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Precision Half-life Measurement of ^{29}P[1] JACOB LONG, MAXIME BRODEUR, University of Notre Dame, TWINSOL COLLABORATION 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. The ^{29}P decay half-life is derived from a series of measurements of which all are over 35 years old. The life-time was determined by the β counting of implanted ^{29}P on a Ta foil that was removed from the beam for counting. The ^{29}P 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 progress on the ^{29}P analysis will be presented.

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