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Verification of different forecasts of Hungarian Meteorological Service

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In this paper I show the results of the forecasts made by the Hungarian Meteorological Service. I focus on the general short- and medium-range forecasts, which contains cloudiness, precipitation, wind speed and temperature for six regions of Hungary. I would like to show the results of some special forecasts as well, such as precipitation predictions which are made for the catchment area of Danube and Tisza rivers, and daily mean temperature predictions used by Hungarian energy companies. The product received by the user is made by the general forecaster, but these predictions are based on the ALADIN and ECMWF outputs. Because of these, the product of the forecaster and the models were also verified. Method like this is able to show us, which weather elements are more difficult to forecast or which regions have higher errors. During the verification procedure the basic errors (mean error, mean absolute error) are calculated. Precipitation amount is classified into five categories, and scores like POD, TS, PC,...etc. were defined by contingency table determined by these categories. The procedure runs fully automatically, all the things forecasters have to do is to print the daily result each morning. Beside the daily result, verification is also made for longer periods like week, month or year. Analyzing the results of longer periods we can say that the best predictions are made for the first few days, and precipitation forecasts are less good for mountainous areas, even, the scores of the forecasters sometimes are higher than the errors of the models. Since forecaster receive results next day, it can helps him/her to reduce mistakes and learn the weakness of the models. This paper contains the verification scores, their trends, the method by which these scores are calculated, and some case studies on worse forecasts.