

¹⁹¹Au

¹⁹¹Au was first clearly identified by Gillon et al. from Princeton University in “Nuclear Spectroscopy of Neutron-Deficient Hg Isotopes” in 1954 ([1954Gi04](#)). The experiment was performed at the Harvard Cyclotron Laboratory using the reaction ¹⁹⁷Au(p,7n) at 65 MeV. Conversion electron spectra were measured with a 119-gauss magnet and K-X-ray lines were attributed to ¹⁹¹Au following the decay of ¹⁹¹Hg. In addition “It is likely that the 252.8-keV γ ray is the $d_{5/2}-d_{3/2}$ transition in Au¹⁹¹.” The estimated half-life was 4 h. The previous provisional assignment of a one day half-life in ¹⁹¹Au ([1948Wi01](#)) deviates significantly from this value. In addition, the paper stated that “the isotope has not been directly observed.”

Adapted from reference ([2010Sc35](#))

- [1948Wi01](#) G. Wilkinson, Phys. Rev. **73**, 252 (1948).
[1954Gi04](#) L. P. Gillon, K. Gopalakrishnan, A. deShalit, and J. W. Mihelich, Phys. Rev. **93**, 124 (1954).
[2010Sc35](#) A. Schuh, A. Fritsch, J. Q. Ginepro, M. Heim *et al.*, At. Data Nucl. Data Tables **96**, 307 (2010).

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