

BOOKS

vides an inexpensive way to look at some interesting physics. One favorite of mine is the illustration that a ball rolling in the balanced molding's groove will create an oscillatory motion for a specific initial condition. After a couple of differentiations of a fourth-order equation, the author reaches the oscillatory equation of motion. These new demonstrations are not for your weak-kneed students and they probably won't flip your world inside out. But most are still fun play, even for the jaded physicist.

GERALD F. WHEELER
Montana State University

Physics. R. Schwenn, E. Marsch, eds. Springer-Verlag, New York, 1990. 282 pp. \$69.50 hc ISBN 0-387-52081-3. *Compilation*

Physics of The Outer Heliosphere. *Cospar Colloquia Series 1.* Proc. Conf., Warsaw, September 1989. S. Grzedzielski, D. E. Page, eds. Pergamon, New York, 1990. 409 pp. \$80.00 hc ISBN 0-08-040780-3

Rotation and Mixing in Stellar Interiors. *Lecture Notes in Physics 366.* Proc. Wksp., Les Houches, France, June 1987.

M.-J. Goupil, J.-P. Zahn, eds. Springer-Verlag, New York, 1990. 182 pp. \$33.00 hc ISBN 0-387-53059-2

Supernovae. *Jerusalem Winter School for Theoretical Physics 6.* Proc. Sch., Jerusalem, Dec-Jan 1988-89. J. C. Wheeler, T. Piran, S. Weinberg, eds. World Scientific, Teaneck, N. J. 1990. 332 pp. \$58.00 hc ISBN 9971-50-963-6

Supernovae. Proc. Wksp., Santa Cruz, Calif., 1989. S. E. Woosley, ed. Springer-Verlag, New York, 1991. 789 pp. \$49.50 hc ISBN 0-387-97071-1

NEW BOOKS

Astronomy and Astrophysics

Annual Review of Astronomy and Astrophysics, Vol. 28. G. Burbidge, D. Layzer, A. Sandage, eds. Annual Reviews, Palo Alto, California, 1990. 706 pp. \$51.00 hc ISBN 0-8243-0928-6. *Compilation*

Astronomy and Astrophysics Abstracts, Vols. 50 A-B. G. Burkhardt, U. Esser, H. Hefele, I. Heinrich, W. Hofmann, K. Krahn, V. R. Matas, L. D. Schmadel, R. Wielen, G. Zech, eds. Springer-Verlag, New York, 1990. 1428 pp. \$254.00 hc ISBN 0-387-52889-X. *Reference*

Atlas and Catalogue of Infrared Sources in the Magellanic Clouds. P. B. W. Schwing, F. P. Israel. Kluwer, Boston, 1990. 212 pp. \$99.00 hc ISBN 0-7923-0654-6. *Floppy disk available*

Comet Halley: Investigations, Results, Interpretations, Vols. I-II. *Ellis Horwood Library of Space Science and Space Technology Series in Astronomy.* J. W. Mason, ed. Ellis Horwood (Simon and Schuster), New York, 1990. **Vol. I: Organization, Plasma, Gas.** 295 pp. \$110.00 hc ISBN 0-13-171075-3. **Vol. II: Dust, Nucleus, Evolution.** 275 pp. \$110.00 hc ISBN 0-13-171075-4. *Compilation*

Evolution of the Universe of Galaxies: Edwin Hubble Centennial Symposium. *Astronomical Society of the Pacific Conference Series 10.* Proc. Conf., Berkeley, Calif., June 1989. R. G. Kron, ed. ASP, San Francisco, 1990. 403 pp. \$32.00 hc ISBN 0-937707-28-7

Low Frequency Astrophysics from Space. *Lecture Notes in Physics 362.* Proc. Wksp., Crystal City, Virginia, January 1990. N. E. Kassim, K. W. Weiler, eds. Springer-Verlag, New York, 1990. 280 pp. \$33.00 hc ISBN 0-387-52891-1

Physics and Chemistry of Comets. *Astronomy and Astrophysics Library.* W. F. Heubner, ed. Springer-Verlag, New York, 1990. 376 pp. \$59.00 hc ISBN 0-387-51228-4. *Compilation*

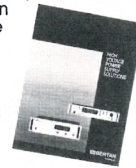
Physics of the Inner Heliosphere, 1: Large-Scale Phenomena. *Physics and Chemistry in Space 20: Space and Solar*

STEP UP TO BERTAN



- OUTPUT VOLTAGE TO 10 kV
- OUTPUT CURRENTS TO 3 mA
- MODELS FOR ALL DETECTORS
- SPECIAL MWPC VERSIONS
- SINGLE AND DUAL OUTPUT UNITS
- REVERSIBLE POLARITY
- LOW RIPPLE AND NOISE
- SHORT CIRCUIT AND ARC PROTECTED
- REMOTELY PROGRAMMABLE
- AC AND DC BIN POWERED

BERTAN High Voltage is the world's leading manufacturer of regulated, precision NIM high voltage power supplies and MINI BINs. The excellent stability and low noise featured in our power supplies are just two of the reasons you should specify Bertan in your application. Versatility and quality are others. And our dependability is backed by uncompromising standards and an exclusive 3 year warranty! Send for our new catalog today.



