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Search for the ^{8}B$(2^+) \rightarrow {}^8$Be(0^+) transition MINESH BACRANIA, DEREK STORM, R.G. HAMISH ROBERTSON, WICK HAXTON, University of Washington — The beta decay of ^{8}B is an important reaction for both solar neutrino physics and understanding the nuclear physics in the mass-8 system. We are searching for the second-forbidden ^{8}B$(2^+) \rightarrow {}^8$Be$(0^+, \text{g.s.})$ transition, which has never before been experimentally detected. The observable signature for this transition is the 92-keV 2α decay of the ground state of ^{8}Be. This talk will discuss the development of an ^{8}B radioactive beam at the UW Tandem and our novel technique for measuring the low-energy signature of this transition. A branching-ratio limit will be given, as well as a comparison of this limit to theoretical estimates.

Minesh Bacrania
University of Washington

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