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Probing Neutrino-Scalar Couplings

Motivated by discovery of scalar particles at the LHC, we revisit the bounds from Yukawa couplings of scalar particles with neutrinos. Using data from meson decays and including for the first time the spectrum from meson decays we manage to put the following constraints for massless scalars: $|g_e|^2 < 1.9 \times 10^{-6}$, $|g_\mu|^2 < 7.4 \times 10^{-8}$ and $|g_\tau|^2 < 2.1 \times 10^{-2}$ at 90% C.L. and we get bounds on massive light scalars.

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