

Becklin receives AAS Pierce Prize

Eric E. Becklin has won the 1975 Newton Lacy Pierce Prize of the American Astronomical Society. The prize is presented annually to an astronomer under 35 years of age for outstanding work during the past five years in instrumentation or observational research. Becklin is scheduled to receive the award on 18 August during the society's annual meeting in San Diego.

He specializes in infrared astronomy, especially radiation from regions of recent star formation and from galactic centers. One of his goals is to learn more about how stars are formed. According to the AAS committee that nominated Becklin for the Pierce Prize, "His facility with instrumentation is not limited to observing at the telescope, but includes design, testing and calibration of a whole observing system."

Becklin is a research associate in physics at the California Institute of Technology (where he earned his doctorate in 1968) and a staff associate at



BECKLIN

Hale Observatories. The Smithsonian Astrophysical Observatory and the Harvard College Observatory are among his previous employers.

Gold named Luce Professor at Mount Holyoke College

Thomas Gold has been named the first Henry R. Luce Professor of Cosmology at Mount Holyoke College in South Hadley, Massachusetts. This is the first time that the professorship, supported by a five-year grant from the Henry Luce Foundation, has been awarded to a college for women. Since 1959 Gold has been director of Cornell University's center for radiophysics and space research.

Together with Sir Herman Bondi and Sir Fred Hoyle, Gold originated the theory of continuous creation of matter, a part of the "steady state" theory of cosmology. He has also made contributions in the areas of radioastronomy (he postulated the existence of pulsars), geophysics and biophysics.

Weinberg awarded Heinrich Hertz Prize

Alvin M. Weinberg has been awarded the first Heinrich Hertz Prize for his contributions to the science and tech-

nology of nuclear energy. The award, consisting of a gold plaque and 30 000 Deutsche Mark, will be presented every three years by a foundation established by the Badenwerk-Aktiengesellschaft, a large utility that supplies electricity to southwest Germany.

Weinberg, who has devoted much of his career to the development of nuclear fission, was director of Oak Ridge (now Holifield) National Laboratory during 1955-74. He is also the founder and director of the Institute for Energy Analysis of Oak Ridge Associated Universities, and former head of research and development for the Federal Energy Office.

Murray appointed director of Jet Propulsion Laboratory

Bruce C. Murray has been appointed director of the California Institute of Technology's Jet Propulsion Laboratory. He is professor of planetary science at Caltech and an authority on Mars, Mercury and Venus. Murray is now completing scientific descriptions of Venus and Mercury from Mariner 10

data and comparing the surface histories of Mercury, Venus, Mars and the Moon with that of the Earth.

Murray succeeds William H. Pickering, who is retiring after 21 years as head of JPL. Under Pickering's direction JPL designed and built Explorer I, the free world's first satellite, and also designed the Ranger, Surveyor and Mariner spacecraft. Caltech operates JPL, which is nearly 40 years old, for the National Aeronautics and Space Administration.

1975 Pioneer Award presented to Getting

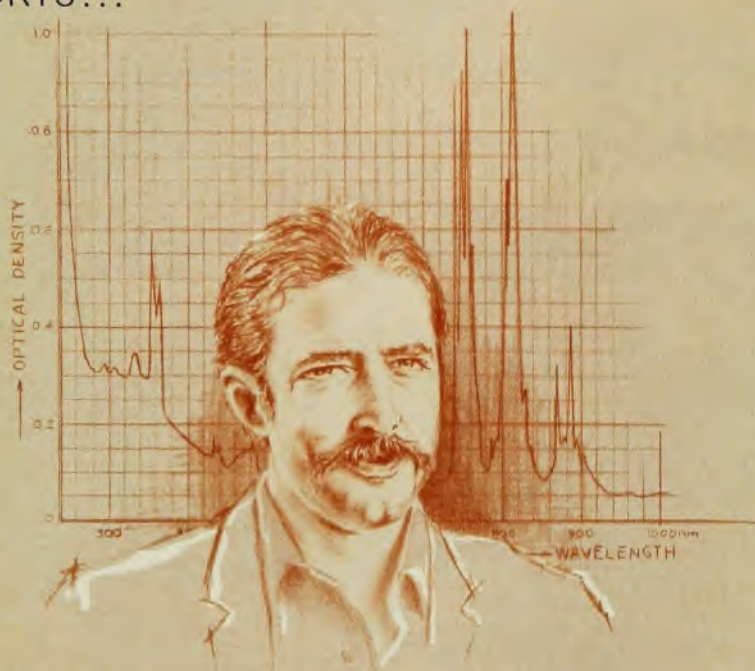
Ivan A. Getting is the recipient of the 1975 Pioneer Award presented by the Aerospace and Electronic Systems Society of the Institute of Electrical and Electronics Engineers. The award honors Getting's outstanding leadership in the development of microwave radar and fire-control systems. He was responsible for development of the first automatic tracking radar, which was used extensively in World War II, and he also worked on a radar-controlled anti-aircraft system for the Navy.

