WE HEAR THAT

Seven physicists and astronomers from abroad have joined the Smithsonian Astrophysical Observatory in Cambridge, Mass., this summer, as visiting scientists. Leendert Aardom of the Technological University in Delft, Holland, is spending a year at the Smithsonian working in the Research and Analysis Division. Prahbu Bhatnagar, head of the Applied Mathematics Department at the Indian Institute of Science in Bangalore, India, is working in astrophysics at the Smithsonian. Guiseppe Colombo of the Instituto di Meccanica in Padova, Italy, will remain at the Smithsonian until October studying celestial mechanics and astronautics. Yoshihide Kozai, an astronomer at the Tokyo Astronomical Observatory, will be at the Smithsonian until next month studying the motion of artificial satellites. Max Roemer of the Sternwarte der Universität Bonn in West Germany is joining the staff this summer as an astrophysicist. Shambhu Sinvhal, director of the Uttar Pradesh State Observatory in Naini Tal, India, and supervisor of the Smithsonian's satellite tracking program in India, is spending part of the summer in Cambridge. George Veis of the National Technical University in Athens, Greece, has returned to the Smithsonian this summer to continue his work in applying data gained from satellites to geodetic studies.

Arthur J. Freeman has been appointed associate director of the National Magnet Laboratory at the Massachusetts Institute of Technology. Dr. Freeman, who joined the Laboratory last winter, continues to serve in his previous capacity as leader of the Laboratory's Instrumentation and Operations Group.

Arthur R. von Hippel, professor of electrophysics and, since 1962, Institute professor at MIT, retired, in June, from his academic duties. Dr. von Hippel has been a member of the faculty since 1936; during World War II, he served as a staff member of MIT's Radiation Laboratory. In 1940,

he founded the Laboratory for Insulation Research at MIT and will continue to direct one of its eight sections, "Special Problems in Molecular Science". The other seven sections became associated with MIT's Materials Science Center when Dr. von Hippel retired, and his work with the last section will complete the dielectric research projects of the Laboratory. John T. Norton, professor of metallurgy, who has been associated with MIT since 1920, also retired from the faculty in June. Dr. Norton served as chairman of the faculty from 1956 to 1958. In 1963, he was appointed to conduct a review of opportunities for MIT students to study overseas, a project on which he will continue to be active on a part-time basis.

Bryce L. Crawford, Jr., dean of the graduate school of the University of Minnesota, was elected president of Associated Midwest Universities during the annual meeting of the AMU Council on June 9 at Argonne National Laboratory. Dr. Crawford succeeds J. Russell Bright of Wayne State University. John A. D. Cooper, dean of sciences and associate dean of faculties at Northwestern University. became vice-president, A. T. Schmehling, also of Northwestern, was reelected treasurer, and John H. Roberson, who has been serving as executive director of AMU, was elected secretary, a post he has previously held. E. L. Goldwasser of the Department of Physics at the University of Illinois was elected to the Board of Directors. The AMU Council elected Philip N. Powers, head of the Department of Nuclear Engineering at Purdue University, to be its chairman and Marvin T. Edmison, director of the Research Foundation at Oklahoma State University as vice-chairman.

Ira S. Bowen, director of the Mt. Wilson and Palomar Observatories of the California Institute of Technology and the Carnegie Institution of Washington, retired on July 1. Dr. Bowen joined the Caltech faculty in 1921 as an instructor in physics and was named

professor in 1931. He became director of the Mt. Wilson Observatory in 1946 and of the Palomar Observatory when it opened in 1948. He will continue to work at the observatories under the title, conferred by the Carnegie Institution, of distinguished service staff member.

