18–19. Institute of Management Sciences, 3rd annual, Los Angeles, Calif. (C. M. Kelly, Litton Industries, Inc., 336 N. Foothill Rd., Beverly Hills, Calif.)

18–20. Optical Soc. of America, semiannual, Lake Placid, N.Y. (A. C. Hardy, Massachusetts Inst. of Technology, Cambridge 39.)

21–23. American College of Apothecaries, Dallas, Tex. (R. E. Abrams, Hamilton Court, 39th & Chestnut St., Philadelphia 4, Pa.)

21–27. Iberian-Latin American Cong. of Dermatology, 3rd, Mexico City, Mexico. (Centro Dermatológico Pascua, Calle Dr. Garciadiego 21, Mexico 7, D.F., Mexico.)

22–24. American Standards Assoc., 38th annual, New York, N.Y. (ASA, 70 E. 45 St., New York 17.)

22–25. American Soc. for Pharmacology and Experimental Therapeutics, Louisville, Ky. (H. Hodge, Dept. of Pharmacology, Univ. of Rochester, Rochester, N.Y.)

22–26. National Safety Cong., Chicago, Ill. (R. L. Forney, National Safety Council, 425 N. Michigan Ave., Chicago, 11.)

22–27. Endocrine Soc., 8th annual postgraduate assembly, Houston, Tex. (Office of Dean, Univ. of Texas, Postgraduate School of Medicine, Texas Medical Center, Houston 25.)

22–2. Industrial Forestry Seminar, New Haven, Conn. (E. T. F. Wohlenberg, Industrial Forestry Dept., Yale Univ., New Haven.)

23. American Soc. of Safety Engineers, annual, Chicago, Ill. (J. B. Johnson, ASSE, 425 N. Michigan Ave., Chicago 11.)

25–26. National Soc. of Professional Engineers, White Sulphur Springs, W.Va. (P. H. Robbins, 2029 K St., NW, Washington 6.)

26–29. American Heart Assoc., annual, scientific sessions, Cincinnati, Ohio. (Medical Director, AHA, 44 E. 23 St., New York 10.)

27. Eastern Psychiatric Research Assoc., New York, N.Y. (T. R. Robie, 676 Park Ave., East Orange, N.J.)

29–30. American Cancer Soc., scientific session, New York, N.Y. (ACS, Professional Education Section, 521 W. 57 St., New York 19.)

29–30. East Coast Conf. on Aeronautical and Navigational Electronics, 3rd annual, Baltimore, Md. (W. D. Crawford, Westinghouse Electric Corp., Air Arm Div., Friendship International Airport, Baltimore 27.)

29–31. Energy Resources Conf., Denver, Colo. (Energy Resources Conf., c/o Denver Chamber of Commerce, 1301 Welton St., Denver 4.)

29–1. Conference on Climatology sponsored by American Meteorological Soc., Asheville, N.C. (K. C. Spengler, 3 Joy St., Boston 8, Mass.)

29–1. Society of Exploration Geophysicists, annual, New Orleans, La. (G. A. Grimm, Tide Water Associated Oil Co., Box 2131, Midland, Tex.)

29–2. Convention on Ferrites, Institution of Electrical Engineers, London, England. (Secretary, IEE, Savoy Place, London, W.C.2.)

(See issue of 17 August for comprehensive list)

Equipment News

All inquiries concerning items listed here should be addressed to Science, *Room 604, 11 W. 42 St., New York 36, N.Y. Include the name(s) of the manufacturer(s) and the department number(s).*

■ ELECTROPHORESIS APPARATUS is designed for processing paper strips or starch blocks. Sagging of strips is prevented by a tension device that holds the paper taut throughout experiments. Electrodes are made of platinum, and electrolytic decomposition products are screened from buffer chambers. Large-scale preparative electrophoresis is carried on in a migration cell by replacing the paper-strip carrier with an adjustable starch tray. Voltages may be set at from 0 to 500 v. Ranges of 0 to 20 and 0 to 200 ma offer a wide calibration spread for small differences in current setting. (Laboratory Glass and Instruments Corp., Dept. S27)

