

## **<sup>202</sup>Pb**

The observation of <sup>202</sup>Pb was reported by Maeder and Wapstra from the Instituut voor Kernfysisch Onderzoek in Amsterdam, in the 1954 article “A new isomer in lead” (1954Ma96). Thallium was irradiated with 26 MeV deuterons and the resulting activity was studied with NaI scintillation spectrometers and a  $\beta$ -ray spectrometer following chemical separation. “In irradiations of Tl with 26-Mev deuterons, a new  $3.5 \pm 0.1$  hr activity appeared in the Pb fraction. Its excitation curve, compared with those of 1.1-hr Pb<sup>204\*</sup> and 2.3-day Pb<sup>203</sup> pointed to the reaction  $Tl^{203}(d,3n)Pb^{202*}$ .” The given half-life corresponds to an isomeric state. Although the level ordering was not correct transitions populating the ground state were observed. The half-life of the ground state ( $\sim 3 \times 10^5$  y) was first observed eight months later (1954Hu61). An earlier assignment of a 5.6 s isomer to <sup>202</sup>Pb (1952Ho41) was incorrect.

Adapted from reference (2013Fr04)

- 1952Ho41 N. J. Hopkins, Phys. Rev. **88**, 680 (1952).
- 1954Hu61 J. R. Huizenga and C. M. Stevens, Phys. Rev. **96**, 548 (1954).
- 1954Ma96 D. Maeder and A. H. Wapstra, Phys. Rev. **93**, 1433 (1954).
- 2013Fr04 C. Fry and M. Thoennessen, At. Data Nucl. Data Tables **99**, 365 (2013).

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