

Constraints on heavy neutral leptons from the BEBC WA66 beam dump experiment

We revisit the search for heavy neutral leptons using BEBC in the 1982 proton beam dump experiment at CERN, focussing on those heavier than the kaon and mixing only with the tau neutrino, as these are far less constrained than their counterparts with smaller mass or other mixings. Recasting the previous search in terms of this model and including additional production and decay channels yields the strongest laboratory bounds to date up to the tau mass.

Participation

I plan to attend in person

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Session Classification: Heavy Neutral Leptons and possible connections with active neutrino physics