Forthcoming Events

April

27–30. American Meteorological Soc., general meeting with American Geophysical Union, Washington, D.C. (K. C. Spengler, AMS, 45 Beacon St., Boston 8, Mass.)

28–30. American Assoc. of Pathologists and Bacteriologists, Memphis, Tenn. (R. L. Holman, Dept. of Pathology, Louisiana State Univ., School of Medicine, New Orleans)

28–30. American Soc. of Human Genetics, Memphis, Tenn. (W. J. Schull, Dept. of Human Genetics, Univ. of Michigan, 1133 E. Catherine St., Ann Arbor)

28–30. Current Concepts in Medicine, 2nd intern. symp., Philadelphia, Pa. (M. J. Schwartz, Deborah Hospital, 901 Walnut St., Philadelphia 7)

28–30. Midwestern Psychological Assoc., Columbus, Ohio. (I. E. Farber, Dept. of Psychology, State Univ. of Iowa, Iowa City)

29. Parenteral Drug Assoc., Philadelphia, Pa. (H. E. Boyden, PDA, 4865 Stenton Ave., Philadelphia 44)

29–30. Thermonuclear Processes, conv., London, England. (Institution of Electrical Engineers, Savoy Pl., London, W.C.2)

30. Idaho Acad. of Science, annual, Pocatello. (A. E. Taylor, Graduate Div., Idaho State College, Pocatello)

30–2. Society for American Archaeology, Salt Lake City, Utah. (D. A. Baerreis, Sterling Hall, Univ. of Wisconsin, Madison 6)

May

1–2. American Soc. for Clinical Investigation, Atlantic City, N.J. (S. J. Farber, New York University College of Medicine, 550 First Ave., New York 16)

1–5. American Assoc. of Cereal Chemists, Chicago, Ill. (J. W. Pence, Western Utilization Research and Development Div., 800 Buchanan St., Albany 10, N.Y.)

1–5. Electrochemical Soc., Chicago, Ill. (H. B. Linford, ES, 1860 Broadway, New York 23)

1–5. Society of American Bacteriologists, 60th annual, Philadelphia, Pa. (D. M. Cleary, Box 354, Upper Darby, Pa.)

1–5. AAAS Southwestern and Rocky Mountain Div., Alpine, Tex. (M. G. Anderson, New Mexico College of Agriculture and Mechanical Arts, P.O. Box 97, University Park)

2. American Federation for Clinical Research, Atlantic City, N.J. (J. E. Bryan, 250 W. 57 St., New York 19)

2–3. Reactions between Complex Nuclei, 2nd conf., Gatlinburg, Tenn. (R. S. Livingston, Oak Ridge Natl. Laboratory, Oak Ridge, Tenn.)

2–4. Aeronautical Electronics, conf., Dayton, Ohio. (L. G. Cumming, IRE, 1 E. 79 St., New York 21)

2–5. Flight Test Symp., natl., San Diego, Calif. (H. S. Kindler, Instrument Soc. of America, 313 Sixth Ave., Pittsburgh 22, Pa.)

2–11. International Cancer Cytology conf., Mexico, D.F., Mexico. (Office of Intern. Conferences, Department of State, Washington 25)

2–11. Pan American Medical Assoc., cong., Mexico City, Mexico. (J. J. Eller, 745 Fifth Ave., New York 22)

3–4. Association of American Physicians, Atlantic City, N.J. (P. B. Beeson, Yale Univ. School of Medicine, New Haven 11, Conn.)

3–4. Conference of Veterinarians, annual, Philadelphia, Pa. (W. H. Rhodes, School of Veterinary Medicine, Univ. of Pennsylvania, Philadelphia 4)

3–5. Society of Pediatric Research, Swampscott, Mass. (C. D. West, Children's Hospital, Cincinnati 29, Ohio)

3–6. Fuel Element Fabrication, symp., Vienna, Austria. (Intern. Atomic Energy Agency, 11 Kärntner Ring, Vienna)

5–6. American Pediatric Soc., annual, Swampscott, Mass. (A. C. McGuinness, 2800 Quebec St., NW, Washington 8)

5–8. Wilson Ornithological Soc., Gatlinburg, Tenn. (A. M. Bagg, Farm St., Dover, Mass.)

