SwitchTest

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Switch tests are designed using subset of each yeast dataset. The subtree for these tests is ((cerevisiae,castellii),kluyveri). Paralog sequences of species castellii were switched in each dataset.

rm(list=ls()) # clean up workspace  
path.switch <- "/Users/xji3/FromCluster06082015/TestTau/"  
summary.list <- c(   
 #HKY  
 "HKY\_clock\_summary",  
 #"Force\_HKY\_clock\_summary",  
 "Dir\_HKY\_clock\_summary",  
 "gBGC\_HKY\_clock\_summary",  
 "Dir\_gBGC\_HKY\_clock\_summary",  
   
 #MG94  
 "MG94\_clock\_summary",  
 "Force\_MG94\_clock\_summary",  
 "Dir\_MG94\_clock\_summary",  
 "gBGC\_MG94\_clock\_summary",  
 "Dir\_gBGC\_MG94\_clock\_summary",  
  
 #HKY  
 "switched\_HKY\_clock\_summary",  
 #"switched\_Force\_HKY\_clock\_summary",  
 "switched\_Dir\_HKY\_clock\_summary",  
 "switched\_gBGC\_HKY\_clock\_summary",  
 "switched\_Dir\_gBGC\_HKY\_clock\_summary",  
   
 #MG94  
 "switched\_MG94\_clock\_summary",  
 "switched\_Force\_MG94\_clock\_summary",  
 "switched\_Dir\_MG94\_clock\_summary",  
 "switched\_gBGC\_MG94\_clock\_summary",  
 "switched\_Dir\_gBGC\_MG94\_clock\_summary"  
 )  
  
for (target.summary in summary.list){  
 summary\_file <- paste(path.switch, target.summary, '.txt', sep = '')  
 all <- readLines(summary\_file, n = -1)  
 col.names <- strsplit(all[1], ' ')[[1]][-1]  
 row.names <- strsplit(all[length(all)], ' ')[[1]][-1]  
 summary\_mat <- as.matrix(read.table(summary\_file,   
 row.names = row.names,   
 col.names = col.names))  
 assign(target.summary, summary\_mat)  
 }  
  
HKY.clock.pair.names <- intersect(colnames(HKY\_clock\_summary), colnames(switched\_HKY\_clock\_summary))  
Dir.HKY.clock.pair.names <- intersect(colnames(Dir\_HKY\_clock\_summary), colnames(switched\_Dir\_HKY\_clock\_summary))  
gBGC.HKY.clock.pair.names <- intersect(colnames(gBGC\_HKY\_clock\_summary), colnames(switched\_gBGC\_HKY\_clock\_summary))  
Dir.gBGC.HKY.clock.pair.names <- intersect(colnames(Dir\_gBGC\_HKY\_clock\_summary), colnames(switched\_Dir\_gBGC\_HKY\_clock\_summary))  
  
MG94.clock.pair.names <- intersect(colnames(MG94\_clock\_summary), colnames(switched\_MG94\_clock\_summary))  
Dir.MG94.clock.pair.names <- intersect(colnames(Dir\_MG94\_clock\_summary), colnames(switched\_Dir\_MG94\_clock\_summary))  
gBGC.MG94.clock.pair.names <- intersect(colnames(gBGC\_MG94\_clock\_summary), colnames(switched\_gBGC\_MG94\_clock\_summary))  
Dir.gBGC.MG94.clock.pair.names <- intersect(colnames(Dir\_gBGC\_MG94\_clock\_summary), colnames(switched\_Dir\_gBGC\_MG94\_clock\_summary))

#### Now show lnL difference between real and control sequences for each model

#HKY  
HKY\_clock\_summary[2, HKY.clock.pair.names] - switched\_HKY\_clock\_summary[2, HKY.clock.pair.names]

