and for the text to be supportive to the ideas to be communicated in a course, it is also bad pedagogically to fill the average student with anxiety over whether or not a deleted topic might in fact appear in an examination question.

In those colleges and universities where a greater flexibility in the choice of topics and their order is enjoyed by the lecturer, the text of Alonso and Finn may provide a welcome change from the above-mentioned list of textbooks. Grouping topics by the physical content of the ideas is commendable pedagogy. It is always satisfying as a subject is developed to extract from each new idea as many by-products as one can. In this way the student can sense the elegance and the economy of thought that the new idea makes possible.

The list of subjects treated by the authors is quite complete—encyclopedic in fact. The books mentioned above and published after Sears and Zemansky have followed this same trend of including more and more of the subject matter of all of physics. This trend is partly due to the publisher who hears, for example, that a certain professor has stated that he cannot teach a course in electricity without including ac circuits. The author is then asked to insert a chapter on ac circuits to make the book more marketable, and the competition soon follows suit.

An important but frequently overlooked side effect of the trend toward encyclopedism is the weight of the book; the sheer physical weight makes a big book such as Alonso and Finn uncomfortable to hold while reading, and makes one think twice about carrying the book from place to place.

The trend toward larger and larger texts is also partly due to the growth of knowledge, and to the pride that physicists have because of the increase in their understanding of natural phenomena. A great deal of our technology rests on this understanding as well as the rapid growth of the technology. But just as we have reached and surpassed the age of overkill in weaponry, we must retreat to a more selective policy to avoid the age of overteach and overbore in spite of our enthusiasm to show how beautifully it all hangs together.

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new books

CONFERENCE PROCEEDINGS

Atti Del Convegno Mendeleeviano: Periodicità e Simmetrie Nell Struttura Elementare Della Materia (Conf. Proc. Torina-Roma, Italy, 15–21 Sept. 1969). M. Verde, ed. 460 pp. Academia Dell Science di Torino, Accademia Nazionale Del Lincei, Torino, Italy, 1971.

Hadronic Interactions of Electrons and Photons (Conf. proc. Eleventh Session of the Scottish Universities Summer School in Physics, 1970, NATO Advanced Study Institute). J. Cumming, H. Osborn, eds. 653 pp. Academic, New York, 1971. $31.00

National Bureau of Standards Publication 353: The Menzel Symposium on Solar Physics, Atomic Spectra and Gaseous Nebulae (Conf. proc. Harvard College Observatory, Cambridge, Mass., 8, 9 April 1971). K. B. Gebbie, ed. 203 pp. US Government Printing Office, Washington, D. C., 1971. $1.75.

Periodic Orbits, Stability and Resonance (Conf. proc. Univ. of São Paulo, The Technical Institute of Aeronautics of São José dos Campos and the National Observatory of Rio de Janeiro, Univ. of São Paulo, São Paulo, Brazil, 4–12 Sept. 1969). G. E. O. Giacaglia, ed. 503 pp. D. Reidel, Dordrecht, Holland, 1970.

Phenomena in Ionized Gases (Conf. proc. 10th International Conference on Phenomena in Ionized Gases, 13–18 Sept., Oxford, UK), Contributed papers. R. N. Franklin, ed. 447 pp. Richard S. Gothard Co Ltd, Oxford, UK, 1971. £ 12

ELEMENTARY PARTICLES

Elementary Particles: Science, Technology and Society. L. C. L. Yuan, ed. 314 pp. Academic, New York, 1971. $15.00

NUCLEI

Experiments in Nuclear Science. 132 pp. Ortec, Oak Ridge, Tenn., 1971. $10.00.

