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On the decadal variability of atmospheric large-scale modes: teleconnections with observational data from Romania

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The long-term evolution of surface air temperature (SAT) and precipitation (P) in Romania is compared to the North Atlantic Oscillation (NAO) and Atlantic Multidecadal Oscillation (AMO) known as major patterns of atmospheric circulation variability with great impact on temperature and precipitation over Europe. Spectral analysis of SAT, P, NAO and AMO indices shows variations of short period (2-7 years), decadal variations with a period of $\sim$11 years (Schwabe cycle) and variations with longer periods 22 and/or 30 years (Hale cycle) and even longer. The decadal and the interdecadal variability are compared to solar/geomagnetic forcing at the corresponding timescales (Schwabe and Hale cycle). Possible teleconnections with other large-scale climate variability modes are discussed.