Ground level ozone at the meteorological observatory Stará Lesná

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A b s t r a c t: Ozone data obtained at monitoring station Stará Lesná represent the special regional time series in the Slovak Republic. Mean hourly ozone concentrations measured by UV photometers at Stará Lesná during the 1992-2003 period were used. Average value 62.9 μg m^{-3} of ground level ozone concentration at Stará Lesná was observed. Maximal annual mean (71.8 μg m^{-3}), the highest number of exceedences (221) of the ambient air quality standard 110 μg m^{-3} (8 h) and maximal daily average (150 μg m^{-3}) of ground level ozone concentration was recorded in 1996. The primary spring maximum at Stará Lesná is connected with convenient photochemical conditions (decrease of relative humidity, increase of air temperature, positive changes in sunshine duration and UV radiation) and the abundance of pollution components as NO_2 and NO_3.

Key words: ground level ozone concentration, annual and daily course, air pollution over rural area, meteorological and radiation effects

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