CPT: $P(\nu_\alpha \to \nu_\beta) = P(\overline{\nu}_\beta \to \overline{\nu}_\alpha) \Rightarrow\ P(\nu_\alpha \to \nu_\alpha) = P(\overline{\nu}_\alpha \to \overline{\nu}_\alpha)$

Disappearance in neutrinos and antineutrinos must be the same.

CP-violation: $P(\nu_\alpha \to \nu_\beta) \neq P(\overline{\nu}_\alpha \to \overline{\nu}_\beta)$

But this can happen only if there are $\geq 2\ \Delta m^2$ participating, and so there cannot be CP violation in a 3(active)+1(sterile) system which is effectively 2-ν

Addition of more than 1 sterile neutrino can introduce CP Violation
allowing different appearance results for neutrinos and anti-neutrinos.
A 3 (active)+2(sterile) system is effectively a 3-ν system if the sterile masses are much larger than the active ones.