

## SENIOR SCIENTIST —OPTICS

Advanced research work in the field of spectrophotometric design is an important and continuing program at Beckman Instruments, Inc. Important investigations are being conducted which will result in the development of new analytical instruments. Expansion in the program has created a key position for a scientist who has specialized in physical optics.

Qualified candidates must have a Ph.D. in Physics or Physical Chemistry with extensive knowledge in research and engineering techniques. Competence in the field should be supported by technical publications, scientific presentations and project accomplishments. Salary will be commensurate with professional stature.

To arrange a meeting with our Research Director, write to R. McEvers. Please include a personal resumé and salary desired.

**Beckman** INSTRUMENTS, INC.

Fullerton, California

An equal opportunity employer.

## SENIOR PHYSICISTS

*Exceptional opportunities in a dynamic and expanding Research & Development company for creative work in:*

- Space Physics
- Plasma Physics
- Magnetohydrodynamics
- Instrumentation Physics
- Nuclear Weapons Physics

Advanced degree. Openings at all levels to \$20,000.

Send resume in confidence to:

Dr. S. Koslov, Dept. P

**ARA** **ARACON LABORATORIES**  
A DIVISION OF ALLIED RESEARCH ASSOCIATES, INC.  
VIRGINIA ROAD ■ CONCORD ■ MASSACHUSETTS  
An equal opportunity employer

Prof. A. M. Freudenthal, 624 Mudd Building, Columbia University, New York 27, N. Y.

### *Fast-Neutron Physics*

Recent developments in fast-neutron physics will be reviewed at an international conference to be held from February 26 to 28 at Rice University as part of that institution's semicentennial celebration in 1963. The conference is also intended to honor the memory of the late Tom W. Bonner, an internationally recognized authority in the field of neutron physics who served as chairman of the Rice Physics Department from 1947 until his death in December of last year.

The conference will immediately precede the joint meeting in Houston of the American Physical Society and the Mexican Physical Society, which will be held on the Rice campus from February 28 to March 2. The program of the conference on fast-neutron physics will include a historical and memorial session of invited papers by Sir John Cockcroft of Cambridge University, R. G. Herb of the University of Wisconsin, and E. Bretscher of Harwell, followed by a memorial ceremony in honor of Prof. Bonner. The other sessions will be devoted to papers organized under the following categories: neutron sources, spectra, and thresholds; neutron-induced reactions and inelastic scattering; elastic scattering and resonance; and polarization studies.

Further information can be obtained by writing to Dr. G. C. Phillips, Physics Department, Rice University, Houston 1, Texas.

### *Mass Spectrometry*

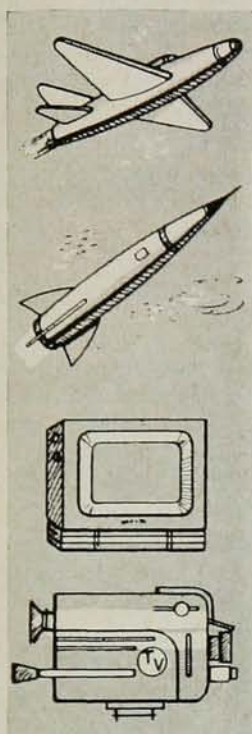
The Eleventh Annual Conference on Mass Spectrometry and Allied Topics, organized by Committee E-14 of the American Society for Testing and Materials, will take place May 14-19 at the Sheraton-Palace Hotel in San Francisco. In addition to sessions of contributed papers, the program will include four half-day symposia devoted respectively to invited papers on the following four main topics: (1) theoretical problems related to mass spectrometry, (2) certain phenomena in collision mass spectrometry, (3) applications of high-resolution mass spectrometers, and (4) mass spectral studies of high-temperature inorganic processes.

Bound volumes of preprints will be available to those attending the conference. The deadline for submitting abstracts of contributed papers is February 1. Abstracts and papers should be sent to N. D. Coggeshall, Gulf Research & Development Co., P.O. Drawer 2038, Pittsburgh 30, Pa.

### *Microwave Theory and Techniques*

A call for papers has been issued for the 1963 National Symposium of the Institute of Radio Engineers' Professional Group on Microwave Theory and Tech-





# PHYSICISTS

Expansion of our Electron Tube operation in commercial, industrial and military markets has created several outstanding opportunities for qualified candidates. Physicists with experience or interest in R&D, Product Design, Manufacturing Engineering, or Application Engineering are invited to explore immediate openings in the following areas:

**IMAGE TUBES.** Storage tubes and devices, image display devices, pick-up tubes, circuitry.

**CATHODE RAY.** Black and white picture tubes, industrial and military, radar display devices.

**POWER TUBES.** Radiation detectors, industrial R.F., mercury pool, high vacuum switch, communication.

**MICROWAVE TUBES.** Magnetrons, klystrons, TWT's, special electron devices, fundamental study programs on interaction circuits, beam study programs.

Write or send resume to: Mr. Wm. Kacala, Technical Recruiting  
P.O. Box 284, Elmira, New York  
or phone collect REgent 9-3611

An Equal  
Opportunity  
Employer



**Westinghouse**  
ELECTRONIC TUBE DIVISION      ELMIRA, NEW YORK

## VICE PRESIDENT RESEARCH

**\$25,000 + Stock Option**

Progressive microwave component manufacturer seeks technical executive to assume complete responsibility for company's R & D effort which is presently limited to power tubes, maser studies, power amplifiers, etc. Candidate selected must be excellent administrator in addition to having successful technical reputation.

