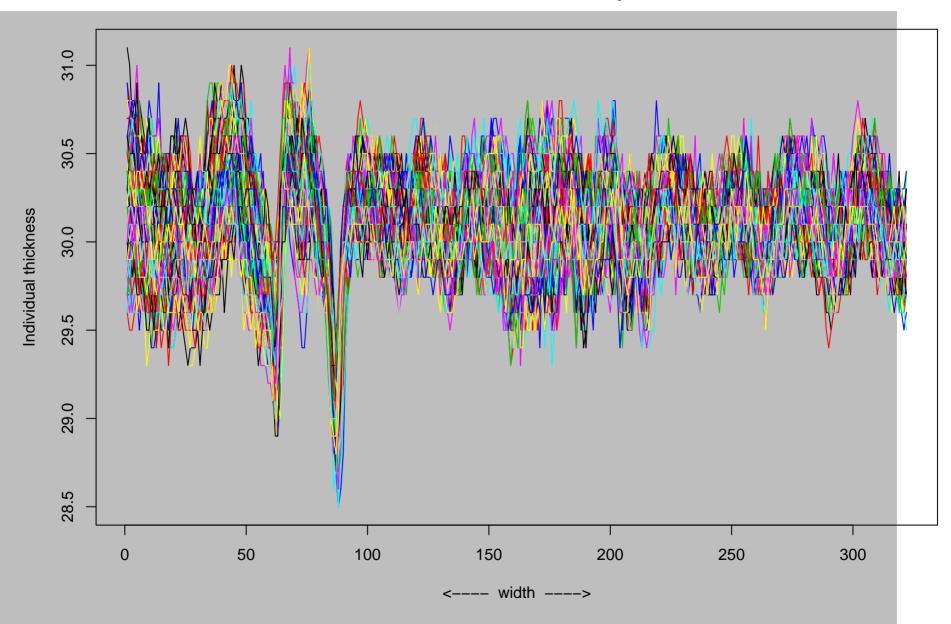
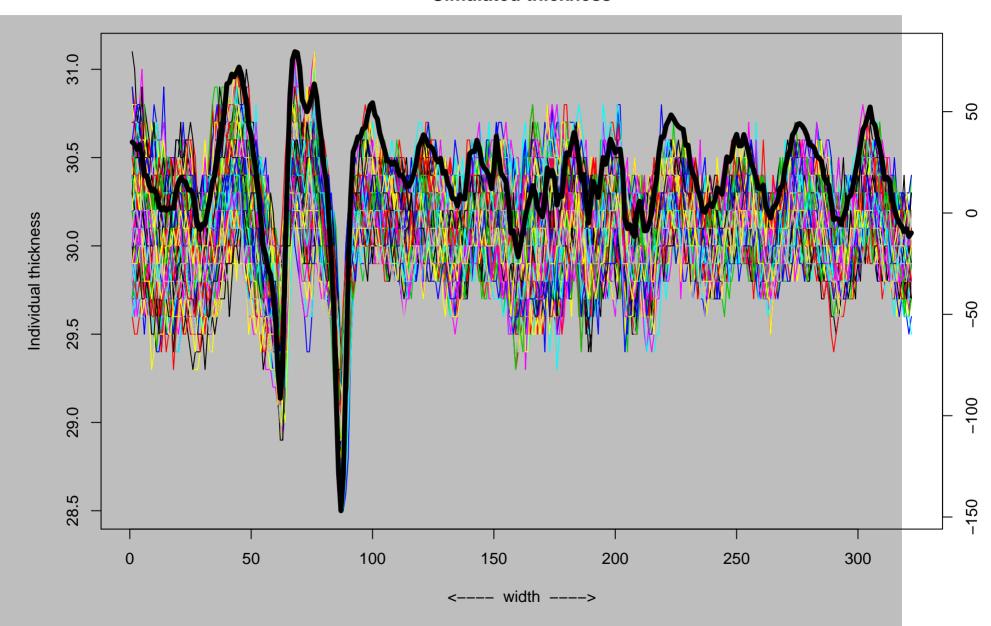
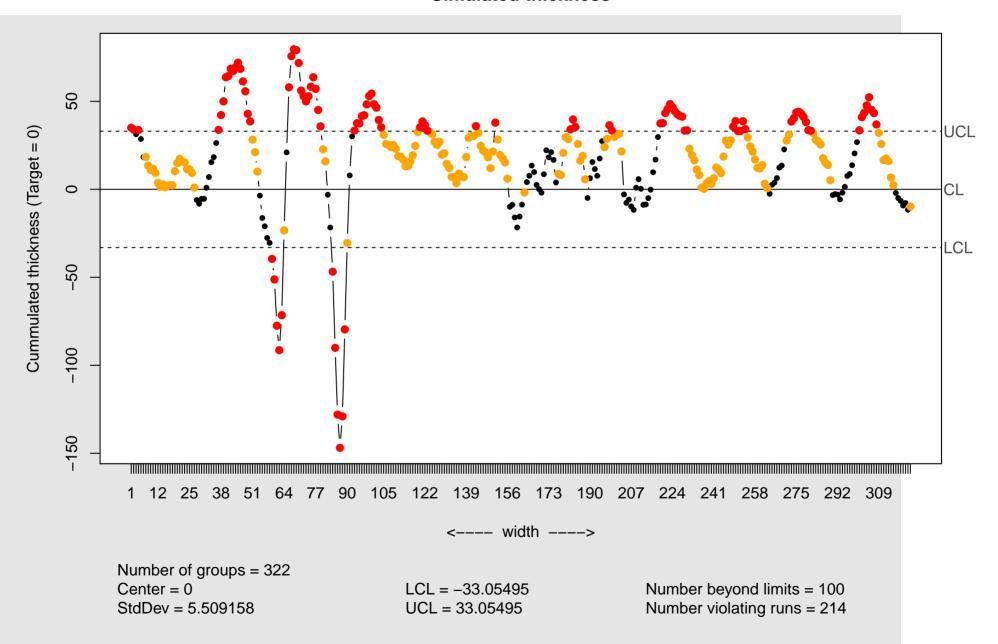
# Individual thickness only



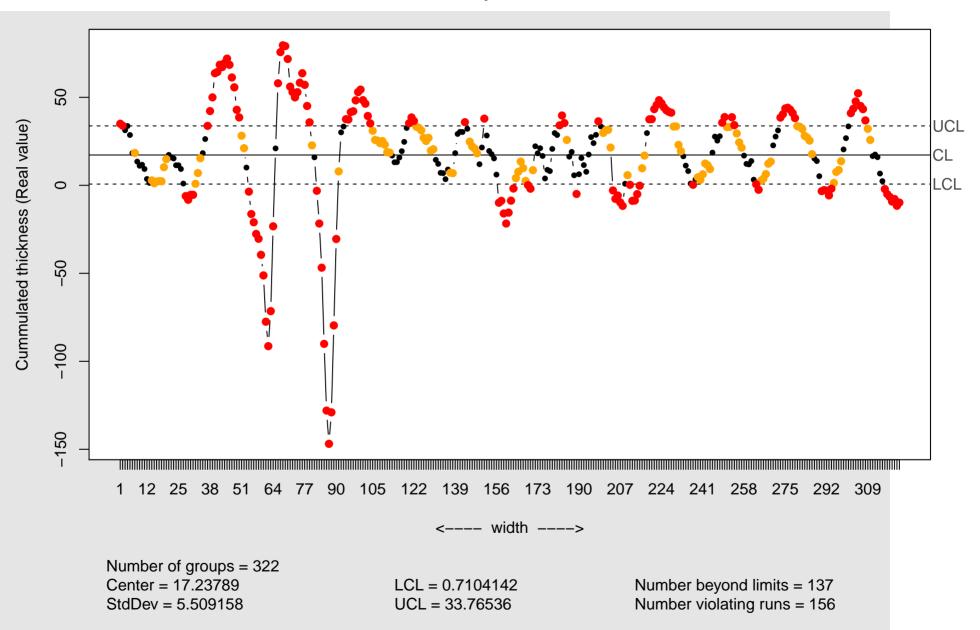
# Simulated thickness



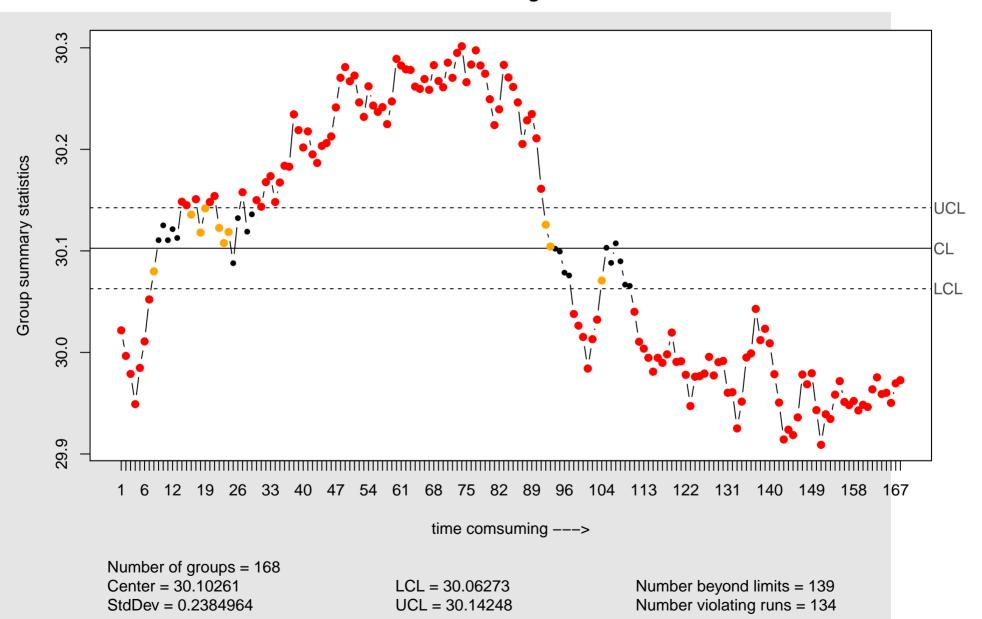
#### Simulated thickness



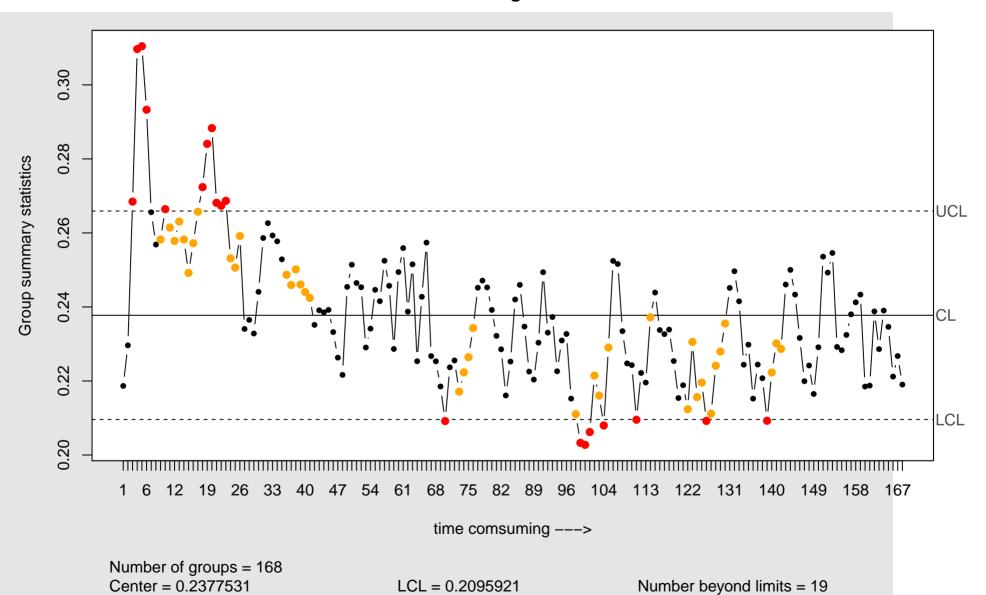
### Simulated thickness: Cpk is 0.1826 and z is -0.9523.



### X-bar chart for a given dataset



## S chart for a given dataset

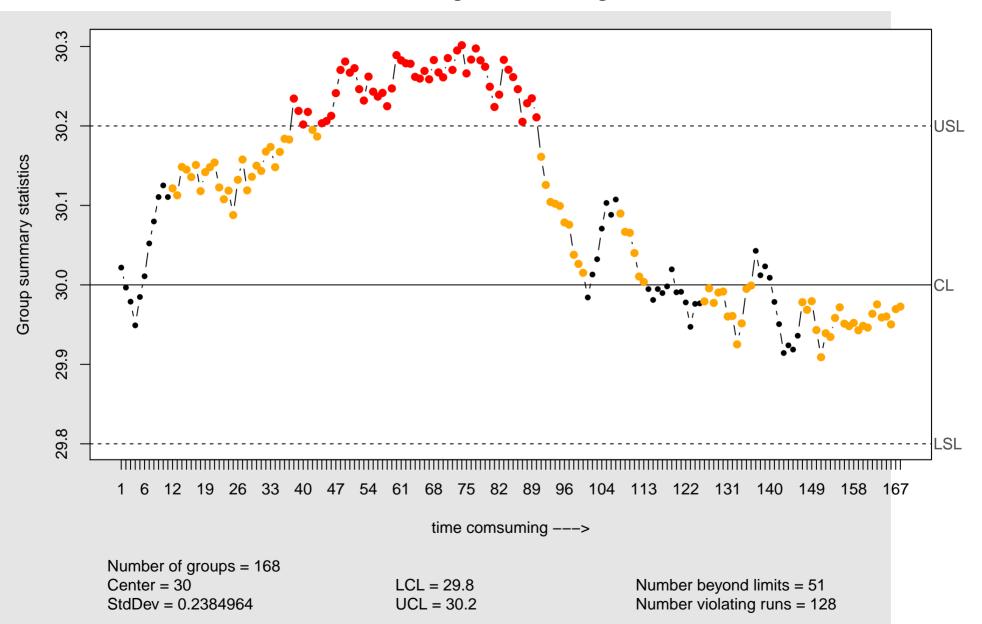


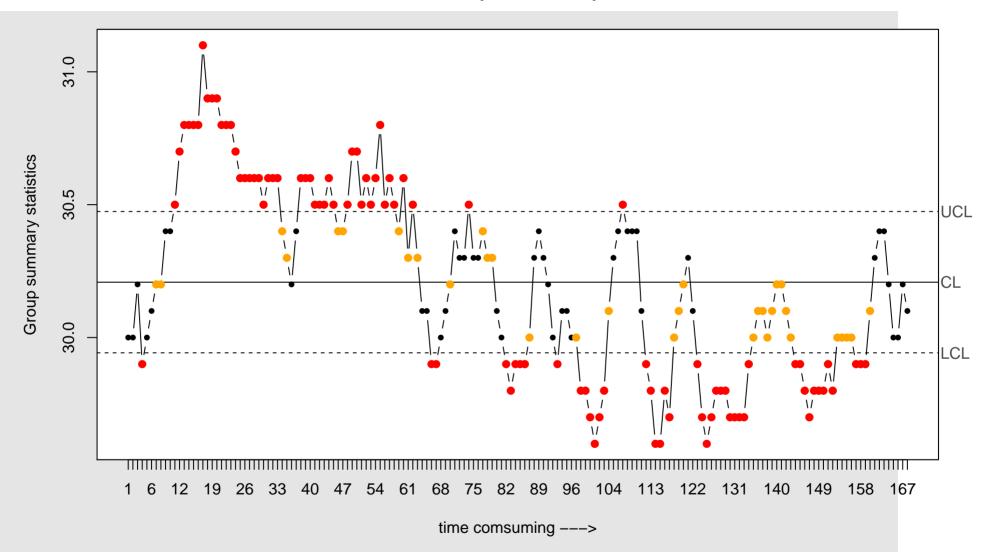
UCL = 0.2659142

Number violating runs = 49

StdDev = 0.2379384

### X-bar chart using USL/LSL for a given dataset

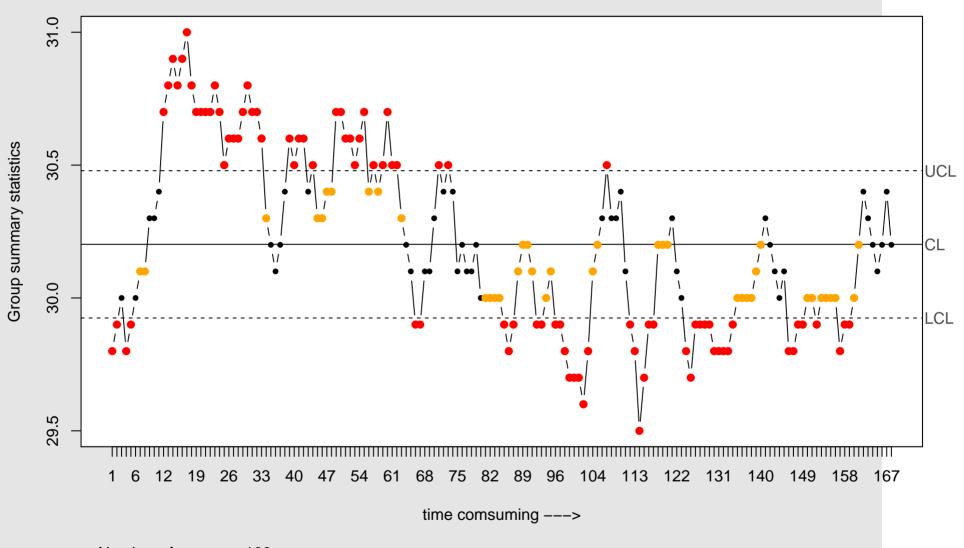




Number of groups = 168 Center = 30.20833

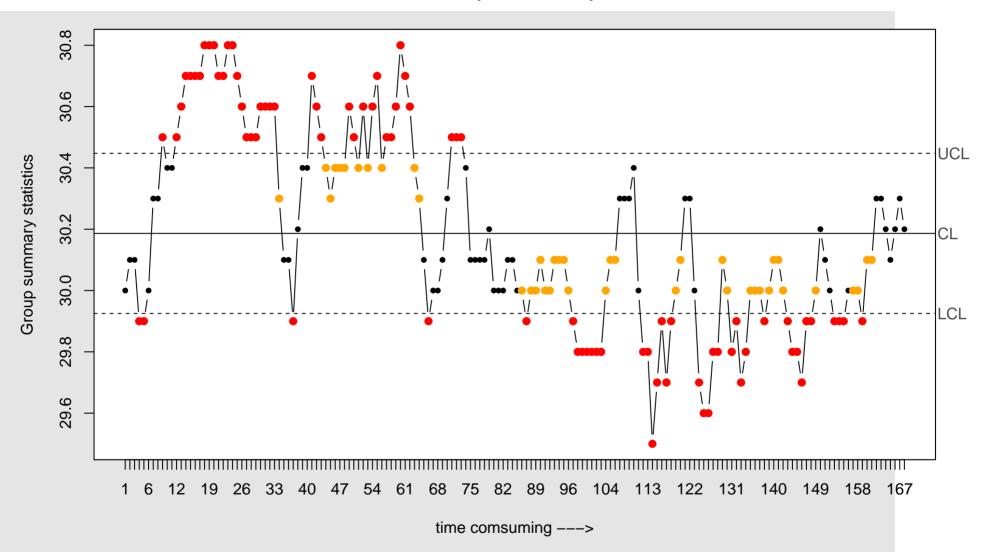
StdDev = 0.08865248

LCL = 29.94238 UCL = 30.47429 Number beyond limits = 91 Number violating runs = 95



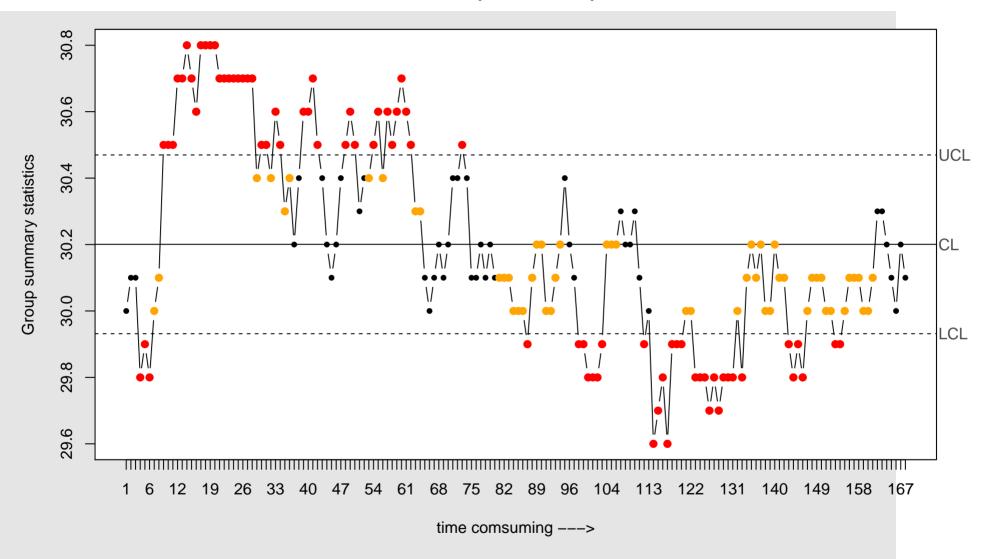
Number of groups = 168 Center = 30.20179 StdDev = 0.09236845

LCL = 29.92468 UCL = 30.47889 Number beyond limits = 86 Number violating runs = 98



Number of groups = 168 Center = 30.18631 StdDev = 0.08705992

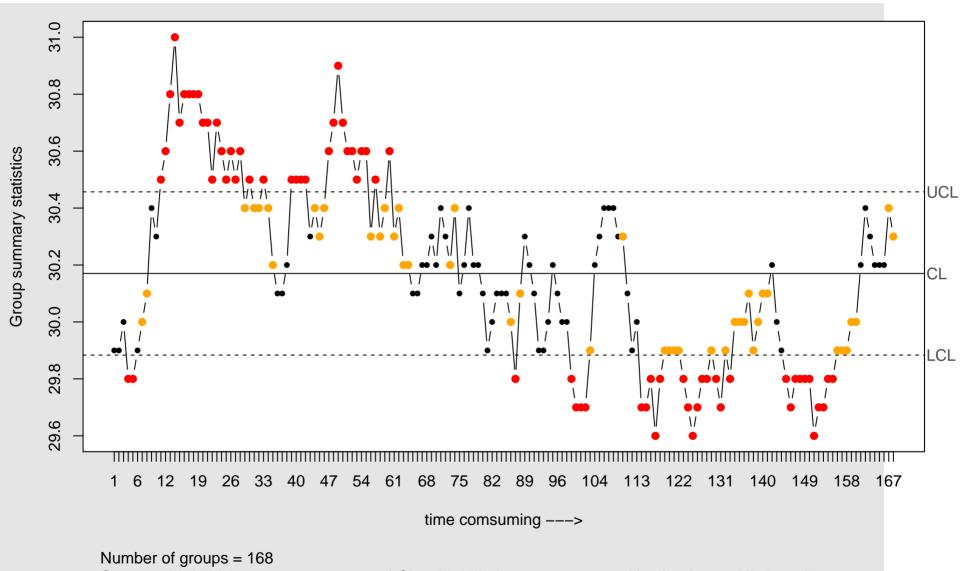
LCL = 29.92513 UCL = 30.44749 Number beyond limits = 79 Number violating runs = 94



Number of groups = 168 Center = 30.2006 StdDev = 0.08971419

LCL = 29.93145 UCL = 30.46974

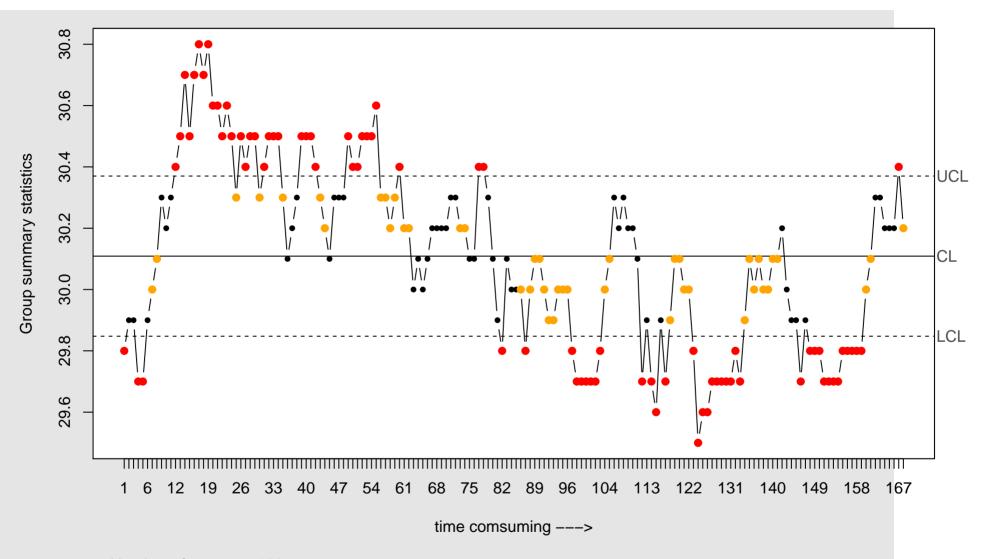
Number beyond limits = 74 Number violating runs = 100



Number of groups = 168 Center = 30.17024 StdDev = 0.09555357

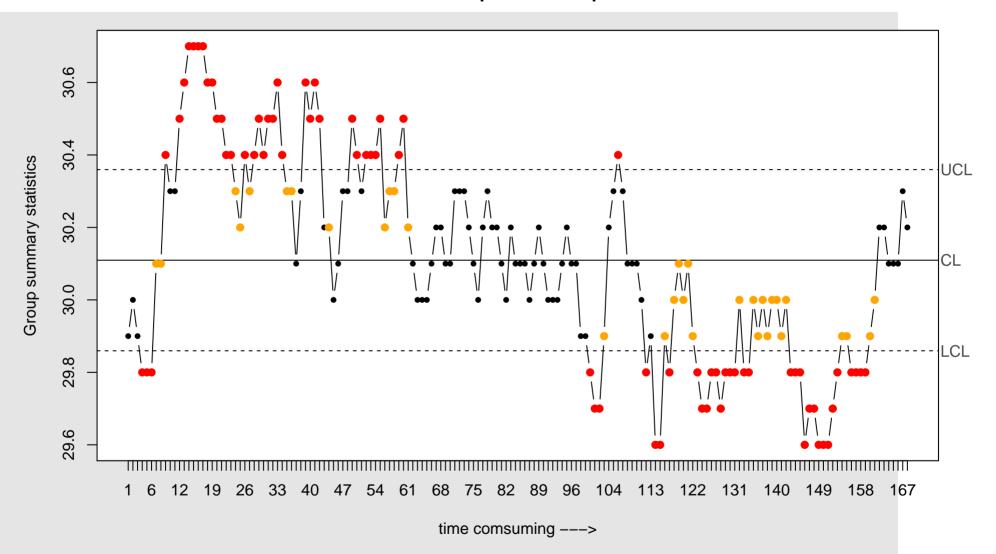
LCL = 29.88358 UCL = 30.4569

Number beyond limits = 67 Number violating runs = 91



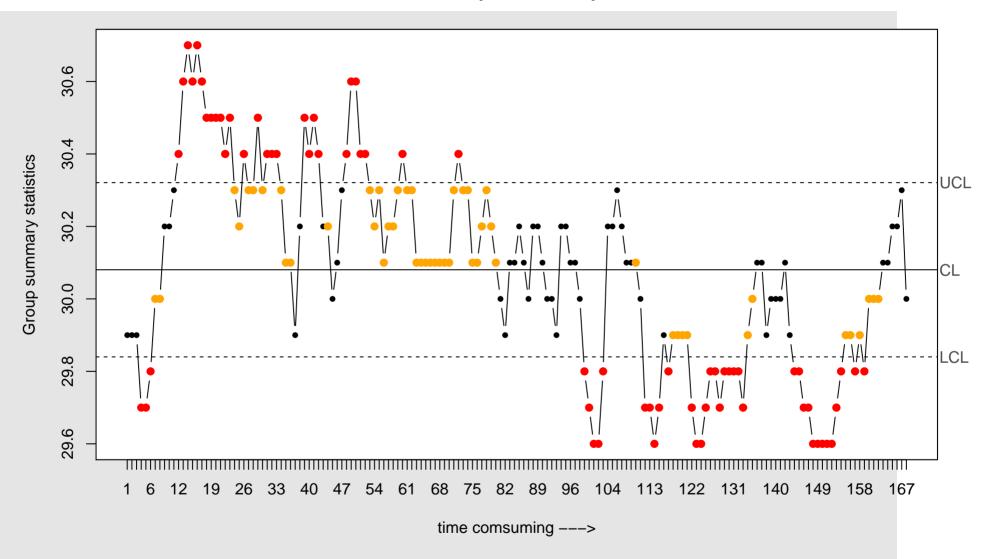
Number of groups = 168 Center = 30.10893 StdDev = 0.08705992

LCL = 29.84775 UCL = 30.37011 Number beyond limits = 76 Number violating runs = 97



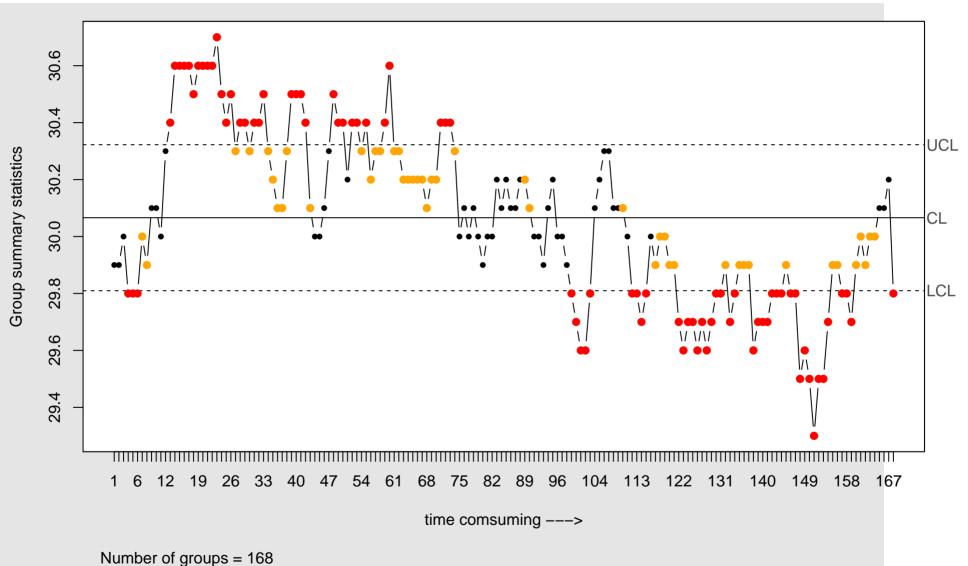
Number of groups = 168 Center = 30.10952 StdDev = 0.08334395

LCL = 29.85949 UCL = 30.35956 Number beyond limits = 70 Number violating runs = 84



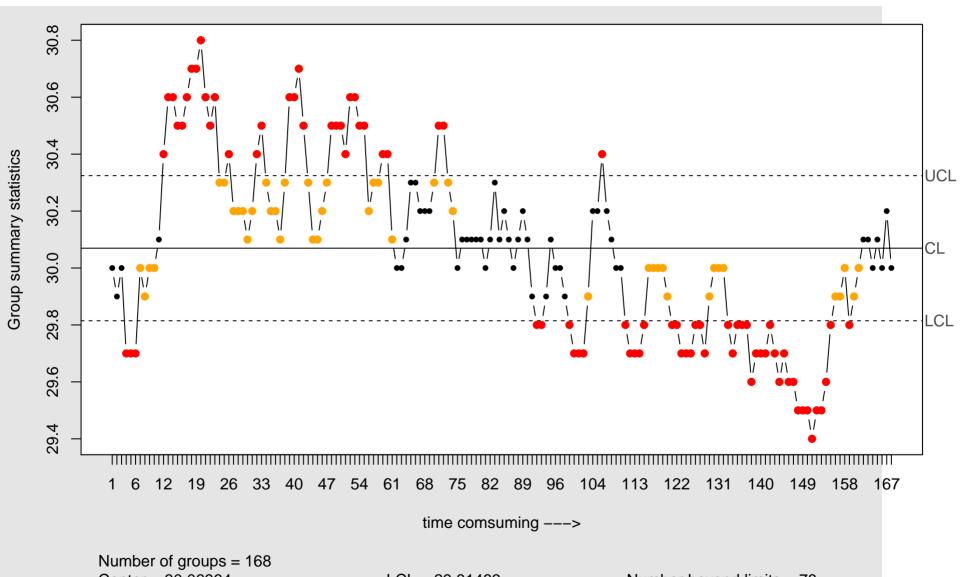
Number of groups = 168 Center = 30.08036 StdDev = 0.08015883

LCL = 29.83988 UCL = 30.32083 Number beyond limits = 66 Number violating runs = 88



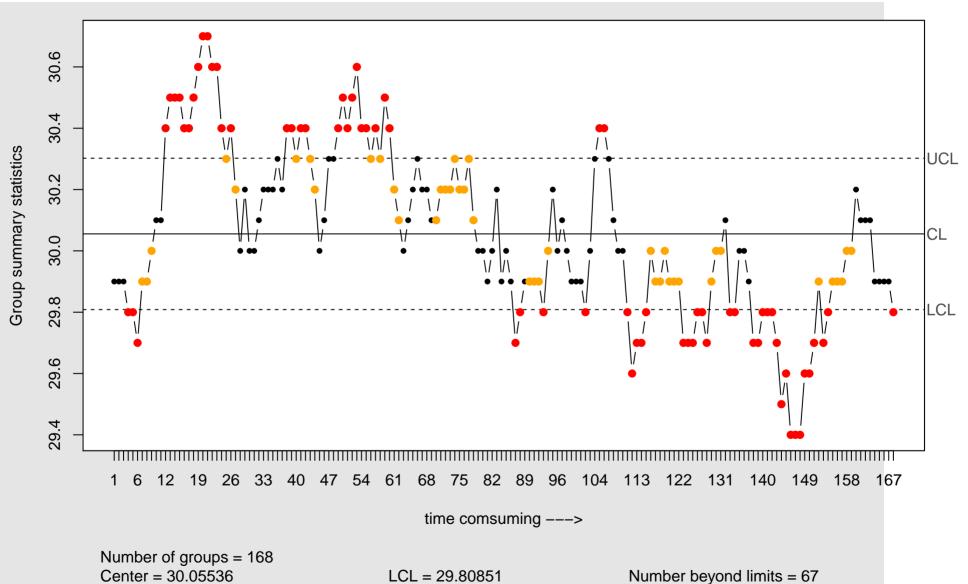
Number of groups = 168 Center = 30.06607 StdDev = 0.08546736

LCL = 29.80967 UCL = 30.32247 Number beyond limits = 78 Number violating runs = 104



Number of groups = 168 Center = 30.06964 StdDev = 0.08493651

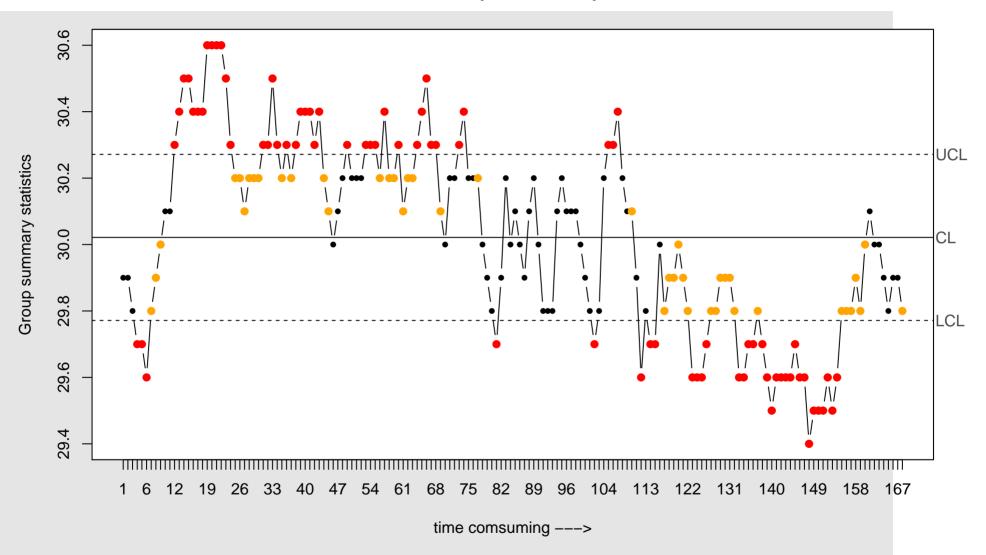
LCL = 29.81483 UCL = 30.32445 Number beyond limits = 78 Number violating runs = 103



Center = 30.05536StdDev = 0.08228224

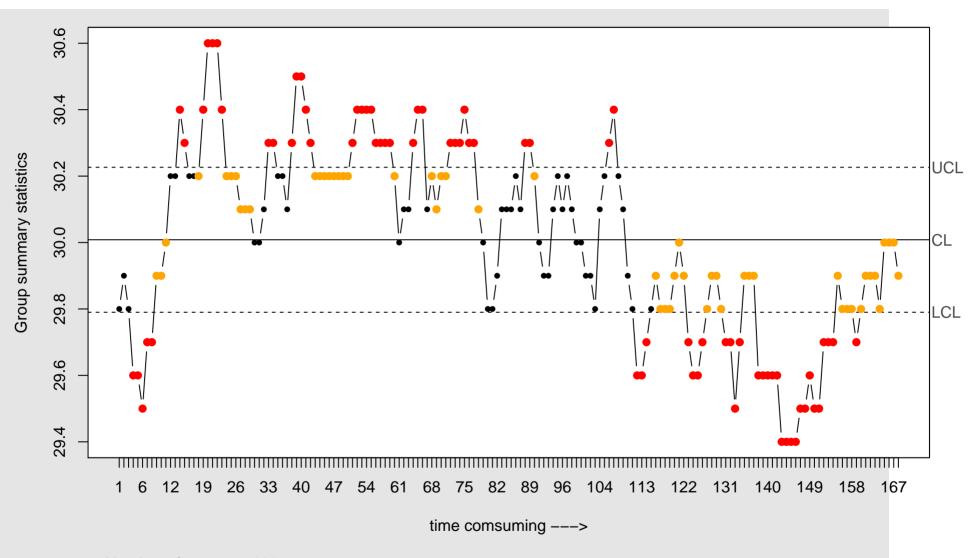
LCL = 29.80851 UCL = 30.3022

Number violating runs = 85



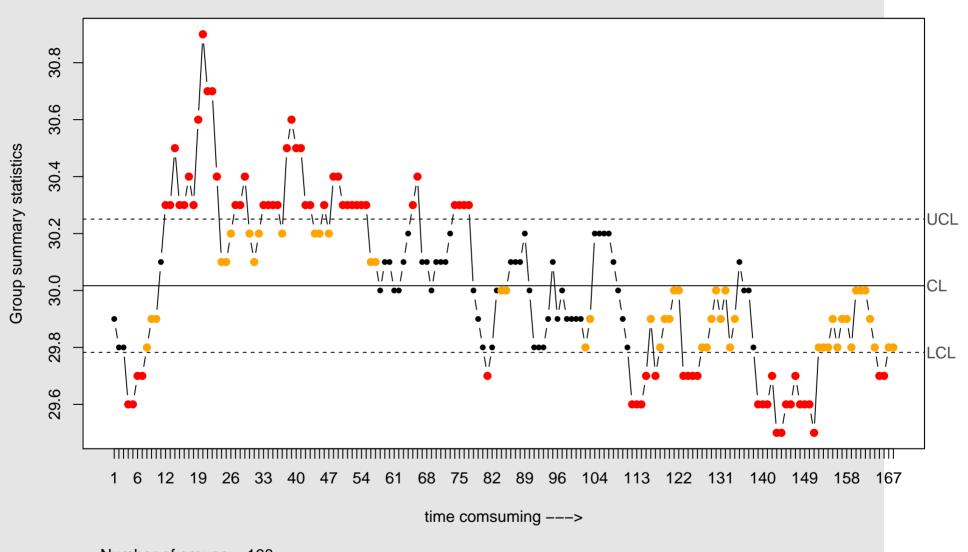
Number of groups = 168 Center = 30.02143 StdDev = 0.08334395

LCL = 29.7714 UCL = 30.27146 Number beyond limits = 73 Number violating runs = 97



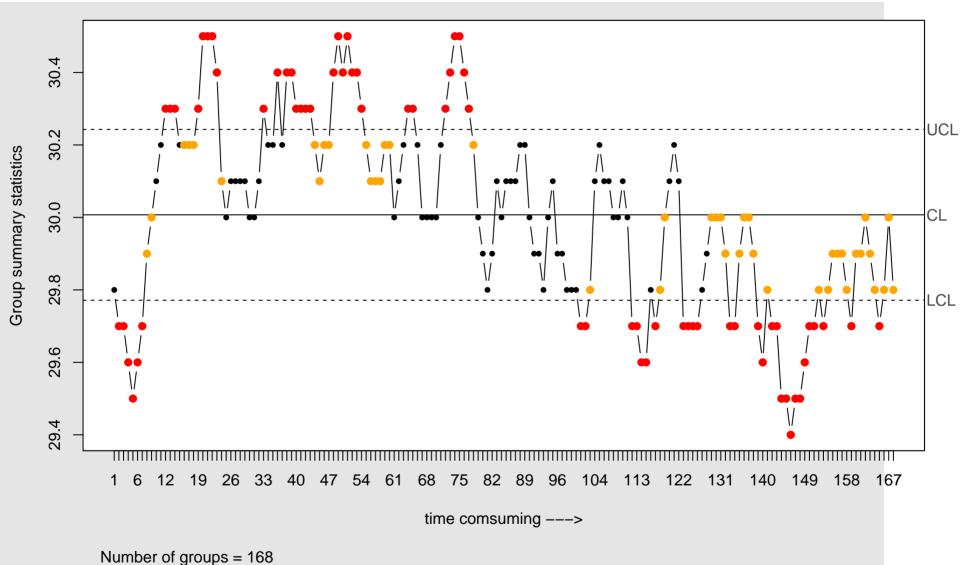
Number of groups = 168 Center = 30.00833 StdDev = 0.07272689

LCL = 29.79015 UCL = 30.22651 Number beyond limits = 70 Number violating runs = 106



Number of groups = 168 Center = 30.01667 StdDev = 0.07803542

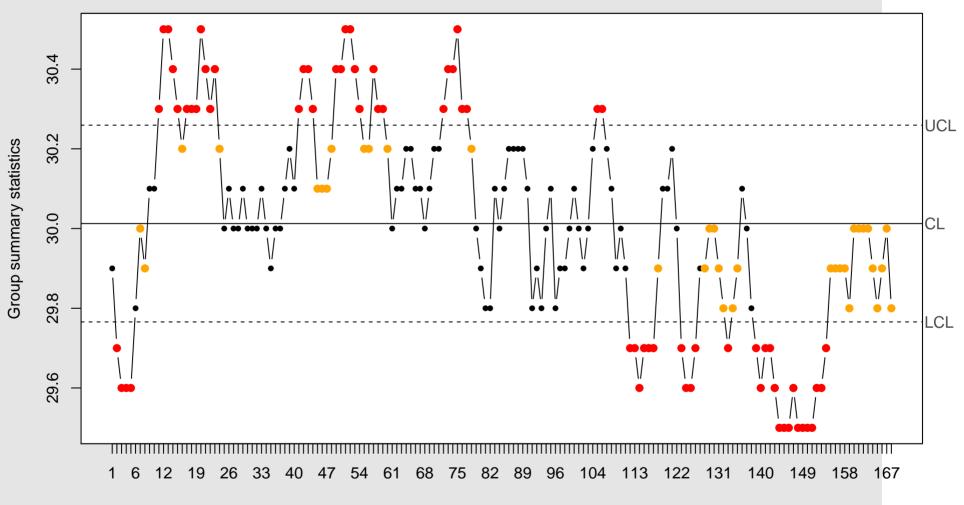
LCL = 29.78256 UCL = 30.25077 Number beyond limits = 69 Number violating runs = 98



Number of groups = 168 Center = 30.00714 StdDev = 0.07856627

LCL = 29.77144 UCL = 30.24284

Number beyond limits = 65 Number violating runs = 82

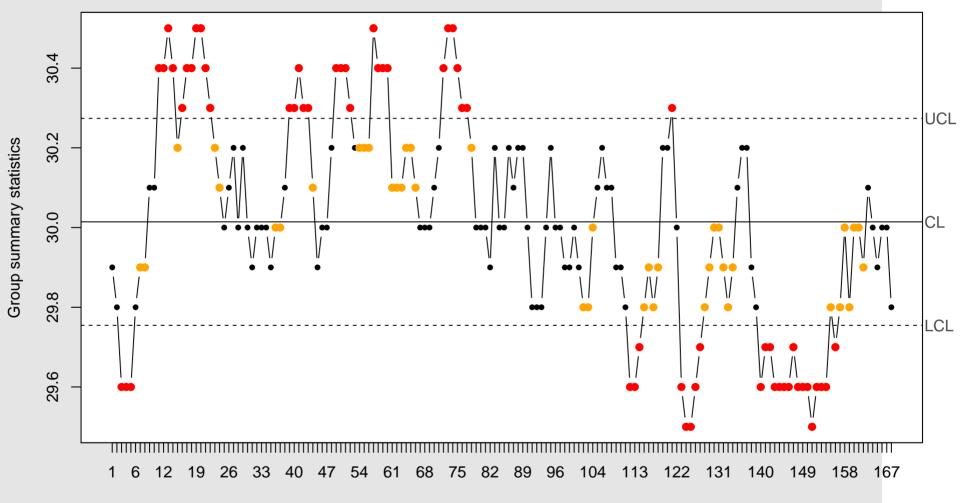


time comsuming --->

Number of groups = 168 Center = 30.0125 StdDev = 0.08228224

LCL = 29.76565 UCL = 30.25935

Number beyond limits = 64 Number violating runs = 71

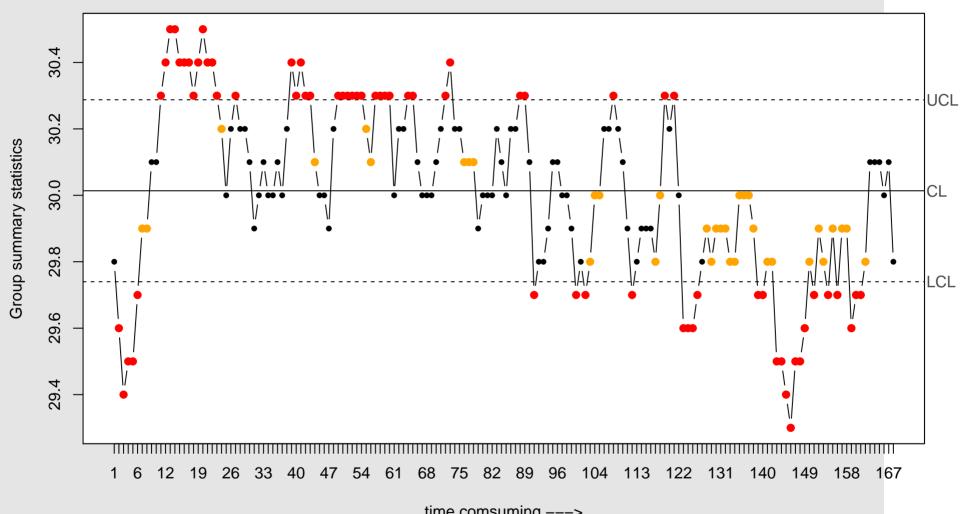


time comsuming --->

Number of groups = 168 Center = 30.01429 StdDev = 0.08652907

LCL = 29.7547 UCL = 30.27387

Number beyond limits = 58 Number violating runs = 64

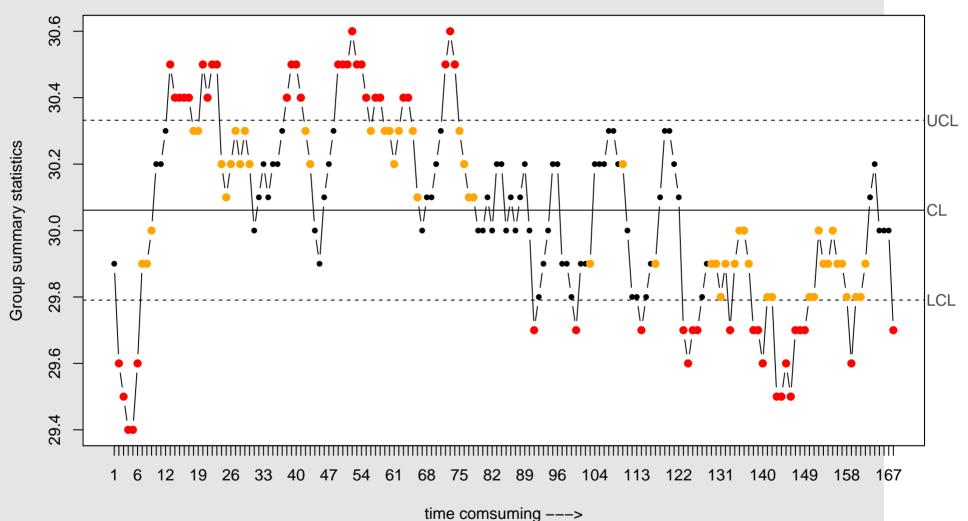


time comsuming --->

Number of groups = 168 Center = 30.01369StdDev = 0.09130675

LCL = 29.73977UCL = 30.28761

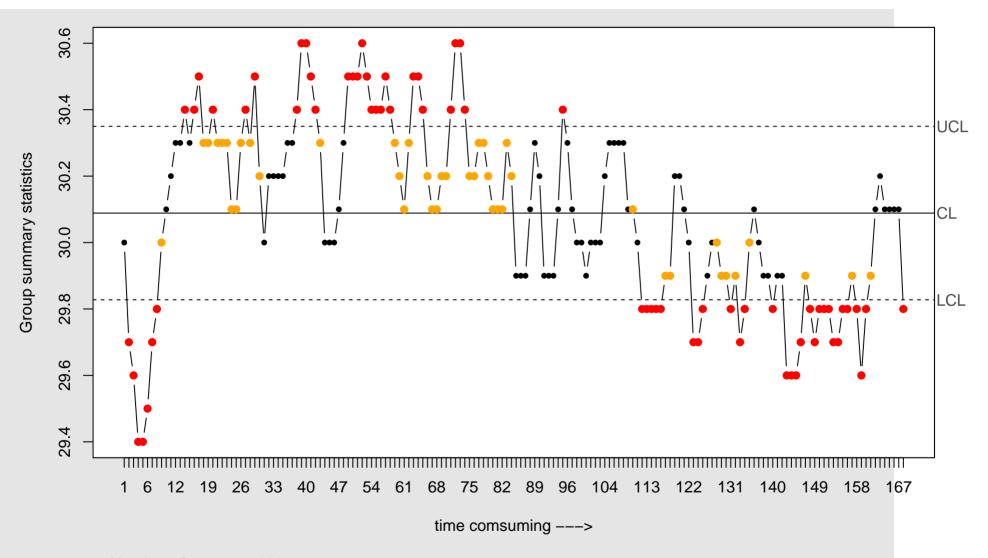
Number beyond limits = 66 Number violating runs = 63



Number of groups = 168 Center = 30.06131StdDev = 0.09024504

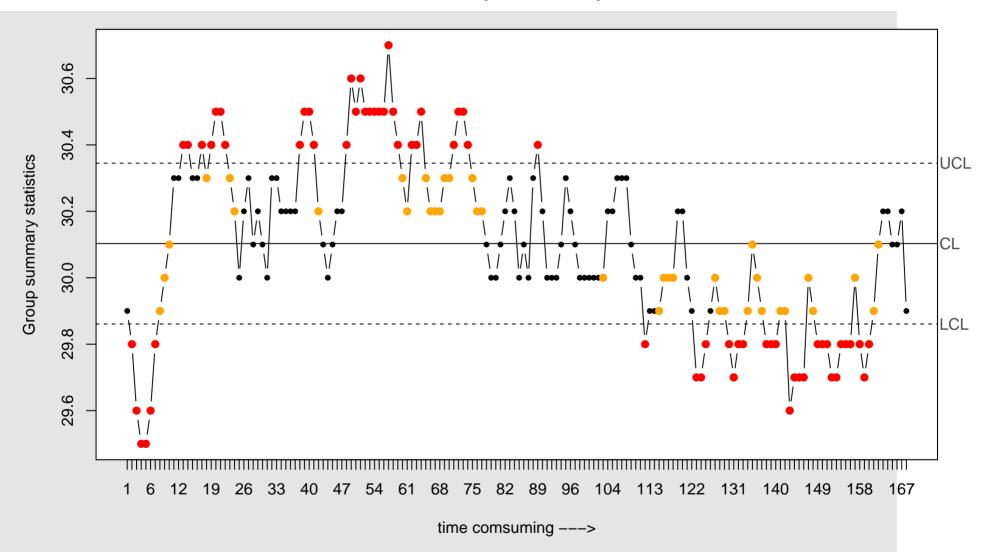
LCL = 29.79057UCL = 30.33204

Number beyond limits = 52 Number violating runs = 81



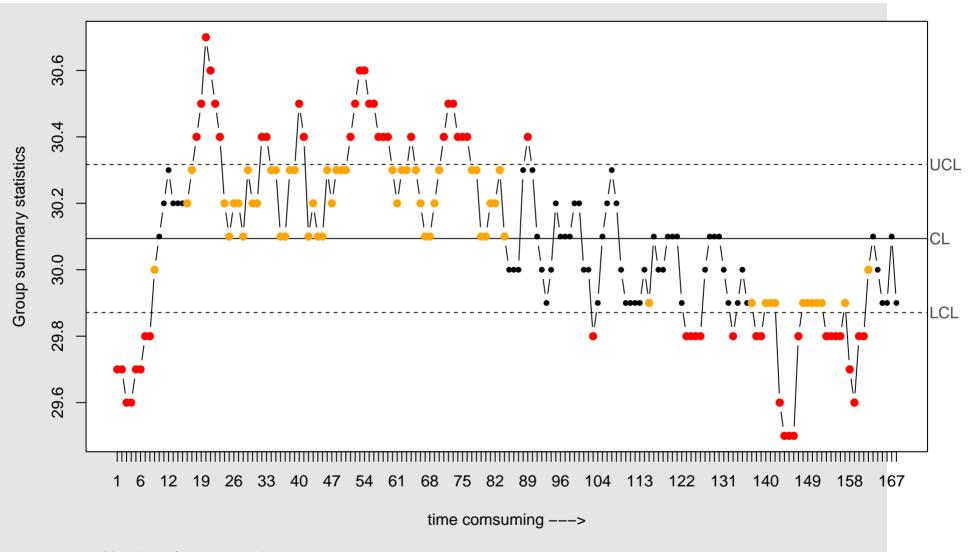
Number of groups = 168 Center = 30.08869 StdDev = 0.08705992

LCL = 29.82751 UCL = 30.34987 Number beyond limits = 65 Number violating runs = 86



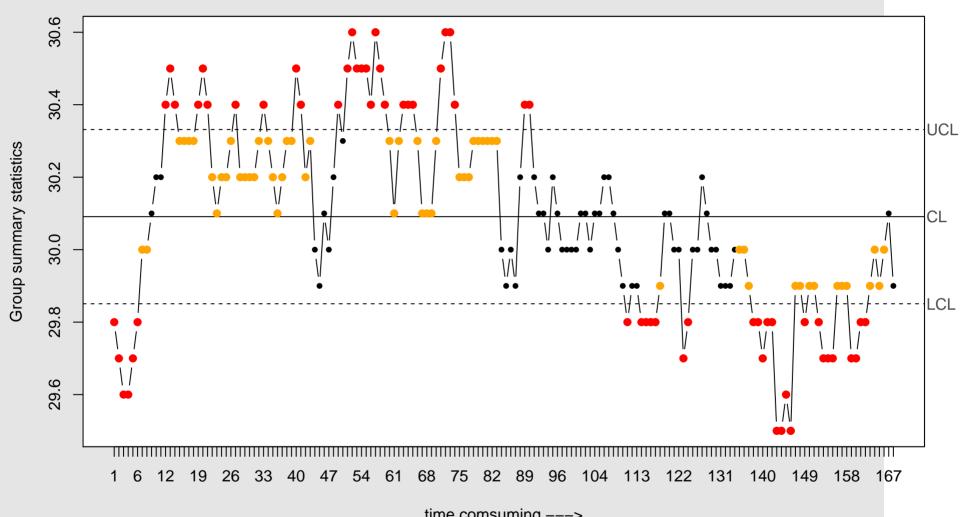
Number of groups = 168 Center = 30.10298 StdDev = 0.08068968

LCL = 29.86091 UCL = 30.34505 Number beyond limits = 63 Number violating runs = 84



Number of groups = 168 Center = 30.09405 StdDev = 0.07431945

LCL = 29.87109 UCL = 30.31701 Number beyond limits = 56 Number violating runs = 99

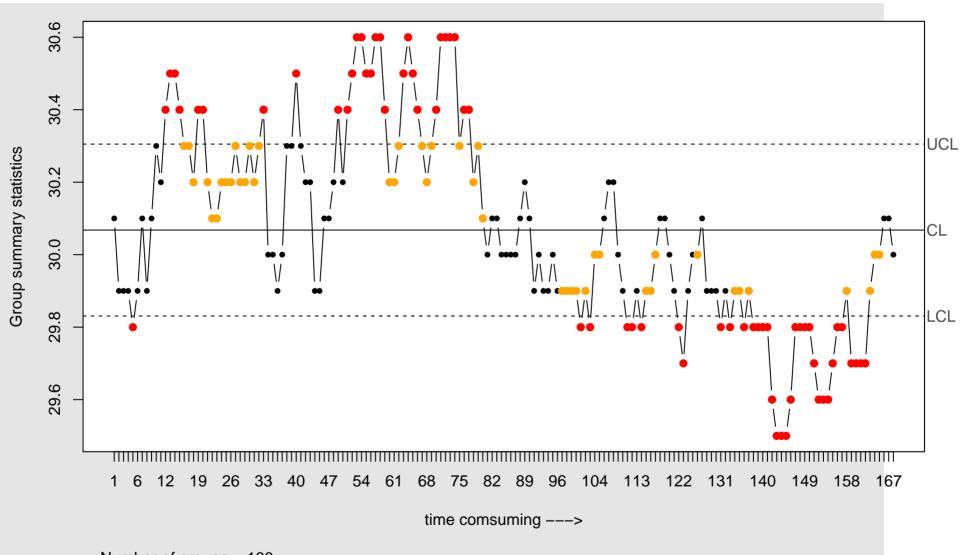


time comsuming --->

Number of groups = 168 Center = 30.09107StdDev = 0.08015883

LCL = 29.85059UCL = 30.33155

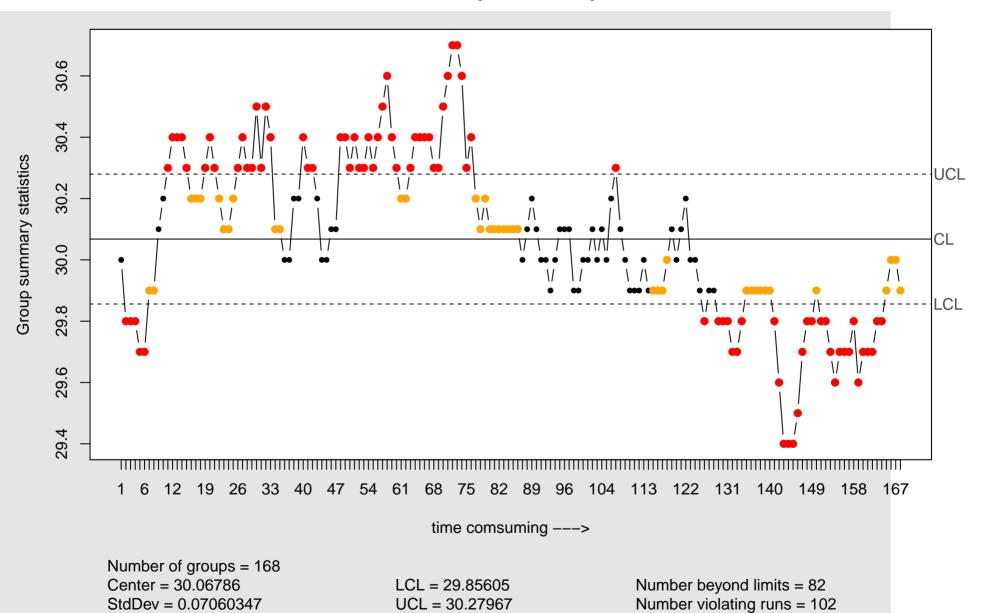
Number beyond limits = 60 Number violating runs = 97

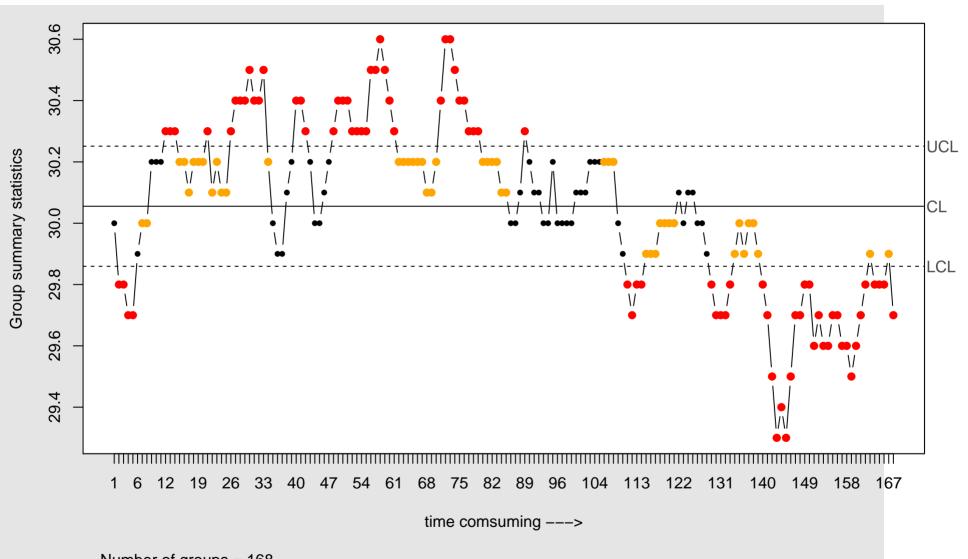


Number of groups = 168 Center = 30.06786 StdDev = 0.07909712

LCL = 29.83057 UCL = 30.30515

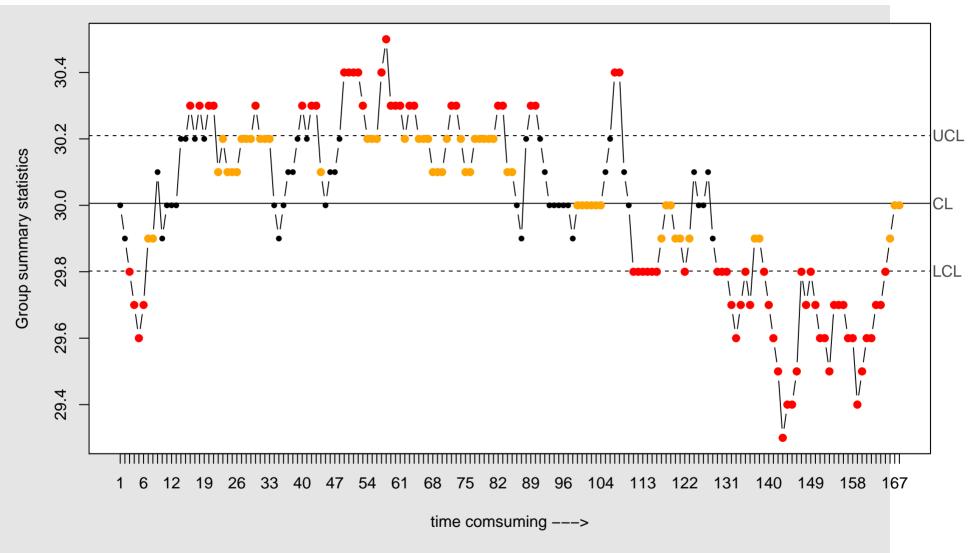
Number beyond limits = 64 Number violating runs = 93





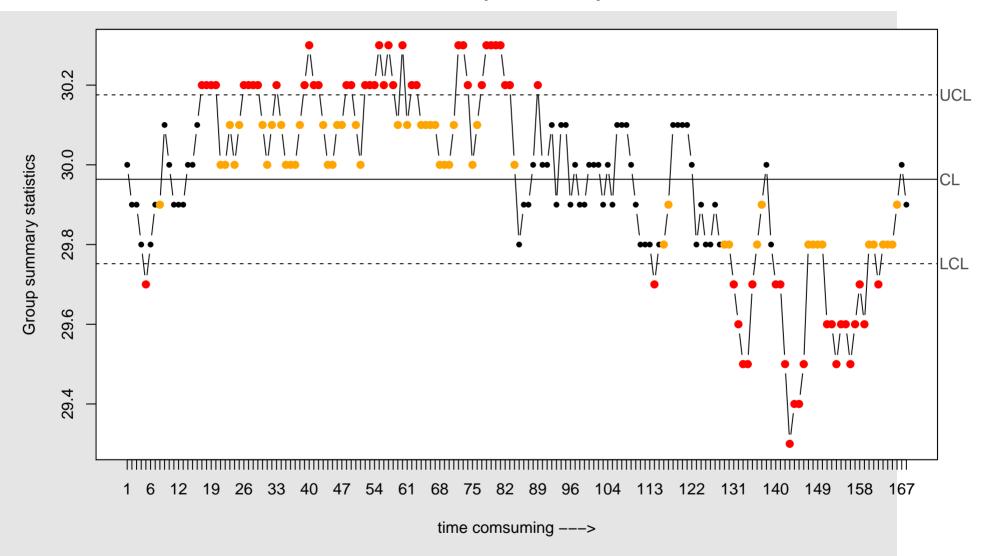
Number of groups = 168 Center = 30.05536 StdDev = 0.06529494

LCL = 29.85947 UCL = 30.25124 Number beyond limits = 79 Number violating runs = 103



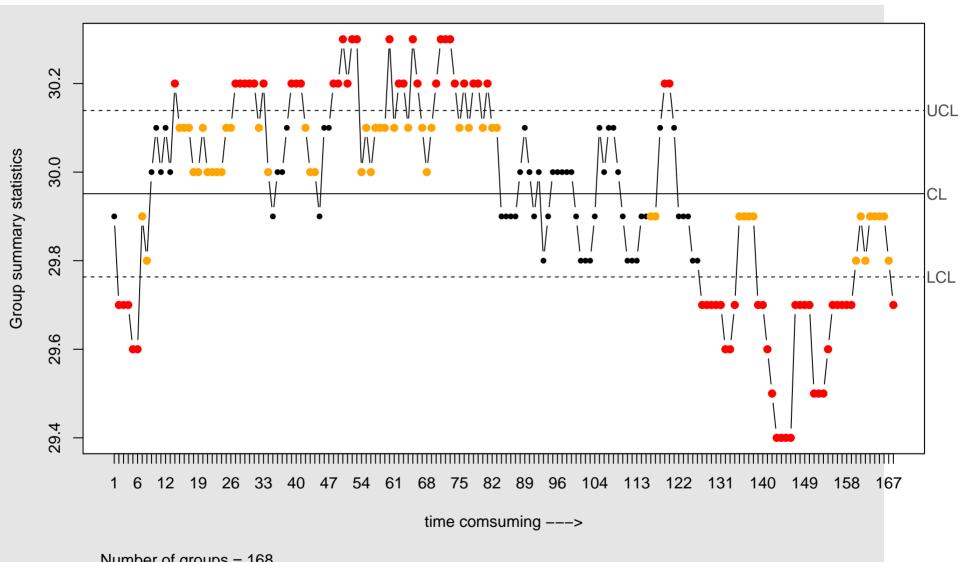
Number of groups = 168 Center = 30.00595 StdDev = 0.06794921

LCL = 29.8021 UCL = 30.2098 Number beyond limits = 74 Number violating runs = 101



Number of groups = 168 Center = 29.96369 StdDev = 0.07060347

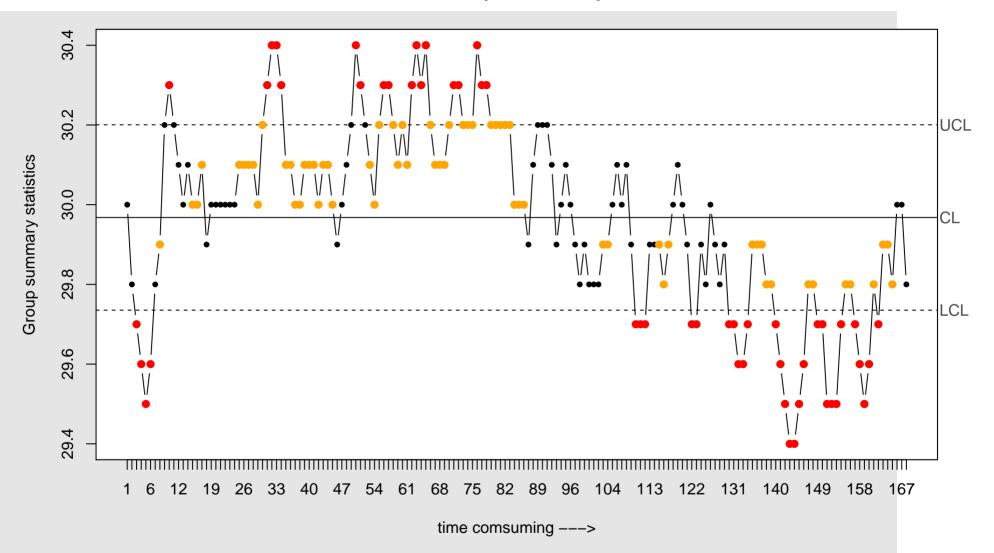
LCL = 29.75188 UCL = 30.1755 Number beyond limits = 60 Number violating runs = 99



Number of groups = 168 Center = 29.95119 StdDev = 0.06264068

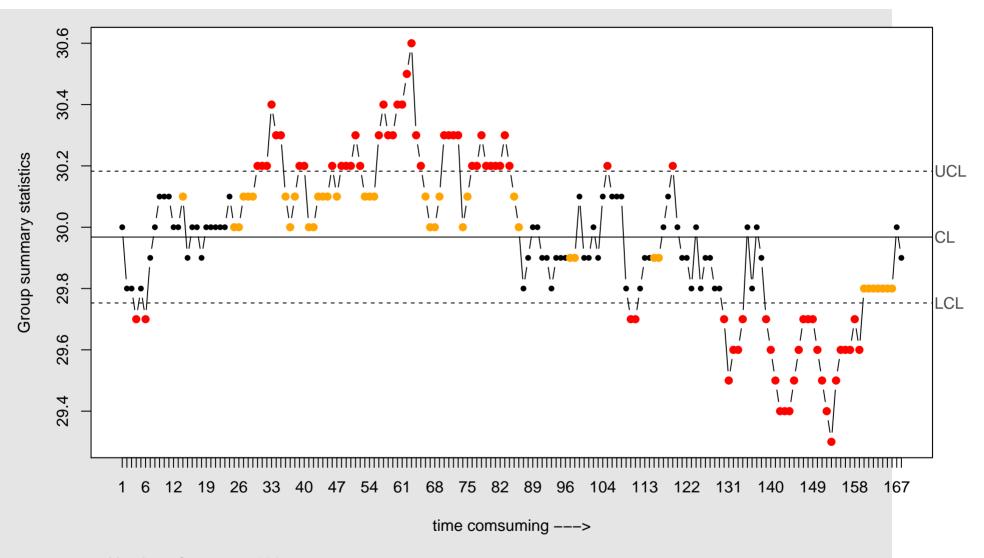
LCL = 29.76327 UCL = 30.13911

Number beyond limits = 67 Number violating runs = 100



Number of groups = 168 Center = 29.96786 StdDev = 0.07750457

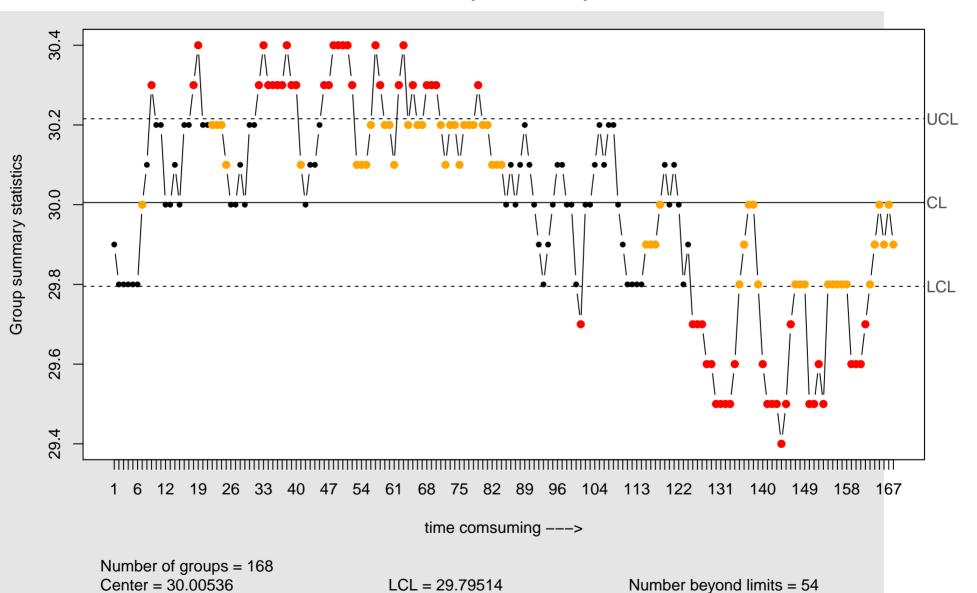
LCL = 29.73534 UCL = 30.20037 Number beyond limits = 50 Number violating runs = 97



Number of groups = 168 Center = 29.96786 StdDev = 0.07166518

LCL = 29.75286 UCL = 30.18285

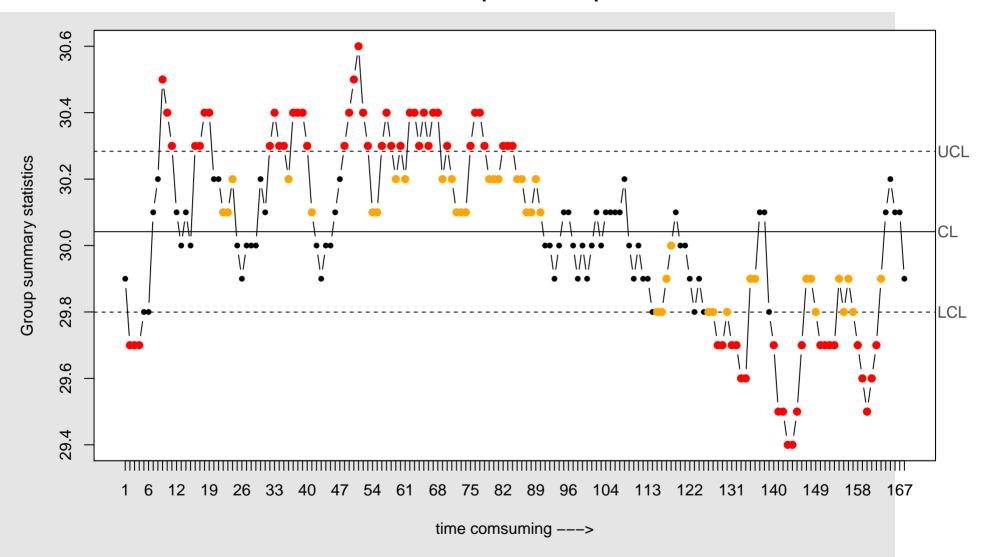
Number beyond limits = 69 Number violating runs = 94



