Abstract Submitted
for the APR18 Meeting of
The American Physical Society

Oxygen isotopes beyond the proton drip line[1] TYLER WEBB, Washington Univ — Nuclei at and beyond the drip lines are among the most exotic nuclear species. Beyond the proton drip line, two-proton decay, the most recently discovered nuclear decay channel, occurs. For $2p$-decaying states in light isotopes, the lifetimes are short and the invariant-mass method is ideal for measuring the decay energy, width, and momentum correlations between the decay fragments. I will present an invariant-mass measurement of the $2p$-decaying nucleus ^{11}O, the mirror of ^{11}Li. I will also present a new measurement of the $2p$-decaying ground and excited states in ^{12}O, including a newly observed 2^+ state. An ambiguity having to do with the possible two-proton decay of this 2^+ state to the 3.353 MeV excited state in ^{10}C will also be discussed.

[1]Funding support provided by DoE

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Date submitted: 11 Jan 2018 Electronic form version 1.4