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Measurement of the $Z/\gamma^* Z/\gamma^*$ Production Cross Section using 10.4 fb^{-1} of $p\bar{p}$ Collisions at $\sqrt{s}$ = 1.96 TeV LEI FENG, Northern Illinois University, D0 COLLABORATION — We present a study of the $Z/\gamma^* Z/\gamma^*$ to four-lepton channel for Z/γ^* masses greater than 30 GeV using the D0 detector in $p\bar{p}$ collisions at $\sqrt{s} = 1.96$ TeV with data corresponding to an integrated luminosity of 10.4 fb^{-1}. We measure the $Z/\gamma^* Z/\gamma^*$ cross section and search for the Higgs boson arising from the $H \to ZZ$ and $HZ \to WWZ$ processes in 4-lepton final states using the $eeee$, $ee\mu\mu$, and $\mu\mu\mu\mu$ channels.

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