Call us with your high voltage problem. We'll provide the high voltage solution.

BERTAN High Voltage

121 New South Road • Hicksville, NY 11801 • 516-433-3110 • Fax: 516-935-1766

Circle number 46 on Reader Service Card

Energy and Environment

Extremely Low Frequency Electromagnetic Fields: The Question of Cancer. B. W. Wilson, R. G. Stevens, L. E. Anderson, eds. Batelle, Columbus, Ohio, 1990. 383 pp. Price not stated *hc* ISBN 0-935470-48-4. *Compilation*

The Legacy of Chernobyl. Z. Medvedev. Norton, New York, 1990. 352 pp. \$24.95 *hc* ISBN 0-393-02802-X

Fluids

Bubble Wake Dynamics in Liquids and Liquid-Solid Suspensions. *Butterworth-Heinemann Series in Chemical Engineering.* L.-S. Fan, K. Tsuchiya. Butterworths-Heinemann, Boston, 1990. 400 pp. \$95.00 *hc* ISBN 0-409-90286-1. *Monograph*

Instability and Transition, Vols. 1-2. *ICASE/NASA LaRC Series. Proc. Wksp., Hampton, Virginia, May-June 1989.* M. Y. Hussaini, R. G. Voigt, eds. Springer-Verlag, New York, 1990. Vol. 1. 438 pp. \$49.50 *hc* ISBN 0-387-97323-0. Vol. 2. 496 pp. \$49.50 *hc* ISBN 3-387-97324-9

A Mathematical Introduction to Fluid Mechanics. Second edition. *Texts in Applied Mathematics 4.* A. J. Chorin, J. E. Marsden. Springer-Verlag, New York, 1990 [1979]. 164 pp. \$29.00 *hc* ISBN 3-387-97300-1

Numerical and Physical Aspects of Aerodynamic Flows IV. *Proc. Symp., Long Beach, Calif., January 1989.* T. Cebeci, ed. Springer-Verlag, New York, 1990. 413 pp. \$97.10 *hc* ISBN 0-387-52259-X

Topological Fluid Mechanics. *Proc. Symp., Cambridge, England, August, 1989.* H. K. Moffatt, A. Tsinober, eds. Cambridge U.P., New York, 1990. 820 pp. \$115.00 *hc* ISBN 0-521-38145-2

Physical Electronics

Compact Transistor Modelling for Circuit Design. H. C. de Graaff, F. M. Klaassen. Springer-Verlag, New York, 1990. 351 pp. \$99.50 *hc* ISBN 3-387-82136-8

Electronics Packaging Forum, Vol 1. J. E. Morris, ed. Van Nostrand Reinhold, New York, 1990. 348 pp. \$56.95 *hc* ISBN 0-442-00178-9. *Compilation*

Measurement of High-Speed Signals in Solid State Devices. *Semiconductors and Semimetals 28.* R. B. Marcus, ed. Academic, San Diego, Calif., 1990. 438 pp. \$85.00 *hc* ISBN 0-12-752128-3. *Compilation*

Physics of Quantum Electron Devices. *Springer Series in Electronics and Photonics 28.* F. Capasso, ed. Springer-Verlag, New York, 1990. 403 pp. \$69.00 *hc* ISBN 3-387-51128-8. *Compilation*

Rate Equations in Semiconductor Electronics. J. E. Carroll. Cambridge U.P.,

New York, 1990. 177 pp. \$24.95 *pb* ISBN 0-521-38866-X

Superconducting Devices. S. T. Rugiero, D. A. Rudman, eds. Academic, San Diego, California, 1990. 396 pp. \$49.95 *hc* ISBN 0-12-601715-8. *Compilation*

Very High Speed Integrated Circuits: Gallium Arsenide LSI. *Semiconductors and Semimetals 29.* T. Ikoma, ed. Academic, New York, 1990. 309 pp. \$75.00 *hc* ISBN 0-12-752129-1. *Compilation*

Miscellaneous

Cambridge Air and Space Dictionary. P. M. B. Walker, ed. Cambridge U.P., New York, 1990. 216 pp. \$29.95 *hc* ISBN 0-521-39439-2. *Reference*

Chemical Oscillations and Instabilities: Non-linear Chemical Kinetics. *International Series of Monographs on Chemistry 21.* P. Gray, S. K. Scott. Oxford U.P., New York, 1990. 454 pp. Price not stated *hc* ISBN 0-19-855646-2

Another Cold And Calculating Scheme From The Engineers At Edwards.



