tion for work in theoretical physics. Viewed in light of these remarks, Stakgold's book is an excellent introduction to the methodology of abstract spaces applied to boundary value problems but does not give sufficient attention to the manipulative aspects of the subject to be the sole text for a course in mathematical physics.

The subject matter in this first volume consists of the theory of Green's functions, an introduction to linear spaces, and applications to linear integral equations and the spectral theory of second-order differential operators. Throughout, the writing is lucid and the account of elementary aspects of the theory is agreeably complete. Parenthetically, one might wish for a more

NEW BOOKS

ELEMENTARY PARTICLES & FIELDS

High Energy Physics, Vol. 2. E. H. S. Burhop, ed. 483 pp. Academic Press, New York, 1967. \$24.00

Précis de Mécanique Quantique Relativiste. By O. Costa de Beauregard. 202 pp. Dunod, Paris, 1967. 24 F.

ATOMS & MOLECULES

Methods of Experimental Physics, Vol. 4: Atomic and Electron Physics, Part A: Atomic Sources and Detectors. Vernon W. Hughes, Howard L. Schultz, eds. 515 pp. Academic Press, New York, 1967. \$21.50

Laser Systems and Applications. By Herbert A. Elion. 624 pp. Pergamon Press, Oxford, 1967. \$22.50

FLUIDS, PLASMAS

Electromagnetic Fluctuations in Plasma. By A. G. Sitenko. Trans. from Russian by Morris D. Friedman. 256 pp. Academic Press, New York, 1967. \$12.50

Stability of Parallel Flows. By Robert Betchov, William O. Criminale Jr. 330 pp. Academic Press, New York, 1967. \$16.00

Introduction to the Dynamics of Rarefied Gases. By V. P. Shidlovskiy. Trans. by Scripta Technica. 168 pp. American Elsevier, New York, 1967. \$12.50

SOLIDS

Magnetism and Magnetic Materials 1967 Digest: A Survey of the Technical Literature of the Preceding Year. W. D. Doyle, A. B. Harris, eds. 280 pp. Academic Press, New York, 1967. \$11.00

The Physics of Electroluminescent Devices. By P. R. Thornton. 382 pp.

complete development of matrix theory, but there is some account of the theory as a specialization of some of the more abstract theory. A distinct deficiency is a lack of motivation for the abstract theory. Nevertheless, I would definitely recommend this book as a supplementary text for a course in mathematical physics or applied mathematics if it were accompanied by suitable material on solution techniques.

* * *

The reviewer is presently head of the Physical Sciences Laboratory, Division of Computer Research and Technology of the National Institutes of Health. He is also on the board of editors of the Journal of Mathematical Physics.

Barnes & Noble, New York, 1967. \$14.50 La Surface de Fermi des Métaux. By Wladimir Mercouroff. 230 pp. Masson, Paris, 1967. 80 F.

Theory of Magnetism in Transition Metals. (Enrico Fermi School, Varenna, Italy, June 1966). W. Marshall, ed. 454 pp. Academic Press, New York, 1967. \$18.50

Progress in Low Temperature Physics, Vol. 5. C. J. Gorter, ed. 332 pp. North-Holland, Amsterdam (Interscience, New York), 1967. \$15.50

Phonons et Hypersons. Conf. proc. (Grenoble, March–April 1966). 176 pp. Presses Universitaires de France, Paris, 1967. Paper 35 F.

CLASSICAL PHYSICS

Theory and Applications of Holography. By John B. DeVelis, George O. Reynolds. 196 pp. Addison-Wesley, Reading, Mass., 1967. \$12.95

The Logic of Special Relativity. By S. J. Prokhovnik. 128 pp. Cambridge U. Press, London, 1967. \$5.95

Electromagnetic Wave Theory. Conf. proc. (Delft, The Netherlands, Sept. 1965). J. Brown, ed. 1099 pp. in two volumes. Pergamon Press, Oxford, 1967. \$43.00

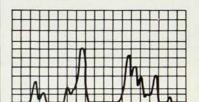
MATHEMATICS & MATHEMATICAL PHYSICS

Generalized Functions, Vol. 3: Theory of Differential Equations. By I. M. Gel'fand, G. E. Shilov. Trans. from Russian by M. E. Mayer. 222 pp. Academic Press, New York, 1967. \$11.00

Joint Statistical Papers of J. Neyman and E. S. Pearson. 299 pp. U. of California Press, Berkeley, Calif., 1967. \$7.00

Approximate Methods for Solution of Differential and Integral Equations. By S. G. Mikhlin, K. L. Smolitskiy. Trans.

