



Is upper stratospheric ozone beginning to turn around?

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We report on the recent evolution of upper stratospheric ozone as seen by lidar measurements at five selected NDSC stations between 45° S and 48° N. The lidar data are compared with correlative long-term measurements from the SAGE, HALOE and SBUV satellite instruments, and from ground-based NSDC microwave radiometers. In general, all instruments give a very similar evolution at each station. During the 1980s and early 1990s, upper stratospheric ozone has been declining by about –8% per decade at Lauder (45° S), and by about –6% per decade at the Northern Hemisphere stations. Since about 1997, ozone has levelled off at most stations, but not at the most northerly station Hohenpeissenberg (48° N). The levelling off is inline with the beginning decrease of stratospheric chlorine, and points to a beginning recovery of upper stratospheric ozone. The different behaviour at Hohenpeissenberg, however, leaves questions which need to be discussed.