Individual thickness only
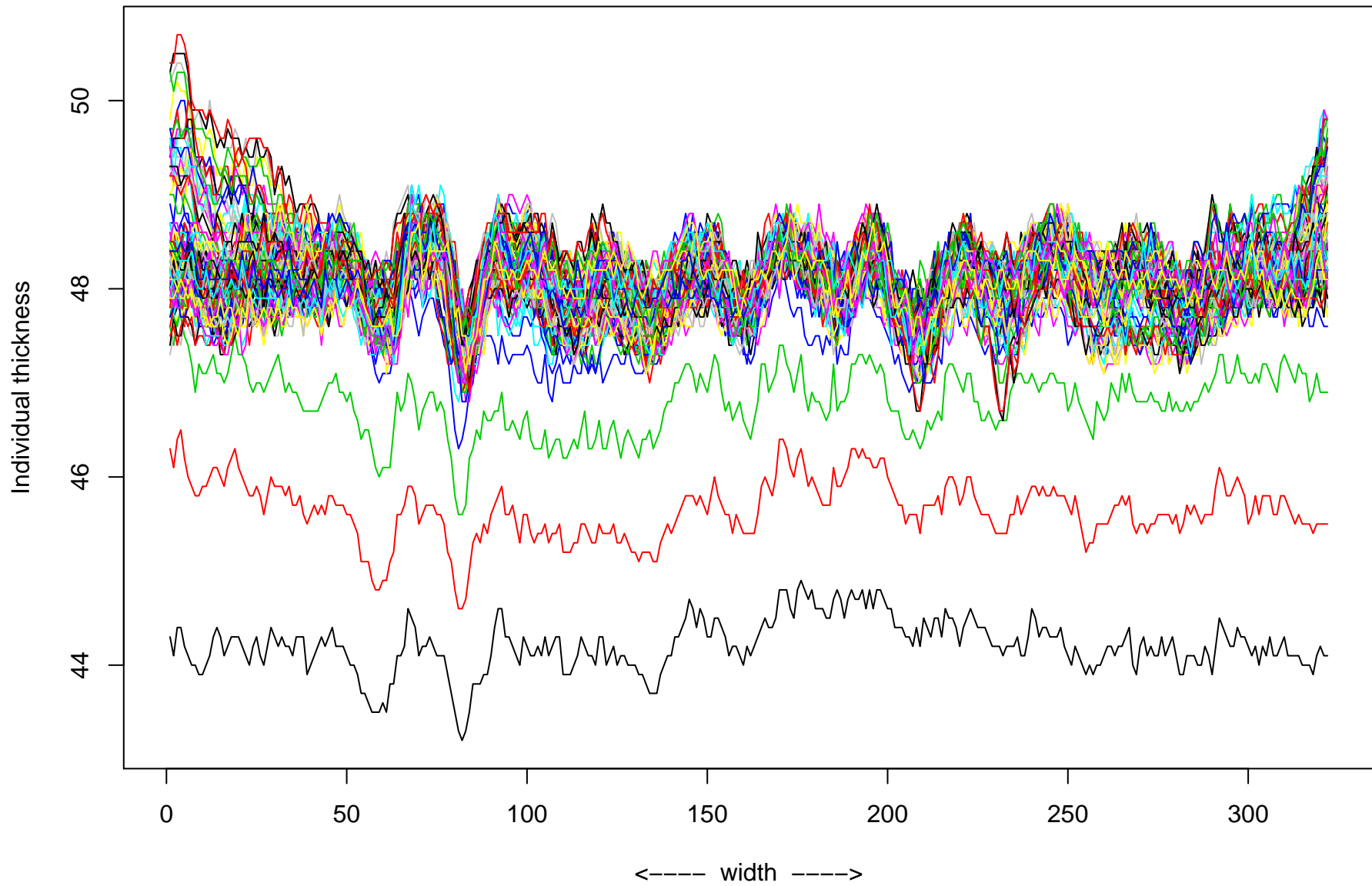
Simulated thickness
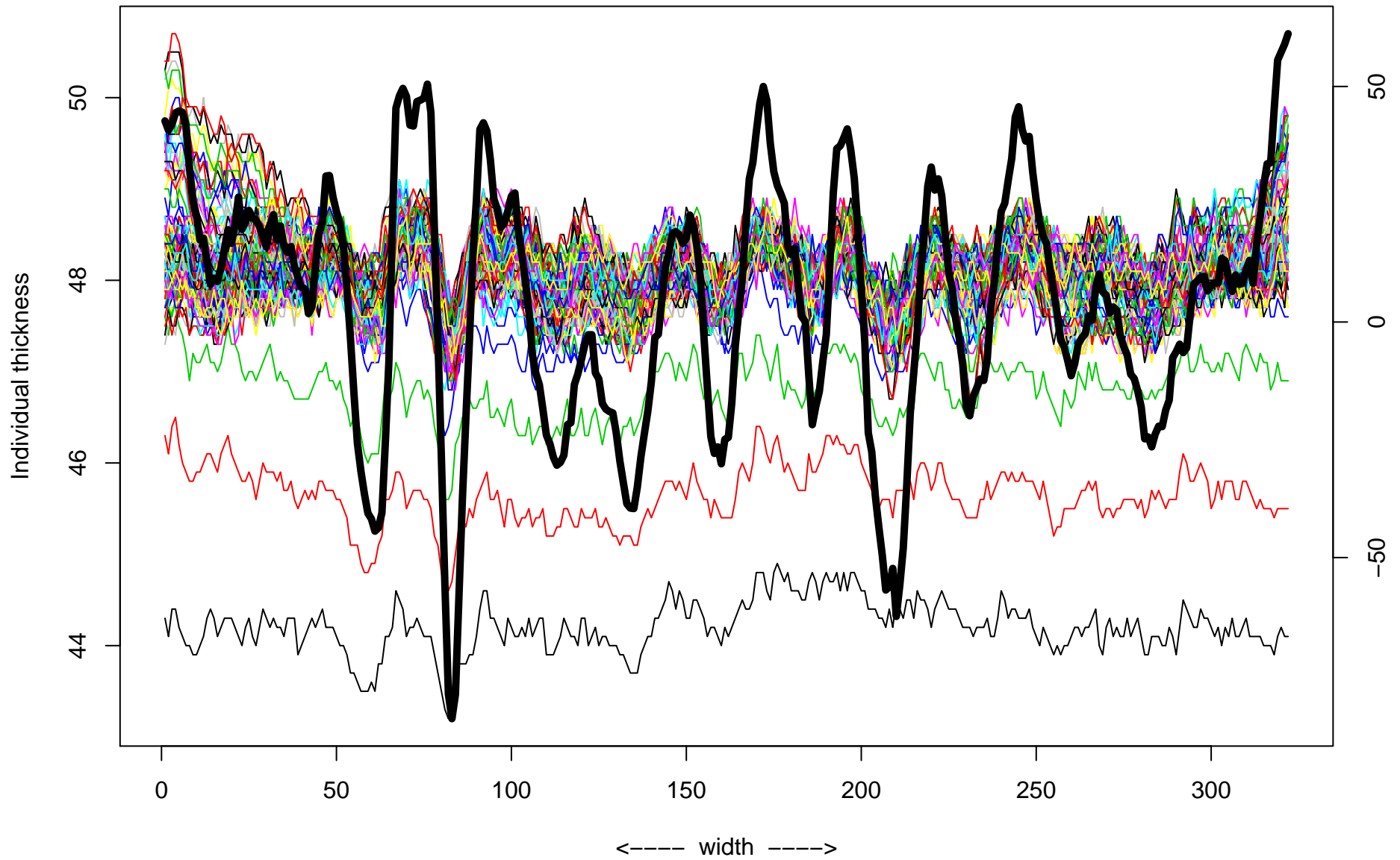
Simulated thickness
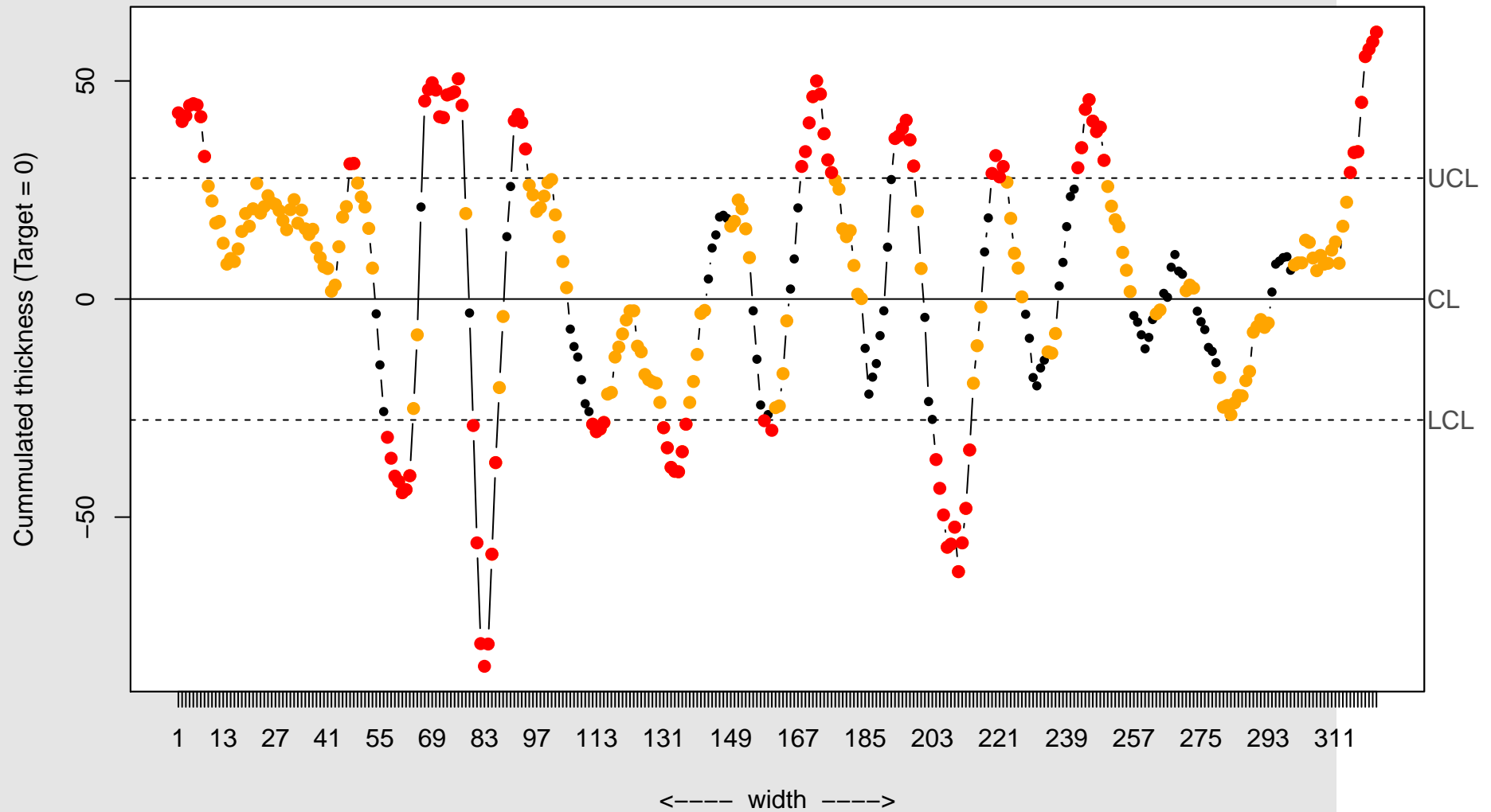
Number of groups = 322
Center = 0   LCL = −27.73083   Number beyond limits = 97
StdDev = 4.621805   UCL = 27.73083   Number violating runs = 208

Simulated thickness: Cpk is 0.3517 and z is −0.4448.

Cummulated thickness (Real value)

UCL
CL
LCL

1   13   27   41   55   69   83   97   113   131   149   167   185   203   221   239   257   275   293   311

<---- width ---->
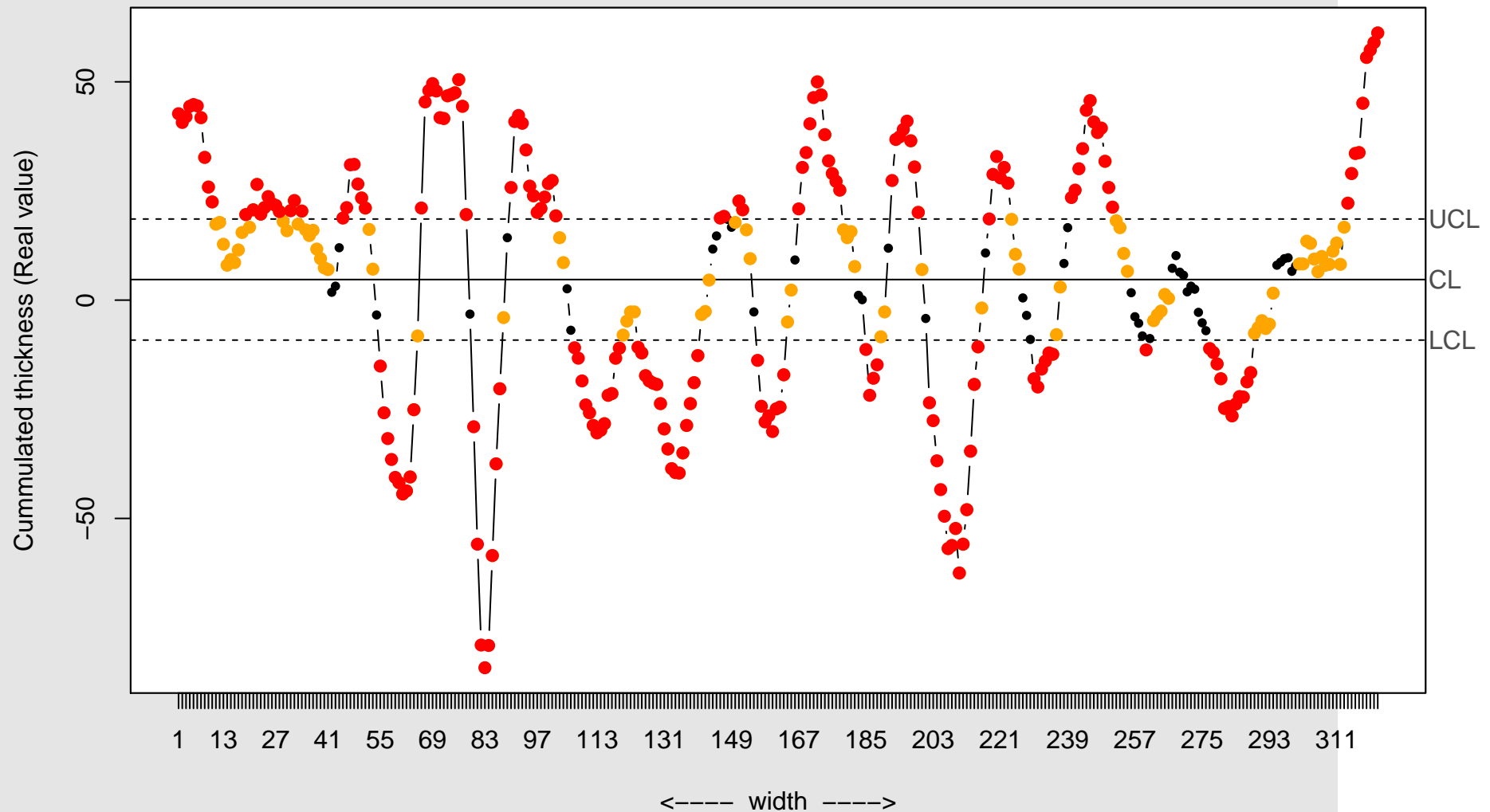
Number of groups = 322
Center = 4.710248   LCL = −9.155165   Number beyond limits = 199
StdDev = 4.621805   UCL = 18.57566   Number violating runs = 202

X−bar chart for a given dataset

Group summary statistics

UCL
LCL

time comsuming −−−>
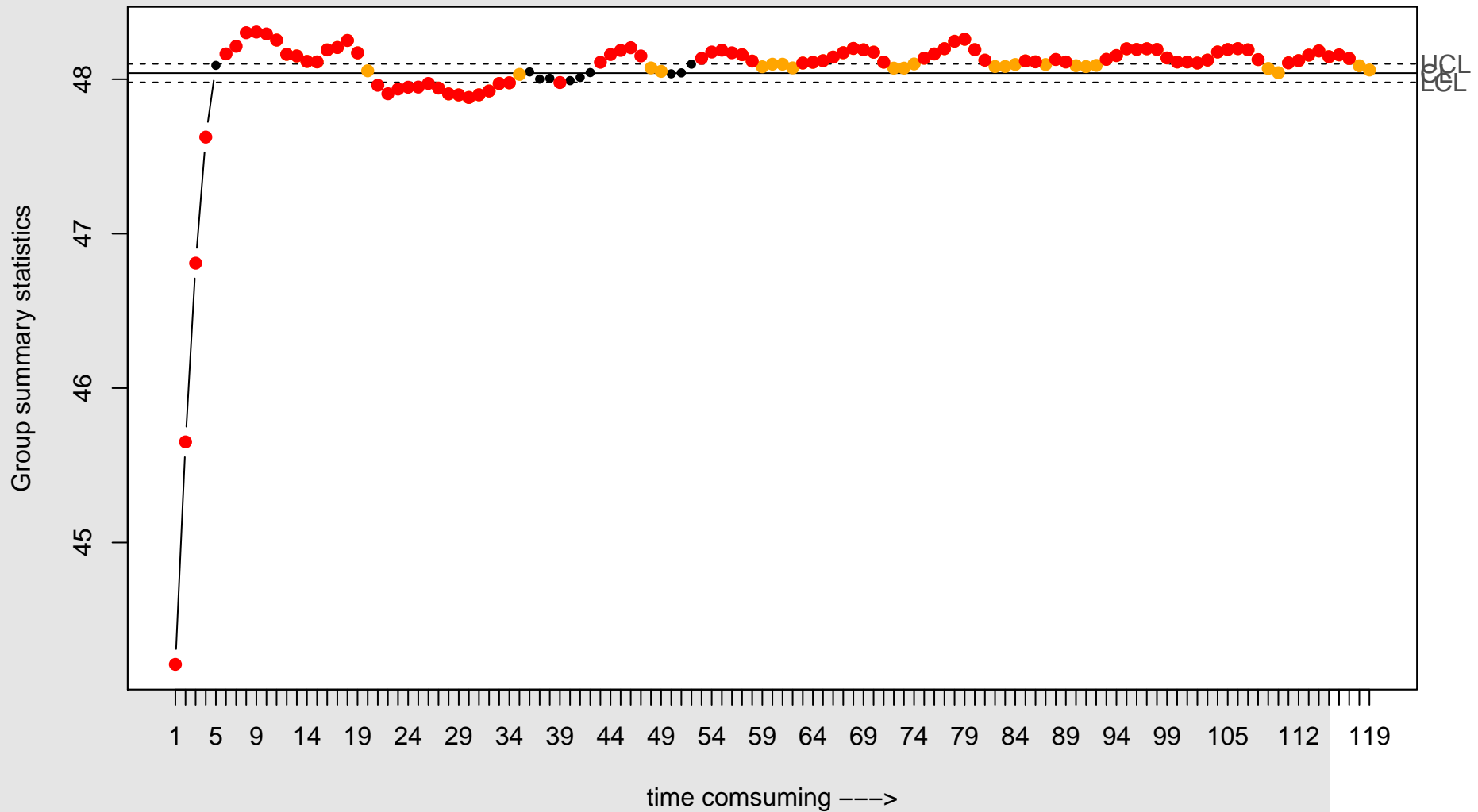
Number of groups = 119
Center = 48.03958   LCL = 47.97968   Number beyond limits = 87
StdDev = 0.3583052   UCL = 48.09948   Number violating runs = 84

S chart for a given dataset

Group summary statistics

time comsuming ———>

UCL
CL
LCL
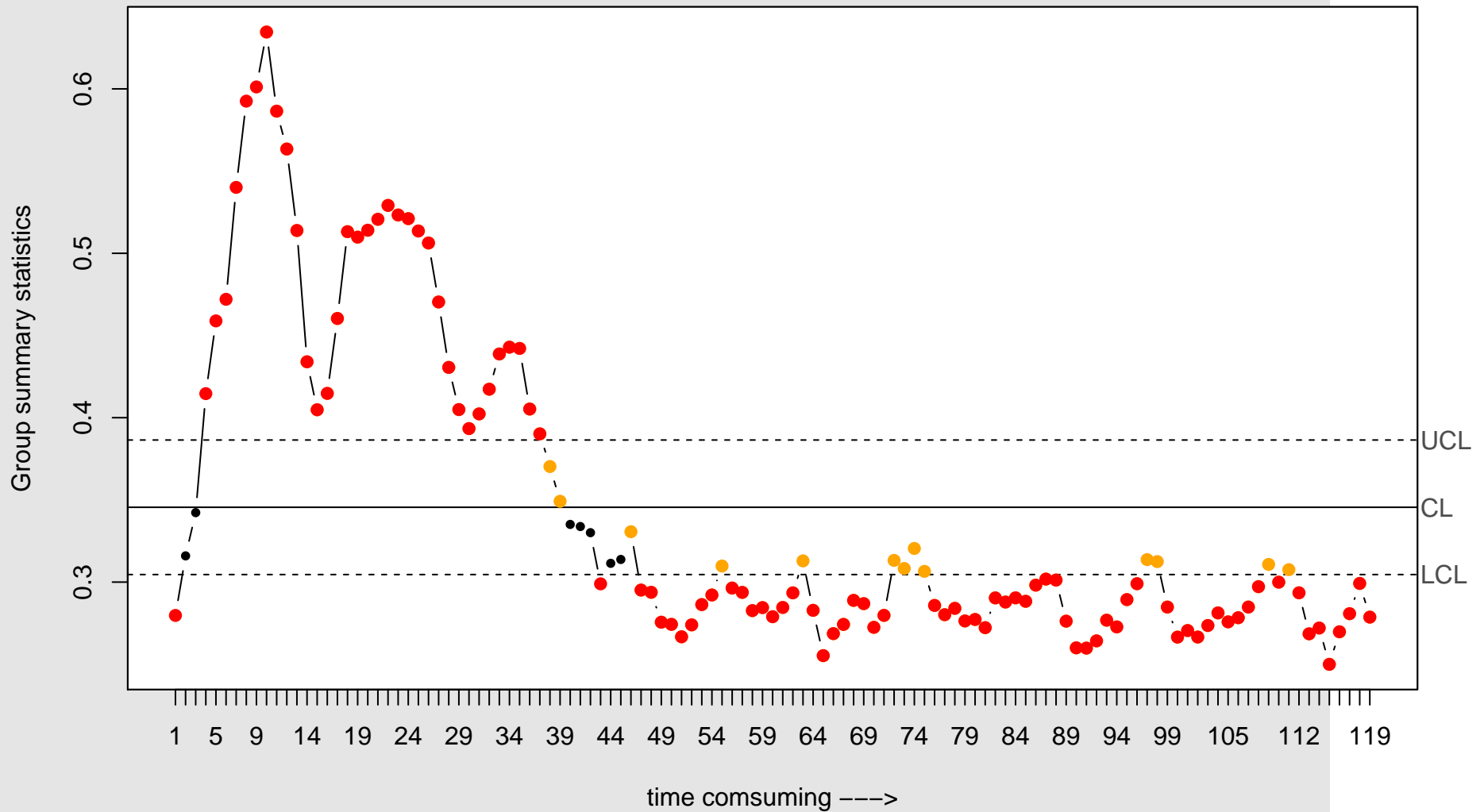
Number of groups = 119
Center = 0.3454992   LCL = 0.304576   Number beyond limits = 99
StdDev = 0.3457684   UCL = 0.3864224   Number violating runs = 104

X−bar chart using USL/LSL for a given dataset
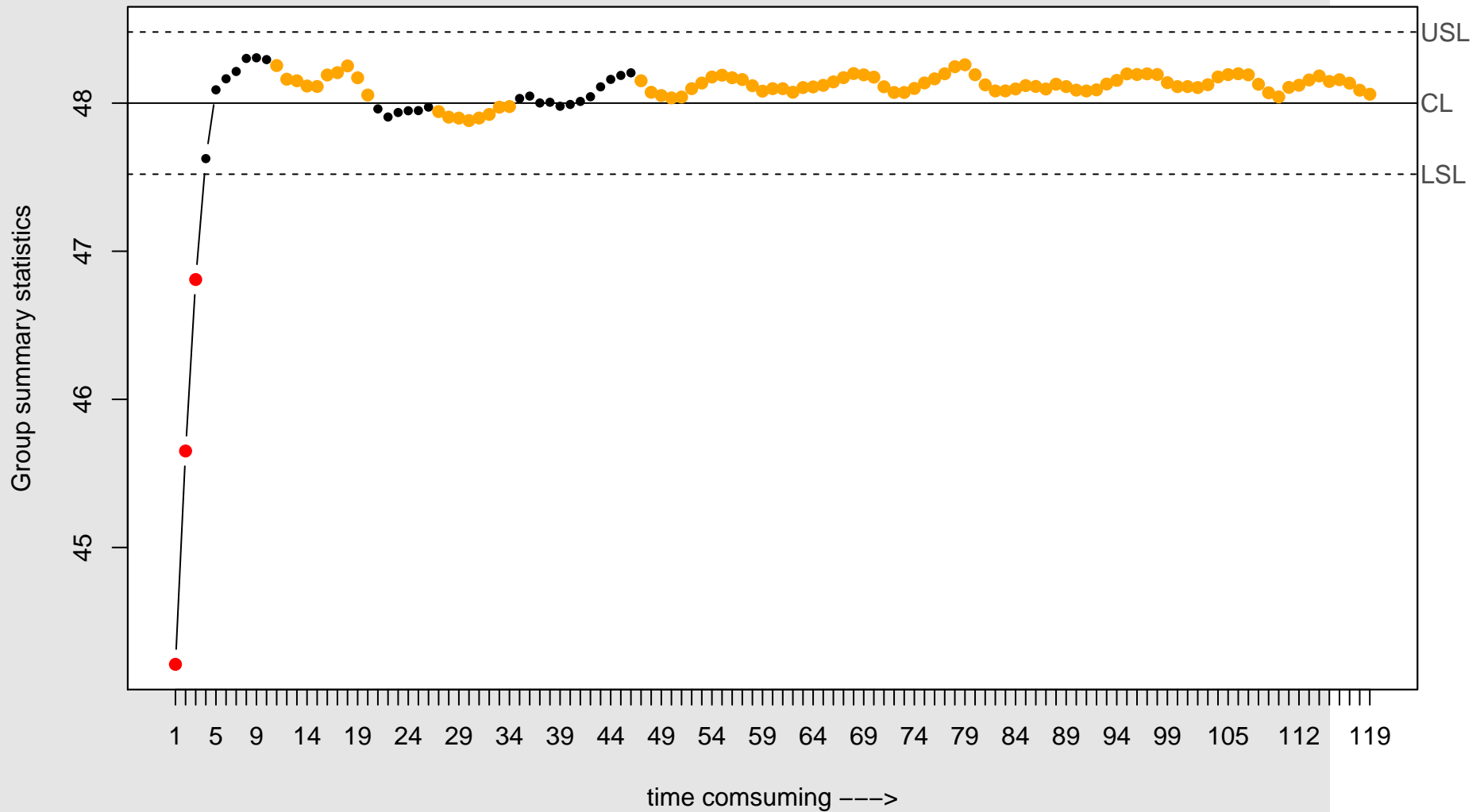
Group summary statistics

USL

CL

LSL

time comsuming −−−>

Number of groups = 119
Center = 48   LCL = 47.52   Number beyond limits = 3
StdDev = 0.3583052   UCL = 48.48   Number violating runs = 91

1th column point of this product

Group summary statistics

time comsuming ---->
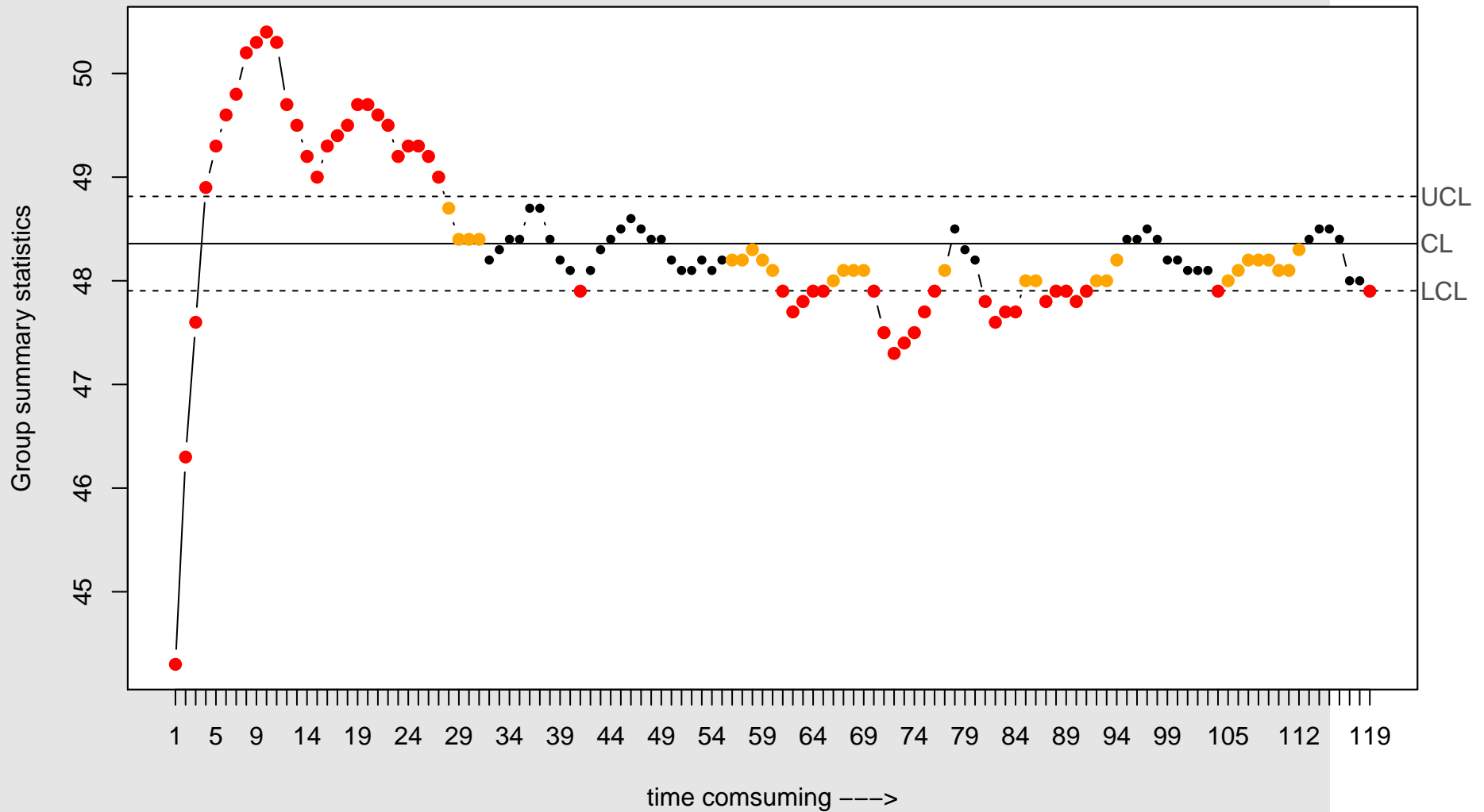
Number of groups = 119
Center = 48.35882   LCL = 47.90354   Number beyond limits = 51
StdDev = 0.151761   UCL = 48.81411   Number violating runs = 62

2th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ---->
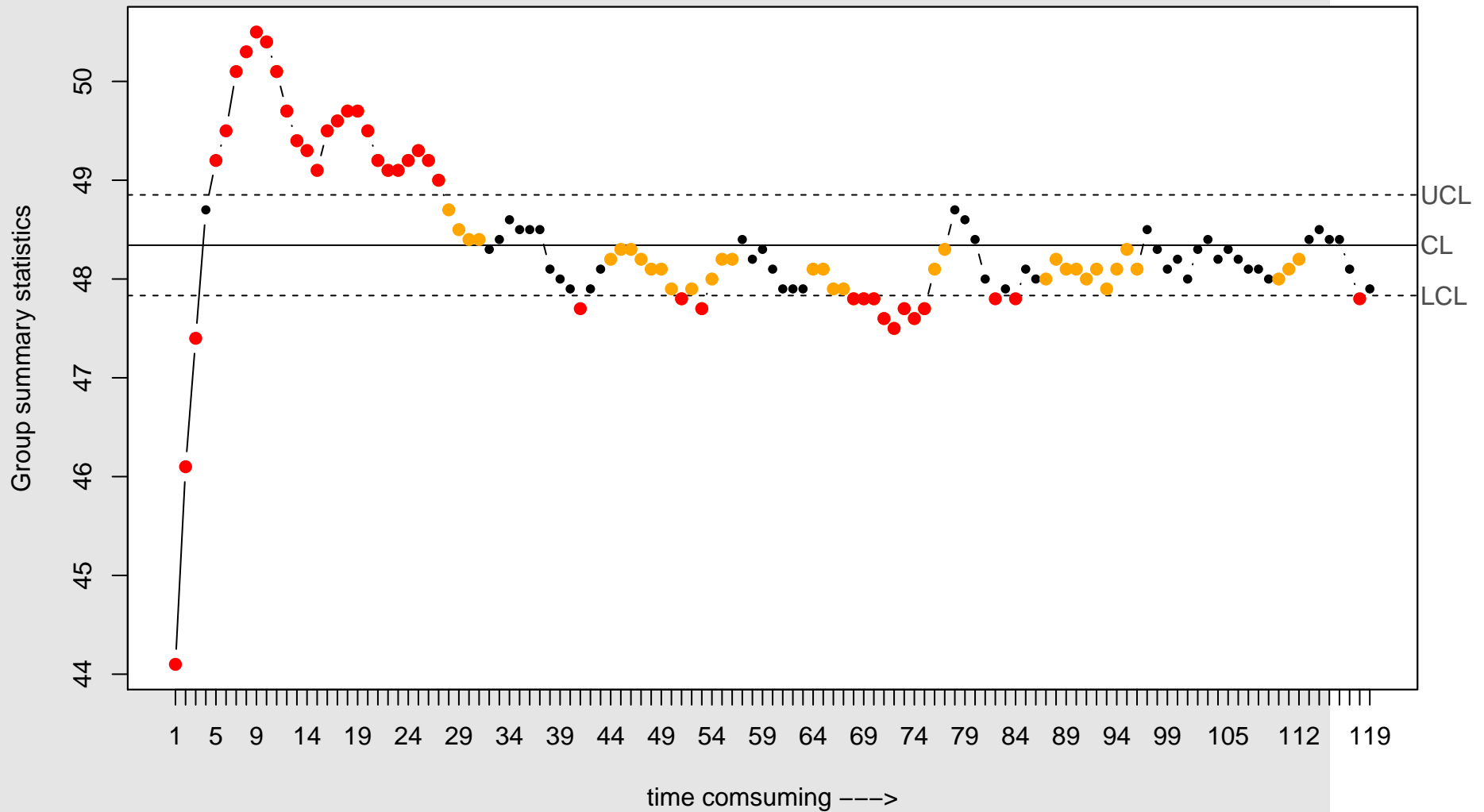
Number of groups = 119
Center = 48.34202   LCL = 47.83264   Number beyond limits = 40
StdDev = 0.169792   UCL = 48.85139   Number violating runs = 62

3th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ––––>
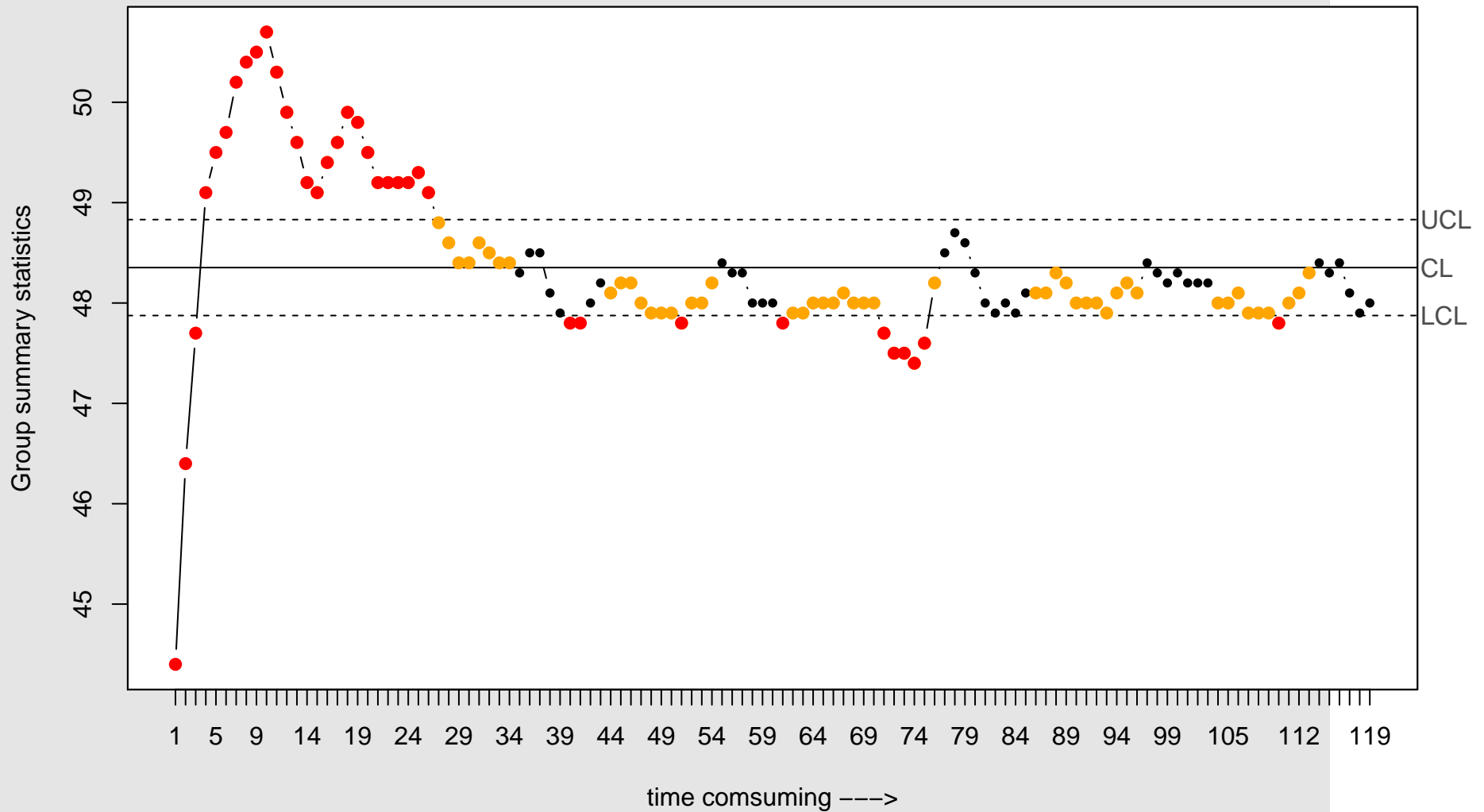
Number of groups = 119
Center = 48.35294   LCL = 47.87512   Number beyond limits = 36
StdDev = 0.159274   UCL = 48.83076   Number violating runs = 72

4th column point of this product

Group summary statistics

time comsuming ---->
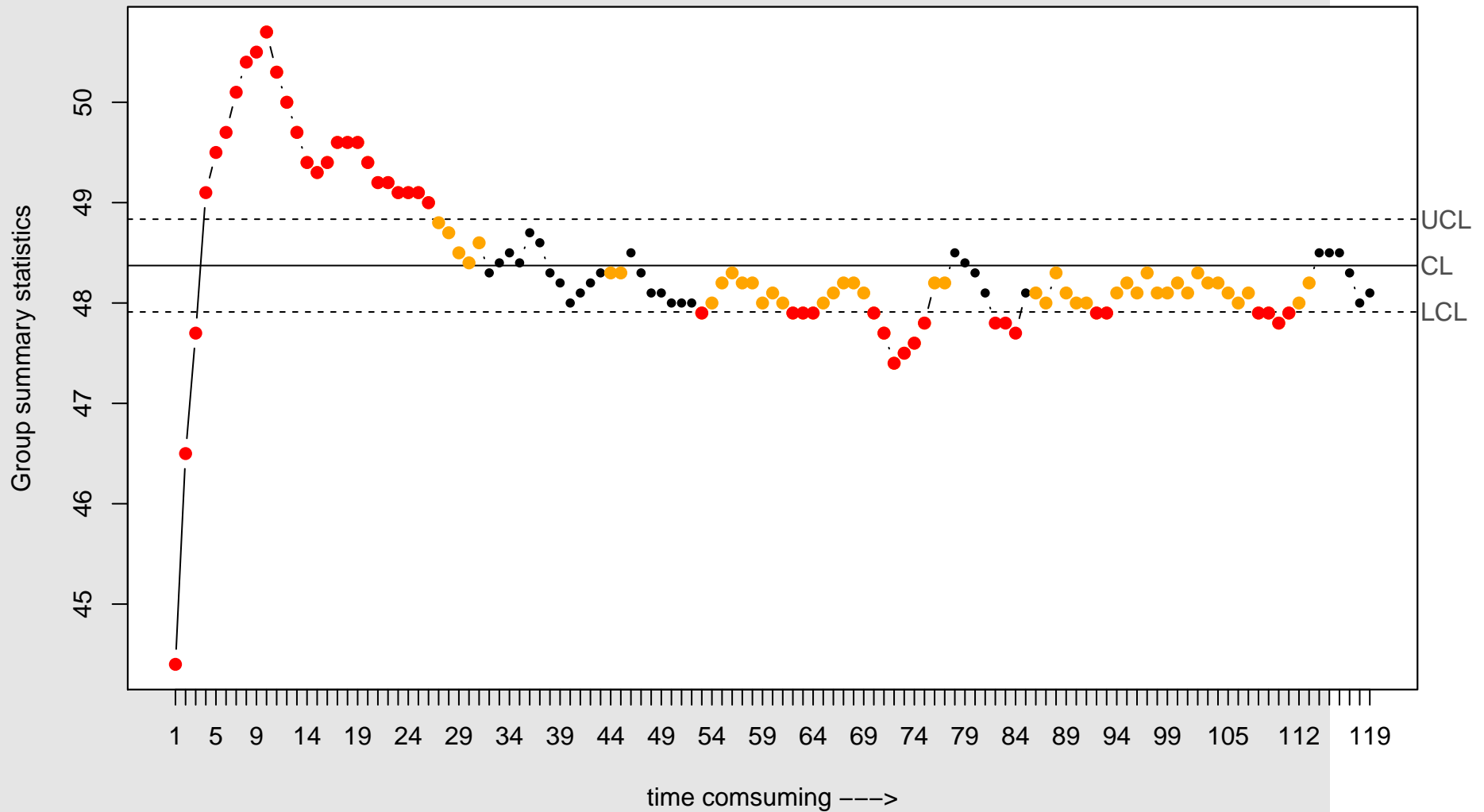
Number of groups = 119
Center = 48.37311   LCL = 47.91106   Number beyond limits = 45
StdDev = 0.1540149   UCL = 48.83515   Number violating runs = 77

5th column point of this product
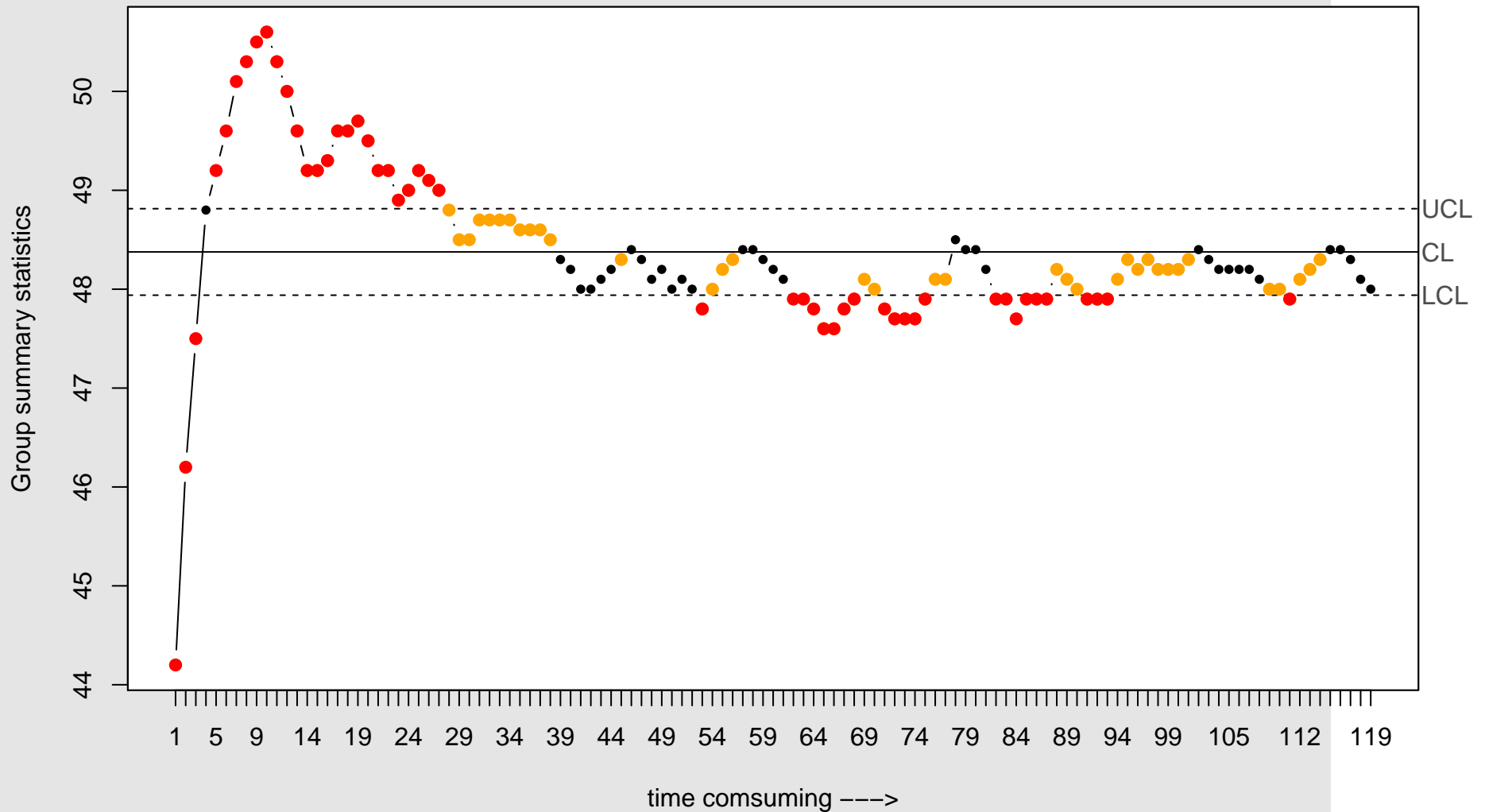
Number of groups = 119
Center = 48.37647   LCL = 47.93922   Number beyond limits = 49
StdDev = 0.1457507   UCL = 48.81372   Number violating runs = 68

6th column point of this product

Group summary statistics

time comsuming ---->
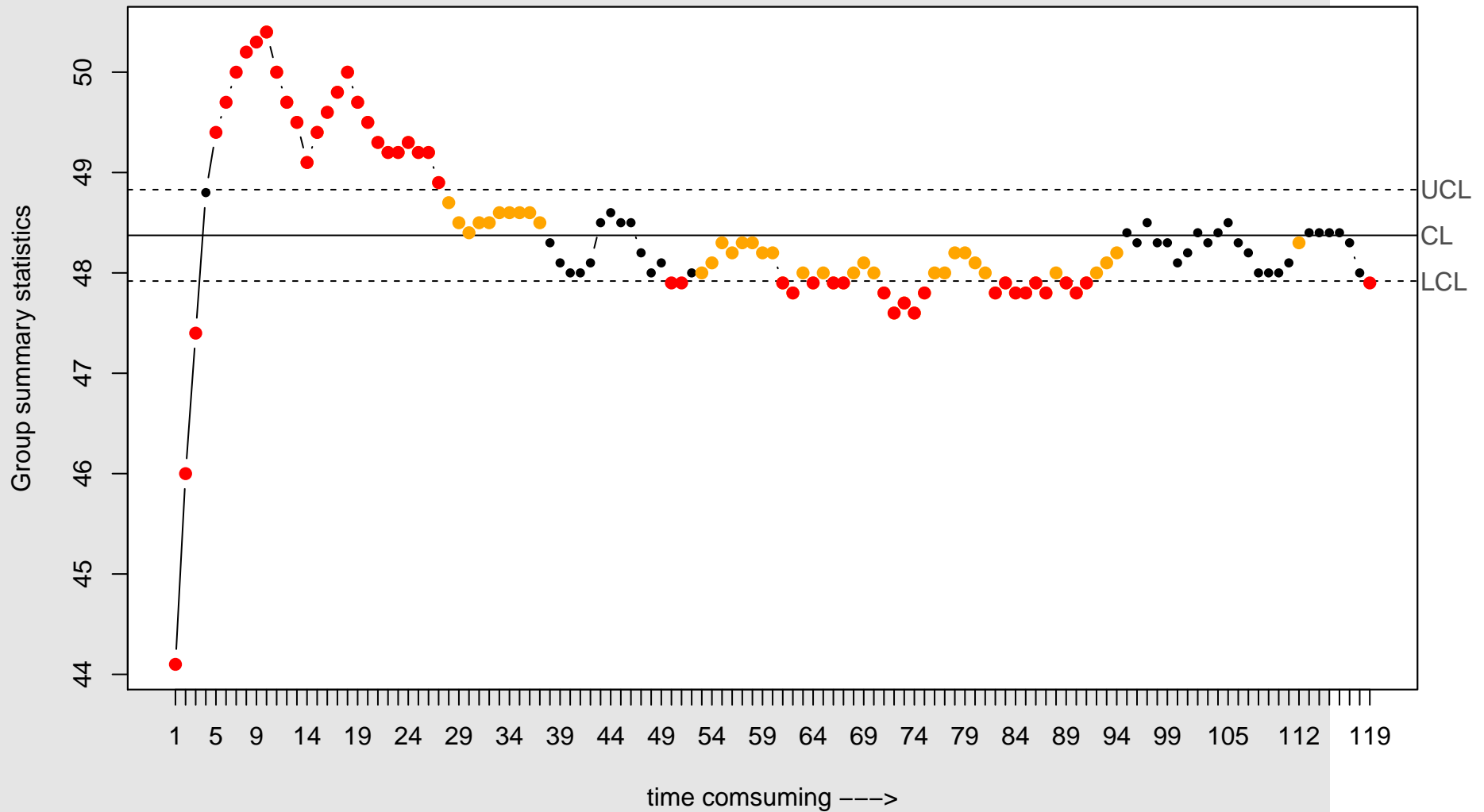
Number of groups = 119
Center = 48.37395   LCL = 47.91867   Number beyond limits = 48
StdDev = 0.151761   UCL = 48.82923   Number violating runs = 71

7th column point of this product
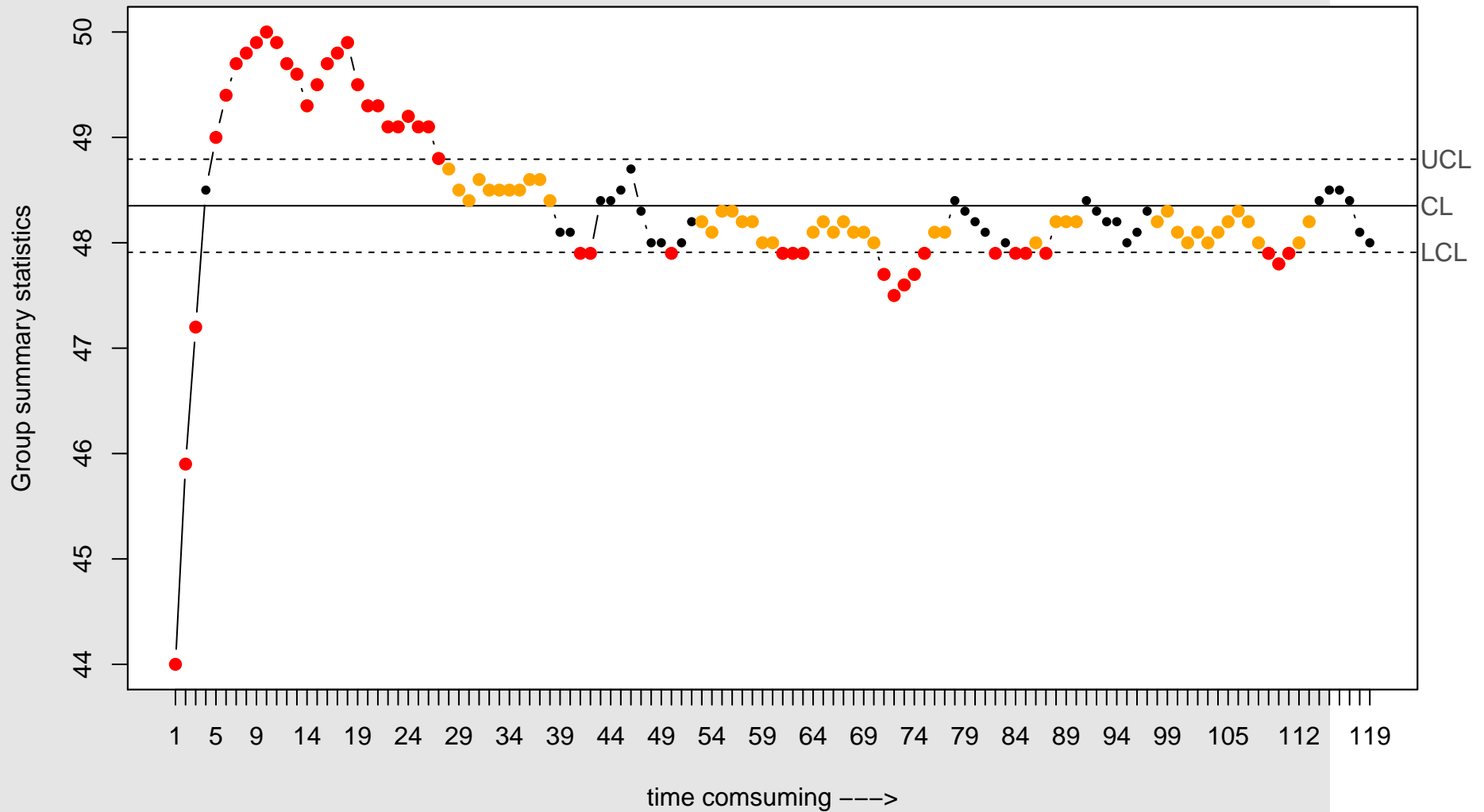
Number of groups = 119
Center = 48.35126   LCL = 47.9095   Number beyond limits = 44
StdDev = 0.1472533   UCL = 48.79302   Number violating runs = 76

8th column point of this product

Group summary statistics

time comsuming ---->
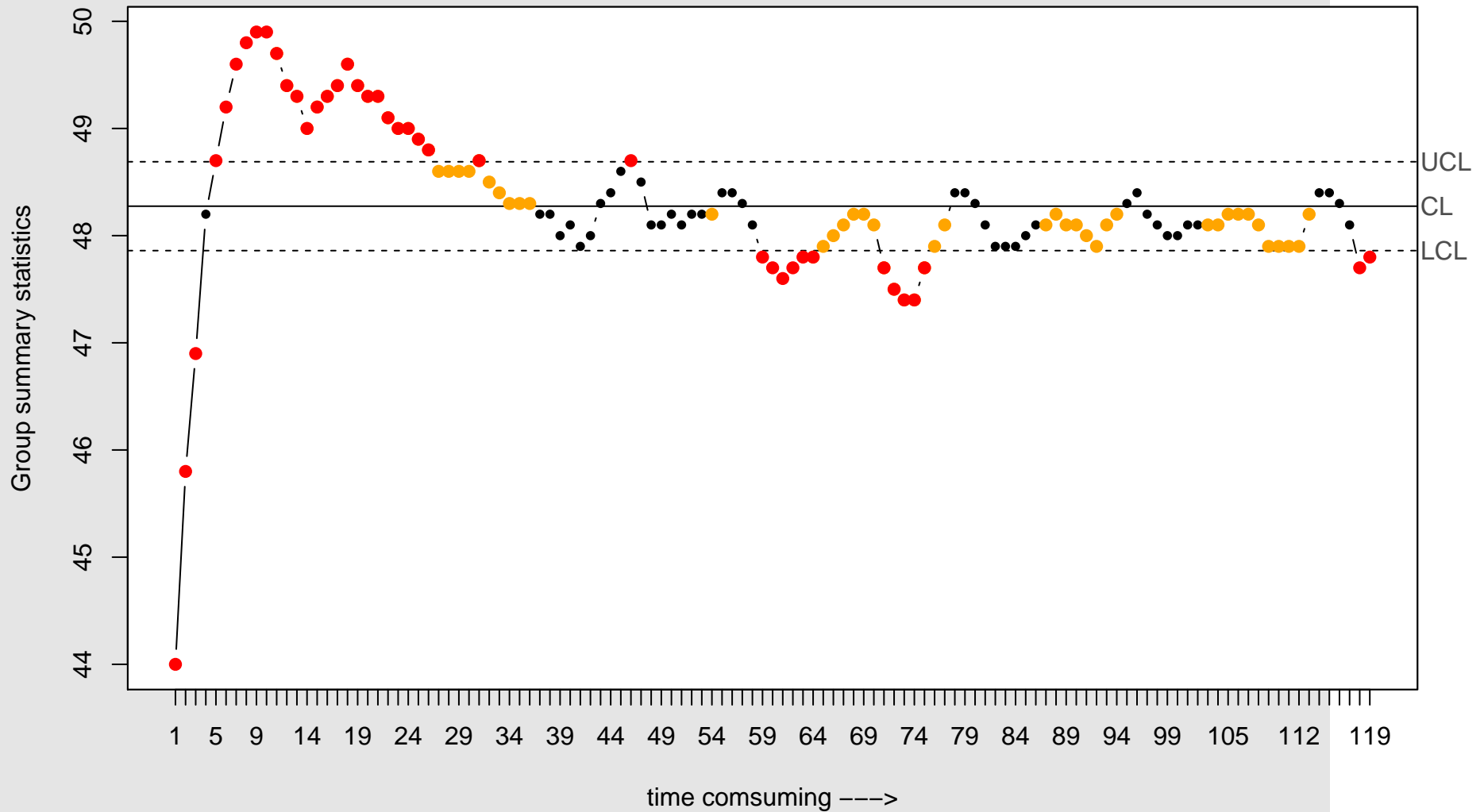
Number of groups = 119
Center = 48.27479   LCL = 47.86008   Number beyond limits = 40
StdDev = 0.1382378   UCL = 48.6895   Number violating runs = 60

9th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL
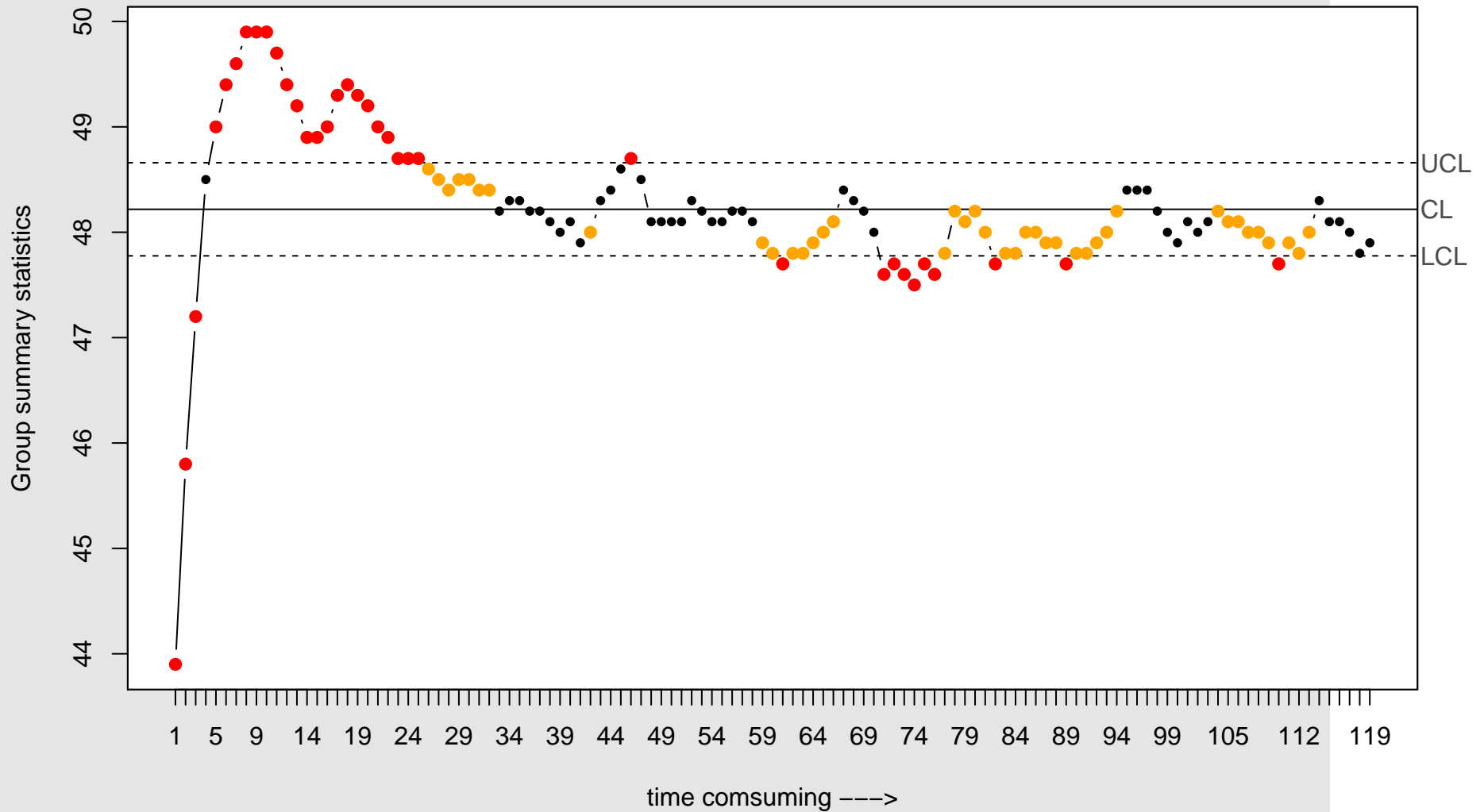
Number of groups = 119
Center = 48.21765
StdDev = 0.1472533
LCL = 47.77589
UCL = 48.65941
Number beyond limits = 35
Number violating runs = 62

10th column point of this product

Group summary statistics

time comsuming --->

Number of groups = 119
Center = 48.18908   LCL = 47.78338   Number beyond limits = 36
StdDev = 0.1352326   UCL = 48.59477   Number violating runs = 51

11th column point of this product
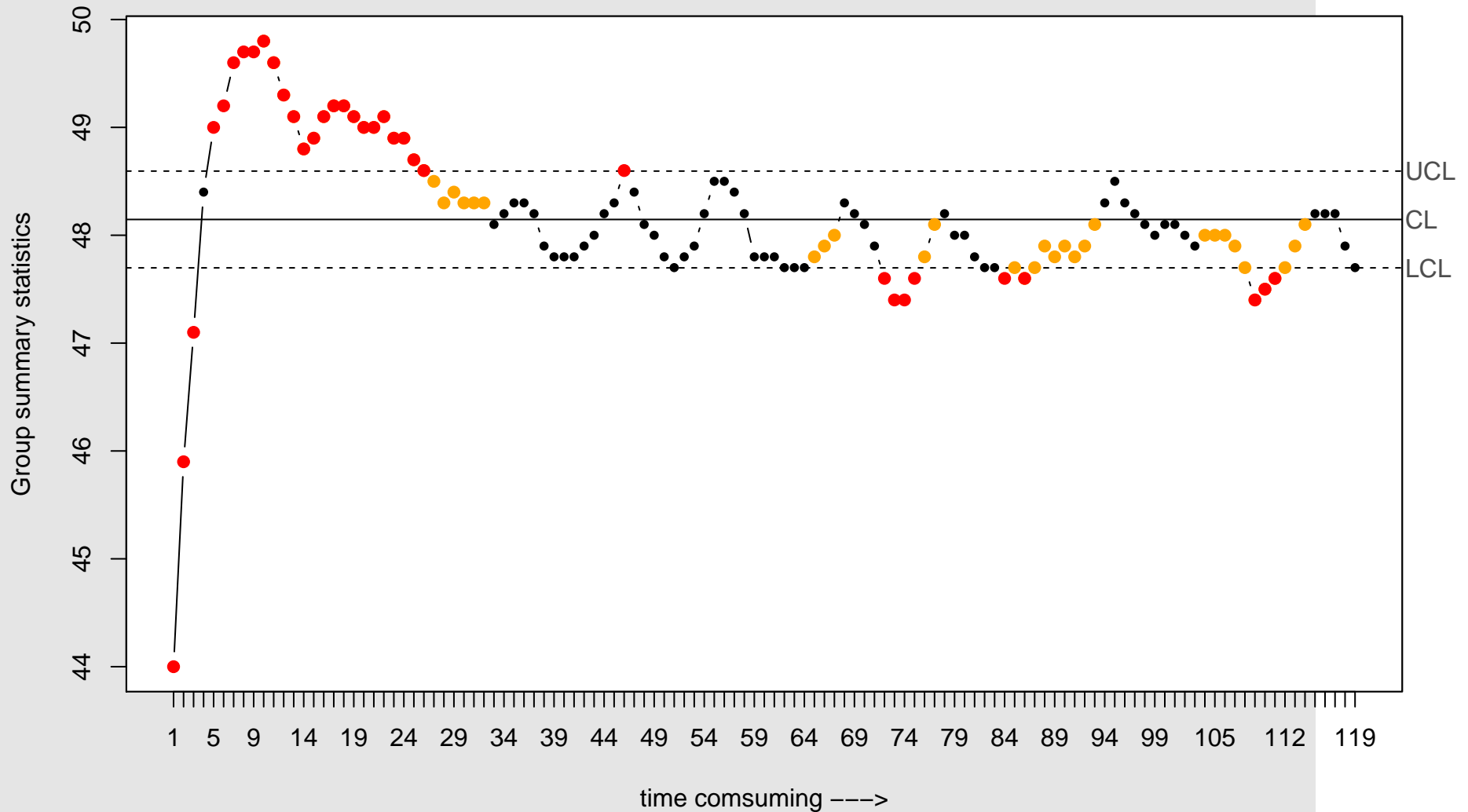
Number of groups = 119
Center = 48.14622
StdDev = 0.1495072

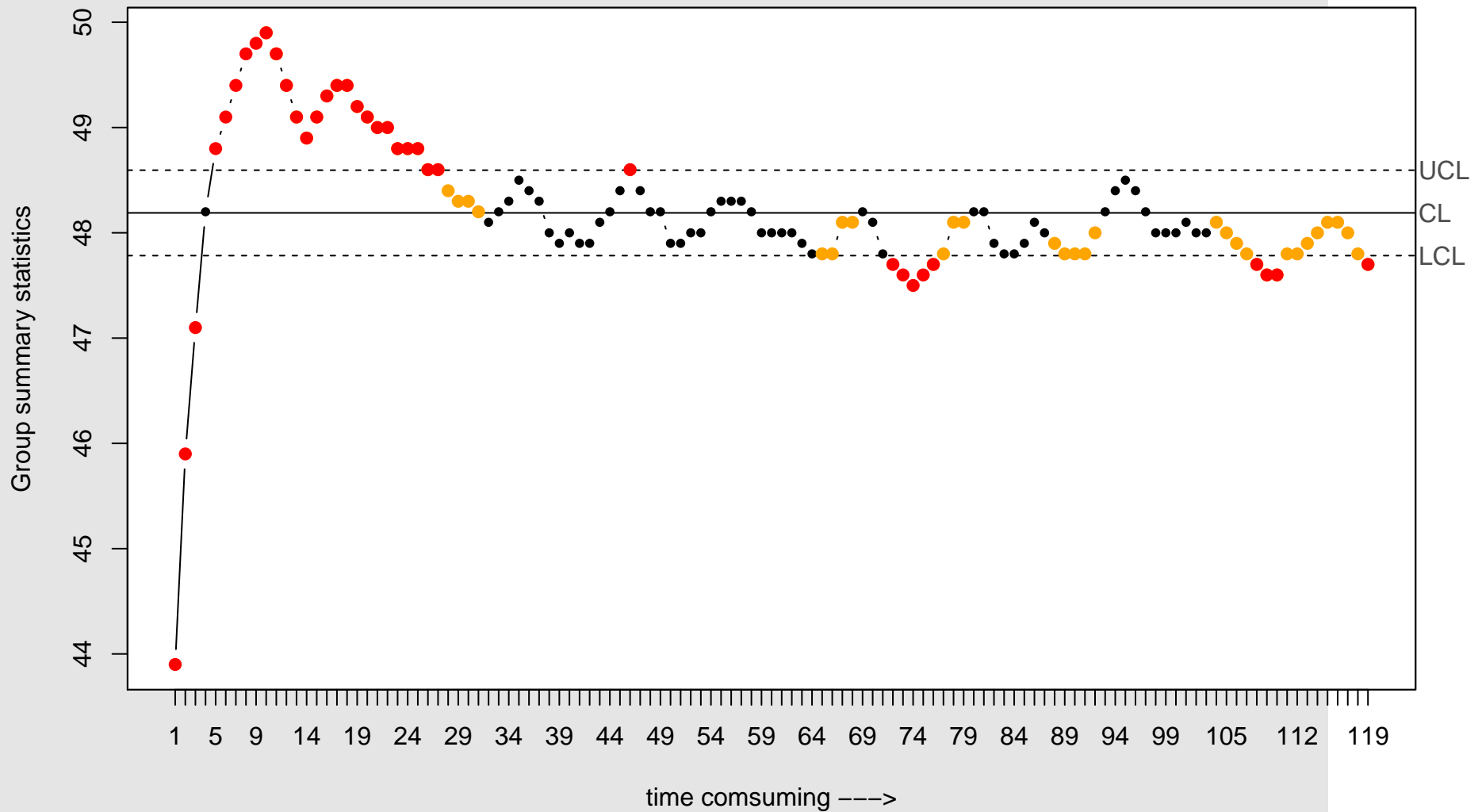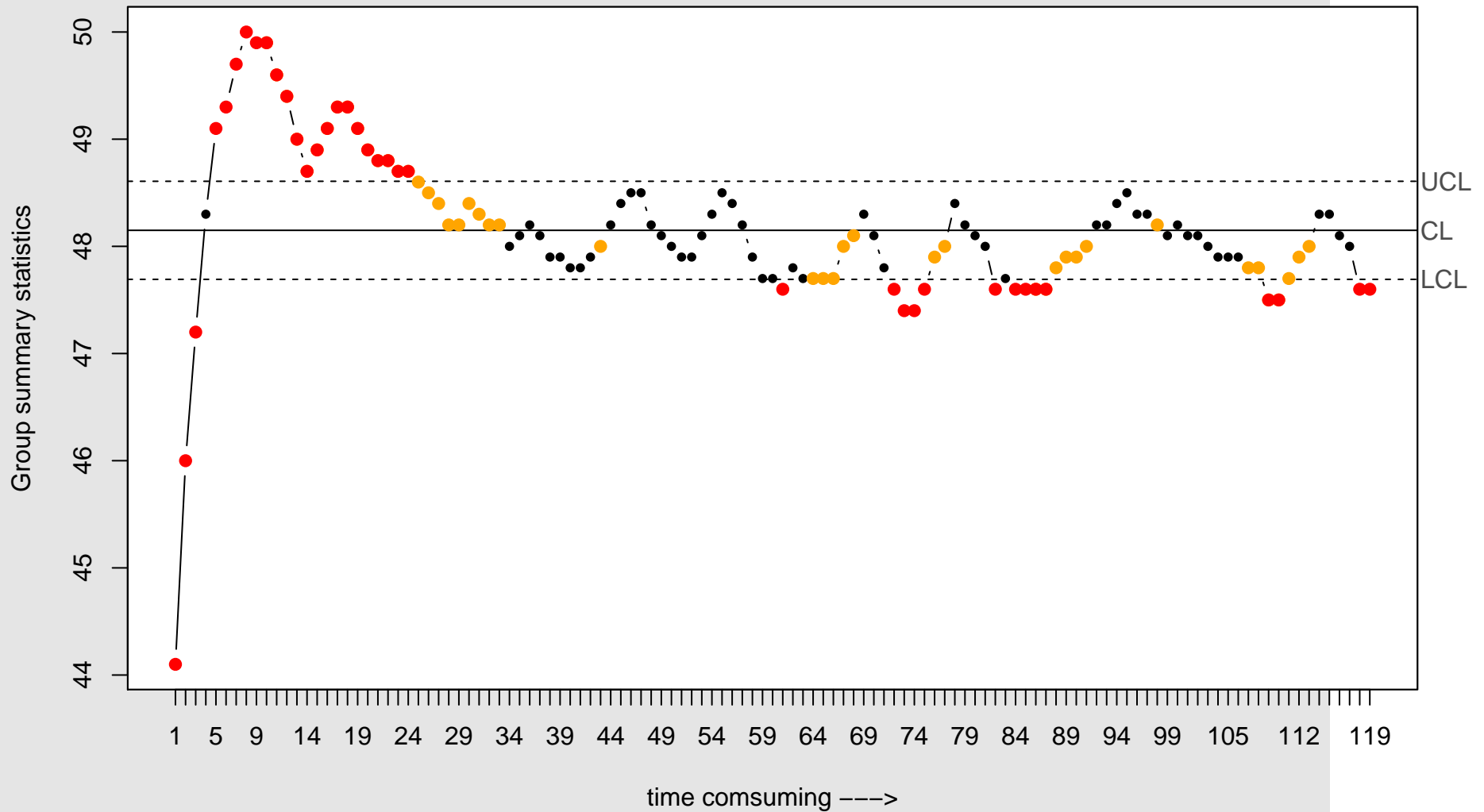LCL = 47.6977
UCL = 48.59474

Number beyond limits = 35
Number violating runs = 48

12th column point of this product

Group summary statistics

time comsuming --->

Number of groups = 119
Center = 48.14958   LCL = 47.69204   Number beyond limits = 37
StdDev = 0.1525123   UCL = 48.60712   Number violating runs = 46

13th column point of this product
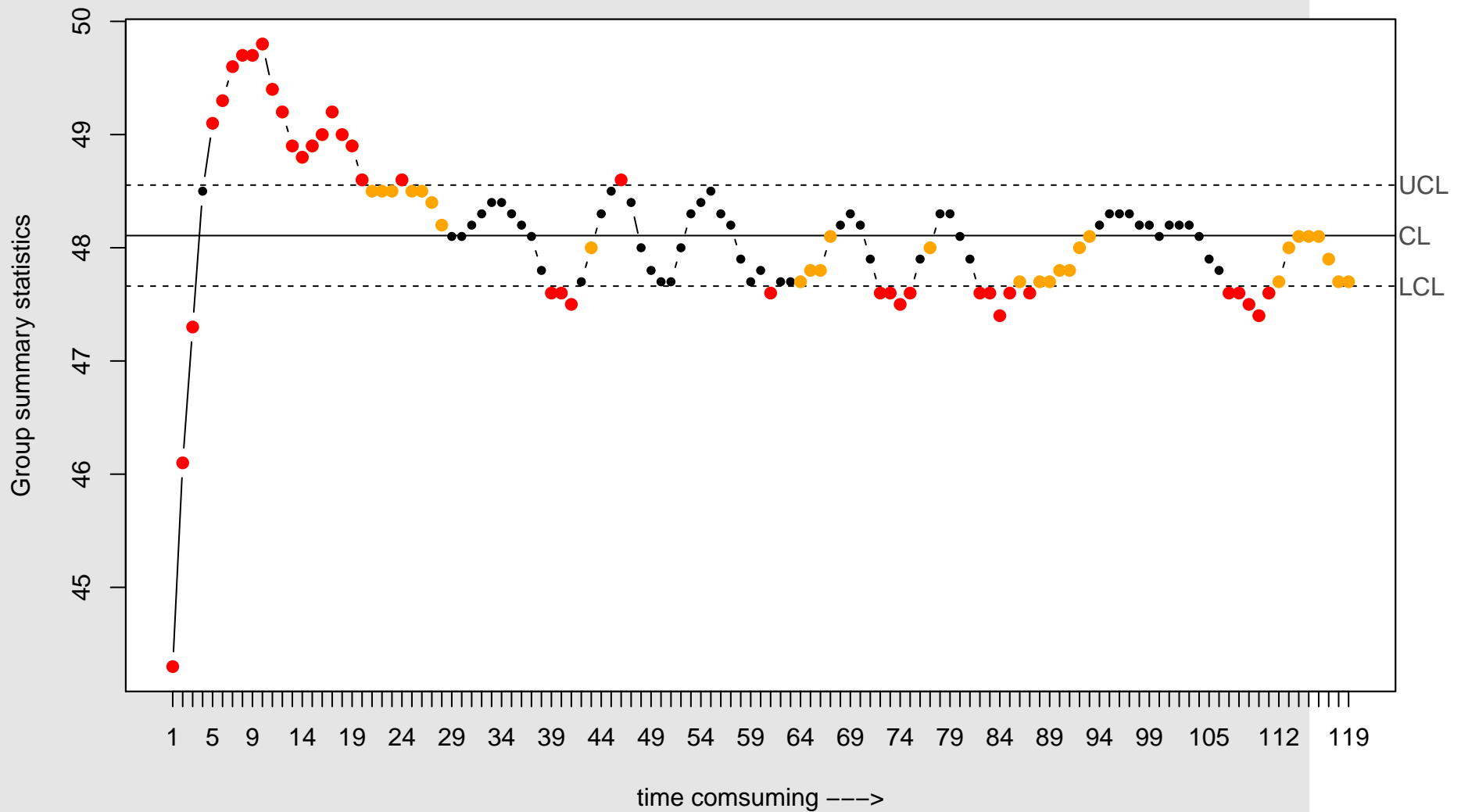
Number of groups = 119
Center = 48.10756   LCL = 47.6613   Number beyond limits = 39
StdDev = 0.1487559   UCL = 48.55383   Number violating runs = 43

14th column point of this product
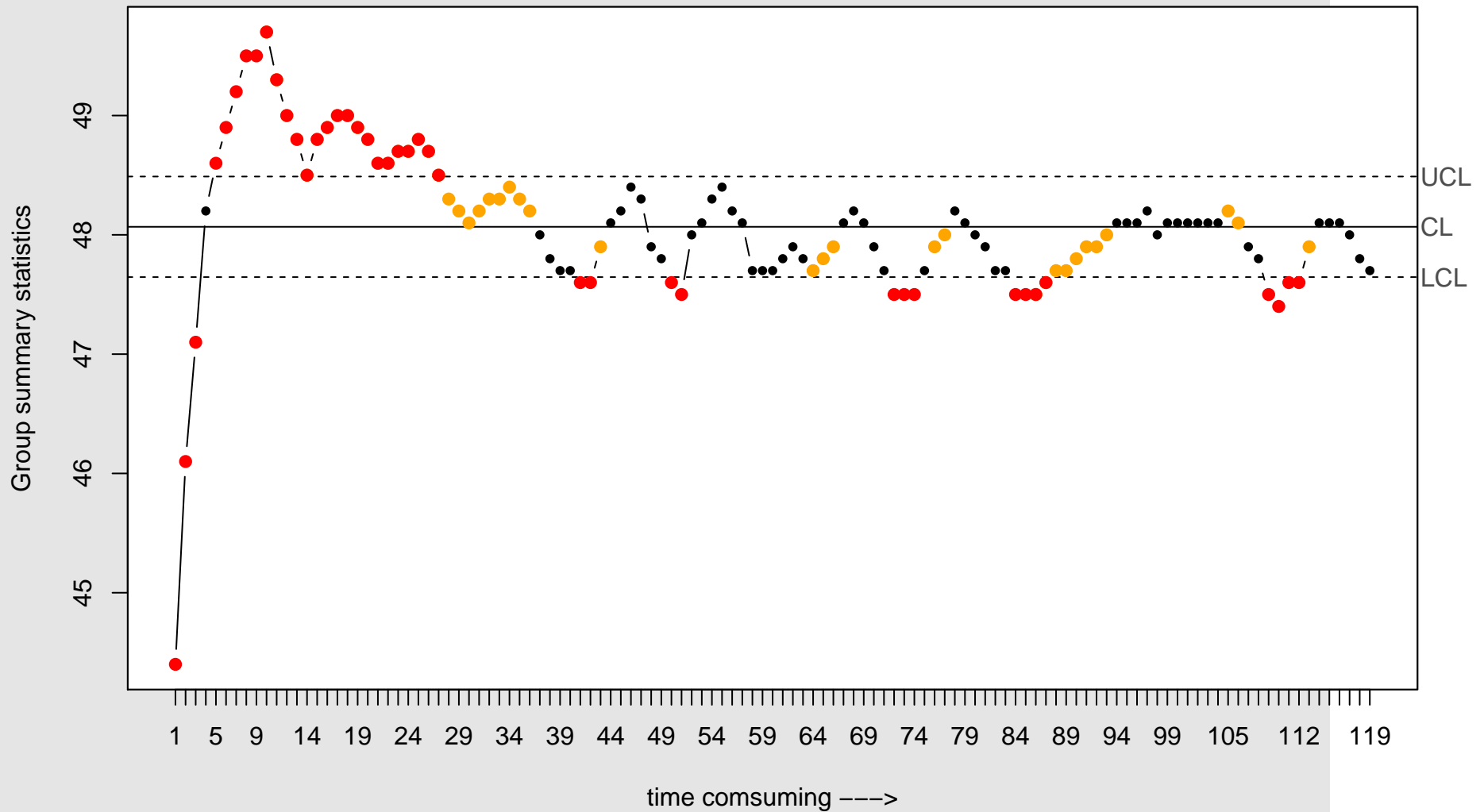
Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 48.06723   LCL = 47.64575   Number beyond limits = 41
StdDev = 0.1404916   UCL = 48.4887   Number violating runs = 44

15th column point of this product

Group summary statistics

time comsuming ———>

Number of groups = 119
Center = 48.07815   LCL = 47.64541   Number beyond limits = 41
StdDev = 0.1442481   UCL = 48.5109   Number violating runs = 50

16th column point of this product

Group summary statistics

time comsuming –––>

Number of groups = 119
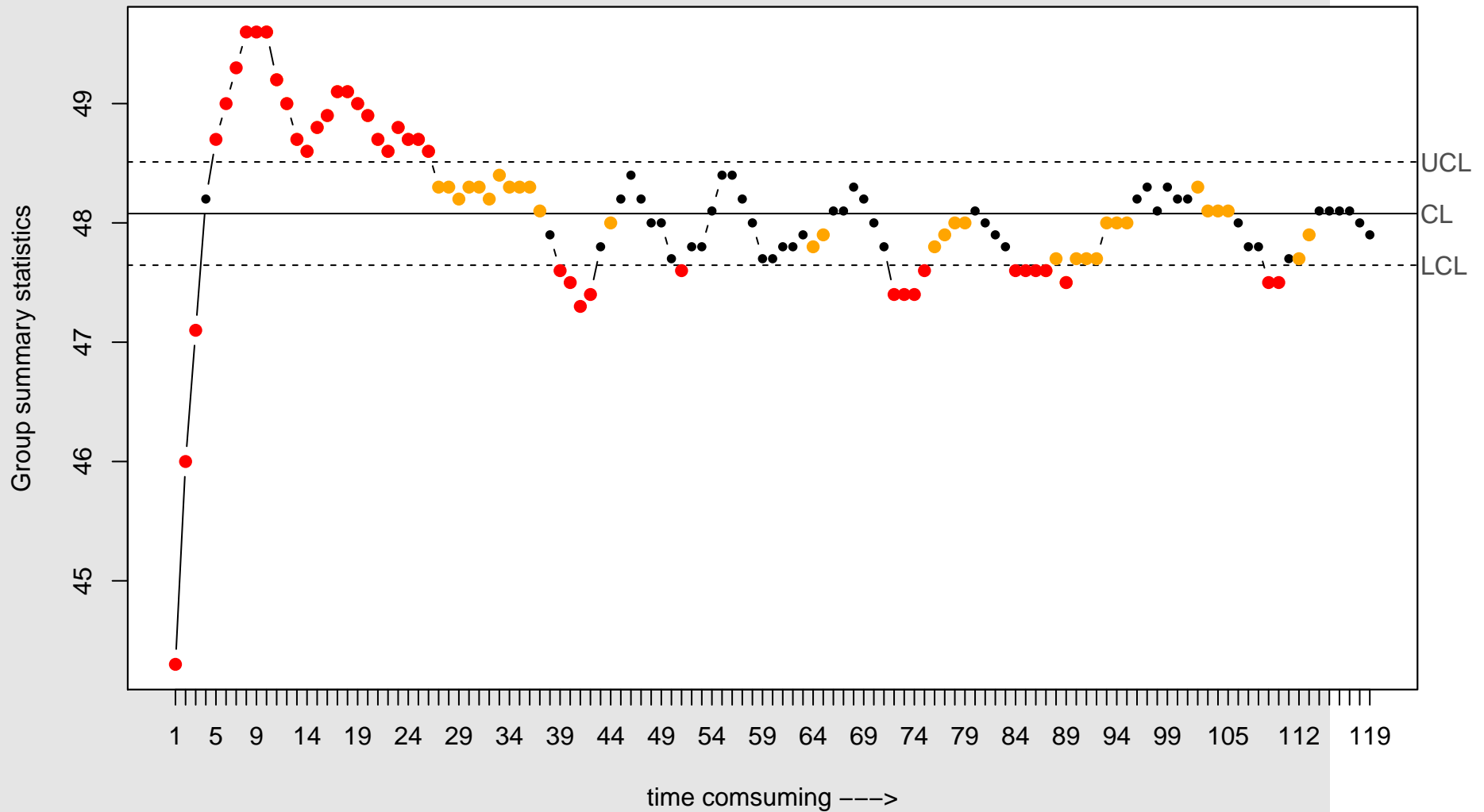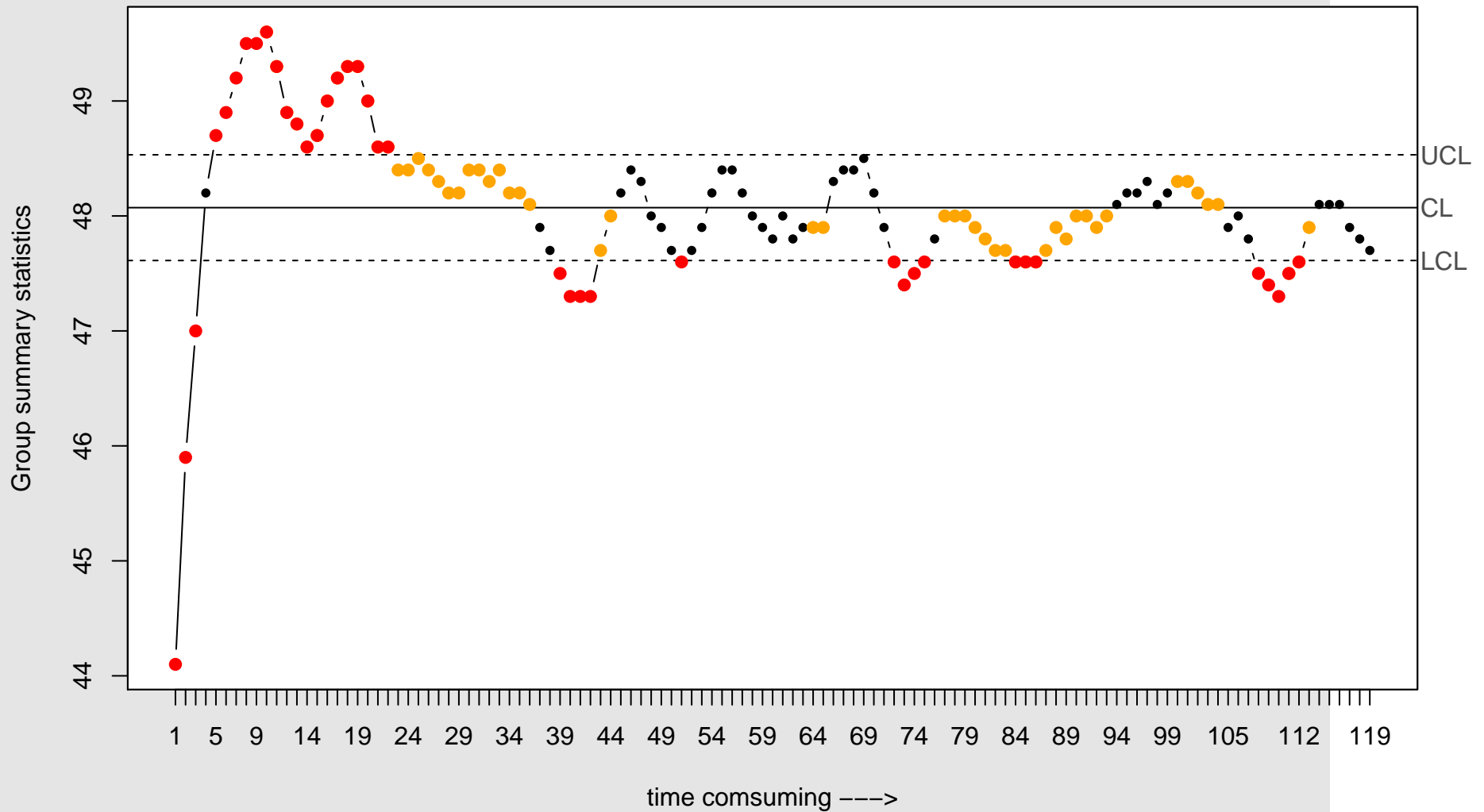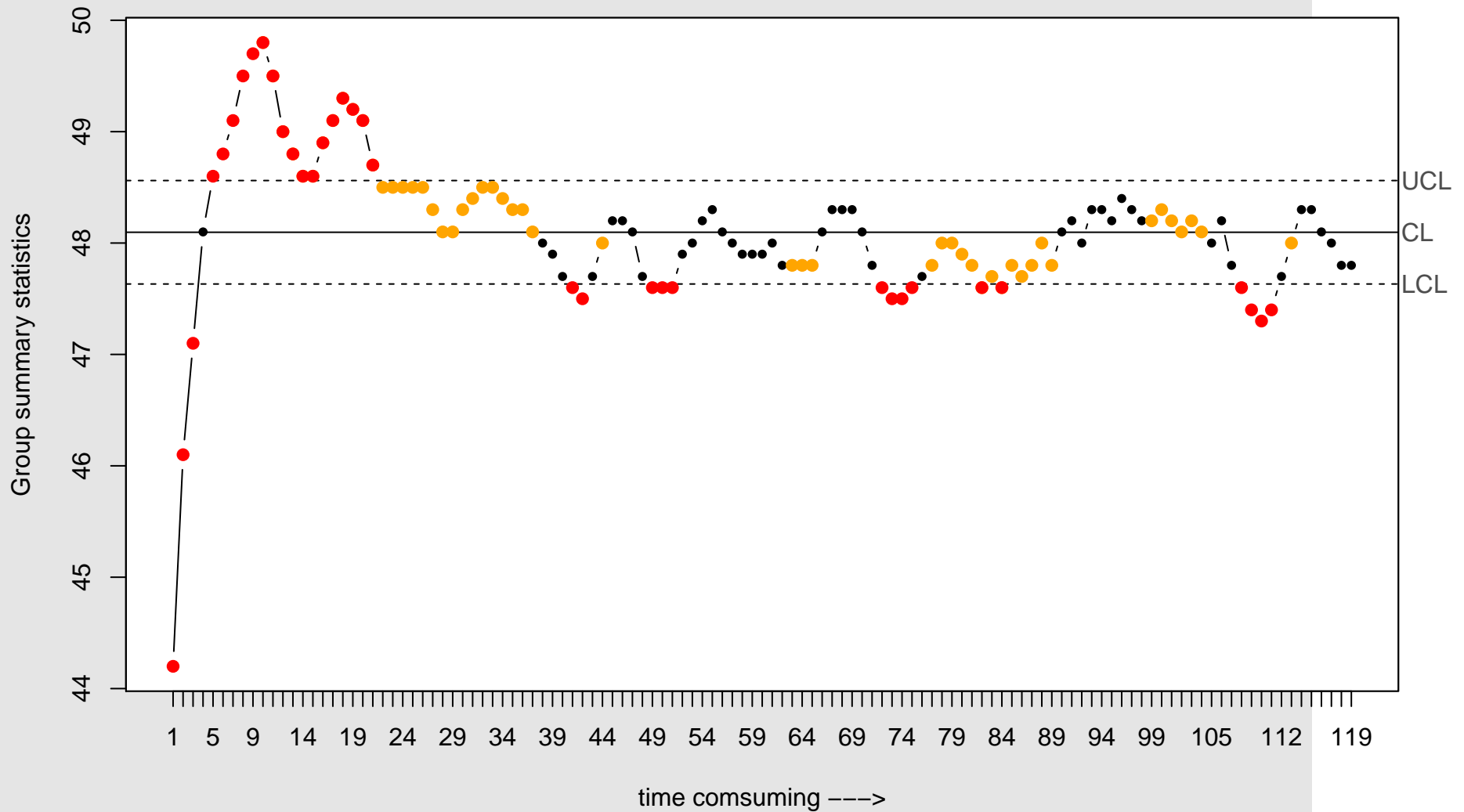Center = 48.07227
StdDev = 0.1532636

LCL = 47.61248
UCL = 48.53206

Number beyond limits = 38
Number violating runs = 56

17th column point of this product

Number of groups = 119
Center = 48.09664   LCL = 47.63234   Number beyond limits = 35
StdDev = 0.1547662   UCL = 48.56094   Number violating runs = 52

18th column point of this product

Group summary statistics

time comsuming ––––>

UCL
CL
LCL
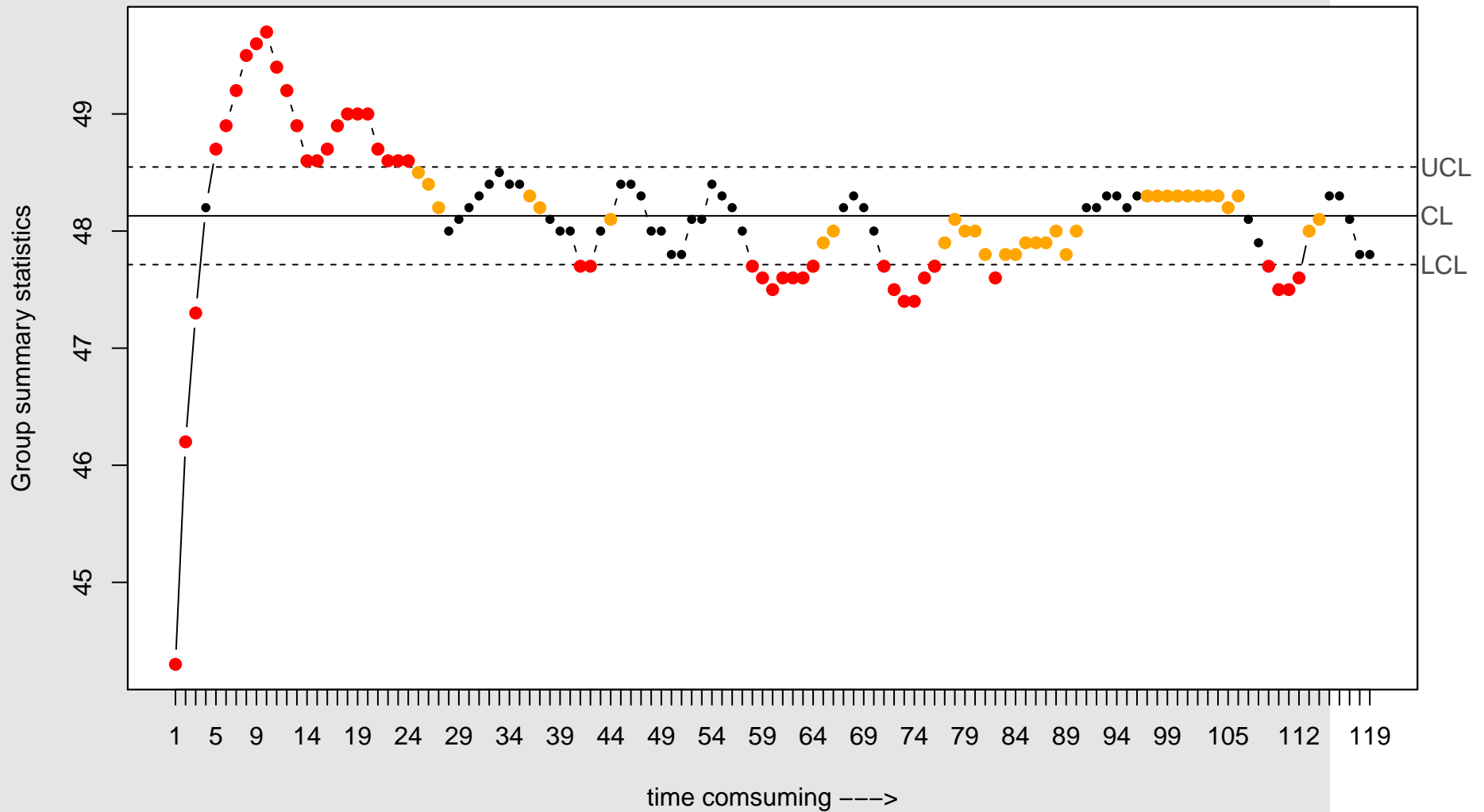
Number of groups = 119
Center = 48.13025   LCL = 47.71328   Number beyond limits = 43
StdDev = 0.1389891   UCL = 48.54722   Number violating runs = 52

19th column point of this product

Group summary statistics

time comsuming ––––>

UCL
CL
LCL
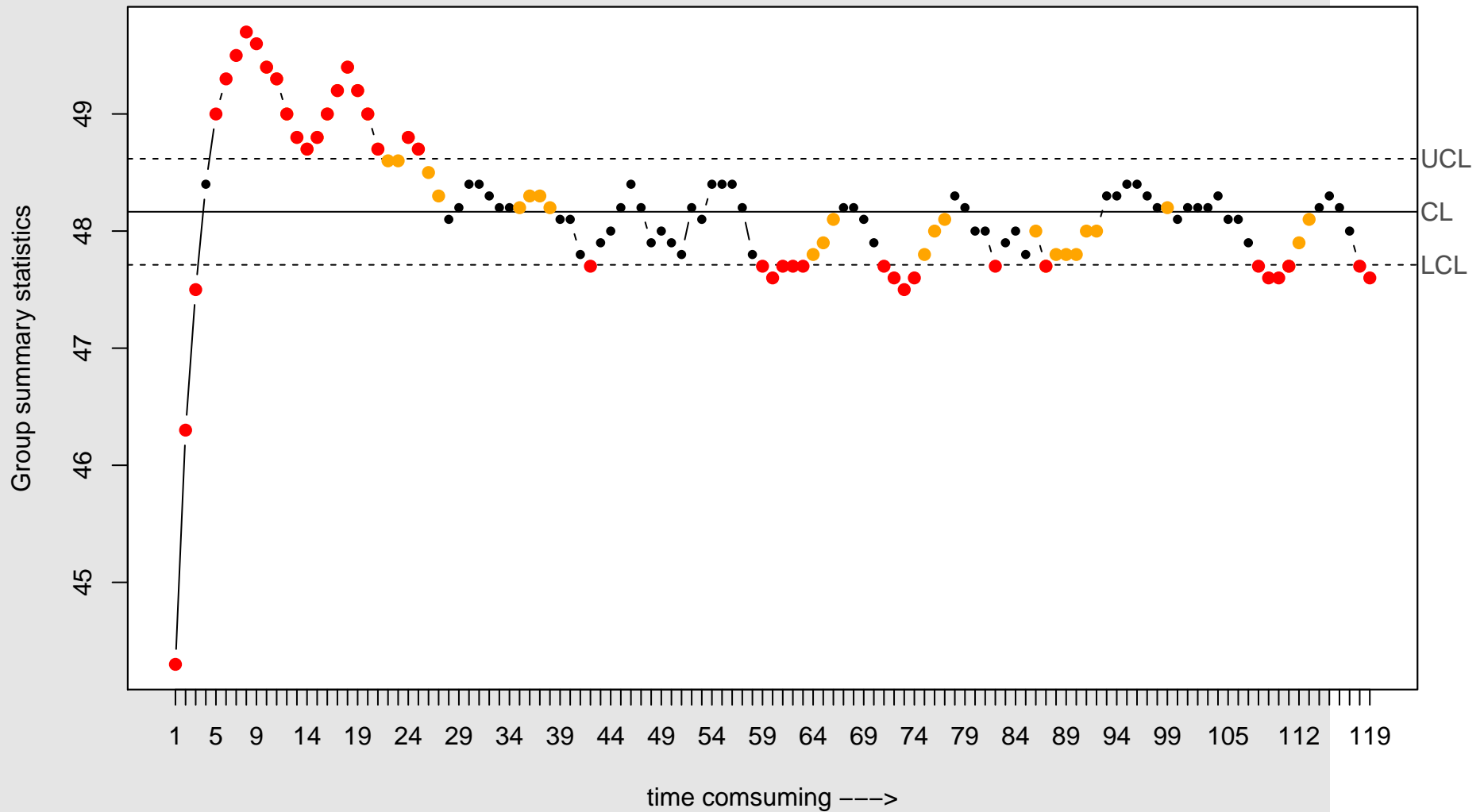
Number of groups = 119
Center = 48.16471   LCL = 47.71168   Number beyond limits = 40
StdDev = 0.1510097   UCL = 48.61774   Number violating runs = 39

20th column point of this product

Group summary statistics

time comsuming --->

UCL
CL
LCL
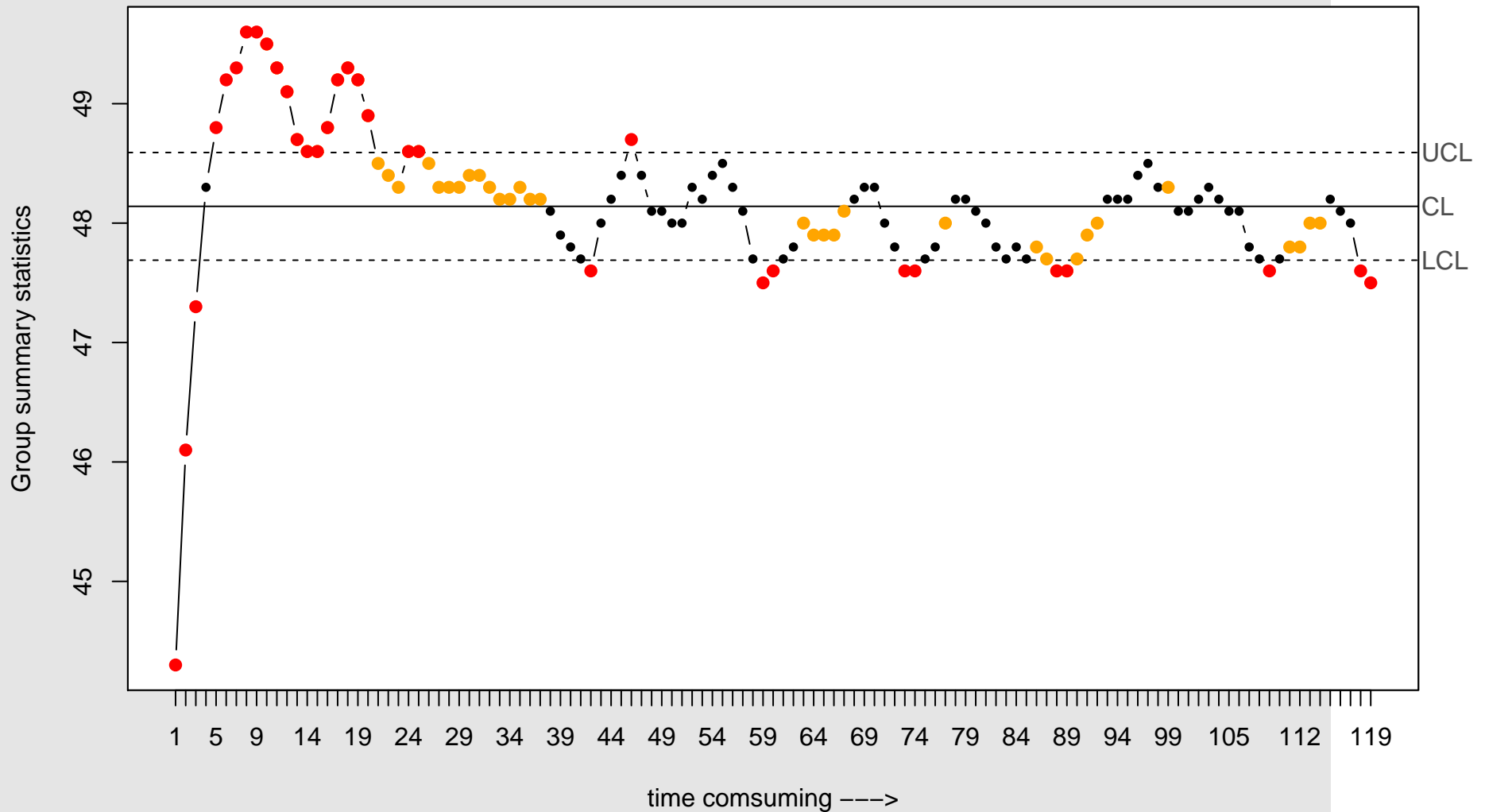
Number of groups = 119
Center = 48.14034   LCL = 47.68956   Number beyond limits = 32
StdDev = 0.1502584   UCL = 48.59111   Number violating runs = 46

21th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ---->
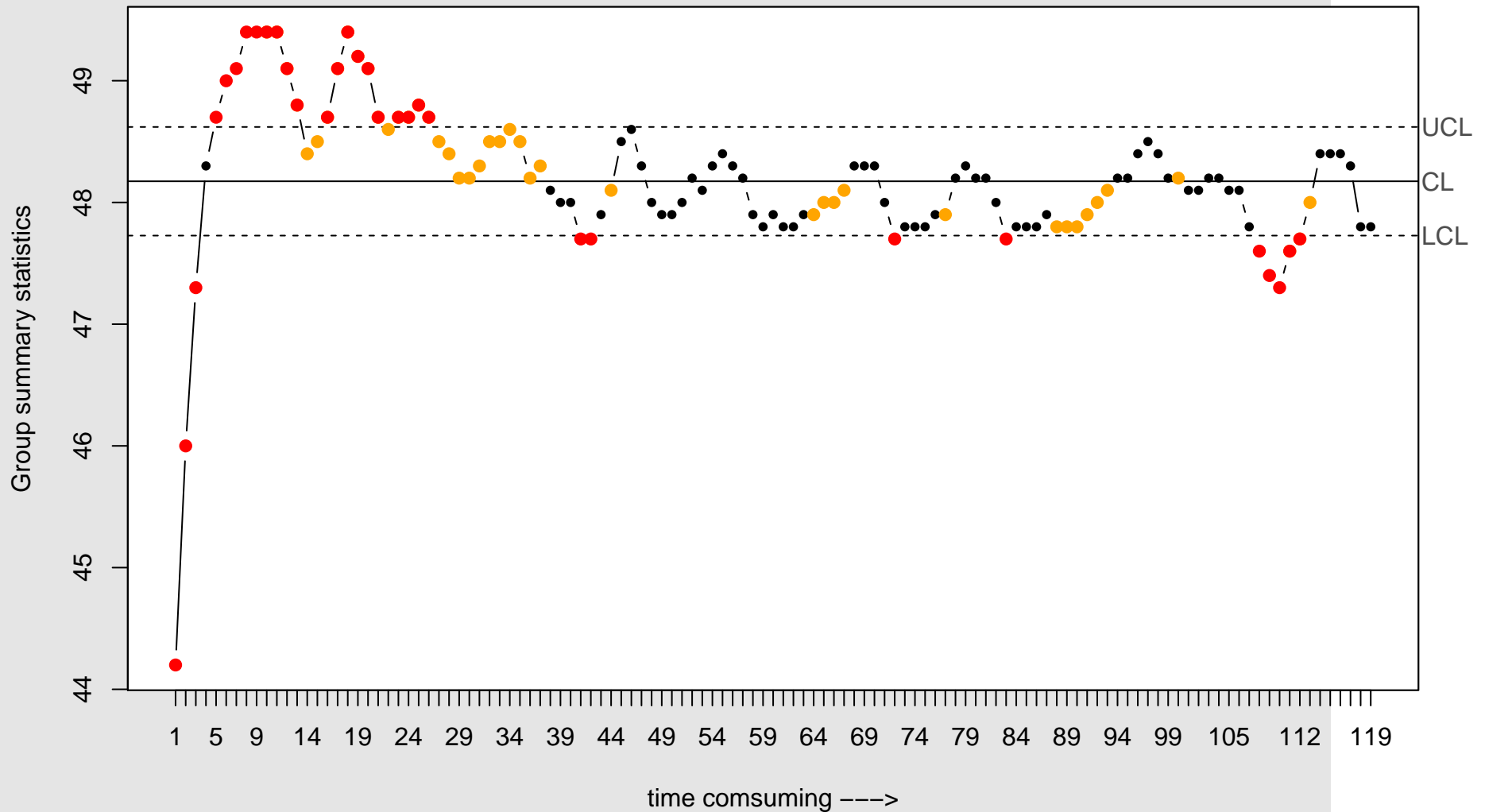
Number of groups = 119
Center = 48.17395   LCL = 47.72768   Number beyond limits = 31
StdDev = 0.1487559   UCL = 48.62022   Number violating runs = 44

22th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ---->
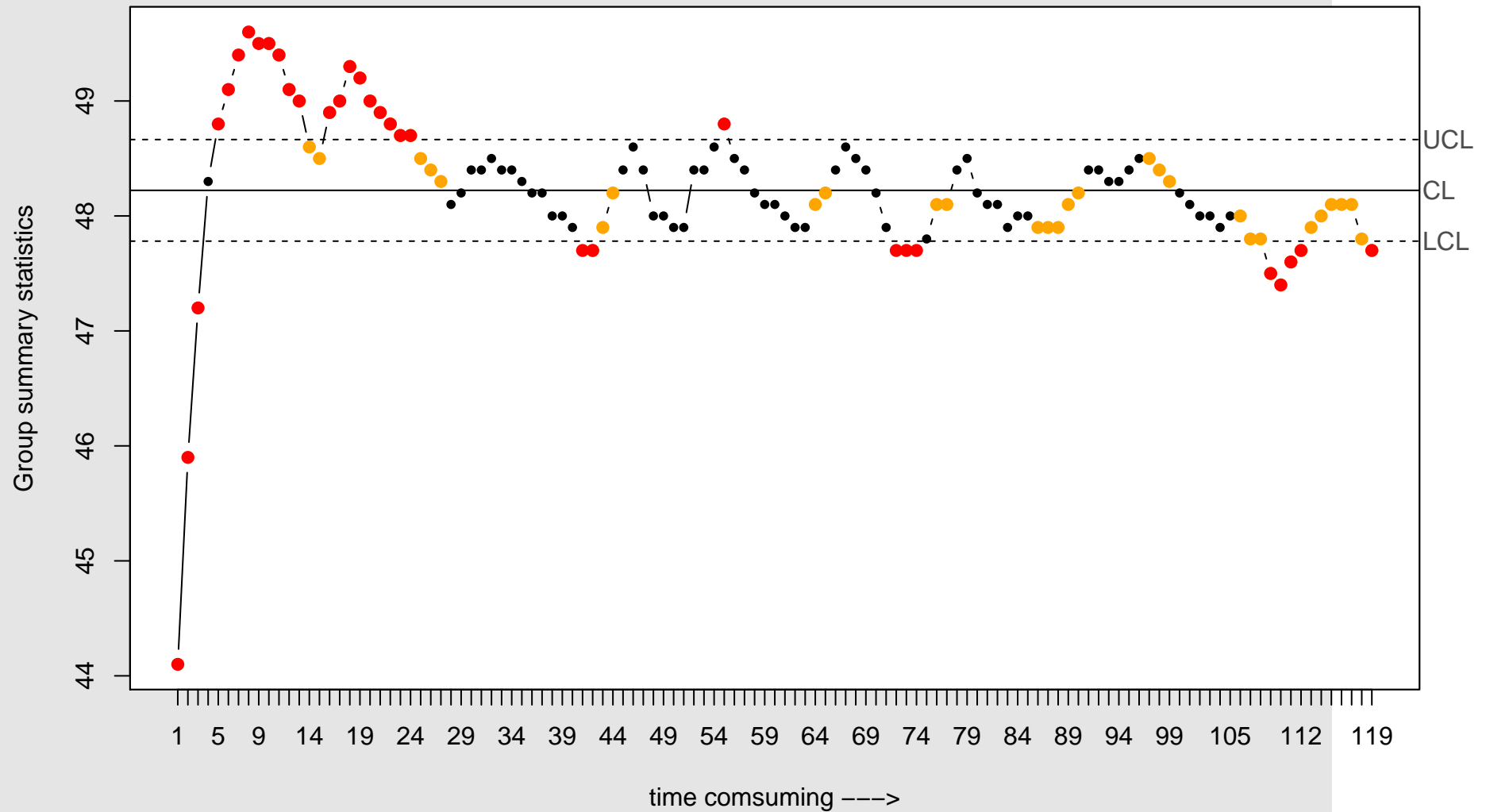
Number of groups = 119
Center = 48.22269   LCL = 47.78093   Number beyond limits = 32
StdDev = 0.1472533   UCL = 48.66445   Number violating runs = 47

23th column point of this product

Group summary statistics

time comsuming ---->
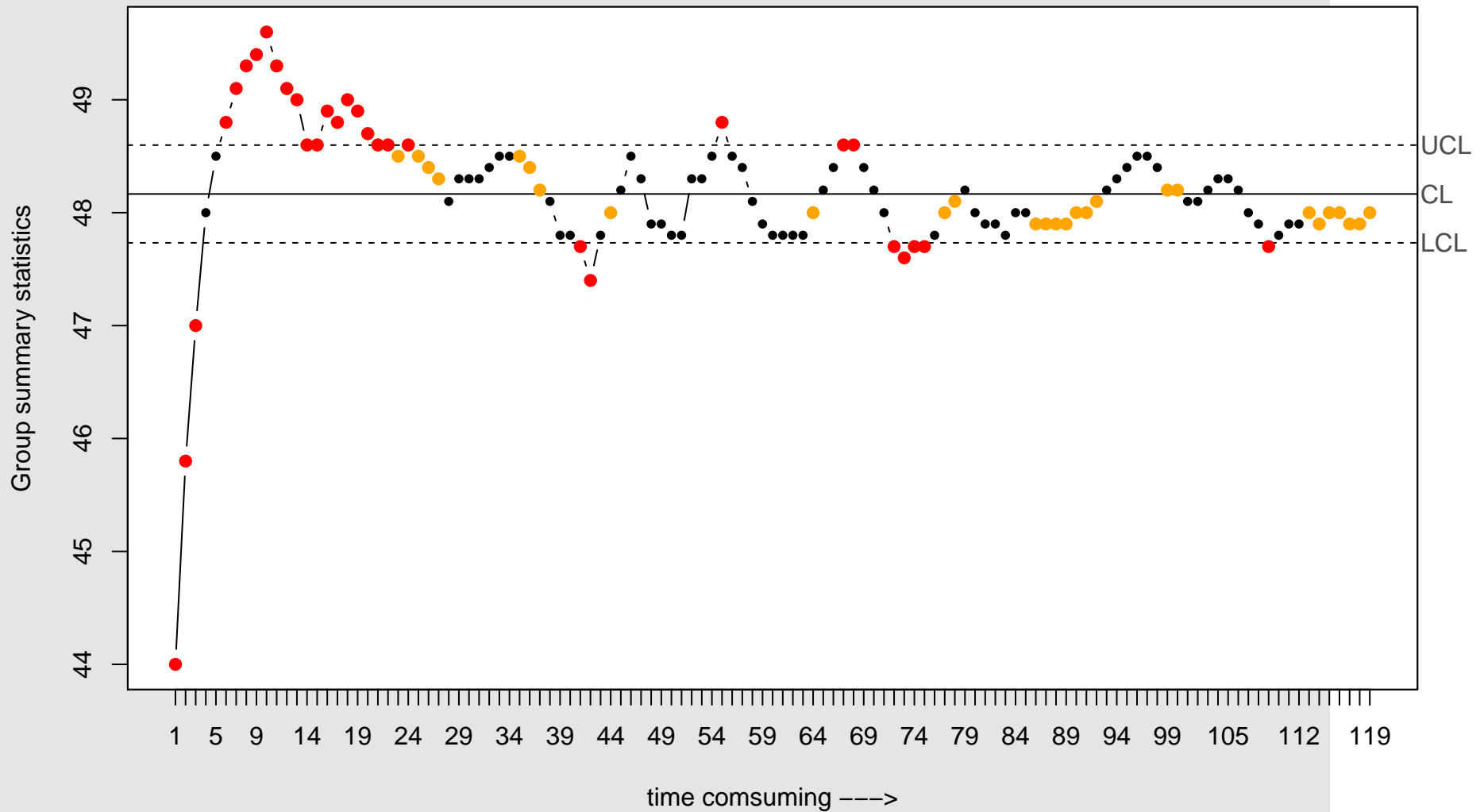
Number of groups = 119

Center = 48.16555   LCL = 47.7328   Number beyond limits = 31

StdDev = 0.1442481   UCL = 48.59829   Number violating runs = 40

24th column point of this product

Group summary statistics

time comsuming ––––>
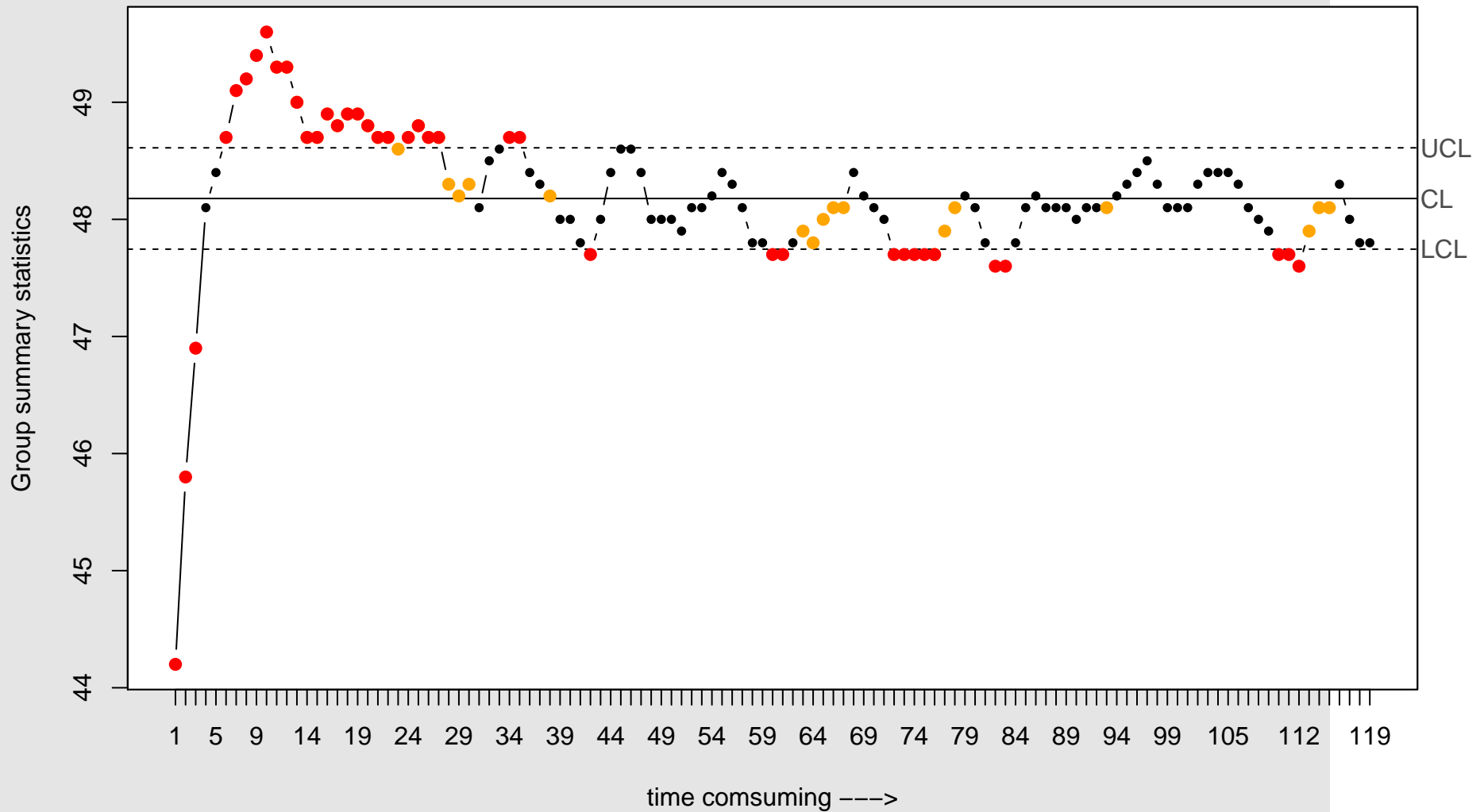
Number of groups = 119
Center = 48.17815   LCL = 47.74541   Number beyond limits = 39
StdDev = 0.1442481   UCL = 48.6109   Number violating runs = 33

25th column point of this product

Group summary statistics

time comsuming ---->
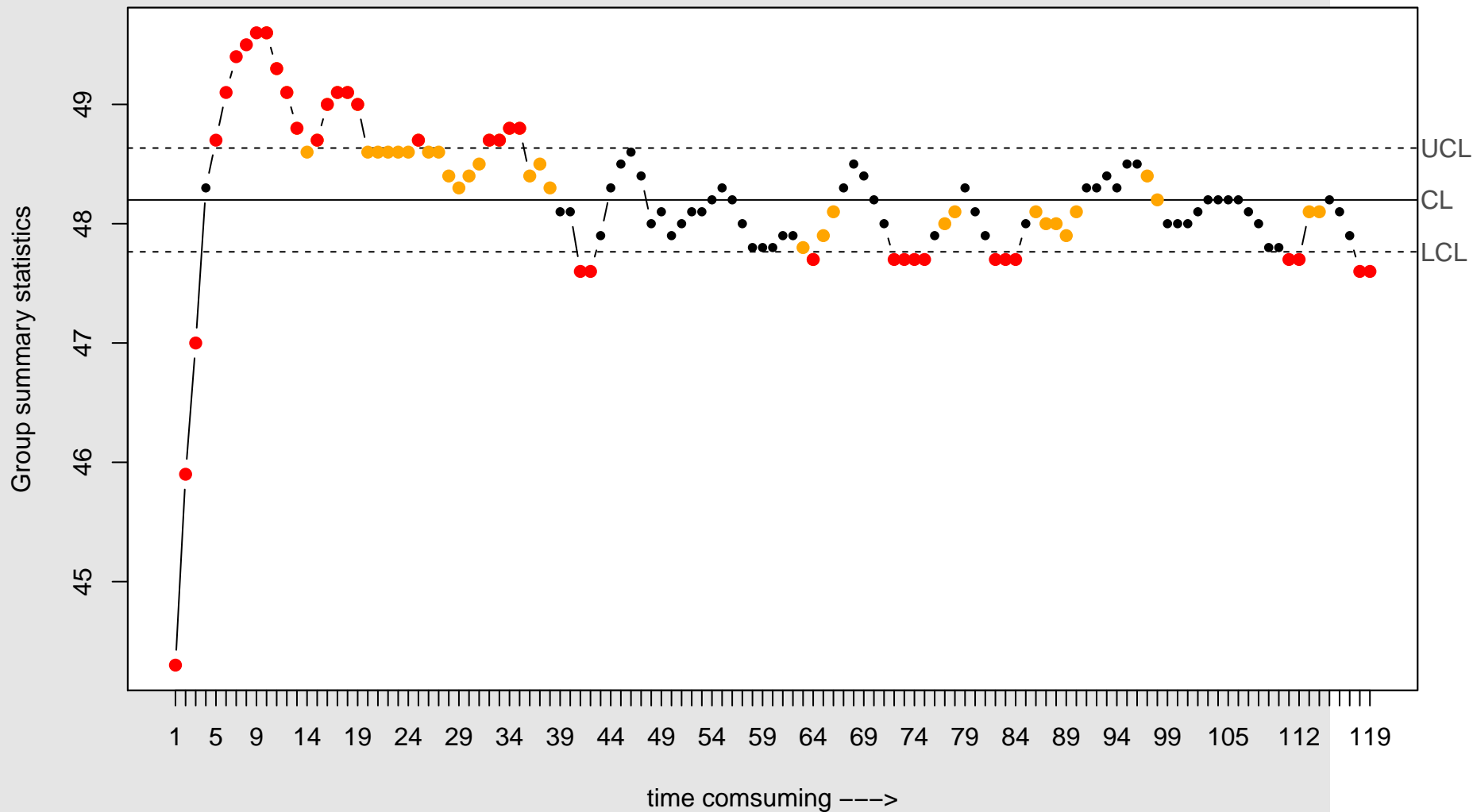
Number of groups = 119
Center = 48.19916
StdDev = 0.1449994

LCL = 47.76416
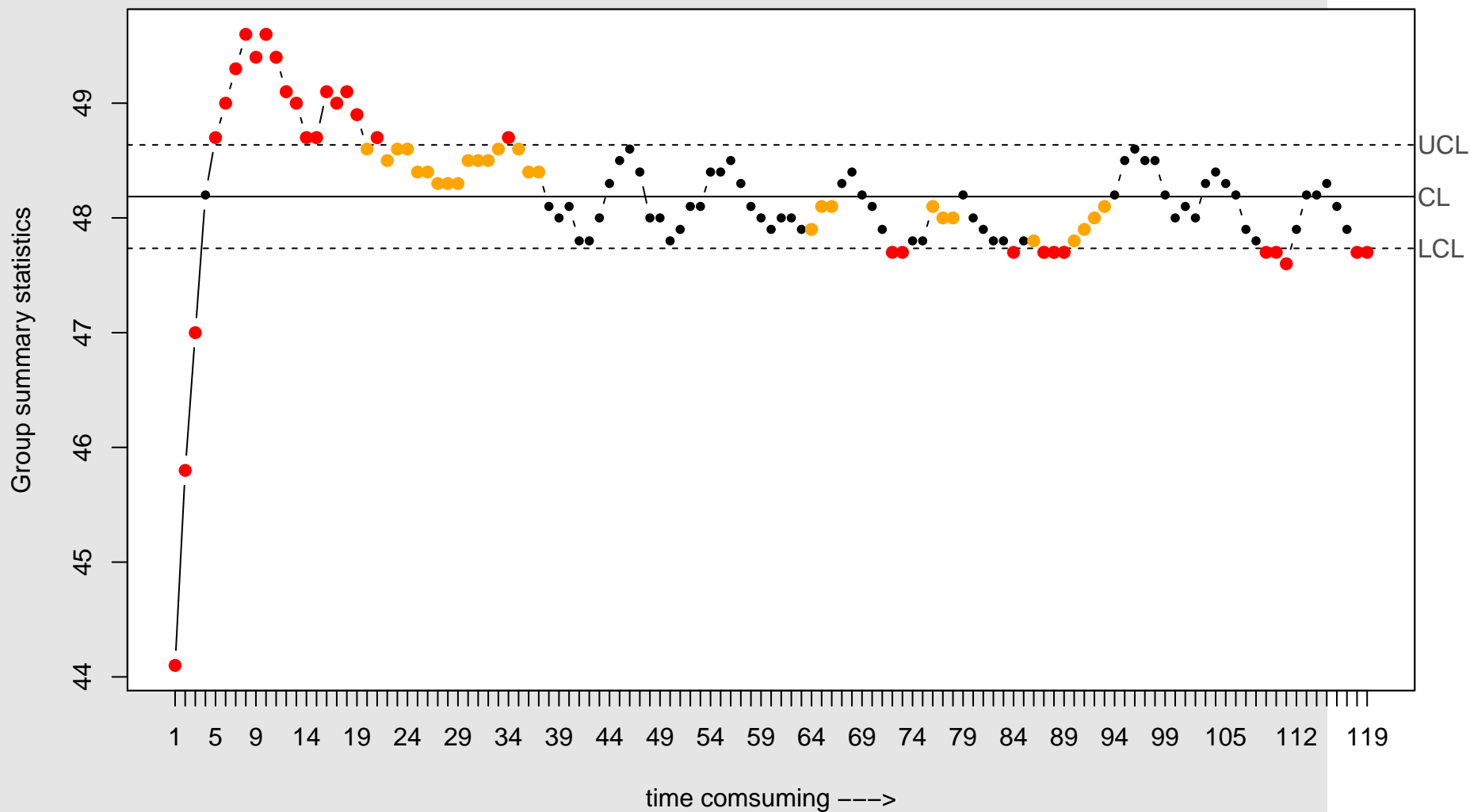UCL = 48.63416

Number beyond limits = 36
Number violating runs = 44

26th column point of this product

Group summary statistics

UCL

CL

LCL

time comsuming ---->

Number of groups = 119
Center = 48.18571   LCL = 47.73494   Number beyond limits = 31
StdDev = 0.1502584   UCL = 48.63649   Number violating runs = 42

27th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ---->
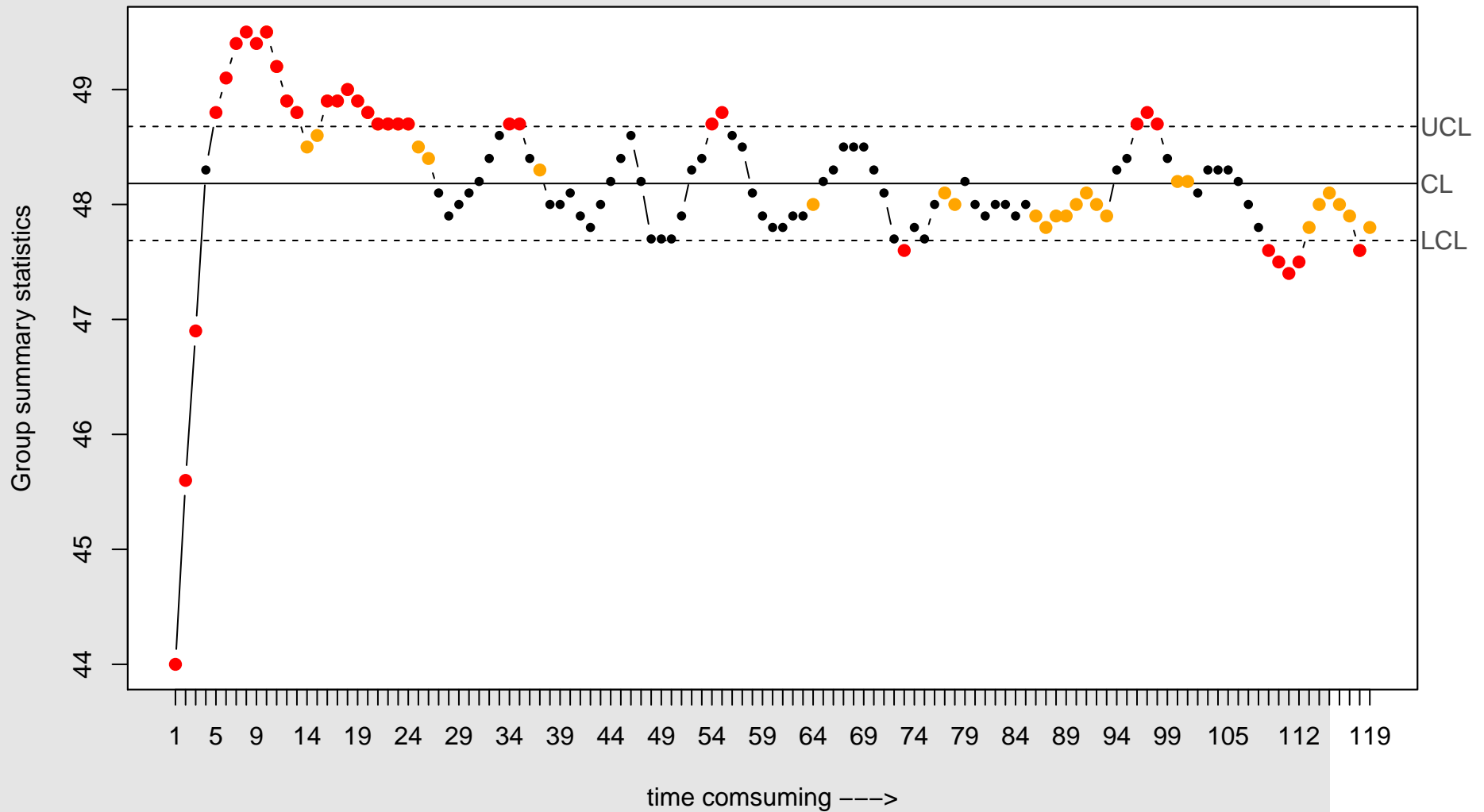
Number of groups = 119
Center = 48.18235   LCL = 47.6865   Number beyond limits = 34
StdDev = 0.1652843   UCL = 48.67821   Number violating runs = 38

28th column point of this product

Group summary statistics

time comsuming ––––>

UCL
CL
LCL
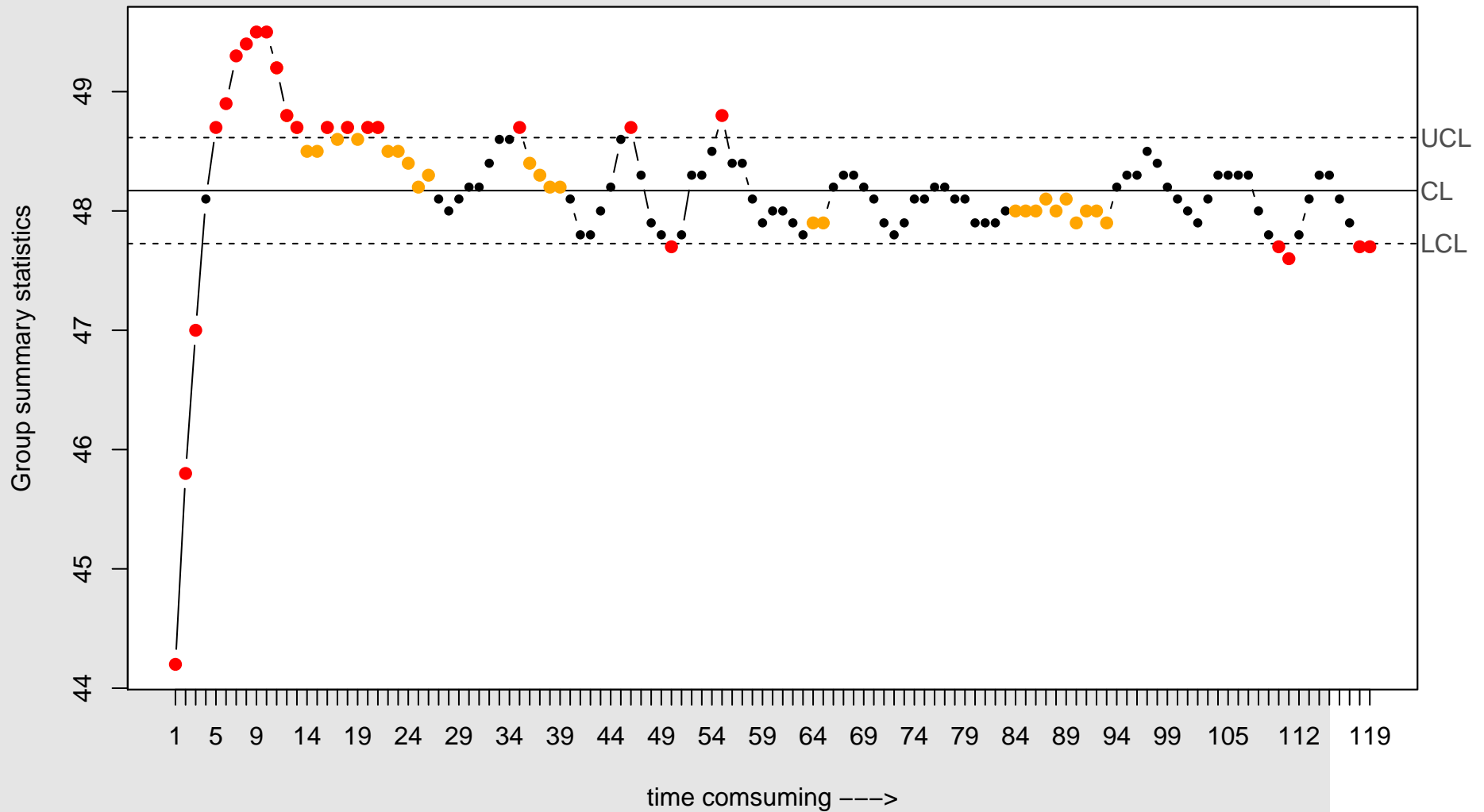
Number of groups = 119
Center = 48.17059   LCL = 47.72657   Number beyond limits = 24
StdDev = 0.1480046   UCL = 48.6146   Number violating runs = 32

29th column point of this product

Group summary statistics

time comsuming ---->
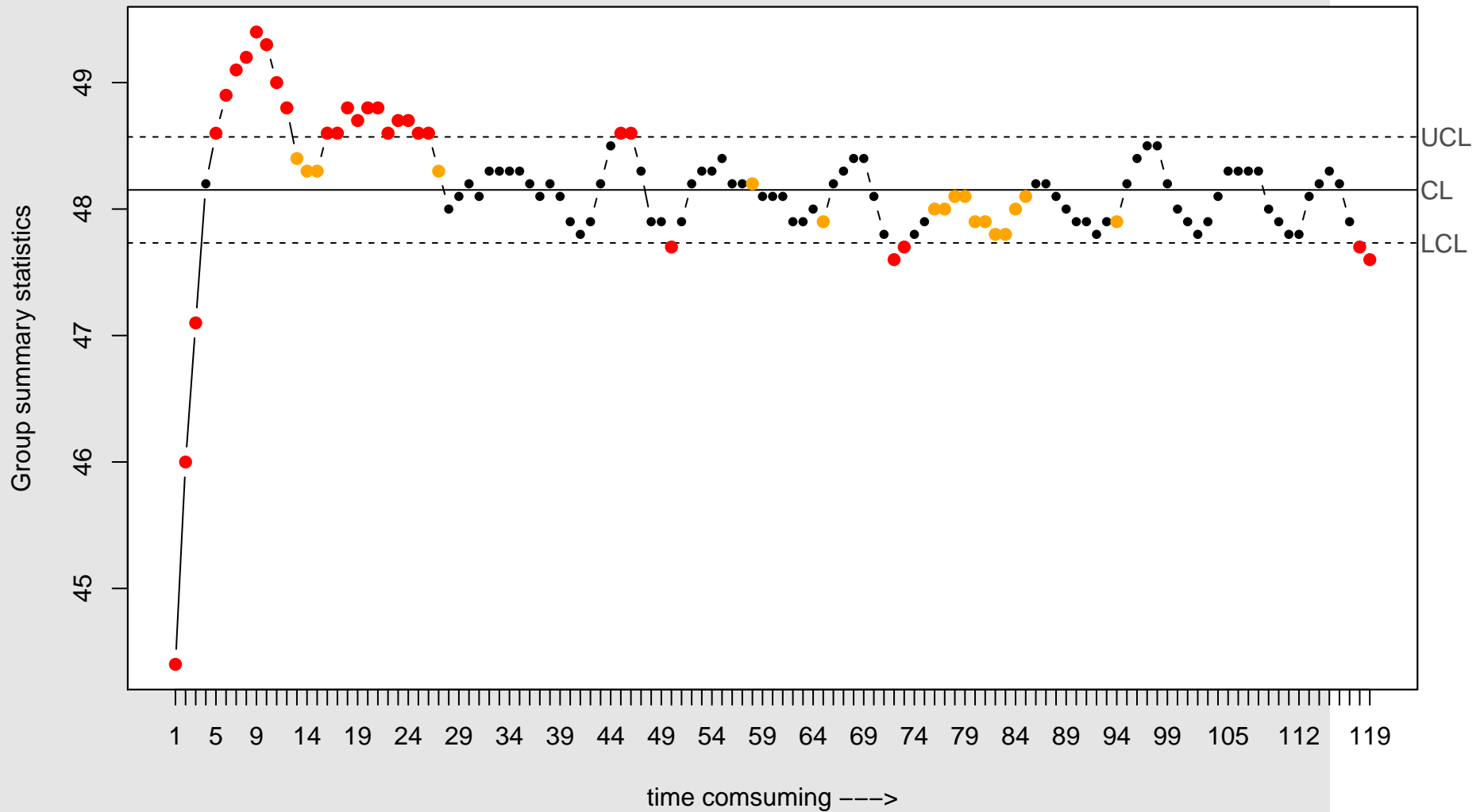
Number of groups = 119
Center = 48.15126
StdDev = 0.1397404

LCL = 47.73204
UCL = 48.57048

Number beyond limits = 29
Number violating runs = 31

30th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ---->

Number of groups = 119
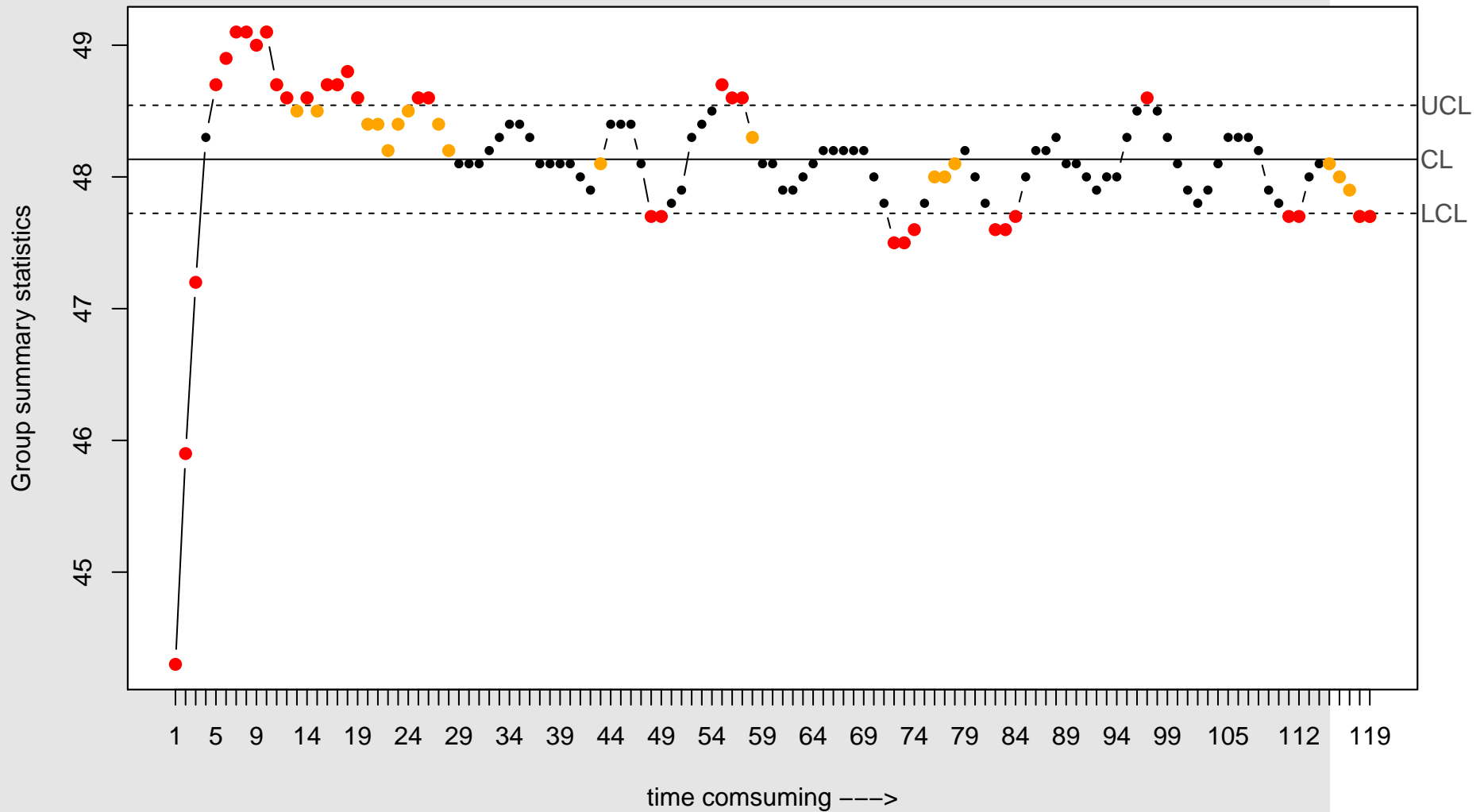Center = 48.13361   LCL = 47.72341   Number beyond limits = 34
StdDev = 0.1367352   UCL = 48.54382   Number violating runs = 29

31th column point of this product

Group summary statistics

time comsuming ---->
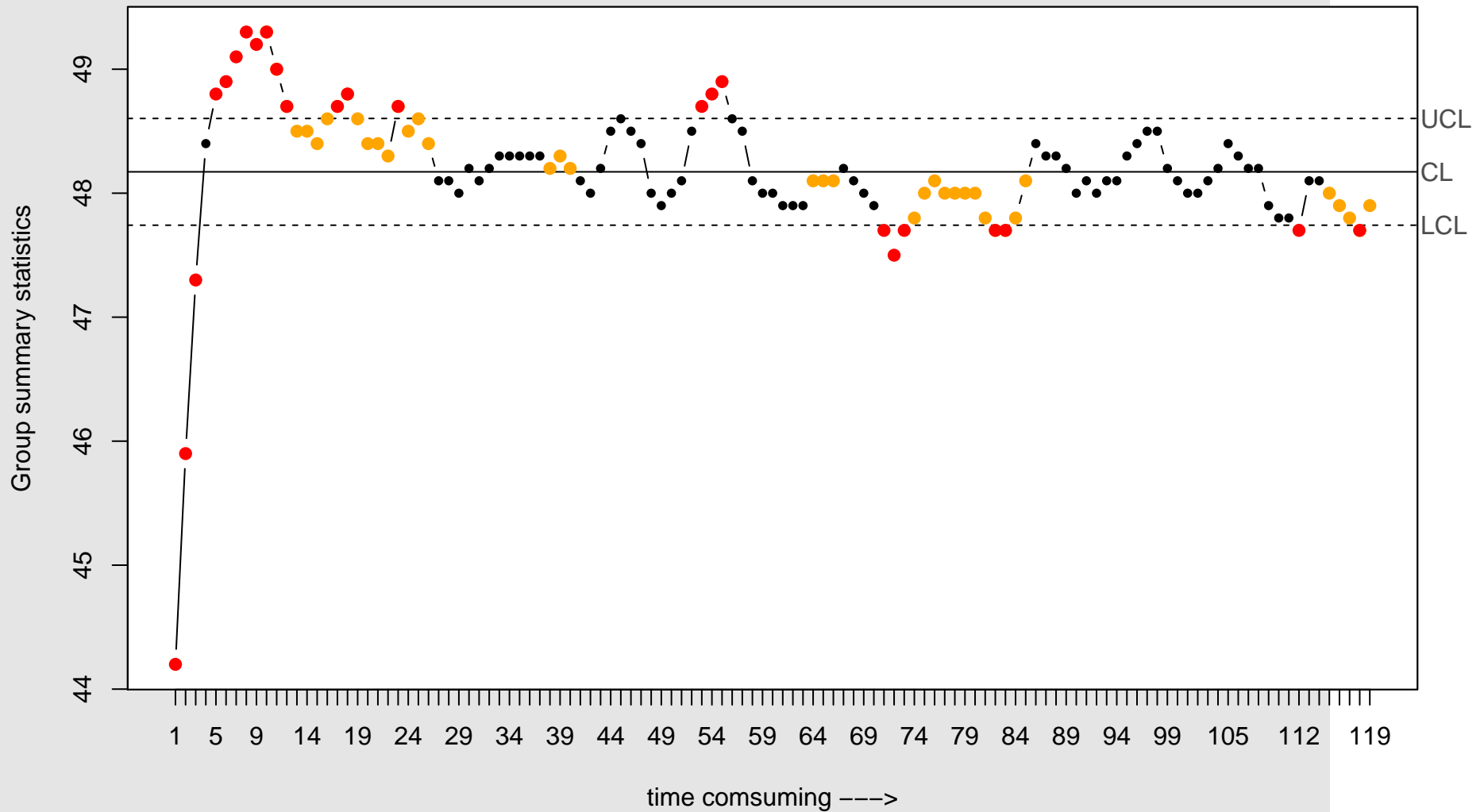
Number of groups = 119
Center = 48.17227   LCL = 47.74178   Number beyond limits = 24
StdDev = 0.1434968   UCL = 48.60276   Number violating runs = 40

32th column point of this product

Group summary statistics

time comsuming --->
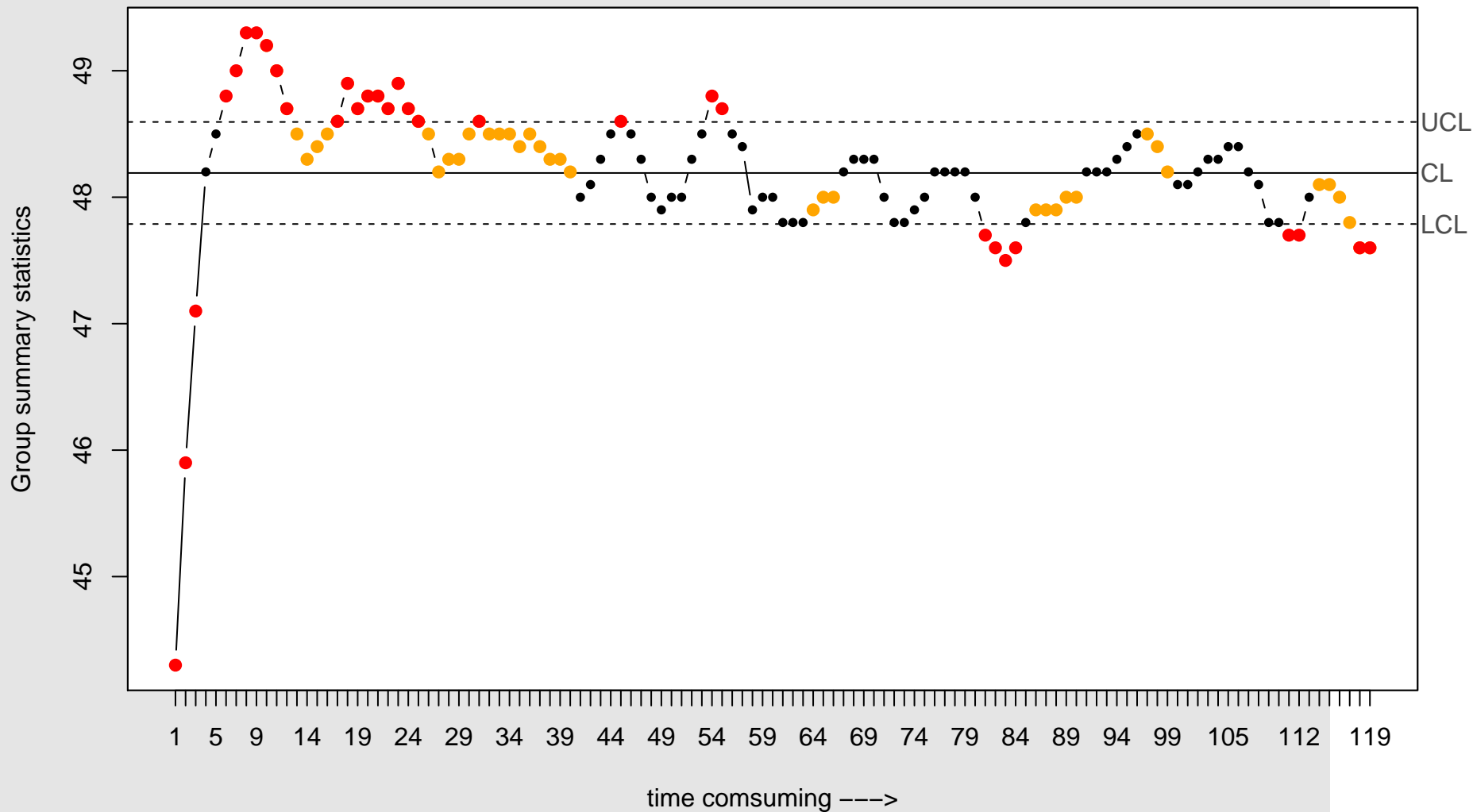
Number of groups = 119
Center = 48.1916   LCL = 47.78815   Number beyond limits = 31
StdDev = 0.1344813   UCL = 48.59504   Number violating runs = 48

33th column point of this product

Group summary statistics

time comsuming --->

UCL
CL
LCL
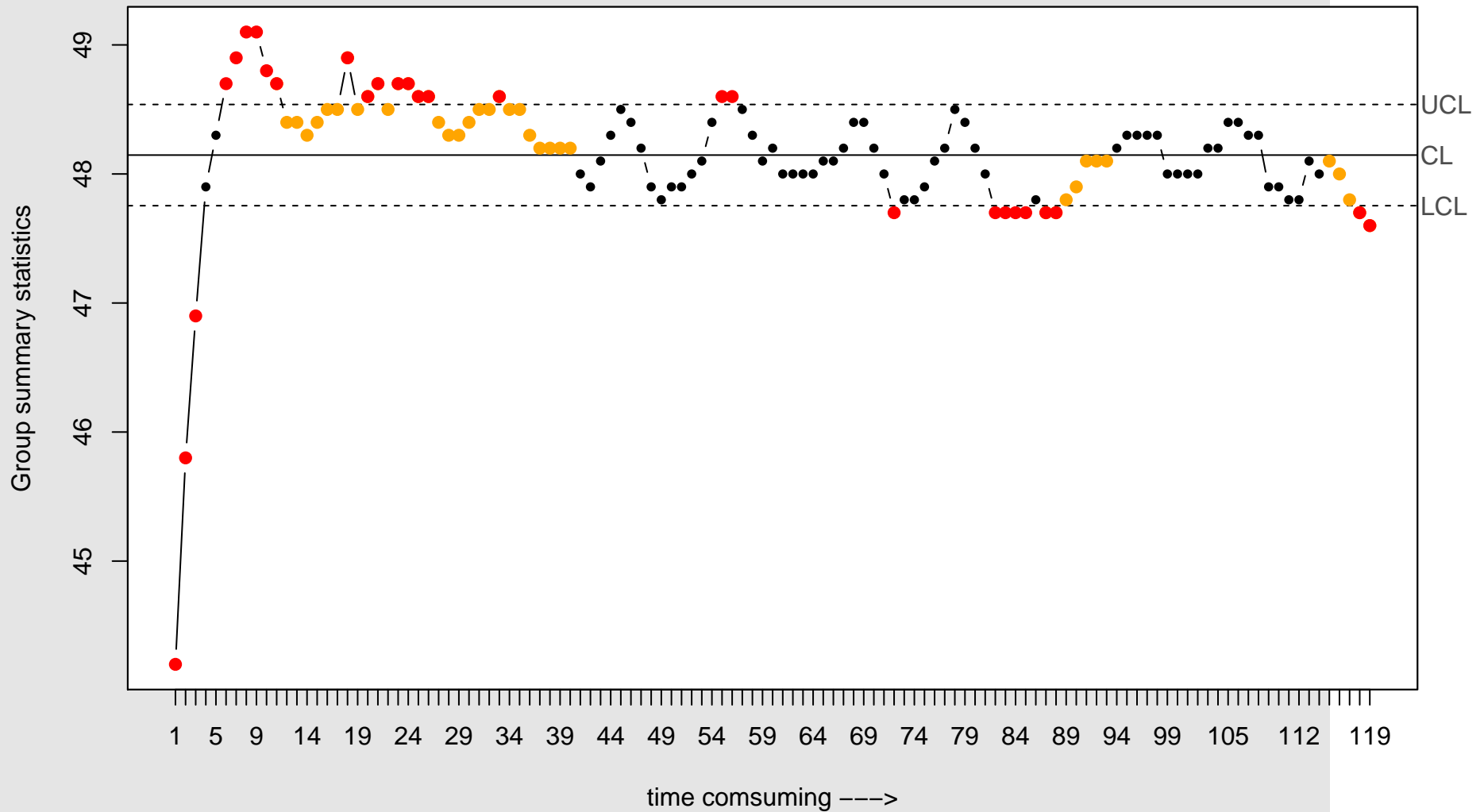
Number of groups = 119
Center = 48.14622
StdDev = 0.1307248
LCL = 47.75404
UCL = 48.53839
Number beyond limits = 28
Number violating runs = 42

34th column point of this product

Group summary statistics

time comsuming ––––>

Number of groups = 119
Center = 48.17143
StdDev = 0.1374865

LCL = 47.75897
UCL = 48.58389

Number beyond limits = 25
Number violating runs = 39

35th column point of this product

Group summary statistics

time comsuming ––––>

Number of groups = 119
Center = 48.13529   LCL = 47.76791   Number beyond limits = 23
StdDev = 0.1224606   UCL = 48.50268   Number violating runs = 50