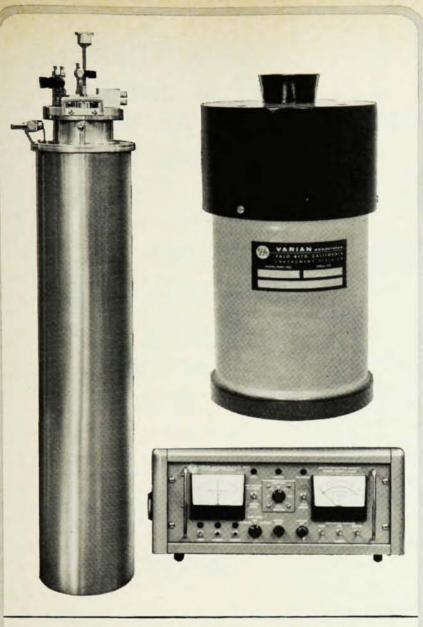
William R. Smythe, professor of physics, and Don M. Yost, professor of inorganic chemistry, also retired last month from the Caltech faculty. Dr. Smythe joined the staff of Caltech in 1923 as a National Research Council fellow and became a professor in 1940. During World War II, he was in charge of the special ballistics section of Caltech's rocket project. Dr. Yost. who is known for his contributions to physics as well as to physical chemistry, first joined Caltech in 1924 as a Du Pont fellow while studying for his PhD. He became an assistant professor in 1929 and was promoted to professor in 1942.

Hugo Benioff, who will retire from Caltech in October as professor emeritus of seismology, first served at Caltech as an assistant in the Mt. Wilson Observatory, but later turned his interests to seismology. In 1924, he became an assistant in Caltech's seismological laboratory, then operated by the Carnegie Institution, and he has been professor of seismology at Caltech since 1950.

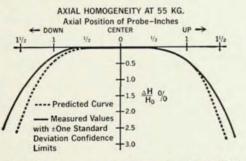
W. Deming Lewis, executive director of the research department of Bell Telephone Laboratories, has been named to succeed Harvey A. Neville as president of Lehigh University. Dr. Neville, who will retire in October, has been a member of the Lehigh staff for 37 years and has served as its president since 1960.

Thomas O. Baldwin of the University of Missouri and George R. Dyer of Duke University were recently appointed to the staff of Oak Ridge National Laboratory.

David Miller has been named chief scientist of the Advanced Products Group of American Machine & Foundry Co.; he will also be director and general manager of AMF's division in Alexandria, Va., which now serves as the Group's scientific laboratory.







TYPICAL 4th ORDER SOLENOID

Rated field 55,000 gauss
Field uniformity . . . 1% —1 in. dia. sphere
Bore diameter . . . 1.03 inches
Outside diameter . . 5.25 inches

Overall length . . . 9.5 inches

COMPLETE VARIAN SUPERCONDUCTING SYSTEMS WITH GUARANTEED PERFORMANCE

Varian superconducting solenoid systems are designed to give you guaranteed reliability and performance tailored to your specific application. They are the result of Varian's extensive program of research plus many years of experience in the field of precision laboratory electromagnets.

A complete Varian superconducting solenoid system includes the following components:

- Simple or compensated solenoid with field intensities from a few kilogauss to more than 60 kilogauss.
- Solid state power supply which provides regulated, programmed, linear field sweep.
- Stainless steel, liquid nitrogen shielded, liquid helium dewar with either single or double-ended access.
- Dewar cap and solenoid support assembly.
- Liquid level sensing devices.
- Liquid helium transfer tube.
- Persistence switch.

Varian offers the following selection of superconducting solenoids:

Simple solenoids (10, 20, 30, 40, 50, or 60 kilogauss)

Compensated solenoids (4th order and 6th order designs)

Helmholtz coils and other custom designed units.

For additional information write Matt McKay.



ANALYTICAL INSTRUMENT DIVISION 611 HANSEN WAY, PALO ALTO 5, CALIF.

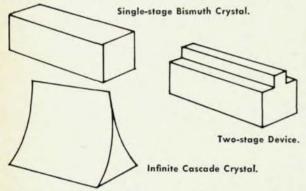
NOW!

MAGNETOTHERMOELECTRICITY SINGLE CRYSTALS

Operational, Ready-To-Use Fabricated, Infinite Cascade

Units of

BISMUTH-ANTIMONY



Exploratory Cascade

Units of

- BISMUTH TELLURIUM
 - BISMUTH LEAD
 - BISMUTH ARSENIC
 - BISMUTH SULPHUR
 - BISMUTH SELENIUM
 - TELLURIUM LEAD

VARIOUS SIZES AVAILABLE

Sperational Units From \$985 to \$4,000 Exploratory Units From

\$750 to \$6,000

Magnetothermoelectricity utilizes Single Crystals of metals making possible temperature drops well over 100°C in a simple cascade unit, and greater temperature drops are possible with specially designed units.

