

DAMSA, A Dark Sector Particle Search Experiment at Fermilab PIP-II LINAC

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The neutrino oscillation needs parameters to be measured precisely to provide essential information for a modification of the Standard Model. Accomplishing this novel goal in future neutrino experiments requires high flux neutrino beams and powerful combination of near and far detectors. Fermilab's PIP-II LINAC is an essential element in providing high flux protons to the Long Baseline Neutrino Facility (LBNF) for the neutrino experiments. The PIP-II LINAC can provide 2mA of proton current with 800MeV to 1GeV. The Dump produced Aboriginal Matter Search at Accelerators (DAMSA) proposes to take advantage of this large proton flux at just the right energy in search of dark sector particles (DSP). In this talk, I will discuss the DAMSA experiment and its sensitivity reach in the Axion-Like Particle search using the high intensity PIP-II LINAC.

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