



Diurnal and daily variations in the surface ultraviolet radiation due to ozone variations in the troposphere at Tsukuba, Japan: Lidar observation and chemistry-climate model simulation

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Ozone vertical profile in the troposphere was continually measured by lidar at Tsukuba, Japan and diurnal variations of ozone was investigated in relation to the daily weather system variations. A chemistry-climate model including detailed tropospheric chemistry was also run to get ozone distribution, which holds consistency in time and space. Based on the observed and simulated ozone profile in the troposphere, diurnal and daily variations in the actinic flux of ultraviolet radiation at the surface were calculated under a clear sky assumption.