

## Operational predictability of winter blocking at ECMWF: an update

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**Abstract.** Seven winters of analyses and forecasts from the operational archives of the European Centre for Medium Range Weather Forecast had been previously analyzed to assess the performance of the model in forecasting blocking events. This work updates some of this previous diagnostic work to the last five winters, from 1987/88 to 1991/92. The data set therefore covers all winter seasons (DJF) from 1980/81 to 1991/92, and consists of daily northern hemisphere 500 hPa geopotential height analyses and of the ten corresponding forecasts verifying on the same day ("Lorenz data"). Local blocking and sector blocking have been defined, using different modifications of the original Lejenas and Økland index. The comparison between the first seven and the last five winters, within the restrictions imposed by limited length of the data set, suggests a much improved situation as far as model climatology of blocking is concerned, especially over the Euro-Atlantic region. Operational predictability of blocking as an initial value problem is also shown to be measurably improved, in both Atlantic and Pacific sectors. All such improvements are shown to have taken place together with a considerable reduction of the model systematic error. Nevertheless, forecasting blocking in the medium range remains a difficult task for the model. More work is needed to understand whether the improvements are to be ascribed to the increased model resolution or to better physical parametrisations.

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