

steps from wherever: traditional theoretical analysis, sophisticated phenomenology, or some combination of the two, or intuition if it can be fruitful.

This book is on the right track, but carries us only a very little way forward. Written for professional solar astronomers or advanced graduate students, it relies very heavily (by rough analysis as much as 50 percent of the total contents) on close paraphrasing of published articles. This is particularly true with respect to theoretical developments. However, the serious student of solar astronomy will have to refer to the original papers themselves, since some of the omitted portions of published articles represent the heart of the matter. The author provides virtually no criticism or analytical insights to make understanding easier, or to relate developments from various points of view. The value of this tabulation lies in the author's choices, involving his judgment. Most professionals will prefer to substitute their own. As uncritical précis, the book has merits, but one might hope for more from its laudable objectives.

The book closes with the paradoxical remark that "while a comprehensive picture . . . is slowly emerging . . . much . . . remains to be done." You can read that two ways. I am not, on the whole, as optimistic about the present accomplishments of solar astronomy. Instead, major qualitative insights still remain to be found by people with wits and knowledge. They may be discouraged by parts of this book.

Most professionals, and libraries, will wish to have it. Proceed with caution in using it, however; as a tutorial handbook it is weak; as a guide to some, though not all, of the literature it is probably useful.

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Physics Series

Advances in Nuclear Physics. Vol. 1. MICHEL BARANGER and ERICH VOGT, Eds. Plenum, New York, 1968. xiv + 416 pp., illus. \$18.50.

Whatever our regrets, modern physics has clearly become fragmented into subfields that have little overlap. One well-defined subfield is nuclear physics, which occupies "a central position between elementary particle physics on one side and atomic and solid state

physics on the other." Therefore it is fitting that there appears a new series of review volumes devoted exclusively to topics in nuclear physics. The editors of this series are known for the clarity and completeness of their own research contributions. Their aim is to secure articles that present up-to-date pedagogic treatments of topics in the current research literature. It may be that soon the best way to enter research in some area of nuclear physics will be to study the pertinent articles of this series.

The five articles of volume 1 bear out this expectation. DeBoer and Eichler give a definitive study of the reorientation effect, an effect that allows the measurement of quadrupole moments of excited states. Starting with a qualitative introduction to the theory of Coulomb excitation, the article moves along smoothly to procedures for the practical design of reorientation experiments. Malcolm Harvey summarizes the content and status of the SU_3 submodel of the nuclear shell model. Although his subject is inherently somewhat dry, the article seems extremely thorough and clear. A series of nine appendices form a précis of relevant topics in group theory. Georges Ripka summarizes the Hartree-Fock theory of deformed light nuclei. In this theory the configuration mixing caused by the two-nucleon in-

teraction is approximated by using single-particle states generated by a deformed single-particle potential. Despite a resemblance to the Nilsson theory, the Hartree-Fock theory leads to qualitatively different results. The article starts from first principles and proceeds with clarity toward its goal of enabling the reader to perform his own calculations. The juxtaposition with Harvey's article is helpful, because the SU_3 theory and the deformed Hartree-Fock theory yield related reductions of the nuclear shell model. A valuable article by Vogt presents the modern form of the statistical theory of nuclear reactions. This simple theory gives accurate accounts of most of the flux that enters low-energy nuclear reactions. Heretofore it was necessary to consult the research literature to learn how the old theory of Wolfenstein and Hauser-Feshbach had been improved. The article includes worked-out examples. Ian Duck treats the much-discussed nonrelativistic three-nucleon system. It is odd that the author stresses Amado's contributions but in the concluding section remarks (correctly) that Mitra's work on the same problem handles the physics more completely. Mitra's work is not presented.

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Social Class and Psychiatric Care

A Decade Later. A Follow-up of *Social Class and Mental Illness*. JEROME K. MYERS and LEE L. BEAN, in collaboration with MAX P. PEPPER. Wiley, New York, 1968. xiv + 250 pp. \$7.95.

Ten years ago, research reported in *Social Class and Mental Illness* added further empirical documentation to an already fairly well-established fact: that the lowest socioeconomic class in the society is greatly overrepresented among clients of psychiatric treatment facilities. A. B. Hollingshead and F. C. Redlich, the sociologist and psychiatrist who authored that report, focused on two related but distinct questions: First, is the risk of developing a psychiatric disorder a function of social position? Second, are there class differentials in the quality and type of psychiatric treatment received? Because of the inherent difficulty of disentangling causal relations in a cross-sectional study of a population that was already in treat-

ment, the answer the study gave to the first question was suggestive but equivocal.

Over the past decade, work of increasing sophistication has begun to throw more light on such components of the problem as class of origin, social mobility, educational and occupational achievement, the course of illness, and the paths into and out of treatment. The answer to the second question, on the other hand, was clear and definite. Lower-class patients received less-preferred treatments—custodial care in state hospitals rather than intensive treatment in private hospitals or out-patient clinics, drugs and other somatic treatments rather than psychotherapy. In short, patterns of class discrimination evident in other sectors of the society were also present in the psychiatric treatment of mental illness. This was hardly a startling finding, certainly not to the members of these classes,