36th column point of this product

Number of groups = 119
Center = 48.12437
StdDev = 0.1314761

LCL = 47.72994
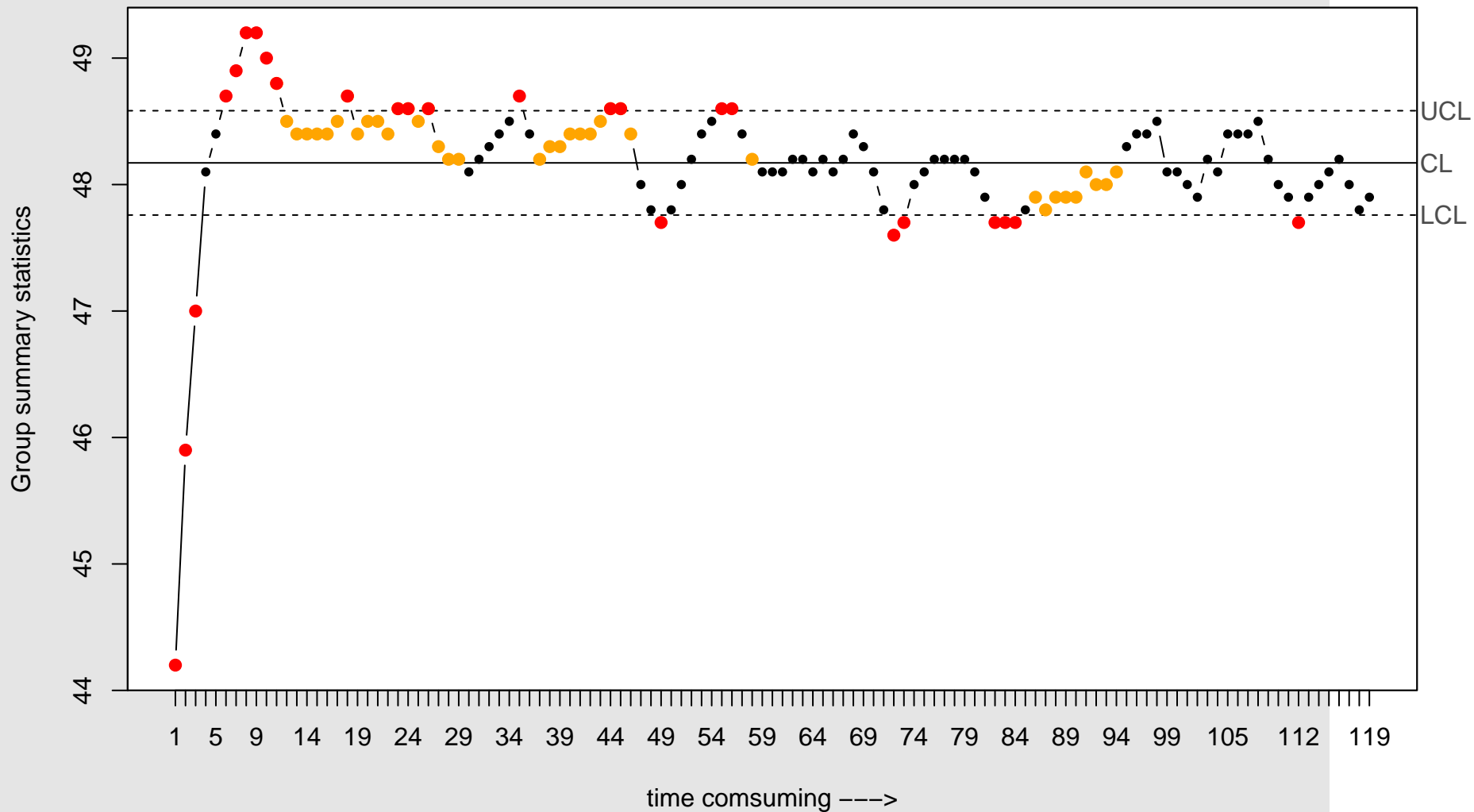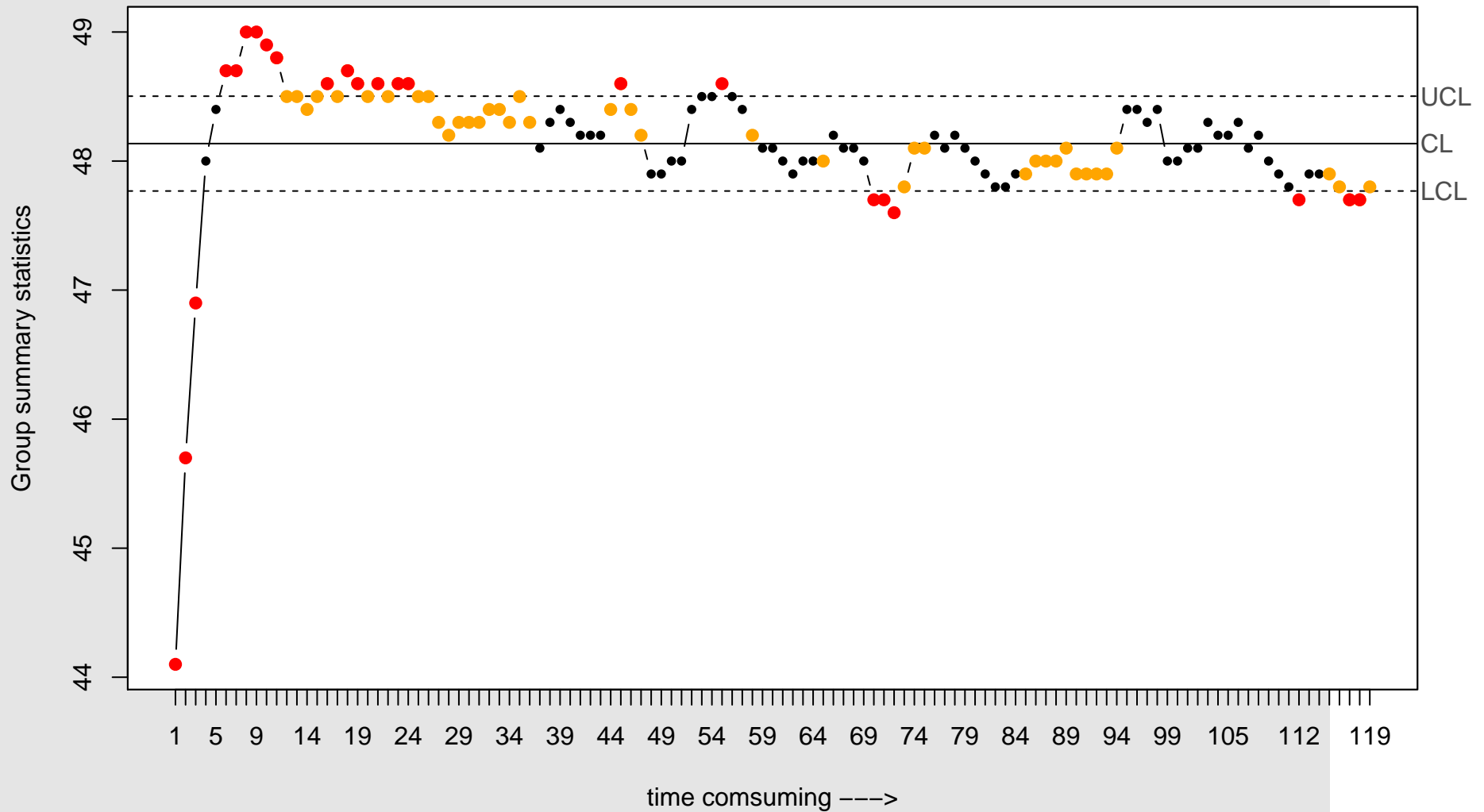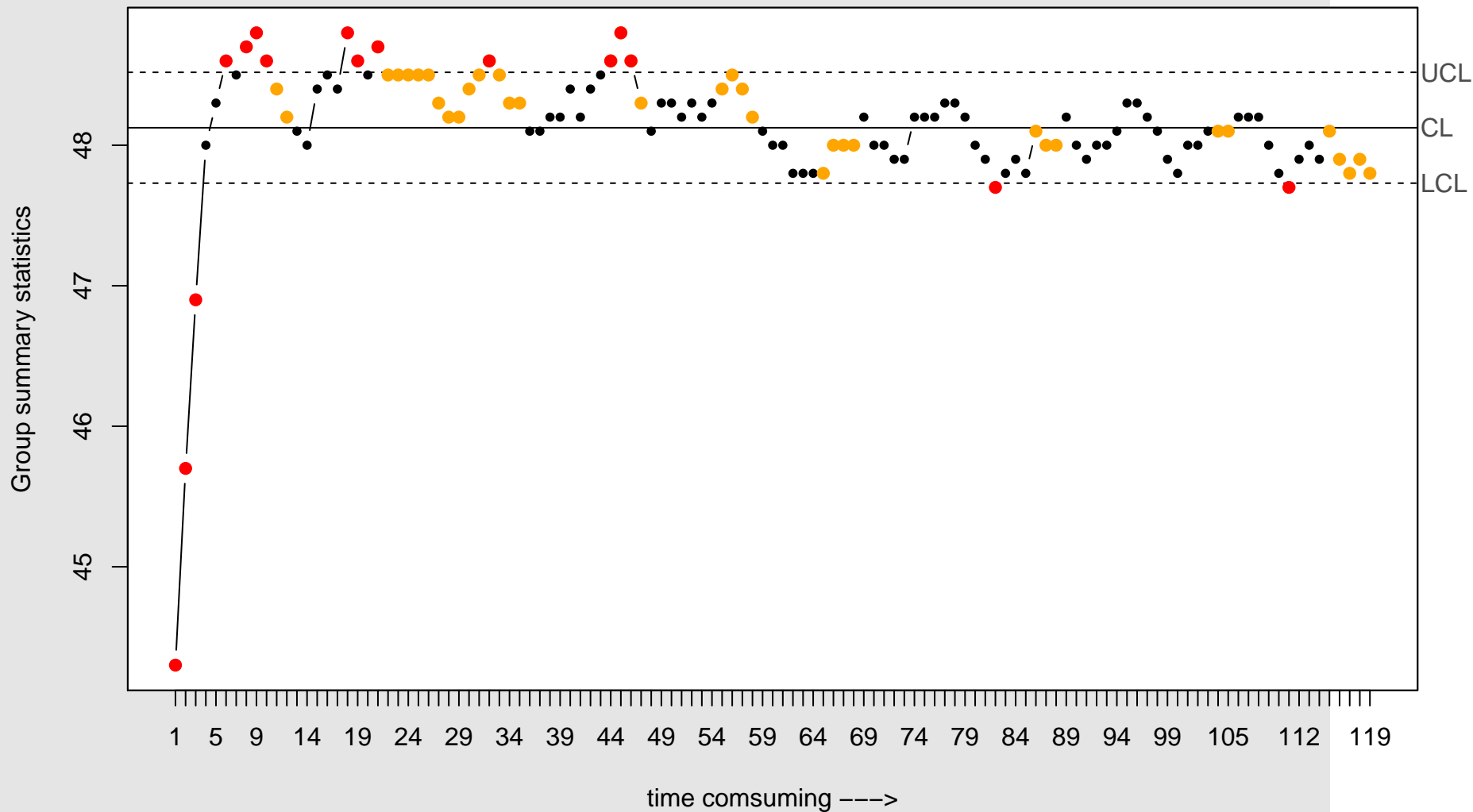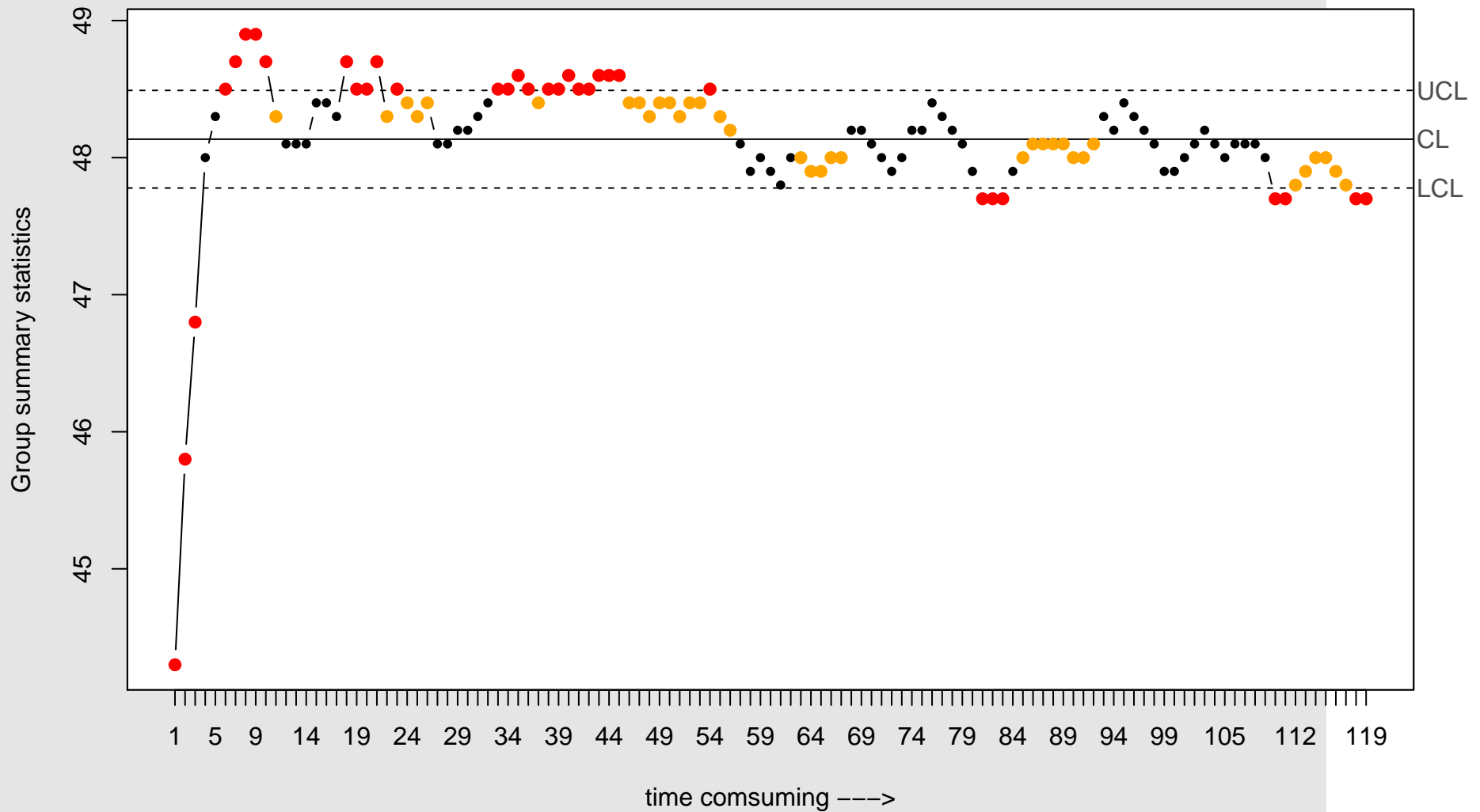UCL = 48.5188

Number beyond limits = 16
Number violating runs = 39

37th column point of this product

Number of groups = 119
Center = 48.13445   LCL = 47.77834   Number beyond limits = 33
StdDev = 0.1187042   UCL = 48.49057   Number violating runs = 52

38th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL
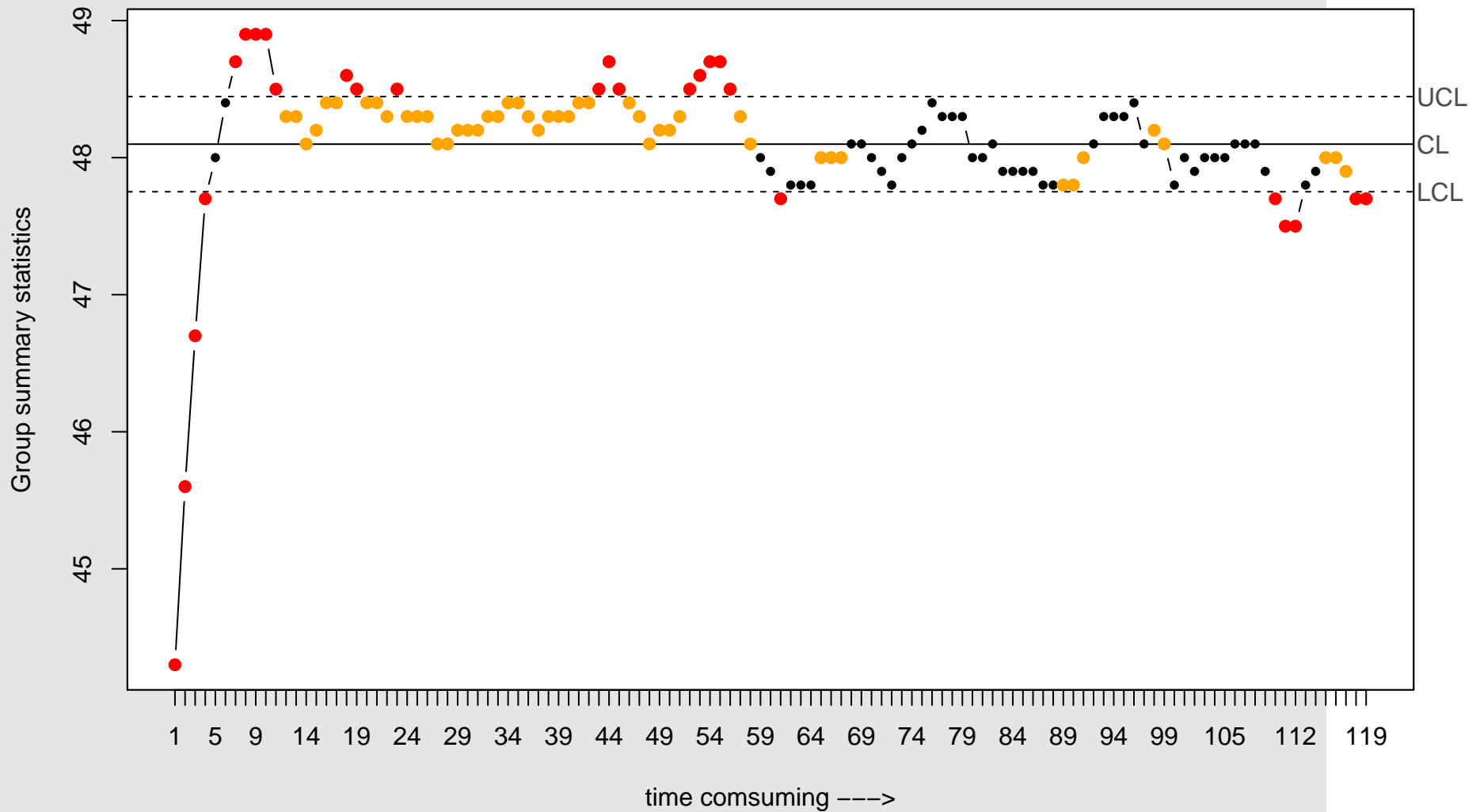
Number of groups = 119
Center = 48.09832   LCL = 47.75122   Number beyond limits = 26
StdDev = 0.115699   UCL = 48.44542   Number violating runs = 60

39th column point of this product
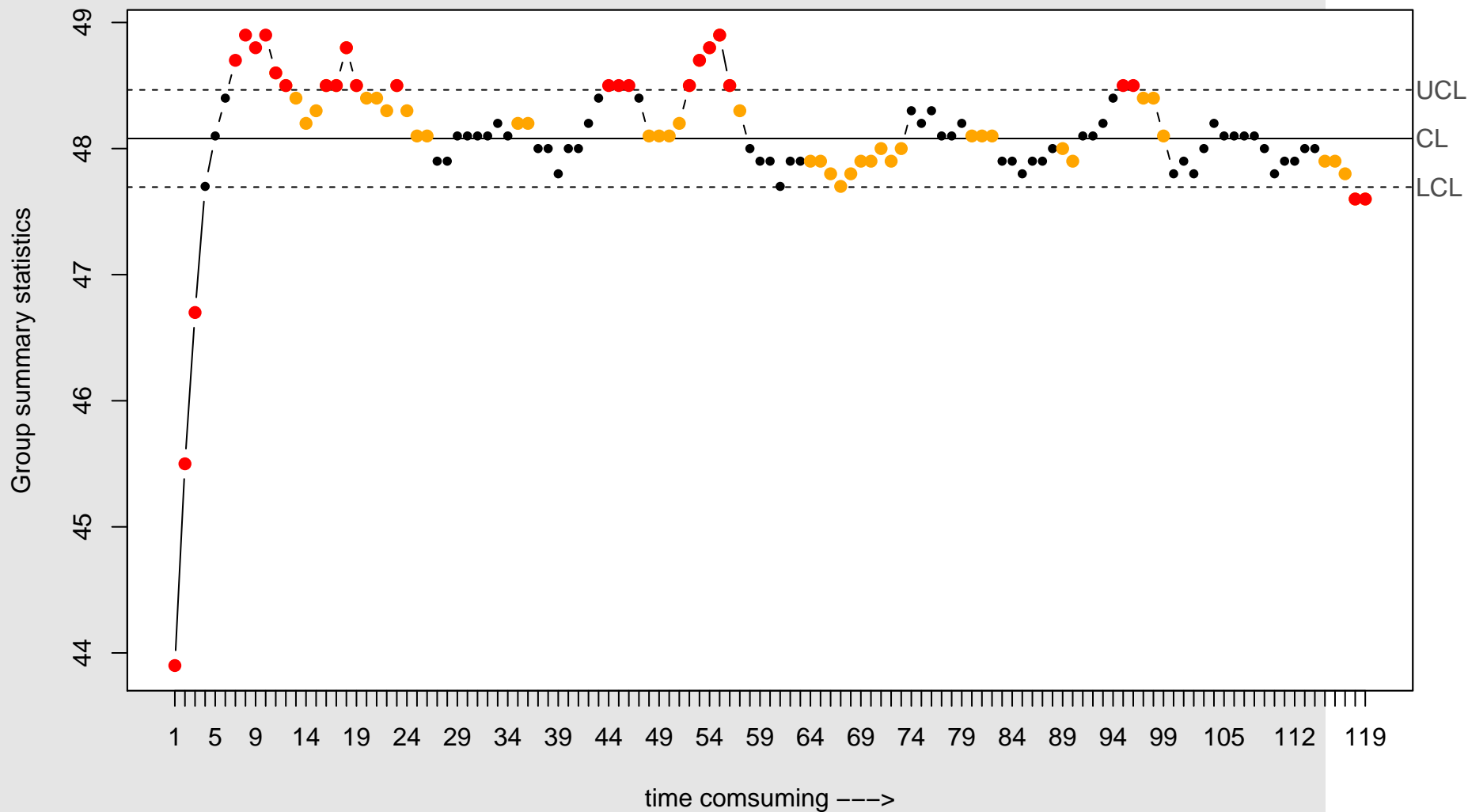
Number of groups = 119
Center = 48.07983   LCL = 47.69442   Number beyond limits = 26
StdDev = 0.128471   UCL = 48.46524   Number violating runs = 51

40th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ----->
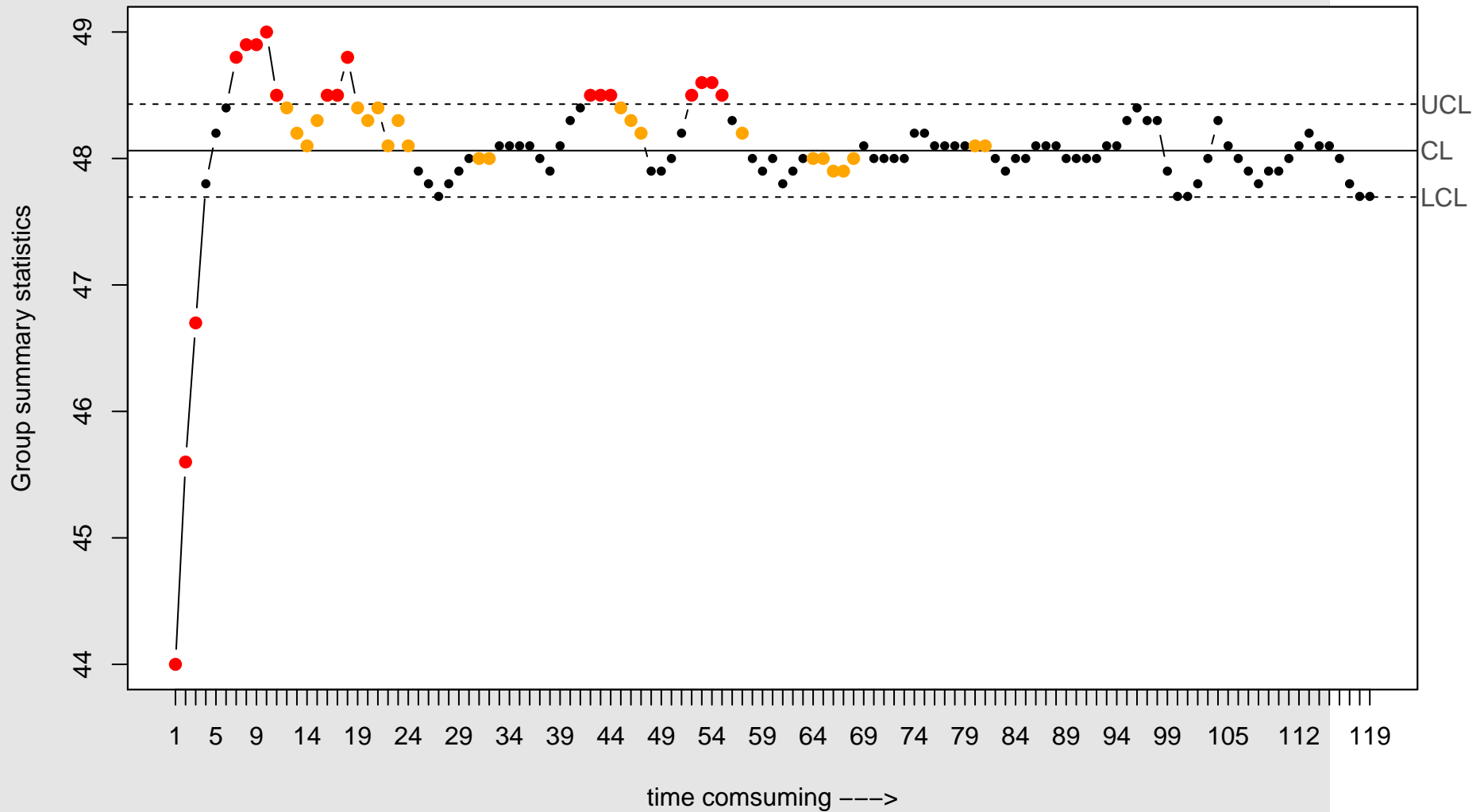
Number of groups = 119
Center = 48.06218   LCL = 47.6948   Number beyond limits = 18
StdDev = 0.1224606   UCL = 48.42957   Number violating runs = 27

41th column point of this product
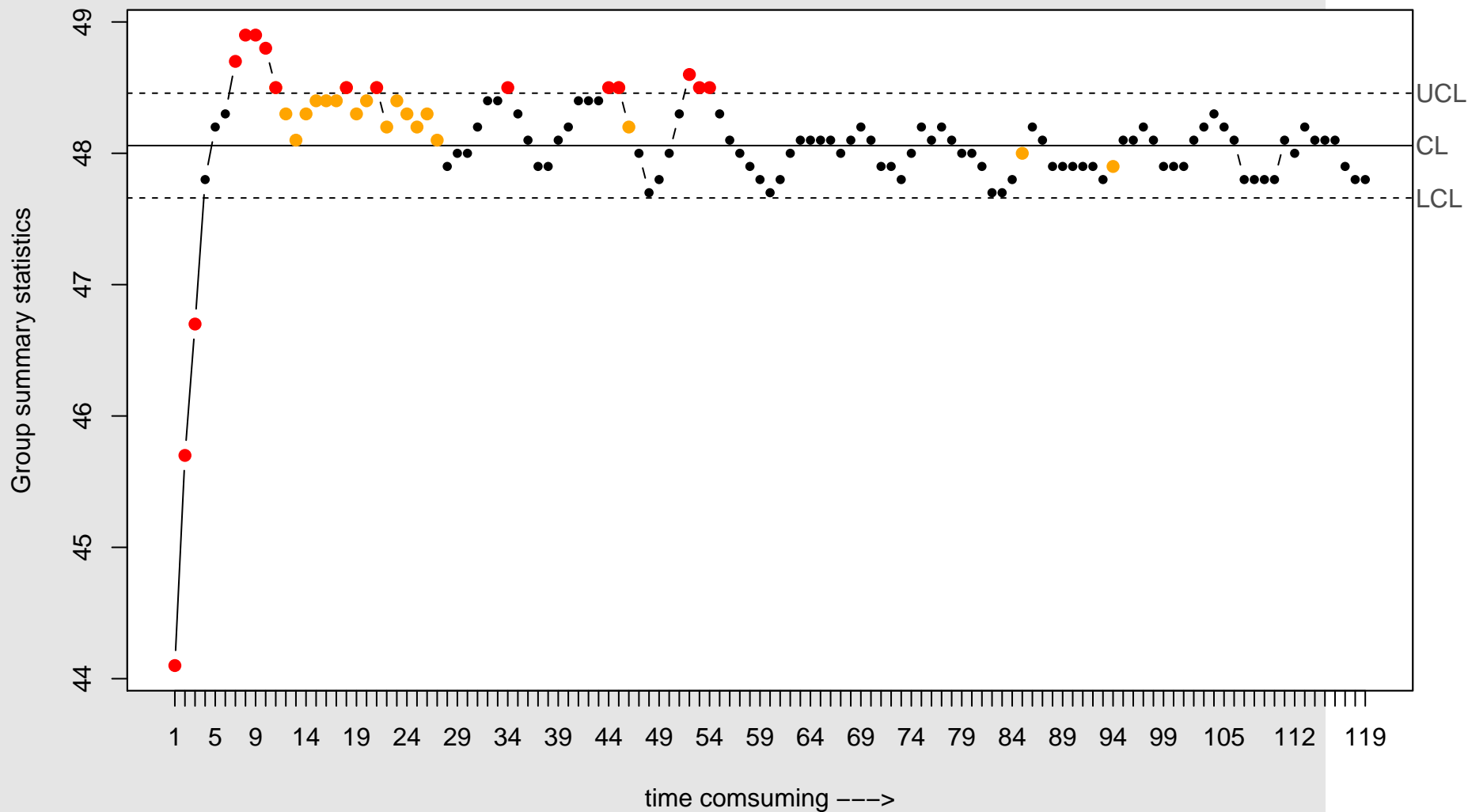
Number of groups = 119
Center = 48.05882
StdDev = 0.1329787

LCL = 47.65989
UCL = 48.45776

Number beyond limits = 16
Number violating runs = 21

42th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL
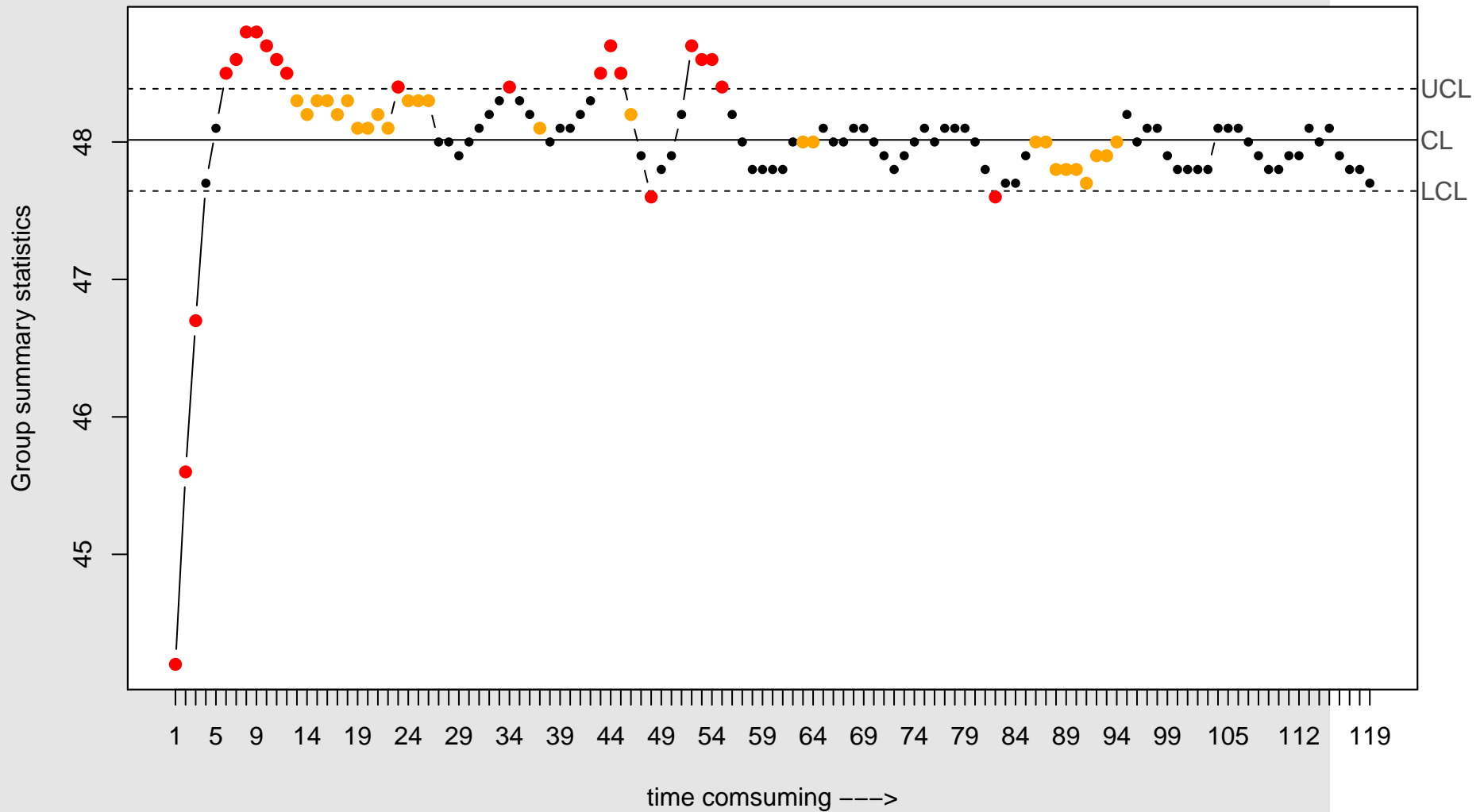
Number of groups = 119
Center = 48.01513   LCL = 47.64324   Number beyond limits = 21
StdDev = 0.1239632   UCL = 48.38702   Number violating runs = 30

43th column point of this product

Group summary statistics

time comsuming ---->
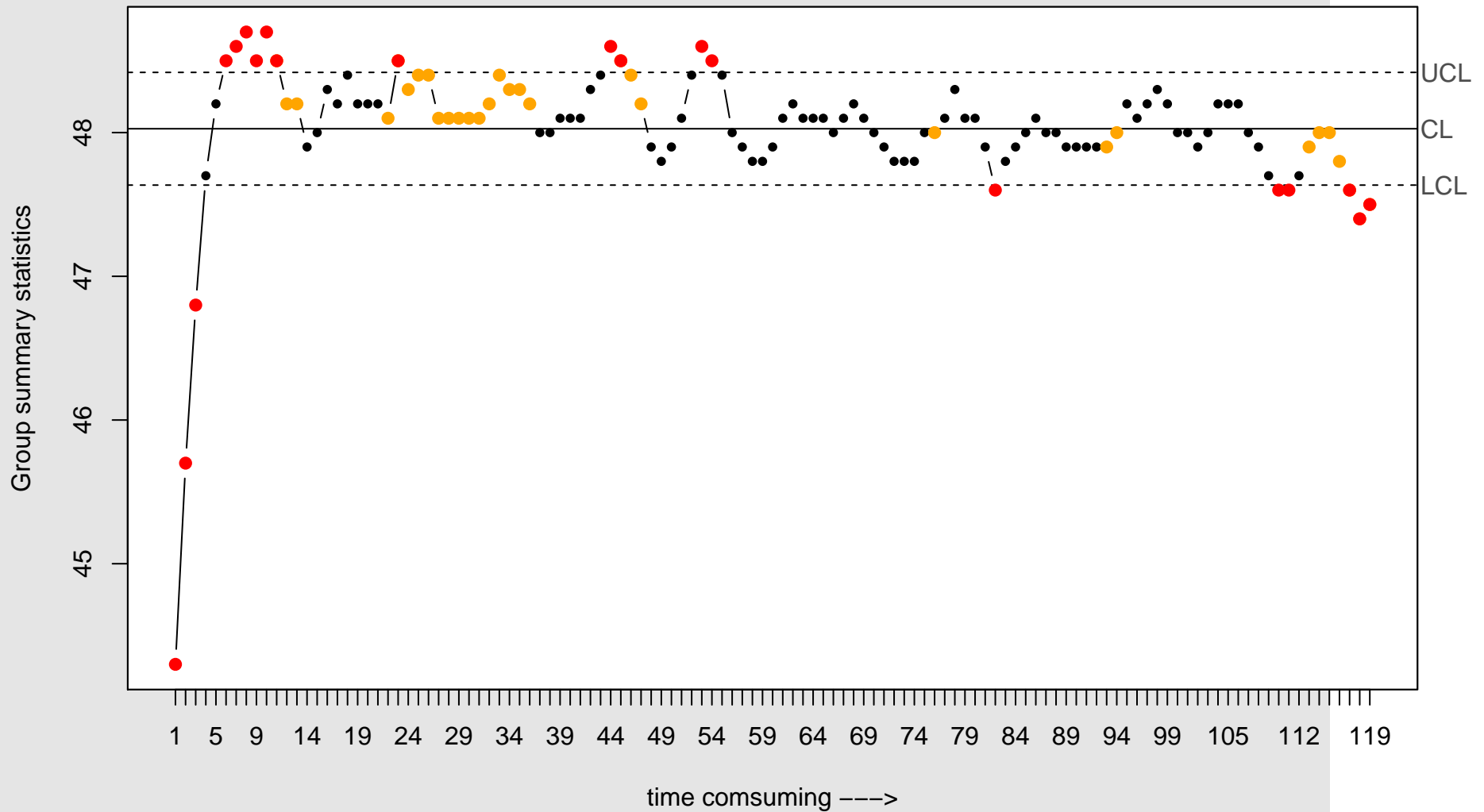
Number of groups = 119
Center = 48.02689   LCL = 47.63472   Number beyond limits = 20
StdDev = 0.1307248   UCL = 48.41907   Number violating runs = 31

44th column point of this product
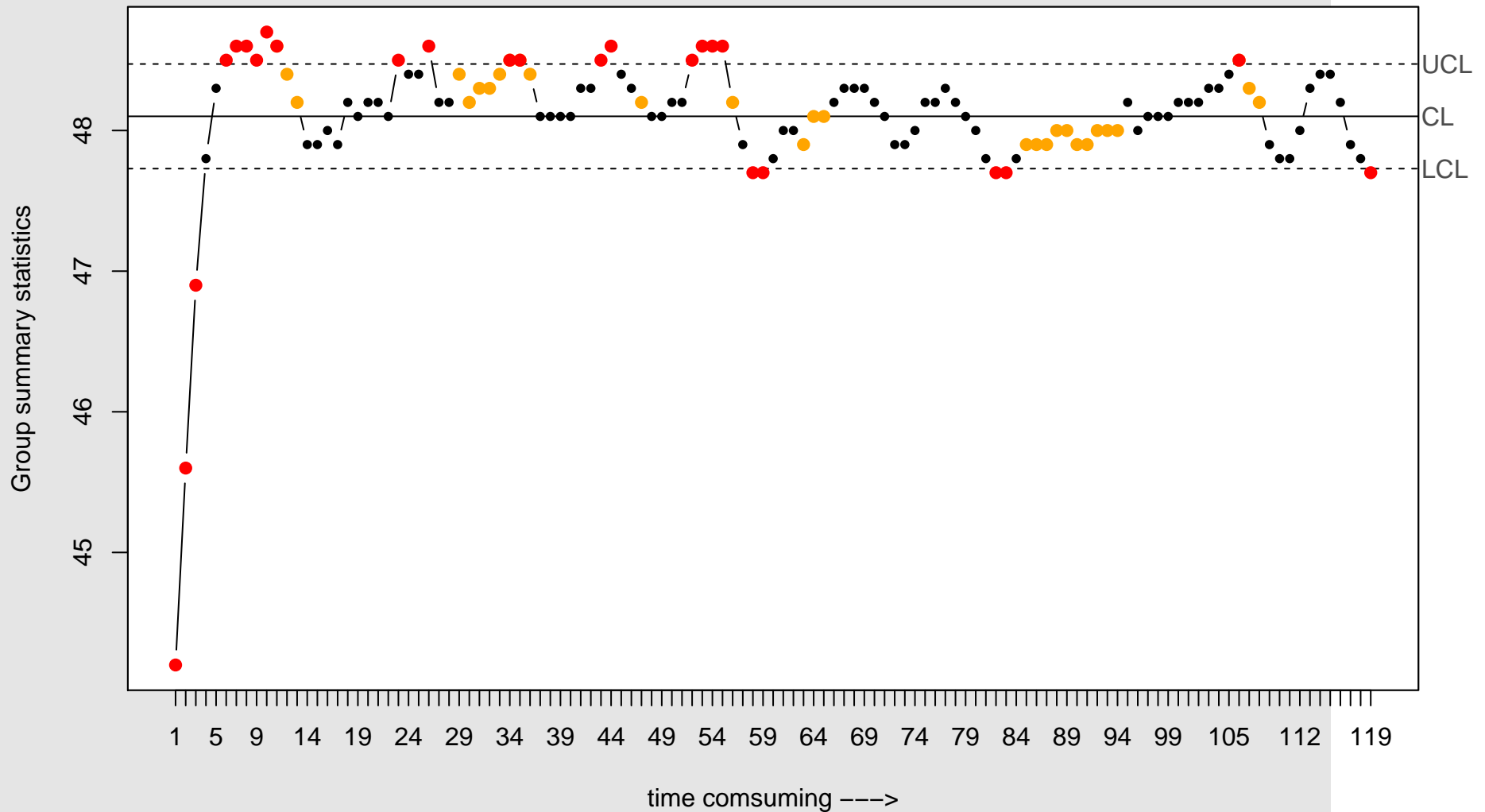
Number of groups = 119
Center = 48.10084   LCL = 47.72895   Number beyond limits = 25
StdDev = 0.1239632   UCL = 48.47273   Number violating runs = 29

45th column point of this product

Group summary statistics

time comsuming ––––>

UCL
CL
LCL
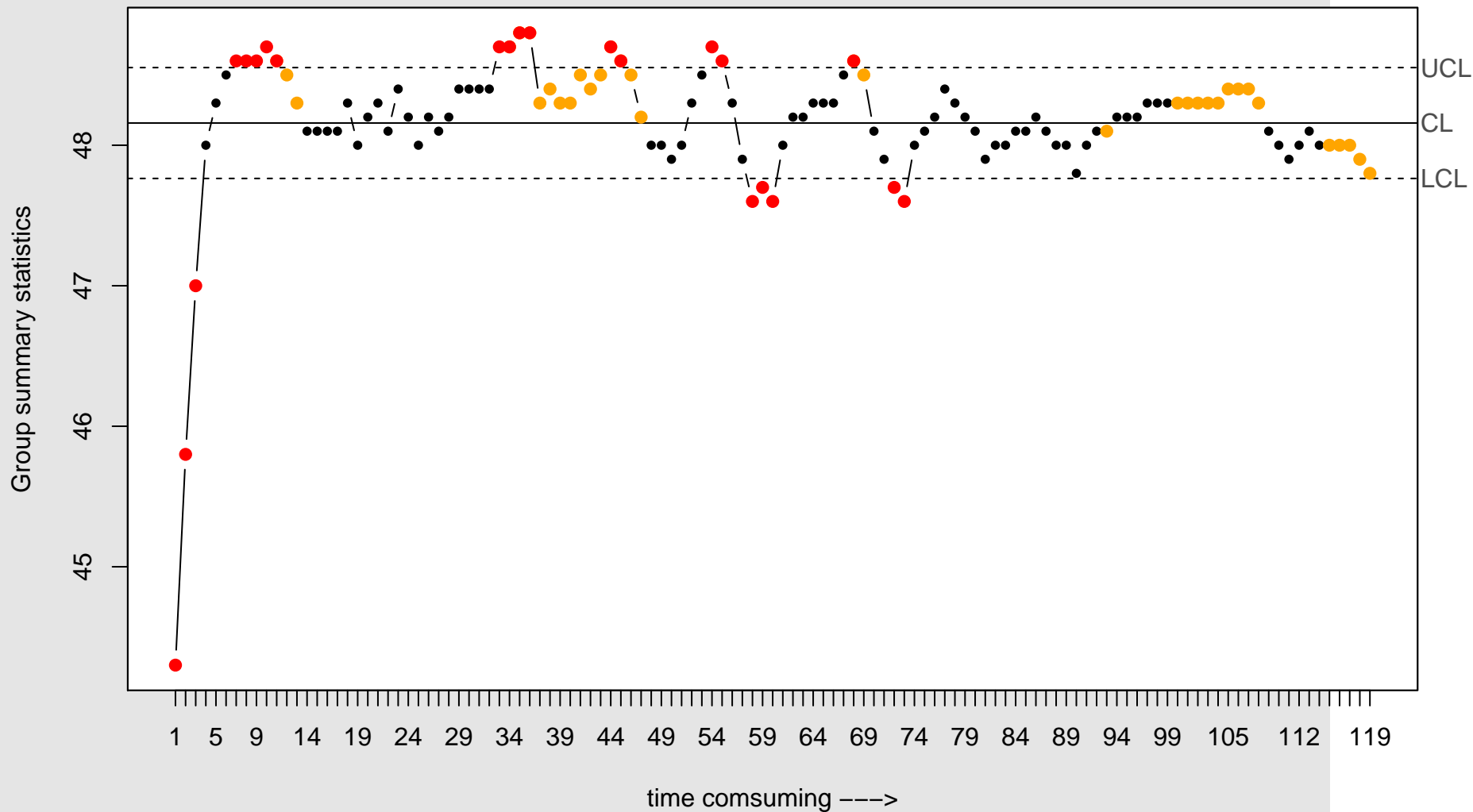
Number of groups = 119
Center = 48.15798   LCL = 47.76355   Number beyond limits = 22
StdDev = 0.1314761   UCL = 48.55241   Number violating runs = 34

46th column point of this product

UCL

CL

LCL

Group summary statistics

48

47

46

45

1   5   9   14   19   24   29   34   39   44   49   54   59   64   69   74   79   84   89   94   99   105   112   119

time comsuming ----->
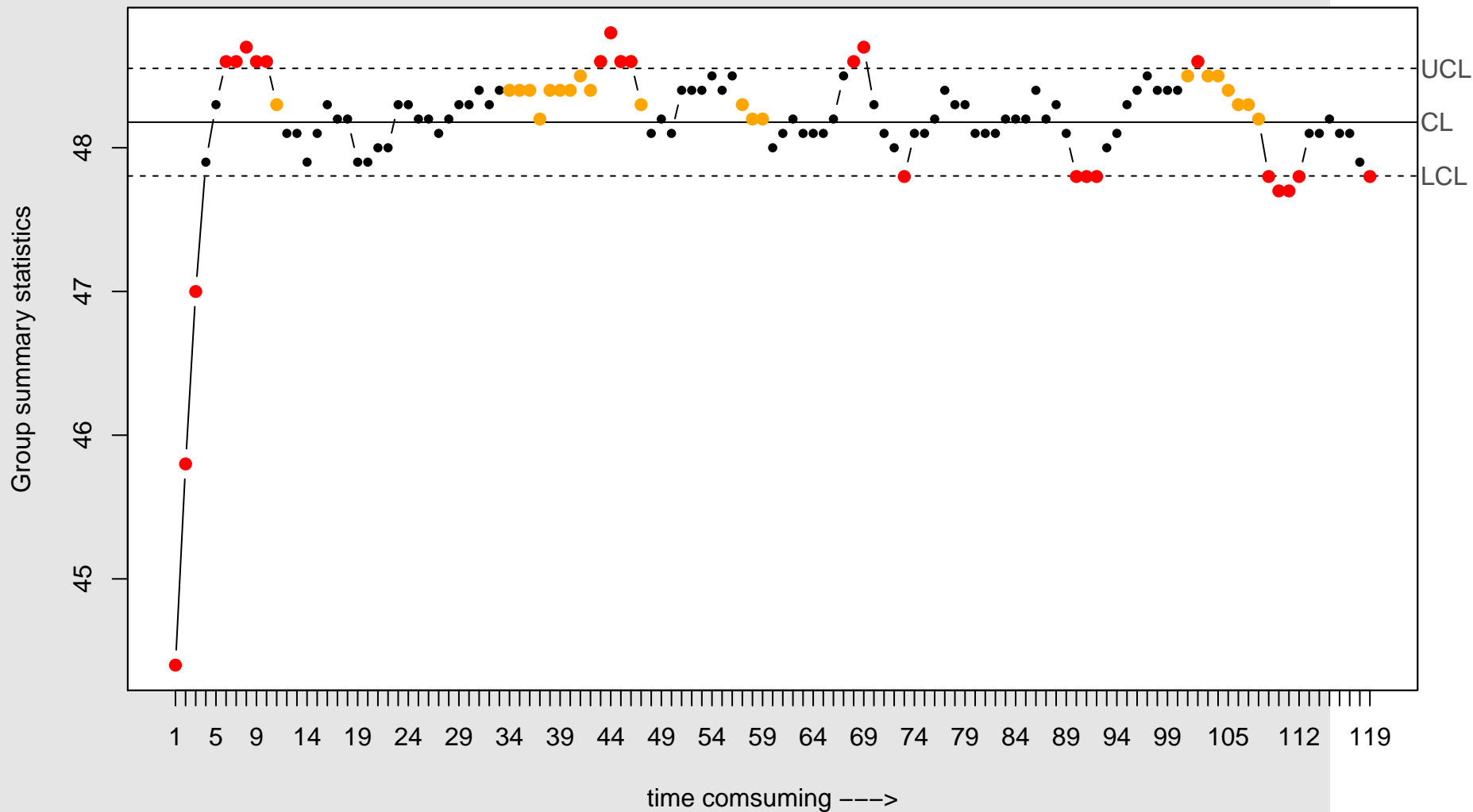
Number of groups = 119
Center = 48.17815   LCL = 47.80401   Number beyond limits = 24
StdDev = 0.1247145   UCL = 48.55229   Number violating runs = 26

47th column point of this product

UCL

CL

LCL

Group summary statistics

48

47

46

45

time comsuming –––>
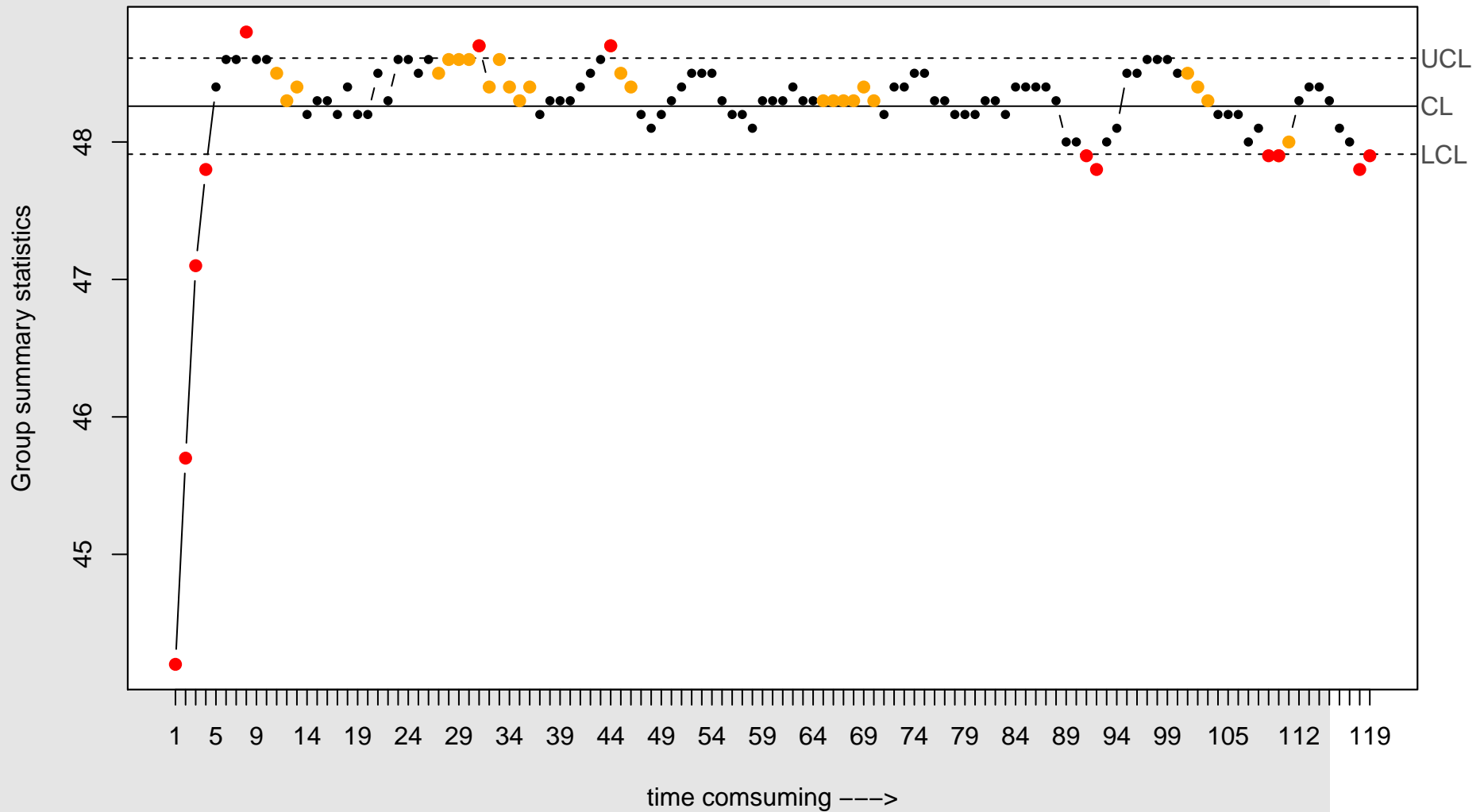
Number of groups = 119
Center = 48.2605
StdDev = 0.1164503

LCL = 47.91115
UCL = 48.60986

Number beyond limits = 13
Number violating runs = 27

48th column point of this product

Group summary statistics

time comsuming ——->
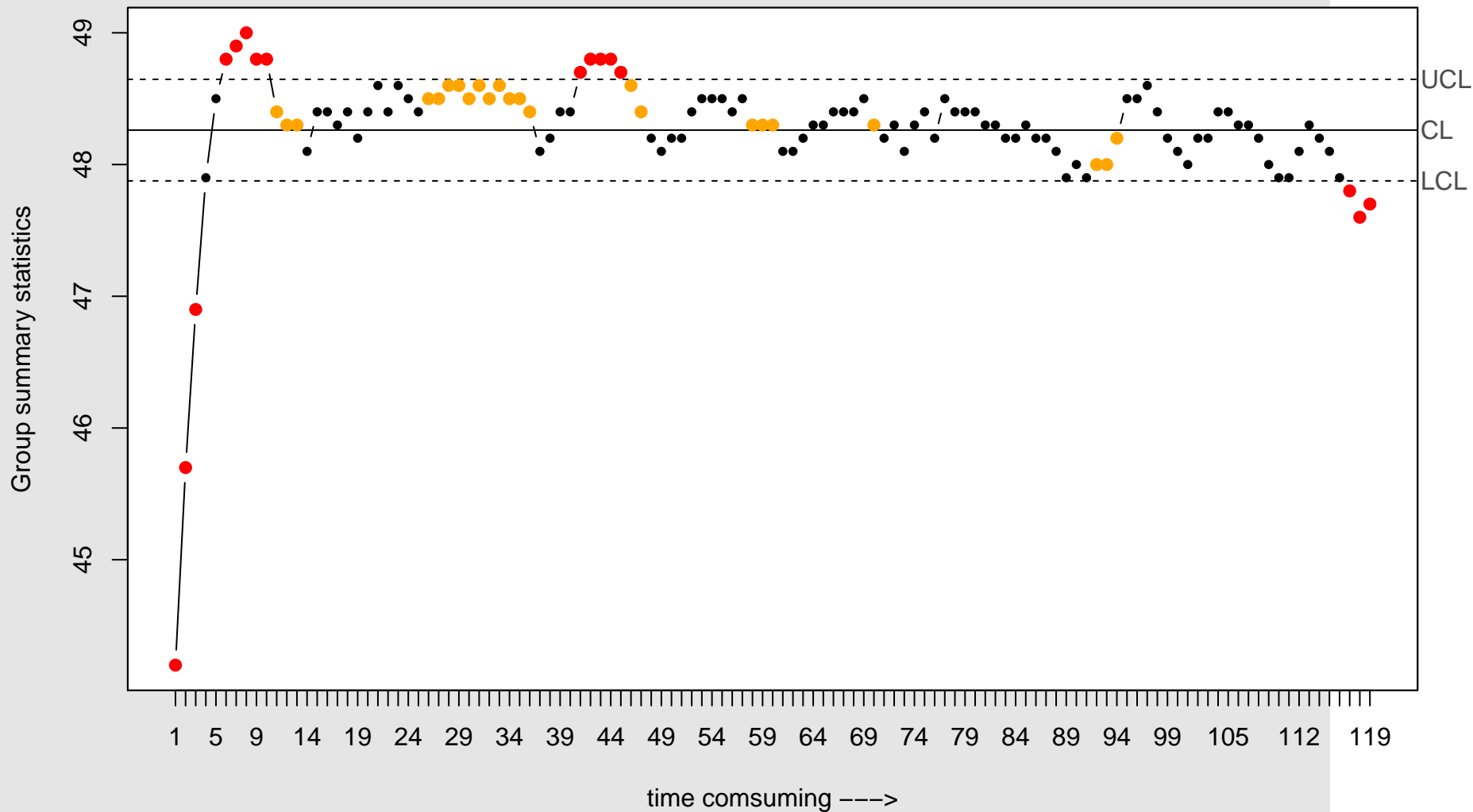
Number of groups = 119
Center = 48.26134   LCL = 47.87593   Number beyond limits = 16
StdDev = 0.128471   UCL = 48.64676   Number violating runs = 24

49th column point of this product

Group summary statistics

time comsuming ––––>
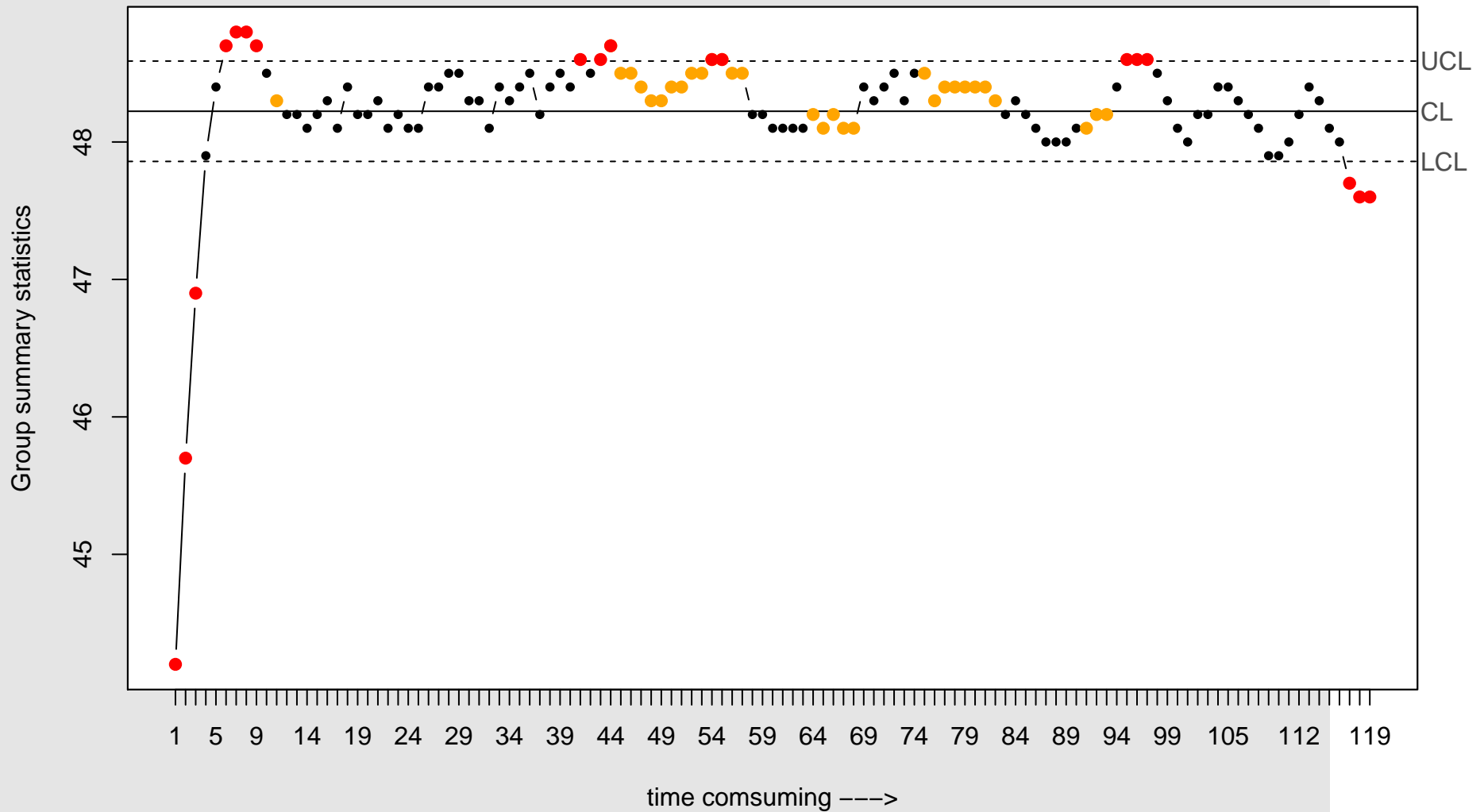
Number of groups = 119
Center = 48.22353   LCL = 47.8584   Number beyond limits = 18
StdDev = 0.1217093   UCL = 48.58866   Number violating runs = 31

50th column point of this product

Group summary statistics

UCL
CL
LCL

48

47

46

45

44

1 5 9 14 19 24 29 34 39 44 49 54 59 64 69 74 79 84 89 94 99 105 112 119

time comsuming ---->
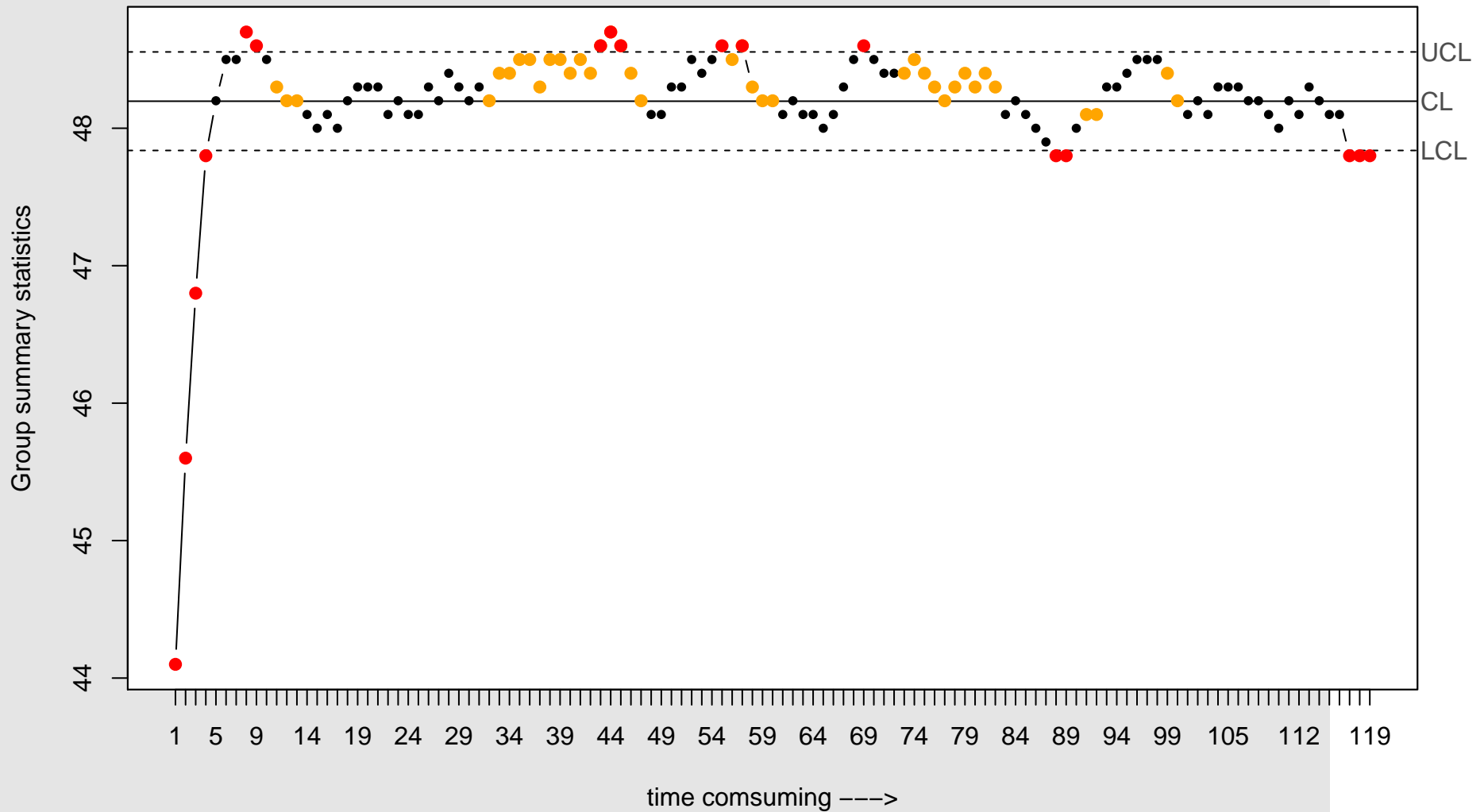
Number of groups = 119
Center = 48.19664   LCL = 47.83827   Number beyond limits = 17
StdDev = 0.1194555   UCL = 48.55501   Number violating runs = 38

51th column point of this product

Group summary statistics

time comsuming ――->
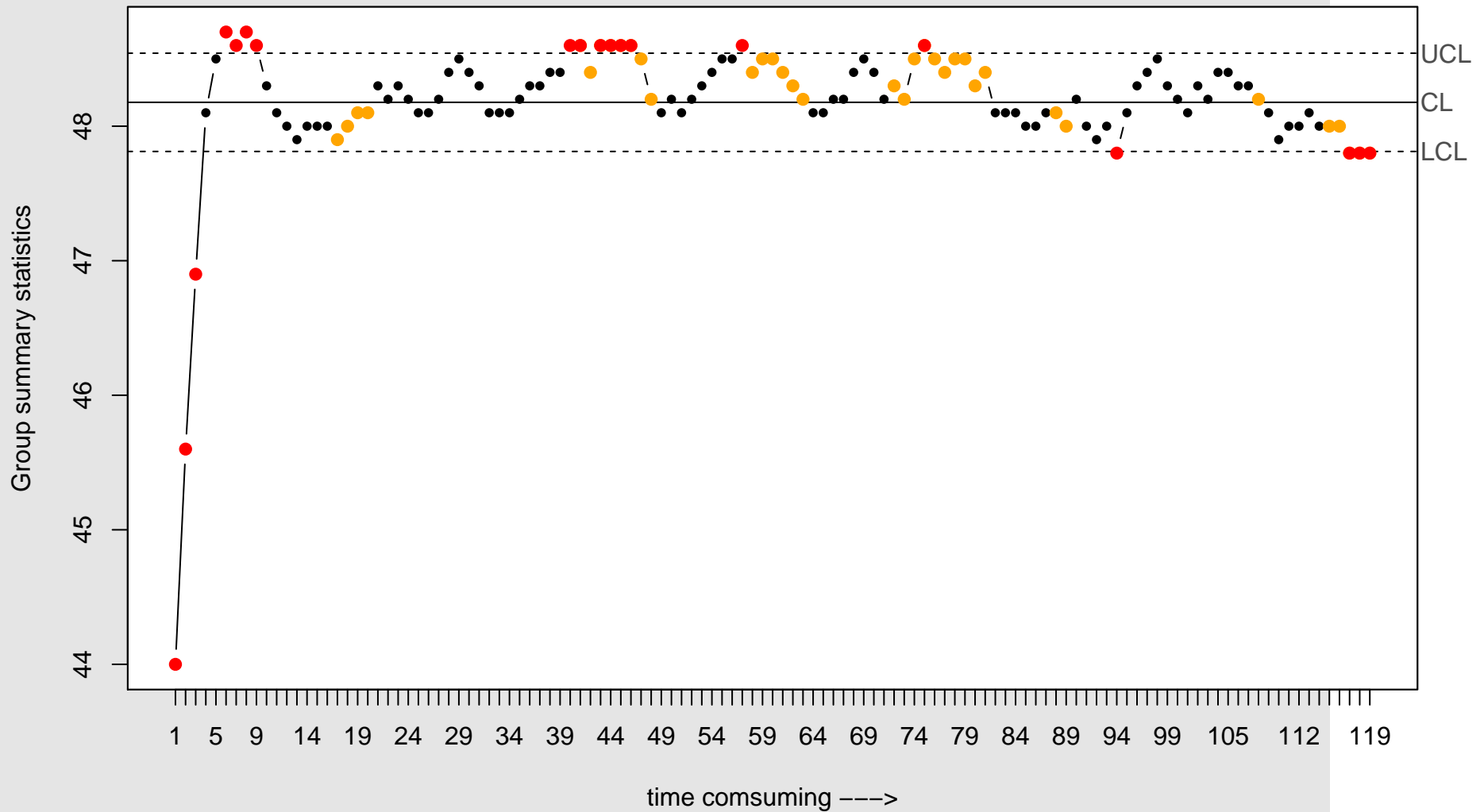
Number of groups = 119
Center = 48.17731
StdDev = 0.1217093
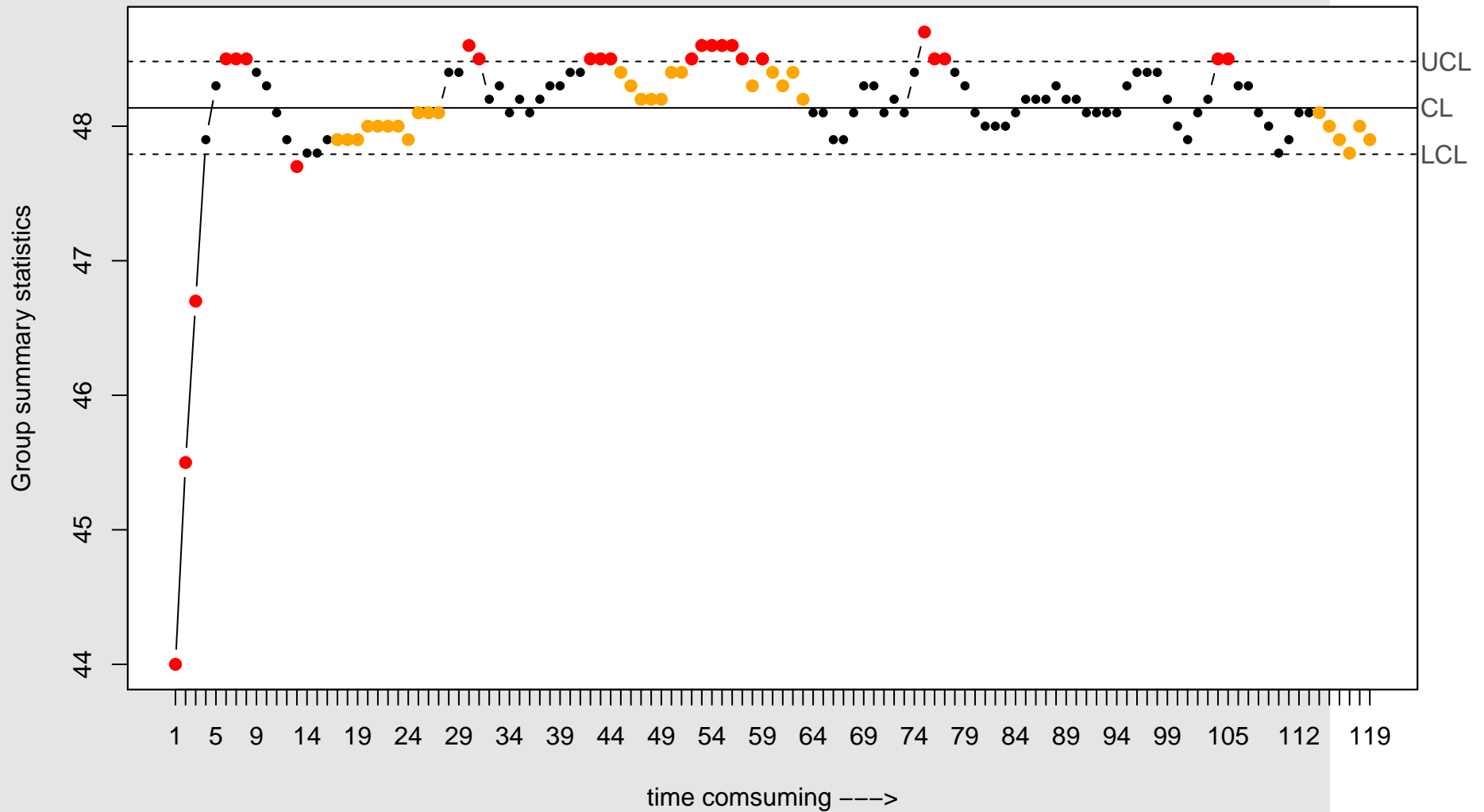
LCL = 47.81218
UCL = 48.54244

Number beyond limits = 19
Number violating runs = 36

52th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 48.13613   LCL = 47.79129   Number beyond limits = 24
StdDev = 0.1149477   UCL = 48.48098   Number violating runs = 38

53th column point of this product

Group summary statistics

time comsuming ---->
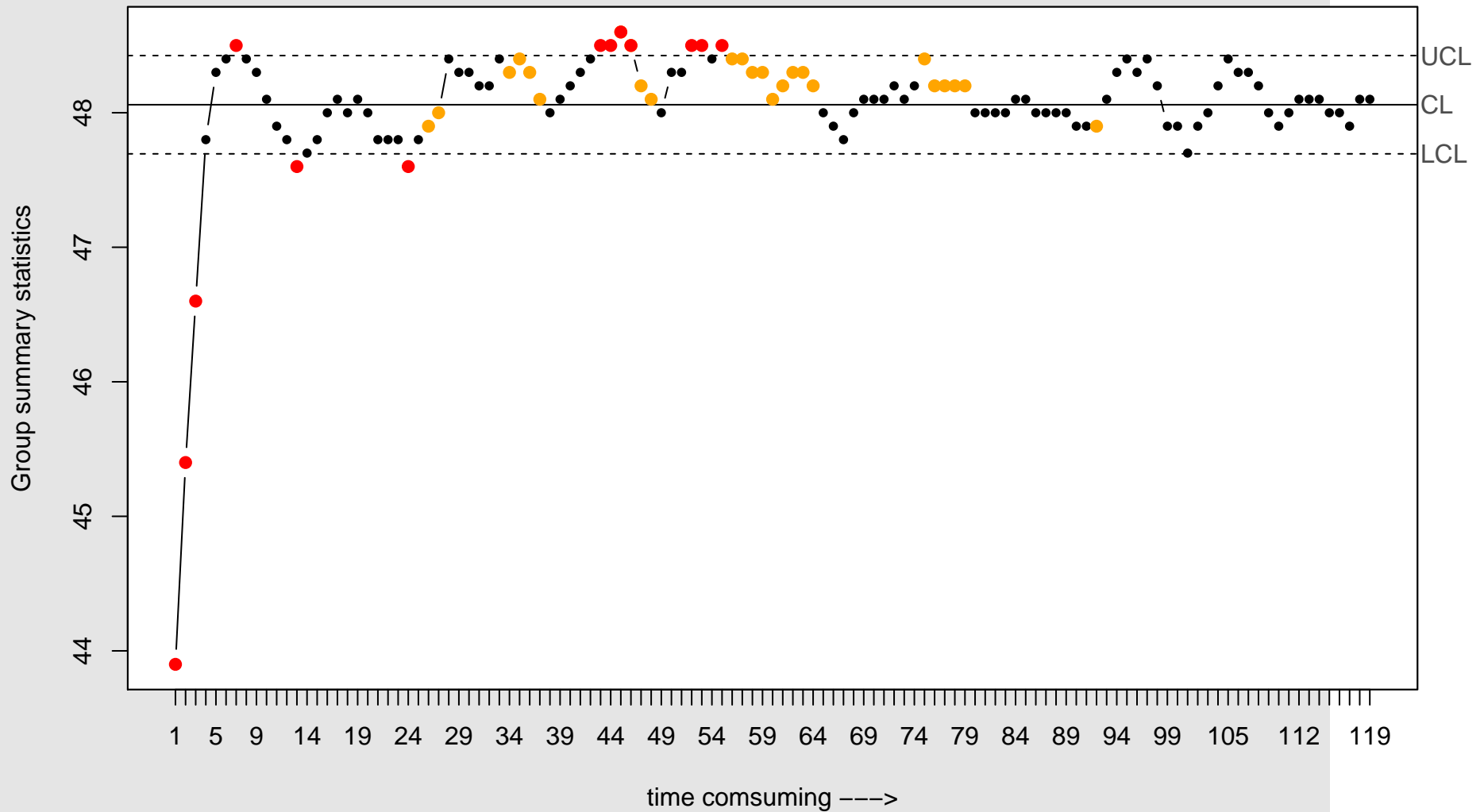
Number of groups = 119
Center = 48.05966
StdDev = 0.1217093
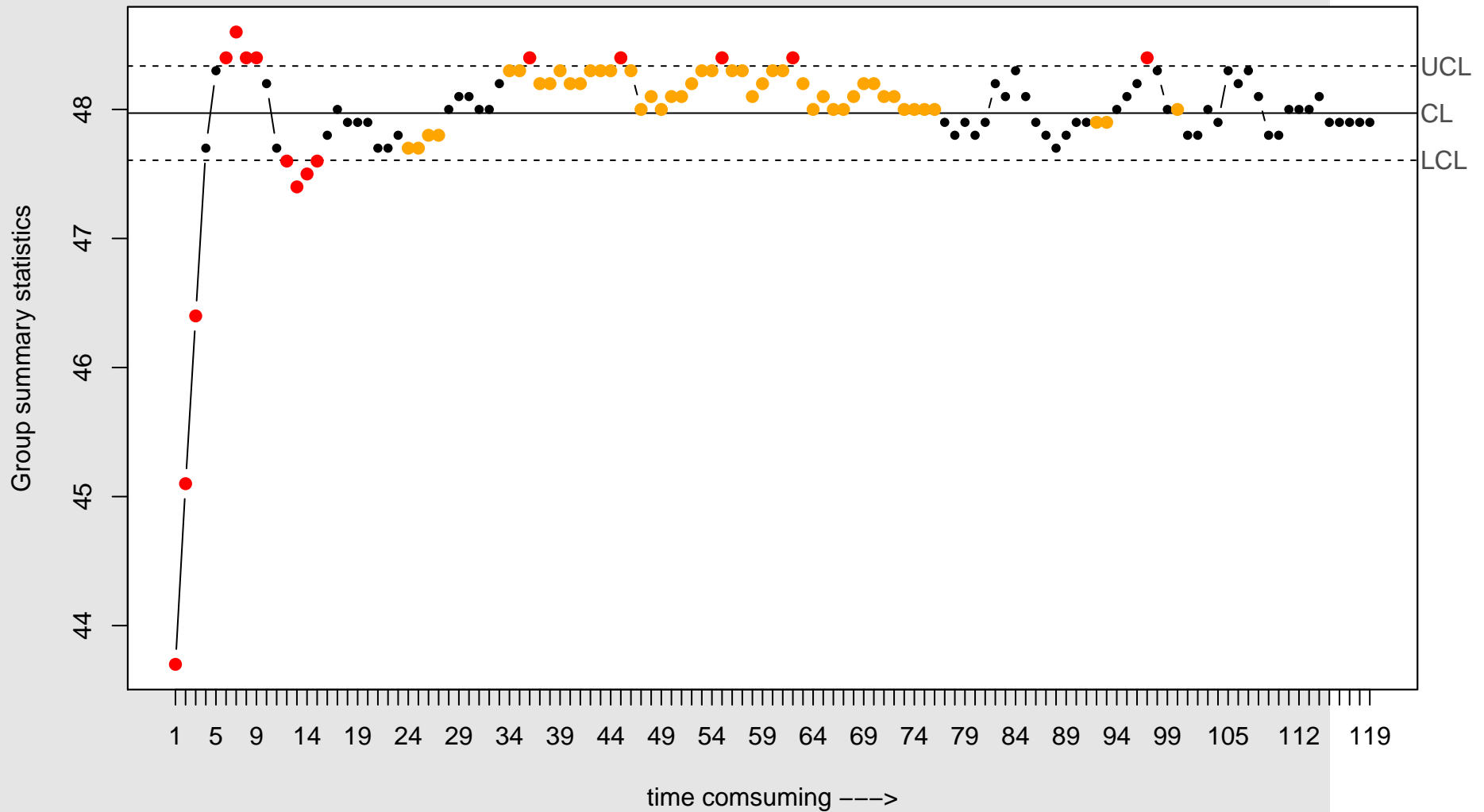
LCL = 47.69454
UCL = 48.42479

Number beyond limits = 13
Number violating runs = 25

54th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 47.97143   LCL = 47.6063   Number beyond limits = 16
StdDev = 0.1217093   UCL = 48.33656   Number violating runs = 50

55th column point of this product

Group summary statistics

time comsuming ––––>
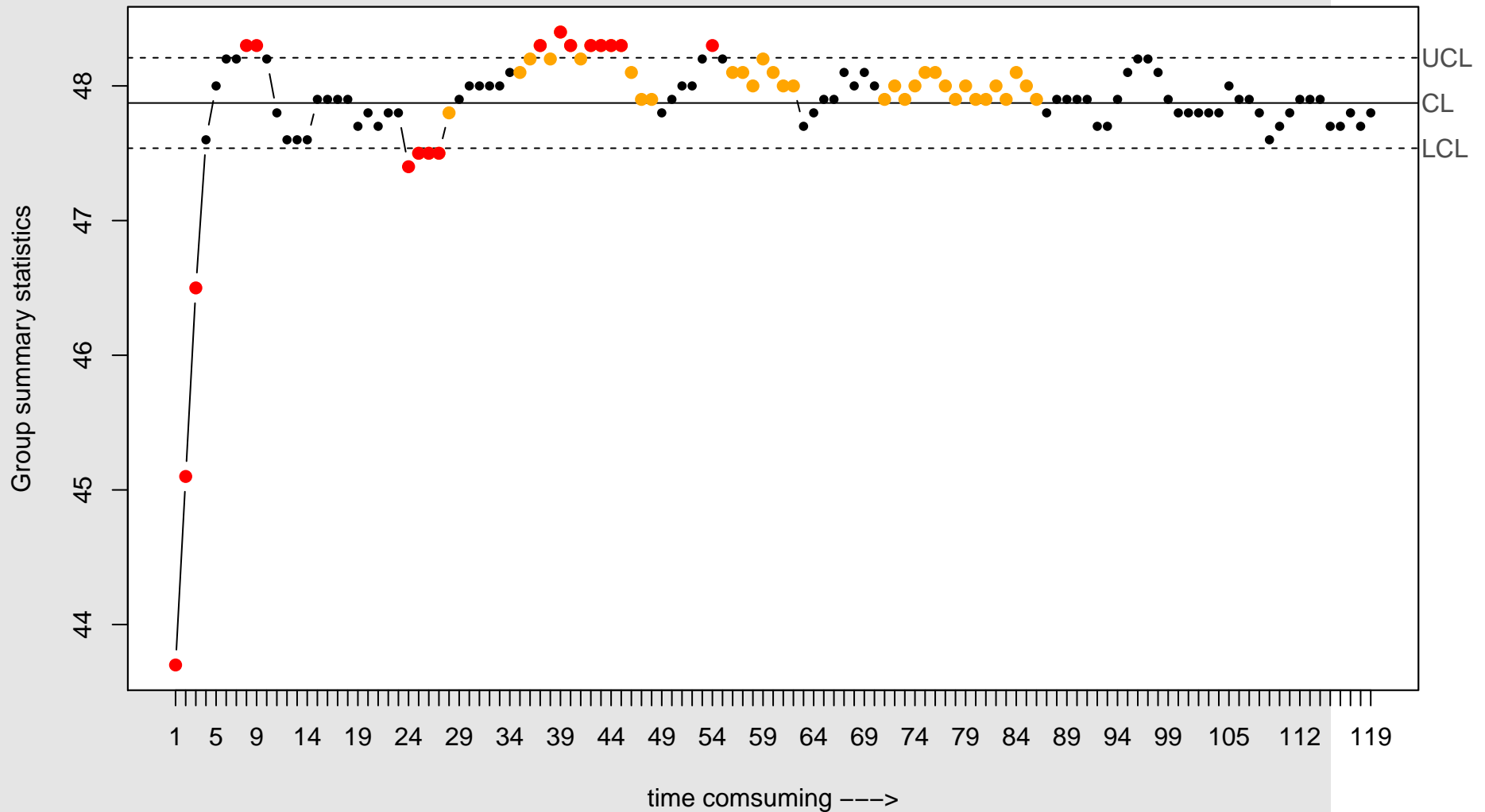
Number of groups = 119
Center = 47.87311   LCL = 47.53728   Number beyond limits = 17
StdDev = 0.1119425   UCL = 48.20894   Number violating runs = 41

56th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL
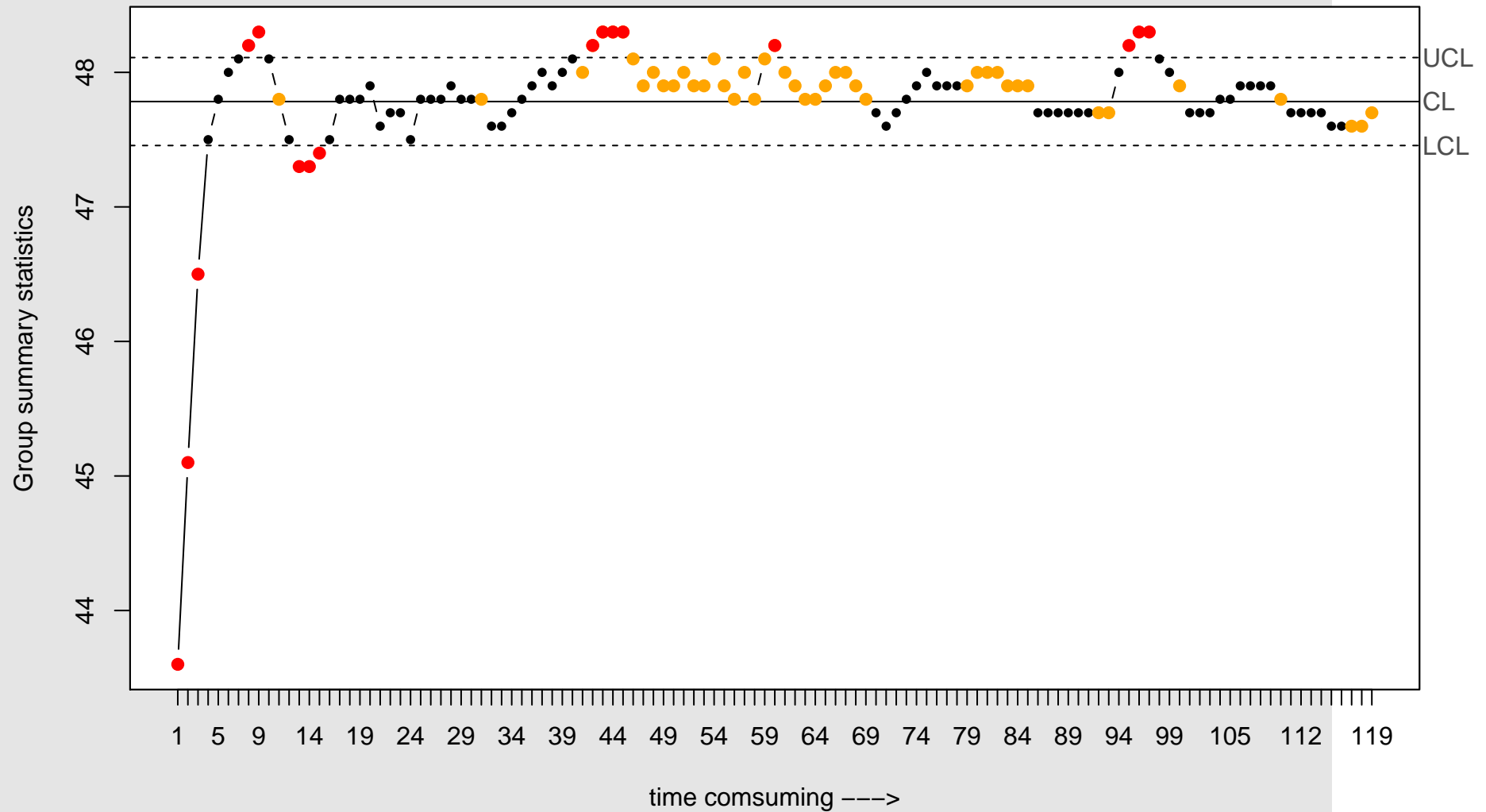
Number of groups = 119
Center = 47.78319   LCL = 47.45638   Number beyond limits = 16
StdDev = 0.1089374   UCL = 48.11001   Number violating runs = 45

57th column point of this product

Group summary statistics

time comsuming ---->
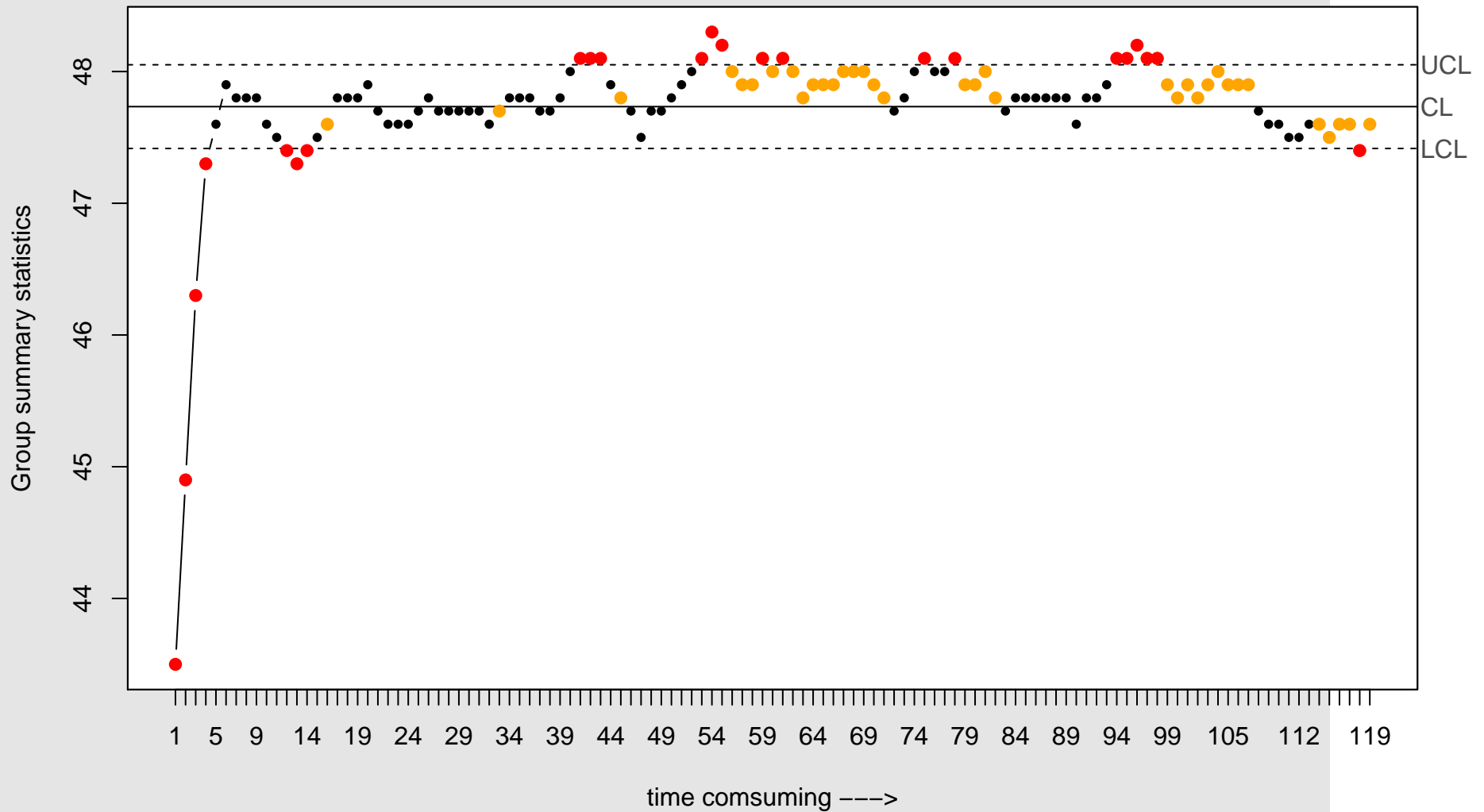
Number of groups = 119
Center = 47.73361   LCL = 47.41582   Number beyond limits = 23
StdDev = 0.1059322   UCL = 48.05141   Number violating runs = 40

58th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL
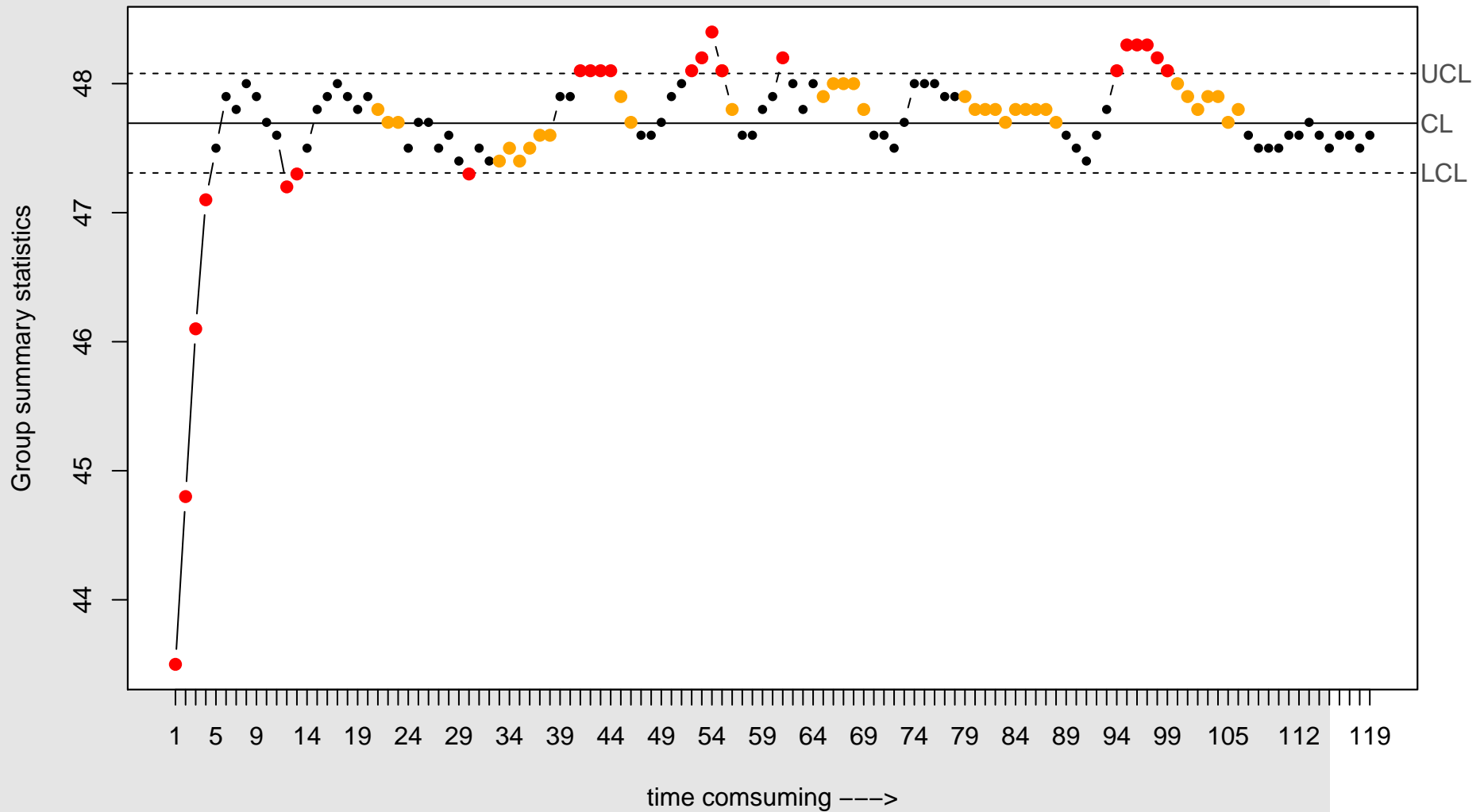
Number of groups = 119
Center = 47.69328   LCL = 47.30786   Number beyond limits = 22
StdDev = 0.128471   UCL = 48.07869   Number violating runs = 36

59th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 47.65882   LCL = 47.29595   Number beyond limits = 15
StdDev = 0.120958   UCL = 48.0217   Number violating runs = 29

60th column point of this product
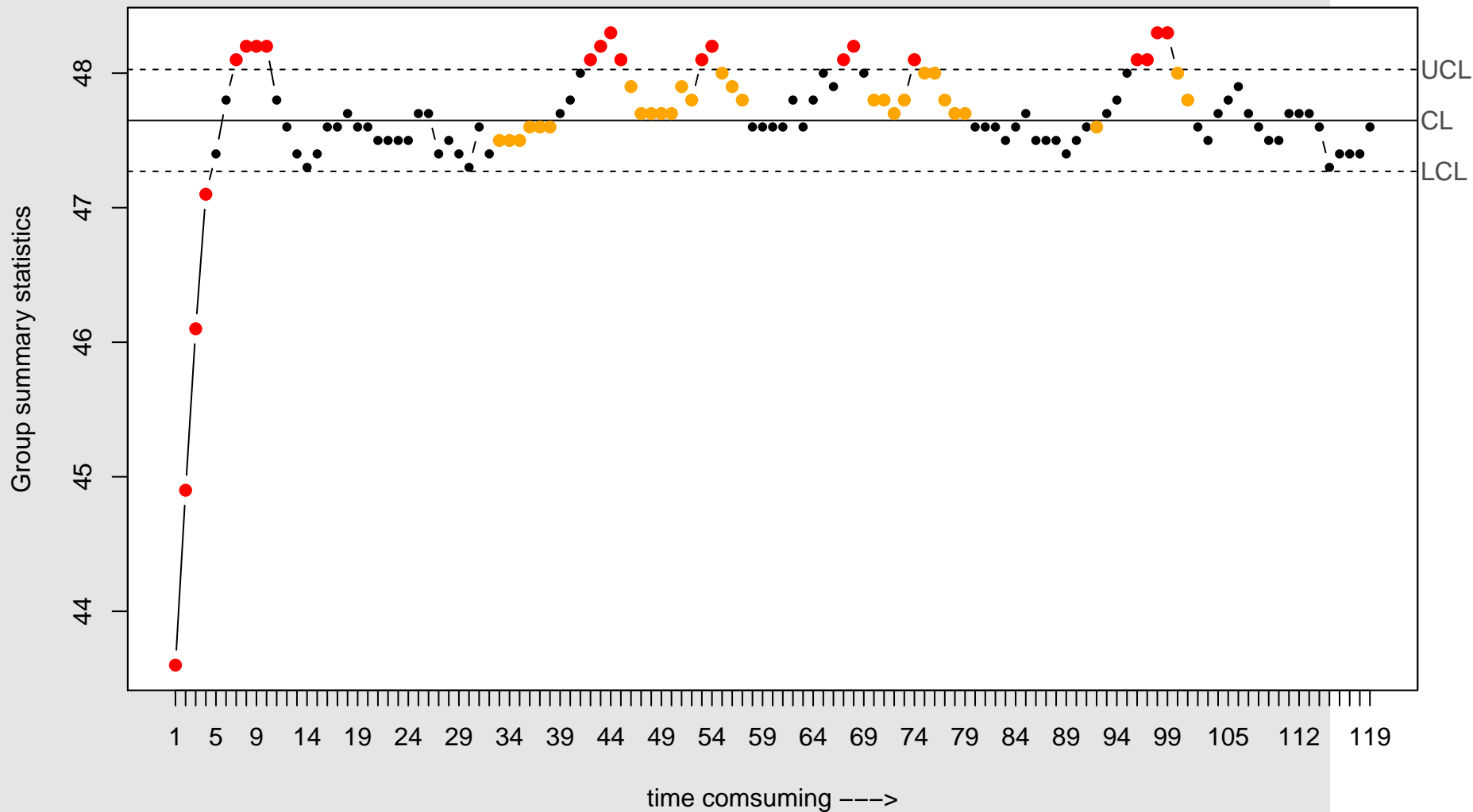
Number of groups = 119
Center = 47.64874   LCL = 47.27009   Number beyond limits = 21
StdDev = 0.1262171   UCL = 48.02739   Number violating runs = 33

61th column point of this product
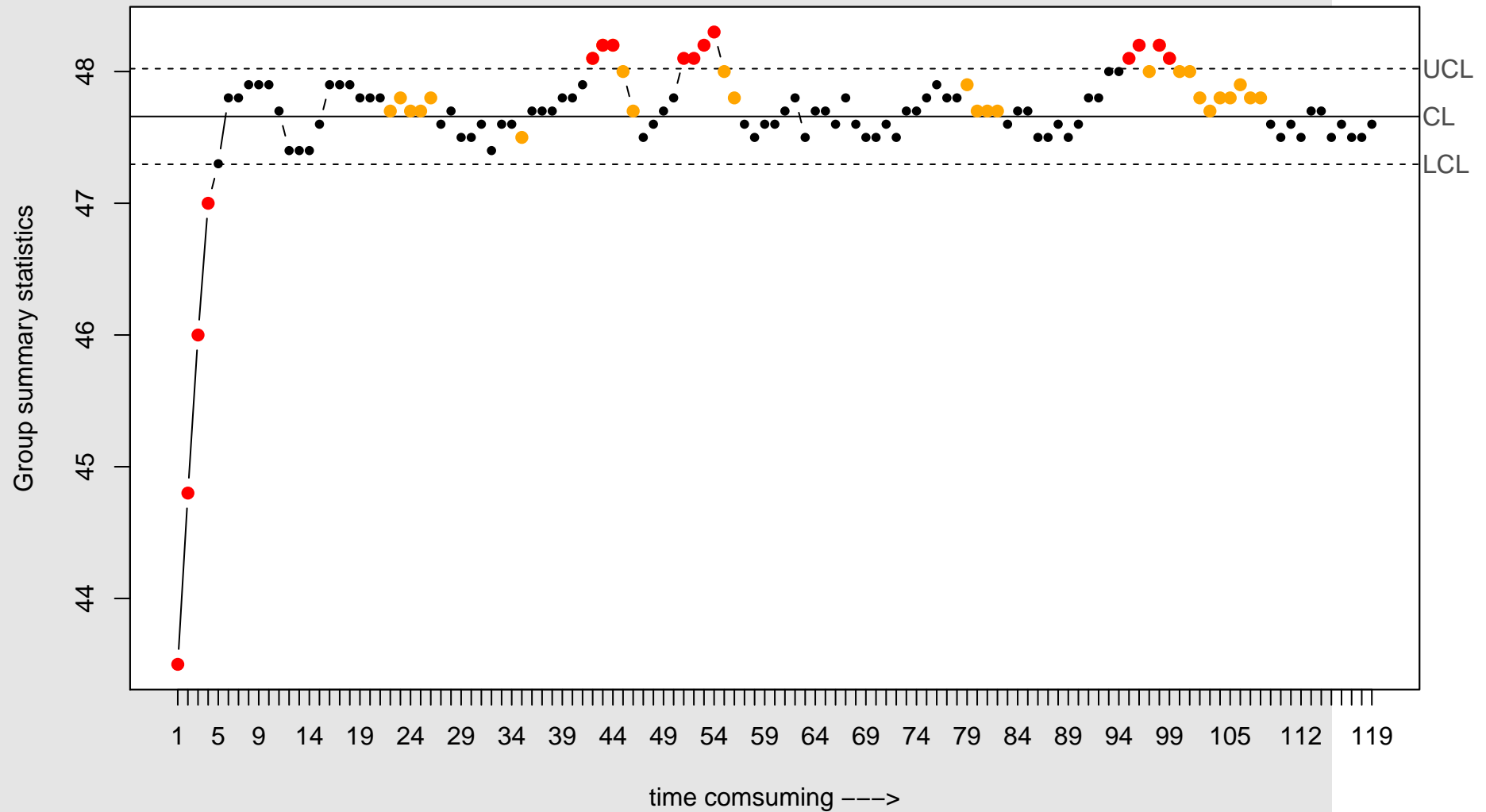
Group summary statistics

time comsuming ---->

UCL
CL
LCL
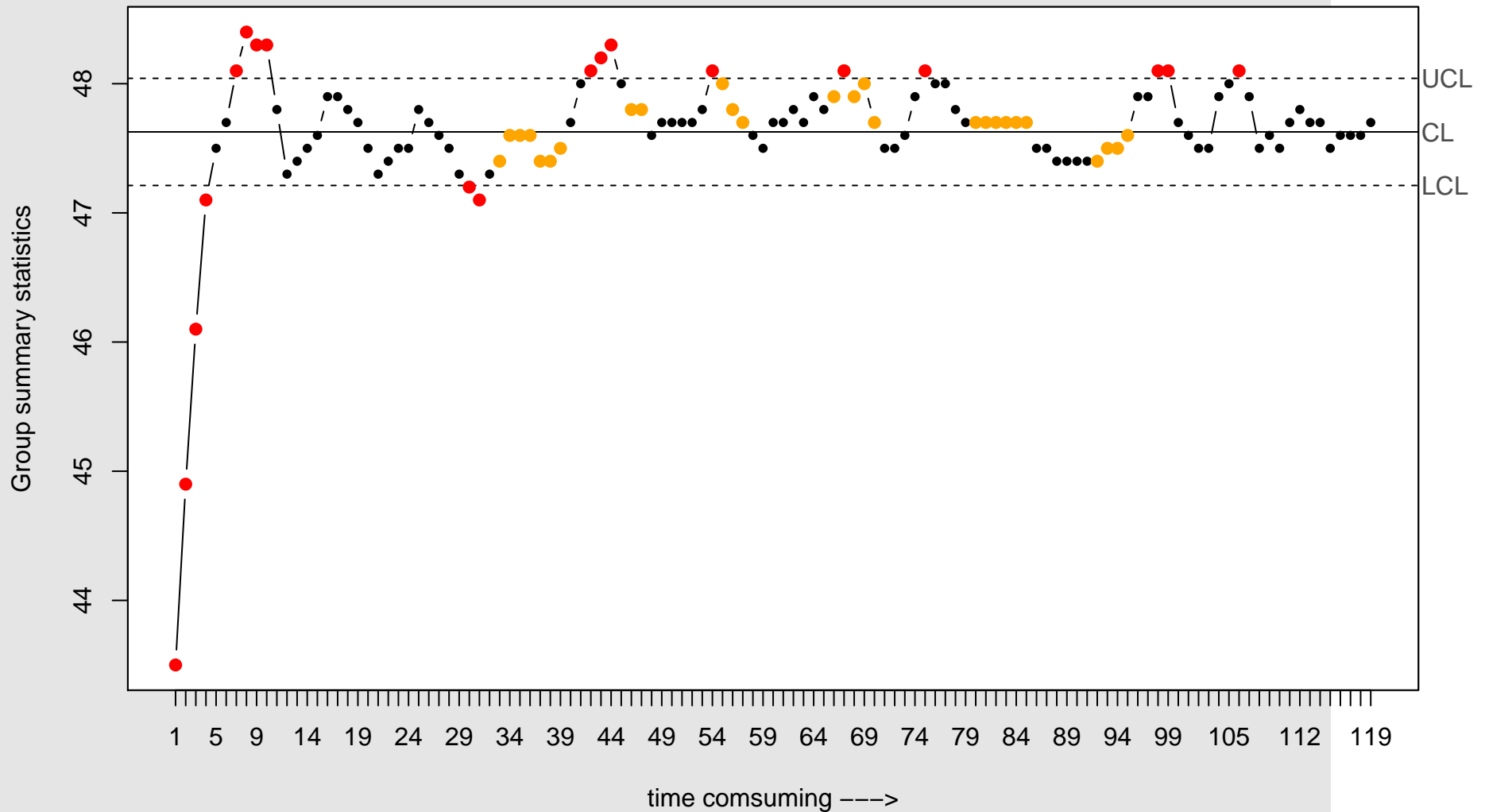
Number of groups = 119
Center = 47.62689
StdDev = 0.1382378
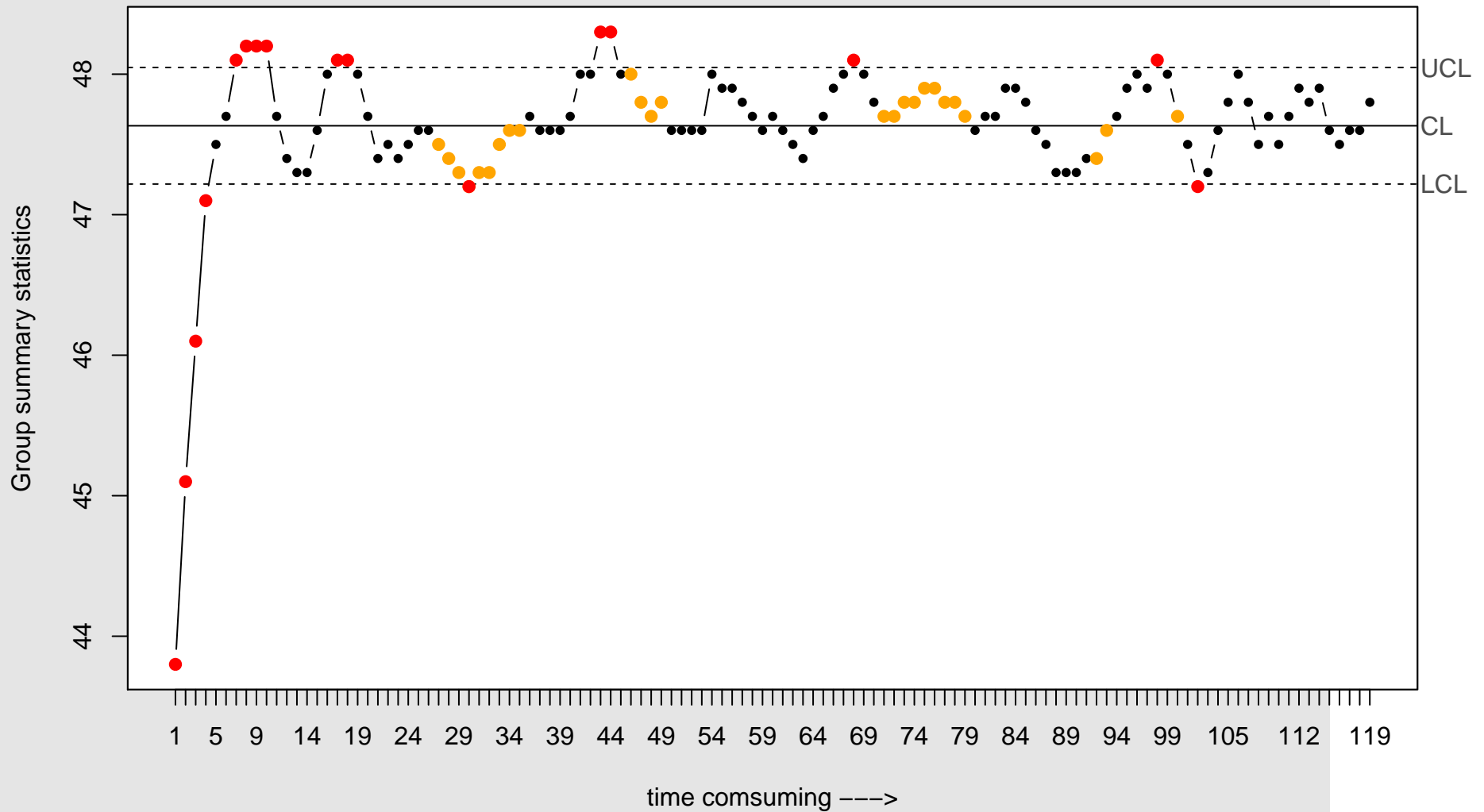
LCL = 47.21218
UCL = 48.0416

Number beyond limits = 19
Number violating runs = 27

62th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ---->

Number of groups = 119
Center = 47.63277   LCL = 47.21806   Number beyond limits = 16
StdDev = 0.1382378   UCL = 48.04749   Number violating runs = 25

63th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL
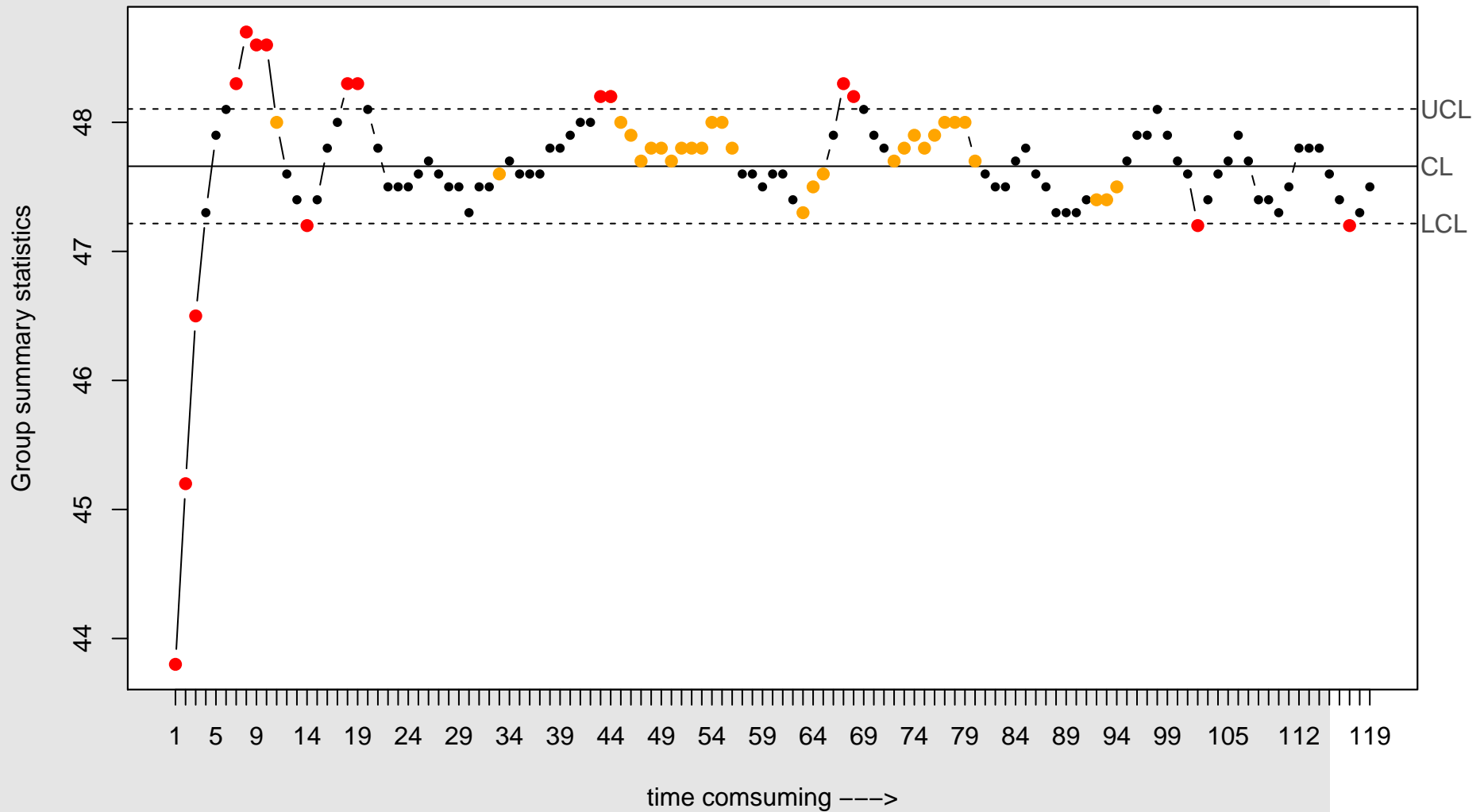
Number of groups = 119
Center = 47.65966   LCL = 47.21565   Number beyond limits = 16
StdDev = 0.1480046   UCL = 48.10368   Number violating runs = 30

64th column point of this product

Group summary statistics

time comsuming --->
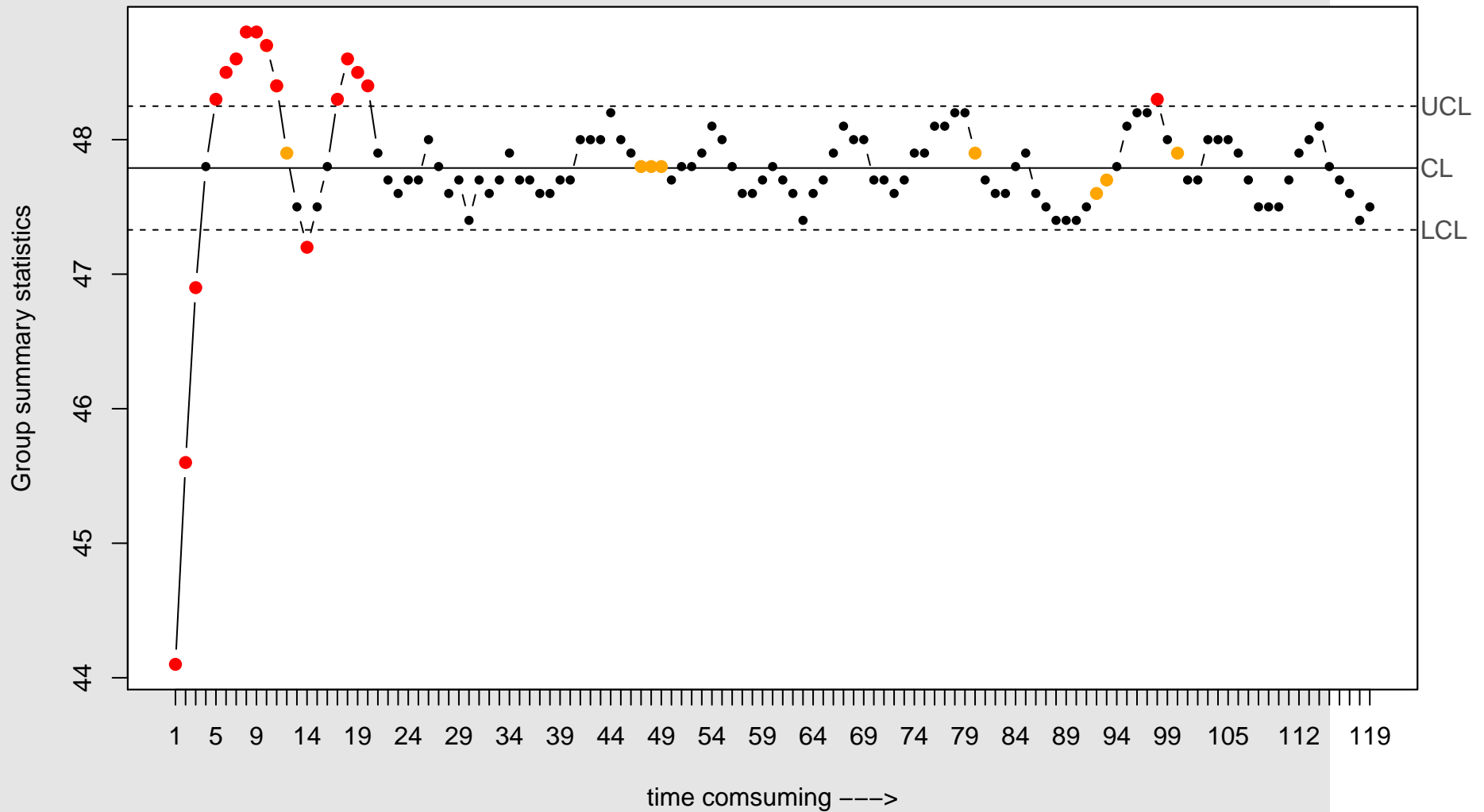
Number of groups = 119
Center = 47.78908   LCL = 47.32928   Number beyond limits = 16
StdDev = 0.1532636   UCL = 48.24887   Number violating runs = 10

65th column point of this product

Group summary statistics

time comsuming ---->
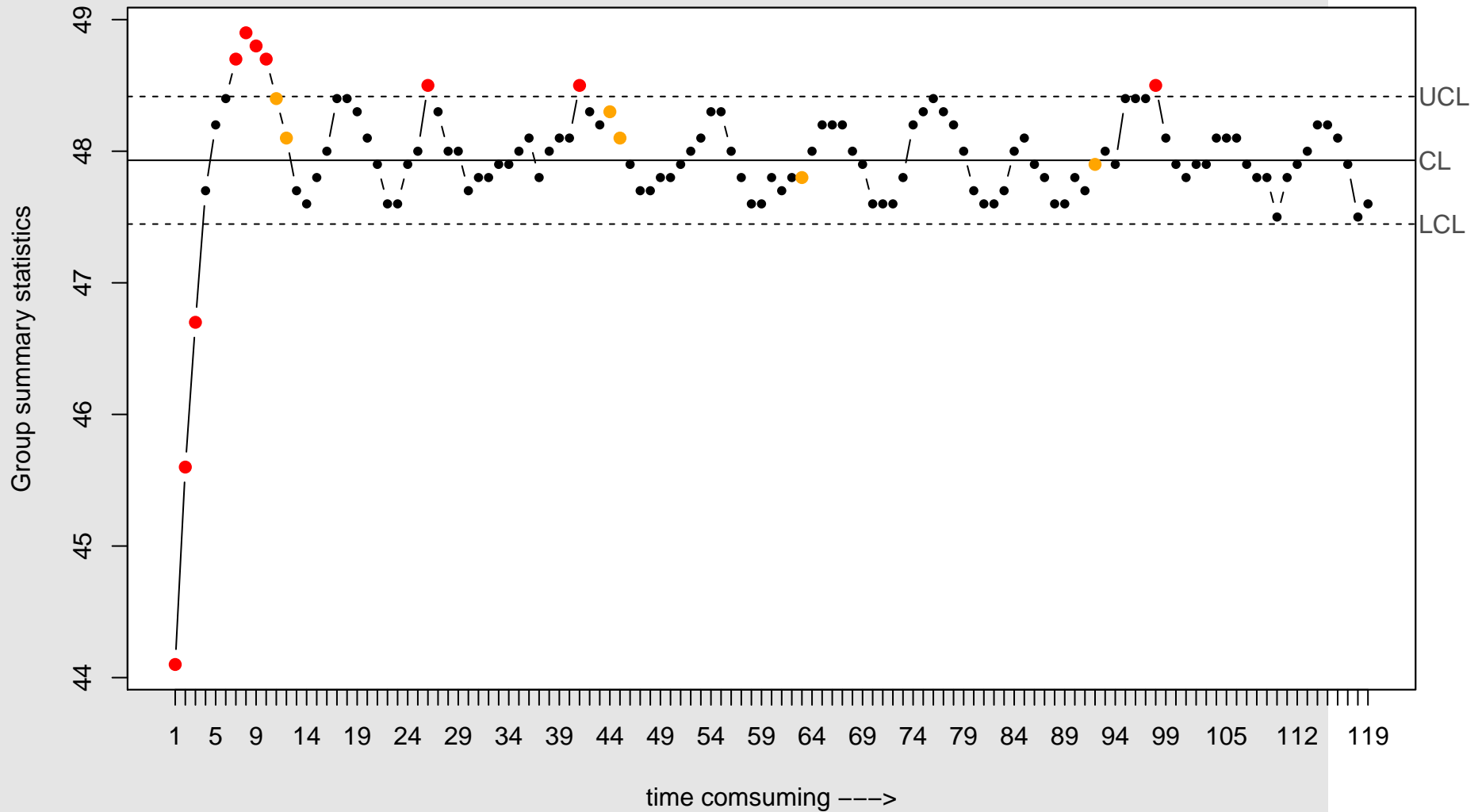
Number of groups = 119
Center = 47.93109   LCL = 47.44651   Number beyond limits = 10
StdDev = 0.1615278   UCL = 48.41568   Number violating runs = 6

66th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ––––>
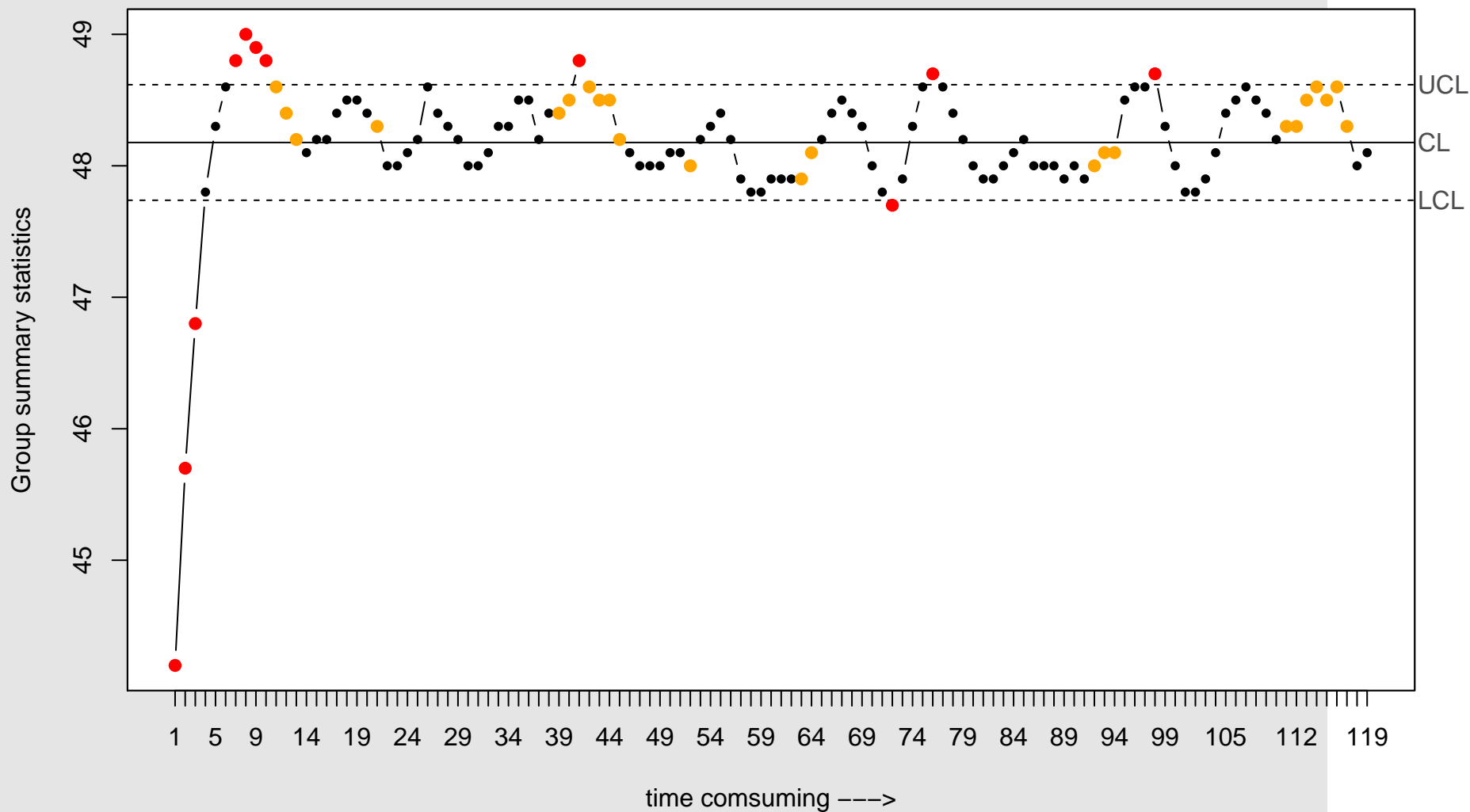
Number of groups = 119
Center = 48.17731   LCL = 47.7378   Number beyond limits = 11
StdDev = 0.146502   UCL = 48.61682   Number violating runs = 24

67th column point of this product

Group summary statistics

time comsuming ––––>
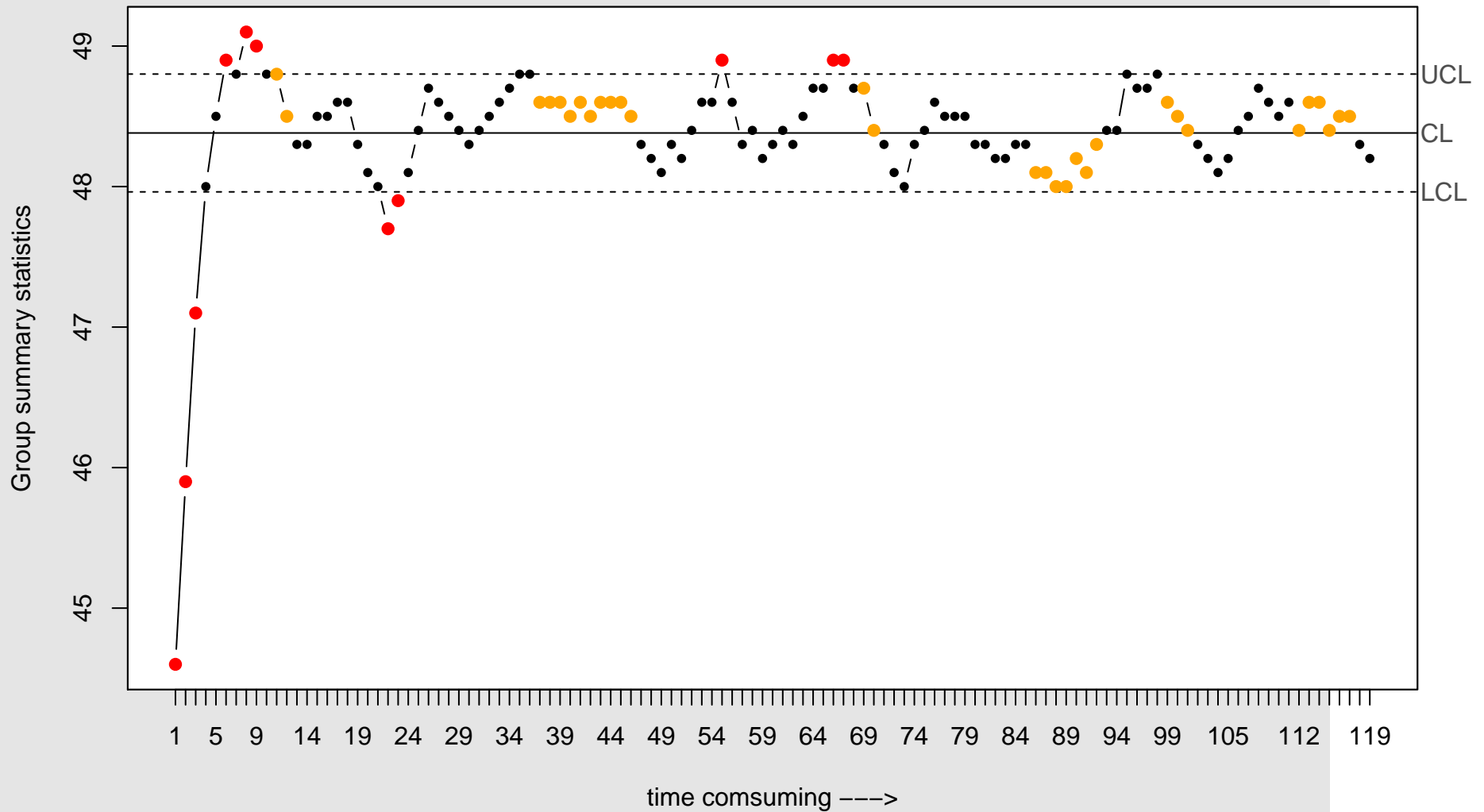
Number of groups = 119
Center = 48.38151   LCL = 47.96229   Number beyond limits = 11
StdDev = 0.1397404   UCL = 48.80073   Number violating runs = 30

68th column point of this product

Group summary statistics

time comsuming ––––>
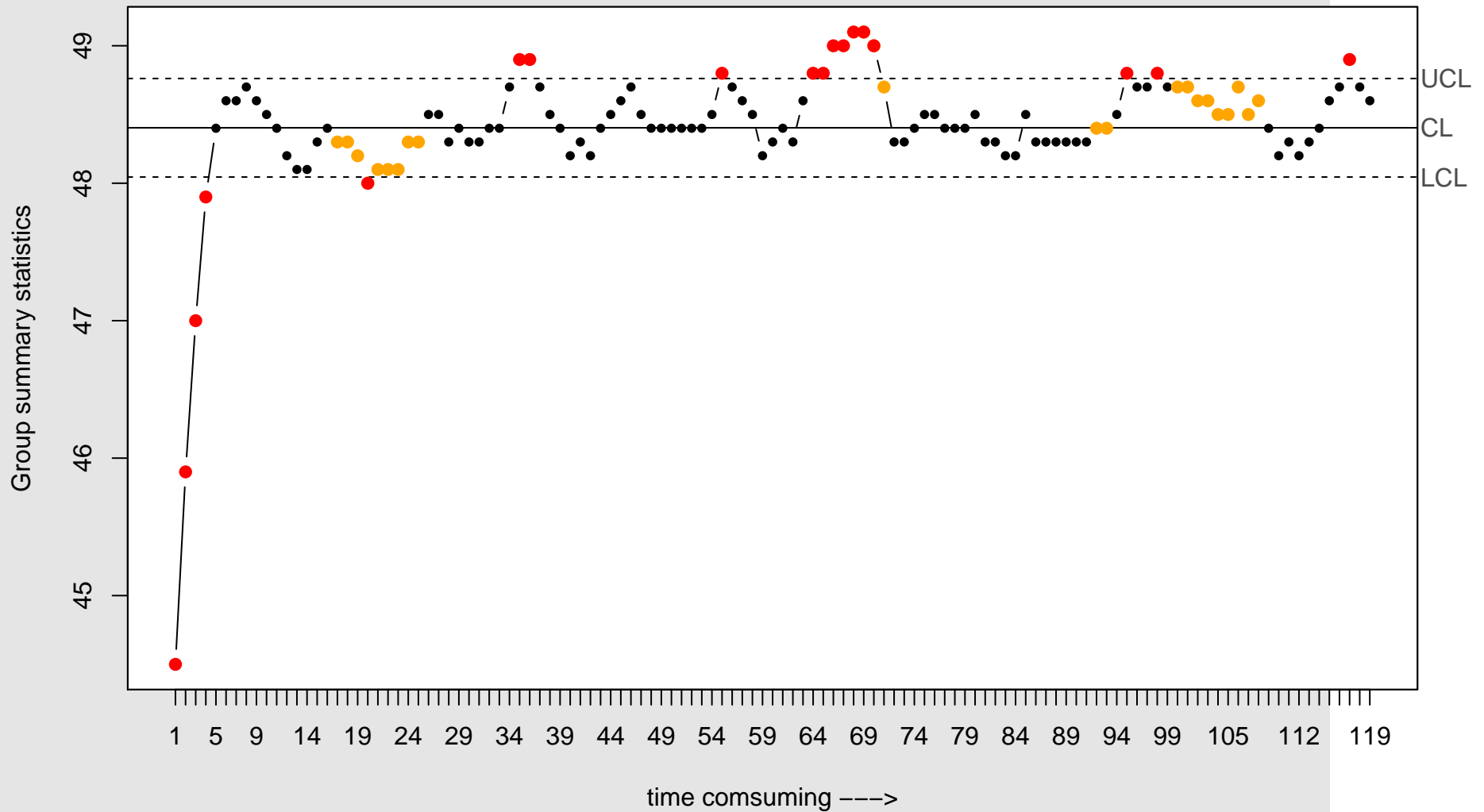
Number of groups = 119
Center = 48.40336   LCL = 48.04499   Number beyond limits = 18
StdDev = 0.1194555   UCL = 48.76173   Number violating runs = 23

69th column point of this product
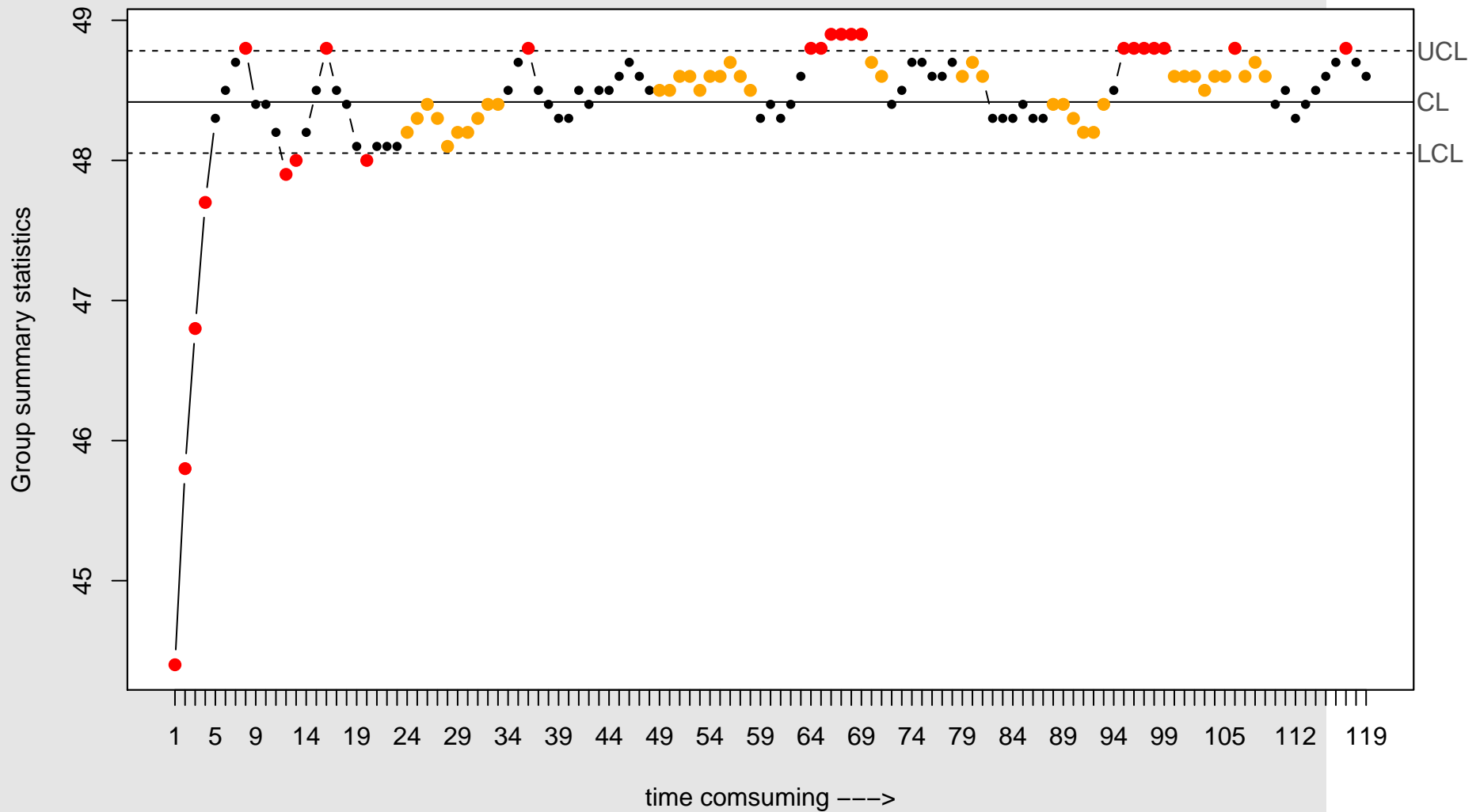
Number of groups = 119
Center = 48.41681   LCL = 48.05168   Number beyond limits = 23
StdDev = 0.1217093   UCL = 48.78193   Number violating runs = 42

70th column point of this product

Group summary statistics

time comsuming ----->
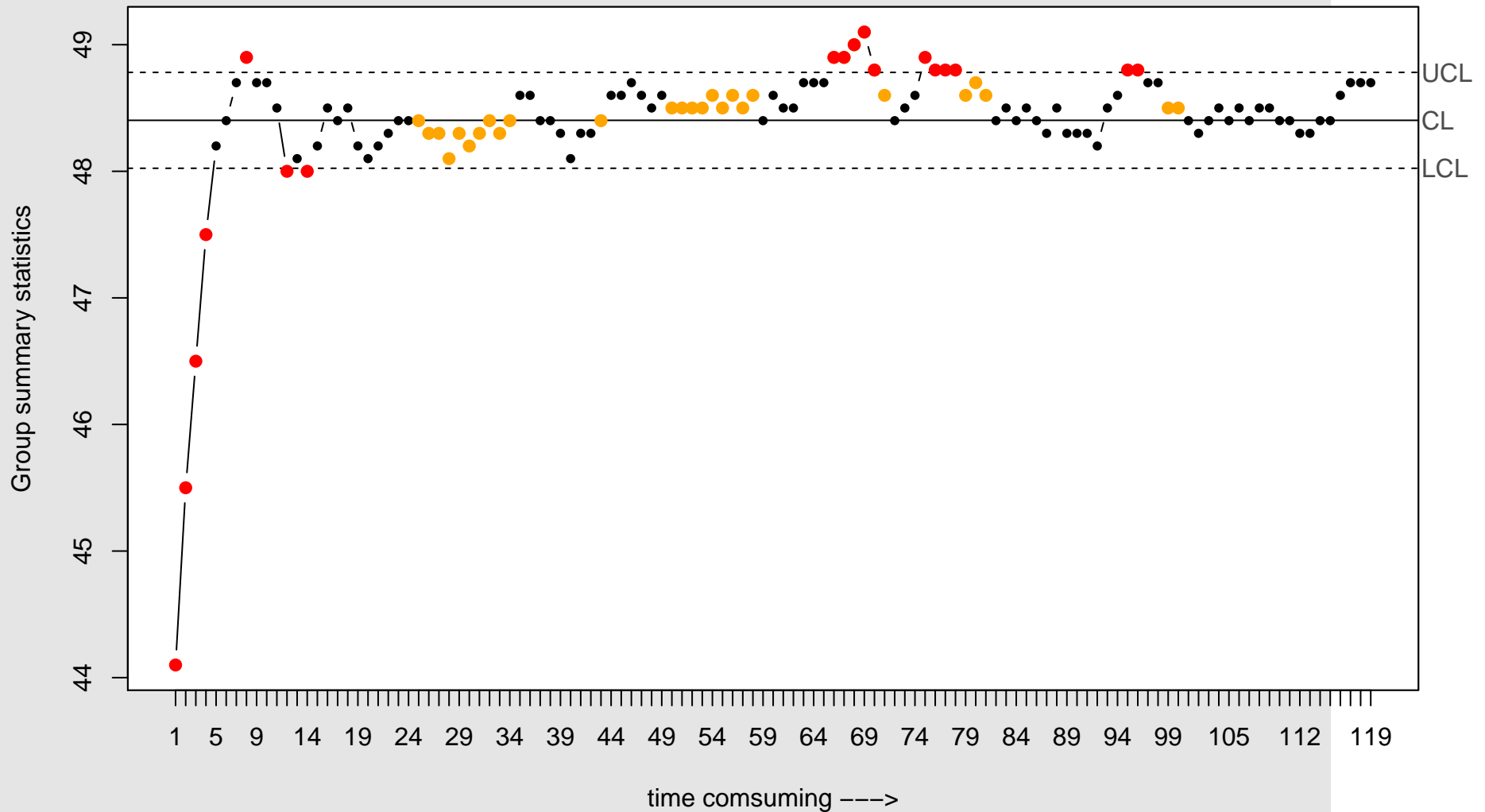
Number of groups = 119
Center = 48.40252
StdDev = 0.1262171
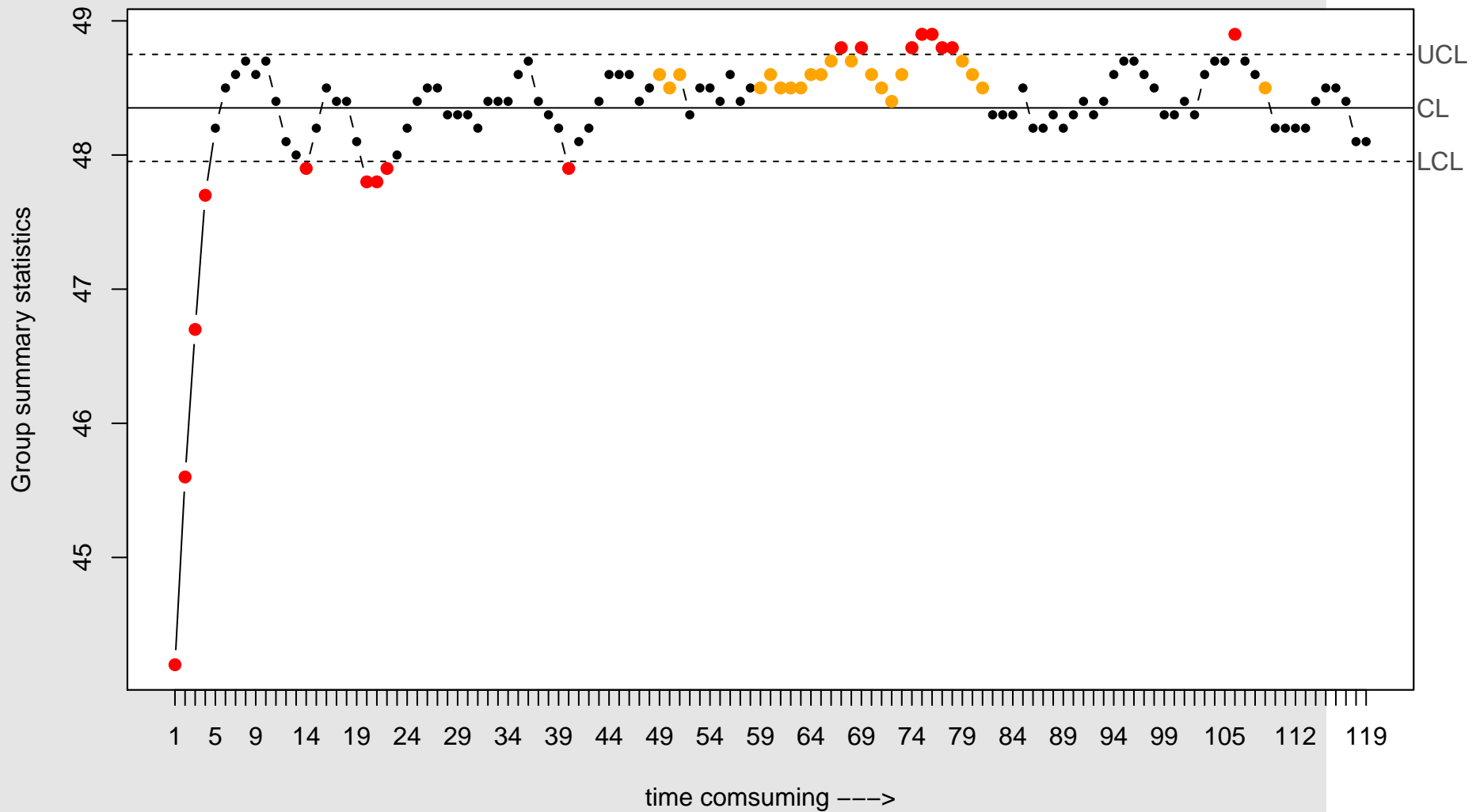
LCL = 48.02387
UCL = 48.78117

Number beyond limits = 18
Number violating runs = 31

71th column point of this product

Group summary statistics

UCL

CL

LCL

time comsuming ---->

Number of groups = 119
Center = 48.35126   LCL = 47.95232   Number beyond limits = 17
StdDev = 0.1329787   UCL = 48.7502   Number violating runs = 27

72th column point of this product

Group summary statistics

time comsuming ––––>
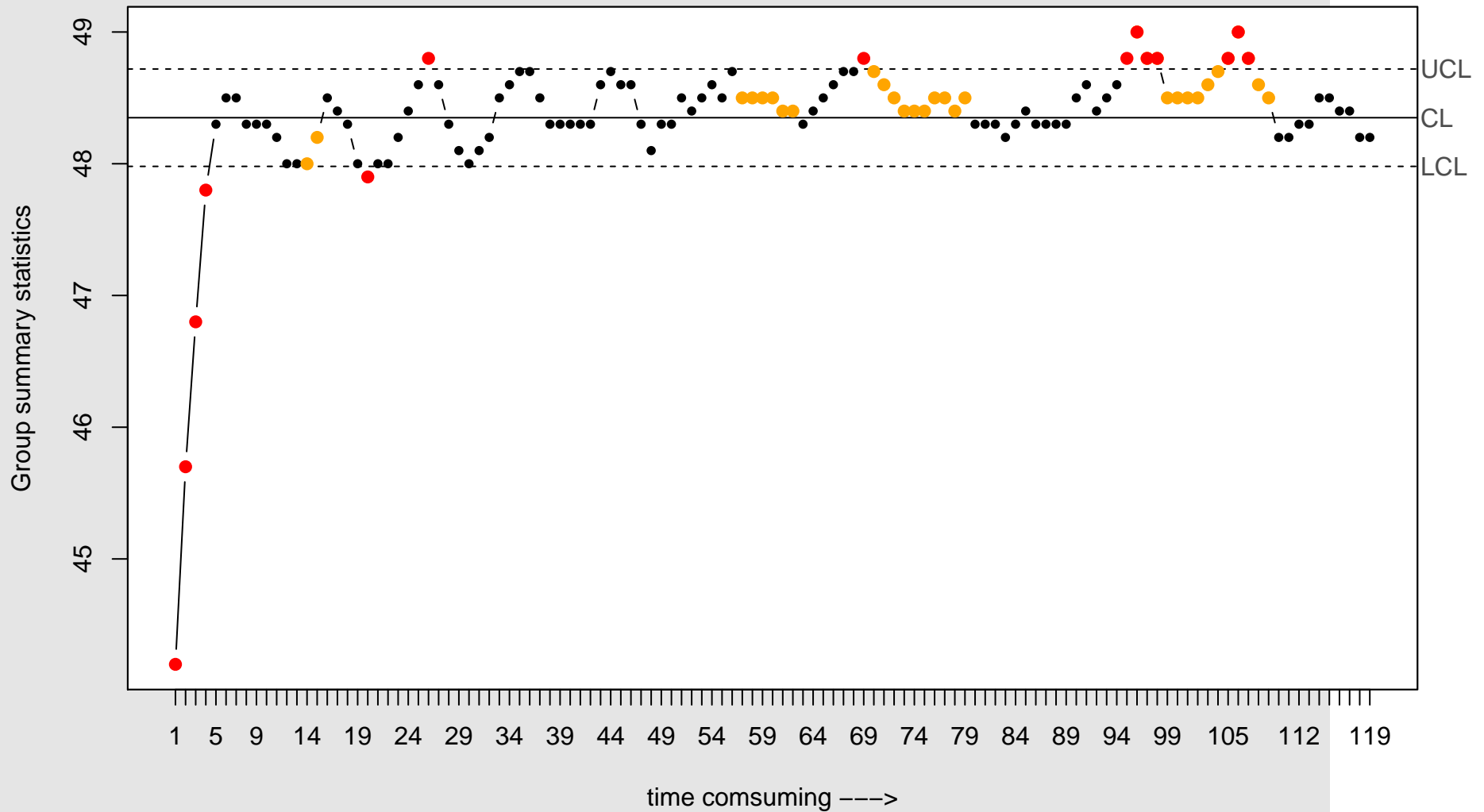
Number of groups = 119
Center = 48.34958   LCL = 47.97994   Number beyond limits = 14
StdDev = 0.1232119   UCL = 48.71922   Number violating runs = 32

73th column point of this product

Group summary statistics

time comsuming ---->
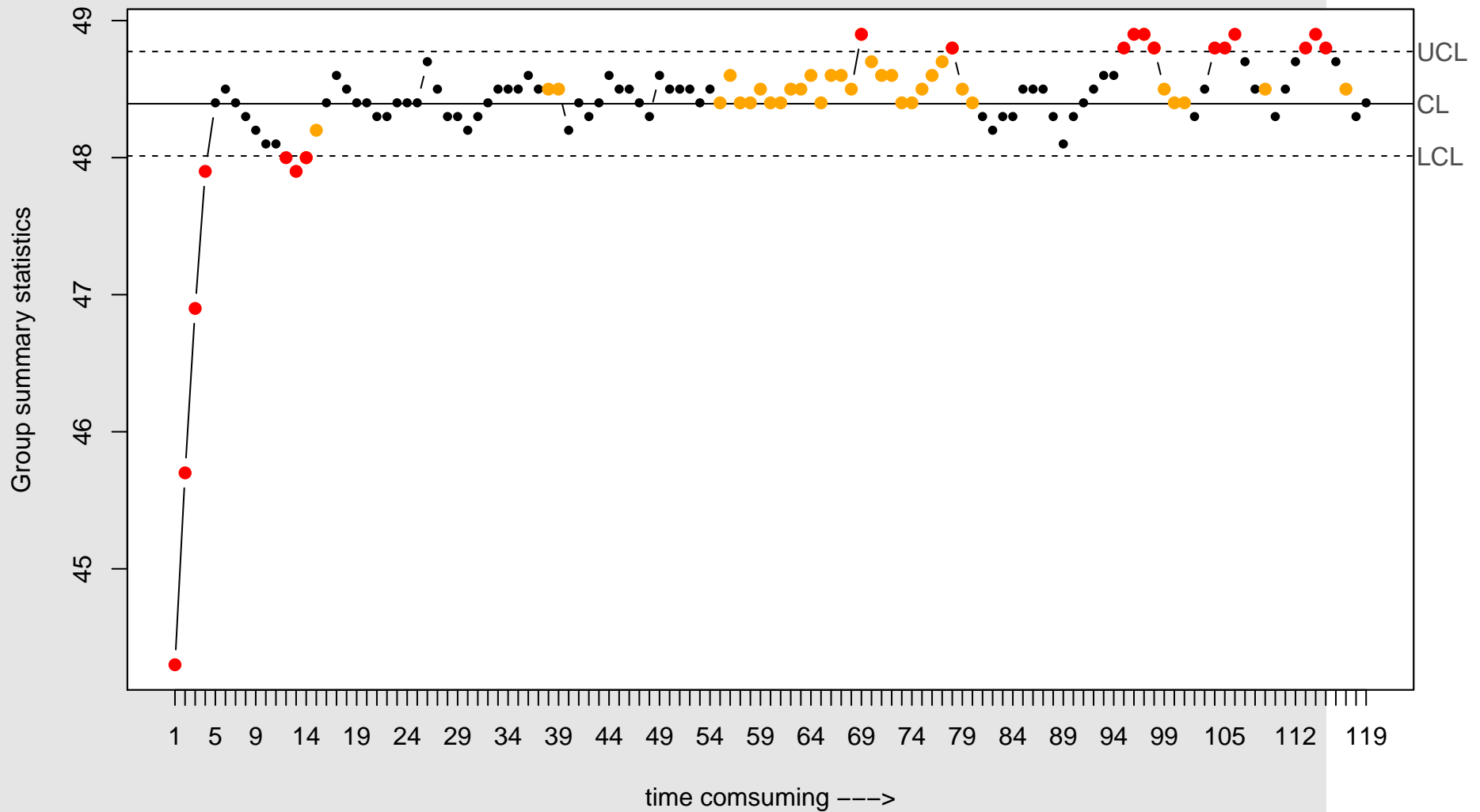
Number of groups = 119
Center = 48.39328   LCL = 48.01237   Number beyond limits = 19
StdDev = 0.1269684   UCL = 48.77418   Number violating runs = 37

74th column point of this product

UCL
CL
LCL

Group summary statistics

49
48
47
46
45

1   5   9   14 19 24 29 34 39 44 49 54 59 64 69 74 79 84 89 94 99 105 112 119

time comsuming ––––>
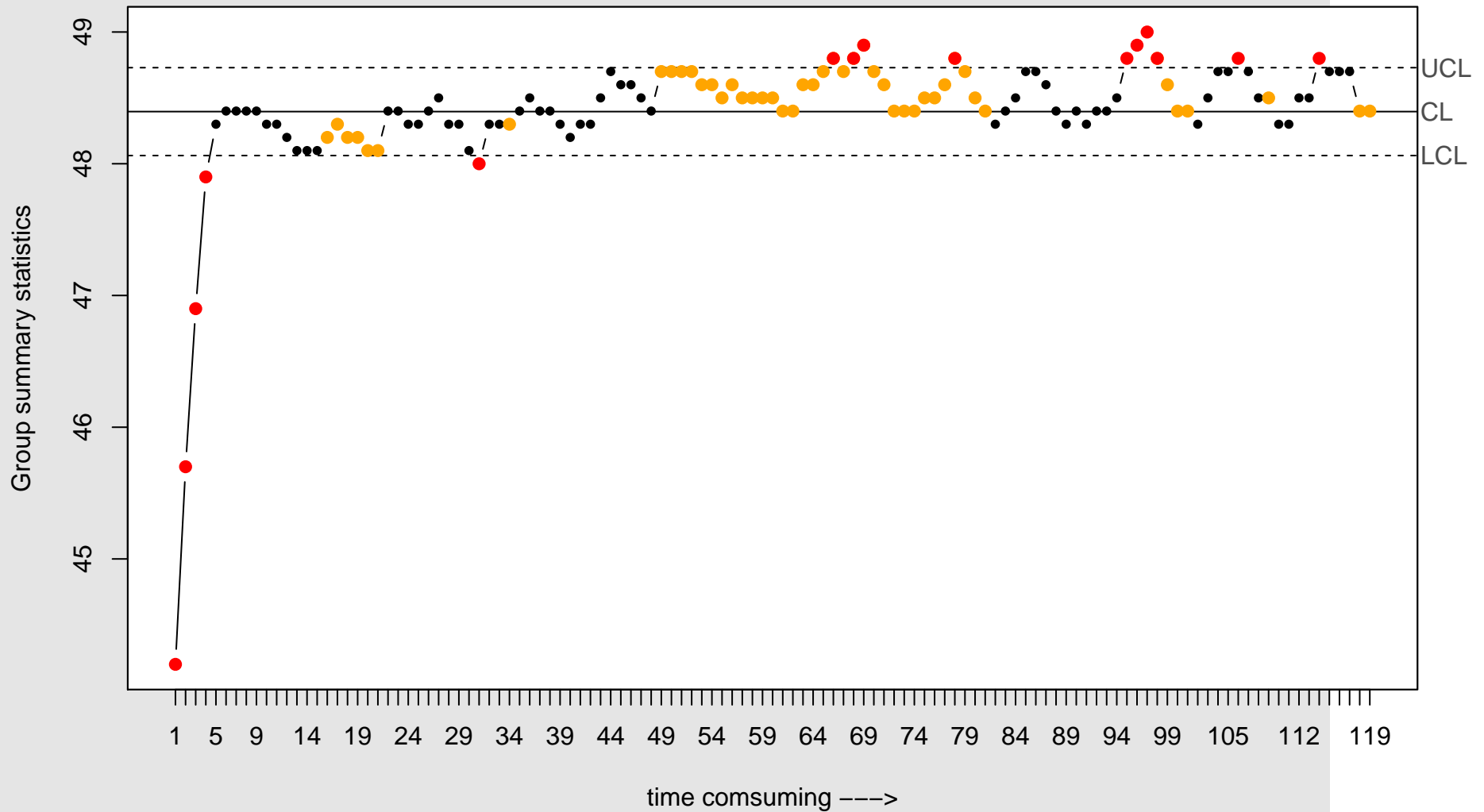
Number of groups = 119
Center = 48.3958   LCL = 48.06222   Number beyond limits = 15
StdDev = 0.1111912   UCL = 48.72937   Number violating runs = 47

75th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL
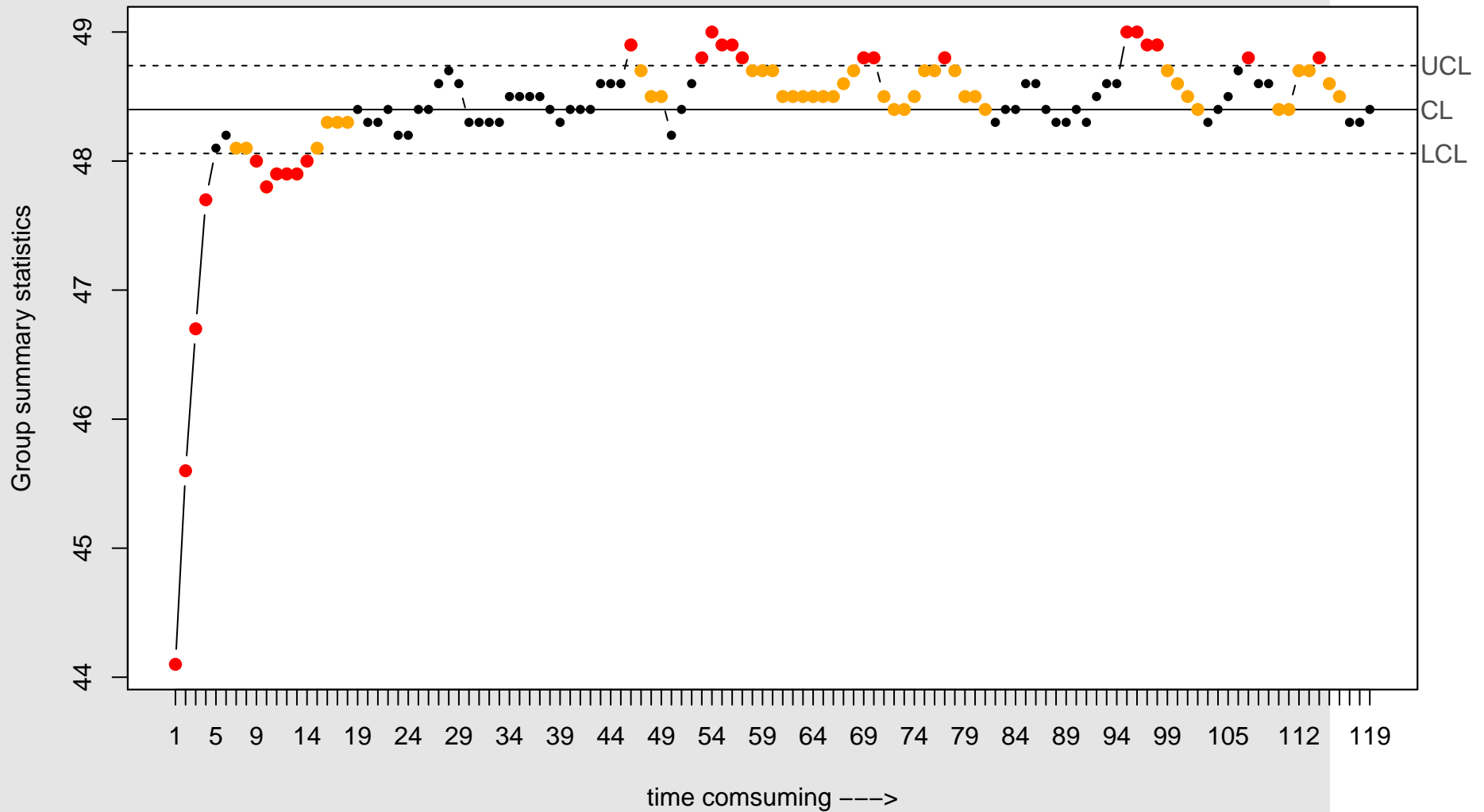
Number of groups = 119
Center = 48.39916   LCL = 48.05882   Number beyond limits = 25
StdDev = 0.1134451   UCL = 48.7395   Number violating runs = 53

