
We hear that...

The following physicists have joined the staff of the Boulder (Colo.) Laboratories of the National Bureau of Standards: **Milo V. Anderson**, **William R. Atkinson**, **D. K. Bailey**, and **Burton A. Kingsbury**.

Robert F. Bacher, chairman of the Division of Physics, Mathematics, and Astronomy at the California Institute of Technology, has been elected to membership on the Board of Directors of Bell & Howell, following that firm's merger with Consolidated Electrodynamics Corporation of which he was previously a director.

Norman A. Bailly, formerly chief scientist for the Department of Radiation Therapy at the Roswell Park Memorial Institute in Buffalo, N. Y., has joined Hughes Aircraft Company's Nuclear Electronics Laboratory as a senior staff physicist.

Robert L. Becker, formerly at the University of Kentucky, has joined the staff of Boston College as an associate professor of physics.

The following physicists have joined the General Atomic Division of General Dynamics Corporation at the John Jay Hopkins Laboratory for Pure and Applied Science in San Diego: **James R. Brown**, formerly of the Westinghouse Bettis Atomic Power Laboratory; **Victor Luco**, formerly of the Curtiss-Wright Research Division; **Hugh L. Garvin** from the University of California; **Ronald A. Missman, Jr.**, from the University of Illinois; **Arthur A. Schupp** of the University of Michigan; **Kedar D. Pyatt** from Yale University; **Albert W. Blackstock** of the Los Alamos Scientific Laboratory; and **Samuel H. Levine** from the Westinghouse Bettis installation.

Walter T. Buhl has been appointed deputy group executive of American Machine & Foundry Company's Electrical Products Group in Vandalia, Ohio. He was formerly vice president and general manager of AMF's Leland Electric Company division.

A. D. Callihan and **F. C. Maienschein** have been appointed associate directors of the Neutron Physics Division at the Oak Ridge National Laboratory.

Anthony Carnvale, formerly at the Naval Ordnance Laboratory, Silver Spring, Md., has joined the Chesapeake Instrument Corporation of Shadyside, Md., where he will head the New Product Development Division.

Frank A. Comerci, who for the past 12 years has been in charge of the Communication and Acoustics Section at the New York Naval Shipyard, has joined Audio Devices, Inc., as senior project engineer at the firm's Stamford, Conn., Laboratory.

Lloyd T. DeVore has been named director of engineering of the Laboratories Division at Hoffman Electronics Corporation in Los Angeles. The appointment was made to coordinate more effectively the Division's research and engineering activity with advanced research at the Hoffman

Science Center in Santa Barbara, which Dr. DeVore also heads.

B. Gale Dick has been appointed assistant professor of physics at the University of Utah in Salt Lake City.

J. Robert Downing, formerly director of the Research and Development Division of Cook Electric Company in Chicago, has been named as president of Space Recovery Systems, Inc., a combined operation of CBS Laboratories and M. Steinthal and Co., Inc., located in El Segundo, Calif.

Ralph Dressel, head of New Mexico State University's Physics Department, is spending the spring semester as a postdoctoral research fellow at the California Institute of Technology, where he is doing research in electron physics.

Nisson A. Finkelstein, formerly assistant director of the Scientific Bureau of the Bausch & Lomb Optical Company, has been appointed assistant vice president and director of research of the Stromberg-Carlson Division of General Dynamics Corporation, located in Rochester, N. Y. **Ernest G. Brock** has been named as a principal scientist in Stromberg-Carlson's Basic Science Laboratory.

Martyn H. Foss has been appointed associate director of the Particle Accelerator Division at the Argonne National Laboratory, Lemont, Ill.

Newton B. Green, vice president and general manager of Eastman Kodak's Apparatus and Optical Division, retired on January 1, after 41 years with the company. **Edwin C. Fritts**, supervisory physicist in the Division's Apparatus Research and Development Department, who first became associated with Kodak in 1923, also retired the same day.

Howard D. Greyber, formerly with the General Electric Missile and Space Vehicle Department in Philadelphia, has joined the staff of the Geophysics Corporation of America in Boston.

Wayland C. Griffith has been promoted to the position of assistant director of research at the Lockheed Missiles and Space Division in Sunnyvale, Calif.

Robert C. Hansen, formerly of Hughes Aircraft Company, has been appointed senior staff engineer in the Telecommunications Laboratory of Space Technology Laboratories in Los Angeles.

