Topological Mass Fit for Leptons

We hypothesize the mass of the n-th lepton is given by the topological formula:

$$S(n) = An^p - Bn \log n \quad \text{with } p = 6.96$$

Fit to Muon and Tau

Using:

$$S(2) = 105.658 \text{ MeV}$$
$$S(3) = 1776.86 \text{ MeV}$$

we solve for constants A and B:

$$A = 0.849014, \quad B = 0.031823$$

Prediction for Electron (n = 1)

Predicted mass:

$$S(1) = 0.849014 \text{ MeV}$$

Actual mass:

$$m_e = 0.511 \text{ MeV}$$

Difference:

$$\Delta m = m_e - S(1) = -0.338014 \text{ MeV}$$

This indicates a significant deviation for the electron, supporting the hypothesis that its mass arises from a different mechanism (e.g. electromagnetic self-energy), while the heavier generations follow the topological scaling.