Study of $^{162}$Er via the $(p, t)$ and $(p, p')$ reactions D. KISLIUK, P.E. GARRETT, A. FINLAY, L. BIANCO, V. BILDSTEIN, C. BURBADGE, S. CHAGNON-LESSARD, A. DIAZ VARELA, M.R. DUNLOP, R. DUNLOP, P. FINLAY, D. JAMIESON, B. JIGMEDDORJ, A.D. MACLEAN, J. MICHETTI-WILSON, K.G. LEACH, A.J. RADICH, E. RAND, C.E. SVENSSON, J. WONG, University of Guelph, G.C. BALL, S. TRIAMBAK, Triunf, T. FAESTERMANN, Technische Universität München, R. HERTENBERGER, H.-F. WIRTH, Ludwig-Maximilian-Universität München — The nature of excited states in well-deformed nuclei pose a challenge in nuclear structure. In light of this, the study of $^{162}$Er via the $^{164}$Er$(p, t)$ and $^{162}$Er$(p, p')$ reactions has been initiated to shed light on the structure of these excited states. The experiments were performed at the Maier-Leibnitz Laboratory using a 22 MeV proton beam on highly-enriched targets of $^{162, 164}$Er and the reaction was analyzed with the Q3D spectrograph. Strong population in the $(p, t)$ reaction of the $0^+_2$ state, far greater than other $0^+$ states, has been observed. Transition matrix elements for population of low-lying states in the $(p, p')$ reaction have also been extracted. Initial results from these experiments will be presented.

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