

Roswell Clifton Gibbs

July 1, 1878 — October 4, 1966

The death of Emeritus Professor Roswell Clifton Gibbs brought to an end a long and distinguished career of service: service to his university, to his profession of physics, and to the nation. During almost fifty years of formal association with Cornell, he played almost every possible role: student (undergraduate and graduate), teacher, research worker, and administrator. After his retirement in 1946, the roles included administrative work on the national level and adviser to the nation's scientific agencies.

Professor Gibbs first came to Cornell in 1903 after having attended public schools in Hume, New York (his birthplace) and in Pike, New York. He received the Bachelor's degree in 1906, the Master's degree in 1908, and the doctoral degree in 1910. His teaching appointments began in 1906 with an instructorship. He became an Assistant Professor of Physics in 1912 and Professor of Physics in 1918. During his career as a professor, he filled many administrative positions: Acting Dean of the College of Arts and Sciences, faculty member of the Board of Trustees and, most notably, Chairman of the Department of Physics from 1934 to 1946.

It would be hard to single out the area of Professor Gibbs' greatest enthusiasm. Certainly he had a great love for teaching and, during his long career, he had a hand in almost every course given in the Physics Department. He was a frequent lecturer in the large introductory physics courses and had a real flair for explaining and demonstrating the abstract concepts of physics. Perhaps his greatest love was the "sophomore lab"—a course for potential physics majors designed to give them an experience in the real problems of experimental physics. Long before such phrases as "open-ended" and "research-oriented" experiments had entered the jargon, he was using the ideas.

As a research worker, Professor Gibbs concentrated in the area of spectroscopy. At the time, this was the major area of research in physical science. The problem was the interpretation of the emission and absorption of radiation, in terms of a coherent picture of atomic structure. It was exciting work since the new theory of quantum mechanics was evolving, and theory and experiment were leapfrogging over each other. In all, Professor Gibbs was author or coauthor of over forty research papers, the topics including such matters as the extreme ultraviolet spectra of isoelectronic sequences, multiple and hyperfine structure of spectra, determination of the charge-to-mass ratio of the electron from the interval between the hydrogen and deuterium alpha lines, and the absorption spectra of organic compounds in solution.

Most of us remember Professor Gibbs most clearly in his role of department chairman. He brought to this task an extraordinary amount of patience and understanding. He was a master of detail, but with a clear understanding of the big problems. In recruiting new staff members, he carefully planned to have Cornell in the forefront of the newly developing areas of physics research.

World War II brought his greatest problems and greatest achievements. As the war clouds gathered, it became clear that while World War I was, in a sense, a “chemists’ war,” the coming conflict would be a “physicists’ war.” There would be insistent demands that key faculty members leave their academic work and join national laboratories for research and development. The prospects for maintaining a viable instructional and research program in physics at Cornell became darker and, at times, almost hopeless. Nevertheless, Professor Gibbs recognized clearly the need for continued training in the physical sciences at all levels. To maintain this training, Professor Gibbs did everything possible and a good deal more: he converted colleagues from the fields of entomology and physiology and psychology into physics instructors so that the underclass courses could continue; he arranged for visiting faculty members on a commuting schedule; he brought in small defense projects as a nucleus for graduate work; he became perforce a nationally recognized expert on some of the legal and procedural aspects of the selective service system; and he made many dreary trips to Washington under the worst of travel conditions. When, in 1946, the war was over and he was permitted to retire, he left to his successors a going organization—an amazing achievement.

The retirement period, however, was no idle time for Professor Gibbs. In 1946, he moved to Washington to assume the chairmanship of the Division of Mathematical and Physical Sciences of the National Research Council. Later, he also took on the position of chairman of the advisory committee to the Army Office of Ordnance Research. He was also consultant to the Nuclear Data Project of the National Research Council and supervisor of its exchange-visitor program. For several years, he was a coeditor of the *Directory of Nuclear Data Tabulations*.

Professor Gibbs had many professional affiliations: a Fellow of the American Physical Society and member of the American Association of Physics Teachers (president in 1942 and 1944-46), member of the Optical Society of America (president in 1937-39) and the American Association for the Advancement of Science (vice-president in 1945). One of his lifelong pleasures was his association with the honor society of Phi Kappa Phi, and he served for a time as the society’s president.

To all of his many tasks, Professor Gibbs brought vigor, wisdom, and devotion to duty. To those of us who remember him, he brought thoughtful advice and the warmth of real friendship.

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