

Patterns of climate variability and change forcing the ocean

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Hands-on session

Using the Climate Explorer, (ocean) reanalysis data and observations will be analysed by the students. This will be done in two directions.

First, a study of one of the standard patterns of climate variability is undertaken, the students can choose the one most relevant for their own research. They are asked to characterize the spatial and temporal properties of that pattern as well as its teleconnections to the rest of the world, including the area of interest.

Next, the opposite approach is taken: starting from a monthly time series, an investigation is made into the patterns of climate variability that affect this time series most strongly. These may coincide with one of the standard patterns discussed before, but may also turn out to be different. For this exercise it is useful if the students have a (preferably monthly) time series of their own that they wish to analyse as an ascii file in the format

Year1	Val(Jan1)	Val(Feb1)	...	Val(Dec1)
Year2	Val(Jan2)	Val(Feb2)	...	Val(Dec2)
...

The goal of the lecture and session is two-fold: to have a broad grasp of the most important patterns of climate variability, and the ability to investigate large-scale patterns further with various statistical techniques.