

## Director of Engineering for PHILIPS LABORATORIES

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### Our new director of engineering

should be of Ph.D. level in Electrical Engineering or Physics and must have high technical competence and broad industrial experience as a basis for a productive cooperation with managers and top technical personnel of divisions marketing a wide range of products such as power and special purpose tubes, ferrites, precision resistors, precision timing devices, electro mechanical relays, small electric motors, analytical instrumentation and others.

He will supervise a group of engineers who will work closely with outstanding scientists in our Laboratories to put ideas and inventions arising from our research program into a form exploitable by existing or newly created operating divisions.

He must have the experience based on solid accomplishments which will enable him to formulate, acquire and lead development programs under sponsorship of government agencies. He will have the initiative to develop an engineering group with the technical resources required for a substantial and growing industrial organization involved in complex and changing technologies.

Philips Laboratories has engaged in a successful research program, predominantly company-supported, for eighteen years at the present location, 20 miles north of Times Square. The new Director of Engineering will participate in the detailed planning for new facilities on a 94 acre site in Briarcliff Manor just 10 miles farther north with access to the heart of New York City in less than an hour by train or automobile.

Send detailed letter or resume and salary requirements (in confidence) to:

**Mr. William Arnett**

*Executive Assistant to Director*

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potential energy, mass, and gravity. Part 3 (about half the book) is concerned with typical astronomical problems: orbital theory, space navigation, orbit perturbations, propulsion dynamics. The treatment is concise but always very clear. A large number of practical illustrative examples fully worked out in the text and many qualitative or quantitative unsolved problems are given at the end of each chapter; only a few of them are provided with answers. Many good illustrations are included.

The metric system is used throughout, and this surely is a healthy feature. However, familiar data, such as escape velocities, are quoted in both metric and English units. Conversion tables for the two systems appear in an appendix.

The book can be used very conveniently as a reference work, thanks to a nomenclature index and a fairly detailed glossary of astronomical terms. Bibliographical references (up to 1960) are abundant and include a list of journals and of bibliographical compilations.

**Explanatory Supplement to the Astronomical Ephemeris and the American Ephemeris and Nautical Almanac.** Prepared jointly by the Nautical Almanac Offices of the United Kingdom and the United States of America. 505 pp. Her Majesty's Stationery Office, London, 1961. Distr. in US by British Information Services, New York. \$7.85. Reviewed by R. E. Street, University of Washington.

SINCE 1960 the British *Astronomical Ephemeris* and the *American Ephemeris and Nautical Almanac* have been identical. The purpose of this *Explanatory Supplement* is to provide users of the *Ephemeris* with fuller explanations of its content, derivation, and use than can be included in the *Ephemeris* itself. It includes auxiliary tables and reference data required in the application of the data tabulated in the *Ephemeris*.

The volume is much more than a dry listing of formulae and tables. It contains a history of the development of Ephemerides in the two English-speaking countries with numerous references. There is an exhaustive discussion of coordinate systems with all of the required corrections, an excellent description of the various modern methods of measuring time with slight reference to the historical development, where ephemerides of minor bodies not in the major *Ephemeris* can be obtained, a brief but fascinating history of the calendar, and many more topics too numerous to enumerate here. The chapter on the system of astronomical constants, for example, makes it clear why these must be self-consistent rather than accurate.

This reviewer is not going to insist that it is necessary for the user of the *American Ephemeris and Nautical Almanac* to have this *Supplement*, whether he is an astronomer, astronaut, or student, as obviously we have gotten along without it for the last two years. On the other hand, those of us who have wondered how and where the tables in the *Ephemeris* came from will find



the answer here. The navigator, who uses a different nautical almanac, will have somewhat less use for this *Supplement*, especially if his mathematical background is insufficient to permit reading all of it. However, anyone interested in practical astronomy, either professionally or as an amateur, will certainly want this *Supplement* in his personal library.

**Progress in International Research on Thermodynamic and Transport Properties.** Symp. Proc. (Princeton, Jan. 1962). Joseph F. Masi and Donald H. Tsai, eds. 762 pp. American Society of Mechanical Engineers and Academic Press Inc., New York, 1962. \$24.00. *Reviewed by Stuart A. Rice, University of Chicago.*

**T**HIS collection of papers contains useful information for those investigators interested in thermodynamics and transport properties. In particular, an extensive review by Liley provides 394 references to recent transport studies of liquids and gases. These are also cross referenced according to the appropriate transport coefficient. There are also contributions on the properties of ionized gases (unsophisticated), on the properties of non-Newtonian fluids, and a number of standard determinations of thermodynamic properties. On the whole the theoretical papers present reviews of recent work but do not in themselves present any new ideas. The theory of transport phenomena is adequately covered, including recent developments in the statistical theory and recent developments in curve fitting. At \$24.00 the volume is too expensive for an individual investigator to have in a personal library but is a worthwhile investment for departmental libraries.

**Properties of Materials at Low Temperatures (Phase I)—A Compendium.** Victor J. Johnson, editor, 983 pp. Pergamon Press Inc., New York, 1961. \$30. *Reviewed by Joseph Hilsenrath, National Bureau of Standards.*

**I**T would be unfair to the editor and contributing authors to proceed to review this compendium without mentioning first the special situation which led to the preparation of this material originally as an Air Force technical report, and the general legal status of material in the public domain, which, judging from this publication at least, seems to leave an author or his agency no voice in deciding the time or the place or the format for the dissemination of his work in a formal publication.

To put the matter bluntly, this is an unsanctioned reprint of a technical report submitted under contract between the U. S. Air Force and the Cryogenic Engineering Laboratory of the Boulder Branch of the National Bureau of Standards. The three-part report was issued by the Wright Air Development Division as WADD Technical Report 60-56 entitled *A Compendium of the Properties of Materials at Low Temperature (Phase I)*. Copies of this report were printed and

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