Abstract Submitted
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Calorimetry for the PHENIX Forward Upgrade VASILY DZHORDZHADZE, University of California Riverside, PHENIX COLLABORATION[1] — The PHENIX muon program can be sufficiently extended by addition of the calorimetry in the forward direction. The Tungsten calorimeters with silicon pixel readout and fine segmentation are proposed to achieve the goal. The proposed calorimeter will cover a rapidity range of 0.9-3.0, increasing the coverage of the muon system ($1.2< \eta <2.4$). The calorimeter will comprise of two parts: electromagnetic and hadronic, with high resolution position (150 mkm) detectors placed inside. This will extend PHENIX's kinematical coverage for photons, π^0, electrons and jets at forward rapidity. It will greatly extend high p_T jet-photon measurements in A+A collisions, will increase the capabilities to measure the production of quarkonium states in A+A collisions by giving sensitivity to the χ_c through the $J/\psi + \gamma$ channel and study nucleon structure in nuclei at high parton densities in p+A collisions through the measurement of *gamma*s and π^0s in the forward region. The calorimeter will provide a good pion rejection, fast trigger and improve muon momentum resolution. In this talk we discuss the calorimeter design, its anticipated performance and ongoing R&D program together with the physics motivation of the device.

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