



## **Thermodynamic indices over the area of Cyprus**

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The objective of this study is the examination of the behavior of various thermodynamic indices with respect to the reported weather phenomena over the area of Cyprus. The thermodynamic indices were grouped into three classes, namely, “no precipitation”, “precipitation” and “hail”. The “no precipitation” class refers to the range of the values of the indices which advocates no precipitation at all; the “precipitation” class refers to the range of values that advocates precipitation, such as rain and showers (excluding hail); and finally, the “hail” class which advocates hail. For each index, monthly and seasonal variations were studied and classified. Also, an attempt was made to specify the threshold values for each class and compare them with the thresholds that are proposed in the international literature. The results of the above classification are made available to the local weather forecasters in various forms and can be used for improving the very short range weather forecasts. For the needs of the present study, the archives of the Cyprus Meteorological Service and online resources available from the University of Wyoming were used; a 10 year period from 1997 to 2006 was examined. The indices’ values were calculated from the radiosonde data valid for 1200UTC from Athalassa station, using the RAOB software.