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New Method For Extracting the Mass of the Top Quark From All-Jets Events GIANLUCA PETRILLO, University of Rochester, D0 COLLABORATION — Six-jet events, arising from decays of $t\bar{t}$ pairs in which both tops decay into a W boson and a b quark, and both W s decay into quark-antiquark pairs, constitute a potentially rich source of completely reconstructable top quarks for mass extraction analyses. However, even when two of the jets are tagged as originating from b -quarks, the mass analysis is complicated by uncertainties in assigning the four other jets to their originating partons when assembling the $t\bar{t}$ pairs. We introduce and describe a new top mass extraction technique that directly addresses this complication, and present preliminary results from applying this technique to data recorded by the D0 experiment at the Fermilab Tevatron.

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