

Contents

INTRODUCTION	vii
I. ANALYTICAL NEUTRON TRANSPORT	
Multiple Scattering of Partially Polarized Light By T. W. MULLIKIN	3
On the Boundary Value Problems of Linear Transport Theory By K. M. CASE	17
On the Structure of Isotropic Transport Operators in Space By ERWIN H. BAREISS and IBRAHIM K. ABU-SHUMAYS	37
Some Recent Results in the Theory of the Transport of Thermal Neutrons By NOEL CORNGOLD	79
II. NUMERICAL NEUTRON TRANSPORT	
Invariant Imbedding and Computational Methods in Radiative Transfer By RICHARD BELLMAN	95
Direct and Inverse Problems for Integral Equations via Initial-Value Methods By H. H. KAGIWADA and R. E. KALABA	112
Solution of the Discrete Ordinate Equations in One and Two Dimensions By E. M. GELBARD, J. A. DAVIS and L. A. HAGEMAN	129
Mathematical Methods Suggested by Transport Theory By G. M. WING	159
III. STOCHASTIC ASPECTS	
Stochastic Formulations of Neutron Transport By GEORGE I. BELL	181
Multiplicative First-Passage Processes and Transport Theory By J. E. MOYAL	198
Kinetic Theory of Transport and Fluctuation Phenomena By R. K. OSBORN	213
Monte Carlo Solutions of Linear Transport Problems By M. H. KALOS	228

IV. KINETIC THEORY AND PLASMA TRANSPORT

Radiative Transfer in Fluctuating Media	
By MAX KROOK and G. B. RYBICKI	237
Boundary Value Problems in Linearized Kinetic Theory	
By CARLO CERCIGNANI	249
Singular and Nonuniform Limits of Solutions of the Boltzmann Equation	
By HAROLD GRAD	269
Recent Results in Plasma Kinetic Theory	
By E. A. FRIEMAN	309
AUTHOR INDEX	319
SUBJECT INDEX	323