

Experimental Techniques in Shock and Vibration, edited by Will J. Worley, *University of Illinois* (American Society of Mechanical Engineers, New York, 1962), 139 pp. \$8.00.

Contents: 10 papers contributed by different authors. 1) Transient Loading Technique for Mechanical Impedance Measurement; 2) Detection and Measurement of Stress Waves; 3) Dynamic Photoelasticity; 4) Role of Dynamic Models in Launch Vehicle Development; 5) Instrumentation for Shock and Vibration Measurements; 6) Dynamic Tests of Buildings and Special Structures; 7) Techniques for Simulation and Analysis of Shock and Vibration Environments of Space Flight Systems; 8) Review of Missile Shock and Vibration Problems; 9) Measurement of Physical Effects from Nuclear Explosions; 10) Specification Vibration Testing.

This volume contains the papers presented at a colloquium on Experimental Techniques in Shock and Vibration at the Winter Annual Meeting of the American Society of Mechanical Engineers, New York, November 27, 1962. It is intended to serve primarily as a review of current unclassified methods.

Physiology of Man in Space, edited by J. H. U. Brown, *Division of General Medical Sciences, Department of Health, Education, and Welfare, Public Health Service, National Institute of Health, Bethesda, Md.* (Academic Press, New York, 1963), 348 pp. \$13.00.

Contents: 8 chapters contributed by different authors. 1) Neuromuscular Aspects of Space Travel; 2) Acceleration; 3) Stress; 4) Human Tolerances; 5) Psychological Aspects of Space Flight; 6) Biomedical Capsules; 7) Space Flight Dynamics—Weightlessness; 8) Ecological Systems.

The primary aim of this book is to present recent data regarding the physiological activity of man in space. It summarizes the results of experimentation on both human and animal subjects in many aspects of physiology as related to aviation and space exploration.

Problems of Cybernetics, edited by A. A. Lyapunov, translation edited by Richard Goodman, translated by G. R. Kiss (Pergamon Press Ltd., Oxford, 1963), Vol. IV, pp. 1135–1428.

Contents: 14 papers contributed by different authors and divided into 7 major parts. Part 1) General Problems; Part 2) Theory of Control Systems; Part 3) Theory of Information; Part 4) Programming; Part 5) Computers; Part 6) Control Processes in Living Organisms; Part 7) Problems of Mathematical Linguists.

Most of the papers appearing in this volume were written between four and five years ago, but this, in the majority of cases, has not lessened their value. The reader should find much material of interest.

Vertical Take-Off and Landing (VTOL) Aircraft, consulting editor, I. B. Laskowitz (New York Academy of Sciences, New York, 1963), Vol. 107, Art. 1, pp. 1–469.

Contents: 27 papers contributed by different authors on such subjects as flight testing of drone helicopters, proposed VTOL flight requirements, design and development of the shaft-driven fan-in-wing VTOL aircraft, design and development of jet VTOL aircraft, gas turbine design consideration for VTOL applications, and the history of flight.

This series of papers is the result of a conference held by the New York Academy of Sciences, December 10–12, 1962. The volume is designed to stimulate scientists and engineers to new and advanced effort and accomplishment.

ABC's of Lasers and Masers, Allan Lytel (Howard W. Sams & Company Inc., Indianapolis, Ind., 1963), 95 pp. \$1.95.

Chapters: 1) Lasers and Masers; 2) Quantum Electronics; 3) Laser Modulators and Detectors; 4) Laser Power Supplies; 5) Laser Communications; 6) Laser Applications.

This book introduces the reader to the various devices used to produce microwave and light radiation. The background of microwave communication is covered in order to create a basic understanding of laser technology as an eventual replacement for present microwave communication systems.

Probabilities and Life, Emile Borel, translated from the French by Maurice Baudin (Dover Publications Inc., New York, 1962, orig. publ. 1943), 87 pp. Paperback reprint, \$1.00.

Theory of Ship Motions, S. N. Blagoveshchensky, translated from the Russian by Theodor and Leonilla Strelkoff (Dover Publications Inc., New York, 1962, orig. publ. 1954), paperback reprint in two volumes. Vol. 1, 355 pp., \$2.00. Vol. 2, 293 pp., \$2.00.

An Introduction to Mathematical Probability, Julian Lowell Coolidge (Dover Publications, Inc., New York, 1962, orig. publ. 1925), 214 pp. Paperback reprint, \$1.35.

An Elementary Introduction to the Theory of Probability, B. V. Gnedenko and A. Ya. Khinchin, translated from the Russian by Leo F. Boron (Dover Publications Inc., New York, 1962, orig. publ. 1961), 5th ed., 130 pp. Paperback reprint, \$1.45.

Methods in Exterior Ballistics, Forest Ray Moulton (Dover Publications Inc., New York, 1962, orig. publ. 1926), 258 pp. Paperback reprint, \$1.75.

The Principles of Electromagnetism Applied to Electrical Machines, B. Hague (Dover Publications Inc., New York, 1962, orig. publ. 1929), 359 pp. Paperback reprint, \$2.25.

