

with the radiochemical data obtained by other investigators.⁷⁻¹⁷

The equilibrium ratio of relatively long-lived nuclides such as Sr⁹⁰ and Tc⁹⁹ in uranium minerals tends to be higher than the ratio in depleted uranium because of the contribution from the neutron-induced fission, and hence the radiochemical data obtained with uranium minerals¹⁸⁻²⁰ are not plotted in Fig. 2.

A few additional radiochemical data reported by previous investigators are not plotted in Fig. 2. For example, the Sr⁹¹ and Sr⁹² values reported by Heydegger and Kuroda⁹ are not reliable, as stated by the authors themselves, and hence are omitted. When more than one value is available for one mass chain, the value with minimum uncertainty was selected in Fig. 2.

The mirror points are plotted in Fig. 2, using the value of 2 for the number of prompt neutrons emitted

⁹ H. R. Heydegger and P. K. Kuroda, *J. Inorg. Nucl. Chem.* **12**, 12 (1959).

¹⁰ H. Arino, AEC Contract At-(40-1)-3235, Annual report 1964, p. 88, 1964 (unpublished).

¹¹ M. N. Rao, Ph.D. dissertation, University of Cologne, 1962 (unpublished).

¹² M. N. Rao and C. J. Sahani, *J. Inorg. Nucl. Chem.* **27**, 2679 (1965).

¹³ P. L. Parker and P. K. Kuroda, *J. Inorg. Nucl. Chem.* **5**, 153 (1958).

¹⁴ Tin Mo and P. K. Kuroda, *J. Inorg. Nucl. Chem.* **27**, 503 (1965).

¹⁵ M. P. Menon and P. K. Kuroda, *J. Inorg. Nucl. Chem.* **26**, 401 (1964).

¹⁶ M. Attrep, Ph.D. dissertation, University of Arkansas, 1965 (unpublished).

¹⁷ P. K. Kuroda and R. R. Edwards, *J. Inorg. Nucl. Chem.* **3**, 345 (1957).

¹⁸ B. T. Kenna and P. K. Kuroda, *J. Inorg. Nucl. Chem.* **26**, 493 (1964).

¹⁹ P. K. Kuroda and R. R. Edwards, *J. Chem. Phys.* **22**, 1940 (1954).

²⁰ B. C. Purukayastha and G. W. Martin, *Can. J. Chem.* **34**, 293 (1956).

per fission. A rather well-defined "mass-yield curve" is thus obtained. The shape of the U²³⁸ spontaneous fission mass-yield curve is, of course, markedly different from that of thermal neutron-induced fission of U²³⁵, and is characterized by a narrow mass distribution with humps and an extremely low yield in the equal-mass region.

In Fig. 2, curve I corresponds to Segrè's decay constant value² of $8.7 \times 10^{-17} \text{ yr}^{-1}$ and curve II represents the value of $6.9 \times 10^{-17} \text{ yr}^{-1}$ reported by Fleischer and Price¹ in the following expression:

$$N^{238} \lambda_{238,f} = \frac{1}{2} \sum_{i=80}^{155} N_i \lambda_i, \quad (1)$$

where N^{238} is the number of U²³⁸ atoms and $N_i \lambda_i$ is the cumulative activities of the fission products at mass number i in equilibrium with N^{238} .

In Fig. 2, the experimental points fall mostly within the area between curves I and II, indicating that the decay constant corresponds to a value of $(7.8 \pm 0.9) \times 10^{-17} \text{ yr}^{-1}$, which is the average of the values reported by Fleischer and Price¹ and Segrè.² It is probably worthy of note that the experimental values for the light peak region tend to agree with curve II, while the values for the heavy peak agree with curve I. It is perhaps significant that the data for the mass chains 138, 139, 141, 143, and 144 were all obtained with natural uranium only, and the measurements for these mass chains should be repeated in future.

ACKNOWLEDGMENT

The authors would like to thank the U. S. Atomic Energy Commission for support of this work through Contract No. At-(40-1)-3235.

Erratum

Coupling Constants in Muon Capture, L. L. FOLDY AND J. D. WALECKA [*Phys. Rev.* **140**, B1339 (1965)]. The sign of one of our small nucleon recoil corrections is incorrect. Equation (13) and therefore Eq. (35) and the last term in Eq. (43) should have opposite signs. This increases our value of F_A^μ / F_A^β by 2% and that of $\mu(\nu^2)$ by 8% (which is well within our quoted error). We are grateful to J. Friar for calling this mistake to our attention.