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Unitarity constraints for Yukawa couplings in the SU (2)L × U (1)Y × U (1)B−L model

Constraints from unitarity perturbativity are studied in the Yukawa sector of a SU (2)L × U (1)Y × U (1)B−L model. In this scenario, besides three right handed neutrinos which are included to cancel chiral anomalies, it is also
postulated a complex scalar singlet for the spontaneous symmetry breaking of the extended gauge sector U (1)B−L
and to give mass to the associated Z ′ boson. From different scattering processes involved neutrinos and Higgs states,
exclusion regions are obtained for neutrino masses and mixing angles.

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