$B^0 \to K^* \mu^- \mu^+$ update

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A short introduction to the νMSM

Neutrinos need a right-handed partner to get their masses like the other SM fermions!

Leptons and quarks get their mass through the Yukawa interaction:

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Three extra N field could exist (*sterile neutrinos*). They would be $SU(2)$ singlets, as they are still unobserved.

$$\mathcal{L} = \mathcal{L}_{SM} \bar{N}_i i\partial\!\!\!/ N_i - f_{i\alpha} H \bar{N}_i L_\alpha - \frac{M_i}{2} \bar{N}_i{}^c N_i + h.c.$$

Sterile neutrinos would mix to $\nu_{e,\mu,\tau}$ with very small couplings $U^2_{e,\mu,\tau}$.

Backup