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Precision Half-life Measurement of ^{25}Al[1] JACOB LONG, TAN AHN, JACOB ALLEN, DANIEL BARDAYAN, University of Notre Dame, FREDRICH BECCHETTI, University of Michigan, DREW BLANKSTEIN, MAXIME BRODEUR, DANIEL BURDETTE, BRYCE FRENTZ, MATTHEW HALL, JAMES KELLY, JAMES KOLATA, PATRICK OMALLEY, BRADLEY SCHULTZ, SABRINA STRAUSS, ADRIAN VALVERDE, University of Notre Dame, TWINSOL COLLABORATION — In recent years, precision measurements have led to considerable advances in several areas of physics, including fundamental symmetry. Precise determination of ft values for superallowed mixed transitions between mirror nuclides could provide an avenue to test the theoretical corrections used to extract the V_{ud} matrix element from superallowed pure Fermi transitions. Calculation of the ft value requires the half-life, branching ratio, and Q value. ^{25}Al decay is of particular interest as its half-life is derived from a series of conflicting measurements, and the largest uncertainty on the ft value stems from the half-life uncertainty. The life-time was determined by the β counting of implanted ^{25}Al on a Ta foil that was removed from the beam for counting. The ^{25}Al beam was produced by a transfer reaction and separated by the TwinSol facility of the Nuclear Science Laboratory of the University of Notre Dame. The ^{25}Al results will be presented with preliminary results of more recent half-life measurements.

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