library(INLA); setwd("C://R files");

# column labels time (1,..,200), and y

D <- read.table("simdata.txt",header=T)

f1 <- y ~ f(time,model="rw1",param=c(1,0.001))

m1=inla(f1,family="gaussian",control.predictor = list( compute=T),

data=D,control.family=list(param=c(1,0.001)))

prec.marg = m1$marginals.hyperpar$"Precision for time"

pm1 <- inla.expectation(function(x) 1/x, prec.marg)

pm2 <- inla.expectation(function(x) (1/x)^2, prec.marg)

psd = sqrt(pm2 - pm1^2)

# posterior mean and sd of signal variance

print(c(mean=pm1, sd=psd))

R1 <- m1$summary.random

F1 <- m1$summary.fitted.values