UCL = 30.21558

Number violating runs = 92

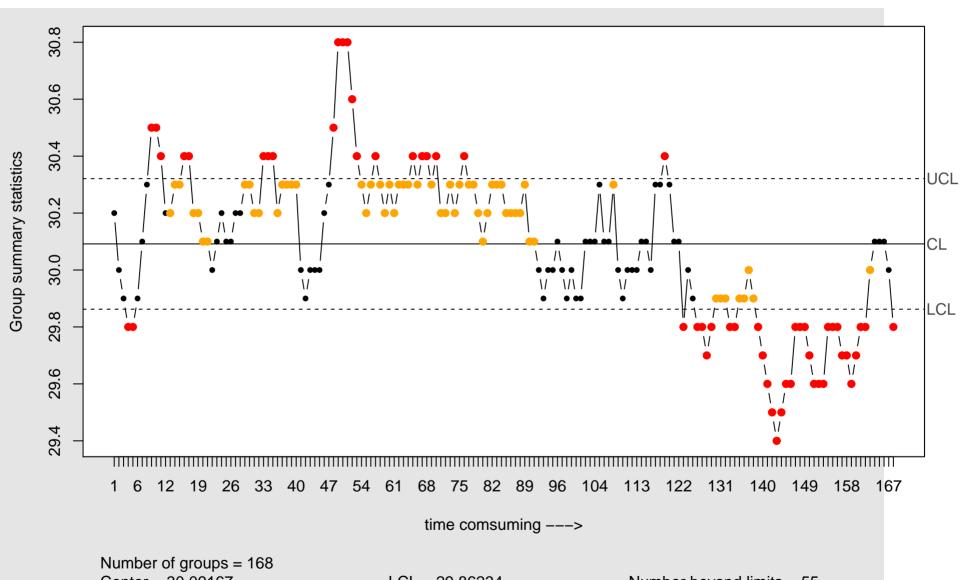
StdDev = 0.07007262



Number of groups = 168 Center = 30.04167 StdDev = 0.08068968

LCL = 29.7996 UCL = 30.28374

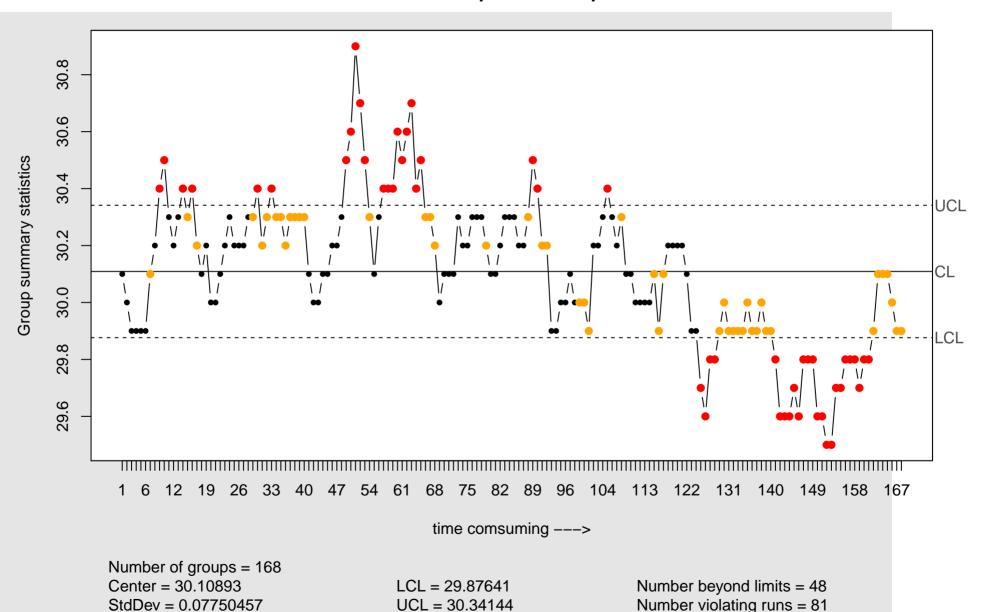
Number beyond limits = 65 Number violating runs = 82

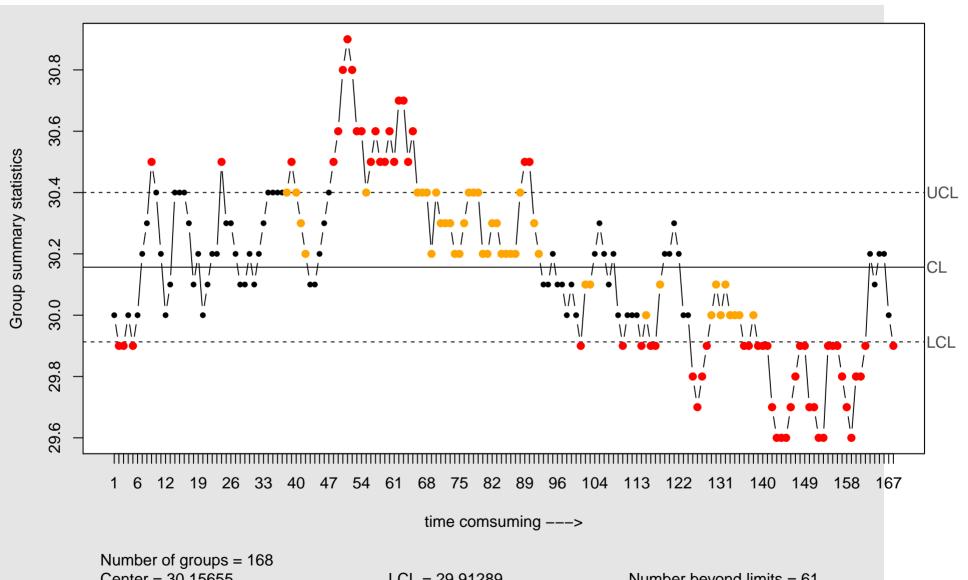


Number of groups = 168 Center = 30.09167 StdDev = 0.07644286

LCL = 29.86234 UCL = 30.321

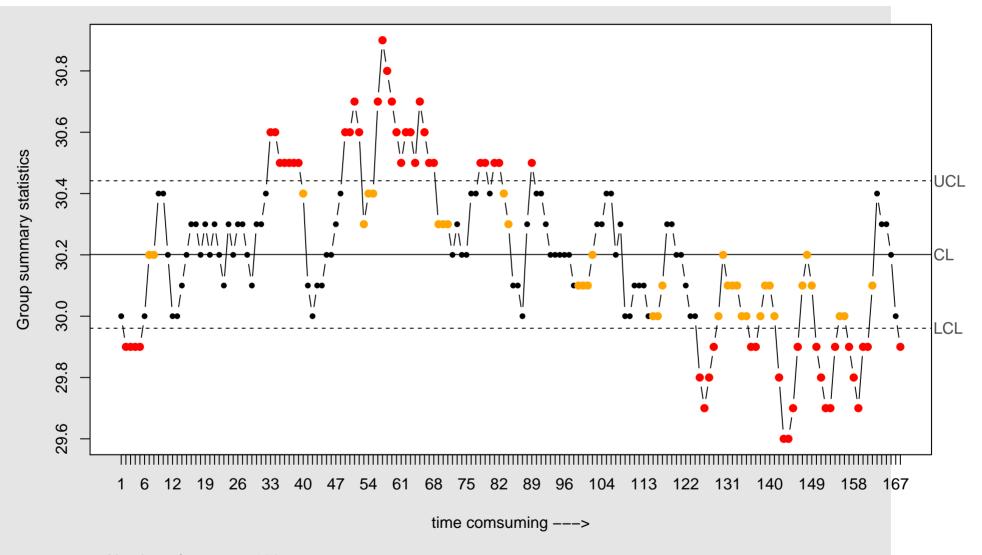
Number beyond limits = 55 Number violating runs = 97





Center = 30.15655StdDev = 0.08122054

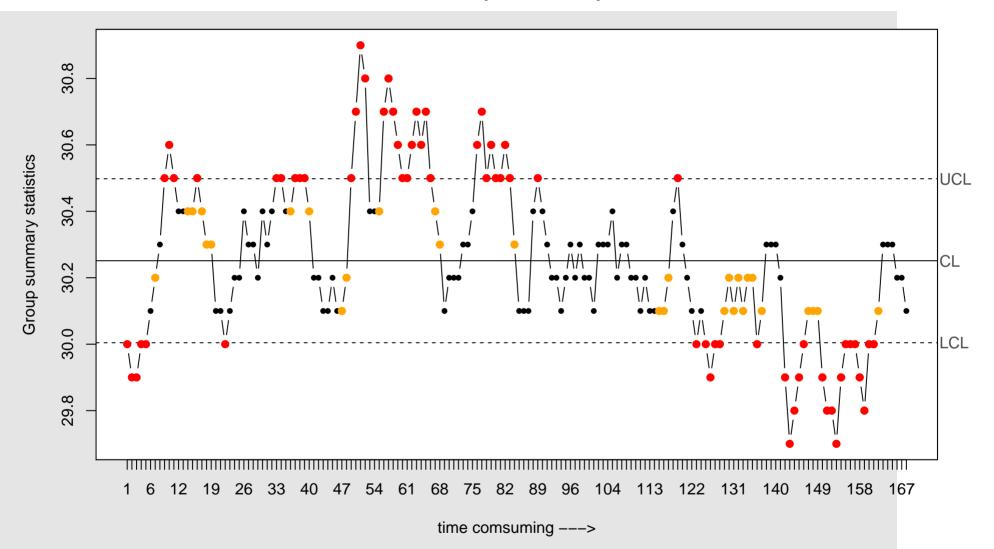
LCL = 29.91289 UCL = 30.40021 Number beyond limits = 61 Number violating runs = 87



Number of groups = 168 Center = 30.20119 StdDev = 0.08015883

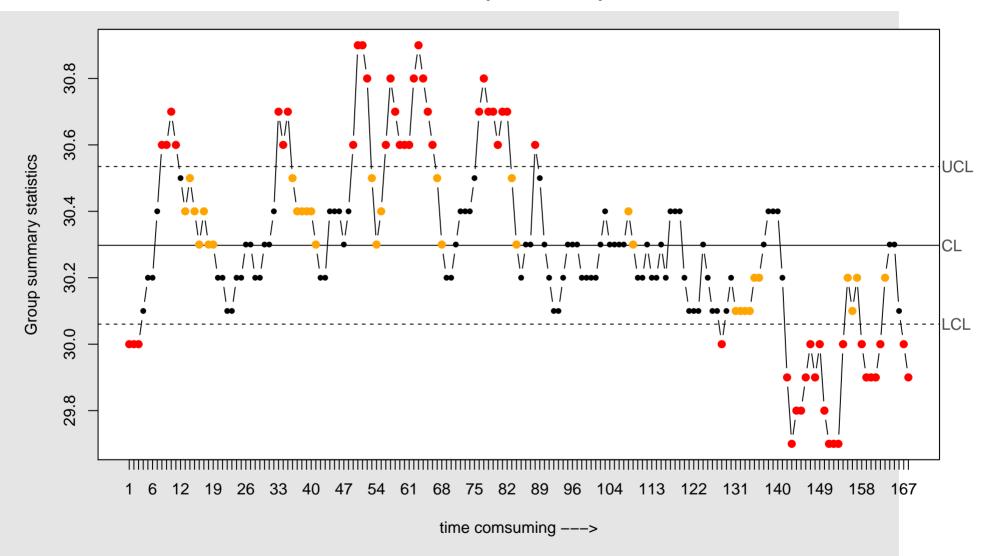
LCL = 29.96071 UCL = 30.44167

Number beyond limits = 55 Number violating runs = 73



Number of groups = 168 Center = 30.25119 StdDev = 0.08228224

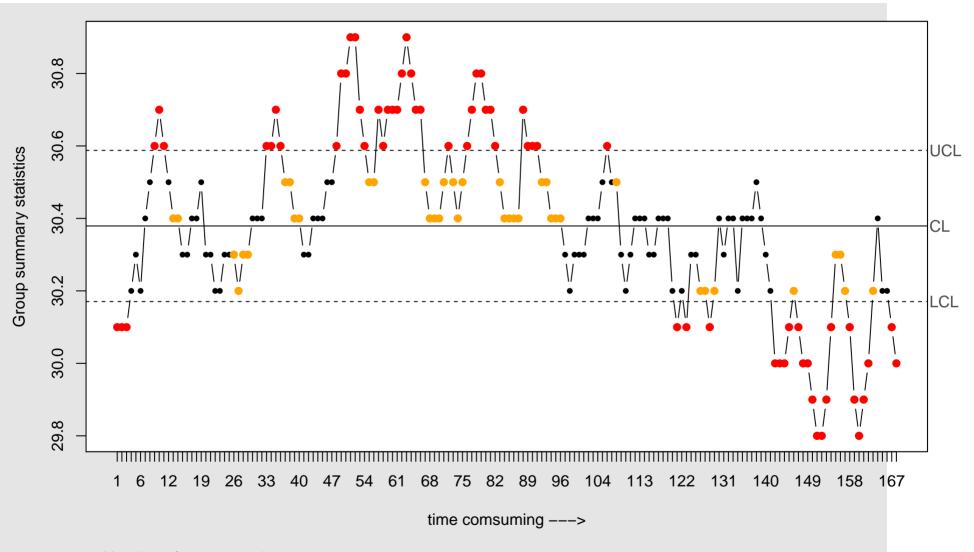
LCL = 30.00434 UCL = 30.49804 Number beyond limits = 63 Number violating runs = 64



Number of groups = 168 Center = 30.29762 StdDev = 0.07909712

LCL = 30.06033 UCL = 30.53491

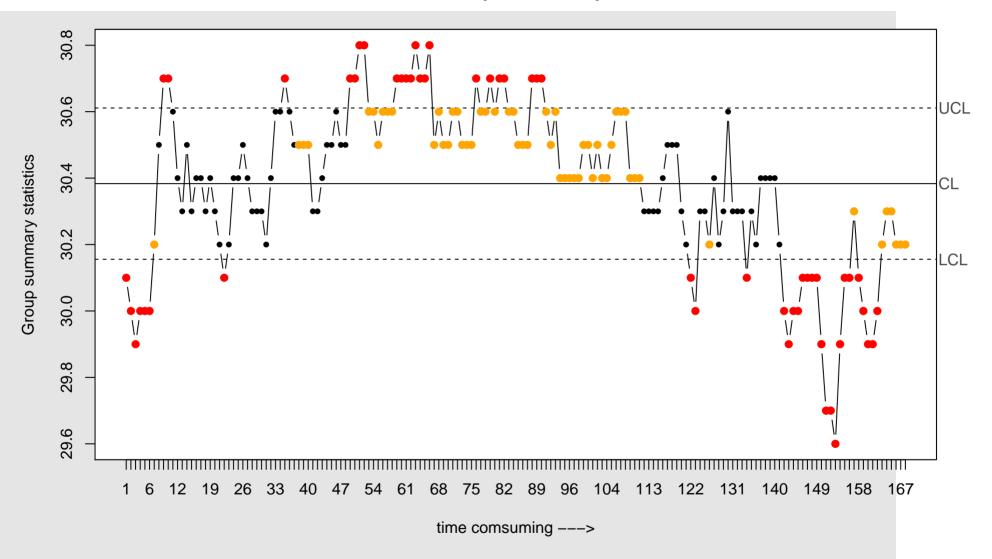
Number beyond limits = 54 Number violating runs = 65



Number of groups = 168 Center = 30.37917 StdDev = 0.06954177

LCL = 30.17054 UCL = 30.58779

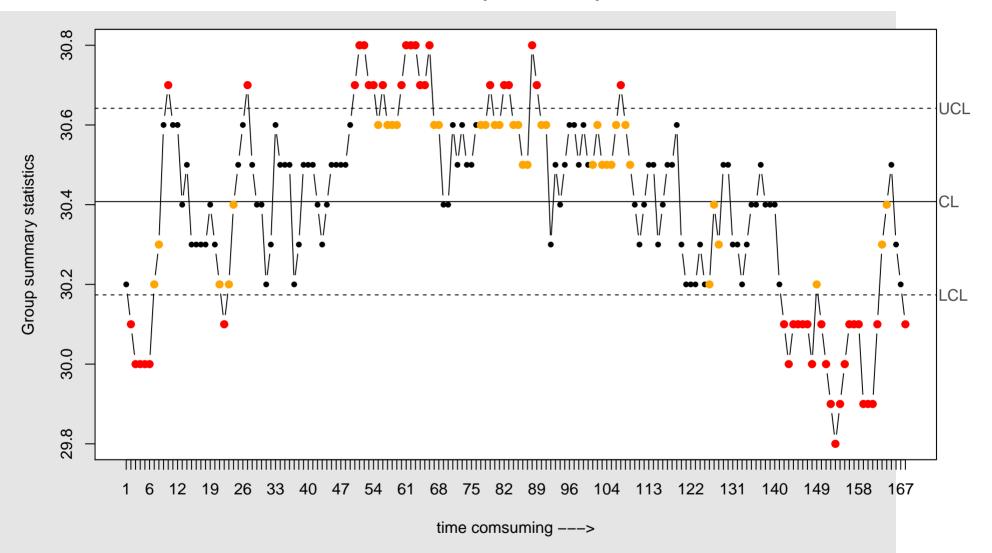
Number beyond limits = 62 Number violating runs = 82



Number of groups = 168 Center = 30.38333 StdDev = 0.07591201

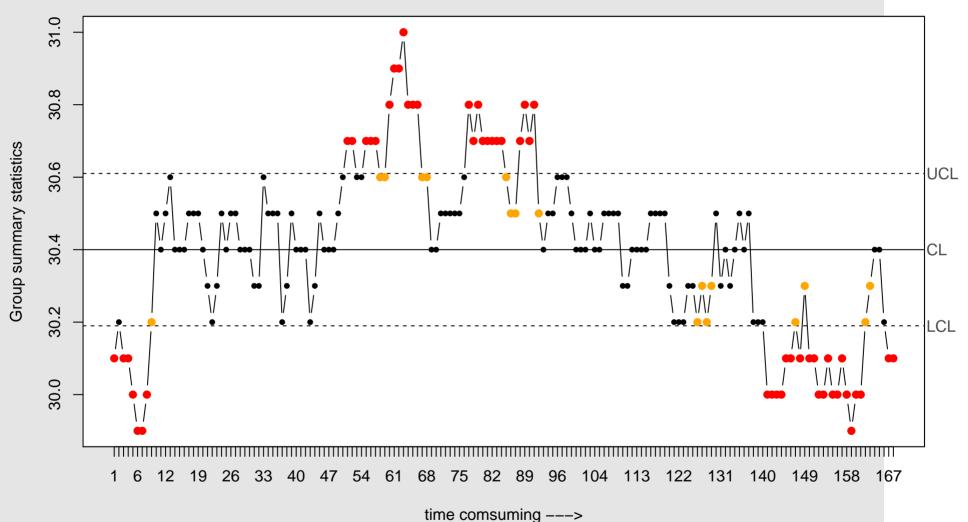
LCL = 30.1556 UCL = 30.61107

Number beyond limits = 52 Number violating runs = 90



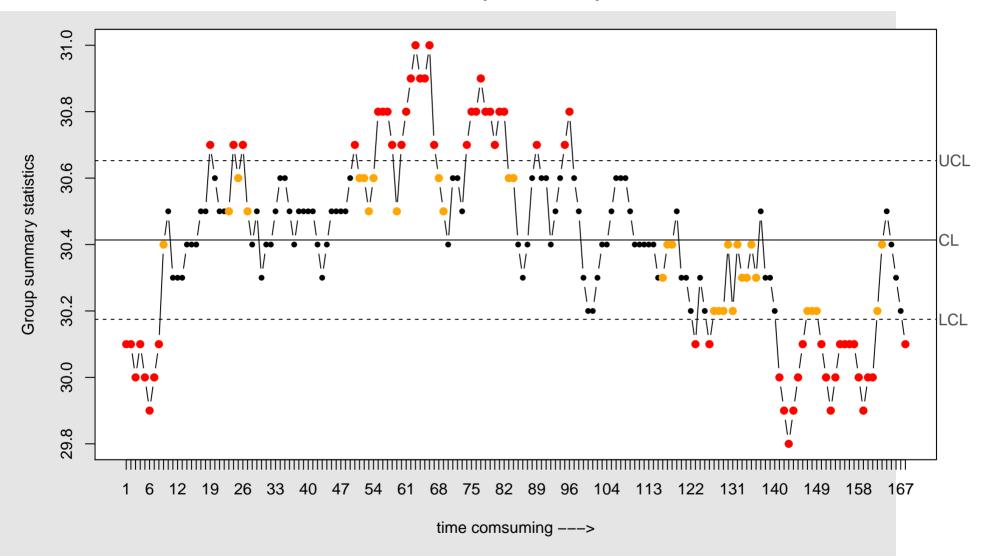
Number of groups = 168 Center = 30.40774 StdDev = 0.07803542

LCL = 30.17363 UCL = 30.64184 Number beyond limits = 48 Number violating runs = 72



Number of groups = 168 Center = 30.4StdDev = 0.07007262

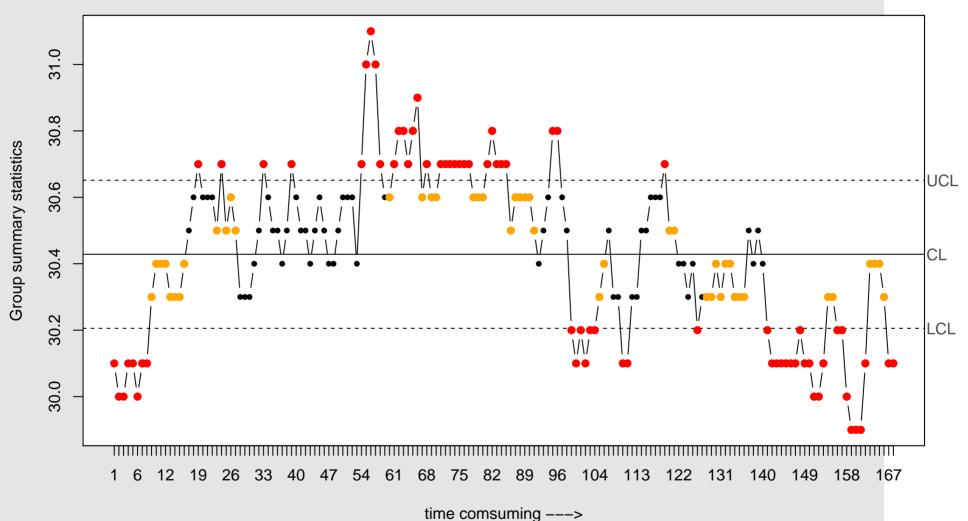
LCL = 30.18978UCL = 30.61022 Number beyond limits = 52 Number violating runs = 57



Number of groups = 168 Center = 30.41369 StdDev = 0.07962798

LCL = 30.17481 UCL = 30.65257

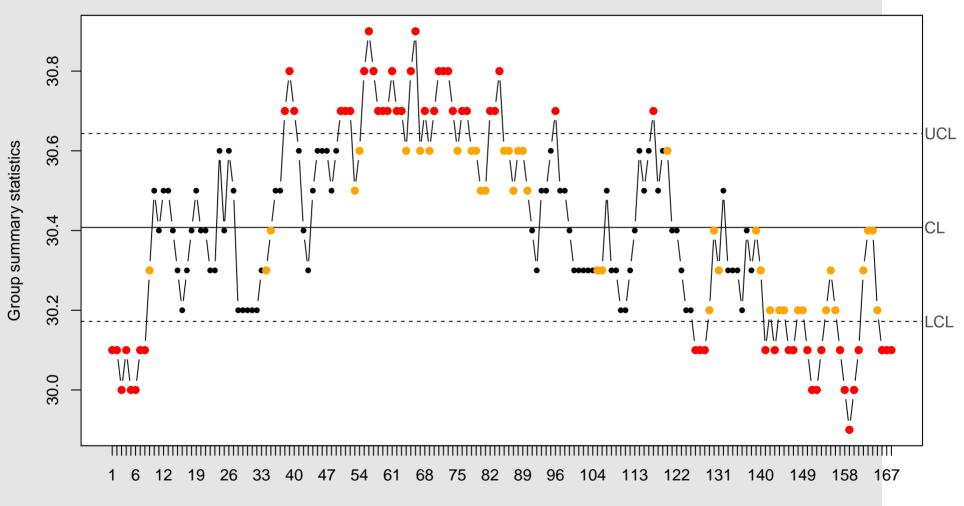
Number beyond limits = 57 Number violating runs = 69



Number of groups = 168 Center = 30.42857StdDev = 0.07431945

LCL = 30.20561 UCL = 30.65153

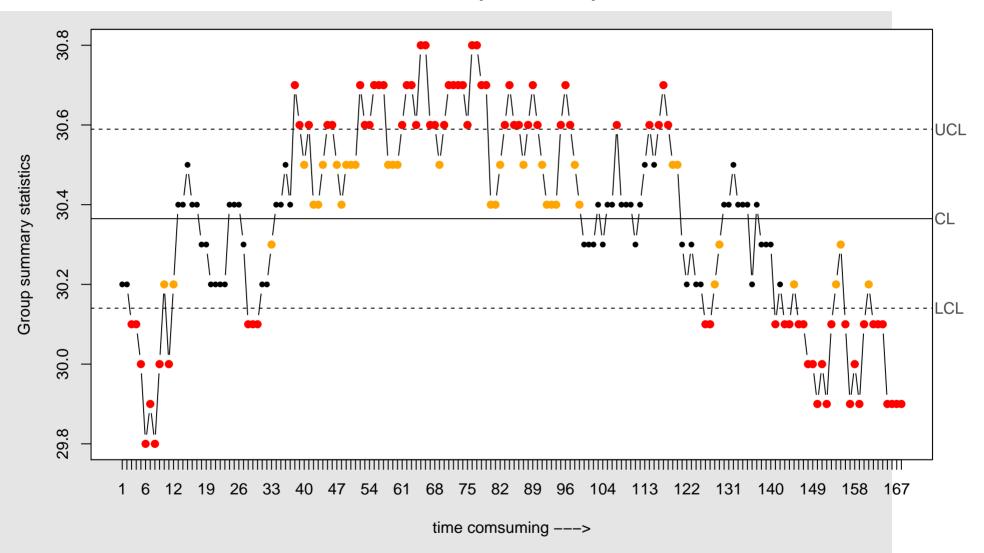
Number beyond limits = 70 Number violating runs = 83



time comsuming --->

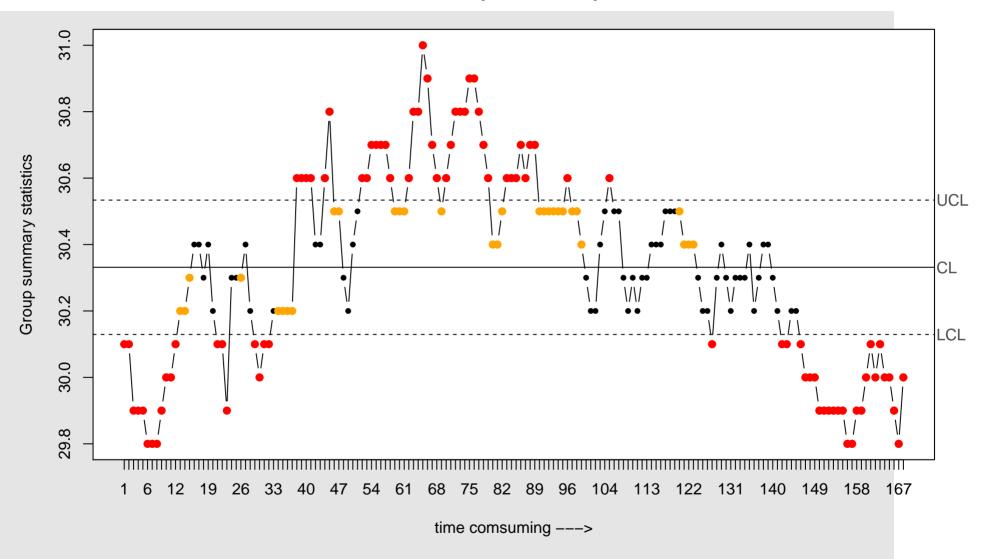
Number of groups = 168 Center = 30.40774 StdDev = 0.07856627

LCL = 30.17204 UCL = 30.64344 Number beyond limits = 57 Number violating runs = 84



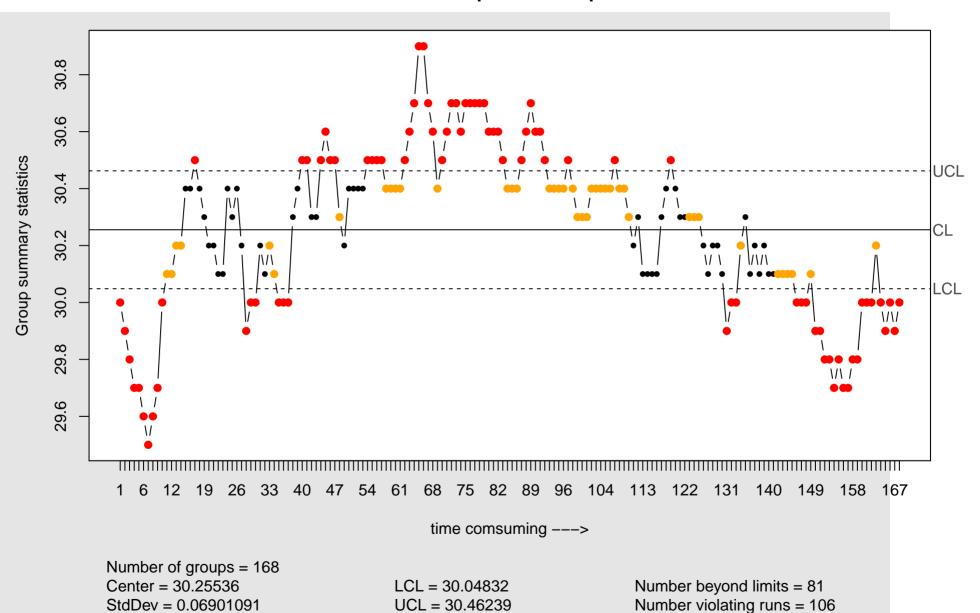
Number of groups = 168 Center = 30.36488 StdDev = 0.0748503

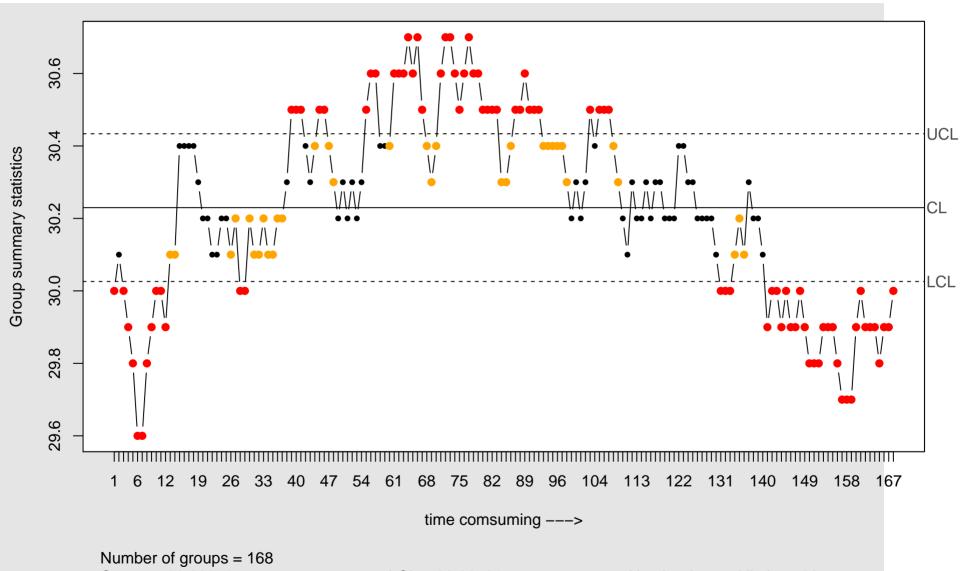
LCL = 30.14033 UCL = 30.58943 Number beyond limits = 80 Number violating runs = 98



Number of groups = 168 Center = 30.33155 StdDev = 0.06741835

LCL = 30.12929 UCL = 30.5338 Number beyond limits = 84 Number violating runs = 89

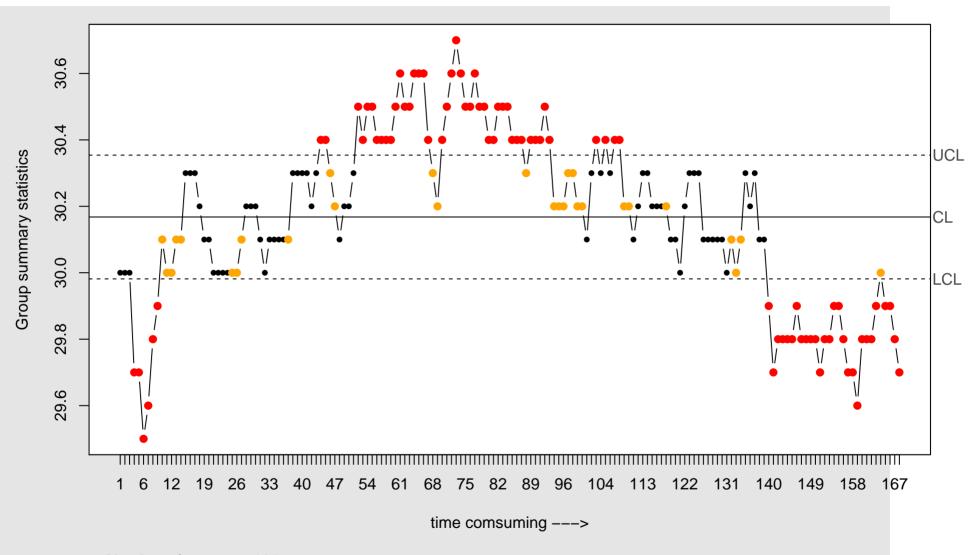




Number of groups = 168 Center = 30.22976 StdDev = 0.06794921

LCL = 30.02591 UCL = 30.43361

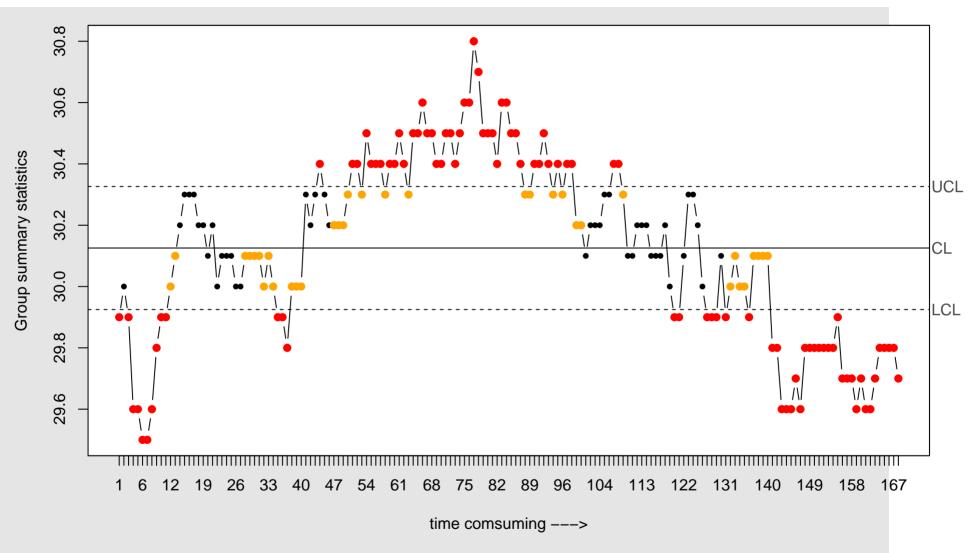
Number beyond limits = 82 Number violating runs = 96



Number of groups = 168 Center = 30.16786 StdDev = 0.06210982

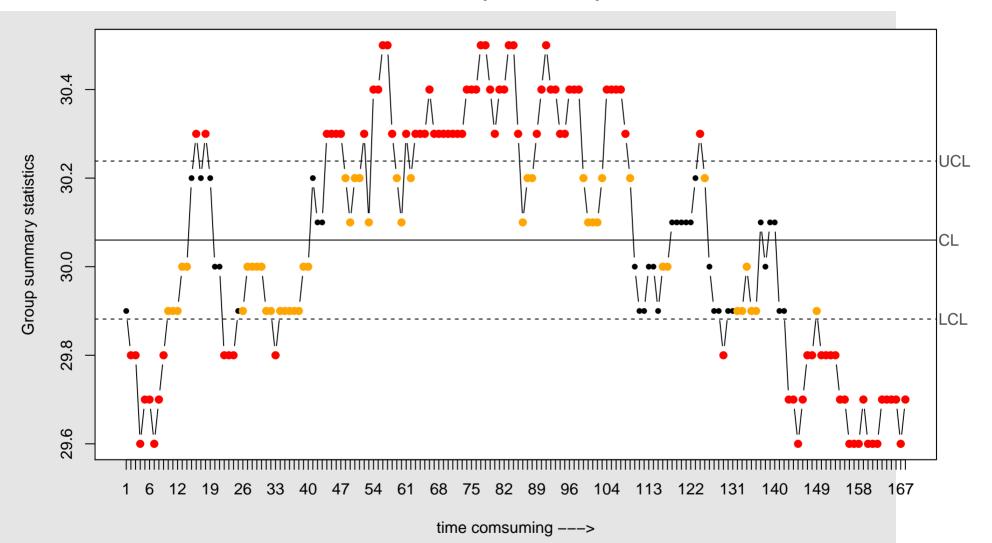
LCL = 29.98153 UCL = 30.35419

Number beyond limits = 79 Number violating runs = 94



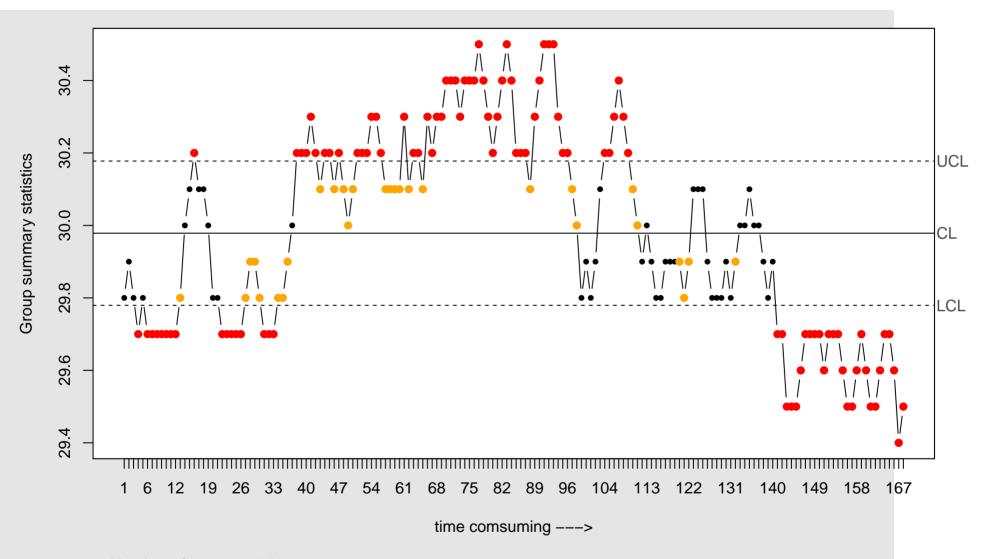
Number of groups = 168 Center = 30.1256 StdDev = 0.0668875

LCL = 29.92493 UCL = 30.32626 Number beyond limits = 92 Number violating runs = 113



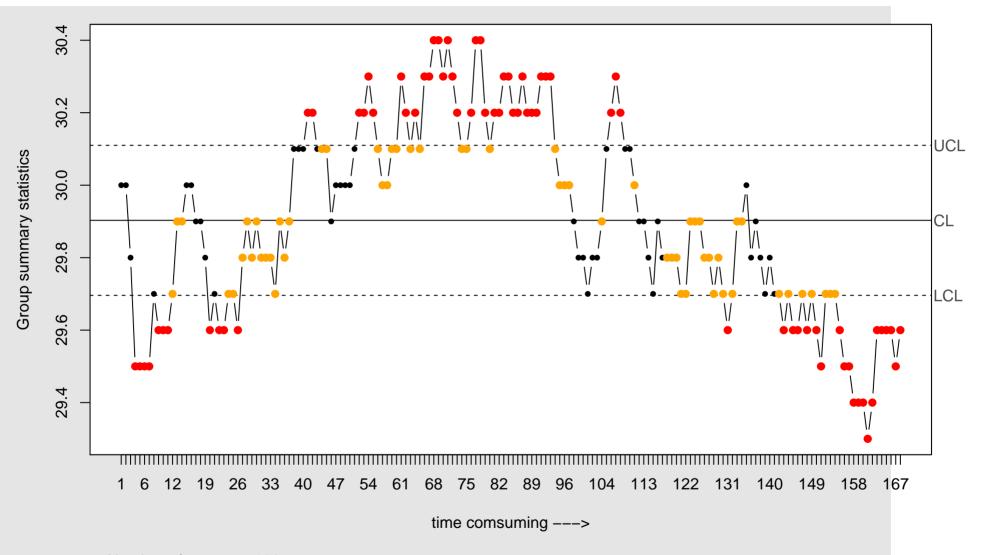
Number of groups = 168 Center = 30.06012 StdDev = 0.05945556

LCL = 29.88175 UCL = 30.23849 Number beyond limits = 90 Number violating runs = 117



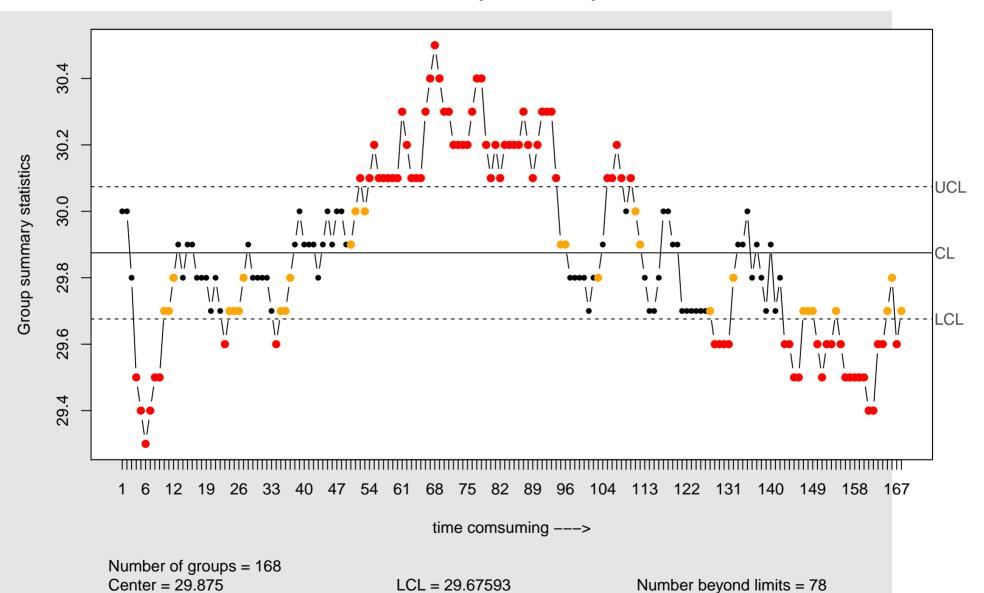
Number of groups = 168 Center = 29.97857 StdDev = 0.06635665

LCL = 29.7795 UCL = 30.17764 Number beyond limits = 98 Number violating runs = 106



Number of groups = 168 Center = 29.90298 StdDev = 0.06901091

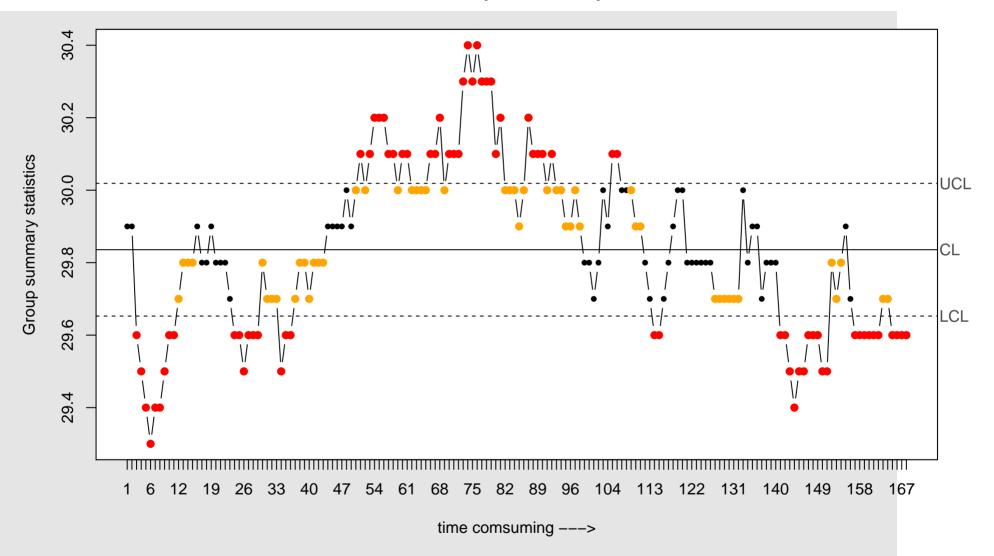
LCL = 29.69594 UCL = 30.11001 Number beyond limits = 69 Number violating runs = 114



UCL = 30.07407

StdDev = 0.06635665

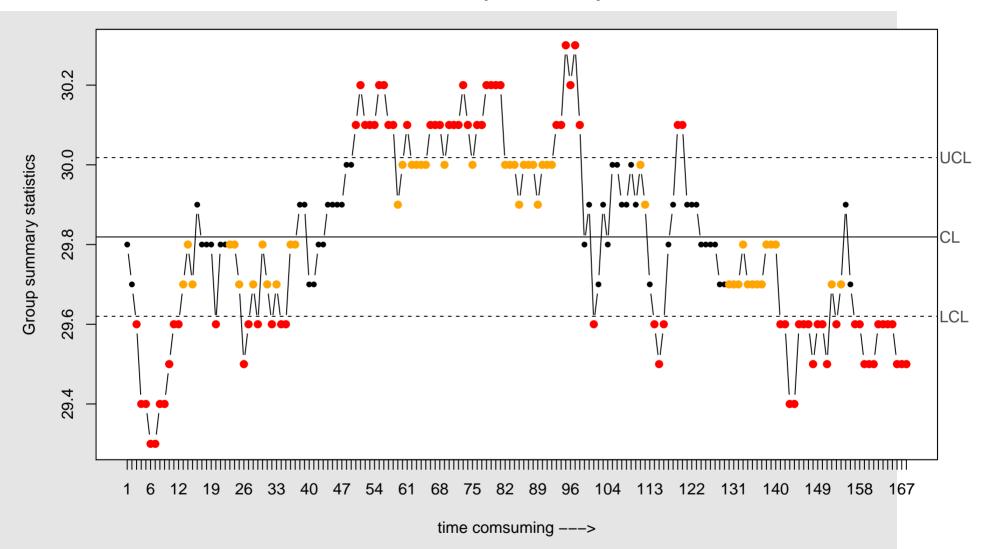
Number violating runs = 91



Number of groups = 168 Center = 29.83571

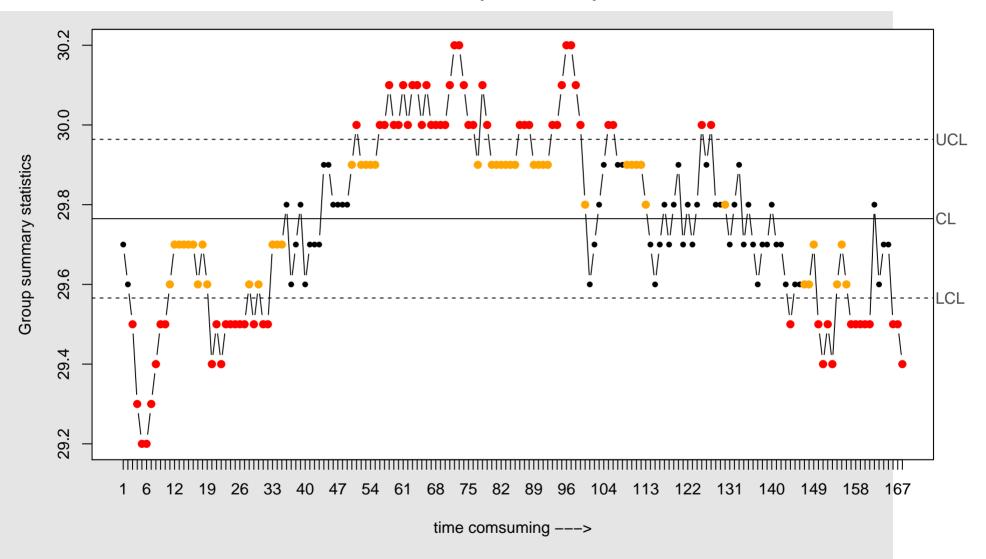
StdDev = 0.06104812

LCL = 29.65257 UCL = 30.01886 Number beyond limits = 72 Number violating runs = 102



Number of groups = 168 Center = 29.81905 StdDev = 0.06635665

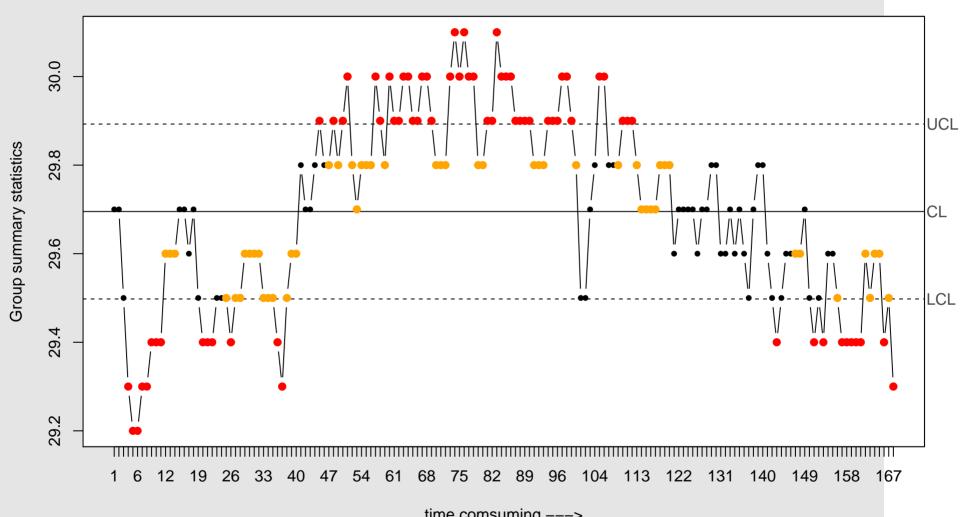
LCL = 29.61998 UCL = 30.01812 Number beyond limits = 77 Number violating runs = 107



Number of groups = 168 Center = 29.76488 StdDev = 0.06635665

LCL = 29.56581 UCL = 29.96395

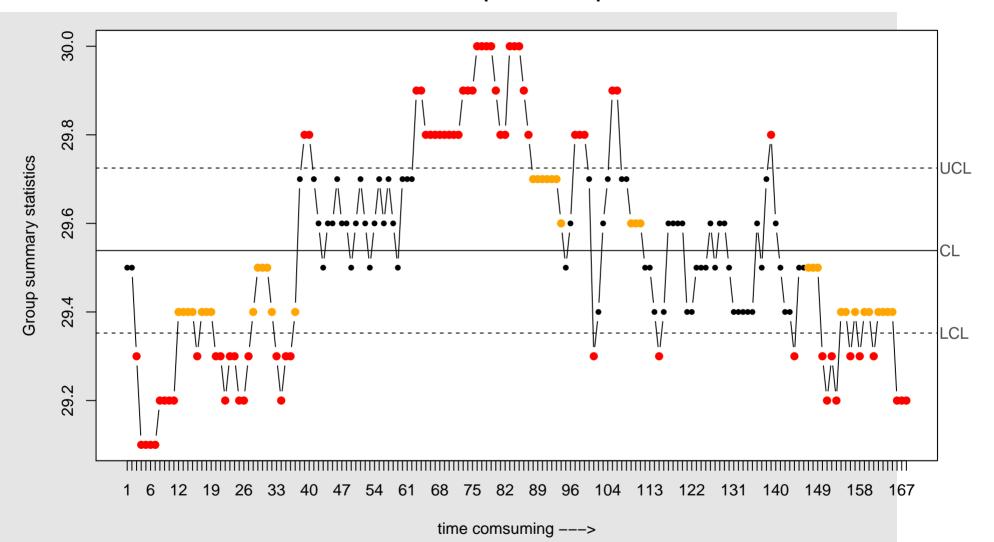
Number beyond limits = 70 Number violating runs = 101



time comsuming --->

Number of groups = 168 Center = 29.69524StdDev = 0.0658258

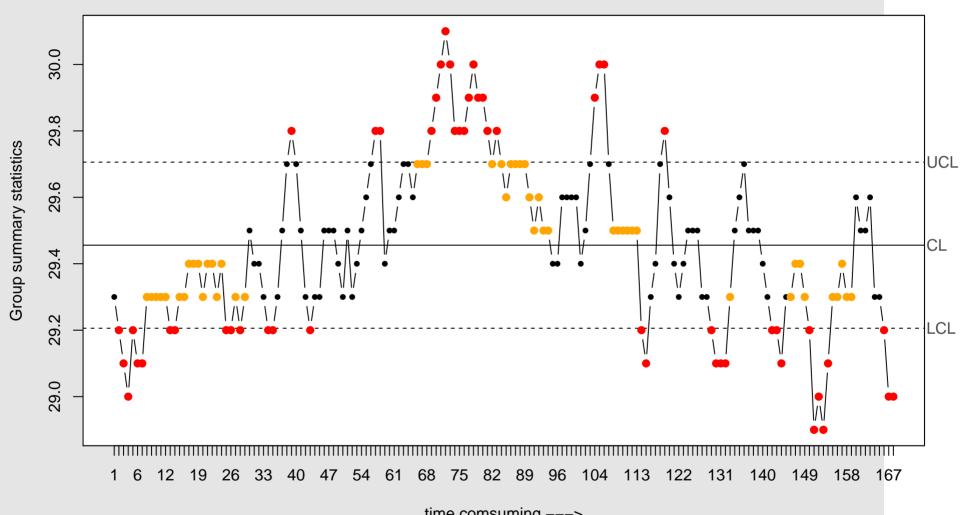
LCL = 29.49776 UCL = 29.89272 Number beyond limits = 67 Number violating runs = 103



Number of groups = 168 Center = 29.53869

StdDev = 0.06210982

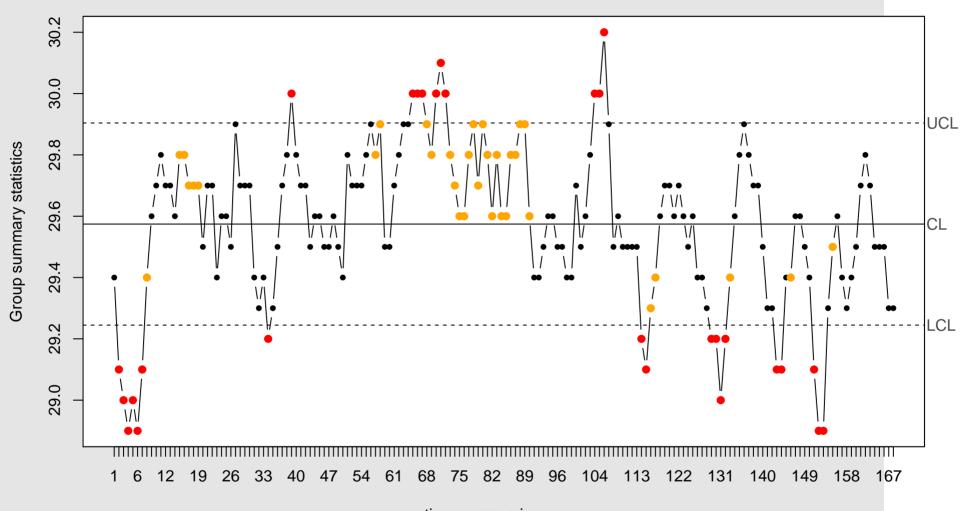
LCL = 29.35236 UCL = 29.72502 Number beyond limits = 68 Number violating runs = 85



time comsuming --->

Number of groups = 168 Center = 29.45595StdDev = 0.08334395

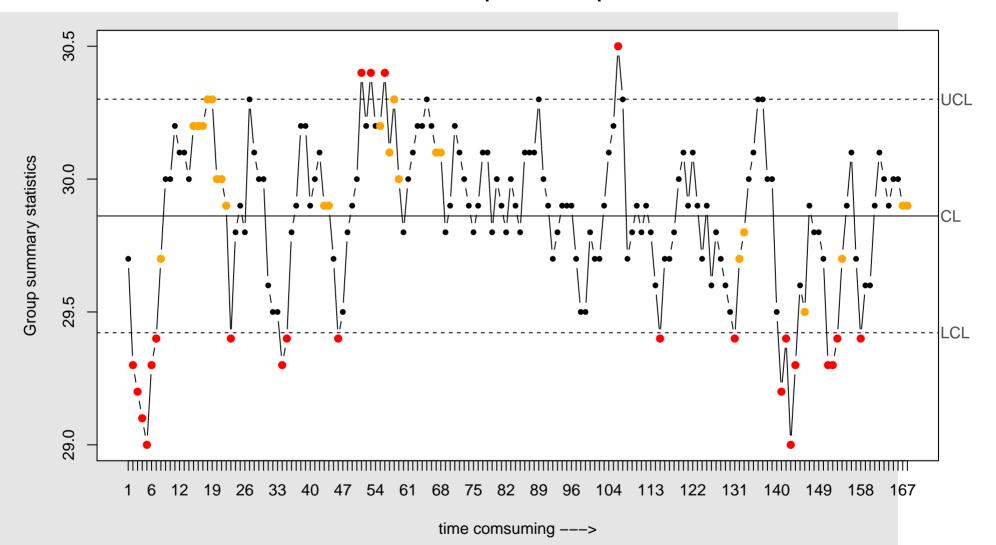
LCL = 29.20592UCL = 29.70598 Number beyond limits = 52 Number violating runs = 73



time comsuming --->

Number of groups = 168 Center = 29.5744 StdDev = 0.1098866

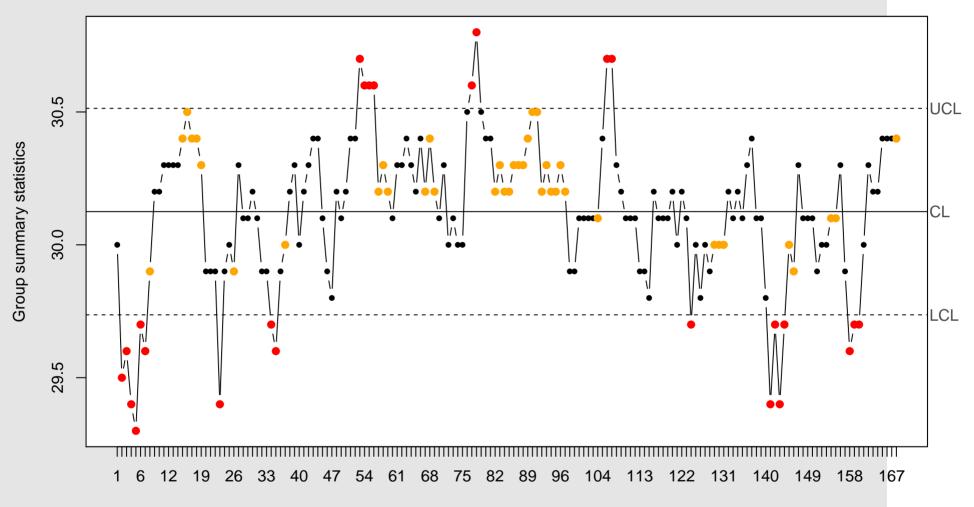
LCL = 29.24474 UCL = 29.90406 Number beyond limits = 28 Number violating runs = 39



Number of groups = 168 Center = 29.86131

StdDev = 0.1465155

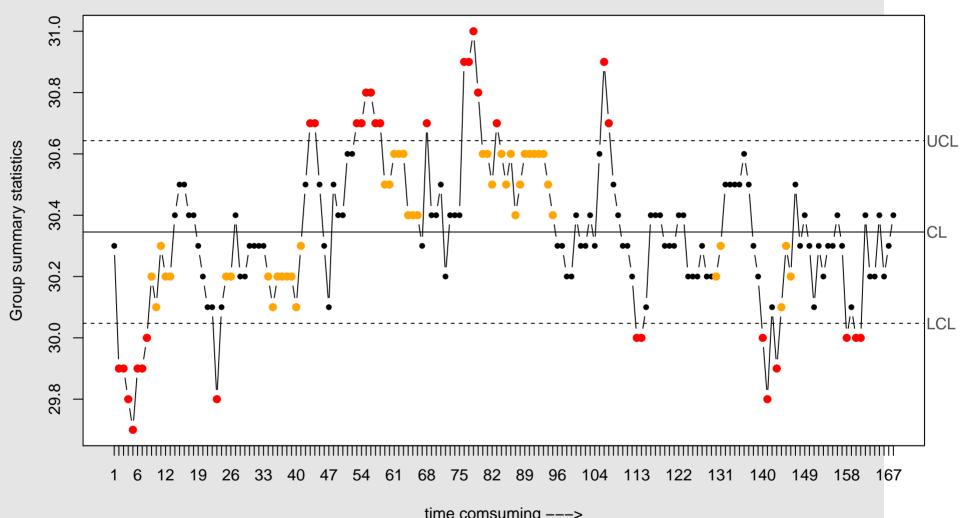
LCL = 29.42176 UCL = 30.30086 Number beyond limits = 24 Number violating runs = 25



time comsuming --->

Number of groups = 168 Center = 30.125 StdDev = 0.1295282

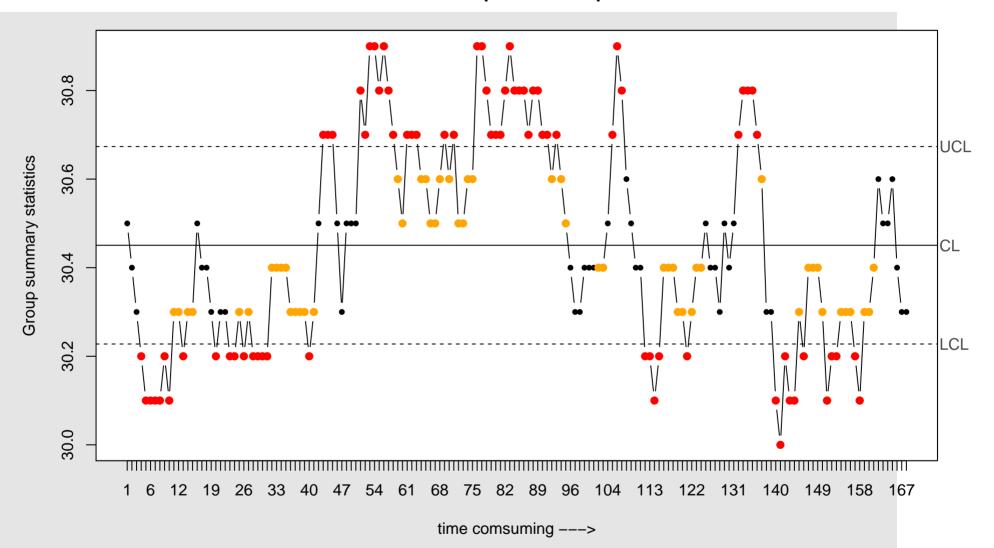
LCL = 29.73642 UCL = 30.51358 Number beyond limits = 25 Number violating runs = 42



time comsuming --->

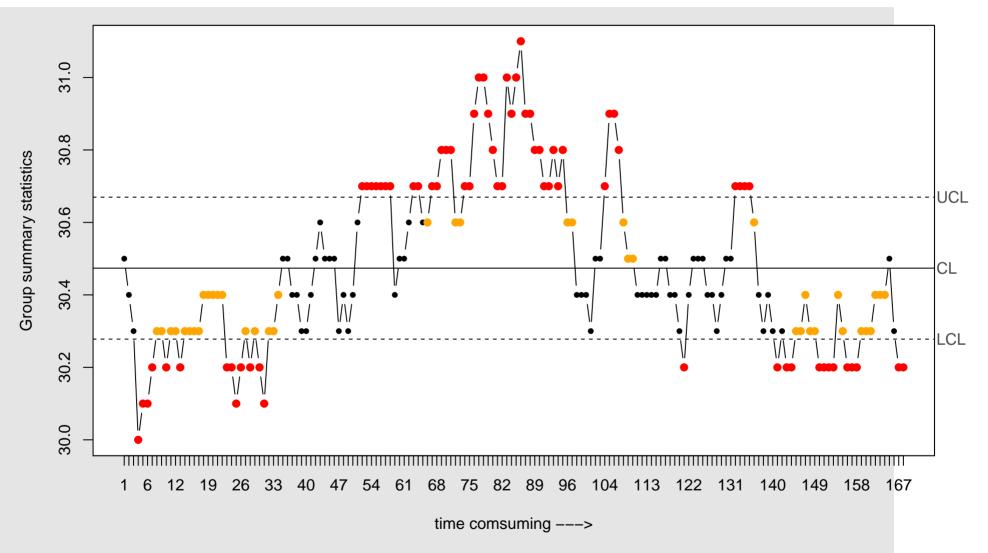
Number of groups = 168 Center = 30.34524StdDev = 0.09926955

LCL = 30.04743UCL = 30.64305 Number beyond limits = 32 Number violating runs = 52



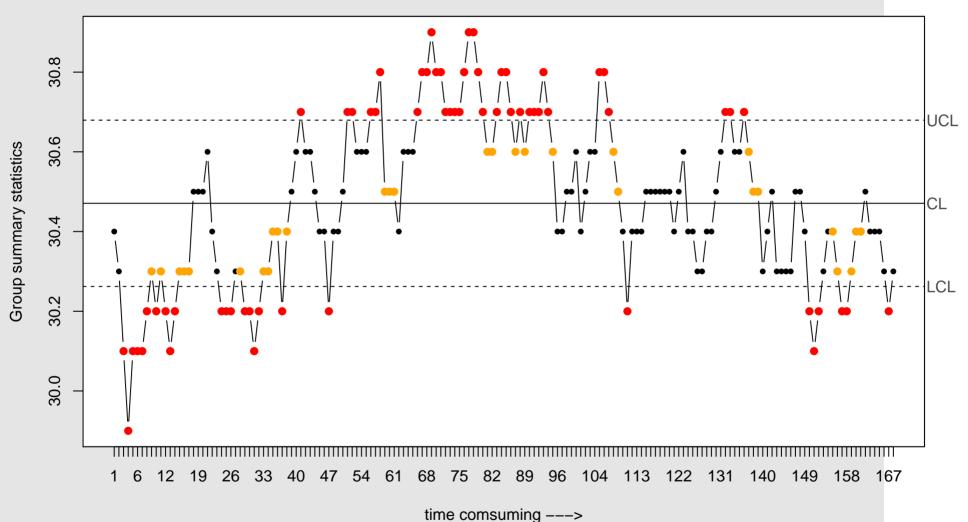
Number of groups = 168 Center = 30.4506 StdDev = 0.07431945

LCL = 30.22764 UCL = 30.67355 Number beyond limits = 74 Number violating runs = 99



Number of groups = 168 Center = 30.47381 StdDev = 0.06529494

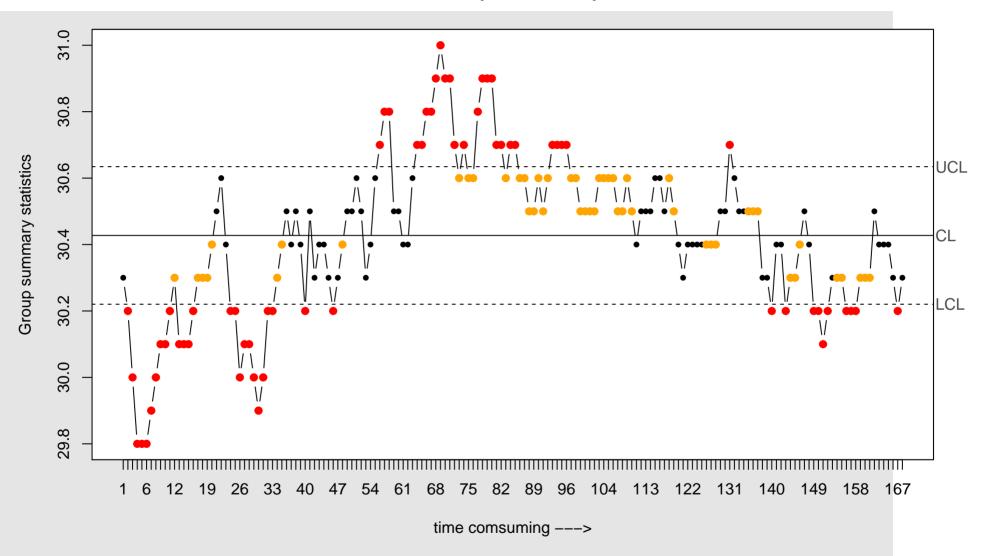
LCL = 30.27792 UCL = 30.66969 Number beyond limits = 70 Number violating runs = 87



Number of groups = 168 Center = 30.47083StdDev = 0.06954177

LCL = 30.26221 UCL = 30.67946

Number beyond limits = 63 Number violating runs = 68

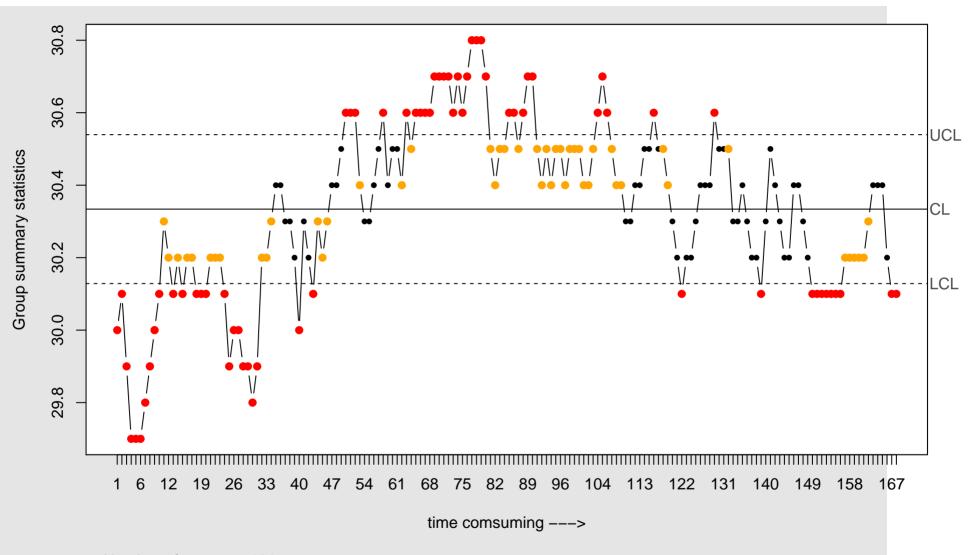


Number of groups = 168 Center = 30.42738

StdDev = 0.06901091

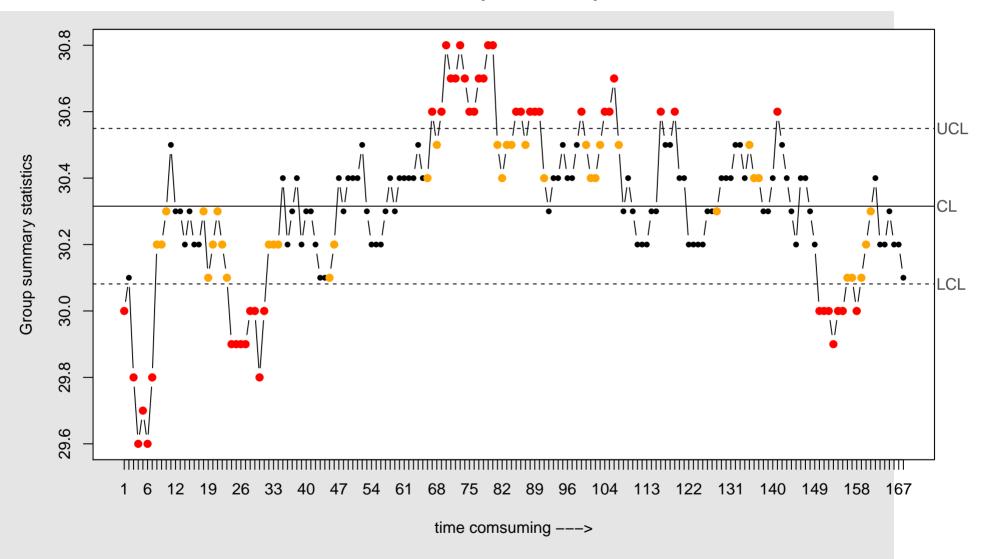
LCL = 30.22035 UCL = 30.63441

Number beyond limits = 62 Number violating runs = 83



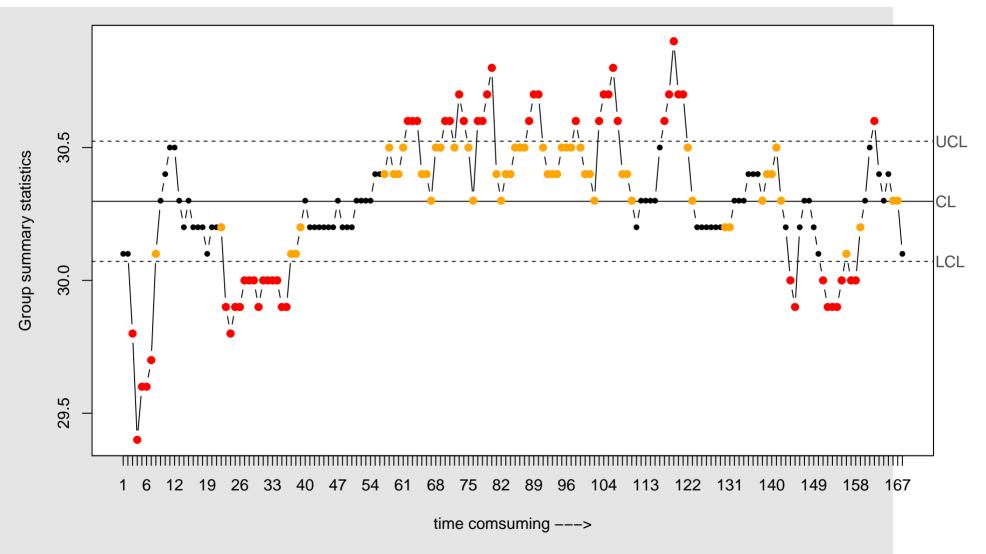
Number of groups = 168 Center = 30.33393 StdDev = 0.06848006

LCL = 30.12849 UCL = 30.53937 Number beyond limits = 67 Number violating runs = 93



Number of groups = 168 Center = 30.31548 StdDev = 0.07803542

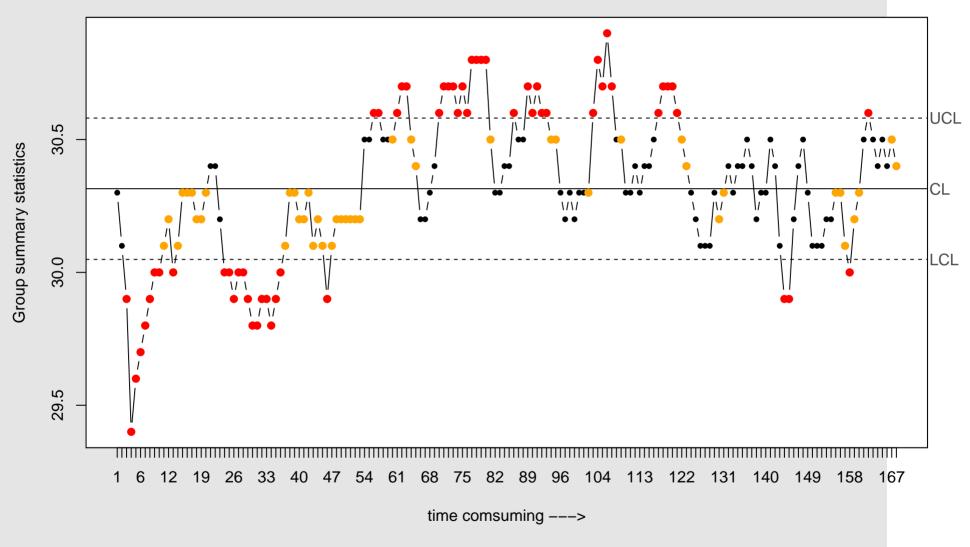
LCL = 30.08137 UCL = 30.54958 Number beyond limits = 46 Number violating runs = 70



Number of groups = 168 Center = 30.29762

StdDev = 0.07538115

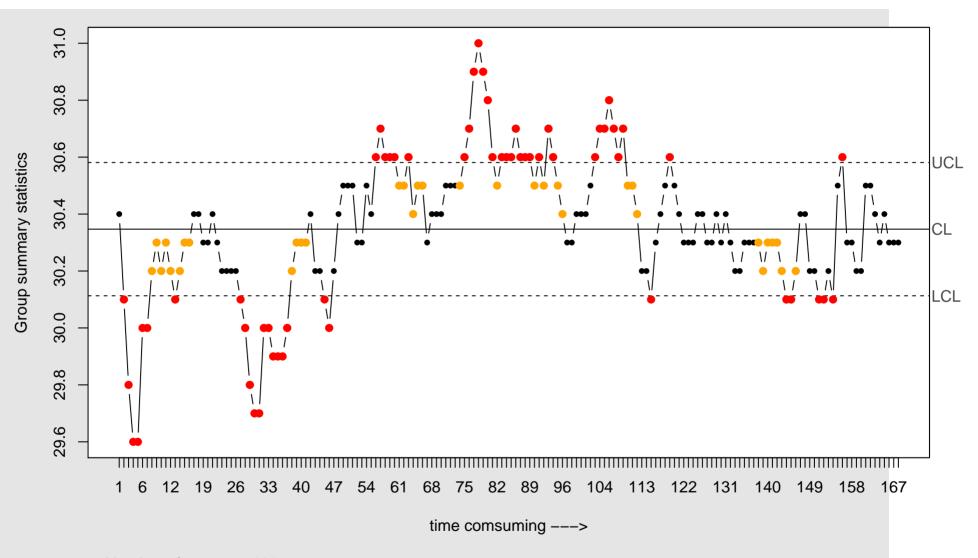
LCL = 30.07148 UCL = 30.52376 Number beyond limits = 54 Number violating runs = 94



