

Fission Products of Thorium

Several long-lived noble gases from thorium irradiated with fast neutrons (9 Mev, from deuterons on beryllium) have been observed. One of these gases is a krypton of 3-hour half-life which decays into an 18-minute rubidium previously reported by Aten, Bakker and Heyn.¹ This rubidium has been checked chemically. The same period appears in the neutron bombardment of rubidium² and hence is either Rb⁸⁶ or Rb⁸⁸. But Kr⁸⁶ is stable, so that the 18-minute rubidium and its parent krypton are most probably to be assigned to nuclei of mass 88.

There are several other longer-lived noble gases with very soft radiations, of which the longest-lived one observed has an apparent period of $5\frac{1}{2}$ days. None of these gases leaves an appreciable active deposit.

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ALEXANDER LANGSDORF, JR.

Radiation Laboratory,
University of California,
Berkeley, California,
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¹ A. H. Aten, Jr., C. J. Bakker and F. A. Heyn, *Nature* **143**, 679 (1939).

² Arthur H. Snell, *Phys. Rev.* **52**, 1007-1022 (1937).