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Tritium Results from Project 8 Phase II

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Project 8 is a tritium endpoint neutrino mass experiment utilizing a phased program to achieve sensitivity to the range of neutrino masses allowed by the inverted mass ordering. The Cyclotron Radiation Emission Spectroscopy (CRES) technique is employed to measure the differential energy spectrum of relativistic decay electrons with high precision. In Phase II, the CRES technique was extended to make its first continuous spectrum measurement on the tritium endpoint. In this talk, we will highlight recent analysis progress towards the final results of Phase II. We will showcase the critical achievements of CRES in this small-scale apparatus, motivating scaling up the technique towards a next-generation neutrino mass experiment.

Collaboration name

Project 8

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