Contribution ID: **503** Type: **Poster etc.**

Search for Heavy Majorana Neutrinos with the Same-Sign Dilepton plus Jets Channel with CMS at 13 TeV

We present a search for heavy majorana neutrinos (N) using same-sign dilepton plus jets events with the CMS data taken in the 2016 LHC pp collisions at $\sqrt{s}$ = 13 TeV. The existance of non-zero masses of the Standard Model (SM) neutrinos from neutrino oscillations results is a clear evidence for physics beyond the SM. No significant excess of N was observed in the data and upper limits were set in the cross section and mixing as functions of the mass of the heavy neutrino. Compared to the previous LHC search, the mass range of heavy neutrino is expanded to 40-1600 GeV, while additional production mechanisms are considered, including the t-channel process, which becomes the significant production mode for mass of N greater than 800 GeV. These limits are the most restrictive direct limits for heavy Majorana neutrino masses above 430 GeV.

Authorship annotation

for the CMS collaboration

Session and Location

Wednesday Session, Poster Wall #94 (Auditorium Gallery Left)

Poster included in proceedings:

no

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Track Classification: Poster (participating in poster prize competition)