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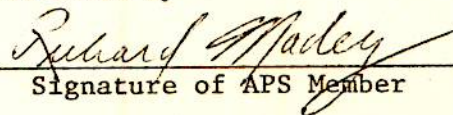
Neutron Production by Relativistic Neon Ions on Various Targets. R. MADEY, B.D. ANDERSON, A.R. BALDWIN, R. CECIL, Kent State U*; W. SCHIMMERLING and J. KAST, Lawrence Berkeley Laboratory†--We measured neutron spectra at seven angles from 15° to 150° produced by 400 AMeV neon ions on C, Al, Cu, Pb, and U and from 250 AMeV neon ions on C and U. A scintillator telescope counted each neon ion in the beam from the Bevalac accelerator and provided a timing signal to measure the neutron flight-time to one of the seven NE-102 plastic scintillation counters operated in a multiplexing mode with a PDP-11/15 computer. Neutron spectra above about 10 MeV were measured with flight paths typically 5 m at forward angles and 3 m at angles larger than 90° . The energy resolution varied from about 9 % at 10 MeV to about 15 % at 400 MeV. Preliminary analysis of the data for uranium indicates that the neutron energy spectrum differs in shape from the proton energy spectrum of Gutbrod et al.¹

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¹H.H. Gutbrod et al, Phys. Rev. Lett. 37, 667 (1976).

Submitted by


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