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Measurement of the top quark mass in the lepton+jets channel using jets with larger cone size at CDF MARIA D'ENRRICO, University of Padova, CDF COLLABORATION — A measurement of the top quark mass in the lepton + jets decay channel $t\bar{t} \rightarrow W^+b + W^-b \rightarrow l^+\nu b + q\bar{q}'\bar{b}$ is performed on a selected sample of top event candidates, named “clean events”. This is a kinematical selection based on jet shape analysis. Clean events are selected comparing two jet reconstructions, implemented with Cone Algorithm of 0.4 or 0.7 radius, by requiring jets reconstructed within a radius $R = 0.4$ to be uniquely linked to jets reconstructed with $R = 0.7$. By this request the contribution of events with jets due to gluon radiation is reduced. The top mass value is obtained using the standard template method. Monte Carlo generated signal and background events are reconstructed using an event-by-event χ^2 kinematics fit, determining distributions of the reconstructed top mass corresponding to the lowest χ^2 value. A likelihood fit is used to compare the data mass distribution with the Monte Carlo templates. The results show that the clean selection combined with requesting exactly 4 jets allows obtaining an improved systematic uncertainty on the top mass measurement.

- Prefer Oral Session
 Prefer Poster Session

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