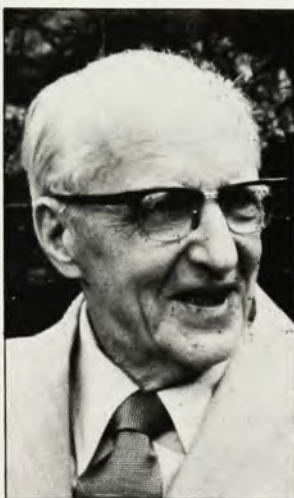


we hear that

APS Southeastern Section presents Beams, Pegram Medals

The Southeastern Section of the American Physical Society has selected this year's recipients of its Beams and Pegram awards. Lawrence C. Biedenharn Jr, professor of physics at Duke University was presented the Jesse Wakefield Beams Medal in recognition of "significant research done within the Southeast region." The George Braxton Pegram Medal for "outstanding teaching done within the Southeast region" went to Ronald D. Edge, professor of physics at the University of South Carolina. Former Emeritus Professor of Physics at the University of Florida, Daniel C. Swanson received the Special Pegram Medal, an award given to an outstanding physics teacher who was active in 1935 (when the Southern Association of Physicists—predecessor of the Southeastern Section—was formed).

Biedenharn received his doctoral degree at MIT. He held research appointments there and at Oak Ridge National Laboratory and faculty positions at Yale and Rice Universities before taking his present post at Duke almost two decades ago. A theorist, particularly in mathematical and nuclear physics, Biedenharn is well-known for his published works, "a number of them classics in their field." His work (with collaborators) on angular momenta, Coulomb excitations, nuclear rotational bands, SL (3,R) symmetry in nuclear collective motions and also on the



SWANSON



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canonical definition of Wigner coefficients are representative of his broad range of interest.

Edge received his education at Cambridge University. Following short-term appointments at the Australian National University, Caltech, Stanford and Yale Universities and the University of Munich, he joined the faculty of the University of South Carolina where he has remained since 1958. His research efforts have centered around photo-nuclear disintegration at intermediate energies, channeling in crystals and the operation

of low- and intermediate-energy accelerators for nuclear particles.

A graduate of Hobart College, MIT and Cornell University, Swanson joined the University of Florida faculty in 1929 remaining there until his retirement in 1971. One of the pioneer members of the Southeastern Section, Swanson designed and built one of the first Van de Graaff generators in the south. He is well remembered for the skill, wisdom and patience with which he served Florida physics students as an adviser and as a teacher.

Turnbull wins Acta Metallurgica medal

The 1979 Acta Metallurgica Gold Medal has been awarded to David Turnbull, a physical chemist from Harvard University. The medal was established in 1974 "to recognize demonstrated ability and leadership in materials research."

Turnbull's contributions to metallurgy and solid-state science over the last 40 years have provided a substantial part of our present understanding of nucleation and growth in crystals, diffusion in solid and liquids, of solid-state reactions and the nature of the glassy state. His interest in the development of his students has also shown itself to be worthy of note; "nearly all have continued to make im-

portant contributions after leaving his laboratory."

Monmouth College (Illinois) awarded Turnbull a BS in 1936, and three years later he took a PhD in physical chemistry at the University of Illinois. From 1939 to 1946 Turnbull was member of the faculty of Case Institute of Technology, whereupon he joined the staff of General Electric Research Laboratory. During the last eight years of his 16-year stay at GE, he also served as adjunct professor of metallurgy at Rensselaer Polytechnic Institute. In 1962, Turnbull became Gordon McKay professor of Applied Physics at Harvard.

The Acta Metallurgica Gold Medal is awarded annually by Acta Metallurgica Inc with financial support from Pergamon

Press, Ltd. Turnbull was nominated both by the American Society for Metals and by the American Institute of Physics.

Klemperer receives Langmuir Award

William Klemperer, who was recently nominated to head the National Science Foundation Directorate for Mathematical and Physical Sciences, (PHYSICS TODAY, November, page 93), is the winner of the American Chemical Society's Irving Langmuir Award in Chemical Physics for 1980. Sponsored by the General Electric Foundation, the \$5000 award was presented in recognition of Klemperer's



KLEMPERER

"significant impact on the scientific understanding of the subtle forces in molecules." Using analytical techniques such as molecular beam spectroscopy, the former Harvard professor has been able to determine the structural details of many important molecules and how electrical properties determine molecular behavior. His most recent investigations, for example, involve the formation mechanisms of molecules in interstellar space—a subject of great cosmological interest.