ATOMS, MOLECULES

Elementary Atomic Structure. By G. K. Woodgate. 225 pp. McGraw-Hill, New York, 1970. $10.50

CHEMICAL PHYSICS

Techniques of Chemistry, Vol. III: Photochromism. G. H. Brown, ed. 853 pp. Interscience, New York, 1971. $47.50

ACOUSTICS

Molecular Acoustics. By A. J. Matheson. 290 pp. Interscience, New York, 1971. $16.50

OPTICS

Optics. By F. G. Smith, J. H. Thomson. 350 pp. Wiley, New York, 1971. $10.00

Polarization Interferometers: Applications in Microscopy and Macroscopy. By M. Francon, S. Mallick. 159 pp. Interscience, New York, 1971. $12.50

Vacuum Ultraviolet Spectroscopy. A. N. Zaidel', E. Ya. Shreider. Z. Lerman, trans. 395 pp. Ann Arbor-Humphrey Science Publishers, London, UK, 1971. $22.50

FLUIDS, PLASMAS

Compressible-Fluid Dynamics. By P. A. Thompson. 665 pp. McGraw-Hill, New York, 1971. $17.50

SOLID STATE, METALS

Elasticity, Plasticity and Structure of Matter. R. Houwink, H. K. de Decler, eds. 3rd ed. 470 pp. Cambridge U. P., Cambridge, UK, 1971. $23.50

Modern Metallographic Techniques and Their Applications. By V. A. Phillips. 538 pp. Wiley, New York, 1971. $27.50

Optische Eigenschaften von Metallen und Legierungen: Mit einer Einführung in die Elektronentheorie der Metalle. By R. E. Hummel. 222 pp. Springer-Verlag, New York, 1971.

CRYSTALS

Color and Symmetry. By A. L. Loeb. 179 pp. Interscience, New York, 1971. $14.95

Interpretation of Electron Diffraction Patterns. By K. W. Andrews, D. J. Dyson, S. R. Keown. 2nd ed. 239 pp. Plenum, New York, 1971. $25.00

Solid State Physics Supplement 3: Theory of Lattice Dynamics in the Harmonic Approximation. By A. A. Maradudin, E. W. Montroll, G. H. Weiss, I. P. Ipatova. 2nd ed. 708 pp. Academic, New York, 1971. $28.50

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Basic Physics of Stellar Atmospheres. By T. L. Swihart. 86 pp. Pachart, Tucson, Arizona, 1971. $7.95

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Dyadic Green's Functions in Electromagnetic Theory. By C. T. Tao. 246 pp. Intext Educational Publishers, Scranton, Pa., 1971. $14.50

Group Theory and its Applications, Vol. 2. E. M. Loebl, ed. 312 pp. Academic, New York, 1971. $18.50

Guide to the Applications of the Laplace and Z-Transforms. By G. Doetsch. 240 pp. Van Nostrand Reinhold, New York, 1971. $15.95

On the Volterra and Other Nonlinear Models of Interacting Populations. By N. S. Goel, S. C. Maitra, E. W. Montroll. 145 pp. Academic, New York, 1971. $5.50

Time and Space-Traveller. By L. Marder. 210 pp. George Allen and Unwin, London, UK, 1971. £3.25

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Advances in Electronics and Electron Physics, Vol. 30. L. Marton, ed. 343 pp. Academic, New York, 1971. $19.50

Critical Assemblies and Reactor Research. By L. C. Schmid. 381 pp. Interscience, New York, 1971. $21.95

Dating Techniques for the Archaeologist. H. N. Michael, E. K. Ralph, eds. 226 pp. MIT Press, Cambridge, Mass., 1971. $12.50