Varian Vacuum PPG



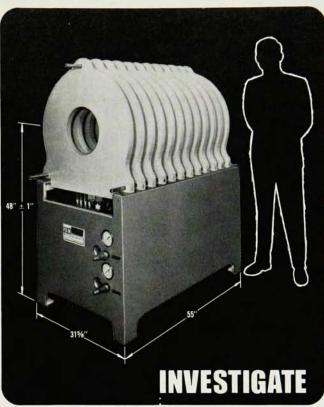
Measures Partial Pressures and Total Pressure

- Mass ranges: 1 to 70 AMU
- Minimum detectable partial pressure: 2 x 10-11 Torr
- Minimum detectable total pressure: 5 x 10⁻¹¹ Torr
- Low cost, easy to use
- Automatic or manual mass scan

Write for complete information. Varian Vacuum Division, Palo Alto, California; Zug, Switzerland; Georgetown, Ontario.



BEFORE BUYING AN AIR CORE SOLENOID...



P.E.M. AIR CORE SOLENOID MODEL ACS 12-27-72

> COIL ID = 12" COIL OD = 27" COIL WIDTH = 15%"

> > @ A P = 100 PSI

 $\frac{NI}{L}$ /COIL = 35,600 AMP-TURNS/INCH

R/COIL @ 20° C = .035 OHM I $_{max}/COIL$ = 740 AMPS P $_{max}/COIL$ = 26 KW H₂O FLOW/COIL = 2.6 GPM P.E.M.'S
FLEXIBLE DESIGN,
GOOD QUALITY,
FAST DELIVERY
and
REASONABLE PRICE!

Adaptability by design is a specialty of ours. That's why this air core solenoid features modular coil design—you select the bench length and number of coil modules to meet your specific requirements. Here are other benefits of the design:

- **a** Current density along the axis can be adjusted to produce the desired field distribution
- **b** Coils are wound with continuous radial spiral and opposing conductor transitions to minimize field distortion
- **C** Coils are wound with hollow copper conductor vacuum-impregnated with epoxy resin in aluminum support rings

Write or call—we'll gladly send you all the facts. We at PEM design to your exact needs. Count on PEM for fast delivery, too!



PACIFIC ELECTRIC MOTOR CO.

1009 66th Avenue • Oakland, California 94621 • 415/569-7621

SOLEIL-BABINET COMPENSATORS

IN STOCK: 2 Models,

TEL: (201)-239-8666

CATALOG NOS. 100-20 100-21 [kevi

TAIL

hess,

00

U Se

ni Sci

Aperture 10 mm 12 mm Range 2λ 4λ Resolution 0.001λ 0.001λ



High extinction, uniform field.

Available mounted in Divided Circle Rotator, or unmounted.

CATALOG UPON REQUEST

one reliable source of optical components for research, development and production

Nuclear Physicists

The men we are looking for have master's degrees or, preferably, doctorates with diverse physics backgrounds. They should thrive on varied and sophisticated problems and have experience in translating advanced physics principles into hardware.

Current projects include applications of advanced image intensifiers and optics, radioisotope cameras for medical diagnostics, inspection technology, X-ray backscatter techniques, neutron inelastic scattering phenomena and imaging with X-rays and neutrons.

Live in Ann Arbor, Michigan, research center of the Midwest. Liberal employee benefits, including company-paid daytime attendance at the University of Michigan.

Send your resume in confidence to: Professional Employment Dept. Aerospace Systems Division The Bendix Corporation 3300 Plymouth Road Ann Arbor, Michigan 48107



Aerospace Systems

An Equal Opportunity Employer

by Scripta Technica. 308 pp. American Elsevier, New York, 1967. \$14.00

Characters of Finite Groups. By Walter Feit. 186 pp. W. A. Benjamin, New York, 1967. Cloth \$9.50, paper \$4.95

INSTRUMENTATION & TECHNIQUES

Applied Optics and Optical Engineering, Vol. 4: Optical Instruments, Part 1. Rudolf Kingslake, ed. 396 pp. Academic Press, New York, 1967. \$16.00

Progress in Radio Science, 1963–1966. Conf. proc. (Munich, Sept. 1966). 2391 pp. in two volumes. International Scientific Radio Union, Brussels, 1967. (Available from Space Sciences Laboratory, University of California, Berkeley.) \$15.00

COMPILATIONS

Handbook of Tables for Mathematics. (3rd edition) Robert C. Weast, Samuel M. Selby, eds. 1050 pp. Chemical Rubber, Cleveland, Ohio, 1967. \$16.00 Scientific Research in British Universities and Colleges 1966–1967, Vol. 1: Physical Sciences. 473 pp. British Information Service, New York, 1967. Paper \$8.00

HISTORY & PHILOSOPHY

Letters on Wave Mechanics: Schrödinger, Planck, Einstein, Lorentz. K. Przibram, ed. Trans. from Austrian by Martin J. Klein. 75 pp. Philosophical Library, New York, 1967. \$6.00

ASTRONOMY, SPACE, GEOPHYSICS

Quasi-Stellar Objects. By Geoffrey Burbidge, Margaret Burbidge. 235 pp. W. H. Freeman, San Francisco, 1967. \$7.50 Advances in Astronomy and Astrophysics, Vol. 5. Zdenek Kopal, ed. 355 pp. Academic Press, New York, 1967. \$16.00 The Gravity Field of the Earth: From Classical and Modern Methods. By Michele Caputo. 202 pp. Academic Press, New York, 1967. \$9.75

L'Environnement de la Terre. By Francis Delobeau. 163 pp. Presses Universitaires de France, Paris, 1967. Paper 15 F.