76th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ---->
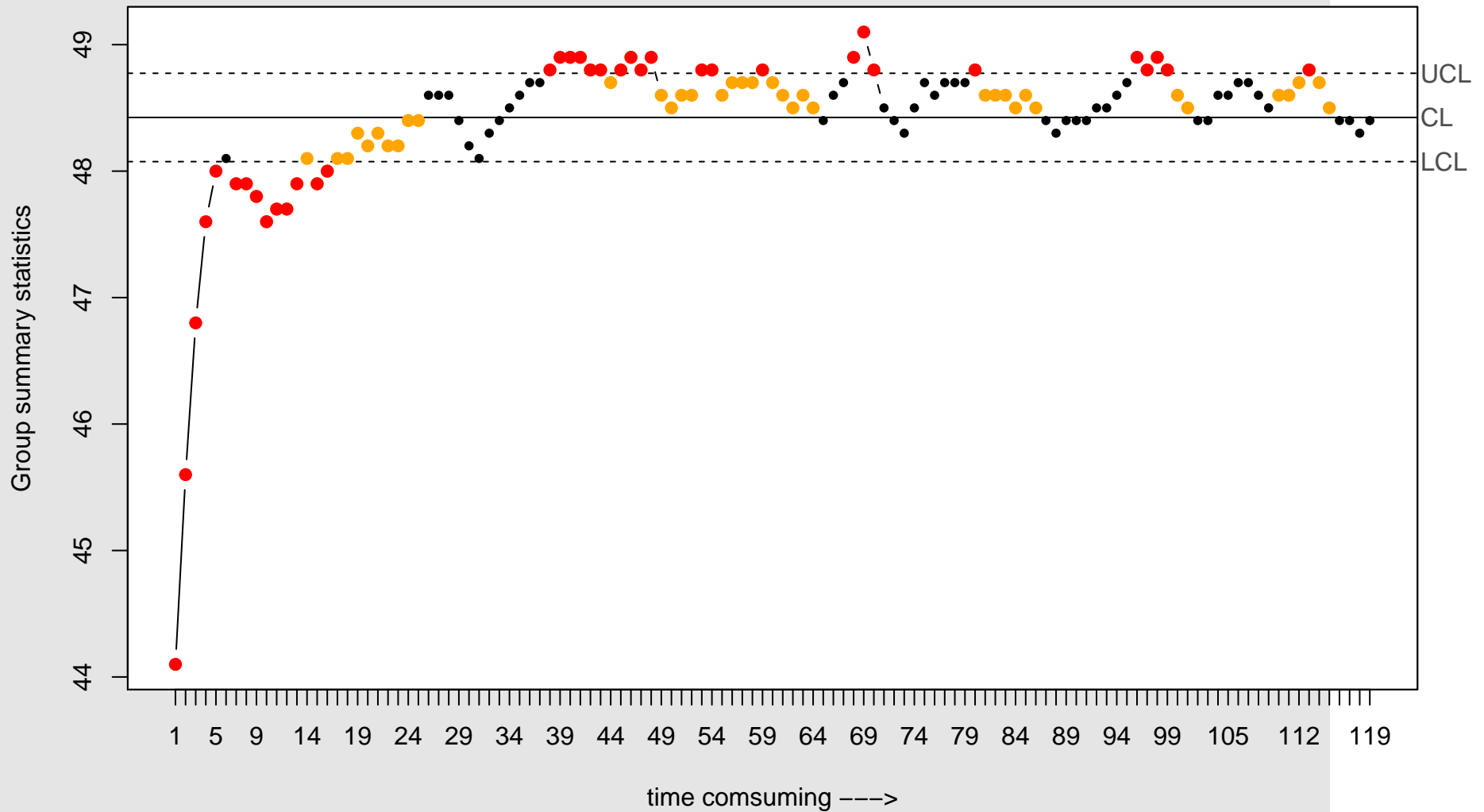
Number of groups = 119
Center = 48.42437
StdDev = 0.1164503
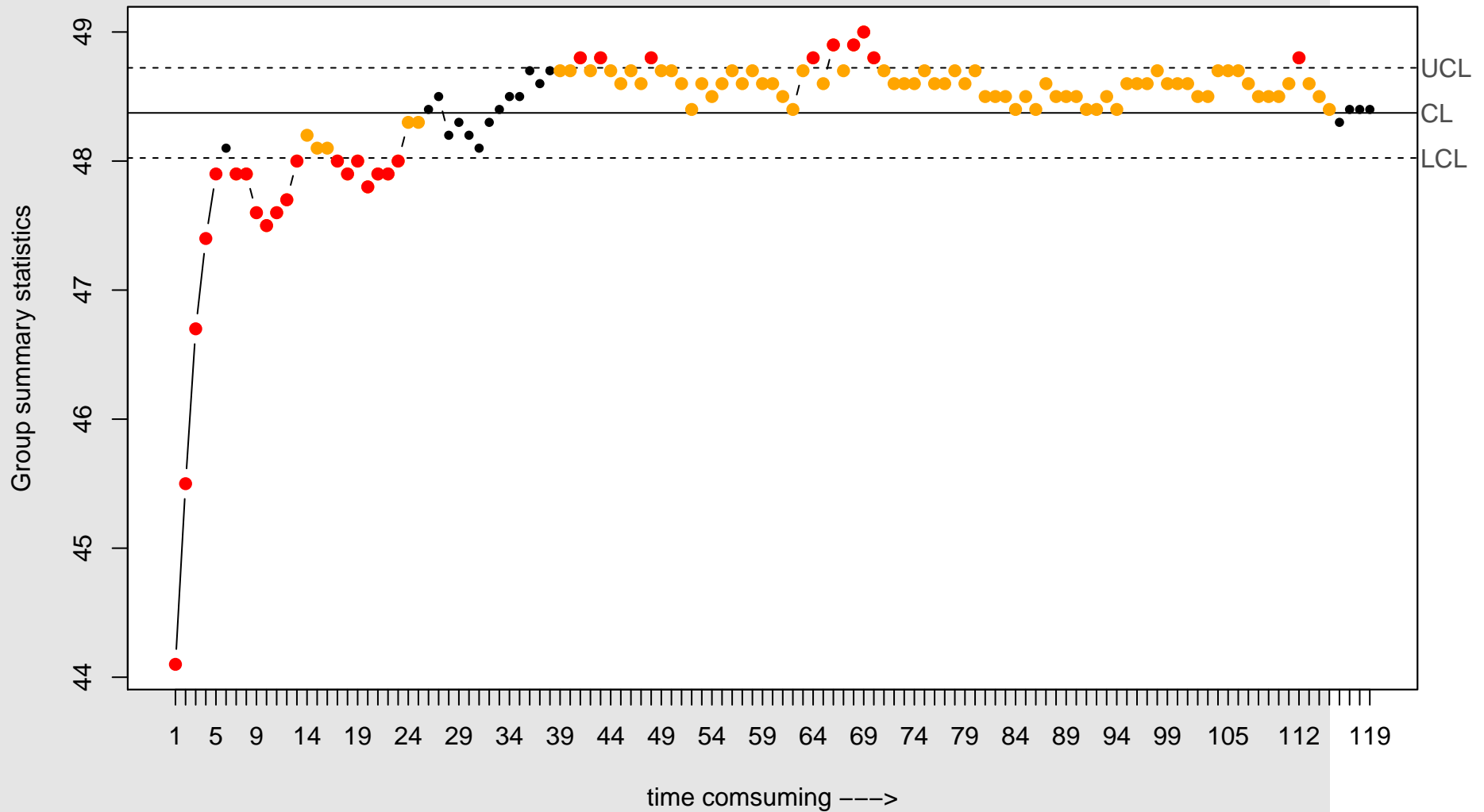
LCL = 48.07502
UCL = 48.77372

Number beyond limits = 36
Number violating runs = 61

77th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL

Number of groups = 119
Center = 48.37311   LCL = 48.02376   Number beyond limits = 28
StdDev = 0.1164503   UCL = 48.72246   Number violating runs = 96

78th column point of this product
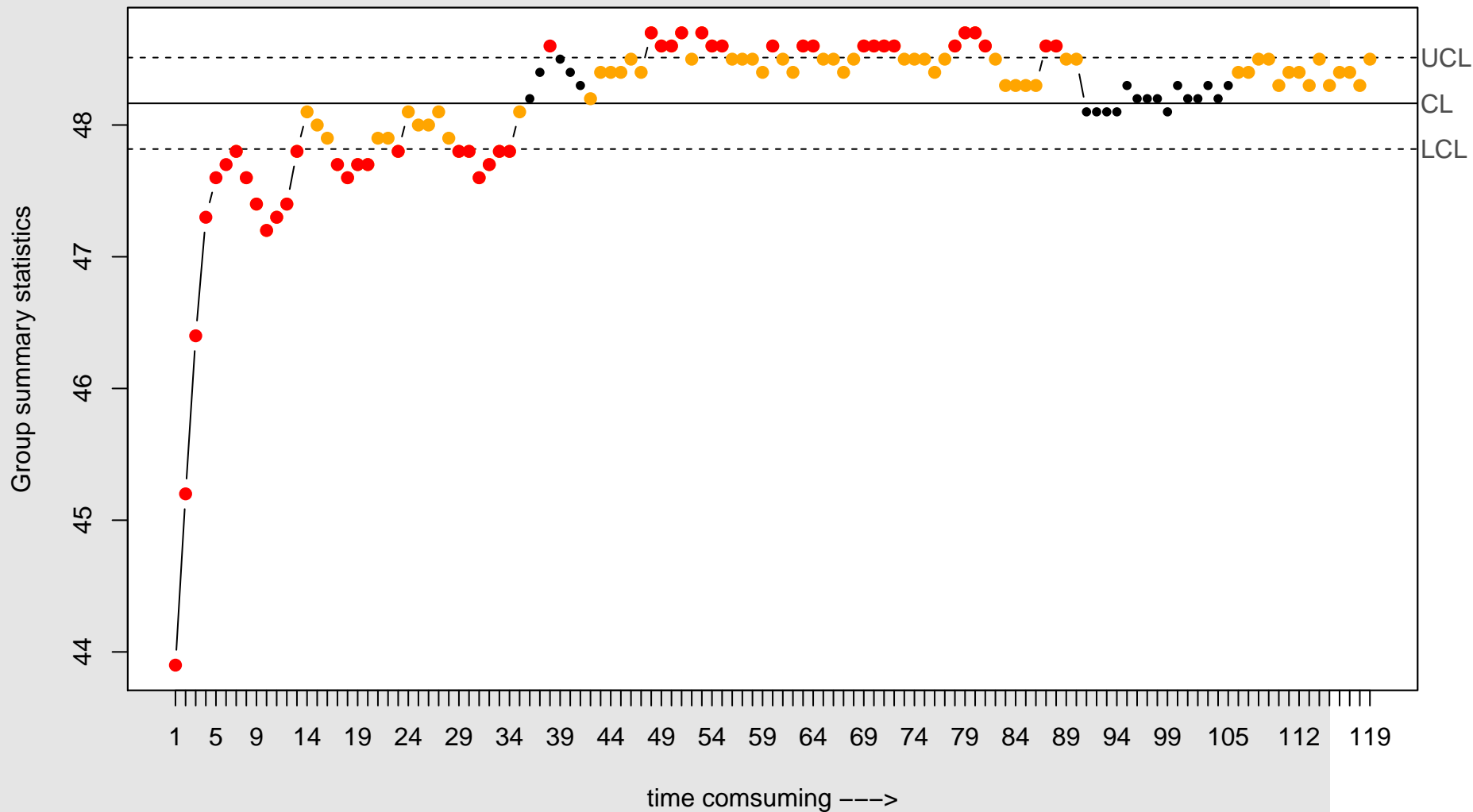
Group summary statistics

UCL
CL
LCL

time comsuming ---->

Number of groups = 119
Center = 48.16471   LCL = 47.81761   Number beyond limits = 45
StdDev = 0.115699   UCL = 48.5118   Number violating runs = 92

79th column point of this product

Group summary statistics

time comsuming ––––>

UCL
CL
LCL
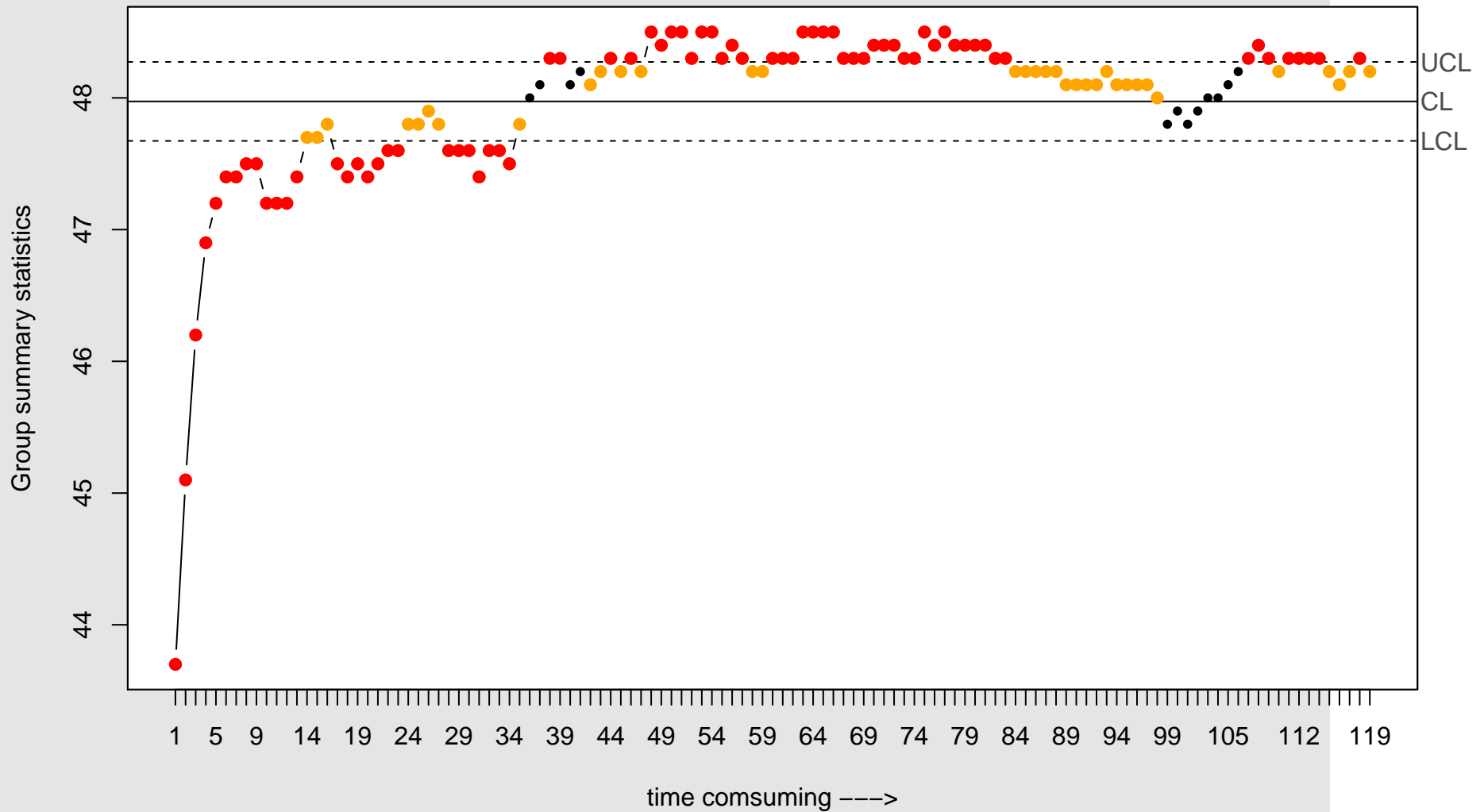
Number of groups = 119
Center = 47.97311   LCL = 47.67334   Number beyond limits = 73
StdDev = 0.09992187   UCL = 48.27287   Number violating runs = 97

80th column point of this product

Group summary statistics

time comsuming ---->
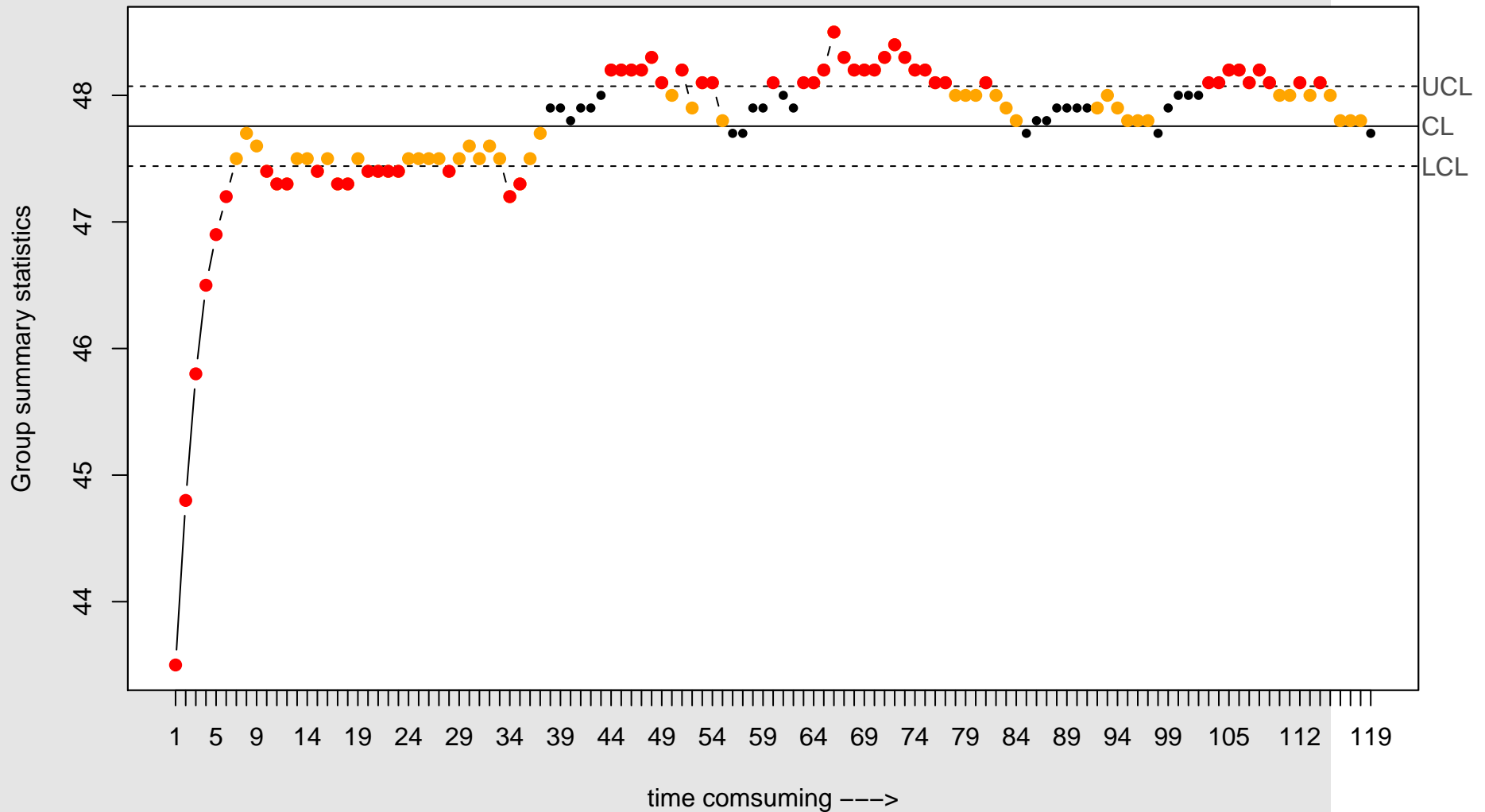
Number of groups = 119
Center = 47.7563   LCL = 47.44076   Number beyond limits = 54
StdDev = 0.1051809   UCL = 48.07185   Number violating runs = 84

81th column point of this product

Group summary statistics

time comsuming ---->
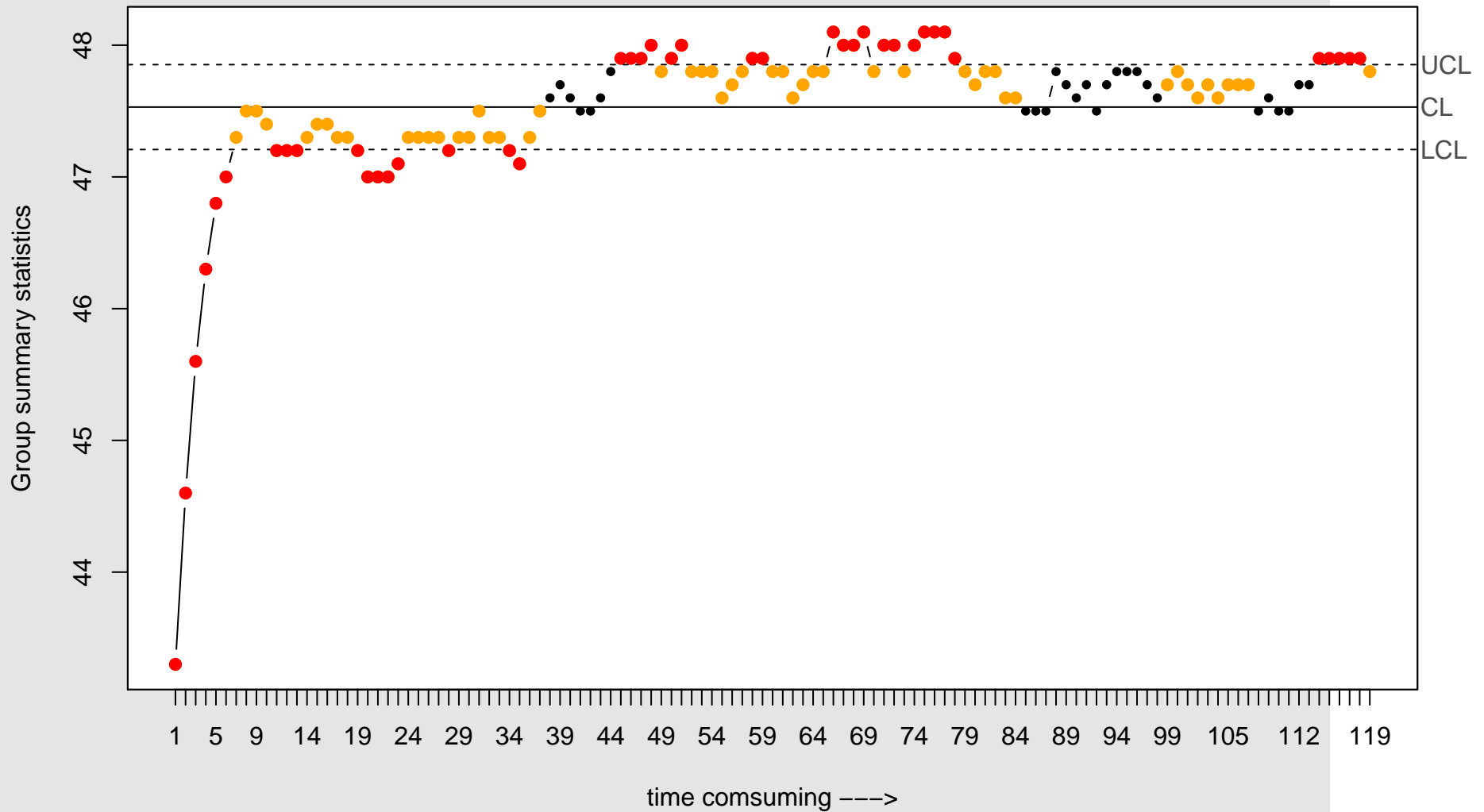
Number of groups = 119
Center = 47.53025
StdDev = 0.1074348

LCL = 47.20795
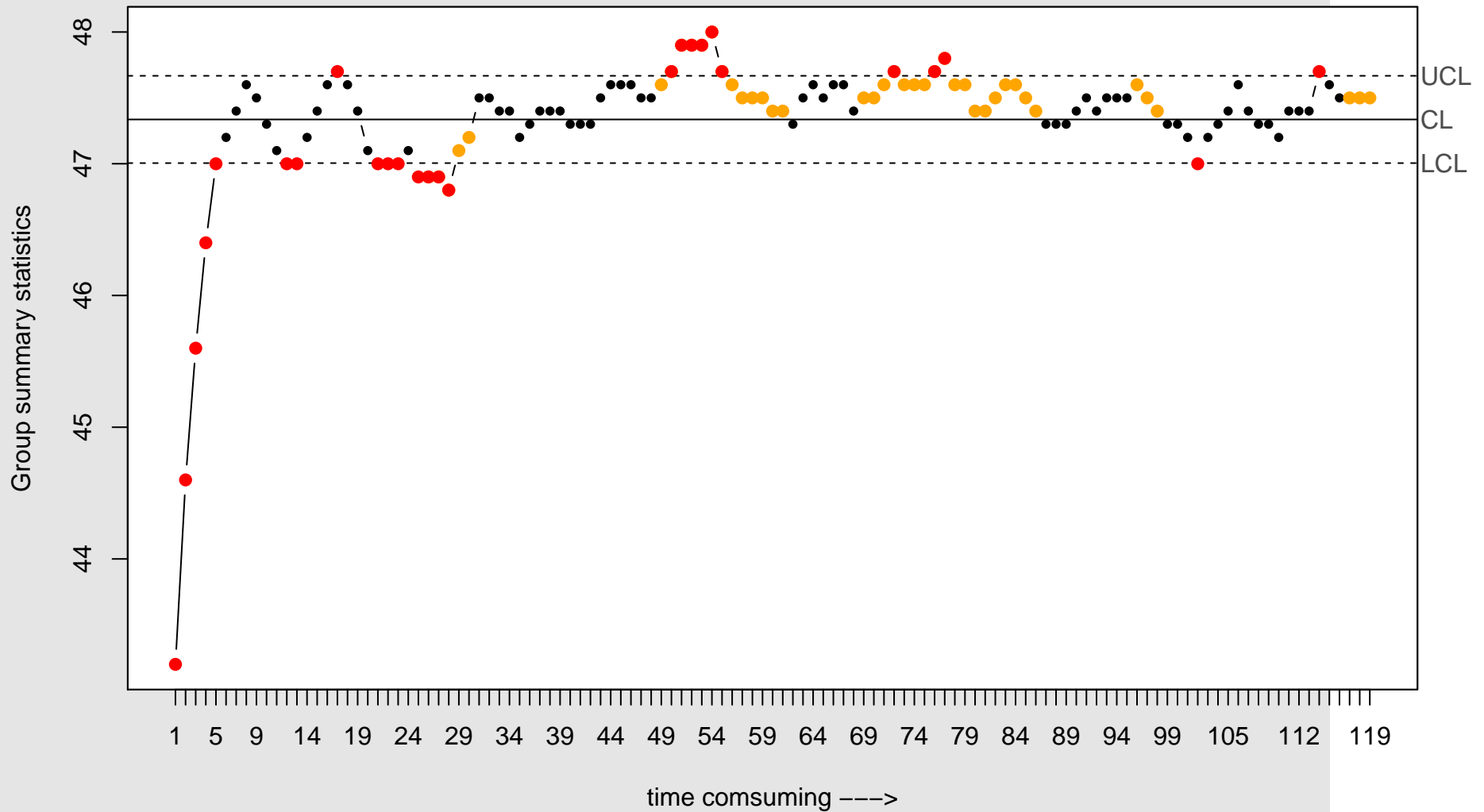UCL = 47.85256

Number beyond limits = 41
Number violating runs = 78

82th column point of this product
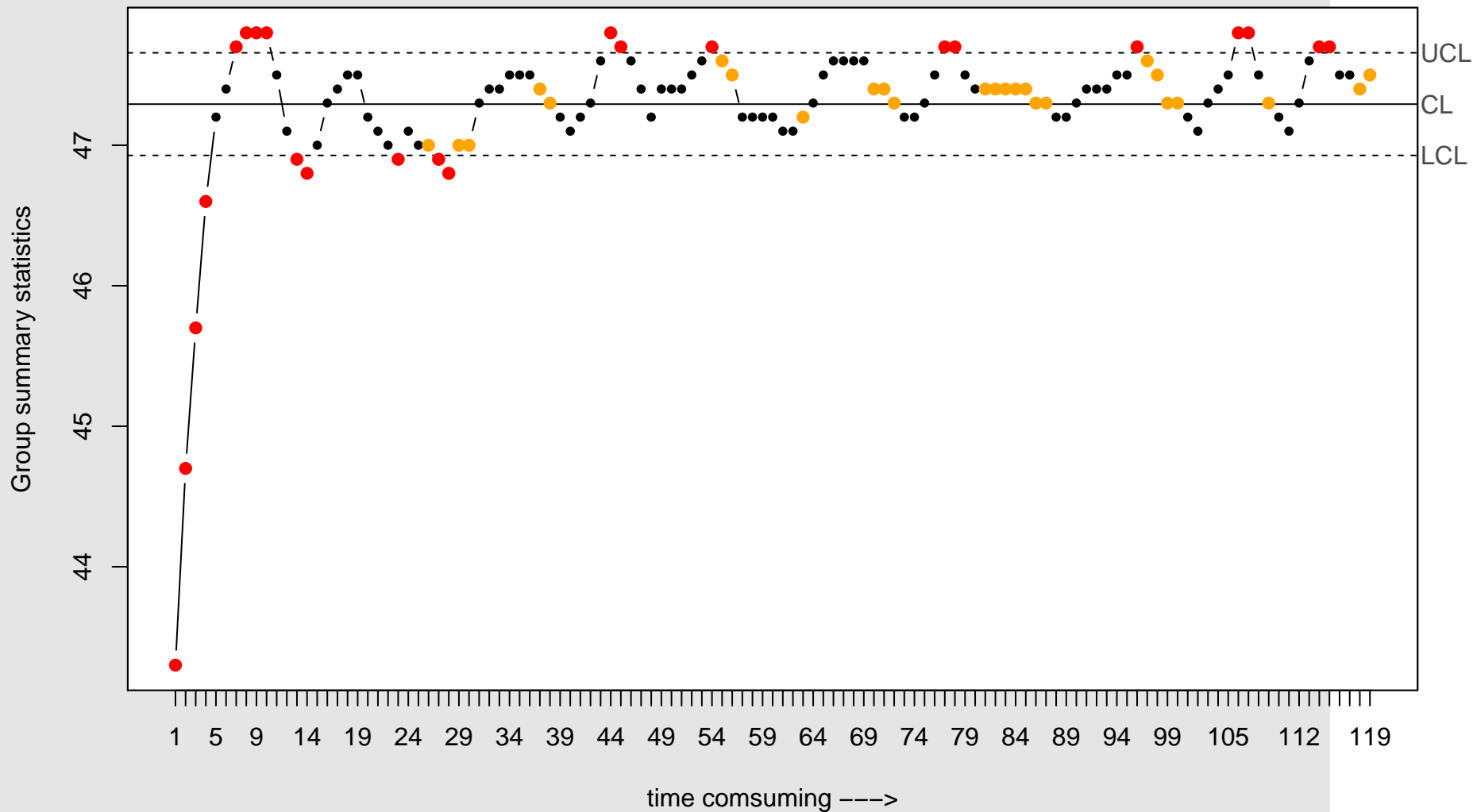

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 47.33613   LCL = 47.00481   Number beyond limits = 26
StdDev = 0.11044   UCL = 47.66745   Number violating runs = 42

83th column point of this product

Group summary statistics

UCL
CL
LCL

47

46

45

44

1   5   9   14   19   24   29   34   39   44   49   54   59   64   69   74   79   84   89   94   99   105   112   119

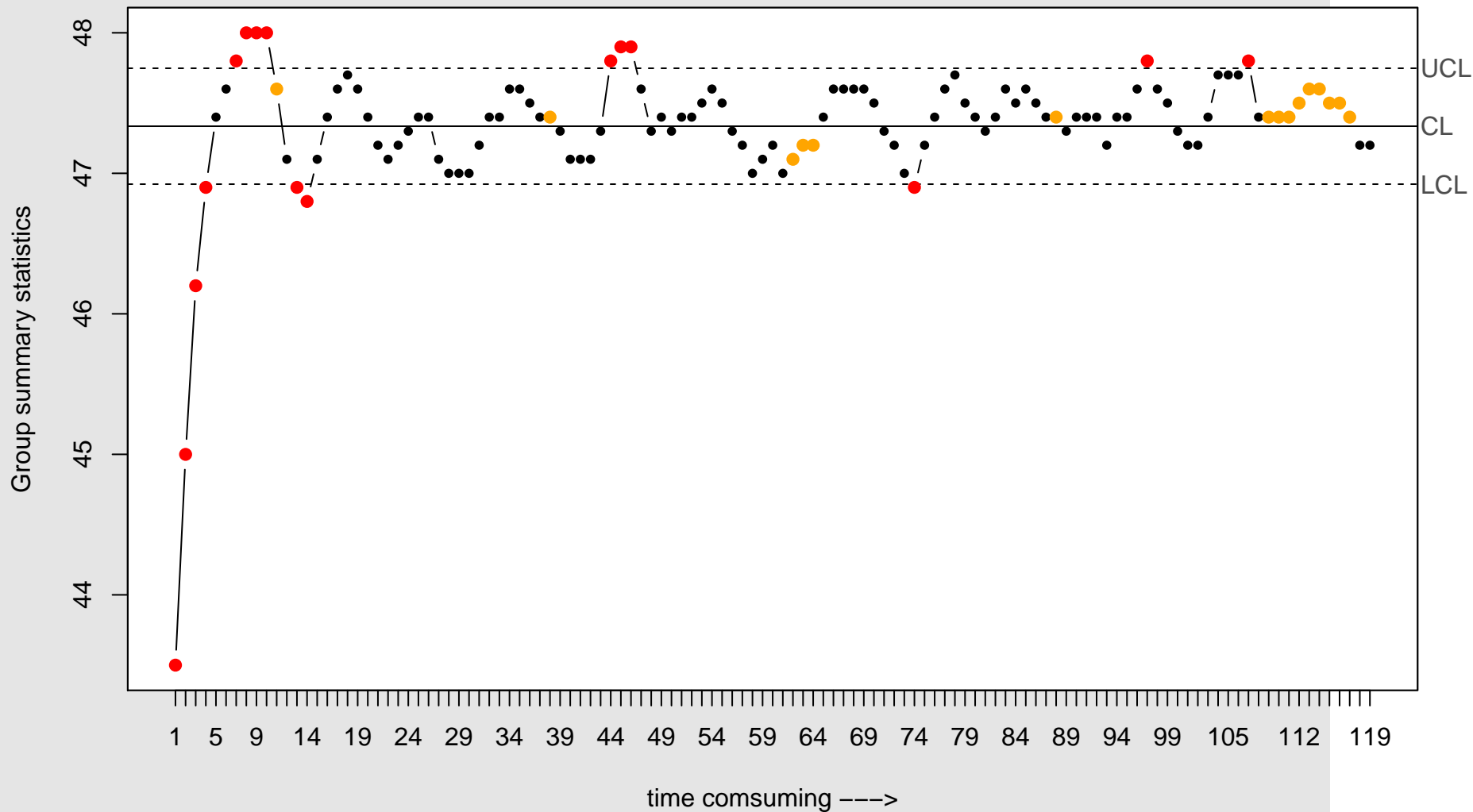time comsuming ---->

Number of groups = 119
Center = 47.29244
StdDev = 0.1217093

LCL = 46.92731
UCL = 47.65756

Number beyond limits = 23
Number violating runs = 28

84th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL

Number of groups = 119
Center = 47.33529   LCL = 46.92283   Number beyond limits = 16
StdDev = 0.1374865   UCL = 47.74775   Number violating runs = 15

85th column point of this product
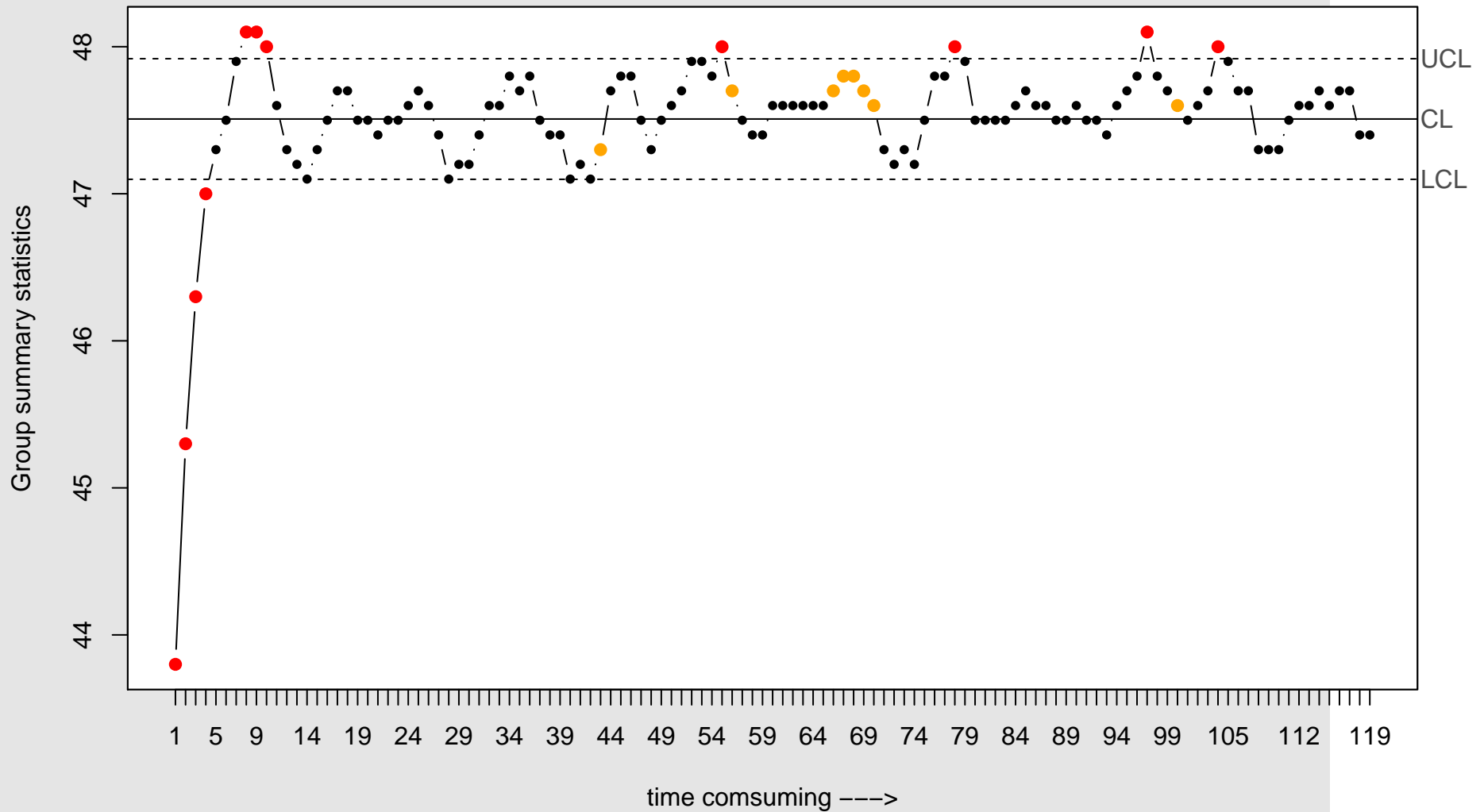
Number of groups = 119
Center = 47.5084   LCL = 47.0982   Number beyond limits = 11
StdDev = 0.1367352   UCL = 47.91861   Number violating runs = 8

86th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ---->
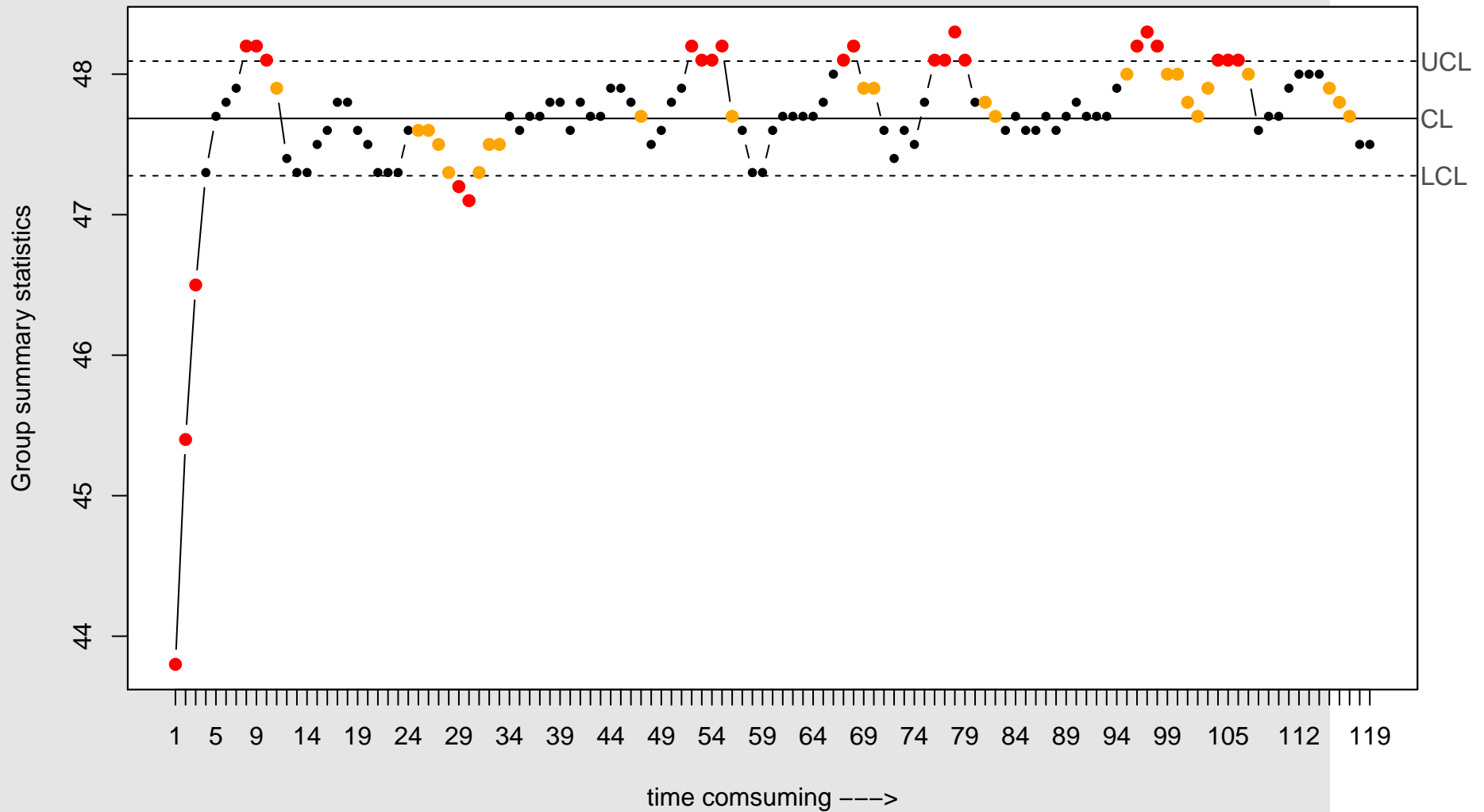
Number of groups = 119
Center = 47.68487   LCL = 47.27692   Number beyond limits = 24
StdDev = 0.1359839   UCL = 48.09283   Number violating runs = 34

87th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ––––>
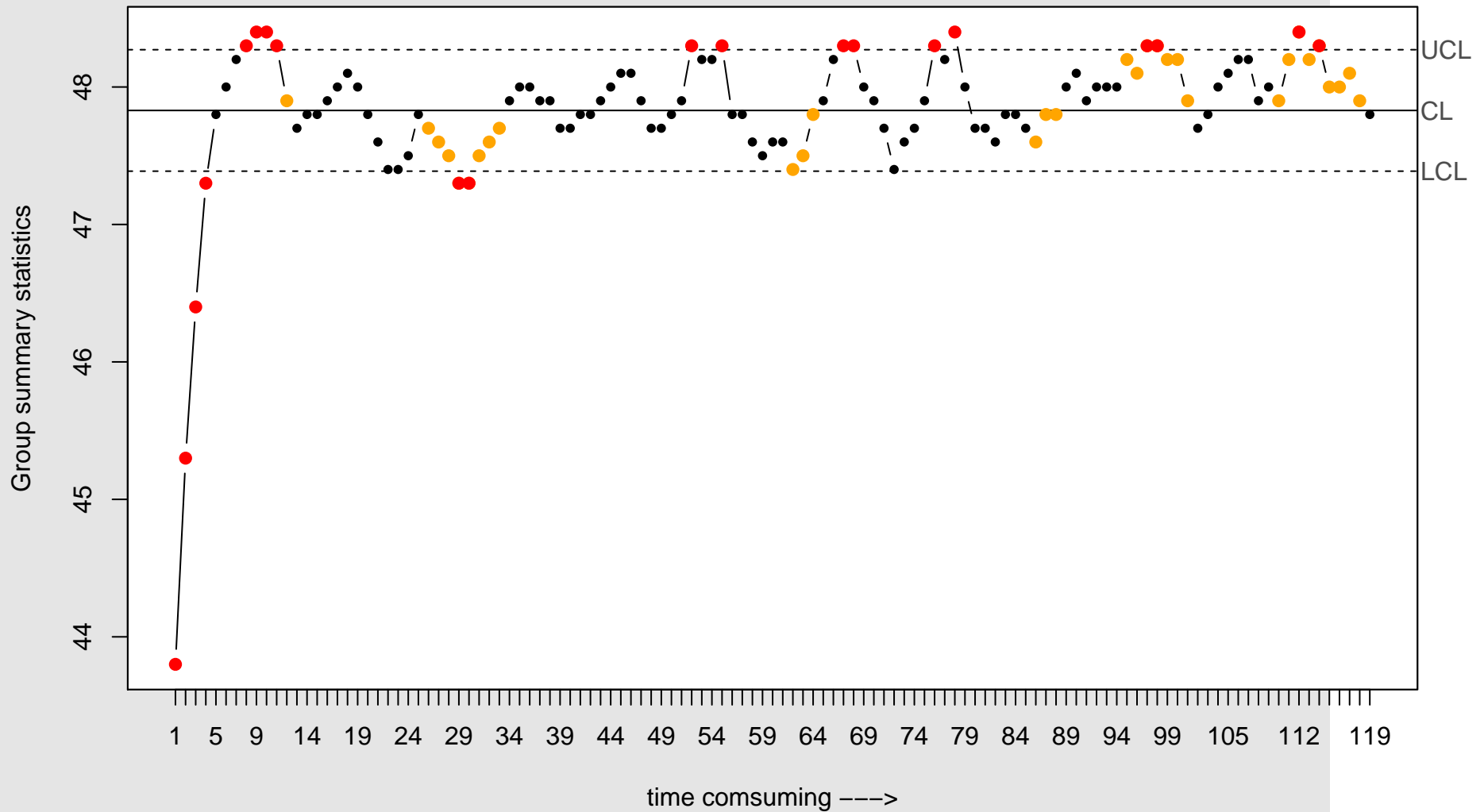
Number of groups = 119
Center = 47.82941   LCL = 47.38765   Number beyond limits = 20
StdDev = 0.1472533   UCL = 48.27117   Number violating runs = 31

88th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ---->
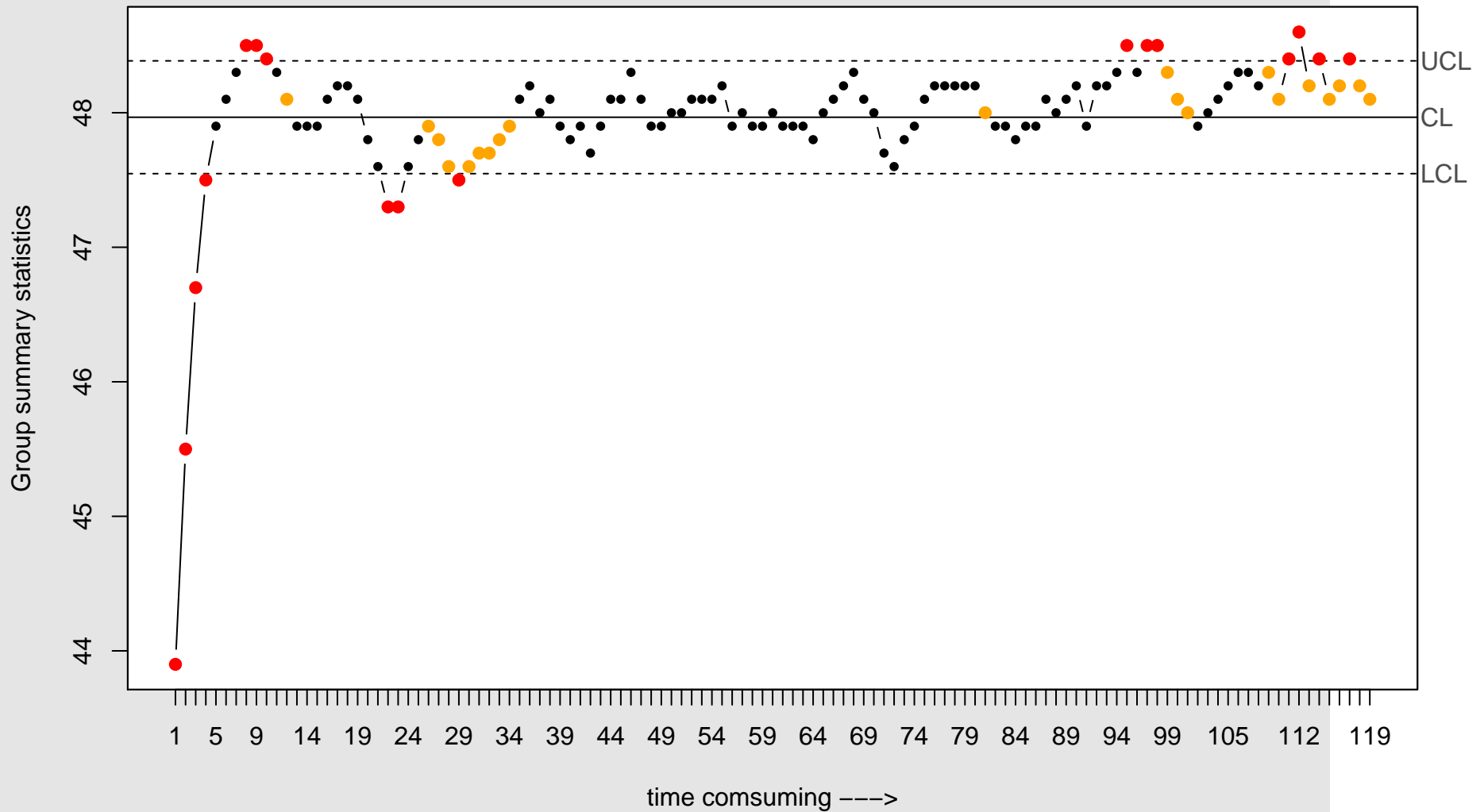
Number of groups = 119
Center = 47.96639
StdDev = 0.1397404

LCL = 47.54717
UCL = 48.38561

Number beyond limits = 17
Number violating runs = 26

89th column point of this product

Group summary statistics

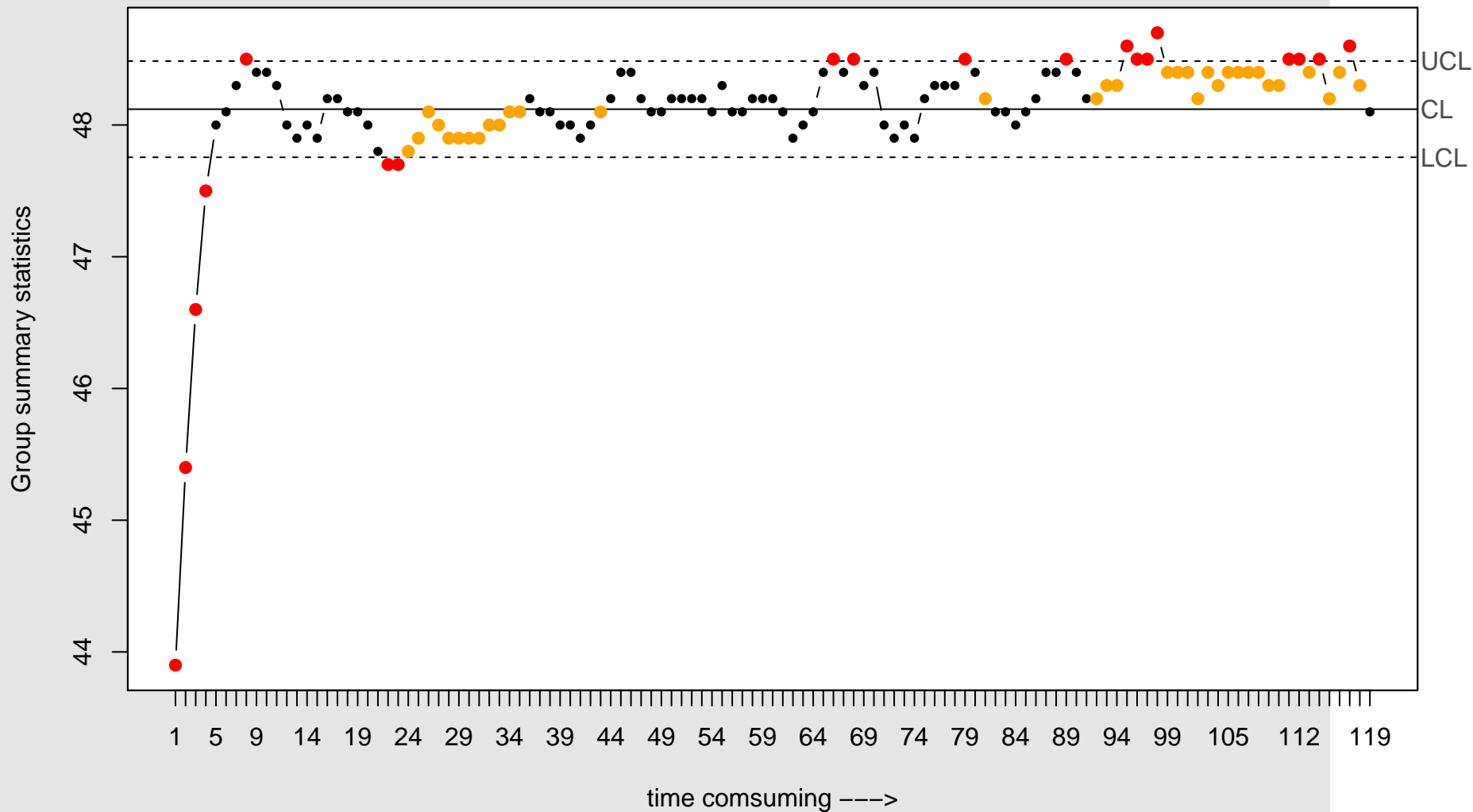time comsuming ----->

Number of groups = 119
Center = 48.12017
StdDev = 0.1217093

LCL = 47.75504
UCL = 48.4853

Number beyond limits = 19
Number violating runs = 41

90th column point of this product

Group summary statistics

time comsuming --->

UCL
CL
LCL
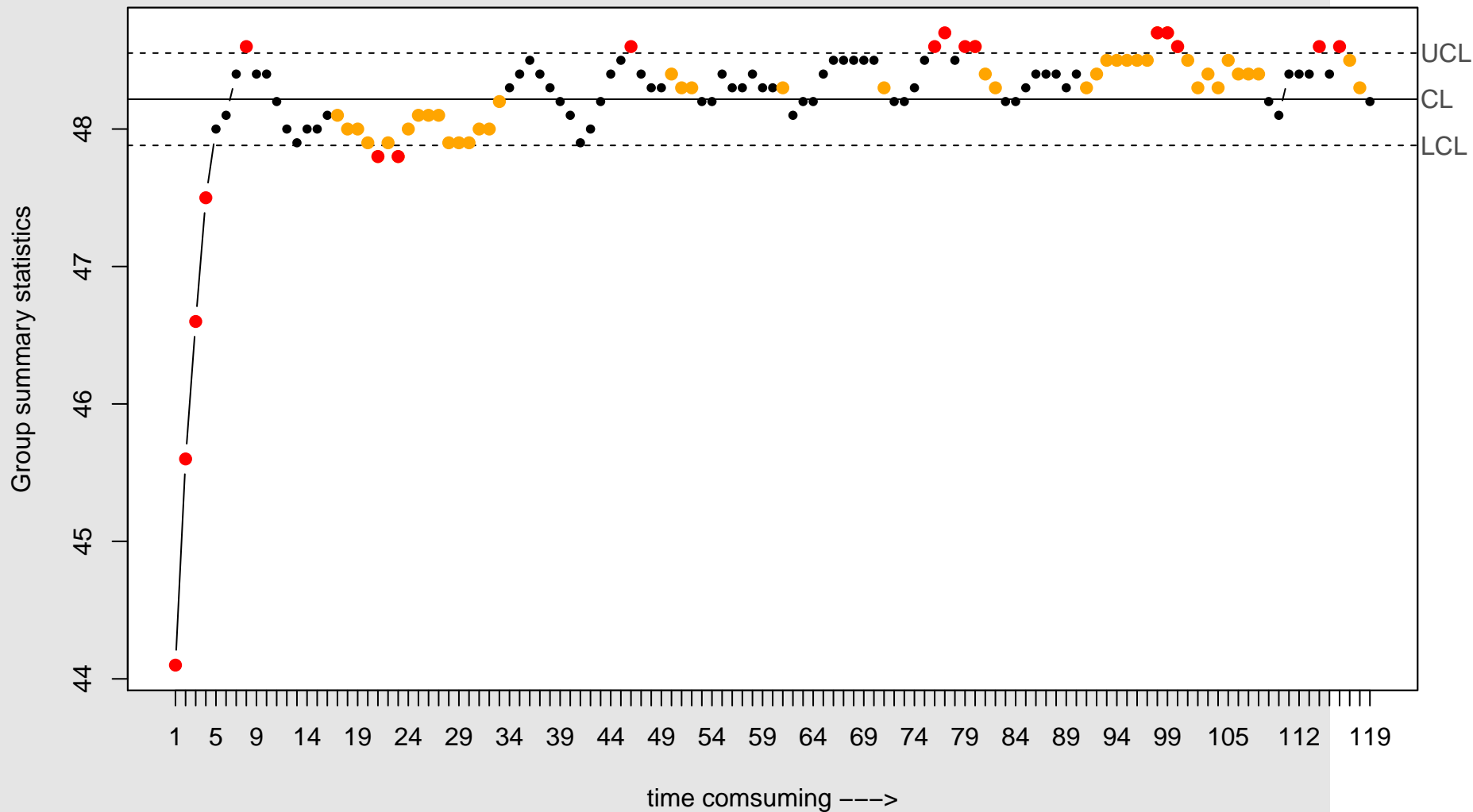
Number of groups = 119
Center = 48.21681   LCL = 47.88098   Number beyond limits = 17
StdDev = 0.1119425   UCL = 48.55263   Number violating runs = 45

91th column point of this product
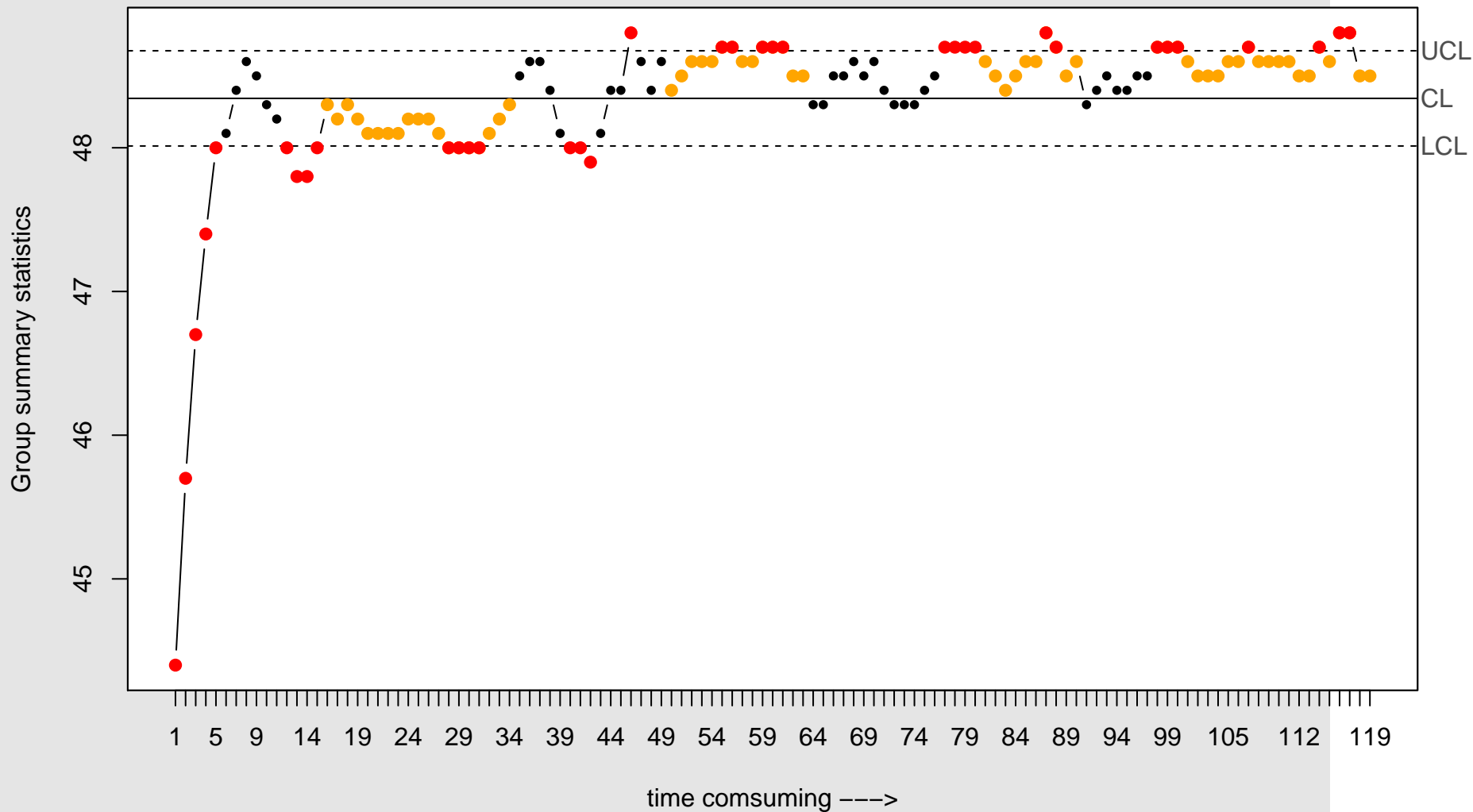
Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 48.3437
StdDev = 0.11044
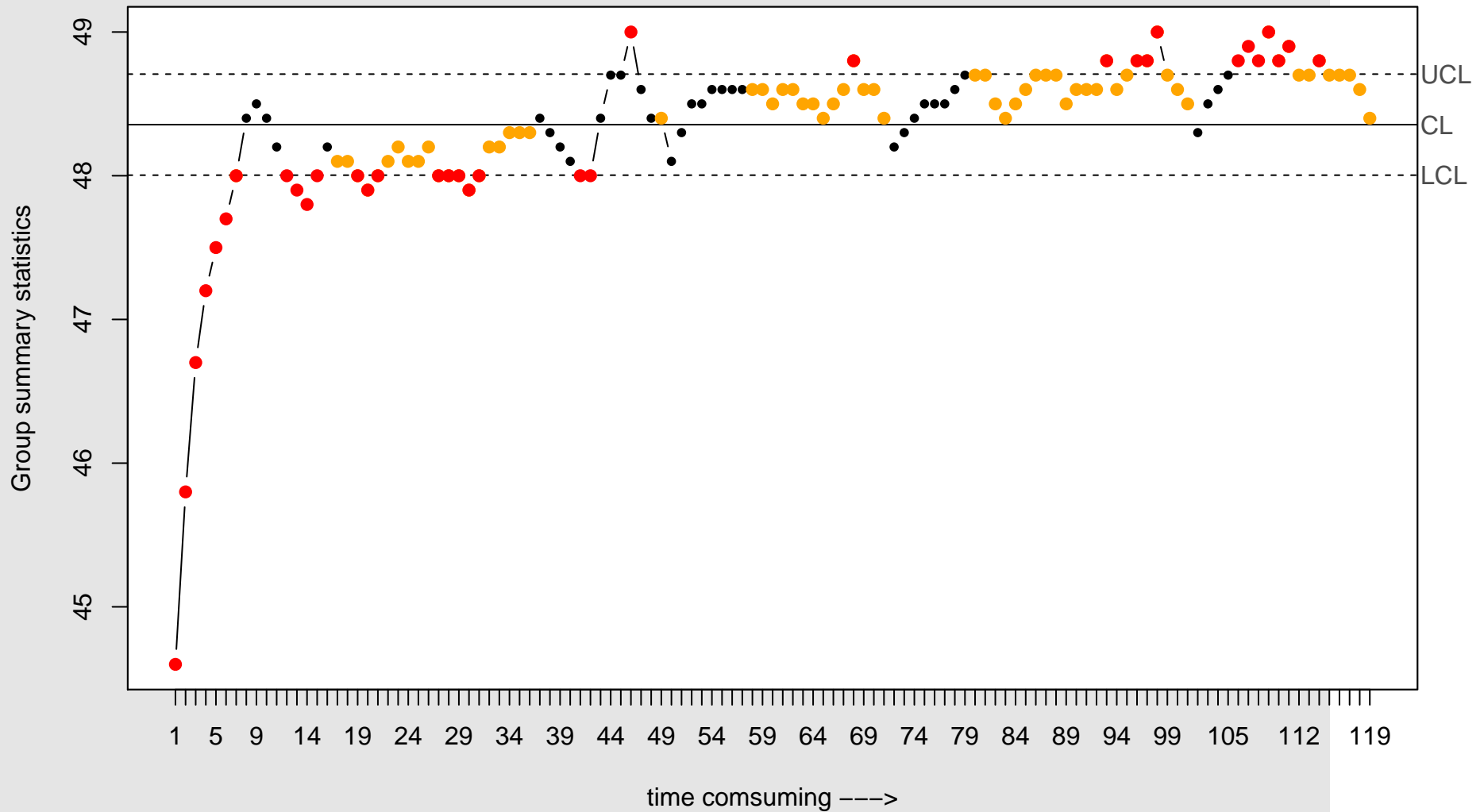
LCL = 48.01238
UCL = 48.67502

Number beyond limits = 35
Number violating runs = 65

92th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming –––>

Number of groups = 119
Center = 48.35546   LCL = 48.00386   Number beyond limits = 34
StdDev = 0.1172016   UCL = 48.70707   Number violating runs = 69

93th column point of this product

UCL

CL

LCL

Group summary statistics

time comsuming ---->
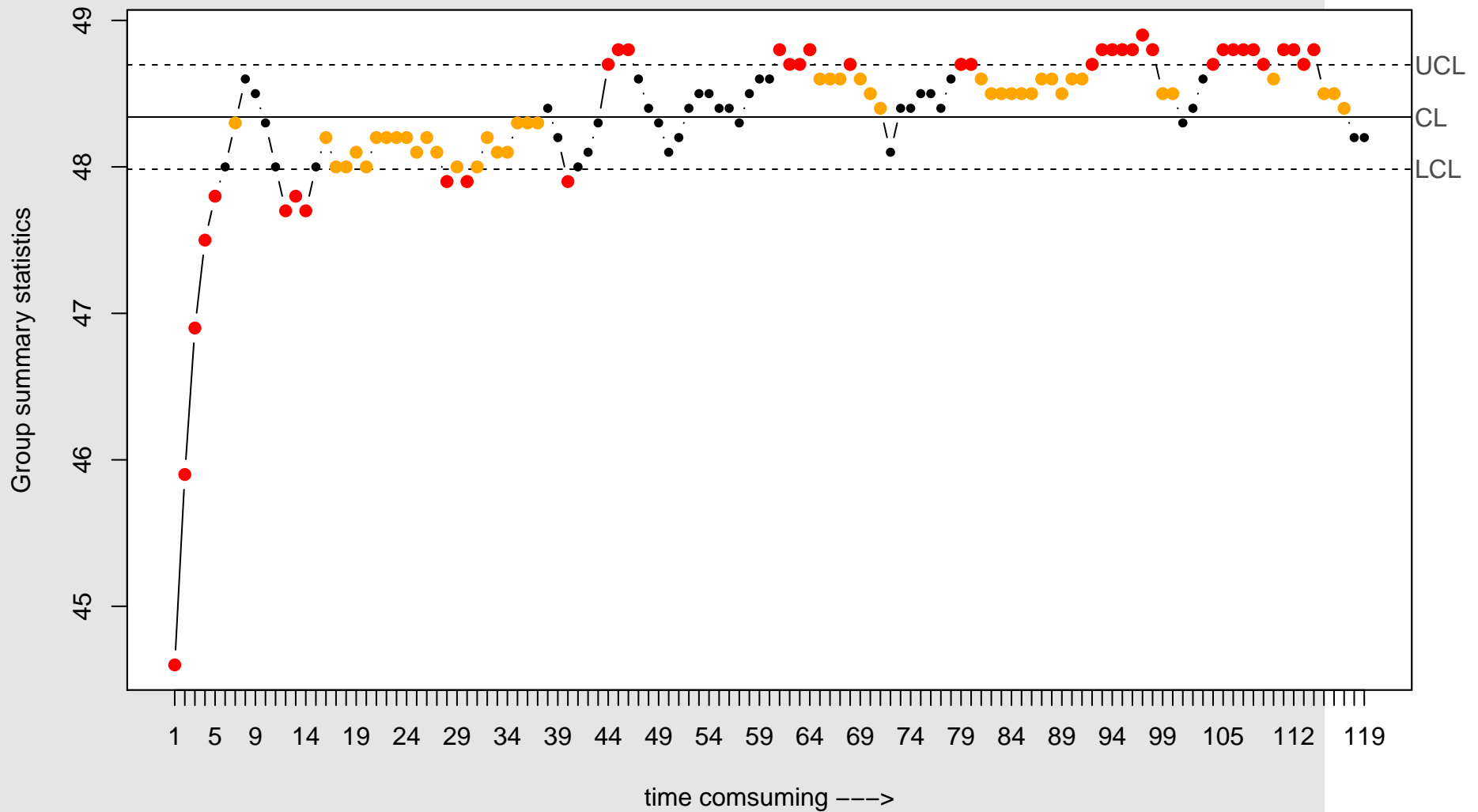
Number of groups = 119
Center = 48.34034   LCL = 47.98422   Number beyond limits = 38
StdDev = 0.1187042   UCL = 48.69645   Number violating runs = 63

94th column point of this product

Group summary statistics

time comsuming ––––>
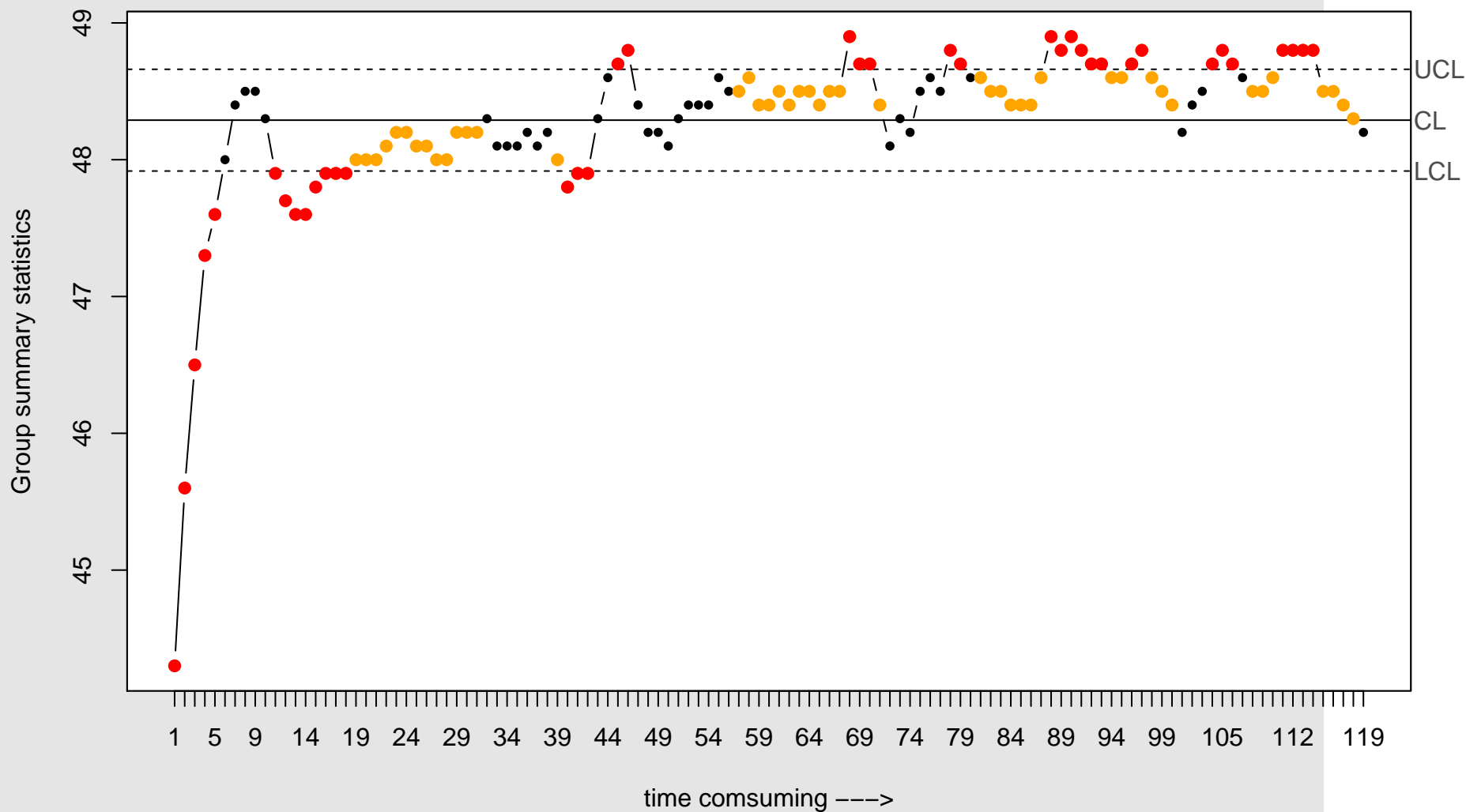
Number of groups = 119
Center = 48.28908
StdDev = 0.1239632

LCL = 47.91719
UCL = 48.66097

Number beyond limits = 38
Number violating runs = 65

95th column point of this product

Group summary statistics

time comsuming ---->
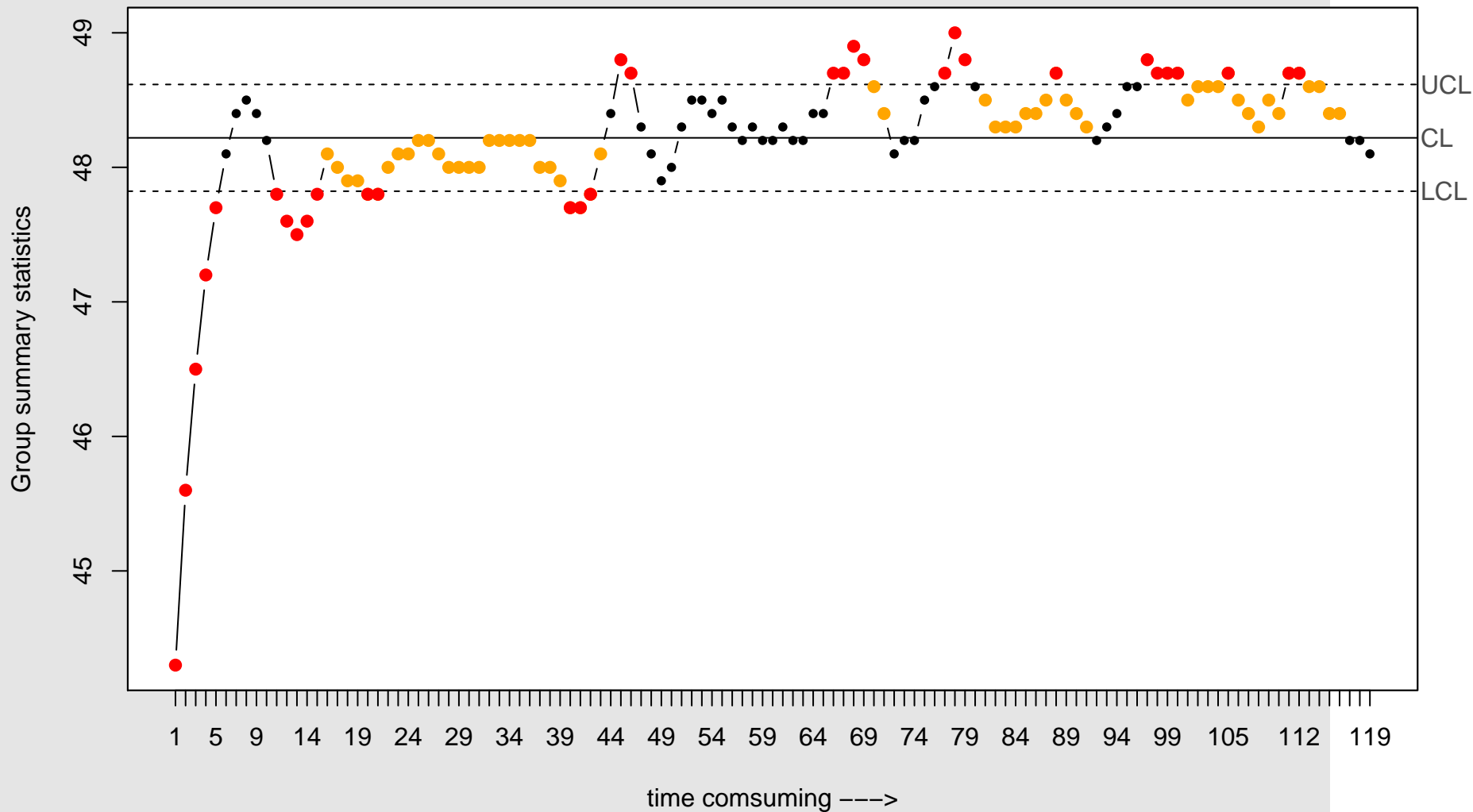
Number of groups = 119
Center = 48.21933   LCL = 47.82265   Number beyond limits = 32
StdDev = 0.1322274   UCL = 48.61601   Number violating runs = 59

96th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ---->
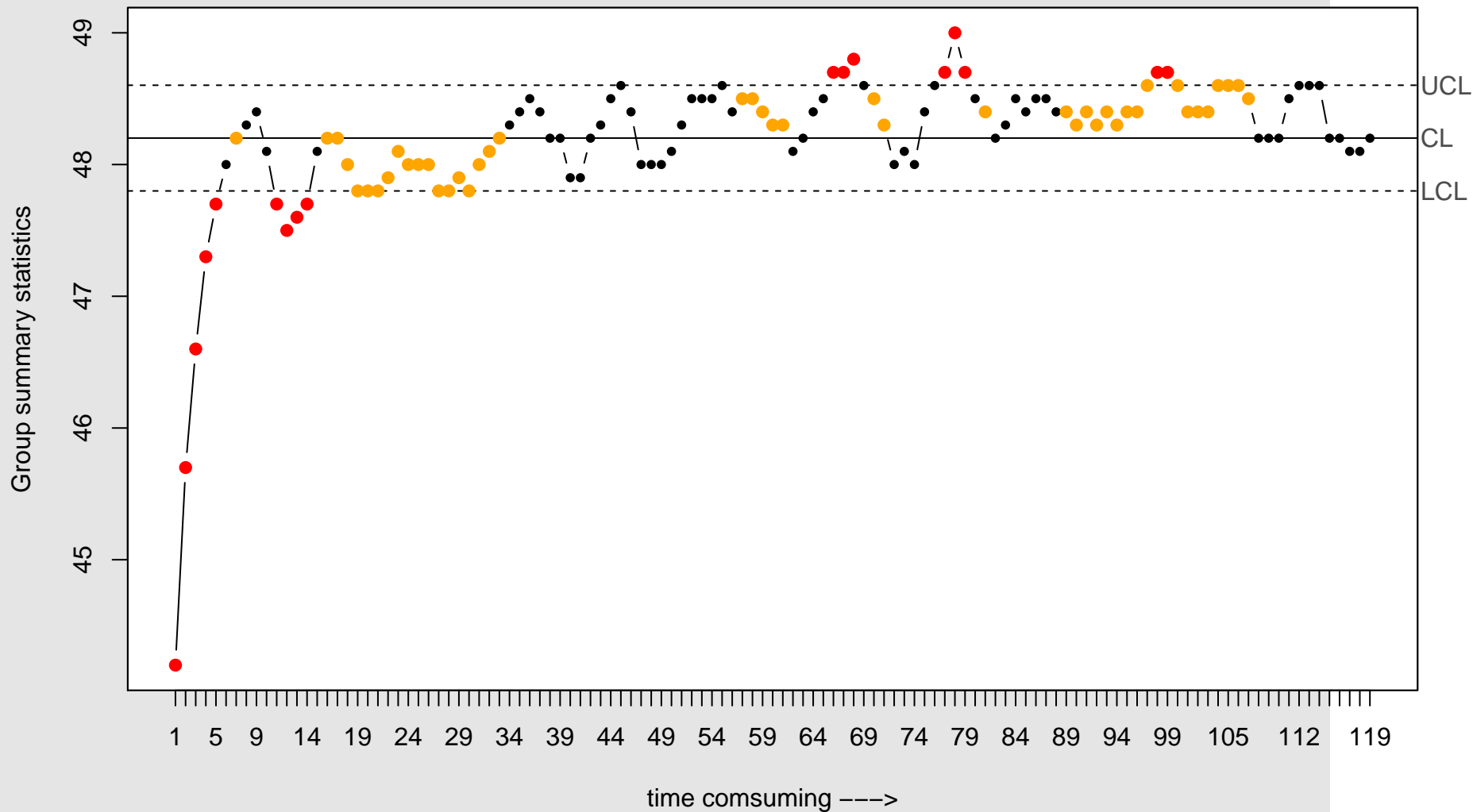
Number of groups = 119
Center = 48.20084   LCL = 47.79965   Number beyond limits = 17
StdDev = 0.13373   UCL = 48.60203   Number violating runs = 46

97th column point of this product
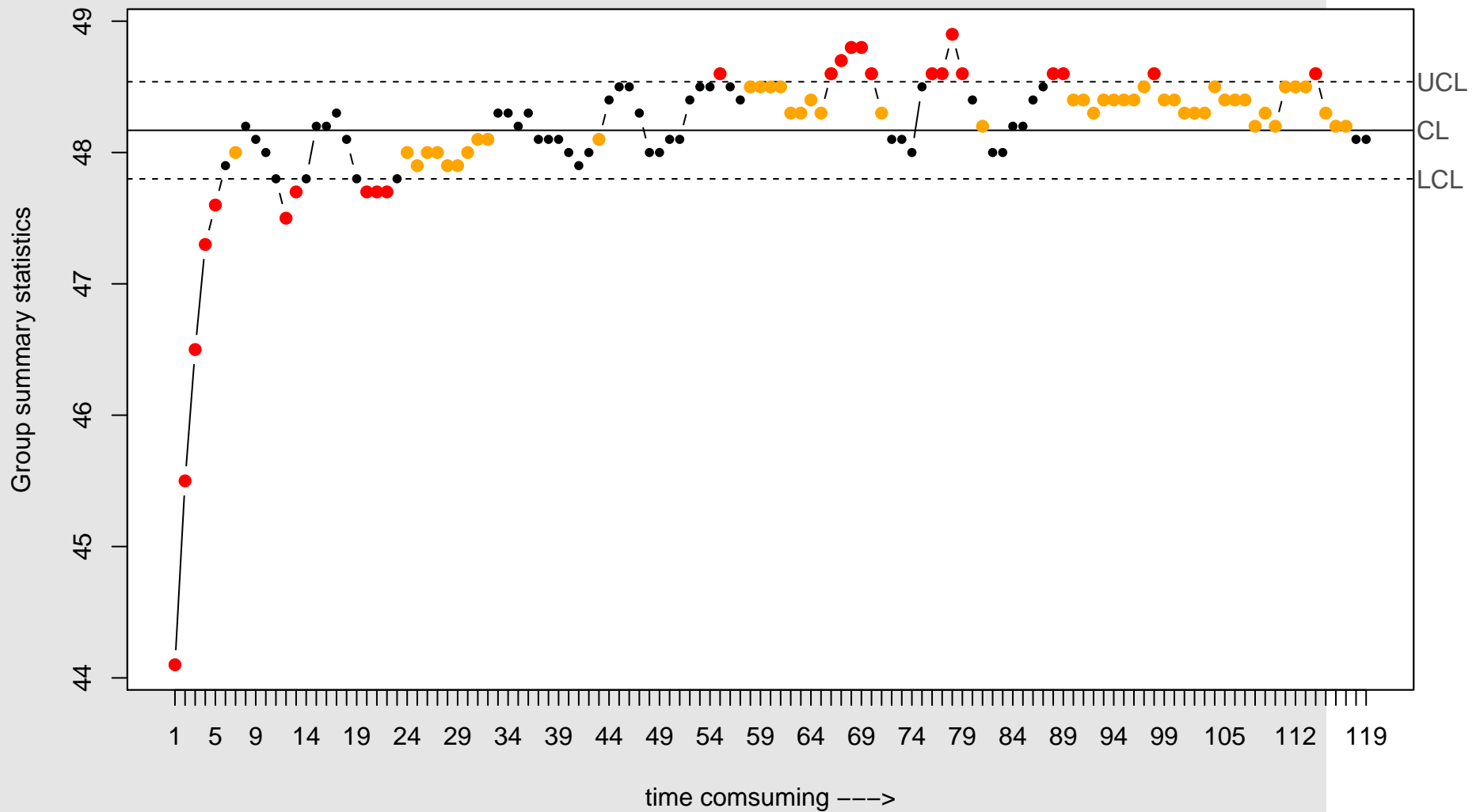
Number of groups = 119
Center = 48.16891   LCL = 47.79927   Number beyond limits = 24
StdDev = 0.1232119   UCL = 48.53854   Number violating runs = 54

98th column point of this product

Group summary statistics

time comsuming ---->
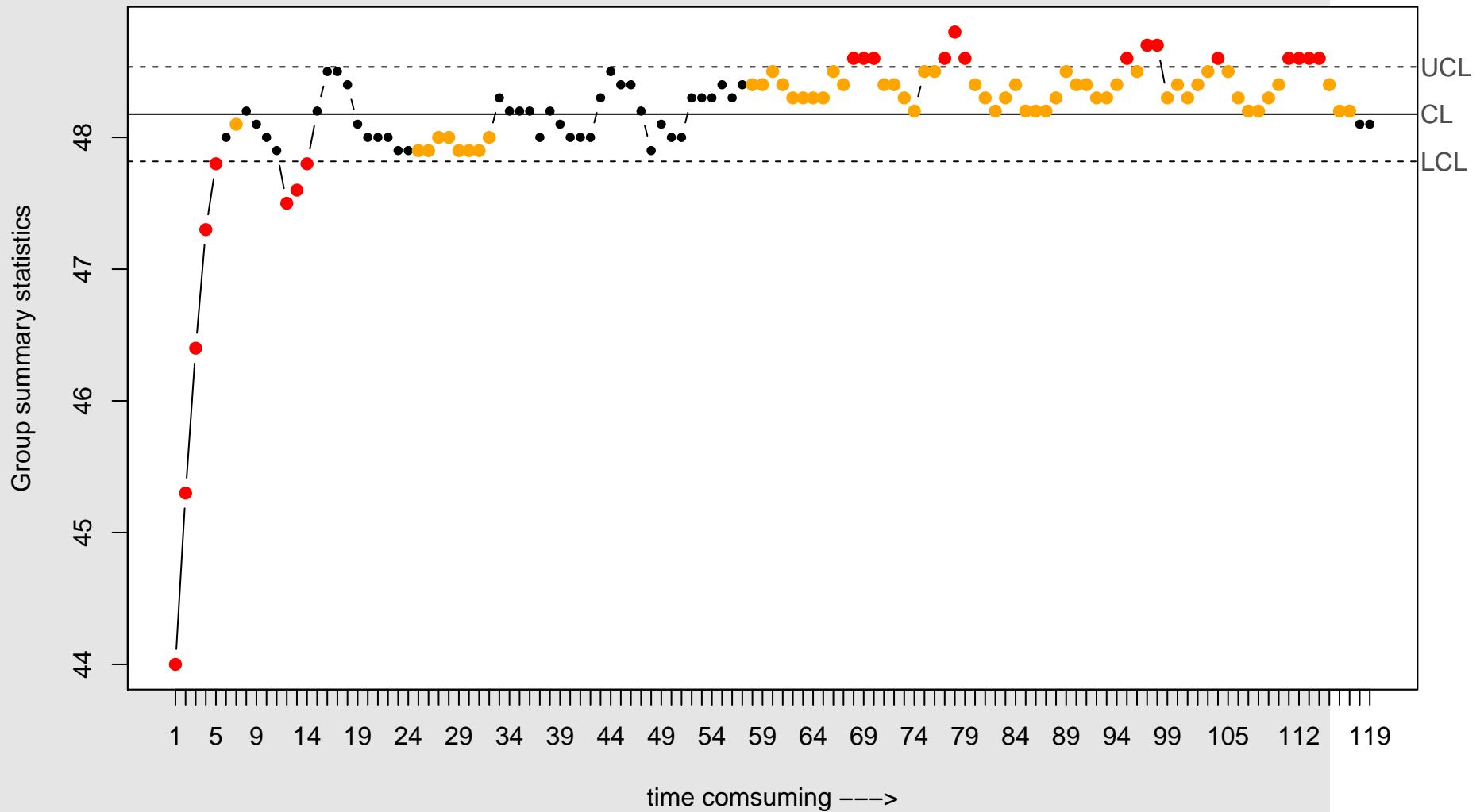
Number of groups = 119
Center = 48.17647   LCL = 47.8181   Number beyond limits = 22
StdDev = 0.1194555   UCL = 48.53484   Number violating runs = 69

99th column point of this product

Group summary statistics

time comsuming ––––>
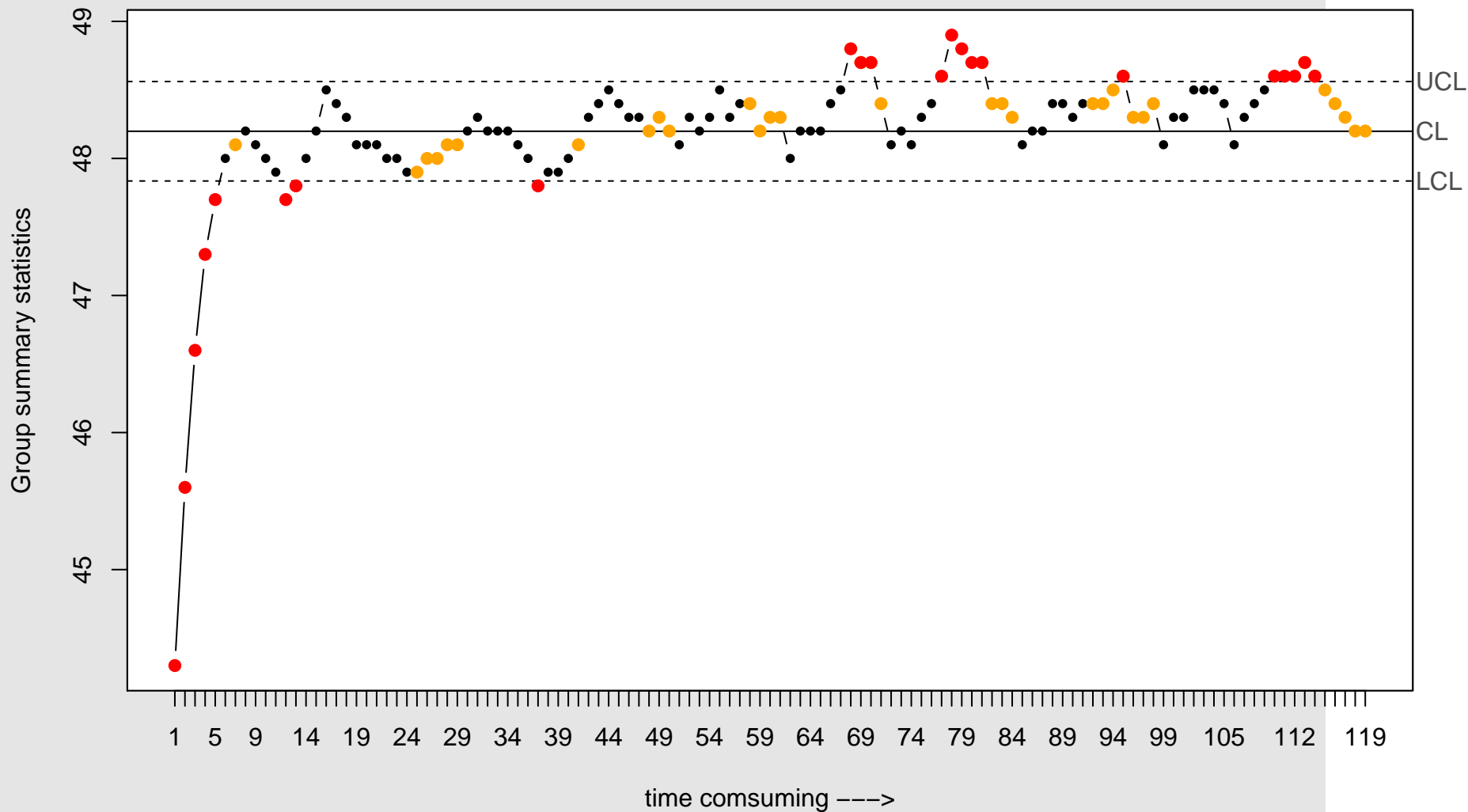
Number of groups = 119
Center = 48.19832   LCL = 47.83545   Number beyond limits = 22
StdDev = 0.120958   UCL = 48.56119   Number violating runs = 35

100th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL
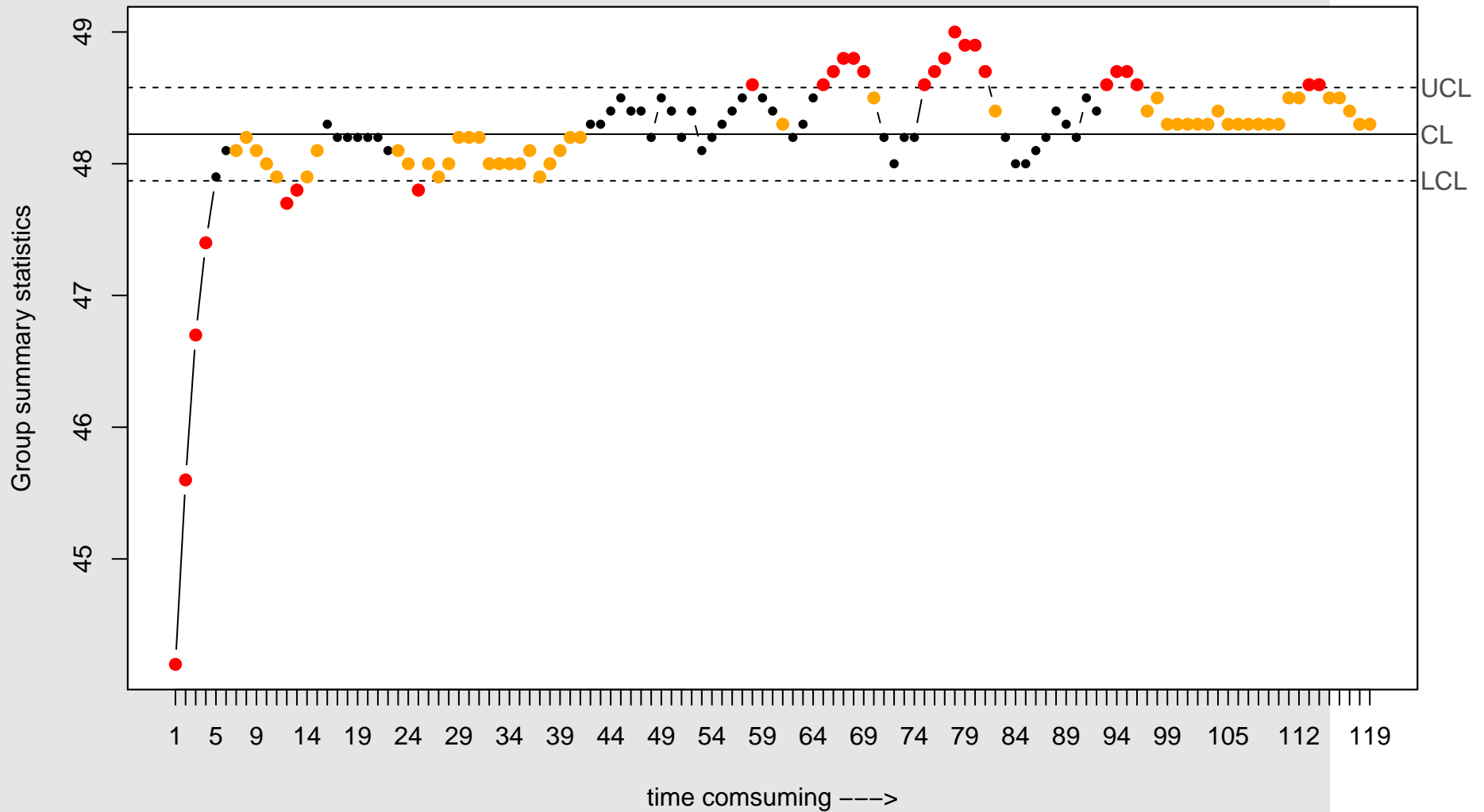
Number of groups = 119
Center = 48.22437   LCL = 47.87051   Number beyond limits = 26
StdDev = 0.1179529   UCL = 48.57823   Number violating runs = 56

101th column point of this product

Group summary statistics

time comsuming –––>

Number of groups = 119
Center = 48.23025   LCL = 47.87189   Number beyond limits = 28
StdDev = 0.1194555   UCL = 48.58862   Number violating runs = 80

102th column point of this product

Group summary statistics

time comsuming ---->
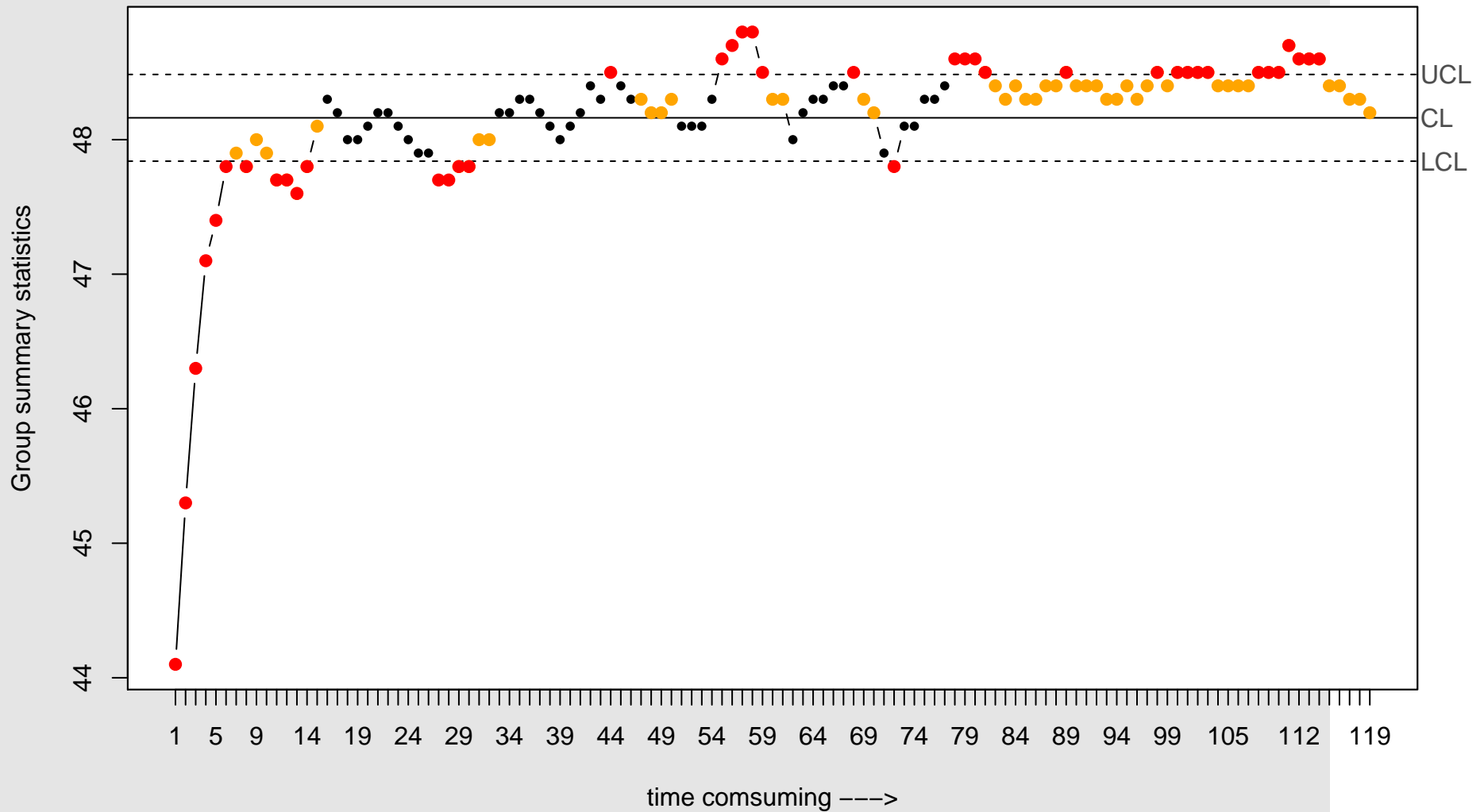
Number of groups = 119
Center = 48.16218   LCL = 47.83988   Number beyond limits = 40
StdDev = 0.1074348   UCL = 48.48449   Number violating runs = 60

103th column point of this product

Group summary statistics
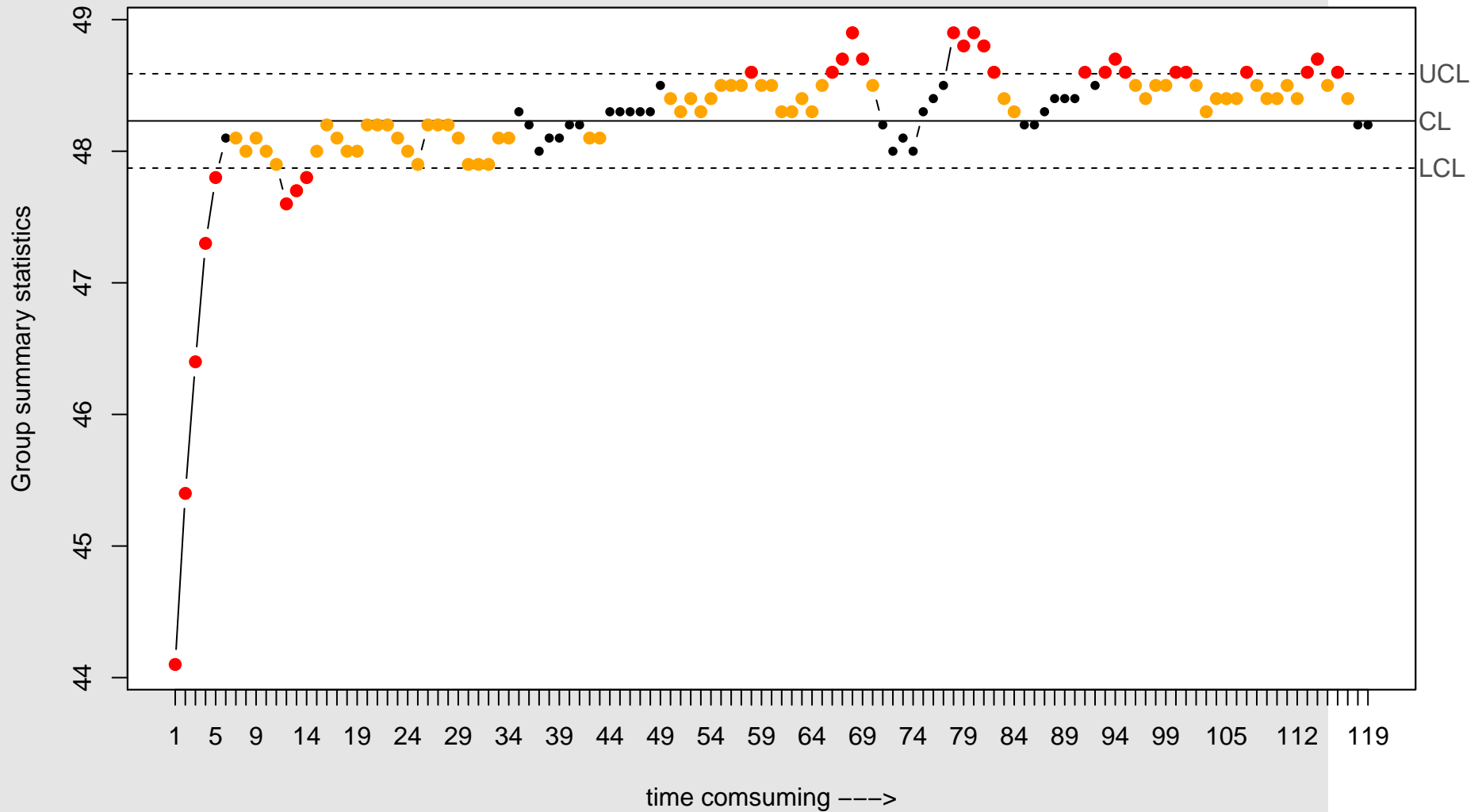
time comsuming ---->
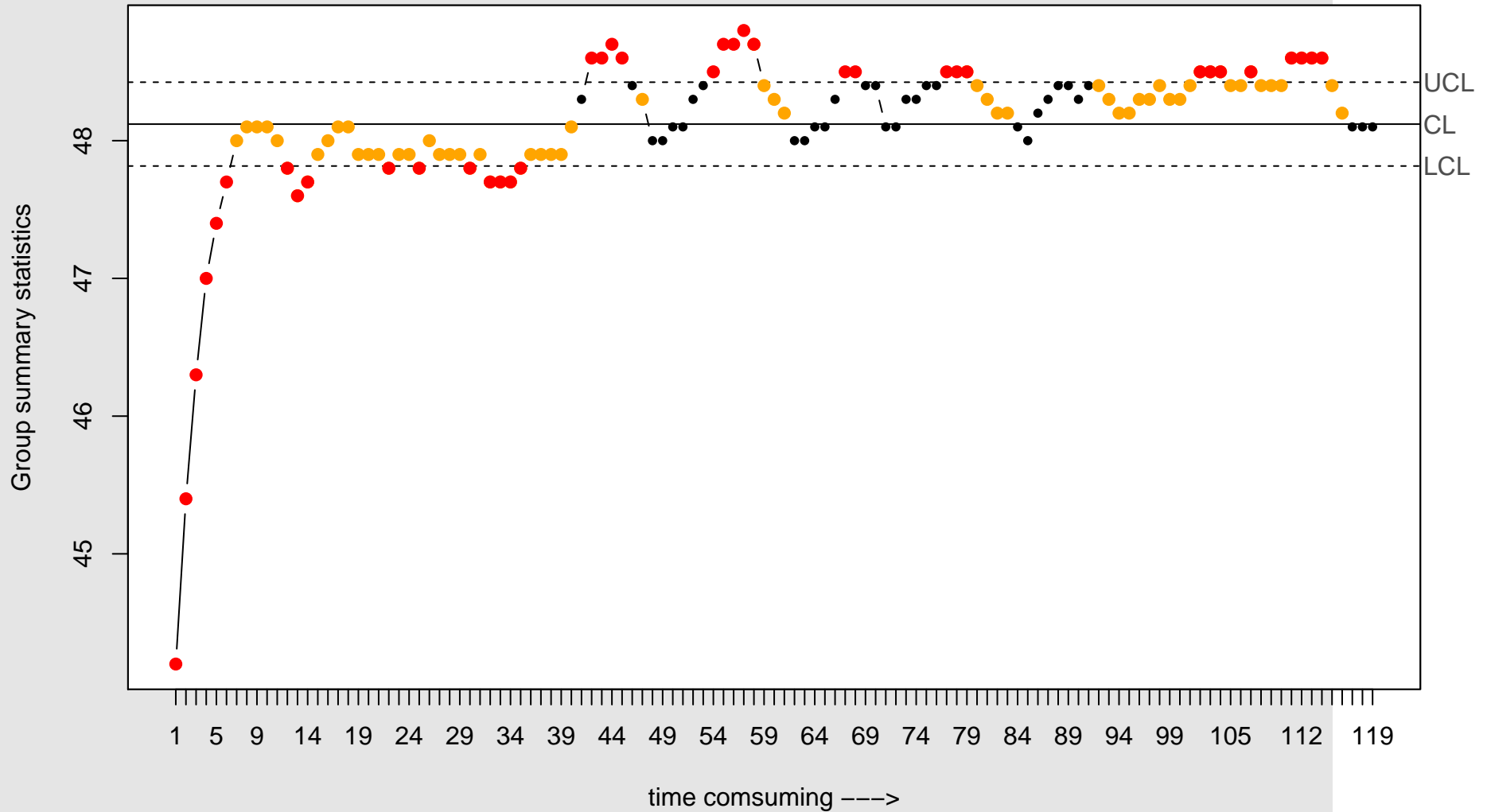
Number of groups = 119
Center = 48.12017
StdDev = 0.1014245

LCL = 47.81589
UCL = 48.42444

Number beyond limits = 38
Number violating runs = 69

104th column point of this product

Group summary statistics

time comsuming ---->
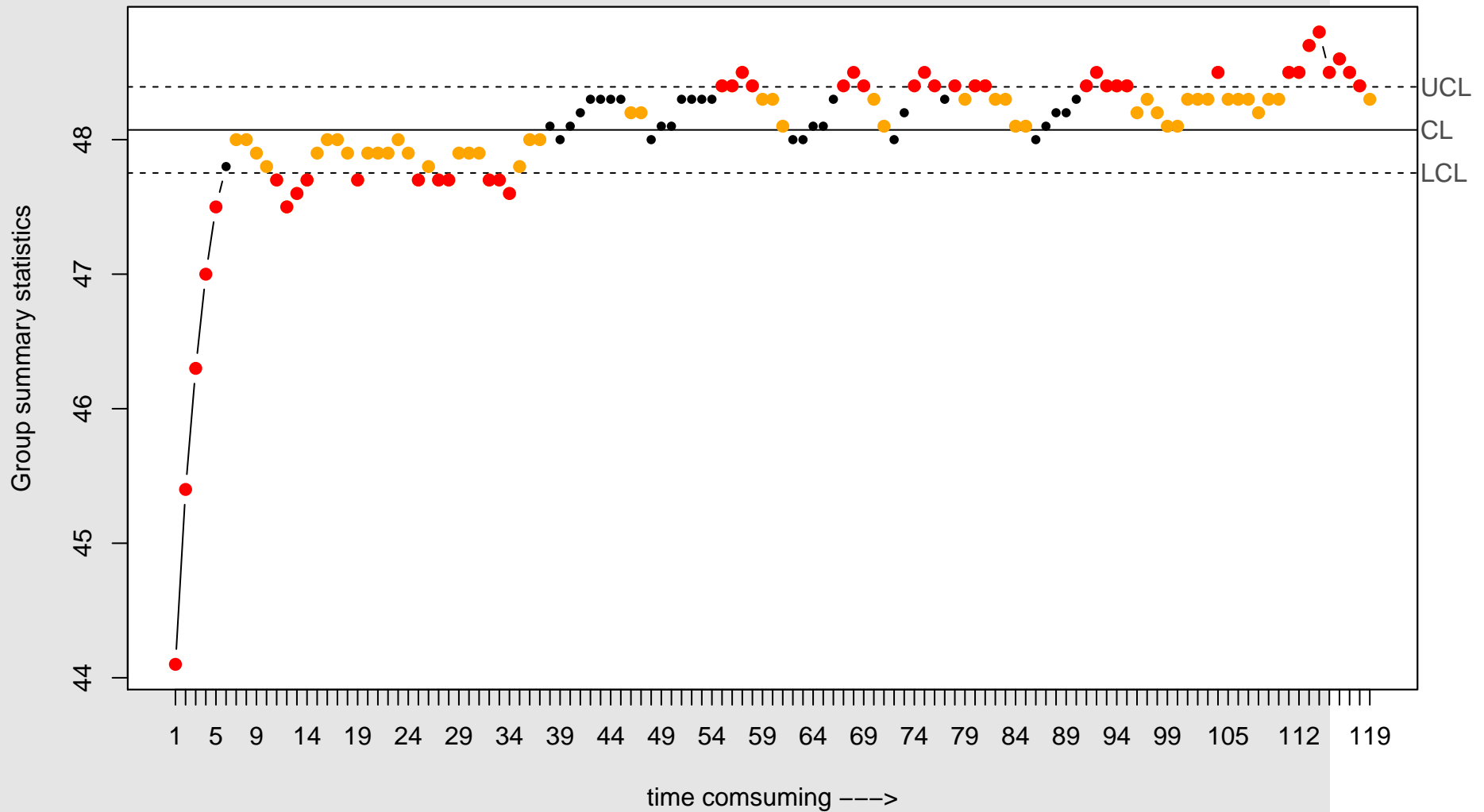
Number of groups = 119
Center = 48.07227   LCL = 47.75222   Number beyond limits = 43
StdDev = 0.1066835   UCL = 48.39232   Number violating runs = 76

105th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ---->
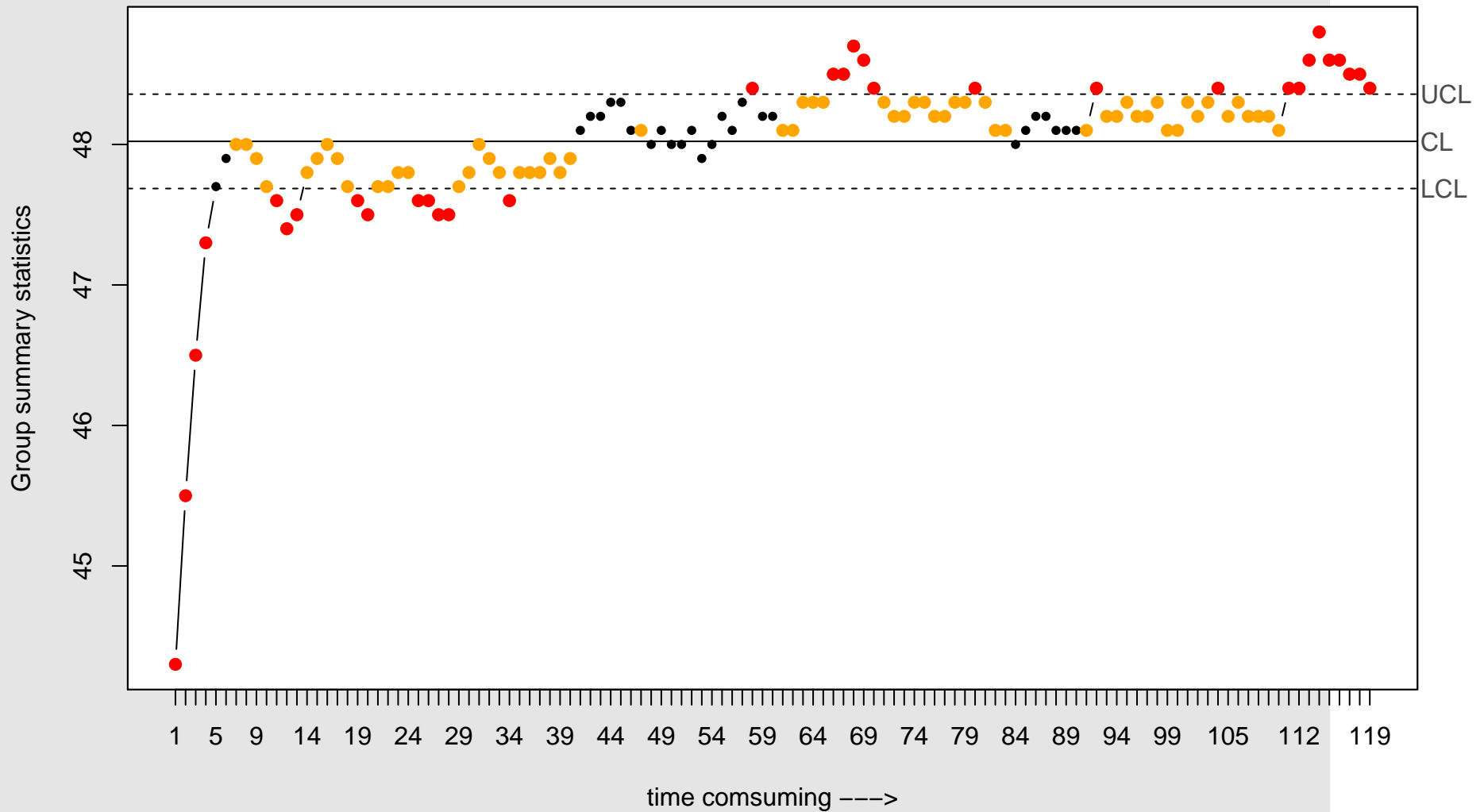
Number of groups = 119
Center = 48.02185   LCL = 47.68602   Number beyond limits = 32
StdDev = 0.1119425   UCL = 48.35768   Number violating runs = 87

106th column point of this product

Group summary statistics

time comsuming ---->
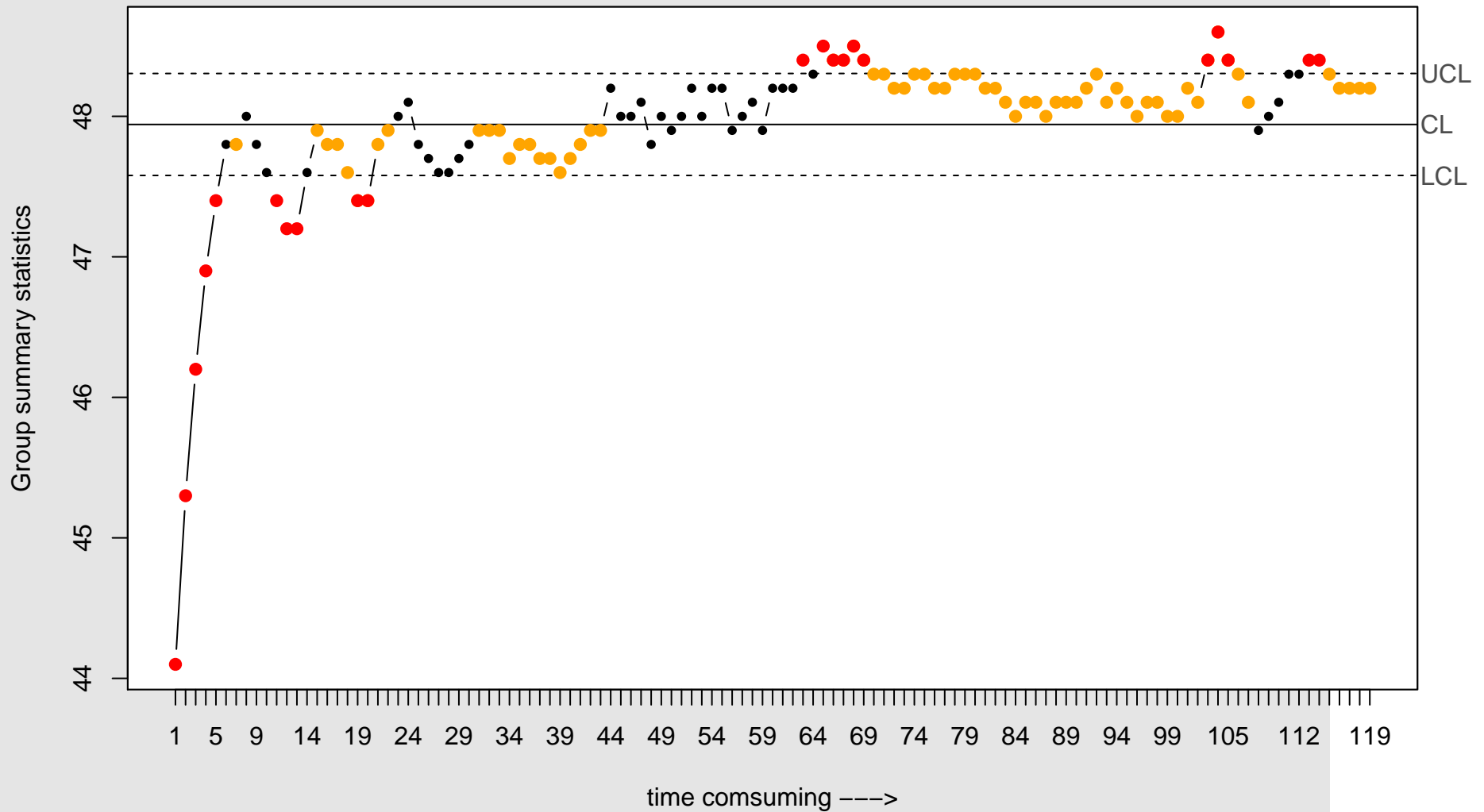
Number of groups = 119
Center = 47.94202
StdDev = 0.120958

LCL = 47.57914
UCL = 48.30489

Number beyond limits = 21
Number violating runs = 69

107th column point of this product

Group summary statistics

time comsuming ---->
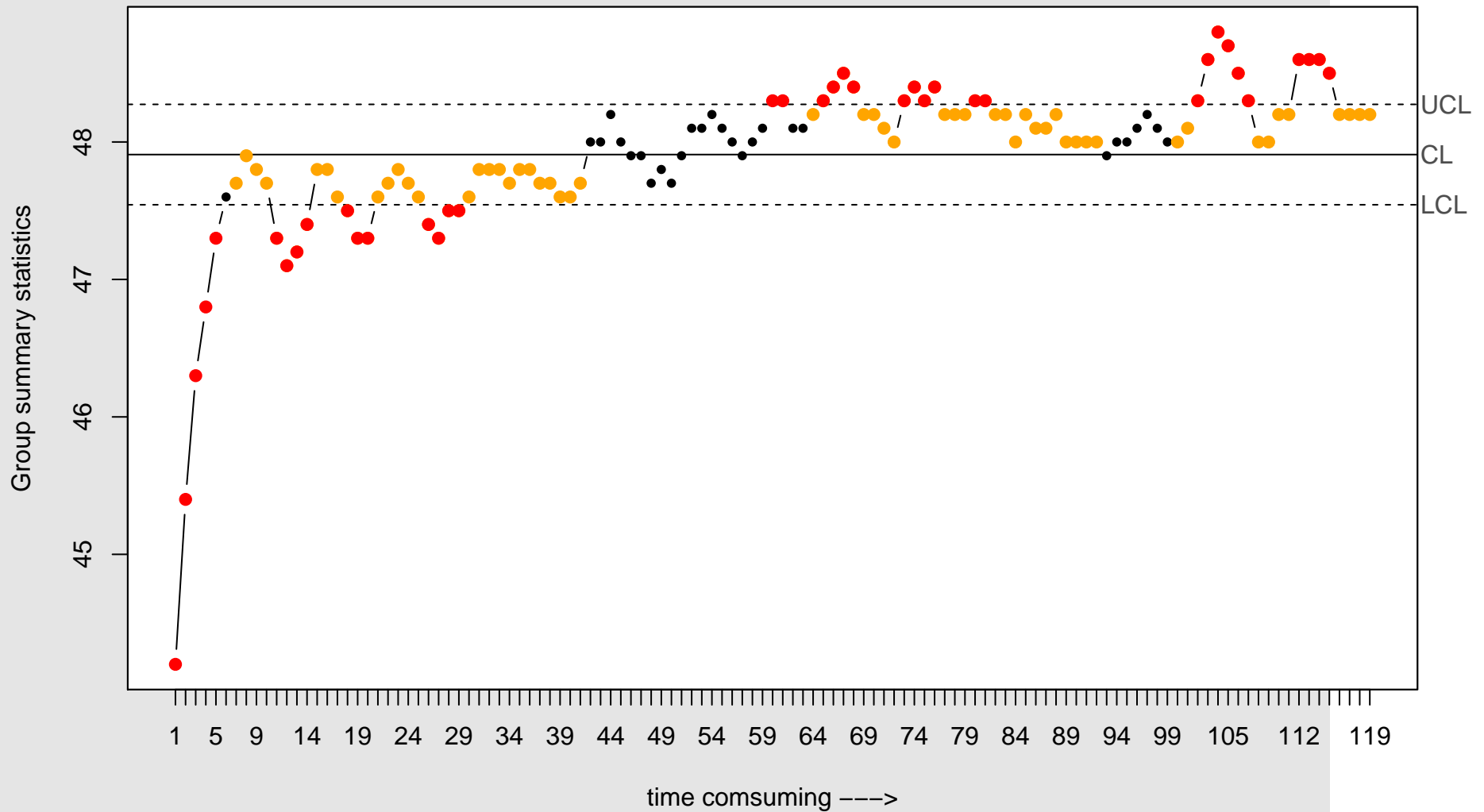
Number of groups = 119
Center = 47.9084   LCL = 47.54328   Number beyond limits = 38
StdDev = 0.1217093   UCL = 48.27353   Number violating runs = 84

108th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 47.88824
StdDev = 0.120958

LCL = 47.52536
UCL = 48.25111

Number beyond limits = 43
Number violating runs = 78

109th column point of this product

Group summary statistics

time comsuming ––––>

Number of groups = 119
Center = 47.84454   LCL = 47.51322   Number beyond limits = 38
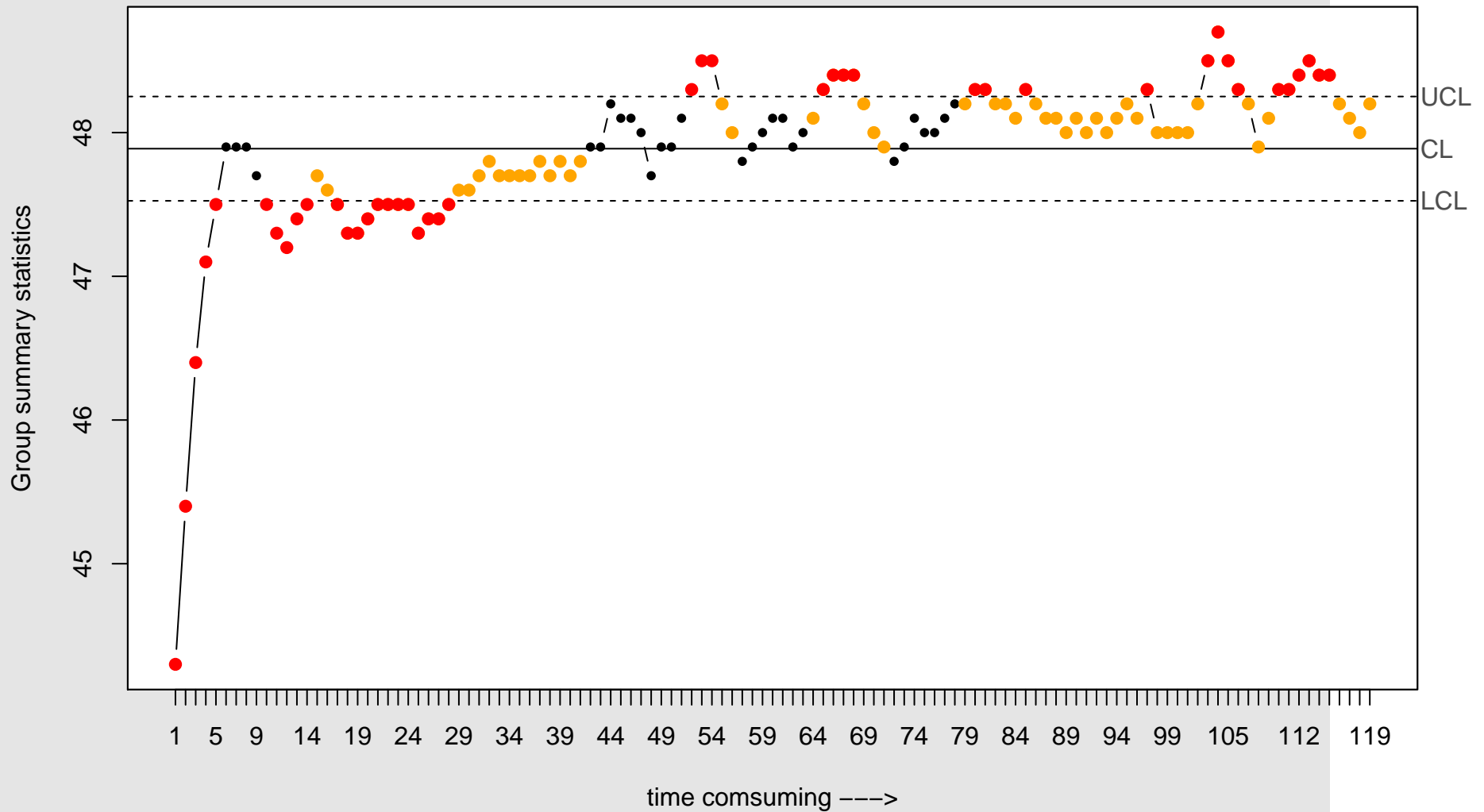StdDev = 0.11044   UCL = 48.17586   Number violating runs = 51

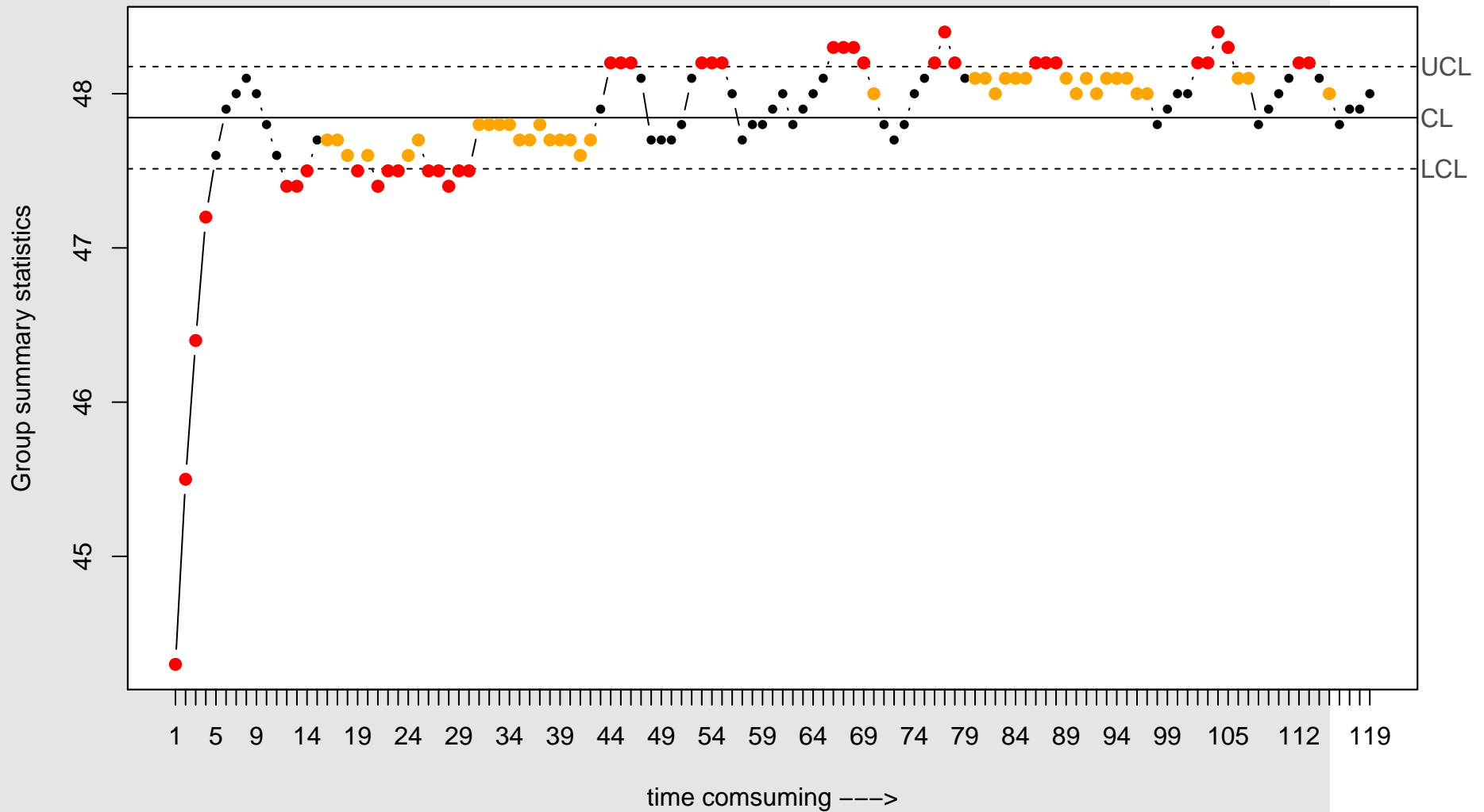# 110th column point of this product
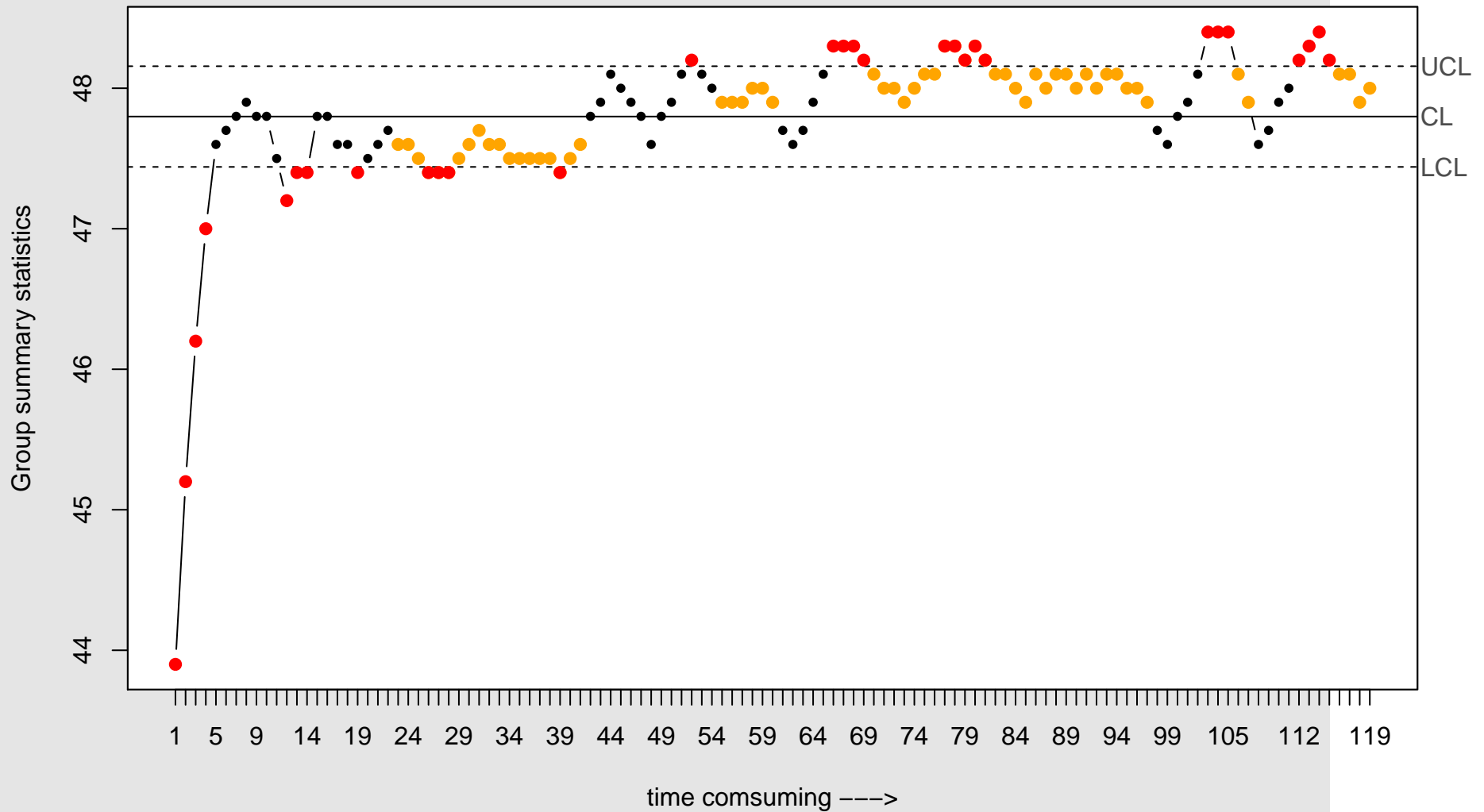
Number of groups = 119
Center = 47.79832   LCL = 47.43995   Number beyond limits = 29
StdDev = 0.1194555   UCL = 48.15669   Number violating runs = 59

111th column point of this product
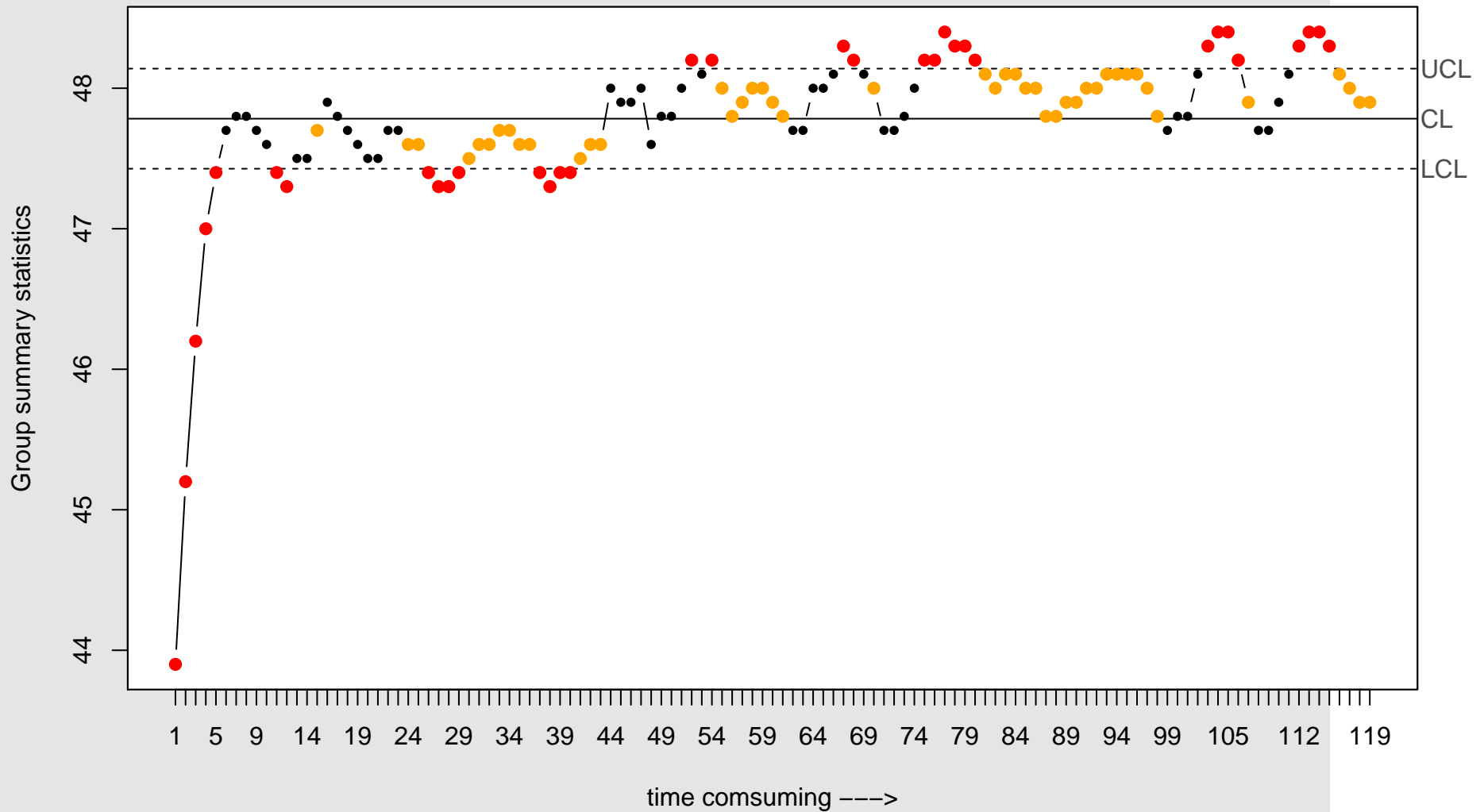
Number of groups = 119
Center = 47.78319   LCL = 47.42708   Number beyond limits = 33
StdDev = 0.1187042   UCL = 48.13931   Number violating runs = 55

112th column point of this product

Group summary statistics

time comsuming ---->
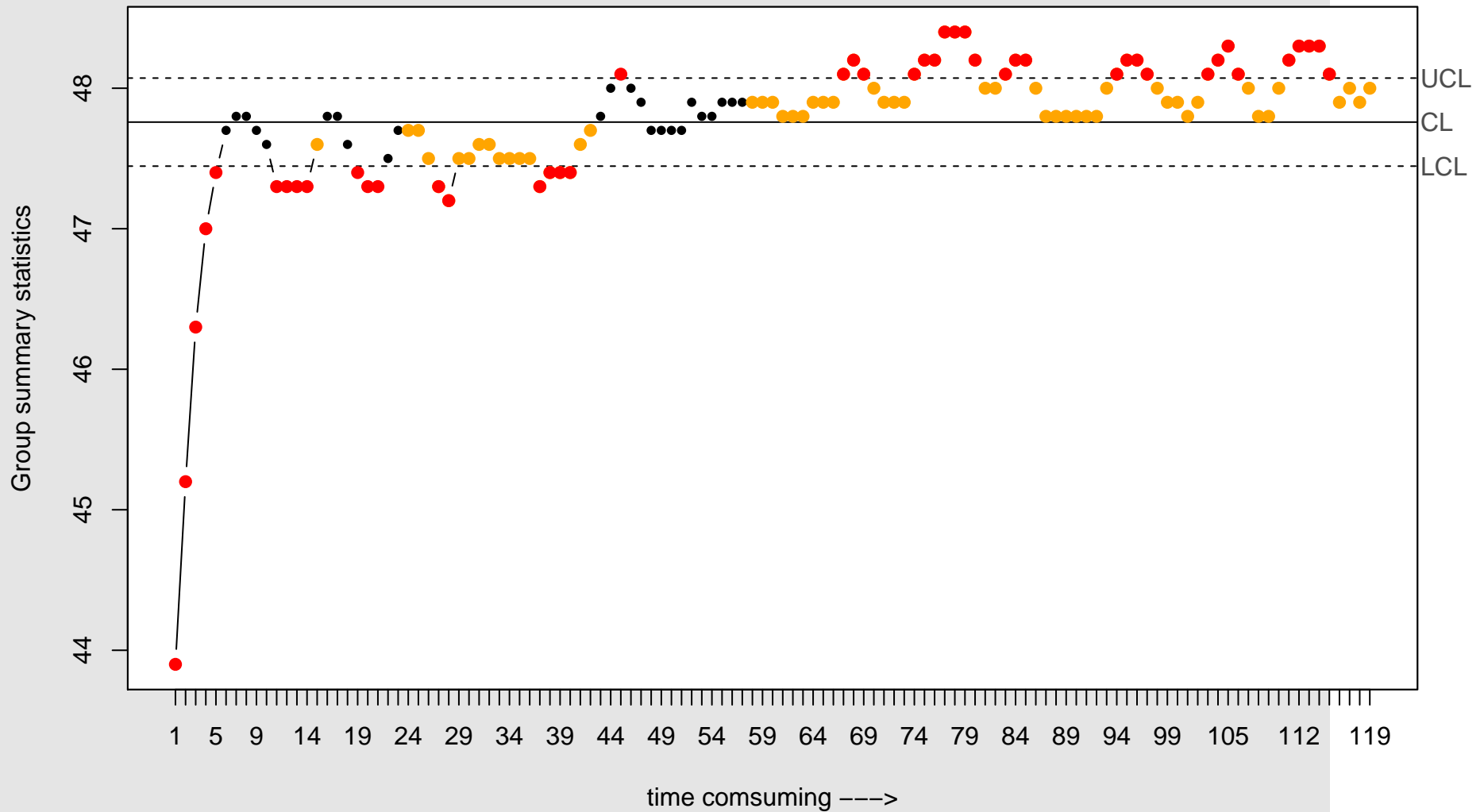
Number of groups = 119
Center = 47.75882   LCL = 47.44553   Number beyond limits = 45
StdDev = 0.1044296   UCL = 48.07211   Number violating runs = 82

113th column point of this product

Group summary statistics

time comsuming --->
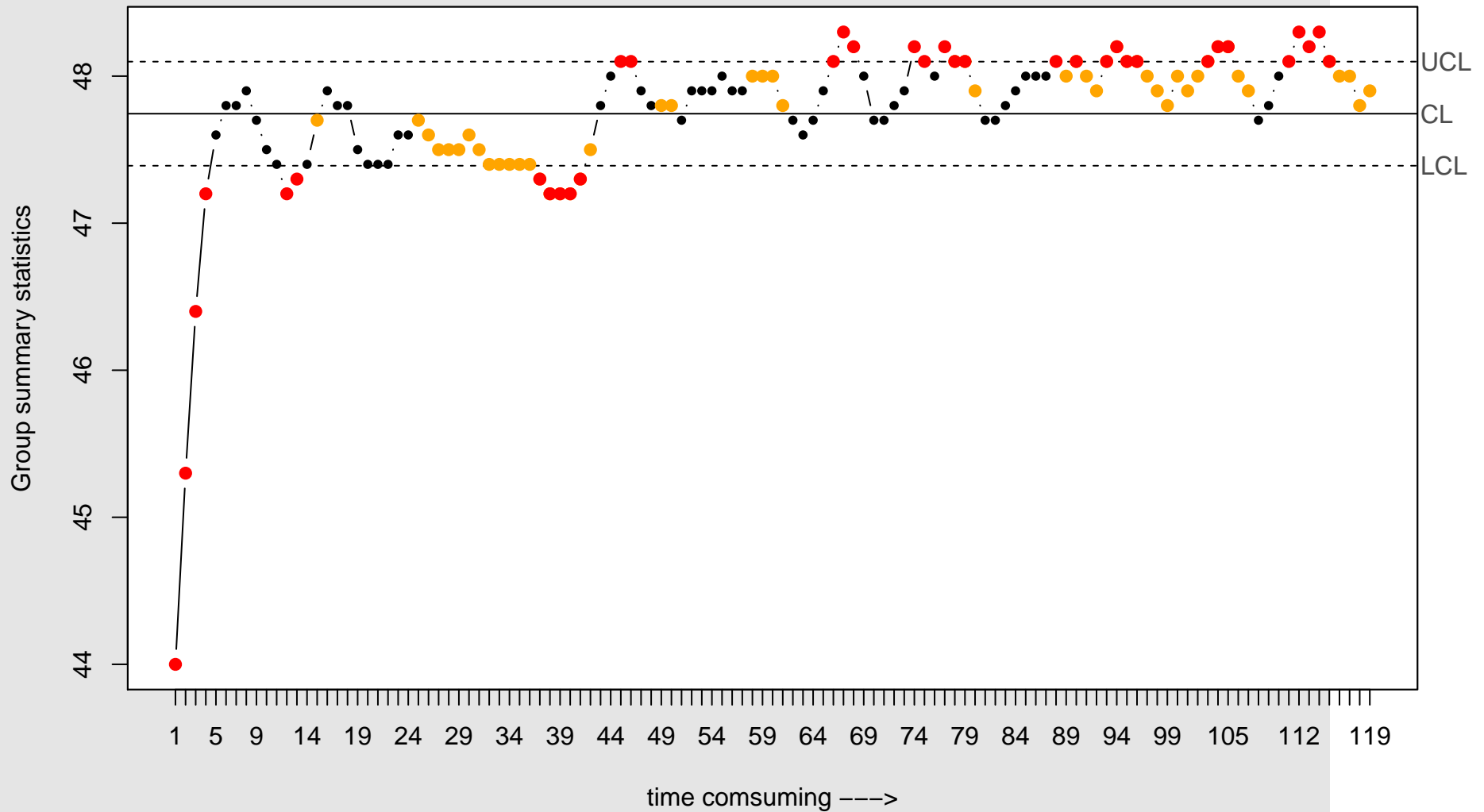
Number of groups = 119
Center = 47.74454   LCL = 47.39068   Number beyond limits = 35
StdDev = 0.1179529   UCL = 48.0984   Number violating runs = 52

114th column point of this product

Group summary statistics

time comsuming –––>
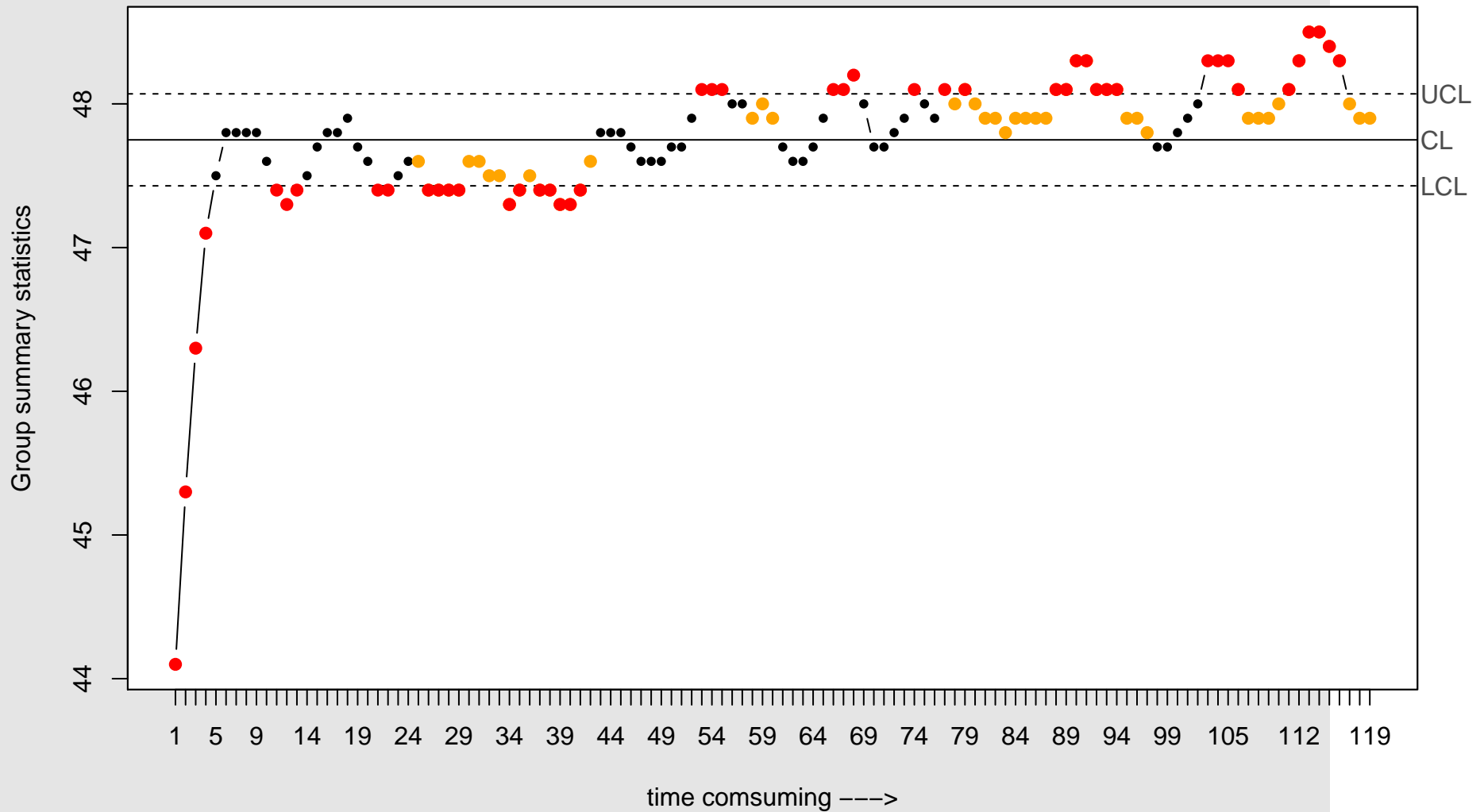
Number of groups = 119
Center = 47.74958   LCL = 47.42953   Number beyond limits = 46
StdDev = 0.1066835   UCL = 48.06963   Number violating runs = 55

115th column point of this product

Group summary statistics

time comsuming −−−>

UCL
CL
LCL
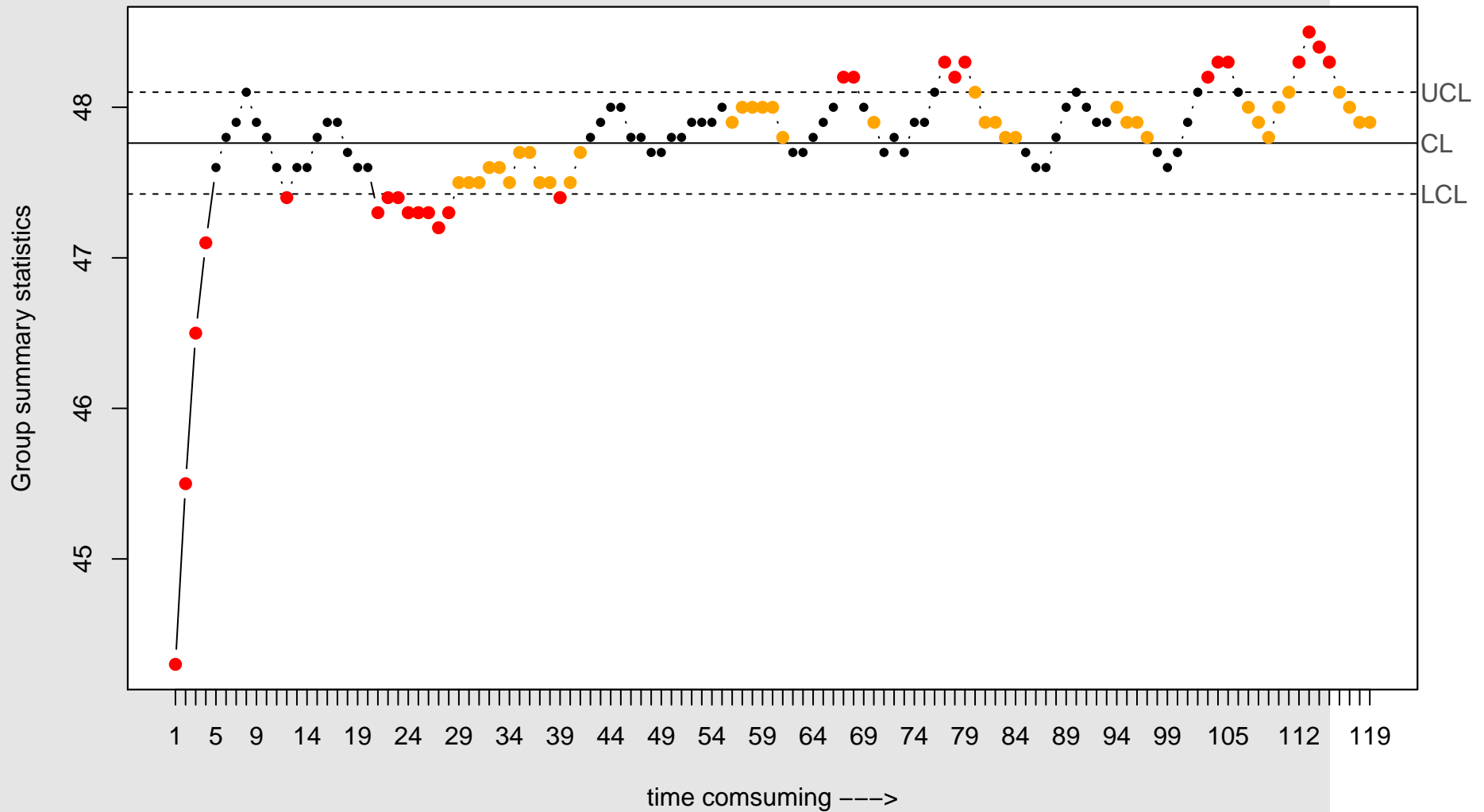
Number of groups = 119
Center = 47.76218   LCL = 47.4241   Number beyond limits = 26
StdDev = 0.1126938   UCL = 48.10027   Number violating runs = 47

116th column point of this product

Group summary statistics

UCL

CL

LCL

time comsuming ---->
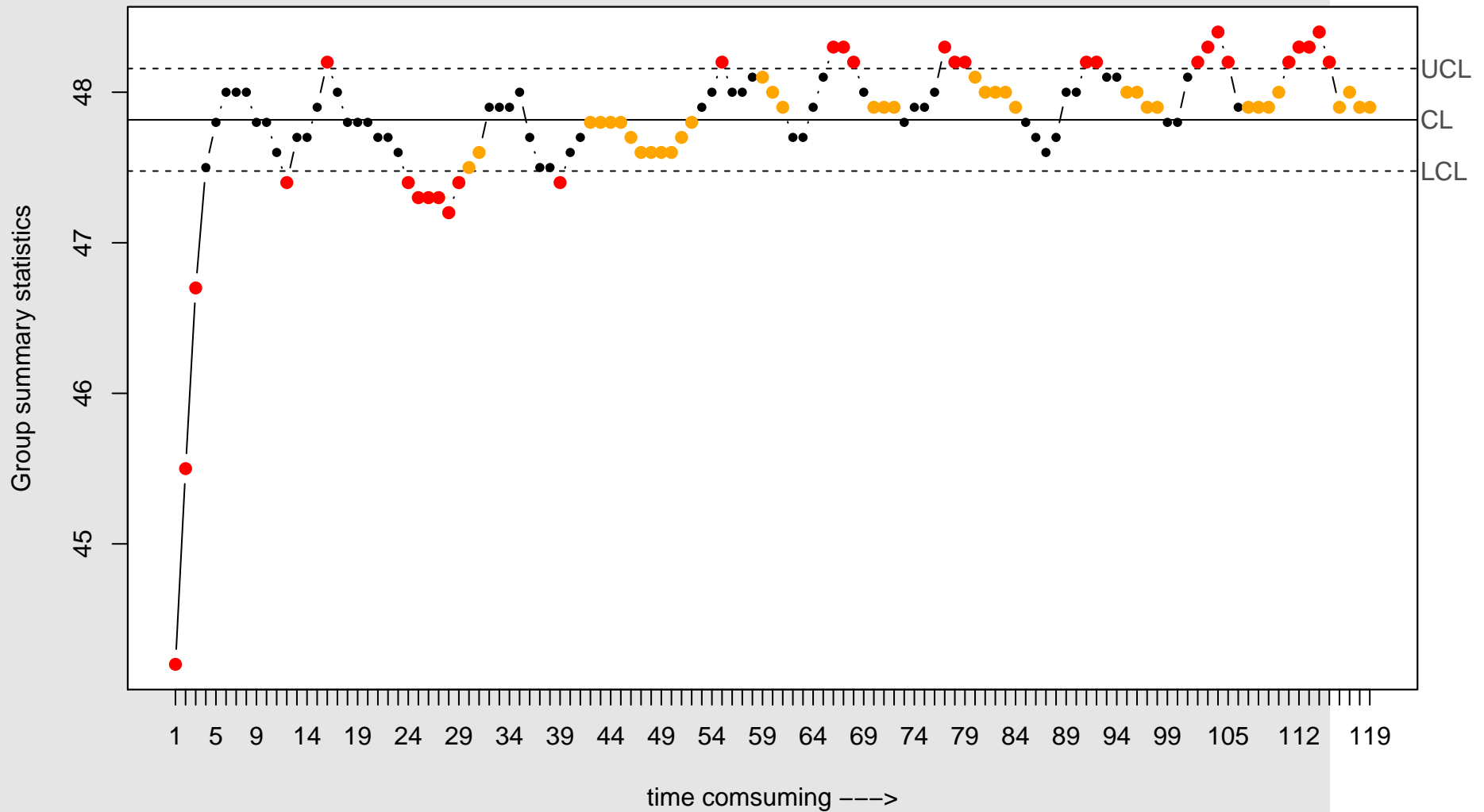
Number of groups = 119
Center = 47.81681   LCL = 47.47647   Number beyond limits = 30
StdDev = 0.1134451   UCL = 48.15714   Number violating runs = 47

117th column point of this product

Group summary statistics

time comsuming –––>
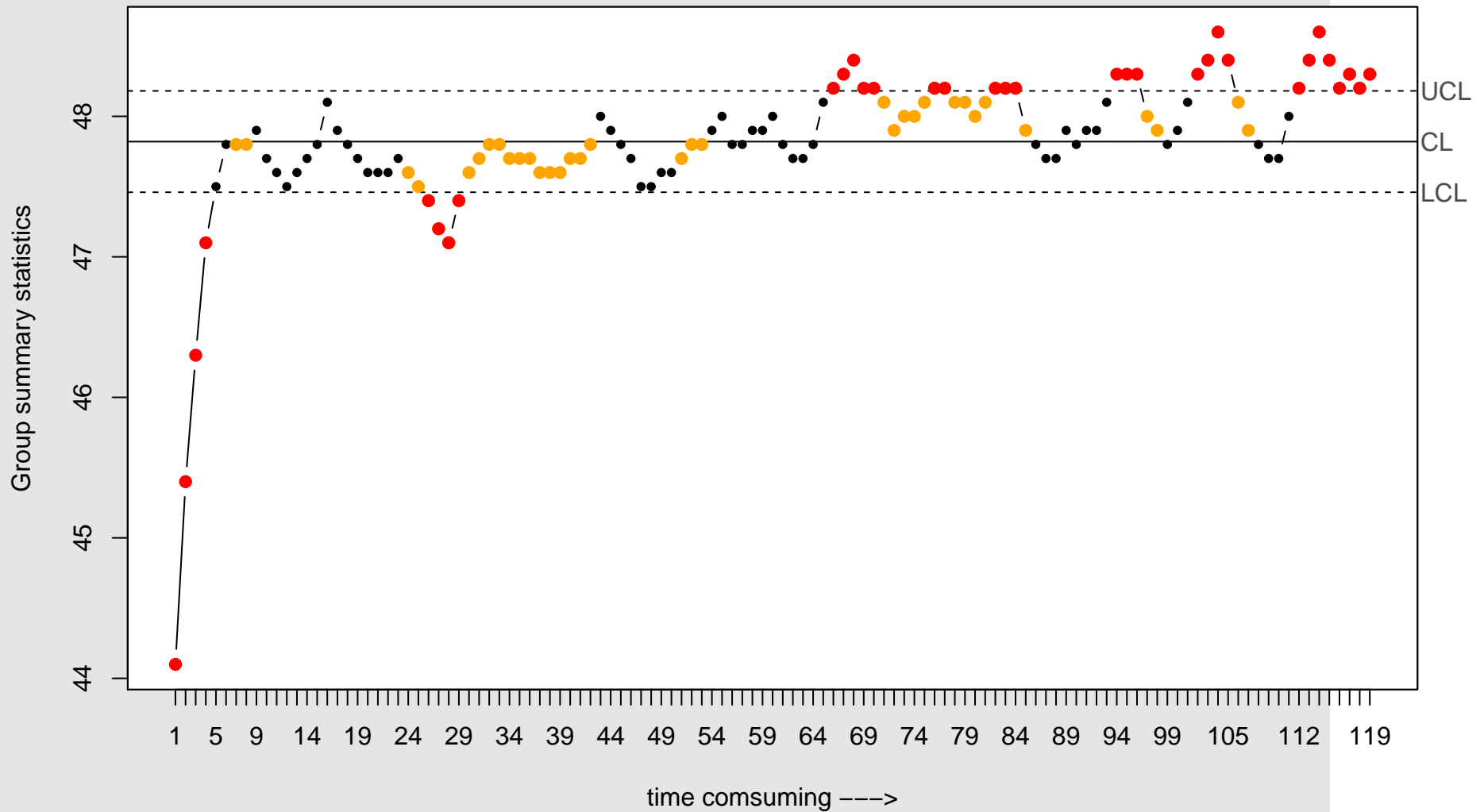
Number of groups = 119
Center = 47.82017   LCL = 47.45955   Number beyond limits = 33
StdDev = 0.1202068   UCL = 48.18079   Number violating runs = 46

