



Total ozone loss during the 2011/12 Arctic winter and comparison to previous years

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The amount of ozone depletion in the Arctic is monitored every year since 1994 by comparison between total ozone measurements of the SAOZ / NDACC UV-Vis spectrometer and 3-D chemical transport model simulations in which ozone is considered as a passive tracer. The method allows to determine the period and the daily rate of ozone destruction and to calculate the amplitude of the cumulative loss at the end of the winter. The destruction is found to be highly dependent on the stratospheric temperature history, varying between 0-10% in relatively warm and short vortex duration years to 25-30% in colder and longer ones with an exception during the winter 2010/2011 when an unprecedented depletion of 39% was reported.

In this study, preliminary results for the winter 2011/12 will be presented and compared to previous winters. The focus will be put on the timing of the chemical ozone loss and on the ability of two 3D CTM (Reprobus and Slimcat) to reproduce the loss.