

Vignette for package HarmonicRegression

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Example data generation

This is a first minimal introduction to the usage of this package. First, we generate some test data:

```
times <- seq(0, 46, 2)

amplitudes <- seq(0, 5, length.out=10)
means <- 1:10
data <- matrix(rnorm(24*10), nrow=10)
data <- sweep(data, 1, means, "+")

rhythms <- matrix(rep(cos(times*pi/12), 10), nrow=10,
                  byrow=T)
rhythms <- sweep(rhythms, 1, amplitudes, "*")

rhythm.data <- data + rhythms
```

Harmonic regression

These synthetic data are now easily analyzed:

```
library(HarmonicRegression)

hreg <- harmonic.regression(t(rhythm.data), times)

plot(amplitudes/means, hreg$pars$amp)
abline(0, 1)
```

