



Internal wave attractors in perturbed domain or medium.

J. Hazewinkel (1,2,3), C Tsimitri (4), LRM Maas (2,4), and SB Dalziel (3)

(1) Centre for Mathematics and Computer science, MAS, Amsterdam, Netherlands (hazewink@nioz.nl), (2) Royal Netherlands Institution for Sea research, Texel, (3) Department of applied mathematics and theoretical physics, University Cambridge, (4) University Utrecht

Internal wave attractors have been observed in relatively simple domains and with linear stratifications. A natural question is whether attractors persist when the domain boundary or stratification is perturbed. We present laboratory experiments where the domain boundary is perturbed with a variety of side walls. Although scattering of the internal wave beams takes place, we find that the energy remains closely linked to the presence of the unperturbed attractor. Also a non-uniform stratification does not lead to disappearance of the attractor. These findings indicate that the attractor is stable under perturbations of domain and medium.