The author, who is not only a brilliant acoustician but also a gifted musician, was one of the late Erwin Meyer's students at Göttingen University. In addition to providing a record of the accomplishments of that group, it presents a well organized and documented exposition of the theory of room acoustics. However, in the basic chapter 1 on the propagation of sound in a gaseous medium, one encounters the Fourier Transform on page 12 and later on such esoteric concepts as the Weiner and Khintchine theorems along with delta functions and correlation coefficients.

In summary, this book would serve as an excellent basic text for a graduate course strongly oriented to room acoustics. It is not for beginner, architects, or "handbook-oriented" consultants. Although there is a chapter titled "Design Considerations and Design Procedures," it does not serve as a "how to do it" guide to room acoustical design. On the other hand, the serious student and practitioner of room acoustical design will be rewarded by a better understanding of the many problems and compromises which must be addressed in the quest for "good acoustics" in a specific room design. Especially pertinent is the introduction wherein Kuttruff expresses his insights on the interplay of art, science, and human factors, all of which bear on the complexity of the problem of room acoustical design.

LUDWIG W. SEPMEYER
Los Angeles, Cal.

book notes

McGraw-Hill Encyclopedia of Ocean and Atmospheric Sciences (Fourth Edition) S. P. Parker, ed. 580 pp. McGraw-Hill, New York, 1979 (first ed., 1977). $34.50

This interdisciplinary reference work combines the oceanic and atmospheric aspects of geology, geochemistry, geophysics, fluid mechanics, chemistry, biology and physics. Comprising 236 articles by over 200 contributors, the *McGraw-Hill Encyclopedia of Ocean and Atmospheric Sciences* treats most major theoretical and experimental concerns in meteorology and oceanography in an integrated fashion. Topics of current interest such as atmospheric pollution, weather modification, satellite programs, and hydrologic and energy cycles are highlighted. The book includes more than 500 illustrations, graphs, maps, photographs.

Wind Power and Other Energy Options. D. R. Inglis. 298 pp. U. Michigan, Ann Arbor, 1978. $16.00 clothbound, $8.50 paperbound

David Rittenhouse Inglis, professor emeritus of physics at the University of Massachusetts, has written an overview of energy sources other than fossil fuels. *Wind Power and Other Energy Options* provides short explanations of the technologies involved, rates their promise, and describes the difficulties that must be overcome for their implementation.

Wind power is the topic of the opening chapters. Inglis reviews existing wind turbine designs, explains the mechanics of a number of new design concepts and examines various points that must be considered when erecting large and small wind power machines. Next, the author details types of solar-related energy systems including direct solar heating and cooling, solar cells and solar steam-electric, wave energy and ocean-thermal generating plants. The book also focuses on nuclear fission. Following a description of reactor designs, Inglis lists many of its drawbacks—nuclear proliferation, radioactive leakage, power station accidents (pre-Three Mile Island), radioactive waste disposal and reactor decommissioning. He also summarizes current developments in nuclear fission and fusion and geothermal power. The book closes with comparative dollar and social

cost analyses of wind and nuclear power and a discussion of our options for future power supplies.

Man-Made Radio Noise. E. N. Skomal. 342 pp. Van Nostrand Reinhold, New York, 1978. $19.95

Radio interference is a wide-spread problem for many users of electrical equipment—from air-traffic controllers to heart-disease patients with pacemakers inplanted in their chests. Edward N. Skomal has written a basic reference text that treats most sources of man-made radio noise. For each individual noise source, he develops a theoretical and empirical framework for understanding their effects. The author also considers how these individual sources combine to form the composite ambient interference found in most urban areas.

Skomal examines automotive ignition—in general, the cause of the highest intensity noise emissions—and then considers radiated noise from electrical power transmission and generating plants. In both cases, the author attempts to supply enough empirical data for the reader to predict the characteristics of real-life radio interference from these types of sources.

The book then treats industrial causes of radio noise with a particular focus on some high-intensity sources such as industrial ovens, electric welders, mining equipment and even neon lighting. Similar treatment is given to consumer products that emit high-intensity discharges, for example, garage-door openers and gas-discharge lighting fixtures.

Near the end, Skomal analyzes incidental noise points above Earth's surface drawing on experimental data collected at heights up to 26 000 feet over major international cities. —SCA

Books scheduled for 1980 publication

Listed below are authors and titles of physics and physics-related books planned for publication during the coming year.

