

## <sup>201</sup>Au

Butement and Shillito report the first observation of <sup>201</sup>Au at the Atomic Energy Research Establishment in Harwell, UK, in 1952 in their paper “Radioactive Gold Isotopes” (1952Bu80). Fast neutrons produced from 20 MeV protons bombarding a beryllium target were used to irradiate mercury and thallium targets. Decay curves were measured for (n,p) (n,pn) on mercury and (n,α) and (n,α) on thallium. The mass assignment was determined “from the modes of production” and was confirmed “by studying the gold isotopes produced by (γ,p) reactions on enriched mercury isotopes.” The half-life was determined via analysis of the decay curve to be 26 m. Butement had previously reported a 27 m activity with a probable assignment of <sup>201</sup>Au or <sup>203</sup>Au (1950Bu07, 1951Bu25). Interestingly, Butement and Shillito do not acknowledge the identification of <sup>200</sup>Au in reference (1951Bu25).

Adapted from reference (2010Sc35)

- 1950Bu07 F. D. S. Butement, *Nature* **165**, 149 (1950).  
1951Bu25 F. D. S. Butement, *Proc. Phys. Soc. (London) A* **64**, 395 (1951).  
1952Bu80 F. D. S. Butement and R. Shillito, *Proc. Phys. Soc. (London) A* **65**, 945 (1952).  
2010Sc35 A. Schuh, A. Fritsch, J. Q. Ginepro, M. Heim *et al.*, *At. Data Nucl. Data Tables* **96**, 307 (2010).

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