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The System for on-Axis Neutrino Detection at the DUNE Near Detector complex

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The Deep Underground Neutrino Experiment Near Detector complex aims at constraining the systematic uncertainties and deconvolving the neutrino beam flux and cross-section models. The System for on-Axis Neutrino Detection (SAND) is the Near Detector component permanently on-axis. SAND is based on the 0.6 T superconducting magnet and electromagnetic calorimeter previously used in the KLOE experiment. The 40 m3 magnetic volume will be filled with an active target/tracker system. One considered option foresees an upstream liquid Argon active target (about 1.5 t) and a Straw Tube Tracker (about 5 t). In this talk the design of SAND will be described and its performances discussed in view of the SAND primary goals, namely the beam monitoring and neutrino flux measurements.

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