Contribution ID: **29** Type: **not specified**

Low scale Left Right symmetry and first LHC data

Wednesday 1 June 2011 18:30 (15 minutes)

We argue that a confirmation of a claim of observation of neutrinoless beta decay, in connection with constraints with cosmology, disfavours the standard mechanism due to Majorana neutrino mass. This implies a presence of new physics contribution near the TeV scale, which can relieve this tension and at the same time has a chance to be tested at the LHC. We discuss new contributions in the context of the minimal left-right symmetric model and show how they are related to the observables at the LHC. As a proof of concept, we demonstrate how the most recent data from the CMS in the two lepton and two jets channel puts a limit on the mass of the right-handed gauge boson. Despite a fairly low luminosity, we obtain a bound on W_R around 1.4 TeV in a large portion of parameter space where the right-handed neutrino mass is on the order of 100 GeV.

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Session Classification: P12 –COLLIDER PHENOMENOLOGY