

LHC phenomenology of general $SU(2) \times SU(2) \times U(1)$ models

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General $SU(2) \times SU(2) \times U(1)$ models represent a well-motivated intermediate step towards the unification of the Standard Model gauge groups. Based on a recent global analysis of low-energy and LEP constraints of these models, we perform numerical scans of their various signals at the LHC. We show that total cross sections for lepton and third-generation quark pairs, while experimentally easily accessible, provide individually only partial information about the model realized in Nature. In contrast, correlations of these cross sections in the neutral and charged current (CC) channels may well lead to a unique identification.

Auteur principal: M. JEZO, Tomas (LPSC)

Co-auteurs: SCHIENBEIN, Ingo (LPSC); KLASSEN, Michael (LPSC)

Orateur: M. JEZO, Tomas (LPSC)

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