Number of groups = 168 Center = 30.31488 StdDev = 0.08865248

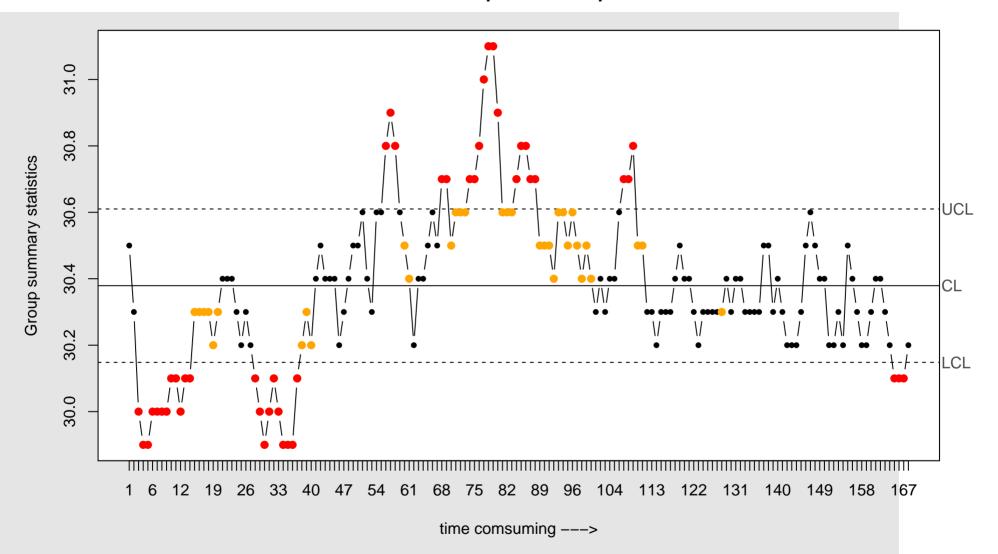
LCL = 30.04892 UCL = 30.58084

Number beyond limits = 59 Number violating runs = 74



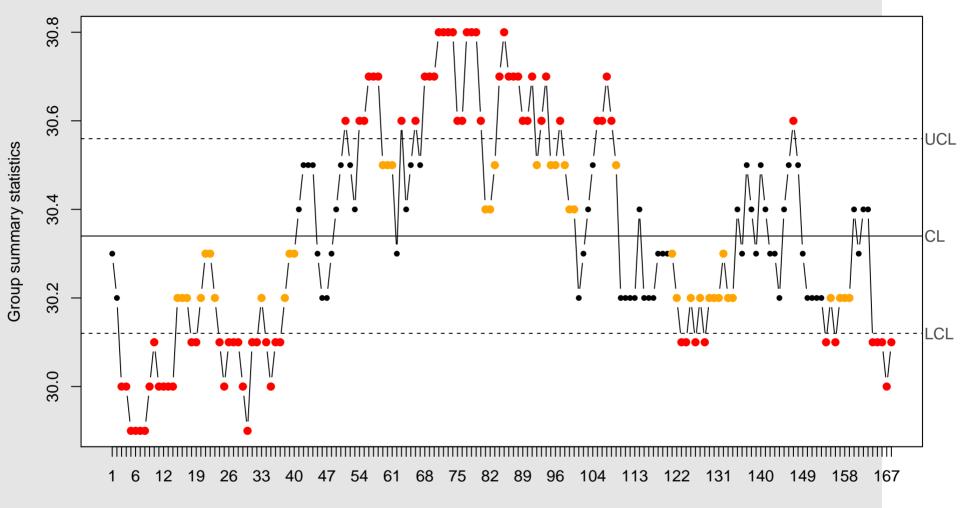
Number of groups = 168 Center = 30.34702 StdDev = 0.07803542

LCL = 30.11292 UCL = 30.58113 Number beyond limits = 58 Number violating runs = 70



Number of groups = 168 Center = 30.37917 StdDev = 0.07697371

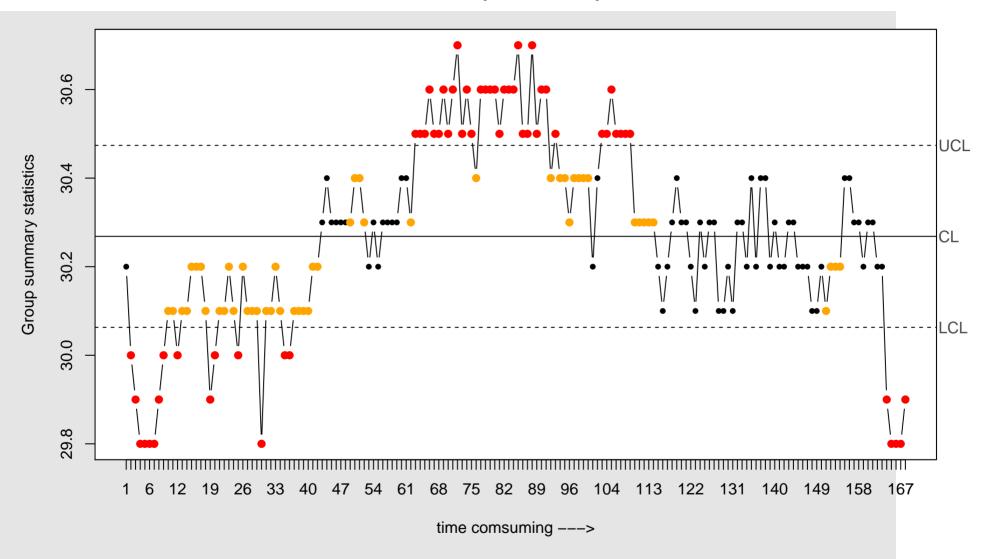
LCL = 30.14825 UCL = 30.61009 Number beyond limits = 45 Number violating runs = 61



time comsuming --->

Number of groups = 168 Center = 30.33988 StdDev = 0.07325774

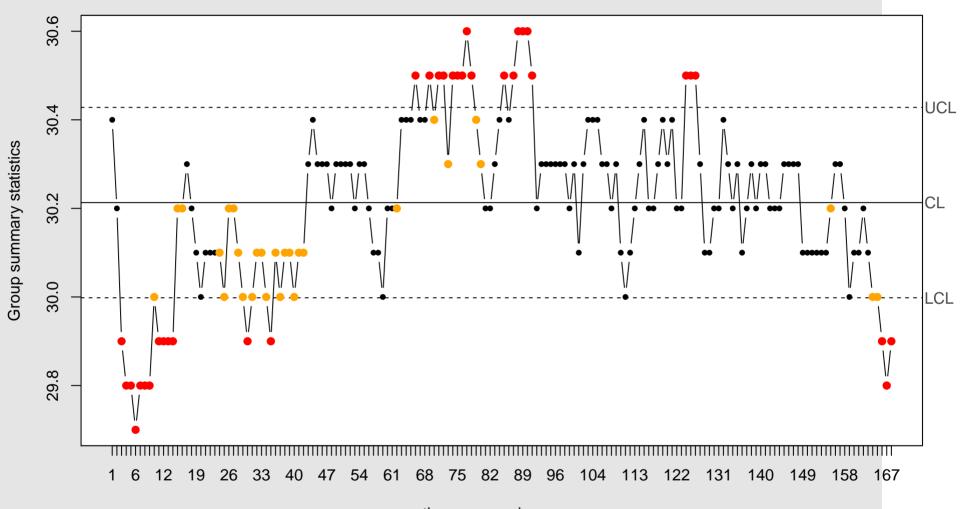
LCL = 30.12011 UCL = 30.55965 Number beyond limits = 75 Number violating runs = 93



Number of groups = 168 Center = 30.26845 StdDev = 0.06848006

LCL = 30.06301 UCL = 30.47389

Number beyond limits = 56 Number violating runs = 91

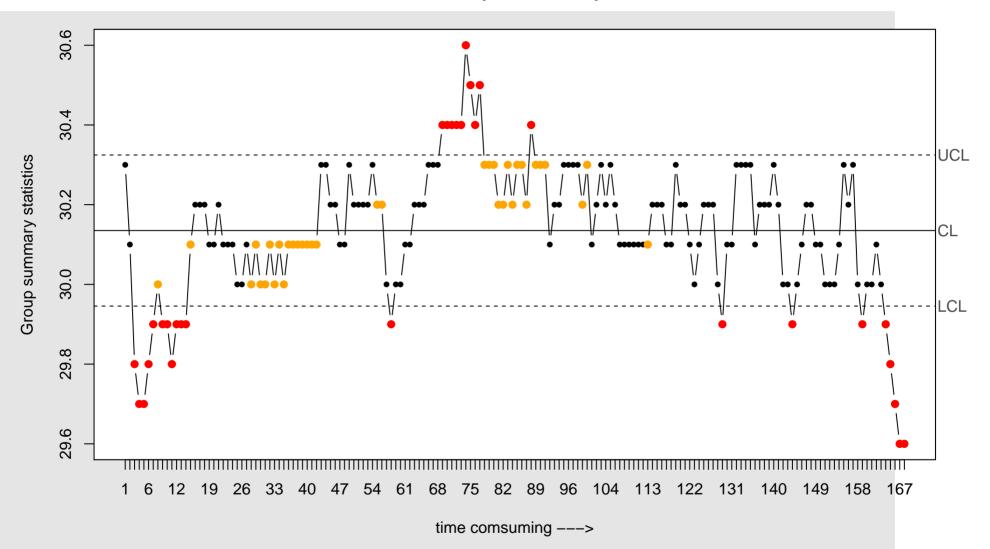


time comsuming --->

Number of groups = 168 Center = 30.2131 StdDev = 0.07166518

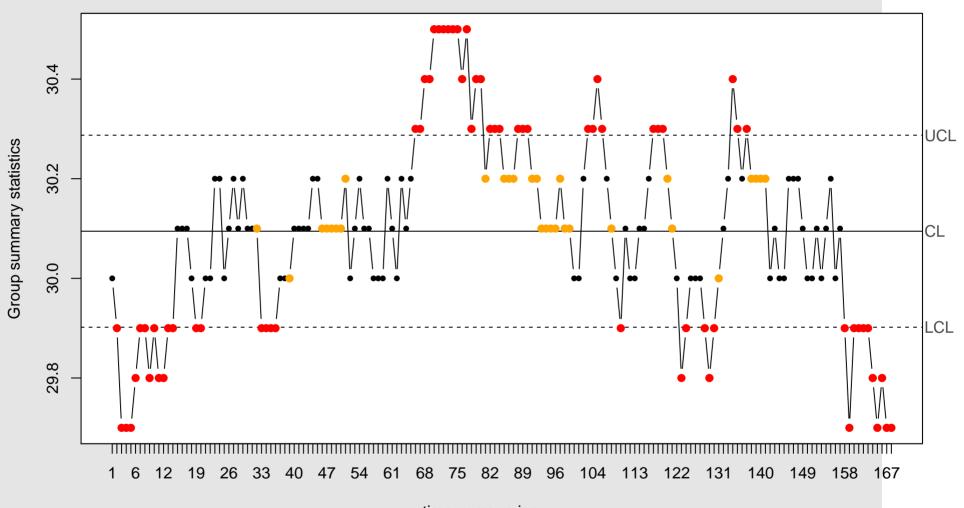
LCL = 29.9981 UCL = 30.42809

Number beyond limits = 34 Number violating runs = 50



Number of groups = 168 Center = 30.13512 StdDev = 0.06317153

LCL = 29.9456 UCL = 30.32463 Number beyond limits = 30 Number violating runs = 56

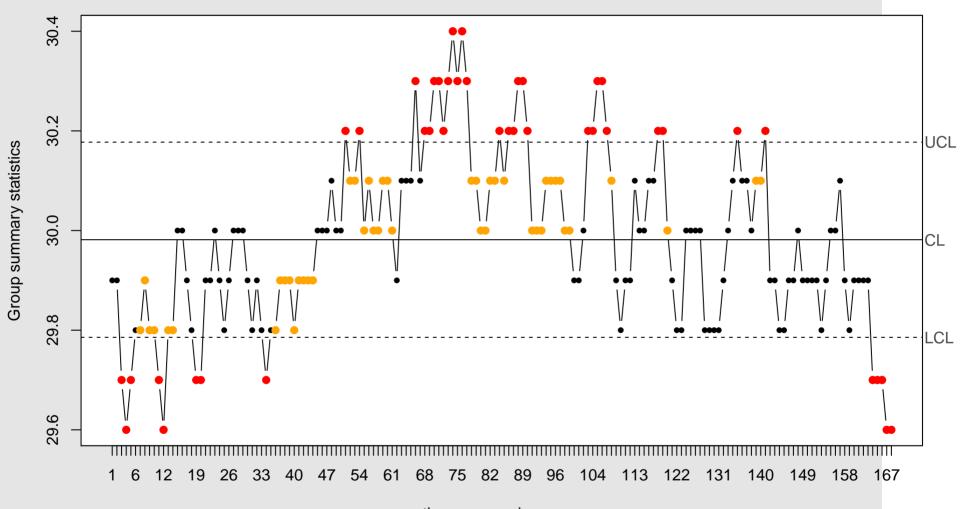


time comsuming --->

Number of groups = 168 Center = 30.09464 StdDev = 0.06423324

LCL = 29.90194 UCL = 30.28734

Number beyond limits = 67 Number violating runs = 63

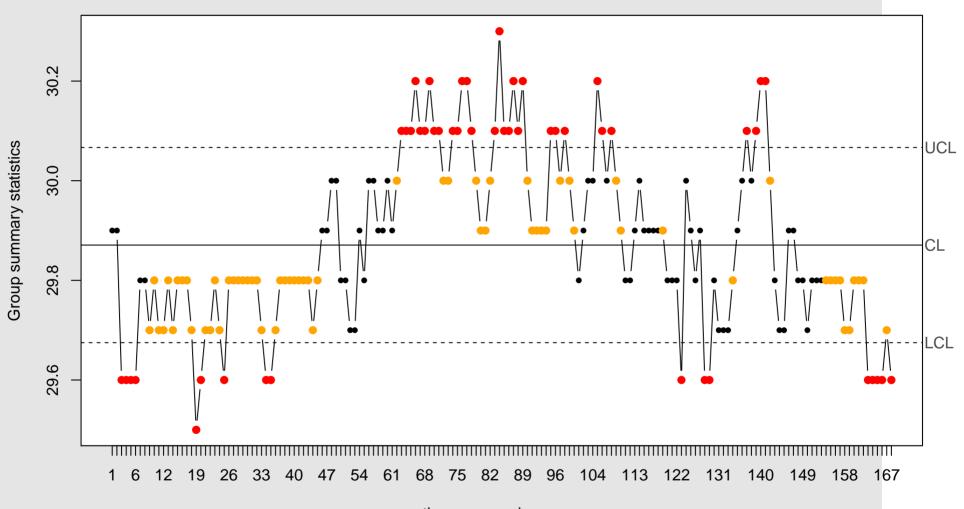


time comsuming --->

Number of groups = 168 Center = 29.98155 StdDev = 0.06529494

LCL = 29.78566 UCL = 30.17743

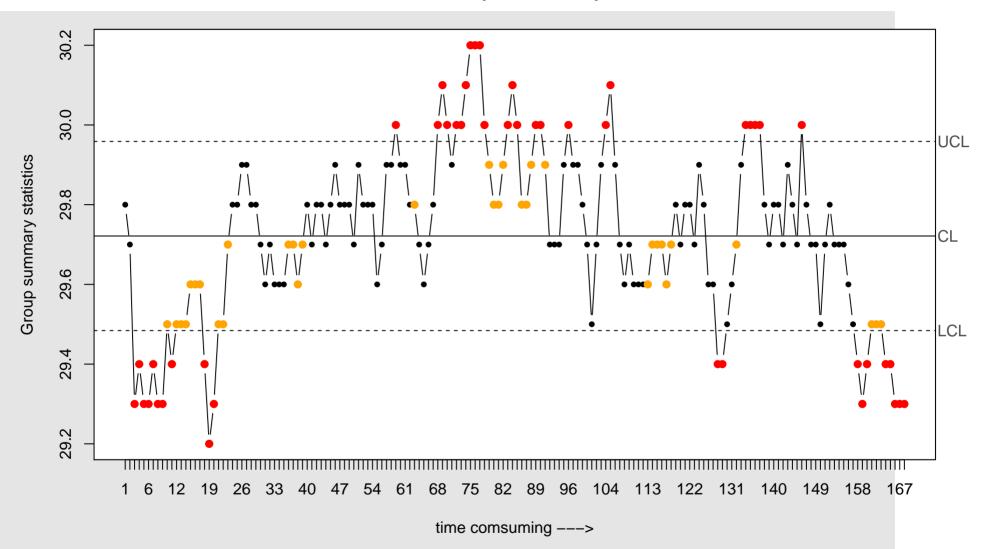
Number beyond limits = 41 Number violating runs = 70



time comsuming --->

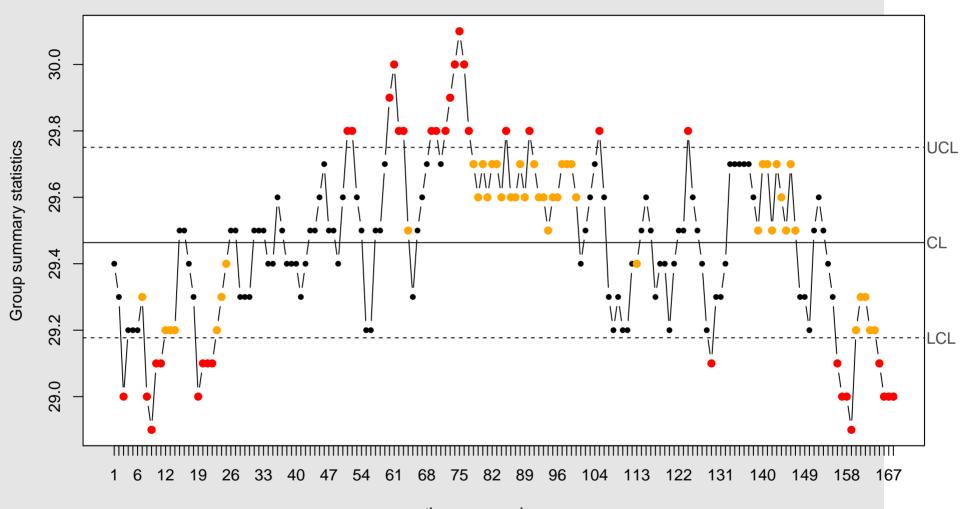
Number of groups = 168 Center = 29.87083 StdDev = 0.06529494

LCL = 29.67495 UCL = 30.06672 Number beyond limits = 48 Number violating runs = 98



Number of groups = 168 Center = 29.72143 StdDev = 0.07909712

LCL = 29.48414 UCL = 29.95872 Number beyond limits = 45 Number violating runs = 57

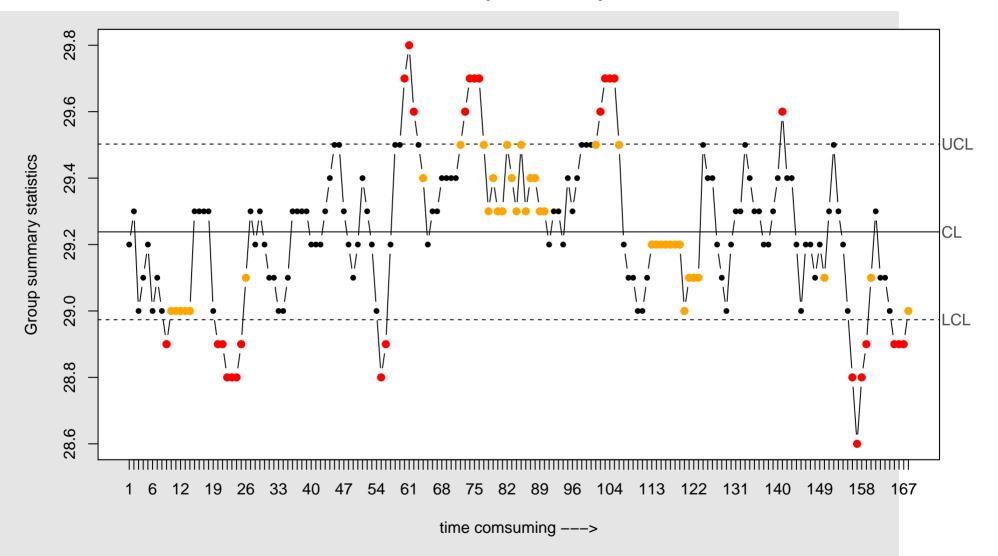


time comsuming --->

Number of groups = 168 Center = 29.46369 StdDev = 0.09555357

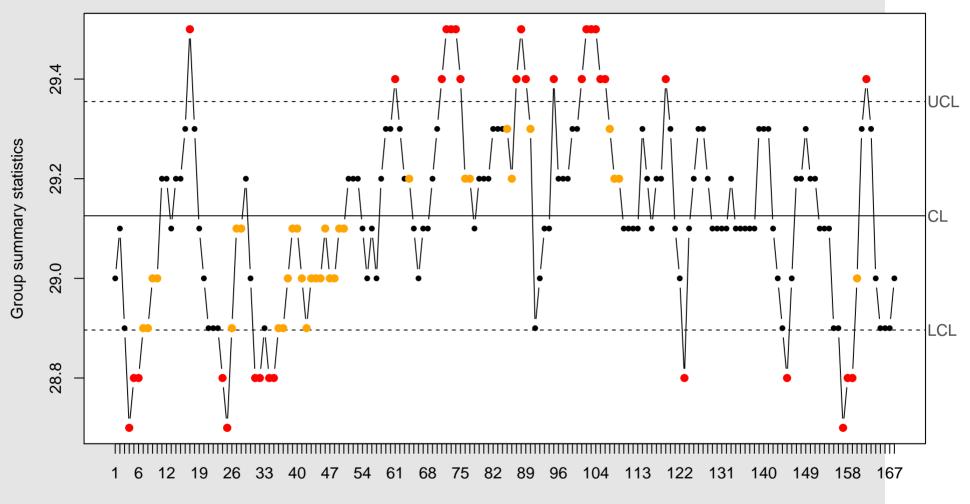
LCL = 29.17703 UCL = 29.75035

Number beyond limits = 36 Number violating runs = 61



Number of groups = 168 Center = 29.2381 StdDev = 0.08812163

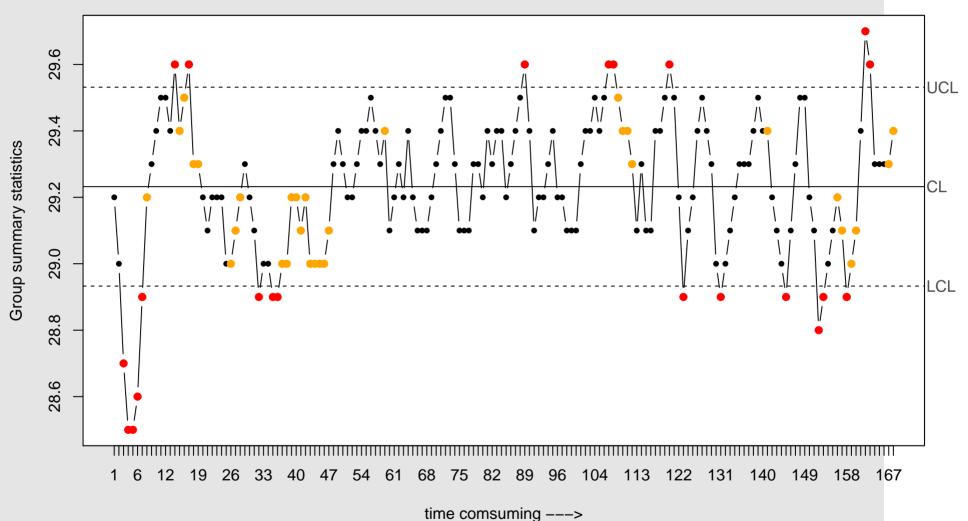
LCL = 28.97373 UCL = 29.50246 Number beyond limits = 28 Number violating runs = 48



time comsuming --->

Number of groups = 168 Center = 29.1256 StdDev = 0.07644286

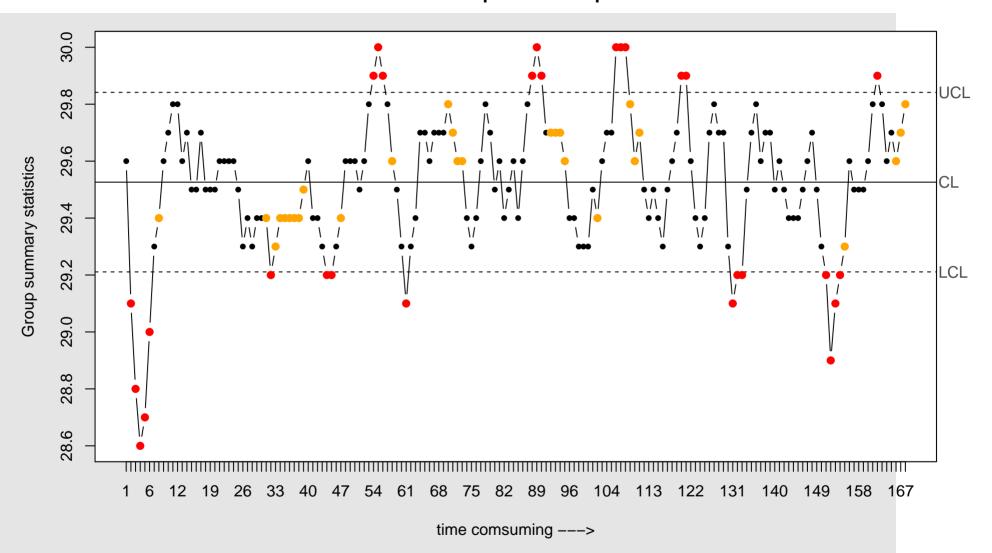
LCL = 28.89627 UCL = 29.35492 Number beyond limits = 33 Number violating runs = 45



Number of groups = 168 Center = 29.23214StdDev = 0.0998004

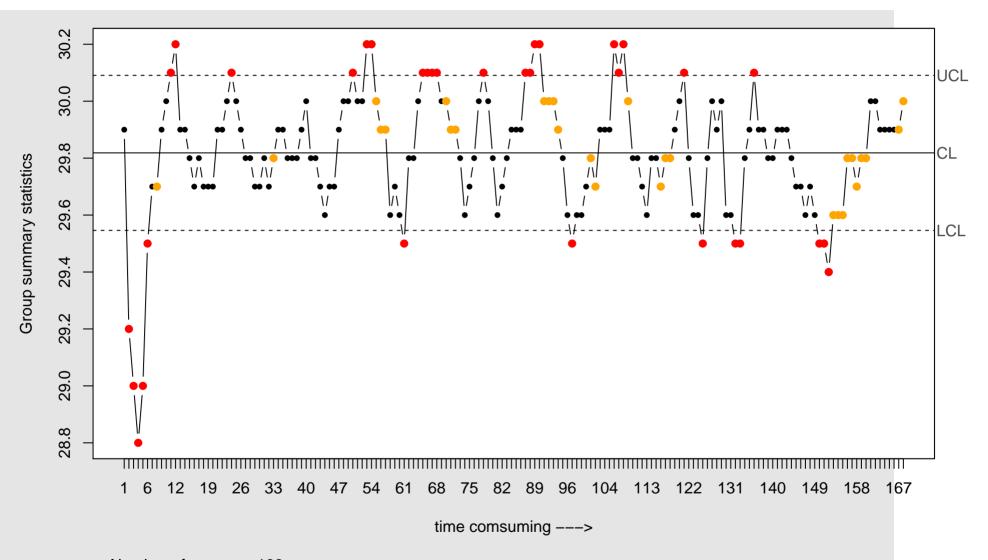
LCL = 28.93274UCL = 29.53154

Number beyond limits = 22 Number violating runs = 37



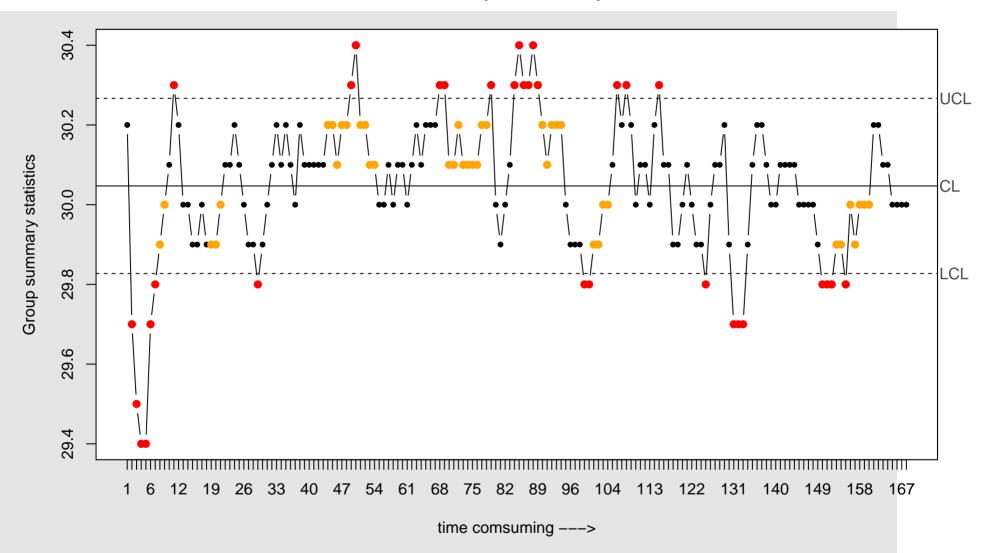
Number of groups = 168 Center = 29.52619 StdDev = 0.1051089

LCL = 29.21086 UCL = 29.84152 Number beyond limits = 28 Number violating runs = 28



Number of groups = 168 Center = 29.81845 StdDev = 0.0907759

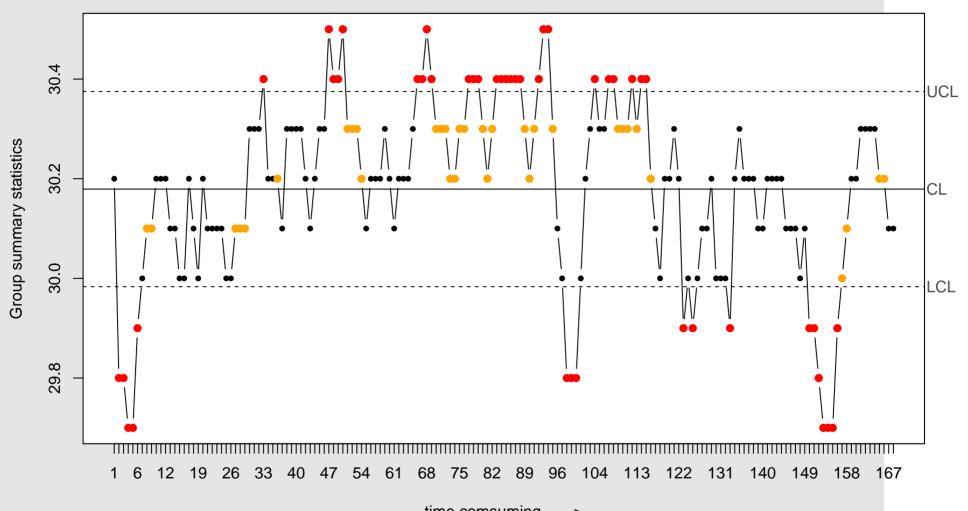
LCL = 29.54612 UCL = 30.09078 Number beyond limits = 33 Number violating runs = 34



Number of groups = 168 Center = 30.04702 StdDev = 0.07325774

LCL = 29.82725 UCL = 30.2668

Number beyond limits = 32 Number violating runs = 48

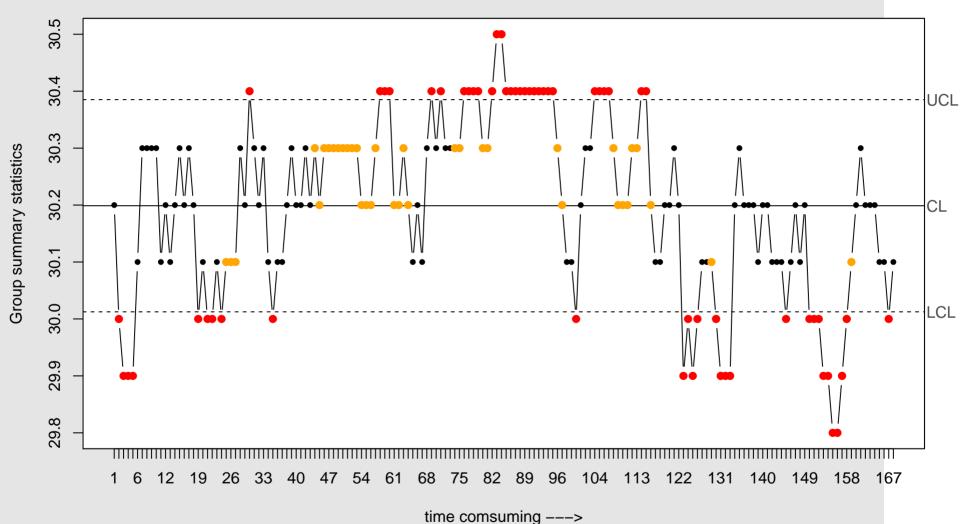


time comsuming --->

Number of groups = 168 Center = 30.17917 StdDev = 0.06529494

LCL = 29.98328 UCL = 30.37505

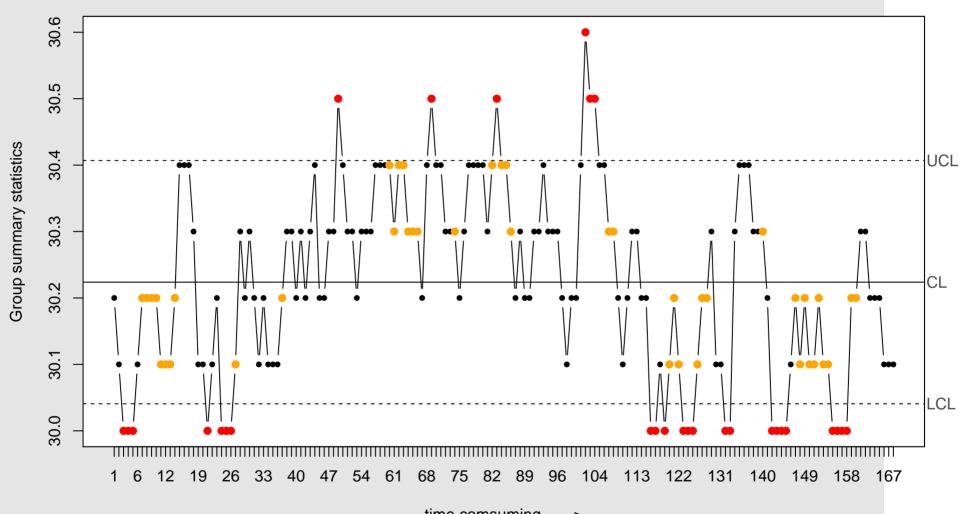
Number beyond limits = 45 Number violating runs = 58



Number of groups = 168 Center = 30.19881StdDev = 0.06210982

LCL = 30.01248UCL = 30.38514

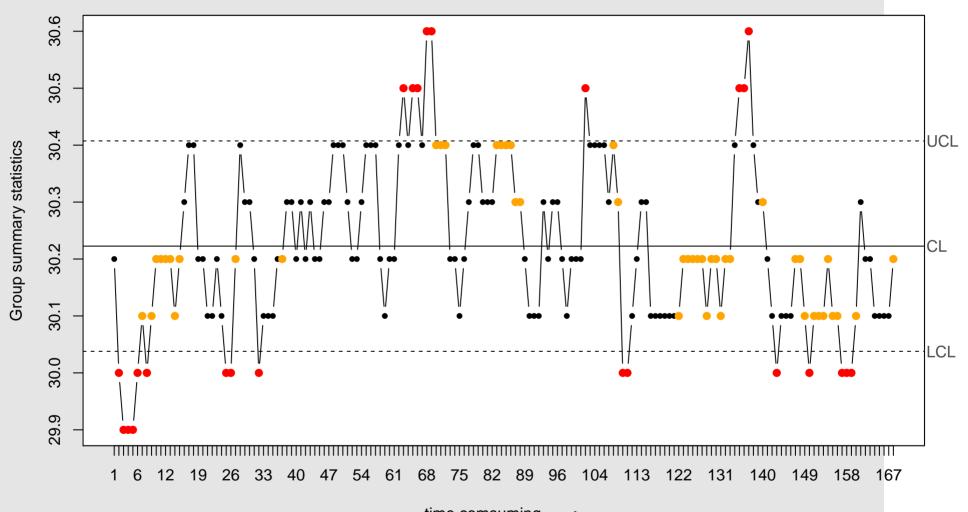
Number beyond limits = 59 Number violating runs = 67



time comsuming --->

Number of groups = 168 Center = 30.22381 StdDev = 0.06104812

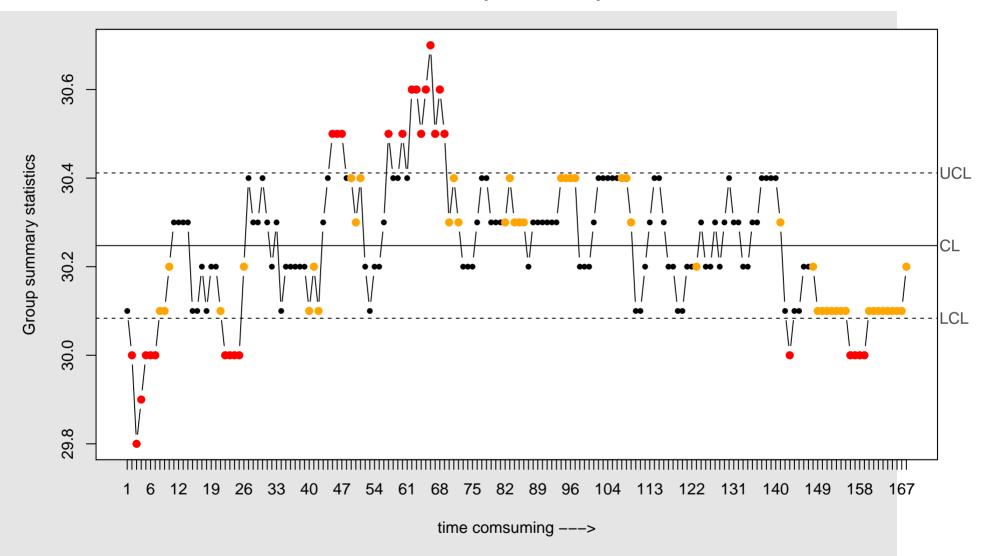
LCL = 30.04067 UCL = 30.40695 Number beyond limits = 29 Number violating runs = 51



time comsuming --->

Number of groups = 168 Center = 30.22262 StdDev = 0.06157897

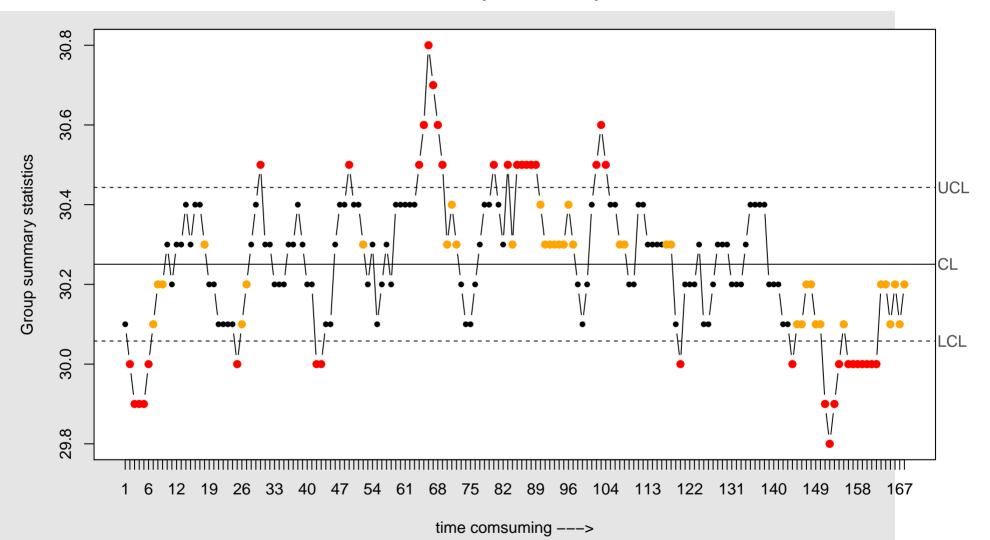
LCL = 30.03788 UCL = 30.40736 Number beyond limits = 25 Number violating runs = 54



Number of groups = 168 Center = 30.24762

StdDev = 0.05467788

LCL = 30.08359 UCL = 30.41165 Number beyond limits = 28 Number violating runs = 62

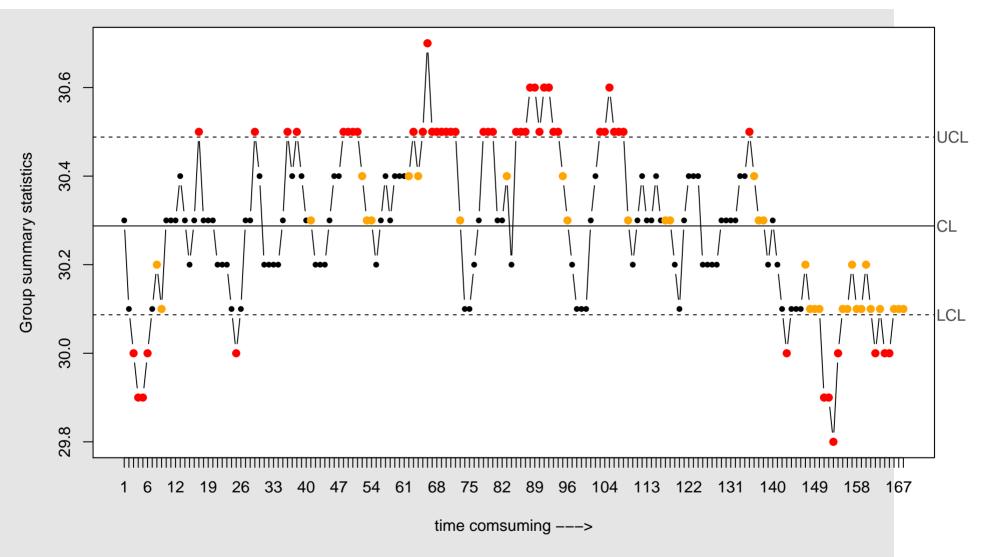


Number of groups = 168 Center = 30.2506

StdDev = 0.06423324

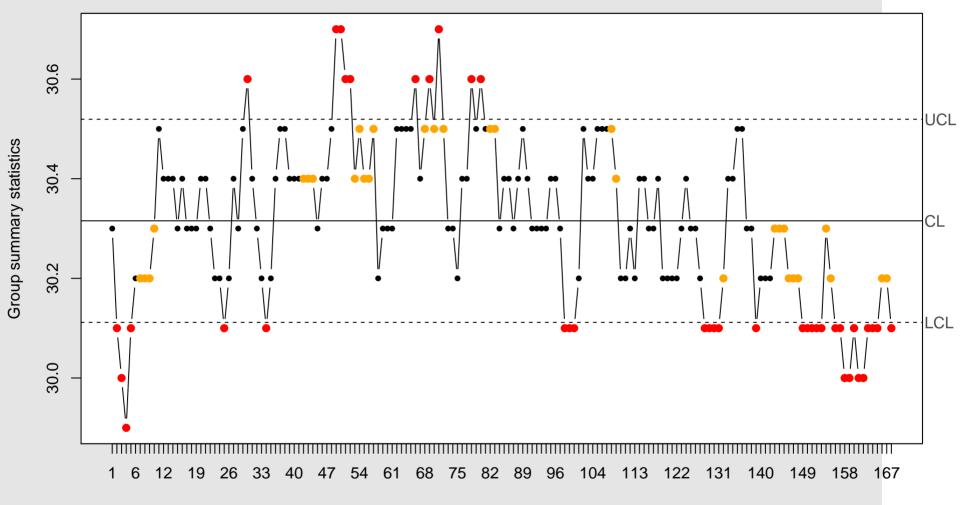
LCL = 30.0579 UCL = 30.44329

Number beyond limits = 39 Number violating runs = 59



Number of groups = 168 Center = 30.2875 StdDev = 0.0668875

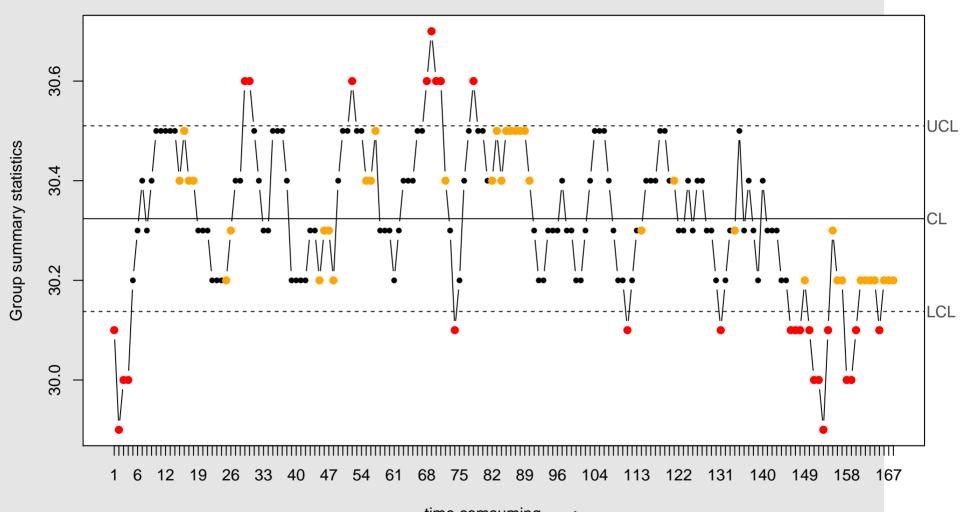
LCL = 30.08684 UCL = 30.48816 Number beyond limits = 50 Number violating runs = 57



time comsuming --->

Number of groups = 168 Center = 30.31548 StdDev = 0.06794921

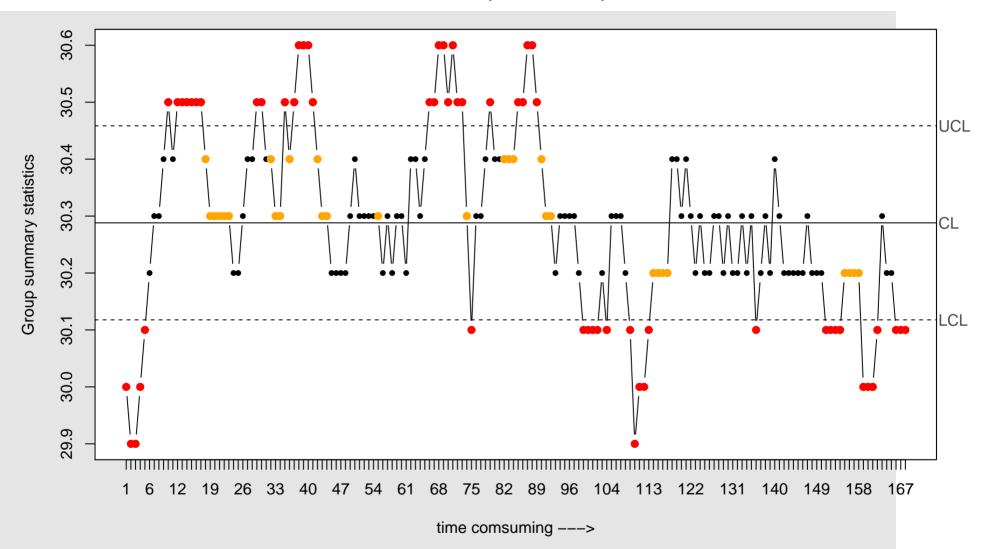
LCL = 30.11163 UCL = 30.51932 Number beyond limits = 40 Number violating runs = 50



time comsuming --->

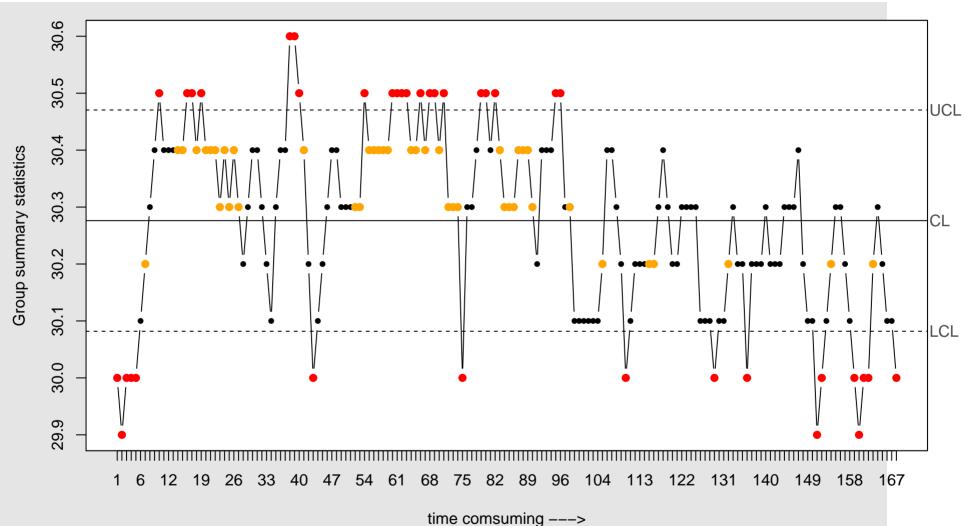
Number of groups = 168 Center = 30.32381 StdDev = 0.06210982

LCL = 30.13748 UCL = 30.51014 Number beyond limits = 27 Number violating runs = 51



Number of groups = 168 Center = 30.2881 StdDev = 0.05680129

LCL = 30.11769 UCL = 30.4585 Number beyond limits = 57 Number violating runs = 57

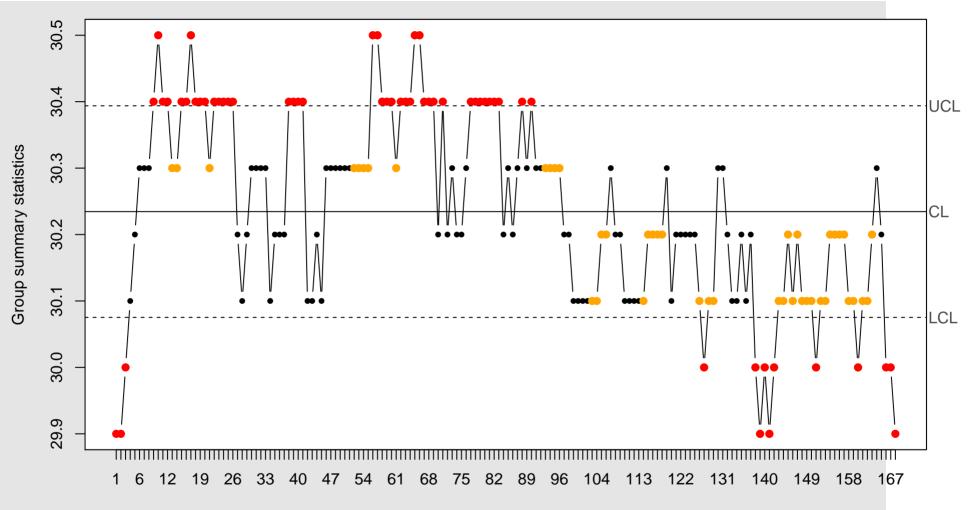


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Number of groups = 168 Center = 30.27619 StdDev = 0.06476409

LCL = 30.0819 UCL = 30.47048

Number beyond limits = 38 Number violating runs = 55

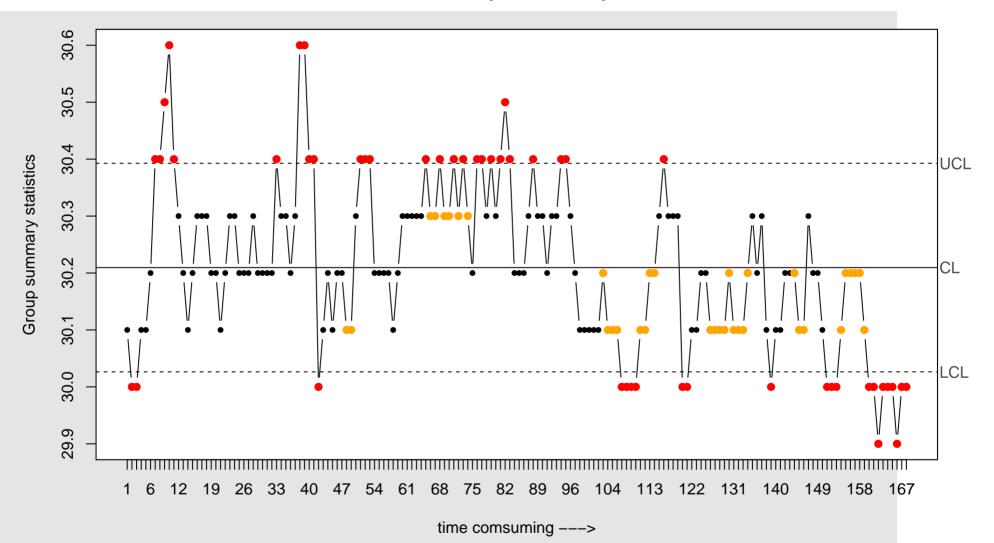


time comsuming --->

Number of groups = 168 Center = 30.23452 StdDev = 0.05308532

LCL = 30.07527 UCL = 30.39378

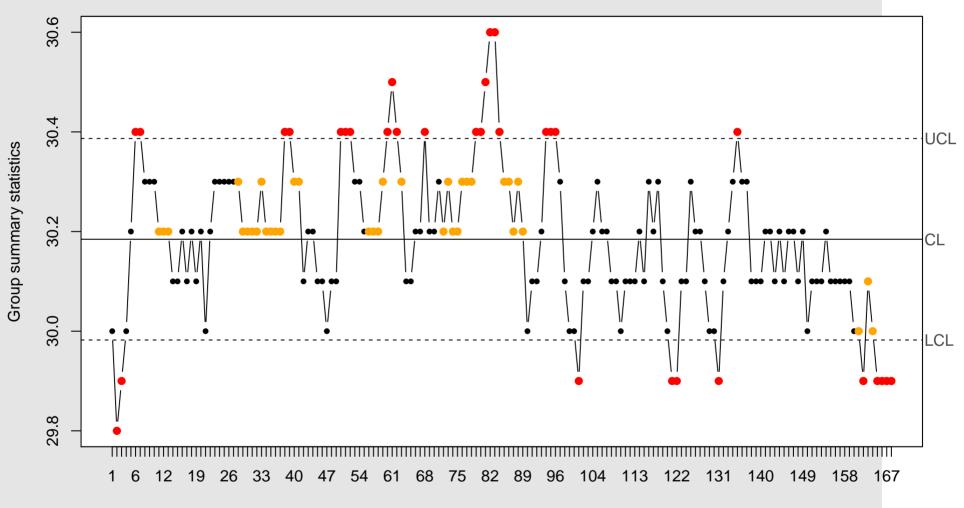
Number beyond limits = 56 Number violating runs = 78



Number of groups = 168 Center = 30.20952

StdDev = 0.06104812

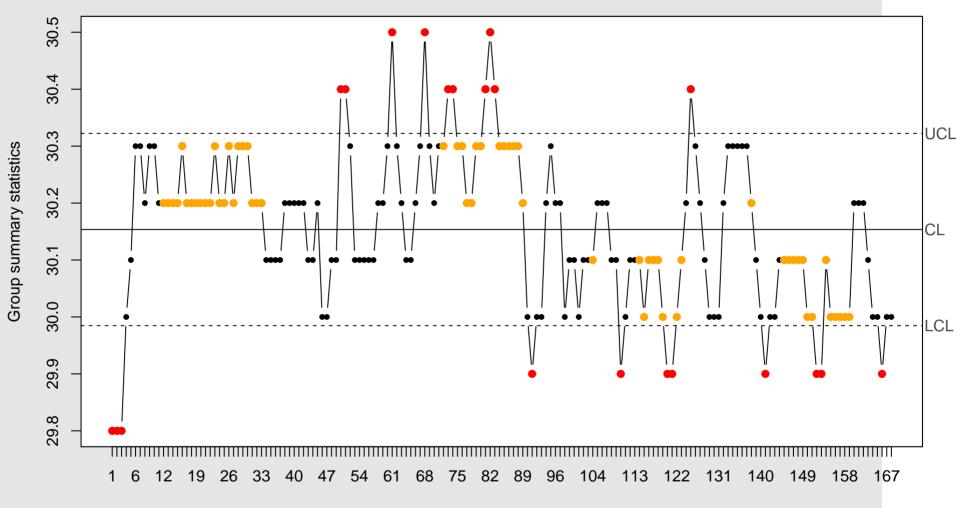
LCL = 30.02638 UCL = 30.39267 Number beyond limits = 49 Number violating runs = 52



time comsuming --->

Number of groups = 168 Center = 30.18452 StdDev = 0.06741835

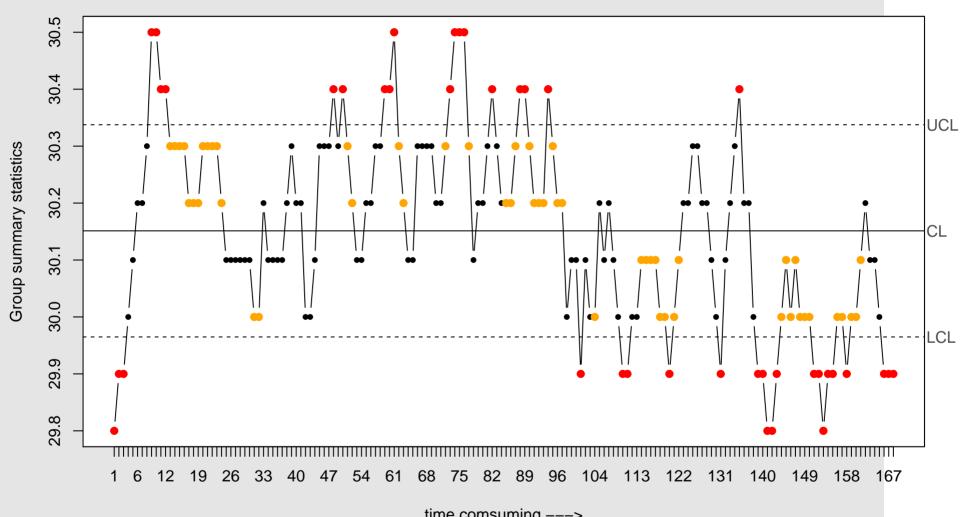
LCL = 29.98227 UCL = 30.38678 Number beyond limits = 32 Number violating runs = 51



time comsuming --->

Number of groups = 168 Center = 30.15357 StdDev = 0.05627044

LCL = 29.98476 UCL = 30.32238 Number beyond limits = 21 Number violating runs = 67

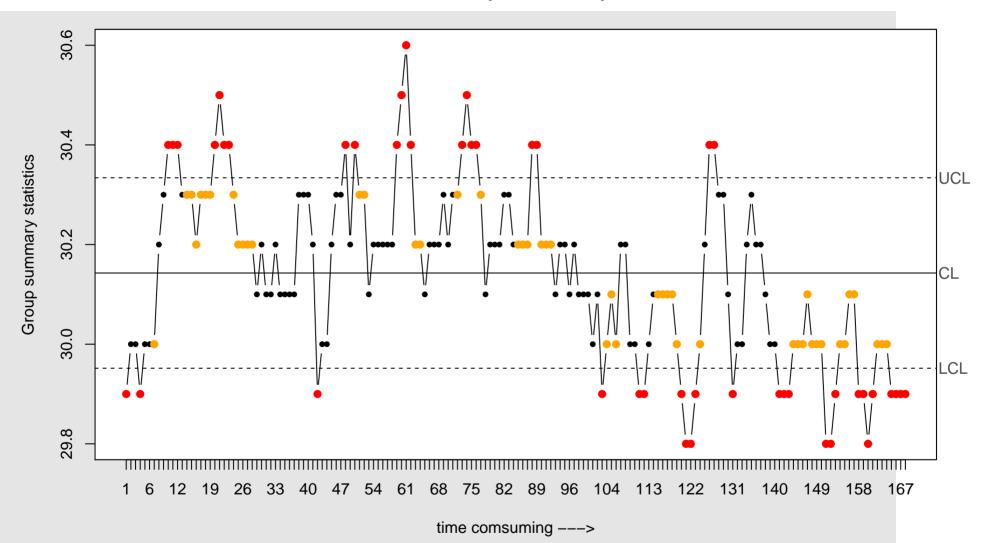


time comsuming --->

Number of groups = 168 Center = 30.15119StdDev = 0.06210982

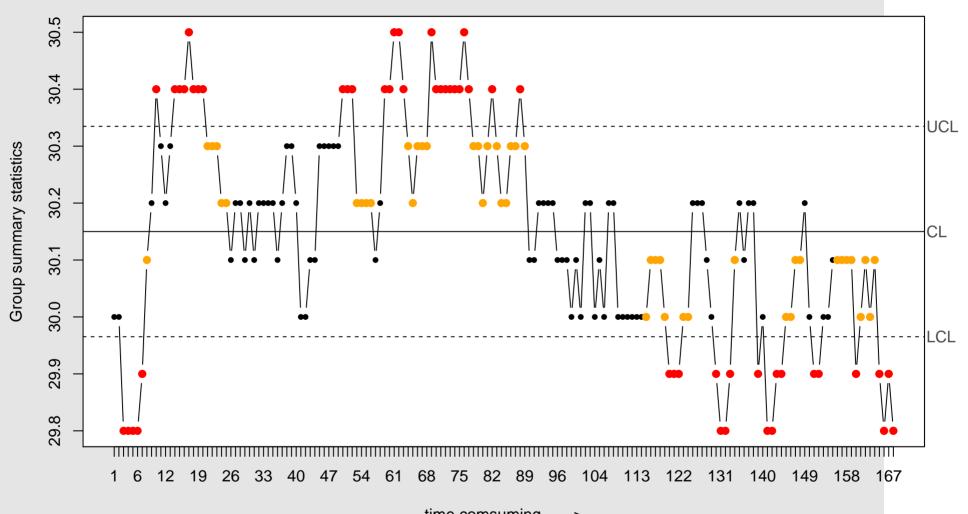
LCL = 29.96486UCL = 30.33752

Number beyond limits = 40 Number violating runs = 67



Number of groups = 168 Center = 30.14286 StdDev = 0.06370238

LCL = 29.95175 UCL = 30.33396 Number beyond limits = 46 Number violating runs = 75

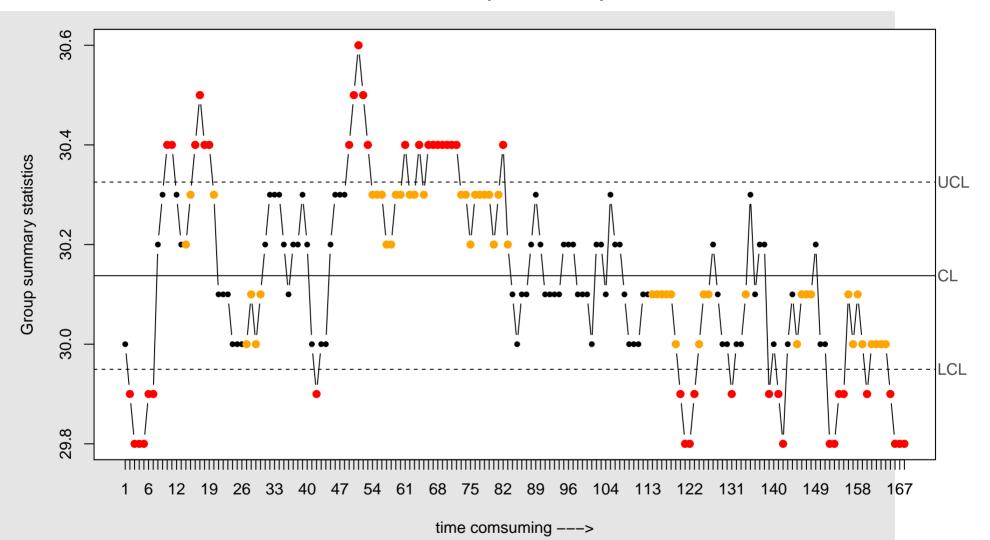


time comsuming --->

Number of groups = 168 Center = 30.15 StdDev = 0.06157897

LCL = 29.96526 UCL = 30.33474

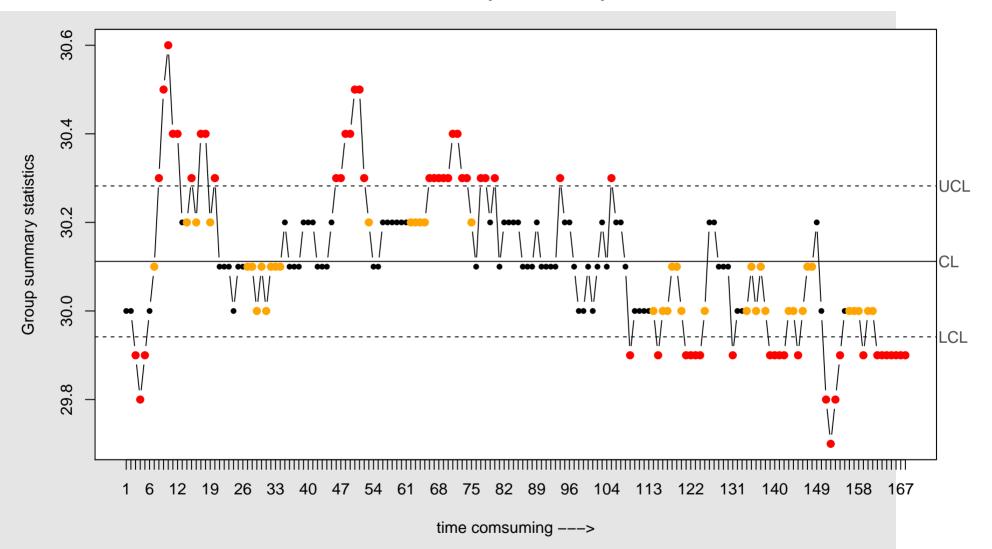
Number beyond limits = 51 Number violating runs = 73



Number of groups = 168 Center = 30.1375

StdDev = 0.06264068

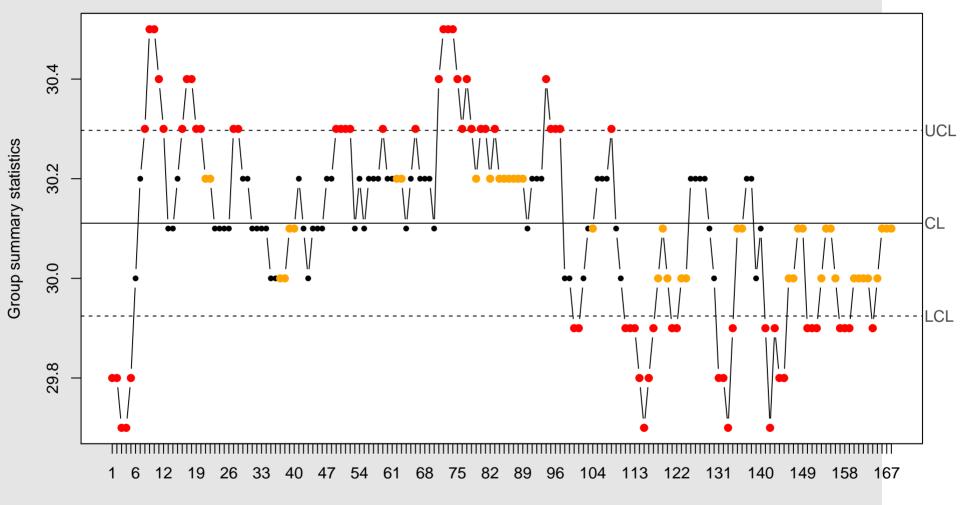
LCL = 29.94958 UCL = 30.32542 Number beyond limits = 45 Number violating runs = 76



Number of groups = 168 Center = 30.1119 StdDev = 0.05680129

LCL = 29.9415 UCL = 30.28231

Number beyond limits = 57 Number violating runs = 73

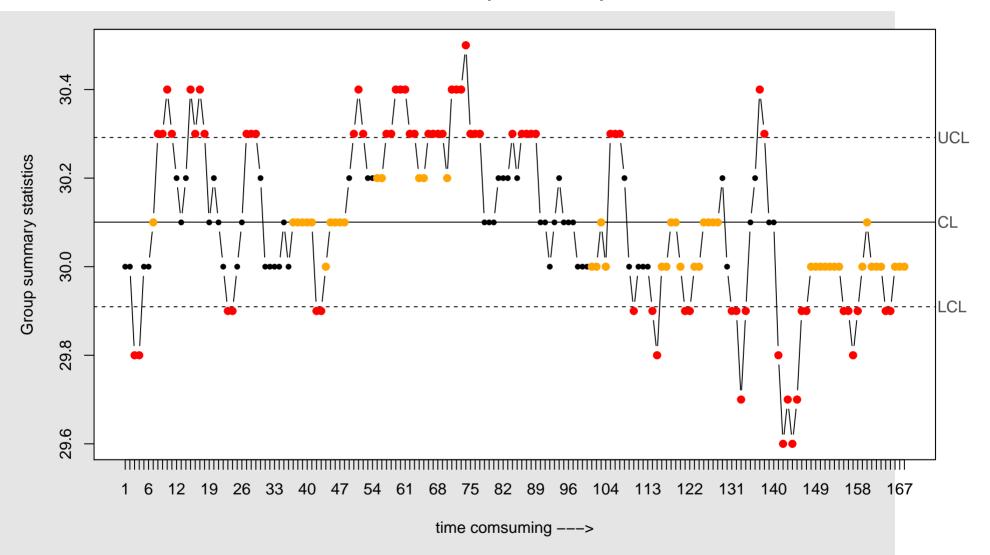


time comsuming --->

Number of groups = 168 Center = 30.11071 StdDev = 0.06210982

LCL = 29.92438 UCL = 30.29704

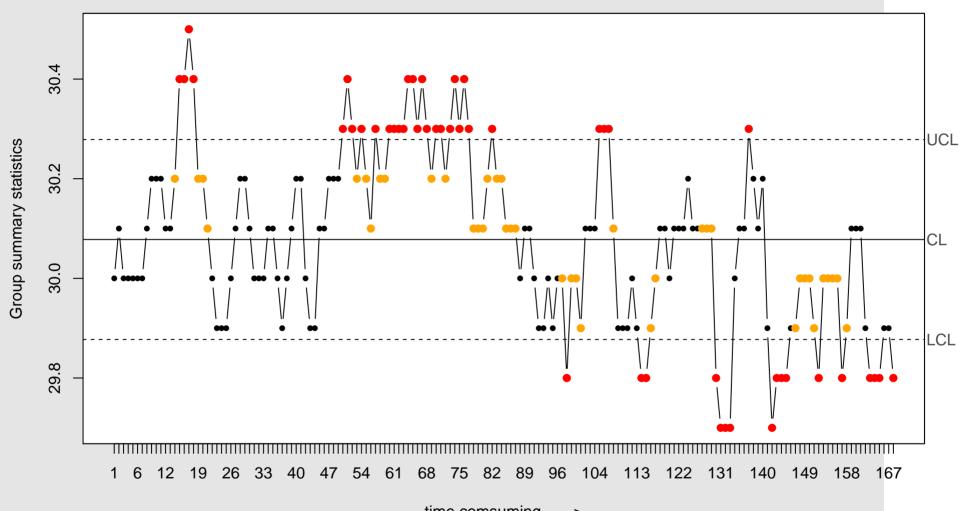
Number beyond limits = 66 Number violating runs = 59



Number of groups = 168 Center = 30.1006 StdDev = 0.06370238

LCL = 29.90949 UCL = 30.2917

Number beyond limits = 70 Number violating runs = 81

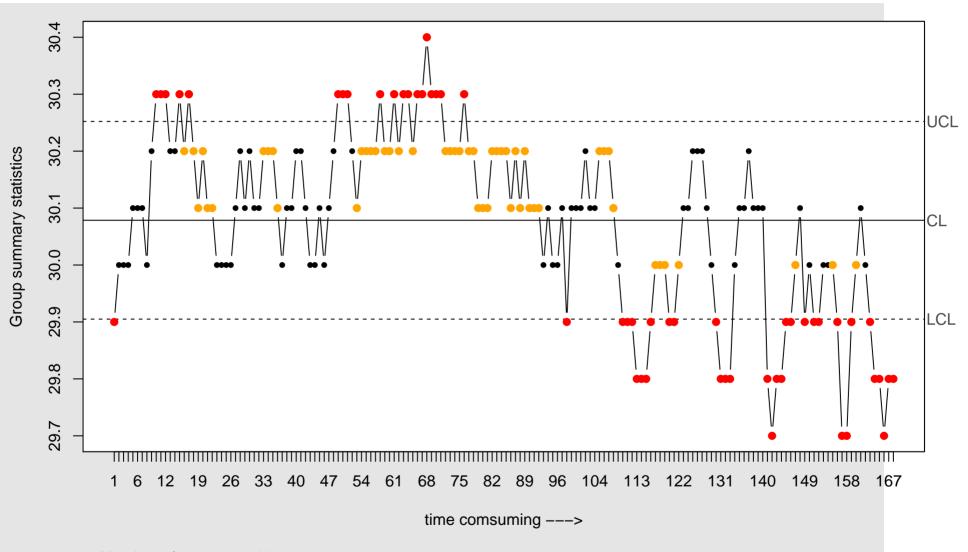


time comsuming --->

Number of groups = 168 Center = 30.07798 StdDev = 0.0668875

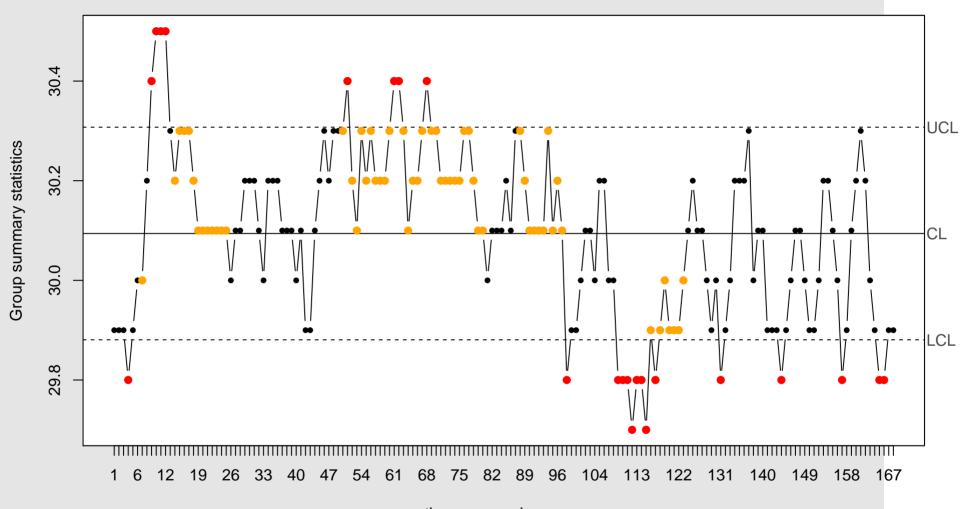
LCL = 29.87731 UCL = 30.27864

Number beyond limits = 47 Number violating runs = 70



Number of groups = 168 Center = 30.07857 StdDev = 0.057863

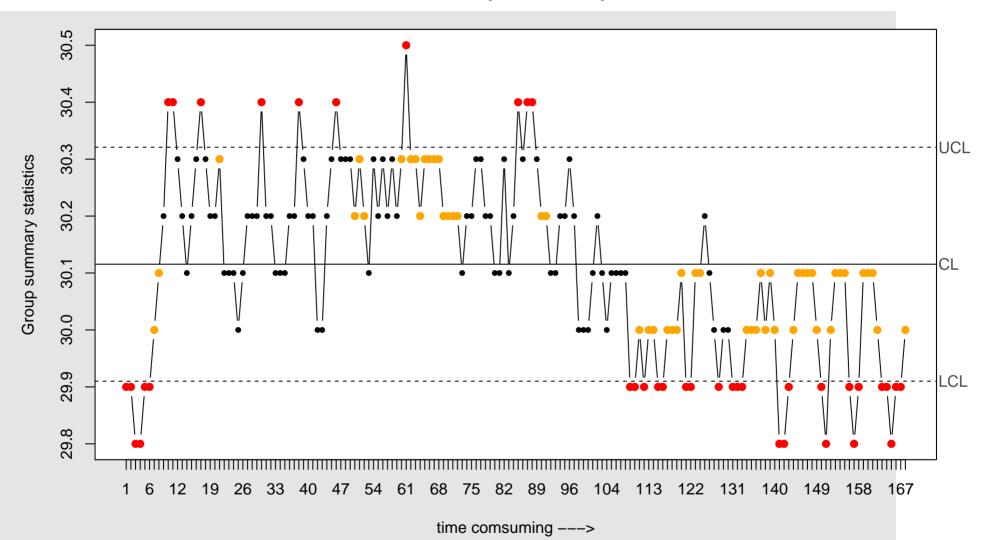
LCL = 29.90498 UCL = 30.25216 Number beyond limits = 53 Number violating runs = 72



time comsuming --->

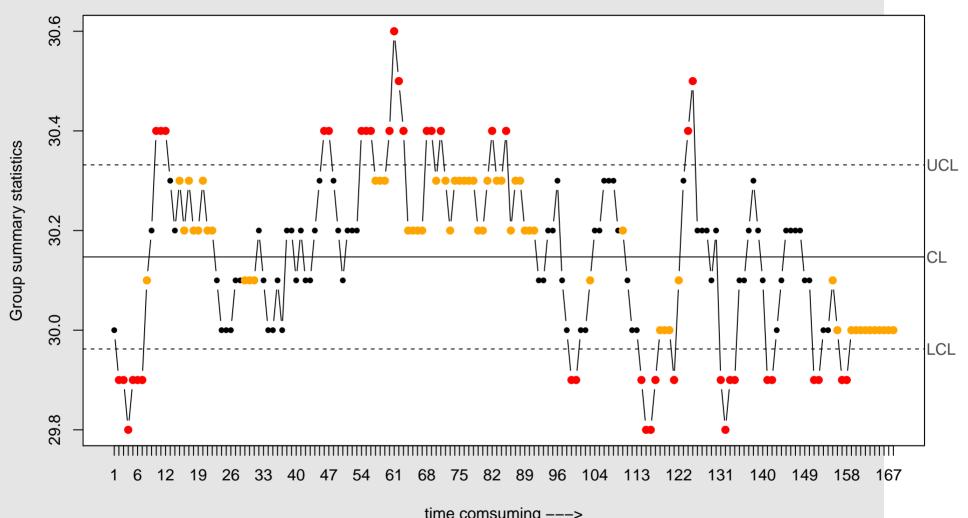
Number of groups = 168 Center = 30.09405 StdDev = 0.07113433

