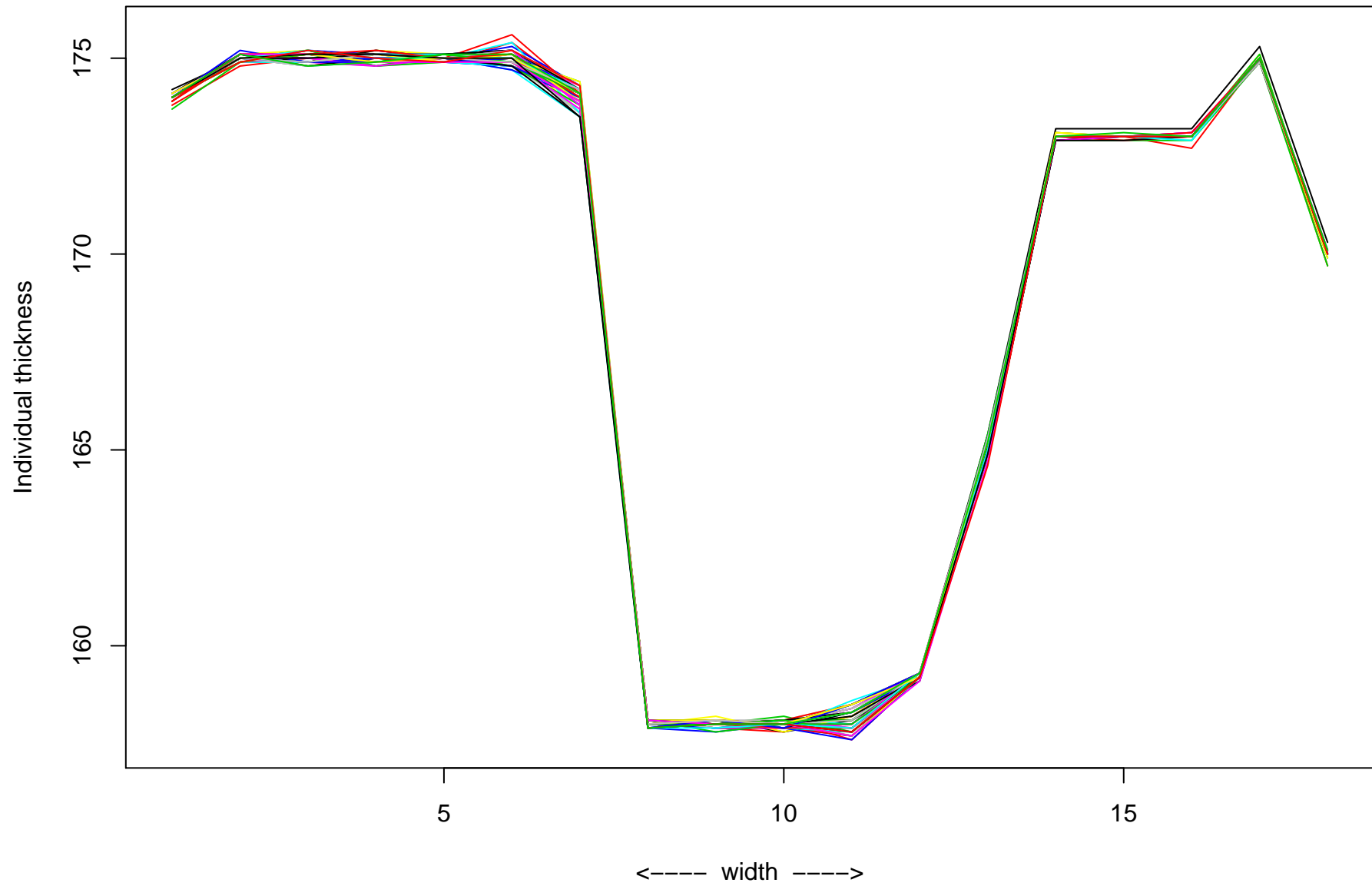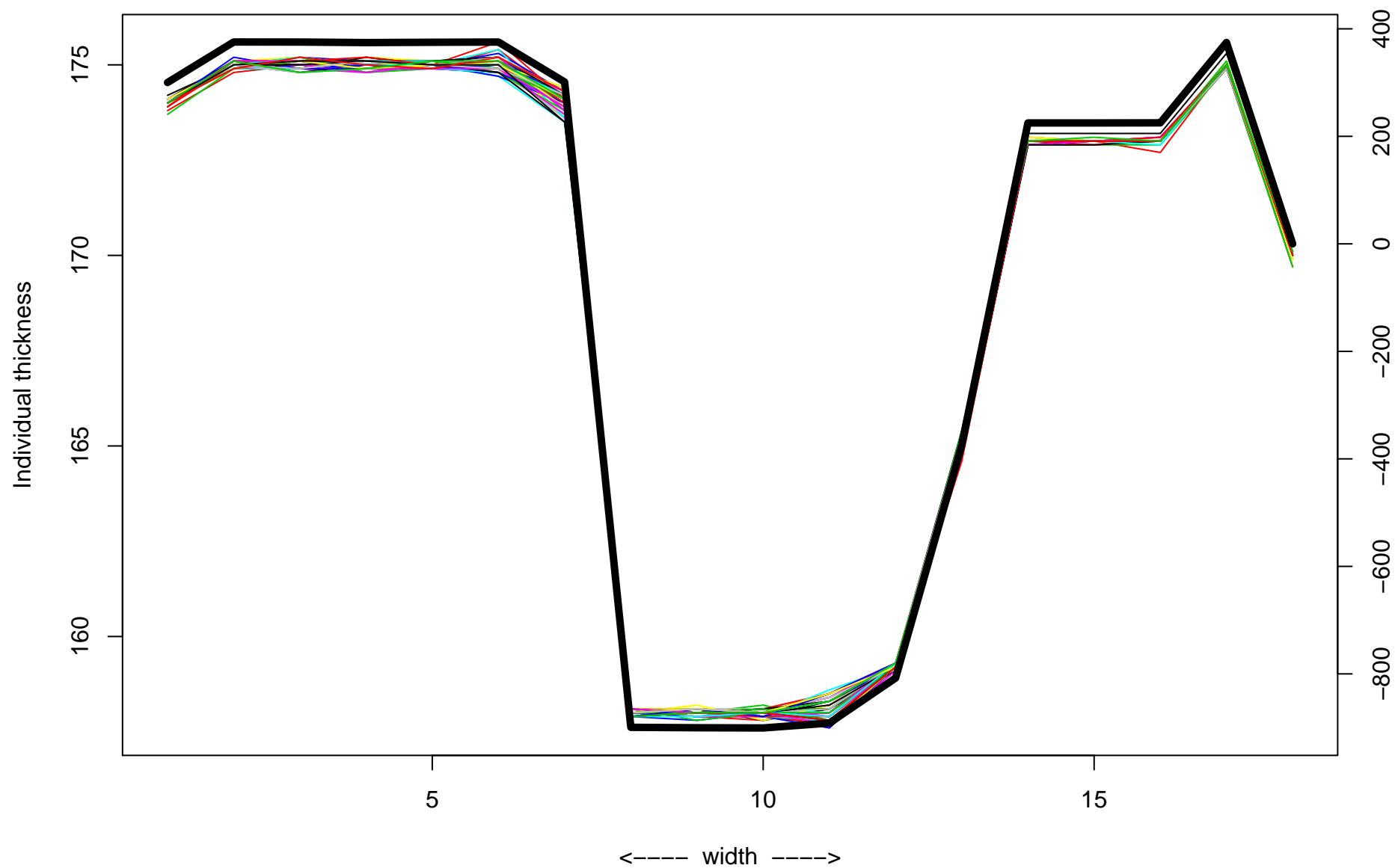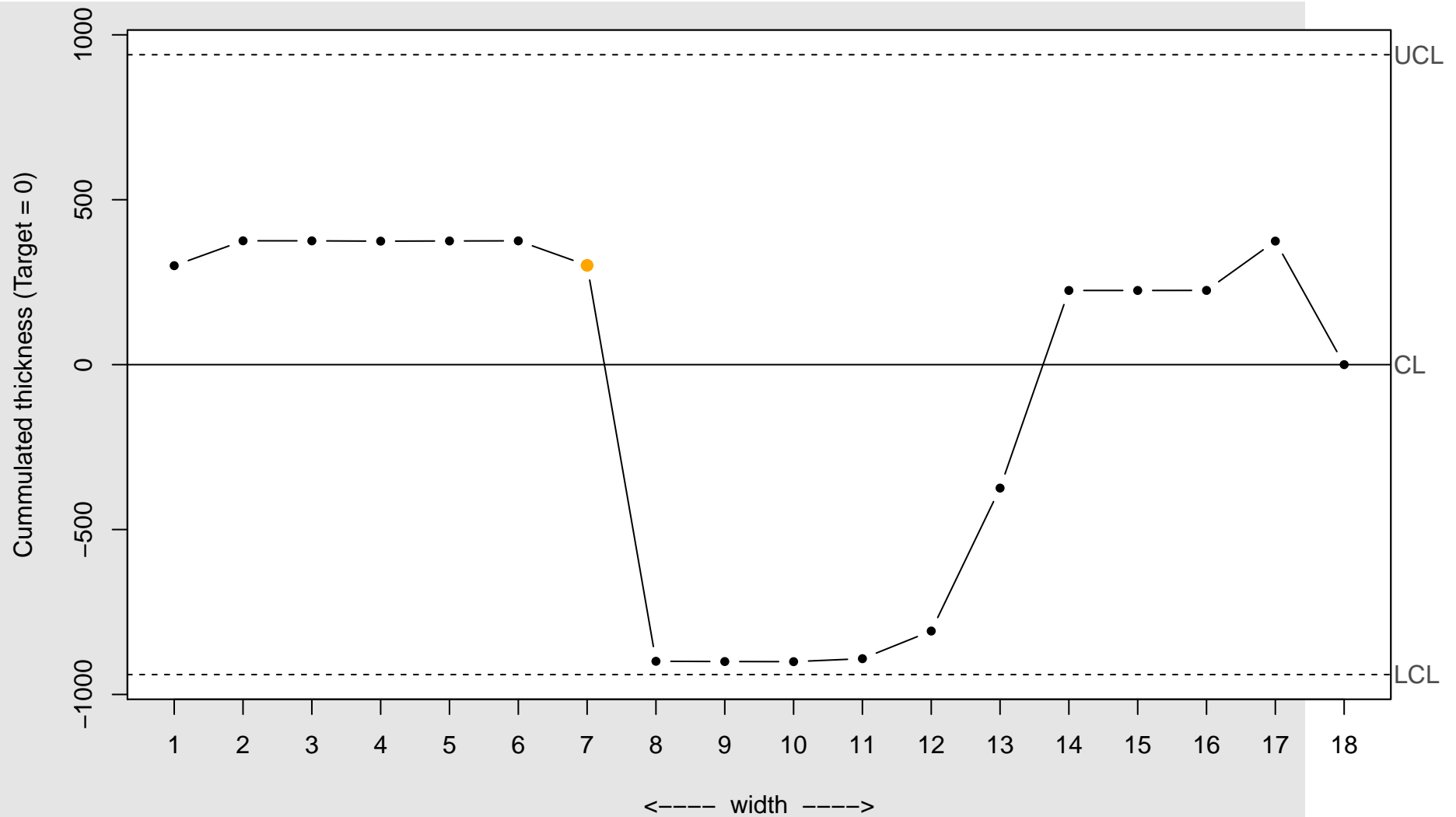**Individual thickness only**