## YLR406C\_YDL075W YER131W\_YGL189C YDR502C\_YLR180W YML026C\_YDR450W   
## 19.3628 9.8028 26.9791 58.5377   
## YNL301C\_YOL120C YHR106W\_YDR353W YIL057C\_YER067W YPL087W\_YBR183W   
## 84.0843 35.5327 11.4347 -24.0597   
## YNL069C\_YIL133C YDR518W\_YCL043C YGR043C\_YLR354C YPR157W\_YGR141W   
## 30.0420 -21.7163 3.4713 -27.7199   
## YDR099W\_YER177W YBR024W\_YBR037C YPL037C\_YDR252W YMR143W\_YDL083C   
## 44.5487 -0.4974 -0.8482 27.3982   
## YPR159W\_YGR143W YJL177W\_YKL180W YGL133W\_YPL216W YJR048W\_YEL039C   
## -1.7191 36.2008 -0.9525 29.1606   
## YBR191W\_YPL079W YER074W\_YIL069C YDR418W\_YEL054C YNL049C\_YIL109C   
## 53.6539 77.6067 36.4239 7.5823   
## YBR117C\_YPR074C YPL232W\_YMR183C YBL087C\_YER117W YGL062W\_YBR218C   
## -120.0949 19.5860 51.9603 429.1650   
## YIR033W\_YKL020C YMR243C\_YOR316C YLR333C\_YGR027C YMR142C\_YDL082W   
## 17.2006 2.9565 84.1888 88.7554   
## YER102W\_YBL072C YAL056W\_YOR371C YDR438W\_YML018C   
## 145.6395 -29.1213 0.2884

Dir\_HKY\_clock\_summary[2, Dir.HKY.clock.pair.names] - switched\_Dir\_HKY\_clock\_summary[2, Dir.HKY.clock.pair.names]

## YLR406C\_YDL075W YER131W\_YGL189C YDR502C\_YLR180W YML026C\_YDR450W   
## 19.0912 9.8874 26.8941 58.5117   
## YNL301C\_YOL120C YHR106W\_YDR353W YIL057C\_YER067W YPL087W\_YBR183W   
## 84.1782 33.8394 10.6494 -24.9848   
## YNL069C\_YIL133C YDR518W\_YCL043C YGR043C\_YLR354C YPR157W\_YGR141W   
## 30.0705 -21.2705 3.8209 -30.4276   
## YDR099W\_YER177W YBR024W\_YBR037C YPL037C\_YDR252W YMR143W\_YDL083C   
## 44.3803 -0.5905 -1.2109 27.6425   
## YPR159W\_YGR143W YJL177W\_YKL180W YGL133W\_YPL216W YJR048W\_YEL039C   
## -2.9755 36.1965 -2.9701 28.9329   
## YBR191W\_YPL079W YER074W\_YIL069C YDR418W\_YEL054C YNL049C\_YIL109C   
## 53.7197 77.6246 36.0031 10.3125   
## YBR117C\_YPR074C YPL232W\_YMR183C YBL087C\_YER117W YGL062W\_YBR218C   
## -126.2673 19.5734 51.7145 429.1300   
## YIR033W\_YKL020C YMR243C\_YOR316C YLR333C\_YGR027C YMR142C\_YDL082W   
## 18.7363 2.5452 84.1442 89.4535   
## YER102W\_YBL072C YAL056W\_YOR371C YDR438W\_YML018C   
## 146.0437 -29.7025 0.1819

gBGC\_HKY\_clock\_summary[2, gBGC.HKY.clock.pair.names] - switched\_gBGC\_HKY\_clock\_summary[2, gBGC.HKY.clock.pair.names]

## YLR406C\_YDL075W YER131W\_YGL189C YDR502C\_YLR180W YML026C\_YDR450W   
## 19.4363 10.9543 28.0229 60.1455   
## YNL301C\_YOL120C YHR106W\_YDR353W YIL057C\_YER067W YPL087W\_YBR183W   
## 84.3201 34.1866 11.6167 -27.2260   
## YNL069C\_YIL133C YDR518W\_YCL043C YGR043C\_YLR354C YPR157W\_YGR141W   
## 32.7898 -16.8092 6.7581 -28.6596   
## YDR099W\_YER177W YBR024W\_YBR037C YPL037C\_YDR252W YMR143W\_YDL083C   
## 42.2184 0.6323 -0.9705 30.9715   
## YPR159W\_YGR143W YJL177W\_YKL180W YGL133W\_YPL216W YJR048W\_YEL039C   
## -5.4361 35.7255 -6.1773 29.2813   
## YBR191W\_YPL079W YER074W\_YIL069C YDR418W\_YEL054C YNL049C\_YIL109C   
## 57.2068 78.5864 37.8080 8.3349   
## YBR117C\_YPR074C YPL232W\_YMR183C YBL087C\_YER117W YGL062W\_YBR218C   
## -123.7511 21.2437 54.8654 439.7173   
## YIR033W\_YKL020C YMR243C\_YOR316C YLR333C\_YGR027C YMR142C\_YDL082W   
## 25.8698 3.7670 84.5945 89.3542   
## YER102W\_YBL072C YAL056W\_YOR371C YDR438W\_YML018C   
## 146.3683 -31.0450 -1.5899

