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Looking amongst the neutrinos for lightweight dark matter in the NOvA Near Detector

Saturday, August 6, 2016 6:00 PM (2 hours)

The NOvA long-baseline neutrino oscillation experiment is getting record numbers of 120GeV protons on target from Fermilab's NuMI neutrino beam. We take advantage of the sophisticated particle identification algorithms of the experiment to search in the data from the 300-ton, off-axis, low-Z, Near Detector of NOvA during the experiment's first physics runs. Lightweight Dark Matter models predict that under-10 GeV candidates produced in the NuMI target might scatter or decay in the Near Detector. This poster outlines the strategies and sensitivities of such a search.

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