argues that existing nuclear weapons are adequate for an all-out attack but unsuited for defensive use; future development will lead to improvement in the possibilities of defense, and will therefore make war less likely. Both sides in the dispute believe that they are fighting for peace, and both are sincere. I consider the arguments on both sides slightly irrelevant. To fight for peace means to me to fight for an effective international control of national armaments. Insofar as a test-ban agreement would distract attention from this objective, I am against it.

To my mind the overriding argument in favor of bomb experiments is the long-range one. The handling of nuclear explosions is a new technology, and attempts to stifle a new technology can neither be fruitful nor ultimately even successful. The dominating fact of our technological situation is that thermonuclear explosions give us energy at something like one ten-thousandth of the cost of all other sources of energy. Professor Orear recently proposed a scheme for the direct harnessing of this energy. Sooner or later, by us or by others, the job will be done.

## Books Received

Notes on Analog-Digital Conversion Techniques. By MIT Servomechanisms Lab staff. Edited by Alfred K. Susskind. 410 pp. The Technology Press of MIT & John Wiley & Sons, Inc., New York, 1958. \$10.00.

FLUID MECHANICS (2nd Revised Edition). By Victor L. Streeter. 480 pp. McGraw-Hill Book Co., Inc., 1958. \$7.50. NUCLEAR REACTOR EXPERIMENTS. By Argonne Nat'l Lab staff. Edited by J. Barton Hoag. 480 pp. D. Van Nostrand Co., Inc., Princeton, N. J., 1958. \$6.75.

Transistor Technology, Vol. 1. By Bell Telephone Labs technical staff. Edited by H. E. Bridgers, J. H. Scaff, J. N. Shive. 661 pp. D. Van Nostrand Co., Inc., Princeton, N. J., 1958. \$7.50.

PHYSICS AND PHILOSOPHY: The Revolution in Modern Science. Vol. 19 of World Perspectives. By Werner Heisenberg. 206 pp. Harper & Brothers Publishers, New York, 1958. \$4.00.

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.

Modern Computing Methods. 129 pp. Philosophical Library, Inc., New York, 1958. \$8.75.

THE ASTRONOMICAL UNIVERSE: A Condon Lecture. By Otto Struve. 55 pp. U. of Oregon Press, Eugene, Ore., 1958. Paperbound \$1.50.

The Cosmic Radiation. By J. E. Hooper and M. Scharff. 172 pp. (Methuen, England) John Wiley & Sons, Inc., New York, 1958. \$2.75.

Le Volcanisme Lunaire et Terrestre: Origine des Continents, des Océans et des Atmosphères, l'Energie géothermique. By Alexandre Dauvillier. 300 pp. Editions Albin Michel, Paris, France, 1958. Paperbound 1.200 fr.

LISTENING IN THE DARK: The Acoustic Orientation of Bats and Men. By Donald R. Griffin. 413 pp. Yale U. Press, New Haven, Conn., 1958. \$7.50.

ZONE MELTING. By William G. Pfann. 236 pp. John Wiley & Sons, Inc., New York, 1958. \$7.50.

Second-Rate Brains. Edited by Kermit Lansner. 96 pp. Doubleday & Co., Inc., New York, 1958. Paperbound \$1.50. D-C Circuit Analysis. Edited by Alexander Schure. 72 pp. John F. Rider Publisher, Inc., New York, 1958. Paperbound \$1.35.

MECHANICS. By Alexander Efron. 112 pp. John F. Rider Publisher, Inc., New York, 1958. Paperbound \$1.50.

NUCLEAR ENERGY. By Alexander Efron. 63 pp. John F. Rider Publisher, Inc., New York, 1958. Paperbound \$1.25.

PROGRESS IN ELEMENTARY PARTICLE AND COSMIC RAY PHYSICS, Vol. 4. Edited by J. G. Wilson and S. A. Wouthuysen. 470 pp. (North-Holland) Interscience Publishers, Inc., New York, 1958. \$12.50.

DICTIONARY OF PHYSICS. Compiled and edited by H. J. Gray. 544 pp. Longmans, Green & Co., Inc., New York, 1958. \$16.50.

PHYSICS PROBLEMS. By Clarence E. Bennett. 240 pp. Barnes & Noble, Inc., New York, 1958. Paperbound \$1.75.

Physical Optics. By R. A. Houstoun. 300 pp. Interscience Publishers, Inc., New York, 1958. \$6.25.

Bone and Radiostrontium. By A. Engström, R. Björnerstedt, C. J. Clemedson, A. Nelson. 139 pp. (Almquist & Wiksell, Sweden) John Wiley & Sons, Inc., New York, 1958. \$8.75.

APPLIED MATHEMATICS FOR ENGINEERS AND PHYSICISTS (2nd Revised Edition). By Louis A. Pipes. 723 pp. McGraw-Hill Book Co., Inc., New York, 1958. \$8.75.

Introduction to Electromagnetic Engineering. By Roger F. Harrington. 312 pp. McGraw-Hill Book Co., Inc., New York, 1958. \$8.00.

THE RUSSIAN LITERATURE OF SATELLITES, Part I. 181 pp. (State Technical & Theoretical Press, Moscow, 1957) Translated by International Physical Index, Inc., New York, 1958. Paperbound.

ATMOSPHERIC EXPLORATIONS: Papers of the Benj. Franklin Memorial Symp. of the American Academy of Arts & Sciences. Edited by Henry G. Houghton. 125 pp. The Technology Press of MIT & John Wiley & Sons, Inc., New York, 1958. \$6.50.

THE PROSPECT FOR NUCLEAR POWER IN PAKISTAN. By Maurice D. Kilbridge. 59 pp. National Planning Assoc., Washington, D. C., 1958. Paperbound \$1.00.

