



Near-term climate predictability over Southern Europe

R. Bojariu, L. Velea, and R. Cica

Administratia Nationala de Meteorologie, Bucharest, Romania (bojariu@meteoromania.ro, +40 21 3166672)

Our study investigates climate predictability over Southern Europe on seasonal to decadal scales. Data used are station and gridded observations, reanalysis fields and model results. We identified predictability sources using trend analyses, linear models based on Canonical Correlation Analysis (CCA) and nonlinear analogue approach. Cross-validations and skill evaluations have been performed basically on the interval 1961-2011. Identified sources of near-term predictability consist of sea surface temperature (SST) patterns and cryosphere-related variability. North Atlantic, Southern Europe and Northern Africa exhibit useful predictive skill for above and below terciles of winter sea level pressure (SLP). This skill patterns show higher scores for areas related to centers of action of North Atlantic/Arctic Oscillation (NAO/AO) suggesting the existence of predictive mechanisms in which SSTs and other boundary layer variables (snow cover extent) are involved. Hindcasts experiments also indicate Atlantic Multidecadal Oscillation (AMO) and climate change signal as phenomena based sources for climate predictability over Southern Europe.