Individual thickness

<—— width ——>

Simulated thickness

Simulated thickness

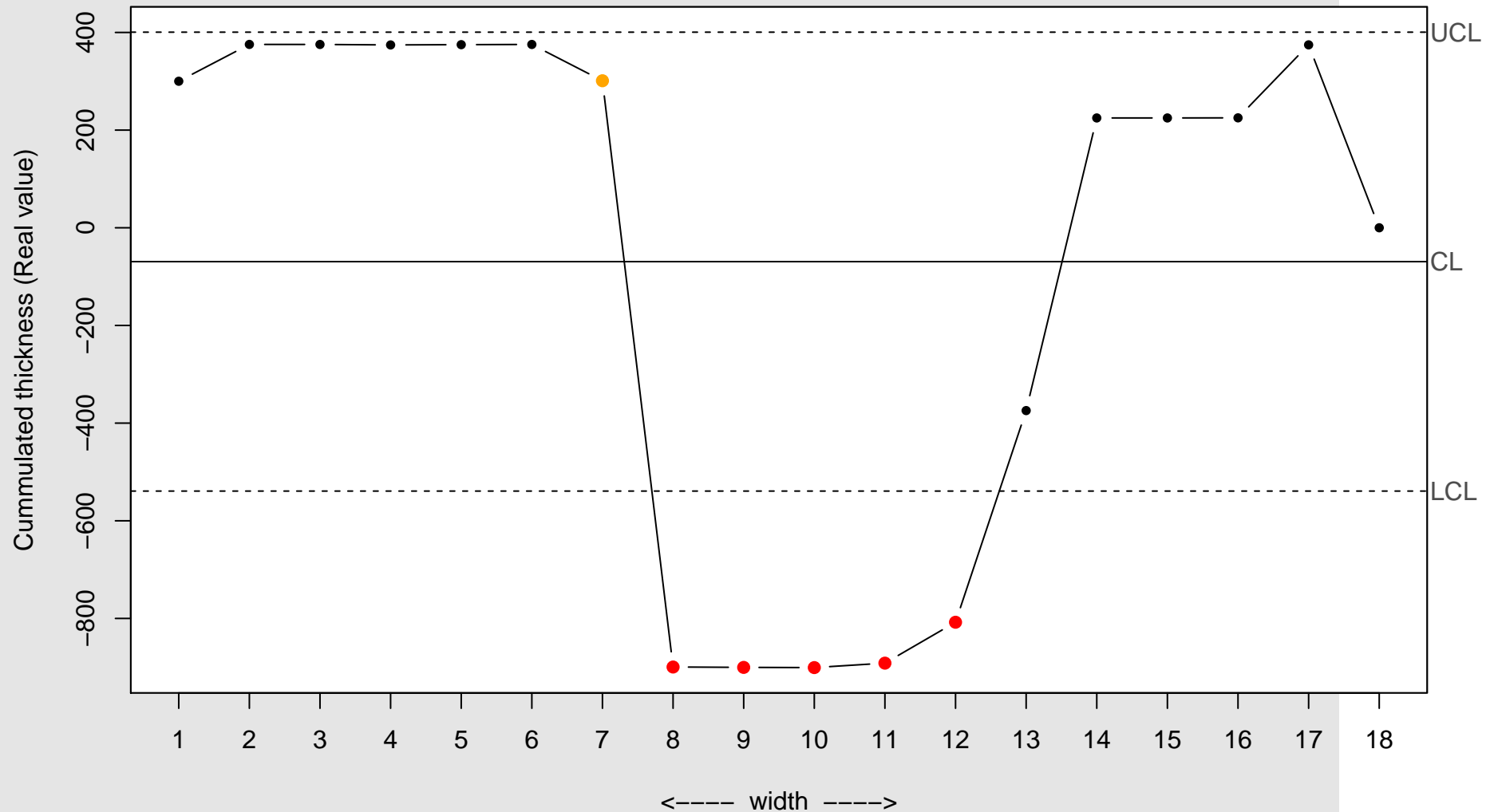Number of groups = 18
Center = 0
StdDev = 156.6176

LCL = −939.7059
UCL = 939.7059

Number beyond limits = 0
Number violating runs = 1

Simulated thickness: Cpk is −0.02207 and z is −1.566.
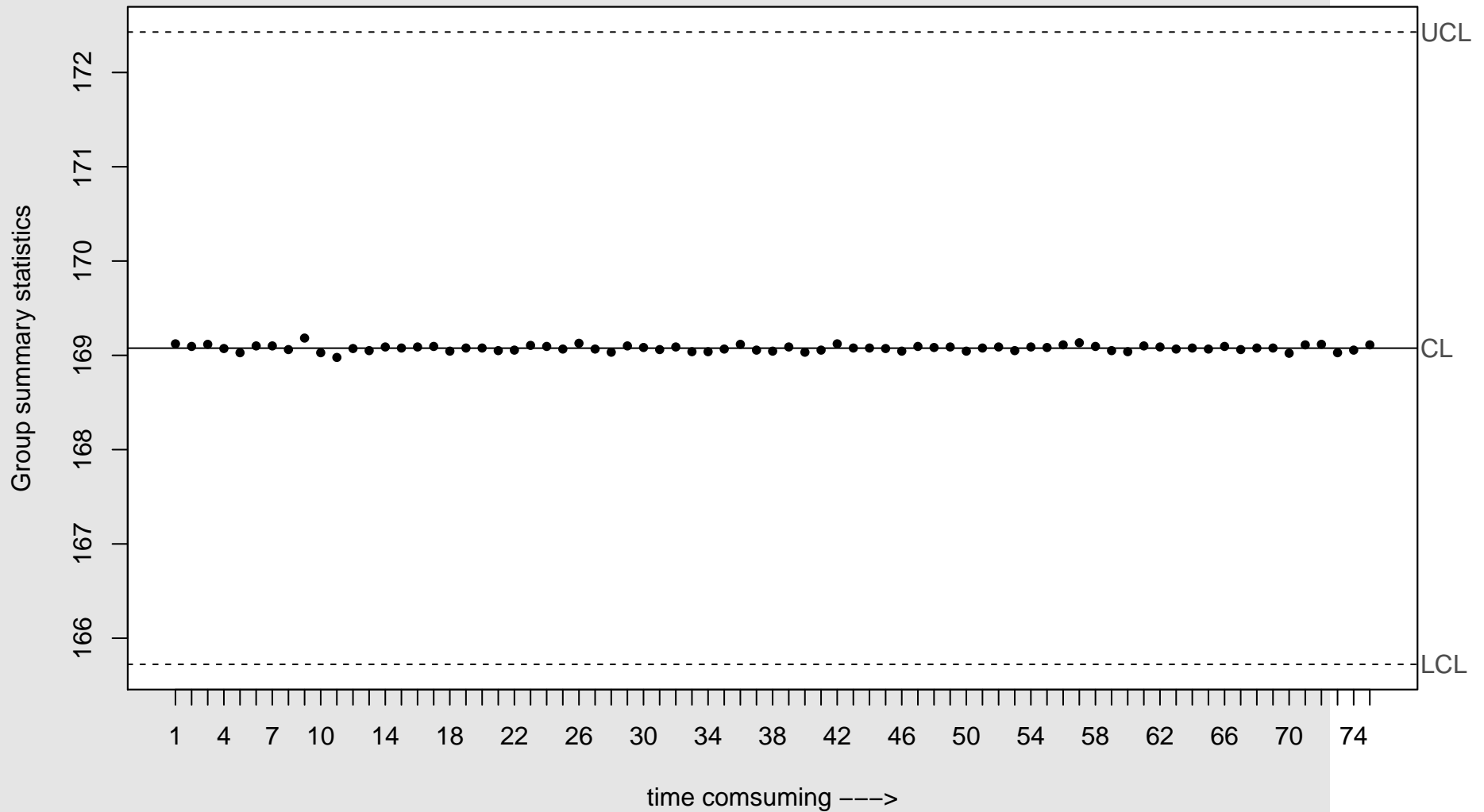

Number of groups = 18
Center = −69.29444   LCL = −539.1474   Number beyond limits = 5
StdDev = 156.6176   UCL = 400.5585   Number violating runs = 1

X–bar chart for a given dataset

Group summary statistics

time comsuming –––>

UCL
CL
LCL

Number of groups = 75
Center = 169.0761   LCL = 165.7231   Number beyond limits = 0
StdDev = 4.741758   UCL = 172.429   Number violating runs = 0

S chart for a given dataset

Group summary statistics

time comsuming --->
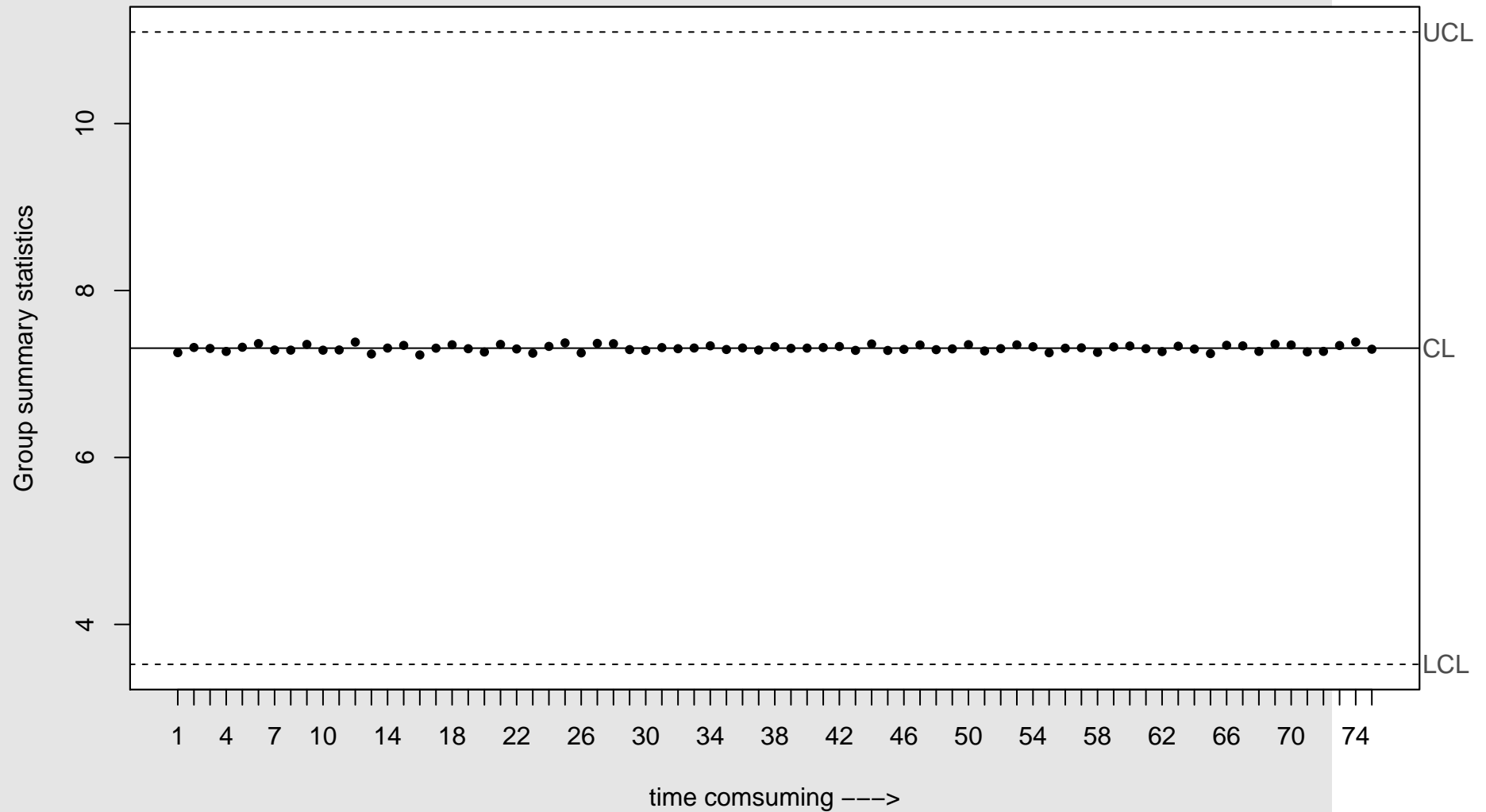
Number of groups = 75
Center = 7.309393   LCL = 3.522023   Number beyond limits = 0
StdDev = 7.417616   UCL = 11.09676   Number violating runs = 0

