

Abstract Submitted
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Exploring the Doubly Charged Higgs of the Left-Right Symmetric Model using Vector Boson Fusion-like Events at the LHC TATHAGATA GHOSH, BHASKAR DUTTA, RICARDO EUSEBI, YU GAO, TERUKI KAMON, Mitchell Institute for Fundamental Physics and Astronomy, Department of Physics and Astronomy, Texas A&M University — In this talk we shall present the study of the pair production of the doubly charged Higgs boson of the left-right symmetric models using multilepton final state in the vector boson fusion (VBF)-like processes. The study is performed in the framework consistent with the model's correction to the standard model ρ_{EW} parameter. VBF topological cuts, number of leptons in the final state and p_T cuts on the leptons are found to be effective in suppressing the background. Significant mass reach can be achieved for exclusion/discovery of the doubly charge Higgs boson for the upcoming LHC run with a luminosity of $\mathcal{O}(10^3)$ fb⁻¹.

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