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The relation of monthly temperature of some sample stations in Iran with different ENSO indices

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Abstract

In this study monthly average temperature of Bandarabbas, Booshehr, Esfahan, Sanandaj, Tehran and Mashhad stations during 1960 to 2005 and also monthly data related to many variables of Enso index (Nino1+2, Nino3, Nino 3+4, Nino 4, MEI, Best) were used. Firstly correlation of each month of year with analogous months was calculated by using Pearson correlation coefficient and in addition to it correlation with one month delay time was also calculated. Meantime some stations showed fairly strong relation with surveyed variables in some months and after calculating their correlation with one month delay time, correlation of most stations with surveying variables were decreased and number of months with significant relation was increased in most cases. But amount of their definition coefficient was less than definition coefficient in simultaneous correlation mode. In relation to Nino 1+2 indexes Sanandaj station showed the most correlation in July. Yet in relation with other indices it has not had significant relation. In relation to other indices, Booshehr station has the highest correlation toward other stations during year especially in October. It seems that correlation of temperature of sample stations with different indices of ENSO has just been limited to two or three months of year that its amount in South stations (Booshehr and Bandarabbas) has been more than north stations.

Keywords: ENSO indices, temperature, Pearson method, Time delay, Iran.

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