

Spectrally resolved Lorenz Energy Cycle in the Ocean

Freitag, 12. April 2024 11:30 (20 Minuten)

The inverse eddy kinetic energy (EKE) cascade from small to larger scales appears to be a robust observed feature of ocean dynamics. It follows the traditional paradigm of an inverse eddy energy cascade from the scales of baroclinic eddy production L to dissipation at larger scales. Challenging this paradigm, however, we present a scale-dependent sign of the baroclinic EKE production term which is a source of EKE at L , but can become a sink at larger scales of the same magnitude in a variety of realistic and idealised ocean models. The Lorenz energy cycle is spectrally resolved to understand the energy cascades and to resolve our missing understanding of the eddy energy route to dissipation.

Hauptautoren: EDEN, Carsten; DETTMER, Jan

Vortragende(r): EDEN, Carsten

Sitzung Einordnung: Conference