Dir\_gBGC\_HKY\_clock\_summary[2, Dir.gBGC.HKY.clock.pair.names] - switched\_Dir\_gBGC\_HKY\_clock\_summary[2, Dir.gBGC.HKY.clock.pair.names]

## YLR406C\_YDL075W YER131W\_YGL189C YDR502C\_YLR180W YML026C\_YDR450W   
## 19.247 11.687 29.393 60.336   
## YNL301C\_YOL120C YHR106W\_YDR353W YIL057C\_YER067W YPL087W\_YBR183W   
## 84.539 26.245 11.181 -27.280   
## YNL069C\_YIL133C YDR518W\_YCL043C YGR043C\_YLR354C YPR157W\_YGR141W   
## 34.753 -13.202 6.478 -27.557   
## YDR099W\_YER177W YPL037C\_YDR252W YMR143W\_YDL083C YPR159W\_YGR143W   
## 40.725 -2.726 28.611 -5.317   
## YJL177W\_YKL180W YGL133W\_YPL216W YJR048W\_YEL039C YBR191W\_YPL079W   
## 35.667 -10.471 29.747 57.060   
## YER074W\_YIL069C YDR418W\_YEL054C YNL049C\_YIL109C YBR117C\_YPR074C   
## 80.096 37.720 12.575 -129.112   
## YPL232W\_YMR183C YBL087C\_YER117W YGL062W\_YBR218C YIR033W\_YKL020C   
## 25.841 54.839 439.721 26.699   
## YMR243C\_YOR316C YLR333C\_YGR027C YMR142C\_YDL082W YER102W\_YBL072C   
## 5.810 84.144 89.706 146.724   
## YAL056W\_YOR371C YDR438W\_YML018C   
## -32.102 -0.935

#MG94  
MG94\_clock\_summary[2, MG94.clock.pair.names] - switched\_MG94\_clock\_summary[2, MG94.clock.pair.names]

## YLR406C\_YDL075W YER131W\_YGL189C YDR502C\_YLR180W YML026C\_YDR450W   
## 11.0394 2.8187 14.1334 37.9670   
## YNL301C\_YOL120C YHR106W\_YDR353W YIL057C\_YER067W YPL087W\_YBR183W   
## 60.0374 24.3743 5.1340 -30.0133   
## YNL069C\_YIL133C YDR518W\_YCL043C YGR043C\_YLR354C YDR099W\_YER177W   
## 21.8764 -21.6778 -0.4223 10.3802   
## YBR024W\_YBR037C YPL037C\_YDR252W YMR143W\_YDL083C YPR159W\_YGR143W   
## -20.5609 -0.4080 14.0634 -31.8137   
## YJL177W\_YKL180W YJR048W\_YEL039C YBR191W\_YPL079W YER074W\_YIL069C   
## 23.7890 13.4470 35.8665 58.9888   
## YDR418W\_YEL054C YNL049C\_YIL109C YBR117C\_YPR074C YPL232W\_YMR183C   
## 22.4693 17.4784 -99.0521 11.0699   
## YBL087C\_YER117W YGL062W\_YBR218C YIR033W\_YKL020C YMR243C\_YOR316C   
## 32.4896 202.6747 9.2636 0.8194   
## YLR333C\_YGR027C YMR142C\_YDL082W YER102W\_YBL072C YDR438W\_YML018C   
## 70.8046 72.2792 118.8894 -1.7596

