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Project PLUTO is a joint program of the Air Force and the Atomic Energy Commission, aimed at developing a nuclear ramjet engine. Marquardt, through its ASTRO division, has been an Air Force prime contractor in this nuclear program for over two years, working closely with the University of California Radiation Laboratory.

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#### NUCLEAR ENGINEER

Experience in nuclear reactor design or reactor test planning for application of nuclear power systems to aircraft and missile propulsion.

#### NUCLEAR PHYSICIST

Should have research background in solid state physics, neutron physics or thermo-nuclear systems. An advanced degree desirable with direct experience in nuclear power systems.

#### NUCLEAR MATERIALS SPECIALIST

Metallurgist, ceramicist, or materials chemist. Experienced in conducting radiation tests on various types of materials.

#### SENIOR DEVELOPMENT ENGINEER

Development of pneumatic and hydraulic breadboard control components and systems through proof-of-the-principle research. For experimental hypersonic air-breathing propulsion systems. Background of controls development and basic controls theory.

## NUCLEAR INSTRUMENTS ENGINEER

Responsible for nuclear instrumentation, fission chambers, counters. Must know nuclear calculations for instrument moderation and shielding. Will establish instrument specifications, conceive packaging to fit application and coordinate with outside agencies.

## CONTROLS ENGINEER

Will develop advanced engine control devices. Must be familiar with theory and application of vacuum tube and semiconductor circuitry. Degree plus experience.

To investigate these and other openings, contact:

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analytic treatment of theories; the omission of some mathematical applications like simple harmonic motion and vibrations; mks units are used throughout.

There are 130 more pages in this book than in the earlier one, but it is almost twice as thick. Although it may be a formidable burden, the book will more than repay the effort needed to carry it. Its wide adoption will do much to improve the quality of freshman instruction in physics. It will be a valuable addition to the reference shelves of professional physicists and of physics instructors at all levels from high schools to graduate schools.

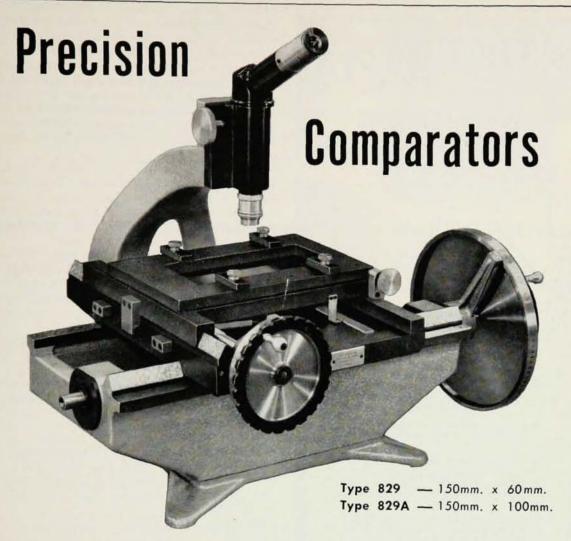
Lectures on Ordinary Differential Equations. By Witold Hurewicz. 122 pp. The Technology Press of MIT and John Wiley & Sons, Inc., New York, 1958. \$5.00. Reviewed by Philip J. Davis, National Bureau of Standards.

This book is an outgrowth of a series of lectures which the late author gave at Brown and at MIT. Though the amount of mathematics presented is modest, the exposition is wonderfully clear and the book is attractively printed. Including material on the Cauchy-Euler approximation method, general linear systems, linear systems with constant coefficients, the singularities and solutions in the large of autonomous systems, and stressing existence theorems and geometrical methods, it makes an elegant introduction to the study of differential equations at the advanced level. There is an appreciation by Solomon Lefschetz of Witold Hurewicz' mathematical career and a bibliography of his work. Many people will want to own a copy as a remembrance of its distinguished author.

Die Physik in Einzelberichten. Edited by Carl Ramsauer. Part 2, Praktische Akustik, 68 pp. Part 3, Wärmelehre I, 84 pp. J. A. Barth, Munich & Physik Verlag, Mosbach/Bd., Germany, 1957. Paperbound DM 14.40 each. Reviewed by Ira M. Freeman, Rutgers University.

