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**Projected Hartree-Fock in a shell model basis**<sup>1</sup> JOSHUA STAKER, CALVIN JOHNSON<sup>2</sup>, San Diego State University — We implement projected Hartree-Fock in a shell model basis and compare against exact numerical results from full space diagonalization. We consider the accuracy of projected Hartree-Fock for the excited state spectrum in the cases of the s - d and p - f fixed parity shells as well as cases of mixed parity in the p - sd shell. The accuracy of valence protonneutron number configurations are also considered including even-even, odd-odd, and odd-A.

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