

LnRosso model equation is:

- when $t \leq \text{mean}(\lambda)$

$$\ln(N_t) = \ln(N_0)$$

- otherwise

$$\ln(N_t) = \ln(N_{max}) - \ln(1 + A \times \exp(B))$$

where:

$$A = \exp[\ln(N_{max}) - \ln(N_0)] - 1$$

$$B = -\mu_{max} \times (t - \lambda)$$

t is time and \ln is natural logarithm. The parameters to estimate are μ_{max} , λ , $\ln(N_0)$ and $\ln(N_{max})$.

The noisy output is defined as:

$$\ln(N_t) = \mathcal{N}(\ln(N_t), \%noise)$$

i.e random number from the normal distribution with mean parameter $\ln(N_t)$ and standard deviation parameter $\%noise$.

Example of LnRosso curve

Time unit is hour. Maximal time is 500h.

$\mu_{max} = 0.05$, $\lambda = 40$, $\ln(N_0) = 5.4$, $\ln(N_{max}) = 20$.