■ TECHNICAL DATA on 15 infrared-transmitting materials that are suitable for use as optical elements in infrared equipment are available in a new brochure. (Servo Corp. of America, Dept. S24)

■ IMPEDANCE COMPARATOR compares complex impedances of any phase angle and indicates the difference in magnitude between the two components being compared and the phase-angle difference simultaneously. On the most sensitive ranges the differences can be determined to 0.01 percent and 0.0001 radians, respectively. The unit includes a calibrating voltage, and the internal oscillator provides frequencies from 100 cy/sec to 100 kcy/sec in decade steps. Meter voltages are available externally to operate recorders, remote indicators, or selecting devices. The range of impedances that can be compared is nominally from 2 ohm to 20 Mohm. Four independent ranges are provided for the impedance difference and the phase-angle difference. (General Radio Co., Dept. S26)

■ TWO-CHANNEL AUDIOMETER permits operator to conduct many types of hearing tests. Both attenuators, graduated in 1-db steps, are continuously variable. The 15-amp instrument provides inputs for psychogalvanic and delayed speech tests and has an octave-frequency range of from 125 to 8000 cy/sec. It includes 500 and 1000 cy/sec oscillators and provides for both manual and automatic pulsing of tones. (Bell Hearing Aid Co., Dept. S30)

■ TECHNICAL DATA on the properties and applications of rare earths and their oxides are given in a recently published bulletin. (St. Eloi Corp., Dept. S32)

PERSONNEL PLACEMENT

CLASSIFIED: 18¢ per word, minimum charge $3.60. Use of Box Number counts as 10 additional words.

COPY for classified ads must reach SCIENCE 2 weeks before date of issue (Friday of every week).

DISPLAY: Rates listed below — no charge for Box Number. Monthly invoices will be sent on a charge account basis—provided that satisfactory credit is established.

Single insertion	**$22.00 per inch**
13 times in 1 year	**21.00 per inch**
26 times in 1 year	**20.00 per inch**
52 times in 1 year	**19.00 per inch**

For PROOFS on display ads, copy must reach SCIENCE 4 weeks before date of issue (Friday of every week).

POSITIONS OPEN

Bacteriologists; $3946.32 to $5011.20 yearly. Six current vacancies in State Health Department with outstanding reputation. No experience required. Requires degree with specialization in the physical sciences or medical technology with courses in bacteriology. Longevity bonus plan. Paid vacation, sick leave benefits, social security and state pension plan. Write to Michigan Civil Service, Lansing 13, Michigan. X

Chemists. Several current vacancies for both experienced and inexperienced chemists. Attractive salaries with regular pay increments depending upon qualifications. Requires degree with minimum of minor in chemistry; M.A. or Ph.D. desirable for higher levels. Paid vacation, sick leave benefits, social security and state pension plan. Write to Michigan Civil Service, Lansing 13, Michigan. X

Science Writer for new 516-bed research hospital and basic science research institute. Basic policy clinical and basic science research into the problem of cancer and allied diseases. Salary open. Qualifications: bachelor's degree and 2 years of writing experience. Box 221, SCIENCE. ew 11/23

POSITIONS OPEN

INFRARED SPECTROSCOPIST

Opening for a responsible individual with several years' industrial experience in infrared spectroscopy to head up an infrared group. Infrared activities are being carried out in a well-equipped, newly established laboratory as part of a cooperative effort to solve a wide variety of physical, chemical and metallurgical problems. Submit résumé and salary requirements to:

EMPLOYMENT DEPARTMENT K
GOODYEAR ATOMIC CORPORATION
P.O. BOX 628
PORTSMOUTH, OHIO

X-RAY DIFFRACTION AND FLUORESCENCE

Opening for responsible individual to take charge of new, well equipped X-ray laboratory in Midwest. Experience and interest required in metallurgical, corrosion, general diffraction problems and fluorescence applications.

