



## **The influence of the winter blocking on the variability of Romanian temperature and precipitation**

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The mean, maximum and minimum winter air temperature (December, January, February) and precipitation variability recorded at 61 stations over Romania is described in connection with winter blocking episodes for the 1962-2000. It has been found that blocking episodes centred over the Atlantic Ocean are associated with lower than normal maximum temperature, minimum temperature and mean temperature over Romania. The correlation between a Euro-Atlantic blocking index and then maximum temperature at the 61 station used varies between 0.4 at the mountain stations and 0.8 at the low altitude stations. Negative anomalies of temperature are associated with positive anomalies of sea level pressure (SLP) and geopotential height at 500hPa (G500) centred over the northern Europe and Greenland, which bring cold air from Greenland over Europe, and negative anomalies of SLP and G500 over the southern part of the Atlantic Ocean. For the minimum temperature and the mean temperature the correlation coefficient varies between -0.1 and -0.8 in rest. During blocking episodes over the Pacific region, it has been found that precipitation totals for DJF are higher than normal over the country. The highest values of the correlation coefficient between a north Pacific blocking index and precipitation anomalies are found in the southern part of the country and vary between 0.3 and 0.8. We suggest that Northern Hemisphere atmospheric blocking variability is strongly connected to extreme regional temperature and precipitation events and is responsible for a large part of interannual variability of winter temperature and precipitation from Eastern Europe.