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Inertia-Gravity Waves generated by near Balanced Flow in 2 Layer Shallow Water Turbulence on the β-Plane

Achim Wirth
CNRS, LEGI, Grenoble, France (achim.wirth@hmg.inpg.fr)

Using a fine resolution numerical model ($4000^2 \times 2$ grid-points) of the two layer shallow-water equations of the mid-latitude β-plane dynamics, it is shown that there is no sudden breakdown of balance in the turbulent enstrophy-cascade but a faint and continuous emission of inertia gravity waves. The wave energy accumulates in the equator-ward region of the domain due to the Coriolis parameter depending on latitude and the dispersion relation of inertia gravity waves.