

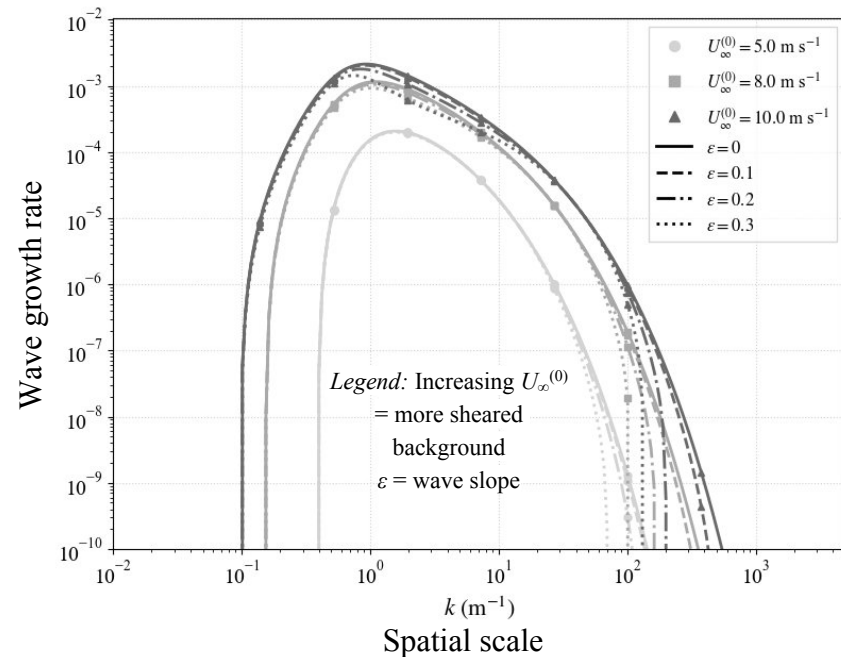
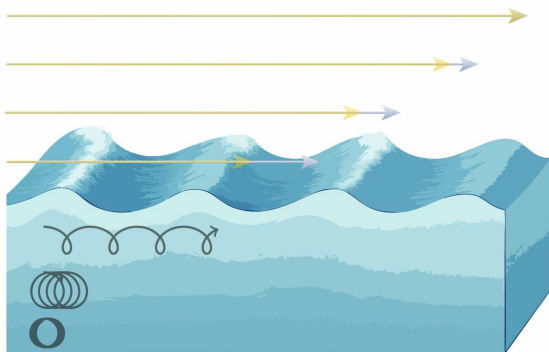
The role of Lagrangian drift in the generation of surface waves by wind

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Wind blowing over the ocean creates waves, thereby transferring momentum into the ocean.

Does the growing wave itself affect this momentum transfer?



We find that the growing wave **does** affect further wave growth; it affects the sheared background flow at the air-sea interface that is fundamental to the instability. Analytically accounting for this wave-induced mean flow can suppress integrated wave growth rates by 40% and provides a new explanation for the experimentally observed decrease with wave steepness.