118th column point of this product

Group summary statistics

time comsuming ––––>
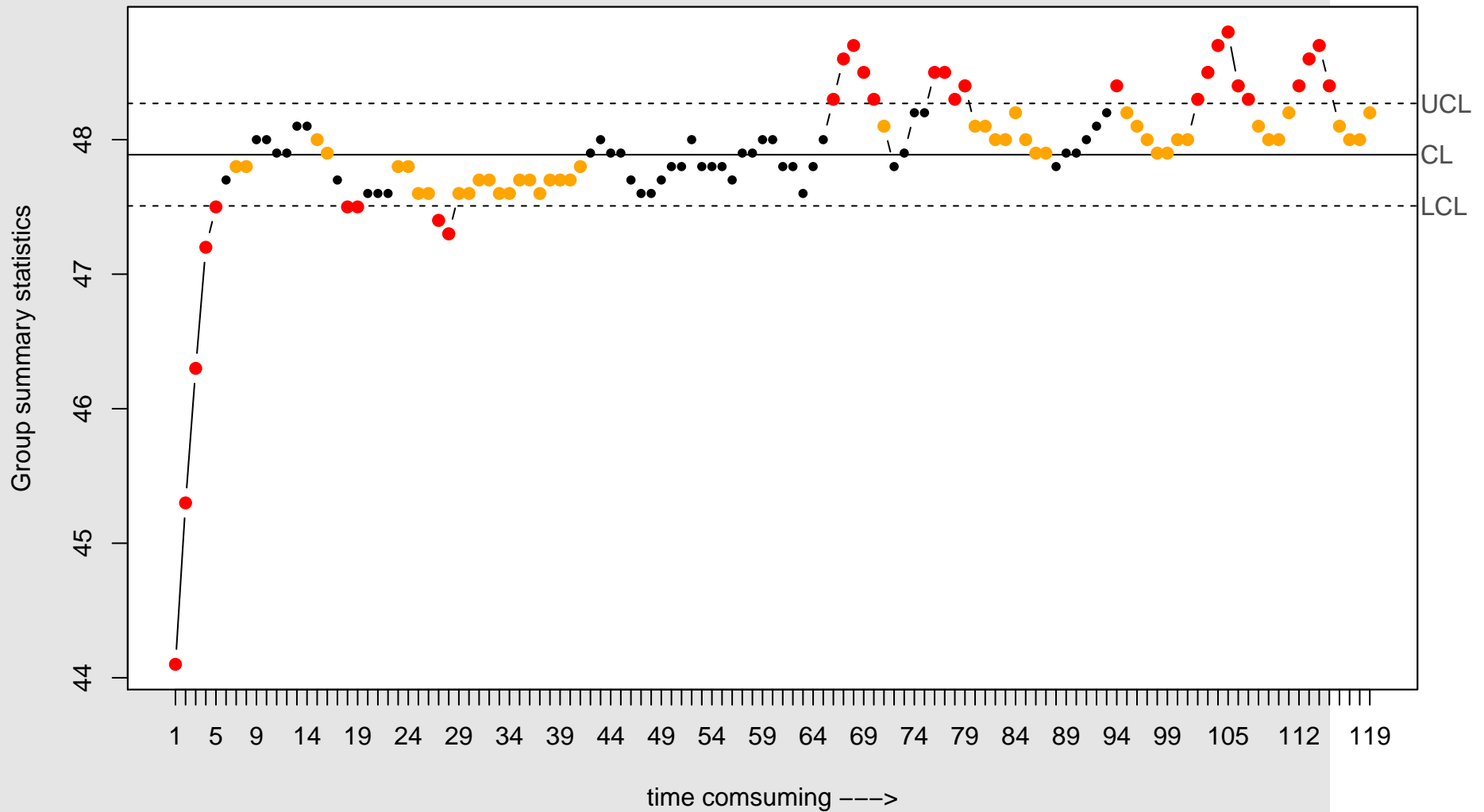
Number of groups = 119
Center = 47.88824   LCL = 47.50733   Number beyond limits = 29
StdDev = 0.1269684   UCL = 48.26914   Number violating runs = 58

119th column point of this product

Group summary statistics

time comsuming ---->
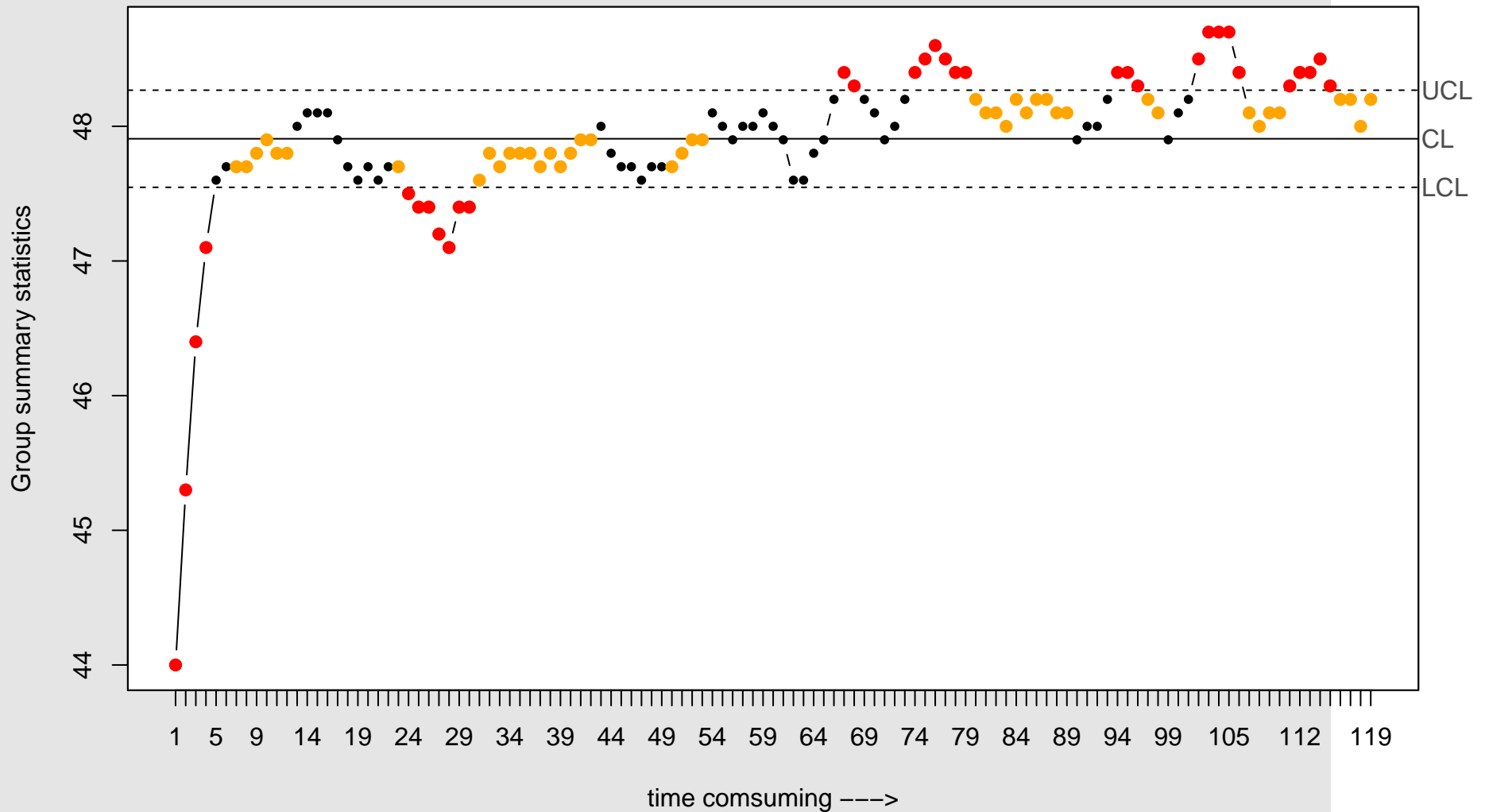
Number of groups = 119
Center = 47.90756   LCL = 47.54694   Number beyond limits = 32
StdDev = 0.1202068   UCL = 48.26818   Number violating runs = 58

120th column point of this product

Group summary statistics

time comsuming ---->
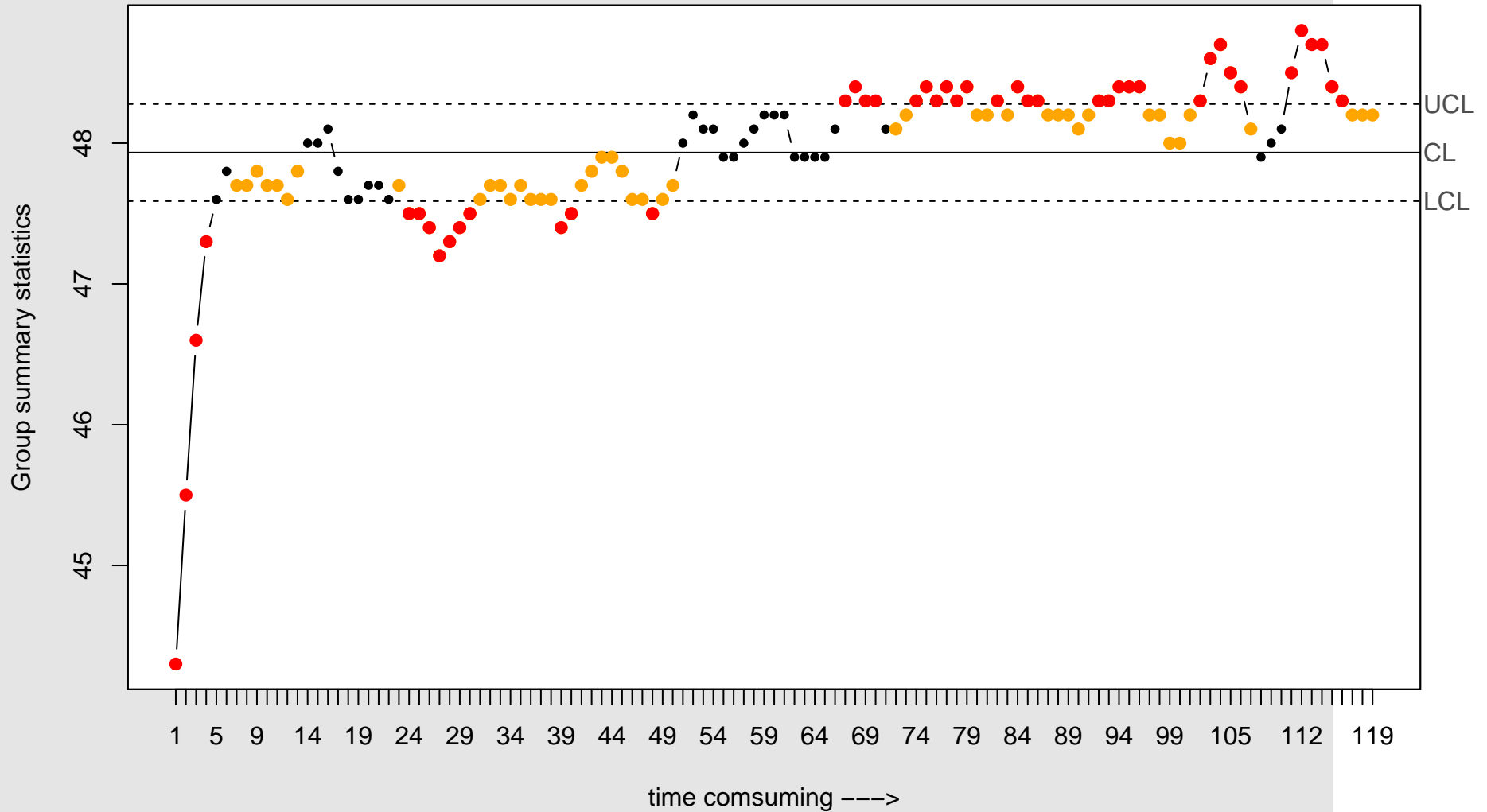
Number of groups = 119
Center = 47.93277   LCL = 47.58793   Number beyond limits = 44
StdDev = 0.1149477   UCL = 48.27762   Number violating runs = 76

121th column point of this product
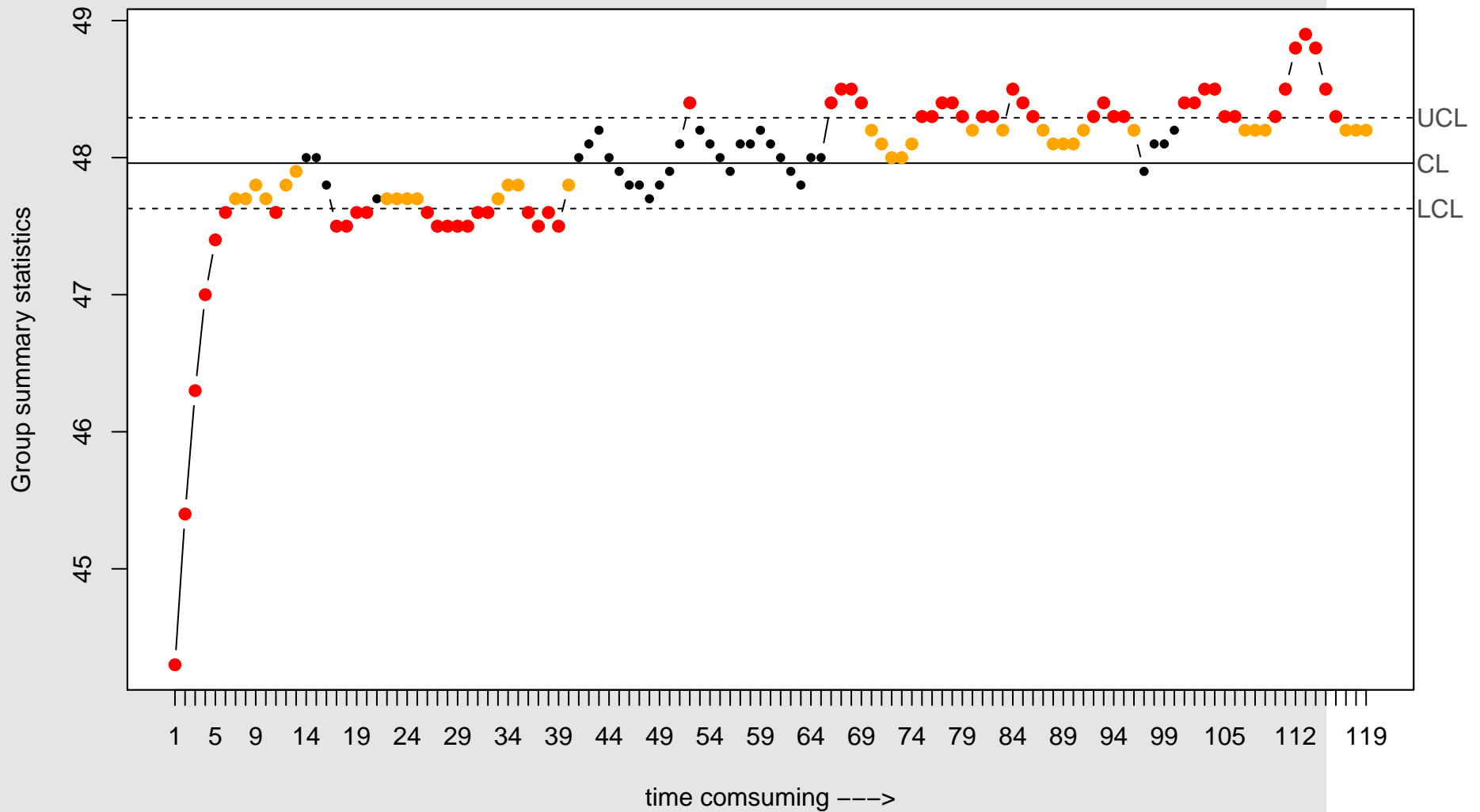
Number of groups = 119
Center = 47.95966   LCL = 47.62834   Number beyond limits = 54
StdDev = 0.11044   UCL = 48.29098   Number violating runs = 69

122th column point of this product
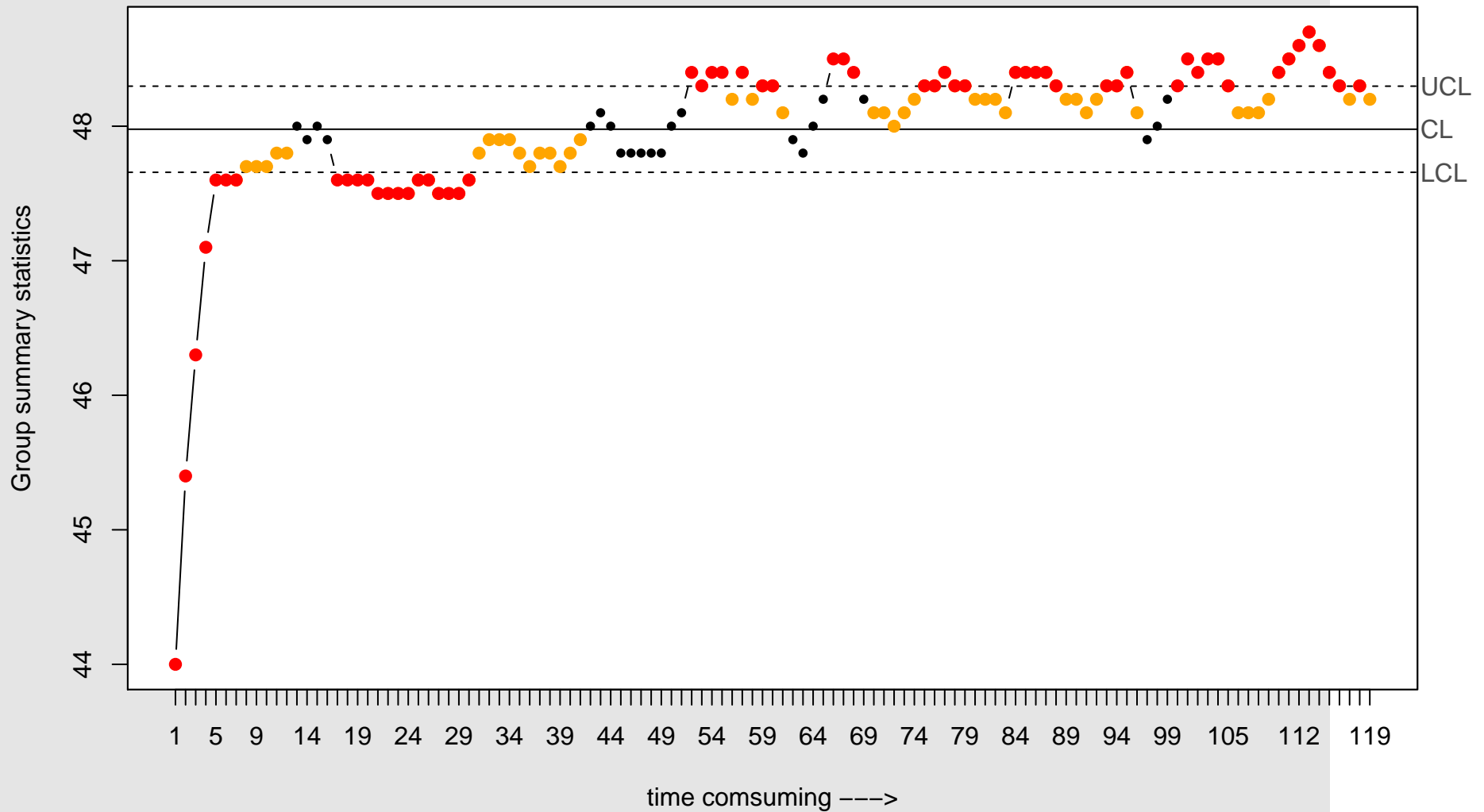
Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 47.97731   LCL = 47.65726   Number beyond limits = 58
StdDev = 0.1066835   UCL = 48.29736   Number violating runs = 75

123th column point of this product
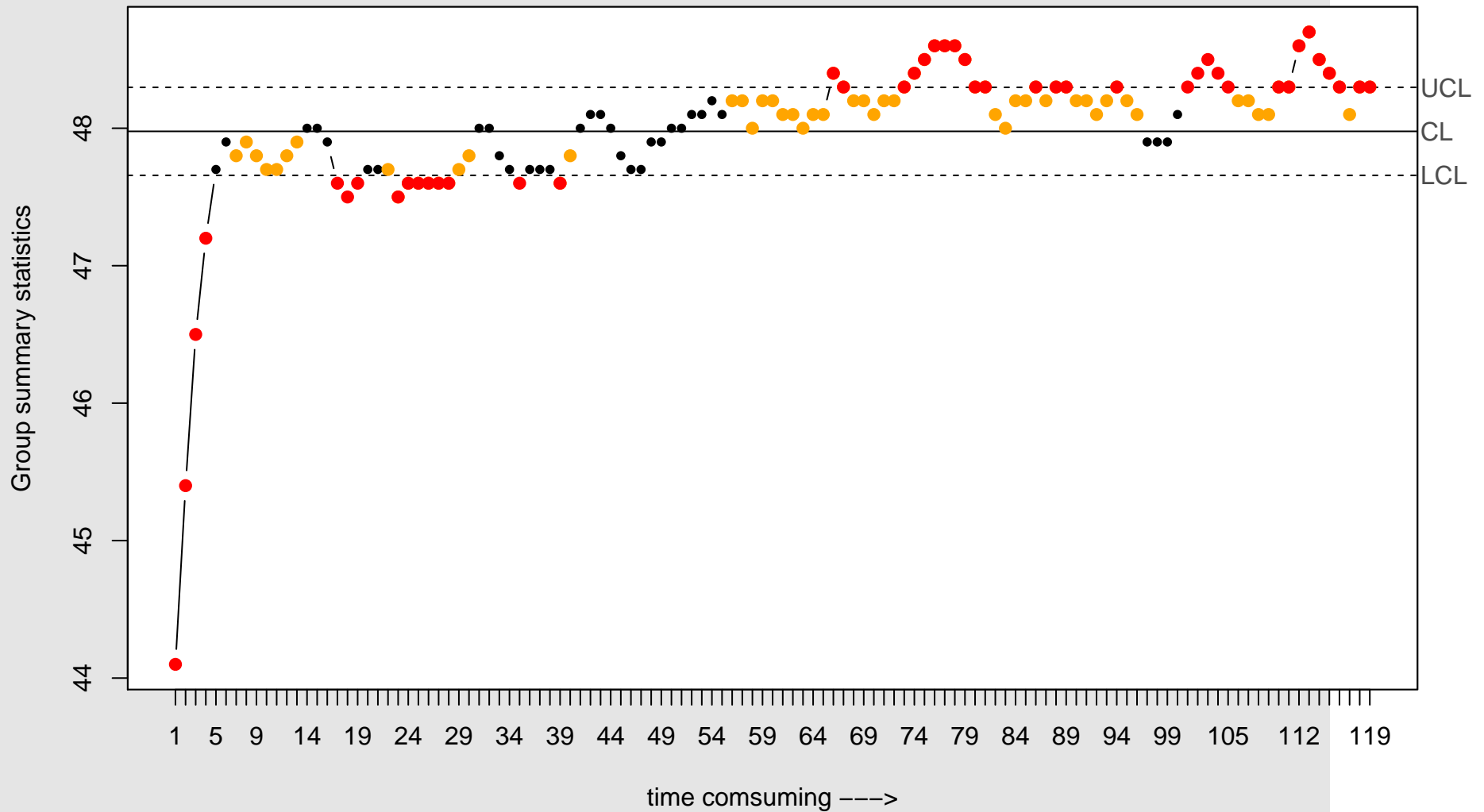
Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 47.97731   LCL = 47.65726   Number beyond limits = 44
StdDev = 0.1066835   UCL = 48.29736   Number violating runs = 73

124th column point of this product

Group summary statistics

time comsuming ––––>
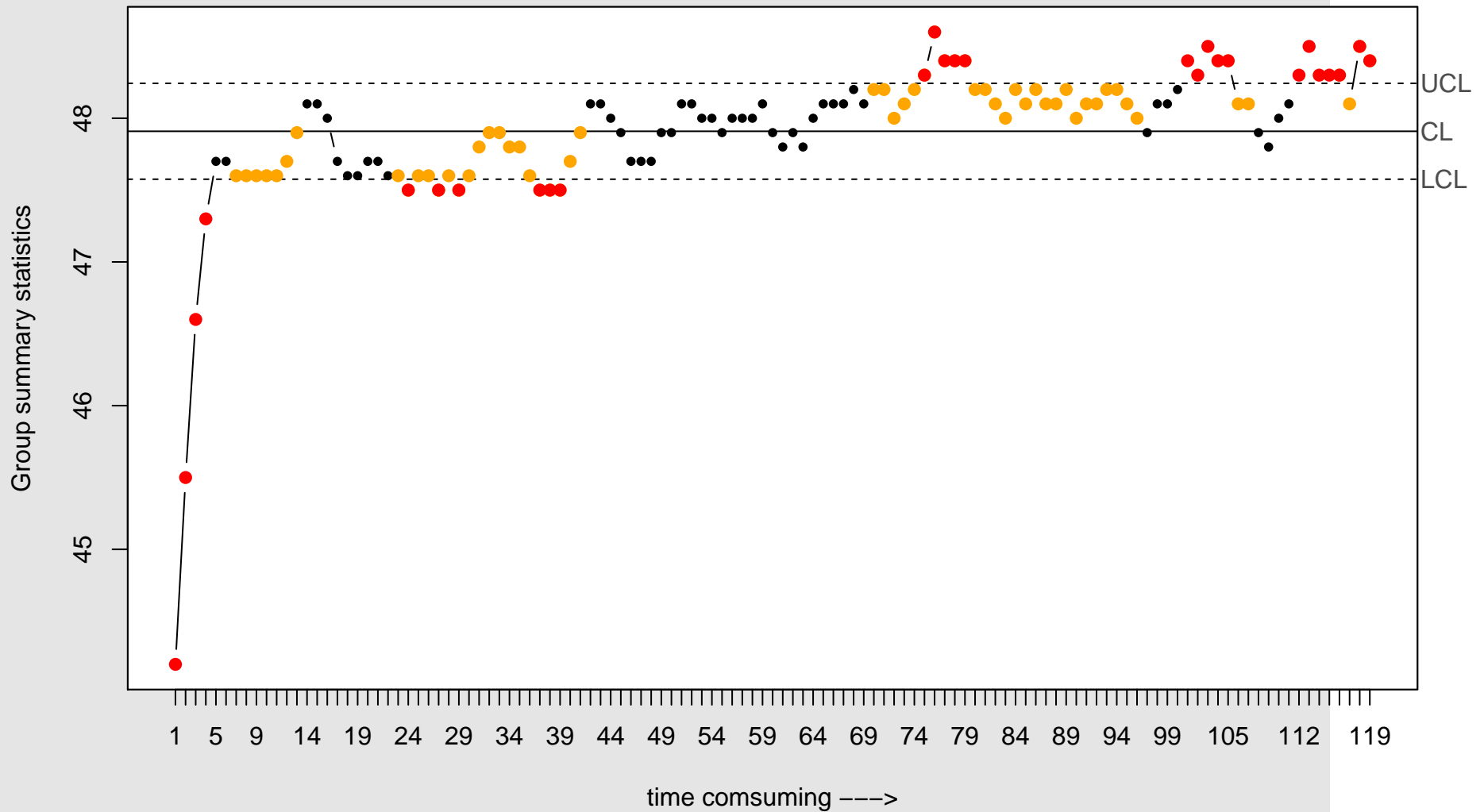
Number of groups = 119
Center = 47.90924   LCL = 47.57567   Number beyond limits = 27
StdDev = 0.1111912   UCL = 48.24282   Number violating runs = 61

125th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 47.89832   LCL = 47.59855   Number beyond limits = 41
StdDev = 0.09992187   UCL = 48.19808   Number violating runs = 67

126th column point of this product

Group summary statistics

time comsuming ---->
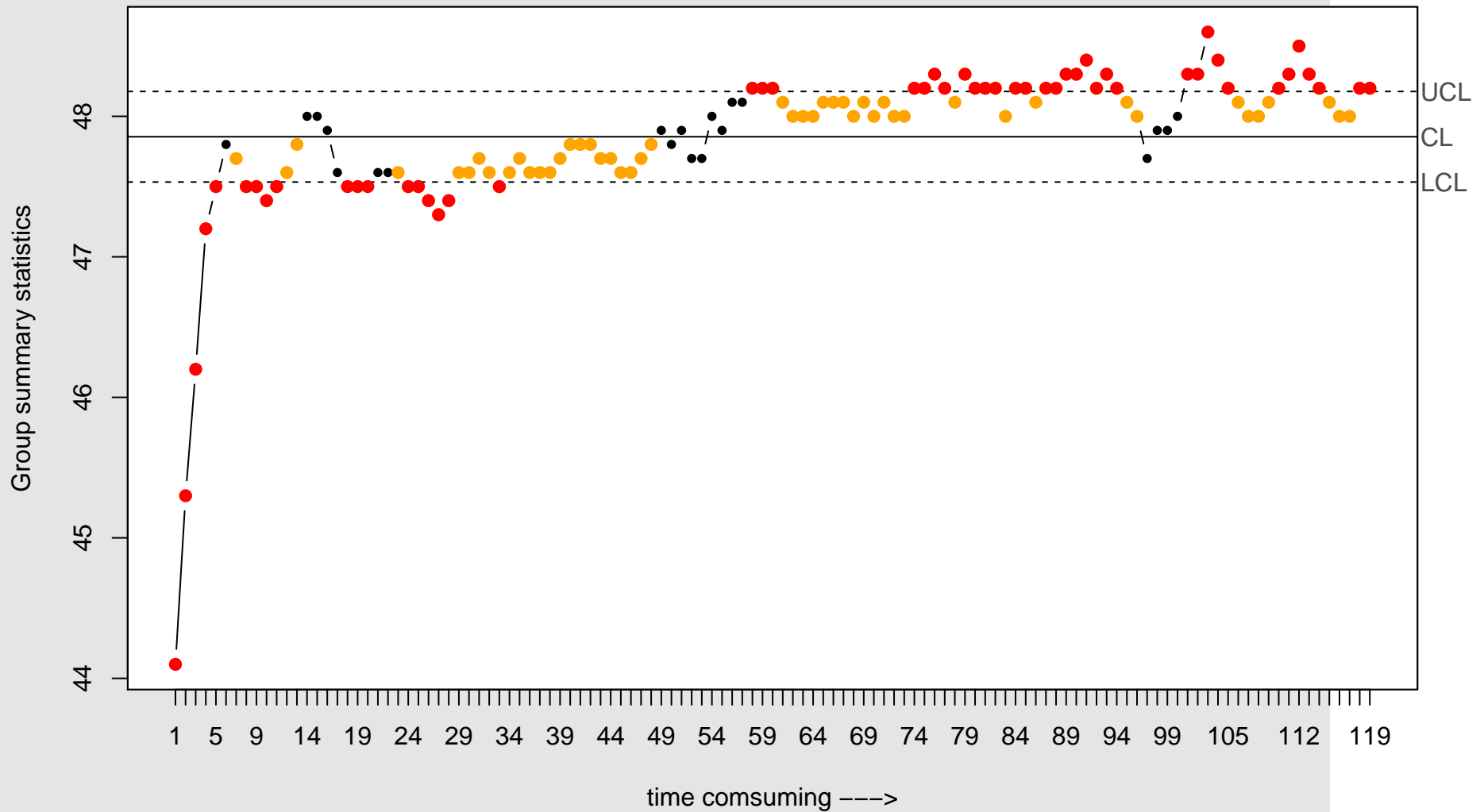
Number of groups = 119
Center = 47.85462
StdDev = 0.1074348

LCL = 47.53232
UCL = 48.17693

Number beyond limits = 51
Number violating runs = 86

127th column point of this product

Group summary statistics

time comsuming ––––>
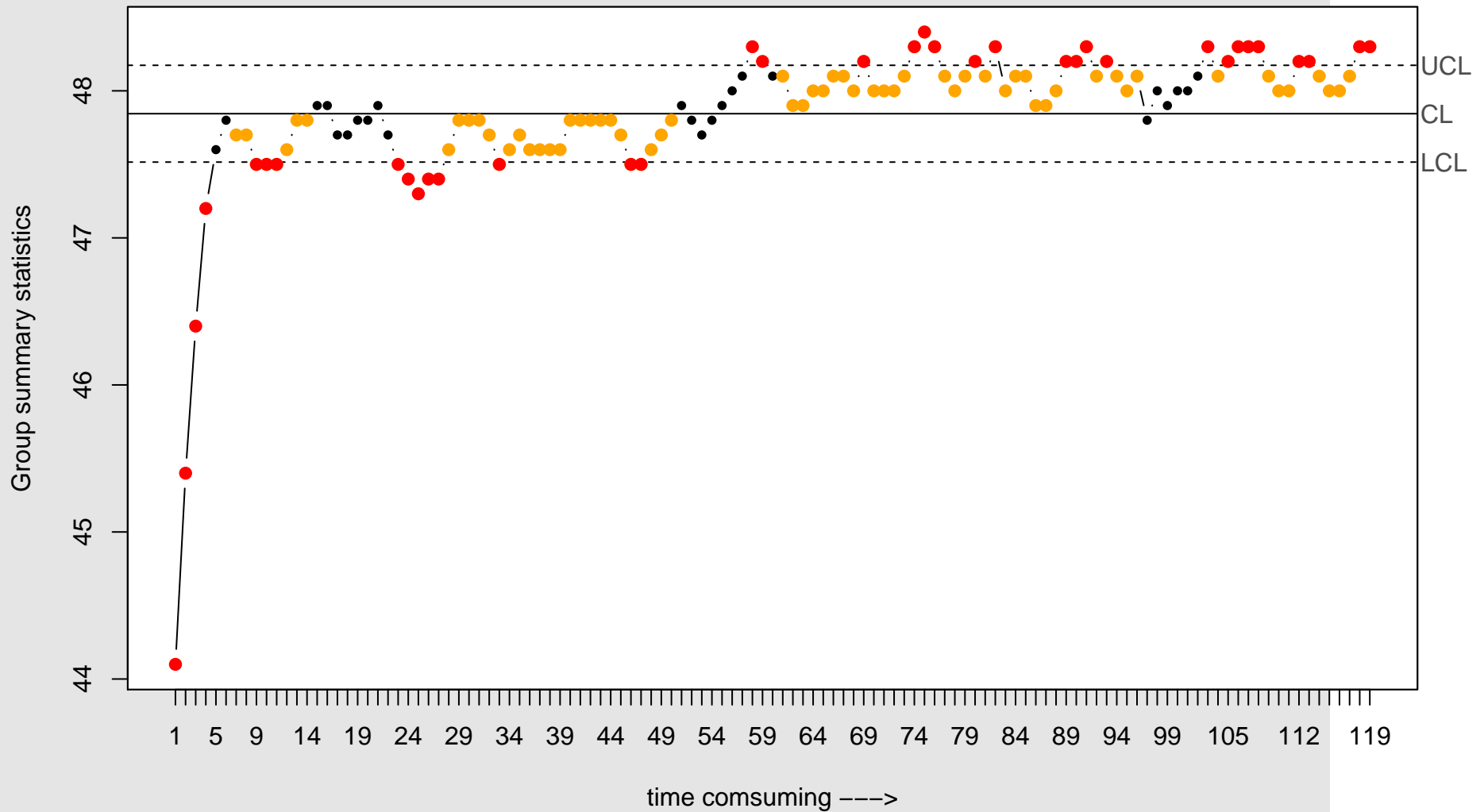
Number of groups = 119
Center = 47.84454
StdDev = 0.1096887

LCL = 47.51547
UCL = 48.1736

Number beyond limits = 36
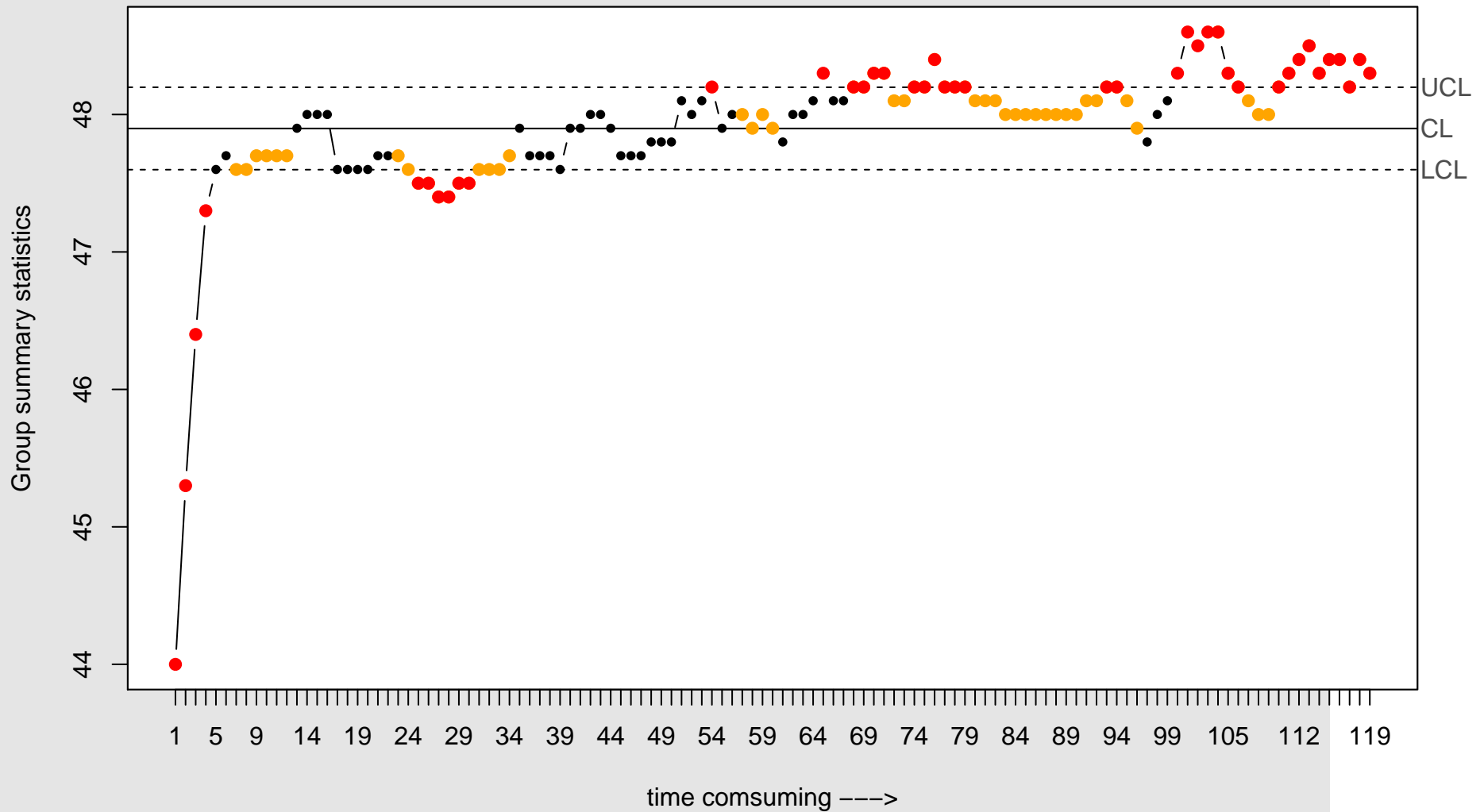Number violating runs = 83

128th column point of this product

Group summary statistics

time comsuming ––––>
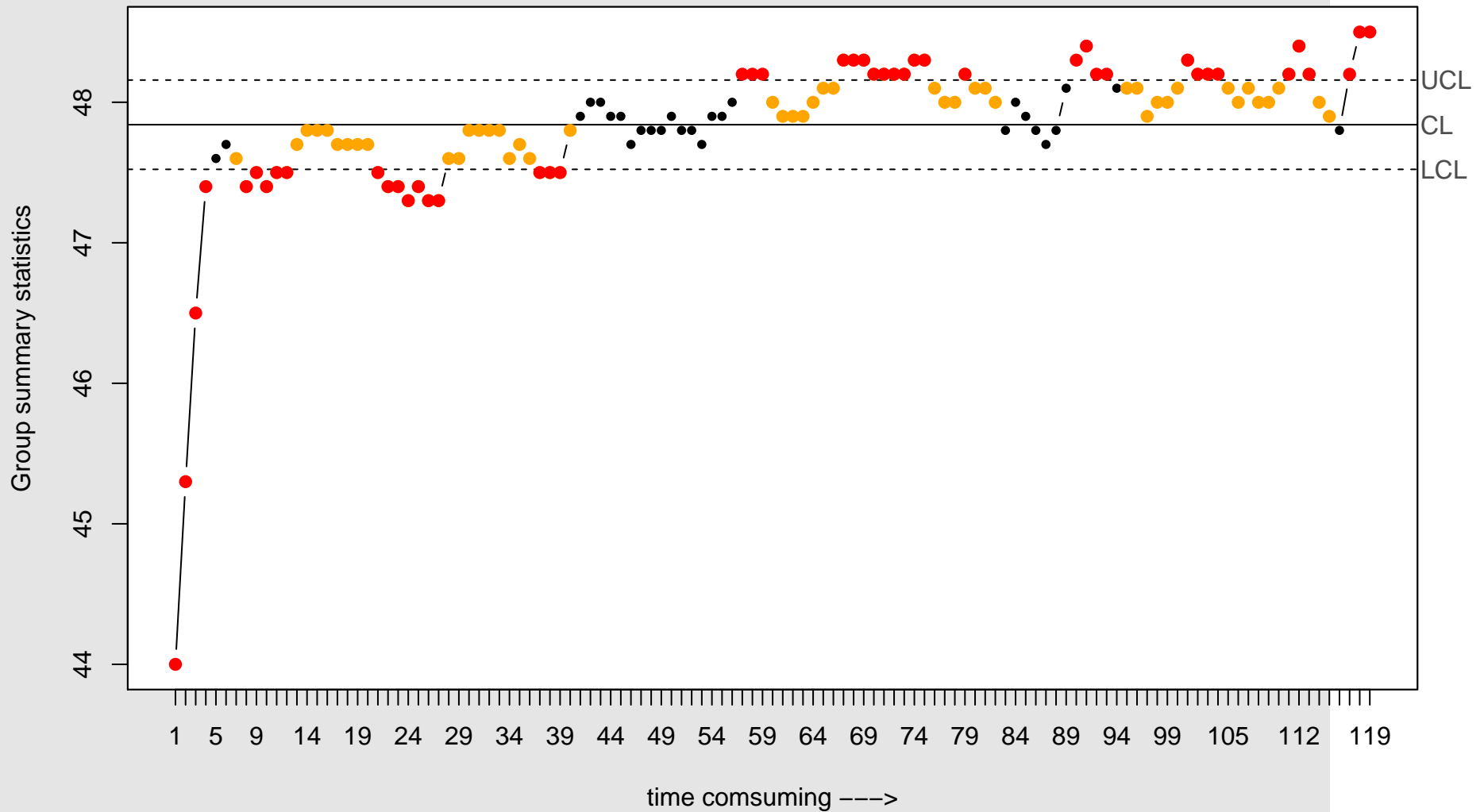
Number of groups = 119
Center = 47.84034   LCL = 47.52254   Number beyond limits = 46
StdDev = 0.1059322   UCL = 48.15813   Number violating runs = 78

129th column point of this product

Group summary statistics

time comsuming –––>
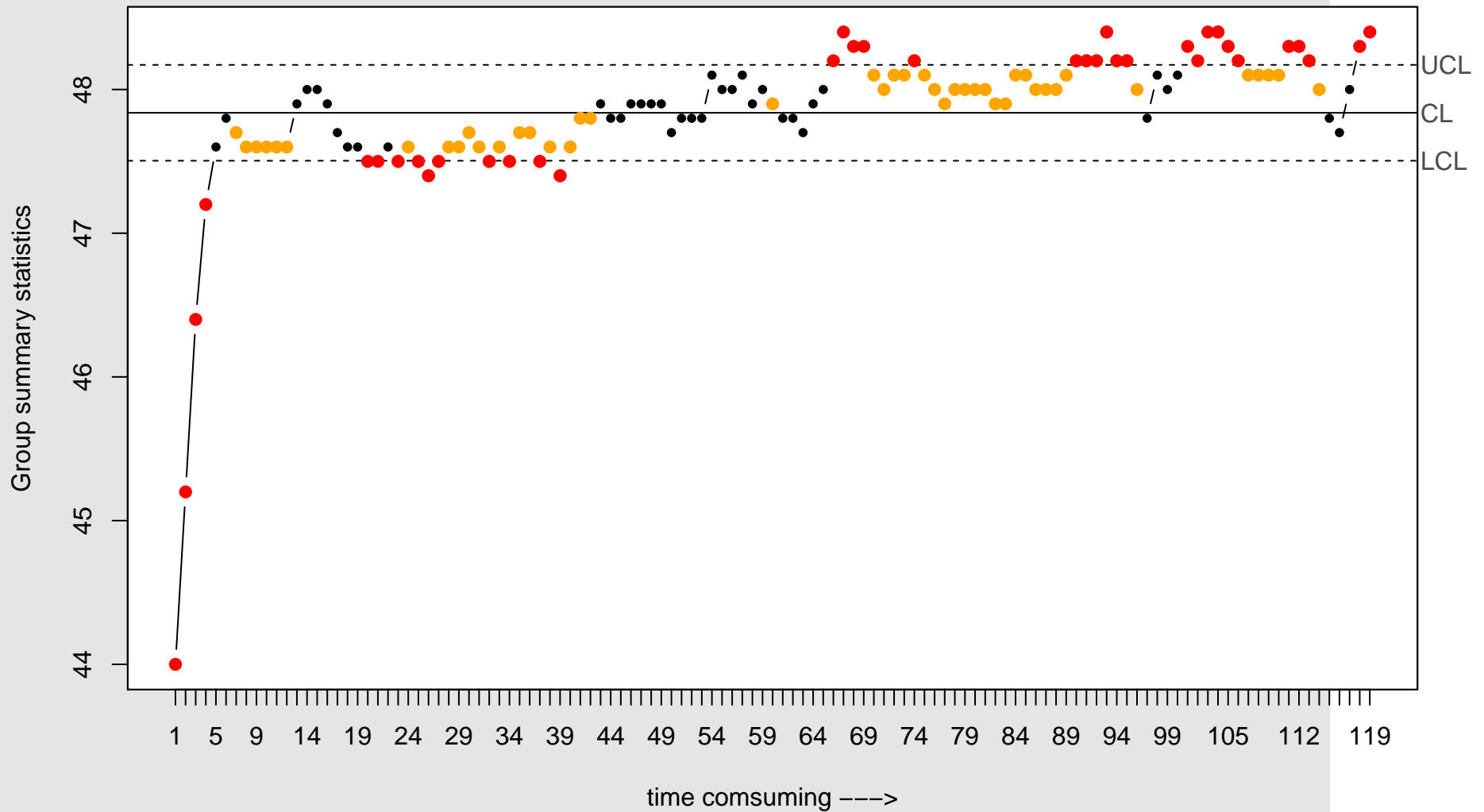
Number of groups = 119
Center = 47.83782   LCL = 47.50424   Number beyond limits = 36
StdDev = 0.1111912   UCL = 48.17139   Number violating runs = 65

130th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 47.80084   LCL = 47.46952   Number beyond limits = 31
StdDev = 0.11044   UCL = 48.13216   Number violating runs = 61

131th column point of this product

Group summary statistics

time comsuming ----->

UCL
CL
LCL
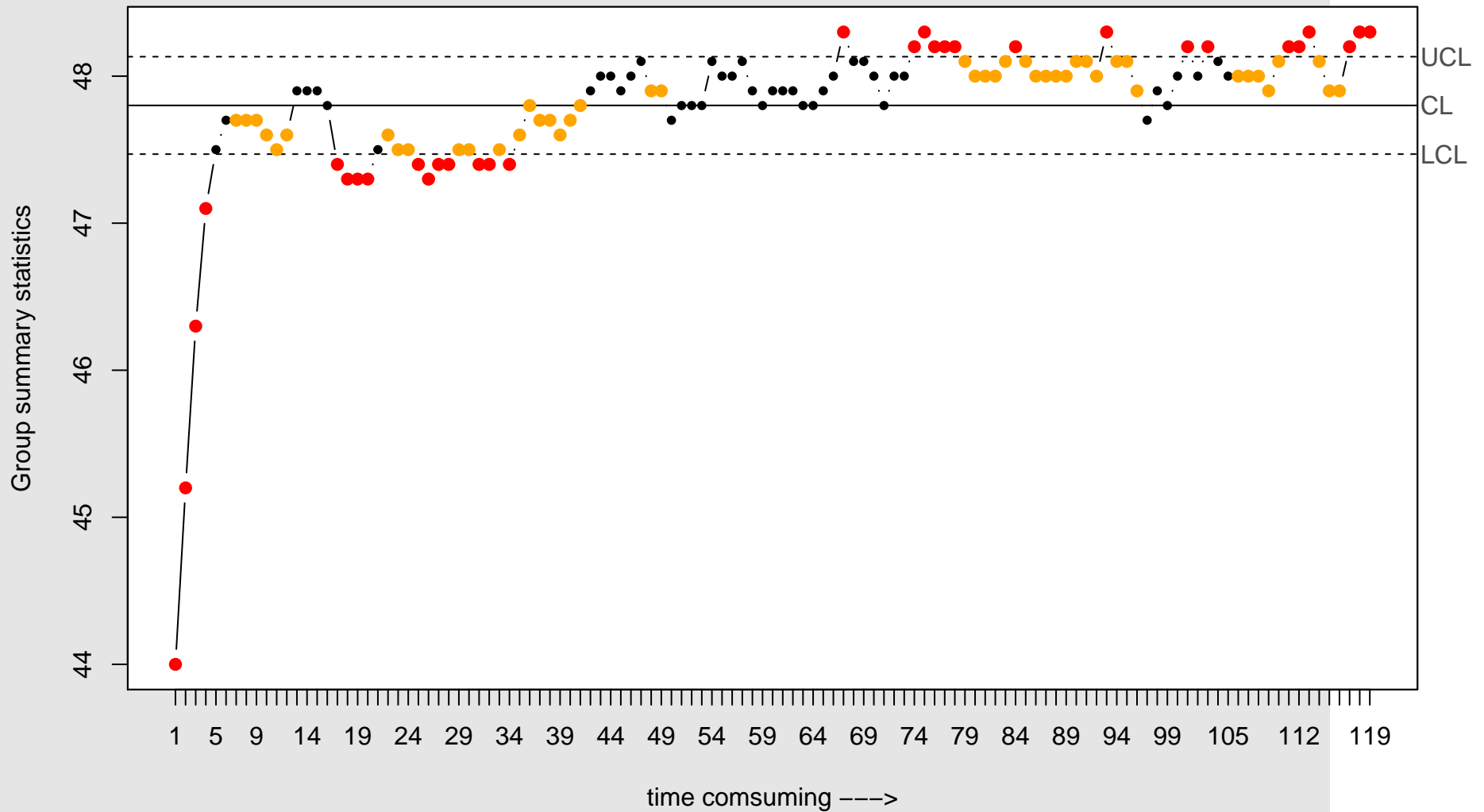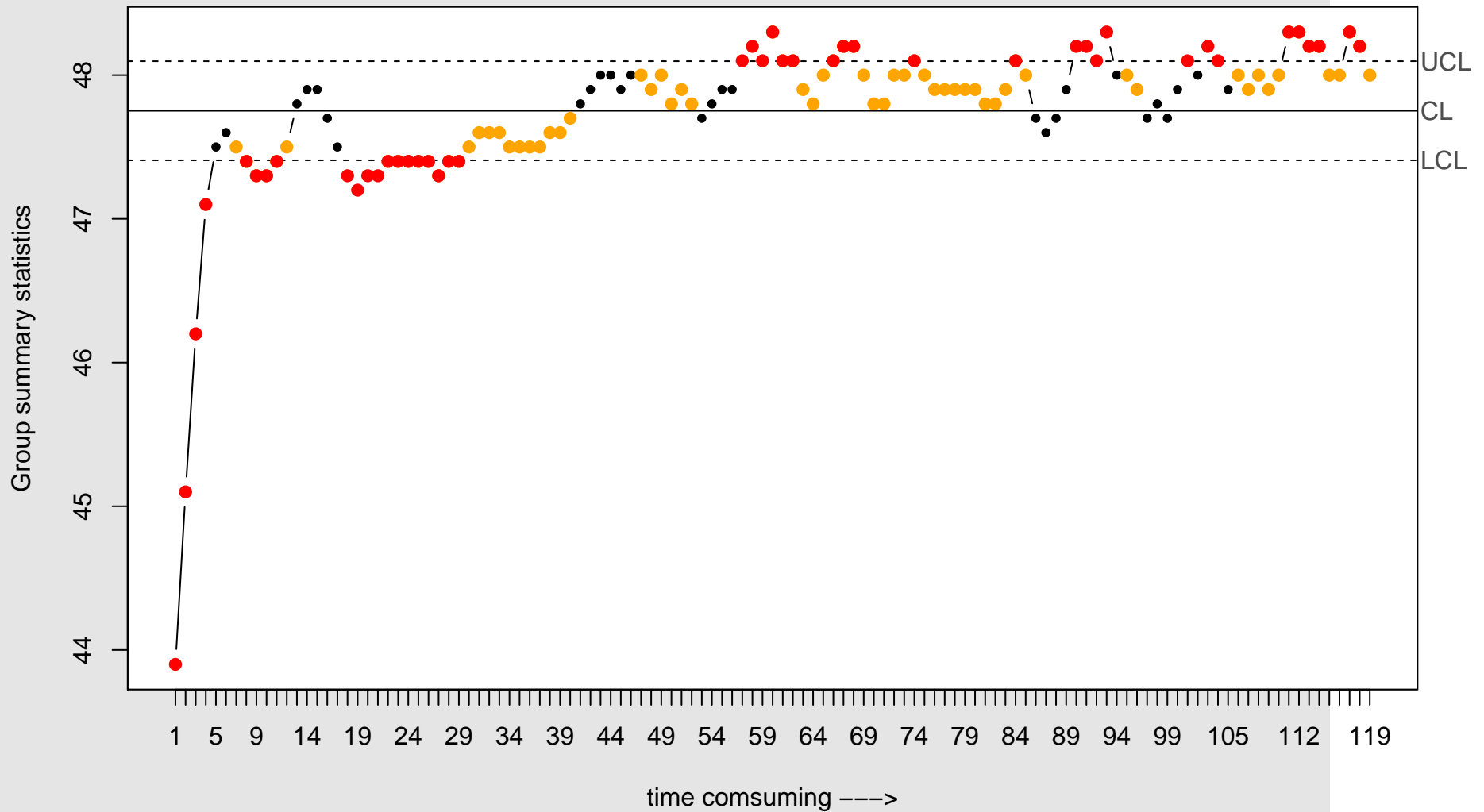
Number of groups = 119
Center = 47.7521   LCL = 47.40726   Number beyond limits = 44
StdDev = 0.1149477   UCL = 48.09694   Number violating runs = 73

132th column point of this product

Group summary statistics

time comsuming ----->
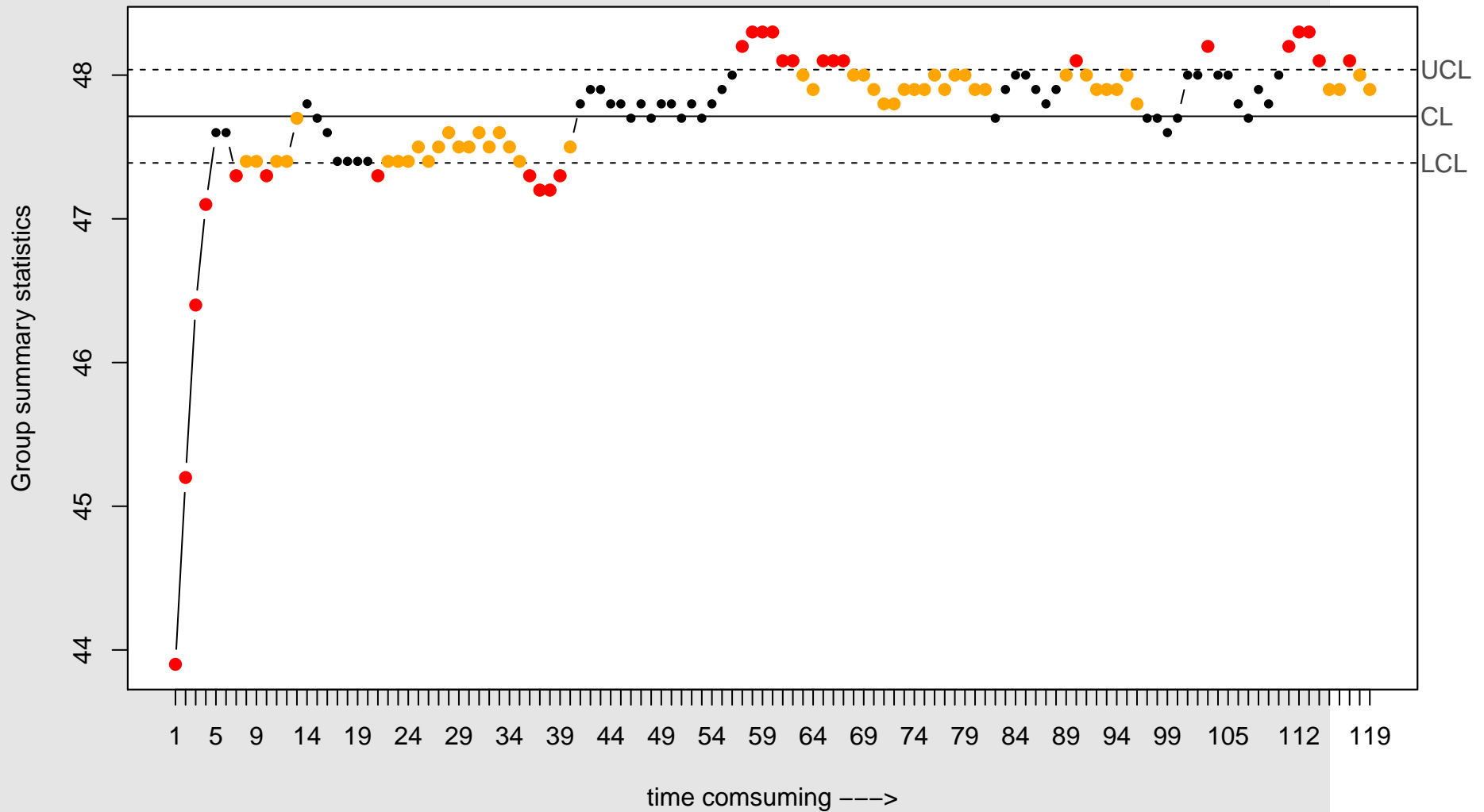
Number of groups = 119
Center = 47.71345
StdDev = 0.1081861

LCL = 47.38889
UCL = 48.038

Number beyond limits = 27
Number violating runs = 63

133th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 47.67563   LCL = 47.34656   Number beyond limits = 38
StdDev = 0.1096887   UCL = 48.0047   Number violating runs = 80

134th column point of this product

Group summary statistics

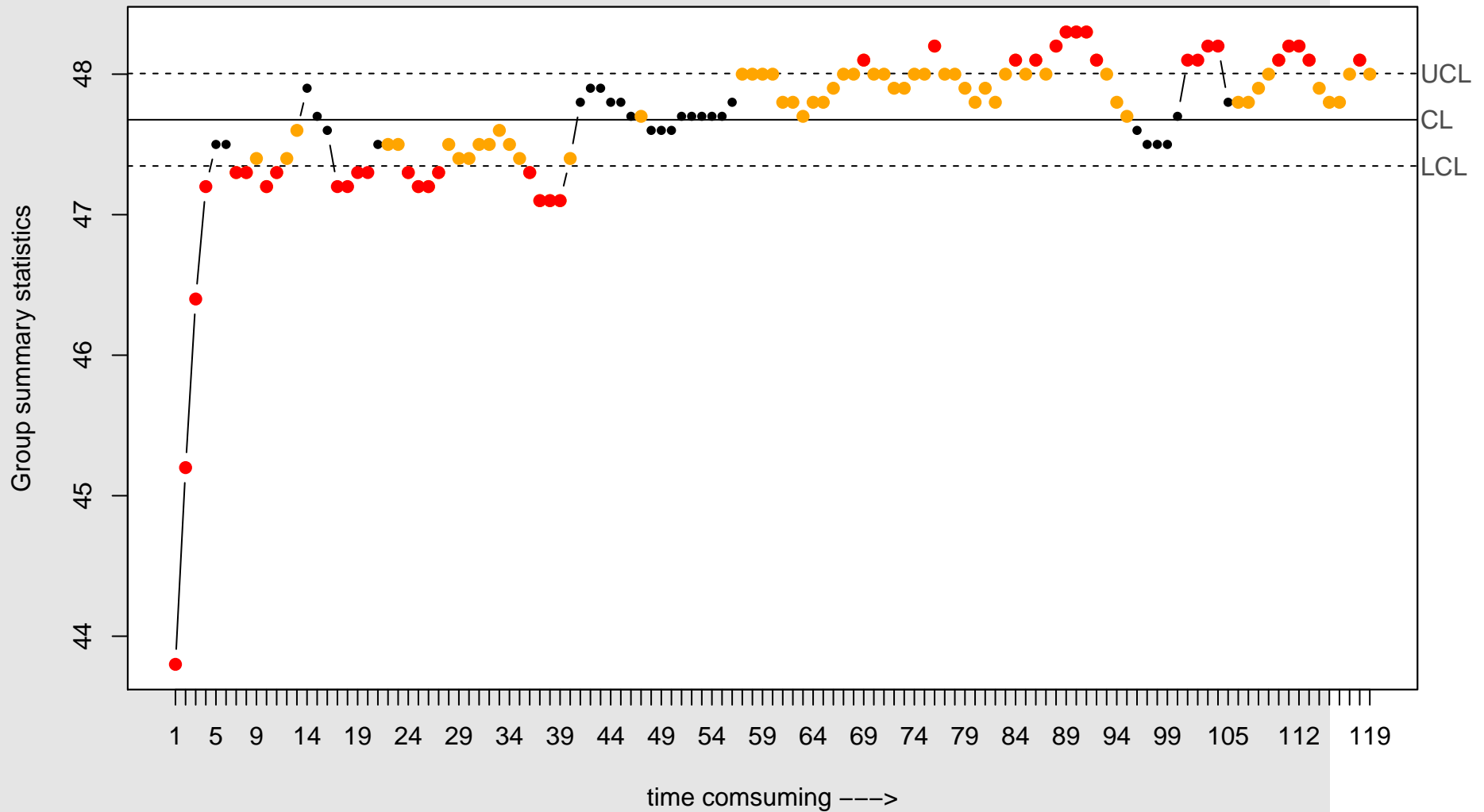time comsuming ––––>
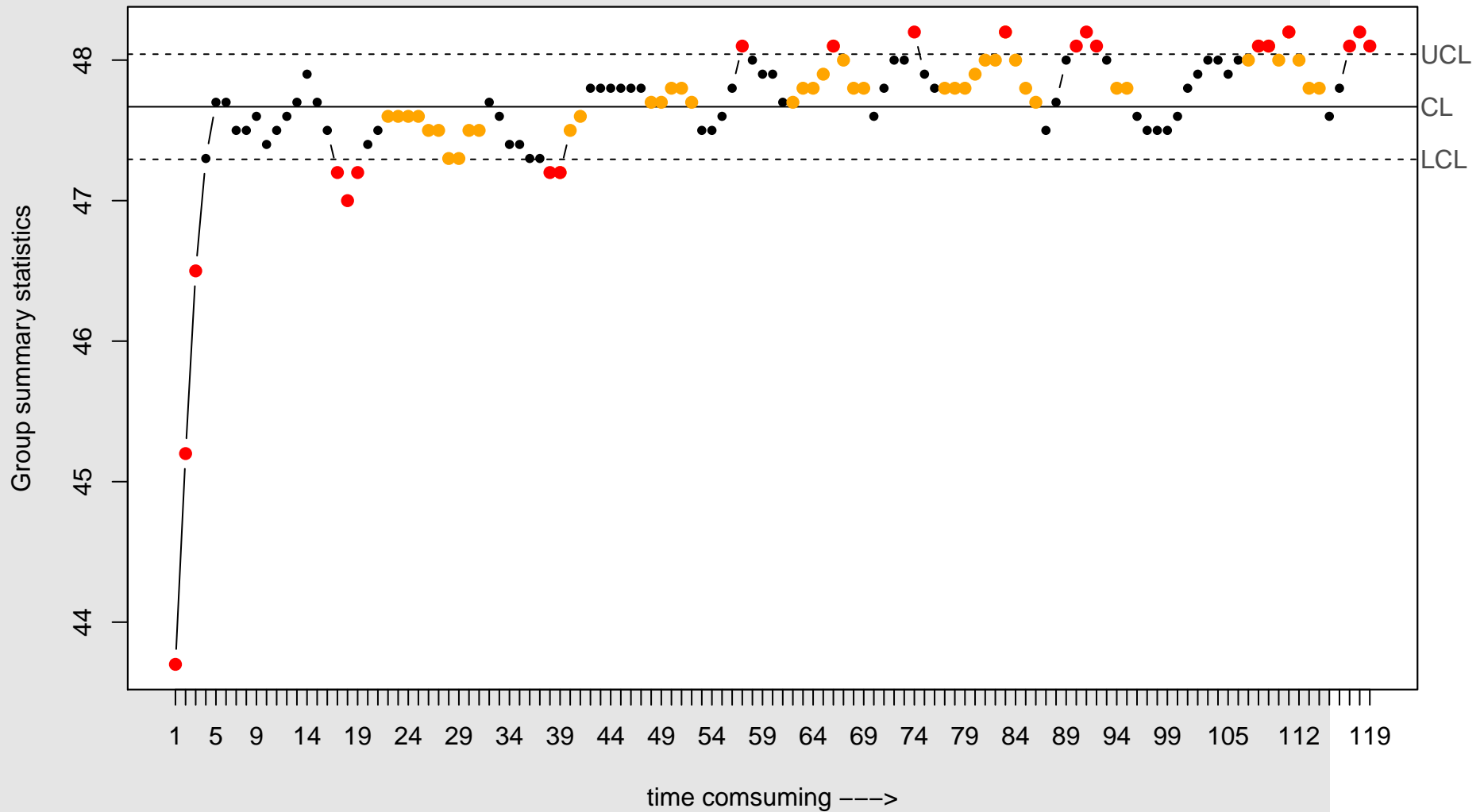
Number of groups = 119
Center = 47.66807
StdDev = 0.1247145

LCL = 47.29392
UCL = 48.04221

Number beyond limits = 21
Number violating runs = 46

135th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ---->
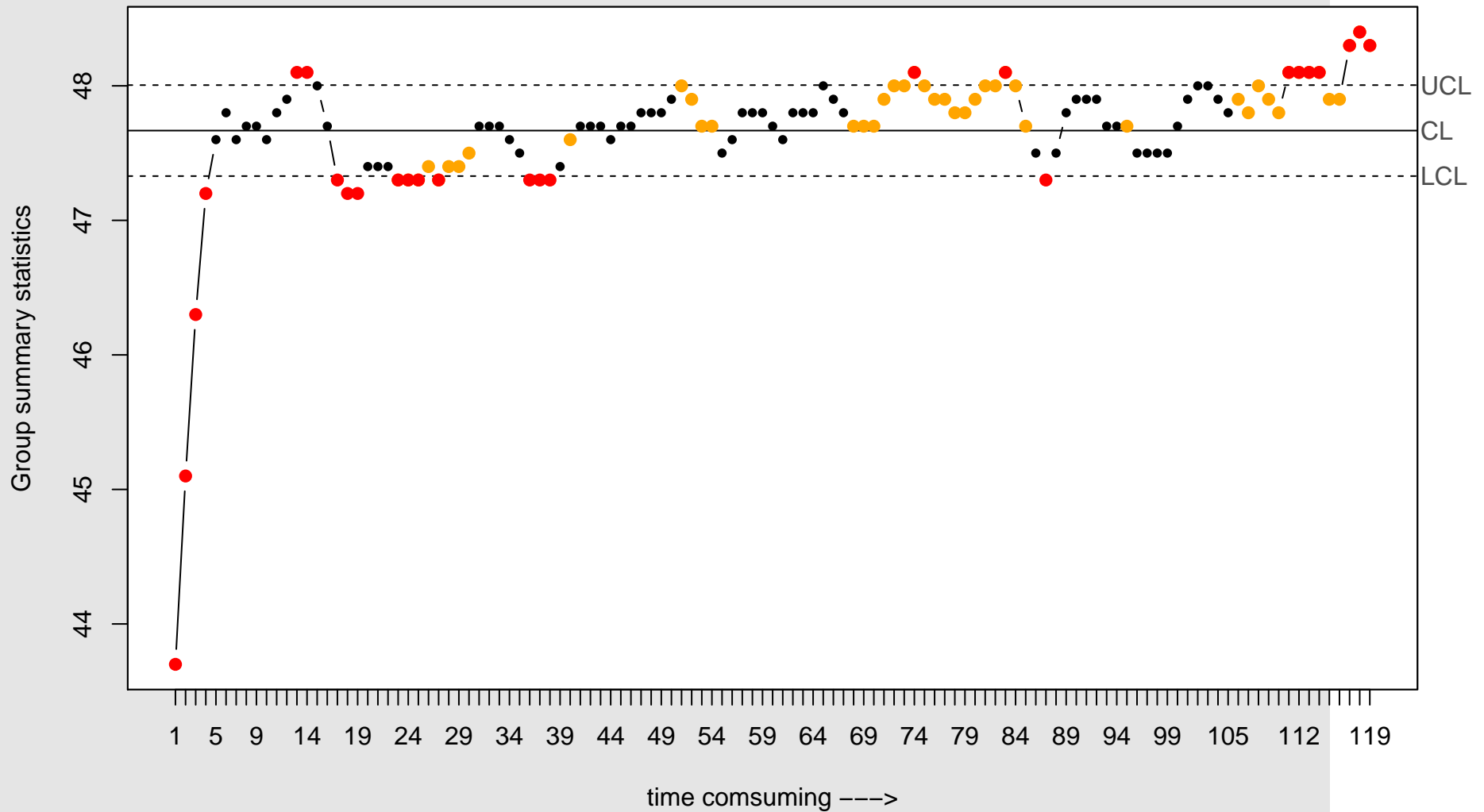
Number of groups = 119
Center = 47.66723   LCL = 47.32915   Number beyond limits = 26
StdDev = 0.1126938   UCL = 48.00531   Number violating runs = 46

136th column point of this product

Group summary statistics

time comsuming ---->
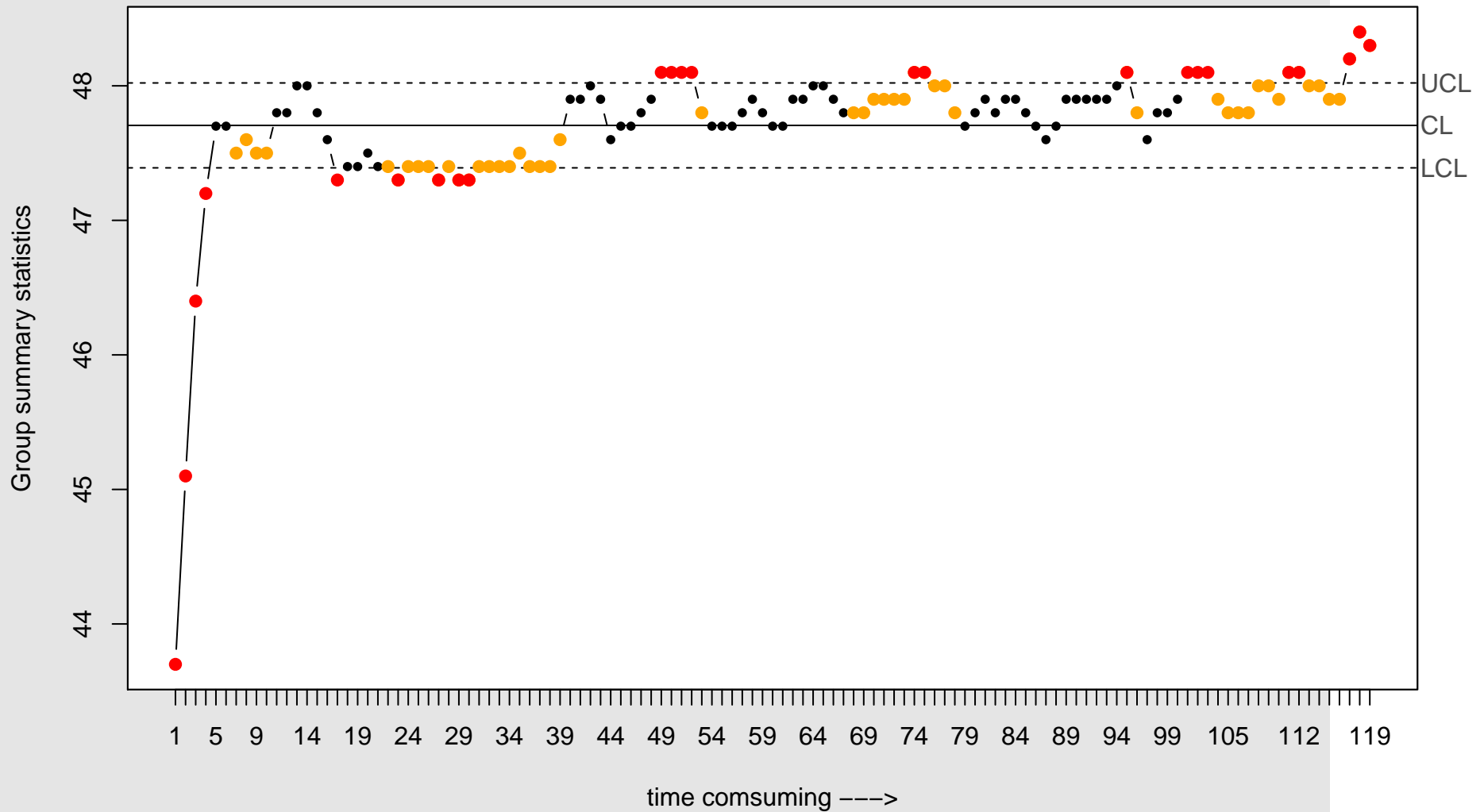
Number of groups = 119
Center = 47.70588   LCL = 47.39034   Number beyond limits = 24
StdDev = 0.1051809   UCL = 48.02143   Number violating runs = 52

137th column point of this product

Group summary statistics

time comsuming ---->
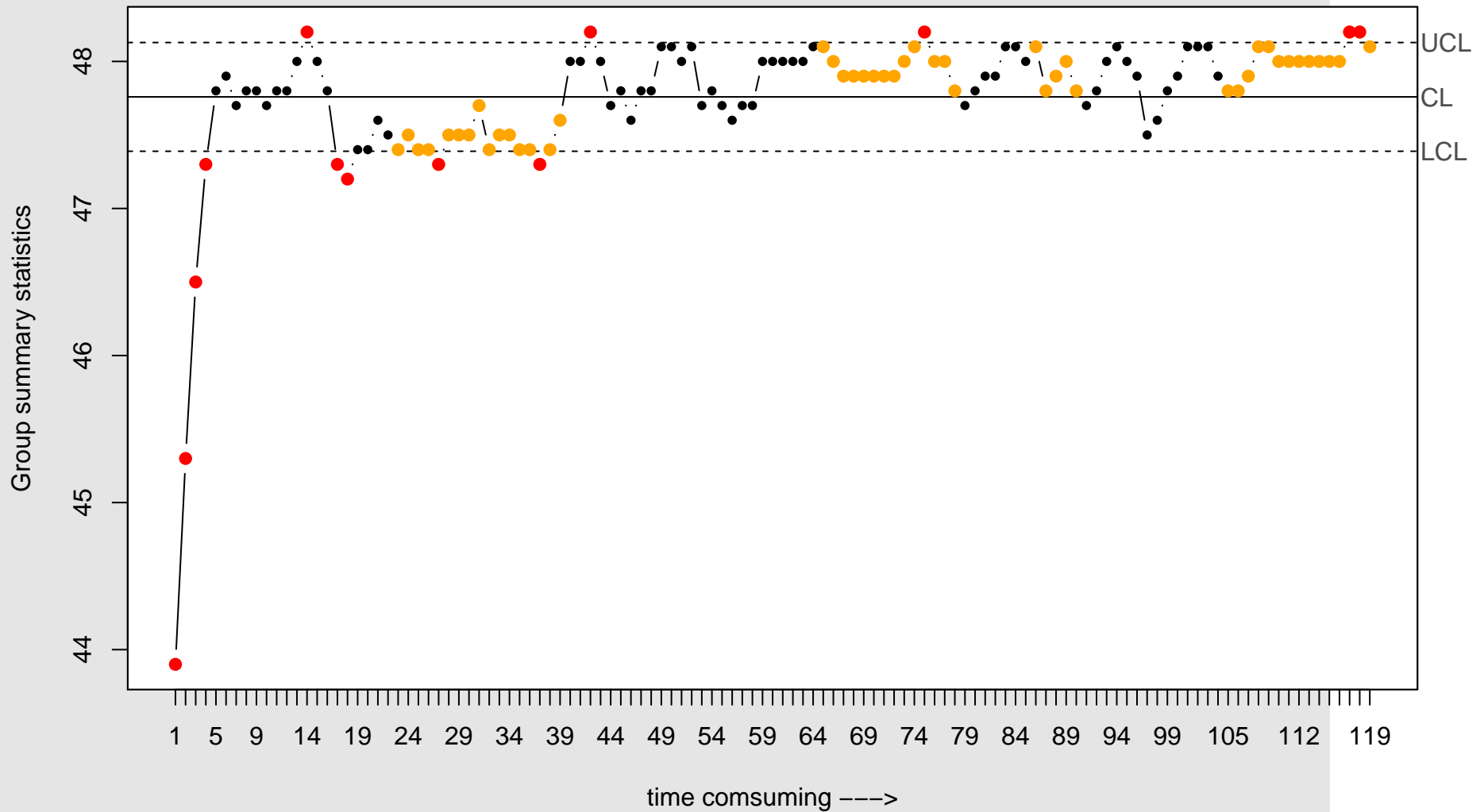
Number of groups = 119
Center = 47.75882   LCL = 47.38919   Number beyond limits = 13
StdDev = 0.1232119   UCL = 48.12846   Number violating runs = 51

138th column point of this product

Group summary statistics

time comsuming ---->
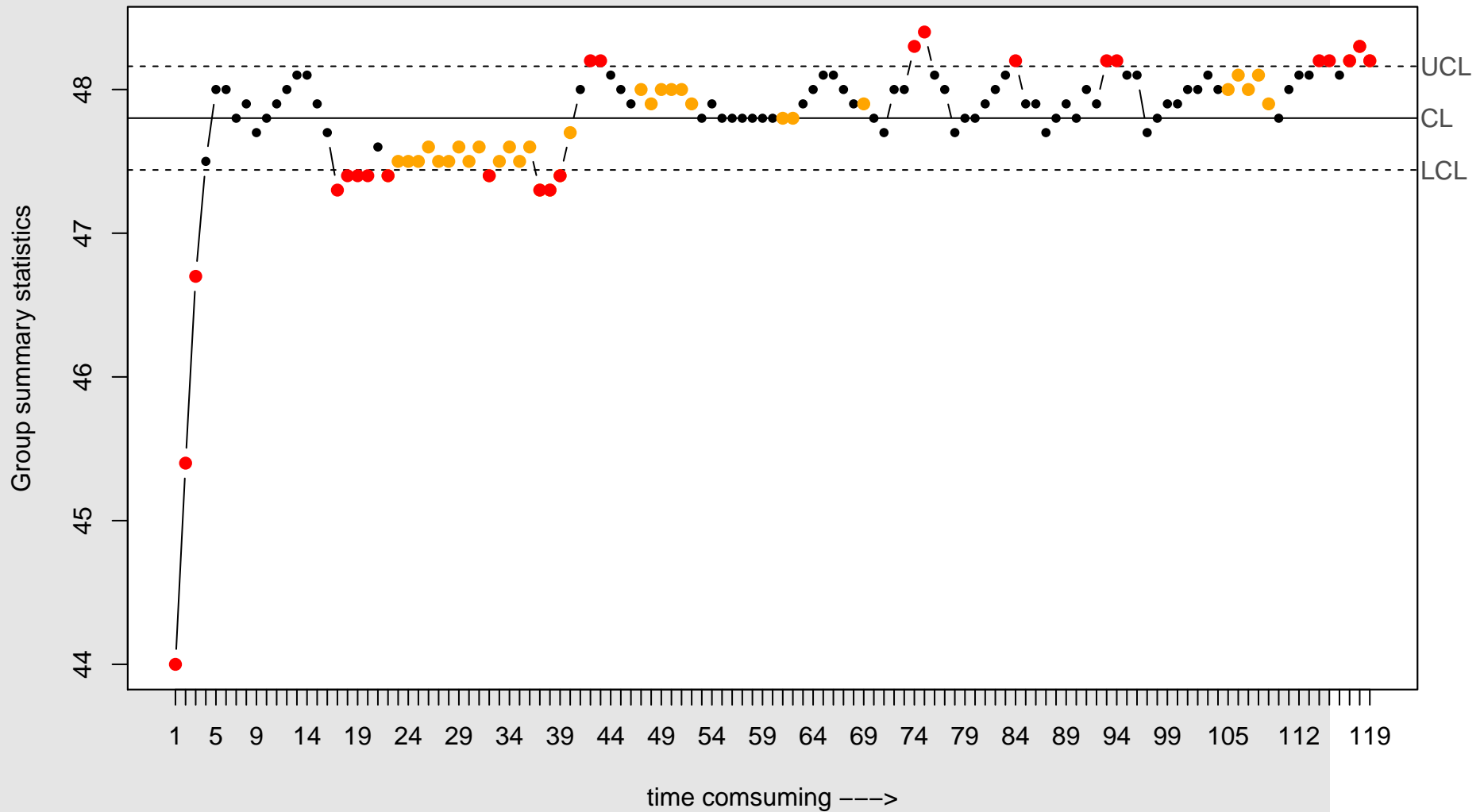
Number of groups = 119
Center = 47.80084   LCL = 47.44022   Number beyond limits = 24
StdDev = 0.1202068   UCL = 48.16146   Number violating runs = 36

139th column point of this product

Group summary statistics

time comsuming ––––>
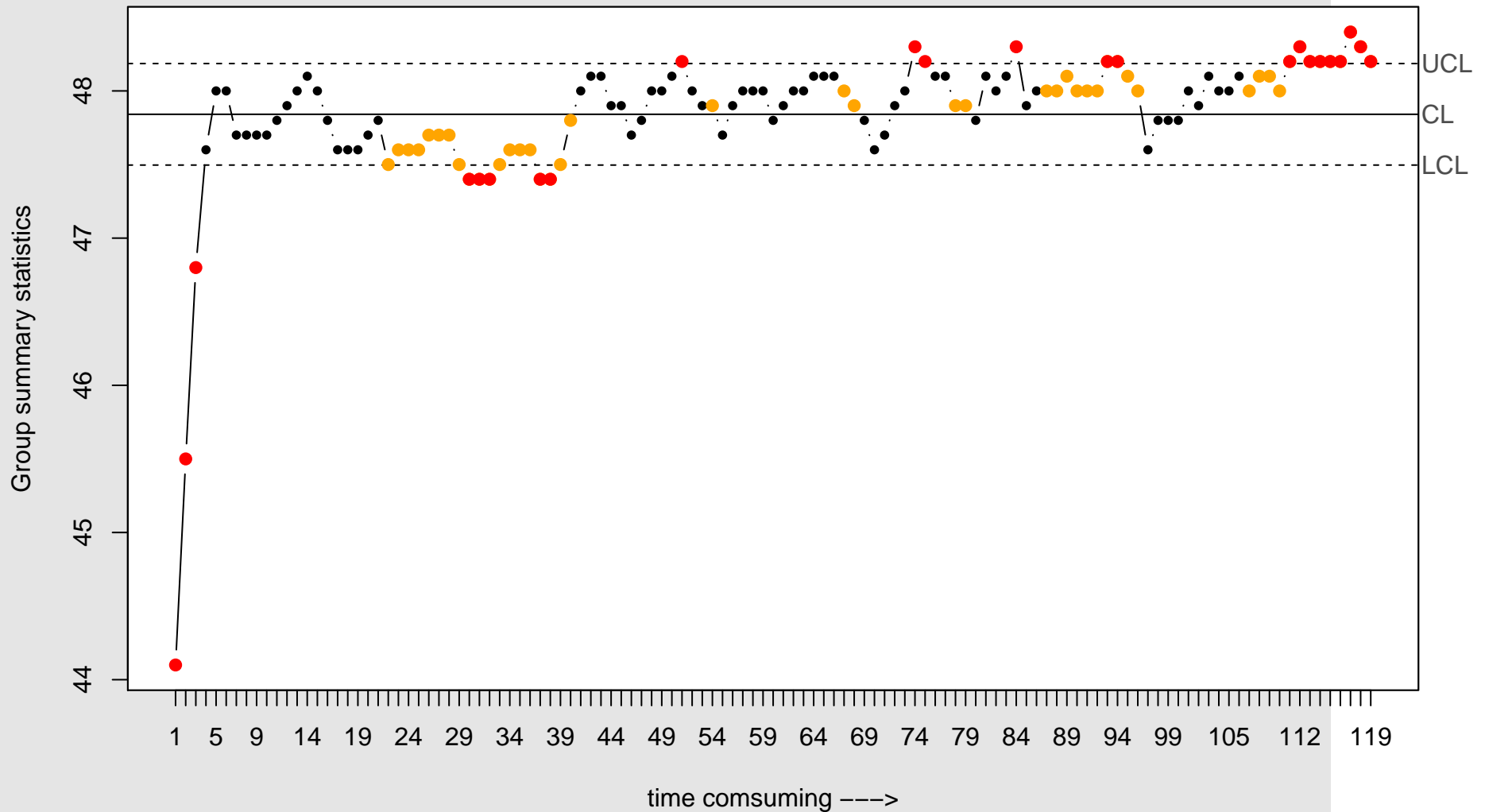
Number of groups = 119
Center = 47.84118   LCL = 47.49633   Number beyond limits = 23
StdDev = 0.1149477   UCL = 48.18602   Number violating runs = 47

140th column point of this product

Group summary statistics

time comsuming ---->
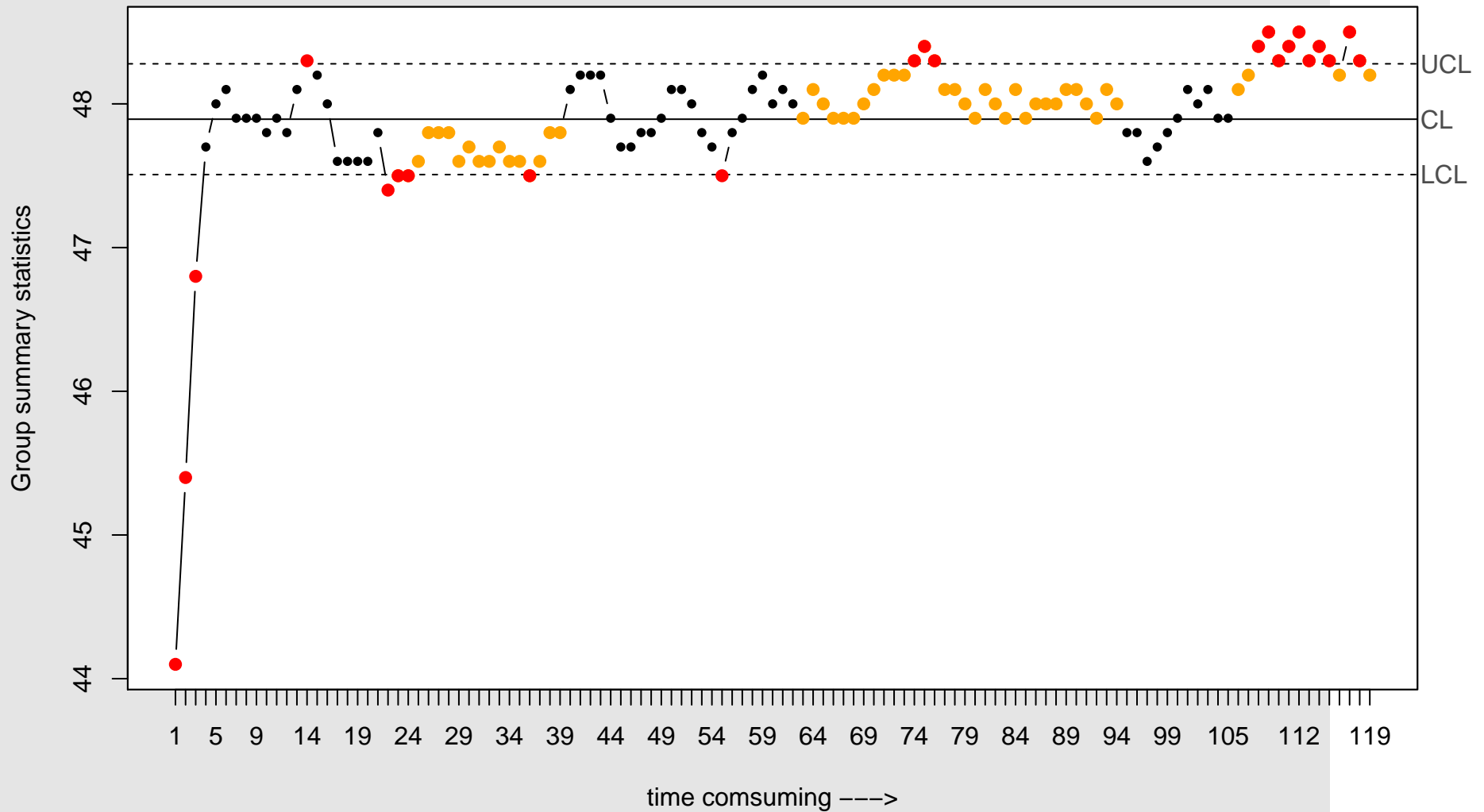
Number of groups = 119
Center = 47.89328   LCL = 47.50786   Number beyond limits = 22
StdDev = 0.128471   UCL = 48.27869   Number violating runs = 63

141th column point of this product

Group summary statistics

time comsuming ---->
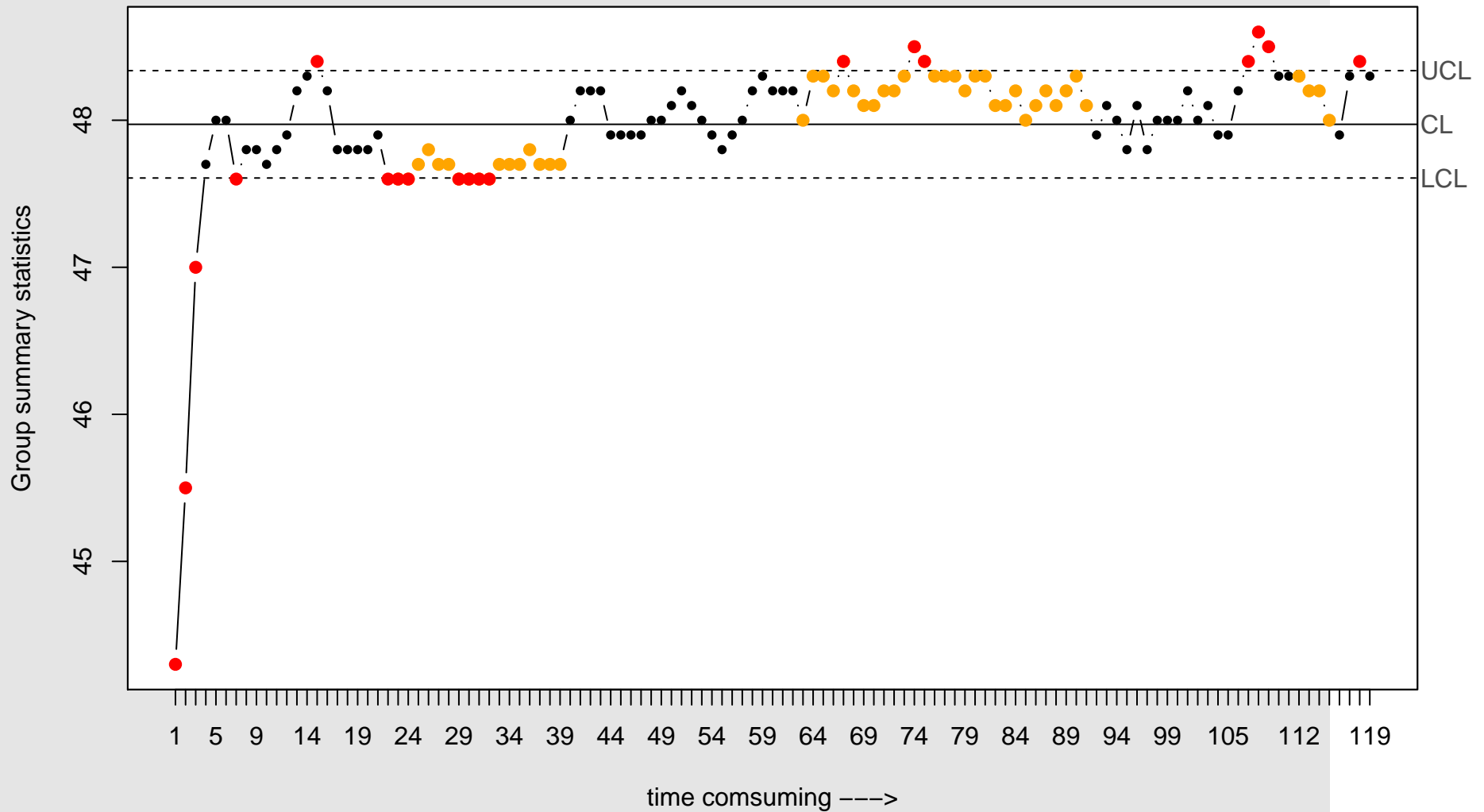
Number of groups = 119
Center = 47.97227
StdDev = 0.1217093

LCL = 47.60714
UCL = 48.3374

Number beyond limits = 19
Number violating runs = 50

142th column point of this product

Group summary statistics

time comsuming ——->
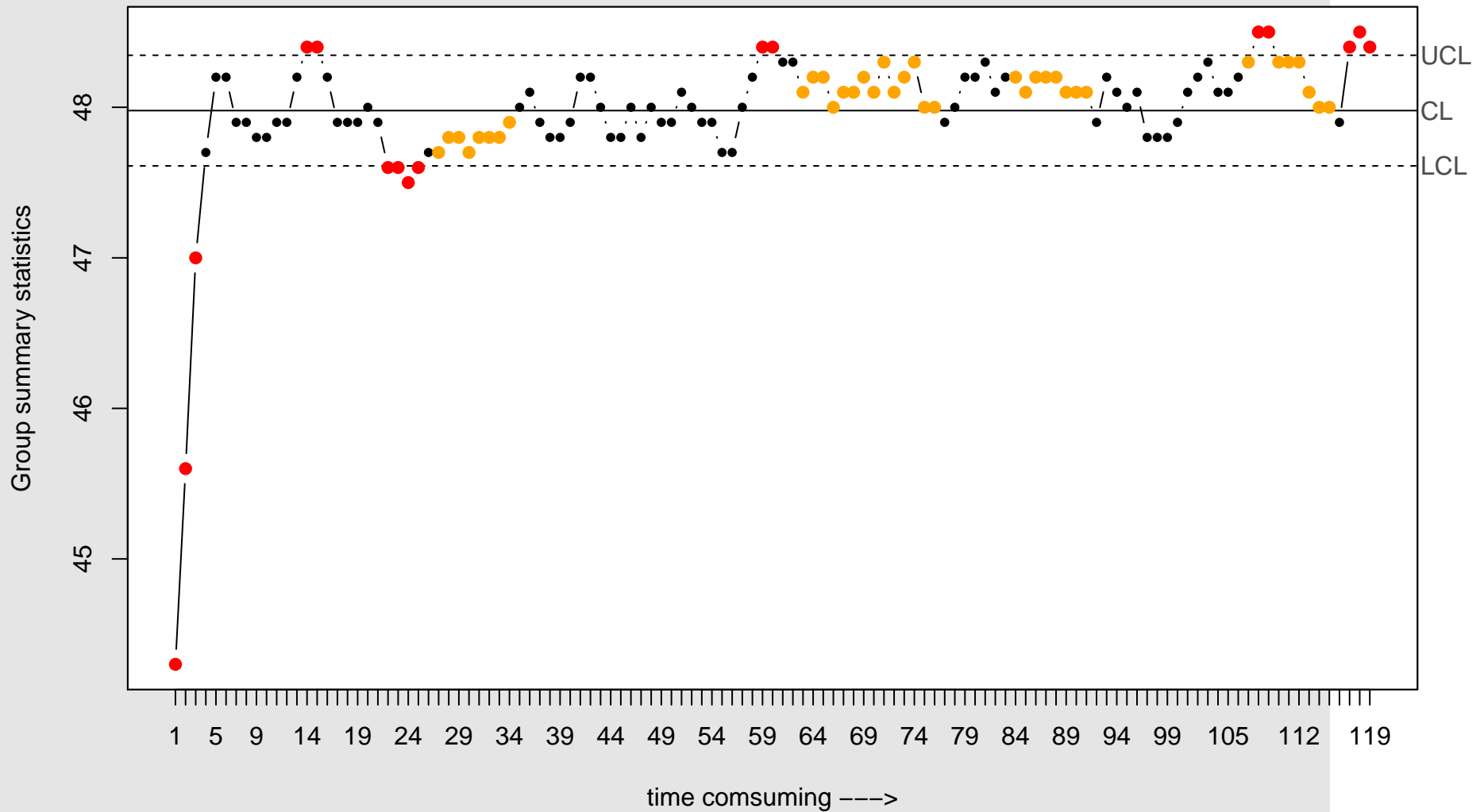
Number of groups = 119
Center = 47.97815   LCL = 47.61077   Number beyond limits = 16
StdDev = 0.1224606   UCL = 48.34553   Number violating runs = 39

143th column point of this product

Group summary statistics

time comsuming ---->
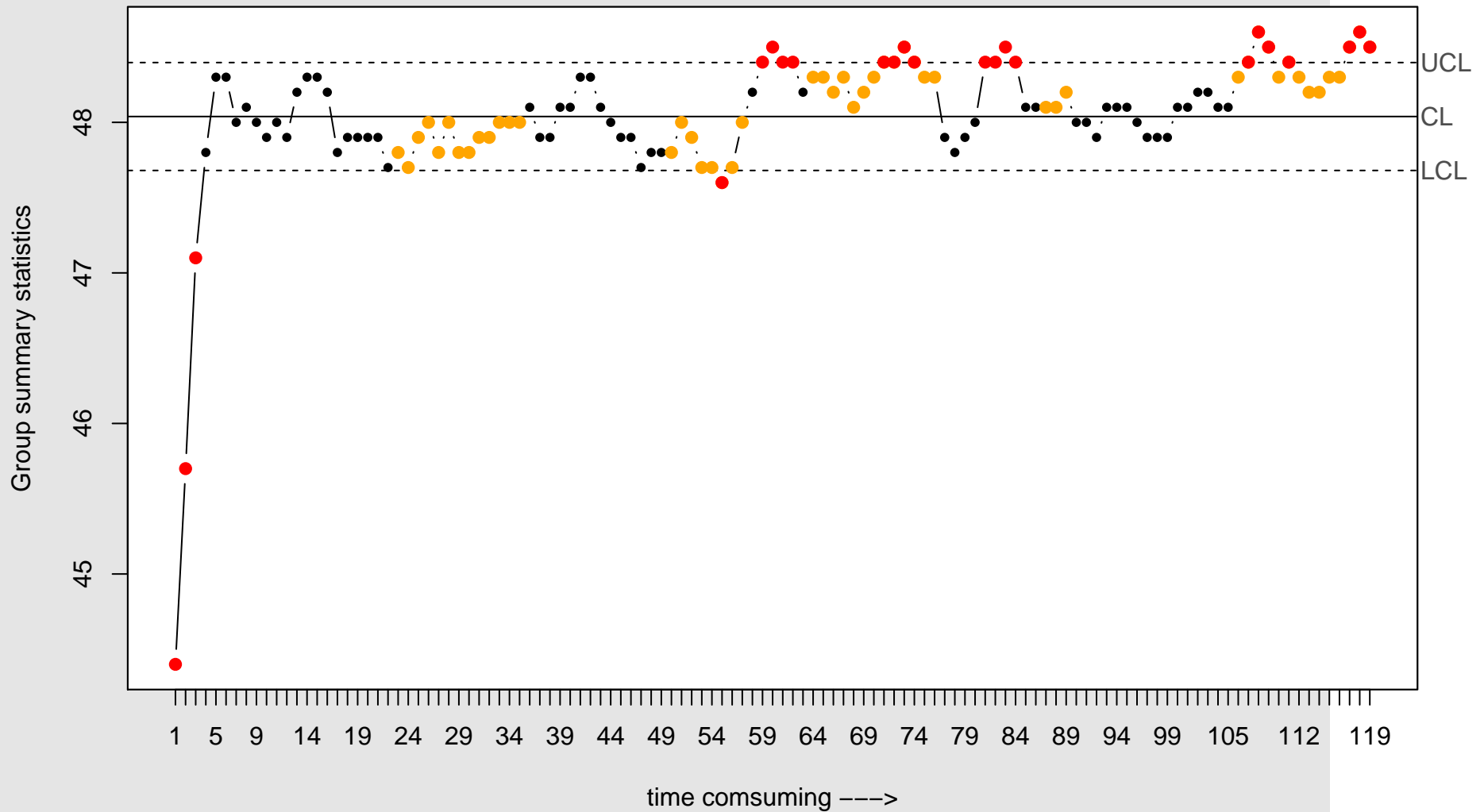
Number of groups = 119
Center = 48.03866   LCL = 47.68029   Number beyond limits = 23
StdDev = 0.1194555   UCL = 48.39702   Number violating runs = 51

144th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL
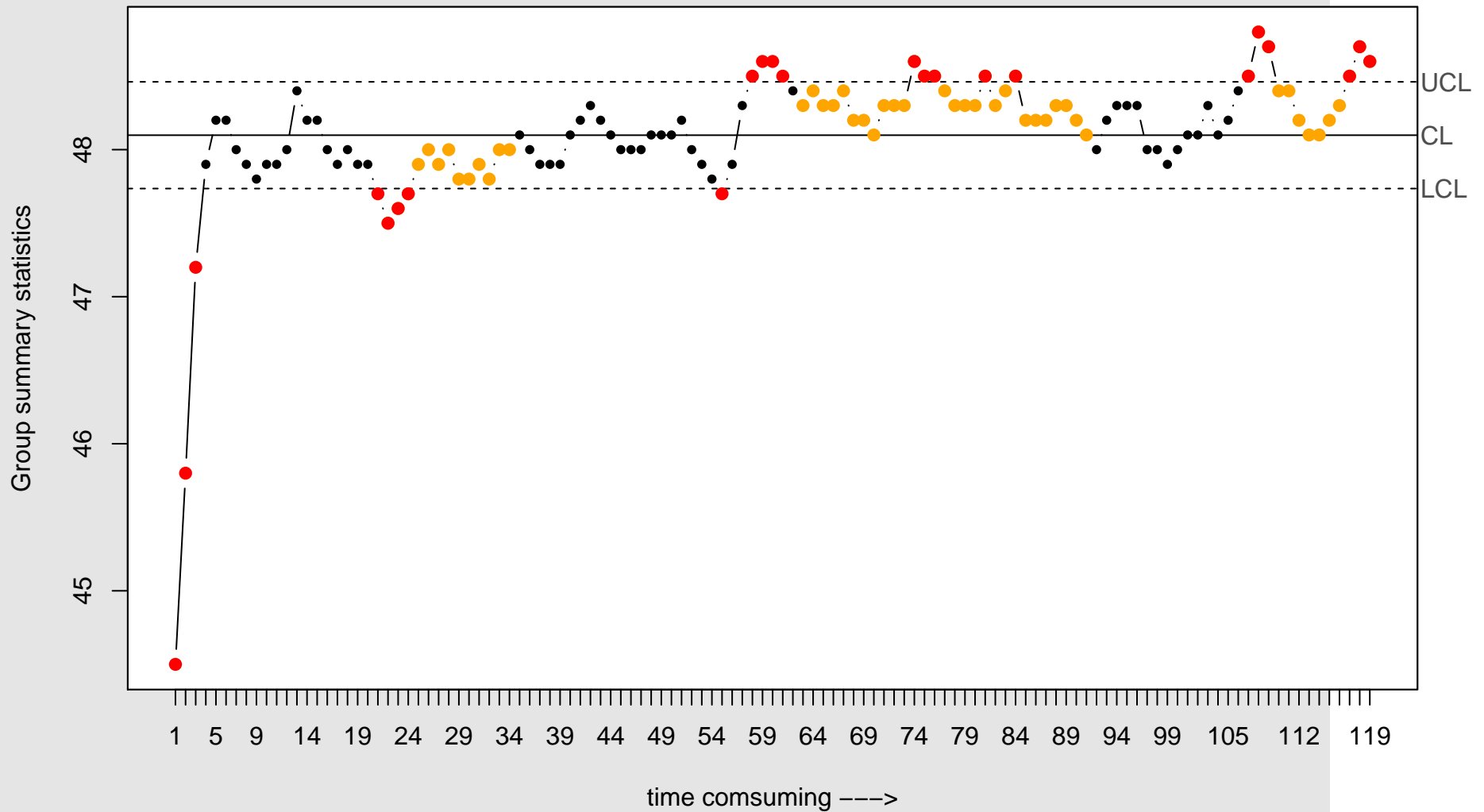
Number of groups = 119
Center = 48.09832   LCL = 47.73545   Number beyond limits = 23
StdDev = 0.120958   UCL = 48.46119   Number violating runs = 55

145th column point of this product

Group summary statistics

time comsuming ---->
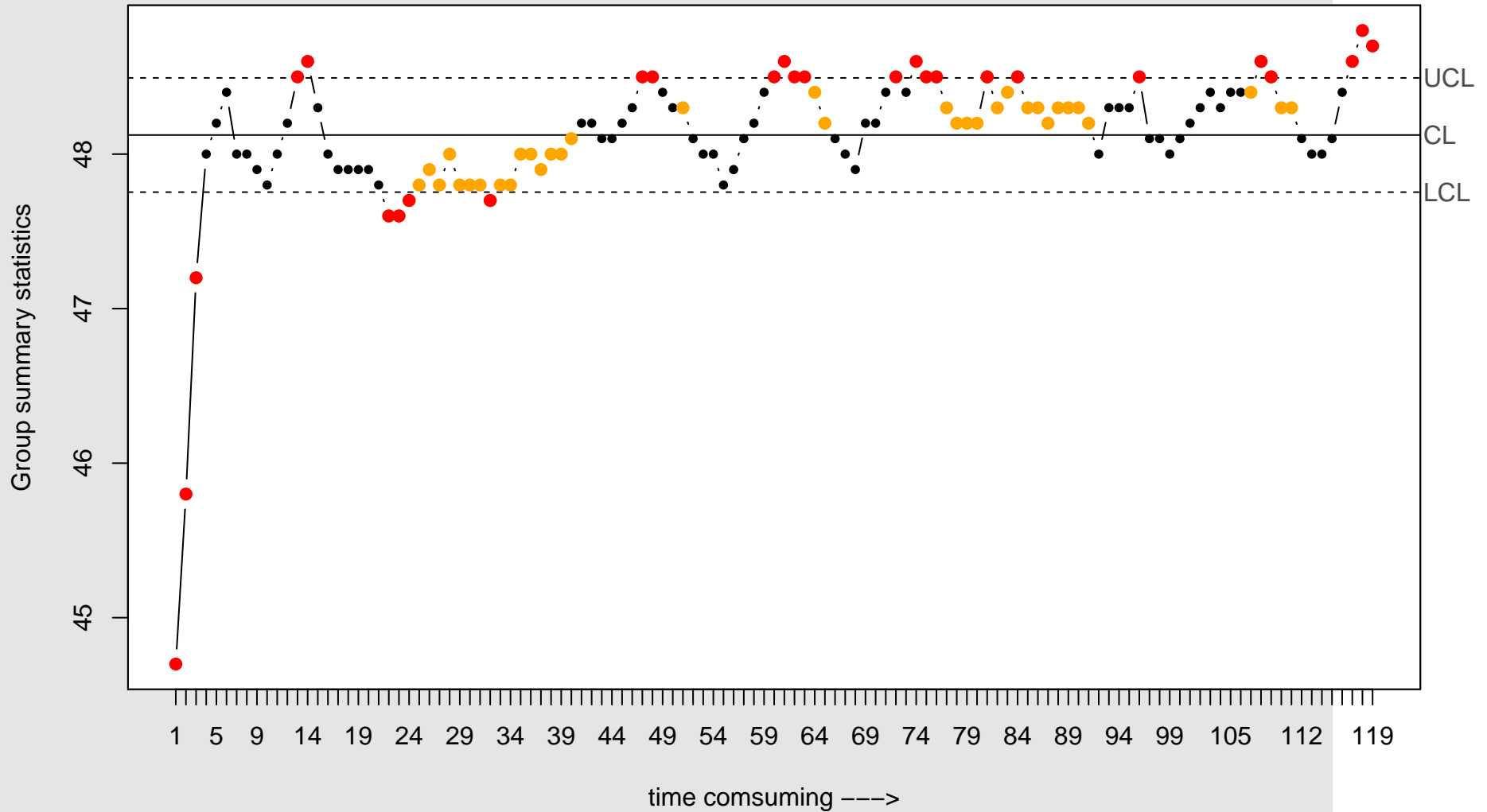
Number of groups = 119
Center = 48.12353   LCL = 47.75389   Number beyond limits = 27
StdDev = 0.1232119   UCL = 48.49317   Number violating runs = 44

146th column point of this product

Group summary statistics

time comsuming ––––>
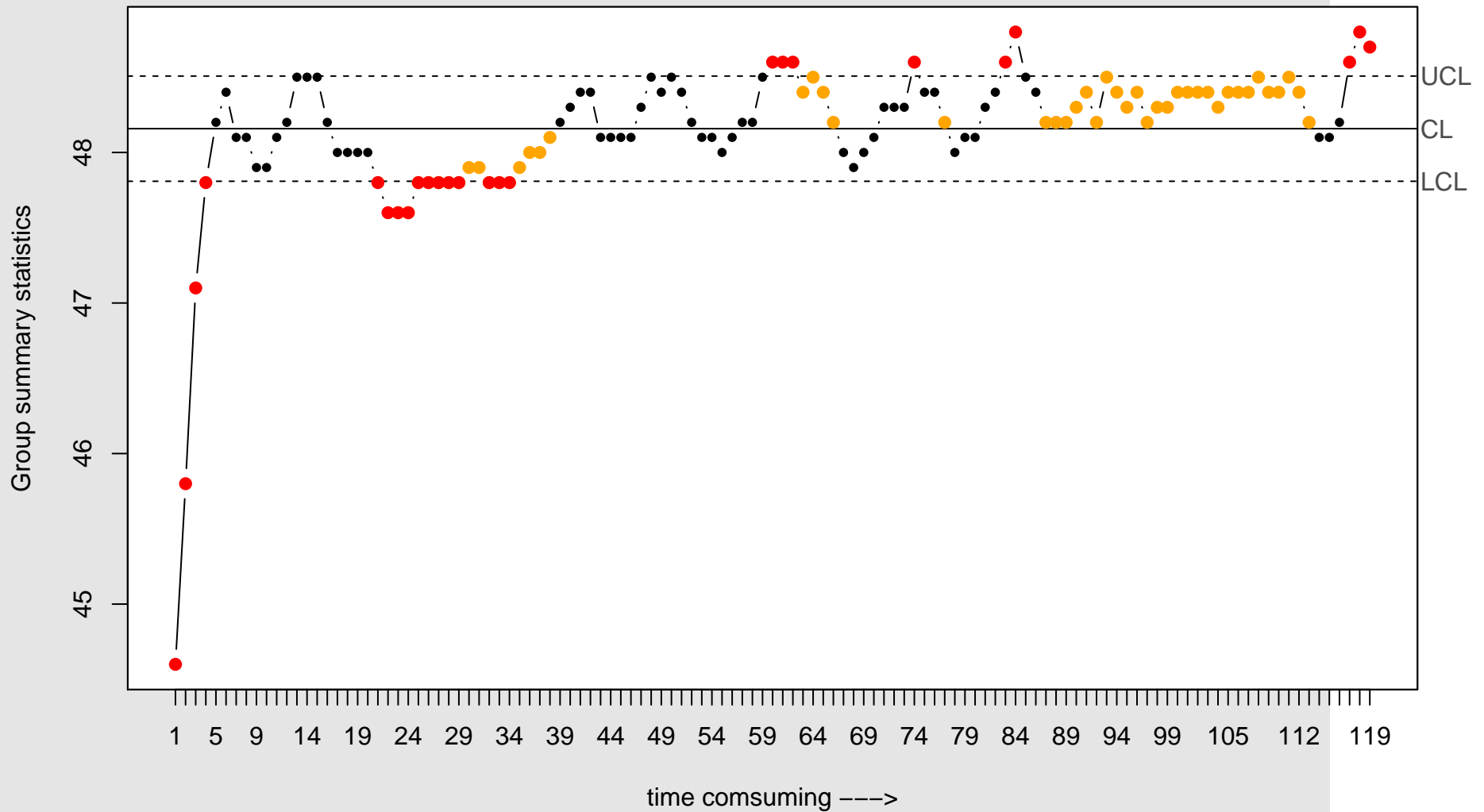
Number of groups = 119
Center = 48.15798   LCL = 47.80863   Number beyond limits = 25
StdDev = 0.1164503   UCL = 48.50733   Number violating runs = 48

147th column point of this product

Group summary statistics

time comsuming ---->
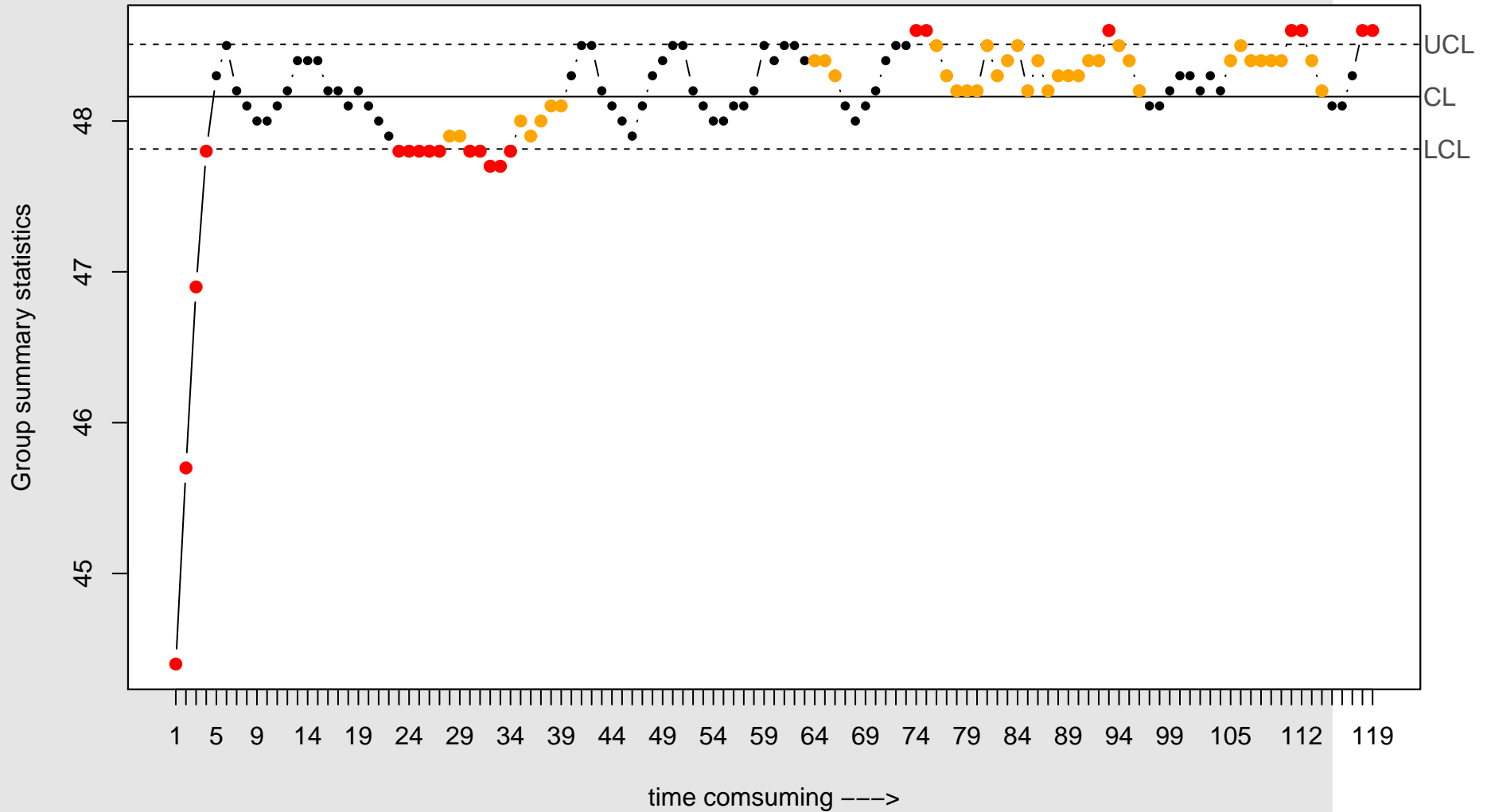
Number of groups = 119
Center = 48.16134   LCL = 47.81425   Number beyond limits = 21
StdDev = 0.115699   UCL = 48.50844   Number violating runs = 48

148th column point of this product

Group summary statistics

time comsuming ---->
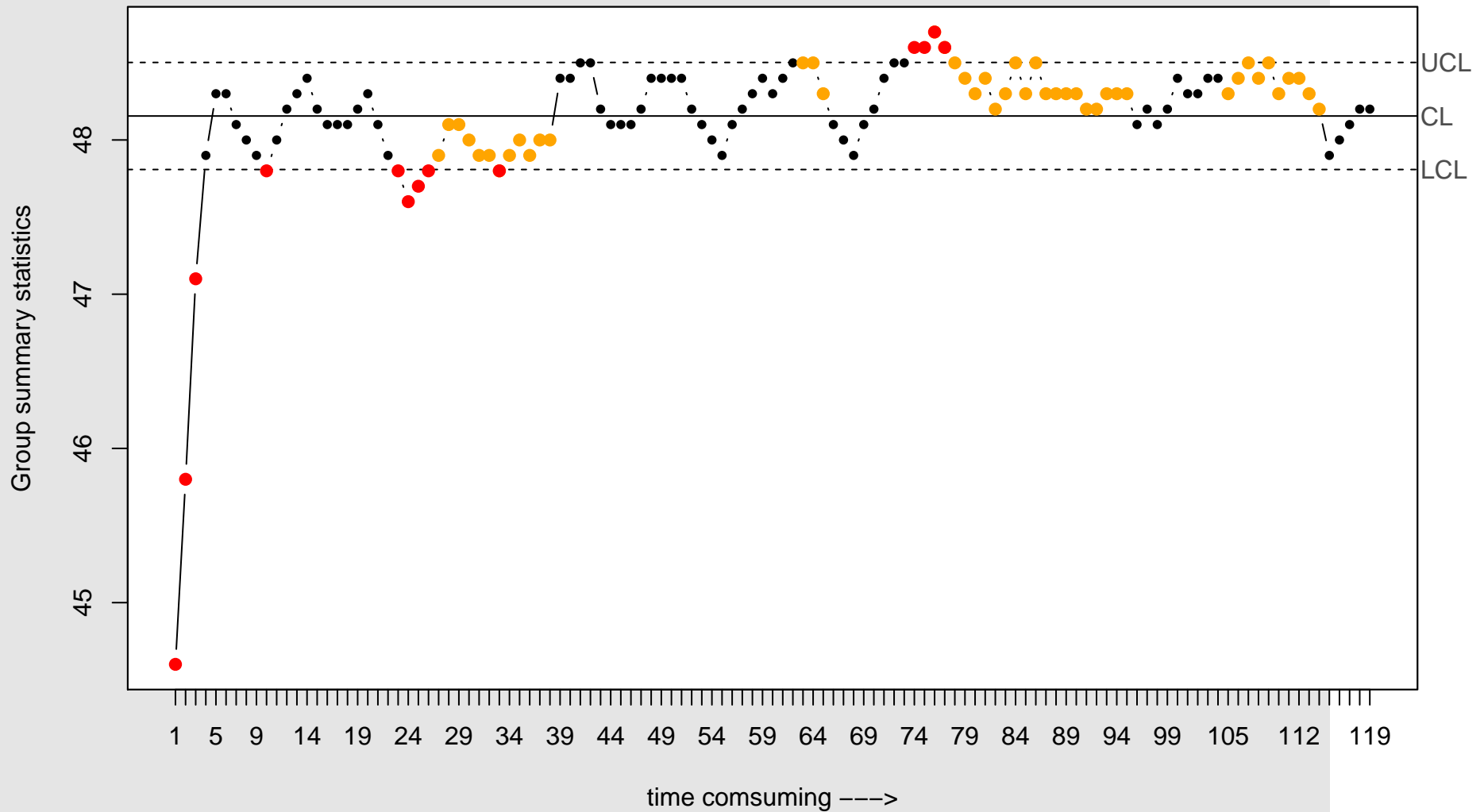
Number of groups = 119
Center = 48.15546   LCL = 47.80837   Number beyond limits = 13
StdDev = 0.115699   UCL = 48.50256   Number violating runs = 45

149th column point of this product

Group summary statistics

time comsuming --->
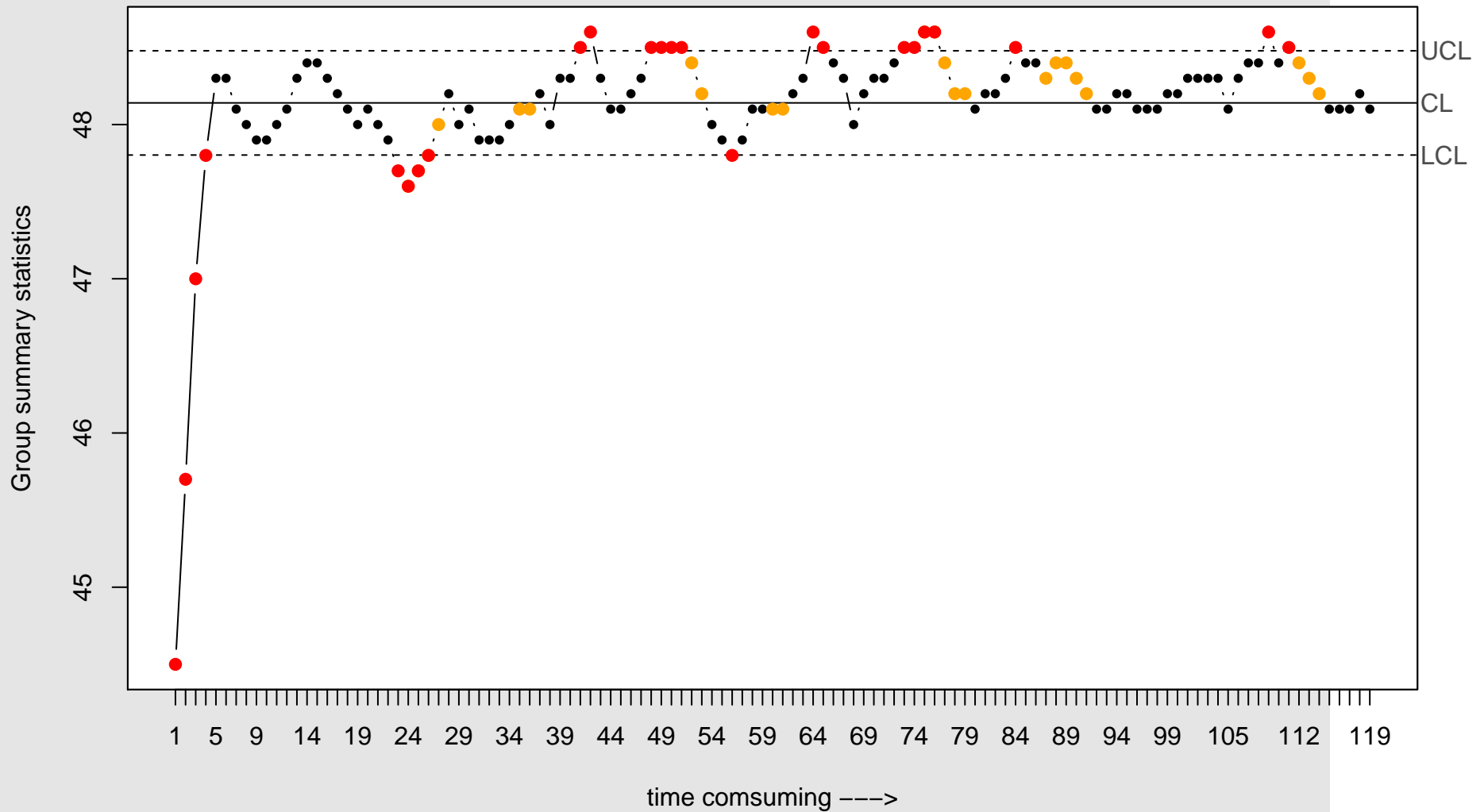
Number of groups = 119
Center = 48.14034   LCL = 47.80225   Number beyond limits = 24
StdDev = 0.1126938   UCL = 48.47842   Number violating runs = 23

150th column point of this product

Group summary statistics

time comsuming ---->
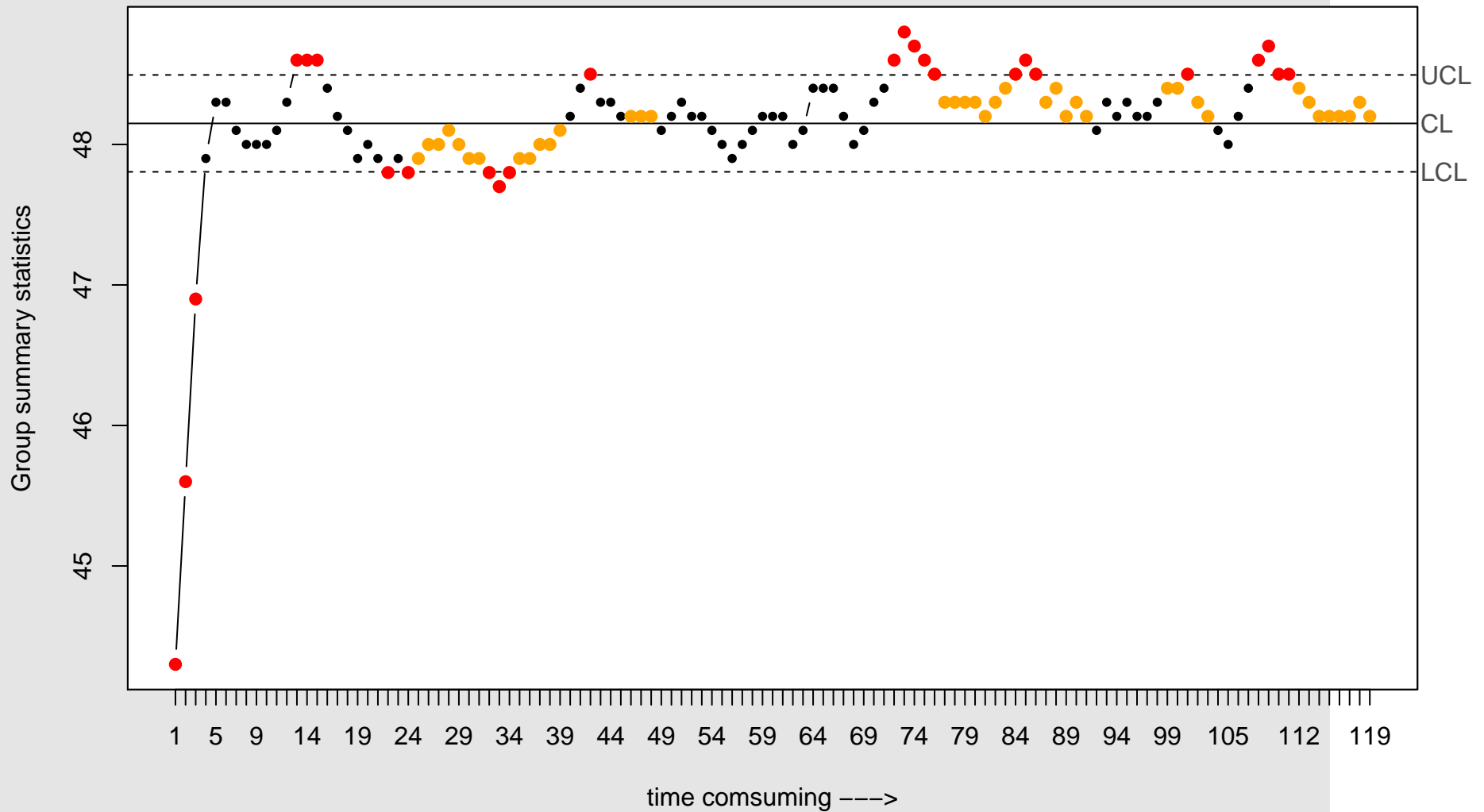
Number of groups = 119
Center = 48.14958   LCL = 47.80474   Number beyond limits = 25
StdDev = 0.1149477   UCL = 48.49442   Number violating runs = 48

151th column point of this product

Group summary statistics

time comsuming --->

Number of groups = 119
Center = 48.19076   LCL = 47.82788   Number beyond limits = 19
StdDev = 0.120958   UCL = 48.55363   Number violating runs = 41

152th column point of this product

Group summary statistics

UCL
CL
LCL

48

47

46

45

1   5   9   14   19   24   29   34   39   44   49   54   59   64   69   74   79   84   89   94   99   105   112   119

time comsuming --->
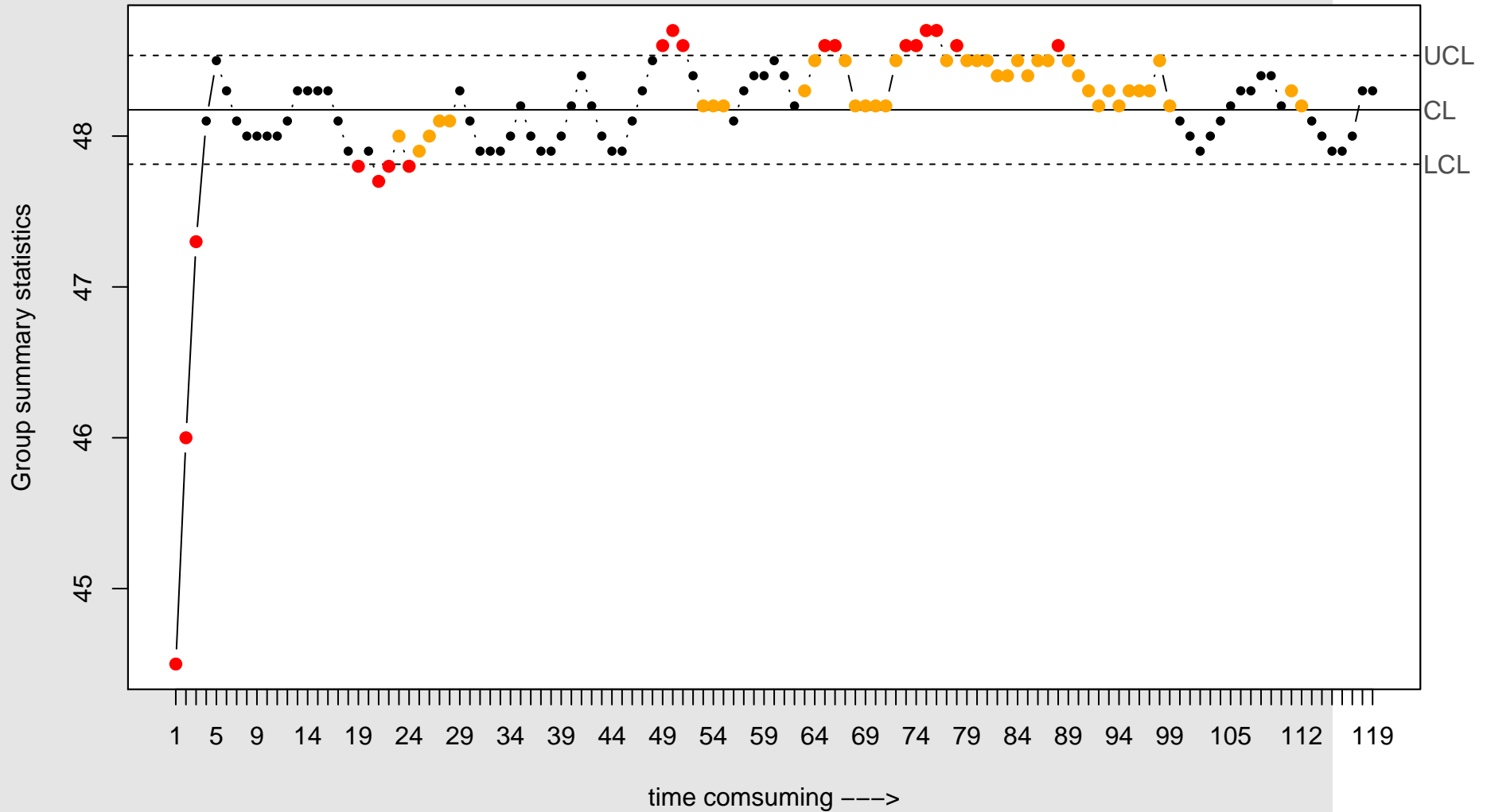
Number of groups = 119
Center = 48.17395   LCL = 47.81333   Number beyond limits = 18
StdDev = 0.1202068   UCL = 48.53457   Number violating runs = 48

153th column point of this product

Group summary statistics

time comsuming ---->
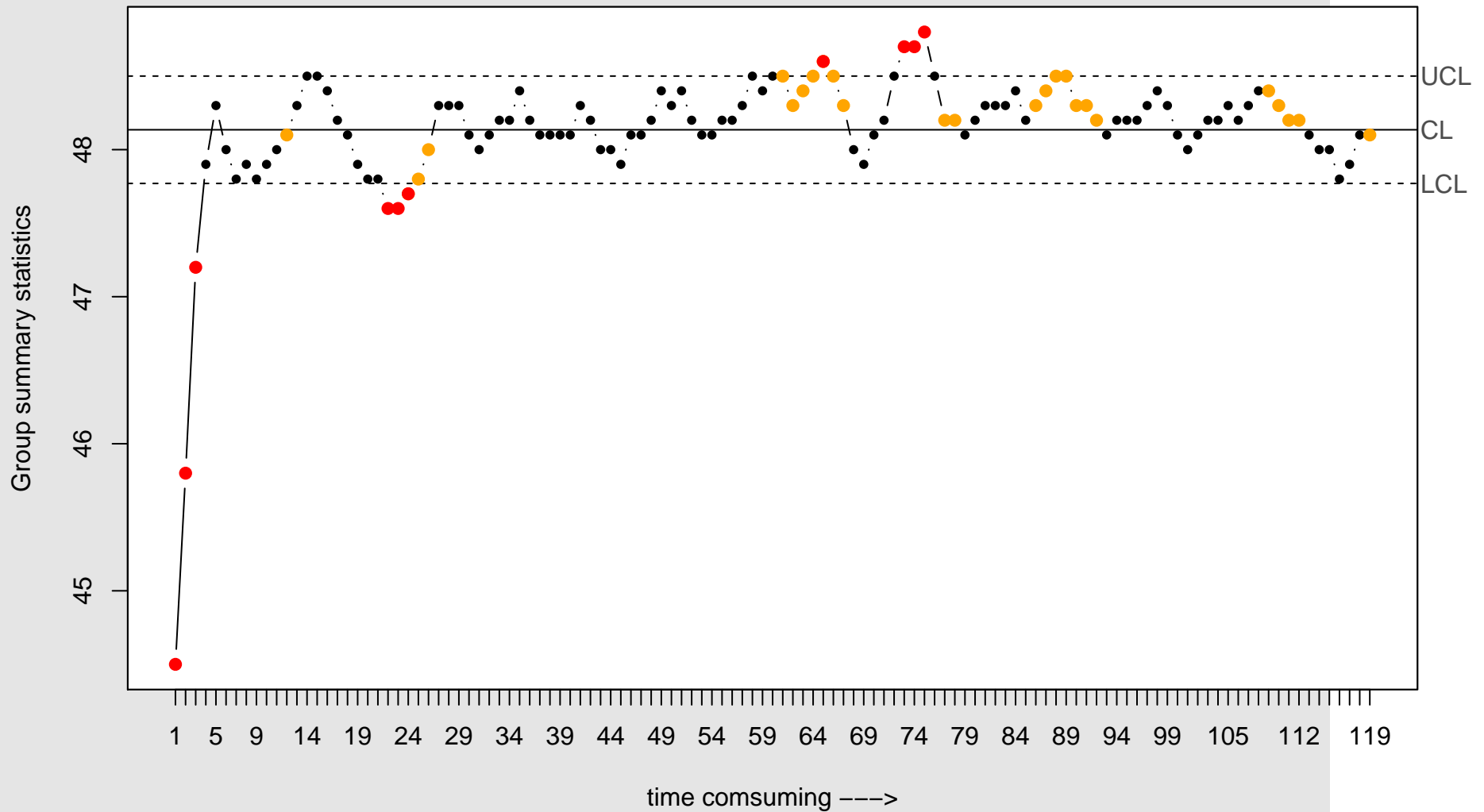
Number of groups = 119
Center = 48.13529
StdDev = 0.1217093

LCL = 47.77017
UCL = 48.50042

Number beyond limits = 10
Number violating runs = 25

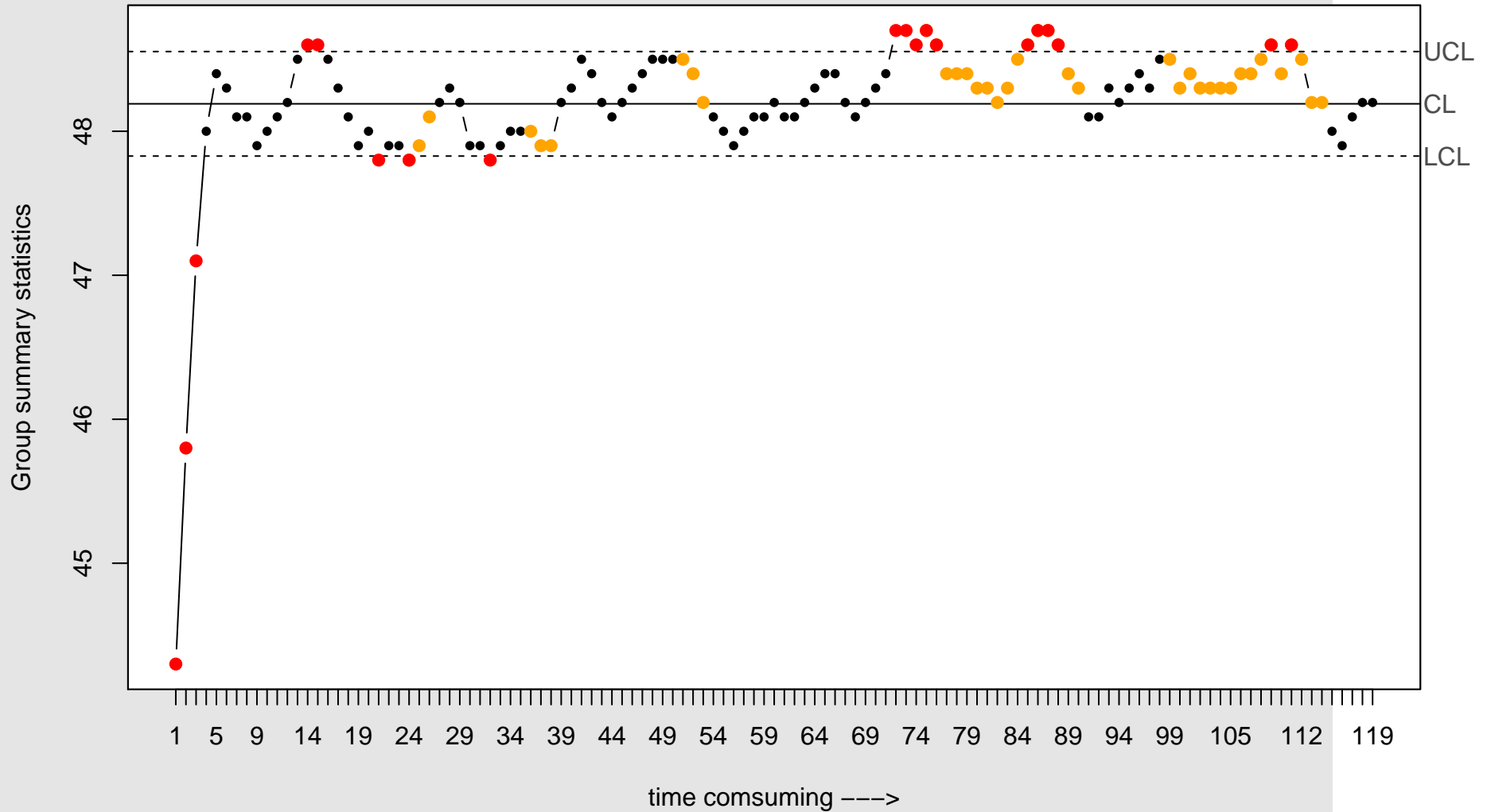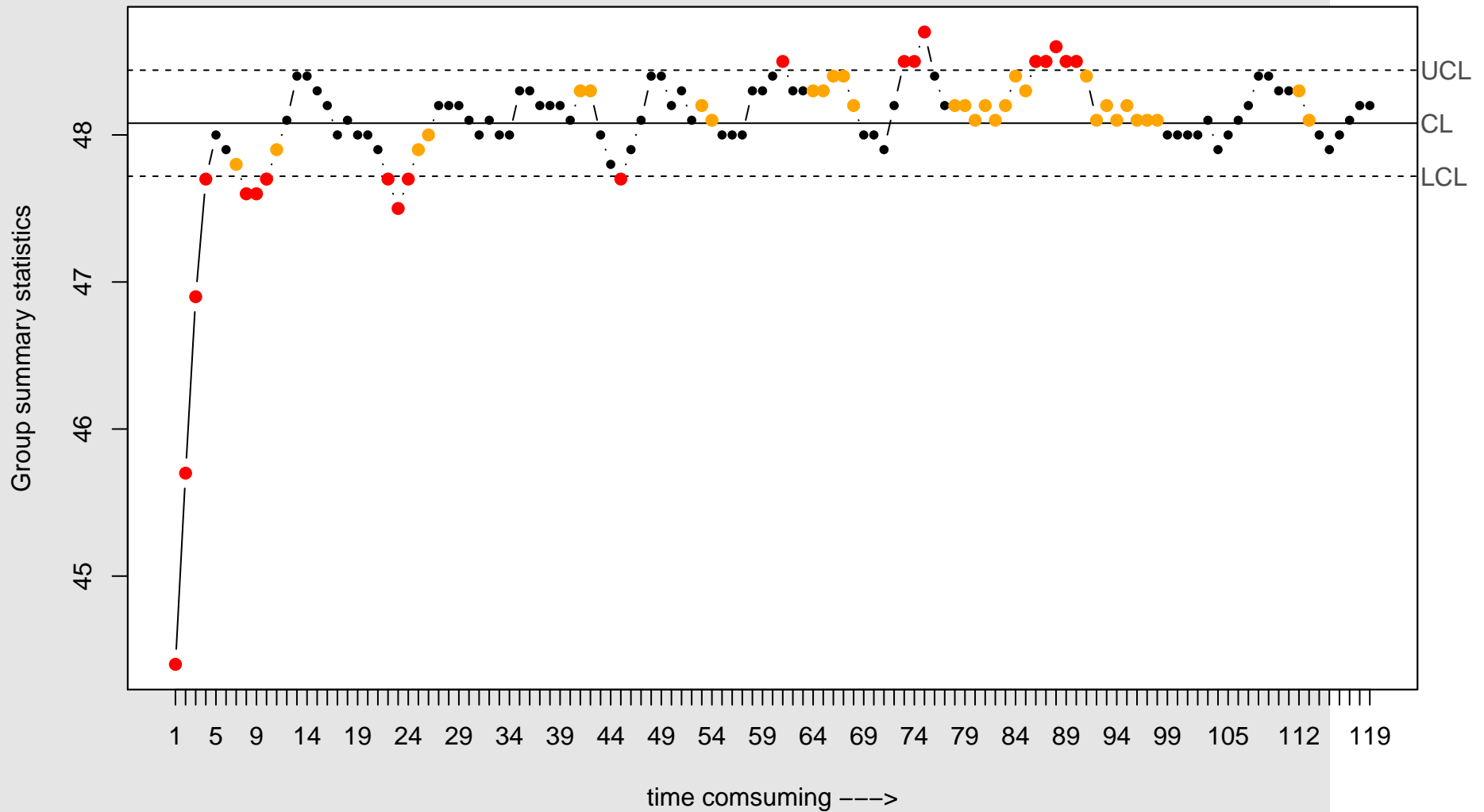# 154th column point of this product

Group summary statistics

time comsuming –––>

Number of groups = 119
Center = 48.07983   LCL = 47.71921   Number beyond limits = 20
StdDev = 0.1202068   UCL = 48.44045   Number violating runs = 39

155th column point of this product

Group summary statistics

time comsuming ––––>
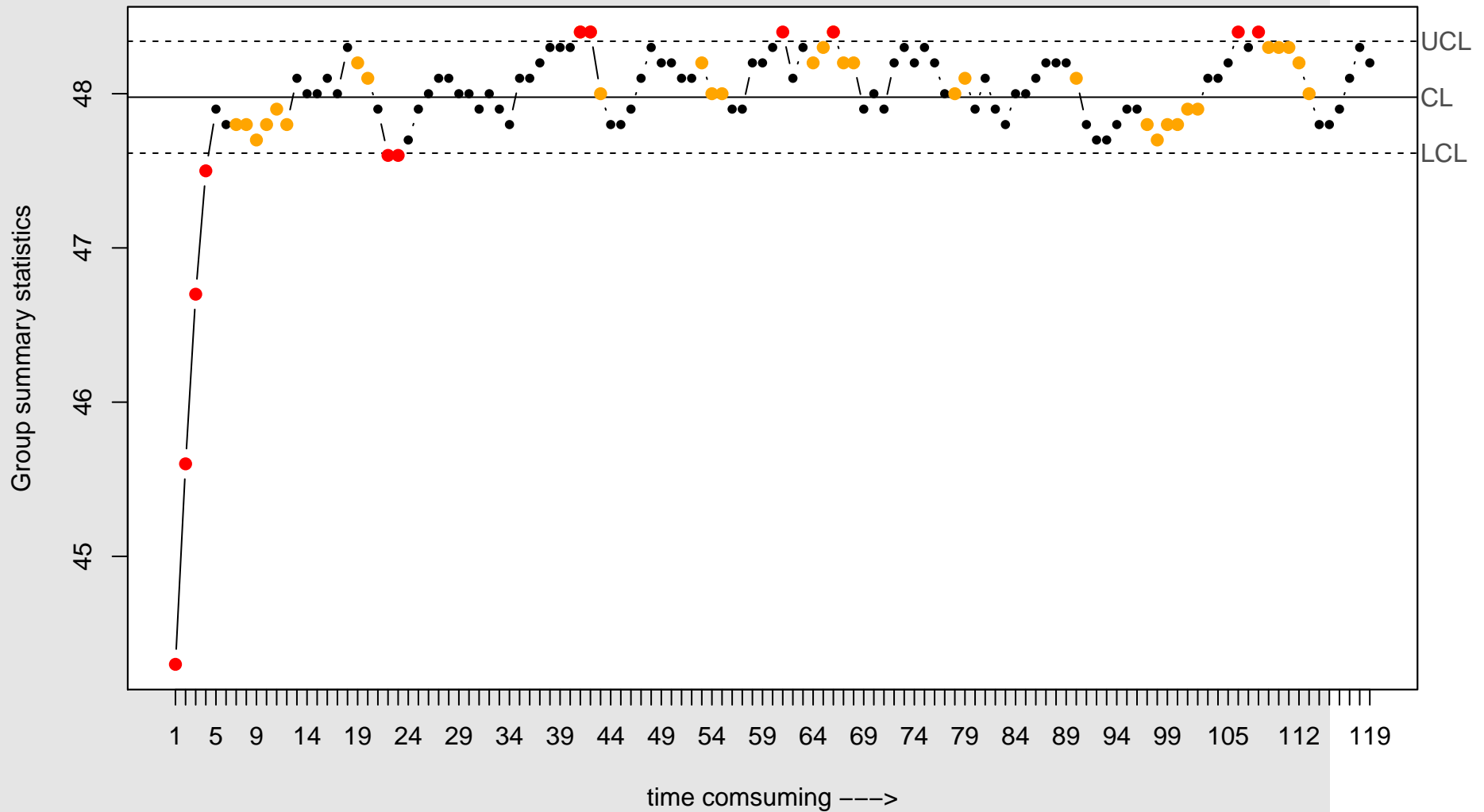
Number of groups = 119
Center = 47.97731   LCL = 47.61444   Number beyond limits = 12
StdDev = 0.120958   UCL = 48.34019   Number violating runs = 33

156th column point of this product

Group summary statistics

time comsuming ---->
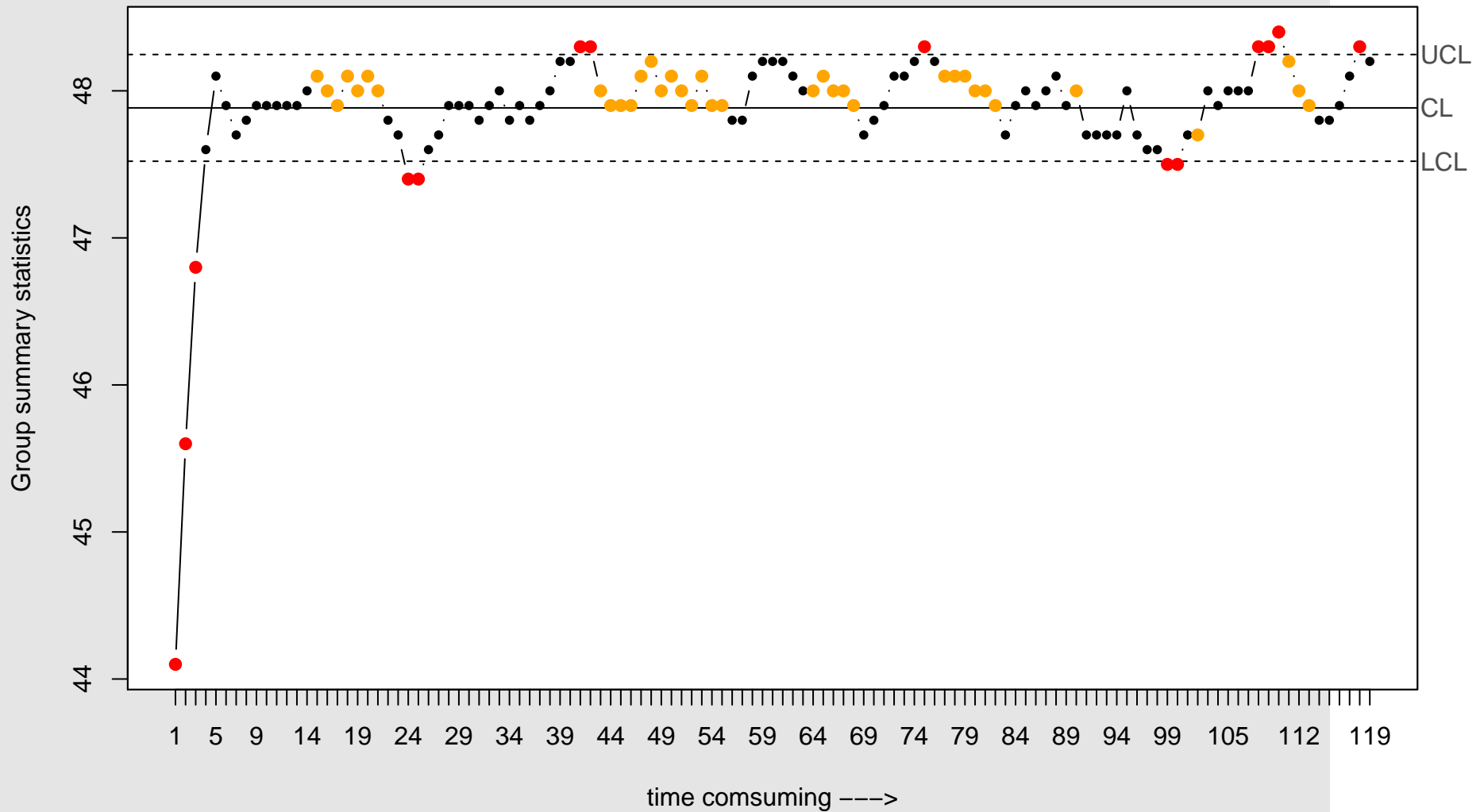
Number of groups = 119
Center = 47.88403   LCL = 47.52116   Number beyond limits = 14
StdDev = 0.120958   UCL = 48.24691   Number violating runs = 38

157th column point of this product

Group summary statistics

time comsuming ––––>
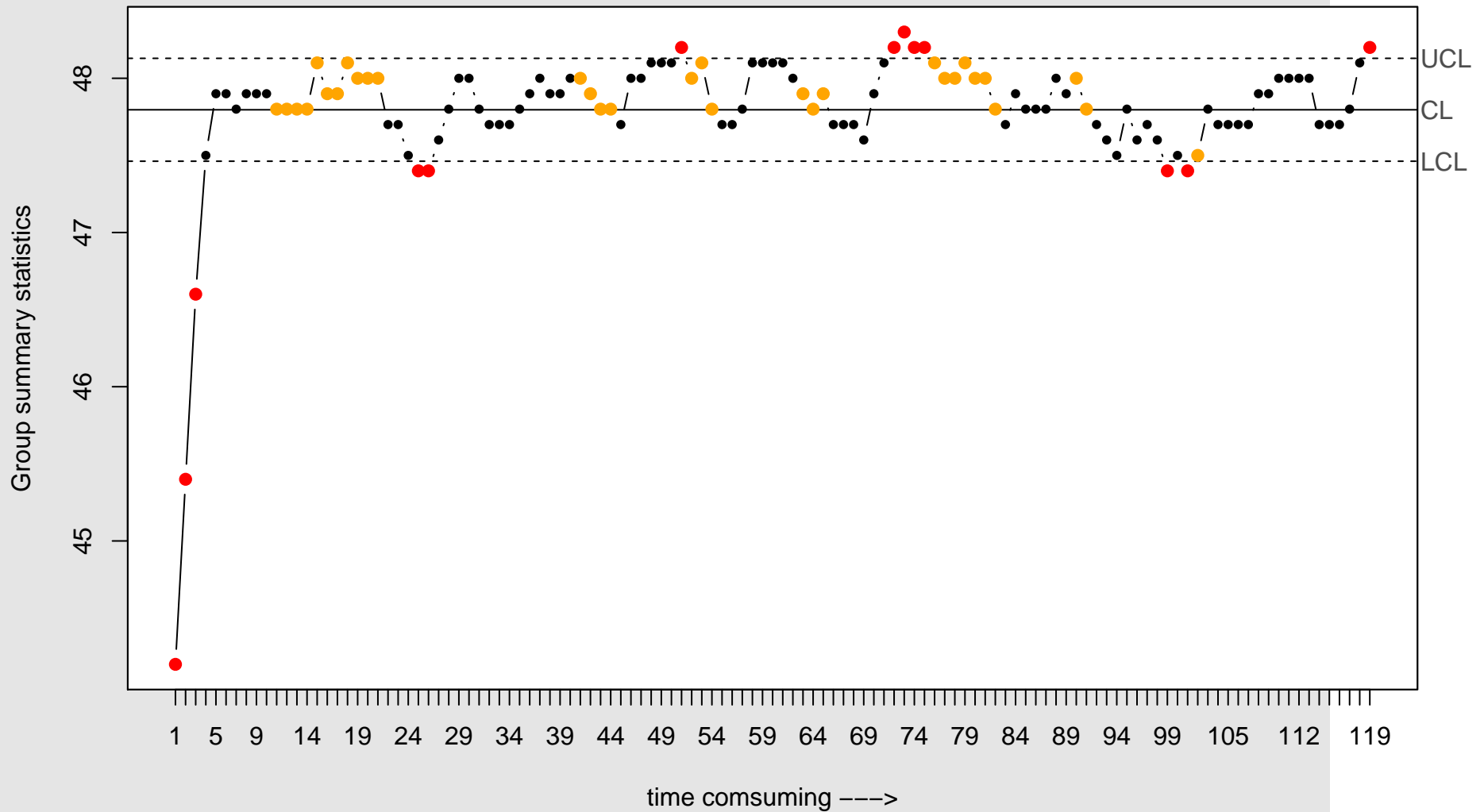
Number of groups = 119
Center = 47.7958   LCL = 47.46222   Number beyond limits = 13
StdDev = 0.1111912   UCL = 48.12937   Number violating runs = 31

158th column point of this product

Group summary statistics

time comsuming –––>
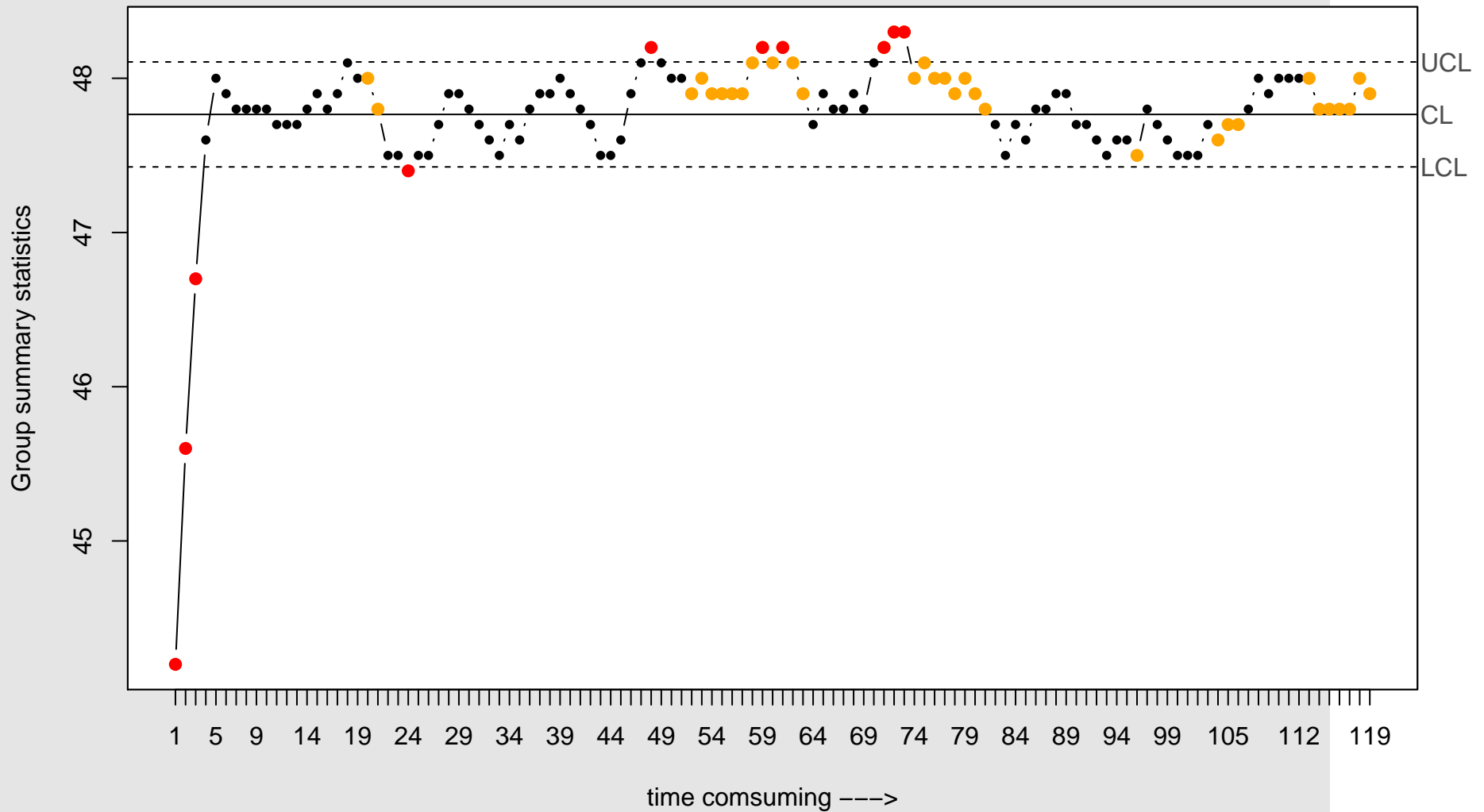
Number of groups = 119
Center = 47.76555   LCL = 47.42521   Number beyond limits = 10
StdDev = 0.1134451   UCL = 48.10588   Number violating runs = 36

