



Atmospheric instability features associated to the dislocation of tropical air mass over Romania – a case study

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The 2007 summer was characterized by an unusual high frequency of tropical origin air mass advections over Romania leading to extremely high temperature periods. Consequently, the absolute maximum temperature for Romania was recorded in July. These very hot periods were followed by short events of intense atmospheric instability. During 10-12th of July, the atmospheric instability covered the entire Romanian area. Heavy rain, strong winds and flash floods affected especially the eastern Romania.

The aim of this paper is to underline the characteristics of the tropical air mass invasions and to analyse the tropical air mass and frontal instability features for the above mentioned episode. Classical observations and remote sensing data together with global and limited area models output were used for the analysis of meteorological fields evolution mainly in high and medium troposphere. A comparison of the models performances for the precipitation forecast is included.