

¹⁹⁶Rn

In the 1995 article “New α -decaying neutron deficient isotopes ¹⁹⁷Rn and ²⁰⁰Fr,” Morita et al. announced the identification of ¹⁹⁶Rn ([1995Mo14](#)). A 273.6 MeV ³⁶Ar beam from the RIKEN ring cyclotron bombarded an enriched ¹⁶⁶Er target forming ¹⁹⁶Rn in (6n) fusion-evaporation reactions. Reaction products were separated with the gas-filled recoil separator GARIS and implanted in a position-sensitive silicon detector which also measured subsequent α decay. “The single event indicated in [the figure] was observed at the bombarding energy of 200 MeV, while events of group A and group B were observed mainly at $E_{lab}=186$ MeV. Because the α_2 energy and the time difference between α_1 and α_2 of the event E are close to the decay energy and the half-life of ¹⁹²Po α -decay, it is highly probable that α_1 originates from the decay of ¹⁵⁶Rn produced in the (³⁶Ar,6n) reaction.” The same group reported the half-life of ¹⁹⁶Rn as 3_{-2}^{+7} ms a year later ([1997Pu01](#)).

Adapted from reference ([2013Fr09](#))

- [1995Mo14](#) K. Morita, Y. H. Pu, J. Feng, M. G. Hies *et al.*, *Z. Phys. A* **352**, 7 (1995).
[1997Pu01](#) Y. H. Pu, K. Morita, M. G. Hies, K. O. Lee *et al.*, *Z. Phys. A* **357**, 1 (1997).
[2013Fr09](#) C. Fry and M. Thoennessen, *At. Data Nucl. Data Tables* **99**, 497 (2013).

Please cite this abstract as: “FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:[10.11578/frib/2279152](https://doi.org/10.11578/frib/2279152)”