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Nuclear Physics in Neutrino Scattering

Following the recent discovery of neutrino oscillations, precision measurements of this phenomenon has required substantial increases in the interaction statistics. This is partially obtained by selecting relatively dense nuclei for the interaction medium such as carbon or argon. Over the past decade, most experiments observing neutrino-nucleus interactions on these more dense media have observed systematic discrepancies in the observed neutrino-nucleus interactions compared to expectations based on results from comparatively light-target experiments. Strong theoretical support has emerged just in the last few years that unexpected intranuclear behavior may resolve this tension. The substantial contributions to this picture from the MiniBooNE experiment at Fermilab will be presented.

Thursday
November 8, 4:00pm
301 Physical Sciences Building
(Refreshments, 3:45pm)