X–bar chart using USL/LSL for a given dataset

Group summary statistics

time comsuming ––––>
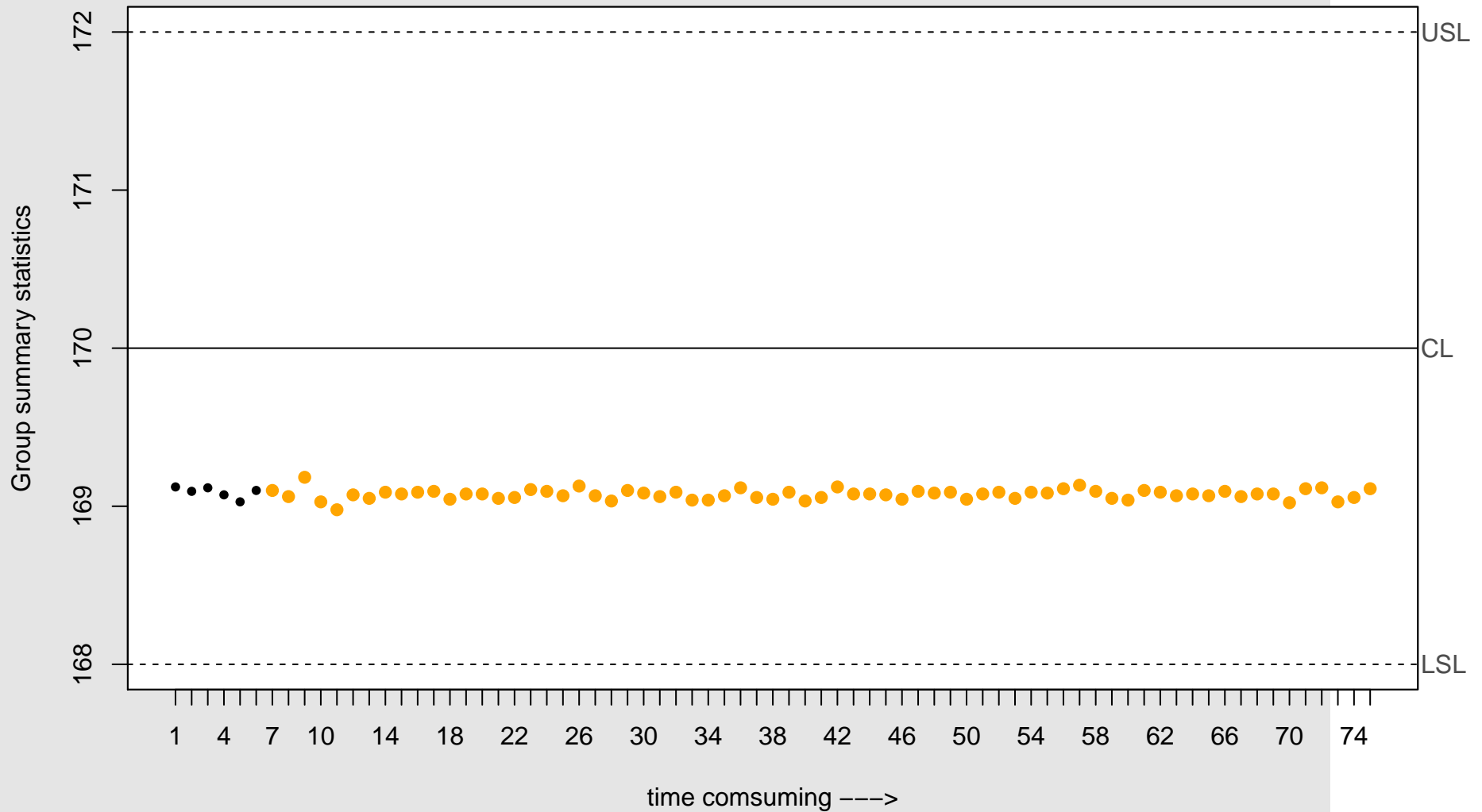
Number of groups = 75
Center = 170
StdDev = 4.741758
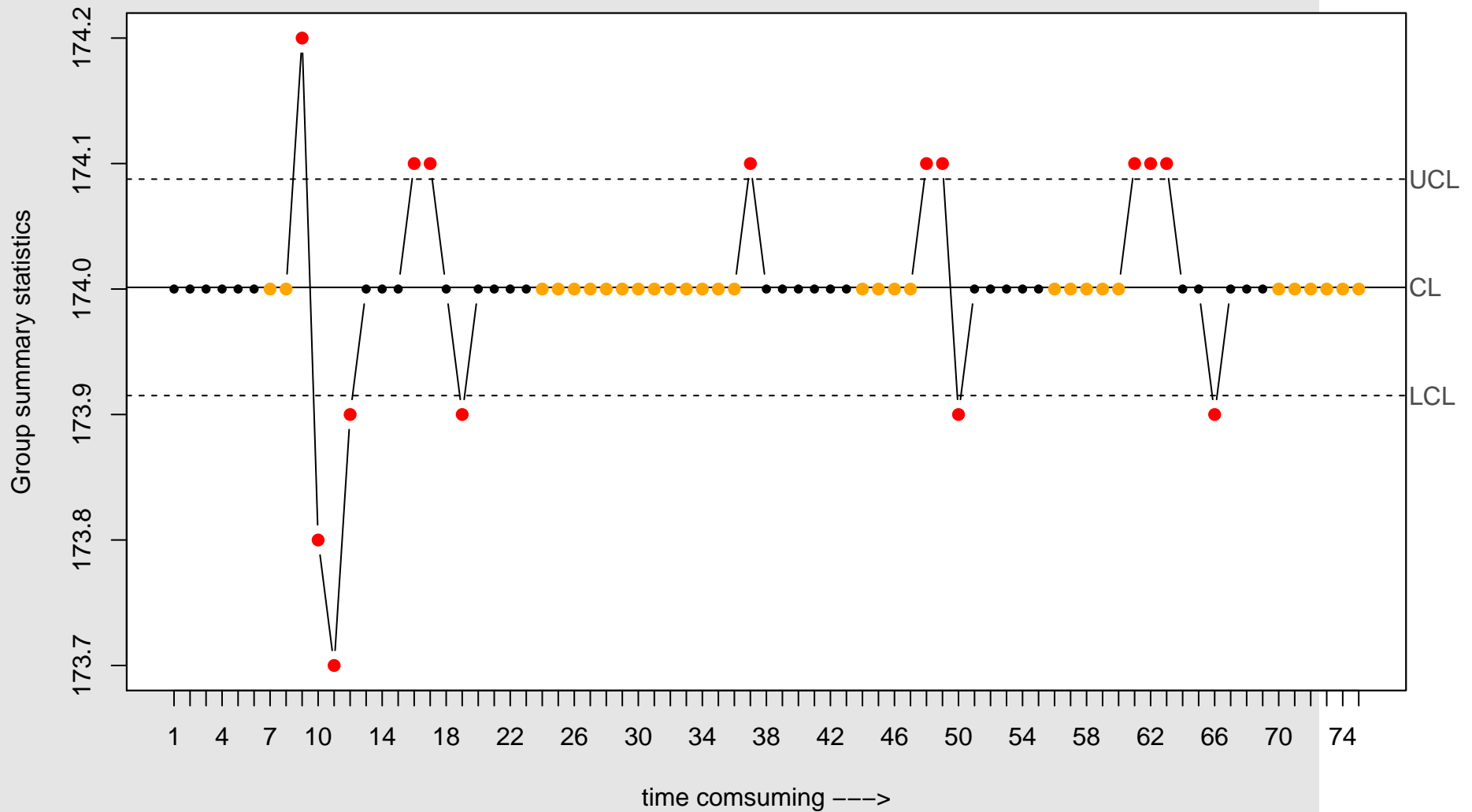
LCL = 168
UCL = 172

Number beyond limits = 0
Number violating runs = 69
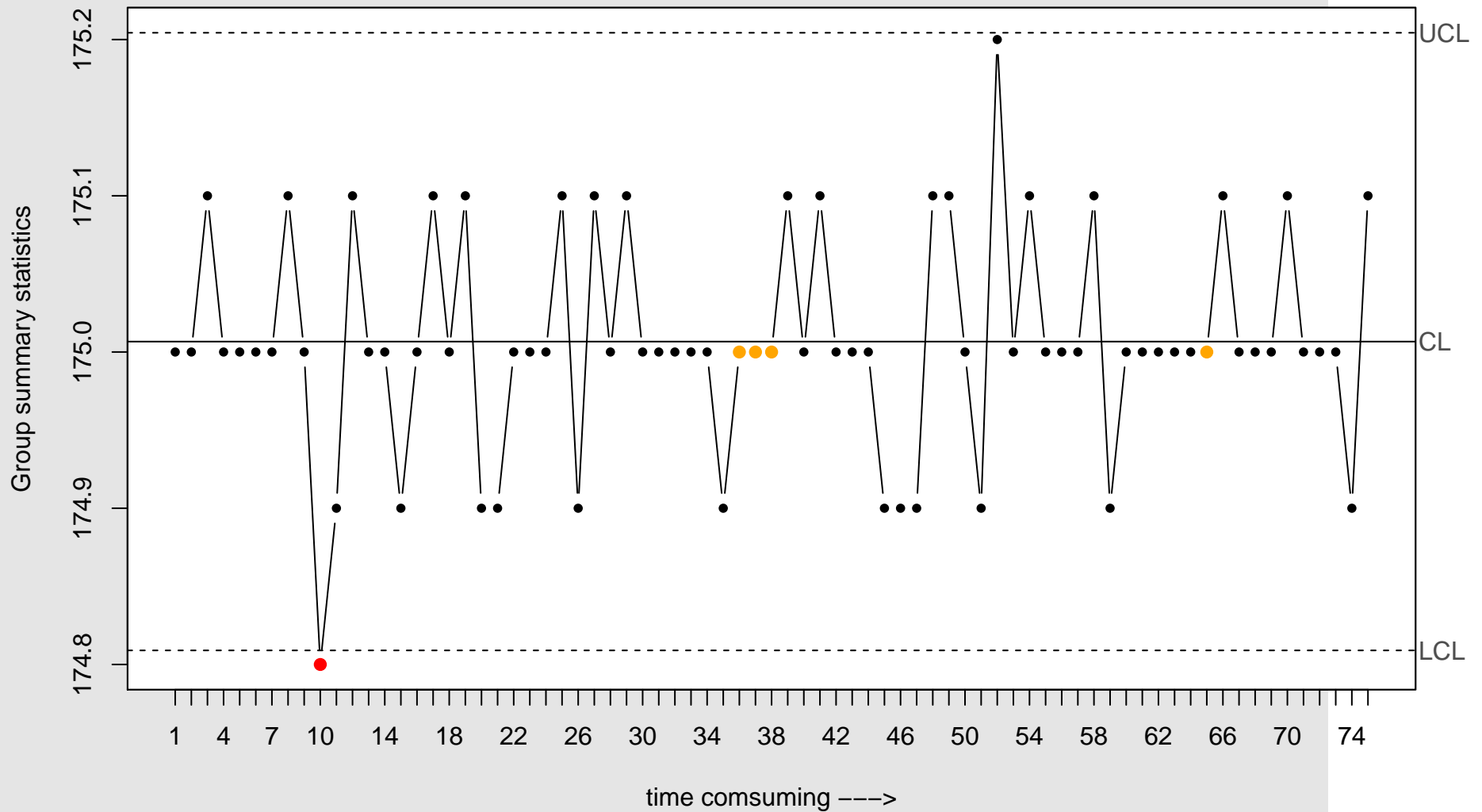
1th column point of this product

Number of groups = 75
Center = 174.0013   LCL = 173.9151   Number beyond limits = 15
StdDev = 0.02875216   UCL = 174.0876   Number violating runs = 30

