

# fit\_betadisp

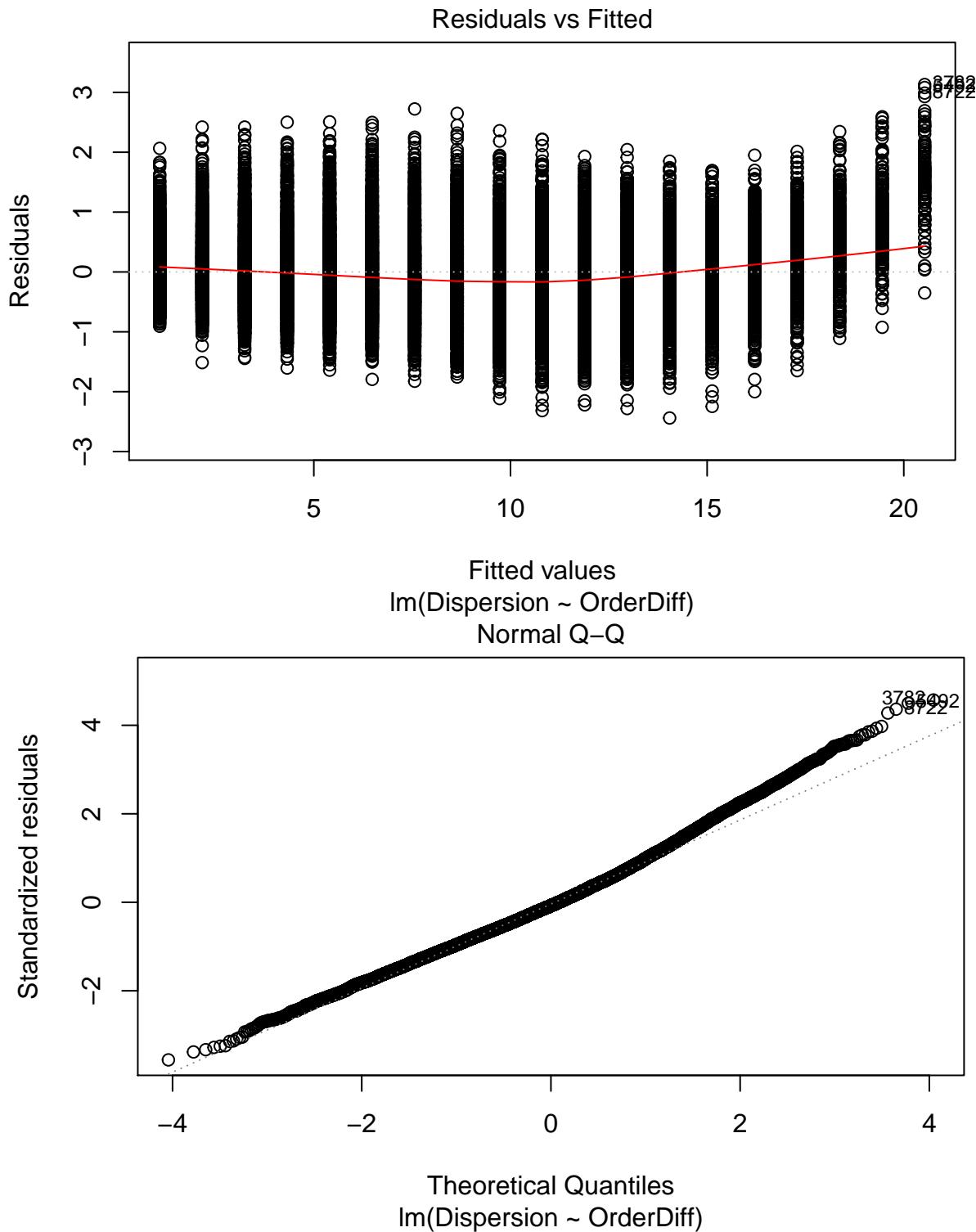
Ali Taqi

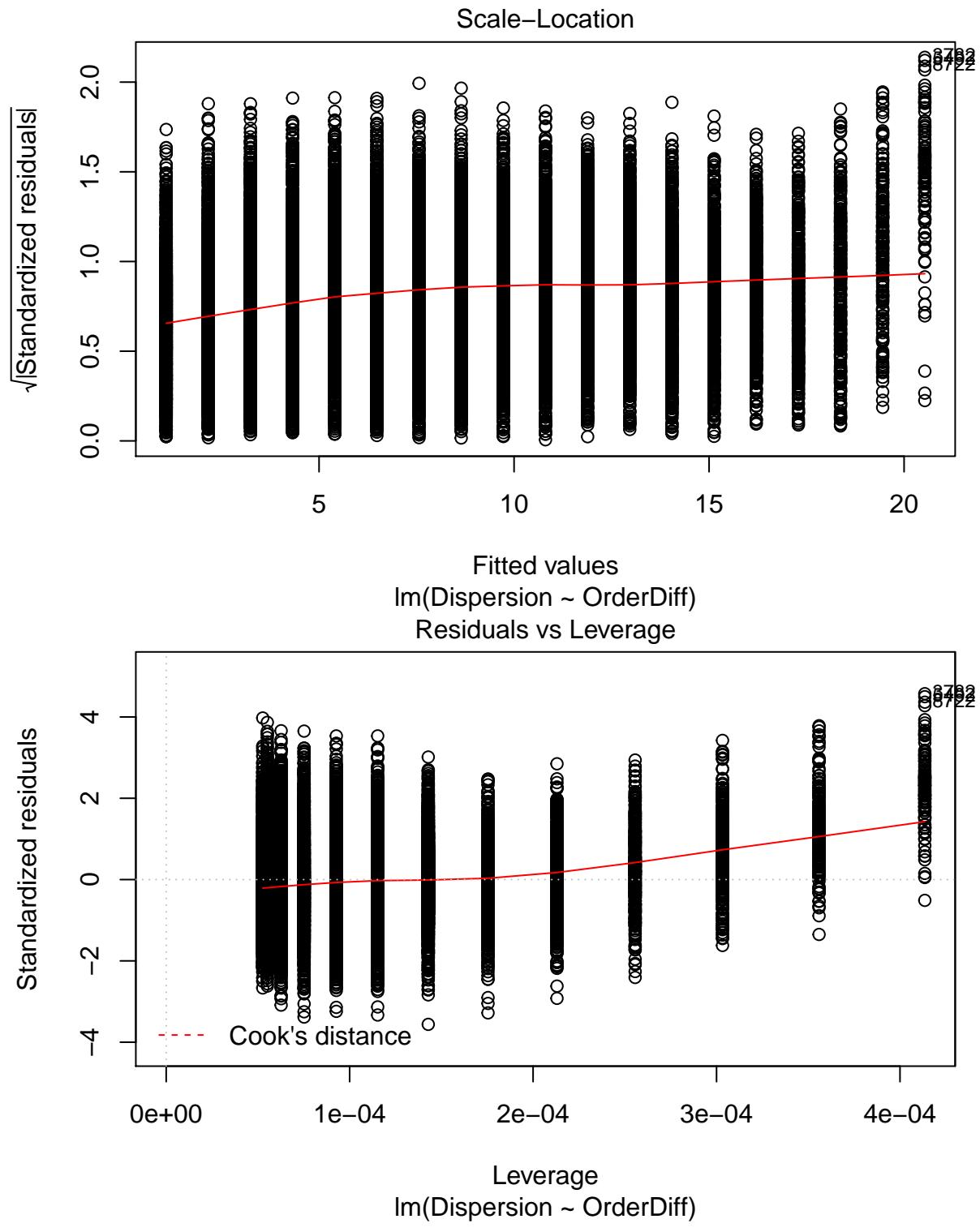
3/7/2021

```
ens <- RME_beta(N = 20, beta = 4, size = 100)
#ens %>% spectrum.scatterplot()
disps_ens <- ens %>% dispersion()

fit_disp <- lm(Dispersion ~ OrderDiff, data = disps_ens)
summary(fit_disp)

##
## Call:
## lm(formula = Dispersion ~ OrderDiff, data = disps_ens)
##
## Residuals:
##       Min     1Q   Median     3Q    Max 
## -2.43984 -0.46602 -0.05241  0.41178  3.13155 
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)    
## (Intercept) -1.404e-07 9.075e-03    0.0        1    
## OrderDiff    1.081e+00 1.085e-03   996.3    <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1 
##
## Residual standard error: 0.6851 on 18998 degrees of freedom
## Multiple R-squared:  0.9812, Adjusted R-squared:  0.9812 
## F-statistic: 9.926e+05 on 1 and 18998 DF,  p-value: < 2.2e-16
plot(fit_disp)
```





```
res <- fit_disp$residuals
disps_ens <- cbind(disps_ens, res)
ggplot() + geom_point(data = disps_ens, mapping = aes(Dispersion, res))
```

