

Abstract Submitted
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Electron-muon correlations in p+p and p+A collisions at $\sqrt{s} = 200$ GeV using the PHENIX detector at RHIC DEEPALI SHARMA, Georgia State University, PHENIX COLLABORATION — The measurement of electron-muon pairs, coming from heavy quark pair decays, suffers less from background as compared to e^+e^- or $\mu^+\mu^-$ pairs since neither direct lepton production nor resonance decays produce this type of correlated signal. Heavy-flavor modification in relativistic p(d)+A collisions is sensitive to different kinds of strong-interaction physics ranging from modifications of the nuclear wave function to initial- and final-state energy loss. PHENIX has published e - μ correlations in p+p and d+Au collisions, where a suppression was seen in the pair yield per collision in d+Au collisions. In the years 2014 and 2015, PHENIX collected high luminosity datasets for p+p, p+Al, p+Au and $^3\text{He}+\text{Au}$ collisions. A systematic study of e - μ correlations in these systems will help us to understand modifications to nuclear parton distribution function (nPDF) at different regions in **Bjorken** x space, and as a function of nuclear medium density. In this talk, we will present the current status of these studies in small collision systems.

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