^{87}Y

The first observation of ^{87}Y was documented by DuBridge and Marshall in their 1940 paper entitled "Radioactive Isotopes of Sr, Y, and Zr" (1940Du05). Strontium targets were bombarded with 6.7 MeV protons at the University of Rochester. The activities of the reaction products were measured with a freon-filled ionization chamber, and the β and γ decays were measured with a magnetic cloud chamber and a β-ray spectrograph. "In addition ... we have observed three other periods produced by protons: 14±2 hours, 80±3 hours, and 105±5 days. Since the 14-hr. and the 80-hr. period are also produced by the bombardment of Sr with deuterons they can be assigned only to Y^{87} or Y^{88}. Stewart, Lawson and Cork, however, found only the 2-hr. period as a result of the reaction Y^{89}(n,2n). Therefore, we must assume that the 14-hr. and 80-hr. period are isomers of Y^{87}." The latter corresponds to the ground state of ^{87}Y. Half-lives of 14(2) h and 82(4) h had been observed previously; however, the assignments to either ^{85}Y or ^{87}Y was uncertain (1939St01).

Adapted from reference (2012Ny02)

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Please cite this abstract as: "FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:10.11578/frib/2279152"