Study of Z boson production using the ATLAS detector

WILL DICLEMENTE, JIM MALLERNEE, TONEY THOMPSON, Duke University, ATLAS COLLABORATION — The ATLAS detector is recording data from 7 TeV proton-proton collisions provided by the CERN Large Hadron Collider. These data are being used to evaluate the ATLAS detector’s performance using high energy electrons, muons and jets. The measurements provide tests of the Standard Model in a new energy domain. We will present studies of $pp \rightarrow Z + X \rightarrow \ell\ell + X$ production. Events are selected where the $Z$ boson decays to electron or muon pairs. Methods for selecting these events will be discussed along with the results of early measurements of the $Z$ boson’s production properties.

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Date submitted: 13 Aug 2010

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