Cyril M. Harris, head of the acoustical research program in Columbia University's Electronics Research Laboratories, is spending his sabbatical leave in Japan as visiting professor (until August 1) at the University of Tokyo.

Norman P. Heydenburg and **Georges M. Temmer** have joined the Physics Department at the Florida State University in Tallahassee through a joint appointment with the Carnegie Institution of Washington. Dr. Temmer will be in charge of Florida State's Tandem Van de Graaff program. Other recent additions to the department include **Renato Ricamo**, on leave from the University of Catania, Sicily, and **Harry Adams** from the University of Minnesota.

John P. Hurley, formerly of Washington University in St. Louis, has joined the staff of the US Naval Radiological Defense Laboratory in San Francisco. He heads the fundamental shielding program of the Nuclear Radiation Shielding Branch.

William P. Hurley, assistant professor of physics at Fordham University in New York City, has received a Fordham College Alumni Association Award presented

Expanding the Frontiers of Space Technology in PHYSICS

Lockheed Missiles and Space Division is engaged in a broad, long-range program of basic scientific research at its laboratories adjacent to Stanford University in Palo Alto, California. Equipment is modern and includes extensive facilities for plasma and spectroscopic research; a variety of shock tubes; a 3.5 mev Van De Graaf accelerator; complete laboratory test facilities; and one of the largest and most modern computing centers in the world.

A group of more than fifty physicists is engaged in research and the fundamental investigation of problems in the following areas:

Nuclear Physics: The measurement and theory of nuclear cross sections; beta, gamma and X-ray spectroscopy; theory of nuclear structure; radiation physics.

Theoretical Physics: The phenomenology and effects of atomic explosions and radiative properties in air under conditions of very high temperatures.

Space Physics: Basic research on the physics of the earth's upper atmosphere and beyond, including: measurement of atmospheric composition and density at orbital altitudes; laboratory experiments on upper atmospheric atomic and molecular reactions; hydro magnetic interactions with the earth's magnetic fields; simulation and study of meteor impacts; and particle radiation.

Plasma Physics: Energy transfer between a plasma and external electromagnetic fields; the transport of microwave and optical radiation through plasmas.

Atomic Physics: Mass spectroscopy; theory and measurements of low energy interactions.

Such programs reach far into the future and deal with unknown and challenging environments. If you are experienced in one of the above areas, or in related work such as astrophysics or chemical physics, you are invited to share in the efforts of a company that has an outstanding record of achievement, and make an important individual contribution to your country's scientific progress.

Write: Research and Development Staff, Dept. C-42,
962 W. El Camino Real, Sunnyvale, California.

U.S. citizenship or existing Department of Defense clearance required.

Lockheed

MISSILES AND SPACE DIVISION

*Systems Manager for the Navy POLARIS FBM;
the Air Force AGENA Satellite in the DISCOVERER Program and the
MIDAS and SAMOS Satellites; Air Force X-7; and Army KINGFISHER*

SUNNYVALE, PALO ALTO, VAN NUYS, SANTA CRUZ, SANTA MARIA, CALIFORNIA
CAPE CANAVERAL, FLORIDA • ALAMOGORDO, NEW MEXICO • HAWAII



FIBER OPTICS

FACE PLATES

GLASS MOSAIC
METAL MOSAIC

FIELD FLATTENERS

FLEXIBLE PERISCOPES

BOROSCOPES

IMAGE DISSECTORS

Single and double clad, Hi strength, Hi transmission, Hi temperature glass fiber; glass micro-tubing; metal core glass fiber; optical millefiori; custom drawn and fused assemblies.

MOSAIC FABRICATIONS, INC.

FOSTER STREET SOUTHBRIDGE, MASS.

UNUSUAL BUYS

• OPTICS
• SCIENCE
• MATH



D-STIX CONSTRUCTION KITS

Unique new tool for teachers of science, math. Colored wood sticks $\frac{1}{8}$ " thick and "easy-on" rubber joints $\frac{1}{16}$ " diam. fit together fast—help visualize and demonstrate scientific concepts. Work out geometric figures, molecular structures, physical principles of stress, mass, inertia, etc. "3-dimensional thinking" adds interest—speeds understanding. Durable Kits. Money-back guarantee.

