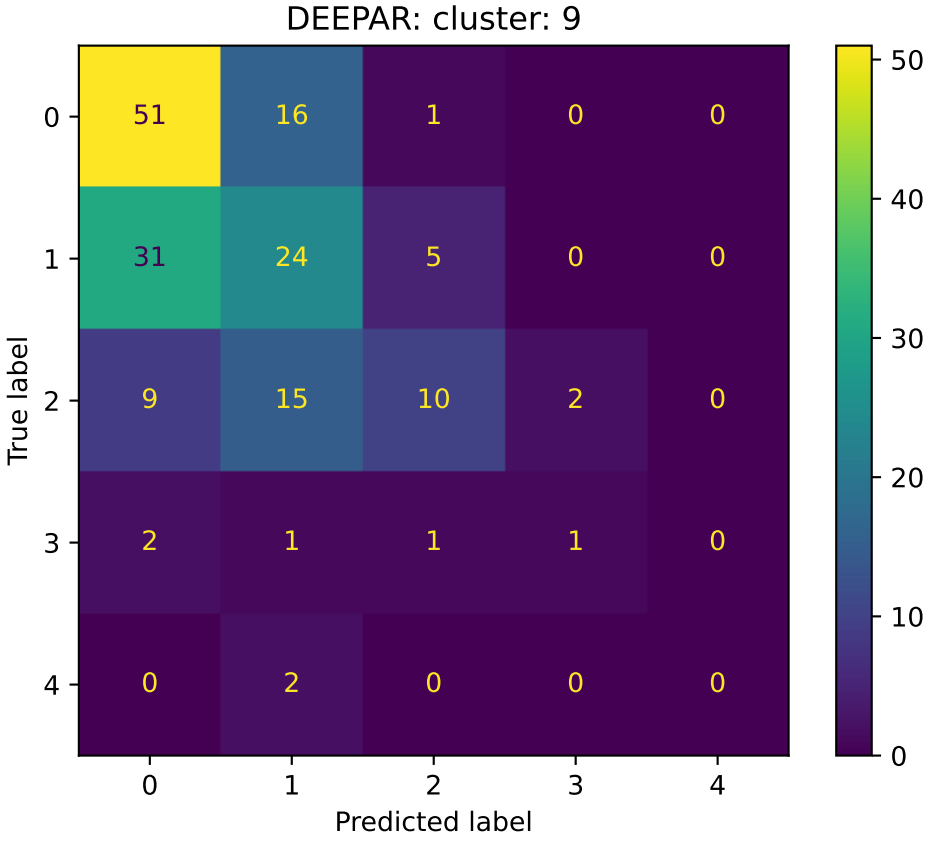

DEEPAR: cluster: 8
True label
Predicted label
0 1 2 3 4 5 6
31 17 3 4 0 0 0
32 11 9 2 0 0 0
11 13 7 6 0 0 0
2 7 4 2 0 0 0
2 0 1 1 0 0 0
1 0 3 1 0 0 0
0 1 0 0 0 0 0
30 25 20 15 10 5 0

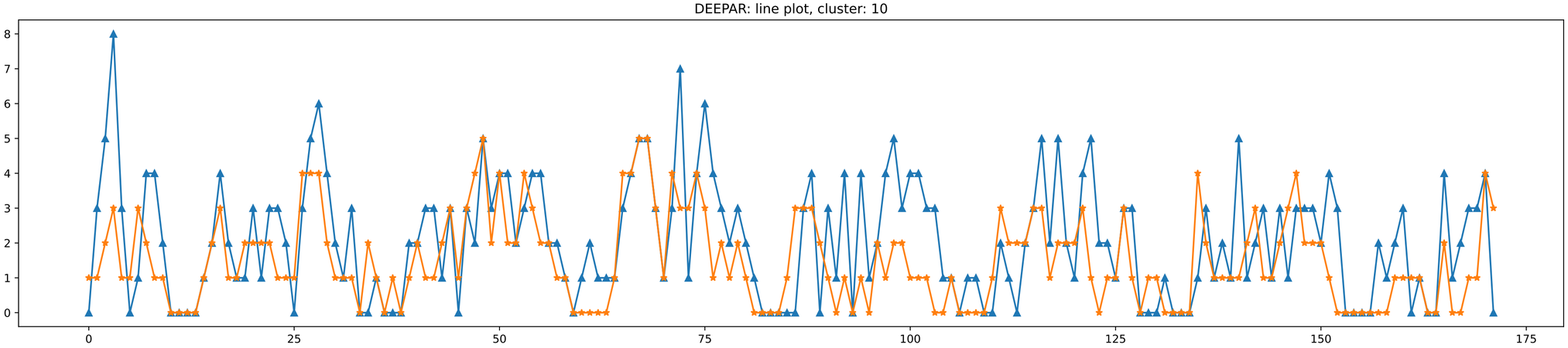

DEEPAR: line plot, cluster: 9
0
1
2
3
4
5
0
25
50
75
100
125
150
175

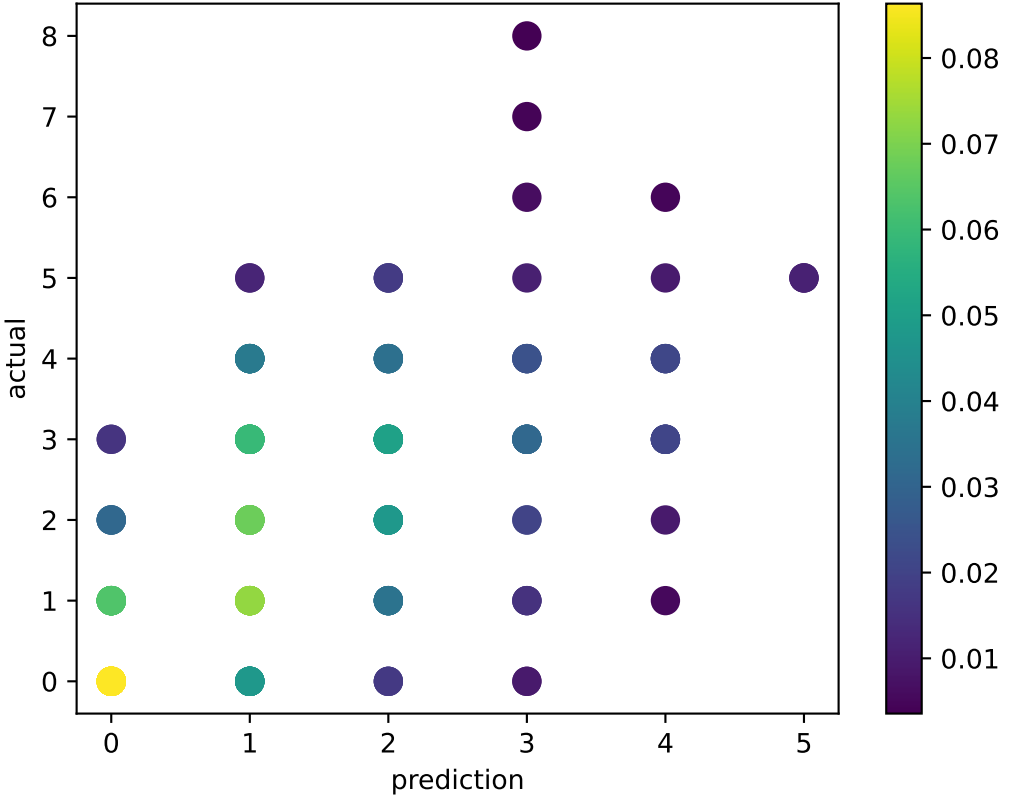

actual
prediction
0
1
2
3
4
5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05

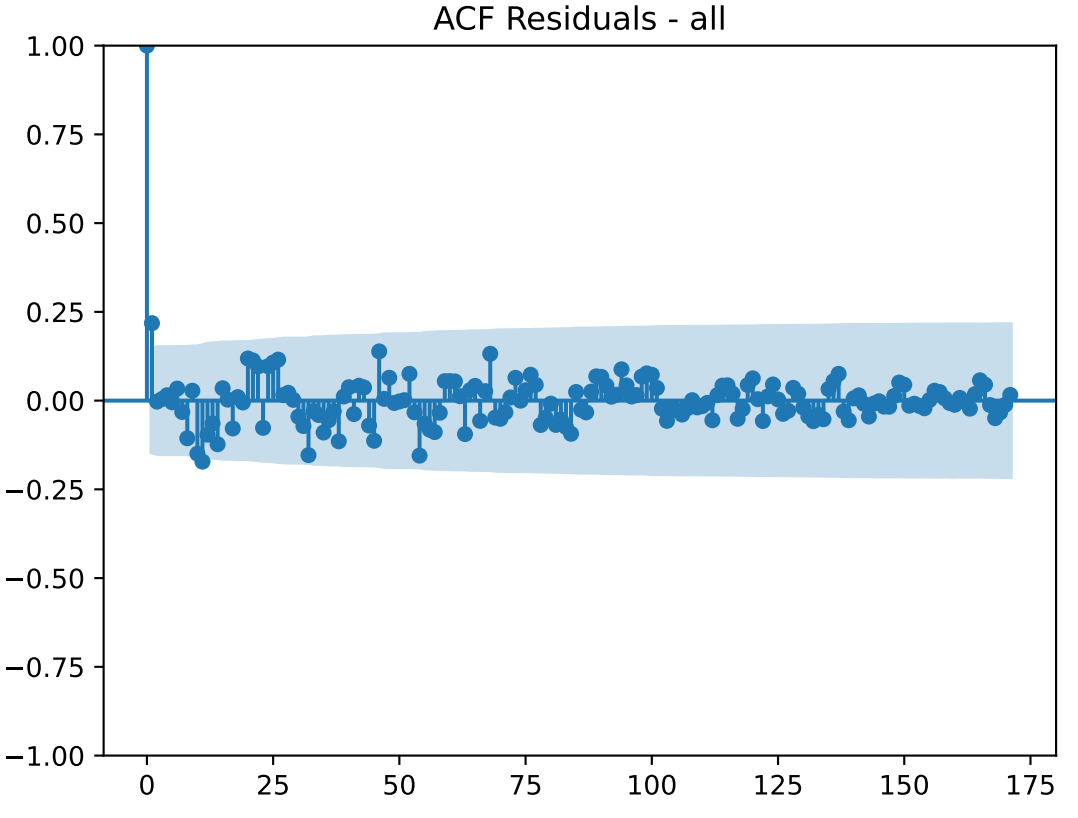

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

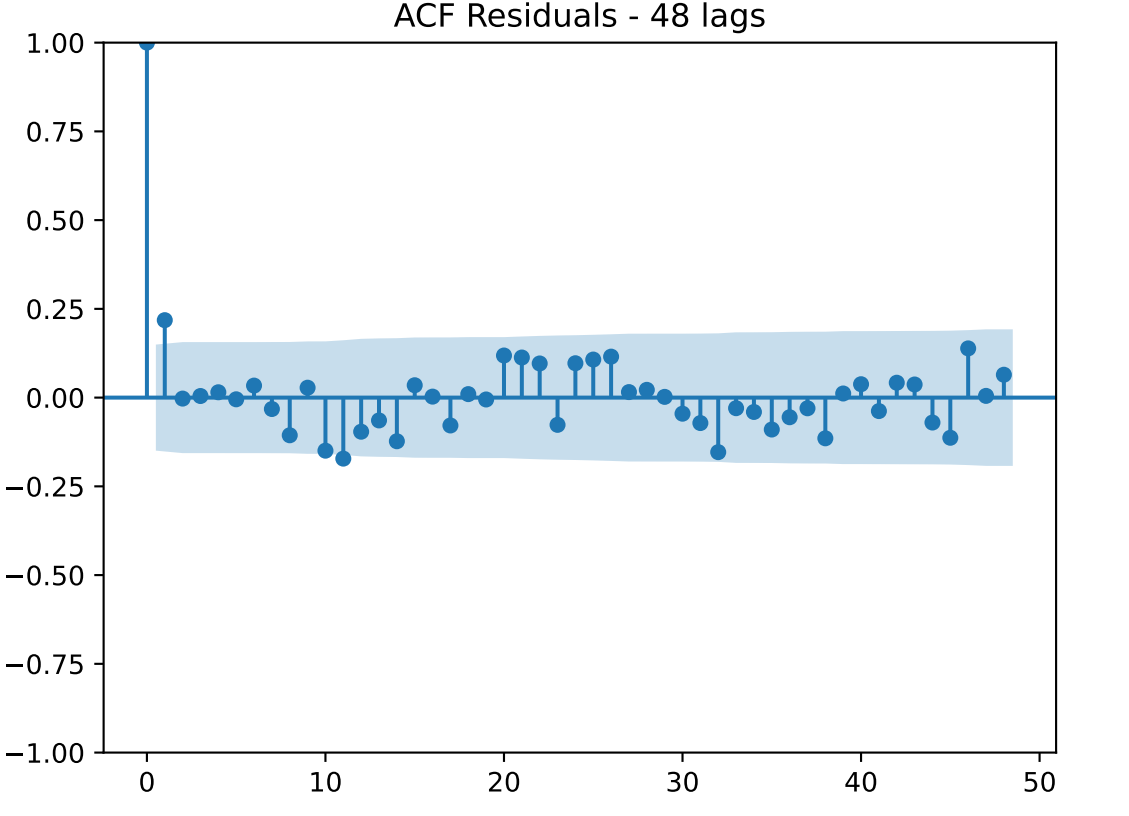

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

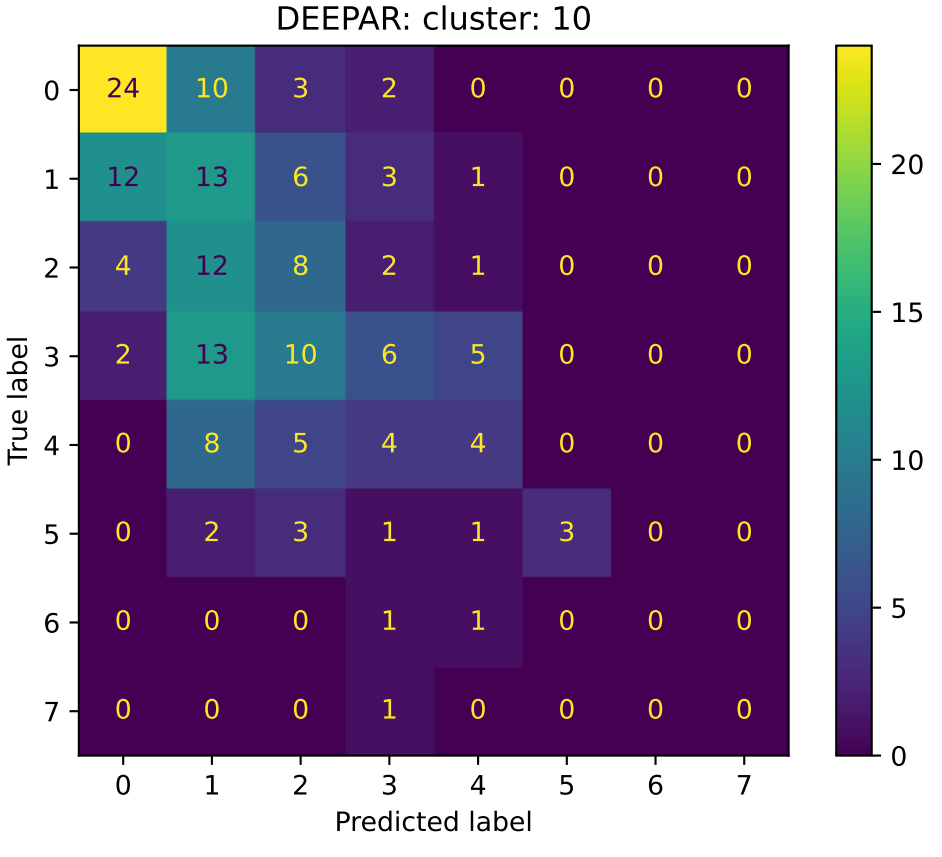

DEEPAR: cluster: 9
True label
Predicted label
0
1
2
3
4
51
16
1
0
0
31
24
5
0
0
9
15
10
2
0
2
1
1
1
0
0
2
0
0
0
50
40
30
20
10
0

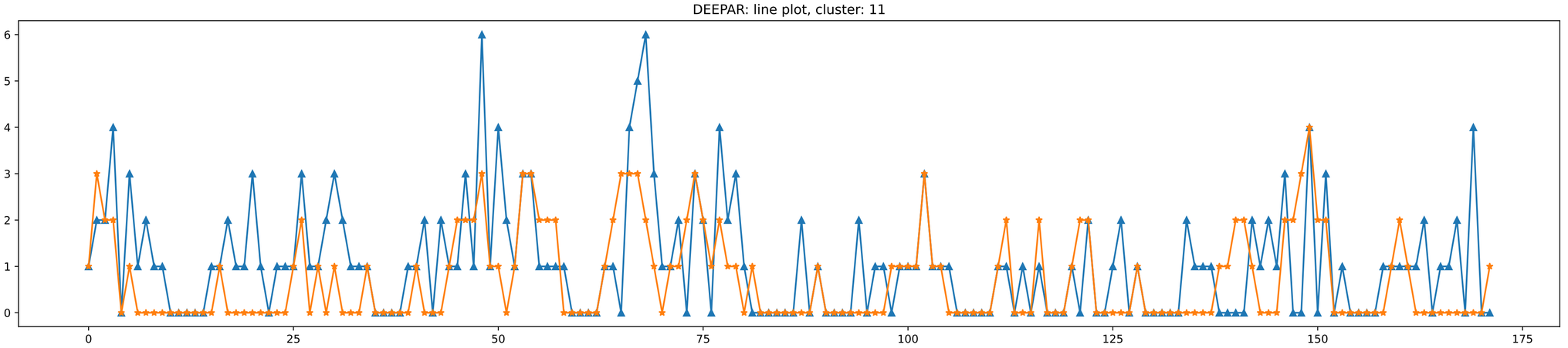

DEEPAR: line plot, cluster: 10
8
7
6
5
4
3
2
1
0
0
25
50
75
100
125
150
175

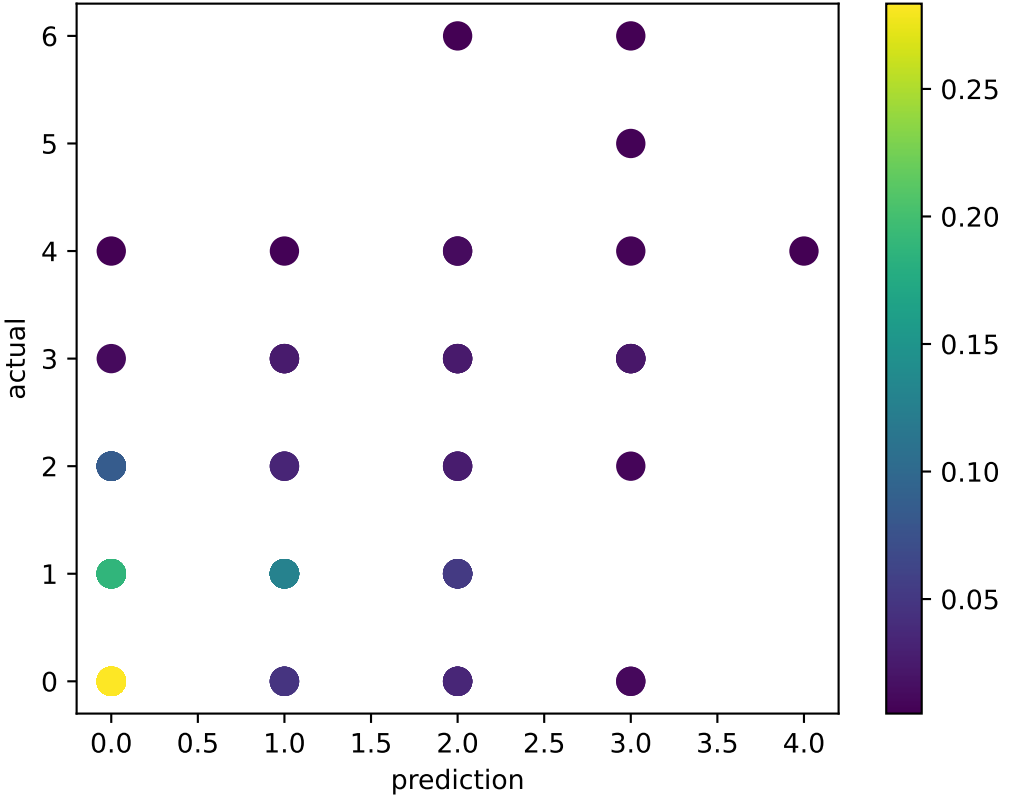

actual
prediction
0
1
2
3
4
5
6
7
8
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01

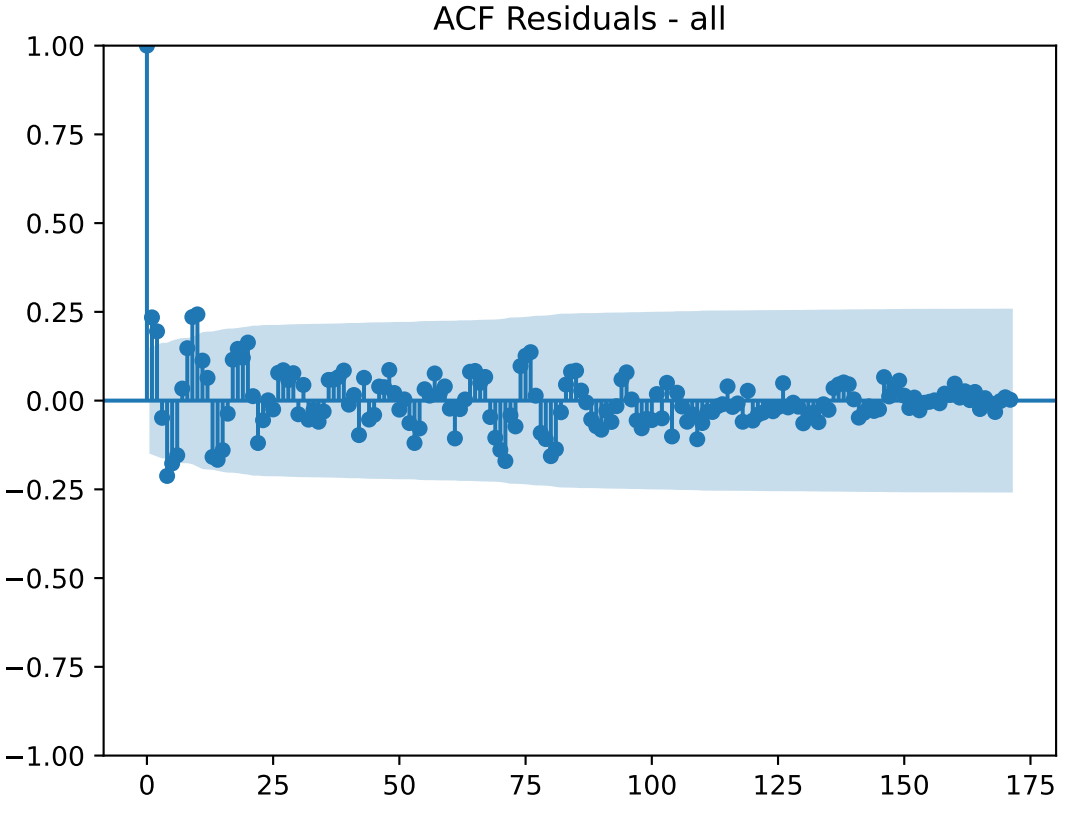

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

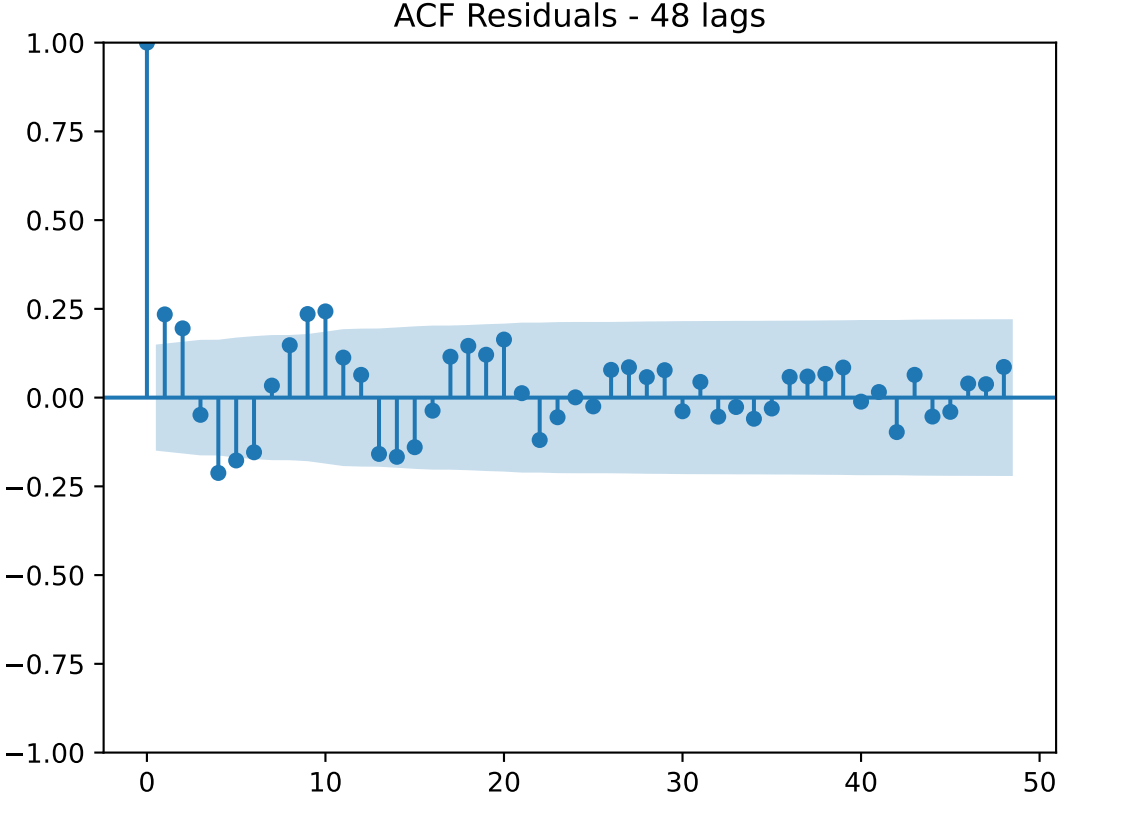

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

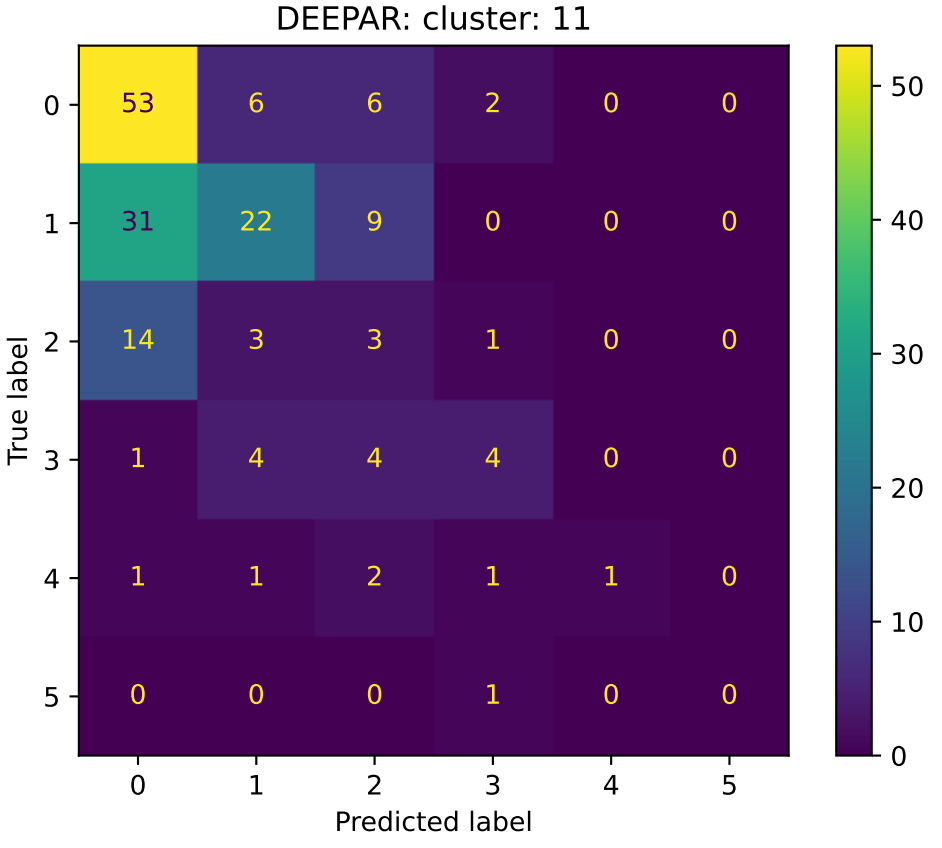

DEEPAR: cluster: 10
True label
Predicted label
0 1 2 3 4 5 6 7
24 10 3 2 0 0 0 0
12 13 6 3 1 0 0 0
4 12 8 2 1 0 0 0
2 13 10 6 5 0 0 0
0 8 5 4 4 0 0 0
0 2 3 1 1 3 0 0
0 0 0 1 1 0 0 0
0 0 0 1 0 0 0 0
0 5 10 15 20

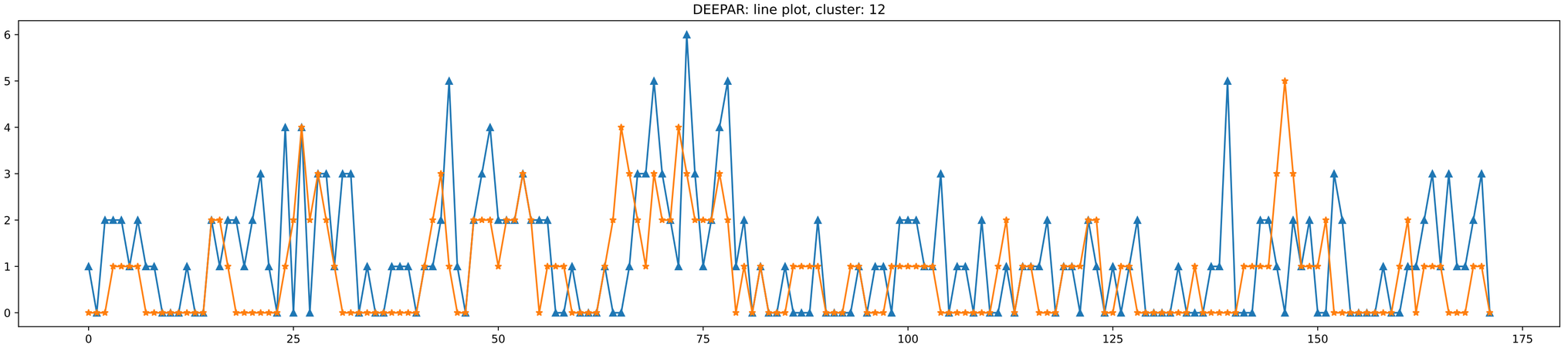

DEEPAR: line plot, cluster: 11
0
1
2
3
4
5
6
0
25
50
75
100
125
150
175

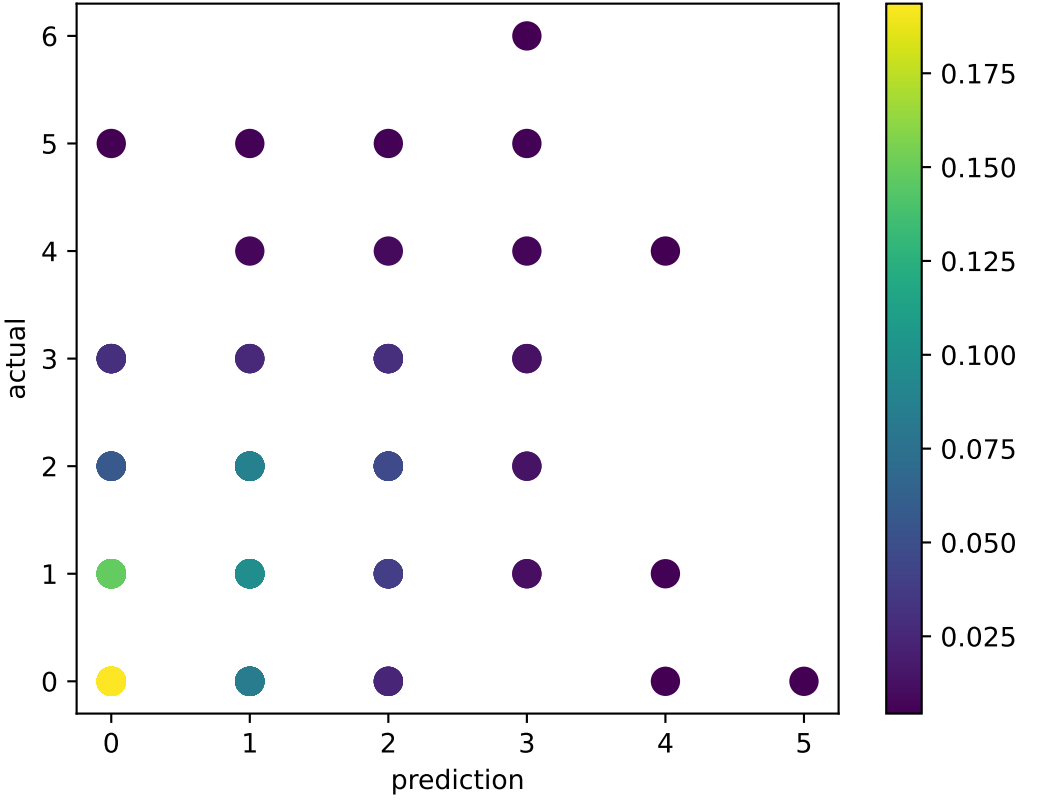

actual
prediction
0
1
2
3
4
5
6
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.25
0.20
0.15
0.10
0.05

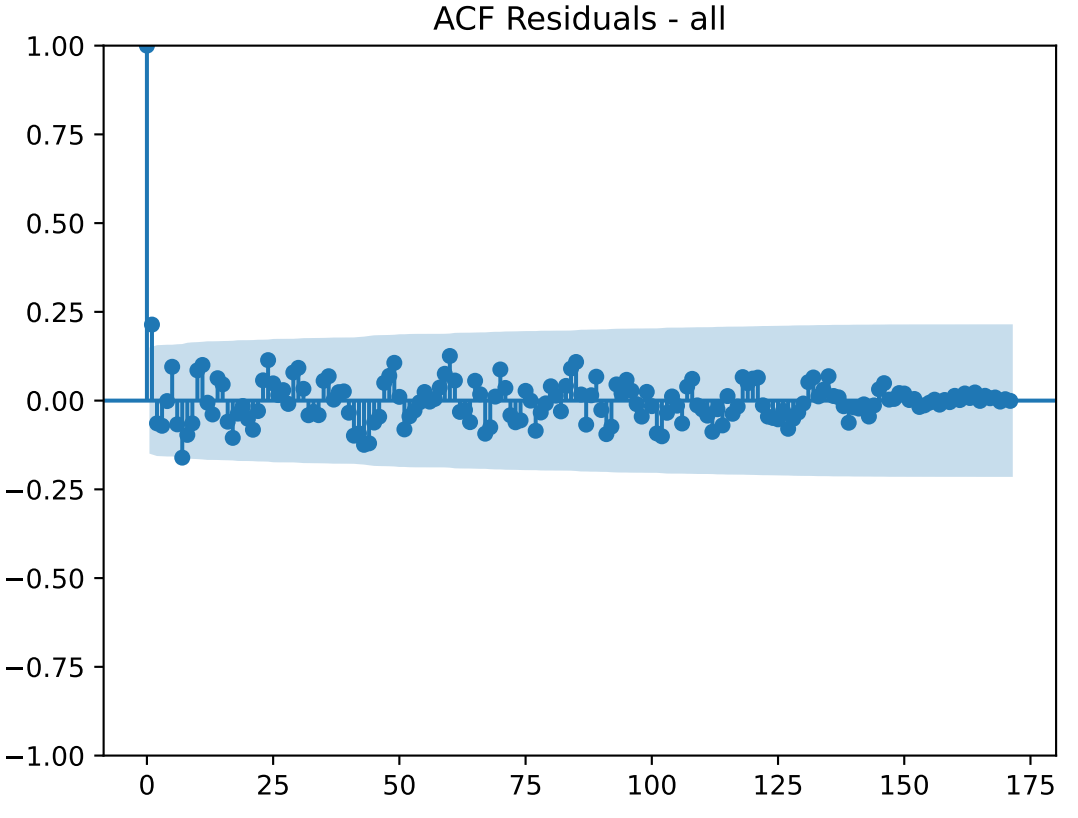

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

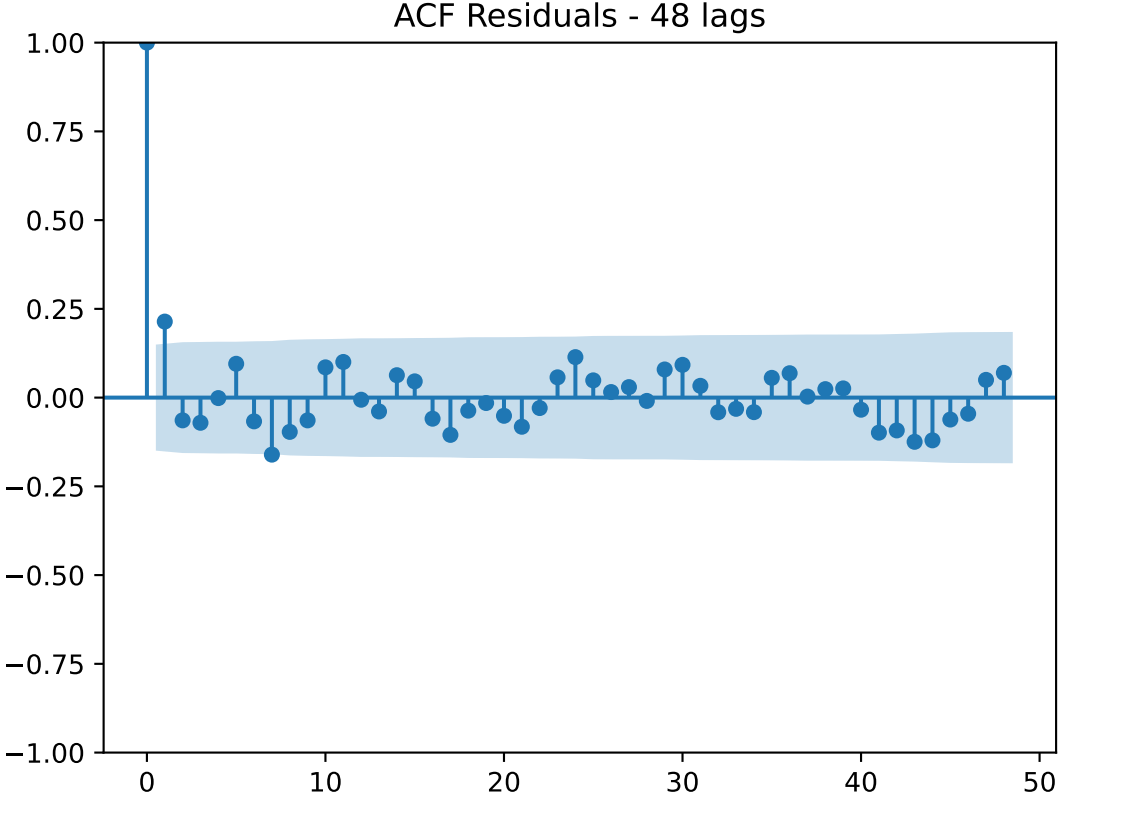

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

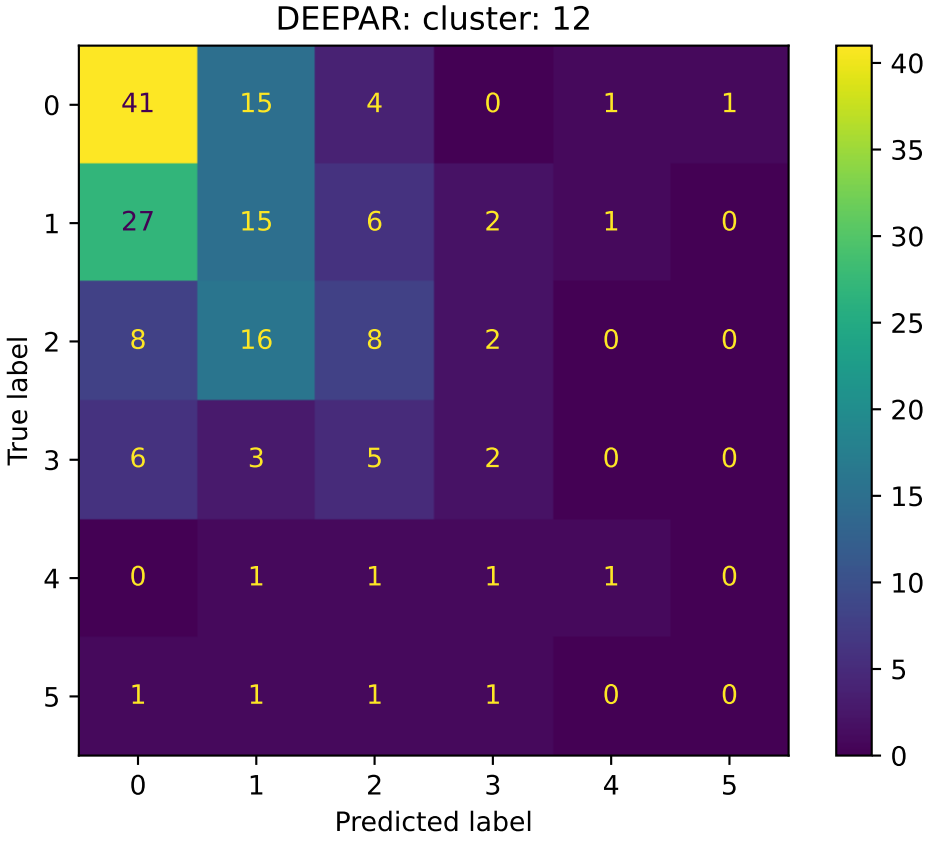

DEEPAR: cluster: 11
True label
Predicted label
0
1
2
3
4
5
53 6 6 2 0 0
31 22 9 0 0 0
14 3 3 1 0 0
1 4 4 4 0 0
1 1 2 1 1 0
0 0 0 1 0 0
50
40
30
20
10
0

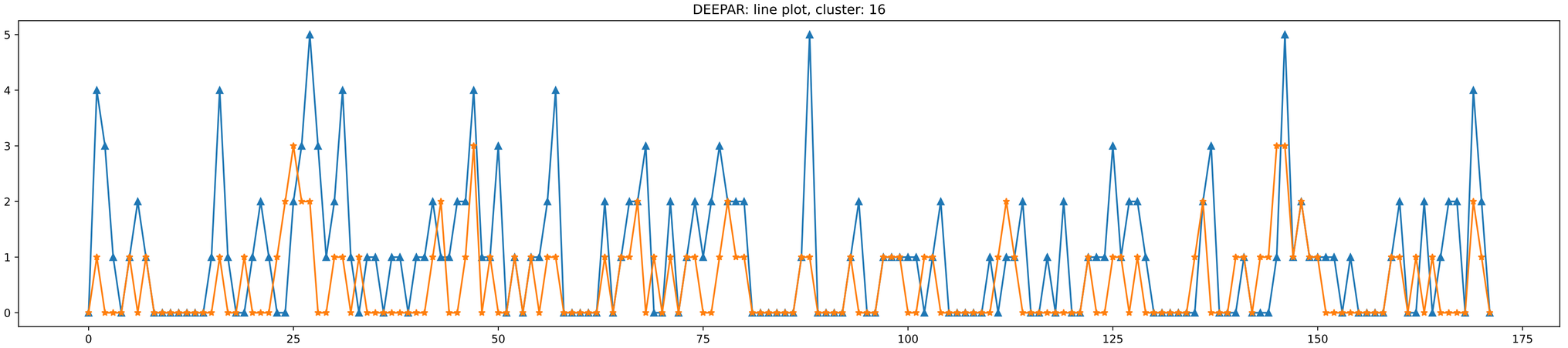

DEEPAR: line plot, cluster: 12
6
5
4
3
2
1
0
0
25
50
75
100
125
150
175

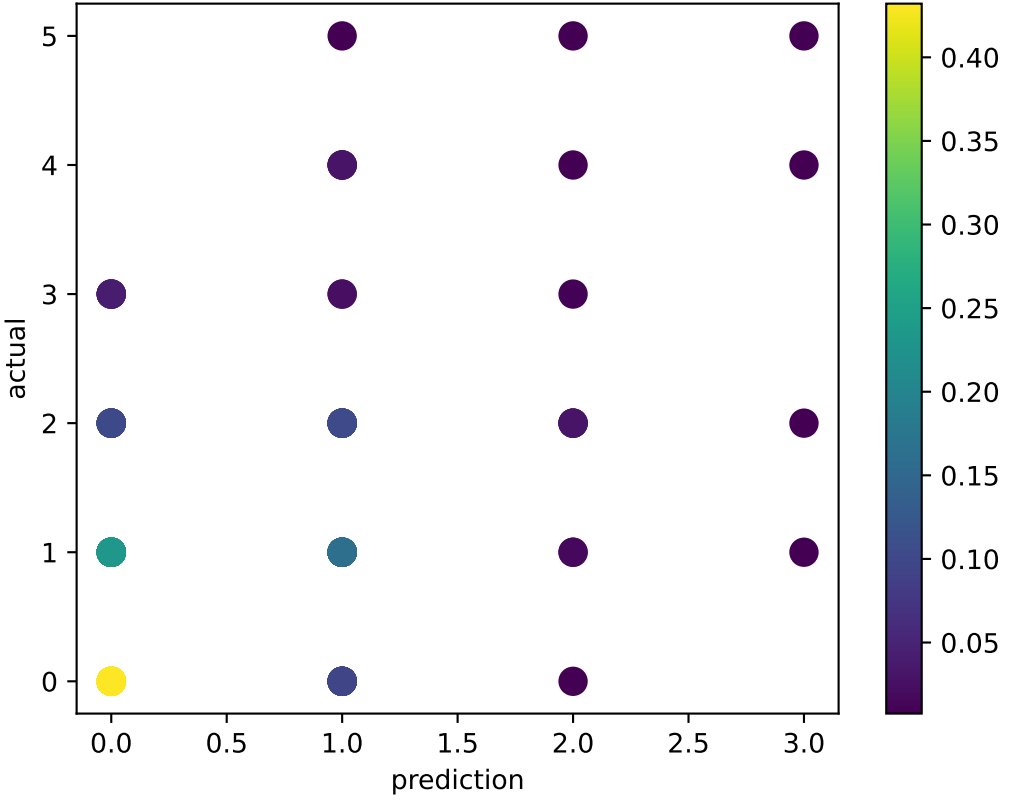

actual
prediction
0
1
2
3
4
5
6
0.175
0.150
0.125
0.100
0.075
0.050
0.025

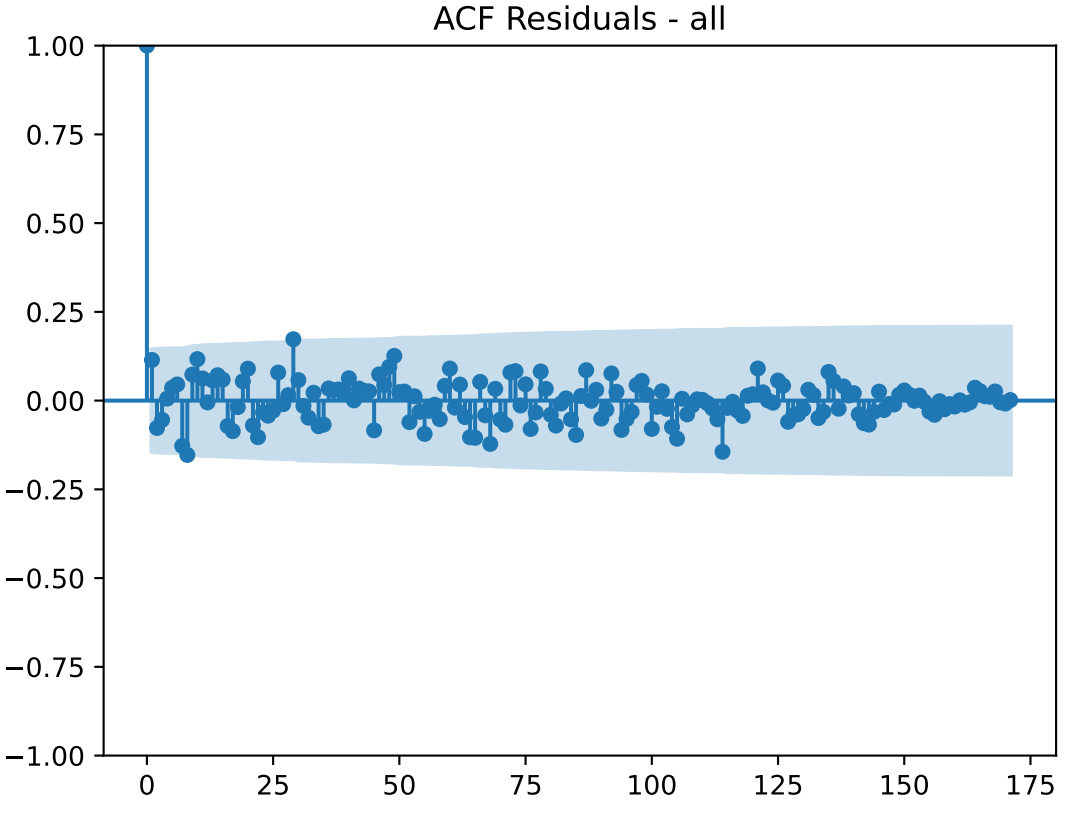

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

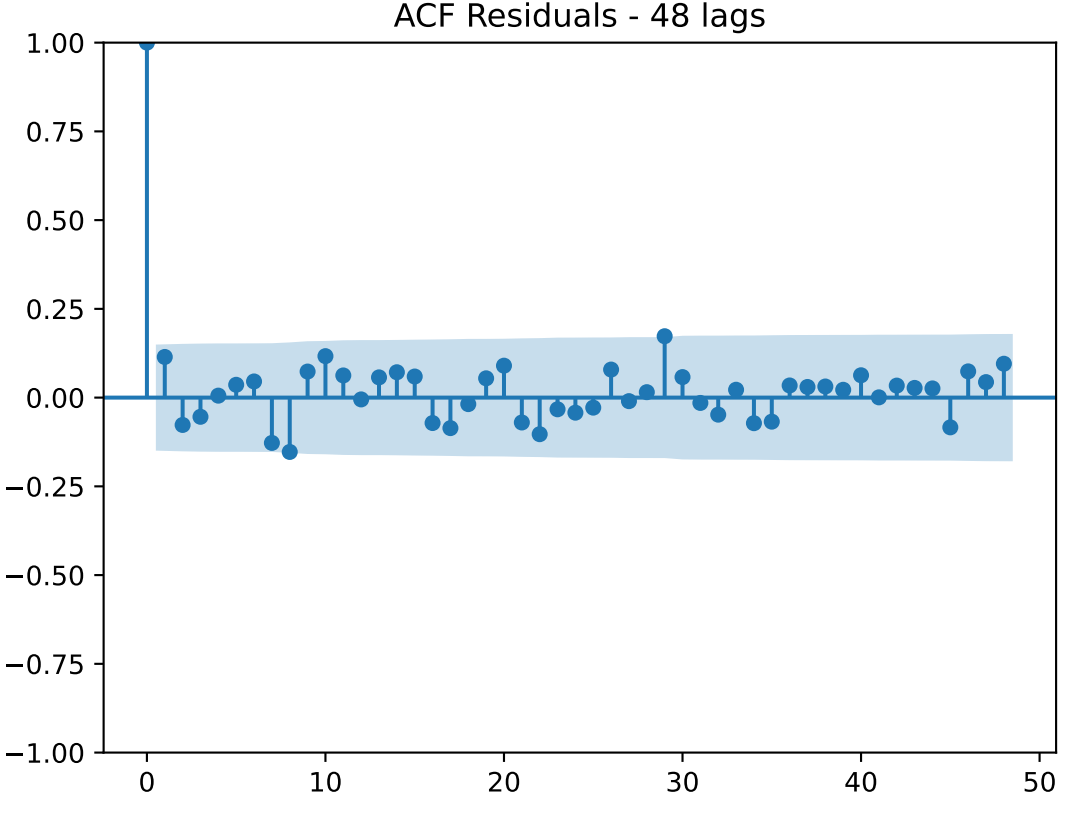

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

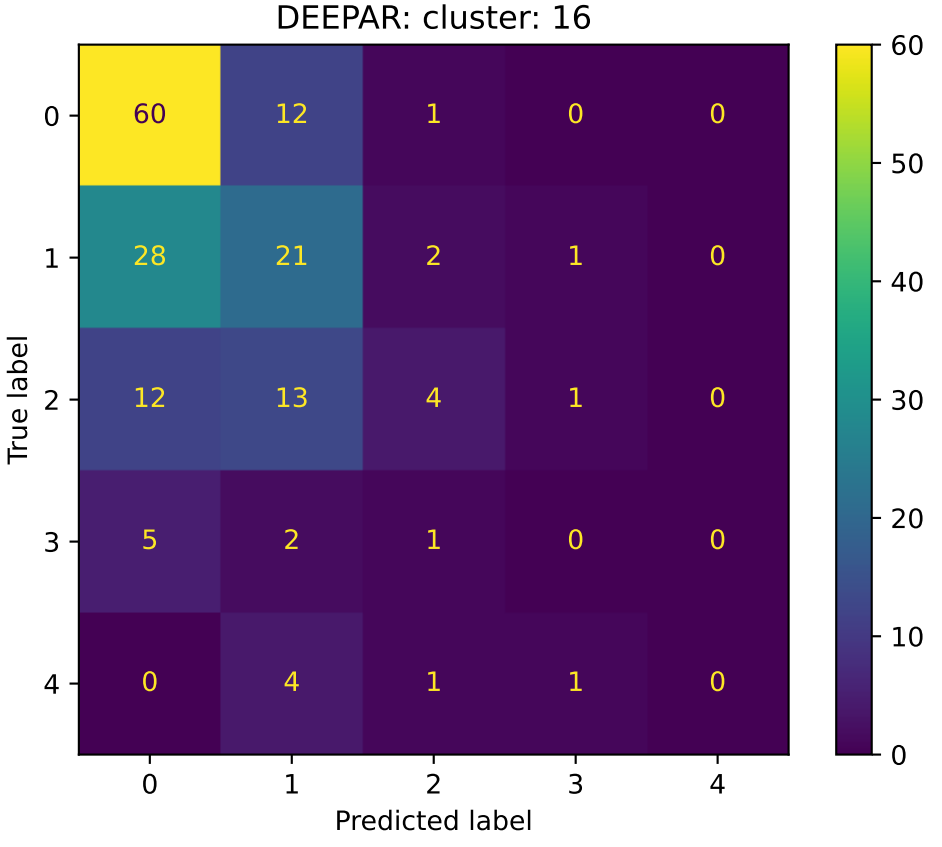

DEEPAR: cluster: 12
True label
Predicted label
0
1
2
3
4
5
41 15 4 0 1 1
27 15 6 2 1 0
8 16 8 2 0 0
6 3 5 2 0 0
0 1 1 1 1 0
1 1 1 1 0 0
40
35
30
25
20
15
10
5
0

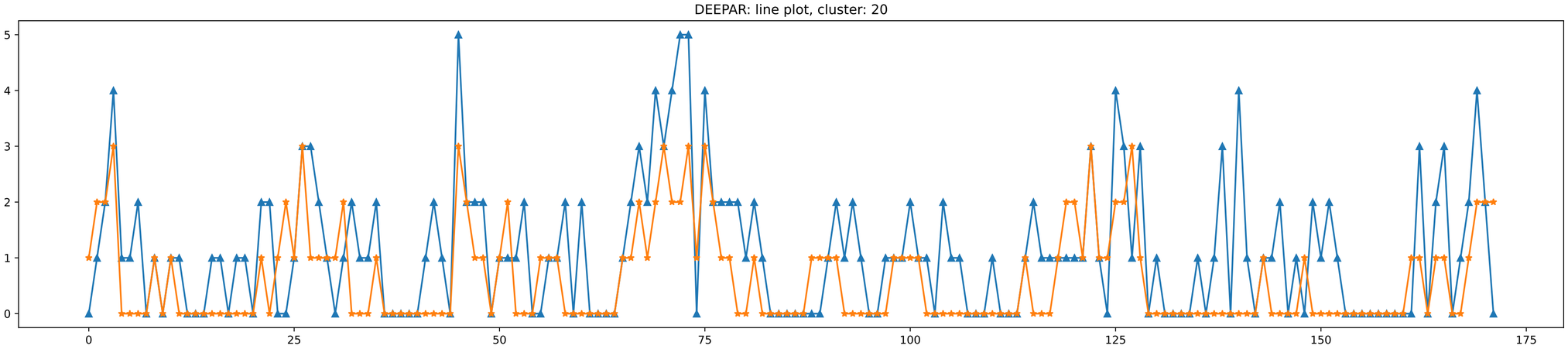

DEEPAR: line plot, cluster: 16
0
1
2
3
4
5
0
25
50
75
100
125
150
175

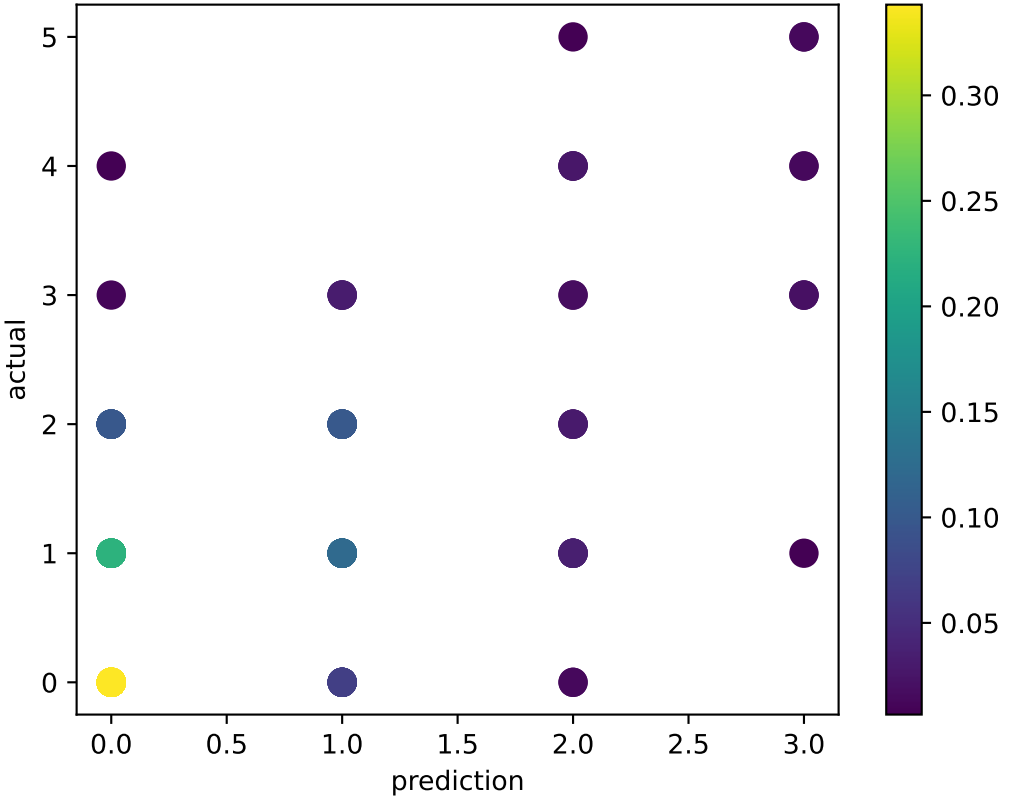

actual
prediction
0
1
2
3
4
5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05

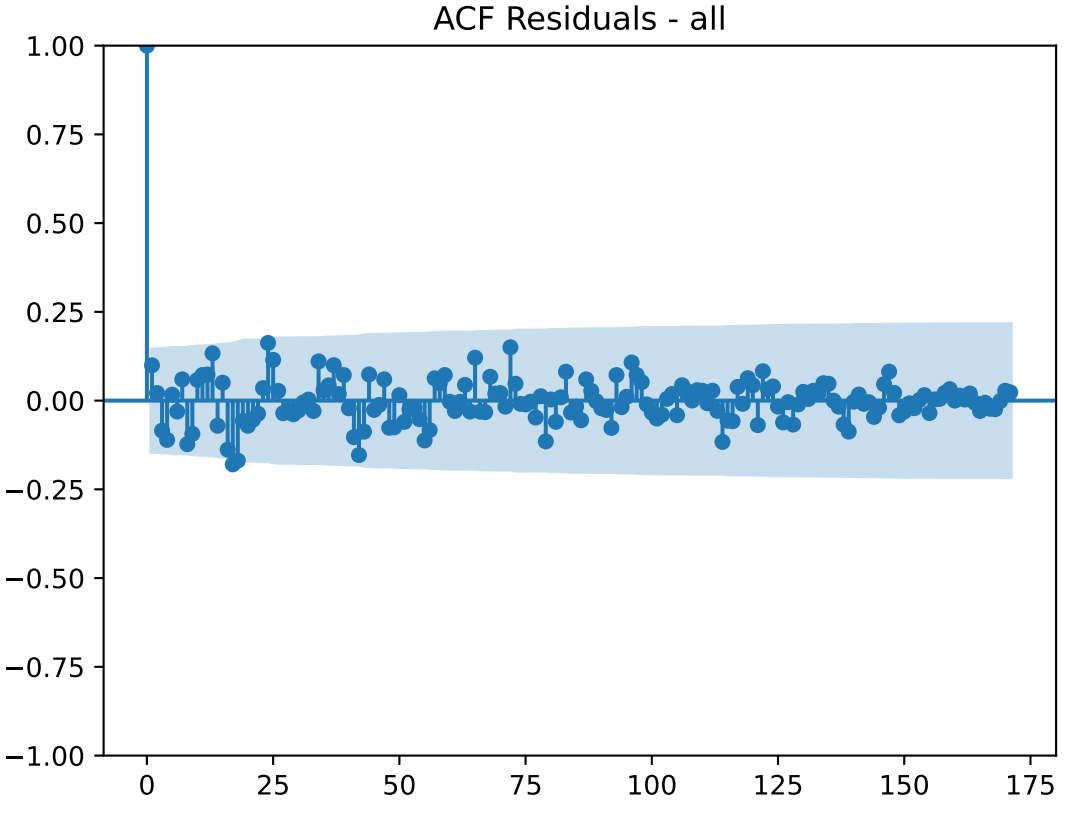

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

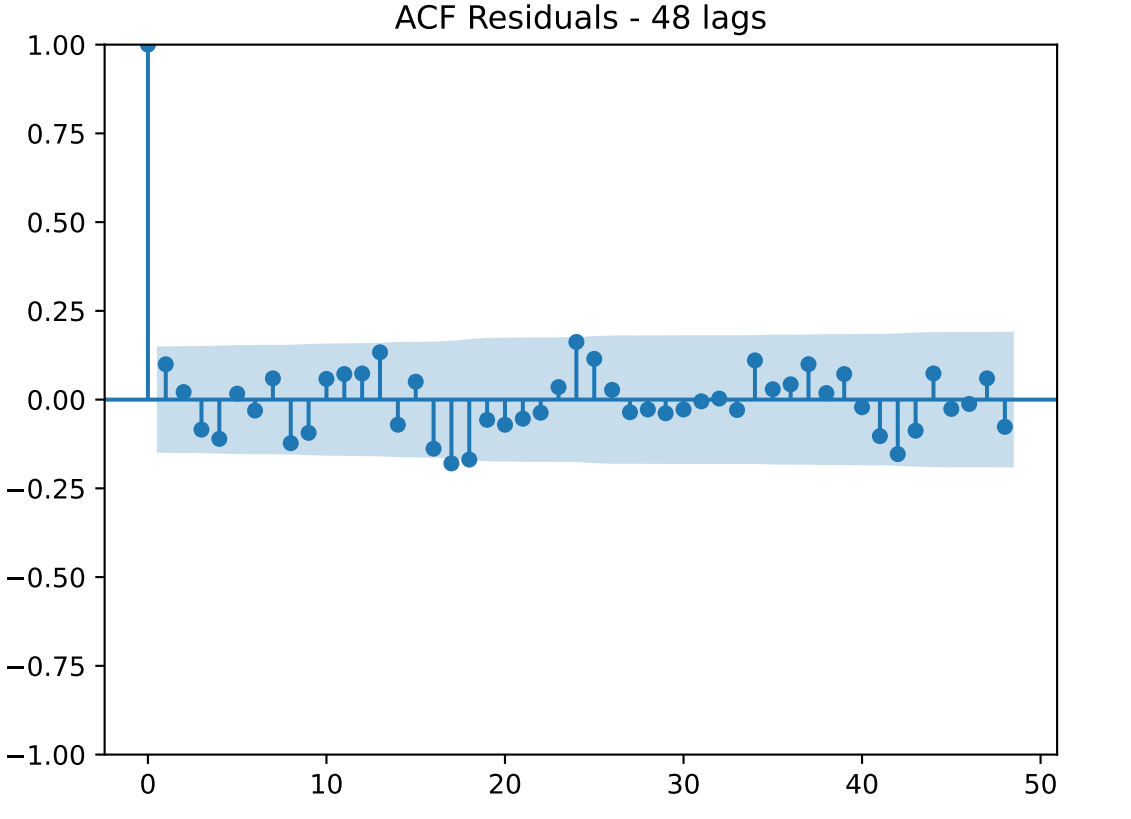

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

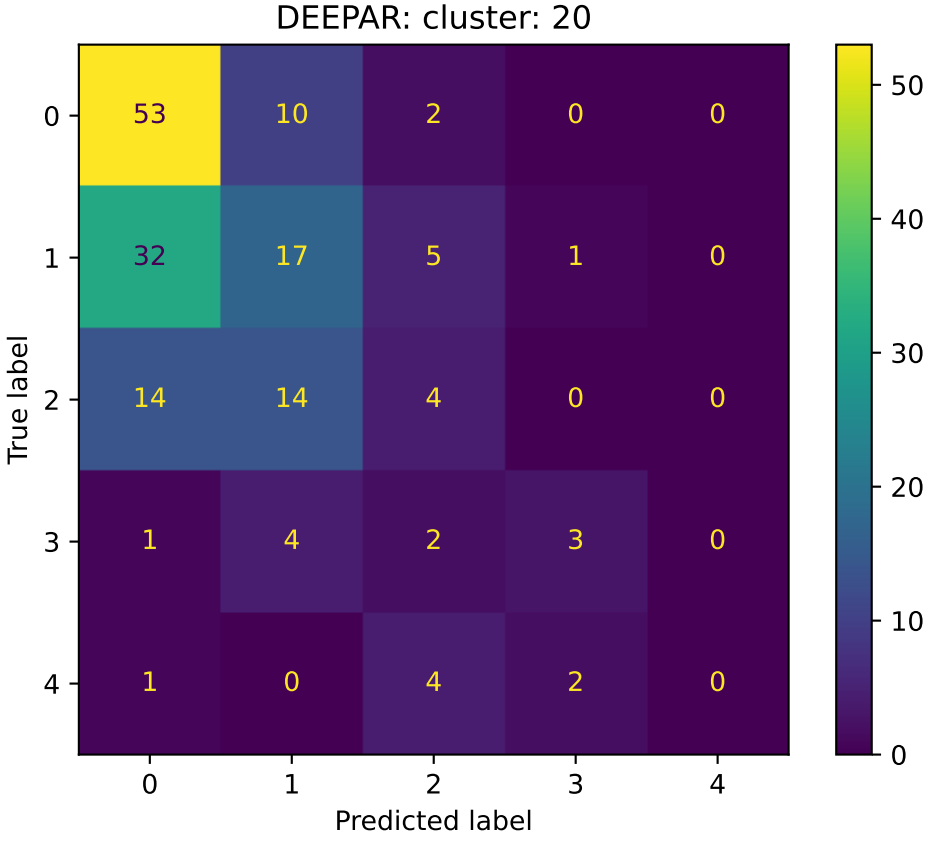

DEEPAR: cluster: 16
True label
Predicted label
0
1
2
3
4
60
12
1
0
0
28
21
2
1
0
12
13
4
1
0
5
2
1
0
0
0
4
1
1
0
60
50
40
30
20
10
0

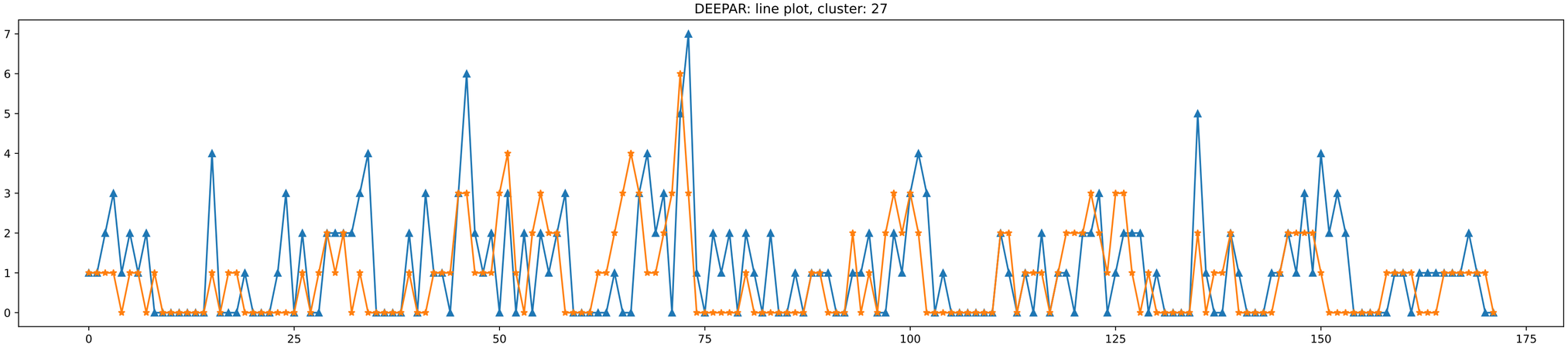

DEEPAR: line plot, cluster: 20
0
1
2
3
4
5
0
25
50
75
100
125
150
175

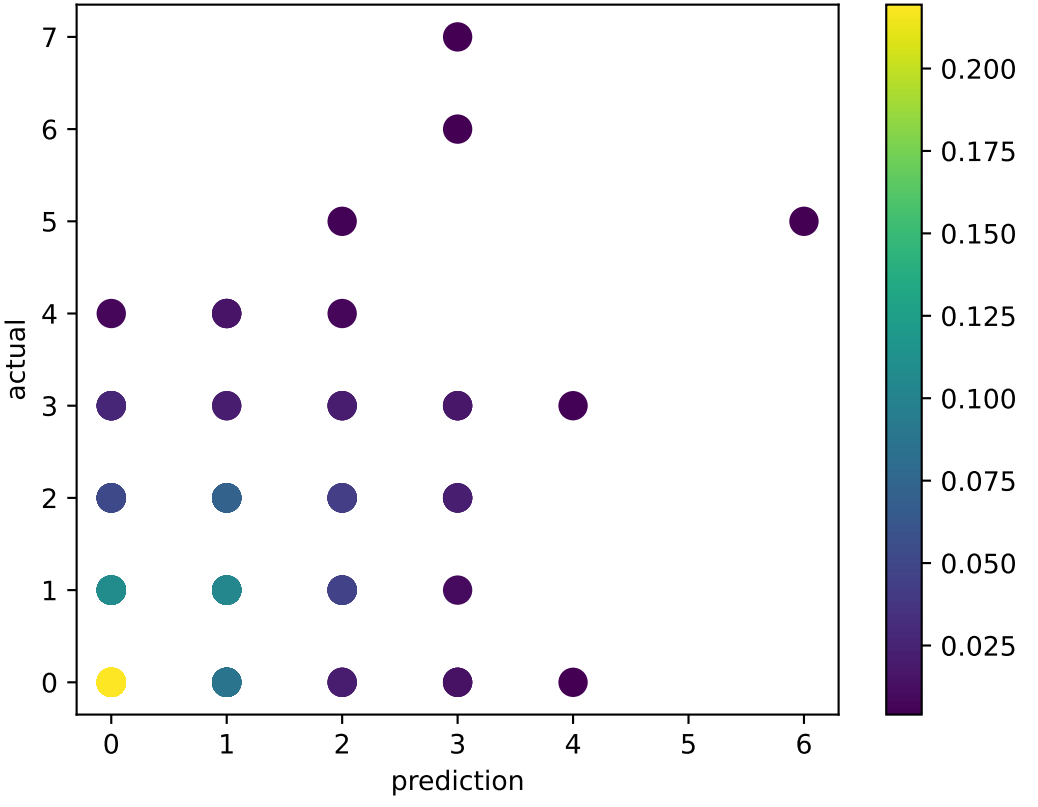

actual
prediction
0
1
2
3
4
5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
0.30
0.25
0.20
0.15
0.10
0.05

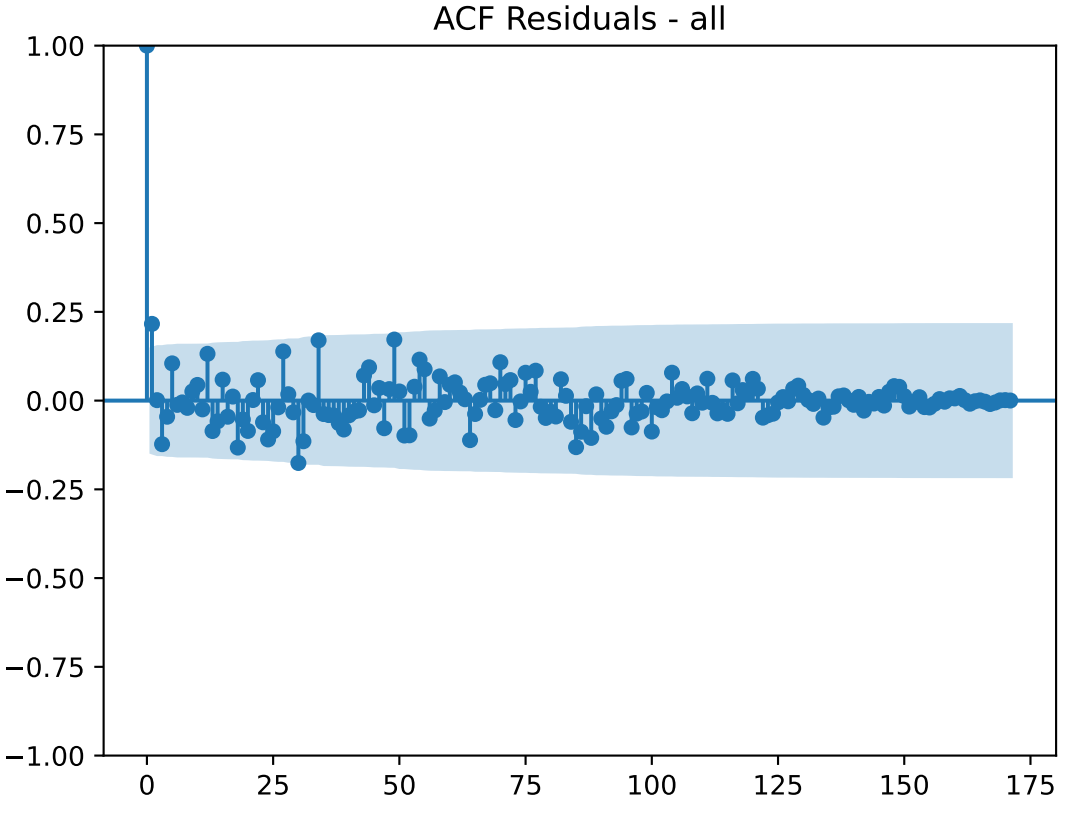

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

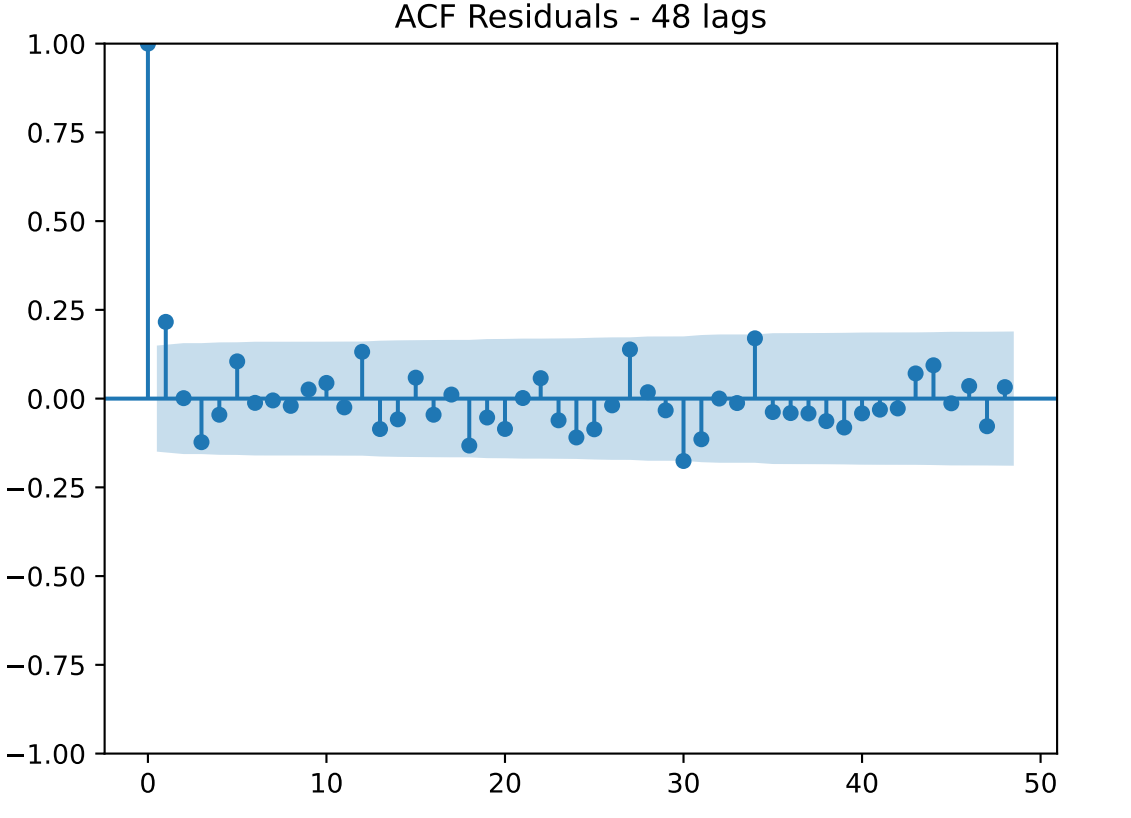

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

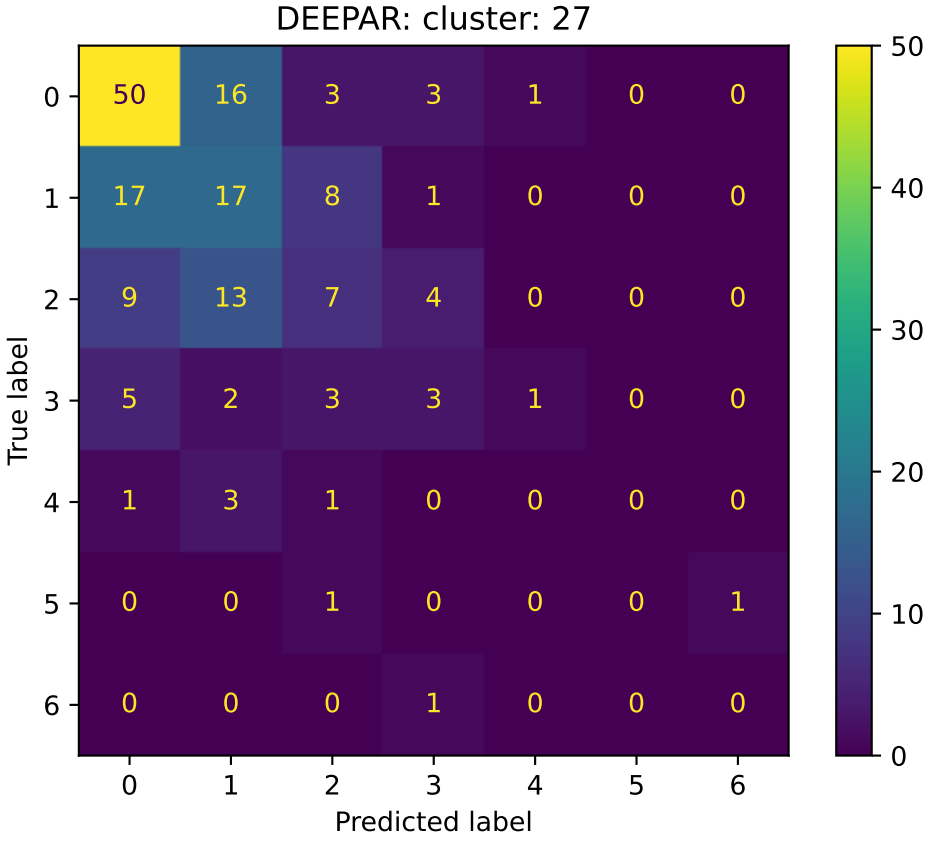

DEEPAR: cluster: 20
True label
Predicted label
0
1
2
3
4
53
10
2
0
0
32
17
5
1
0
14
14
4
0
0
1
4
2
3
0
1
0
4
2
0
50
40
30
20
10
0

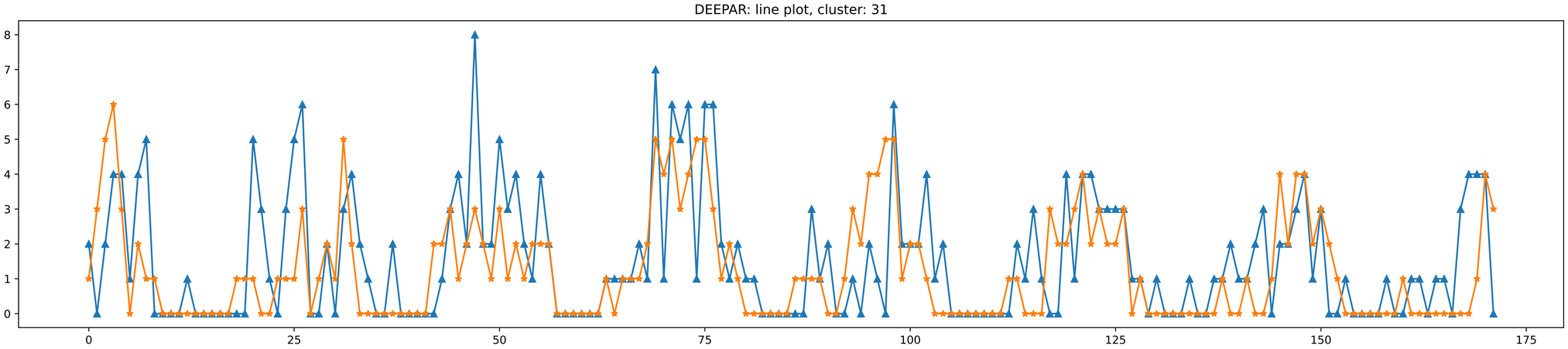

DEEPAR: line plot, cluster: 27
0
1
2
3
4
5
6
7
0
25
50
75
100
125
150
175

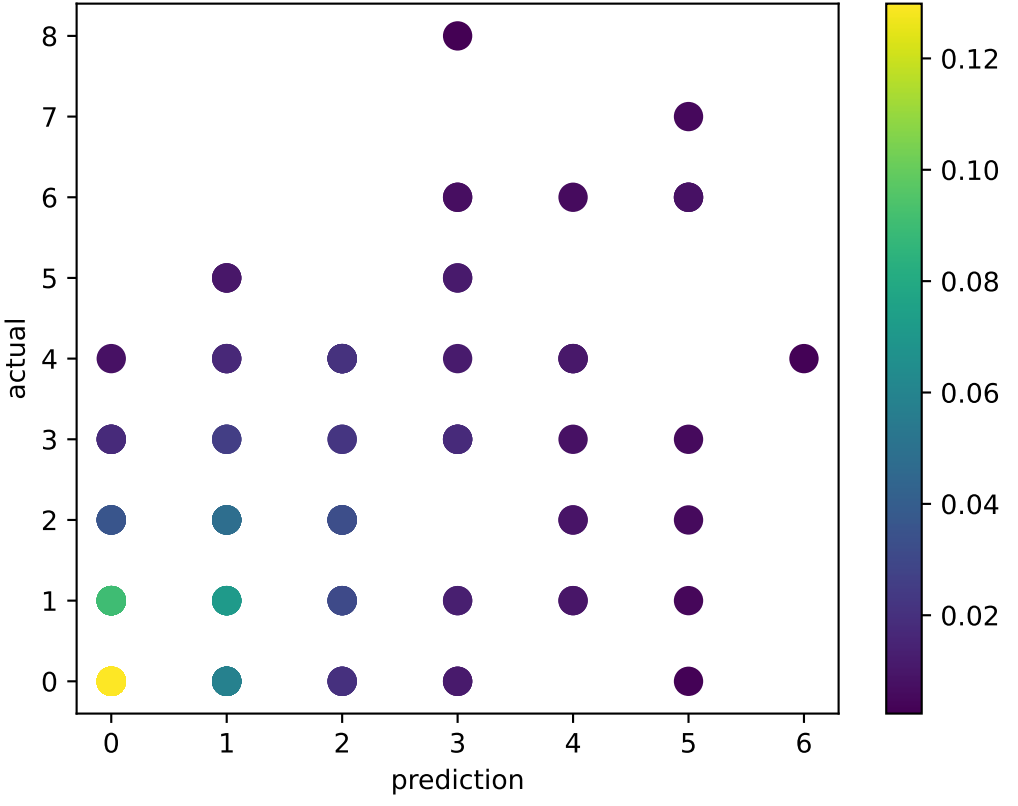

actual
prediction
0
1
2
3
4
5
6
7
0.200
0.175
0.150
0.125
0.100
0.075
0.050
0.025

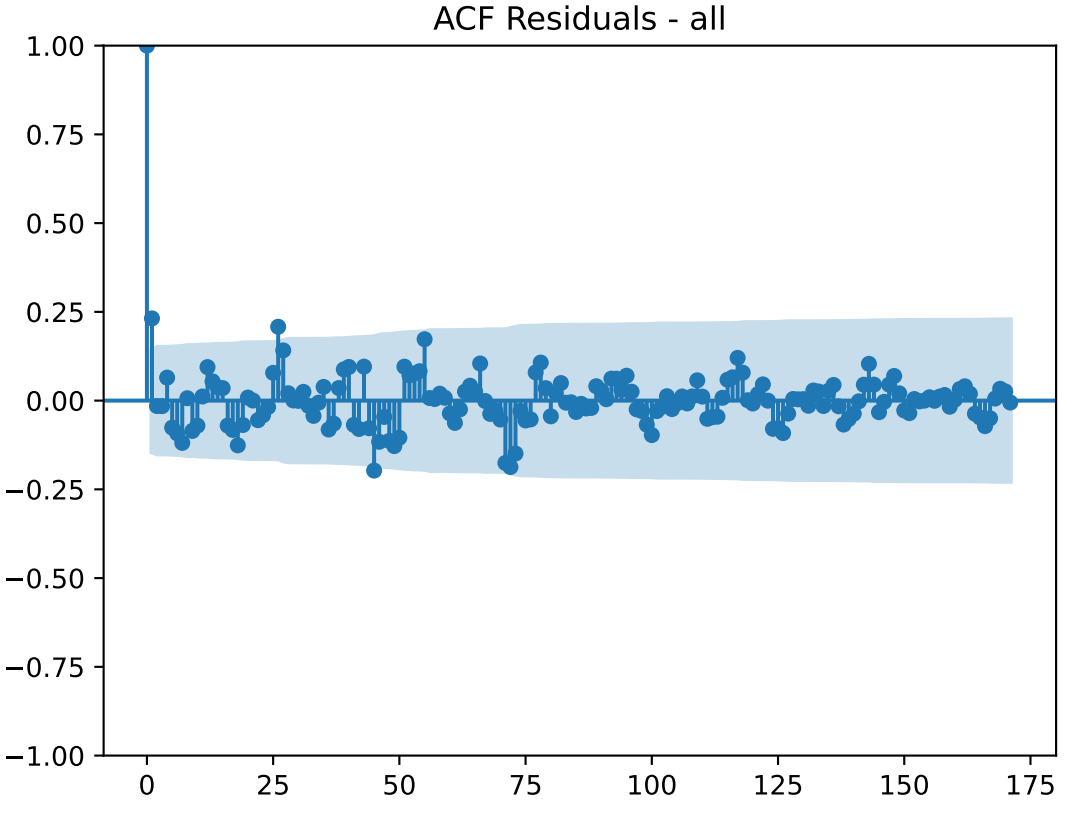

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

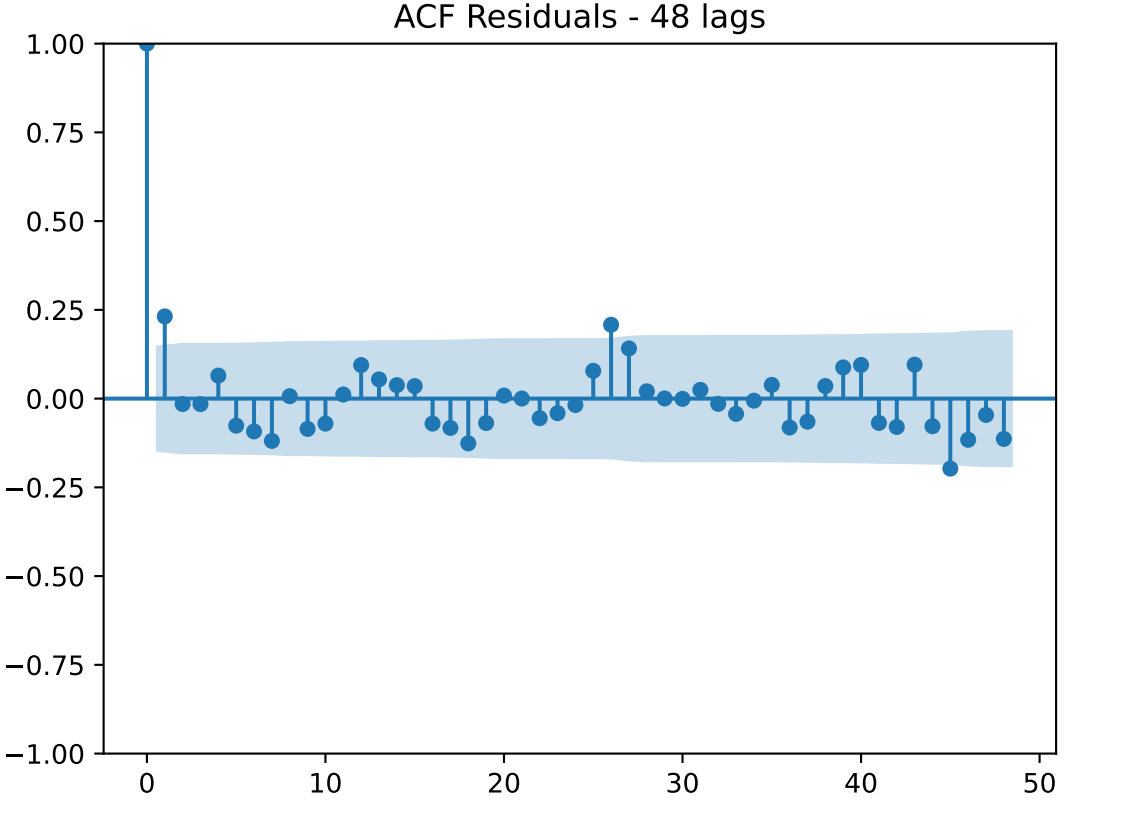

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

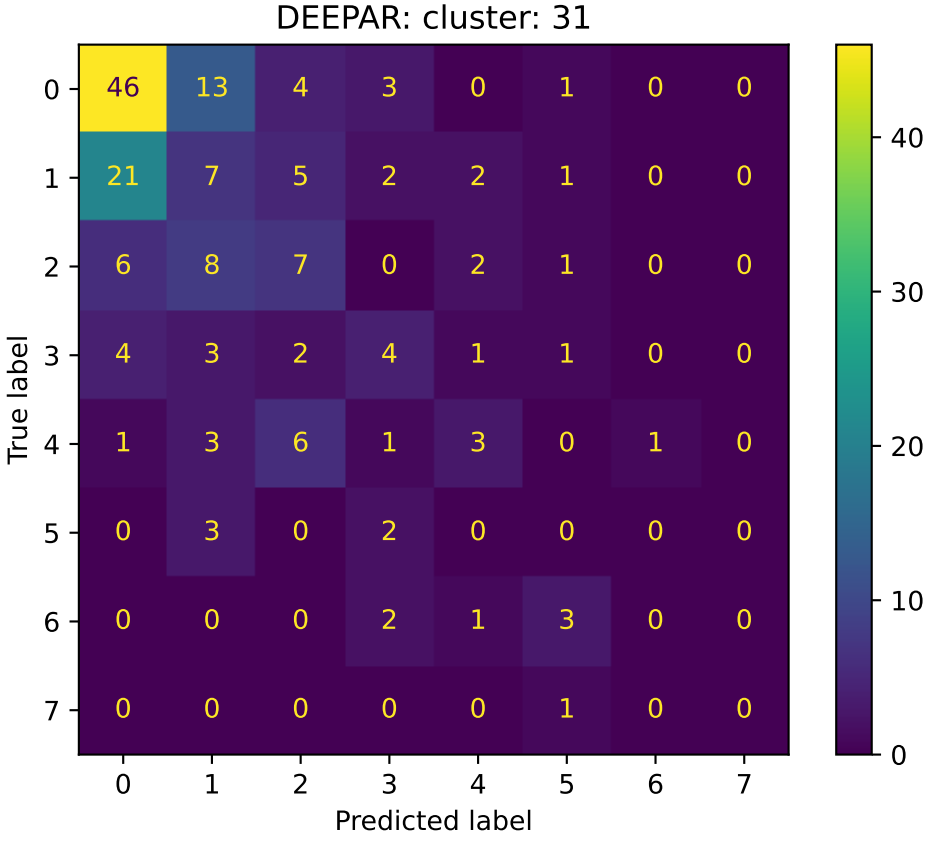

DEEPAR: cluster: 27
True label
Predicted label
0
1
2
3
4
5
6
50 16 3 3 1 0 0
17 17 8 1 0 0 0
9 13 7 4 0 0 0
5 2 3 3 1 0 0
1 3 1 0 0 0 0
0 0 1 0 0 0 1
0 0 0 1 0 0 0
50
40
30
20
10
0

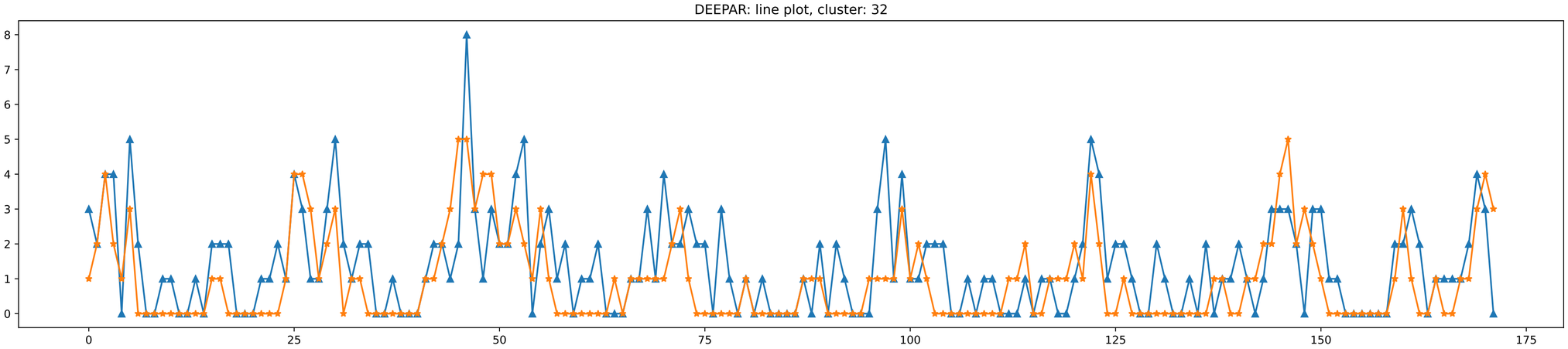

DEEPAR: line plot, cluster: 31
0
1
2
3
4
5
6
7
8
0
25
50
75
100
125
150
175

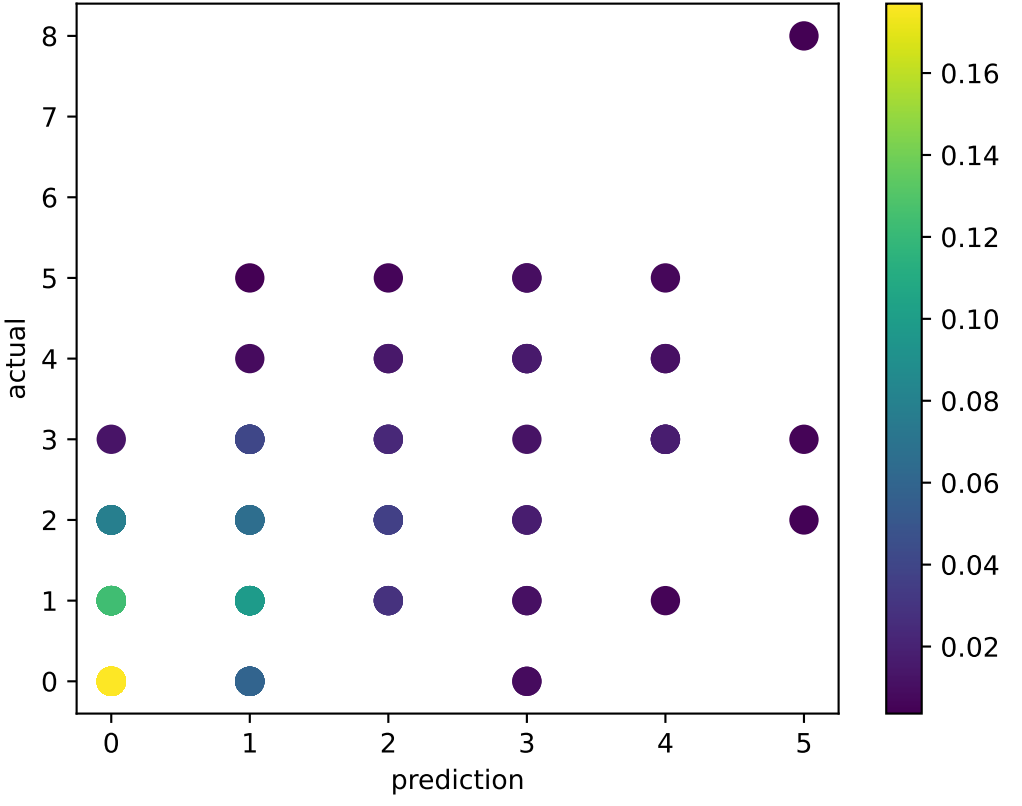

actual
prediction
0
1
2
3
4
5
6
7
8
0.12
0.10
0.08
0.06
0.04
0.02

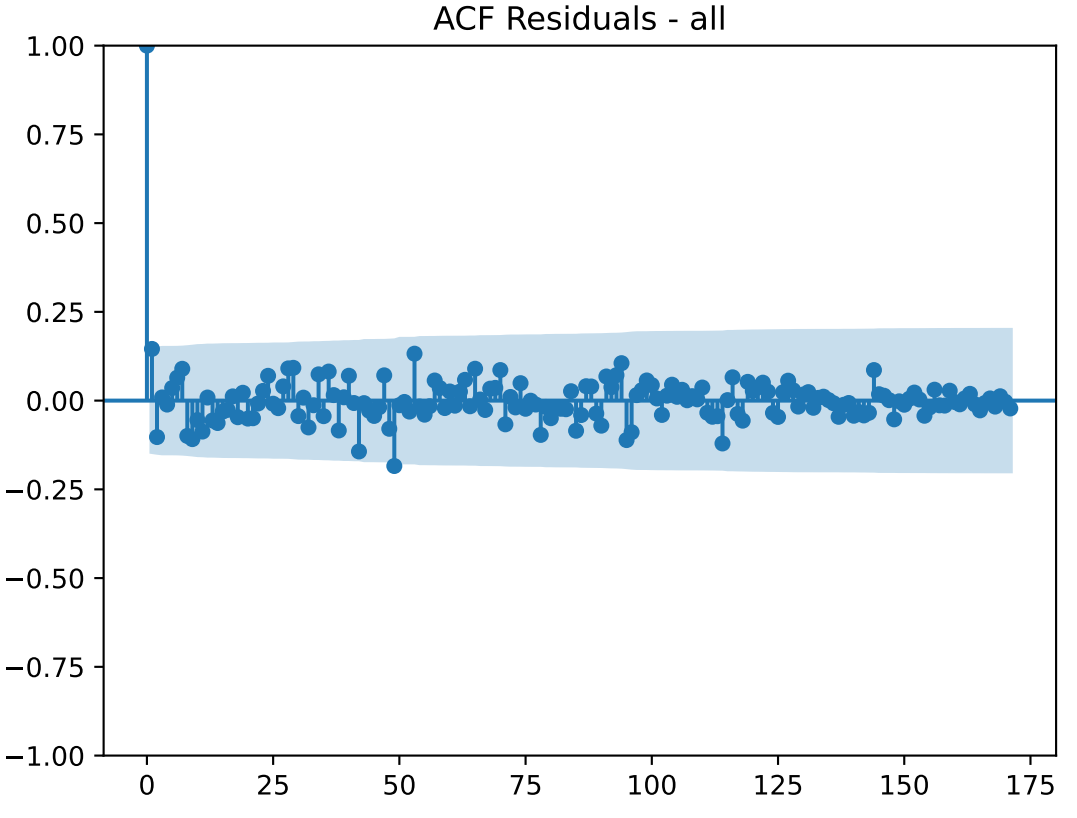

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

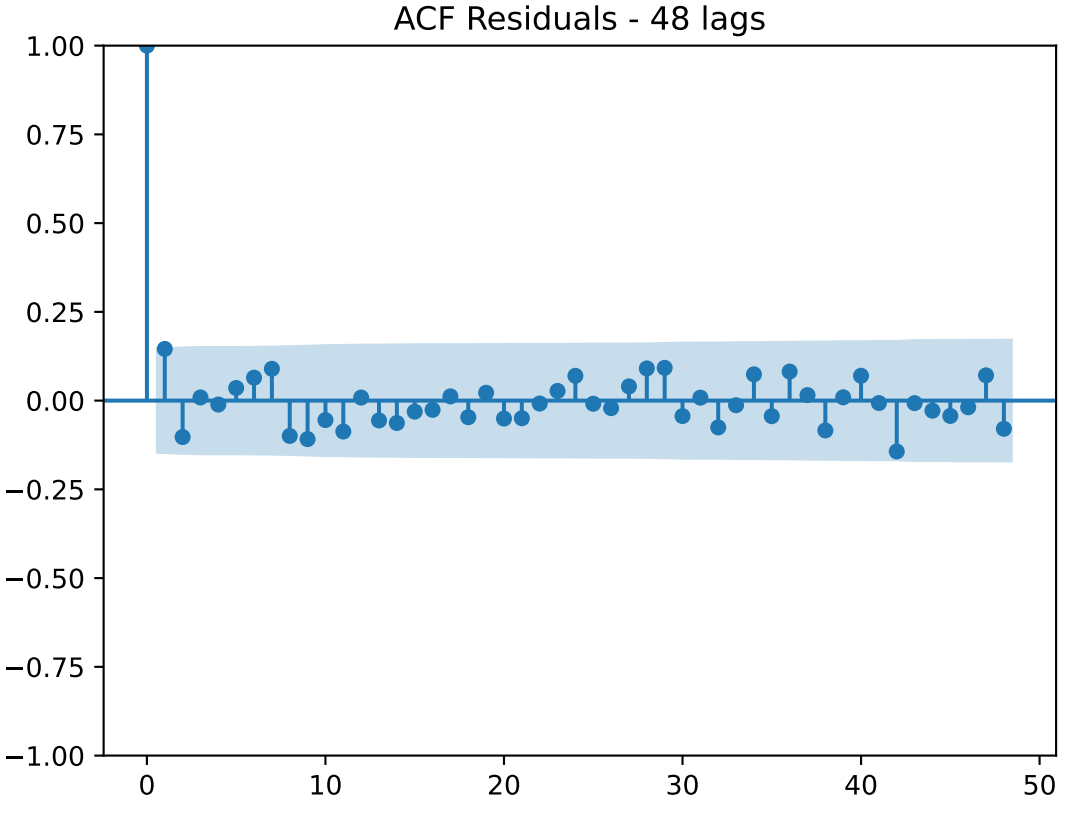

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

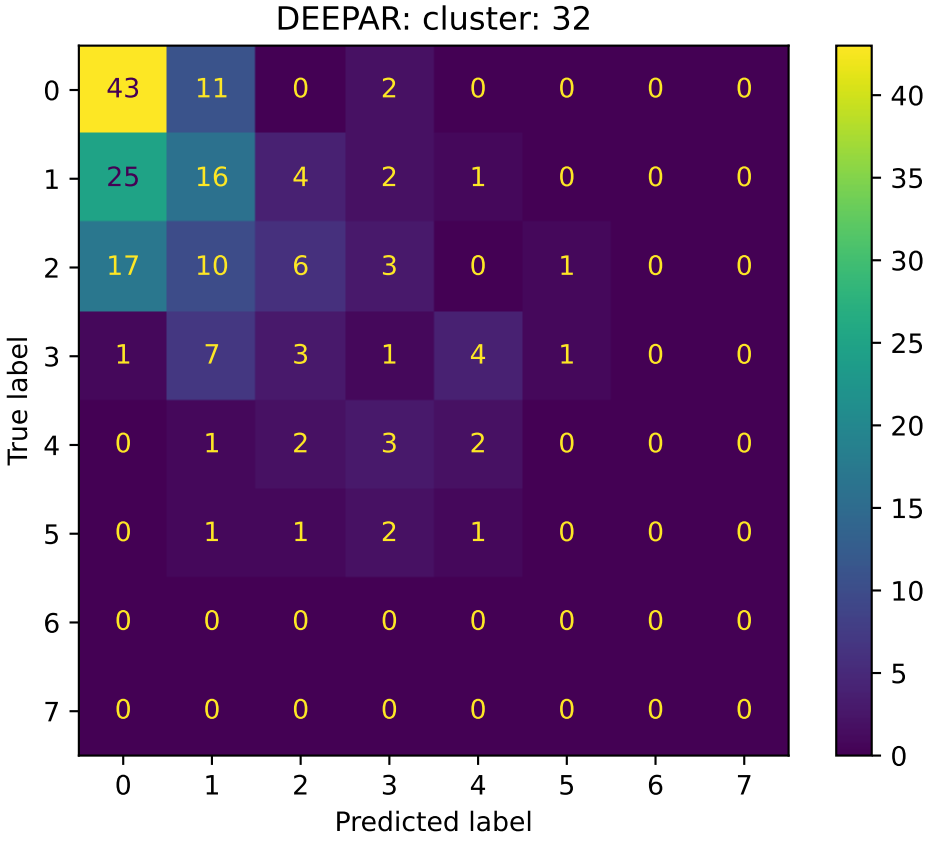

DEEPAR: cluster: 31
True label
Predicted label
0 1 2 3 4 5 6 7
46 13 4 3 0 1 0 0
21 7 5 2 2 1 0 0
6 8 7 0 2 1 0 0
4 3 2 4 1 1 0 0
1 3 6 1 3 0 1 0
0 3 0 2 0 0 0 0
0 0 0 2 1 3 0 0
0 0 0 0 0 1 0 0
0 10 20 30 40

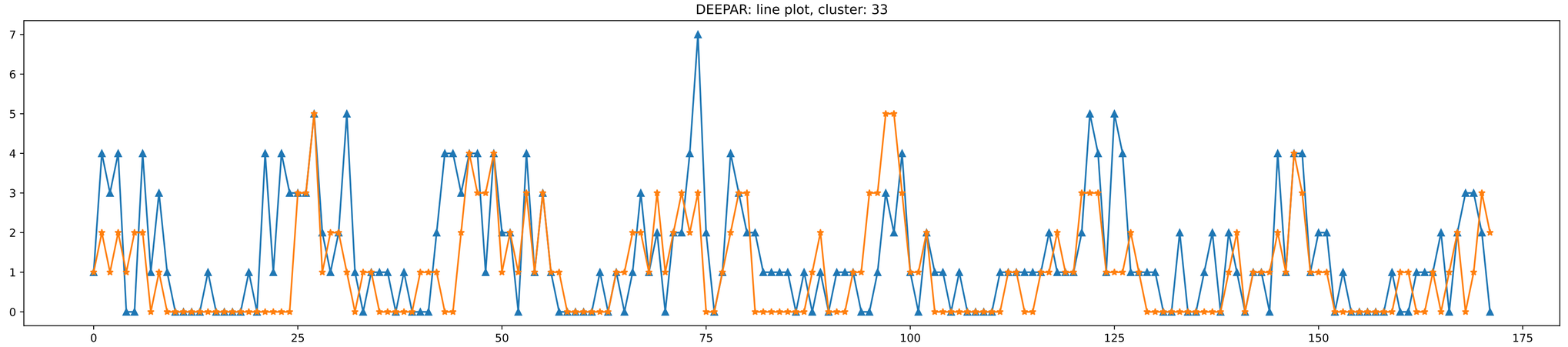

DEEPAR: line plot, cluster: 32
8
7
6
5
4
3
2
1
0
0
25
50
75
100
125
150
175

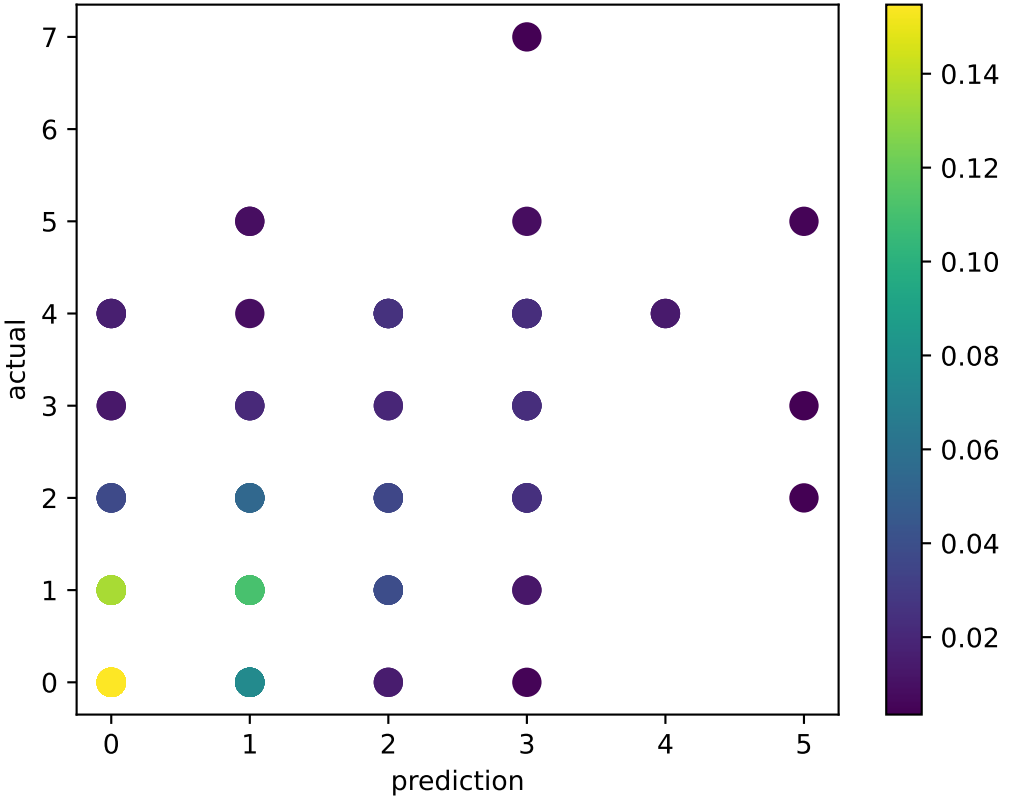

actual
prediction
0
1
2
3
4
5
6
7
8
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02

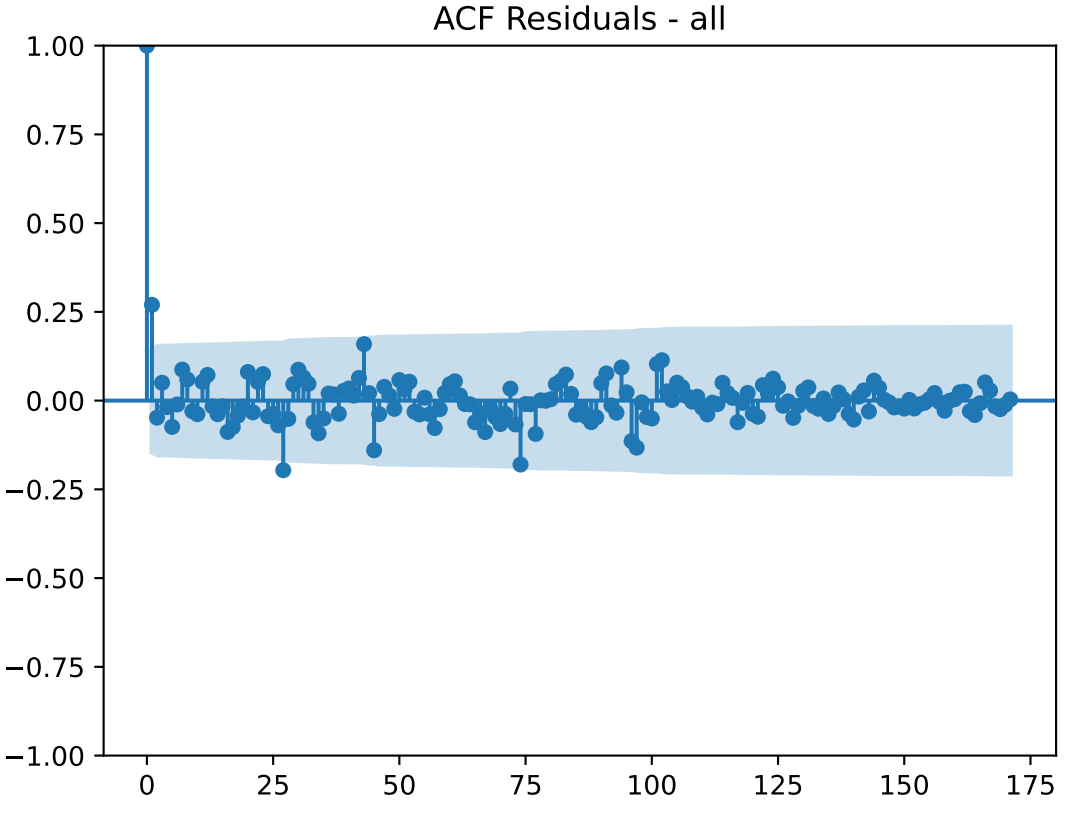

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

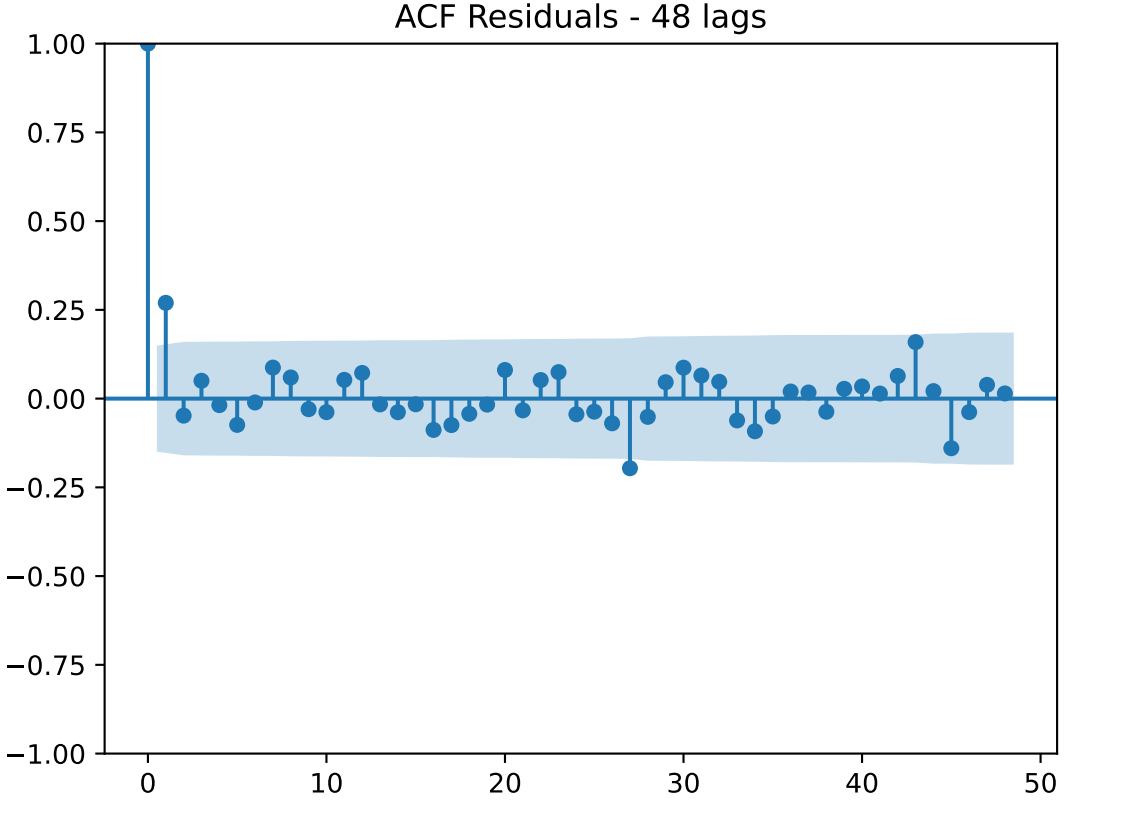

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

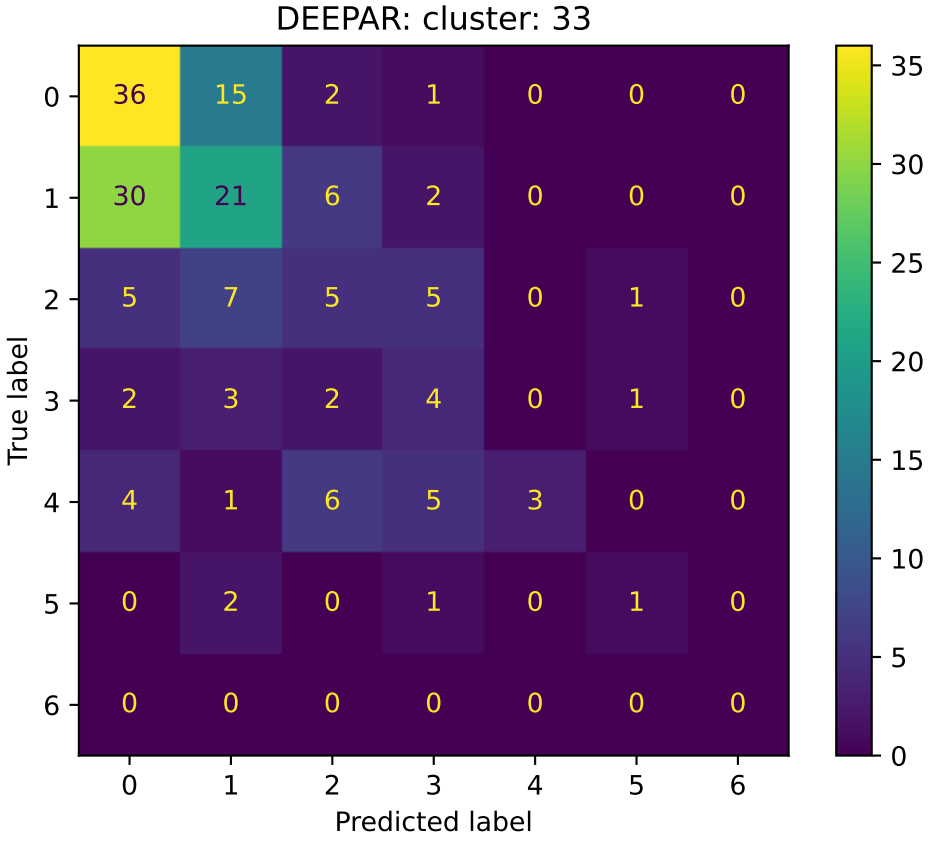

DEEPAR: cluster: 32
True label
Predicted label
0 1 2 3 4 5 6 7
43 11 0 2 0 0 0 0
25 16 4 2 1 0 0 0
17 10 6 3 0 1 0 0
1 7 3 1 4 1 0 0
0 1 2 3 2 0 0 0
0 1 1 2 1 0 0 0
0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0
0 5 10 15 20 25 30 35 40

