Sodankylä Total Column Ozone Intercomparison Campaign, March and April 2006

B.M. Walsh[1], B.R. Bojkov[3], R.E. Evans[1], S.J. Oltmans[1], D. Quincy[2],

[1]NOAA Earth System Research Laboratory, GMD, 325 Broadway, Boulder, CO 80305; 303-497-6666, Fax: 303-497-5590; E-mail: Brooke.Walsh@noaa.gov
[2]Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder, 80309;
[3] NASA Goddard Space Flight Center, Mail Code 130, Greenbelt, Maryland 20771

The Sodankylä Total Column Ozone Intercomparison is a cooperative international project to assess the algorithms that measure total column ozone at large solar zenith angles and high total column ozone amounts. The campaign will take place just north of the Arctic Circle in Sodankylä, Finland (N 67°21'48.0" E 26°37'36.0") at the Finnish Meteorological Institute's Arctic Research Centre, from March 27-April 14, 2006. The NOAA/ESRL/GMD World Dobson Calibration Center, Boulder, CO will provide on-site data from the Secondary World Standard Dobson Spectrophotometer, D065, and European scientists will provide similar data from the European Standard Dobson Spectrophotometer, D064. These two instruments will produce base data sets that will be compared with satellite observations as well as balloon borne instruments and LIDAR measurements. The campaign will also test the accuracy of the corrections currently used to determine ozone under these specific conditions in Arctic regions (Figure1). The overall goal of the campaign is to define baseline measurement methods as well as to outline high latitude and ozone specific algorithms for all ozone related instruments recording under these extreme conditions. The overall result of the campaign will be to improve data sets and accuracy in measuring Artic ozone depletion.

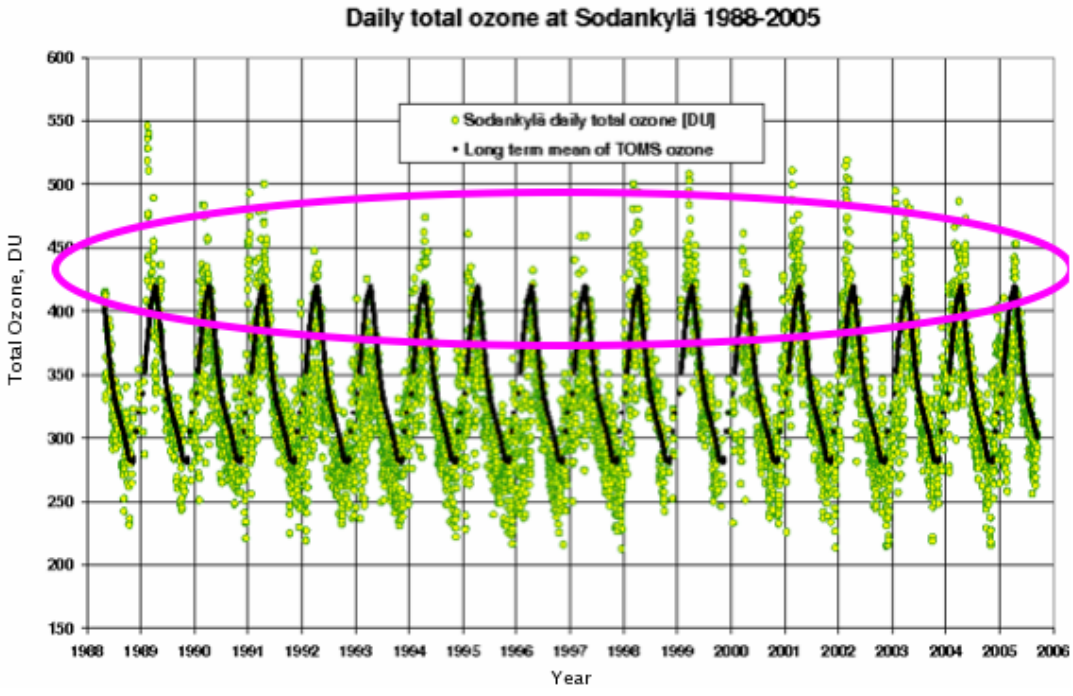

Figure 1. Springtime levels of total column ozone are consistently above 400 DU over Sodankylä, demonstrating that the location (N 67°21'48.0", E 26°37'36.0") is ideal for the conditions under which Arctic ozone can be measured effectively. (E. Kyrö, FMI-ARC)