



Precipitation Variability in Connection to Air Blocking Circulation in Southern Part of Romania

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The blocking air circulation over Romania affects frequency and amount of precipitation. In general, precipitation variability in the southern part of Romania is strongly influenced by blocking activity in the Atlantic-European region during winter. In our study we investigated the relationship between the variability of precipitation recorded at six meteorological stations in southern part of Romania and blocking frequency. Monthly precipitation data for the period 1961-2002 and the geopotential heights at 500hPa pressure level from ERA40 database were used in our study. The blocking circulation frequency and persistence were determined by computed using bidimensional Tibaldi-Molteni index for the selected period. The results have shown that high (low) blocking activity is associated to low (high) precipitation frequency in southern part of Romania. Persistent blocking circulation regime is associated with persistent meteorological drought in southern part of Romania. The Angot index was used to characterize the drought. The results are consistent with blocking-North Atlantic Oscillation relationship as established in our previous studies.