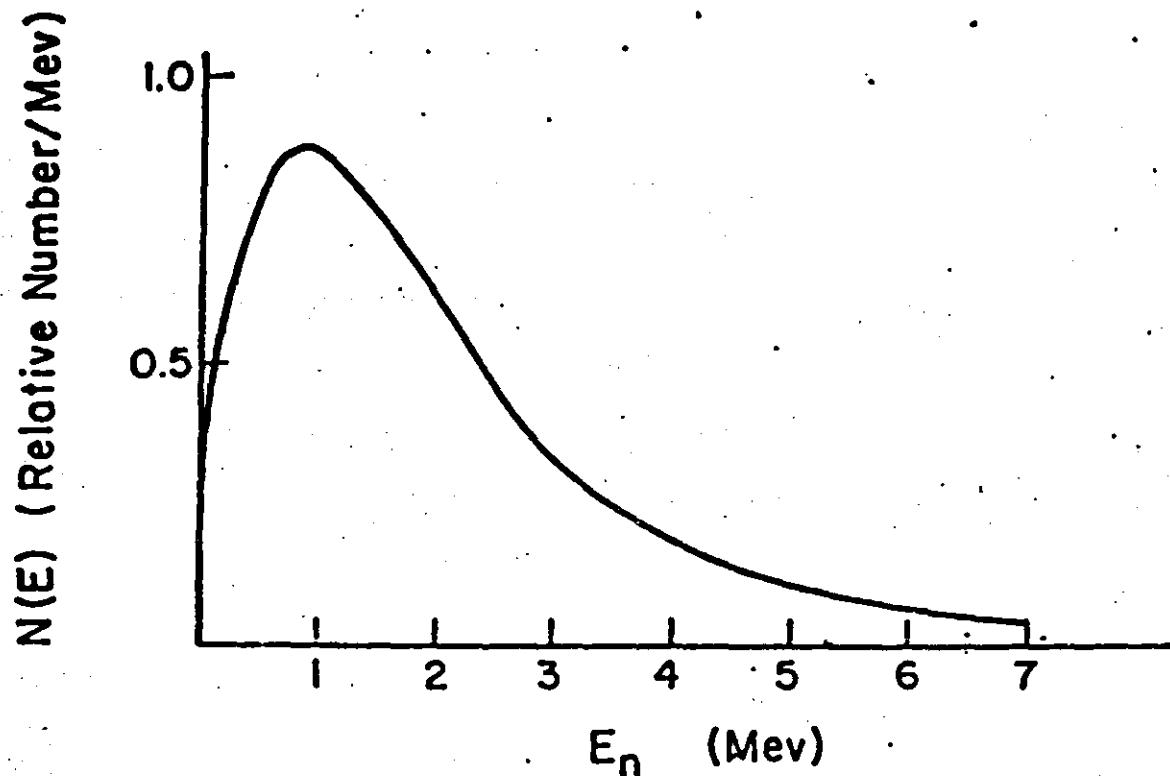
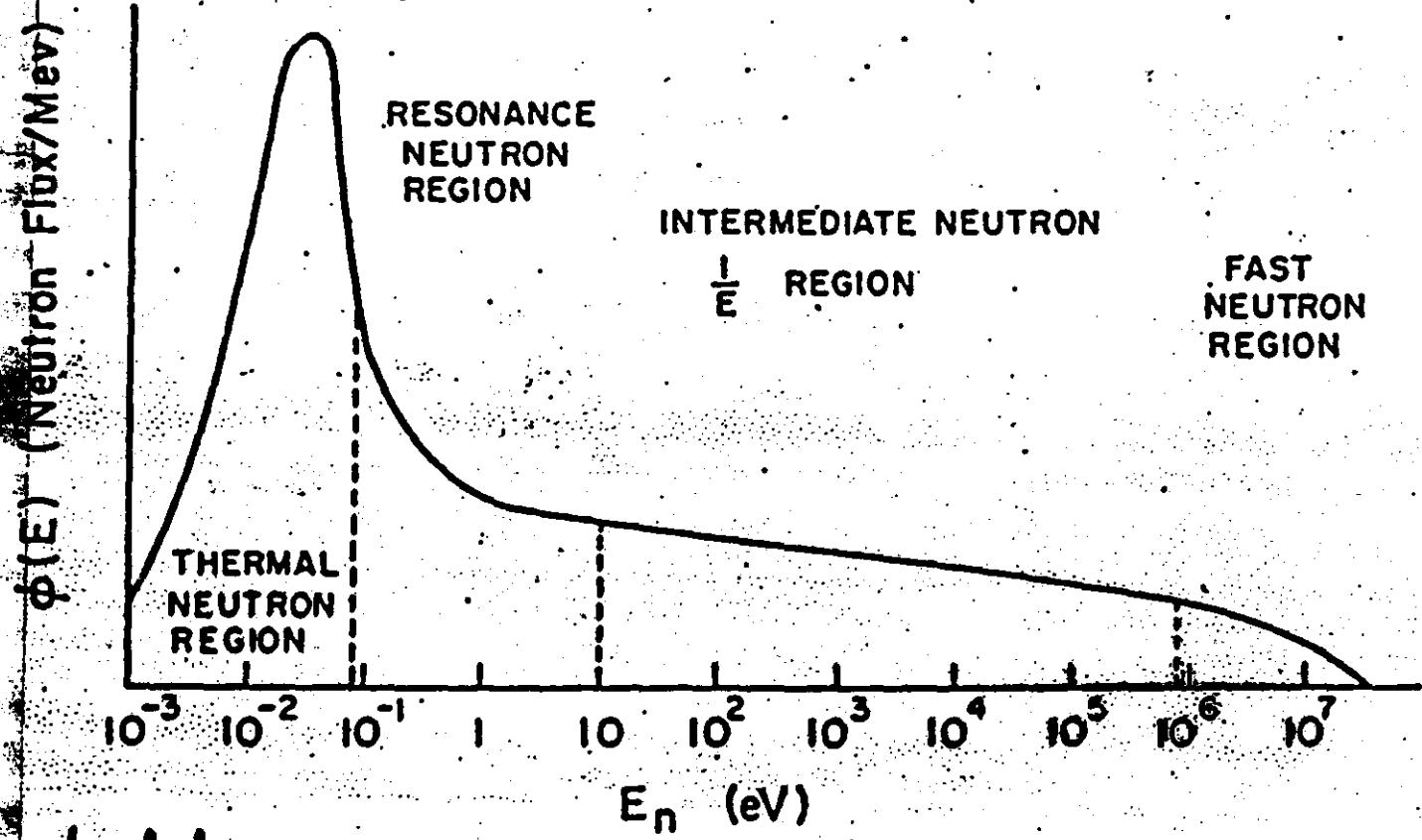


