

## $^{226}\text{Pa}$

Meinke et al. reported the observation of  $^{226}\text{Pa}$  in the 1949 paper “Three additional collateral alpha-decay chains” (1949Me54). Thorium was bombarded with 150 MeV deuterons from the Berkeley 184-inch cyclotron. The  $\alpha$ -decay chains from  $^{226}\text{Pa}$  was measured following chemical separation. “Similarly the protactinium fraction of 150-MeV deuteron-bombarded thorium shows a series of alpha-particle emitters whose rate of decay is controlled by the 1.7-minute half-life of the parent with the subsequent members all too short-lived to be isolated and separately studied. Although the mass type has not yet been identified through known daughters as above, general considerations with regard to the method of formation and half-life of the parent substance, and the energies of all the members of the series suggest a collateral branch of the  $4n+2$  family:  ${}_{91}\text{Pa}^{226} \xrightarrow{\alpha} {}_{89}\text{Ac}^{222} \xrightarrow{\alpha} {}_{87}\text{Fr}^{218} \xrightarrow{\alpha} {}_{85}\text{At}^{214} \xrightarrow{\alpha} {}_{88}\text{Bi}^{210}(\text{RaE}).$ ” The measured half-life was 1.70(15) min.

Adapted from reference (2013Fr03)

1949Me54 W. W. Meinke, A. Ghiorso, and G. T. Seaborg, Phys. Rev. **75**, 314 (1949).

2013Fr03 C. Fry and M. Thoennessen, At. Data Nucl. Data Tables **99**, 345 (2013).

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