

Abstract Submitted
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Project 8: Towards cyclotron radiation emission spectroscopy on tritium¹ MARTIN FERTL, University of Washington, PROJECT 8 COLLABORATION — Project 8 aims to determine the neutrino mass by making a precise measurement of the beta decay of molecular tritium ($Q = 18.6$ keV) using the recently demonstrated the technique of cyclotron radiation emission spectroscopy (CRES). We report on results for calibration measurements performed with Kr-83m in a gas cell that fulfills the stringent requirements for a measurement using tritium: cryogenic operation, safe tritium handling, a non-magnetic design, and a good microwave guide performance. The phased program that allows Project 8 to probe the neutrino mass range accessible using molecular tritium is described.

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