

Abstract Submitted
for the APR06 Meeting of
The American Physical Society

A Muon Collider as a SUSY Higgs Factory DAVID CLINE, University of California, Los Angeles, GAIL HANSON, University of California, Riverside, NEUTRINO FACTORY AND MUON COLLIDER COLLABORATION — In the Minimal Supersymmetric (SUSY) Standard Model (MSSM) there are five Higgs bosons, the lightest of which h^0 will most likely be discovered at the Large Hadron Collider (LHC). However, for moderately large $\tan\beta$ the heavier Higgs bosons A^0 and H^0 may have greatly suppressed couplings to gauge bosons. Discovery of these heavier Higgs bosons may not be possible at the LHC or at an e^+e^- linear collider. In a muon collider Higgs bosons are produced through the s -channel, and even in the decoupling limit the couplings of the A^0 and H^0 to $\mu^+\mu^-$ are not suppressed. In this case a muon collider will be needed to discover the A^0 and H^0 . In addition, these heavy Higgs bosons can be largely degenerate, and the very small center-of-mass energy spread of a muon collider will be necessary to separate them. A muon collider as a SUSY Higgs factory will be discussed.

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Date submitted: 13 Jan 2006

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