Using a covariant coalescence model, we have studied hadron production in relativistic heavy ion collisions from both soft partons in the quark-gluon plasma and hard partons in minijets [1]. Including transverse flow of soft partons and independent fragmentation of minijet partons, the model is able to describe available experimental data on pion, kaon, and antiproton transverse momentum spectra. As shown in Fig. 1, the resulting antiproton to pion ratio increases at low transverse momenta and reaches a value of about one at intermediate transverse momenta, as observed in experimental data at RHIC. At high transverse momenta, this ratio decreases and approaches that given by the perturbative QCD. Elliptic flows of phi mesons and baryons such as protons, lambdas, cascades, and omegas have also been evaluated from partons with elliptic flows extracted from fitting measured pion and kaon elliptic flows. The predicted proton and lambda elliptic flows are consistent with available experimental data as shown in Fig. 2 for protons.

**References**