

Neutrino Mass from Tritium Beta Decay: From Mainz to KATRIN

After the evidence of neutrino masses by oscillation experiments the determination of the absolute neutrino mass scale is of prime importance. A way of the direct determination of the neutrino mass scale is the investigation of the kinematics of β -decays. The Mainz Neutrino Mass Experiment investigated the β -decay of tritium and yields an upper limit on the mass of the electron neutrino of $m_\nu < 2.3$ eV. With this value its sensitivity limit is reached. The Karlsruhe Tritium Neutrino Experiment KATRIN, which is under construction will be able to reach a sensitivity on m_n in the sub-eV range. The talk will present the results of the Mainz experiment and introduce the KATRIN experiment.