



Poster session 1 - Monday 4 July

P1.027 Looking at two beams in the NOvA near detector

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NOvA is a long-baseline neutrino oscillation experiment with two detectors separated by 810 km. The NOvA Near Detector (ND) is a 300-ton, fine-grained, nearly fully active low-Z tracking calorimeter located at Fermilab. The ND is positioned 1 km away from the NuMI beam target at 14.6 mrad off the beam axis providing a narrow-band neutrino beam that is peaked at 2 GeV. The unique positioning of the ND also results in an exposure to Booster Neutrino Beam (BNB) neutrinos at 162 mrad off-axis, 780 m away from the target with a kaon-induced neutrino energy peak around 1.4 GeV. At an estimated 2500 ν_{μ} charged-current interactions from the BNB per year, there will be enough data to perform cross-checks of the energy calibration and measurements of neutrino cross sections at different neutrino energies from the BNB and NuMI beams respectively. This poster will discuss the physics capabilities and current studies in this experimental setup.