

Abstract Submitted  
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**The third generation squark search at the 14 TeV LHC** HUANIAN ZHANG, The University of Arizona — In the search for top/bottom squark (stop/sbottom) in SUSY at the LHC, the common practice has been to assume a 100% decay branching fraction for a given search channel. In realistic MSSM scenarios of a Bino-like LSP with light Wino or Higgsino next-to-LSPs (NLSPs), there are often more than one significant decay modes to be present, which significantly weaken the current sbottom search limits at the LHC. On the other hand, the combination of the multiple decay modes offers alternative discovery channels for sbottom searches. In this talk, I will present the decay patterns of stop and sbottom for some realistic MSSM scenarios, and the search sensitivity at the 14 TeV LHC with  $300 \text{ fb}^{-1}$  integrated luminosity. For the stop/sbottom pair production at the 14 TeV LHC, we find that the third generation squark can be discovered up to 1050 GeV at  $5 \sigma$  significance, or excluded up to 1200 GeV if there is no SUSY signal over Standard Model backgrounds being found.

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