



Contribution ID: 313

Type: not specified

Producing Heavy Squarks at 100 TeV

Tuesday, August 4, 2015 5:30 PM (15 minutes)

If Supersymmetry is realized in nature, there are both theoretical and phenomenological reasons to believe that the masses of scalar superpartners to the quarks (squarks) lie in the tens of TeV range. This renders squark pair production kinematically out of reach for both LHC-14 and 100 TeV future hadron colliders. In this talk, I will instead discuss the associated production of a heavy squark along with superpartners to gauge bosons (gauginos) at a 100 TeV collider. This channel provides a powerful probe of the heavy squark parameter space, and can even be the discovery mode for Supersymmetry. Using a simple set of kinematic cuts, I will show that for gaugino masses in the multi-TeV range, squarks with masses up to 30 TeV can be discovered at a 100 TeV collider with sufficient luminosity.

Oral or Poster Presentation

Oral

Primary author: Mr ZHENG, Bob (University of Michigan)

Co-author: Mr ELLIS, Sebastian (University of Michigan)

Presenter: Mr ZHENG, Bob (University of Michigan)

Session Classification: BSM Physics

Track Classification: BSM Collider