



The role of aerosol forcing in the variations of Portuguese temperature parameters

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Atmospheric aerosol is one of the possible natural drivers of climatic variations. The origins of atmospheric aerosol are connected with volcanic, anthropogenic activities as well as with result of natural chemical processes in boundary layer and free atmosphere. Extensive remote sensing of aerosol parameters over different altitude/longitude/time ranges gives us possibility to investigate the role of aerosol variability in deviations of temperature parameters over selected regions.

New homogeneous data sets of more than centennial-long measurements of monthly averages for the four temperature parameters (minimum, maximum and average temperature and diurnal temperature range) provided by three Portuguese meteorological stations. The temperature records as well as aerosol parameters are analysed for period 1980-2005. In this study we have been compared the satellites series of aerosol contents in the region in attempt to establish their relations and understand the role of aerosol in the variations of Portuguese temperature.