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Meteorological and Synoptic Aspects of the Novorossiysk Bora Forming and Evolution

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The genetic and synoptic classification of the Novorossiysk Bora was done using the daily observations on the Novorossiysk meteorological station, the radio sounding data in Tuapse and Rostov-on-Don, and other available synoptic information. Then the basic scenarios of the beginning and evolution of this dangerous weather event for the Black Sea coast were worked out.
According to the genetic classification the Bora was divided into four types: frontal, air-mass, monsoon and gravity. For each type the quantitative criteria were elaborated, which can be used in future in the prediction of this destructive event nearby Novorossiysk.
The analysis of the circulation conditions also allowed to work out the synoptic classification. According to this classification all the variety of the synoptic processes was combined into four classes: Azores, North-Atlantic, Siberian and Arctic. For each class the typical schemes of the synoptic processes and forecasting maps of the geopotential difference on the H1000 between the European Part of Russia and Novorossiysk were obtained before 48 hours to the beginning of the Bora. It was shown, that the most complicated situations for the prediction concerned with the entrance of the active anticyclones of the Arctic class to the European part of Russia, and the most successful forecasts concerned with the stationary anticyclones of the Siberian class.