Abstract Submitted
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Double-beta decay Q values of ^{130}Te, ^{128}Te, and ^{120}Te[1] S.A. CALDWELL, N.D. SCIELZO, G. SAVARD, J.A. CLARK, J. VAN SCHELT, C.M. DEIBEL, J. FALLIS, S. GULICK, D. LASCAR, A.F. LEVAND, G. LI, J. MINTZ, E.B. NORMAN, K.S. SHARMA, M. STERNBERG, T. SUN — Using the Canadian Penning Trap mass spectrometer we have measured Q values for the double-beta decay processes with parent nuclei ^{120}Te, ^{128}Te, ^{130}Te. These measurements are relevant to the search for neutrinoless double-beta decay ($0\nu\beta\beta$) at the COURE/CUORICINO experiment. If observed, $0\nu\beta\beta$ decay would imply that the electron neutrino is a massive Majorana particle and that lepton number is not universally conserved in nature. We provide our results and a discussion of their implications.

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