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Publication Date

1979

U J 3 3 3 1 3 3 4 1

UC-34c
LBL-8680
Abstract

To be presented at the American Physical
Society Meeting, Washington, D. C.,
April 23-26, 1979

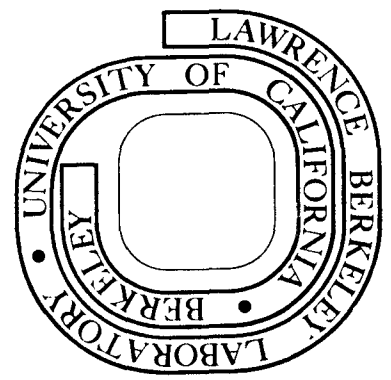
180° PRODUCTION OF DEUTERONS AND TRITONS IN
RELATIVISTIC HEAVY-ION COLLISIONS

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January 1979

Prepared for the U. S. Department of Energy
under Contract W-7405-ENG-48

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Submission Date

LBL- 8680A
AbstractAbstract Submitted
for theWashington, D.C.

Meeting of the American Physical Society

April 23-26, 1979

Date of Meeting

Physical Review
Analytic Subject Index
Number 25.Bulletin Subject Heading
in which Paper should be placedRelativistic heavy-ions

180° Production of Deuterons and Tritons in Relativistic Heavy-Ion Collisions.* J.W.HARRIS, S.A. CHESSIN, J.V.GEAGA, J.Y.GROSSIORD,† D.L.HENDRIE, L.S. SCHROEDER, R.N.TREUHAFT, and K. VAN BIBBER, Lawrence Berkeley Laboratory. -- Continuing our study of 180° particle production in relativistic collisions, deuterons and tritons were detected in the bombardment of C, Al, Cu, Sn, and Pb targets by 0.4 to 2.1 GeV/n projectiles ranging in atomic mass from protons to argon. Systematics of the incident energy dependence and target and projectile A-dependence of the inclusive cross sections were studied. Information on the production of these light nuclear fragments provide important tests for various existing models. The experimental results will be compared to predictions for light fragment production assuming coalescence.¹ Calculations have also been performed using the "firestreak" model² and will be compared to the data. Implications of the results of this study on other models for the production of light fragments will be discussed.

*Work supported by the U.S.Dept. of Energy.

†Address: Institut de Physique Nucleaire de Lyon.

¹S.T.Butler and C.A.Pearson, Phys. Rev. Lett. 7, 69 (1969), and Phys. Rev. 129, 836 (1963).²J.Gosset et al., Phys. Rev. C18, 844 (1978).

Submitted by

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RL-6317

This report was done with support from the Department of Energy. Any conclusions or opinions expressed in this report represent solely those of the author(s) and not necessarily those of The Regents of the University of California, the Lawrence Berkeley Laboratory or the Department of Energy.

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