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Search for Contact Interactions using 140fb-1 of pp collision data collected at $\sqrt{s}=13\text{TeV}$ with the ATLAS detector

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A search is conducted for non-resonant high-mass phenomena in dielectron and dimuon final states. The search uses the full Run-2 proton-proton collision data collected between 2015 and 2018 at $\sqrt{s} = 13\text{ TeV}$ by the ATLAS experiment at the LHC corresponding to an integrated luminosity of 140 fb-1. A novel approach involving a functional form is fitted to the dilepton invariant mass distribution of the data in a fit region and extrapolated to high mass to model the contribution from background processes. Lower limits on the Contact Interaction energy scale are set for various models.

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