2th column point of this product

Group summary statistics
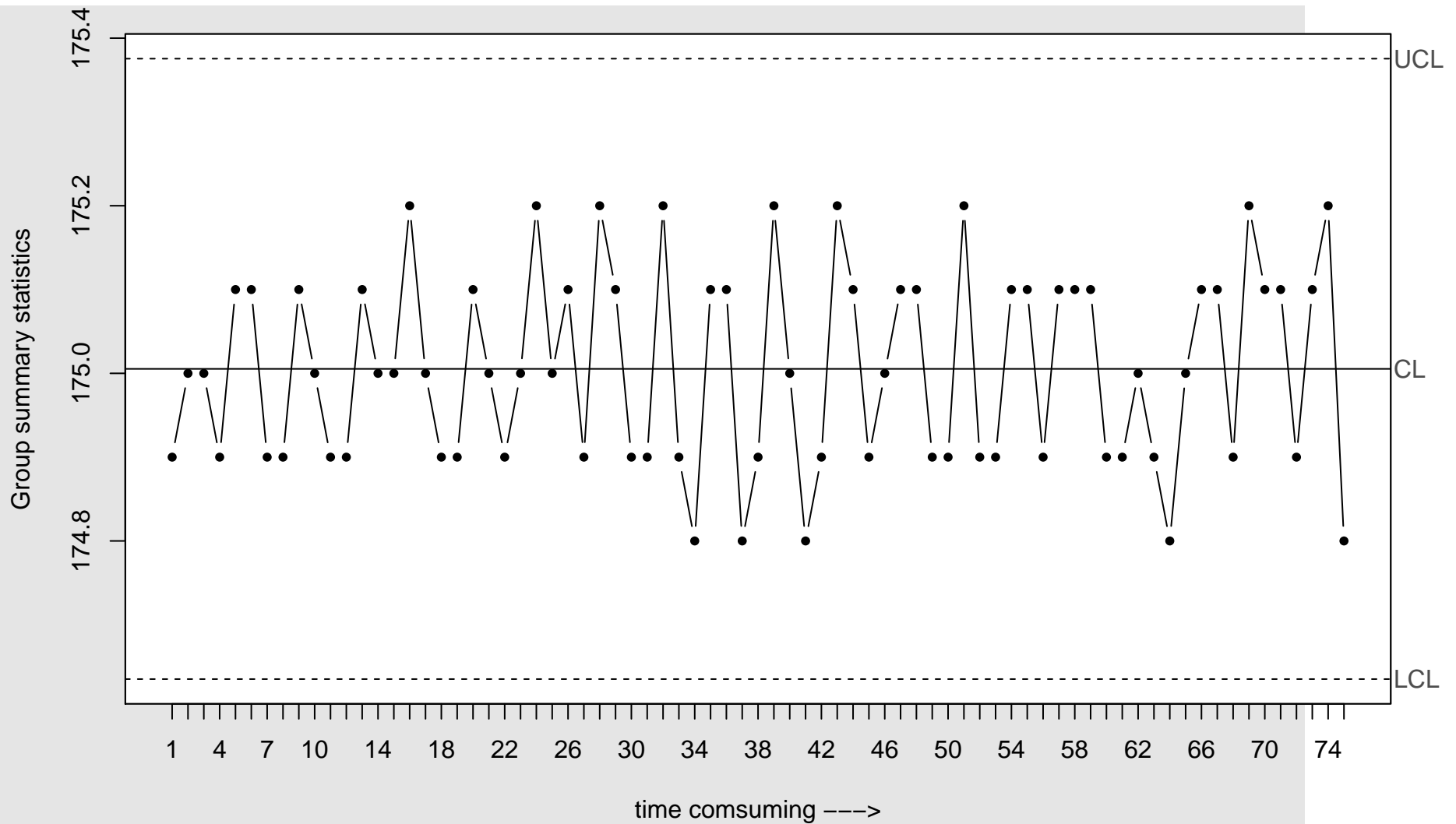
time comsuming ––––>

Number of groups = 75
Center = 175.0067
StdDev = 0.06589036

LCL = 174.809
UCL = 175.2043

Number beyond limits = 1
Number violating runs = 4
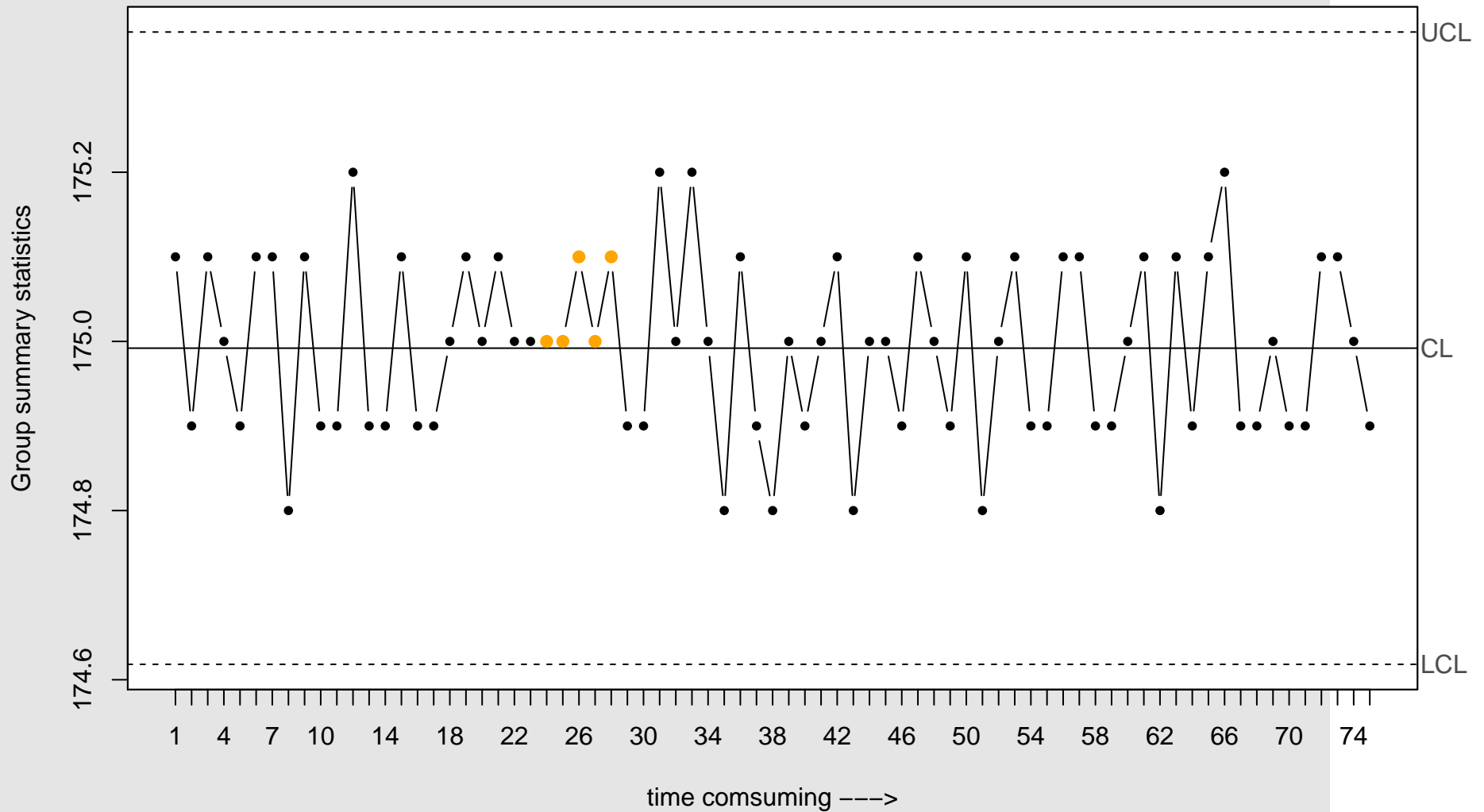
3th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 75
Center = 175.0053   LCL = 174.6351   Number beyond limits = 0
StdDev = 0.1233947   UCL = 175.3755   Number violating runs = 0

4th column point of this product

Number of groups = 75
Center = 174.992   LCL = 174.6182   Number beyond limits = 0
StdDev = 0.1245927   UCL = 175.3658   Number violating runs = 5

5th column point of this product

Number of groups = 75
Center = 175   LCL = 174.8023   Number beyond limits = 0
StdDev = 0.06589036   UCL = 175.1977   Number violating runs = 0

