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V. J. Young
State University of Iowa

G. J. Plain
State University of Iowa

W. B. McLean
State University of Iowa

A. Ellett
State University of Iowa

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DISTRIBUTION IN ANGLE OF ALPHA PARTICLES
FROM $\text{Li}^7 + \text{H}^1$

V. J. YOUNG, G. J. PLAIN, W. B. McLEAN, A. ELLETT

We find the distribution of alpha particles from $\text{Li}^7 + \text{H}^1$ is not spherically symmetric, a result in disagreement with the conclusions of earlier investigators,¹ who, however, worked at rather low energies only.

Thick target data at energies as low as 150 ekv show the presence of a small $\cos^2 \Theta$ term and may be represented by

$$I(\Theta) = 1 + .16 \cos^2 \Theta$$

while at 440 ekv the asymmetry is very marked, the data being well represented by

$$I(\Theta) = 1 + .7 \cos^2 \Theta.$$

Because of the rapid increase of yield with energy, it is to be expected that thin target data will show a slightly but only slightly greater $\cos^2 \Theta$ term. Preliminary thin target data appear to bear this out.

¹ F. Kirchner, *Phys. Zeits*, 34, 785, 1933. J. Giarratana and C. G. Brennecke, *Phys. Rev.* 49, 35, 1936. H. Neuert, *Ann. d. Phys.* 36, 437, 1939.

DEPARTMENT OF PHYSICS,
STATE UNIVERSITY OF IOWA,
IOWA CITY, IOWA.
IOWA STATE COLLEGE,
AMES, IOWA.

THE RESONANCE IN THE B-P-a REACTION

W. B. McLEAN, V. J. YOUNG, W. L. WHITSON, G. J. PLAIN,
A. ELLETT

The yield of alpha particles of range greater than 2 cms. from boron bombarded by protons has been studied as a function of bombarding energy in the range from 100 to 200 ekv, using a thin target, either methyl borate or boron trifluoride at pressures of 1 mm. of Hg. The yield vs. energy curve shows an approximately exponential rise on which is superposed a sharp (half breadth ~ 6 ekv) intense line at $150 \pm$ ekv. There is some indication of a weaker and much broader line at 190 ekv. Number range curves are not yet available, but the appearance of pulses on the oscillo-