

$i := 0..25$      $N_0 := 26$

$\Delta t_i :=$   $\left( \begin{array}{c} 130 \\ 136 \\ 141 \\ 148 \\ 154 \\ 163 \\ 170 \\ 180 \\ 190 \\ 203 \\ 214 \\ 228 \\ 247 \\ 267 \\ 290 \\ 316 \\ 350 \\ 391 \\ 444 \\ 513 \\ 606 \\ 741 \\ 950 \\ 1330 \\ 2222 \\ 6660 \end{array} \right)$

$$tx_i := \sum_{i1=0}^i \Delta t_{i1}$$

$$f_i := \frac{1}{N_0 \cdot \Delta t_i}$$

$tx_i =$

130
266
407
555
709
872
$1.042 \cdot 10^3$
$1.222 \cdot 10^3$
$1.412 \cdot 10^3$
$1.615 \cdot 10^3$
$1.829 \cdot 10^3$
$2.057 \cdot 10^3$
$2.304 \cdot 10^3$
$2.571 \cdot 10^3$
$2.861 \cdot 10^3$
...

$f_i =$

$2.959 \cdot 10^{-4}$
$2.828 \cdot 10^{-4}$
$2.728 \cdot 10^{-4}$
$2.599 \cdot 10^{-4}$
$2.498 \cdot 10^{-4}$
$2.36 \cdot 10^{-4}$
$2.262 \cdot 10^{-4}$
$2.137 \cdot 10^{-4}$
$2.024 \cdot 10^{-4}$
$1.895 \cdot 10^{-4}$
$1.797 \cdot 10^{-4}$
$1.687 \cdot 10^{-4}$
$1.557 \cdot 10^{-4}$
$1.441 \cdot 10^{-4}$
$1.326 \cdot 10^{-4}$
...

$$F(tx, \lambda) := \lambda \cdot e^{-\lambda \cdot tx}$$

$$SSE(\lambda) := \sum_i (f_i - F(tx_i, \lambda))^2$$

$$\lambda := 0.0002$$

Given

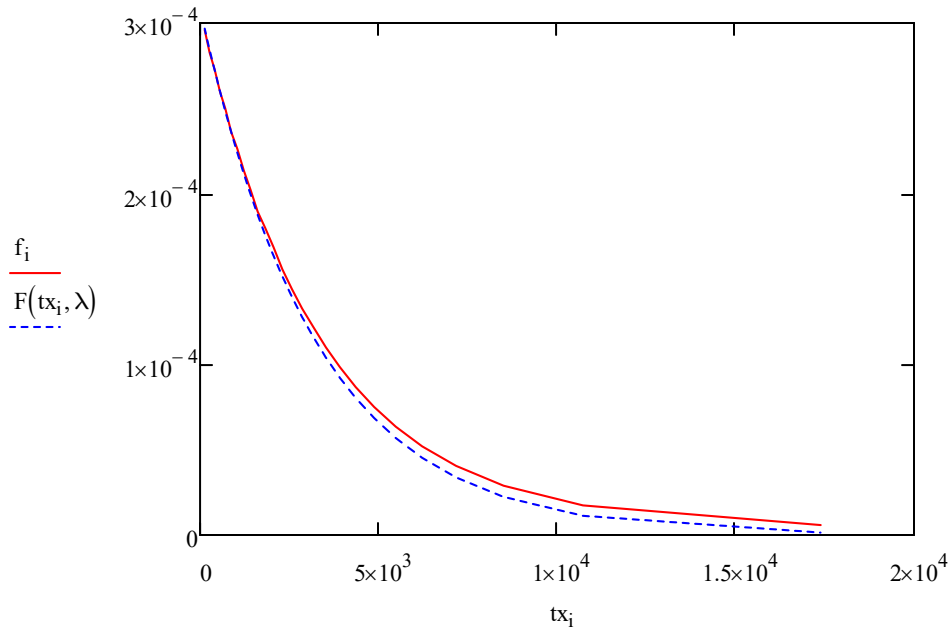
$$l = 1$$

$$SSE(\lambda) = 0$$

$$\lambda := \text{Minerr}(\lambda)$$

$$\lambda = 3.088 \times 10^{-4}$$

$$\frac{SSE(\lambda)}{N_0 - 1} = 2.229 \times 10^{-11}$$



$$\alpha := 0.1$$

$$qchisq\left(\frac{\alpha}{2}, 2 \cdot N_0\right) = 36.437 \quad qchisq\left(1 - \frac{\alpha}{2}, 2 \cdot N_0\right) = 69.832 \quad pchisq(0.0605, 1) = 0.194$$

$$\lambda_n := qchisq\left(\frac{\alpha}{2}, 2 \cdot N_0\right) \cdot \frac{\lambda}{2 \cdot (N_0 - 1)} \quad \lambda_B := \frac{\lambda \cdot qchisq\left(1 - \frac{\alpha}{2}, 2 \cdot N_0\right)}{2 \cdot (N_0 - 1)}$$

$$T_{cp} := \frac{1}{\lambda} \quad T_B := \frac{1}{\lambda_n} \quad T_n := \frac{1}{\lambda_B}$$

$$\lambda_n = 0.0002250564 \quad \lambda = 3.088 \times 10^{-4} \quad \lambda_B = 4.313 \times 10^{-4}$$

$$T_n = 2.318 \times 10^3 \quad T_{cp} = 3.238 \times 10^3 \quad T_B = 4.443 \times 10^3$$

$$T_{cp1} := \text{mean}(tx) \quad \sigma := \text{stdev}(tx) \quad \frac{\sigma}{T_{cp1}} = 1.042$$

$$T_{cp1} = 3.661 \times 10^3 \quad \sigma = 3.815 \times 10^3$$

$$\lambda_1 := \frac{1}{T_{cp1}}$$

$$\lambda_1 = 2.731 \times 10^{-4}$$

$$fff(tx) := \lambda_1 \cdot e^{-\lambda_1 \cdot tx}$$

