

SAMS BOOKS

on SPACE SCIENCE

ROCKET & SPACE SCIENCE SERIES

Prepared under the guidance of the Amateur Rocket Association, this series is written for serious students of astronautics.

Vol. 1. Propulsion. Edited by Bruce Ketchum. Presents a brief history of rocketry and explores Newton's Laws. Discusses chemical, electrical, and nuclear energy sources, and describes the conversion of power from potential energy to actual thrust. 224 pages. Order 20386.....\$4.25

Vol. 2. Propellants. Reviews the fundamental principles connected with rocket propulsion. Explains types of propellants, chemical reactions involved, and techniques of manufacturing. Discusses present solid and liquid fuels, and exotic propellants of the future. 176 pages. Order 20528.....\$4.25

SPACE TECHNOLOGY SERIES

Prepared under the guidance of Training and Retraining, Inc.

Inertial Guidance Systems. by Robert L. Gates. Fully describes the inertial guidance systems used in all U.S. ballistic missiles as well as in space projects. The basic theory and equipment techniques of these systems are also being applied to aircraft operation. Discusses coordinate systems and earth effects, inertial sensors, the inertial-measurement system, the guidance computer, and system operation. 176 pages. Order 20605.....\$4.95

Controlled Guidance Systems. by Hal Hellman. This programmed text covers the fundamentals of guidance systems, including ballistic trajectory, hyperbolic guidance, motion, translation, proportional navigation, celestial navigation, and stellar-inertial guidance. Explains principles, construction, and operation of various systems. 224 pages. Order 20573.....\$4.95

Synchros and Servos. by Robert J. Britz & Carlo H. Fiorenelli. A programmed text presenting the basic principles of synchro and servo motors and generators and their applications. Includes maintenance and troubleshooting methods. 192 pages. Order 20533.....\$4.95

Lasers and Masers. by Charles A. Pike. This programmed text describes in detail the basic operating principles of the laser and maser. Also covers the early history and development of atomic structure which provides the framework for the development of laser and maser devices. 176 pages. Order 20559.....\$4.95

Microminiature Electronics. by Israel Kallish. Presents the basics of this vital new field which is playing an increasingly important role in space, military, commercial, and industrial electronic equipment design. The text is programmed and supported by numerous illustrations. 304 pages. Order 20582.....\$5.75

EXPERIMENTAL ASTRONAUTICS

by Morris Goran. Introduces the fundamentals of space science as derived from astronomy, physics, biology, engineering, and other sciences. Presents 79 simple, learn-by-doing experiments which show how to build units such as a periscope, ground-effect device, sundial, telescope, and others. 168 pages. Order 20509.....\$3.95

EXPERIMENTAL EARTH SCIENCES

by Morris Goran. Explains the earth and its atmosphere through 60 fascinating experiments in the four basic fields of astronomy, meteorology, oceanography, and geology. Includes experiments in measurement as well as construction-type projects. 128 pages. Order 20601.....\$2.95

ABC's of Telemetry. 96 pages. Order 20051.....\$2.50

Understanding Telemetry Circuits. 160 pages. Order 20518.....\$3.95

Howard W. Sams & Co., Inc.

Order from any Sams Distributor or bookstore, or mail to Howard W. Sams & Co., Inc., Dept. SN-3, 4300 West 62nd St., Indianapolis, Ind. 46268

Send me the following books:

- 20386 20573 20582 20051
 20528 20533 20509 20518
 20605 20559 20601 \$_____encl.

Name _____
 Address _____
 City _____ State _____ Zip _____

films OF THE WEEK

Listing is for readers' information of new 16mm and 8mm films on science, engineering, medicine and agriculture for professional, student and general audiences. For further information on purchase, rental or free loan, write to distributor.

ABOUT TREES. 16mm, color, sound, 10 min. The distinctive trees of Australia portrayed in a wide variety of settings. Audience: general. Purchase \$85 or rental \$2.50 from Films Officer, Australian News and Information Bureau, 636 Fifth Avenue, New York, N.Y. 10020, or Western states, Press and Information Officer, Australian Consulate-General, 350 Post Street, San Francisco, Calif. 94108.

ANOTHER MAN'S FAMILY. 16mm, color, sound, 25 min. The story of a typical family—parents, two children and a dog—in a modern dwelling. To some extent, they recognize the common fire hazards in their home, but they fail to realize that their lives actually are in constant peril. Aimed at making the viewer think long and hard about his own attitudes and behavior, rather than always assuming that fire tragedy only strikes "the other fellow." Audience: high school, college, adult. Purchase \$195 from National Fire Protection Association, Publications Service Department, 60 Batterymarch St., Boston, Mass. 02110.

BECOMING MEN AND WOMEN. 16mm, color, sound, 9½ min. How heredity and environment affect growth and development. The boy-girl relationship. The adolescent's social and physical needs. The necessary habits of personal hygiene and tips on nutrition. Audience: grades 5-6, teacher training, adult groups. Purchase \$125 from Carousel Films, 1501 Broadway, New York, N.Y. 10036.

