

Abstract Submitted
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Measurement of π^0 mesons in p-Pb collisions at $\sqrt{s_{\text{NN}}} = 5.02$ TeV with PHOS in ALICE at LHC TSUBASA OKUBO, Hiroshima University, ALICE COLLABORATION — Suppression of high p_{T} charged particles has been observed in heavy-ion collisions at LHC energies, however the suppression mechanism has not been understood yet. Studies of particle production in p-A collisions provide us new information whether the suppression is originated from an initial condition of colliding nuclei or due to the final effects in quark matter created by the collision. We have measured neutral pions emitted in p-Pb collisions at $\sqrt{s_{\text{NN}}} = 5.02$ TeV with PHOS at the ALICE experiment. The PHOS is a unique and precise photon spectrometer composed of lead tungstate crystals. With its outstanding performances of precise-granularity and high energy resolution, neutral pions can be identified via two photon decays at an excellent mass resolution $\delta m/m = 3\%$. Raw yields of pions out of a 90 million minimum-bias event sample were counted in invariant mass spectra. The raw yields were corrected for reconstruction efficiencies and acceptances with Monte-Carlo analyses. We will discuss the corrected p_{T} spectrum up to 20 GeV/c.

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