159th column point of this product

Group summary statistics

time comsuming ---->
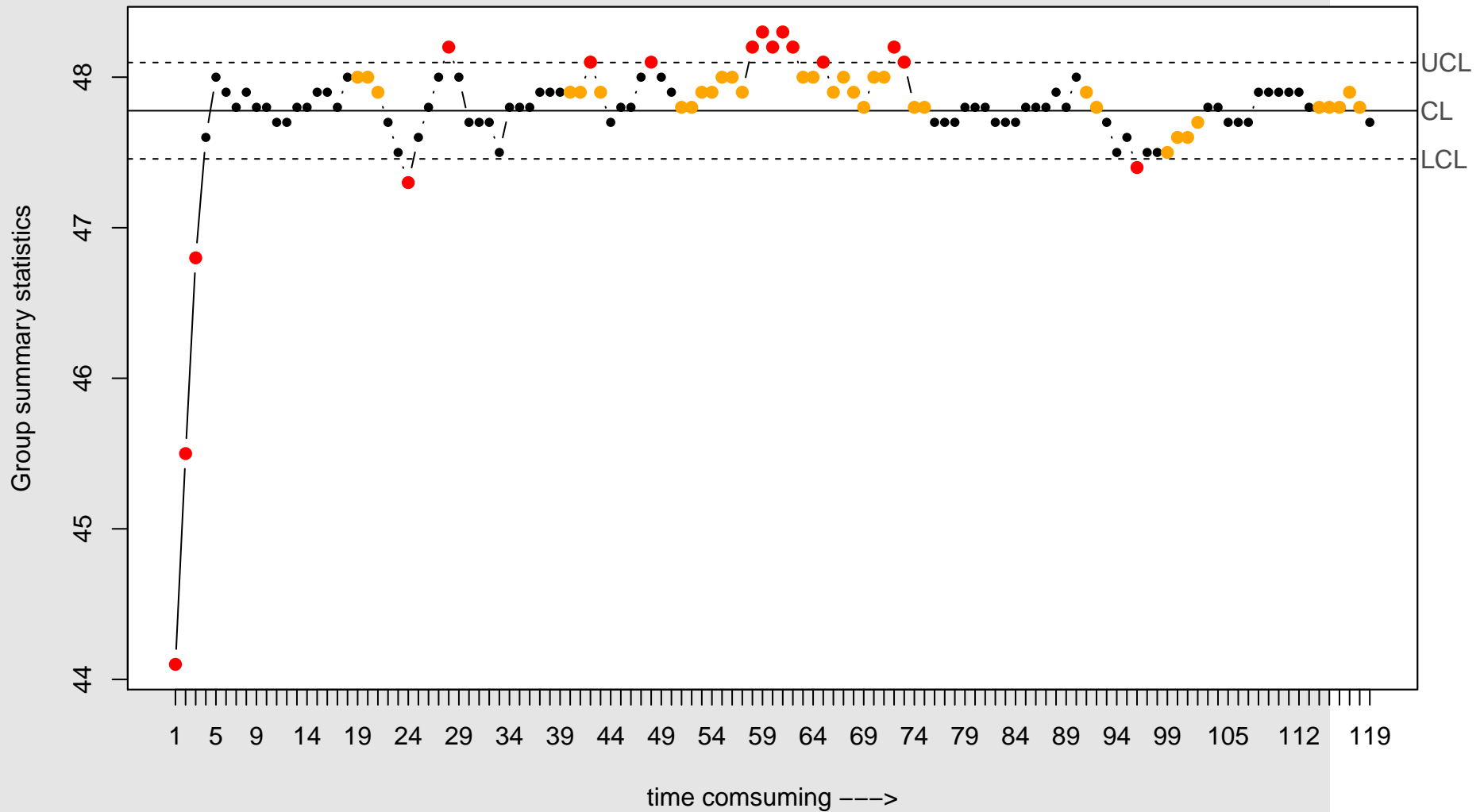
Number of groups = 119
Center = 47.77731   LCL = 47.45726   Number beyond limits = 16
StdDev = 0.1066835   UCL = 48.09736   Number violating runs = 43

160th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 47.74706
StdDev = 0.11044
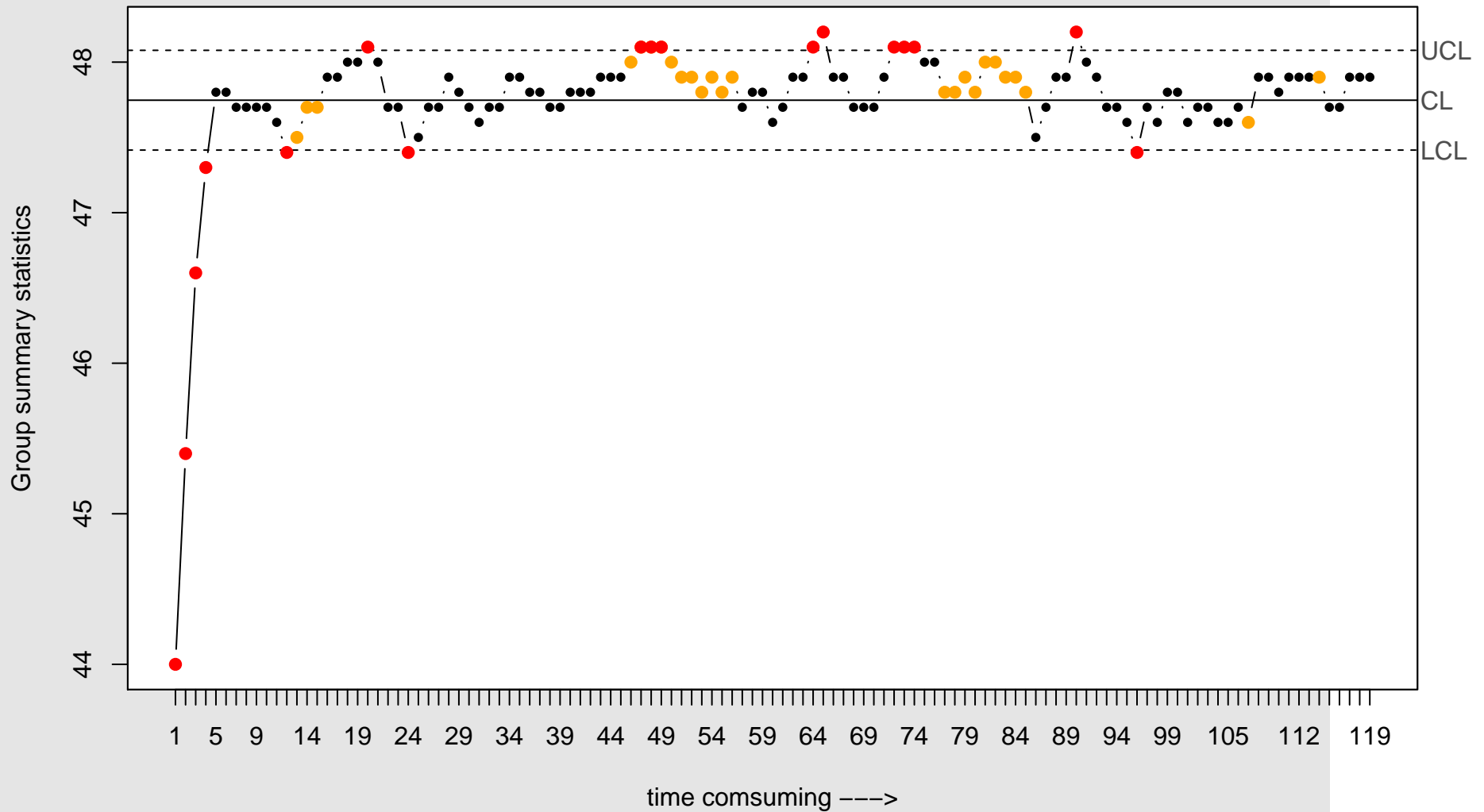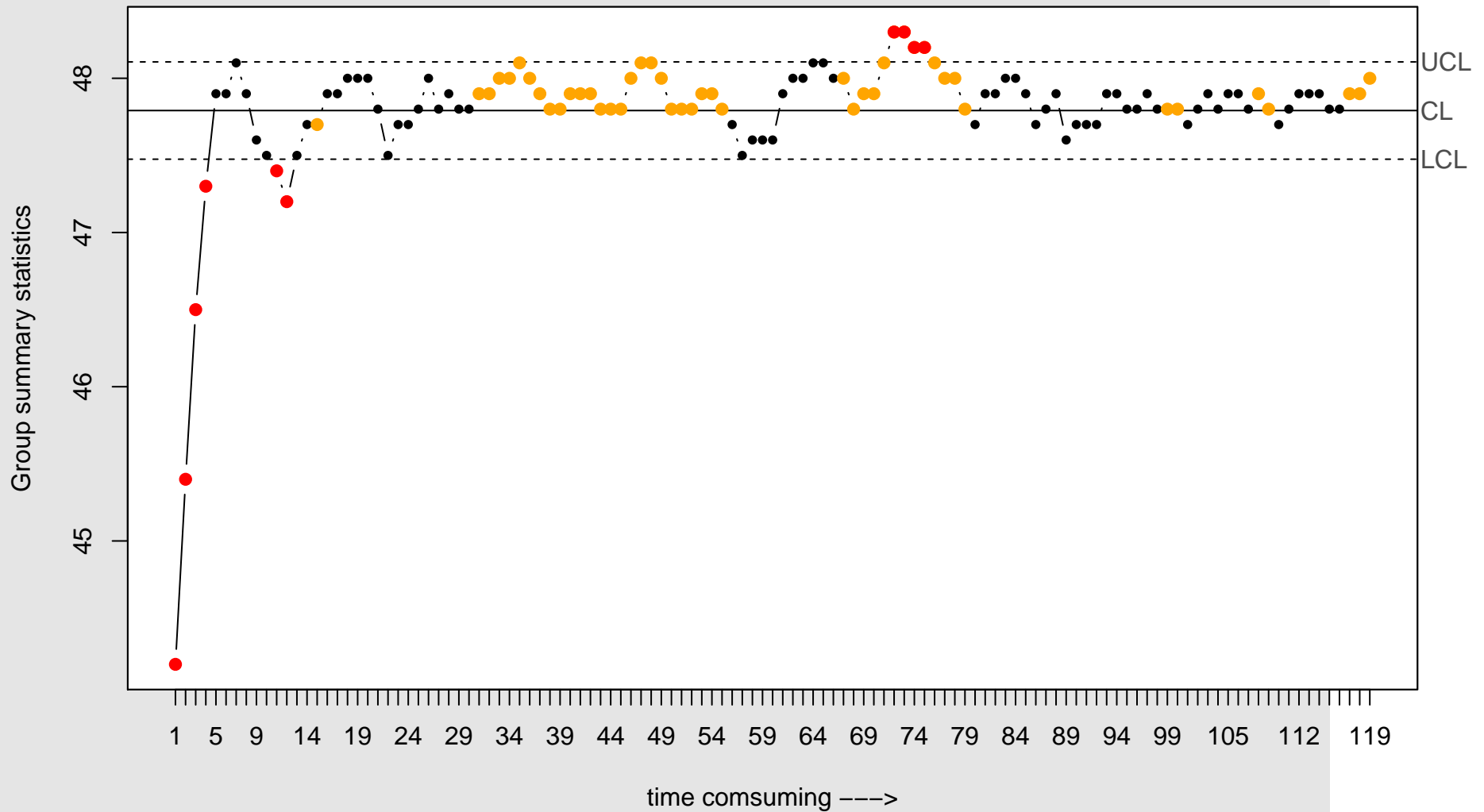LCL = 47.41574
UCL = 48.07838
Number beyond limits = 17
Number violating runs = 25

161th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ––––>

Number of groups = 119
Center = 47.79076   LCL = 47.47521   Number beyond limits = 10
StdDev = 0.1051809   UCL = 48.1063   Number violating runs = 46

162th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL
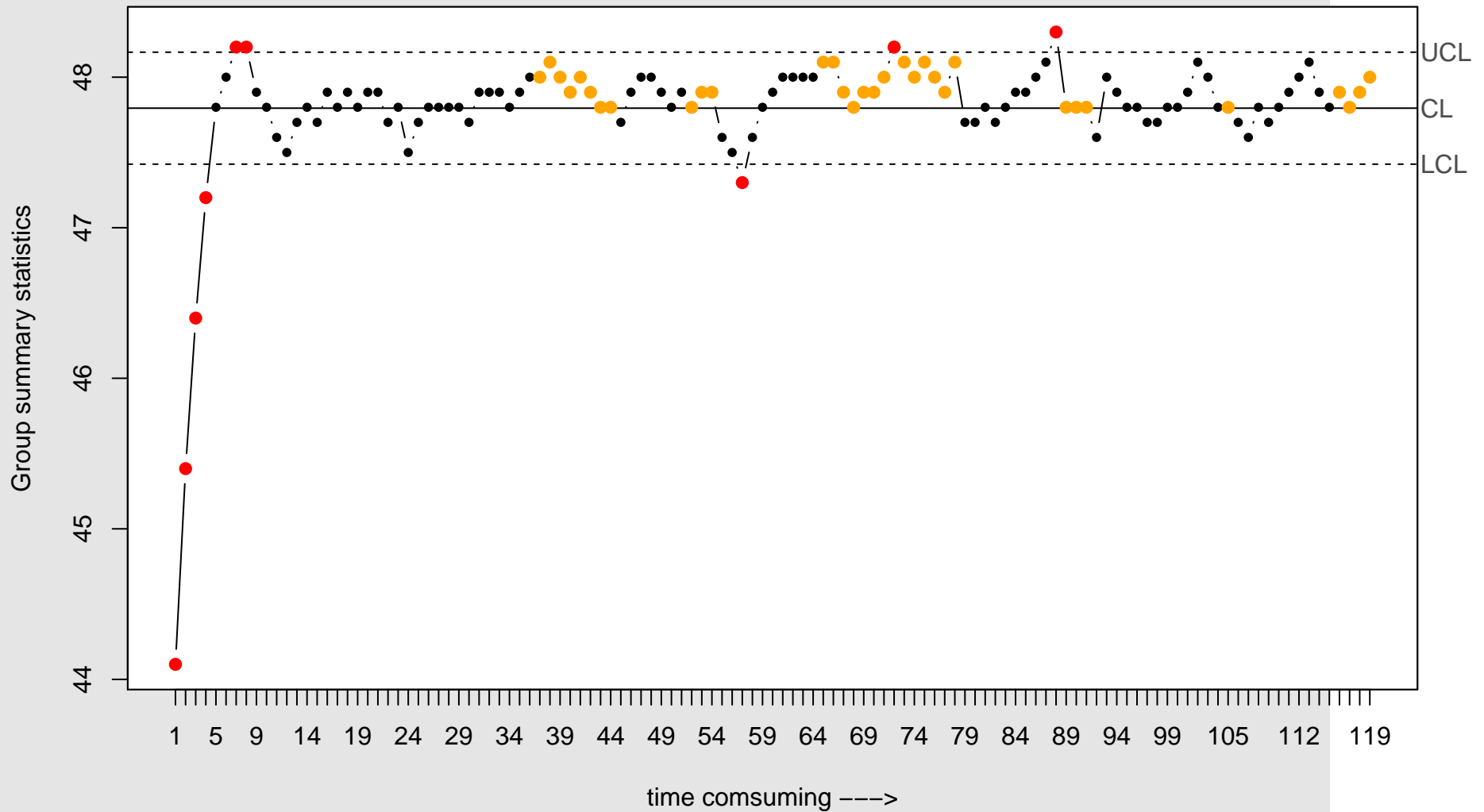
Number of groups = 119
Center = 47.79412   LCL = 47.42223   Number beyond limits = 9
StdDev = 0.1239632   UCL = 48.16601   Number violating runs = 33

163th column point of this product

Group summary statistics

time comsuming ---->
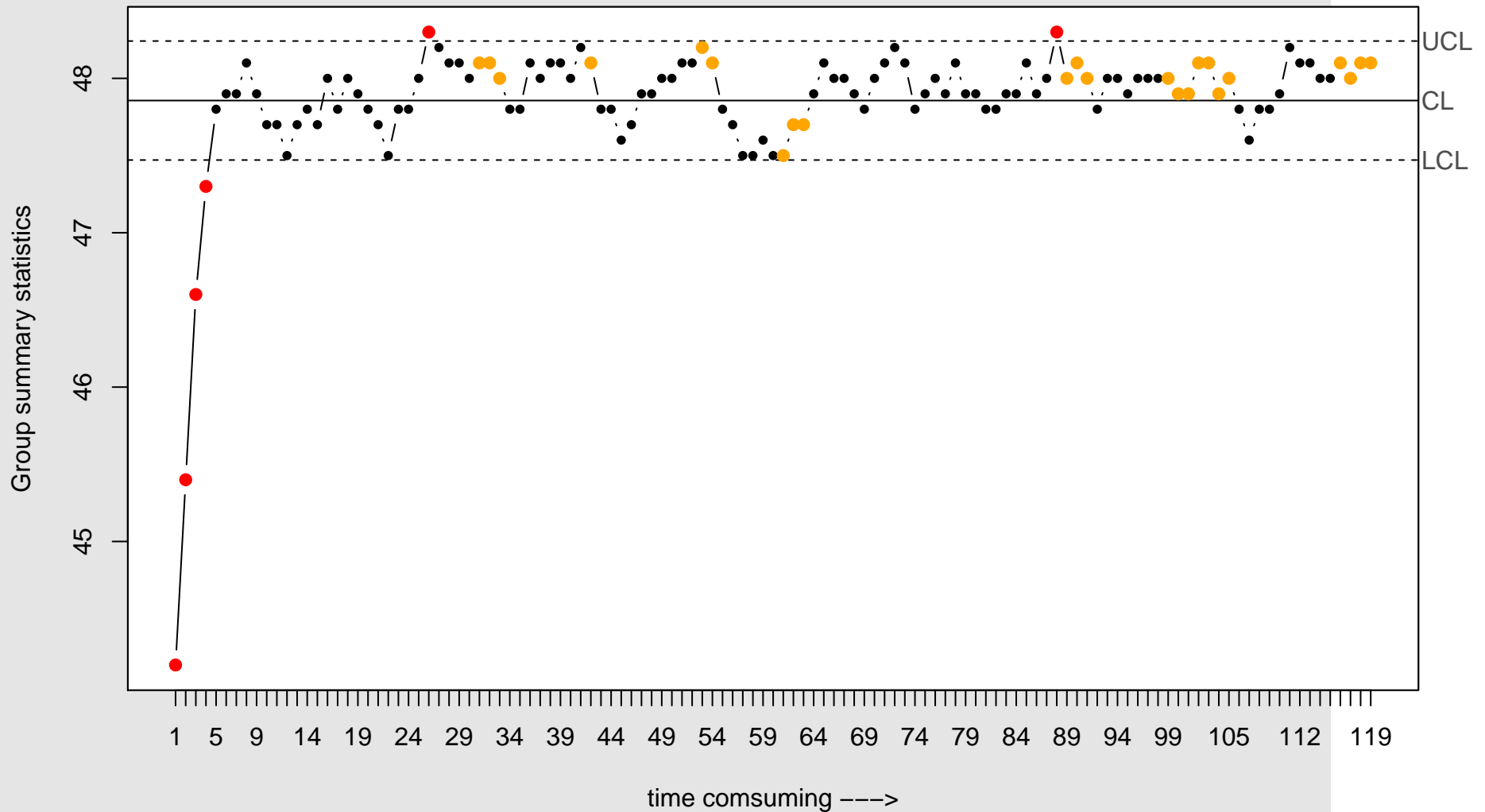
Number of groups = 119
Center = 47.8563   LCL = 47.47089   Number beyond limits = 6
StdDev = 0.128471   UCL = 48.24172   Number violating runs = 23

164th column point of this product

Group summary statistics

UCL

CL

LCL

time comsuming ---->
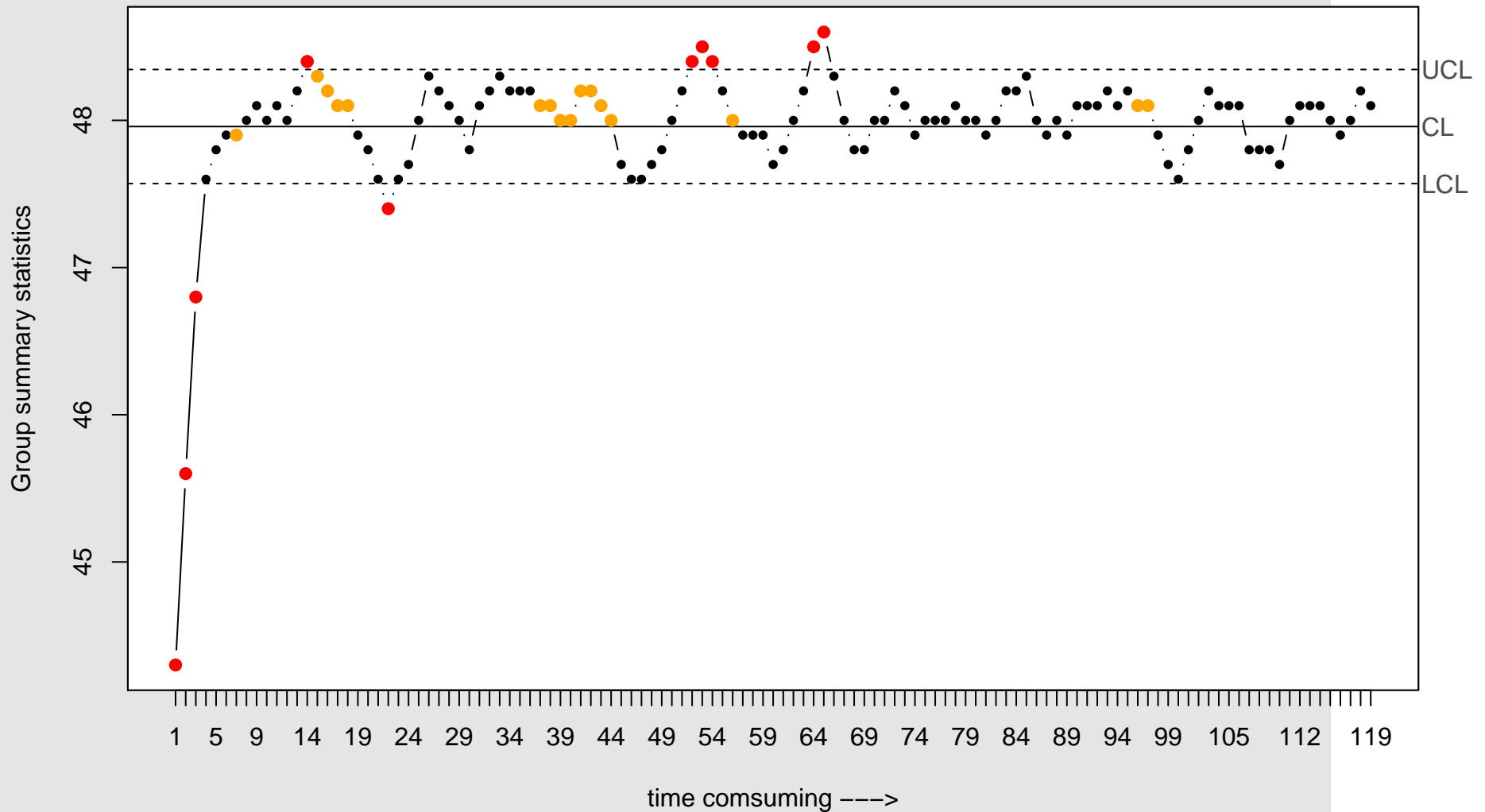
Number of groups = 119
Center = 47.95798   LCL = 47.57032   Number beyond limits = 10
StdDev = 0.1292223   UCL = 48.34565   Number violating runs = 17

165th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL
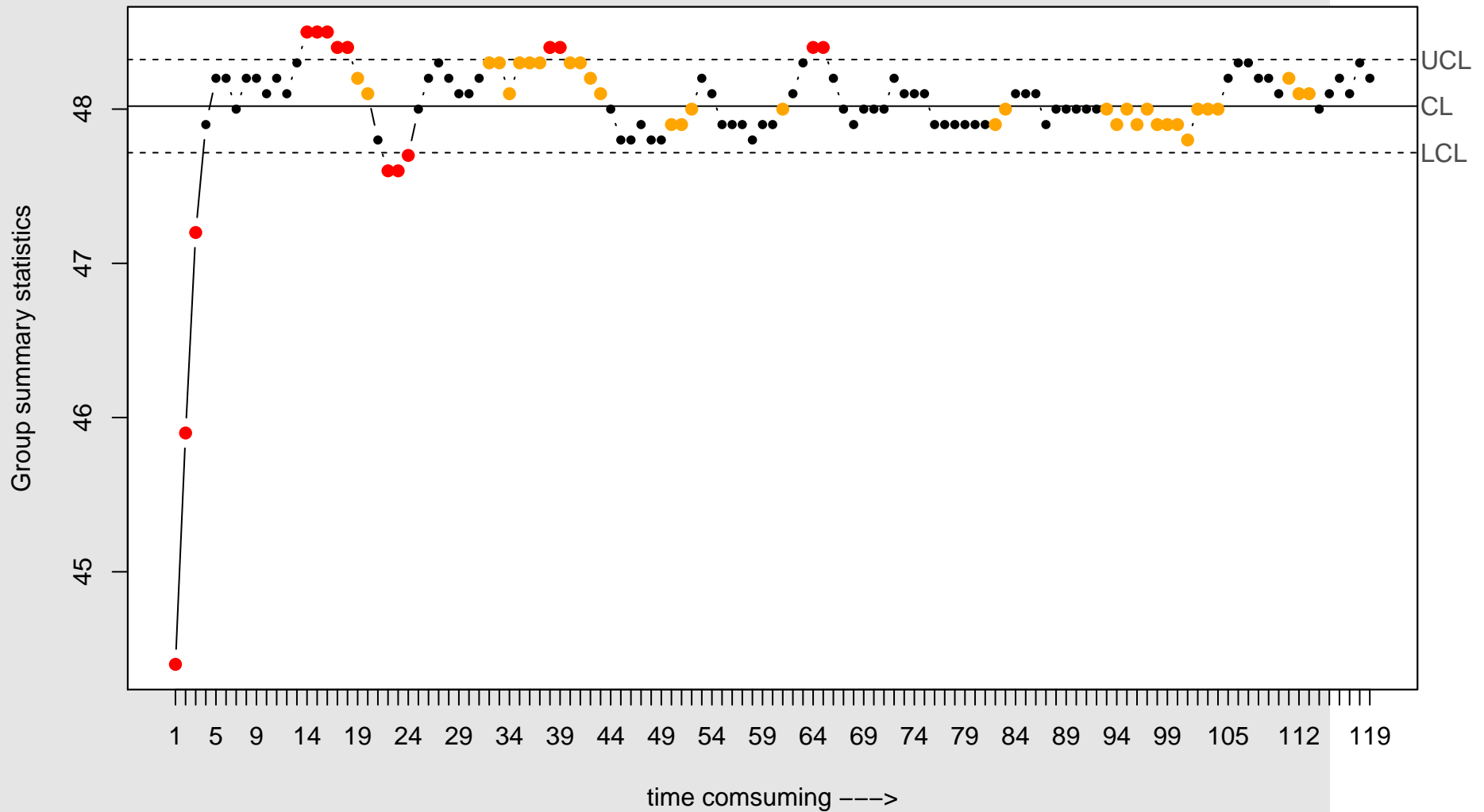
Number of groups = 119
Center = 48.01933   LCL = 47.71731   Number beyond limits = 15
StdDev = 0.1006732   UCL = 48.32135   Number violating runs = 40

166th column point of this product

Group summary statistics

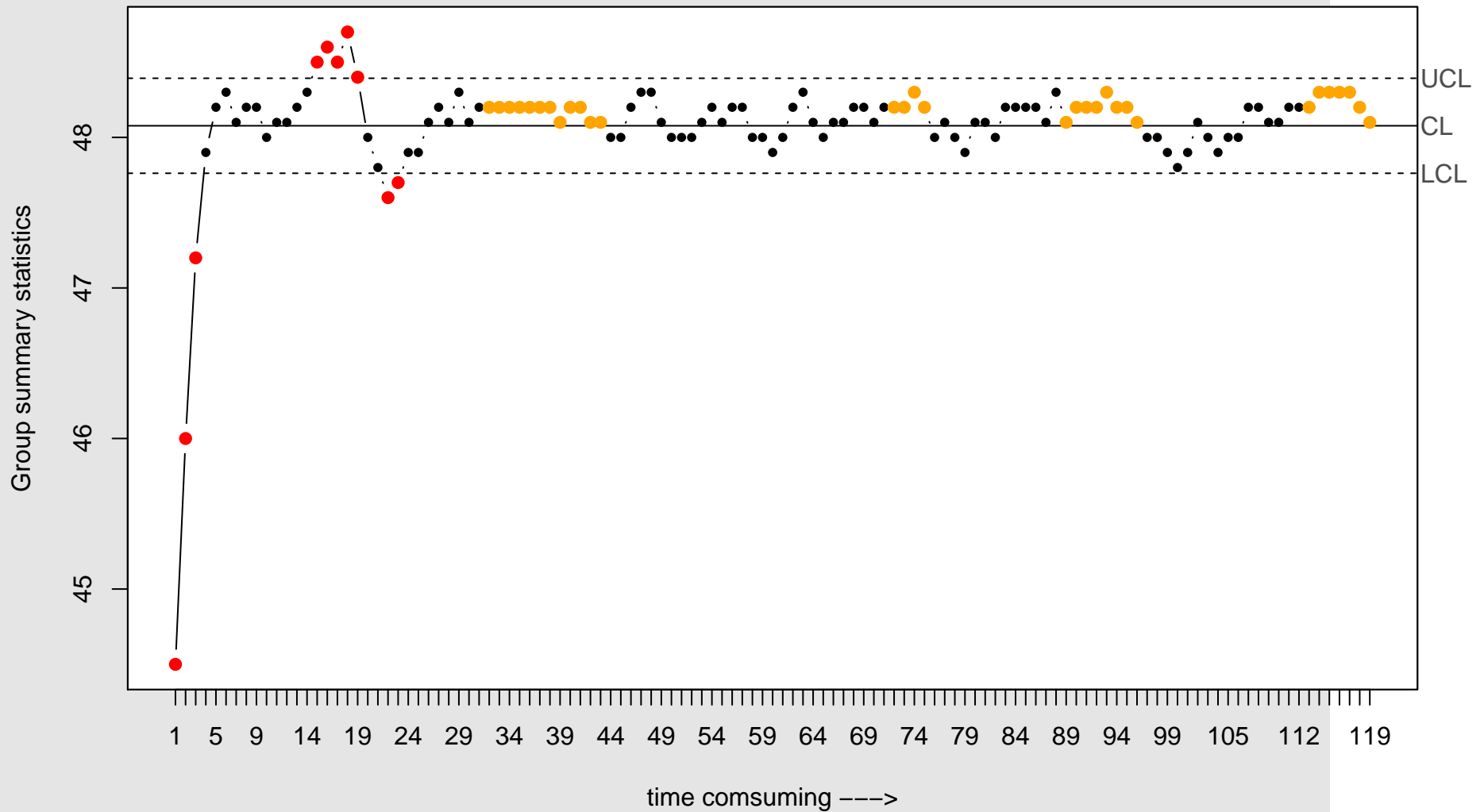time comsuming ----->

Number of groups = 119
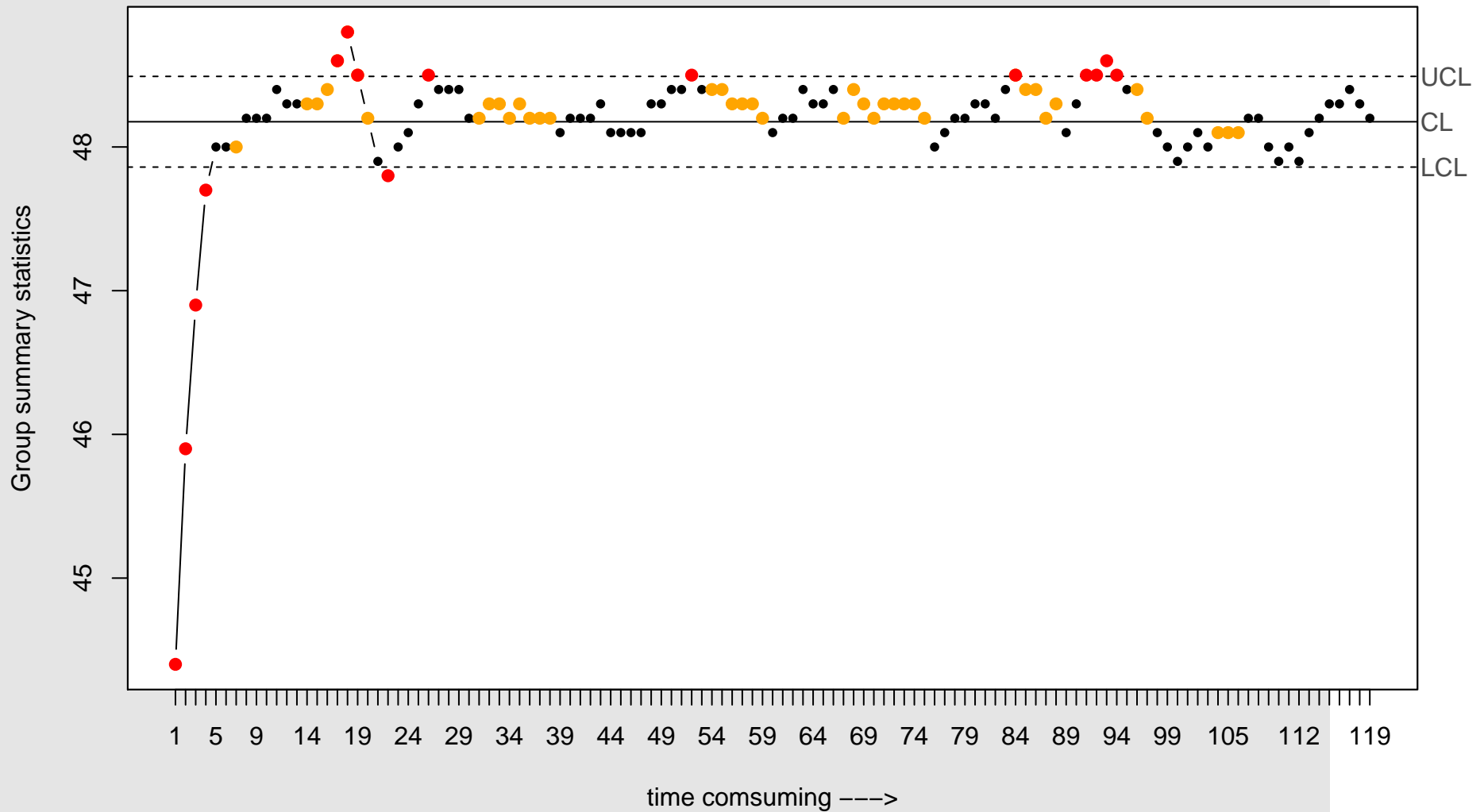Center = 48.07731
StdDev = 0.1051809

LCL = 47.76177
UCL = 48.39285

Number beyond limits = 10
Number violating runs = 34

167th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 48.17563   LCL = 47.86009   Number beyond limits = 15
StdDev = 0.1051809   UCL = 48.49117   Number violating runs = 41

168th column point of this product

Group summary statistics

time comsuming ---->

UCL

CL

LCL
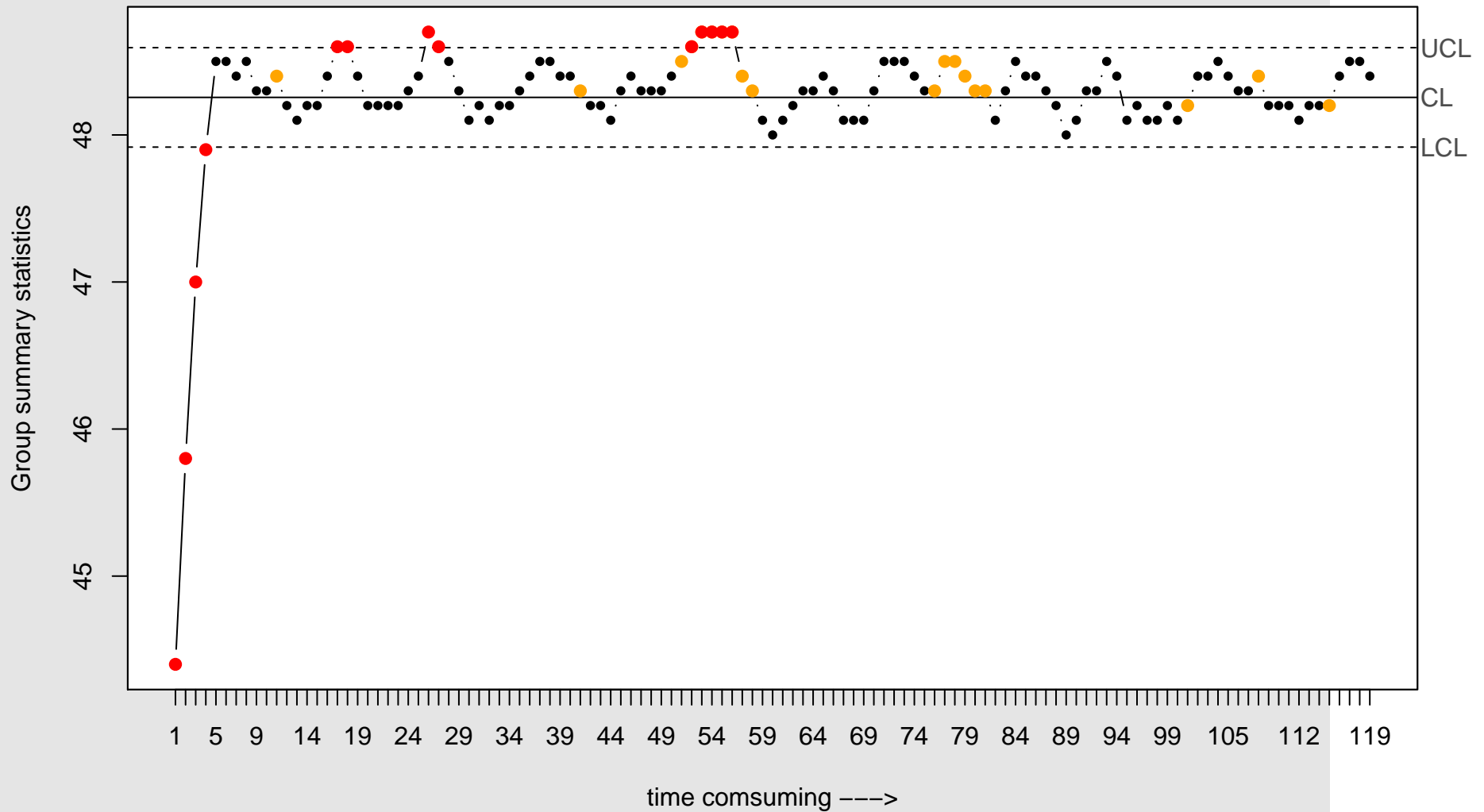
Number of groups = 119
Center = 48.25546   LCL = 47.91738   Number beyond limits = 13
StdDev = 0.1126938   UCL = 48.59354   Number violating runs = 19

169th column point of this product

Group summary statistics

time comsuming ---->
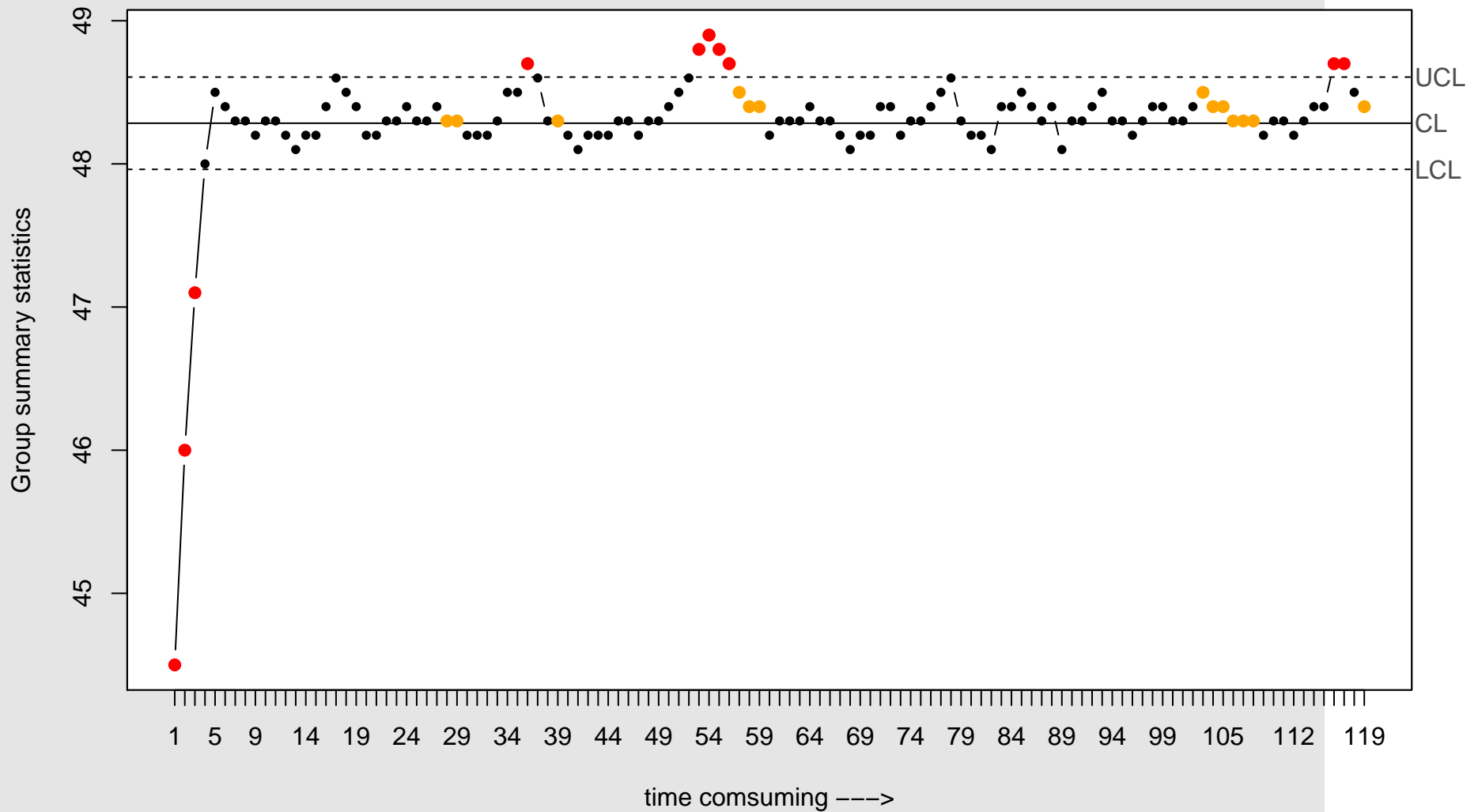
Number of groups = 119
Center = 48.28403   LCL = 47.96173   Number beyond limits = 10
StdDev = 0.1074348   UCL = 48.60634   Number violating runs = 16

170th column point of this product

Group summary statistics

time comsuming ––––>
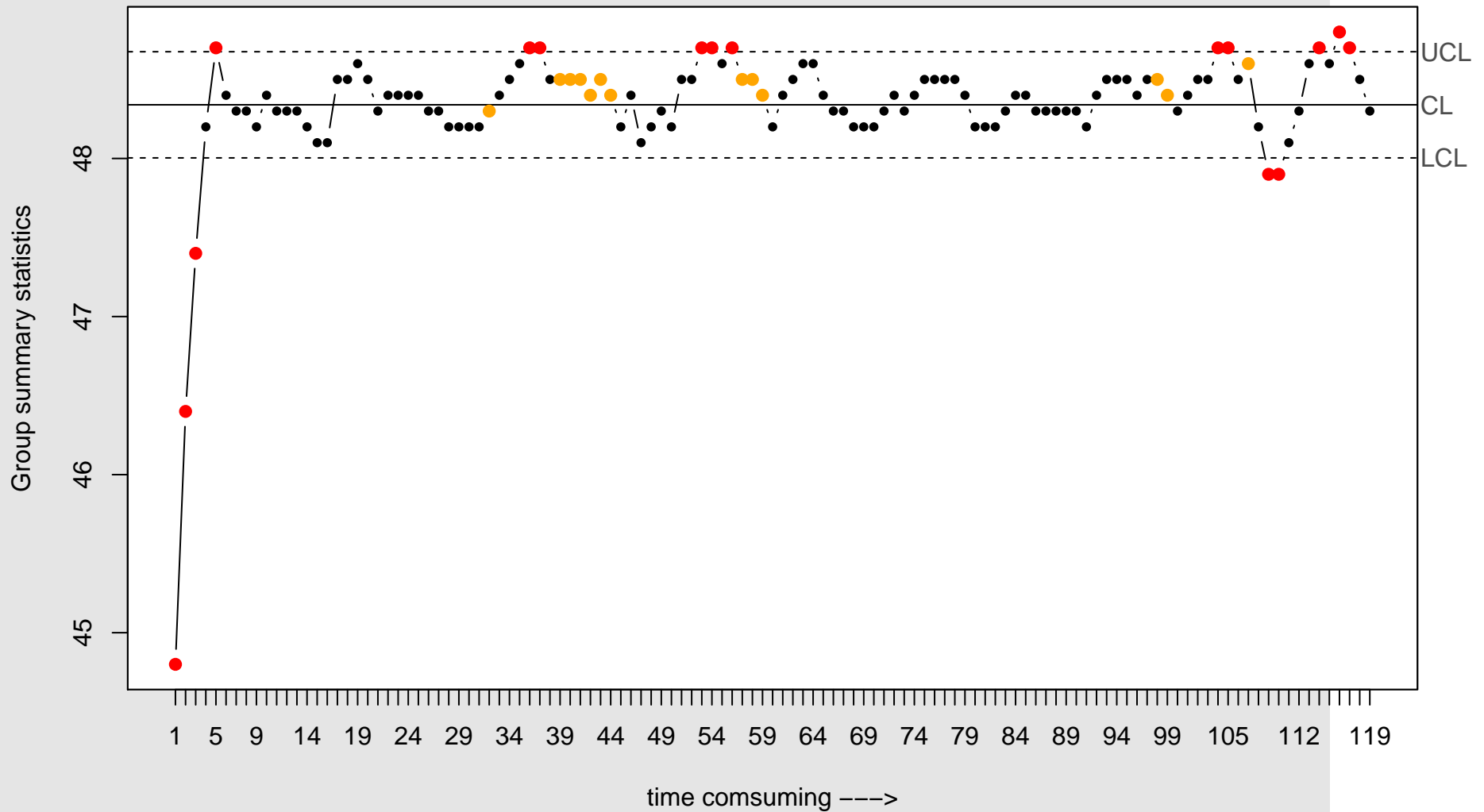
Number of groups = 119
Center = 48.3395   LCL = 48.00367   Number beyond limits = 16
StdDev = 0.1119425   UCL = 48.67532   Number violating runs = 13

171th column point of this product

Group summary statistics

time comsuming ---->

UCL

CL

LCL
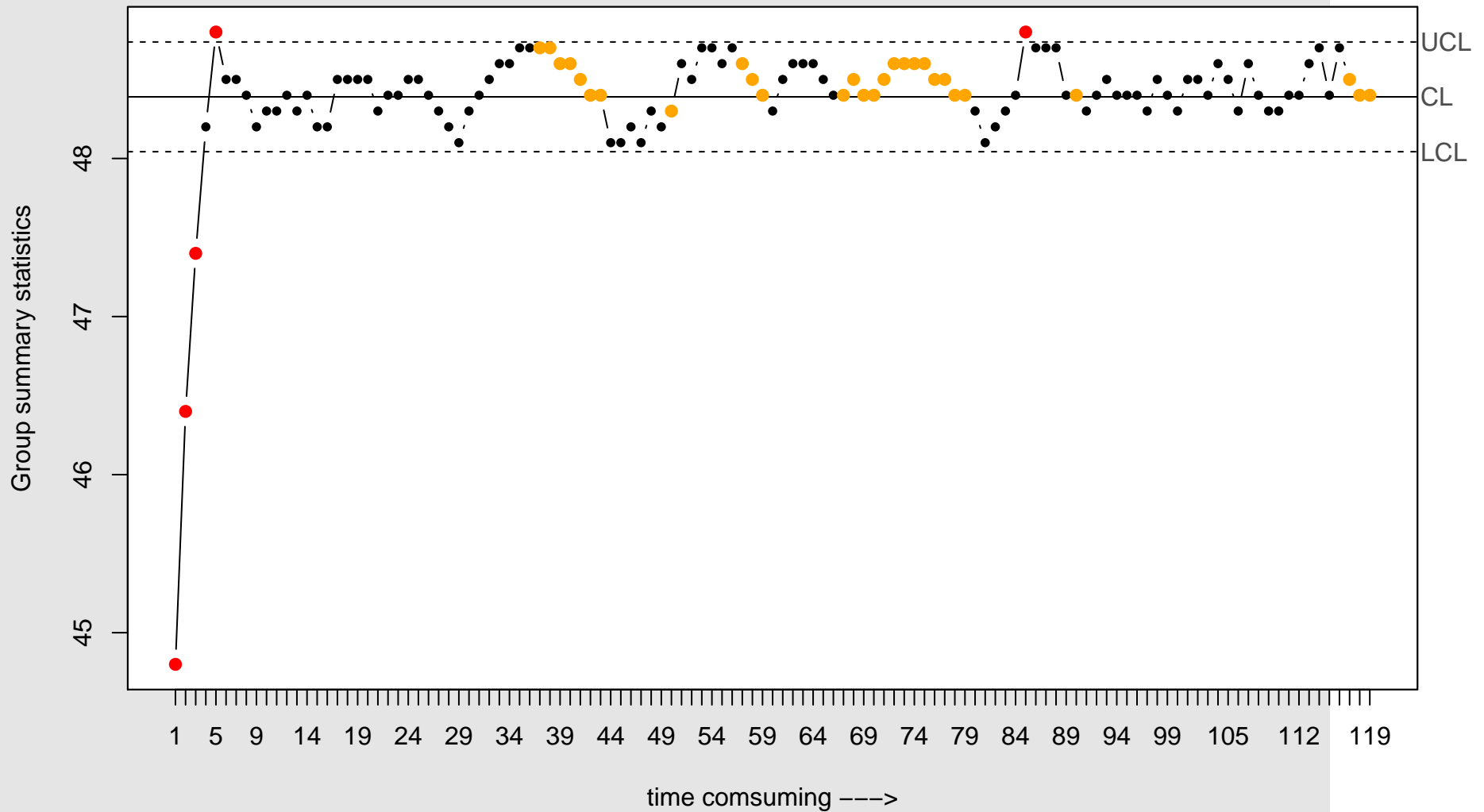
Number of groups = 119
Center = 48.38992   LCL = 48.04282   Number beyond limits = 5
StdDev = 0.115699   UCL = 48.73701   Number violating runs = 28

172th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL
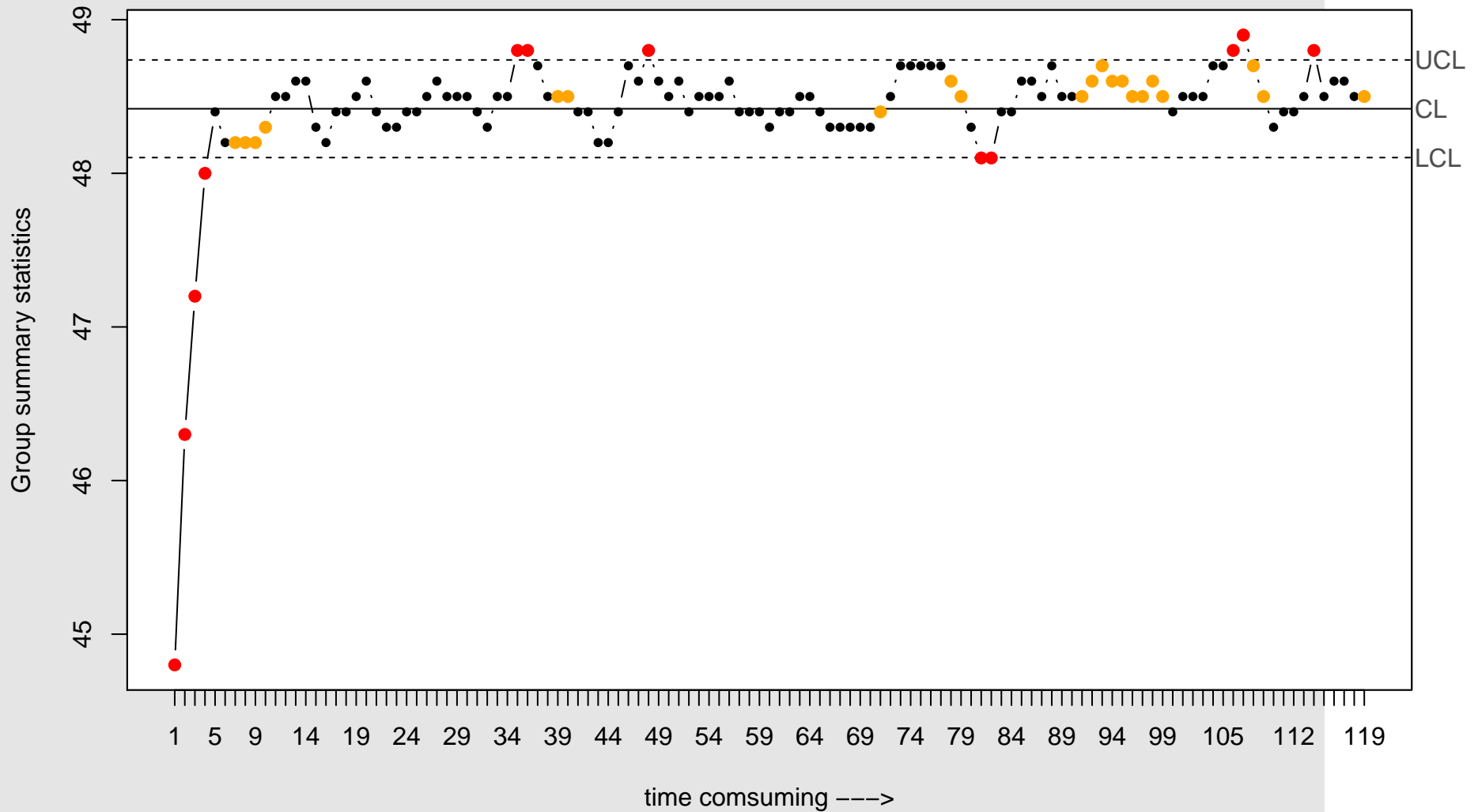
Number of groups = 119
Center = 48.42017   LCL = 48.10237   Number beyond limits = 12
StdDev = 0.1059322   UCL = 48.73796   Number violating runs = 22

173th column point of this product

Group summary statistics

time comsuming ---->
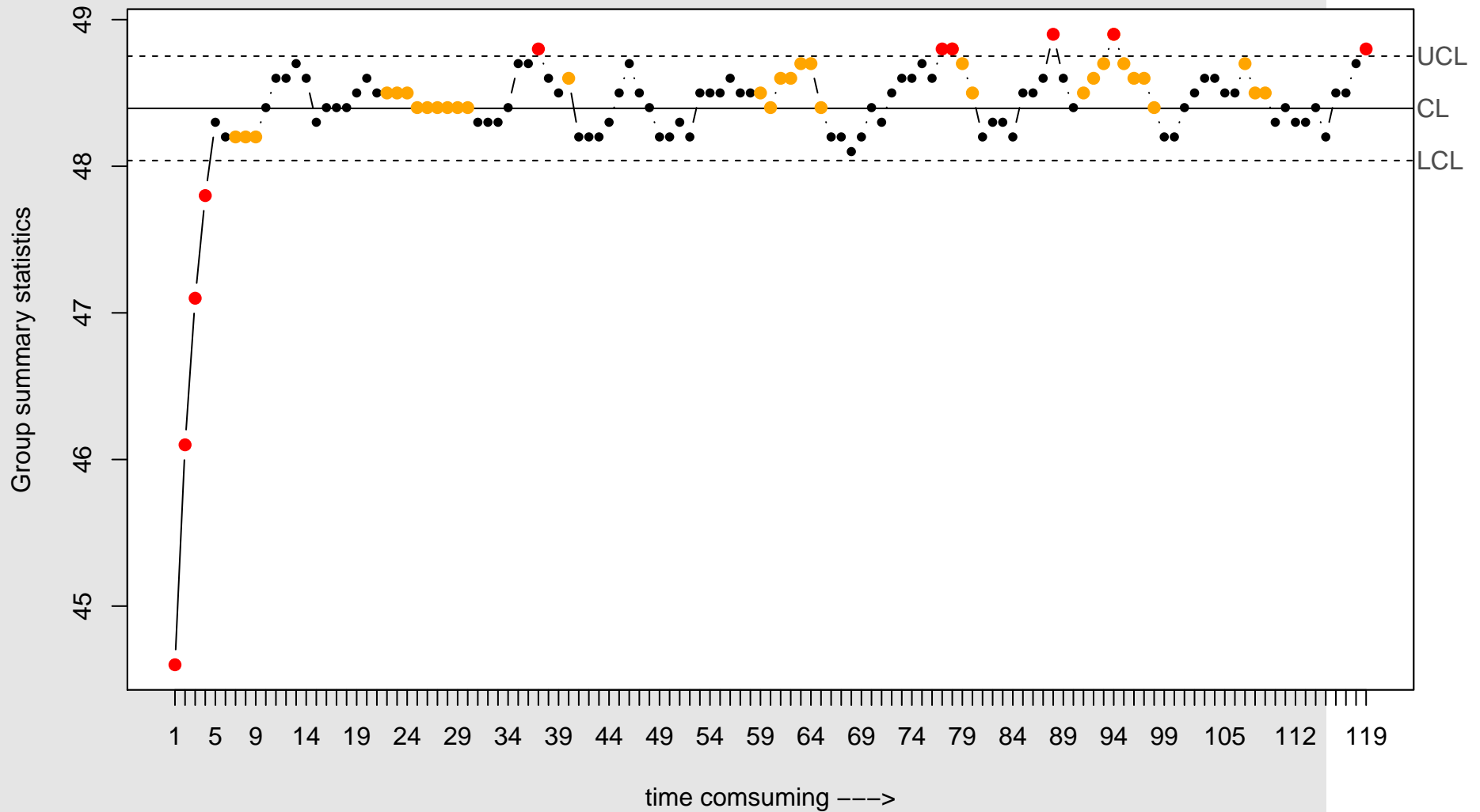
Number of groups = 119
Center = 48.39496   LCL = 48.03885   Number beyond limits = 10
StdDev = 0.1187042   UCL = 48.75107   Number violating runs = 34

174th column point of this product

Group summary statistics

time comsuming –––>
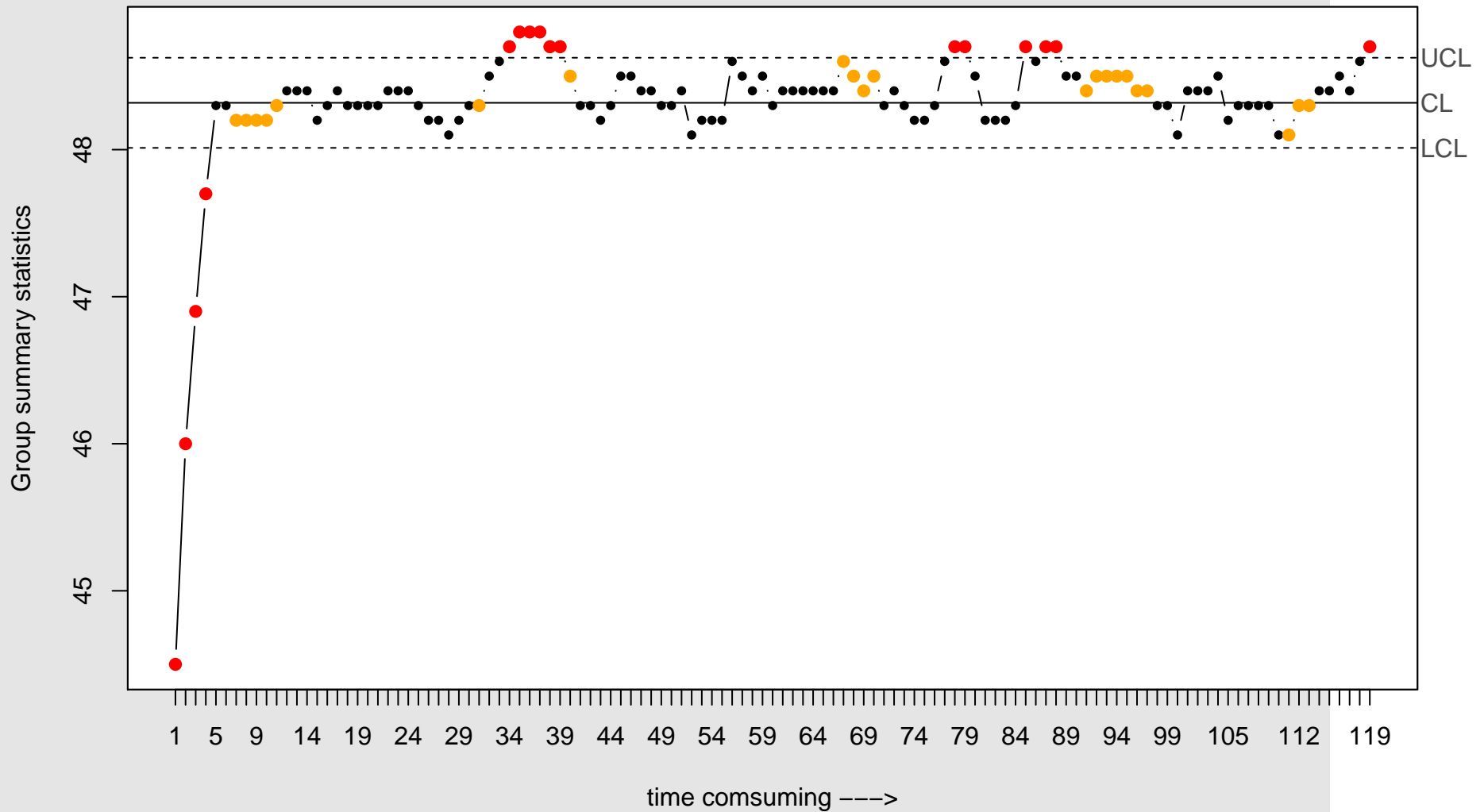
Number of groups = 119
Center = 48.31849   LCL = 48.01196   Number beyond limits = 16
StdDev = 0.1021757   UCL = 48.62501   Number violating runs = 23

175th column point of this product

Group summary statistics

time comsuming ---->
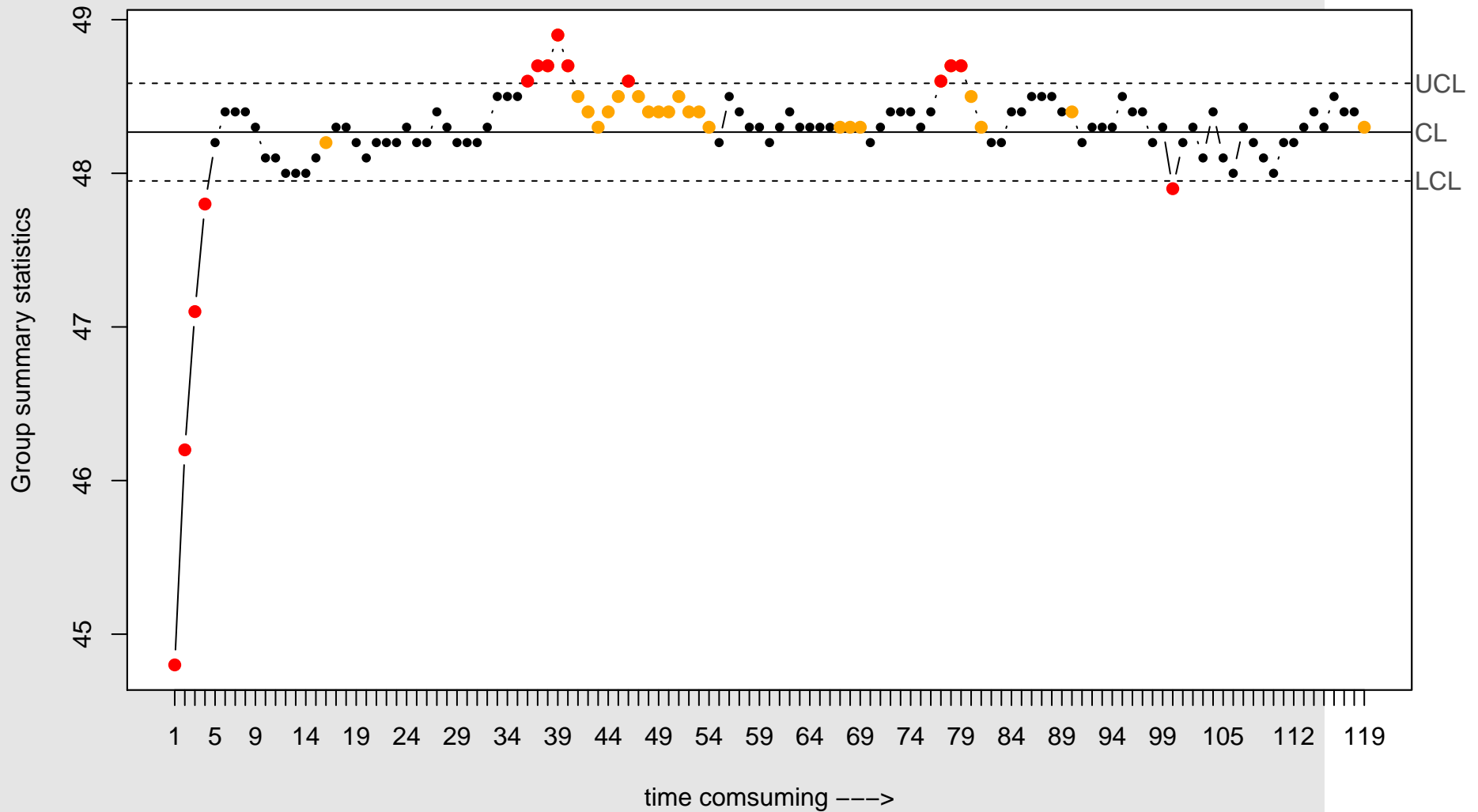
Number of groups = 119
Center = 48.26807   LCL = 47.95027   Number beyond limits = 14
StdDev = 0.1059322   UCL = 48.58586   Number violating runs = 28

176th column point of this product

Group summary statistics

time comsuming ---->
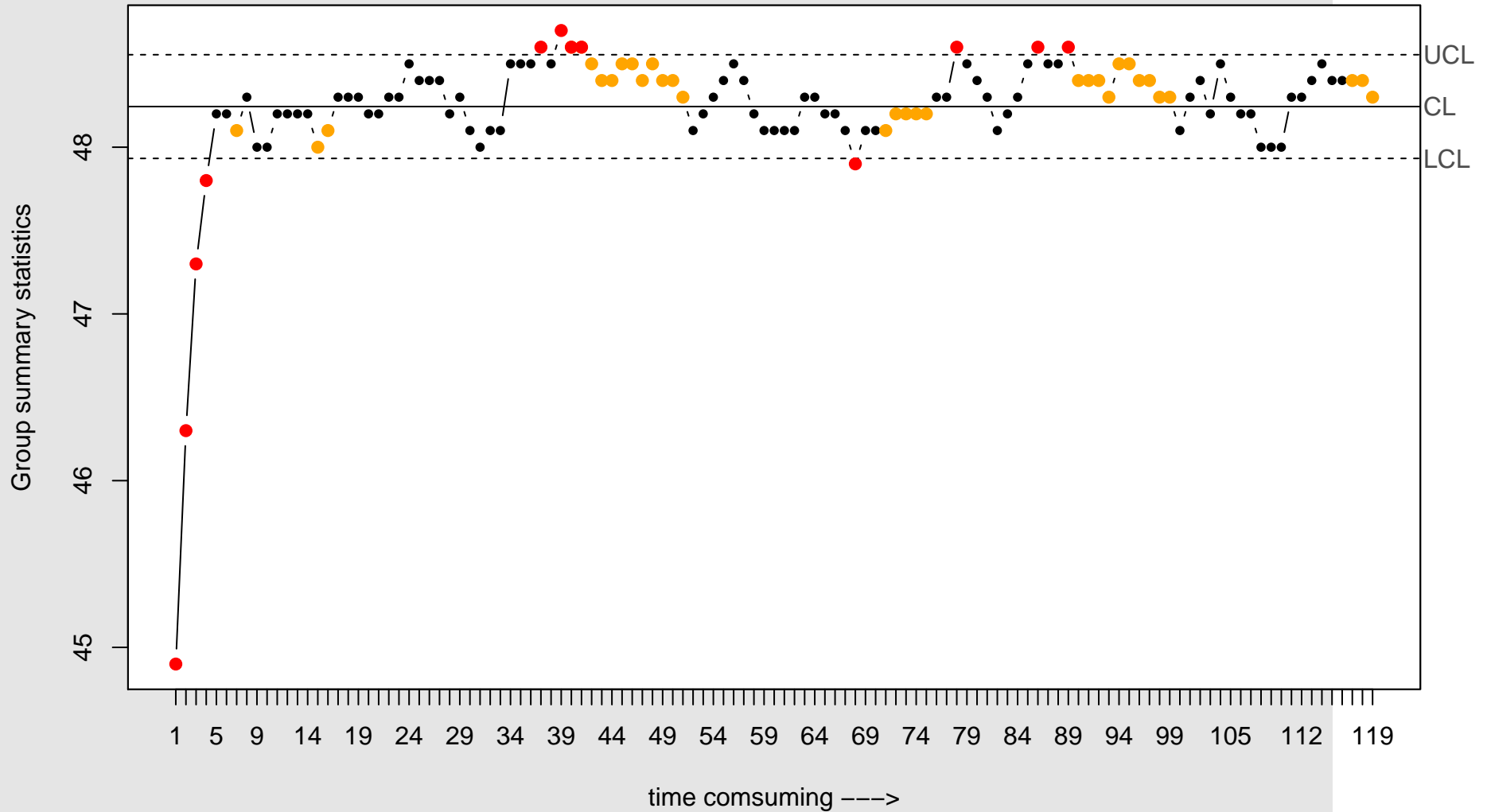
Number of groups = 119
Center = 48.2437   LCL = 47.93266   Number beyond limits = 12
StdDev = 0.1036783   UCL = 48.55473   Number violating runs = 33

177th column point of this product

Group summary statistics

time comsuming ----->
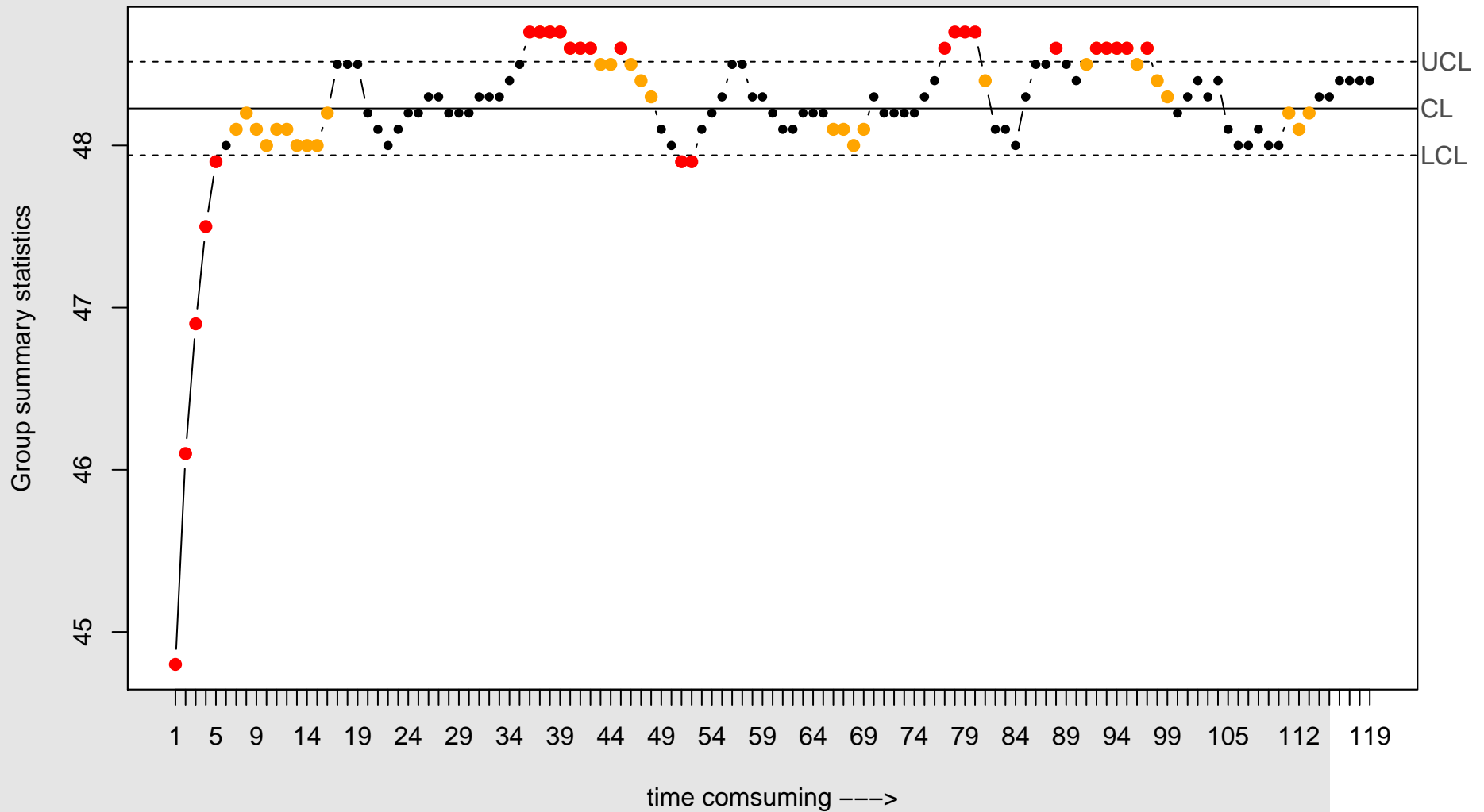
Number of groups = 119
Center = 48.22857   LCL = 47.94008   Number beyond limits = 25
StdDev = 0.0961654   UCL = 48.51707   Number violating runs = 39

178th column point of this product

Group summary statistics

time comsuming ---->
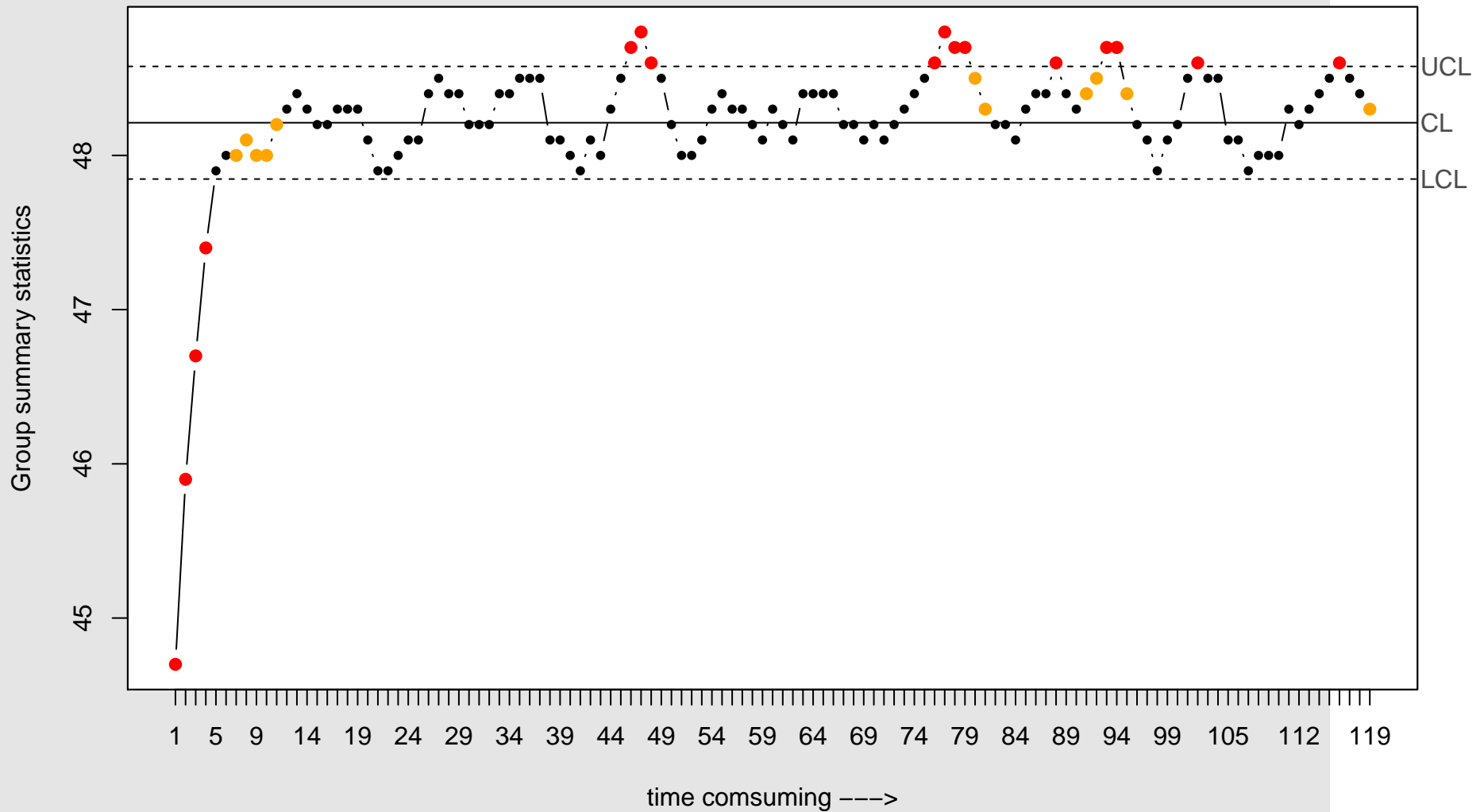
Number of groups = 119
Center = 48.21176   LCL = 47.84664   Number beyond limits = 16
StdDev = 0.1217093   UCL = 48.57689   Number violating runs = 14

179th column point of this product

Group summary statistics

time comsuming ----->
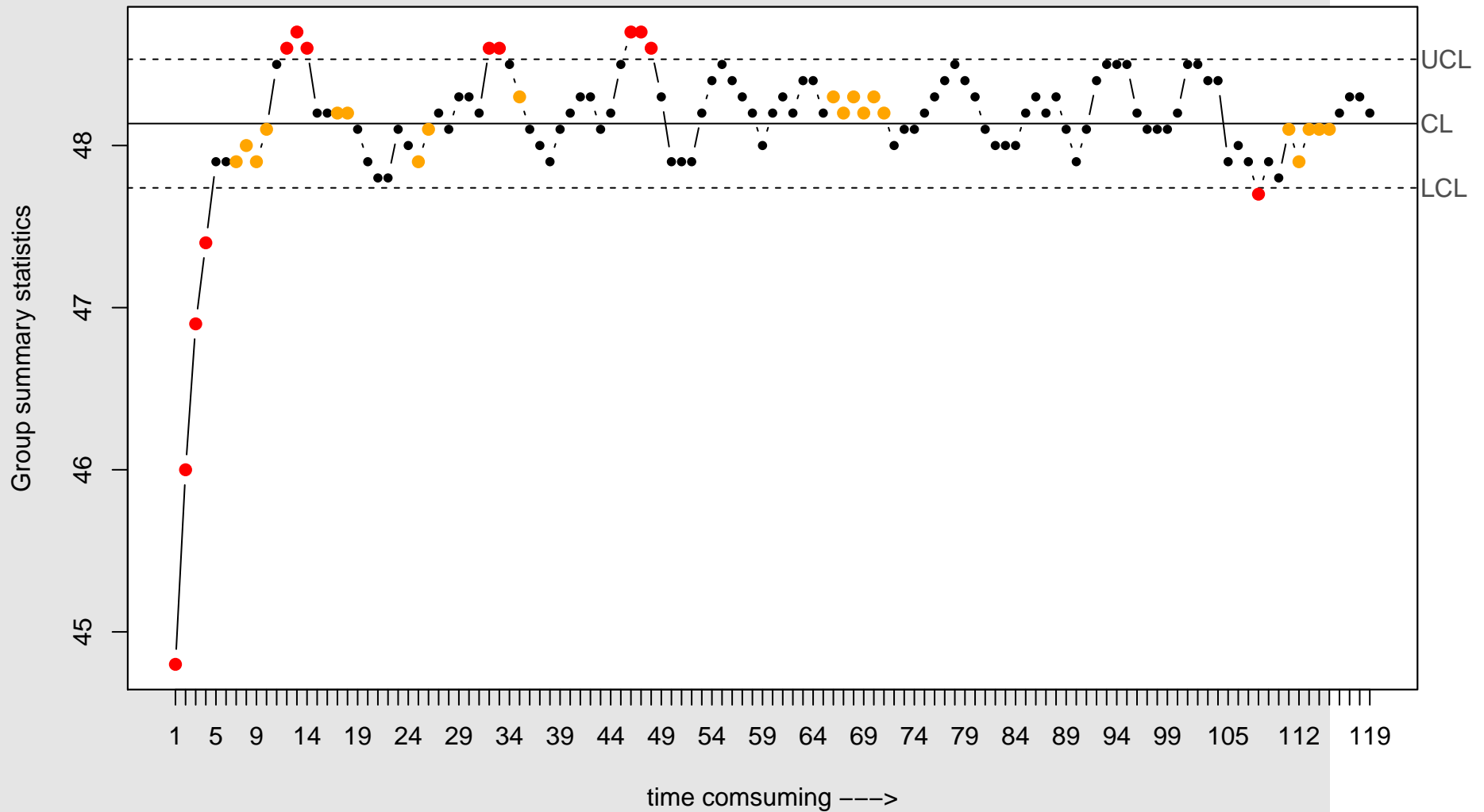
Number of groups = 119
Center = 48.13529   LCL = 47.73861   Number beyond limits = 13
StdDev = 0.1322274   UCL = 48.53198   Number violating runs = 20

180th column point of this product

Group summary statistics

time comsuming ---->
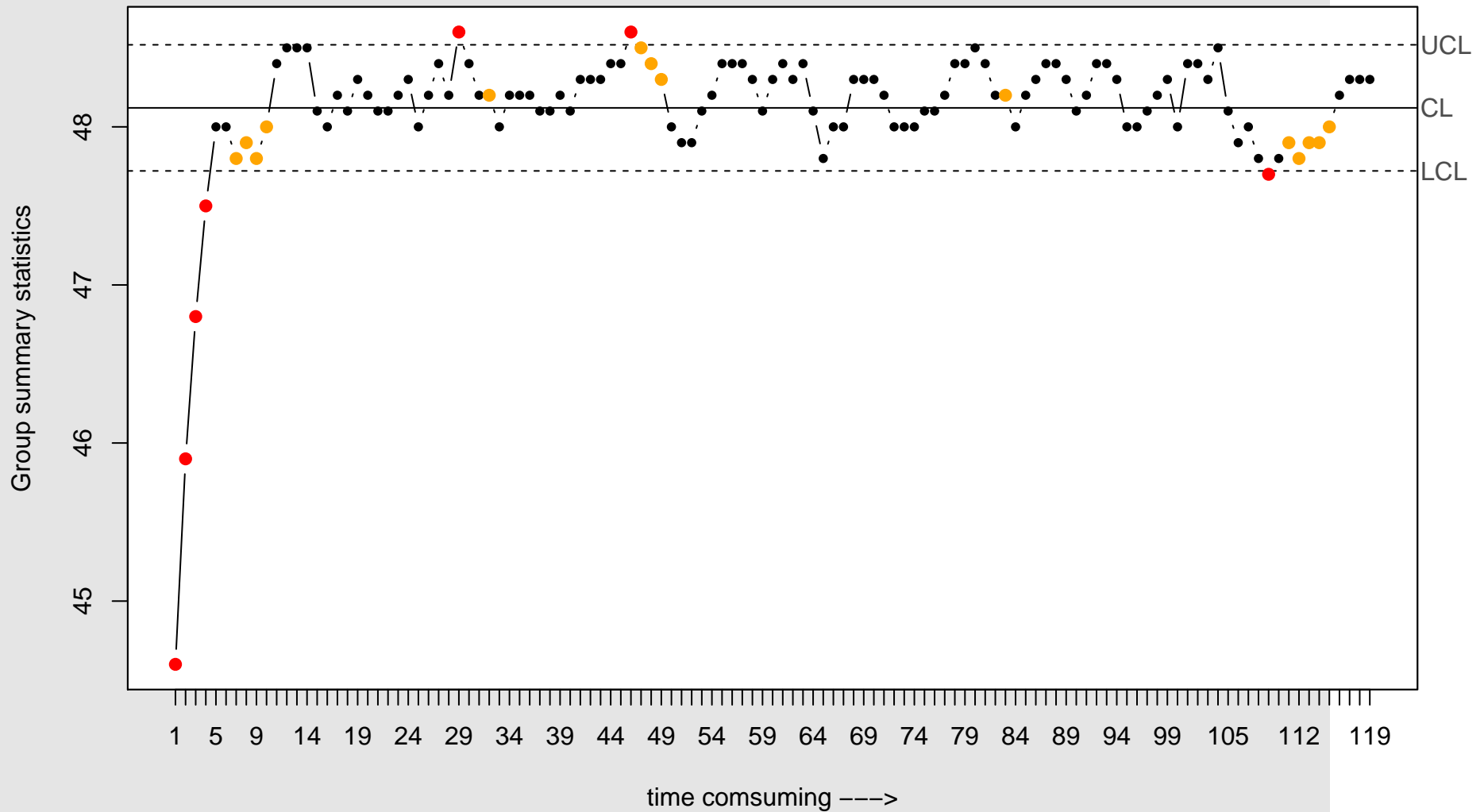
Number of groups = 119
Center = 48.12017
StdDev = 0.1329787
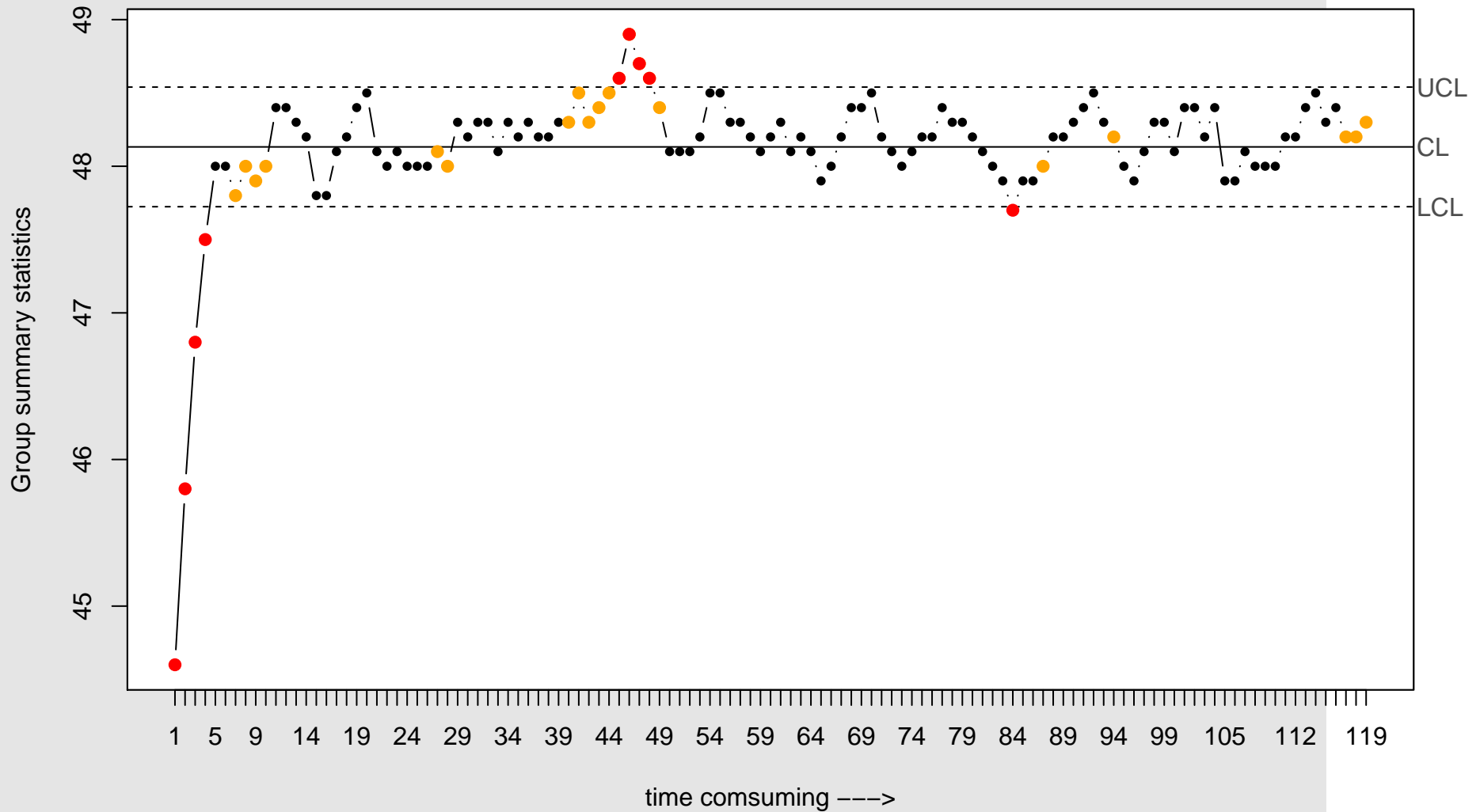
LCL = 47.72123
UCL = 48.5191

Number beyond limits = 7
Number violating runs = 14

181th column point of this product

Group summary statistics

time comsuming ––––>

Number of groups = 119
Center = 48.13193   LCL = 47.72398   Number beyond limits = 9
StdDev = 0.1359839   UCL = 48.53988   Number violating runs = 21

182th column point of this product

Group summary statistics

45 46 47 48

UCL
CL
LCL

1 5 9 14 19 24 29 34 39 44 49 54 59 64 69 74 79 84 89 94 99 105 112 119

time comsuming ---->

Number of groups = 119
Center = 48.06471   LCL = 47.65225   Number beyond limits = 10
StdDev = 0.1374865   UCL = 48.47717   Number violating runs = 26

183th column point of this product

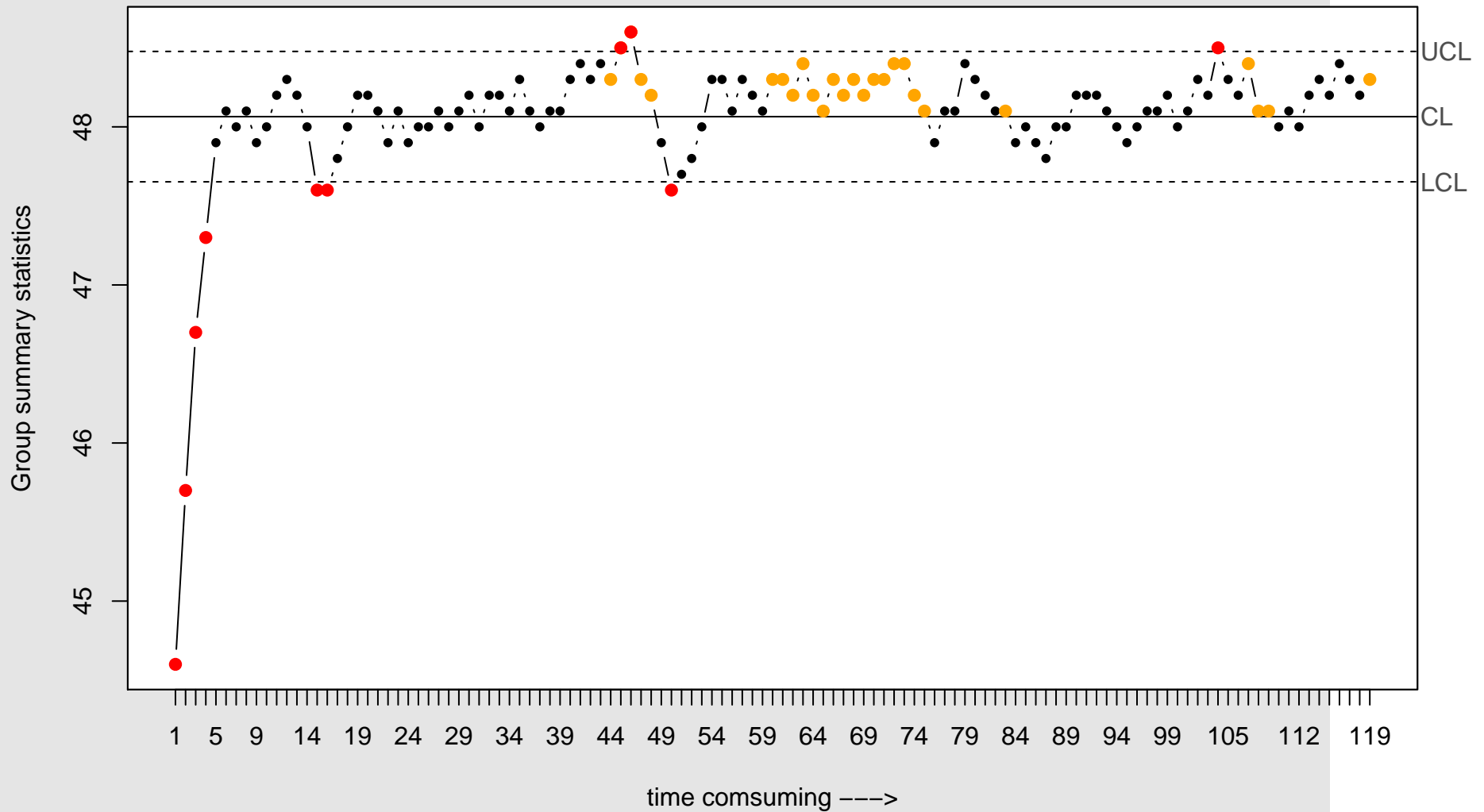Group summary statistics

time comsuming ---->
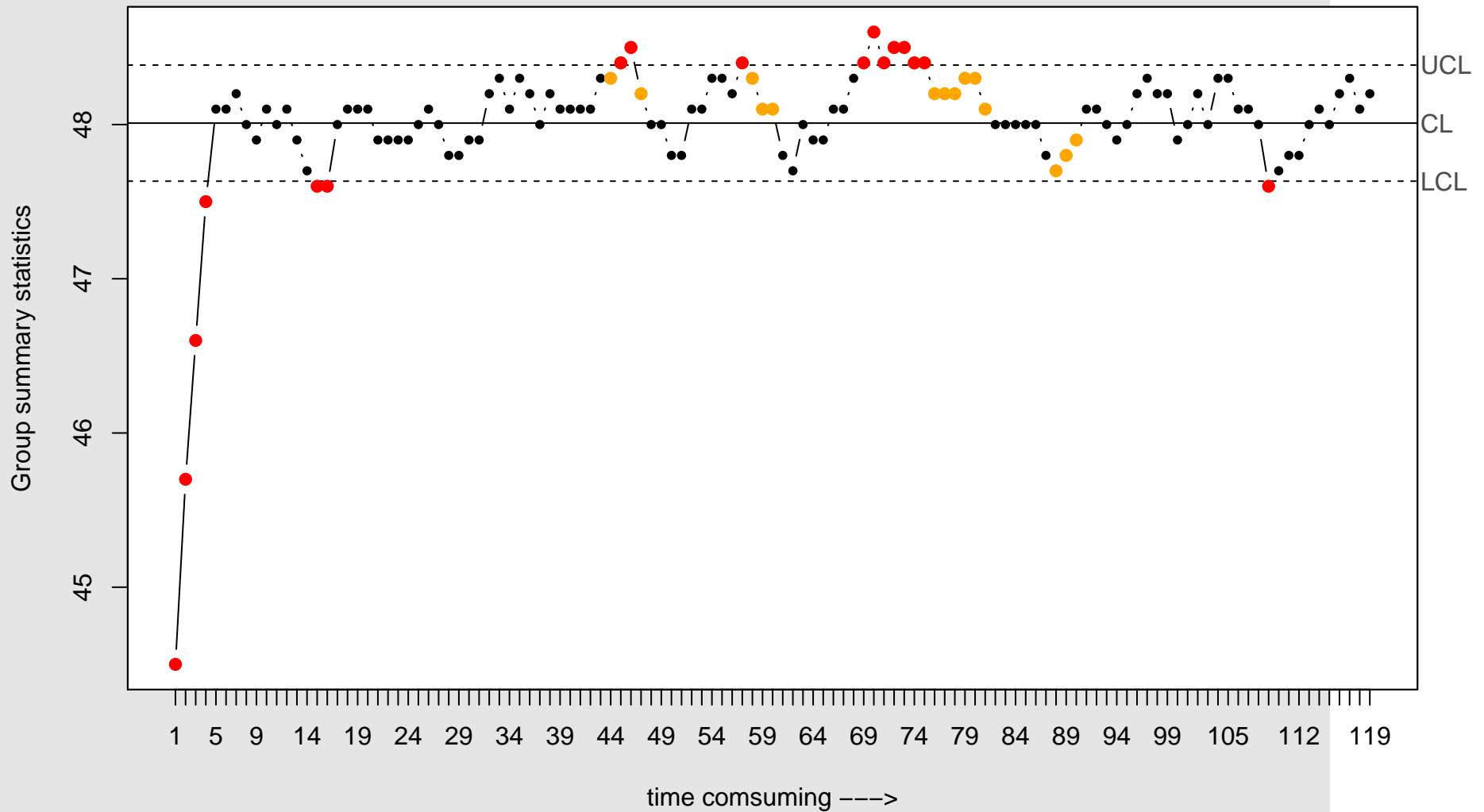
Number of groups = 119
Center = 48.00924
StdDev = 0.1254658
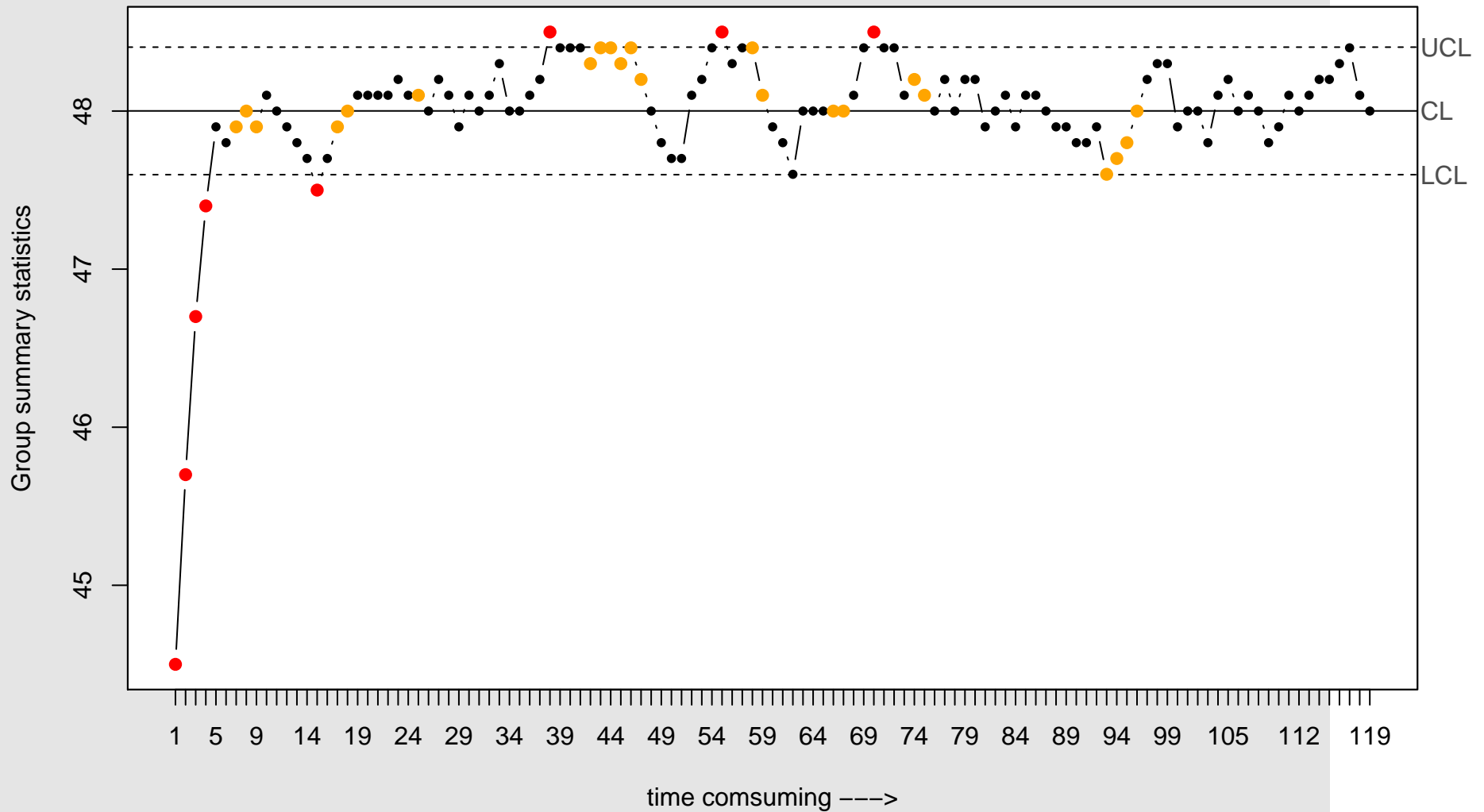
LCL = 47.63285
UCL = 48.38564

Number beyond limits = 17
Number violating runs = 20

184th column point of this product

Group summary statistics

time comsuming --->

Number of groups = 119
Center = 48.00084   LCL = 47.5974   Number beyond limits = 8
StdDev = 0.1344813   UCL = 48.40428   Number violating runs = 22

185th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ––––>
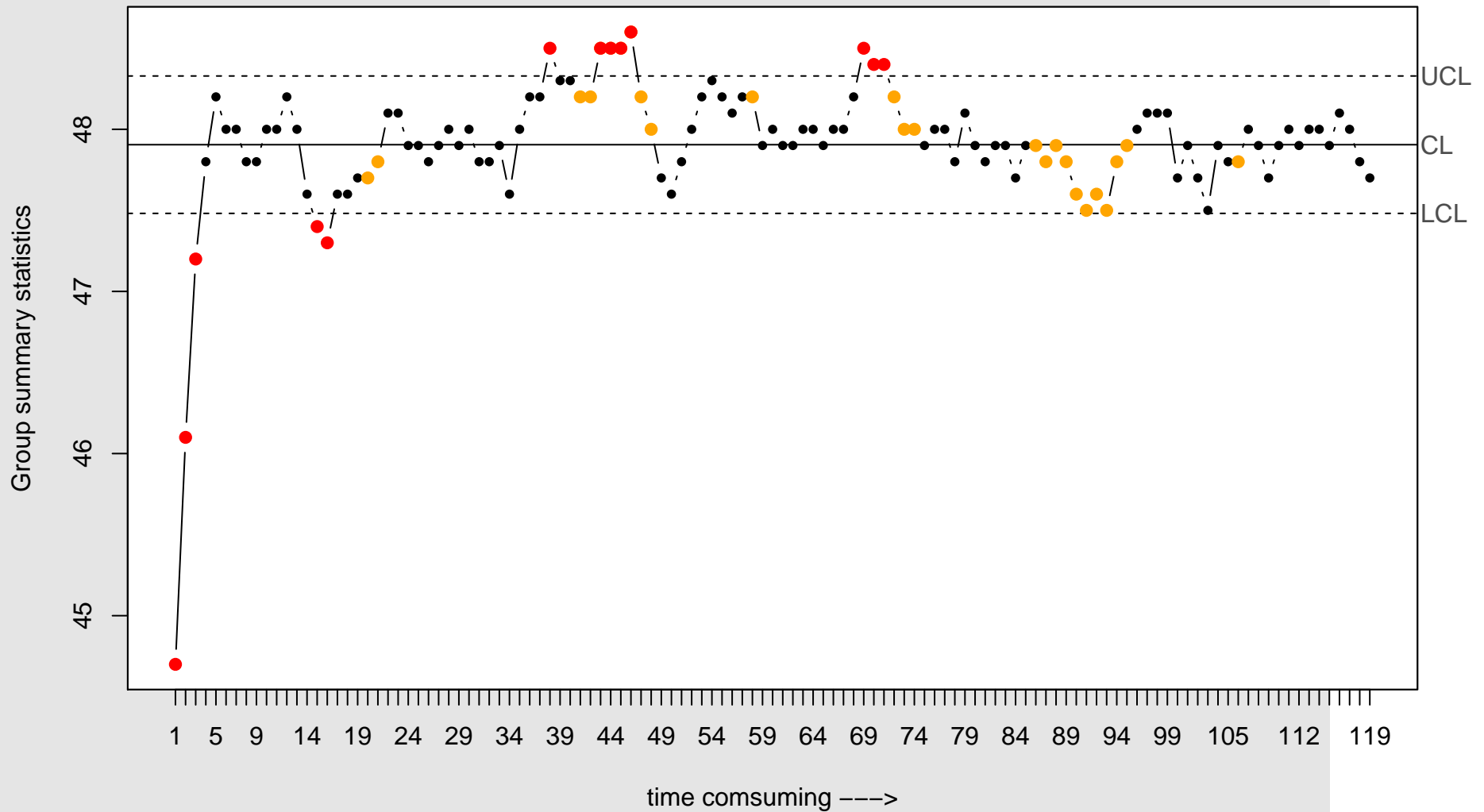
Number of groups = 119
Center = 47.90504   LCL = 47.48131   Number beyond limits = 13
StdDev = 0.1412429   UCL = 48.32877   Number violating runs = 25

186th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ---->
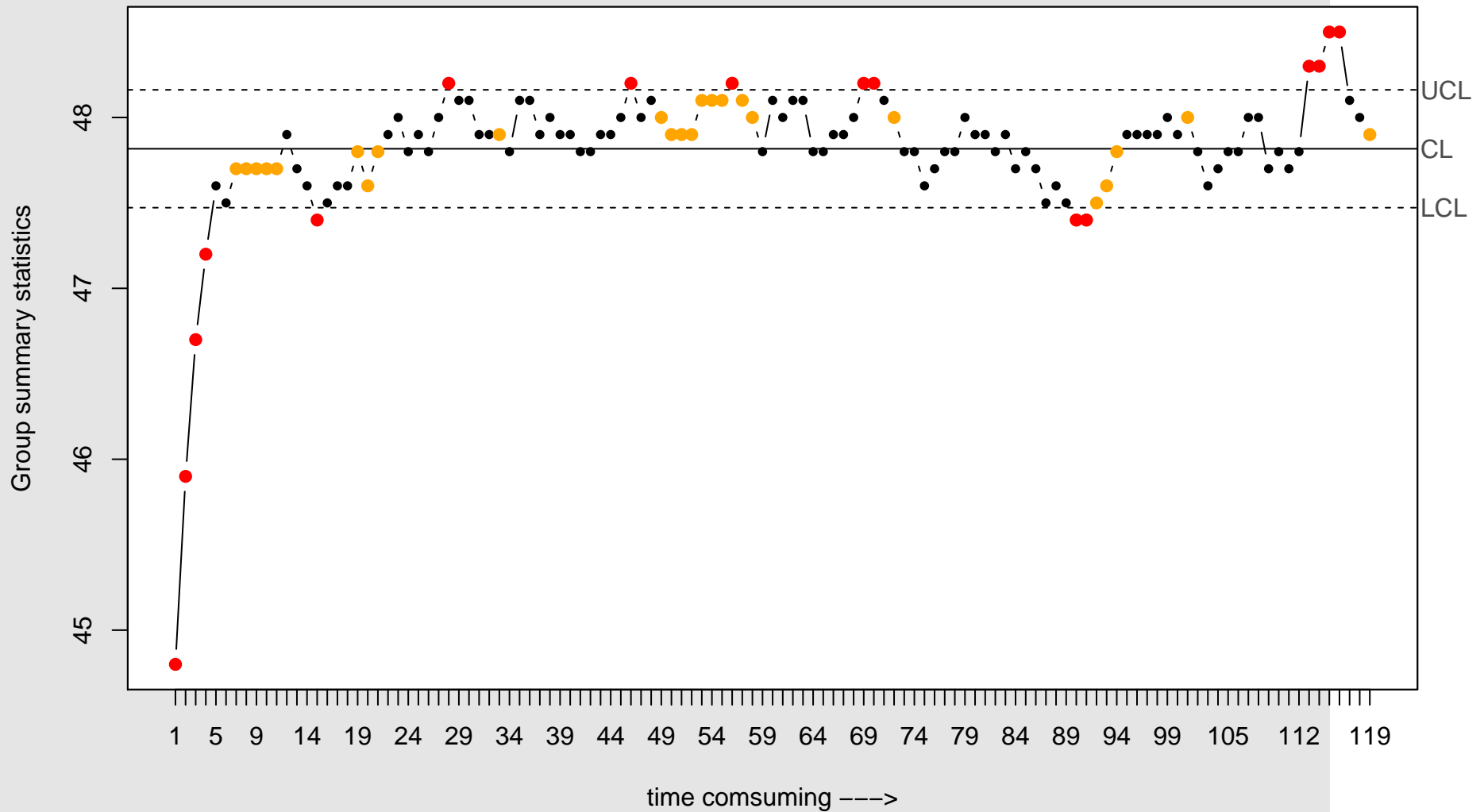
Number of groups = 119
Center = 47.81681   LCL = 47.47196   Number beyond limits = 16
StdDev = 0.1149477   UCL = 48.16165   Number violating runs = 27

187th column point of this product

Group summary statistics

time comsuming --->

UCL
CL
LCL

Number of groups = 119
Center = 47.84958   LCL = 47.5115   Number beyond limits = 12
StdDev = 0.1126938   UCL = 48.18766   Number violating runs = 16

188th column point of this product

Group summary statistics

time comsuming –––>
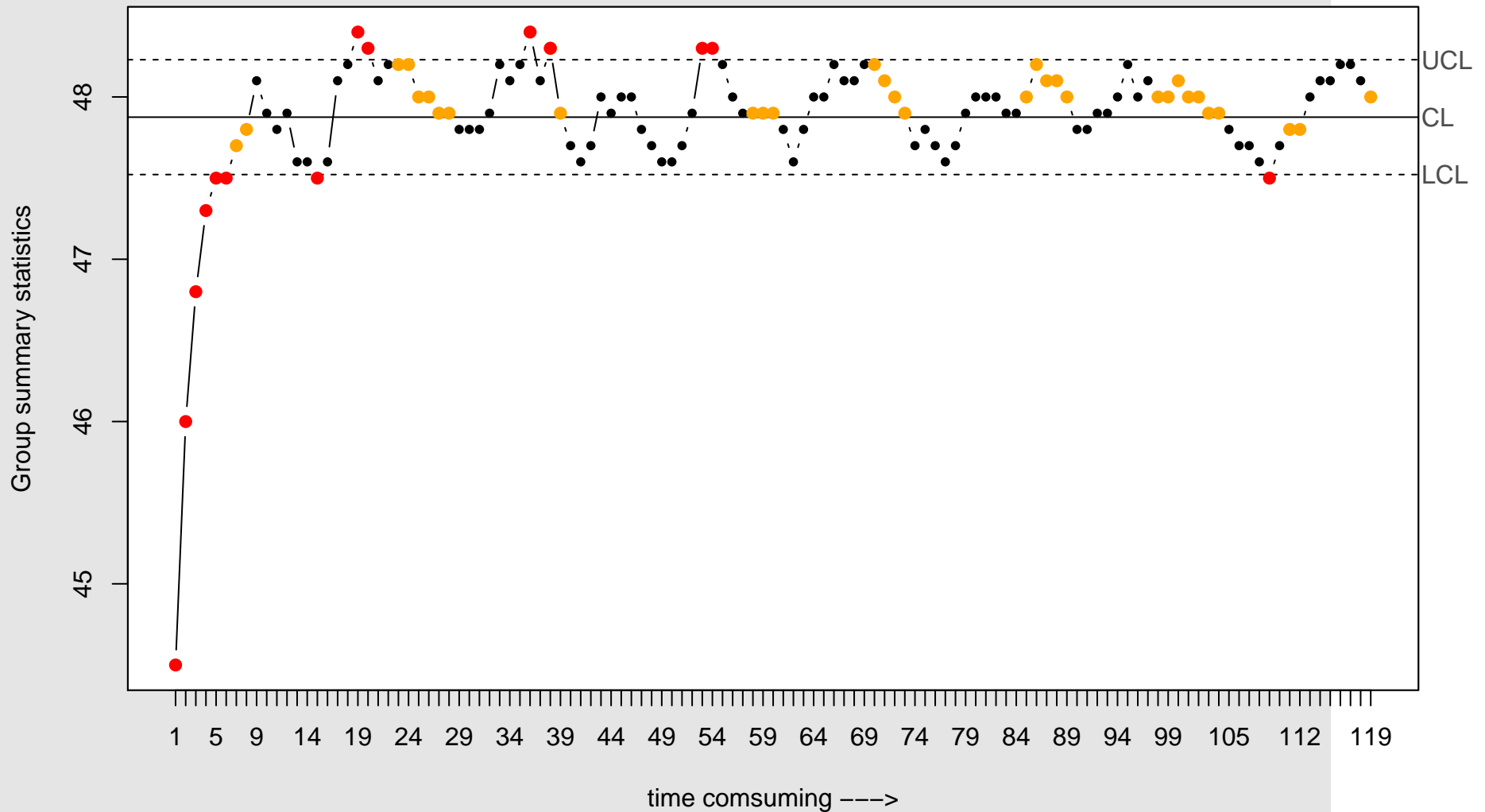
Number of groups = 119
Center = 47.87563   LCL = 47.52177   Number beyond limits = 14
StdDev = 0.1179529   UCL = 48.22949   Number violating runs = 32

189th column point of this product
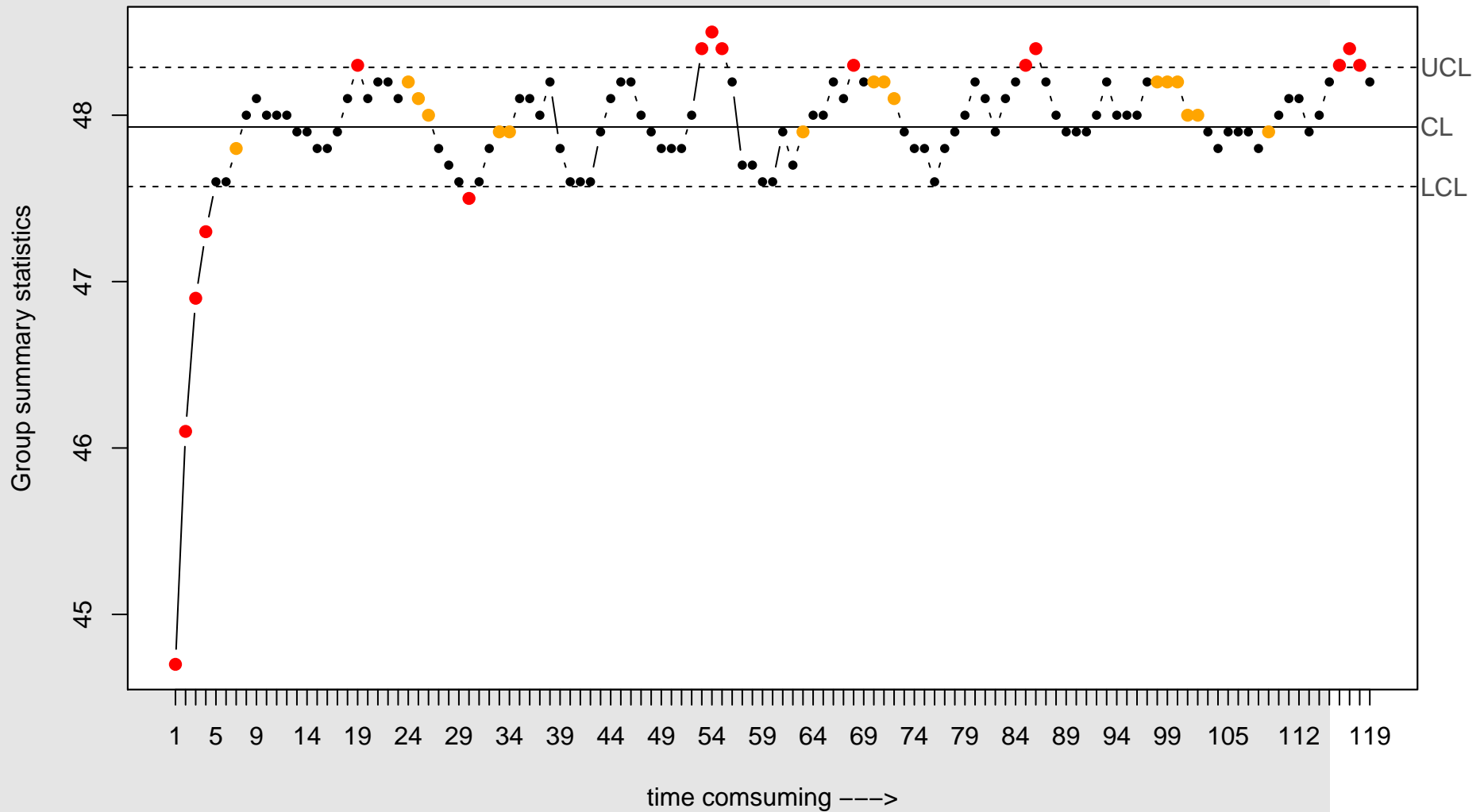
Number of groups = 119
Center = 47.92941   LCL = 47.57105   Number beyond limits = 15
StdDev = 0.1194555   UCL = 48.28778   Number violating runs = 16

190th column point of this product

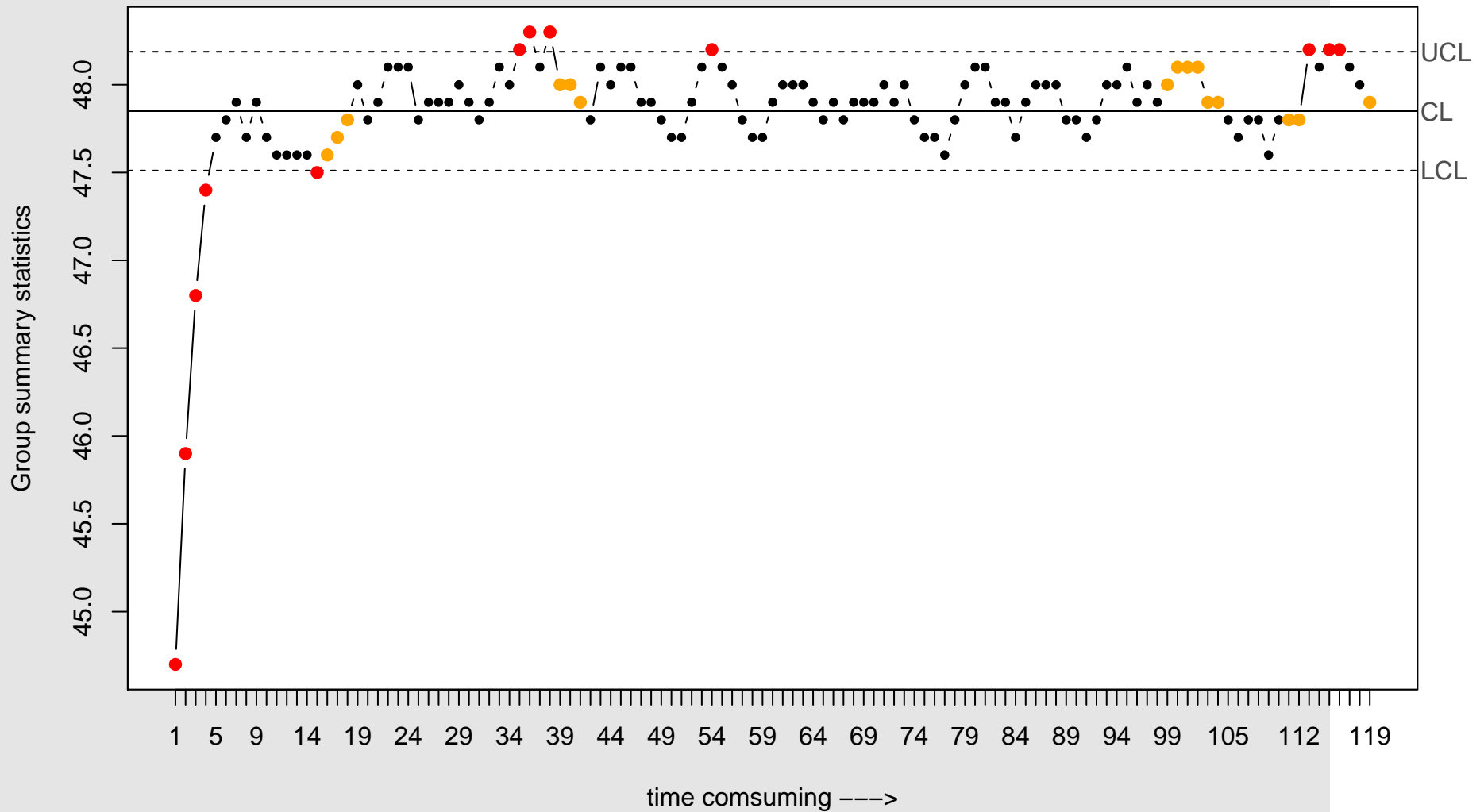Group summary statistics

time comsuming ––––>

UCL

CL

LCL
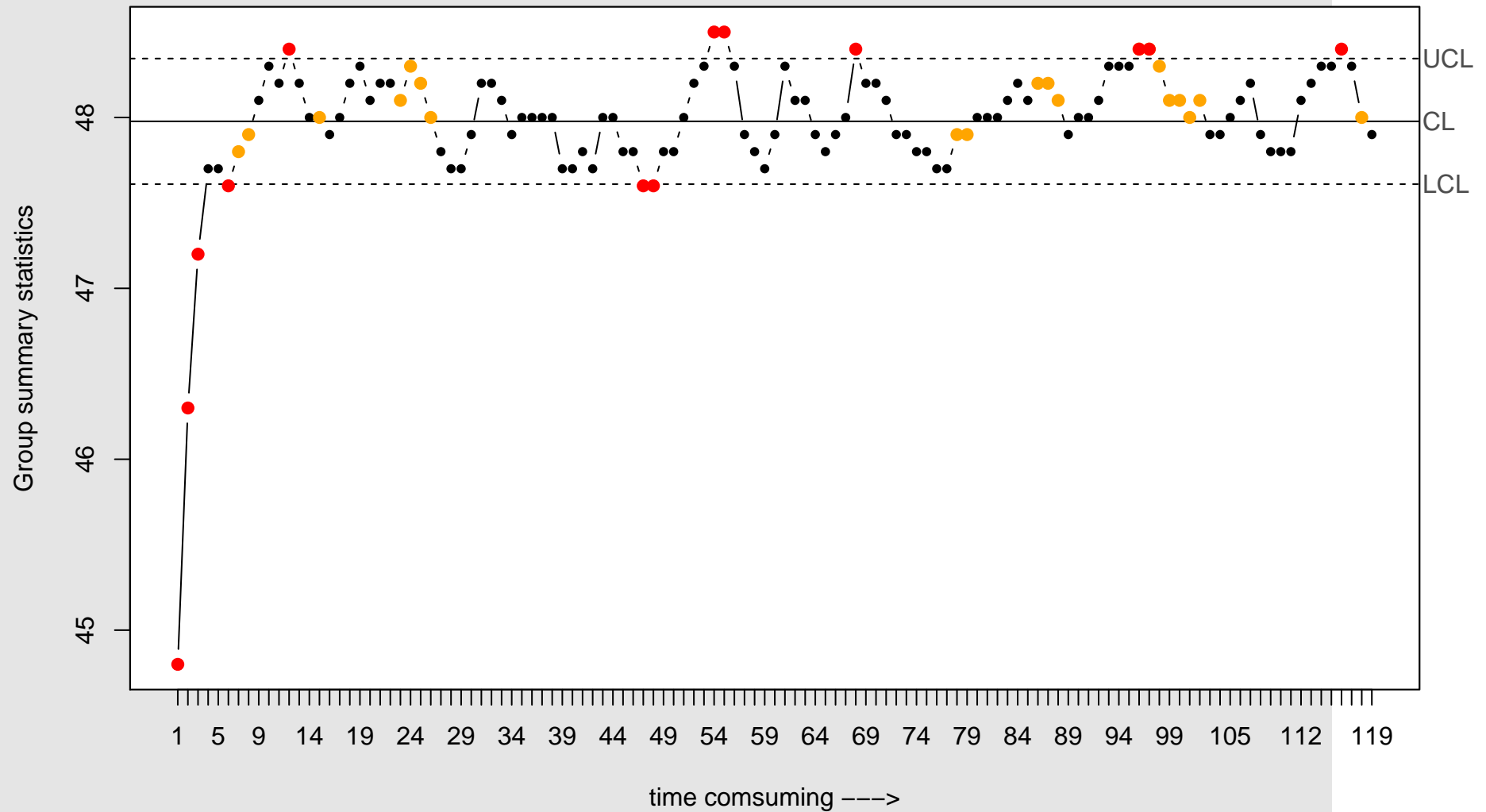
Number of groups = 119
Center = 47.97731
StdDev = 0.1224606

LCL = 47.60993
UCL = 48.34469

Number beyond limits = 13
Number violating runs = 20

191th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 48.1
StdDev = 0.1314761
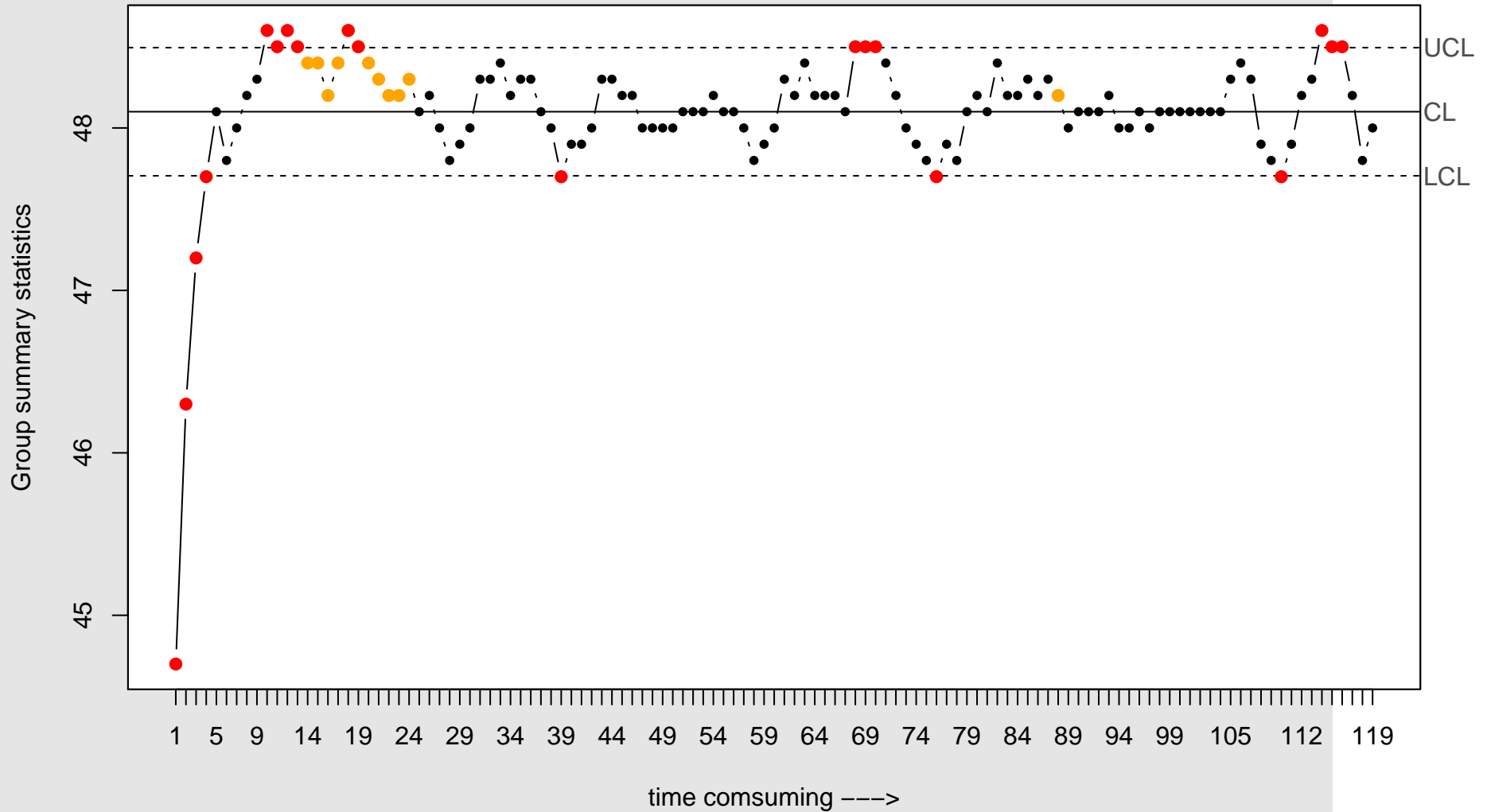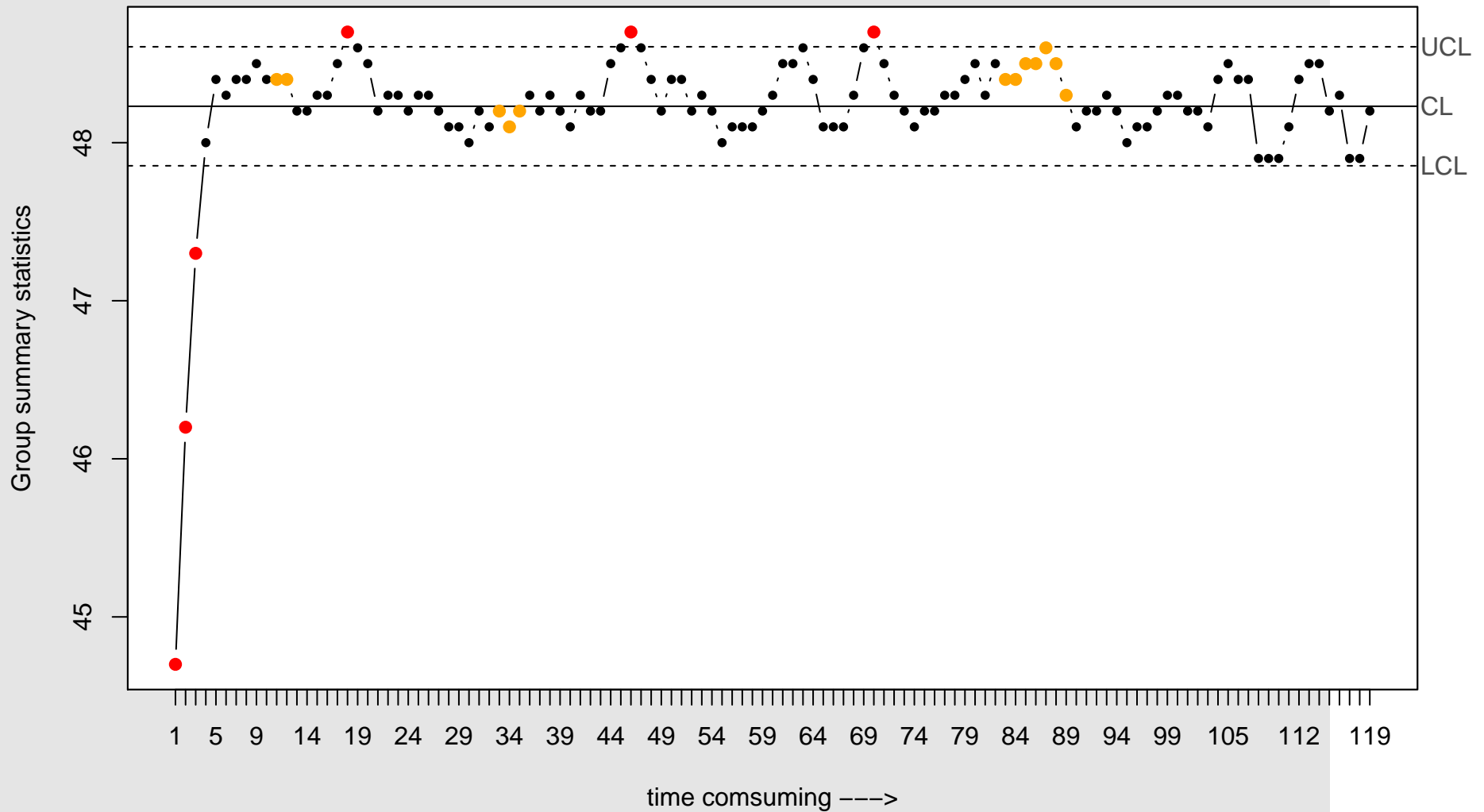
LCL = 47.70557
UCL = 48.49443

Number beyond limits = 19
Number violating runs = 12

192th column point of this product

Group summary statistics

time comsuming --->

Number of groups = 119
Center = 48.23025   LCL = 47.85385   Number beyond limits = 6
StdDev = 0.1254658   UCL = 48.60665   Number violating runs = 12

193th column point of this product

Group summary statistics

time comsuming ---->
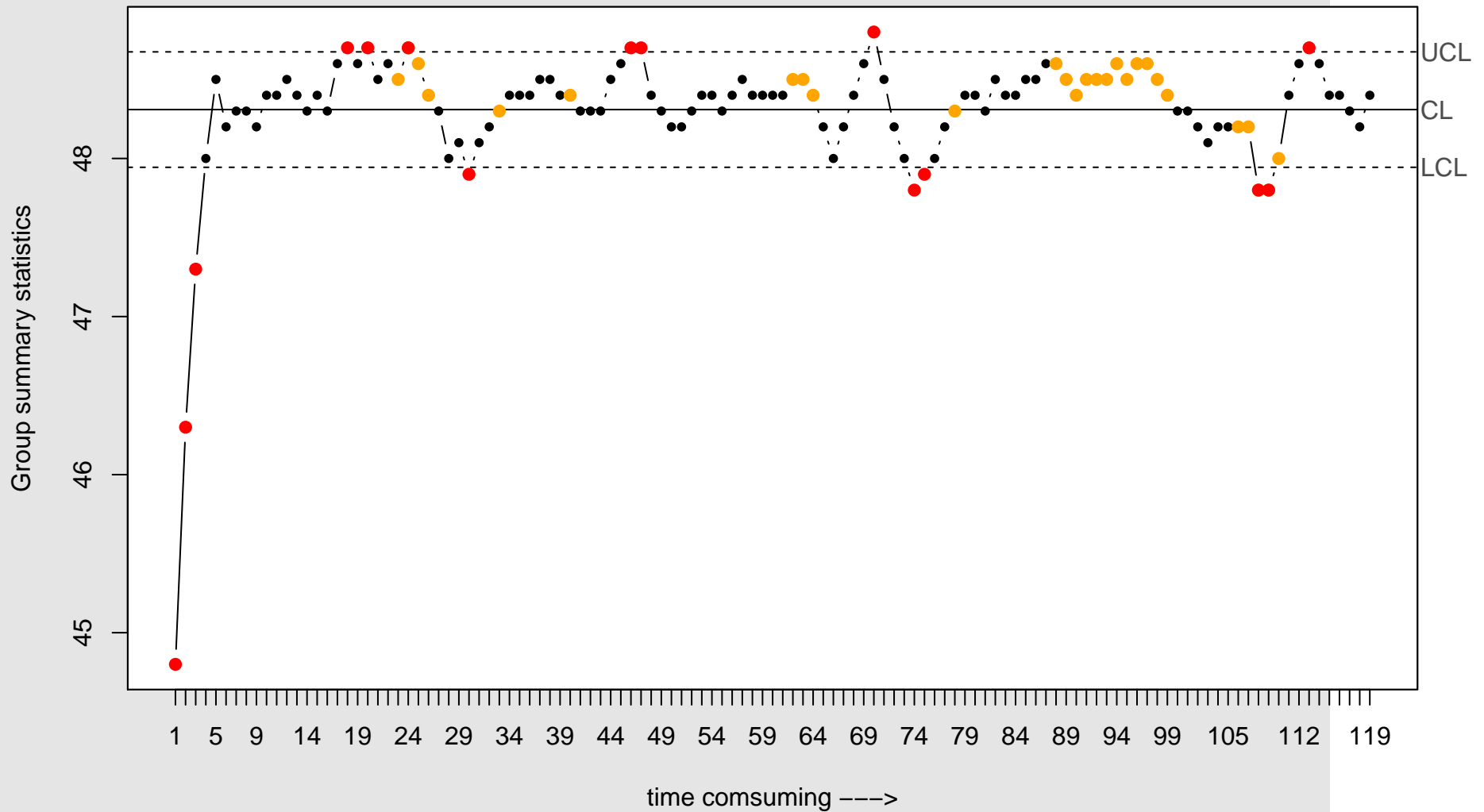
Number of groups = 119
Center = 48.30924   LCL = 47.94412   Number beyond limits = 15
StdDev = 0.1217093   UCL = 48.67437   Number violating runs = 27

194th column point of this product

Group summary statistics

time comsuming --->
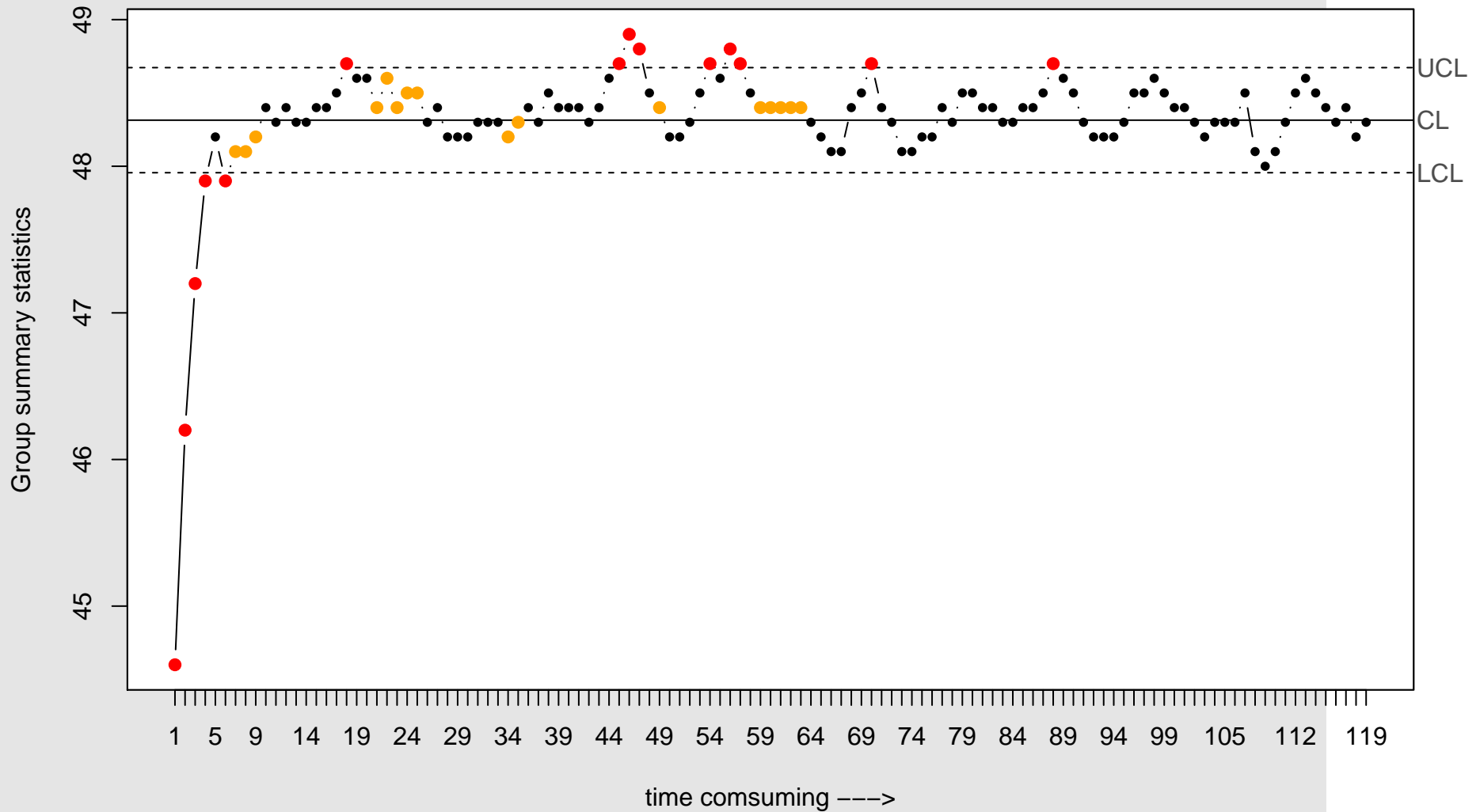
Number of groups = 119
Center = 48.31429   LCL = 47.95592   Number beyond limits = 14
StdDev = 0.1194555   UCL = 48.67265   Number violating runs = 16

195th column point of this product

Group summary statistics

time comsuming –––>
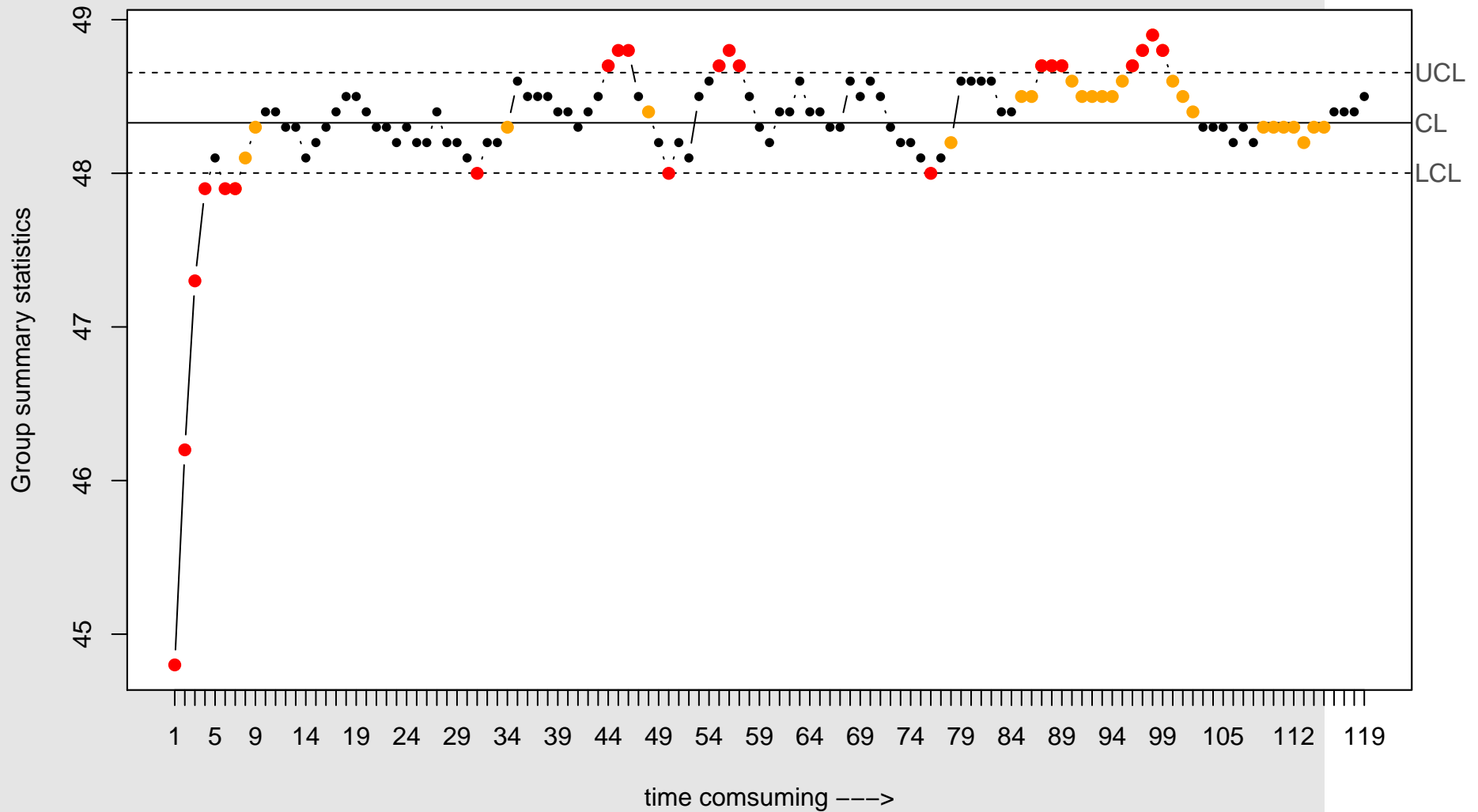
Number of groups = 119
Center = 48.32857   LCL = 48.00176   Number beyond limits = 22
StdDev = 0.1089374   UCL = 48.65538   Number violating runs = 31

196th column point of this product

Group summary statistics

time comsuming ---->
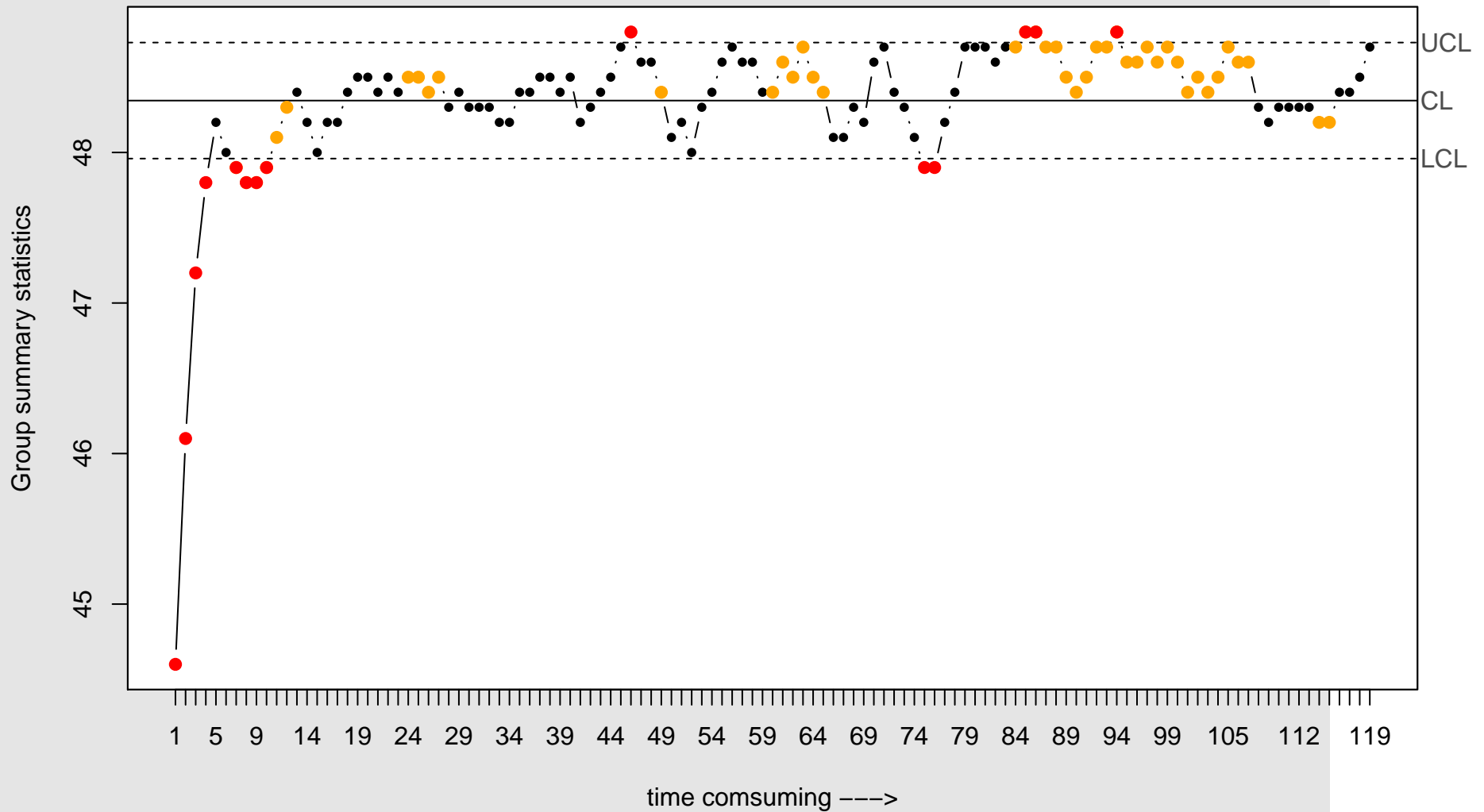
Number of groups = 119
Center = 48.34454   LCL = 47.95912   Number beyond limits = 14
StdDev = 0.128471   UCL = 48.72995   Number violating runs = 43

197th column point of this product

Number of groups = 119
Center = 48.30672   LCL = 47.92807   Number beyond limits = 18
StdDev = 0.1262171   UCL = 48.68537   Number violating runs = 22
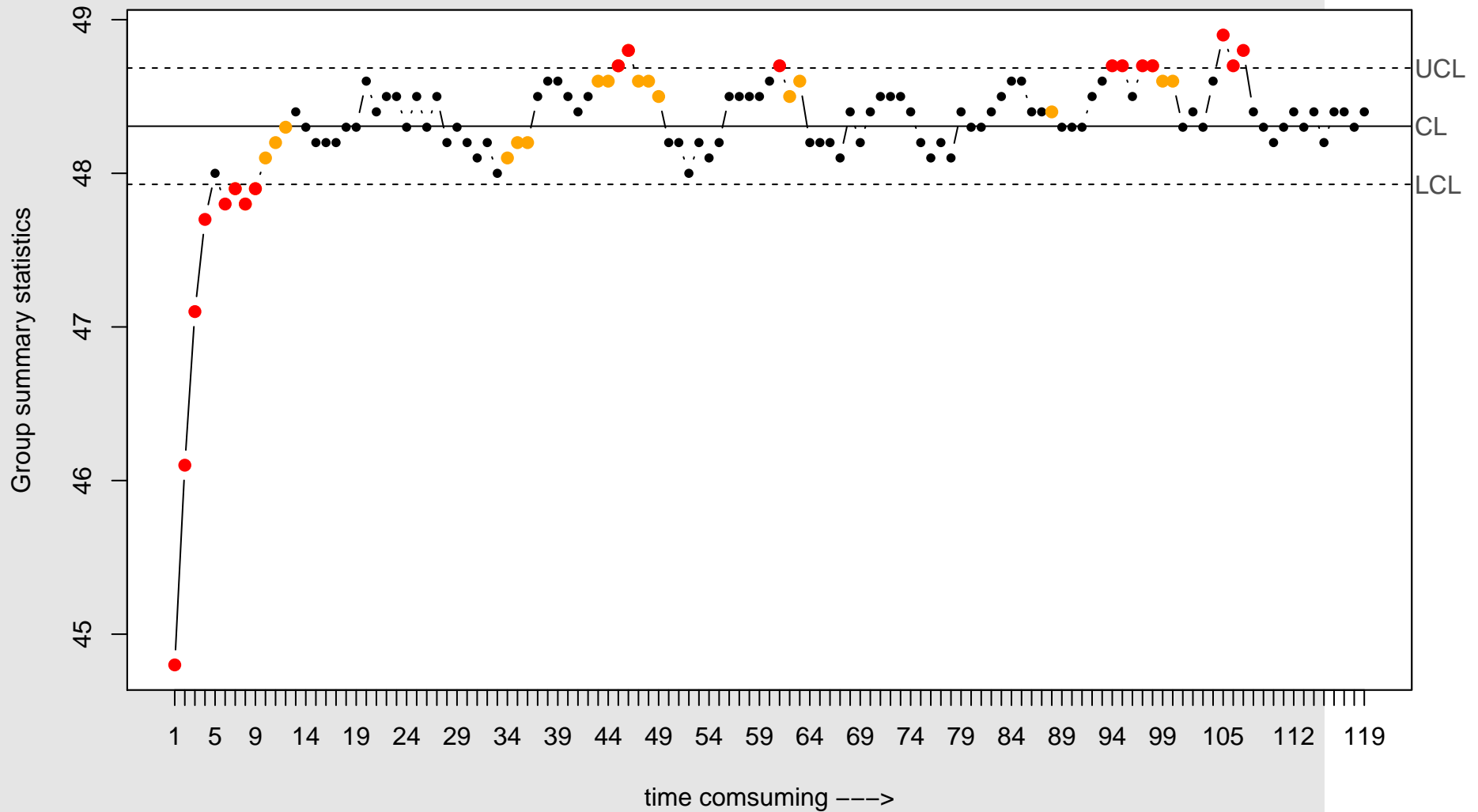
198th column point of this product

Group summary statistics

time comsuming ---->
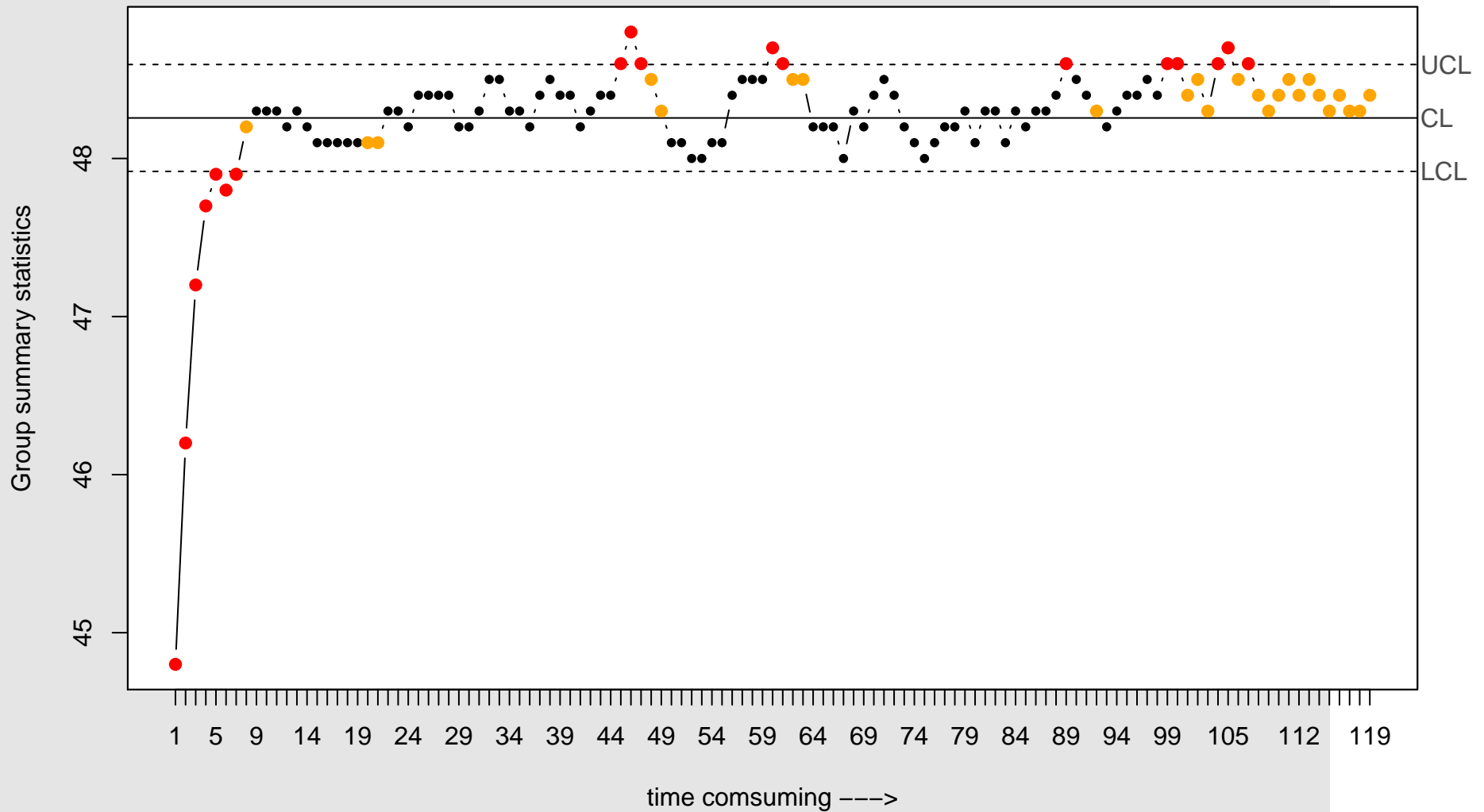
Number of groups = 119
Center = 48.2563   LCL = 47.91822   Number beyond limits = 18
StdDev = 0.1126938   UCL = 48.59438   Number violating runs = 29

199th column point of this product
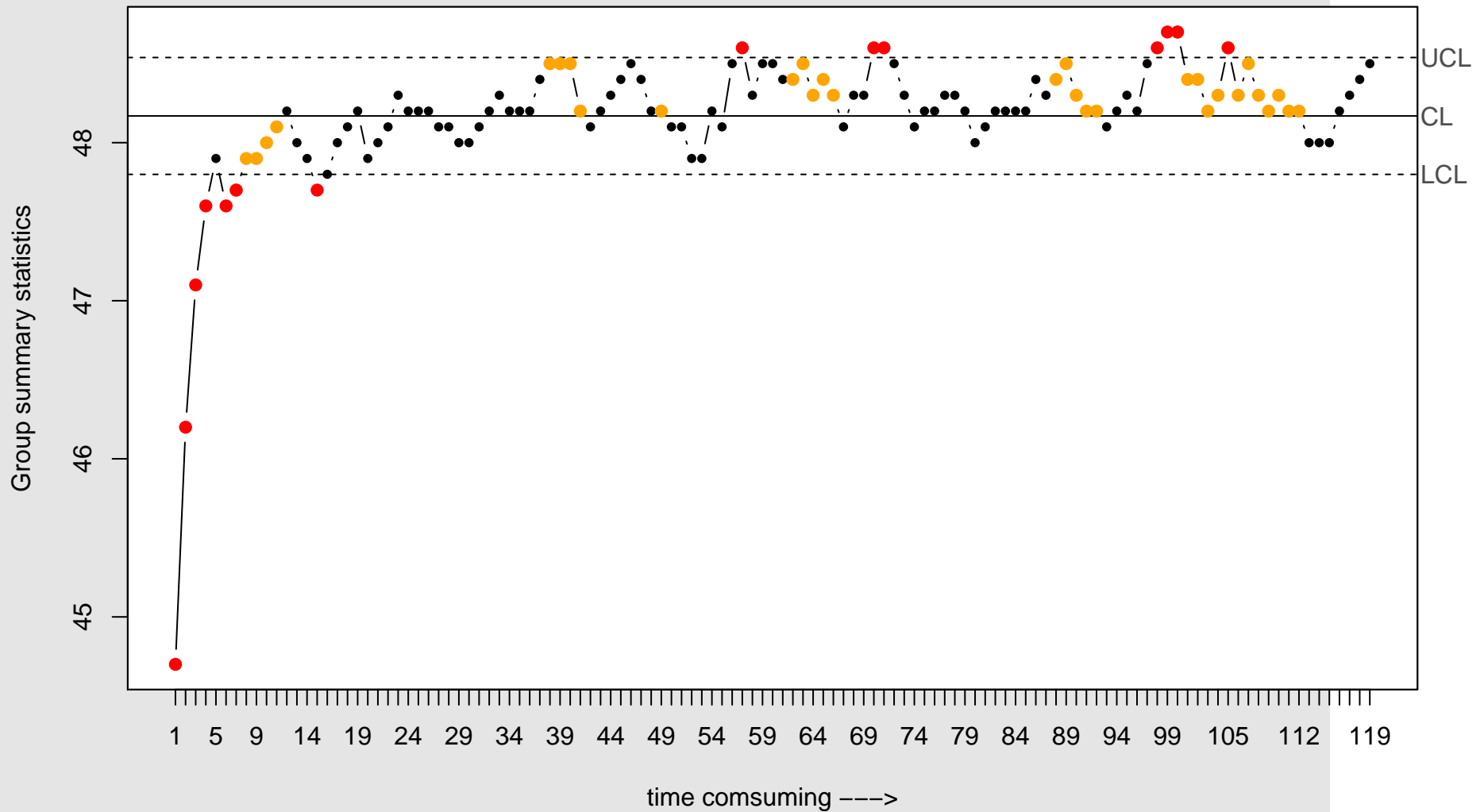
Group summary statistics

time comsuming ––––>

Number of groups = 119
Center = 48.16891   LCL = 47.79927   Number beyond limits = 14
StdDev = 0.1232119   UCL = 48.53854   Number violating runs = 33

