

Abstract Submitted
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Z=14 and Z=16 shell closures¹ MATHIS WIEDEKING, Lawrence Livermore National Laboratory, P. FALLON, A.O. MACCHIAVELLI, Lawrence Berkeley National Laboratory — It has been known for a long time that the interaction between valence neutrons and protons plays a pervasive role in the evolution of nuclear structure with changing neutron and proton number. With experimental data far from stability becoming available we present a systematic investigation of experimental excitation energies and electromagnetic properties in nuclei along the N=10, 11, and 12 isotones. We have searched available experimental data for signatures of shell closures far from stability. These data are compared to N_n - N_p models and are found to be consistent with the proposed proton shell closures at Z=14 [1] and Z=16 [2]. [1] P.D. Cottle, Phys. Rev. C 76, 027301 (2007) [2] Z. Dlouhy et al., Nucl. Phys. A722, 36 (2003)

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