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Electric Dipole strengths in ^{11}Be[1] ELAINE KWAN, Lawrence Livermore National Laboratory, TIGRESS/BAMBINO COLLABORATION — Conventional nuclear structure and properties are known to change as nuclei become more neutron rich. Light nuclei near the neutron drip line are of interest theoretically and experimentally since they exhibit unique features not observed elsewhere. The one neutron halo nucleus ^{11}Be has the fastest known $E1$ transition between bound states with a strength $\sim$0.1 e^2fm^2, an inverted parity, and contains few nucleons that it can be calculated theoretically based on first principles. Large $E1$ strength to the continuum has also been observed. Accuracies of $\sim$10% for the $B(E1)$ between the bound states and $\sim$5% to the continuum have been measured, but with discrepancies of 15% between the reported strengths for the latter. Improvement to the precisions of the $B(E1)$ values will help isolate the importance of individual N-N interactions included in theory. The first low-energy Coulomb excitation experiment on ^{11}Be was recently carried out at TRIUMF using the TIGRESS/BAMBINO array to measure the $E1$ strengths. A semi-classical reaction model and quantum mechanical calculation using the extended continuum discretized coupled channels model were used to determine the $B(E1)$ strengths. Preliminary results will be presented.

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