



COST 726: Long term changes and climatology of UV radiation over Europe

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The ultraviolet (UV) radiation reaching the ground is only a small portion of the radiation we receive from the sun. Nevertheless, UV radiation has a wide variety of effects on humans and the environment. Studies on the impact of UV radiation require knowledge of UV climatology and changes that have occurred in the past. It would be of special importance having the estimates of average and extreme characteristics of the UV impact on various biological systems (including human beings) as well as doses over different time periods. For this the COST726 action was founded in 2004. The main objective of the Action is to advance the understanding of UV radiation distribution under various meteorological conditions in Europe in order to determine UV radiation climatology and assess UV changes over Europe. Since UV solar radiation plays an important role in many processes in the biosphere, including the influence on human organisms, and may be very harmful if UV exposure exceeds "safe" limits, the knowledge of biologically effective UV radiation doses and their geographical distribution and climatology in Europe is crucial for the European population, who will be addressed as the main end user of the Action. To achieve its general objective, the Action has the following practical objectives:

(i) to make an inventory of available solar radiation data sets, including UV data, spectral and broadband, ancillary data (ozone, clouds, sunshine etc.) and available

satellite data,

(ii) to advance the understanding of UV reconstruction models for the calculations of UV climatology and assessment of UV changes,

(iii) to advance the understanding of biological UV radiation climatology and changes in Europe,

(iv) to advance the understanding of UV influence on ecosystem, both on the basis of climatology and changes of selected effective UV radiation doses in Europe,

(v) to use the advanced knowledge under the points above, in order to elaborate a comprehensive analysis and information basis, addressed to beneficiaries,

(vi) Additionally, special attention should be paid to application of QC/QA procedures for the UV measurements with broadband instruments. To get homogeneity of the broadband data, an additional objective is to create a European reference group of broadband radiometers.

The COST726 action is organised in 4 working groups (WG). WG1 is responsible for data collection, WG2 for UV modelling, WG3 for the requirements for biological UV effects, WG4 for developing quality control recommendations and procedures.

The members of the action come from 22 European countries and two international organisations.

The major benefits of the Action will be a geographically broader and scientifically deeper knowledge of the climatology of UV radiation and of selected biologically effective UV radiation doses across Europe. The main beneficiaries will be the public, researchers in atmospheric and medical sciences as well as authorities and policy makers.

The progress of the Action and the outcome is presented at: www.cost726.org