quickly after the β decay and would, therefore, show decay periods that correspond to the periods of the disintegration of A to the excited state of B.

The delayed neutron periods that have been observed and their yields are listed in Table 4. The first two periods are rather well verified and have been identified to be emitted by Kr^{87} and Xe^{137}, respectively*. The shortest period is not yet definitely confirmed.†

TABLE 4 – DELAYED NEUTRONS FROM U^{235} [Phys. Rev. 74:1330(1948)] †.

HALF-LIFE (SEC)	RELATIVE INTENSITY	DELAYED NEUTRONS PER PROMPT NEUTRON. (%)
55.3 ± 0.7	0.054	0.025
22.4 ± 0.4	0.294	0.166
5.5 ± 0.3	0.297	0.213
1.7 ± 0.2	0.279	0.241
0.36 ± 0.07	0.076	0.085
(0.0044 ± 0.0007 ?)	(~.02)	

8.4 THE FISSION PROCESS – GENERAL NATURE OF CROSS SECTION

The cross sections for capture and fission for the isotopes of uranium and plutonium that have so far been investigated show a rather complicated dependence on energy. For some isotopes, the (n,f) cross section decreases with neutron energy, whereas for others it increases. Some isotopes show an (n,f) threshold, whereas some have an (n,f) cross section that follows the 1/v law at low energies. Pronounced resonances for capture are apparent at low neutron energies in isotopes like U^{238}. The resonances become less striking at higher energies, where they tend to become smeared out.

*Phys. Rev. 72:545 (147).

†Phys. Rev. 74:1330 (1948).

†Similar periods have been found for the delayed neutrons in plutonium fission. See Phys. Rev.72:567 and 570 (1947). The per cent of delayed neutrons per prompt neutron is taken from Phys. Rev. 73:111 (1948).

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