

1998 MORRIS KATZ MEMORIAL LECTURE IN ENVIRONMENTAL RESEARCH

Dr. Gordon McBean

Assistant Deputy Minister

Atmospheric Environment Service, Environment Canada

Forecasting:

Today's Weather to Next Century's Climate

8 April 1998

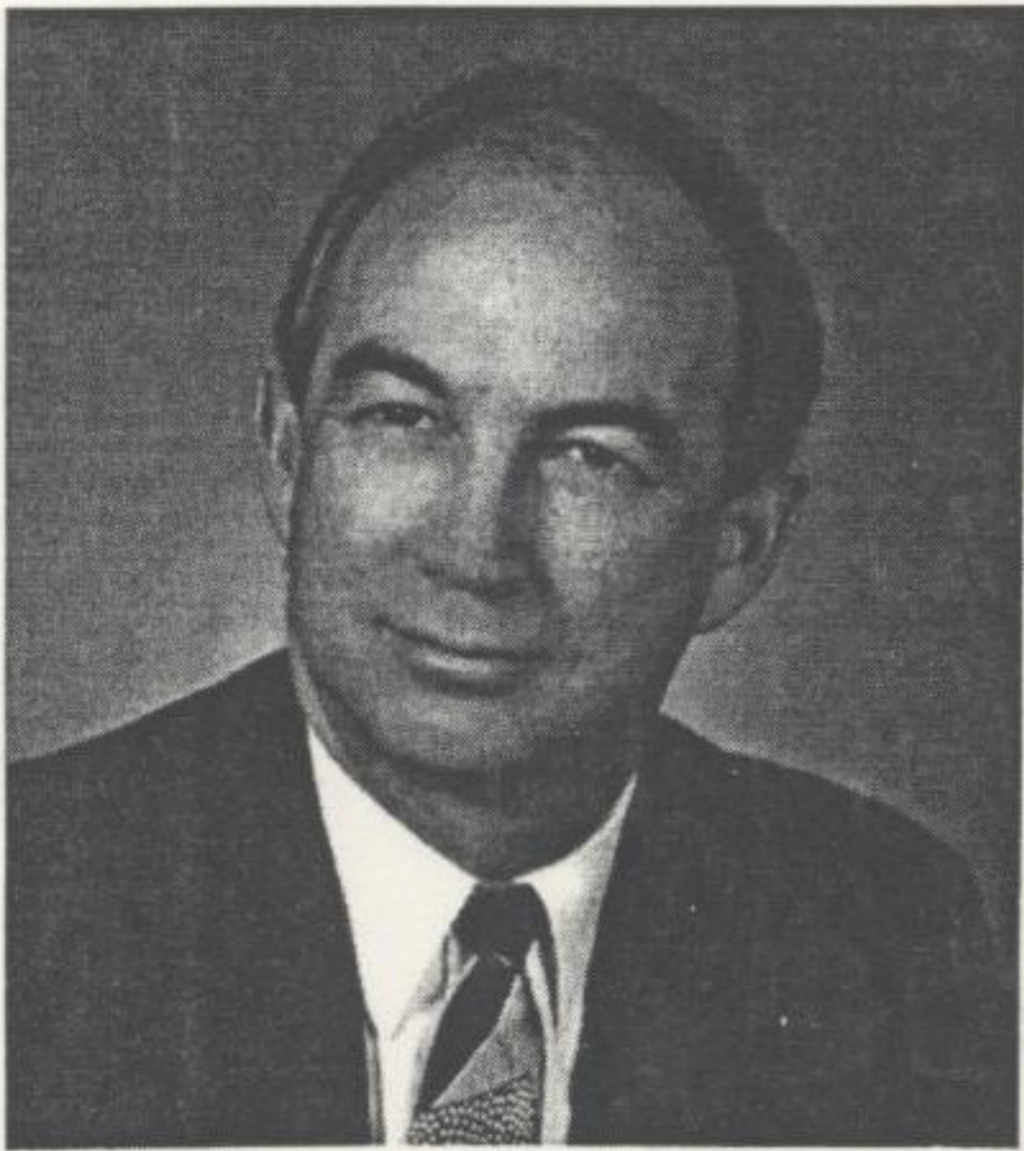
3:00 p.m.

