



Signals from natural fluctuations in the re-evaluated surface UV irradiance record of Thessaloniki, Greece

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Recently the solar ultraviolet spectral irradiance record of Thessaloniki, Greece, (1990-2006) has been re-evaluated by revisiting the calibration history of the two Brewer spectroradiometers and by applying corrections for the temperature variations and the angular response of the instruments. Monthly averages of spectral irradiance at selected wavelengths are analyzed statistically to investigate the response of surface UV irradiance to various natural fluctuations in different seasons. These fluctuations include the 11-year solar cycle, the Quasi Biennial Oscillation (QBO), and the longterm trend. The effect of the long-term changes in the ozone and aerosol columns over Thessaloniki is also included in the analysis. The response of natural fluctuations that influence ozone is statistically significant in the UV-B wavelengths, and becomes weaker in the UV-A.