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Search for Higgs boson using a matrix-element technique at CDF

BARBARA ALVAREZ, JAVIER CUEVAS, Universidad de Cantabria, FLOREN-
CIA CANELLI, Fermi National Accelerator Laboratory, BERND STELZER, Uni-
versity of California Los Angeles, ROCIO VILAR, Universidad de Cantabria, THE
CDF COLLABORATION — We present a search for Higgs produced in association
with a W boson using 2 fb^{-1} of data accumulated with the CDF detector at the Fer-
milab Tevatron. Events used in this analysis are selected with one charged lepton,
large missing transverse energy, and two or three jets, where at least one jet is iden-
tified as a b -quark jet using displaced secondary-vertex information from the silicon
detector. Using a matrix-element analysis technique and a neural-network jet-flavor
separator we improve separation of signal and background and greatly improve the
sensitivity of our search.

Matthew Herndon
University of Wisconsin

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