Submit replies to Dept. O, Box 220, SCIENCE.

POSITIONS OPEN

MEDICAL EDITOR ASSISTANT

Male or female with bachelor's degree with science major, preferably premedical training, for position in Advertising Department as Assistant to Medical Editor. Experience in medical and scientific writing and editing necessary.

Above position immediately available with expanding drug company located in central New York State. Send résumés to Personnel Director, Eaton Laboratories Division, Norwich Pharmacal Company, Norwich, N.Y. X

(a) **Physician** experienced in pharmaceutical field or with definite interest and training in pharmacology or biochemistry; serve as director of research and medical relations, pharmaceutical company; $17,500. (b) **Director, Medical Literature Department,** pharmaceutical company; physician with supervising experience in writing and editing; East. (c) **Assistant Director,** excellently equipped laboratories for scientific criminal investigation; Ph.D., training in physiology, pharmacology, human anatomy, pathology. (d) **Research Biochemist,** Ph.D., with evidence of capacity for original research; university research department; $5200–$5600; West. S9-1, Medical Bureau, Palmolive Building, Chicago. X

Research Laboratory Technician with background in biochemistry. Write Midwest Medical Research Foundation, 3241 Victor Place, Wichita 8, Kansas. X

Scientific Writer. Young M.D. or person with equivalent training in medical science with literary interest and talent to write technical material for the medical profession. Work involves interpretation of laboratory and clinical data on new drugs explaining composition, application, use, therapeutic action of new drug discoveries for F.D.A., scientific publications, and practising physicians. Large midwestern ethical pharmaceutical research and manufacturing organization. Please send complete résumé to Box 213, SCIENCE. 9/7, 14, 21

GET YOUR ADVANCE COPY

of the General Program-Directory of the AAAS New York Meeting by first class mail – early in December

The General Program-Directory of the 123rd Meeting of the AAAS in New York City, Dec. 26–31, 1956, will be available to anyone, at cost, within the first week in December—whether he can attend the Meeting or not. You will want the General Program-Directory for your reference shelf.

Program content

1. The two-session general symposium, "Moving Frontiers of Science," arranged by the Committee on AAAS Meetings.
2. The six sessions of the Conference on Scientific and Technical Editorial Problems.
3. Details of the anniversary celebrations of the AAAS-Gordon Research Conferences, Botanical Society of America, Freud *et al.*
4. Programs of the 18 AAAS sections (symposia and contributed papers).
5. Programs of the more than 80 participating societies.
6. The Special Sessions: AAAS, Academy Conference, Conference on Scientific Manpower, National Geographic Society, Phi Beta Kappa, RESA, Sigma Xi.
7. Details of the Hotel Statler—center of the Meeting—and other hotels and session sites.
8. Titles of the latest foreign and domestic scientific films to be shown in the AAAS Science Theatre.
9. Exhibitors in the 1956 Annual Exposition of Science and Industry and descriptions of their exhibits.

Directory content

1. AAAS officers, staff, committees for 1956.
2. Complete roll of AAAS presidents and their fields.
3. The more than 265 affiliated organizations.
4. Historical sketch and organization of the Association; the 1955 revised Constitution and Bylaws.
5. Publications of the Association.
6. AAAS Awards and Grants—including all past winners.
7. Membership figures by sections.
8. Section committees (Council members) in detail.
9. Local committees.
10. Future Meetings of the AAAS through 1962.
11. New and current activities of the AAAS.

Advance Registration

Advance registration has these decided advantages: 1)You avoid delay at the Registration Center upon arrival; 2)You receive the General Program-Directory in ample time to decide, unhurriedly, which events and sessions you particularly wish to attend; 3)Your name is posted in the Visible Directory as the Meeting opens.

The following coupon may be used both by advance registrants and by those who wish only the advance copy of the General Program-Directory.

