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## **Unitarity constraints for Yukawa couplings in the SU (2)<sub>L</sub> × U (1)<sub>Y</sub> × U (1)<sub>B-L</sub> model**

Constraints from unitarity perturbativity are studied in the Yukawa sector of a SU (2)<sub>L</sub> × U (1)<sub>Y</sub> × U (1)<sub>B-L</sub> 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)<sub>B-L</sub> 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.

**Primary author:** Prof. CASTILLO RAMIREZ, Andrés Fernando (Universidad Nacional de Colombia)

**Co-authors:** Prof. GOMEZ TARAZONA, Carlos (Universidad Nacional de Colombia); Dr MORALES APONTE, John (Associated Professor at Universidad Nacional de Colombia); Dr DIAZ, Rodolfo (Associated Professor at Universidad Nacional de Colombia)

**Presenter:** Prof. CASTILLO RAMIREZ, Andrés Fernando (Universidad Nacional de Colombia)

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