
Contribution ID: **65** Type: **Poster (main workshop)**

# Determination of the Absolute Neutrino Mass using Quantum Technologies

The observation of neutrino oscillations provides proof of non-zero neutrino masses. However, these same neutrino oscillation experiments do not provide information on the absolute scale of these masses, which remain unknown. The neutrino masses may be accessed via measurement of the shape of the tritium beta-decay energy spectrum with a particularly sensitive technique known as Cyclotron Radiation Emission Spectroscopy (CRES). The Quantum Technologies for Neutrino Mass (QTNM) collaboration aims to utilise CRES, along with state-of-the-art techniques from experimental Atomic, Molecular and Optical (AMO) physics, recent advances in the development of ultra-low-noise microwave amplifiers and other quantum technologies, to build a demonstrator apparatus suitable for measuring the absolute neutrino masses.

**Author:** Dr JONES, Seb

**Presenter:** Dr JONES, Seb