

Getting started with RLumCarlo

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Figure 1

```
library(RLumCarlo)

## Loading required package: magrittr
times <- seq(0, 5000)

## Run MC simulation

run_MC_ISO(E = 1.2,
           s = 1e10,
           T = 200,
           rho = 0.007,
           times = times) %>%
  calc_RLumCarlo() %>%
  plot_RLumCarlo(norm = T, legend = T)
grid()
```

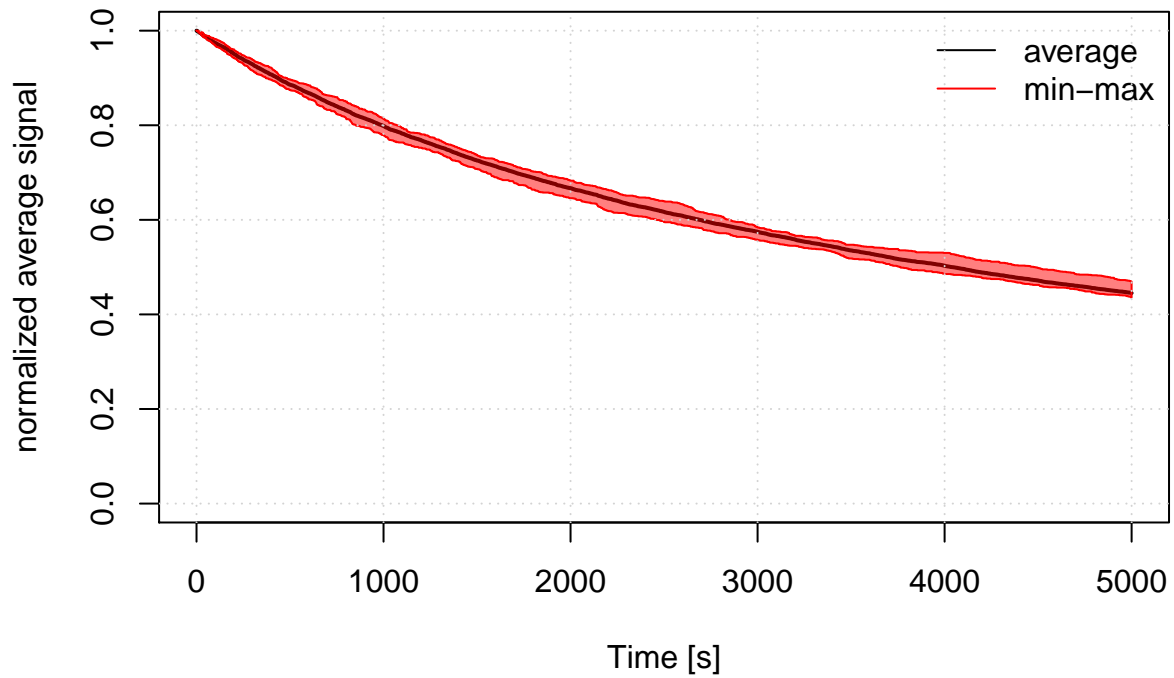


Figure 2

```
times <- seq(0, 1000)

## Run MC simulation

run_MC_CW_IRSL(A = 0.12, rho = 0.003, times = times) %>%
calc_RLumCarlo() %>% plot_RLumCarlo(norm = T, legend = T)

run_MC_CW_IRSL(A = 0.21, rho = 0.003, times = times) %>%
calc_RLumCarlo() %>% plot_RLumCarlo(norm = T, add = T)
grid()
```