Klemperer received an AB from Harvard University in 1950 and a doctorate from the University of California, Berkeley in 1954. He had been on the Harvard faculty since 1954 and had been a full professor of chemistry since 1965.

The award, given once every two years by the ACS, was established by the GE Foundation in 1964. Its purpose is "to recognize and encourage outstanding interdisciplinary research in chemistry and physics, in the spirit of Irving Langmuir."

Franklin Institute honors scientists

The Franklin Institute honored eleven scientists and educators for their outstanding scientific and technical achievements at its annual Medal Day in October. Among those recognized were:

► Steven Weinberg, Higgins Professor of Physics, Harvard University. He received the Eliot Cresson Medal for his efforts in the development of a unified theory of weak and electromagnetic interaction (in addition to the 1979 Nobel Prize in Physics, see this issue, page 17) and for his contributions to other physical theories.

► Richard J. Whitcomb, head of the Transonic Aerodynamics Branch of Langley Research Center, Hampton, Virginia. The Howard N. Potts Medal

went to Whitcomb for "his outstanding and innovative contributions to transonic flight." He discovered and verified the "area rule," a revolutionary method for the design of aircraft with reduced drag and increased speed.

► Elias Burstein, professor of physics, University of Pennsylvania. Burstein was awarded the John Price Wetherill Medal for his work on the optical properties of solids and their applications in photoconductive technology. He holds the basic patents on extrinsic silicon and germanium infrared detectors.

► Benjamin Abeles, senior research associate at Exxon Research and Engineering Company, Linden, N.J. and George D. Cody, group head at the same facility. The pair shared the Stuart Ballantine Medal for their research on thermal conduction in semiconductors and for their development of certain germanium-silicon alloys, materials used in thermoelectric power generators.

► Richard G. Brewer, IBM Fellow at IBM Corporation, San Jose, California. The Albert A. Michelson Medal was presented to Brewer "for his many discoveries and contributions to laser physics in the area of nonlinear interaction of intense laser light with molecules." Very precise molecular spectroscopic measurements using nonlinear laser effects, the discovery of stimulated Brillouin scattering in liquids and versatile optical frequency switching techniques for the observation of optical coherence effects in materials are among Brewer's achievements.

Winterberg is Hermann Oberth Gold Medalist

This year's Hermann Oberth Gold Medal has been awarded to Friedwardt Winterberg, research professor at the University of Nevada Desert Research Institute. The Hermann Oberth-Wernher von Braun International Foundation for Space Flight, which presents the gold medal annually, recognized Winterberg for his achievements in the field of thermonuclear propulsion.

Winterberg received an MS from the University of Frankfurt in 1953 and a doctoral degree in nuclear physics from the University of Göttingen in 1955. From 1955 to 1959, he was group leader for theoretical physics at the research reactor in Hamburg, Federal Republic of Germany. In 1959 he became an assistant professor at Case Institute of Technology, and he joined the faculty of the University of Nevada Desert Research Institute four years later.

Winterberg did pioneering work on inertial-confinement fusion more than 15 years ago. He first proposed what is today known as "impact fusion" (fusion achieved through acceleration of macro-particles at fuel targets) in 1963. He



WINTERBERG

contributed the first ideas for starting small thermonuclear reactions with intense electron and ion beams. Beginning in the 1960's, Winterberg showed that thermonuclear microexplosion concepts together with a superconducting magnetic reflector might lead to a good space propulsion system. This idea was used by the British Interplanetary Society in their "Project Daedalus Study," a proposal to send a probe to Barnard's star.

Fowler and Schmidt get astronomy prizes

The Astronomical Society of the Pacific has recently conferred two awards. William A. Fowler, Institute Professor of Physics at Caltech, has won the 1979 Catherine Wolfe Bruce Gold Medal, and Gary D. Schmidt, a postdoctoral researcher at Lick Observatory, received this year's Robert J. Trumpler Award. The Bruce Gold Medal was established in 1898 to recognize distinguished service to astronomy. The Trumpler Award has been presented since 1956 to a recent PhD recipient whose research is "considered unusually important to astronomy." It carries with it a stipend of \$500.

Fowler's research has included studies of the origins of the elements, specifically the production of deuterium and helium in the "big bang" and in massive objects. He has also investigated the release of gravitational and nuclear energy from massive objects. Fowler took his doctorate from Caltech in 1936 and joined the faculty in the same year. In 1970, he was chosen the first holder of the Institute Professorship of Physics at Caltech, an endowed chair. He served as president of The American Physical Society in 1976.

Schmidt was honored for his development of a technique to photoelectrically map polarized radiation emitted by galaxies and galactic nebulae. Schmidt received his PhD from the University of Arizona at Tucson.