OPTIQUE ÉLECTRONIQUE, Vol. 2. By P. Grivet, et al. 339 pp. CNRS & Bordas, Paris, France, 1958. Paperbound.

MAX PLANCK: Physikalische Abhandlungen und Vorträge. Vol. 1, 776 pp. Vol. 2, 716 pp. Vol. 3, 426 pp. Friedr. Vieweg & Sohn, Braunschweig, Germany, 1958. DM 150.00 per set. WAVE PROPAGATION AND ANTENNAS. By George B. Welch. 257 pp. D. Van Nostrand Co., Inc., Princeton, N. J., 1958. \$5.75.

THE EXPLORATION OF SPACE BY RADIO. By R. Hanbury Brown and A. C. B. Lovell. 207 pp. John Wiley & Sons, Inc., New York, 1958. \$6.50.

ELEMENTARE NEUTRONENPHYSIK. By K. Wirtz and K. H. Beckurts. 243 pp. Springer-Verlag, Berlin, Germany, 1958. Paperbound DM 49.60.

MATHEMATICAL THEORY OF COMPRESSIBLE FLUID FLOW. By Richard von Mises, completed by Hilda Geiringer, G. S. S. Ludford. 514 pp. Academic Press Inc., New York, 1958. \$15.00.

SWITCHING CIRCUITS AND LOGICAL DESIGN. By Samuel H. Caldwell. 686 pp. John Wiley & Sons, Inc., New York, 1958. \$14.00.

EIGENFUNCTION EXPANSIONS ASSOCIATED WITH SECOND-ORDER DIFFERENTIAL EQUATIONS, Part 2. By E. C. Titchmarsh, 404 pp. Oxford U. Press, New York, 1958. \$11.20. CHEMICAL THERMODYNAMICS: A Course of Study. By Frederick T. Wall. 422 pp. W. H. Freeman & Co., San Francisco, Calif., 1958. \$8.00.

1958 HEAT TRANSFER AND FLUID MECHANICS INSTITUTE. (Preprints of papers, U. of California, Berkeley, June 1958). 264 pp. Stanford U. Press, Stanford, Calif. \$8.50.

CONCEPTS OF CLASSICAL OPTICS. By John Strong. 692 pp. W. H. Freeman & Co., San Francisco, Calif., 1958. \$9.50.

MOLECULAR QUANTUM MECHANICS AND MOLECULAR ELECTRONIC SPECTROSCOPY: Early Workers. Vol. 1 of Molecular Electronic Bibliography. By Lilli Kasha and Michael Kasha. 136 pp. Publishers Press, Inc., Tallahassee, Fla., 1958. Paperbound \$3.50 in US; \$4.50 elsewhere.

1970 WITHOUT ARMS CONTROL: Implications of Modern Weapons Technology. By NPA Special Project Comm. on Security Through Arms Control. 72 pp. Pamphlet No. 104. Nat'l Planning Assoc., Washington, D. C., 1958. Paperbound \$1.25.

ENERGY FOR MAN: Windmills to Nuclear Power. By Hans Thirring. 409 pp. Indiana U. Press, Bloomington, Ind., 1958. \$6.95.

MAN AND HIS PHYSICAL UNIVERSE (3rd Revised Edition). By F. C. Jean, E. C. Harrah, F. L. Herman, S. R. Powers. 657 pp. Ginn & Co., Boston, Mass., 1958. \$6.50.

PROCEEDINGS OF THE INTERNATIONAL SYMPOSIUM ON ISOTOPE SEPARATION (Amsterdam, Apr. 1957). Edited by J. Kistemaker, J. Bigeleisen, A. O. C. Nier. 704 pp. (North-Holland, Holland) Interscience Publishers, Inc., New York, 1958. \$15.00.

SEMICONDUCTOR THERMOELEMENTS AND THERMOELECTRIC COOLING. By A. F. Ioffe, L. S. Stil'bans, E. K. Iordanishvili, T. S. Stavitskaya. Revised and supplemented by A. F. Ioffe. Translated from Russian by A. Gelbtuch. 184 pp. (USSR Academy of Sciences, Moscow) Infosearch Ltd., London, England, 1957, \$6.00.

PRINCIPLES OF MODERN PHYSICS. By A. P. French. 355 pp. John Wiley & Sons, Inc., New York, 1958. \$6.75.

FINITE QUEUING TABLES. By L. G. Peck and R. N. Hazelwood. 210 pp. Publ. No. 2 of ORSA Publications in Operations Research. John Wiley & Sons, Inc., New York, 1958. \$8.50.

FOUNDATIONS OF MODERN PHYSICAL SCIENCE. By Gerald Holton and Duane H. D. Roller. Edited by Duane Roller. 782 pp. Addison-Wesley Publishing Co., Inc., Reading, Mass., 1958, \$8.50.

THE TREE OF MATHEMATICS. Edited by Glenn James. 20 contributors. 403 pp. The Digest Press, Pacoima, Calif., 1958. \$6.00.

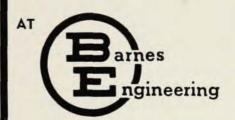
101 Puzzles in Thought and Logic. By C. R. Wylie, Jr. 128 pp. Dover Publications, Inc., New York, 1957. Paperbound \$1.00.

IMPEDANCE MATCHING. Edited by Alexander Shure. 119 pp. John F. Rider Publisher, Inc., New York, 1958. Paperbound \$2.90.

Principles of Noise, By J. J. Freeman. 299 pp. John Wiley & Sons, Inc., New York, 1958. \$9.25.

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