

Abstract Submitted
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Precision β -decay studies in a RFQ ion trap N. SCIELZO, A. LEVAND, G. SAVARD, I. TANIHATA, B. ZABRANSKY, Argonne National Laboratory, J. CLARK, H. SHARMA, K. SHARMA, Y. WANG, Argonne National Laboratory and U. of Manitoba, A. HECHT, Argonne National Laboratory and U. of Maryland — A linear RFQ ion trap has been constructed and brought online at Argonne for precise measurements of β -decay angular correlations to test the $V - A$ description of the weak interaction. The open geometry of the trap allows four sets of charged particle and γ -ray detectors to be brought close to the trapped radioactive ions. The first experiment will be a measurement of the $\beta - \nu$ correlation coefficient in ^{14}O . The recoil nucleus momentum can be inferred from the Doppler shift of the γ -rays emitted from the first excited state of ^{14}N . Recent progress towards a measurement of the $\beta - \nu$ correlation will be discussed. This work was supported in part by the U.S. Department of Energy, Office of Nuclear Physics, under Contract No. W-31-109-ENG-38.

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