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Recent heavy ion results from ATLAS experiment

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During the first three years of operation the ATLAS experiment has collected an integrated luminosity of 0.15 nb-1 for sqrt(s_NN)=2.76 TeV lead-lead collisions,
30 nb-1 for 5.02 TeV proton-lead collisions, and 5 pb-1 for sqrt(s)=2.76 TeV proton-proton collisions. The proton-lead and the high-statistics 2.76 TeV proton-proton data recorded during the highly successful 2013 LHC heavy ion run provide valuable control measurements for interpreting results from lead-lead collisions. Results will be presented for measurements in lead-lead collisions of inclusive jets, jet fragmentation, electroweak bosons, and boson-jet correlations. These measurements provide new insight into the mechanism of in-medium parton energy loss. Measurements of bulk particle production will also be presented with a focus on studies of elliptic and higher-order collective flow. Included in these results will be measurements of event-by-event collective flow. In addition to providing baseline measurements for the lead-lead program, the proton-lead data also provide a unique opportunity to study the physics of soft and hard scattering in a high parton density environment. An overview of relevant proton-lead results will be presented.

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