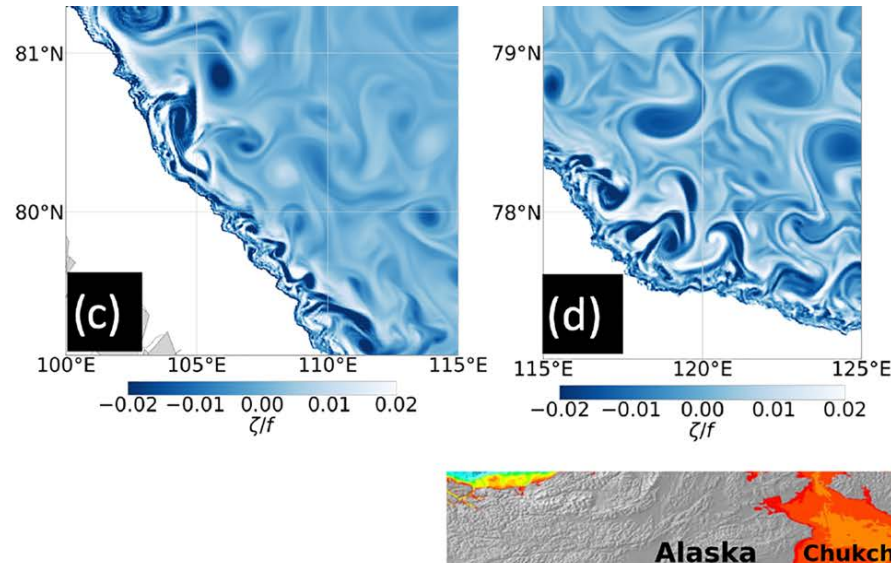


Size of eddies in the Arctic Ocean



Relative vorticity in model simulations (Wang et al. 2020). Anticyclonic (dark) and cyclonic (light) eddies are responsible for lateral mixing. They are formed as a result of baroclinic instability.

Goal of thesis:

- Create a map of the wavelength and growth rate of baroclinic instability in the Arctic Ocean based on linear stability theory, using climatological and model data on temperature and salinity.
- Compare the size and distribution of eddies simulated by a high-resolution numerical model with the theory and observational data available in the literature.

Requirements

- Good knowledge of ocean dynamics, experience with Matlab or Python