Technical Literature Digest

M. H. Smith, Associate Editor

The James Forrestal Research Center, Princeton University

Propulsion and Power (Combustion Systems)

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EDITOR'S NOTE: Contributions from Professors E. R. G. Eckert, E. M. Sparrow, and W. E. Ibele of the Heat Transfer Laboratory, University of Minnesota, are gratefully acknowledged.

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Leitmann (Academic Press, New York, 1962), 453 pp.

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Acceleration of Plasma by Inductively Generated Electro-magnetic Fields, D. B. Miller. Michigan Univ., Dept. Elec. Eng. Rept. 02836-10-F, April 1961, 220 pp., 99 refs. (AFCRL-462). Ph.D. Thesis.

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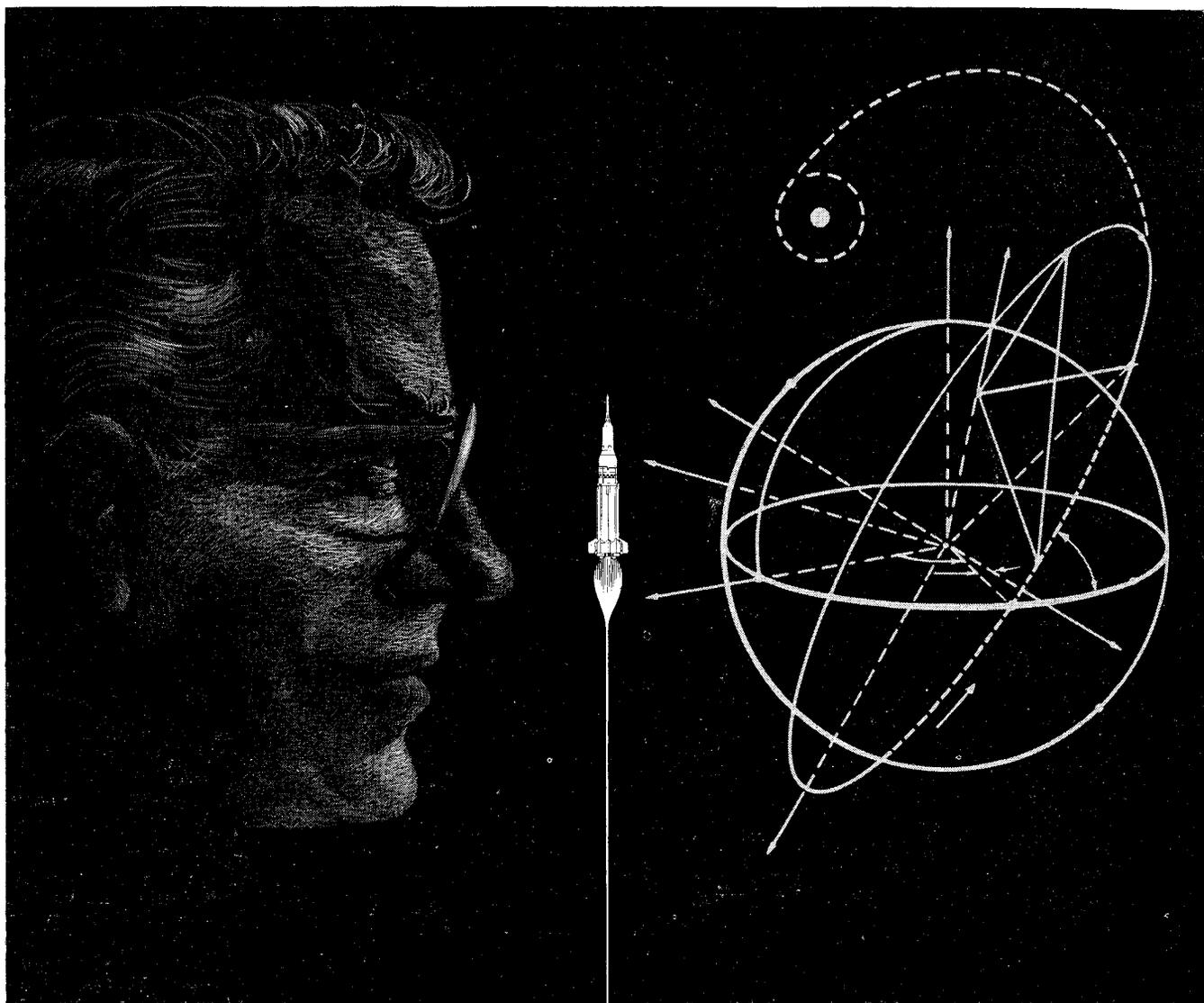
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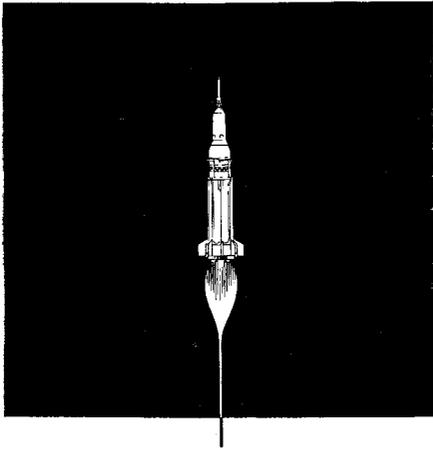
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Jet Propulsion Lab. TR 32-340, Nov. 20, 1962, 17 pp.

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