

Abstract

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Influence of circulation indices upon winter temperature variability in Egypt

Trends of winter surface air temperature anomalies, WSATA, are investigated using data obtained from 13 monitoring stations. The analysis is performed in two steps one deals with separate stations independently and the other deals with stations' groups. Groups' anomalies are correlated to circulation indices showing negative correlation between temperature with North Atlantic Oscillations and positive one with Mediterranean Oscillation Index. Both power analysis and frequency distribution analysis are applied. The results show existence of Schwabe, Hale and Gleissberg cycles and declare that there are no critical thermal changes of climate in Egypt. It is concluded that the temperature changes during the past three decades are not only because of the human activity but the extraterrestrial impacts as well