Search for the associated production of charginos and neutralinos in trilepton final states involving $\tau$ leptons with the DØ detector

INGO TORCHIANI, University of Freiburg, DZERO COLLABORATION — Final states containing tau leptons are of particular interest in supersymmetric theories with large $\tan\beta$. The existing DØ searches for the associated production of charginos and neutralinos in $p\bar{p}$ collisions in the trilepton topology have been extended to include final states containing at least one tau lepton decaying hadronically. The search uses data recorded by the DØ detector at the Fermilab Tevatron collider at a center-of-mass energy of 1.96 TeV. The results of this analysis, based on an integrated luminosity of $\sim 350 \text{ pb}^{-1}$, are used to place new limits on the production cross section of charginos and neutralinos.