

Abstract Submitted  
for the DNP13 Meeting of  
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**Shell-Model Calculations of Two-Nucleon Transfer Related to Double Beta Decay**<sup>1</sup> ALEX BROWN, National Superconducting Cyclotron Laboratory and Department of Physics and Astronomy, Michigan State University, East Lansing, Michigan 48824-1321 — I will discuss theoretical results for two-nucleon transfer cross sections for nuclei in the regions of  $^{48}\text{Ca}$ ,  $^{76}\text{Ge}$  and  $^{136}\text{Xe}$  of interest for testing the wavefunctions used for the nuclear matrix elements in double-beta decay. Various reaction models are used. A simple cluster transfer model gives relative cross sections. Thompson's code Fresco with direct and sequential transfer is used for absolute cross sections. Wavefunctions are obtained in large-basis proton-neutron coupled model spaces with the code NuShellX with realistic effective Hamiltonians such as those used for the recent results for  $^{136}\text{Xe}$  [M. Horoi and B. A. Brown, Phys. Rev. Lett. 110, 222502 (2013)].

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