

W-mass and the reduced minimal 331 model

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We rescue a doomed model, known as Reduced Minimal 331 model (RM331), which was put aside few years ago when contrasted with α_s parameter precise measurements. Taking advantage of the new precise CDF collaboration's W -mass measurement, translated into a new value for the α_s parameter, we show that the model is still a competitive model at the few TeV scale. This model is an electroweak gauge extension of the standard model with some variant versions available in literature. One of these versions, the RM331 model, presents the least possible number of scalar multiplets among them, sufficient to engender the electroweak symmetry breaking and fermion mass, though the last is achieved through effective operators. In some sense, its scalar spectrum is more economical than the usual two Higgs doublet model, possessing only the observed standard Higgs field plus another CP-even scalar and a doubly charged scalar, offering an interesting content to be explored in current LHC collider, as well as to address open questions not answered by the standard model.