Irradiation Sources



(a)



4.1d

A SLOWPOKE-2 INSTALLATION

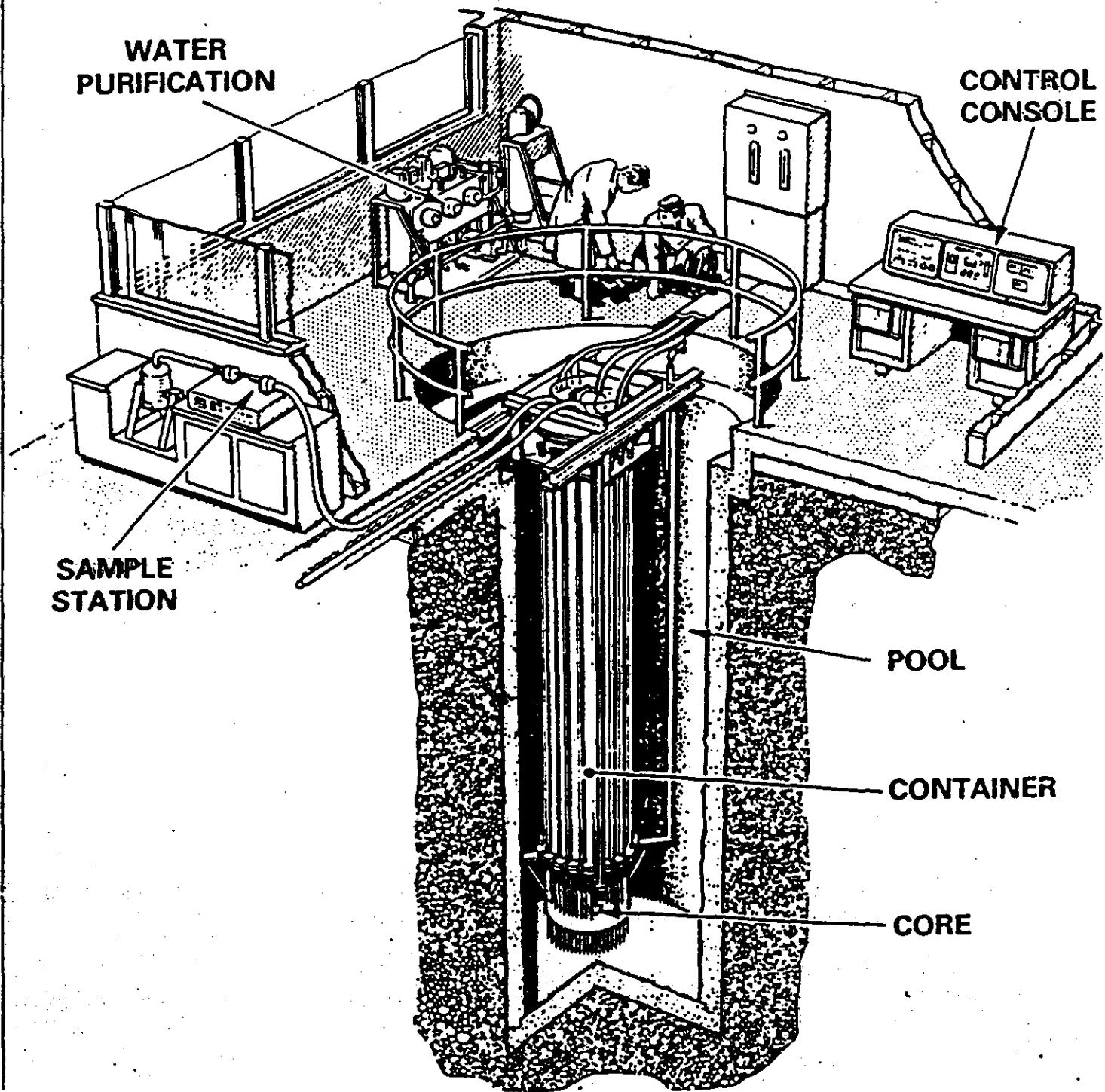


