

Abstract Submitted
for the DNP17 Meeting of
The American Physical Society

Measurement of long-range correlations between muons and charged-particles in $p\text{Pb}$ with the ATLAS detector XIAO TU, Columbia University — Two-particle correlations between charged-particle pairs and between charged-particle and muon pairs are measured as a function of pseudorapidity and azimuthal angle difference in $p\text{Pb}$ collisions at $\sqrt{s_{\text{NN}}} = 8.16$ TeV. Structure in the two-dimensional function centered at $\Delta\phi = 0$ and extending over a large range of $\Delta\eta$ called ridge is seen in the data set. A template fitting method is implemented to extract the second Fourier coefficient of the long-range correlations. In this method a rescaled correlation function from peripheral events representing the recoil component plus a cosine modulation representing the ridge is used to describe the whole correlation function. In the analysis $v_{2,2}$ is factorized into the products of the single particle v_2 . Therefore v_2 of the muons is obtained and its dependences on multiplicity and muon transverse momentum are presented.

Xiao Tu
Columbia University

Date submitted: 05 Jul 2017

Electronic form version 1.4