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$^{10}B(d,p)^{11}B$ and $^{25}Mg(d,p)^{26}Mg$ measurements using the Super-Enge Split-Pole Spectrograph[1] GRAY SELBY, ANTHONY KUCHERA, Davidson, GORDON MCCANN, KEN HANSELMAN, LAGY BABY, PAUL COTTLE, CHRIS ESPARZA, KIRBY KEMPER, FSU, ALEX CONLEY, RAFFY TRAAS, SHELLY LESHER, UW, JESSICA NEBEL-CROSSON, LEW RILEY, Ursinus, INGO WIEDENHOEVER, FSU — Two experiments were preformed using the Super-Enge Split-Pole Spectrograph at Florida State Universitys John D. Fox Accelerator Laboratory to measure high-resolution spectra of states in ^{26}Mg and ^{11}B through the use of (d,p) single-particle transfer reactions. Spin assignment confirmation of five states above the proton threshold of ^{26}Si are necessary for assessing the astrophysical impact of the $^{25}Al(p,\gamma)$ reaction rate on the ^{26}Al cosmic abundance. We investigate $^{25}Mg(d,p)^{26}Mg$ as a mirror to ^{26}Al to assign spin to the mirrors to the states of interest. A previous study observed beta-delayed proton emission in the neutron-rich nucleus ^{11}Be with an unexpectedly high decay mode strength that can only be understood if the decay proceeds through a new single-particle resonance in ^{11}B strongly fed by beta-decay. A recent pre-print corroborates the study, providing the expected excitation energy. While the resonance in ^{11}B was not found, spin assignments of ^{11}B states were assigned, one of which was previously unassigned.

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