ACADEMIC PRESS

Brekhovskikh, L. M. Waves in Layered Media (Second Edition)
Brewer, G. R. Electron Beam Technology in Microelectronic Fabrication
Button, J. K., ed. Infrared and Millimeter Waves, Vol. 3: Submillimeter Techniques
Dennis, A. S. Weather Modification by Cloud Seeding
Fromhold, A. T., Jr Quantum Mechanics for Applied Physics & Engineering
Herman, H., ed. Treatise on Materials Science & Technology, Vol. 18
Herman, H., ed. Treatise on Materials Science & Technology, Vol. 19: Experimental Methods
Kingslake, R./Thompson, B. J. Applied Optics and Optical Engineering, Vol. 4: A Comprehensive Treatise
Lin, S. H. Radiationless Transitions Marcuse, D. Principles of Quantum Electronics
Marton, C., ed. Advances in Electronics and Electron Physics, Vols. 50 and 51
Marton, C., ed. Advances in Electronics and Electron Physics, Suppl. 13A: Applied Charged Particle Optics
Marton, C., ed. Methods of Experimental Physics, Vol. 16, Part A: Polymers—Molecular Structure and Dynamics; Part B: Polymers—Crystal Structure & Morphology; Part C: Polymers—Physical Properties
Marton, C., ed. Methods of Experimental Physics, Vol. 17: Accelerators in Atomic Physics
Marton, C., ed. Methods of Experimental Physics, Vol. 18: Fluid Dynamics
Ross, M./Goodman, J. W., eds. Laser Applications, Vol. 4
Saltzman, B., ed. Advances in Geophysics, Vol. 22
Seitz, F./Ehrenreich, H./Turnbull, D., eds. Solid State Physics, Vol. 35
Shannon, R. R./Wyant, J. C., eds. Applied Optics and Optical Engineering, Vol. 8
Uhlmann, D. R./Kreidl, N., eds. Glass, Vol. 5
Van de Hulst, H. C. Multiple Light Scattering, Vols. 1 and 2
von Heimendahl, M. Introduction to Electron Microscopy of Materials
von Mises, R./von Karman, T., eds. Advances in Applied Mechanics, Vol. 20
Wunderlich, B. Macromolecular Physics, Vol. 3: Thermal Properties
Yih, C. S., ed. Stratified Flows

ADDISON-WESLEY PUBLISHING COMPANY

Biedenharn, L. C./Louck, J. D. Angular Momentum in Quantum Physics, Parts 1 and 2
Biedenharn, L. C./Louck, J.D. The Ricah-Wigner Algebra in Quantum Theory, Part 1 and 2
Faddeev, L. D./Slavnov, A. A. Quantum Theory of Gauge Fields
Goldstein, H. Classical Mechanics (Second Edition)
Hecht, E. Physics in Perspective
Jacobs, S. F., ed. Free Electron Generators of Coherent Radiation
Lerner, R. G./Trigg, G. L., eds. Encyclopedia of Physics
Lovesey, S. Condensed Matter Physics: Dynamic Correlations
Miller, A. I. Albert Einstein's Special Theory of Relativity: Discovery (1905) and Early

continued . . .

BOOKS FOR 1980 . . .

Interpretation (1905–1911)

Ne'eman, Y., ed. Jerusalem Einstein Centennial Symposium Volume

Sears, F. W./Zemansky, M. W./Young, H. D. College Physics (Fifth Edition)

Slater, P. N. Remote Sensing: Optics and Optical Systems

Woolf, H., ed. Albert Einstein Centennial Celebration Volume

AMERICAN INSTITUTE OF PHYSICS

Month, M., Herrera, J. C., eds. Non-linear Dynamics and the Beam-Beam Interaction

ANN ARBOR SCIENCE PUBLISHERS

Bailey, R. L. Solar Electrics Research and Development

Stumpf, F. B. Introductory Analytical Acoustics

CAMBRIDGE UNIVERSITY PRESS

Blythe, A. R. Electrical Properties of Polymers (paperbound edition)

Chandrasekar, S. Liquid Crystals (paperbound edition)

Davidge, R. W. Mechanical Behaviour of Ceramics (paperbound edition)

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Wilson, J. I. B. Solar Energy

GORDON AND BREACH, SCIENCE PUBLISHERS

Babuel-Peyrissac, J. P. Kinetic Equation of Fluids and Plasmas

HARVARD UNIVERSITY PRESS

Crombie, A. C. Augustine to Galileo

Lang, K./Gingerich, O. Source Book in Astronomy and Astrophysics, 1900–1975

Smith, A. K./Weiner, C., eds. J. Robert Oppenheimer, Letters and Recollections

MIT PRESS

Miyamoto, K. Plasma Physics for Nuclear Fusion

continued . . .

