

The challenge to verify operational weather warnings

T. Weusthoff and M. Arpagaus

MeteoSwiss, Zuerich, Switzerland (tanja.weusthoff@meteoswiss.ch)

The increasing temporal and spatial resolution of numerical weather forecast models requires advanced verification methods to reduce the so-called „double penalty“ problem. Instead of a point-by-point comparison, new verification methods take into account the neighbourhood of the point of interest or compare objects in the forecast with objects in the observation.

Higher resolution models allow more precise weather warnings for small warning regions: For example, MeteoSwiss issues operational warnings for 138 regions in Switzerland. With regions that small, the problem of high-resolution model verification also becomes a topic for warning verification. Another important point is the dependence of warnings in space and time, which needs to be taken into account. MeteoSwiss is developing an automatic verification tool that allows a systematic evaluation of the issued warnings. The method should be „tolerant“ in terms of near hits and small displacements.