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Search for invisible nucleon decay in SNO+ during commissioning phase IAN COULTER, Univ of Pennsylvania, SNO+ COLLABORATION — The SNO+ experiment aims to explore several topics in neutrino physics, including neutrinoless double beta decay and low energy solar neutrinos. For its initial commissioning phase, SNO+ will fill its inner vessel with light water and run to evaluate the performance of the detector and electronics. During this water-fill phase, it will have a unique sensitivity to certain modes of invisible nucleon decay, where the nucleon decays to a mode in which the decay products are not detected, e.g. to 3 neutrinos. With just a couple of months of water running, SNO+ is expected to set an improved model independent limit on the current bounds.

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