

# TRANSVERSE MOMENTUM DISTRIBUTIONS OF NEUTRAL PIONS FROM NUCLEAR COLLISIONS AT 200 A·GeV

*WA80 Collaboration*

*(For a complete list of authors, see published paper.)*

New results on transverse mass spectra of neutral pions measured at central rapidity are presented for impact parameter selected 200 A·GeV S+S and S+Au collisions. The distributions cover more than 8 orders of magnitude in cross section over the range  $0.3 \text{ GeV}/c \leq p_T \leq 4.0 \text{ GeV}/c$ . Detailed comparisons to results from pp collisions are made. The spectra from all systems show a clear power-law-like shape with similar curvature. Collisions of S+Au exhibit a larger mean transverse momentum than pp increasing with centrality. Predictions of string models and by hydrodynamic approaches including collective expansion and decays of short-lived resonances are compared to the data, and the implications are discussed.

Abstract of published paper: *European Phys. J. C* **5**, 255 (1998).