

GERHARD HERZBERG, 1904 - 1999

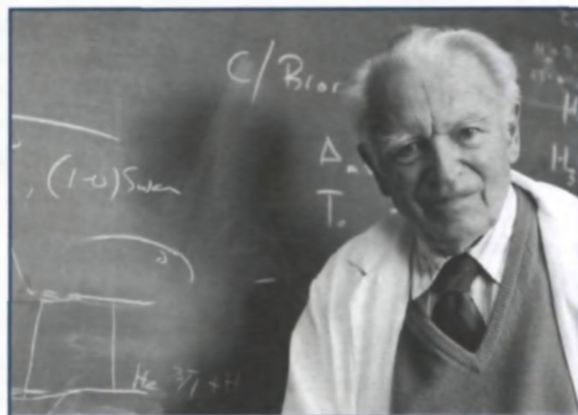
Like no other person, Gerhard Herzberg dominated much of the past century of Canadian physics. He was born in Hamburg, Germany, on Christmas day, 1904 and died at his home in Ottawa just before the close of the century, on March 3, 1999 at the age of 94. He arrived in Saskatchewan in 1935, spent a decade there, and then, after a brief sojourn at the University of Chicago, was brought to the National Research Council (NRC) by C.J. Mackenzie, in 1948. He spent the next half century at the NRC (see the article by P.A. Redhead in this issue for more details on Herzberg's years at the National Research Council).

The esteem that the spectroscopic and scientific communities held Herzberg in was evident in the conferences held every five years in his honour. The first of these took place in 1969 to celebrate his 65th birthday. At this meeting, when most would be thinking of retirement, he was appointed Distinguished Research Scientist.

In 1970, the Canadian Association of Physicists, as part of its 25th anniversary celebrations, instituted a new annual award in honour of one of Canada's most distinguished physicists. The new award, to be known as the Herzberg Medal, has a likeness of Dr. Herzberg on one side and an accurate representation of the potential curve of the ground state of the hydrogen molecule on the other side. When first introduced, the medal was awarded "for outstanding achievement in any field of research by a physicist who, in the year of the award, is not more than 38 years of age". This was subsequently changed to 40 years of age.

In 1971, Herzberg was awarded the Nobel Prize in Chemistry, for his contributions to the knowledge of electronic structure and geometry of molecules, particularly free radicals.

In 1974 the formation of the Herzberg Institute of Astrophysics was announced in his honour. It provided a place where he would be able to continue his research for as long as he wished. The most recent Herzberg conference was held in 1994 and he officially retired in early 1995, but he still came into the Sussex Drive building



Gerhard Herzberg

of NRC on a regular basis until failing health finally prevented him from doing so.

Most recently, in tribute to the life-long pursuit of excellence in research that Gerhard Herzberg exemplified and inspired, NSERC dedicated its highest award in his honour. Starting in 2000, the Canada Gold Medal for Science and Engineering will be entitled the Gerhard Herzberg Gold Medal for Science and Engineering. In addition to the medal, recipients

will receive \$1,000,000 in research funding.

For Canadian physicists, the picture of Herzberg standing on the NRC steps, gazing out confidently (see article by P.A. Redhead), should be burnished in the memory of every Canadian physicist. It represents what was finest about our past century. Infecting many colleagues with his enthusiasm he led the NRC laboratories to greatness. As was noted in the address for his Nobel Award, "Dr. Gerhard Herzberg is generally considered to be the world's foremost molecular spectroscopist and his large institute in Ottawa is the undisputed centre for such research". His vision, his voice, his influence, and his advocacy had a great impact on fundamental research at Canadian universities for many decades.

Gerhard Herzberg was a member of the CAP from 1950 until his death in 1999, the CAP President in 1956-57 and the recipient of the CAP Medal of Achievement in 1957. Dr. Herzberg's constant support of and affection for the CAP has now culminated in the CAP receiving a sizeable and much appreciated bequest from his estate. This bequest will allow the CAP to undertake a new initiative, probably in the area of education. Detailed plans will be announced in the near future..

Details of G. Herzberg's life and of his impact on Canada can be found in a recent and very fine obituary in *Physics in Canada* (vol. 55, page 127, July/August, 1999), by John W. Johns, Boris P. Stoicheff and James K. Watson. This vignette was abstracted, in part, from the obituary.

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