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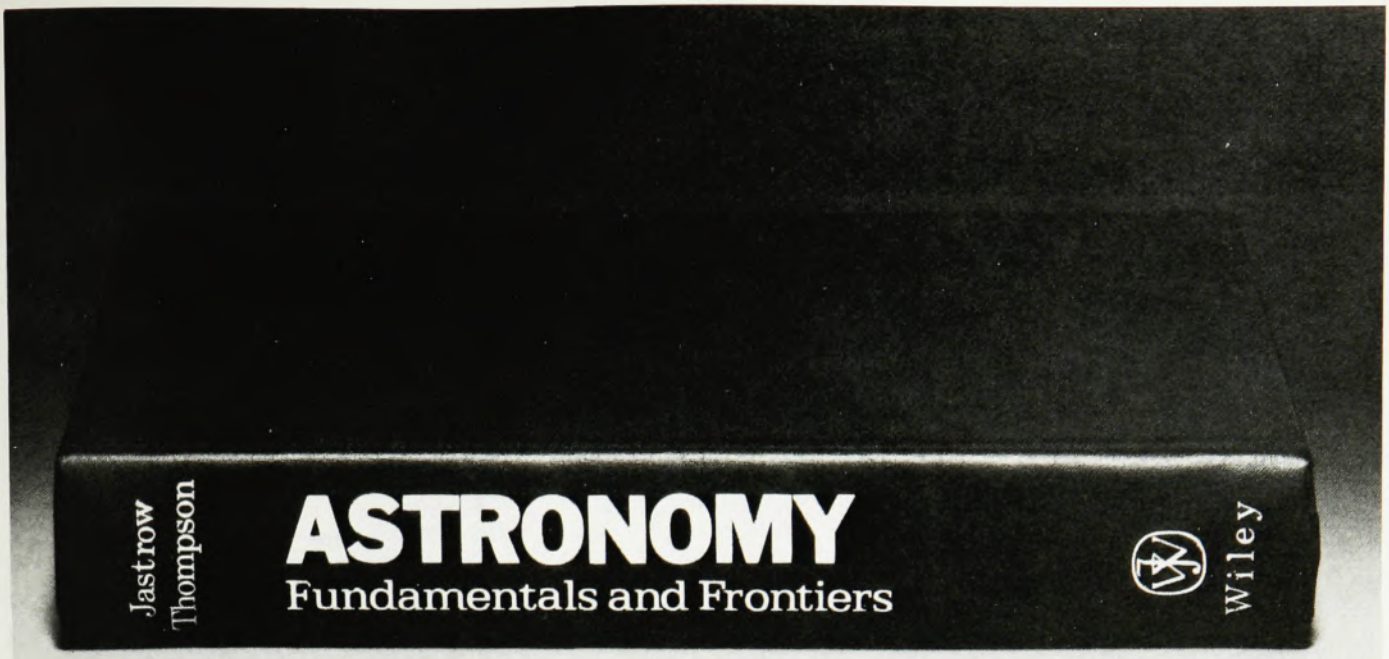
Statistical Antenna Theory. By Y. S. Shifrin. 370 pp. Golem Press, Boulder, Colo., 1971. $16.00



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NMR, Basic Principles and Progress, Vol. 3: Static Quadrupole Effects in Disordered Cubic Solids, Nuclear Magnetic Relaxation Spectroscopy; Vol. 5: Analysis of NMR Spectra. P. Diehl, E. Fluck, R. Kosfeld, eds. 144 pp.; 165 pp. Springer-Verlag, New York, 1971. $18.50 ea.

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Theorie und Praxis der Halbleiterdetektoren für Kernstrahlung. By H. Büker. 304 pp. Springer-Verlag, New York, 1971. $26.00

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The Project Physics Course Reader: Unit 6, The Nucleus. 264 pp. Holt, Rinehart and Winston, New York, 1971. $2.08

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Introduction to Newton's "Principia." By I. B. Cohen. 380 pp. Harvard U. P., Cambridge, Mass., 1971. $30.00

The Science of Matter: A Historical Survey, Selected Readings. M. P. Crosland, ed. Penguin, Middlesex, UK, 1971. $4.95

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Liquid Wastes of Industry: Theories, Practices and Treatment. By N. L. Nemerow. 584 pp. Addison-Wesley, Reading, Mass., 1971. $22.50

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