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The probability of the mountain wave generation over the European part of the Russian Federation in May–August 2023 is studied. The conditions for the occurrence of strong downdrafts and leeward orographic turbulence are discussed for 4 domains including the mountain systems of the Urals, the North Caucasus, the Kola Peninsula and Crimea. An analysis of circulation and thermodynamic conditions favorable for the generation of mountain waves over European Russia were calculated using the initial and forecast data of the COSMO-Ru6.6 model. The accuracy of forecasting the parameters used in the calculations was assessed. It was found that in some cases, moderate turbulence reported in AIREP Speci aircraft observations near the areas with complex terrain could be of orographic nature.

Keywords: mountain waves, pilot reports, COSMO-Ru model, orographic turbulence

Tab. 8. Fig. 5. Ref. 19.