

PROJECT 8

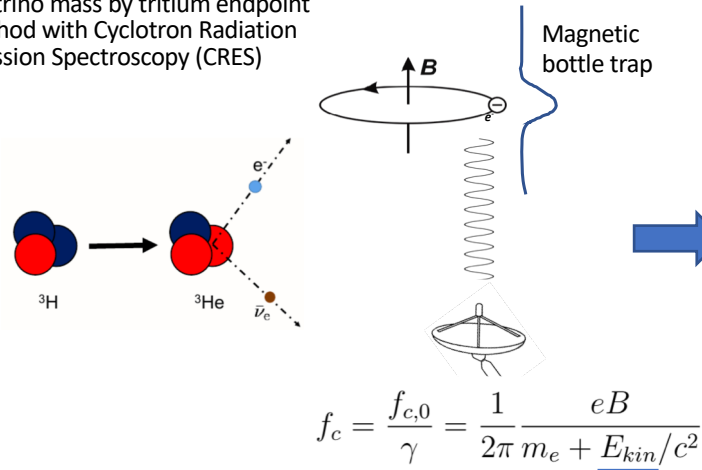
Magnetic field calibration and instrumental response for Project 8 Phase II apparatus with a Kr-83m source

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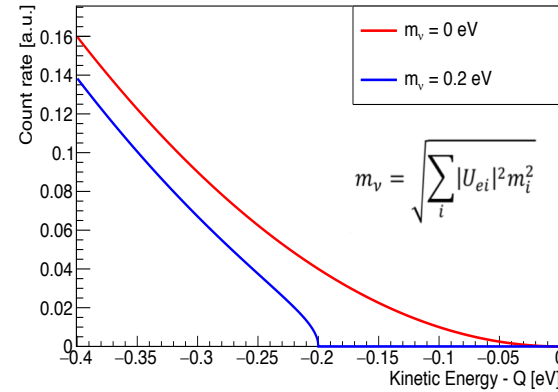
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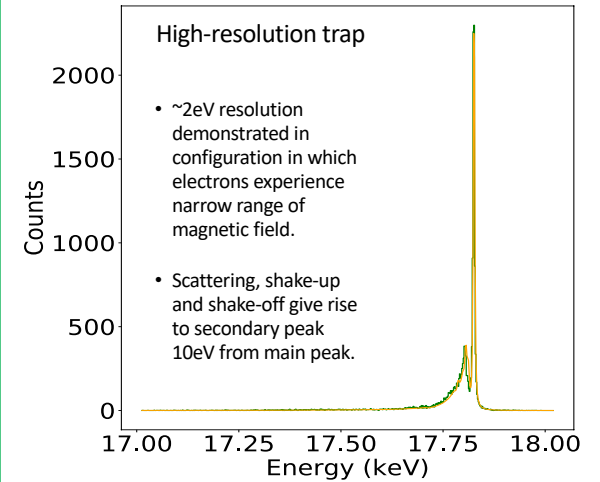
Project 8's long-term goal: measure neutrino mass by tritium endpoint method with Cyclotron Radiation Emission Spectroscopy (CRES)



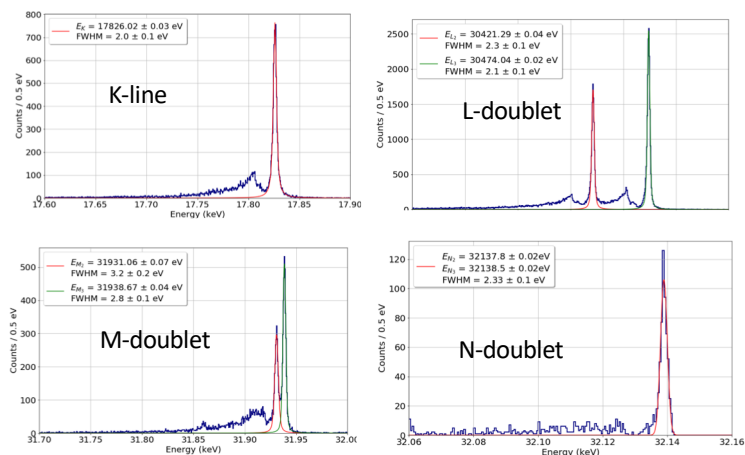
Energy spectrum of electrons emitted from tritium β^- decay



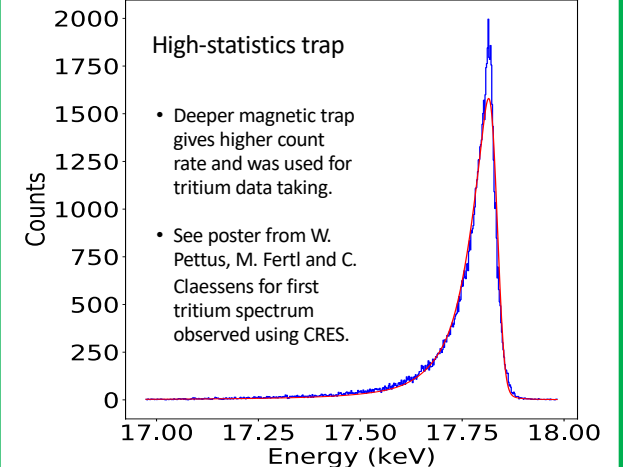
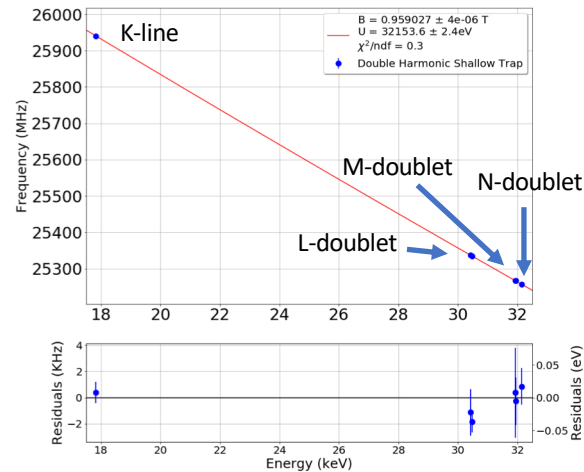
Fits of Kr-83m 17.8keV line with model including shake-up, shake-off, and electron collisions with hydrogen molecules and krypton atoms



Energy spectra for Kr-83m conversion electrons



Linearity of instrumental response is demonstrated over ~4keV



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