

NMRpackage

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This is an example of how one writes a *vignette* for an R package. Vignettes are typically Sweave documents that get processed and checked during R’s “build” and “check” invocations.

Sweave can be used to “weave” in R code. For example, these commands will be executed and any output (none in this case) would be interspersed:

```
> require(NMRpackage)
> f <- system.file("sampledata", "degas.txt", package="NMRpackage")
> a <- readNMRData(f)
> b <- createZooObjects(a)
> m <- createStateMatrix(b)
```

The above uses the `pkgzoo` package, and creates a list, `b`, of `zoo` objects (irregular time series) and a multivariate `zoo` object, `m`, which can be accessed like a matrix.

Our package provides a simple plotting function, `nmrTsPlot`. For plotting within Sweave, one can include the code within a float (Figure 1).

Tables can be made in \LaTeX , but here we want to convert an R object into a table. The `xtable` package will make this easy. First, we create a table of times that mole rat i is in the same bubble as mole rat j .

This code is technical, and we spare the reader by using `echo=FALSE`.

Here we print the table. The `print` method for `xtable` objects will produce \LaTeX code by default, so we inform Sweave that our output is of type “tex” and not R code using `results=tex`.

```
> out <- nmrTsPlot(m[, 1:4])  
> print(out)
```

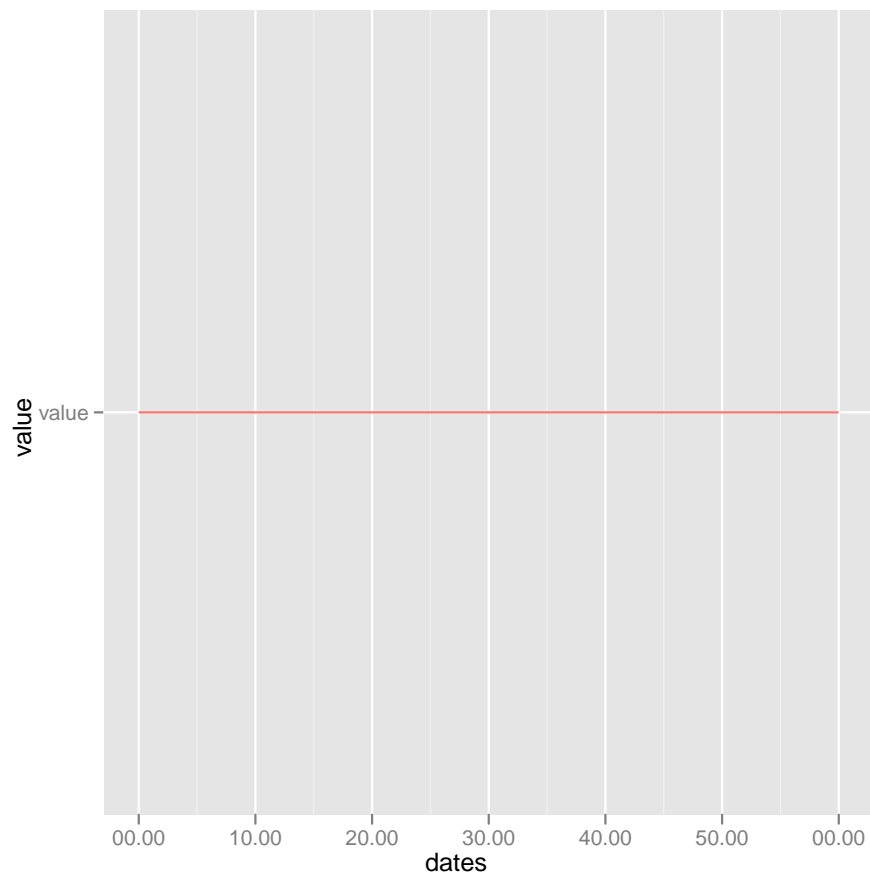


Figure 1: Time series plot of first 4 mole rats (`nmrTsPlot(m[, 1:4])`)

	1	2	3	4	5	6	7	8
1	-	263	184	897	10	329	10	38
2	263	-	6	100	0	0	0	0
3	184	6	-	0	112	112	112	112
4	897	100	0	-	0	716	14	28
5	10	0	112	0	-	7485	3722	10279
6	329	0	112	716	7485	-	3722	7318
7	10	0	112	14	3722	3722	-	3722
8	38	0	112	28	10279	7318	3722	-

Table 1: Number of events mole rat i is in same chamber as mole rat j . Note that mole rats 1 and 2 share time, mole rats 1 and 6 share time, but not mole rats 2 and 6