DOI: https://doi.org/10.37162/2618-9631-2024-1-6-23

Application of stochastic parameter perturbations in SL-AV model version for long-range forecasting / Alipova K.A., Tolstykh M.A., Fadeev R.Yu. // Hydrometeorological Research and Forecasting, 2024, no. 1 (391), pp. 6-23.

The paper examines the impact of applying the disturbances of parameters for the schemes describing subgrid-scale processes in the SL-AV atmosphere model on the characteristics of average monthly atmospheric circulation in ensemble subseasonal forecasts. 25-year retrospective forecasts are computed for different seasons with different perturbation sets, the results are compared with forecasts without perturbations. It is shown that perturbing three parameters reduces forecast errors of some variables as compared to undisturbed forecasts without introducing errors into integral characteristics.

Keywords: long-range weather forecasting, stochastic perturbation of parametrization parameters, SL-AV global atmospheric model

Tab. 3. Fig. 7. Ref. 25.