$$
\begin{aligned}
P(\nu_a \to \nu_b) &= \textstyle\sum_i |U_{ai}|^2 |U_{bi}|^2 \\
&\quad + 2Re(U^*_{a1} U_{b1} U_{a2} U^*_{b2} \times exp(-i\Delta m^2_{21} L/2E) \\
&\quad + 2Re(U^*_{a1} U_{b1} U_{a3} U^*_{b3} \times exp(-i\Delta m^2_{31} L/2E) \\
&\quad + 2Re(U^*_{a2} U_{b2} U_{a3} U^*_{b3} \times exp(-i\Delta m^2_{32} L/2E)
\end{aligned}
$$