HOWARD LOGAN BRONSON

1878 – 1968

by W. J. Archibald

Howard Bronson, whose death occurred on March 7th, 1968, was born in the small town called Washington, in Connecticut, on July 12th, 1878. He graduated from Yale with the A. B. degree in 1900 and the Ph.D. in physics in 1904. For a year, 1900-1901, he was an instructor in physics at Lehigh University. From 1901 to 1904 he held an appointment as an assistant in physics at Yale. Attracted by the presence of Lord Rutherford he then went to McGill and remained there until 1910, holding in succession the posts of demonstrator (1904-1907), lecturer (1907-1909), and assistant professor (1909-1910). In 1910 he became Head of the Physics Department at Dalhousie University and stayed in that department until his retirement in 1946. On retirement he was made Professor Emeritus and awarded the honorary degree of LL.D. His election to Fellowship in the Royal Society of Canada occurred in 1916. Professor Bronson maintained a lively interest in the proceedings of the Institute throughout his active career in Halifax and served as President from 1918 to 1920 and in several other capacities.

These are the bare statistics, which show that his career can be divided into two epochs, before and after 1910. In that year he had to make a choice between McGill and Dalhousie, and he decided to go to Dalhousie where he remained the rest of his life. The Department of Physics at Dalhousie was an old one even in 1910, having had very distinguished professors since about 1870.

His skill in research was very great and he always had a small group of students "making measurements". Most of these "measurements" were worthy of publication and for many years it was the pattern for candidates for the Master's degree at Dalhousie to have their experimental work published. The excellent experimental work which led to Bronson's election to the Royal Society was done mostly at McGill when he was involved with a group who were trying to make sense of the signals coming out of the nucleus of the atom. Dr. Bronson may thus be placed in that small group of distinguished scientists who worked with Lord Rutherford in fashioning the model

of the nucleus. His chief contributions consisted of accurate observations of the half lives of active nuclei and their decay schemes and the development of more precise and faster methods of measuring very small ionization currents.

From 1910 and for the next thirty years Bronson and his students at Dalhousie published papers on a wide variety of topics. These include the electrical properties of ice, X-rays, radioactivity, and a very careful series of measurements on the specific heats of metals. The work on specific heats is as accurate as that currently achieved by solid state physicists.

His old students remember Dr. Bronson chiefly for his qualities as a teacher and the strength and integrity of his character. His classroom methods were peculiarly his own; one could hardly say that he lectured. He did not believe in doing for a student anything that the student could reasonably be expected to do for himself. He asked far more questions than he answered but his questions were penetrating, and forced the student to face squarely the central point of any issue. A favourite, and oft repeated principle of Dr. Bronson's was that in science as in life the individual should pay far more attention to process than to outcome. This attitude of concentration on sound methods was central to everything that he did and determined his attitude to how students should be treated, how education should be pursued, how the university should be run, how the country should be governed, and how a life should be lived.

The impression Dr. Bronson has left on thousands of students and colleagues was that of an able scientist and a "good" man.