York University, Moot Court

Osgoode Hall Law School

4700 Keele Street, Toronto

Centre for Atmospheric Chemistry



Abstract

Science has developed enhanced capability to forecast weather, water, climate and state of the atmosphere and this gives us, in a sense, a new relationship with the future. Society is now able to see into the future with some confidence and also to see how their own collective activities affect parts of that future.

The role of the Atmospheric Environment Program is to provide Canadians and their governments with information and warnings on the future states of the atmosphere and related components of our natural environment. These range from warnings of tornadoes in the next hour, to a severe ice storm, air pollution episode or flood in the next few days, to next season's warm spell due to El Nino, through to climate change in the next century. These forecasts rely on global observing systems, high-powered computers and highly trained professionals, linked by telecommunications, and are based on scientific understanding of the atmosphere and the coupled earth system.

The lecture will focus on this scientific basis, founded in physics, chemistry and other sciences, the concepts of time and space scales and how these lead us to incorporate expanding components of the earth system as the forecast period extends, and how uncertainties in our observations and knowledge and the fundamentals of our chaotic earth system limit our forecasts.

Biographical Sketch

Dr. McBean was born in Vancouver, B.C., Canada, on May 30, 1943. He received a B.Sc. in Physics (1964) and a Ph.D. in Physics and Oceanography (1970) from University of British Columbia, with an M-Sc. in Meteorology (1966) from McGill University in Montreal.

Dr. McBean worked with the Atmospheric Environment Service (AES) in various capacities for over 27 years. During 1966-67, he was a forecaster at the Toronto Weather Office.

The period of the 1970's was spent in Downsview, Ontario, where he was Chief of Boundary Layer Research Division and Acting Director, Air Quality and Inter-Environmental Research Branch. He moved to Victoria, British Columbia, in 1980, to the Institute of Ocean Sciences as a Senior Scientist with the Canadian Climate Centre of AES.

In 1988, Dr. McBean was appointed to the University of British Columbia (UBC) as Professor and Chair of the Atmospheric Science Program in the Departments of Geography and Oceanography. In 1992, he became Head of the Department of Oceanography.

On February 1, 1994, Dr. McBean returned to Environment Canada as Assistant Deputy Minister of the Atmospheric Environment Service.

He has extensive management and research experience and over 100 scientific publications and 13 chapters in books. He was awarded the President's Prize of the Canadian Meteorological and Oceanographic Society in 1975, the 1989 Patterson Medal and elected a Fellow of the American Meteorological Society in 1986 and a Fellow of the Royal Society of Canada in 1993 and of the American Meteorological Society in 1986.

Dr. McBean is currently Chairman of the Coordinating Committee for the World Climate Program, a member of the Executive Council of the World Meteorological Organization (WMO) and a member of The International Council of Scientific Unions (ICSU) Advisory Committee on the Environment and the Inter-American Institute. Other affiliations have included; Chairman of the Joint Scientific Committee for the World Climate Research Program sponsored by WMO and The International Council of Scientific Unions (ICSU) (1988-94), President of Canadian Meteorology and Oceanographic Society (1993) and Councillor of the American Meteorological Society (1993-96).

The Lectureship Fund

The Morris Katz Lectureship was made possible by the establishment of an Endowment Fund created through contributions from his family, his friends, his colleagues, private companies, universities and government. It is intended that this lectureship become self sustaining. Major contributions in support of this year's lecture have been made by:

Centre for Atmospheric Chemistry and Ontario Ministry of the Environment

If you share in Morris Katz' enthusiasm and commitment to having a cleaner environment, please make a contribution to support this ongoing educational activity. Send your contribution in care of: The Morris Katz Memorial Lectureship, Centre for Atmospheric Chemistry, York University, 4700 Keele Street, Toronto, Ontario, M3J 1P3 Canada.

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Web: <http://www.science.yorku.ca/cac/>