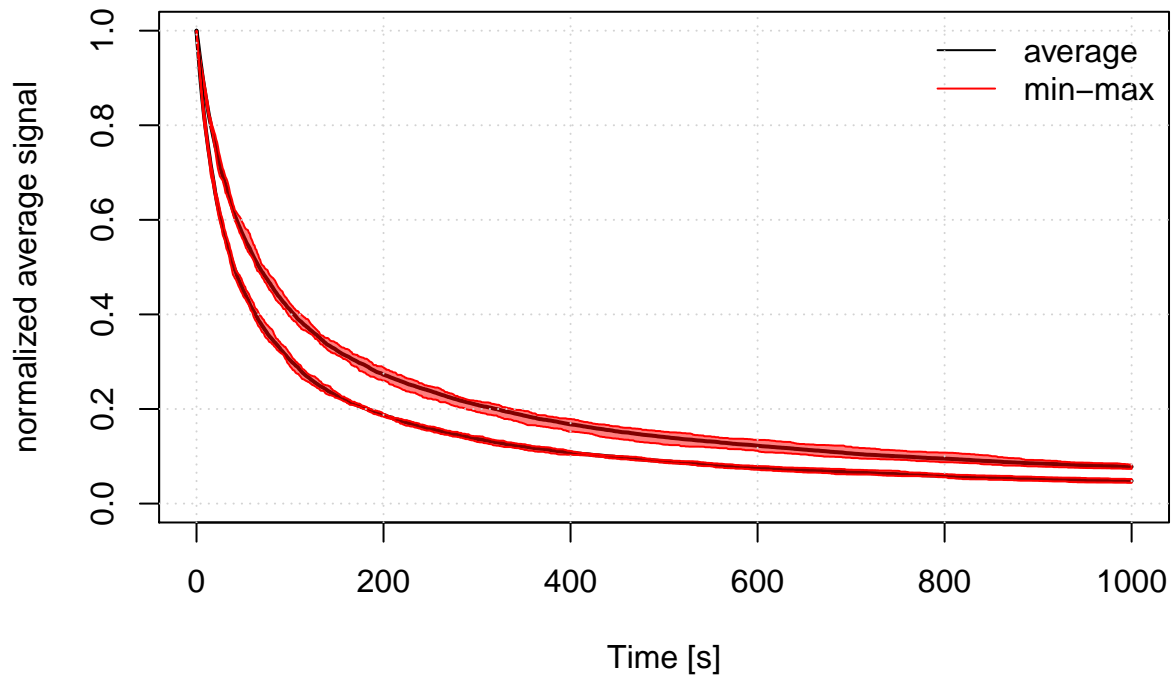


Figure 3

```
s <- 3.5e12
rho <- 0.015
E <- 1.45

times <- seq(100, 450) # time = temperature

results_rc0 <- run_MC_TL(s=s, E = E, rho = rho, r_c = 0, times = times) %>%
  calc_RLumCarlo()

results_rc07 <- run_MC_TL(s=s, E = E, rho = rho, r_c = 0.7, times = times) %>%
  calc_RLumCarlo()

results_rc077 <- run_MC_TL(s=s, E = E, rho = rho, r_c = 0.77, times = times) %>%
  calc_RLumCarlo()

results_rc086 <- run_MC_TL(s=s, E = E, rho = rho, r_c = 0.86, times = times) %>%
  calc_RLumCarlo()
```

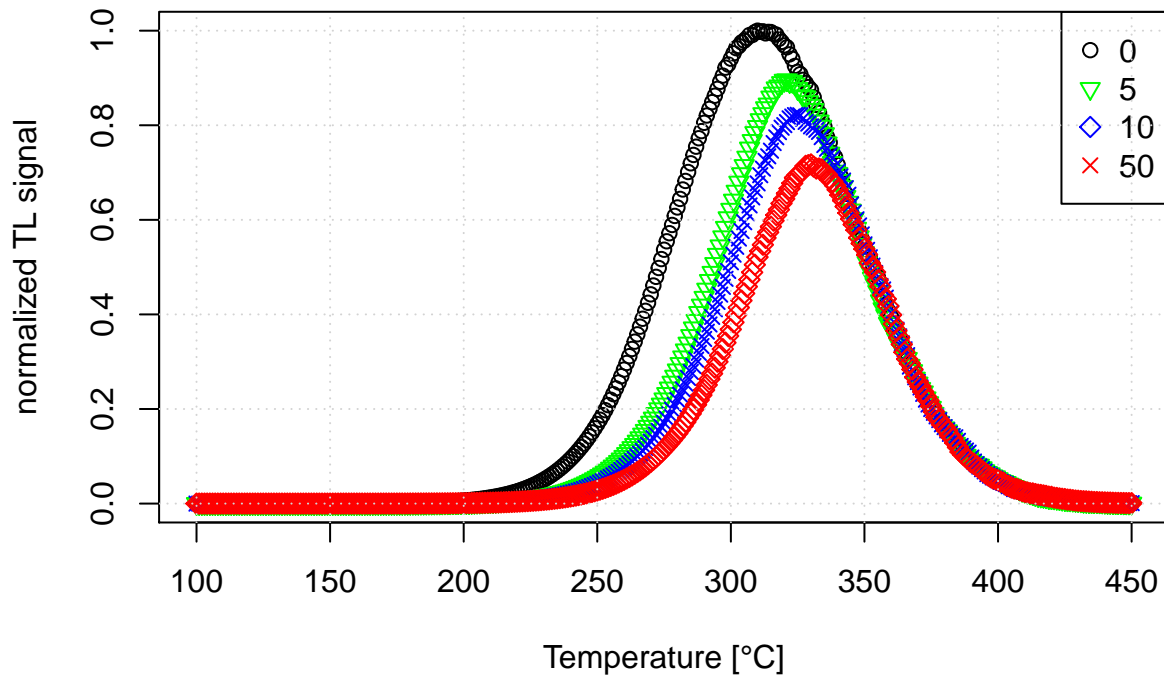


Figure 4

```
s <- 3.5e12
rho <- 0.015
E <- 1.45

times <- seq(200, 500) # time = temperature

run_MC_TL(s=s, E = E, rho = rho, r_c = 0.85, times = times) %>%
  calc_RLumCarlo() %>% plot_RLumCarlo(legend = T)

run_MC_TL(s=s, E = E, rho = rho, r_c = 1.13, times = times) %>%
  calc_RLumCarlo() %>% plot_RLumCarlo(add = T)

run_MC_TL(s=s, E = E, rho = rho, r_c = 1.3, times = times) %>%
  calc_RLumCarlo() %>% plot_RLumCarlo(add = T)

grid()
```

