Abstract Submitted
for the APR14 Meeting of
The American Physical Society

Search for diboson resonances in the $llqq$ final state using pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector MILES WU, University of Chicago, ATLAS COLLABORATION — This talk presents a search for WZ and ZZ resonances in the $llqq$ final state, using the ATLAS detector, from pp collisions at $\sqrt{s} = 8$ TeV. Many beyond the Standard Model theories predict heavy vector boson pair resonances. The $llqq$ final state provides a larger branching ratio compared to the fully leptonic state and reduced backgrounds compared to the fully hadronic state. Jet substructure techniques and a new modification to lepton isolation are used to increase sensitivity to high-mass resonances. The bulk Randall-Sundrum graviton and the extended gauge model W' boson are used as benchmark models.

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Date submitted: 09 Jan 2014 Electronic form version 1.4