

George H. Herbig, with the University of California, Santa Cruz, has been named acting director of Lick Observatory. He replaces **Robert P. Kraft** who was appointed a visiting fellow at the Joint Institute for Laboratory Astrophysics at the University of Colorado.

The US Naval Oceanographic Office has named **Morris Schulkin** as associate director for acoustics.

On 30 June **M. Stanley Livingston**, **Bruno Rossi** and **Jerrold R. Zacharias** retired from the Massachusetts Institute of Technology.

Livingston, who is known for his work on accelerators, received his PhD from the University of California, Berkeley in 1931. He worked with Ernest O. Lawrence on the first cyclotron and with Hans Bethe on the first survey of experimental nuclear physics. In 1938 he joined MIT and built its first cyclotron. During his leave of absence in 1946-48, he served as chairman of the Accelerator Project at Brookhaven National Laboratory. Livingston was also the first director of the Cambridge Electron Accelerator, and since 1967 he has been associate director of the National Accelerator Laboratory, Batavia, Ill. He recently received the Atomic Energy Commission Citation for his work in atomic energy.

Rossi was born in Venice and received his PhD from the University of Bologna. Before leaving Italy in 1938, he taught at the University of Florence and at Padua. He then joined the University of Manchester, the University of Chicago and Cornell University. Rossi, who was among the first to study cosmic physics, joined MIT in 1946 and became an Institute Professor in 1966. Among his achievements are the initiation of

the program that led to the first observation of the solar wind and participation in the discovery of the first stellar source of x-rays.

Known for his contributions in science, military technology and education, Zacharias joined MIT in 1940 as head of the division on radar transmitter components at the Radiation Laboratory. In 1945 he directed the engineering division at Los Alamos and returned to MIT in 1946 as a professor and director of the Laboratory for Nuclear Science. He developed the first useful atomic frequency standard and has continued research on frequency spectra of atoms. In addition, he was associate director of Project Lincoln, which led to the establishment of Lincoln Laboratory, and he helped form the Physical Science Study Committee that eventually became the Educational Development Center, of which he is now vice-president and a trustee. Zacharias will continue as director of the Education Research Center at MIT; he was appointed in 1968.

Lehigh University promoted **Wilber D. Spatz** to professor and **Frank J. Feigl** to associate professor.

Frederic de Hoffmann has been elected to the newly created position of chancellor of the Salk Institute. He is the founder and currently the vice-chairman of Gulf General Atomic.

Memorial University of Newfoundland has promoted **Michael G. Rochester** to professor.

Among the 50 new members elected to the National Academy of Sciences are **Berni J. Alder**, Lawrence Radiation Laboratory, Livermore; **Lewis M. Branscomb**, director, National Bureau of Standards; **Bernard F. Burke**, M. Stanley Livingston and **Alexander Rich**, Massachusetts Institute of Technology; **James W. Cronin** and **Arthur S. Wightman**, Princeton University; **Harold Grad**, New York University; **Arthur L. Schawlow**, Stanford Univer-

sity, and **Michael Tinkham**, Harvard University.

The Academy also elected 10 foreign associates; among them are **Hendrik B. G. Casimir**, N. V. Philips' Gloeilampenfabriken, Netherlands and **Rudolph Peierls**, Oxford University, UK.

George D. Cody was promoted to director of the solid-state research laboratory at RCA.

At Bell Telephone Laboratories, **James McKenna** has been promoted to head of the mathematics of physics and networks department and **Richard S. Wagner** to head of the structure analysis and thin-film materials department.

Effective 1 July, **William L. Reitmeyer** is head of the newly formed astronomy department at New Mexico State University.

Kenneth G. Wilson has been promoted to associate professor at Cornell University.

At Aerojet-General Corp electronics division, **Peter K. Cheo**, formerly of Bell Telephone Laboratories, has become manager of the laser applications research laboratory.

James G. Kereiakes, radiology professor at the University of Cincinnati College of Medicine, has become president of the American Association of Physicists in Medicine. He succeeds **Robert O. Gorson** of the Stein Research Center, Jefferson Medical College.

At Pennsylvania State University, **Douglas H. Sampson** was promoted to professor of astrophysics.

Richard I. Weller, physics professor and former department chairman at Franklin and Marshall College, has become dean of the new School of Science and Mathematics at Edinboro State College, Pa.

The International Atomic Energy Agency has appointed two new division directors. **Compton Alexander**



ZACHARIAS



LIVINGSTON



ROSSI

Rennie of the UK is the new director of the nuclear power and reactors division, replacing **Bernard I. Spinrad**, and **Charles William Pelzer** of the US, heads the division of Scientific and Technical Information, succeeding **John Woolston** of Canada.

