

## **$^{164}\text{Ta}$**

In the 1982 paper “Untersuchung des Neuen Isotops  $^{164}\text{Ta}$ ”, Eichler et al. reported the first discovery of  $^{164}\text{Ta}$  ([1982Ei03](#)). An enriched  $^{151}\text{Eu}$  target was bombarded with 154 and 164 MeV  $^{20}\text{Ne}$  beams from the Dubna U-300 heavy-ion accelerator and  $^{164}\text{Ta}$  was produced in the fusion-evaporation reaction  $^{151}\text{Eu}(^{20}\text{Ne},7n)$ . Decay curves and  $\gamma$ -ray spectra were measured following chemical separation. “In periodic batch-wise experiments the Ta-fraction was chemically separated and the isotope  $^{164}\text{Ta}$  with a half-life of  $20\pm 5$  s was found, emitting 210.6 keV  $\gamma$ -rays. The assignment is based on the measured growth and decay curve of  $^{164}\text{Hf}$ .” Less than four months later Liang et al. independently reported a half-life of 13.7(6) s ([1982Li17](#)).

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

- [1982Ei03](#) B. Eichler, H. Bruchertseifer, J. Estevez, T. Cruz, and I. Zvara, *Radiochem. Radioanal. Lett.* **53**, 161 (1982).
- [1982Li17](#) C. F. Liang, P. Paris, D. Bucurescu, S. Della Negra *et al.*, *Z. Phys. A* **309**, 185 (1982).
- [2012Ro36](#) R. Robinson and M. Thoennessen, *At. Data Nucl. Data Tables* **98**, 911 (2012).

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