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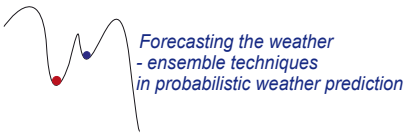

Skill assessmnet of the new ECMWF 100-meter wind fields

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On 26 January 2010, the horizontal resolution of the ECMWF forecasting systems, the high-resolution single forecast (HRES) and data assimilation (4DVAR) systems, and ensemble prediction system (EPS) was increased (model cycle Cy36r1). More specifically, the HRES and 4DVAR resolution were increased from T799 (25 km grid) to T1279 (16 km), while the EPS resolution changed from T399 (50 km) to T639 (32 km) for the first 10 days of the forecast and from T255 (80 km) to T319 (65 km) for day 10 onwards. The resolution of the wave model coupled to the HRES was also increased from 40 km to 28 km, and the resolution of the wave model coupled to the EPS was increased from 111 km to 55 km, while the representation of the wave spectrum was improved so that now there are 36 frequencies and 36 directions (HRES mode). The higher resolution systems are expected to produce a better representation of atmospheric features such as tropical storms, fronts, heavy rainfall and land/sea transitions. The impact of the latest upgrade on the performance of HRES and EPS forecasts has been studied focusing on various surface weather parameters. During this investigation, the impact of recent changes are discussed, with emphasis given on the skill assessment of 100-meter wind fields for different land and sea areas of Europe.