6th column point of this product

Number of groups = 75
Center = 175.0053
StdDev = 0.184493

LCL = 174.4519
UCL = 175.5588

Number beyond limits = 1
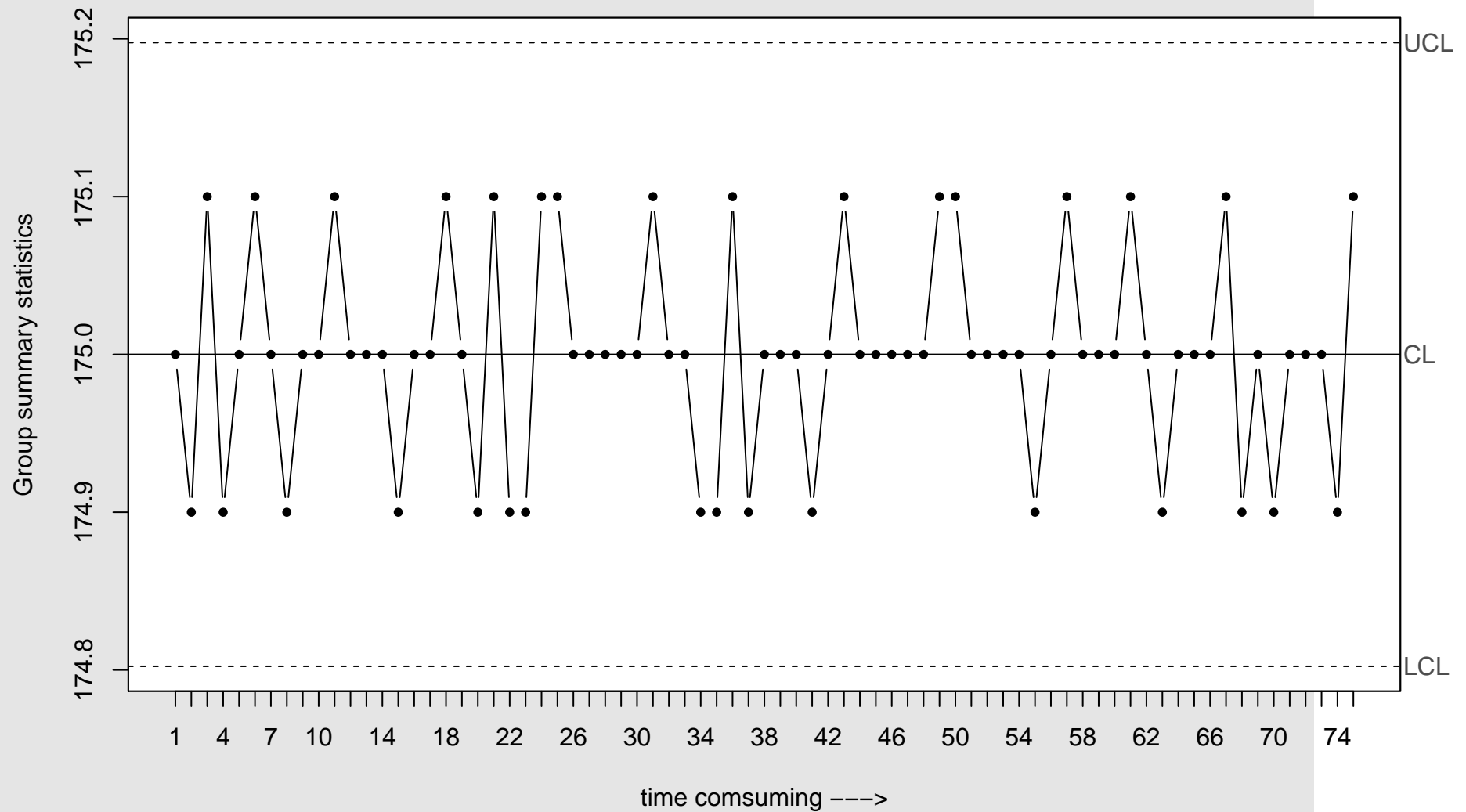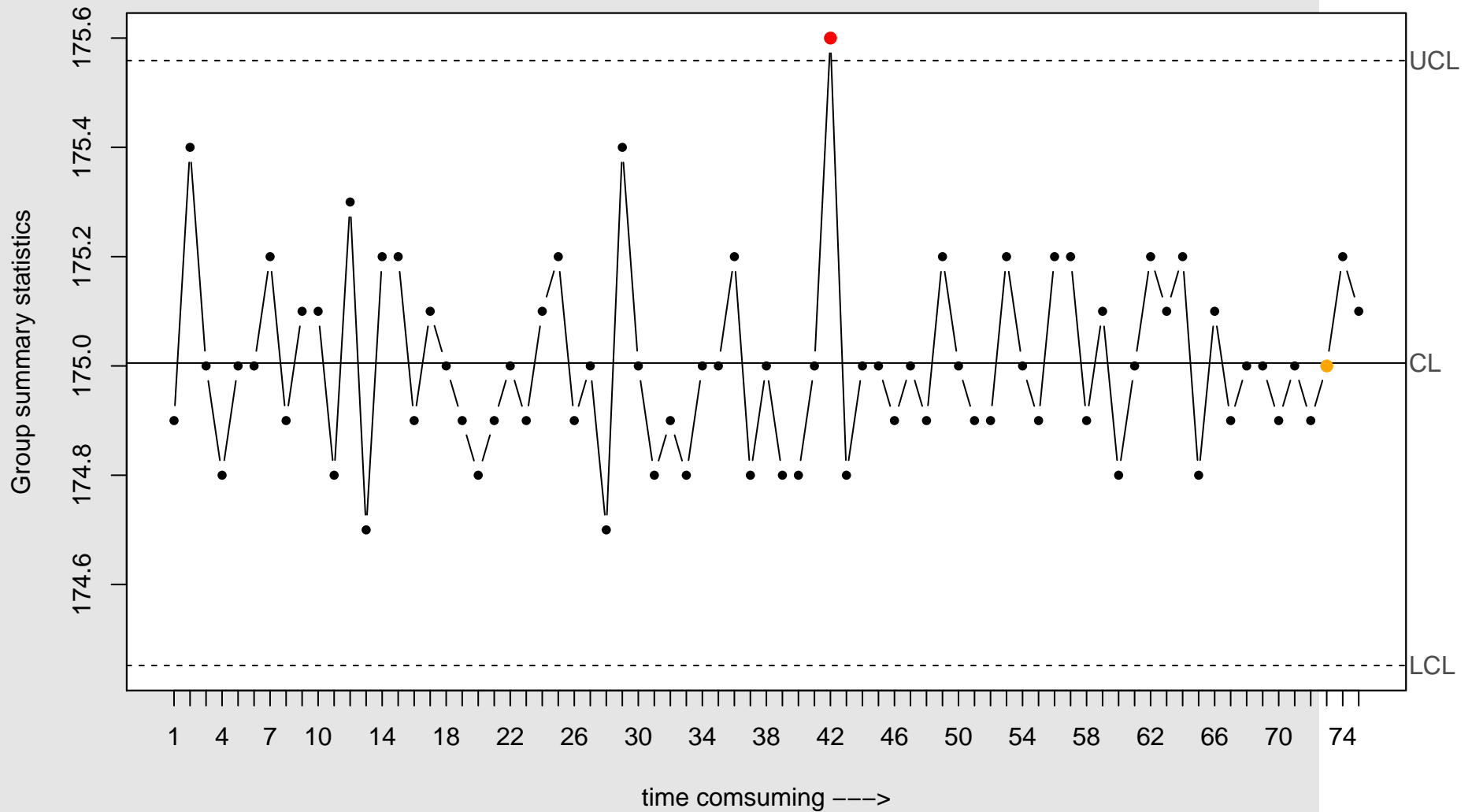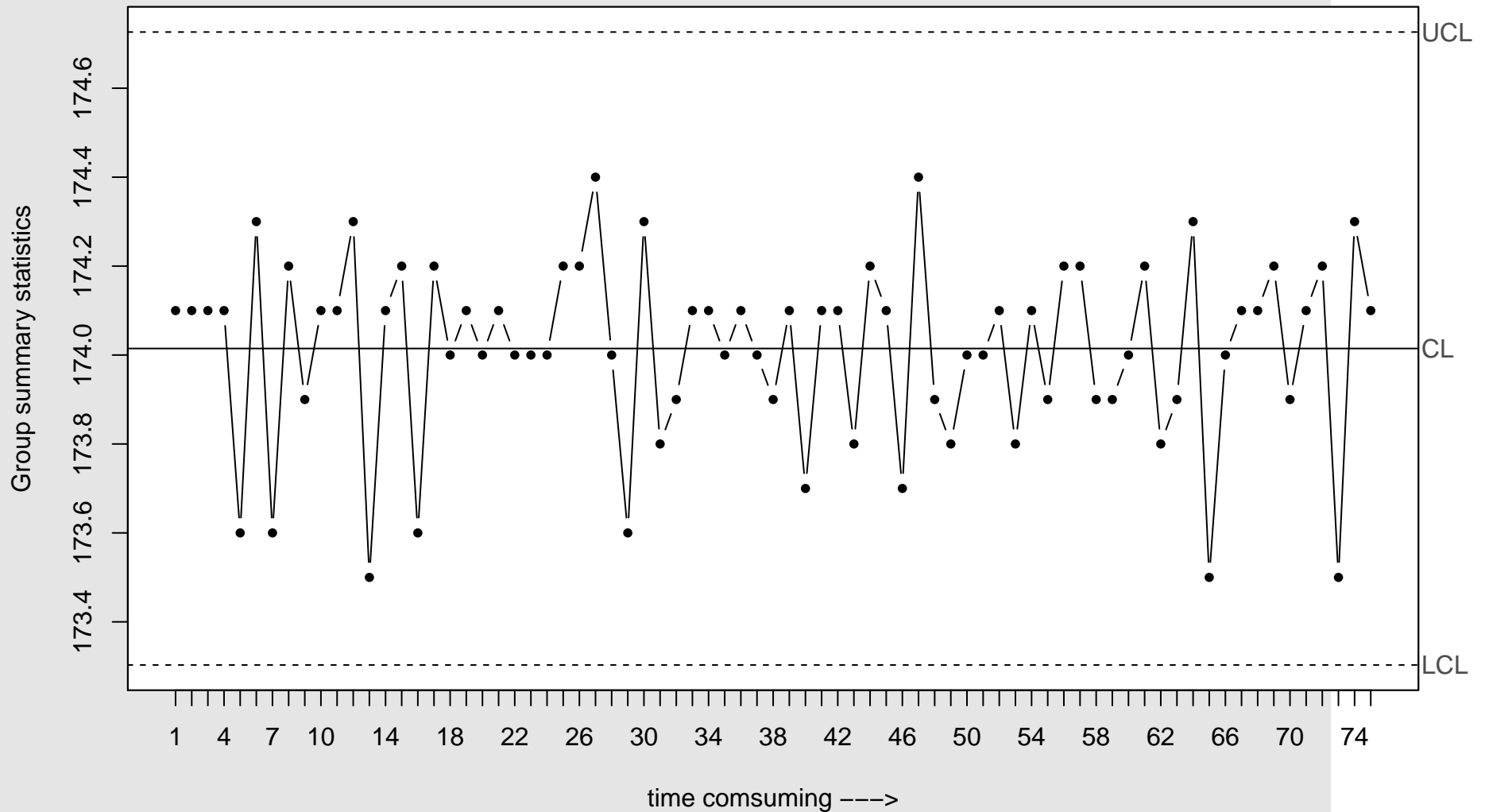Number violating runs = 1

7th column point of this product

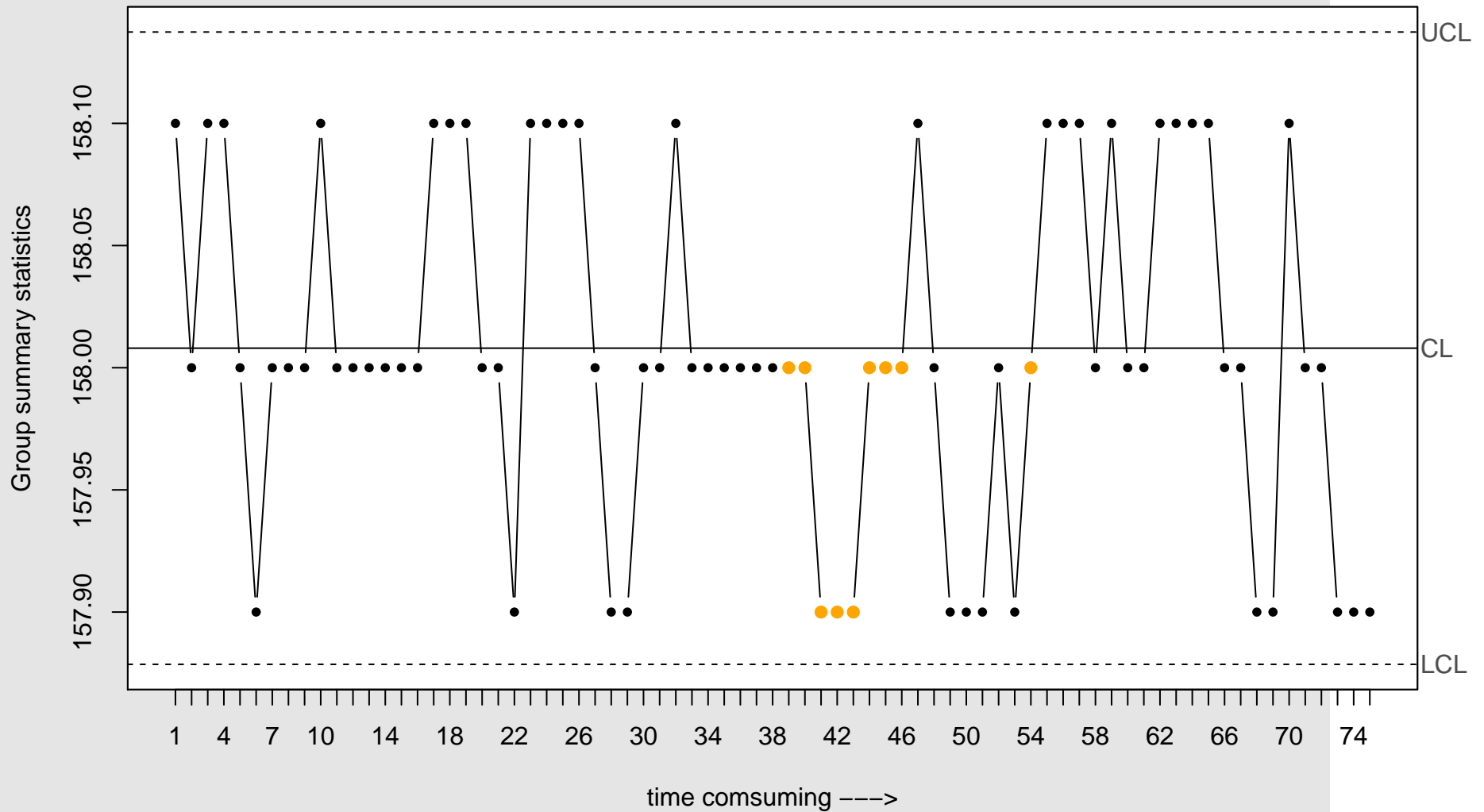Number of groups = 75
Center = 174.0147   LCL = 173.3031   Number beyond limits = 0
StdDev = 0.2372053   UCL = 174.7263   Number violating runs = 0

8th column point of this product

Group summary statistics
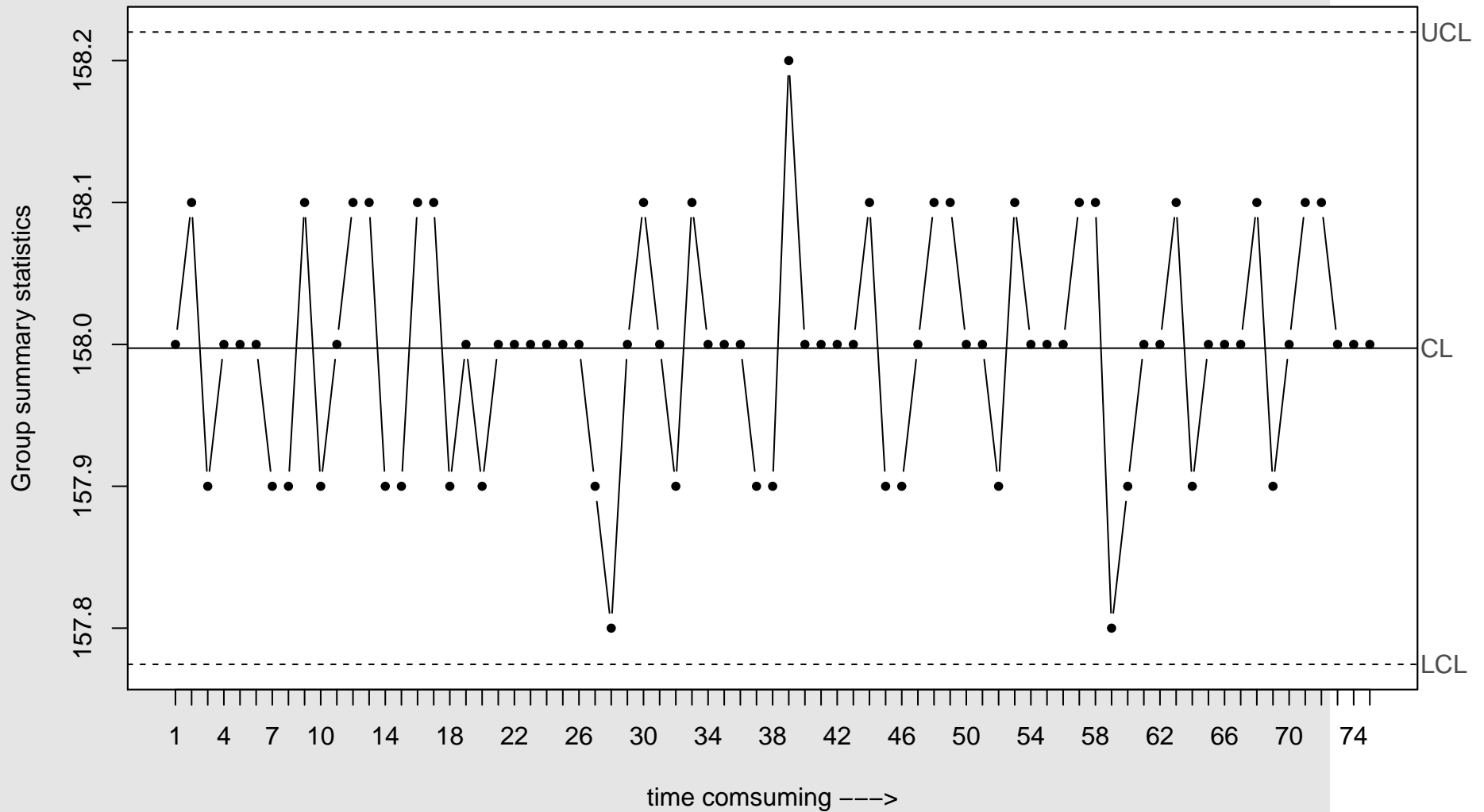
time comsuming ––––>

