

```
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Rank: 65/81
## R-sq.(adj) =  0.949   Deviance explained = 95.6%
## GCV = 0.0075709   Scale est. = 0.0064918   n = 177
```

Results for the main text:

```
res = summary(bm)$p.table
res = cbind(res,Factor=10^(res[, "Estimate"]))
# Effect of light after exponentiating the coefficient to get multiplicative factor
print.model.summary(res[2,5],res[2,3],res[2,4],units="x",effect.word="factor")
```

```
## [1] "factor = 1.4x, t = 4.53, P < 0.0001"
```

```
# Interaction - 2013
```

```
print.model.summary(10^(res[7,1]+res[2,1]),res[7,3],res[7,4],units="x",
  effect.word="factor with interaction")
```

```
## [1] "factor with interaction = 1.1x, t = -2.30, P = 0.0231"
```

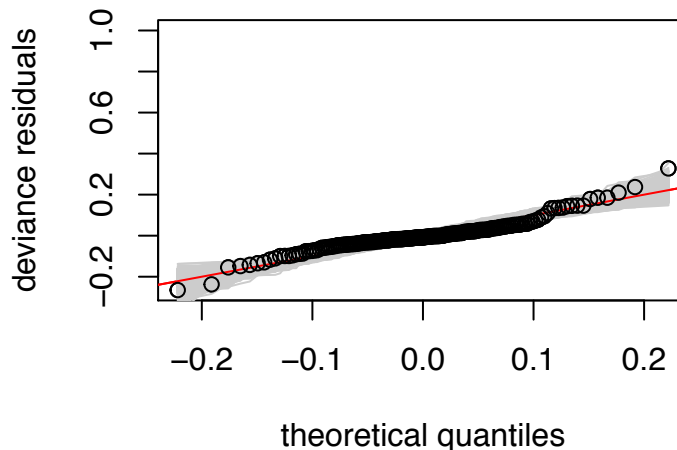
```
# Interaction - 2015
```

```
print.model.summary(10^(res[8,1]+res[2,1]),res[8,3],res[8,4],units="x",
  effect.word="factor with interaction")
```

```
## [1] "factor with interaction = 2.9x, t = 6.88, P < 0.0001"
```

No strong evidence of any deviation; all points within the bounds of the simulated datasets.

```
qq.gam(bm,rep=1000,pch=1,level=1)
```



Although the variance increases, this does not affect the regression coefficients; it may make the test more conservative (i.e. more difficult to detect a statistical difference between illuminated and dark periods or between years).

```
plot.lme(bm,type=c("p","smooth"),col.line="black")
```