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Measurement of the $WW+WZ$ diboson cross section in final states containing both leptonic and hadronic decays at CDF MARTINA HURWITZ, University of Chicago, CDF COLLABORATION — We present a measurement of the $WW+WZ$ production cross section in 4.6fb^{-1} of integrated luminosity collected by the CDF detector from $p\bar{p}$ collisions at $\sqrt{s} = 1.96$ TeV. The measurement is performed in final states resulting from semileptonic decays containing an identified lepton and two hadronic jets, an event topology also used in searches for the Higgs boson. Separation of the signal from the overwhelming W + jets background is achieved using matrix element calculations. Modeling of the background processes are studied carefully to ensure that the inputs to the matrix element calculations are well-matched in data and simulation. The measured cross section is found to be in agreement with NLO predictions.

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