Searches for supersymmetry in final states with a Z boson with the ATLAS detector

DEVIN HARPER, University of Michigan, ATLAS COLLABORATION — This talk presents searches for supersymmetry in the final state with events containing a Z boson \((Z \rightarrow \ell\ell, \ell = e, \mu)\), large missing transverse momentum and jets. Two ATLAS analyses are presented, one using a data sample of 1 \(fb^{-1}\) collected at \(\sqrt{s} = 7\ TeV\) and the other using 6 \(fb^{-1}\) collected at \(\sqrt{s} = 8\ TeV\). No excesses above the Standard Model background expectation were observed. The results were interpreted in the context of a general gauge mediation (GGM) scenario, where the lightest supersymmetric particle is the gravitino and the next-to-lightest supersymmetric particle is a Higgsino-like neutralino.