Number of groups = 75
Center = 158.008
StdDev = 0.04312823

LCL = 157.8786
UCL = 158.1374

Number beyond limits = 0
Number violating runs = 9

9th column point of this product

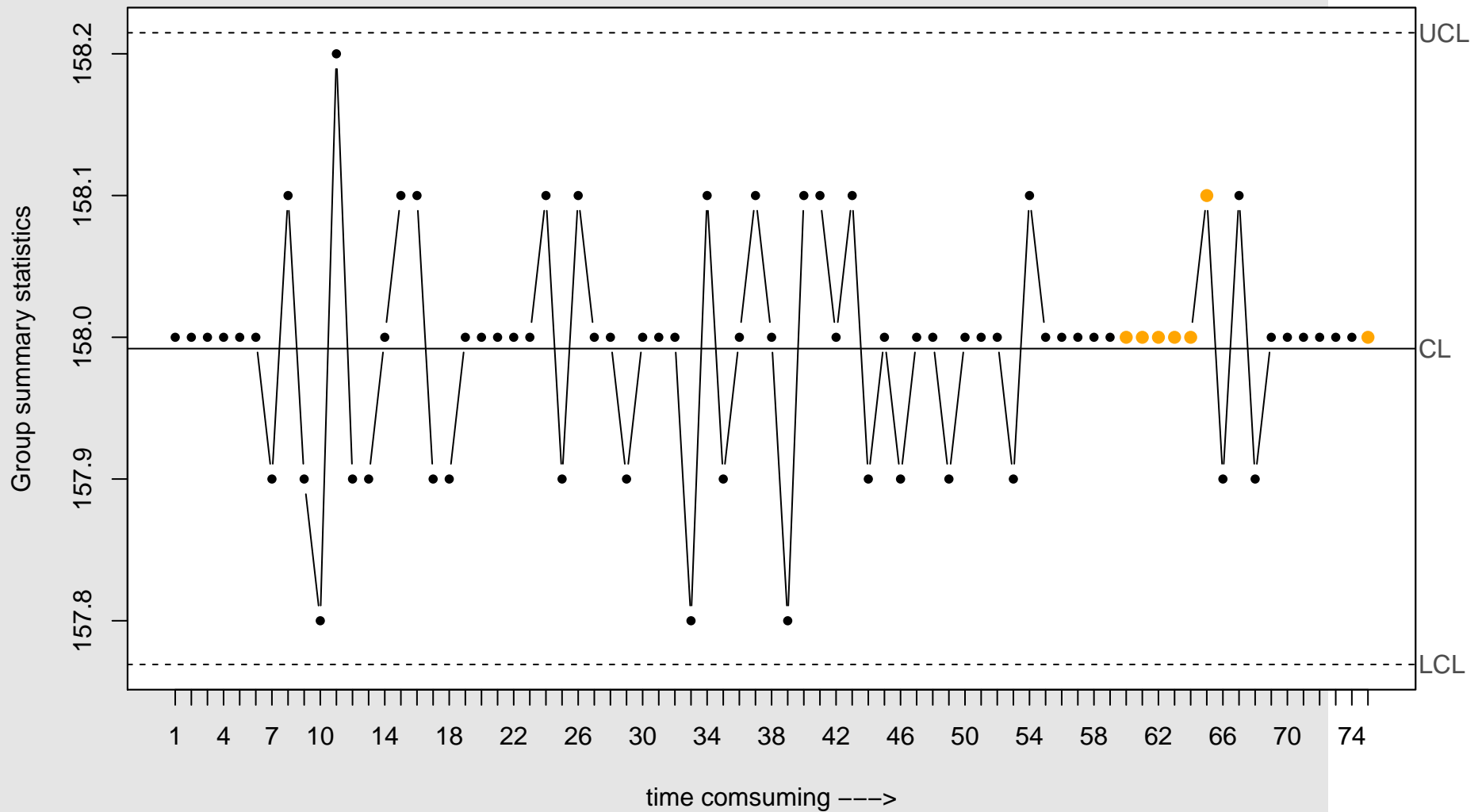Number of groups = 75
Center = 157.9973   LCL = 157.7745   Number beyond limits = 0
StdDev = 0.0742764   UCL = 158.2202   Number violating runs = 0

10th column point of this product

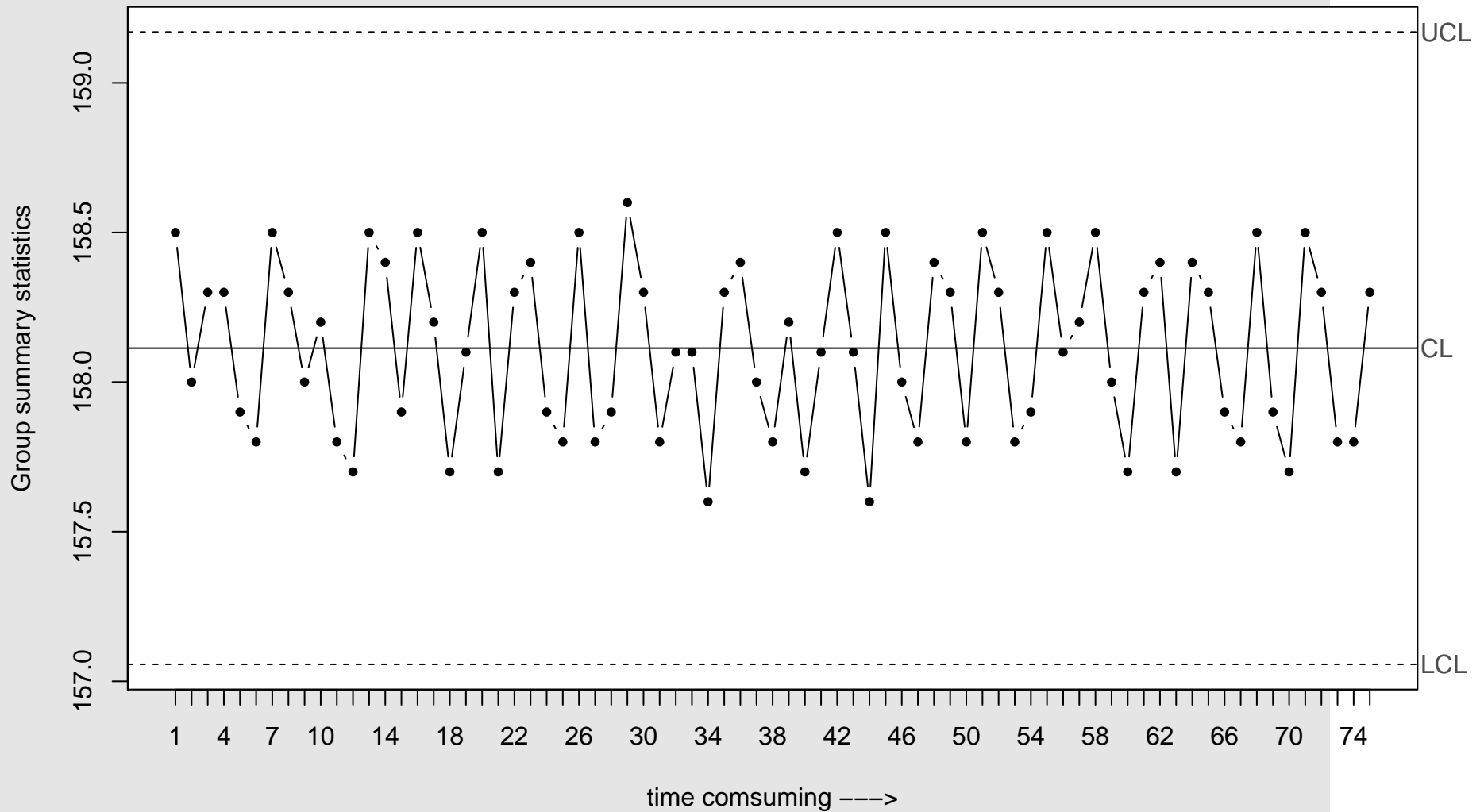Group summary statistics

time comsuming –––>

Number of groups = 75
Center = 157.992
StdDev = 0.0742764

LCL = 157.7692
UCL = 158.2148

Number beyond limits = 0
Number violating runs = 7

11th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 75
Center = 158.1133   LCL = 157.0567   Number beyond limits = 0
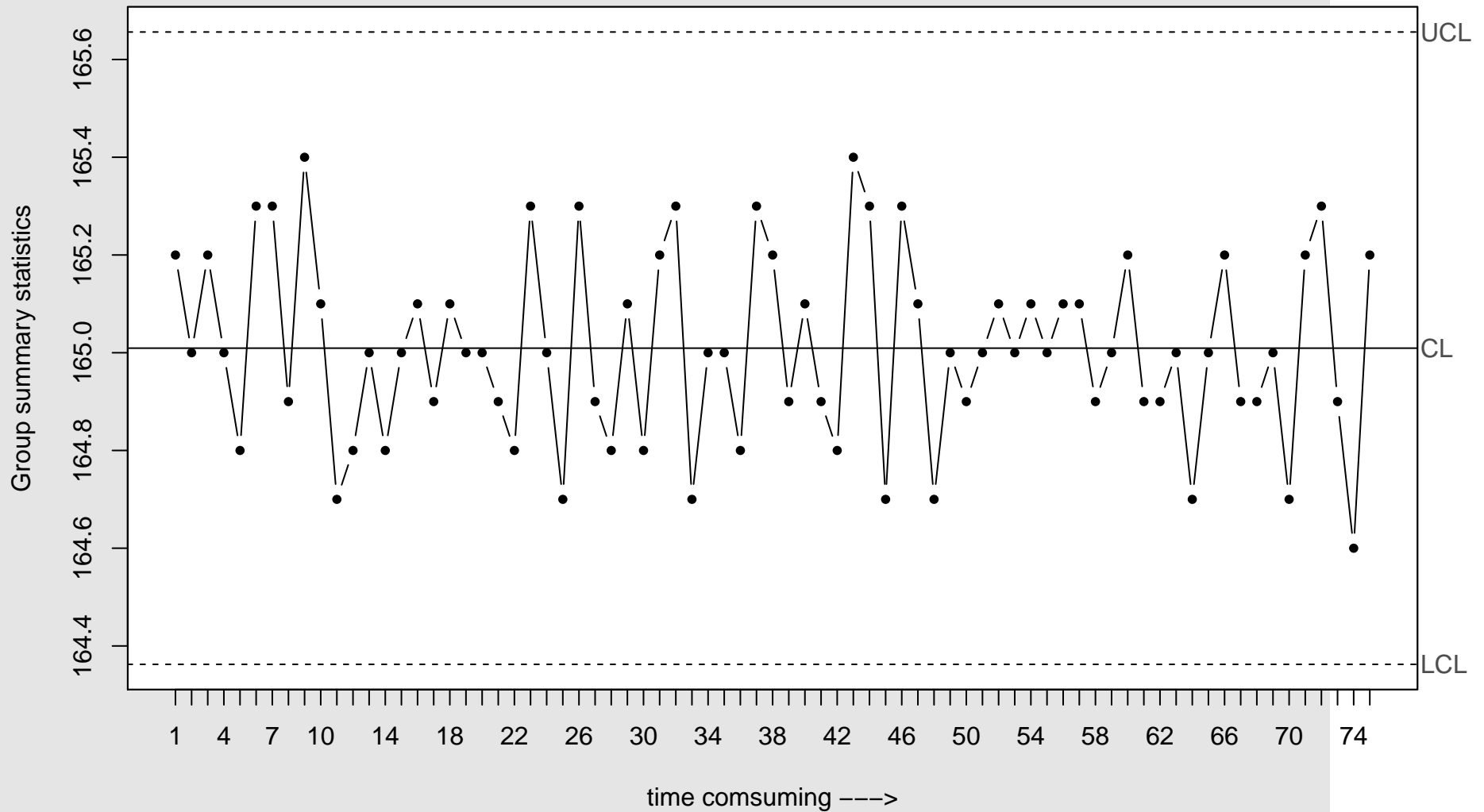StdDev = 0.3522139   UCL = 159.17   Number violating runs = 0

