

Comparison of TMRCA in neutral vs. with background selection models.

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Load data

```
require(tidyr)
```

```
## Loading required package: tidyr
```

```
get.data <- function(sumfun = var, name = "Variance of TMRCA") {  
  var1000kb.n <- numeric(10)  
  var200kb.n <- numeric(10)  
  var50kb.n <- numeric(10)  
  var1000kb.s <- numeric(10)  
  var200kb.s <- numeric(10)  
  var50kb.s <- numeric(10)  
  for (i in 1:10) {  
    d <- read.csv(paste("dm2L_neutral_rep", i, "_w1000000.csv", sep = ""), header = TRUE)  
    var1000kb.n[i] <- sumfun(d$AverageTmrca)  
    d <- read.csv(paste("dm2L_neutral_rep", i, "_w200000.csv", sep = ""), header = TRUE)  
    var200kb.n[i] <- sumfun(d$AverageTmrca)  
    d <- read.csv(paste("dm2L_neutral_rep", i, "_w50000.csv", sep = ""), header = TRUE)  
    var50kb.n[i] <- sumfun(d$AverageTmrca)  
    d <- read.csv(paste("dm2L_bgs_rep", i, "_w1000000.csv", sep = ""), header = TRUE)  
    var1000kb.s[i] <- sumfun(d$AverageTmrca)  
    d <- read.csv(paste("dm2L_bgs_rep", i, "_w200000.csv", sep = ""), header = TRUE)  
    var200kb.s[i] <- sumfun(d$AverageTmrca)  
    d <- read.csv(paste("dm2L_bgs_rep", i, "_w50000.csv", sep = ""), header = TRUE)  
    var50kb.s[i] <- sumfun(d$AverageTmrca)  
  }  
  d <- data.frame(Model = rep(c("Neutral", "BgS"), each = 10),  
                  W1000kb = c(var1000kb.n, var1000kb.s),  
                  W200kb = c(var200kb.n, var200kb.s),  
                  W50kb = c(var50kb.n, var50kb.s))  
  d <- d %>% pivot_longer(cols = c(W1000kb, W200kb, W50kb),  
                        names_to = "Window size",  
                        values_to = name)  
  return(d)  
}  
dvar <- get.data(var)  
dmean <- get.data(mean, name = "Mean of TMRCA")  
dcv <- get.data(function(x) sd(x)/mean(x), name = "CV of TMRCA")
```

