NOvA: The (Weak) Force is Strong with This One

4:00 PM, Monday; May 4, 2015; Refreshments at 3:45 PM
120 Engineering (Hammond Auditorium)

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ABSTRACT:
The NOvA experiment is a long-baseline accelerator based neutrino oscillation experiment. It uses the upgraded NuMI beam from Fermilab and measures electron neutrino appearance and muon neutrino disappearance at its far detector in Ash River, Minnesota. Goals of the experiment include measurements of the neutrino mixing angles, mass hierarchy, and CP violating phase. Construction of the detectors was completed in August 2014. Both detectors are constructed of PVC extrusions filled with liquid scintillator. The experiment is operational and gathering data, and the NOvA collaboration is preparing its first report of the results.

BIO: Dr. Corwin was born and raised in Wisconsin before earning his B.S. in physics from the University of Minnesota in 2003. In 2008, he earned his Ph.D. at The Ohio State University with a dissertation on the BaBar experiment. He then worked as a postdoc for Indiana University, spending most of his time based at Fermilab. While with Indiana, he was a member of the MINOS and NOvA experiments. He led the analysis combining the MINOS beam and atmospheric neutrino data and was heavily involved with quality control of the liquid scintillator for the NOvA detectors. He began his current position with the South Dakota School of Mines & Technology in Aug. of 2013; he has continued as a member of NOvA and joined the new DUNE collaboration.