Figure 1: Typical SLOWPOKE-2 Reactor Installation

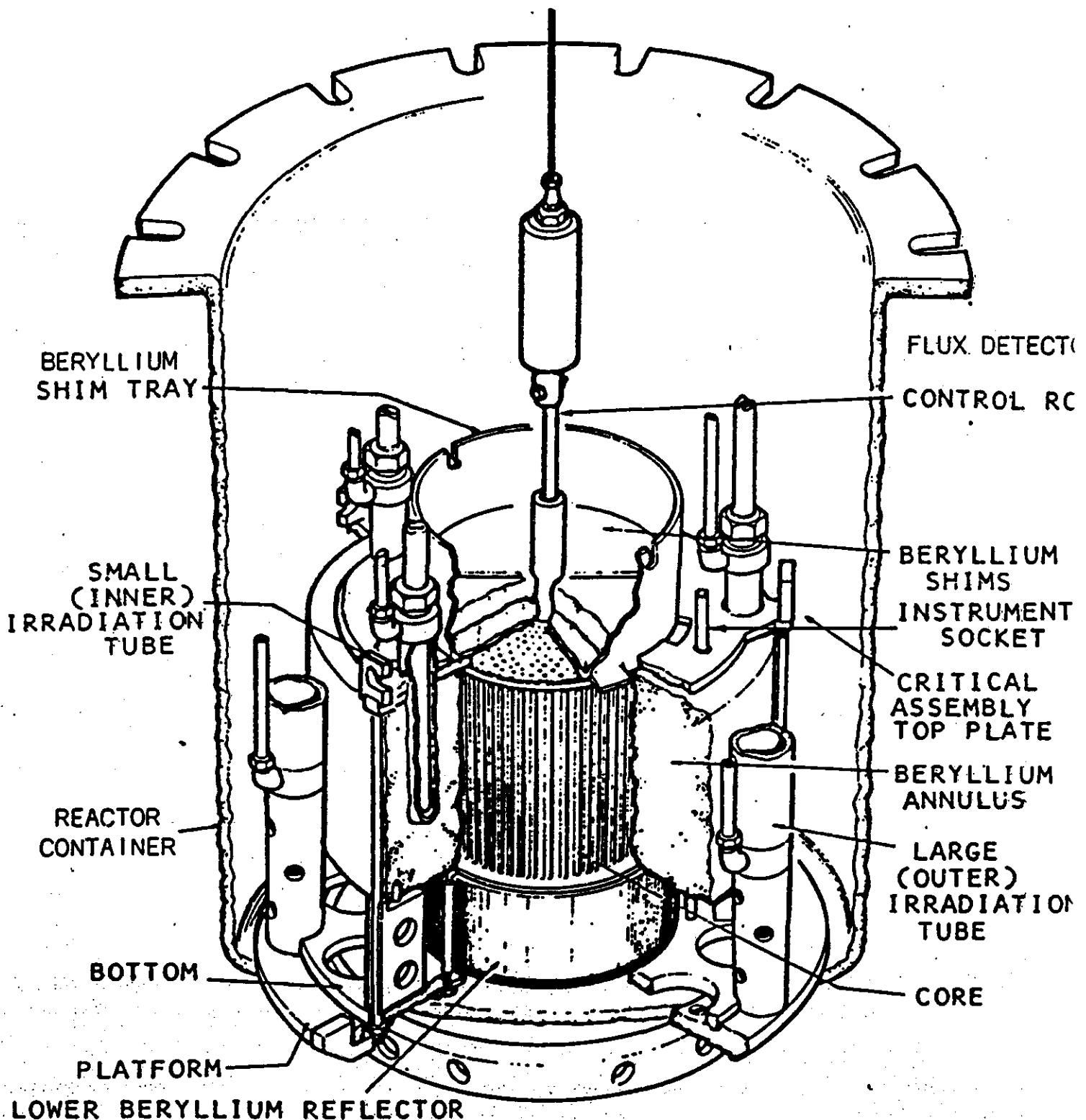
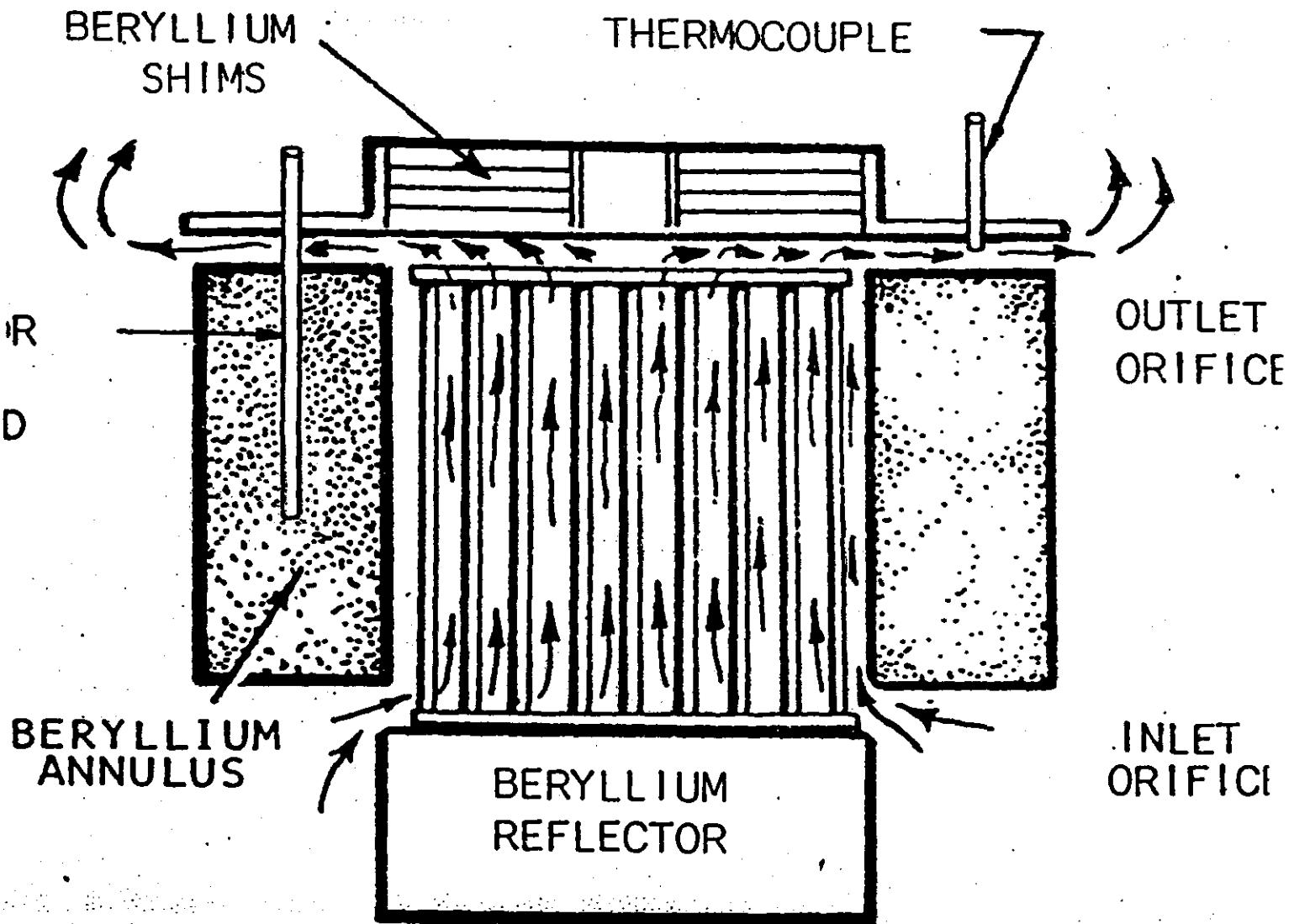


