Contents

Introduction	vi
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