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Radiative neutrino masses

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I will present two models where light active neutrino masses are radiatively generated. In the first one the light active neutrino masses are generated at one loop level via a radiative seesaw mechanism mediated by the neutral components of the SU(3)L leptonic Octet and electrically neutral scalars. These SU(3)L leptonic Octet is crucial for achieving successful gauge coupling unification. The second theory is a minimally extended inert doublet model where the tiny neutrino masses are generated through a three-loop seesaw. The model leads to a rich phenomenology while satisfying all the current constraints imposed by neutrinoless double-beta decay, charged-lepton flavor violation, and electroweak precision observables. The model could also successfully explain the W mass anomaly and provides viable fermionic or scalar dark matter candidates.

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