

Abstract Submitted
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Phase II of the Project 8 neutrino mass experiment using Cyclotron Radiation Emission Spectroscopy¹ ELISE NOVITSKI, University of Washington, PROJECT 8 COLLABORATION — Project 8 is a neutrino mass experiment that uses a new technique, Cyclotron Radiation Emission Spectroscopy (CRES), to make a differential measurement of the tritium β^- spectrum. Project 8 aims to use the advantages of CRES to overcome the systematic and statistical limitations of current-generation direct measurement methods. It will proceed in a phased approach toward a goal of effective electron antineutrino mass sensitivity of ~ 40 meV/ c^2 . This talk will introduce CRES and Project 8, and will report on recent Phase II results. These include systematic studies using monoenergetic conversion electrons from ^{83m}Kr , as well as analysis progress and preliminary data from the ongoing final Phase II molecular tritium spectrum measurement, which is the first continuous spectrum measured using CRES.

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