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Search for WW/WZ in Lepton plus Neutrino plus Heavy Flavor Dijet Final States at CDF

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We present a search for WW/WZ diboson production in the lepton plus neutrino plus heavy flavor dijet channel at the CDFII experiment. After successful observation of WW/WZ in the inclusive lepton plus neutrino plus dijet channel, we now focus on the identification of this process in cases where either a W or Z boson decays into one or more heavy flavor quarks. The search uses events with a single reconstructed electron or muon, large missing transverse energy and two reconstructed jets, which are collected using a number of orthogonal trigger paths. In comparison with the previous analysis we have improved the rejection of the QCD multijet background using a Support Vector Machine algorithm, which considerably improves background rejection.

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