TEXTBOOKS

Quantum Mechanics. (2nd edition) By A. S. Davydov. Trans. from Russian by I. V. Schested. 669 pp. NEO Press, Ann Arbor, Mich., 1967. Paper \$6.00

Problèmes de Cristallographie. By Pierre Ducros, Janine Lajzerowicz-Bonneteau. 118 pp. Dunod, Paris, 1967. Paper 18 F. Eléments de Physique Nucléaire. (2nd edition) By Daniel Blanc, Georges Ambrosino. 286 pp. Masson, Paris, 1967. 50 F.

Electronics for Scientists and Engineers. By R. Ralph Benedict. 635 pp. PrenticeHall, Englewood Cliffs, N. J., 1967. \$12.95

Modern Transistor Electronics Analysis and Design. By Fred K. Manasse, John A. Ekiss, Charles R. Gray. 555 pp. Prentice-Hall, Englewood Cliffs, N. J., 1967. \$12.95

Advanced Tests for the Graduate Record Examination: Physics. Edward C. Gruber, ed. 59 pp. Arco, New York, 1963. Cloth, \$5.50, paper \$3.95

The Chemistry of Molten Salts: An Introduction to the Physical and Inorganic Chemistry of Molten Salts and Salt Vapors. By Harry Bloom. 184 pp. W. A. Benjamin, New York, 1967. \$10.00

Introduction to Quantum Mechanics for Electrical Engineers. By P. A. Lindsay. 240 pp. McGraw-Hill, New York, 1967. \$9.50

Ordinary Differential Equations: A First Course. By Fred Brauer, John A. Nohel. 457 pp. W. A. Benjamin, New York, 1967. \$10.75

Vector Analysis and Cartesian Tensors with Selected Applications. By Krishnamurty Karamcheti. 255 pp. Holden-Day, San Francisco, 1967. \$9.50

POPULARIZATIONS

Science Year: The World Book Science Annual, 1967. 433 pp. Field Enterprises, Chicago, 1967. \$6.95, \$5.95 for subscribers

The Science Century. By Magnus Pyke. 183 pp. Walker, New York, 1967. \$5.95 Mr. Tompkins in Paperback. By George Gamow. 186 pp. Cambridge U. Press, New York, 1965. Cloth \$4.50

MISCELLANEOUS

Formulation of Research Policies. Conf. proc. (Santa Barbara, Calif., Jan.–Feb. 1966) Bruce S. Old, Lawrence W. Bass, eds. 218 pp. American Association for the Advancement of Science, Washington, D. C., 1967. \$7.75, \$6.75 for AAAS members

Physics in Canada: Survey and Outlook. 385 pp. Canadian Association of Physicists, Ottawa, 1967. Paper \$2.50

Advances in Electronics and Electron Physics, Vol. 23. L. Marton, ed. 490 pp. Academic Press, New York, 1967. \$22.50

Technology in Western Civilization. Melvin Kranzberg, Carroll W. Pursell Jr, eds. 1574 pp. in two volumes. Oxford U. Press, New York, 1967. \$27.50 in boxed set, student edition \$17.00

The Search for Understanding: Selected Writings of Scientists of the Carnegie Institution. Caryl P. Haskins, ed. 330 pp. Carnegie Institution, Washington, D. C., 1967. \$6.00

World Literature in Physics: as Seen Through "Physics Abstracts," 1964 Issues. 532 pp. International Council of Scientific Unions, Paris, 1967. \$15.00 □

Westinghouse

Image Tubes

are growing with the rapidly expanding Night Vision market and closed circuit TV field.

Exclusive developments in SEC camera tubes, high resolution and special purpose vidicons, image intensifiers, and solid state devices make Westinghouse a leader in the field.

Westinghouse needs physicists, engineers and scientists who want to grow and contribute in any of the following fields:



- Application Engineering
- Tube Test and Evaluation
- · Electron Optics
- Photoelectron Emission
- Fiber Optics Technology
- Physical Chemistry
- Design Engineering



Come and join over 400 technical, engineering and scientific personnel serving military, industrial and commercial markets with the finest in electronic tubes.

Send resume indicating salary requirements to:

Mr. William Kacala Westinghouse Electronic Tube Div. Box 284 Elmira, New York



An equal opportunity employer