This series of review articles represents a resumption of the earlier *Physik in Regelmässigen Berichten* published by the German Society for Technical Physics between 1933 and 1944. At that time the publication policy called for a division of the entire field of pure and applied physics into 60 sections, with a recognized specialist in each subject reporting on progress in his field of interest at intervals of approximately three years. The idea of publication at regular intervals had to be abandoned, and it is planned that additions to the present series should appear whenever it becomes feasible to meet a need for updating a given topic.

Each contribution is intended to delineate the lines of development of a given field, with special attention to the synoptic and critical presentation of new results. Volume 1 was not on hand for review, but the remaining two volumes appear to fulfill this aim in an extremely satisfactory way. The individual authors.



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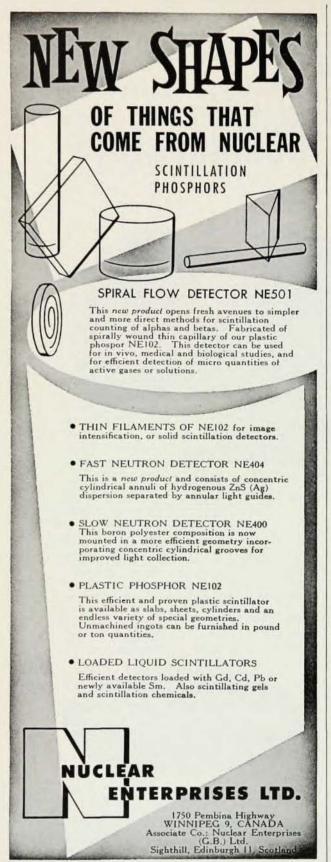


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OVER 25 YEARS OF LEADERSHIP IN THE DESIGN AND MANUFACTURE OF THE FINEST HIGH PRECISION MEASURING AND RULING INSTRUMENTS.



who are without exception German scientists, summarize current advances in active fields and give major emphasis to those topics not adequately covered in existing standard books and monographs.

Extensive lists of references accompany each volume. In Vol. 2 there is a long list of books and review articles by topic, and a separate list of periodical articles arranged chronologically and extending to 1957. At the end of Vol. 3 there appears a chronological listing of books and papers published up to September 1955.

The topics treated in Vol. 2 include: Ultrasonics; Acoustic Measurement Techniques; Transducers and Analog Systems; Sound Transmission and Storage; Architectural Acoustics; Sound Ranging and Location; Physiological and Psychological Acoustics, Music and Speech; Audiometry and Hearing Aids.

The titles of the papers in Vol. 3 are: Thermal Instrumentation and Measurements; Thermodynamics of Irreversible Processes; Liquid He II. The last of these papers is a clear and valuable résumé of this active and puzzling field. It is some 30 pages in length and carries a list of over 200 literature references.

The American publication that is closest in aim and scope to these *Einzelberichten* is, of course, the *Reviews of Modern Physics*. However, as the above list of topics would indicate, the series under review here is much more strongly slanted toward applied and technical subjects.

The Direction of Research Establishments: Symp. Proceedings (Nat'l Physical Lab, Sept. 1956). 5 sessions; 20 papers. Philosophical Library, Inc., New York, 1957. \$12.00. Reviewed by C. Kittel, University of California.

The Director of Research is a new type in our society. He is not described very satisfactorily in the published literature. He has escaped the novelist's ear and the painter's eye. No analyst has discussed the motivations of the research director. His public addresses on ceremonial occasions are platitudinous and do not tell us how he operates, how he creates in his laboratories an atmosphere, an ambiance, in which discoveries are made. We do not know his response to the criticisms made in two recent books, *The Sources of Invention* and *The Organization Man*. Their authors have suggested that many large laboratories are not prepared to do anything first, and that creative individuals who are capable of significant discovery are not adequately supported by the laboratory direction.

In the present symposium a large number of research directors, mostly British, discuss the problems of their profession. It is useful to list the central papers and speakers; the discussion periods following the talks, however, contain many useful as well as amusing statements: "Fundamental and Applied Aspects of Research Problems", by J. D. Bernal (University of London); "The Research Project: Choice and Termination", by Willis Jackson (Metropolitan-Vickers); "Creativity and