

## <sup>186</sup>Ta

“Radioactive <sup>186</sup>Tantalum” was published by Poë in 1955, describing the first observation of <sup>186</sup>Ta ([1955Po43](#)). Tungstic acid targets were irradiated with fast neutrons produced by bombarding beryllium with protons from the Harwell cyclotron. Decay curves and  $\beta$ - and  $\gamma$ -ray spectra were measured following chemical separation. “The new radioactive isotope <sup>186</sup>Ta has been prepared and its decay characteristics determined as follows: Half-life:  $10.5 \pm 0.5$  min, Maximum  $\beta$ -energy:  $2.2_2$  MeV, Conversion-electron energies:  $\leq 0.15$  MeV,  $\gamma$ -ray energies: 125, 200, 300, 410, 510, 610, 730, 940 and possibly  $\sim 1150$  keV. The mass assignment suggested by its production by (n,p), but not by ( $\gamma$ ,p), reactions on tungsten was confirmed by experiments using tungstic acid enriched in <sup>186</sup>W.”

Adapted from reference ([2012Ro36](#))

[1955Po43](#) A. J. Poe, Phil. Mag. **46**, 1165 (1955).

[2012Ro36](#) R. Robinson and M. Thoennessen, At. Data Nucl. Data Tables **98**, 911 (2012).

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