Getting started with RLumCarlo

Johannes Friedrich

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Figure 1

```
library(RLumCarlo)

times <- seq(0, 500)

## Run MC simulation

run_MC_ISO(A = 0.20,
           rho = 0.007,
           times = times) %>%
  calc_RLumCarlo() %>%
    plot_RLumCarlo(norm = T, legend = T)
grid()
```

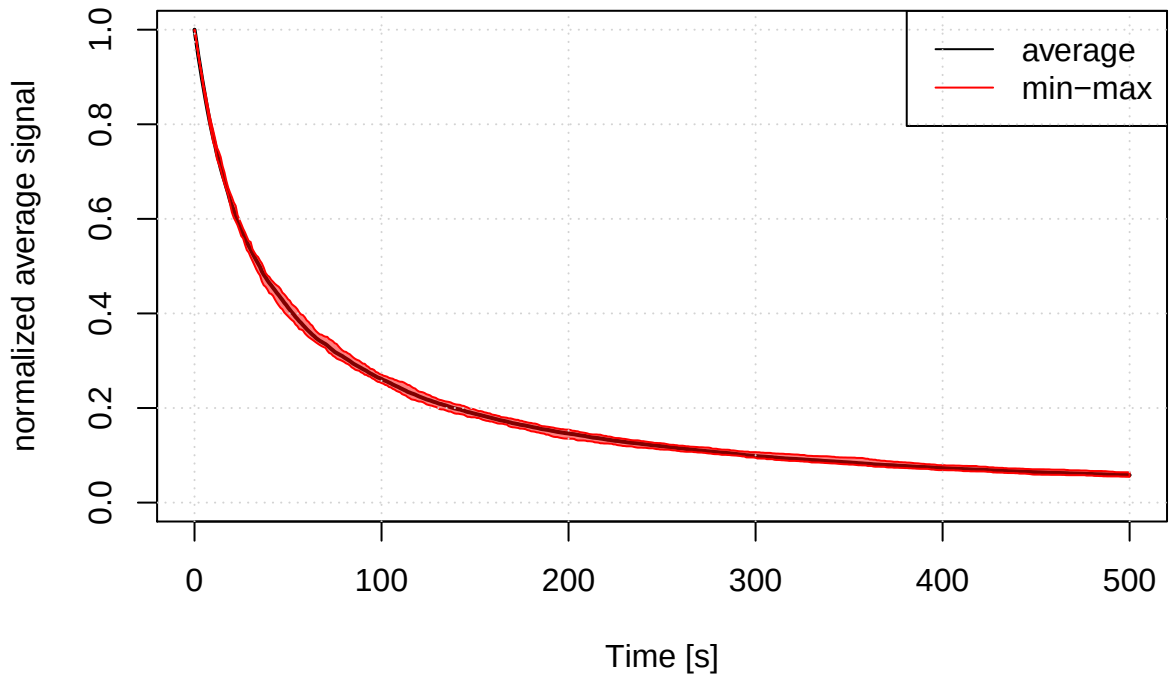


Figure 2

```
