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**Measurement of the Top Quark Mass in DØ using the Ideogram Method** MARTIJN MULDERS, Fermi National Accelerator Laboratory, DZERO COLLABORATION — The top quark mass is one of the fundamental parameters of the Standard Model. At a hadron collider, top quarks are dominantly produced in pairs ($t\bar{t}$), each of them decaying to a $W$ boson and a $b$ quark. We report on the measurement of the mass of the top quark in the lepton+jets final state, using data collected by the DØ experiment during Run II of the Fermilab Tevatron collider. The top quark mass is determined by using the so-called "Ideogram Method," based on constrained kinematic fitting, but designed to make optimal use of the available information: it build a per-event likelihood taking into account all possible jet permutations, the possibility that the event was background, and the estimated error on the fitted mass for each jet permutation. Information from a $b$-tagging algorithm is also used to further improve the separation between signal and backgrounds. A discussion will also be given on recent progress in the understanding of systematic uncertainties in the top quark measurement.

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