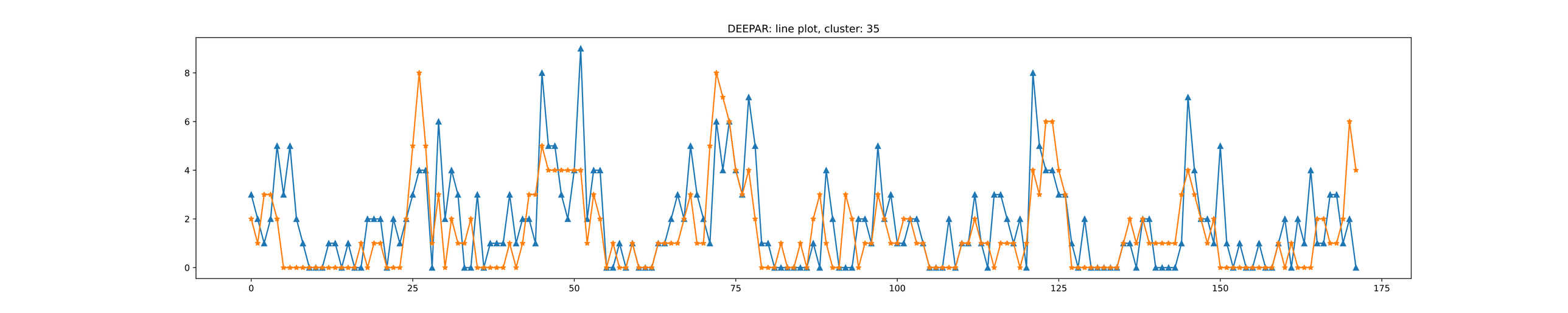

DEEPAR: line plot, cluster: 33
0
1
2
3
4
5
6
7
0
25
50
75
100
125
150
175

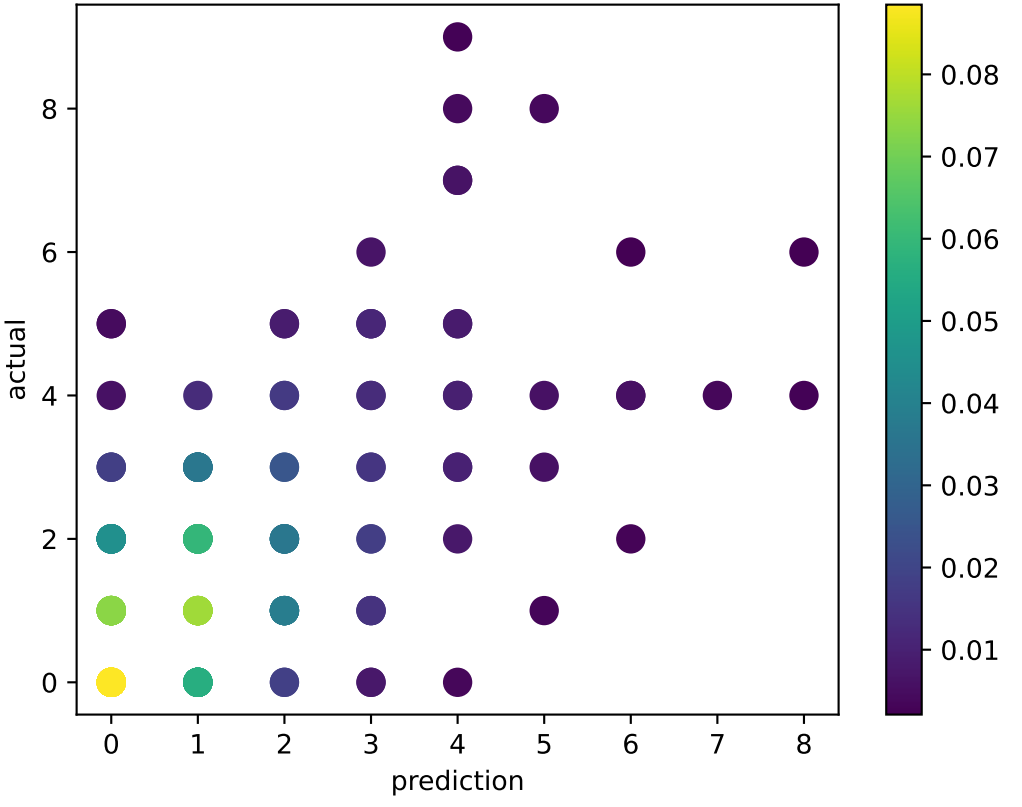

actual
prediction
0
1
2
3
4
5
6
7
0.14
0.12
0.10
0.08
0.06
0.04
0.02

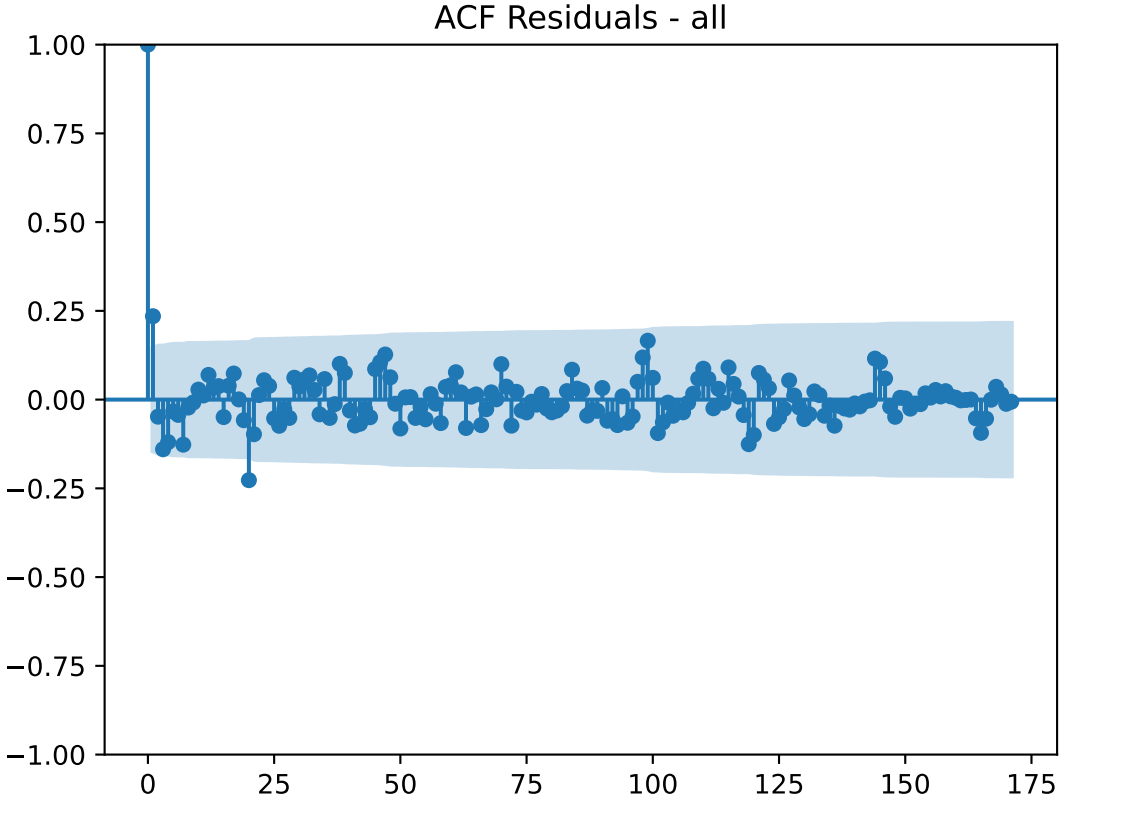

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

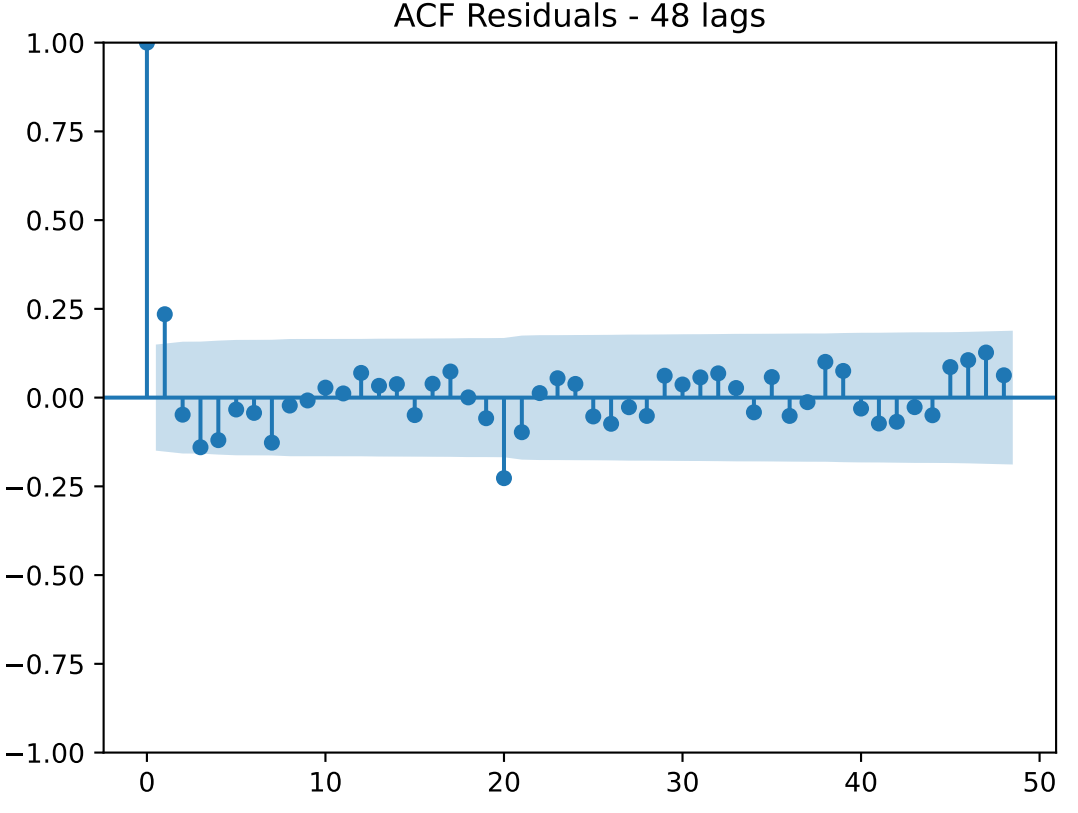

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

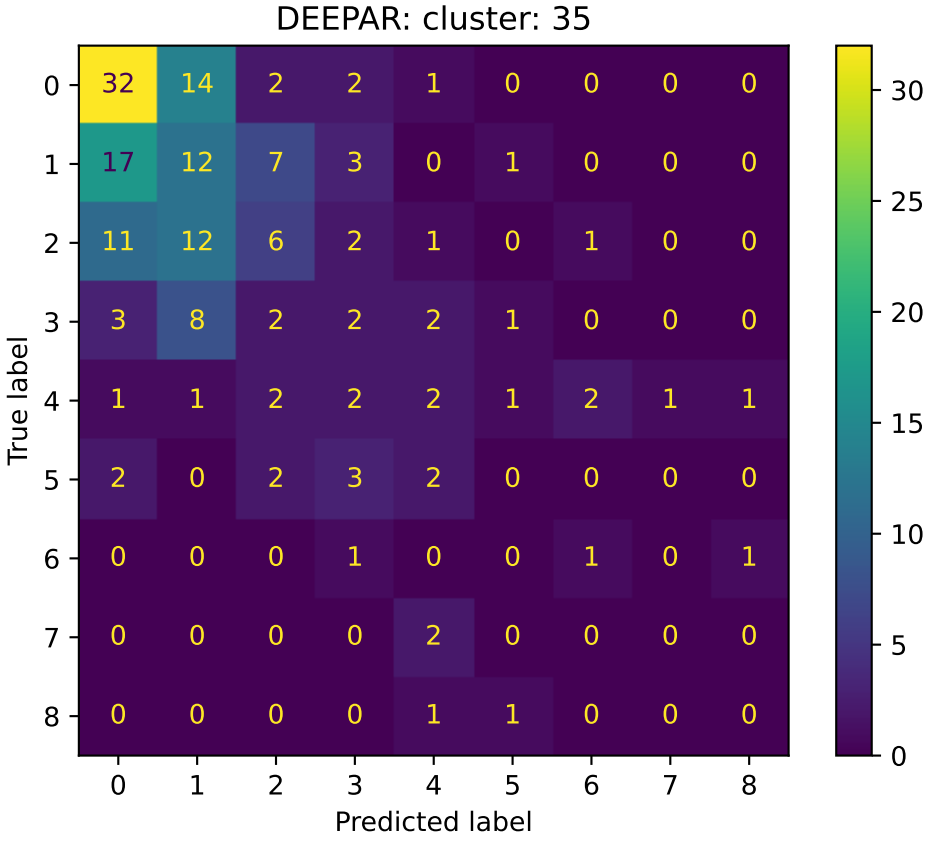

DEEPAR: cluster: 33
True label
Predicted label
0 1 2 3 4 5 6
36 15 2 1 0 0 0
30 21 6 2 0 0 0
5 7 5 5 0 1 0
2 3 2 4 0 1 0
4 1 6 5 3 0 0
0 2 0 1 0 1 0
0 0 0 0 0 0 0
35 30 25 20 15 10 5 0

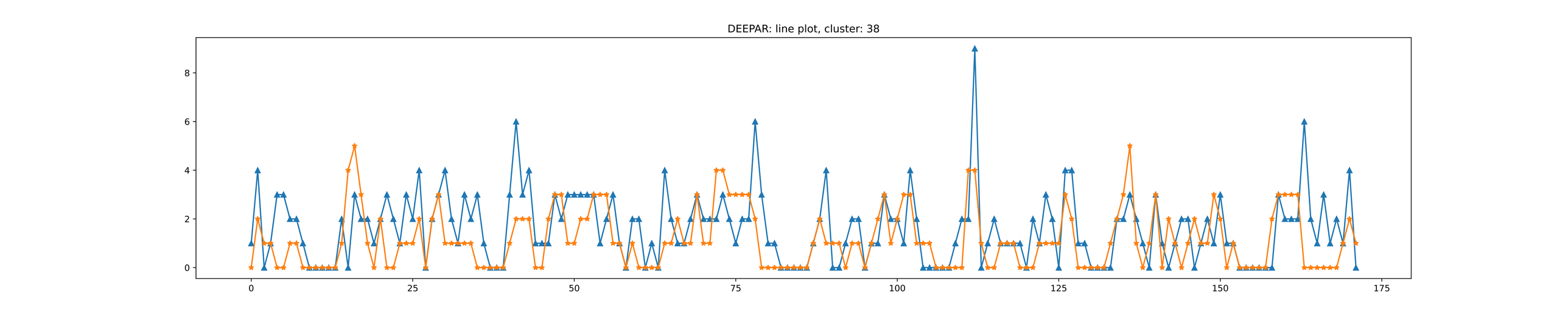

DEEPAR: line plot, cluster: 35
0
2
4
6
8
0
25
50
75
100
125
150
175

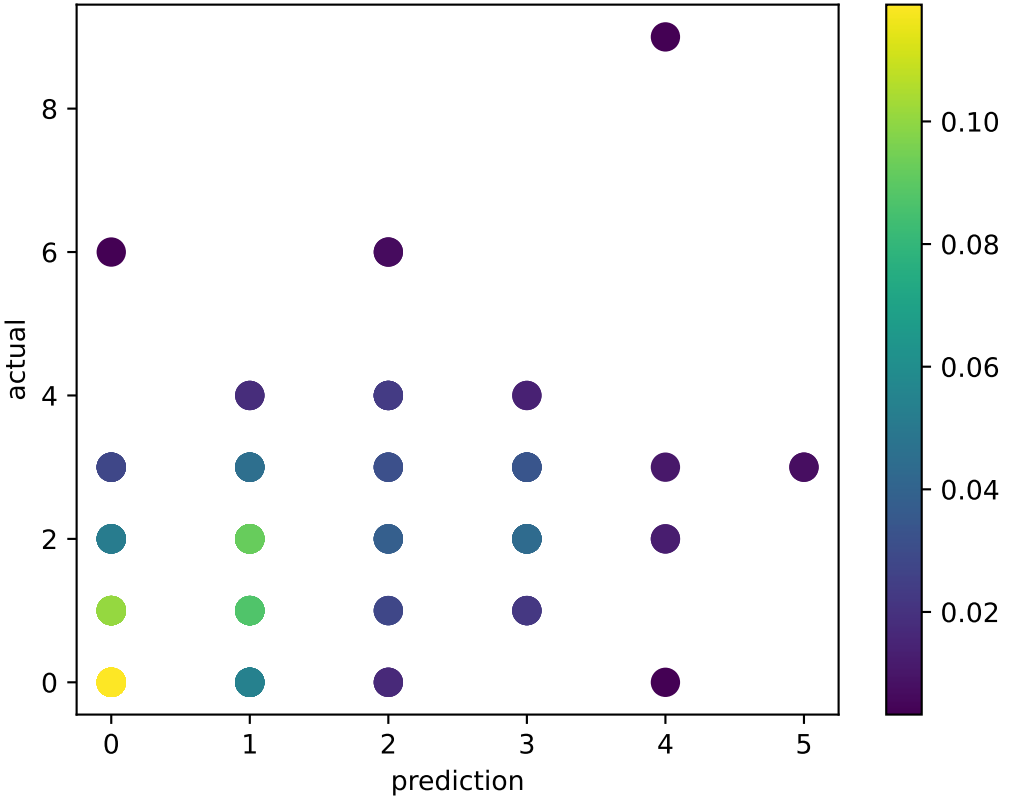

actual
prediction
0
1
2
3
4
5
6
7
8
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01

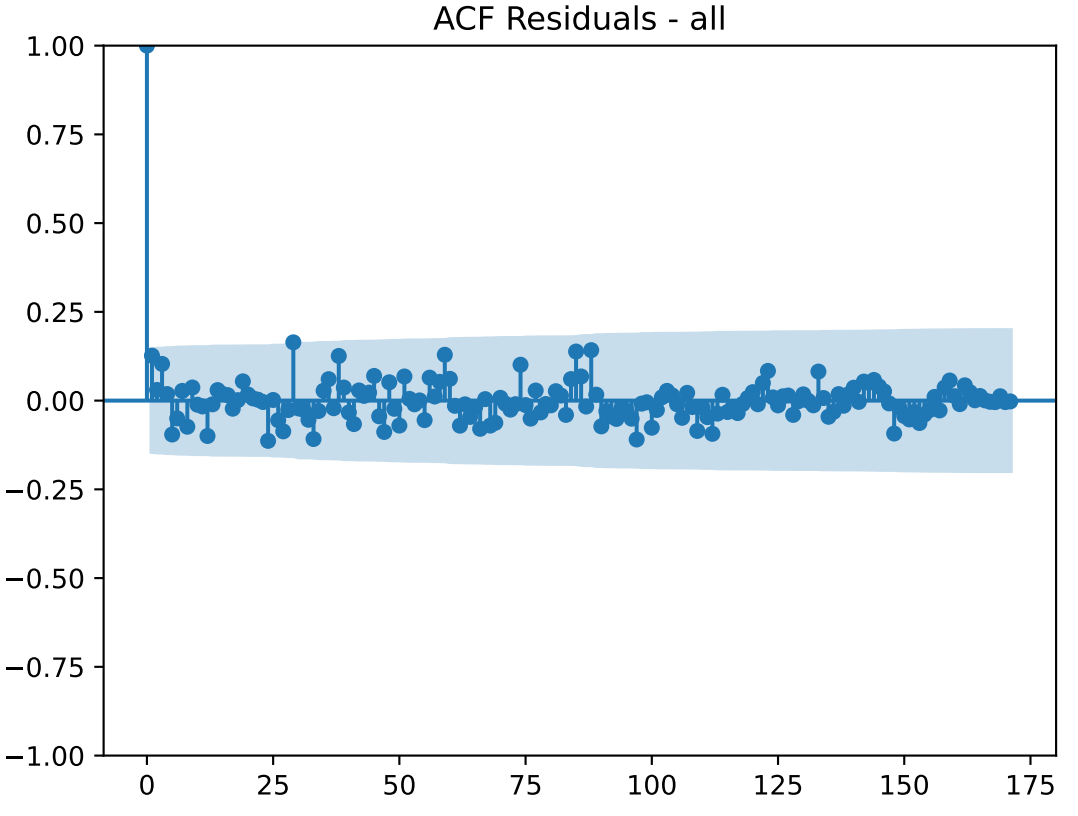

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

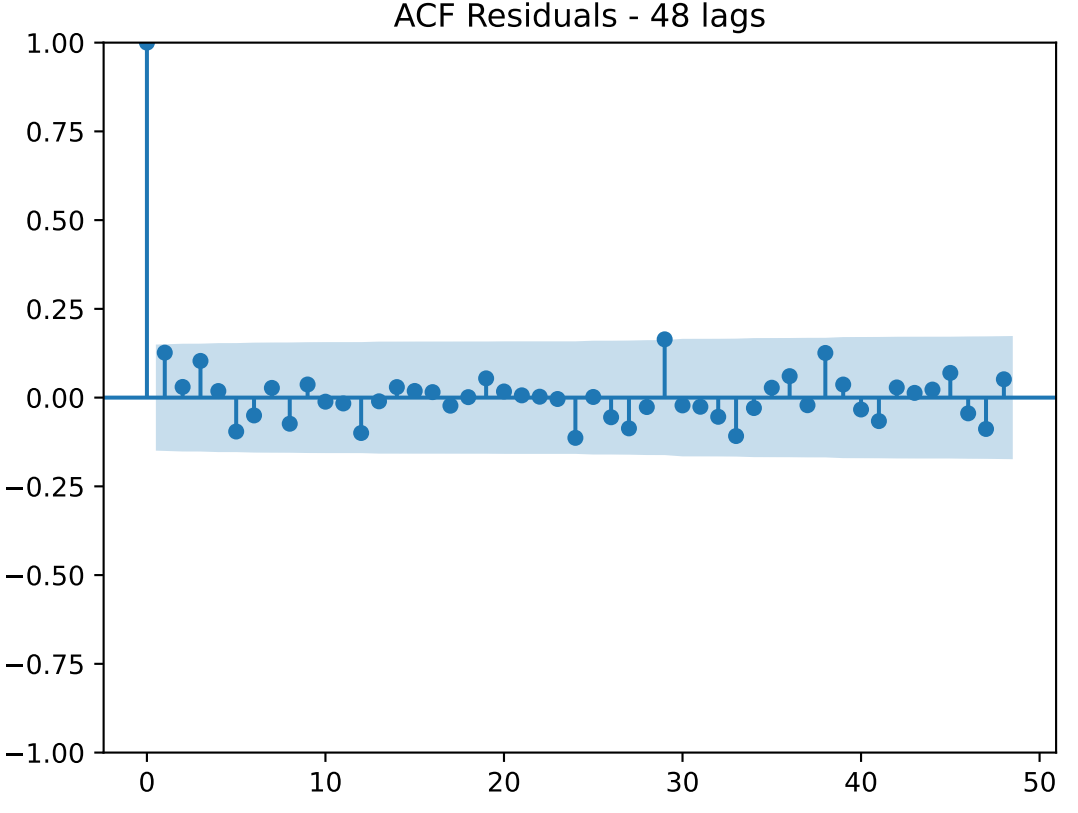

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

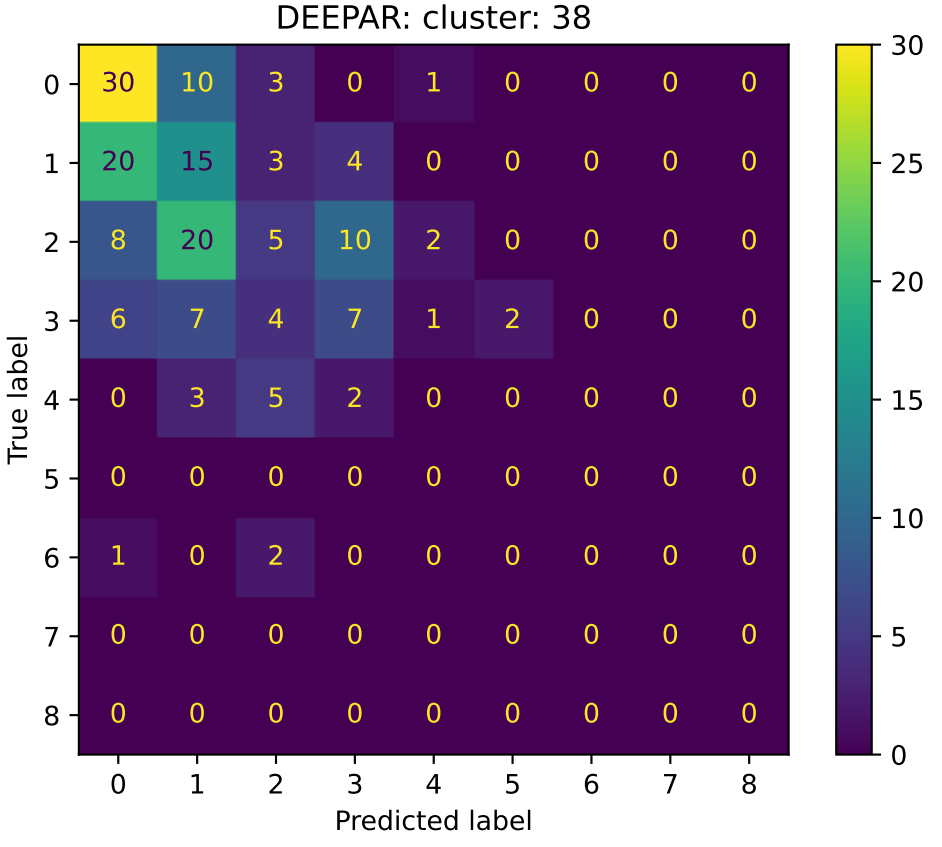

DEEPAR: cluster: 35
True label
Predicted label
0 1 2 3 4 5 6 7 8
32 14 2 2 1 0 0 0 0
17 12 7 3 0 1 0 0 0
11 12 6 2 1 0 1 0 0
3 8 2 2 2 1 0 0 0
1 1 2 2 2 1 2 1 1
2 0 2 3 2 0 0 0 0
0 0 0 1 0 0 1 0 1
0 0 0 0 2 0 0 0 0
0 0 0 0 1 1 0 0 0
30 25 20 15 10 5 0

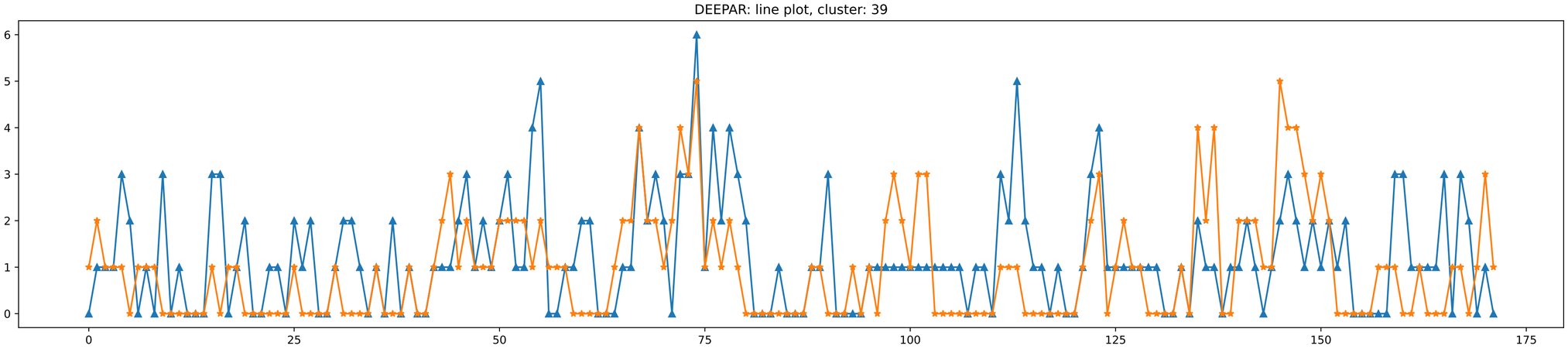

DEEPAR: line plot, cluster: 38
0
2
4
6
8
0
25
50
75
100
125
150
175

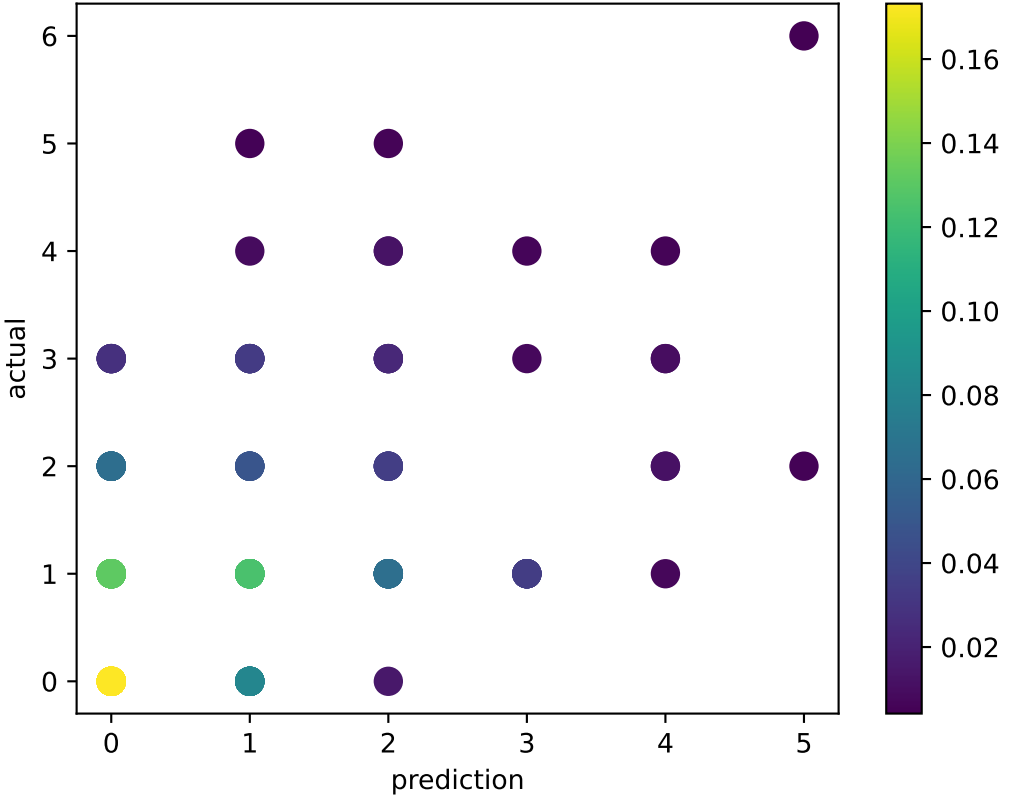

actual
prediction
0
1
2
3
4
5
0
2
4
6
8
0.02
0.04
0.06
0.08
0.10

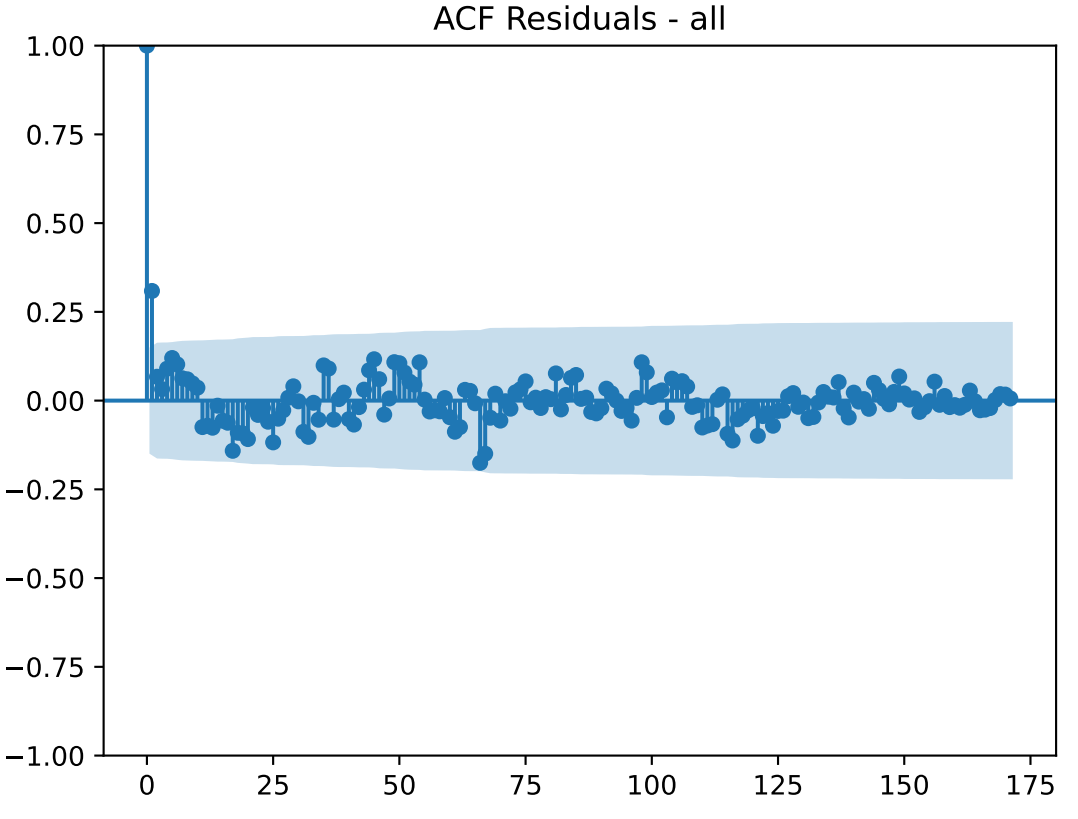

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

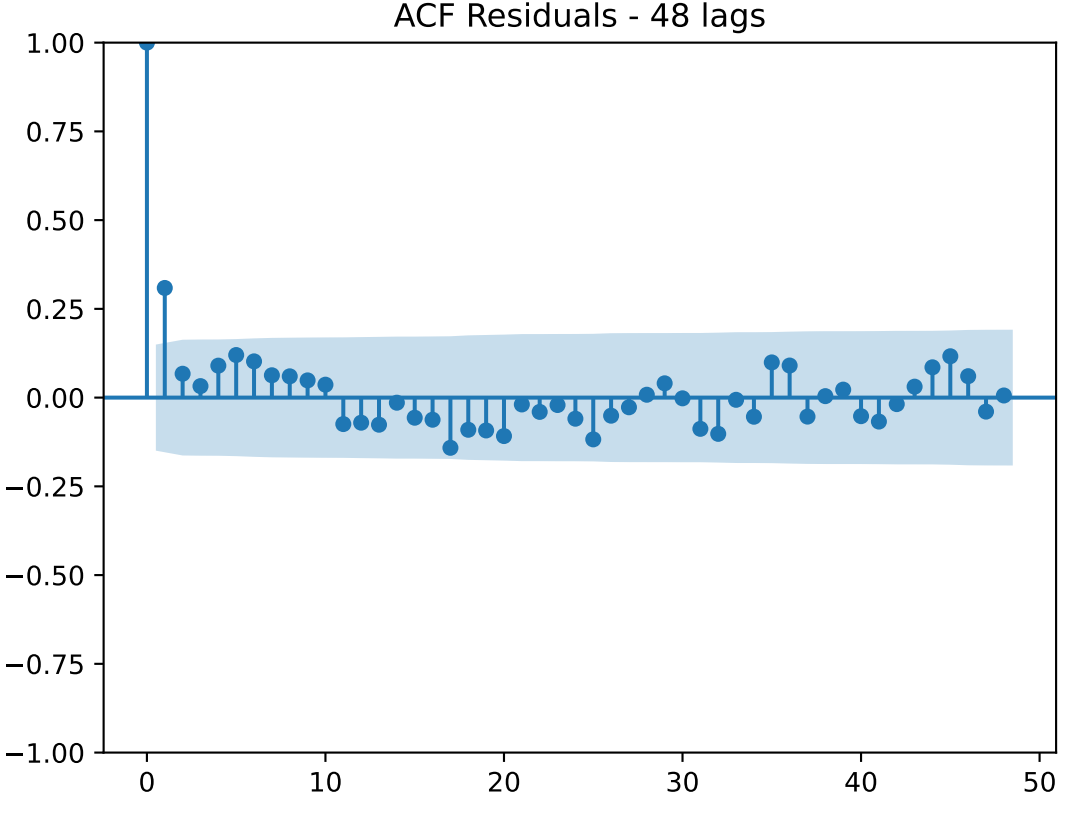

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

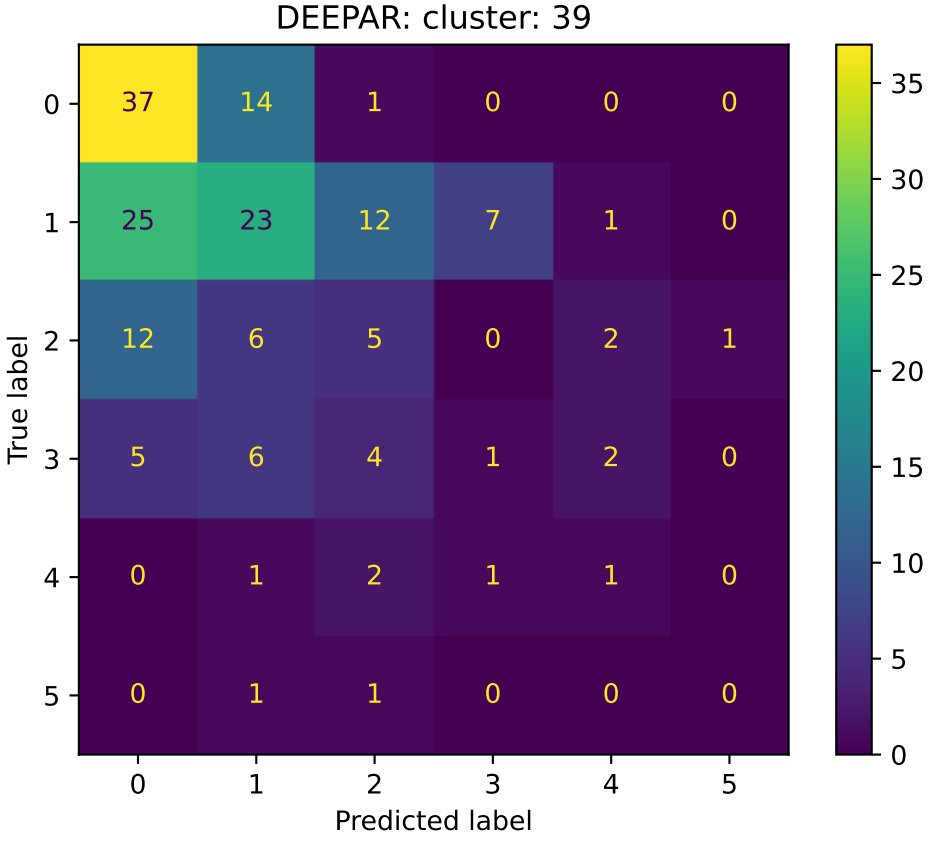

DEEPAR: cluster: 38
True label
Predicted label
0 30 10 3 0 1 0 0 0 0
1 20 15 3 4 0 0 0 0 0
2 8 20 5 10 2 0 0 0 0
3 6 7 4 7 1 2 0 0 0
4 0 3 5 2 0 0 0 0 0
5 0 0 0 0 0 0 0 0 0
6 1 0 2 0 0 0 0 0 0
7 0 0 0 0 0 0 0 0 0
8 0 0 0 0 0 0 0 0 0
0 1 2 3 4 5 6 7 8
30 25 20 15 10 5 0

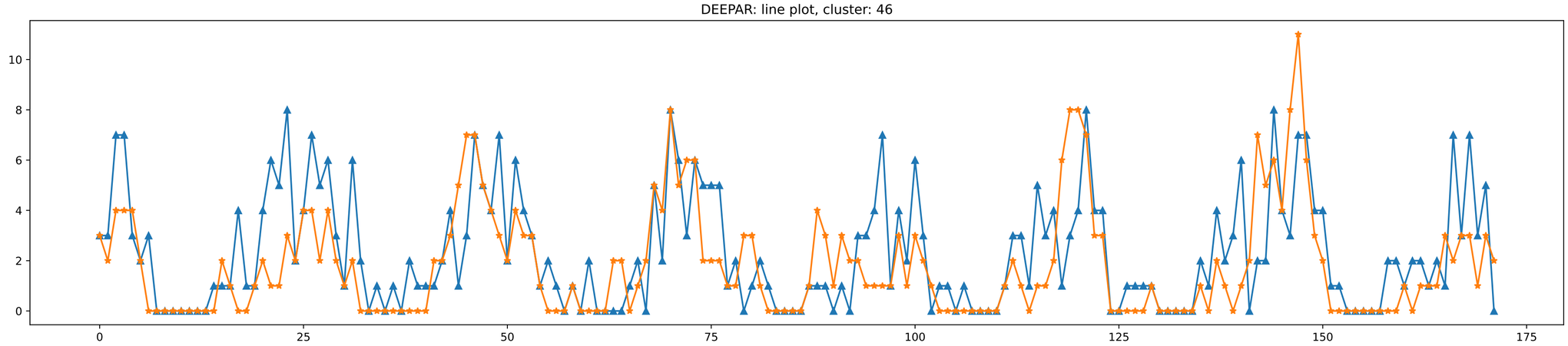

DEEPAR: line plot, cluster: 39
0
1
2
3
4
5
6
0
25
50
75
100
125
150
175

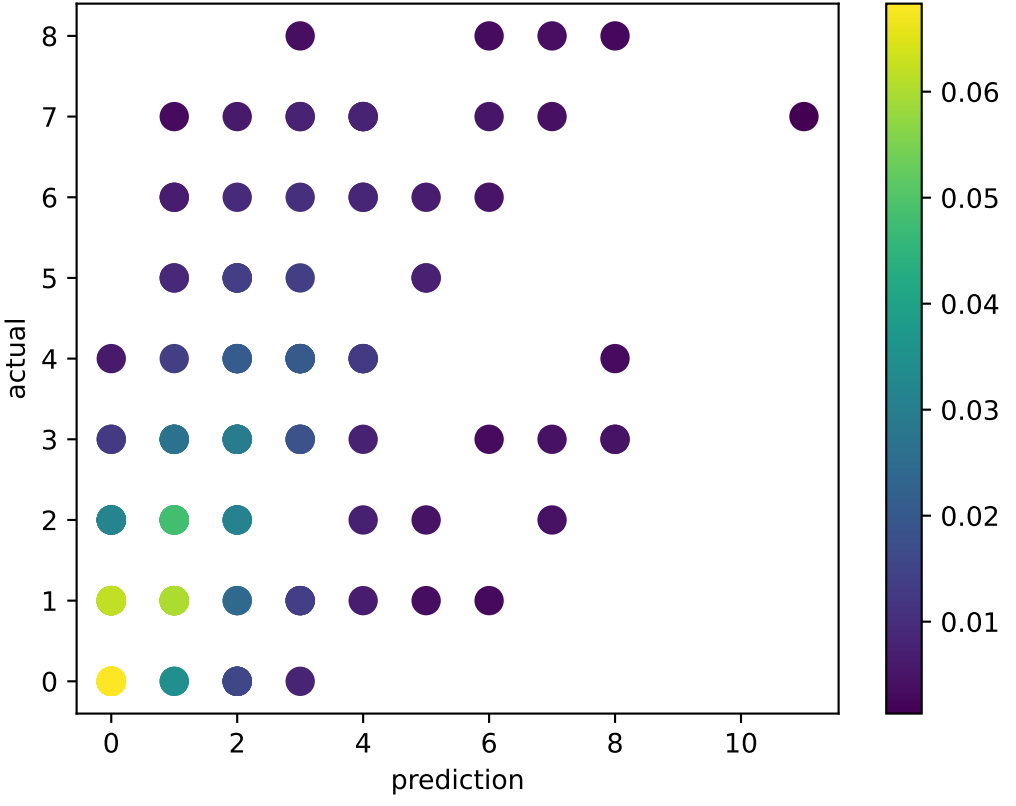

actual
prediction
0
1
2
3
4
5
6
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02

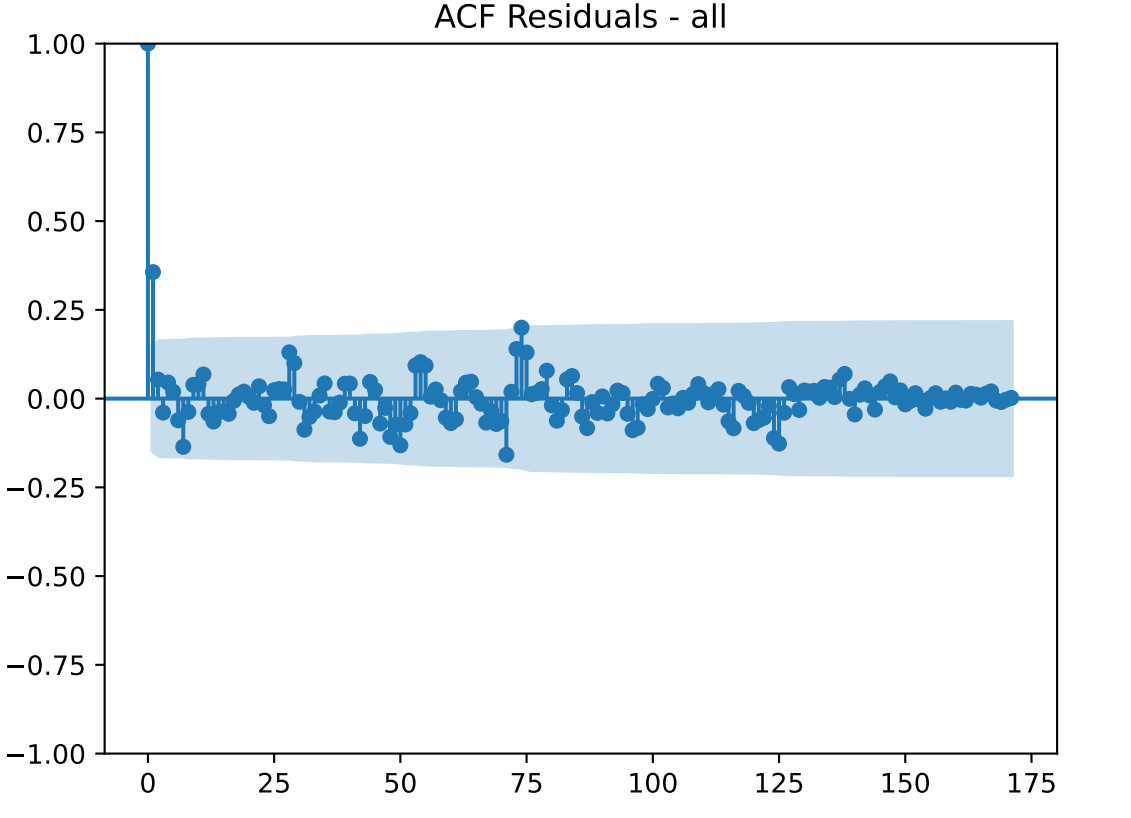

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

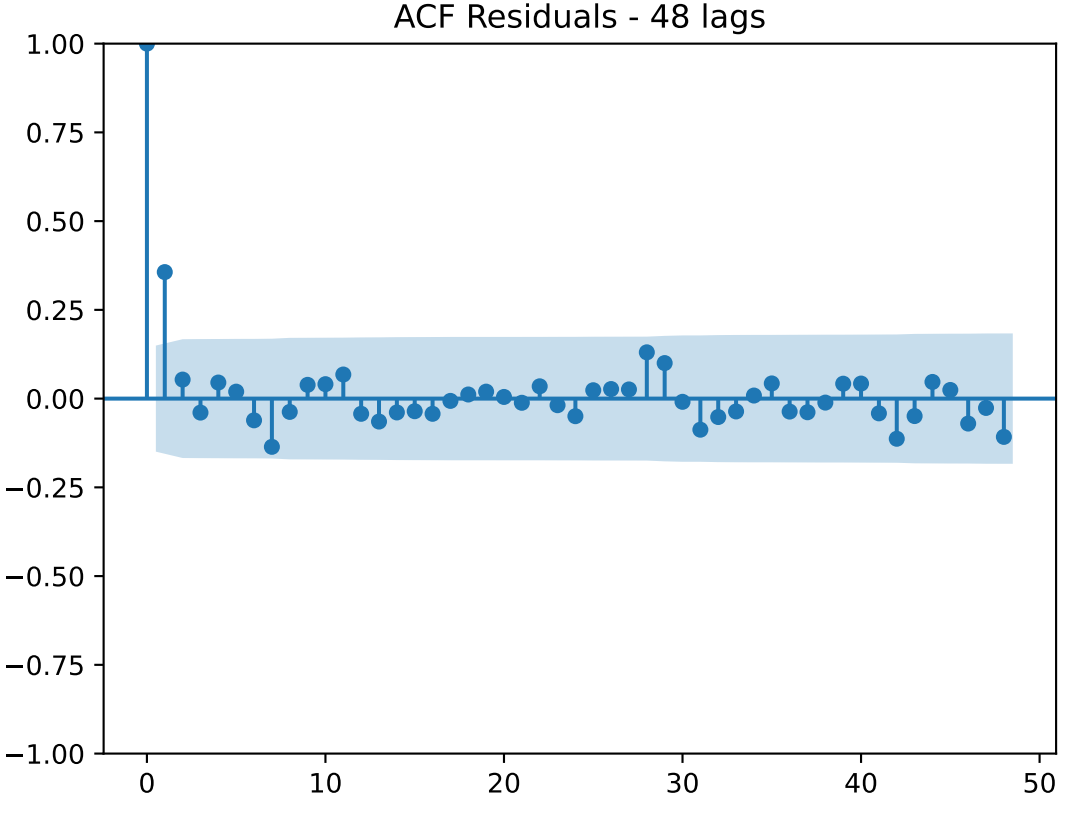

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

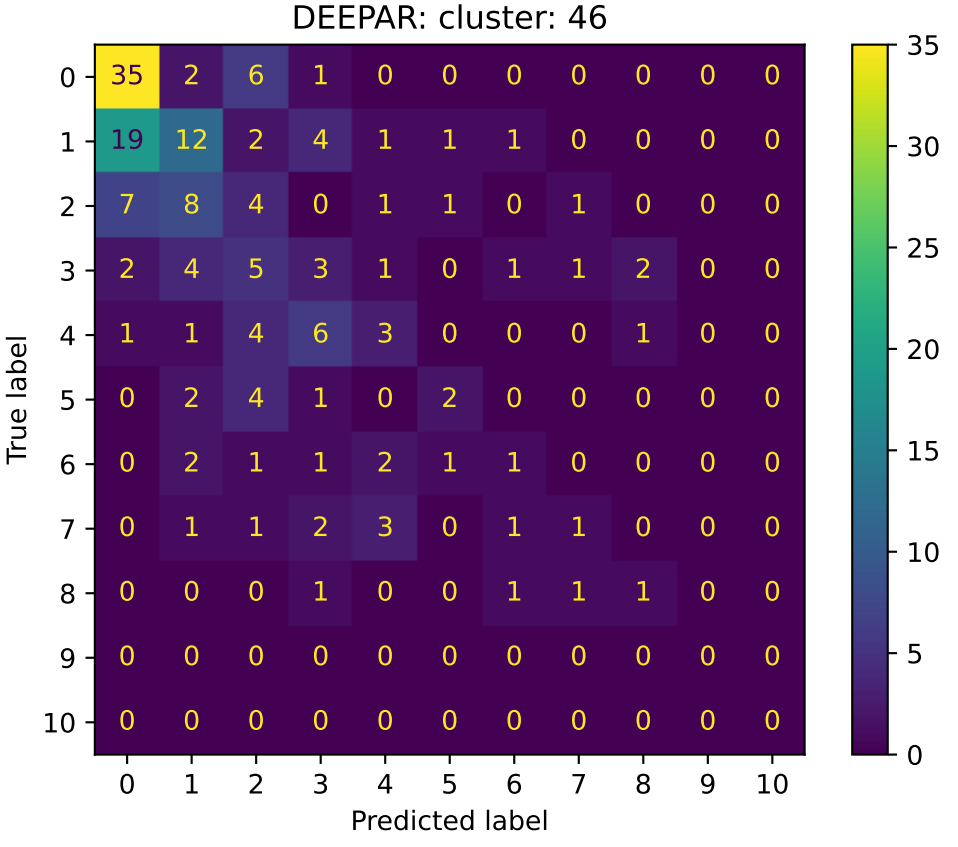

DEEPAR: cluster: 39
True label
Predicted label
0
1
2
3
4
5
37 14 1 0 0 0
25 23 12 7 1 0
12 6 5 0 2 1
5 6 4 1 2 0
0 1 2 1 1 0
0 1 1 0 0 0
35
30
25
20
15
10
5
0

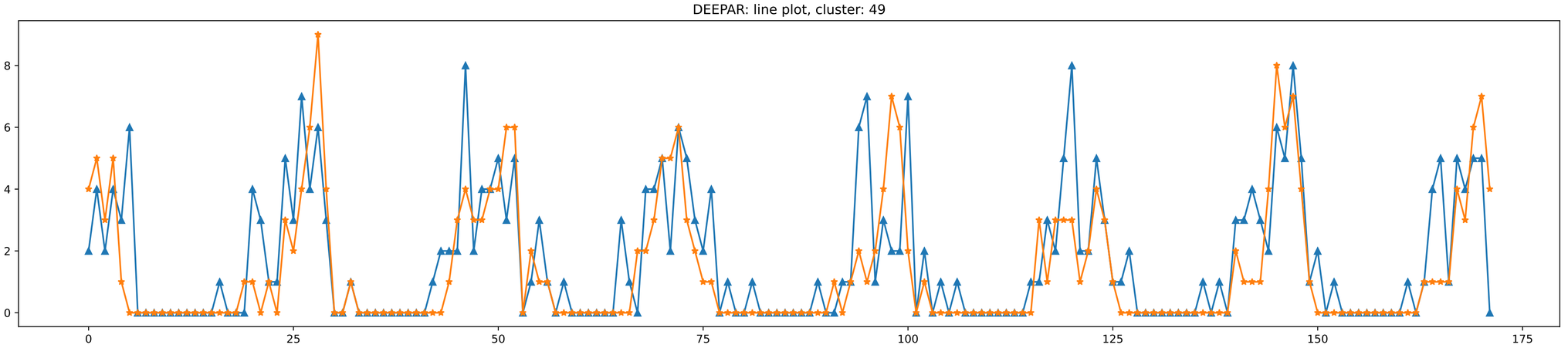

DEEPAR: line plot, cluster: 46
0
2
4
6
8
10
0
25
50
75
100
125
150
175

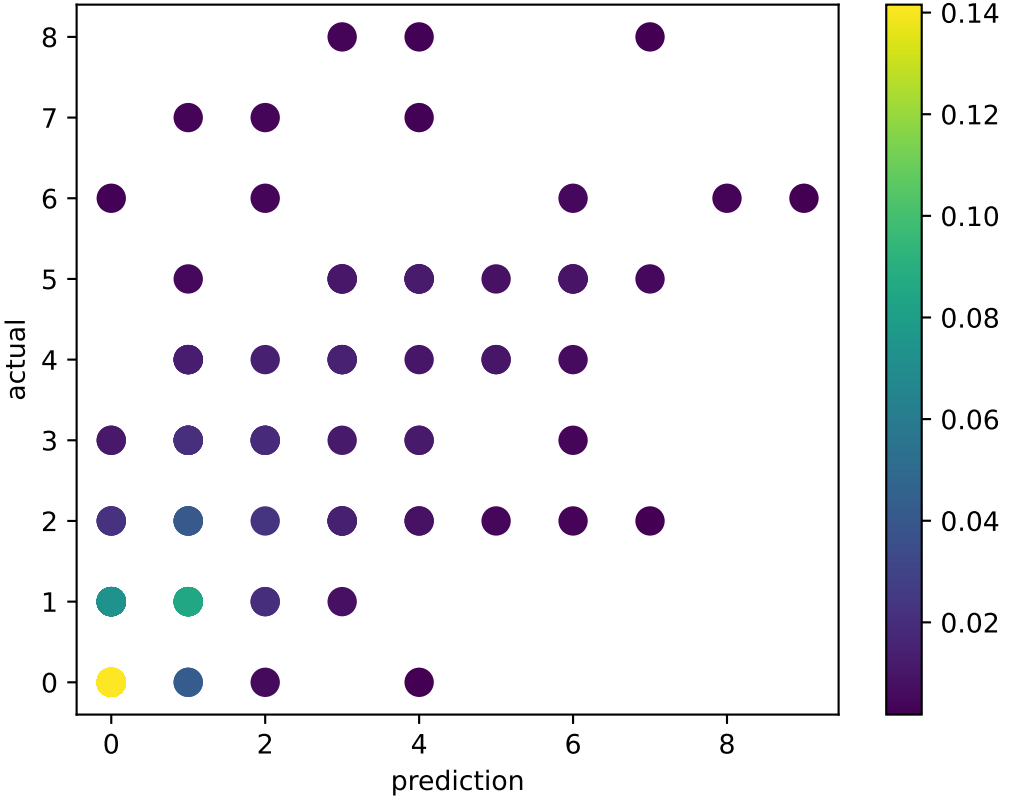

actual
prediction
0
2
4
6
8
10
0
1
2
3
4
5
6
7
8
0.06
0.05
0.04
0.03
0.02
0.01

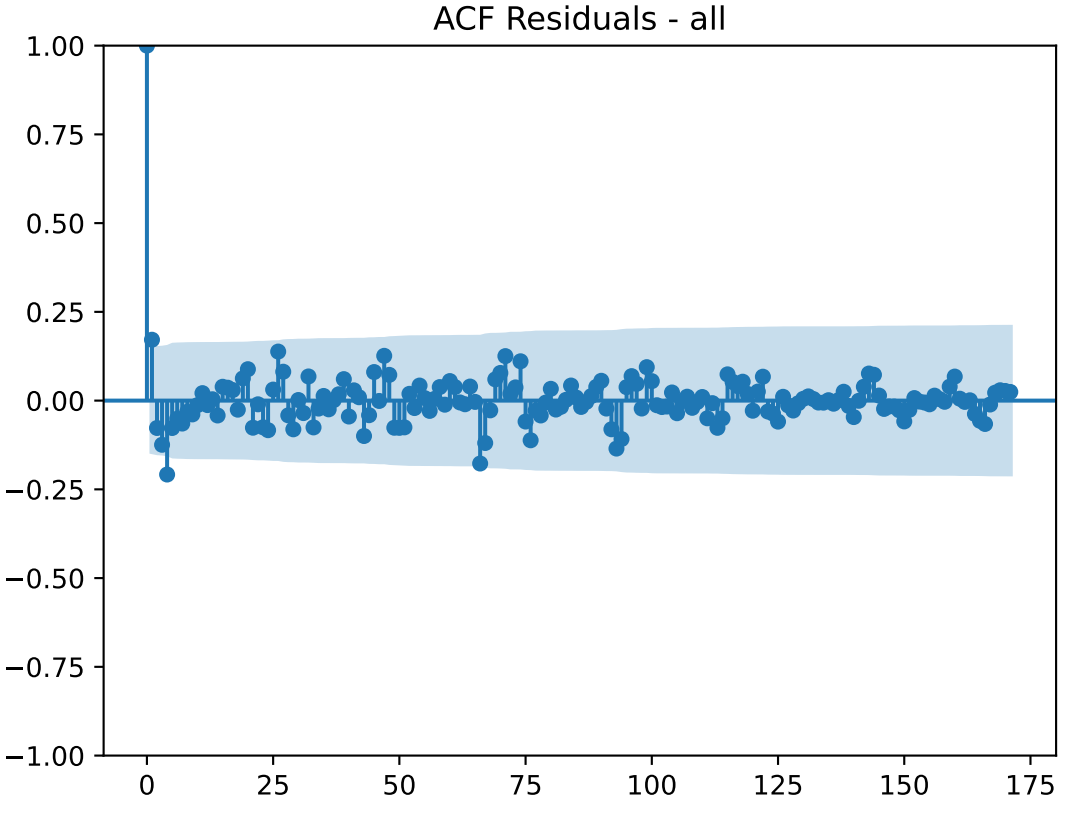

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

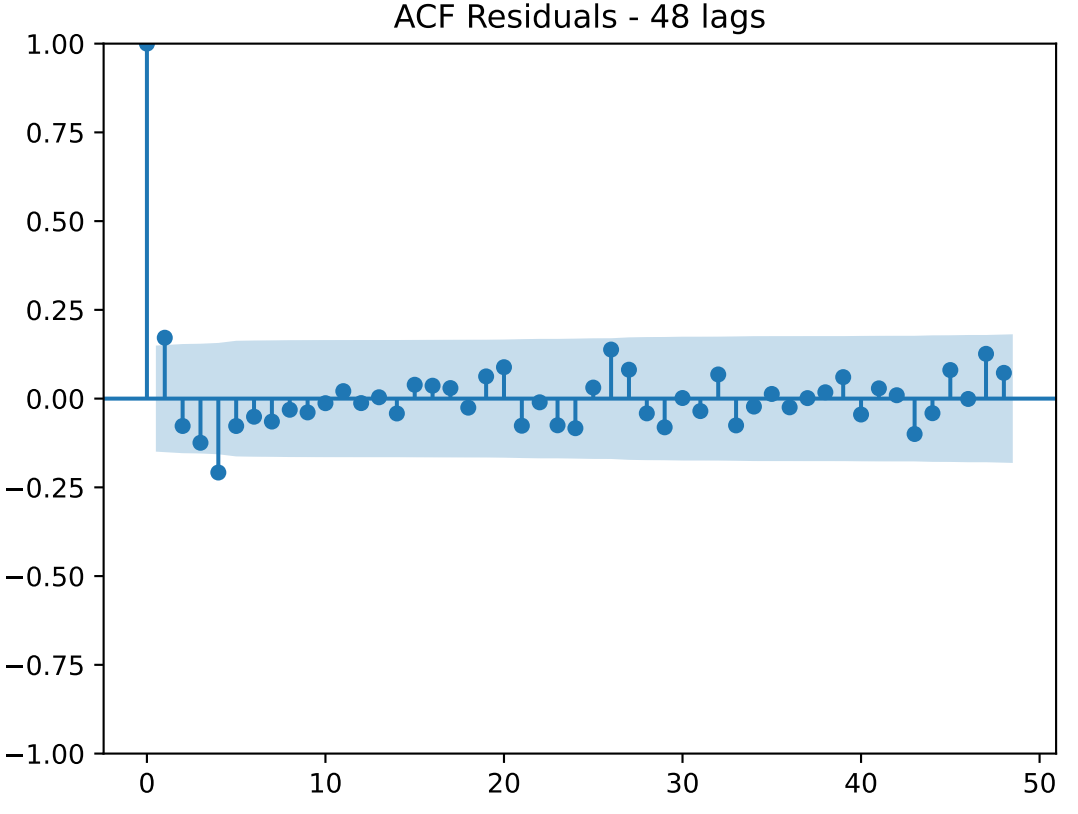

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

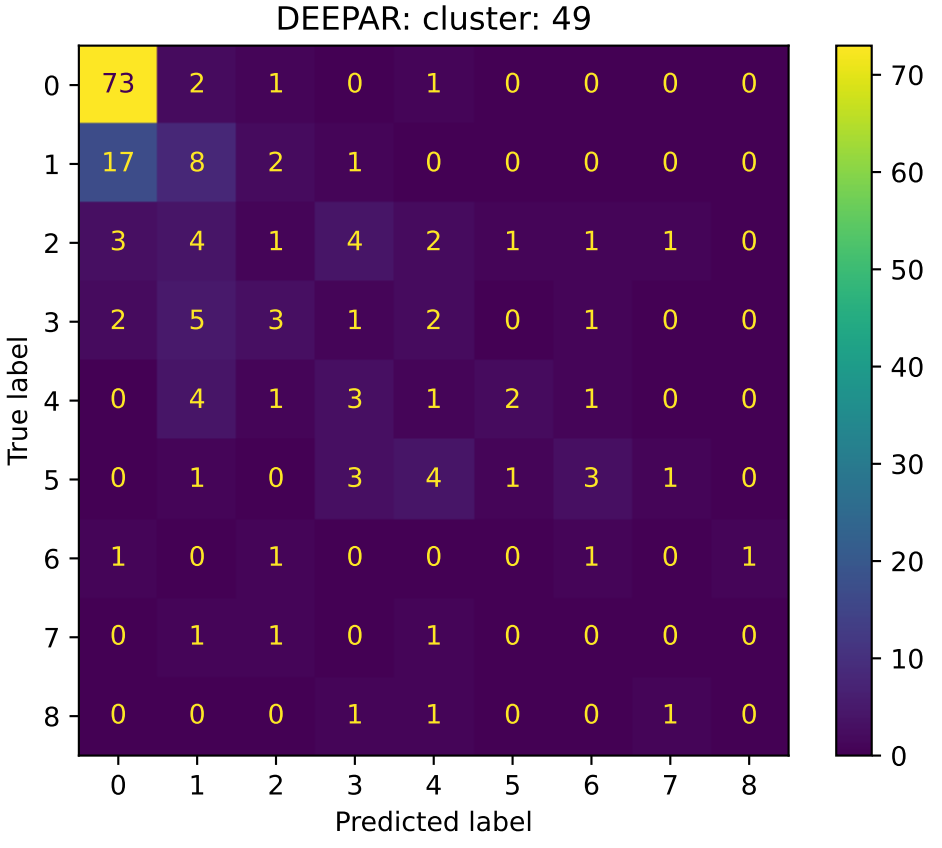

DEEPAR: cluster: 46
True label
Predicted label
0 1 2 3 4 5 6 7 8 9 10
35 2 6 1 0 0 0 0 0 0 0
19 12 2 4 1 1 1 0 0 0 0
7 8 4 0 1 1 0 1 0 0 0
2 4 5 3 1 0 1 1 2 0 0
1 1 4 6 3 0 0 0 1 0 0
0 2 4 1 0 2 0 0 0 0 0
0 2 1 1 2 1 1 0 0 0 0
0 1 1 2 3 0 1 1 0 0 0
0 0 0 1 0 0 1 1 1 0 0
0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0
35 30 25 20 15 10 5 0

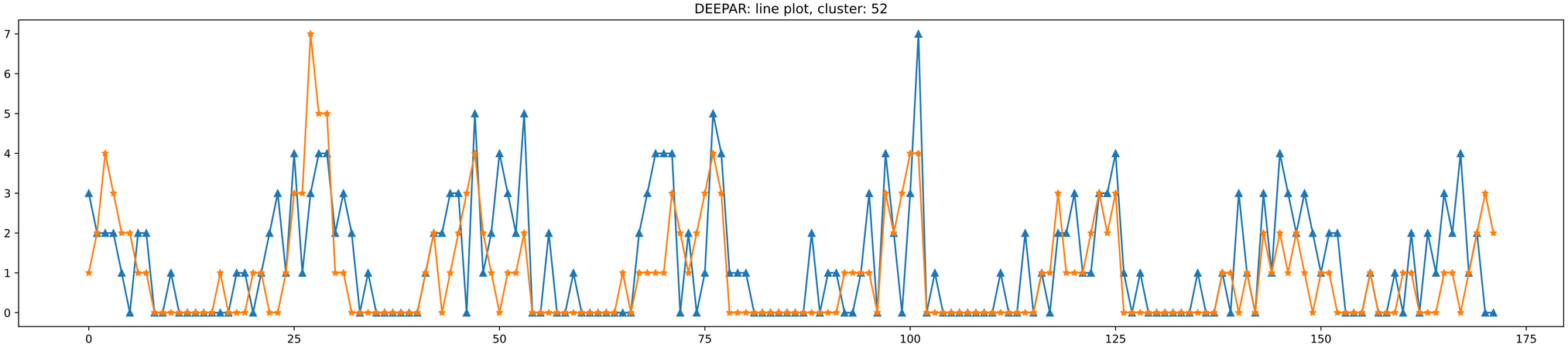

DEEPAR: line plot, cluster: 49
0
2
4
6
8
0
25
50
75
100
125
150
175

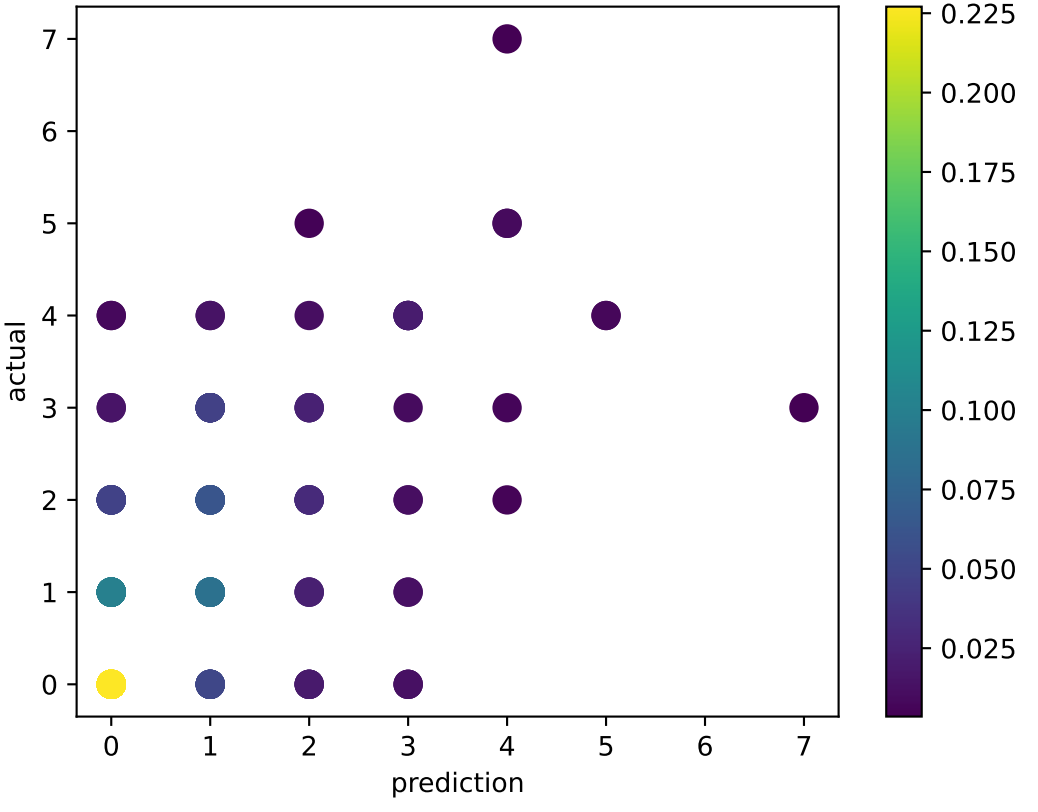

actual
prediction
0
2
4
6
8
0
1
2
3
4
5
6
7
8
0.14
0.12
0.10
0.08
0.06
0.04
0.02

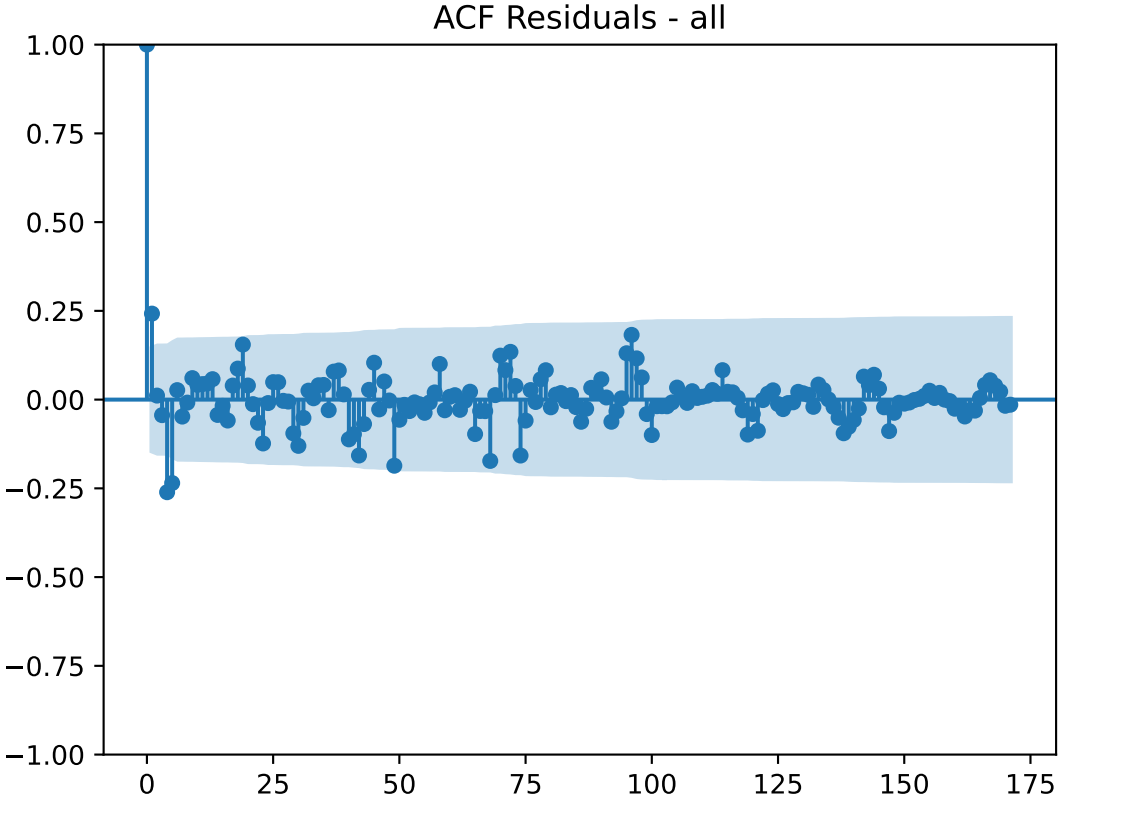

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

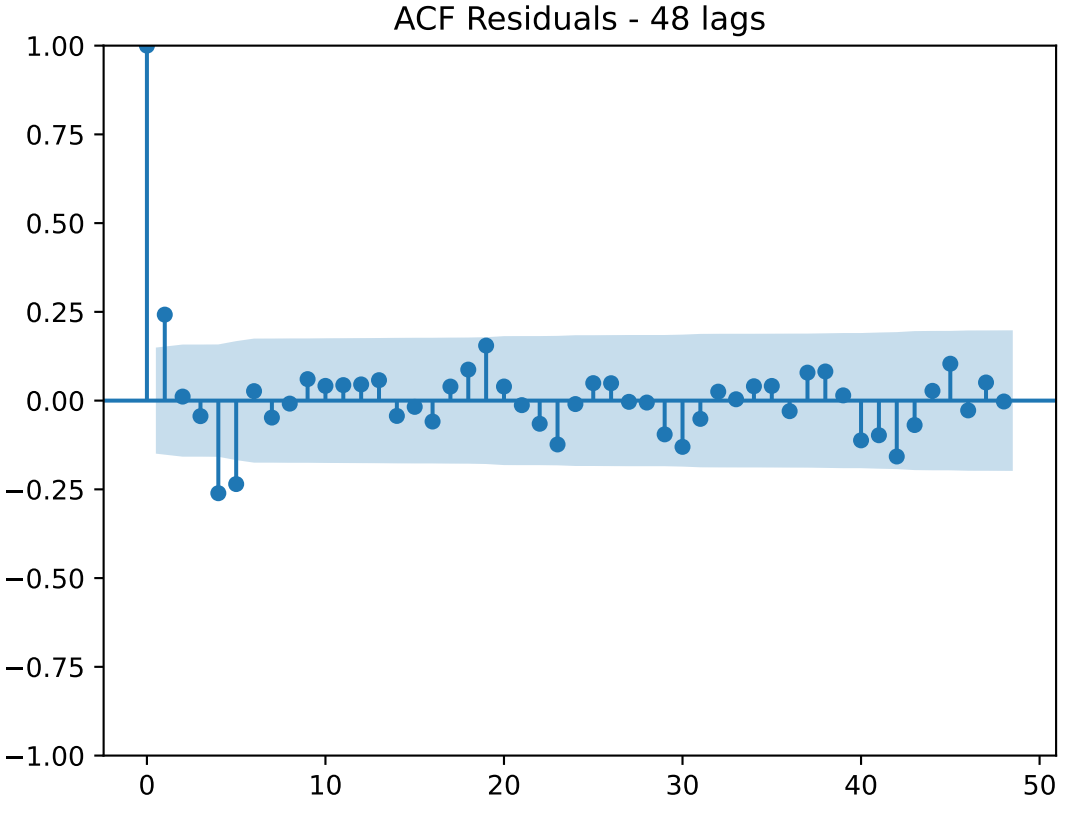

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

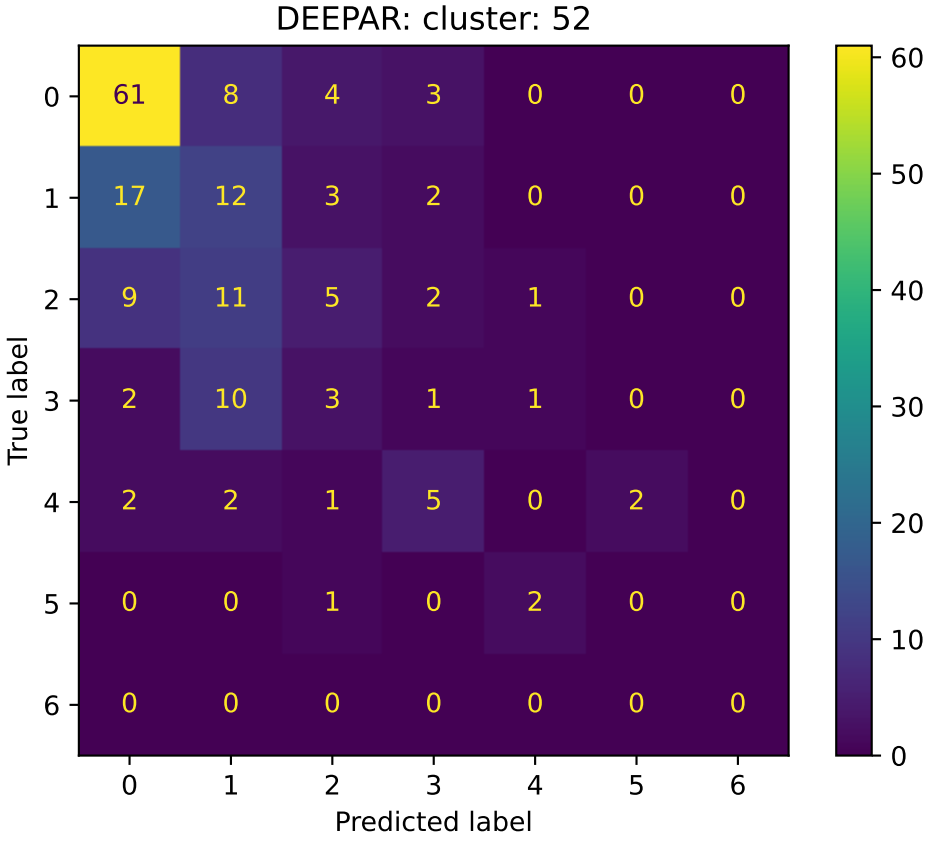

DEEPAR: cluster: 49
True label
Predicted label
0 73 2 1 0 1 0 0 0 0
1 17 8 2 1 0 0 0 0 0
2 3 4 1 4 2 1 1 1 0
3 2 5 3 1 2 0 1 0 0
4 0 4 1 3 1 2 1 0 0
5 0 1 0 3 4 1 3 1 0
6 1 0 1 0 0 0 1 0 1
7 0 1 1 0 1 0 0 0 0
8 0 0 0 1 1 0 0 1 0
0 1 2 3 4 5 6 7 8
70 60 50 40 30 20 10 0

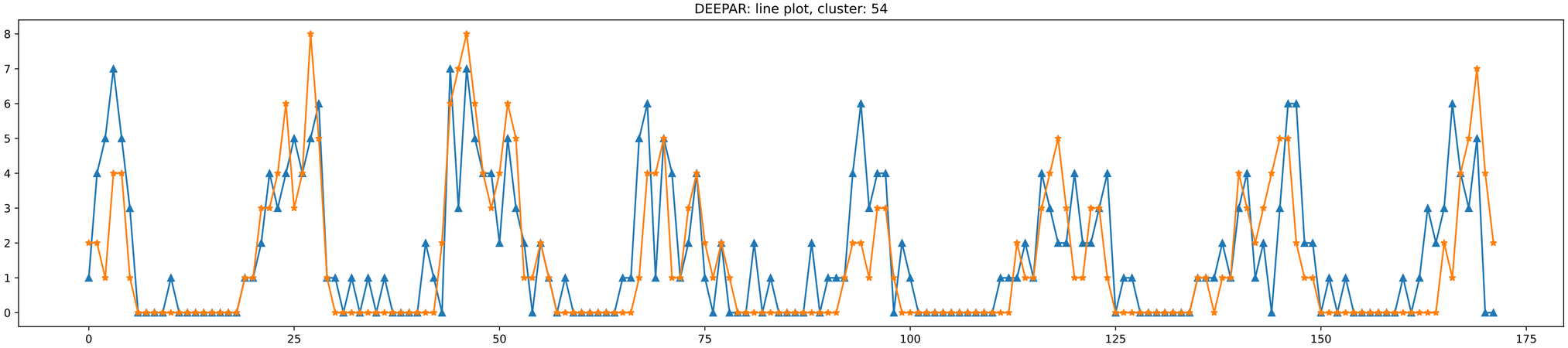

DEEPAR: line plot, cluster: 52
0
1
2
3
4
5
6
7
0
25
50
75
100
125
150
175

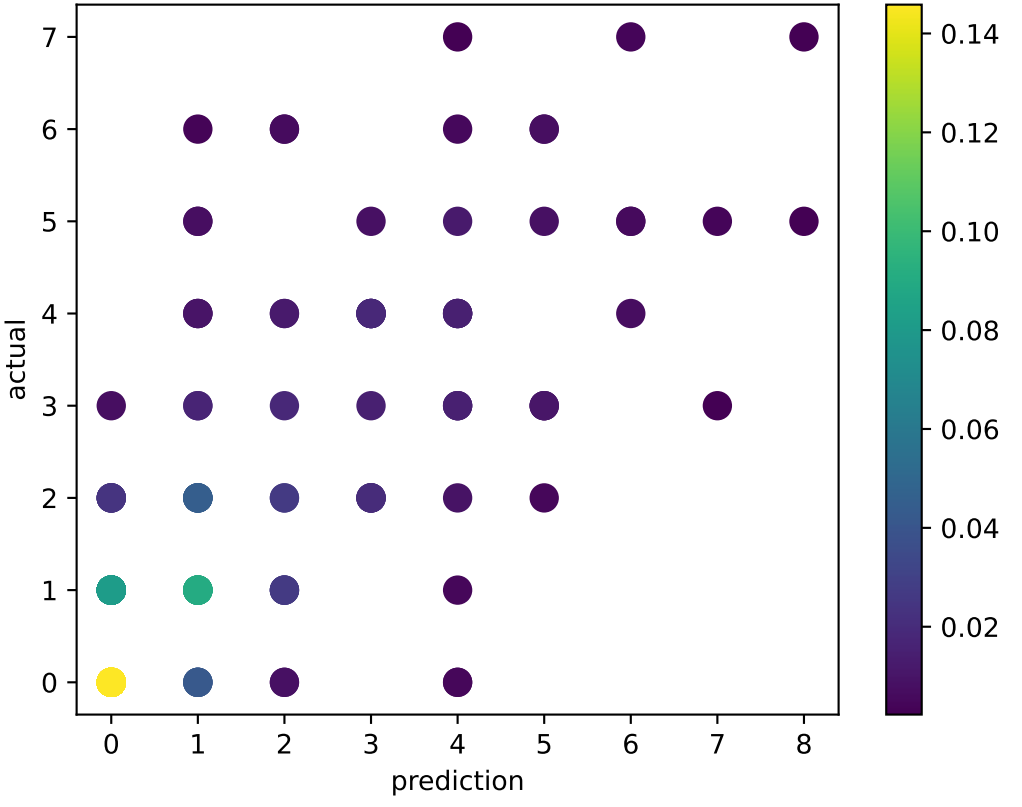

actual
prediction
0
1
2
3
4
5
6
7
0.225
0.200
0.175
0.150
0.125
0.100
0.075
0.050
0.025

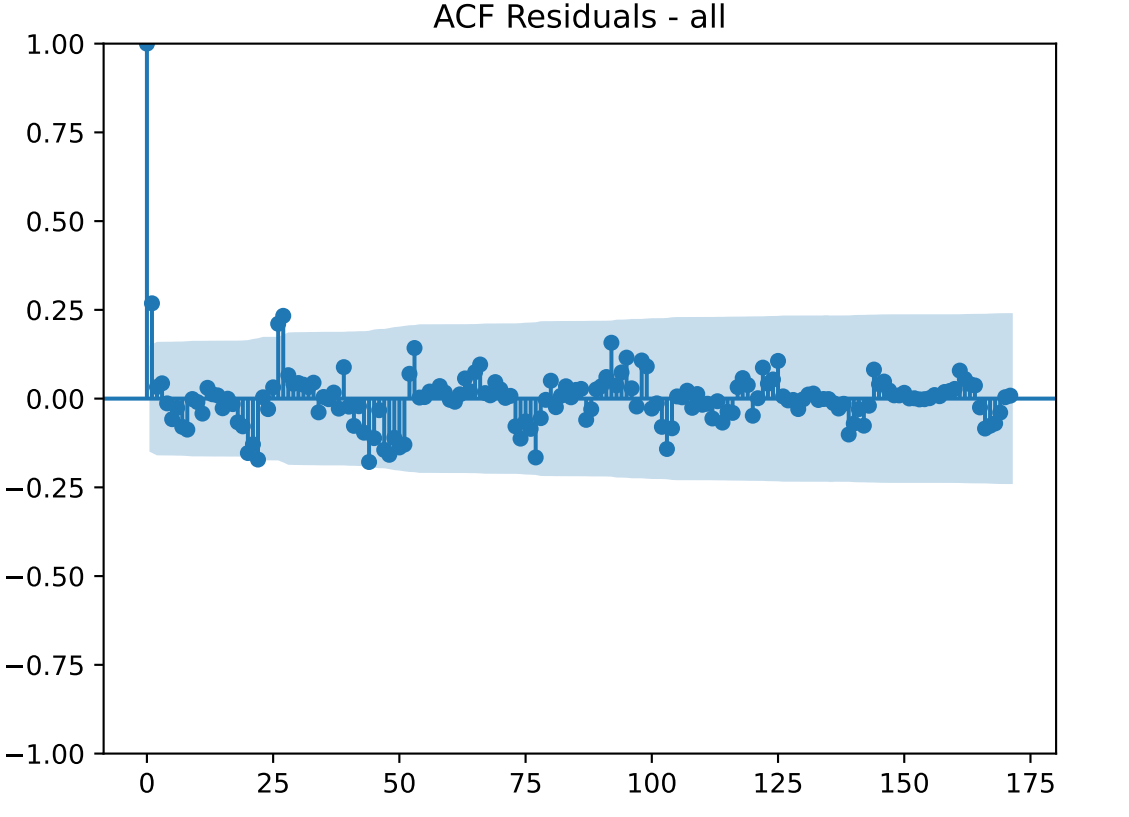

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

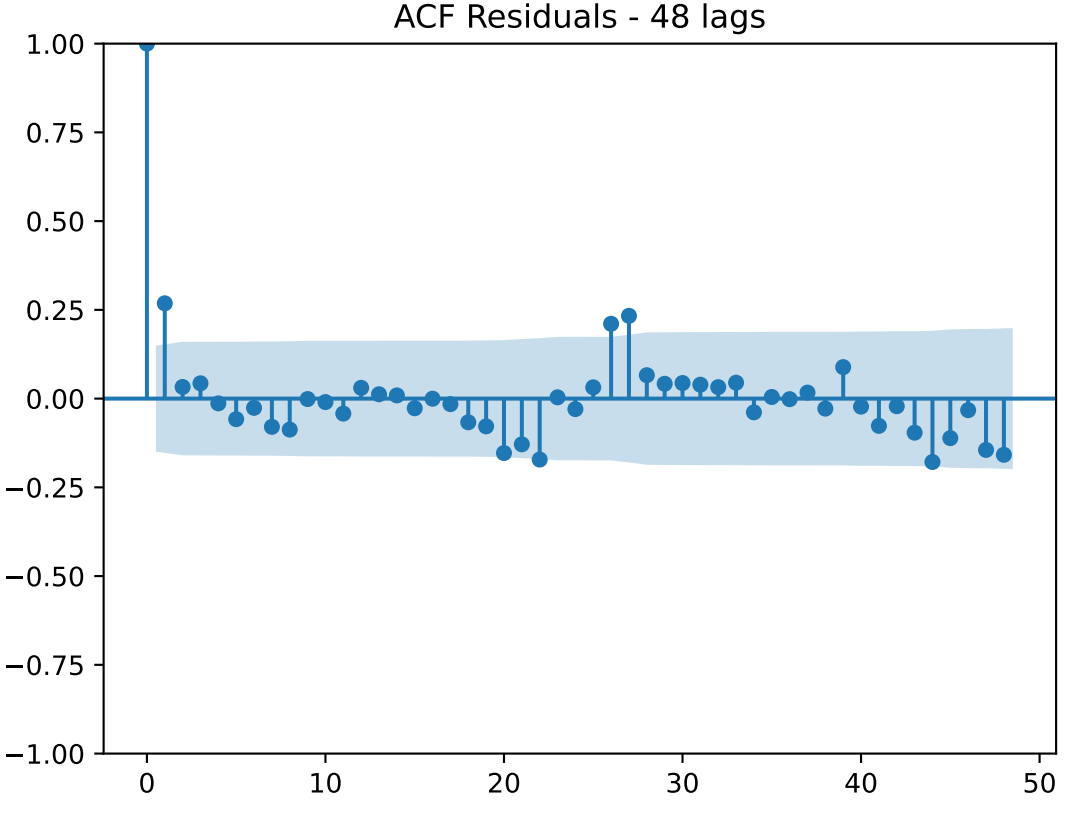

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

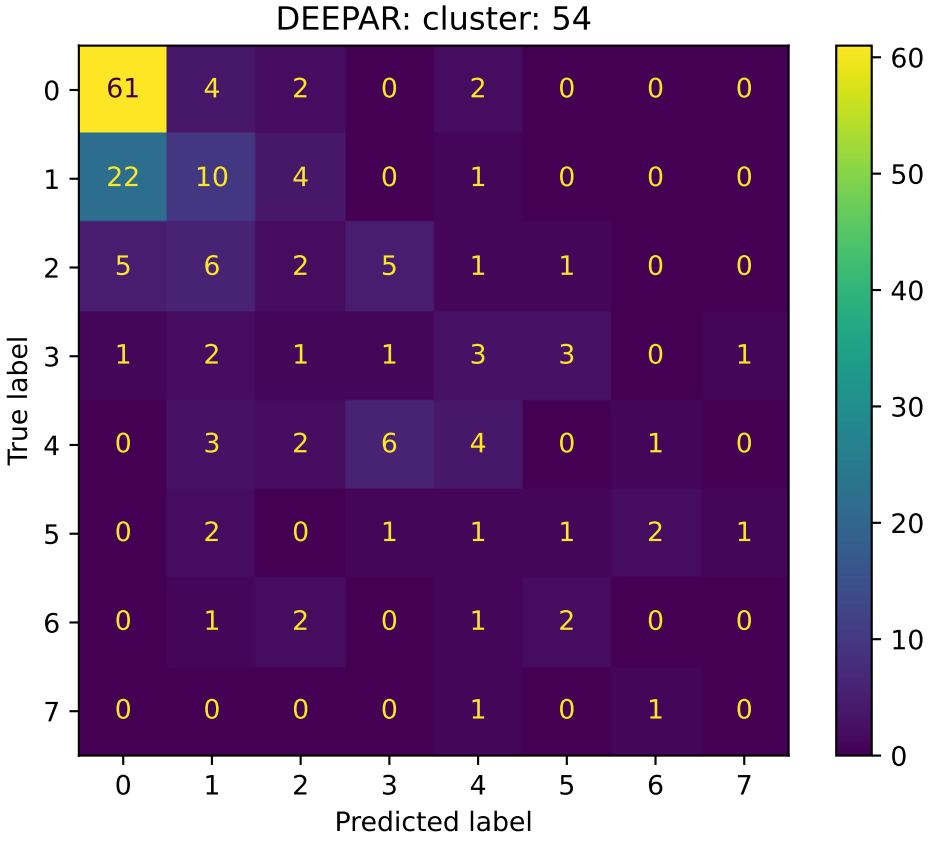

DEEPAR: cluster: 52
True label
Predicted label
0 1 2 3 4 5 6
61 8 4 3 0 0 0
17 12 3 2 0 0 0
9 11 5 2 1 0 0
2 10 3 1 1 0 0
2 2 1 5 0 2 0
0 0 1 0 2 0 0
0 0 0 0 0 0 0
60 50 40 30 20 10 0

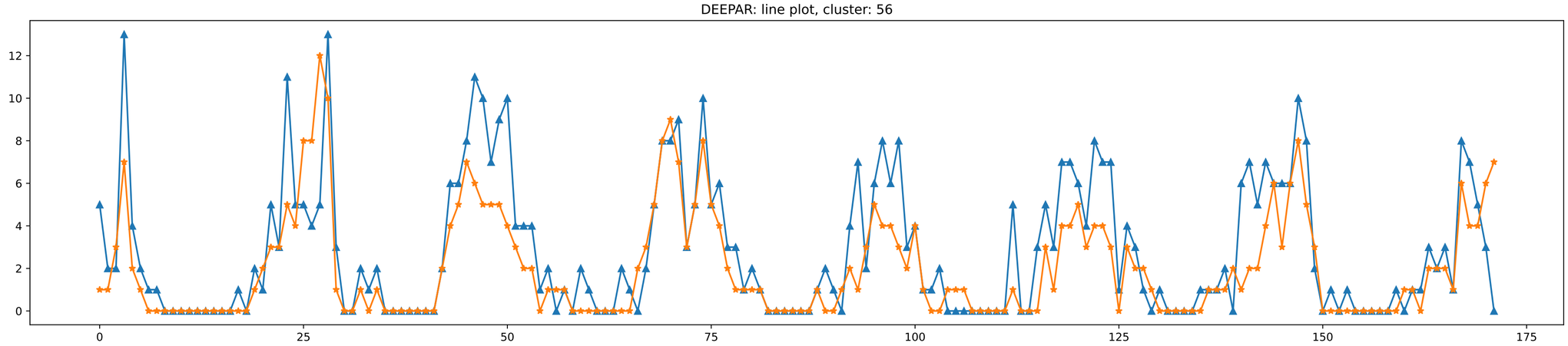

DEEPAR: line plot, cluster: 54
0
1
2
3
4
5
6
7
8
0
25
50
75
100
125
150
175

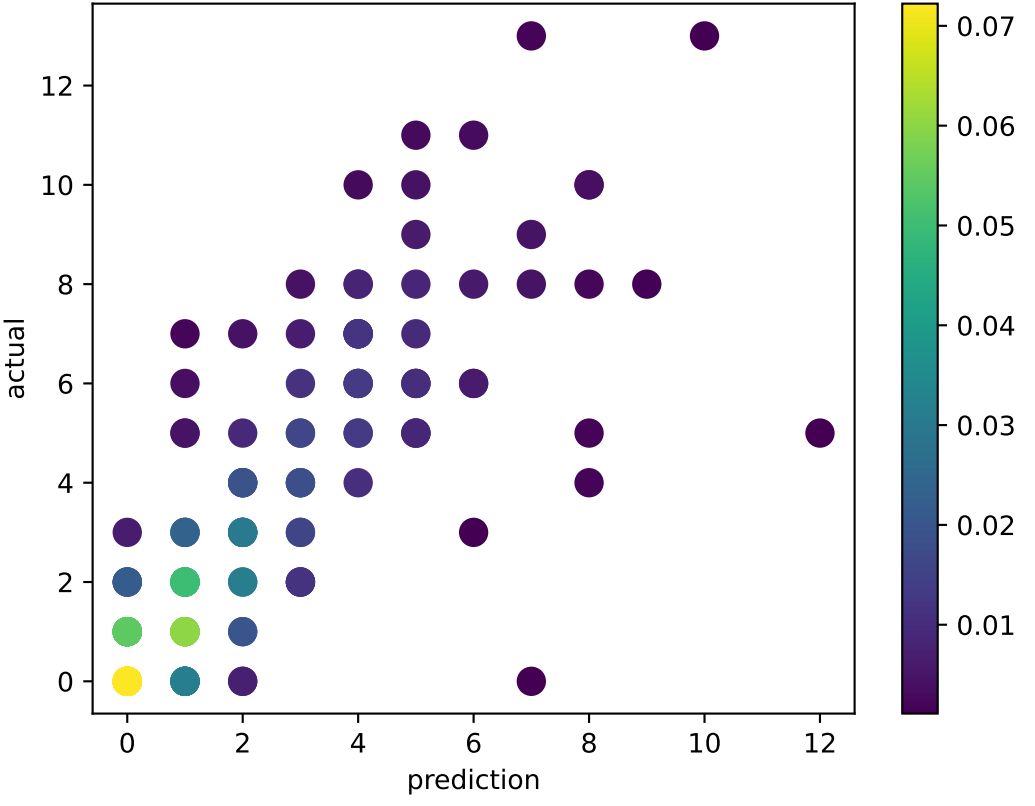

actual
prediction
0
1
2
3
4
5
6
7
8
0.14
0.12
0.10
0.08
0.06
0.04
0.02

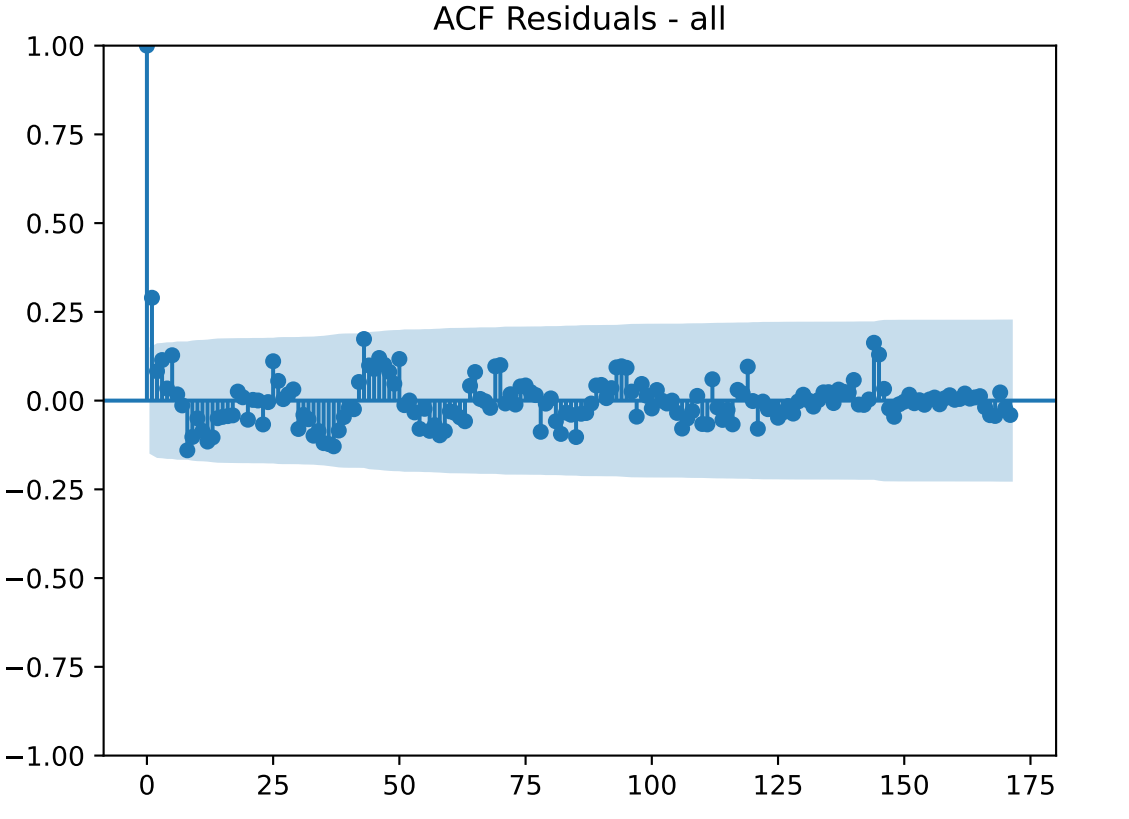

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

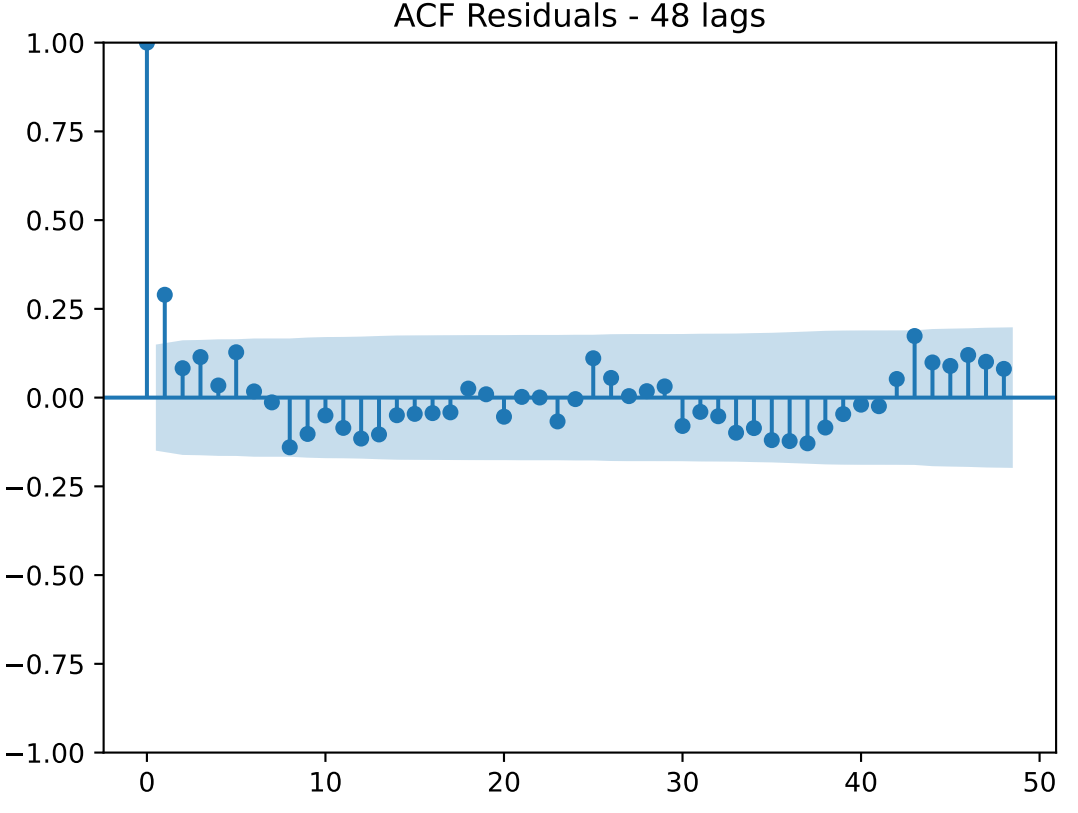

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

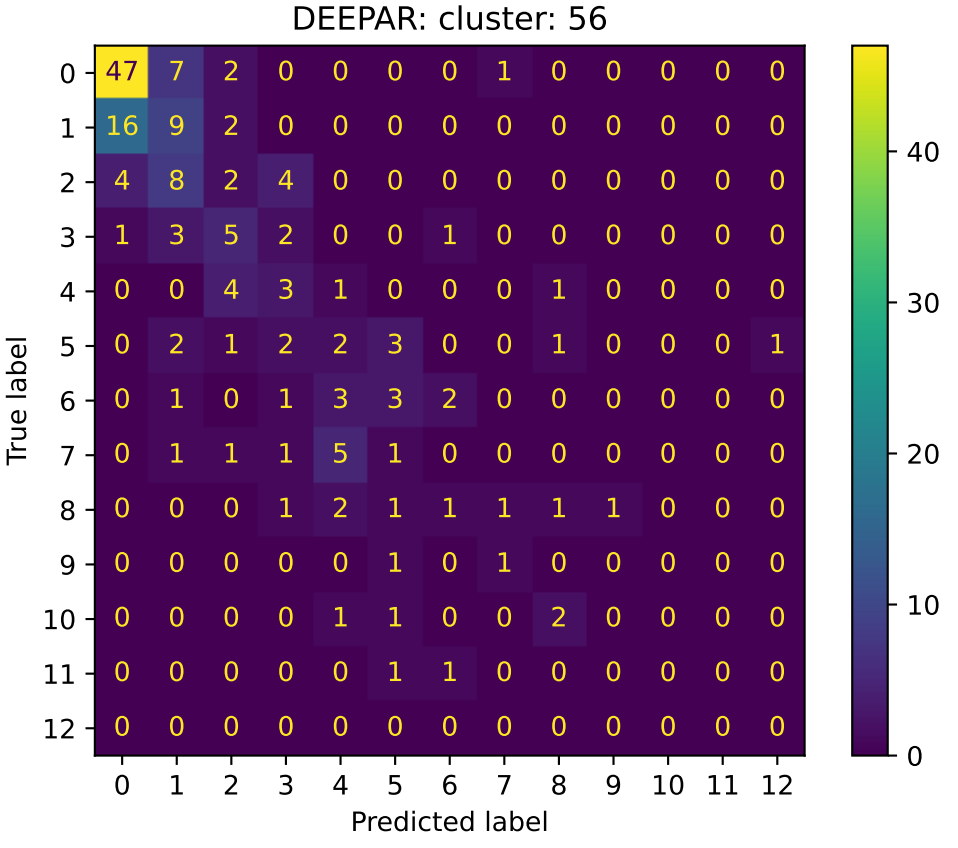

DEEPAR: cluster: 54
True label
Predicted label
0 1 2 3 4 5 6 7
61 4 2 0 2 0 0 0
22 10 4 0 1 0 0 0
5 6 2 5 1 1 0 0
1 2 1 1 3 3 0 1
0 3 2 6 4 0 1 0
0 2 0 1 1 1 2 1
0 1 2 0 1 2 0 0
0 0 0 0 1 0 1 0
60 50 40 30 20 10 0

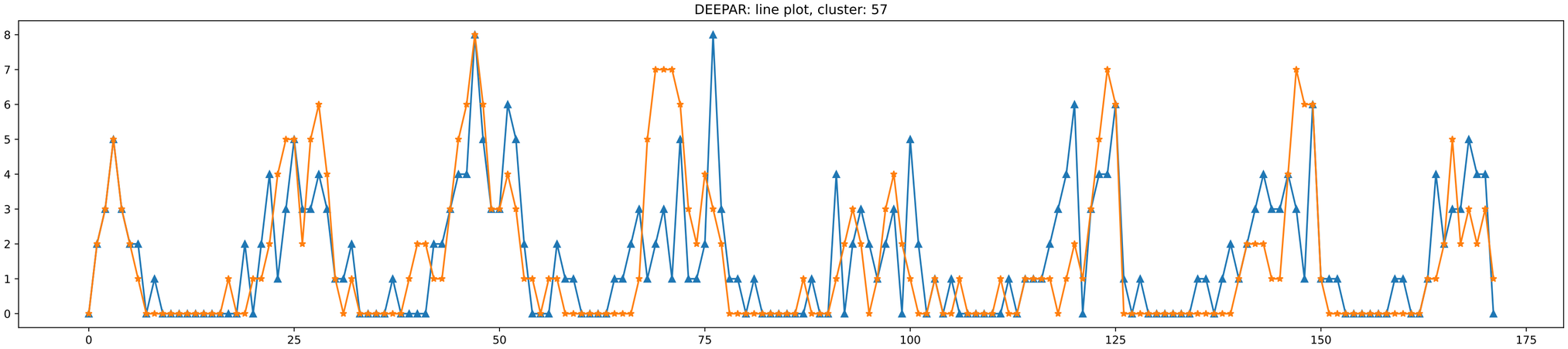

DEEPAR: line plot, cluster: 56
0
2
4
6
8
10
12
0
25
50
75
100
125
150
175

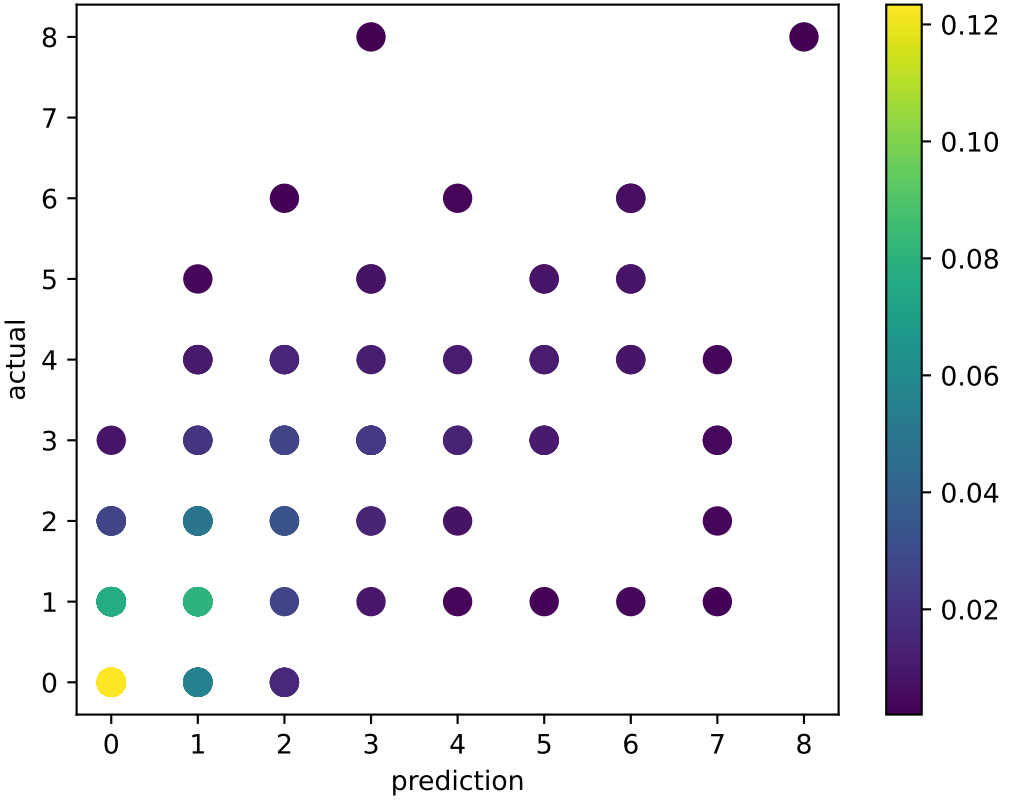

actual
prediction
0
2
4
6
8
10
12
0.07
0.06
0.05
0.04
0.03
0.02
0.01

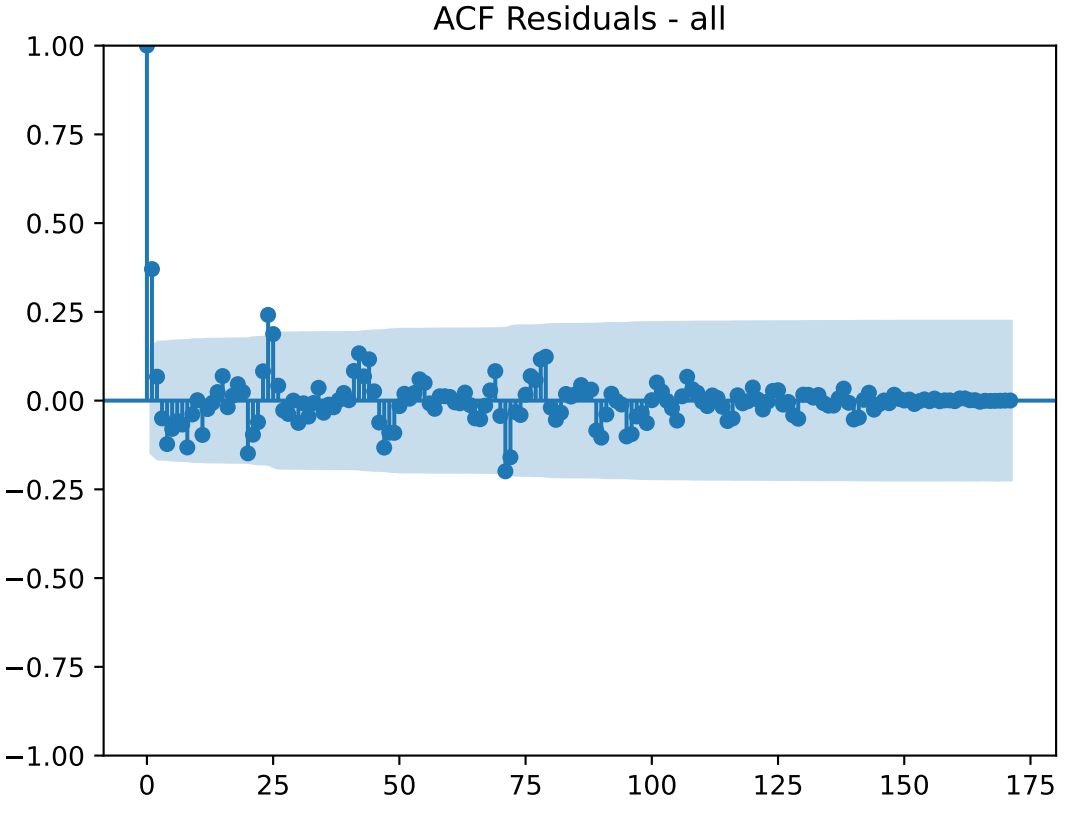

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

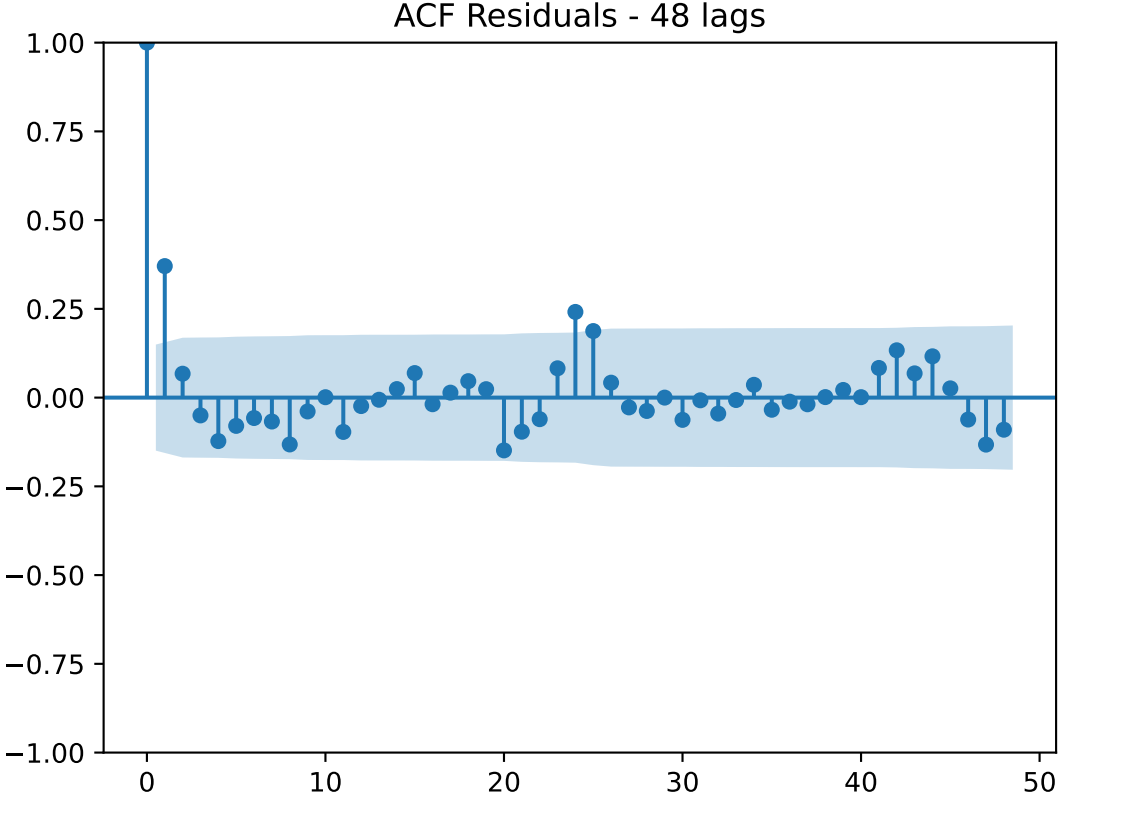

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

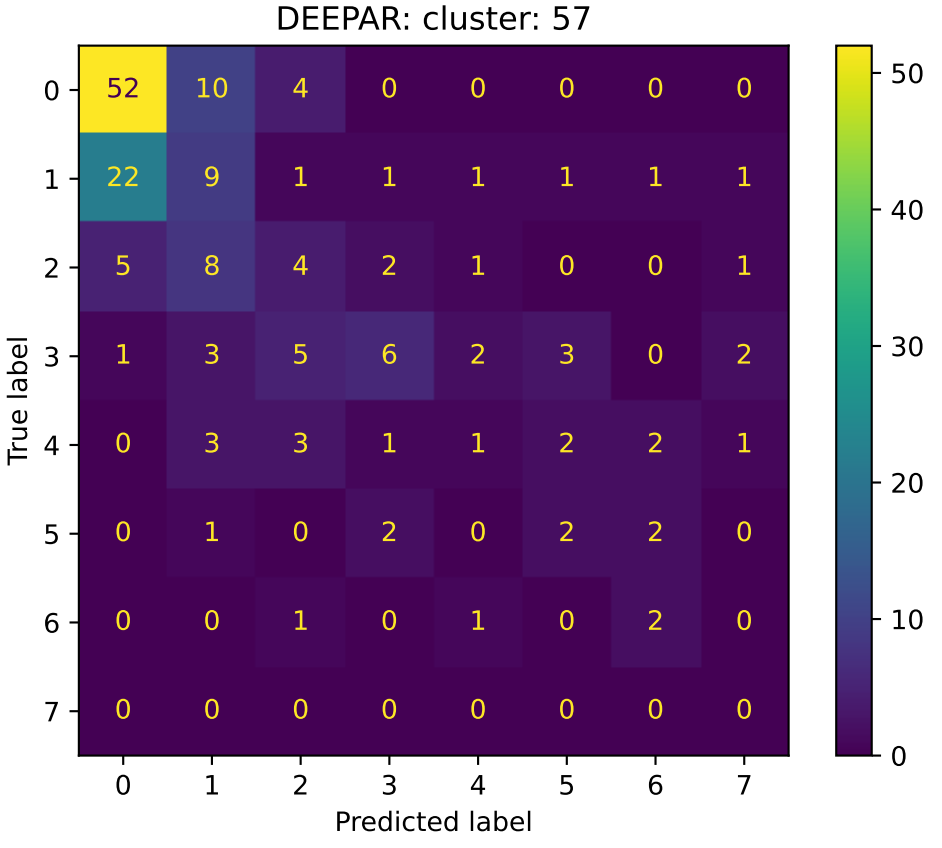

DEEPAR: cluster: 56
True label
Predicted label
0 47 7 2 0 0 0 0 1 0 0 0 0 0
1 16 9 2 0 0 0 0 0 0 0 0 0 0
2 4 8 2 4 0 0 0 0 0 0 0 0 0
3 1 3 5 2 0 0 1 0 0 0 0 0 0
4 0 0 4 3 1 0 0 0 1 0 0 0 0
5 0 2 1 2 2 3 0 0 1 0 0 0 1
6 0 1 0 1 3 3 2 0 0 0 0 0 0
7 0 1 1 1 5 1 0 0 0 0 0 0 0
8 0 0 0 1 2 1 1 1 1 1 0 0 0
9 0 0 0 0 0 1 0 1 0 0 0 0 0
10 0 0 0 0 1 1 0 0 2 0 0 0 0
11 0 0 0 0 0 1 1 0 0 0 0 0 0
12 0 0 0 0 0 0 0 0 0 0 0 0 0
0 1 2 3 4 5 6 7 8 9 10 11 12
40
30
20
10
0

