



Influences of regional SST variability on extreme precipitation in Romania

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Atmospheric circulation provides permanent heat and humidity transfer between sea surface and the surrounding regions. Our study aims to identify the role of regional sea surface temperature anomalies and related atmospheric circulation patterns on extreme precipitation in Romania. We used daily and monthly precipitation amounts from 104 Romanian stations, sea surface temperature (SST) anomalies over the Mediterranean and Black Seas, and geopotential heights over the Northern Hemisphere for the interval 1961-2002. Geopotential and SST data are extracted from ERA-40. Our results show that on regional scale, Black Sea SST seems to modulate extreme precipitation, especially in the cold season. The cold season signal is robust and may be used in predictive methodologies.