

Abstract Submitted  
for the APR10 Meeting of  
The American Physical Society

**MSSM  $H^\pm \rightarrow \chi^\pm \chi^0$  Searches** CALEB LAMPEN, University of Arizona, ATLAS COLLABORATION — In the Minimum Supersymmetric Standard Model (MSSM), the charged Higgs boson ( $H^\pm$ ) can decay into a chargino-neutralino ( $\chi^\pm \chi^0$ ) pair producing the final states containing three leptons (electron/muon) and missing transverse energy ( $3l + \cancel{E}_T$ ). The early ATLAS data of approximately  $200 \text{ pb}^{-1}$  can be investigated to determine the  $3l + \cancel{E}_T$  background shapes for numerous new physics searches beyond the SM. Monte Carlo studies related to such background determination in  $3l + \cancel{E}_T$  channel along with a preliminary sensitivity study for the MSSM  $H^\pm \rightarrow \chi^\pm \chi^0 \rightarrow 3l + \cancel{E}_T$  search are presented here.

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Date submitted: 22 Oct 2009

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