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Search for high-mass dilepton resonances in 21 fb^{-1} of pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS experiment

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The ATLAS detector at the Large Hadron Collider is used to search for high mass resonances decaying to an electron-positron pair or a muon-antimuon pair. Results are presented from the analysis of pp collisions at a center-of-mass energy of 8 TeV corresponding to an integrated luminosity of approximately 21 fb^{-1} . A narrow resonance with Standard Model Z couplings to fermions is excluded at 95% C.L. for masses below 2.79 TeV in the electron channel, 2.53 TeV in the muon channel, and 2.90 TeV in the two channels combined. Limits on other model interpretations are also presented, including a Grand Unification model based on the E_6 gauge group, Z^* bosons, Minimal Z' Models, a spin-2 Randall-Sundrum graviton, quantum black holes and a Minimal Walking Technicolor model with a composite Higgs boson.

Primary authors: ELLINGHAUS, Frank (Johannes-Gutenberg-Universitaet Mainz); BRET CANO, Marc (University of London (GB)); DAYA, Rozmin (Southern Methodist University (US)); VIEL, Simon (University of British Columbia (CA)); WILLOCQ, Stephane (University of Massachusetts (US))

Presenter: BRET CANO, Marc (University of London (GB))

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