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Compact Ionization Chamber-First Stage Unit (Abstract)

W. B. McLean
State University of Iowa

James Jacobs
State University of Iowa

RESONANCE IN $B^{11} + H^1$

(ABSTRACT)

JAMES JACOBS AND W. B. MCLEAN

Yield-energy curves for the reaction $B^{11} + H^1$, using a gas target, have been obtained with an ionization chamber set to count all alpha particles of range greater than 2.0 cm., 2.5 cm., 3.0 cm. and 3.5 cm. The difference curves indicate that alpha particles of all ranges show resonance at 158 $\pm$ 3 Kev. The energy of the bombarding protons was obtained by using the 330 Kev resonance in the yield of gamma rays from the reaction $F^{19} + H^1$ as a standard. The apparent half-width for both the fluorine and boron reactions is about 6 Kev.

STATE UNIVERSITY OF IOWA,
IOWA CITY, IOWA.

PHYSICS CONCEPTS IN GRADE SCHOOL SCIENCE

(ABSTRACT)

C. J. LAPP

The physics concepts in grade school science have been determined by examining some thirty grade school science readers. These have been classified by grades.

STATE UNIVERSITY OF IOWA,
IOWA CITY, IOWA.

COMPACT IONIZATION CHAMBER-FIRST STAGE UNIT

(ABSTRACT)

W. B. MCLEAN AND JAMES JACOBS

A compact ionization chamber-first stage unit for the detection of alpha particles and protons which has low sensitivity to mechanical vibration and high signal to noise ratio has been constructed, using a metal tube (6J7)which supports the collector plate of the ionization chamber directly on its grid cap, thus eliminating the usual flexible lead. This costruction makes it possible to mount the entire unit in the position formerly occupied by the ionization chamber alone and dispense with any vibration-damping suspension for the tube.

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