— THIS IS YOUR COUPON FOR AN ADVANCE COPY OF THE GENERAL PROGRAM-DIRECTORY —

1a. ☐ Enclosed is $3.00 for my advance Registration Fee which brings me the Program-Directory, Convention Badge, and all privileges of the Meeting.

1b. ☐ Enclosed is $2.00 for only the Program-Directory. (It is understood that, if I should attend the Meeting later, the Badge—which is necessary for all privileges of the Meeting—will be secured for $1.00 more.)
(Check one)

2. FULL NAME (Dr., Miss, etc.) .....
(Please print or typewrite) (Last) (First) (Initial)

3. ACADEMIC, PROFESSIONAL, OR BUSINESS CONNECTION .....

4. OFFICE OR HOME ADDRESS .....
(For receipt of Program-Directory)

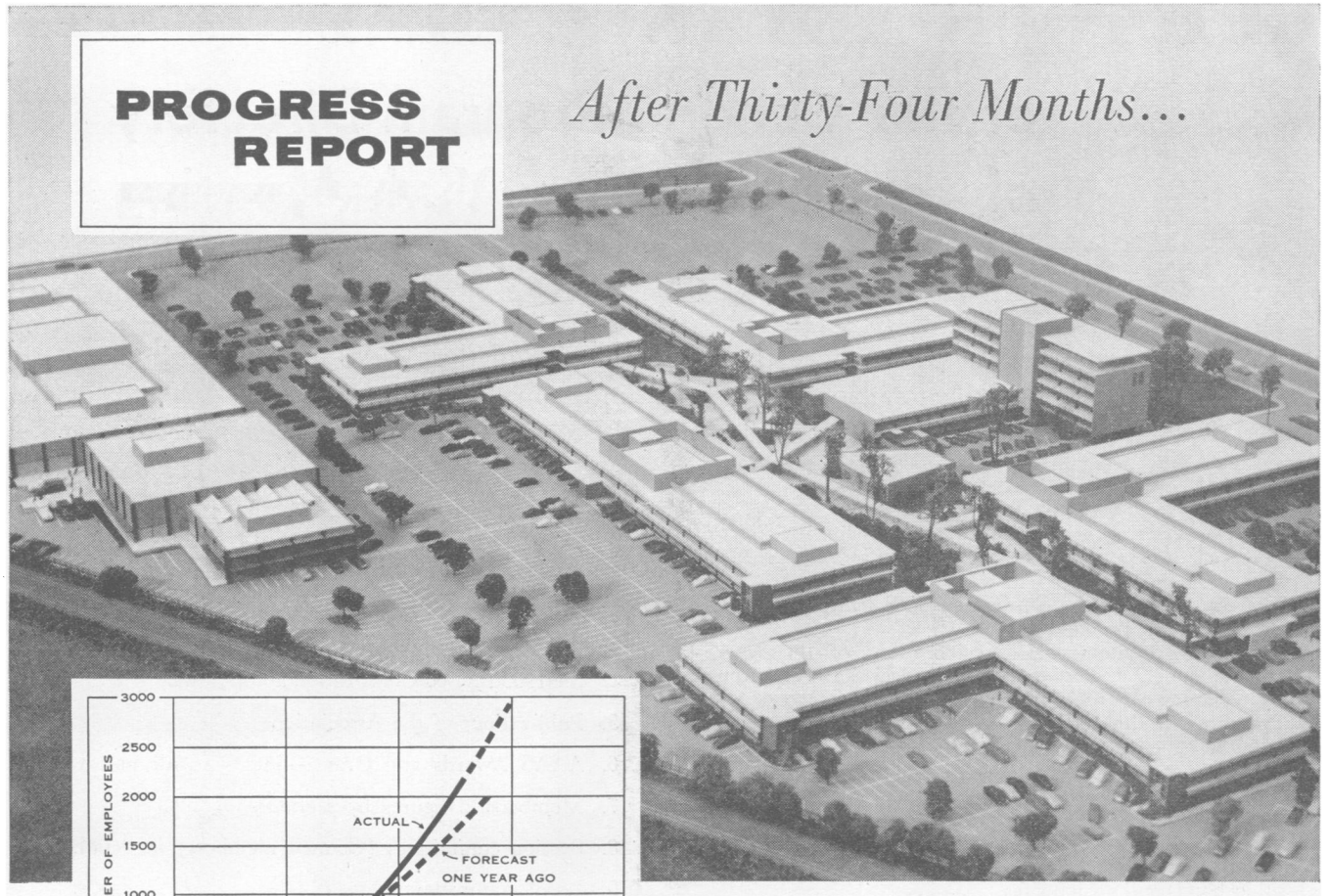
5. YOUR FIELD OF INTEREST .....

