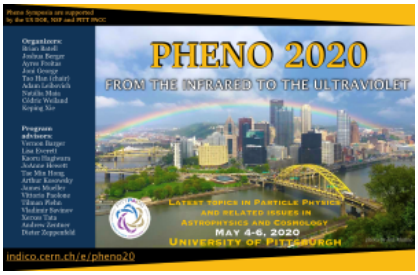

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Doubly Charged Higgs Boson Production at Hadron Colliders

Tuesday 5 May 2020 14:30 (15 minutes)

The production of doubly charged Higgs bosons $\Delta^{\pm\pm}$ in high-p_T proton collisions is a key prediction of several new physics scenarios, particularly the Type II Seesaw model for neutrino masses. We present a state-of-the-art and systematic comparison of $\Delta^{\pm\pm}$ production mechanisms, emphasizing the importance of higher-order corrections and subdominant channels. For Drell-Yan processes, we present the impact of a static jet veto at NLO+NNLL(veto). For the photon fusion channel, the dependence on photon PDF modeling is definitively assessed. Finally, an updated outlook for the discovery potential at HL-LHC and beyond are summarized. [arXiv:1912.08975]

Summary

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