NuCo 2021: Neutrinos en Colombia



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Sensitivity of the elastic neutrino-electron and coherent elastic neutrino-nucleus scattering experiments to the neutrino electric millicharge

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Different constraints to the neutrino electric millicharge (NEM) have been achieved by studying interactions such as the elastic neutrino-electric scattering (ENES). In recent years, bounds on this parameter are also being obtained from data of the COHERENT experiment. We studied the potential of the coherent elastic neutrino-nucleus scattering (CEvNS) in future reactor neutrino experiments to constrain the NEM. Additionally, we show results for limits on the NEM from ENES experiments. In both cases we used a combination of several experimental data, where bounds up to the order of 10^{-14}e are attained from CEvNS experimental proposals. We will talk about these outcomes at NuCo 2021.

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