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Search for First Generation Leptoquarks REGINA CAPUTO, SUNY Stony Brook, ATLAS COLLABORATION — Leptoquarks are hypothetical particles that carry both lepton and baryon number and are proposed to exist in several Grand Unification Theories (GUTs) and technicolor models. This work presents a search for first generation leptoquarks at the ATLAS detector using an integrated luminosity of 35 pb^{-1} collected from the 2010 data set. The search is for pair production of leptoquarks in which one leptoquark would decay into an electron/quark pair, and the other into a neutrino/quark pair giving an event topology of one high energy electron, missing transverse energy and two high energy jets. The background, predominantly from associated production of W bosons with jets and of top quarks, is estimated using Standard Model simulated data, normalized to observations in control regions.

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