About the Reviewer: Edward Larsen has been an assistant professor of mathematics at New York University since 1971. During that time he has worked at the Courant Institute of Mathematical Sciences on applied mathematical methods in transport theory. Dr. Larsen did his undergraduate and graduate work at Rensselaer Polytechnic Institute. Apart from transport theory, his other main interests are asymptotic methods, applied functional analysis, and wave propagation.

The Equations of Radiation Hydrodynamics. By G. C. Pomraning. Pergamon Press, Inc., Elmsford, New York (1973).

This is a good book. Pomraning tells what the book is for and what it is about: the derivation of equations of the interaction of radiation with matter in various approximations and with motion and relativistic effects. He develops the equations and then he tells us what he has told us, the classical prescription for a good lecture or a good book.

I read the book with interest as an old neutron man who has had little dealing with plasmas; I had much to learn and enjoyed the opportunity of recognizing the sources and parallels with neutron transport theory. The book will serve admirably as a monograph on the subject, justly meeting the author's claim which does not extend (nor does he here provide) to methods of solving the equations.

I liked the economy of effort that cut out unnecessary mathematical technique in tensor notation when the development of the equations in relativistic motion did not require it. I was left a little confused around p. 159 in the discussion in the energy levels at which Thompson and Rayleigh scattering become dominant. I have to say something to prove that I read the book with a critical eye, and on this basis I offer a right-hand square bracket for equation 8.82 in a book that otherwise does both author and compositor credit for its remarkable freedom from typographical error.

It is a book at the graduate level that will be wanted by those working with plasmas (in practice or theory) and hence in preparing digital codes for description of fusion reactors. Pomraning has done the community a service by his careful collection and development of the equations, delivered with economy and panache.

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About the Reviewer: The reviewer, who is active in the British Nuclear Energy Society and Institution of Nuclear Engineers, is also a Fellow of the American Nuclear Society and past chairman of the local section in central Europe. Dr. Lewins recently spent a period visiting the Nuclear Engineering Department of the University of Alexandria to learn about and contribute to the Egyptian nuclear power program. His own interests are in the variational method extending through perturbation theory and optimization methods.