

THE 17<sup>TH</sup> ANNUAL HAROLD I. SCHIFF LECTURE  
FACULTY OF SCIENCE AND ENGINEERING

Presented by:

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*Climate Change, and Atmosphere-Surface  
Interactions in the Arctic*

Tuesday, November 27<sup>th</sup>, 2007

2:30 p.m.

Senate Chamber, N940, Ross Building  
York University

**Abstract:** Climate change in the Arctic is proceeding at a pace considerably greater than the global average, with evident consequences for sea ice, snow packs, permafrost, the associated biota, and with important yet poorly understood climate and chemical exchange feedbacks between the surface and the atmosphere. Numerous questions now arise about interactions between a changing Arctic surface, and impacts on the frequency and nature of ozone and mercury depletion events, and the way toxic pollutants are processed in the Arctic. In this talk I will review the many contributions of Canadian science to a better understanding of the role of the cryosphere in mediating atmospheric composition, chemistry and climate in the Arctic. I will discuss current activities of the international project Ocean-Atmosphere-Sea Ice-Snowpack (OASIS), which focuses on chemical exchange between the surface and the atmosphere in the Arctic, and I will comment on the future of atmospheric chemistry research in the Arctic, and how it connects to Arctic and global climate change, and international politics.

*Organized by the York University Centre for Atmospheric Chemistry. Email: cac@yorku.ca*