Getting attended Oxford University as a graduate Rhodes Scholar and earned his doctorate in astrophysics in 1935. Since 1960 he has been president of the Aerospace Corporation, a non-profit company that provides engineering and research services to various branches of the US government.

AGU honors Sykes for research in tectonics

Lynn R. Sykes, professor of geology and head of the seismology group at Columbia University's Lamont-Doherty Geological Observatory, has been awarded the 1975 Walter H. Bucher Medal by the American Geophysical Union. The medal is given every two years for "original contributions to the basic knowledge of the earth's crust."

While doing research in the late 1960's, Sykes's group of Lamont-Doherty scientists coined the phrase "the new global tectonics," which applies to their finding that the Earth's crust is composed of several large plates, 60 miles thick, moving in relation to each other. Also an authority on earthquake prediction and detection of underground nuclear explosions, he led the



On Lanthanum Beryllate- A New Laser Host Material.

A new rare-earth-ion laser host has been invented* at Allied Chemical Corporation by C.F. Cline and R.C. Morris. Energy storage about 2.5X larger than for yttrium aluminum garnet rods has been observed with this material together with 60% larger conversion efficiency (slope).

In studies of host materials, the monotectic compound $\text{La}_2\text{O}_3 \cdot 2\text{BeO}$ was found to be of particular interest. Its structure consists of low symmetry La^{3+} sites embedded in a 3-dimensional network of corner-sharing BeO_4 tetrahedra; the large La^{3+} site is thus available for rare earth doping. The large atomic weight of La is offset by the high mole fraction and low atomic weight of Be resulting in a low average atomic weight which contributes to good mechanical and thermal transport properties.

At the same time ease and economy of crystal growth is achieved due to the low (1365°C) melting point and the large distribution coefficients for rare earth substitution on La^{3+} sites. Single crystal $\text{La}_2\text{Be}_2\text{O}_5 : \text{Nd}^{3+}$ boules can be grown "core-free" permitting larger finished laser rods and/or higher rod yields from the boule.

Room temperature lasing in Q-switched and pulse modes has been achieved with lanthanum beryllate at 1.070 and 1.079 microns depending on the orientation; plus cw operation at 1.070 microns. The output radiation is linearly polarized.

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*U.S. Patent No. 3,866,142.



we hear that

team of Columbia geologists who in 1973 made the first successful prediction of an earthquake in the US.

Sykes joined Columbia University geology department in 1961 as a research assistant in seismology, earned his doctorate in 1964 and was appointed full professor and head of Columbia's seismology group in 1972. In June 1974 he traveled to Moscow as part of the US delegation at talks on the nuclear arms limitation treaty and in October of the same year he was a member of the US seismology group that visited China.

Fermi National Accelerator Laboratory in Batavia, Illinois has announced a number of administrative appointments. **John A. McCook** has been appointed associate director for administration; **J. Richie Orr** will become assistant director; **Philip V. Livdahl** has been appointed head and **Frederick R. Huson** deputy head of the accelerator division; **James K. Walker** has become head of the internal target experimental area, and **John Peoples** has been named head and **Drasko Jovanovic** assistant head of the research division.

