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Search for anomalous production of like-sign lepton pairs with the ATLAS detector LOUISE SKINNARI, University of California, Berkeley, ATLAS COLLABORATION — We present a search for anomalous production of two prompt like-sign leptons and constraints on physics beyond the Standard Model. The search is performed using a data sample corresponding to an integrated luminosity of 5 fb^{-1}, collected in 2011 at $\sqrt{s} = 7$ TeV by the ATLAS detector at the LHC. Lepton pairs are selected inclusively by requiring two isolated leptons of the same electric charge with $p_T > 20$ GeV. The invariant mass distribution is examined and limits are placed on the anomalous production cross section as function of invariant mass with respect to a fiducial region close to that of the experimental selection. The inclusive search is also interpreted within a few different models of physics beyond the Standard Model.

Louise Skinnari
University of California, Berkeley

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