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OTTAWA 2, CANADA

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NO. 18

FOR RELEASE:

THURSDAY, 12 JULY, 1956.

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OVERSEAS HONOURS FOR NRC SCIENTIST

DR. GERHARD HERZBERG, Director of the National Research Council's Division of Pure Physics, today received the high academic distinction of being awarded the honorary degree of Doctor of Science by the National University of Ireland in Belfast.

Dr. Herzberg's international reputation in his field is also shown by the fact that he has been invited to present the introductory report to the Symposium on Molecules in Astronomical Objects to be held shortly at Liège, Belgium. He has also been asked to give lectures at Manchester, Dublin, and Düsseldorf, Germany.

Scientific Achievements

Dr. Herzberg has contributed to the knowledge of the structure of a number of important molecules, including molecular oxygen, molecular nitrogen, carbon dioxide, acetylene, prussic acid; and he has discovered several new molecules, such as phosphorus nitride and phosphorus carbide. One aspect of his work is of considerable importance to astronomers. By comparison of his laboratory spectra, it has been possible to establish the presence of certain molecules in planets, stars, and in the interstellar space. For example, molecular hydrogen has been detected in the atmosphere of the planet Uranus and the presence of a diatomic molecular ion consisting of carbon and hydrogen in interstellar space has been demonstrated. Recently Dr. Herzberg and his collaborators have carried out work on the spectra of free

radicals. These are molecules which occur temporarily in various chemical reactions.

#### Author

Dr. Herzberg is the author of three books: Atomic Spectra and Atomic Structure; Molecular Spectra and Molecular Structure: I, Diatomic Molecules; II, Infrared and Raman Spectra.

#### Honours

Dr. Herzberg became a Fellow of the Royal Society of Canada in 1939, and President of their Section III in 1951-52. In 1953, he was awarded the Henry Marshall Tory Medal of the Royal Society of Canada "for his achievements in the field of atomic and molecular spectra". Dr. Herzberg is an Honorary Fellow of the Indian Academy of Sciences, and a Fellow of the Royal Society of London. He received the Médaille de l'Université, Liège, Belgium in 1950; the honorary degree of LL.D. from the University of Saskatchewan in 1953; and the honorary degree of D.Sc. from McMaster University in 1954.

#### Biographical Data

Dr. Herzberg was born in Hamburg, Germany, in 1904. He studied physics at the Darmstadt Institute of Technology and obtained his Dr. Ing. degree in 1928. From 1928 to 1930 he did postdoctorate work at the University of Goettingen and at the University of Bristol, where he held a research studentship. From 1930 to 1935 he lectured at the Darmstadt Institute of Technology, and became Assistant in the Department of Physics.

He joined the staff of the University of Saskatchewan as Research Professor of Physics in 1935 and became Professor of Spectroscopy at the Yerkes Observatory of the University of Chicago in 1945. He

returned to Canada in 1948 to accept a position as Principal Research Officer with the National Research Council at Ottawa. In 1949 he became Director of NRC's Division of Physics, and Director of the Division of Pure Physics in 1955.