

Phenomenology 2022 Symposium: From Virtual to Real



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Type III seesaw with R-parity violation in light of m_W (CDF)

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Motivated by the recently reported measurement of the W boson mass $M_W=80.4335\pm0.0094$ GeV by the CDF collaboration, we propose a type III extension of the minimal supersymmetric standard model (MSSM) which also includes an R-parity violating term. Without taking potential SUSY radiative corrections into account, we show that the CDF measurement of M_W and the LEP measurement of the ρ parameter can be simultaneously accommodated at the 2σ level. A long-lived gravitino in a few GeV mass range is a unique viable dark matter candidate in this framework.

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