PEARP, the Météo-France Ensemble Prediction System

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PEARP (Prévision d’Ensemble ARPEGE) is the Météo-France short-range Ensemble Prediction System based of the ARPEGE/IFS software. PEARP is a global system and the varying resolution of ARPEGE allows to produce with one single system high resolution probabilistic forecasts over Western Europe and ensemble products for TC tracks over the Tropical Atlantic area and Indian Ocean as well. Initial uncertainty is taken into account by coupling a small Ensemble Data assimilation System with singular vectors technique and a multi-physics approach is used to represent model error.

Impact of the recent modification of the ensemble size (from 11 to 35 members) and the model resolution increase (from 25 to 15 km over France) on classical probabilistic scores will be shown. Particular emphasis will be put on the skill of this system regarding probabilistic predictions of some recent high impact weather events (windstorms and heavy precipitating events over the Mediterranean area).