

ing but always stimulating series of technical papers and less specialized reviews and summary. Thomas, Saxon, Weisskopf, Gugelot, and many others guarantee the authenticity, if not always the correctness, of the work.

Proceedings of the 1954 Glasgow Conference on Nuclear and Meson Physics. Edited by E. H. Bellamy and R. G. Moorhouse. 352 pp. Pergamon Press, London and New York, 1955. \$9.50. *Reviewed by* *Erich M. Harth, Duke University.*

It has become clear with the publication of these proceedings that the lasting success of a scientific conference depends to a large extent on the presentation of the permanent record of that meeting. Too often, hastily edited notes which are hard to obtain, difficult to read and of doubtful reliability, are all that remains of the labors of many experts.

The presentation in book form of the more than one hundred papers given at the Glasgow Conference has been a real pleasure to anyone working in the field of nuclear physics. The editing by Drs. Bellamy and Moorhouse is of uniformly high quality.

The papers are divided into eight sections: Nuclear Forces and Nuclear Scattering, Nuclear Data and Nuclear Models, Photodisintegration, Beta- and Gamma-Ray Transitions, π -Mesons, Field Theory, High-Energy Experimental Technique, and Heavy Mesons and Hyperons. The sections are opened with a review paper by an outstanding expert in the field "so that physicists who are not specialists in that particular branch receive a comprehensive introduction to the reports of the latest researches which follow". The discussions following the papers have been included, and extensive references have been added throughout.

The diversity of the subject matter precludes a summary of the contents of this volume. The theory of Gell-Mann and Pais on heavy unstable particles—to mention only one of the more spectacular results presented here—is given for the first time in its complete form. More recent experimental findings have borne out this theory to a remarkable degree.

Electricity. By Eric de Ville. 159 pp. Penguin Books, Inc., Baltimore, Md., 1955. Paperbound \$65. *Reviewed by* *J. R. Pierce, Bell Telephone Laboratories.*

To readers who grow somewhat weary of popular books which profess to explain the most abstruse parts of modern physics, this small book will have welcome features. It explains in generally clear and simple terms and with the aid of clear line drawings, such truly intelligible matters as electrical instruments, bells, bridges, generators and motors, the telegraph and telephone, wireless, television and radar, and it has something to say about the atom and about electronic computers. In general, the emphasis is more on practical importance

and industrial use than in understanding the fundamental physical background of electricity. The book is illustrated with 20 admirable photographs of various historical and modern devices.

While the book is simple and clear, it is not entirely without fault. For one thing, the historical approach is used throughout, and this leads to the inclusion of certain matters, such as description of Daniell and Leclanché cells, which by this time we could perhaps ignore.

For another thing, while most of the statements of the book seem to be based on authorities of one sort or another, these authorities apparently range from old to modern and have not been fully reconciled. Thus, in the case of electric current, we read on page 27, "Exactly how the electric charges pass along the wire we do not yet know", while on page 89 we are told that "The electrons can be thought of as a cloud which is free to move independently of the atoms from which they come." On page 77, the myth that electron impact moved the paddles in a tube built by Crookes is perpetuated. On page 46 there is listed among the advantages of turbo-alternators over reciprocating engines, quietness, but not efficiency.

Thus the reader is not always completely safe as to details and the proper interpretation of the things which he finds in the book but, by and large, what he finds is at least intelligible and practically important. One could perhaps wish for a somewhat better digested and deeper book covering similar ground.

Beta- and Gamma-Ray Spectroscopy. Edited by Kai Siegbahn. 959 pp. (North-Holland Publishing Co., Netherlands) Interscience Publishers, Inc., New York, 1955. \$20.00. *Reviewed by* *Bernard T. Feld, Massachusetts Institute of Technology.*

The phenomenal development of low energy (classical) nuclear physics in the last decade has been such that even the experts cannot hope to maintain more than a superficial familiarity with all of its aspects. In this circumstance, it has become necessary to depend on authoritative surveys of the various branches of the field, appearing at reasonable (and constantly decreasing) intervals, to preserve the continuity and ease of intercourse so necessary to continued progress.

The volume here under review is the outstanding effort to date in this direction. It covers only a limited field—that of the investigation of nuclear energy levels by the study of the beta- and gamma-ray spectra of radioactive nuclei—but with a thoroughness and authority which will render it indispensable to workers in these and related fields for years to come. It is a book by experts for experts, but its scope is sufficiently broad so that it will be used, and frequently so, by practically all nuclear physicists.

It would be foolhardy for this reviewer, even if space allowed, to attempt a detailed summary of what is contained in the 959 pages—26 chapters made up of 42