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## Search for Majorana neutrino production in same-sign dimuon final states with the ATLAS detector at 7 TeV

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A search for a heavy Majorana neutrino decaying into a W boson and a muon has been performed using the ATLAS detector at the LHC. The search is performed using events with two same-sign muons, at least two jets and low missing transverse momentum. The data used in the search were collected in pp collisions at  $\sqrt{s} = 7$  TeV in 2011 and correspond to an integrated luminosity of 4.7 fb<sup>-1</sup>. No excess of events above the background prediction is observed and 95% confidence level upper limits are set on the cross section times branching ratio for the production of heavy Majorana neutrinos. The observed limits range from 28 to 3.4 fb for heavy neutrino masses between 100 and 300 GeV.

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