Dir\_MG94\_clock\_summary[2, Dir.MG94.clock.pair.names] - switched\_Dir\_MG94\_clock\_summary[2, Dir.MG94.clock.pair.names]

## YLR406C\_YDL075W YER131W\_YGL189C YDR502C\_YLR180W YML026C\_YDR450W   
## 11.0256 2.8171 14.2288 37.9683   
## YNL301C\_YOL120C YHR106W\_YDR353W YIL057C\_YER067W YPL087W\_YBR183W   
## 60.0359 24.8043 5.2052 -29.9111   
## YNL069C\_YIL133C YDR518W\_YCL043C YGR043C\_YLR354C YDR099W\_YER177W   
## 21.8849 -21.6686 -0.3941 10.4392   
## YBR024W\_YBR037C YPL037C\_YDR252W YMR143W\_YDL083C YPR159W\_YGR143W   
## -20.9516 -0.7985 14.1420 -33.5500   
## YJL177W\_YKL180W YJR048W\_YEL039C YBR191W\_YPL079W YER074W\_YIL069C   
## 23.8734 13.4470 35.8676 58.9888   
## YDR418W\_YEL054C YNL049C\_YIL109C YBR117C\_YPR074C YPL232W\_YMR183C   
## 22.4145 19.3079 -102.0513 11.0409   
## YBL087C\_YER117W YGL062W\_YBR218C YIR033W\_YKL020C YMR243C\_YOR316C   
## 32.4728 202.6769 10.4386 0.8279   
## YLR333C\_YGR027C YMR142C\_YDL082W YER102W\_YBL072C YDR438W\_YML018C   
## 70.8043 72.2788 119.1338 -2.3713

gBGC\_MG94\_clock\_summary[2, gBGC.MG94.clock.pair.names] - switched\_gBGC\_MG94\_clock\_summary[2, gBGC.MG94.clock.pair.names]

## YLR406C\_YDL075W YER131W\_YGL189C YDR502C\_YLR180W YML026C\_YDR450W   
## 11.1286 3.5444 17.0925 40.3792   
## YNL301C\_YOL120C YHR106W\_YDR353W YIL057C\_YER067W YPL087W\_YBR183W   
## 60.8599 26.0135 4.8970 -30.2218   
## YNL069C\_YIL133C YDR518W\_YCL043C YGR043C\_YLR354C YDR099W\_YER177W   
## 25.3012 -20.2074 0.4694 15.0554   
## YBR024W\_YBR037C YPL037C\_YDR252W YMR143W\_YDL083C YPR159W\_YGR143W   
## -19.1297 -0.2724 18.5595 -25.9741   
## YJL177W\_YKL180W YJR048W\_YEL039C YBR191W\_YPL079W YER074W\_YIL069C   
## 23.8510 15.2769 41.7603 60.4078   
## YDR418W\_YEL054C YNL049C\_YIL109C YBR117C\_YPR074C YPL232W\_YMR183C   
## 24.8616 14.3727 -100.3477 12.1927   
## YBL087C\_YER117W YGL062W\_YBR218C YIR033W\_YKL020C YMR243C\_YOR316C   
## 37.2922 250.7454 9.8482 0.6895   
## YLR333C\_YGR027C YMR142C\_YDL082W YER102W\_YBL072C YDR438W\_YML018C   
## 71.4786 74.7251 121.0864 -3.1952

Dir\_gBGC\_MG94\_clock\_summary[2, Dir.gBGC.MG94.clock.pair.names] - switched\_Dir\_gBGC\_MG94\_clock\_summary[2, Dir.gBGC.MG94.clock.pair.names]

## YLR406C\_YDL075W YER131W\_YGL189C YDR502C\_YLR180W YML026C\_YDR450W   
## 11.1895 4.1760 17.4857 40.8960   
## YIL057C\_YER067W YPL087W\_YBR183W YNL069C\_YIL133C YDR518W\_YCL043C   
## 6.9150 -31.0718 26.8514 -12.8696   
## YGR043C\_YLR354C YDR099W\_YER177W YBR024W\_YBR037C YMR143W\_YDL083C   
## 0.4992 25.6789 -16.9678 12.9408   
## YPR159W\_YGR143W YJL177W\_YKL180W YJR048W\_YEL039C YER074W\_YIL069C   
## -25.6116 23.8972 16.5297 63.7397   
## YDR418W\_YEL054C YNL049C\_YIL109C YBR117C\_YPR074C YPL232W\_YMR183C   
## 25.4828 6.3203 -98.6073 7.5997   
## YBL087C\_YER117W YGL062W\_YBR218C YIR033W\_YKL020C YMR243C\_YOR316C   
## 38.4093 250.8788 11.8078 -2.3229   
## YMR142C\_YDL082W YDR438W\_YML018C   
## 74.0251 -3.5488

