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Direct Determination of Neutrino Mass with KATRIN

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The Karlsruhe Tritium Neutrino experiment (KATRIN) is a next generation tritium β decay experiment capable of performing a high precision direct measurement of the absolute mass of the electron neutrino. The projected sensitivity of the experiment is $m(\nu_e) < 0.2$ eV (90% C.L.) improving upon previous experiments by an order of magnitude. An overview of the experiment and its current status will be presented. Some of the technical challenges being addressed by the experiment will also be discussed. KATRIN is scheduled to begin collecting data in 2009. Support for this project in the United States is provided by the DOE under contract DE-FG-97ER41020.