Larry J. Williams has joined the Electric Power Research Institute as a member of the technical staff of the energy systems, environment and conservation division in the energy demand and conservation program.

Lowell J. Paige has been appointed special assistant to **David S. Saxon**, new president of the University of California. Paige is now assistant director for science education of the National Science Foundation.

Maarten Schmidt, former executive officer for astronomy at the California Institute of Technology, has become chairman of Caltech's division of physics, mathematics and astronomy. He succeeds **Robert B. Leighton**, professor of physics, who will now devote full time to teaching and research.

Rosalyn S. Yalow, senior medical investigator at Veterans Administration Hospital in the Bronx, New York, has been elected to the National Academy of Sciences.

Chi-Kwan Au has joined the department of physics and astronomy at the University of South Carolina as assistant professor.

K. Kameswara Rao will join the faculty of Western Michigan University in September as assistant professor of physics.

Newly appointed assistant professors of physics at Texas A&M University are **Wiley P. Kirk** and **Steven P. Rountree**.

Bruce J. Faraday has been named head of the radiation effects branch of the Naval Research Laboratory's radiation technology division.

Robert A. Frosch has been named associate director for applied oceanography at Woods Hole Oceanographic Institution, where he will work on ocean engineering, applied research and marine policy. He is currently assistant executive director of the United Nations Environment Program in Nairobi, Kenya.

obituaries

Sir Geoffrey Taylor

Sir Geoffrey Ingram Taylor, who has died at the age of 89, was one of the great scientists of our time and perhaps the last notable representative of that school of thought that includes Kelvin, Maxwell and Rayleigh, who were physicists, applied mathematicians and engineers—the distinction is irrelevant because their skill knew no such boundaries. Between 1909 and 1973 he published voluminously, and in a lifetime devoted to research left his mark on every subject he touched and on every one of his colleagues. Although he was no lecturer (some of his attempts to explain difficult matters in simple terms have become legend), his outgoing manner and complete lack of pomposity conveyed, as no formal exposition could have done, the enthusiasm and intuitive understanding that informed all his work.

His first paper, on interference fringes photographed in very weak light, was his only excursion into the world of quanta and was undertaken, according to his own story, because the exposure time of hundreds of hours enabled him to fit in an already-arranged sailing voyage. Afterwards problems of continuum mechanics mainly attracted him, especially fluid dynamics and the plastic deformation of crystals. It is strange to note that his pioneering contribution to the initiation of dislocation theory in 1934 very nearly represented the end of his researches in this field, because immediately after he became wholly immersed in the statistical theory of turbulence. His great gift for combining mathematical analysis with relatively simple experiments, each fertilizing the other, is shown here at its most powerful. It was a joy to see him demonstrate some phenomenon in fluid flow with bits and pieces seemingly gathered from the scrap box and assembled in the kitchen sink. This was not the economy of a lazy man—quite the opposite; such demonstrations were an essential part of the equipment of an astonishingly agile and exact mind, enough to give a hint on which to build an analytical description.

And this ability to see interesting



TAYLOR

problems in the observations of daily life stayed with him to the end—water-bells, paint-rollers, the swimming of eels and sperm, peeling of adhesive tape, disintegration of charged drops—all these came under his imaginative scrutiny after he had reached the age of 65, and all served to demonstrate how a vigorous mind need not seek challenges among the expensive equipment of a modern laboratory. To be sure, none of these later investigations broke new ground, but are the last outpouring of a fertile genius who, as much as any other, kept the flame of classical physics burning brightly when it could well have been extinguished.

Taylor spent the greater part of his life at Trinity College, Cambridge and at the Cavendish Laboratory, where he was a Royal Society Professor. Honorary doctorates from all around the world came his way and provided opportunities for travel and exploration that formed his private relaxation. He was admitted to the Order of Merit in 1969. To his many friends he was a continual inspiration, at once a profound thinker and, it seemed, a truly happy man.

SIR BRIAN A. PIPPARD
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