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v and $\pi \rightarrow e + v$). Surely the author does not mean that there is no experimental information, and as for theory, what was the paper of Marvin Goldberger and San Treiman (*Phys. Rev.* **110**, 1178 (1958)) about? I am told that this paper was not much believed at first—maybe that is why the author ignores it. Also, because of the date of publication, many recent theoretical developments (covered in Lee's book, such as N. Cabibbo's revision of the idea of "universality") are absent.

Ubiquity and utility of statistics

STATISTICAL CONTINUUM THEORIES. By Mark J. Beran. 424 pp. Interscience, New York, 1968. \$17.50

by STUART A. RICE

With the continued evolution of science there is a growing understanding of the ubiquity of statistical concepts and of the wide utility of statistical method in the description of systems with many degrees of freedom. For example there now exist, in addition to the classical statistical mechanics of particles, statistical-mechanical theories of ecology, of control mechanisms and of neuronal behavior.

In Beran's book, four problems are used to demonstrate the utility of statistical methods in studies of systems with many degrees of freedom, the differences and similarities among disparate systems, how these differences may be used to provide essential simplifications and approximations and so on. The four problems studied are: the theory of partial coherence, the theory of heterogeneous matter, flow through porous media and turbulence. The book begins with a very good mathematics introduc-

This book deals with more subjects than Lee's book, for example mesomolecular phenomena. To repeat what I said in the beginning, it is incomparably more detailed than Lee's book—with the exception noted—in the description of the experiments, especially the early experiments. But as an up-to-date scientific treatise, it is not comparable to Lee's book.

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The reviewer is a theoretical nuclear physicist at Los Alamos Scientific Laboratory.

tion that describes functional and probabilistic concepts and related material. This review is followed by a description of the general formulation of the statistical method, in which the derivation of functional equations is particularly clear and thorough because the derivation is physically motivated and not mathematically rigorous. The author then discusses a variety of interesting truncation procedures including their limitations. The book concludes with four chapters that deal with the application of statistical methods to the four problems mentioned above. The treatment of each application is up to date and clean.

It appears to me that *Statistical Continuum Theories* is an extremely useful addition to the literature. A study of this book will reward those who seek greater insight into the relationship between macroscopic variables and microscopic dynamics in a variety of systems.

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The reviewer is director of the James Frank Institute at the University of Chicago.

Radiology and nuclear war

RADIOLOGICAL PROTECTION OF THE PUBLIC IN A NUCLEAR MASS DISASTER. (Symp. Proc., Interlaken, Switzerland 26 May–1 June 1968). 688 pp. Fachverband für Strahlenschutz.

by NORMAN A. BAILY

These symposium proceedings cover a wide variety of topics connected with the contingency of a nuclear accident or bombing. The problems connected

with either a nuclear accident or nuclear war are serious ones, and the topic deserves considerable attention. Unfortunately, although the growth of nuclear power plants is very rapid and seems certain to grow at an even more rapid rate in the future, the papers deal mainly with nuclear war.

Although many well known people contributed to the symposium, very little new material was presented. In