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Precise measurement of ^{28}Al half-life[1] BIYING LIU, MAXIME BRODEUR, DANIEL BARDAYAN, University of Notre Dame, FREDERICK BECCHETTI , University of Michigan, CHEVELLE BOOMERSHINE, DANIEL BURDETTE, LOUIS CAVES, ORLANDO GOMEZ, SAMUEL HENDERSON, JAMES KOLATA, JACOB LONG, AUSTIN NELSON, PATRICK O'MALLEY, University of Notre Dame, ANDRES PARDO, University of Notre Dame Londrina State University — Precise and accurate half-lives of beta-decaying nuclei are important for a myriad of applications including the determination of nucleosynthesis pathways, and fundamental tests the weak interaction. Unfortunately, the half-life of several isotopes currently stem from conflicting measurements, which affects their accuracy and precision. The half-life of ^{28}Al is one such, as it includes several precise, but discrepant measurements resulting in the application of a 0.1% uncertainty on the world value by the NNDC. In an effort to remedy to the situation, a precise half-life measurement of ^{28}Al was performed using the β counting station at the University of Notre Dame's Nuclear Science Laboratory. The new measurement falls in between the two most recent values while disagreeing with both, prompting the need for another independent measurement. The experiment, data analysis and a new world value will be presented.

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