WRITE OR CALL FOR LITERATURE



emi-elements, inc.

Saxonburg Boulevard, Saxonburg, Pa. Phone: 412-352-1548

SENIOR PHYSICIST

EDGERTON, GERMESHAUSEN & GRIER, INC.

Santa Barbara, California

EG&G, a dynamic leader in nuclear science and instrumentation, is offering an attractive professional opportunity for an individual with the following qualifications and interests:

PhD or MS with minimum of 4 years experience to lead a small research group which is carrying out basic and applied research in the following areas:

-SOLID-STATE LIGHT SOURCES
-RADIATION EFFECTS IN SOLIDS
-FLUORESCENCE OF MATERIALS
-NUCLEAR COUNTING

The Santa Barbara Laboratories have excellent facilities, provide a receptive atmosphere for research and development, and are located near the campus of the University of California, Santa Barbara.

TO ARRANGE FOR INTERVIEW SEND RESUME TO

MR. D. HILL

E. G. & G.

P.O. Box 98, Dept. PT, Goleta, Calif.

U.S. Citizenship Required An equal opportunity employer

PHYSICIST

For theoretical and exploratory research at senior levels in expanding research group. Preferably Ph.D. with five years experience. Background and interest in infrared, microwave, visible and ultraviolet spectra and their application to photogrammetry and remote measurement. Location new modern research center in suburban Oklahoma City. Contact: Employment Office, Kerr-McGee Oil Industries, Inc., Kerr-McGee Building, Oklahoma City, Oklahoma.

An equal opportunity employer

Dr. Miller was formerly director of the company's R&D laboratories at the Morehead Patterson Research Center in Springdale, Conn.

Jacob Enoch of the Department of Physics and Astronomy at the University of Kansas was recently promoted to the rank of associate professor. His new title was incorrectly reported in the July issue of *Physics Today*.

K. Mukherjee, formerly of the University of Illinois, has been appointed assistant professor in the Department of Materials Sciences at the State University of New York in Stony Brook.

Bruno M. Kalab, who recently received his doctoral degree from the University of Vienna, has joined the Nuclear Radiation Physics Branch of the US Naval Radiological Defense Laboratory in San Francisco.

Louis A. Burnelle and James Mead have joined the staff of Martin Company's Research Institute for Advanced Studies in Baltimore. Dr. Burnelle, who came to RIAS from the faculty of the University of Liége in Belgium, is performing theoretical calculations of electron energies for selected molecules. Dr. Mead is a cosmic-ray specialist from the Lawrence Radiation Laboratory in Livermore, California.

Paul K. Weimer of the RCA Laboratories in Princeton, N. J., has been named a fellow of the technical staff of RCA in recognition of "his continued outstanding technical achievements", particularly in television tube development and thin-film technology.

Allan M. Cormack of Tufts University's Department of Physics has been promoted to the rank of professor. Brenton F. Stearns, associate professor of physics at Tufts, will spend the next academic year on sabbatical leave at the Lawrence Radiation Laboratory in Berkeley.

Ernst Schloemann of the Raytheon Company's Research Division has been promoted to the rank of scientific fellow. Dr. Schloemann is the first scientist in the Division to be awarded the fellowship, which was established by Raytheon in 1962 to recognize outstanding research or engineering achievement.



The Research Laboratories is a unique entity with advanced scientific programs to determine the fundamental nature of liquids, solids, and gases as well as applied research programs oriented to utilize the latest technology in specific product areas. Since most efforts are on an individual rather than team basis, emphasis is on professional maturity and accomplishment.



Plasma Physics * Physical Electronics * Low Temperature Physics * Magnetohydrodynamics * Instrument Research and Development * Materials Sciences * Thin Films * Surface Studies * Infra Red *
Aerophysics * Electrical and Nuclear Propulsion *
Propellant Chemistry * Rocket and Air Breathing
Propulsion * Advanced Systems Analysis * Mathematical Analysis * Experimental and Analytical
Aerodynamics * Design * Machine Computation

For a descriptive brochure, write to Mr. E. A. Ciriack.

Research Laboratories

UNITED AIRCRAFT CORPORATION, East Hartford B. Connecticut

an equal opportunity employer