Figure 2: Core, Reflectors and Irradiation Tubes in Lower Section of Reactor Container

4.1d



SLOWPOKE REACTOR - THE CORE

4.1d

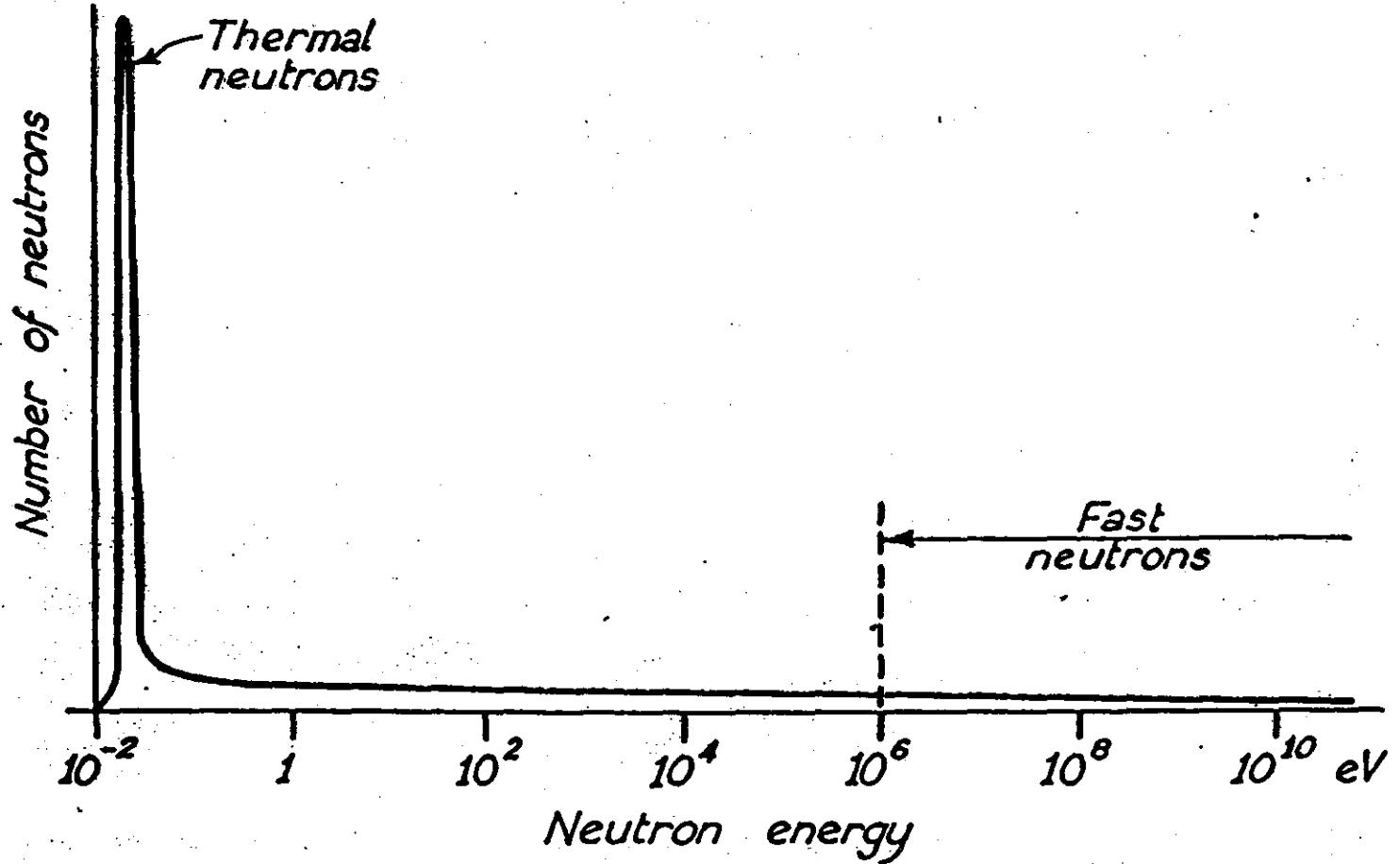
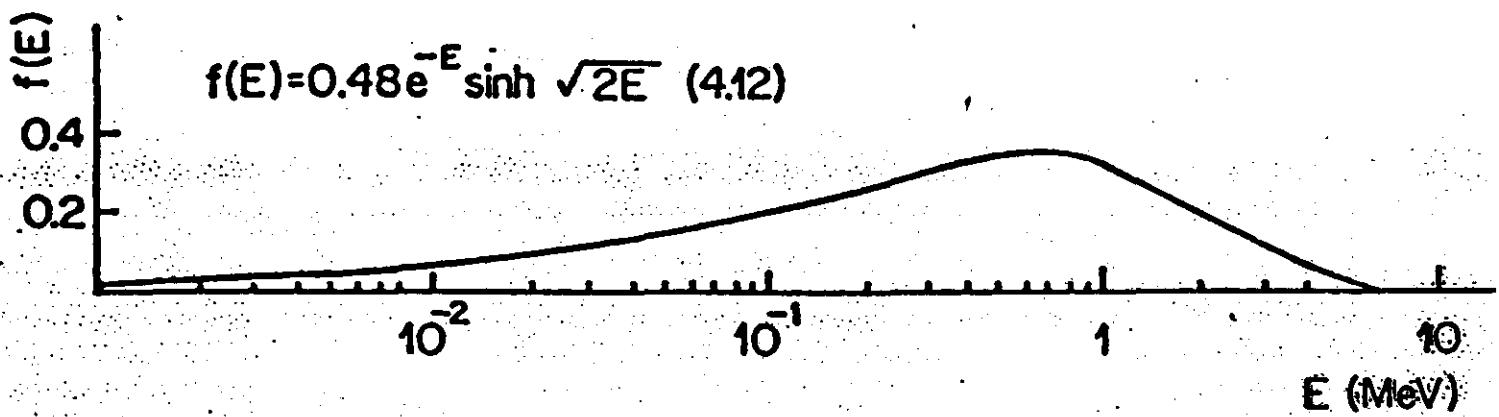
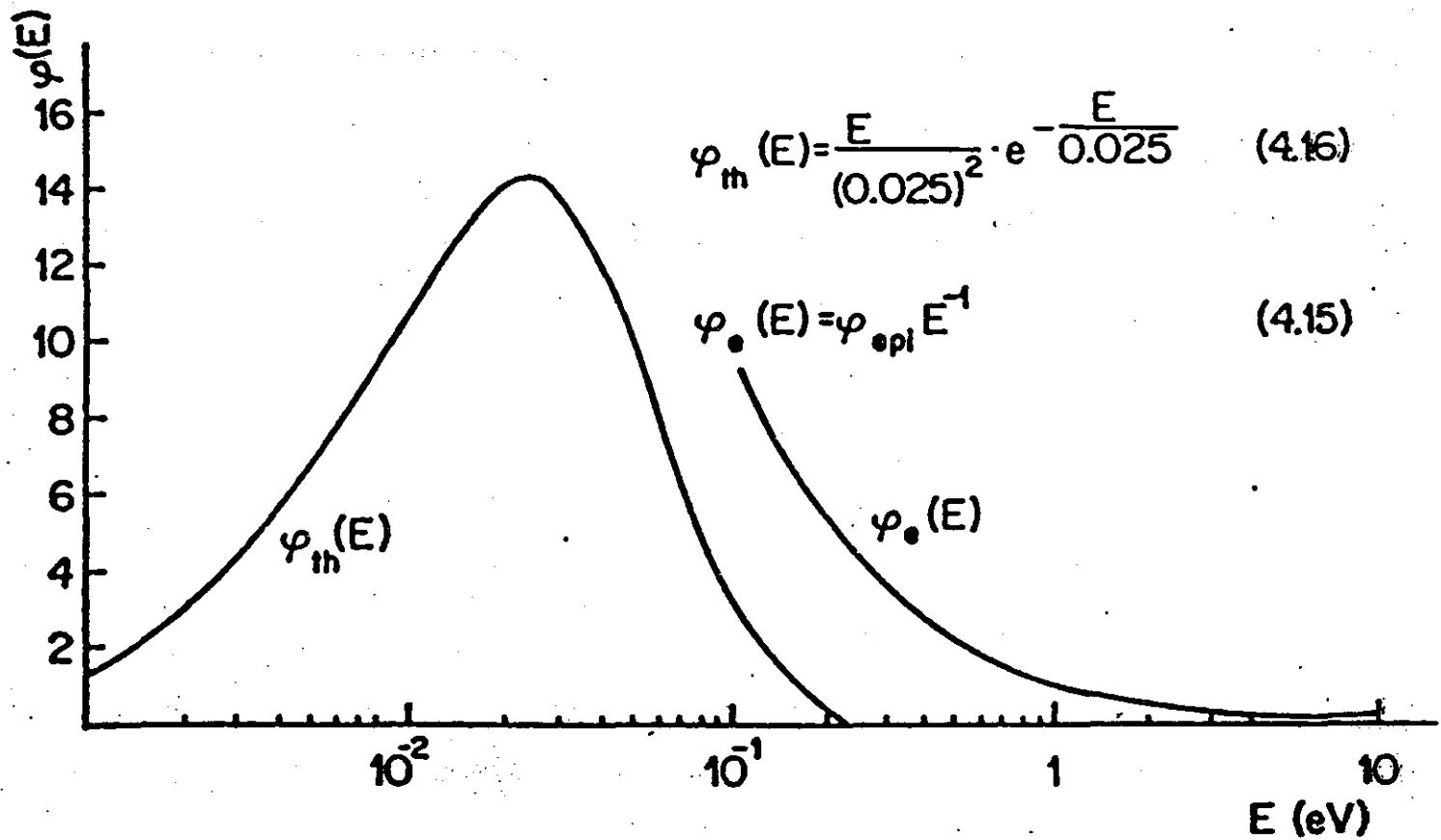


