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DUNE as the Next-Generation Solar Neutrino Experiment

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Solar neutrinos reveal crucial information on neutrino properties and the interior of the Sun. However, it is not clear which experiment will significantly improve current observations in the near future. We show that DUNE, intended for other purposes, is extremely promising for this role. A combination of charged-current and elastic scattering events constrains the neutrino oscillation parameters θ_{12} , Δm_{21}^2 and the 8B flux at an unprecedented level. DUNE can also make the first detection of hep neutrinos, with a 10% precision on its normalization. A solar neutrino program in DUNE would reinvigorate this field and enrich DUNE scientific objectives. I will discuss both theoretical and experimental efforts needed to ensure the success of such a program.