

Abstract Submitted
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Lifetime measurements in ^{16}C and ^{20}C MARINA PETRI, Lawrence Berkeley National Laboratory — The search for new phenomena and structure effects due to the influence of large isospin, weak nucleon binding, and coupling to the continuum is of great interest in nuclear structure physics. We present data from a direct lifetime measurement of the 2^+ states in ^{16}C and ^{20}C , which have been cited as examples of “neutron decoupling.” The deduced $B(E2:2^+ \rightarrow 0^+)$ values are compared to shell model calculations. Neutron-rich carbon nuclei are one of the few isotopes experimentally accessible up to the neutron drip-line and provide an opportunity to follow changes in structure from stability to the drip-line. The experiments were carried out at the NSCL using the recoil distance method. This work is a collaboration between LBNL, MSU/NSCL, and Cologne.

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