



## **Representation of synoptic-scale Rossby Wave Packets and Blocking in the S2S Prediction Project Database**

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Rosby wave packets (RWPs) are one of the dominating midlatitude atmospheric phenomena. A realistic representation of RWPs is essential for a skillful prediction of the day-to-day weather and its extremes. Using an objective RWP tracking technique, this study verifies the representation of RWPs for all models in the Subseasonal to Seasonal Prediction Project database. Consistent with reanalyses, the reforecasts show one RWP every four days. The three models with the coarsest grid spacing tend to overestimate the propagation distance due to a negative RWP decay frequency bias over the Atlantic-European sector. A verification of atmospheric blocking suggests that this bias is related to a negative blocking frequency bias in the same region. The biases are reduced in models with finer grid spacing. However, that this bias reduction is not only dependent on the grid spacing highlights the effect of the different representation of key-physical processes on RWPs and blocking.