



Relationship between the Siberian High and rainfall over Cyprus

P. Lingis (1, 2), R. Thompson (1), S. Michaelides (2)

(1) Institute of Atmospheric and Environmental Science, University of Edinburgh

(2) Meteorological Service of Cyprus

lingis.panayiotis@gmail.com / 0035799593097

The effect of the Siberian High on the precipitation over the island of Cyprus is examined by constructing indices that define the strength and the geographical displacement of the High. A network of 20 rain gauge stations covering the whole area of Cyprus were selected. Both coastal and inland stations were used, in an attempt to identify a possible relation between rainfall resulting from fronts, advection or instability, on the one hand, and the Siberian High indices on the other hand.

The pressure field of the Siberian High was found to affect the precipitation of each month differently. The results are consistent for each case and the geographical location of each station was found to play an important role. The first index (the first principal component, that is equivalent to the mean sea level pressure of the SH) was found to be mainly related with precipitation over the western part of Cyprus during February and March; the second index (that defines the N-S displacement of the SH) affects mainly the precipitation over Cyprus for January; the third index (that is defined as the E-W displacement) affects the precipitation in March; and the fourth index (that indicates the curvature of the pressure field) was related to precipitation in October, November and December.