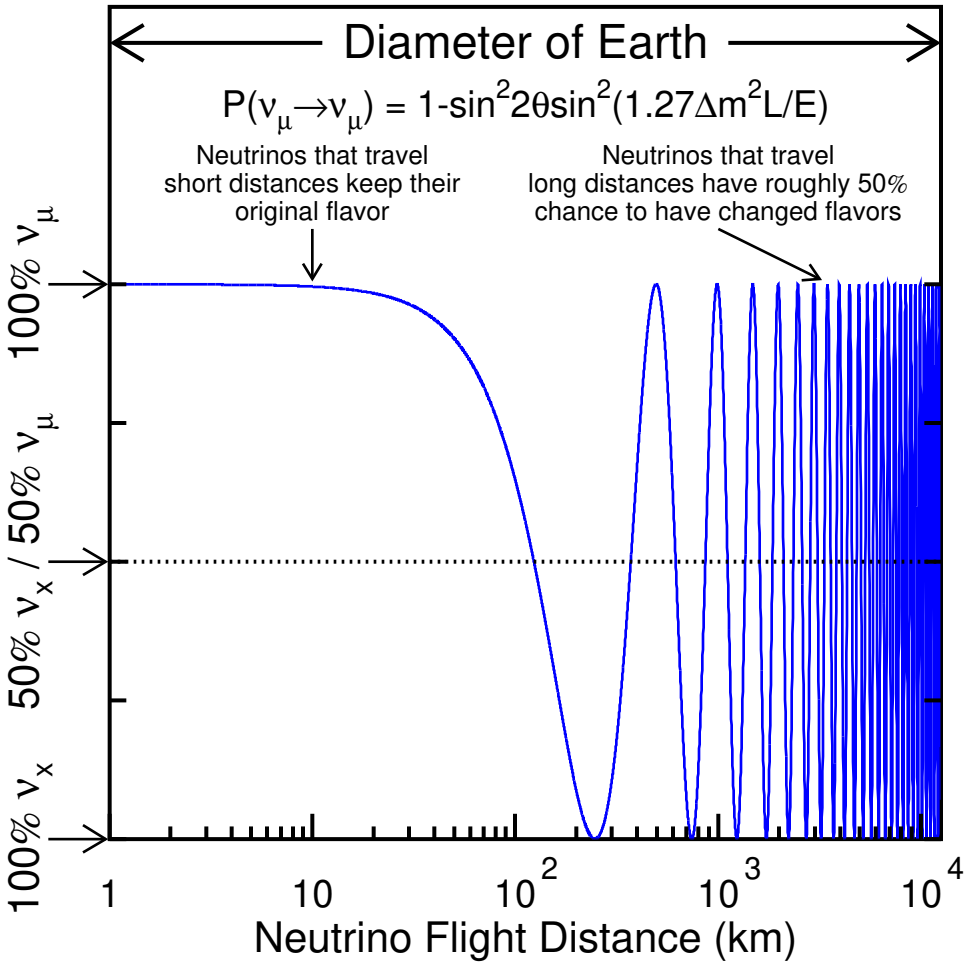
Diameter of Earth
P(νμ→νμ) = 1-sin²2θsin²(1.27Δm²L/E)
Neutrinos that travel short distances keep their original flavor
Neutrinos that travel long distances have roughly 50% chance to have changed flavors
100% νμ
50% νμ / 50% νx
100% νx
1
10
10²
10³
10⁴
Neutrino Flight Distance (km)