Angular correlations between forward-rapidity muons and mid-rapidity charged particles in p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV

SAEHANSEUL OH, Yale University, ALICE COLLABORATION — Two particle angular correlations have been used as a powerful tool in exploring particle production mechanism in relativistic heavy ion physics. Angular correlations between forward-rapidity muons (-4.0 < $\eta_{lab}$ < -2.5) and mid-rapidity charged particles (-0.9 < $\eta_{lab}$ < 0.9) are measured by the ALICE detector in p-Pb collisions at a nucleon-nucleon center-of-mass energy of 5.02 TeV in 2013. These unique kinematics allow us to access the small-x region of the Pb nucleus, where high gluon densities are expected. Muon-hadron correlations, expected to have features that exhibit gluon saturation, are compared to calculations using a Color Glass Condensate (CGC) model, as well as mid-rapidity di-hadron correlations by the ALICE collaboration. Previous forward-rapidity two particle correlations in d-Au collisions at RHIC will also be compared.