#### Now show lnL increase of IGC from force case

#MG94  
MG94.clock.pair.names <- intersect(intersect(MG94.clock.pair.names, colnames(Force\_MG94\_clock\_summary)), colnames(switched\_Force\_MG94\_clock\_summary))  
lnL.increase.mat <- cbind(MG94\_clock\_summary[2, MG94.clock.pair.names] - Force\_MG94\_clock\_summary[2, MG94.clock.pair.names],   
 switched\_MG94\_clock\_summary[2, MG94.clock.pair.names] - switched\_Force\_MG94\_clock\_summary[2, MG94.clock.pair.names],   
 ((MG94\_clock\_summary[2, MG94.clock.pair.names] - Force\_MG94\_clock\_summary[2, MG94.clock.pair.names])  
 - (switched\_MG94\_clock\_summary[2, MG94.clock.pair.names] - switched\_Force\_MG94\_clock\_summary[2, MG94.clock.pair.names])))  
colnames(lnL.increase.mat) <- c("original lnL increase",   
 "switched lnL increase",   
 "difference")  
lnL.increase.mat

## original lnL increase switched lnL increase difference  
## YLR406C\_YDL075W 12.2697 1.230e+00 11.0394  
## YER131W\_YGL189C 5.3032 2.484e+00 2.8187  
## YDR502C\_YLR180W 20.8969 6.764e+00 14.1334  
## YML026C\_YDR450W 38.0146 4.764e-02 37.9670  
## YNL301C\_YOL120C 60.1298 9.242e-02 60.0374  
## YHR106W\_YDR353W 17.0550 1.044e-01 16.9506  
## YIL057C\_YER067W 5.5910 2.993e+00 2.5981  
## YPL087W\_YBR183W 5.5424 3.333e-01 5.2090  
## YNL069C\_YIL133C 26.9059 5.029e+00 21.8764  
## YDR518W\_YCL043C 15.2060 4.565e+00 10.6412  
## YGR043C\_YLR354C 0.3439 7.662e-01 -0.4223  
## YDR099W\_YER177W 10.3691 -1.109e-02 10.3802  
## YBR024W\_YBR037C 4.9725 3.714e+00 1.2582  
## YPL037C\_YDR252W 4.0145 3.882e-02 3.9756  
## YMR143W\_YDL083C 14.7007 -4.898e-05 14.7007  
## YPR159W\_YGR143W 37.7582 1.426e+01 23.4936  
## YJL177W\_YKL180W 22.9701 9.095e-01 22.0606  
## YJR048W\_YEL039C 13.8928 -1.184e-05 13.8928  
## YBR191W\_YPL079W 35.9336 6.623e-02 35.8674  
## YER074W\_YIL069C 58.9893 -6.510e-05 58.9894  
## YDR418W\_YEL054C 23.5936 1.670e-02 23.5769  
## YNL049C\_YIL109C 19.7419 2.755e+01 -7.8069  
## YBR117C\_YPR074C 0.5267 1.434e+00 -0.9071  
## YPL232W\_YMR183C 13.9632 2.893e+00 11.0699  
## YBL087C\_YER117W 33.4615 7.486e-02 33.3866  
## YGL062W\_YBR218C 202.6739 -8.690e-04 202.6747  
## YIR033W\_YKL020C 26.2294 1.924e+01 6.9933  
## YMR243C\_YOR316C 2.4430 5.690e+00 -3.2470  
## YLR333C\_YGR027C 70.8041 -4.825e-04 70.8046  
## YMR142C\_YDL082W 72.2791 -1.013e-04 72.2792  
## YER102W\_YBL072C 118.8917 2.279e-03 118.8894  
## YDR438W\_YML018C 0.8254 2.585e+00 -1.7596

