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MINERvA

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MINERvA is a dedicated neutrino scattering experiment which will collect data in the NuMI beam at Fermilab. The experiment is designed to measure inclusive and exclusive cross-sections for a wide variety of neutrino reactions over a 1-20 GeV range of neutrino energies. The MINERvA detector is centered around a fully-active, low-density, tracking chamber consisting of plastic scintillator strips. The strips have a novel triangular cross-section to improve position resolution and are read out wavelength shifting fibers coupled to multi-anode photomultiplier tubes. The tracking chamber is surrounded by electromagnetic and hadronic calorimeters. Muons punching through the detector are analyzed in the MINOS near detector which sits just downstream of MINERvA.

The MINERvA collaboration has recently completed construction of a fully functional prototype, representing roughly 20% of the full detector, which is now being operated in the NuMI neutrino beam. The complete MINERvA detector will begin taking data in early 2010. I will describe the goals of the experiment, the construction and calibration of the detector, and early experience operating it in a neutrino beamline.

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