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Effect of Relaxing b -quark Tagging Requirements in WH Searches at CDF CHIARA FERRAZZA, INFN, Pisa (Italy), CDF COLLABORATION — Significant increases in sensitivity have recently been obtained for Higgs searches at CDF based on increases in integrated luminosity and development of sophisticated analysis techniques. For a low mass standard model Higgs boson ($m_H < 135 \text{ GeV}/c^2$), production in association with a vector boson (W or Z) with subsequent decays of $H \rightarrow b\bar{b}$ and either $W \rightarrow \ell\nu$, $Z \rightarrow \nu\nu$, or $Z \rightarrow \ell\ell$ lead to final states that provide the best separation between signal and backgrounds. Typically, some multivariate technique is applied to the subset of events in which at least one of the b -quark jets is identified by the presence of a displaced, secondary vertex. Here, we present results of studies showing the potential gains in sensitivity that can be obtained by relaxing requirements used to identify these secondary vertices.

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