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Conversion electron detector for Laboratory Nuclear Astrophysics Reactions JOHN E. ELLSWORTH, Physics and Astronomy, Brigham Young University — The role electrons play in enhancing nucleosynthesis reactions is of great interest. There is also some interest in the possibility of electrons acting as a catalyst. Steven Jones, after having observed the ultimate fusion rate for muon catalyzed fusion, posited in 1986 the possibility of electrons catalyzing fusion reactions, which prompted the BYU Geo-Fusion Hypothesis. In 2017, Matej Lipoglavsek reported the 'Observation of electron emission in the nuclear reaction between protons and deuterons.' To investigate the possibility of an enhanced rate of conversion electrons from other reactions an accelerator target chamber is being constructed. Described here is the target chamber and its charged particle detector designed to include electrons up to 25MeV.

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