

AIP Executive Committee and Governing Board Resolution in Memory of John C. Johnson

John C. Johnson gave of himself to physics in many ways: as researcher, teacher, administrator, society officer. His death leaves a void in the leadership of the physics community that AIP serves. Especially do we, his colleagues on the Executive Committee and the Governing Board of the American Institute of Physics, feel this loss. His ability and his willingness both to face difficult problems squarely and to deal with them with wisdom and statesmanship worked to the benefit of all. We remember and miss him for his never-failing consideration for others and his quiet but unflagging optimism that enriched those whose lives and work he touched.

ried on basic research in acoustics, underwater sound, noise reduction, fluid dynamics and weapons systems, provided advice to various government agencies, especially the Department of the Navy, and produced new ideas in underwater weapon design and delivery, including the development of prototype models and supervision of testing.

In addition to all that, Johnson's laboratory served as the focus for acoustical education and research on the State College campus. It assisted the development of the Environmental Acoustics Lab, work in the department of mechanical engineering and the creation of a department of aerospace engineering.

In recognition that he had built the Applied Research Laboratory into one of the strongest research institutes on any campus, Johnson was given the University Professorship. His superb leadership in directing the successful operation of programs related to the development of undersea warfare tech-

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nologies recently earned him the Meritorious Public Service Citation of the US Navy.

Shortly after his arrival at Penn State, Johnson began a program of summer courses in acoustics for the Navy, a program, subsequently enlarged, that began granting degrees in acoustics in 1965.

Johnson was active in the affairs of professional societies. He assisted the Acoustical Society of America by producing its career booklet, *Acoustics and You*, wholly at his laboratory. He served as President of the Society in 1970-71 and then, in the spirit of John Quincy Adams, came back as a senior adviser, serving as a member of its Executive Council from 1979 until his death.

In 1980, he accepted appointment as Secretary of AIP, where members of other AIP societies have had an opportunity to observe and admire his ability and leadership.

ROBERT T. BEYER
Brown University
Penn State University

Sanborn Conner Brown

Sanborn Conner Brown, professor emeritus at MIT, died at his home in Henniker, New Hampshire, 28 November 1981. He was born in 1913 in Beirut, Lebanon, where his father, Julius Arthur Brown, was professor of physics and astronomy and later dean of The American University. Brown left Lebanon to attend the Tabor Academy in Massachusetts and then Dartmouth, where he studied physics. He obtained his BA in 1935 and MA in 1937. Brown was awarded a teaching fellowship in 1938 at MIT. Writing his thesis on Geiger-Müller counters, he received his PhD in 1944. He was appointed assistant professor in 1945, associate in 1949, professor in 1962, and associate dean from 1963 to 1975, when he retired.

During the war, Brown taught and worked on cryptography for the Office of Scientific Research and Development. When the Radiation Laboratory was dismantled after the war, Brown organized a microwave discharge group to use the leftover equipment to produce microwave cavity discharges and study the resultant ionized gas. During the following eighteen years some 50 researchers passed through the group to obtain degrees or to learn the techniques. They studied the process of breakdown, the penetration and absorption of microwaves in the ionized gas, the mobility of electrons and diffusion of ions, recombination and ionization rates, cyclotron resonance and so on. In particular, they greatly ad-



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vanced the techniques of cavity measurement.

Brown was technical advisor to the US delegation at the UN International Conference on the Peaceful Uses of Atomic Energy in Geneva in 1958 and was a delegate to the following conference in Salzburg, Austria, in 1964. However, fusion research rapidly departed from the study of plasma instabilities to the design of even more complex equipment to control them. As the students went where the assistantships were offered, which was with the big machines, Brown dropped out of the laboratory to become associate dean of our graduate school.

Meanwhile he wrote *Basic Data of Plasma Physics* (1959, revised in 1966) and *Introduction to Electrical Discharges in Gases* (1966) and edited *Electrons, Ions, and Waves* (1967), *Electron-Molecule Scattering* (1979) and *Fundamentals of Plasma Physics* (1979).

After the tremendous development of physics research during the war, there was an organized effort in this country to develop physics education comparably. In 1958 Brown, along with William C. Kelly of the National Research Council, obtained the backing of The American Institute of Physics and The International Union of Pure and Applied Physics to set up a group of scientists from six countries who met in Konstanz, Germany, and organized the International Conference on Physics Education in Paris in 1960, with Brown as chairman and editor. This, the first of a series, was also followed by the formation of the International Commission on Physics Education and of the IUPAP Commission on Physics

Education, both with Brown as chairman. He was awarded the Distinguished Service Citation by the AAPT for these activities.

When he was at Dartmouth, Brown became interested in early physicists. He was particularly fascinated by Count Rumford's experiment on the mechanical equivalent of heat. The experiment—simple, yet decisive between concepts—was the type Brown wished to do, and in fact resembled the measurements of power absorption and diffusion rates which he did do later in a microwave cavity instead of a cannon. When Brown's cryptographic war work enabled him in his words "to make a modern scientific study of the first secret-ink-letter of the American revolution (written by the future Count Rumford)," the die was cast. He wrote three books on Count Rumford: *Count Rumford, Physicist Extraordinary* (1962) for students, *Rumford, Sir Benjamin Thompson* (1967) for nonscientists, and the completely annotated *Benjamin Thompson, Count Rumford* (1978), and edited the five-volume *Collected Works of Count Rumford* (1968–1972). This work earned him a Fellowship in the Royal Institution.

In 1954 Brown joined a group at the American Academy of Arts and Sciences seeking a scientific basis for our sense of good and evil. They formed, with a like-minded group of clergy, The Institute on Religion in an Age of Science, in which Brown became very active. As Brown progressively relinquished research, education, and Count Rumford, he concentrated more on the need for a theology compatible with our vastly increased knowledge of the laws of nature and their universality, and of a religion to consider our frightening power to destroy life by nuclear explosions or to render it valueless by overpopulation.

WILLIAM P. ALLIS

Massachusetts Institute of Technology

Glenn A. Mann

Glenn A. Mann, former chairman of the department of physics and engineering physics at Texas Tech University, died 21 December 1981.

Mann was born in Detroit in 1930. He received his BS, MS and PhD (in 1959) degrees in physics from Michigan State University. He went to Texas Tech University in 1960.

His primary research interests were in experimental infrared spectroscopy, where his major contributions were studies of the effect of hindered rotation on the spectra of methyl mercaptan and methyl alcohol. For the past several years his main interest had been in physics education. □

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