

Abstract Submitted
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Construction and Testing of Four Adit Photomultiplier Tubes with Scintillating Plastic for Neutron Detection ALEXANDER COREY, None — We have constructed a number of prototype cadmium capture-gated neutron detectors that are simple and inexpensive in design. For many applications, a large volume detector is desirable, so we built and tested a detector with a 10 in. x 10 in. x 6 in. head coupled to four Hamamatsu R1250 photomultiplier tubes. This detector has a maximum efficiency of about 12% for 2.00 MeV neutrons. These tubes are excellent for timing which was important for measuring the detector efficiency as a function of neutron energy, but not optimum for light collection. To improve efficiency, we are building a similar detector using Adit B133D01S photomultiplier tubes. We will describe the construction and operation of these detectors.

Alexander Corey
None

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