200th column point of this product

Group summary statistics

time comsuming ––––>
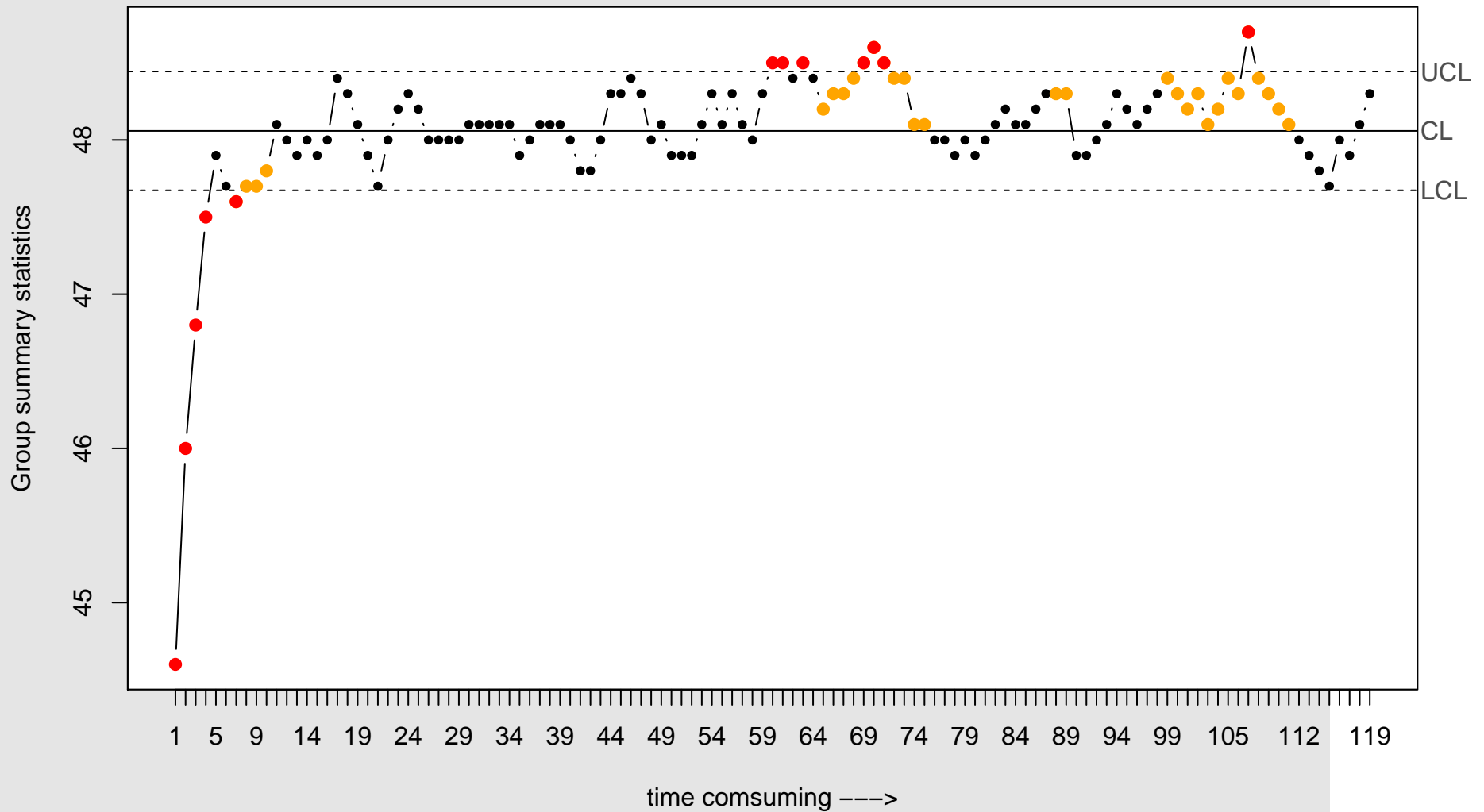
Number of groups = 119
Center = 48.05882   LCL = 47.67341   Number beyond limits = 12
StdDev = 0.128471   UCL = 48.44424   Number violating runs = 30

201th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ---->
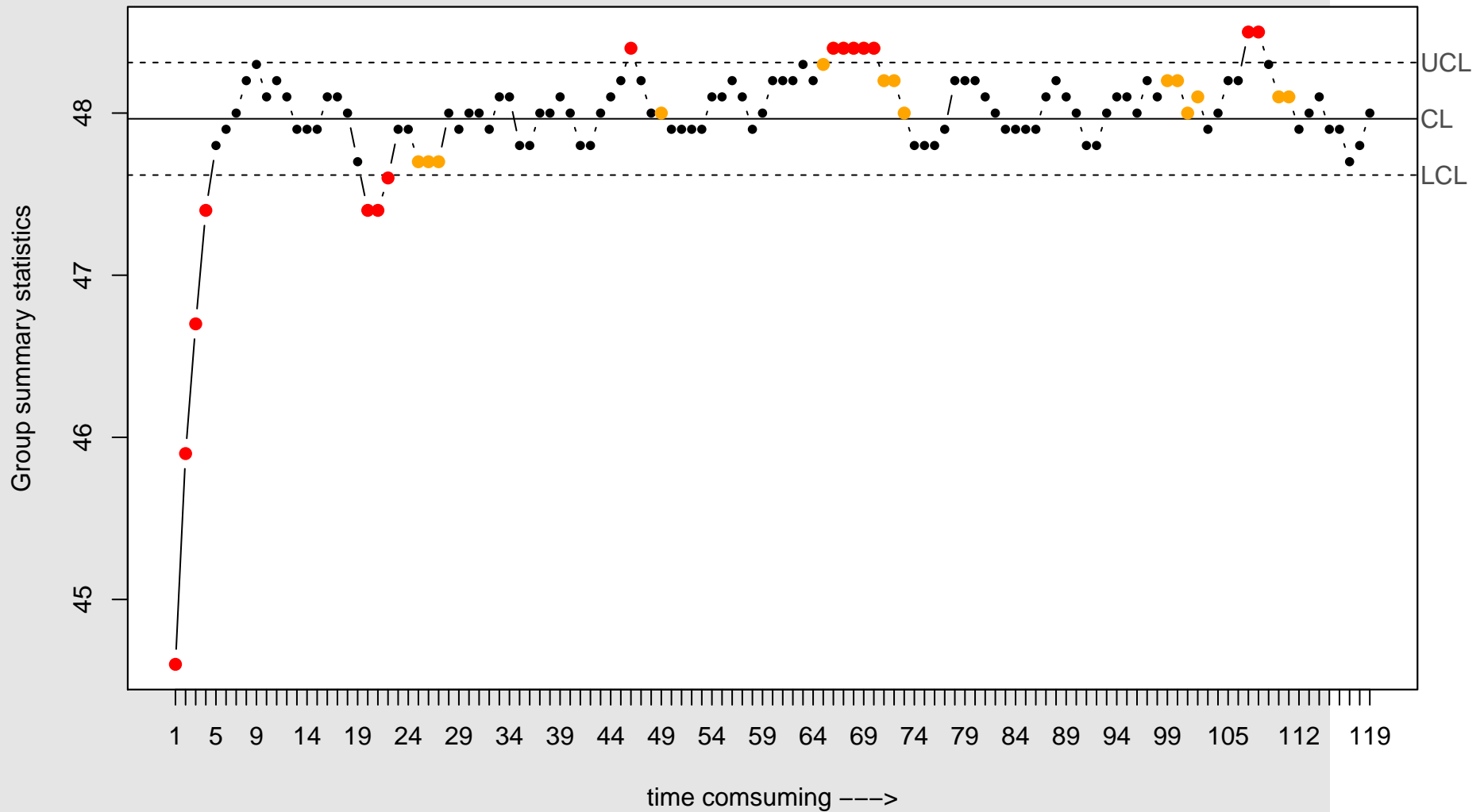
Number of groups = 119
Center = 47.96471   LCL = 47.61761   Number beyond limits = 15
StdDev = 0.115699   UCL = 48.3118   Number violating runs = 19

202th column point of this product

Group summary statistics

time comsuming ---->

UCL

CL

LCL
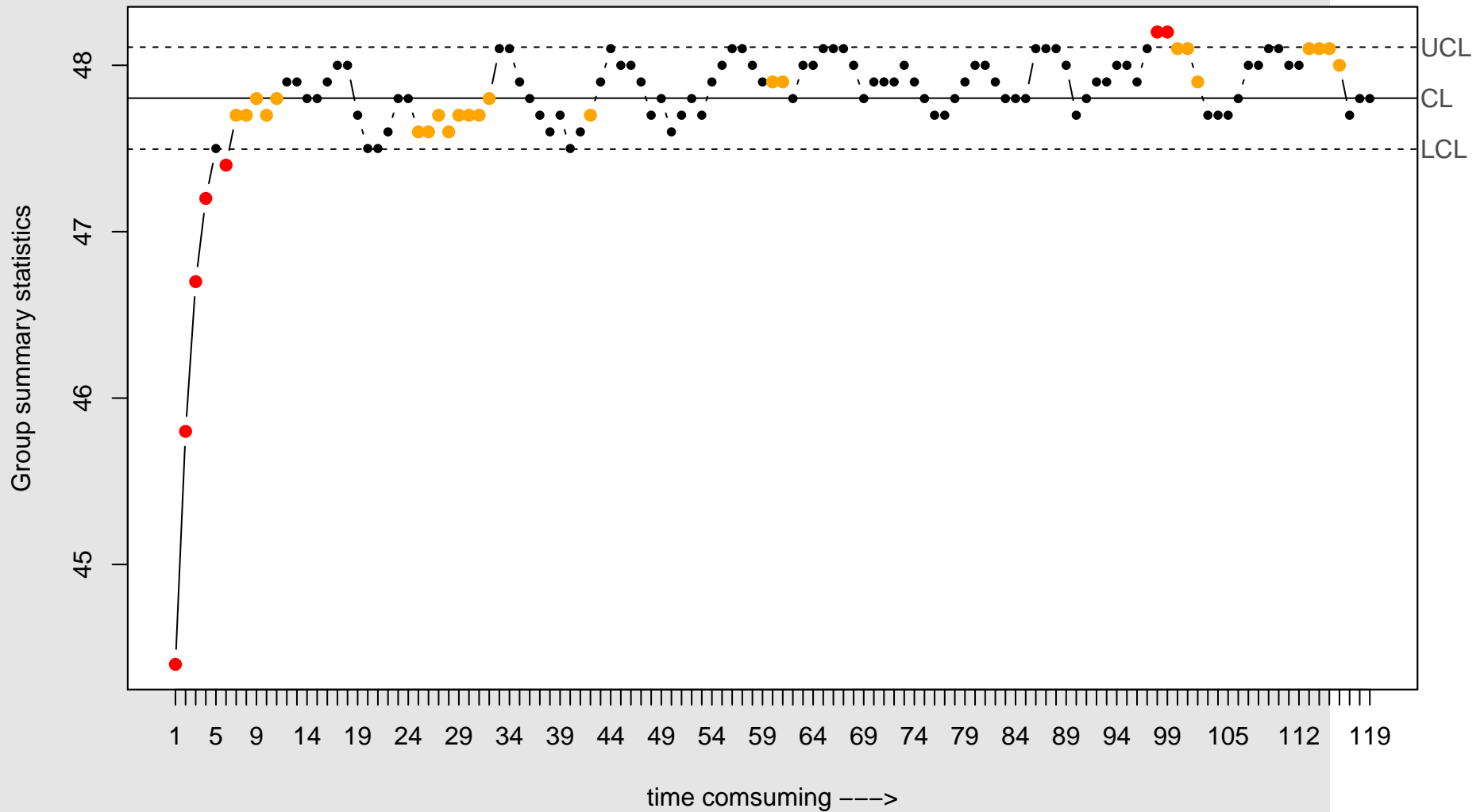
Number of groups = 119
Center = 47.80252   LCL = 47.49599   Number beyond limits = 7
StdDev = 0.1021757   UCL = 48.10905   Number violating runs = 25

203th column point of this product

Group summary statistics

time comsuming ––––>

Number of groups = 119
Center = 47.76807   LCL = 47.39392   Number beyond limits = 6
StdDev = 0.1247145   UCL = 48.14221   Number violating runs = 29

204th column point of this product

Group summary statistics

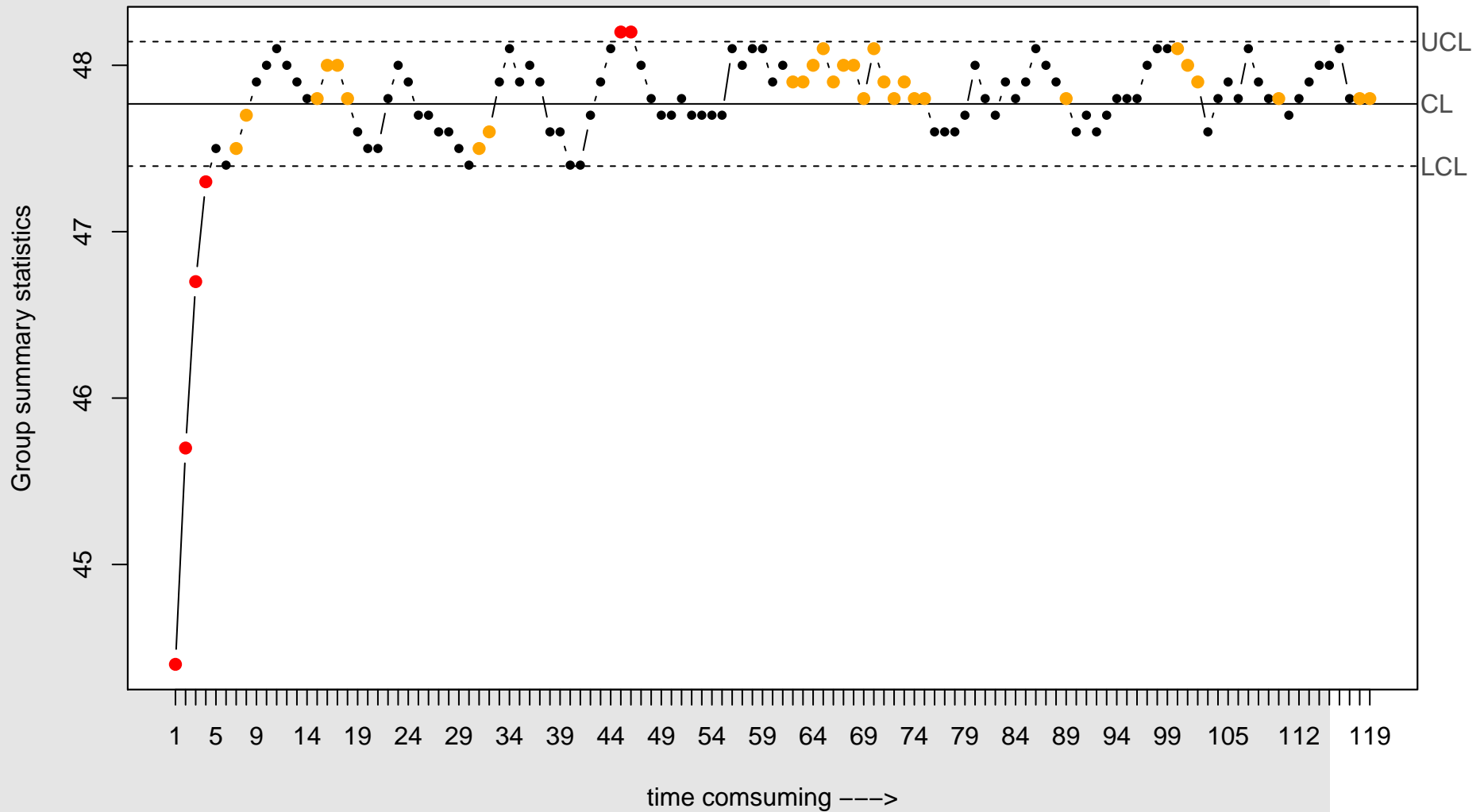time comsuming --->
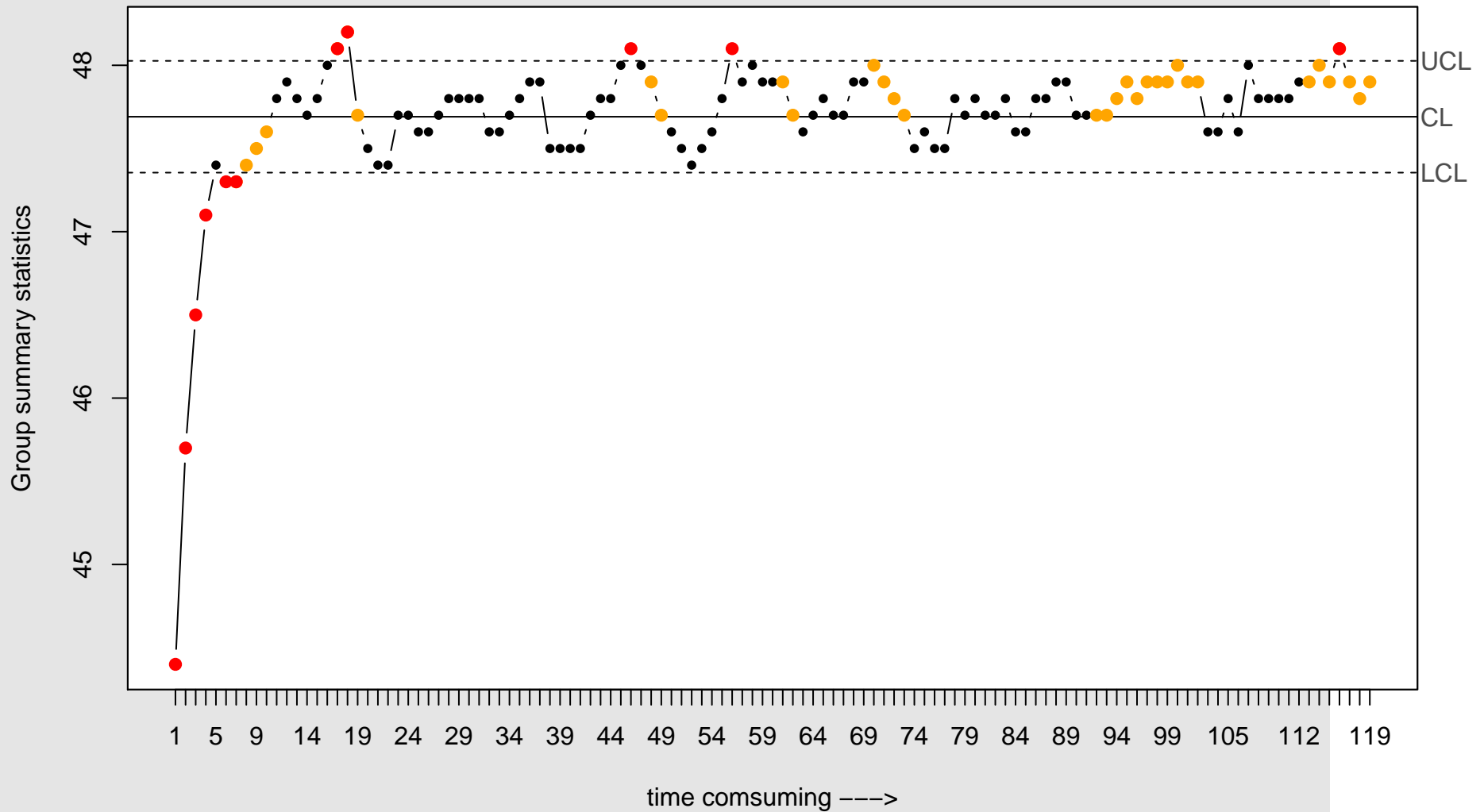
Number of groups = 119
Center = 47.69076
StdDev = 0.1119425
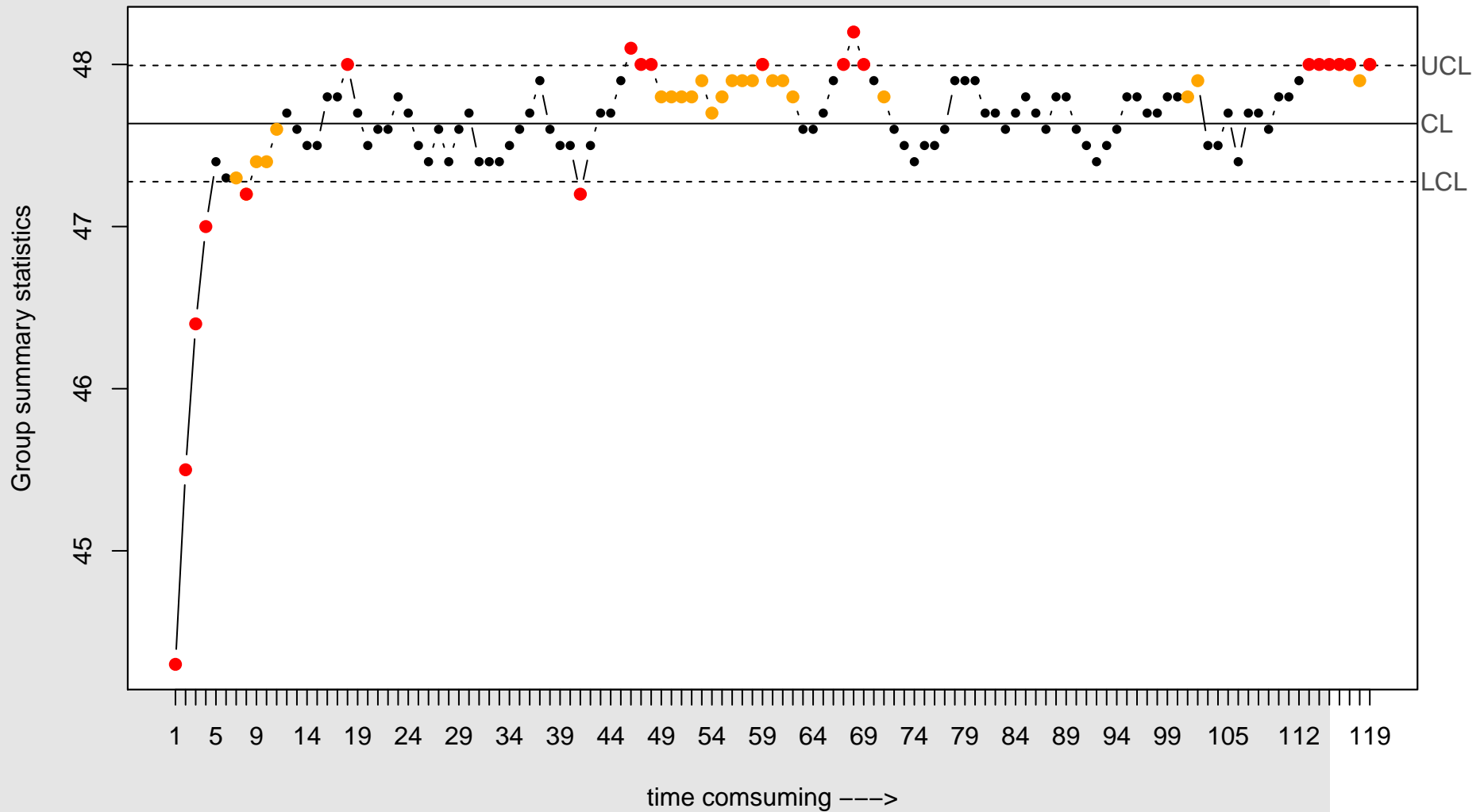
LCL = 47.35493
UCL = 48.02658

Number beyond limits = 11
Number violating runs = 33

205th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ----->

Number of groups = 119
Center = 47.63529   LCL = 47.27693   Number beyond limits = 20
StdDev = 0.1194555   UCL = 47.99366   Number violating runs = 26

206th column point of this product

Group summary statistics

time comsuming ---->
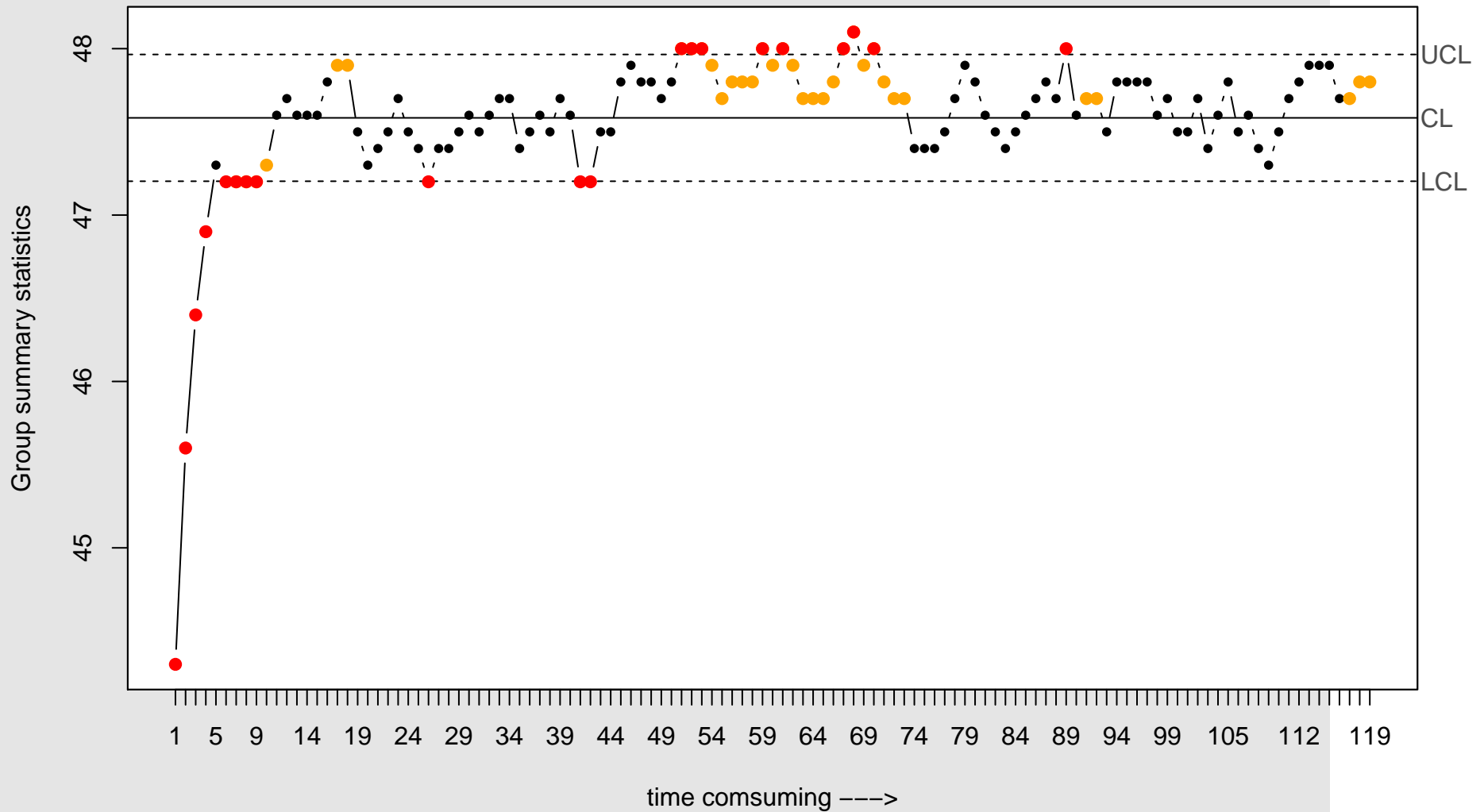
Number of groups = 119
Center = 47.58403   LCL = 47.20313   Number beyond limits = 20
StdDev = 0.1269684   UCL = 47.96494   Number violating runs = 34

207th column point of this product

Group summary statistics

time comsuming ––––>
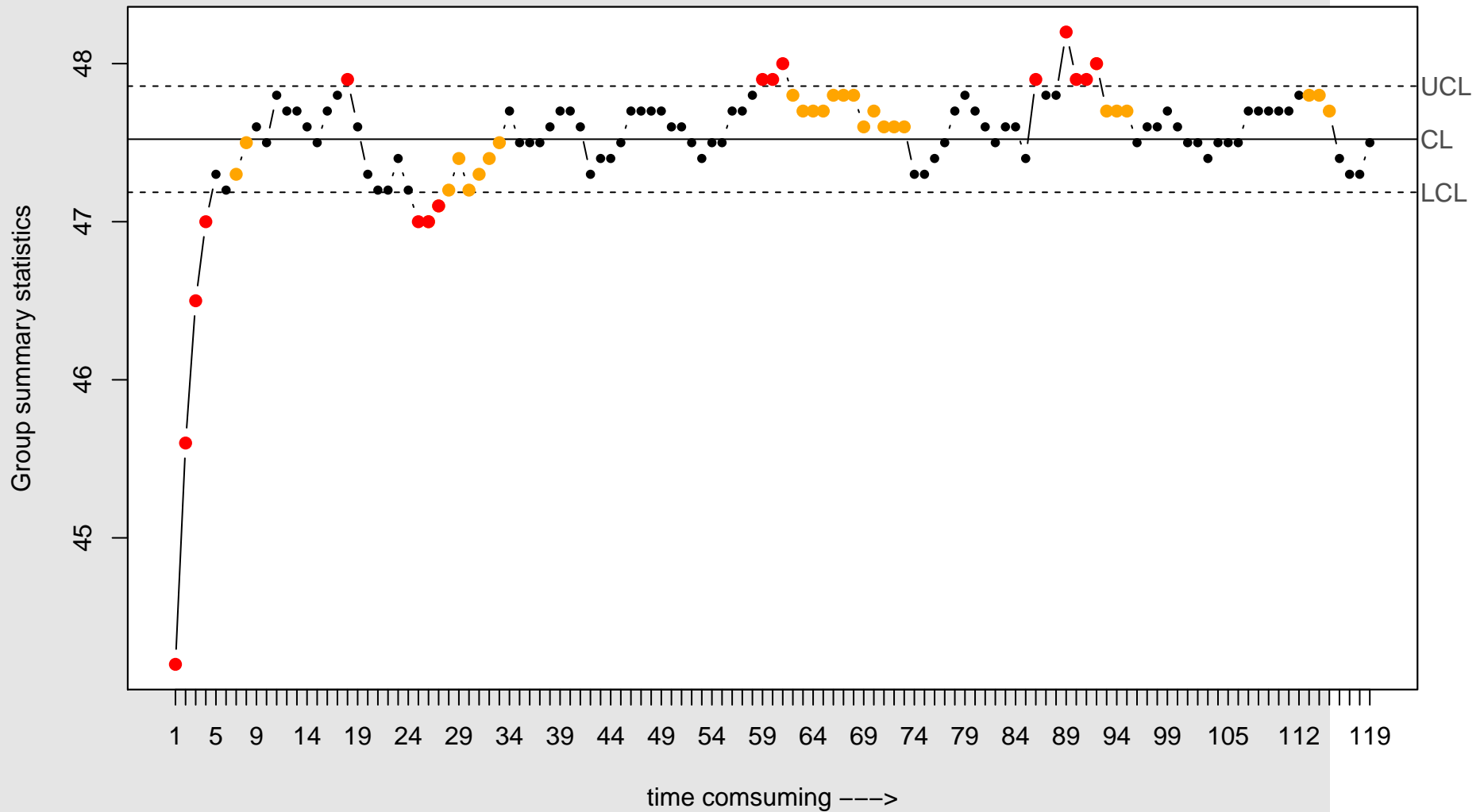
Number of groups = 119
Center = 47.52185   LCL = 47.18602   Number beyond limits = 16
StdDev = 0.1119425   UCL = 47.85768   Number violating runs = 29

208th column point of this product

Group summary statistics

time comsuming –––>
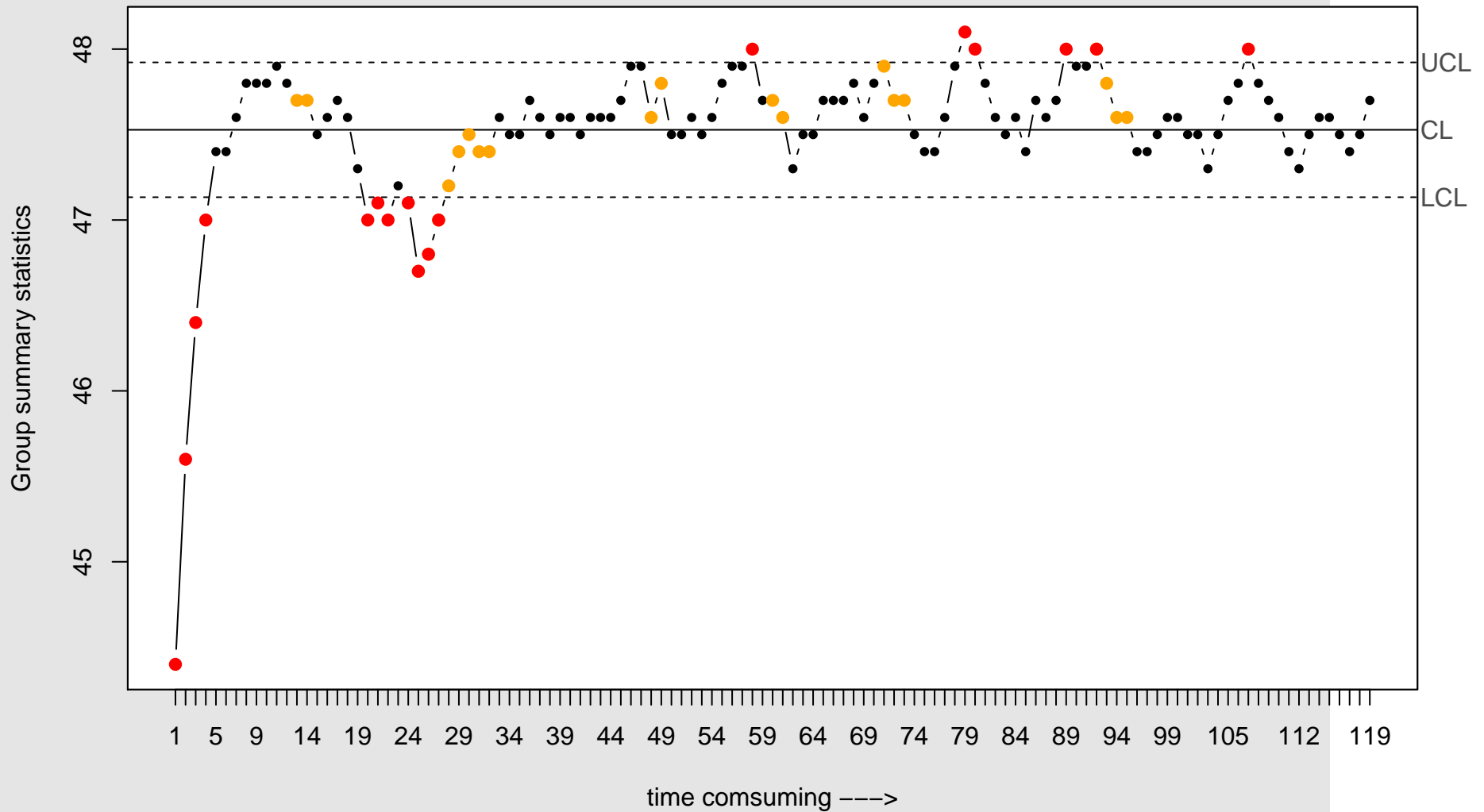
Number of groups = 119
Center = 47.52773   LCL = 47.1333   Number beyond limits = 17
StdDev = 0.1314761   UCL = 47.92216   Number violating runs = 21

209th column point of this product

Group summary statistics

time comsuming ---->

UCL

CL

LCL
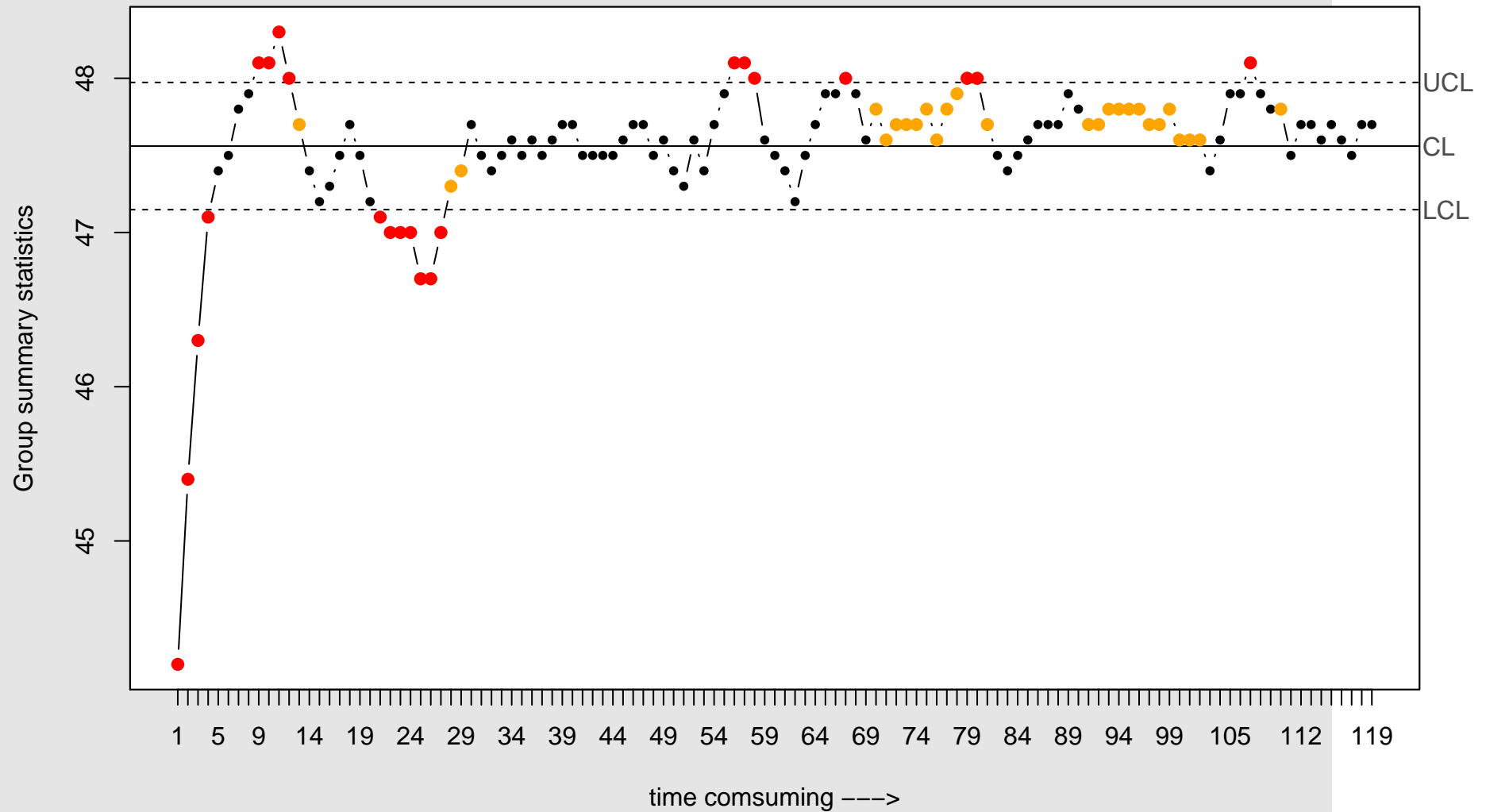
Number of groups = 119

Center = 47.5605   LCL = 47.14804   Number beyond limits = 22

StdDev = 0.1374865   UCL = 47.97296   Number violating runs = 31

210th column point of this product

Group summary statistics

time comsuming ---->
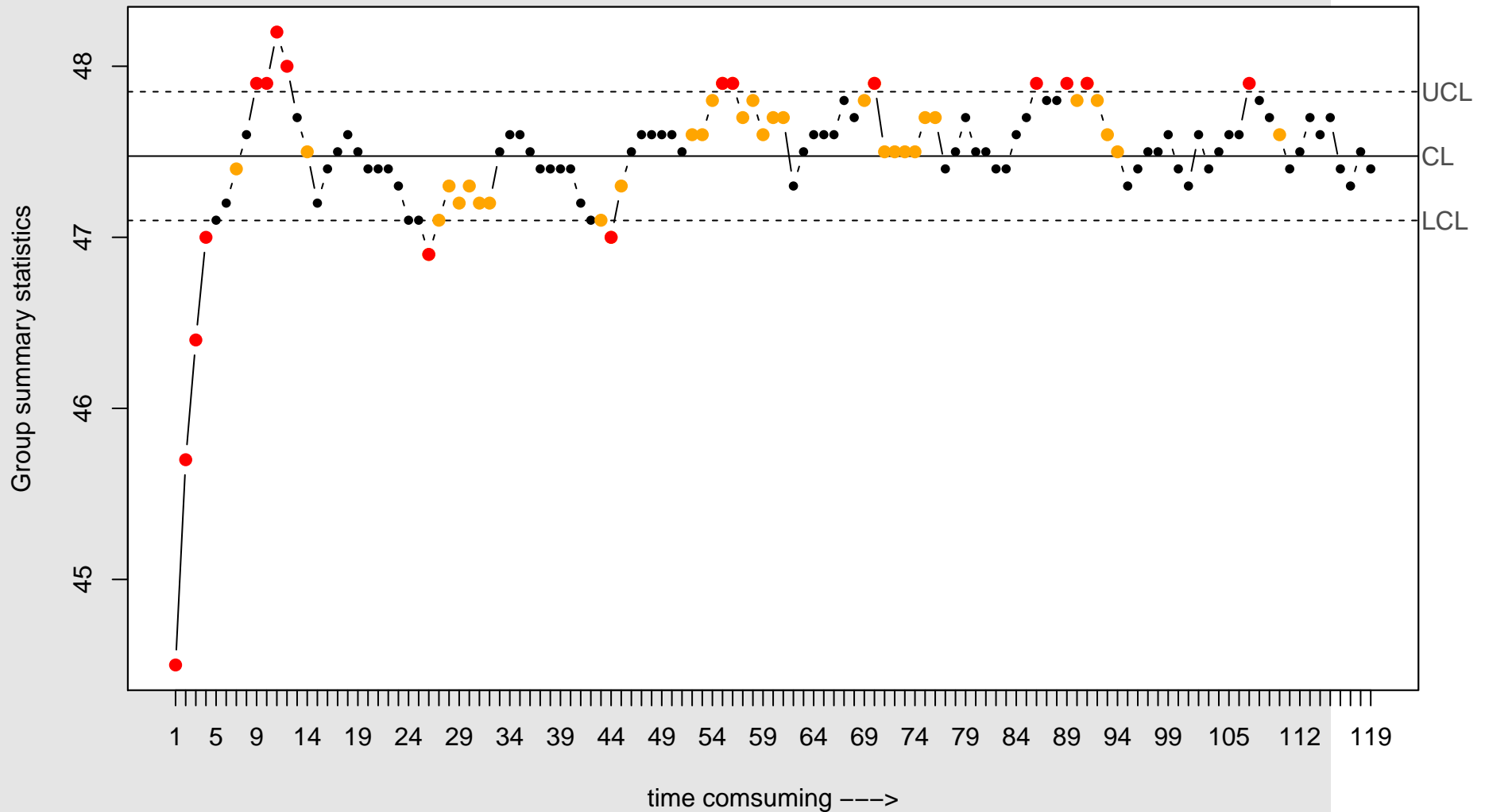
Number of groups = 119
Center = 47.47479   LCL = 47.09839   Number beyond limits = 17
StdDev = 0.1254658   UCL = 47.85119   Number violating runs = 36

211th column point of this product

Group summary statistics

time comsuming ---->
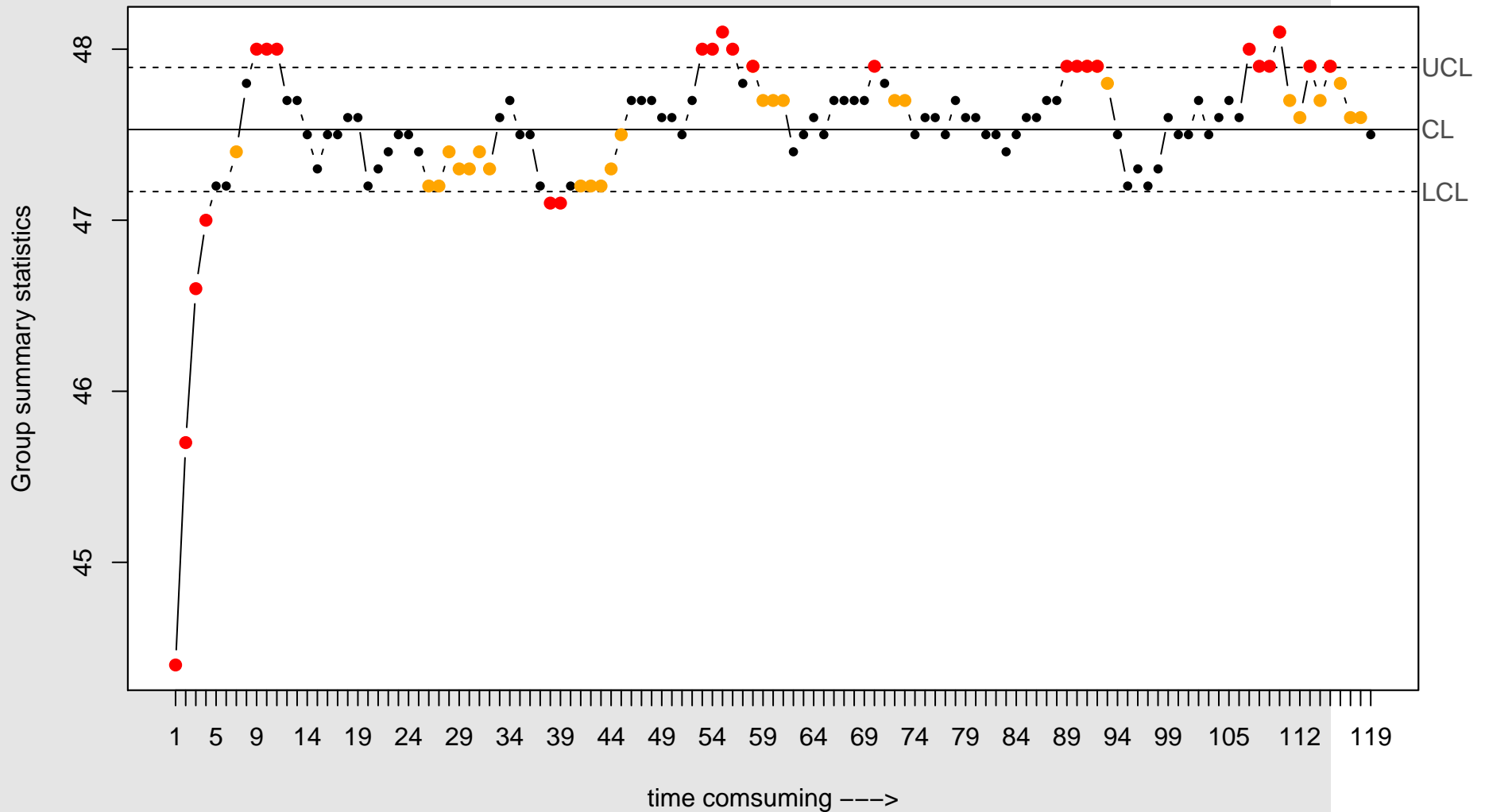
Number of groups = 119
Center = 47.53025   LCL = 47.16738   Number beyond limits = 25
StdDev = 0.120958   UCL = 47.89313   Number violating runs = 31

212th column point of this product

UCL

CL

LCL

Group summary statistics

48

47

46

45

1   5   9   14   19   24   29   34   39   44   49   54   59   64   69   74   79   84   89   94   99   105   112   119

time comsuming ---->
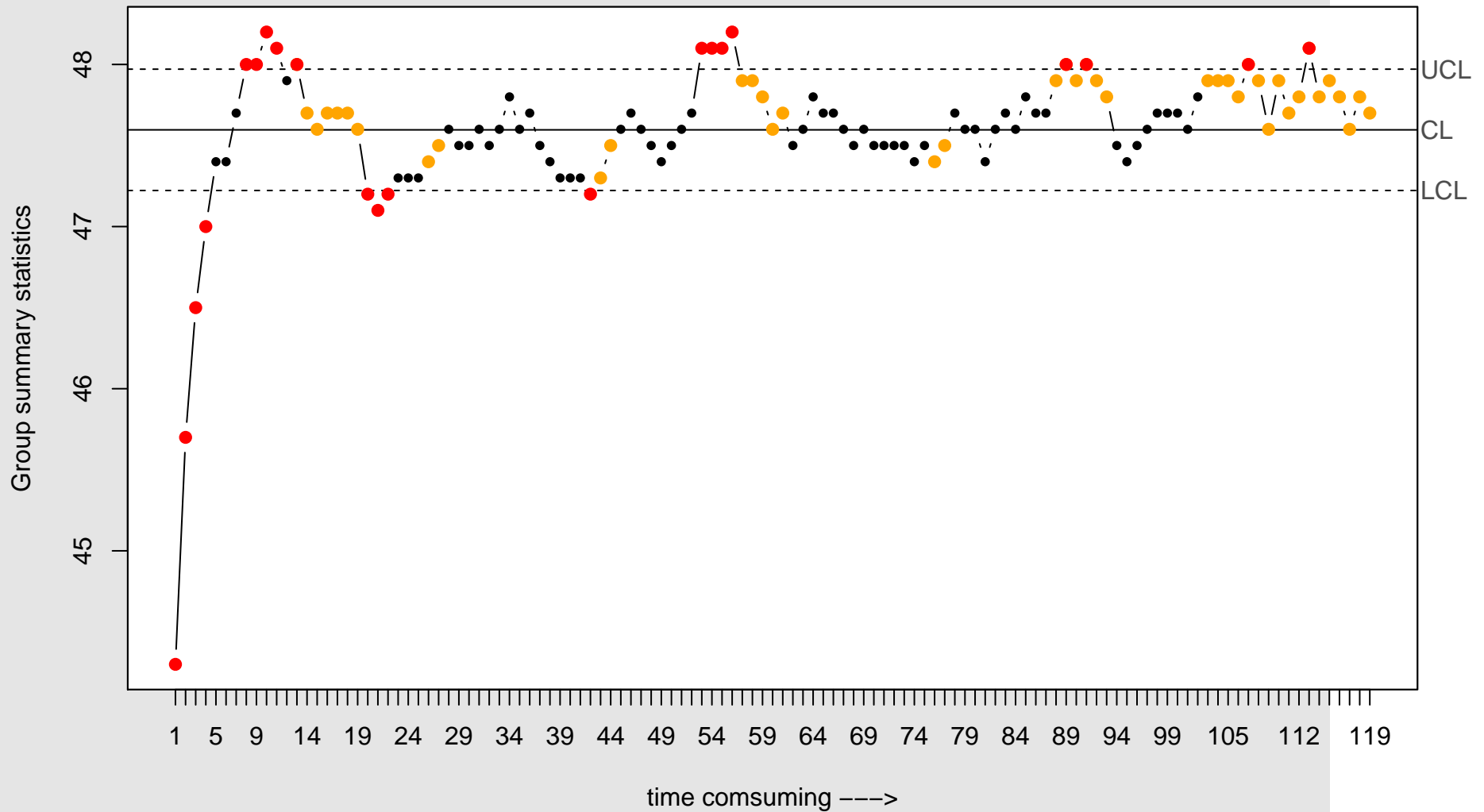
Number of groups = 119
Center = 47.59664   LCL = 47.2225   Number beyond limits = 21
StdDev = 0.1247145   UCL = 47.97078   Number violating runs = 41

213th column point of this product

Group summary statistics

time comsuming ———>

UCL
CL
LCL
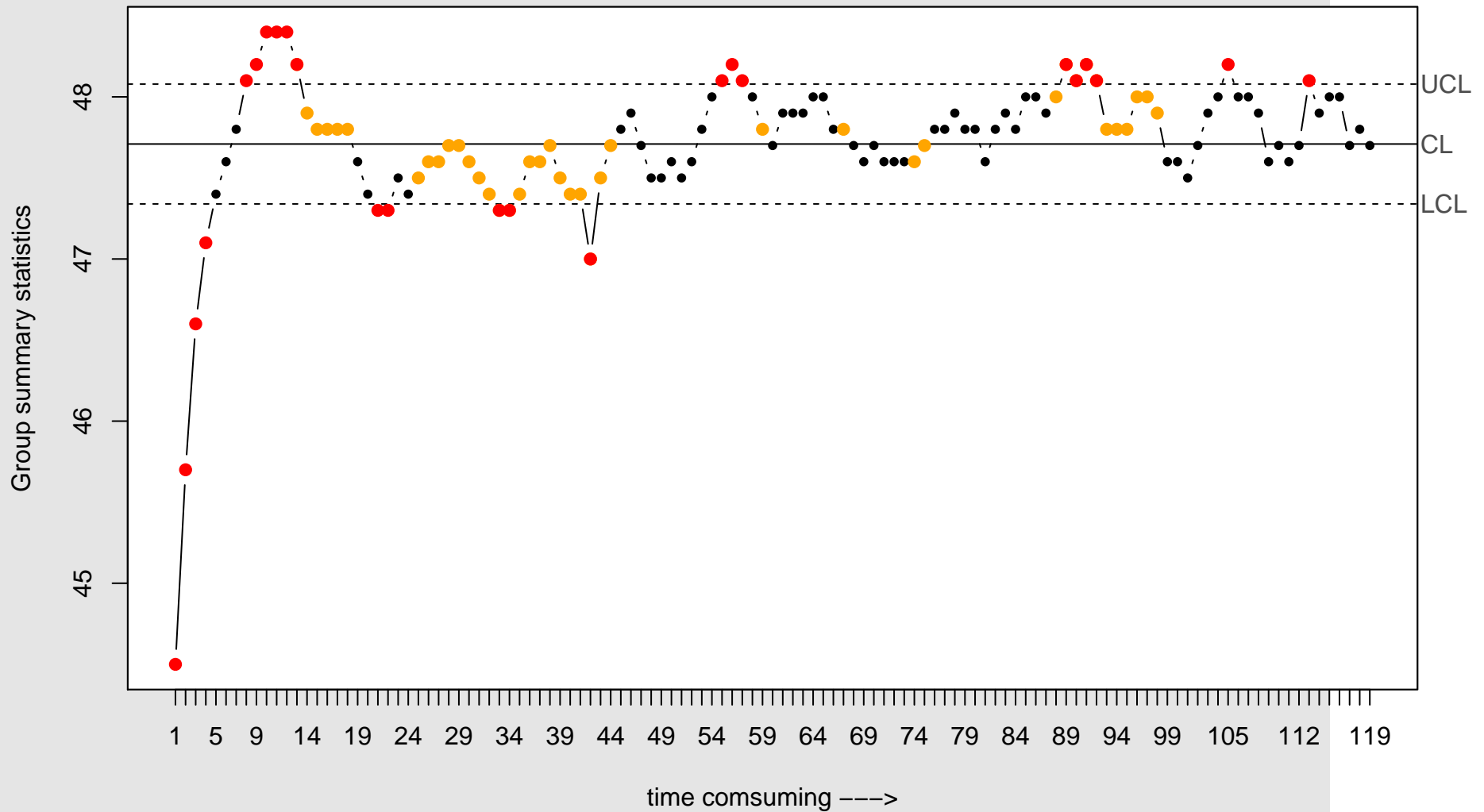
Number of groups = 119
Center = 47.70924   LCL = 47.33961   Number beyond limits = 24
StdDev = 0.1232119   UCL = 48.07888   Number violating runs = 41

214th column point of this product

Group summary statistics

time comsuming ––––>

UCL
CL
LCL
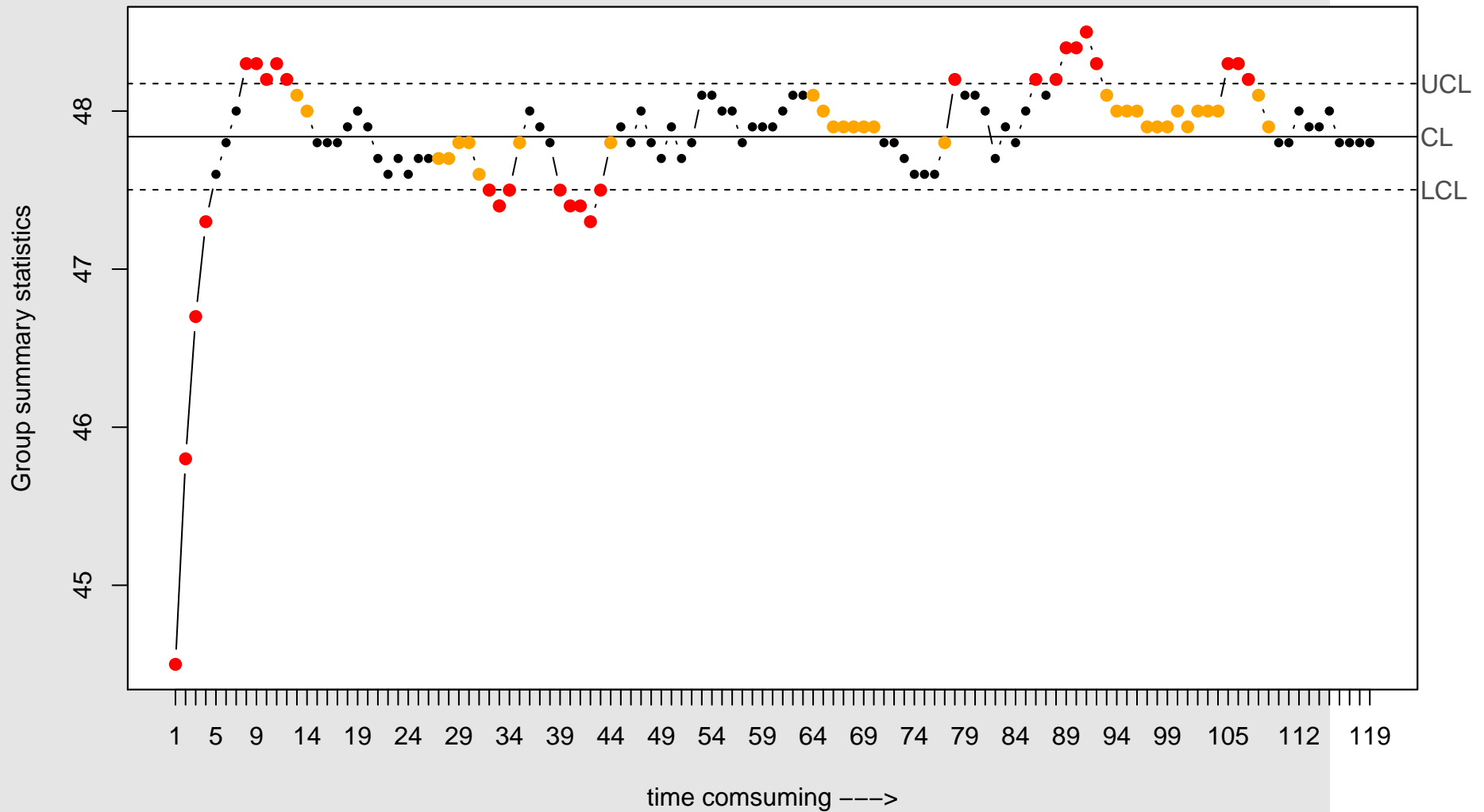
Number of groups = 119
Center = 47.83782   LCL = 47.50199   Number beyond limits = 27
StdDev = 0.1119425   UCL = 48.17364   Number violating runs = 39

215th column point of this product

Group summary statistics

time comsuming ---->
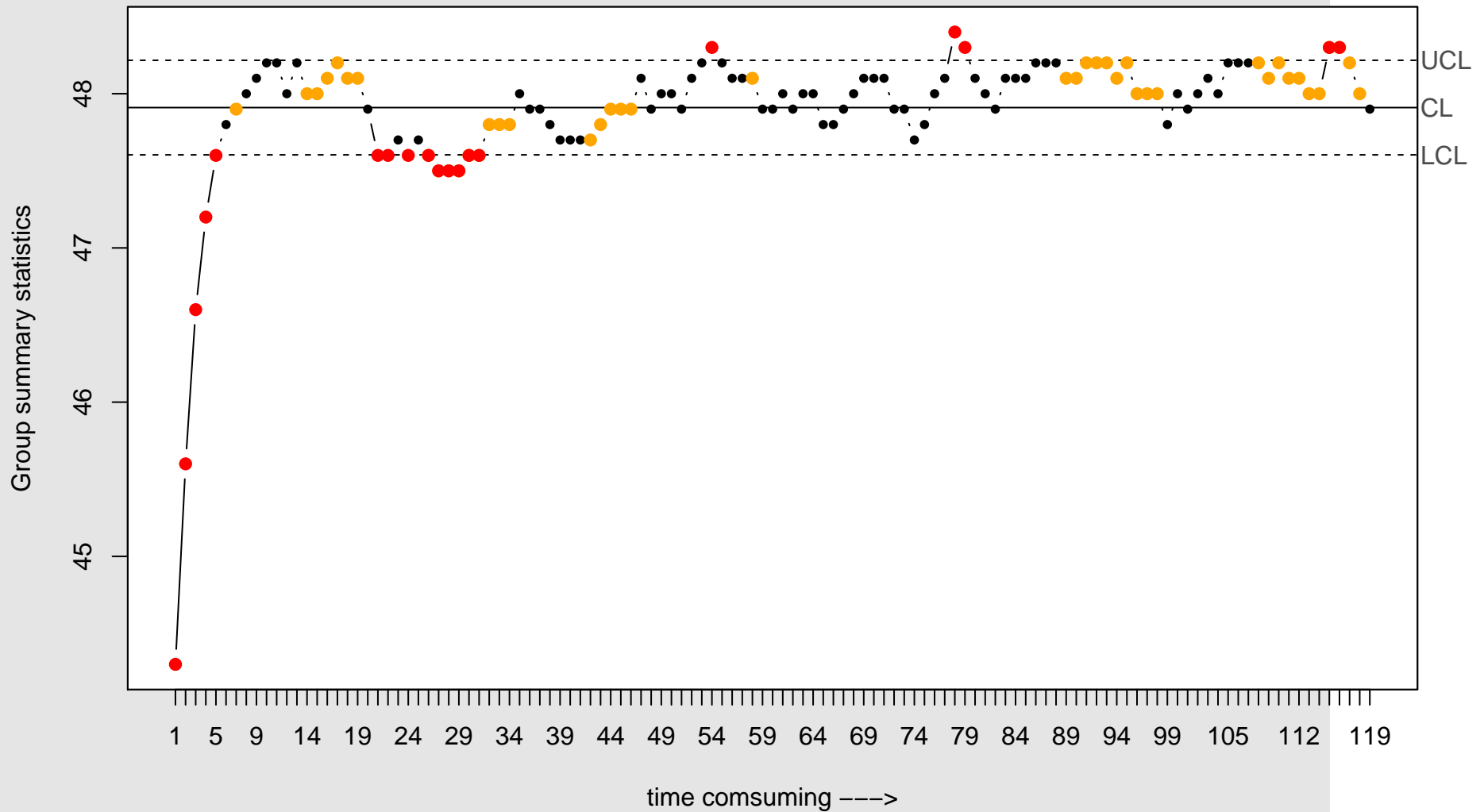
Number of groups = 119
Center = 47.91008   LCL = 47.60356   Number beyond limits = 19
StdDev = 0.1021757   UCL = 48.21661   Number violating runs = 43

216th column point of this product

Group summary statistics

time comsuming ––––>

Number of groups = 119
Center = 47.98487
StdDev = 0.1179529

LCL = 47.63102
UCL = 48.33873

Number beyond limits = 18
Number violating runs = 50

217th column point of this product

Group summary statistics

time comsuming ––––>

Number of groups = 119
Center = 48.09076
StdDev = 0.1247145
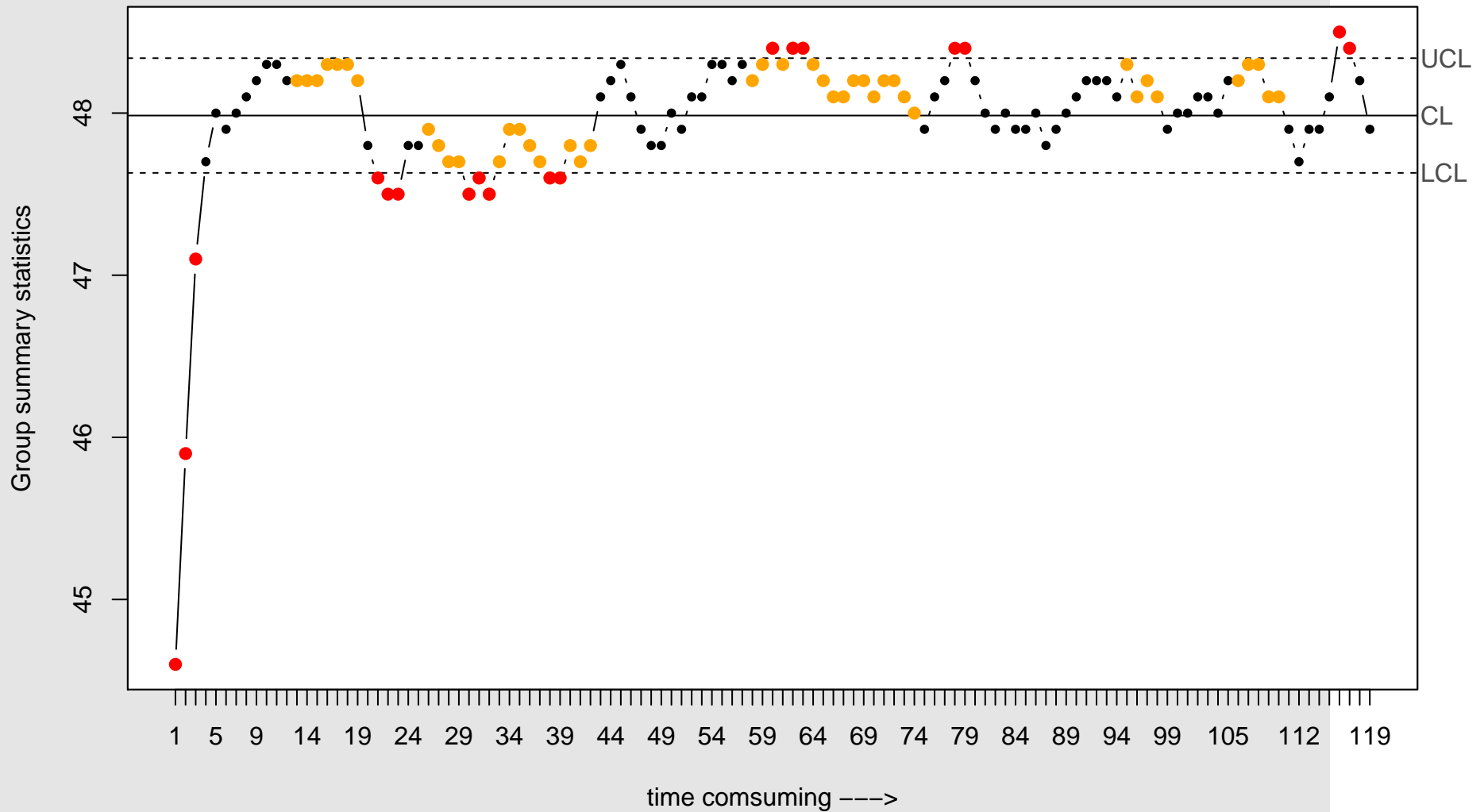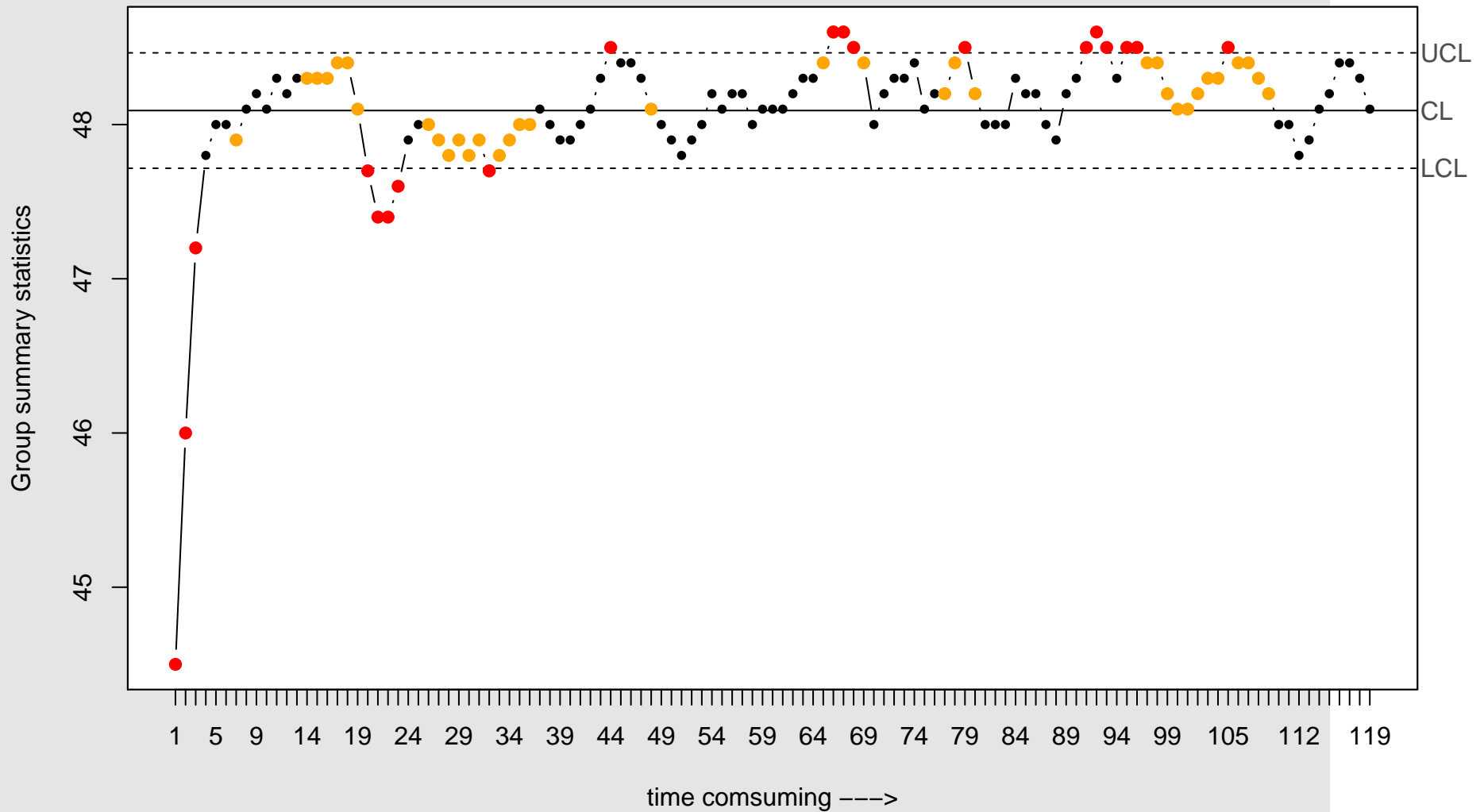
LCL = 47.71661
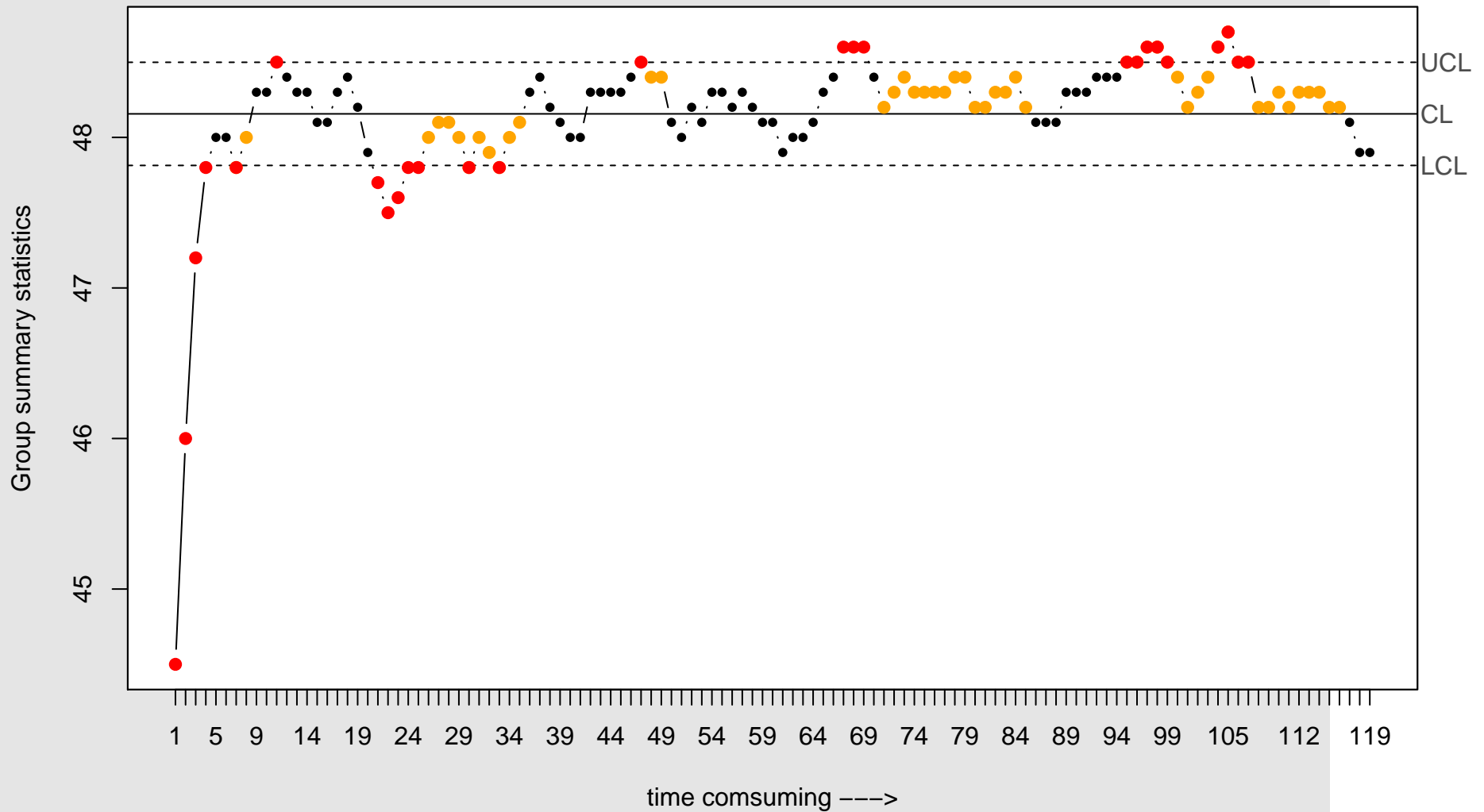UCL = 48.4649

Number beyond limits = 19
Number violating runs = 43

218th column point of this product

Group summary statistics

time comsuming ––––>

Number of groups = 119
Center = 48.1563   LCL = 47.81371   Number beyond limits = 26
StdDev = 0.1141964   UCL = 48.49889   Number violating runs = 51

219th column point of this product

Group summary statistics

time comsuming ---->
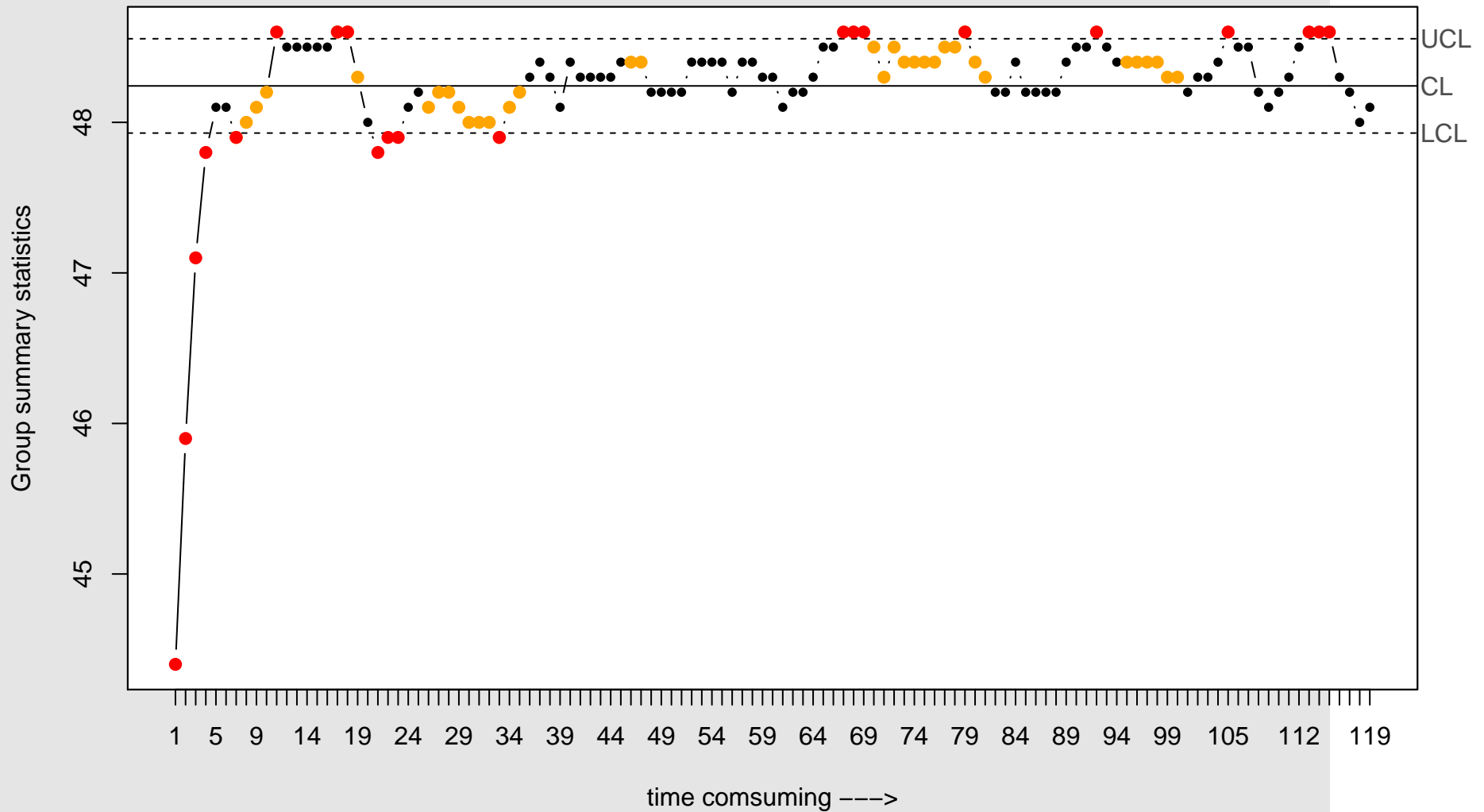
Number of groups = 119
Center = 48.24202   LCL = 47.92873   Number beyond limits = 21
StdDev = 0.1044296   UCL = 48.55531   Number violating runs = 37

220th column point of this product

Group summary statistics

time comsuming ----->
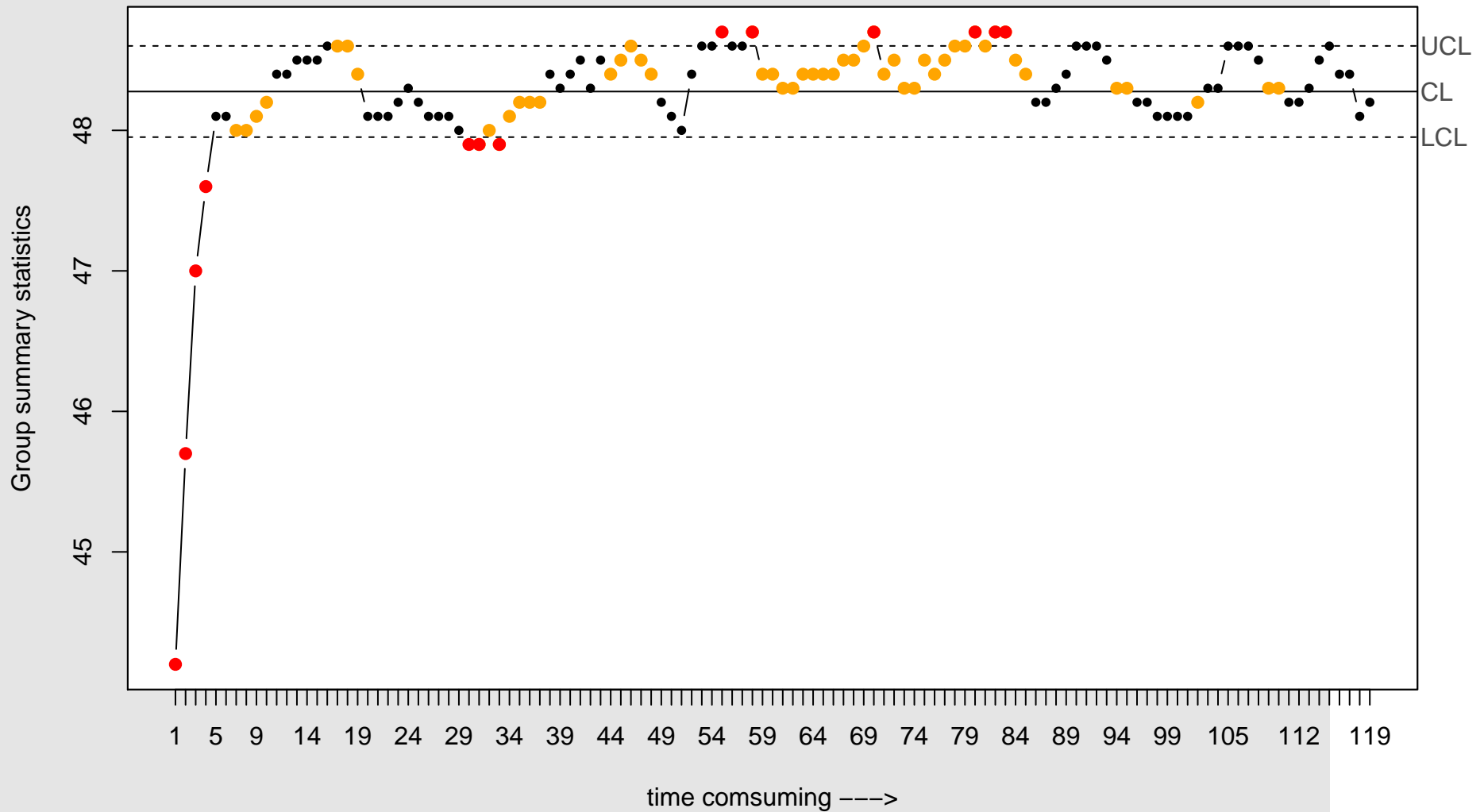
Number of groups = 119
Center = 48.27647   LCL = 47.95191   Number beyond limits = 13
StdDev = 0.1081861   UCL = 48.60103   Number violating runs = 52

221th column point of this product

Group summary statistics

UCL
CL
LCL

48

47

46

45

1   5   9   14 19 24 29 34 39 44 49 54 59 64 69 74 79 84 89 94 99 105 112 119

time comsuming ––––>
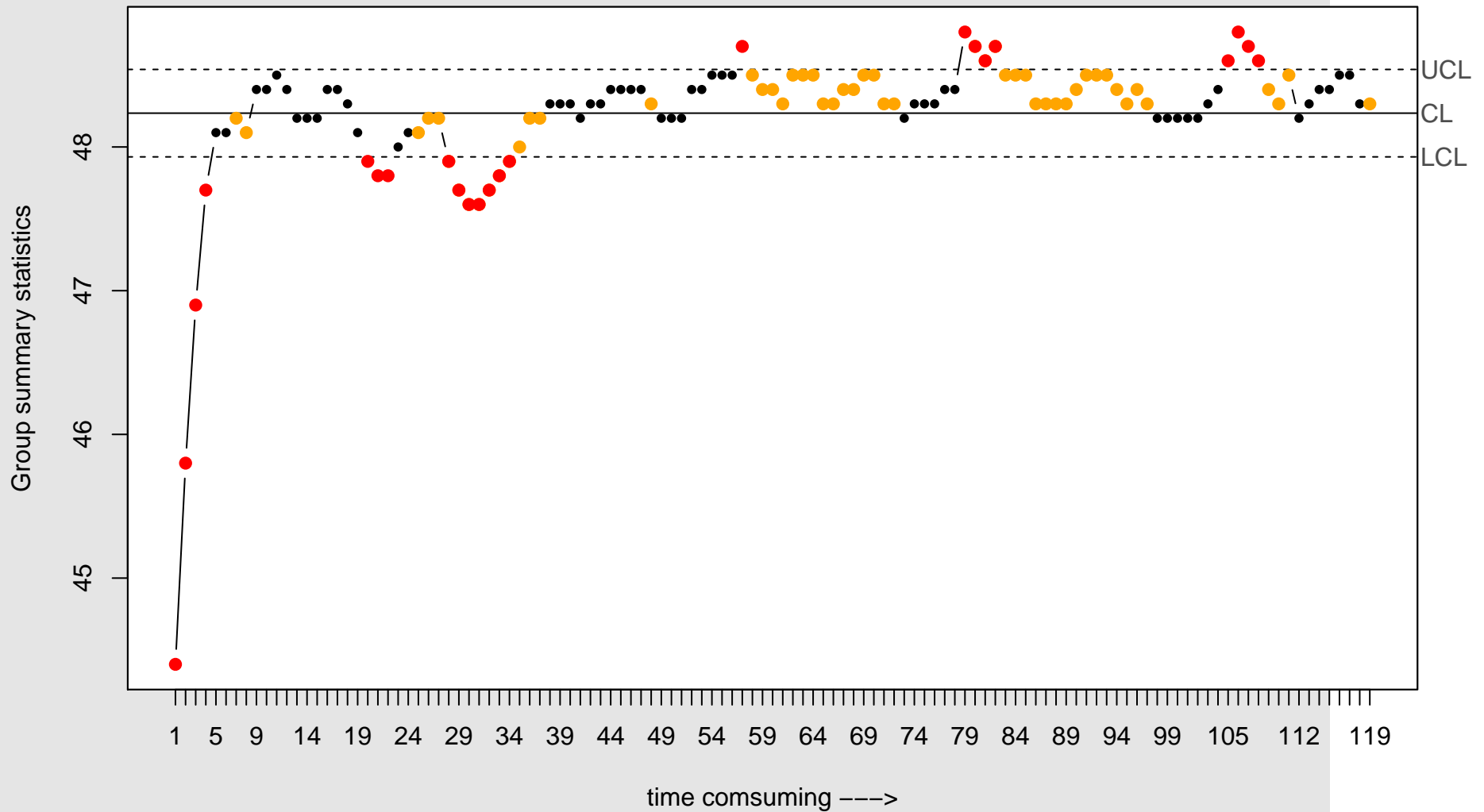
Number of groups = 119
Center = 48.23529   LCL = 47.93102   Number beyond limits = 23
StdDev = 0.1014245   UCL = 48.53957   Number violating runs = 53

222th column point of this product

Group summary statistics

time comsuming --->
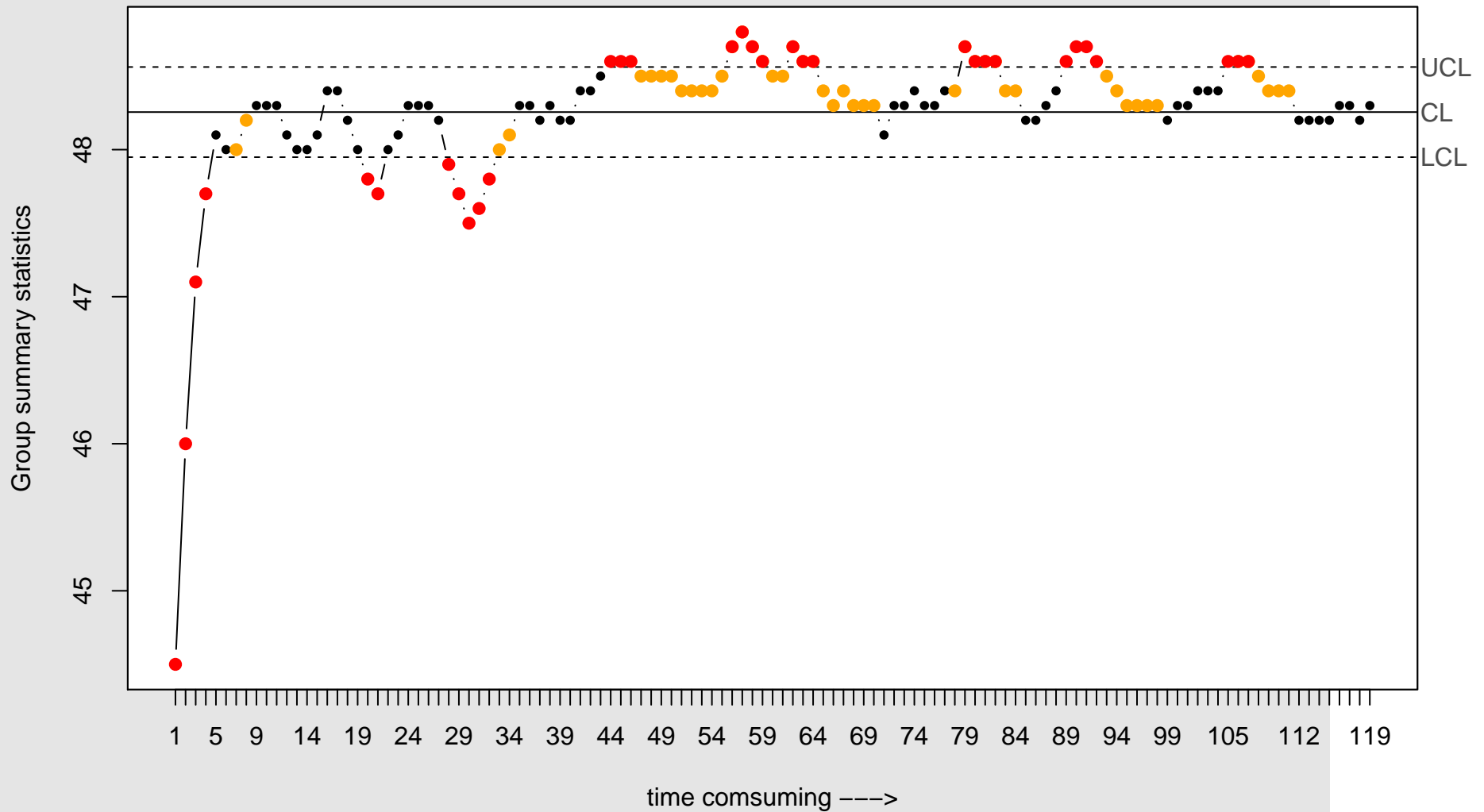
Number of groups = 119
Center = 48.25546   LCL = 47.94893   Number beyond limits = 32
StdDev = 0.1021757   UCL = 48.56199   Number violating runs = 47

223th column point of this product

Group summary statistics

time comsuming –––>

UCL
CL
LCL
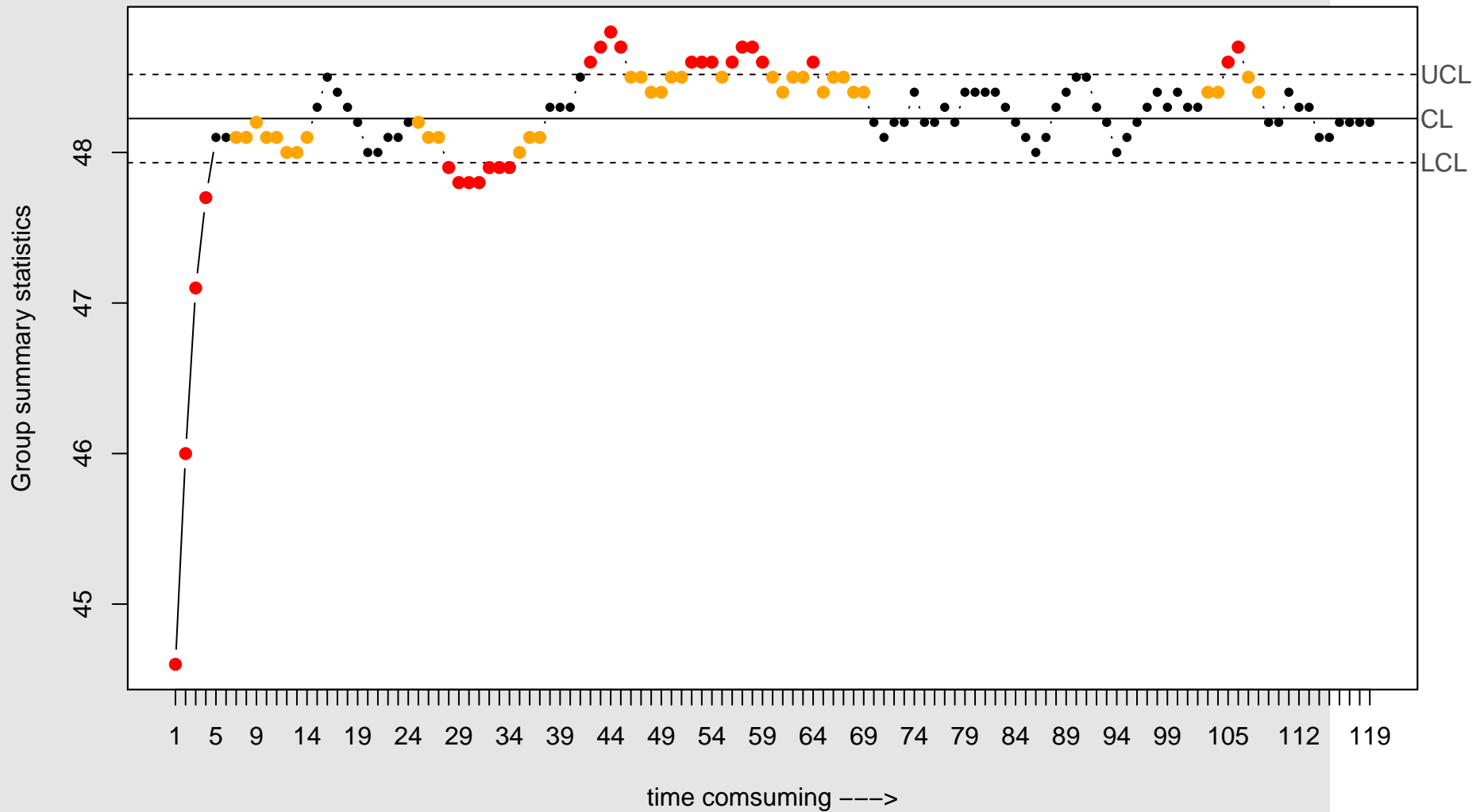
Number of groups = 119
Center = 48.22521   LCL = 47.93221   Number beyond limits = 25
StdDev = 0.09766799   UCL = 48.51821   Number violating runs = 53

224th column point of this product

Group summary statistics

time comsuming ––––>
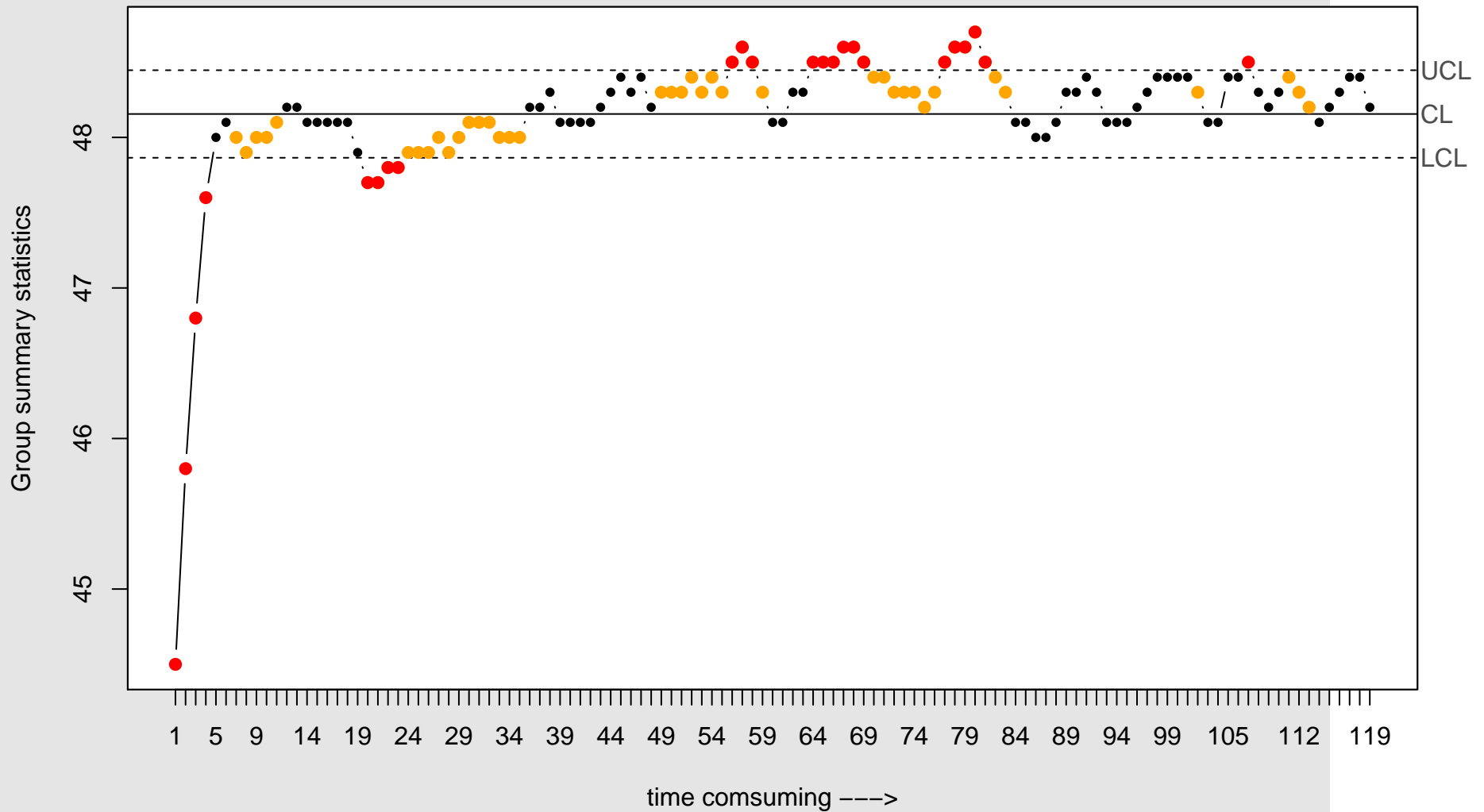
Number of groups = 119
Center = 48.15546   LCL = 47.86471   Number beyond limits = 23
StdDev = 0.0969167   UCL = 48.44621   Number violating runs = 52

225th column point of this product

Group summary statistics

time comsuming ––––>
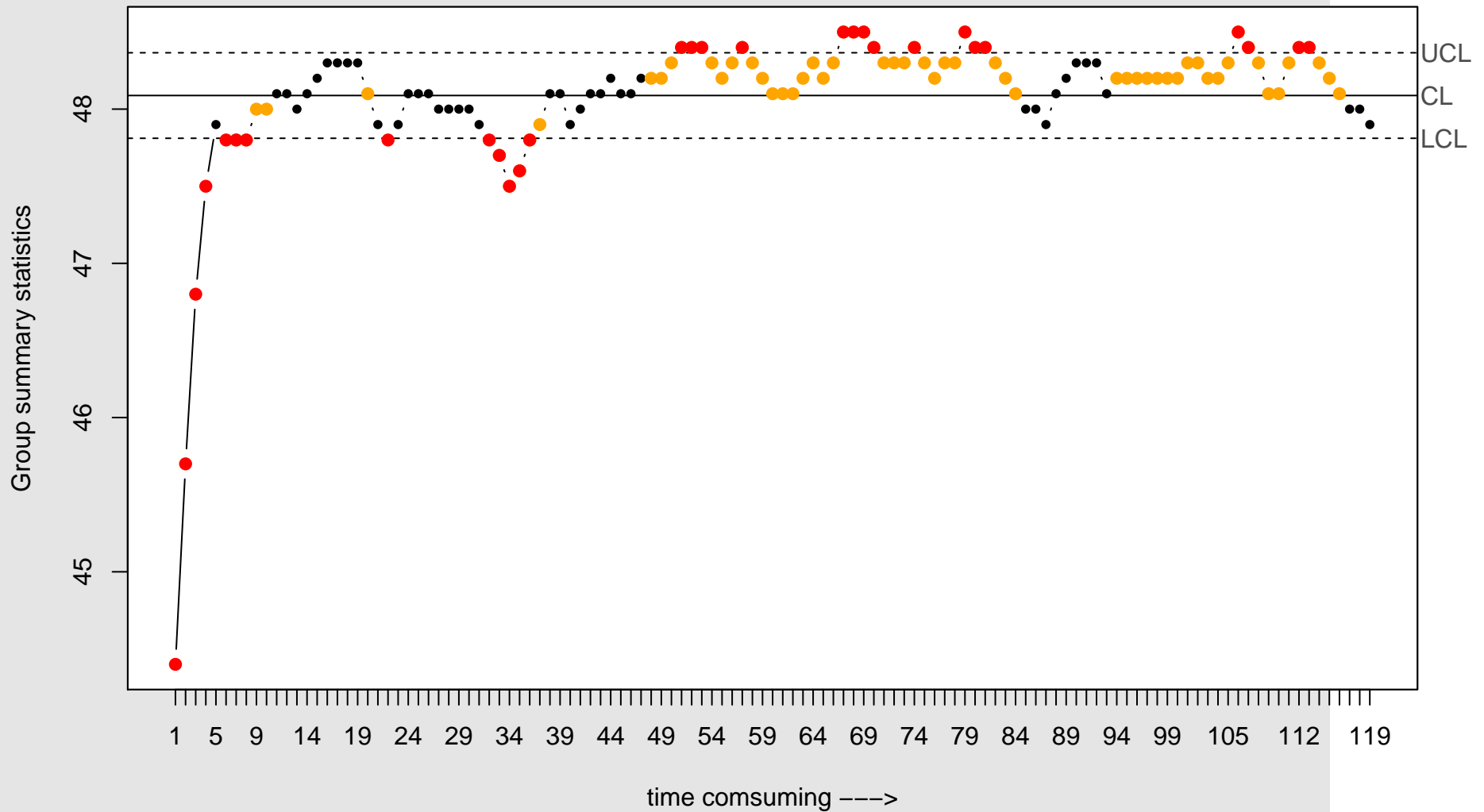
Number of groups = 119
Center = 48.08824   LCL = 47.81101   Number beyond limits = 29
StdDev = 0.09240894   UCL = 48.36546   Number violating runs = 70

226th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL
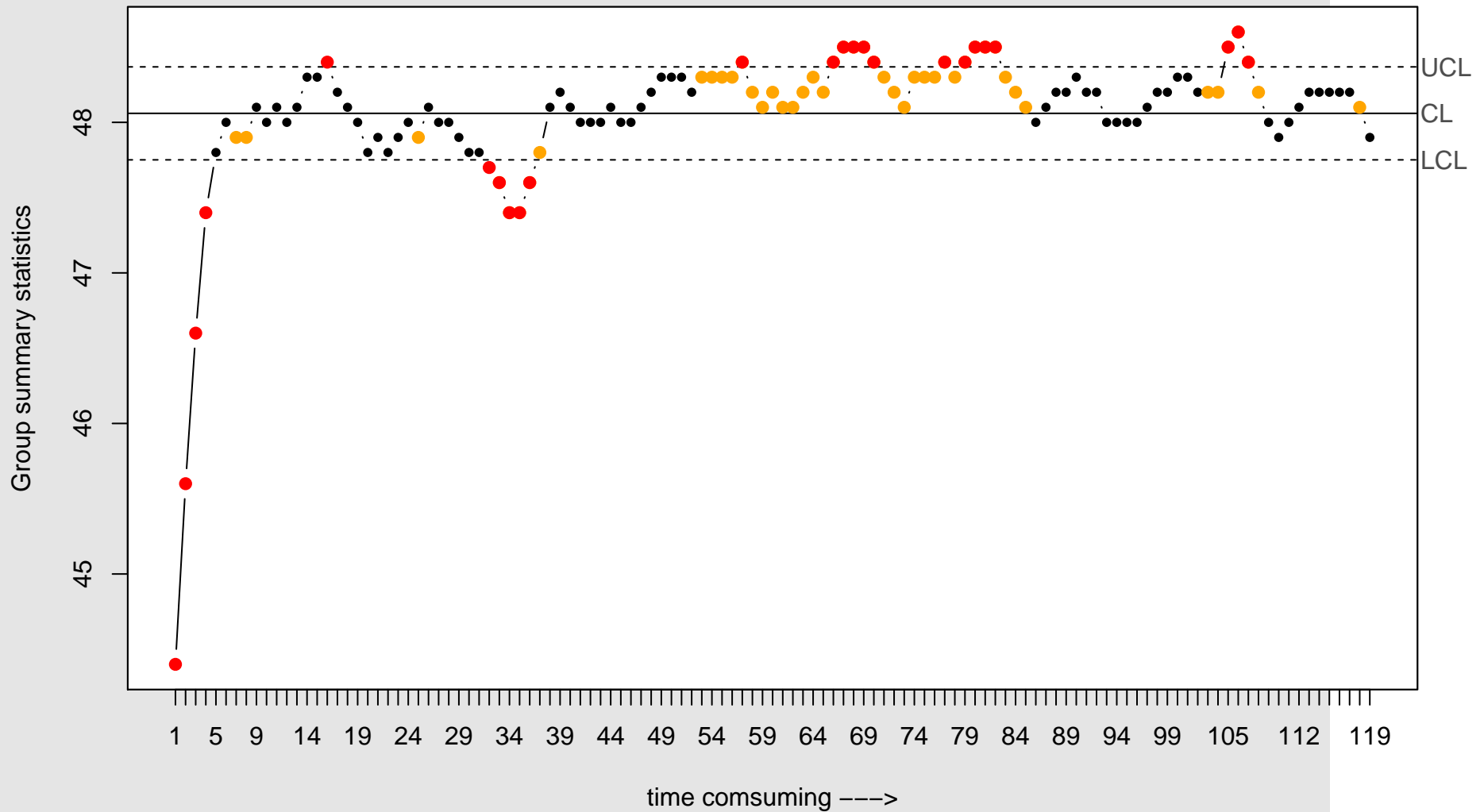
Number of groups = 119
Center = 48.05966   LCL = 47.75088   Number beyond limits = 24
StdDev = 0.102927   UCL = 48.36844   Number violating runs = 48

227th column point of this product

time comsuming ––––>
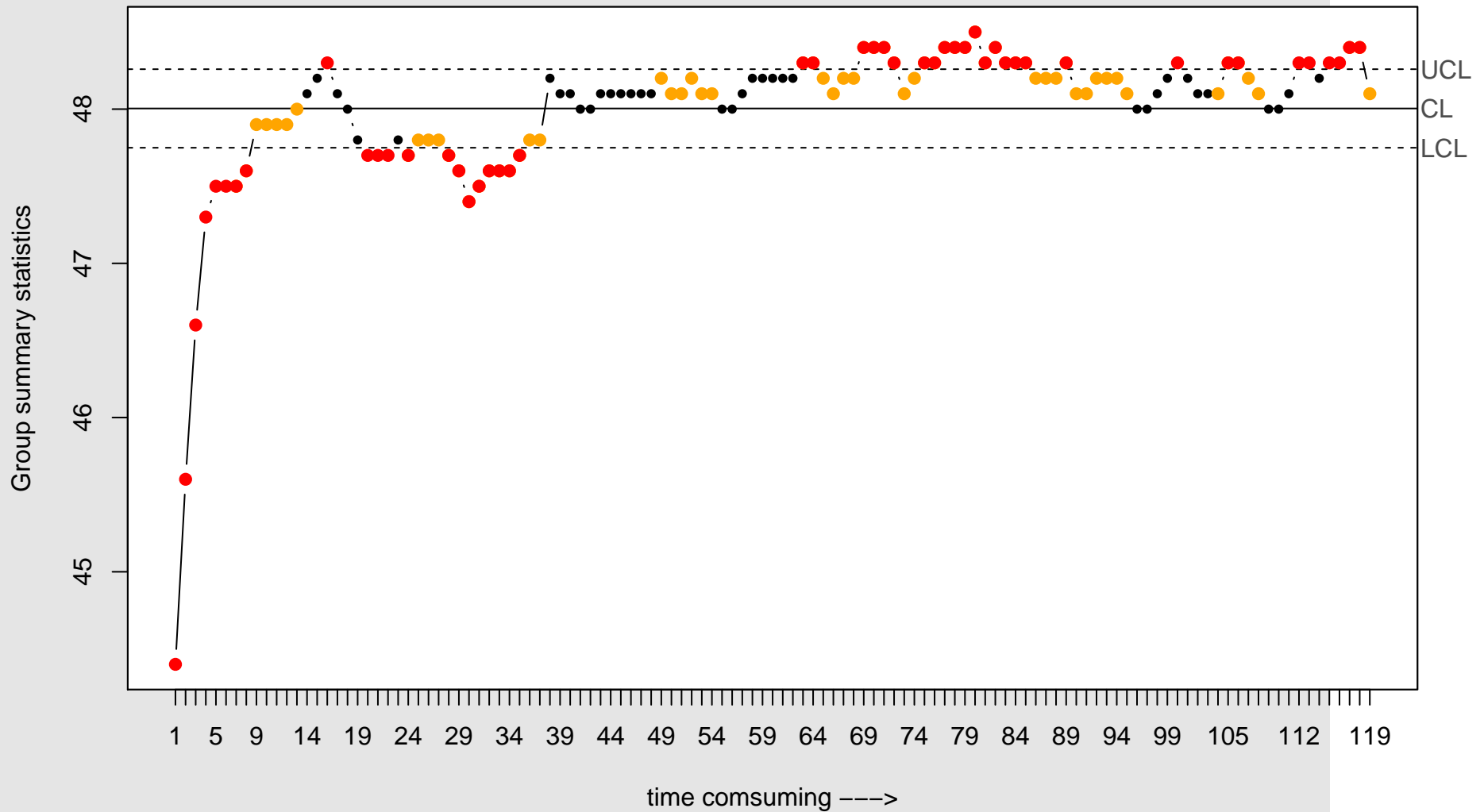
Number of groups = 119
Center = 48.0042   LCL = 47.74951   Number beyond limits = 48
StdDev = 0.08489602   UCL = 48.25889   Number violating runs = 68

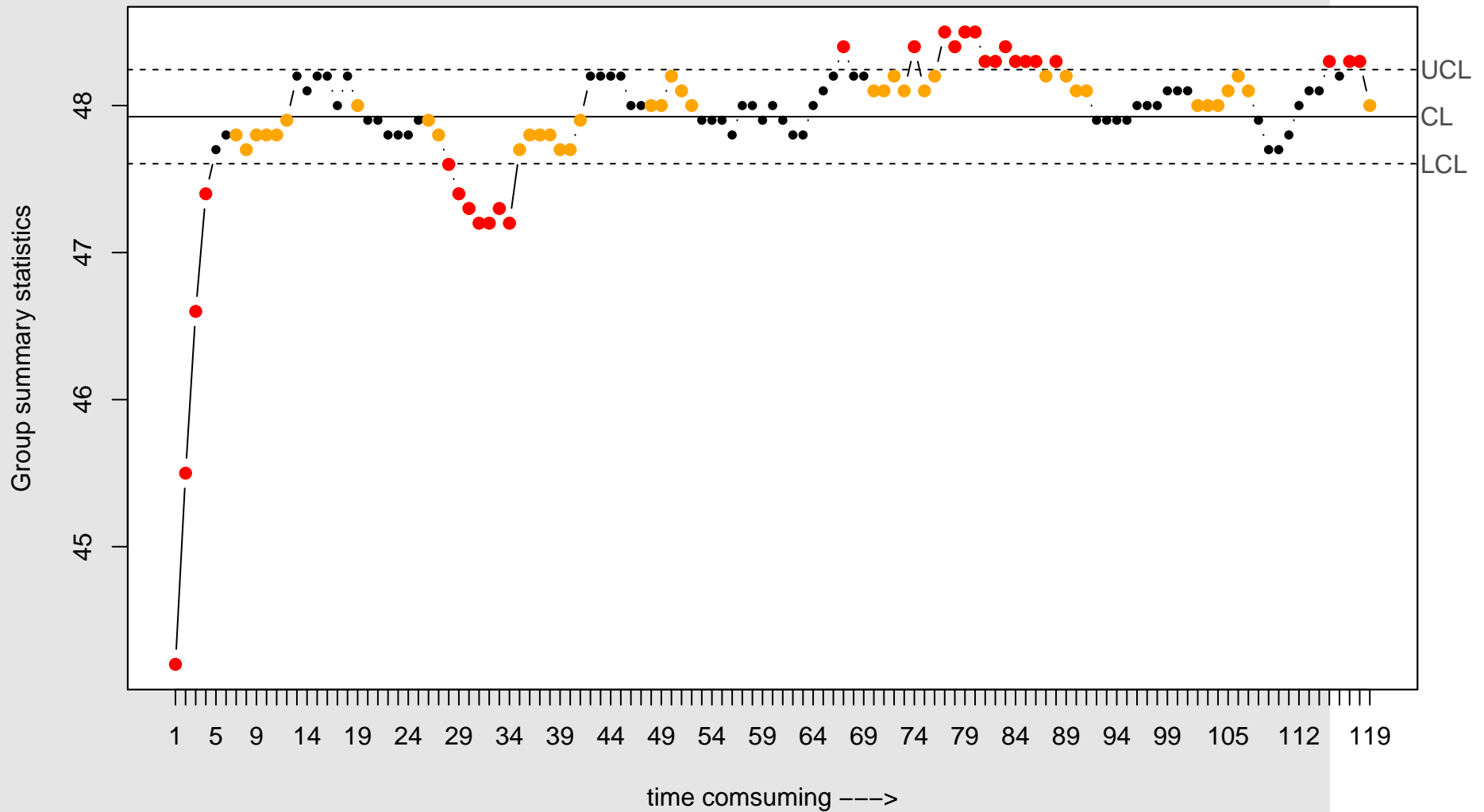# 228th column point of this product
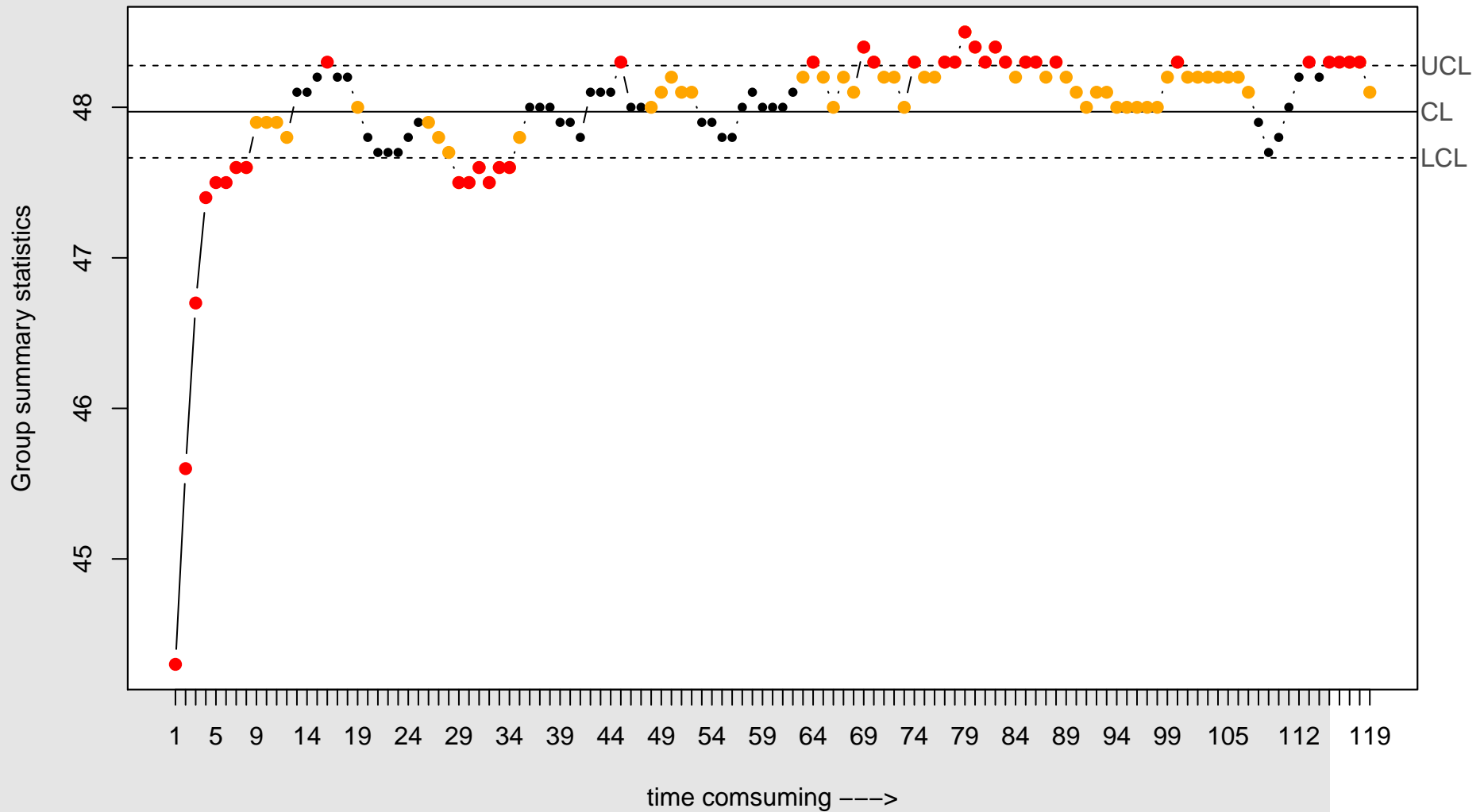
Number of groups = 119
Center = 47.97059   LCL = 47.66406   Number beyond limits = 36
StdDev = 0.1021757   UCL = 48.27712   Number violating runs = 70

229th column point of this product

Group summary statistics

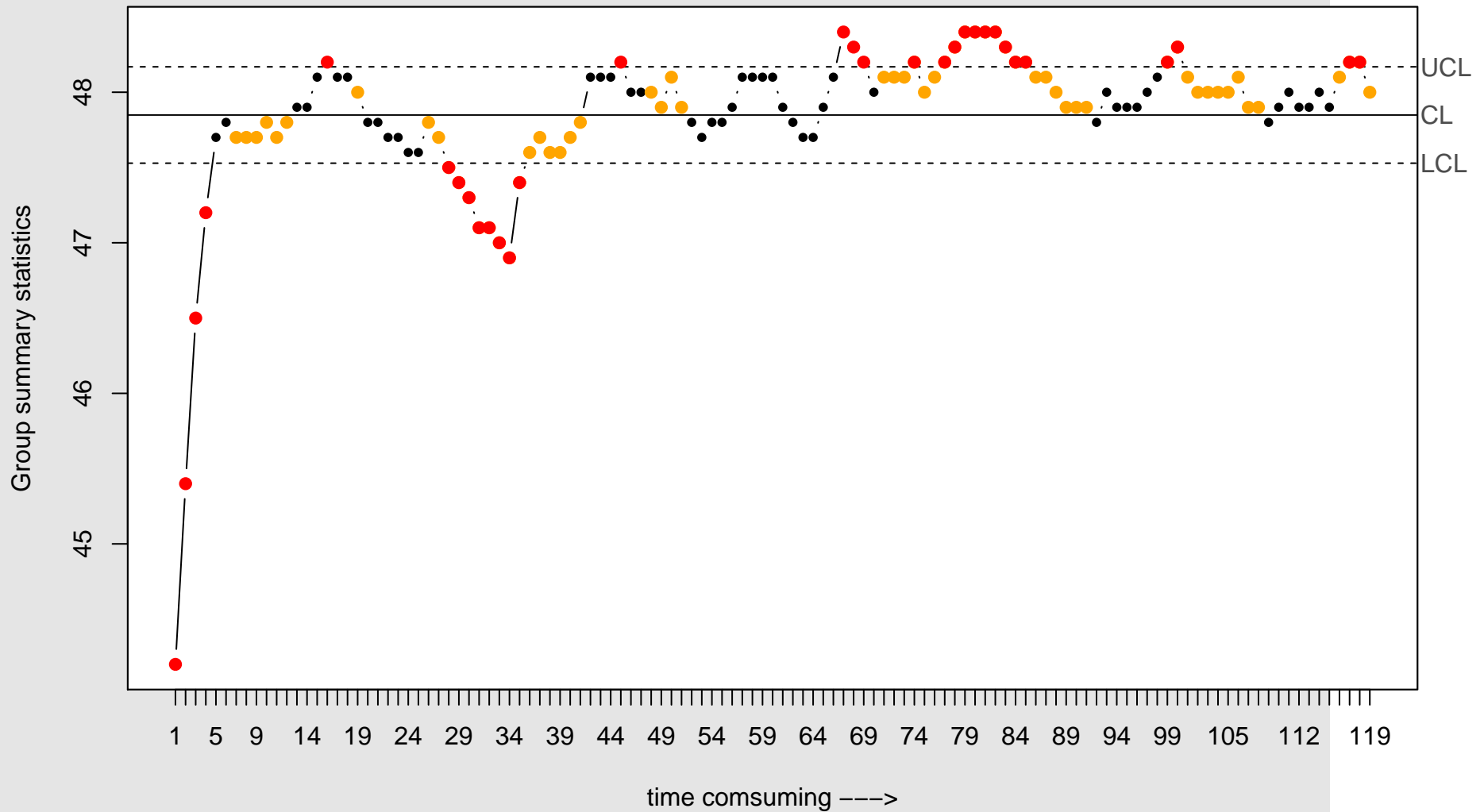time comsuming ––––>

Number of groups = 119
Center = 47.92437
StdDev = 0.1066835

LCL = 47.60432
UCL = 48.24442

Number beyond limits = 27
Number violating runs = 58

230th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 47.84874   LCL = 47.52869   Number beyond limits = 31
StdDev = 0.1066835   UCL = 48.16879   Number violating runs = 62

231th column point of this product

Group summary statistics

time comsuming ––––>
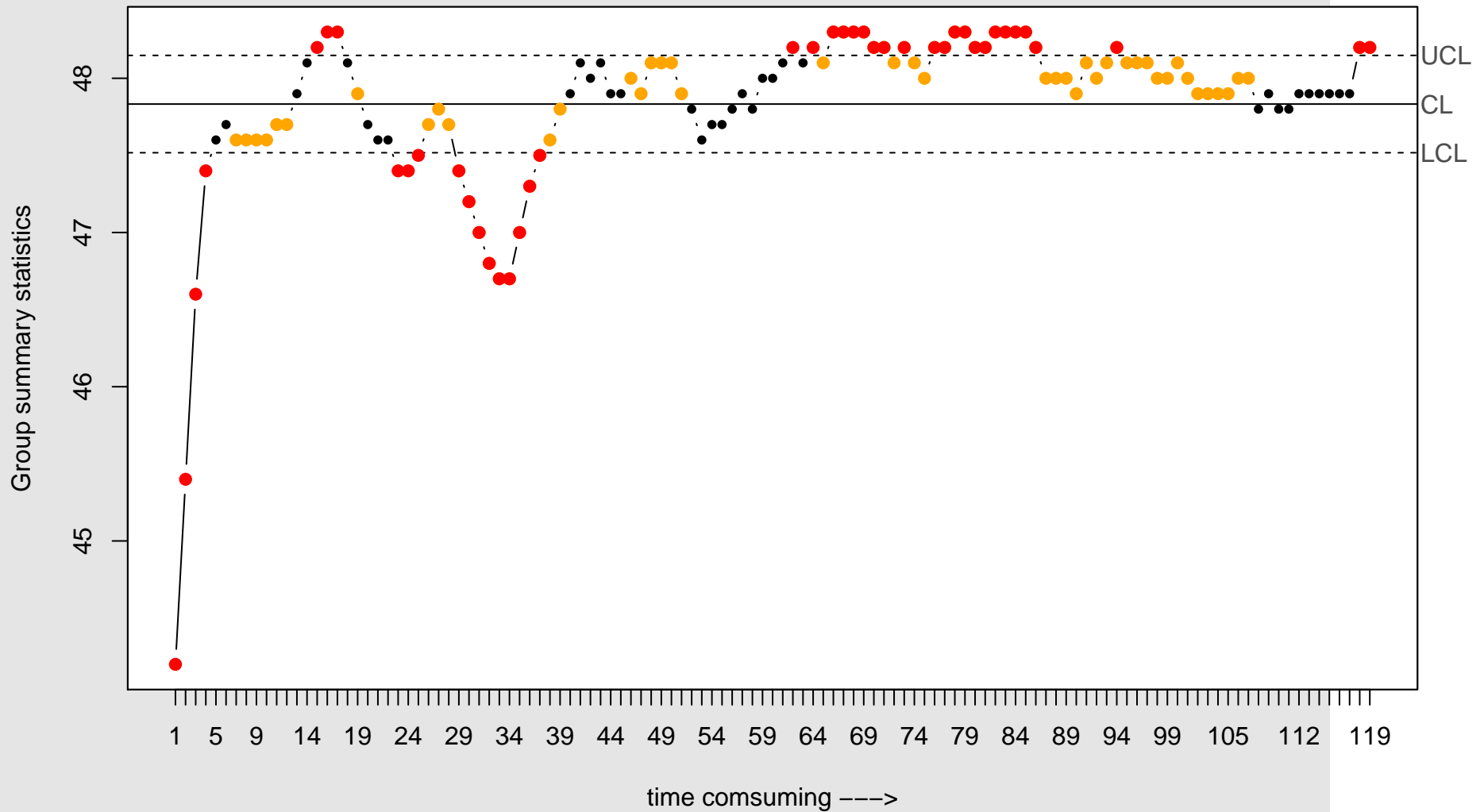
Number of groups = 119
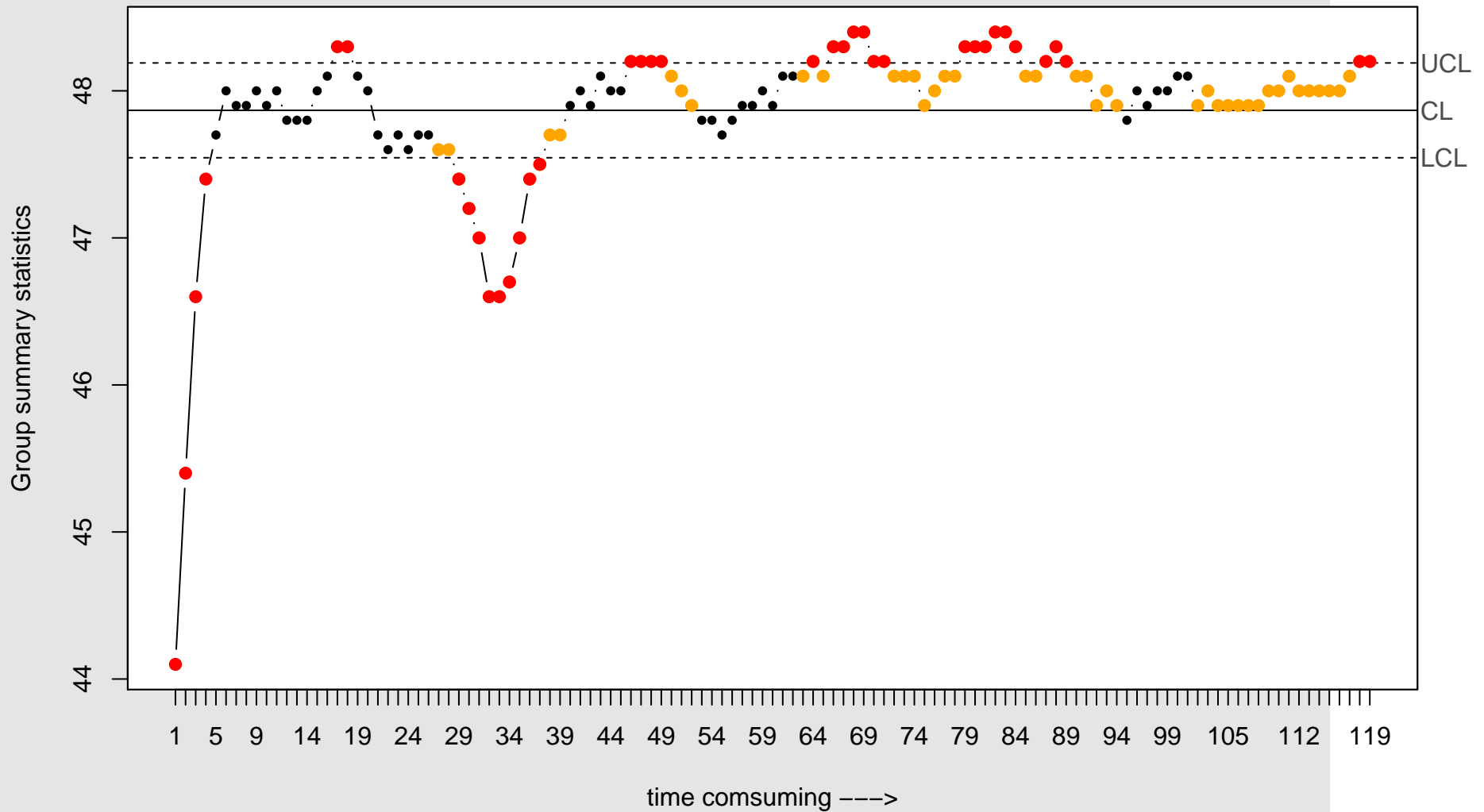Center = 47.83277
StdDev = 0.1051809

LCL = 47.51723
UCL = 48.14832

Number beyond limits = 42
Number violating runs = 72

232th column point of this product

Group summary statistics

time comsuming ––––>

Number of groups = 119
Center = 47.86723   LCL = 47.54492   Number beyond limits = 37
StdDev = 0.1074348   UCL = 48.18953   Number violating runs = 70

233th column point of this product

Group summary statistics

UCL
CL
LCL

48

47

46

45

1   5   9   14   19   24   29   34   39   44   49   54   59   64   69   74   79   84   89   94   99   105   112   119

time comsuming ––––>
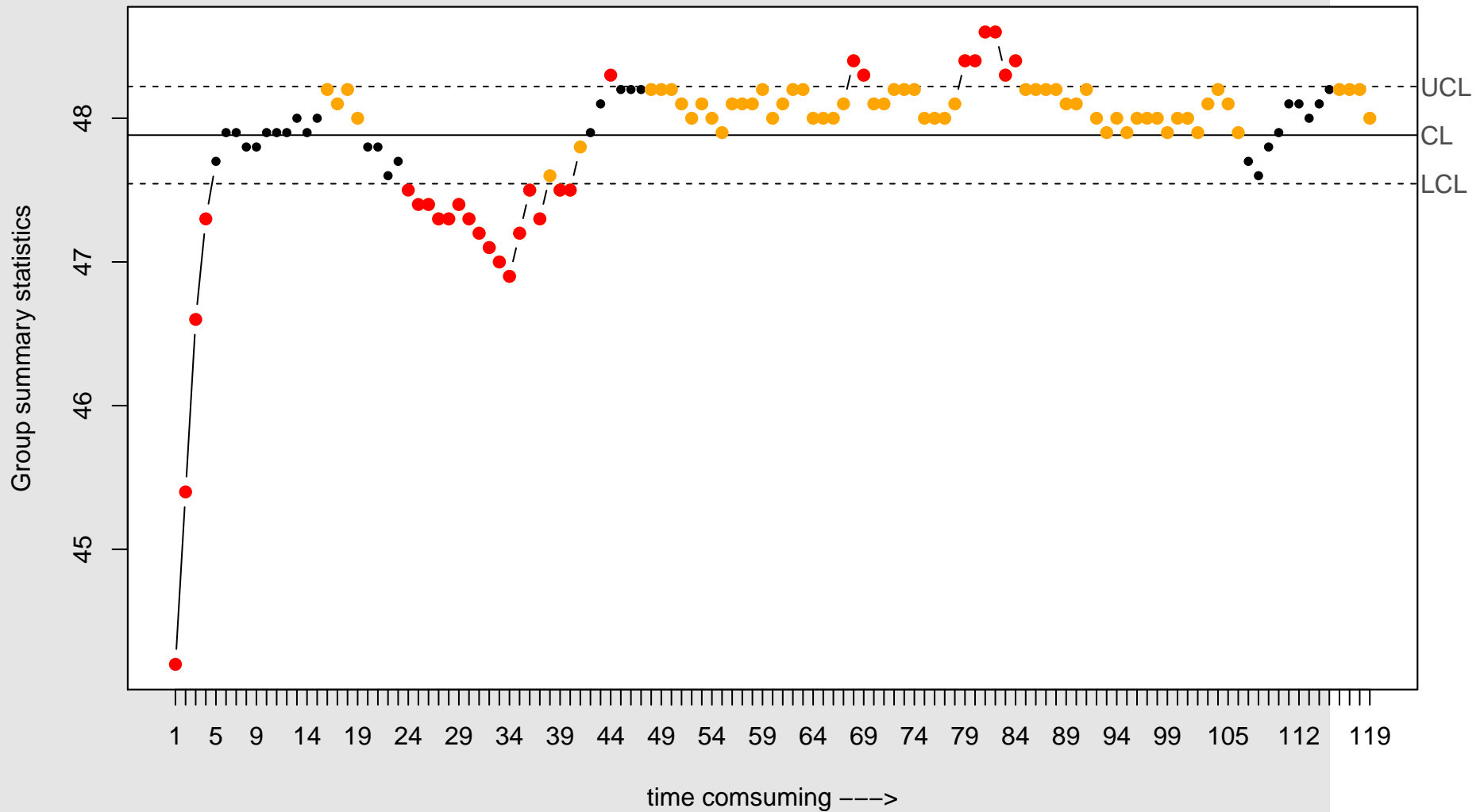
Number of groups = 119
Center = 47.88235   LCL = 47.54427   Number beyond limits = 29
StdDev = 0.1126938   UCL = 48.22043   Number violating runs = 83

234th column point of this product

Group summary statistics

time comsuming ---->
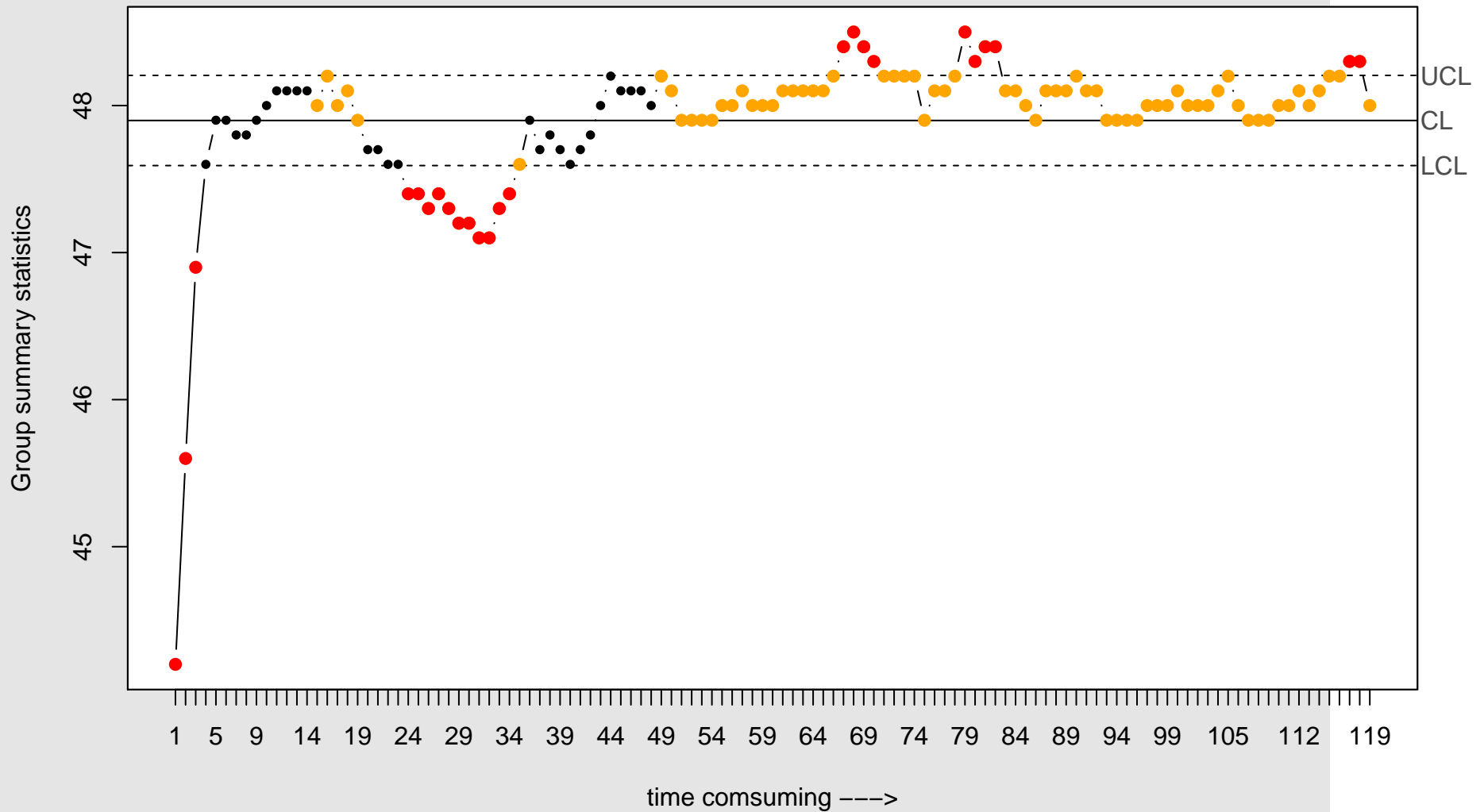
Number of groups = 119
Center = 47.89832   LCL = 47.59179   Number beyond limits = 24
StdDev = 0.1021757   UCL = 48.20485   Number violating runs = 86

235th column point of this product

Group summary statistics

time comsuming ――>

UCL
CL
LCL
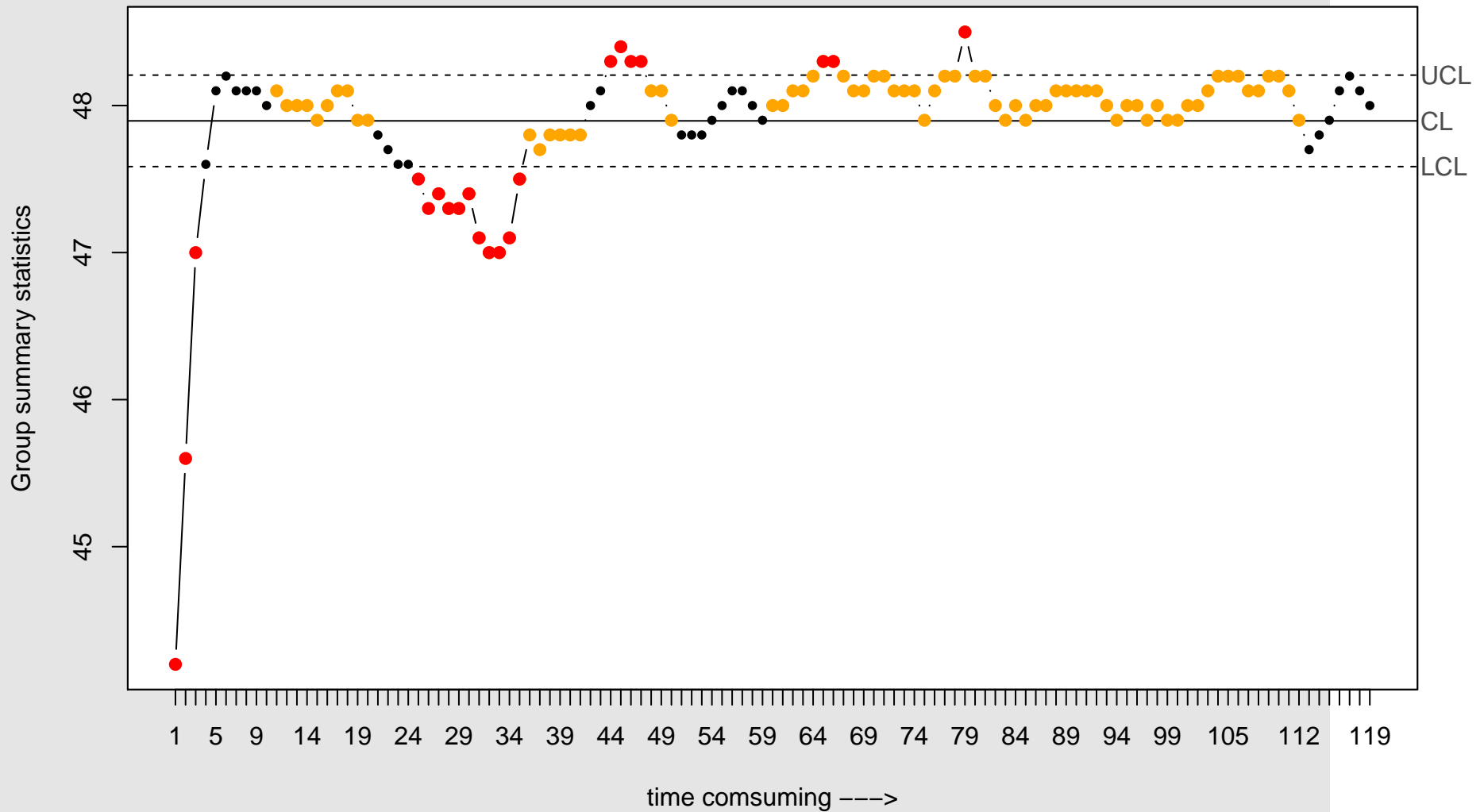
Number of groups = 119
Center = 47.8958   LCL = 47.58476   Number beyond limits = 21
StdDev = 0.1036783   UCL = 48.20683   Number violating runs = 81

236th column point of this product

Group summary statistics

time comsuming –––>
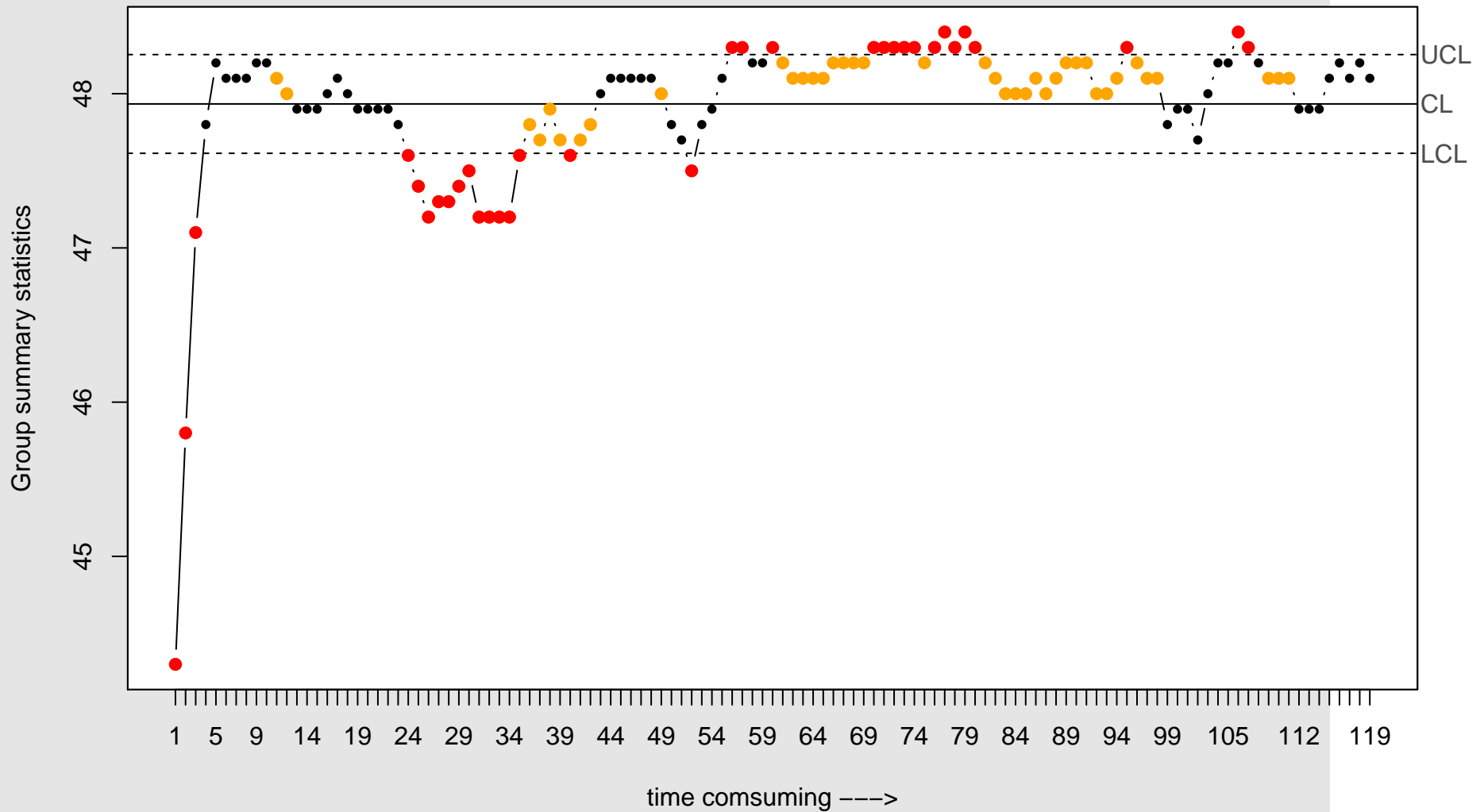
Number of groups = 119
Center = 47.93361   LCL = 47.61356   Number beyond limits = 33
StdDev = 0.1066835   UCL = 48.25366   Number violating runs = 62

237th column point of this product

Group summary statistics

time comsuming --->
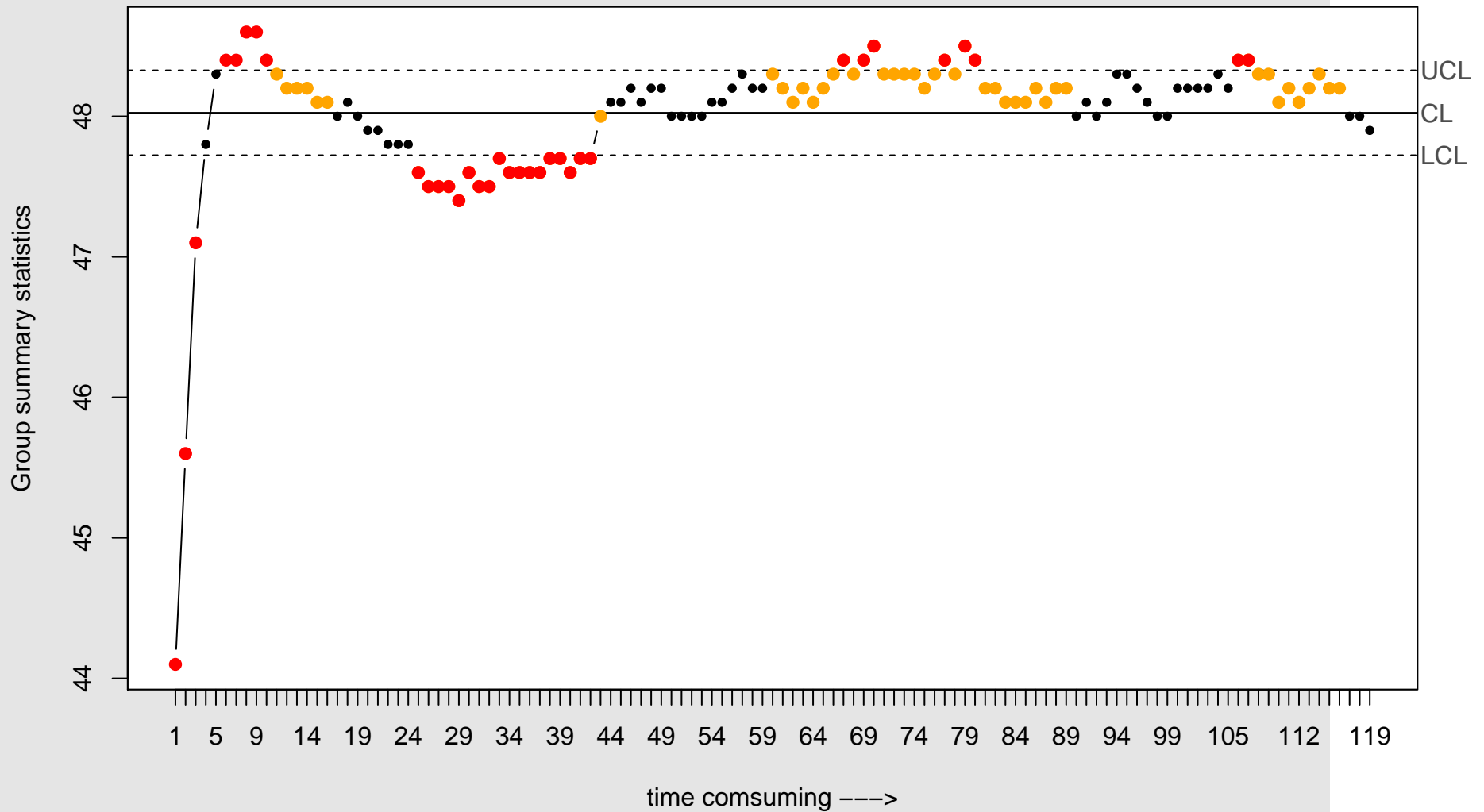
Number of groups = 119
Center = 48.02521   LCL = 47.72319   Number beyond limits = 34
StdDev = 0.1006732   UCL = 48.32723   Number violating runs = 66

238th column point of this product

Group summary statistics

time comsuming ----->
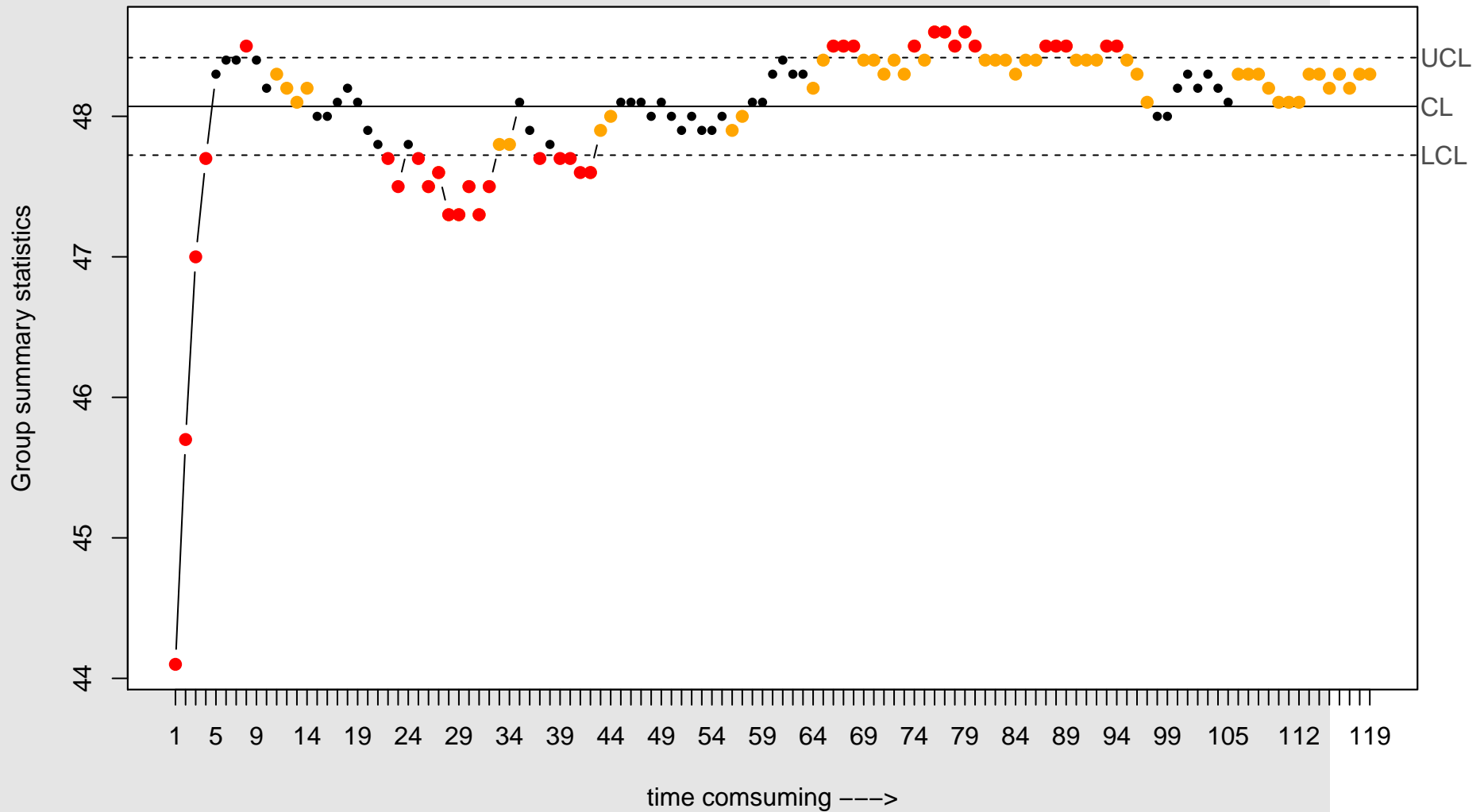
Number of groups = 119
Center = 48.07059   LCL = 47.72349   Number beyond limits = 34
StdDev = 0.115699   UCL = 48.41769   Number violating runs = 66

239th column point of this product

Group summary statistics

time comsuming –––>
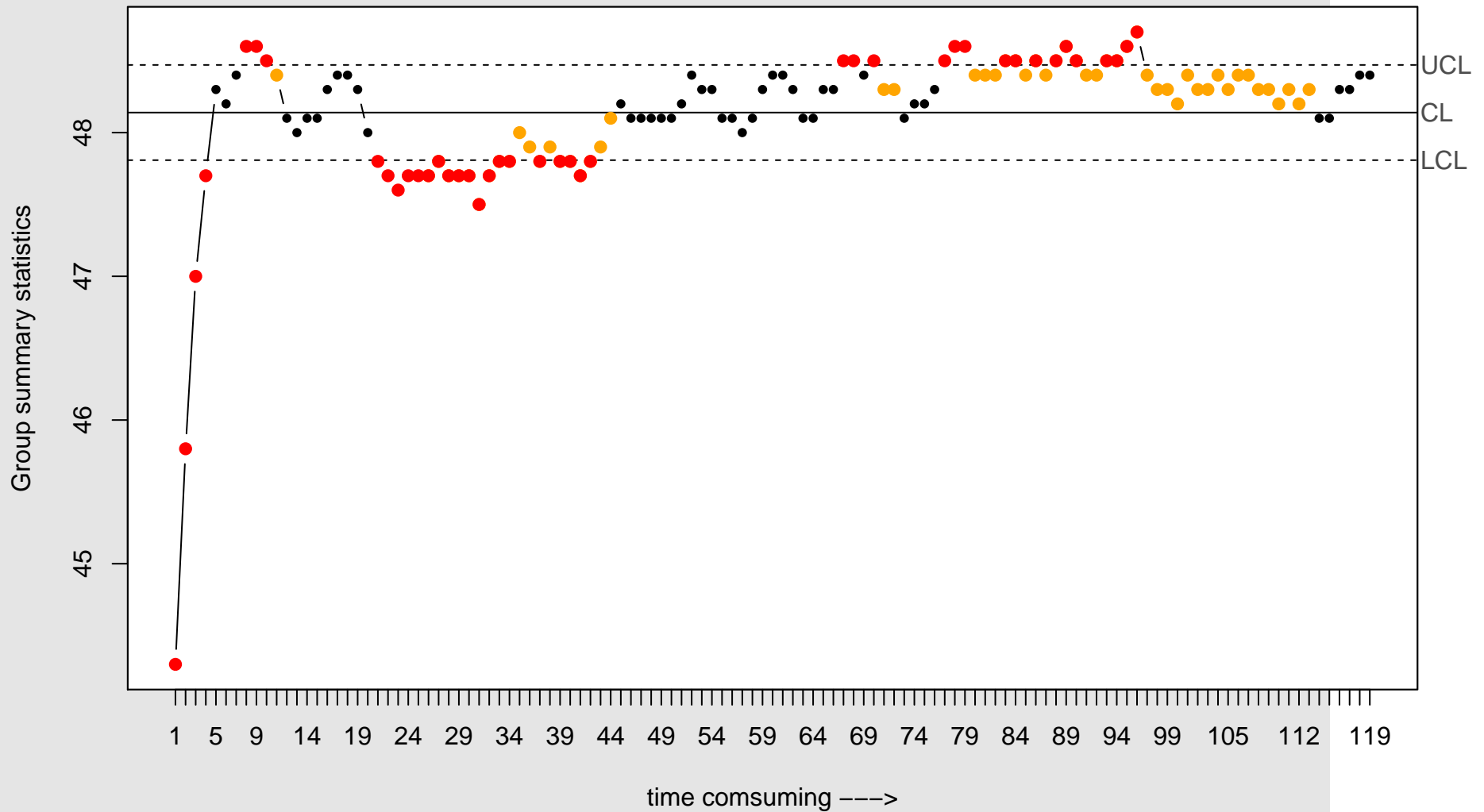
Number of groups = 119
Center = 48.1395   LCL = 47.80818   Number beyond limits = 42
StdDev = 0.11044   UCL = 48.47082   Number violating runs = 56

240th column point of this product

Group summary statistics

time comsuming ---->
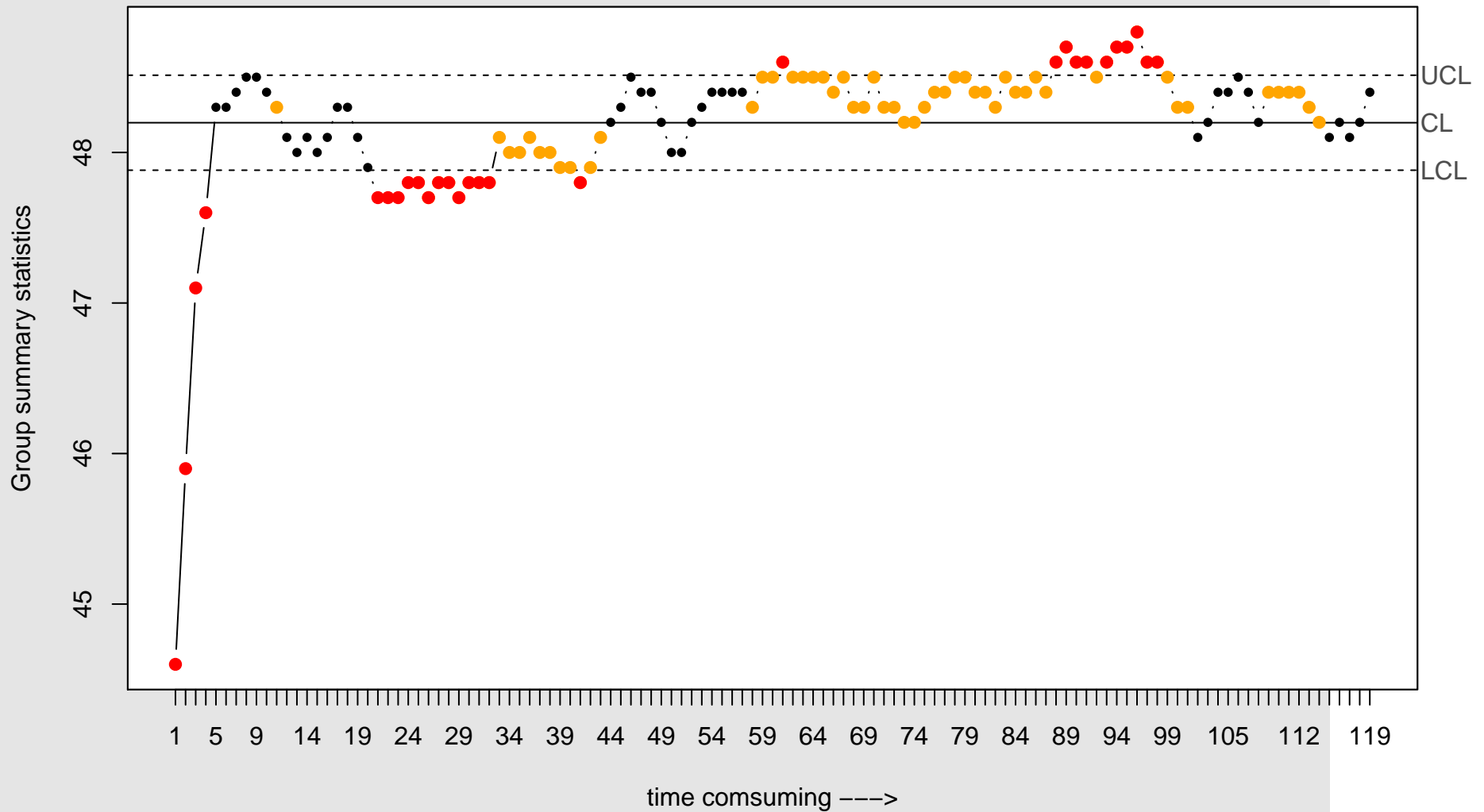
Number of groups = 119
Center = 48.19748   LCL = 47.88194   Number beyond limits = 28
StdDev = 0.1051809   UCL = 48.51302   Number violating runs = 70

