



## **Vortex Rossby wave interaction**

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We investigate the interaction of a Rossby wave with a vortex on a topographic B-plane. In a former study (Flor & Eames, *J. Fluid Mech* 2002) we have shown that the propagation direction and speed of vortices on the B-plane depends on the vortex velocity profile, with isolated vortices moving to the North, and non-isolated vortices (i.e. with a  $1/r$  far field velocity profile) moving to the West. In the latter case the strong interaction with the vortex-induced Rossby-waves dominates, whereas for isolated vortices weak Rossby waves are generated in the near field and their influence is of minor importance. In this study we consider multiple monopolar vortices as well as sinusoidal Rossby wave perturbed vortices, and show how the vortex propagation direction and speed are modified due to the Rossby waves. In varying the amplitude of the waves, various interaction scenarios occur.