6–7. Minnesota Acad. of Science, St. Cloud. (J. P. Emanuel, Winona State College, Winona, Minn.)

6–7. North Carolina Acad. of Science, Greensboro. (J. A. Yarbrough, Meredith College, Raleigh, N.C.)

6–7. North Dakota Acad. of Science, annual, Fargo. (B. G. Gustafson, Box 573, University Station, Grand Forks, N.D.)

6–7. Population Assoc. of America, annual, Washington, D.C. (K. B. Mayer, Dept. of Sociology and Anthropology, Brown Univ., Providence 12, R.I.)

6–7. South Dakota Acad. of Science, 45th annual, Brookings. (J. M. Winter, Dept. of Botany, Univ. of South Dakota, Vermillion)

6–8. International Cong. of Phlebology, 1st, Chambéry, France. (J. Marmasse, 3, rue de la République, Orléans (Loiret), France)

(See issue of 18 March for comprehensive list)

New Products

The information reported here is obtained from manufacturers and from other sources considered to be reliable. Neither Science *nor the writer assumes responsibility for the accuracy of the information. All inquiries concerning items listed should be addressed to the manufacturer. Include the department number in your inquiry.*

■ TELEMETERING SYSTEM for transmitting on-off information from remote stations to a central location uses existing telephone lines. Audio tones in the range from 200 to 450 cy/sec are used with adjacent tones spaced 10 cy/sec apart. Interference with normal telephone use is prevented by filters installed at each telephone. These block signal-tone frequencies, but pass voice and ringing frequencies. The equipment is transistorized. Modulators operate on 6 to 8 volts d-c power and demodulators, one for each 10 modulators, operate on 115 volts a-c. Ambient operating temperature range is 10° to 50°C. (Duplex Div., Bell & Gossett Co., Dept. Sci462, Morton Grove, Ill.)

■ RESISTANCE-RATIO INSTRUMENTS are available in three-, four-, and six-dial models. The six-dial model permits comparison of resistors with a standard up to ratios of 10 to 1 with ratio limit of error of ±0.01 percent. Resistance between external terminals is a constant 2,111,110 ohms for all settings. Potential contact may be set at any point to the nearest 0.001 ohm. Ratio range of the 4-dial model is 0.994445 to 1.005555 in steps of 0.000001, and of the 3-dial model, 0.99445 to 1.00555 in steps of 0.00001. (Minneapolis-Honeywell Regulator Co., Rubicon Instrument Div., Dept. Sci463, Ridge Ave. at 35 St., Philadelphia 32, Pa.)

■ LINEAR MOTION POTENTIOMETER is designed to operate over the temperature range −65° to +500°F. Displacement range is 1.31 in. Available resistances range from 1000 to 20,000 ohms with resolutions ranging from 0.0013 to 0.0035 in. Power rating is 4.0 watts at 40°C. (Bourns Laboratories Inc., Dept. Sci447, P.O. Box 2112, Riverside, Calif.)

■ ELECTRON MICROPROBE ANALYZER, for analysis of magnesium and higher atomic number elements, operates by exciting x-radiation from elements in a volume of a few cubic microns on the surface of a sample. Electron-optics system contained in a vertical column includes a biased gun, two magnetic lenses, and alignment devices. Effective focus diameter is of the order of 2 μ when measured in zirconium at 25 kv. Accelerating voltage is adjustable in 5-kv steps from 10 to 50 kv. The specimen stage accommodates samples up to 0.5 in. in diameter and 0.25 in. thick. Translation facilities operate in two orthogonal directions, one horizontal and one inclined 30 deg. X-ray optics are enclosed in a ray-proof chamber containing three or more adjustable curved-crystal spectrographs or one scanning x-ray spectrograph. Helium bags are optionally available. Three counting channels provide for two Geiger counters and one scintillation counter. An optical system is provided for viewing the sample surface at a fixed magnification of 220. The instrument is housed in two units, one a desk console and the other an electronics cabinet. (Philips Electronic Instruments, Dept. Sci461, 750 S. Fulton Ave., Mount Vernon, N.Y.)