241th column point of this product

Group summary statistics

time comsuming ---->
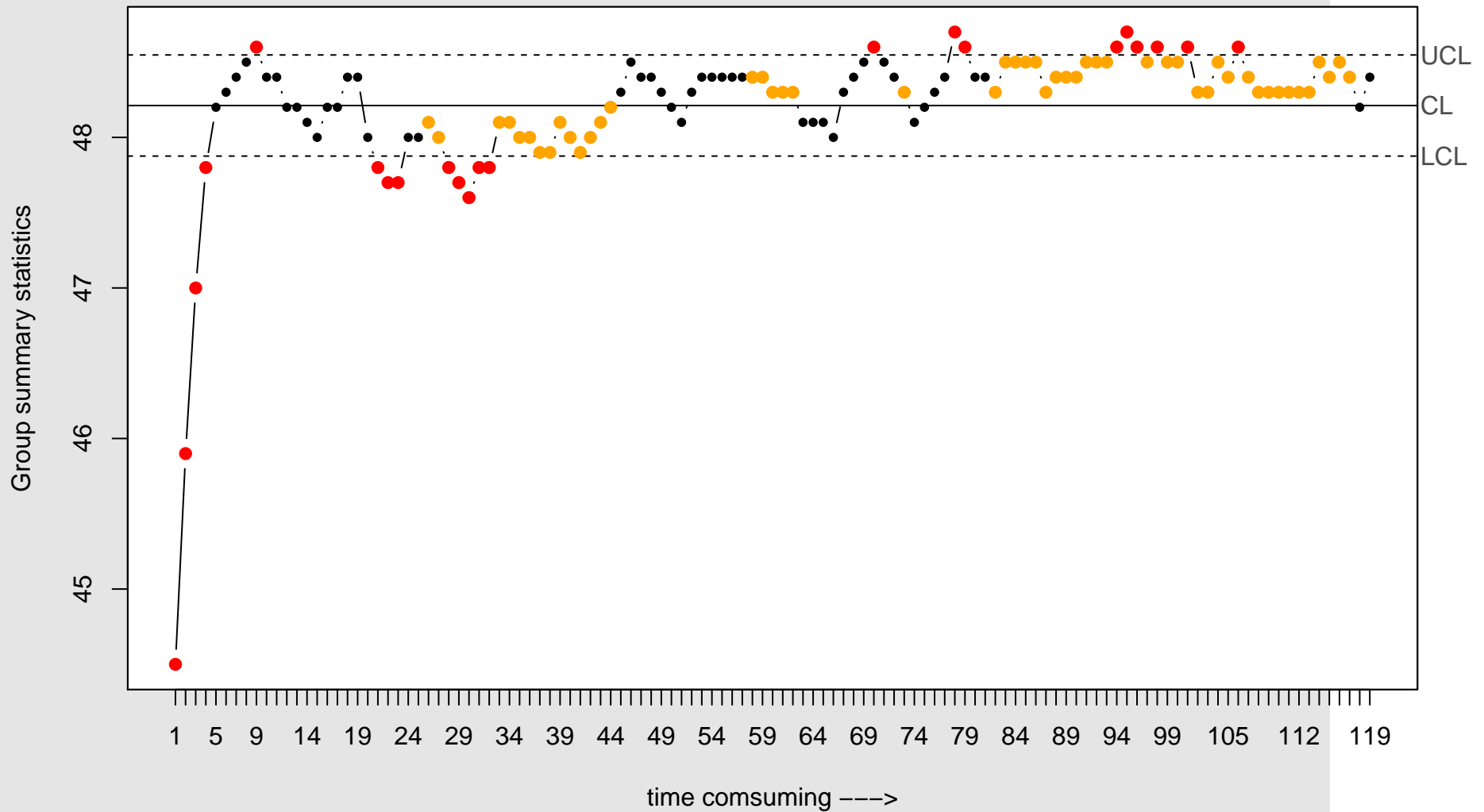
Number of groups = 119
Center = 48.21176   LCL = 47.87594   Number beyond limits = 22
StdDev = 0.1119425   UCL = 48.54759   Number violating runs = 61

242th column point of this product

Group summary statistics

time comsuming ––––>
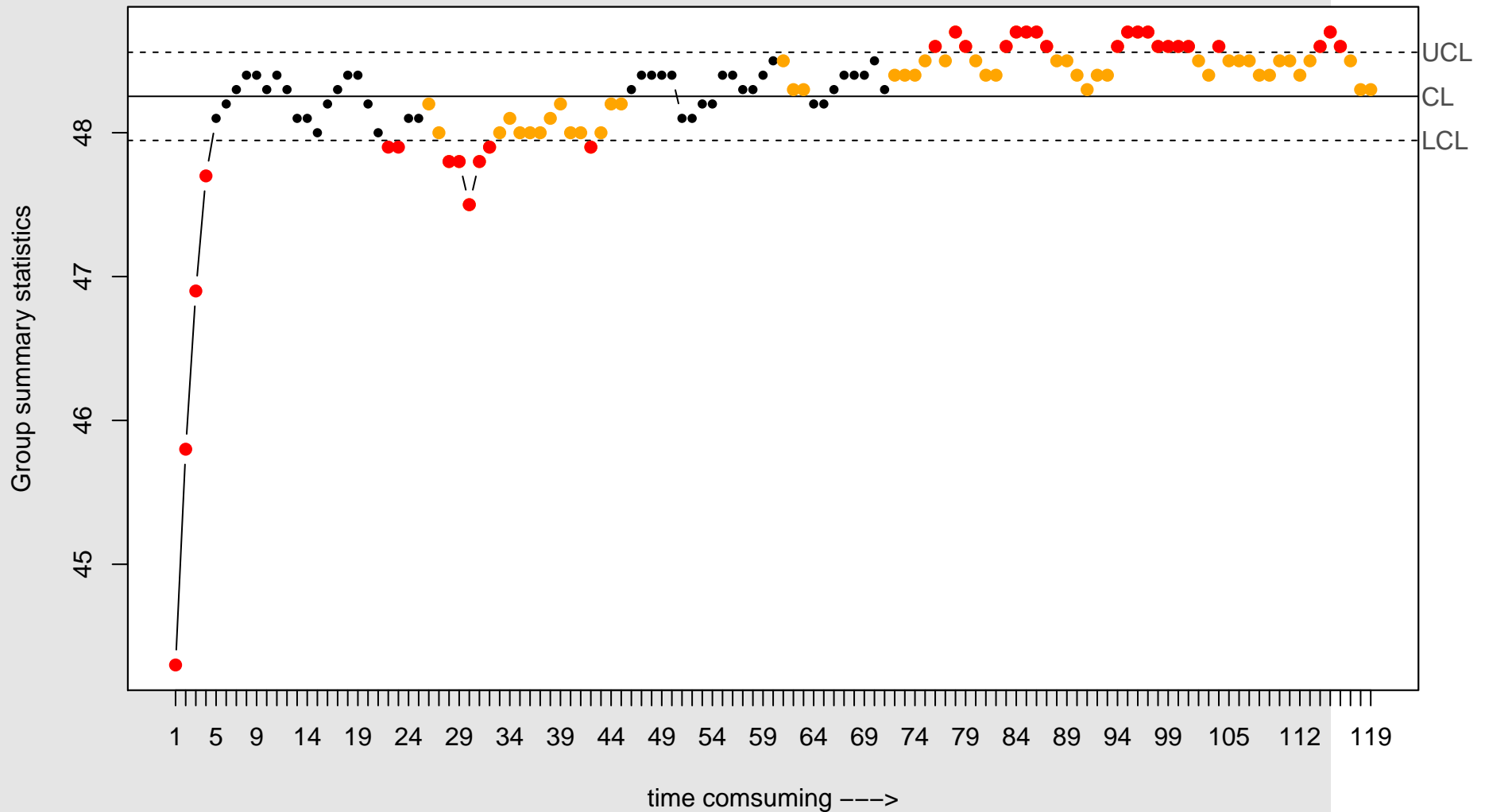
Number of groups = 119
Center = 48.25294   LCL = 47.94641   Number beyond limits = 32
StdDev = 0.1021757   UCL = 48.55947   Number violating runs = 71

243th column point of this product

Group summary statistics

UCL
CL
LCL

48

47

46

45

1   5   9   14   19   24   29   34   39   44   49   54   59   64   69   74   79   84   89   94   99   105   112   119

time comsuming ––––>
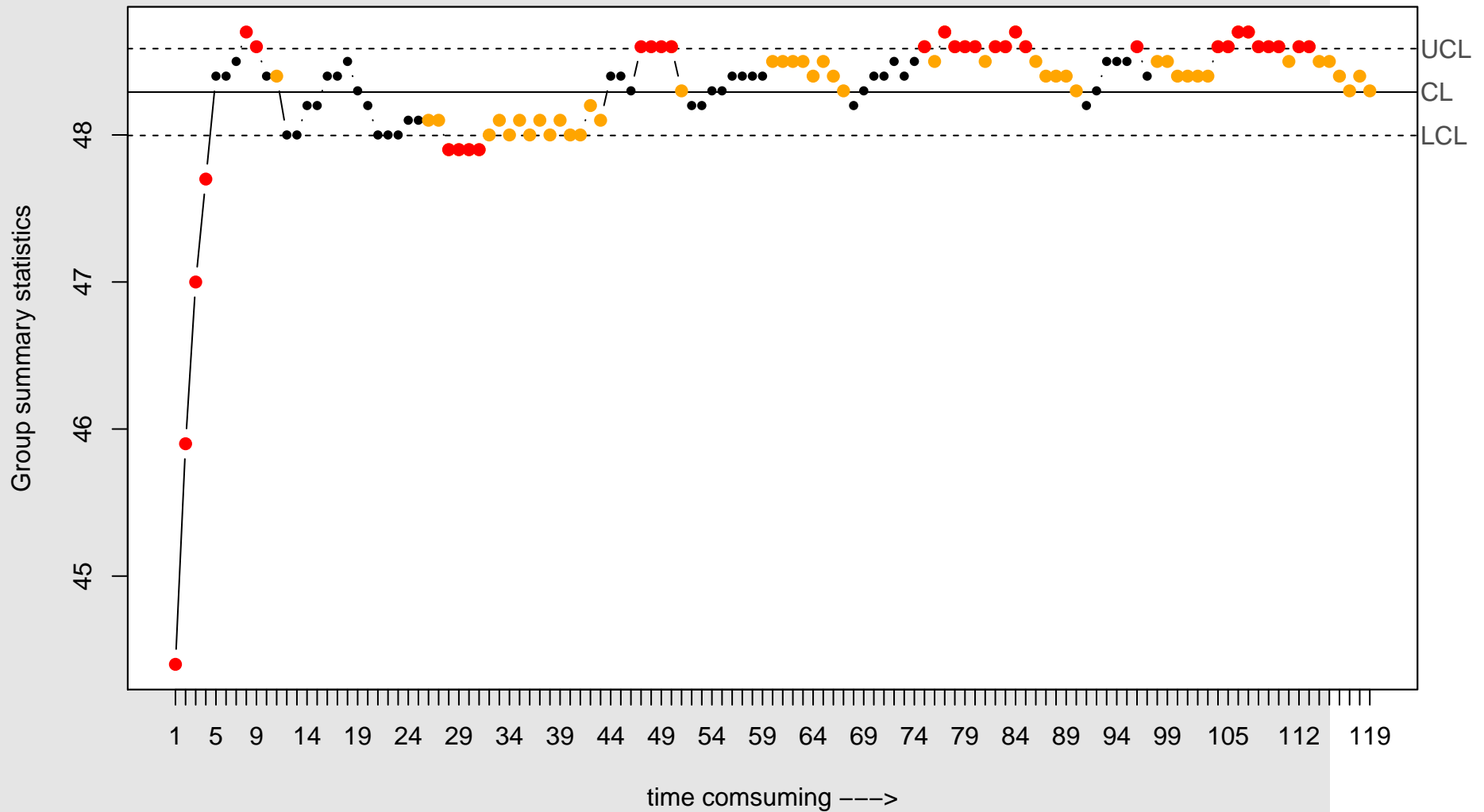
Number of groups = 119
Center = 48.2916   LCL = 47.99634   Number beyond limits = 33
StdDev = 0.09841928   UCL = 48.58685   Number violating runs = 67

244th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL
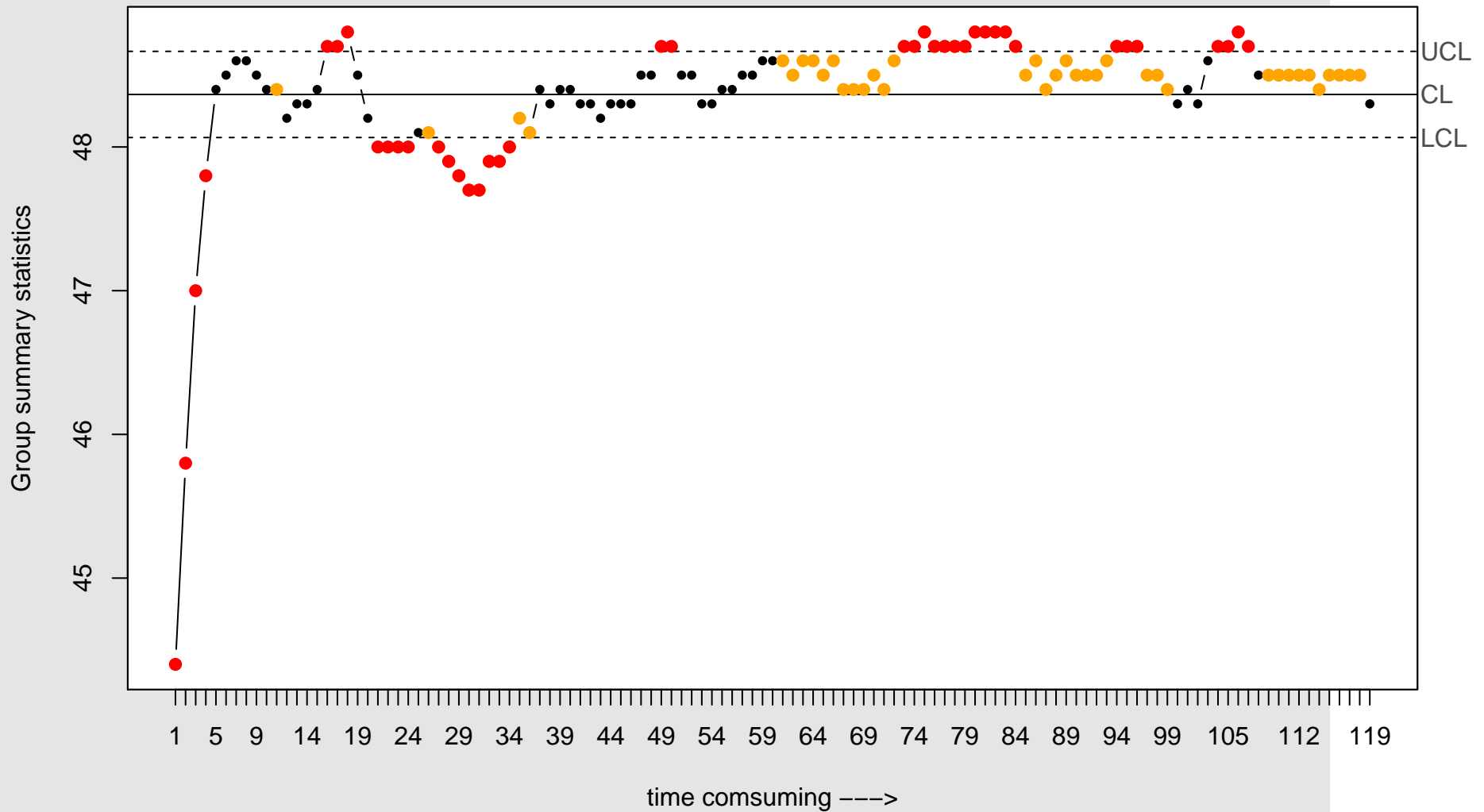
Number of groups = 119
Center = 48.36555   LCL = 48.06578   Number beyond limits = 40
StdDev = 0.09992187   UCL = 48.66531   Number violating runs = 61

245th column point of this product

Group summary statistics

time comsuming ---->
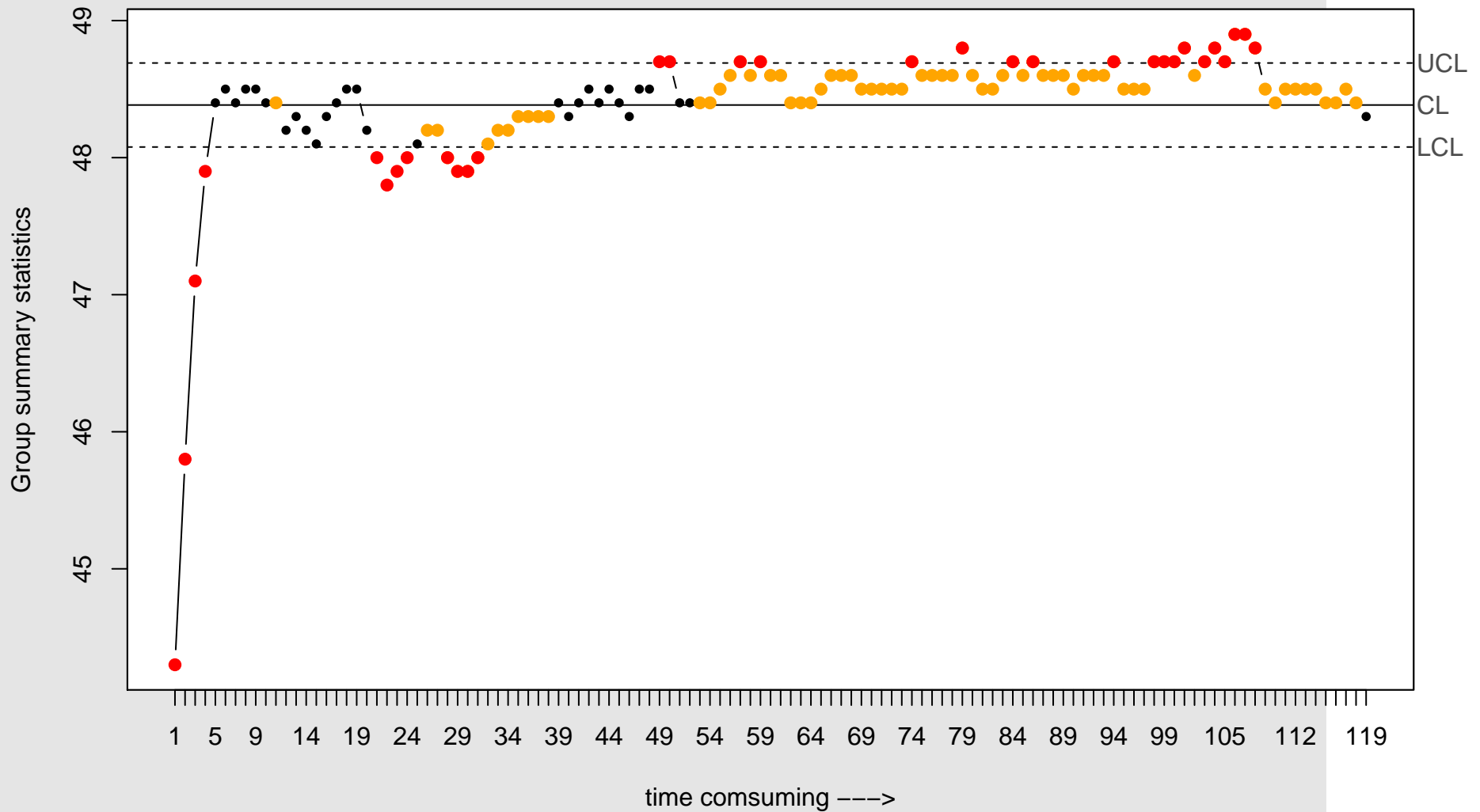
Number of groups = 119
Center = 48.38403   LCL = 48.07751   Number beyond limits = 31
StdDev = 0.1021757   UCL = 48.69056   Number violating runs = 80

246th column point of this product
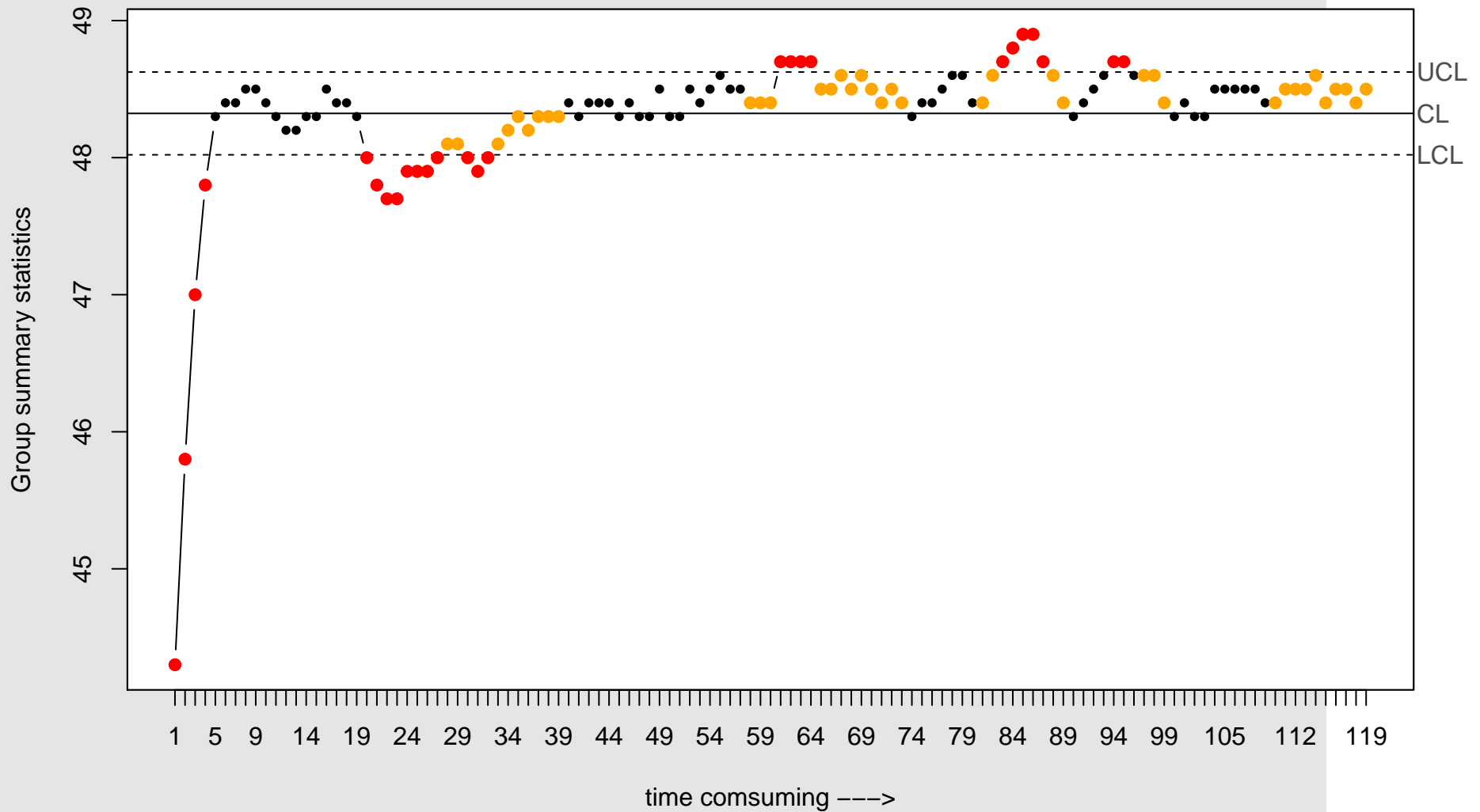

Group summary statistics

time comsuming –––>
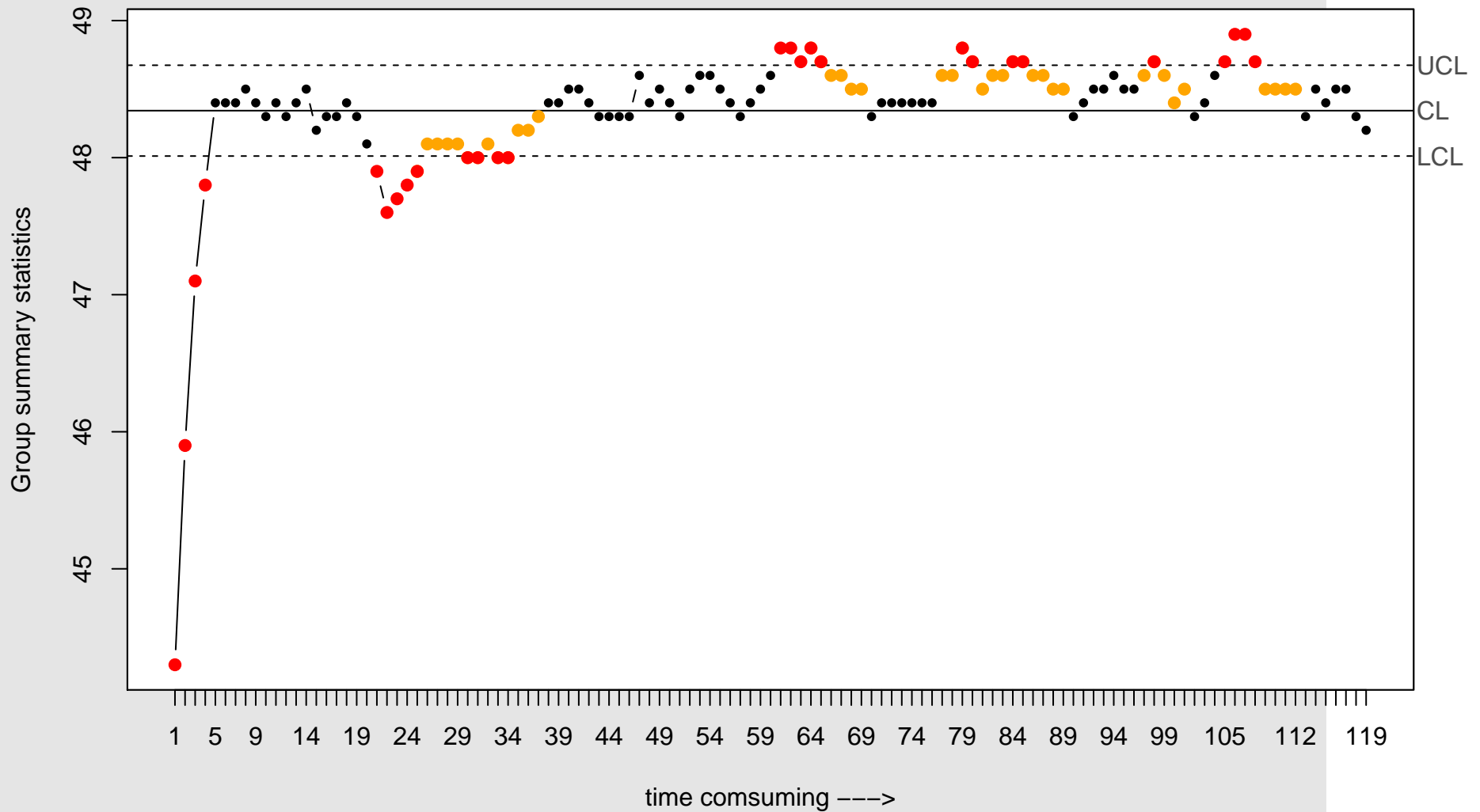
Number of groups = 119
Center = 48.34286
StdDev = 0.11044

LCL = 48.01154
UCL = 48.67418

Number beyond limits = 27
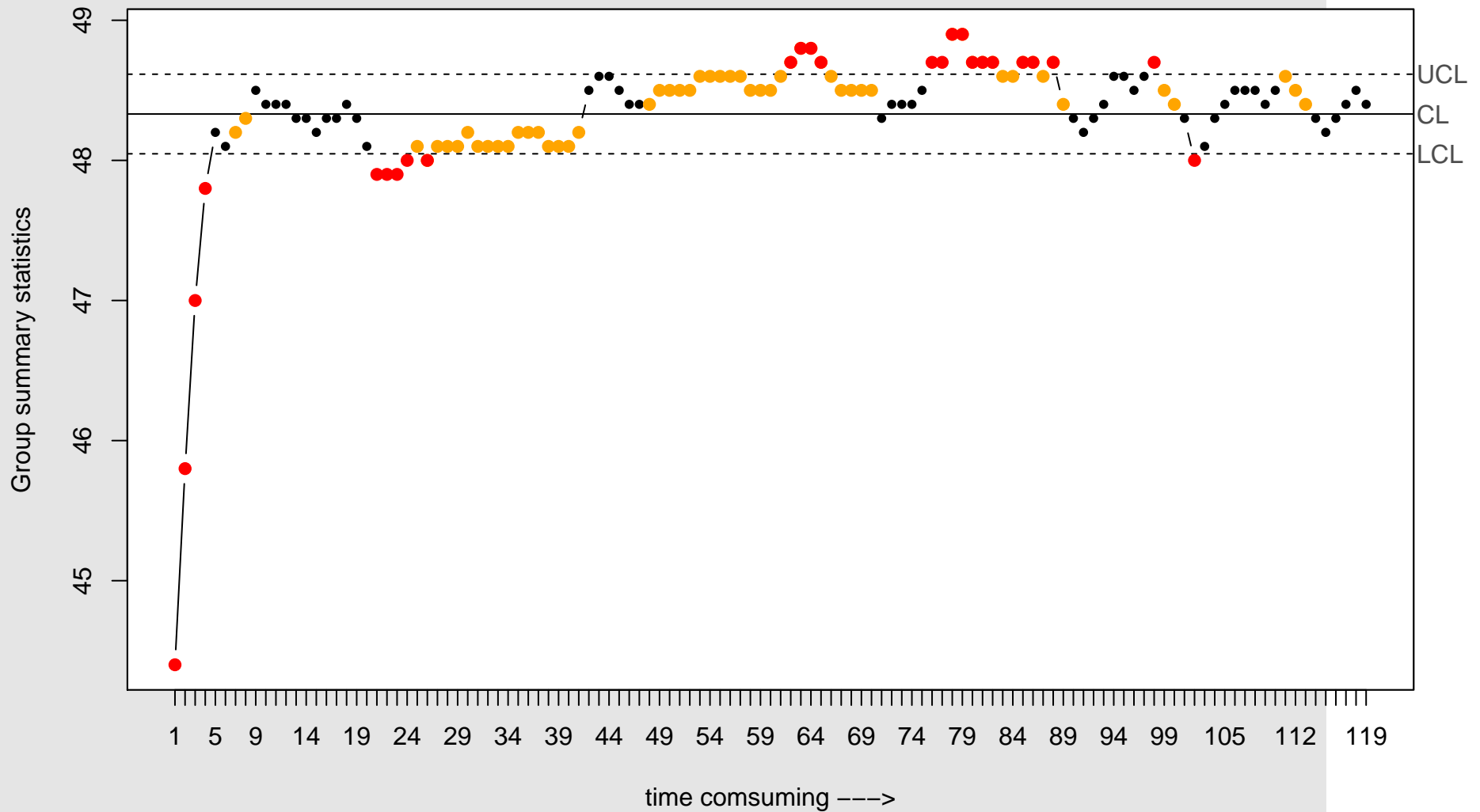Number violating runs = 41

247th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 48.32269   LCL = 48.02067   Number beyond limits = 26
StdDev = 0.1006732   UCL = 48.62471   Number violating runs = 53

248th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 48.33109   LCL = 48.0471   Number beyond limits = 25
StdDev = 0.09466282   UCL = 48.61508   Number violating runs = 59

249th column point of this product

Group summary statistics

time comsuming ---->
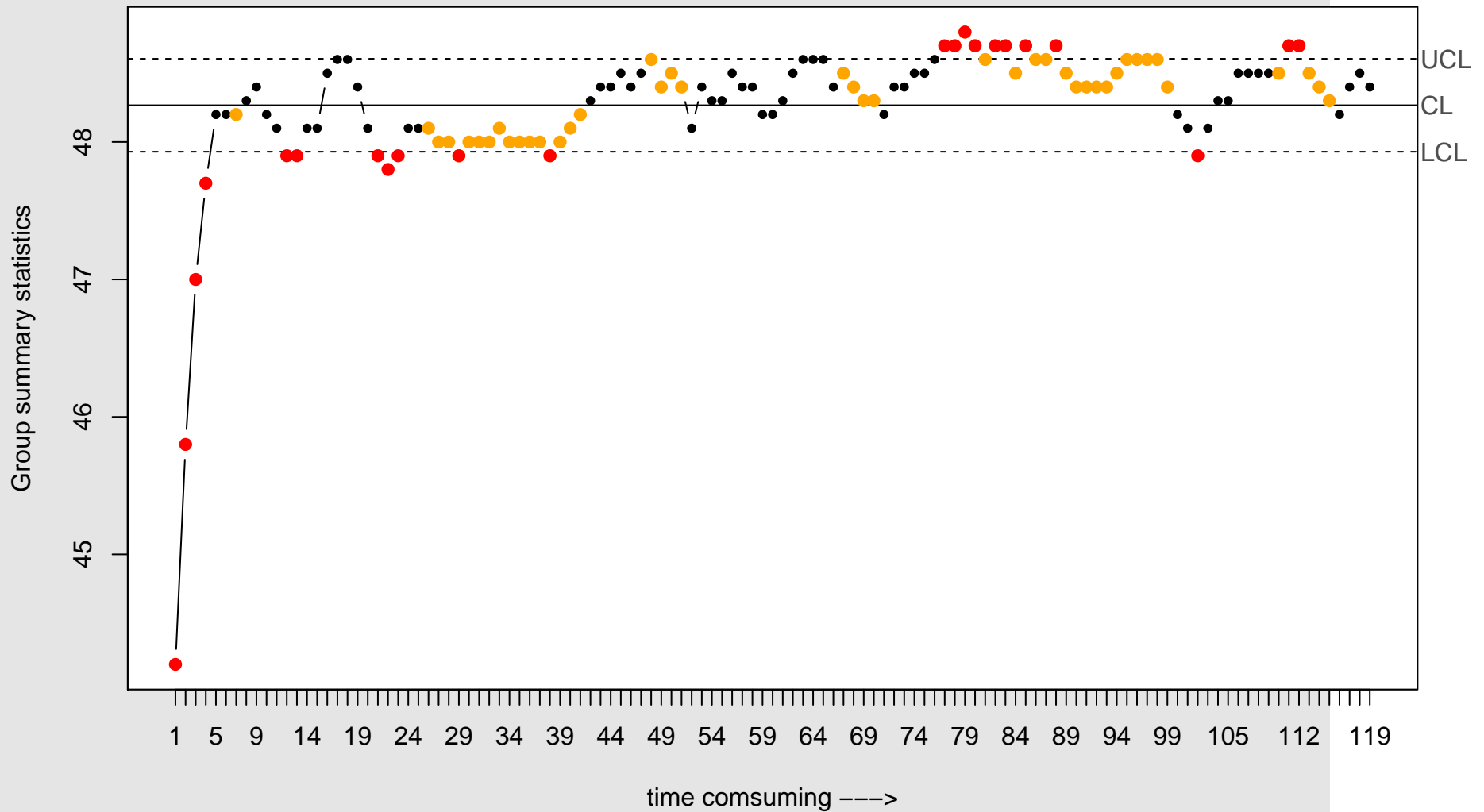
Number of groups = 119
Center = 48.26723   LCL = 47.92915   Number beyond limits = 22
StdDev = 0.1126938   UCL = 48.60531   Number violating runs = 53

250th column point of this product

Number of groups = 119
Center = 48.21681
StdDev = 0.1066835
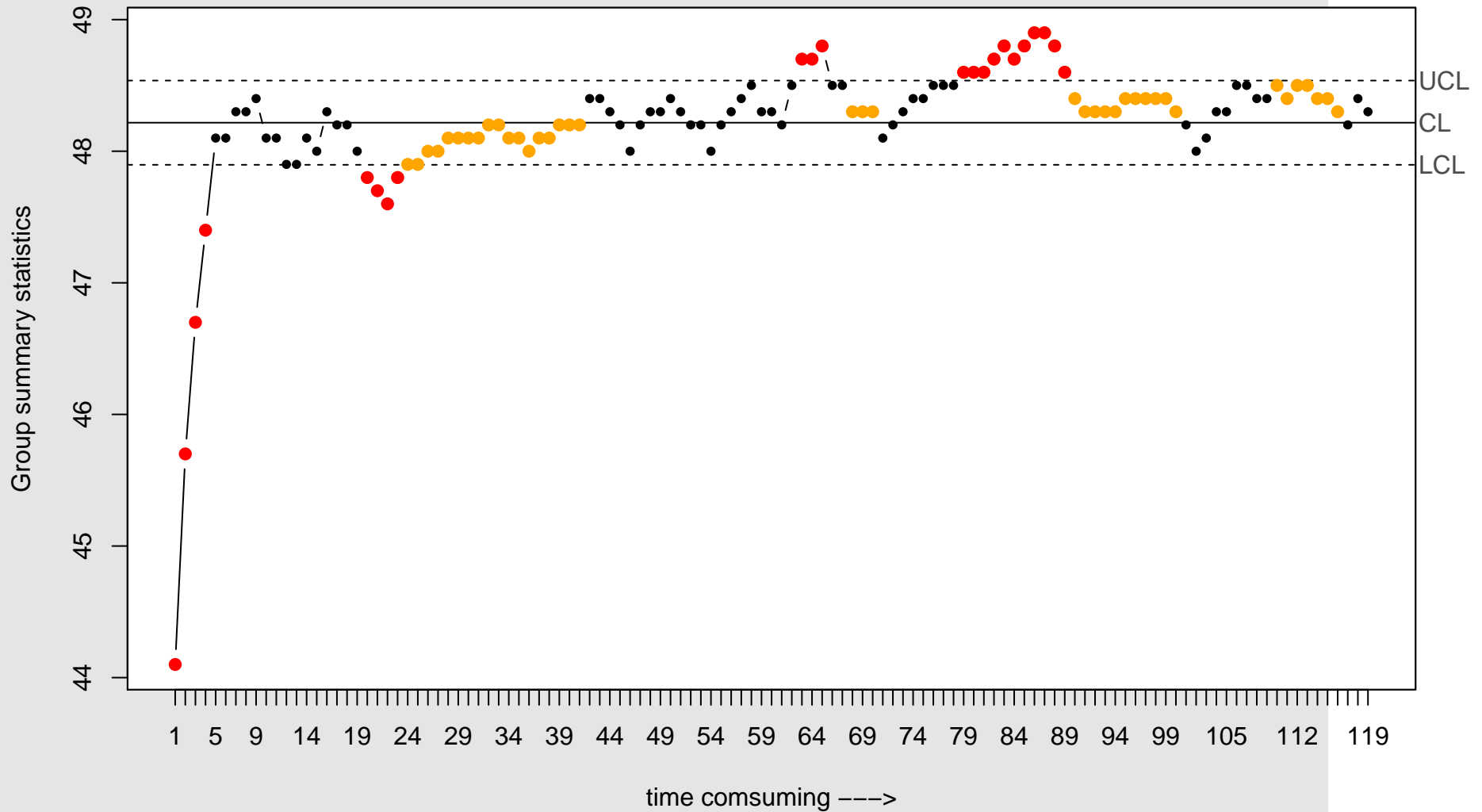
LCL = 47.89676
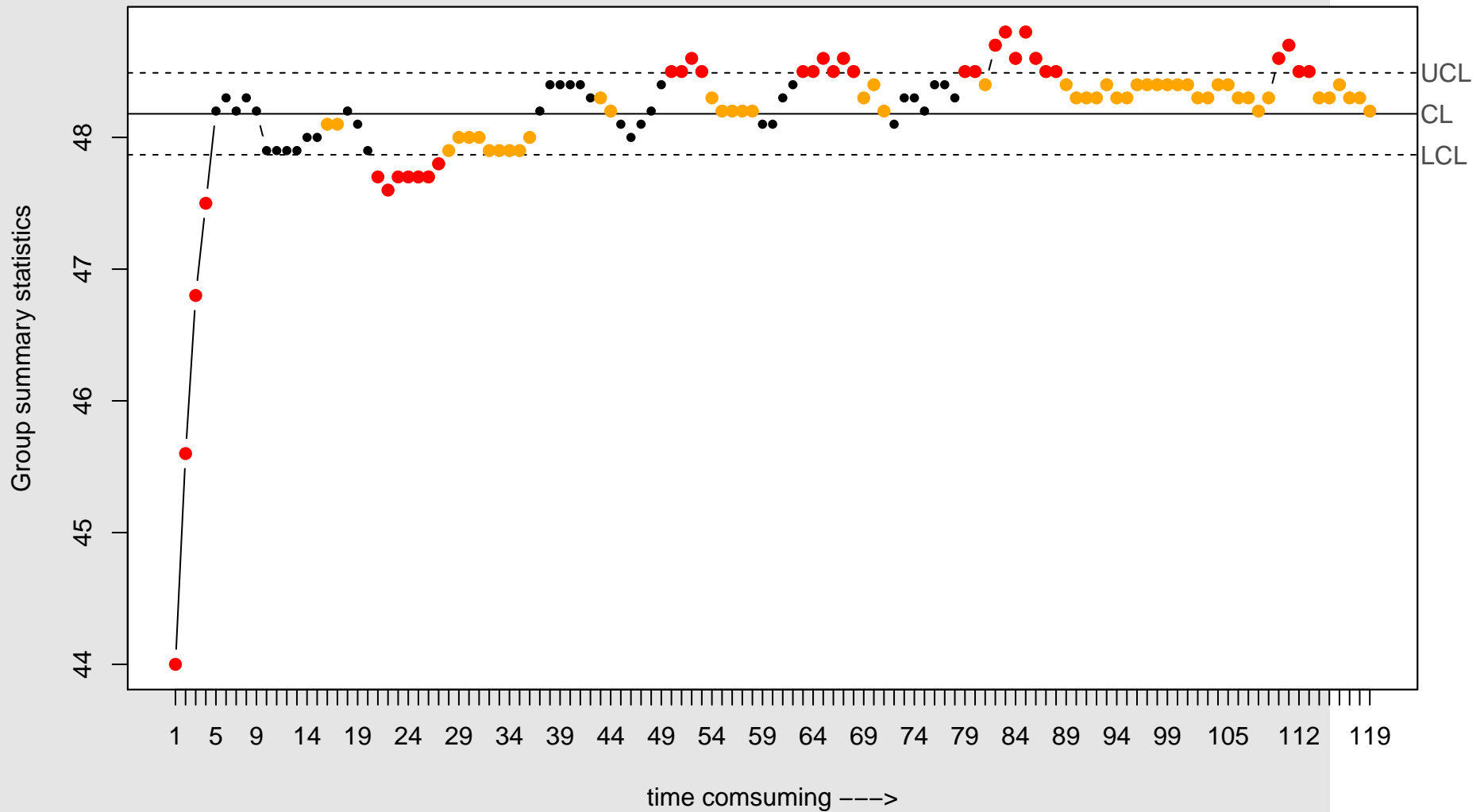UCL = 48.53686

Number beyond limits = 22
Number violating runs = 51

251th column point of this product

Group summary statistics

time comsuming –––>

UCL
CL
LCL

Number of groups = 119
Center = 48.17899   LCL = 47.86796   Number beyond limits = 34
StdDev = 0.1036783   UCL = 48.49003   Number violating runs = 67

252th column point of this product

Group summary statistics

time comsuming –––>

UCL
CL
LCL
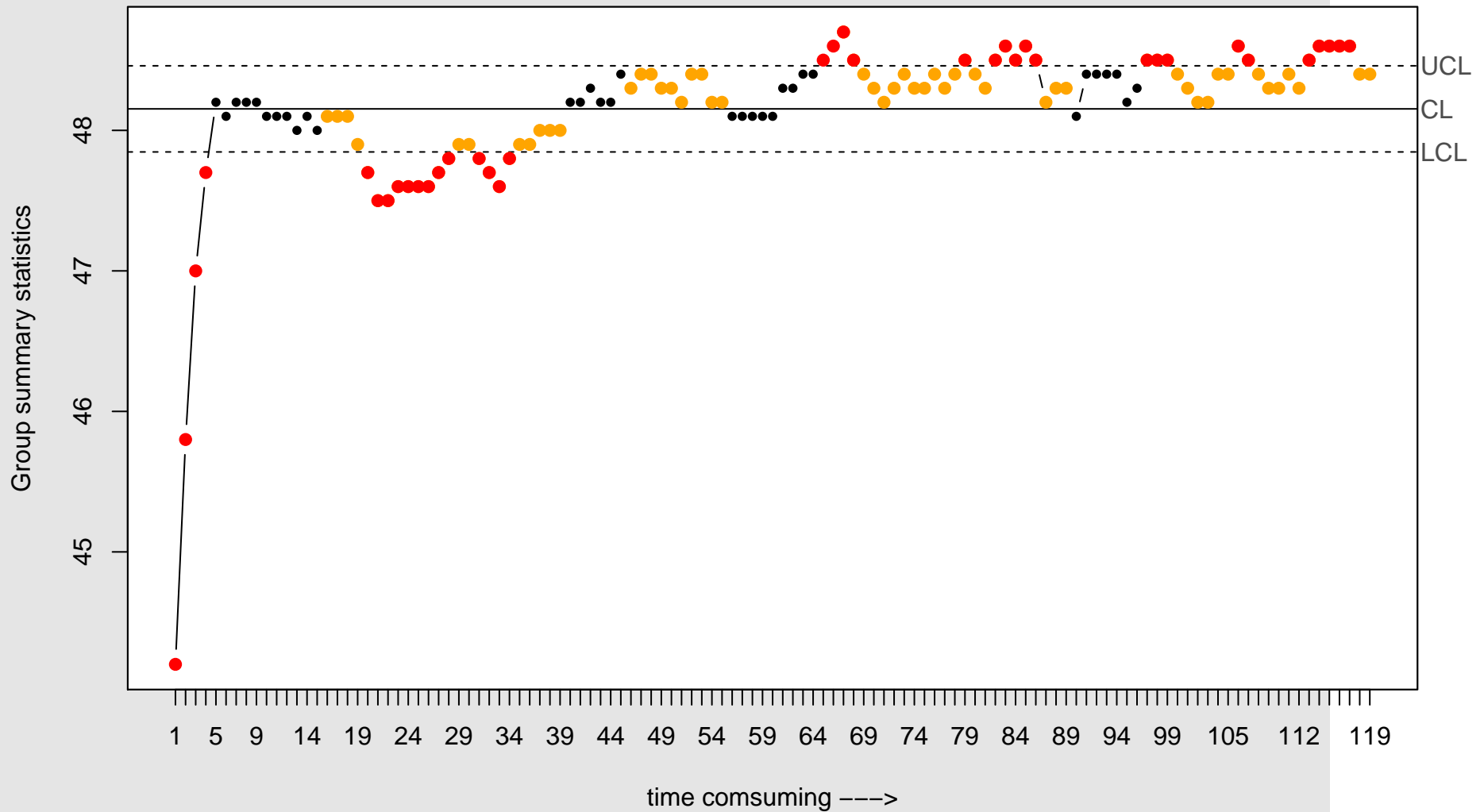
Number of groups = 119
Center = 48.15294   LCL = 47.84641   Number beyond limits = 37
StdDev = 0.1021757   UCL = 48.45947   Number violating runs = 80

253th column point of this product

Group summary statistics

time comsuming --->

UCL
CL
LCL
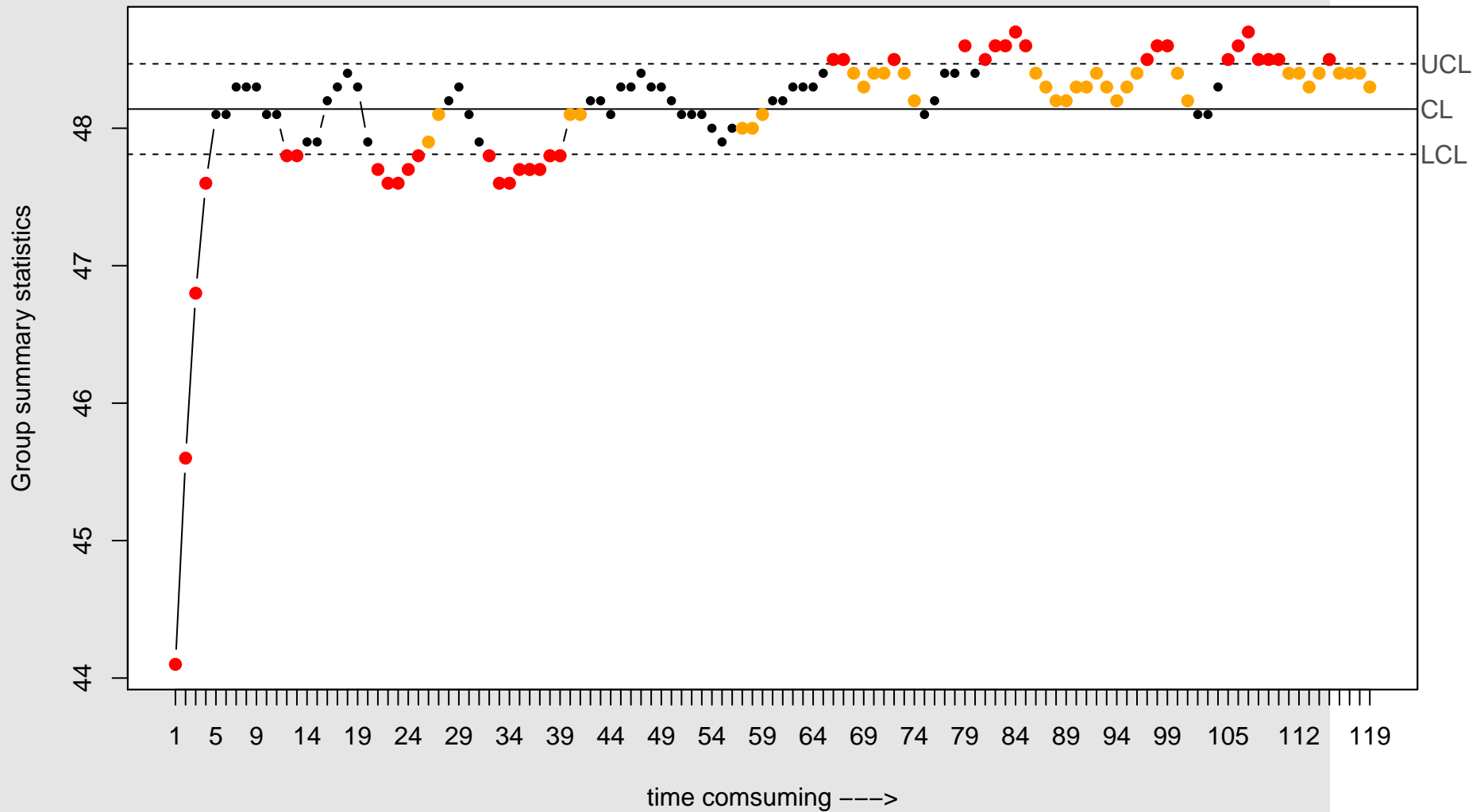
Number of groups = 119
Center = 48.1395   LCL = 47.81043   Number beyond limits = 38
StdDev = 0.1096887   UCL = 48.46856   Number violating runs = 50

254th column point of this product

Group summary statistics

time comsuming ---->
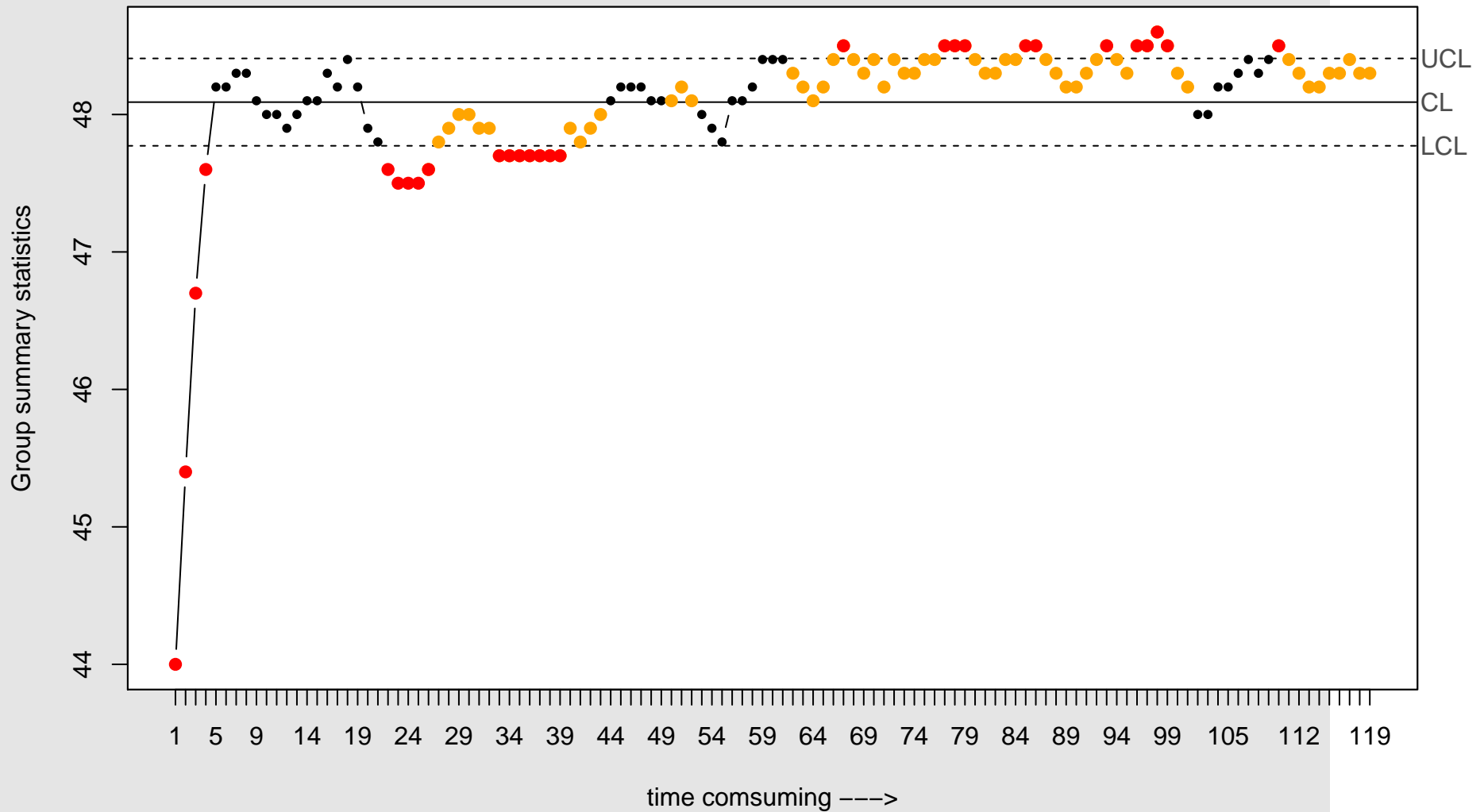
Number of groups = 119
Center = 48.08992   LCL = 47.77212   Number beyond limits = 28
StdDev = 0.1059322   UCL = 48.40771   Number violating runs = 71

255th column point of this product

Group summary statistics

time comsuming –––>
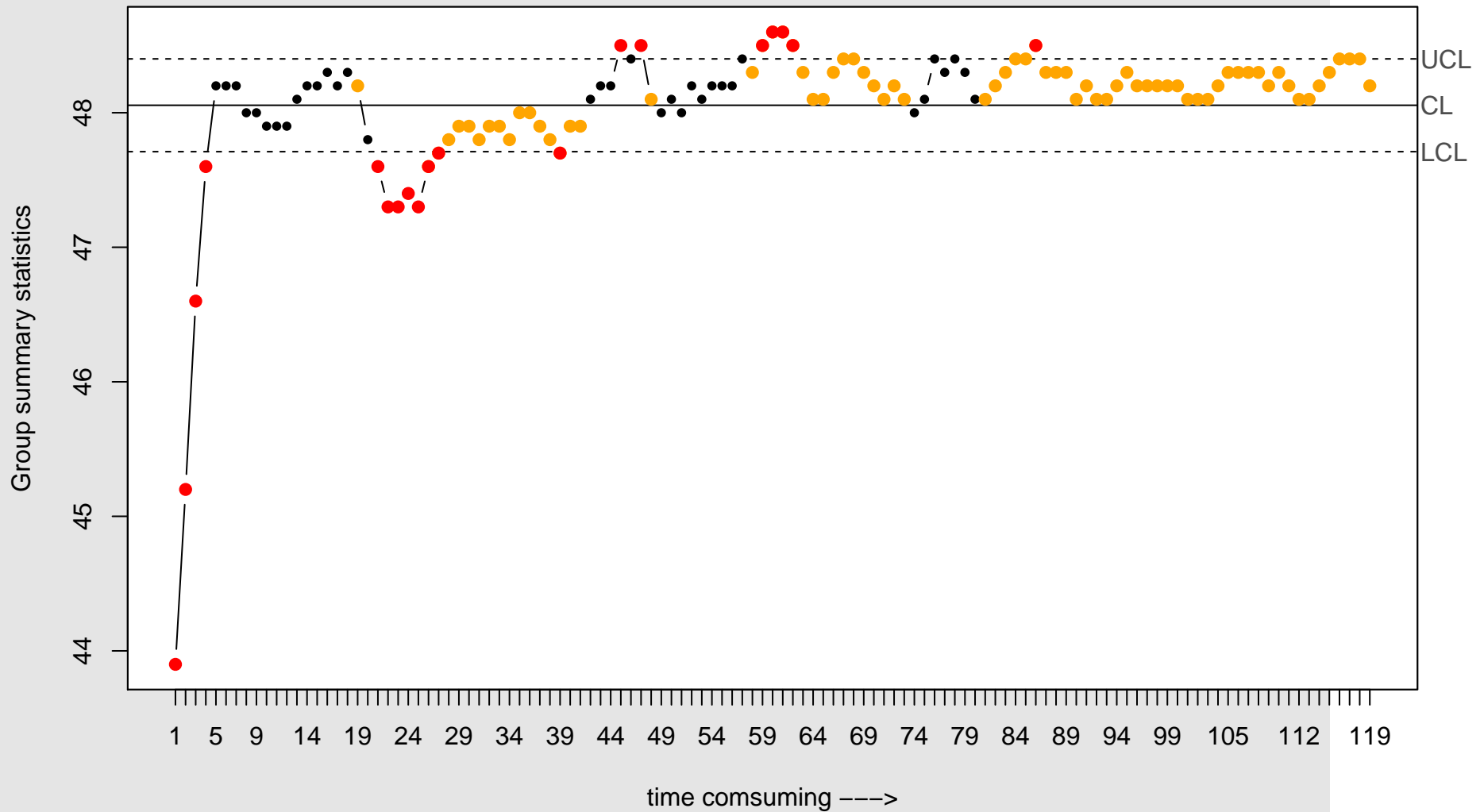
Number of groups = 119
Center = 48.05546   LCL = 47.71062   Number beyond limits = 19
StdDev = 0.1149477   UCL = 48.40031   Number violating runs = 73

256th column point of this product

Group summary statistics

time comsuming ---->
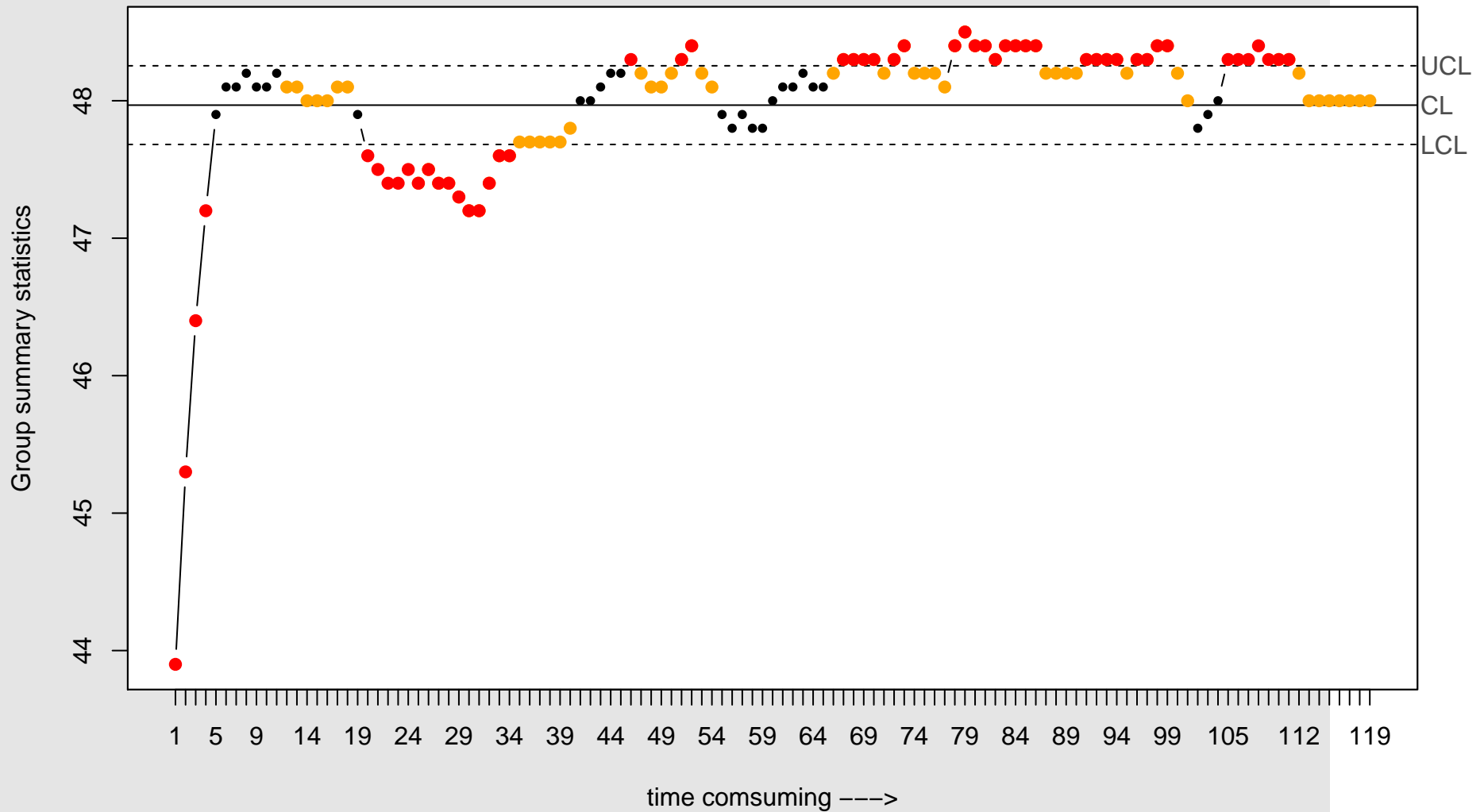
UCL
CL
LCL
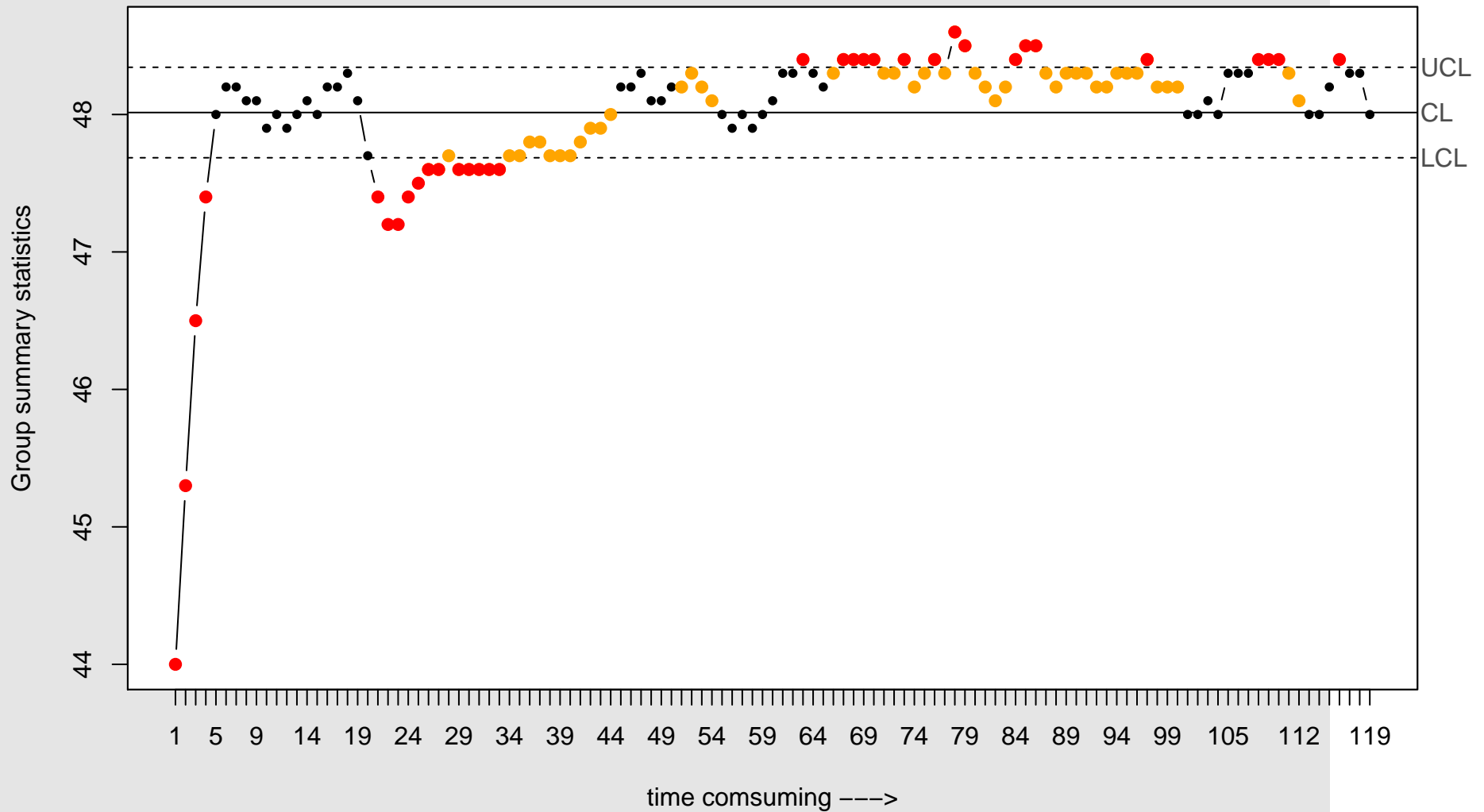
Number of groups = 119
Center = 48.01429
StdDev = 0.1096887

LCL = 47.68522
UCL = 48.34335

Number beyond limits = 33
Number violating runs = 60

257th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 47.96807   LCL = 47.68182   Number beyond limits = 52
StdDev = 0.09541411   UCL = 48.25431   Number violating runs = 77

258th column point of this product

Group summary statistics

time comsuming ---->
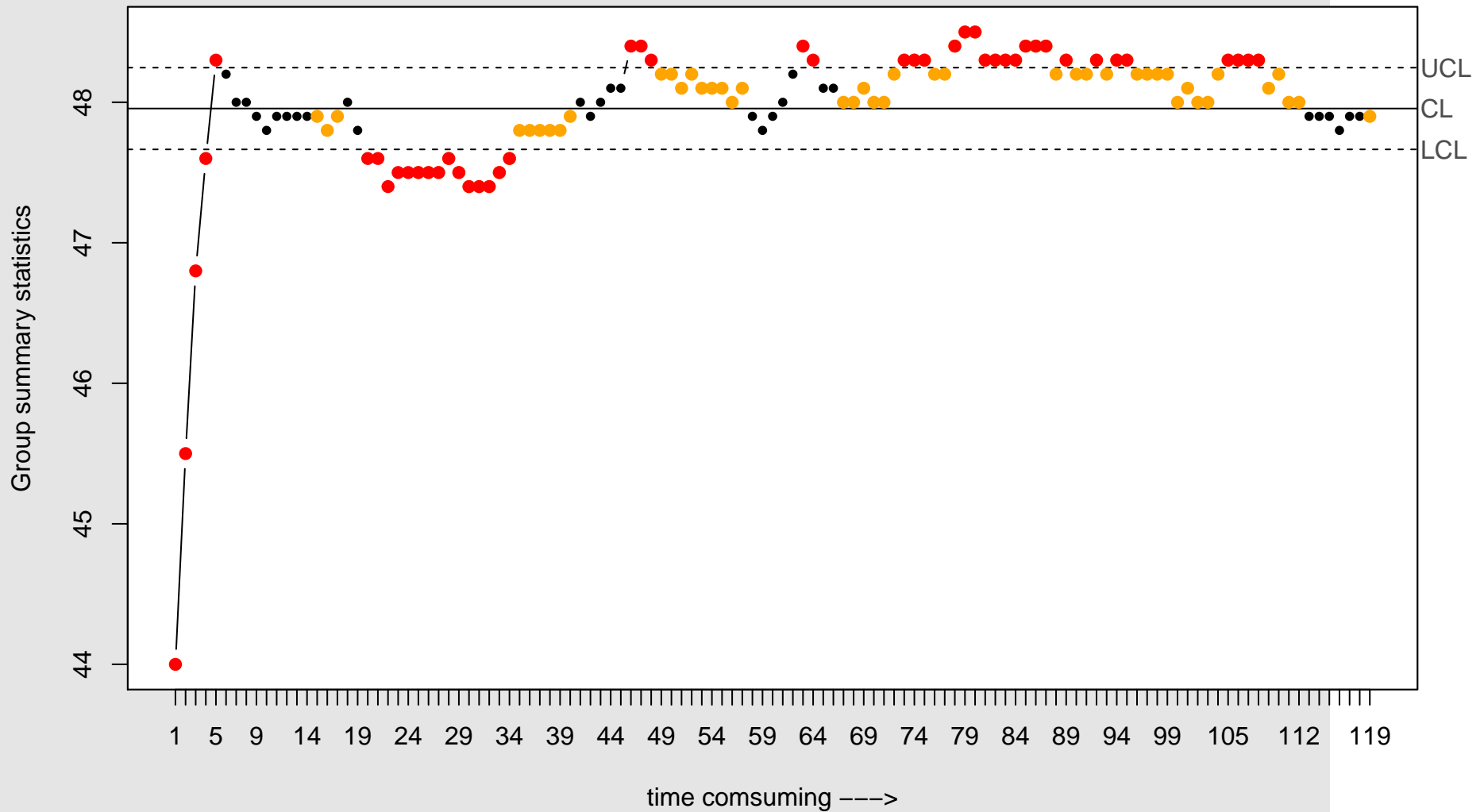
Number of groups = 119
Center = 47.95546   LCL = 47.66471   Number beyond limits = 46
StdDev = 0.0969167   UCL = 48.24621   Number violating runs = 75

259th column point of this product

Group summary statistics

time comsuming --->
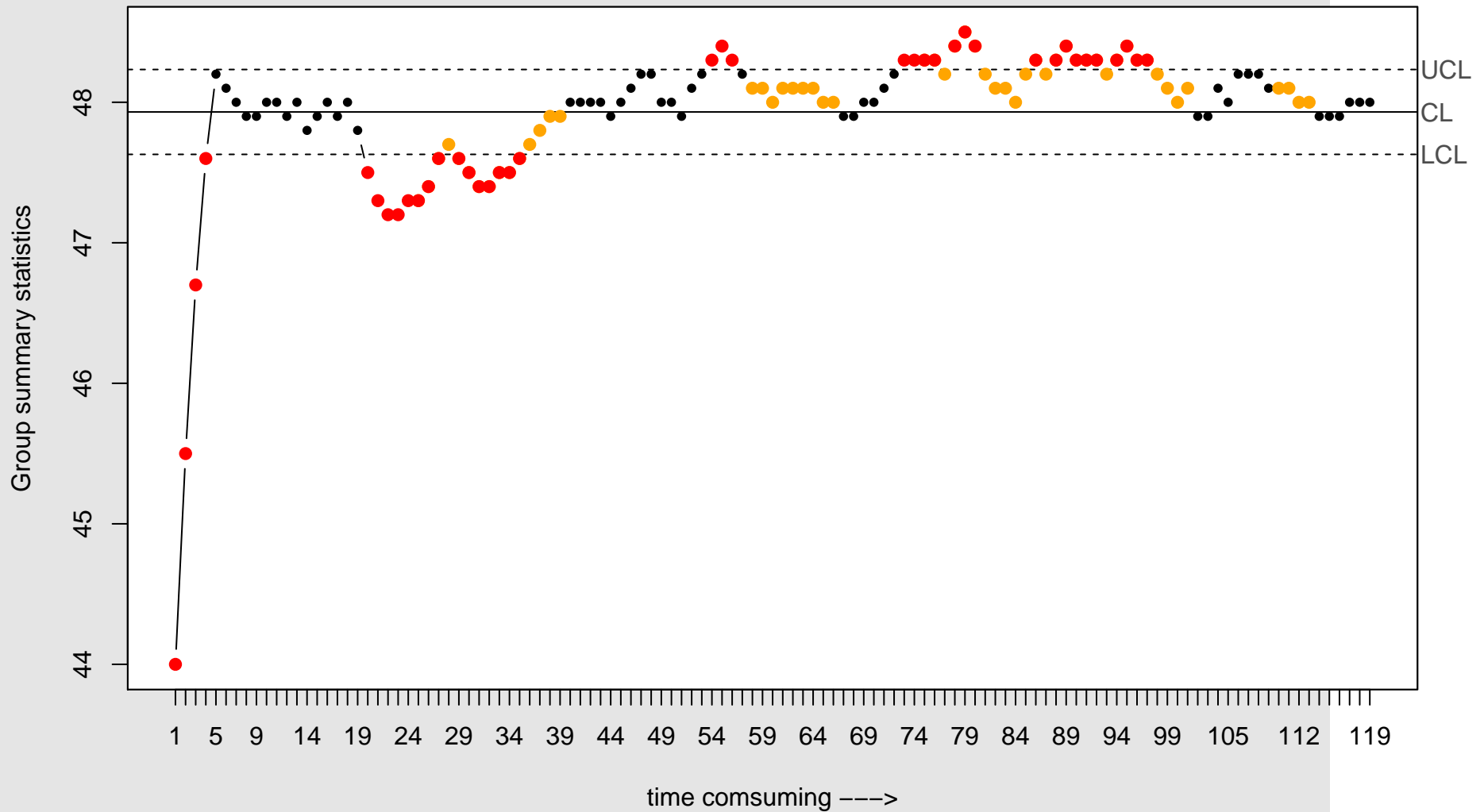
Number of groups = 119
Center = 47.93109   LCL = 47.62907   Number beyond limits = 39
StdDev = 0.1006732   UCL = 48.23311   Number violating runs = 55

260th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL
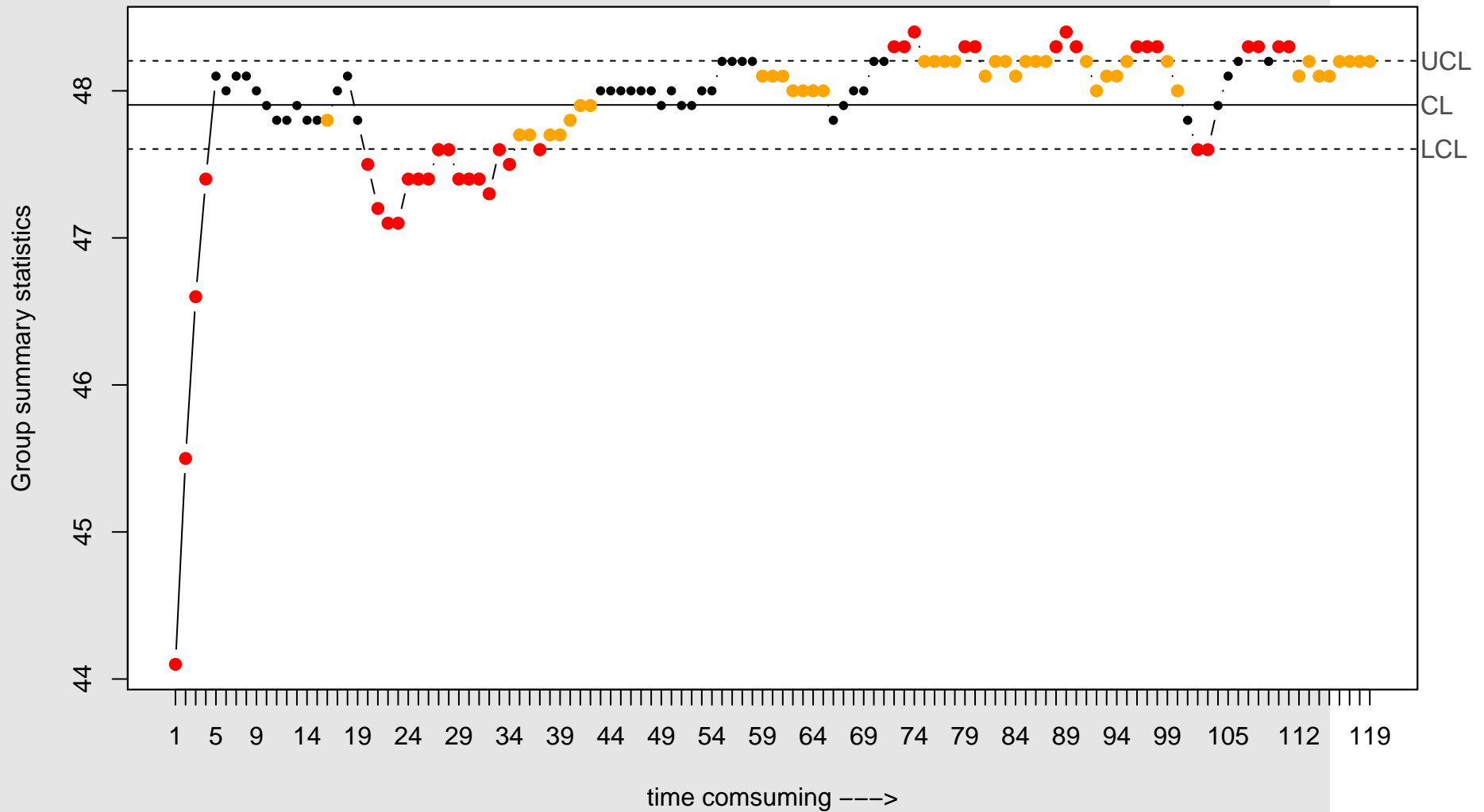
Number of groups = 119
Center = 47.9042   LCL = 47.60444   Number beyond limits = 37
StdDev = 0.09992187   UCL = 48.20397   Number violating runs = 62

261th column point of this product

Group summary statistics

time comsuming ––––>
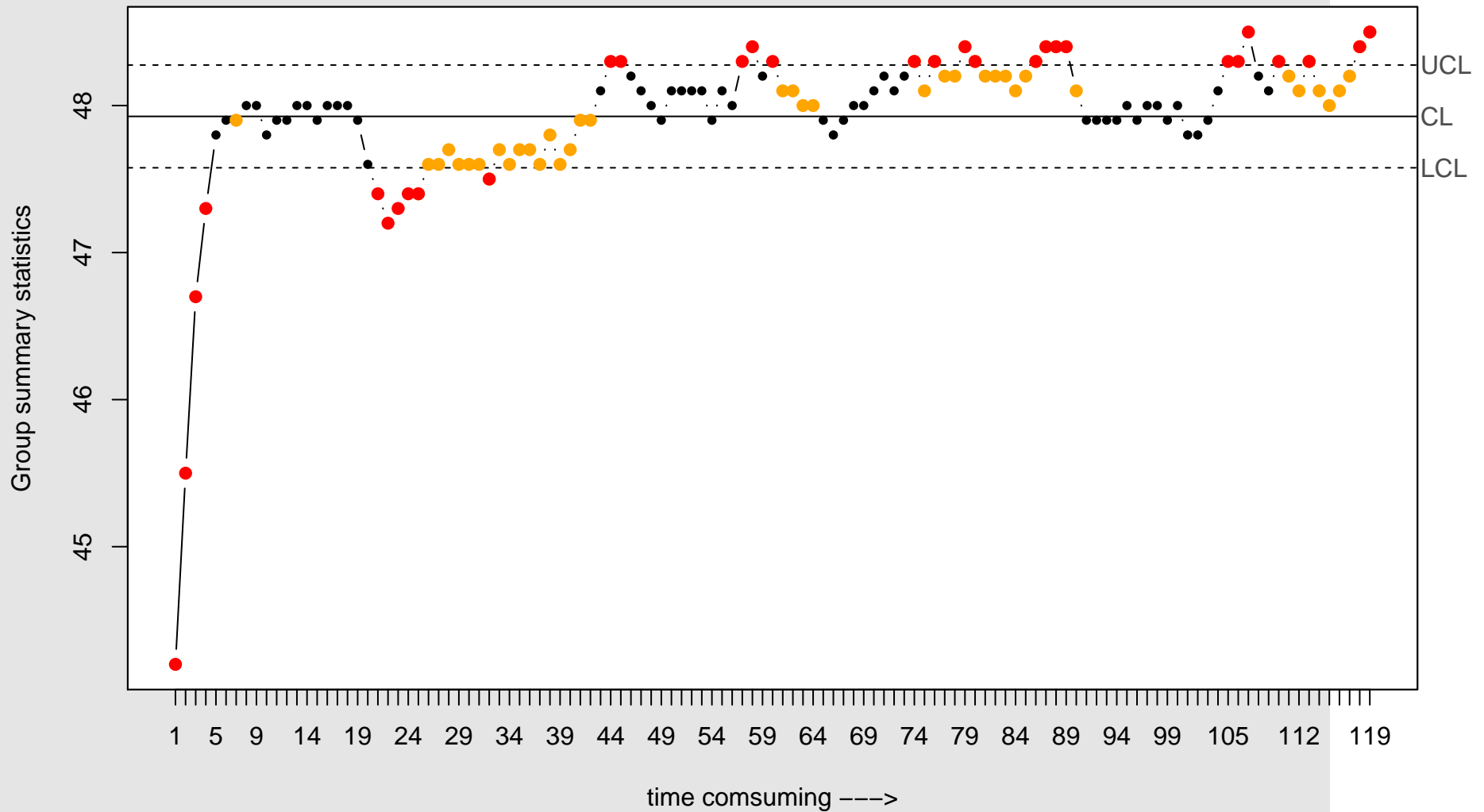
Number of groups = 119
Center = 47.92605   LCL = 47.5767   Number beyond limits = 30
StdDev = 0.1164503   UCL = 48.2754   Number violating runs = 50

262th column point of this product

Group summary statistics

time comsuming ––––>
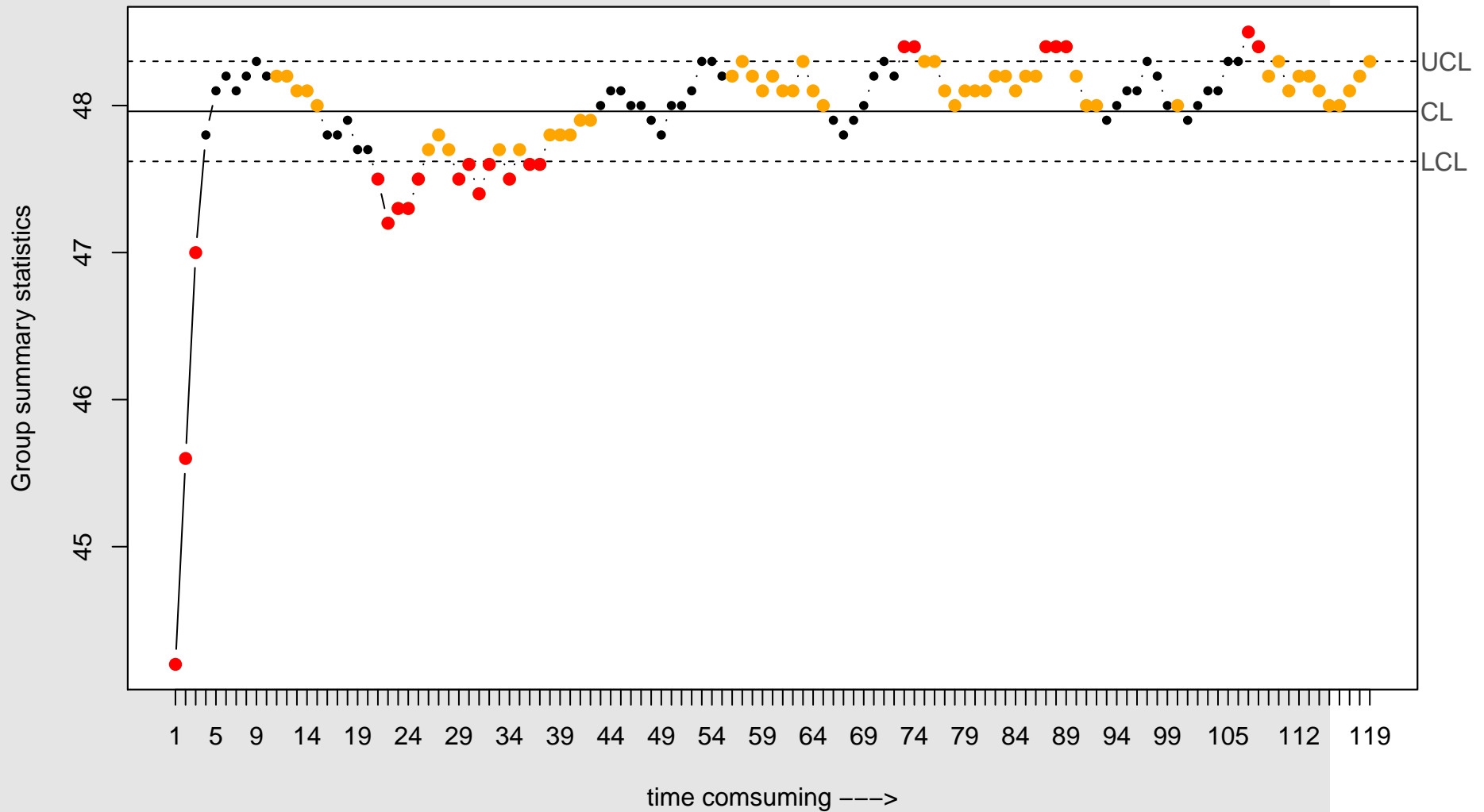
Number of groups = 119
Center = 47.9605   LCL = 47.62017   Number beyond limits = 22
StdDev = 0.1134451   UCL = 48.30084   Number violating runs = 67

263th column point of this product
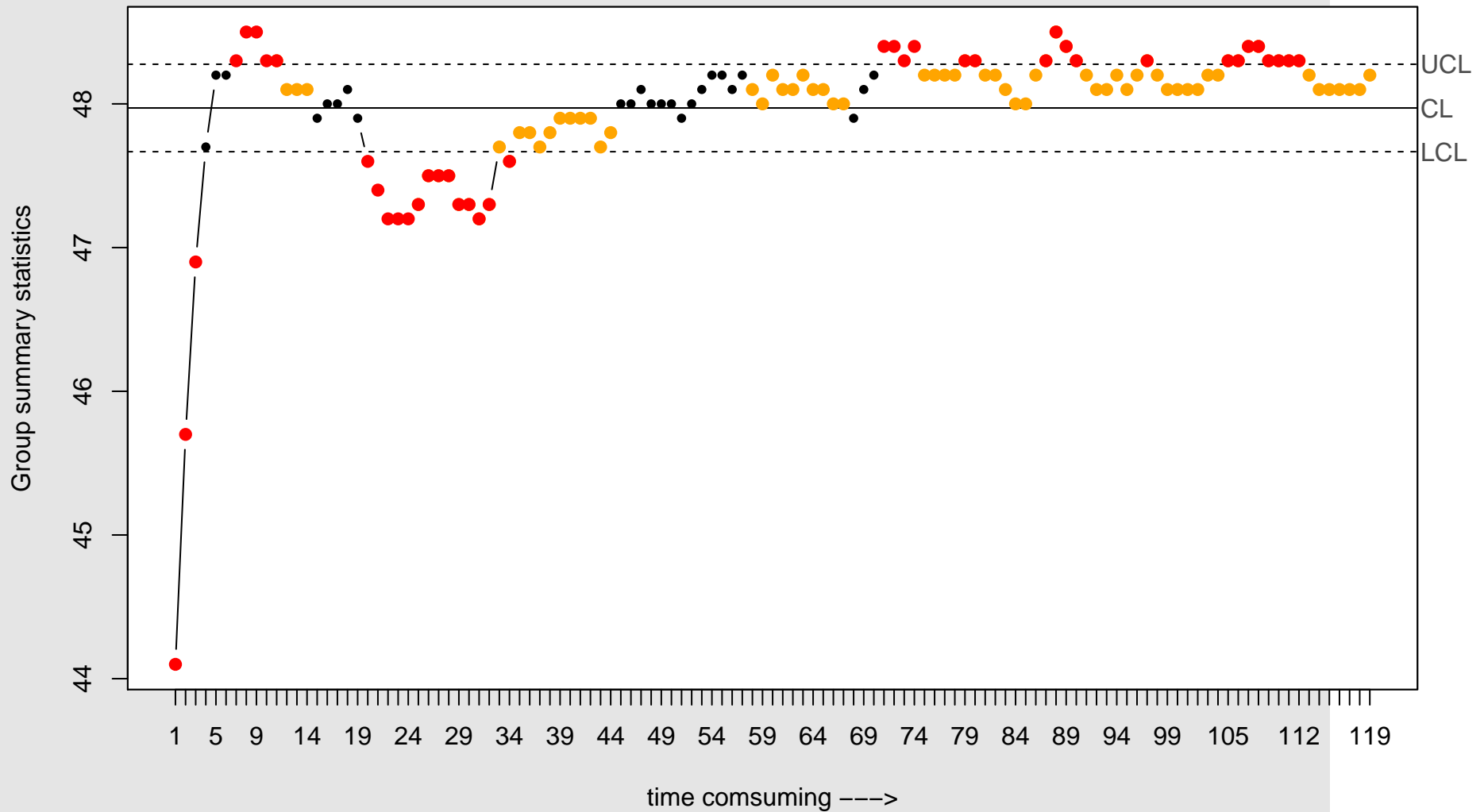
Group summary statistics

time comsuming ––––>

Number of groups = 119
Center = 47.97143   LCL = 47.66716   Number beyond limits = 41
StdDev = 0.1014245   UCL = 48.2757   Number violating runs = 79

264th column point of this product

UCL

CL

LCL

Group summary statistics

48

47

46

45

time comsuming ---->

1   5   9   14   19   24   29   34   39   44   49   54   59   64   69   74   79   84   89   94   99   105   112   119
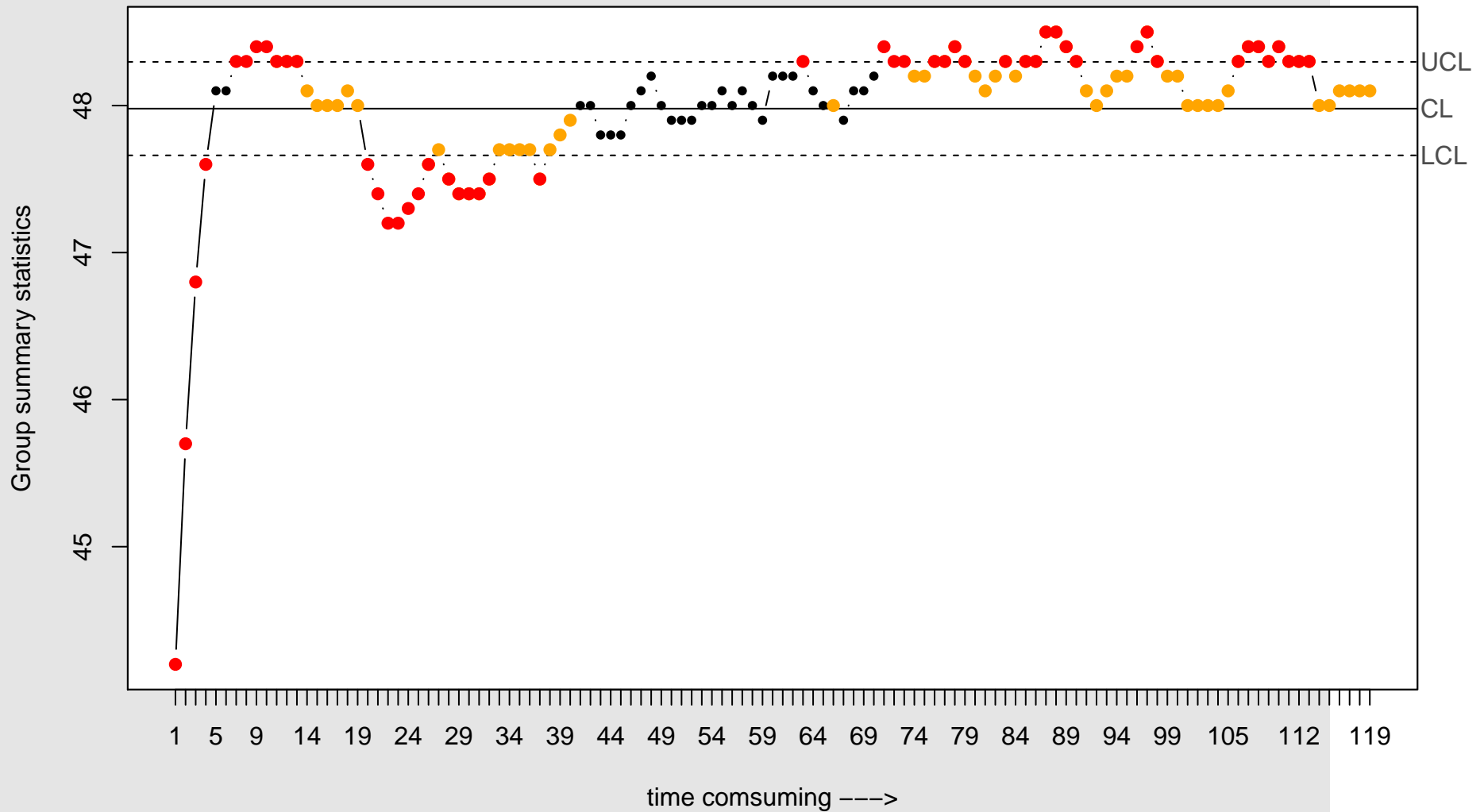
Number of groups = 119
Center = 47.97899   LCL = 47.66119   Number beyond limits = 50
StdDev = 0.1059322   UCL = 48.29679   Number violating runs = 71

265th column point of this product

Group summary statistics

time comsuming ---->
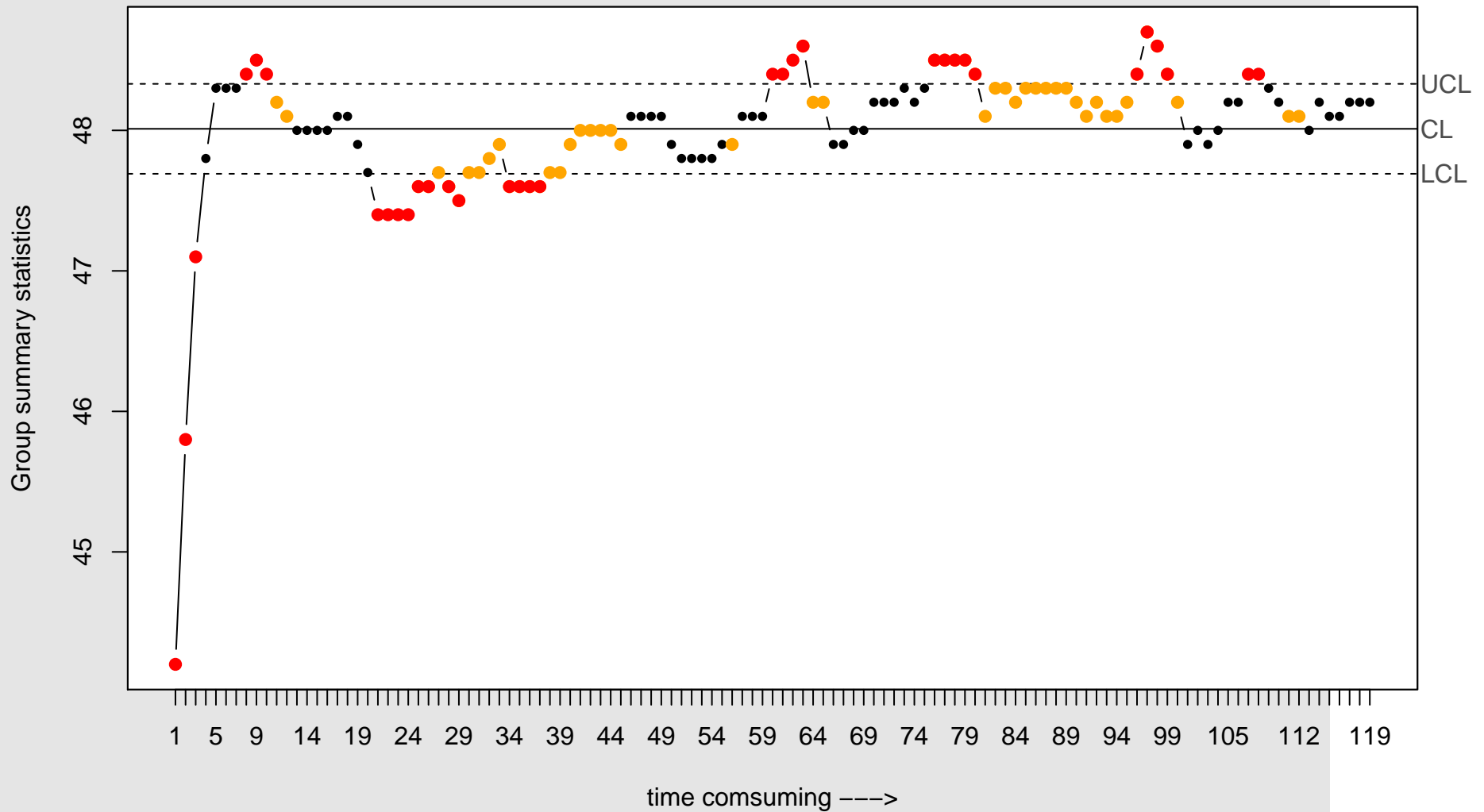
Number of groups = 119
Center = 48.01092   LCL = 47.69087   Number beyond limits = 33
StdDev = 0.1066835   UCL = 48.33097   Number violating runs = 54

266th column point of this product

Group summary statistics

time comsuming ---->
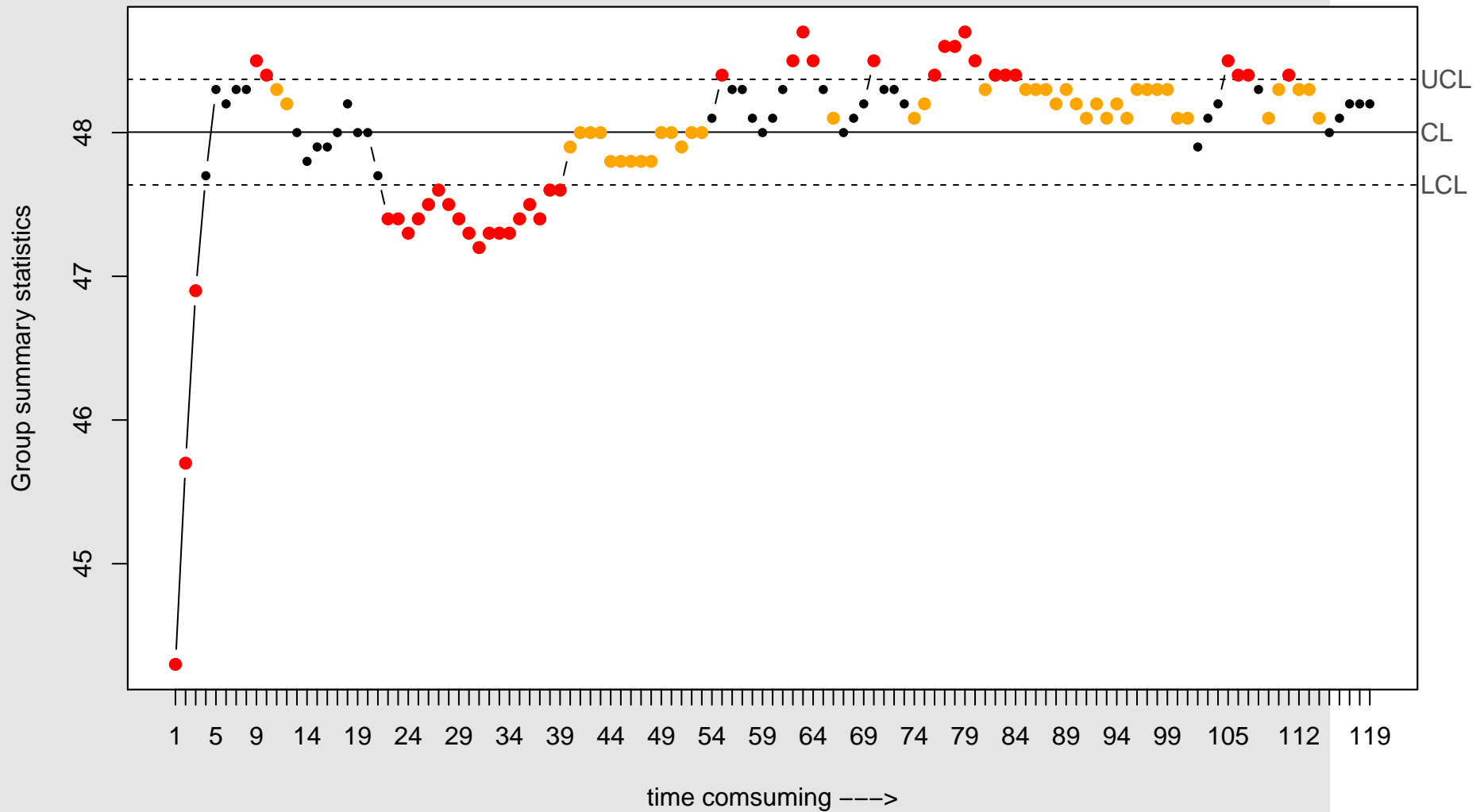
Number of groups = 119
Center = 48.00336   LCL = 47.63598   Number beyond limits = 40
StdDev = 0.1224606   UCL = 48.37074   Number violating runs = 66

267th column point of this product

Group summary statistics

time comsuming ---->
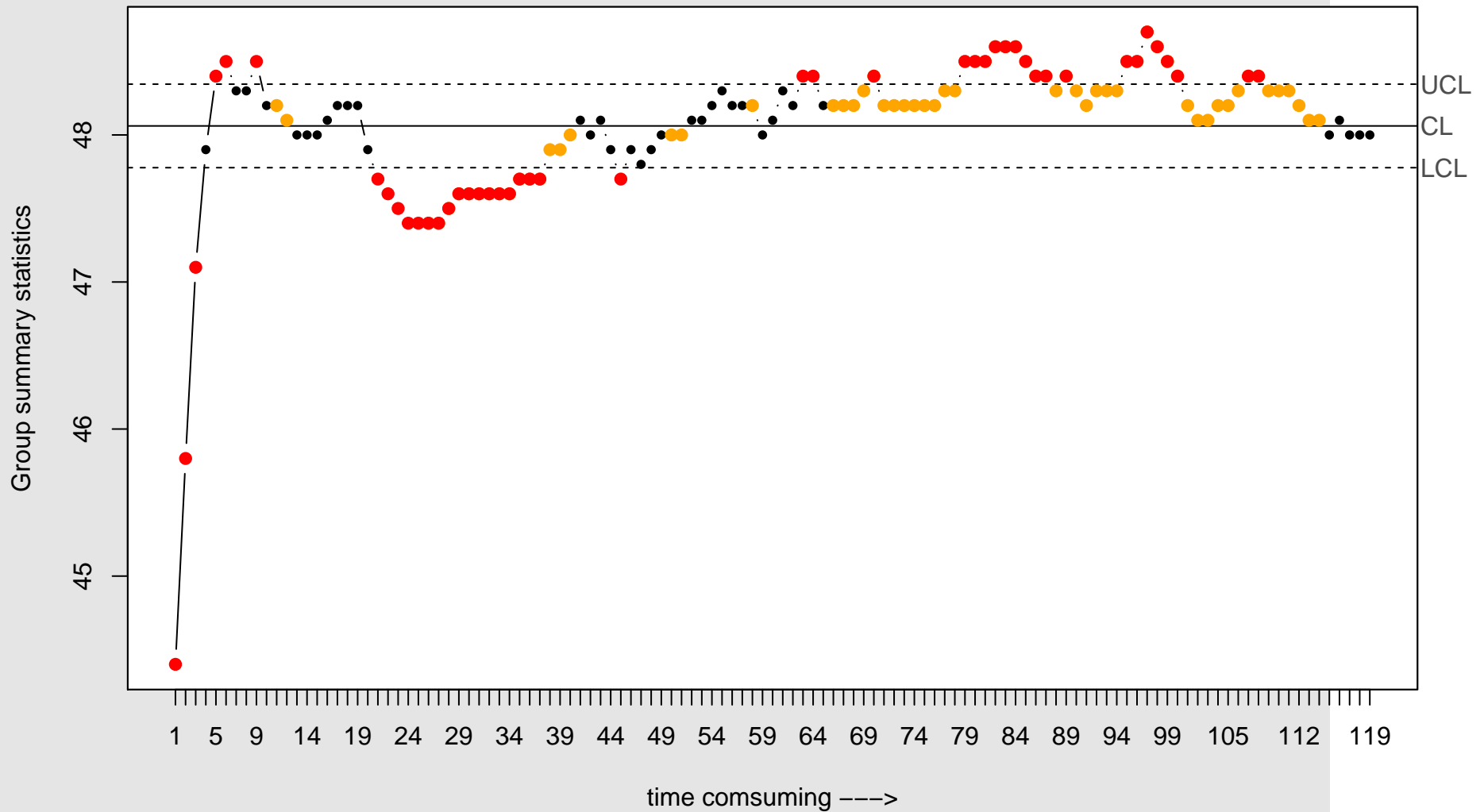
Number of groups = 119
Center = 48.06134
StdDev = 0.09466282
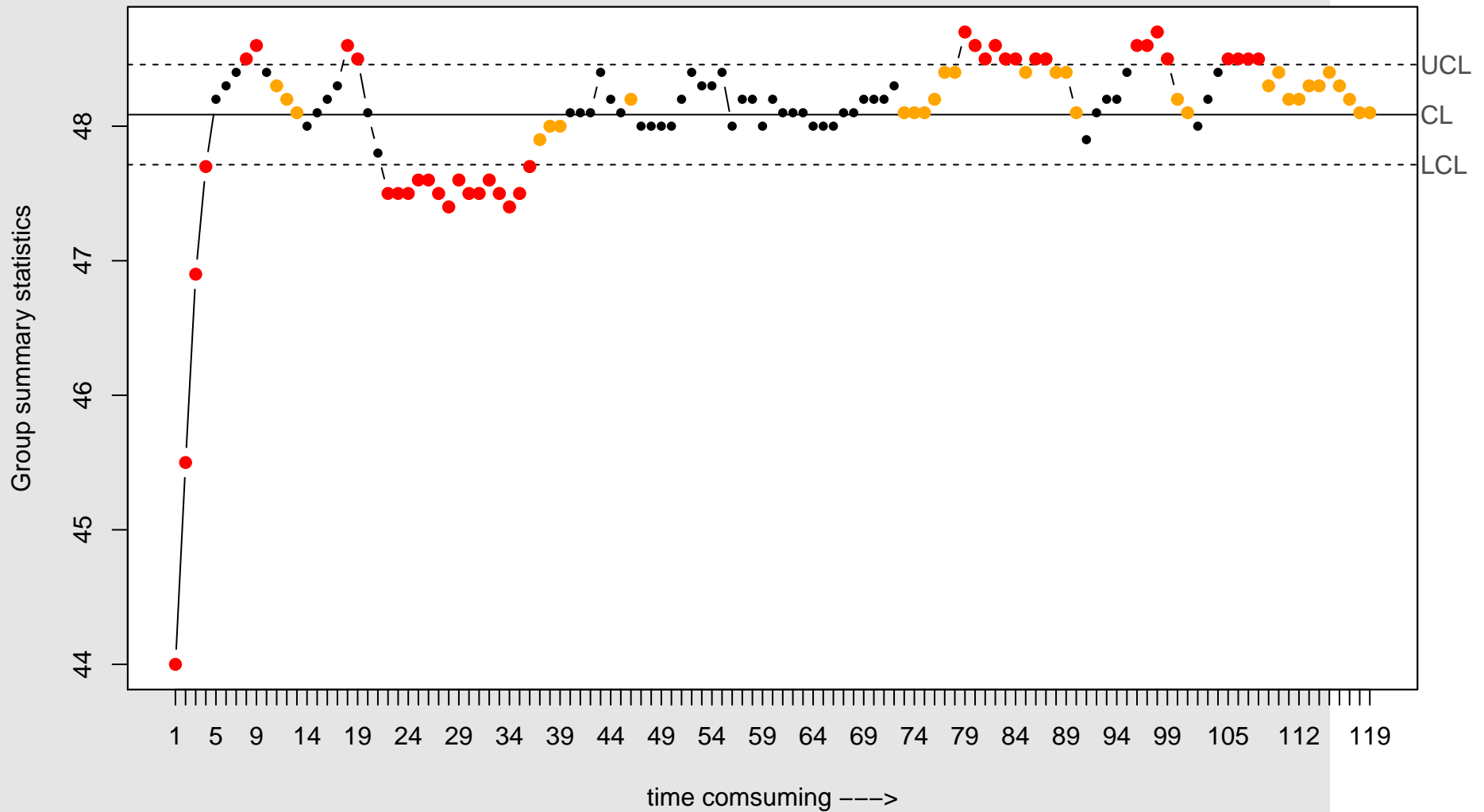
LCL = 47.77736
UCL = 48.34533

Number beyond limits = 45
Number violating runs = 69

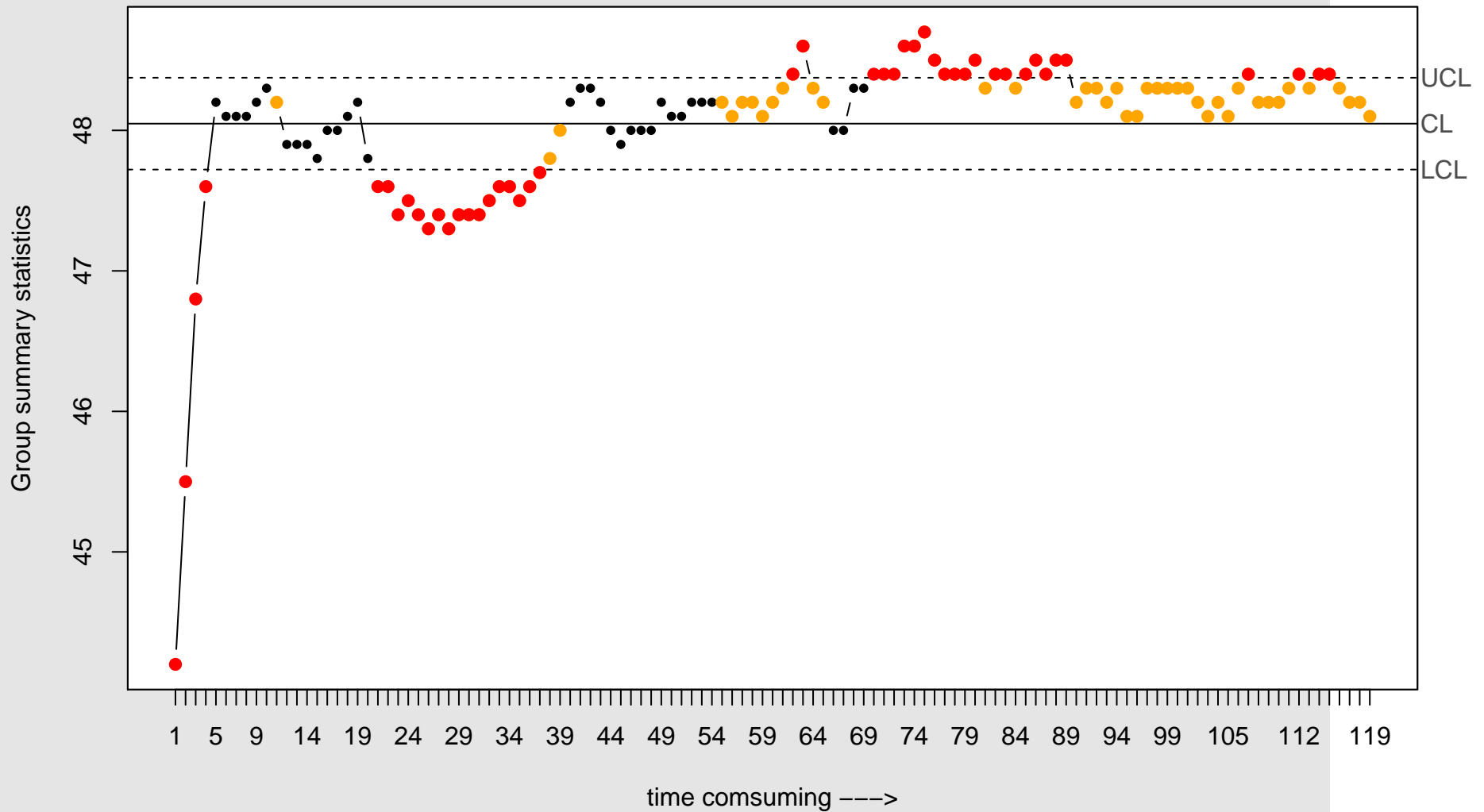# 268th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 48.08571   LCL = 47.71382   Number beyond limits = 39
StdDev = 0.1239632   UCL = 48.4576   Number violating runs = 50

269th column point of this product

Group summary statistics

time comsuming ---->
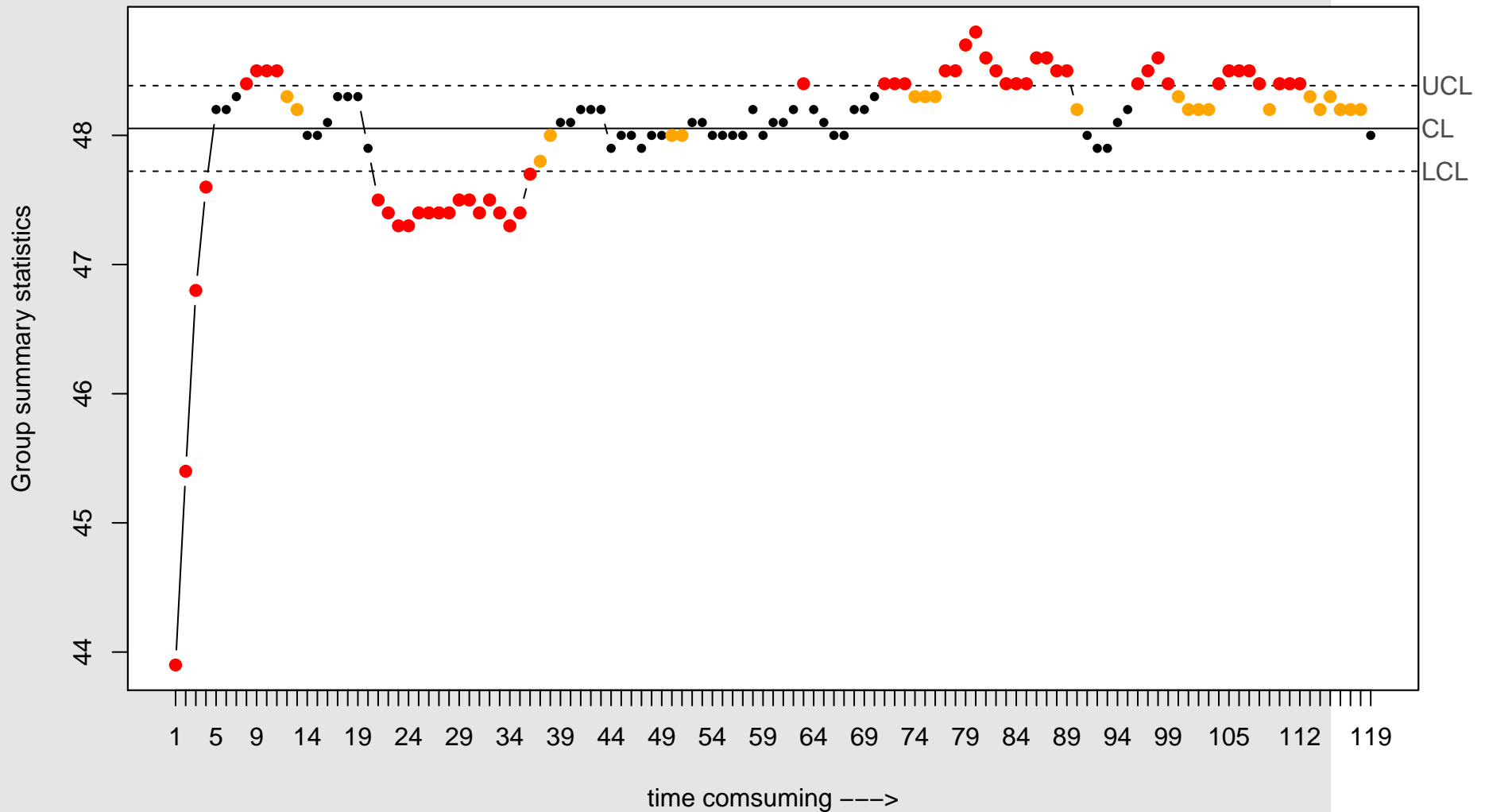
Number of groups = 119
Center = 48.05378   LCL = 47.72246   Number beyond limits = 53
StdDev = 0.11044   UCL = 48.3851   Number violating runs = 54

270th column point of this product

Group summary statistics

time comsuming ––––>

Number of groups = 119
Center = 48.0479   LCL = 47.72109   Number beyond limits = 45
StdDev = 0.1089374   UCL = 48.37471   Number violating runs = 72

271th column point of this product

Group summary statistics

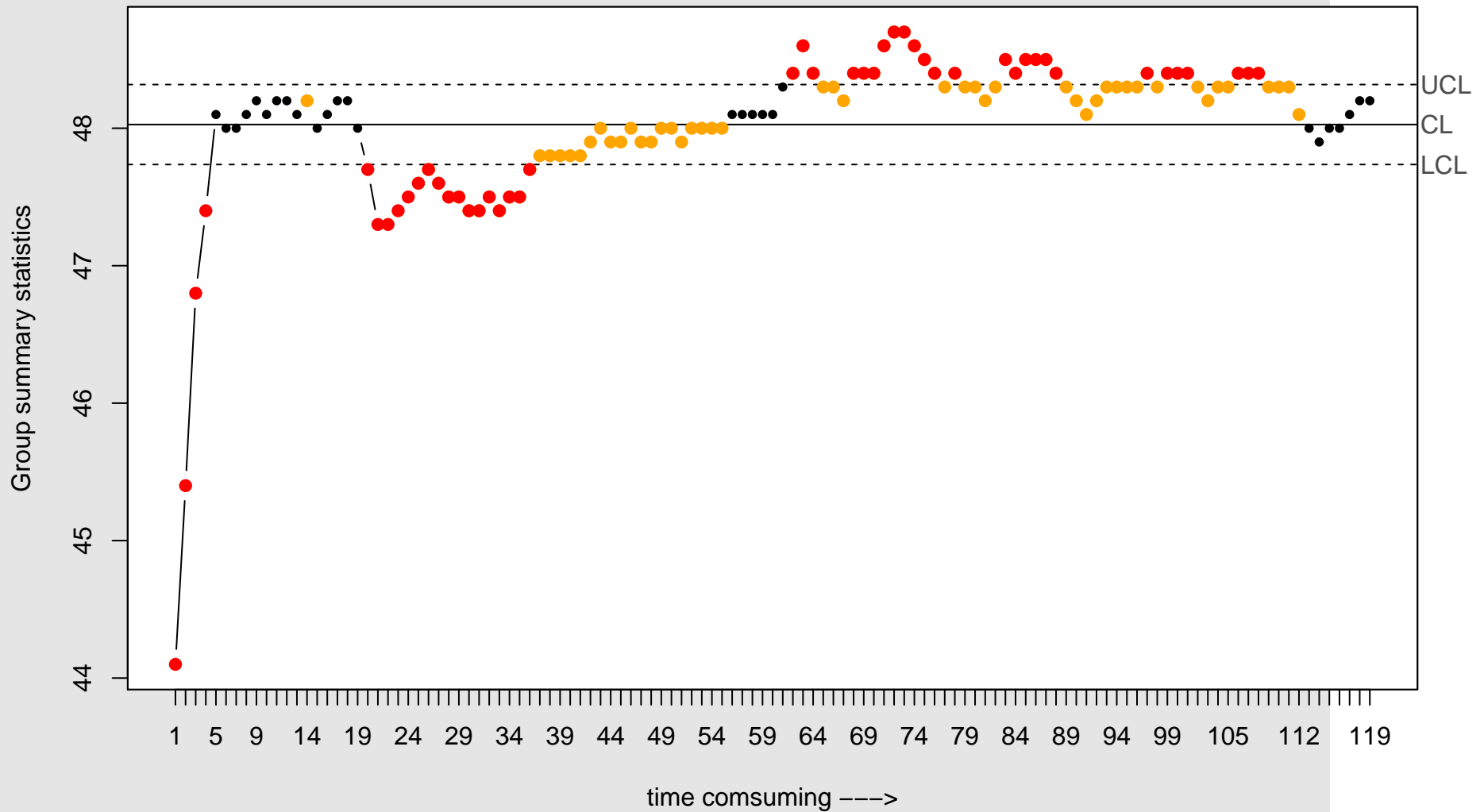time comsuming –––>
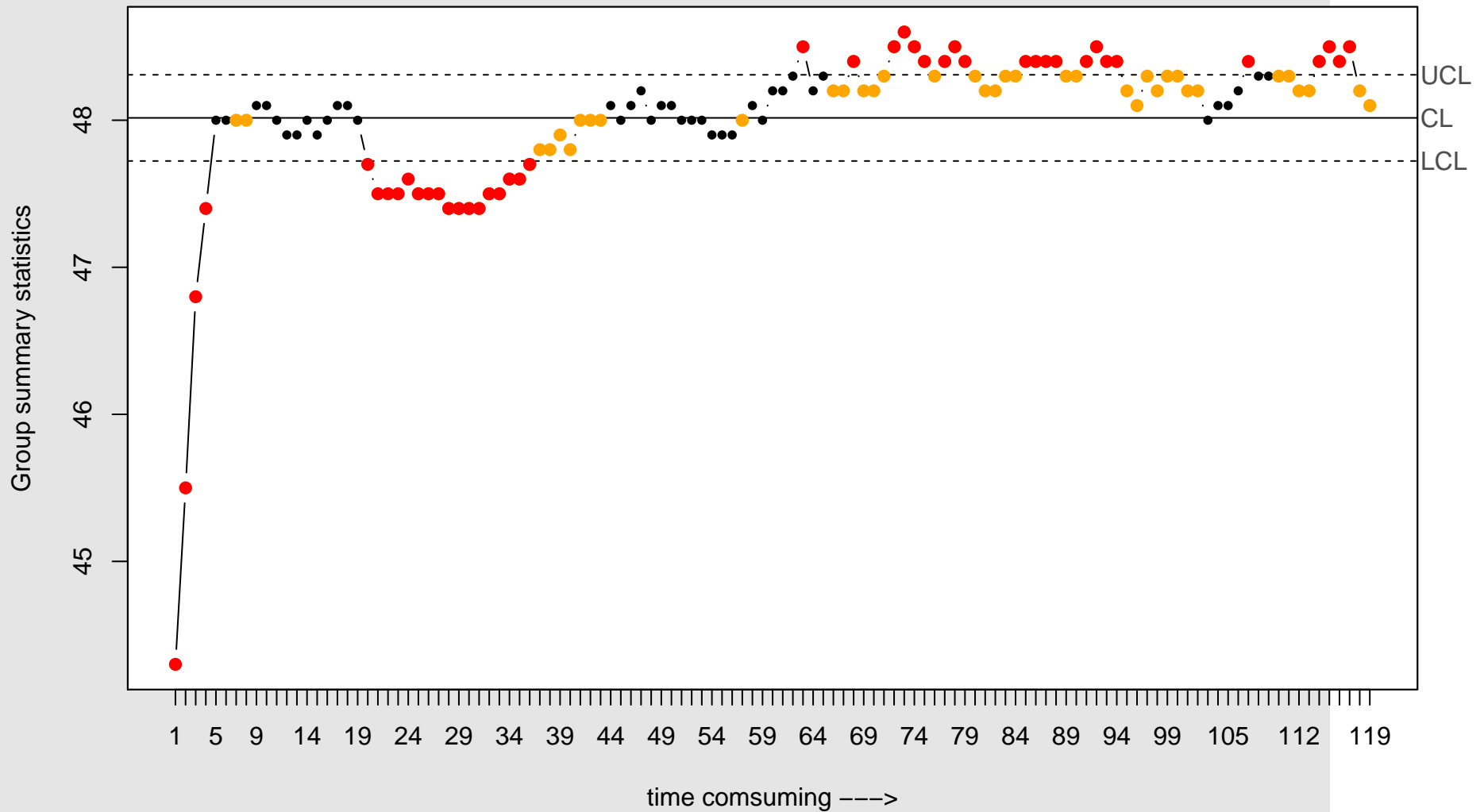
Number of groups = 119
Center = 48.01597
StdDev = 0.09766799

LCL = 47.72296
UCL = 48.30897

Number beyond limits = 43
Number violating runs = 69

272th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 48.02689   LCL = 47.73614   Number beyond limits = 47
StdDev = 0.0969167   UCL = 48.31764   Number violating runs = 83

273th column point of this product

Group summary statistics

time comsuming –––>
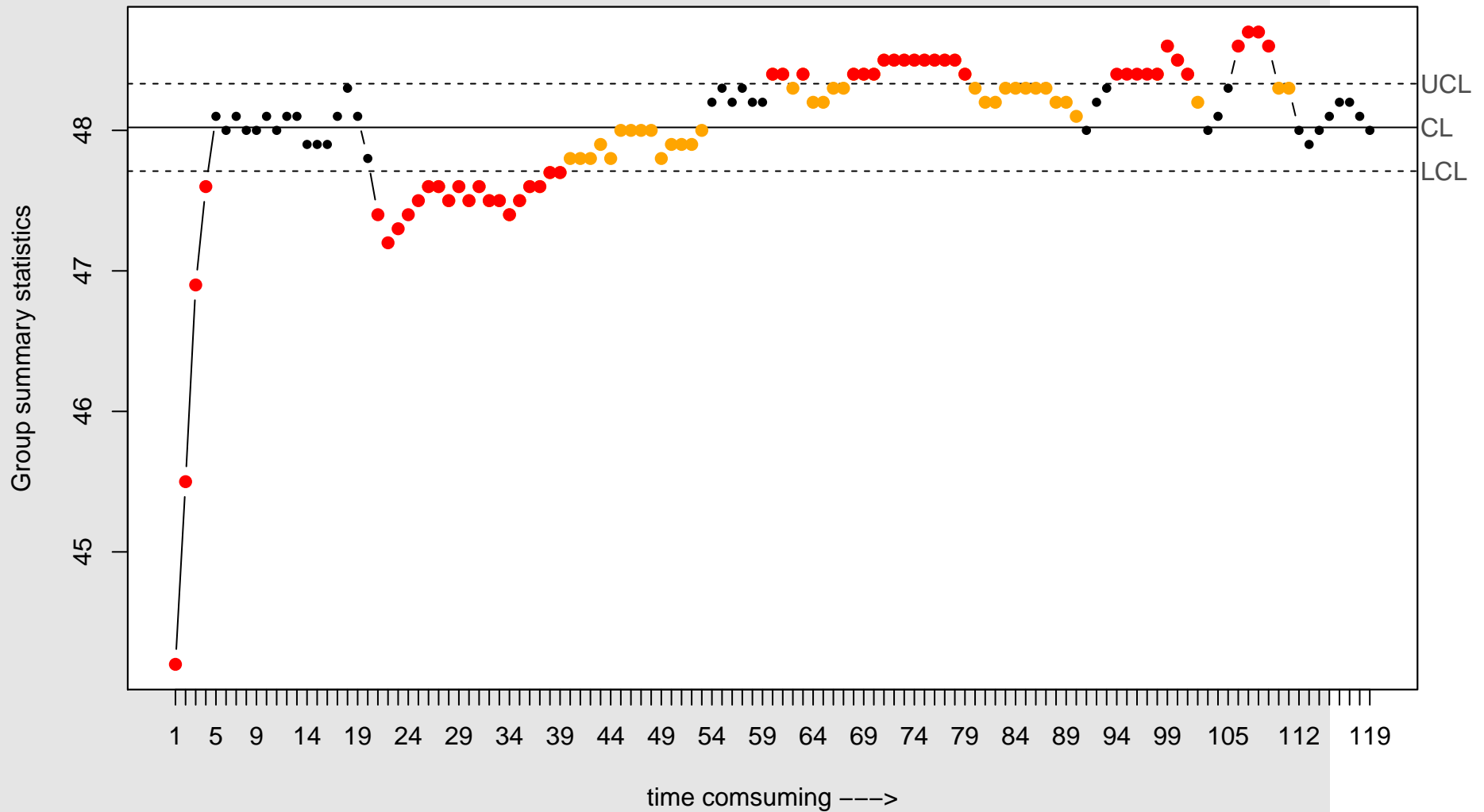
Number of groups = 119
Center = 48.02101   LCL = 47.70997   Number beyond limits = 50
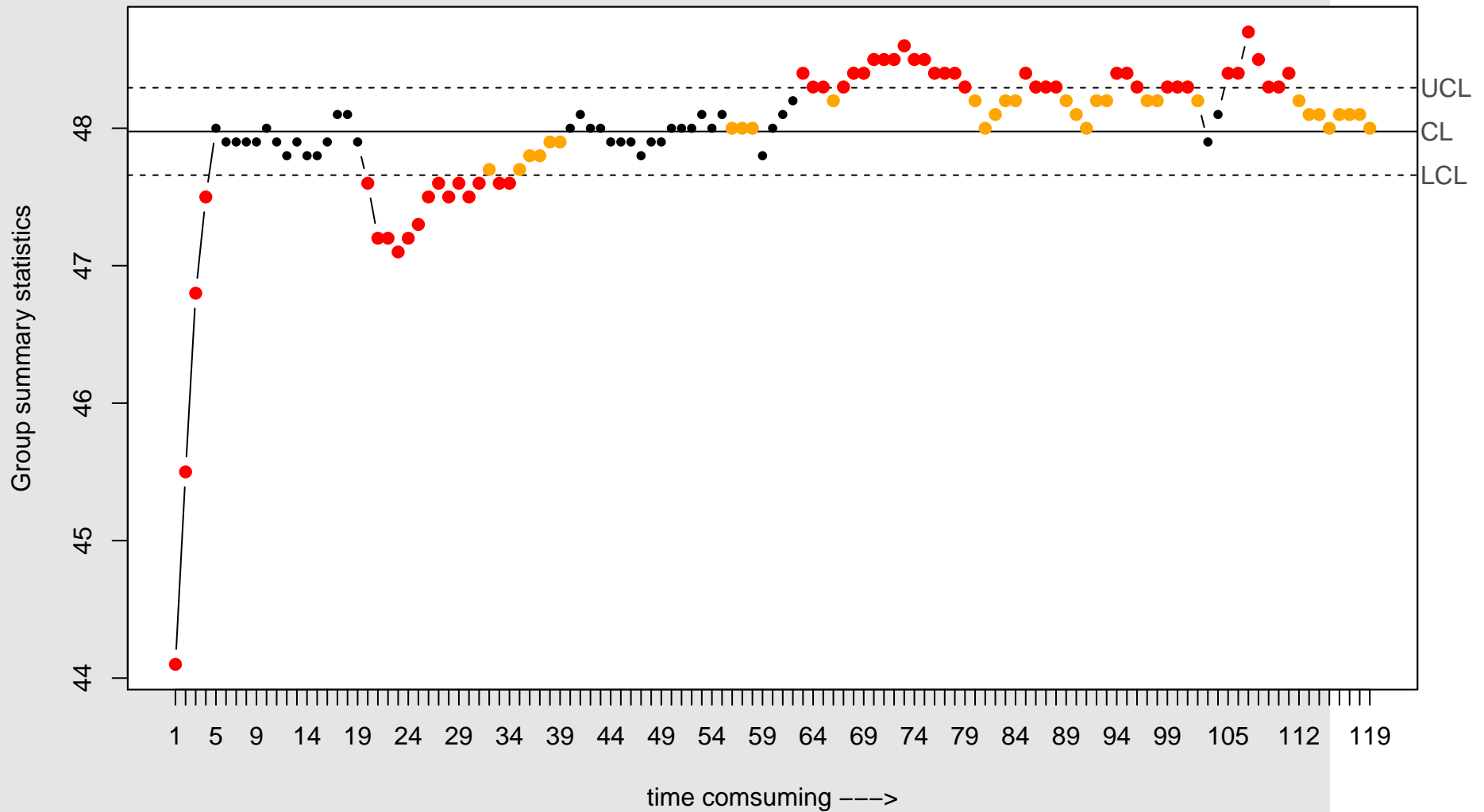StdDev = 0.1036783   UCL = 48.33204   Number violating runs = 66

274th column point of this product

Number of groups = 119
Center = 47.97647   LCL = 47.65867   Number beyond limits = 51
StdDev = 0.1059322   UCL = 48.29427   Number violating runs = 65

275th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL
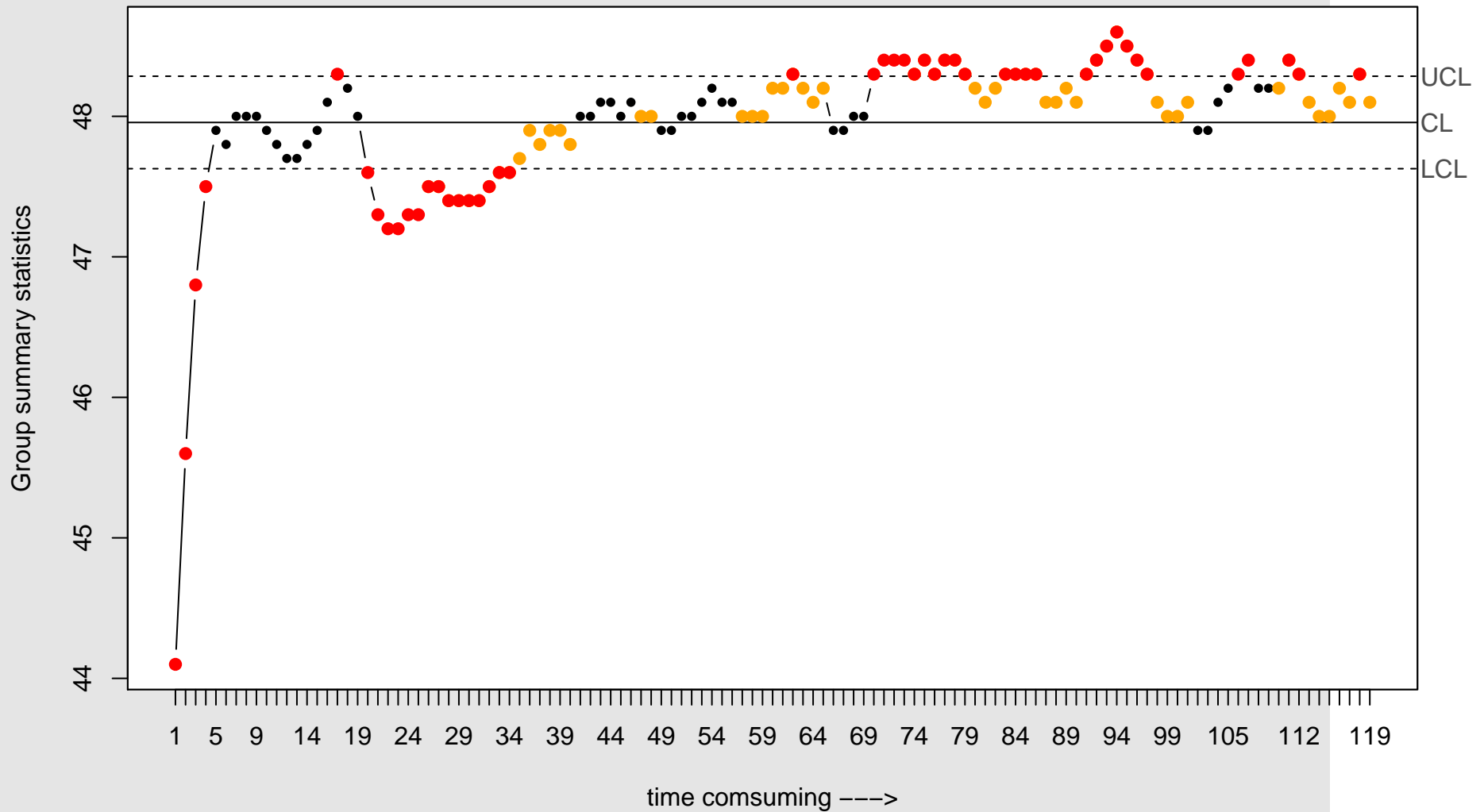
Number of groups = 119
Center = 47.9563   LCL = 47.62724   Number beyond limits = 47
StdDev = 0.1096887   UCL = 48.28537   Number violating runs = 64

276th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ---->
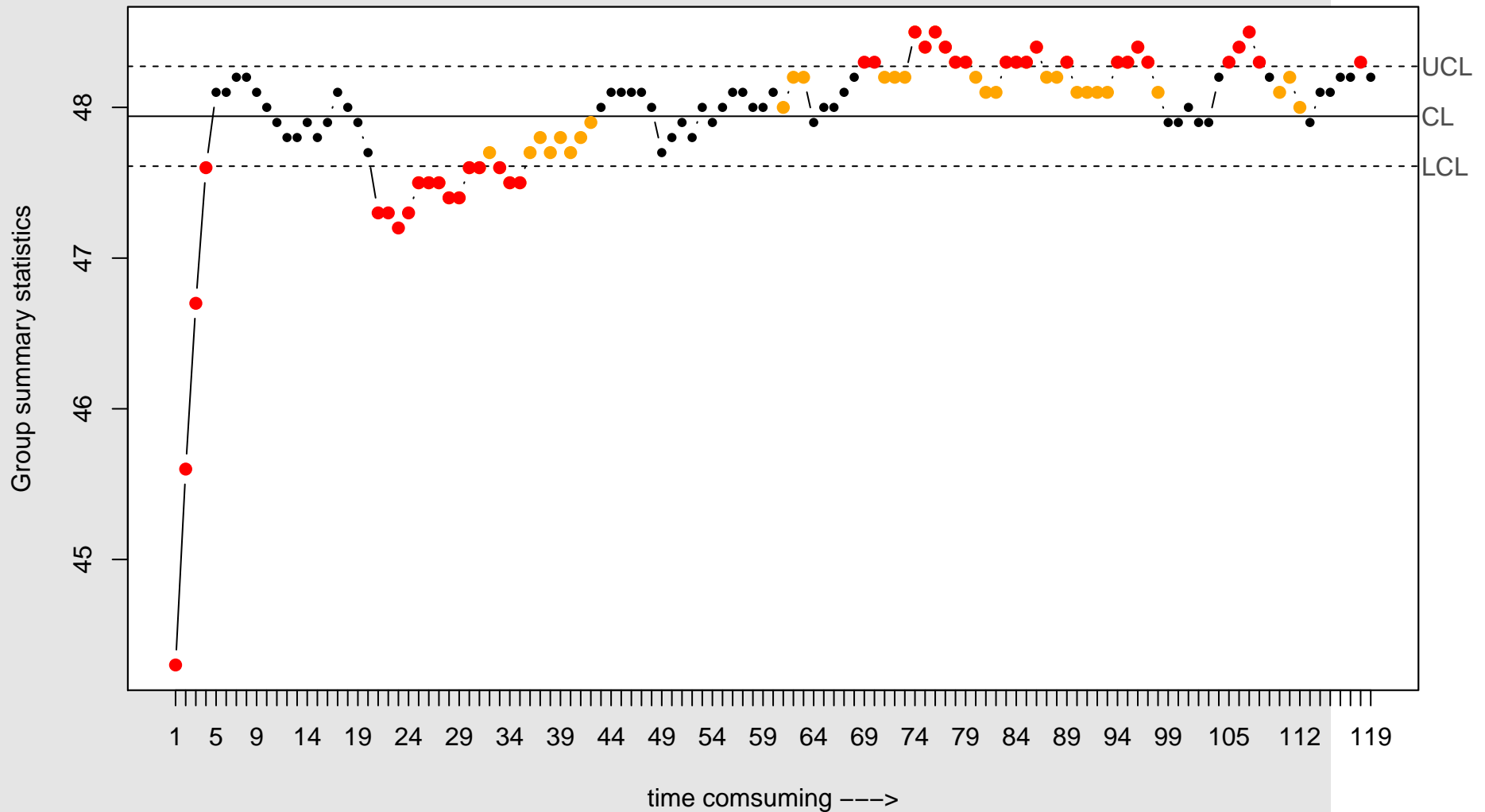
Number of groups = 119
Center = 47.94118   LCL = 47.60986   Number beyond limits = 40
StdDev = 0.11044   UCL = 48.2725   Number violating runs = 52

277th column point of this product

Group summary statistics

time comsuming ----->
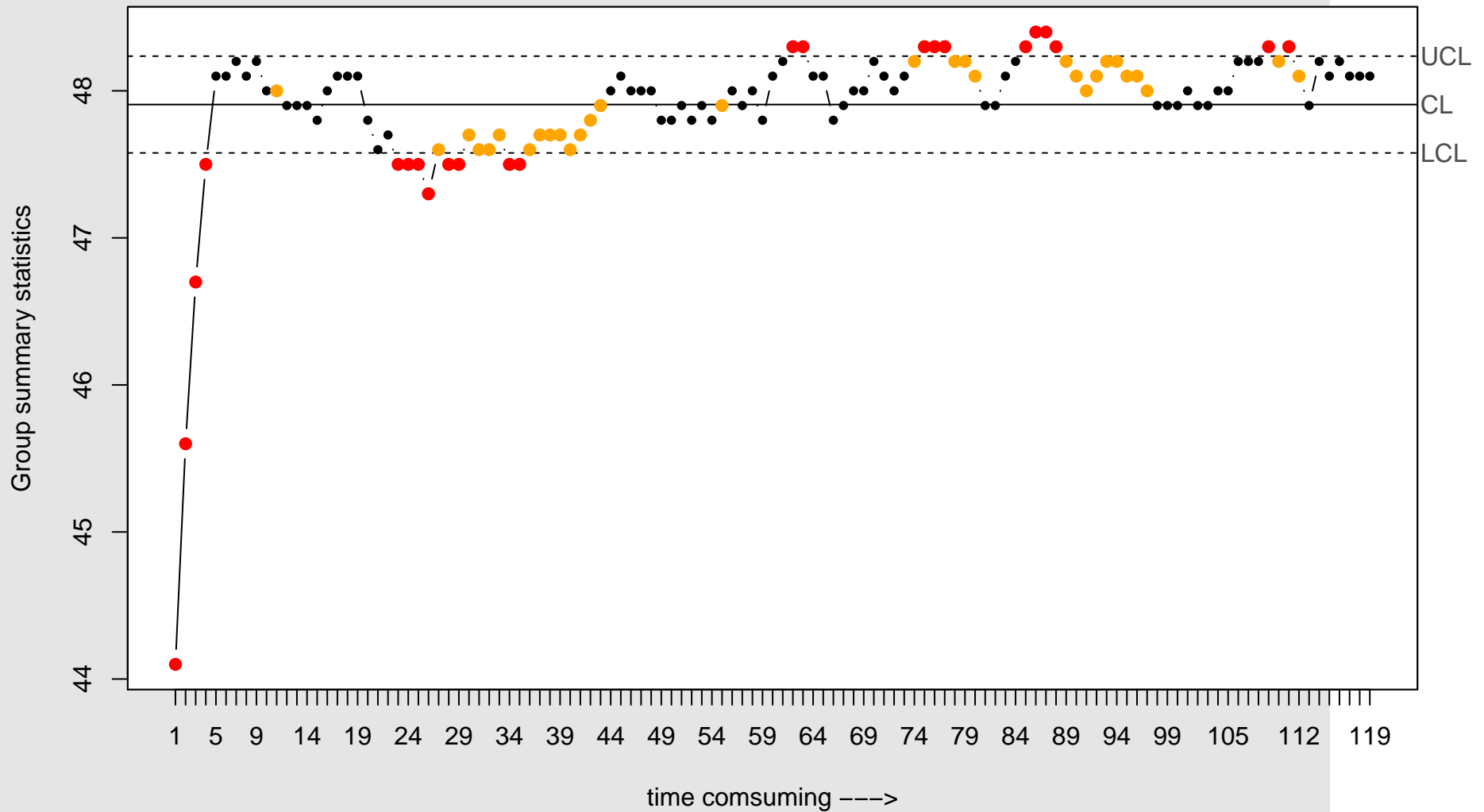
Number of groups = 119
Center = 47.90672   LCL = 47.57766   Number beyond limits = 23
StdDev = 0.1096887   UCL = 48.23579   Number violating runs = 39

278th column point of this product

Group summary statistics

time comsuming ---->
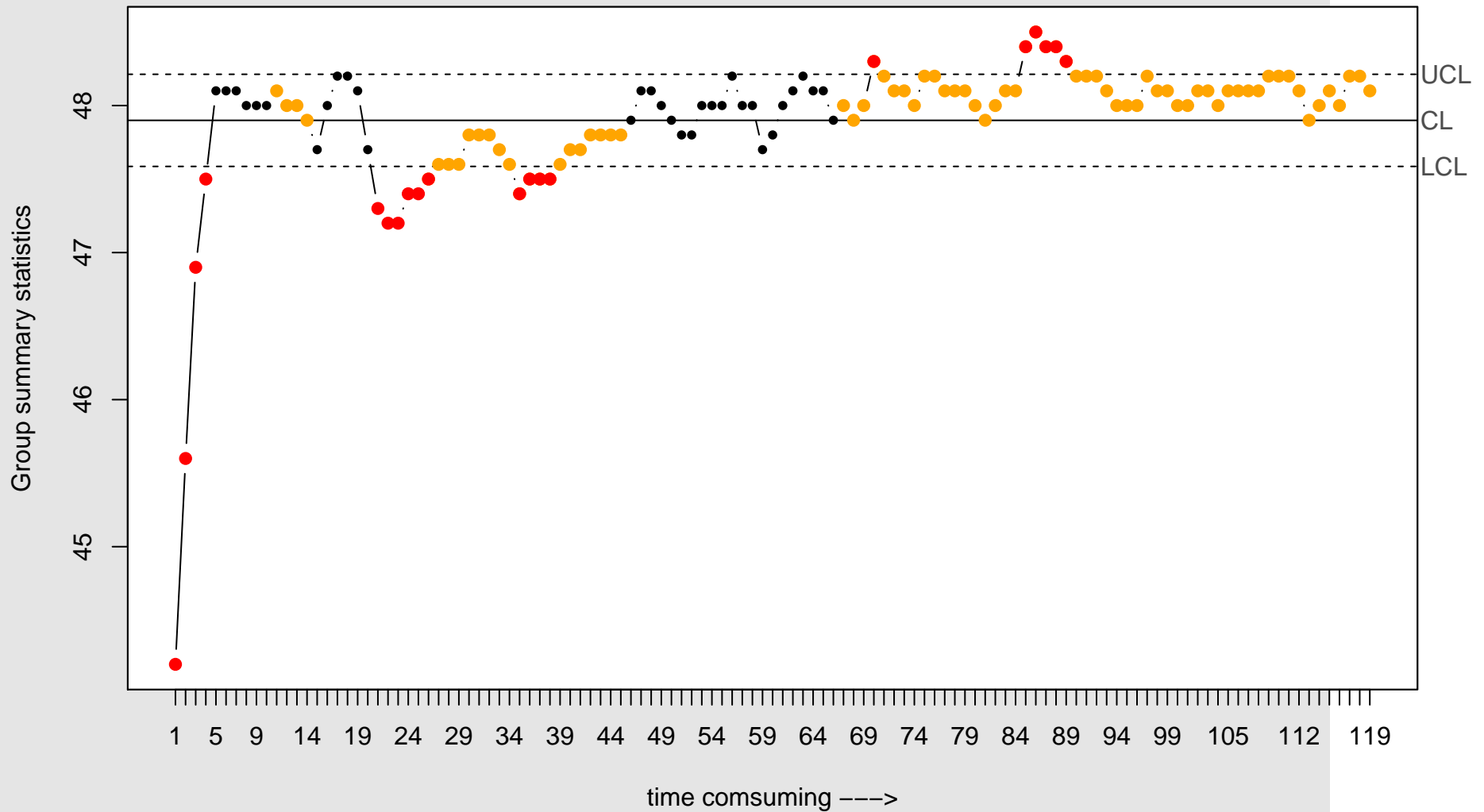
Number of groups = 119
Center = 47.89916
StdDev = 0.1044296
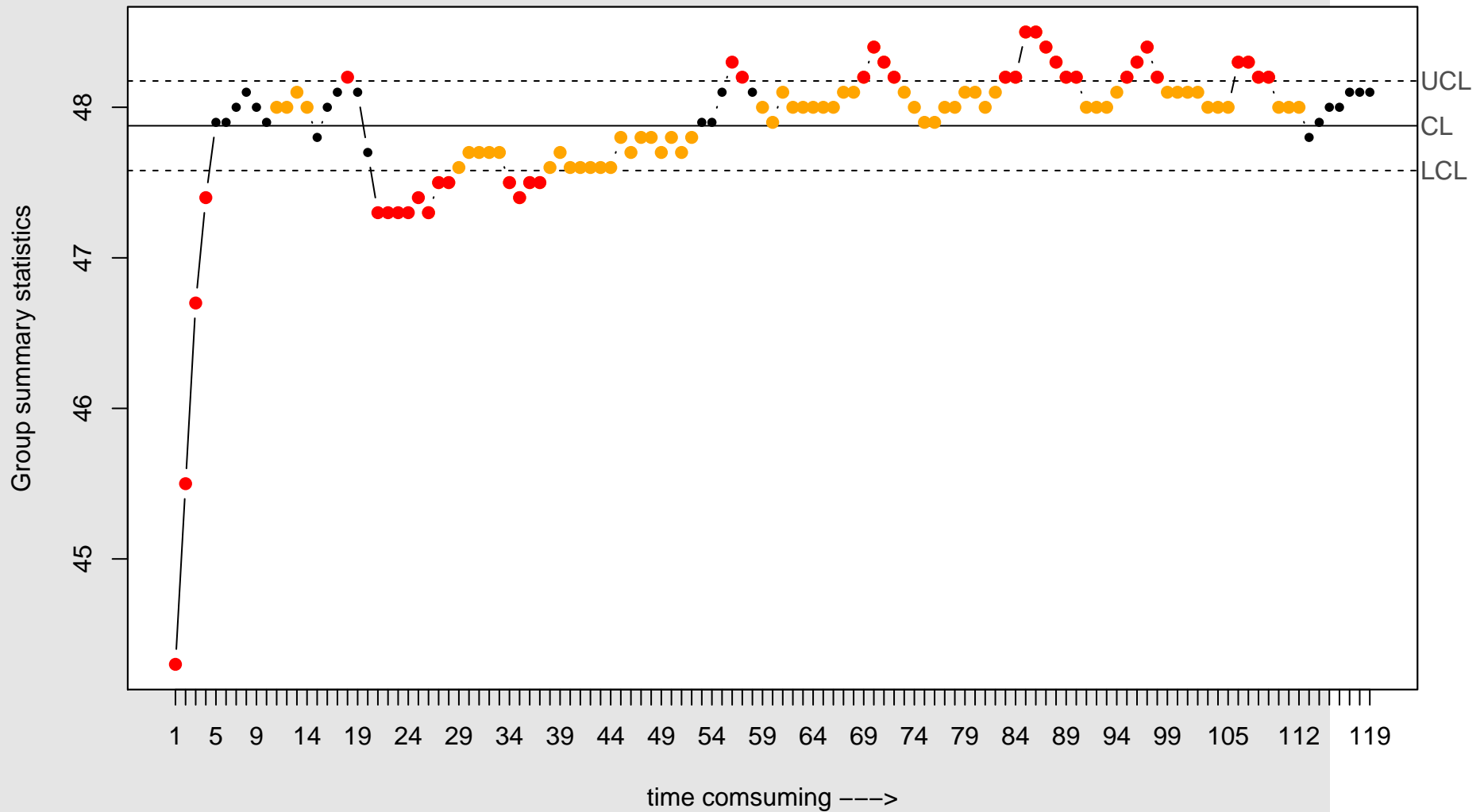
LCL = 47.58587
UCL = 48.21245

Number beyond limits = 20
Number violating runs = 77

279th column point of this product

Group summary statistics

time comsuming –––>

Number of groups = 119
Center = 47.87731   LCL = 47.5798   Number beyond limits = 39
StdDev = 0.09917057   UCL = 48.17482   Number violating runs = 85

280th column point of this product
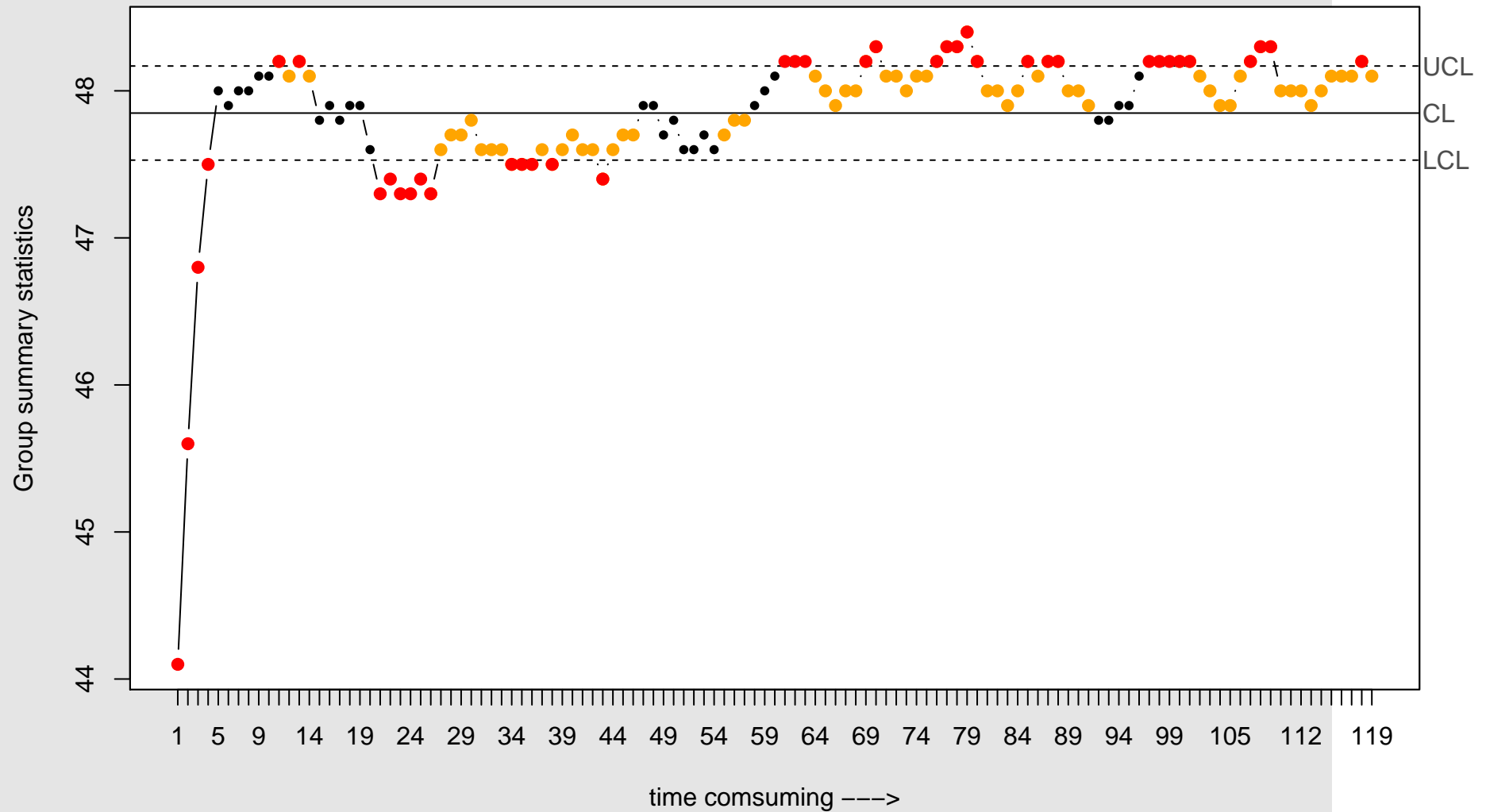
Group summary statistics

time comsuming --->

Number of groups = 119
Center = 47.84874   LCL = 47.52869   Number beyond limits = 39
StdDev = 0.1066835   UCL = 48.16879   Number violating runs = 76

281th column point of this product

Group summary statistics

time comsuming ––––>

Number of groups = 119
Center = 47.7916   LCL = 47.51437   Number beyond limits = 56
StdDev = 0.09240894   UCL = 48.06882   Number violating runs = 72

