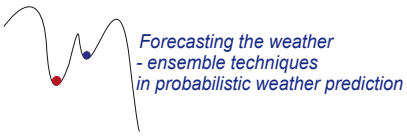
EMS Annual Meeting Abstracts
Vol. 8, EMS2011-655, 2011
11th EMS / 10th ECAM



Regional tendencies of mean and extreme wind characteristics in Hungary

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One of the most important effects of climate variability and climate change may come from changes in the intensity and frequency of climatic extremes. As a respond to the need of new climatological analyses complex wind field research was carried out on clarifying the possible changes of wind characteristics in the country. The aim of this research was to study and provide reliable information about the state and evaluation of wind climate of Hungary. First of all, special attention was paid on creation of a high quality, homogeneous data series. The research presented is based on 36-year-long (1975-2010) wind data series of 36 Hungarian synoptic meteorological stations. Regarding the great interest to document and evaluate the mean and extremes of near-surface wind that could assist in estimating the regional effects of climate change, complex wind climate analysis was carried out. Spatial and temporal distributions of mean and extreme wind characteristics were estimated; wind extremes and trends were interpolated and mapped over the country. Furthermore, measured and ERA Interim reanalysis data were compared in order to estimate the regional climate change effects.