If you would like to learn more about this position but don't have a prepared resume, simply write down your home phone number and address on the back of one of your business cards and mail it to:

C. A. Davies

**Davies-Shea, inc.**

332 S. Michigan, Chicago 4, Ill.  
WEBster 9-3833

*Serving the Electronics Industry Exclusively—With Integrity.*

## THE ISRAEL ATOMIC ENERGY COMMISSION OFFERS A NUMBER OF FELLOWSHIPS FOR THE ACADEMIC YEAR 1963-1964

These fellowships are intended for scientists with several years of post doctoral research experience as well as experience in leading a research group.

It is expected that the candidate will have worked for several years in one of the following fields:

**Nuclear Medicine  
Solid State Physics  
Radiation Chemistry**

The selected candidates will work at the Israel Atomic Energy Commission Laboratories near Rehovot, and will have at their disposal the facilities of the Centre, including a 5 MW Swimming Pool Reactor.

The stipend includes round trip fare by air or ship for the scientist and his family, free lodging and an adequate living allowance in local currency.

Applications and inquiries should be sent to the following address:

**PERSONNEL DEPARTMENT  
P.O.B. 527  
Rehovot, ISRAEL.**



**MEMBER, RESEARCH STAFF**  
**ASSOCIATE MEMBER, RESEARCH STAFF**  
**MAGNETICS**

Expanding programs devoted to understanding the fundamental nature of magnetic recording and relevant fields of magnetism have created openings on our Corporate Research Staff for both inexperienced and experienced Ph.D. level Physicists. Typical investigations include:

**Analytical Magnetic Recording Studies**  
**Particle Interaction Theory**  
**Structure of Magnetic Particles**  
**Properties of Magnetic Particle Collection**  
**Magnetic Relaxation Studies**

Our Research Laboratory environment requires of its staff members individual study, publication and achievement.

**Mr. C. R. Moody**  
**AMPEX CORPORATION**  
*World Leader in Magnetic Recording*  
**2400 Bay Road**  
**Redwood City, California**  
 An equal opportunity employer

## Salaries to \$35,000

### MOLECULAR SCIENCE

Solid State Devices & Systems • Memory Devices  
 • Lasers & Masers

### PLASMA PHYSICS

Energy Conversion • Plasma Dynamics • MHD •  
 Space Physics • Nuclear Systems •  
 Radiation Effects

### UNDERWATER SYSTEMS

Transducers • Oceanography • Displays

### ASTRO PHYSICS

Celestial Mechanics • Topology • Terrestrial and  
 Non Terrestrial Interface

*Expenses Paid by Employer Clients*



*Designed to Find the Creative Engineer and Scientist*

225 E. REDWOOD ST.  
 BALTIMORE 2, MD.  
 PHONE: 539-6604

niques, which is scheduled to take place May 20-22 at the Miramar Hotel in Santa Monica, Calif.

For those wishing to present contributed papers, a 100-word abstract and a 1000-word summary, both in duplicate, should be submitted by January 5 to Dr. Irving Kaufman, Space Technology Laboratories, Inc., 1 Space Park, Redondo Beach, Calif. General information about the symposium can be obtained from Alvin Clavin, Rantec Corporation, 23999 Ventura Boulevard, Calabasas, Calif.

### Vacuum Science

On behalf of the Joint British Committee for Vacuum Science and Technology, the amalgamated Institute of Physics and Physical Society is arranging a one-day symposium on education in vacuum science and technology. The meeting is to be held at Brunel College, Acton, London, on May 29.

Sessions will be devoted to the following topics: (1) content of lecture courses in physics undergraduate curricula, (2) the necessity for postgraduate courses in vacuum technology with special reference to engineering, (3) educational work in vacuum science and technology abroad, and (4) laboratory experiments in vacuum technology suitable for courses in colleges of technology.

Additional information and advance-registration forms will be available in February and can be obtained from the Administration Assistant, The Institute of Physics and the Physical Society, 47 Belgrave Square, London, S.W.1, England.

### Materials

An International Conference on Materials will be held February 3-7, 1964, in Philadelphia, under the sponsorship of the American Society for Testing and Materials. Scheduled in conjunction with the Society's annual Committee Week, the meeting will emphasize the need for world-wide cooperation in the advancement of materials technology. The cooperation of ASTM in the standardizing activities of other nations will also be stressed. Several of the conference sessions, covering the use of nuclear physics in the testing of materials, will be co-sponsored by the International Union of Testing and Research Laboratories for Materials and Structures.

The program is expected to include papers on plasmas, thermonuclear power generation, magneto-hydrodynamics, masers and lasers, electromagnetic properties at cryogenic temperatures, very-high-frequency ultrasonics, microelectronics, and related areas. The emphasis in each case will be on materials problems. Invited papers will present new contributions, rather than review subject fields.

Further information can be obtained from the American Society for Testing and Materials, 1916 Race St., Philadelphia 3, Pa.