■ AMPLIFIER AND SWEEP VOLTAGE GENERATOR are combined in this instrument that provides seven rates of sweep voltage for use with X-Y plotters. Rates range from 0.5 mv/sec to 50 mv/sec, with ±2 percent accuracy. A rate of 0.1 mv/sec can be obtained with some loss of linearity. In its amplifier setting the instrument becomes a chopper-stabilized d-c amplifier delivering either amplified current output or voltage output by use of proper shunts. Used with a standard 10 mv/in. recorder, sensitivities up to 10 in./mv are obtainable. (Houston Instrument Corp., Dept. Sci464, 1717 Clay Ave., Houston 3, Tex.)

■ OSCILLOSCOPE CAMERA records patterns with object-to-image-size ratio 1 to 0.9. Multiple exposures are provided by moving the lens to 11 detented positions while the camera back remains fixed. Lens adjustment can be made without removing the camera from the oscilloscope. The pattern can be observed with both eyes while exposures are being made. (Hewlett-Packard Co., Dept. Sci460, 275 Page Mill Rd., Palo Alto, Calif.)

■ FREQUENCY-TO-VOLTAGE CONVERTERS are available in six standard models covering the audio frequency range to 5000 cy/sec, with models to 14,000 cy/sec available on special order. Standard outputs are 0 to 1 and 0 to 5 volts d-c filtered, 0 to 50 μa filtered, and 0 to 1 ma unfiltered. Both zero setting and range scale are adjustable. Standard units offer linearity and accuracy said to be better than ±½ percent of full-scale frequency with temperature sensitivity less than 10^{-4}/°C from − 60° to + 80°C. Accuracies within ±0.1 percent and temperature sensitivity under 5×10^{-5}/°C are said to be available on special order. (Pioneer Magnetics Inc., Dept. Sci469, 5888 Wilshire Blvd., Los Angeles 36, Calif.)

JOSHUA STERN

National Bureau of Standards, Washington, D.C.

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Pharmacologist, Ph.D., M.D. Laboratory, clinical, administrative, teaching experience; societies, publications. Unusually well-qualified man in early 40's seeks responsible position, research or clinical investigation. Replies confidential. Box 72, SCIENCE. X

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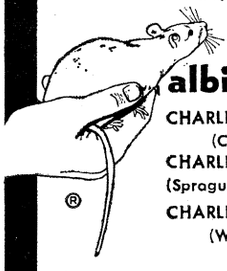

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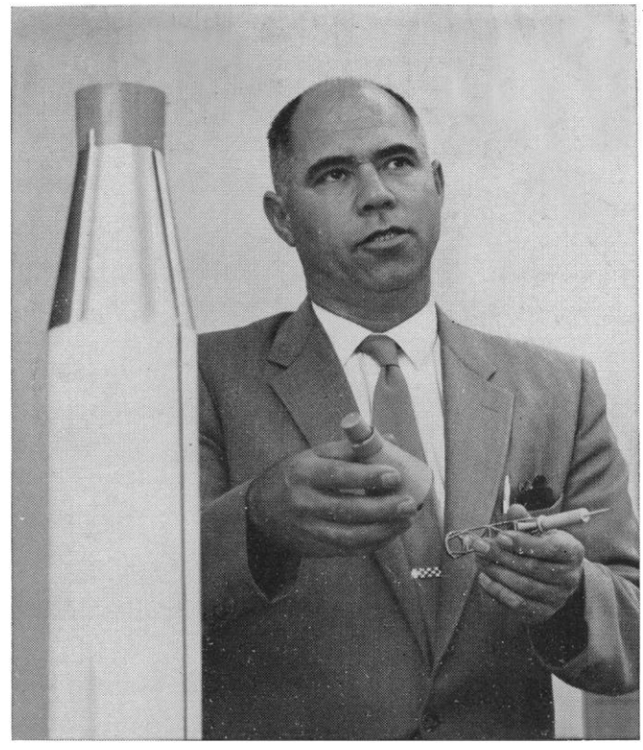

