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1 Seasonal and long-term variability of tropospheric ozone at the high-altitude observatory Terskol

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Continuous high-frequency (every minute) automatic measurements of surface ozone concentration have been made at the high-altitude observatory Terskol in the Northern Caucasus since 2003. This report presents the main experimental results including seasonal variations and factors affecting ozone levels (meteorological phenomena, intrusion of stratospheric ozone, transport of polluted air masses etc). Ozone concentrations at Terskol peak (3100 m above sea level) show a distinct seasonal cycle with the highest concentrations during the spring-summer and a peak amplitude of about 90 ppbv. The mean concentrations are founded to be roughly 40 ppbv in winter and 50 ppbv in summer.