



UV-B radiation, ozone, spore dosimetry and meteorological data from 1996 to 2006 at Southern Brazil

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During the past twenty years a negative trend in globally averaged total ozone column amount has been observed which is of great concern for the biosphere and human health. Profiles of ozone, UV-B (Brewer measurements) and spore dosimetry (by *Bacillus subtilis* strain TKJ6312) aiming the monitoring of the biological UV radiation and meteorological parameters (precipitation, temperature and relative humidity) have been evaluated at the Southern Space Observatory (29.4°S, 53.8°W), South of Brazil. The monitoring is important on this location, due mainly to factors as the secondary effect of ozone hole and the geomagnetic anomaly located on the region of the Observatory. The higher values of ozone were found for September (299.9 ± 8.0 UD), while the lowers for January (257.5 ± 2.5 UD) in agreement with latitude and seasonal ozone variation. About UV-B radiation and spore dosimetry, were observed the higher values for January (34.7 ± 7.9) · 10^3 W/m² and (4.8 ± 1.7) · 10^3 and the lowers for June (6.8 ± 0.5) · 10^3 W/m² and (0.4 ± 0.2) · 10^3 for both cases, respectively. The lowers temperatures were registered in July (17.8 ± 0.8) °C and the higher in January (28.8 ± 1.0) °C. The relative humidity presents in December ($73.5 \pm 5.8\%$) and June ($89.4 \pm 4.9\%$) were the lower and higher values respectively. The precipitation averages were about 129.7 ± 28.5 mm for all the time analyzed. These analyses will help to evaluate the profile of incidence of radiation UVB in the South Region of Brazil. The pertinent correlations will be presented.