FIG. 3.4. Distribution of neutron energies in a reactor.

4.1d

NEUTRON ACTIVATION ANALYSIS



4.1.d REACTOR NEUTRON SPECTRUM

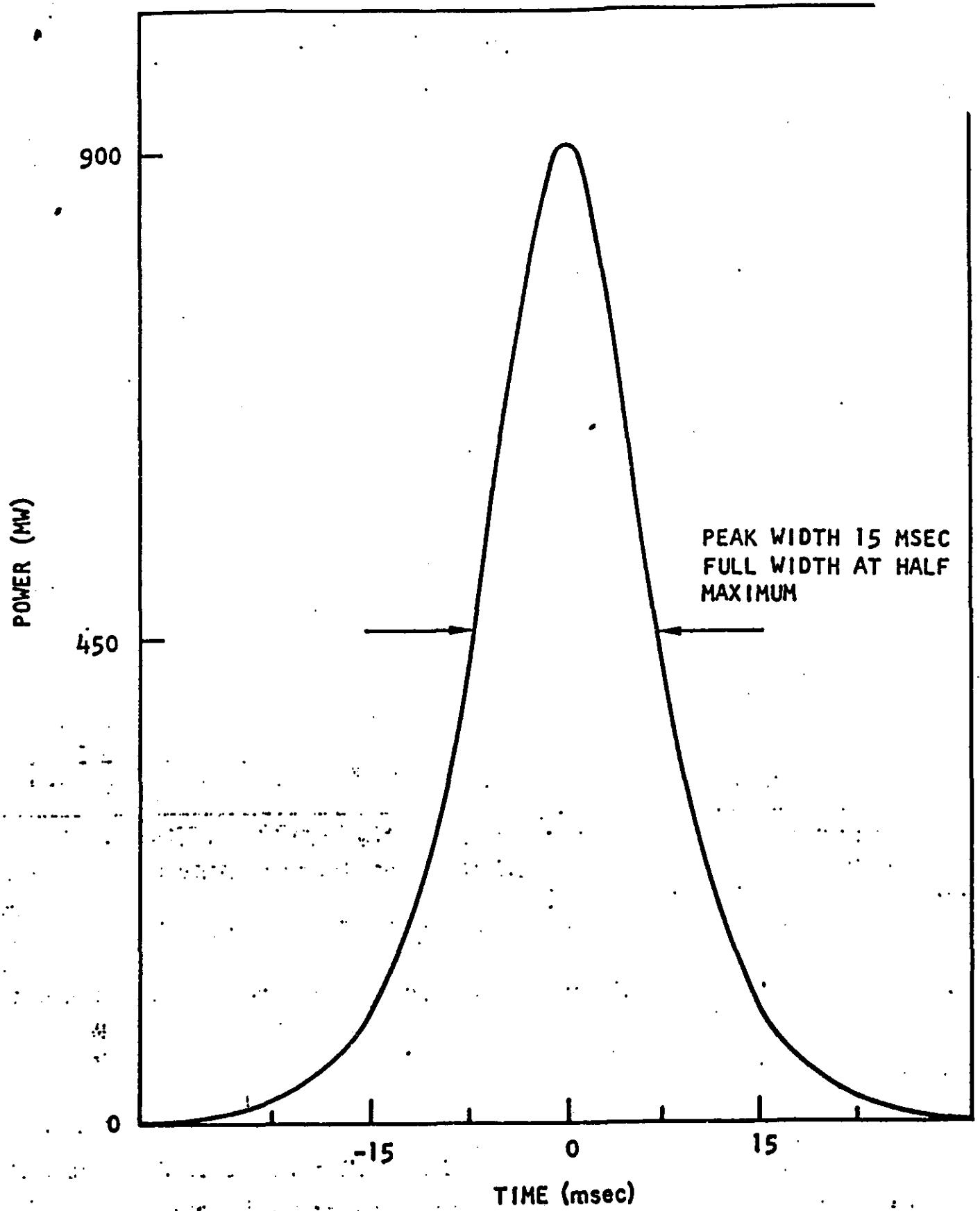
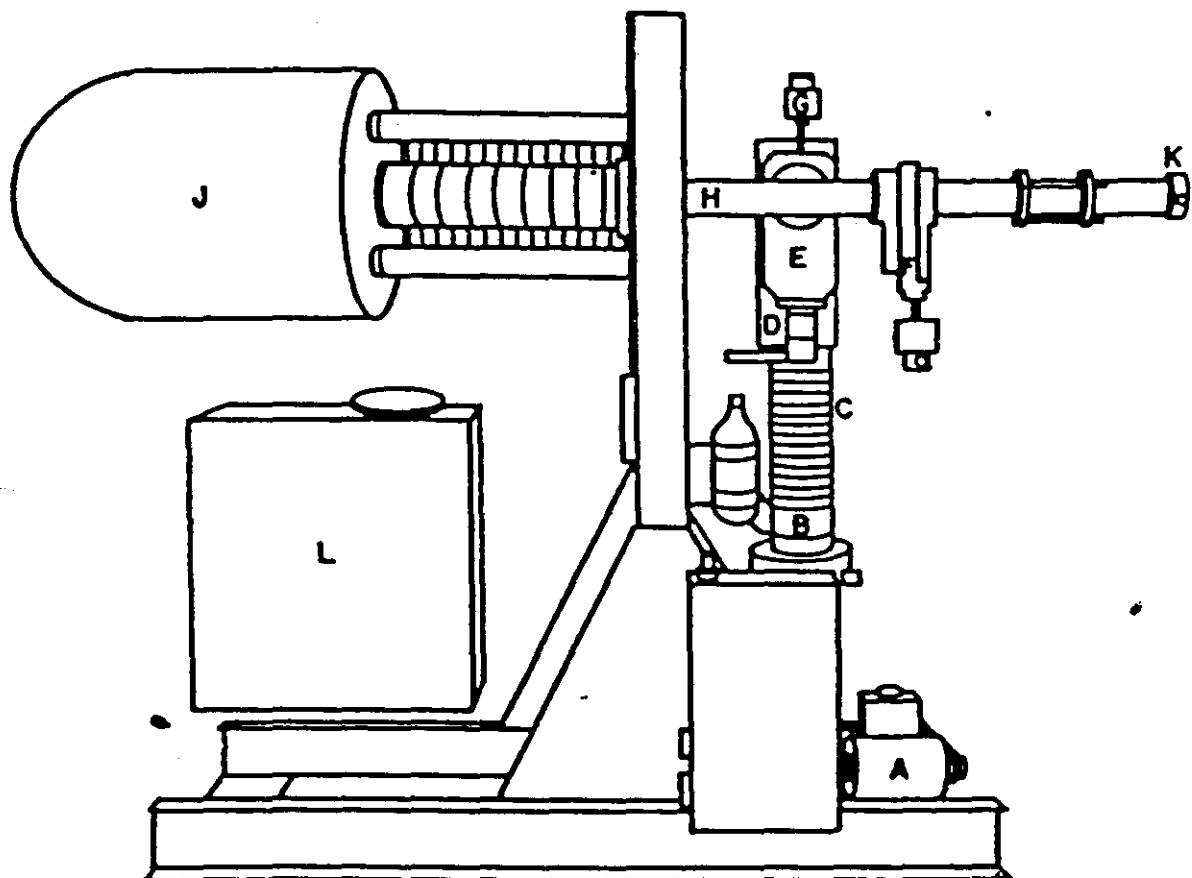