#### Now show Tau estimate difference

Tau.diff.mat <- cbind(MG94\_clock\_summary["tau", MG94.clock.pair.names],   
 switched\_MG94\_clock\_summary["tau", MG94.clock.pair.names],   
 MG94\_clock\_summary["tau", MG94.clock.pair.names] - switched\_MG94\_clock\_summary["tau", MG94.clock.pair.names],  
 (MG94\_clock\_summary["tau", MG94.clock.pair.names] - switched\_MG94\_clock\_summary["tau", MG94.clock.pair.names]) / MG94\_clock\_summary["tau", MG94.clock.pair.names] \* 100.0  
 )  
colnames(Tau.diff.mat) <- c("Tau from MG94 clock",   
 "Tau from switched MG94 clock",   
 "difference",  
 "difference/MG94 estimate %")  
Tau.diff.mat

## Tau from MG94 clock Tau from switched MG94 clock  
## YLR406C\_YDL075W 2.29282 7.575e-01  
## YER131W\_YGL189C 1.22128 6.442e-01  
## YDR502C\_YLR180W 0.57562 2.655e-01  
## YML026C\_YDR450W 4.73767 1.312e-01  
## YNL301C\_YOL120C 4.35459 1.292e-01  
## YHR106W\_YDR353W 0.29577 3.068e-02  
## YIL057C\_YER067W 0.25787 1.750e-01  
## YPL087W\_YBR183W 0.16311 3.098e-02  
## YNL069C\_YIL133C 1.42802 7.324e-01  
## YDR518W\_YCL043C 0.16913 9.225e-02  
## YGR043C\_YLR354C 0.03187 5.078e-02  
## YDR099W\_YER177W 0.54202 1.080e-03  
## YBR024W\_YBR037C 0.16508 1.090e-01  
## YPL037C\_YDR252W 0.29723 2.953e-02  
## YMR143W\_YDL083C 3.19763 2.395e-05  
## YPR159W\_YGR143W 0.37499 1.976e-01  
## YJL177W\_YKL180W 2.05573 3.570e-01  
## YJR048W\_YEL039C 0.54961 1.362e-06  
## YBR191W\_YPL079W 3.84026 1.449e-01  
## YER074W\_YIL069C 6.03557 9.762e-06  
## YDR418W\_YEL054C 1.67864 2.959e-02  
## YNL049C\_YIL109C 0.17159 2.502e-01  
## YBR117C\_YPR074C 0.03997 5.932e-02  
## YPL232W\_YMR183C 0.28731 1.134e-01  
## YBL087C\_YER117W 3.83445 7.427e-02  
## YGL062W\_YBR218C 1.12985 1.432e-05  
## YIR033W\_YKL020C 0.21889 1.718e-01  
## YMR243C\_YOR316C 0.08832 1.323e-01  
## YLR333C\_YGR027C 3.32810 5.664e-05  
## YMR142C\_YDL082W 4.96847 2.022e-05  
## YER102W\_YBL072C 10.52005 2.358e-02  
## YDR438W\_YML018C 0.05217 1.013e-01  
## difference difference/MG94 estimate %  
## YLR406C\_YDL075W 1.53529 66.96  
## YER131W\_YGL189C 0.57705 47.25  
## YDR502C\_YLR180W 0.31014 53.88  
## YML026C\_YDR450W 4.60649 97.23  
## YNL301C\_YOL120C 4.22539 97.03  
## YHR106W\_YDR353W 0.26510 89.63  
## YIL057C\_YER067W 0.08285 32.13  
## YPL087W\_YBR183W 0.13213 81.01  
## YNL069C\_YIL133C 0.69560 48.71  
## YDR518W\_YCL043C 0.07688 45.45  
## YGR043C\_YLR354C -0.01891 -59.33  
## YDR099W\_YER177W 0.54094 99.80  
## YBR024W\_YBR037C 0.05608 33.97  
## YPL037C\_YDR252W 0.26769 90.06  
## YMR143W\_YDL083C 3.19761 100.00  
## YPR159W\_YGR143W 0.17738 47.30  
## YJL177W\_YKL180W 1.69877 82.64  
## YJR048W\_YEL039C 0.54961 100.00  
## YBR191W\_YPL079W 3.69539 96.23  
## YER074W\_YIL069C 6.03556 100.00  
## YDR418W\_YEL054C 1.64904 98.24  
## YNL049C\_YIL109C -0.07862 -45.82  
## YBR117C\_YPR074C -0.01935 -48.42  
## YPL232W\_YMR183C 0.17396 60.55  
## YBL087C\_YER117W 3.76018 98.06  
## YGL062W\_YBR218C 1.12983 100.00  
## YIR033W\_YKL020C 0.04706 21.50  
## YMR243C\_YOR316C -0.04403 -49.85  
## YLR333C\_YGR027C 3.32804 100.00  
## YMR142C\_YDL082W 4.96845 100.00  
## YER102W\_YBL072C 10.49647 99.78  
## YDR438W\_YML018C -0.04910 -94.11

