



Verification of fog and low cloud simulations using an object oriented method

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Fog and low level clouds have an important impact on human safety and economy. Therefore, high quality forecasting of the fog cycle is desirable to minimize potential risks or costs in those activities where presence of fog has an impact. Numerical modelling of fog remains an important challenge due to the diversity and scales of the mechanisms involved in fog processes.

This work presents an objective way to verify numerical simulations against satellite images of fog and low clouds products. It is based on the SAL algorithm which compares patterns present in a domain, assessing three aspects: the structure (S), amplitude (A) and location (L). Although this method was originally applied to the verification of precipitation forecasts we consider it can be extended to the verification of fog.

Examples with real fog cases are used in this work to illustrate how this oriented-based verification provides consistent results. Simulations from the semi-operational numerical model HARMONIE, running at AEMET, are compared with satellite MSG products of cloud type.