

The Second Annual Harold I. Schiff Faculty of Pure and Applied Science Lectureship Series

Presented by

Professor James G. Anderson
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on

Thursday, October 8, 1992

3:30 pm

in

Osgoode Hall, Moot Court, Rm. 101

York University

The Airborne Arctic Ozone Campaign of 1991-1992: What are the Conclusions?

Abstract:

The United States executed an investigation of the mid and high latitude lower stratosphere using the high altitude NASA ER-2 aircraft for *in situ* observations and the long range DC-8 aircraft for remote soundings. The campaign extended over an eight month period from August 1991 through March 1992 with deployments out of Fairbanks, Alaska; Bangor, Maine; and Mountain View, California. The objectives of the mission address two questions: (1) Will significant ozone erosion occur within the Arctic vortex in the next ten years as chlorine loading in the stratosphere approaches five ppbv? (2) Which mechanisms are responsible for the observed ozone erosion poleward of 30N in the Winter/Spring northern hemisphere reported in satellite observations?

The presentation will focus on an interpretation of the results obtained from both aircraft with an emphasis on the observations that tested the processes controlling the loss rate of ozone at mid and high latitudes of the northern hemisphere. The role of heterogeneous processes in controlling free radical concentrations, of the propensity of polar stratospheric clouds to repartition inorganic chlorine, the ordering of catalytic processes in the ozone loss budget and the theoretical tools for interpreting the new *in situ* results will be emphasized.

For further information please call Carol Francis, 736-5410