

DOI: <https://doi.org/10.37162/2618-9631-2026-1-6-29>

A concept of global tropopause prediction in the Russian Area Forecast Center / Ivanova A.R., Sokolova U.O., Komasko N.I., Skriptunova E.N., Shakina N.P., Zavialova A.A. // Hydrometeorological research and forecasts, 2026, no. 1 (399), pp. 6-29.

The paper examines various tropopause definitions (WMO, PTGT, and dynamic) for operational weather information support for aviation based on the output of a global numerical weather prediction model. The limitations of each approach are discussed, and a rationale for a change in the sign of the Ertel's potential vorticity upon crossing the equator is presented. The validity for choosing an isertelic surface identifying the extratropical tropopause and an isentropic surface for forecasting the tropical tropopause is presented. An example of a forecast of tropopause characteristics based on a combination of two concepts for the entire globe is given.

Keywords: Russian Area Forecast Center, tropopause, global NWP model, radiosonde observations, Ertel's potential vorticity, isentropic surface

Tab. 8. Fig. 7. Ref. 19.