



## **Forcing in the UV region during Saharan dust events. Preliminary results.**

**C. Guirado**, O.E. García, A.M. Díaz, F.J. Expósito and J.P. Díaz

Department of Physics, University of La Laguna, Avda. Astrofísico Francisco Sánchez s/n, La Laguna, S/C de Tenerife, 38202, Spain

(cguirado@ull.es / Fax: +34-922318228 / Phone: +34-922318232)

The importance of the harmful effects of UV radiation has warranted an important effort to understand all aspects of the UV radiative transfer in the atmosphere. Special attention must be put on the study of the factors that can affect these irradiance levels. The atmospheric aerosols, i.e. solid and liquid particles in the atmosphere, can affect the climate both directly, by radiation scattering and absorption, and indirectly, modifying the cloud condensation nuclei (CCN) properties. In order to evaluate the impact of the mineral dust over the UV energy transfer (UV forcing), we have located a double monochromator in a sea level station at Santa Cruz de Tenerife, Canary Island (28.5°N, 16.3°W). This region is ideally suited for the study of radiative effect of the dust because it experiences frequent Saharan dust events. The instrument has been calibrated, following the standard procedure for spectral irradiance calibration, each month with DXW 100 W standard lamps and twice by year with DXW 1000 W standard lamps NIST traceable. The Slaper *et al.* (1995) algorithm has been used to correct for misalignments in wavelength. The aerosol properties have been obtained from the aerosol MODIS product. We have obtained variations in the integrated UV energy, from 290 to 400 nm, ranging from 30% up to 60%, depending on the aerosol load.