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PHENIX measurements of sqrt(s) dependence of pi0 production in pp collisions at mid-rapidity ALEXANDER BAZILEVSKY, Brookhaven National Laboratory, PHENIX COLLABORATION — Neutral pion measurements in proton-proton (pp) collisions serve to explore the structure of the proton, to constrain fragmentation mechanisms and to establish the baseline to study medium effects in heavy ion collisions. Perturbative Quantum Chromodynamics (pQCD) is a crucial tool in interpreting measurements which involve high pT particle production. PHENIX has already reported the differential cross section for inclusive pi0 production in pp collisions at mid-rapidity at $\sqrt{s}$=62.4 and 200 GeV. In 2009 RHIC Run PHENIX collected data at $\sqrt{s}$=500 GeV. Here we report on status of the pi0 cross section analysis and compare the measurements at different $\sqrt{s}$ to NLO pQCD calculations. xT scaling will be also examined.

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