12th column point of this product

time comsuming ---->
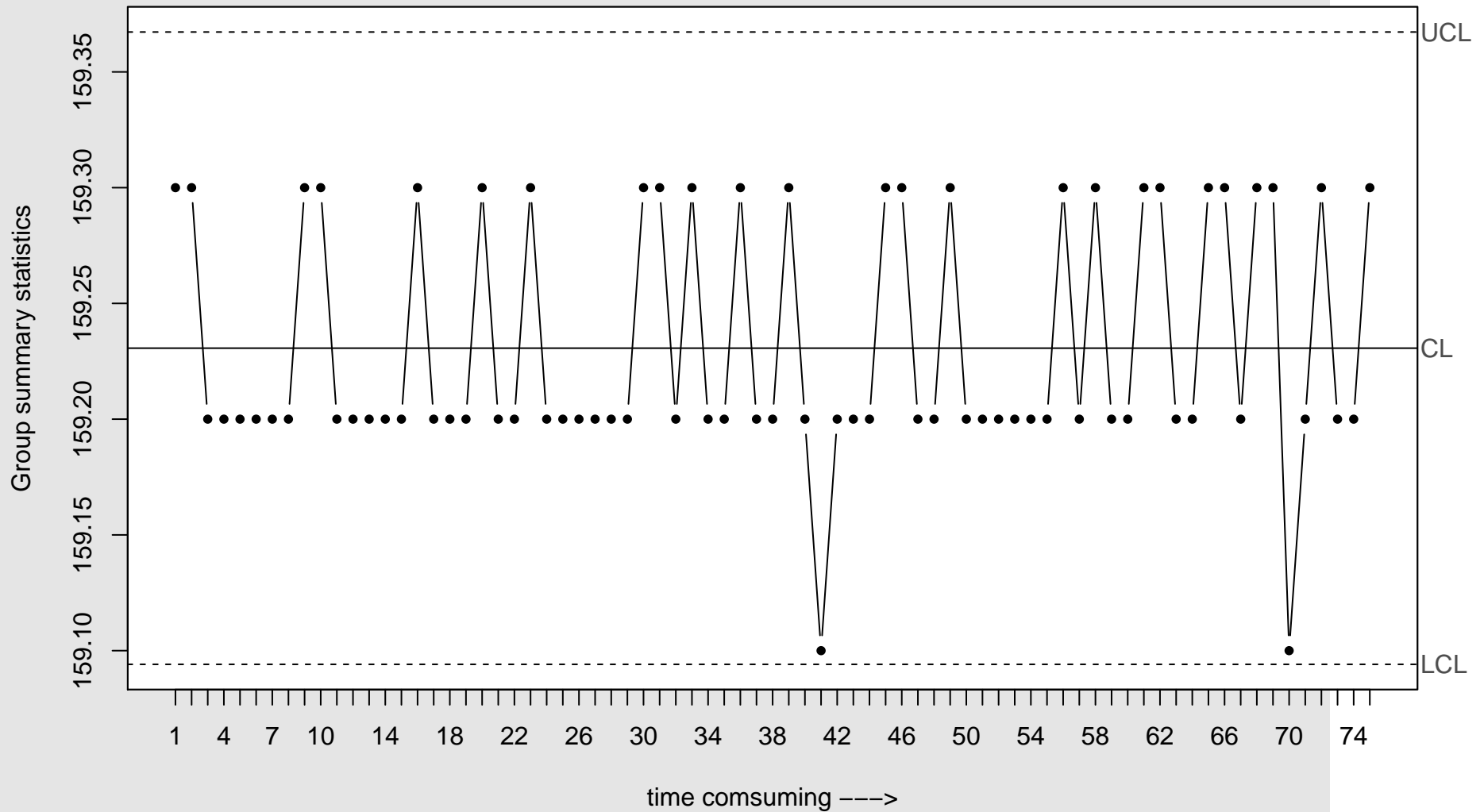
Number of groups = 75
Center = 159.2307   LCL = 159.0941   Number beyond limits = 0
StdDev = 0.04552425   UCL = 159.3672   Number violating runs = 0

13th column point of this product

Number of groups = 75
Center = 165.0093   LCL = 164.3624   Number beyond limits = 0
StdDev = 0.2156412   UCL = 165.6563   Number violating runs = 0

14th column point of this product
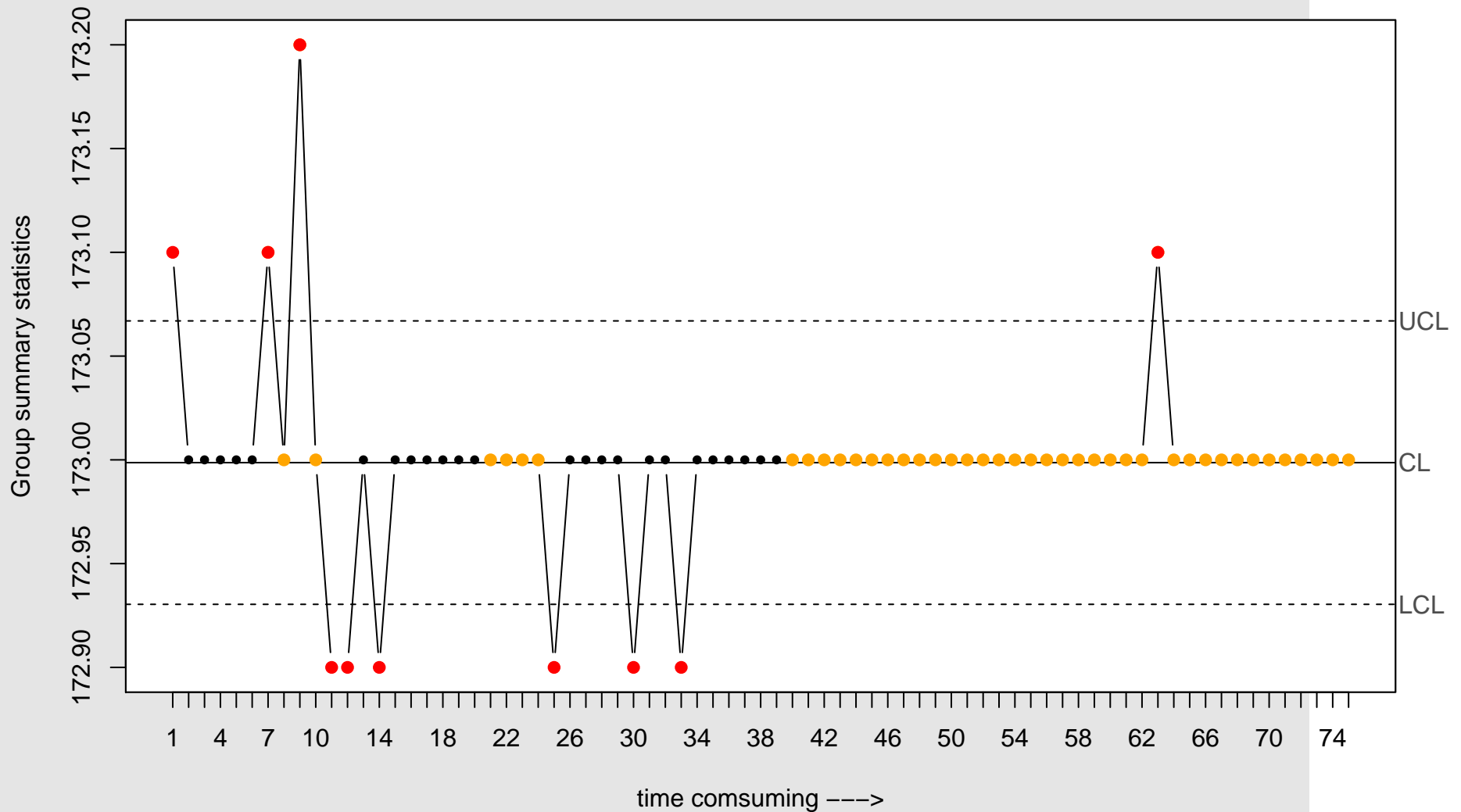
Number of groups = 75
Center = 172.9987   LCL = 172.9304   Number beyond limits = 10
StdDev = 0.02276212   UCL = 173.067   Number violating runs = 44

15th column point of this product
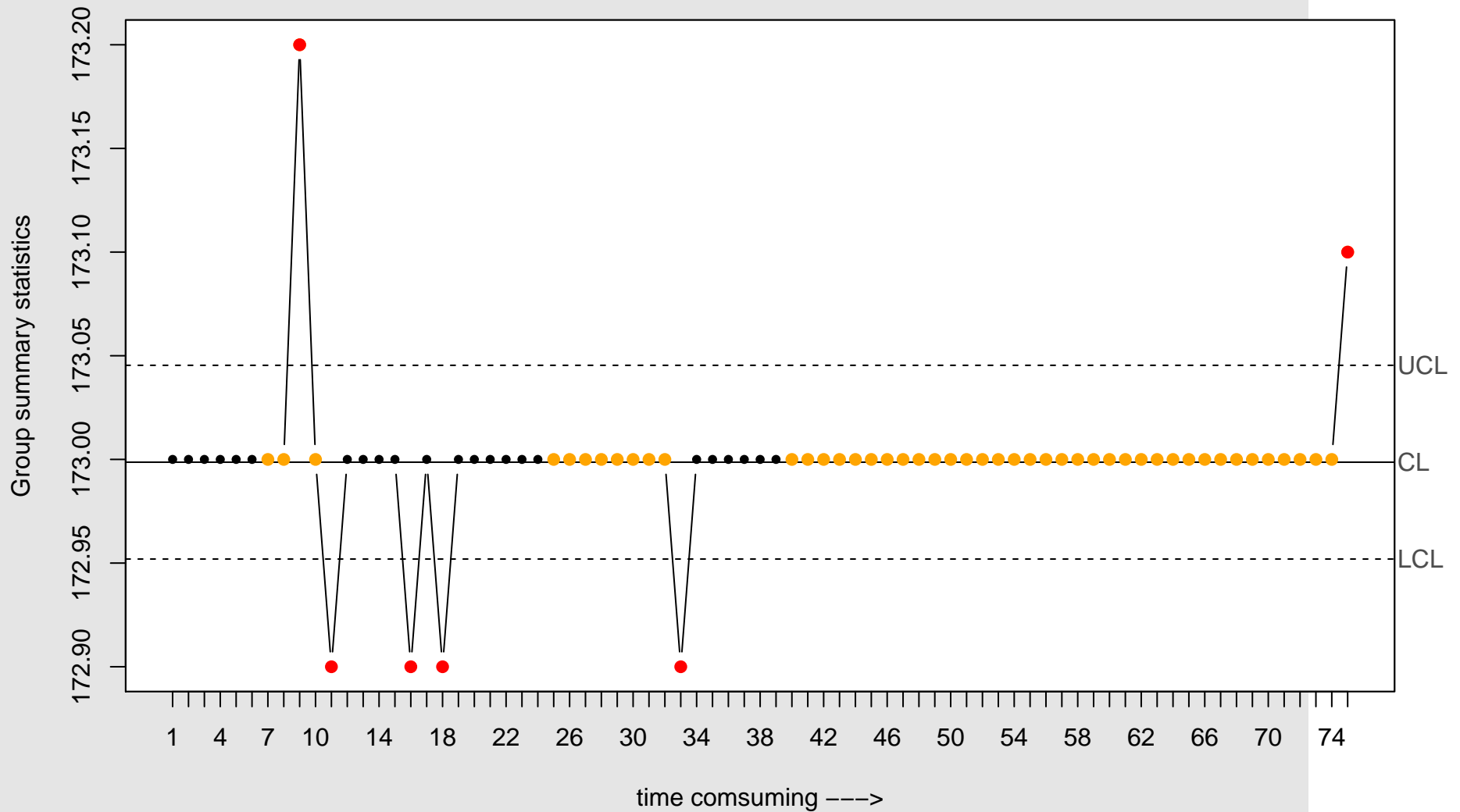
Number of groups = 75
Center = 172.9987   LCL = 172.9519   Number beyond limits = 6
StdDev = 0.01557408   UCL = 173.0454   Number violating runs = 48