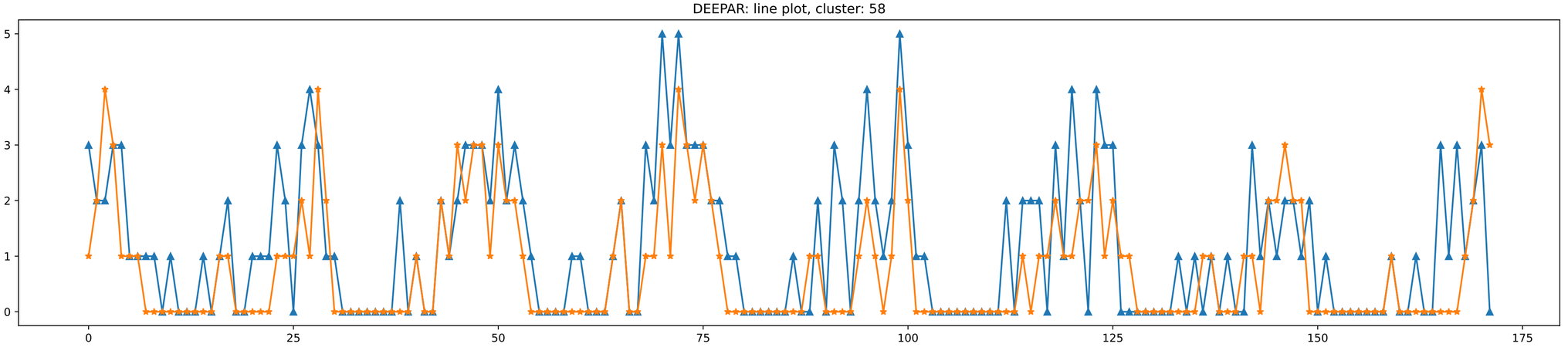

DEEPAR: line plot, cluster: 57
0
1
2
3
4
5
6
7
8
0
25
50
75
100
125
150
175

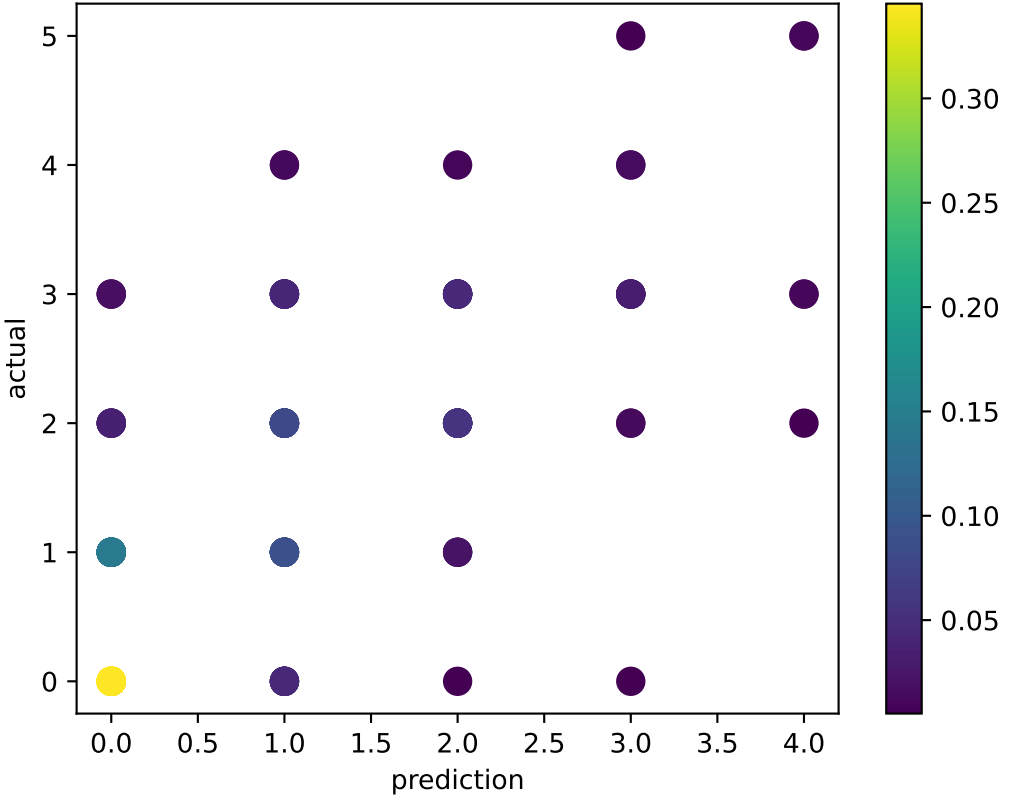

actual
prediction
0
1
2
3
4
5
6
7
8
0.12
0.10
0.08
0.06
0.04
0.02

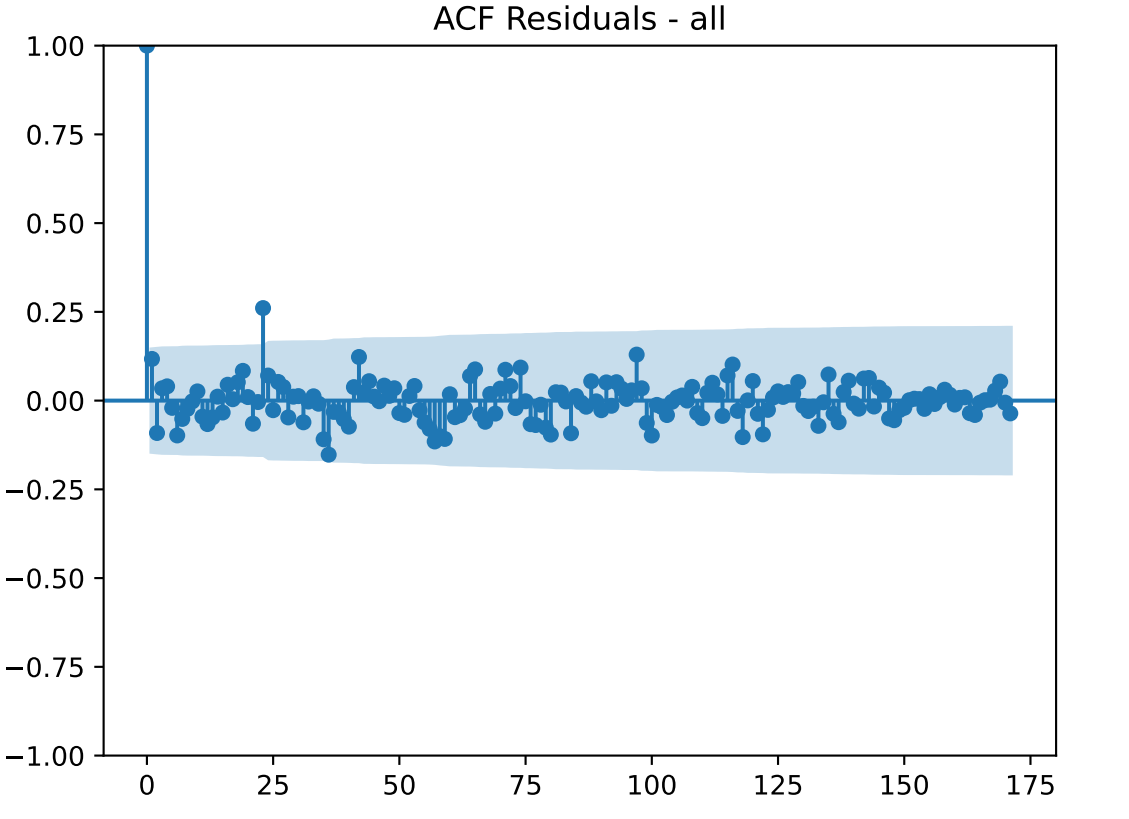

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

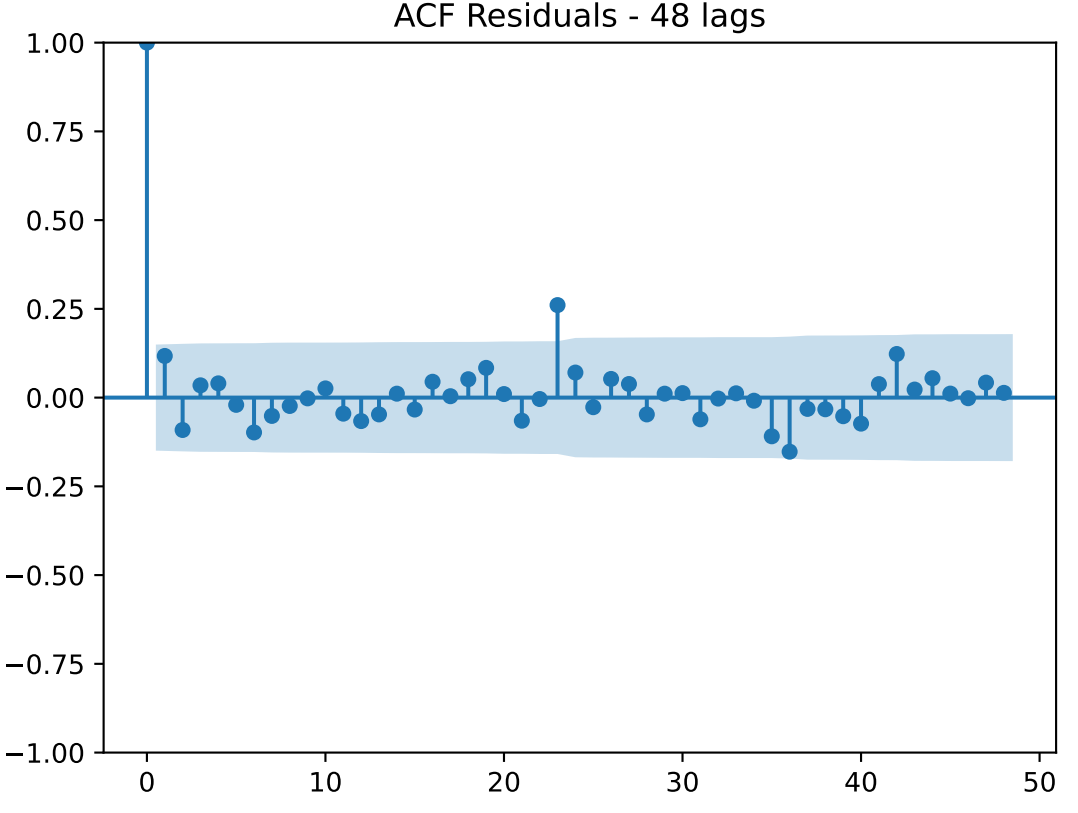

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

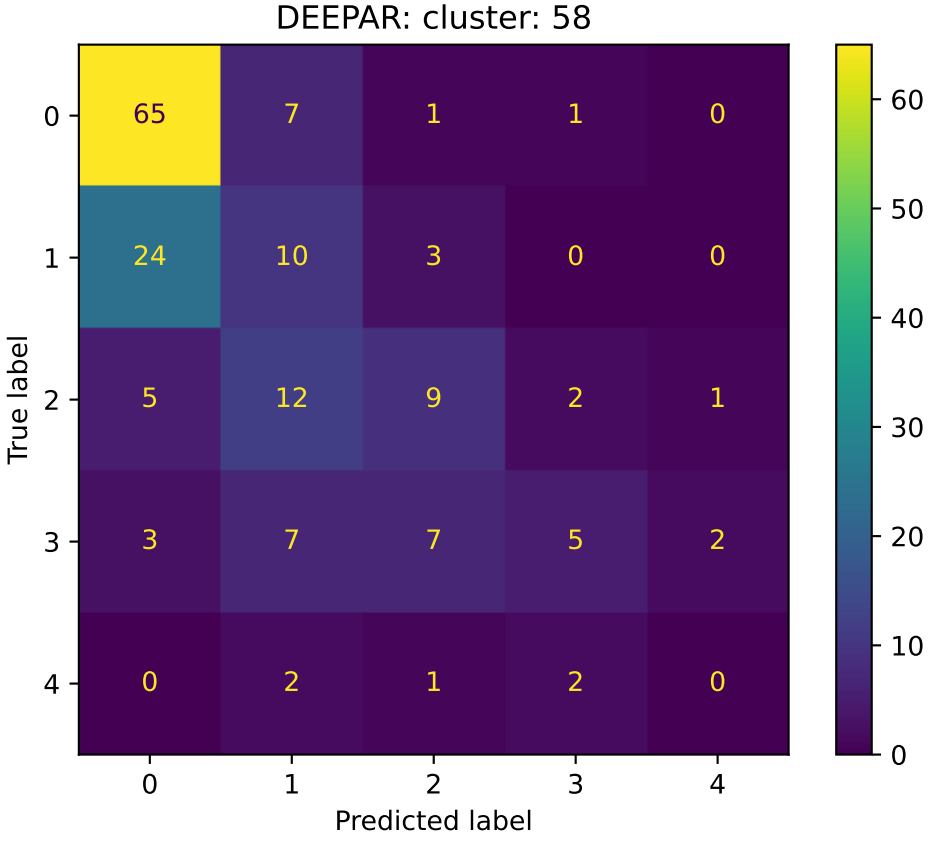

DEEPAR: cluster: 57
True label
Predicted label
0 1 2 3 4 5 6 7
52 10 4 0 0 0 0 0
22 9 1 1 1 1 1 1
5 8 4 2 1 0 0 1
1 3 5 6 2 3 0 2
0 3 3 1 1 2 2 1
0 1 0 2 0 2 2 0
0 0 1 0 1 0 2 0
0 0 0 0 0 0 0 0
50
40
30
20
10
0

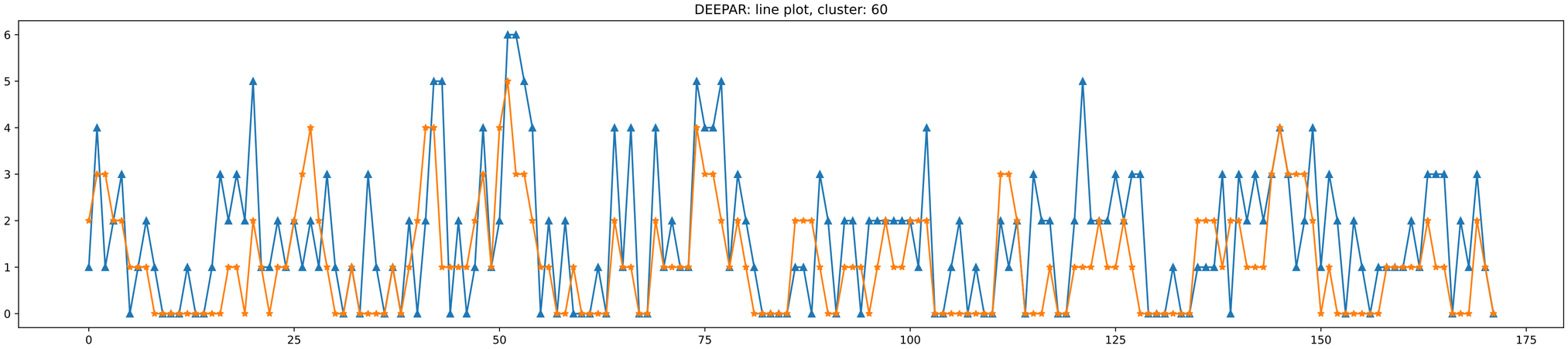

DEEPAR: line plot, cluster: 58
0
1
2
3
4
5
0
25
50
75
100
125
150
175

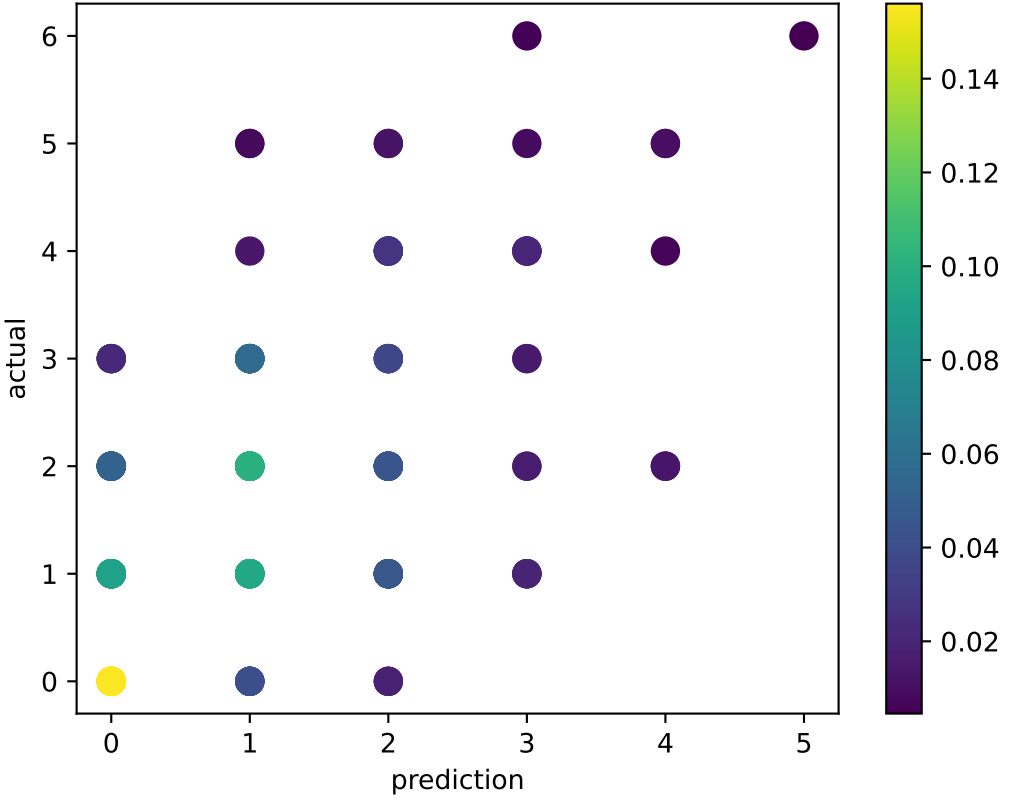

actual
prediction
0
1
2
3
4
5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.30
0.25
0.20
0.15
0.10
0.05

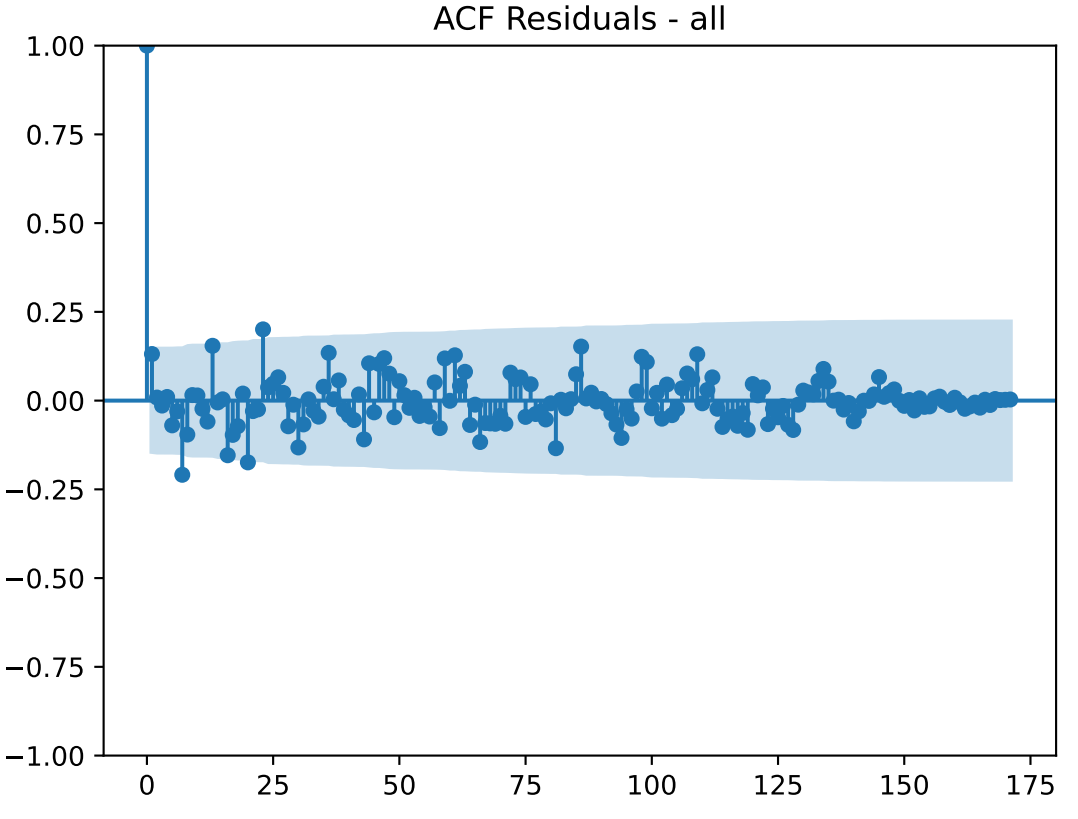

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

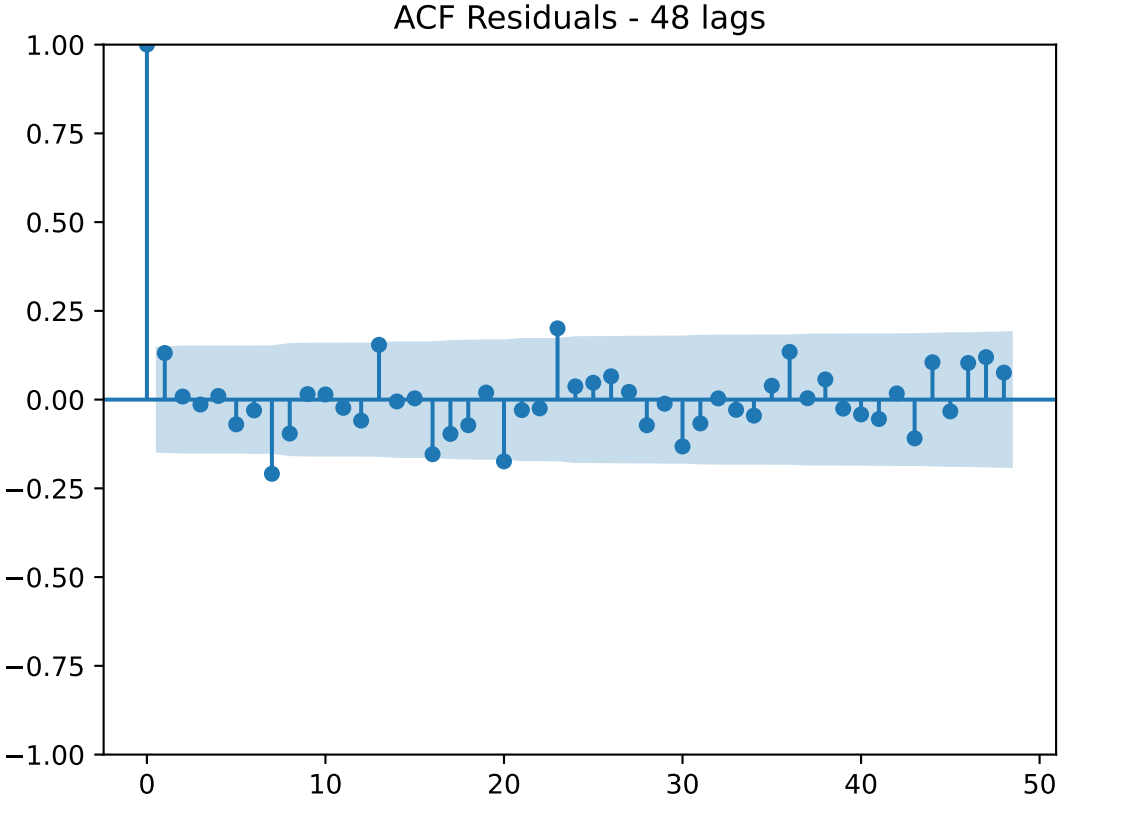

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

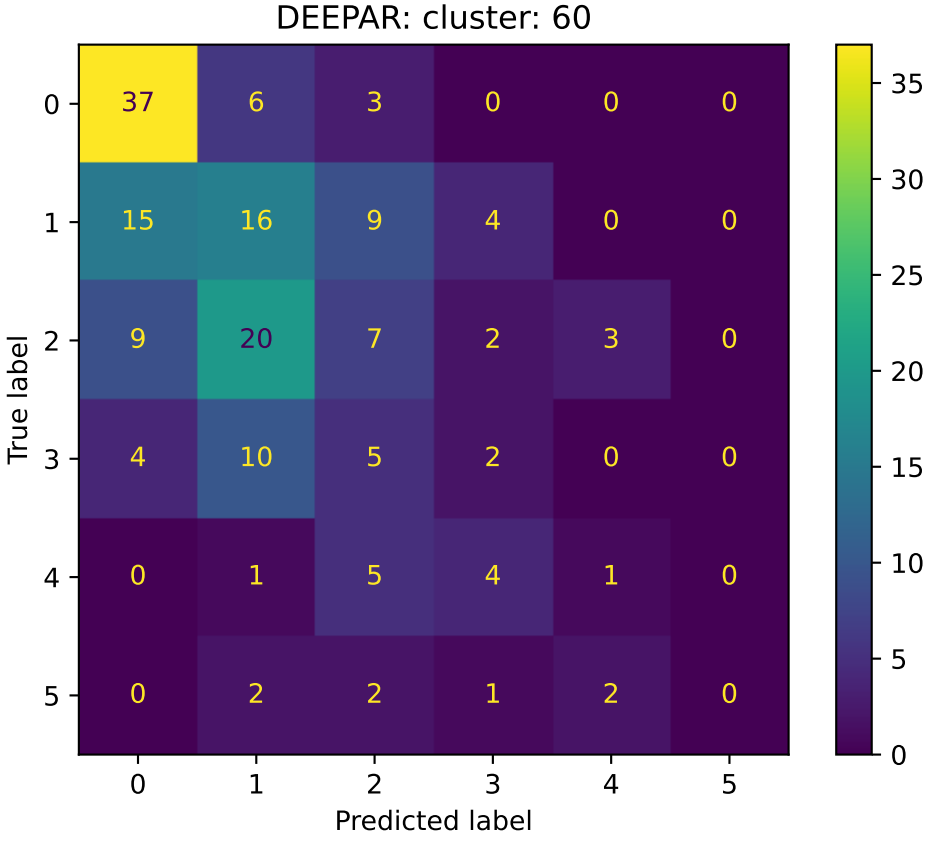

DEEPAR: cluster: 58
True label
Predicted label
0
1
2
3
4
65
7
1
1
0
24
10
3
0
0
5
12
9
2
1
3
7
7
5
2
0
2
1
2
0
60
50
40
30
20
10
0

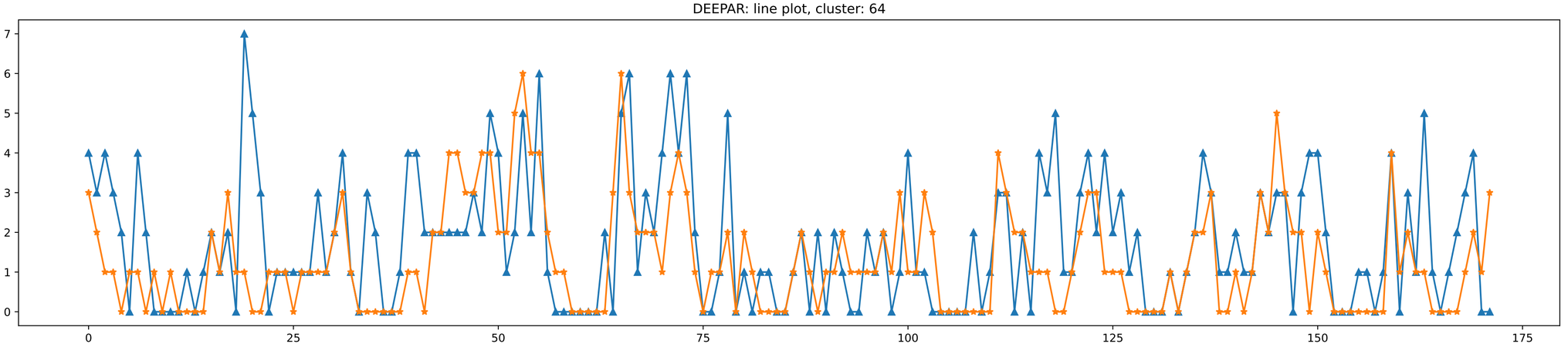

DEEPAR: line plot, cluster: 60
0
1
2
3
4
5
6
0
25
50
75
100
125
150
175

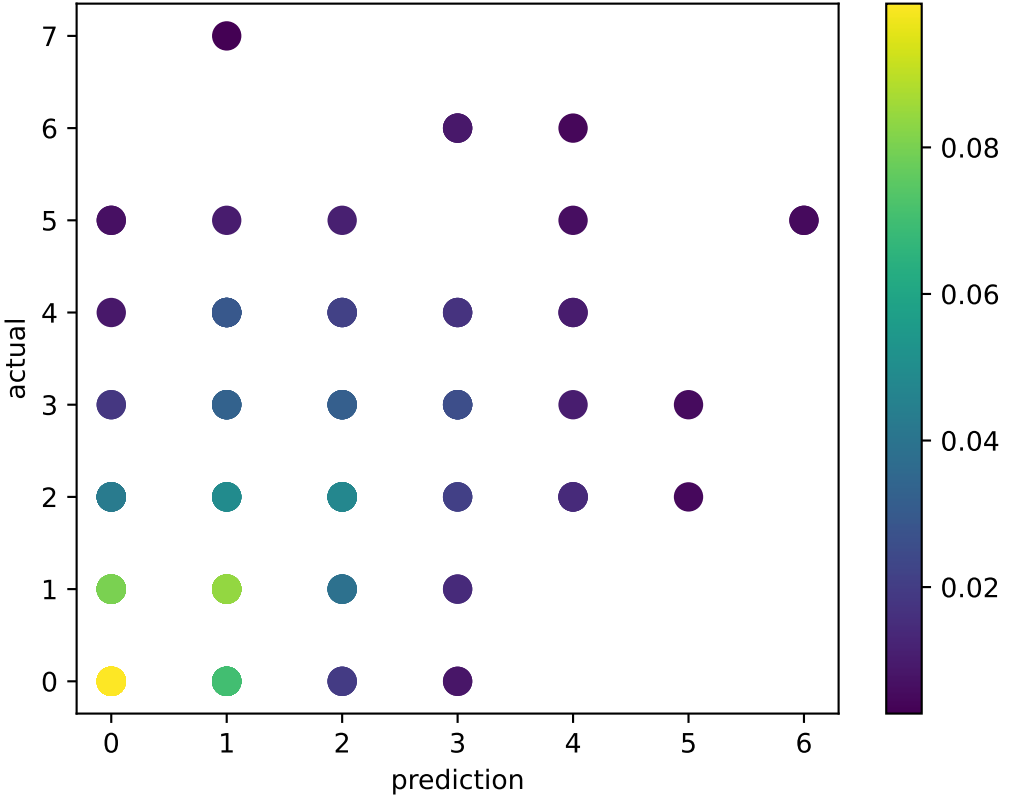

actual
prediction
0
1
2
3
4
5
6
0.14
0.12
0.10
0.08
0.06
0.04
0.02

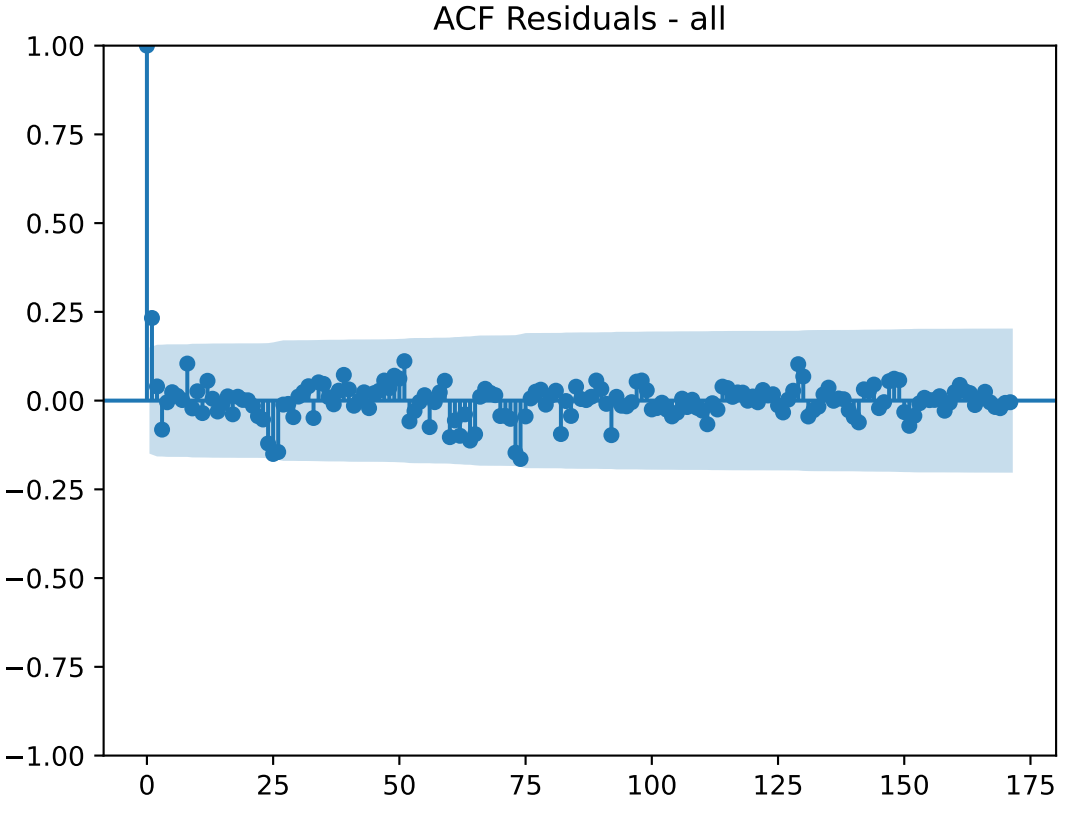

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

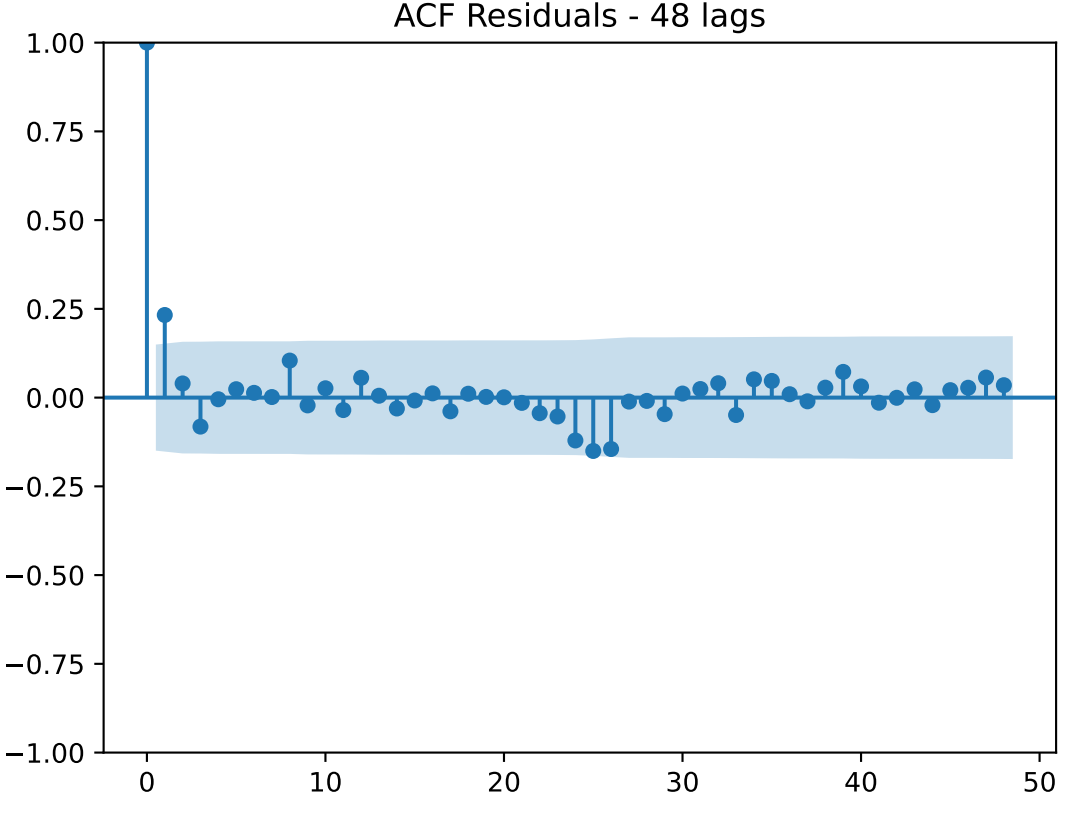

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

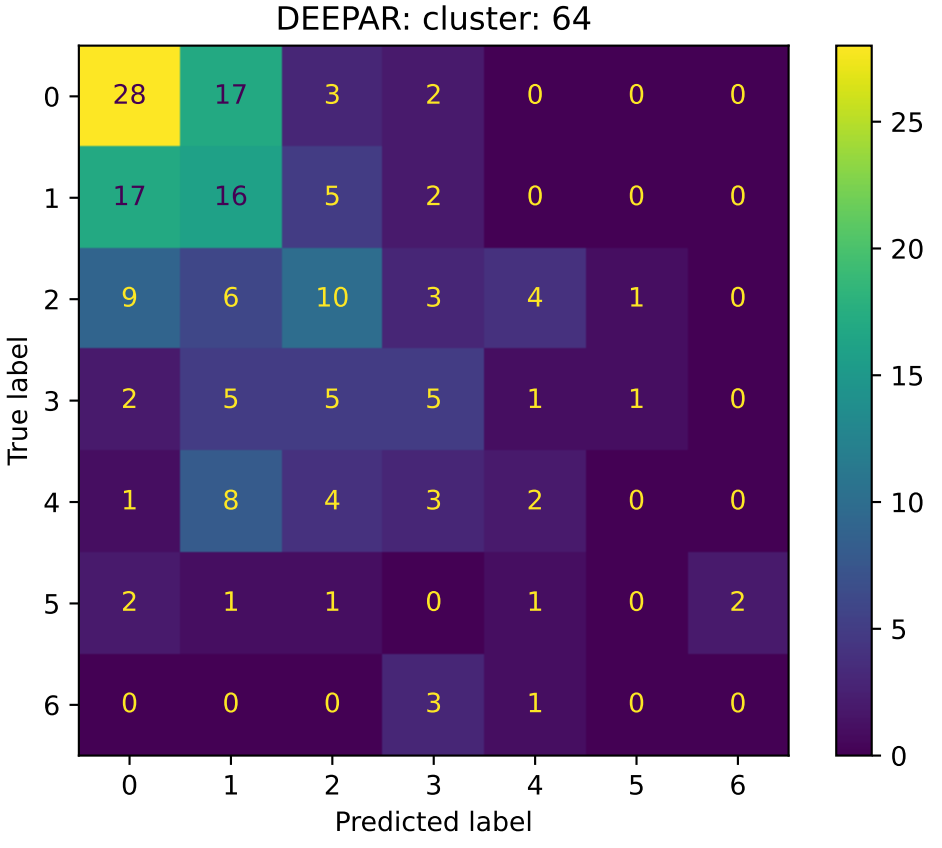

DEEPAR: cluster: 60
True label
Predicted label
0
1
2
3
4
5
37 6 3 0 0 0
15 16 9 4 0 0
9 20 7 2 3 0
4 10 5 2 0 0
0 1 5 4 1 0
0 2 2 1 2 0
35
30
25
20
15
10
5
0

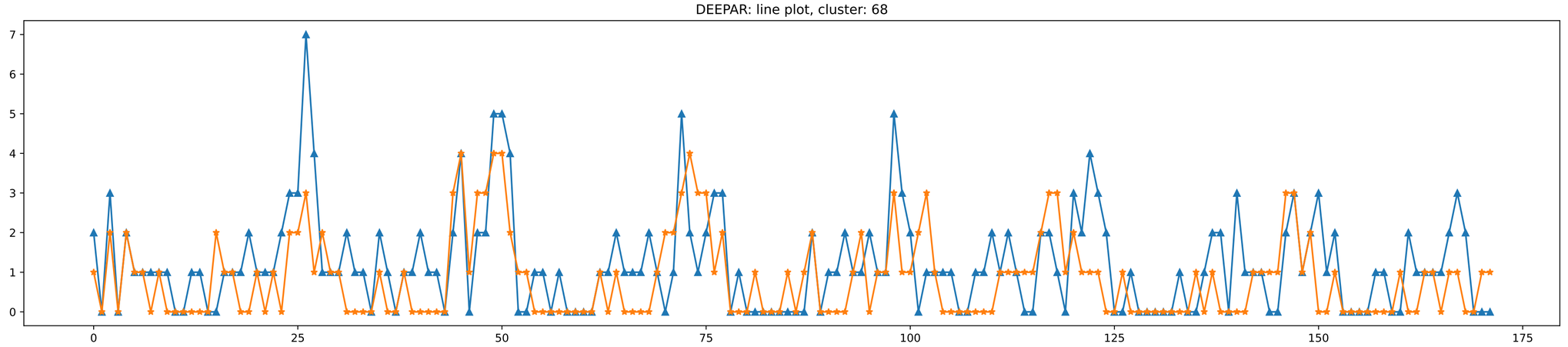

DEEPAR: line plot, cluster: 64
0
1
2
3
4
5
6
7
0
25
50
75
100
125
150
175

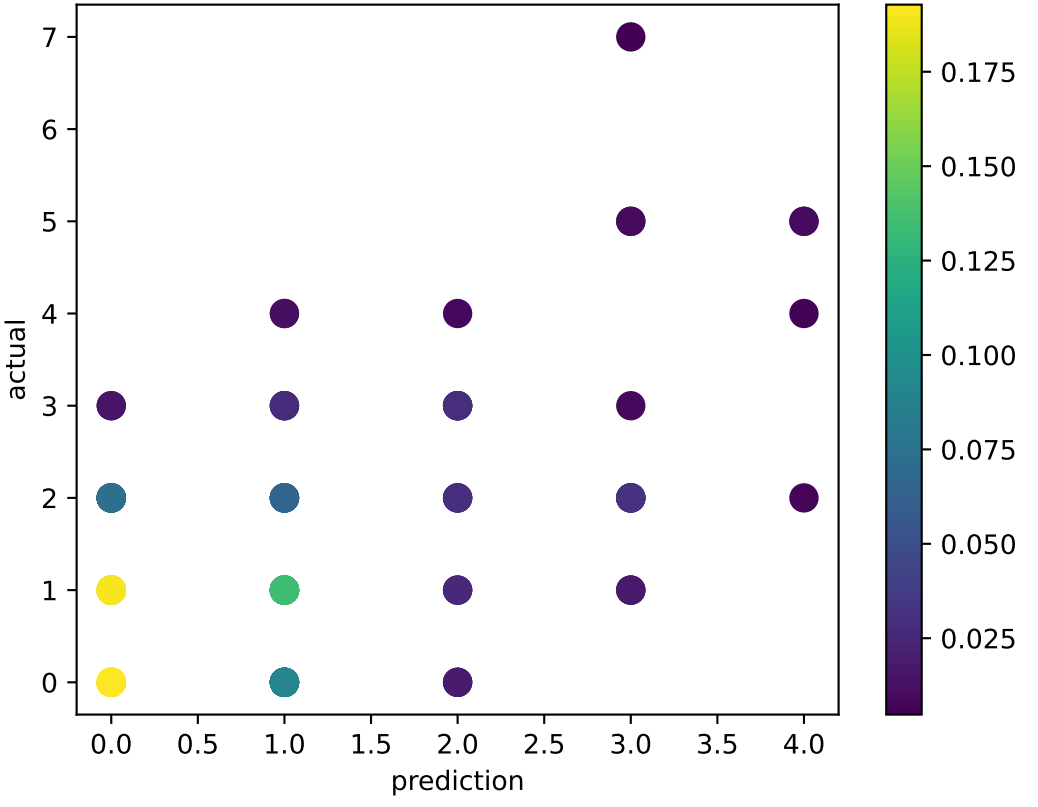

actual
prediction
0
1
2
3
4
5
6
7
0.02
0.04
0.06
0.08

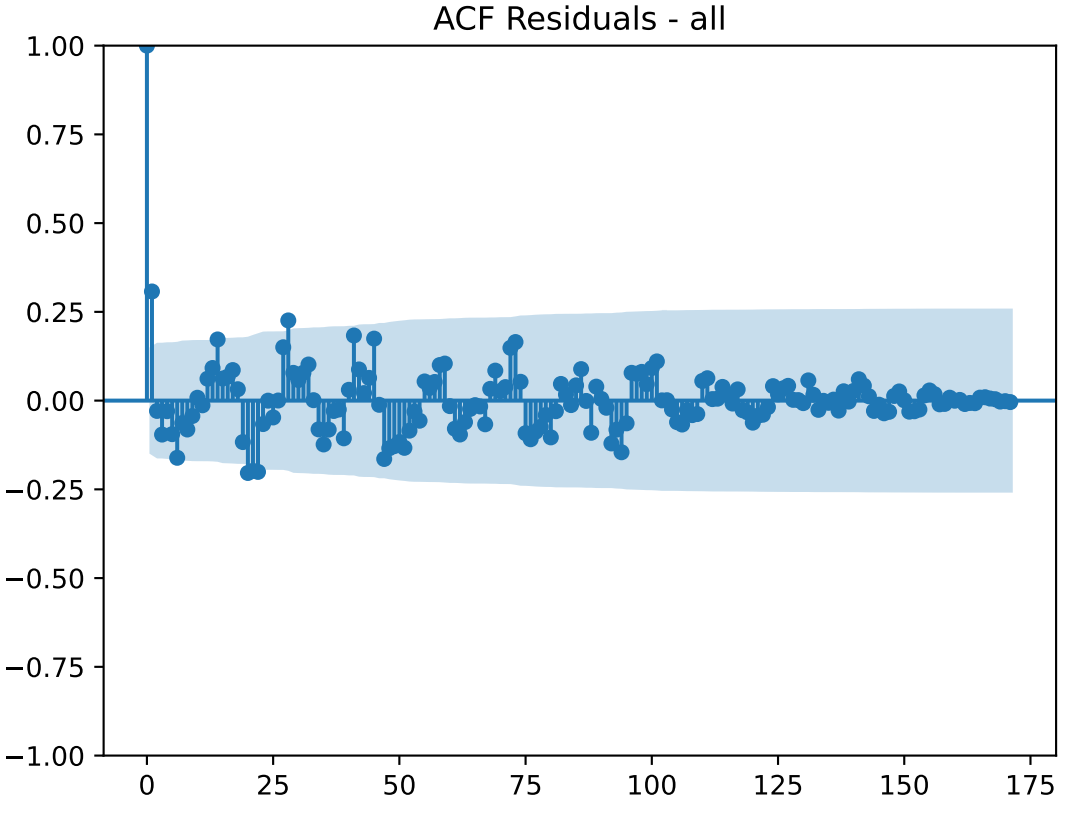

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

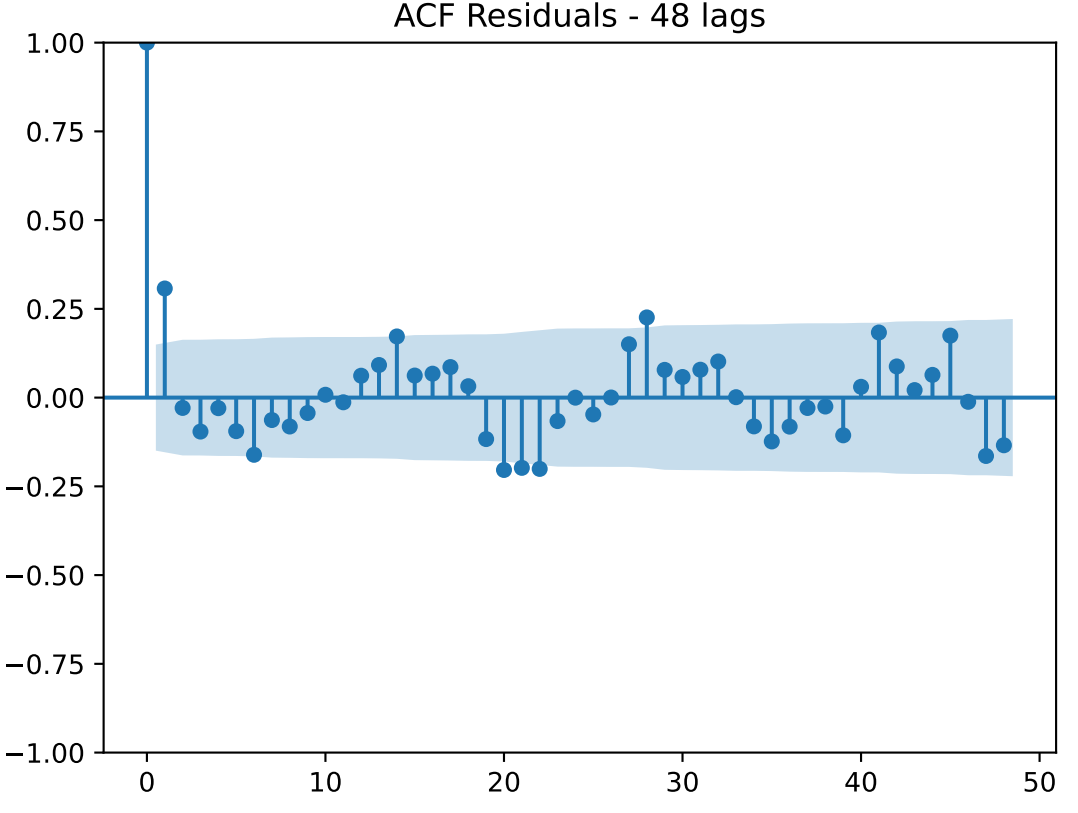

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

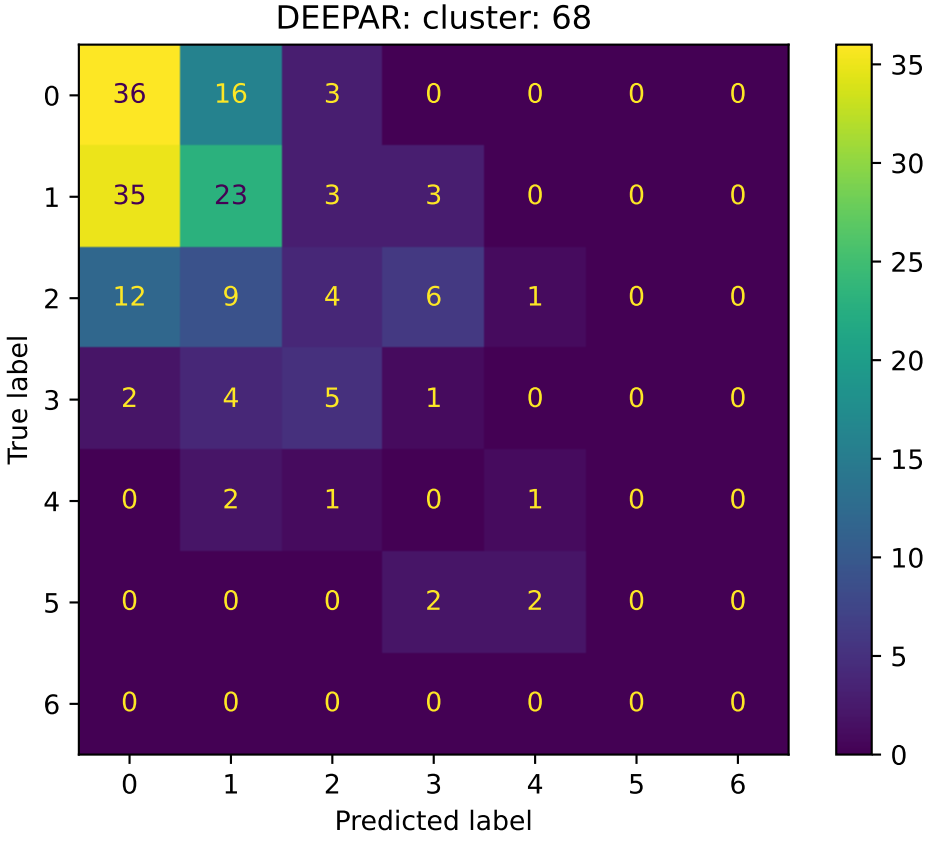

DEEPAR: cluster: 64
True label
Predicted label
0 1 2 3 4 5 6
28 17 3 2 0 0 0
17 16 5 2 0 0 0
9 6 10 3 4 1 0
2 5 5 5 1 1 0
1 8 4 3 2 0 0
2 1 1 0 1 0 2
0 0 0 3 1 0 0
25 20 15 10 5 0

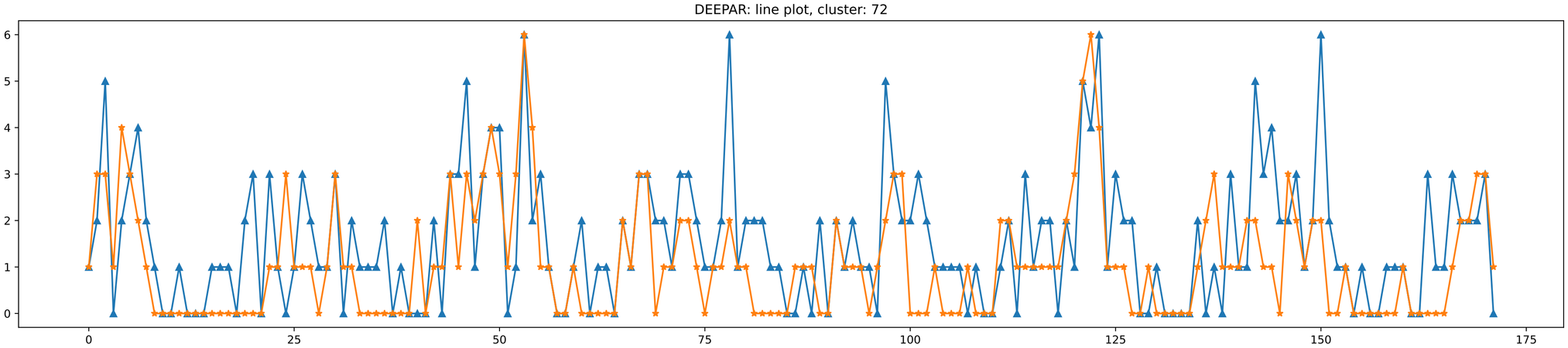

DEEPAR: line plot, cluster: 68
0
1
2
3
4
5
6
7
0
25
50
75
100
125
150
175

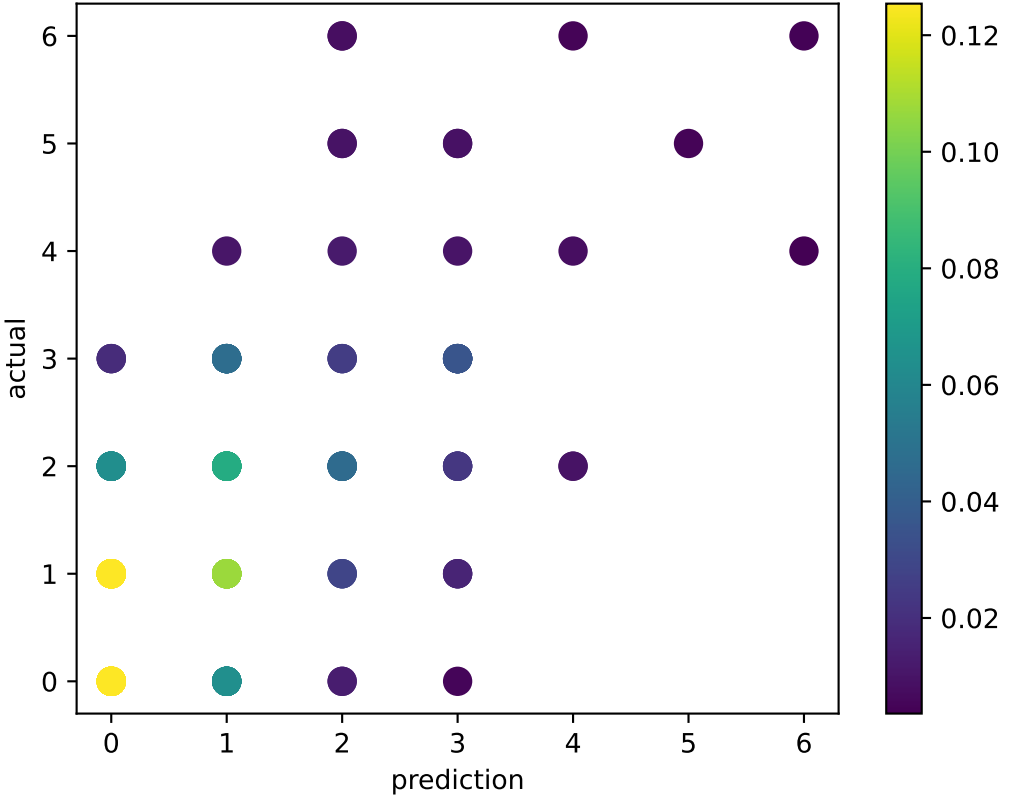

actual
prediction
0
1
2
3
4
5
6
7
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.175
0.150
0.125
0.100
0.075
0.050
0.025

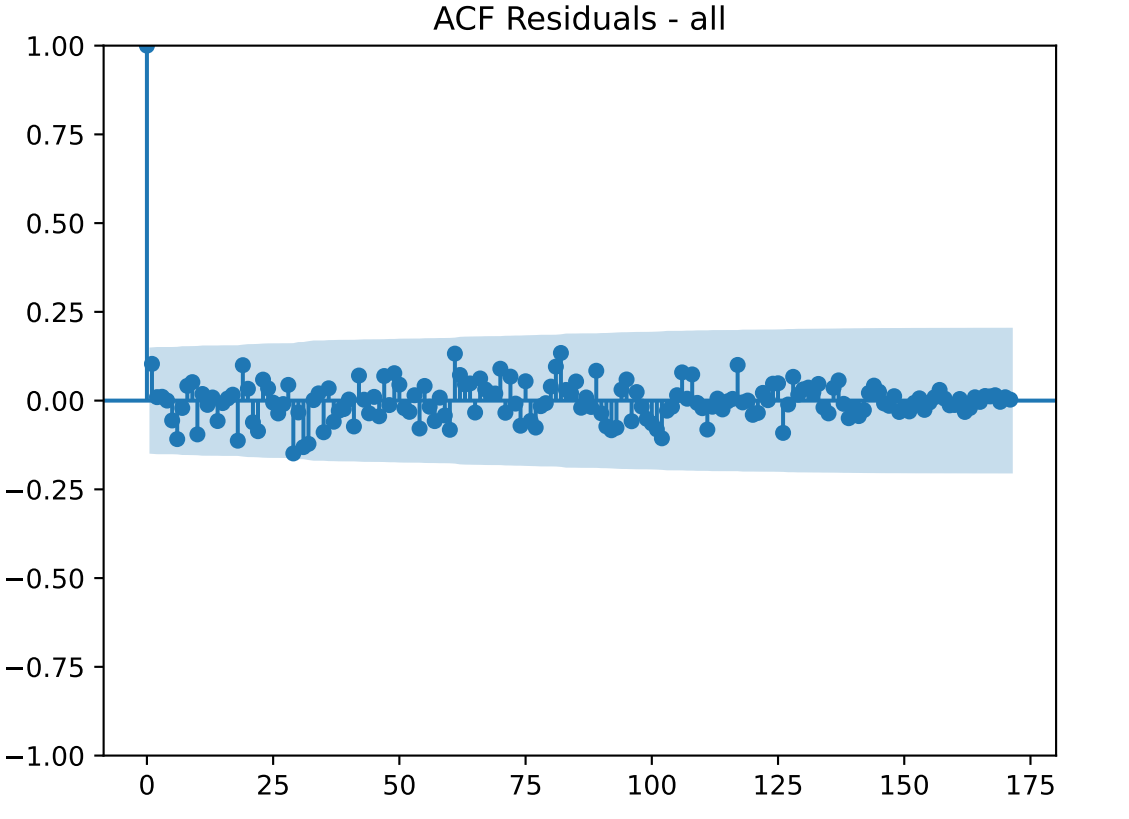

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

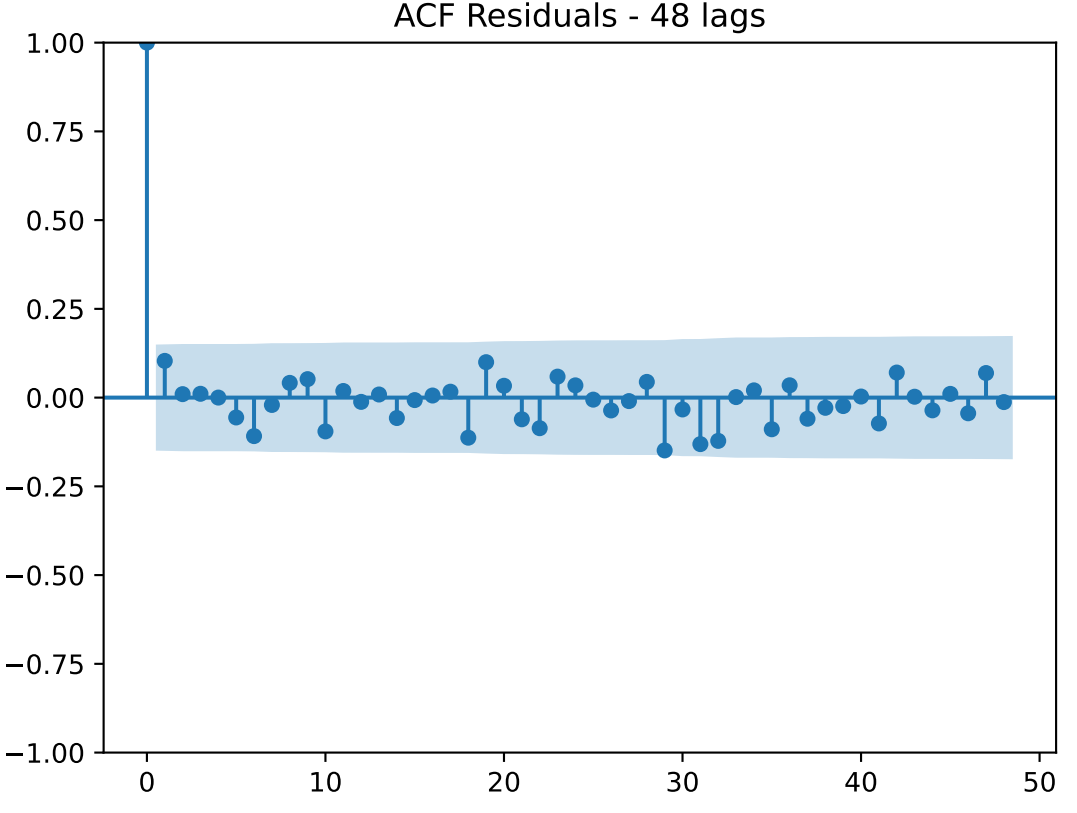

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

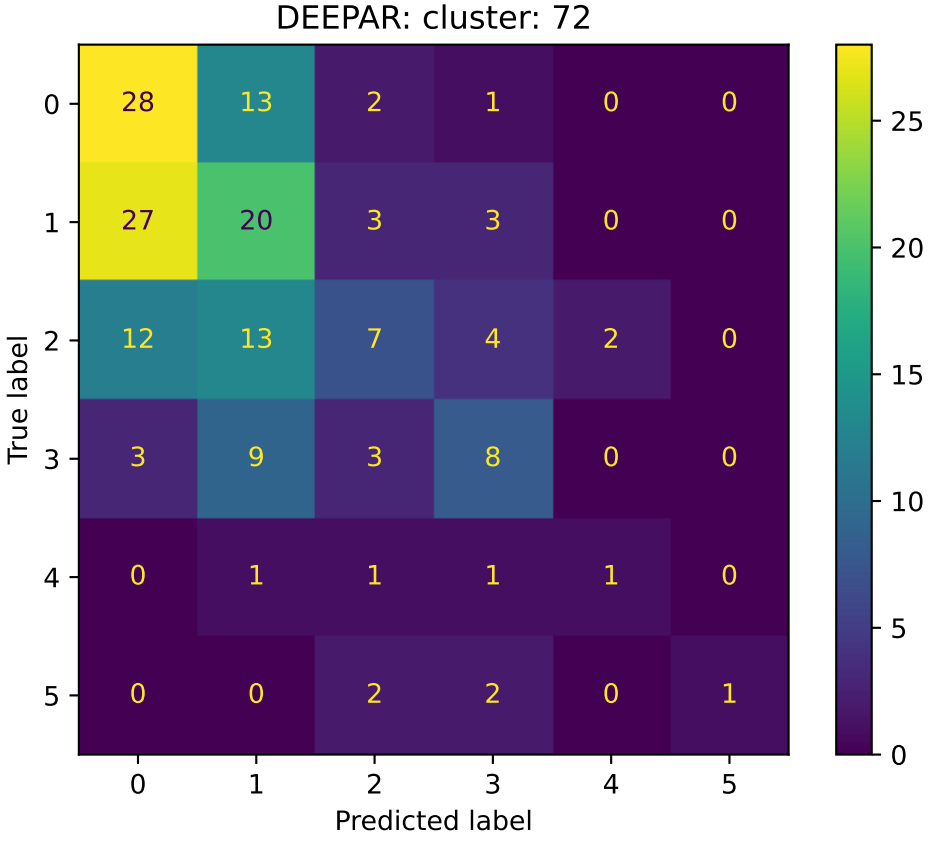

DEEPAR: cluster: 68
True label
Predicted label
0 1 2 3 4 5 6
36 16 3 0 0 0 0
35 23 3 3 0 0 0
12 9 4 6 1 0 0
2 4 5 1 0 0 0
0 2 1 0 1 0 0
0 0 0 2 2 0 0
0 0 0 0 0 0 0
35 30 25 20 15 10 5 0

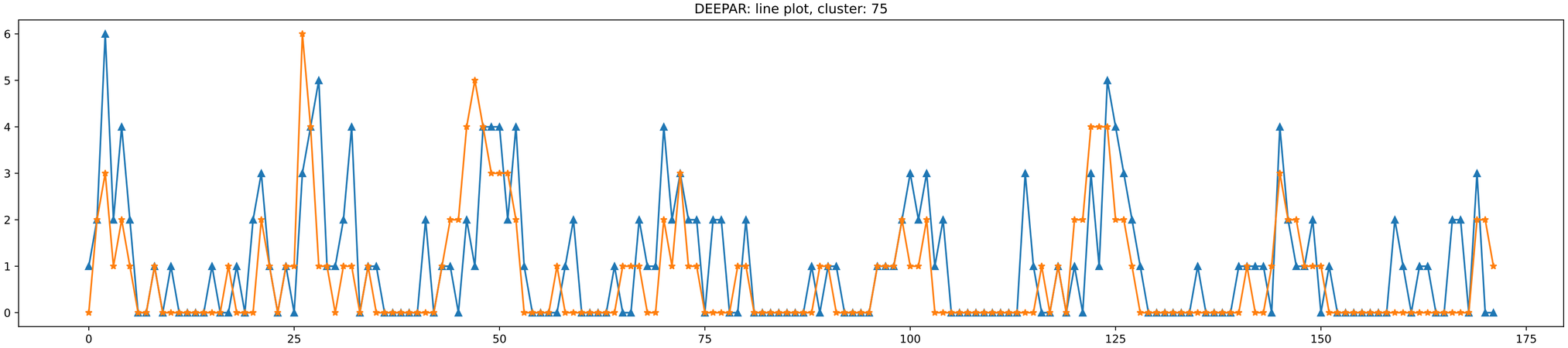

DEEPAR: line plot, cluster: 72
0
1
2
3
4
5
6
0
25
50
75
100
125
150
175

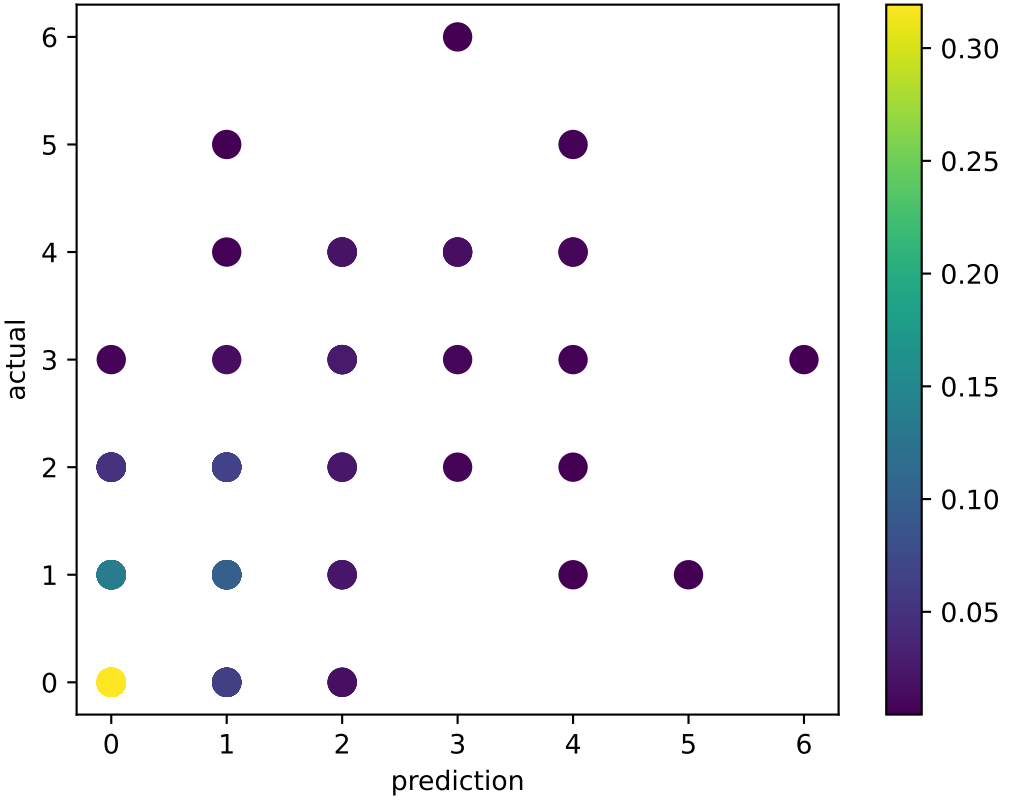

actual
prediction
0
1
2
3
4
5
6
0.12
0.10
0.08
0.06
0.04
0.02

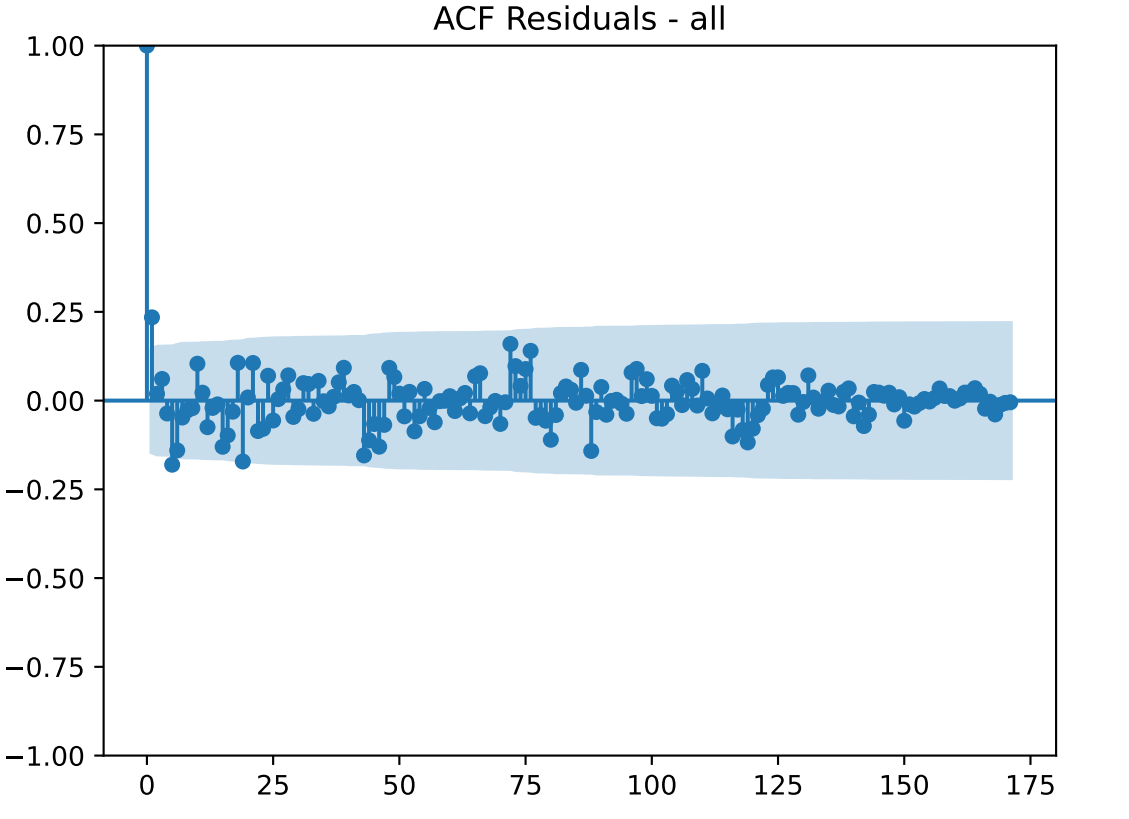

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

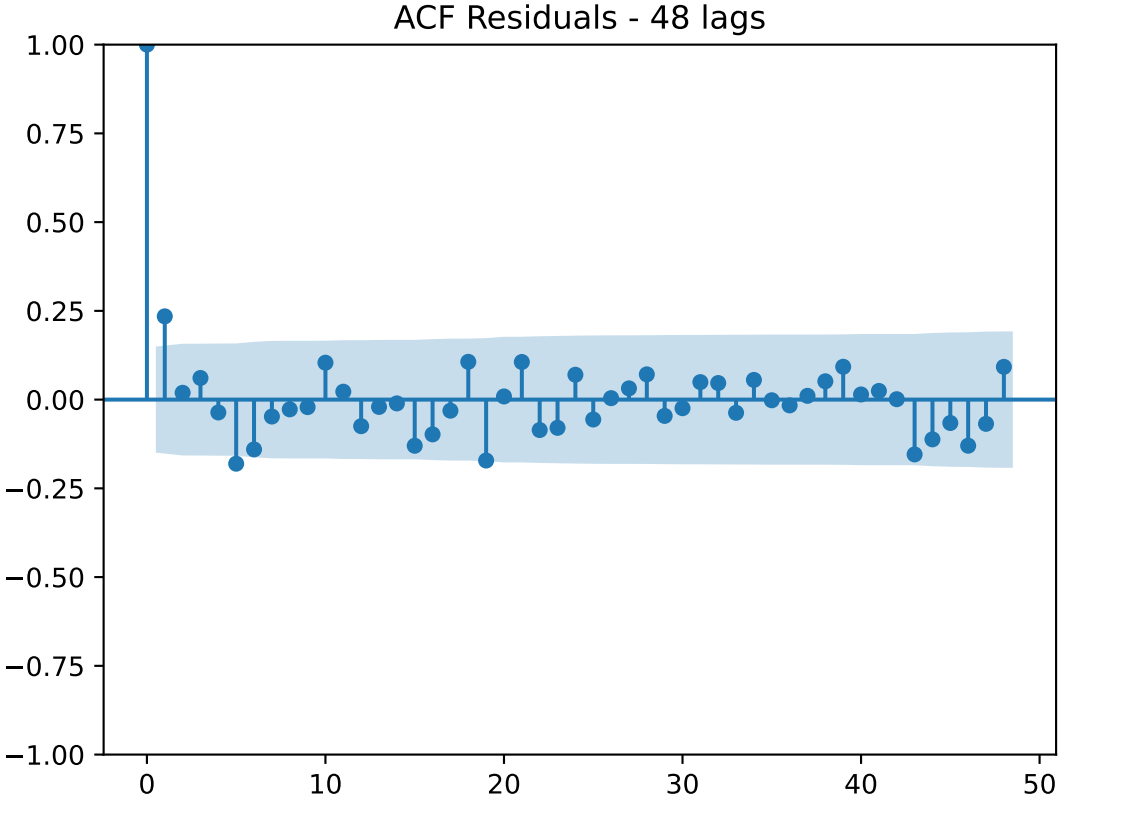

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

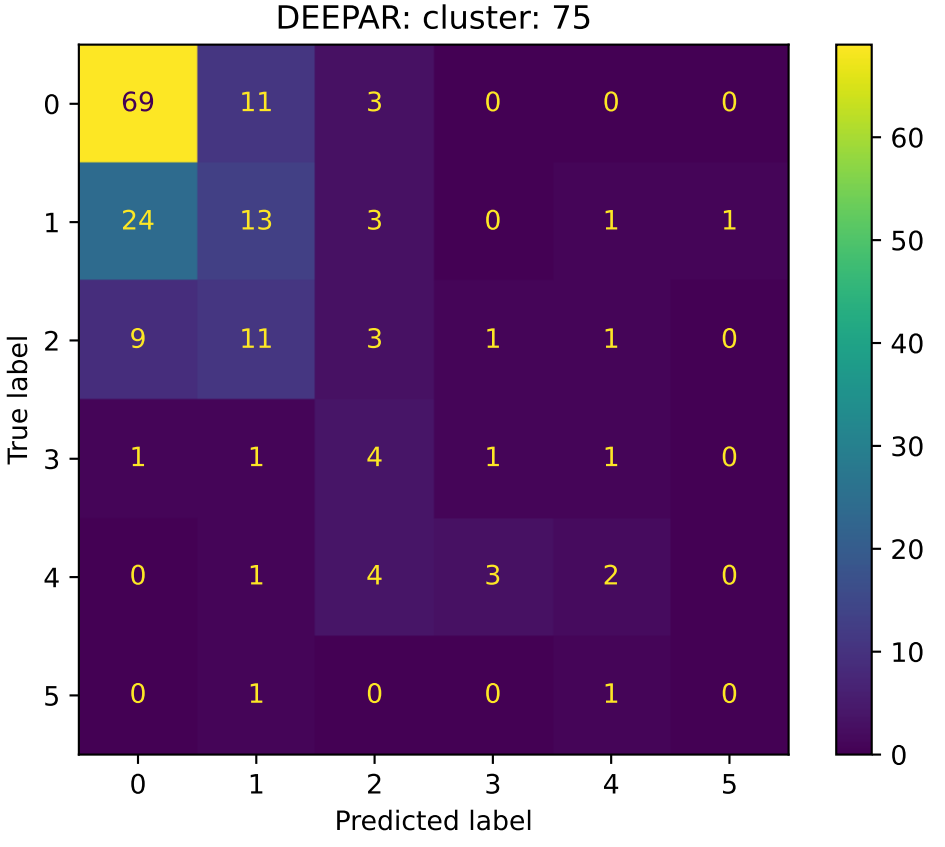

DEEPAR: cluster: 72
True label
Predicted label
0
1
2
3
4
5
28 13 2 1 0 0
27 20 3 3 0 0
12 13 7 4 2 0
3 9 3 8 0 0
0 1 1 1 1 0
0 0 2 2 0 1
25
20
15
10
5
0

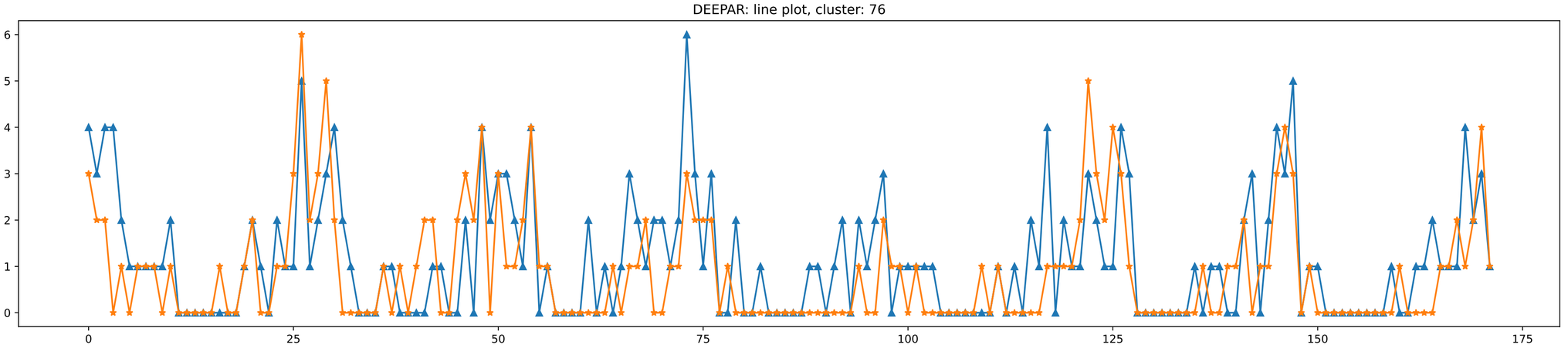

DEEPAR: line plot, cluster: 75
0
1
2
3
4
5
6
0
25
50
75
100
125
150
175

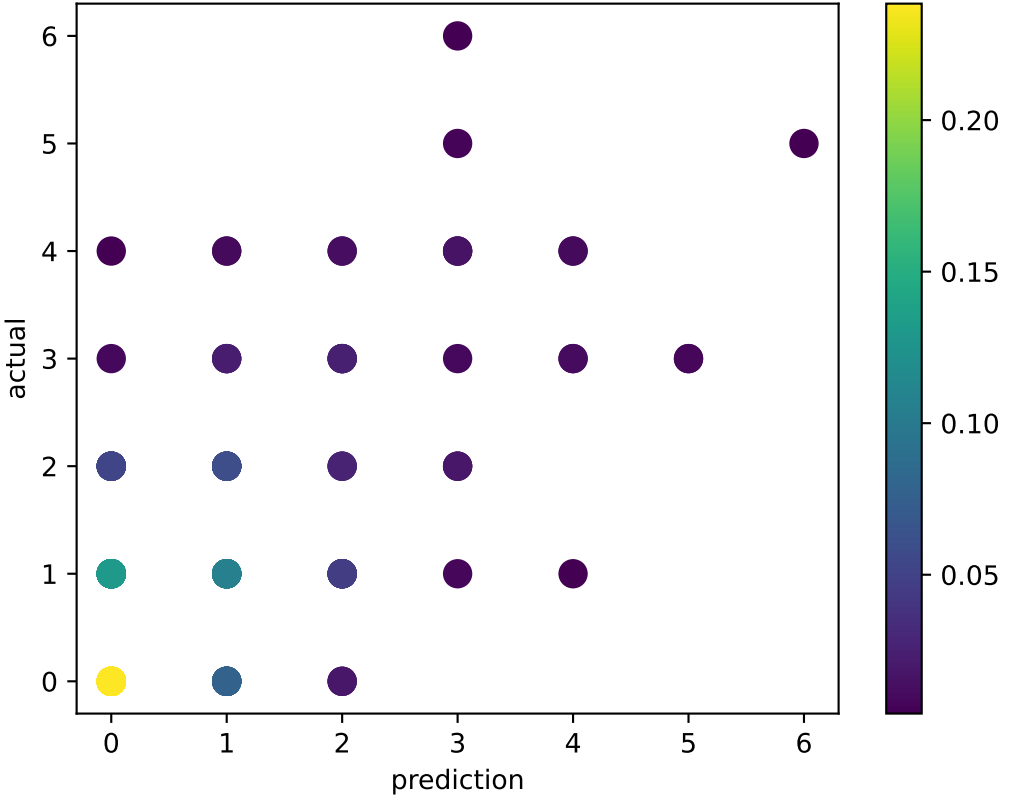

actual
prediction
0
1
2
3
4
5
6
0.30
0.25
0.20
0.15
0.10
0.05

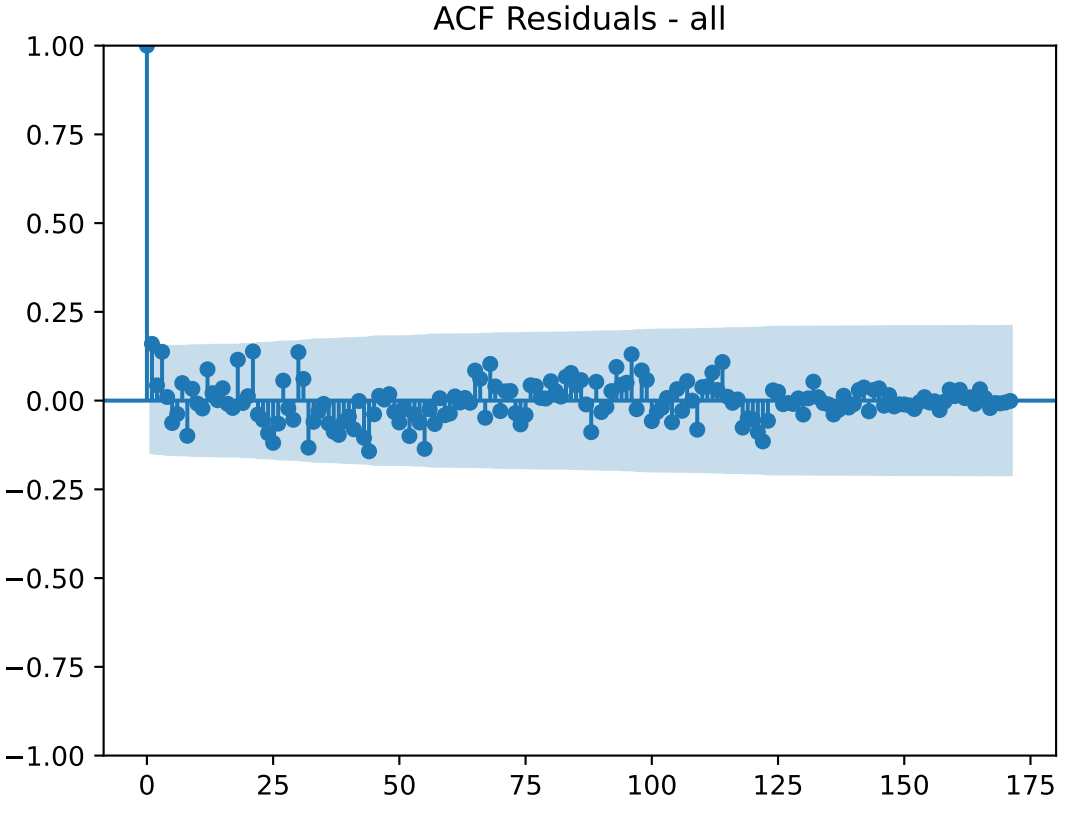

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

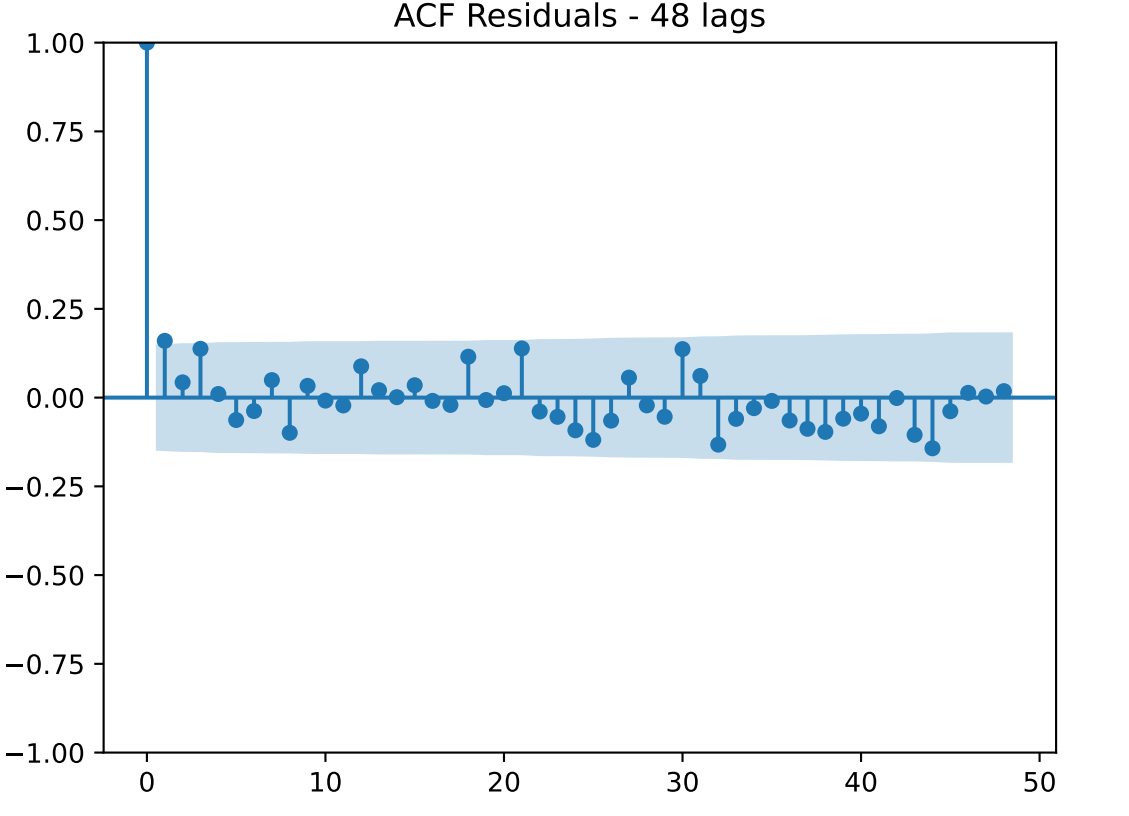

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

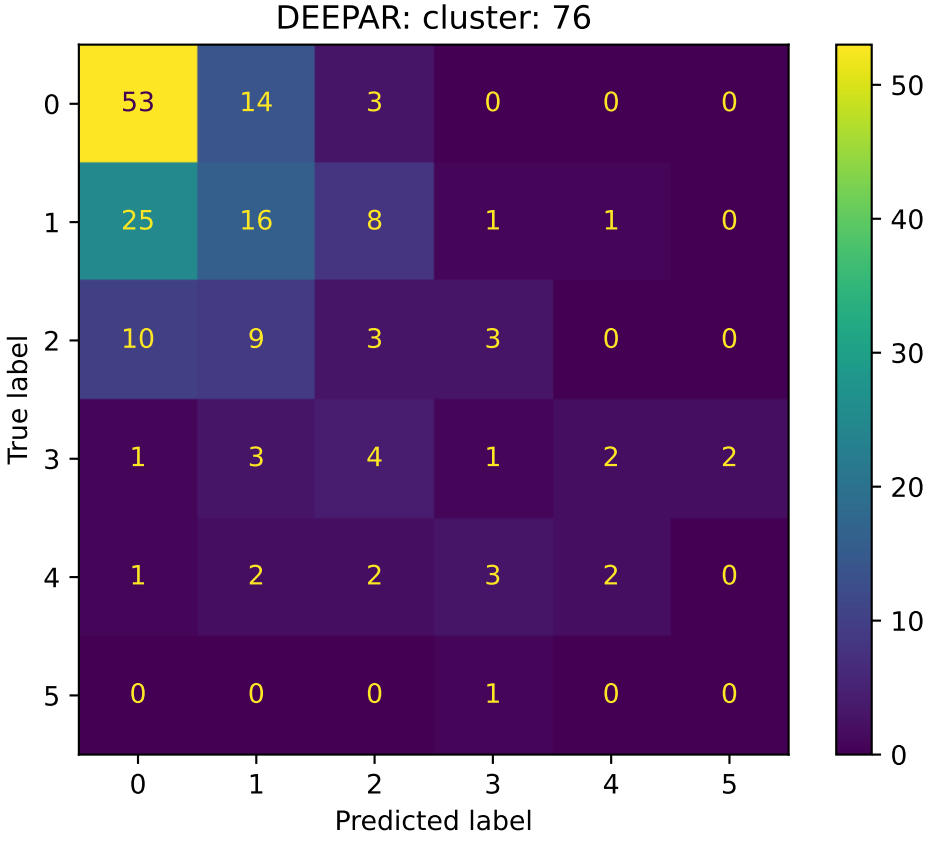

DEEPAR: cluster: 75
True label
Predicted label
0
1
2
3
4
5
69 11 3 0 0 0
24 13 3 0 1 1
9 11 3 1 1 0
1 1 4 1 1 0
0 1 4 3 2 0
0 1 0 0 1 0
60
50
40
30
20
10
0

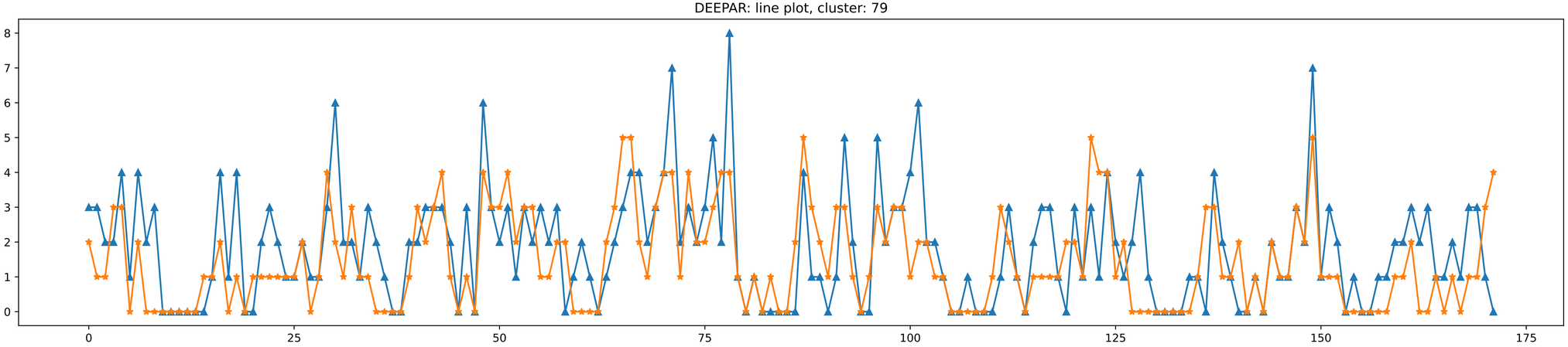

DEEPAR: line plot, cluster: 76
0
1
2
3
4
5
6
0
25
50
75
100
125
150
175

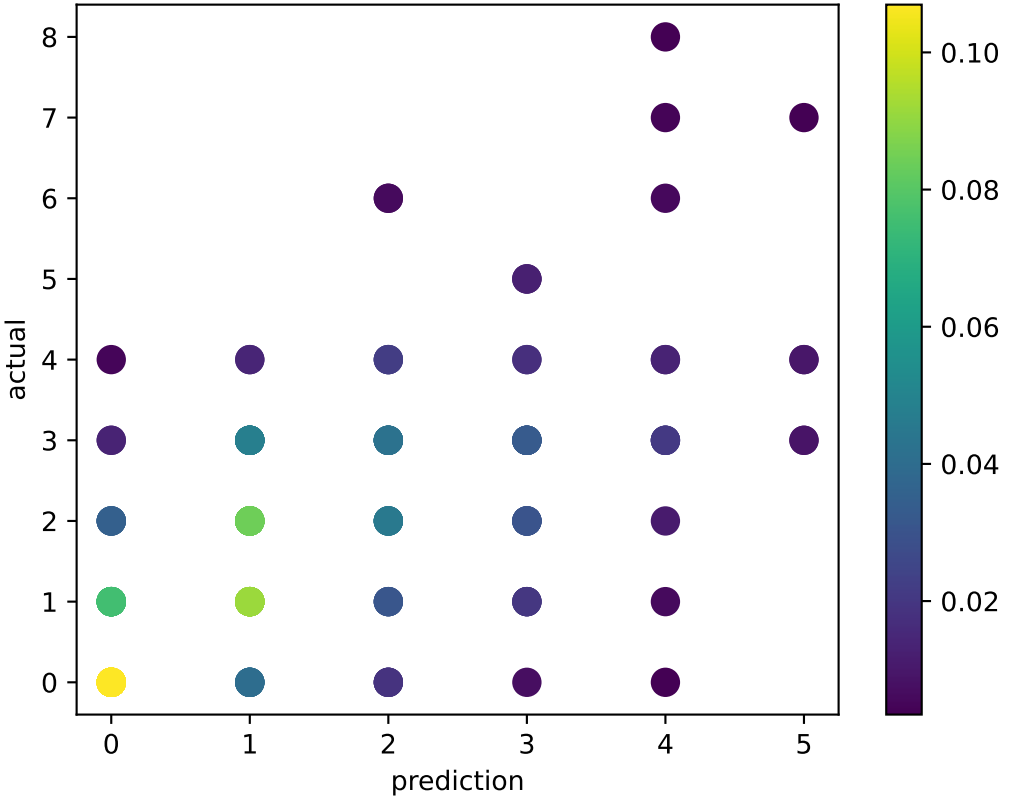

actual
prediction
0
1
2
3
4
5
6
0.20
0.15
0.10
0.05

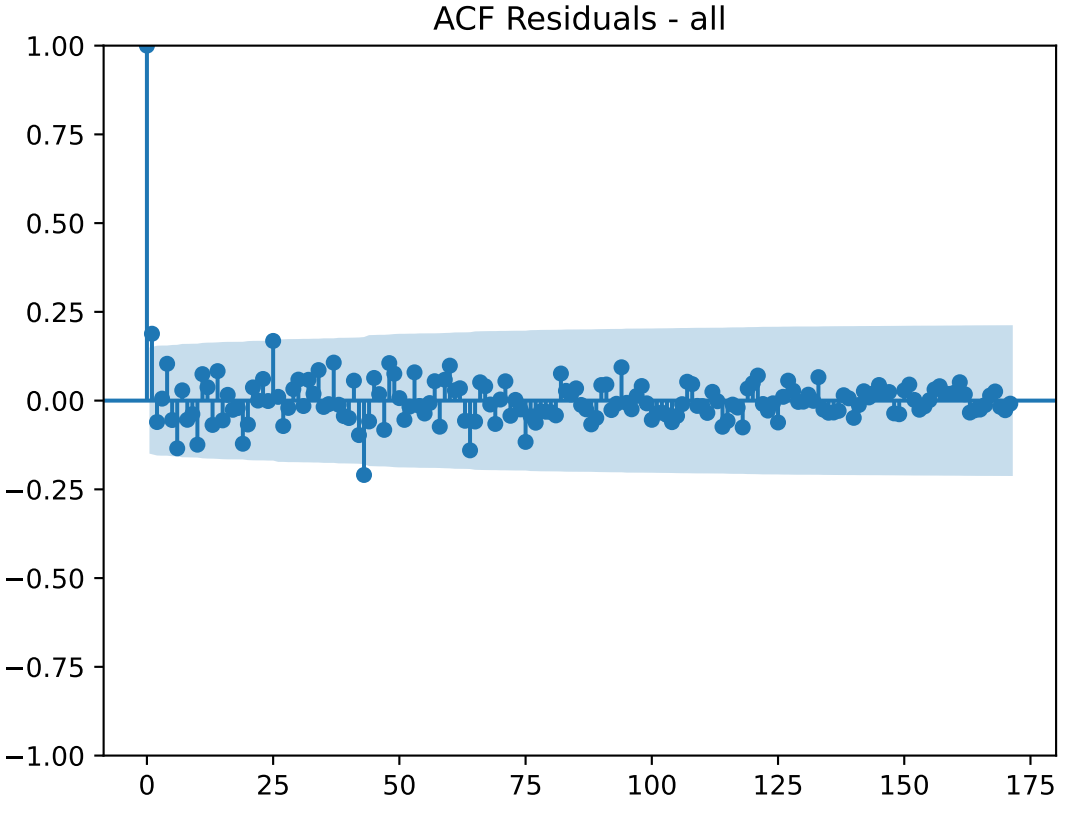

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

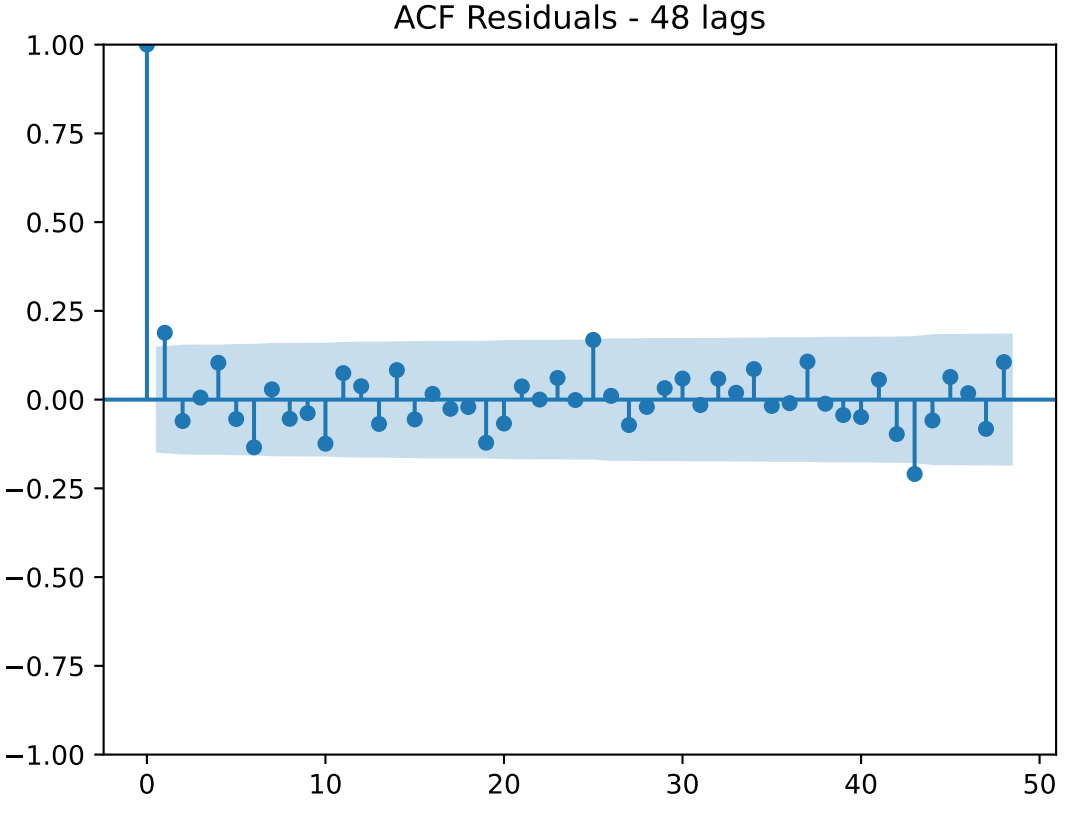

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

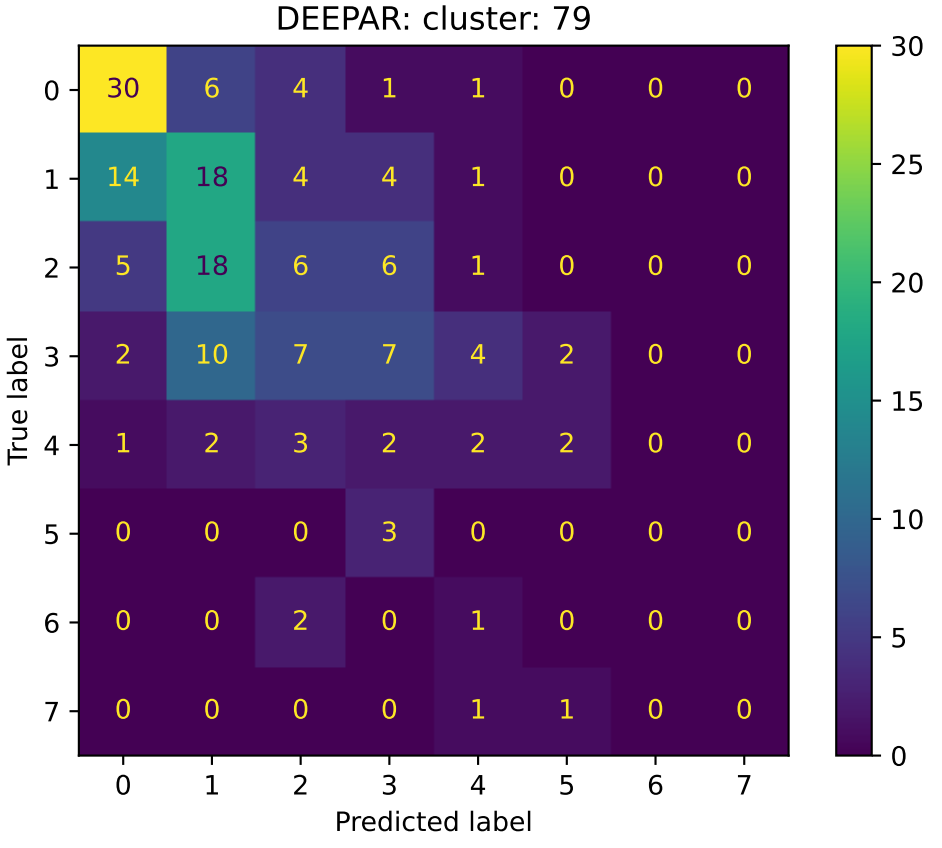

DEEPAR: cluster: 76
True label
Predicted label
0
1
2
3
4
5
53 14 3 0 0 0
25 16 8 1 1 0
10 9 3 3 0 0
1 3 4 1 2 2
1 2 2 3 2 0
0 0 0 1 0 0
50
40
30
20
10
0

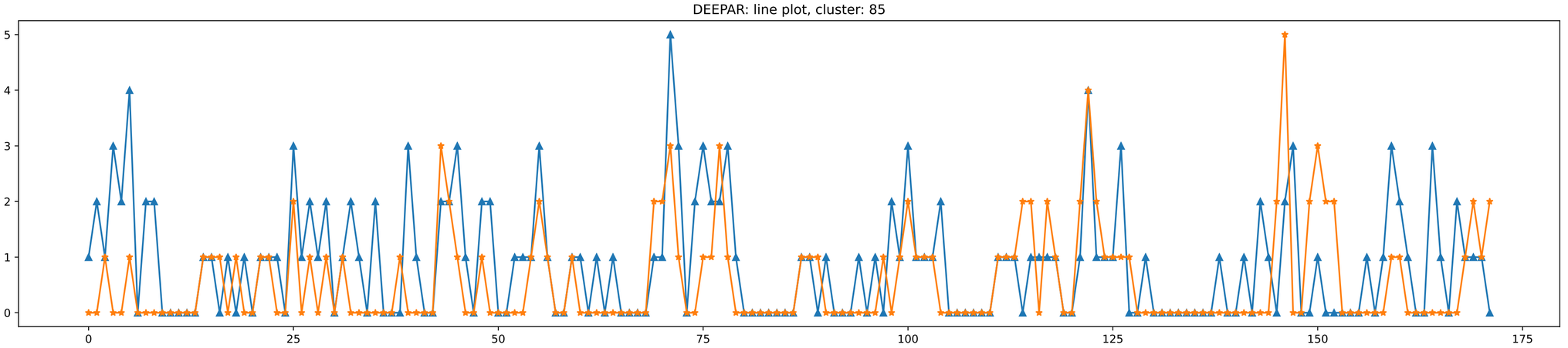

DEEPAR: line plot, cluster: 79
8
7
6
5
4
3
2
1
0
0
25
50
75
100
125
150
175

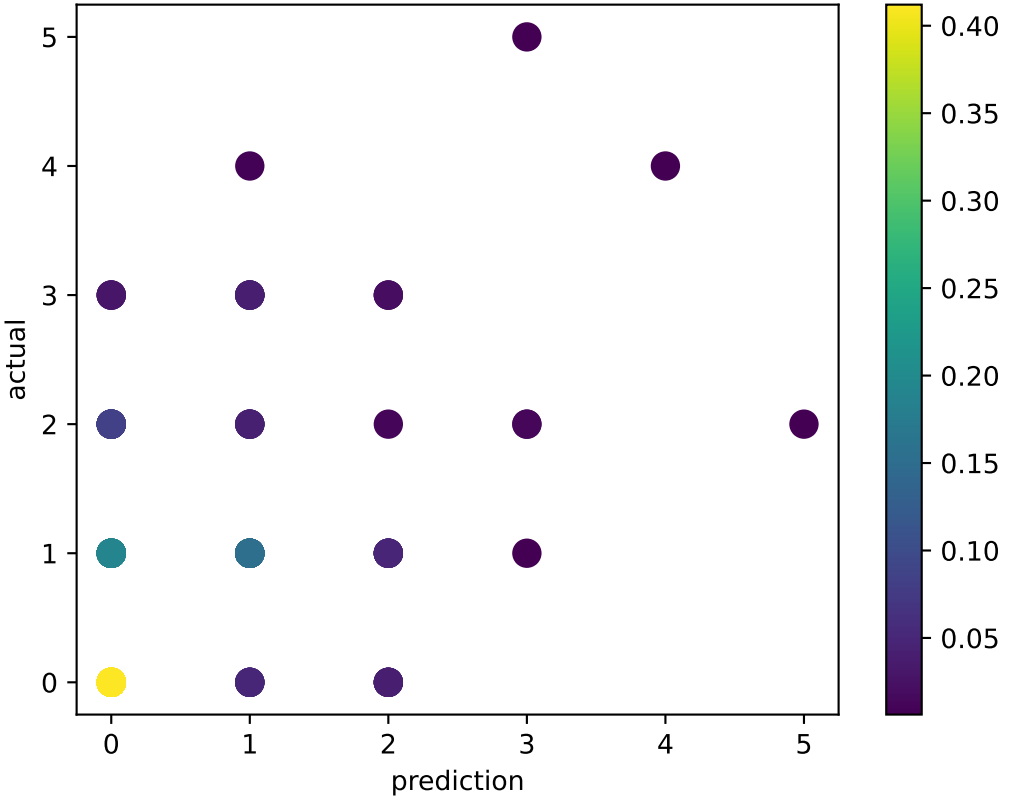

actual
prediction
0
1
2
3
4
5
6
7
8
0.10
0.08
0.06
0.04
0.02

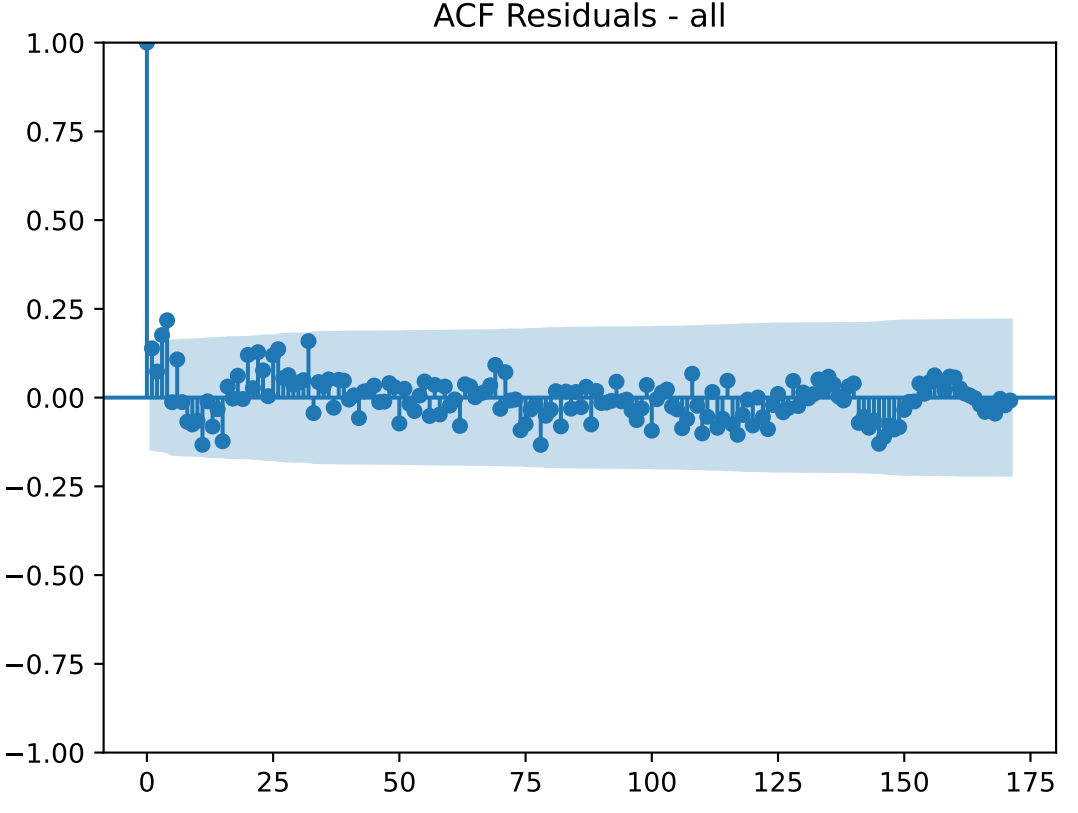

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

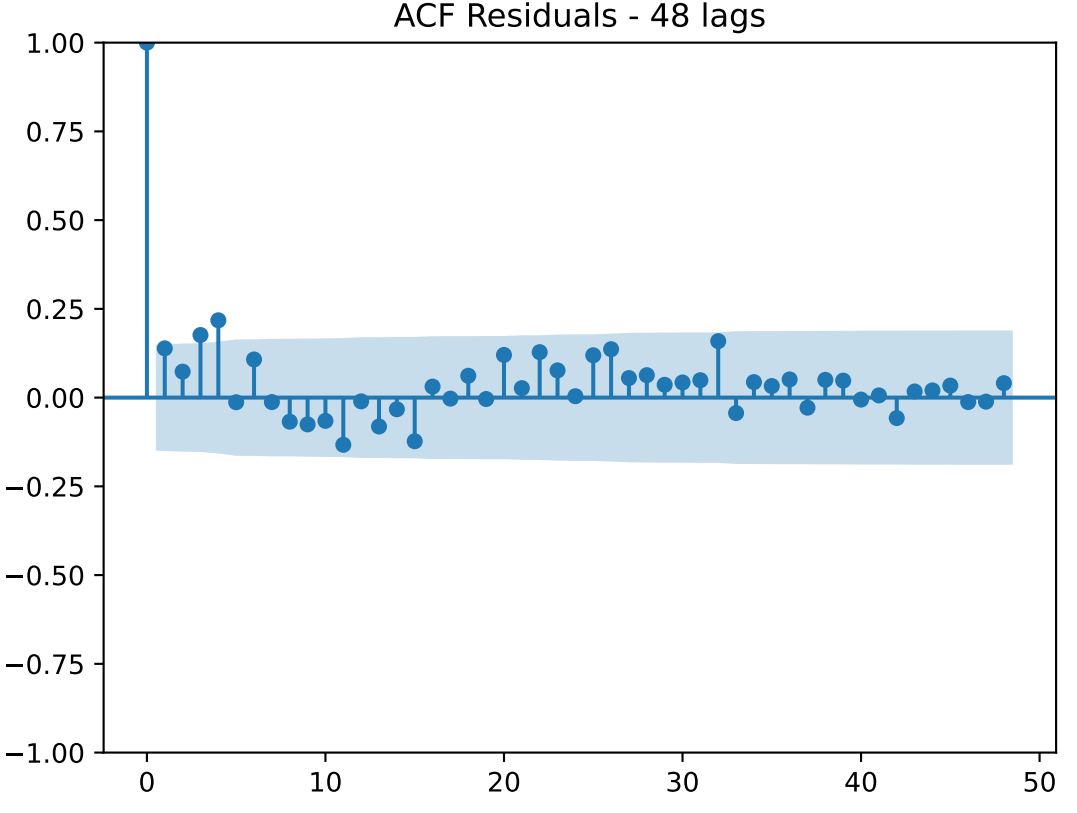

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

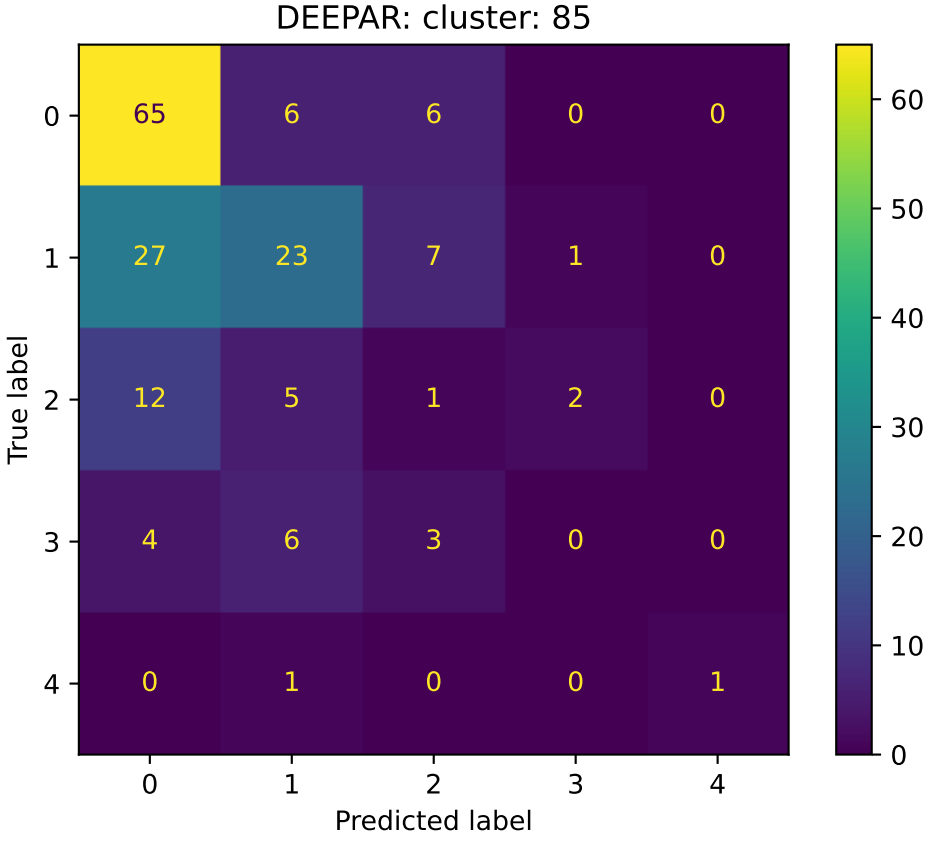

DEEPAR: cluster: 79
True label
Predicted label
0 1 2 3 4 5 6 7
30 6 4 1 1 0 0 0
14 18 4 4 1 0 0 0
5 18 6 6 1 0 0 0
2 10 7 7 4 2 0 0
1 2 3 2 2 2 0 0
0 0 0 3 0 0 0 0
0 0 2 0 1 0 0 0
0 0 0 0 1 1 0 0
30 25 20 15 10 5 0

