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## Latest Constraints on Millicharged Particles Using ArgoNeuT

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Millicharged particles (mCPs) are theoretical particles with fractional electric charge, which could constitute part of the dark matter present in the Universe and can naturally arise in dark sectors with U(1)' gauge symmetries. We report the latest constraints to the parameter space of mCPs using data from ArgoNeuT, a 0.24 ton Liquid Argon Time Projection Chamber (LArTPC), with a novel phenomenoglical proposal of aligning doublet hits. ArgoNeuT was placed in the Neutrinos at the Main Injector (NuMI) neutrino beamline at Fermilab from 2009-2010. The 120 GeV proton beam which produced the neutrinos could also produce a large flux of mCPs which would interact in ArgoNeuT. In addition to setting limits, we describe the manner in which mCPs would be detected in LArTPCs.

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