

Progress toward measuring the mass of the neutrino

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The discovery of neutrino oscillations gives us proof that neutrinos have mass, the first direct contradiction of the minimal standard model. But how much mass? That is something oscillations cannot give, other than to tell us that the average of the three masses must be at least 0.02 eV. Laboratory measurements of the beta spectrum of tritium have steadily advanced: the masses are now known to be less than 2 eV. A very large and ambitious experiment called KATRIN that offers an order of magnitude gain in sensitivity is taking shape in Germany. And a novel, very different idea has just this summer passed its proof-of-concept test.

Refreshments @
3:30 in 202 NSH