16th column point of this product

Group summary statistics

time comsuming –––>
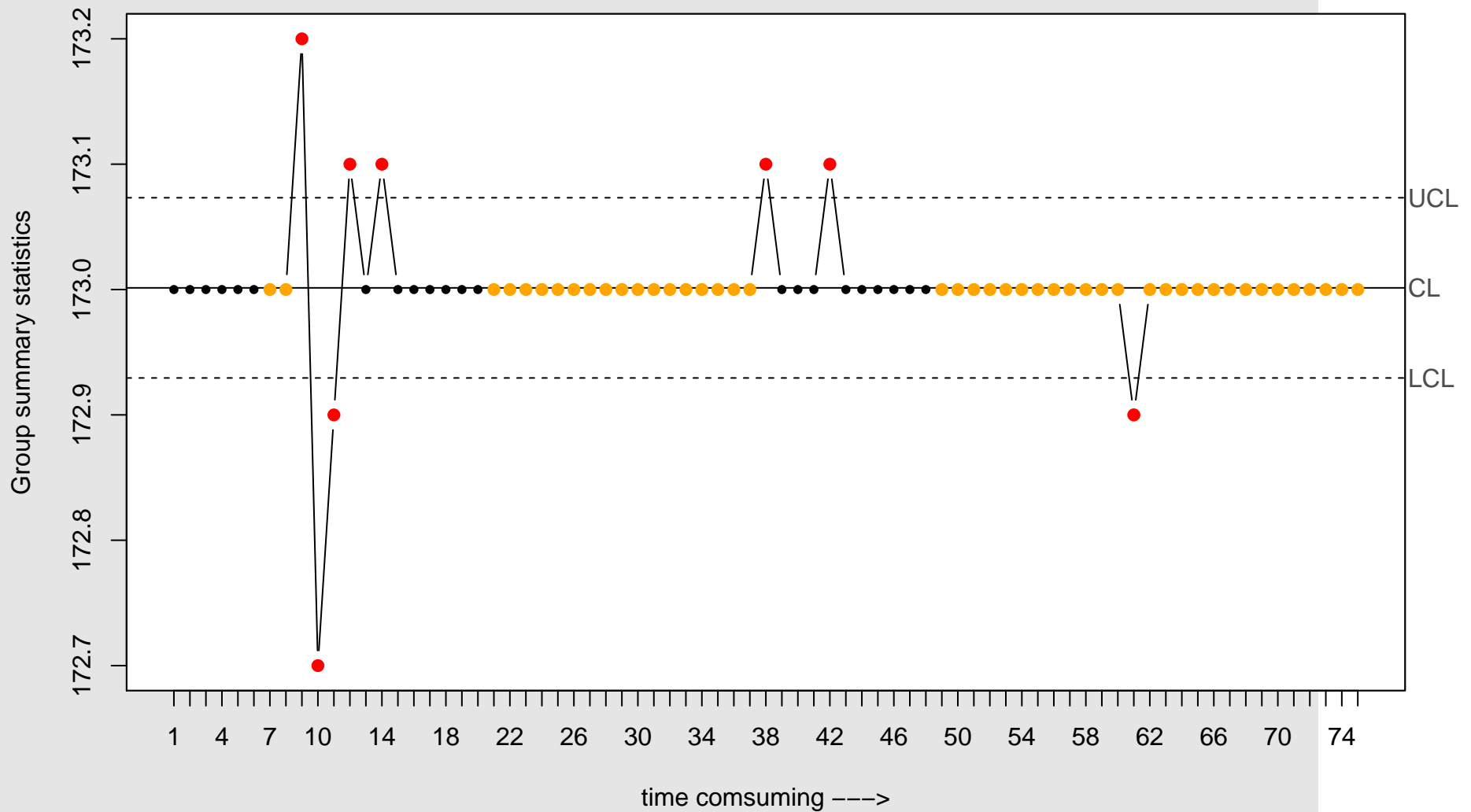
Number of groups = 75
Center = 173.0013   LCL = 172.9295   Number beyond limits = 8
StdDev = 0.02396013   UCL = 173.0732   Number violating runs = 46

17th column point of this product

Number of groups = 75
Center = 174.9947   LCL = 174.9156   Number beyond limits = 12
StdDev = 0.02635614   UCL = 175.0737   Number violating runs = 28
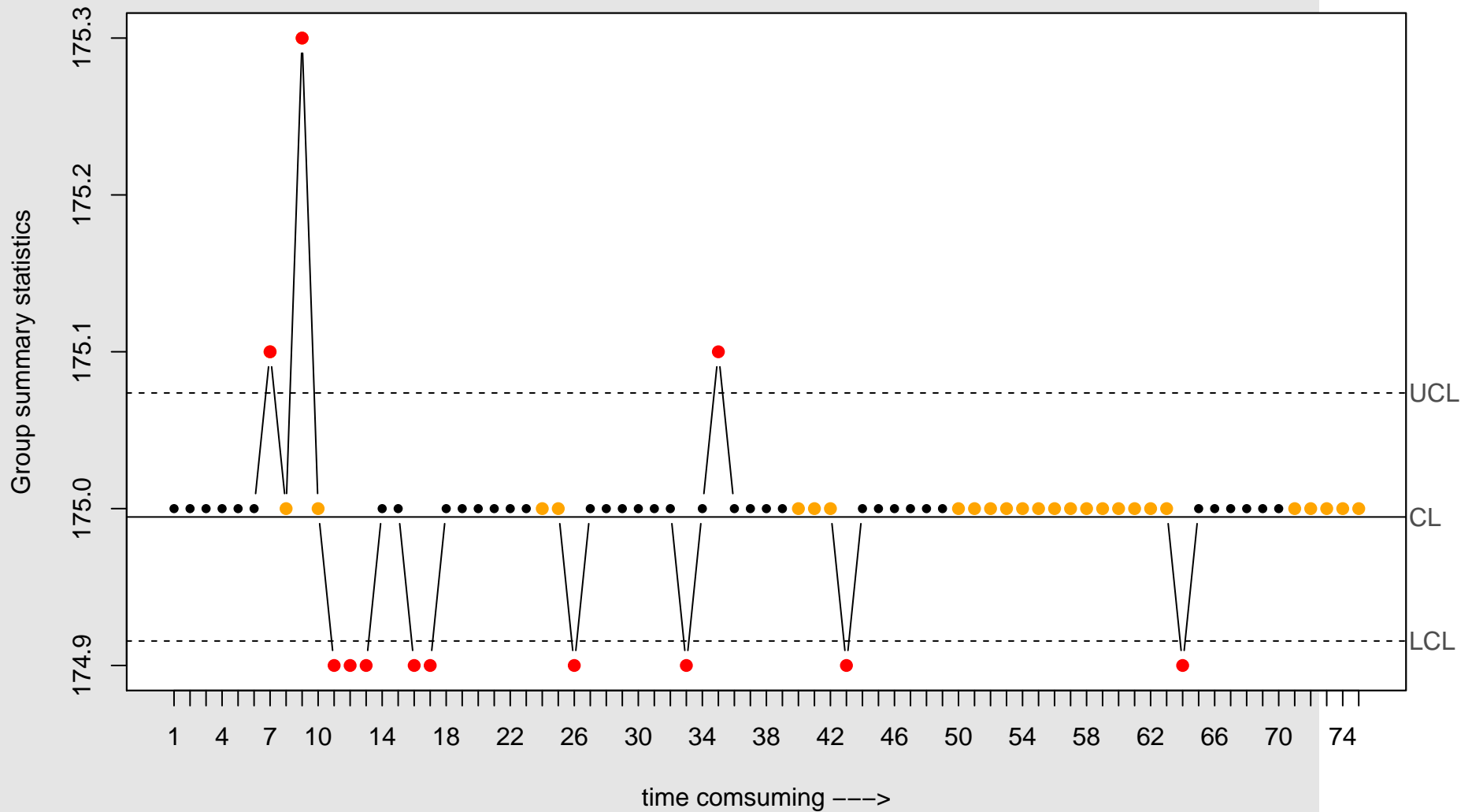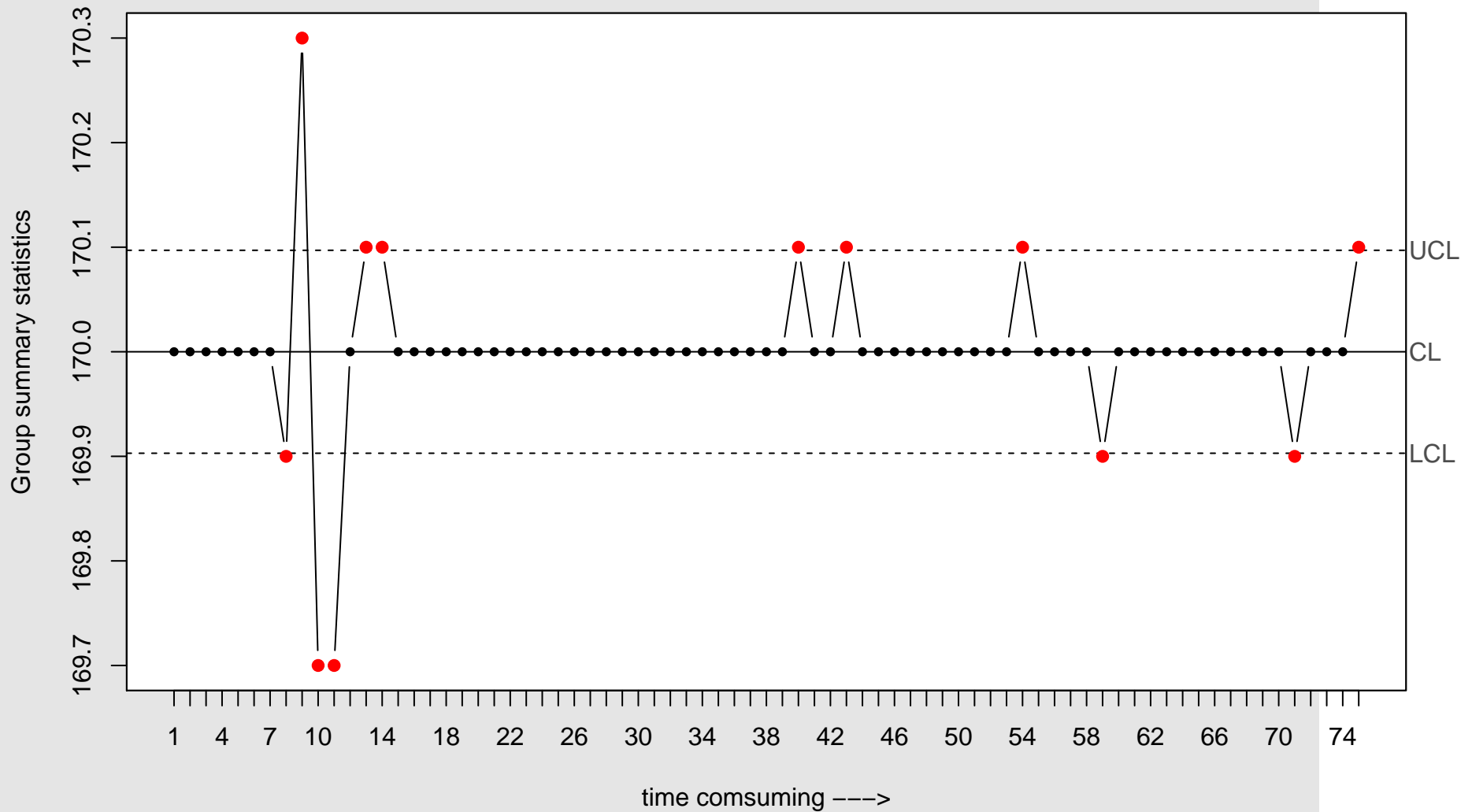
18th column point of this product

Number of groups = 75
Center = 170
StdDev = 0.03234618

LCL = 169.903
UCL = 170.097

Number beyond limits = 12
Number violating runs = 0