Designing a cryopump this small and powerful is a rather large feat. But in creating the new high-efficiency Coolstar[®], that's just what our engineers have done.

These new technology cryopumps offer controllable cooling power in a compact package. And only Coolstar Cryopumps feature a unique variable power design that offers the industry's fastest cooldown, highest gas throughput handling, and simplified leak checking. All backed by Edwards' unmatched service and vacuum component availability.

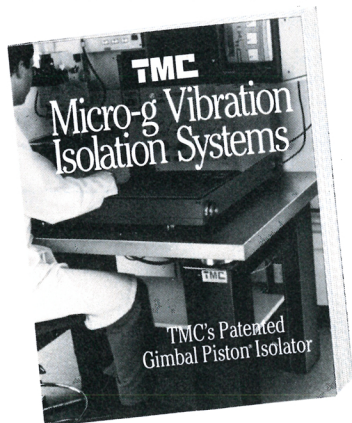
For more information about what makes Edwards Coolstar Cryopumps the best choice in your research or manufacturing operation, contact your Edwards representative. Or call 1-800-848-9800.

EDWARDS
Edwards High Vacuum International

A Division of The BOC Group, Inc.
One Edwards Park, 301 Ballardvale Street
Wilmington, MA 01887
Europe: 44 293 528844
Pacific: 81 3 756 4026
© 1991 The BOC Group, Inc.

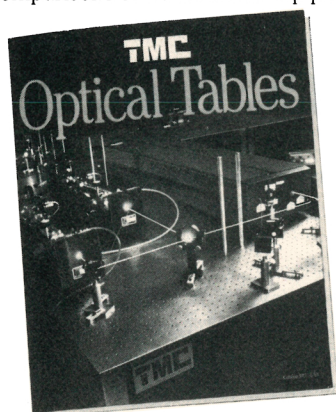
Circle number 50 on Reader Service Card

NEW CATALOGS



Vibration Isolation Systems

New fourth-generation Micro-g® Gimbal Piston® Vibration Isolation Lab Tables. Features include higher isolation performance, modular construction, contemporary industrial design. Catalog also contains Table Top Platforms, Floor Platforms, and technical comparisons of isolators and top plates.



Optical Tables

Latest catalog covers six standard lines of TMC steel honeycomb optical tables including patented, spill-proof CleanTop®. Discusses design, construction and features, with cost/performance comparisons and selection guides.

SEND FOR YOUR COPIES

TMC

Technical Manufacturing Corporation
15 Centennial Drive • Peabody, MA 01960
1-800-542-9725 • 508-532-6330
TMC-42 FAX 508-531-8682

Circle number 51 on Reader Service Card

Current Topics in Shock Waves. *AIP Conference Proceedings 206.* Proc. Symp. Bethlehem, Penna., July 1989. Y. W. Kim, ed. AIP, New York, 1990. 976 pp. \$95.00 (\$76.00, AIP members) *hc* ISBN 0-88318-776-0

A Development of the Equations of Electromagnetism in Material Continua. *Springer Tracts in Natural Philosophy 36.* H. F. Tiersten. Springer-Verlag, New York, 1990. 148 pp. \$49.00 *hc* ISBN 0-387-97241-2. *Monograph*

Freedom in Machinery, Vol. 2: Screw Theory Exemplified. J. Phillips. Cambridge U.P., New York 1990. 249 pp. \$85.00 *hc* ISBN 0-521-25442-6

More Mudpies to Magnets: Science for Young Children. E. A. Sherwood, R. A. Williams, R. E. Rockwell, L. J. Sweetman. Gryphon, Mt. Rainier, Maryland, 1990. 207 pp. \$16.95 *pb* ISBN 0-87659-150-0

The Organization of Learning. C. R. Gallistel. MIT P., Cambridge, Mass., 1990. 648 pp. \$45.00 *hc* ISBN 0-267-07113-4

Texts and Popularizations

The Age of Intelligent Machines. R. Kurzweil. MIT, Cambridge, Mass., 1990. 565 pp. \$29.95 *hc* ISBN 0-262-11121-7

The Analysis of Linear Partial Differential Operators I. *Springer Study Edition.* Second edition. Hörmander. Springer-Verlag, New York, 1990 [1983]. 440 pp. \$39.50 *pb* ISBN 0-387-52343-X

The Astronomer's Universe: Stars, Galaxies, and Cosmos. H. Friedman. Norton, New York, 1990. 360 pp. \$24.95 *hc* ISBN 0-393-02818-6

Beyond the Third Dimension: Geometry, Computer Graphics, and Higher Dimensions. T. F. Banchoff. Freeman, New York, 1990. 209 pp. Price not stated *hc* ISBN 0-7167-5025-2