by Ed Ewing

Engineering Specialist, Assigned to Project Mercury at Radioplane Division, Northrop Corporation

In high-speed bail outs, the opening process of the standard personnel parachute is a nylon explosion. The fate of the man with his body harness attached to the risers depends mainly on the magnitude of this opening shock and his body position when he receives it. Today's increased speeds and altitudes (where parachutes open even faster) have made opening shock a serious hazard to survival.

An emergency ejection from a high-speed jet, for example, is a sudden thrust into the full blast of the airstream at speeds up to 800 miles per hour — enough to rip open most parachute containers and tear their contents to shreds. And because of the airman's disorientation during the shock of ejection, the most reliable system must place minimum dependence on human intelligence for its operation.

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Radioplane took a new approach to the design and development of a canopy that would open just slowly enough to bring the shock within tolerable limits and at the same time open positively and dependably. Radioplane experimented with five different models, seven modifications and 270 dummy drop tests to produce the now-famous "Skysail"—the ring parachute with the unique sawtooth profile.

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"Skysail" proves to be the solution to a challenging phase of the jet age.

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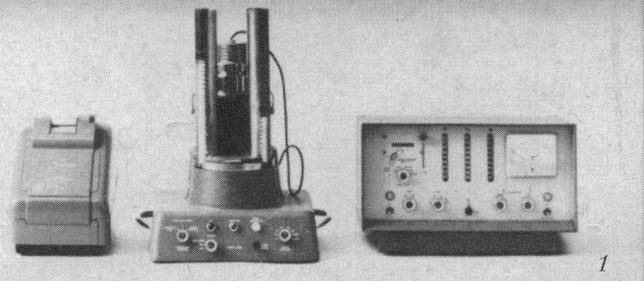

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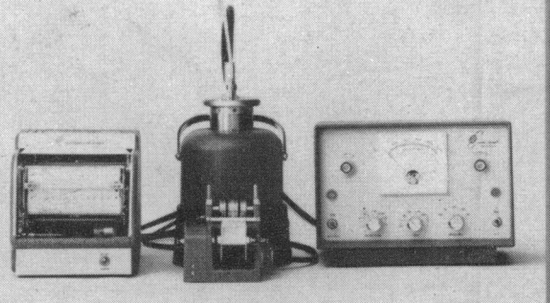

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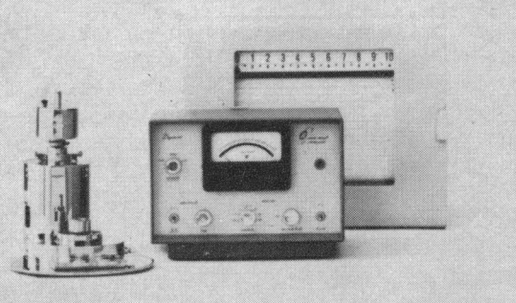

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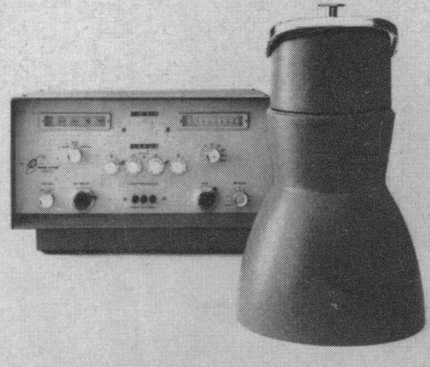

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