

^{178}W

^{178}W was discovered by Wilkinson from Berkeley in 1950 as reported in “Neutron Deficient Radioactive Isotopes of Tantalum and Wolfram” (1950Wi67). Protons from the 184-cyclotron directed on a tantalum target created the isotope. “The bombardment of tantalum with protons of energy 10 to 70 Mev has led to the characterization of five new radioactive isotopes of wolfram.” Wilkinson counted the observation of an isomeric state in ^{179}W as the fifth isotope. They were identified following chemical separation by the measurement of K X-rays, electrons and γ radiation. The half-life of ^{178}W was measured to be 21.5(1) d. It should be mentioned that Wilkinson and Hicks had reported a 135 m half-life in 1948. They could not uniquely assign it to a specific tungsten isotope (either ^{178}W or ^{179}W) (1948Wi02), however, this half-life corresponds most likely to ^{177}W .

Adapted from reference (2010Fr08)

- 1948Wi02 G. Wilkinson and H. G. Hicks, Phys. Rev. **74**, 1733 (1948).
1950Wi67 G. Wilkinson, Phys. Rev. **80**, 495 (1950).
2010Fr08 A. Fritsch, J. Q. Ginepro, M. Heim, A. Schuh *et al.*, At. Data Nucl. Data Tables **96**, 315 (2010).

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