

Text S4: The genomic rate of *abortion* of ribosomes has power law decay

Measured ribosome density profile appears linear in a log-log graph. Namely the in ribosomal density in the x site is $C_1 \cdot x^{-\alpha_{real}}$ where $\alpha_{real} = 0.158$ (Figure 4B); our model also predicts a linear line in a log-log graph but with a smaller slope: the genomic ribosomal density in the x site is $C_2 \cdot x^{-\alpha_{RFM}}$ where $\alpha_{RFM} = 0.1$ (Figure 4B). These results may suggest that an additional factor $C_2 \cdot x^{-\alpha_{ABR}}$ with $\alpha_{ABR} = 0.058$ should be added to represent other phenomena such as the genomic rate of *abortion* of ribosomes.