

7. Present status: Production: available on request from L. Bowman, ARL, WADD.
8. *Reference:* H. Steinberg and R. Aronson, WADD TR-58-771.

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ABCD

1. Code name: ABCD
2. Computer: IBM 704—SAP coded
3. Nature of code: Monte Carlo calculation of neutron dose inside a shielded cylindrical crew compartment. The source may take on one of three forms: (1) monoenergetic and constant in direction, (2) monoenergetic with constant angle to the axis, or (3) given by the output of Convair's D-54 code, i.e., the angle and energy distribution at a distance resulting from air-scattering of a neutron gun source. The data obtained consists of a radial dose distribution (based on distance from the axis)

- as well as total dose. The similarity transform is used to obtain doses simultaneously for many geometrically similar cases.
4. Restrictions: The walls of the container consist of hydrogen and/or one nonhydrogen element.
 8 radial cavity divisions
 20 similarity ratios
 Machine requirements: 8K memory, drums, 4 tape units.
 5. Typical running time: To obtain deviations less than 5%, 5–10 min for all cases studied.
 6. Unusual features: Importance sampling extensively used to reduce variance of results. Random numbers generated by Richtmeyer procedure to reduce variance.
 7. Present status: Production: available on request from E. P. Blizard, Neutron Physics Division, ORNL.
 8. *Reference:* H. Steinberg, TRG-211-3-FR.

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