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## LBL Publications

### Title

A Statistical Treatment of Angular Momentum Fractionation in Heavy Ion Reactions

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Abstract

A STATISTICAL TREATMENT OF ANGULAR  
MOMENTUM FRACTIONATION IN HEAVY ION REACTIONS

R. P. Schmitt and L. G. Moret

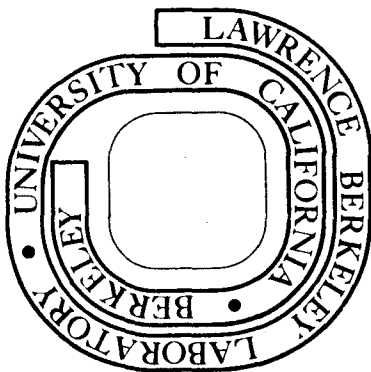
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Prepared for the U. S. Department of Energy  
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**For Reference**

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January 30, 1979

Submission Date

LBL-8734A

Abstract

Abstract Submitted  
for the  
Washington, D. C.

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Meeting of the American Physical Society

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April 23-26, 1979

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Date of Meeting

Physical Review  
Analytic Subject Index  
Number 25.70

Bulletin Subject Heading  
in which Paper should be placed  
Heavy Ion Theory

A Statistical Treatment of Angular Momentum Fractionation in Heavy Ion Reactions.\* R. P. SCHMITT, and L. G. MORETTO, Lawrence Berkeley Laboratory, #Berkeley, California 94720. -- On the basis of gamma-ray multiplicity data it has been suggested<sup>1</sup> that there is an angular momentum fractionation along the mass asymmetry coordinate. To shed light on this matter we consider a two sphere model in which statistical equilibrium has been achieved. Model calculations clearly demonstrate an angular momentum fractionation which concentrates the highest angular momenta at symmetry. Furthermore, the calculations show that there are distinct differences in the fractionation pattern for deep-inelastic reactions and for compound nucleus fission.

\*This work was supported by the Nuclear Physics Division of the U. S. Department of Energy under contract No. W-7405-ENG-48.

1. M.M. Aleonard et al, Phys. Rev. Lett. 40, 622 (1978).

# Submitted by Gordon J. Wozniak

Submitted by

*G. J. Wozniak*

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Signature of APS Member

G. J. WOZNIAK

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