Figure 7.25 The shape of a reactor power pulse reaching a peak power of 900 MW. [From H. P. Yule and V. P. Guinn, Enhancement

Neutrons

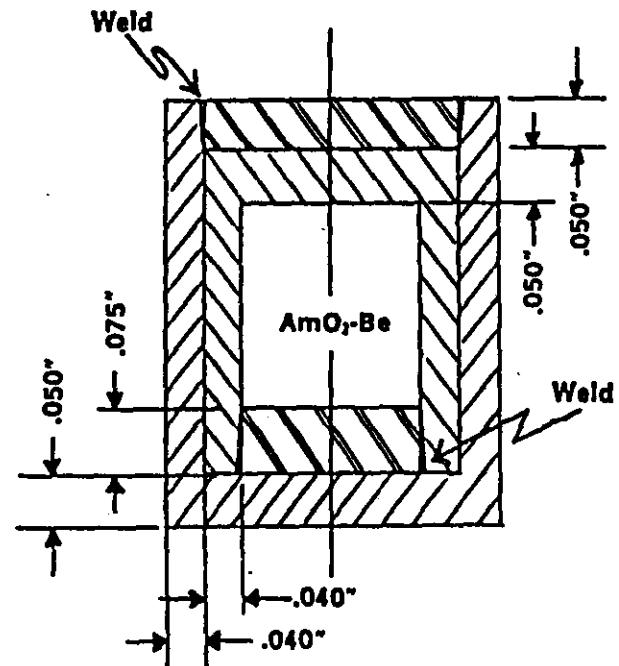


- A FORE PUMP
- B DIFFUSION PUMP
- C BAFFEL
- D COLD TRAP
- E GATE VALVES
- F VACUUM GAGE
- H BEAM TUBE
- J TERMINAL
- K TARGET HOLDEF
- L POWER SUPPLY

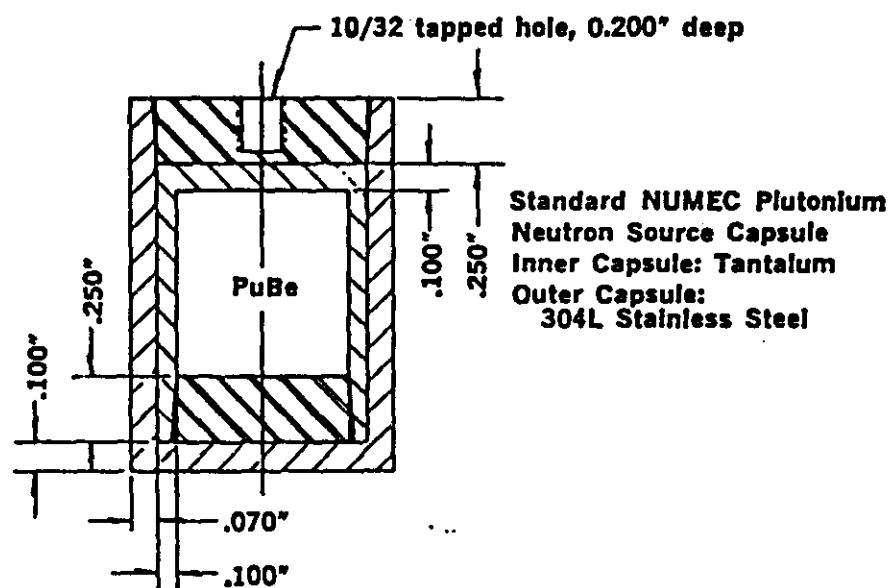
Figure 3.3 A schematic diagram of a neutron generator. [From W. W. Meinke and R. V. Shideler, Activation Analysis: New Generators and Techniques Make It Routine, *Nucleonics* 20, No. 3, 60-65 (1962).]

4.2

4.3



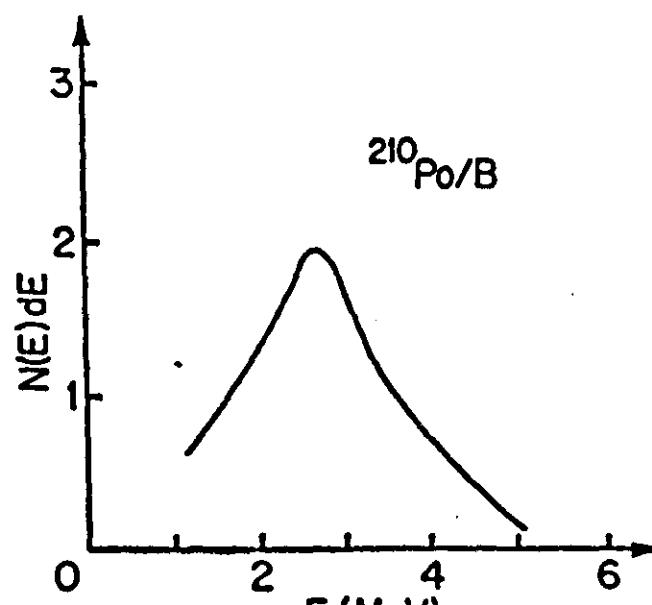
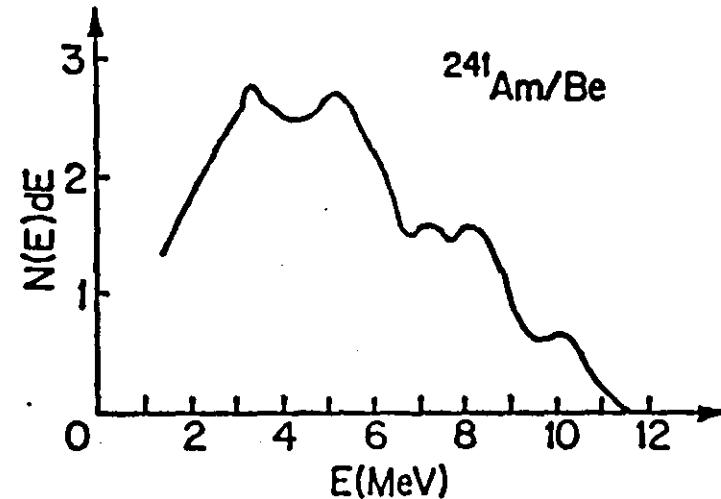
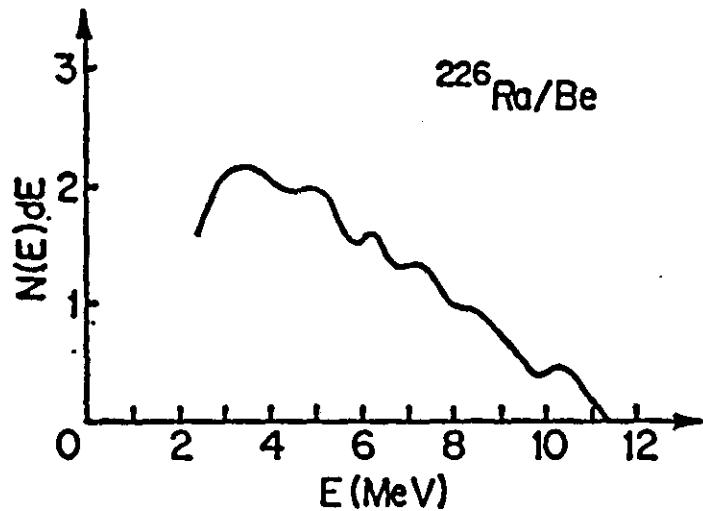
Capsule Material: Type 304L stainless steel



