

$$P(\nu_{\mu} \rightarrow \nu_e) = \sin^2(2\theta) \sin^2 \left(1.27 \frac{\Delta m^2 [\text{eV}^2] L [\text{m}]}{E_{\nu} [\text{MeV}]} \right)$$

$$P(\nu_{\mu} \rightarrow \nu_{\mu}) = 1 - \sin^2(2\theta) \sin^2 \left(1.27 \frac{\Delta m^2 L}{E_{\nu}} \right)$$