Robert B. Leighton was named chairman of the California Institute of Technology division of physics, mathematics and astronomy, effective 15 Sept. He succeeds **Carl D.**



LEIGHTON

Anderson, who will continue doing research at Cal Tech. Anderson won a Nobel Prize for discovering antimatter; Leighton has collaborated with him in the use of cosmic rays for particle physics. Leighton was the main investigator of the Mariner spacecraft television experiments and a codiscoverer of the oscillating waves and giant convection cells on the sun's surface.

Henry Margenau, Eugene Higgins Professor of Physics and Natural Philosophy at Yale University, will be a visiting professor at the University of Heidelberg in the fall.

F. M. Miller Receives AAPT Millikan Award for Films

At the June meeting of the American Association of Physics Teachers, **Franklin Miller Jr.**, professor and physics chairman at Kenyon College, received the **Robert A. Millikan Lecture Award** for his work in film making, especially the single-concept film. His lecture was titled "A Long Look at the Short Film."

After receiving his PhD from the University of Chicago in 1939, Miller joined Rutgers University until 1948, when he went to Kenyon. A year after joining Kenyon, he helped form the Society for the Social Responsibility in Science and served as its president during 1953-55. He is now a member of the council. He also served on the AAPT Visual Aids Committee and initiated the society's Film Competition and worked with the Commission on College Physics in creating a Physics Film Repository.

The **Millikan Lecture Award**, given at the annual summer meeting, was established in 1963 to be given for "notable and creative contributions to the teaching physics." It is supported by Prentice-Hall, Inc.

First ACA Warren Award To M. Hart and U. Bonse

The first **Bertram E. Warren Diffraction Physics Award** of the American Crystallographic Association was given to **Michael Hart**, lecturer at the University of Bristol, and **Ulrich Bonse**, professor at the University of Munster, for work described in their article on page 26 of this issue of *PHYSICS TODAY*.

The award was created by students and friends of Warren on the occasion of his retirement from the Massachusetts Institute of Technology in 1967. It consists of \$1000 and is to be given every three years for an important recent contribution to the physics of solids or liquids using x-ray, neutron or electron-diffraction techniques.

APS T. W. Bonner Prize To Fowler of Cal Tech

William A. Fowler of the California Institute of Technology is the recipient of **T. W. Bonner Prize** in Nuclear Physics given by the American Physical Society and supported by the Texas Nuclear Corp.

To be given at the meeting of the APS division of nuclear physics in October, the award cites Fowler for "his leading and stimulating quantitative laboratory studies of those nuclear processes of importance in the astrophysical environment, thereby increasing our understanding of the origin of the elements and of stellar evolution."

This prize was established in 1964 by friends of **Tom W. Bonner** and consists of \$1000 and a certificate. It is given annually for outstanding experimental research.

Isadore Amdur, Physical Chemist at MIT, Dies

Isadore Amdur, professor of physical chemistry at the Massachusetts Institute of Technology, died at the age of 60 on 3 June following an operation. He was known for his research on intermolecular forces with the technique of scattering neutral atoms and mole-

cules at high energies and for his study of transport phenomena. He was also the author of *Chemical Kinetics*.

Educated at the University of Pittsburgh, Amdur received his PhD there in 1932. He then joined MIT as a National Research Fellow in Physical Chemistry and was appointed as an instructor in 1934 and then as a professor in 1951. During 1944-5 Amdur was associated with the Manhattan District Project. Recently he was named to the National Science Foundation Undergraduate Science Advisory Committee.

Developer of Aluminized Picture Tube, L. Pensak

A physicist at RCA Laboratories who developed an aluminized picture tube used in television receivers, **Louis Pensak**, died on May 13 in Princeton Hospital at the age of 58.

Pensak, who received 19 US patents, invented storage tubes for use in radar systems and developed the Pensak furnace used for materials research and process development.

Born in New York, Pensak received his BS from Long Island University in 1932 and his MS from New York University in 1936. He joined the Radio Corp of America in 1937 and worked on the development of oscilloscopes and kenoscopes.

Soviet Crystallographer, Shubnikov, Dies at 83

On 28 April, **Alexi Vasiljevich Shubnikov**, professor of crystallography at Moscow University, died at the age of 83.

He was one of the founders of modern experimental crystallographic research in the USSR and an organizer of the Institute of Crystallography, USSR Academy of Sciences. He is best known as the first editor of *Kristallografiia* and for his participation in the formation of the International Union of Crystallography and for his work on the antisymmetry elements in structure groups.

After graduating from Moscow University in 1912, he joined the People's University of Shanyanskii until 1920. He then became a member of the USSR Academy of Sciences and director of the Institute of Crystallography from 1944 to 1962. In 1953 he became a professor at Moscow University and was awarded the Stalin Prize in 1946 and in 1950. □