### 08162015

filtered.pairs <- rownames(read.table("/Users/xji3/Genconv/NewClusterPackRun/Yeast14pairs", row.names = 2))  
lnL.increase.mat[filtered.pairs, ]

## original lnL increase switched lnL increase difference  
## YLR406C\_YDL075W 12.270 1.230e+00 11.039  
## YER131W\_YGL189C 5.303 2.484e+00 2.819  
## YML026C\_YDR450W 38.015 4.764e-02 37.967  
## YNL301C\_YOL120C 60.130 9.242e-02 60.037  
## YNL069C\_YIL133C 26.906 5.029e+00 21.876  
## YMR143W\_YDL083C 14.701 -4.898e-05 14.701  
## YJL177W\_YKL180W 22.970 9.095e-01 22.061  
## YBR191W\_YPL079W 35.934 6.623e-02 35.867  
## YER074W\_YIL069C 58.989 -6.510e-05 58.989  
## YDR418W\_YEL054C 23.594 1.670e-02 23.577  
## YBL087C\_YER117W 33.462 7.486e-02 33.387  
## YLR333C\_YGR027C 70.804 -4.825e-04 70.805  
## YMR142C\_YDL082W 72.279 -1.013e-04 72.279  
## YER102W\_YBL072C 118.892 2.279e-03 118.889

Tau.diff.mat[filtered.pairs, ]

## Tau from MG94 clock Tau from switched MG94 clock  
## YLR406C\_YDL075W 2.293 7.575e-01  
## YER131W\_YGL189C 1.221 6.442e-01  
## YML026C\_YDR450W 4.738 1.312e-01  
## YNL301C\_YOL120C 4.355 1.292e-01  
## YNL069C\_YIL133C 1.428 7.324e-01  
## YMR143W\_YDL083C 3.198 2.395e-05  
## YJL177W\_YKL180W 2.056 3.570e-01  
## YBR191W\_YPL079W 3.840 1.449e-01  
## YER074W\_YIL069C 6.036 9.762e-06  
## YDR418W\_YEL054C 1.679 2.959e-02  
## YBL087C\_YER117W 3.834 7.427e-02  
## YLR333C\_YGR027C 3.328 5.664e-05  
## YMR142C\_YDL082W 4.968 2.022e-05  
## YER102W\_YBL072C 10.520 2.358e-02  
## difference difference/MG94 estimate %  
## YLR406C\_YDL075W 1.5353 66.96  
## YER131W\_YGL189C 0.5770 47.25  
## YML026C\_YDR450W 4.6065 97.23  
## YNL301C\_YOL120C 4.2254 97.03  
## YNL069C\_YIL133C 0.6956 48.71  
## YMR143W\_YDL083C 3.1976 100.00  
## YJL177W\_YKL180W 1.6988 82.64  
## YBR191W\_YPL079W 3.6954 96.23  
## YER074W\_YIL069C 6.0356 100.00  
## YDR418W\_YEL054C 1.6490 98.24  
## YBL087C\_YER117W 3.7602 98.06  
## YLR333C\_YGR027C 3.3280 100.00  
## YMR142C\_YDL082W 4.9685 100.00  
## YER102W\_YBL072C 10.4965 99.78