Abstract Submitted
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Determination of effective charges in the lower pf shell[1] J.M. COOK, P. ADRICH, D. BAZIN, M.D. BOWEN, B.A. BROWN, C.M. CAMPBELL, A. GADE, T. GLASMACHER, S. MCDANIEL, A. OBERTELLI, K. SIWEK, J.R. TERRY, D. WEISSHAAR, National Superconducting Cyclotron Laboratory, Michigan State University — Recently, the use of the standard effective charges, $e_p = 1.5$ and $e_n = 0.5$, has been called into question, and the noncanonical values of $e_p = 1.15$ and $e_n = 0.8$ have been suggested for the upper fp shell[2]. ^{50}Ca is ideally situated for determining the e_n effective charge due to its closed $\pi(sd)$ shell. The results of the measurement of the B(E2; $0_1^+ \rightarrow 2_1^+$) transition rate in ^{50}Ca, which is proportional to e_n^2, via intermediate-energy Coulomb excitation at the National Superconducting Cyclotron Laboratory will be reported. In this experiment, γ rays were observed using the high-efficiency NaI APEX Array in conjunction with particle identification by the S800 Spectrograph.

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[2]R. du Rietz *et al.*, Phys. Rev. Lett. **93**, 222501 (2004)

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