LCL = 29.88064 UCL = 30.30745 Number beyond limits = 23 Number violating runs = 65



Number of groups = 168

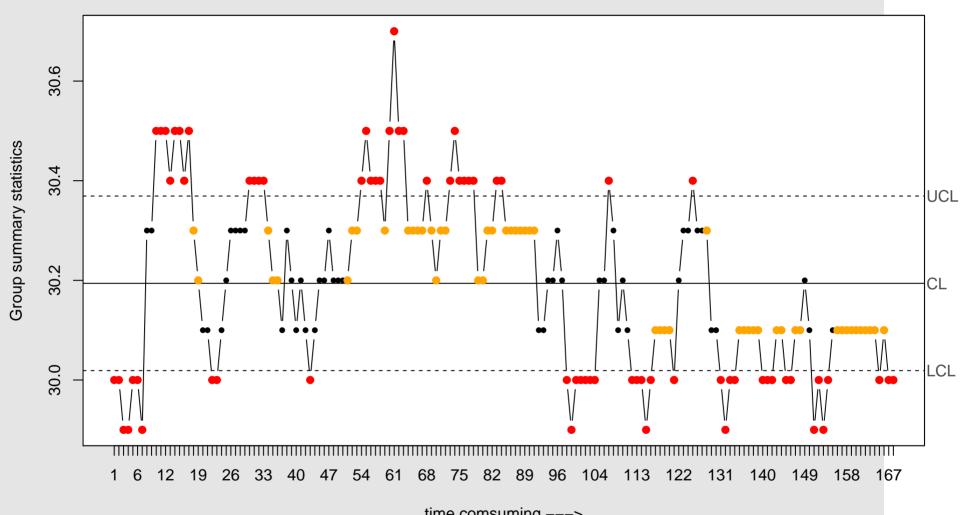
Center = 30.11548 StdDev = 0.06848006 LCL = 29.91004 UCL = 30.32092 Number beyond limits = 40 Number violating runs = 74



time comsuming --->

Number of groups = 168 Center = 30.14702StdDev = 0.06157897

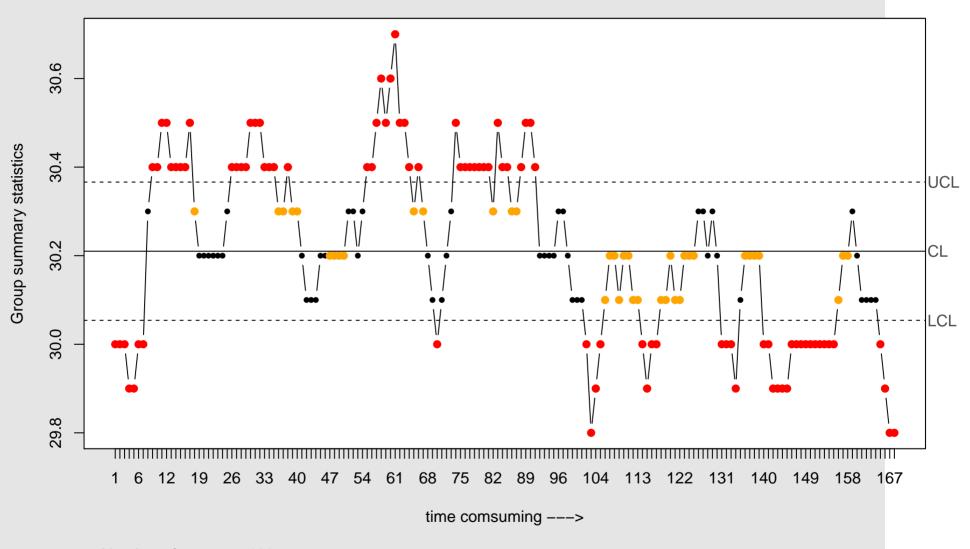
LCL = 29.96229UCL = 30.33176 Number beyond limits = 42 Number violating runs = 70



time comsuming --->

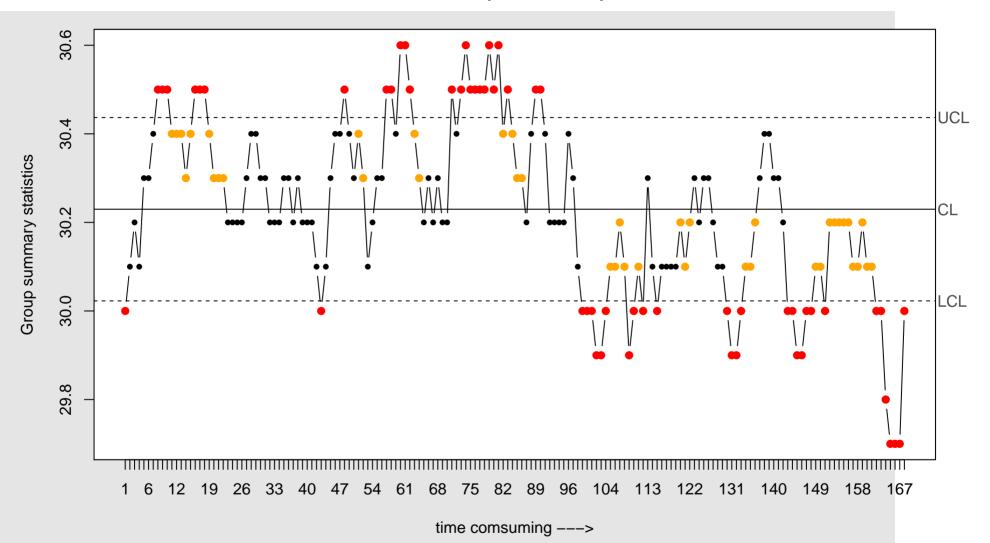
Number of groups = 168 Center = 30.19405StdDev = 0.05839385

LCL = 30.01887UCL = 30.36923 Number beyond limits = 71 Number violating runs = 88



Number of groups = 168 Center = 30.21012 StdDev = 0.05202361

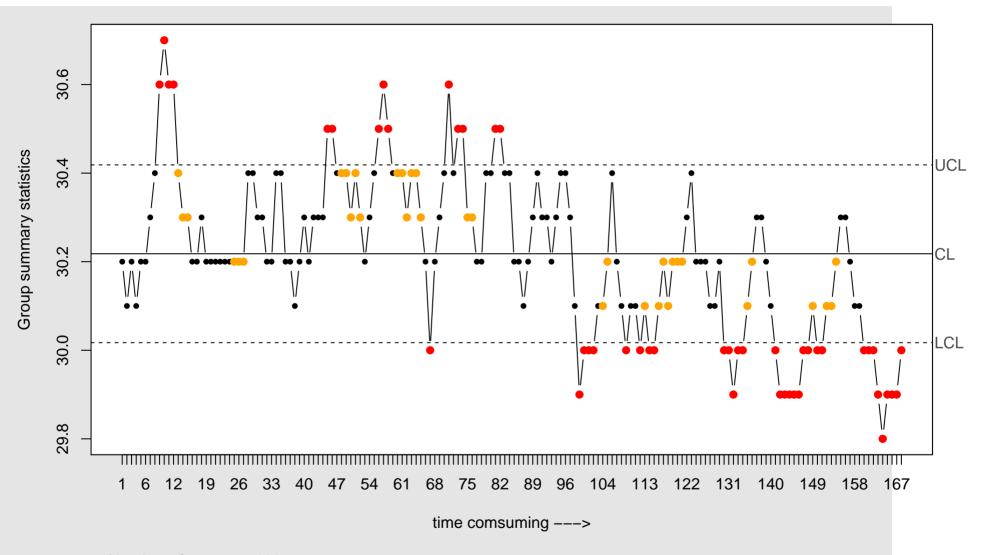
LCL = 30.05405 UCL = 30.36619 Number beyond limits = 86 Number violating runs = 89



Number of groups = 168 Center = 30.22976

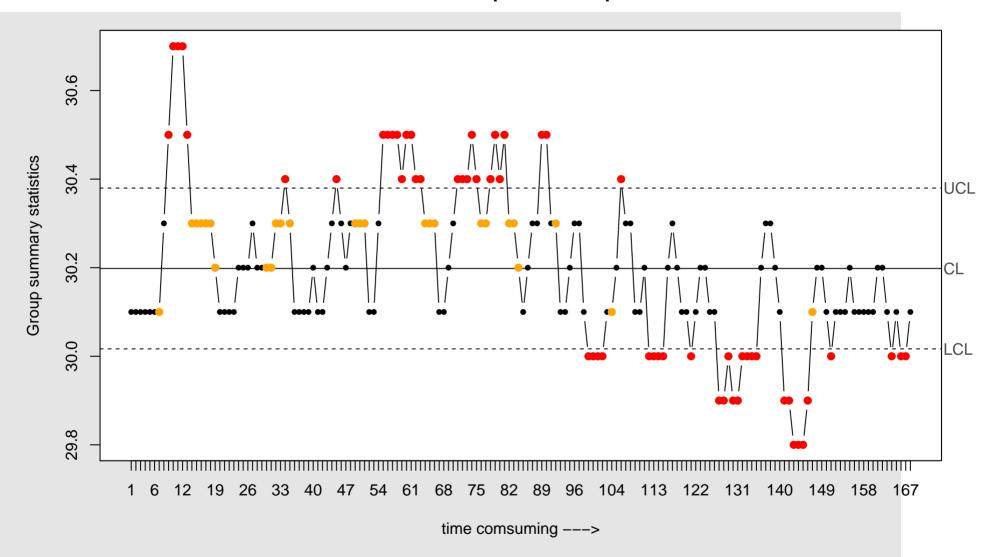
StdDev = 0.06901091

LCL = 30.02273 UCL = 30.43679 Number beyond limits = 55 Number violating runs = 65



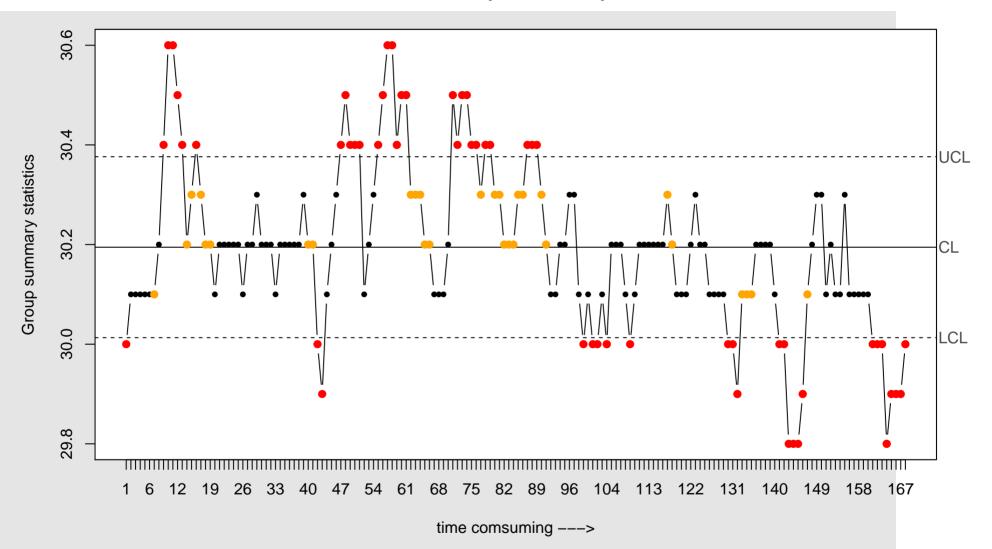
Number of groups = 168 Center = 30.21786 StdDev = 0.0668875

LCL = 30.01719 UCL = 30.41852 Number beyond limits = 47 Number violating runs = 53



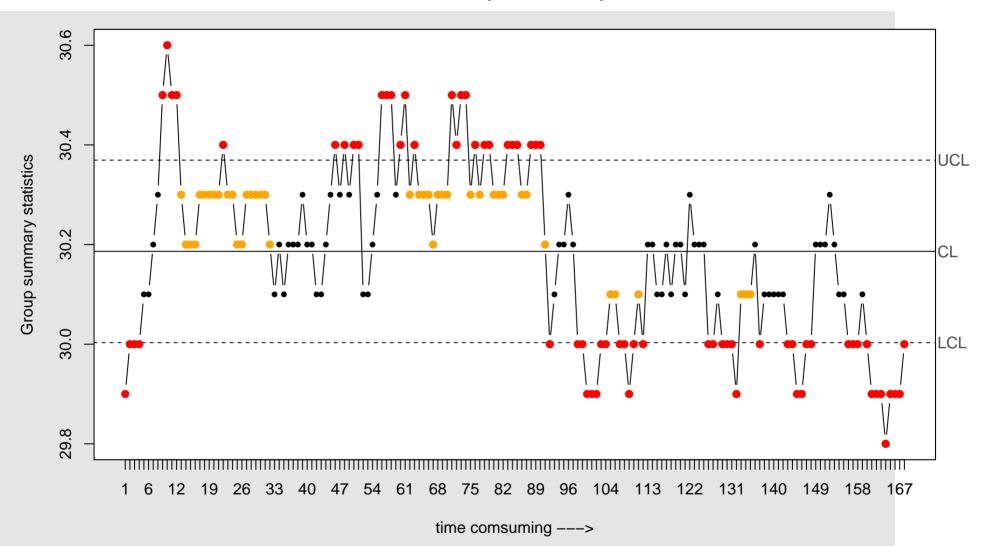
Number of groups = 168 Center = 30.19821 StdDev = 0.06051726

LCL = 30.01666 UCL = 30.37977 Number beyond limits = 56 Number violating runs = 42



Number of groups = 168 Center = 30.19464 StdDev = 0.06051726

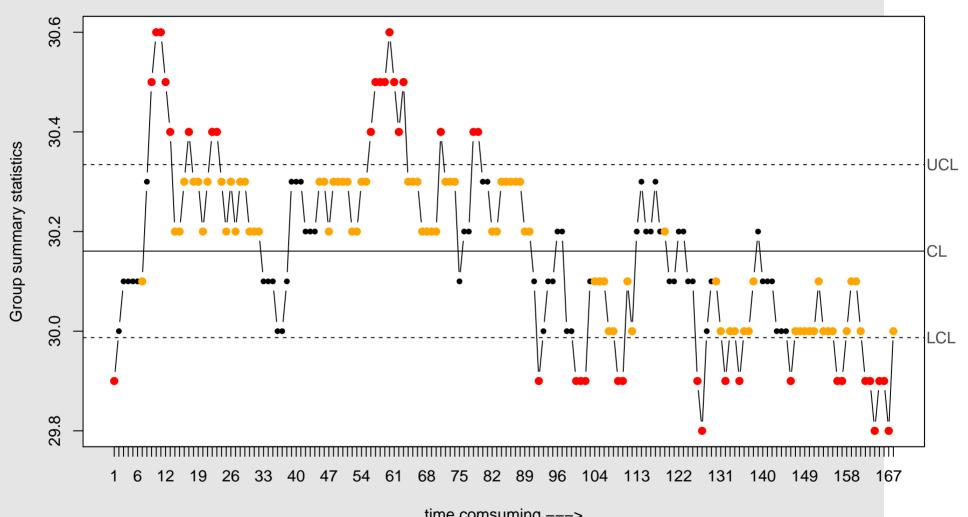
LCL = 30.01309 UCL = 30.37619 Number beyond limits = 54 Number violating runs = 50



Number of groups = 168 Center = 30.18631

StdDev = 0.06104812

LCL = 30.00317 UCL = 30.36945 Number beyond limits = 70 Number violating runs = 82

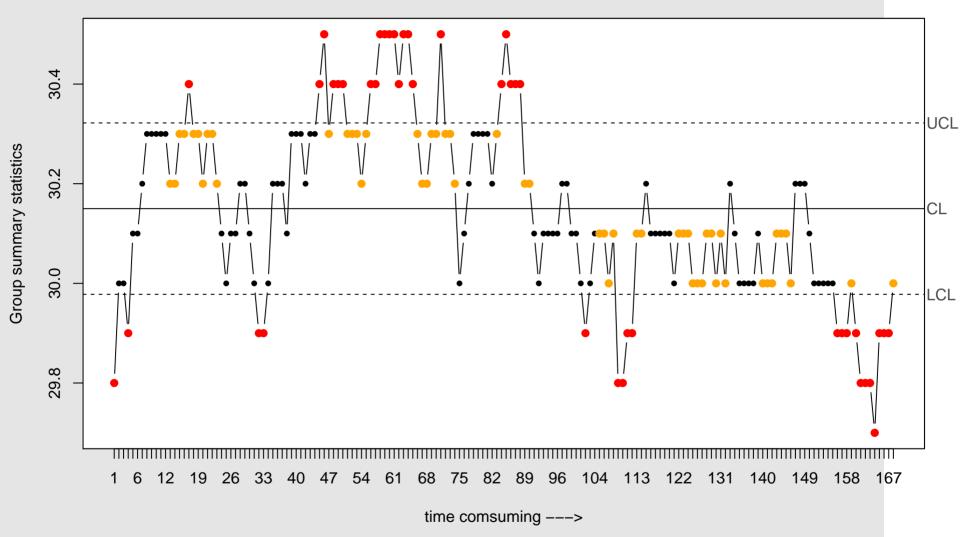


time comsuming --->

Number of groups = 168 Center = 30.16071StdDev = 0.057863

LCL = 29.98713UCL = 30.3343

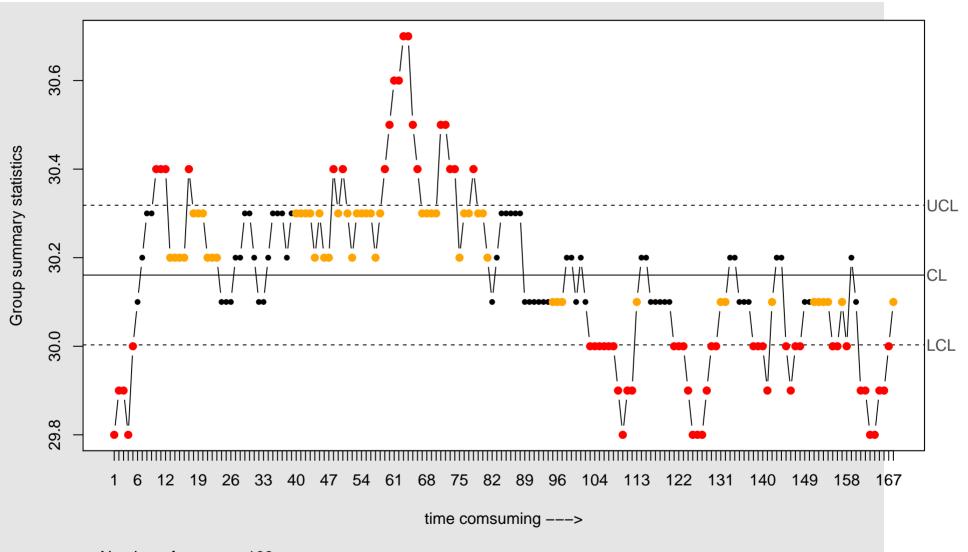
Number beyond limits = 39 Number violating runs = 101



Number of groups = 168 Center = 30.15StdDev = 0.05733214

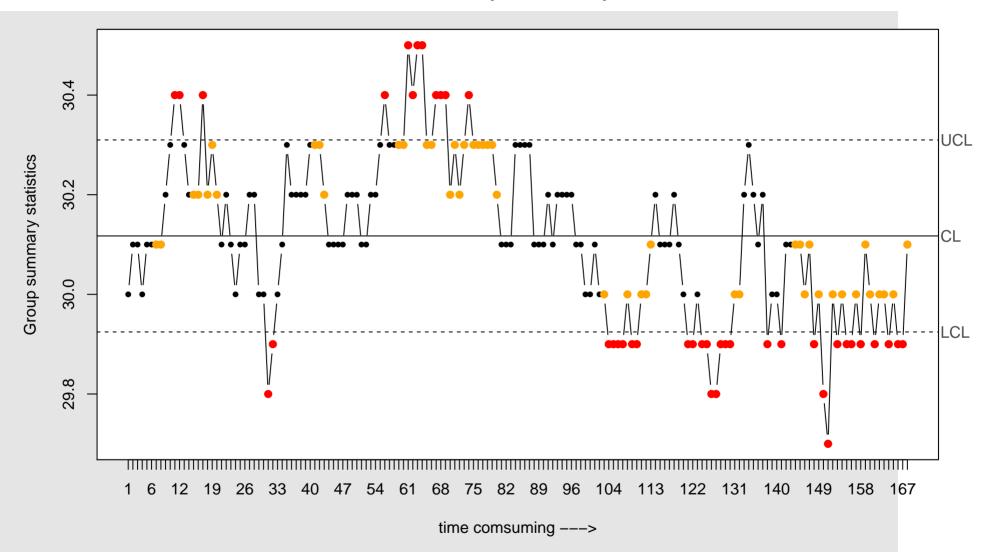
LCL = 29.978UCL = 30.322

Number beyond limits = 42 Number violating runs = 90



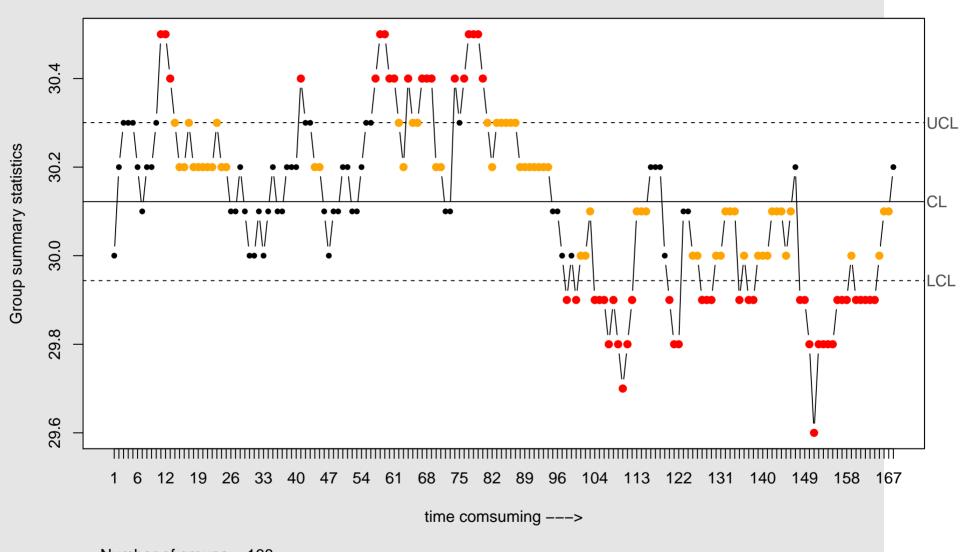
Number of groups = 168 Center = 30.16071 StdDev = 0.05255447

LCL = 30.00305 UCL = 30.31838 Number beyond limits = 62 Number violating runs = 86



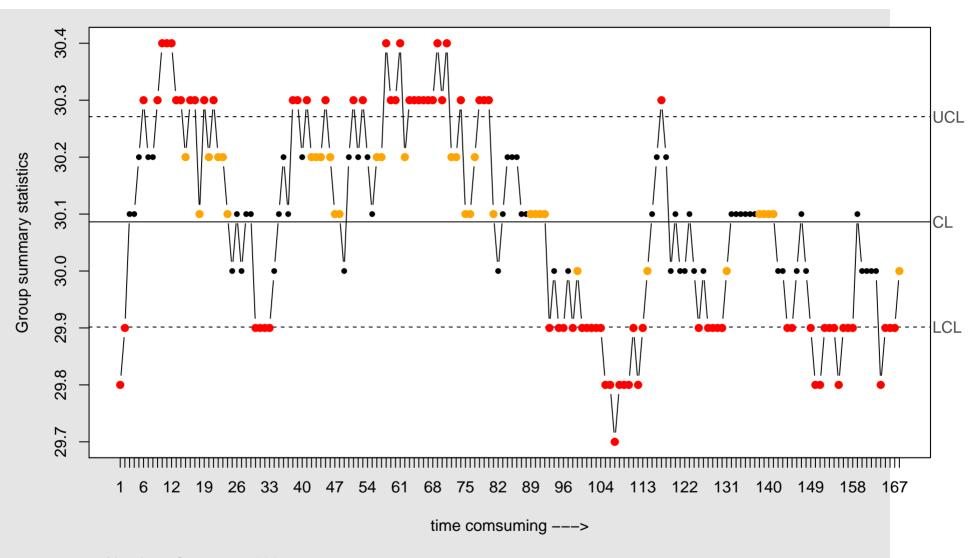
Number of groups = 168 Center = 30.11726 StdDev = 0.06423324

LCL = 29.92456 UCL = 30.30996 Number beyond limits = 42 Number violating runs = 77



Number of groups = 168 Center = 30.12202 StdDev = 0.05945556

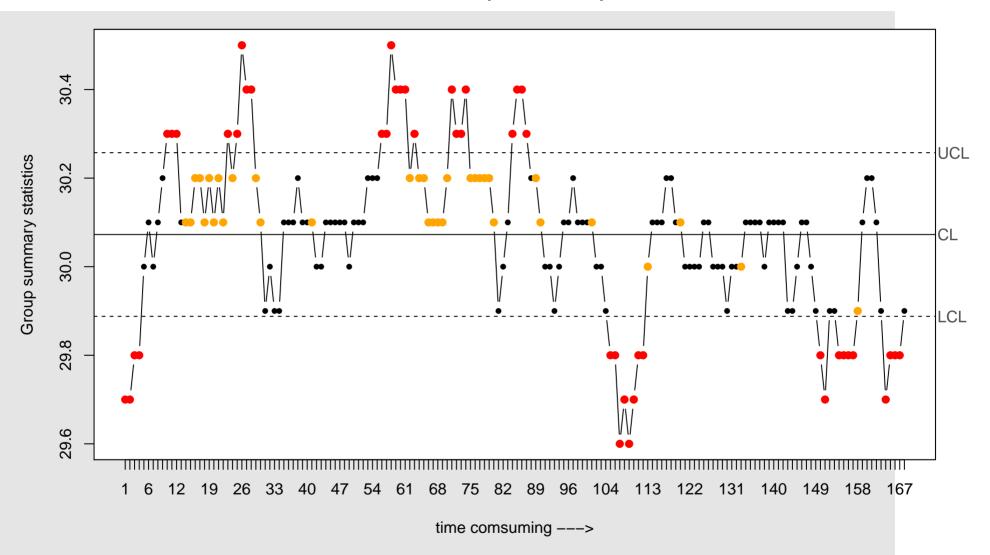
LCL = 29.94366 UCL = 30.30039 Number beyond limits = 55 Number violating runs = 92



Number of groups = 168 Center = 30.08631 StdDev = 0.06157897

LCL = 29.90157 UCL = 30.27105

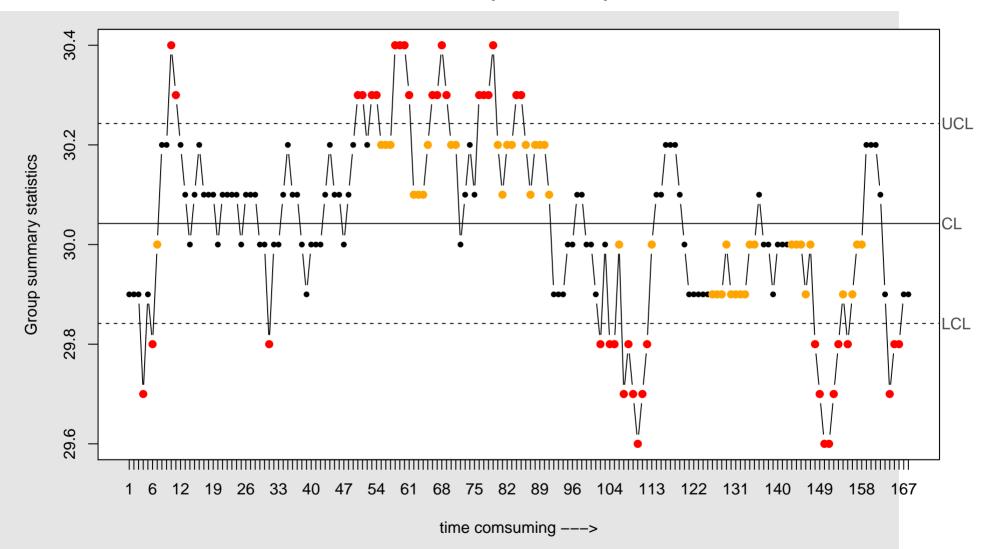
Number beyond limits = 80 Number violating runs = 84



Number of groups = 168 Center = 30.07262 StdDev = 0.06157897

LCL = 29.88788 UCL = 30.25736

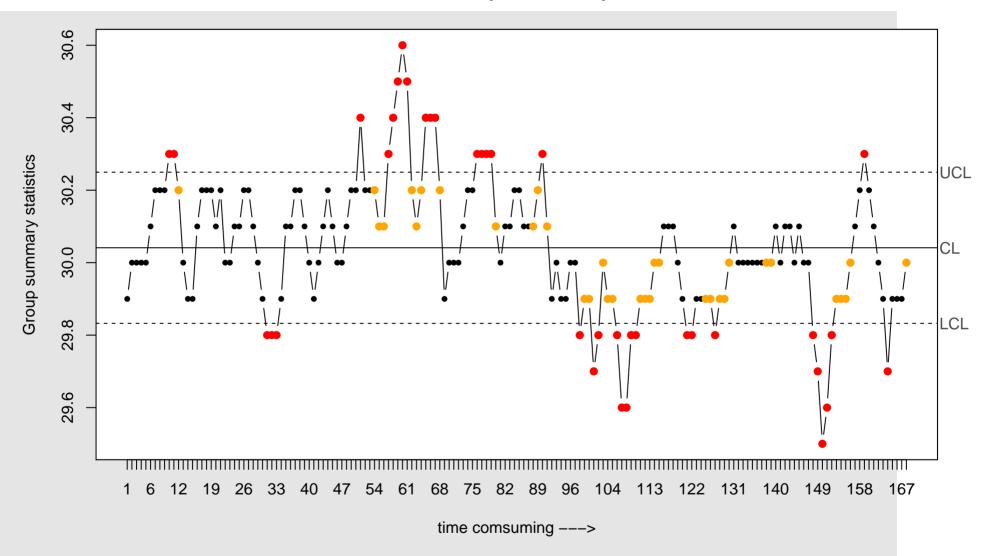
Number beyond limits = 45 Number violating runs = 59



Number of groups = 168 Center = 30.04226

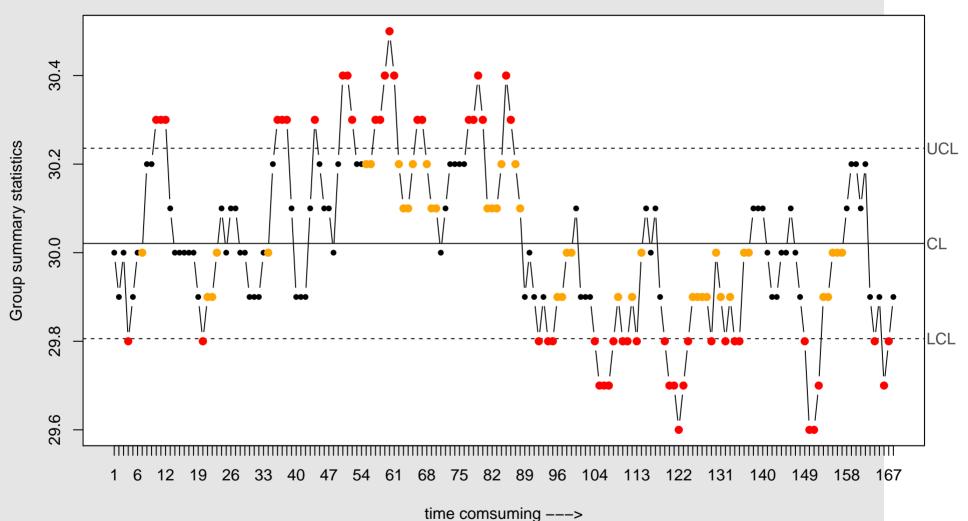
StdDev = 0.0668875

LCL = 29.8416 UCL = 30.24292 Number beyond limits = 42 Number violating runs = 67



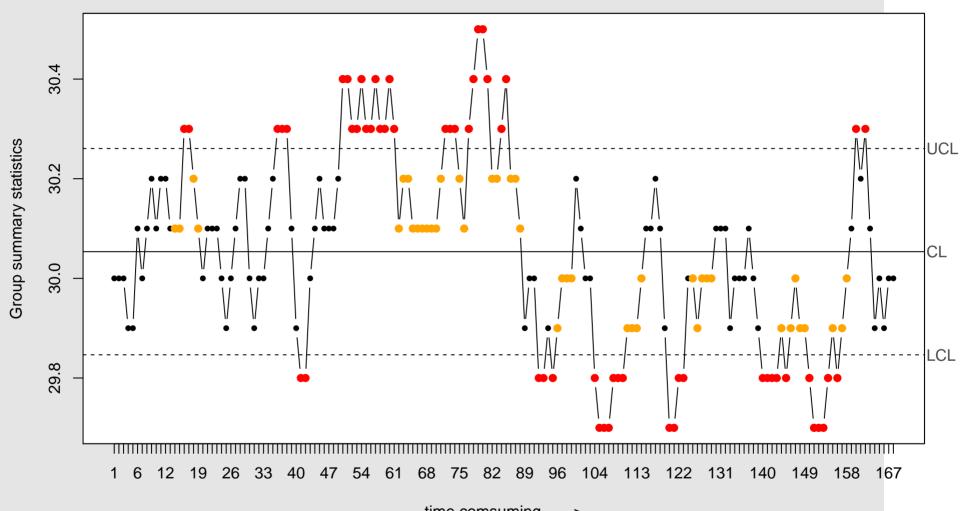
Number of groups = 168 Center = 30.04107 StdDev = 0.06954177

LCL = 29.83245 UCL = 30.2497 Number beyond limits = 37 Number violating runs = 54



Number of groups = 168 Center = 30.02083StdDev = 0.07166518

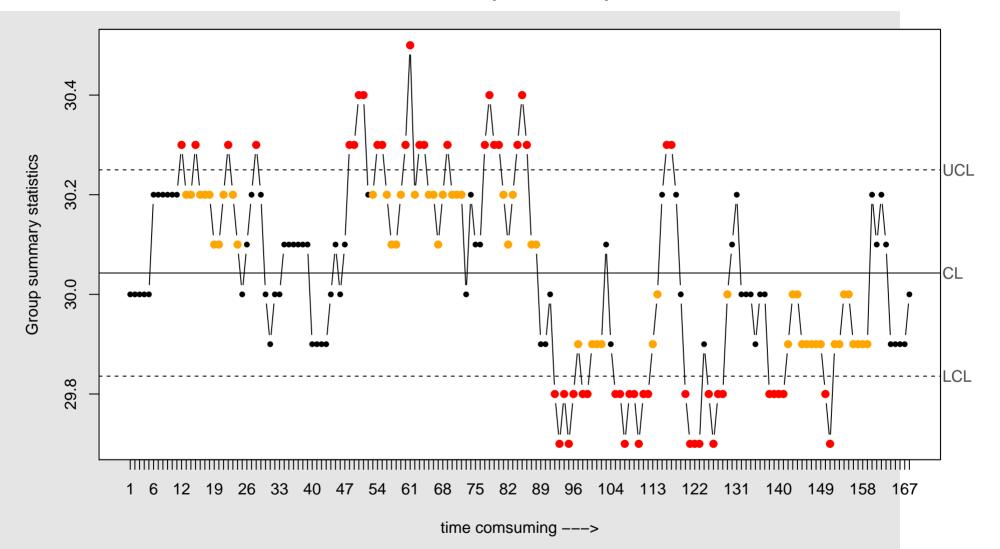
LCL = 29.80584UCL = 30.23583 Number beyond limits = 53 Number violating runs = 65



time comsuming --->

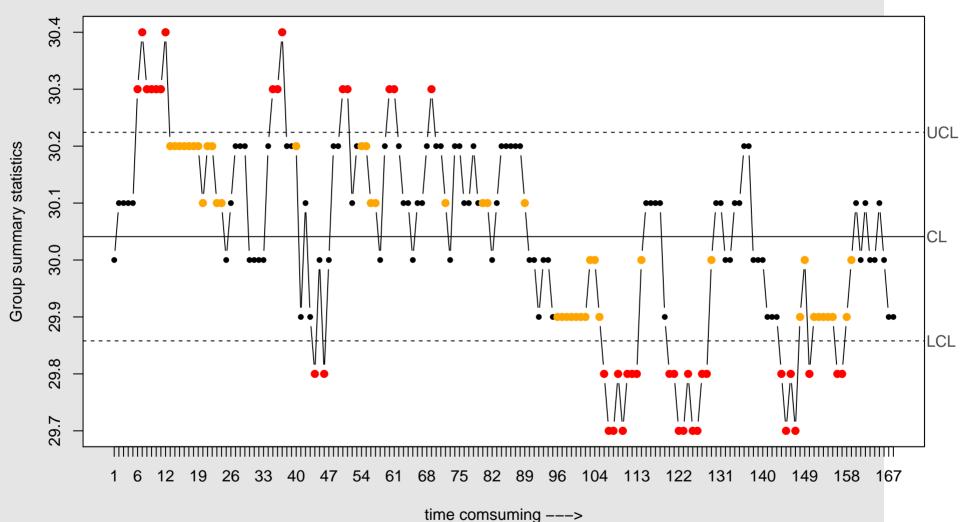
Number of groups = 168 Center = 30.05357 StdDev = 0.06901091

LCL = 29.84654 UCL = 30.2606 Number beyond limits = 56 Number violating runs = 77



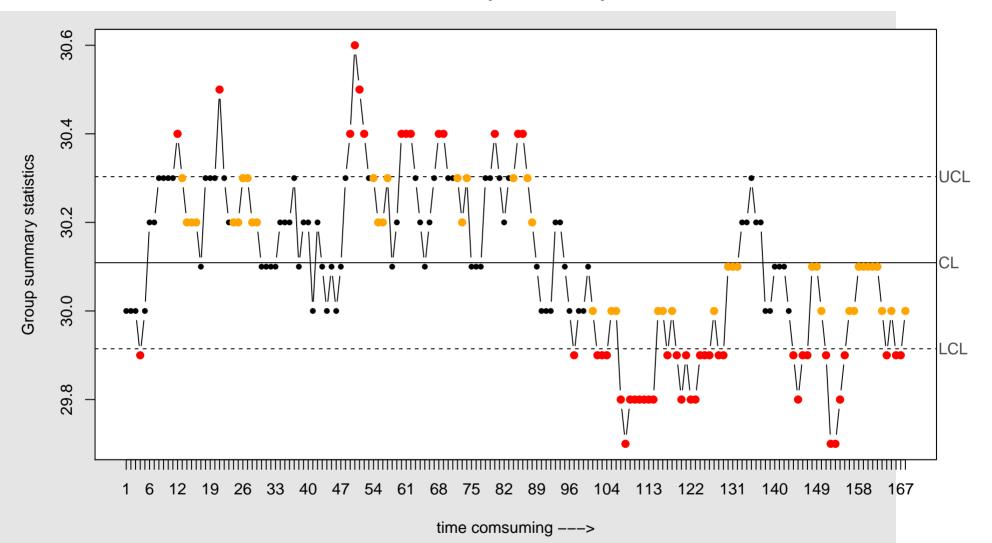
Number of groups = 168 Center = 30.04286 StdDev = 0.06901091

LCL = 29.83582 UCL = 30.24989 Number beyond limits = 53 Number violating runs = 82



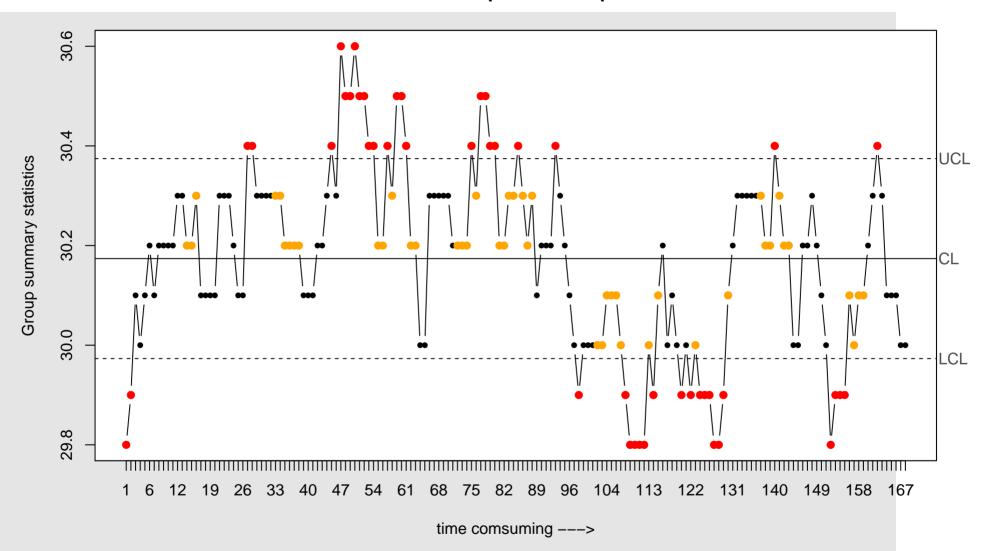
Number of groups = 168 Center = 30.04107StdDev = 0.06104812

LCL = 29.85793UCL = 30.22422 Number beyond limits = 41 Number violating runs = 66



Number of groups = 168 Center = 30.10893 StdDev = 0.06476409

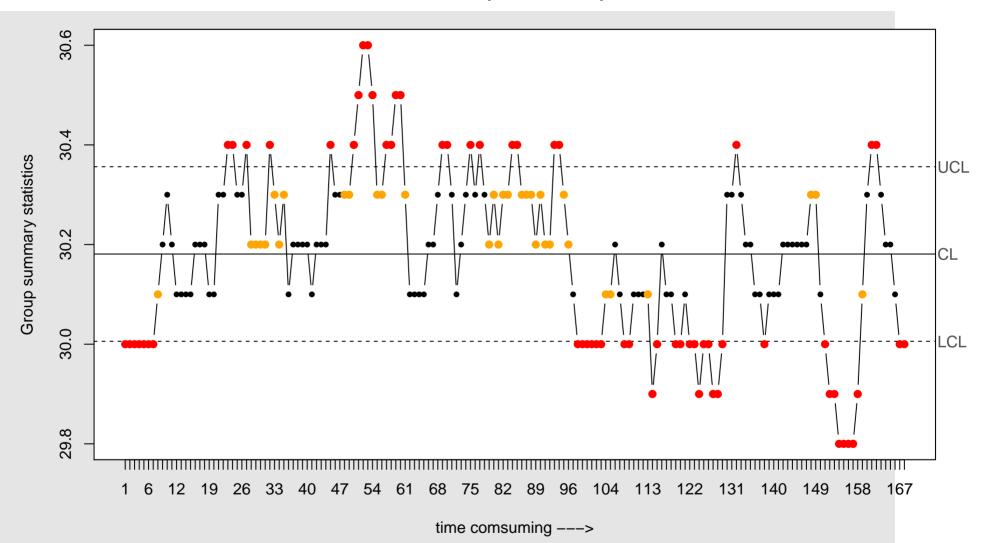
LCL = 29.91464 UCL = 30.30322 Number beyond limits = 50 Number violating runs = 80



Number of groups = 168 Center = 30.17381 StdDev = 0.0668875

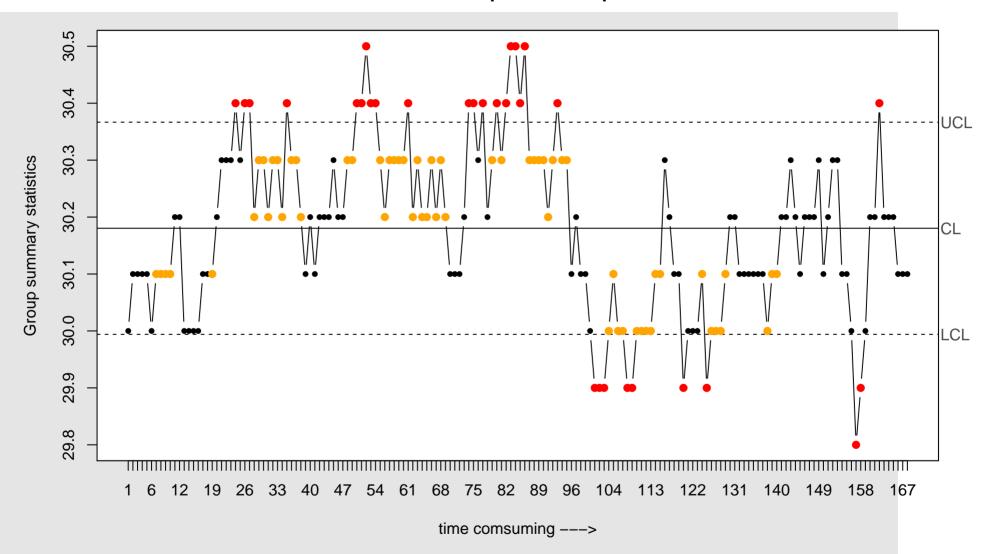
LCL = 29.97315 UCL = 30.37447

Number beyond limits = 45 Number violating runs = 75



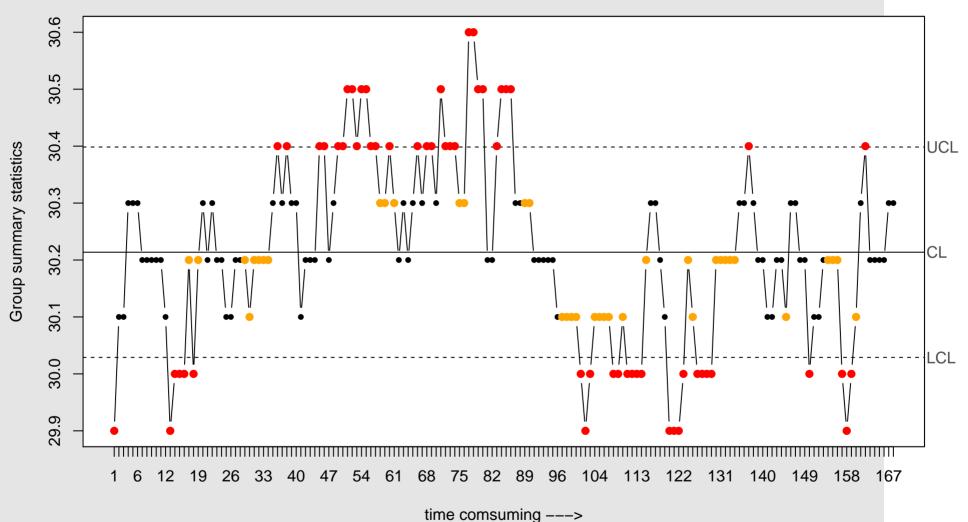
Number of groups = 168 Center = 30.18095 StdDev = 0.05839385

LCL = 30.00577 UCL = 30.35613 Number beyond limits = 63 Number violating runs = 62



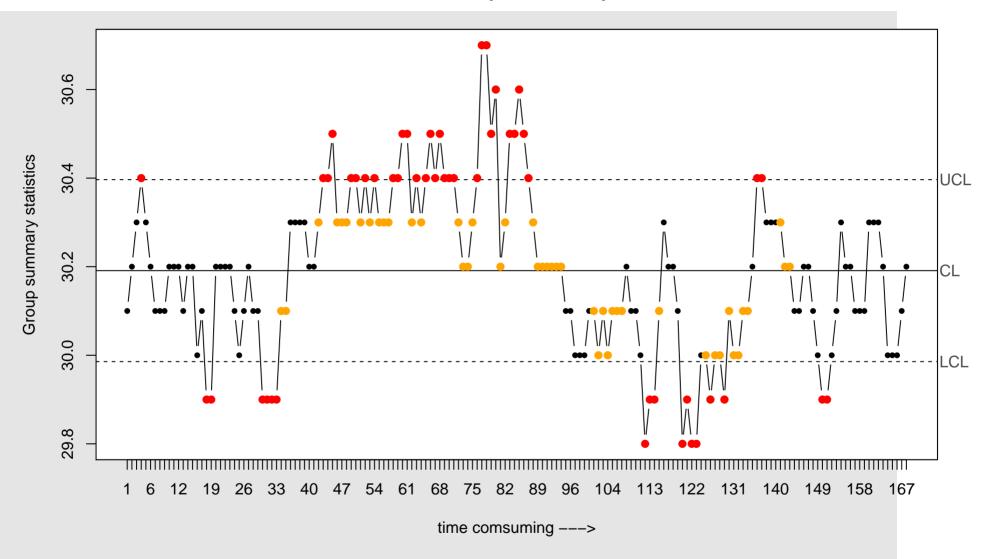
Number of groups = 168 Center = 30.18036 StdDev = 0.06210982

LCL = 29.99403 UCL = 30.36669 Number beyond limits = 30 Number violating runs = 78



Number of groups = 168 Center = 30.21369StdDev = 0.06157897

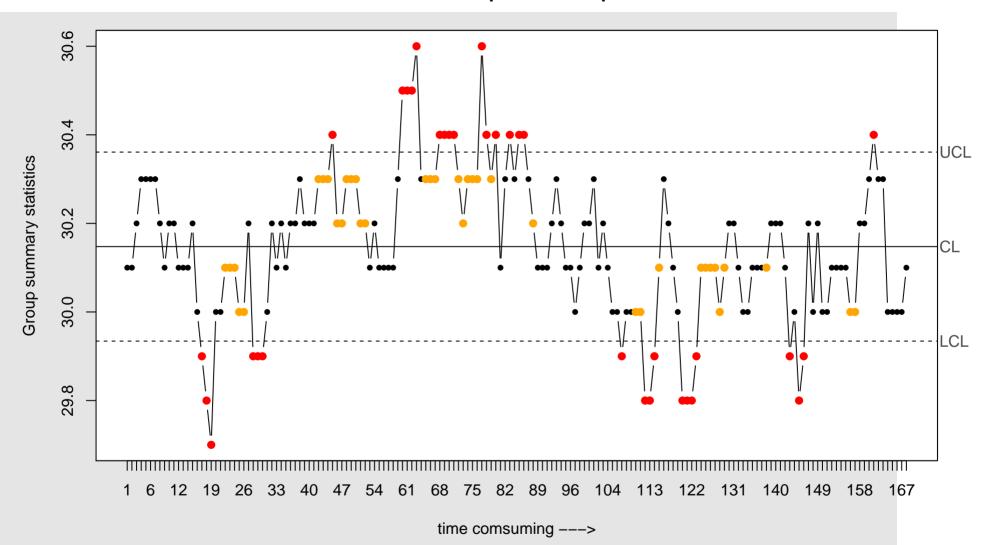
LCL = 30.02895UCL = 30.39843 Number beyond limits = 58 Number violating runs = 71



Number of groups = 168 Center = 30.19107 StdDev = 0.06848006

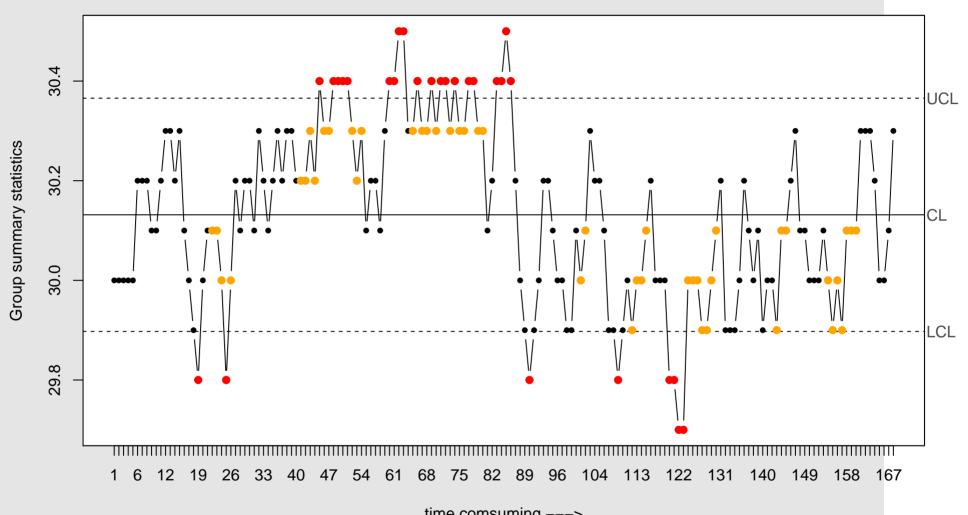
LCL = 29.98563 UCL = 30.39651

Number beyond limits = 49 Number violating runs = 76



Number of groups = 168 Center = 30.14762 StdDev = 0.07113433

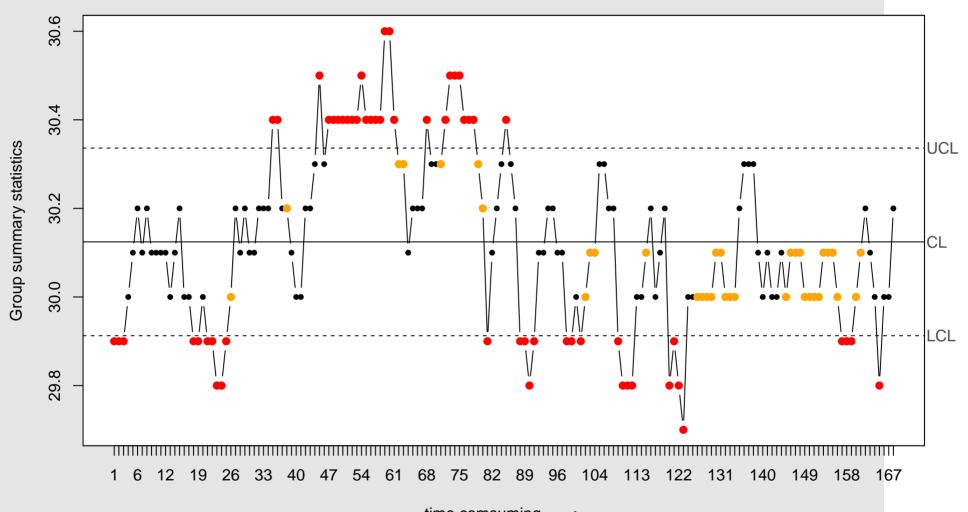
LCL = 29.93422 UCL = 30.36102 Number beyond limits = 33 Number violating runs = 48



time comsuming --->

Number of groups = 168 Center = 30.13155StdDev = 0.07803542

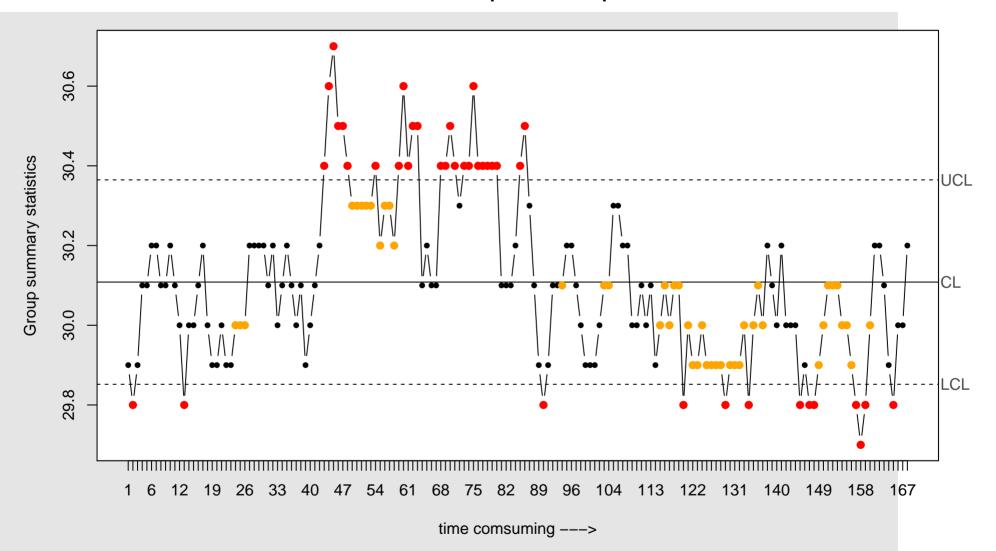
LCL = 29.89744UCL = 30.36565 Number beyond limits = 28 Number violating runs = 59



time comsuming --->

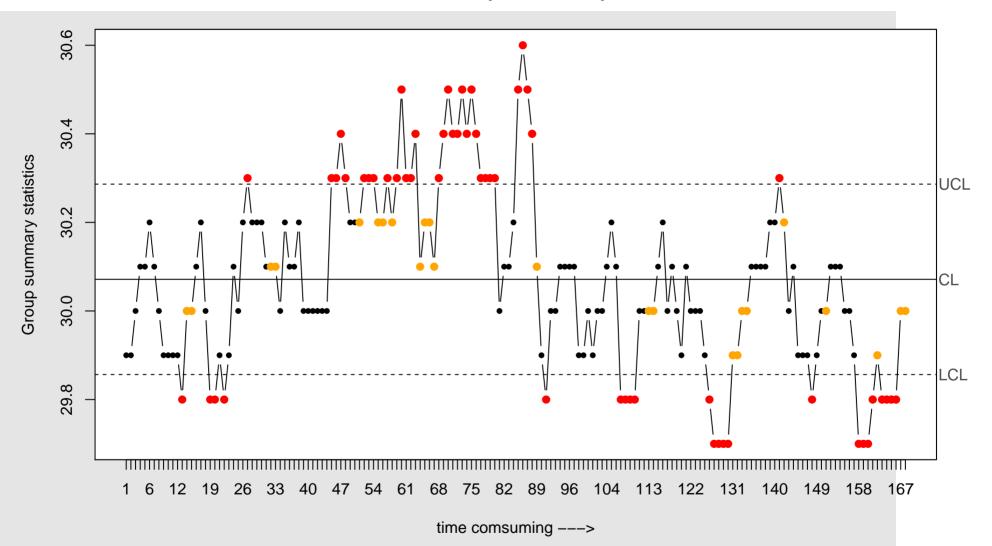
Number of groups = 168 Center = 30.1244 StdDev = 0.07060347

LCL = 29.91259 UCL = 30.33622 Number beyond limits = 57 Number violating runs = 62



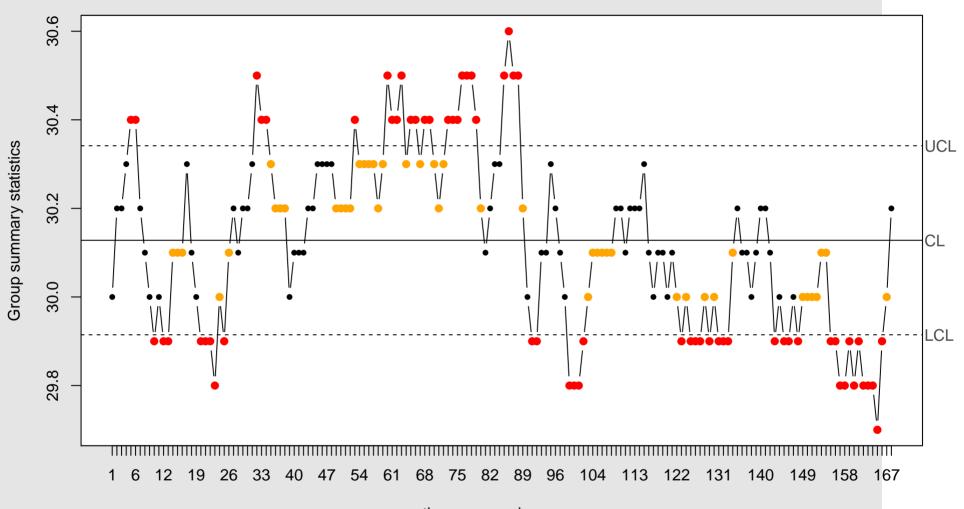
Number of groups = 168 Center = 30.10833 StdDev = 0.08546736

LCL = 29.85193 UCL = 30.36474 Number beyond limits = 39 Number violating runs = 65



Number of groups = 168 Center = 30.07143 StdDev = 0.07166518

LCL = 29.85643 UCL = 30.28642 Number beyond limits = 55 Number violating runs = 56

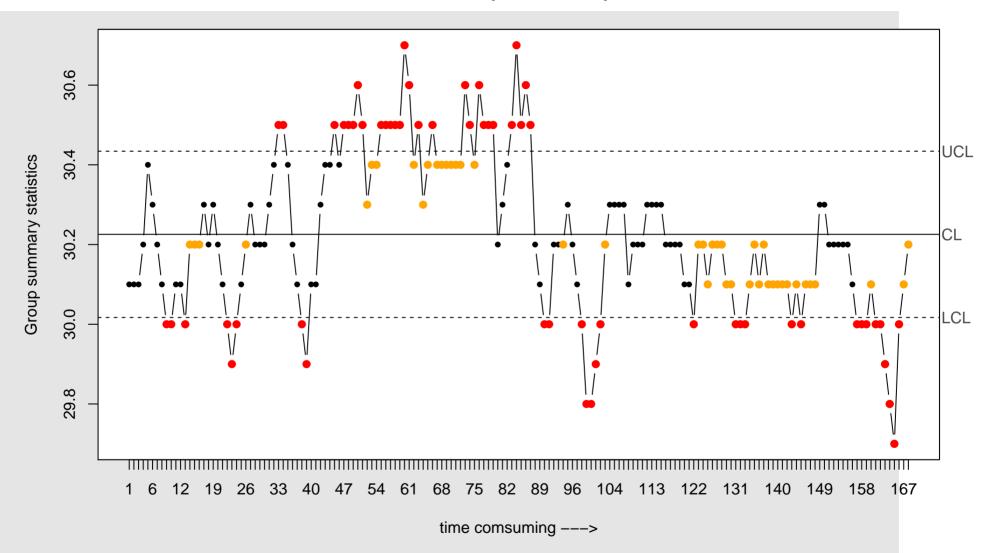


time comsuming --->

Number of groups = 168 Center = 30.12798 StdDev = 0.07113433

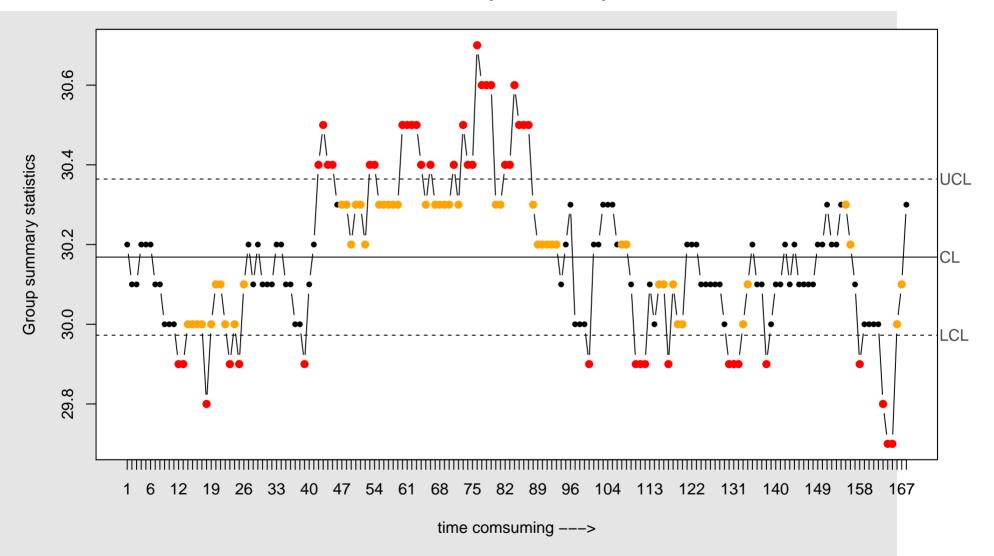
LCL = 29.91457 UCL = 30.34138

Number beyond limits = 63 Number violating runs = 83



Number of groups = 168 Center = 30.2256 StdDev = 0.06954177

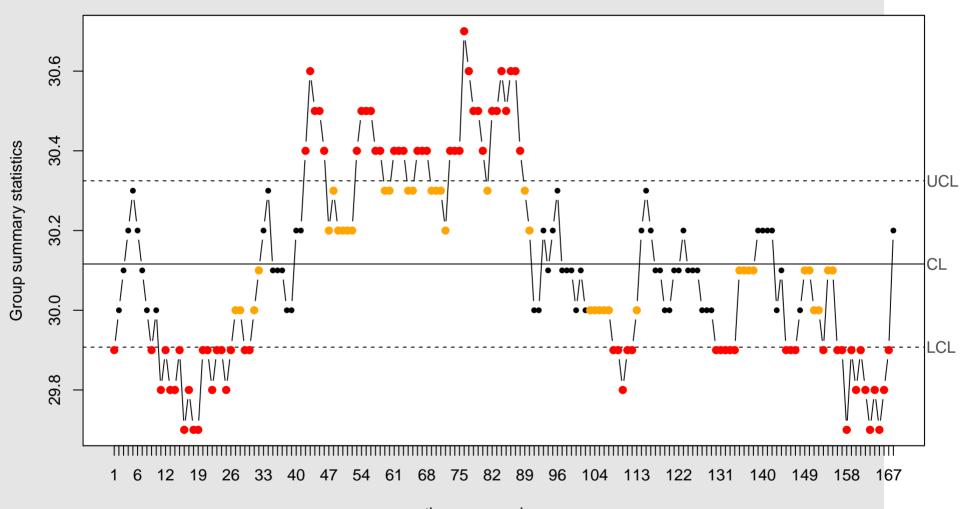
LCL = 30.01697 UCL = 30.43422 Number beyond limits = 58 Number violating runs = 80



Number of groups = 168 Center = 30.16845 StdDev = 0.06529494

LCL = 29.97257 UCL = 30.36434

Number beyond limits = 45 Number violating runs = 81

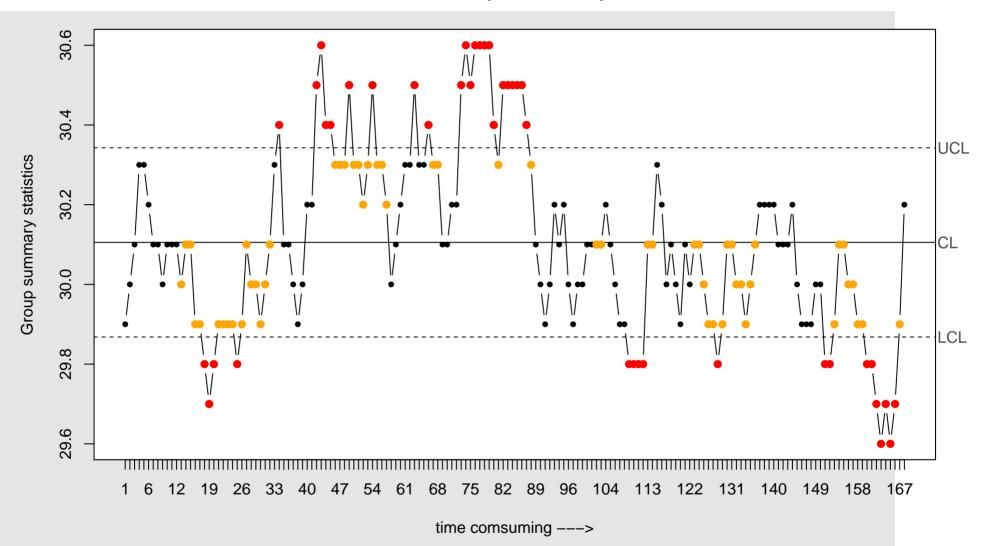


time comsuming --->

Number of groups = 168 Center = 30.11607 StdDev = 0.06954177

LCL = 29.90745 UCL = 30.3247

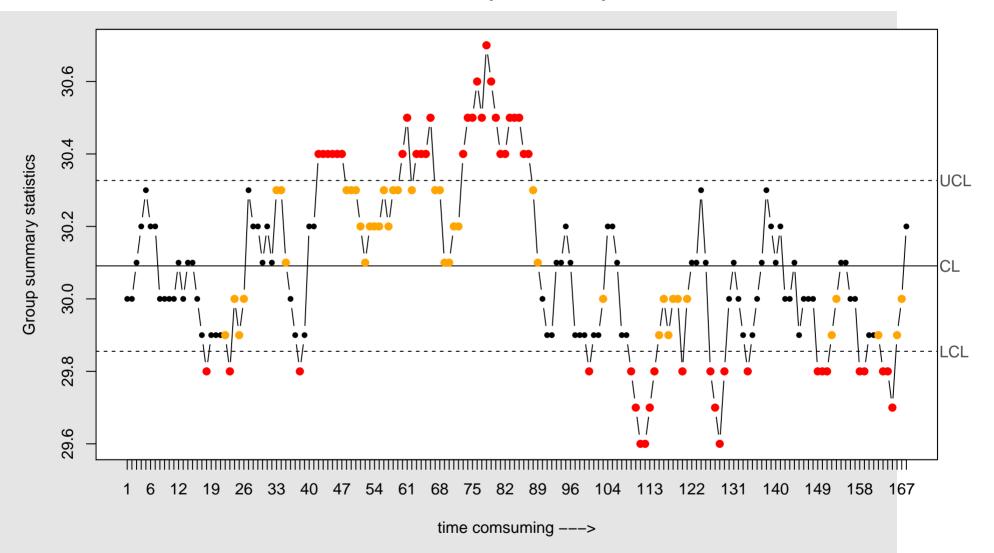
Number beyond limits = 78 Number violating runs = 104



Number of groups = 168 Center = 30.10536

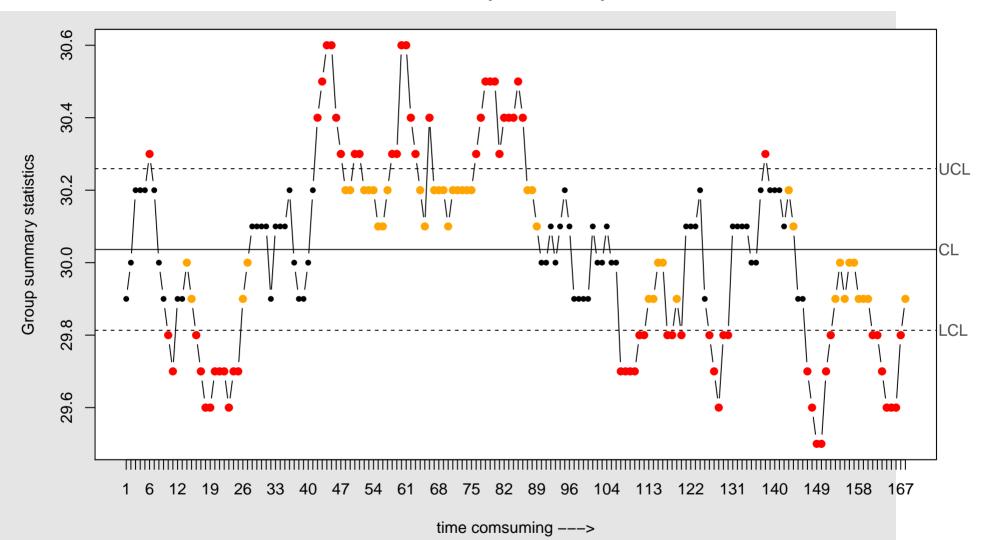
StdDev = 0.07909712

LCL = 29.86807 UCL = 30.34265 Number beyond limits = 41 Number violating runs = 84



Number of groups = 168 Center = 30.09107 StdDev = 0.07856627

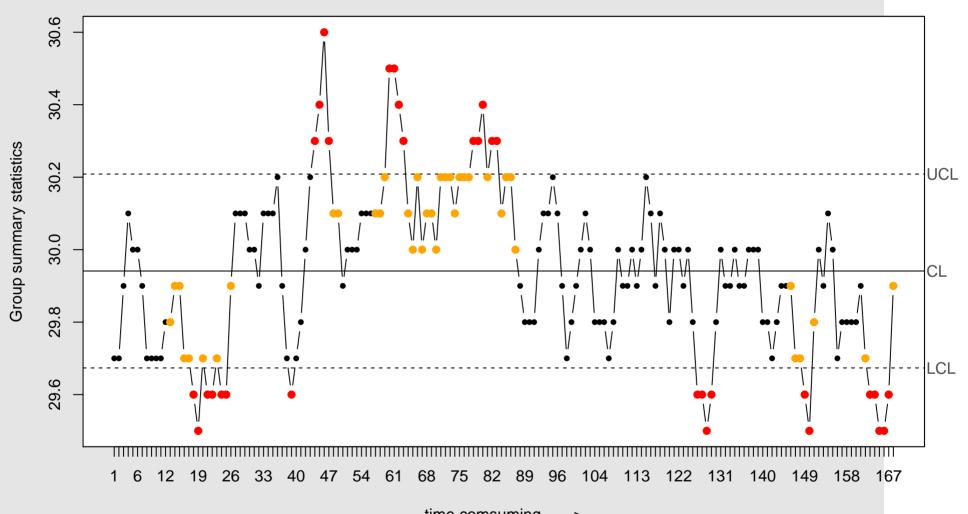
LCL = 29.85537 UCL = 30.32677 Number beyond limits = 51 Number violating runs = 71



Number of groups = 168 Center = 30.03631

StdDev = 0.07431945

LCL = 29.81335 UCL = 30.25927 Number beyond limits = 67 Number violating runs = 87