Standard NUMEC Plutonium
Neutron Source Capsule
Inner Capsule: Tantalum
Outer Capsule:
304L Stainless Steel

Figure 3.1 Commercially available encapsulated sources of Am- α -Be and Pu- α -Be neutrons yield neutron outputs of about 2.1×10^6 and 1.8×10^6 neutrons/sec-curiie, respectively. (Courtesy of the Nuclear Materials and Equipment Corporation.)

4.3



4.3

Neutron spectra from neutron sources

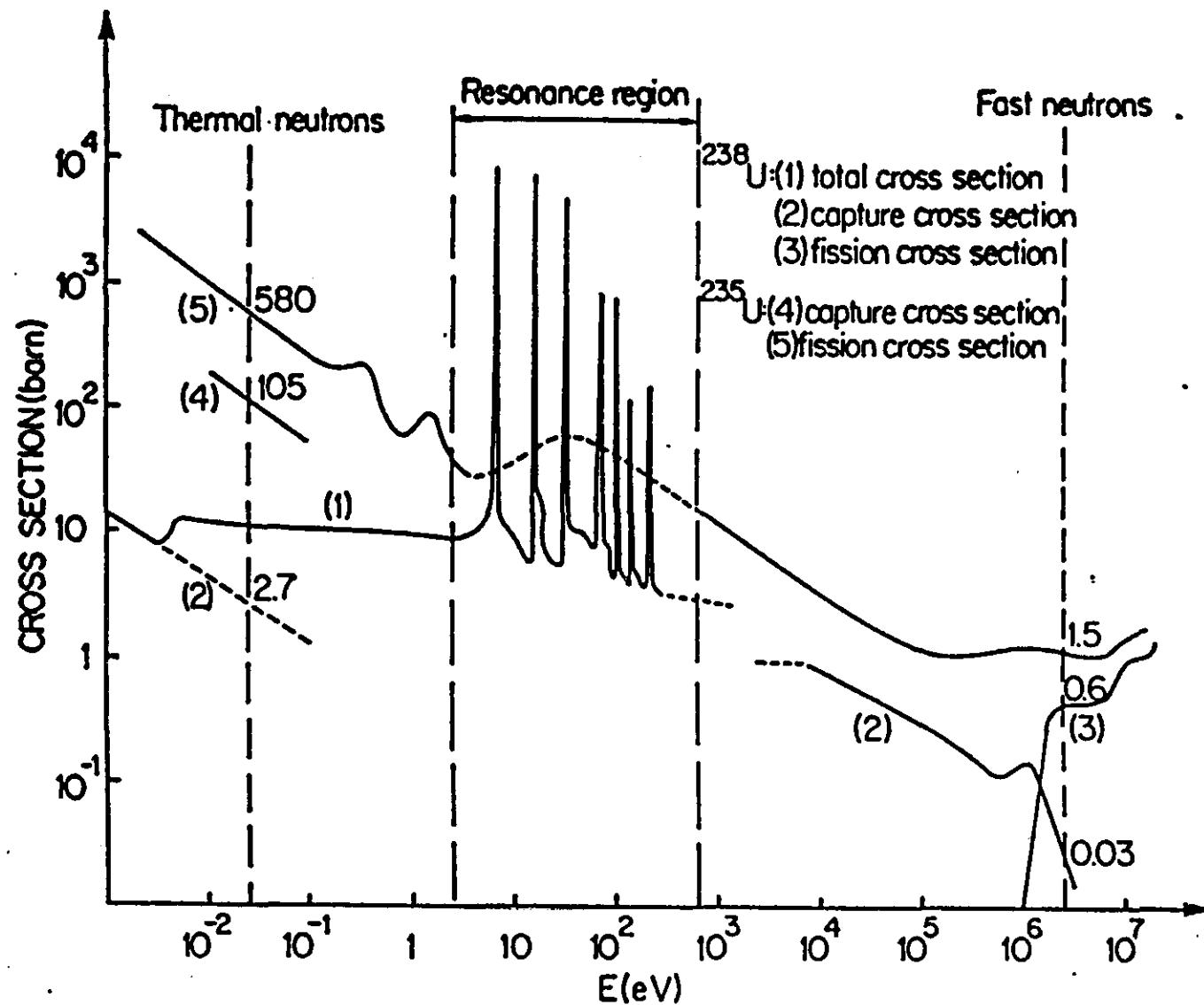


Fig. 4.4. Neutron capture and fission cross section of ^{235}U and ^{238}U (12).

E