Abstract Submitted
for the APR14 Meeting of
The American Physical Society

Two-proton decay from Isobaric Analog States of light nuclei KYLE BROWN, Washington Univ — Recent experiments at the National Superconducting Cyclotron Laboratory at Michigan State University using the charged-particle array HiRA and the gamma-ray array CAESAR have shed light on a new class of two-proton emitters associated with Isobaric Analog States (IAS). The two-proton decay is to the Isobaric Analog state of the daughter, which then gamma decays. These isospin-allowed transitions occur when one-proton decays are forbidden by either energy or isospin conservation, and when two-proton decay to the ground state is isospin forbidden. Three possible examples of this decay path will be discussed ($^{8}B_{IAS}$, $^{12}N_{IAS}$, and $^{16}F_{IAS}$). The known IAS of ^{8}C in ^{8}B was confirmed to decay by two-proton emission to the 3.56 MeV IAS in ^{6}Li. While the IAS in ^{8}B was previously known, it was measured in this experiment with unbiased statistics and in coincidence with the 3.56 MeV gamma-ray. The IAS in ^{16}F was investigated for the first time in this experiment and is still under investigation. Previous work on the IAS of ^{12}O in ^{12}N at the Cyclotron Institute at Texas A&M will also be presented.

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Date submitted: 10 Jan 2014 Electronic form version 1.4