

Neutrino mass experiments: current and future

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Nearly 70 years since the neutrino was discovered, and 25 years since discovery of neutrino oscillations established its non-zero mass, the absolute neutrino-mass scale remains unknown. Due to its unique characteristics, determining this neutrino property requires new measurement techniques to be developed. Currently, there are four measurement approaches: using cosmological models, inference from time-of-arrival from supernovae, through observation of neutrinoless double beta decay, and the kinematics of weak decay processes.

I will review the theoretical basis underlying neutrino mass measurement and present key experiments in this field. I will highlight the current best upper limits, how neutrino mass experiments are complementary to other neutrino property searches, and summarize the challenges that lie ahead of the neutrino mass community.

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