282th column point of this product

Group summary statistics

time comsuming ---->
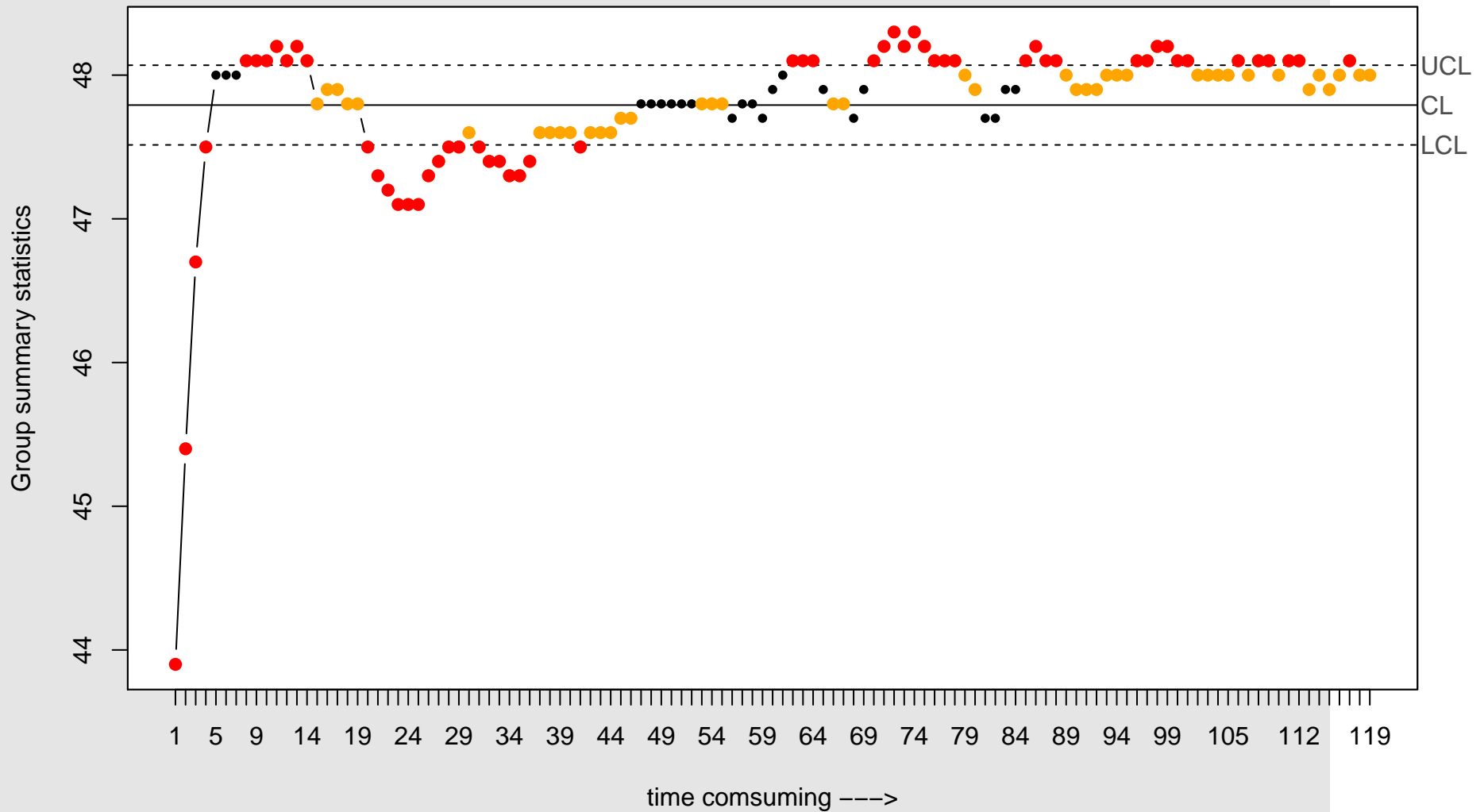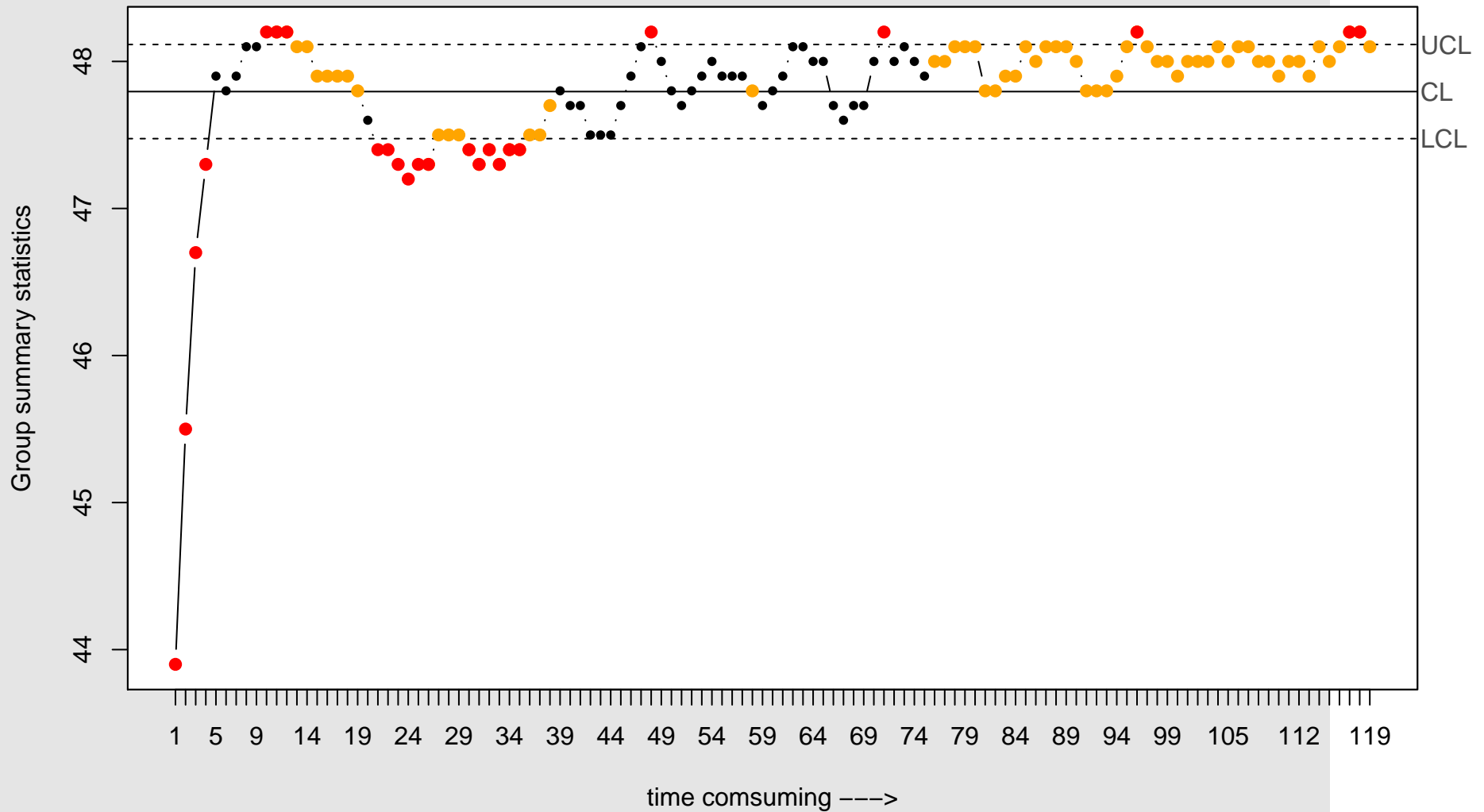
Number of groups = 119
Center = 47.79496   LCL = 47.47491   Number beyond limits = 24
StdDev = 0.1066835   UCL = 48.11501   Number violating runs = 67

283th column point of this product
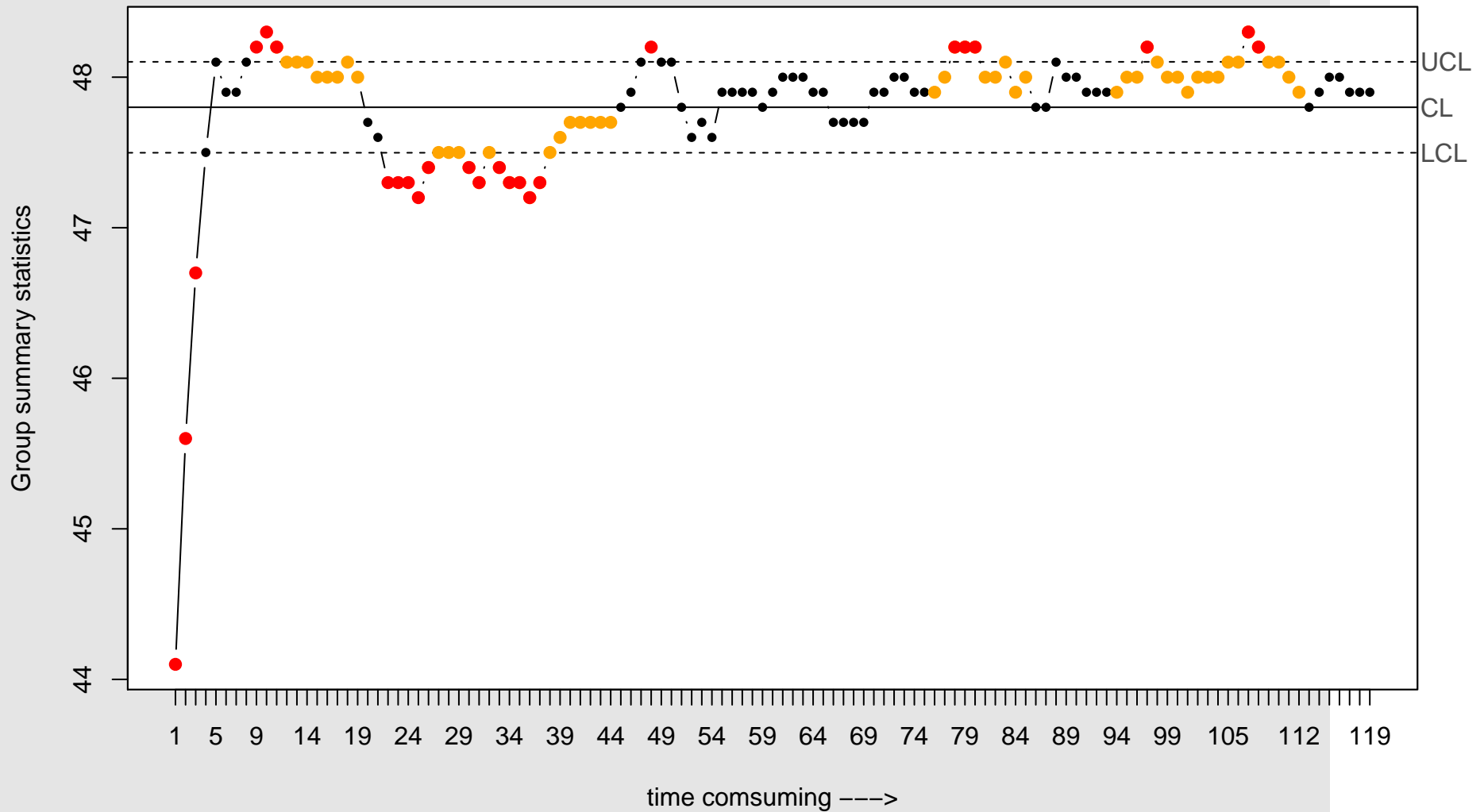

Group summary statistics

time comsuming ---->
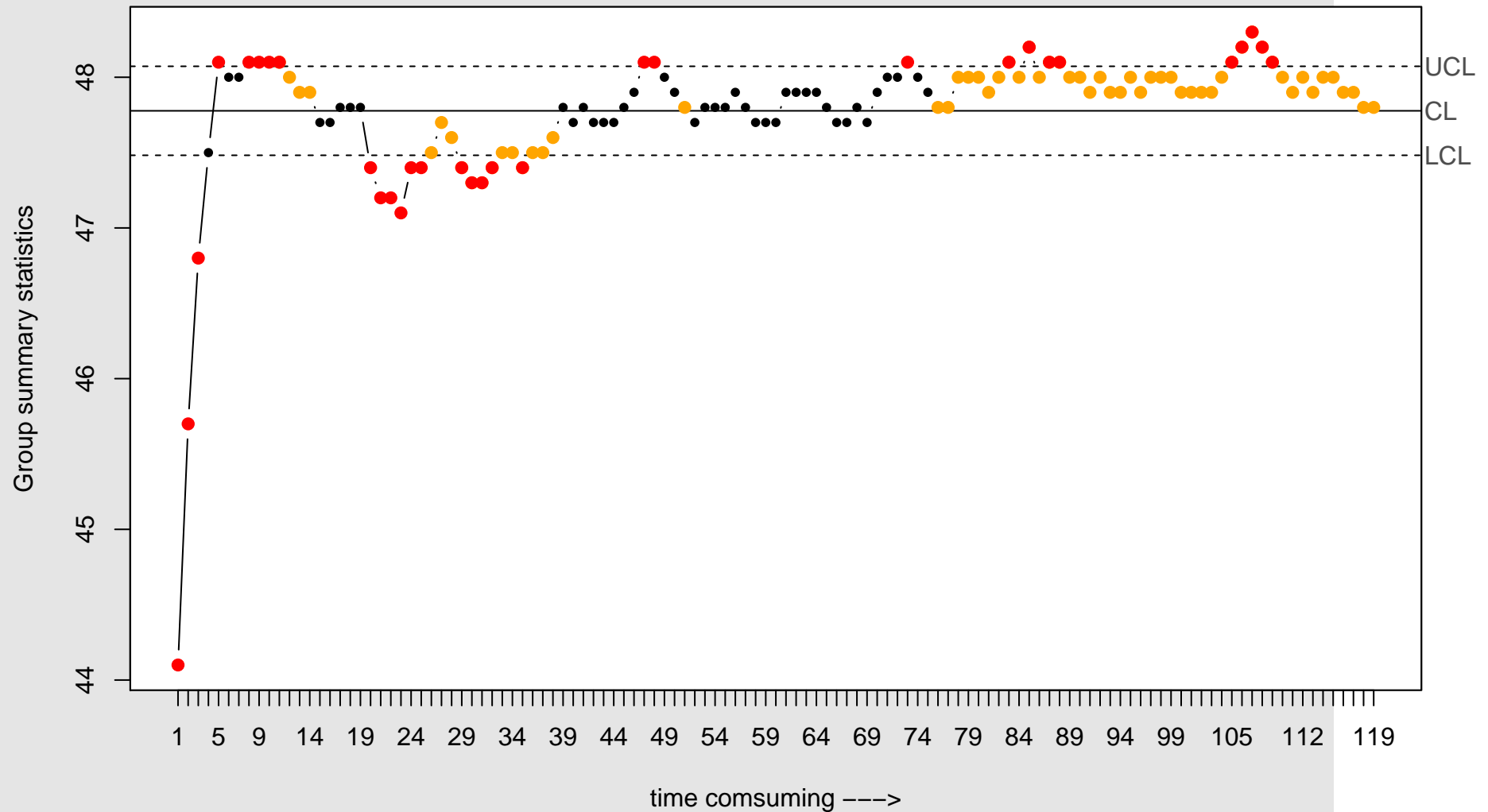
Number of groups = 119
Center = 47.77731
StdDev = 0.09841928

LCL = 47.48205
UCL = 48.07257

Number beyond limits = 31
Number violating runs = 62

284th column point of this product

Group summary statistics

time comsuming ––––>

Number of groups = 119
Center = 47.8   LCL = 47.49798   Number beyond limits = 25
StdDev = 0.1006732   UCL = 48.10202   Number violating runs = 57

285th column point of this product

Group summary statistics

time comsuming ----->
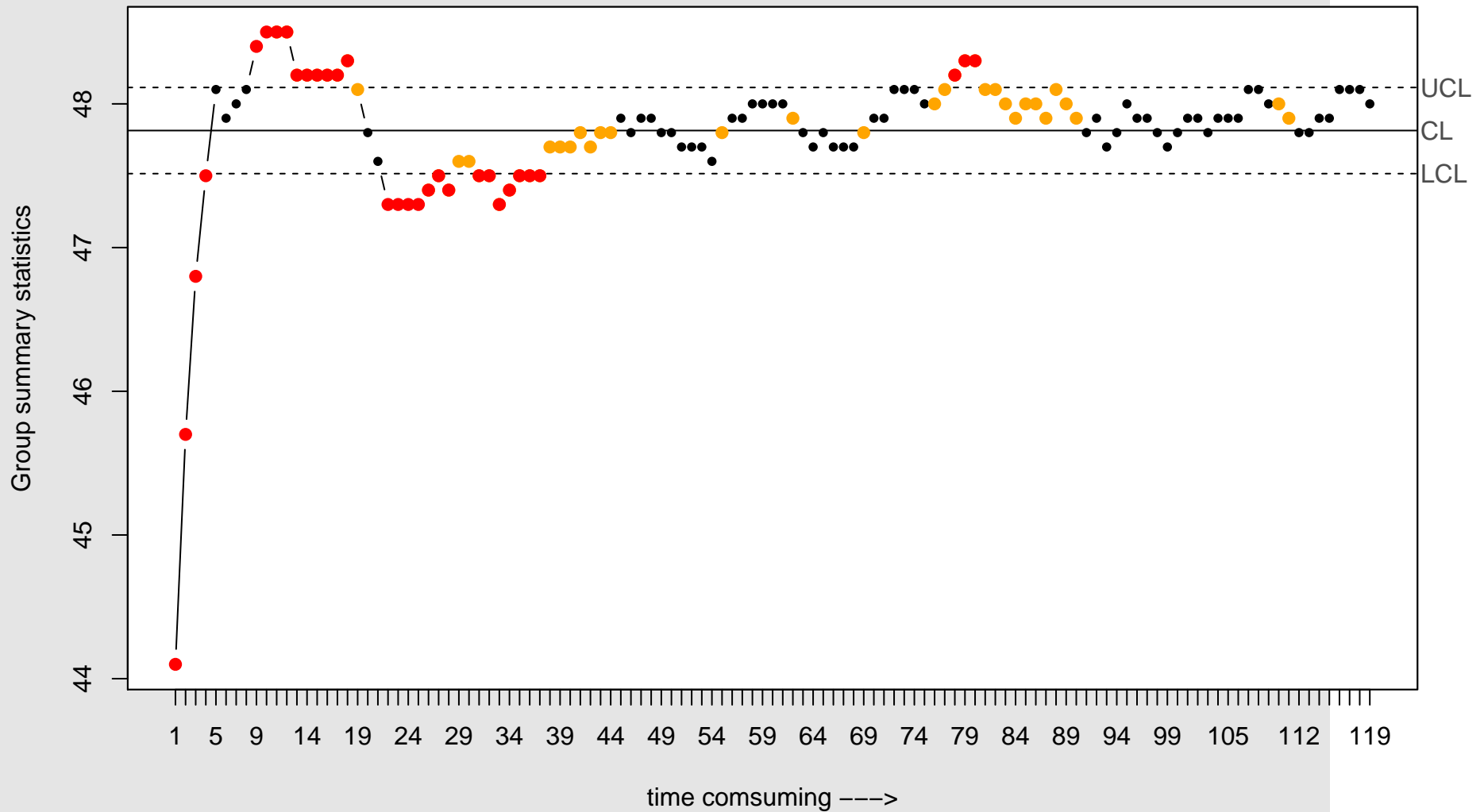
Number of groups = 119
Center = 47.81429   LCL = 47.51452   Number beyond limits = 31
StdDev = 0.09992187   UCL = 48.11405   Number violating runs = 48

286th column point of this product

Group summary statistics

UCL

CL

LCL

time comsuming ----->
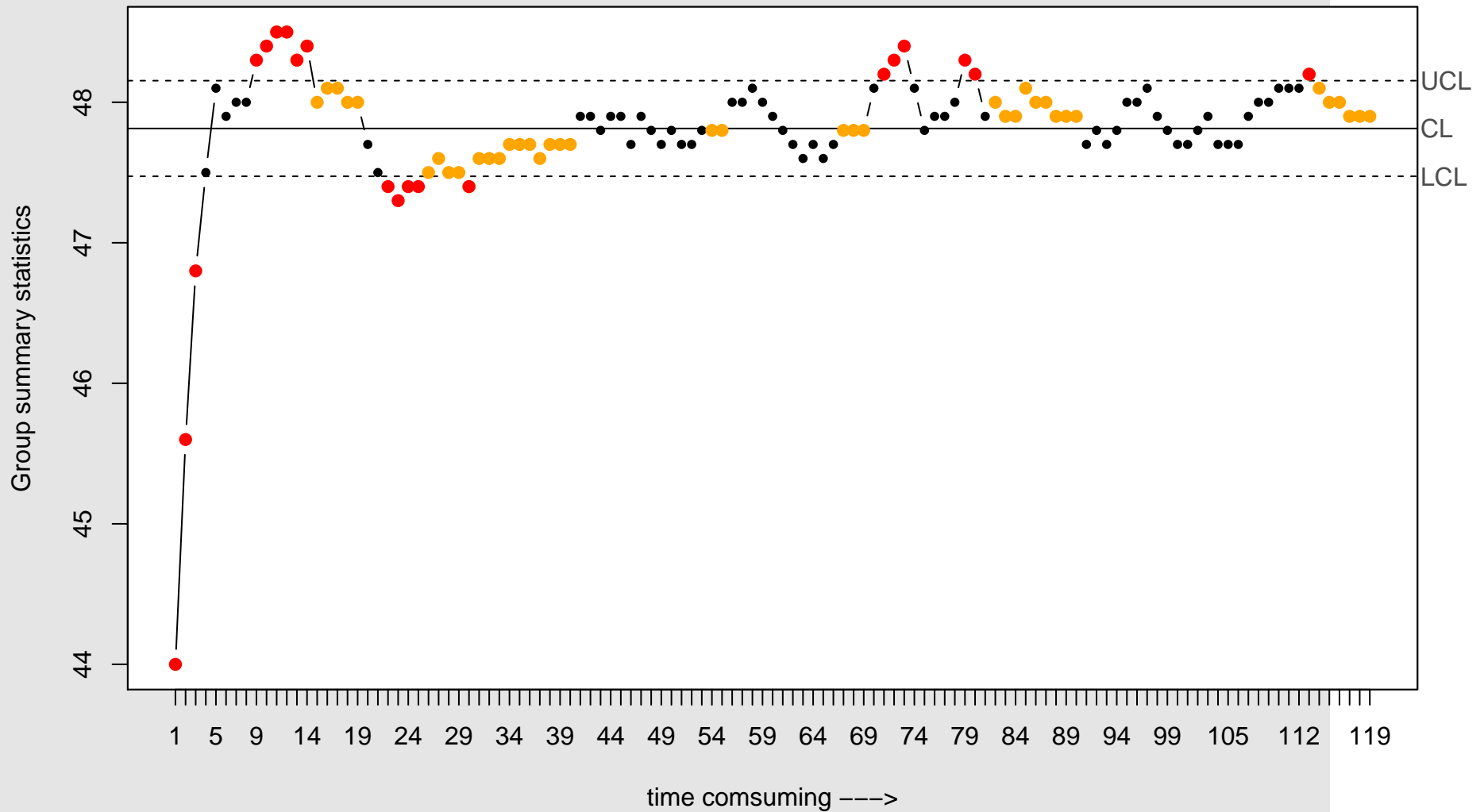
Number of groups = 119
Center = 47.81345   LCL = 47.47311   Number beyond limits = 20
StdDev = 0.1134451   UCL = 48.15378   Number violating runs = 45

287th column point of this product

Group summary statistics

time comsuming ––––>

UCL
CL
LCL
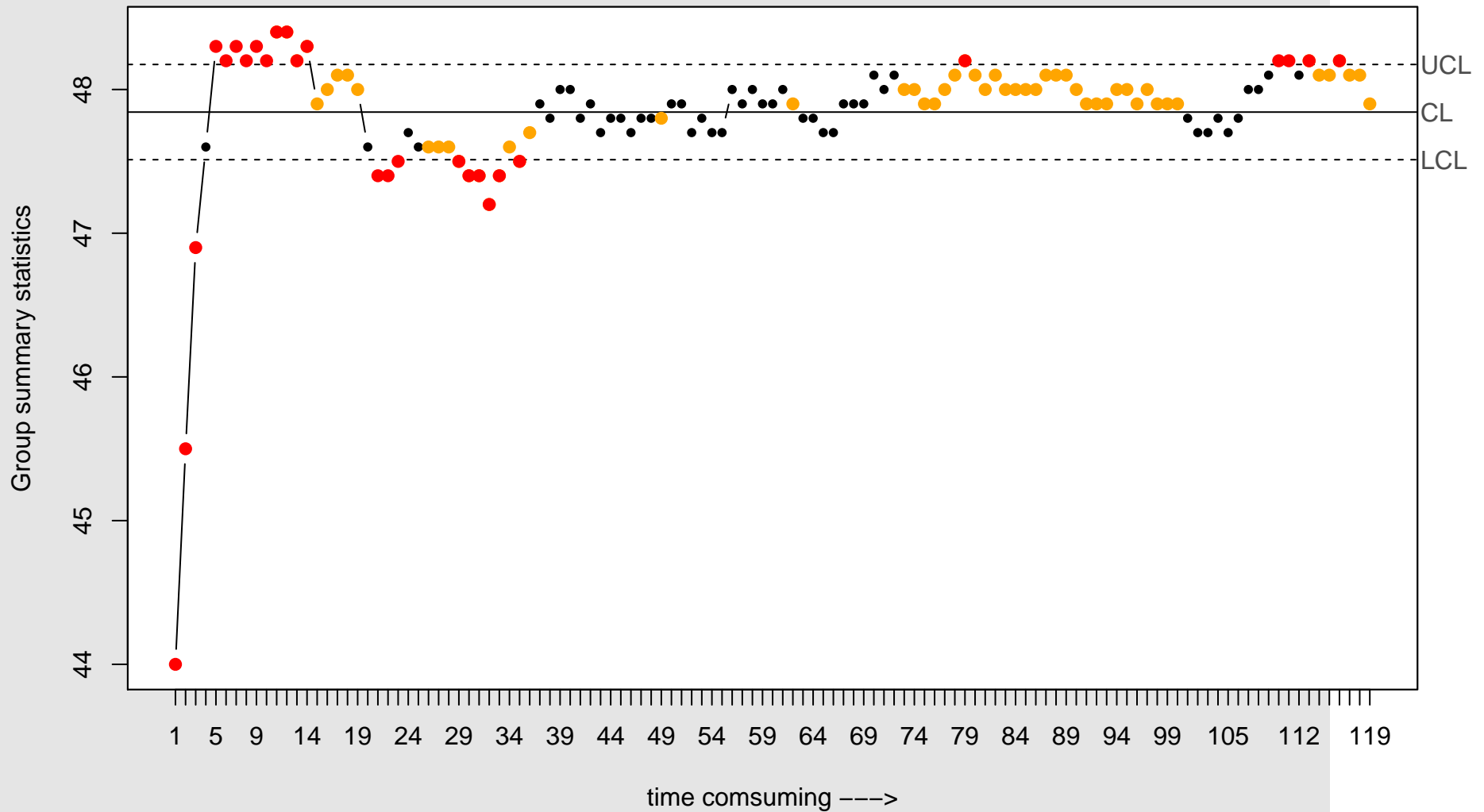
Number of groups = 119
Center = 47.84286   LCL = 47.51154   Number beyond limits = 27
StdDev = 0.11044   UCL = 48.17418   Number violating runs = 57

288th column point of this product

Group summary statistics

time comsuming ––––>
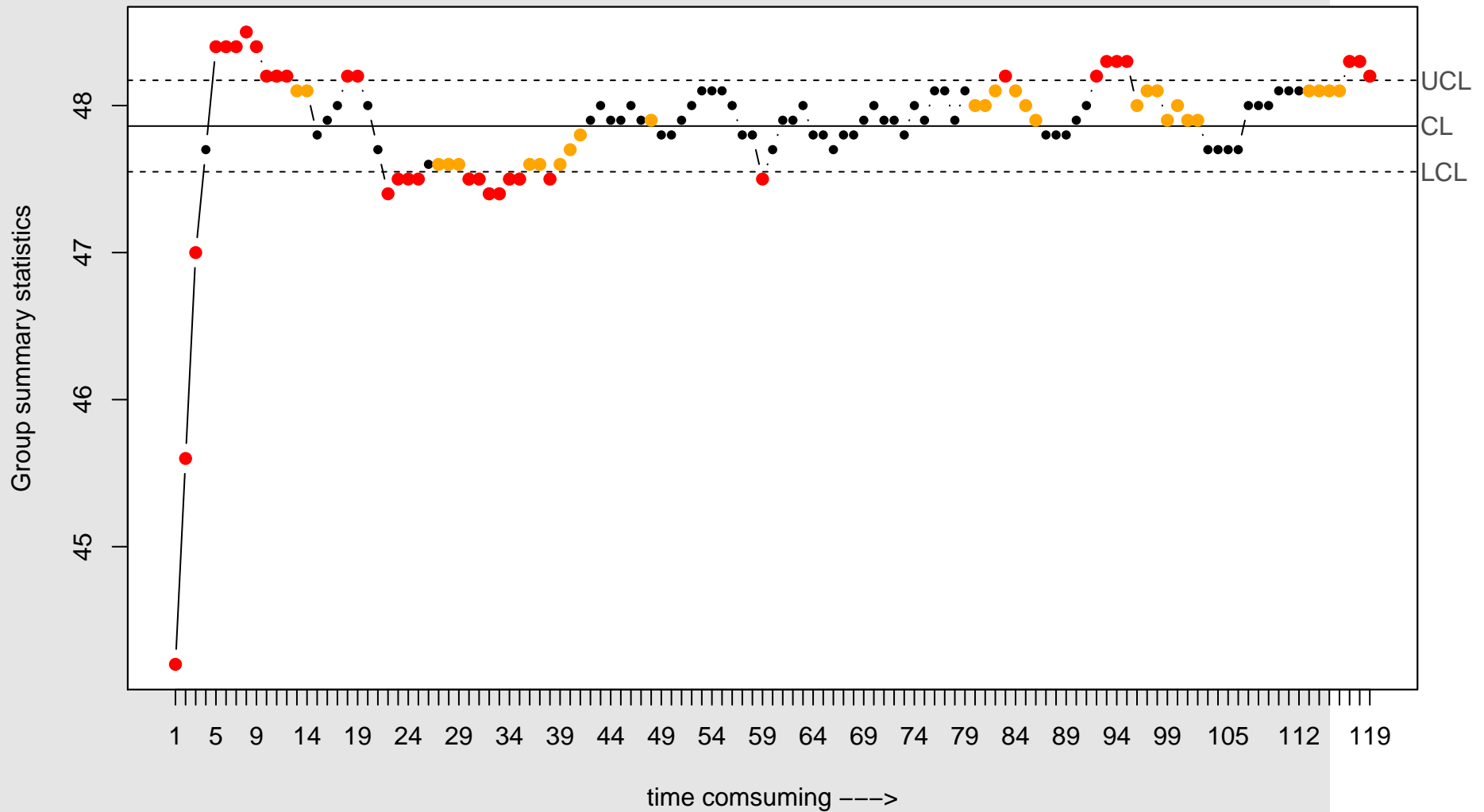
Number of groups = 119
Center = 47.8605   LCL = 47.54947   Number beyond limits = 33
StdDev = 0.1036783   UCL = 48.17154   Number violating runs = 41

289th column point of this product

Group summary statistics

time comsuming ---->
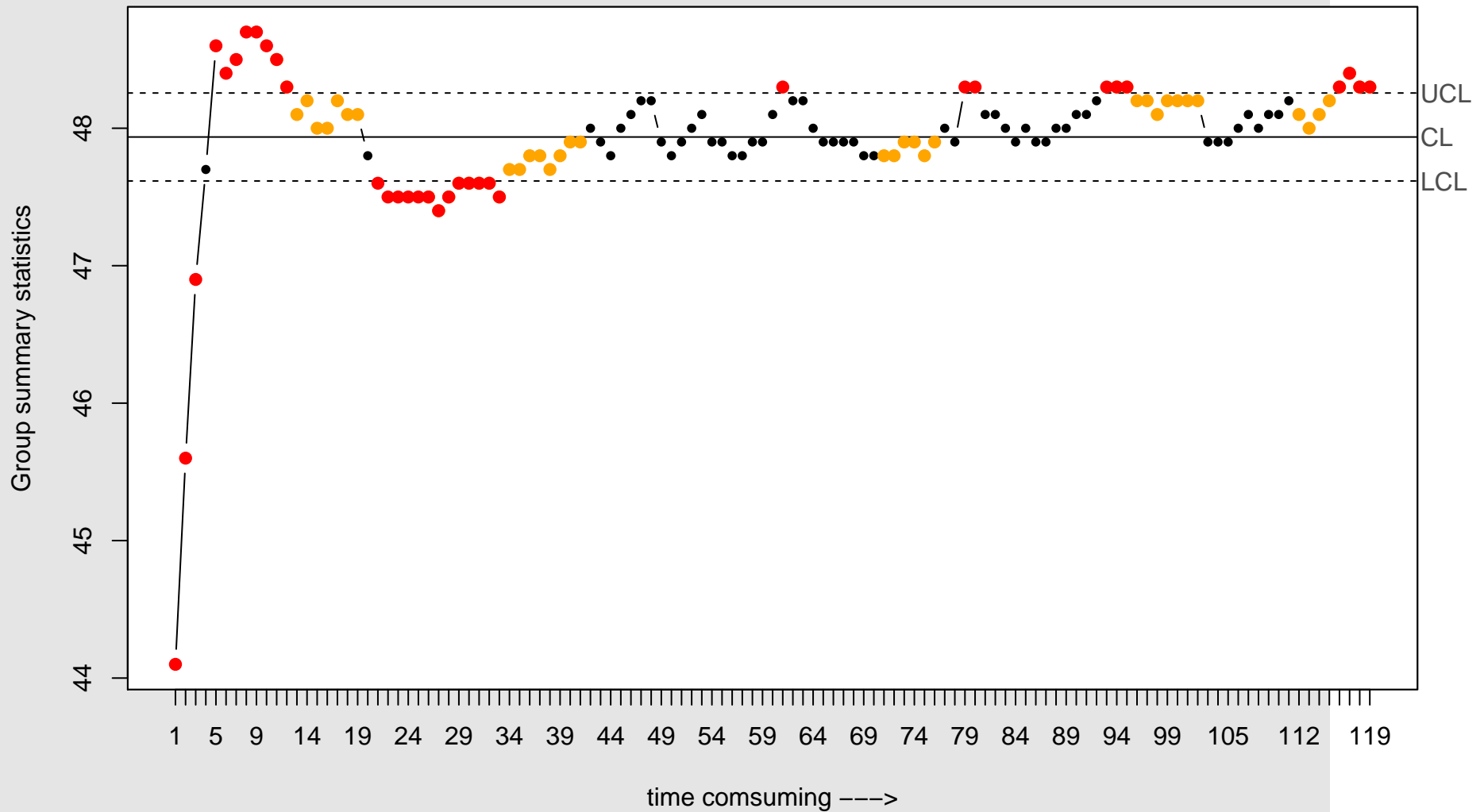
Number of groups = 119
Center = 47.93613   LCL = 47.61608   Number beyond limits = 34
StdDev = 0.1066835   UCL = 48.25618   Number violating runs = 48

290th column point of this product

Group summary statistics

UCL
CL
LCL

time comsuming ––––>
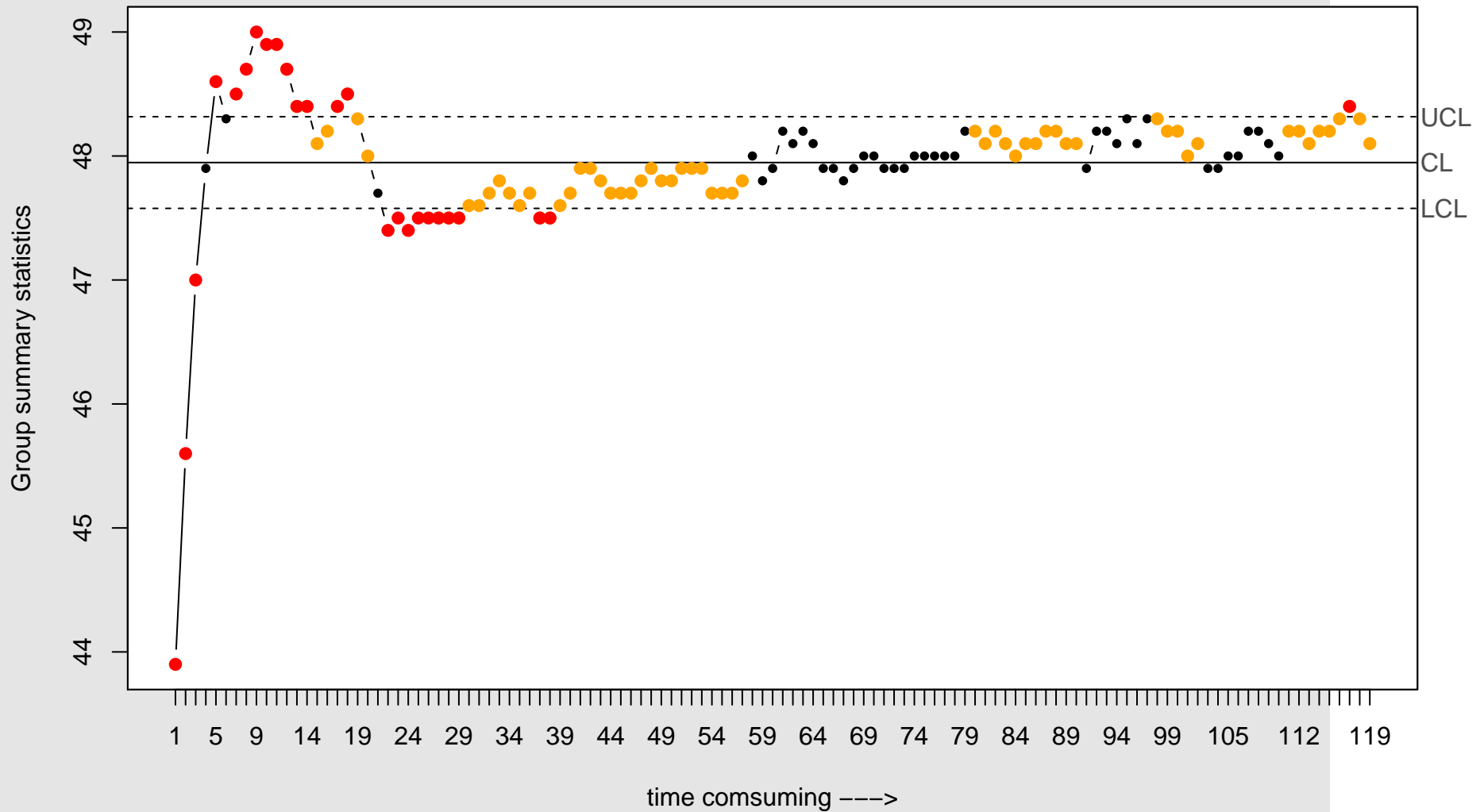
Number of groups = 119
Center = 47.94706   LCL = 47.57742   Number beyond limits = 25
StdDev = 0.1232119   UCL = 48.31669   Number violating runs = 66

291th column point of this product

Group summary statistics

time comsuming −−−>
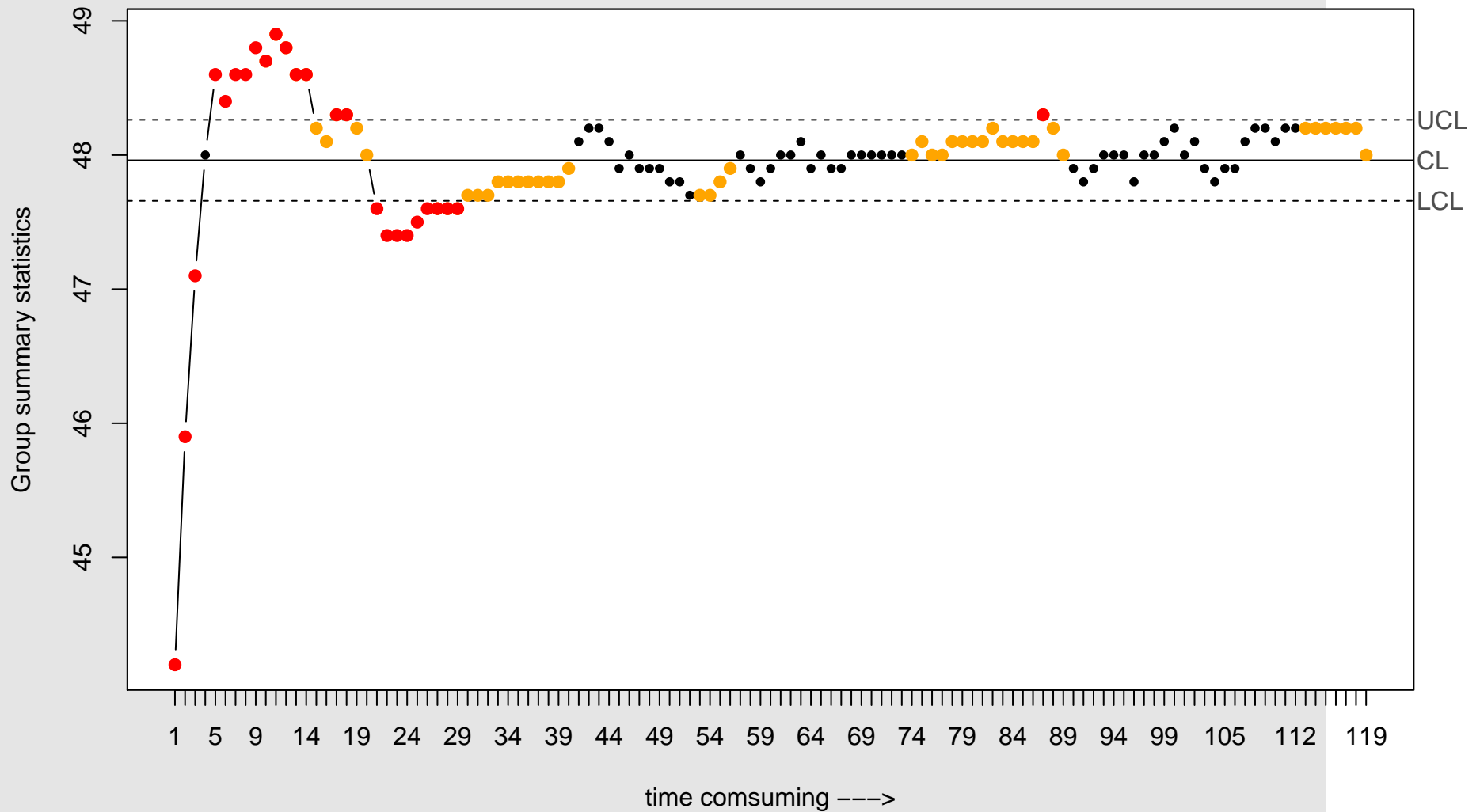
Number of groups = 119
Center = 47.9605   LCL = 47.65848   Number beyond limits = 25
StdDev = 0.1006732   UCL = 48.26252   Number violating runs = 52

292th column point of this product

Group summary statistics

time comsuming ---->
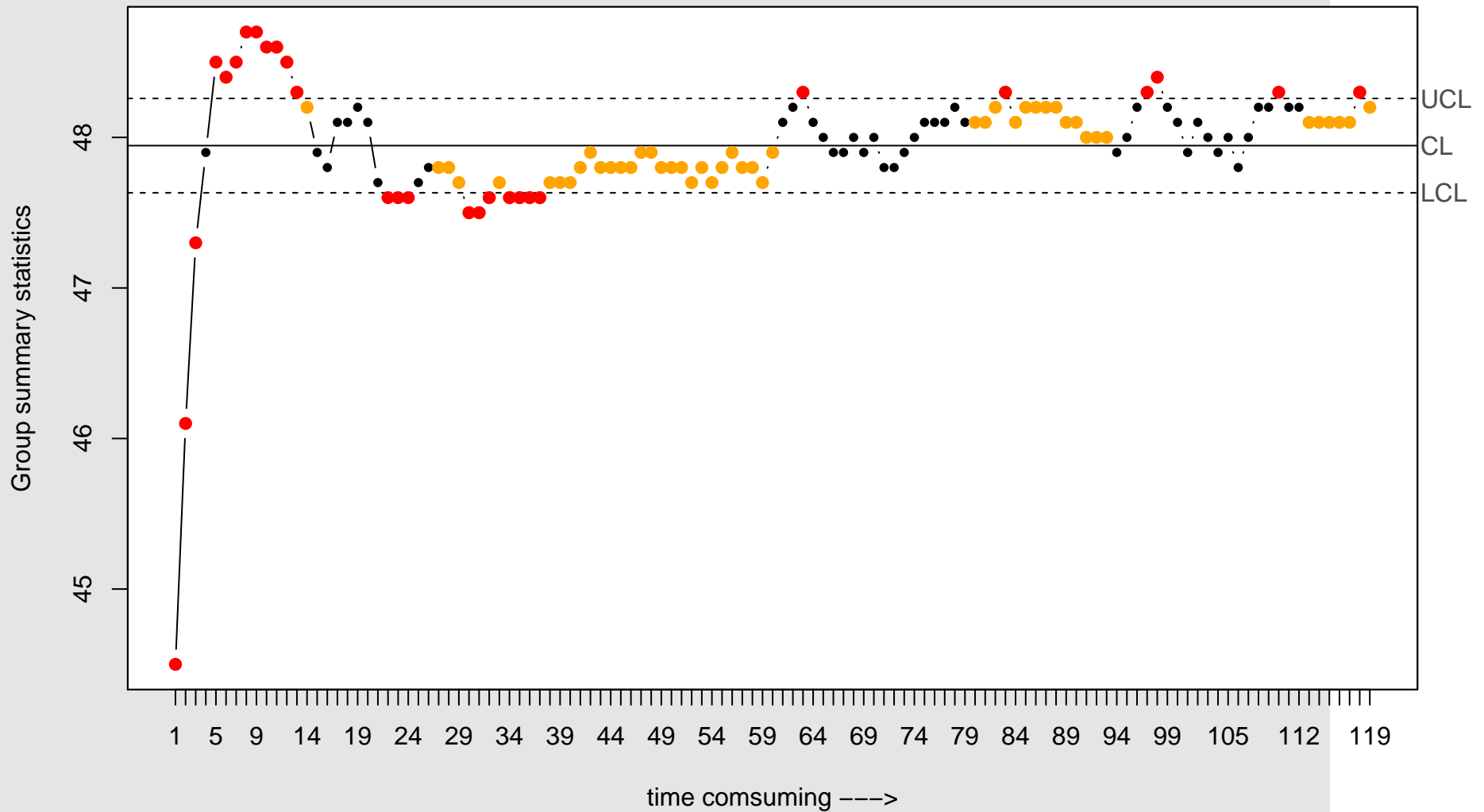
Number of groups = 119
Center = 47.94538   LCL = 47.63209   Number beyond limits = 28
StdDev = 0.1044296   UCL = 48.25867   Number violating runs = 59

293th column point of this product

Group summary statistics

time comsuming ---->
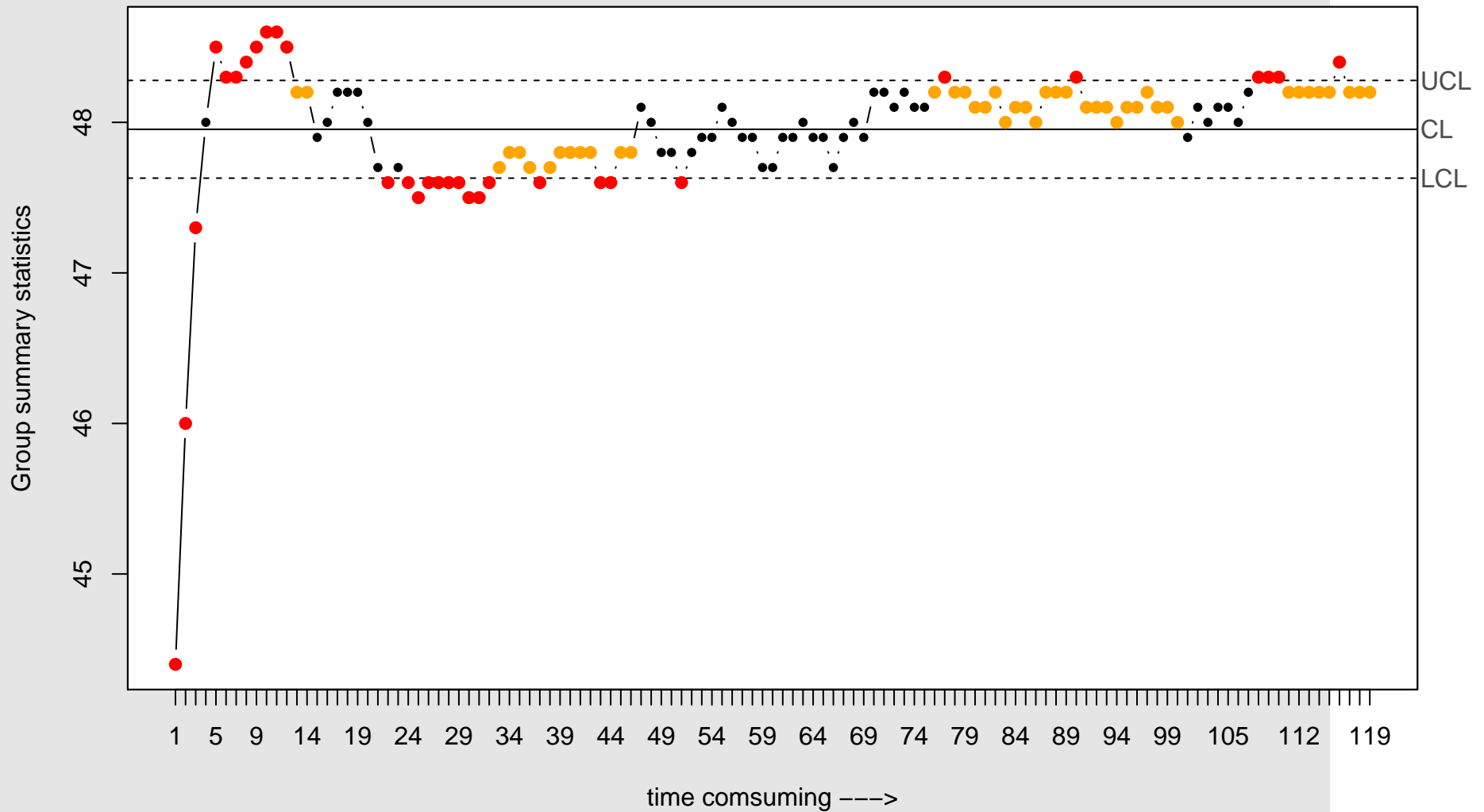
Number of groups = 119
Center = 47.95378   LCL = 47.62922   Number beyond limits = 31
StdDev = 0.1081861   UCL = 48.27834   Number violating runs = 62

294th column point of this product

Group summary statistics

time comsuming ---->
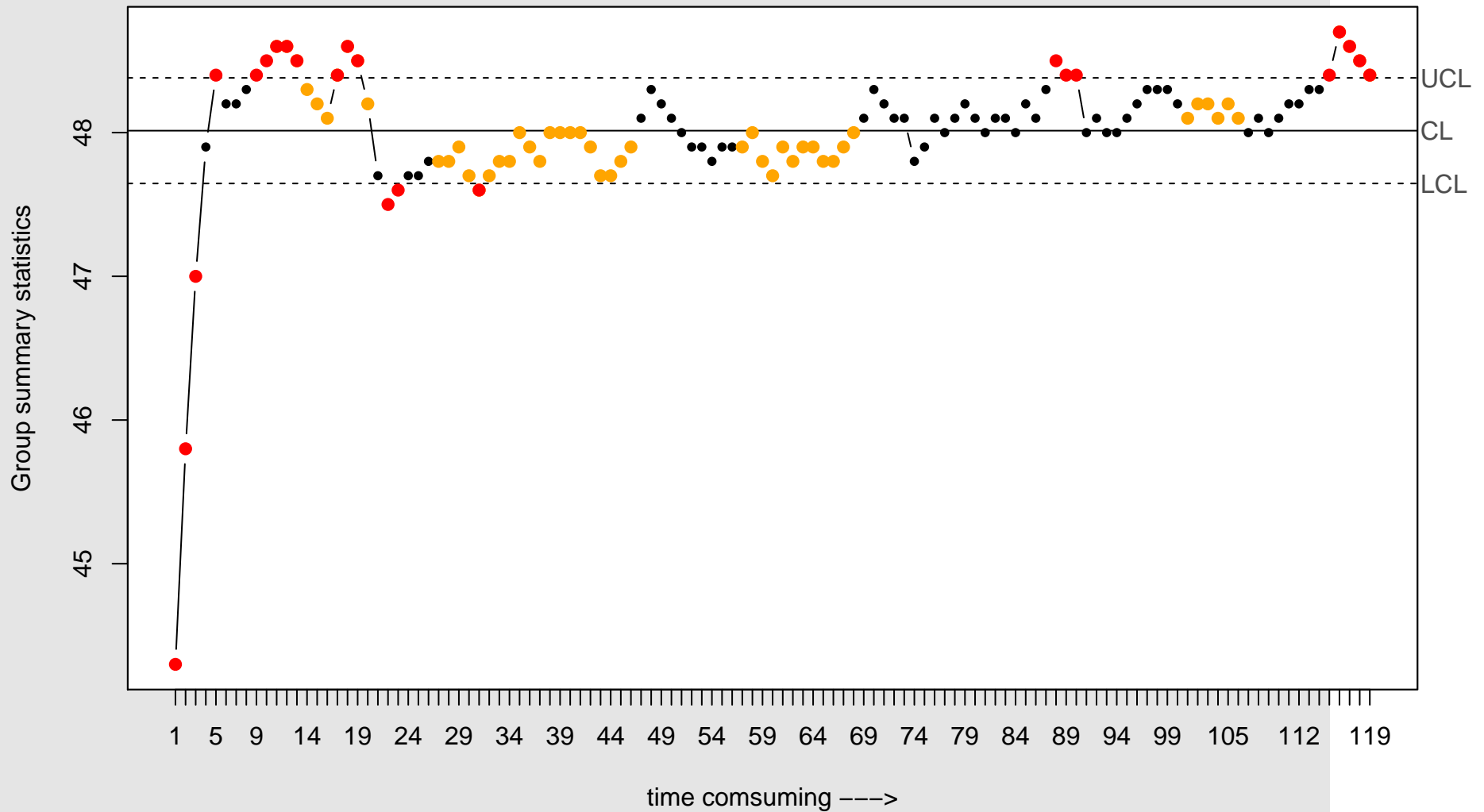
Number of groups = 119
Center = 48.01345   LCL = 47.64606   Number beyond limits = 23
StdDev = 0.1224606   UCL = 48.38083   Number violating runs = 52

295th column point of this product

Group summary statistics

time comsuming –––>
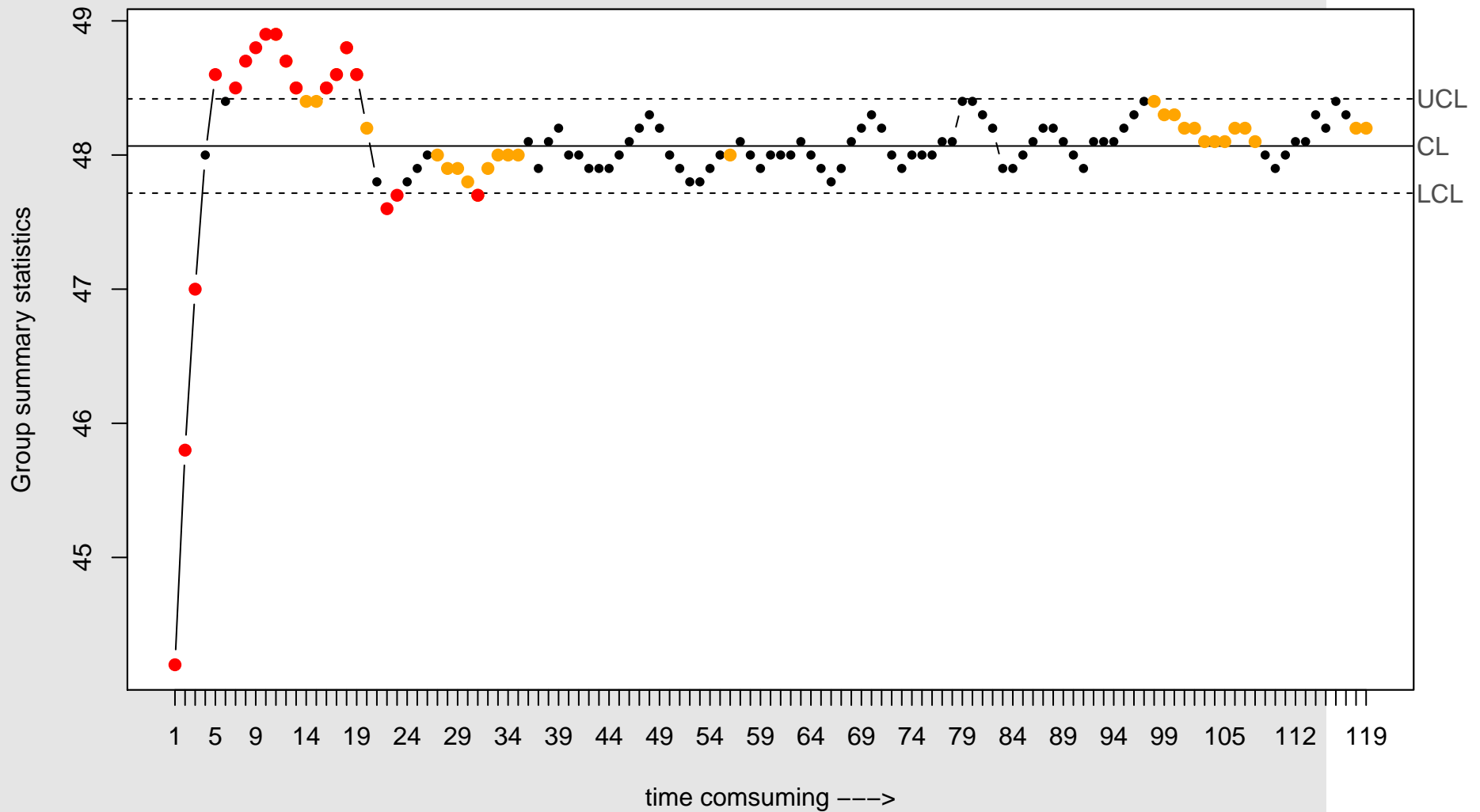
Number of groups = 119
Center = 48.06723   LCL = 47.71562   Number beyond limits = 18
StdDev = 0.1172016   UCL = 48.41883   Number violating runs = 33

296th column point of this product
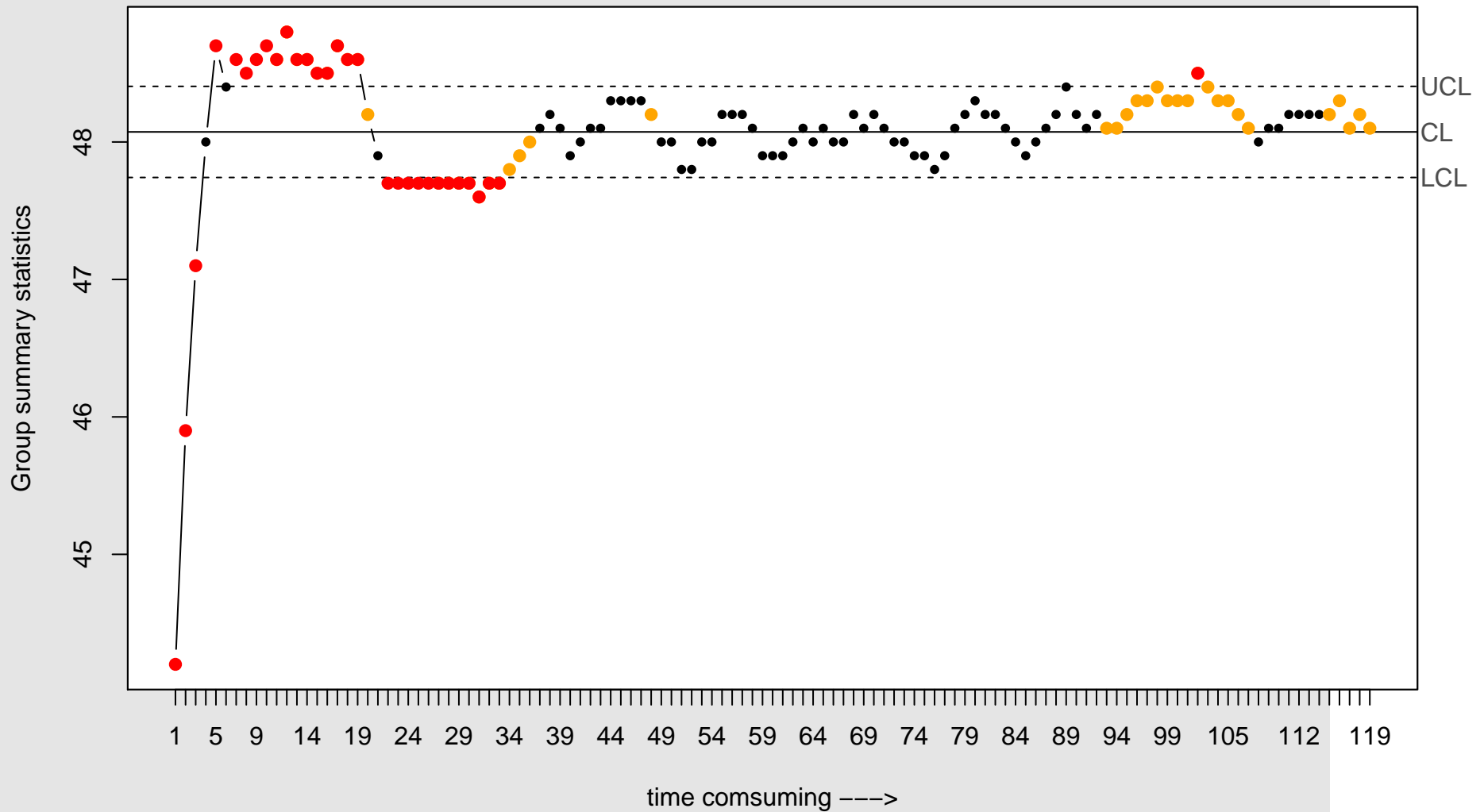
Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 48.07311   LCL = 47.74179   Number beyond limits = 30
StdDev = 0.11044   UCL = 48.40443   Number violating runs = 41

UCL
CL
LCL

297th column point of this product

Group summary statistics

time comsuming ---->

UCL
CL
LCL
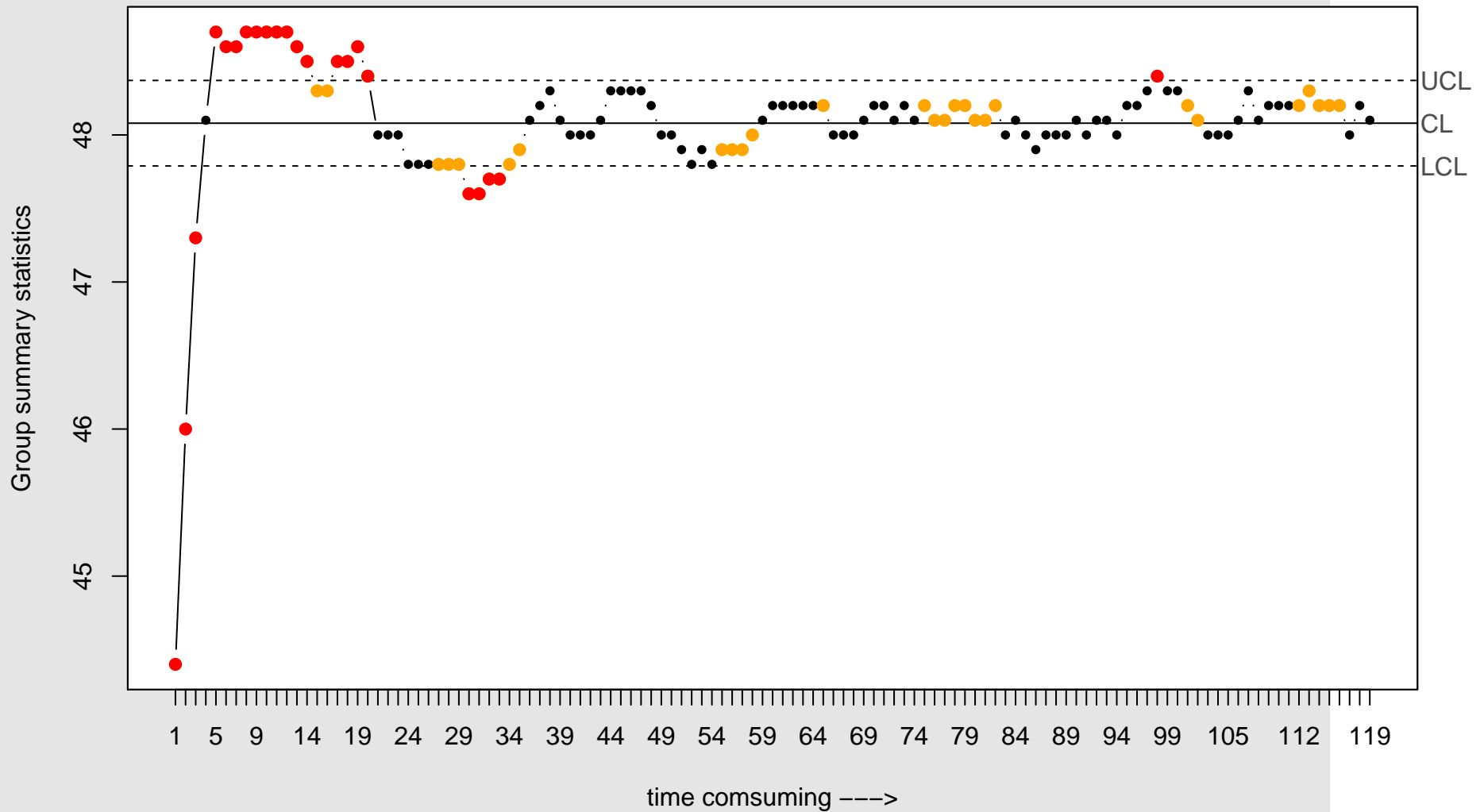
Number of groups = 119
Center = 48.07983   LCL = 47.78908   Number beyond limits = 22
StdDev = 0.0969167   UCL = 48.37058   Number violating runs = 40

298th column point of this product

Group summary statistics

time comsuming ---->
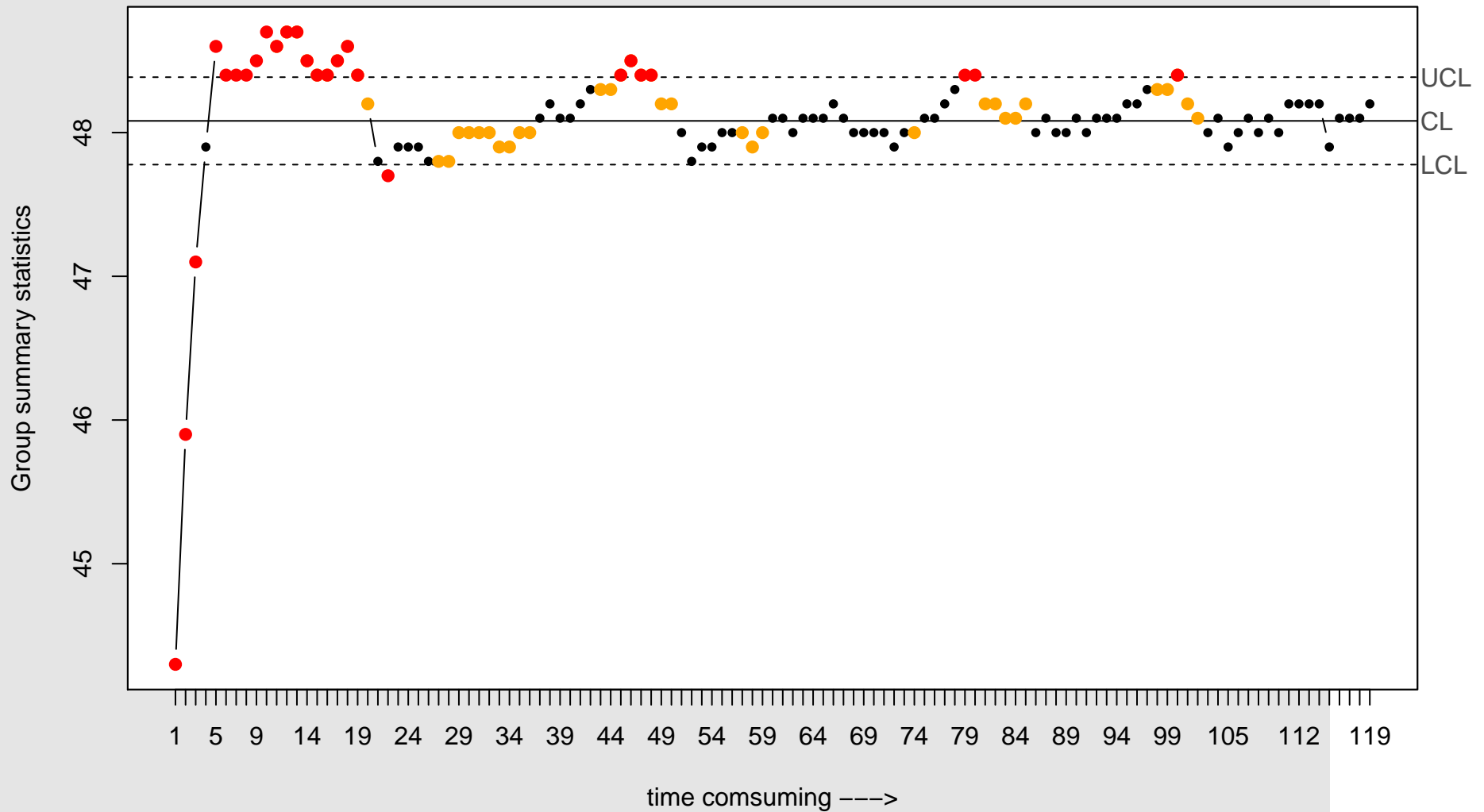
Number of groups = 119
Center = 48.08151   LCL = 47.77724   Number beyond limits = 26
StdDev = 0.1014245   UCL = 48.38579   Number violating runs = 42

299th column point of this product
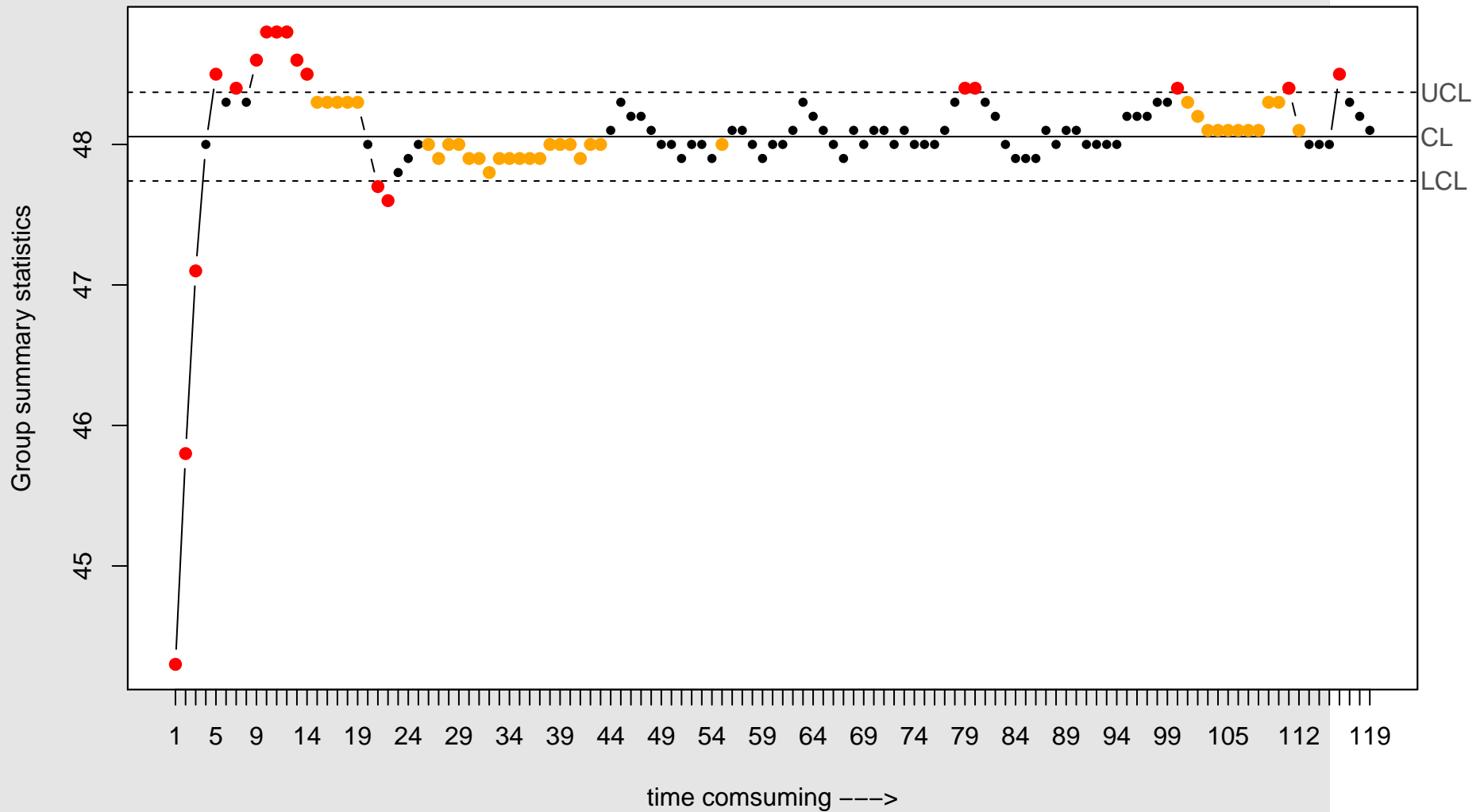
Number of groups = 119
Center = 48.05546   LCL = 47.73992   Number beyond limits = 18
StdDev = 0.1051809   UCL = 48.371   Number violating runs = 40

300th column point of this product

Group summary statistics

time comsuming ---->
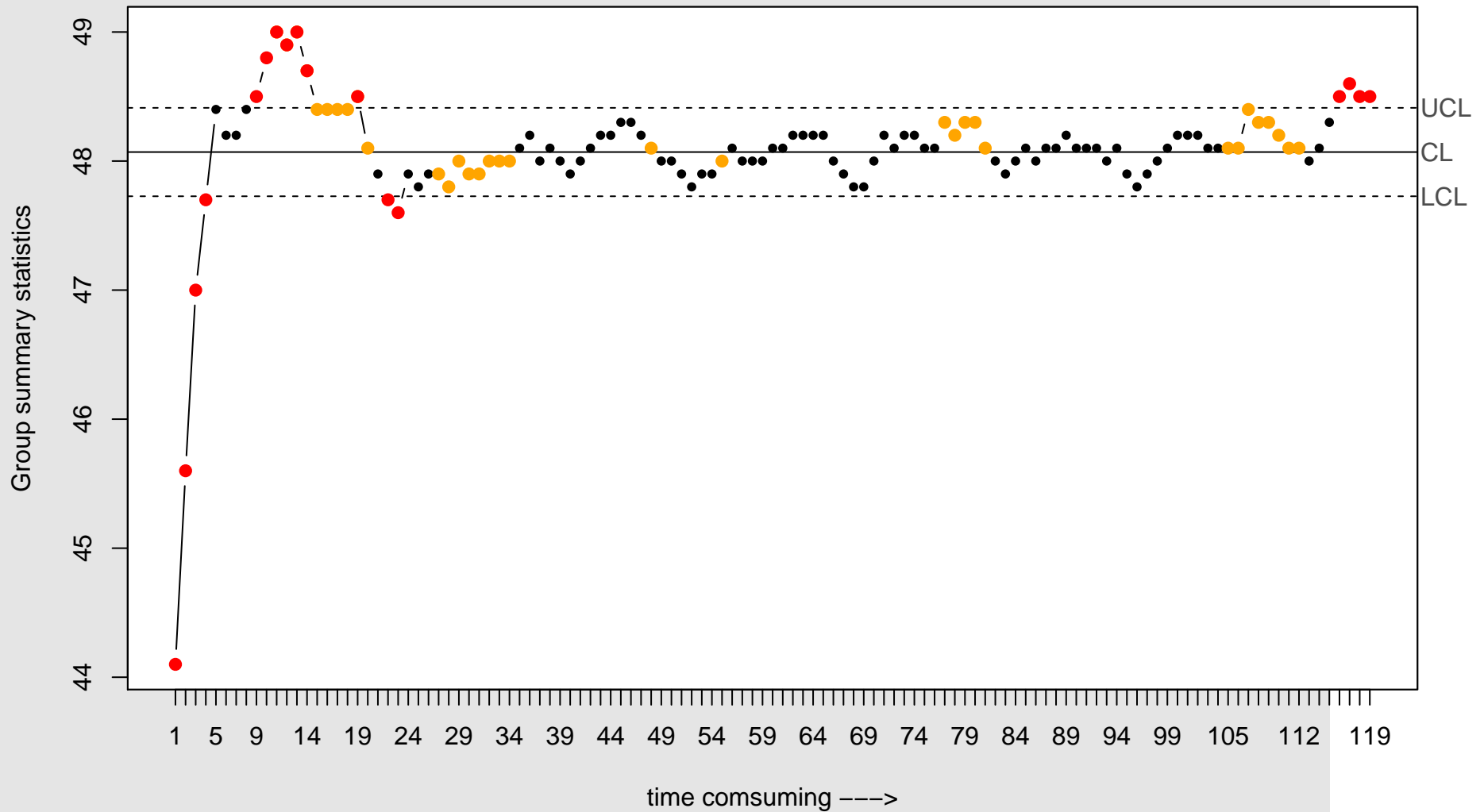
UCL

CL

LCL
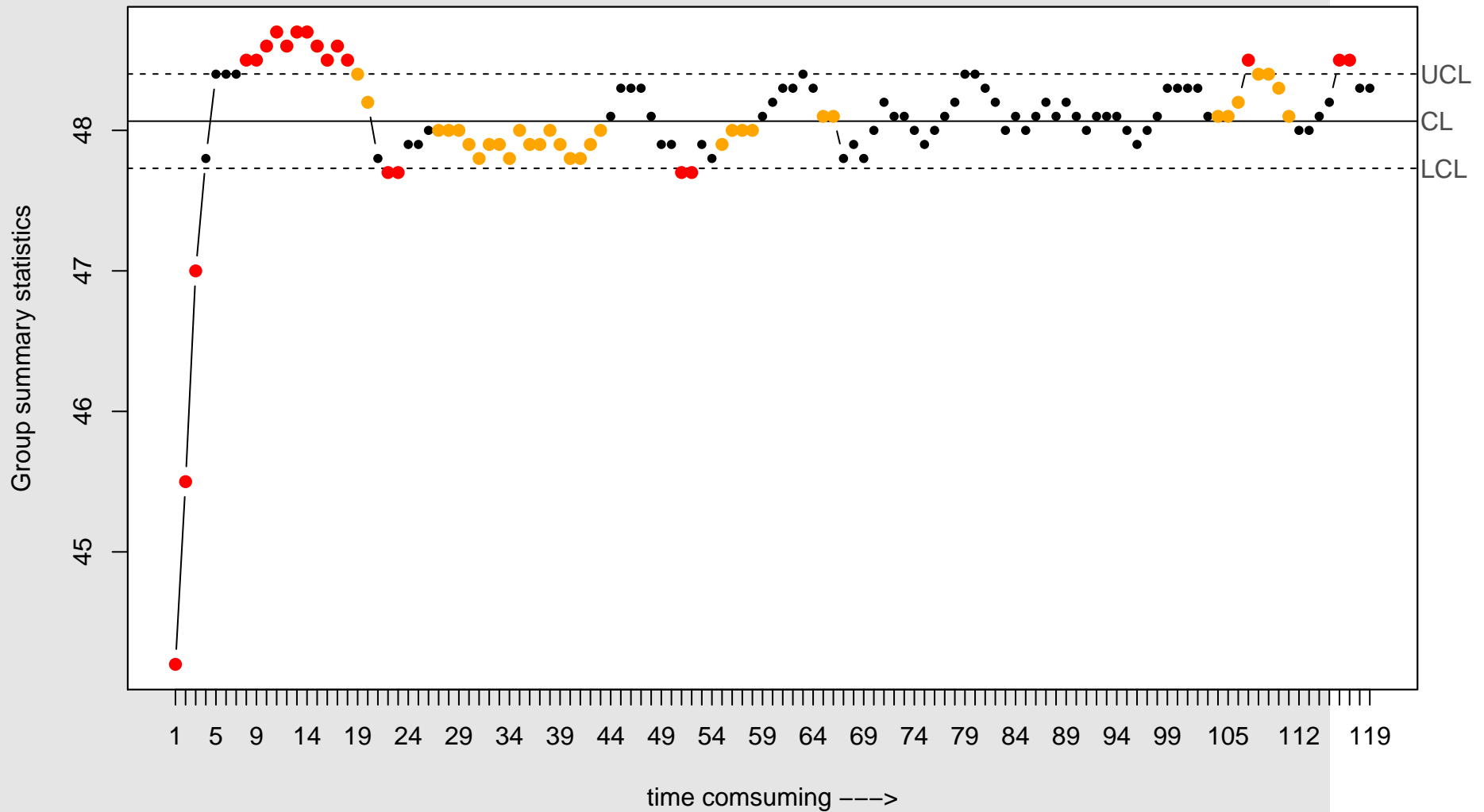
Number of groups = 119
Center = 48.06555
StdDev = 0.1119425

LCL = 47.72972
UCL = 48.40137

Number beyond limits = 21
Number violating runs = 41

301th column point of this product

Group summary statistics

time comsuming –––>

Number of groups = 119
Center = 48.06975   LCL = 47.72716   Number beyond limits = 17
StdDev = 0.1141964   UCL = 48.41234   Number violating runs = 33

302th column point of this product

Group summary statistics

time comsuming ---->
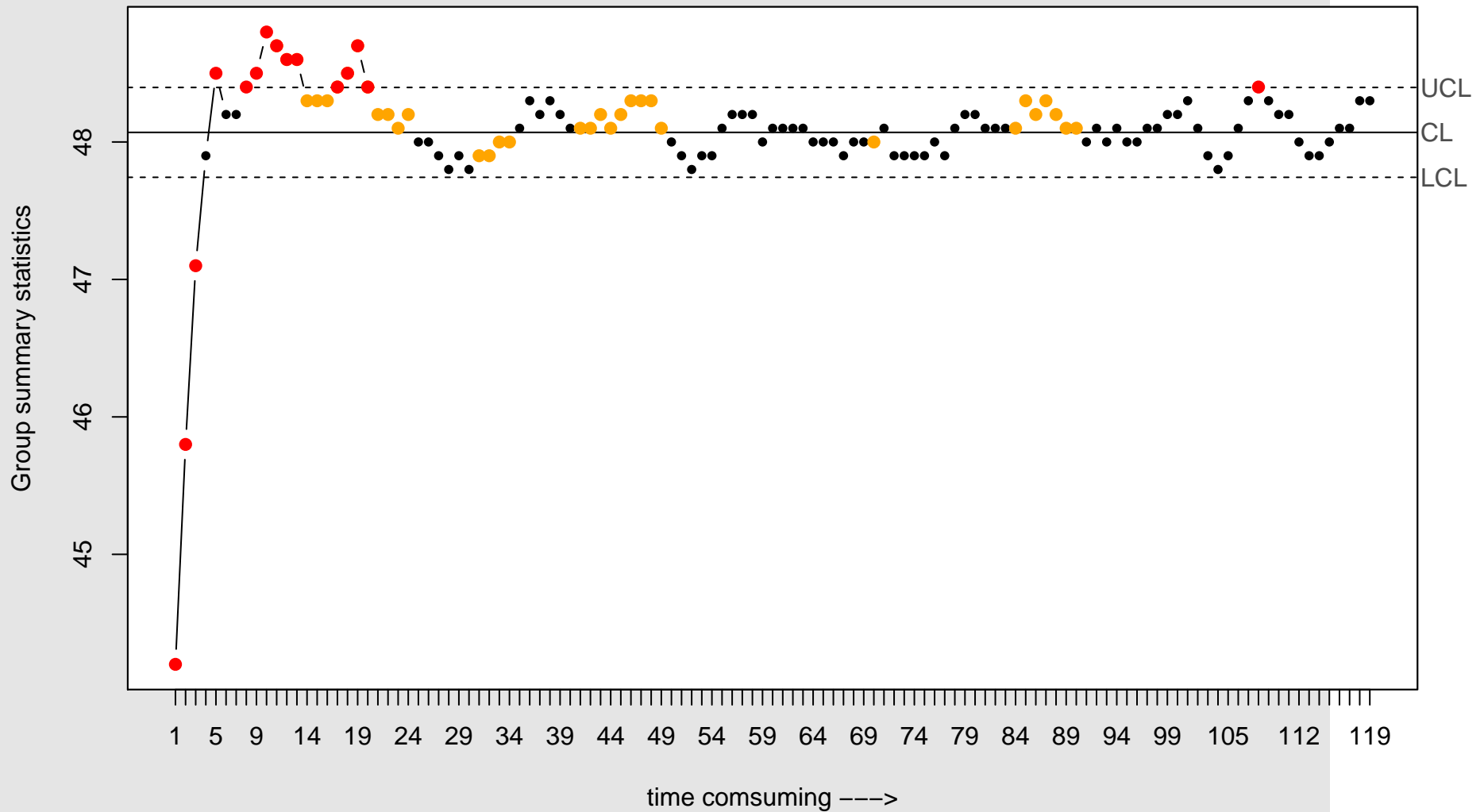
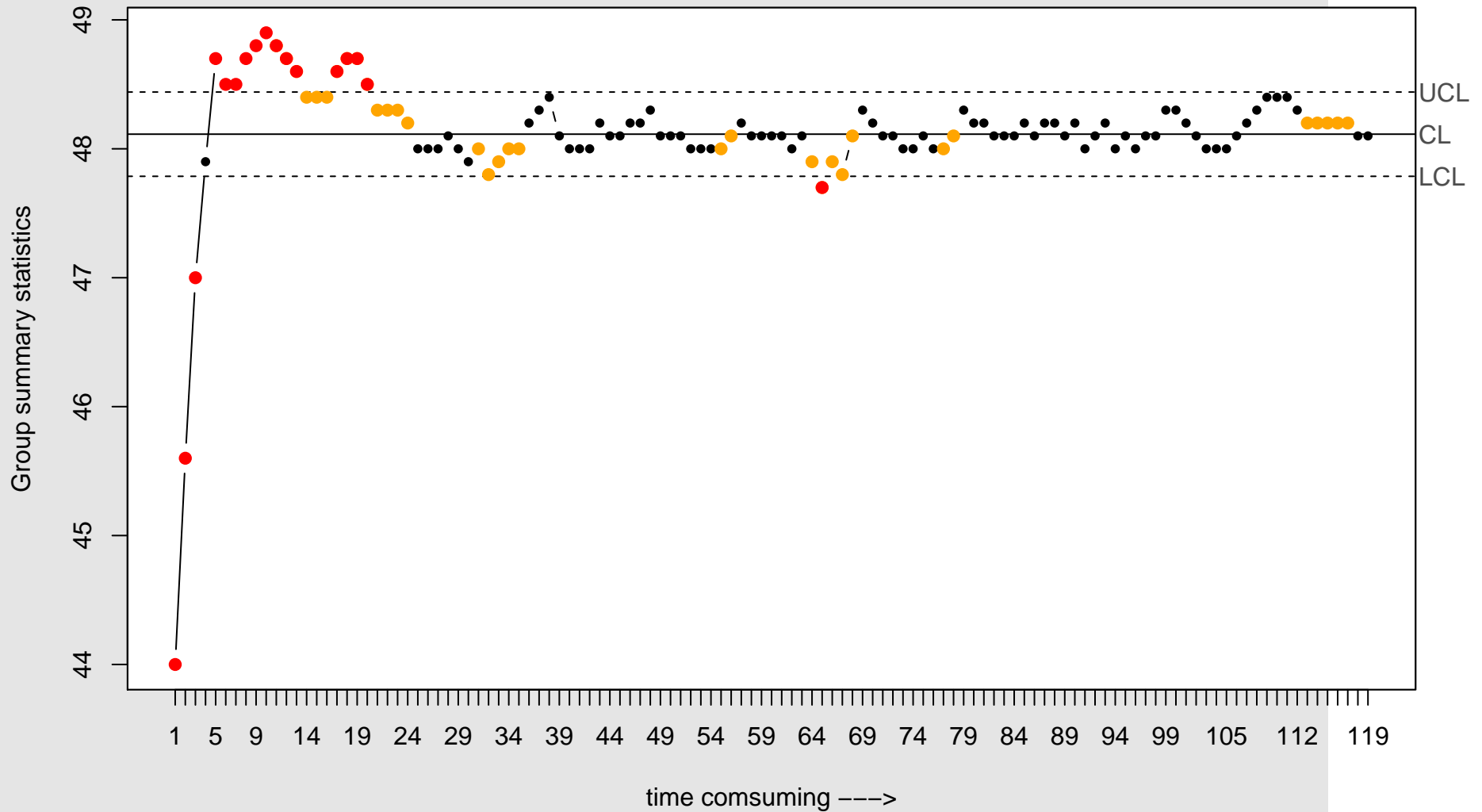Number of groups = 119
Center = 48.06975
StdDev = 0.1089374

LCL = 47.74294
UCL = 48.39656

Number beyond limits = 15
Number violating runs = 35

303th column point of this product

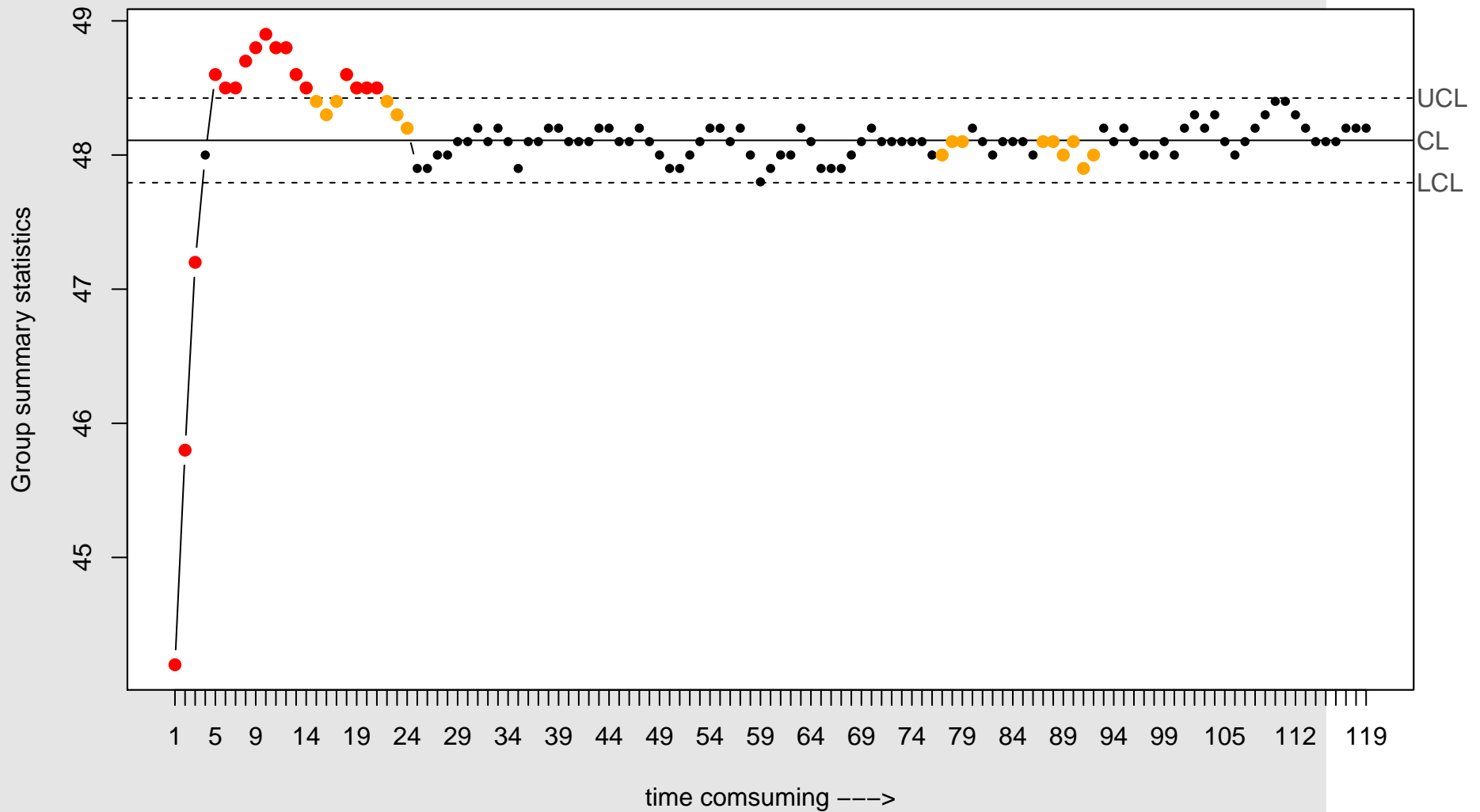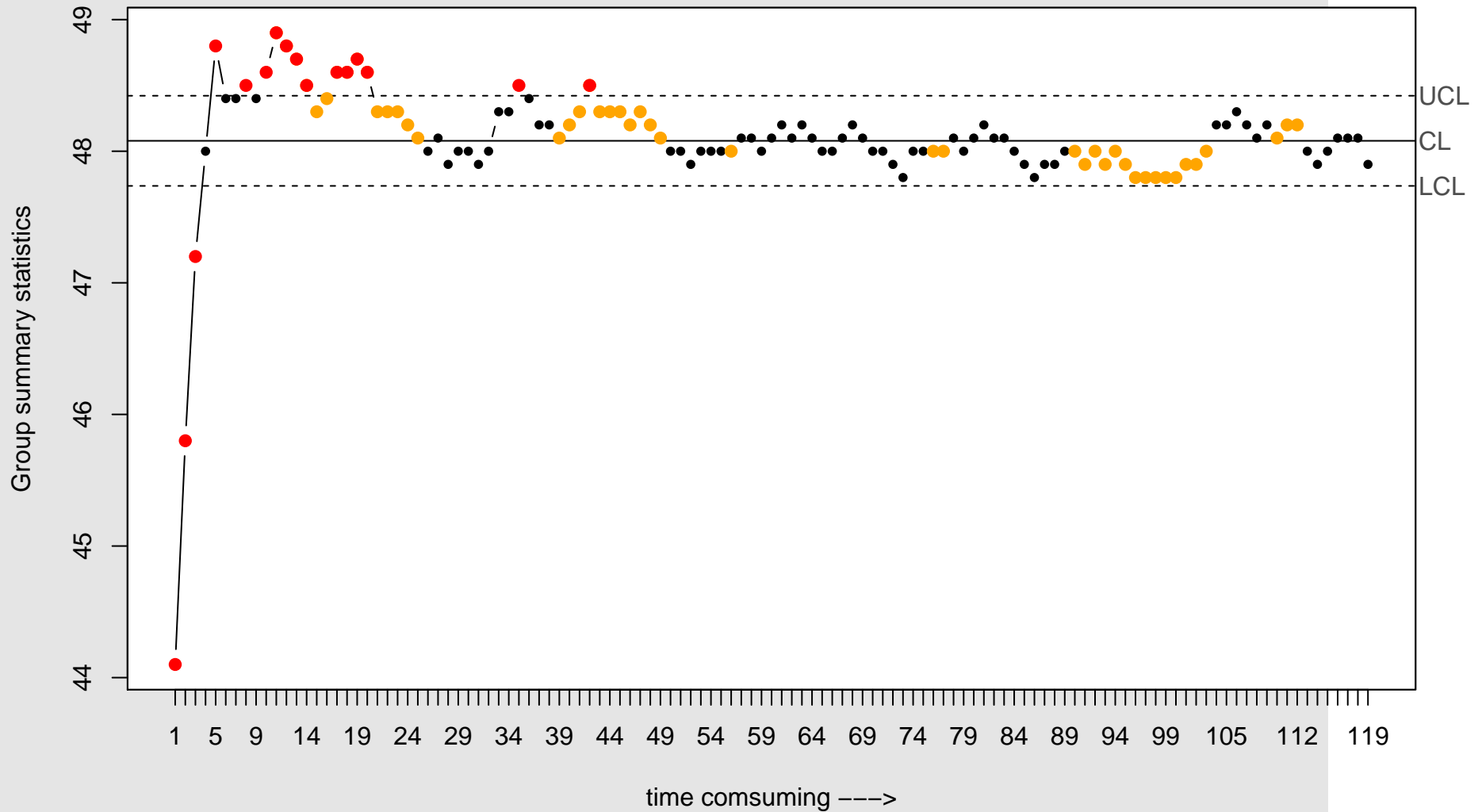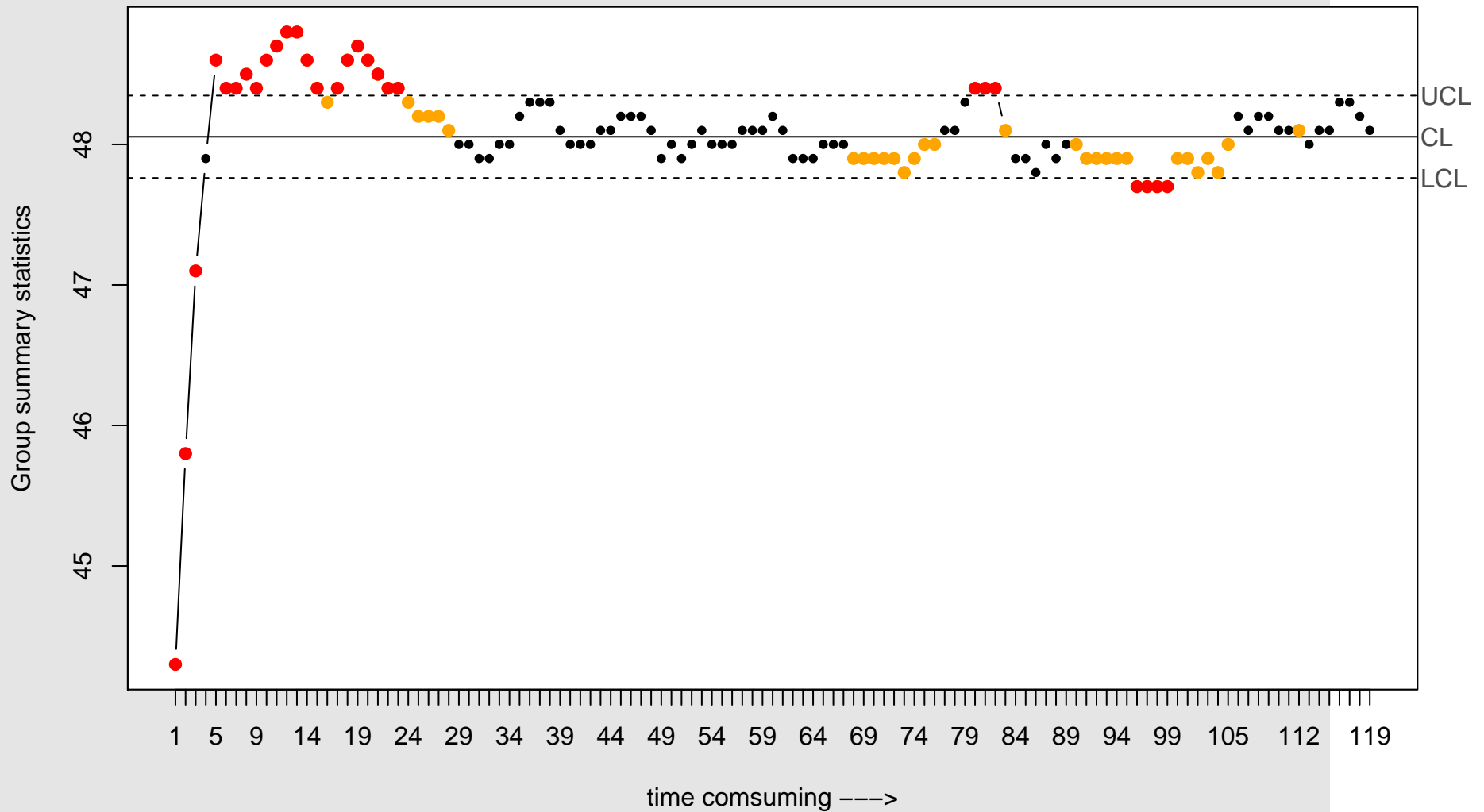

Number of groups = 119
Center = 48.11345   LCL = 47.78663   Number beyond limits = 17
StdDev = 0.1089374   UCL = 48.44026   Number violating runs = 33

304th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 48.10924   LCL = 47.7937   Number beyond limits = 17
StdDev = 0.1051809   UCL = 48.42479   Number violating runs = 23

305th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 48.07899
StdDev = 0.1141964

LCL = 47.7364
UCL = 48.42158

Number beyond limits = 16
Number violating runs = 46

306th column point of this product

Group summary statistics

time comsuming ———>

Number of groups = 119
Center = 48.05462   LCL = 47.76162   Number beyond limits = 28
StdDev = 0.09766799   UCL = 48.34763   Number violating runs = 45

307th column point of this product

Group summary statistics

time comsuming –––>
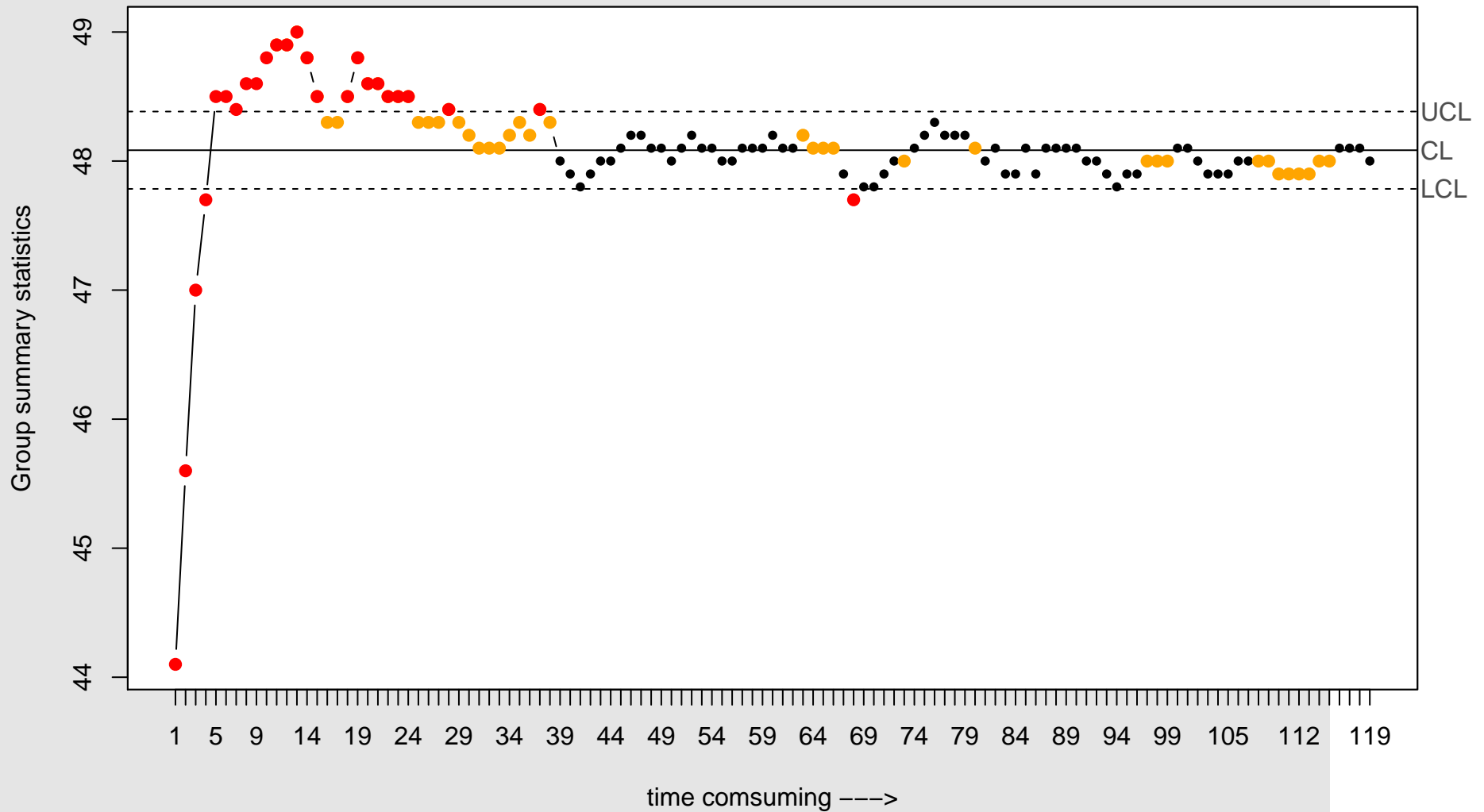
Number of groups = 119
Center = 48.08403   LCL = 47.78427   Number beyond limits = 25
StdDev = 0.09992187   UCL = 48.3838   Number violating runs = 45

308th column point of this product

Group summary statistics

time comsuming ---->
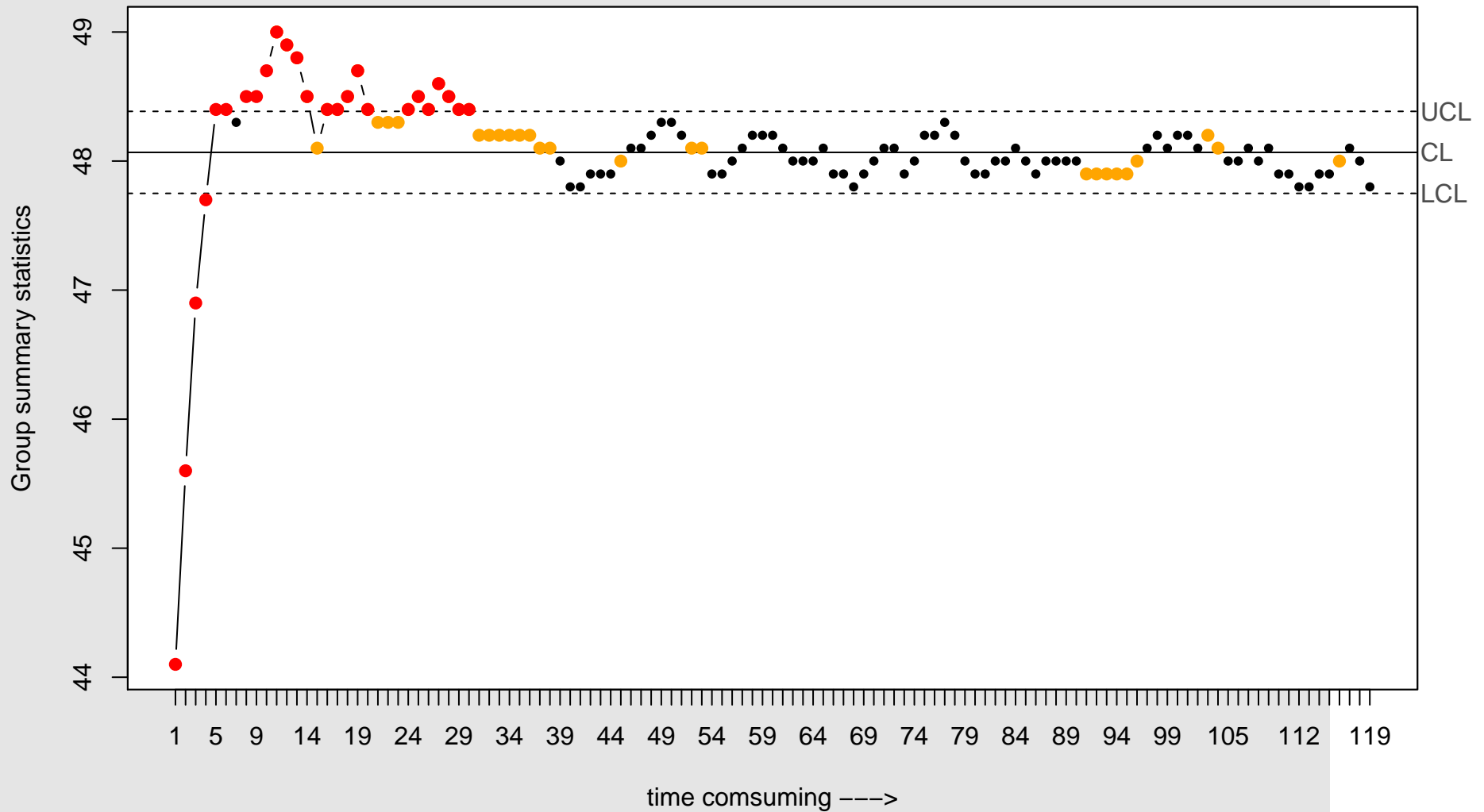
Number of groups = 119
Center = 48.06723   LCL = 47.74943   Number beyond limits = 25
StdDev = 0.1059322   UCL = 48.38502   Number violating runs = 40

309th column point of this product

Group summary statistics

time comsuming ----->
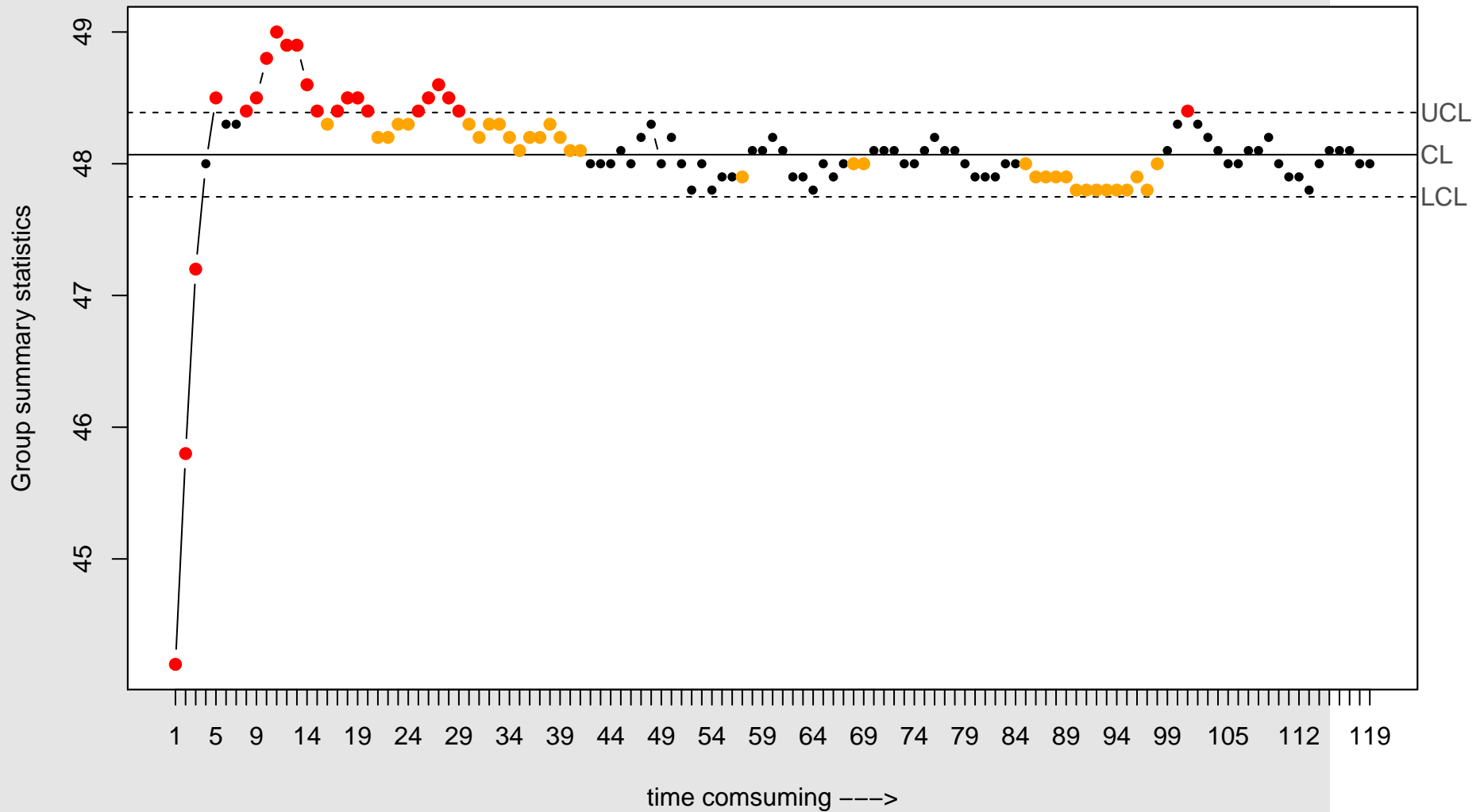
Number of groups = 119
Center = 48.06891   LCL = 47.74886   Number beyond limits = 22
StdDev = 0.1066835   UCL = 48.38896   Number violating runs = 48

310th column point of this product
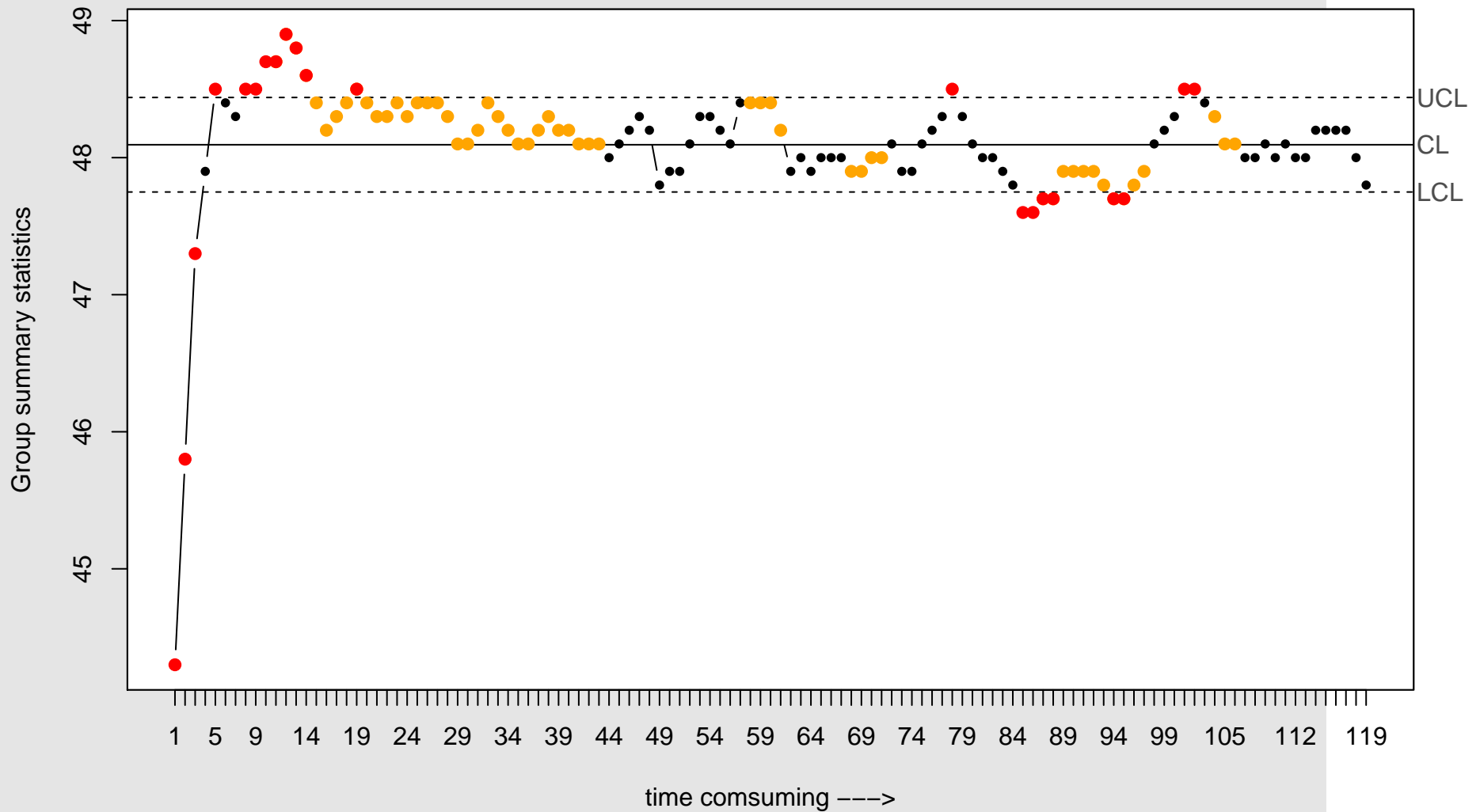
Number of groups = 119
Center = 48.09412   LCL = 47.74927   Number beyond limits = 21
StdDev = 0.1149477   UCL = 48.43896   Number violating runs = 55

311th column point of this product

Group summary statistics

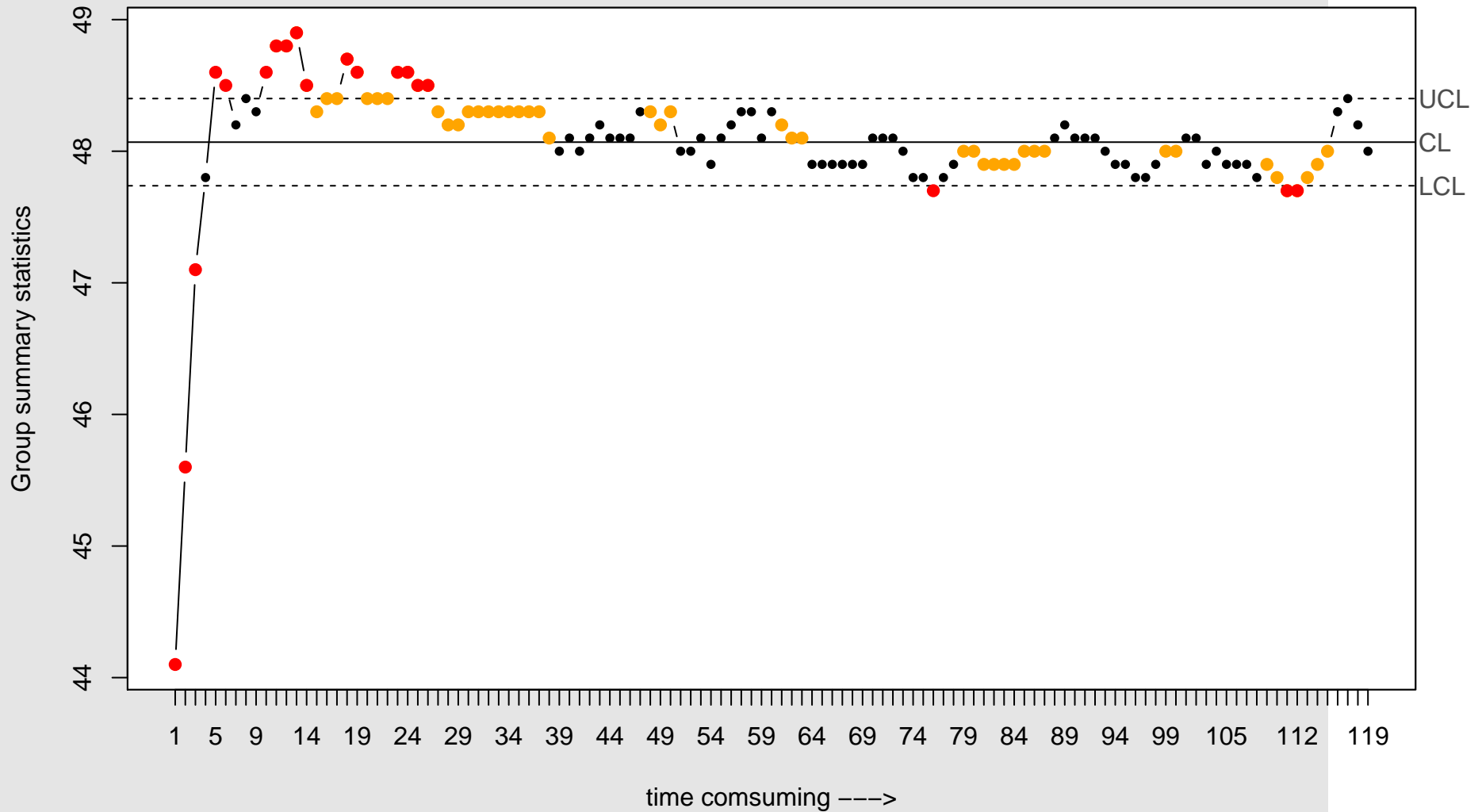time comsuming ––––>
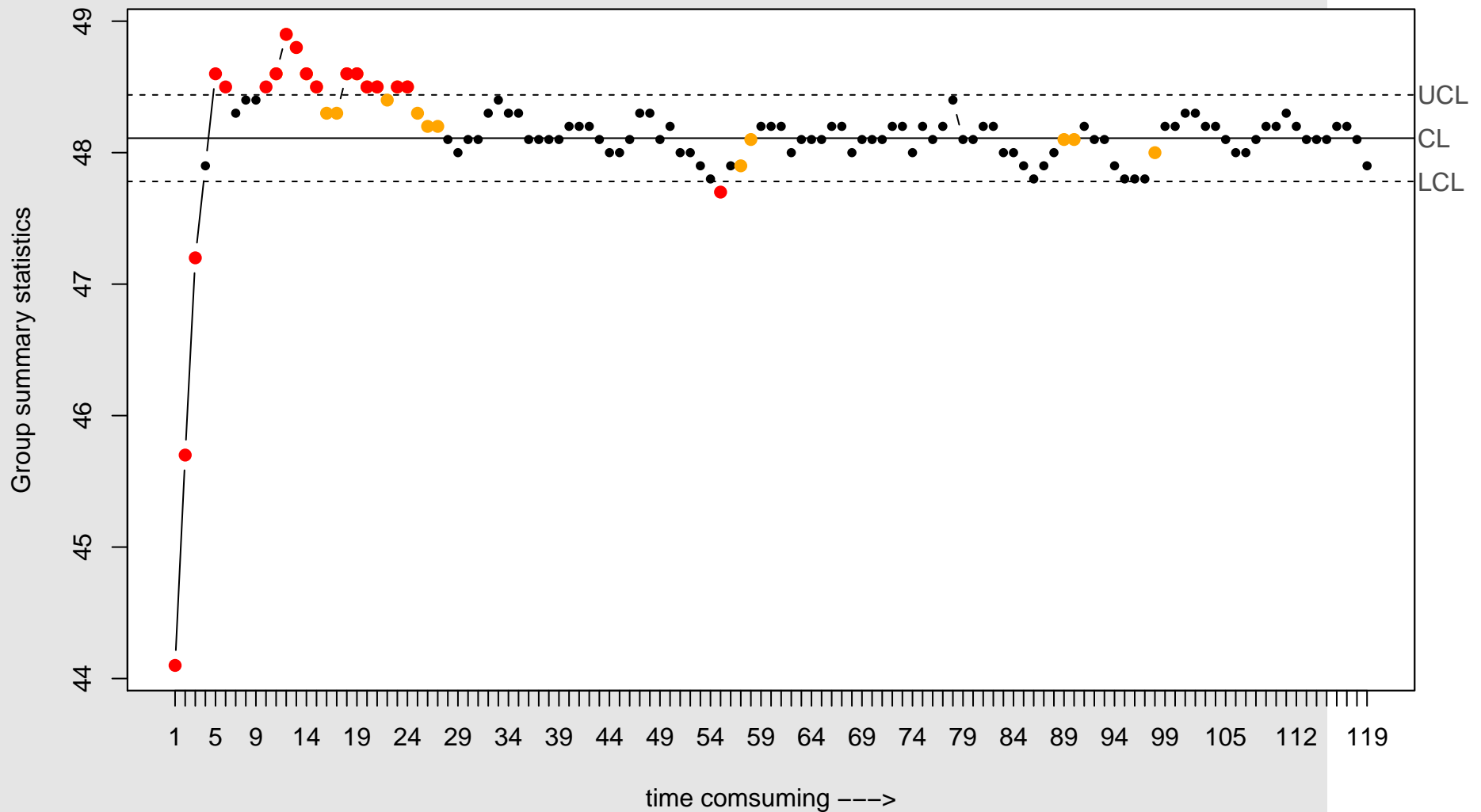
Number of groups = 119
Center = 48.11008
StdDev = 0.1096887

LCL = 47.78102
UCL = 48.43915

Number beyond limits = 18
Number violating runs = 22

312th column point of this product

Group summary statistics

time comsuming ---->

Number of groups = 119
Center = 48.06891   LCL = 47.73759   Number beyond limits = 19
StdDev = 0.11044   UCL = 48.40023   Number violating runs = 52

313th column point of this product

Group summary statistics

time comsuming ––––>
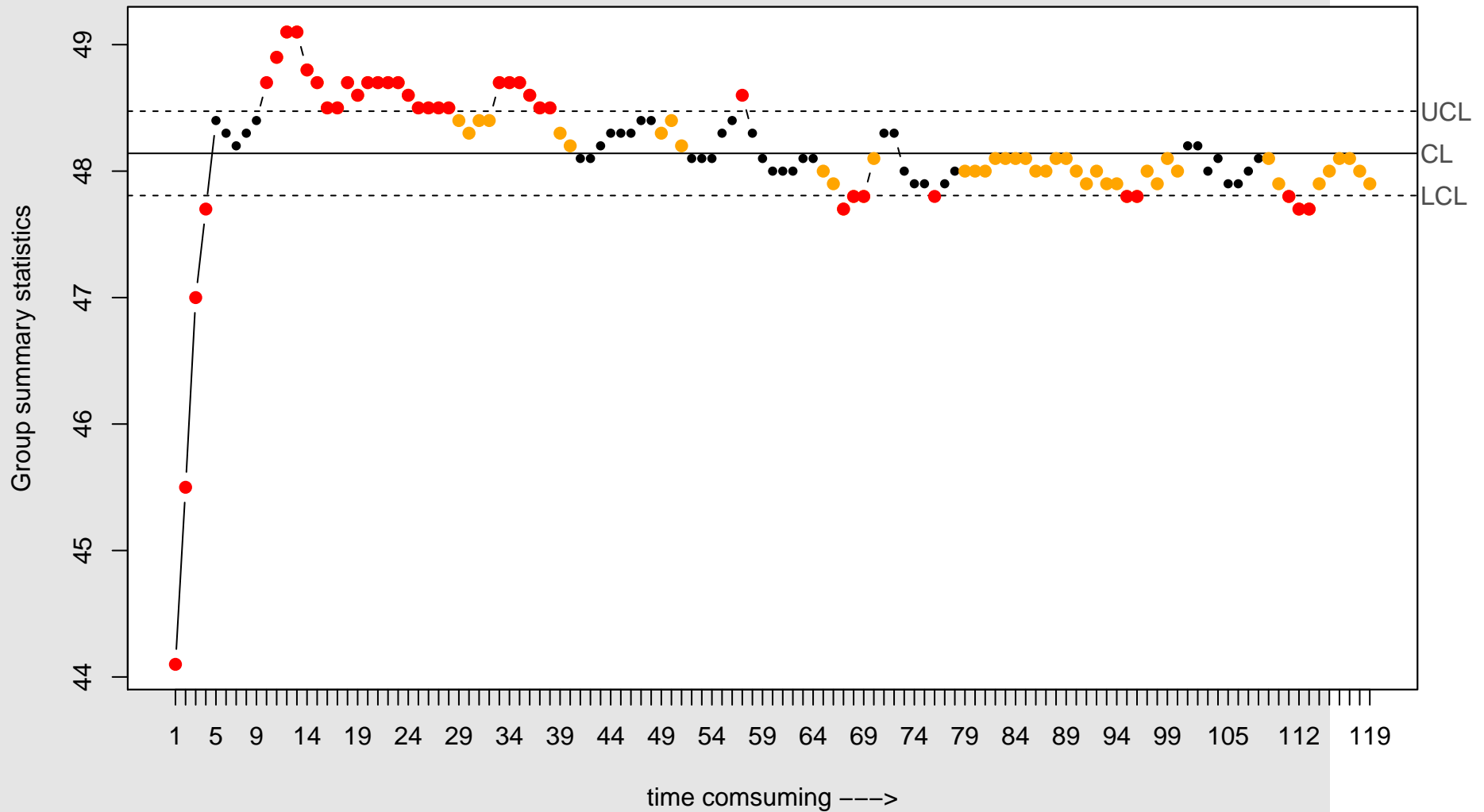
Number of groups = 119
Center = 48.14034   LCL = 47.80676   Number beyond limits = 39
StdDev = 0.1111912   UCL = 48.47391   Number violating runs = 72

314th column point of this product

Group summary statistics

time comsuming ---->
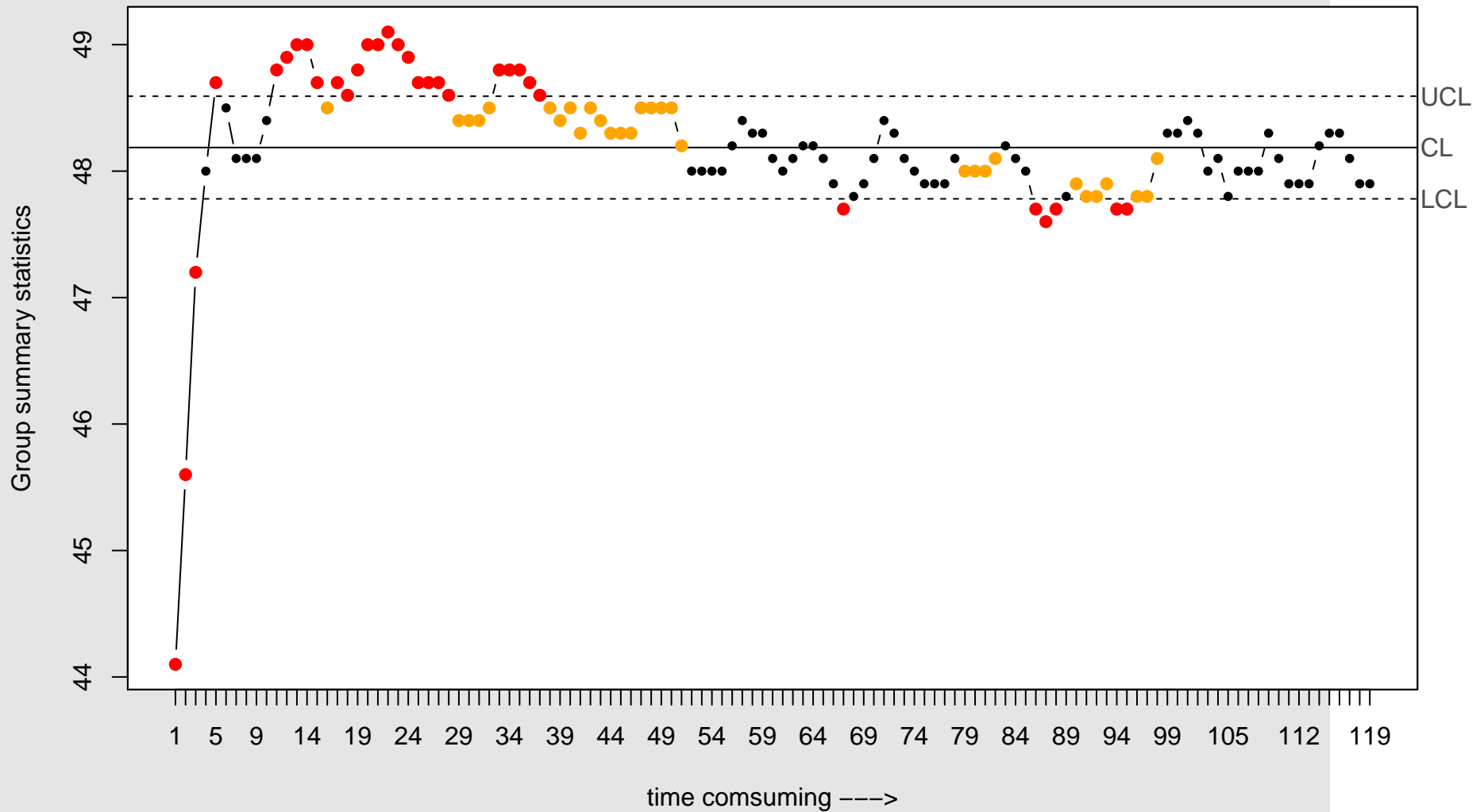
Number of groups = 119
Center = 48.18655   LCL = 47.78086   Number beyond limits = 32
StdDev = 0.1352326   UCL = 48.59225   Number violating runs = 49

315th column point of this product

Group summary statistics

time comsuming ––––>

UCL
CL
LCL
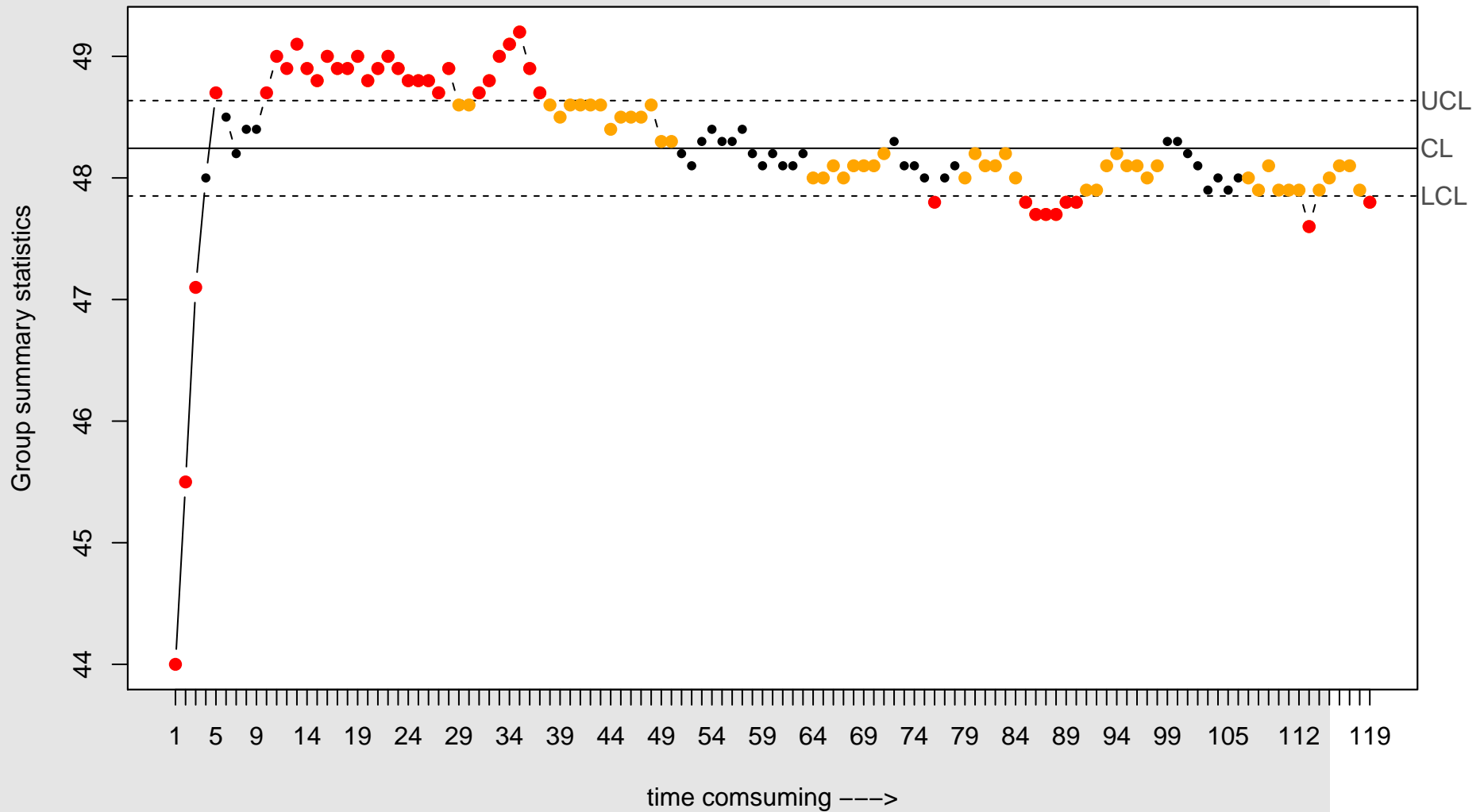
Number of groups = 119
Center = 48.2437   LCL = 47.85152   Number beyond limits = 39
StdDev = 0.1307248   UCL = 48.63587   Number violating runs = 78

316th column point of this product

Group summary statistics

time comsuming ––––>
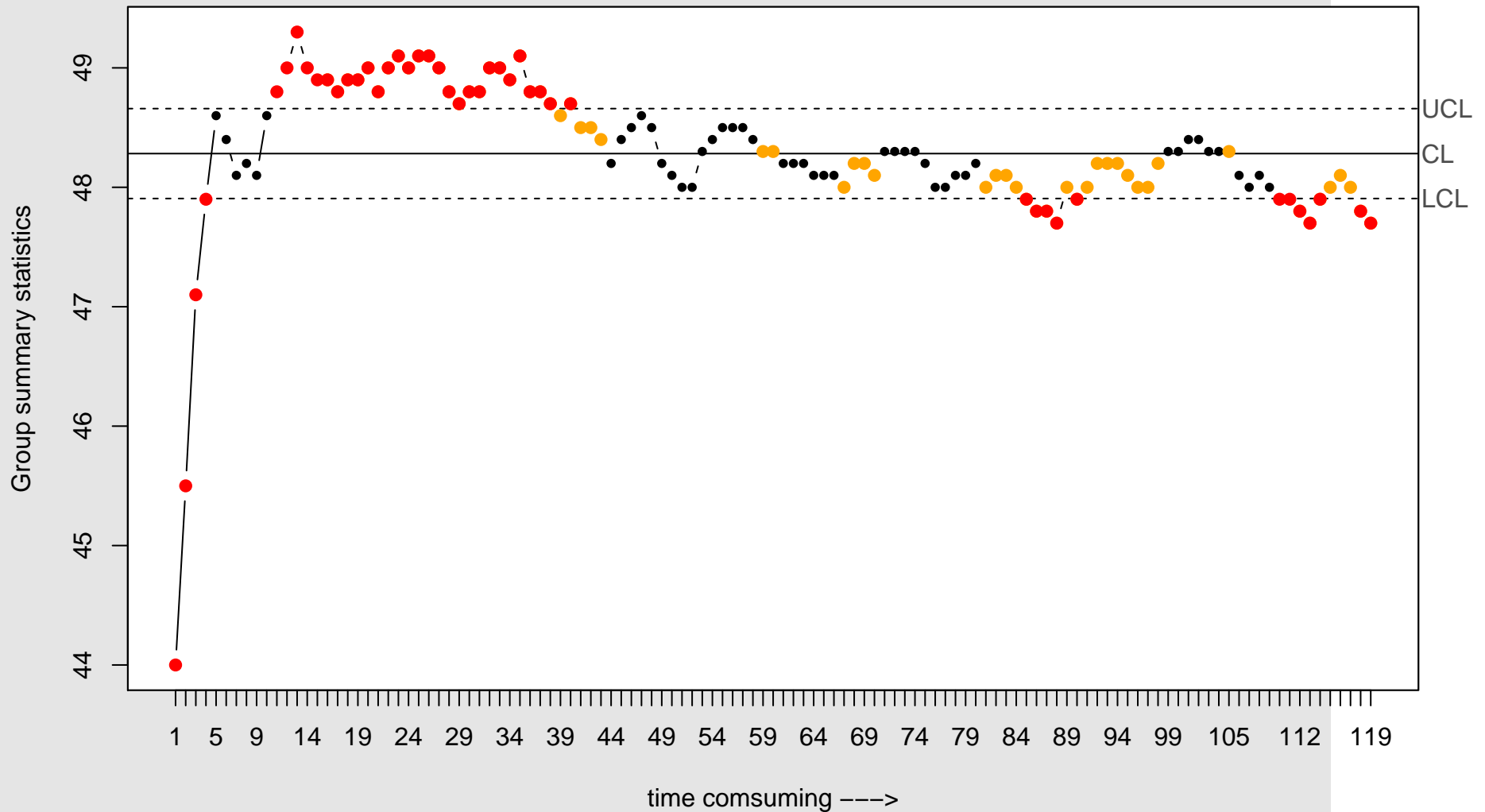
Number of groups = 119
Center = 48.28235   LCL = 47.90596   Number beyond limits = 45
StdDev = 0.1254658   UCL = 48.65875   Number violating runs = 61

317th column point of this product

Group summary statistics

time comsuming ---->
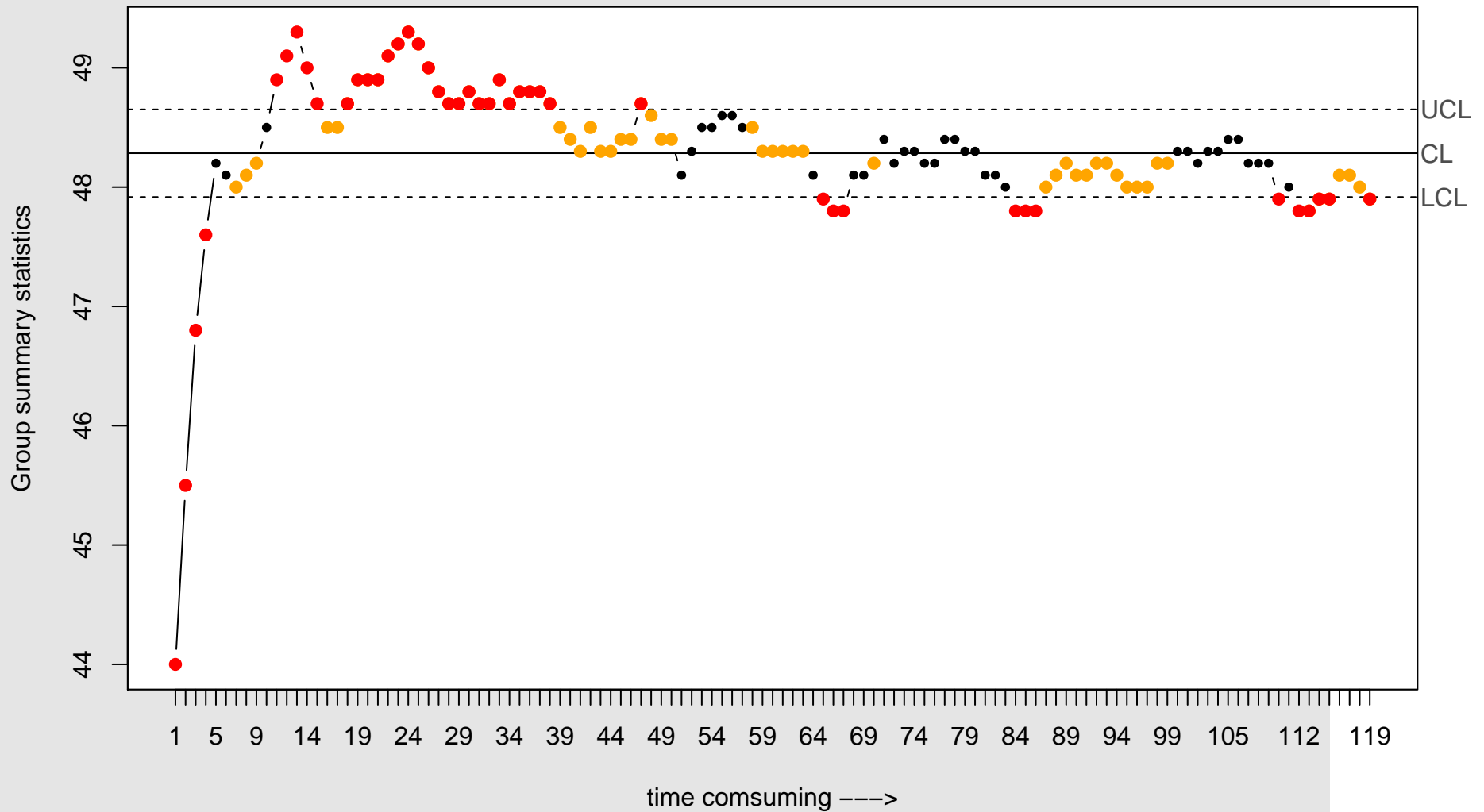
Number of groups = 119
Center = 48.28403   LCL = 47.91665   Number beyond limits = 43
StdDev = 0.1224606   UCL = 48.65142   Number violating runs = 65

318th column point of this product

Group summary statistics

time comsuming ---->
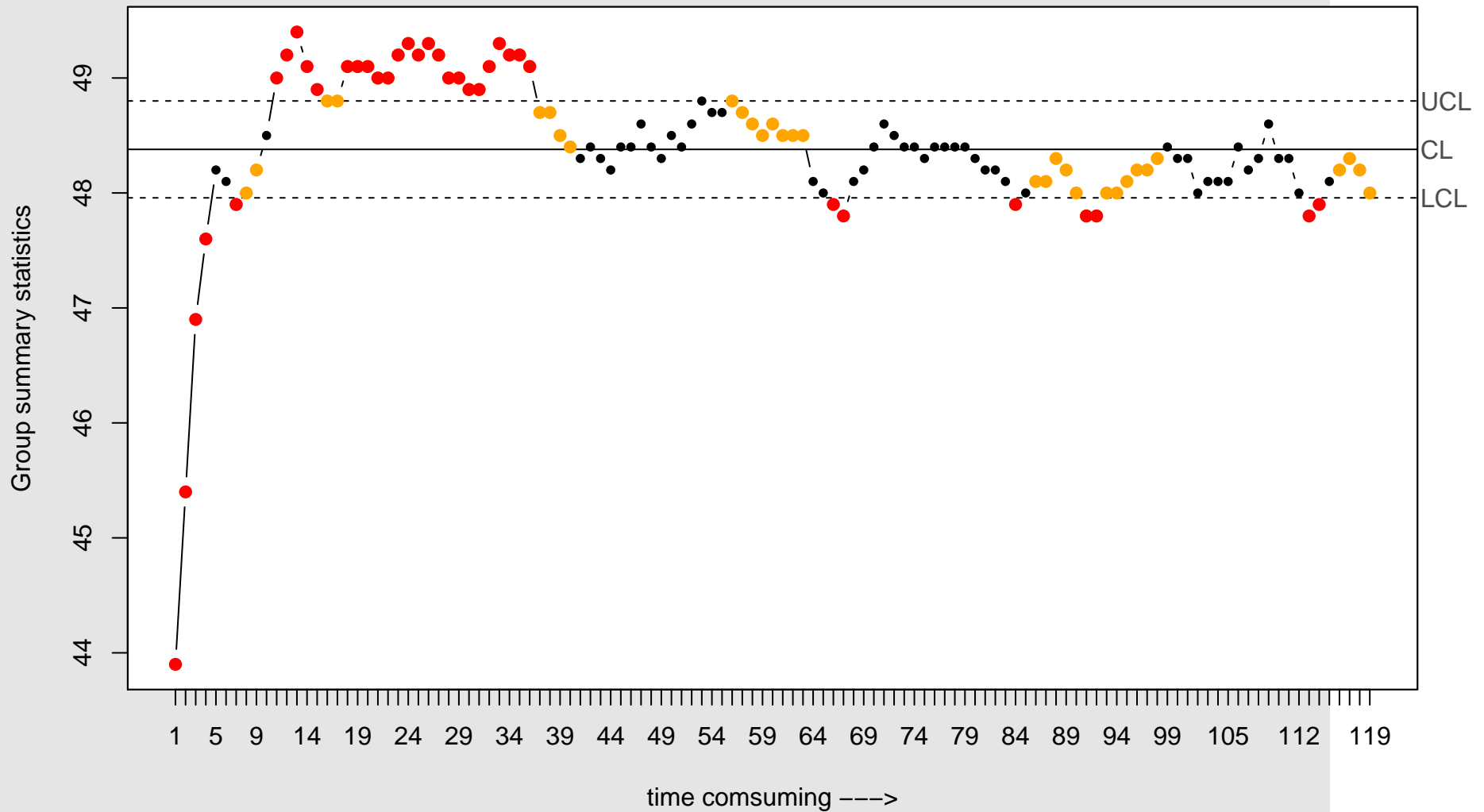
Number of groups = 119
Center = 48.37899   LCL = 47.95752   Number beyond limits = 36
StdDev = 0.1404916   UCL = 48.80047   Number violating runs = 53

319th column point of this product

Group summary statistics

time comsuming –––>
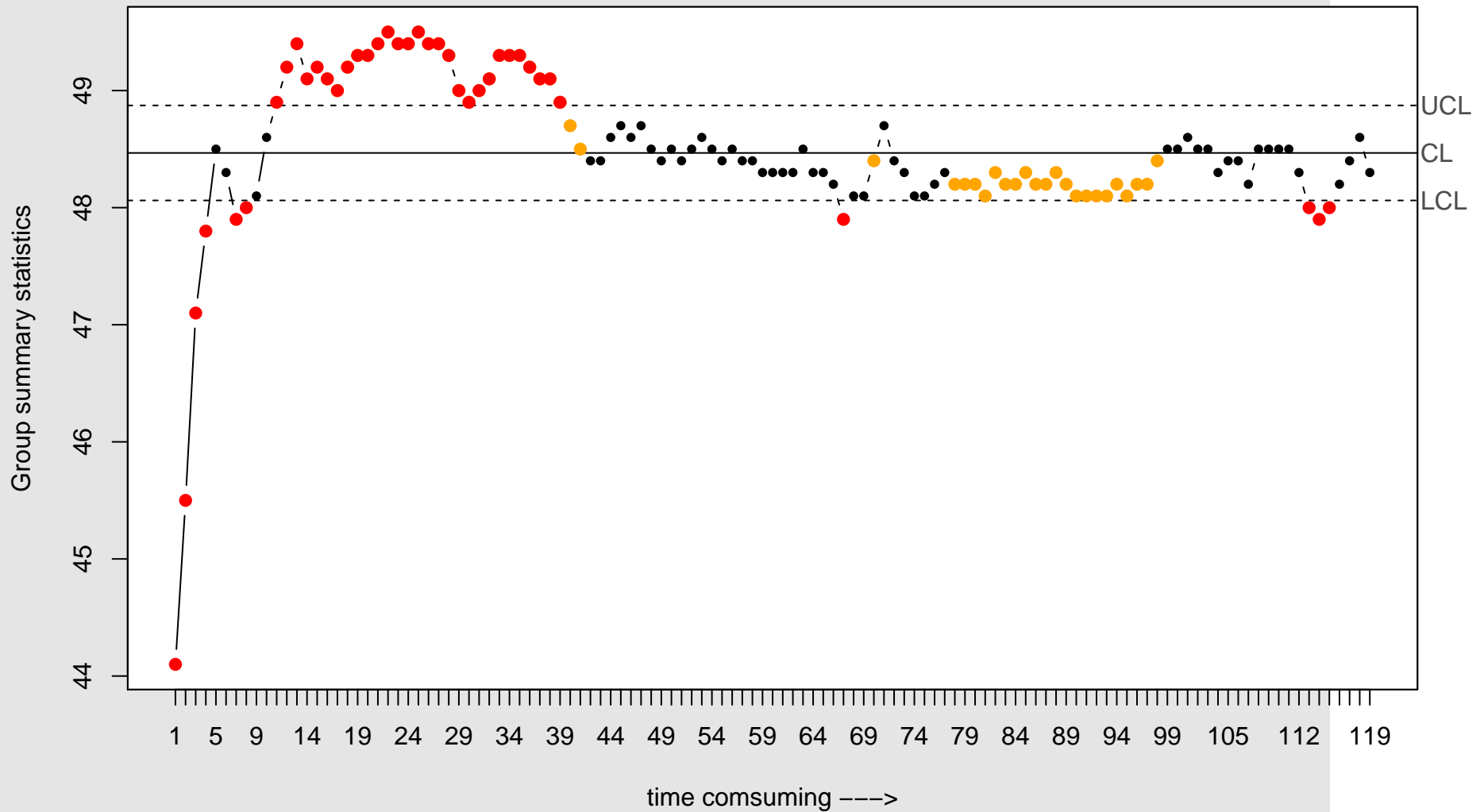
Number of groups = 119
Center = 48.46723   LCL = 48.06153   Number beyond limits = 39
StdDev = 0.1352326   UCL = 48.87292   Number violating runs = 48

320th column point of this product

Group summary statistics

time comsuming ----->
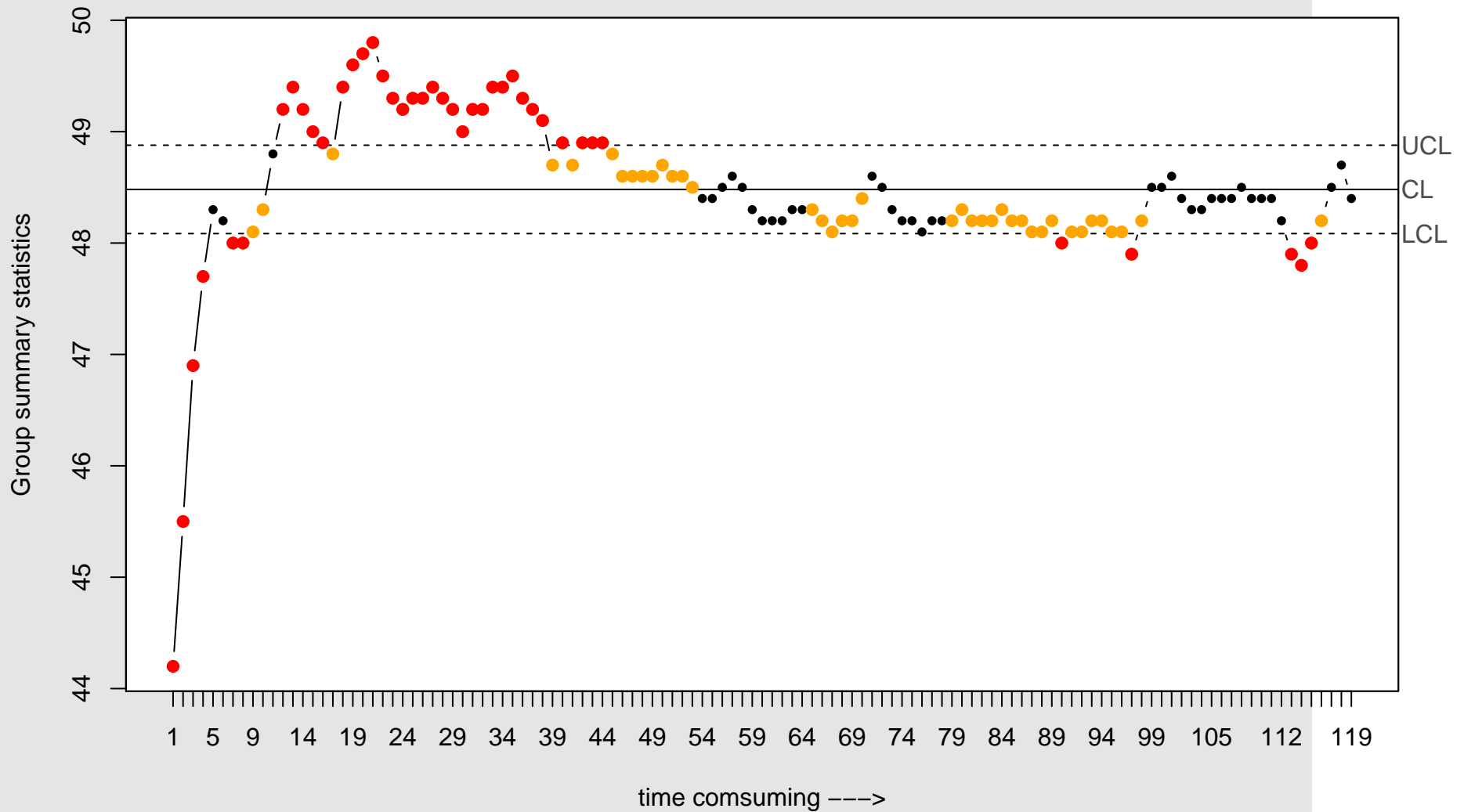
Number of groups = 119
Center = 48.48151   LCL = 48.08483   Number beyond limits = 41
StdDev = 0.1322274   UCL = 48.87819   Number violating runs = 69

321th column point of this product

time comsuming –––>

Group summary statistics
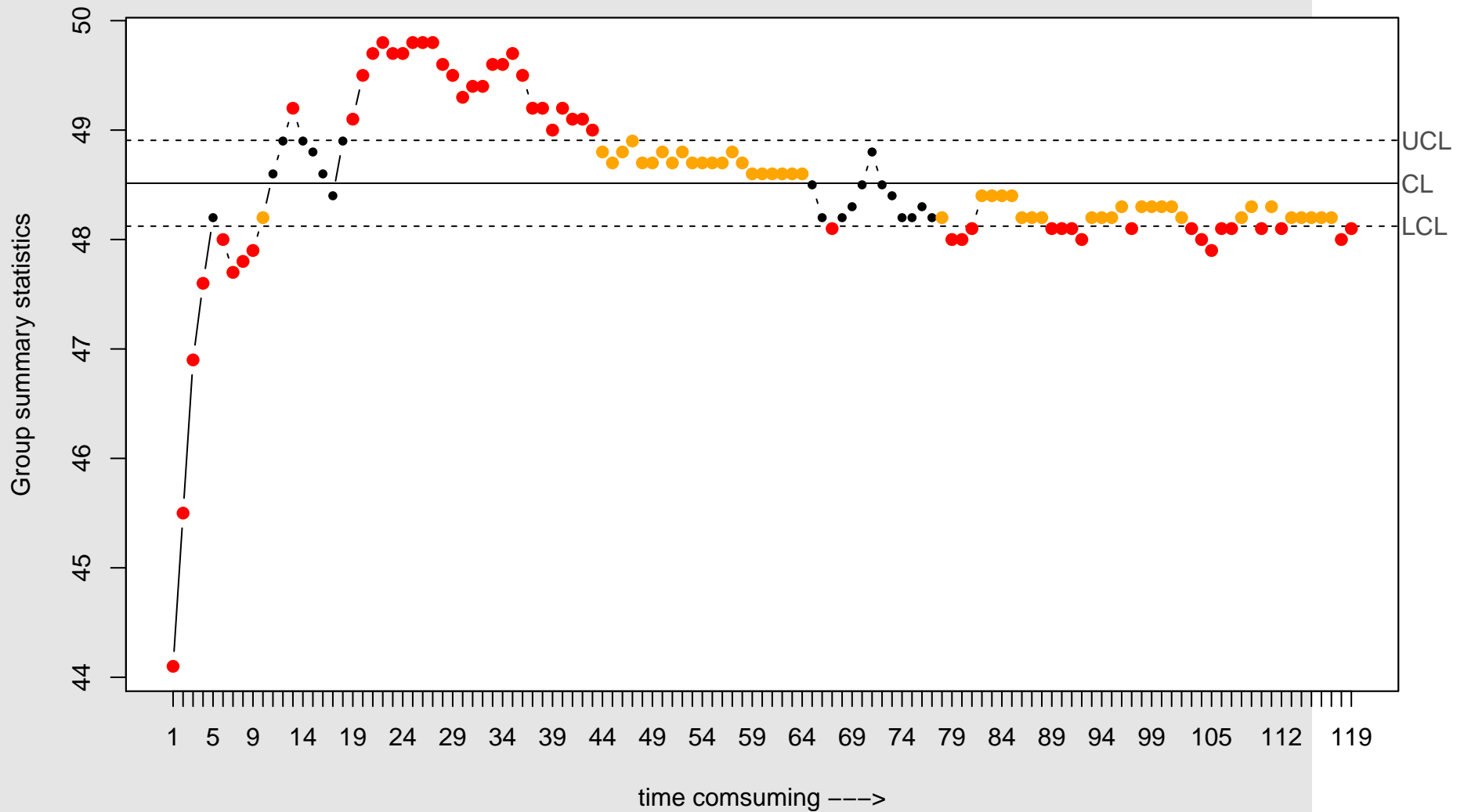
UCL
CL
LCL
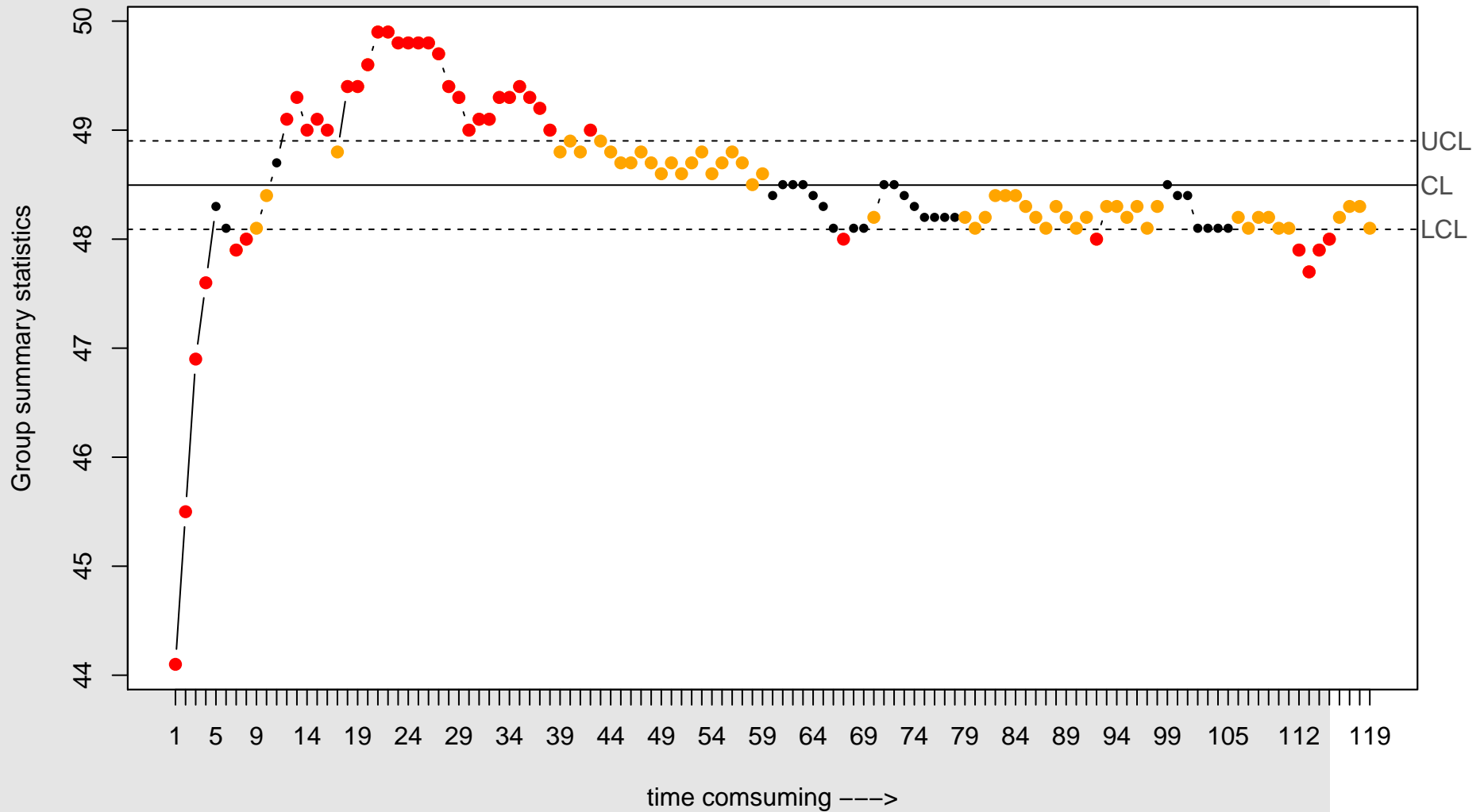
Number of groups = 119
Center = 48.4958
StdDev = 0.1352326

LCL = 48.0901
UCL = 48.9015

Number beyond limits = 39
Number violating runs = 82

322th column point of this product

Group summary statistics

time comsuming ––––>

Number of groups = 119
Center = 48.51429
StdDev = 0.1307248

LCL = 48.12211
UCL = 48.90646

Number beyond limits = 52
Number violating runs = 87