Abstract Submitted for the APR13 Meeting of The American Physical Society

Observation of single resonance $Z\rightarrow 4l$ in pp collisions with the ATLAS detector NAN LU¹, University of Michigan - Ann Arbor, ATLAS COLLABORATION — This talk will present the observation of single resonance Z boson decays to four leptons in proton-proton collisions data collected by the ATLAS detector. The single resonance peak from $Z\rightarrow 4l$ provides a natural standard candle for the Higgs boson search in the $H\rightarrow ZZ^*\rightarrow 4l$ channel. The cross section and the branching ratio of the single resonance $Z\rightarrow 4l$ production measured using 7 TeV and 8 TeV data will be reported.

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Date submitted: 11 Jan 2013 Electronic form version 1.4