

Projekt:**Berichtszeitraum:****Projekttitel:** Mid-latitude ocean-atmosphere interaction

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Understanding natural unforced variations of climate on decadal-to-multidecadal timescales is important because of their large socio-economic impacts and potential to mask anthropogenic climate change. State-of-the-art climate models show little agreement on the nature of decadal-to-multi-decadal climate variability. Limited understanding of key processes is at the heart of the problem. The aim of this project is to further our understanding of two such processes through numerical experiments with climate models:

1. The role of the stratosphere in ocean-atmosphere interaction, and in observed decadal-to-multidecadal climate variability and teleconnections.
2. The ocean-atmosphere coupling over ocean fronts, particularly those associated with mid-latitude western boundary currents.

The work is funded through the BMBF's Mittelfristige Klimaprognosen (MiKlip) project. It will focus on climate variations in the Pacific sector, including their teleconnections to the Atlantic sector, and will also cover seasonal-to-interannual timescales. Thus, the experiments here complement those proposed in DKRZ projects 464, which focus only on Atlantic Multi-decadal variability. Planned experiments are summarized in Table 1.