

¹⁸⁰Os

The discovery of ¹⁸⁰Os was reported in the 1966 paper “The decay of the isotope Os¹⁸⁰” by Belyaev et al. ([1966Be41](#)). Tm₂O₃ targets were bombarded with 100 MeV ¹⁴N from the Dubna U-150 cyclotron and ¹⁸⁰Os was formed in the fusion-evaporation reaction ¹⁶⁹Tm(¹⁵N,4n). Gamma-ray spectra were measured with a NaI(Tl) crystal following chemical separation. “In our measurements we observed γ lines having the same energy, 105 and 510 keV, and an intense 880-keV γ line. This gives grounds for assuming that the observed 21-minute activity is connected with the decay of the isotope Os¹⁸⁰, which, taking into account the time necessary to separate the osmium (~ 1 hour), is in radioactive equilibrium with the daughter rhenium, that is, Os¹⁸⁰ $\xrightarrow{21\text{ min}}$ Re¹⁸⁰ $\xrightarrow{2.4\text{ min}}$.” Previously a 23 min half-life had been tentatively assigned to ¹⁸¹Os ([1958Fo47](#)) and was later reassigned to ¹⁸⁰Os ([1966Ho16](#)).

The discovery date was changed from the original assignment to credit the original Russian publication.

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

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- [1966Be41](#) B. N. Belyaev, V. I. Gudov, A. V. Kalyamin, L. M. Krizhanskii, and O. M. Lilova, Yadern. Fiz. **4**, 225 (1966).
- [1966Ho16](#) K. J. Hofstetter and P. J. Daly, Phys. Rev. **152**, 1050 (1966).
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