

# Ozone and UV radiation over southern South America: Climatology and anomalies

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Ozone and UV radiation were analyzed at eight stations from tropical to sub-Antarctic regions in South America. Ground UV irradiances were measured by multichannel radiometers as part of the Inter American Institute for Global Change Radiation network. The irradiance channels used for this study were centered at 305 nm (for UV-B measurements) and 340 nm (for UV-A measurements).

Results were presented as daily maximum irradiances, as monthly averaged, daily integrated irradiances and as the ratio of 305 nm to 340 nm. These findings are the first to be based on a long time series of semispectral data from the southern region of South America. As expected, the UV-B channel and total column ozone varied with latitude. The pattern of the UV-A channel was more complex because of local atmospheric conditions. Total column ozone levels of <220 Dobson Units were observed at all sites. Analysis of autocorrelations showed a larger persistence of total column

ozone level than irradiance. A decreas