Black Holes and the Universe. I. Novikov (translated from Russian by V. Kisin). Cambridge U.P., New York, 1990. 176 pp. \$39.50 *hc* ISBN 0-521-36657-7

Colliding Galaxies: The Universe in Turmoil. B. Parker. Plenum, New York, 1990. 298 pp. \$23.45 *hc* ISBN 0-306-43566-7

Connections: The Geometric Bridge between Art and Science. J. Kappraff. McGraw-Hill, New York, 1990. 472 pp. \$19.50 *pb* ISBN 0-07-034251-2

A Course in Mathematics for Students of Physics, Vol. 2. P. Bamberg, S. Sternberg. Cambridge U.P., New York, 1990. 850 pp. \$54.50 *hc* ISBN 0-521-33245-1

Elementary Fluid Dynamics. *Oxford Applied Mathematics and Computing Science Series.* D. J. Acheson. Oxford U.P., New York, 1990. 396 pp. \$85.00 *hc* ISBN 0-19-859660-X. *Monograph*

The Ends of the Earth: The Polar Regions of the World. I. Asimov. Plume, New York, 1990. 363 pp. \$12.95 *pb* ISBN 0-525-48573-2

First Contact: The Search for Extraterrestrial Intelligence. B. Bova, B. Preiss,

eds. Penguin, New York, 1990. 337 pp. \$19.95 *hc* ISBN 0-453-00720-1. *Compilation*

Fusion: The Search for Endless Energy. R. Herman. Cambridge U.P., New York, 1990. 240 pp. \$19.95 *pb* ISBN not stated.

Genome. J. E. Bishop, M. Waldholz. Simon and Schuster, New York, 1990. 352 pp. \$22.95 *hc* ISBN 0-671-67094-8

How to Solve Problems. Second edition. D. Scarl. Dosoris, Glen Cove, New York, 1990. 110 pp. \$8.95 *pb* ISBN 0-9622008-2-4

Islands of Truth: A Mathematical Mystery Cruise. I. Peterson. Freeman, New York, 1990. 325 pp. \$19.95 *hc* ISBN 0-7167-2113-9

Keep your Eye on the Ball: The Science and Folklore of Baseball. R. G. Watts, A. T. Bahill. Freeman, New York, 1990. 210 pp. \$18.95 *hc* ISBN 0-7167-2104-X

Measure, Topology, and Fractal Geometry. *Undergraduate Texts in Mathematics.* G. A. Edgar. Springer-Verlag, New York, 1990. 214 pp. \$29.95 *hc* ISBN 0-387-97272-2

Mechanics. Second edition. P. Smith, R. C. Smith. Wiley, New York, 1990. 322 pp. \$34.94 *pb* ISBN 0-471-92737-6

New Horizons: Explorations in Science. P. D. Ouspensky. Globe, New York, 1990. 220 pp. \$14.95 *pb* ISBN 0-936385-21-9

The New Solar System. Third edition. J. K. Beatty, A. Chaikin, eds. Sky, Cambridge, Mass., and Cambridge U.P., New York, 1990. 326 pp. \$39.95 *hc* ISBN 0-933346-55-7; \$24.95 *pb* ISBN 0-933346-56-6

A Primer of Diffusion Problems. R. Ghez. Wiley, New York, 1990. 243 pp. \$26.95 *pb* ISBN 0-471-84692-9

Our Universe: An Armchair Guide. M. R. Rowan-Robinson. Freeman, New York, 1990. 180 pp. Price not stated *hc* ISBN 0-7167-2156-2

The Principles of Electromagnetic Theory. A. Kovetz. Cambridge U.P., New York, 1990. 220 pp. \$49.50 *hc* ISBN 0-521-39106-7

Relativistic Quantum Mechanics: Wave Equations. *Theoretical Physics 3.* W. Greiner. Springer-Verlag, New York, 1990. 345 pp. \$39.50 *pb* ISBN 0-387-50896-0

Science vs. Religion. T. S. Clements. Prometheus, Buffalo, New York, 1990. 264 pp. \$24.95 *hc* ISBN 0-87975-593-8

Space Places. R. Ressmeyer. Collins, San Francisco, 1990. 193 pp. Price not stated *hc* ISBN 0-00-215732-2

Thermal Analysis. B. Wunderlich. Academic, San Diego, Calif., 1990. 450 pp. \$49.50 *hc* ISBN 0-12-765605-7

Time Journeys: A Search for Cosmic Destiny and Meaning. P. Halpern. McGraw-Hill, New York, 1990. 153 pp. \$11.95 *pb* ISBN 0-07-025706-X

Your Guide to the Great Solar Eclipse of 1991. J. Rao. Sky, Cambridge, Mass., 1989. 139 pp. \$14.95 *pb* ISBN 0-933346-53-0 ■