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A moving threat: the hemispheric transport of pollution

The 16th annual Harold I. Schiff Lecture will be presented by Daniel J. Jacob, professor of atmospheric chemistry & environmental engineering at Harvard University. His presentation, titled "The Hemispheric transport of pollution: Ozone, particles, and mercury", will take place on Friday, Dec. 8, 2:30pm in N940 Ross Building.

Right: Harvard University Professor Daniel Jacob will present the 16th annual Harold I. Schiff Lecture

Surface ozone, particulate matter (PM) and mercury are well-recognized man-made pollutants targeted by regulations throughout the developed world. Regulations are enacted by individual nations on their domestic emissions, but there is increasing evidence that a hemispheric approach is necessary because of pollutant transport on international and intercontinental scales. The associated environmental issues, transport pathways and process uncertainties including chemistry are very different for ozone, PM and mercury. In his presentation, Jacob will discuss each of these in turn. He will also illustrate how an integrated approach to hemispheric pollution research is useful because of commonality in modeling tools, methods of observation and policy challenges.



Jacob will discuss prospects for improving the understanding of long-range transport of pollution to the Arctic during the International Polar Year (2007-2008). He will describe plans for the NASA ARCTAS aircraft/satellite mission to be conducted in spring/summer 2008 as part of an international integrated study known as POLARCAT. The study will examine the environmental and air quality of the Earth's poles using aircraft, remote sensing, surface measurements, and modelling of climate change.

Jacob is the Vasco McCoy Family Professor of Atmospheric Chemistry & Environmental Engineering in the Division of Engineering & Applied Science at Harvard University. He holds a BSc in chemical engineering from the Ecole Supérieure de Physique et Chimie de Paris and a PhD in environmental engineering from the California Institute of Technology. Jacob has served as mission scientist on five NASA aircraft campaigns in the past decade. Among his professional honours are the NASA Distinguished Public Service Medal (2003), the AGU Macelwane Medal (1994) and a Packard Fellowship (1989). Jacob has published over 250 papers in professional journals and has trained 27 PhD students and 25 postdocs over the course of his career.

The Harold I. Schiff Lecture series was established in honour of Professor Emeritus Harold I. Schiff, who was York's founding dean of the Faculty of Science in 1968. Among his numerous achievements have been his major contributions to the development of techniques for measuring trace constituents in the upper atmosphere and to the interpretation of the physics and chemistry of the stratosphere.

An educator and scientist in the field of chemistry, Schiff began at York in 1964 and was named a member of York's Founders Society in honour of his contributions to the early development of the University.

While at York, Schiff was Chair of the Department of Chemistry and director of the Natural Science Program in 1964; dean of the Faculty of Science 1965 to 1972; and director of the Centre for Atmospheric Chemistry 1985 to 1989.

Professor Schiff passed away on March 31, 2003, while on vacation in Cuba.

The lecture has been organized by the [York Centre for Atmospheric Chemistry](#). For more information, e-mail cac@yorku.ca or contact Carol Weldon, administrative assistant, York Centre for Atmospheric Chemistry, at ext. 55410. The lecture is free and open to the York community.

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