BEING BOYS AND GIRLS. 16mm, color, sound, 9½ min. How boys and girls become aware of and learn to accept their bodily differences; how they develop, and discover that they will one day become men and women and parents. Audience: grades 3-4, teacher training, adult groups. Purchase \$125 from Carousel Films, 1501 Broadway, New York, N.Y. 10036.

THE CHROMOSOMES OF MAN. 16mm, b&w, sound, 20 min. Demonstrating the advances in chromosome research, photomicrography is used to show chromosomes splitting during cell division and abnormal chromosome arrangements. Audience: high school. Purchase \$135 from Encyclopedia Britannica Educational Corporation, 425 North Michigan Ave., Chicago, Ill. 60611.

HOLDING HANDS. 16mm, color, sound, 16 min. Features a fire department officer showing youngsters how to avoid and extinguish clothing fires, the dangers of carrying or playing with matches, what to do in case of fire at home and how to make a home fire escape plan. The title is derived from a family escape plan which, in case of fire, calls for everyone to meet at a certain location outside the house and join hands so that they know when everyone is out. Audience: elementary, teachers, others who teach children fire safety. Purchase \$165 from National Fire Protection Association, Publications Service Department, 60 Batterymarch St., Boston, Mass. 02110.

POISON. 16mm, color, sound, 14 min. The danger to young children of poisonous products in the home is the subject of this home safety film. Procedures to be followed in case of accidental poisoning are clearly defined, but the emphasis of the film is on prevention. Audience: parents, adult groups. Purchase \$165 or rental \$10 from International Film Bureau, 332 S. Michigan Ave., Chicago, Ill. 60604.

LETTERS

to the editor

The rest of the story

It was a pleasure to see SCIENCE NEWS (8 March) containing the note on "Water, Silicates and Diamond." It is pleasing to have Berkeley work so well covered in your magazine.

However, I was a little disappointed that you did not tell the whole story of silicates—the suggestion by Woolf and Ney of their presence in envelopes around red giant stars, the discovery by Stein and Gillett of similar material in the Orion nebula, and the calculations by Gilman on the formation of silicates in stellar atmospheres, all contained in papers to appear together with ours on interstellar silicate in the March issue of ASTROPHYSICAL JOURNAL LETTERS. The apparent presence of silicates in such diverse places in the galaxy is of much greater interest than its discovery in the spectrum of a single star, and also the cooperative effort involved in this research among people at widely scattered institutions (University of Minnesota, Princeton University, University of California, San Diego and University of California, Berkeley) is something all too rare in modern science, and perhaps worthy of comment.

John E. Gaustad
 University of California
 Berkeley

Too much to ask

I believe Jeanne Richie's comment in Letters (SN: 3/1, p. 205) reached right to the heart of the matter when she referred to child bearing as a "burden"—not a beautiful act of procreation which only a woman can carry out.

Science may soon relieve her of that burden!

Ron Waldron
 Eldridge, California

Address communications to Editor,
 Science News, 1719 N Street, N.W.
 Washington, D. C. 20036

SCIENCE NEWS

Copyright © 1969 by Science Service, Inc., 1719 N Street, N.W., Washington, D.C. 20036. Reproduction of any portion of SCIENCE NEWS is strictly prohibited.

Subscription rate: 1 yr., \$7.50; 2 yrs., \$13.50; 3 yrs., \$19.50. Special trial offer: 39 weeks, \$3.97. Single copy, 25 cents. No charge for foreign postage. Change of address: Three weeks' notice is required. Please state exactly how magazine is addressed. Include zip code.

Printed in U.S.A. Second class postage paid at Washington, D.C. Established as Science News Letter® in mimeograph form March 13, 1922. Title registered as trademark U.S. and Canadian Patent Offices. Indexed in Reader's Guide to Periodical Literature, Abridged Guide and the Engineering Index. Member of Audit Bureau of Circulation. UNSOLICITED MANUSCRIPTS will not be returned unless accompanied by a stamped, self-addressed envelope.

Published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N.W., Washington, D.C. 20036. North 7-2255. Cable Address: SCIENSERV.

ADVERTISING

L. D. Young, Advertising Director, SCIENCE NEWS, 1719 N St., N.W., Washington, D.C. 20036, Phone 202-667-8945.

Advertising Representatives: SCRIPPS-HOWARD NEWSPAPERS. General Advertising Department: 200 Park Ave., New York, N.Y., TN 7-5000; 400 N. Michigan Ave., Chicago, Ill., SU 7-3355; Suite 211, Braniff Building, Dallas, Tex., PL 7-3847; 908 E. Northland Tower, Southfield, Mich., 444-4595; 6363 Wilshire Blvd., Los Angeles, Calif., OL 3-0026; Room 1522, Philadelphia National Bank Building, Philadelphia, Pa., LO 3-6275; 100 California St., San Francisco, Calif., 989-5570; Suite 417, 3384 Peachtree Rd., N.E., Atlanta, Ga. 261-1571.