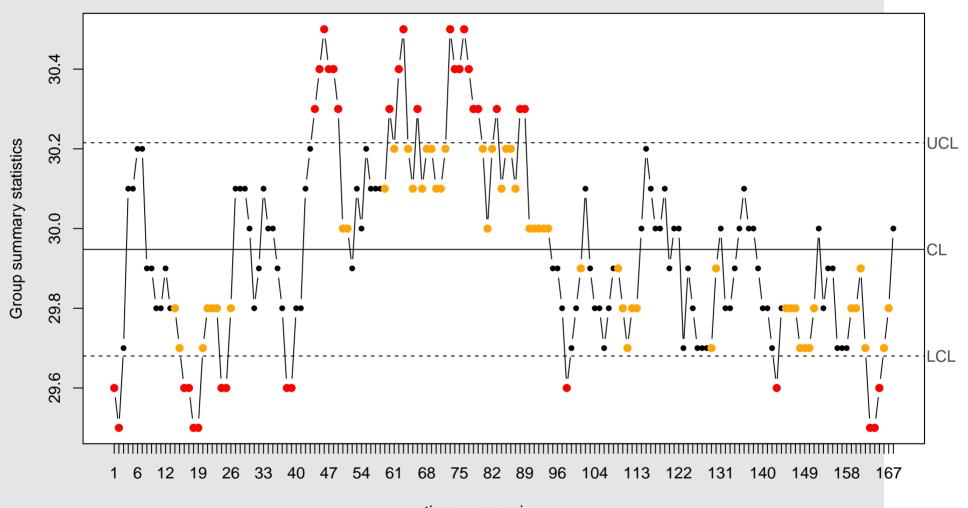


time comsuming --->

Number of groups = 168 Center = 29.94107 StdDev = 0.08918334

LCL = 29.67352 UCL = 30.20862

Number beyond limits = 31 Number violating runs = 60

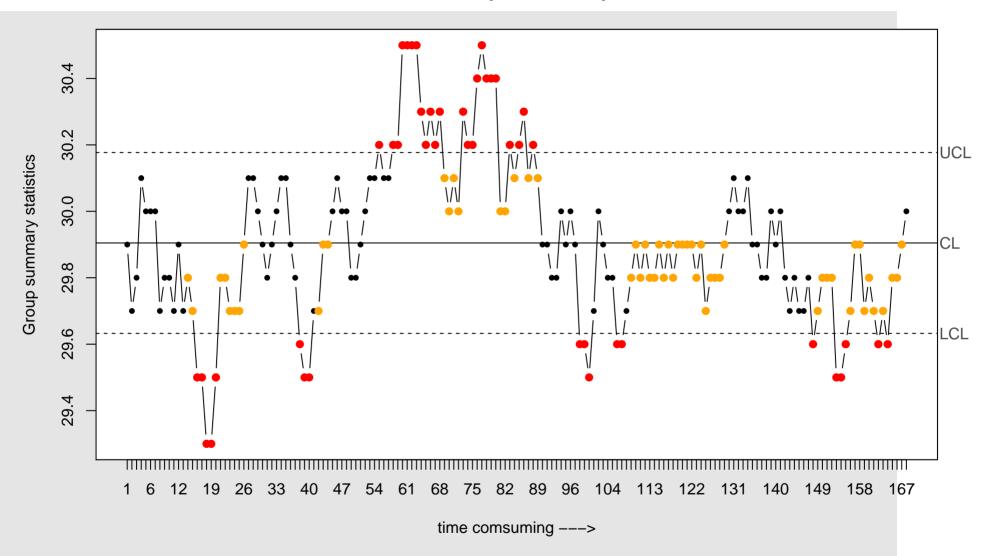


time comsuming --->

Number of groups = 168 Center = 29.94762 StdDev = 0.08918334

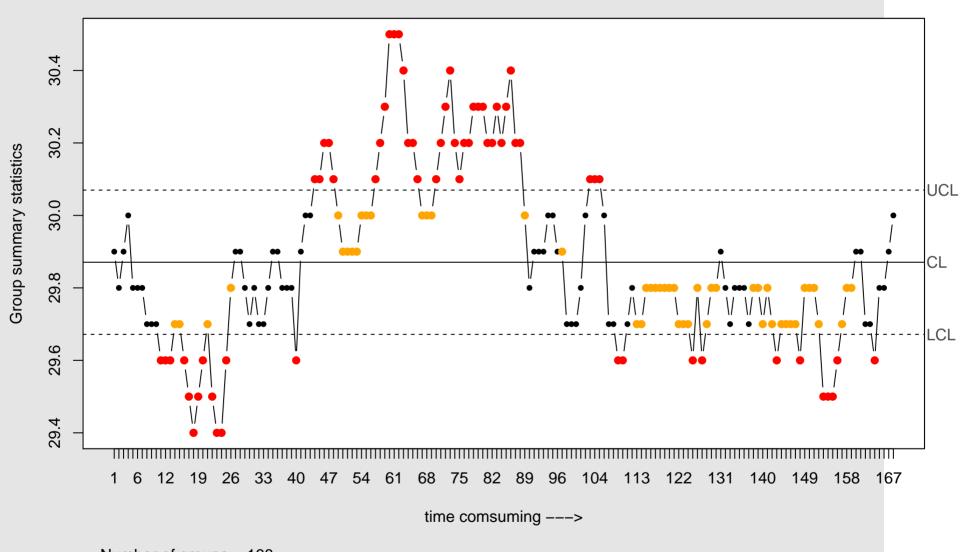
LCL = 29.68007 UCL = 30.21517

Number beyond limits = 35 Number violating runs = 77



Number of groups = 168 Center = 29.90476 StdDev = 0.0907759

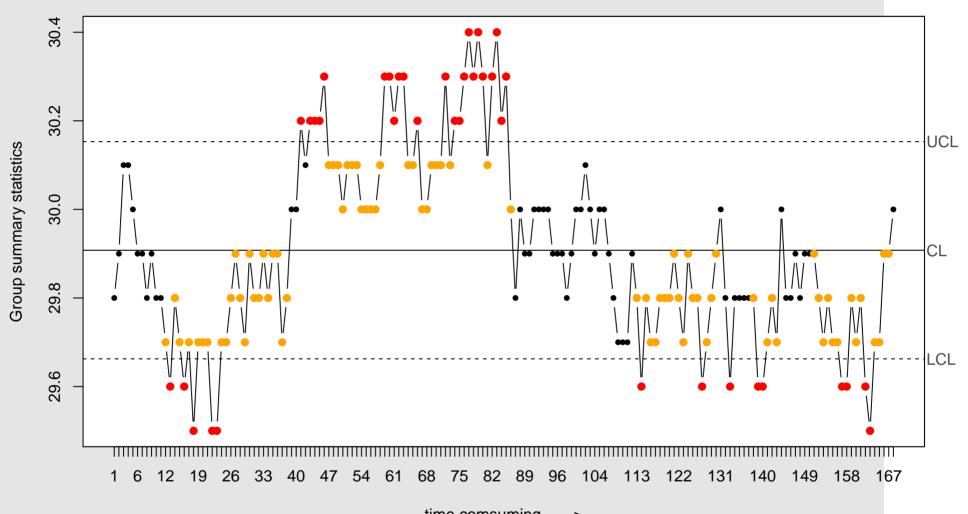
LCL = 29.63243 UCL = 30.17709 Number beyond limits = 43 Number violating runs = 89



Number of groups = 168 Center = 29.87083 StdDev = 0.06635665

LCL = 29.67176 UCL = 30.0699

Number beyond limits = 61 Number violating runs = 100

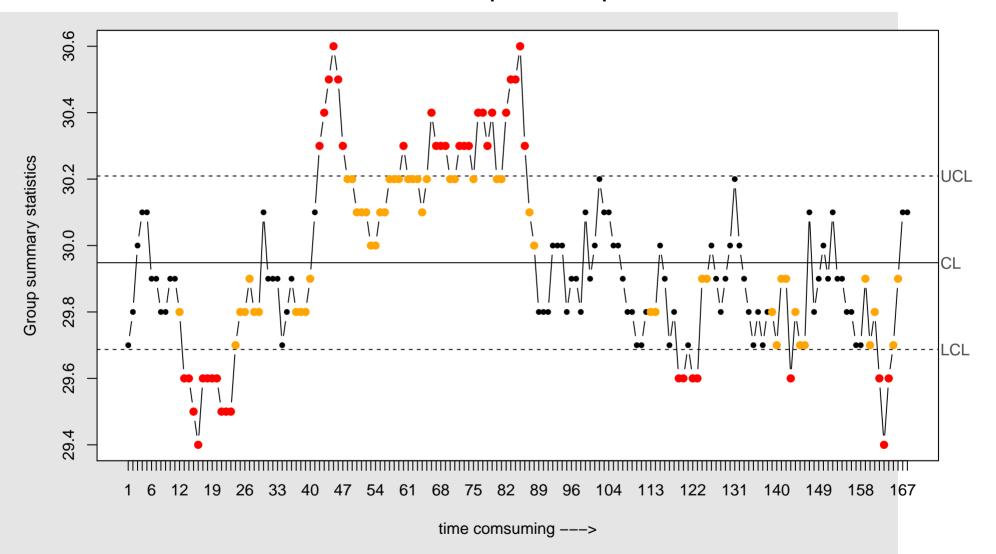


time comsuming --->

Number of groups = 168 Center = 29.90774 StdDev = 0.08175139

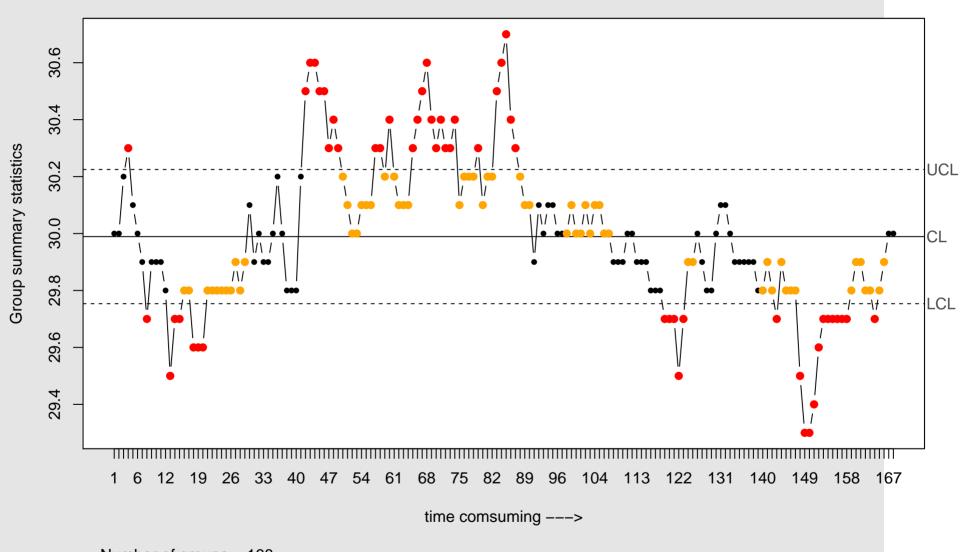
LCL = 29.66248 UCL = 30.15299

Number beyond limits = 37 Number violating runs = 110



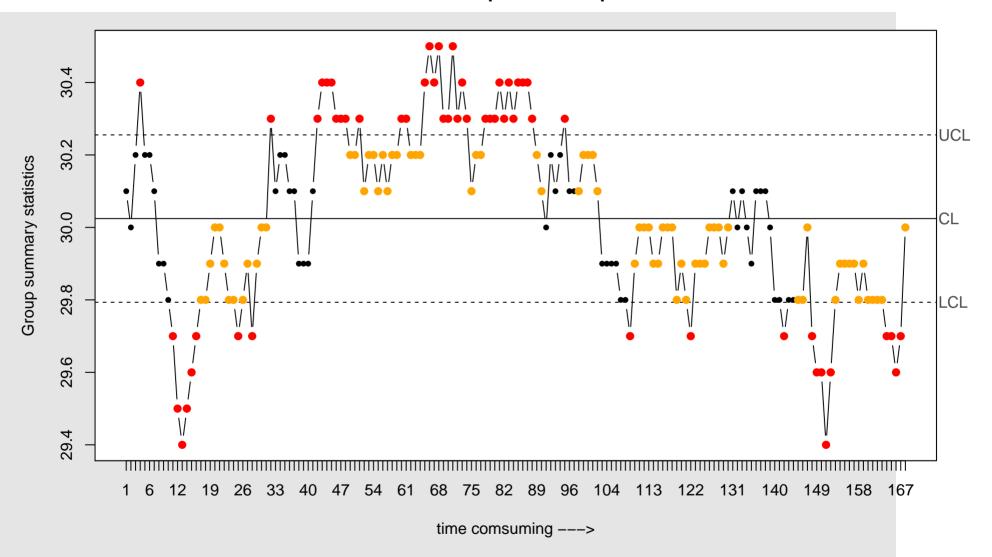
Number of groups = 168 Center = 29.94821 StdDev = 0.08705992

LCL = 29.68703 UCL = 30.20939 Number beyond limits = 42 Number violating runs = 86



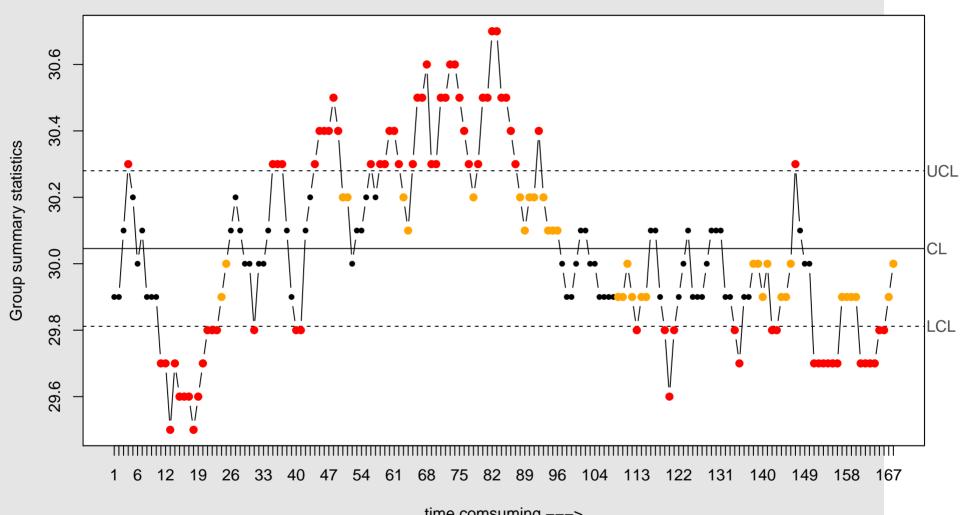
Number of groups = 168 Center = 29.98929 StdDev = 0.07856627

LCL = 29.75359 UCL = 30.22498 Number beyond limits = 53 Number violating runs = 105



Number of groups = 168 Center = 30.0244 StdDev = 0.07697371

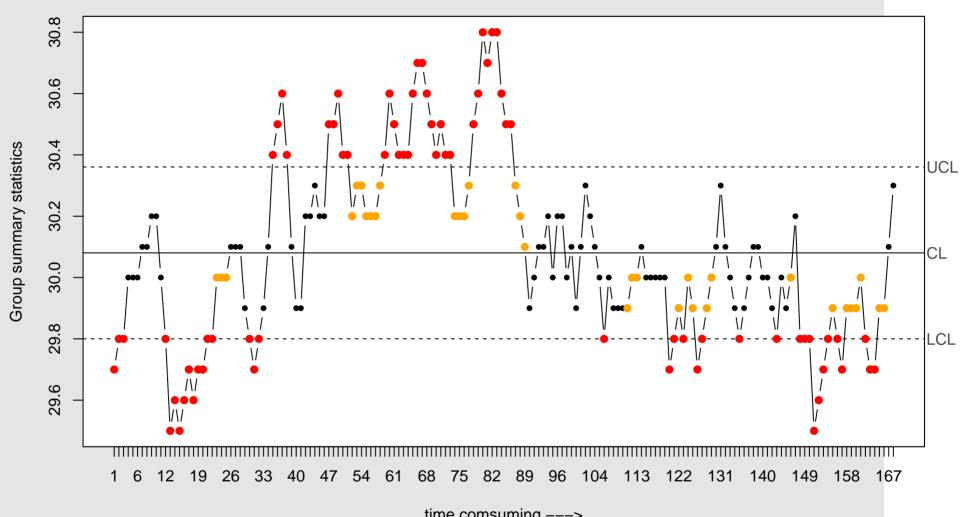
LCL = 29.79348 UCL = 30.25533 Number beyond limits = 54 Number violating runs = 113



time comsuming --->

Number of groups = 168 Center = 30.04583StdDev = 0.07803542

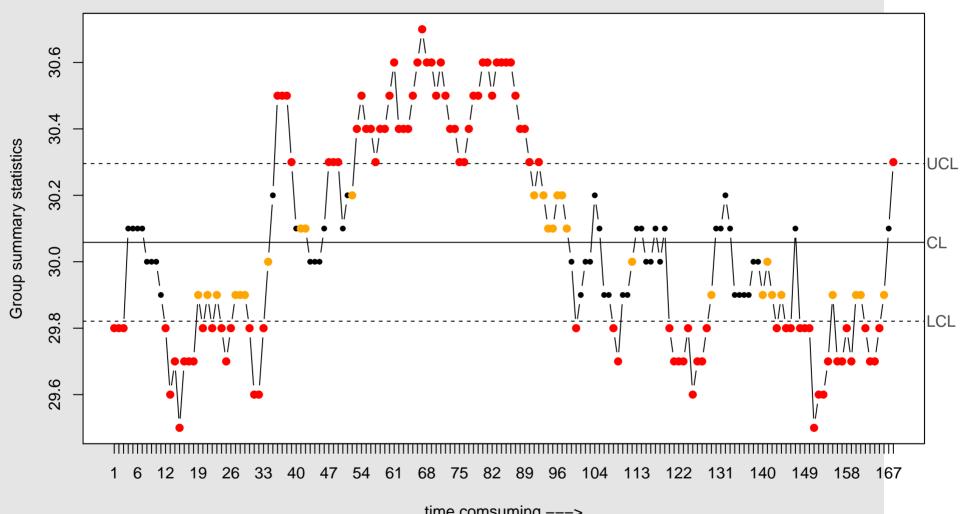
LCL = 29.81173 UCL = 30.27994 Number beyond limits = 76 Number violating runs = 84



time comsuming --->

Number of groups = 168 Center = 30.08036StdDev = 0.09343016

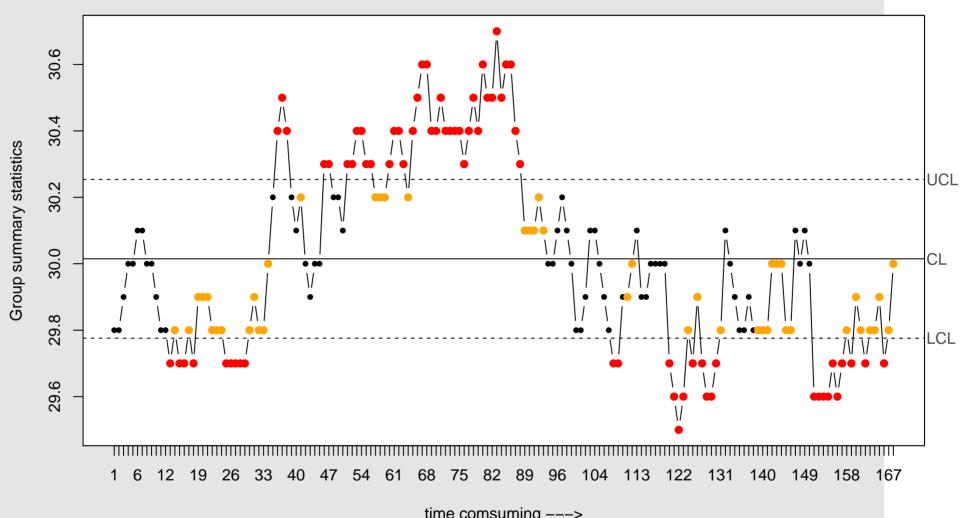
LCL = 29.80007UCL = 30.36065 Number beyond limits = 70 Number violating runs = 77



time comsuming --->

Number of groups = 168 Center = 30.05833StdDev = 0.07909712

LCL = 29.82104 UCL = 30.29562 Number beyond limits = 96 Number violating runs = 95

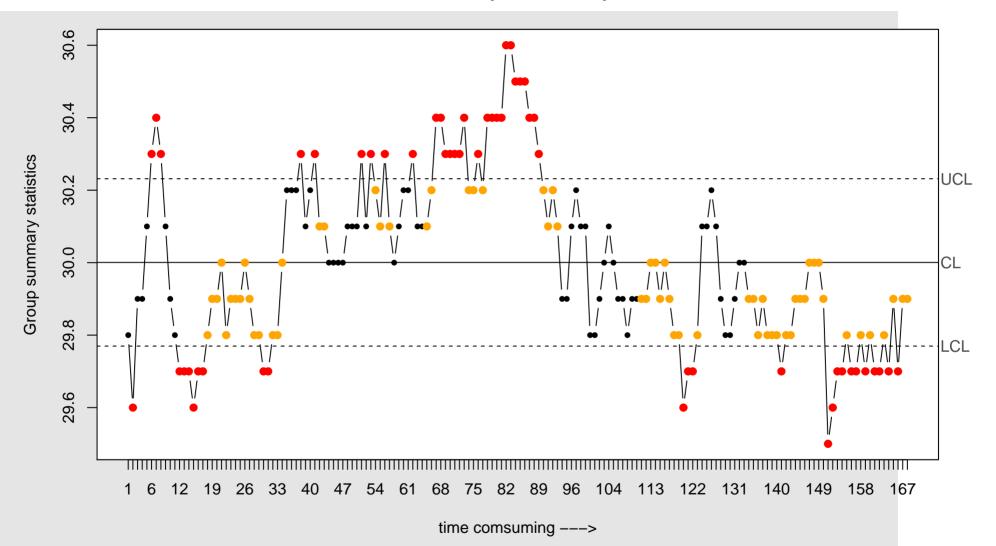


time comsuming --->

Number of groups = 168 Center = 30.01488StdDev = 0.07962798

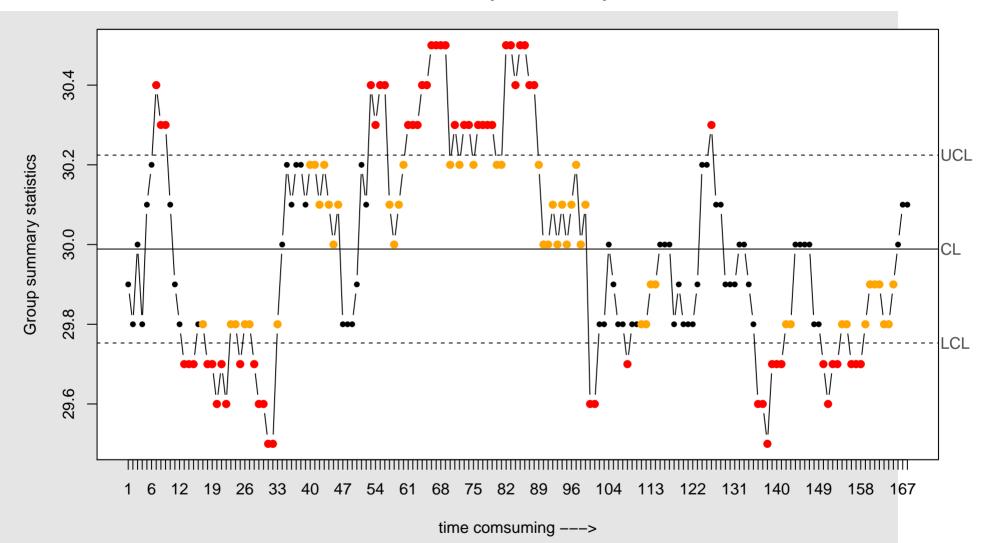
LCL = 29.776UCL = 30.25376

Number beyond limits = 69 Number violating runs = 99



Number of groups = 168 Center = 30.0006 StdDev = 0.07697371

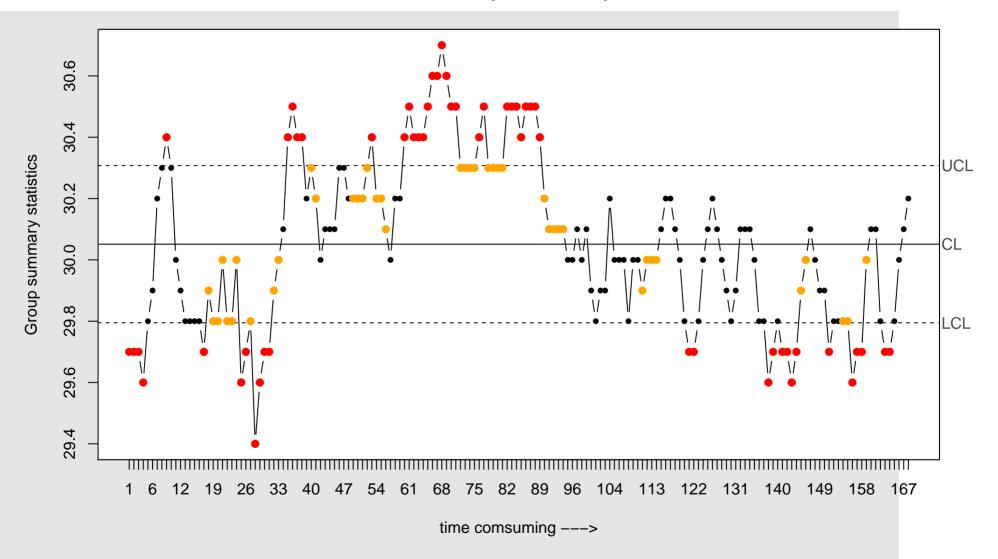
LCL = 29.76967 UCL = 30.23152 Number beyond limits = 53 Number violating runs = 103



Number of groups = 168 Center = 29.98869

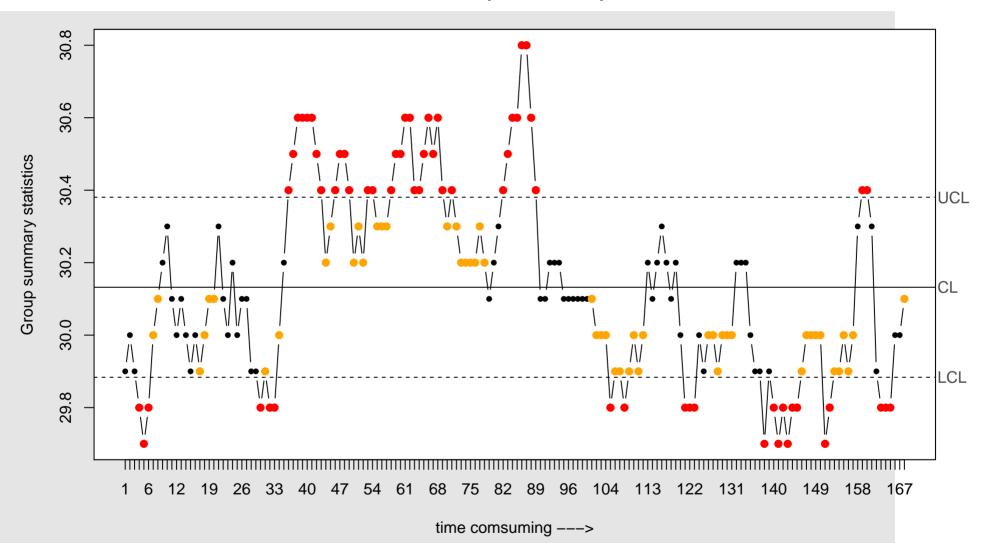
StdDev = 0.07856627

LCL = 29.75299 UCL = 30.22439 Number beyond limits = 61 Number violating runs = 87



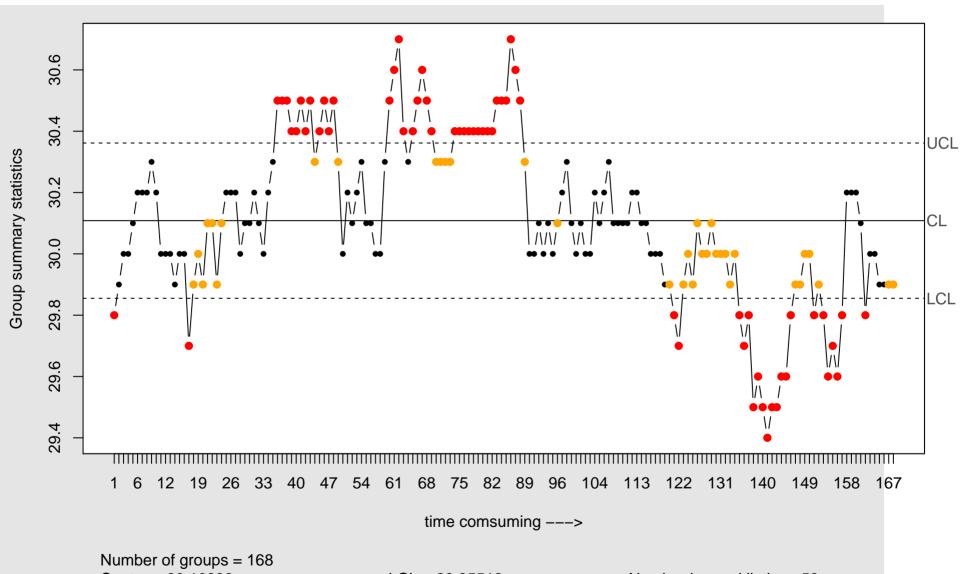
Number of groups = 168 Center = 30.05119 StdDev = 0.08546736

LCL = 29.79479 UCL = 30.30759 Number beyond limits = 53 Number violating runs = 74



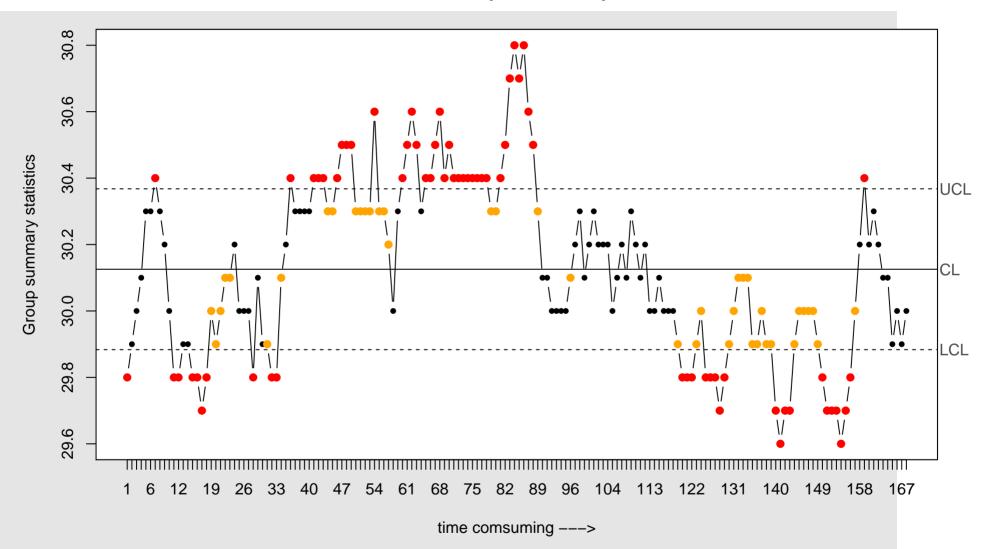
Number of groups = 168 Center = 30.13214 StdDev = 0.0828131

LCL = 29.8837 UCL = 30.38058 Number beyond limits = 60 Number violating runs = 88



Number of groups = 168 Center = 30.10833 StdDev = 0.08440566

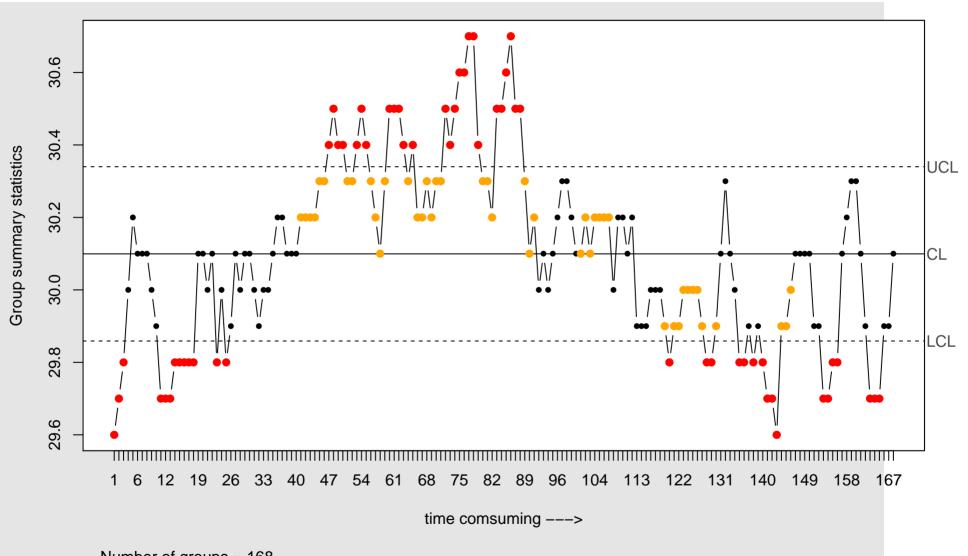
LCL = 29.85512 UCL = 30.36155 Number beyond limits = 59 Number violating runs = 84



Number of groups = 168 Center = 30.1256 StdDev = 0.08068968

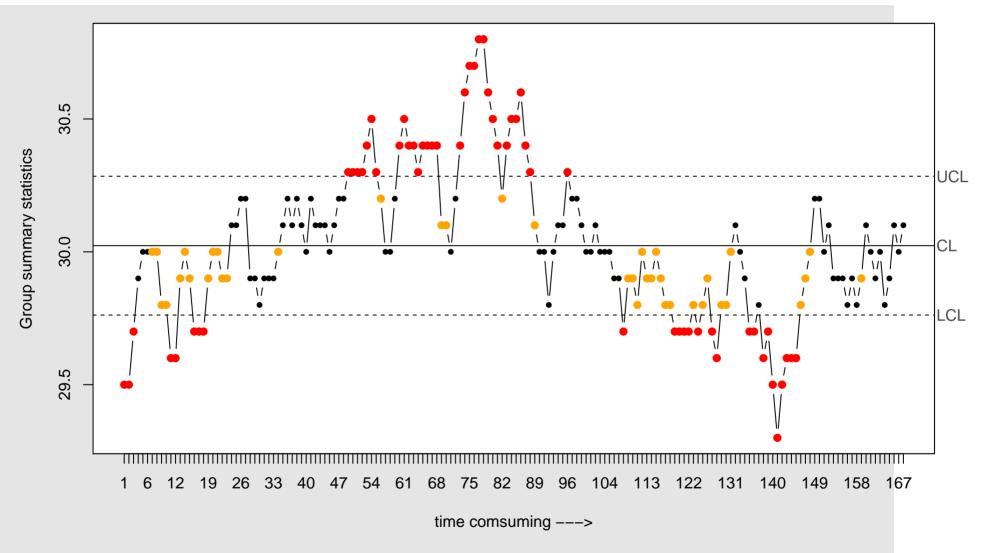
LCL = 29.88353 UCL = 30.36766

Number beyond limits = 66 Number violating runs = 94



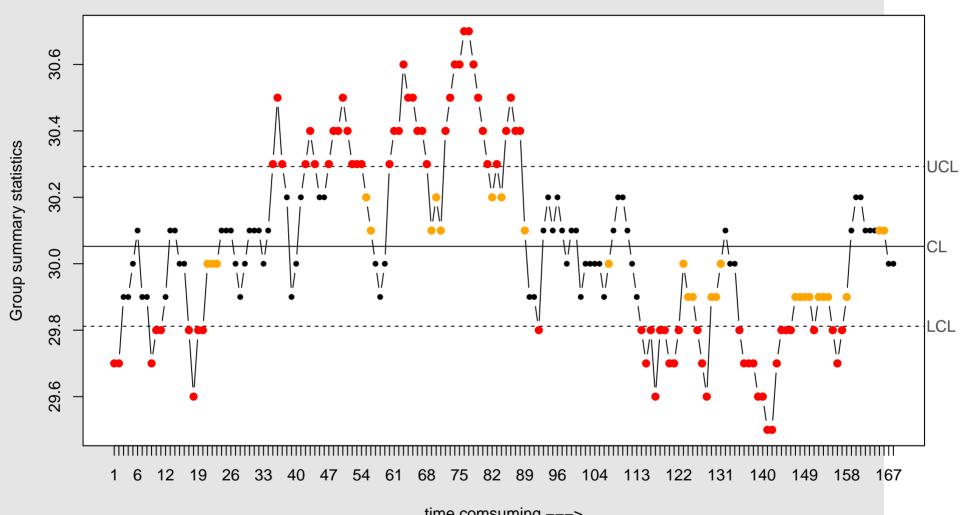
Number of groups = 168 Center = 30.0994 StdDev = 0.08015883

LCL = 29.85893 UCL = 30.33988 Number beyond limits = 56 Number violating runs = 81



Number of groups = 168 Center = 30.02321 StdDev = 0.08705992

LCL = 29.76203 UCL = 30.28439 Number beyond limits = 58 Number violating runs = 75

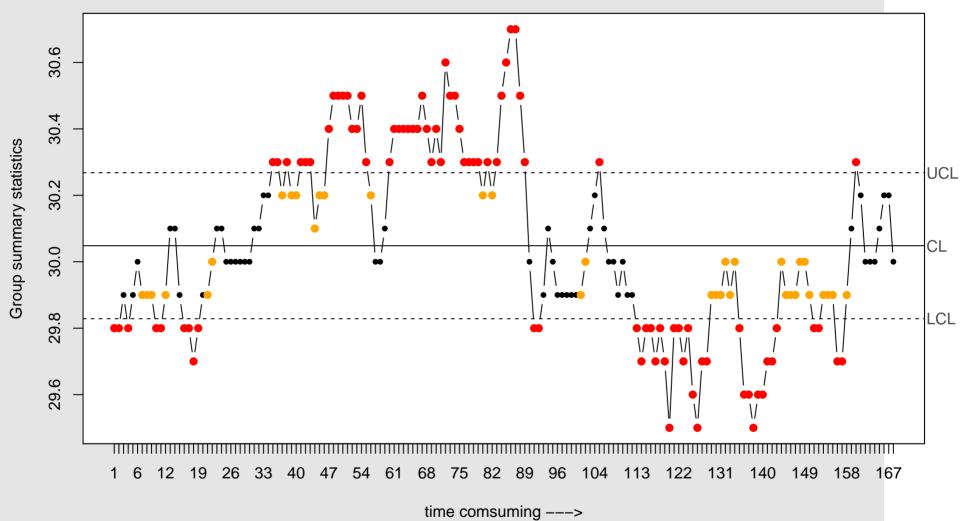


time comsuming --->

Number of groups = 168 Center = 30.05238StdDev = 0.08015883

LCL = 29.8119UCL = 30.29286

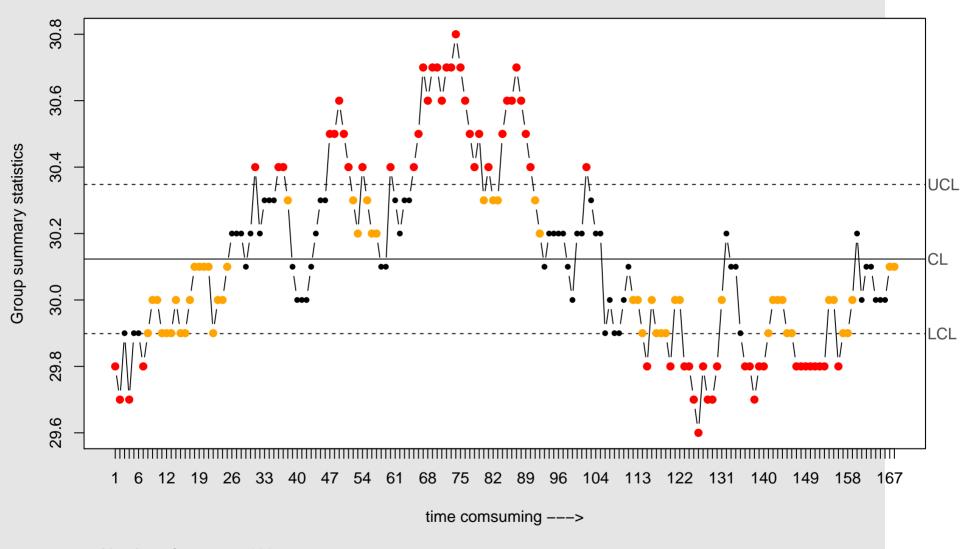
Number beyond limits = 76 Number violating runs = 74



Number of groups = 168 Center = 30.04821StdDev = 0.07325774

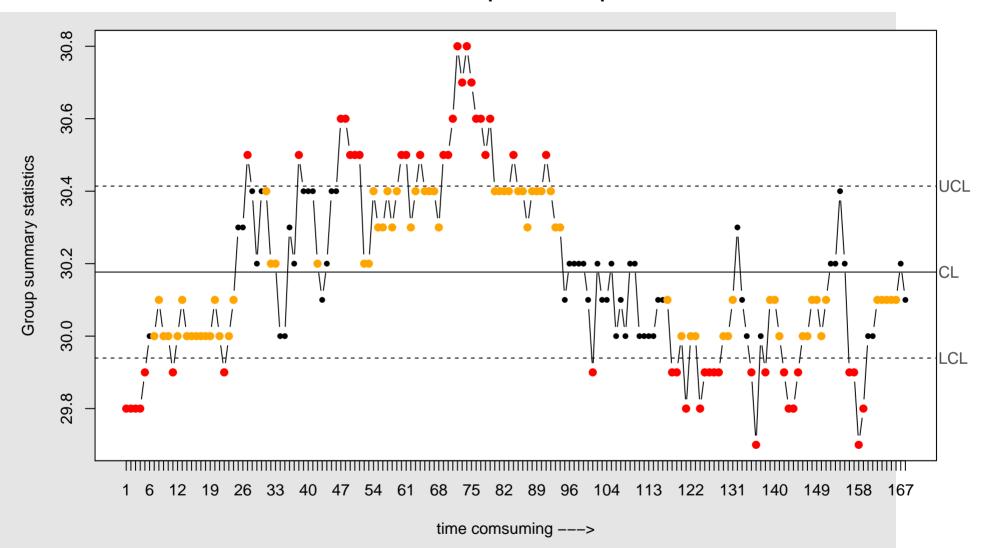
LCL = 29.82844 UCL = 30.26799

Number beyond limits = 85 Number violating runs = 101



Number of groups = 168 Center = 30.12321 StdDev = 0.0748503

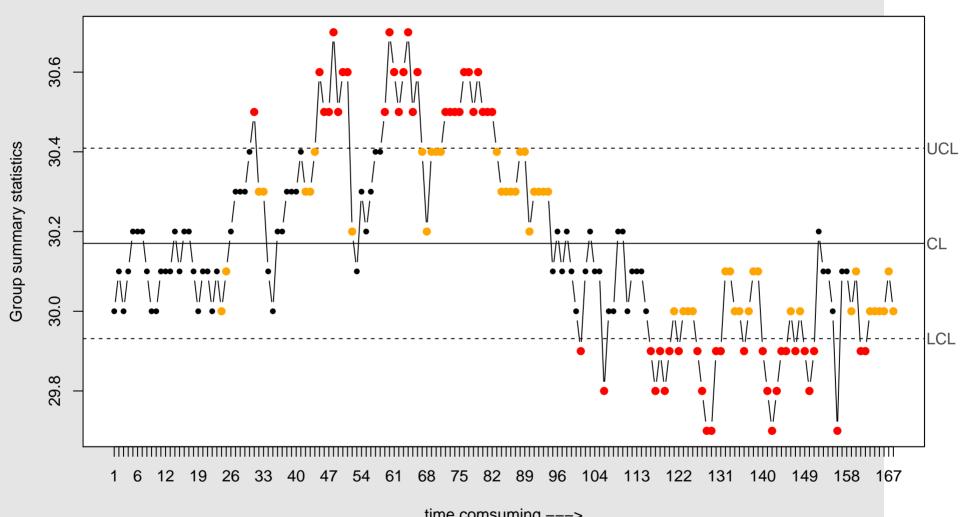
LCL = 29.89866 UCL = 30.34777 Number beyond limits = 61 Number violating runs = 100



Number of groups = 168 Center = 30.17679

StdDev = 0.07909712

LCL = 29.93949 UCL = 30.41408 Number beyond limits = 50 Number violating runs = 100

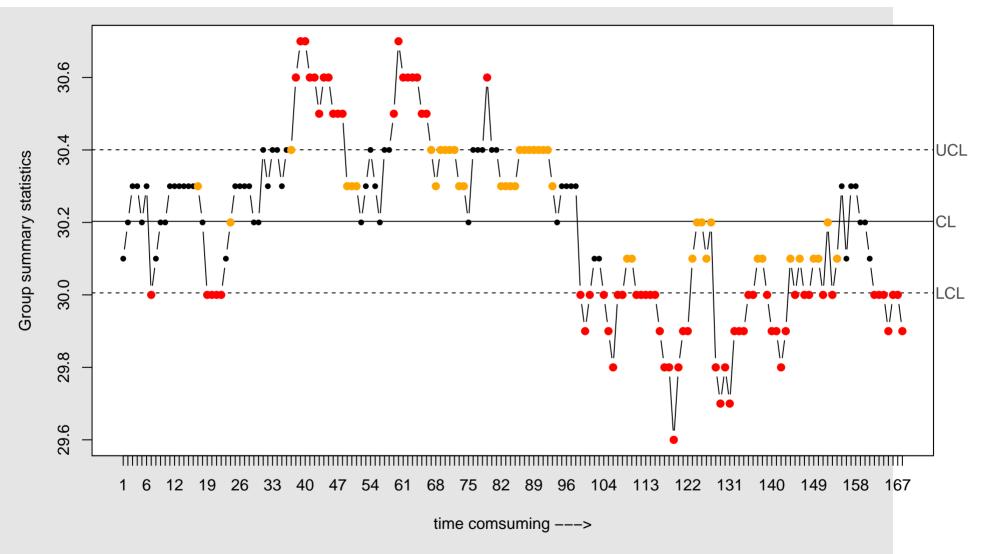


time comsuming --->

Number of groups = 168 Center = 30.17024StdDev = 0.07962798

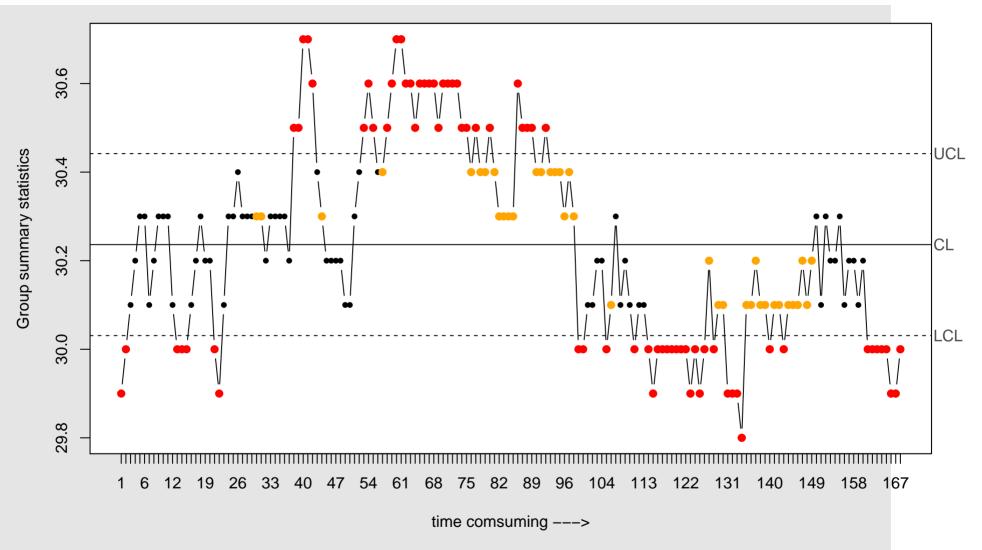
LCL = 29.93135UCL = 30.40912

Number beyond limits = 55 Number violating runs = 95



Number of groups = 168 Center = 30.20298 StdDev = 0.0658258

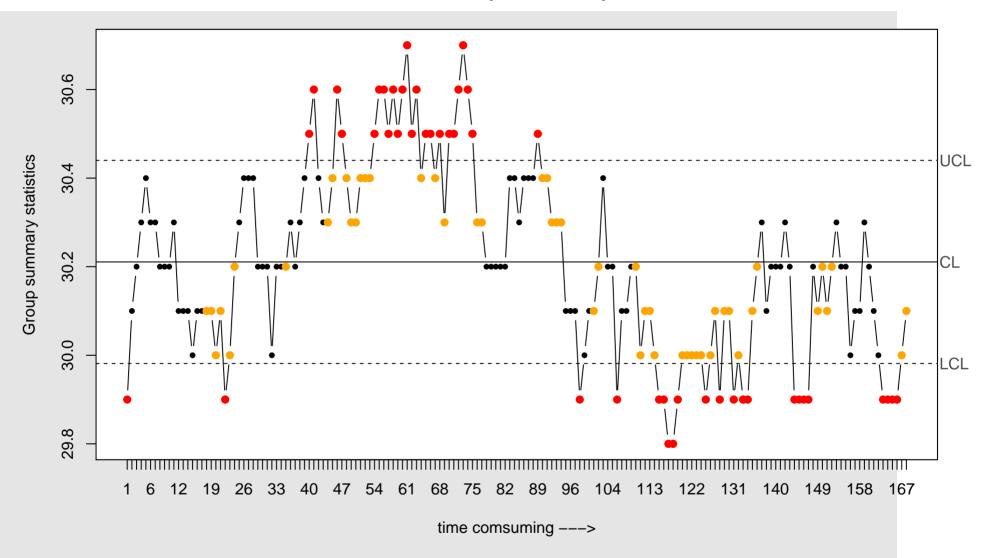
LCL = 30.0055 UCL = 30.40045 Number beyond limits = 71 Number violating runs = 95



Number of groups = 168 Center = 30.23631

StdDev = 0.06848006

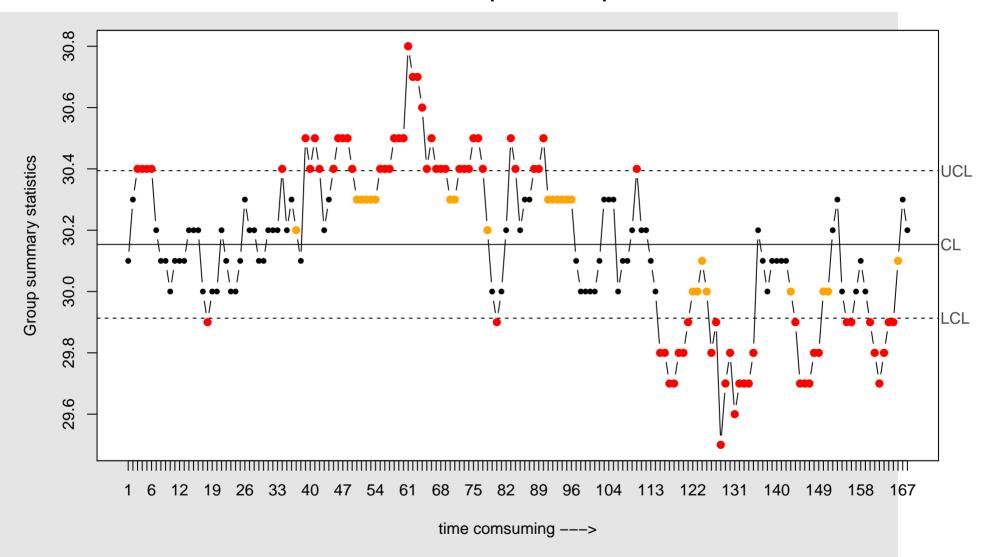
LCL = 30.03087 UCL = 30.44175 Number beyond limits = 72 Number violating runs = 90



Number of groups = 168 Center = 30.21071 StdDev = 0.07644286

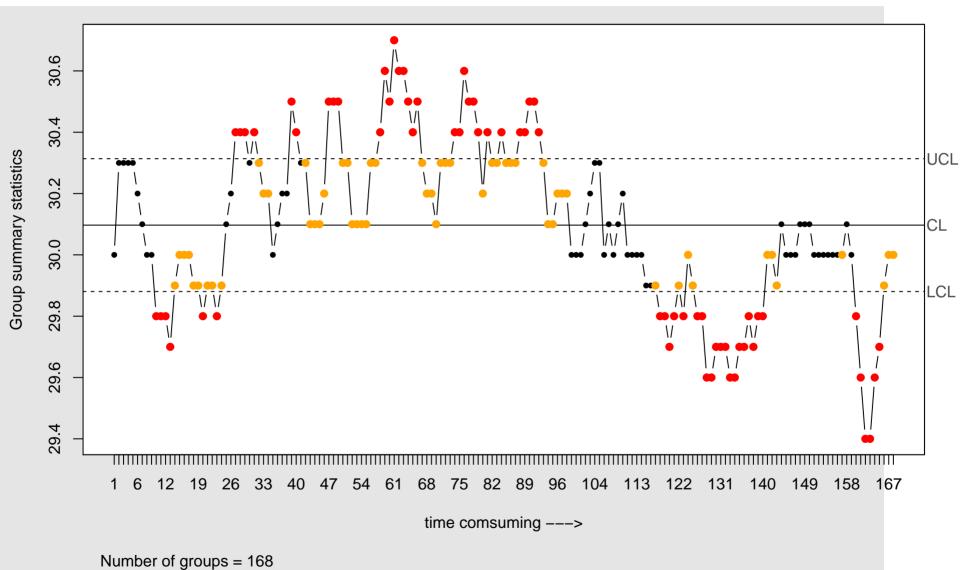
LCL = 29.98139 UCL = 30.44004

Number beyond limits = 46 Number violating runs = 84



Number of groups = 168 Center = 30.15357 StdDev = 0.08015883

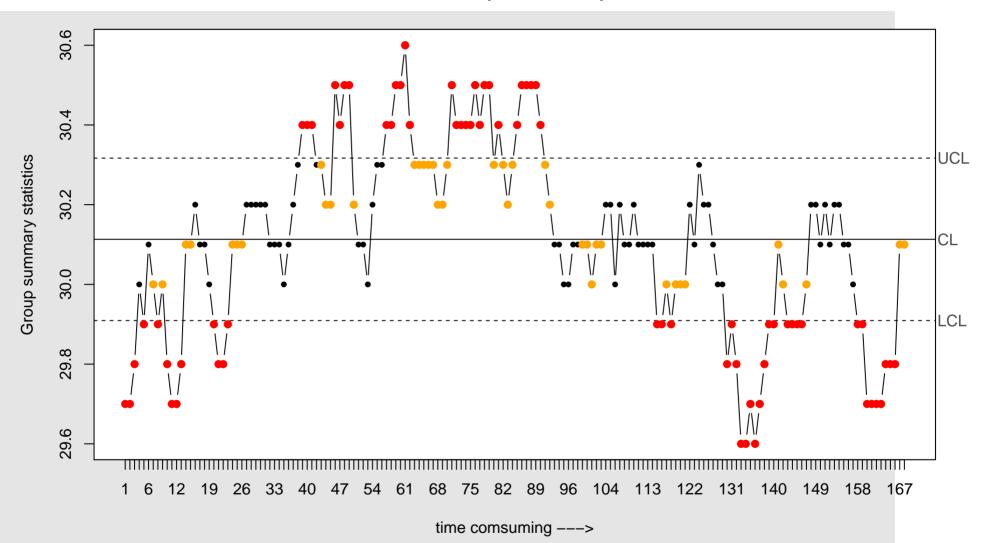
LCL = 29.91309 UCL = 30.39405 Number beyond limits = 74 Number violating runs = 77



Number of groups = 168 Center = 30.09702 StdDev = 0.07219603

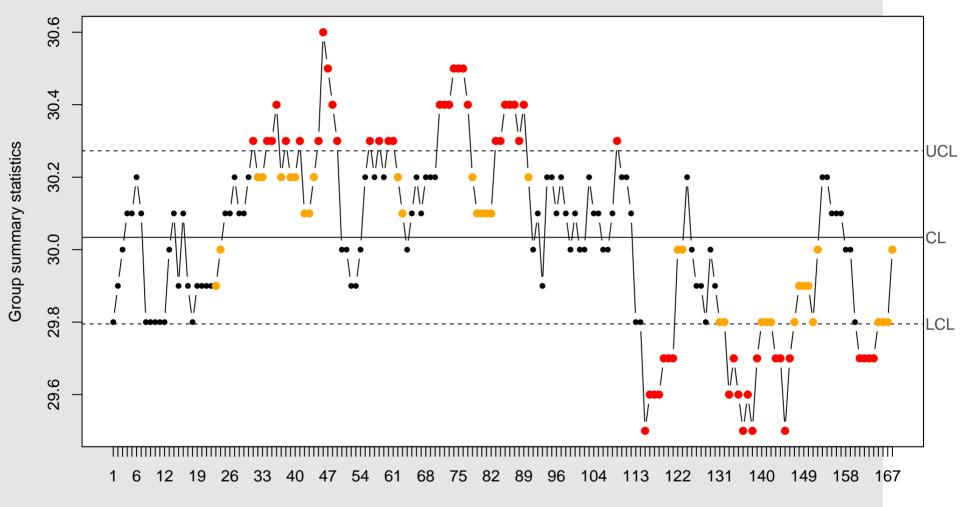
LCL = 29.88044 UCL = 30.31361

Number beyond limits = 63 Number violating runs = 104



Number of groups = 168 Center = 30.1131 StdDev = 0.06794921

LCL = 29.90925 UCL = 30.31694 Number beyond limits = 69 Number violating runs = 87

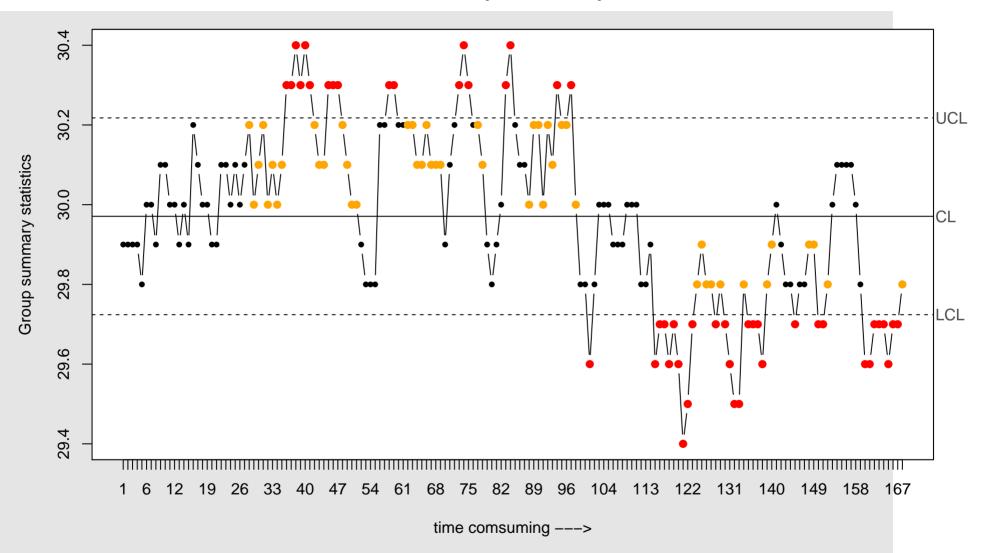


time comsuming --->

Number of groups = 168 Center = 30.03393 StdDev = 0.07962798

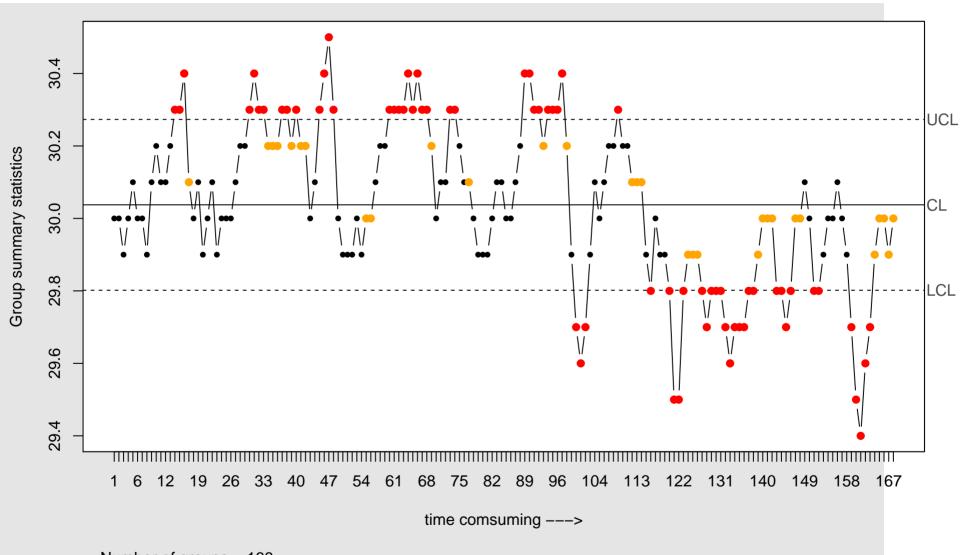
LCL = 29.79504 UCL = 30.27281

Number beyond limits = 52 Number violating runs = 76



Number of groups = 168 Center = 29.97083 StdDev = 0.08228224

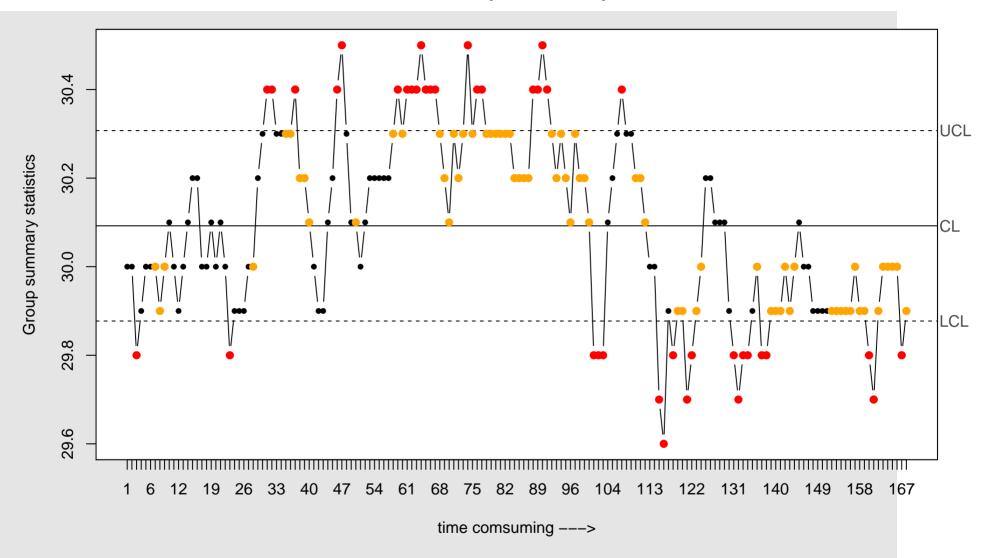
LCL = 29.72399 UCL = 30.21768 Number beyond limits = 48 Number violating runs = 77



Number of groups = 168 Center = 30.0375 StdDev = 0.07856627

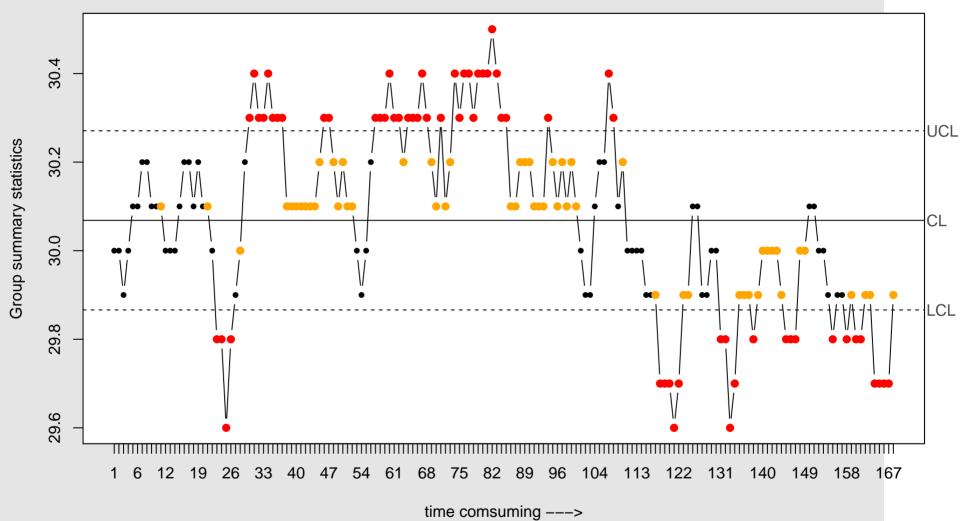
LCL = 29.8018 UCL = 30.2732

Number beyond limits = 65 Number violating runs = 66



Number of groups = 168 Center = 30.09226 StdDev = 0.07166518

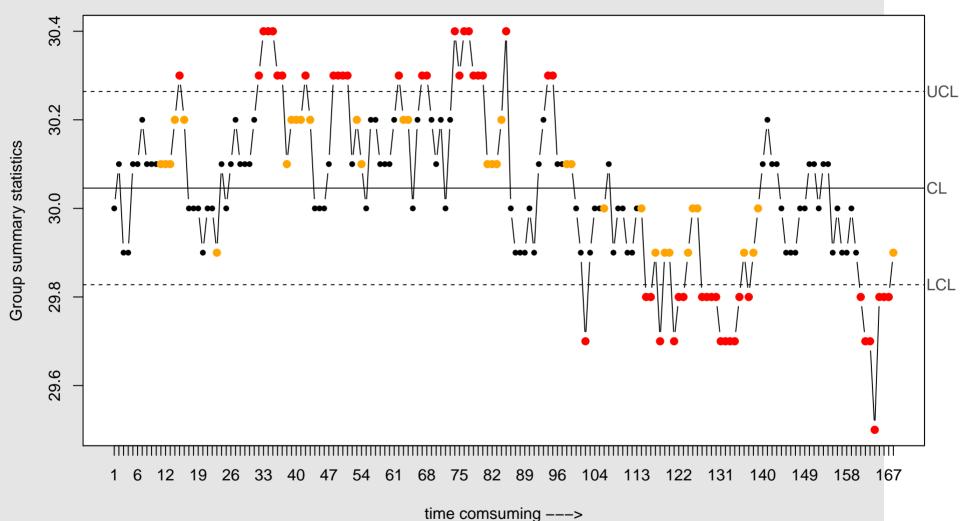
LCL = 29.87727 UCL = 30.30726 Number beyond limits = 40 Number violating runs = 89



Number of groups = 168 Center = 30.06845StdDev = 0.06741835

LCL = 29.8662UCL = 30.27071

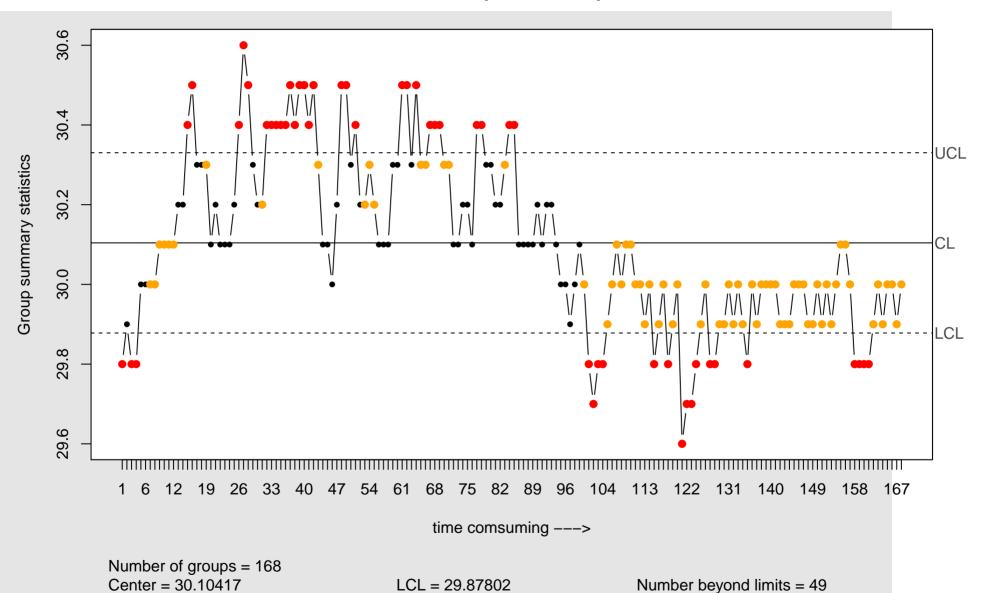
Number beyond limits = 62 Number violating runs = 97



Number of groups = 168 Center = 30.04583StdDev = 0.07272689

LCL = 29.82765 UCL = 30.26401

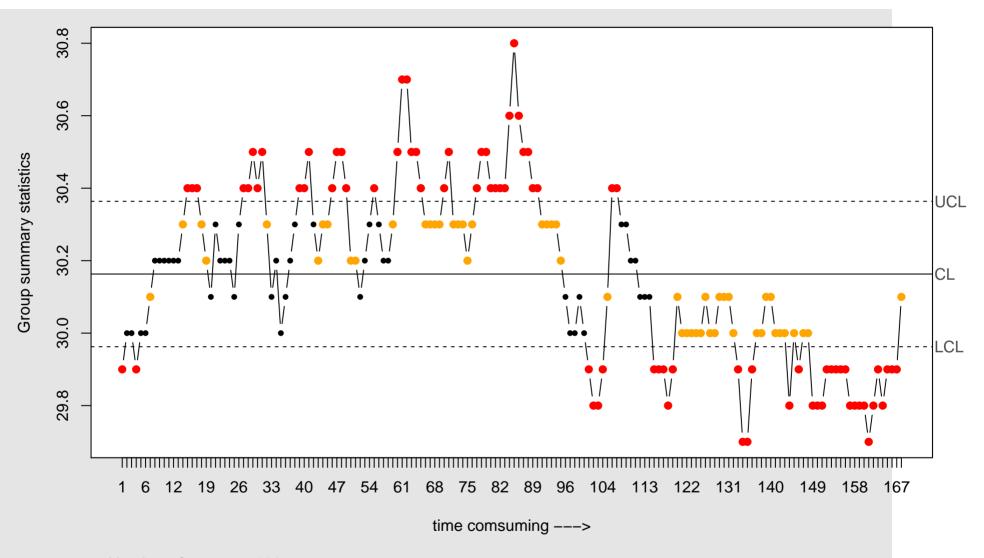
Number beyond limits = 49 Number violating runs = 68



UCL = 30.33031

Number violating runs = 102

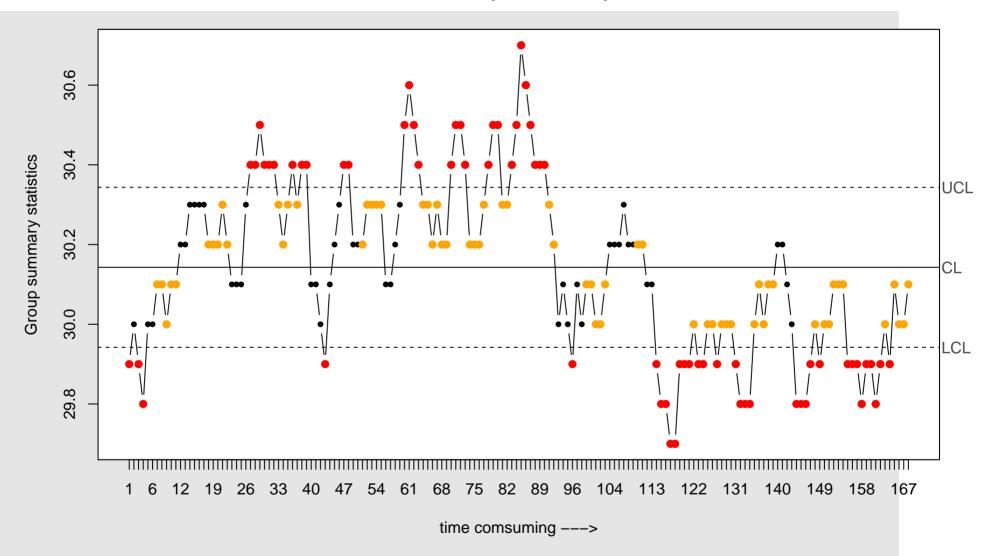
StdDev = 0.07538115



Number of groups = 168 Center = 30.1631 StdDev = 0.0668875

LCL = 29.96243 UCL = 30.36376

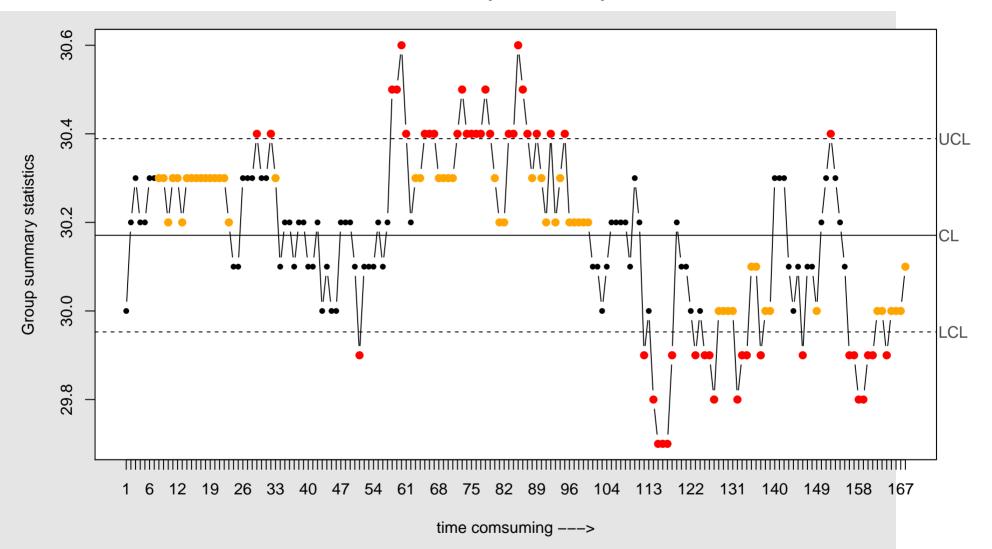
Number beyond limits = 76 Number violating runs = 109



Number of groups = 168 Center = 30.14286 StdDev = 0.0668875

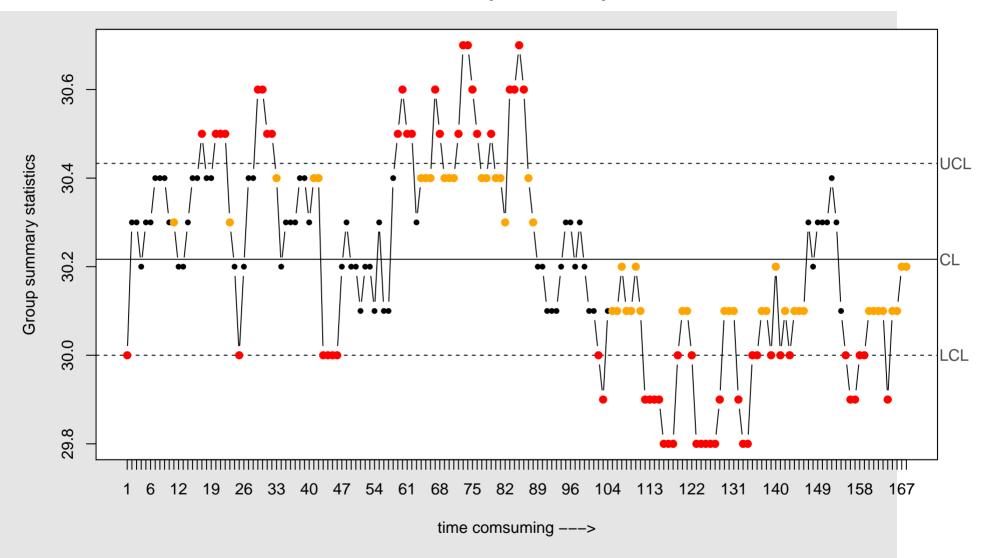
LCL = 29.94219 UCL = 30.34352

Number beyond limits = 64 Number violating runs = 102



Number of groups = 168 Center = 30.17083 StdDev = 0.07272689

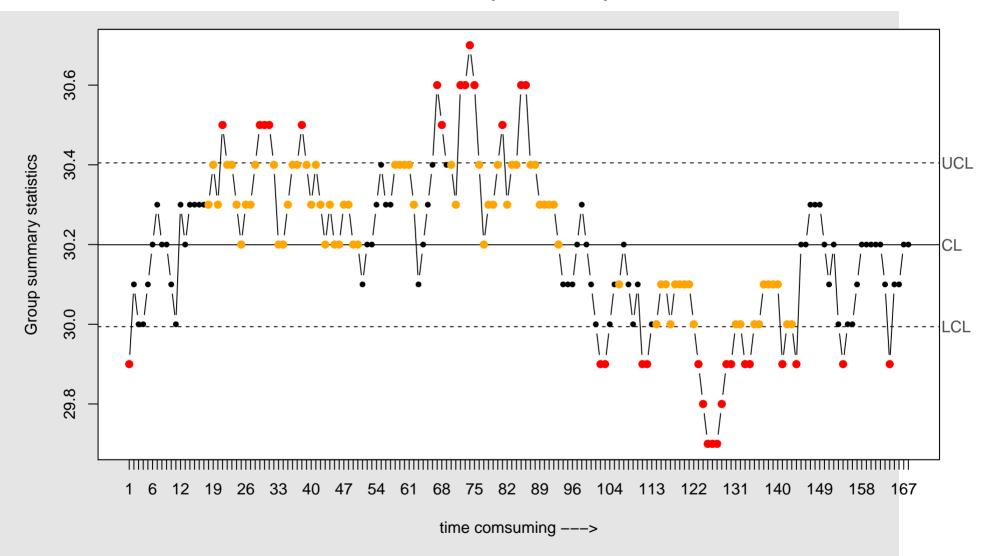
LCL = 29.95265 UCL = 30.38901 Number beyond limits = 49 Number violating runs = 80