McGRAW-HILL PHYSICS TEXTS: IN TOUCH WITH ENERGY AROUND US

INTRODUCTION TO PHYSICS FOR SCIENTISTS AND ENGINEERS, Third Edition
Frederick Bueche,
University of Dayton
1980, 896 pages (tent.), $21.00 (tent.)
Student/Instructor Solutions Supplement; Workbook, both by Joseph J. Kepes, University of Dayton

Now in its third edition, this highly teachable text provides unified coverage of the basic laws of both classical and modern physics. More emphasis is now placed on SI units, the common features of all waves, radiation units, the biological effects of radiation, entropy, and the second law.

PHYSICS IN SCIENCE AND INDUSTRY
Alan Cromer, Northeastern University
1980, 736 pages (tent.), $18.95 (tent.)
Instructor's Manual; Study Guide

This text bridges the gap between the classroom and the real world with its in-depth coverage of the applications of physics to technology. One exceptional feature of this text is the *Guide to Major Topics,* which classifies main equations and examples of each chapter into specific topics, and indexes these topics to the end-of-chapter problems.

THEORETICAL MECHANICS OF PARTICLES AND CONTINUA
Alexander L. Fetter and **John Dirk Walecka,** both of Stanford University
1980, 576 pages (tent.), $21.95 (tent.)

A lucid examination of the theoretical and applied aspects of classical mechanics, with appropriate mathematical methods, this text introduces basic Newtonian principles and then develops each topic from this foundation, addressing the dynamics of classical particles and continua.

PRACTICAL PHYSICS: The Production and Conservation of Energy
Joseph F. Mulligan,
University of Maryland
1980, 496 pages (tent.), $16.95 (tent.)
Instructor's Manual

Emphasizing the practical nature of physics in contemporary society, particularly in relation to the energy issue, this introductory physics text uses a quantitative approach throughout, but employs only basic arithmetic and the simplest algebra. Students will find the author's examination of modern technological products especially interesting.

PHYSICS IN EVERYDAY LIFE
Richard Dittman and **Glenn Schmieg,** both of the University of Wisconsin—Milwaukee
1979, 368 pages, $14.95
Instructor's Manual

Written for students whose background in math and science is minimal, this book offers a selected number of fundamental topics that relate to everyday life as directly experienced or assimilated through the media.

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Iribarne, J. V./Cho, H. R. Atmospheric Physics

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Shrader-Frechette, K. S. Nuclear Power and Public Policy: The Social and Ethical Problems of Fission Technology

Strub, A. S./Ehringer, H., eds. New Ways to Save Energy

PLENUM PUBLISHING CORPORATION

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Leontovich, M. A., ed. Reviews of Plasma Physics, Vol. 8

Levy, M./Bastevonte, J. L./Jacobs, M./Speiser, D./Meyers, J./Gastmans, R., eds. Quarks and Leptons (Cargese 1979)

McDowell, M. R. C./Ferendeci, A. M., eds. Atomic and Molecular Processes in Controlled Thermonuclear Fusion

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Interacting Bosons in Nuclear Physics (Proc. of a seminar, Erice, Italy, June 1979). F. Iachello, ed. 201 pp. Plenum, New York, 1979. $29.50

Pulsed Neutron Research (Proc. (Trudy) of the P. N. Lebedev Phys. Inst.) N. G. Basov, ed. 111 pp. Consultants Bureau (Plenum), New York, 1979. $35.00

Neutron Capture Gamma-Ray Spectroscopy (Proc. of an int. symp., Stony Brook, N.Y., September 1978). R. E. Chrien, W. R. Kane, eds. 898 pp. Plenum, New York, 1979. $69.50

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The Electrochemistry of Lead (Papers presented at a symp., Salford, UK, 1974). A. T. Kuhn, ed. 484 pp. Academic, New York, 1979. $59.00

Atomic and Molecular Collisions. Sir Harrie Massey. 327 pp. Halsted (Wiley), New York, 1979. $34.95

Magnetic Resonance of Phase Transitions. F. J. Owens, C. P. Poole, Jr, H. A. Farach, eds. 399 pp. Academic, New York, 1979. $44.00

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Electron-Molecule and Photon-Molecule Collisions (Proc. of a conf., Pacific Grove, Cal., August 1978). T. Rescigno, V. McKoy, B. Schneider, eds. 365 pp. Plenum, New York, 1979. $39.50

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