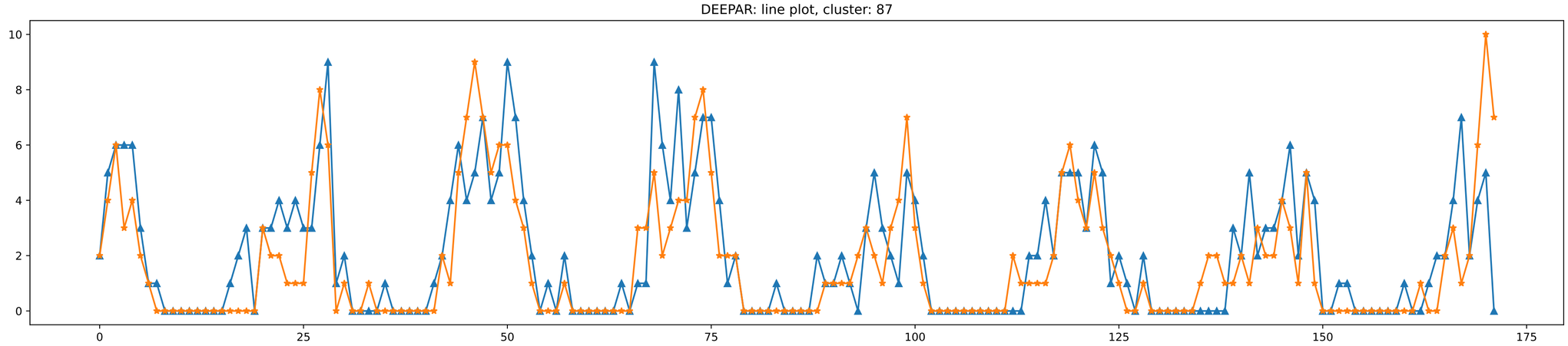

DEEPAR: line plot, cluster: 85
0
1
2
3
4
5
0
25
50
75
100
125
150
175

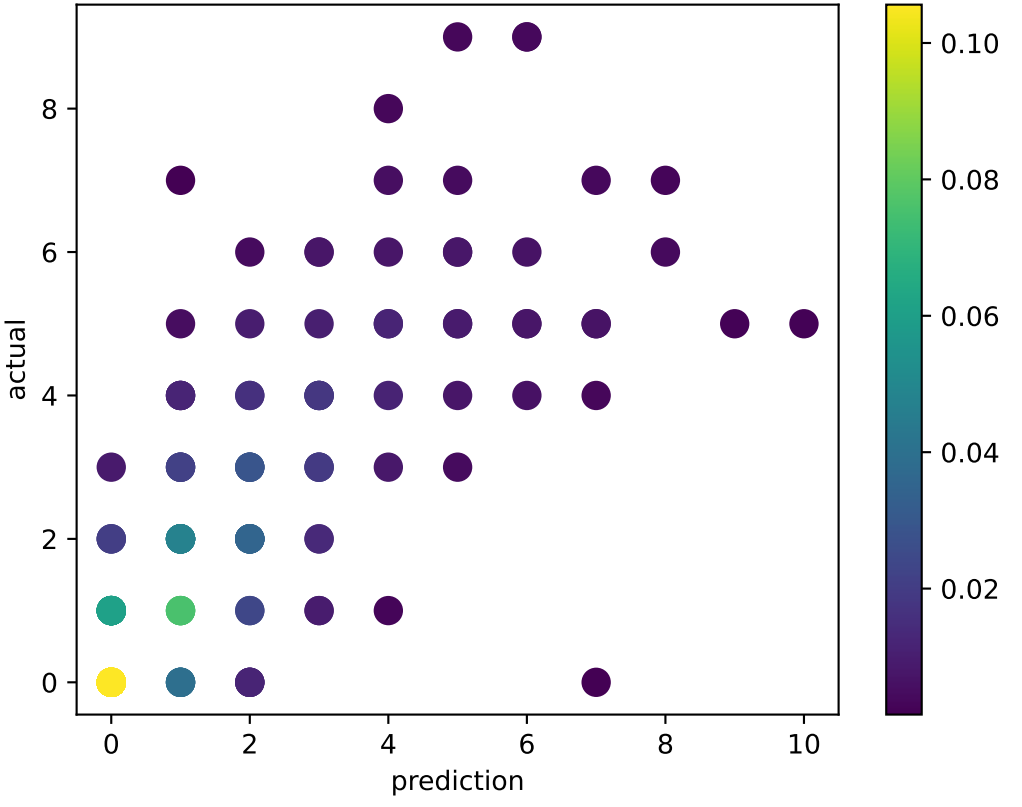

actual
prediction
0
1
2
3
4
5
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05

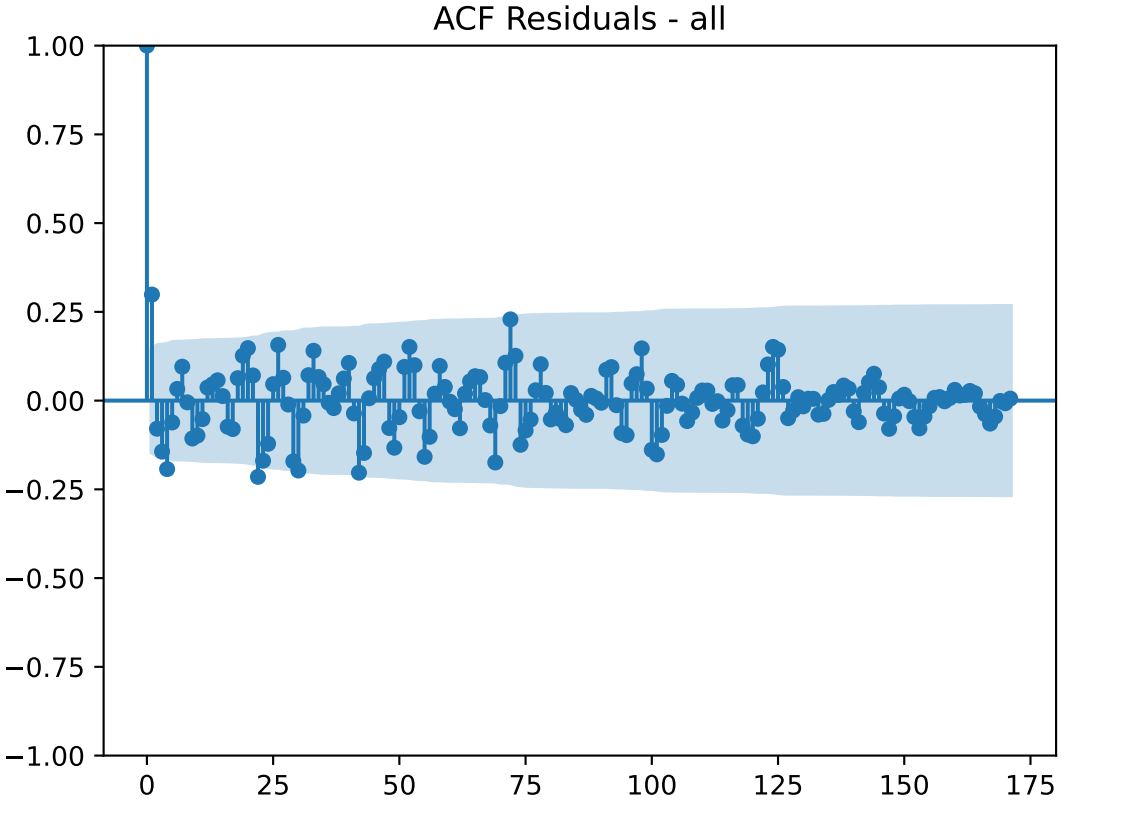

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

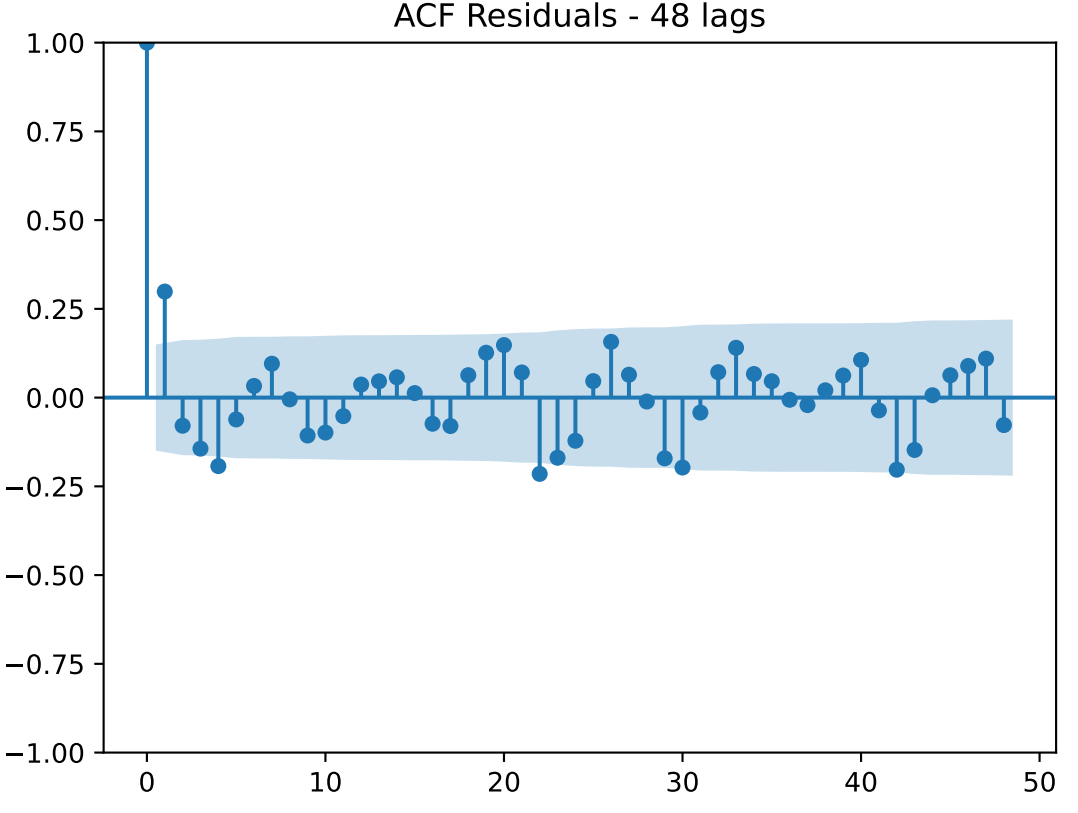

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

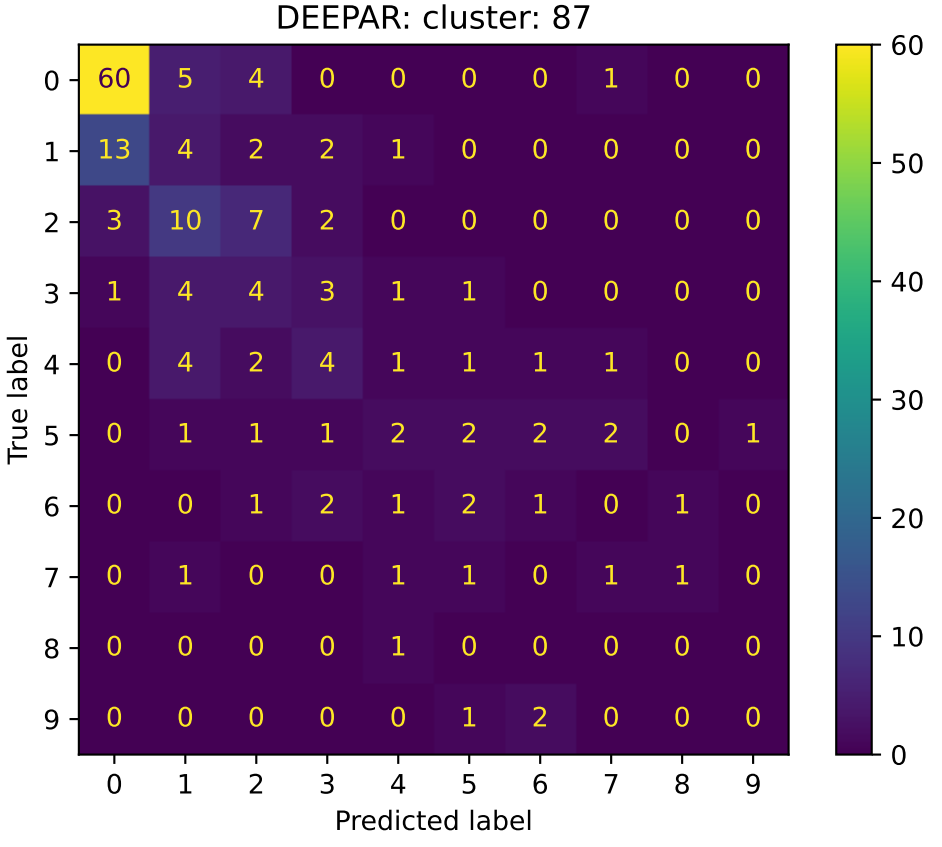

DEEPAR: cluster: 85
True label
Predicted label
0
1
2
3
4
65
6
6
0
0
27
23
7
1
0
12
5
1
2
0
4
6
3
0
0
0
1
0
0
1
60
50
40
30
20
10
0

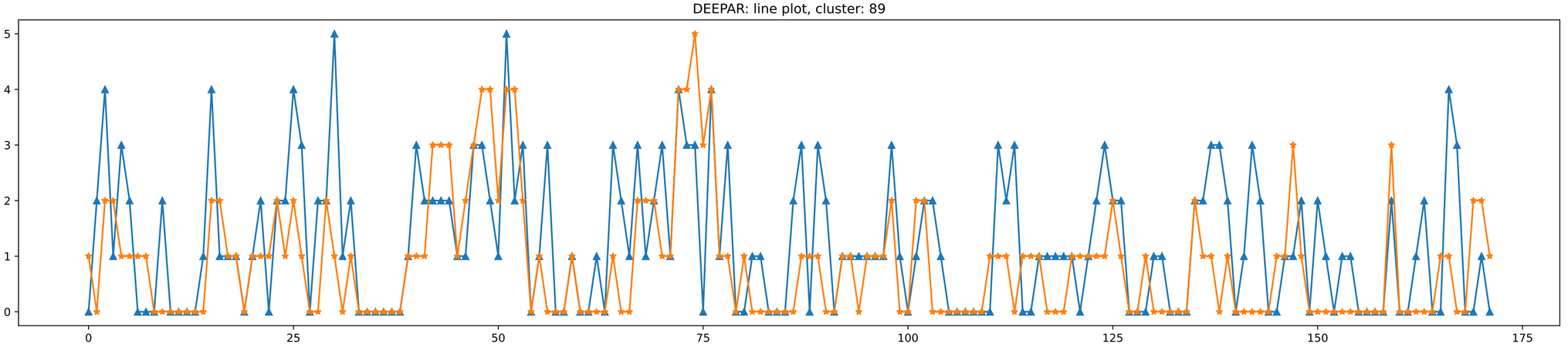

DEEPAR: line plot, cluster: 87
10
8
6
4
2
0
0
25
50
75
100
125
150
175

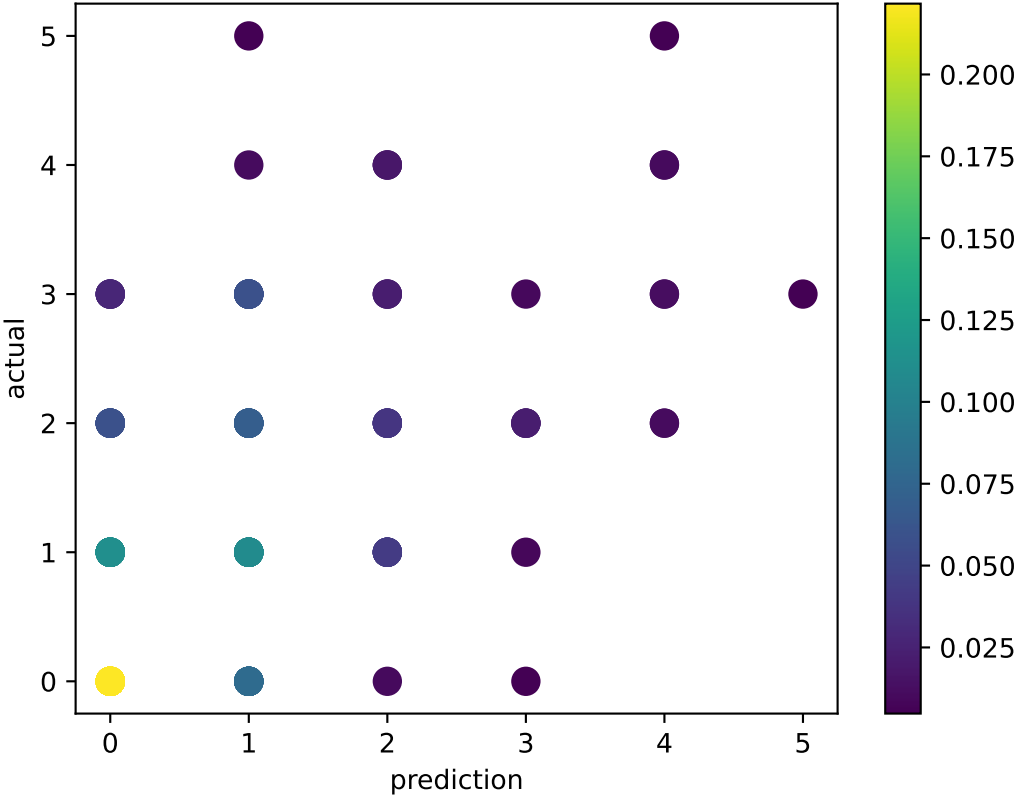

actual
prediction
0
2
4
6
8
10
0.10
0.08
0.06
0.04
0.02

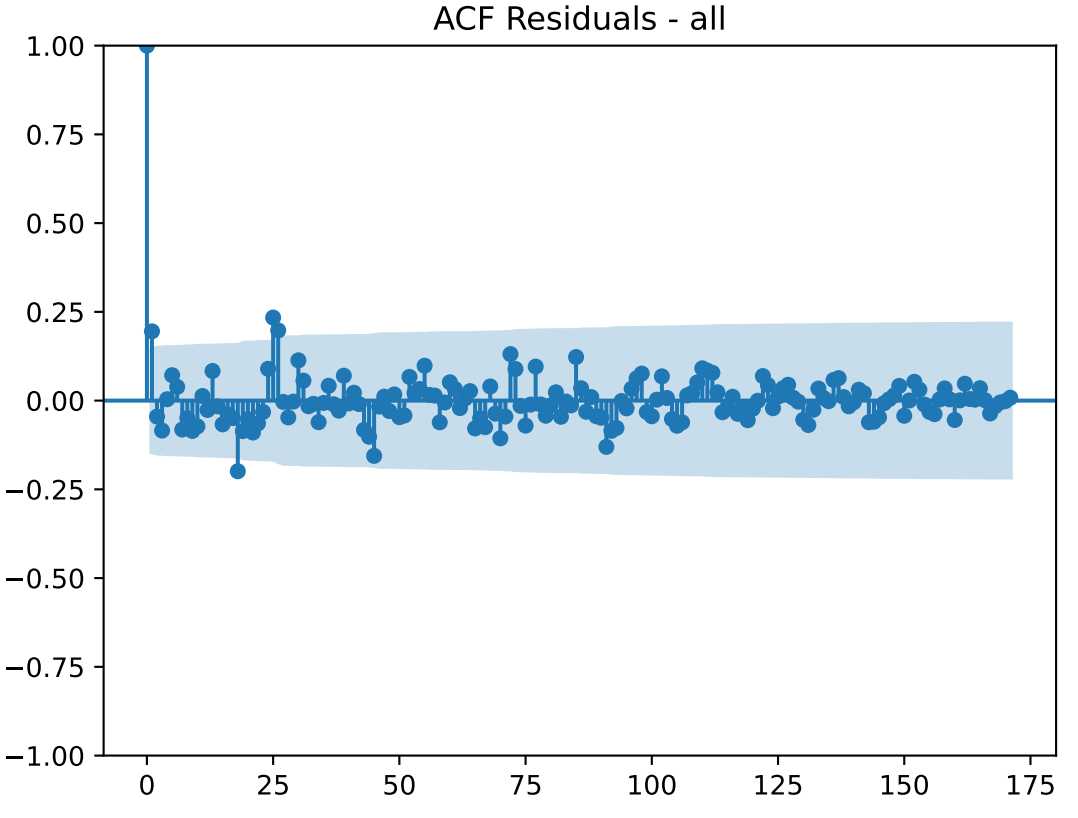

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

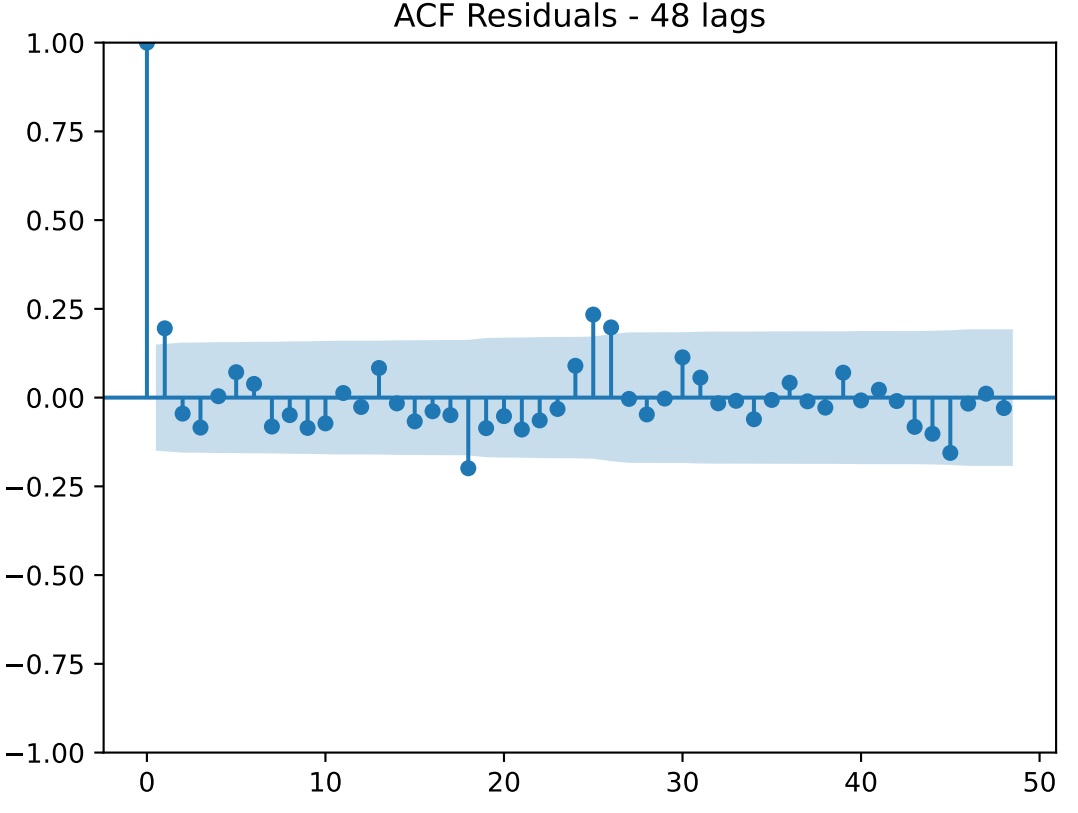

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

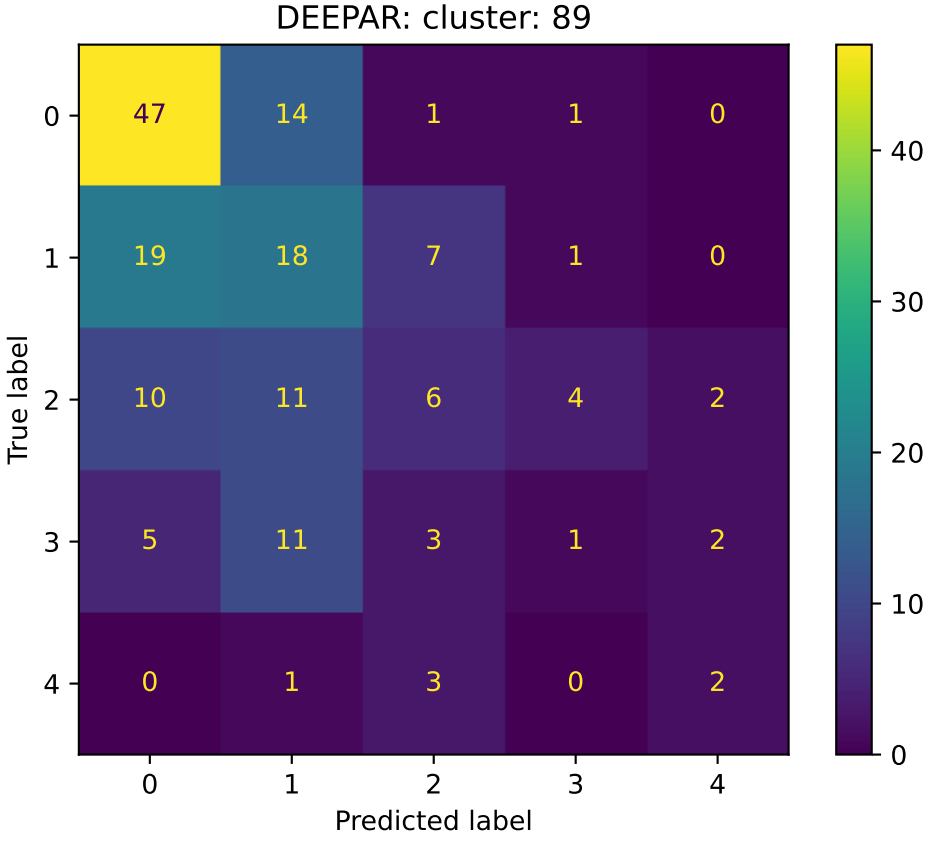

DEEPAR: cluster: 87
True label
Predicted label
0 1 2 3 4 5 6 7 8 9
60 5 4 0 0 0 0 1 0 0
13 4 2 2 1 0 0 0 0 0
3 10 7 2 0 0 0 0 0 0
1 4 4 3 1 1 0 0 0 0
0 4 2 4 1 1 1 1 0 0
0 1 1 1 2 2 2 2 0 1
0 0 1 2 1 2 1 0 1 0
0 1 0 0 1 1 0 1 1 0
0 0 0 0 1 0 0 0 0 0
0 0 0 0 0 1 2 0 0 0
60 50 40 30 20 10 0

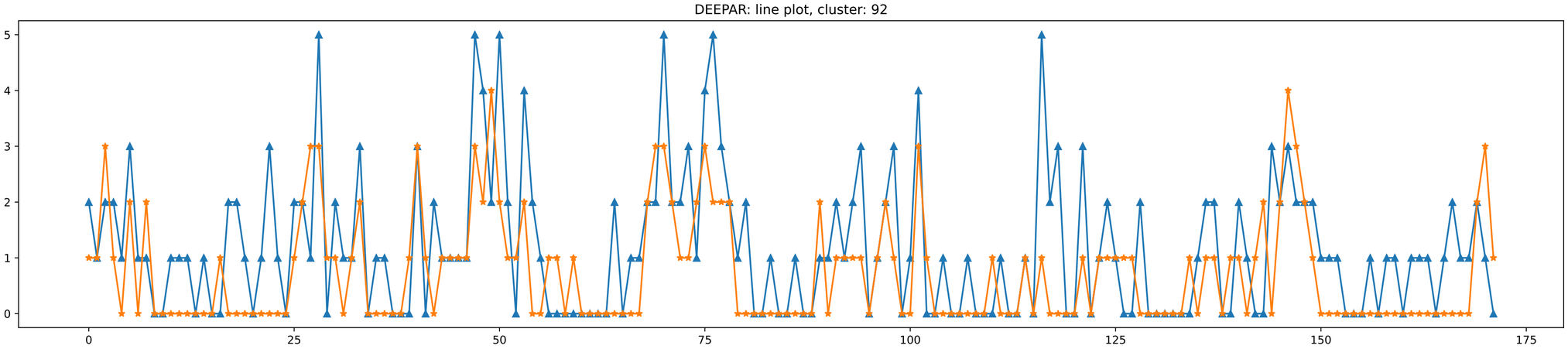

DEEPAR: line plot, cluster: 89
0
1
2
3
4
5
0
25
50
75
100
125
150
175

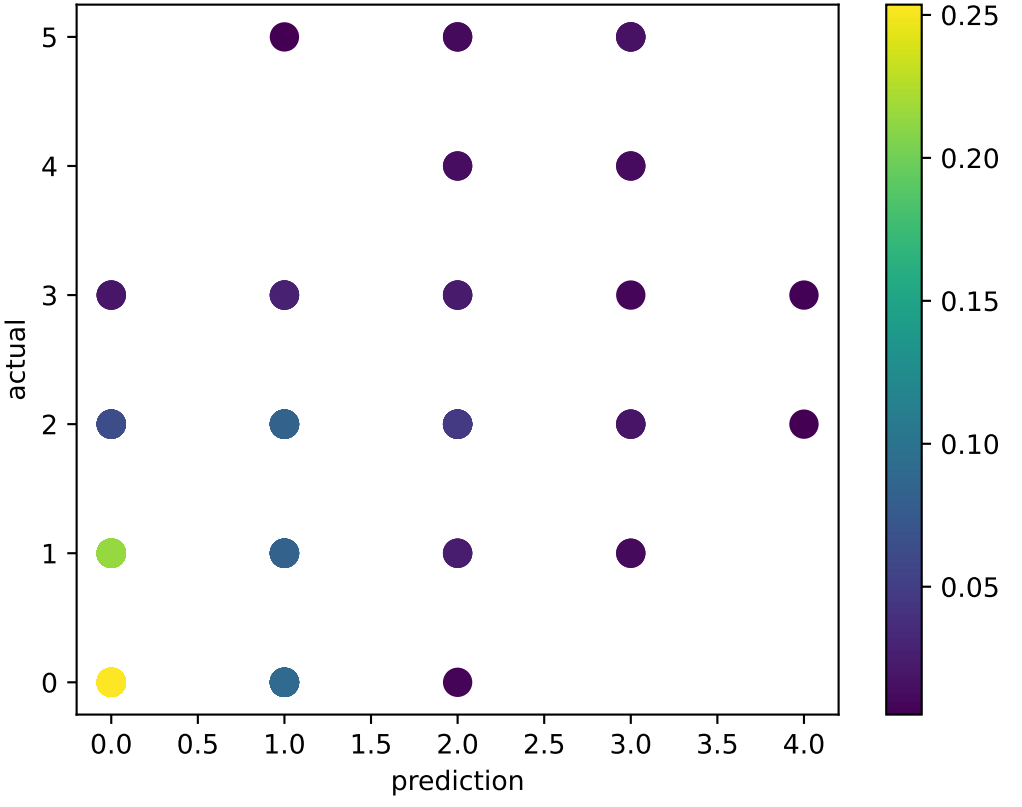

actual
prediction
0
1
2
3
4
5
0.200
0.175
0.150
0.125
0.100
0.075
0.050
0.025

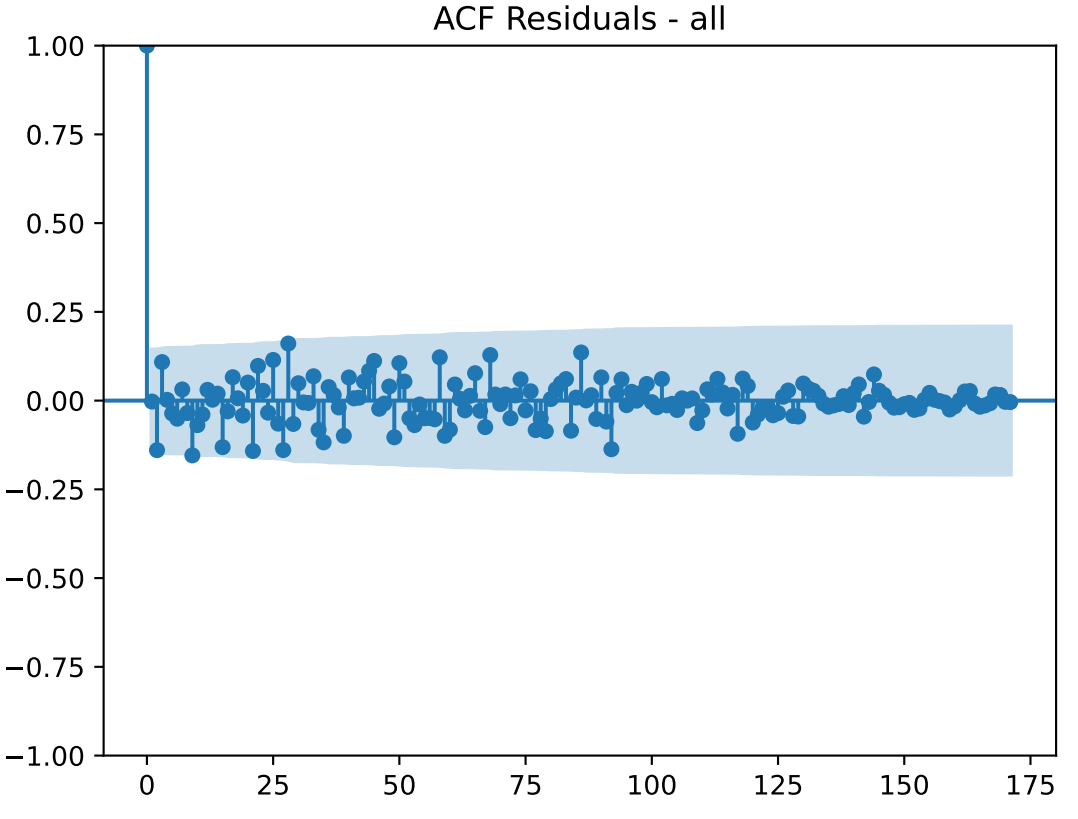

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

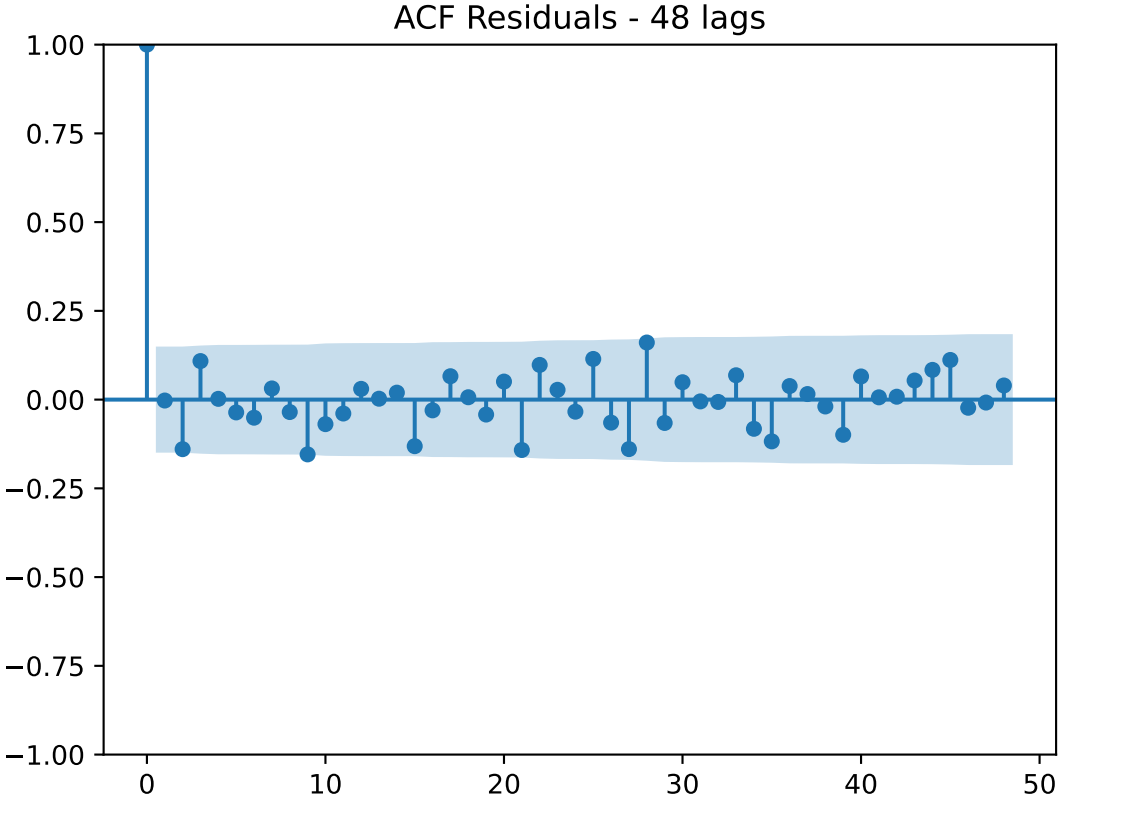

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

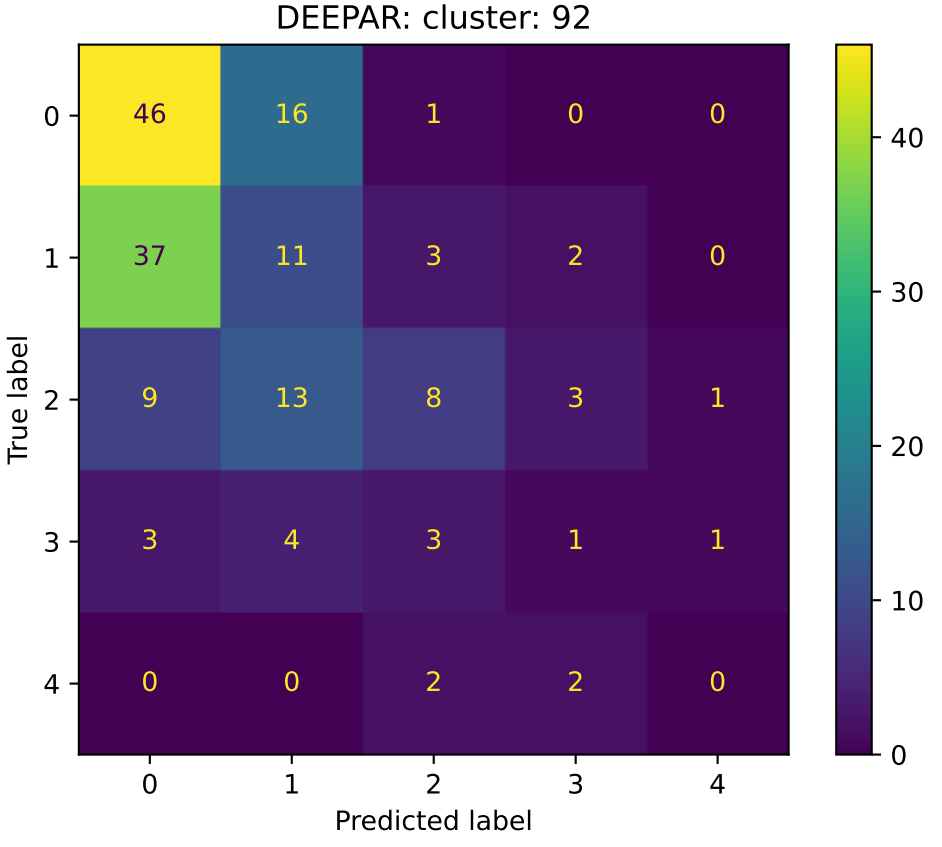

DEEPAR: cluster: 89
True label
Predicted label
0
1
2
3
4
47
14
1
1
0
19
18
7
1
0
10
11
6
4
2
5
11
3
1
2
0
1
3
0
2
40
30
20
10
0

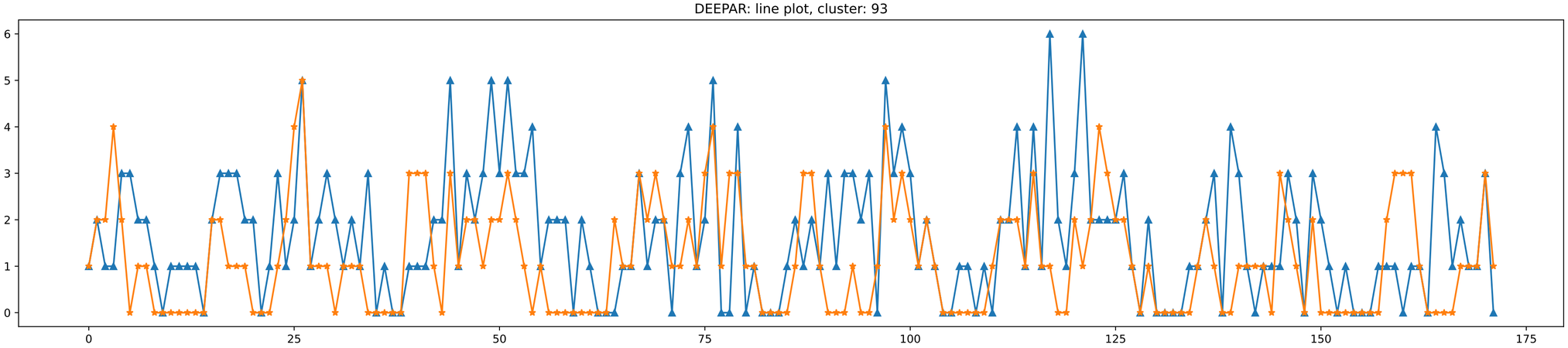

DEEPAR: line plot, cluster: 92
0
1
2
3
4
5
0
25
50
75
100
125
150
175

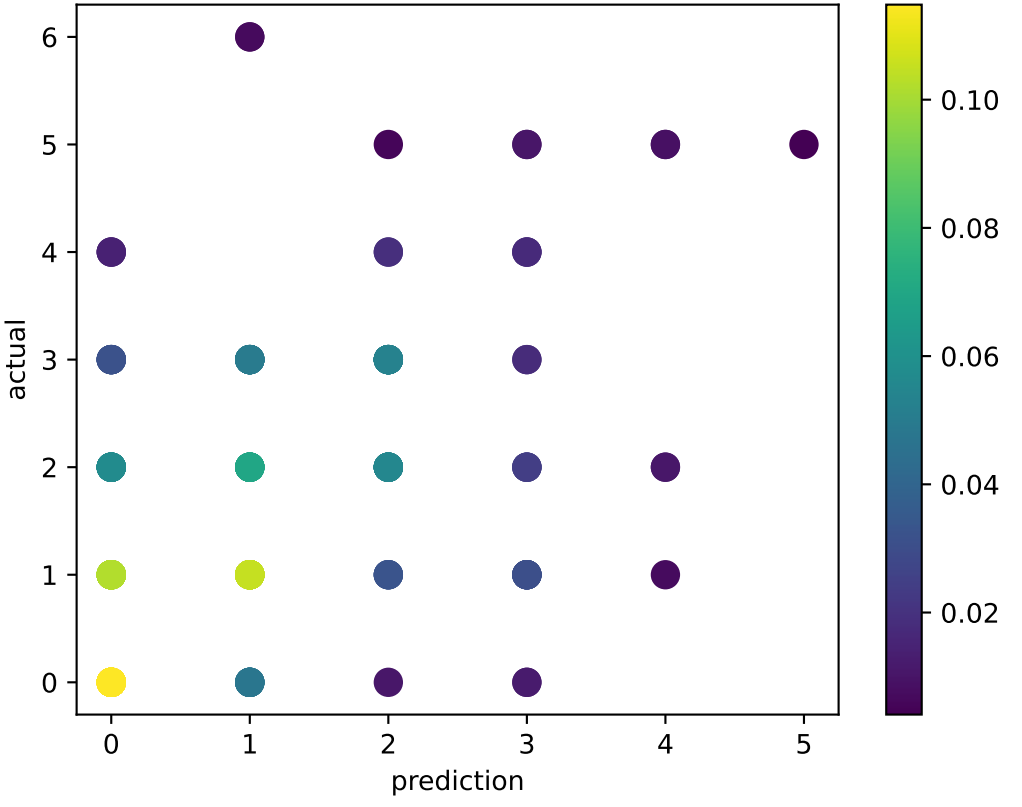

actual
prediction
0
1
2
3
4
5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.25
0.20
0.15
0.10
0.05

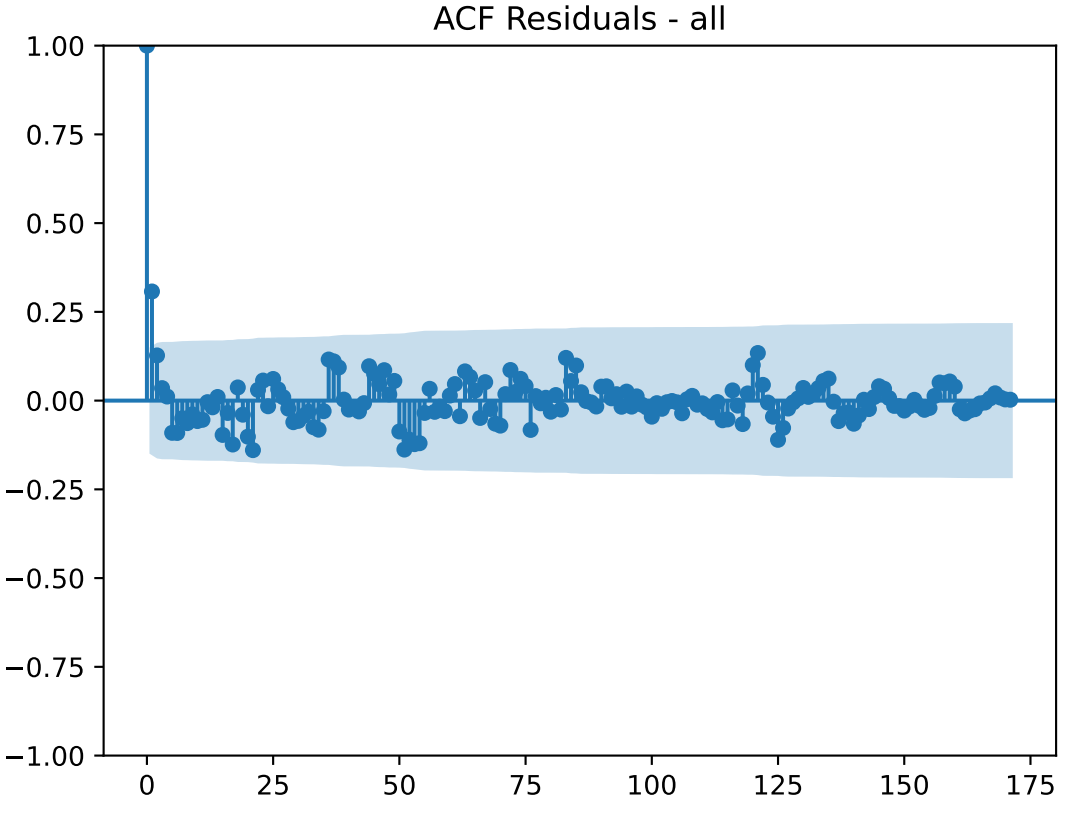

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

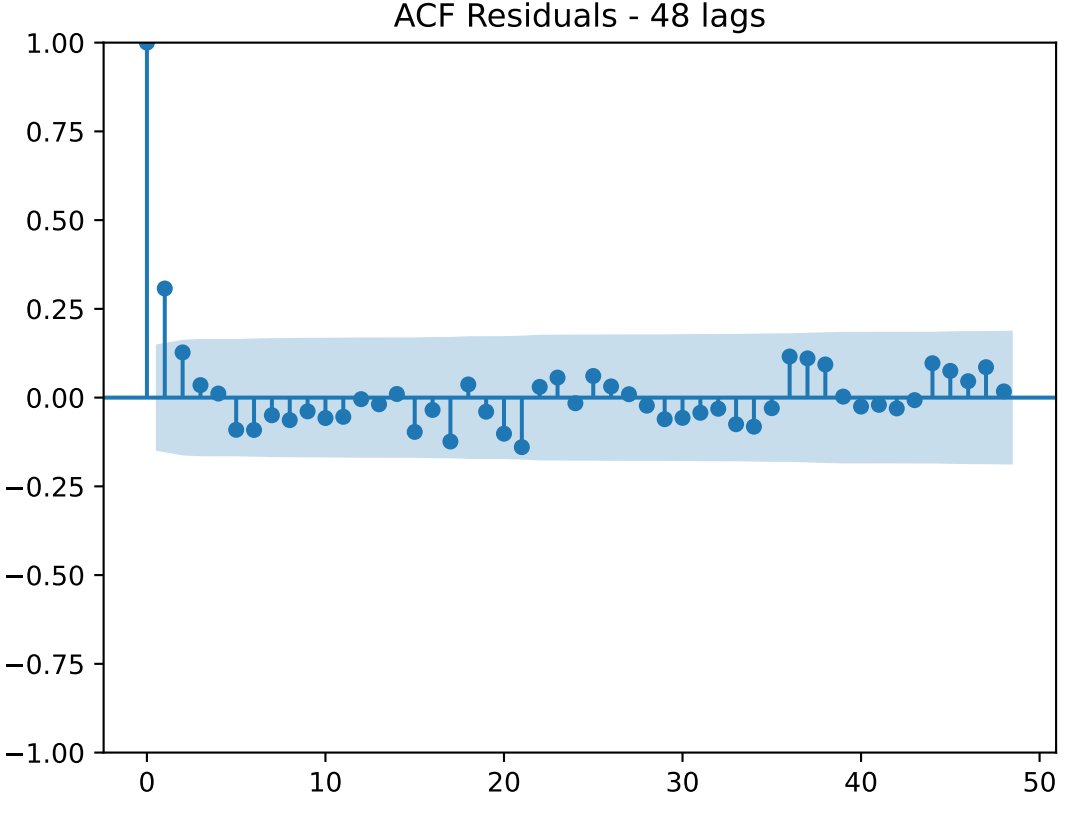

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

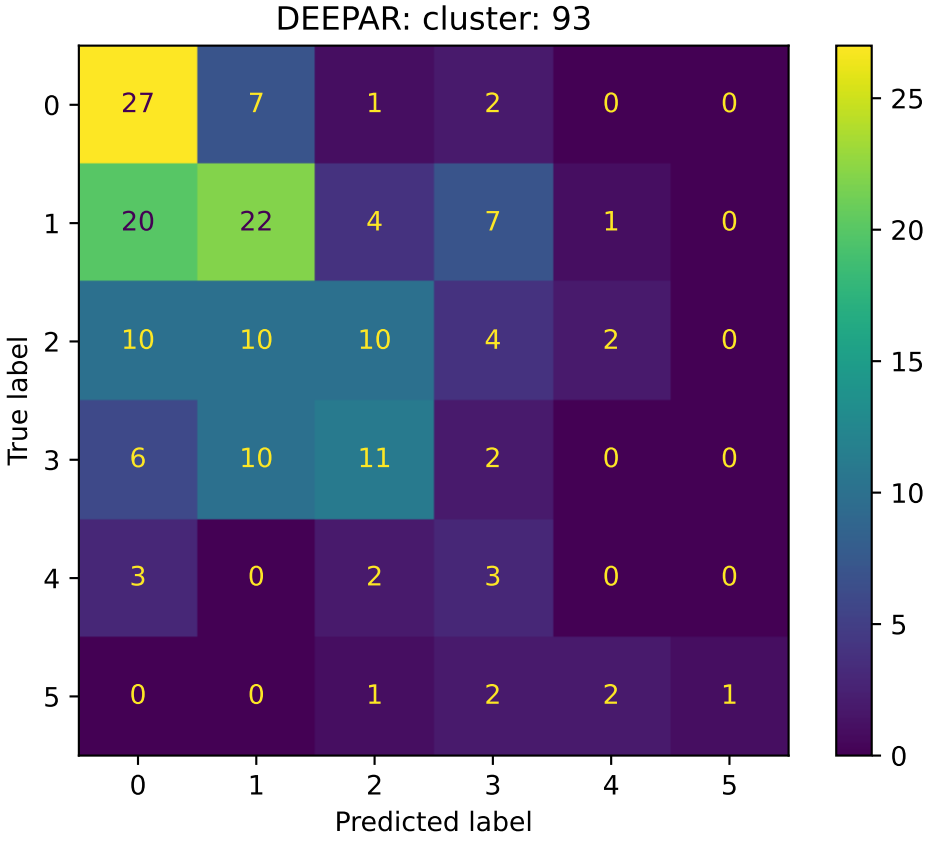

DEEPAR: cluster: 92
True label
Predicted label
0
1
2
3
4
46
16
1
0
0
37
11
3
2
0
9
13
8
3
1
3
4
3
1
1
0
0
2
2
0
40
30
20
10
0

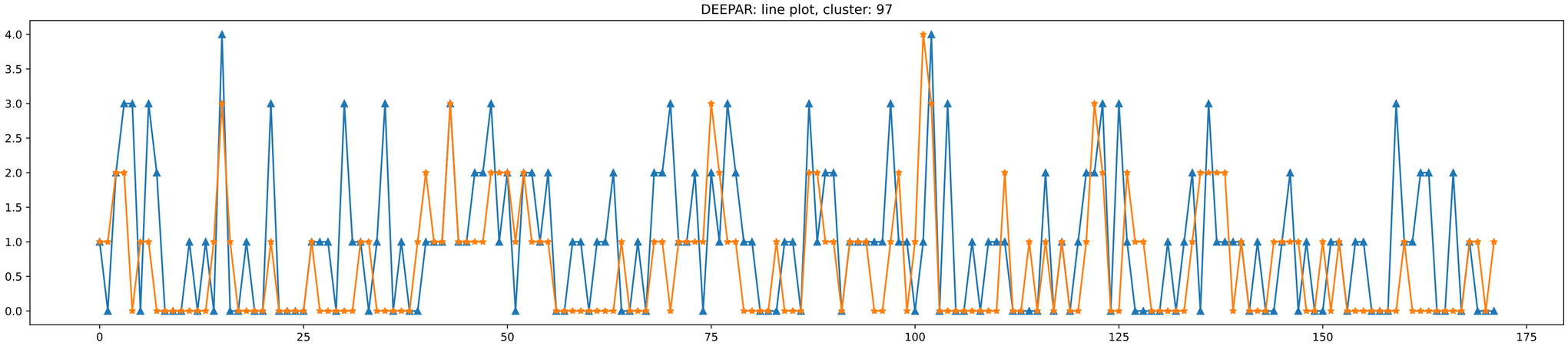

DEEPAR: line plot, cluster: 93
0
1
2
3
4
5
6
0
25
50
75
100
125
150
175

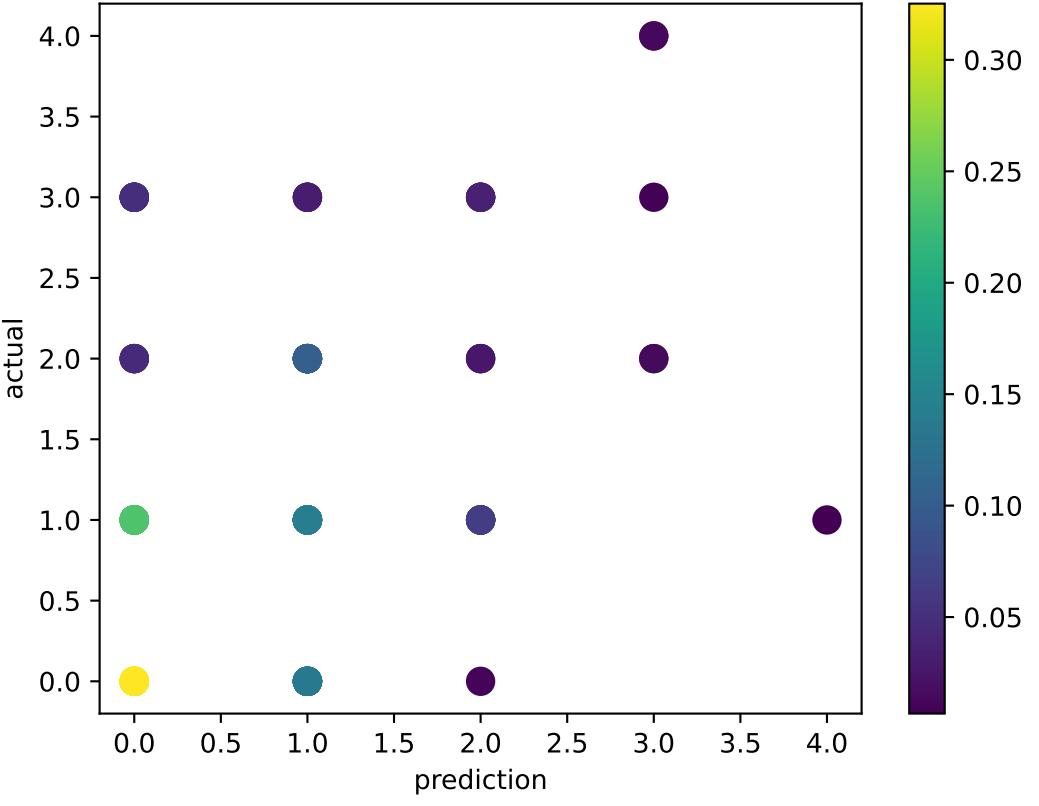

actual
prediction
0
1
2
3
4
5
6
0.10
0.08
0.06
0.04
0.02

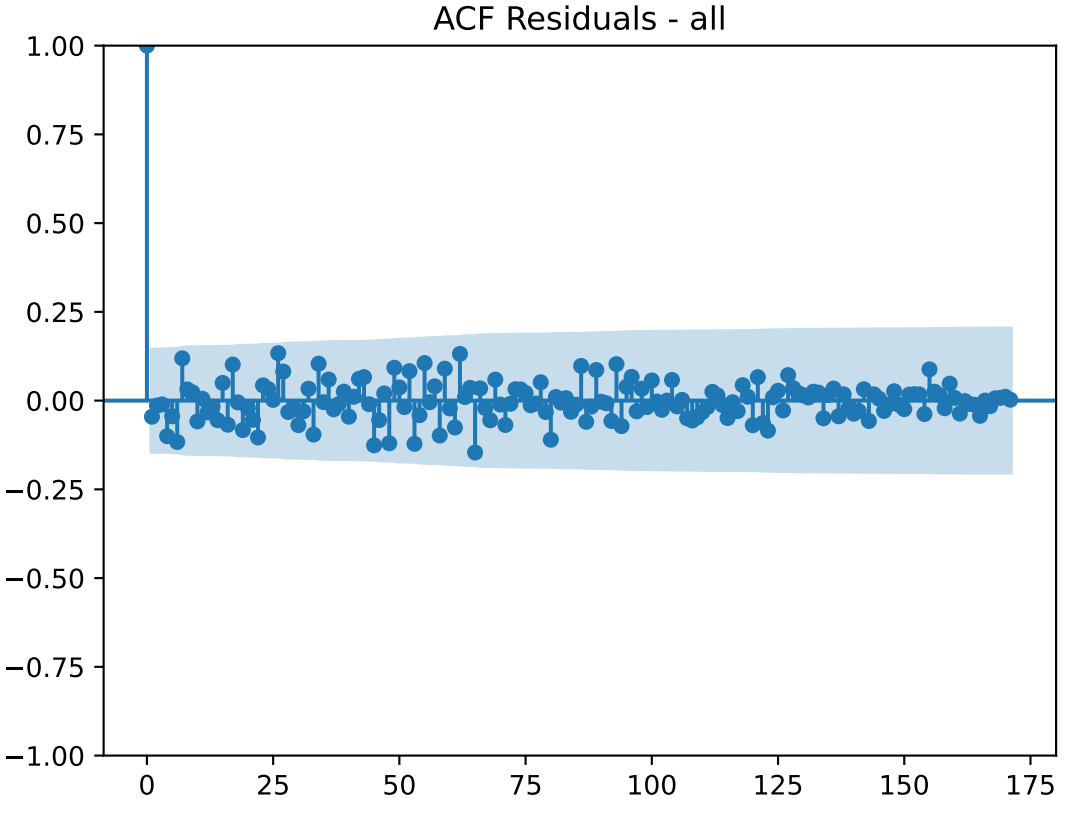

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

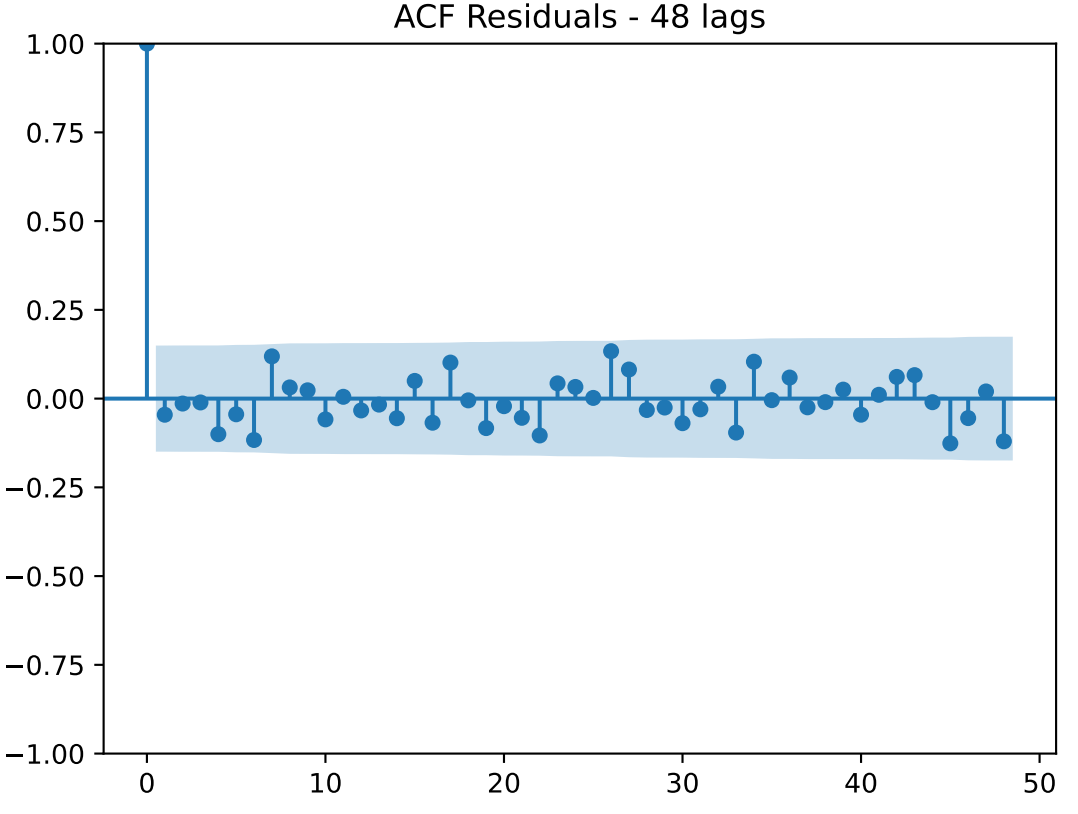

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

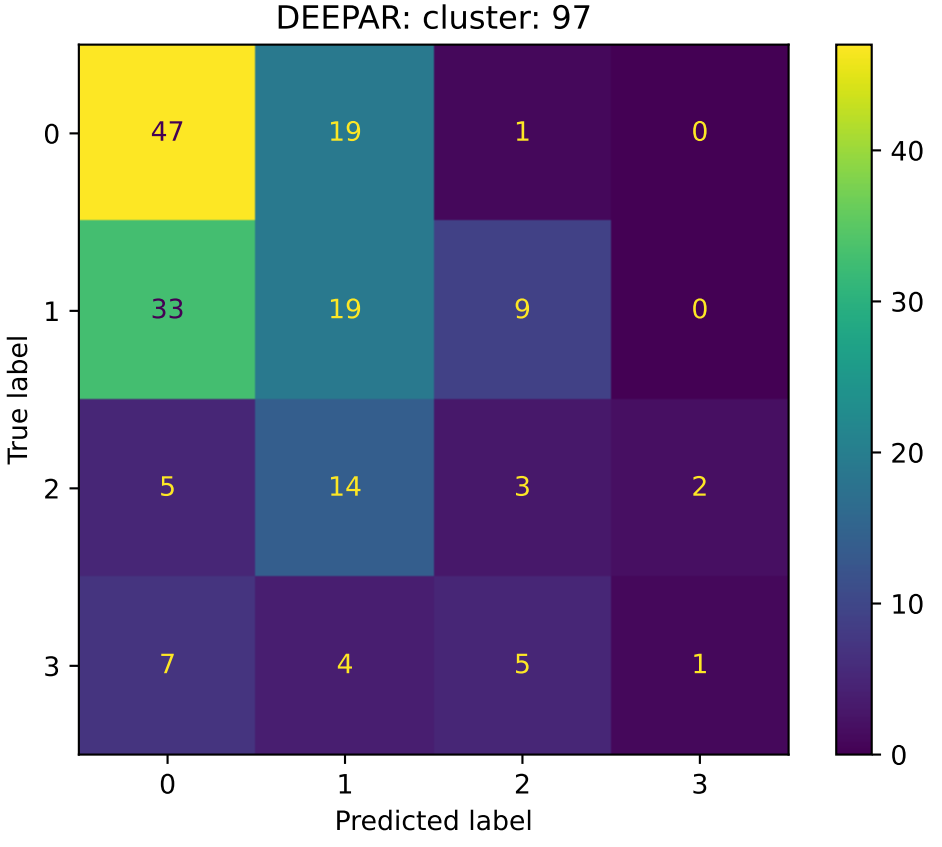

DEEPAR: cluster: 93
True label
Predicted label
0
1
2
3
4
5
27 7 1 2 0 0
20 22 4 7 1 0
10 10 10 4 2 0
6 10 11 2 0 0
3 0 2 3 0 0
0 0 1 2 2 1
25
20
15
10
5
0

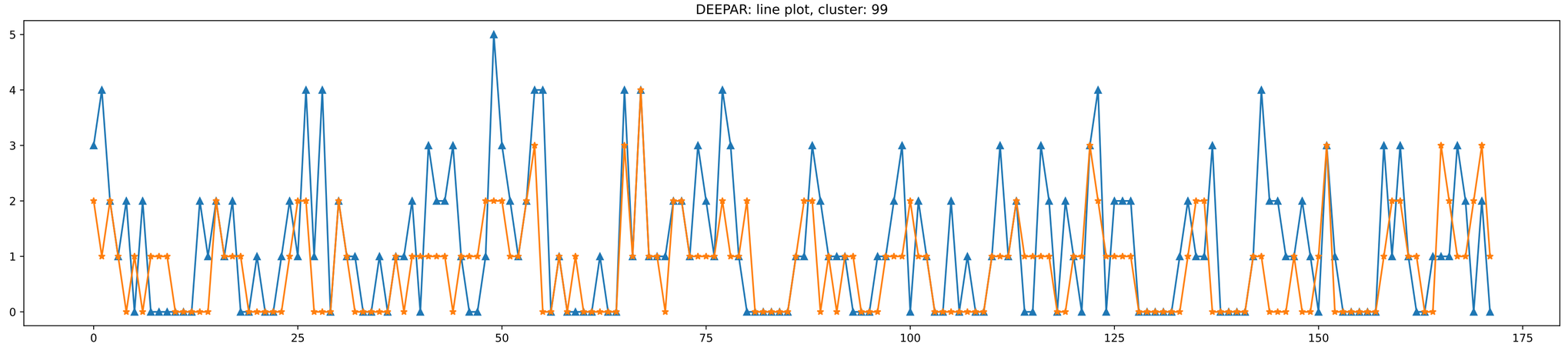

DEEPAR: line plot, cluster: 97
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
25
50
75
100
125
150
175

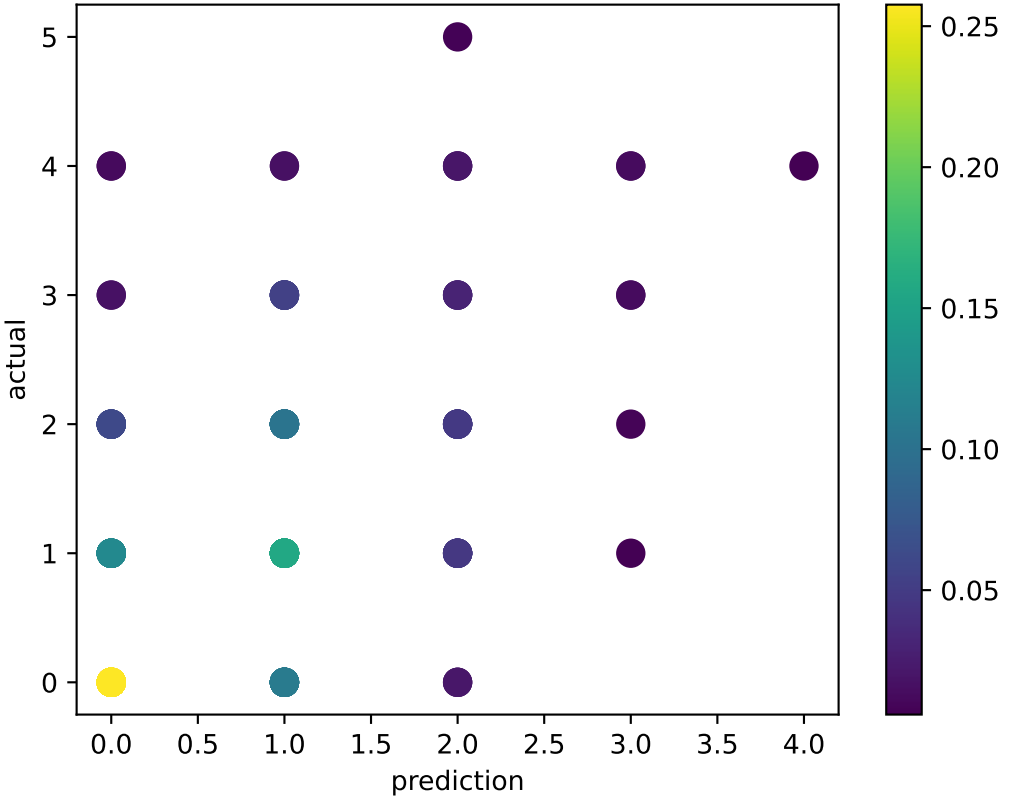

actual
prediction
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.30
0.25
0.20
0.15
0.10
0.05

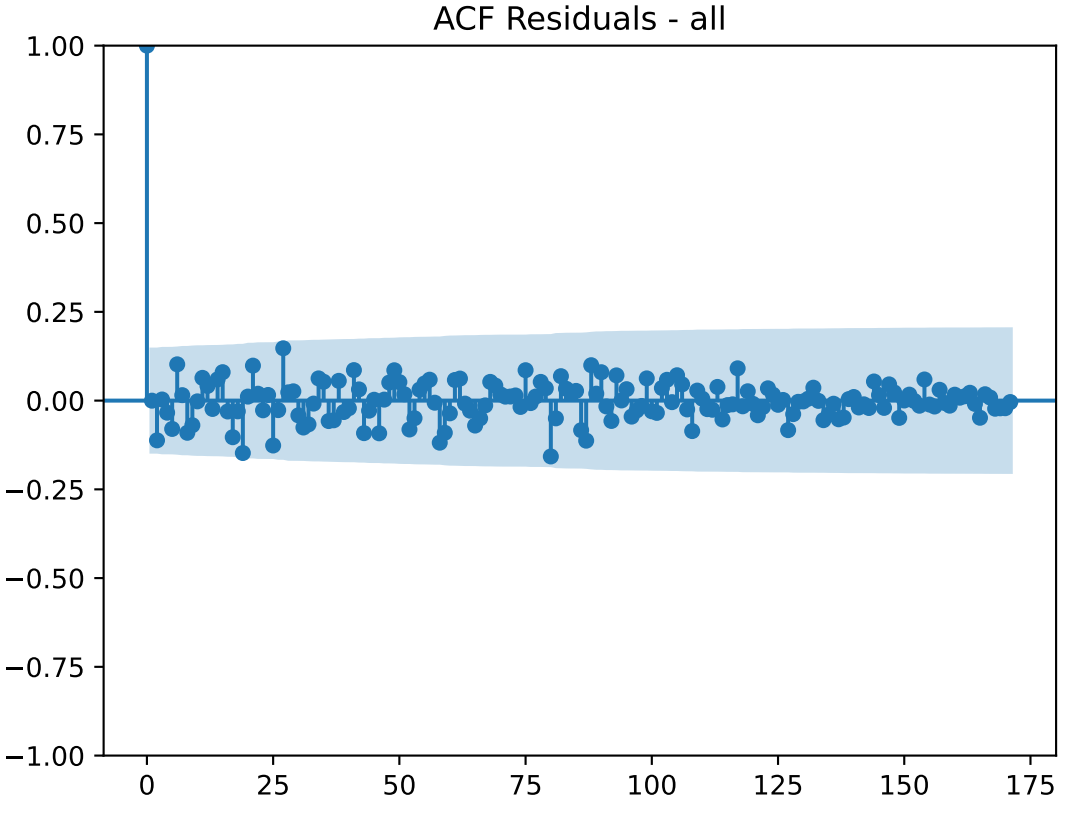

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

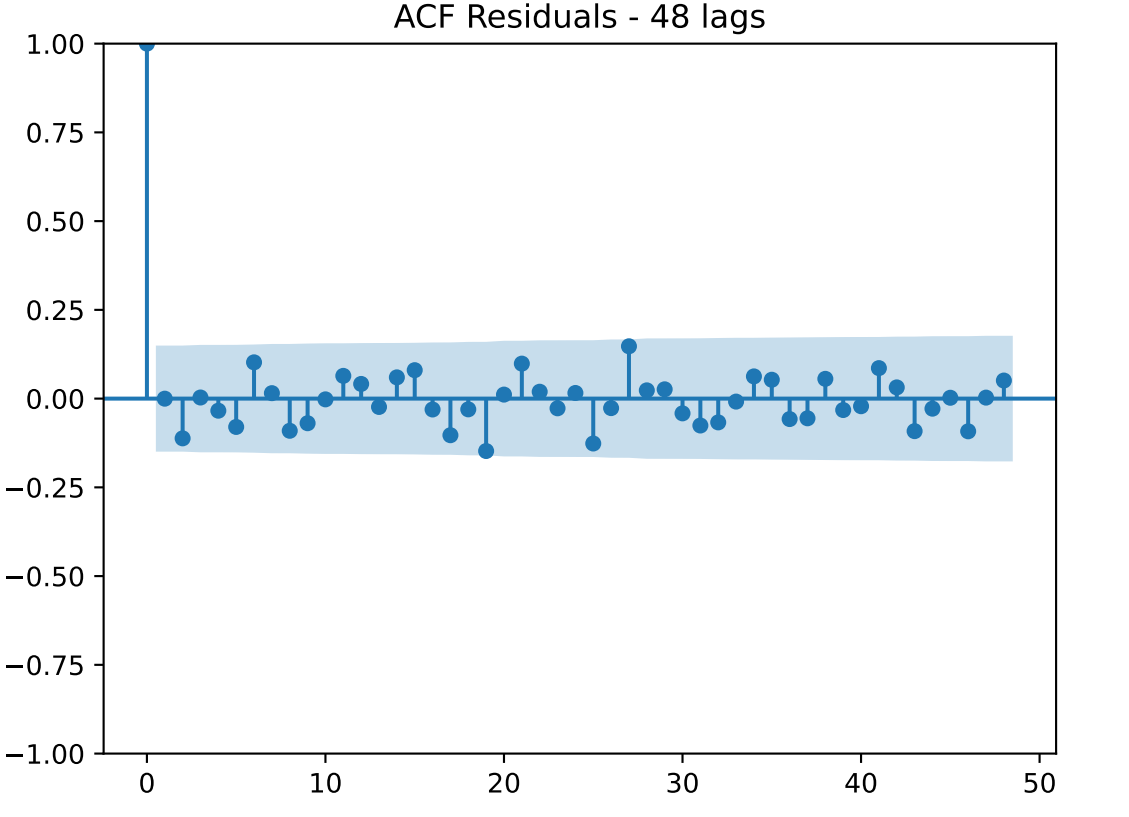

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

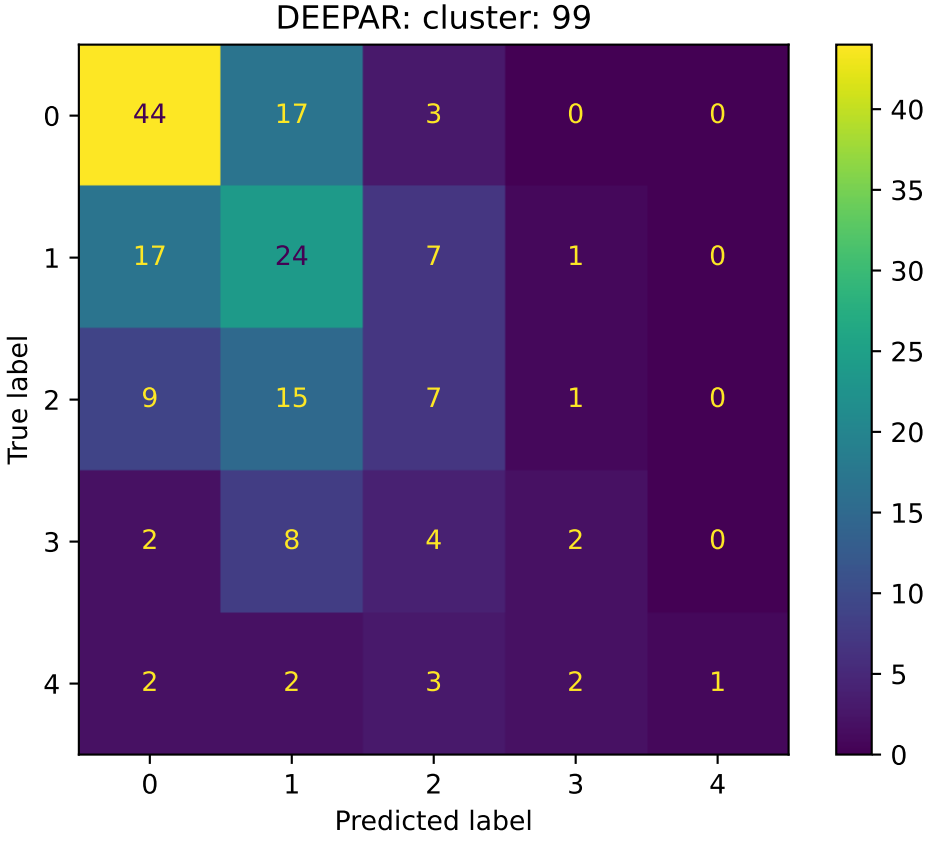

DEEPAR: cluster: 97
True label
Predicted label
0
1
2
3
47
19
1
0
33
19
9
0
5
14
3
2
7
4
5
1
40
30
20
10
0

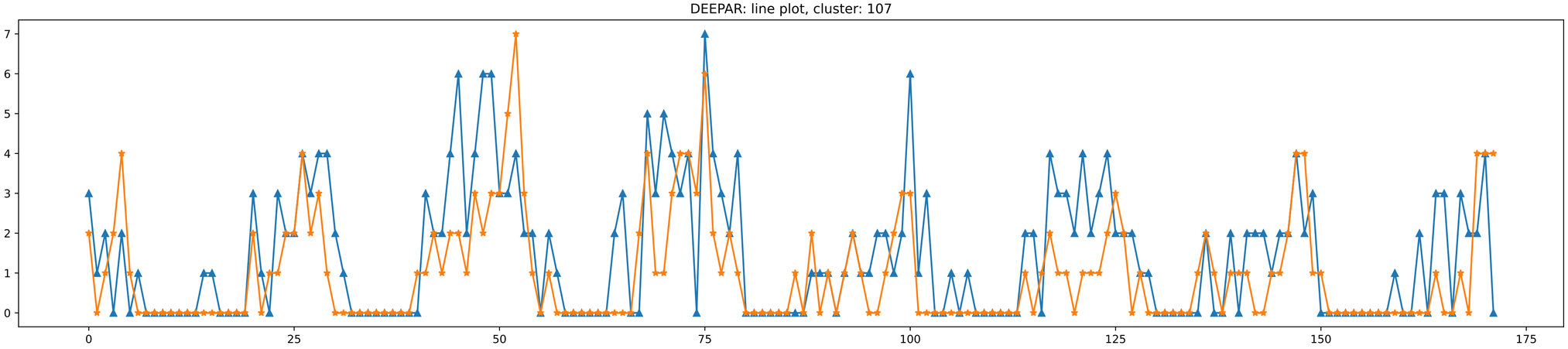

DEEPAR: line plot, cluster: 99
0
1
2
3
4
5
0
25
50
75
100
125
150
175

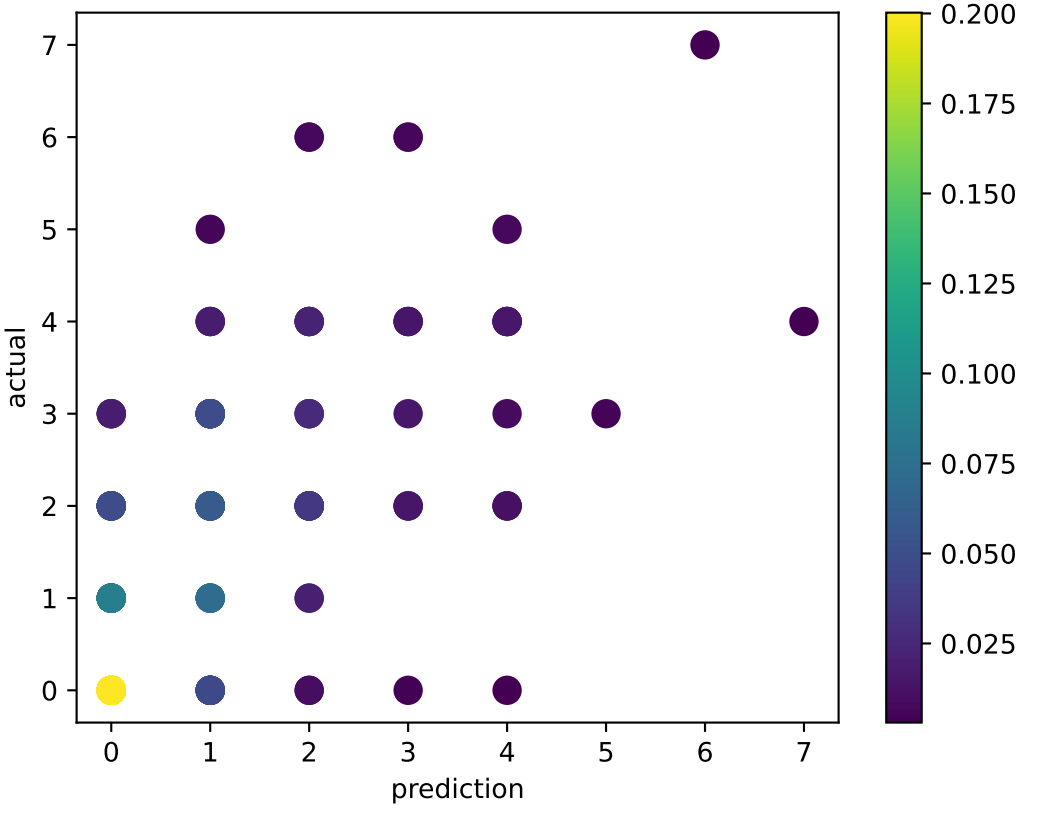

actual
prediction
0
1
2
3
4
5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.25
0.20
0.15
0.10
0.05

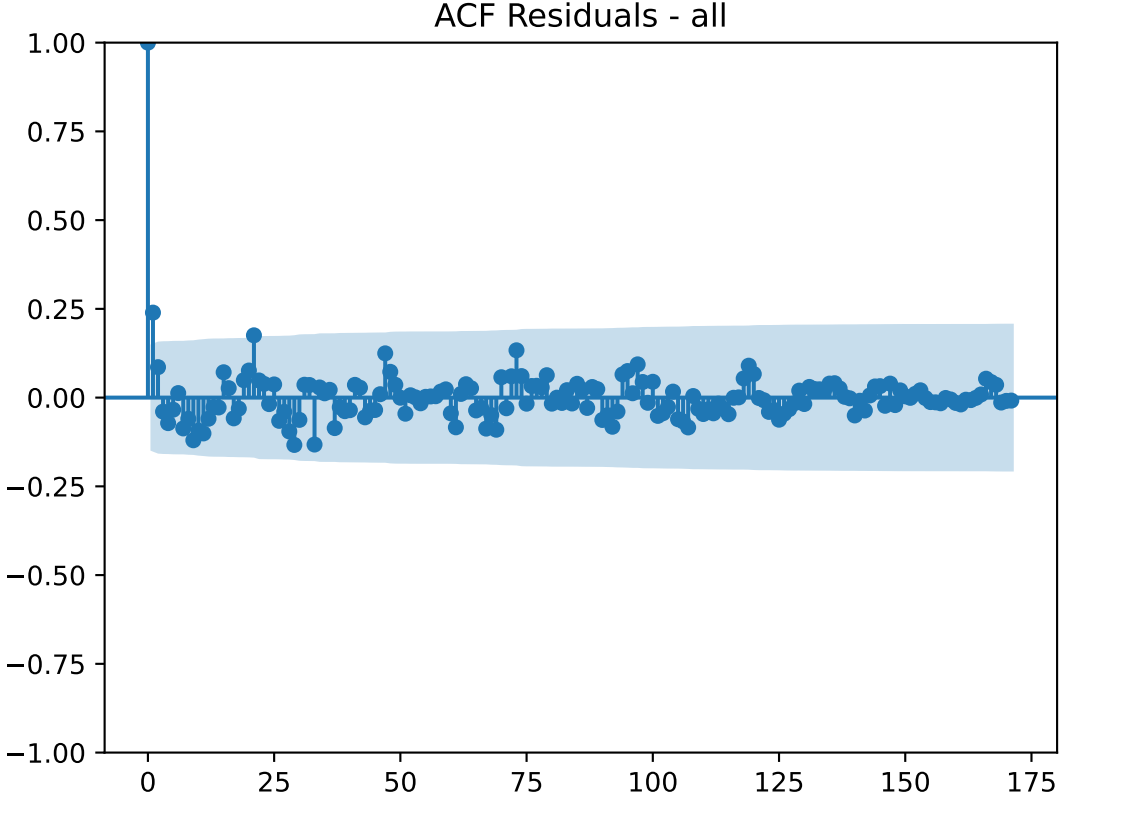

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

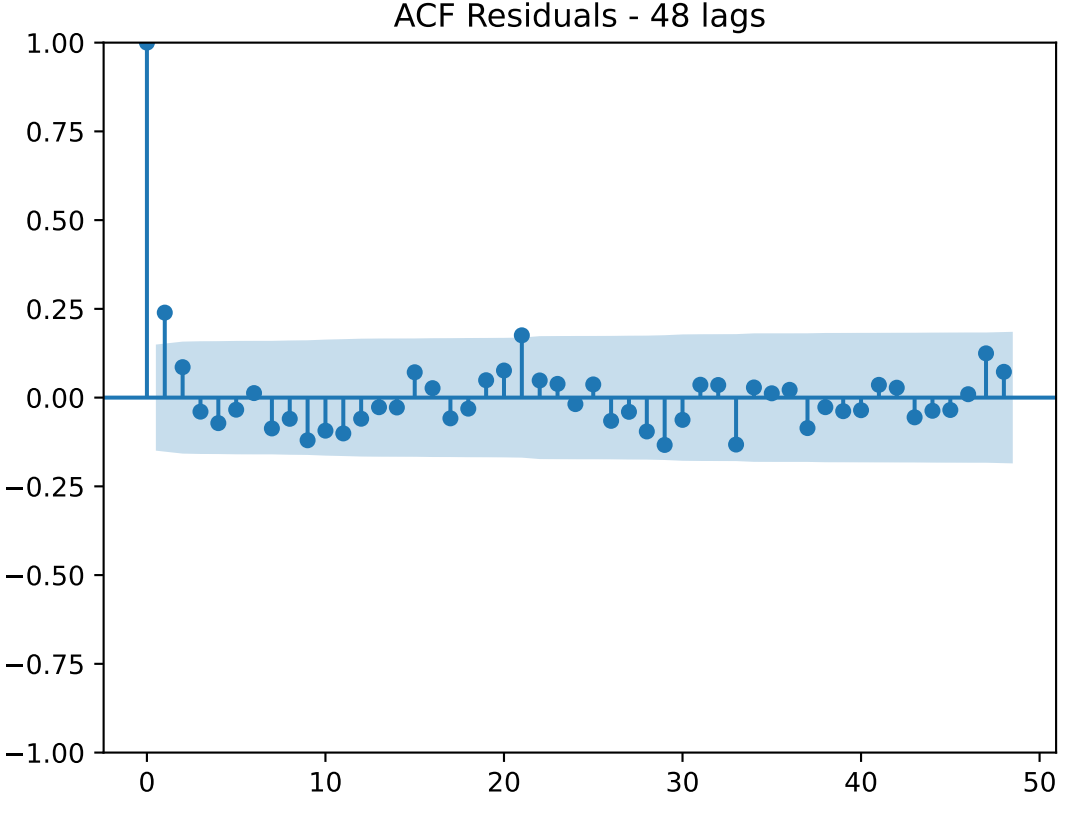

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

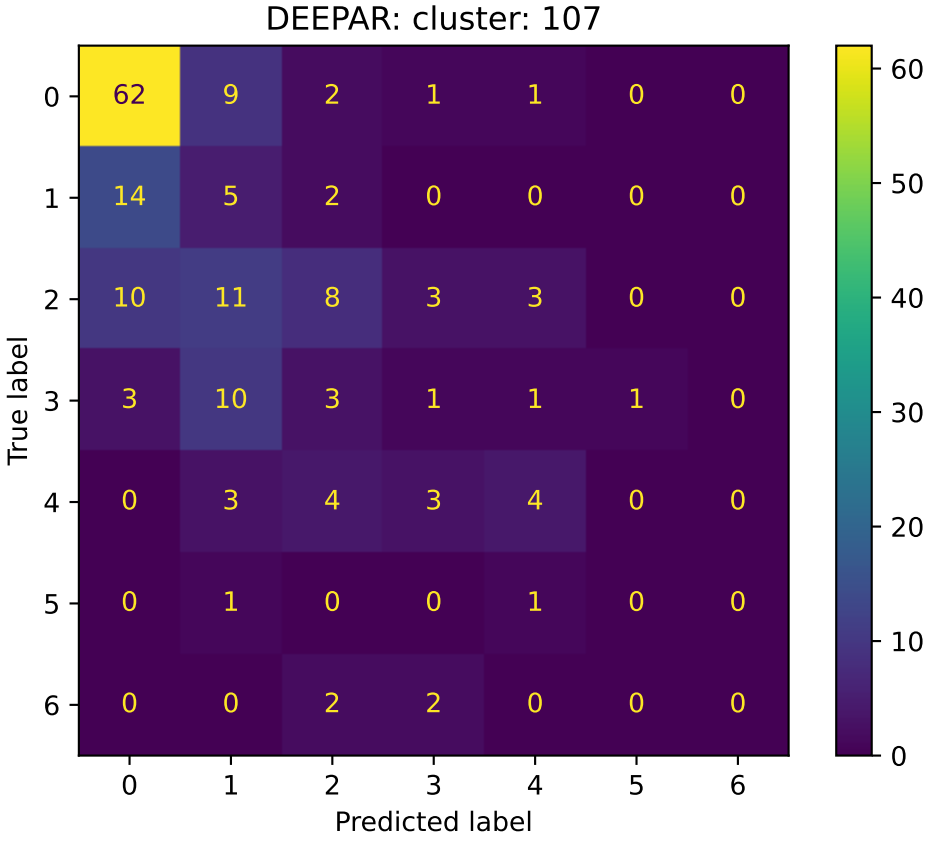

DEEPAR: cluster: 99
True label
Predicted label
0
1
2
3
4
44
17
3
0
0
17
24
7
1
0
9
15
7
1
0
2
8
4
2
0
2
2
3
2
1
40
35
30
25
20
15
10
5
0

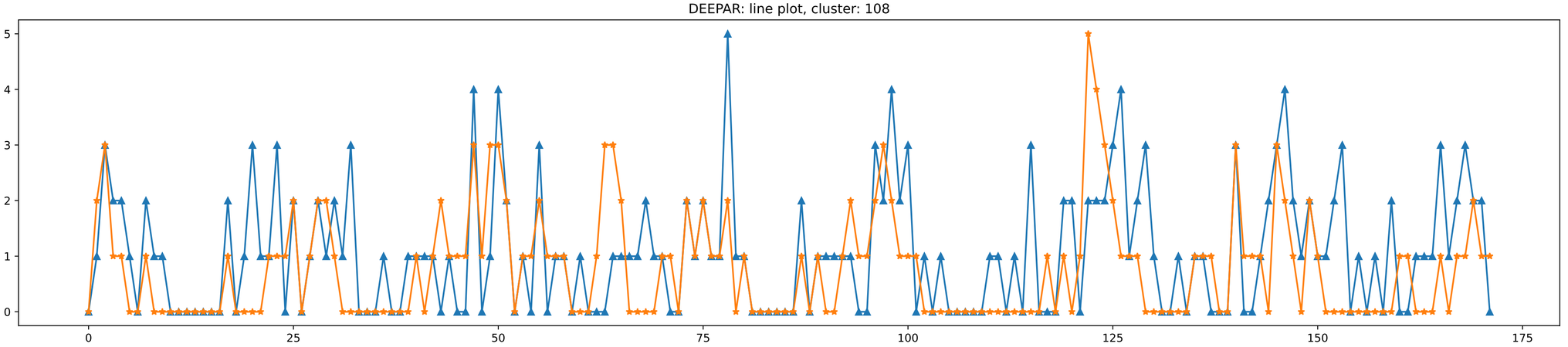

DEEPAR: line plot, cluster: 107
0
1
2
3
4
5
6
7
0
25
50
75
100
125
150
175

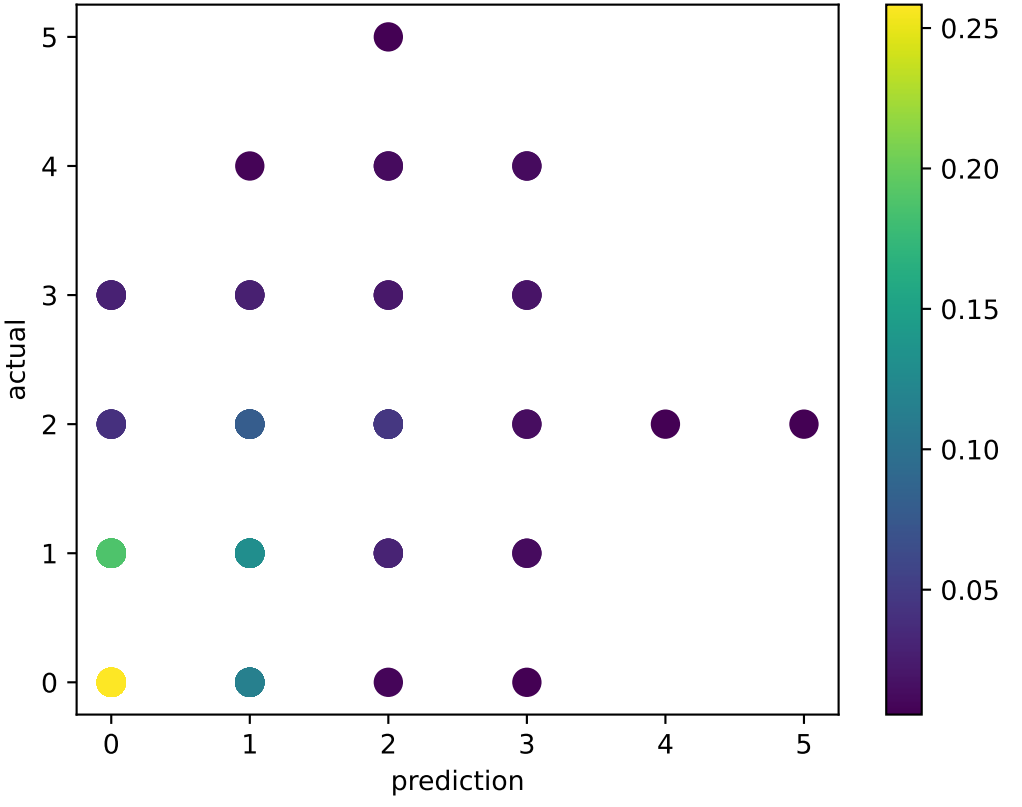

actual
prediction
0
1
2
3
4
5
6
7
0.200
0.175
0.150
0.125
0.100
0.075
0.050
0.025

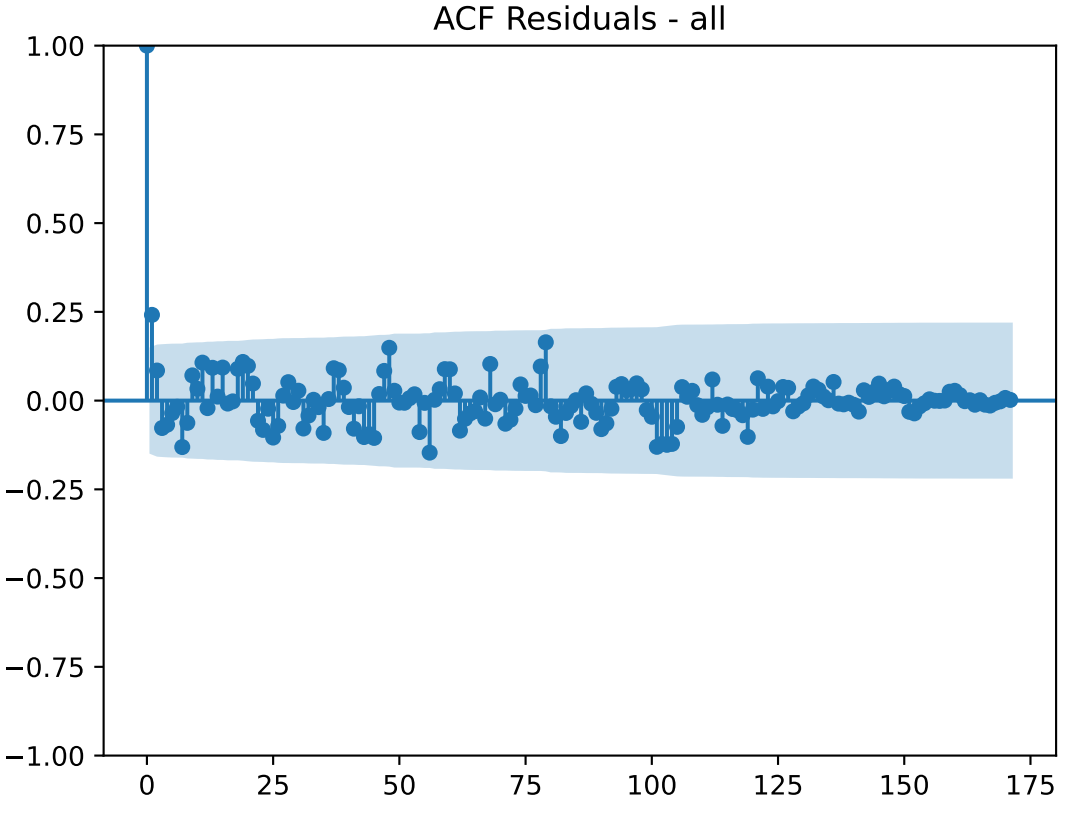

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

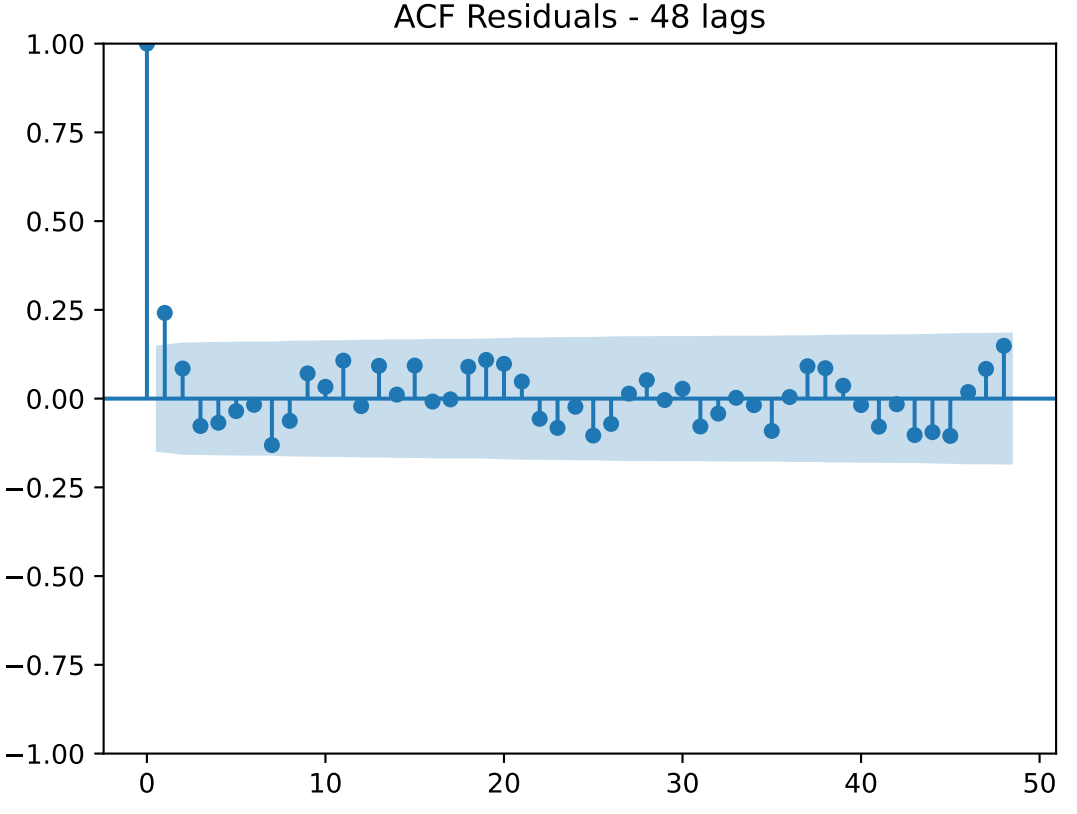

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

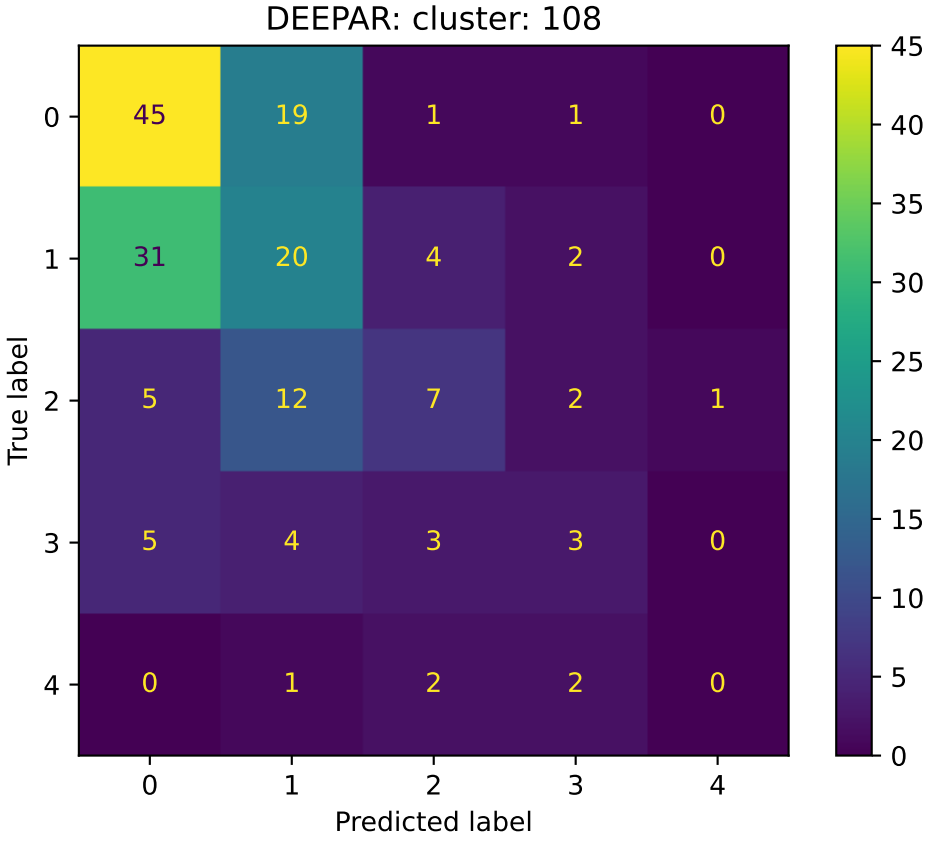

DEEPAR: cluster: 107
True label
Predicted label
0 1 2 3 4 5 6
62 9 2 1 1 0 0
14 5 2 0 0 0 0
10 11 8 3 3 0 0
3 10 3 1 1 1 0
0 3 4 3 4 0 0
0 1 0 0 1 0 0
0 0 2 2 0 0 0
60 50 40 30 20 10 0

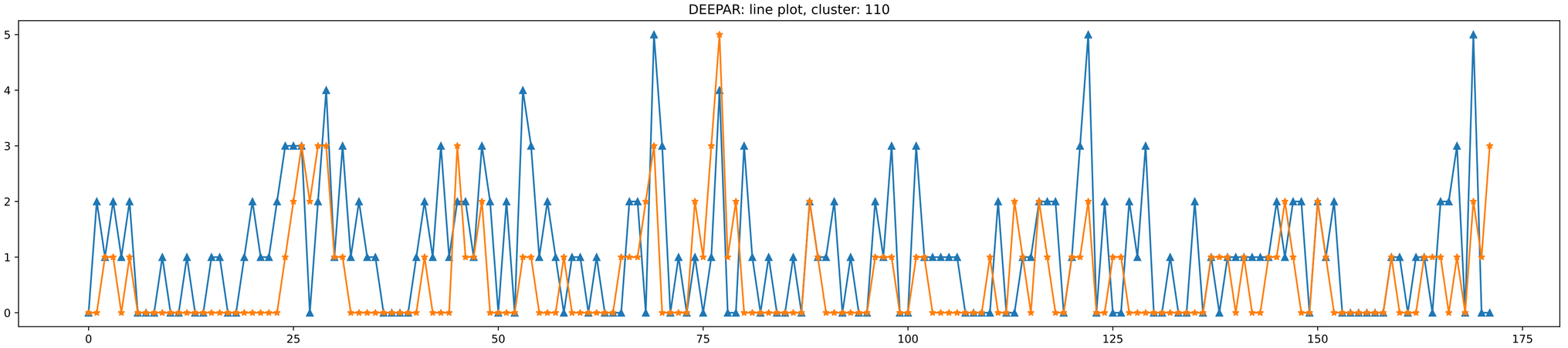

DEEPAR: line plot, cluster: 108
0
1
2
3
4
5
0
25
50
75
100
125
150
175

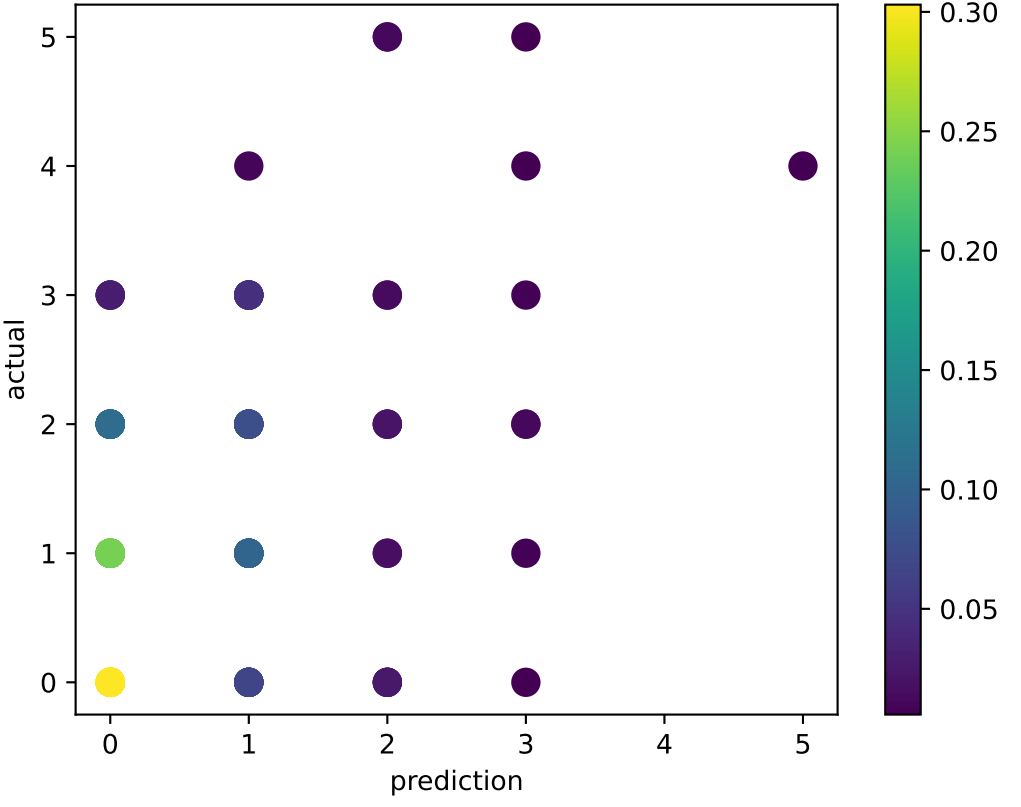

actual
prediction
0
1
2
3
4
5
0.25
0.20
0.15
0.10
0.05

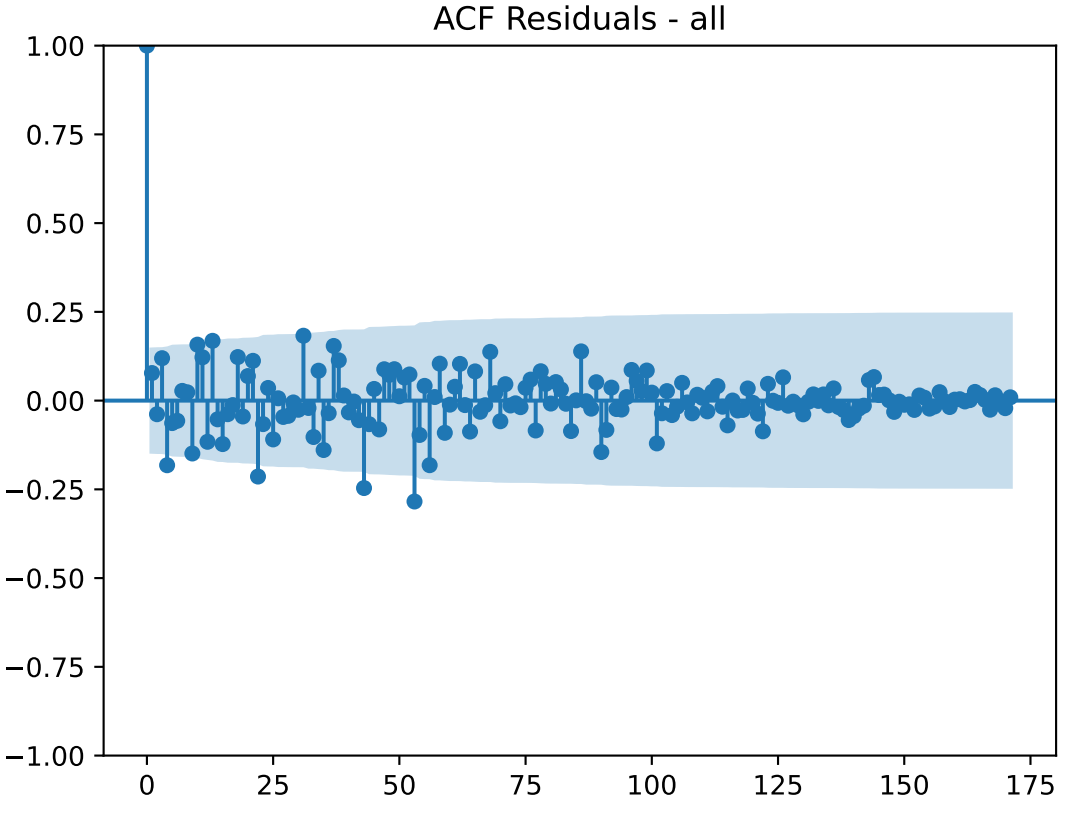

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

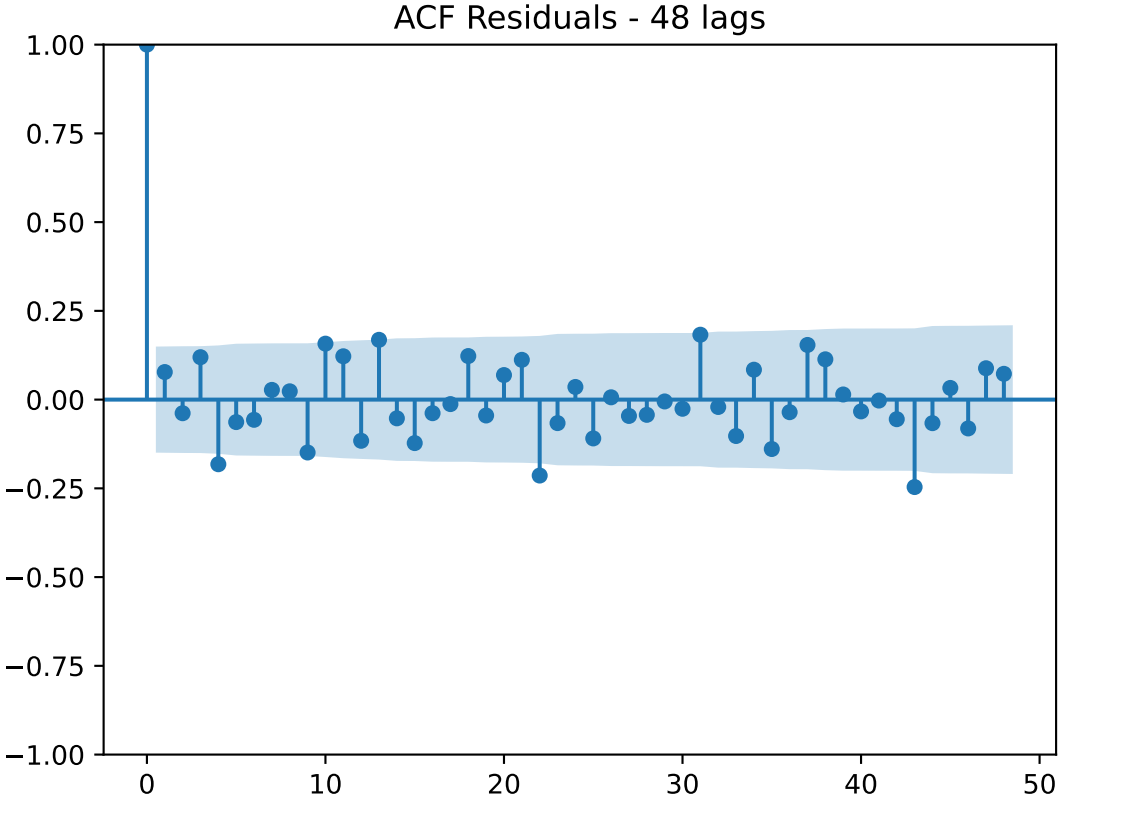

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

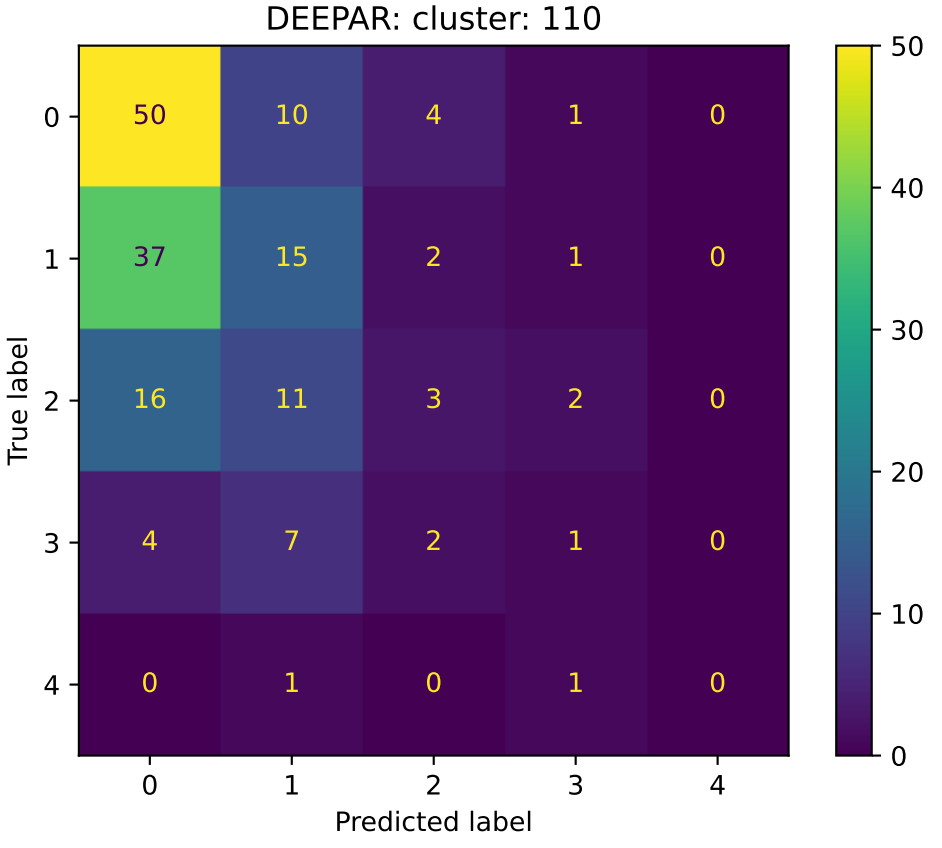

DEEPAR: cluster: 108
True label
Predicted label
0
1
2
3
4
45
19
1
1
0
31
20
4
2
0
5
12
7
2
1
5
4
3
3
0
0
1
2
2
0
45
40
35
30
25
20
15
10
5
0

