

## **Projekt 464**

### **Mechanisms and predictability of North Atlantic decadal climate variability**

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## **1 Project overview**

North Atlantic climate exhibits strong decadal-to-multidecadal variability with significant global impacts. These impacts include European summer time temperatures, North Atlantic hurricanes, and droughts over Northern Africa, Brazil and India. These decadal-to-multidecadal variations are potentially predictable, and efforts are underway to develop decadal prediction systems. However, these efforts are hampered by major gaps in our understanding of the mechanisms involved. Lack of data is a primary reason for this. In this project, a hierarchy of models will be used to comprehensively map the parameter space of possible solutions, so that the limited observations can be better used to constrain the mechanisms involved. Other problems associated with decadal forecasting will also be tackled. In particular, innovative forecast initialisation schemes for extending the retrospective forecasts (hindcast) period back past the 1950s will be investigated.