

# MINOS near-detector data decomposition and far-detector extrapolation

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The MINOS experiment at Fermilab uses two functionally identical detectors, the near detector at Fermilab and the far detector at Soudan Mine in Minnesota, to search for the muon-neutrino to electron-neutrino oscillations and potentially constrain the last unknown mixing angle in the 3-flavor lepton mixing matrix. In order to estimate the backgrounds in the far detector, where the potential oscillations can be measured, we need to understand the beam composition at the near detector. I will discuss a data-driven method for decomposing the near detector data which utilizes data taken in two different beam configurations. The resulting background expectation at the far detector will also be discussed.

**Primary author:** SWAIN, Sanjay (Stanford University)

**Presenter:** SWAIN, Sanjay (Stanford University)

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