



Analysis of extreme temperature events in Central Europe related to high pressure blocking situations in 2001-2011

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Atmospheric blocking is commonly known as situation where the zonal flow is interrupted by strong and persistent meridional flow. The normal eastward progression of synoptic disturbances is then obstructed, leading to episodes of prolonged extreme weather conditions. As the blocking highs can remain in place for several days or weeks, these weather patterns persist for a long time over certain areas, and are often accompanied by significant temperature and precipitation anomalies.

In this study a link between high pressure blocks over Euro - Atlantic region and extreme temperature events in Central Europe is explored. The spatial and seasonal variability of high pressure blocking events have been investigated, using results from ECMWF ERA Interim Analysis for the period 2001 – 2011. To identify objectively atmospheric blocked flows, the method of TM-Index by Tibaldi and Molteni with synoptic filters (B. Schalge, et al., 2011) was applied. The results have been compared to the synoptic records of extreme temperatures throughout this period. We present the results, analysis and discussion of this comparison.