Contribution ID: **110** Type: **Oral**

Neutrino masses and the decay of triplet Higgs in the Littlest Higgs scenario

Monday, 13 March 2006 11:50 (20 minutes)

We investigate the sources of neutrino mass generation in Little Higgs theories, by confining ourselves to the Littlest Higgs scenario. Our conclusion is that the most satisfactory way of incorporating neutrino masses is to include a lepton-number violating interaction between the scalar triplet and lepton doublets. The tree-level neutrino masses are generated by the vacuum expectation value of the triplet. We also
calculate the various decay branching ratios of the charged and neutral scalar triplet states, in regions of the parameter space consistent with the observed neutrino masses, hoping to search for signals of lepton-number violating interactions in collider experiments.

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Session Classification: New Physics at TeV Scale and Precision Electroweak

Track Classification: New Physics at TeV Scale & Electroweak Precision Test