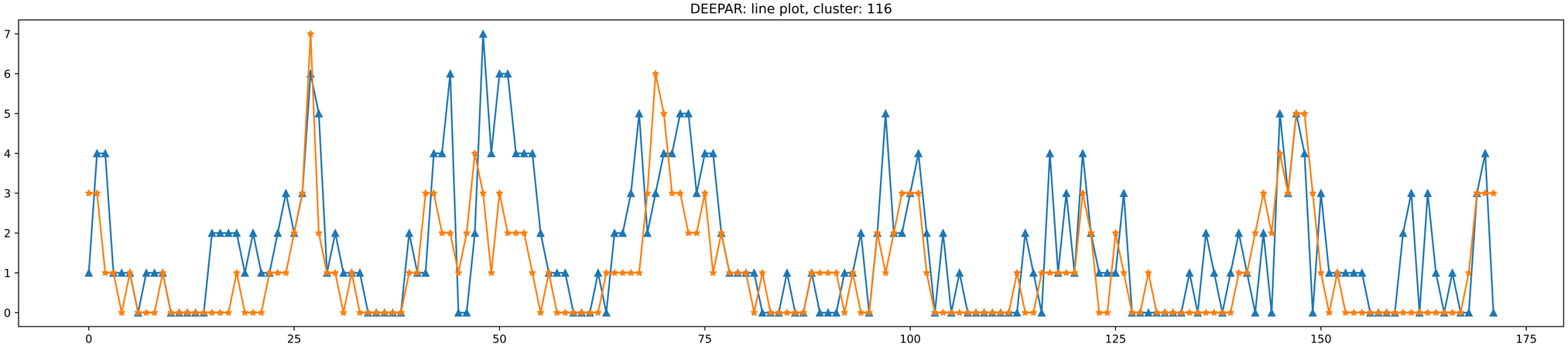

DEEPAR: line plot, cluster: 110
0
1
2
3
4
5
0
25
50
75
100
125
150
175

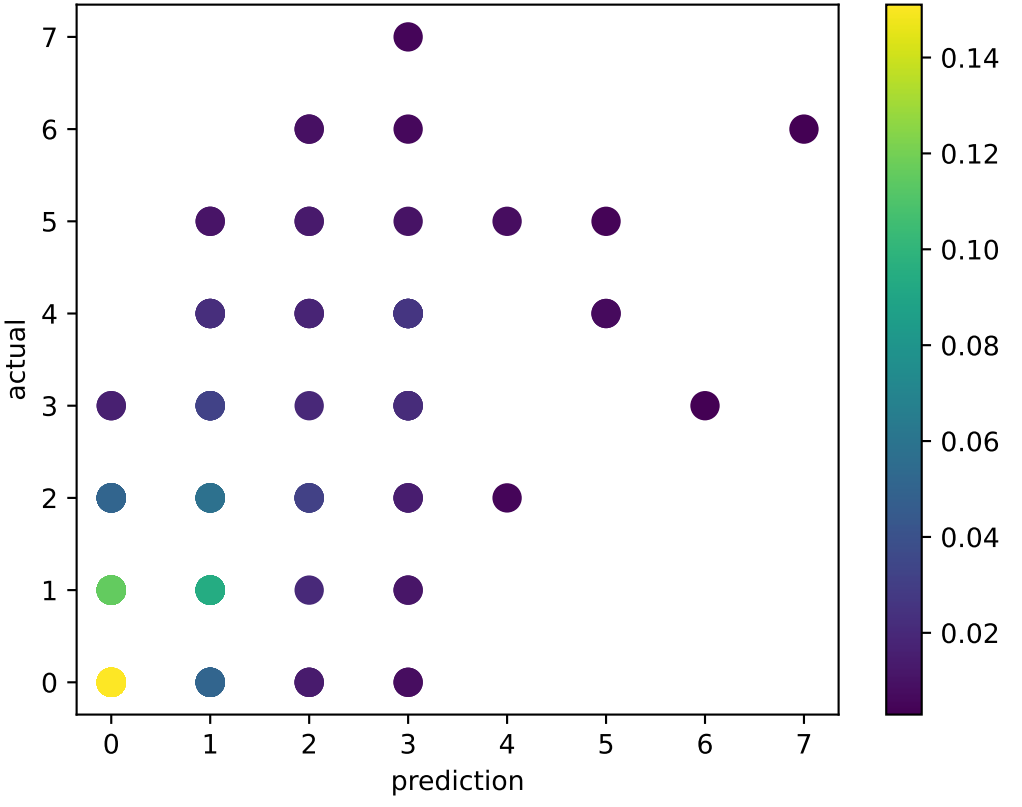

actual
prediction
0
1
2
3
4
5
0.30
0.25
0.20
0.15
0.10
0.05

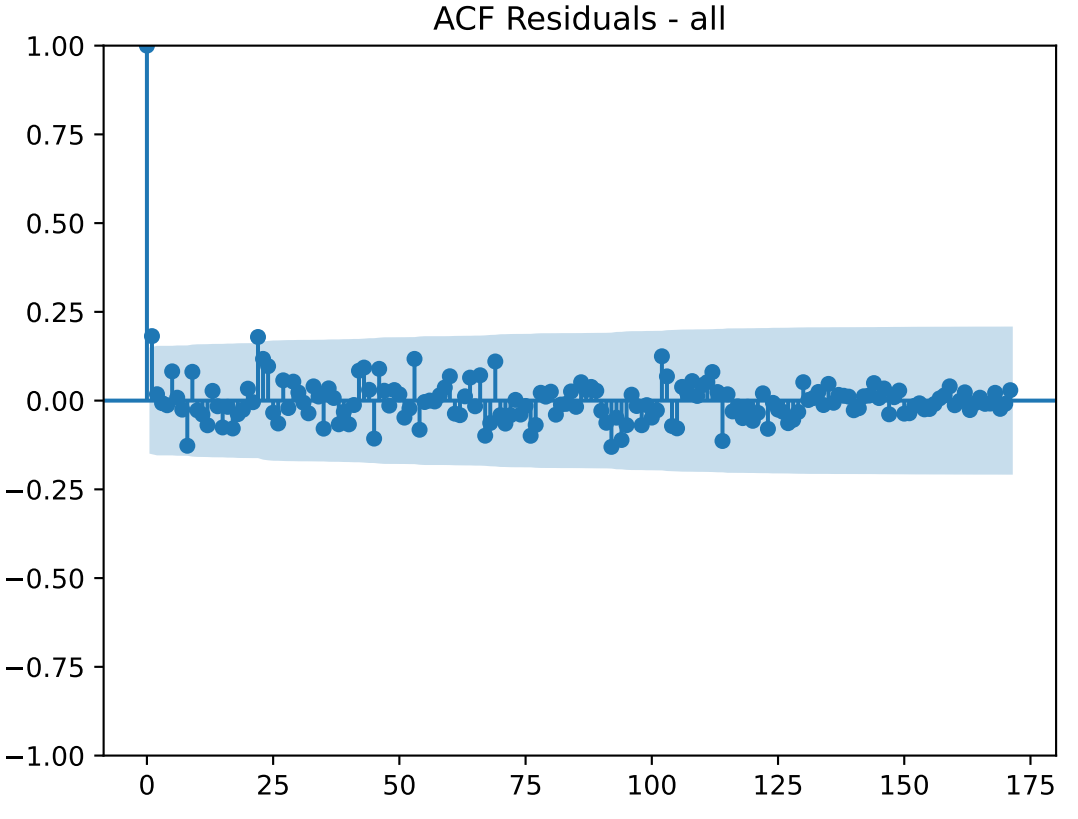

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

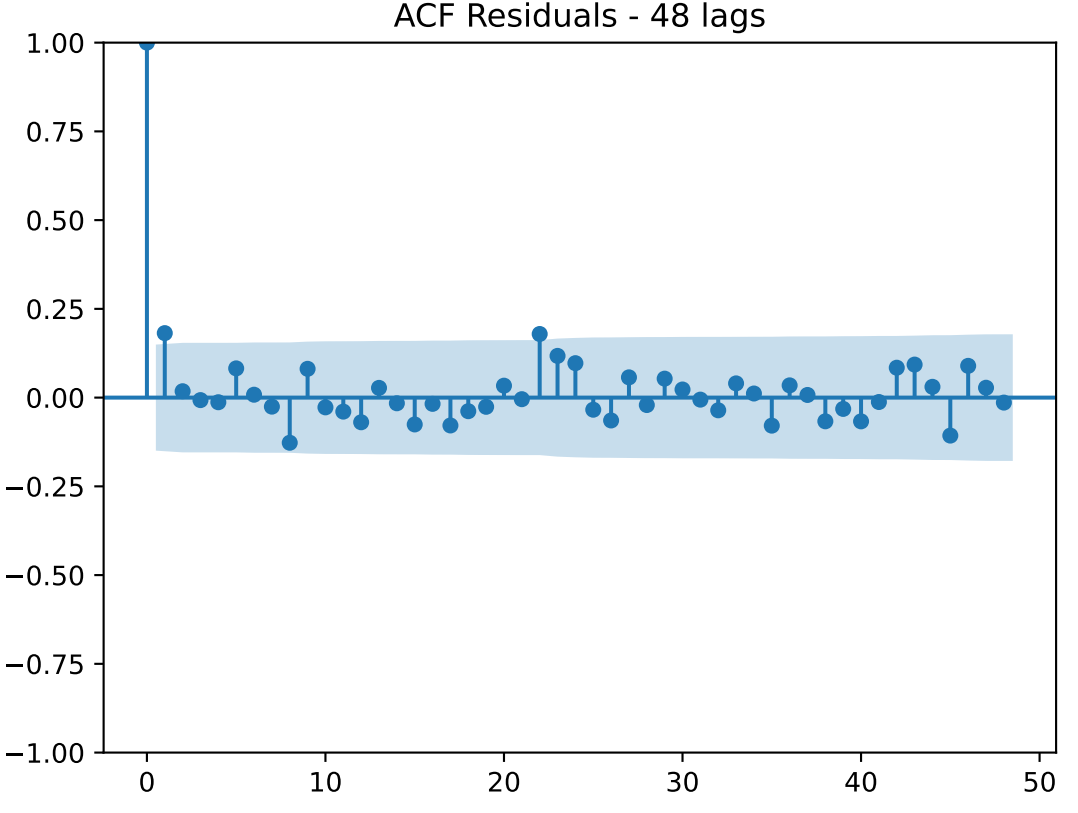

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

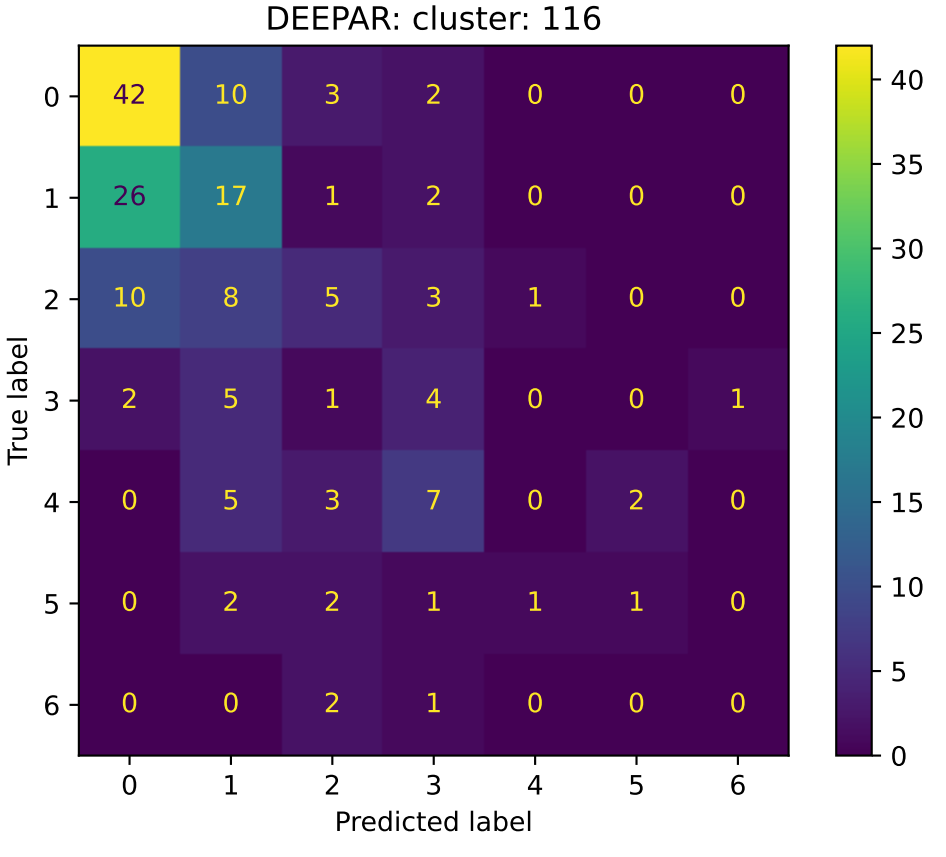

DEEPAR: cluster: 110
True label
Predicted label
0
1
2
3
4
50
10
4
1
0
37
15
2
1
0
16
11
3
2
0
4
7
2
1
0
0
1
0
1
0
50
40
30
20
10
0

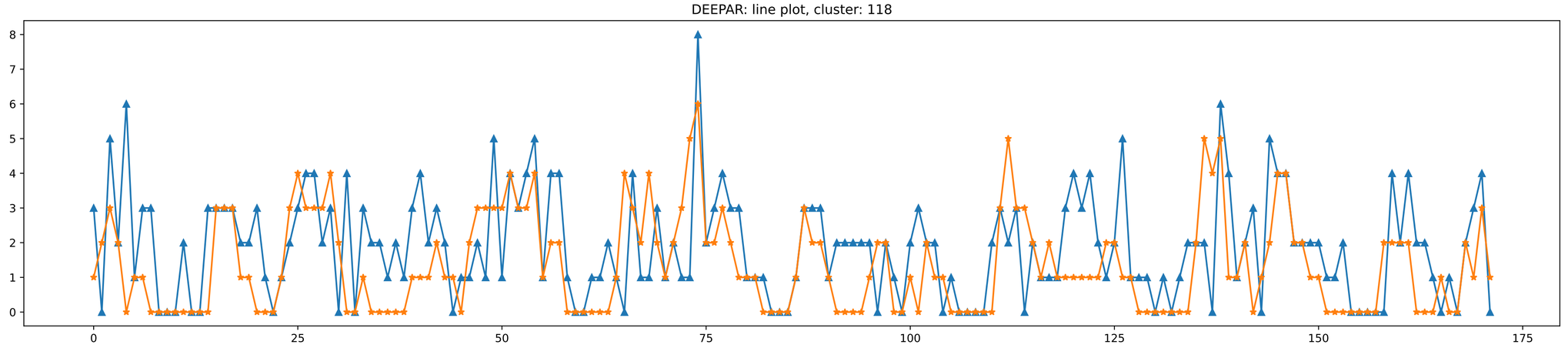

DEEPAR: line plot, cluster: 116
0
1
2
3
4
5
6
7
0
25
50
75
100
125
150
175

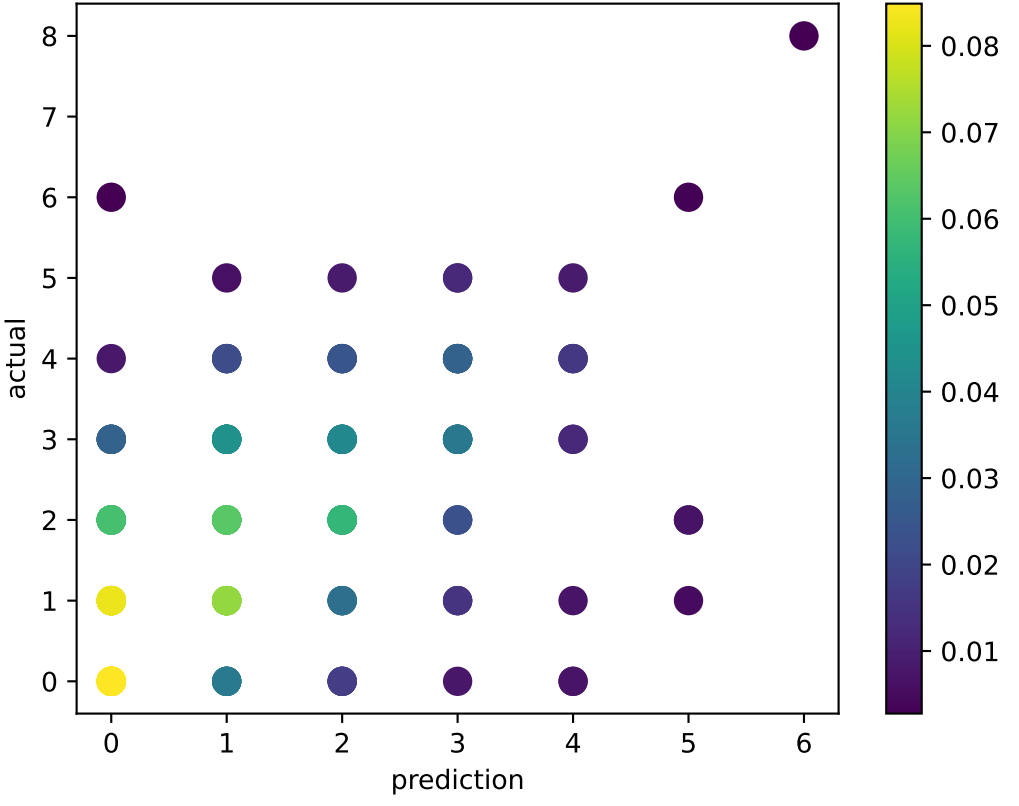

actual
prediction
0
1
2
3
4
5
6
7
0.14
0.12
0.10
0.08
0.06
0.04
0.02

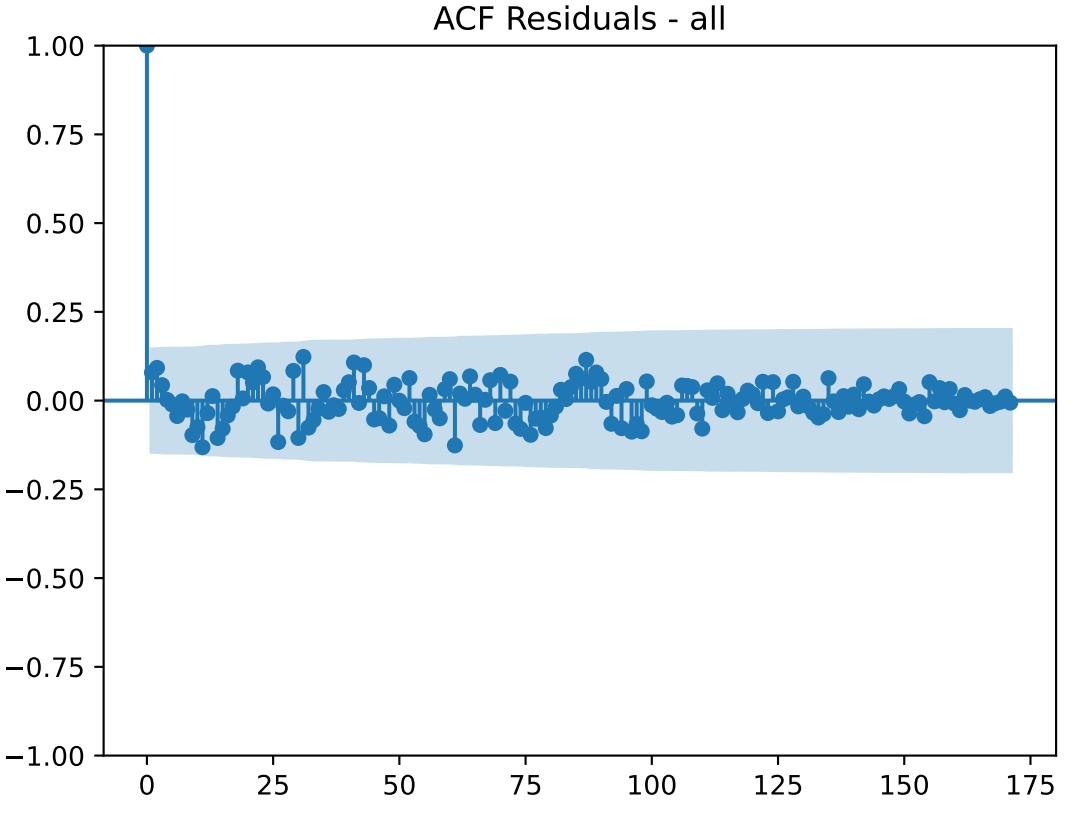

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

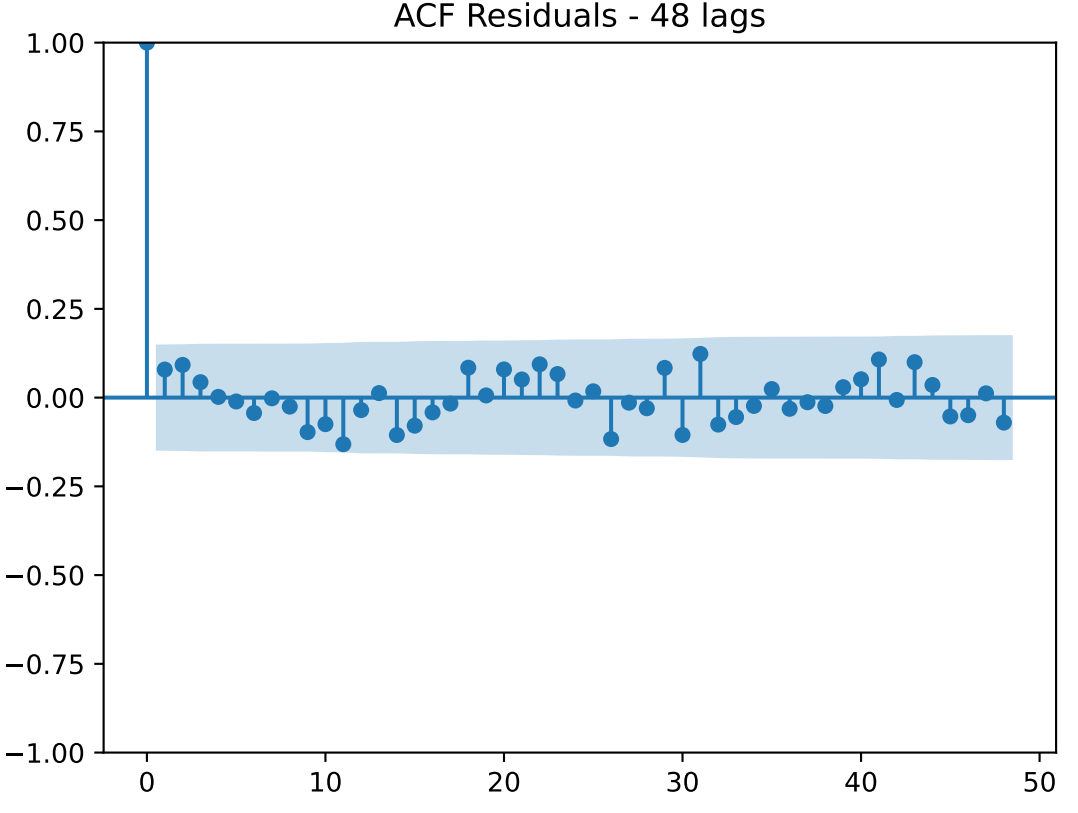

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

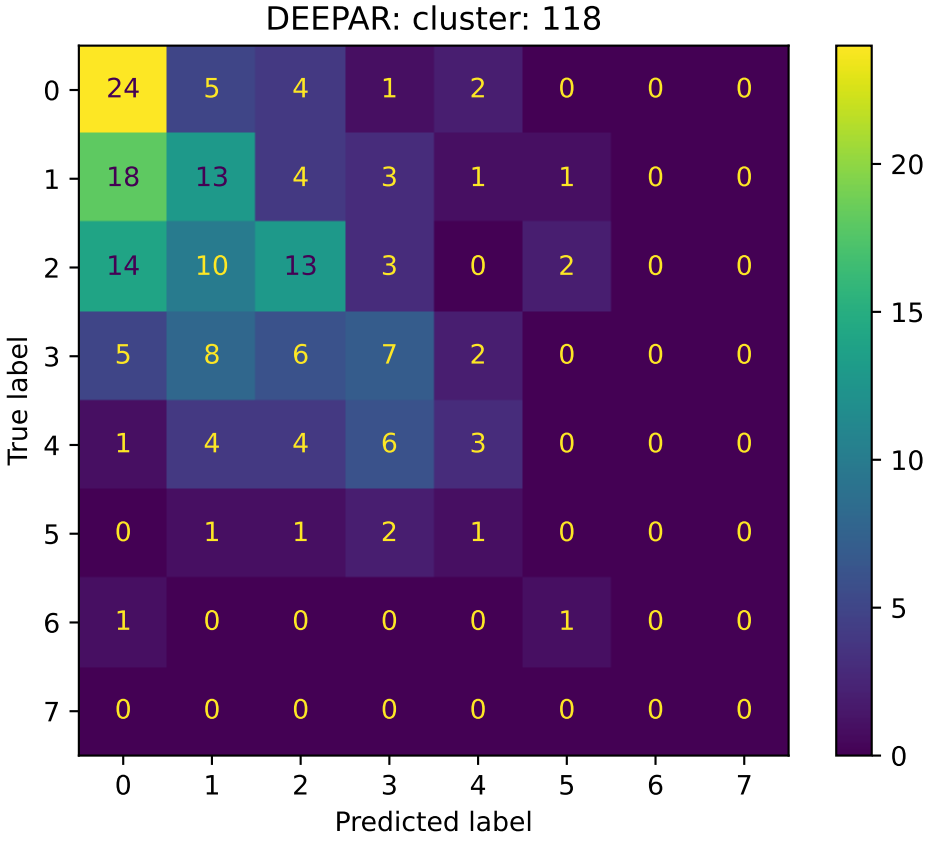

DEEPAR: cluster: 116
True label
Predicted label
0 1 2 3 4 5 6
42 10 3 2 0 0 0
26 17 1 2 0 0 0
10 8 5 3 1 0 0
2 5 1 4 0 0 1
0 5 3 7 0 2 0
0 2 2 1 1 1 0
0 0 2 1 0 0 0
40 35 30 25 20 15 10 5 0

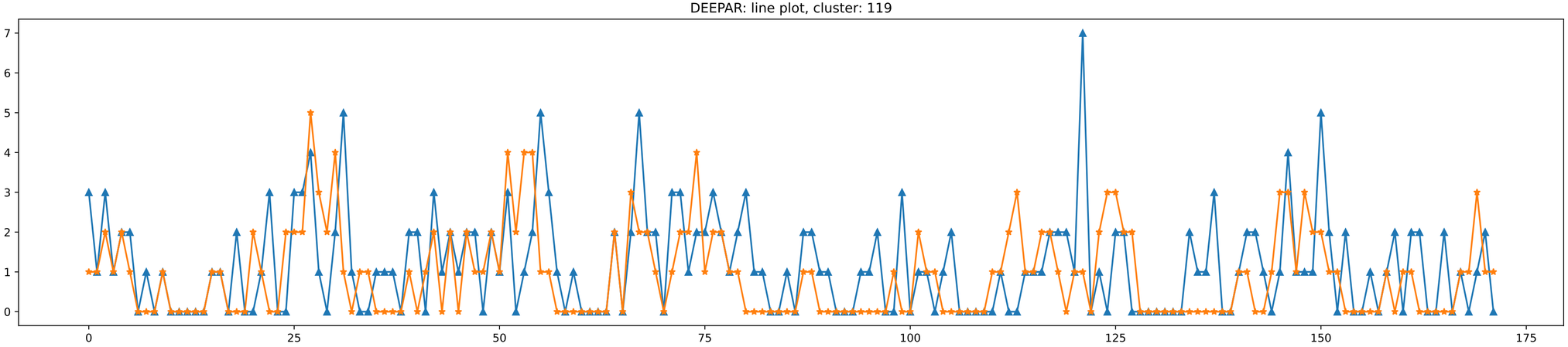

DEEPAR: line plot, cluster: 118
8
7
6
5
4
3
2
1
0
0
25
50
75
100
125
150
175

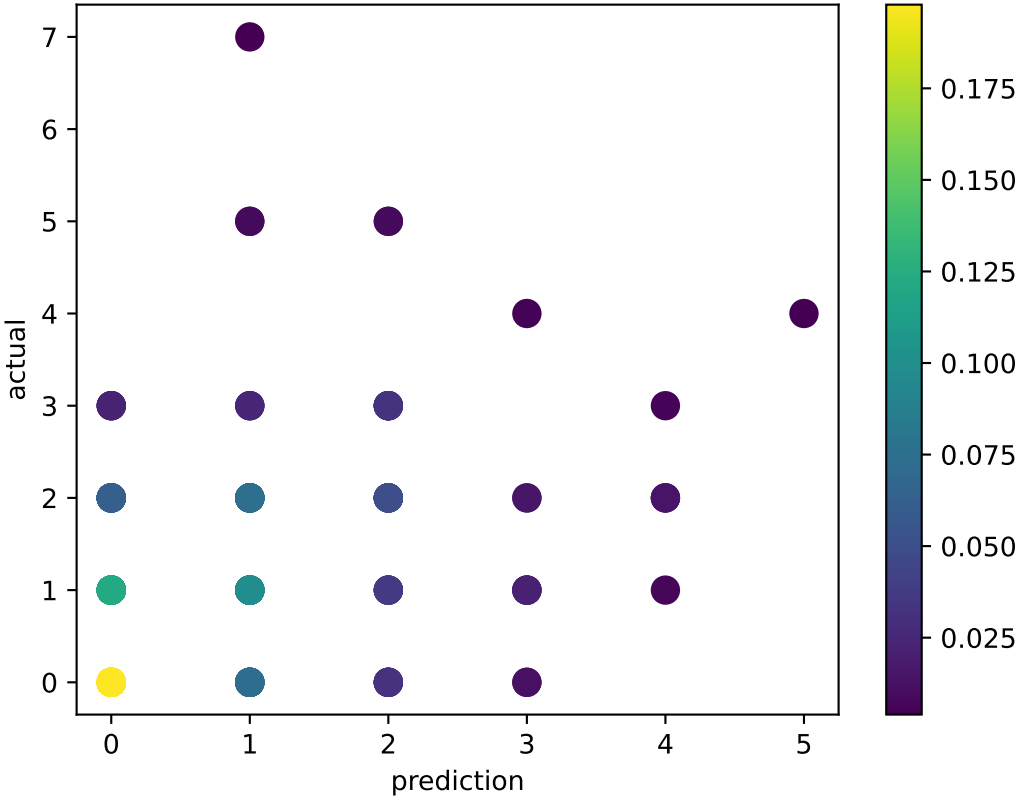

actual
prediction
0
1
2
3
4
5
6
7
8
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01

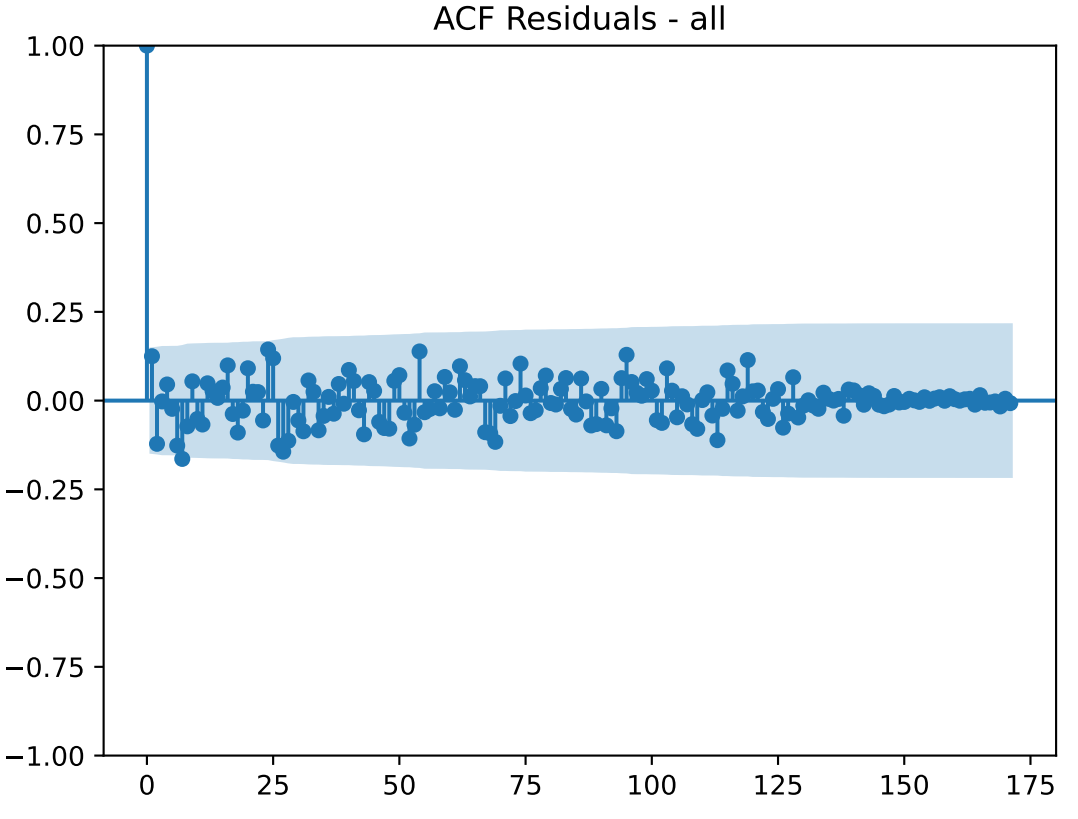

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

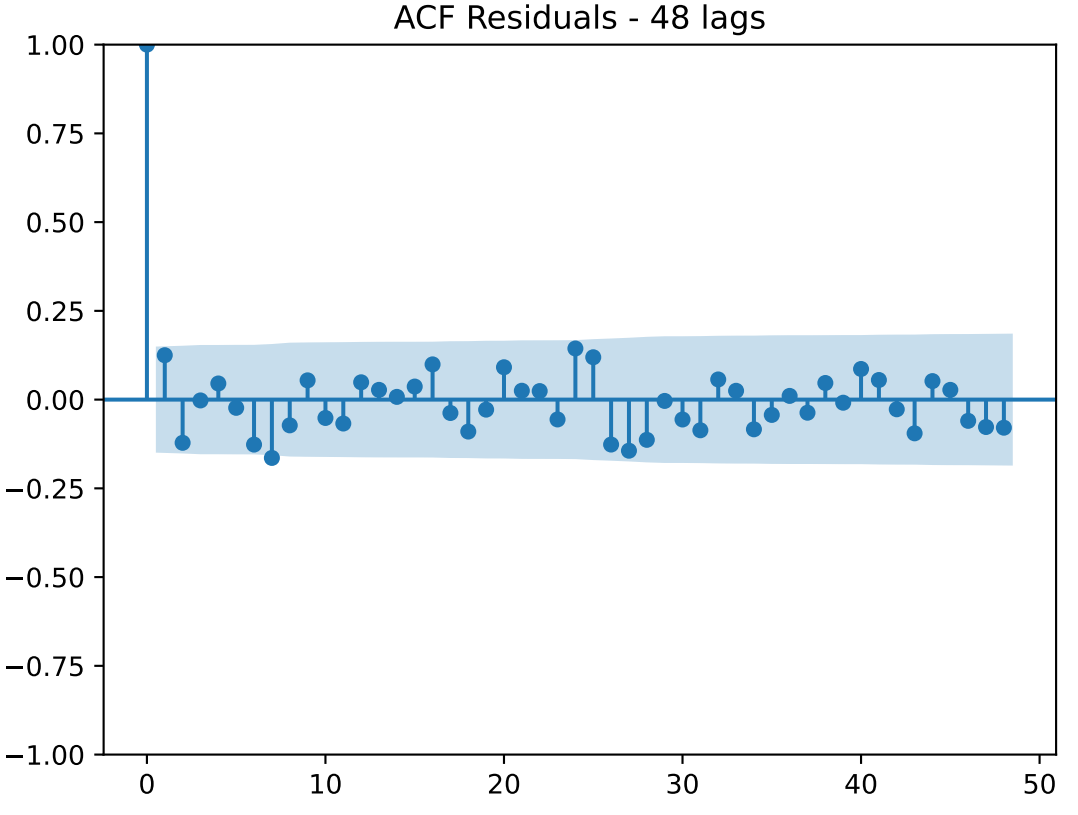

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

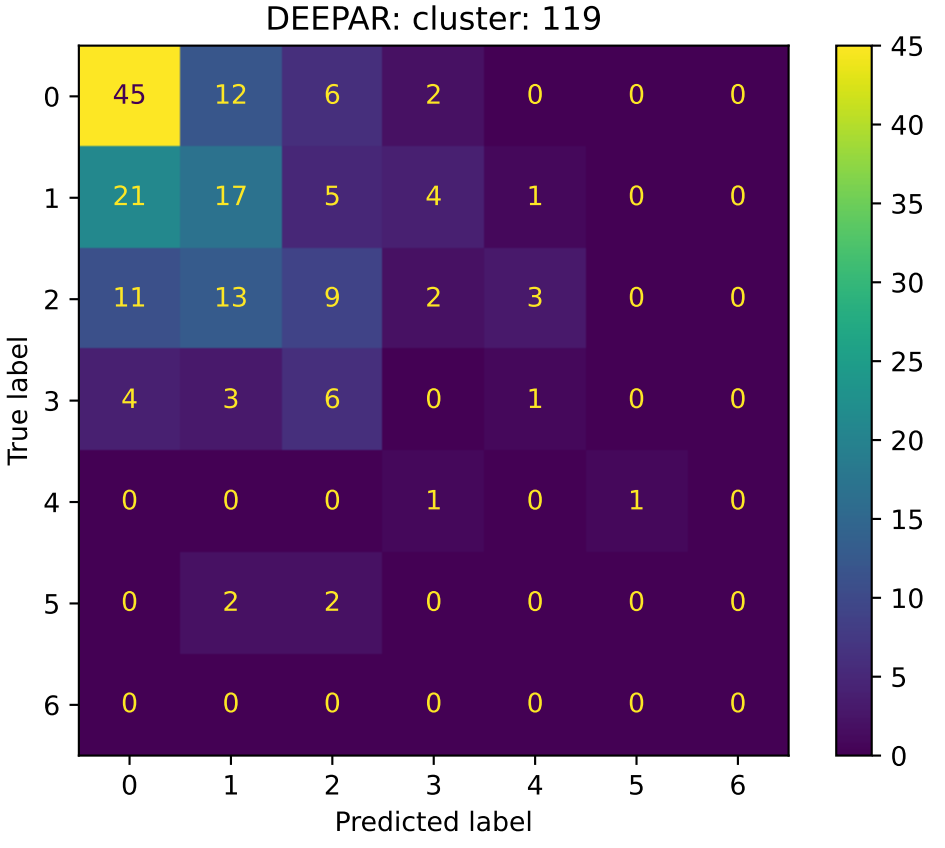

DEEPAR: cluster: 118
True label
Predicted label
0 1 2 3 4 5 6 7
24 5 4 1 2 0 0 0
18 13 4 3 1 1 0 0
14 10 13 3 0 2 0 0
5 8 6 7 2 0 0 0
1 4 4 6 3 0 0 0
0 1 1 2 1 0 0 0
1 0 0 0 0 1 0 0
0 0 0 0 0 0 0 0
0 5 10 15 20

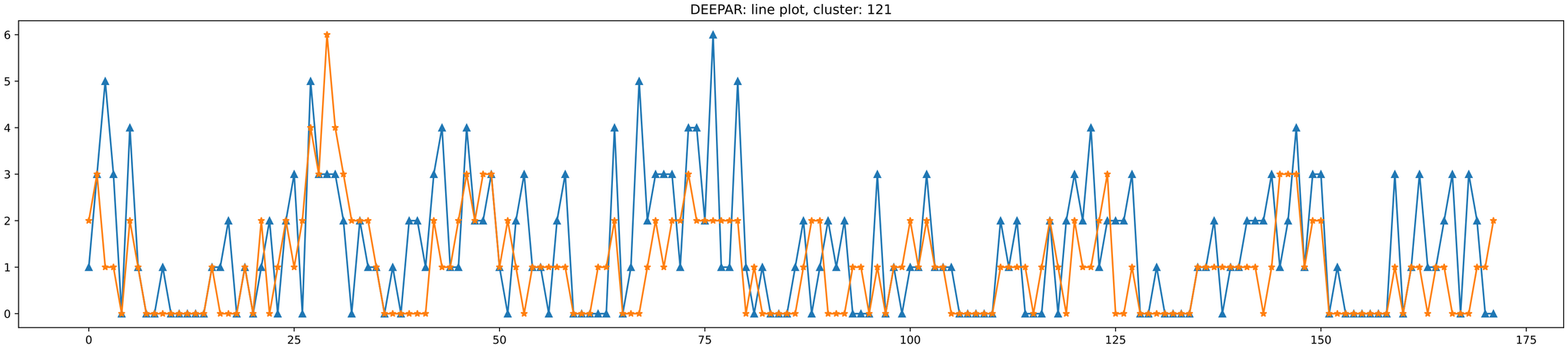

DEEPAR: line plot, cluster: 119
0
1
2
3
4
5
6
7
0
25
50
75
100
125
150
175

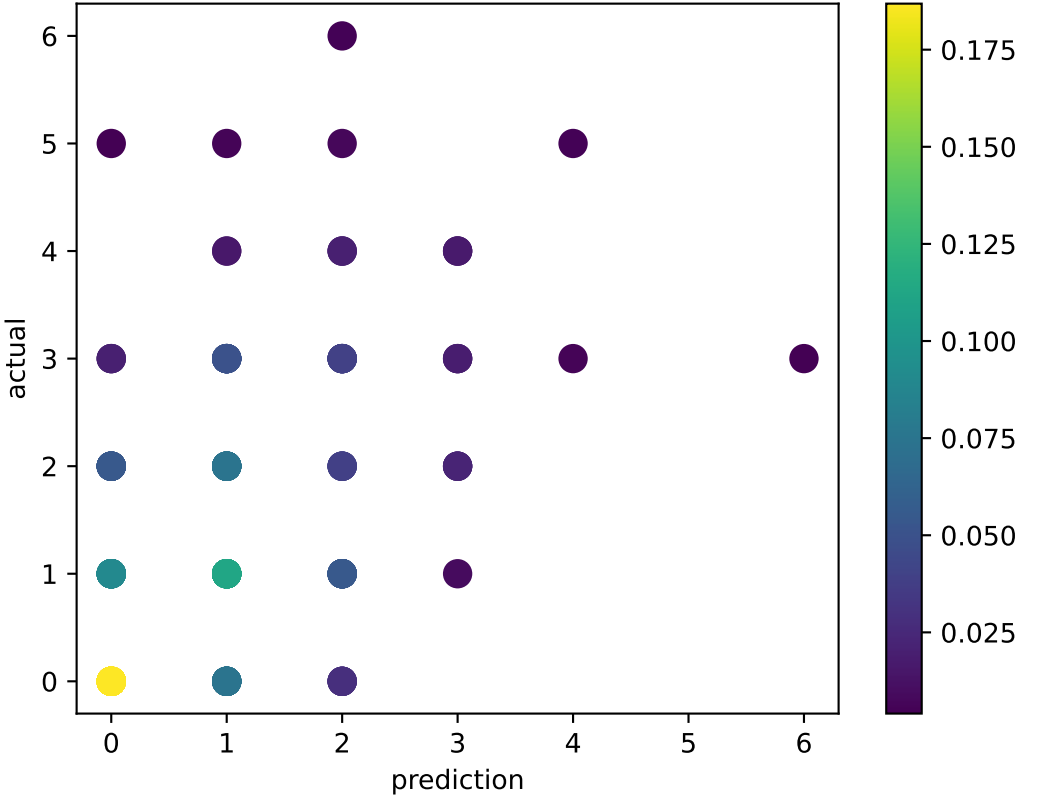

actual
prediction
0
1
2
3
4
5
6
7
0.175
0.150
0.125
0.100
0.075
0.050
0.025

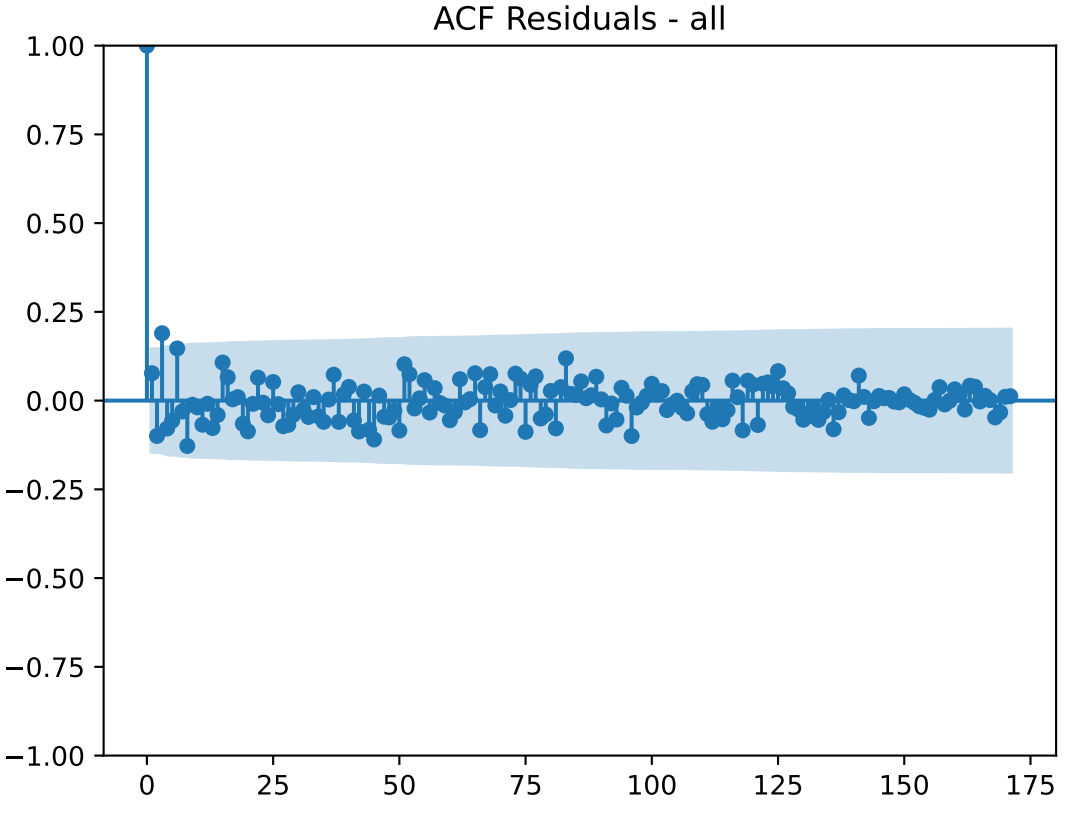

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

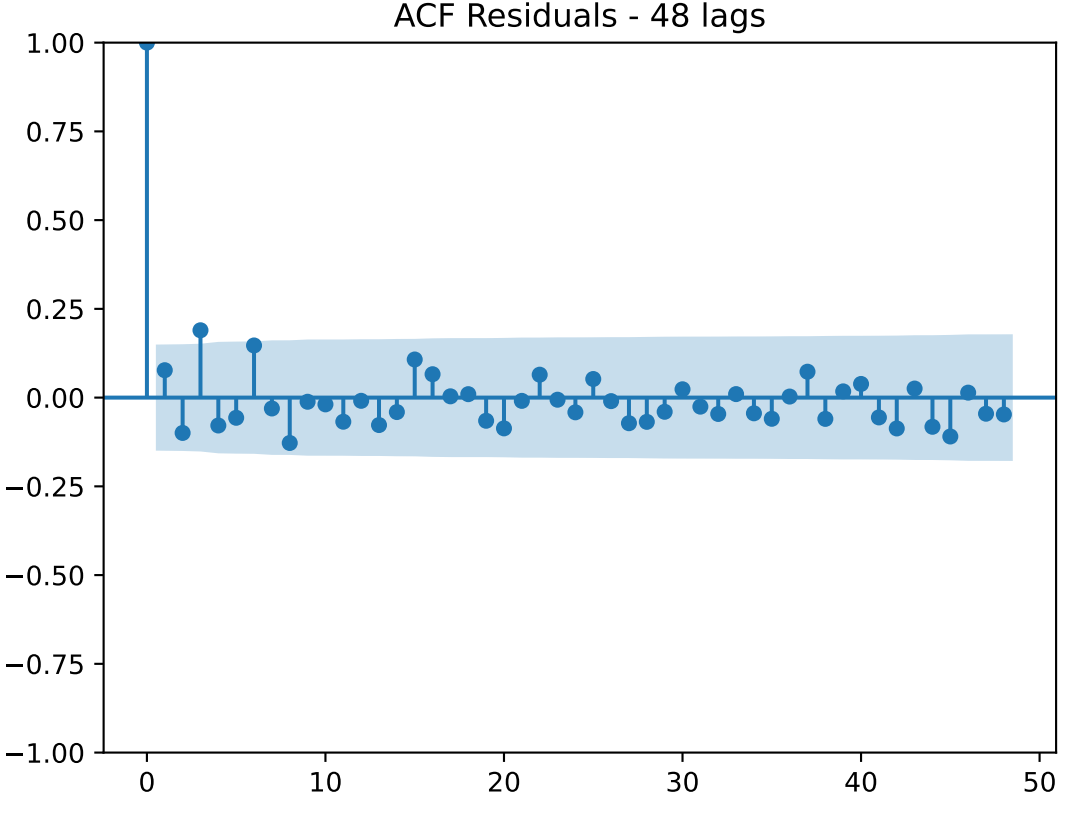

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

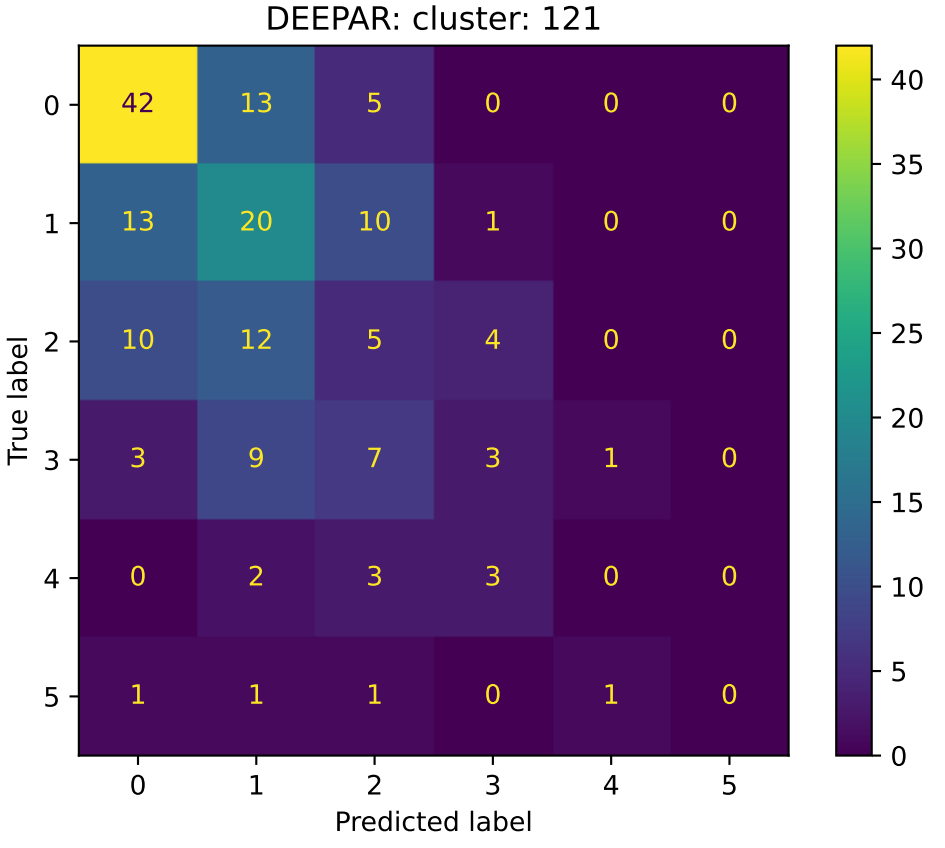

DEEPAR: cluster: 119
True label
Predicted label
0 1 2 3 4 5 6
45 12 6 2 0 0 0
21 17 5 4 1 0 0
11 13 9 2 3 0 0
4 3 6 0 1 0 0
0 0 0 1 0 1 0
0 2 2 0 0 0 0
0 0 0 0 0 0 0
0 5 10 15 20 25 30 35 40 45

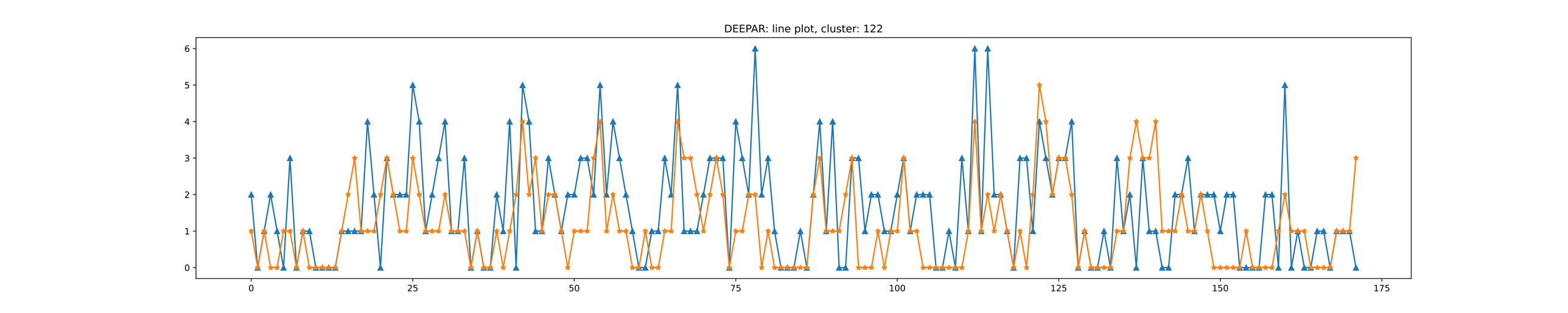

DEEPAR: line plot, cluster: 121
0
1
2
3
4
5
6
0
25
50
75
100
125
150
175

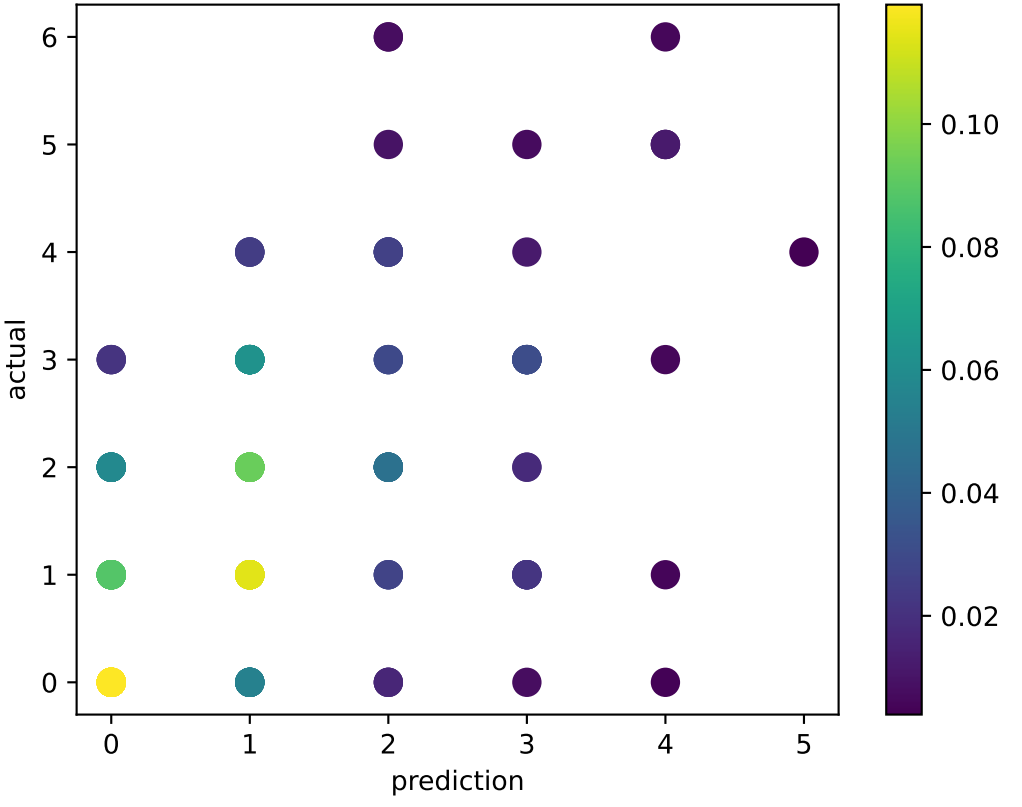

actual
prediction
0
1
2
3
4
5
6
0.175
0.150
0.125
0.100
0.075
0.050
0.025

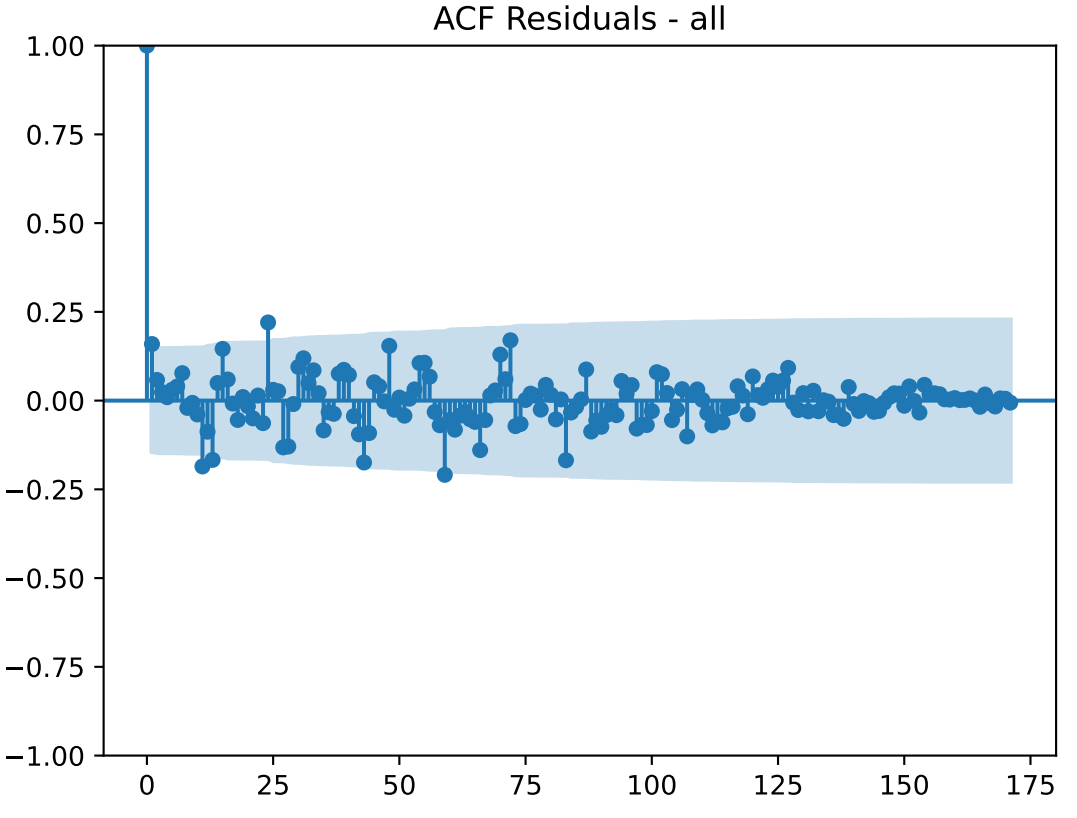

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

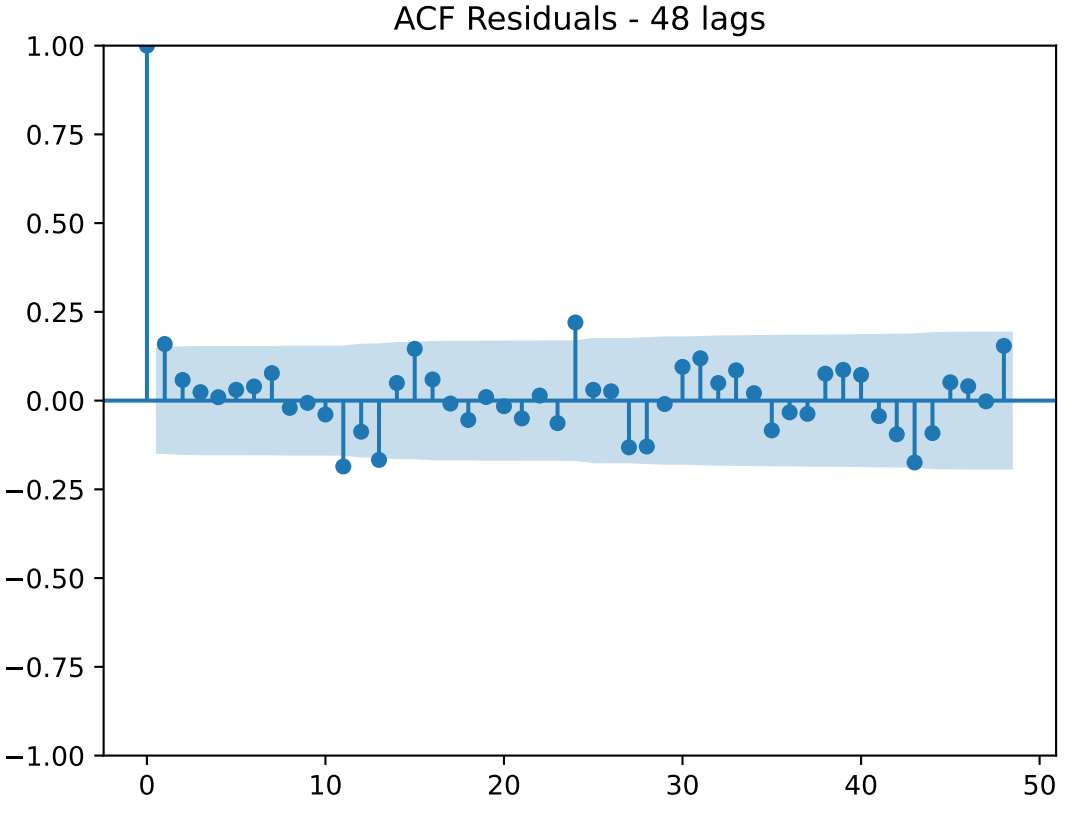

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

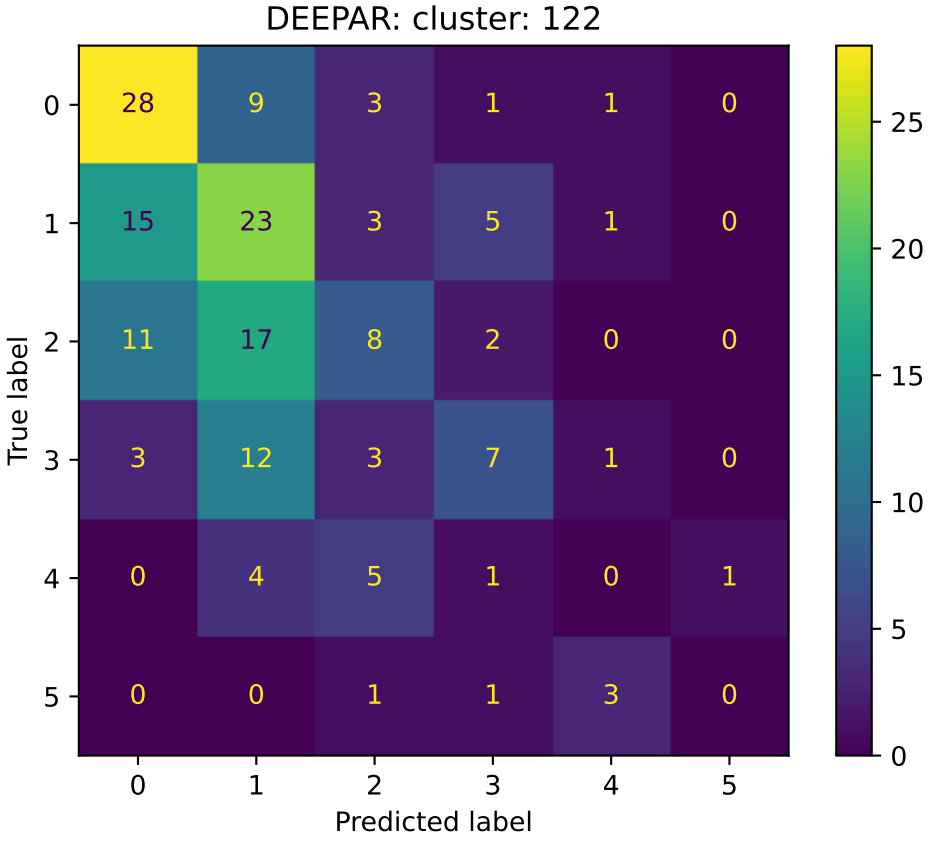

DEEPAR: cluster: 121
True label
Predicted label
0
1
2
3
4
5
42 13 5 0 0 0
13 20 10 1 0 0
10 12 5 4 0 0
3 9 7 3 1 0
0 2 3 3 0 0
1 1 1 0 1 0
40
35
30
25
20
15
10
5
0

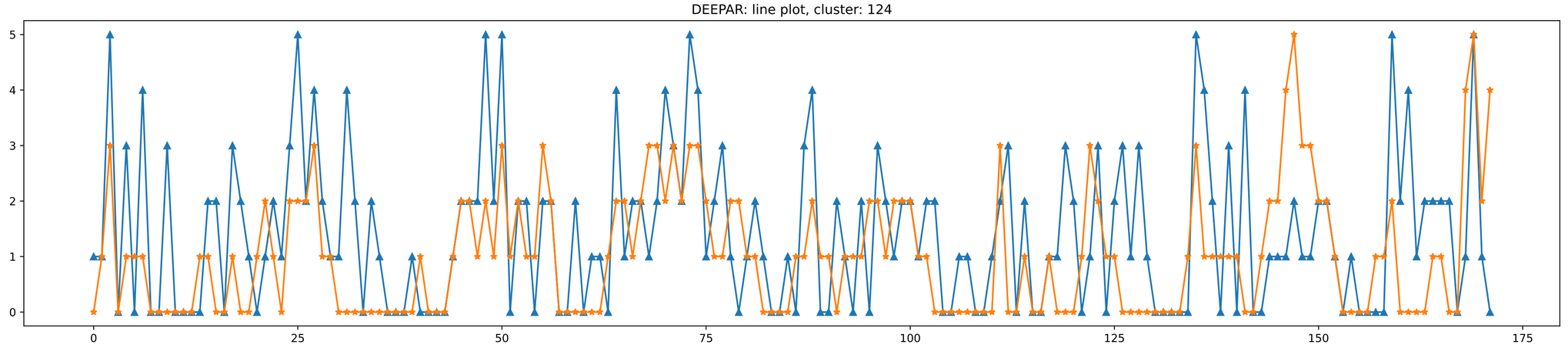

DEEPAR: line plot, cluster: 122
0
1
2
3
4
5
6
0
25
50
75
100
125
150
175

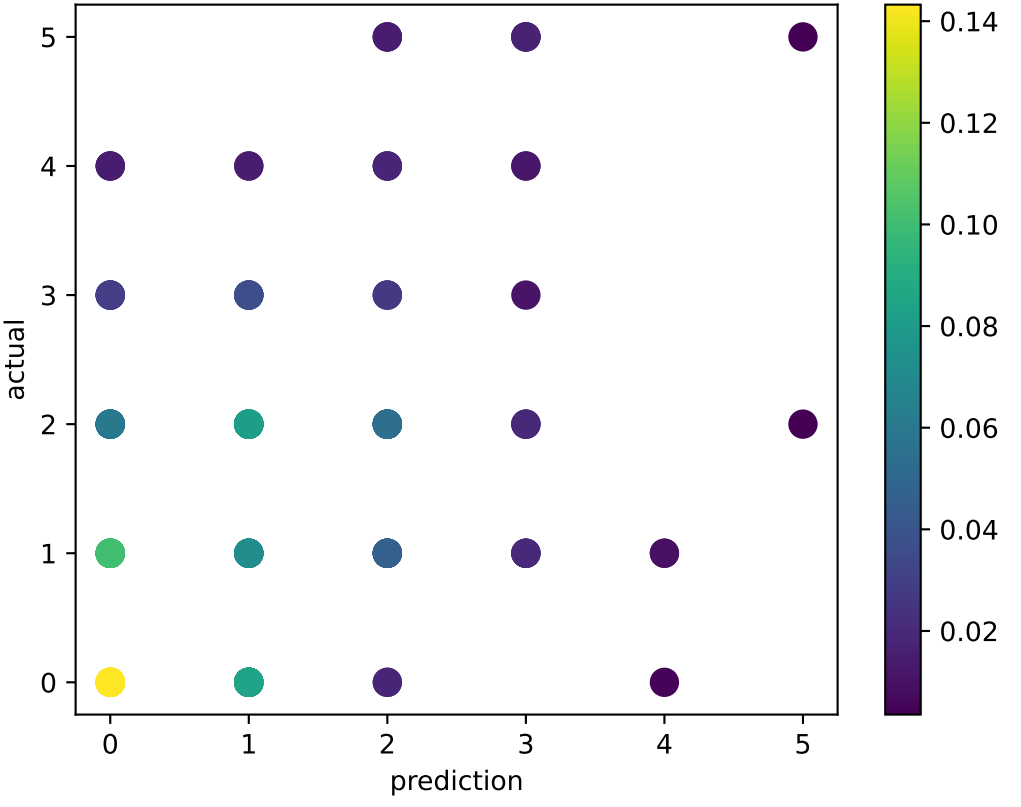

actual
prediction
0
1
2
3
4
5
6
0.10
0.08
0.06
0.04
0.02

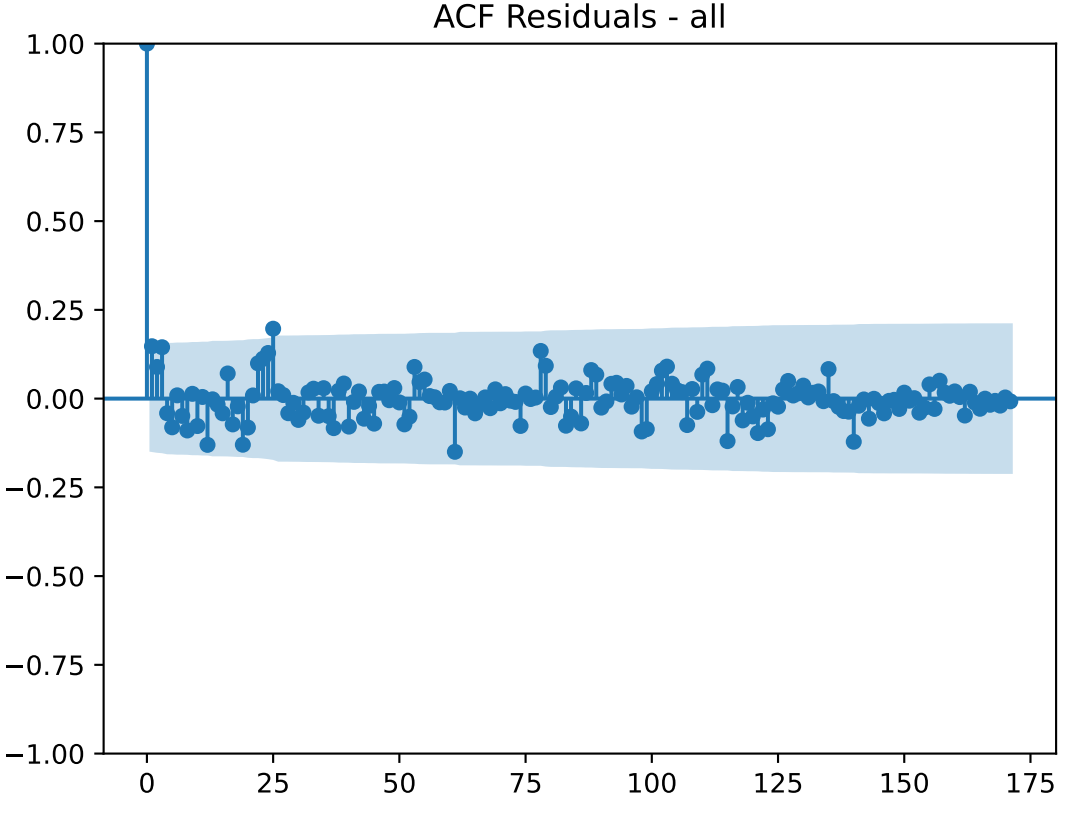

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

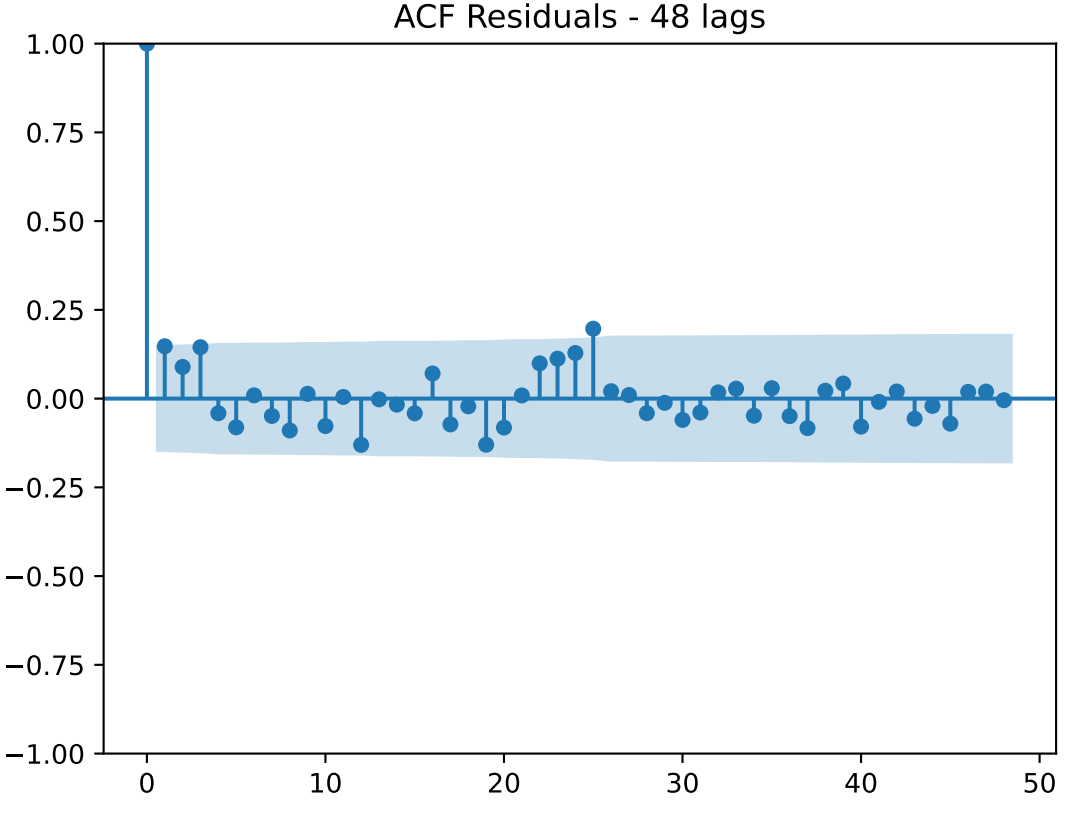

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

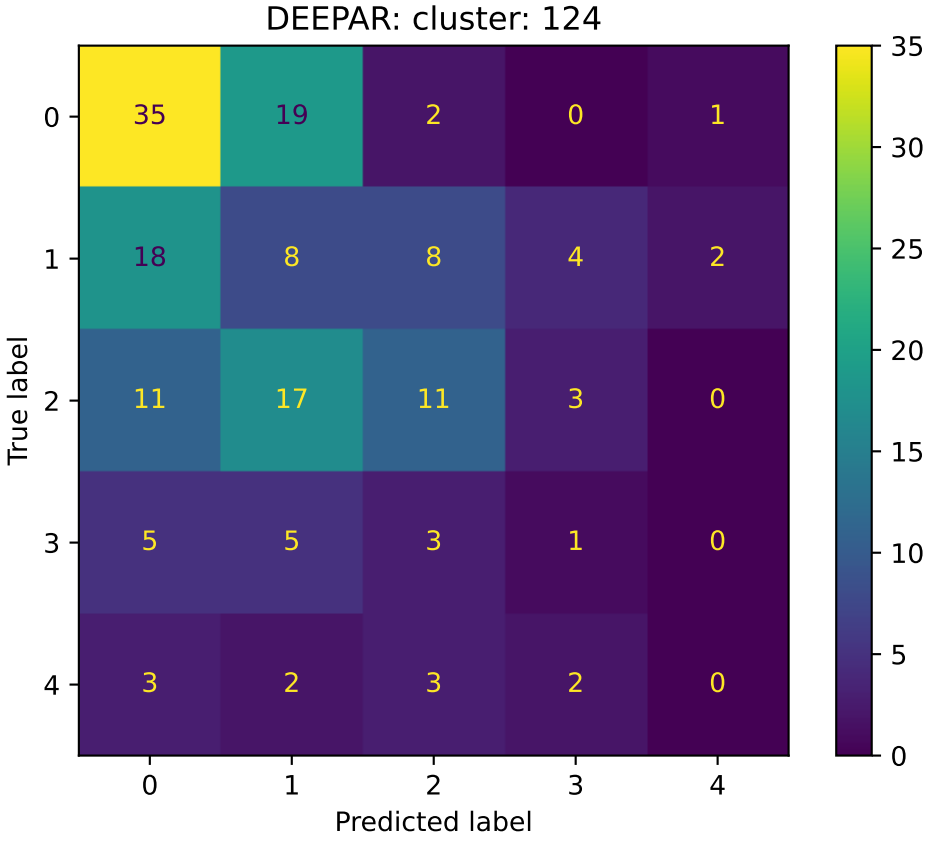

DEEPAR: cluster: 122
True label
Predicted label
0
1
2
3
4
5
28 9 3 1 1 0
15 23 3 5 1 0
11 17 8 2 0 0
3 12 3 7 1 0
0 4 5 1 0 1
0 0 1 1 3 0
0
5
10
15
20
25

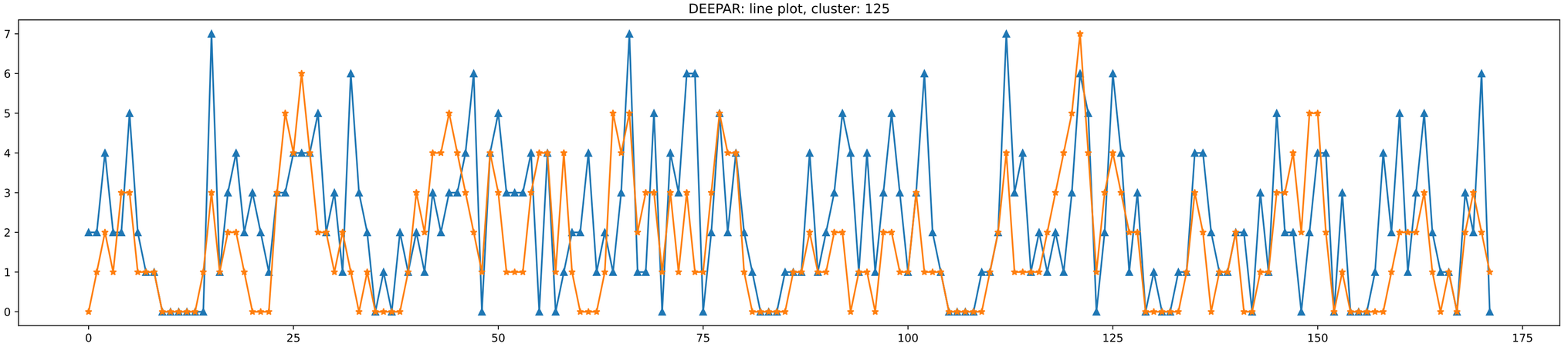

DEEPAR: line plot, cluster: 124
0
1
2
3
4
5
0
25
50
75
100
125
150
175

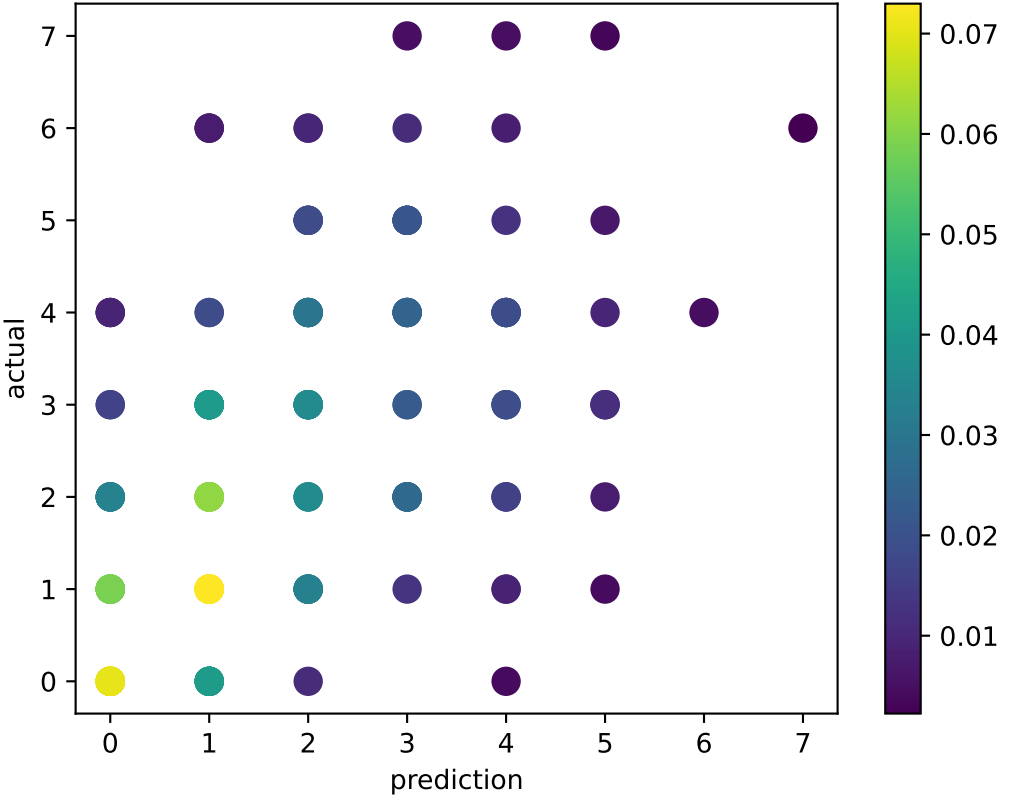

actual
prediction
0
1
2
3
4
5
0.14
0.12
0.10
0.08
0.06
0.04
0.02

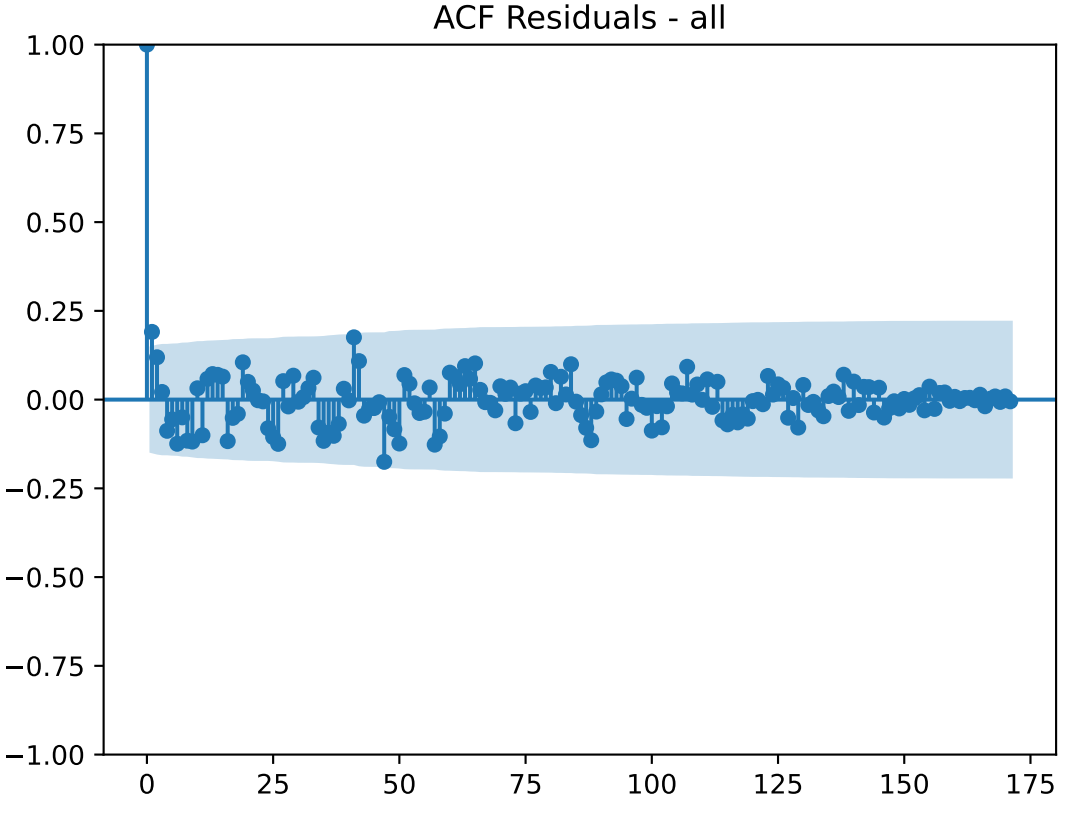

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

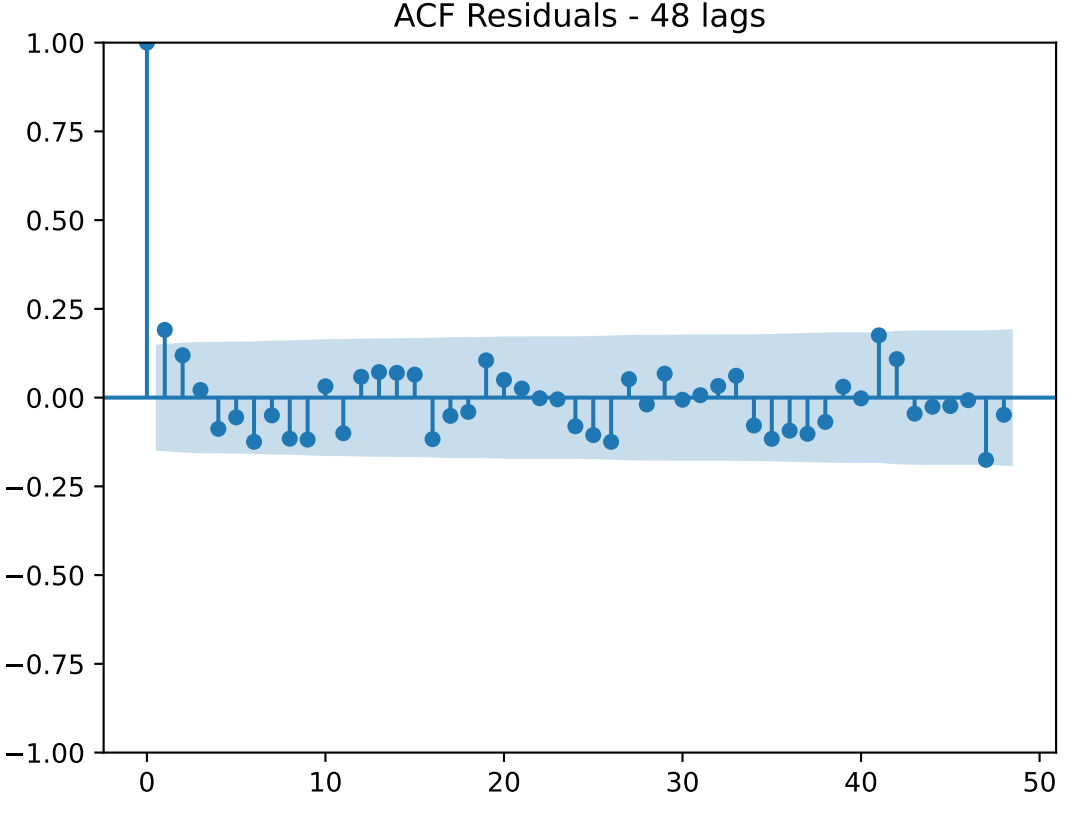

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

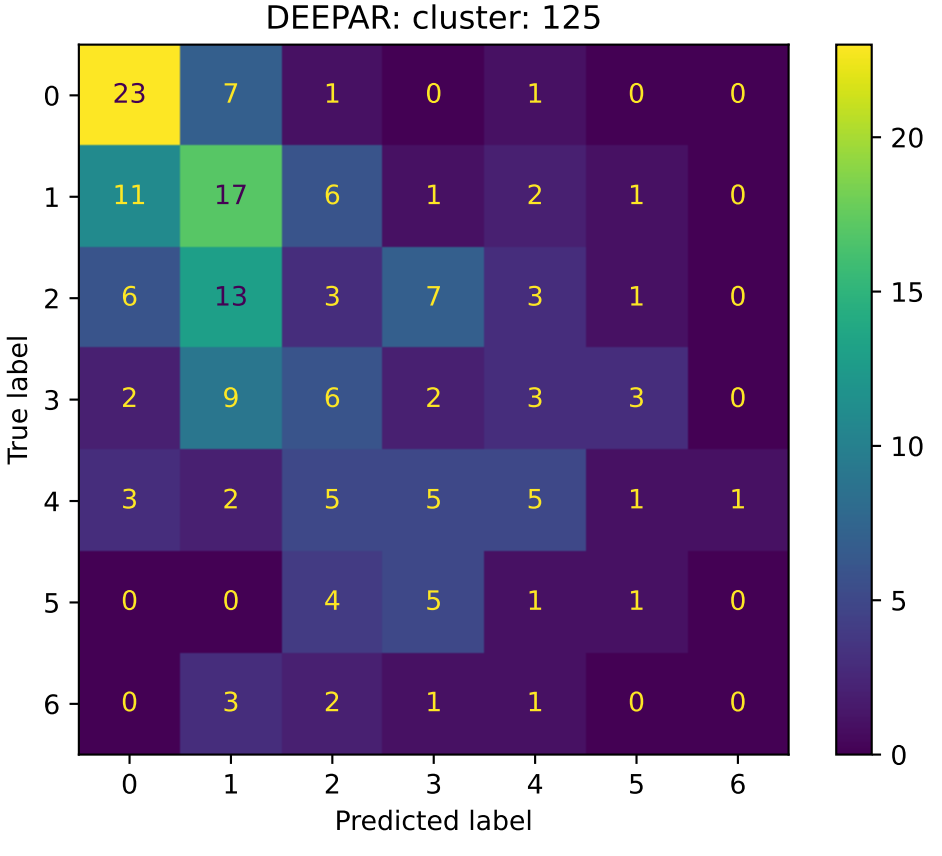

DEEPAR: cluster: 124
True label
Predicted label
0
1
2
3
4
35
19
2
0
1
18
8
8
4
2
11
17
11
3
0
5
5
3
1
0
3
2
3
2
0
35
30
25
20
15
10
5
0

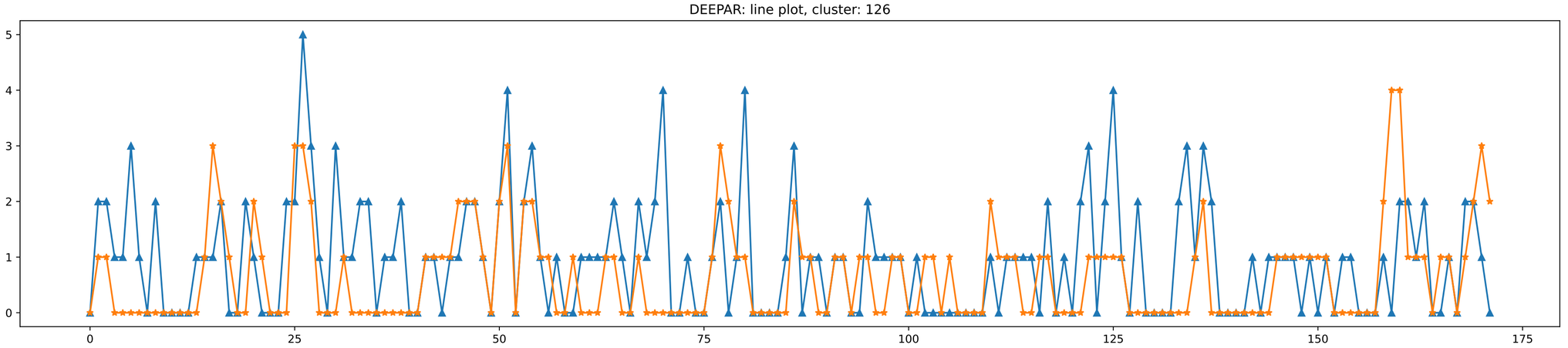

DEEPAR: line plot, cluster: 125
0
1
2
3
4
5
6
7
0
25
50
75
100
125
150
175

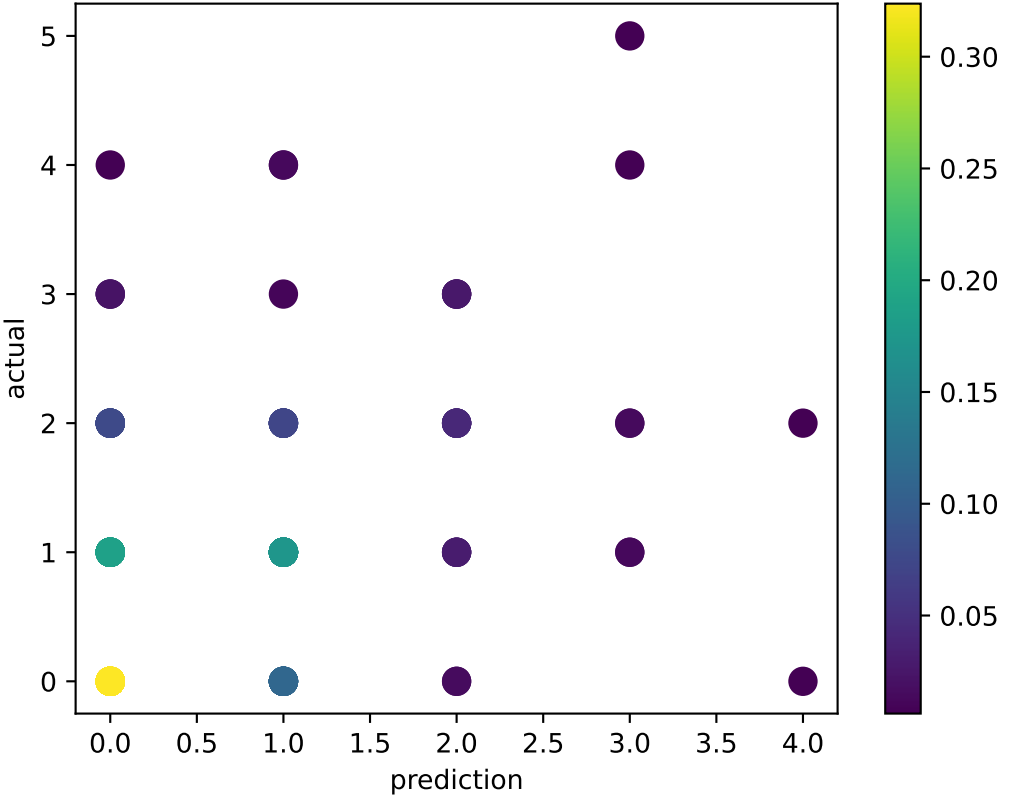

actual
prediction
0
1
2
3
4
5
6
7
0.07
0.06
0.05
0.04
0.03
0.02
0.01

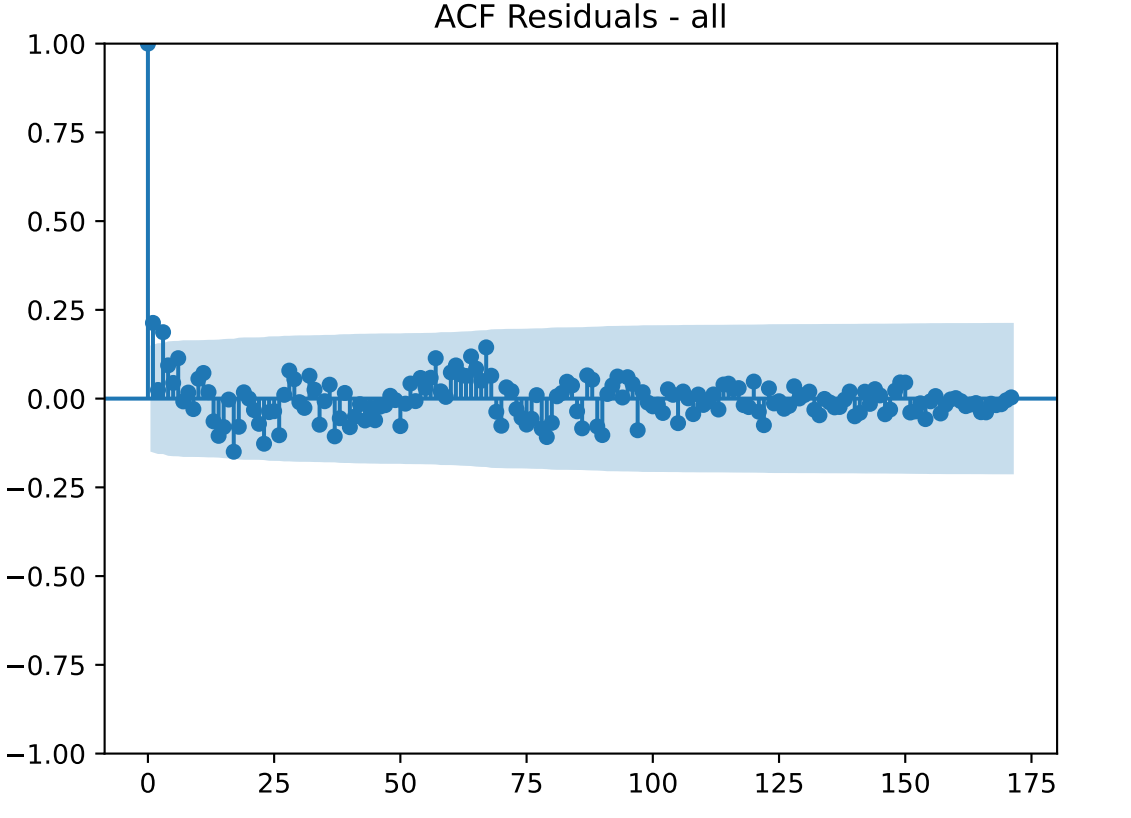

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

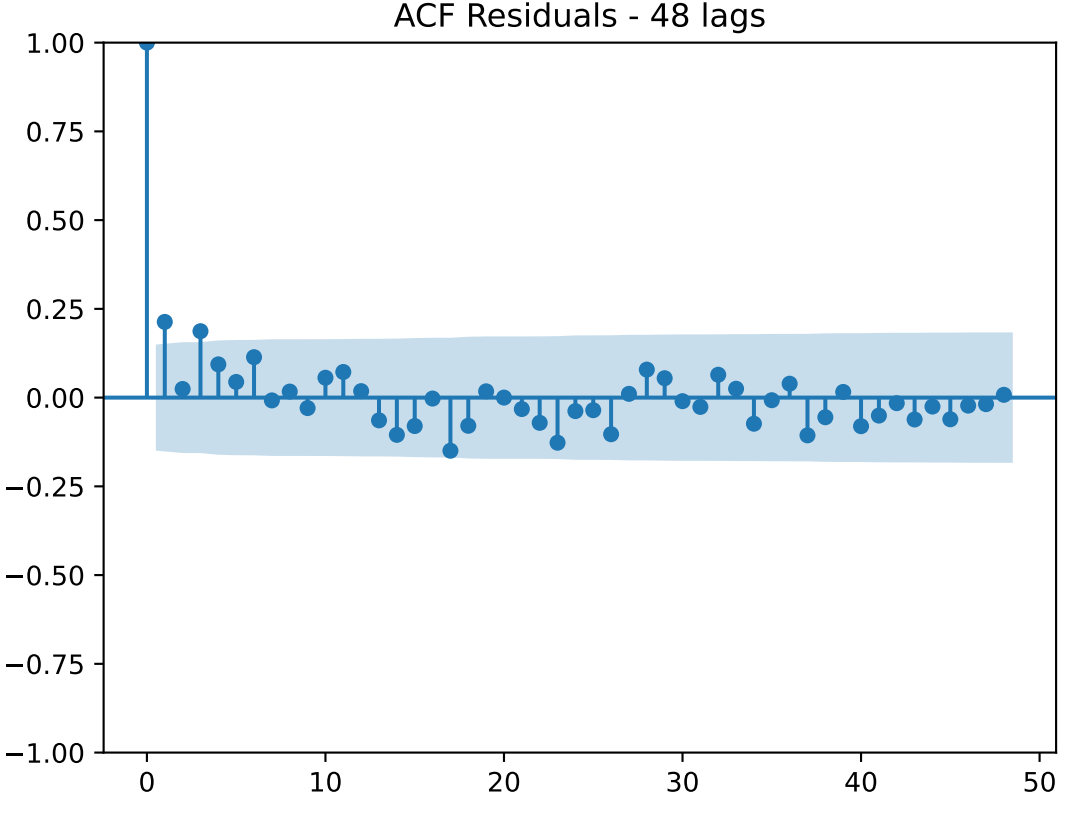

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

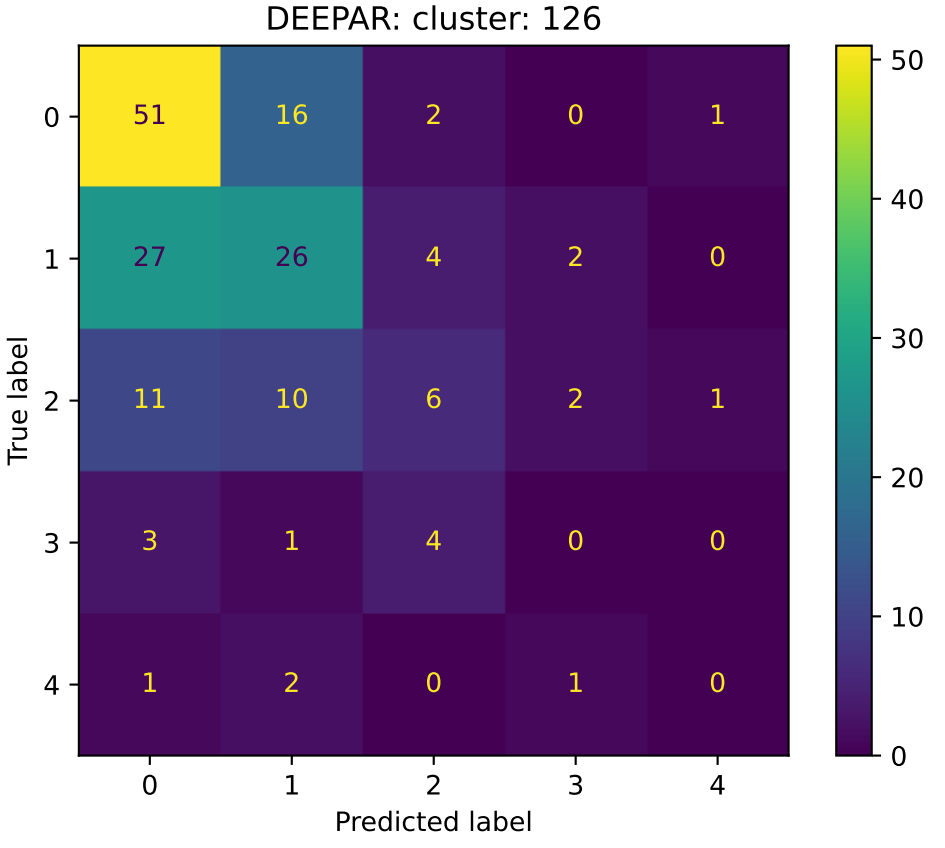

DEEPAR: cluster: 125
True label
Predicted label
0 1 2 3 4 5 6
23 7 1 0 1 0 0
11 17 6 1 2 1 0
6 13 3 7 3 1 0
2 9 6 2 3 3 0
3 2 5 5 5 1 1
0 0 4 5 1 1 0
0 3 2 1 1 0 0
0 5 10 15 20

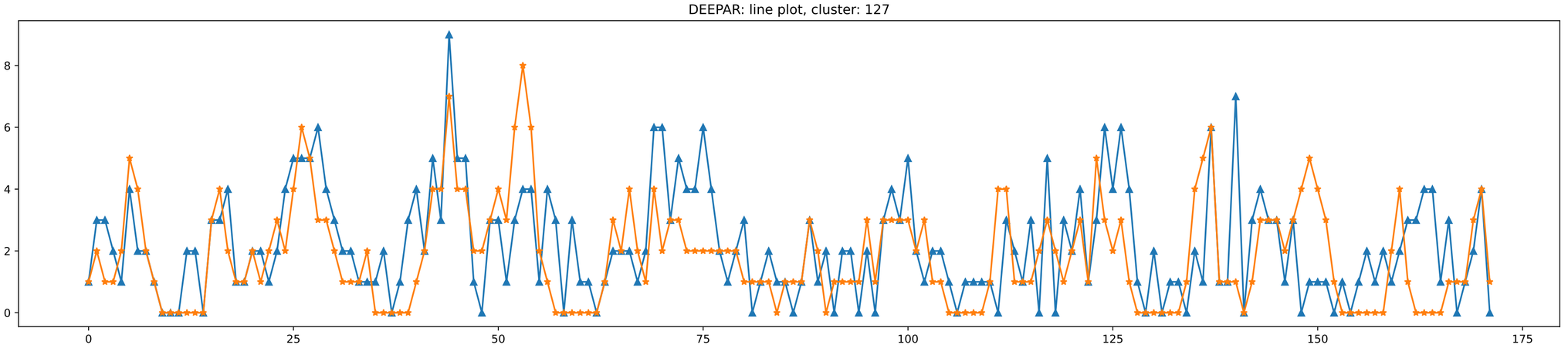

DEEPAR: line plot, cluster: 126
0
1
2
3
4
5
0
25
50
75
100
125
150
175

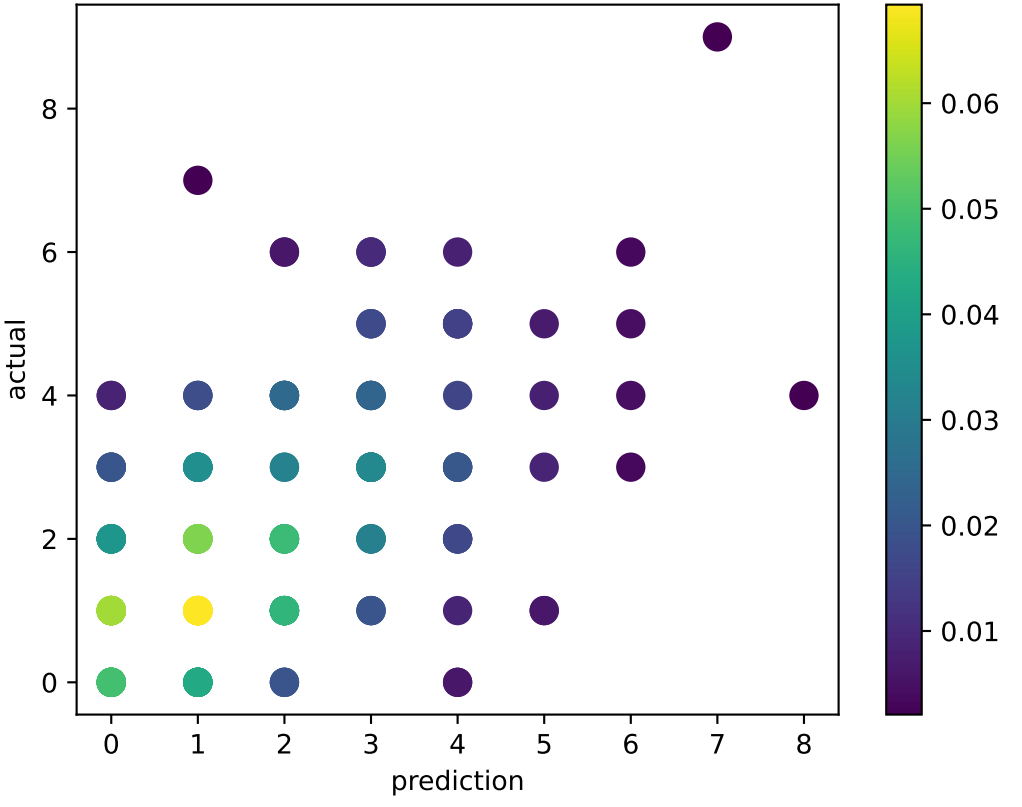

actual
prediction
0
1
2
3
4
5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.30
0.25
0.20
0.15
0.10
0.05

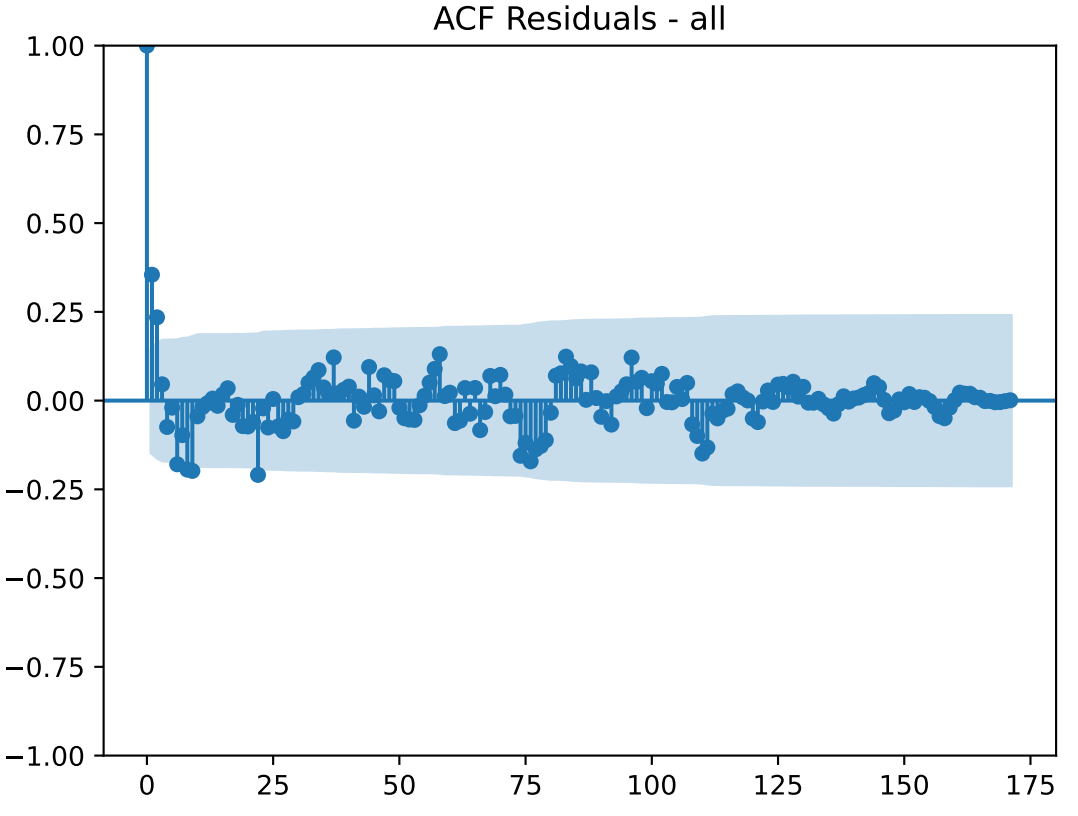

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

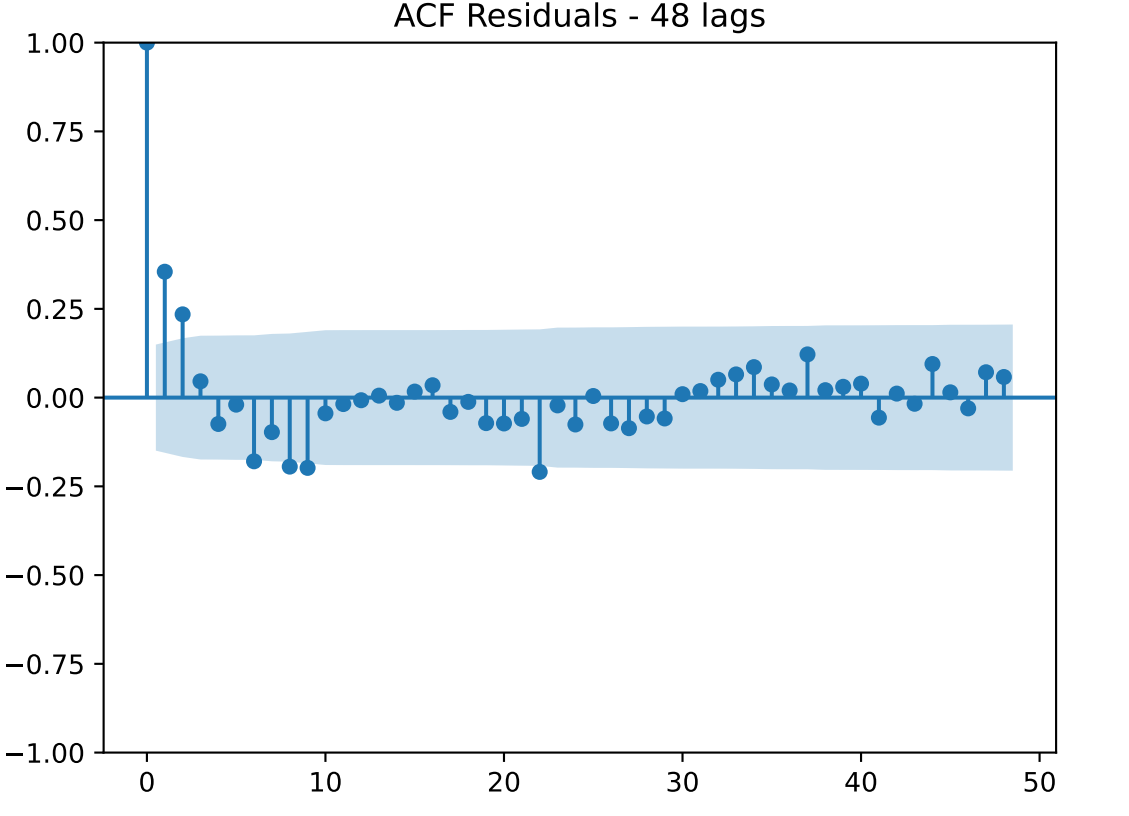

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

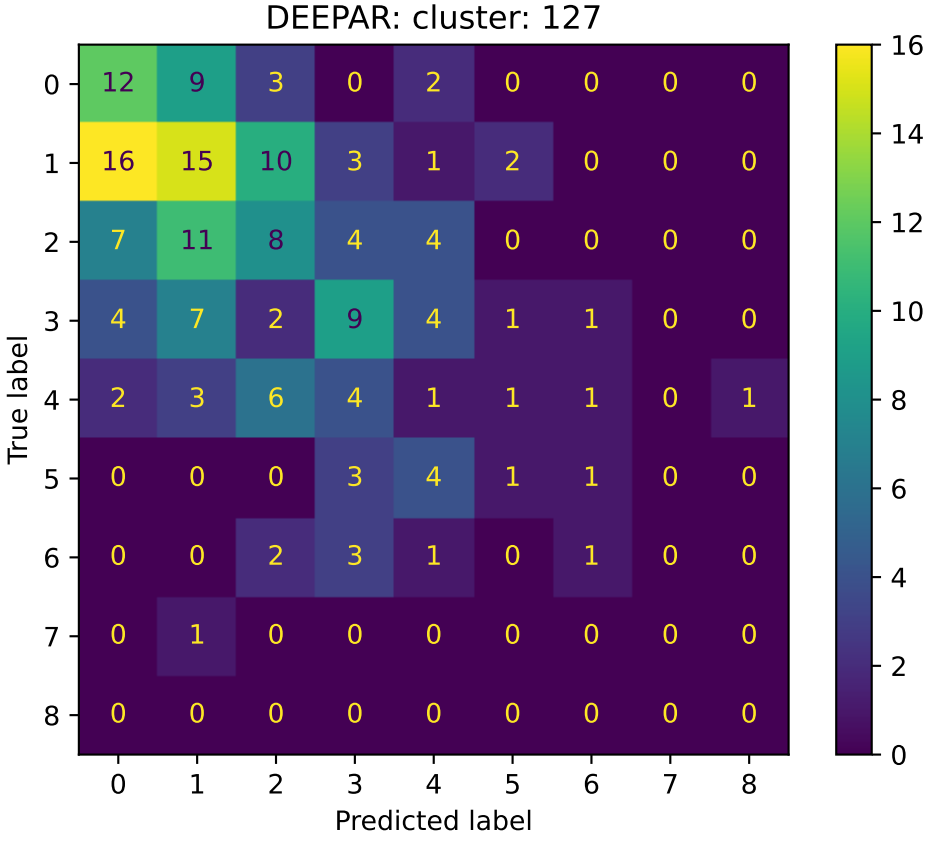

DEEPAR: cluster: 126
True label
Predicted label
0
1
2
3
4
51
16
2
0
1
27
26
4
2
0
11
10
6
2
1
3
1
4
0
0
1
2
0
1
0
50
40
30
20
10
0