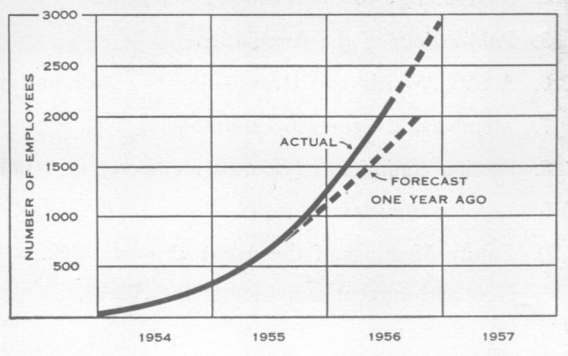
6. CONVENTION ADDRESS .....
(May be added later, after arrival)

Please mail this Coupon and your check or money order for $3.00 or $2.00 to the
AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE
1515 Massachusetts Avenue, N.W., Washington 5, D.C.

PROGRESS REPORT

After Thirty-Four Months...





RESEARCH AND DEVELOPMENT PERSONNEL The above curve shows the growth in Ramo-Wooldridge personnel which has taken place since our Progress Report one year ago. A significant aspect of this growth is the increase in our professional staff which today is made up of 135 Ph.D.'s, 200 M.S.'s and 265 B.S.'s or B.A.'s. Members of the staff average approximately ten years' experience.

FACILITIES Within the past few months, construction has been completed at our Arbor Vitae complex, which now consists of eight modern buildings of 350,000 square feet, four of which are illustrated at the bottom of the page. Nearby is the R-W flight test facility, including hangar, shop, and laboratories, located on a 7-acre plot at International Airport.

To provide additional space for our continuing growth, construction has been started on an entirely new 40-acre Research and Development Center, located three miles from the Arbor Vitae buildings. The photograph above is of a model of the Center, which we believe will be one of the finest research and development facilities in the country. The first three buildings, now under construction, will total 250,000 square feet.

A second major construction program is underway on a manufacturing plant for quantity production of electronic systems. The initial unit of the plant, located on a 640-acre site in suburban Denver, Colorado, will be completed next spring and will contain approximately 150,000 square feet.

PROJECTS Our current military contracts support a broad range of advanced work in the fields of modern communications, digital computing and data-processing, fire control systems, instrumentation and test equipment. In the guided missile field, Ramo-Wooldridge has technical direction and systems engineering responsibility for the Air Force Intercontinental and Intermediate Range Ballistic Missiles. Our commercial contracts are in the fields of operations research, automation, and data processing. All this development work is strengthened by a supporting program of basic electronic and aeronautical research.

THE FUTURE *As we look back on our first three years of corporate history, we find much to be grateful for. A wide variety of technically challenging contracts have come to us from the military services and from business and industry. We have been fortunate in the men and women who have chosen to join us in the adventure of building a company. We are especially happy about the six hundred scientists and engineers who have associated themselves with R-W. Their talents constitute the really essential ingredient of our operations. We plan to keep firmly in mind the fact that the continued success of The Ramo-Wooldridge Corporation depends on our maintaining an organizational pattern, a professional environment, and methods of operating the company that are unusually well suited to the special needs of the professional scientist and engineer.*

The Ramo-Wooldridge Corporation

5730 ARBOR VITAE ST. • LOS ANGELES 45, CALIF.