



## Long-term trend analysis of the ozone shield

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Multiple regression models have been extensively used in order to extract long-term trends from suitable atmospheric ozone data. In previous ozone assessments natural variability in stratospheric ozone measurements was usually described using Quasi Biennial Oscillation (QBO) and the eleven year solar cycle as explanatory variables. However, other processes, such as ozone destruction caused by violent volcanic eruptions, arctic ozone depletion and long-term climate variability (such as described by the North Atlantic Oscillation (NAO) respectively Arctic Oscillation (AO), El Nino Southern Oscillation (ENSO), etc.) are important factors modulating stratospheric ozone, which can have a substantial influence on long-term ozone trends, in particular when they influence ozone at the beginning or at the end of the time series. In this presentation long-term ground based total ozone measurements will be used and a variety of explanatory variables will be tested attempting to separate dynamically and chemically caused long-term ozone trends. This work is part of the EU-project CANDIDOZ (Chemical and Dynamical Influences on Decadal Ozone Change).