Abstract Submitted
for the DNP15 Meeting of
The American Physical Society

Investigation of excited 0^+ states populated in the ^{162}Er(p,t) reaction C. BURBADGE, V. BILDSTEIN, A. DIAZ VARELA, M. DUNLOP, R. DUNLOP, P.E. GARRETT, D.S. JAMIESON, D. KISLIUK, K.G. LEACH, J. LORANGER, A. MACLEAN, A. RADICH, E. RAND, C.E. SVENSSON, University of Guelph, G.C. BALL, S. TRIAMBAK, Triumf, T. FAESTERMANN, Technische Universität München, R. HERTENBERGER, H.- F. WIRTH, Ludwig Maximilian Universität München — A continuing challenge in nuclear structure physics is the determination of the nature of low-lying excited 0^+ states. Various approaches have been implemented to interpret the occurence of these states, such as vibrational excitations in β and γ phonons or pairing excitations. One of the difficulties, however, in resolving the nature of these states is that there is a paucity of data; even the first excited state, 0_2^+, is not always known. Direct two-neutron transfer reactions are a useful tool for locating and investigating the nature of excited 0^+ states in well-deformed nuclei. Using the Q3D spectrograph at the Maier-Leibnitz Laboratory, the $N = 92$ nucleus ^{160}Er was studied via (p, t) reactions with a highly-enriched ^{162}Er target. Strong population of the 0_2^+ state was observed with large cross sections greater than any other excited 0^+ state. Preliminary results will be presented.

Christina Burbadge
Univ of Guelph

Date submitted: 01 Jul 2015 Electronic form version 1.4