Quark results from the DØ experiment

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Abstract

Heavy quark results from D0 are reviewed. We present the b–quark production cross section at forward rapidity, in $p\overline{p}$ collisions at a center–of–mass energy of 1.8 TeV. The ratio of b–quark production cross sections in $p\overline{p}$ collisions at center–of–mass energies of 630 GeV and 1.8 TeV is also presented and compared to next–to–leading order QCD predictions. In addition, we present a measurement of the inclusive J/ψ production cross section in the forward rapidity region, and compare it to current models of charmonium production. The $t\overline{t}$ production cross section at a center–of–mass energy of 1.8 TeV and the top quark mass, both determined from several decay channels, are presented. The M_W is also presented and its implications for the Standard Model Higgs are discussed.