

# **Variability of spectral UV irradiance in Austria in the years 1994 - 2005**

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Knowledge of spectral UV irradiance and its dependence on various parameters are prerequisites to quantitatively understand and estimate the effect and consequences of increased in UV radiation. The intensity of UV radiation reaching the earth's surface is influenced by the concentration of stratospheric ozone as well as by further atmospheric parameters, such as clouds, aerosols and surface albedo, which may change in the future. Knowledge of UV variability and the mechanisms that control this variability are essential for the development of UV scenarios related to climate change.

Influences of atmospheric variability on short- and long-term changes of spectral UV irradiance measured at the Sonnblick Observatory (47.03 N, 12.57 E, 3106 m) are studied. Spectral UV measurements at wavelengths from 290 nm to 400 nm performed during the period from 1994 to 2005 are used in this investigation. These measurements have been performed with a Brewer ozone single spectrophotometer and with a Bentham DM 150 spectroradiometer (double monochromator). Spectral UV irradiance time series have been analysed for possible trends. The influence of ozone, albedo and clouds on UV variability is evaluated separately using 10-year climatology.