Measurement of the Top Quark Mass at D0 Using the Matrix-Element Method in the Lepton+Jets Channel ZHENYU YE, Fermilab, D0 COLLABORATION — We report on the measurement of the top quark mass using candidates in the lepton+jets final state. For each event, a probability based on the differential cross section for production is calculated as a function of the top mass and the overall jet energy scale. The top mass and jet energy scale are extracted by maximizing a likelihood constructed as the product of the single event probabilities. The overall jet energy scale is constrained by the two jets from the hadronic W boson decay.

Graham Wilson
University of Kansas

Date submitted: 08 Jan 2008   Electronic form version 1.4