Stock No. 70,209-K (23 pcs) \$3.00 Postpaid
Stock No. 70,210-K (370 pcs) \$5.00 Postpaid
Stock No. 70,211-K (452 pcs) \$7.00 Postpaid

OFFSPRING OF SCIENCE . . . REALLY BEAUTIFUL CIRCULAR DIFFRACTION GRATING CUFF LINKS and EARRINGS



A Dazzling Rainbow of Color!

As a scientific phenomenon, this new kind of jewelry is capturing attention everywhere. Shimmering rainbows of gem-like color in earrings and cuff links of exquisite beauty—made with CIRCULAR DIFFRACTION GRATING REPLICA. Just as a prism breaks up light into its full range of individual colors, so does the Diffraction Grating.

Stock No. 30,349-K—Earrings (clip style) . Tax Incl. \$2.75 Pstpd.
Stock No. 30,350-K—Cuff Links Tax Incl. \$2.75 Pstpd.

LOW-COST SCIENCE AND MATH LEARNING AND TEACHING AIDS

EDMUND SCIENTIFIC CO. is cooperating in the Science Teaching Program in High Schools and Colleges throughout America, by developing science and math teaching aids at low prices.

Write for FREE CATALOG "K" for items and prices:

FREE! Giant CATALOG of OPTICAL BUYS!

OVER 1,000 OPTICAL ITEMS. . . Many on-the-job helps . . . quality control aids. 128 pages—hundreds of illustrations. Many war surplus bargains! Imported instruments! Lenses, Prisms, Magnifiers, Telescopes, Satellite Scopes, Microscopes, Binoculars, etc. Optics for industry, research labs, experimenters, hobbyists. No obligation. Write for FREE Catalog K



Send Check or Money Order, Or Order on Open Account
EDMUND SCIENTIFIC CO., Barrington, N. J.

to Fordham alumni "for winning distinction for themselves and for their college through professional accomplishments".

William R. Hutchins, formerly chief of the Ballistic Missiles Defense Branch of the Department of Defense Advance Research Project Agency, has been named to the newly created post of scientific liaison officer for the Raytheon Company and will make his headquarters at the firm's Washington, D. C., office.

Alan C. Kolb, of the US Naval Research Laboratory and secretary of the APS Division of Plasma Physics, has received the Washington Academy of Sciences 1959 Award for Scientific Achievement in the Physical Sciences for "distinguished service in conducting original research in high-temperature physics".

Donald E. McCarthy, formerly with the Aerojet Corporation, and **James C. Sternberg** from Michigan State University have joined the Scientific and Process Instruments Division of Beckman Instruments, Inc., in Fullerton, Calif.

Frank A. Metz has joined the Intellectronics Laboratories of Ramo-Wooldridge in Canoga Park, Calif. **John O'Grady** has joined the Ramo-Wooldridge Reconnaissance Systems Department.

R. G. Moore, Jr., formerly with the Convair Division of General Dynamics Corporation, has joined the technical staff of Texas Instruments, Inc., Dallas, Tex.

Harold S. Morton and **Eugene L. Nooker** of The Johns Hopkins University Applied Physics Laboratory have been awarded Distinguished Public Service Awards by the Navy for their work on the design development of missile warheads.

Nathan Ockman has joined the Electronic Research Laboratory at RCA's David Sarnoff Research Center in Princeton, N. J.

S. Fred Singer, professor of physics at the University of Maryland, has been named by the US Junior Chamber of Commerce as one of the Ten Outstanding Young Men of 1959. The awards have been made annually since 1938 to ten men between the ages of 21 and 36 whose "exceptional achievements exemplify the opportunities available in the free enterprise system".

Ramond C. Waddell, formerly at the Naval Research Laboratory, has been named as a consultant in the Payload Systems Division at the National Aeronautics and Space Administration's Goddard Space Flight Center, Washington, D. C.

Robert T. Watson, formerly with the Radio Corporation of America, has been appointed associate director of the Components and Instrumentation Laboratory at the ITT Laboratories, Nutley, N. J.

John A. Wheeler, professor of physics at Princeton University, has accepted an appointment to the Board of Trustees of Battelle Memorial Institute in Columbus, Ohio.

Harry J. White, formerly director of research and development at Research-Cottrell, Inc., has accepted an appointment as professor of applied science at Portland State College in Oregon.

Marsh W. White became professor emeritus of physics at the Pennsylvania State University on January 31 after 42 years on the Penn State faculty. He will continue to serve as executive secretary of Sigma Pi Sigma, the national physics honor society.