Number of groups = 168 Center = 30.21667 StdDev = 0.07219603

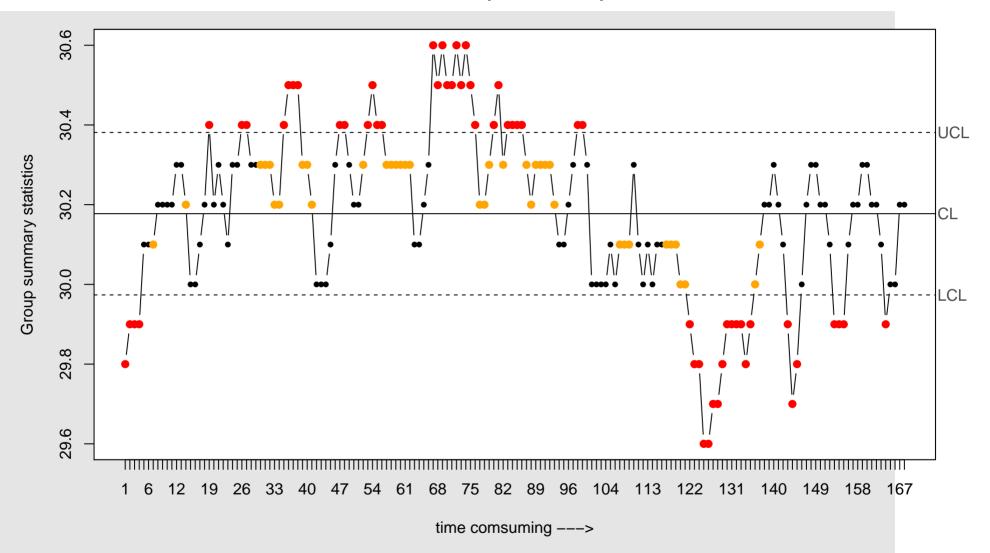
LCL = 30.00008 UCL = 30.43325

Number beyond limits = 61 Number violating runs = 84



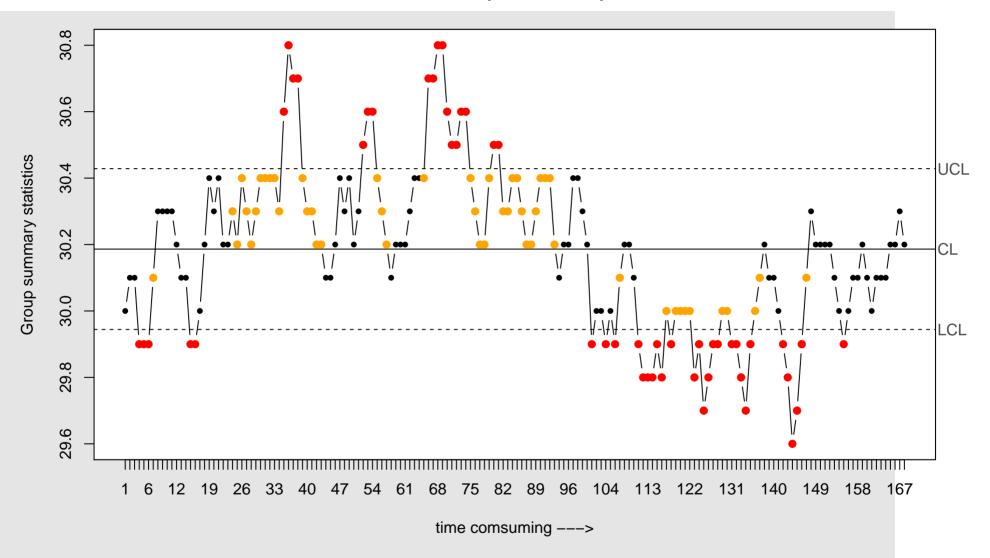
Number of groups = 168 Center = 30.1994 StdDev = 0.06848006

LCL = 29.99396 UCL = 30.40484 Number beyond limits = 33 Number violating runs = 94



Number of groups = 168 Center = 30.17738 StdDev = 0.06794921

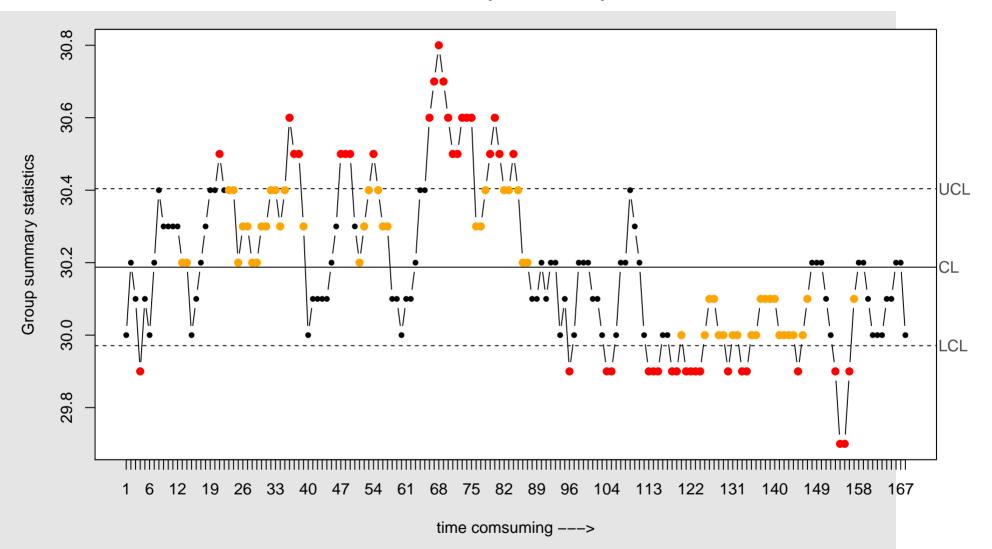
LCL = 29.97353 UCL = 30.38123 Number beyond limits = 56 Number violating runs = 72



Number of groups = 168 Center = 30.18631

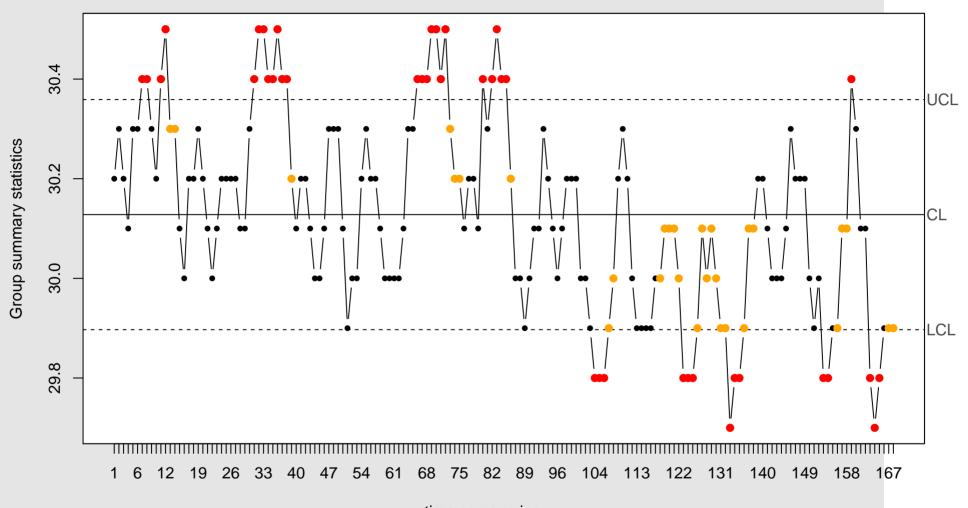
StdDev = 0.08068968

LCL = 29.94424 UCL = 30.42838 Number beyond limits = 50 Number violating runs = 82



Number of groups = 168 Center = 30.1875 StdDev = 0.07219603

LCL = 29.97091 UCL = 30.40409 Number beyond limits = 43 Number violating runs = 76

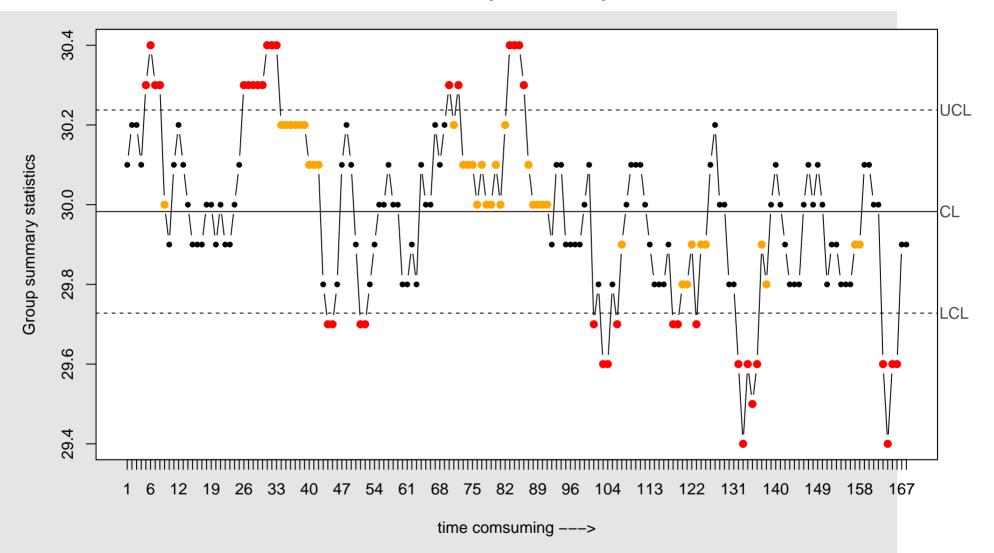


time comsuming --->

Number of groups = 168 Center = 30.12798 StdDev = 0.07697371

LCL = 29.89706 UCL = 30.3589

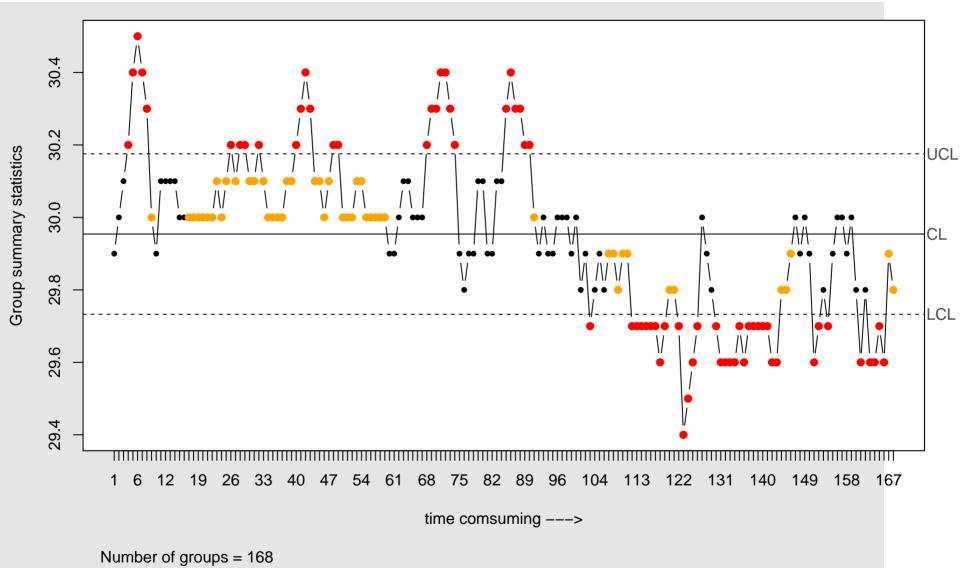
Number beyond limits = 39 Number violating runs = 43



Number of groups = 168 Center = 29.98274 StdDev = 0.08493651

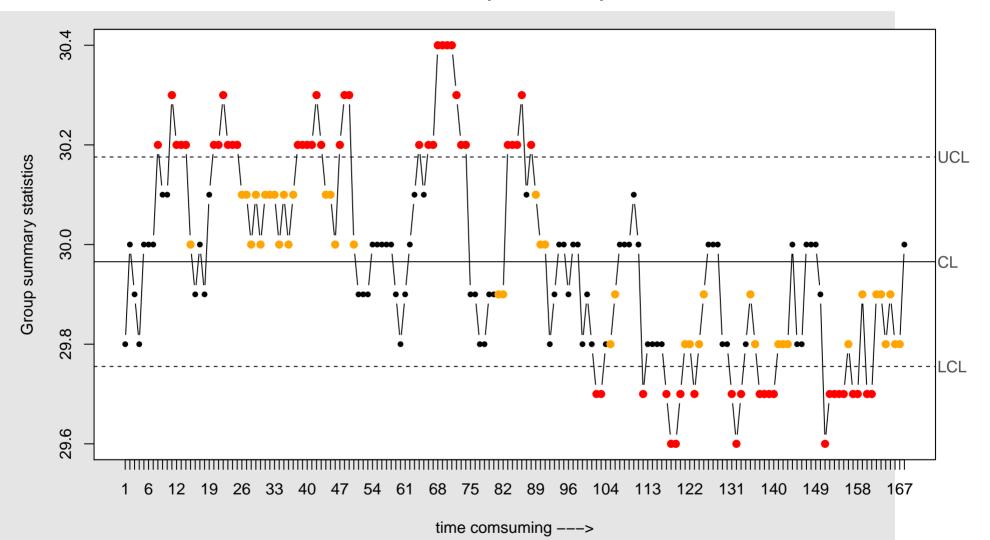
LCL = 29.72793 UCL = 30.23755

Number beyond limits = 38 Number violating runs = 51



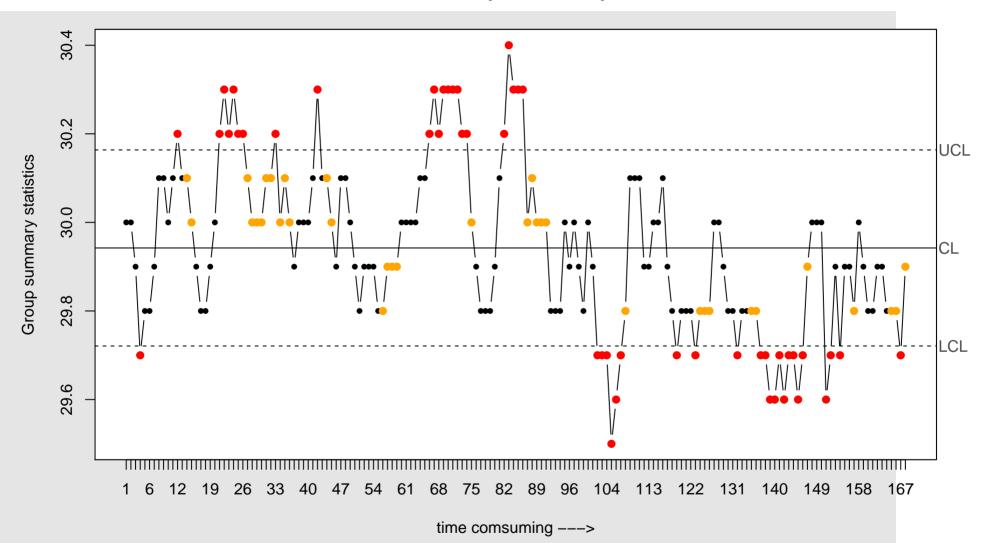
Number of groups = 168 Center = 29.95417 StdDev = 0.07378859

LCL = 29.7328 UCL = 30.17553 Number beyond limits = 64 Number violating runs = 91



Number of groups = 168 Center = 29.96548 StdDev = 0.07007262

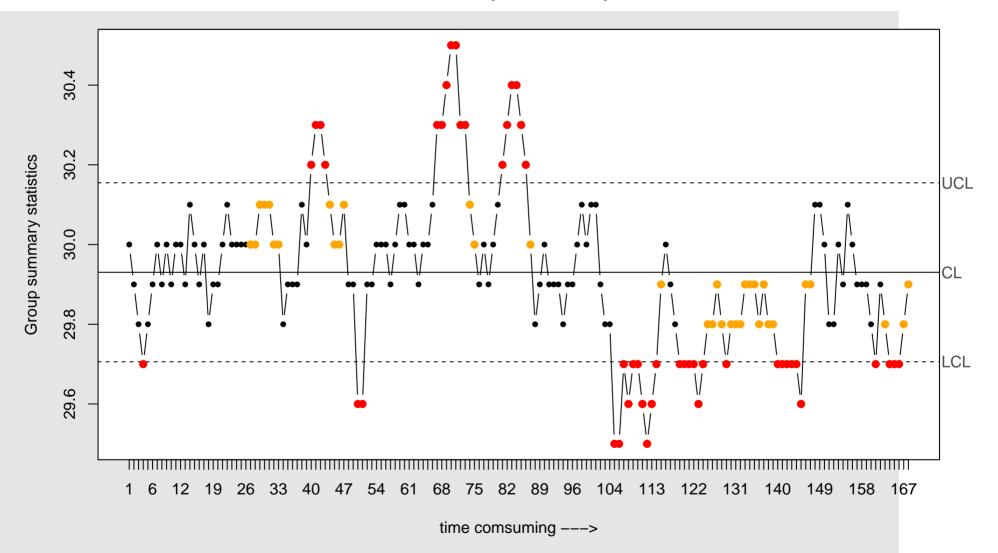
LCL = 29.75526 UCL = 30.17569 Number beyond limits = 59 Number violating runs = 74



Number of groups = 168 Center = 29.94226 StdDev = 0.07378859

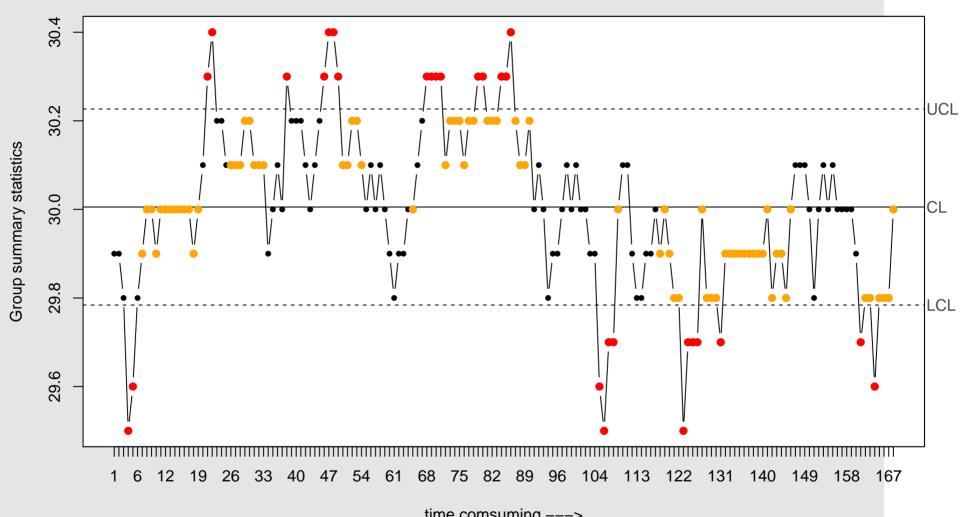
LCL = 29.7209 UCL = 30.16363

Number beyond limits = 47 Number violating runs = 58



Number of groups = 168 Center = 29.93036 StdDev = 0.0748503

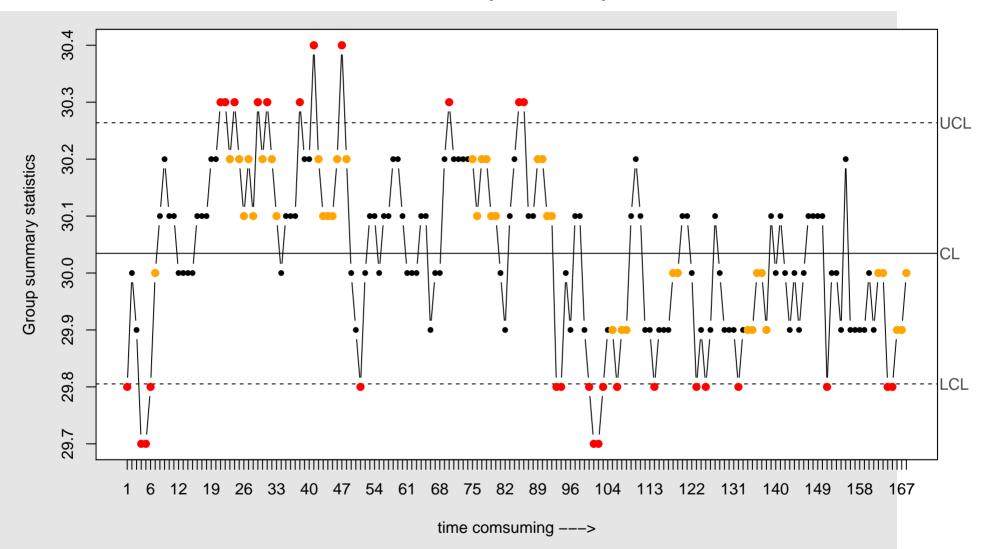
LCL = 29.70581 UCL = 30.15491 Number beyond limits = 47 Number violating runs = 59



time comsuming --->

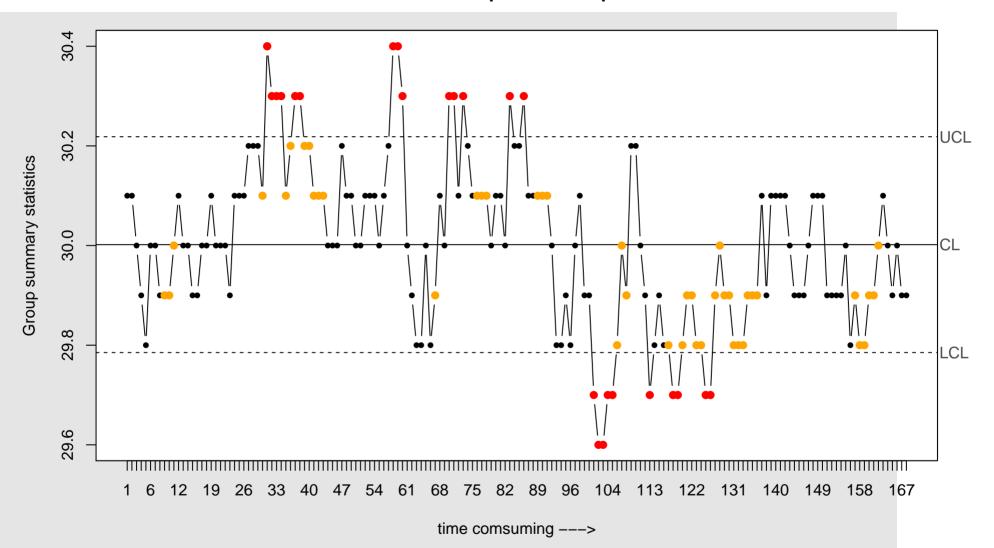
Number of groups = 168 Center = 30.00536StdDev = 0.07378859

LCL = 29.78399UCL = 30.22672 Number beyond limits = 29 Number violating runs = 85



Number of groups = 168 Center = 30.03452 StdDev = 0.07644286

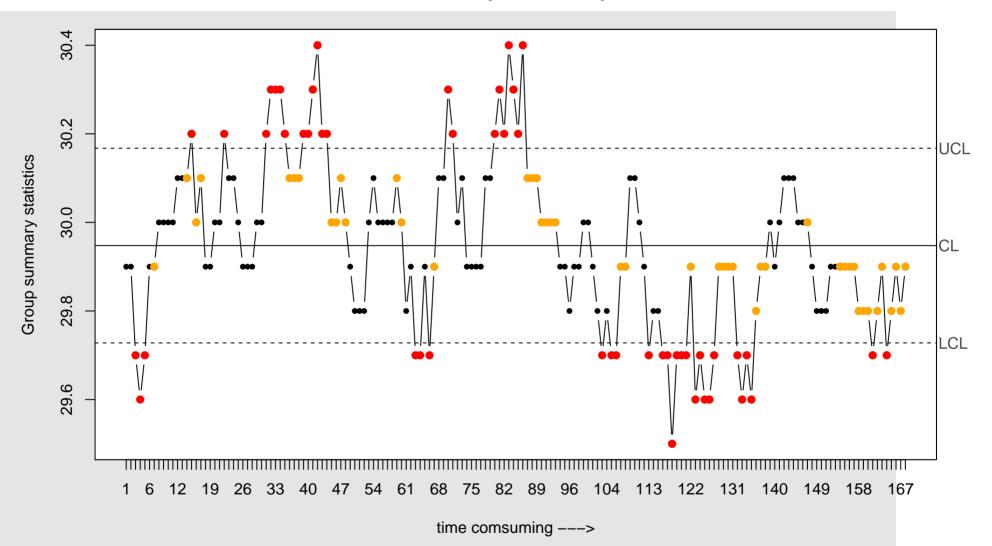
LCL = 29.8052 UCL = 30.26385 Number beyond limits = 30 Number violating runs = 49



Number of groups = 168 Center = 30.00179

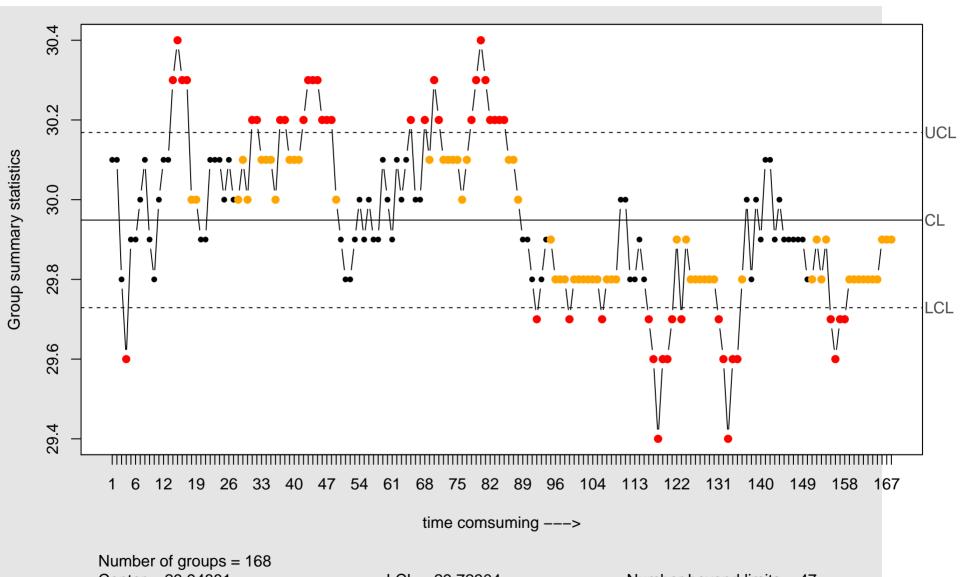
StdDev = 0.07219603

LCL = 29.7852 UCL = 30.21837 Number beyond limits = 24 Number violating runs = 54



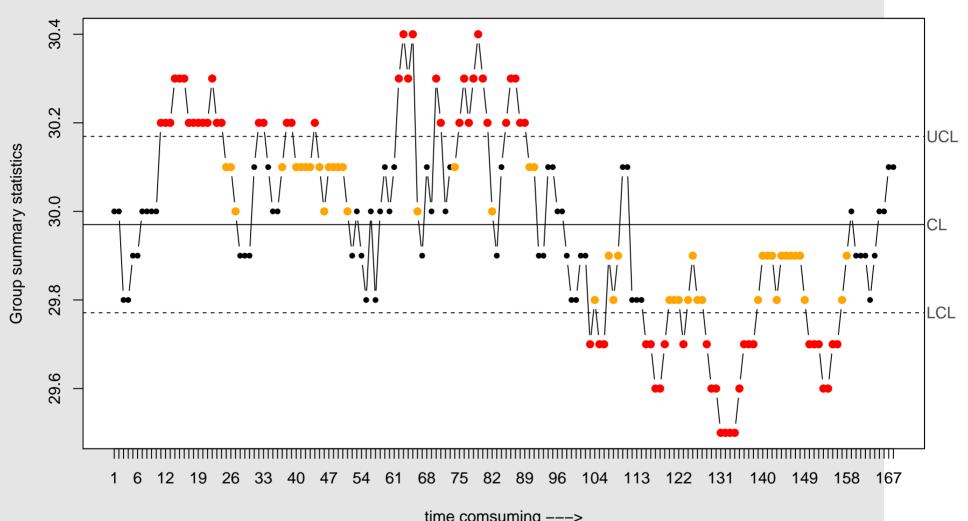
Number of groups = 168 Center = 29.94762 StdDev = 0.07325774

LCL = 29.72785 UCL = 30.16739 Number beyond limits = 49 Number violating runs = 71



Number of groups = 168 Center = 29.94881 StdDev = 0.07325774

LCL = 29.72904 UCL = 30.16858 Number beyond limits = 47 Number violating runs = 98

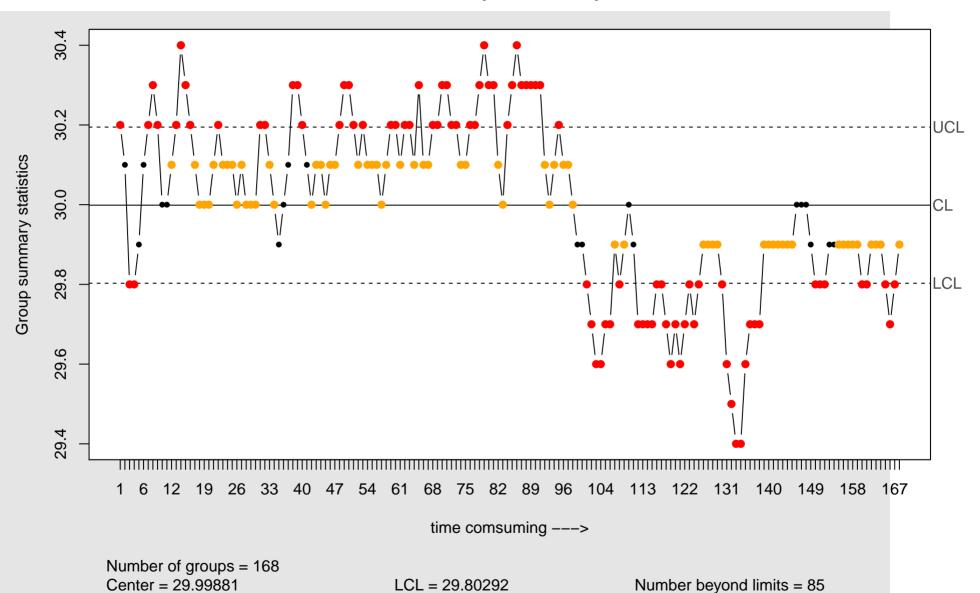


time comsuming --->

Number of groups = 168 Center = 29.97024StdDev = 0.06635665

LCL = 29.77117 UCL = 30.16931

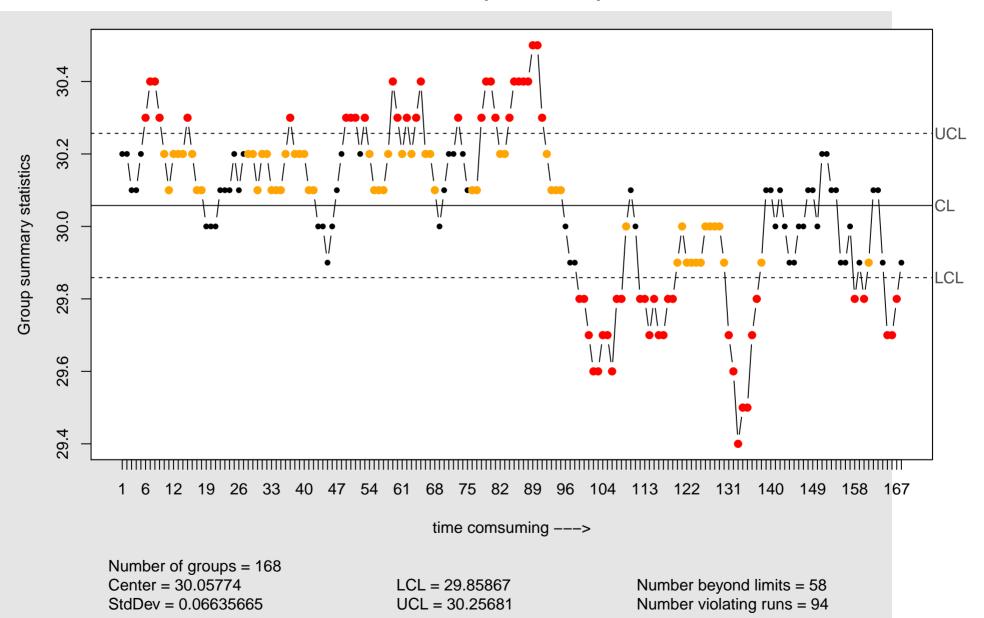
Number beyond limits = 64 Number violating runs = 91

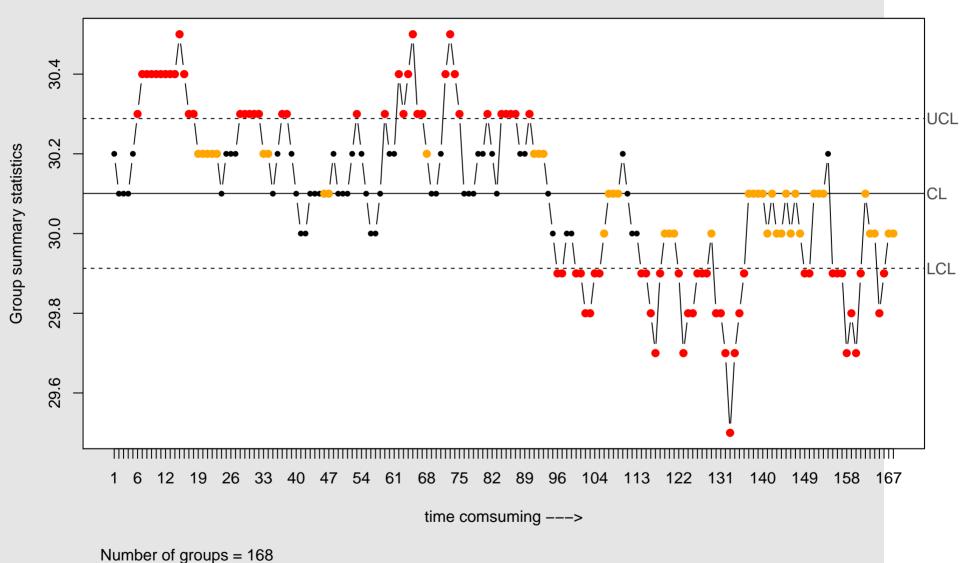


UCL = 30.19469

Number violating runs = 128

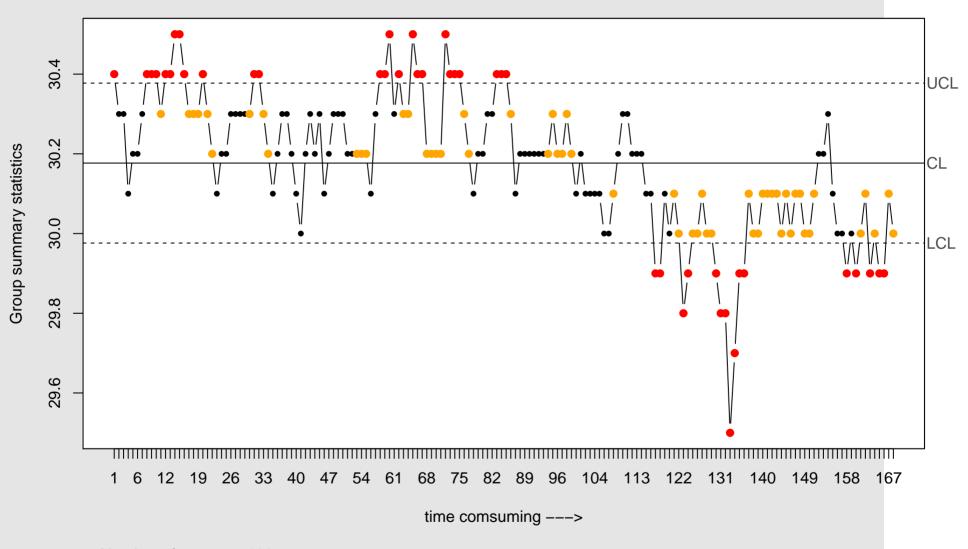
StdDev = 0.06529494





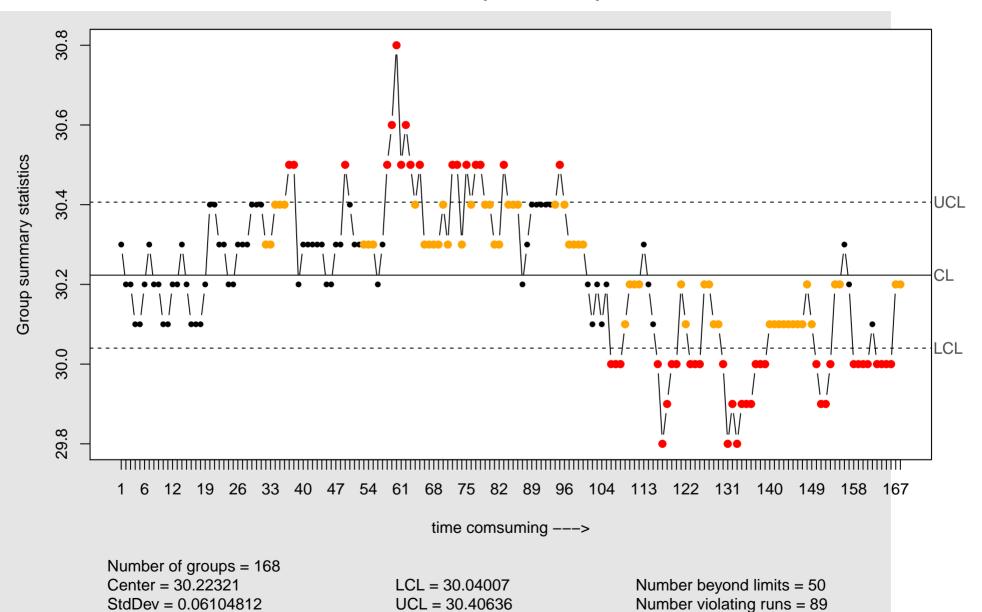
Number of groups = 168 Center = 30.1006 StdDev = 0.06264068

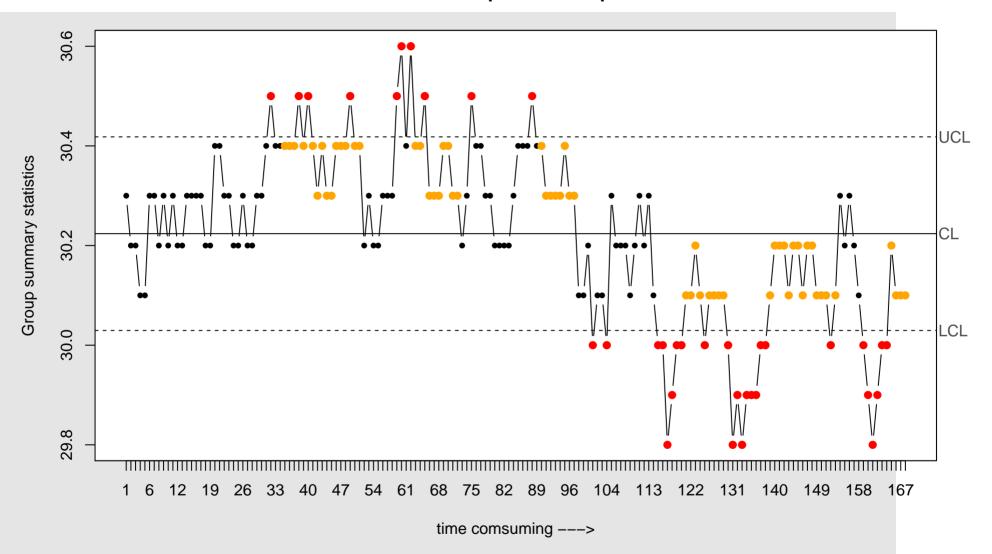
LCL = 29.91267 UCL = 30.28852 Number beyond limits = 76 Number violating runs = 82



Number of groups = 168 Center = 30.17679 StdDev = 0.0668875

LCL = 29.97612 UCL = 30.37745 Number beyond limits = 42 Number violating runs = 83

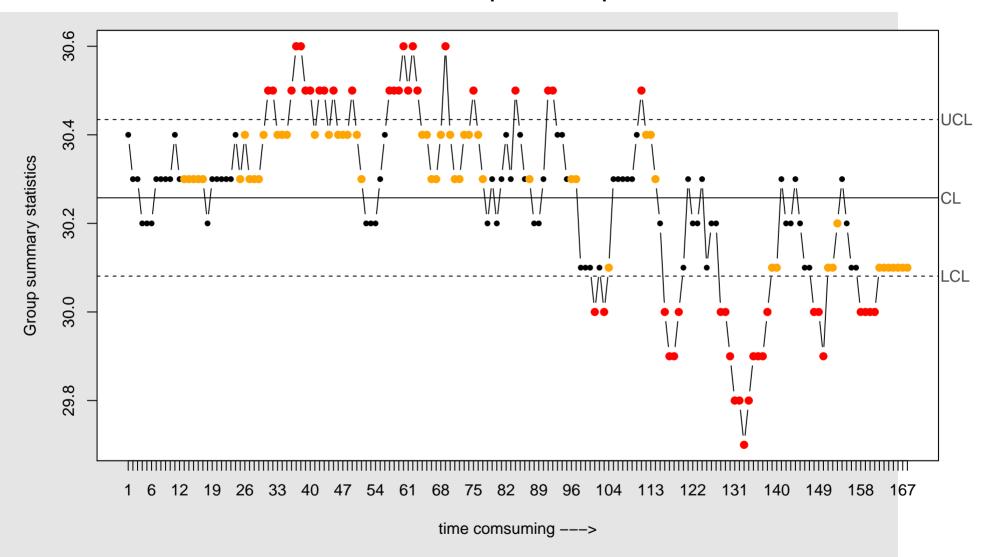




Number of groups = 168 Center = 30.22381 StdDev = 0.06476409

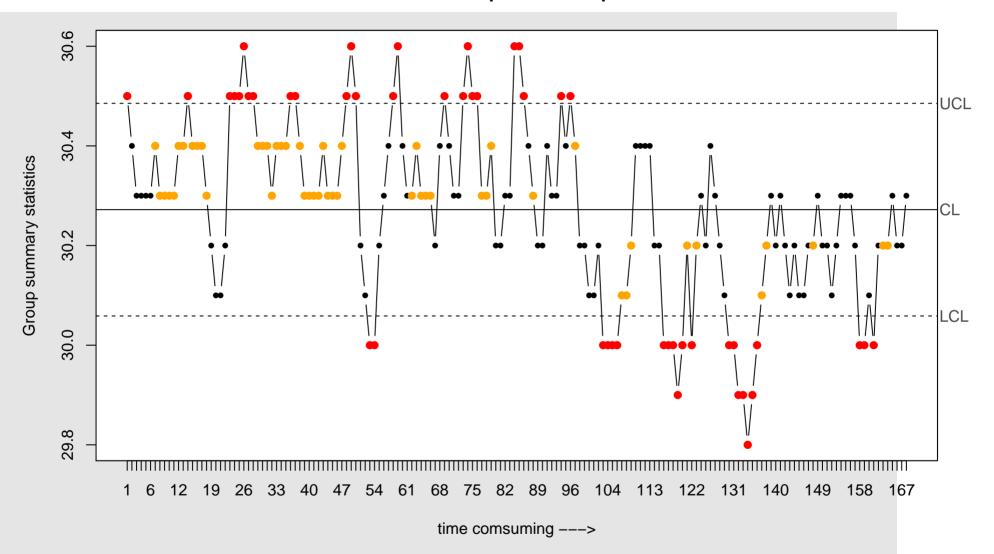
LCL = 30.02952 UCL = 30.4181

Number beyond limits = 35 Number violating runs = 77



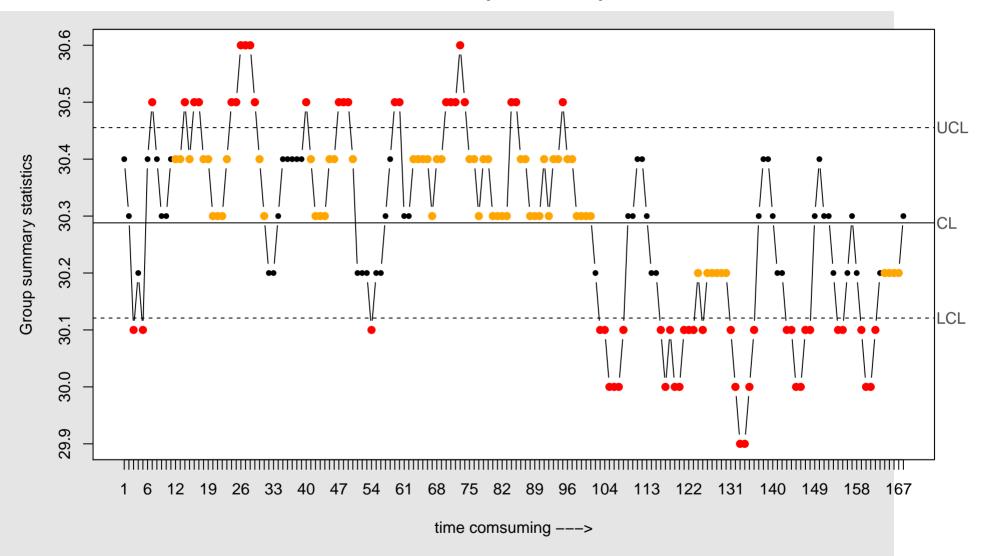
Number of groups = 168 Center = 30.25774 StdDev = 0.0589247

LCL = 30.08096 UCL = 30.43451 Number beyond limits = 48 Number violating runs = 78



Number of groups = 168 Center = 30.27202 StdDev = 0.07113433

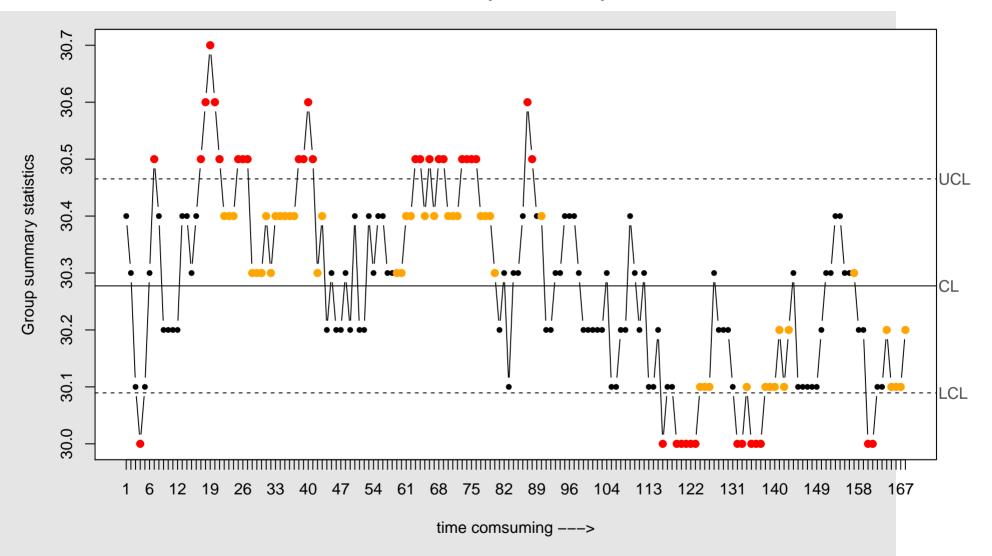
LCL = 30.05862 UCL = 30.48543 Number beyond limits = 47 Number violating runs = 65



Number of groups = 168 Center = 30.2881 StdDev = 0.05573958

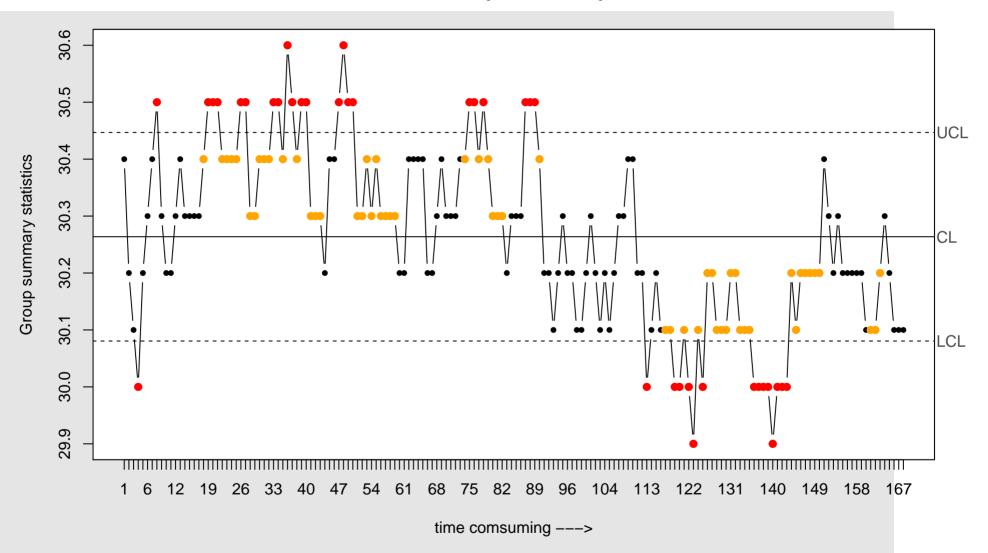
LCL = 30.12088 UCL = 30.45531

Number beyond limits = 60 Number violating runs = 94



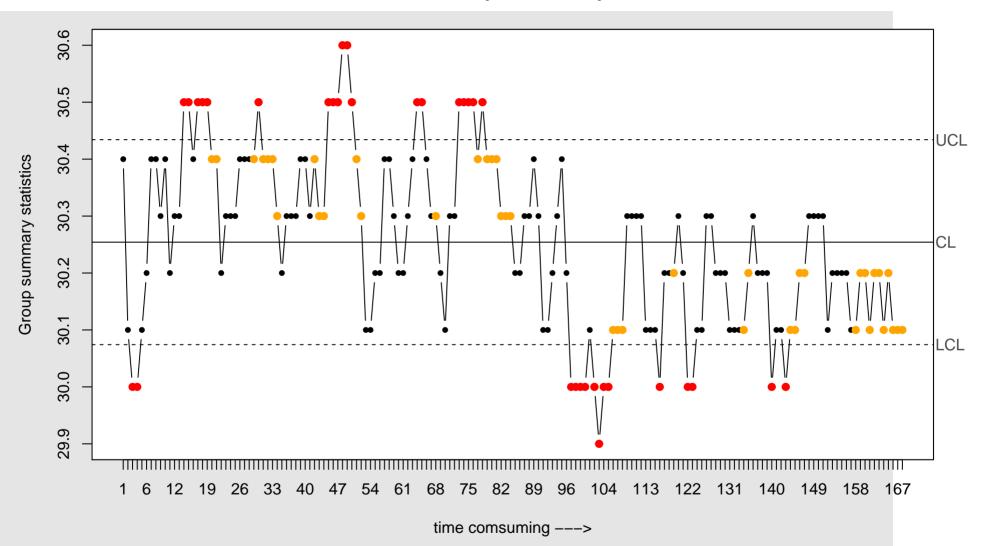
Number of groups = 168 Center = 30.27738 StdDev = 0.06264068

LCL = 30.08946 UCL = 30.4653 Number beyond limits = 38 Number violating runs = 72



Number of groups = 168 Center = 30.26369 StdDev = 0.06104812

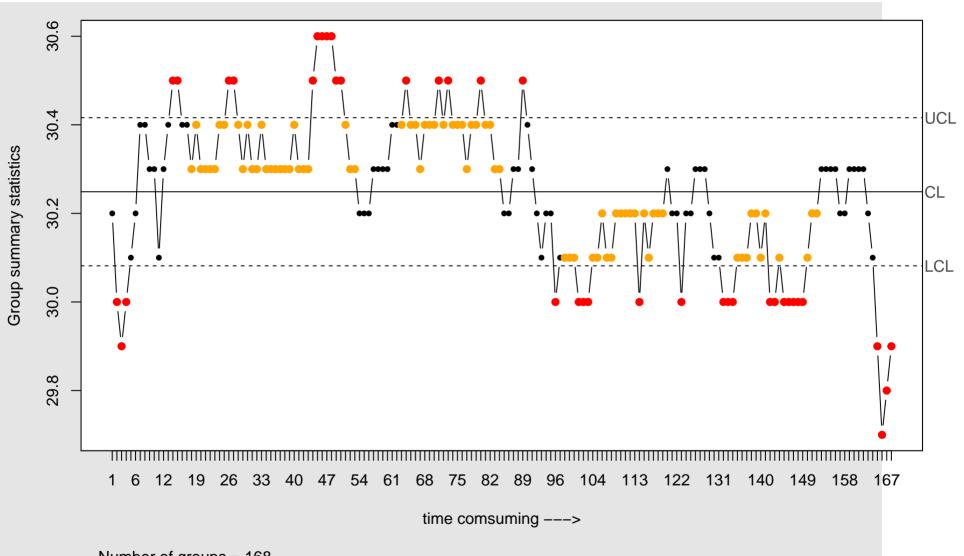
LCL = 30.08055 UCL = 30.44683 Number beyond limits = 37 Number violating runs = 82



Number of groups = 168 Center = 30.25417 StdDev = 0.05998641

LCL = 30.07421 UCL = 30.43413

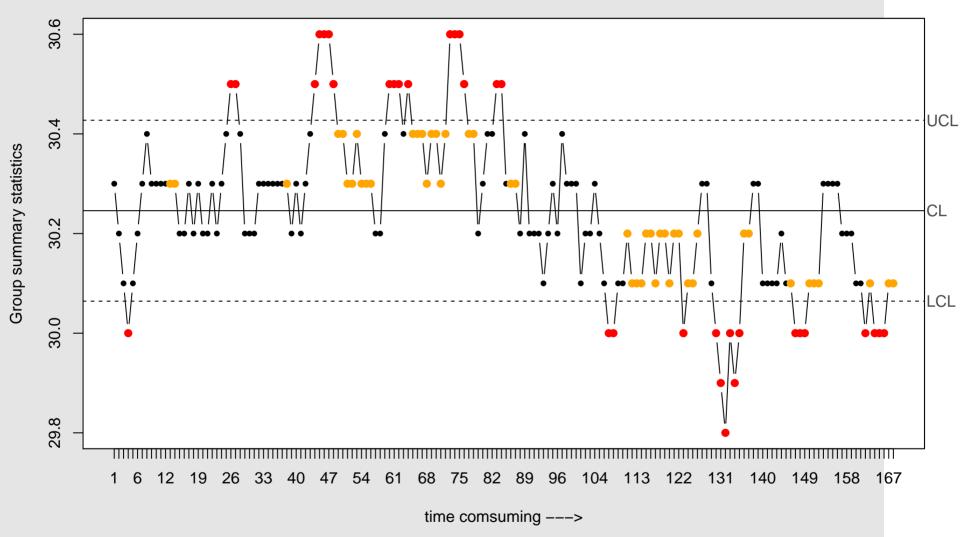
Number beyond limits = 34 Number violating runs = 56



Number of groups = 168 Center = 30.24881 StdDev = 0.05573958

LCL = 30.08159 UCL = 30.41603

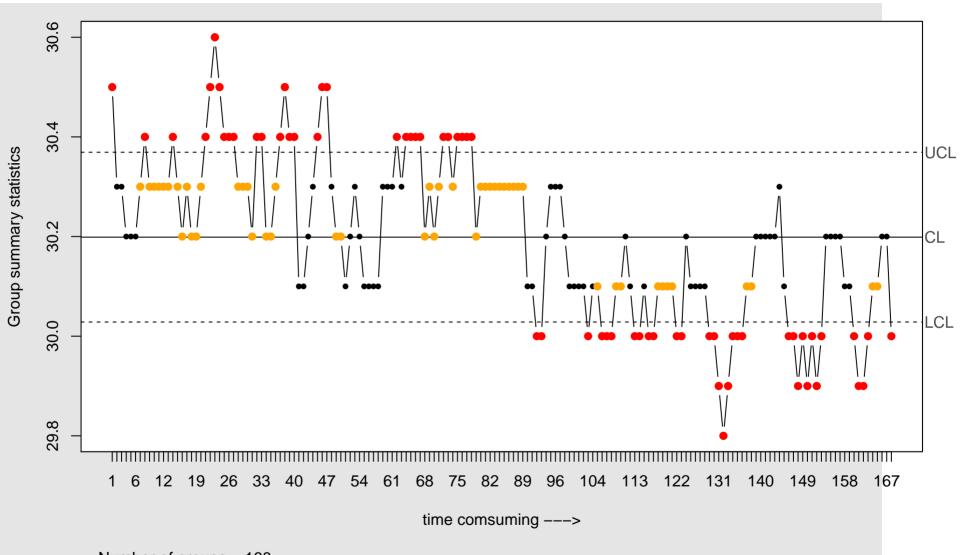
Number beyond limits = 39 Number violating runs = 98



Number of groups = 168 Center = 30.24583StdDev = 0.06051726

LCL = 30.06428UCL = 30.42739

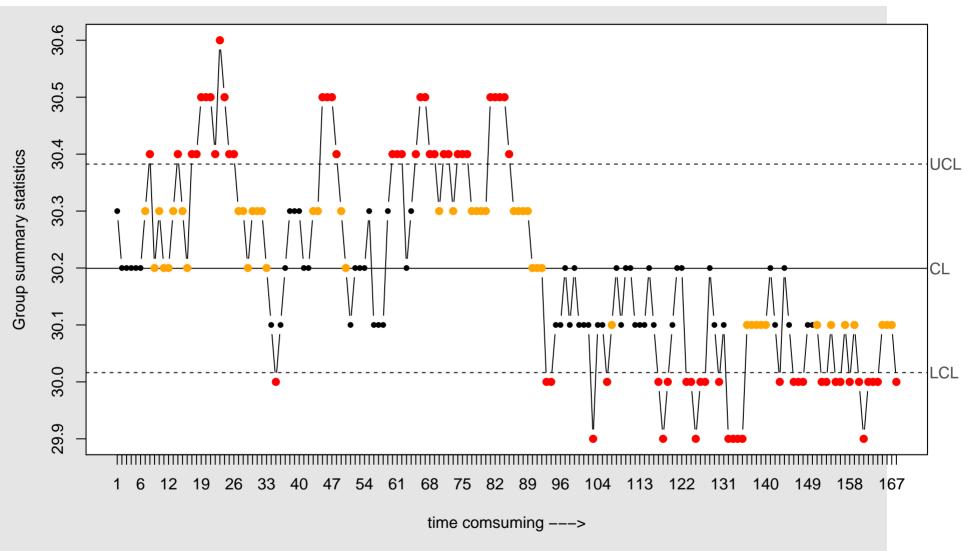
Number beyond limits = 34 Number violating runs = 60



Number of groups = 168 Center = 30.19881 StdDev = 0.05680129

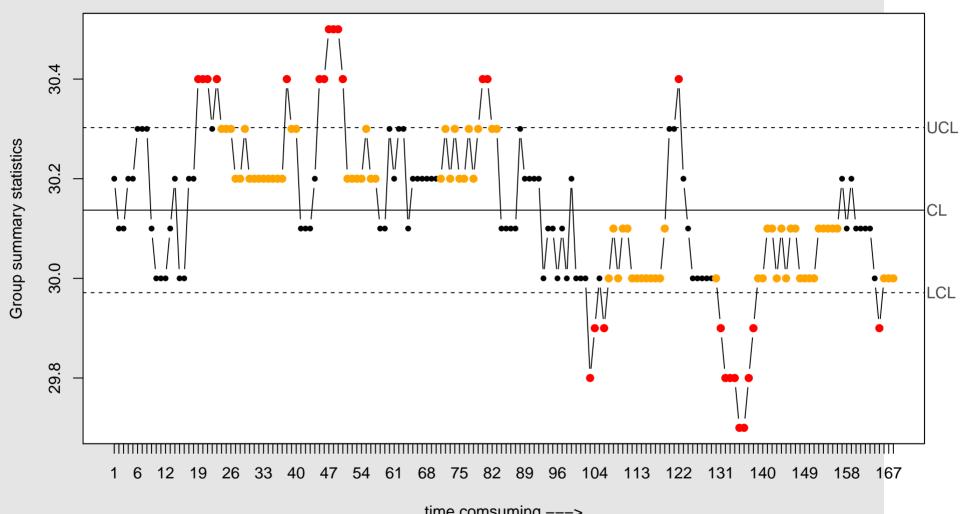
LCL = 30.02841 UCL = 30.36921

Number beyond limits = 63 Number violating runs = 86



Number of groups = 168 Center = 30.1994 StdDev = 0.06104812

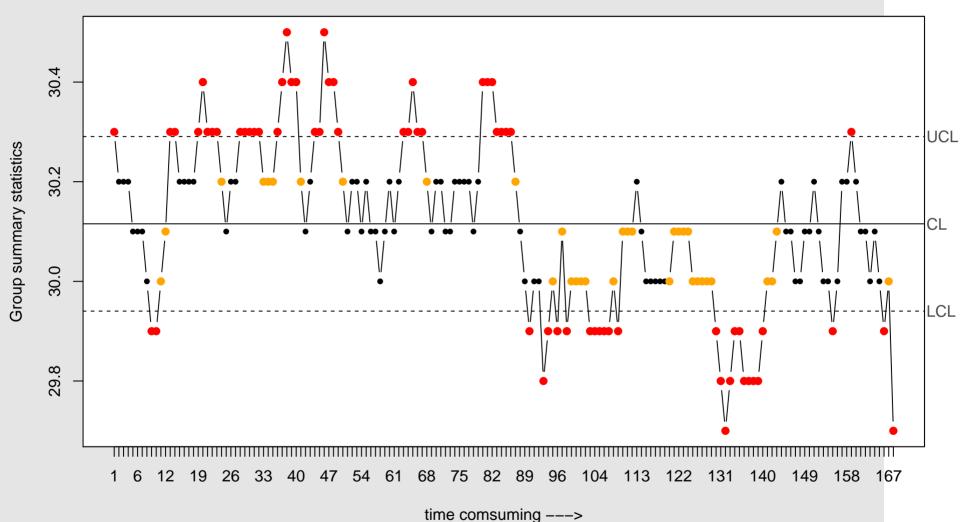
LCL = 30.01626 UCL = 30.38255 Number beyond limits = 67 Number violating runs = 89



time comsuming --->

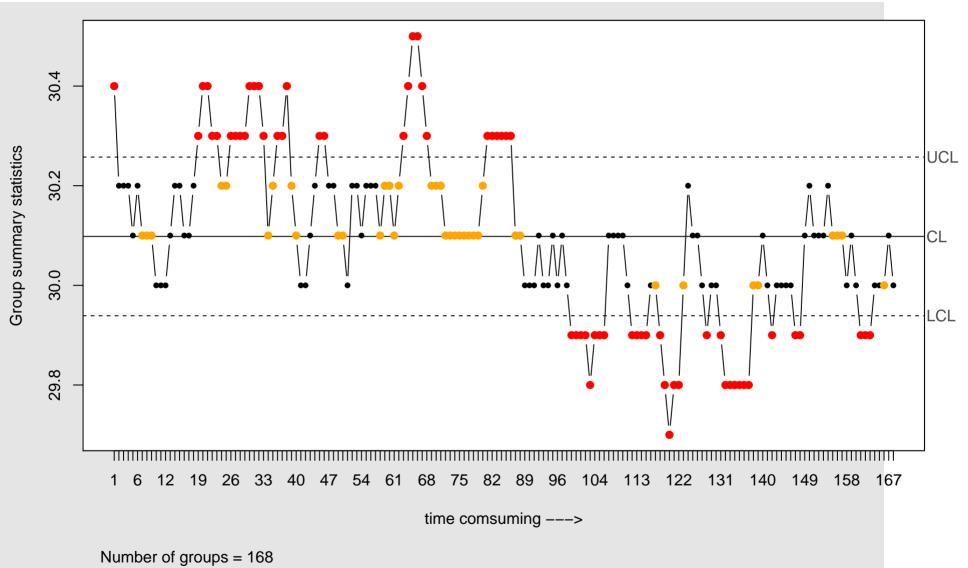
Number of groups = 168 Center = 30.1369StdDev = 0.05520873

LCL = 29.97128UCL = 30.30253 Number beyond limits = 26 Number violating runs = 83



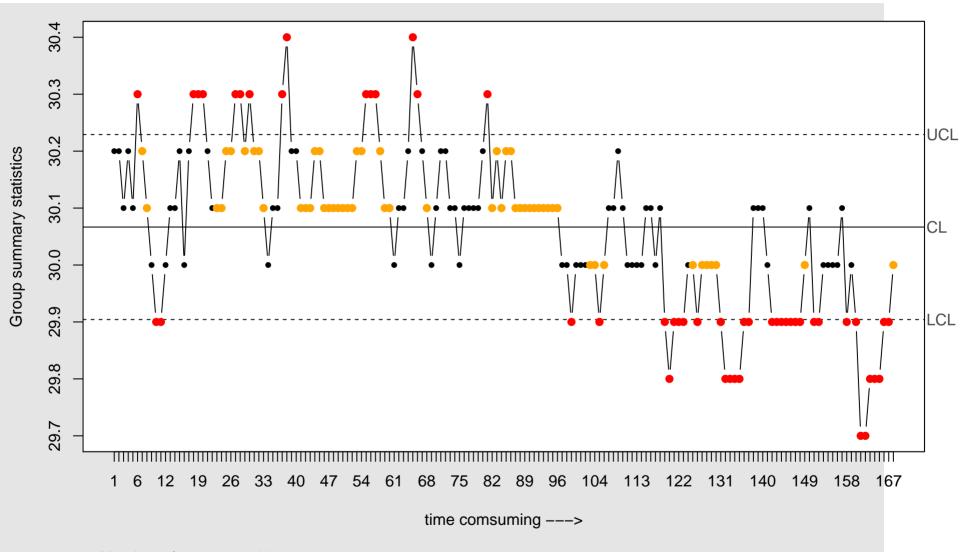
Number of groups = 168 Center = 30.11548StdDev = 0.05839385

LCL = 29.94029UCL = 30.29066 Number beyond limits = 64 Number violating runs = 69



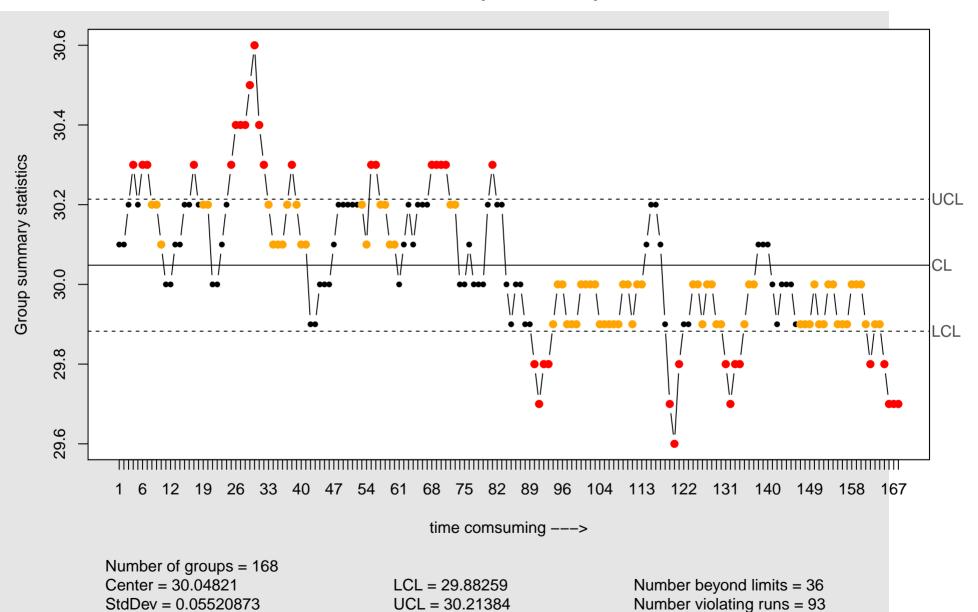
Number of groups = 168 Center = 30.09821 StdDev = 0.05308532

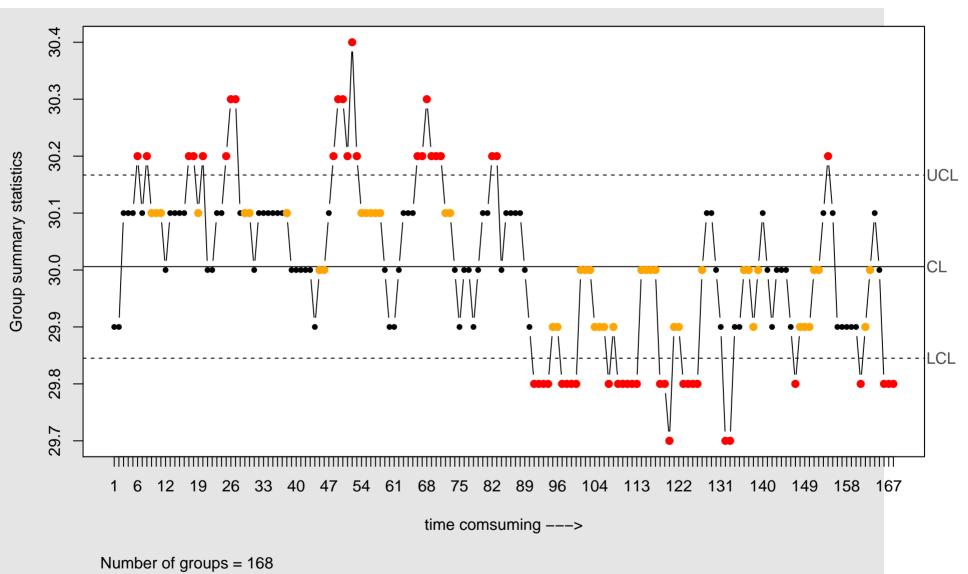
LCL = 29.93896 UCL = 30.25747 Number beyond limits = 62 Number violating runs = 81



Number of groups = 168 Center = 30.06667 StdDev = 0.05414703

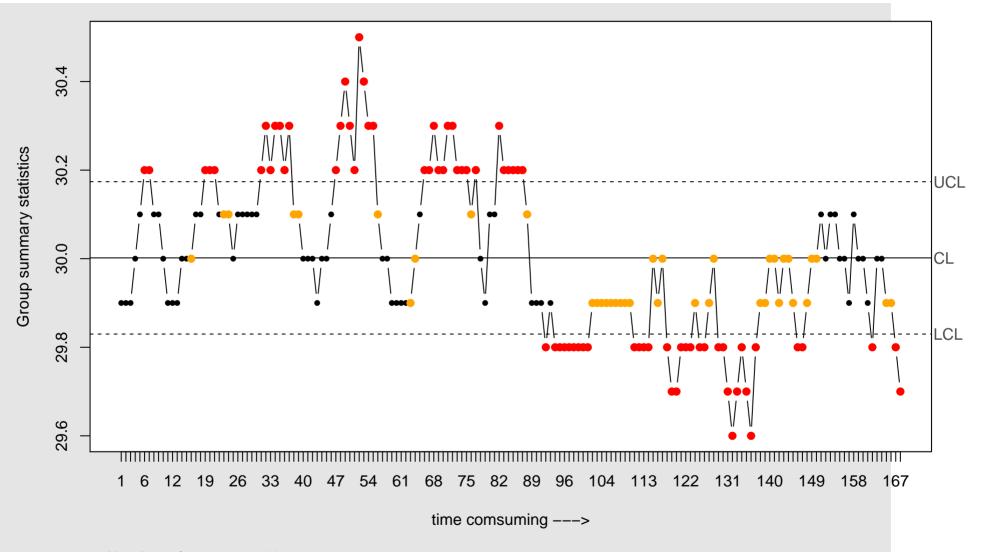
LCL = 29.90423 UCL = 30.22911 Number beyond limits = 50 Number violating runs = 74





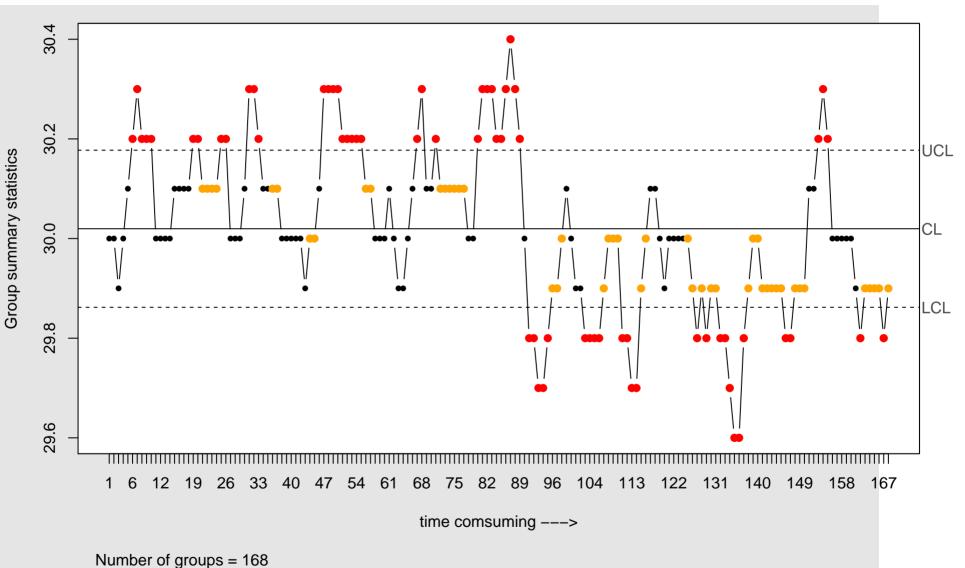
Number of groups = 168 Center = 30.00595 StdDev = 0.05361617

LCL = 29.8451 UCL = 30.1668 Number beyond limits = 51 Number violating runs = 66



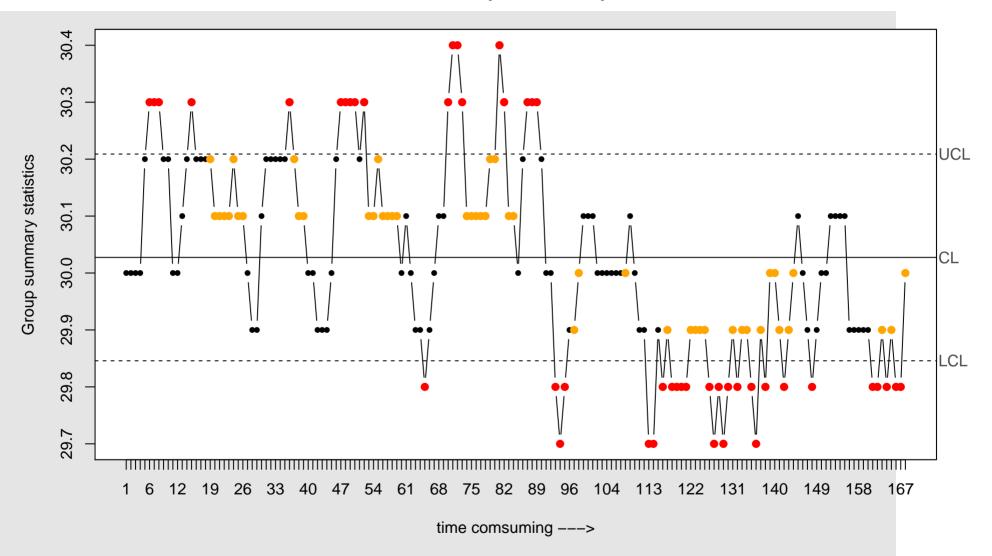
Number of groups = 168 Center = 30.00179 StdDev = 0.05733214

LCL = 29.82979 UCL = 30.17378 Number beyond limits = 73 Number violating runs = 88



Number of groups = 168 Center = 30.01964 StdDev = 0.05255447

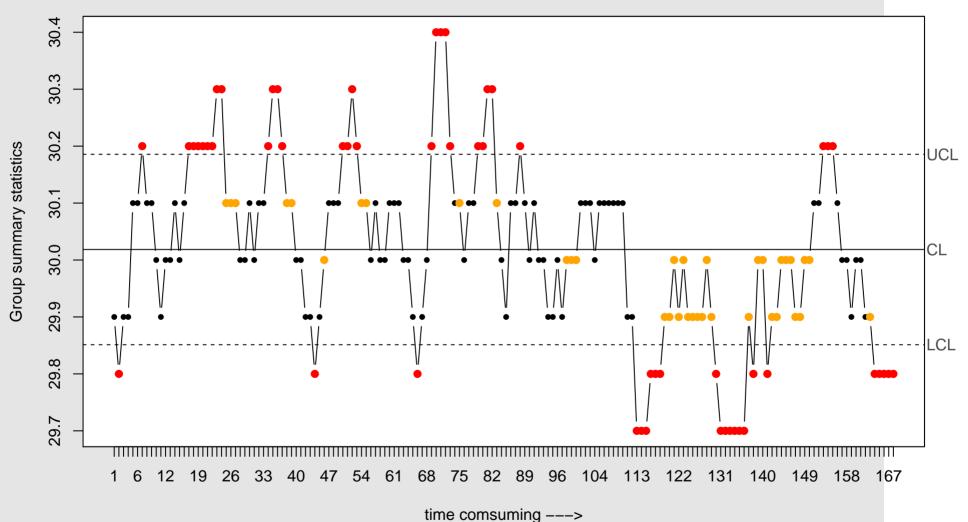
LCL = 29.86198 UCL = 30.17731 Number beyond limits = 62 Number violating runs = 73



