



Teleconnection patterns influencing the precipitation variability in the Danube basin

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In this study, the link between the associated indices of the teleconnections patterns and the first principal component of the precipitation in the Danube basin, for each season, is investigated by means of the stepwise regressions, composite maps and power spectra.

Eight teleconnections patterns were considered: the Arctic Oscillation (AO), the Atlantic Meridional Oscillation (AMO), the East Atlantic pattern (EA), the East Atlantic/ Western Russia (EAWRUS), the Greenland-Balkan Oscillation (GBO), the North Atlantic Oscillation (NAO), the Scandinavian pattern (SCAND) and the Southern Oscillation (SO).

We have found that their influence on the precipitation depends on the season and the position of the station in the Danube basin. For instance, in winter time, the signals with high statistical significance, in the precipitation in the middle and lower basin, are produced of GBO, AO, EAWRUS and NAO. Also in the winter season, AMO brings a contribution to precipitation in the Danube basin, but at a confidence level much lower (~ 90%).