

## NEW PHYSICS

### The New Age in Physics

By Harrie Massey. Revised and enlarged edition. Pp. 386. (London: Elek Books, Ltd., 1966.) 63s. net.

THE need to interpret the realm of physics research to the intelligent layman is ever present. Because of the wide range of subjects investigated, the professional physicist himself also requires non-technical accounts of those parts of the discipline which are remote from his own field if he is to maintain an overall picture of modern developments. Professor Sir Harrie Massey's book *The New Age in Physics* fulfils the requirements of a wide spectrum of people which includes the two examples mentioned. In this new edition of his book he presents an up to date account of the present state of all the major branches of physics research. No mathematics above fifth form level is required, but most fundamental points are given an adequate qualitative description. For example, the classification of nucleons, strange particles and mesons according to the mathematics of group theory, leading to the prediction of the properties of particles such as the  $\Omega^-$  which have subsequently been discovered, is illustrated by the geometrical properties of certain regular figures.

The book starts with an exposition of wave mechanics and the uncertainty principle. Properties of electrons in solids are then explained with mention of topics such as the principles of the working of transistors, low temperature physics, lasers and the Mössbauer effect. Then come chapters on relativity, particle acceleration and detection, nuclear physics and fission and high energy physics. The subjects of electrons in solids and fundamental particles present the greatest challenge to the author in his task of providing qualitative explanations of mathematically based concepts. Finally there are chapters devoted to branches of extra-terrestrial physics where the description of observations is naturally more to the forefront and where the underlying physical explanation is often in terms of better appreciated, classical laws. Radio-astronomy, upper atmosphere and space research are included here. The author is in an excellent position to emphasize the British contribution to this last field.

Since the book is basically non-technical, the language can contain a greater sense of excitement than is thought to be permissible in a normal scientific paper. For example, when discussing the Hoyle-Fowler idea of gravitational collapse as the explanation of quasi-stars, due account being taken of general relativity theory, Massey says: "No matter what the ultimate answer, the grandeur of the speculation is unsurpassed". There are many illustrations, including colour photographs of the aurora and televised pictures of the Moon's surface taken by lunar probes.

J. J. QUENBY

### The Nature of the Lunar Surface

By Wilmot N. Hess, Donald H. Menzel and John A. O'Keefe. Proceedings of the 1965 IAU-NASA Symposium. Pp. viii+320. (Baltimore, Md.: The Johns Hopkins Press; London: Oxford University Press, 1966.) 108s. net.

WHAT are the current controversies about the nature of the Moon? The answers are set out lucidly in this report of the lectures and discussions of the 1965 International Astronomical Union—National Aeronautics and Space Administration Symposium.

Previously published material is digested in some of the papers but, in others, relatively new concepts are extremely well argued. Hapke presents an eminently readable discussion relating to the important problem of the damage of lunar surface materials by corpuscular radiation; Ingrao, Young and Linski detail a rigorous analysis of the interpretation of infra-red measurements, with some

warnings for the unwary; and O'Keefe offers important arguments for ash flows, while Shoemaker argues for a fragmental layer resulting from meteoritic churning. Kuiper argues that the lunar surface is strong enough to support an astronaut, whereas Gold reserves judgment on this question. Urey and Levin differ in their opinions of the origin and development of the Moon. There are many revealing differences of opinion among the specialists and it is stimulating to see them stated explicitly, particularly in the lengthy discussions which appear in the text and add very great interest to the publication.

G. FIELDER

### Pulmonary Diseases and Anomalies of Infancy and Childhood

By Milton I. Levine and Armond V. Mascia. Pp. xii+368. (New York and London: Hoeber Medical Division, Harper and Row, 1966.) \$12; 96s.

THE author's preface to this book starts with the statement that it has been written primarily for paediatricians, radiologists and medical students. It is unlikely that a book suitable for such diverse categories of people could be written, and this one fails in its declared objective. The space devoted to clinical manifestations and treatment is often inadequate for the paediatrician who is really looking for guidance, and not enough is said about radiographic interpretation for the radiologist. The references at the end of each chapter are by no means up to date and they derive almost exclusively from American journals. On the other hand, the contents must include almost every known intrathoracic disease of paediatrics, and the reproductions of the radiographs are excellent. This would, therefore, be a useful book on the shelves of a paediatric library although the individual paediatrician or radiologist could find a better use for \$12.

J. H. HUTCHISON

### Conference on Librarian-Statistician Relations in the Field of Economic Statistics

Edited by K. A. Mallaber. (Papers and Proceedings of a Conference sponsored by the Library Association and the Royal Statistical Society, 5th July, 1965.) Pp. 138. (London: The Library Association, 1966.) 40s. (L.A. members 30s.)

THE six papers presented at this Conference deal with the use of the library of the Royal Statistical Society, with the economics library and information service of an industrial firm, with the Board of Trade library services to statisticians and their staff, with the librarian and financial analysis, with library and information services for the economist in London, the Midlands and the North of England, and with bibliographical co-operation between statisticians and librarians. The approach to relations between users (and potential users) of libraries and the organization of libraries is sound and realistic, but not lacking in imagination, and this is no less characteristic of the discussion of the papers which occupy rather more than half the book. For this reason the book is welcome and deserves the attention both of the new Social Sciences Research Council, and of the committee of the University Grants Committee and the Department of Education and Science now considering university libraries. If the latter committee can produce a report anything like as constructive and adequate, most librarians will be pleasantly surprised. But the present volume is worth publication merely for Mr. K. A. Mallaber's comment about the absurdity of the current practice of attempting to use the inter-loan service to borrow publications costing only a few shillings and which are in print. That some libraries are prepared to resort to such loans costing at least twenty-five shillings apart from the charge for postage, however, reflects not merely a sad lack of realism but also the parsimony with which library and librarian services are still in practice far too often treated.

R. BRIGHTMAN