Number of groups = 168 Center = 30.02738 StdDev = 0.06051726

LCL = 29.84583 UCL = 30.20893

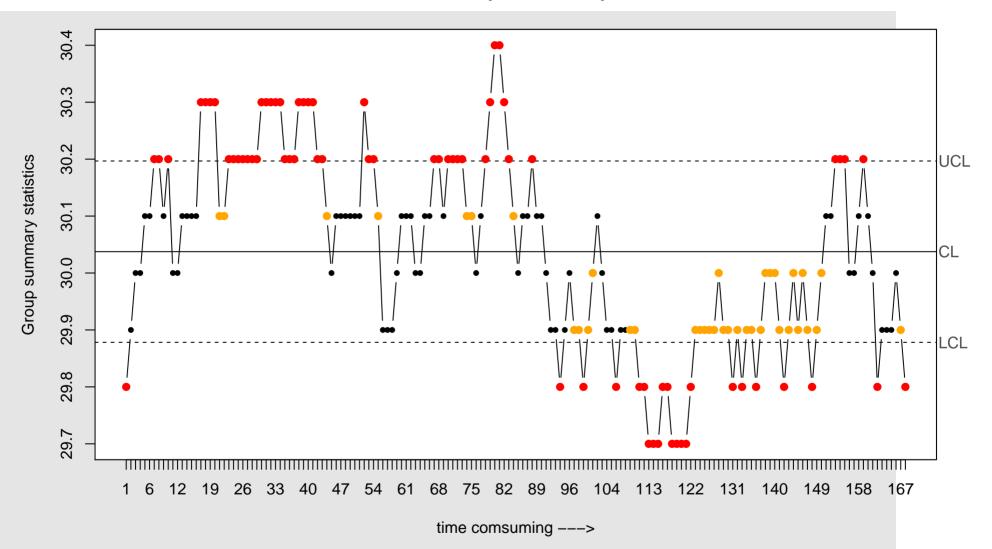
Number beyond limits = 46 Number violating runs = 70



Number of groups = 168 Center = 30.01845StdDev = 0.05573958

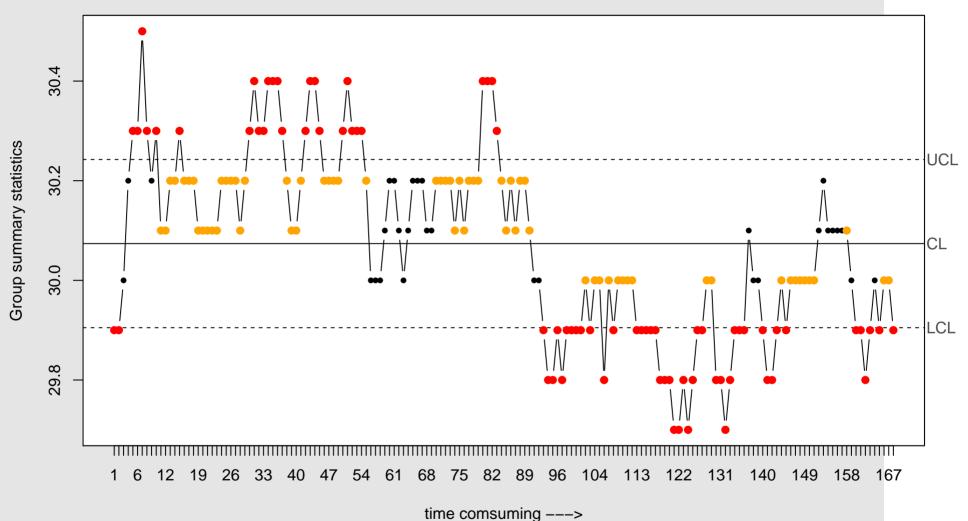
LCL = 29.85123UCL = 30.18567

Number beyond limits = 53 Number violating runs = 57



Number of groups = 168 Center = 30.0375 StdDev = 0.05308532

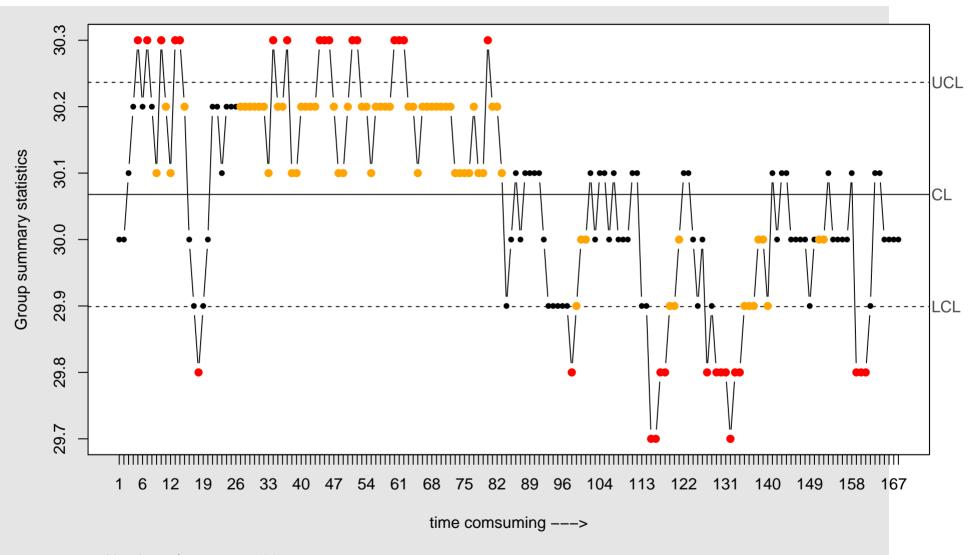
LCL = 29.87824 UCL = 30.19676 Number beyond limits = 71 Number violating runs = 86



Number of groups = 168 Center = 30.07381StdDev = 0.05627044

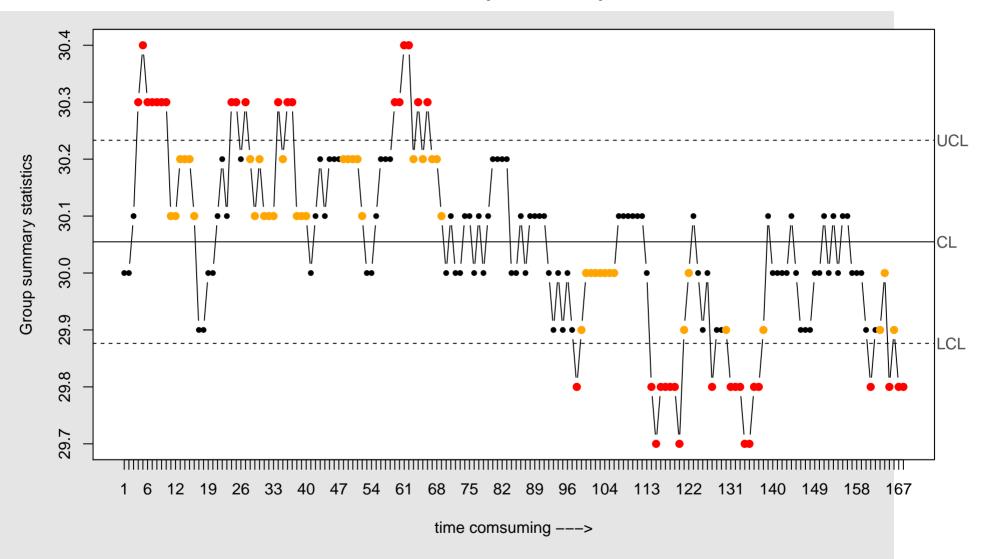
LCL = 29.905UCL = 30.24262

Number beyond limits = 74 Number violating runs = 120



Number of groups = 168 Center = 30.06786 StdDev = 0.05627044

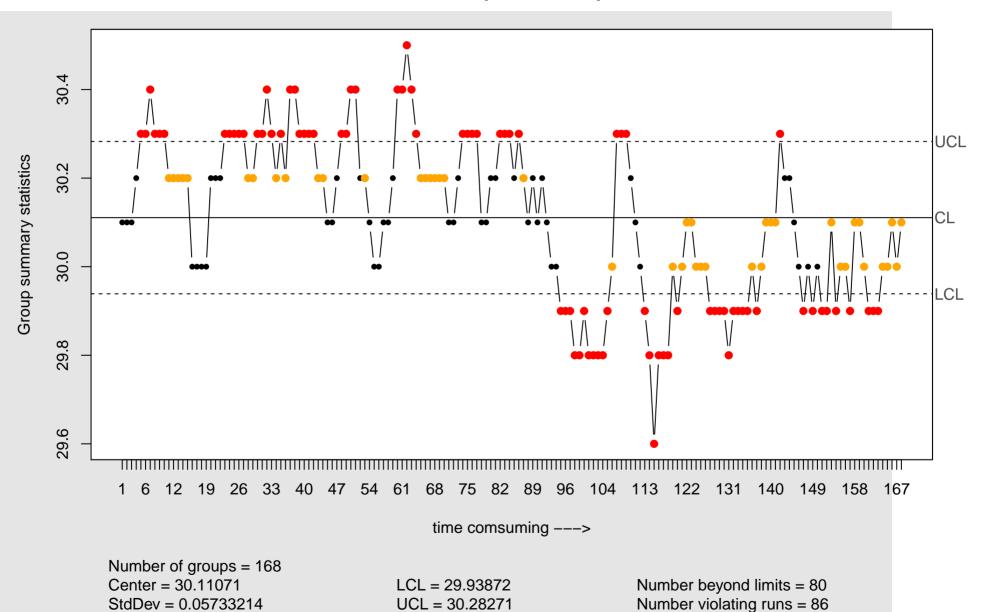
LCL = 29.89905 UCL = 30.23667 Number beyond limits = 32 Number violating runs = 84

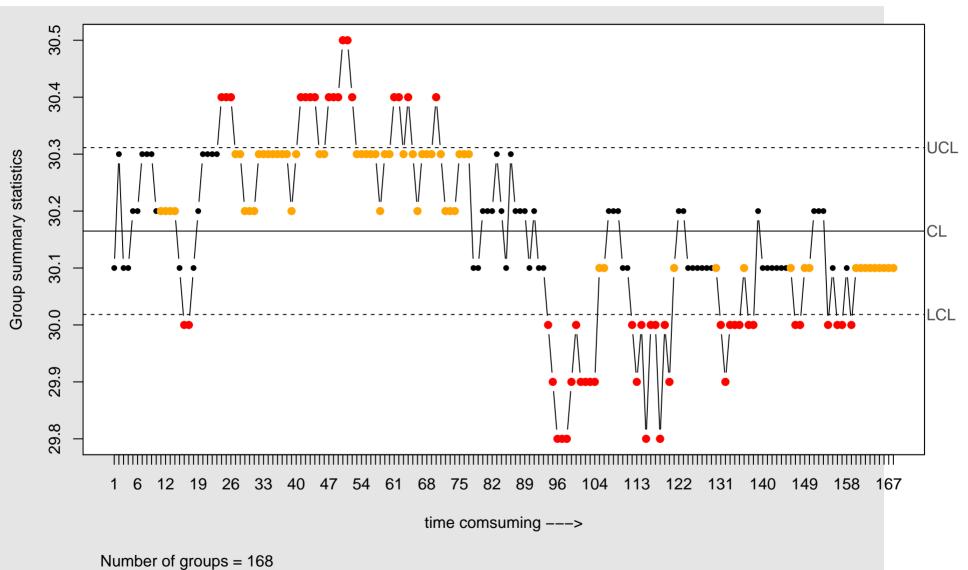


Number of groups = 168 Center = 30.05476 StdDev = 0.05945556

LCL = 29.8764 UCL = 30.23313

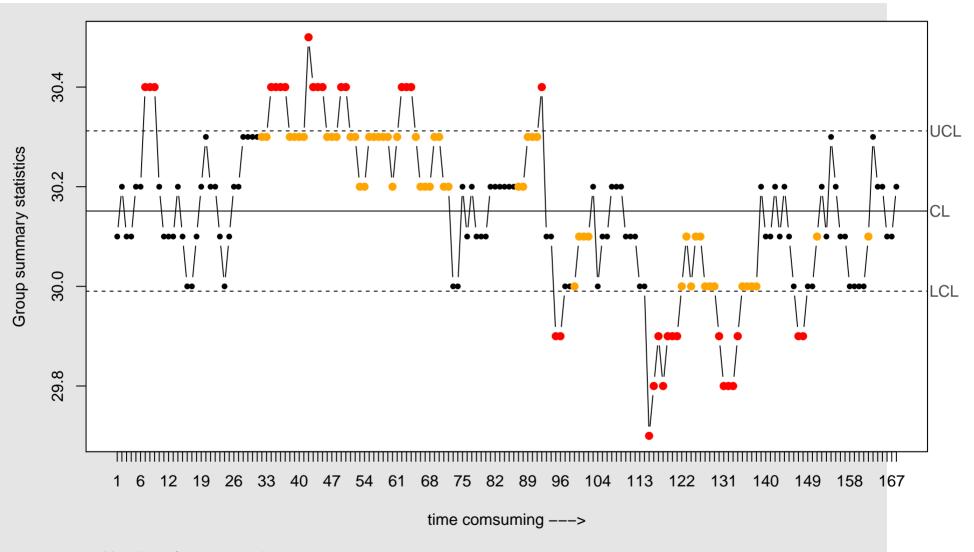
Number beyond limits = 39 Number violating runs = 64





Number of groups = 168 Center = 30.16488 StdDev = 0.04883849

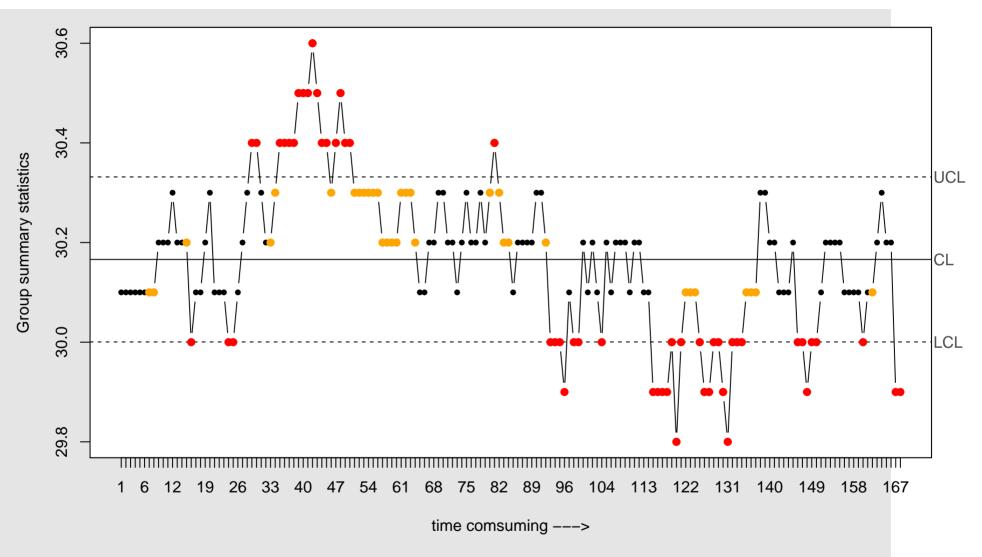
LCL = 30.01837 UCL = 30.3114 Number beyond limits = 52 Number violating runs = 95



Number of groups = 168 Center = 30.15119 StdDev = 0.05361617

LCL = 29.99034 UCL = 30.31204

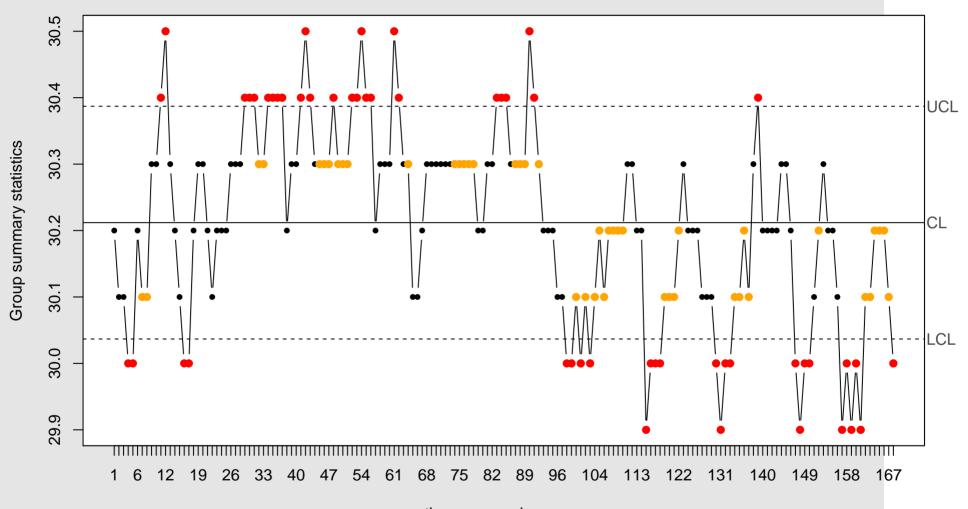
Number beyond limits = 33 Number violating runs = 76



Number of groups = 168 Center = 30.16607 StdDev = 0.05520873

LCL = 30.00045 UCL = 30.3317

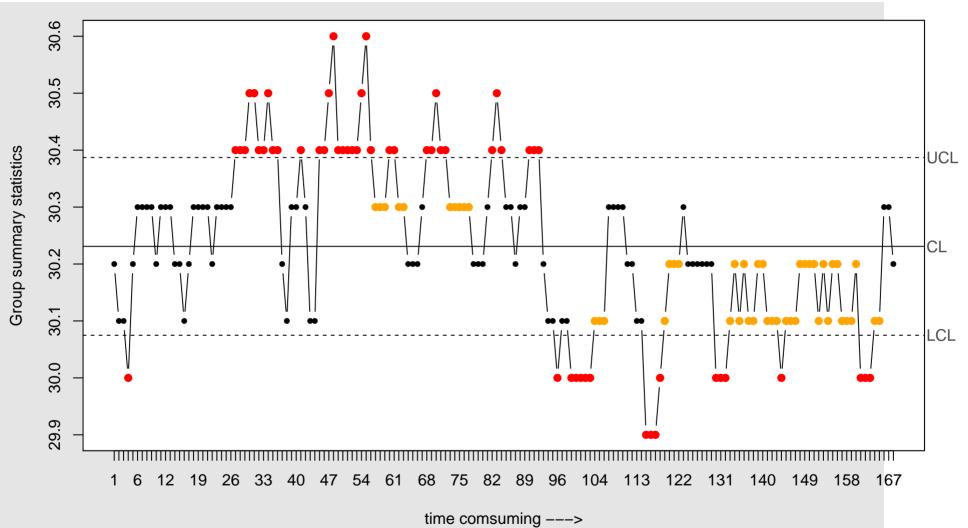
Number beyond limits = 53 Number violating runs = 62



time comsuming --->

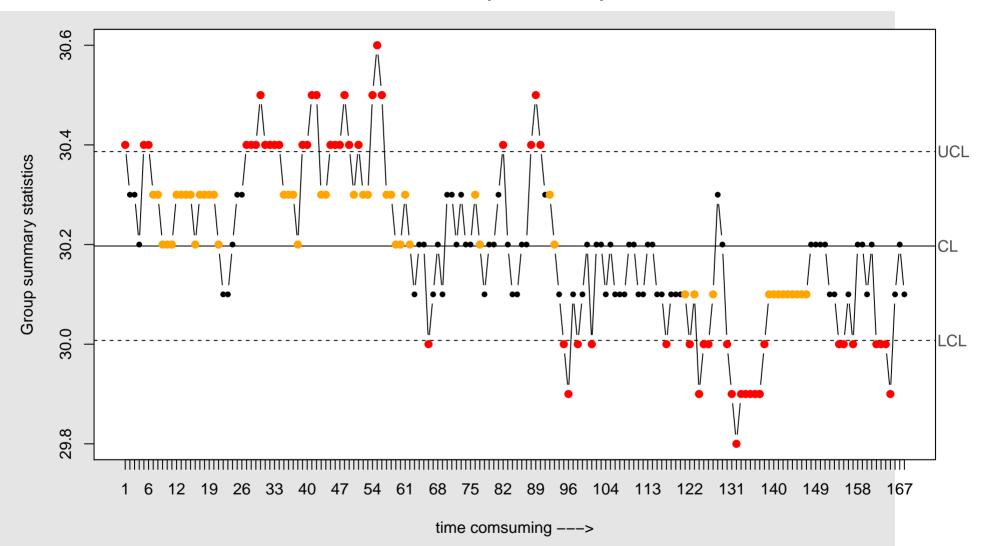
Number of groups = 168 Center = 30.2119 StdDev = 0.05839385

LCL = 30.03672 UCL = 30.38709 Number beyond limits = 52 Number violating runs = 66



Number of groups = 168 Center = 30.23095StdDev = 0.05202361

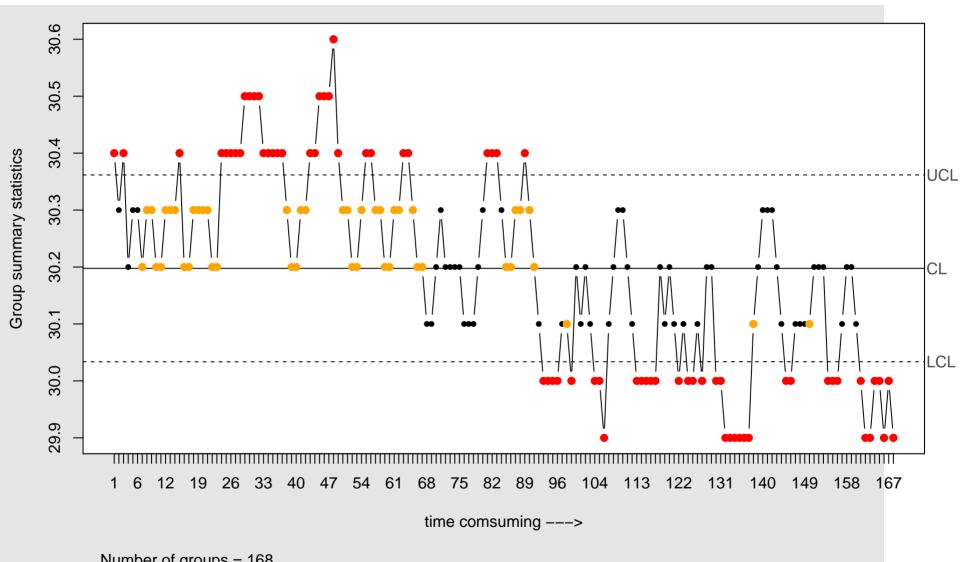
LCL = 30.07488UCL = 30.38702 Number beyond limits = 54 Number violating runs = 76



Number of groups = 168 Center = 30.19702

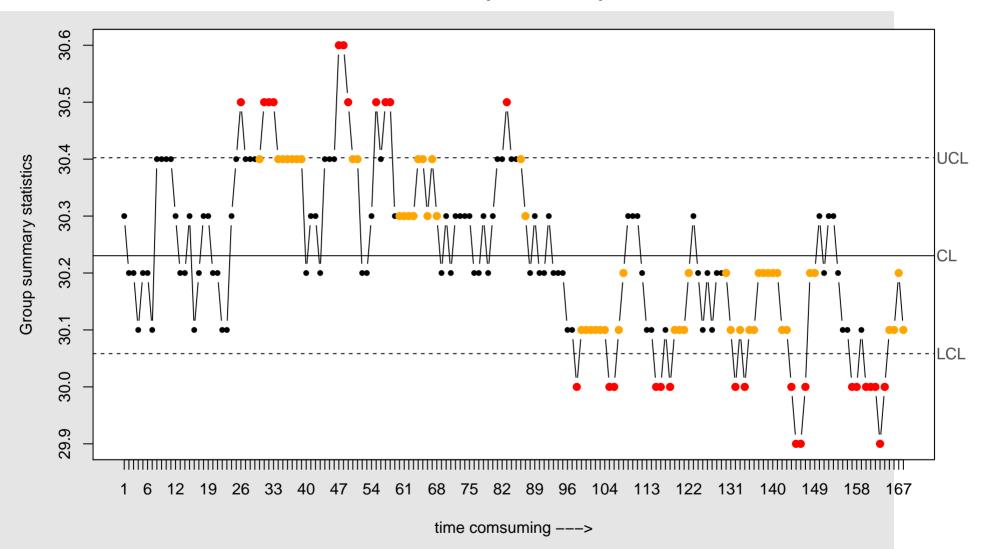
StdDev = 0.06317153

LCL = 30.00751 UCL = 30.38654 Number beyond limits = 54 Number violating runs = 71



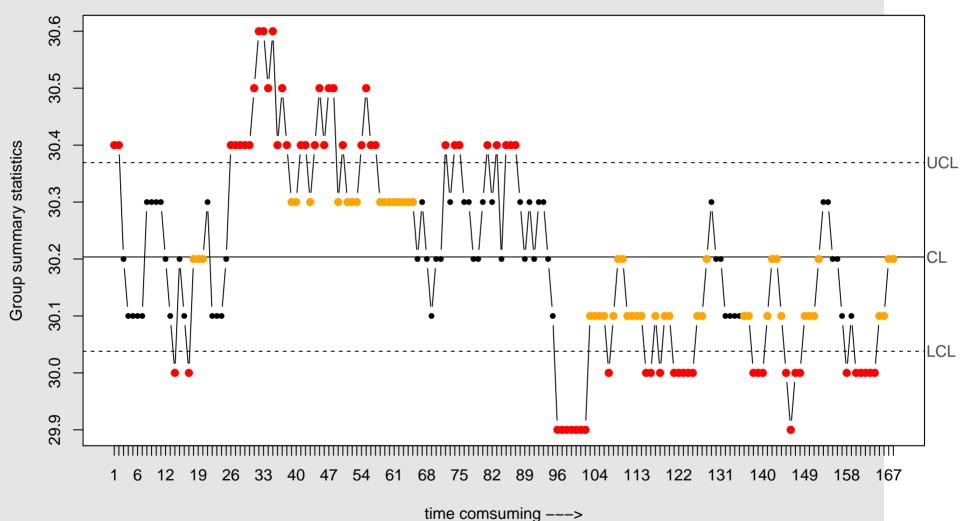
Number of groups = 168 Center = 30.19762 StdDev = 0.05467788

LCL = 30.03359 UCL = 30.36165 Number beyond limits = 70 Number violating runs = 78



Number of groups = 168 Center = 30.23036 StdDev = 0.05733214

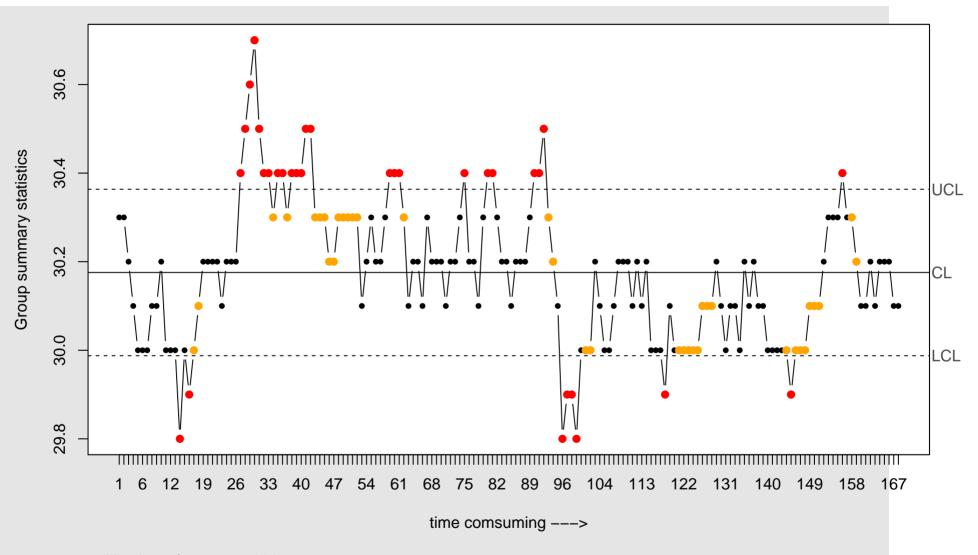
LCL = 30.05836 UCL = 30.40235 Number beyond limits = 30 Number violating runs = 67



Number of groups = 168 Center = 30.20357StdDev = 0.05520873

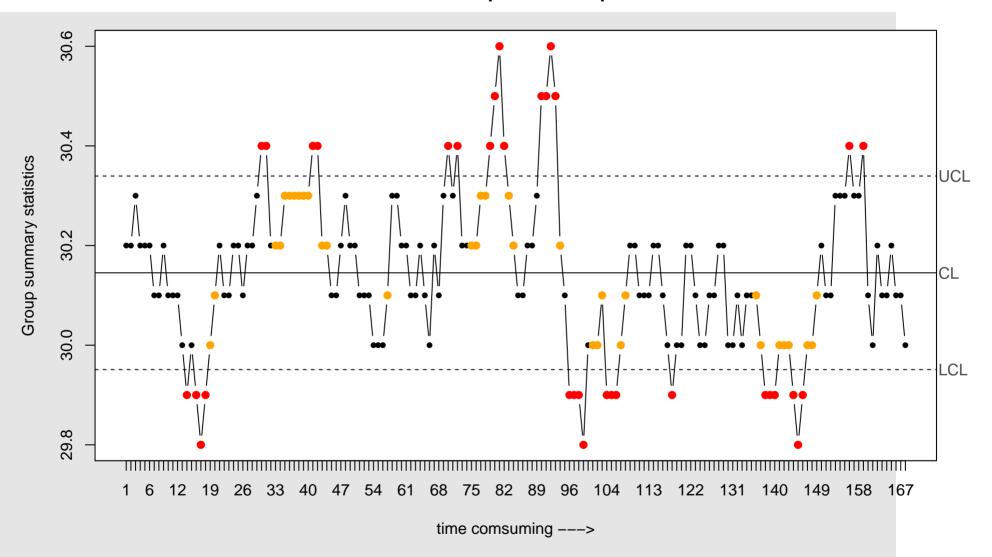
LCL = 30.03795UCL = 30.3692

Number beyond limits = 66 Number violating runs = 91



Number of groups = 168 Center = 30.1756 StdDev = 0.06264068

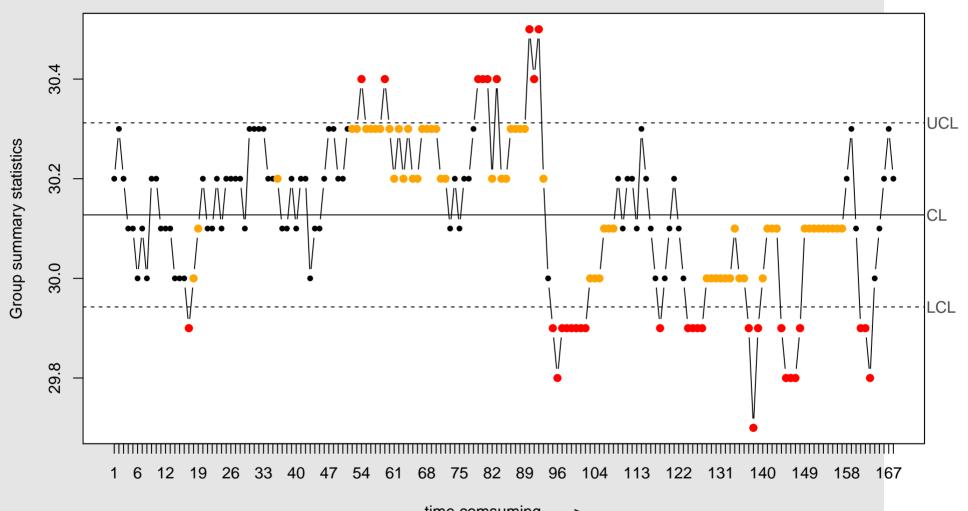
LCL = 29.98767 UCL = 30.36352 Number beyond limits = 32 Number violating runs = 51



Number of groups = 168 Center = 30.14524 StdDev = 0.06476409

LCL = 29.95095 UCL = 30.33953

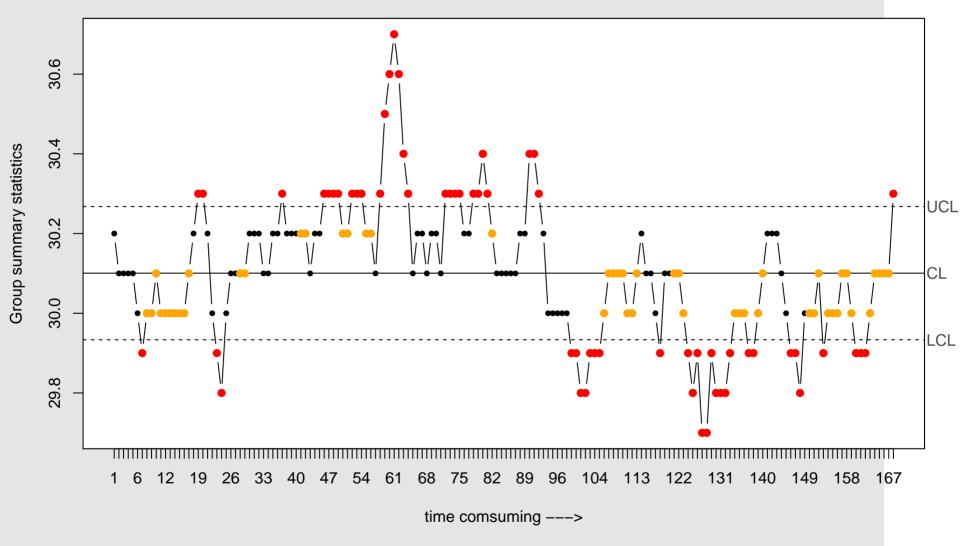
Number beyond limits = 34 Number violating runs = 53



time comsuming --->

Number of groups = 168 Center = 30.12738 StdDev = 0.06157897

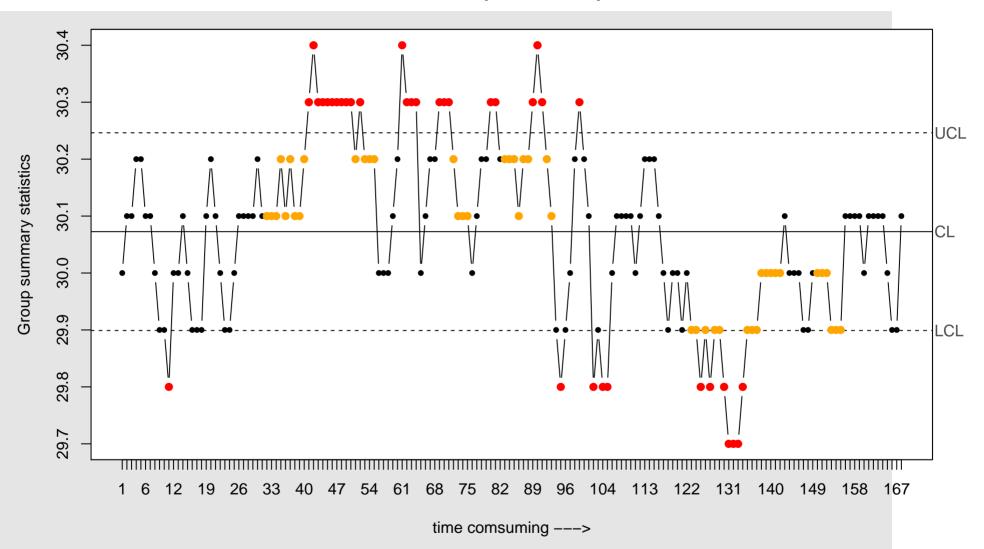
LCL = 29.94264 UCL = 30.31212 Number beyond limits = 34 Number violating runs = 76



Number of groups = 168 Center = 30.1006 StdDev = 0.05573958

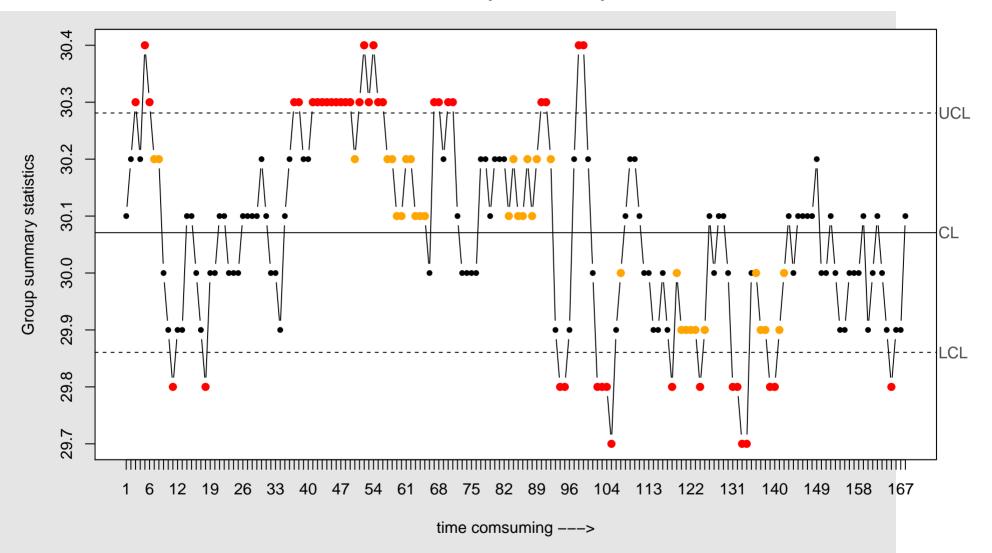
LCL = 29.93338 UCL = 30.26781

Number beyond limits = 59 Number violating runs = 79



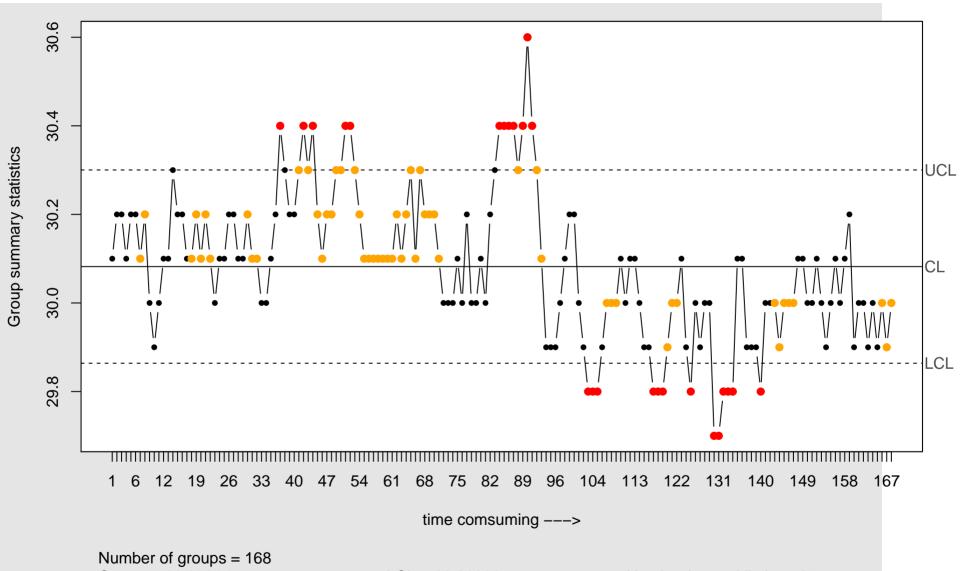
Number of groups = 168 Center = 30.07262 StdDev = 0.057863

LCL = 29.89903 UCL = 30.24621 Number beyond limits = 36 Number violating runs = 65



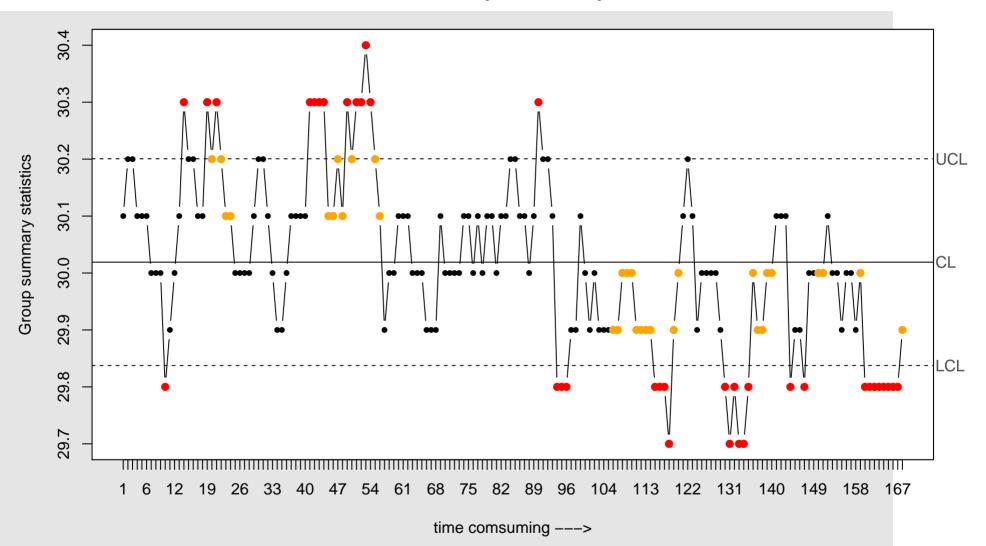
Number of groups = 168 Center = 30.07083 StdDev = 0.07007262

LCL = 29.86062 UCL = 30.28105 Number beyond limits = 45 Number violating runs = 53



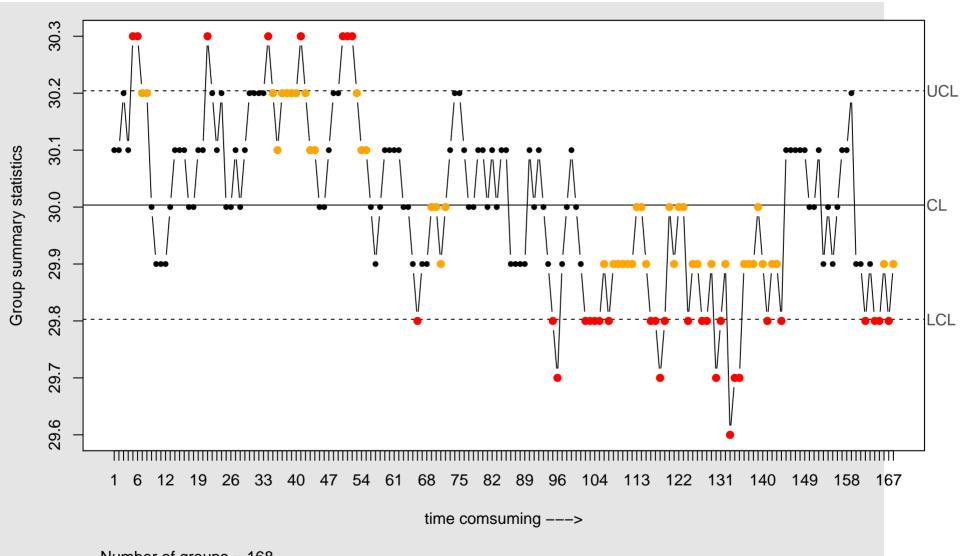
Number of groups = 168 Center = 30.08214 StdDev = 0.07272689

LCL = 29.86396 UCL = 30.30032 Number beyond limits = 25 Number violating runs = 66



Number of groups = 168 Center = 30.01905 StdDev = 0.06051726

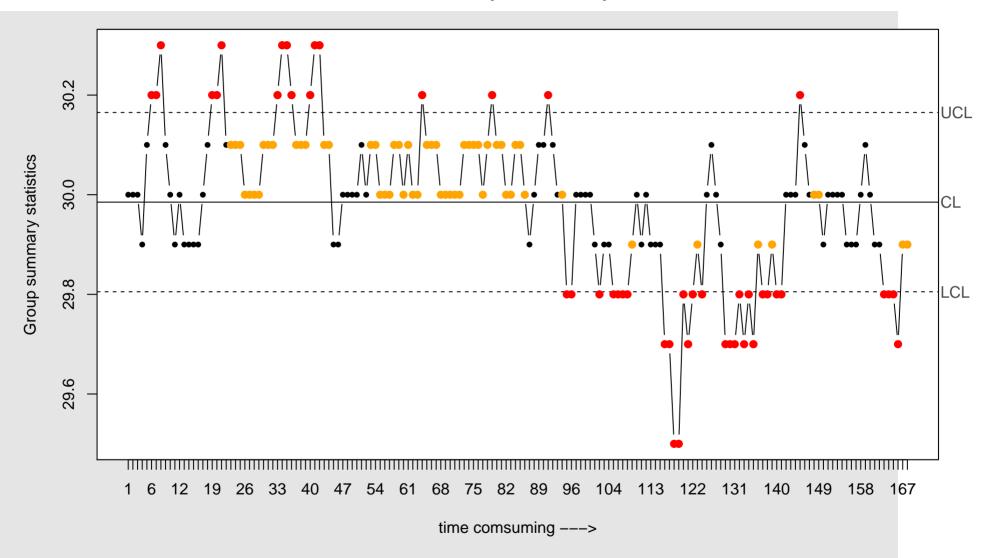
LCL = 29.8375 UCL = 30.2006 Number beyond limits = 37 Number violating runs = 58



Number of groups = 168 Center = 30.00357 StdDev = 0.0668875

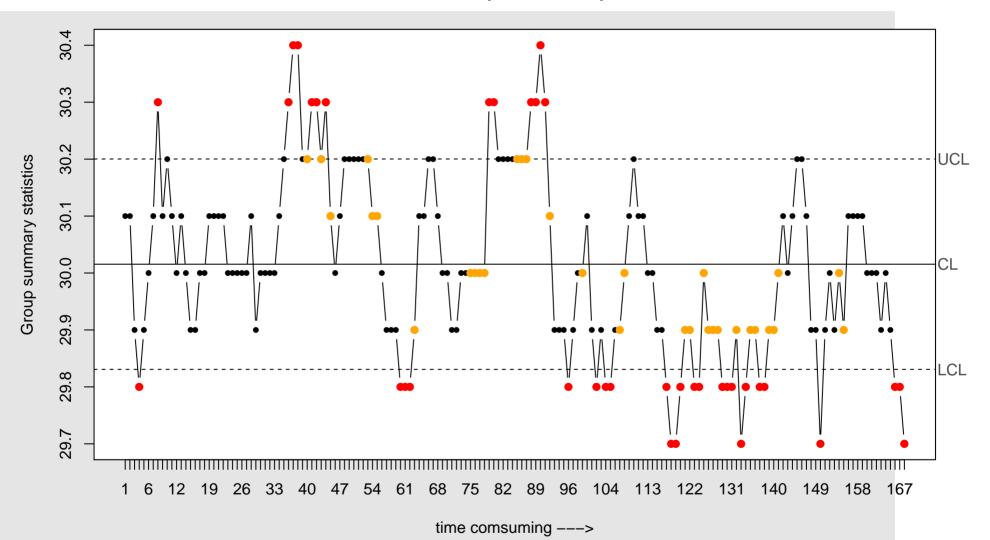
LCL = 29.80291 UCL = 30.20423

Number beyond limits = 34 Number violating runs = 61



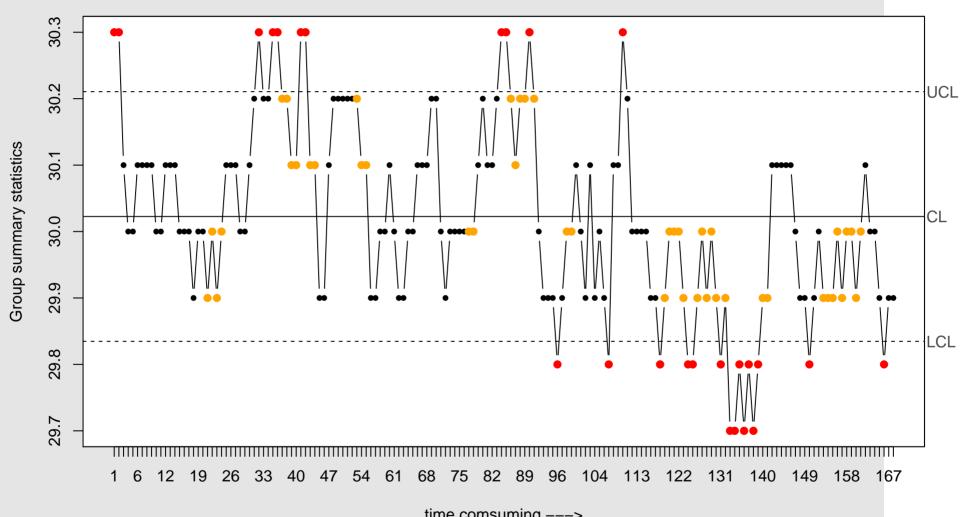
Number of groups = 168 Center = 29.98512 StdDev = 0.05998641

LCL = 29.80516 UCL = 30.16508 Number beyond limits = 47 Number violating runs = 78



Number of groups = 168 Center = 30.01548 StdDev = 0.06157897

LCL = 29.83074 UCL = 30.20021 Number beyond limits = 38 Number violating runs = 54

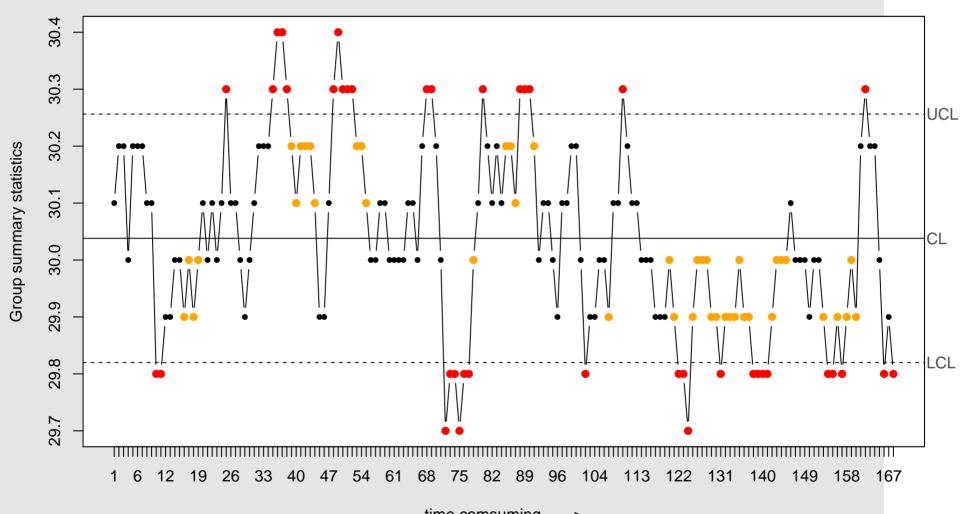


time comsuming --->

Number of groups = 168 Center = 30.02262StdDev = 0.06264068

LCL = 29.8347UCL = 30.21054

Number beyond limits = 26 Number violating runs = 60

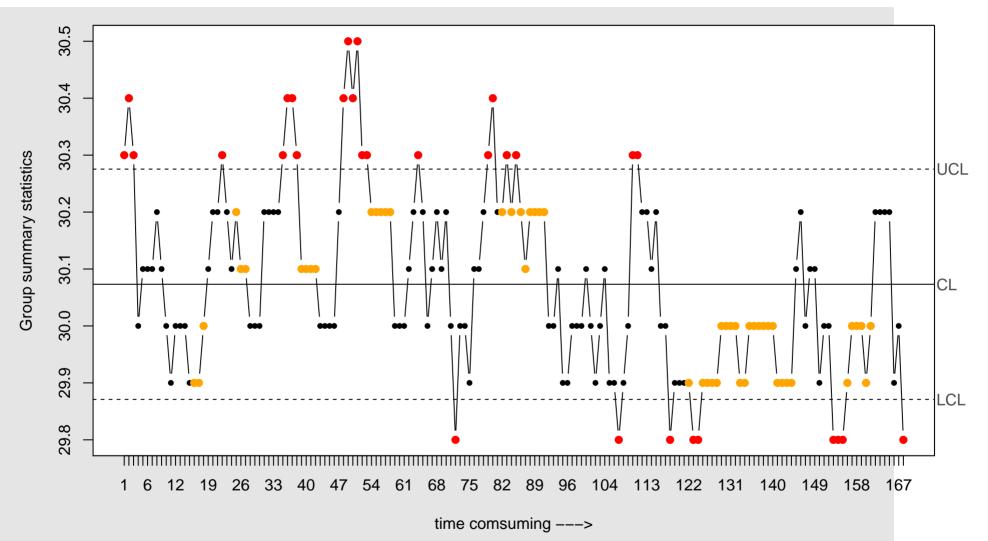


time comsuming --->

Number of groups = 168 Center = 30.0381 StdDev = 0.07272689

LCL = 29.81991 UCL = 30.25628

Number beyond limits = 40 Number violating runs = 59



Number of groups = 168

Center = 30.07321

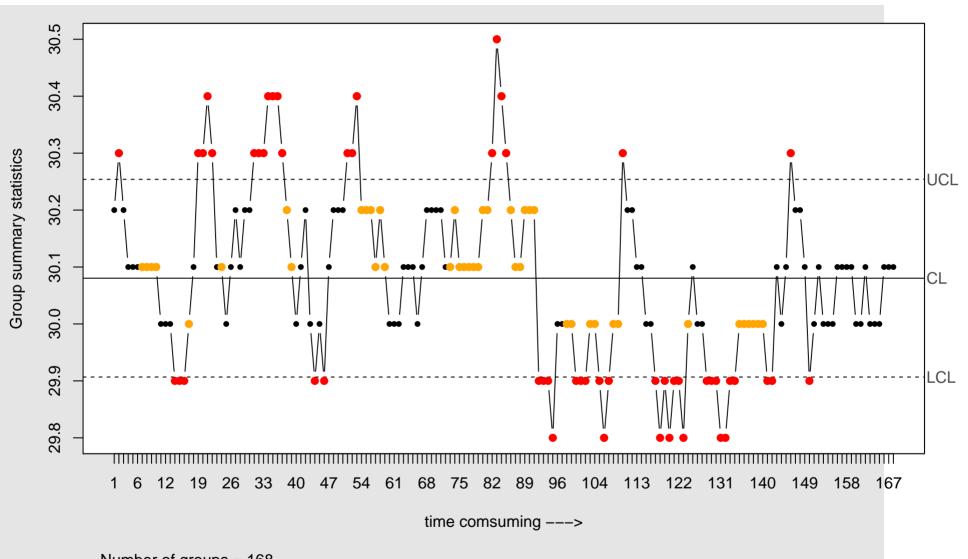
StdDev = 0.06741835

LCL = 29.87096

UCL = 30.27547

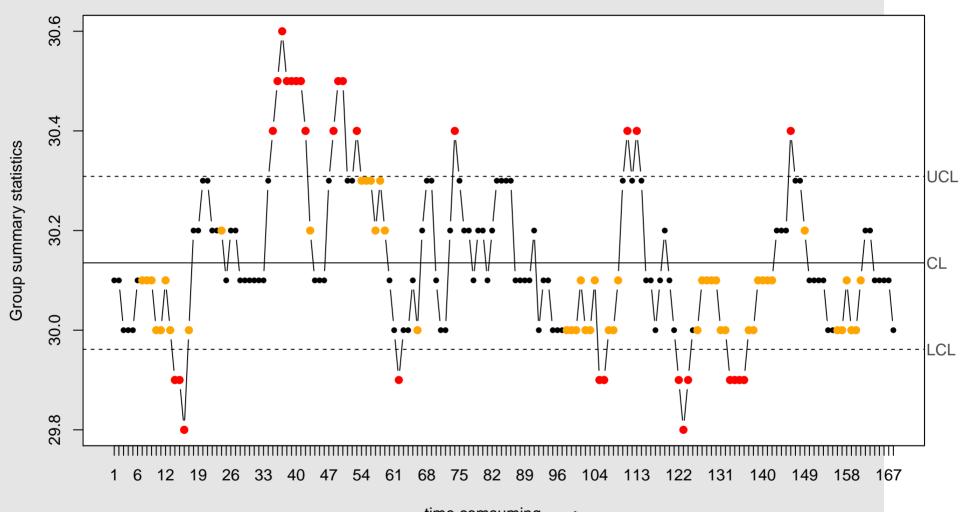
Number beyond limits = 30

Number violating runs = 57



Number of groups = 168 Center = 30.08036 StdDev = 0.057863

LCL = 29.90677 UCL = 30.25395 Number beyond limits = 53 Number violating runs = 67

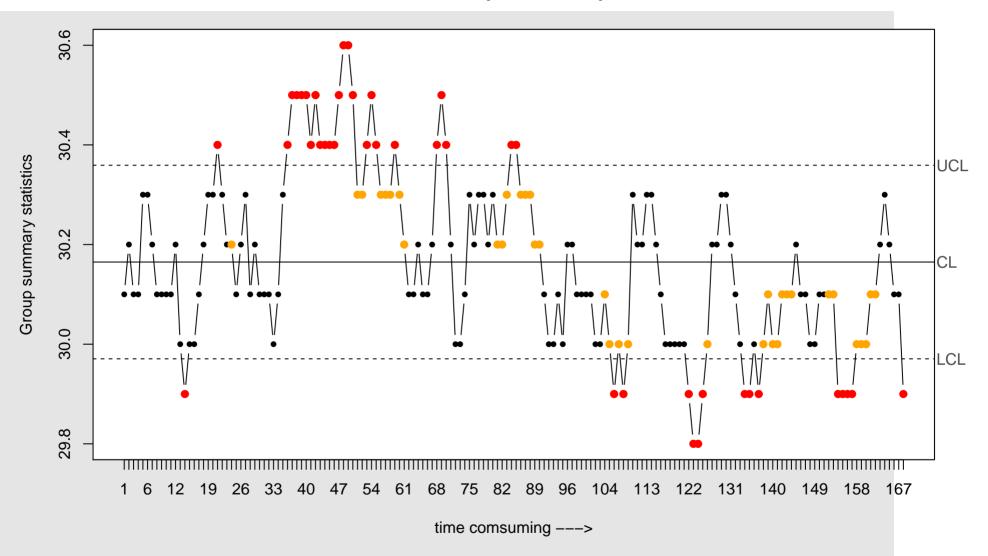


time comsuming --->

Number of groups = 168 Center = 30.13512 StdDev = 0.057863

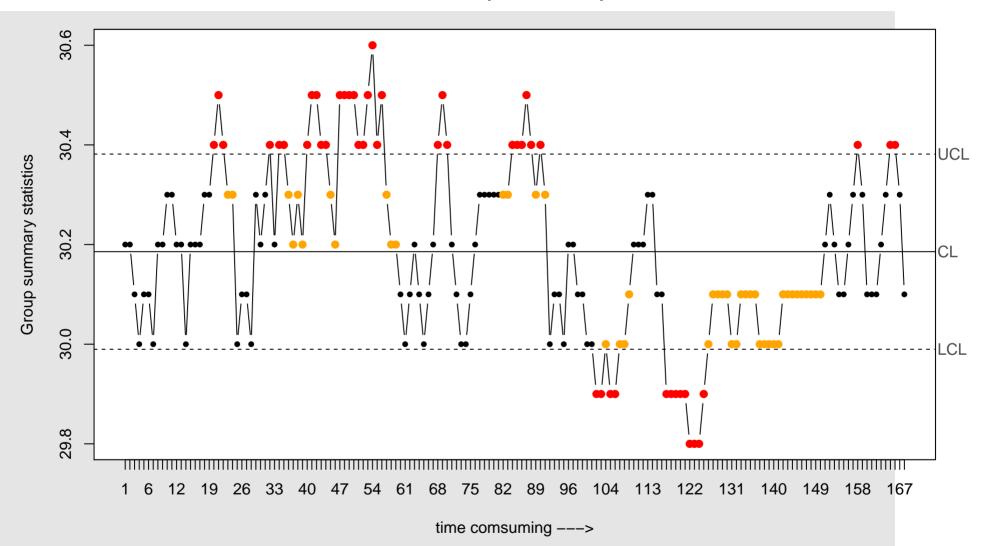
LCL = 29.96153 UCL = 30.30871

Number beyond limits = 29 Number violating runs = 60



Number of groups = 168 Center = 30.16488 StdDev = 0.06476409

LCL = 29.97059 UCL = 30.35917 Number beyond limits = 40 Number violating runs = 61

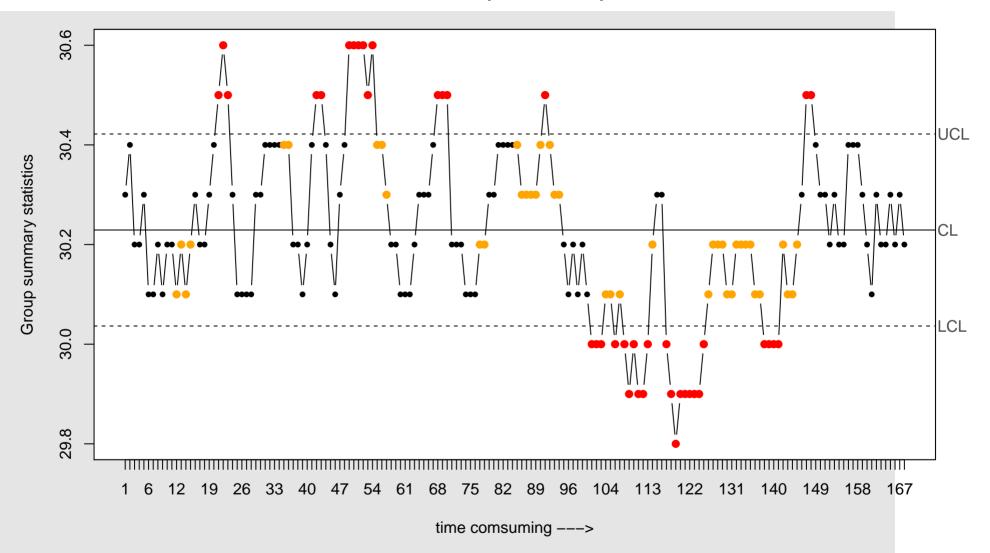


Number of groups = 168 Center = 30.18571

LCL = 29.98983StdDev = 0.06529494UCL = 30.3816

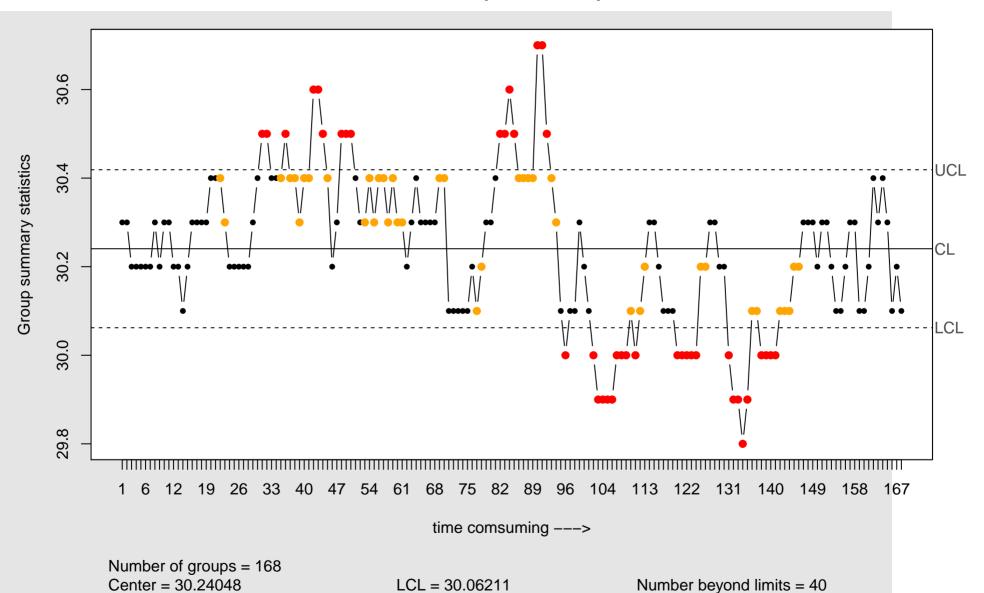
Number beyond limits = 46

Number violating runs = 75



Number of groups = 168 Center = 30.22917 StdDev = 0.06423324

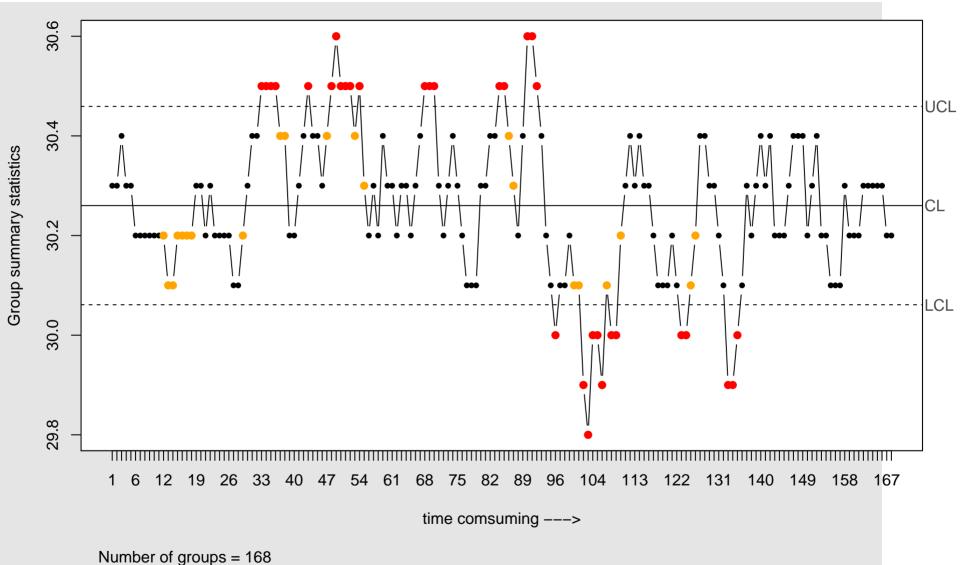
LCL = 30.03647 UCL = 30.42187 Number beyond limits = 40 Number violating runs = 61



UCL = 30.41884

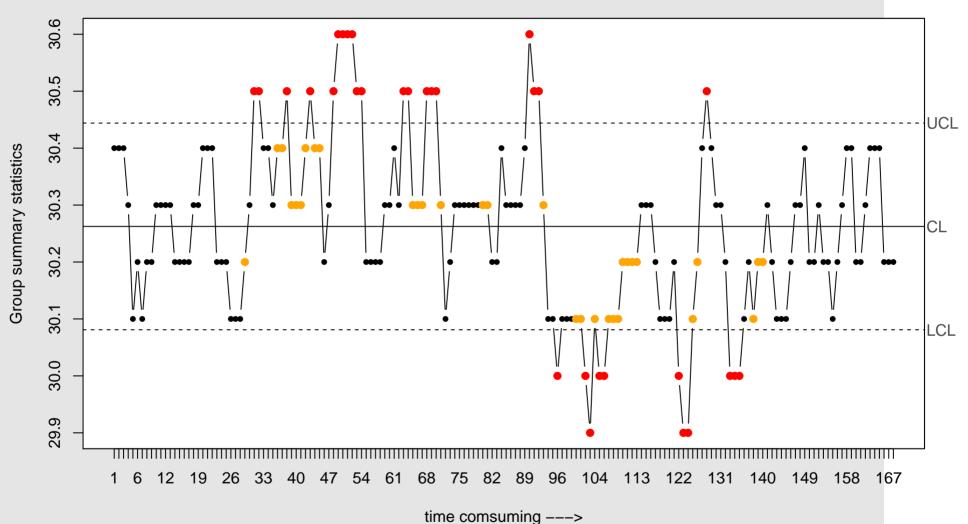
Number violating runs = 61

StdDev = 0.05945556



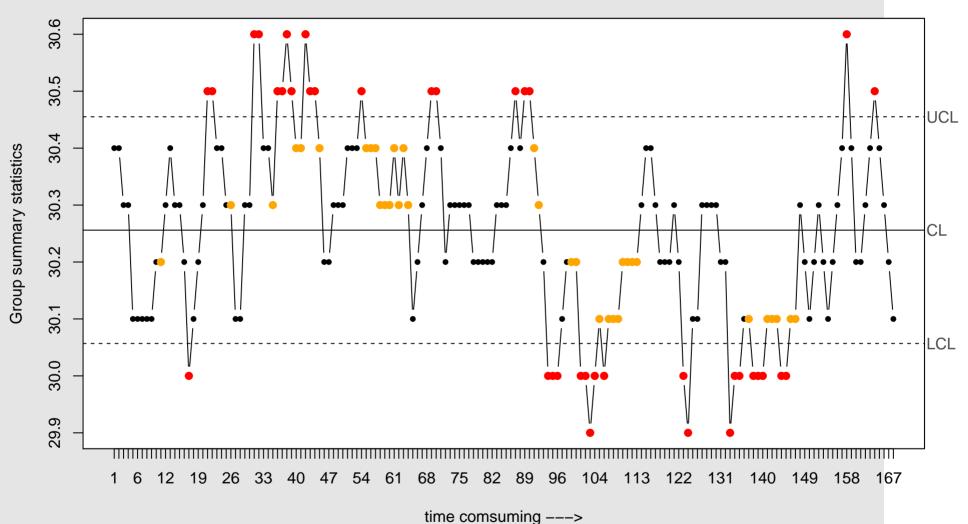
Number of groups = 168 Center = 30.26012 StdDev = 0.06635665

LCL = 30.06105 UCL = 30.45919 Number beyond limits = 32 Number violating runs = 37



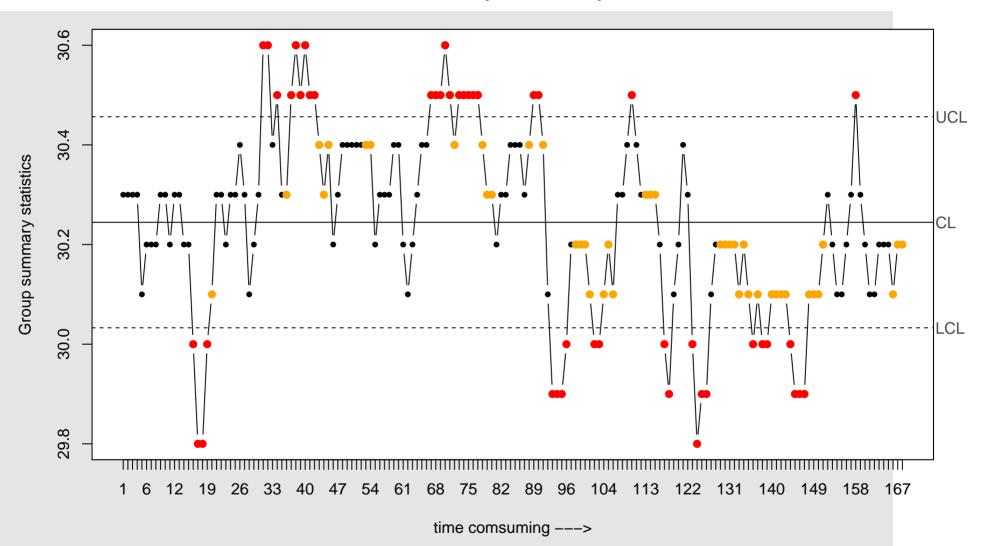
Number of groups = 168 Center = 30.2625StdDev = 0.06051726

LCL = 30.08095UCL = 30.44405 Number beyond limits = 31 Number violating runs = 47



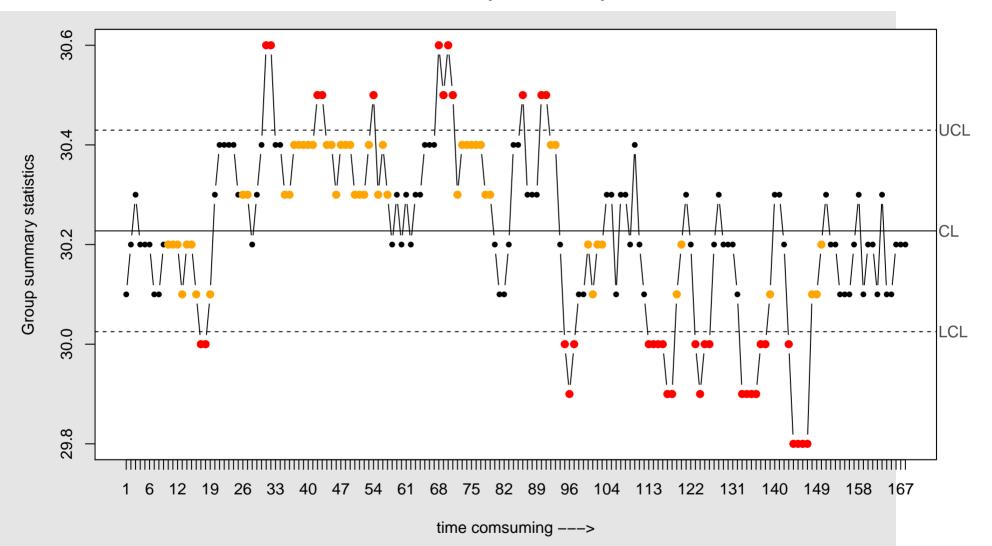
Number of groups = 168 Center = 30.25595StdDev = 0.06635665

LCL = 30.05688UCL = 30.45502 Number beyond limits = 38 Number violating runs = 54



Number of groups = 168 Center = 30.24464 StdDev = 0.07060347

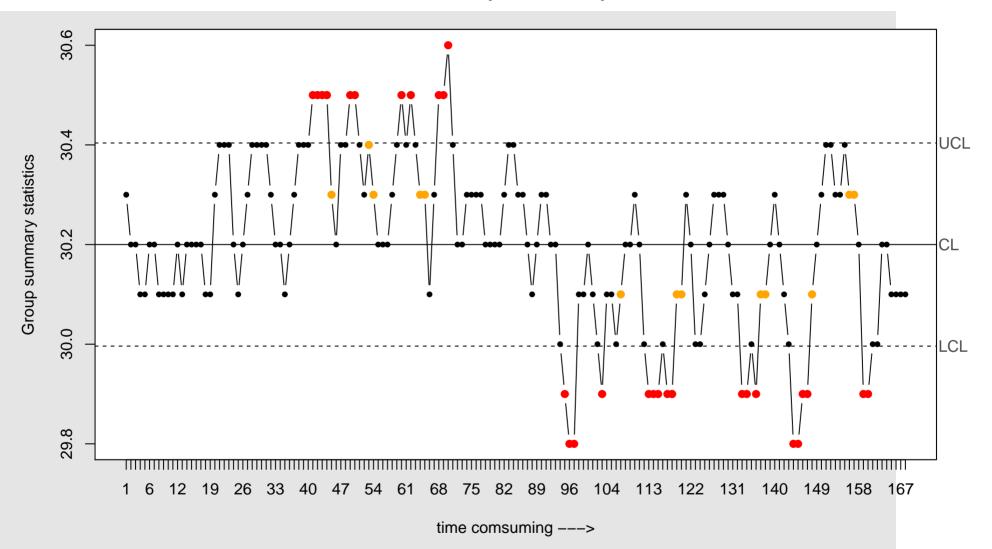
LCL = 30.03283 UCL = 30.45645 Number beyond limits = 46 Number violating runs = 66



Number of groups = 168 Center = 30.22738

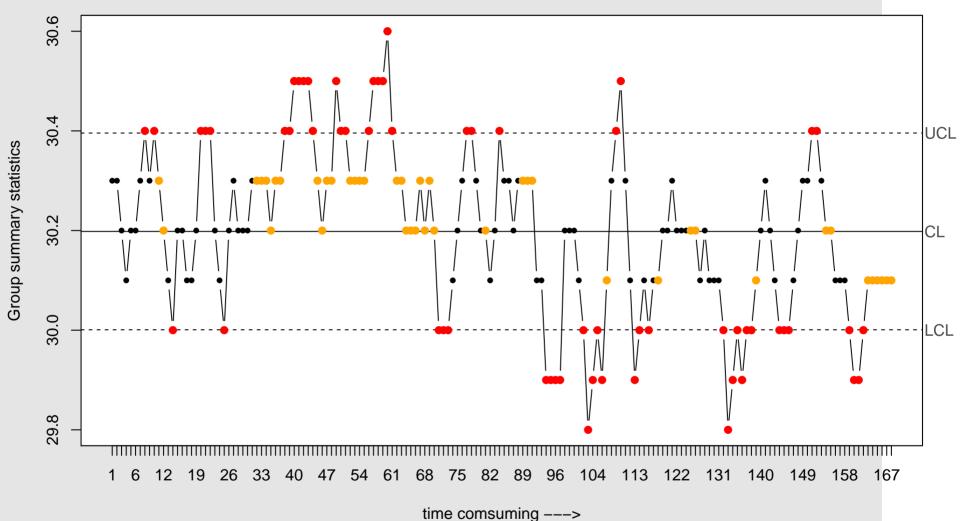
StdDev = 0.06741835

LCL = 30.02513 UCL = 30.42964 Number beyond limits = 38 Number violating runs = 66