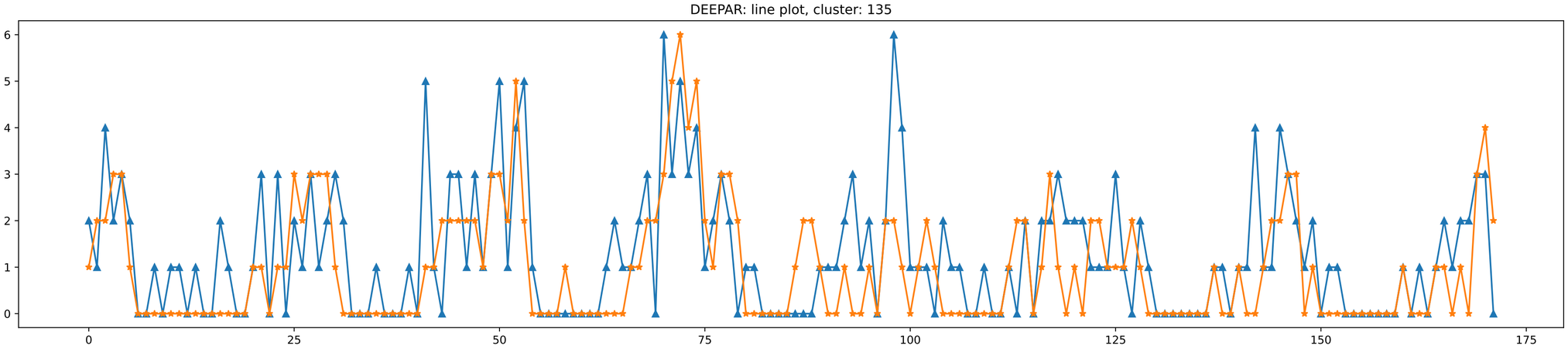

DEEPAR: line plot, cluster: 127
0
2
4
6
8
0
25
50
75
100
125
150
175

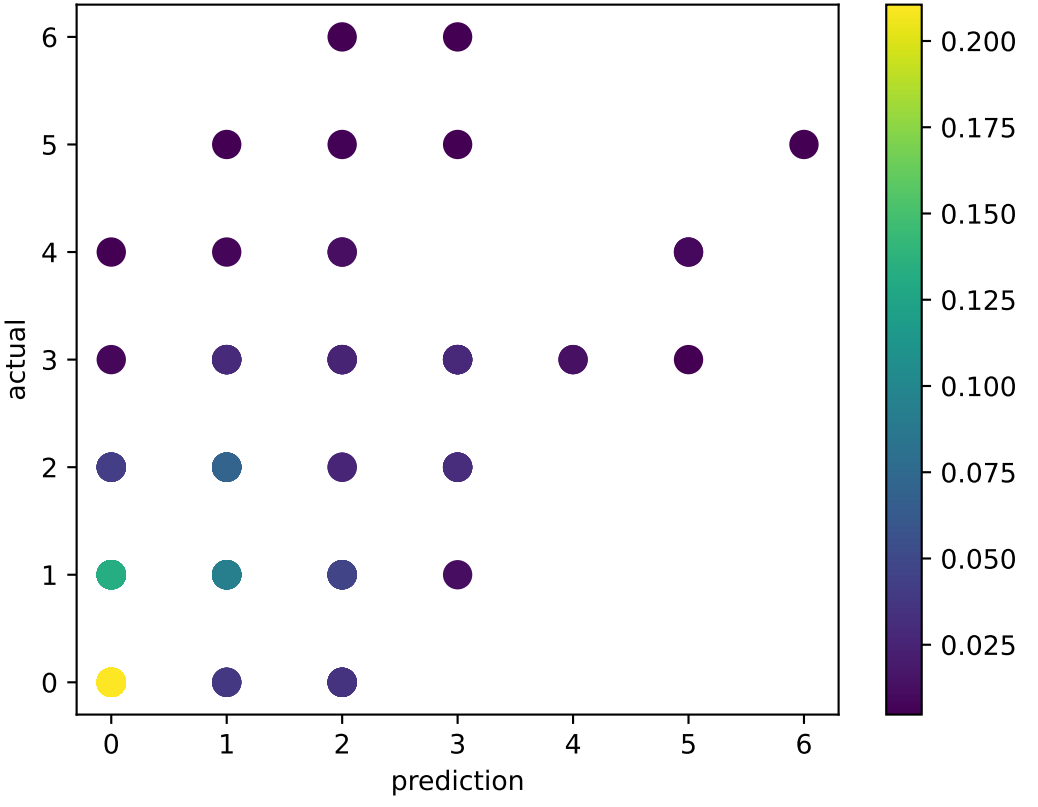

actual
prediction
0
1
2
3
4
5
6
7
8
0.06
0.05
0.04
0.03
0.02
0.01

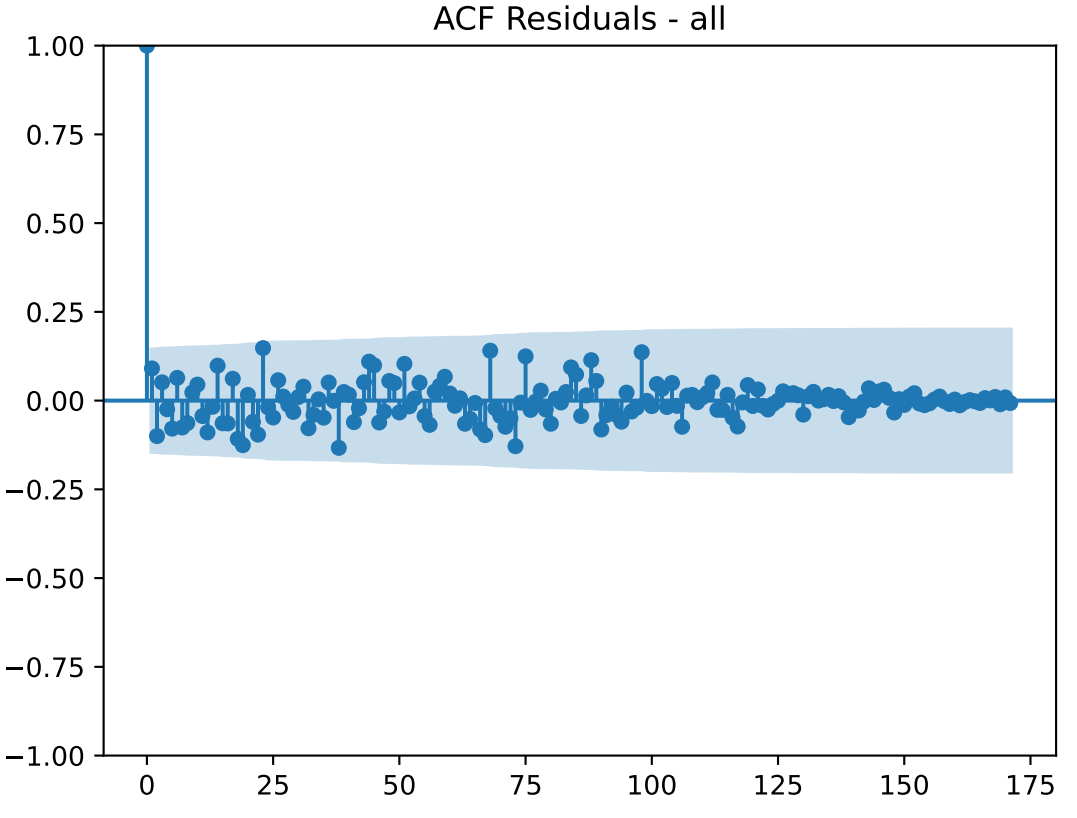

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

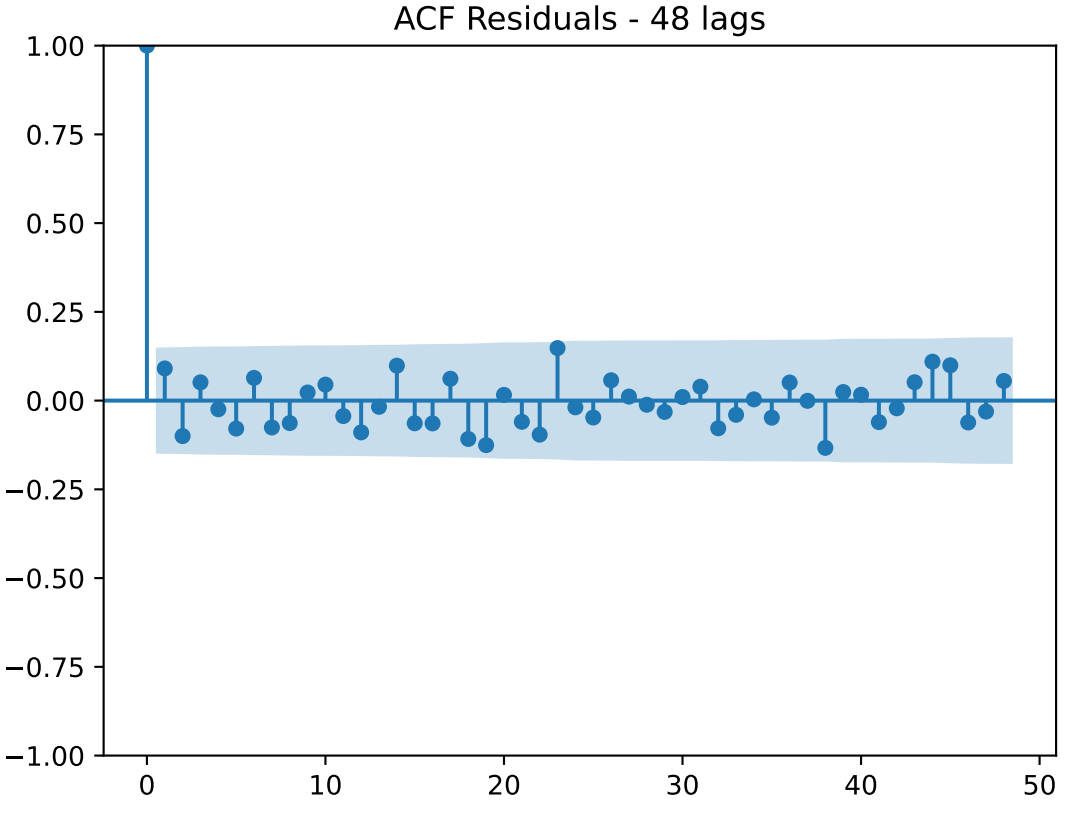

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

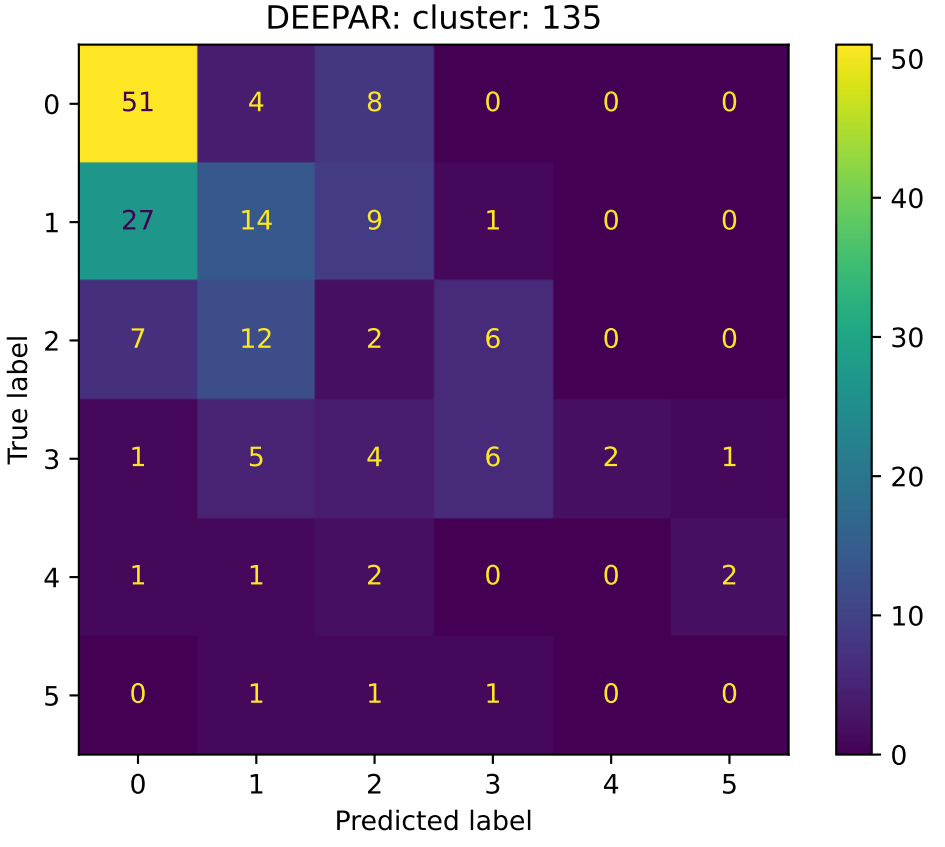

DEEPAR: cluster: 127
True label
Predicted label
0 1 2 3 4 5 6 7 8
12 9 3 0 2 0 0 0 0
16 15 10 3 1 2 0 0 0
7 11 8 4 4 0 0 0 0
4 7 2 9 4 1 1 0 0
2 3 6 4 1 1 1 0 1
0 0 0 3 4 1 1 0 0
0 0 2 3 1 0 1 0 0
0 1 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0
16 14 12 10 8 6 4 2 0

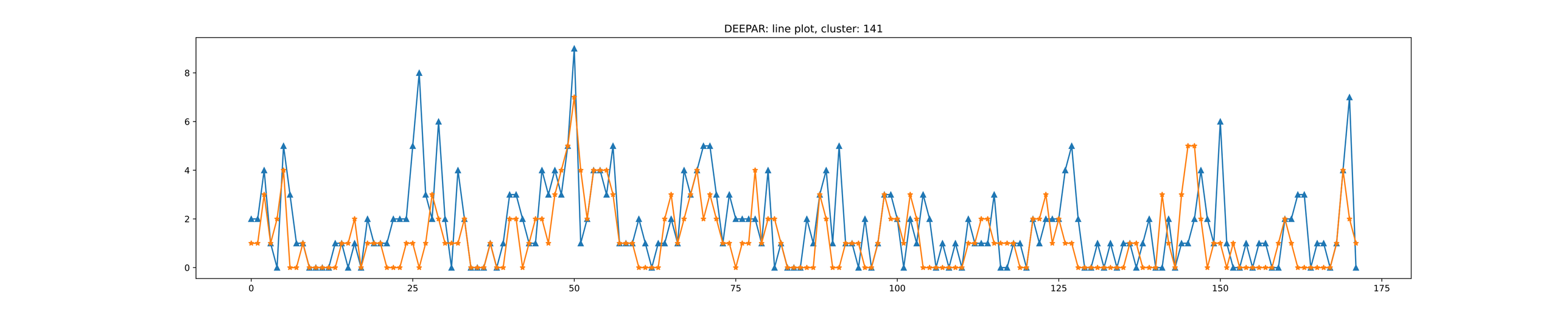

DEEPAR: line plot, cluster: 135
0
1
2
3
4
5
6
0
25
50
75
100
125
150
175

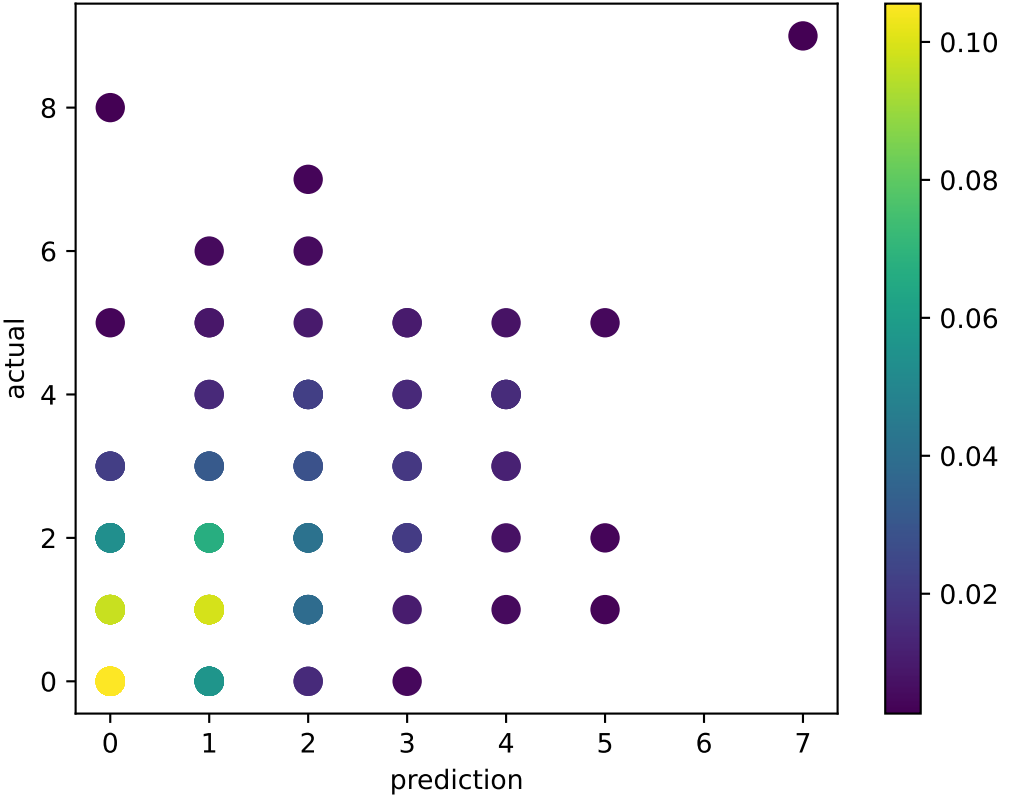

actual
prediction
0
1
2
3
4
5
6
0.200
0.175
0.150
0.125
0.100
0.075
0.050
0.025

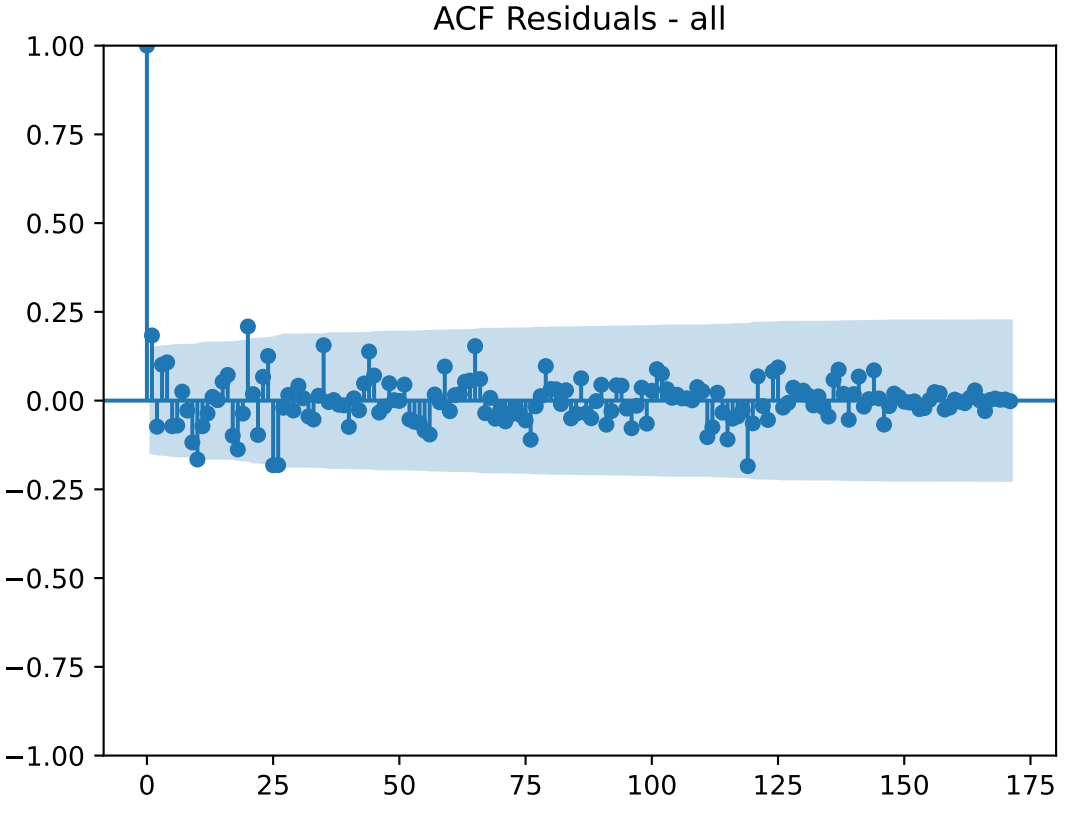

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

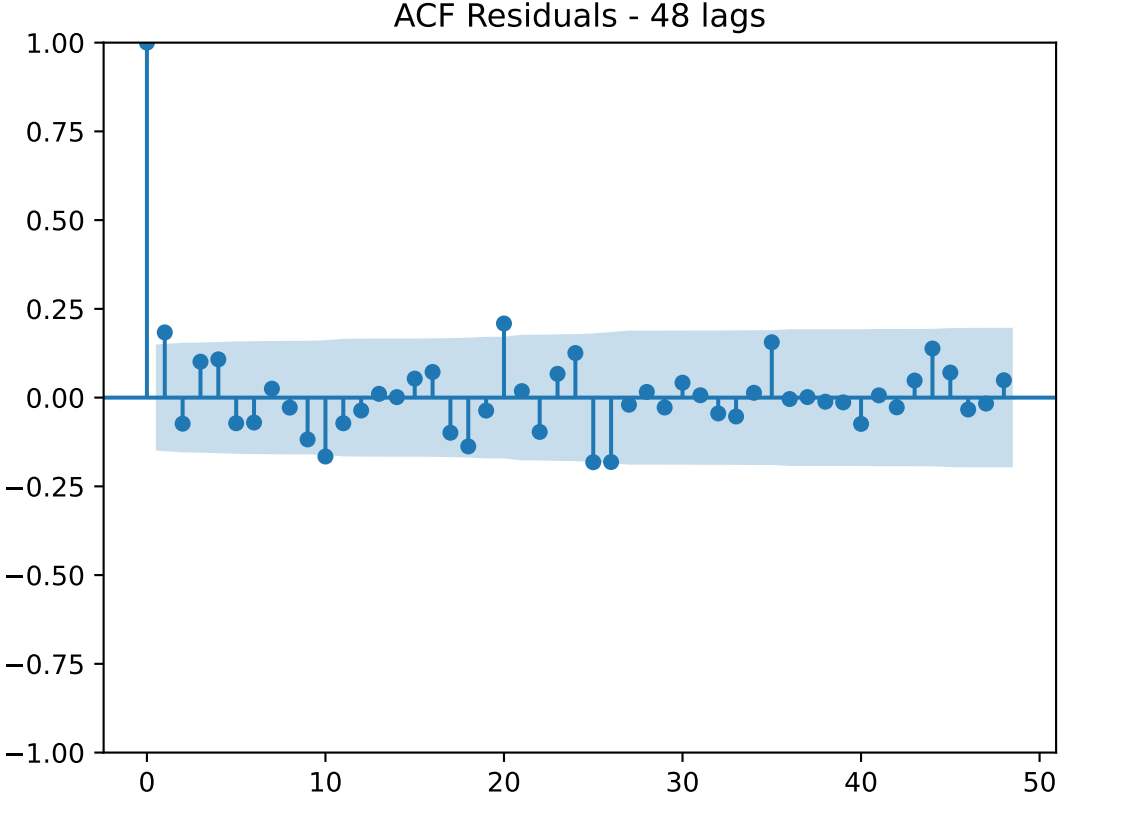

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

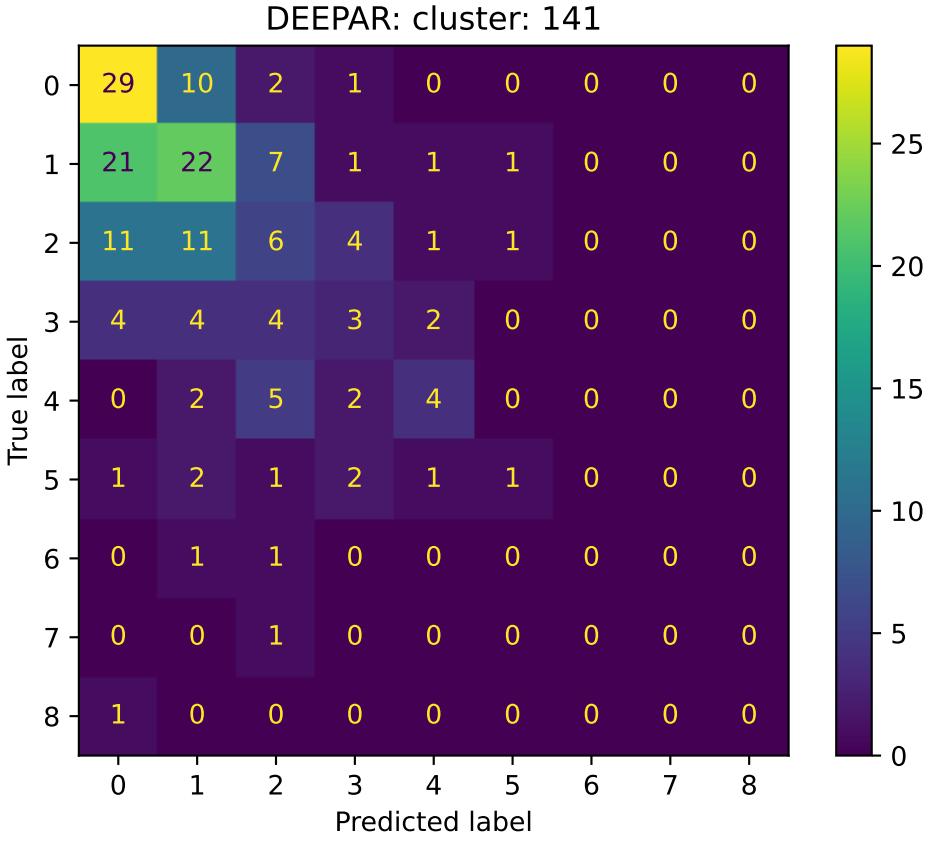

DEEPAR: cluster: 135
True label
Predicted label
0
1
2
3
4
5
51 4 8 0 0 0
27 14 9 1 0 0
7 12 2 6 0 0
1 5 4 6 2 1
1 1 2 0 0 2
0 1 1 1 0 0
50
40
30
20
10
0

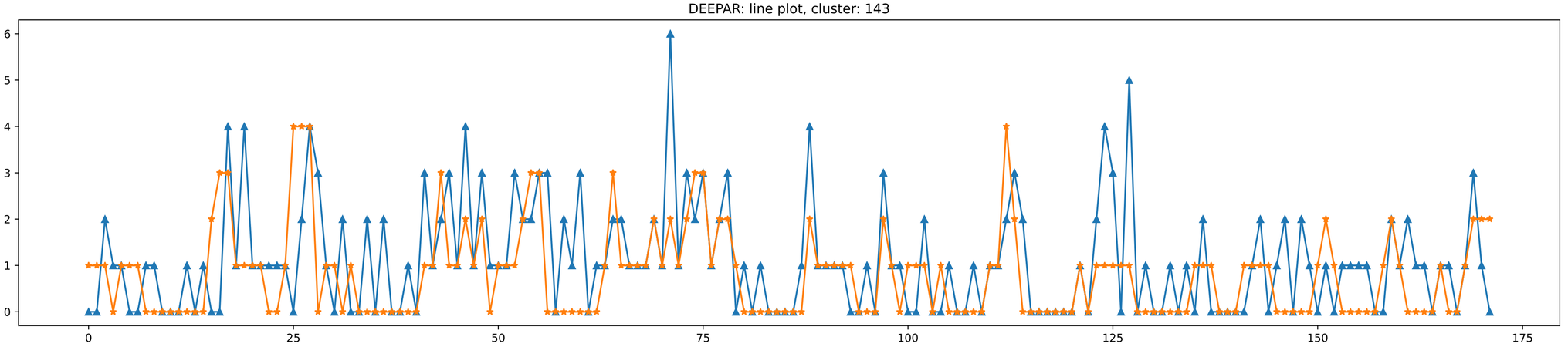

DEEPAR: line plot, cluster: 141
0
2
4
6
8
0
25
50
75
100
125
150
175

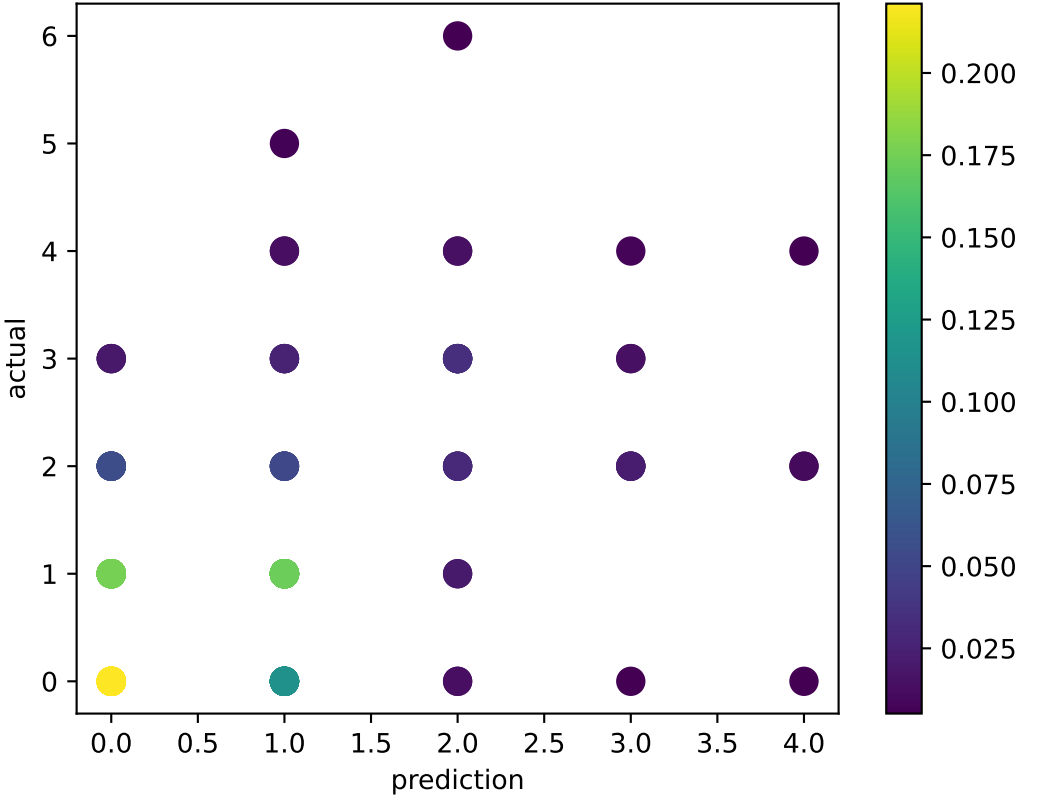

actual
prediction
0
1
2
3
4
5
6
7
8
0.10
0.08
0.06
0.04
0.02

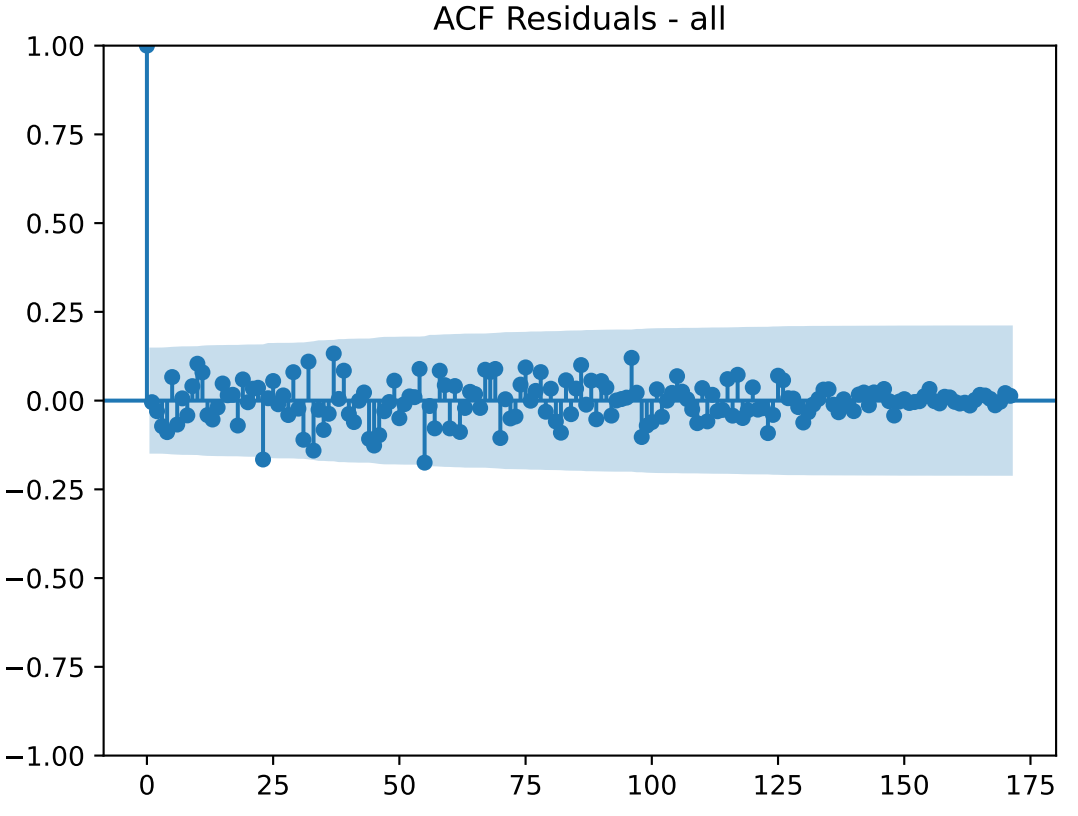

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

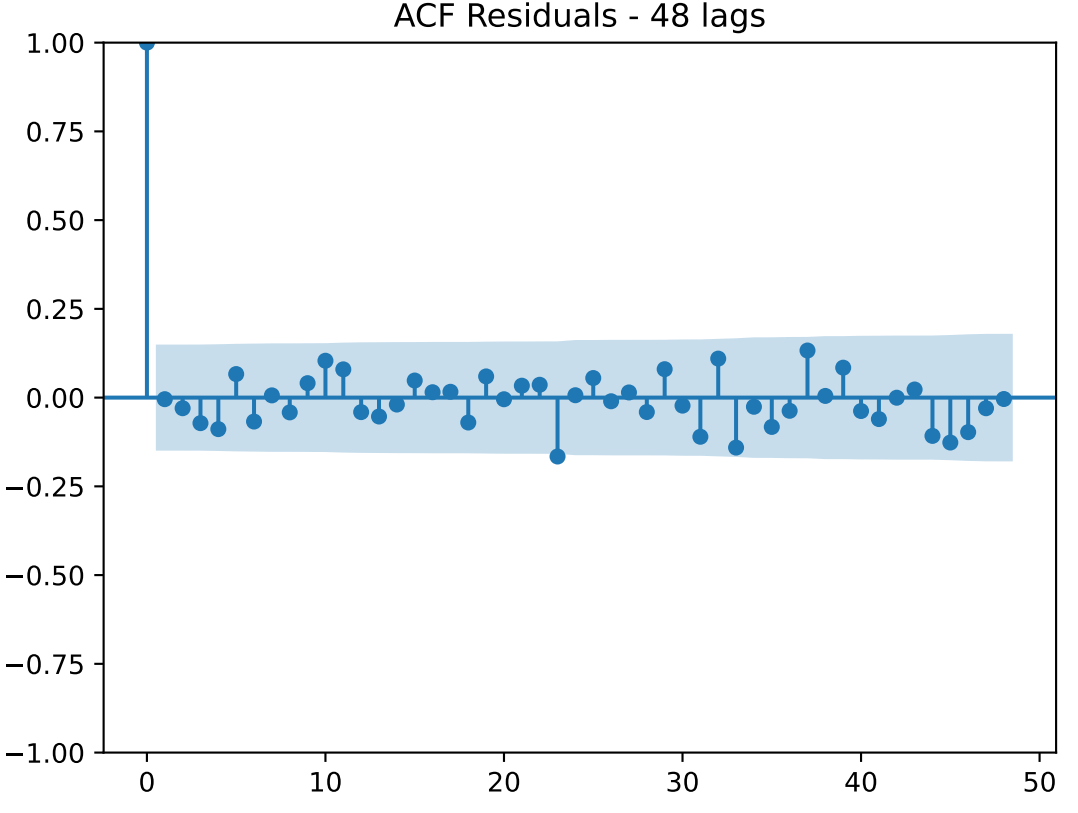

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

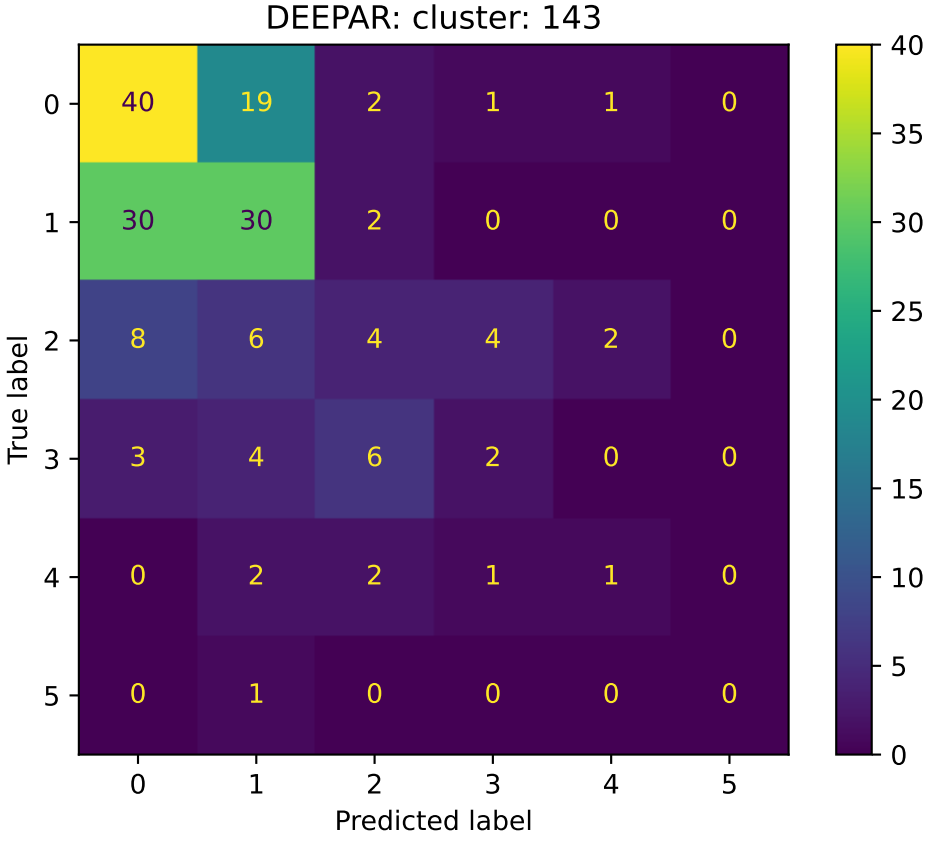

DEEPAR: cluster: 141
True label
Predicted label
0 29 10 2 1 0 0 0 0 0
1 21 22 7 1 1 1 0 0 0
2 11 11 6 4 1 1 0 0 0
3 4 4 4 3 2 0 0 0 0
4 0 2 5 2 4 0 0 0 0
5 1 2 1 2 1 1 0 0 0
6 0 1 1 0 0 0 0 0 0
7 0 0 1 0 0 0 0 0 0
8 1 0 0 0 0 0 0 0 0
0 1 2 3 4 5 6 7 8
25 20 15 10 5 0

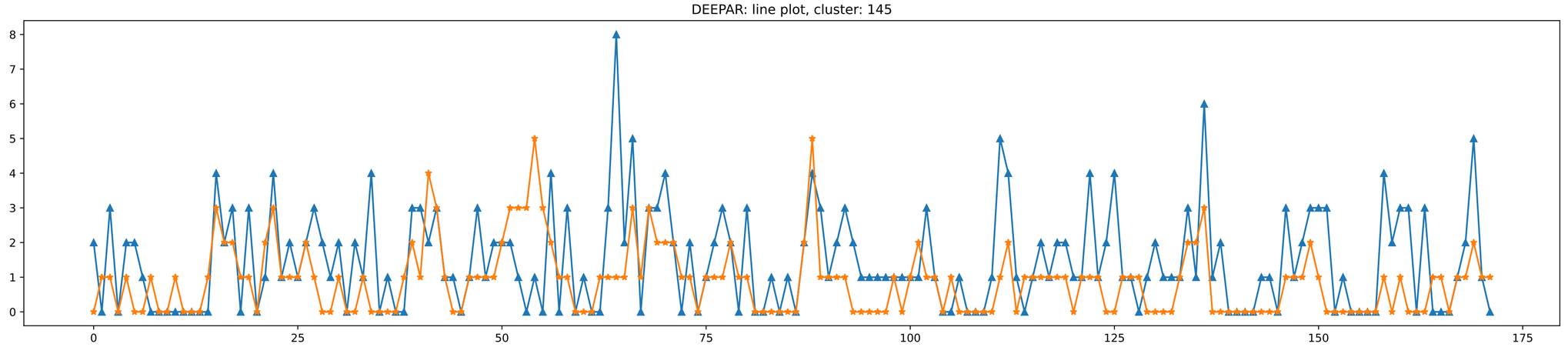

DEEPAR: line plot, cluster: 143
0
1
2
3
4
5
6
0
25
50
75
100
125
150
175

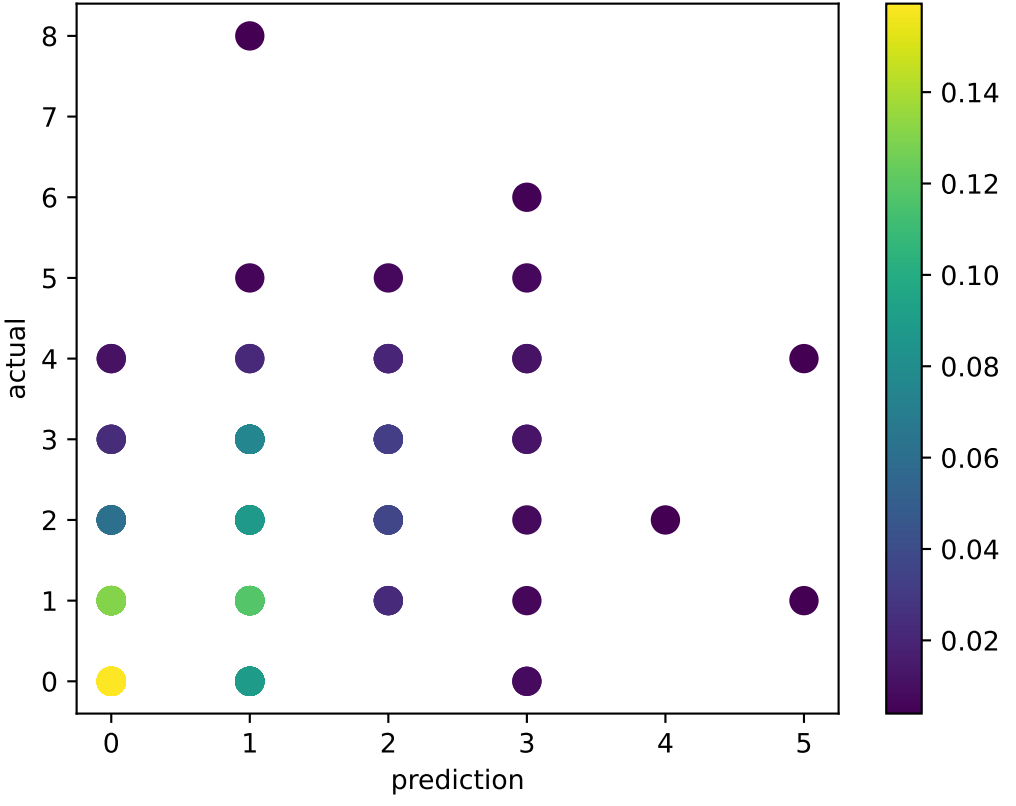

actual
prediction
0
1
2
3
4
5
6
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.200
0.175
0.150
0.125
0.100
0.075
0.050
0.025

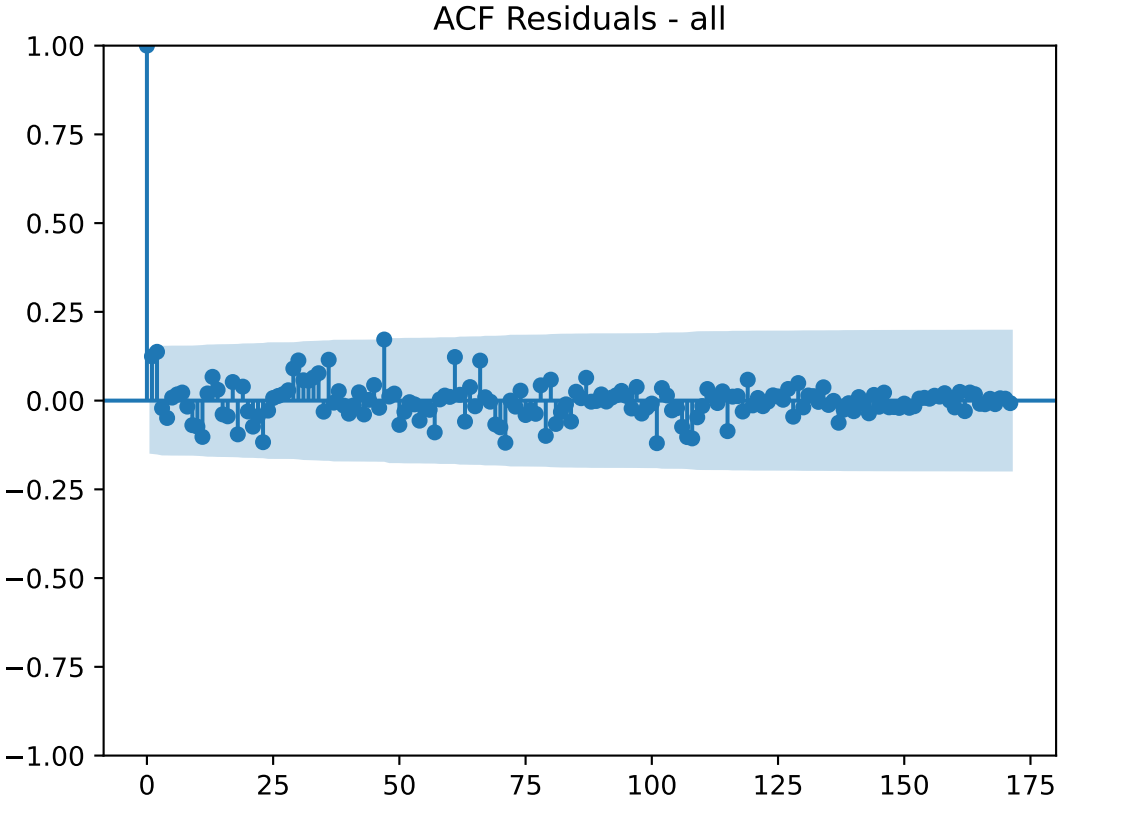

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

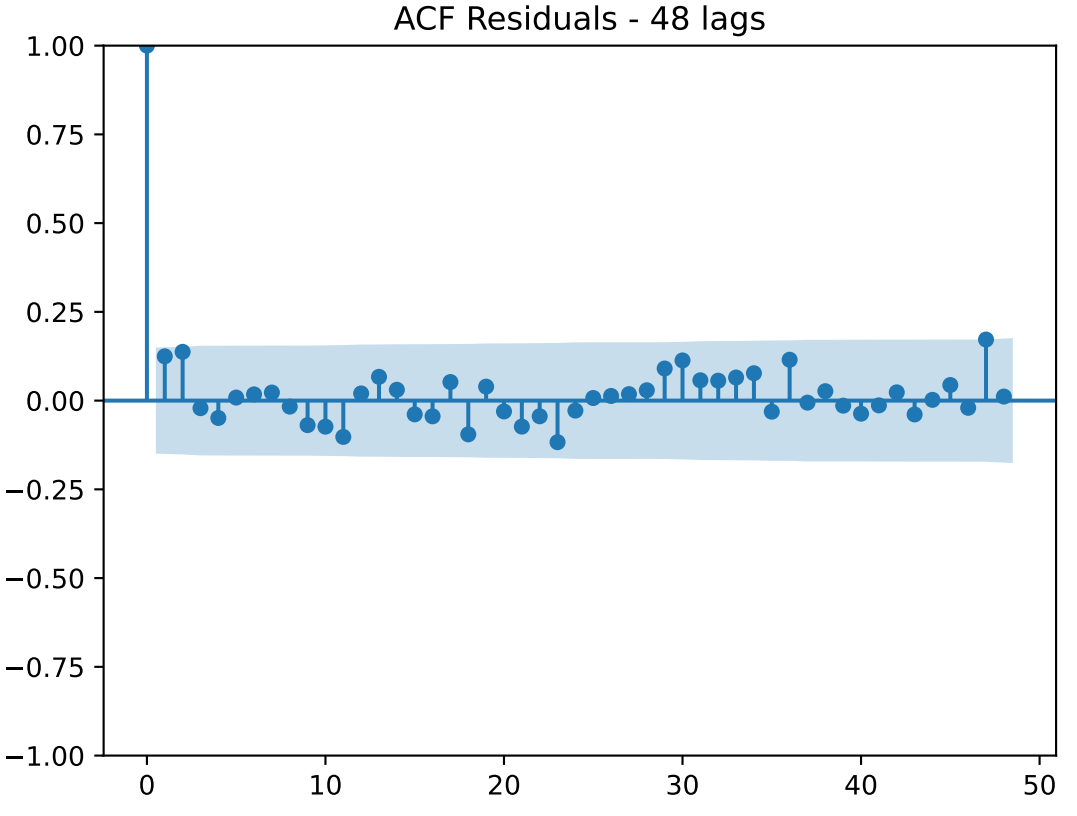

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

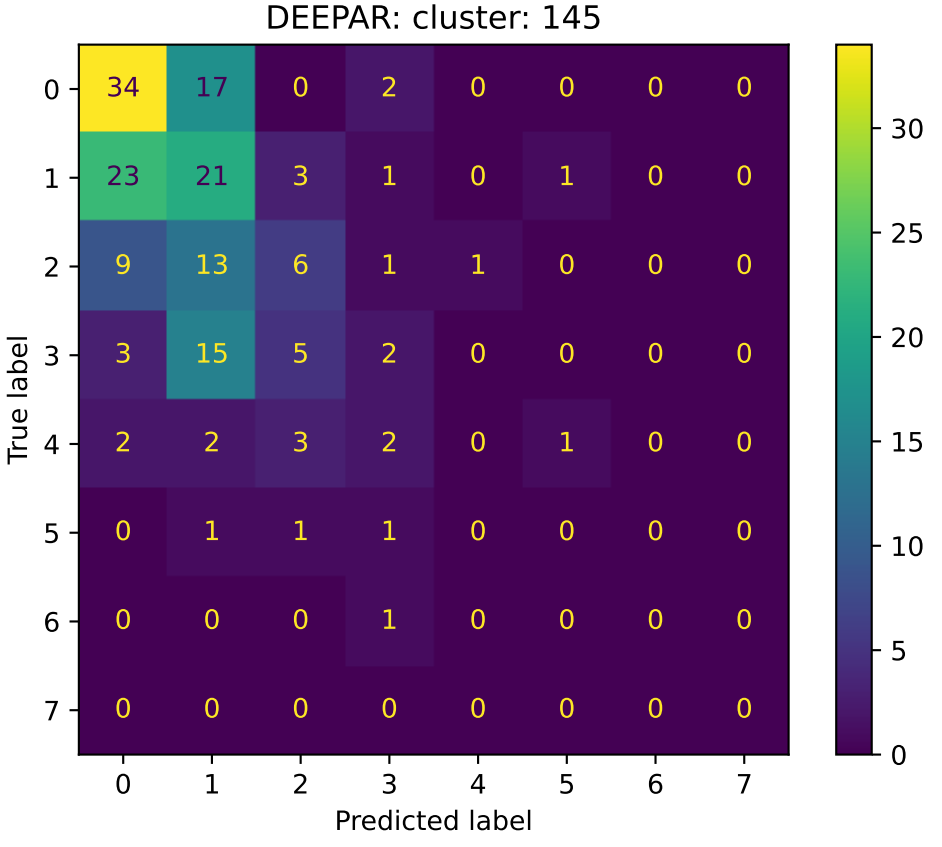

DEEPAR: cluster: 143
True label
Predicted label
0
1
2
3
4
5
40
19
2
1
1
0
30
30
2
0
0
0
8
6
4
4
2
0
3
4
6
2
0
0
0
2
2
1
1
0
0
1
0
0
0
0
40
35
30
25
20
15
10
5
0

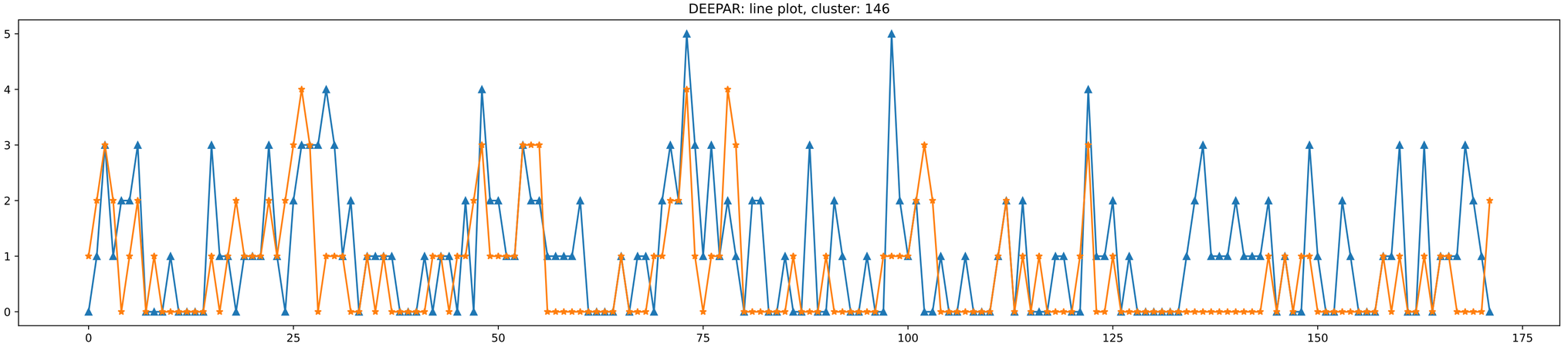

DEEPAR: line plot, cluster: 145
8
7
6
5
4
3
2
1
0
0
25
50
75
100
125
150
175

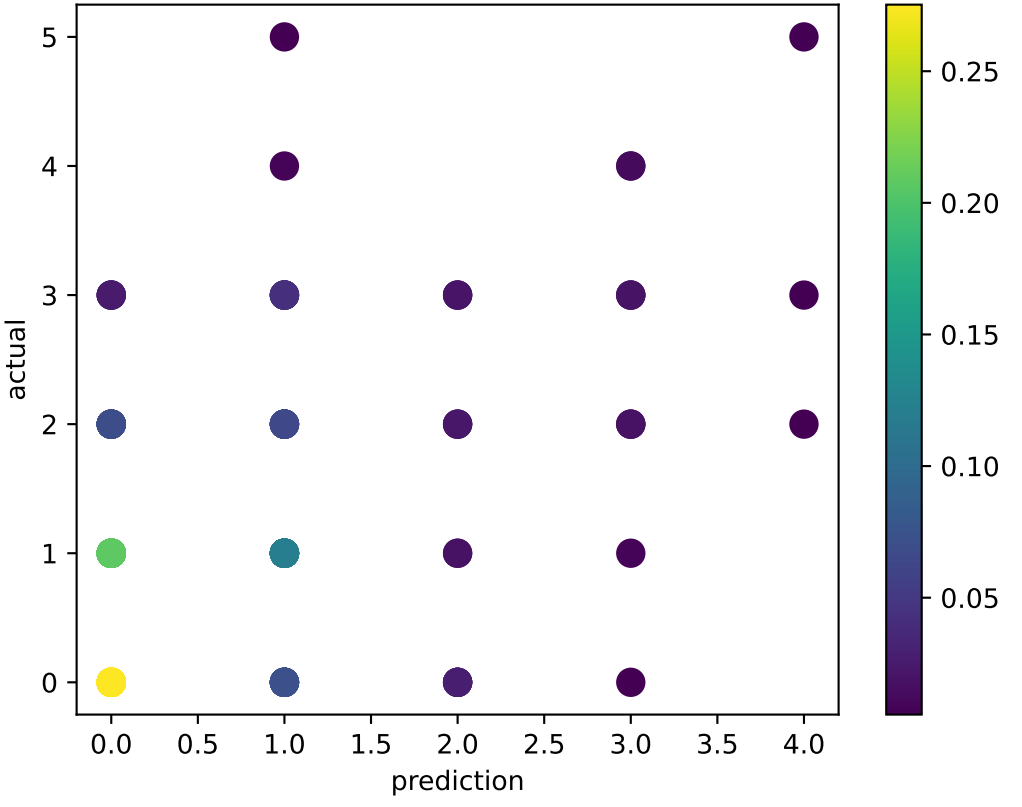

actual
prediction
0
1
2
3
4
5
6
7
8
0.14
0.12
0.10
0.08
0.06
0.04
0.02

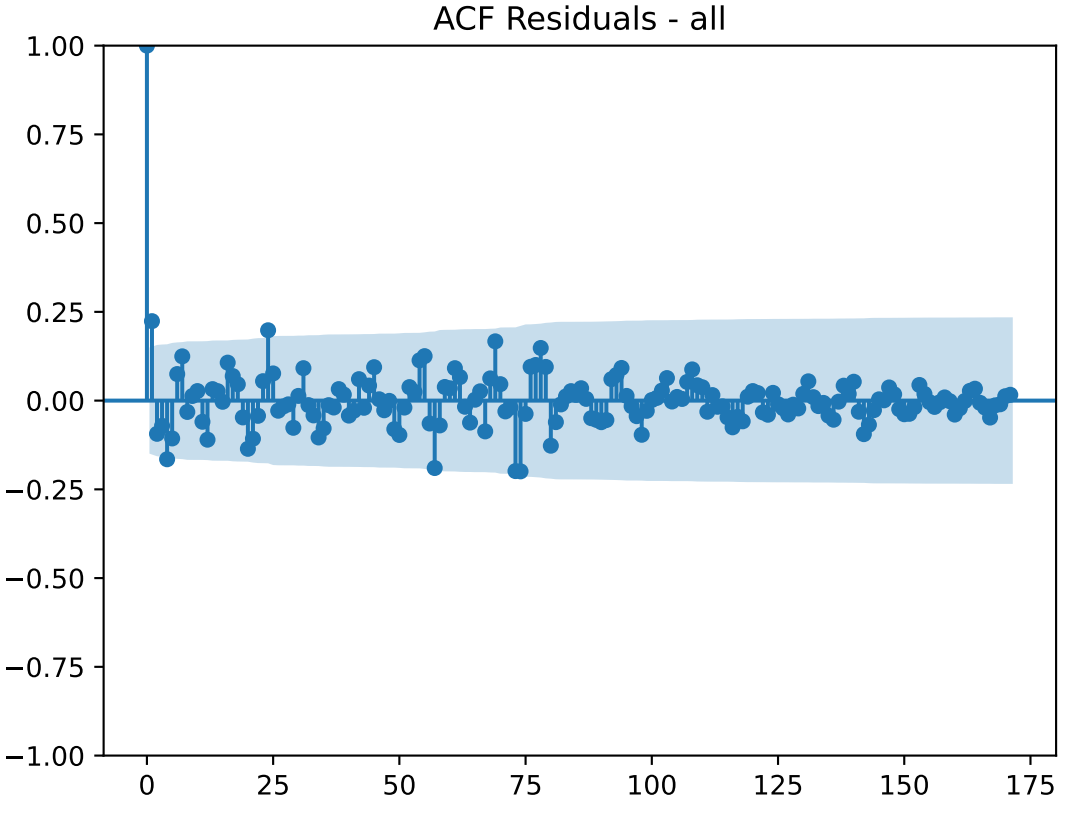

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

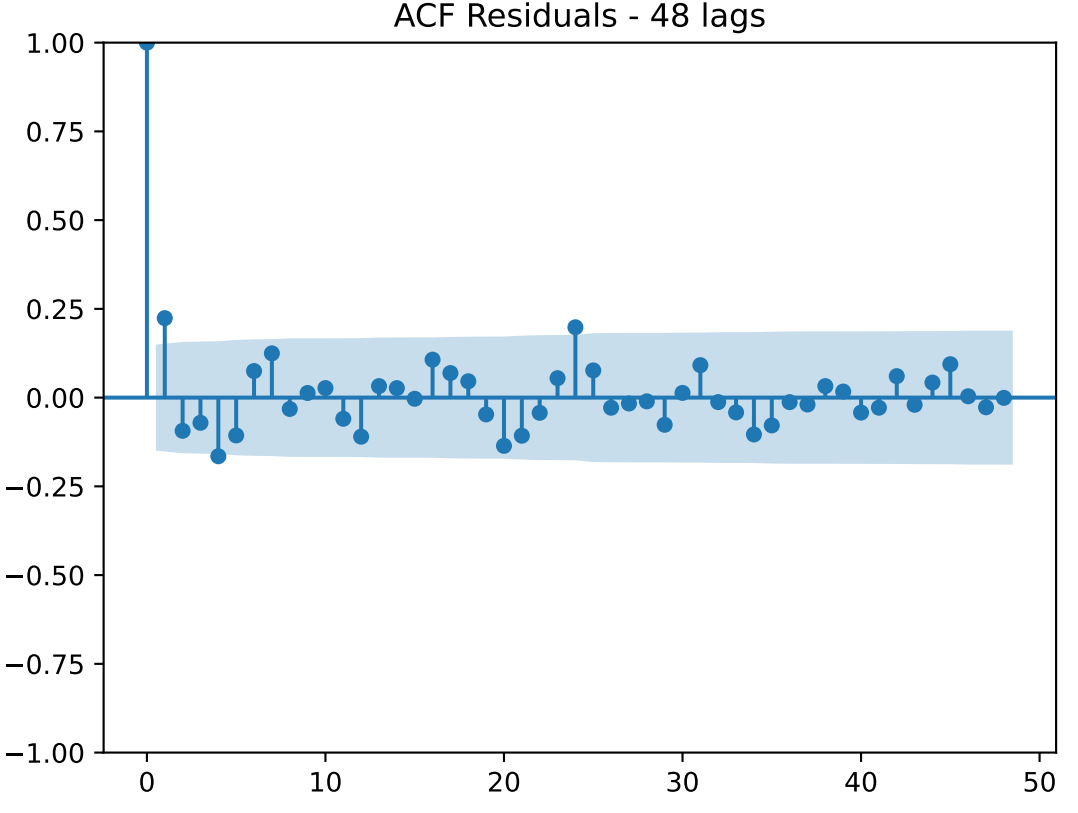

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

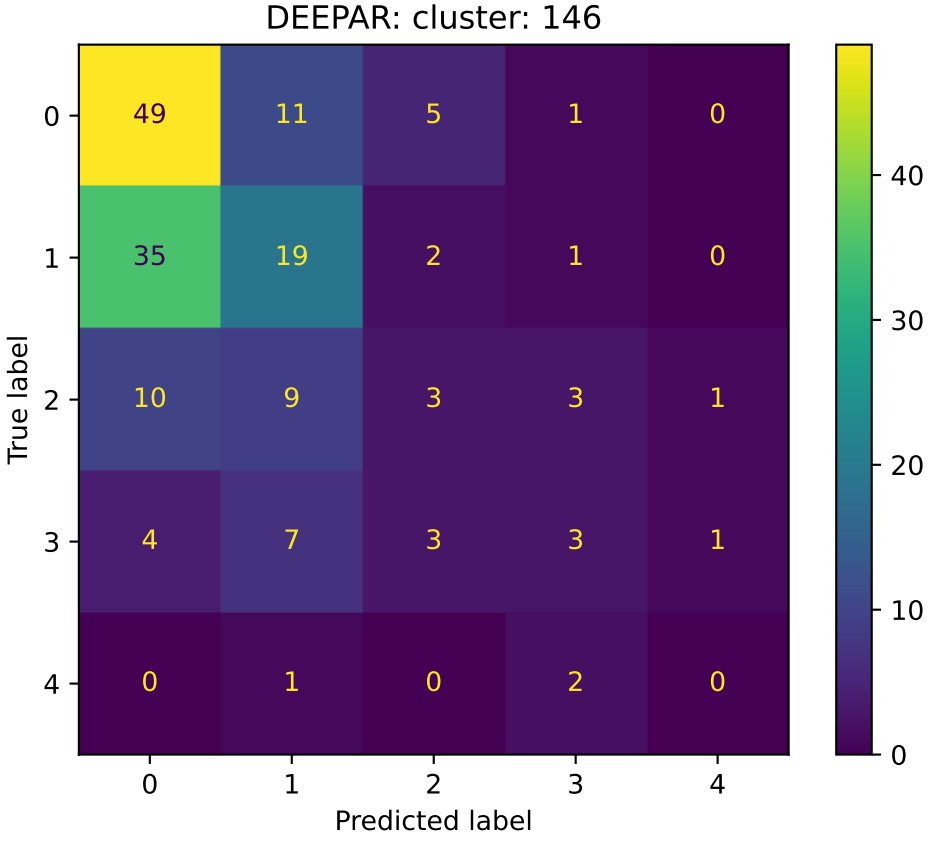

DEEPAR: cluster: 145
True label
Predicted label
0 1 2 3 4 5 6 7
34 17 0 2 0 0 0 0
23 21 3 1 0 1 0 0
9 13 6 1 1 0 0 0
3 15 5 2 0 0 0 0
2 2 3 2 0 1 0 0
0 1 1 1 0 0 0 0
0 0 0 1 0 0 0 0
0 0 0 0 0 0 0 0
30
25
20
15
10
5
0

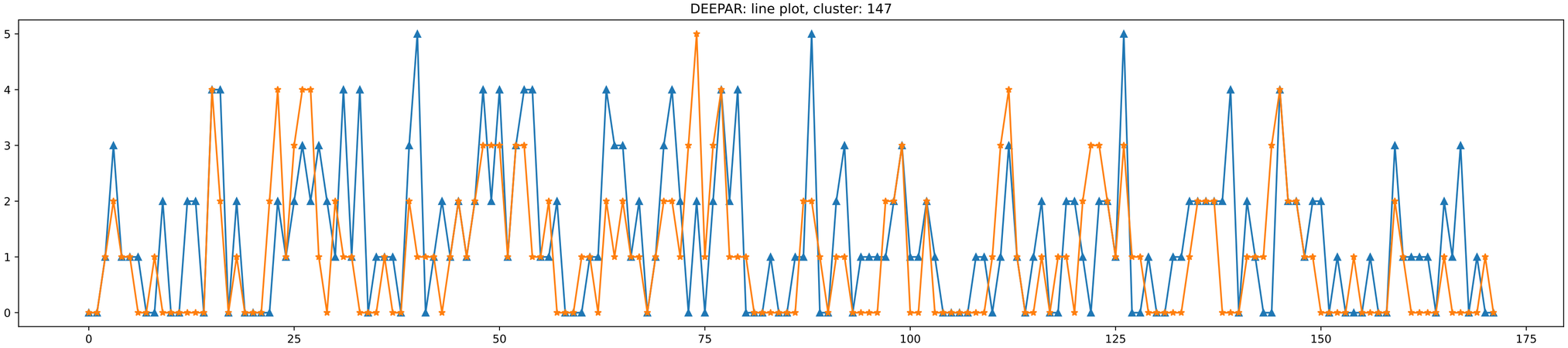

DEEPAR: line plot, cluster: 146
0
1
2
3
4
5
0
25
50
75
100
125
150
175

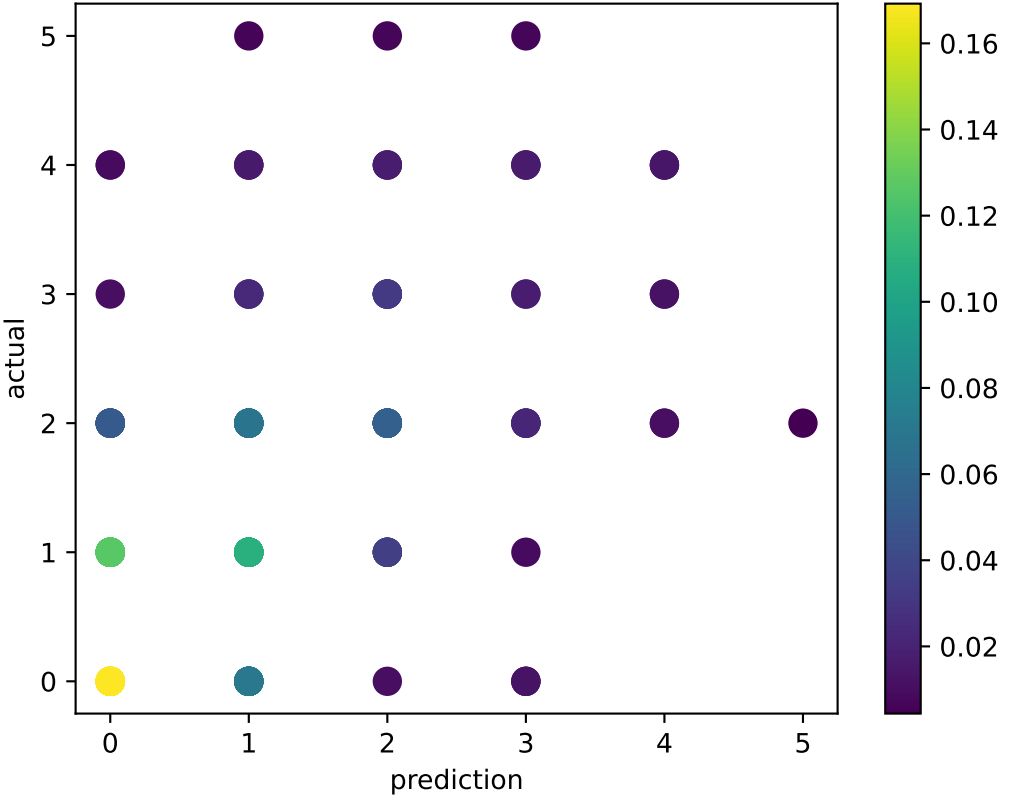

actual
prediction
0
1
2
3
4
5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.25
0.20
0.15
0.10
0.05

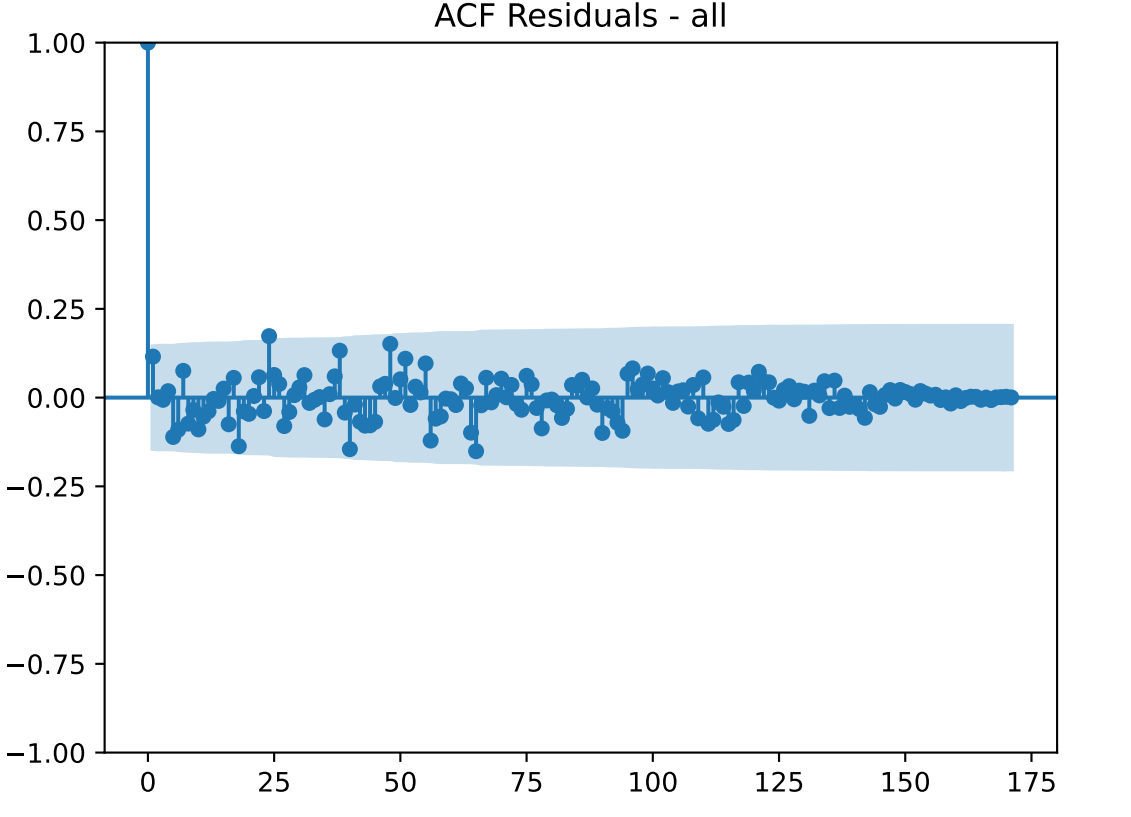

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

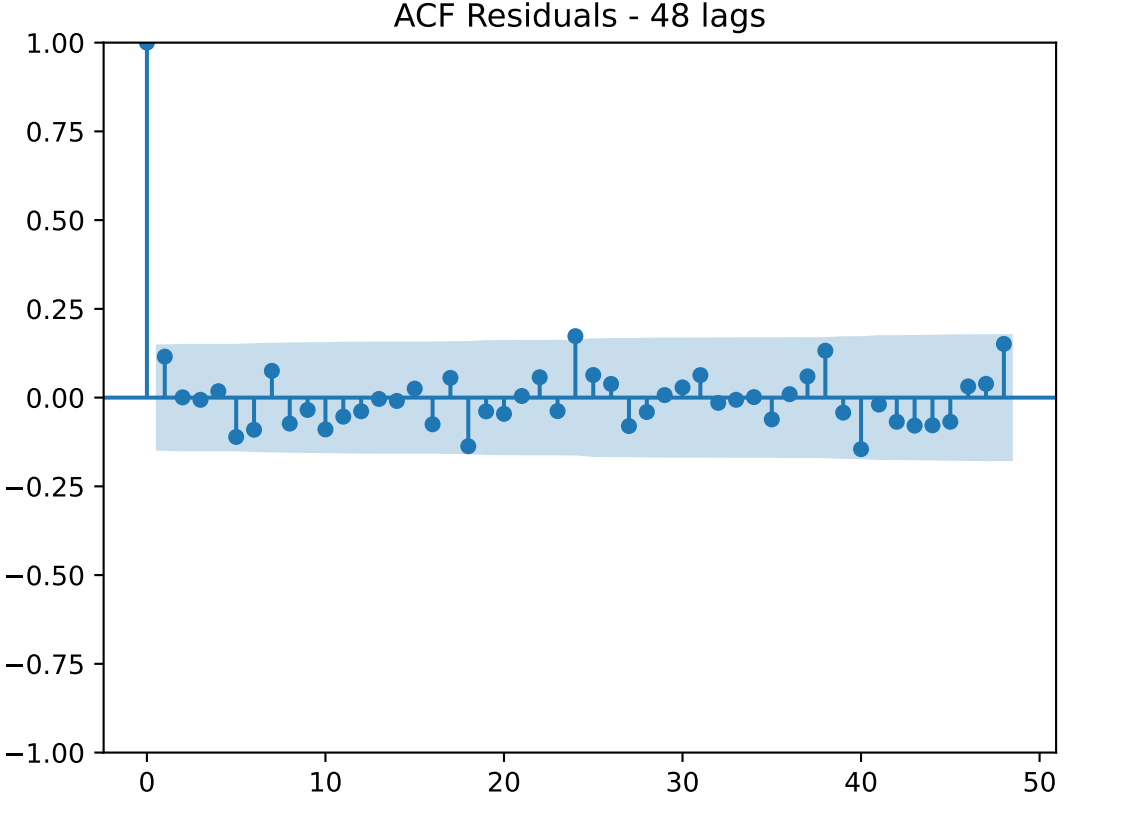

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

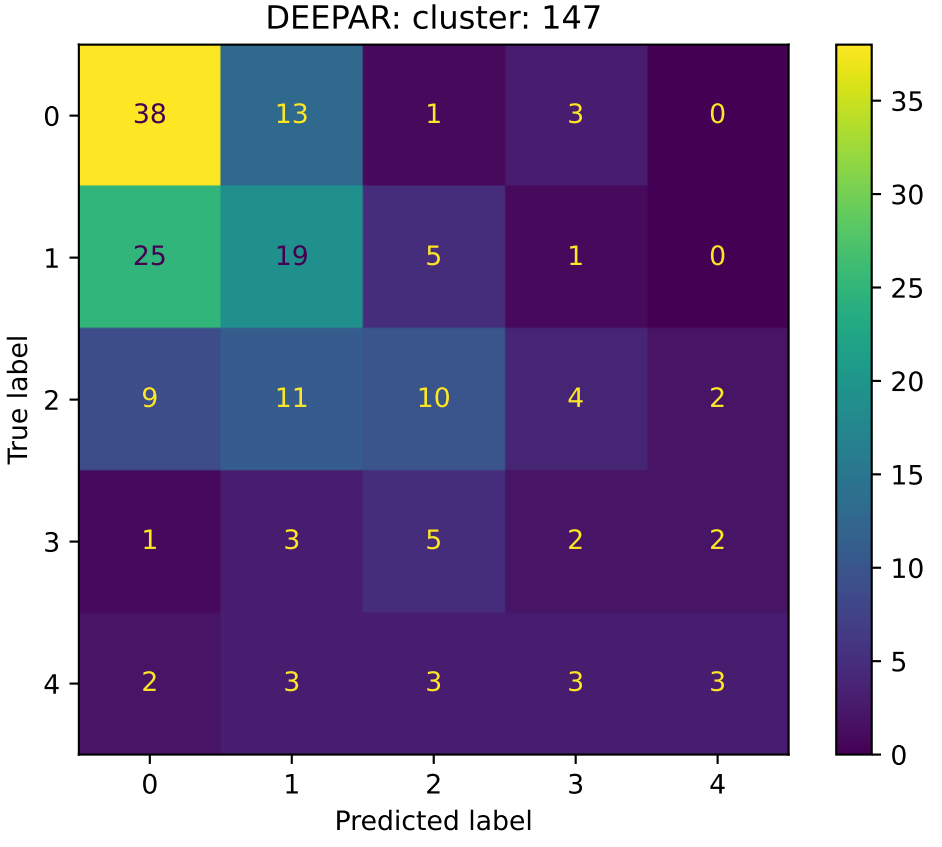

DEEPAR: cluster: 146
True label
Predicted label
0
1
2
3
4
49
11
5
1
0
35
19
2
1
0
10
9
3
3
1
4
7
3
3
1
0
1
0
2
0
40
30
20
10
0

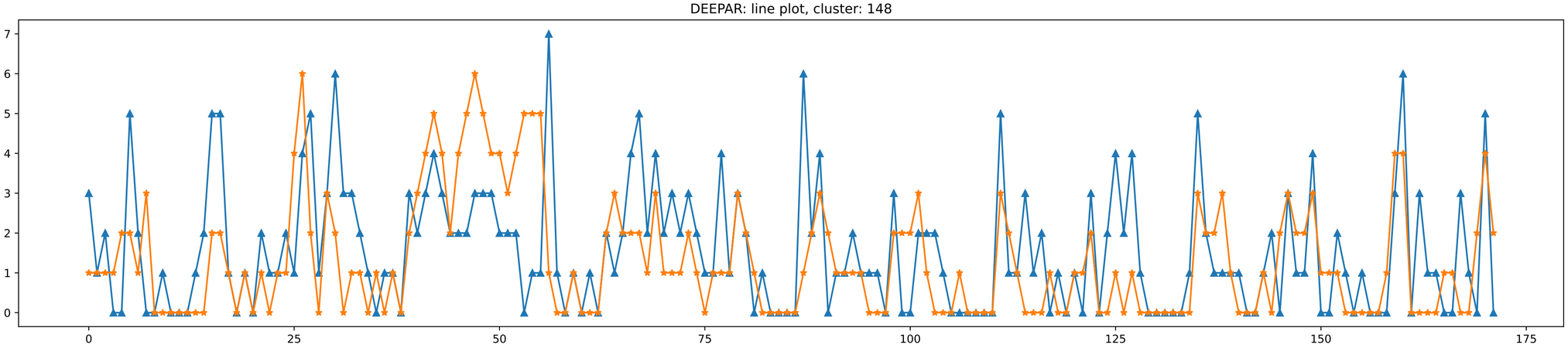

DEEPAR: line plot, cluster: 147
0
1
2
3
4
5
0
25
50
75
100
125
150
175

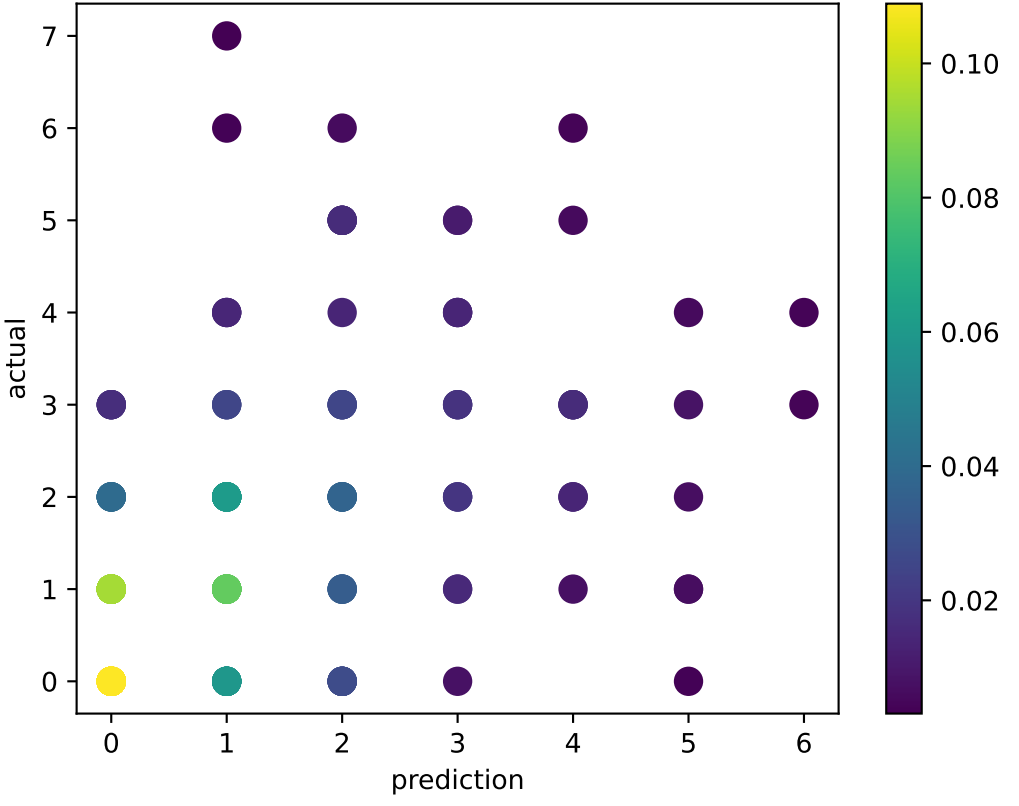

actual
prediction
0
1
2
3
4
5
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02

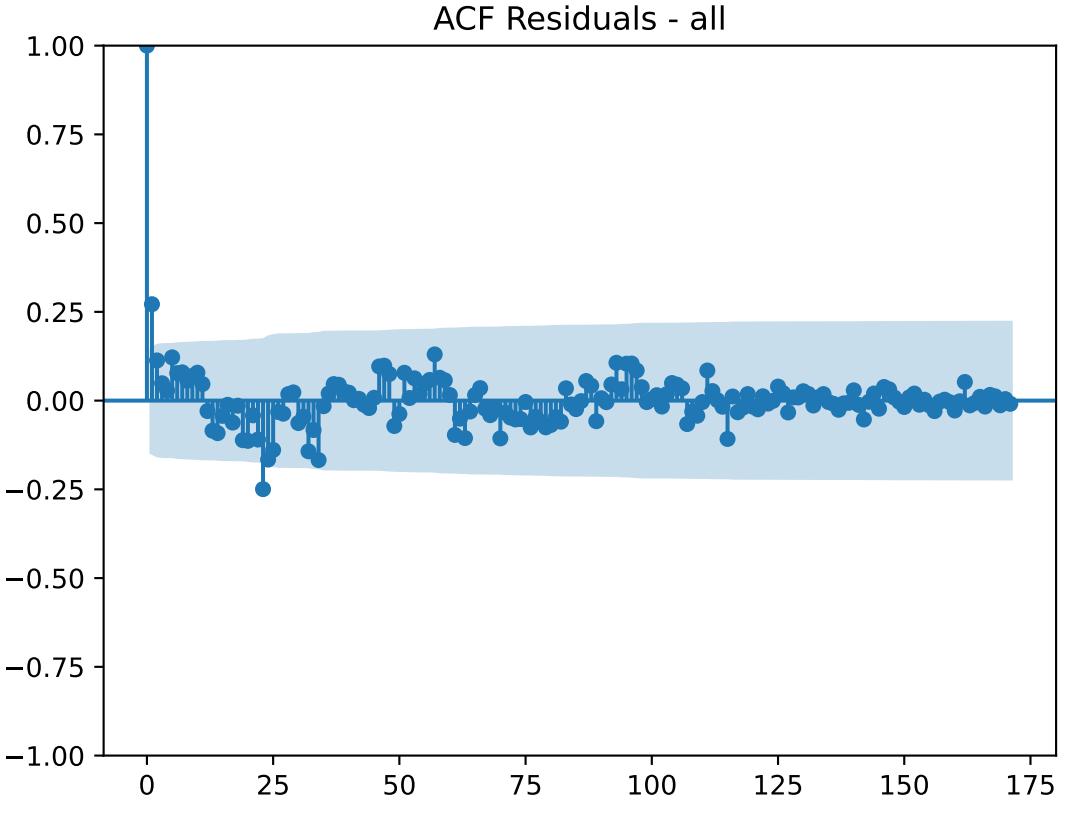

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

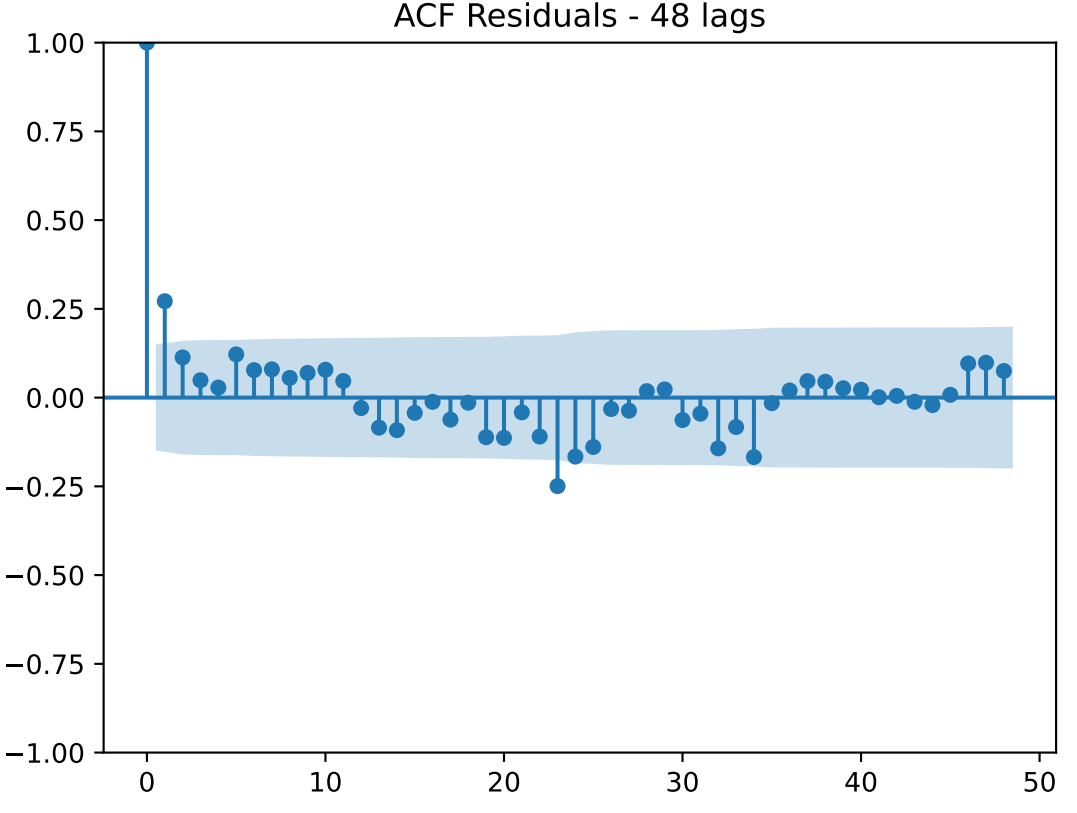

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

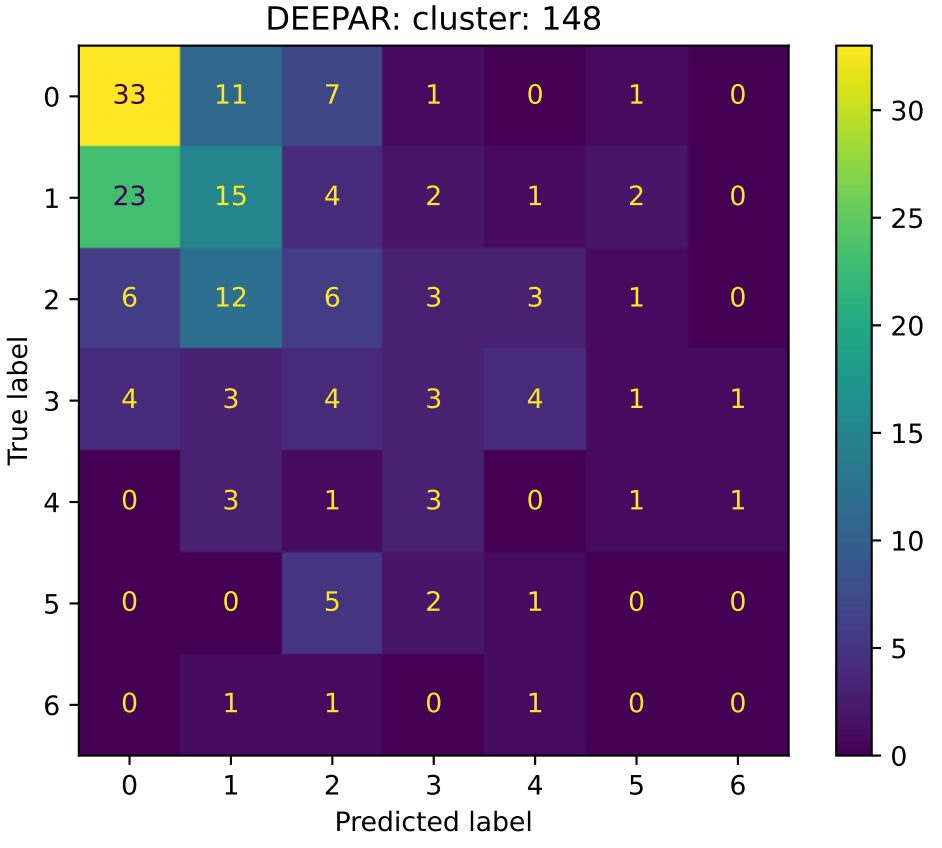

DEEPAR: cluster: 147
True label
Predicted label
0
1
2
3
4
38
13
1
3
0
25
19
5
1
0
9
11
10
4
2
1
3
5
2
2
2
3
3
3
3
35
30
25
20
15
10
5
0

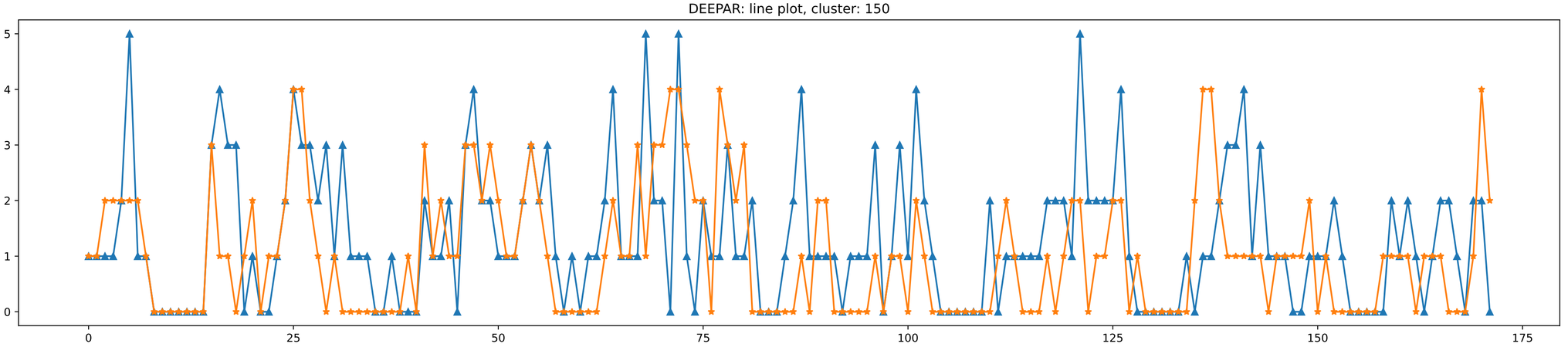

DEEPAR: line plot, cluster: 148
0
1
2
3
4
5
6
7
0
25
50
75
100
125
150
175

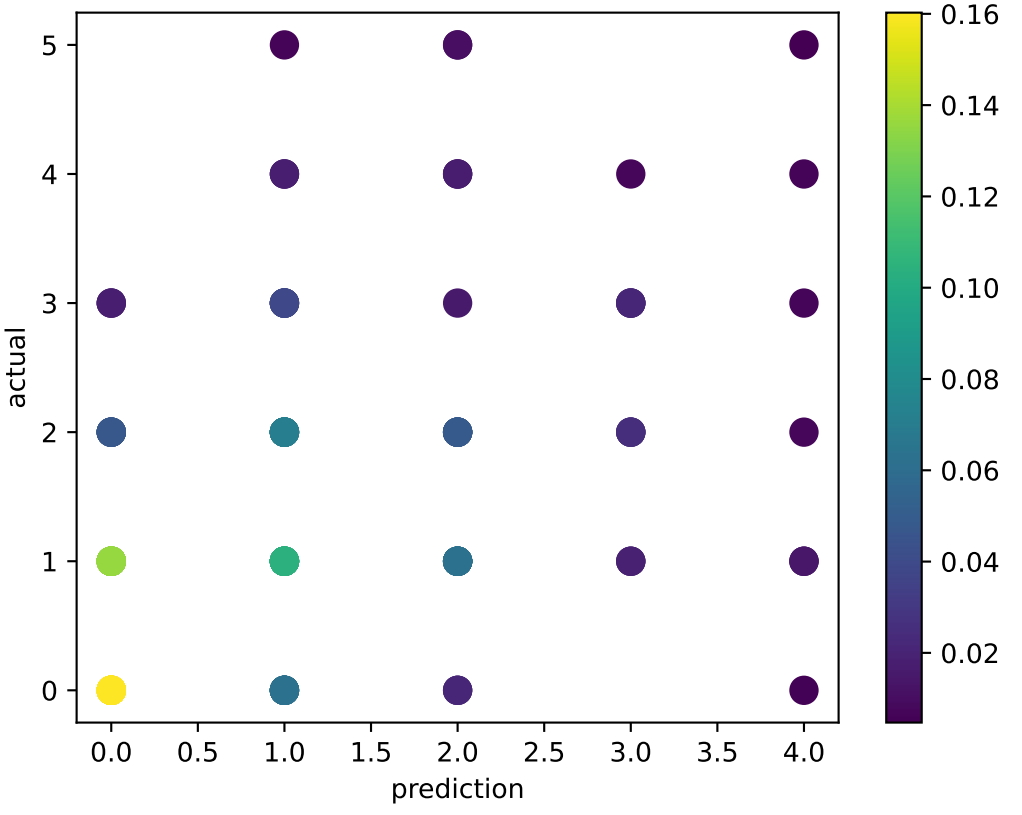

actual
prediction
0
1
2
3
4
5
6
7
0.10
0.08
0.06
0.04
0.02

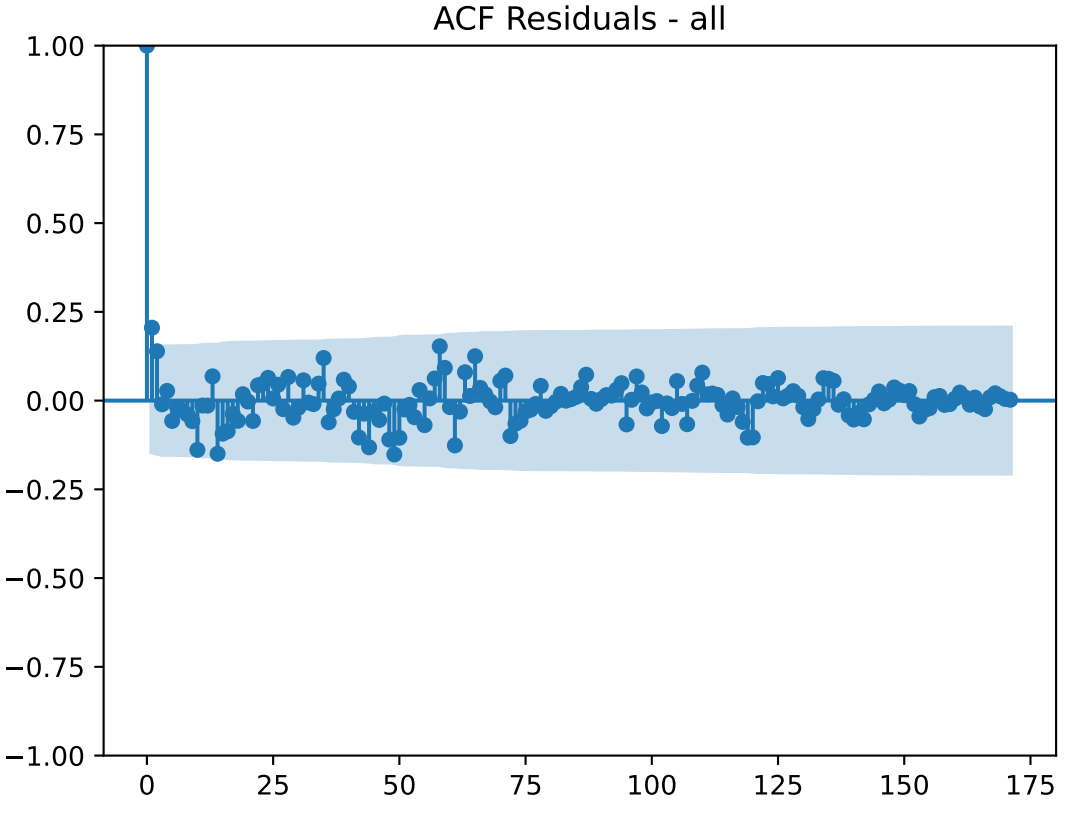

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

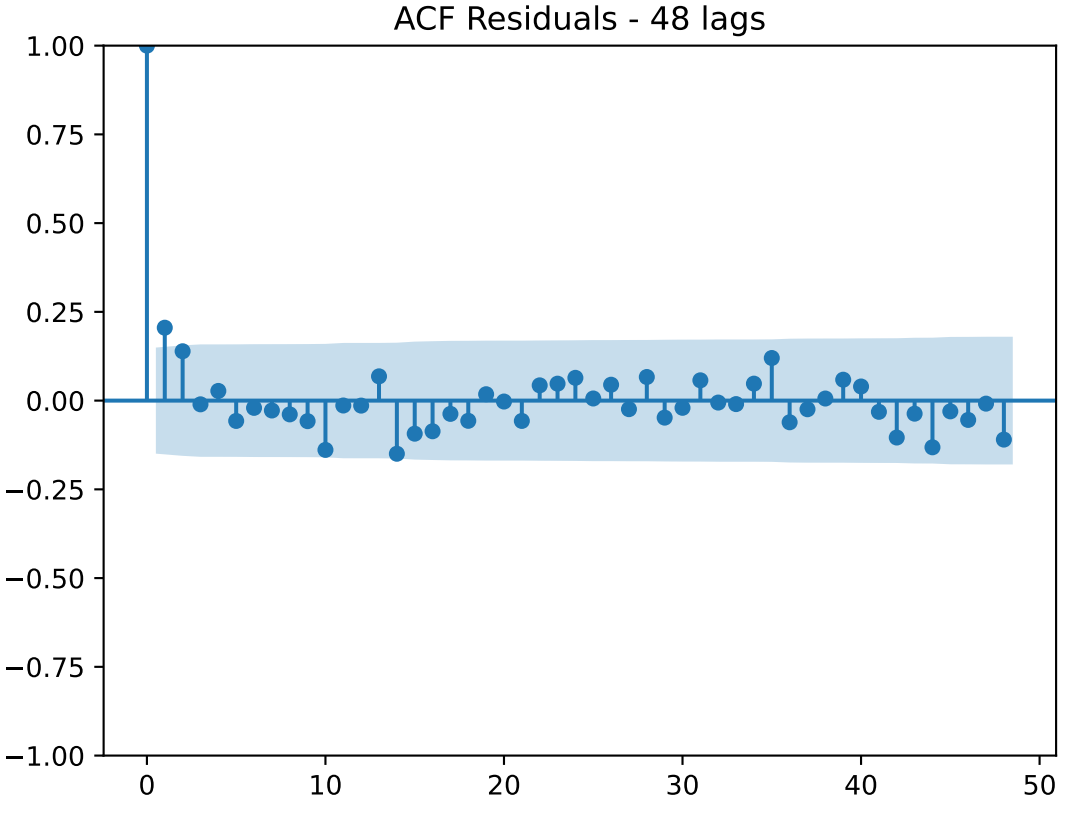

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

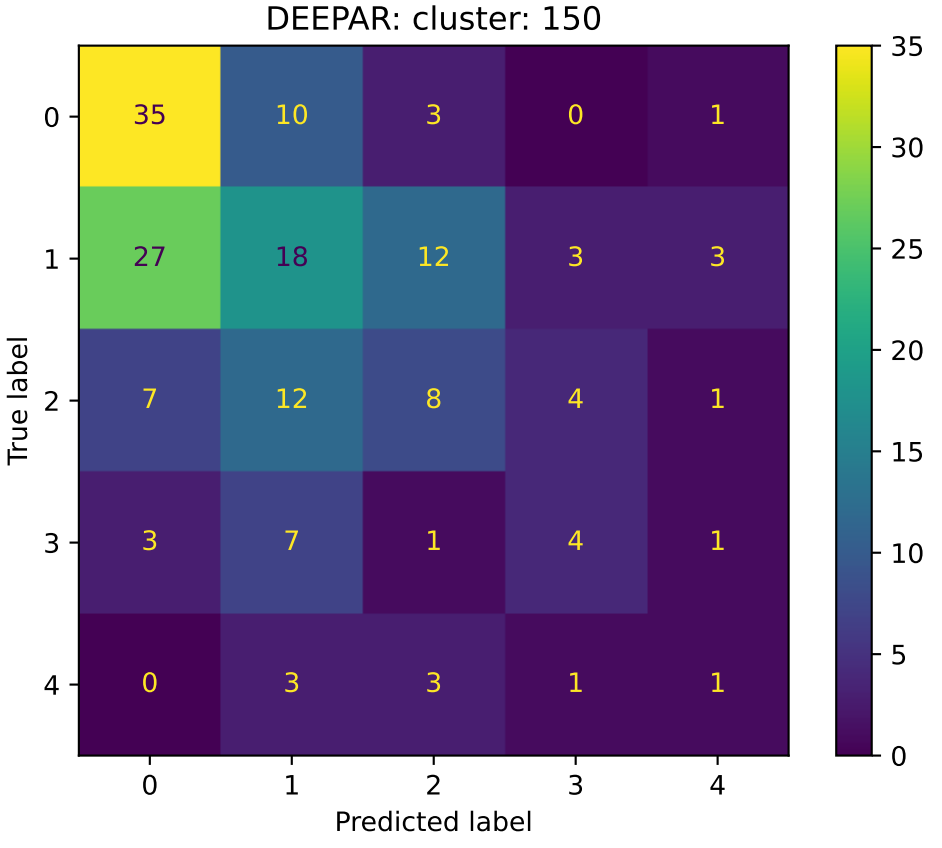

DEEPAR: cluster: 148
True label
Predicted label
0 1 2 3 4 5 6
33 11 7 1 0 1 0
23 15 4 2 1 2 0
6 12 6 3 3 1 0
4 3 4 3 4 1 1
0 3 1 3 0 1 1
0 0 5 2 1 0 0
0 1 1 0 1 0 0
30 25 20 15 10 5 0

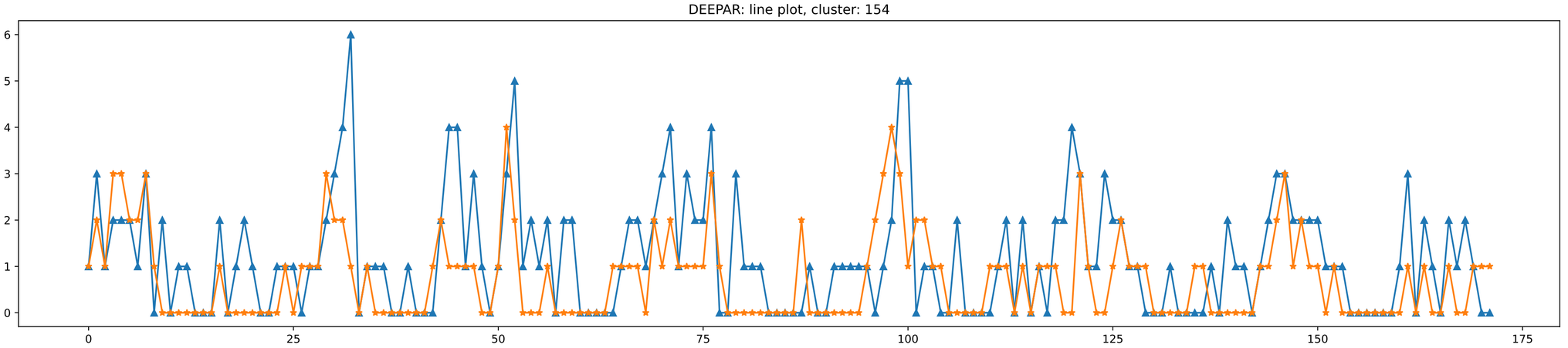

DEEPAR: line plot, cluster: 150
0
1
2
3
4
5
0
25
50
75
100
125
150
175

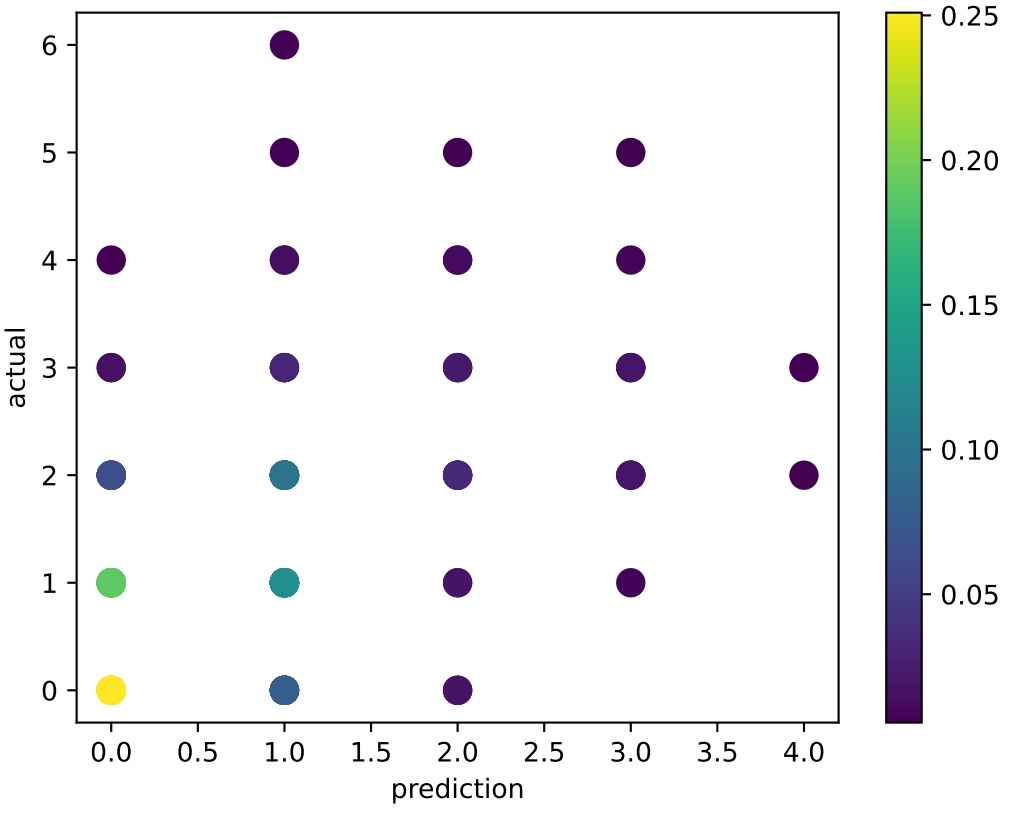

actual
prediction
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0
1
2
3
4
5
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02

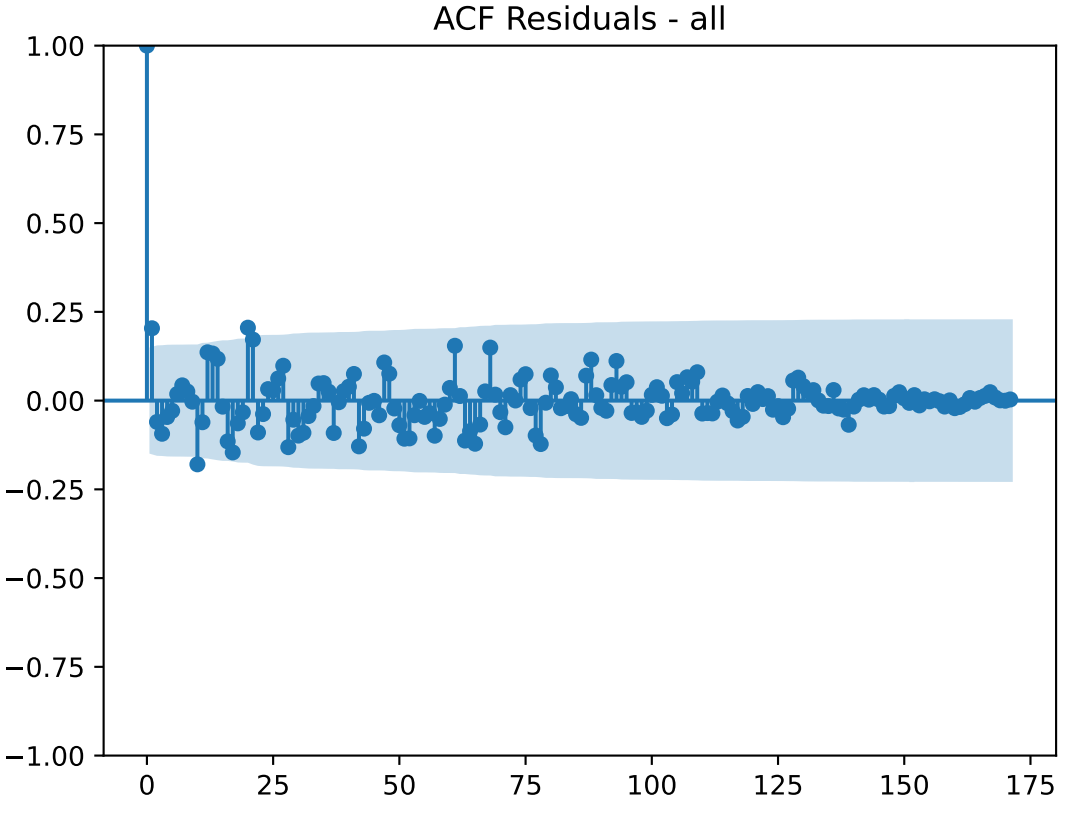

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

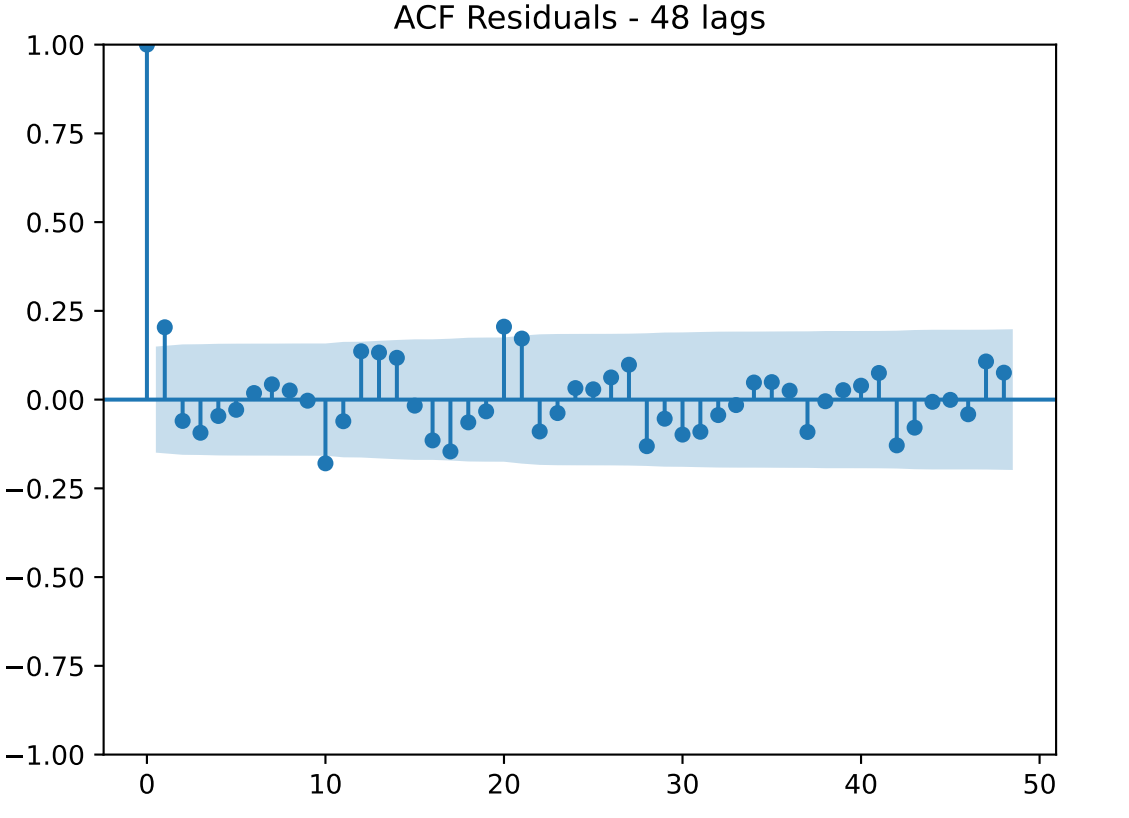

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

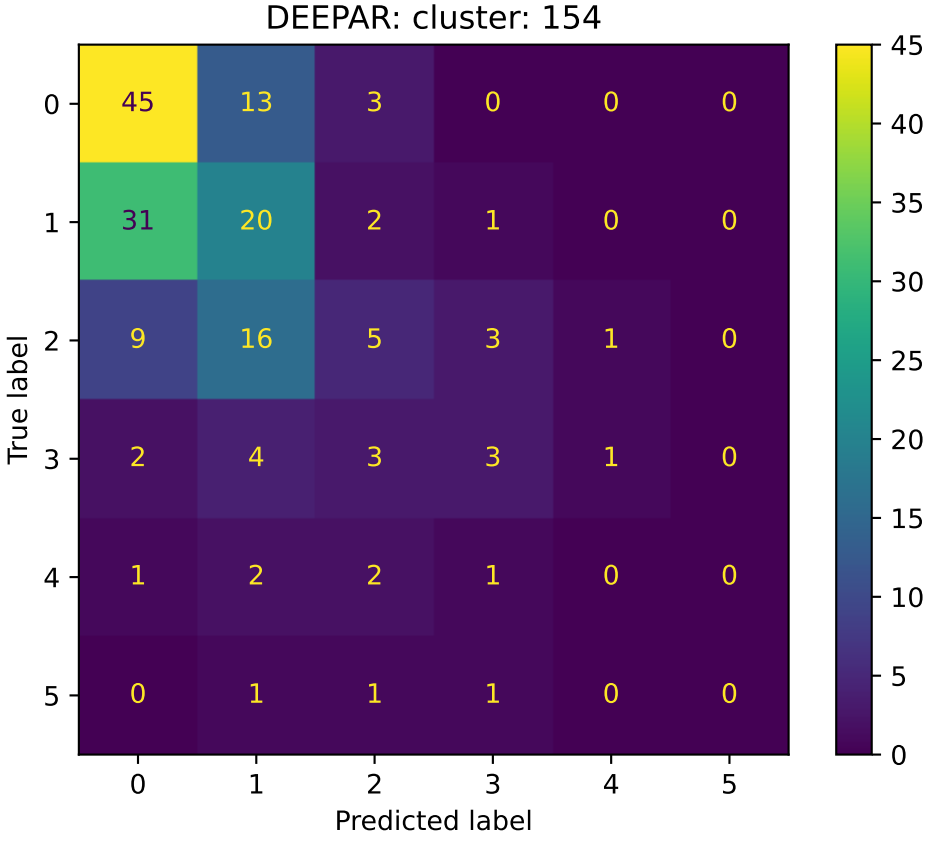

DEEPAR: cluster: 150
True label
Predicted label
0
1
2
3
4
35
10
3
0
1
27
18
12
3
3
7
12
8
4
1
3
7
1
4
1
0
3
3
1
1
35
30
25
20
15
10
5
0

