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Correction tool of an automatic weather forecast database for severe events

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Because of the availability of huge and increasing amount of data and the decreasing man-power dedicated to weather forecasting, Météo-France has started developing an automatic weather forecast database. This database is built by combining several numerical weather prediction models (ARPEGE, HRES, AROME, AROME-IFS) and ensemble systems (PEARP, EPS, AROME-PE) at different running times. It provides forecast probabilistic data and preferred values in deterministic form to serve the general public across the globe and over all lead times from day one to 14 (with priority for France for day one to 3).

In case of severe weather events, a correction tool will be applied to the automatic forecasts in order to avoid eventual unconsistencies with the expert scenario made by forecasters in particular when an extreme event is expected. Several ideas are being evaluated : replacing the automatic forecast with 1) the closest run among all the runs used to build the automatic forecast to the expert scenario, 2) a weighted average of the best runs, 3) the digitalized expert scenario. The methodology used to mesure the distance between the automatic forecast and the expert scenario will be presented.

In this presentation, we focus on results over France up to day one lead-time.

Thematic area

Severe weather and hazard forecasting

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