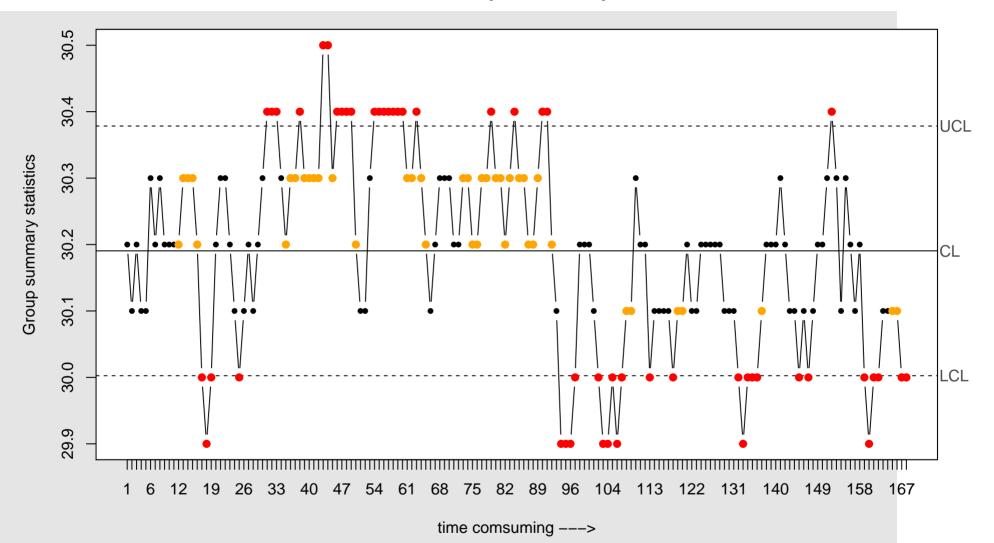
Number of groups = 168 Center = 30.2 StdDev = 0.06794921

LCL = 29.99615 UCL = 30.40385 Number beyond limits = 29 Number violating runs = 16



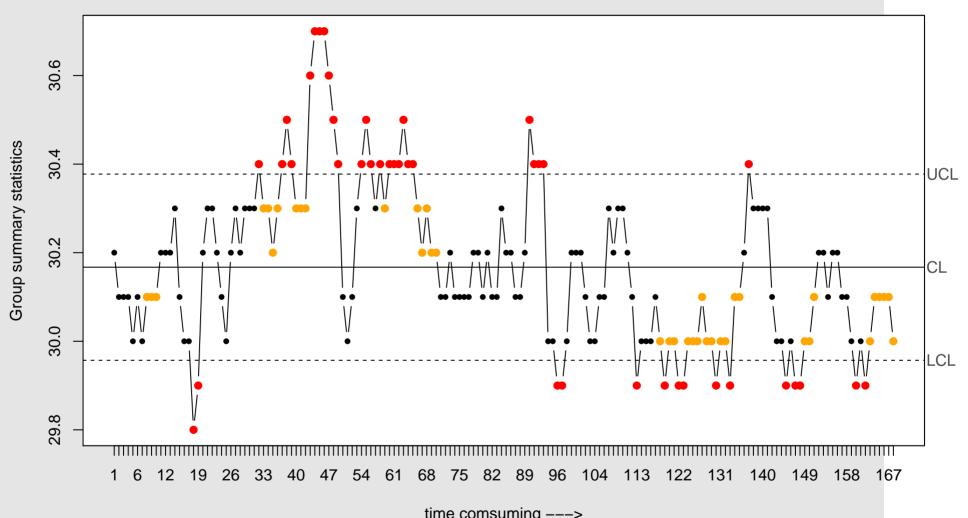
Number of groups = 168 Center = 30.19821StdDev = 0.0658258

LCL = 30.00074UCL = 30.39569 Number beyond limits = 59 Number violating runs = 63



Number of groups = 168 Center = 30.19048 StdDev = 0.06264068

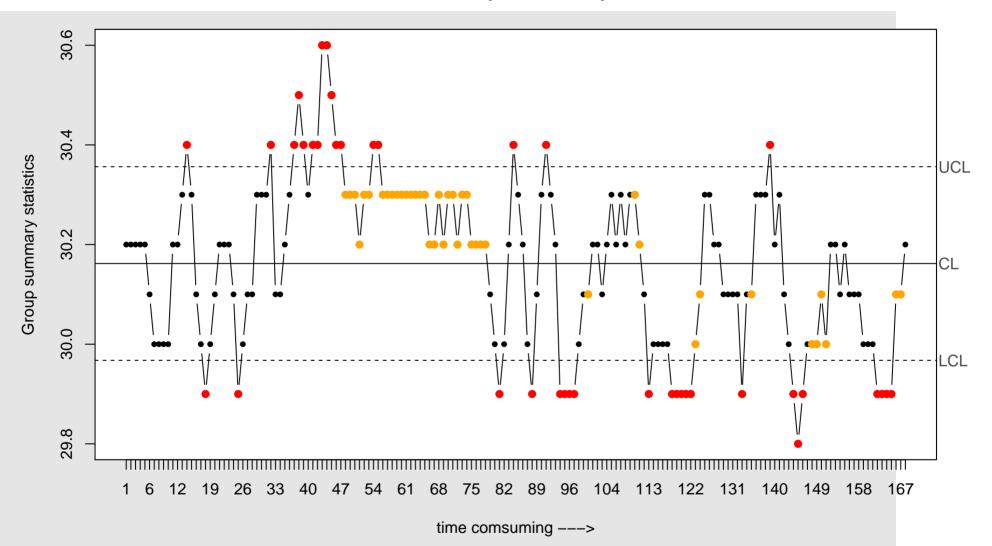
LCL = 30.00255 UCL = 30.3784 Number beyond limits = 52 Number violating runs = 60



time comsuming --->

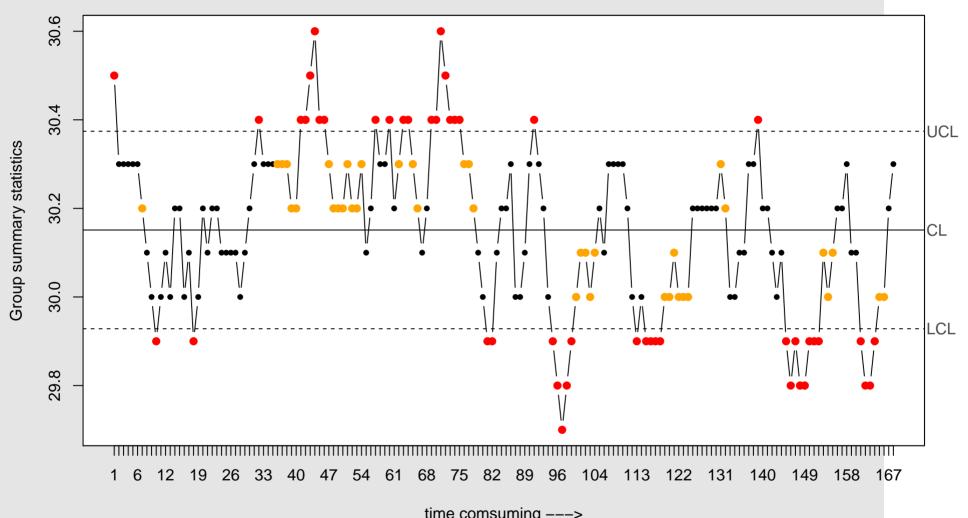
Number of groups = 168 Center = 30.16726StdDev = 0.07007262

LCL = 29.95704UCL = 30.37748 Number beyond limits = 41 Number violating runs = 61



Number of groups = 168 Center = 30.1619 StdDev = 0.06476409

LCL = 29.96761 UCL = 30.3562 Number beyond limits = 39 Number violating runs = 59

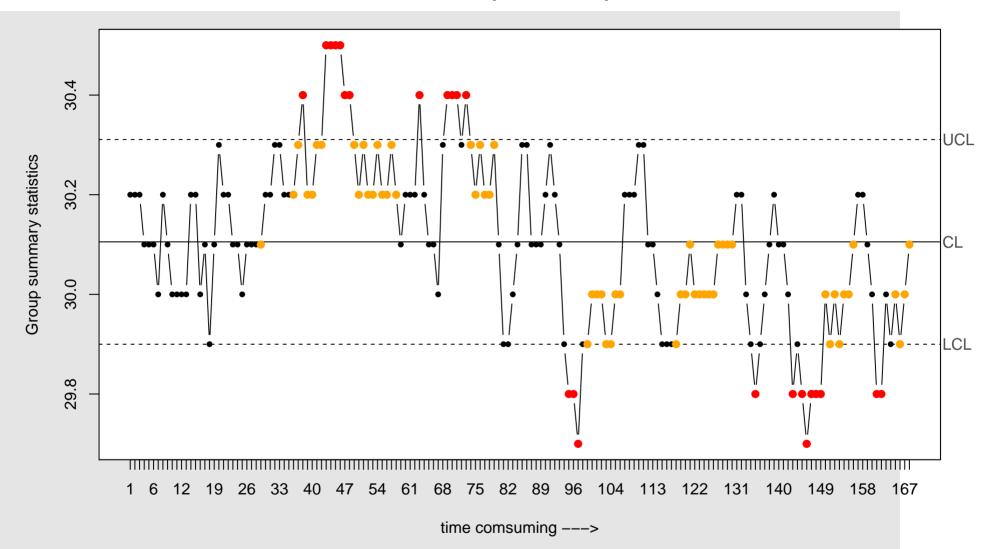


time comsuming --->

Number of groups = 168 Center = 30.15119 StdDev = 0.07431945

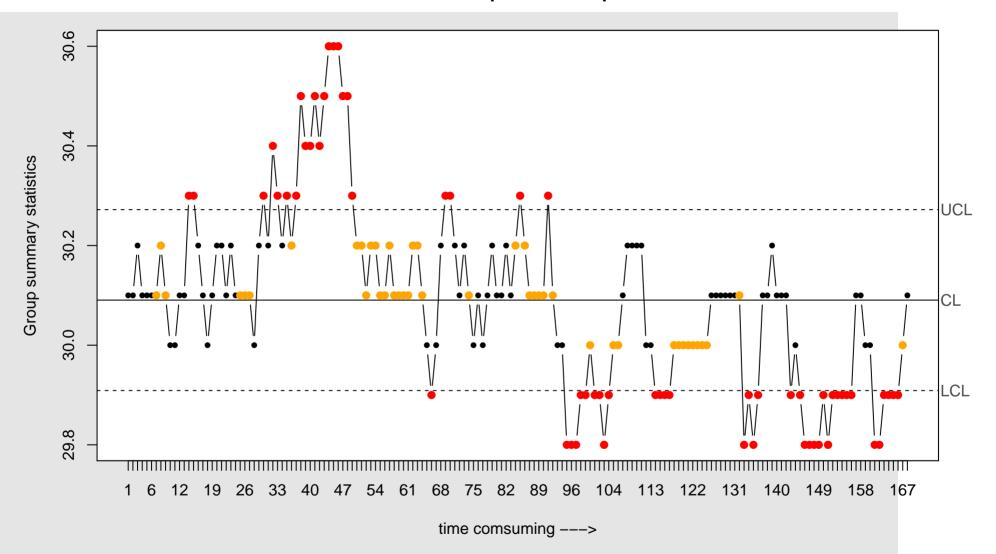
LCL = 29.92823UCL = 30.37415

Number beyond limits = 47 Number violating runs = 54



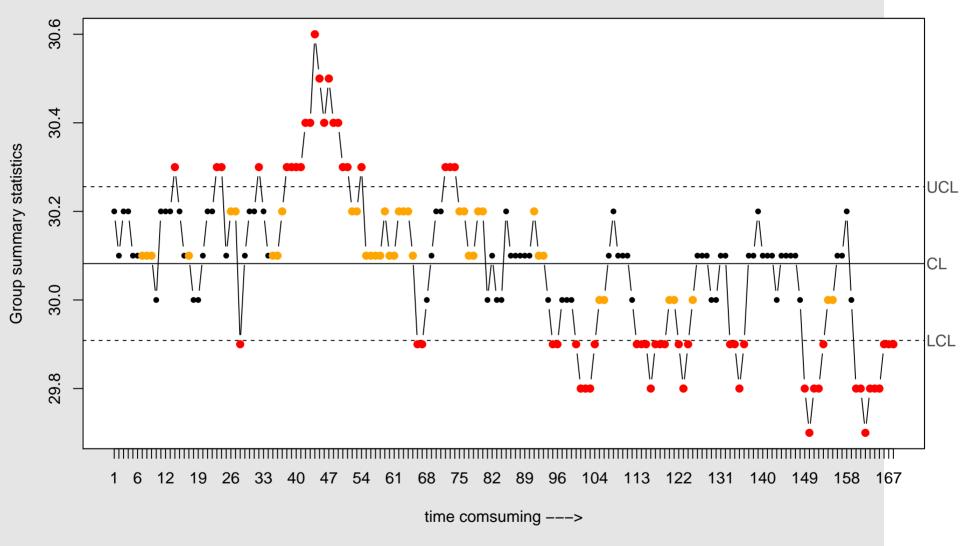
Number of groups = 168 Center = 30.10536 StdDev = 0.06848006

LCL = 29.89992 UCL = 30.3108 Number beyond limits = 24 Number violating runs = 66



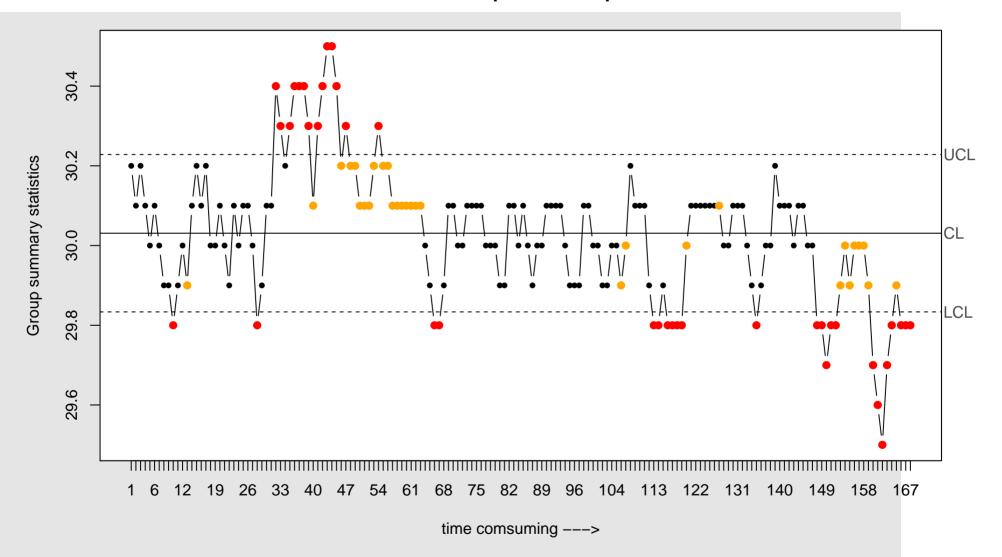
Number of groups = 168 Center = 30.09048 StdDev = 0.06051726

LCL = 29.90892 UCL = 30.27203 Number beyond limits = 60 Number violating runs = 74



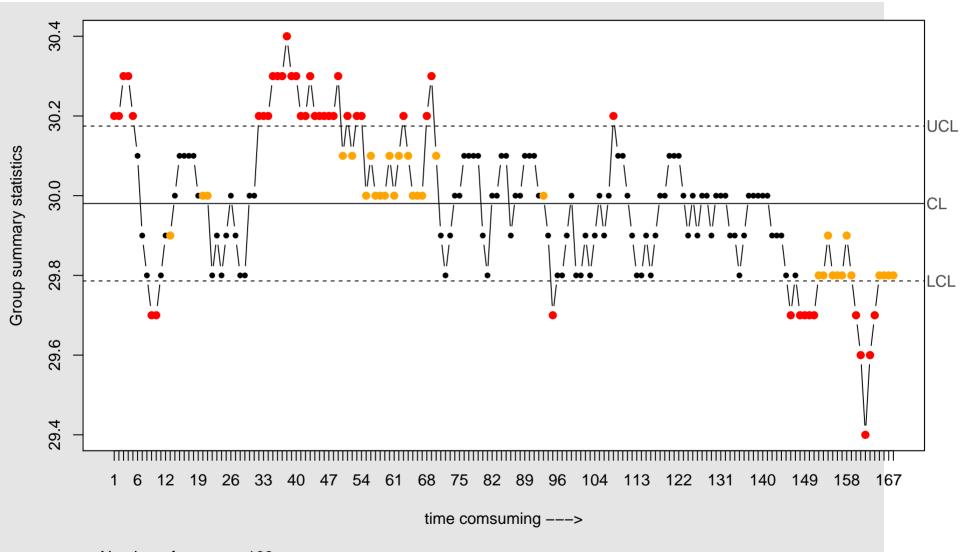
Number of groups = 168 Center = 30.08214 StdDev = 0.057863

LCL = 29.90855 UCL = 30.25573 Number beyond limits = 60 Number violating runs = 67



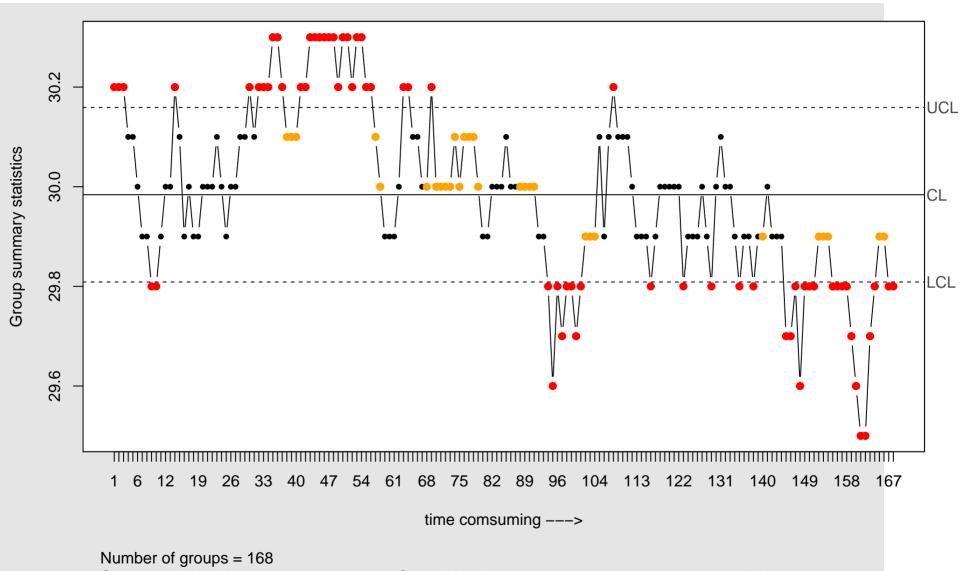
Number of groups = 168 Center = 30.03095 StdDev = 0.0658258

LCL = 29.83347 UCL = 30.22843 Number beyond limits = 38 Number violating runs = 52



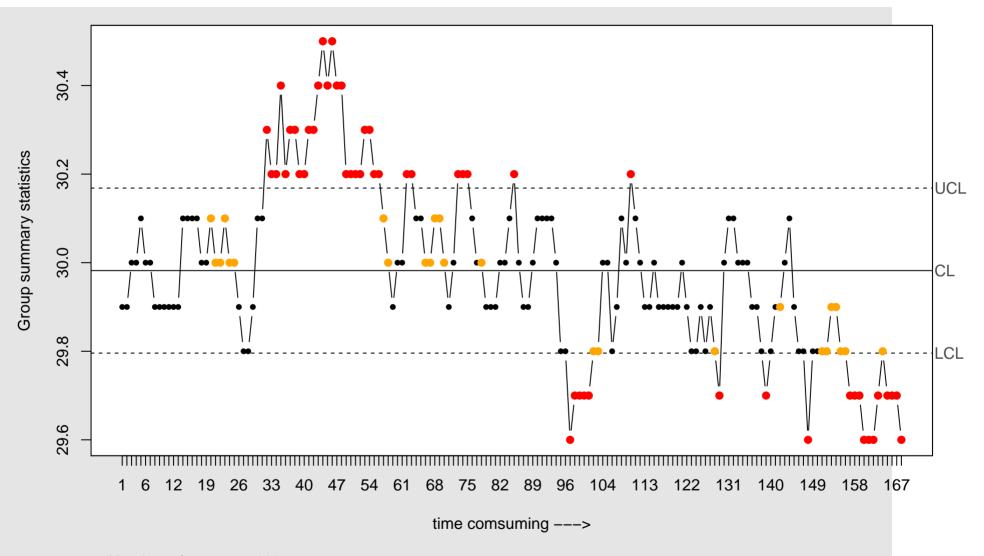
Number of groups = 168 Center = 29.98036 StdDev = 0.06476409

LCL = 29.78606 UCL = 30.17465 Number beyond limits = 43 Number violating runs = 60



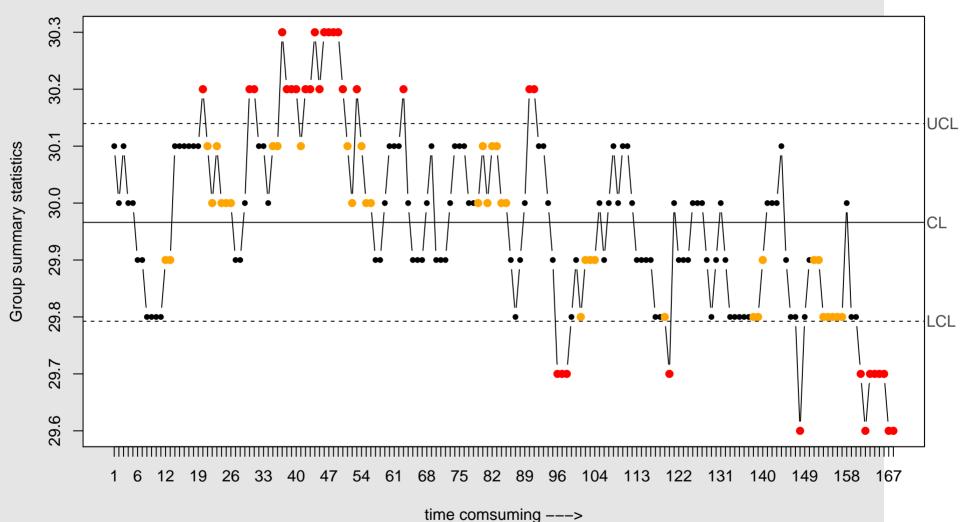
Number of groups = 168 Center = 29.98393 StdDev = 0.05839385

LCL = 29.80875 UCL = 30.15911 Number beyond limits = 65 Number violating runs = 72



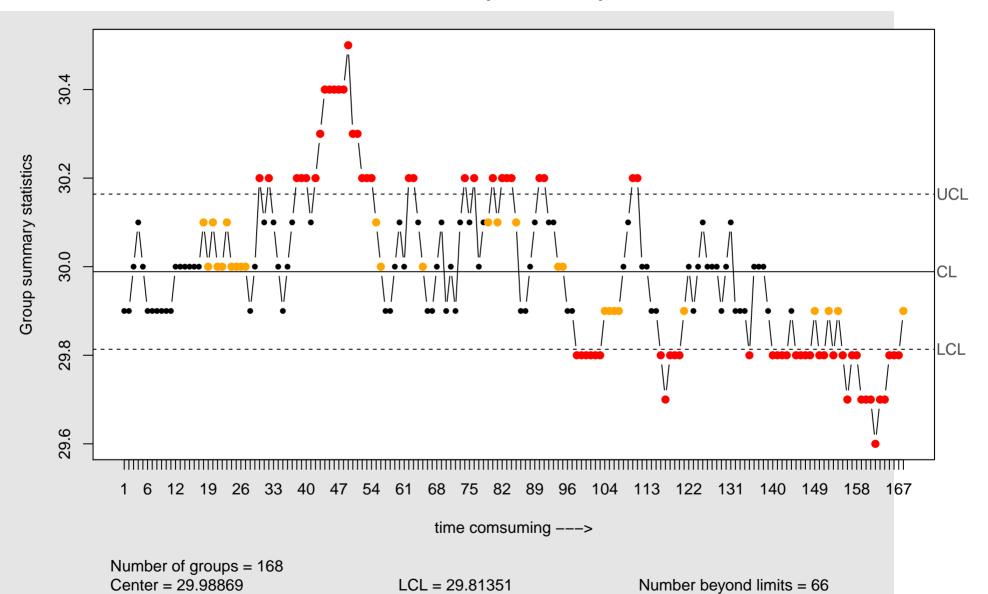
Number of groups = 168 Center = 29.98214 StdDev = 0.06210982

LCL = 29.79581 UCL = 30.16847 Number beyond limits = 51 Number violating runs = 59



Number of groups = 168 Center = 29.96607StdDev = 0.057863

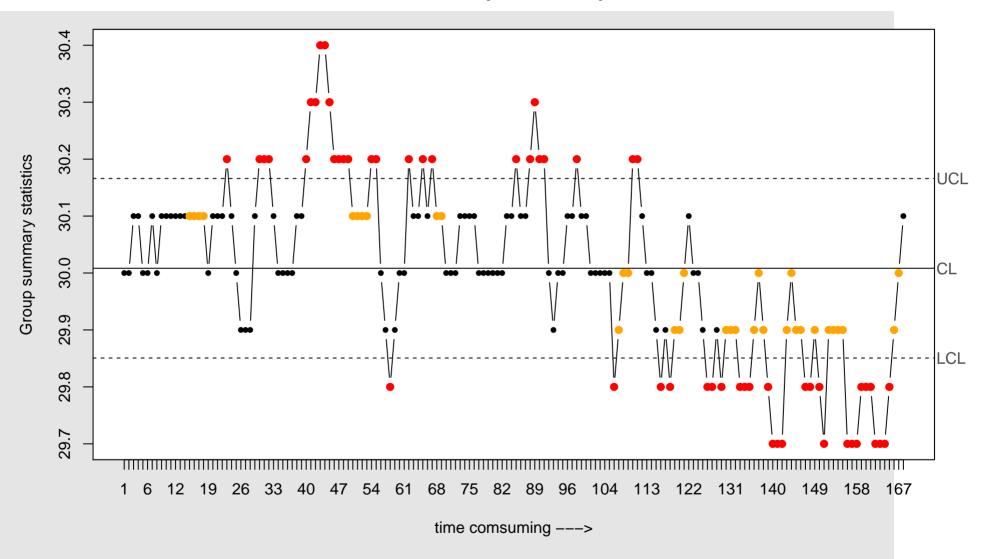
LCL = 29.79248UCL = 30.13966 Number beyond limits = 33 Number violating runs = 58



UCL = 30.16387

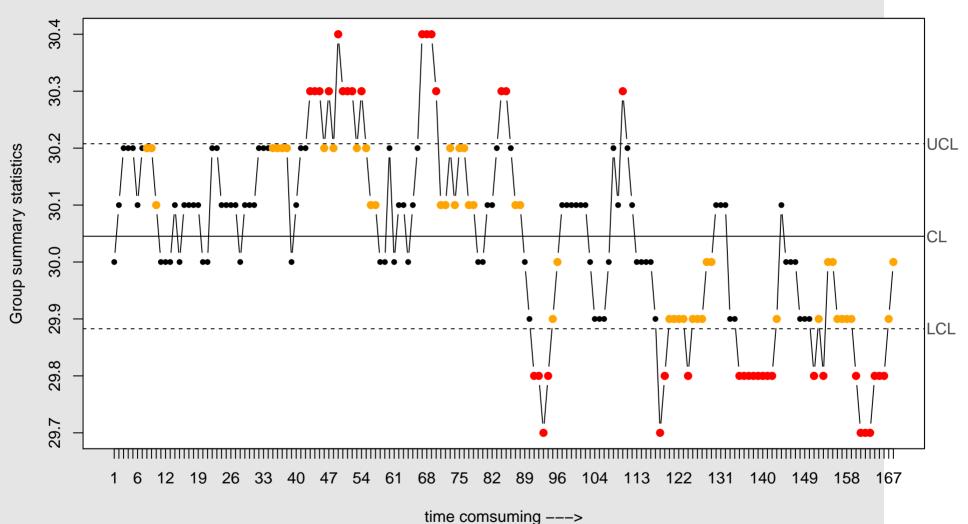
Number violating runs = 67

StdDev = 0.05839385



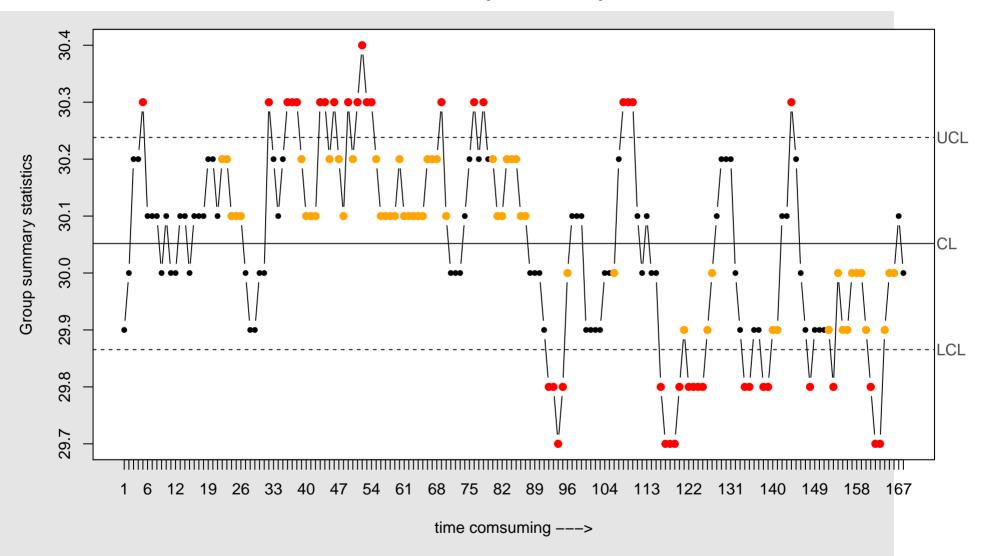
Number of groups = 168 Center = 30.00833 StdDev = 0.05255447

LCL = 29.85067 UCL = 30.166 Number beyond limits = 55 Number violating runs = 66



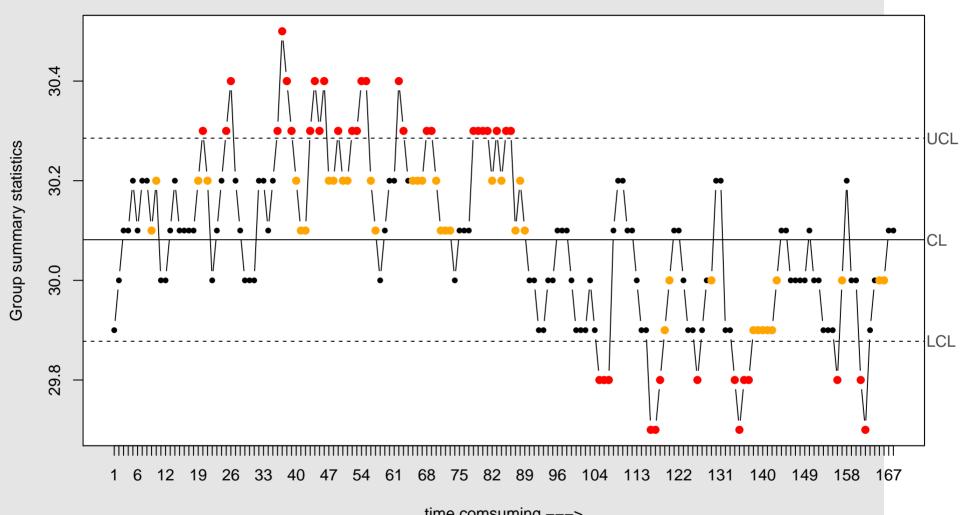
Number of groups = 168 Center = 30.04524StdDev = 0.05414703

LCL = 29.8828UCL = 30.20768 Number beyond limits = 40 Number violating runs = 65



Number of groups = 168 Center = 30.05179 StdDev = 0.06210982

LCL = 29.86546 UCL = 30.23812 Number beyond limits = 42 Number violating runs = 77

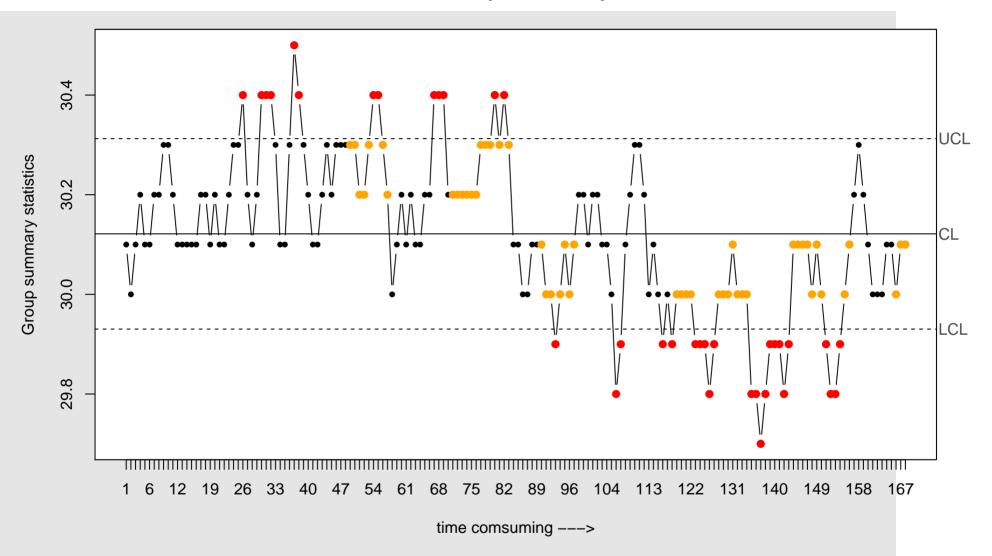


time comsuming --->

Number of groups = 168 Center = 30.08155StdDev = 0.06794921

LCL = 29.8777UCL = 30.2854

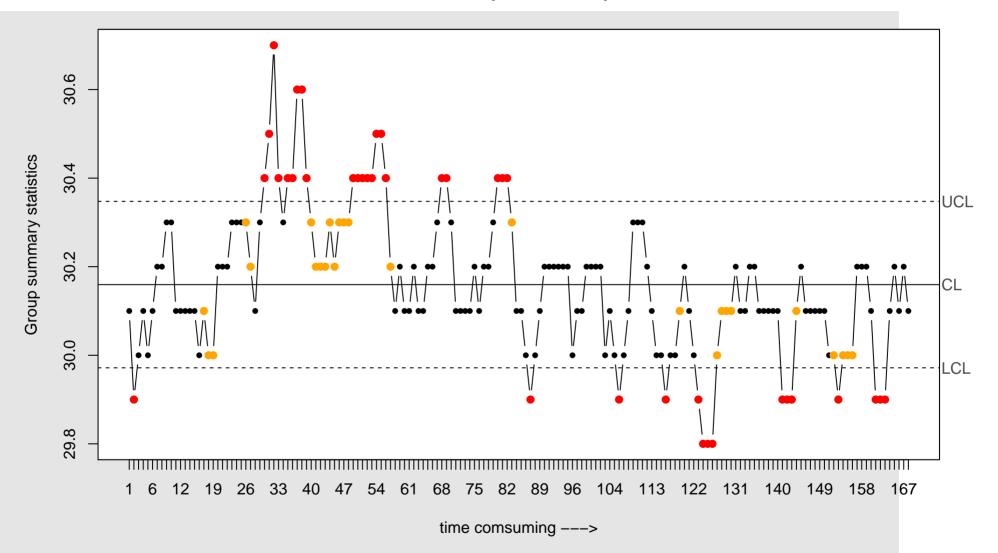
Number beyond limits = 41 Number violating runs = 58



Number of groups = 168 Center = 30.12143 StdDev = 0.06370238

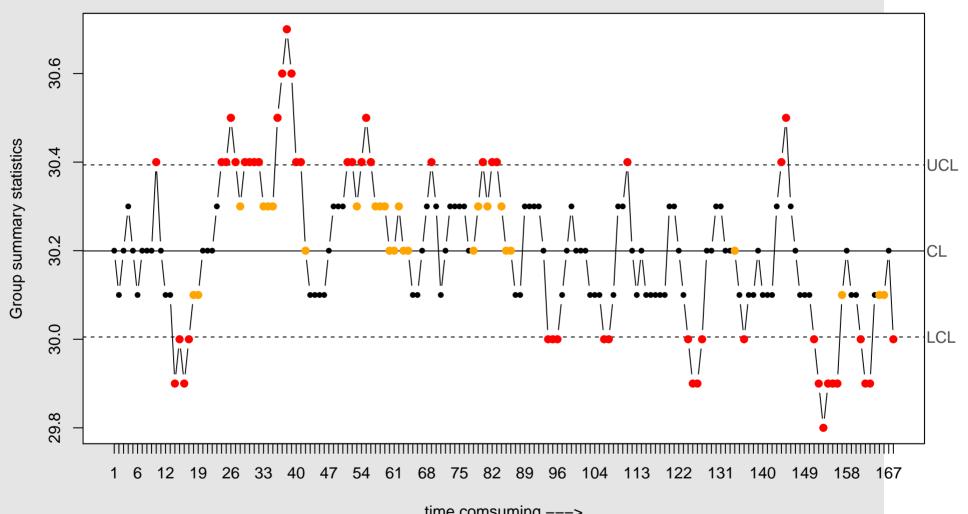
LCL = 29.93032 UCL = 30.31254

Number beyond limits = 36 Number violating runs = 71



Number of groups = 168 Center = 30.15952 StdDev = 0.06264068

LCL = 29.9716 UCL = 30.34745 Number beyond limits = 37 Number violating runs = 42

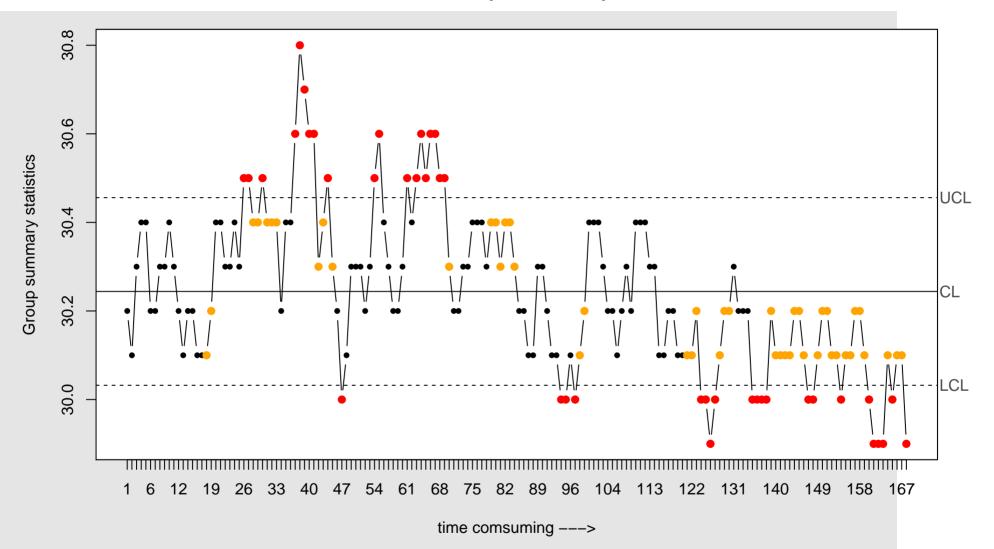


time comsuming --->

Number of groups = 168 Center = 30.1994StdDev = 0.06476409

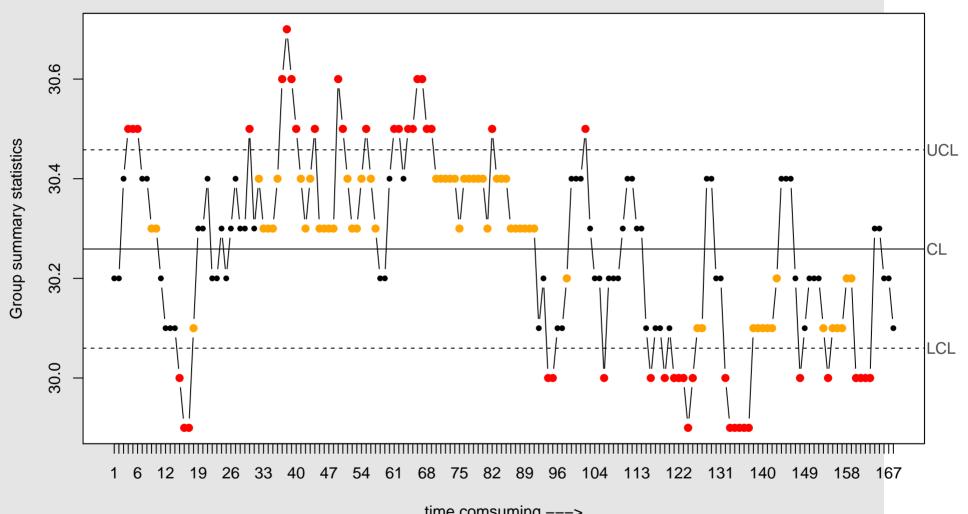
LCL = 30.00511UCL = 30.3937

Number beyond limits = 51 Number violating runs = 47



Number of groups = 168 Center = 30.24405 StdDev = 0.07060347

LCL = 30.03224 UCL = 30.45586 Number beyond limits = 40 Number violating runs = 70

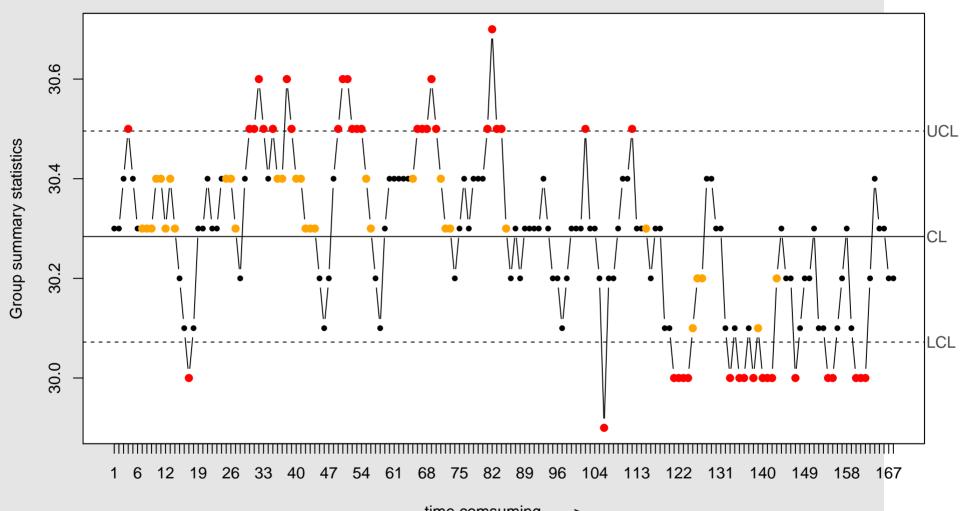


time comsuming --->

Number of groups = 168 Center = 30.25893StdDev = 0.06635665

LCL = 30.05986UCL = 30.458

Number beyond limits = 47 Number violating runs = 83

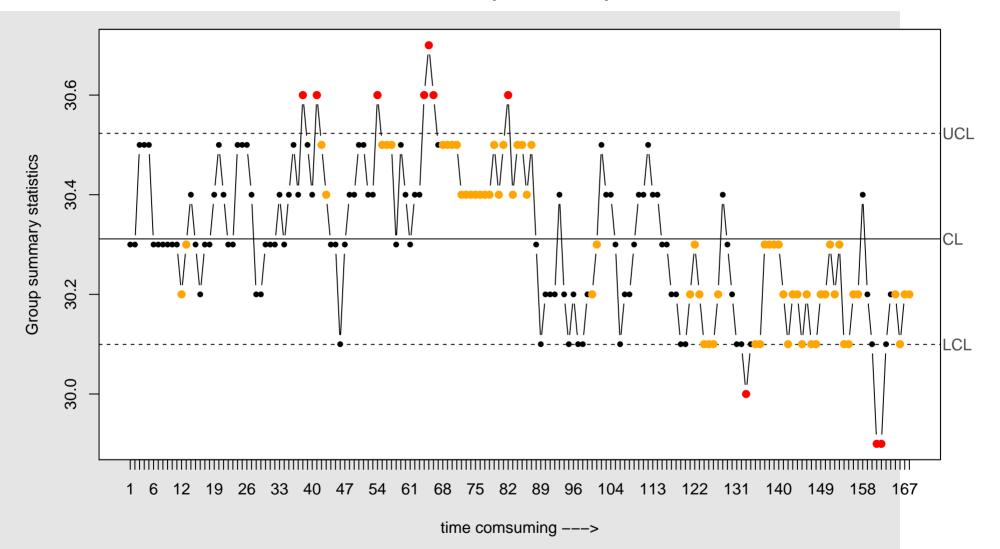


time comsuming --->

Number of groups = 168 Center = 30.28393 StdDev = 0.07060347

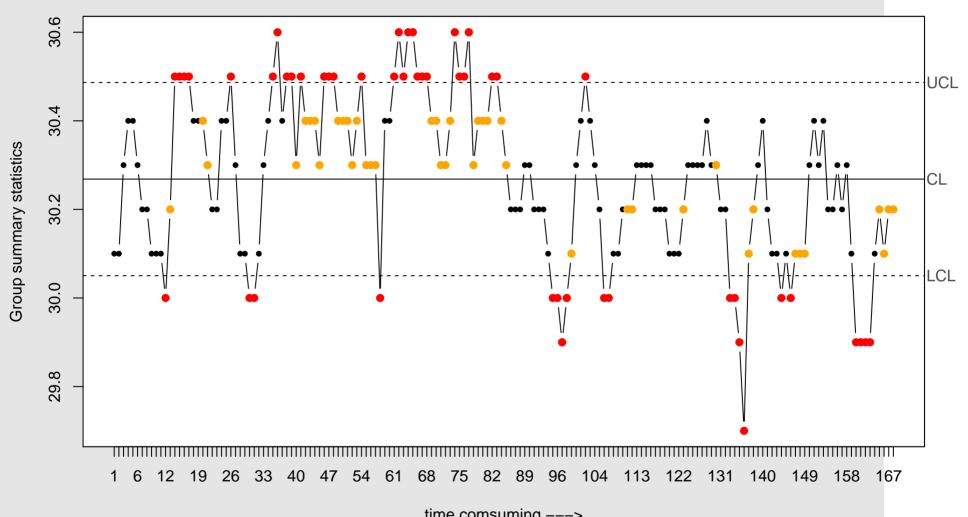
LCL = 30.07212 UCL = 30.49574

Number beyond limits = 44 Number violating runs = 48



Number of groups = 168 Center = 30.31131 StdDev = 0.07060347

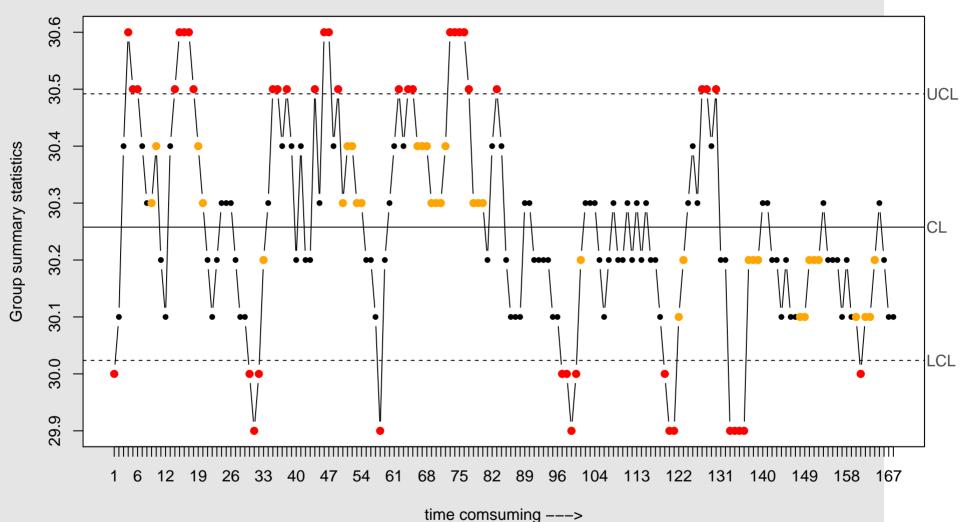
LCL = 30.0995 UCL = 30.52312 Number beyond limits = 10 Number violating runs = 65



time comsuming --->

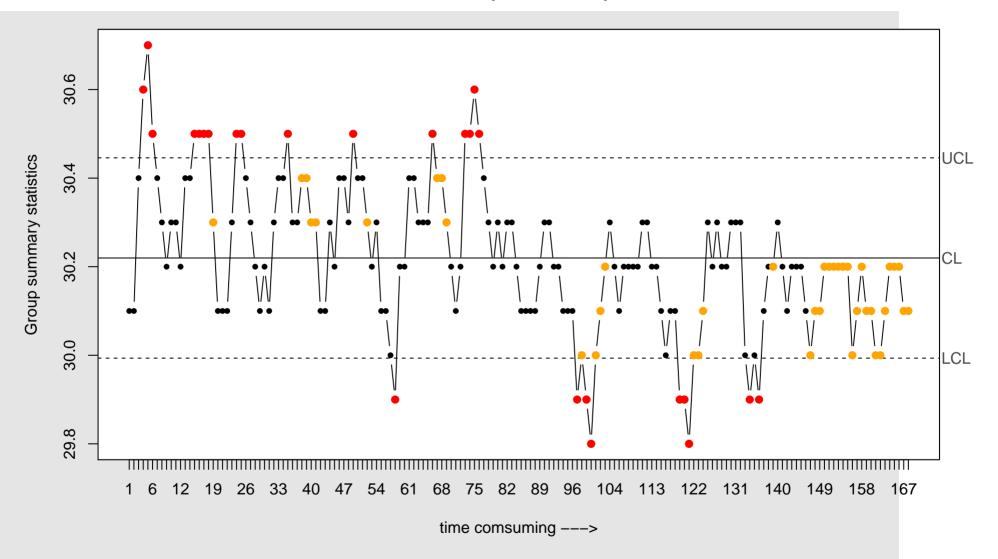
Number of groups = 168 Center = 30.26845StdDev = 0.07272689

LCL = 30.05027UCL = 30.48663 Number beyond limits = 49 Number violating runs = 59



Number of groups = 168 Center = 30.25774StdDev = 0.07803542

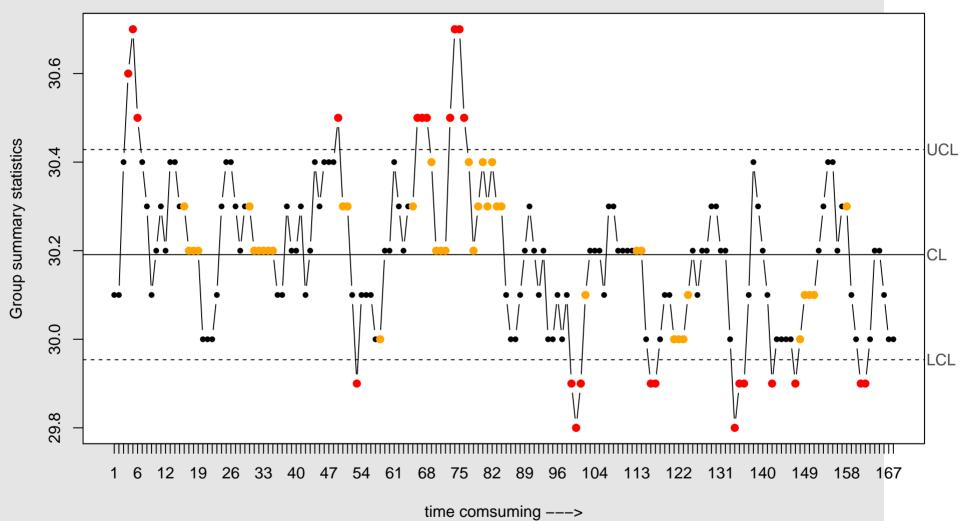
LCL = 30.02363UCL = 30.49184 Number beyond limits = 44 Number violating runs = 46



Number of groups = 168 Center = 30.21964 StdDev = 0.07538115

LCL = 29.9935 UCL = 30.44579

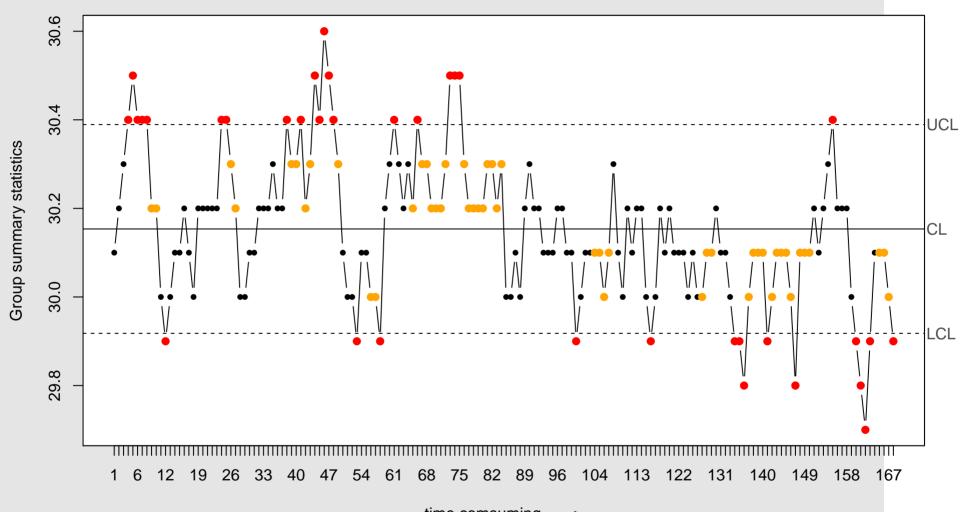
Number beyond limits = 25 Number violating runs = 44



Number of groups = 168 Center = 30.19107StdDev = 0.07909712

LCL = 29.95378UCL = 30.42836

Number beyond limits = 24 Number violating runs = 49

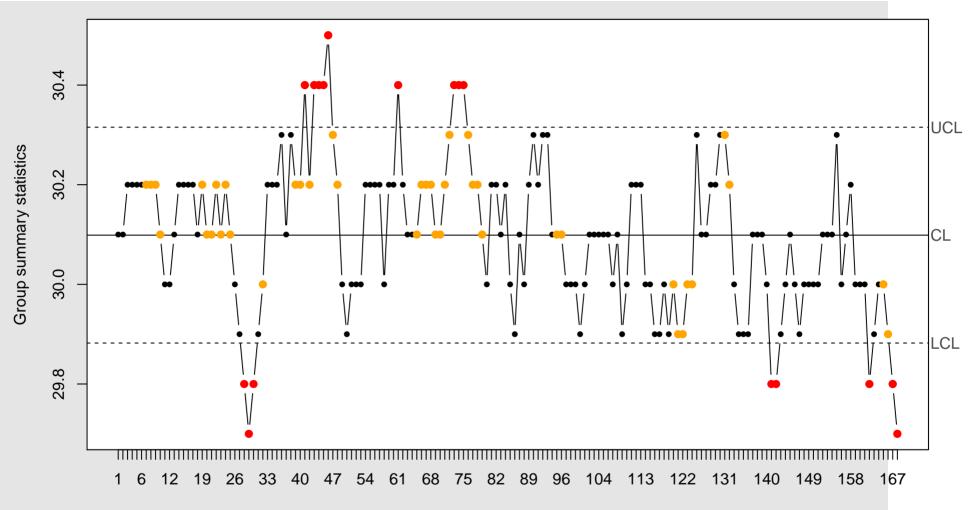


time comsuming --->

Number of groups = 168 Center = 30.15357 StdDev = 0.07856627

LCL = 29.91787 UCL = 30.38927

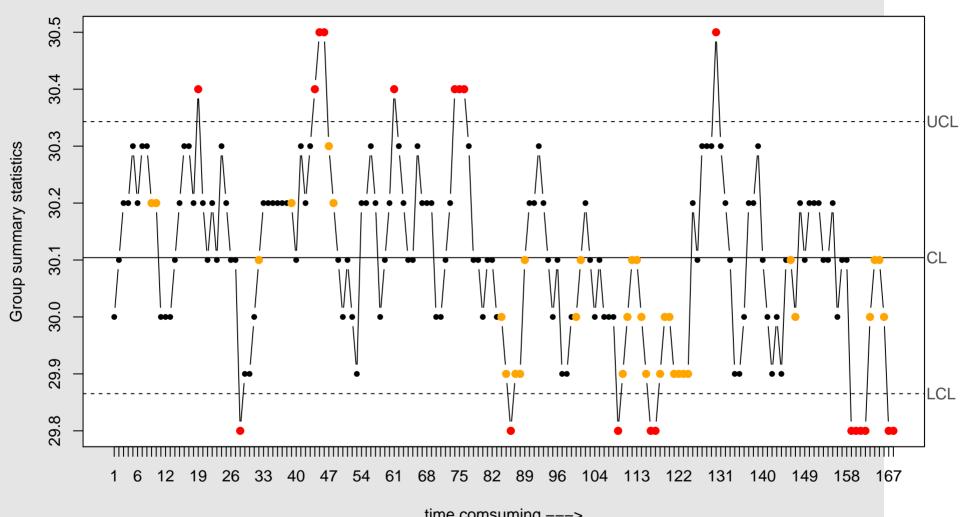
Number beyond limits = 35 Number violating runs = 66



time comsuming --->

Number of groups = 168 Center = 30.09881 StdDev = 0.07219603

LCL = 29.88222 UCL = 30.3154 Number beyond limits = 17 Number violating runs = 50

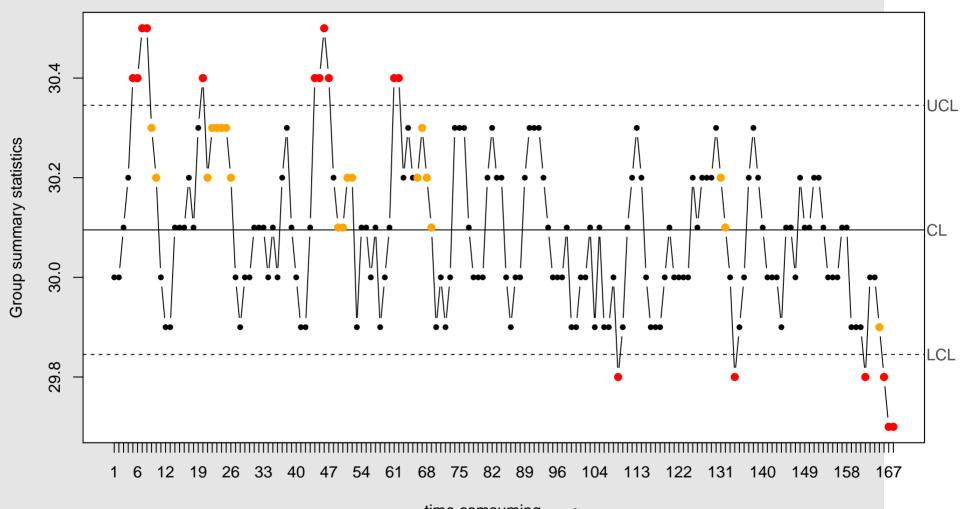


time comsuming --->

Number of groups = 168 Center = 30.10417StdDev = 0.07962798

LCL = 29.86528UCL = 30.34305

Number beyond limits = 20 Number violating runs = 39

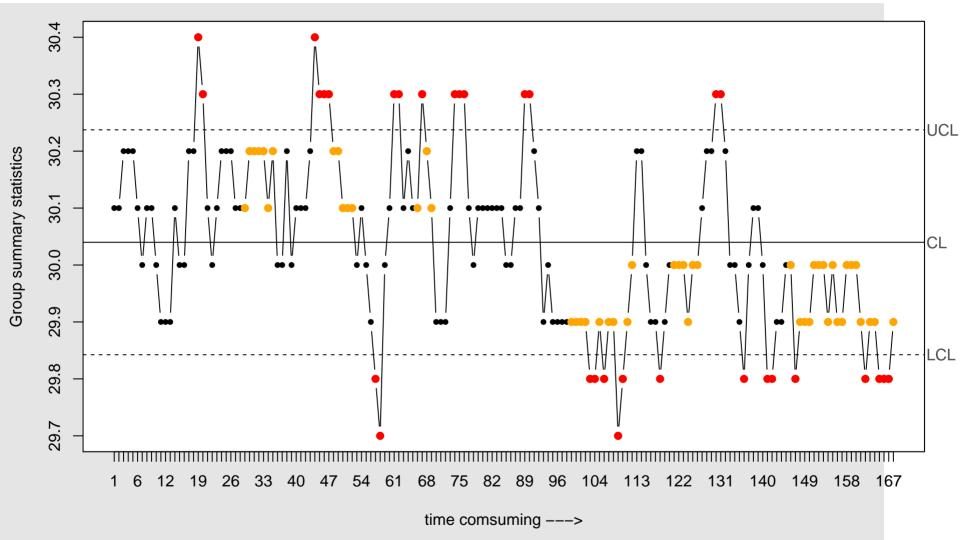


time comsuming --->

Number of groups = 168 Center = 30.09524 StdDev = 0.08334395

LCL = 29.84521 UCL = 30.34527

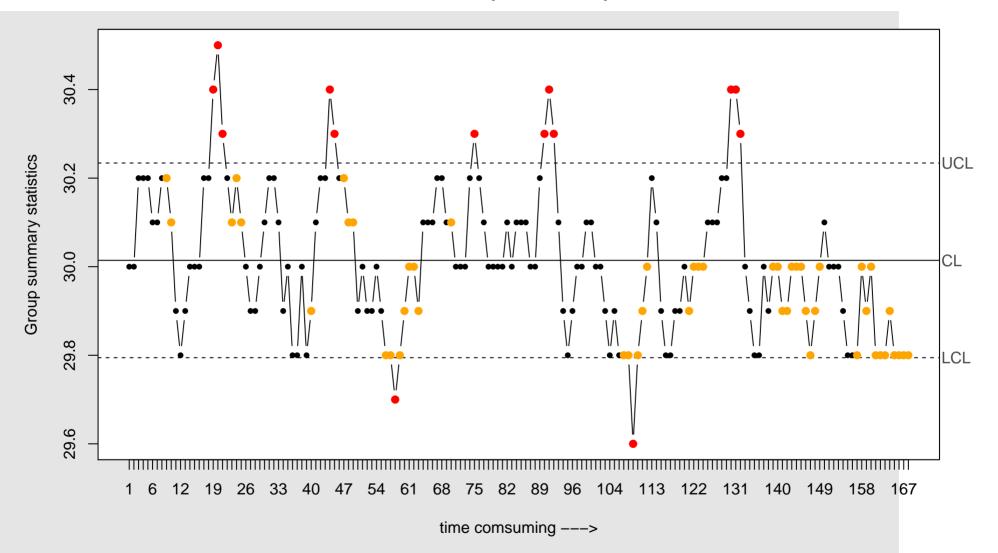
Number beyond limits = 17 Number violating runs = 23



Number of groups = 168

Center = 30.03988 StdDev = 0.0658258

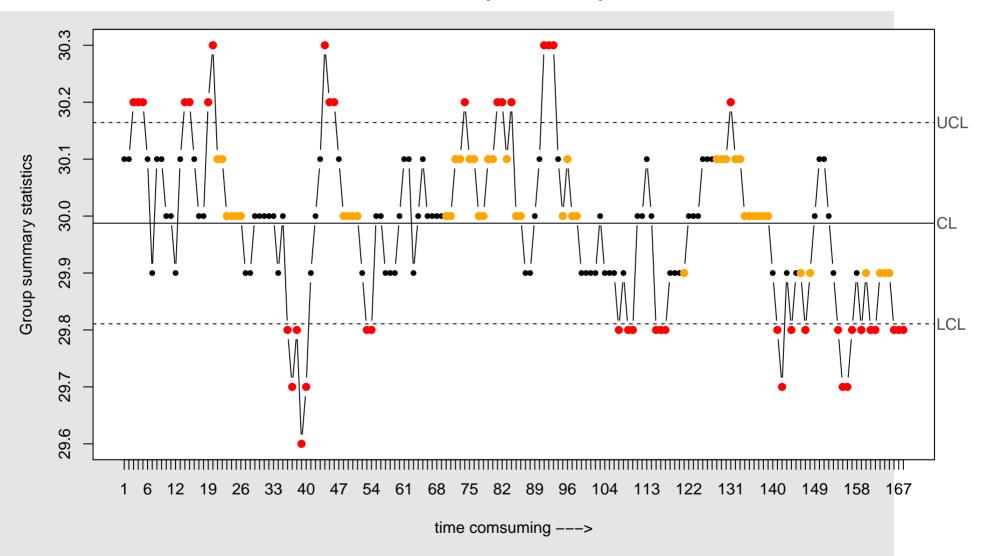
LCL = 29.8424 UCL = 30.23736 Number beyond limits = 32 Number violating runs = 61



Number of groups = 168 Center = 30.01429 StdDev = 0.07325774

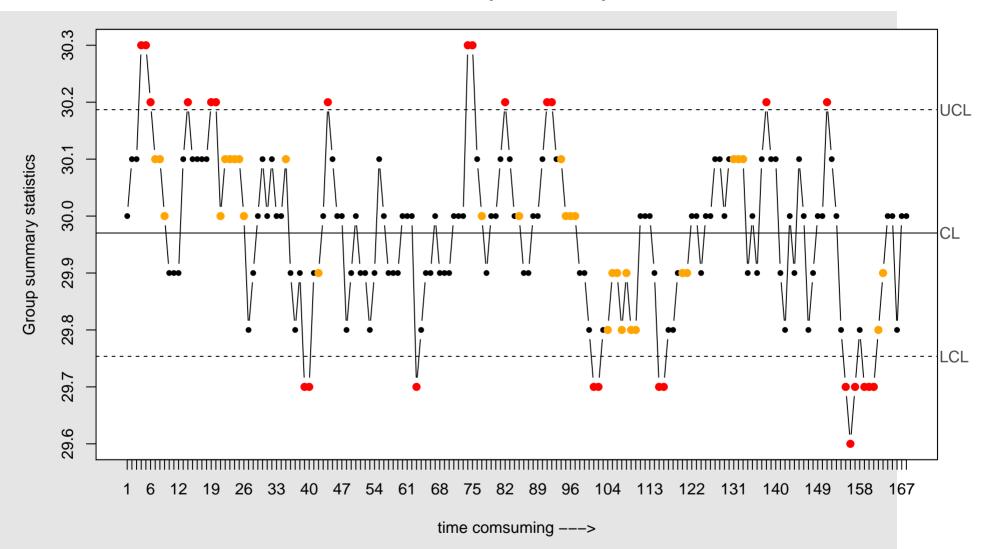
LCL = 29.79451 UCL = 30.23406

Number beyond limits = 14 Number violating runs = 53



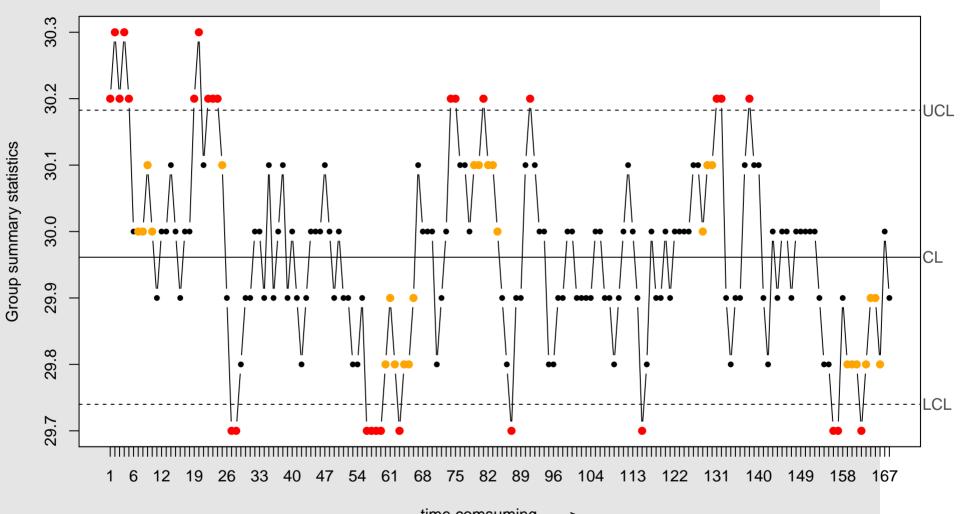
Number of groups = 168 Center = 29.9875 StdDev = 0.0589247

LCL = 29.81073 UCL = 30.16427 Number beyond limits = 45 Number violating runs = 60



Number of groups = 168 Center = 29.97024 StdDev = 0.07219603

LCL = 29.75365 UCL = 30.18683 Number beyond limits = 27 Number violating runs = 35

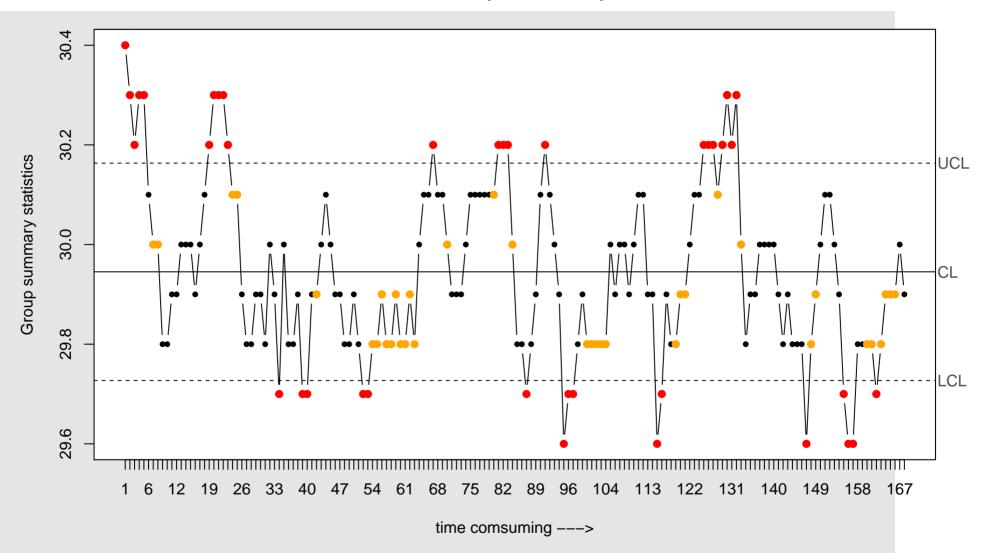


time comsuming --->

Number of groups = 168 Center = 29.96131 StdDev = 0.07378859

LCL = 29.73994 UCL = 30.18268

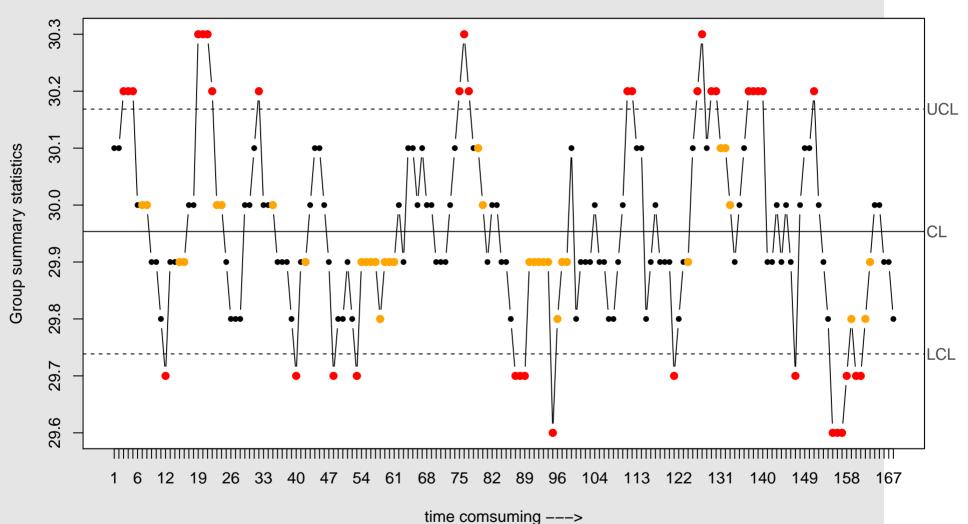
Number beyond limits = 29 Number violating runs = 36



Number of groups = 168 Center = 29.94524 StdDev = 0.07272689

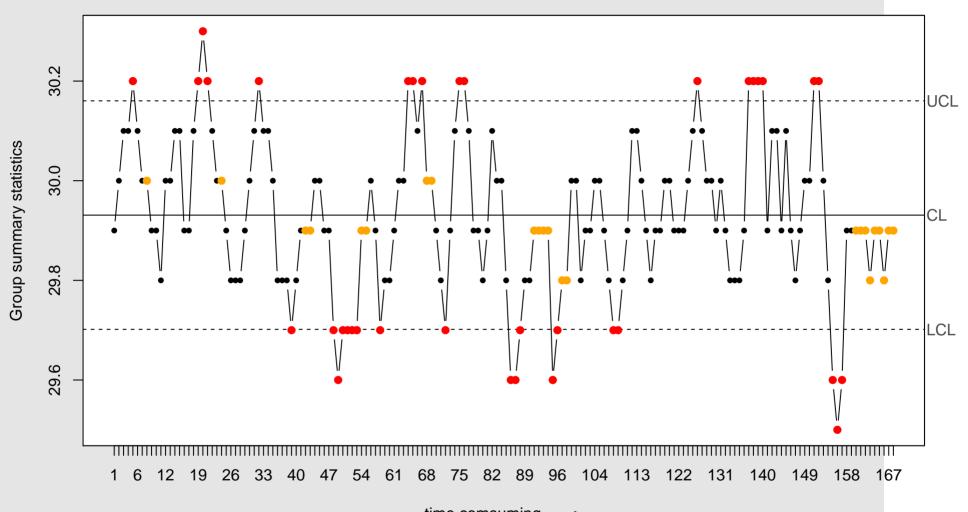
LCL = 29.72706 UCL = 30.16342

Number beyond limits = 38 Number violating runs = 48



Number of groups = 168 Center = 29.95357StdDev = 0.07166518

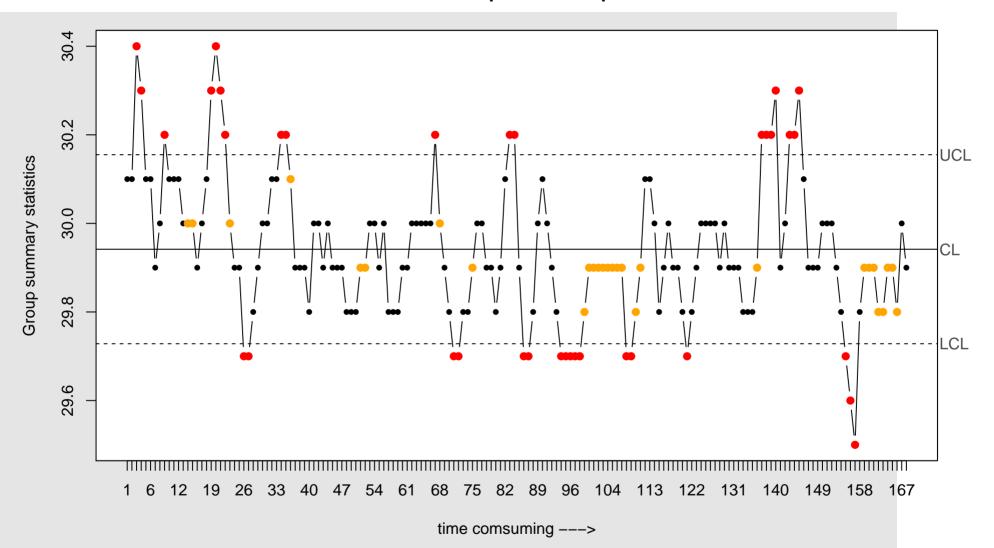
LCL = 29.73858UCL = 30.16857 Number beyond limits = 38 Number violating runs = 37



time comsuming --->

Number of groups = 168 Center = 29.93095 StdDev = 0.07644286

LCL = 29.70162 UCL = 30.16028 Number beyond limits = 36 Number violating runs = 27



Number of groups = 168 Center = 29.94167 StdDev = 0.07113433

LCL = 29.72826 UCL = 30.15507 Number beyond limits = 36 Number violating runs = 31