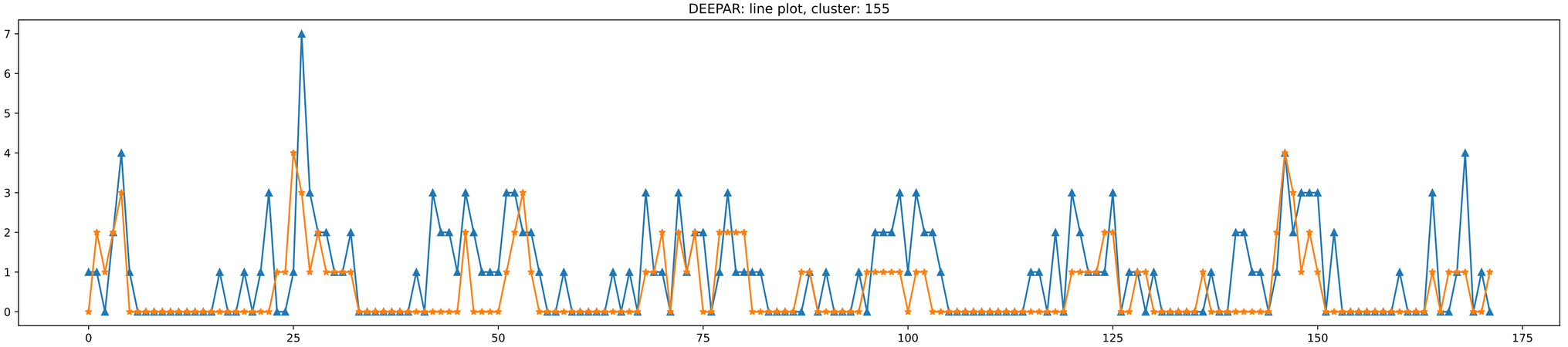

DEEPAR: line plot, cluster: 154
0
1
2
3
4
5
6
0
25
50
75
100
125
150
175

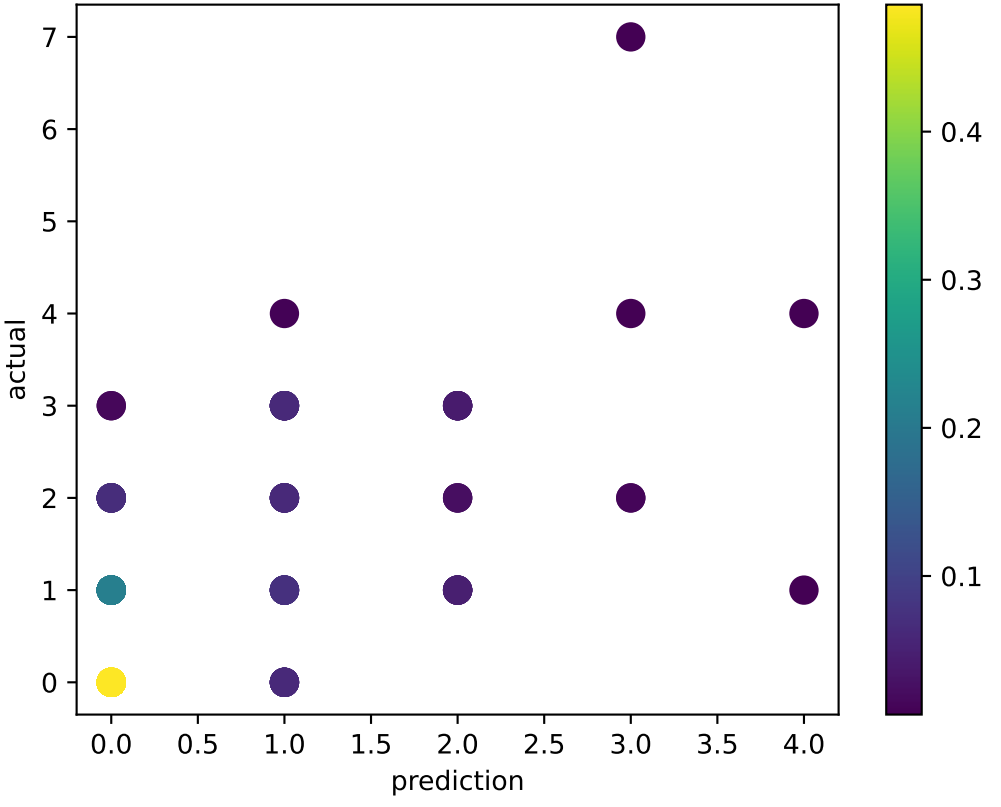

actual
prediction
0
1
2
3
4
5
6
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.25
0.20
0.15
0.10
0.05

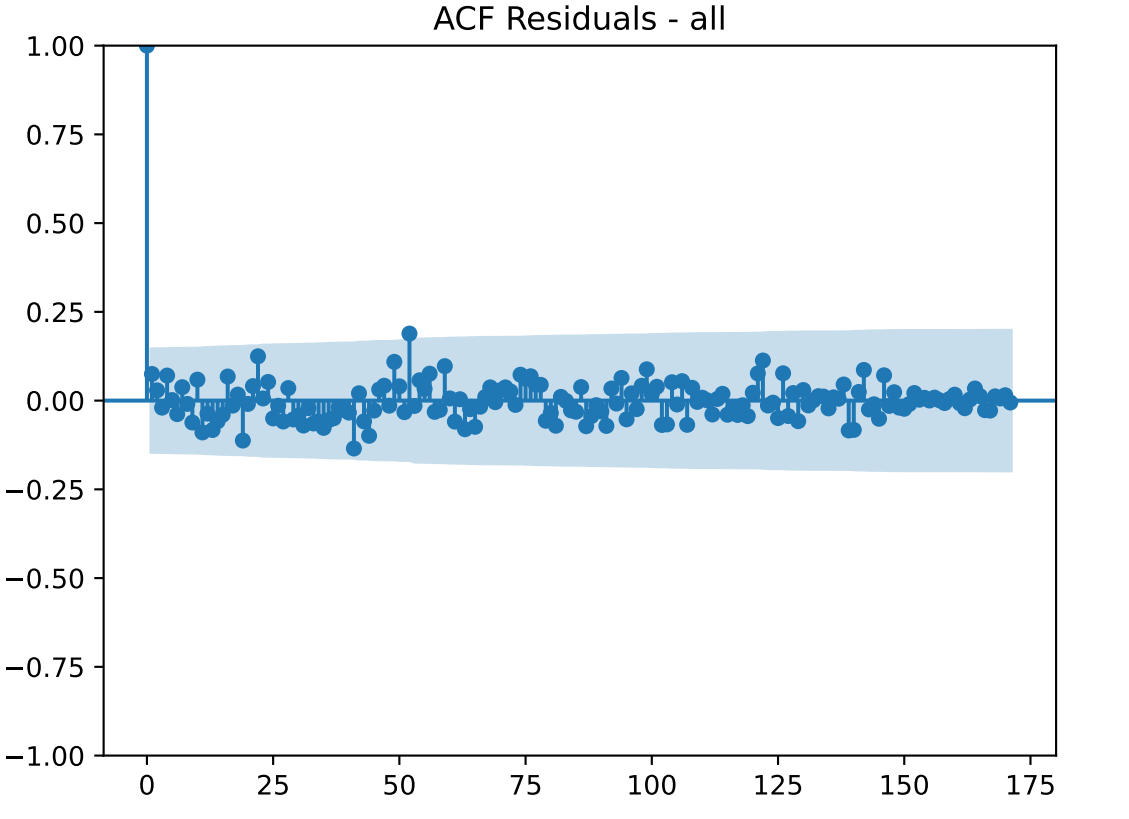

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

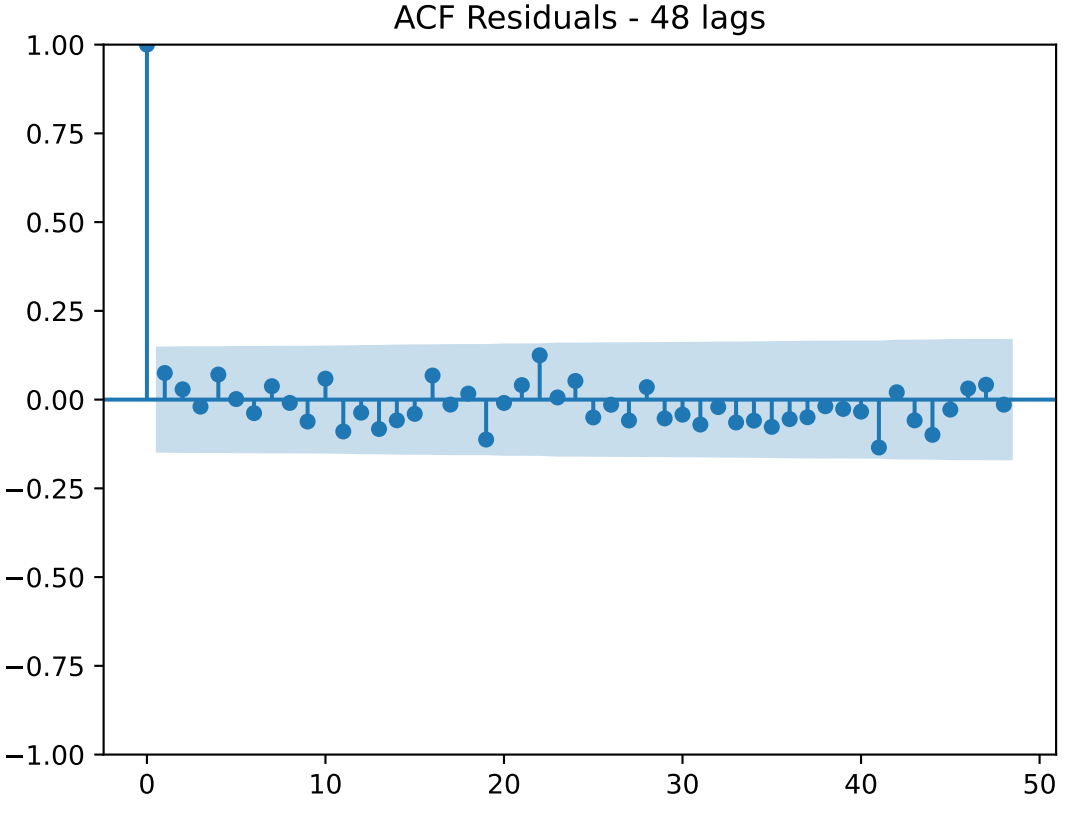

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

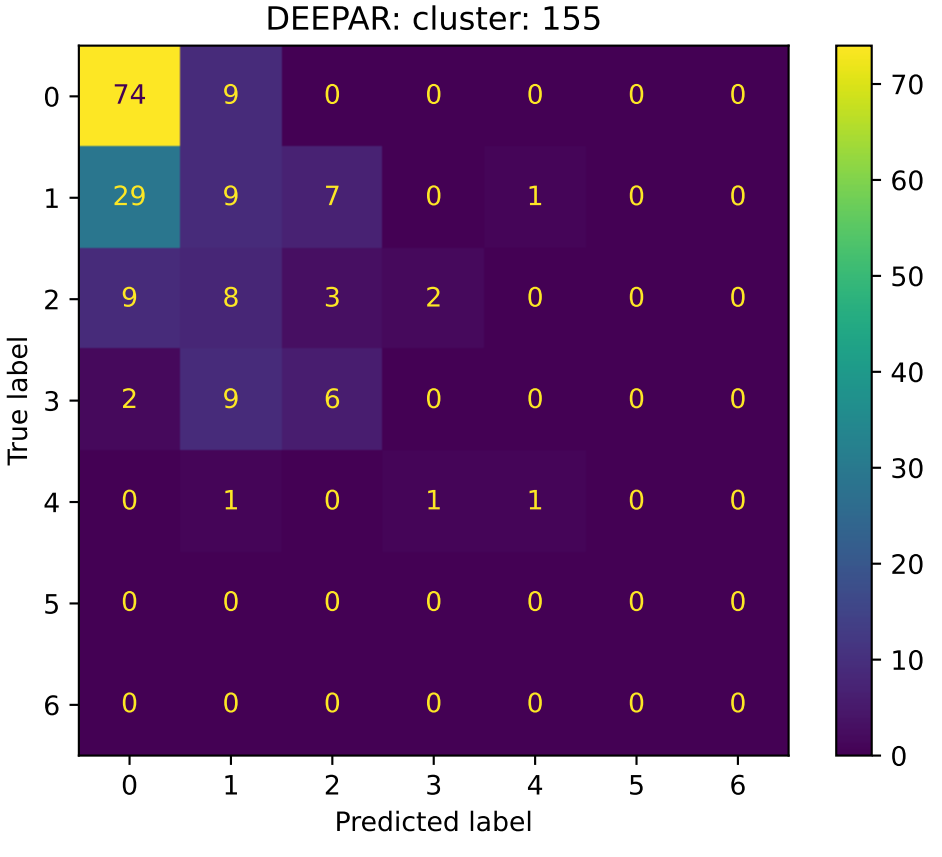

DEEPAR: cluster: 154
True label
Predicted label
0
1
2
3
4
5
45 13 3 0 0 0
31 20 2 1 0 0
9 16 5 3 1 0
2 4 3 3 1 0
1 2 2 1 0 0
0 1 1 1 0 0
45
40
35
30
25
20
15
10
5
0

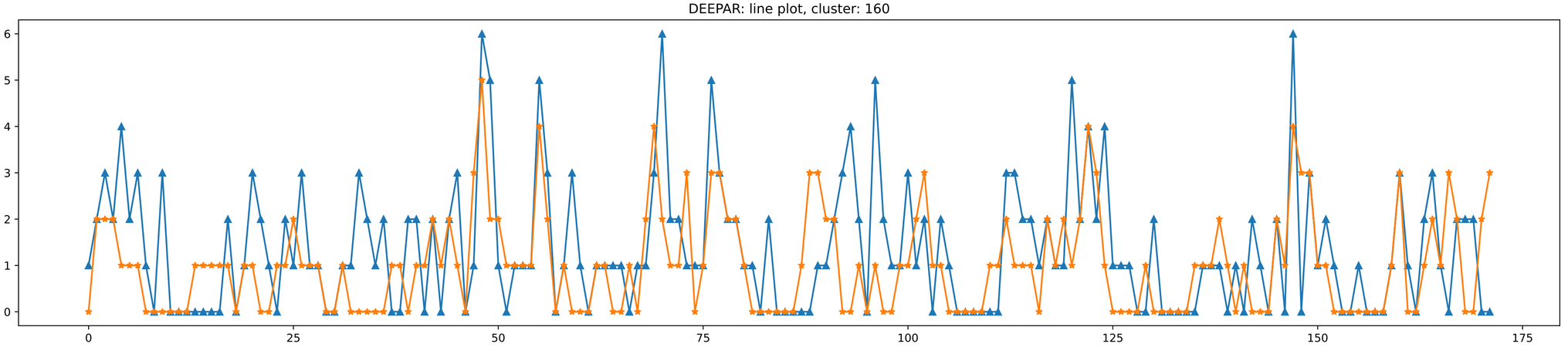

DEEPAR: line plot, cluster: 155
0
1
2
3
4
5
6
7
0
25
50
75
100
125
150
175

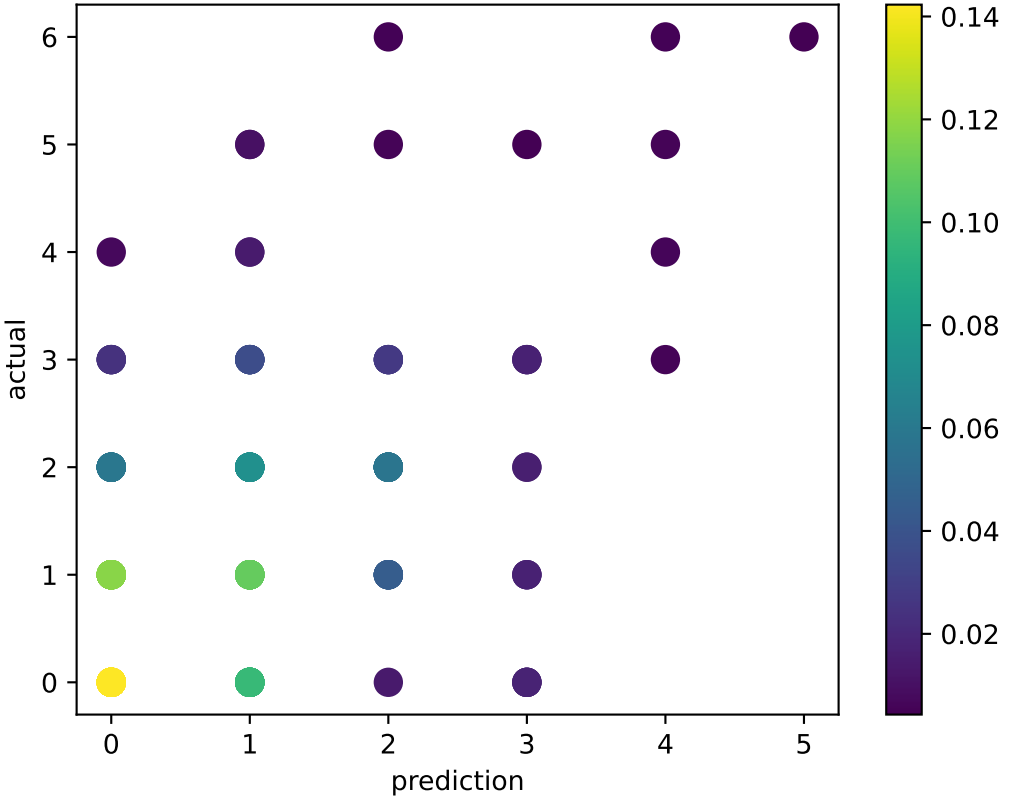

actual
prediction
0
1
2
3
4
5
6
7
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.1
0.2
0.3
0.4

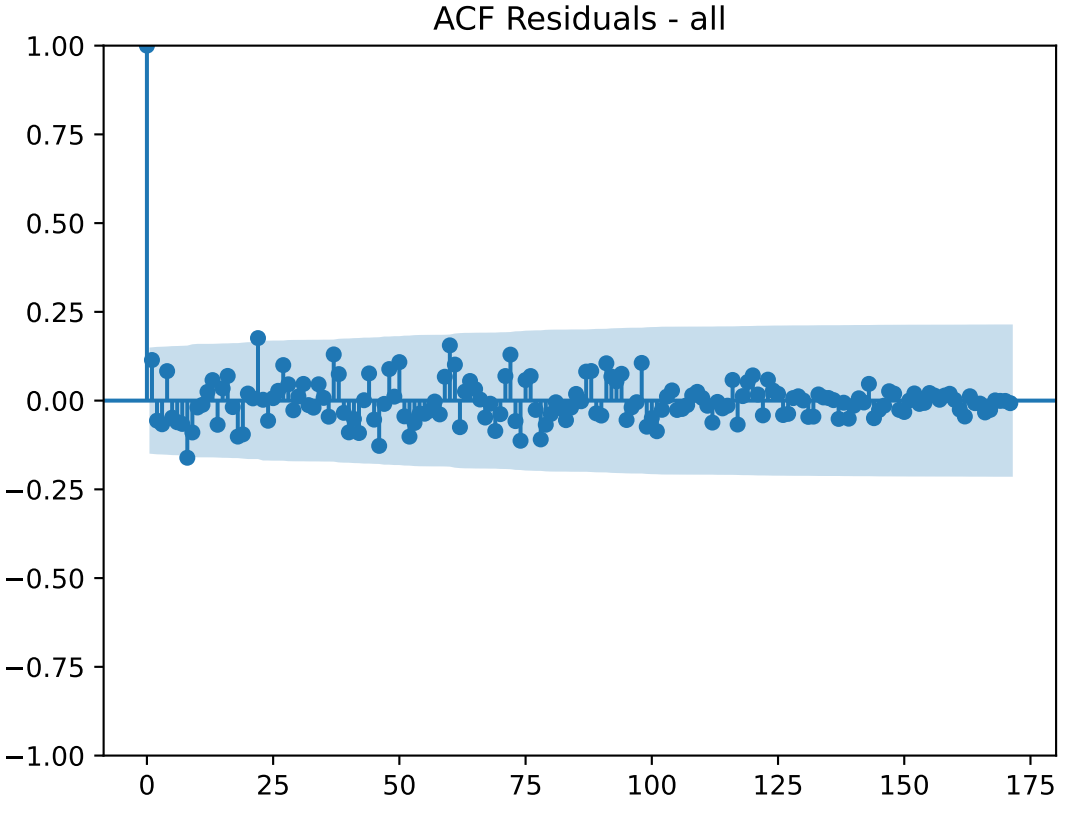

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

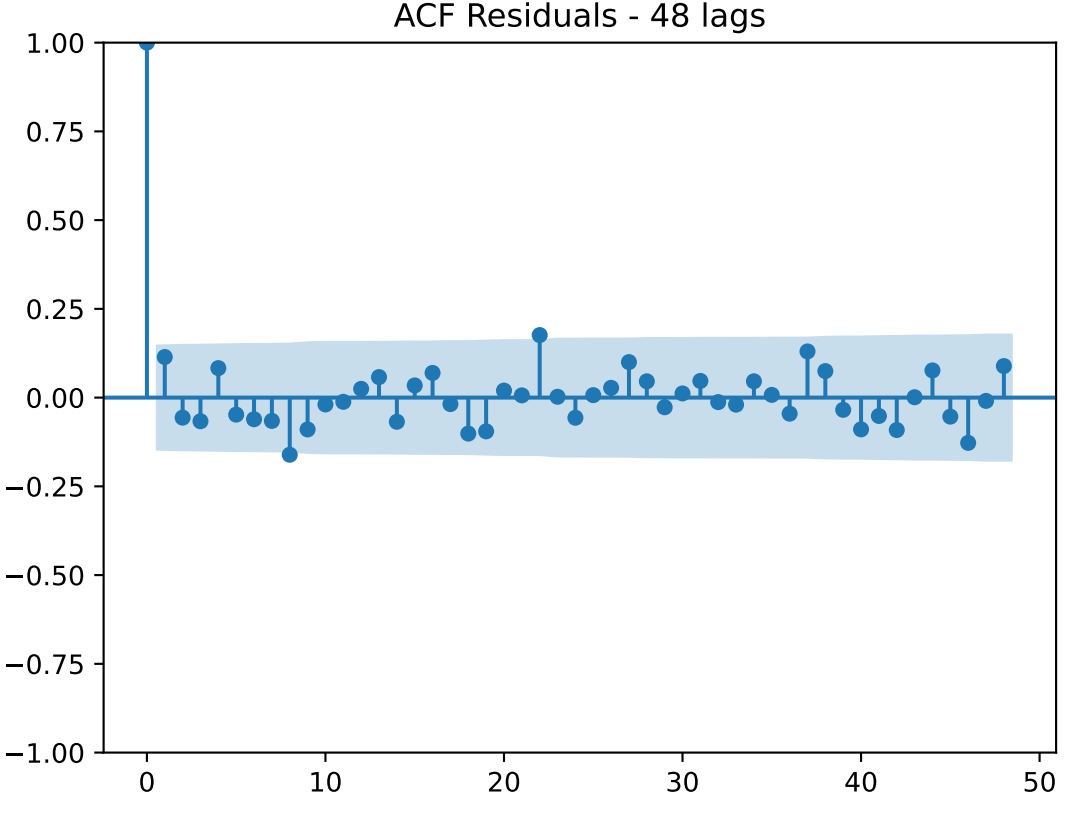

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

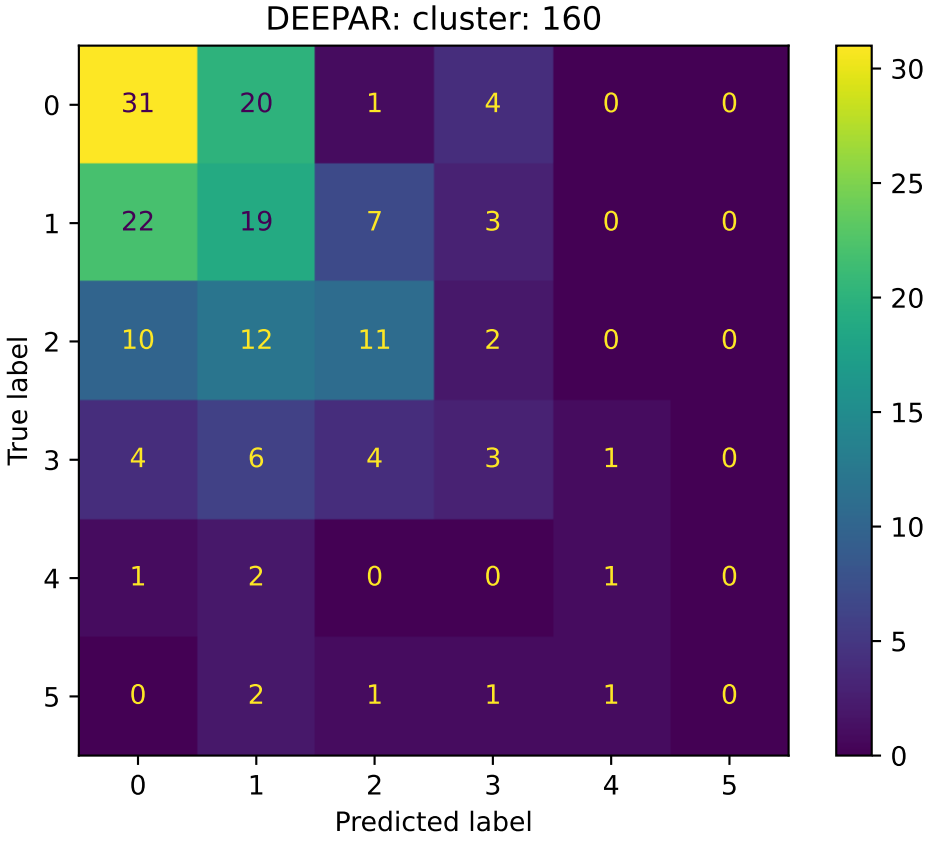

DEEPAR: cluster: 155
True label
Predicted label
0 1 2 3 4 5 6
74 9 0 0 0 0 0
29 9 7 0 1 0 0
9 8 3 2 0 0 0
2 9 6 0 0 0 0
0 1 0 1 1 0 0
0 0 0 0 0 0 0
0 0 0 0 0 0 0
70 60 50 40 30 20 10 0

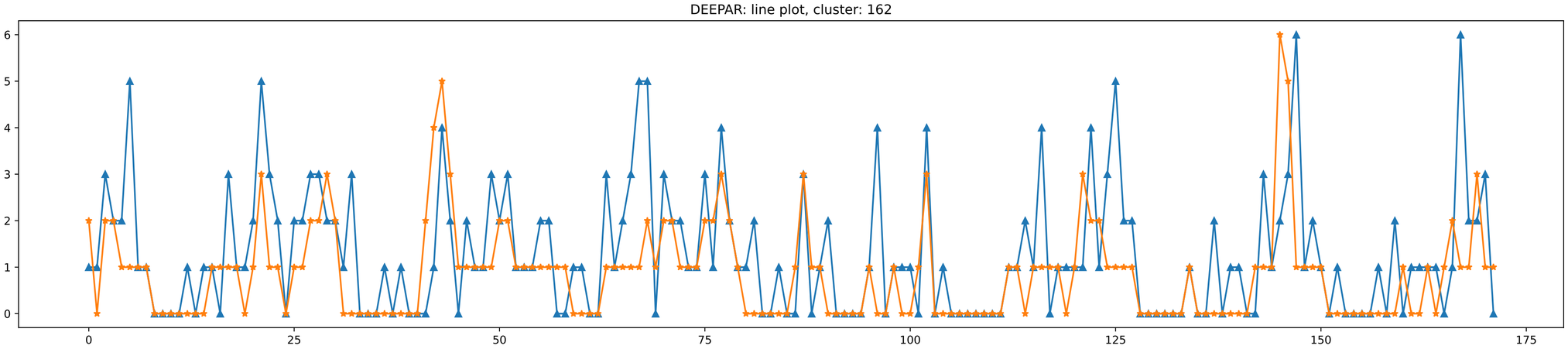

DEEPAR: line plot, cluster: 160
0
1
2
3
4
5
6
0
25
50
75
100
125
150
175

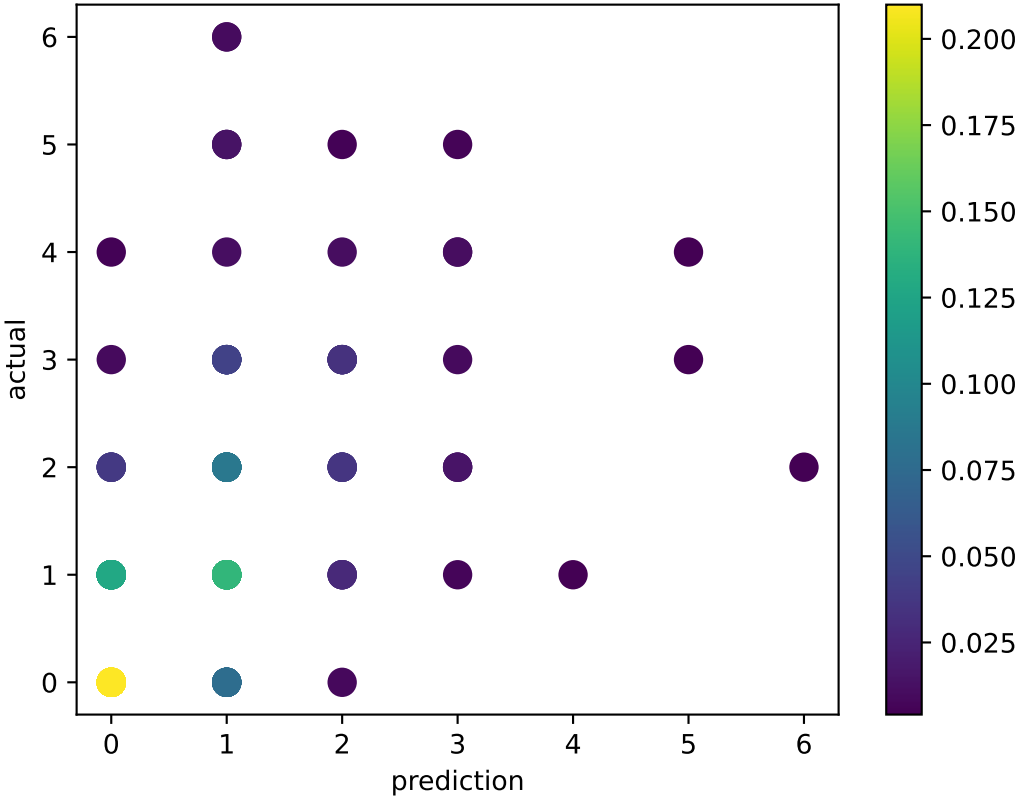

actual
prediction
0
1
2
3
4
5
6
0.14
0.12
0.10
0.08
0.06
0.04
0.02

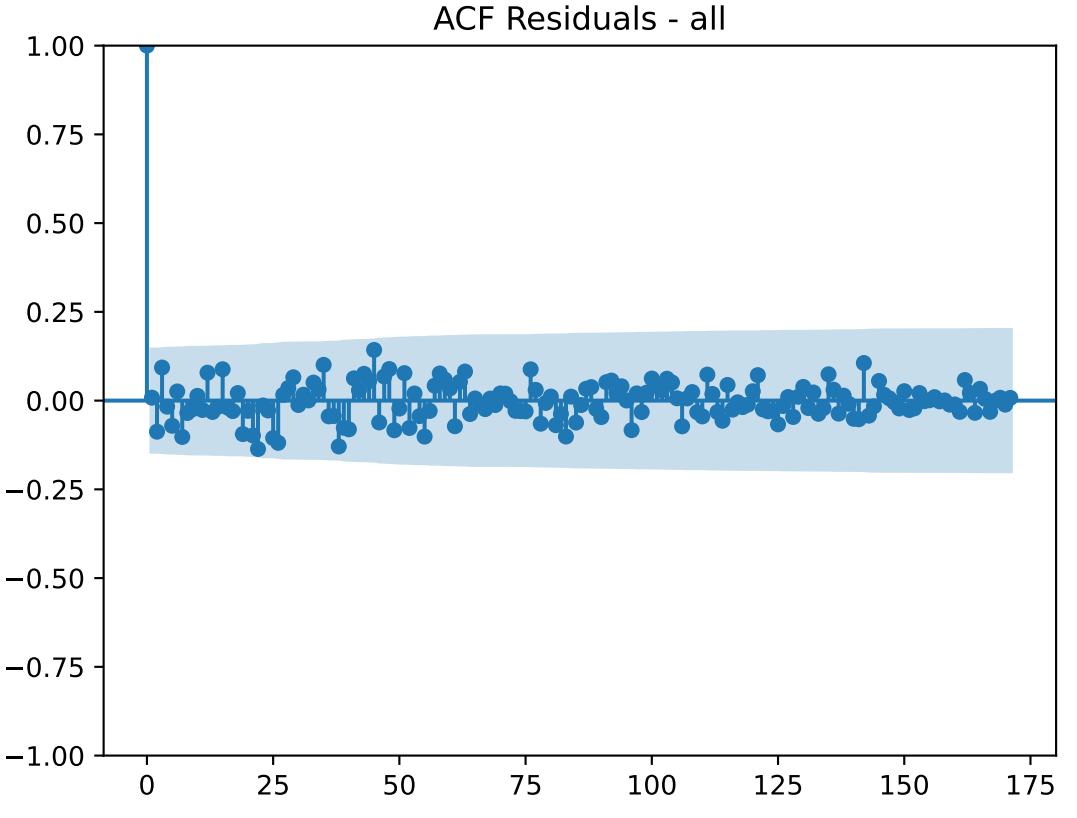

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

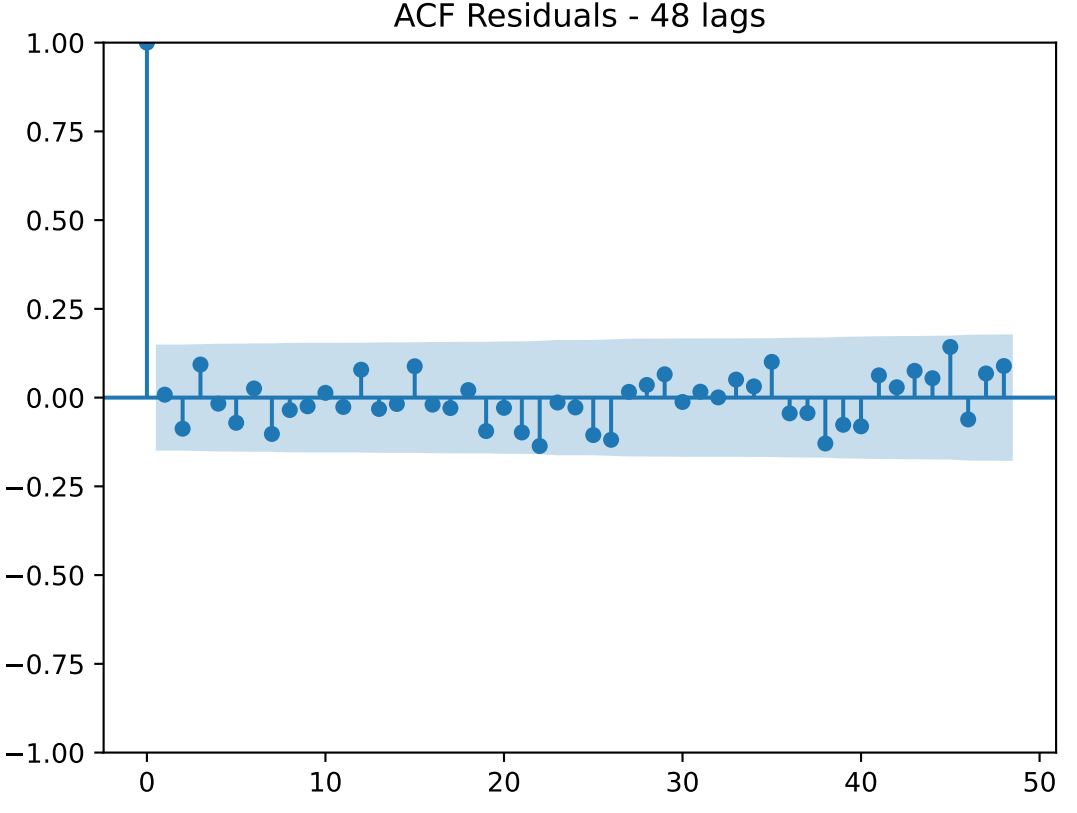

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

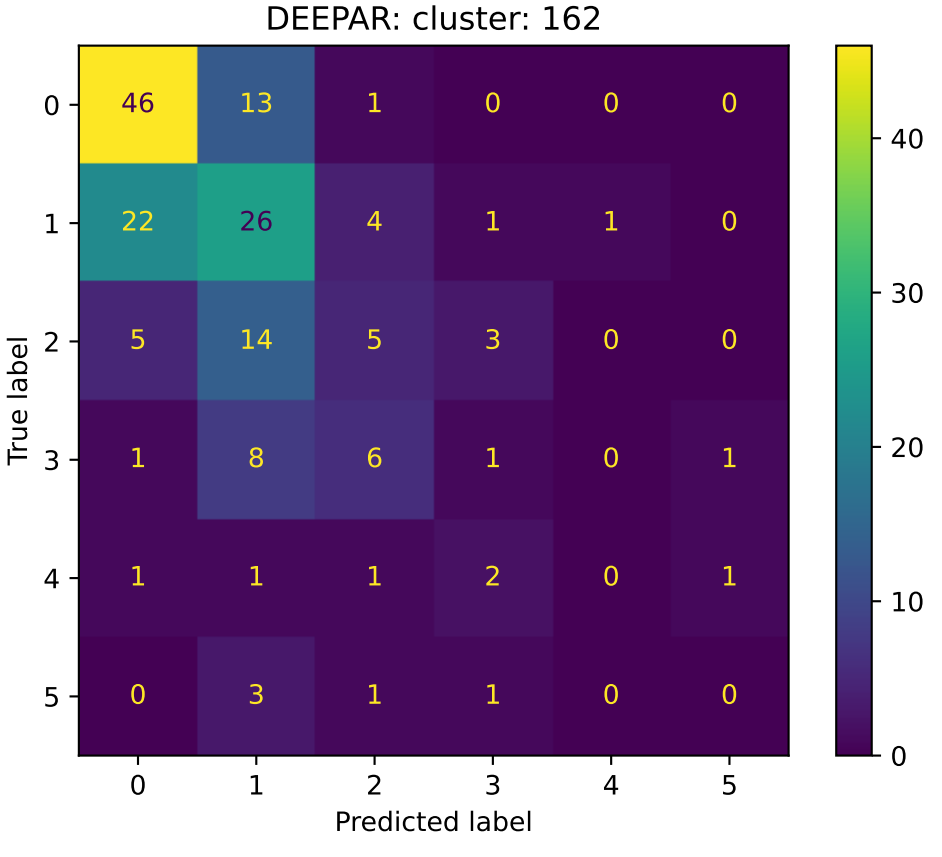

DEEPAR: cluster: 160
True label
Predicted label
0
1
2
3
4
5
31 20 1 4 0 0
22 19 7 3 0 0
10 12 11 2 0 0
4 6 4 3 1 0
1 2 0 0 1 0
0 2 1 1 1 0
30
25
20
15
10
5
0

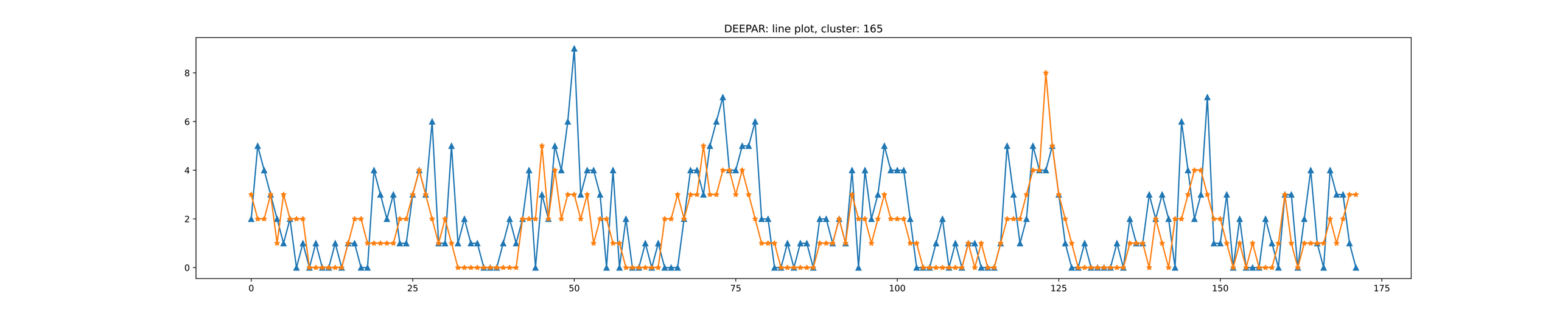

DEEPAR: line plot, cluster: 162
0
1
2
3
4
5
6
0
25
50
75
100
125
150
175

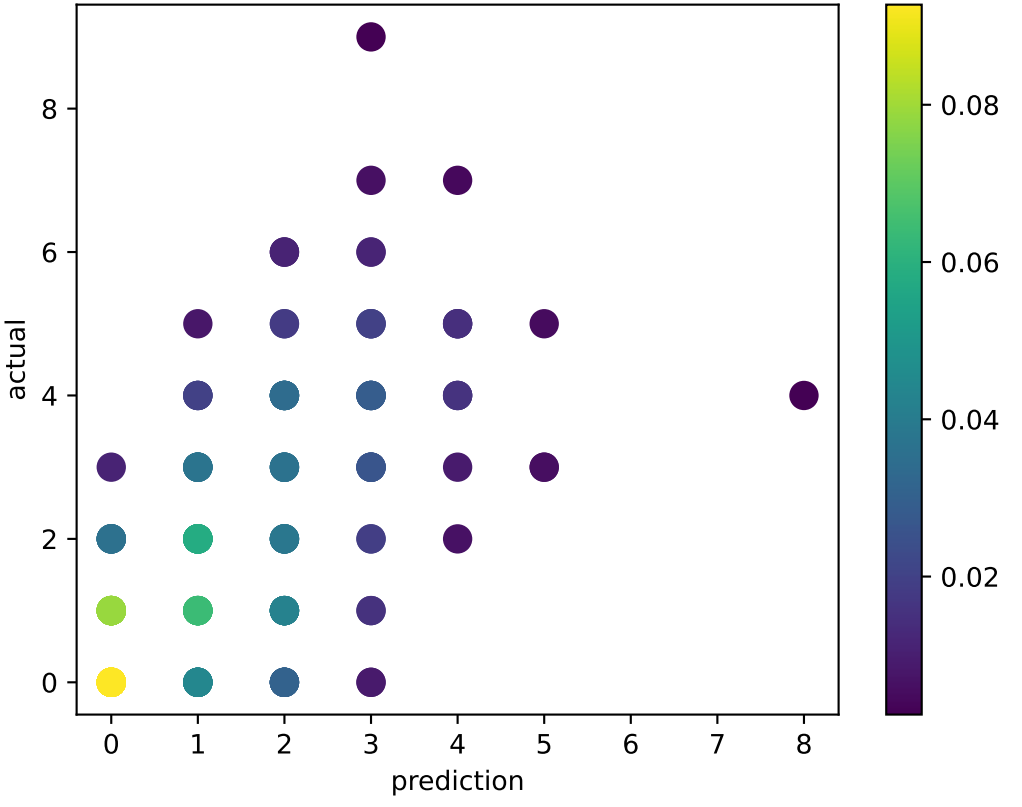

actual
prediction
0
1
2
3
4
5
6
0.200
0.175
0.150
0.125
0.100
0.075
0.050
0.025

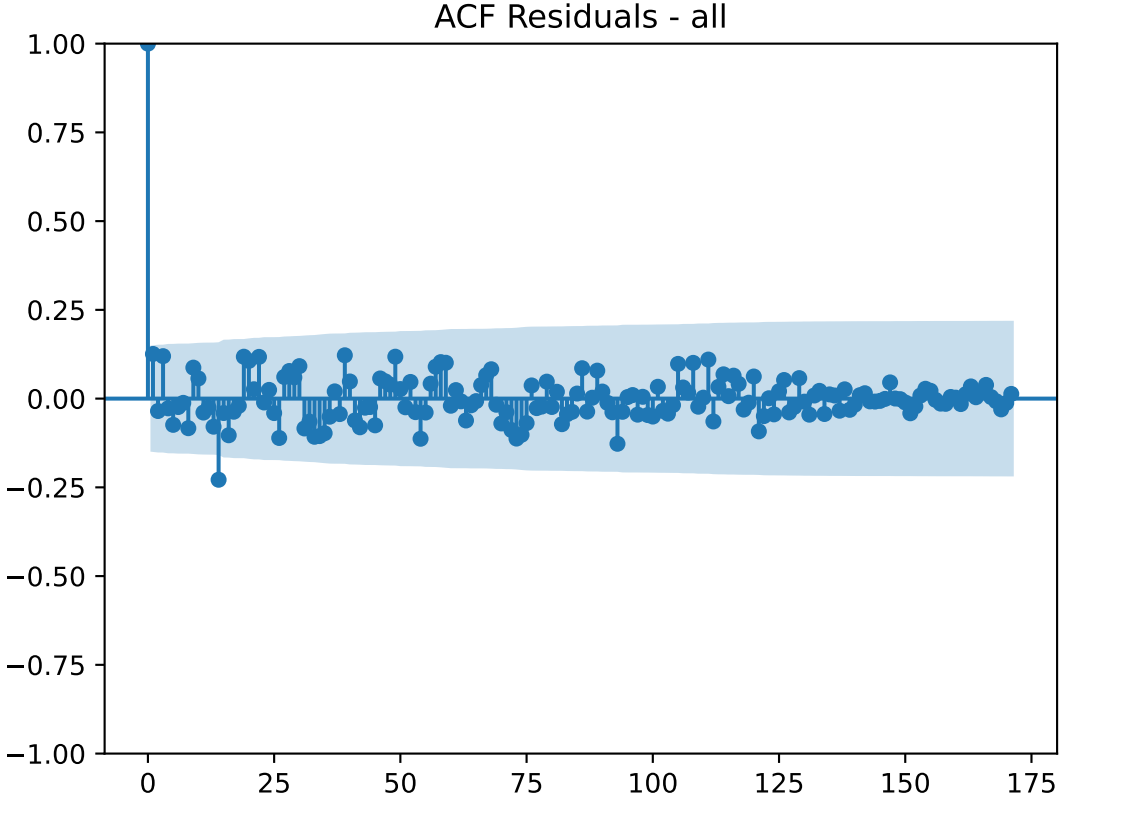

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

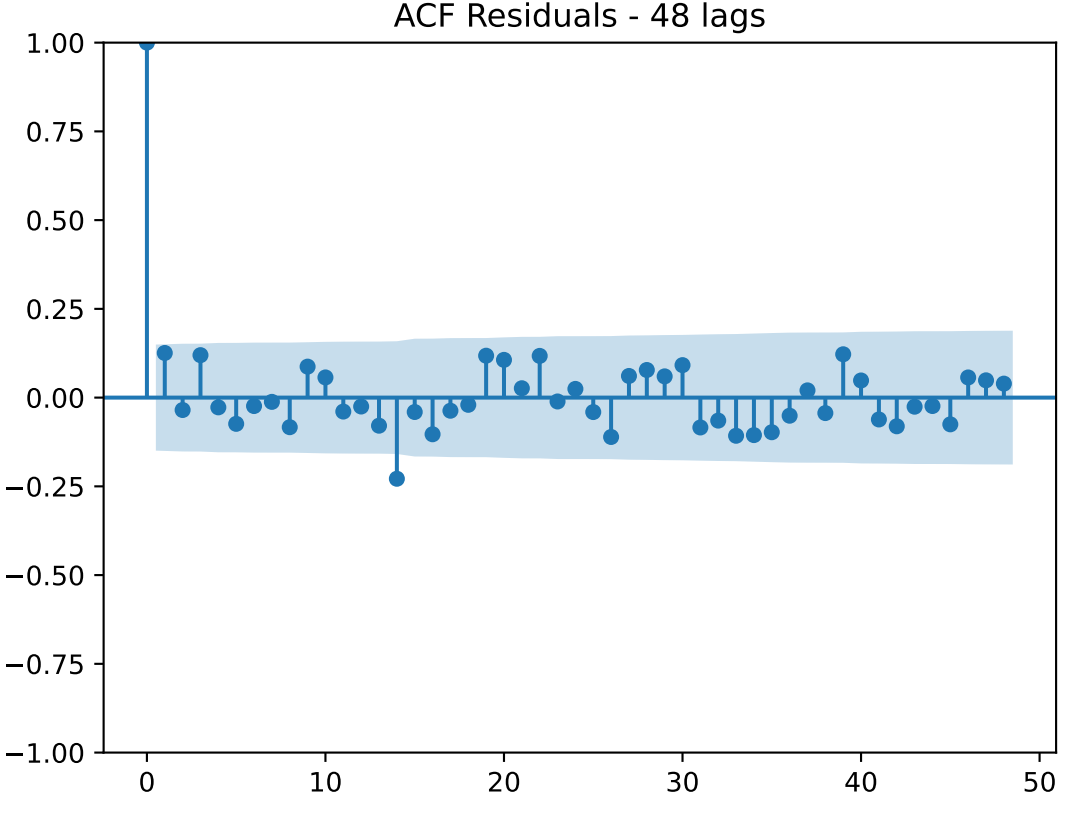

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

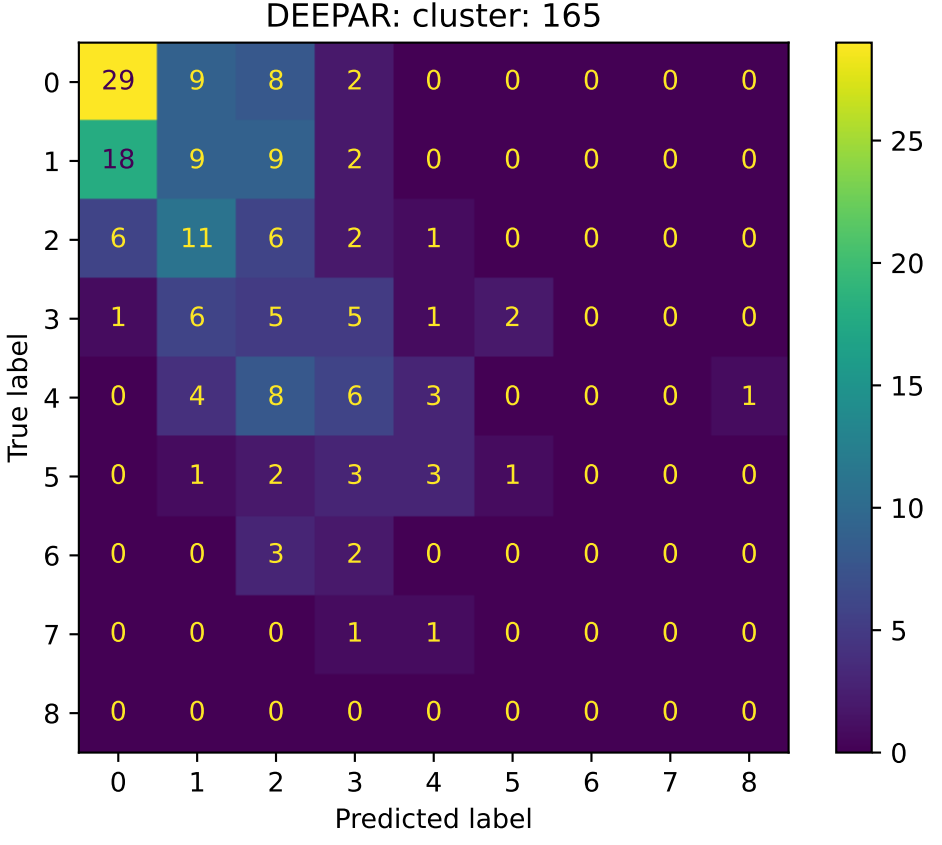

DEEPAR: cluster: 162
True label
Predicted label
0
1
2
3
4
5
46 13 1 0 0 0
22 26 4 1 1 0
5 14 5 3 0 0
1 8 6 1 0 1
1 1 1 2 0 1
0 3 1 1 0 0
40
30
20
10
0

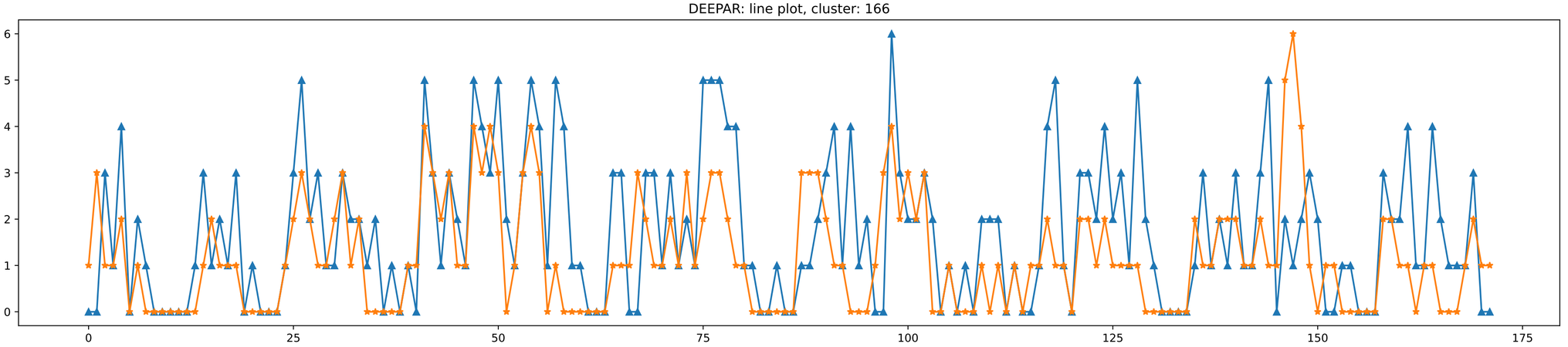

DEEPAR: line plot, cluster: 165
0
2
4
6
8
0
25
50
75
100
125
150
175

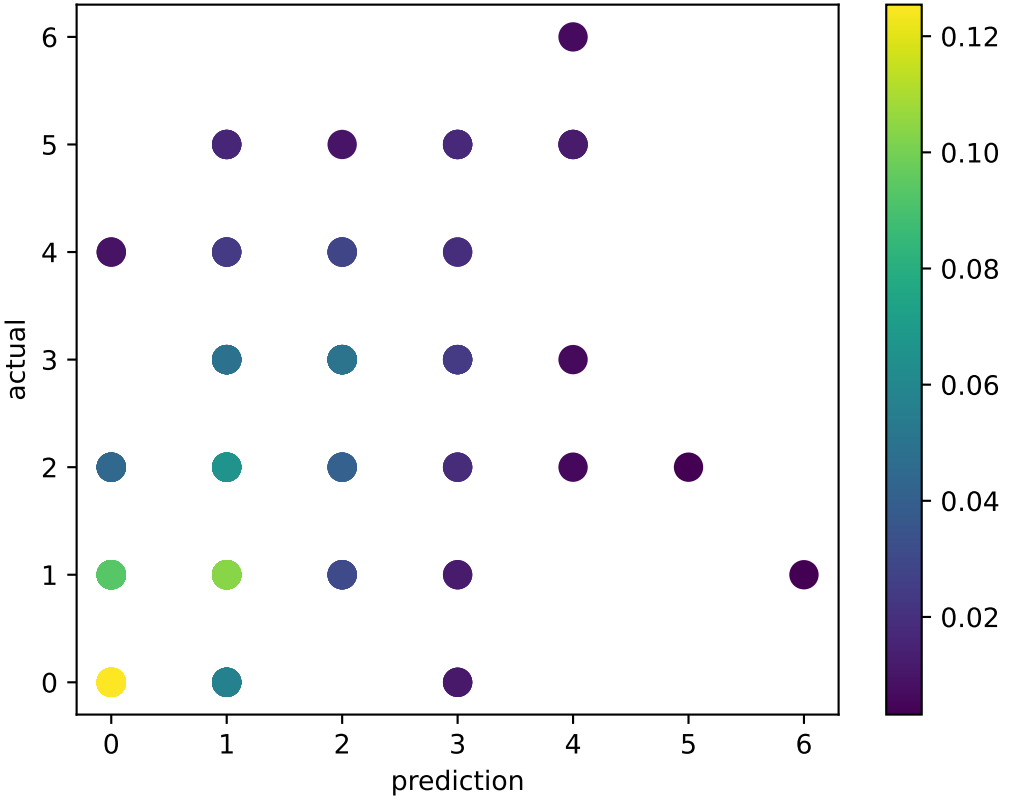

actual
prediction
0
1
2
3
4
5
6
7
8
0.08
0.06
0.04
0.02

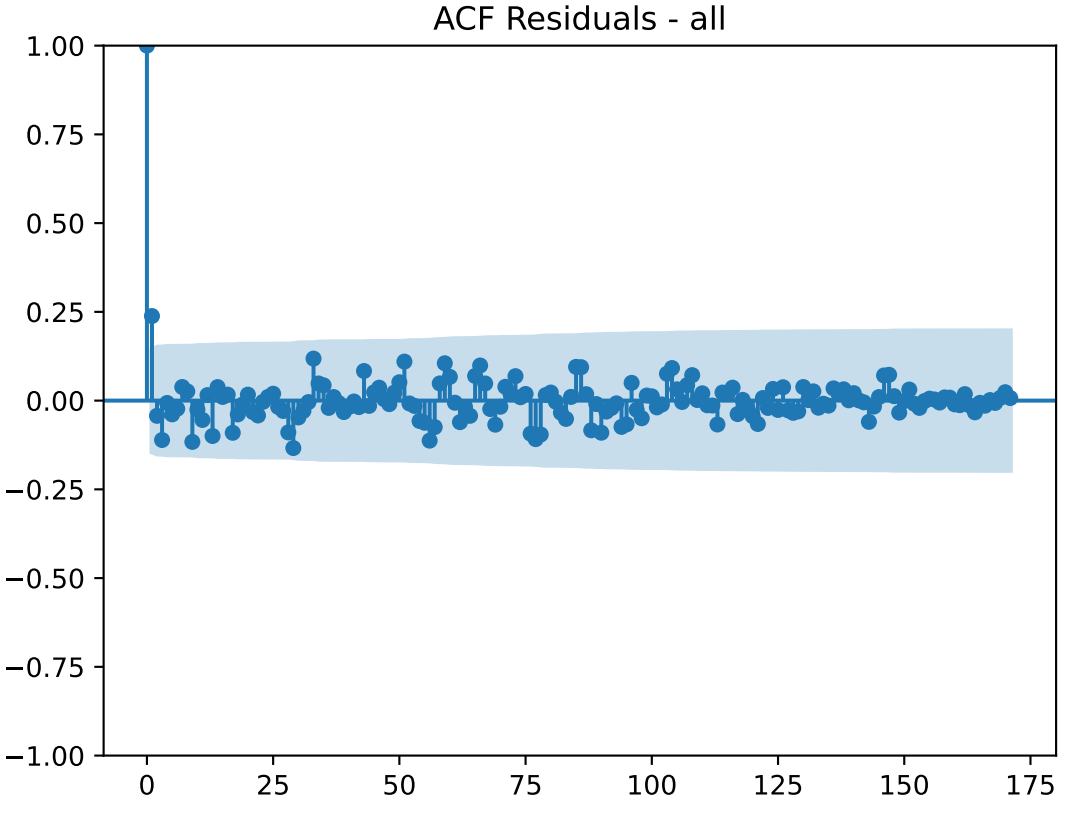

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

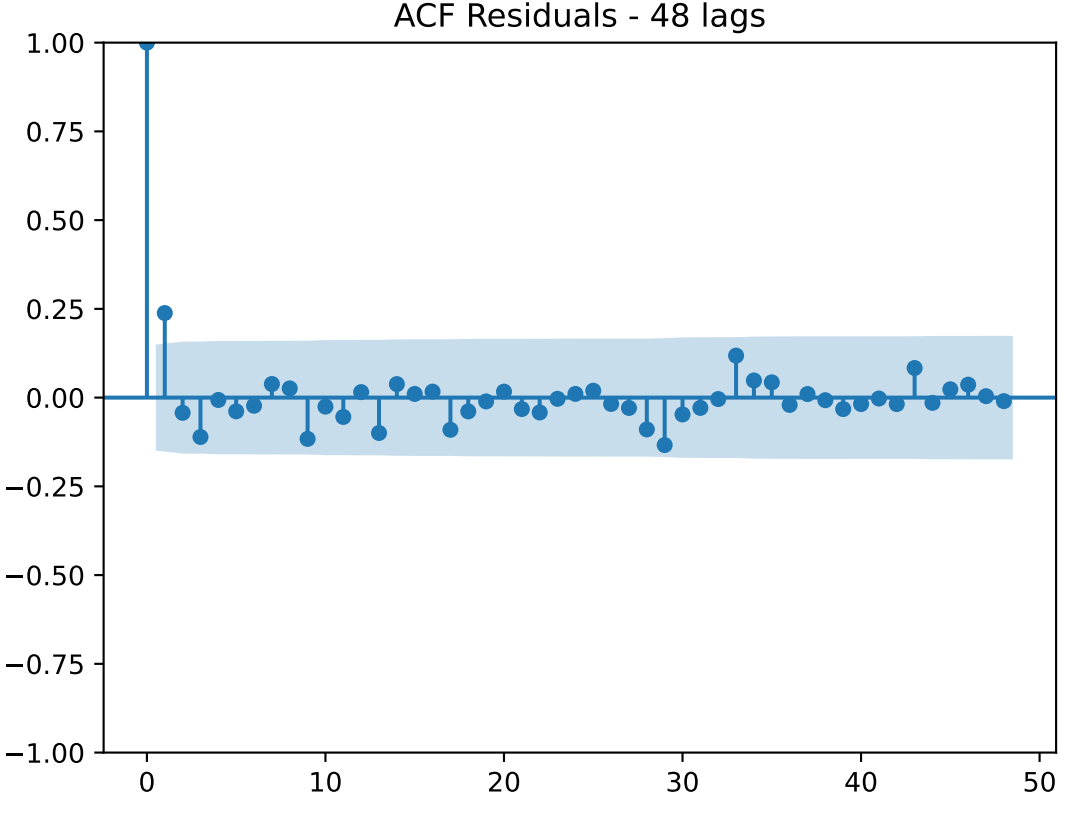

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

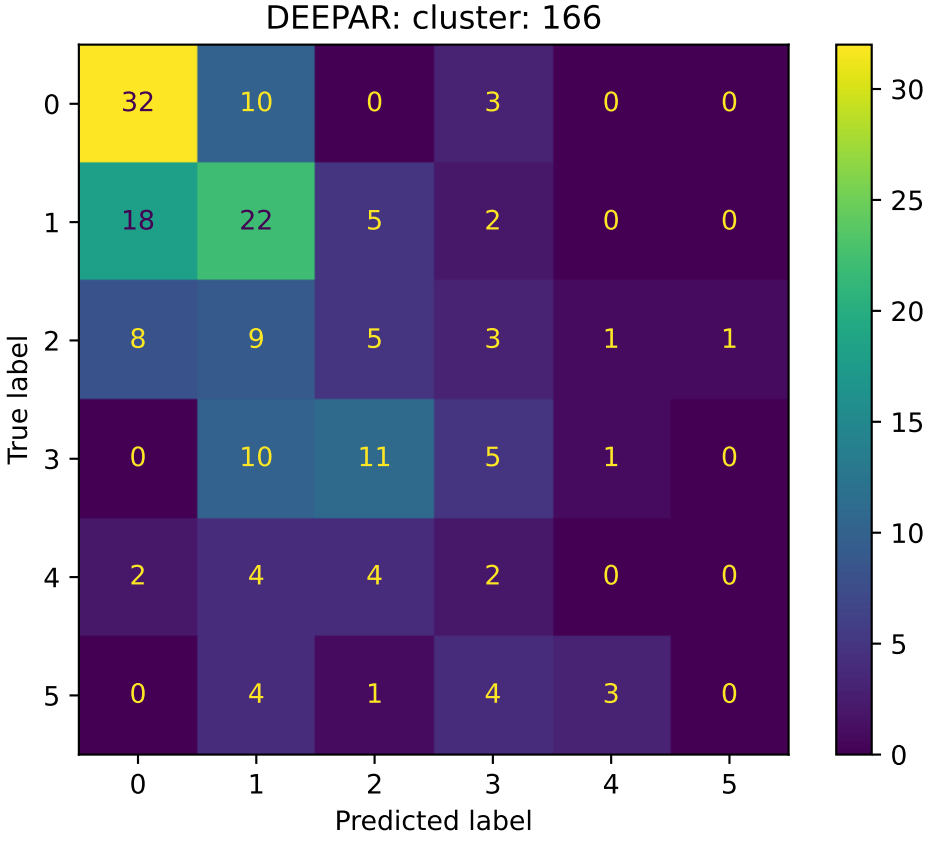

DEEPAR: cluster: 165
True label
Predicted label
0 29 9 8 2 0 0 0 0 0
1 18 9 9 2 0 0 0 0 0
2 6 11 6 2 1 0 0 0 0
3 1 6 5 5 1 2 0 0 0
4 0 4 8 6 3 0 0 0 1
5 0 1 2 3 3 1 0 0 0
6 0 0 3 2 0 0 0 0 0
7 0 0 0 1 1 0 0 0 0
8 0 0 0 0 0 0 0 0 0
0 1 2 3 4 5 6 7 8
25
20
15
10
5
0

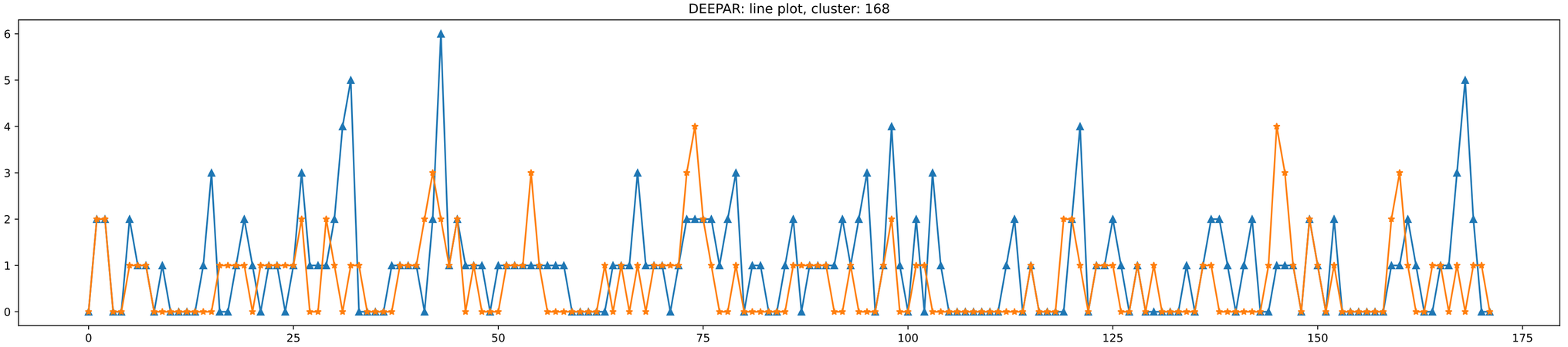

DEEPAR: line plot, cluster: 166
0
1
2
3
4
5
6
0
25
50
75
100
125
150
175

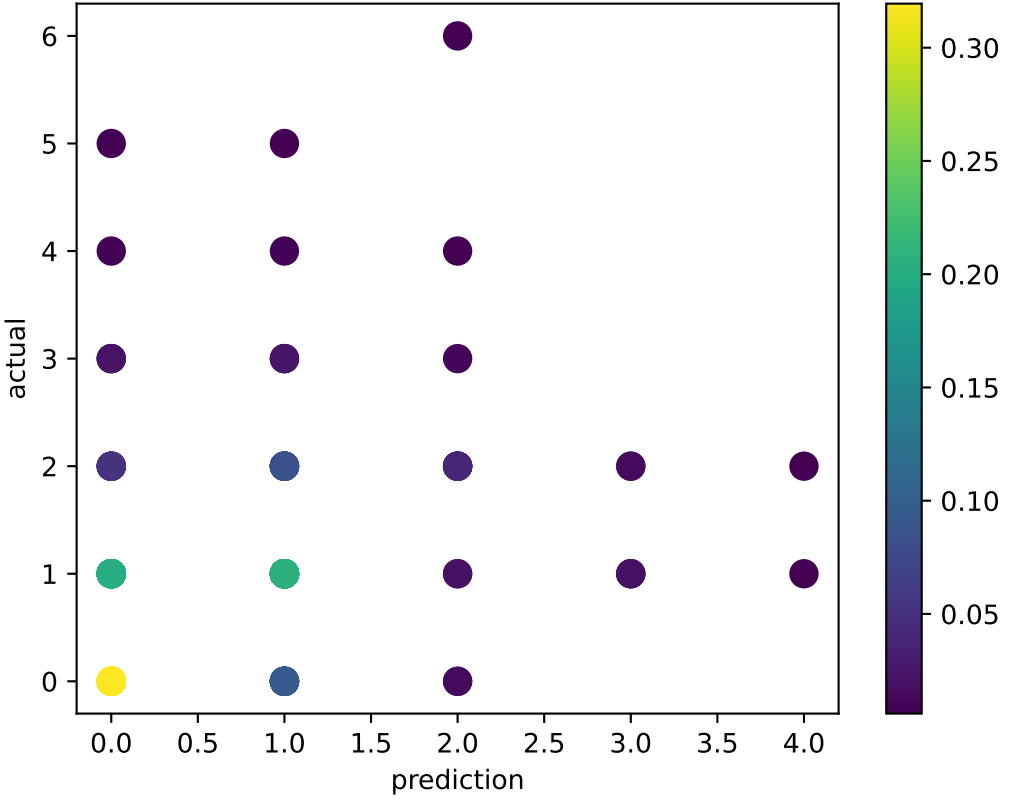

actual
prediction
0
1
2
3
4
5
6
0.12
0.10
0.08
0.06
0.04
0.02

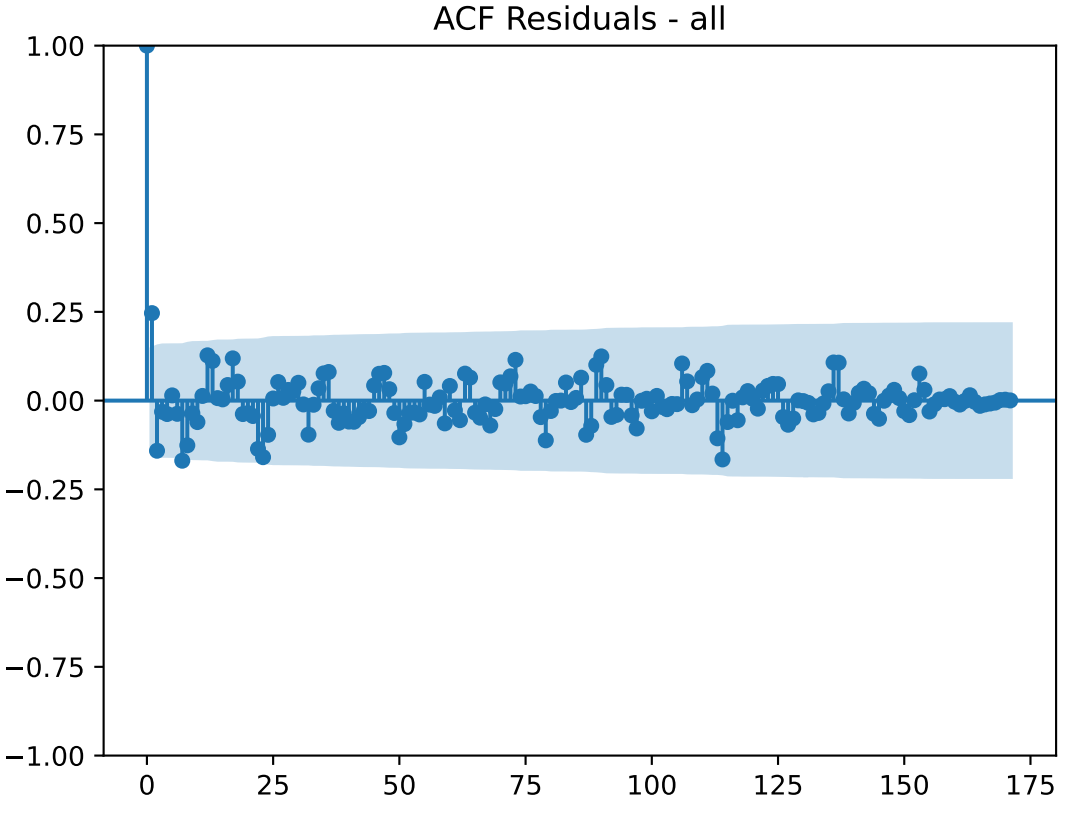

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

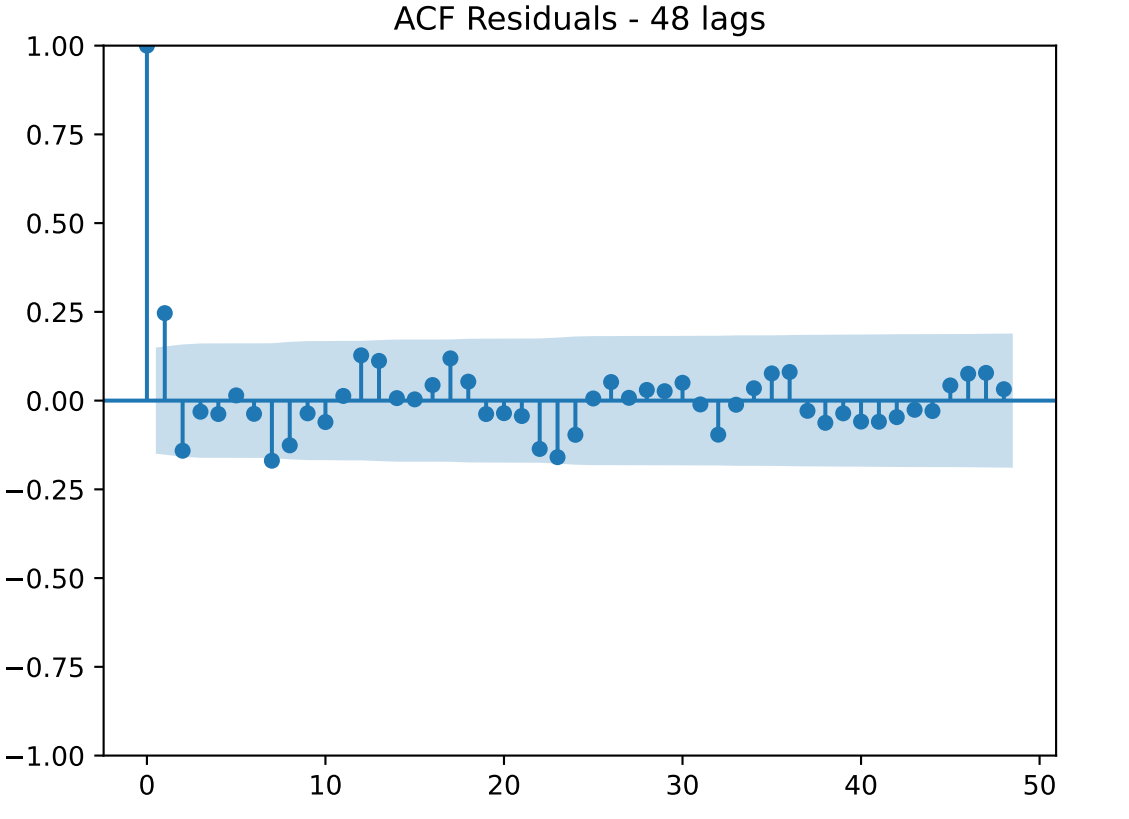

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

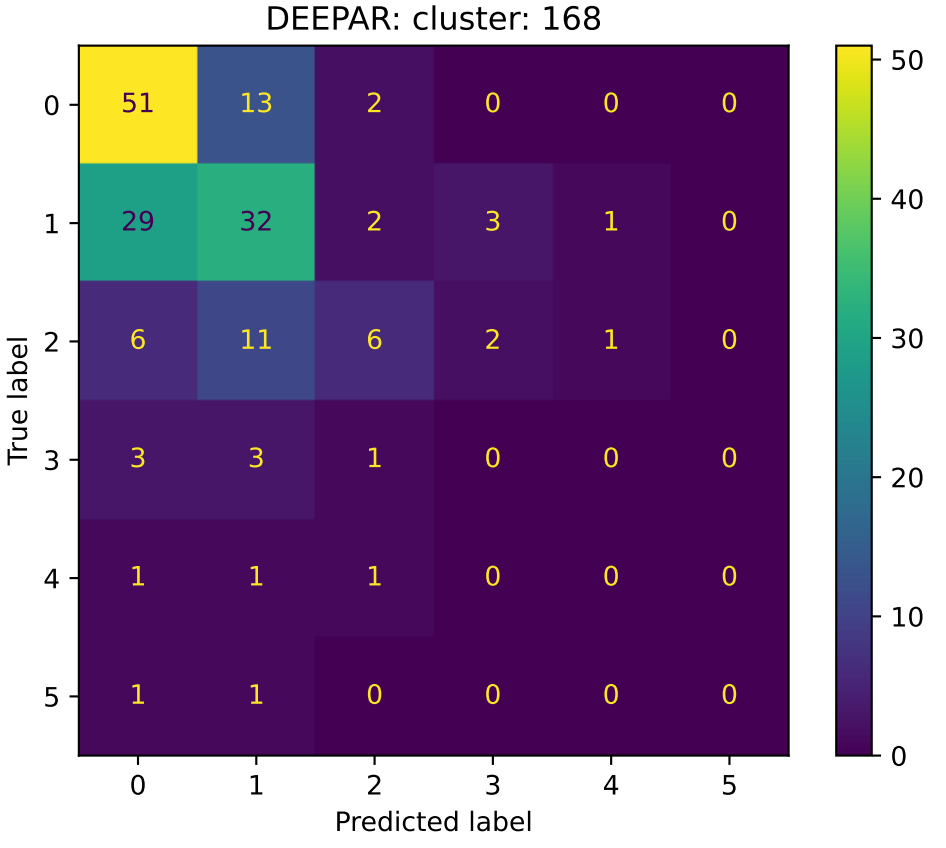

DEEPAR: cluster: 166
True label
Predicted label
0
1
2
3
4
5
32 10 0 3 0 0
18 22 5 2 0 0
8 9 5 3 1 1
0 10 11 5 1 0
2 4 4 2 0 0
0 4 1 4 3 0
30
25
20
15
10
5
0

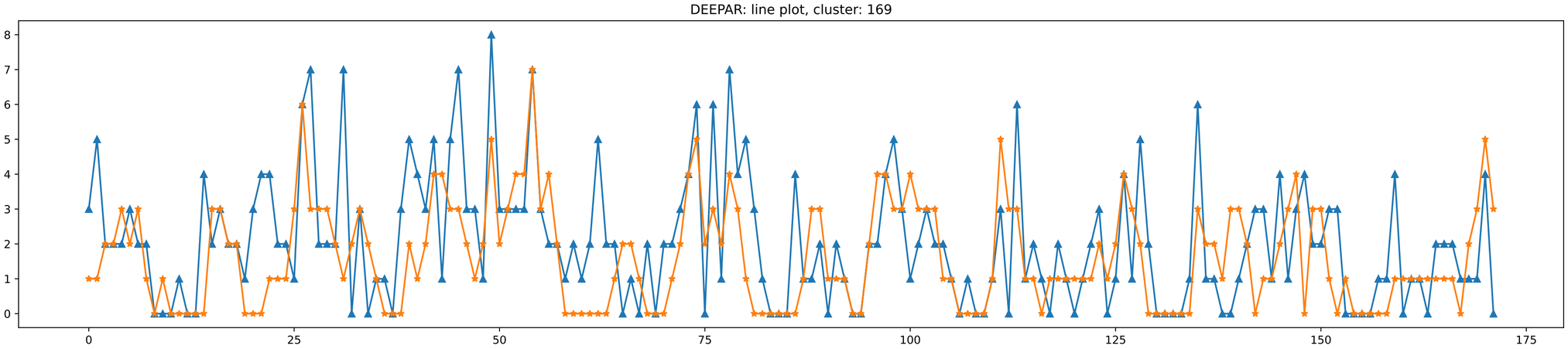

DEEPAR: line plot, cluster: 168
0
1
2
3
4
5
6
0
25
50
75
100
125
150
175

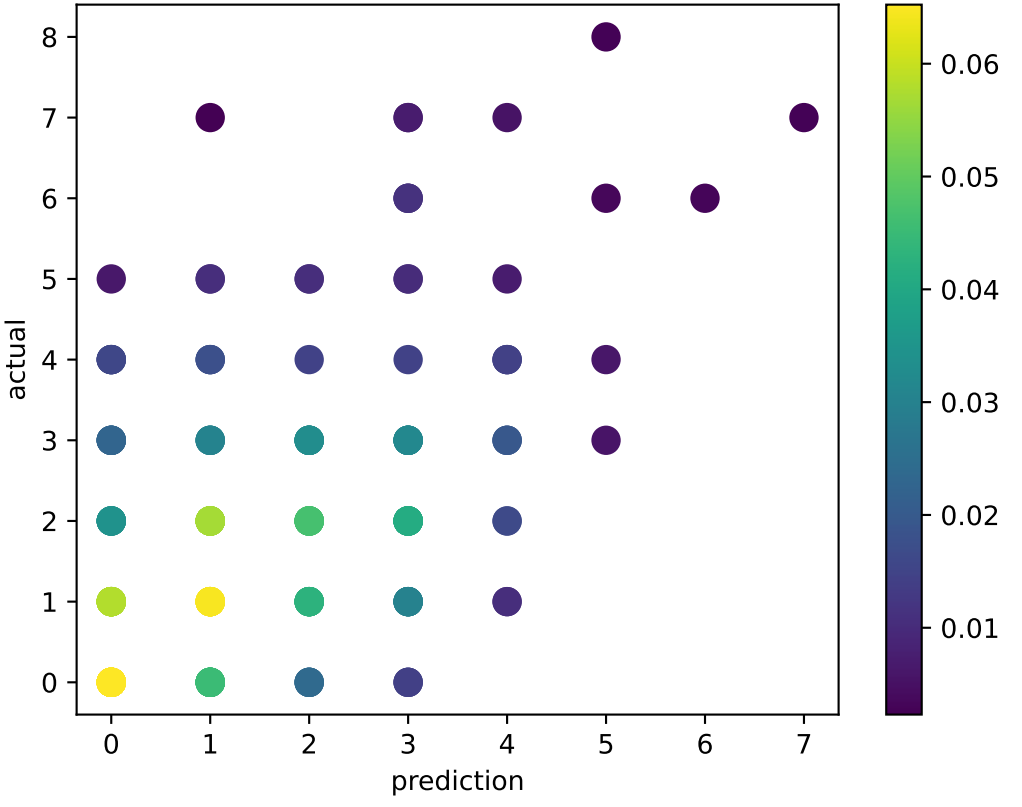

actual
prediction
0
1
2
3
4
5
6
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.30
0.25
0.20
0.15
0.10
0.05

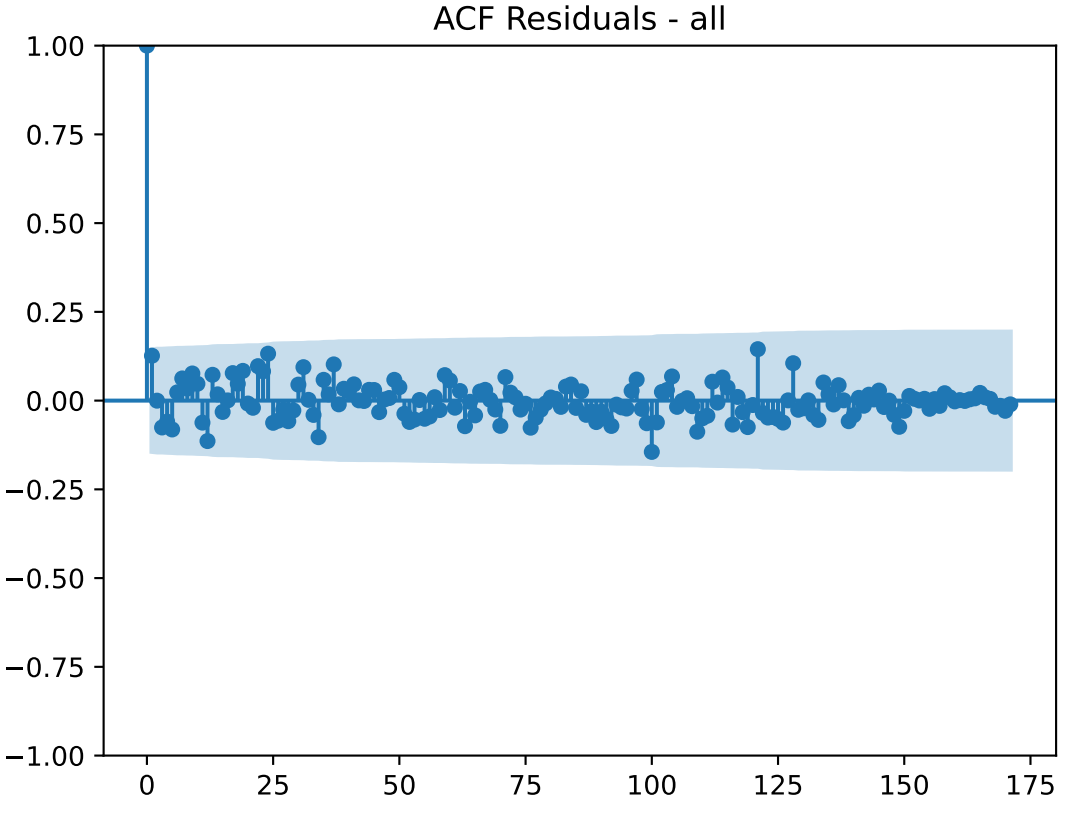

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

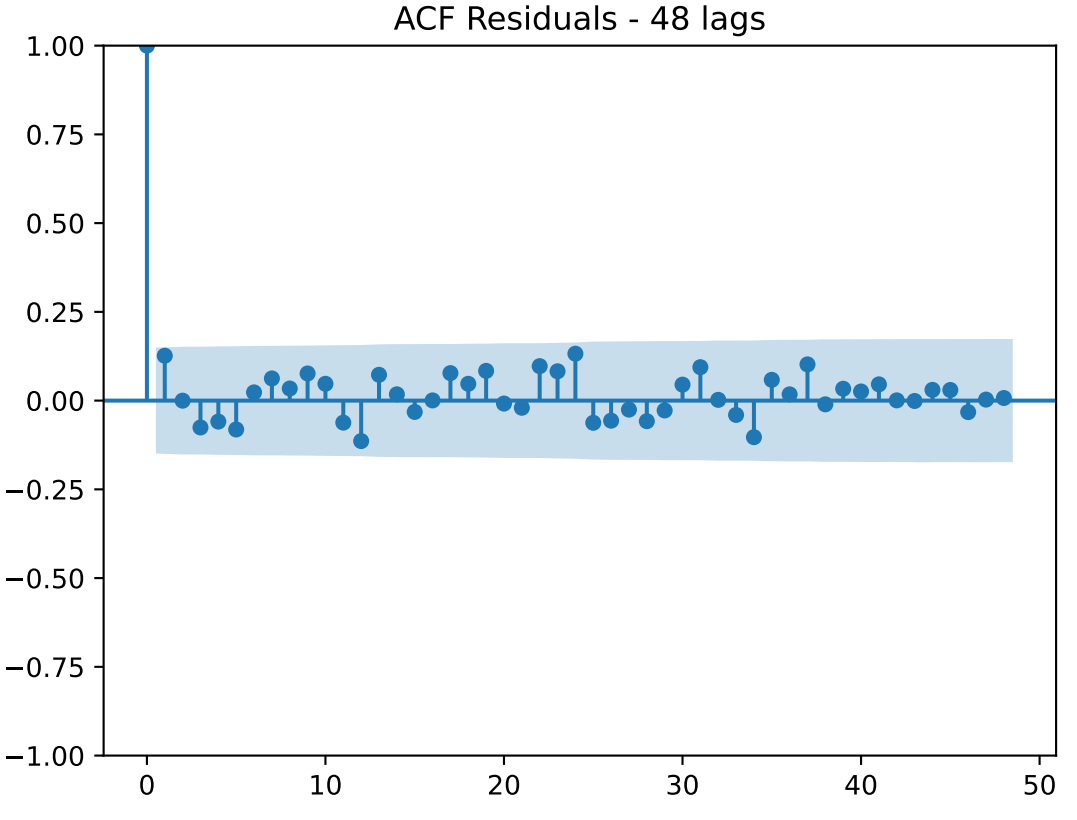

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

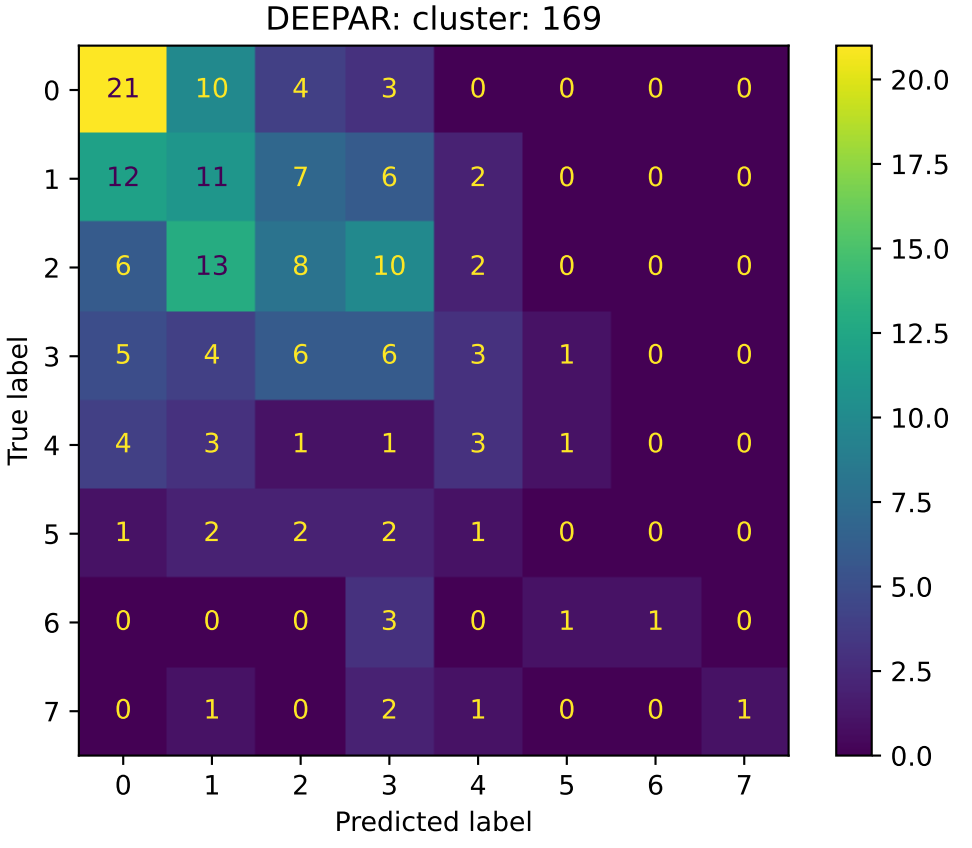

DEEPAR: cluster: 168
True label
Predicted label
0
1
2
3
4
5
51 13 2 0 0 0
29 32 2 3 1 0
6 11 6 2 1 0
3 3 1 0 0 0
1 1 1 0 0 0
1 1 0 0 0 0
50
40
30
20
10
0

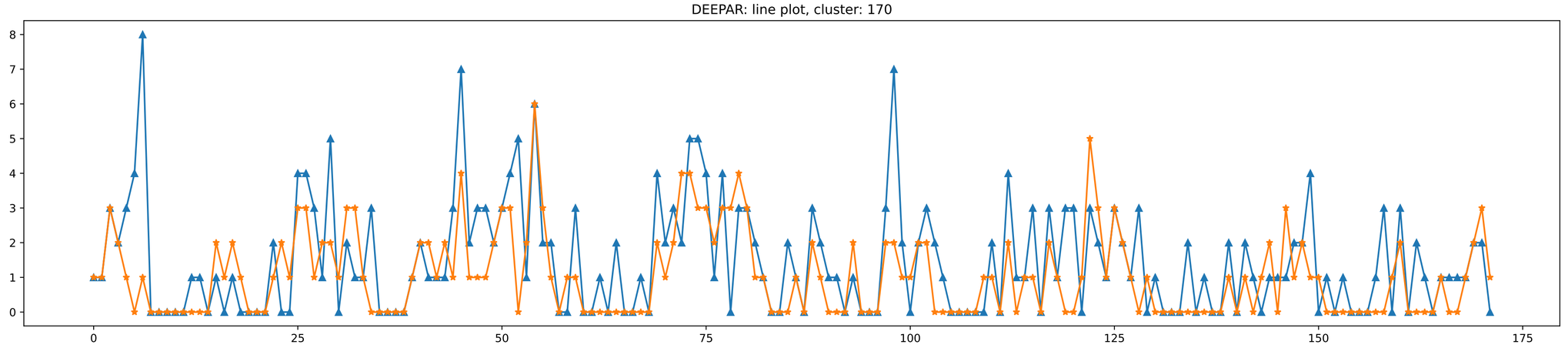

DEEPAR: line plot, cluster: 169
0
1
2
3
4
5
6
7
8
0
25
50
75
100
125
150
175

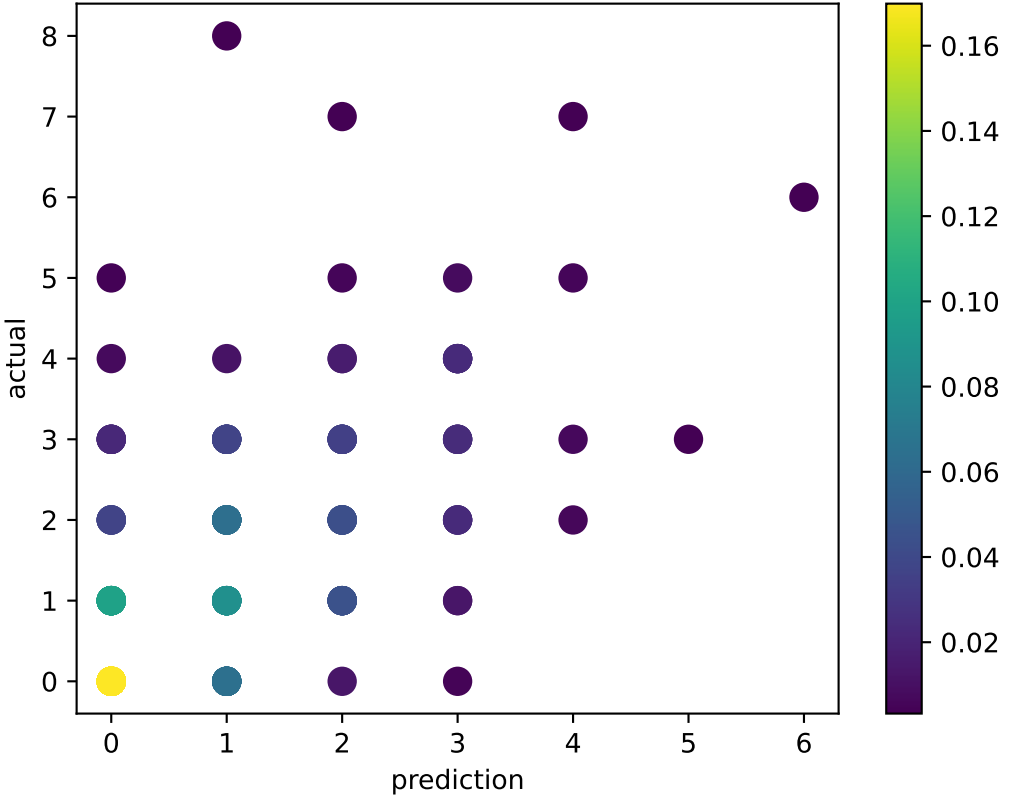

actual
prediction
0
1
2
3
4
5
6
7
8
0.06
0.05
0.04
0.03
0.02
0.01

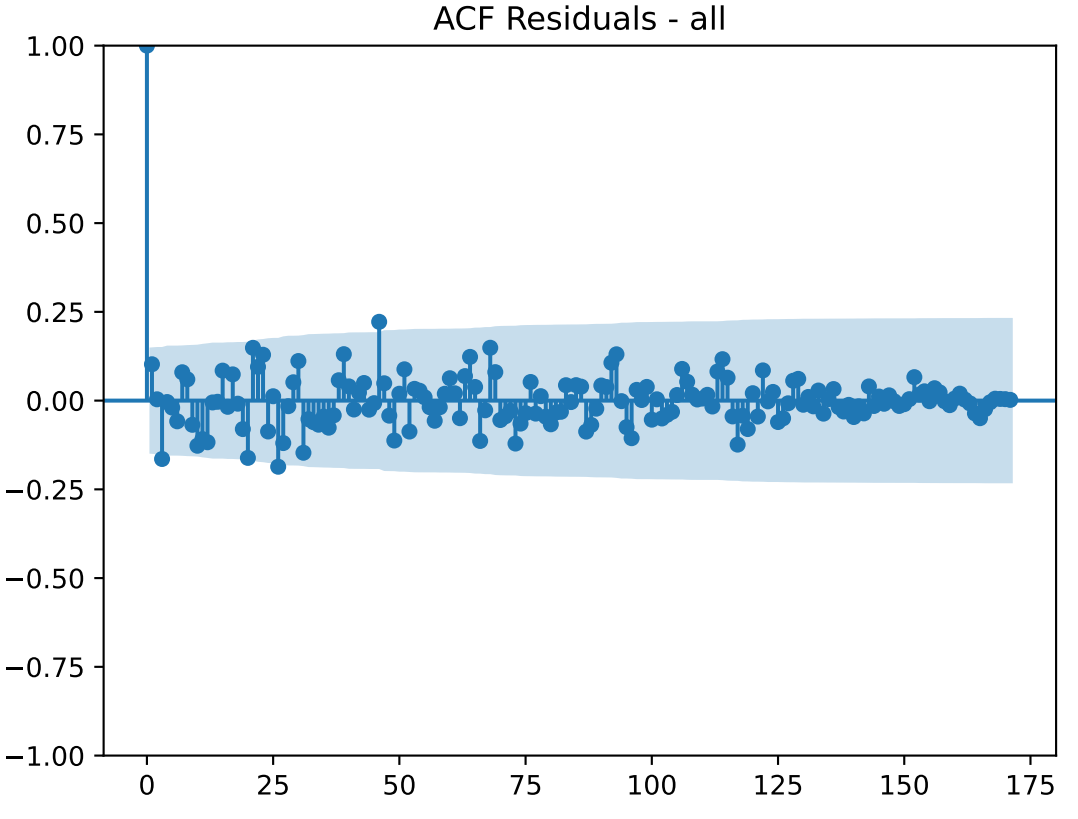

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

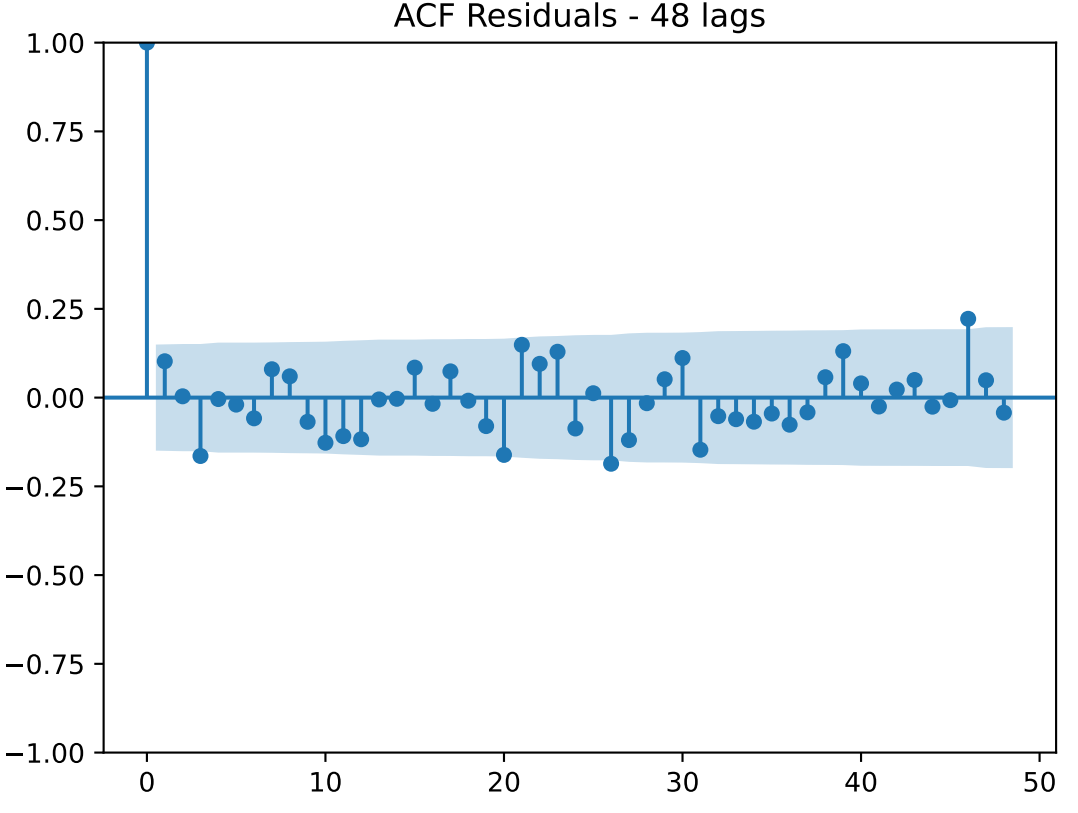

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

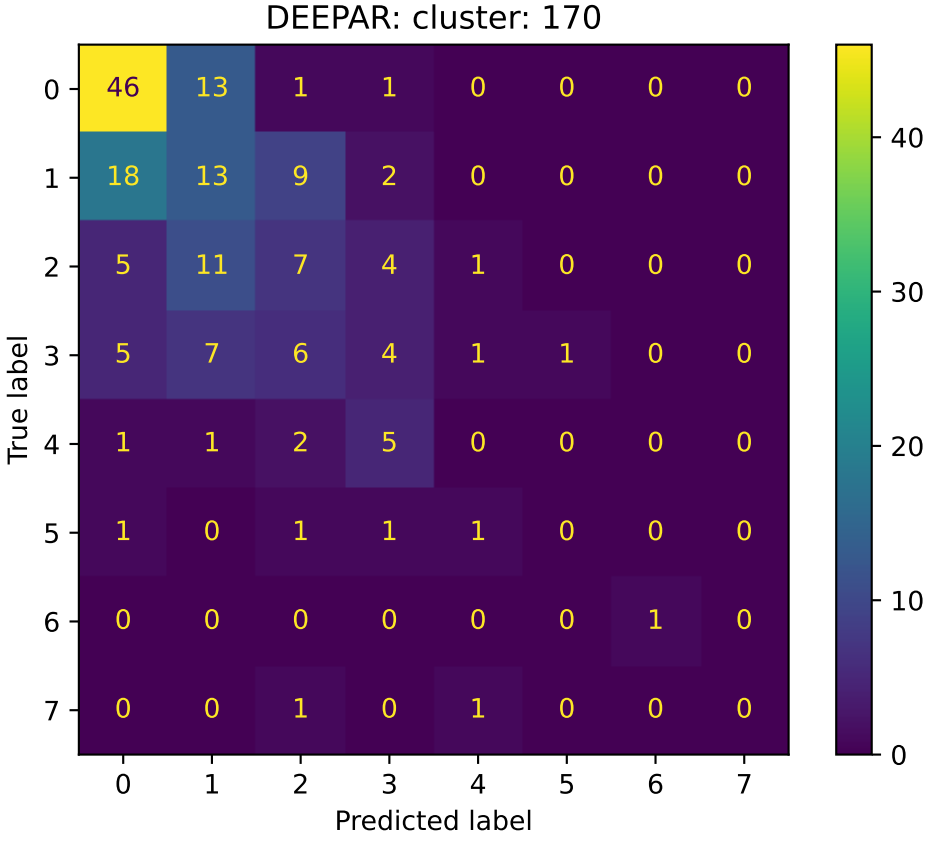

DEEPAR: cluster: 169
True label
Predicted label
0 21 10 4 3 0 0 0 0
1 12 11 7 6 2 0 0 0
2 6 13 8 10 2 0 0 0
3 5 4 6 6 3 1 0 0
4 4 3 1 1 3 1 0 0
5 1 2 2 2 1 0 0 0
6 0 0 0 3 0 1 1 0
7 0 1 0 2 1 0 0 1
0 1 2 3 4 5 6 7
20.0
17.5
15.0
12.5
10.0
7.5
5.0
2.5
0.0

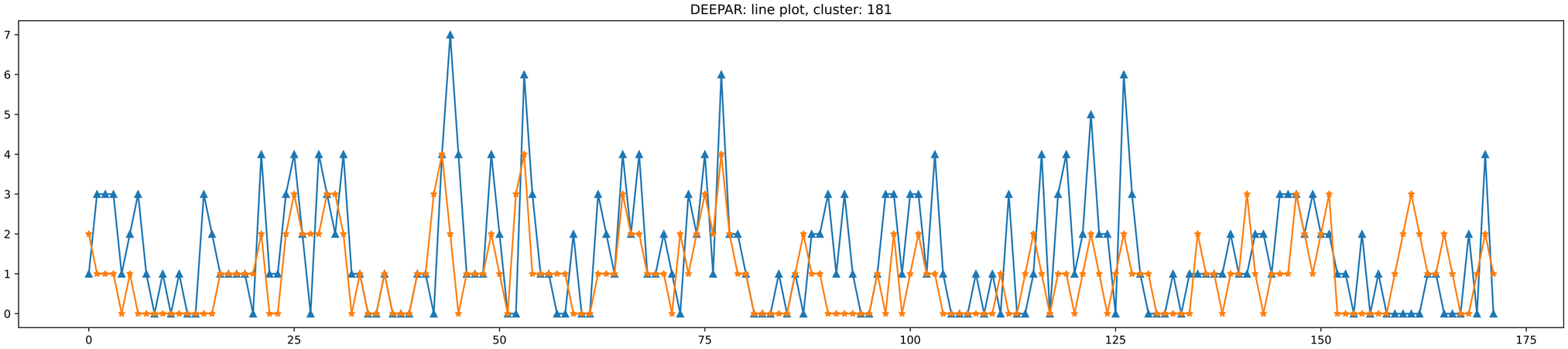

DEEPAR: line plot, cluster: 170
8
7
6
5
4
3
2
1
0
0
25
50
75
100
125
150
175

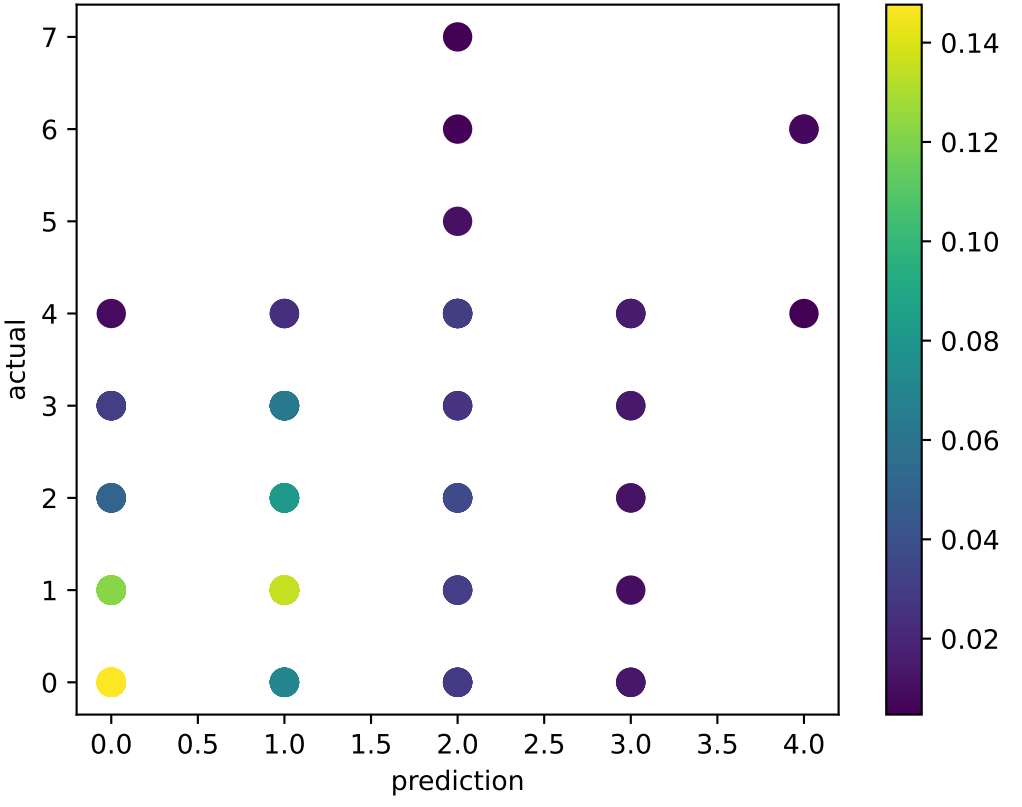

actual
prediction
0
1
2
3
4
5
6
7
8
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02

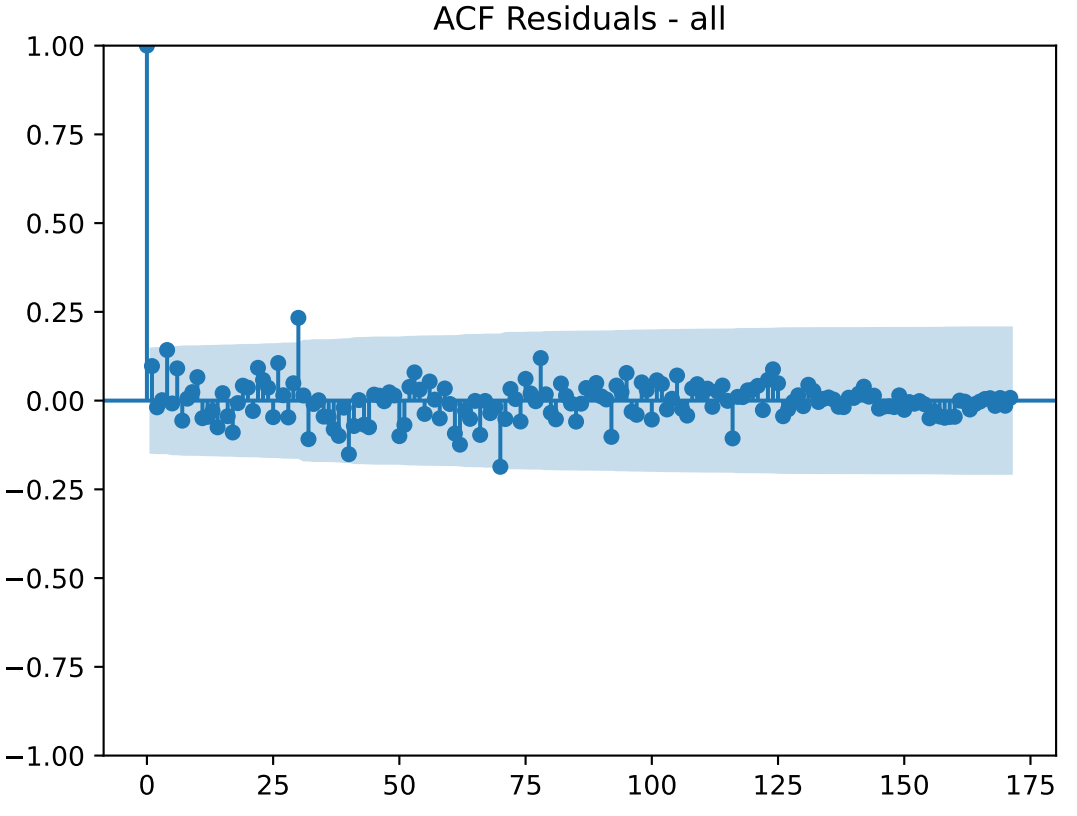

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

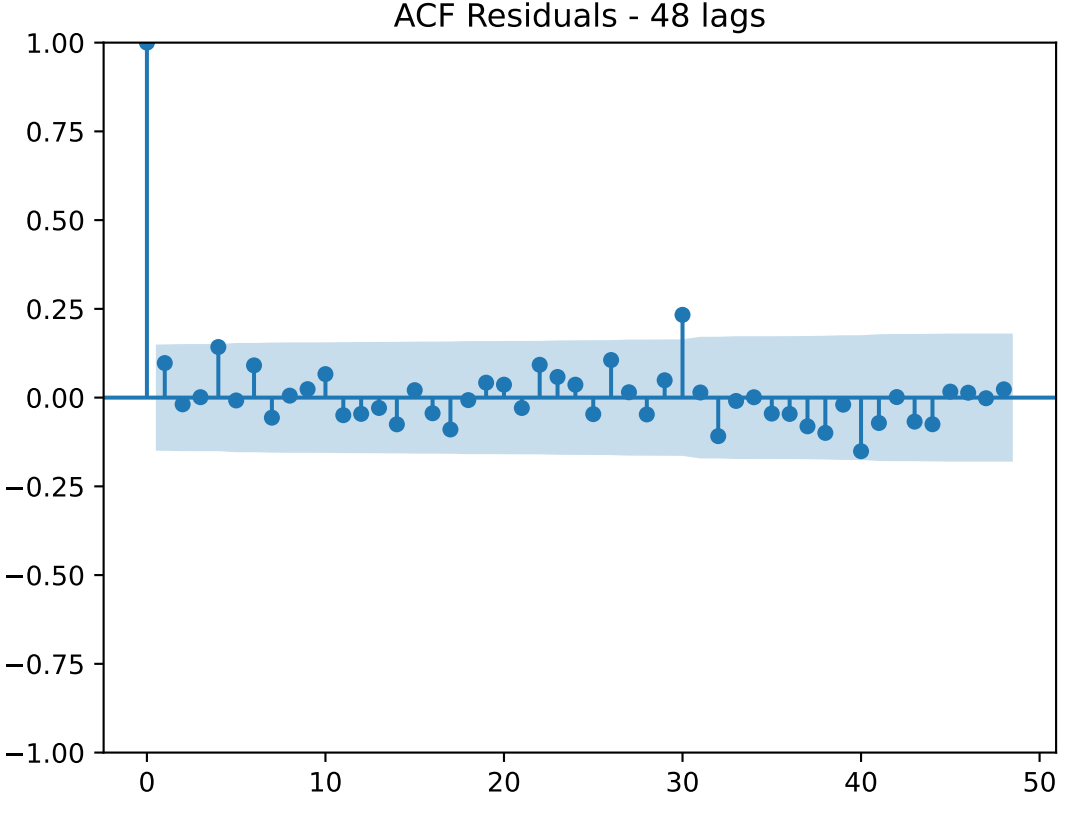

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

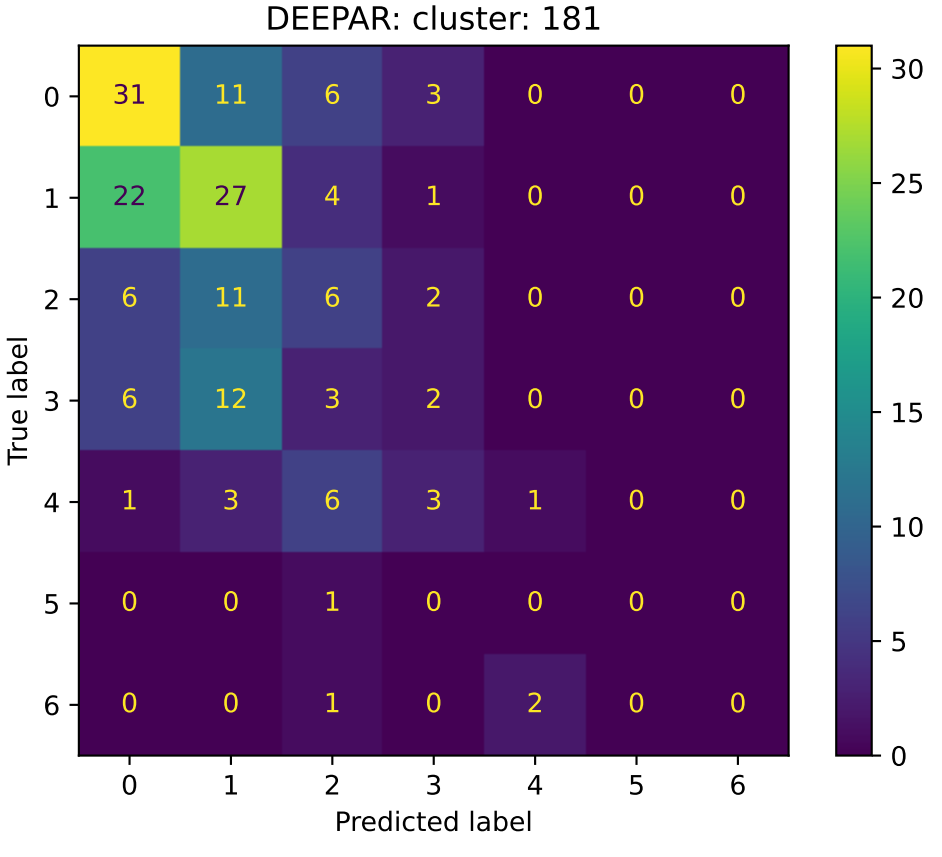

DEEPAR: cluster: 170
True label
Predicted label
0 1 2 3 4 5 6 7
46 13 1 1 0 0 0 0
18 13 9 2 0 0 0 0
5 11 7 4 1 0 0 0
5 7 6 4 1 1 0 0
1 1 2 5 0 0 0 0
1 0 1 1 1 0 0 0
0 0 0 0 0 0 1 0
0 0 1 0 1 0 0 0
40
30
20
10
0

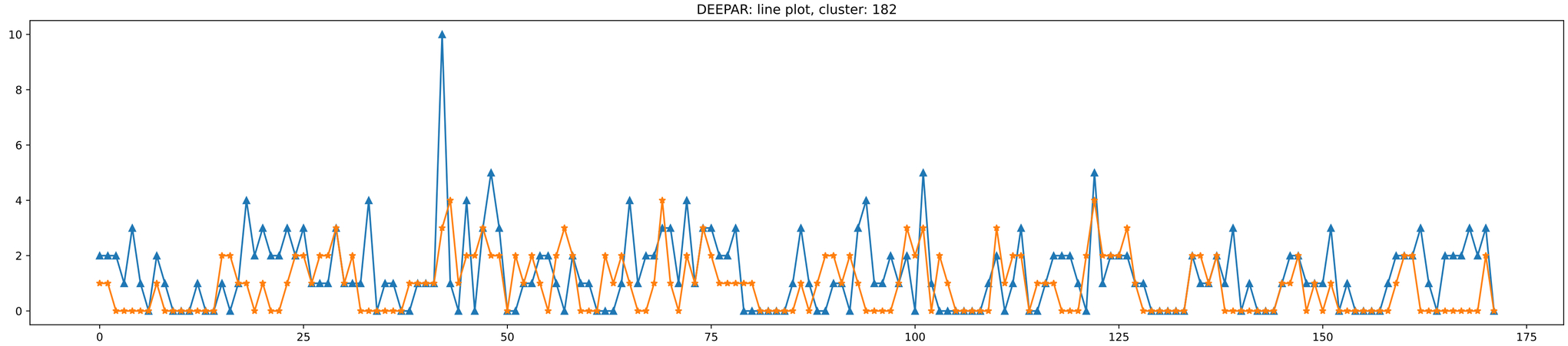

DEEPAR: line plot, cluster: 181
0
1
2
3
4
5
6
7
0
25
50
75
100
125
150
175

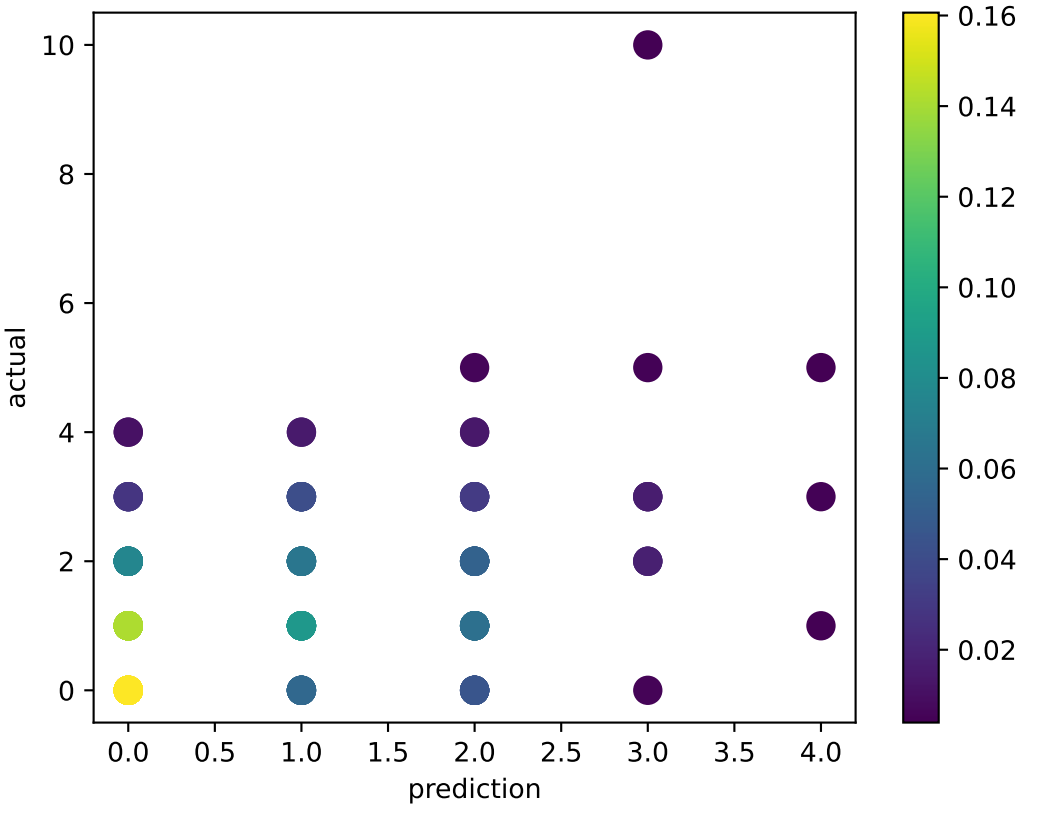

actual
prediction
0
1
2
3
4
5
6
7
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.14
0.12
0.10
0.08
0.06
0.04
0.02

