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A Search for Sterile Neutrinos at MINOS and Prospects for MINOS+

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A new search for disappearance of active neutrinos over a baseline of 735 km was conducted using the NuMI neutrino beam and the MINOS detectors. The data analyzed correspond to an exposure of 10.56e20 protons-on-target. The neutral-current candidate spectrum measured at the Far Detector is compared with predictions assuming standard mixing between three active neutrino flavors. Both neutral-current and charged-current spectra are also fitted to neutrino oscillation models assuming one sterile neutrino. In this talk, new results using MINOS data and prospects for MINOS+ using the upgraded NuMI beam are presented.

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