

Abstract Submitted
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Search for Heavy Majorana Neutrino in Same-Sign Dilepton Channel MATTHEW RELICH, University of California, Irvine, ATLAS COLLABORATION — Non-zero neutrino masses require the introduction of right-handed field components for the neutrino. Generating sub-eV neutrino masses through Yukawa interactions requires extremely small coupling constants, thus leading to an aesthetically displeasing theory. Using Type-I seesaw mechanism, light neutrino masses and mixings are generated naturally by introducing heavy Majorana neutrino (HMN) terms. We study the production and decay of HMN using a Lagrangian of effective operators in LHC pp collisions at $\sqrt{s} = 7$ TeV. This model independent approach allows for a broader and more reliable view of expected physics for TeV-scale Majorana neutrinos. We present a search for HMN with a total integrated luminosity of 35 pb^{-1} recorded with the ATLAS detector.

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