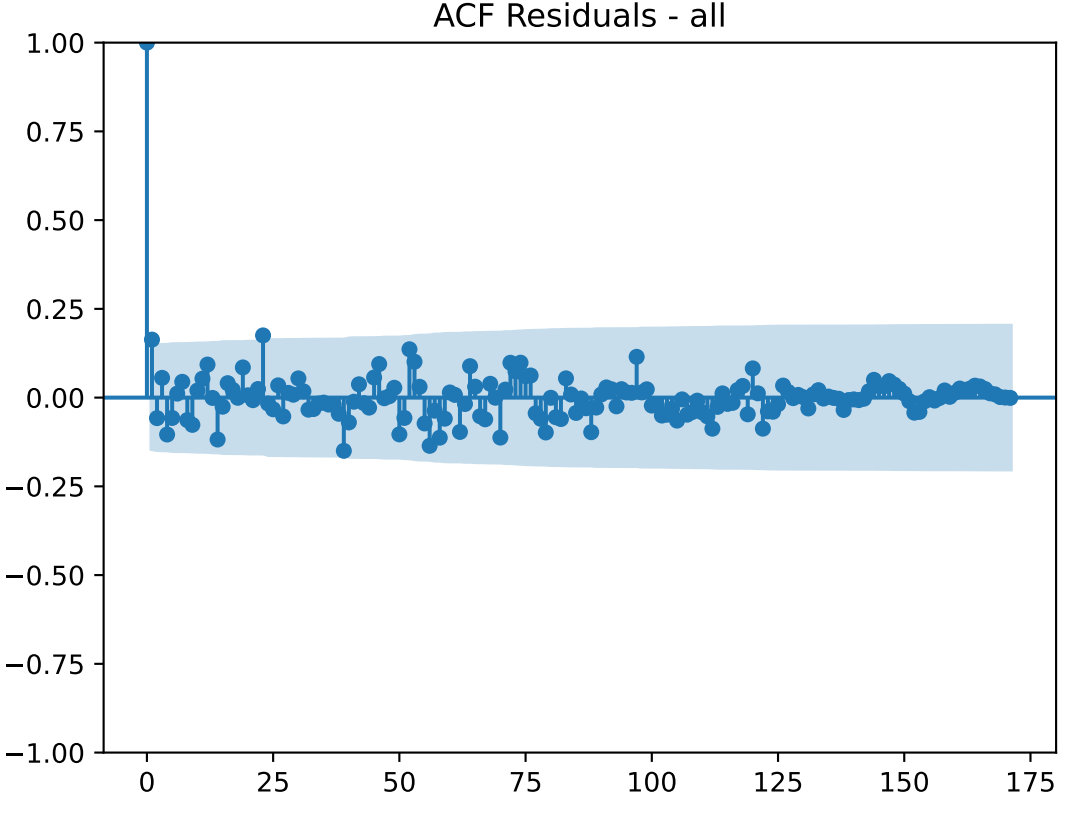

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

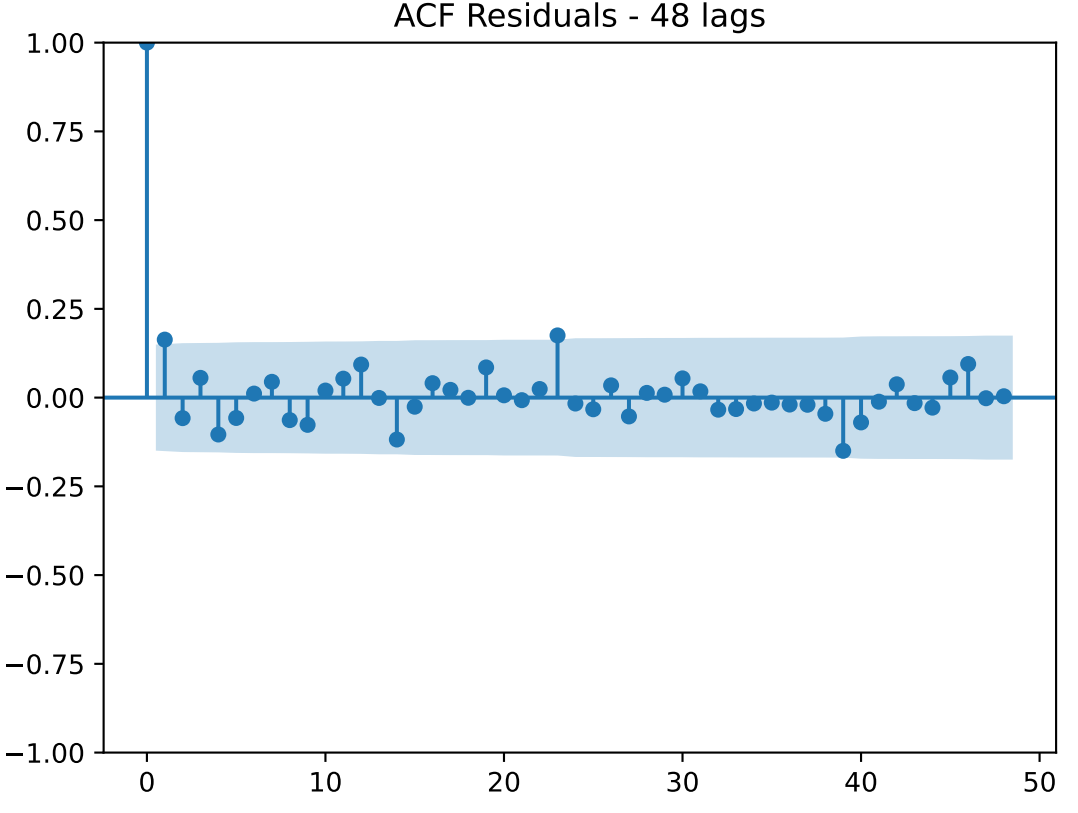

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

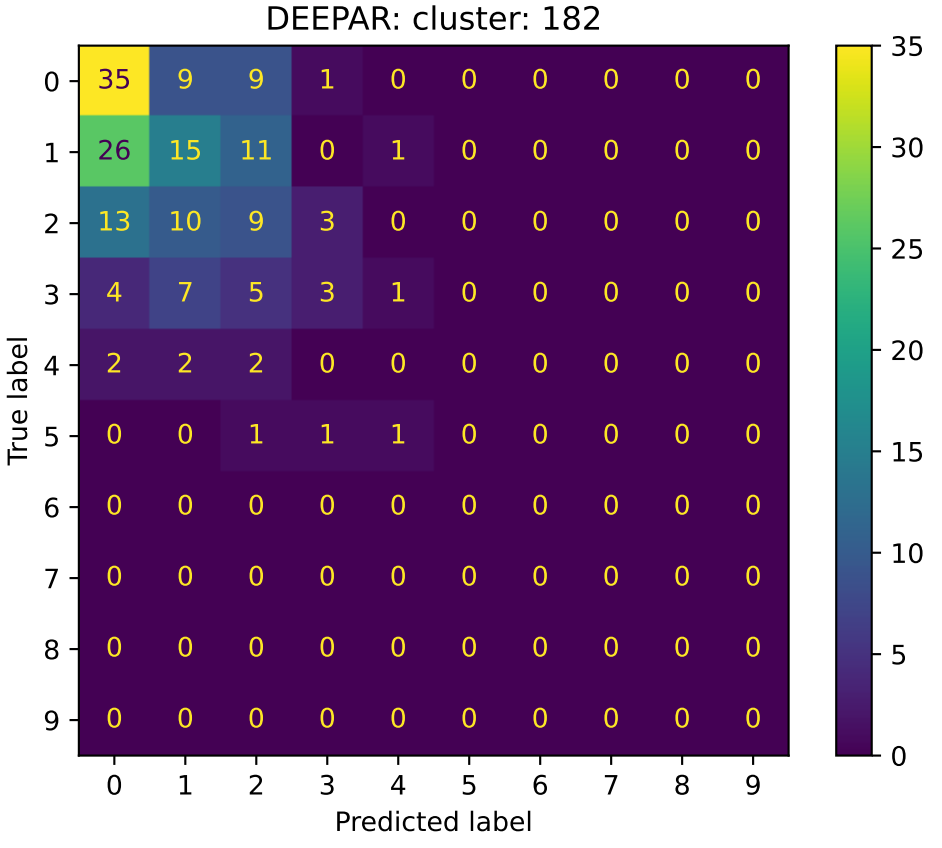

DEEPAR: cluster: 181
True label
Predicted label
0 1 2 3 4 5 6
31 11 6 3 0 0 0
22 27 4 1 0 0 0
6 11 6 2 0 0 0
6 12 3 2 0 0 0
1 3 6 3 1 0 0
0 0 1 0 0 0 0
0 0 1 0 2 0 0
30 25 20 15 10 5 0

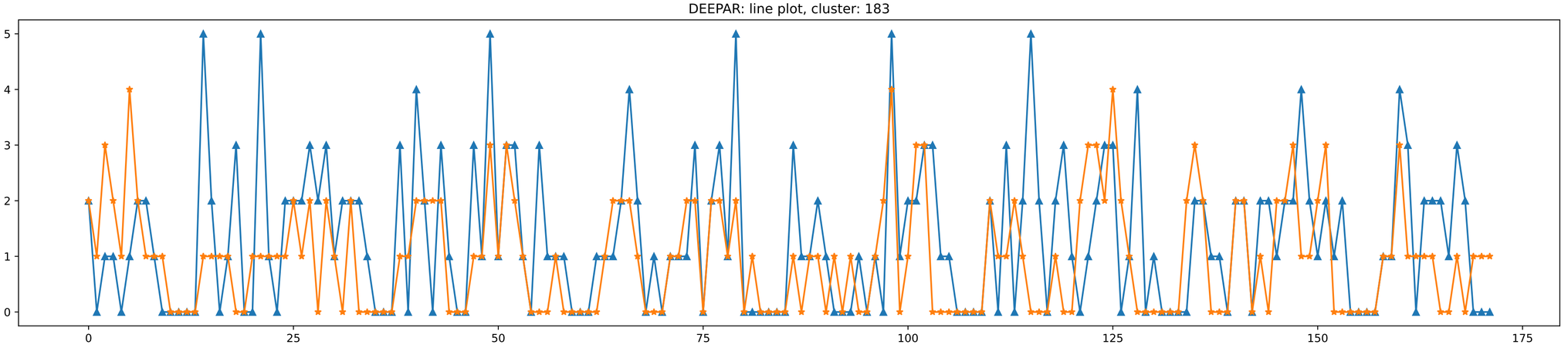

DEEPAR: line plot, cluster: 182
10
8
6
4
2
0
0
25
50
75
100
125
150
175

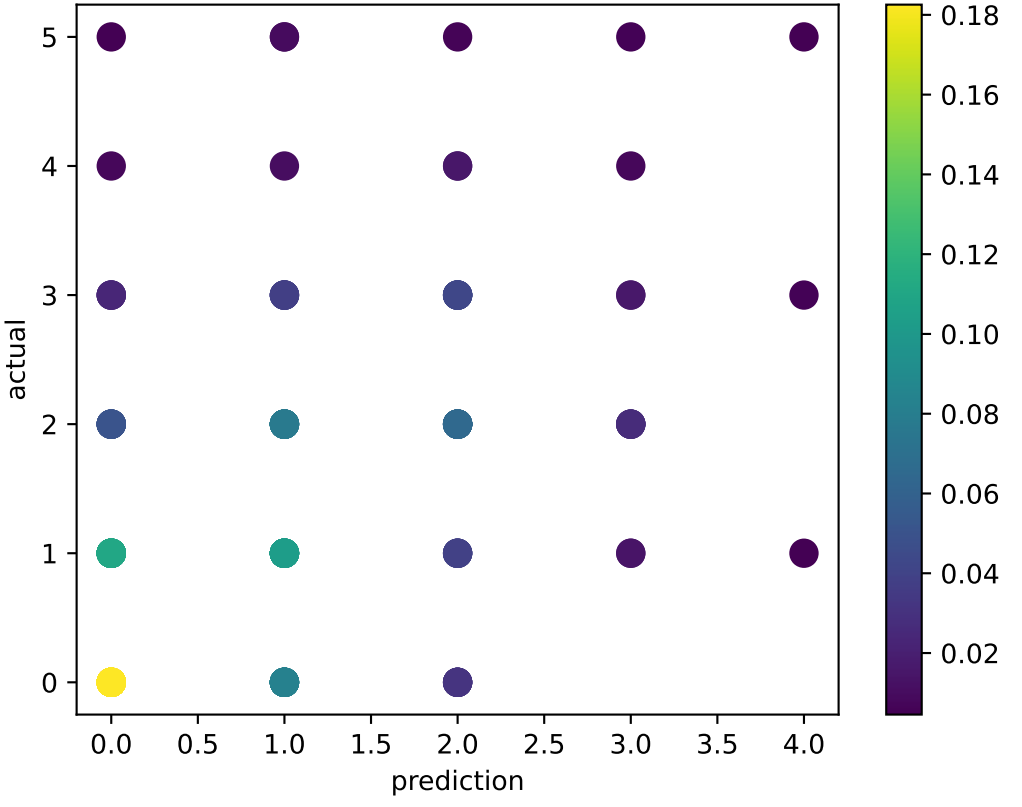

actual
prediction
0
2
4
6
8
10
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02

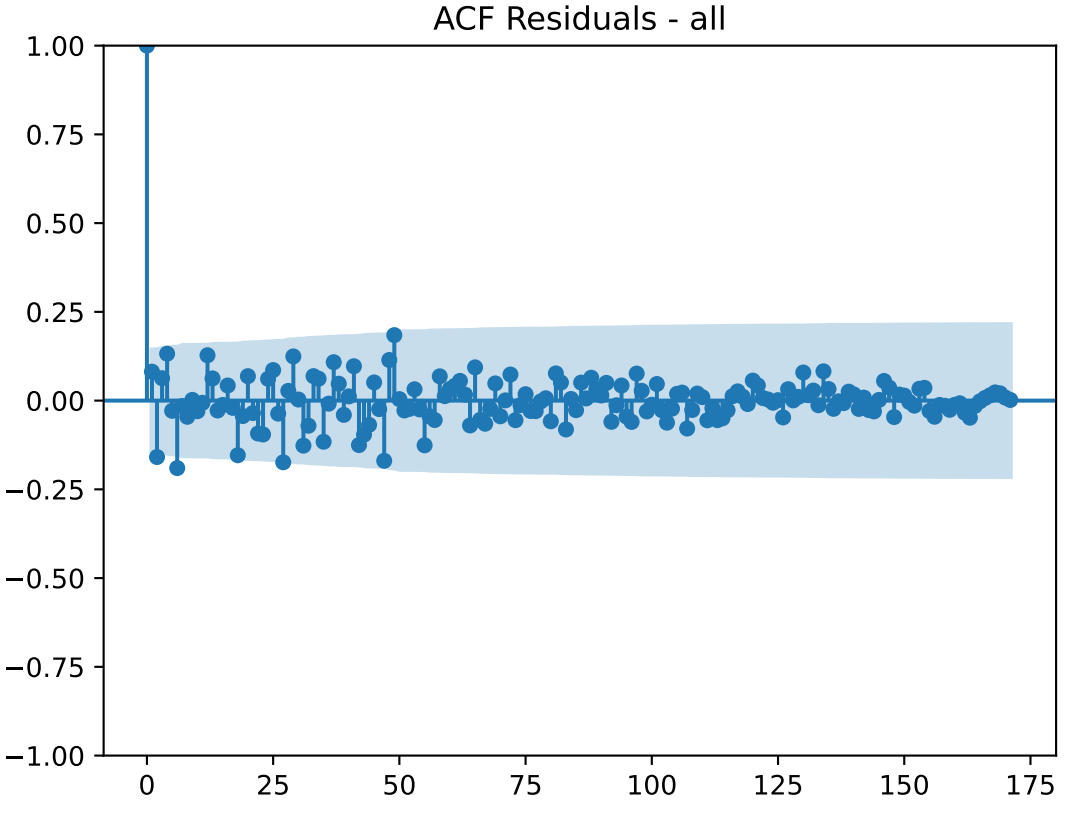

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

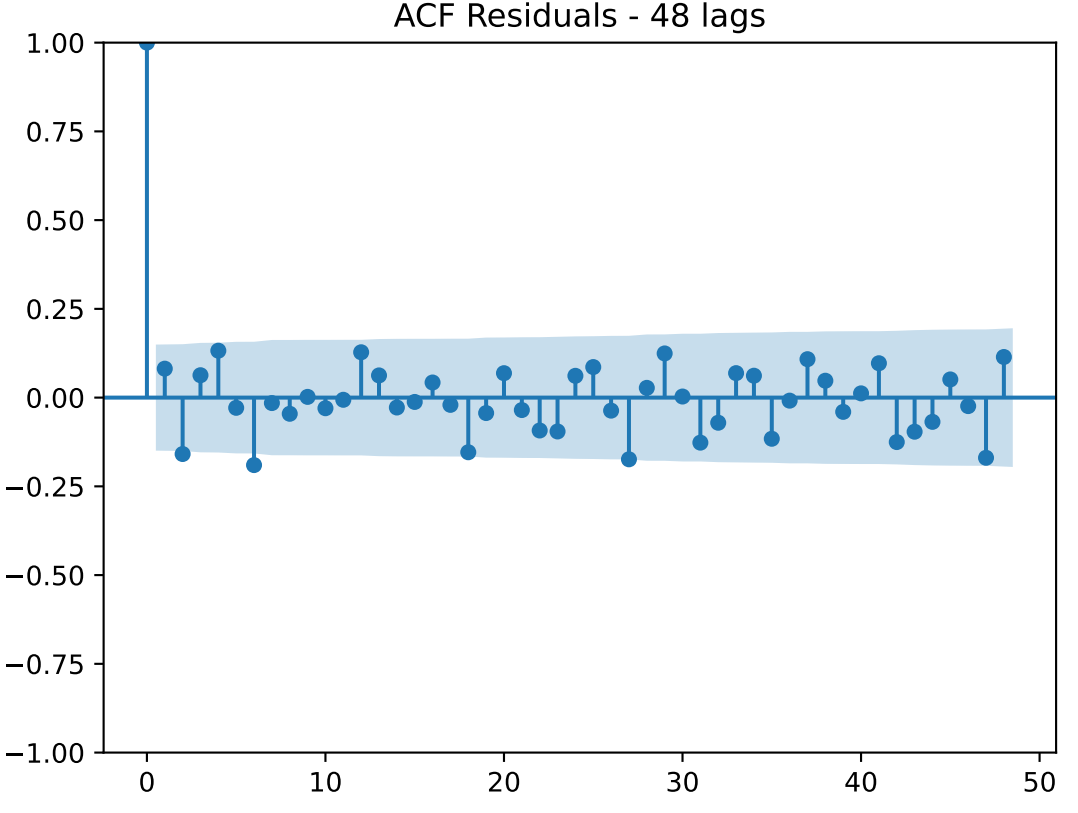

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

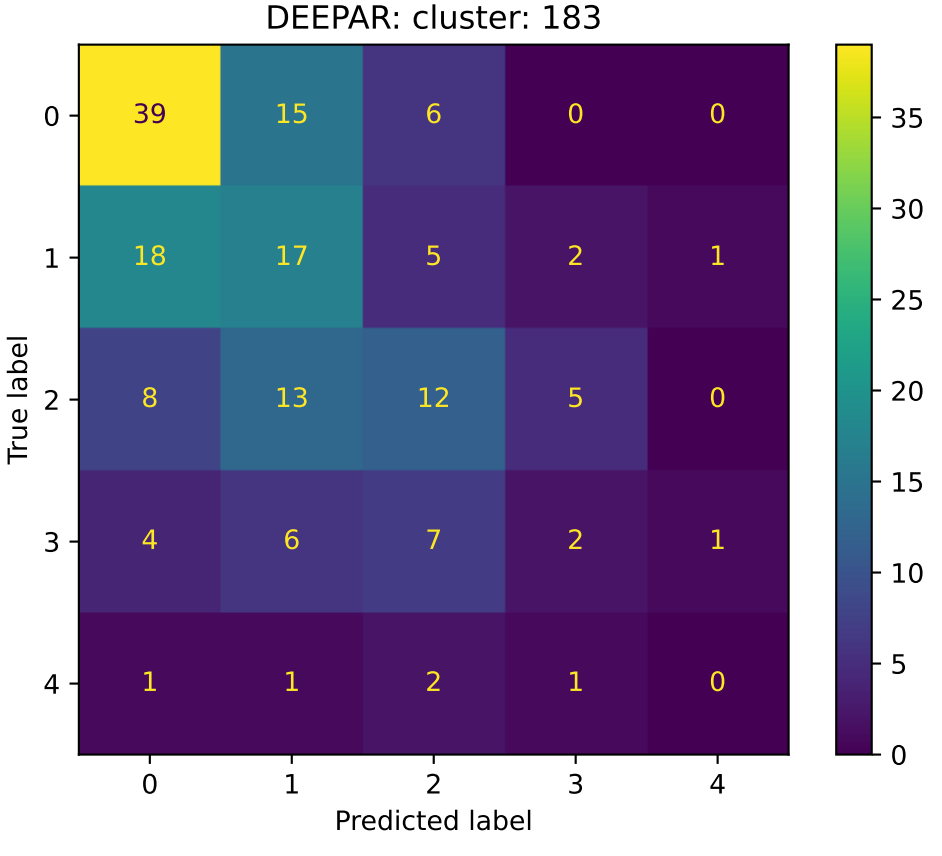

DEEPAR: cluster: 182
True label
Predicted label
0 1 2 3 4 5 6 7 8 9
35 9 9 1 0 0 0 0 0 0
26 15 11 0 1 0 0 0 0 0
13 10 9 3 0 0 0 0 0 0
4 7 5 3 1 0 0 0 0 0
2 2 2 0 0 0 0 0 0 0
0 0 1 1 1 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0
35 30 25 20 15 10 5 0

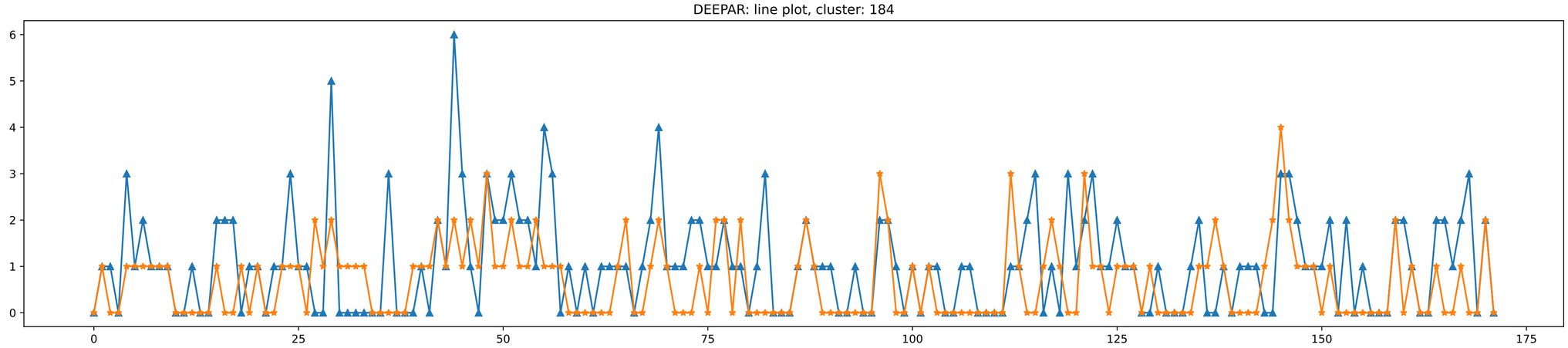

DEEPAR: line plot, cluster: 183
0
1
2
3
4
5
0
25
50
75
100
125
150
175

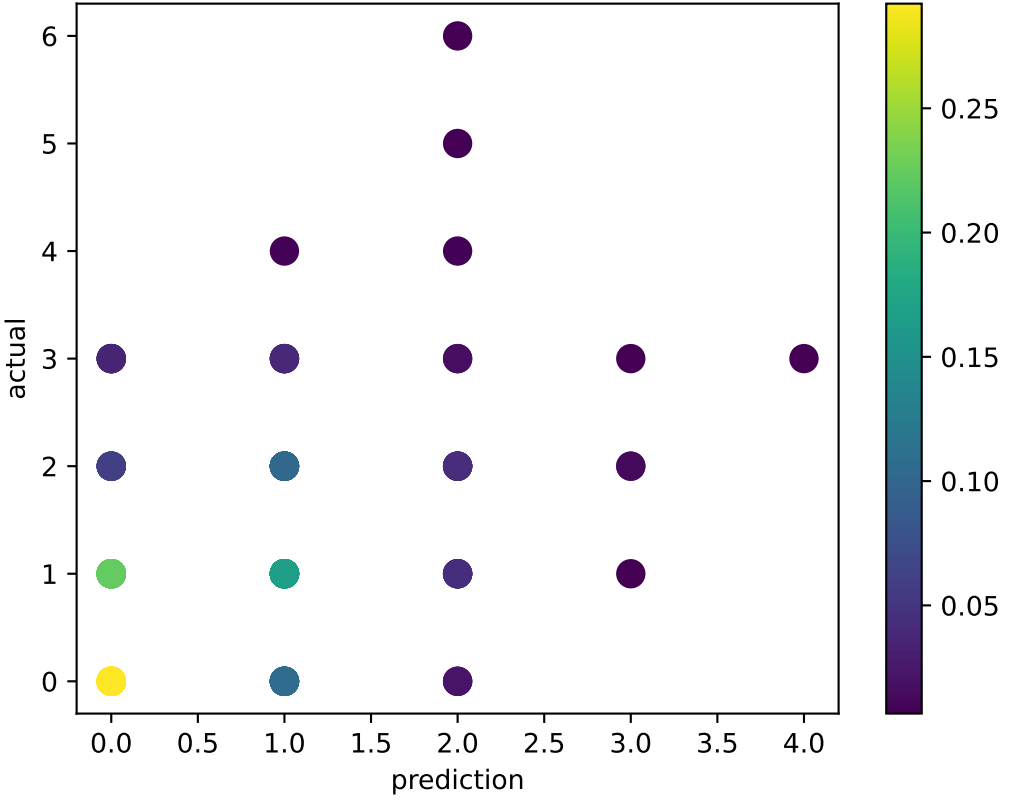

actual
prediction
0
1
2
3
4
5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02

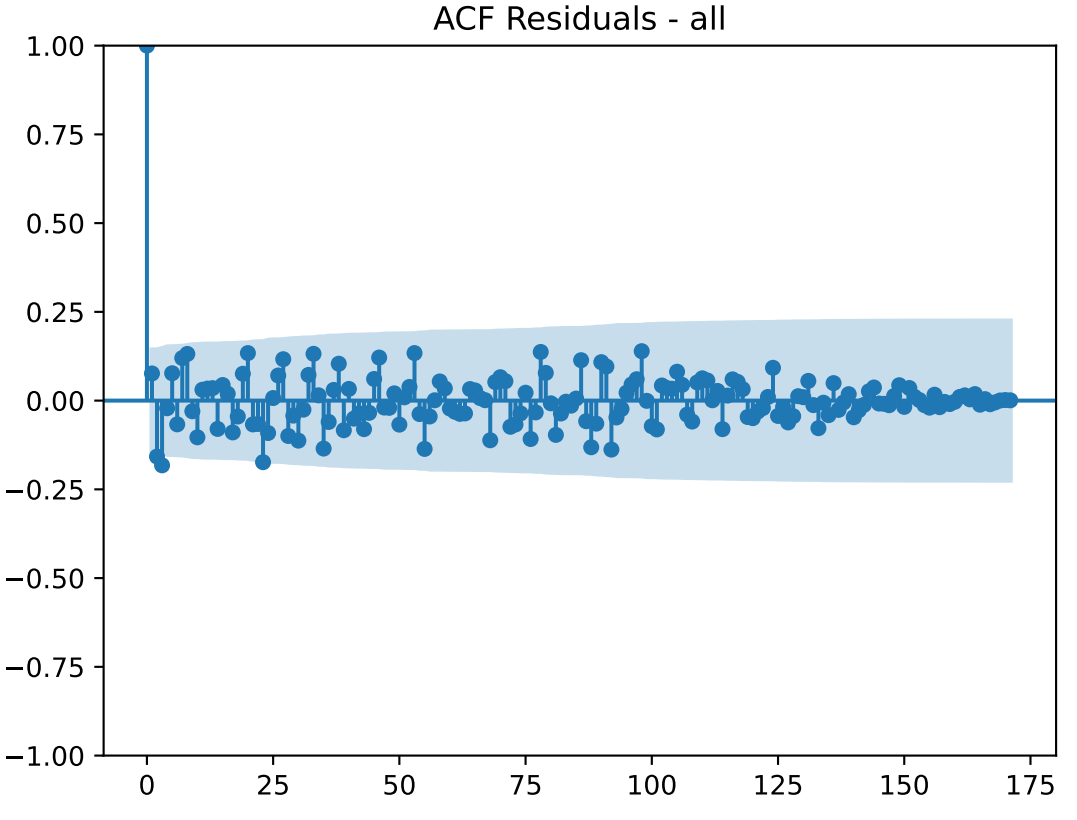

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

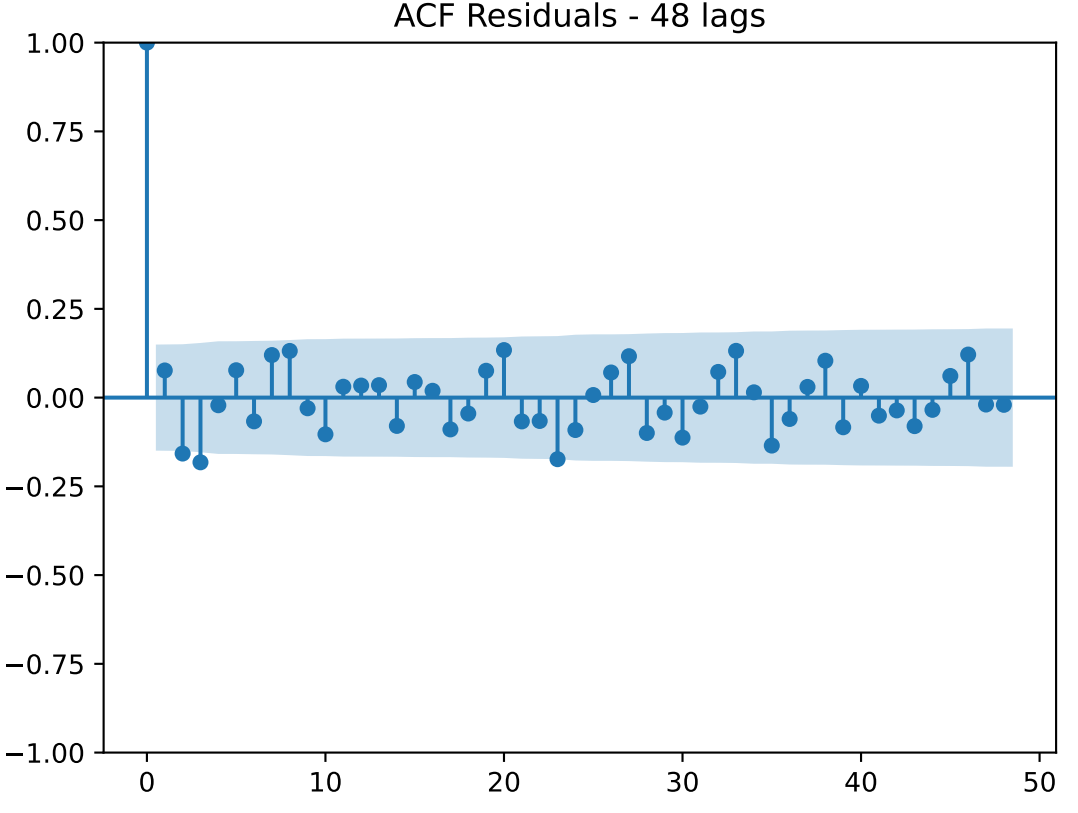

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

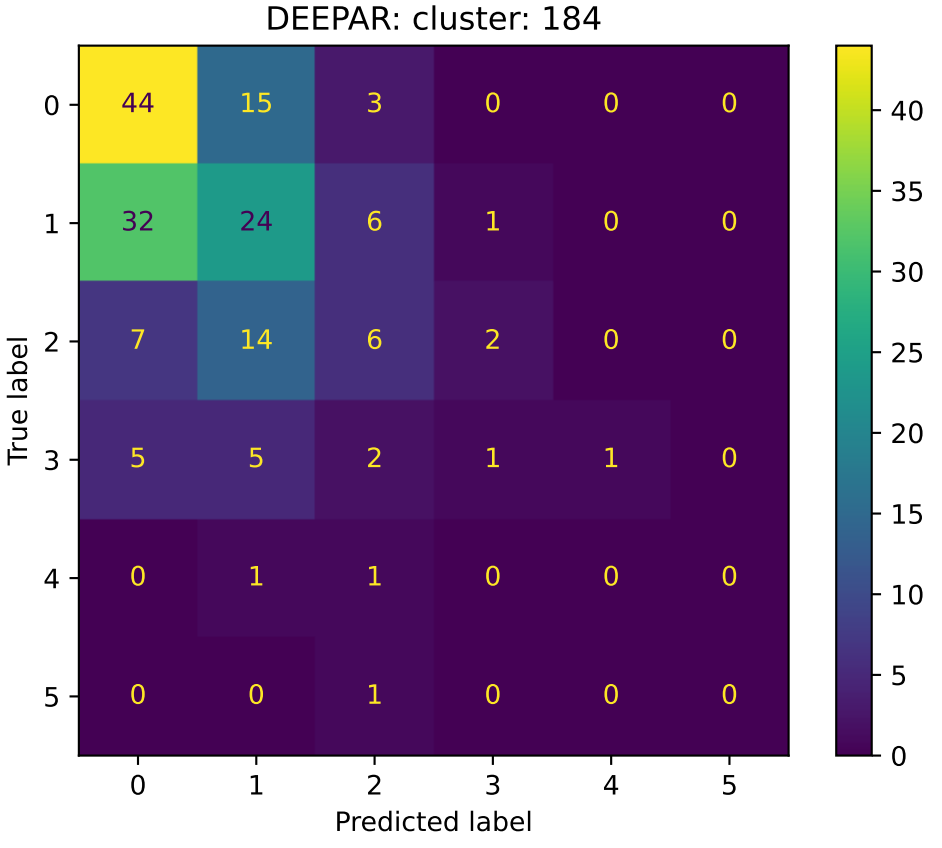

DEEPAR: cluster: 183
True label
Predicted label
0
1
2
3
4
39
15
6
0
0
18
17
5
2
1
8
13
12
5
0
4
6
7
2
1
1
1
2
1
0
35
30
25
20
15
10
5
0

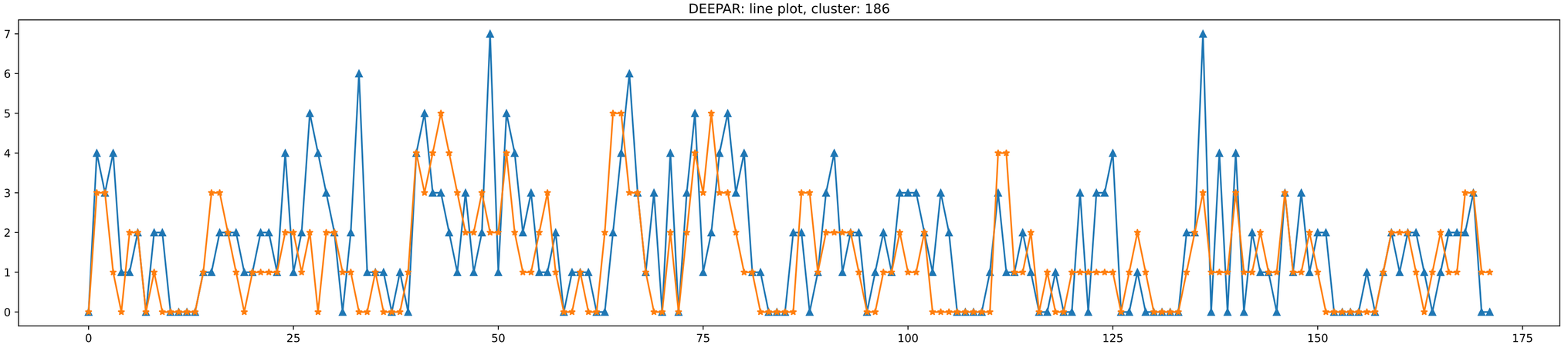

DEEPAR: line plot, cluster: 184
0
1
2
3
4
5
6
0
25
50
75
100
125
150
175

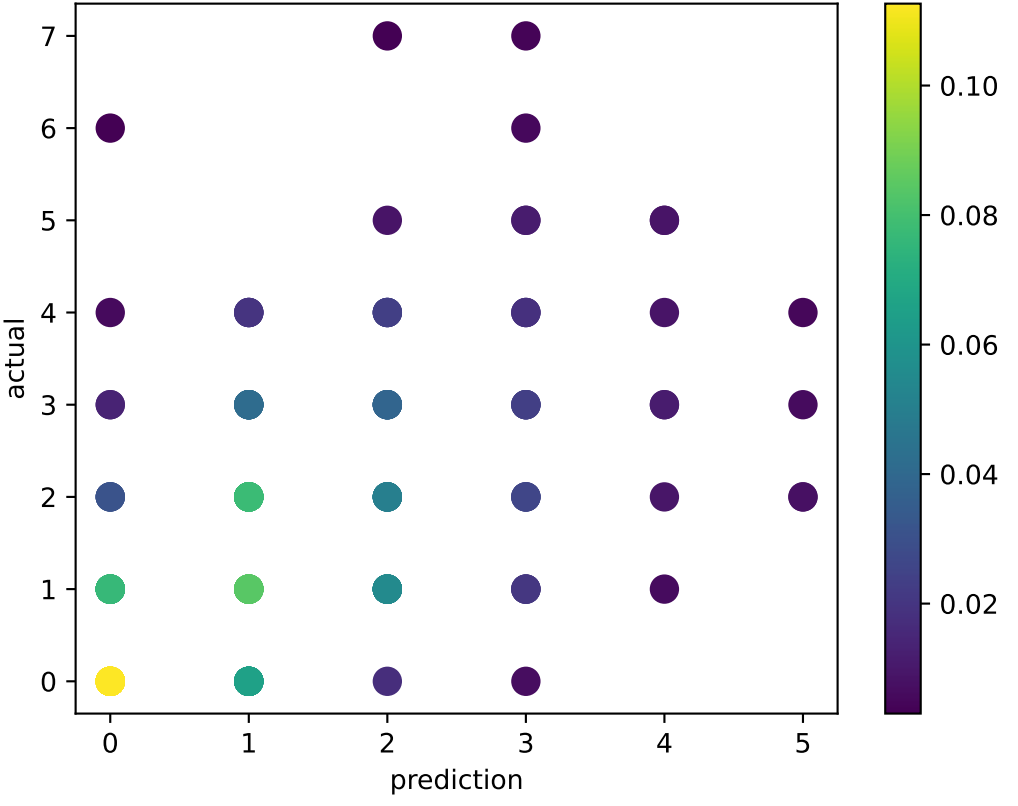

actual
prediction
0
1
2
3
4
5
6
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.25
0.20
0.15
0.10
0.05

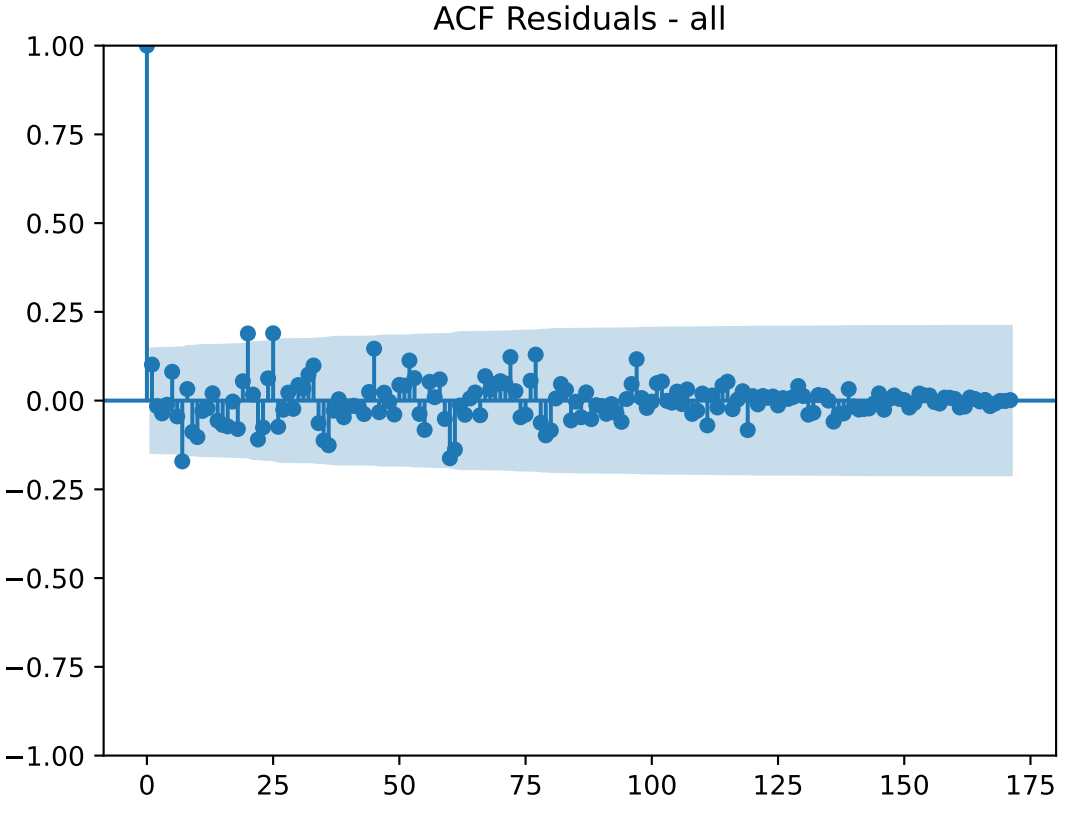

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

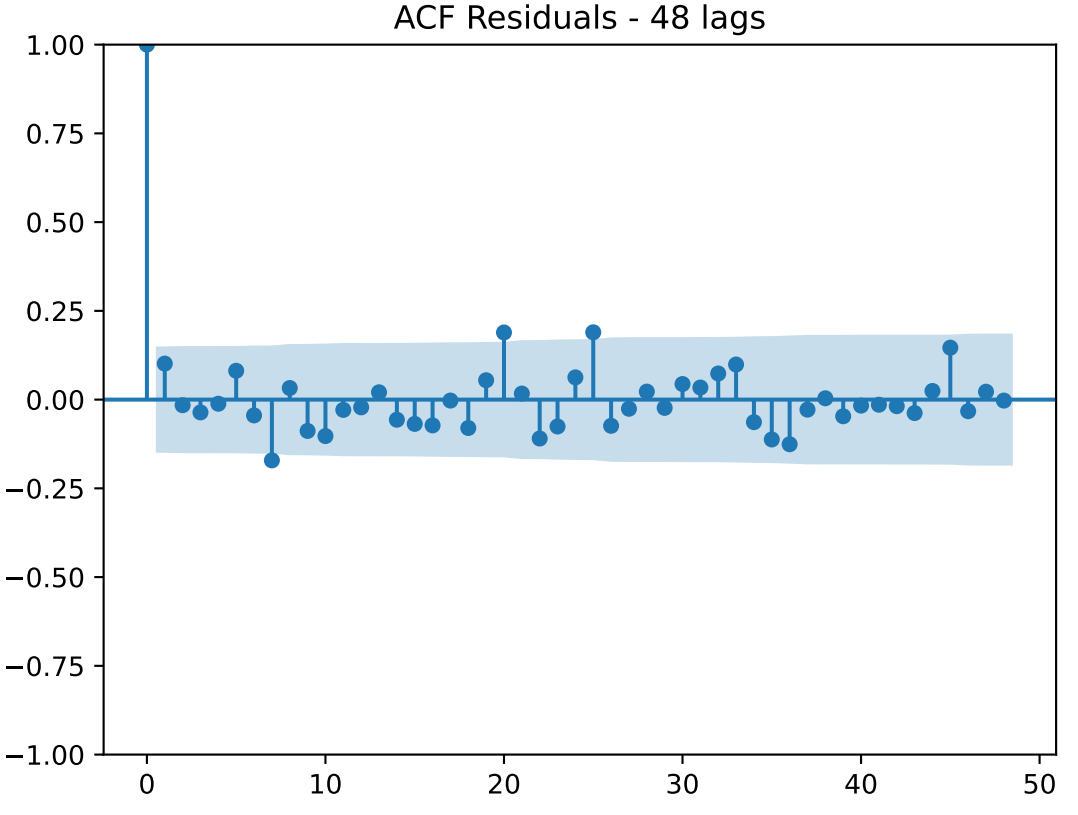

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

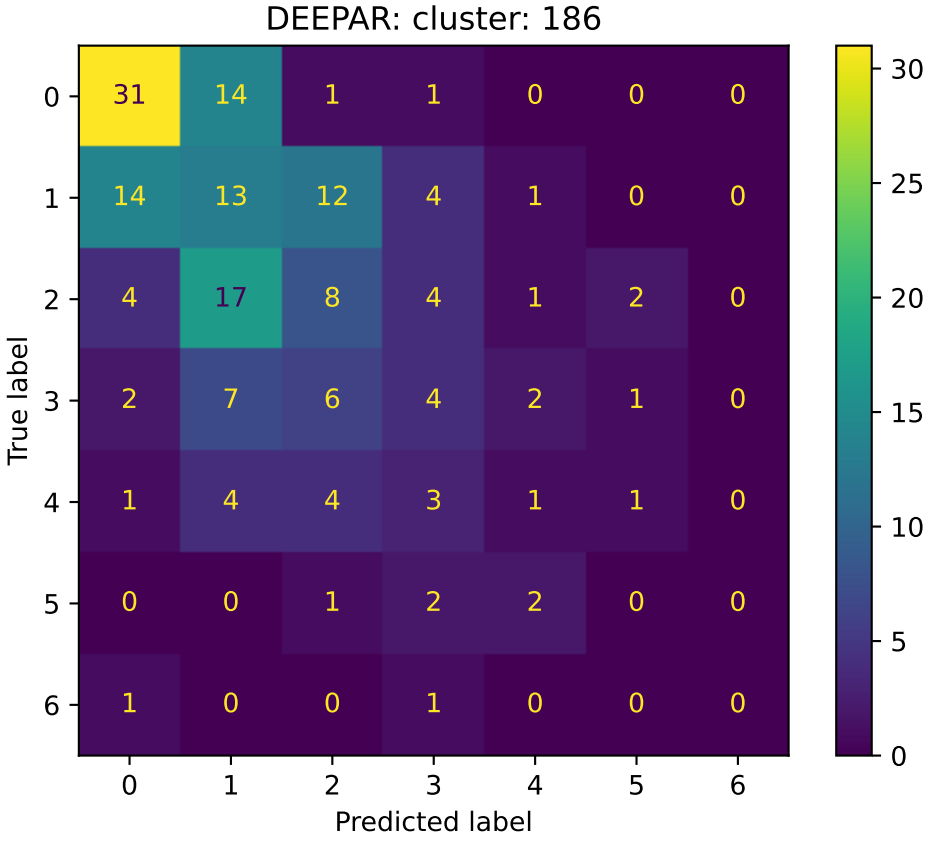

DEEPAR: cluster: 184
True label
Predicted label
0
1
2
3
4
5
44
15
3
0
0
0
32
24
6
1
0
0
7
14
6
2
0
0
5
5
2
1
1
0
0
1
1
0
0
0
0
0
1
0
0
0
40
35
30
25
20
15
10
5
0

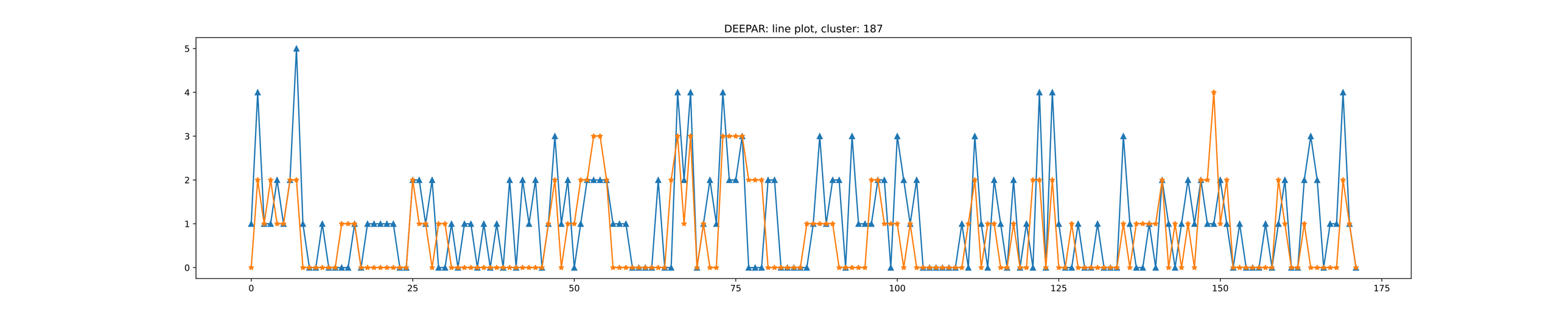

DEEPAR: line plot, cluster: 186
0
1
2
3
4
5
6
7
0
25
50
75
100
125
150
175

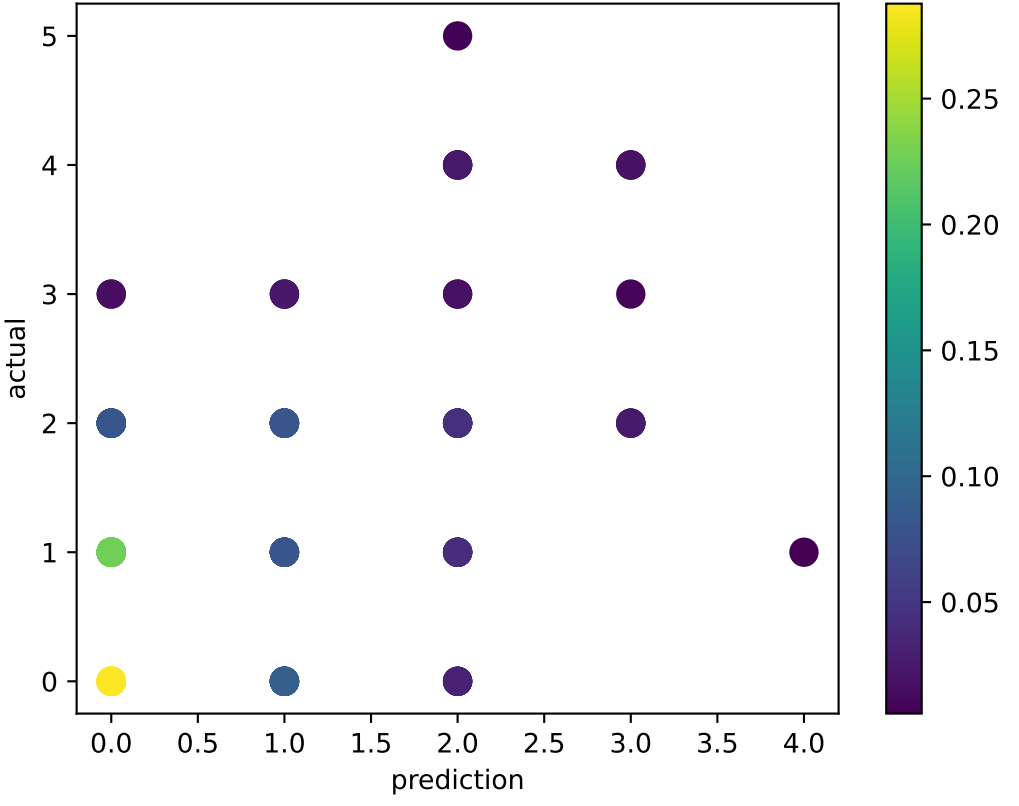

actual
prediction
0
1
2
3
4
5
6
7
0.10
0.08
0.06
0.04
0.02

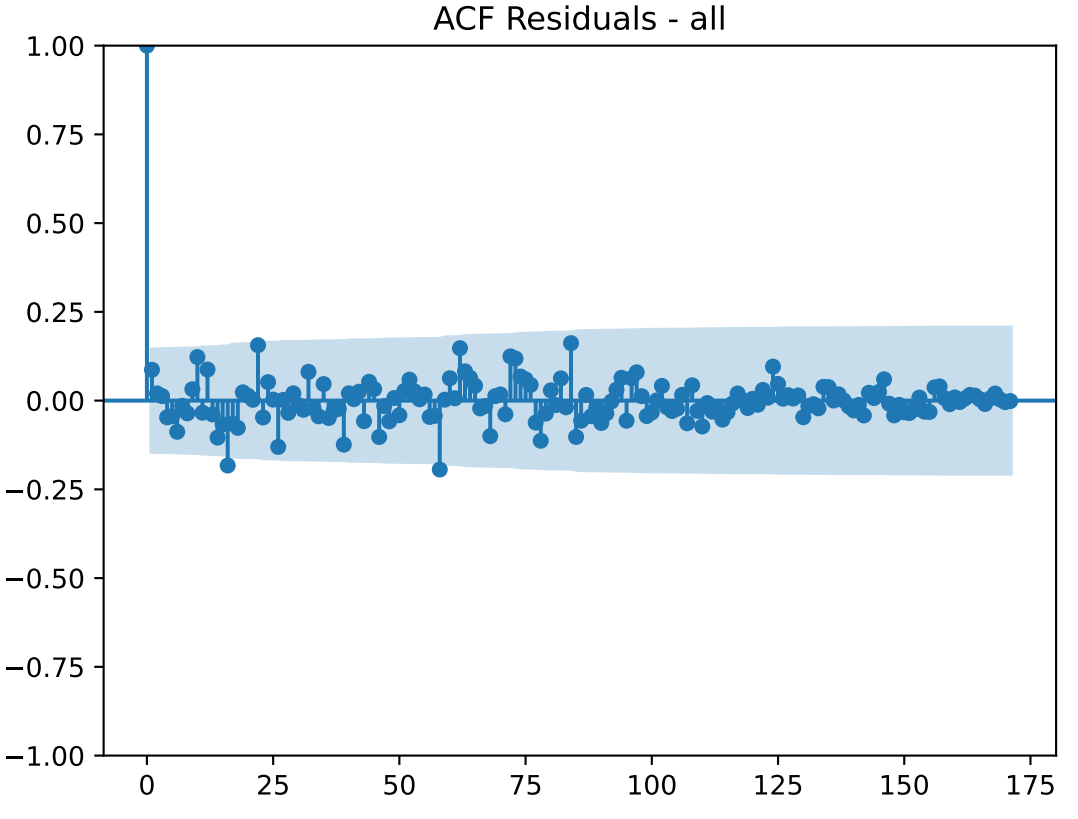

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

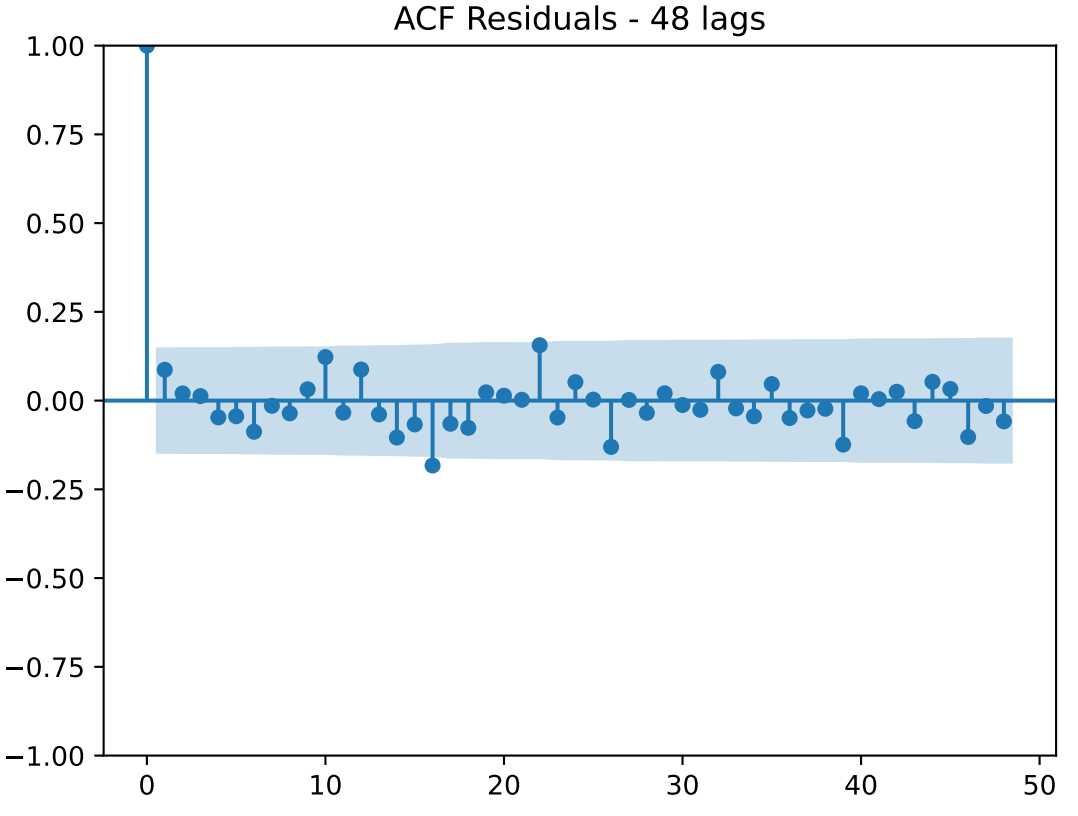

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

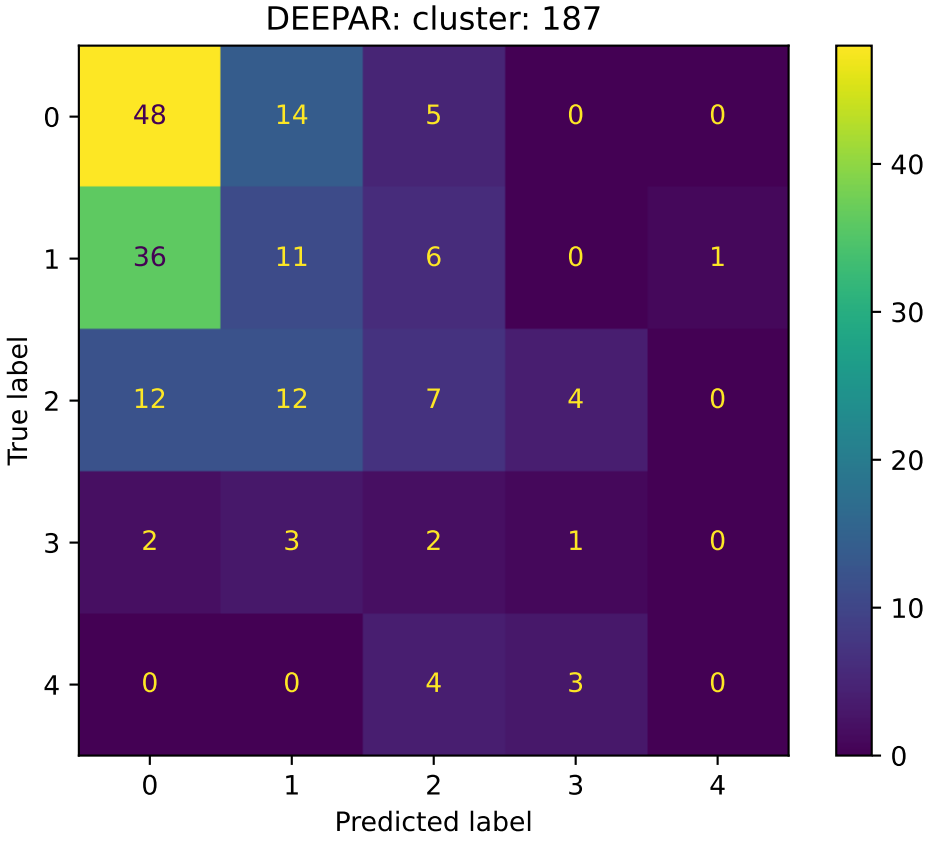

DEEPAR: cluster: 186
True label
Predicted label
0 1 2 3 4 5 6
31 14 1 1 0 0 0
14 13 12 4 1 0 0
4 17 8 4 1 2 0
2 7 6 4 2 1 0
1 4 4 3 1 1 0
0 0 1 2 2 0 0
1 0 0 1 0 0 0
30 25 20 15 10 5 0

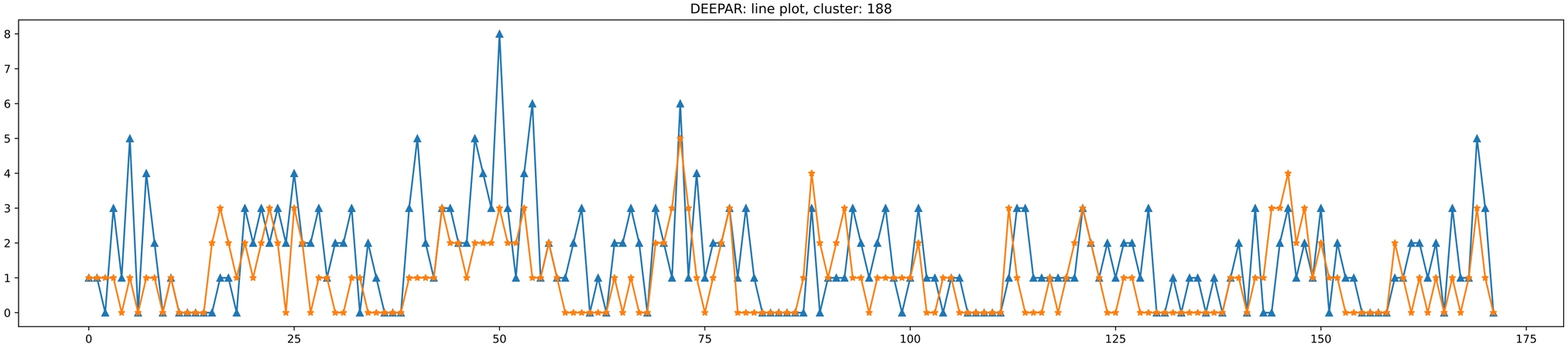

DEEPAR: line plot, cluster: 187
0
1
2
3
4
5
0
25
50
75
100
125
150
175

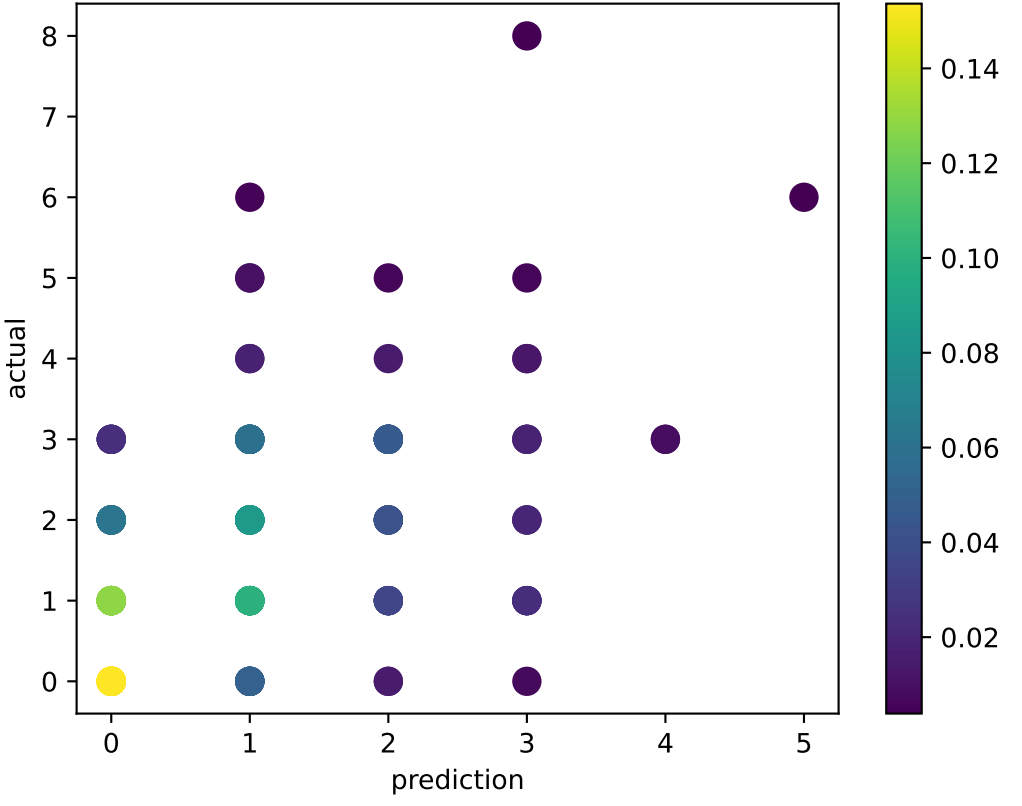

actual
prediction
0
1
2
3
4
5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.25
0.20
0.15
0.10
0.05

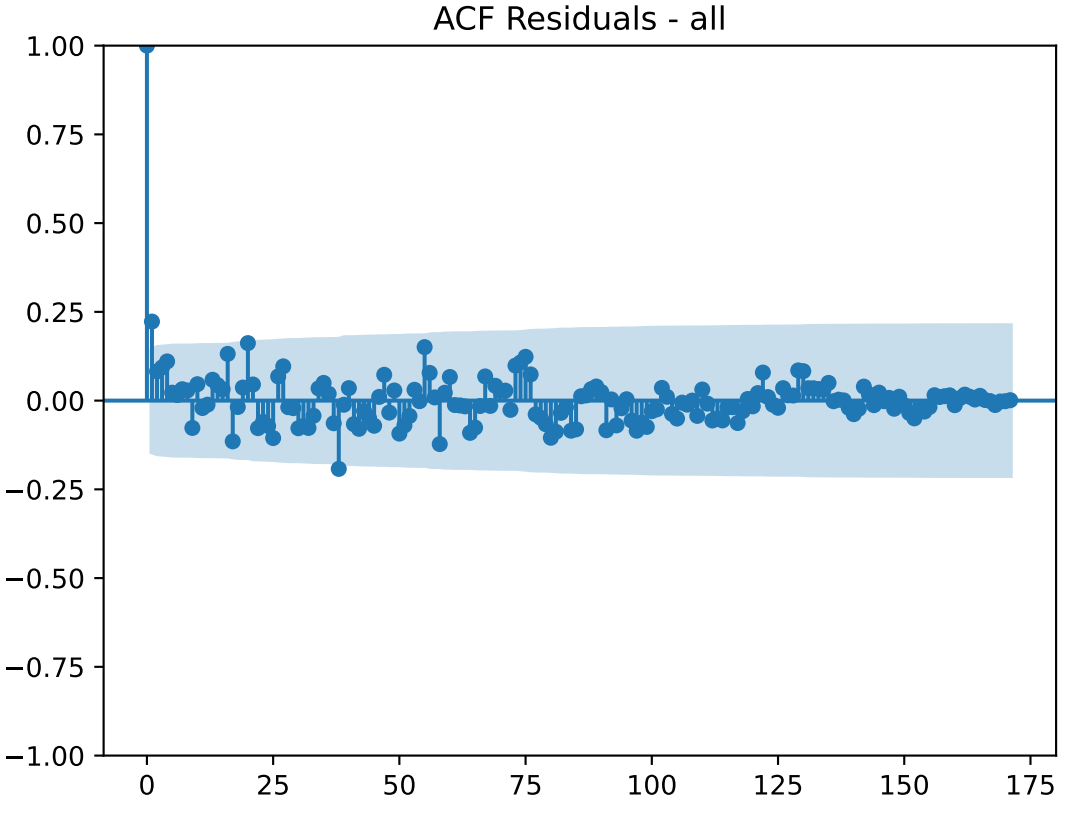

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

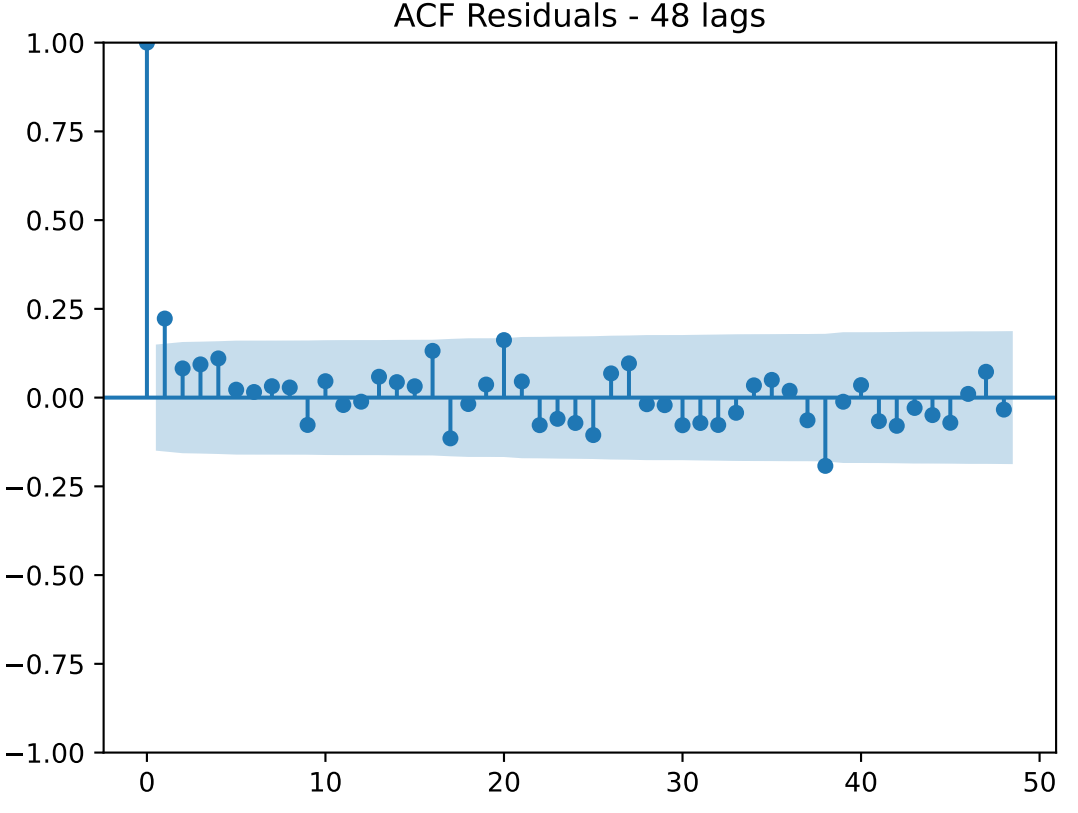

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

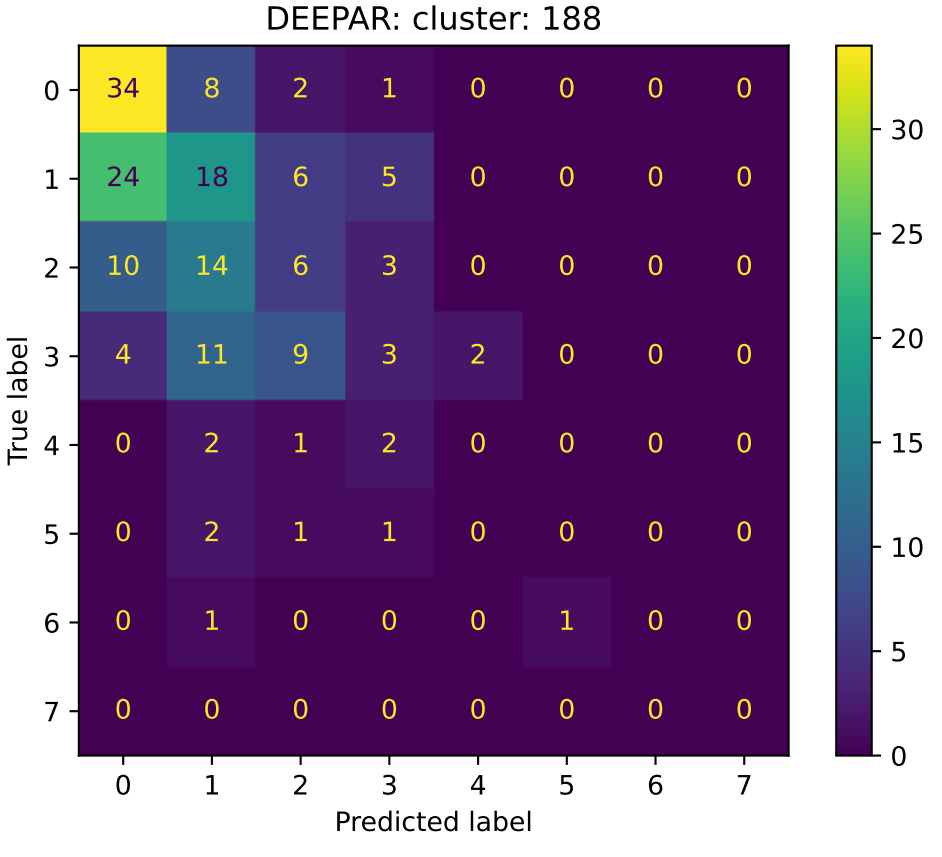

DEEPAR: cluster: 187
True label
Predicted label
0
1
2
3
4
48
14
5
0
0
36
11
6
0
1
12
12
7
4
0
2
3
2
1
0
0
0
4
3
0
40
30
20
10
0

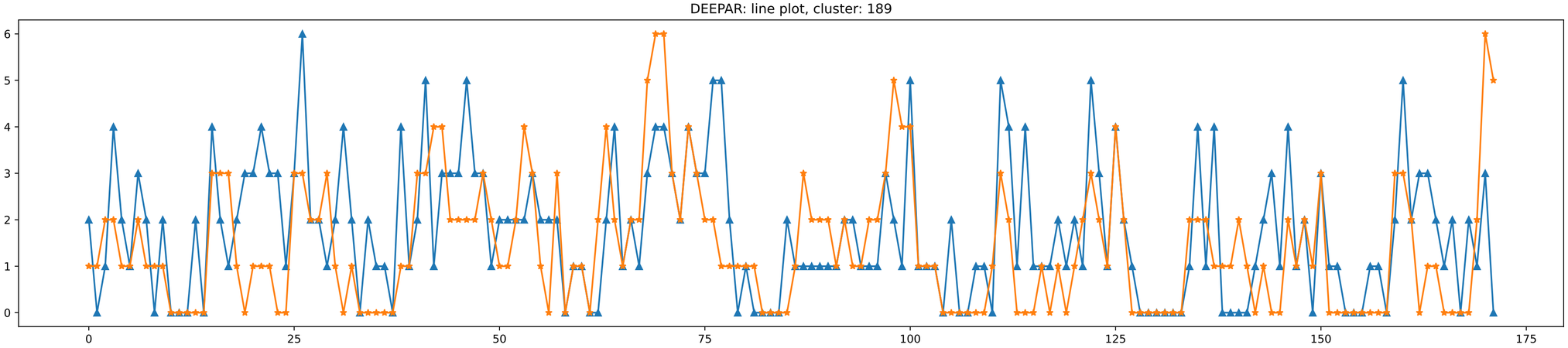

DEEPAR: line plot, cluster: 188
0
1
2
3
4
5
6
7
8
0
25
50
75
100
125
150
175

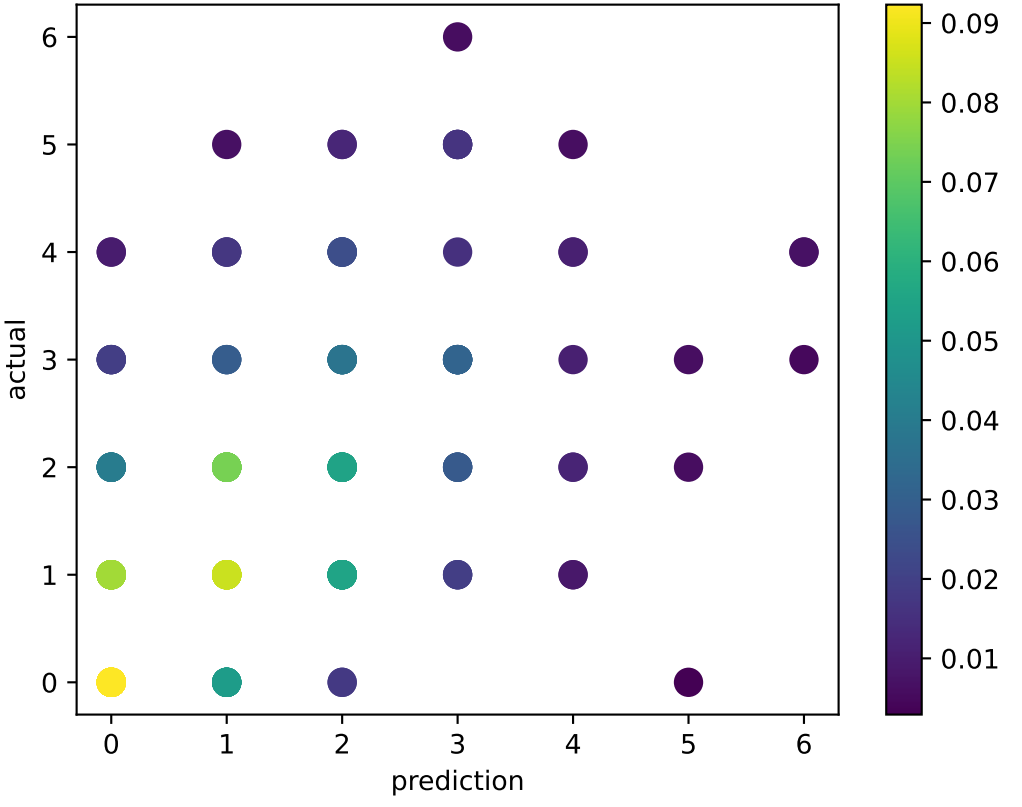

actual
prediction
0
1
2
3
4
5
6
7
8
0.14
0.12
0.10
0.08
0.06
0.04
0.02

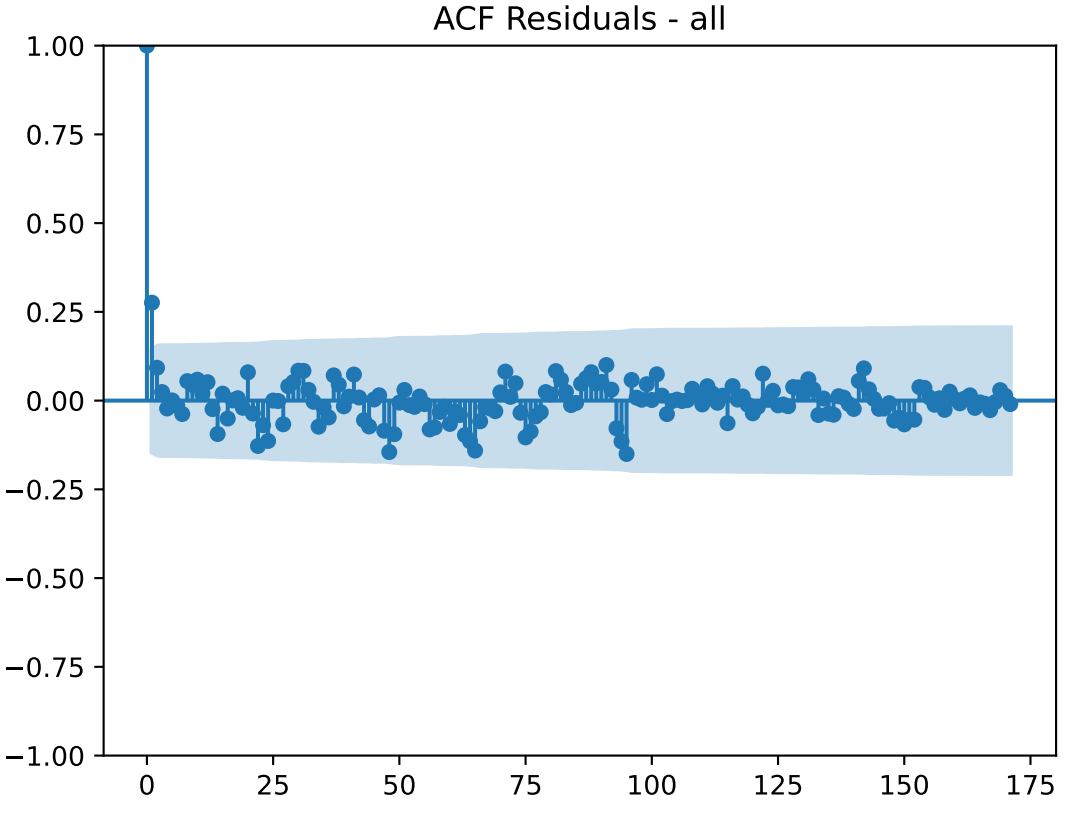

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

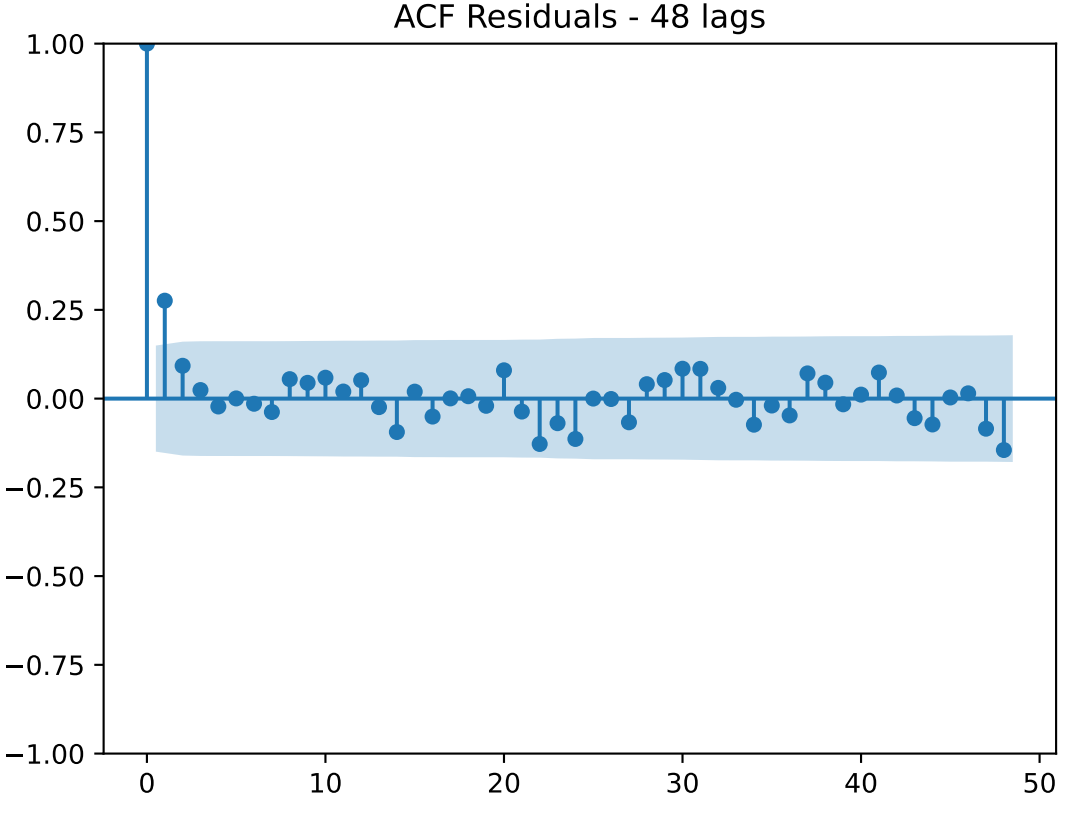

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

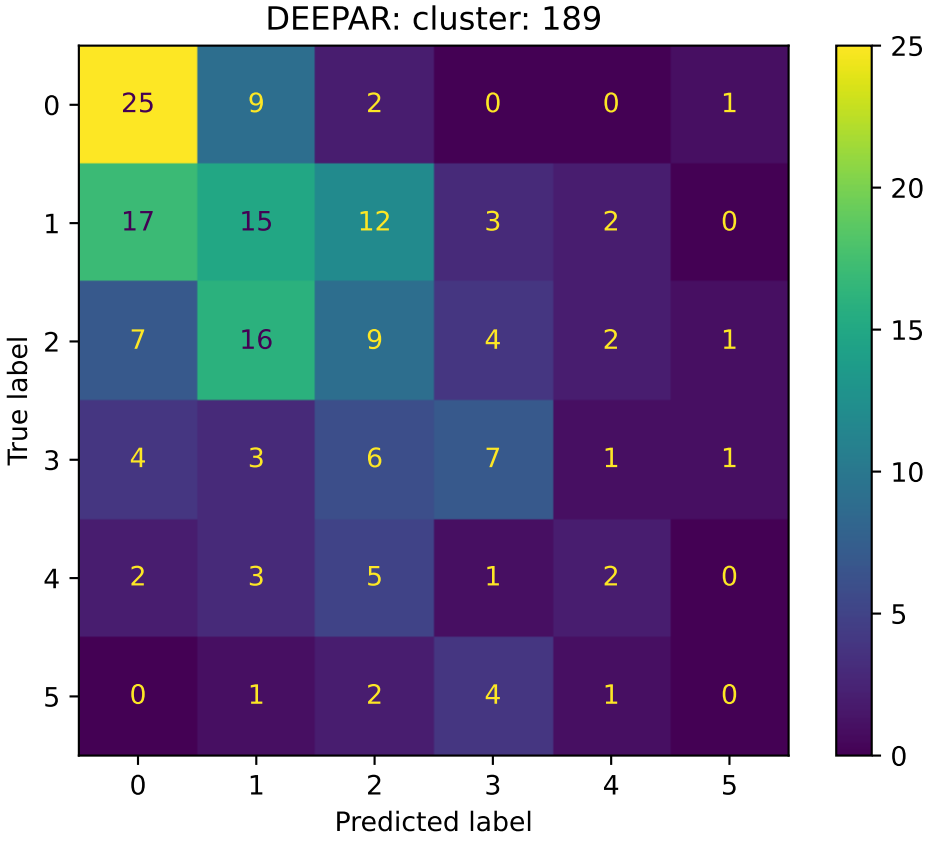

DEEPAR: cluster: 188
True label
Predicted label
0 34 8 2 1 0 0 0 0
1 24 18 6 5 0 0 0 0
2 10 14 6 3 0 0 0 0
3 4 11 9 3 2 0 0 0
4 0 2 1 2 0 0 0 0
5 0 2 1 1 0 0 0 0
6 0 1 0 0 0 1 0 0
7 0 0 0 0 0 0 0 0
0 1 2 3 4 5 6 7
30 25 20 15 10 5 0

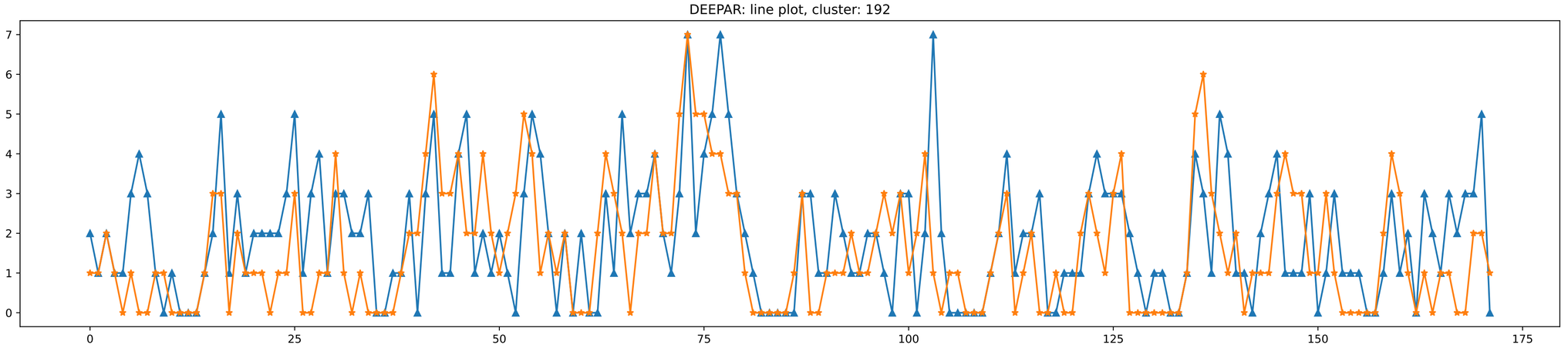

DEEPAR: line plot, cluster: 189
0
1
2
3
4
5
6
0
25
50
75
100
125
150
175

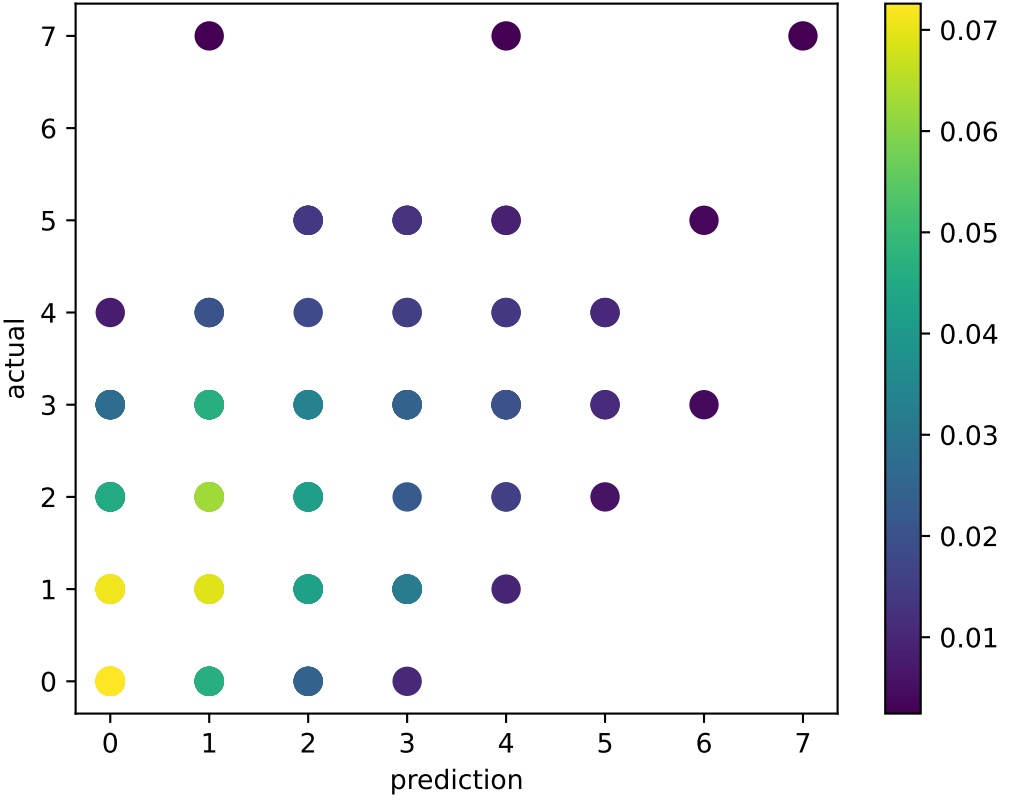

actual
prediction
0
1
2
3
4
5
6
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01

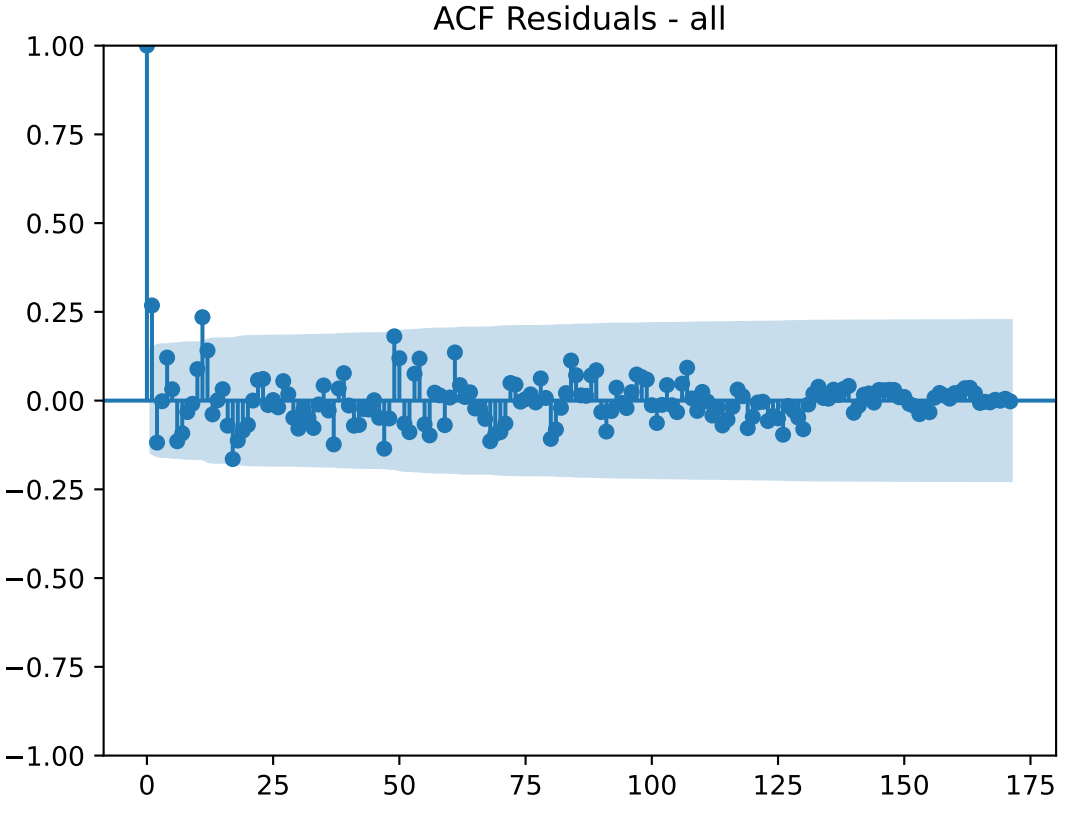

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

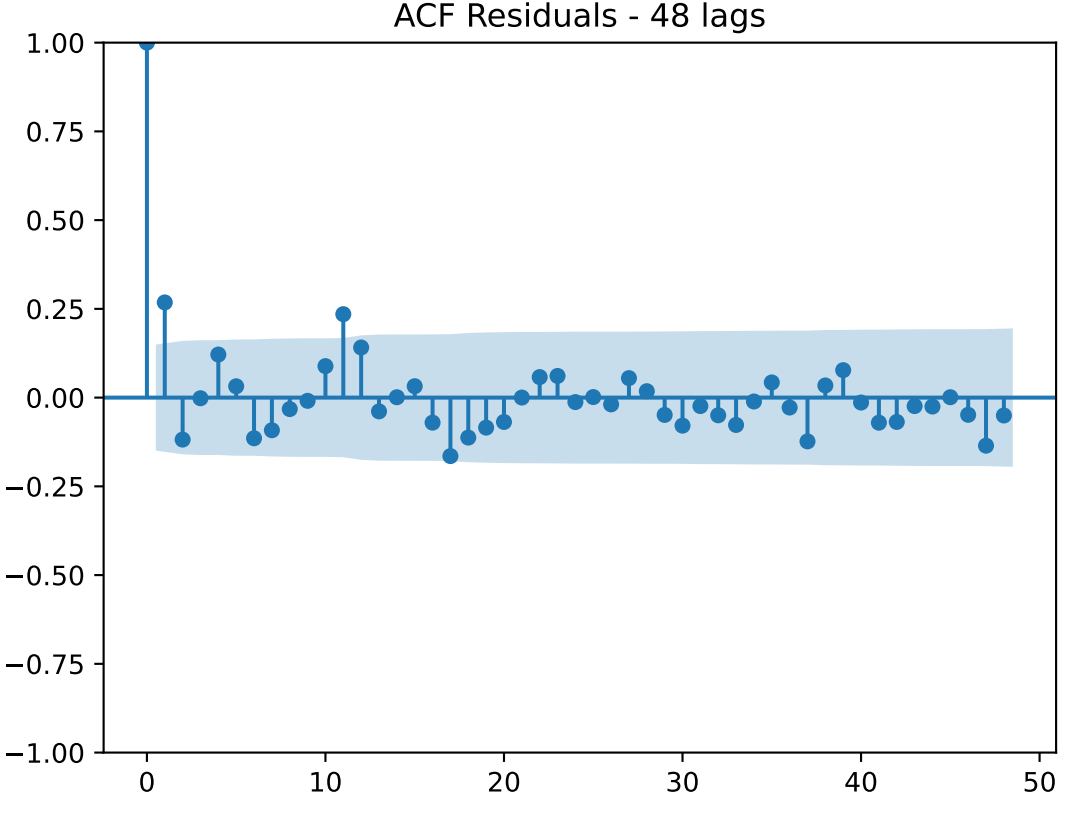

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

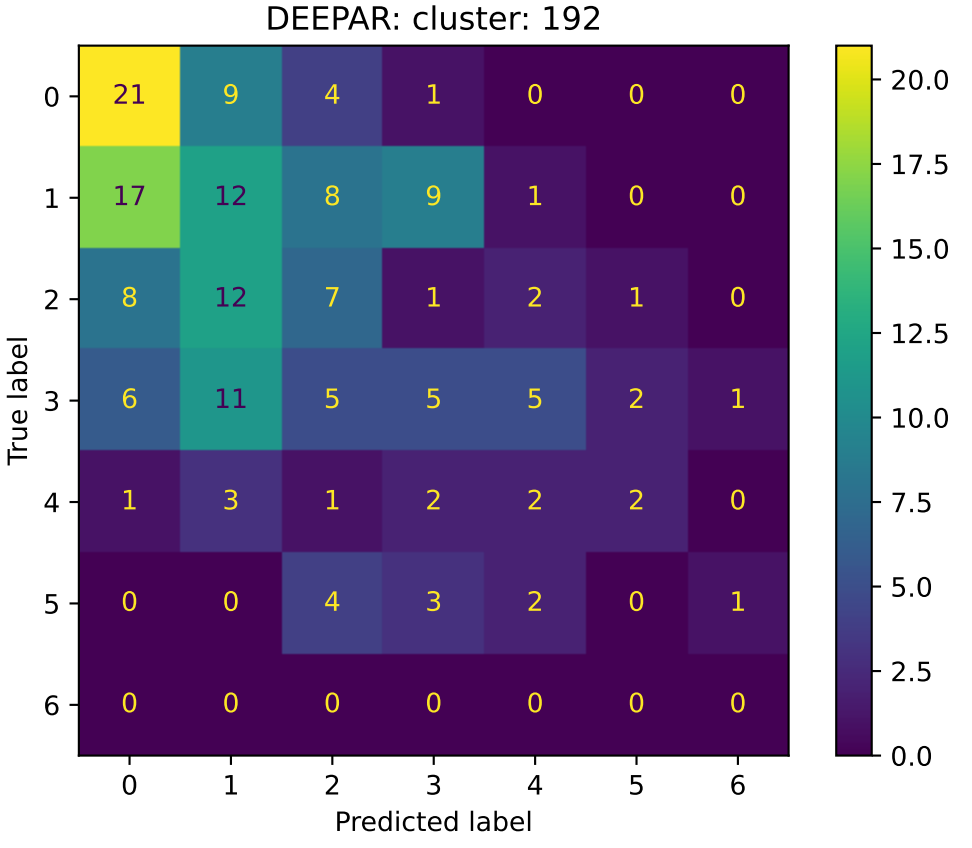

DEEPAR: cluster: 189
True label
Predicted label
0
1
2
3
4
5
25
9
2
0
0
1
17
15
12
3
2
0
7
16
9
4
2
1
4
3
6
7
1
1
2
3
5
1
2
0
0
1
2
4
1
0
25
20
15
10
5
0

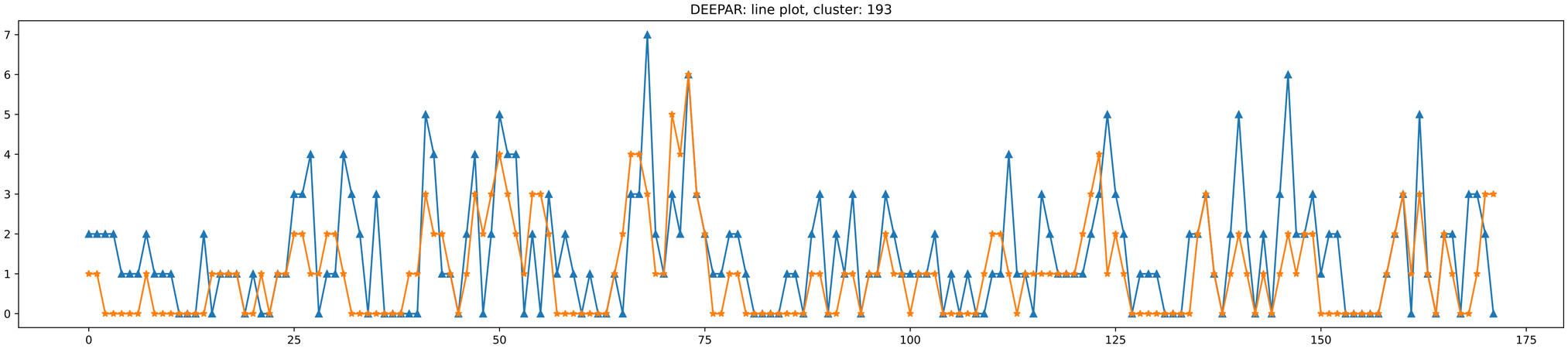

DEEPAR: line plot, cluster: 192
0
1
2
3
4
5
6
7
0
25
50
75
100
125
150
175

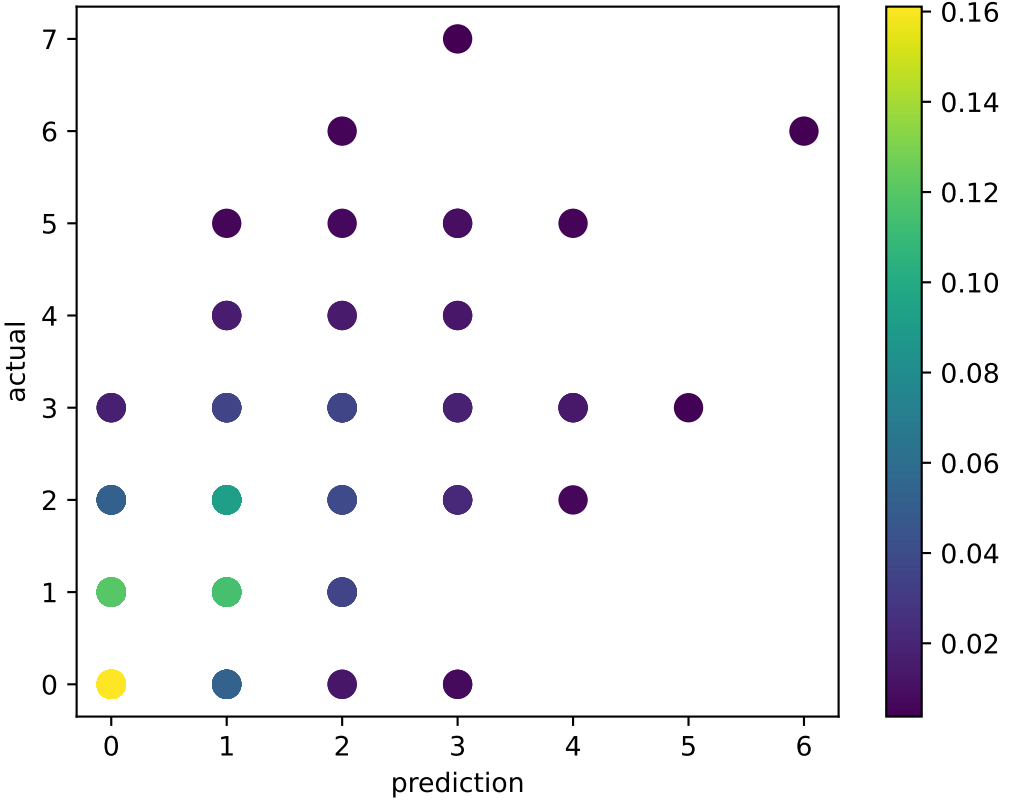

actual
prediction
0
1
2
3
4
5
6
7
0.07
0.06
0.05
0.04
0.03
0.02
0.01

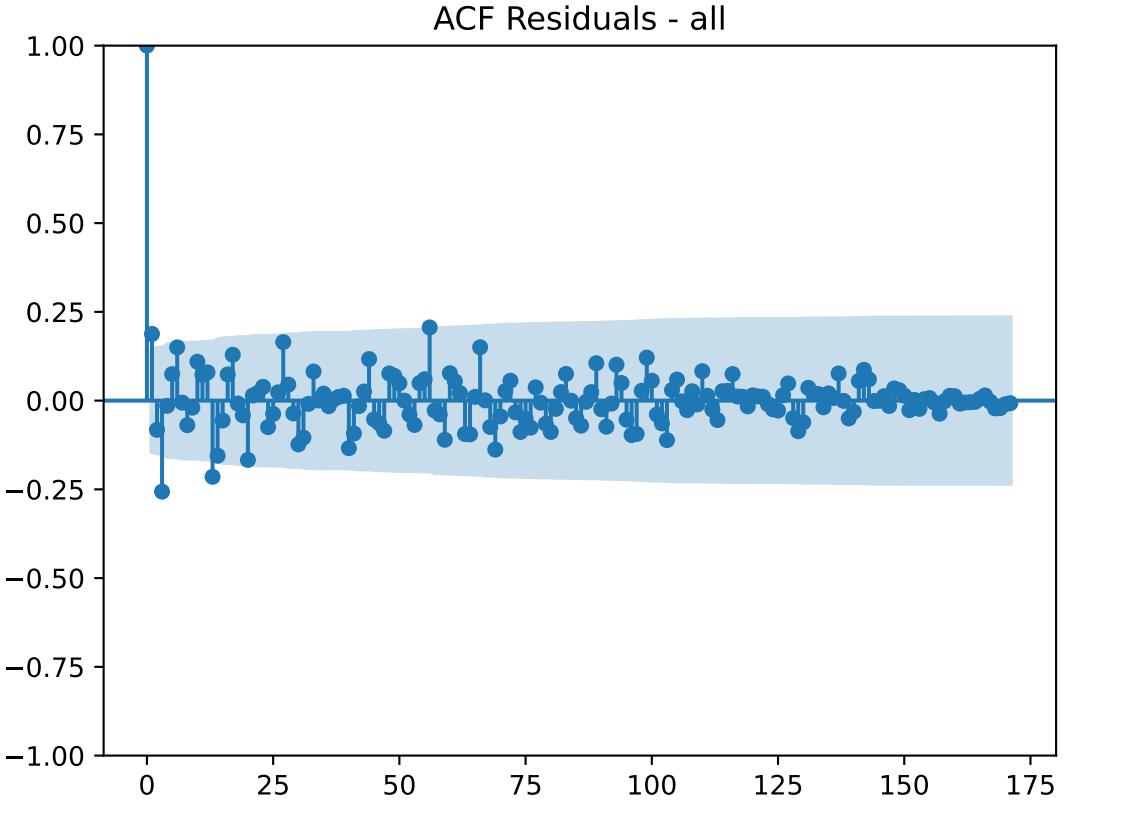

ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175

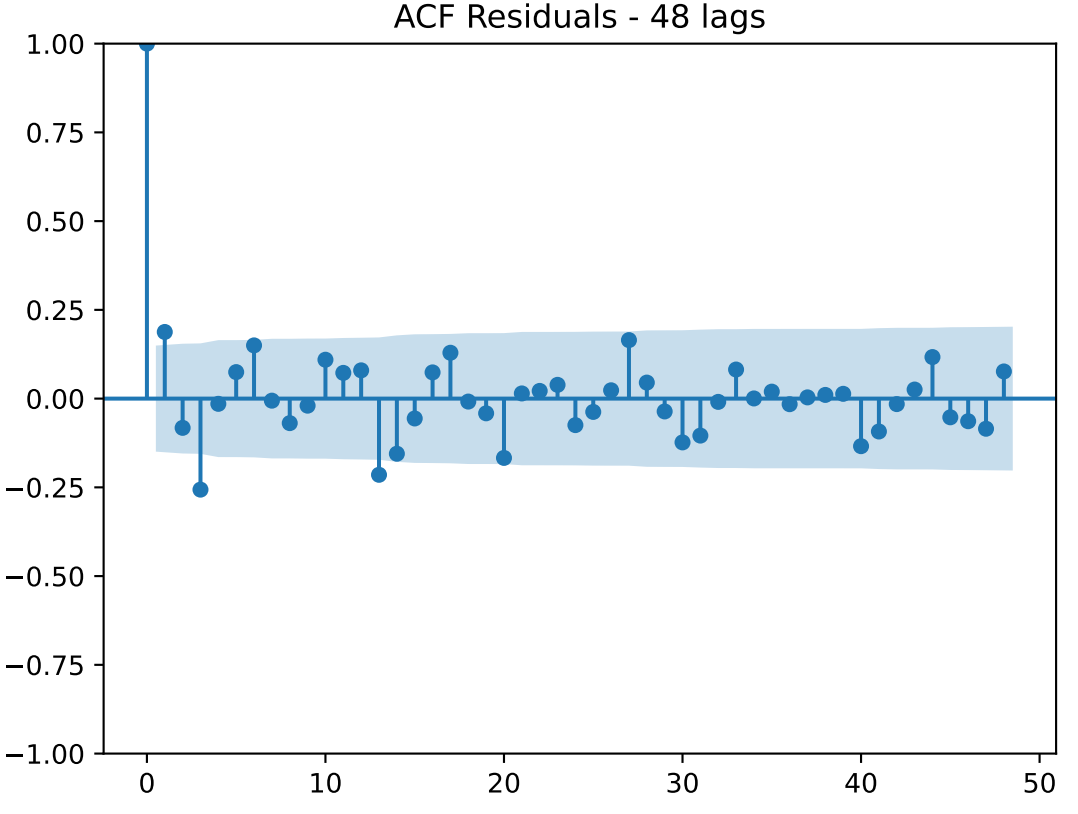

ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50

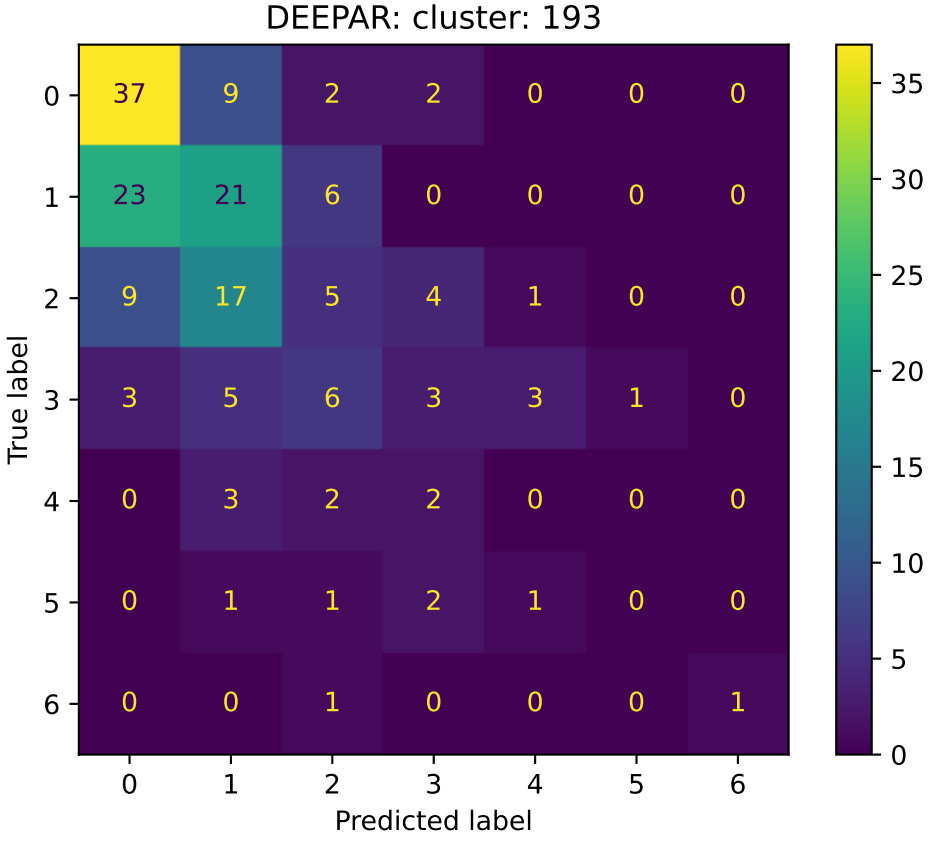

DEEPAR: cluster: 192
True label
Predicted label
0 1 2 3 4 5 6
21 9 4 1 0 0 0
17 12 8 9 1 0 0
8 12 7 1 2 1 0
6 11 5 5 5 2 1
1 3 1 2 2 2 0
0 0 4 3 2 0 1
0 0 0 0 0 0 0
20.0
17.5
15.0
12.5
10.0
7.5
5.0
2.5
0.0

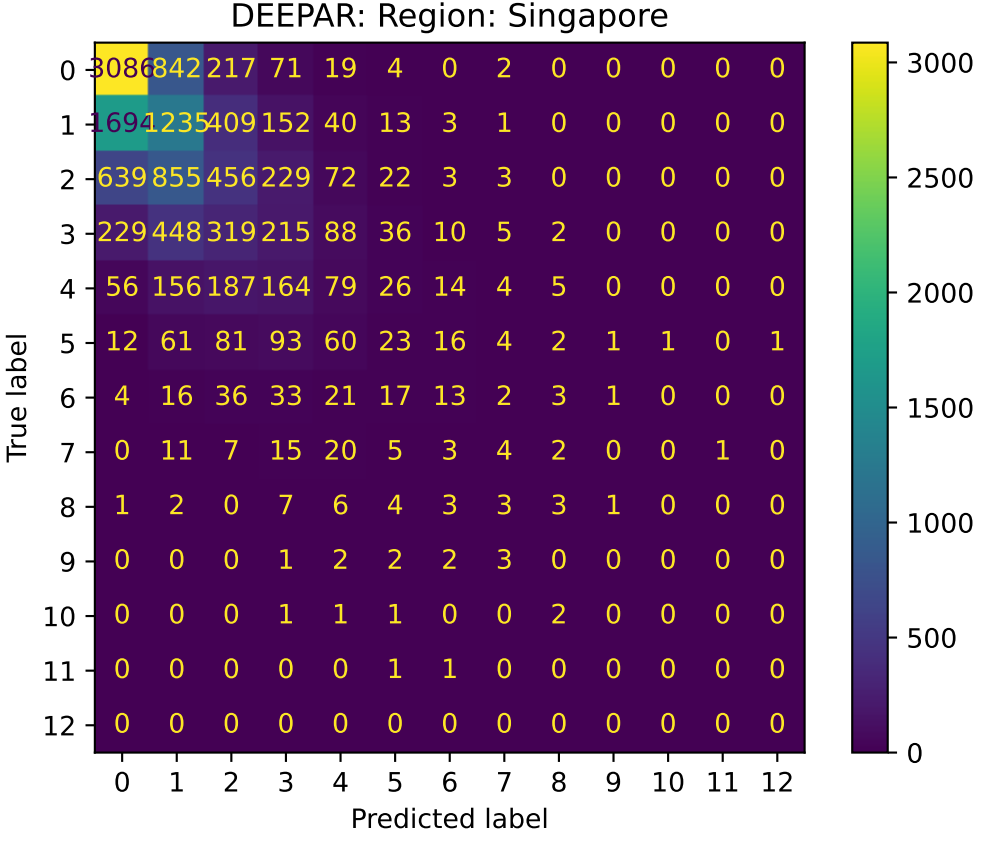

DEEPAR: line plot, cluster: 193
0
1
2
3
4
5
6
7
0
25
50
75
100
125
150
175


actual
prediction
0
1
2
3
4
5
6
7
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02


ACF Residuals - all
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
25
50
75
100
125
150
175


ACF Residuals - 48 lags
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
10
20
30
40
50


DEEPAR: cluster: 193
True label
Predicted label
0 1 2 3 4 5 6
37 9 2 2 0 0 0
23 21 6 0 0 0 0
9 17 5 4 1 0 0
3 5 6 3 3 1 0
0 3 2 2 0 0 0
0 1 1 2 1 0 0
0 0 1 0 0 0 1
35 30 25 20 15 10 5 0


DEEPAR: Region: Singapore
True label
Predicted label
0 1 2 3 4 5 6 7 8 9 10 11 12
3086 842 217 71 19 4 0 2 0 0 0 0 0
1691 1235 409 152 40 13 3 1 0 0 0 0 0
639 855 456 229 72 22 3 3 0 0 0 0 0
229 448 319 215 88 36 10 5 2 0 0 0 0
56 156 187 164 79 26 14 4 5 0 0 0 0
12 61 81 93 60 23 16 4 2 1 1 0 1
4 16 36 33 21 17 13 2 3 1 0 0 0
0 11 7 15 20 5 3 4 2 0 0 1 0
1 2 0 7 6 4 3 3 3 1 0 0 0
0 0 0 1 2 2 2 3 0 0 0 0 0
0 0 0 1 1 1 0 0 2 0 0 0 0
0 0 0 0 0 1 1 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0
3000
2500
2000
1500
1000
500
0