

Abstract Submitted
for the APR09 Meeting of
The American Physical Society

Search for Associated Production of W and Higgs Bosons in the all Hadronic Decay Mode in $p\bar{p}$ Collisions at $\sqrt{s}=1.96$ TeV JUSTACE CLUTTER, University of Kansas, D0 COLLABORATION — We present a search for a low mass standard model Higgs Boson, produced in association with a W boson, in the all hadronic decay channel at a center-of-mass energy of $\sqrt{s}=1.96$ TeV, using 1 fb^{-1} of data collected with the D0 detector at the Fermilab Tevatron collider. The Higgs boson is required to decay to two b -quarks and the W boson to two light quarks. This channel is potentially very powerful but is extremely challenging because of the large multijet background. A two dimensional fit to the invariant mass of the two b -quark jets and the invariant mass of the remaining two light quark jets is explored as a technique to determine a limit on the production cross section of the Standard Model Higgs boson.

Elizaveta Shabalina
II. Physikalisches Institut, Universität Göttingen

Date submitted: 05 Jan 2009

Electronic form version 1.4