Particle Physics Seminar

Neutrino-nucleus interactions: recent measurements at MINERvA

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TUESDAY

OCTOBER 6

4:00 P.M.

RM 415 NSH

The next generation of neutrino experiments will support an extensive research program of the nature and properties of these elusive particles. The flagship long baseline experiment in the U.S, DUNE, aims to discover or rule out CP violation in the neutrino sector. High precision cross section results are critical inputs to this ambitious program.

Contemporary long baseline neutrino experiments use heavy nuclear targets for high statistics. Neutrino interactions with bare fermions are well understood but are still under investigation in dense nuclear matter. The nuclear medium modifies the initial and final states substantially.

We will examine ongoing efforts aimed at probing neutrino-nucleus interactions at the Fermilab-based MINERvA experiment and discuss future plans of study.