

New Physics with nuSTORM

The Neutrinos from Stored muons (nuSTORM) facility has been proposed to measure neutrino-nucleon cross-sections with percent level precision. It has been shown that nuSTORM with a detector for short baseline oscillation search has excellent capability to search for the existence of light sterile neutrinos that have been postulated to explain the LSND and MiniBooNE results. This analysis used the Charged Current events in a magnetized Iron calorimeter detector. We study if the large number of Neutral Current events at the detector can be used to constrain the sterile neutrino parameter space further. In addition we also study the constraints on non-unitarity of neutrino mixing matrix using both charged and neutral current events at nuSTORM.

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WG1

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