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Surface ozone variability in Poland, 1995-2005

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The results of surface ozone measurements at different type of locations performed during the period 1995-2005 are presented. Mountain (Śnieżka), rural (Belsk, Jarczew), coastal (Ł eba), and urban (Warsaw) type of location has been selected for data analysis. Measurements at above mentioned stations have been executed by the Institute of Meteorology and Water Management and Institute of Geophysics, Polish Academy of Sciences.

Long-term analysis shows the positive trend of ozone concentrations at all stations. At the end of analyzed period mean ozone levels were up to 15% higher than in the middle of nineties. The strongest trend occurred during the autumn-winter season. Typical seasonal variation (spring or early summer maximum and autumn minimum) has been observed at all stations. Ozone values (hourly means) measured during so called "episodes" reached 210 μg/m^3 and were at similar level at all analyzed stations, however the highest monthly means have been measured at mountain and coastal stations, while the lowest at urban station. The frequency and intensity of episodes of high surface ozone levels during the analyzed period as well as the possible reasons of the episodes are analyzed.