^{176}Lu

^{176}Lu was identified at the Old Chemistry Laboratory in Oxford, UK, by Marsh and Sugden and published in the 1935 paper "Artificial radioactivity of the rare earth elements" (1935Ma03). Ytterbium and lutetium oxides were irradiated with neutrons from a 400 mCi radon source in contact with powdered beryllium. "We have now examined a specimen of ytterbia separated from lutecia and other earths by the electrolytic method as insoluble $YbSO_4$. It gives a very feeble activity which is indistinguishable in period from that of lutecium and is probably due to residual traces of that element. The residual earths after the separation of ytterbium consisted chiefly of lutecia and gave a strong activity identical in period with that found for Prof. Urbain's specimen of lutecia." The reported half-life of 4.0(1) h corresponds to an isomeric state and the first determination of the ground state half-life ($7.3(2)\times10^{10}$) was reported four years later (1939Li13).

Adapted from reference (2012Gr19)

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