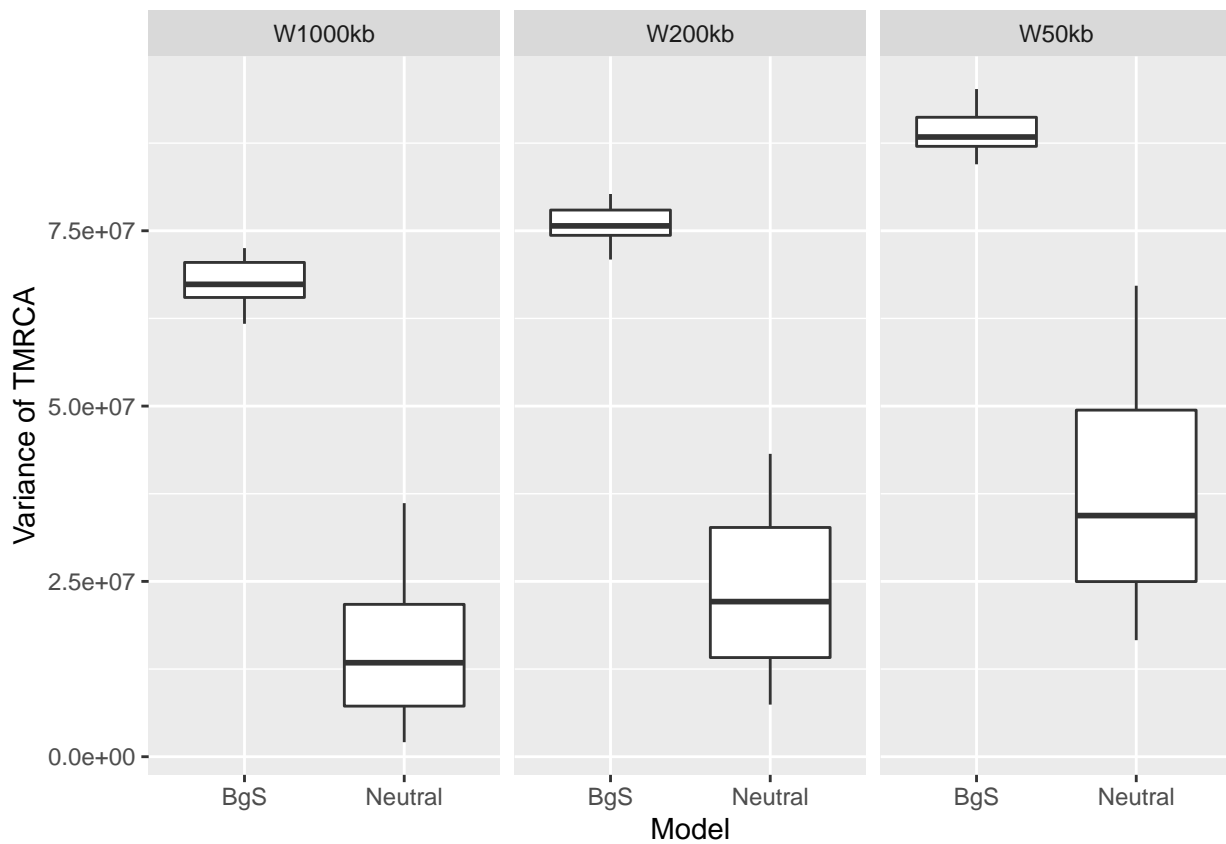
Plot results

Variance:

```
require(ggplot2)
```

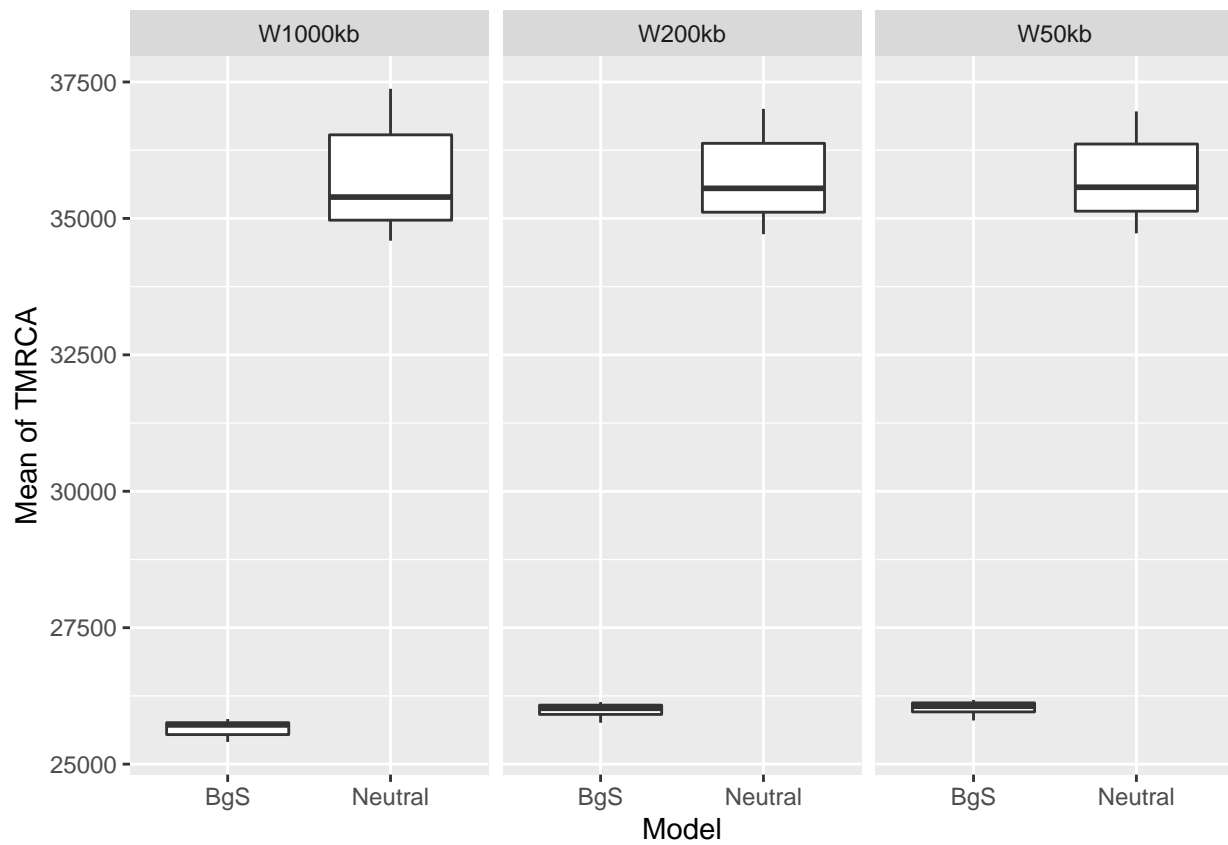
```
## Loading required package: ggplot2
```

```
p.var <- ggplot(dvar, aes(x = Model, y = `Variance of TMRCA`)) +  
  geom_boxplot() + facet_grid(~ `Window size`)  
p.var
```



Mean:

```
p.mean <- ggplot(dmean, aes(x = Model, y = `Mean of TMRCA`)) +  
  geom_boxplot() + facet_grid(~ `Window size`)  
p.mean
```



Coefficient of Variation:

```
p.cv <- ggplot(dcv, aes(x = Model, y = `CV of TMRCA`)) +
  geom_boxplot() + facet_grid(~ `Window size`)
p.cv
```

