Abstract Submitted
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Transition Rate Measurement in ^{18}N[1] MATHIS WIEDEKING, LBNL, P. FALLON, A.O. MACCHIAVELLI, L.W. PHAIR, D.L. BLEUEL, R.M. CLARK, M. CROMAZ, M-A. DELEPLANQUE, J.D. GIBELIN, I-Y. LEE, M.A. MCMAHAN, L.G. MORETTO, E. RODRIGUEZ-VIEITEZ, D. WARD, LBNL, L.A. BERNSTEIN, J.T. BURKE, B.F. LYLES, LLNL, A. VOLYA, FSU — Previous information on excited states of ^{18}N has been obtained from selective reaction mechanisms such as beta-decay and charge exchange reactions only. This work is the first to successfully utilize the non-selective ^{9}Be(^{11}B,2p)^{18}N fusion-evaporation reaction to extract structure information. The LIBERACE-STARS detector array – an array of large-area segmented silicon detectors (E-ΔE) and Compton suppressed HPGe Clover detectors – was used to detect the charged particles and γ radiation, respectively. New γ transitions were added to the ^{18}N level scheme and the B(M1) from the first excited state to the ground state was determined to be 0.01 W.u. $<$ B(M1) $<$ 3.6 W.u. Shell model calculations were used to study the low-lying configurations of ^{18}N and its odd-A neighbors ^{17}C and ^{19}O (N=11 isotones). The role of proton holes in determining the evolution of ground state and low-lying excited state properties of these N=11 isotones will be discussed.

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