



TAF verification - improvements of the thunderstorm forecasts at Croatian airports

Jadran Jurković (1), Vinko Šoljan (1), Zoran Pasarić (2), and Igor Kos (1)

(1) Croatia Control Ltd, Jadran Jurković, Velika Gorica, Croatia (jadran.jurkovic@crocontrol.hr), (2) Department of Geophysics, Faculty of Science, University of Zagreb, Zagreb, Croatia (pasaric@irb.hr)

Thunderstorms are one of the greatest dangers to aviation. Despite their nature and the challenge they pose to forecasting, there is a growing demand for accurate area and point forecasts of thunderstorms. Terminal aerodrome forecast (TAF) is the standard ICAO product used for flight planning purposes worldwide. Written by forecaster, it contains wind, visibility, weather phenomena, cloud conditions and temperature forecasts for the airport for a 24 hours period.

Recently, standard verification procedure of TAF forecasts in Croatia Control Ltd. has been established and regular seasonal verification reports for winter and summer were produced. Verification follows the approach proposed by Mahringer (2008) which is used in Austro Control. TAF forecasted conditions are verified with observed ones (METAR reports) for each hour of the TAF and weather element.

Here, we present results of the verification of thunderstorm forecasts for the past 10 years. Results were analyzed by different verification scores, all of them showing a clear trend of increased quality of forecasts during the period. The trend is pronounced even more for the airports at the coast of the Adriatic sea. Although the form of forecasts remained the same, during years there have been many changes, e.g., development of forecasting procedures, improvement of numerical models and visualization, changes of staff, additional efforts in training at internal and external workshops and seminars (e.g. ESSL courses). After all, this positive trend in the quality of convection forecasting in Croatia is just one part of advances of knowledge in this field in past decades.