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The physical and synoptic predictors are presented, which allow refining the automated forecasts of heavy precipitation implemented in the Hydrometeorological Center of Russia on the recommendation of the Roshydromet Central Methodological Forecasting Commission, as well as hydrodynamic forecasts of precipitation and forecasts of weather forecasters. The physical substantiation of the considered predictors is given. Their optimal values for the formation of heavy precipitation are determined. The parameters of convection and the intensity of the convective phenomenon diagnosed on the basis of radar data further expand the possibilities of refining forecasts of heavy and very heavy precipitation and, if necessary, allow issuing a storm warning with a sufficient lead time or refining a storm warning.

Keywords: heavy precipitation, physical and synoptic predictors, diagnosed convection parameters, DMRL-C data

Fig. 5. Ref. 9.