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**Wind gust nowcasting using numerical forecasts, radar data and machine learning: definitions and terms, observational tools and models** / Muravev A.V., Kiktev D.B., Smirnov A.V. // Hydrometeorological research and forecasts. 2025, no. 3 (397), pp. 8-31.

A brief overview of modern tools and methods for nowcasting of surface wind gusts using the output of numerical weather prediction, radar observations, and machine learning techniques is presented. The relevant definitions and terms are given, observational tools and methods for processing observations are described, wind gust models and their nowcasting systems are discussed. The overview is compiled taking into account the domestic operational technologies involved in the tests of a new gust nowcasting version conducted in 2024.

*Keywords:* wind gust nowcasting, numerical weather prediction, radar observations, machine learning

Ref. 80.