On the length and time scales of the power supply to the ocean between the meso-scale and the synoptic-scale

by **Achim Wirth**
(Univ. Grenoble Alpes, CNRS, Grenoble INP, LEGI, 38000 Grenoble, France)

The dependence of the power supply to the ocean on the coarse-graining range of the atmospheric and oceanic velocity in space from 0.5° to 10° and time from 6h to 40 days is determined. In the area of the Gulf Stream and the Kuroshio extensions the dependence of the power-input on space-time coarse-graining varies over tenfold for the coarse-graining considered. The strongest gradients of power input are found for the smallest and shortest coarse-graining scales with he opposing gradients in space (including smaller scales reduces the power input) and time (including shorter scales increases the power input).

For more information I refer to :

https://www.ocean-sci-discuss.net/os-2019-128/#discussion