$i := 0..25 \qquad N_0 := 26$

$$\Delta tt := \begin{pmatrix} 130 \\ 136 \\ 141 \\ 148 \\ 154 \\ 163 \\ 170 \\ 180 \\ 190 \\ 203 \\ 214 \\ 228 \\ 247 \\ 267 \\ 290 \\ 316 \\ 350 \\ 391 \\ 444 \\ 513 \\ 606 \\ 741 \\ 950 \\ 1330 \\ 2222 \\ 6660 \end{pmatrix}$$

$$f_i := \frac{1}{N_0 \cdot \Delta tt_i} \qquad tx_i := \sum_{i1=0}^{i} \Delta tt_{i1}$$

$tx_i =$

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

$f_i =$

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

$$F(tx, m, \sigma) := \frac{1}{\sqrt{2 \cdot \pi} \cdot \sigma} \cdot e^{\left[\frac{-(tx-m)^2}{2(\sigma)^2}\right]}$$

$$SSE(m, \sigma) := \sum_i \left(f_i - F\left(tx_i, m, \sigma\right)\right)^2$$

$m := 6000$ $\sigma := 6000$

Given

$SSE(m, \sigma) = 0$

$$\begin{pmatrix} m \\ \sigma \end{pmatrix} := \mathrm{Minerr}(m, \sigma)$$

$Tcp := \mathrm{mean}(tx)$

$m = 804.494$

$\sigma = 1.679 \times 10^{3}$

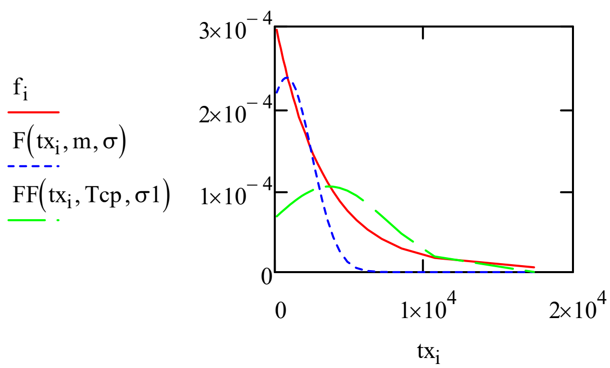
$\frac{SSE(m,\sigma)}{N_0 - 1} = 1.467 \times 10^{-9}$

$\sigma 1 := stdev(tx)$

$\sigma 1 = 3.815 \times 10^{3}$

25

$FF(tx, Tcp, \sigma 1) := \frac{1}{\sqrt{2 \cdot \pi} \cdot \sigma 1} \cdot e^{\left[\frac{-(tx - Tcp)^2}{2(\sigma 1)^2}\right]}$



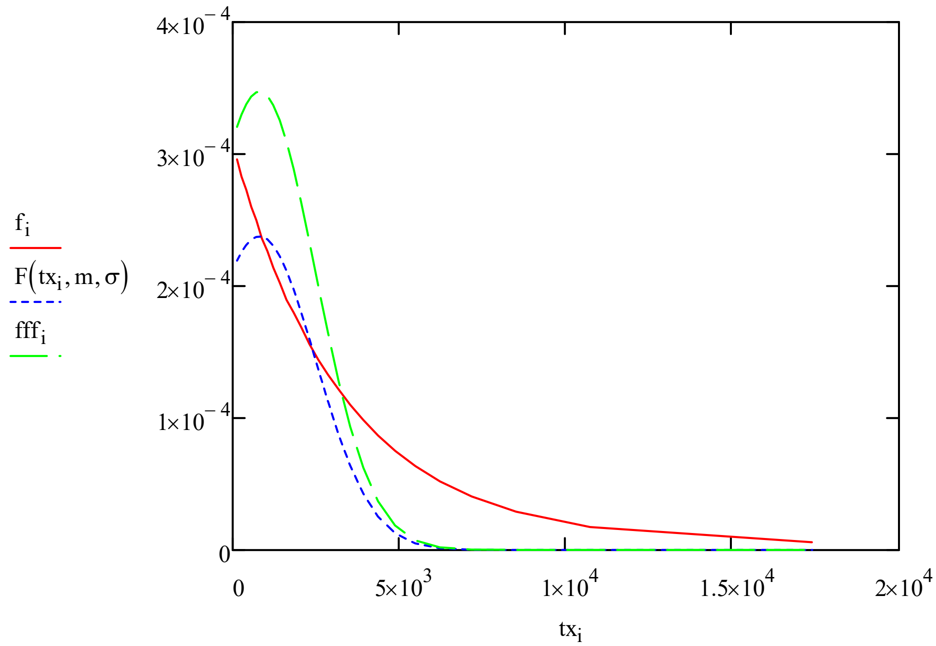
$$c0 := \frac{1}{\int_0^{\infty} \frac{e^{-\frac{(m-tx)^2}{2\cdot\sigma^2}}}{\sqrt{2\cdot\pi}\cdot\sigma}\, dtx}$$

$c0 = 1.462$

$$Tcp2 := c0 \cdot \int_0^{\infty} tx \cdot \frac{e^{-\frac{(m-tx)^2}{2\cdot\sigma^2}}}{\sqrt{2\cdot\pi}\cdot\sigma}\,dtx \qquad tcp2 := m + c0 \cdot e^{-\frac{(m)^2}{2\cdot\sigma^2}} \cdot \frac{\sigma}{\sqrt{2\cdot\pi}} = 1.677 \times 10^3$$

$$Tcp2 = 1.677 \times 10^3 \qquad tcp2 = 1.677 \times 10^3$$

$$fff := c0 \cdot \frac{e^{-\frac{(m-tx)^2}{2\cdot\sigma^2}}}{\sqrt{2\cdot\pi}\cdot\sigma}$$



$\alpha := 0.9$

$qt(\alpha, N_0 - 1) = 1.316 \qquad qt(1 - \alpha, N_0 - 1) = -1.316$

$$Tn := Tcp - qt(\alpha, N_0 - 1) \cdot \frac{\sigma}{\sqrt{N_0}}$$

$$Tв := Tcp + qt(\alpha, N_0 - 1) \cdot \frac{\sigma}{\sqrt{N_0}}$$

$Tn = 3.228 \times 10^3$ $Tcp = 3.661 \times 10^3$ $Tв = 4.095 \times 10^3$

$$pnorm(tx_i, m, \sigma) - \frac{i-1}{N_0} =$$

	0
0	0.382
1	0.374
2	0.368
3	0.364
4	0.362
5	0.362
6	0.364
7	0.367
8	0.372
9	0.378
10	0.383
11	0.388
12	0.391
13	0.392
14	0.39
15	...

$$\frac{i}{N_0} - pnorm(tx_i, m, \sigma) =$$

-0.344
-0.336
-0.329
-0.326
-0.323
-0.324
-0.325
-0.329
-0.334
-0.339
-0.345
-0.349
-0.353
-0.354
-0.351
...

$$\sqrt{N_0} \cdot 0.392 = 1.999$$