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()
```

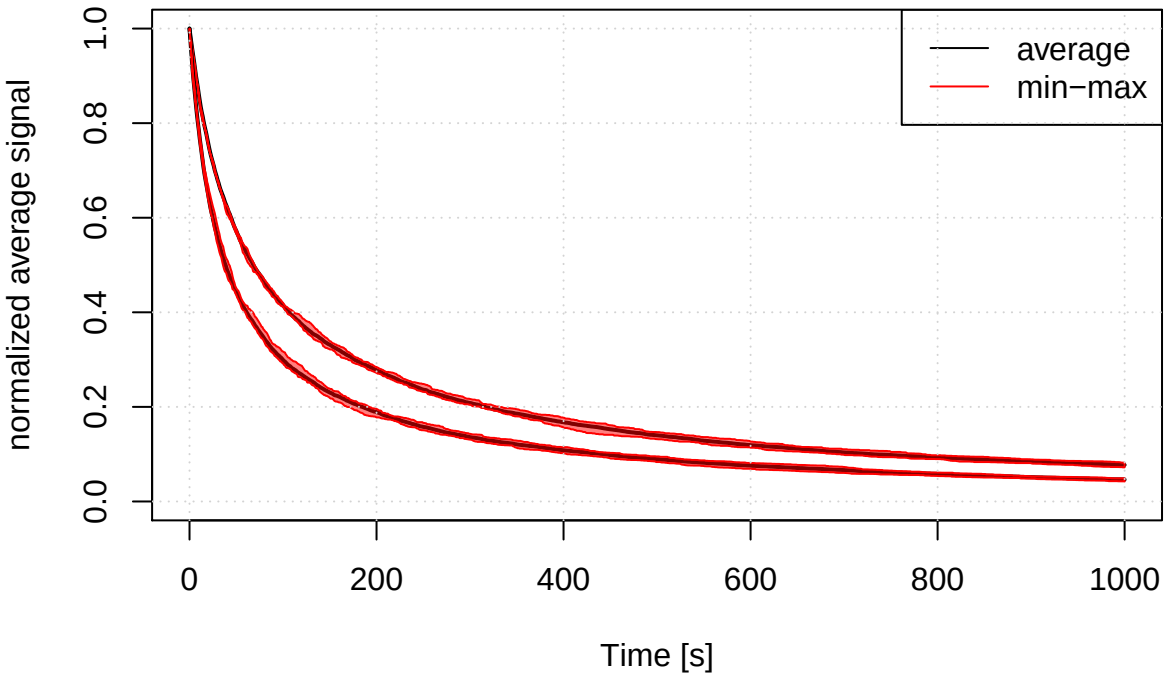


Figure 3

```
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()
```

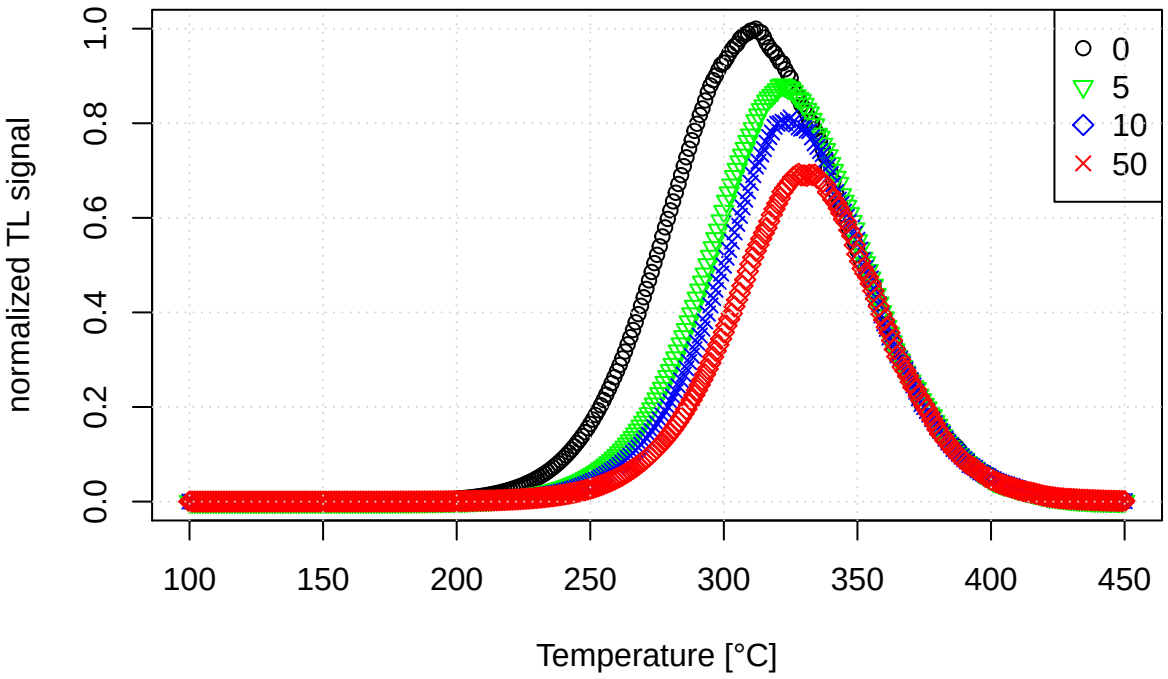
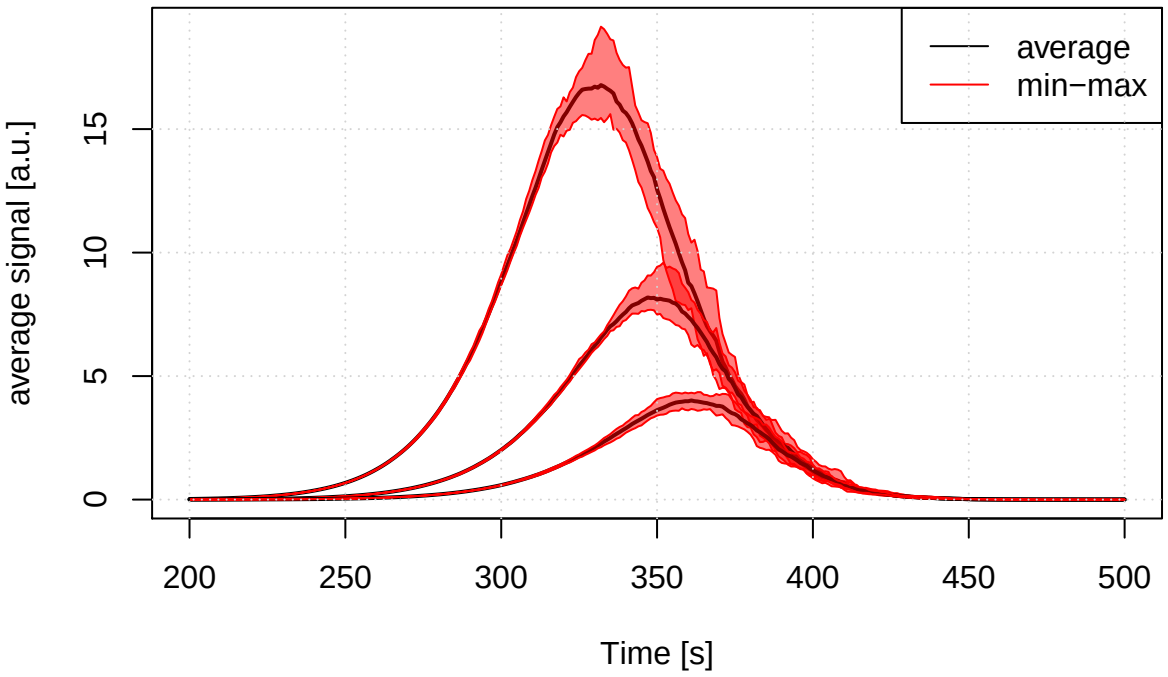


Figure 4

```
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()
```


average
min−max
average signal [a.u.]
0
5
10
15
200
250
300
350
400
450
500
Time [s]