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Dispersion in harbour and coastal areas

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Experimental results of turbulent [U+FB02]ows in the sea surface near the coastline have been performed using both Lagrangian and Eulerian methods, [U+FB01]eld tests are presented using video recordings and velocity sensors[1]. The spatial and temporal resolution is limited by the measuring instruments, which results in "[U+FB01]ltering" out the very small scales. The experimental [U+FB01]eld-results obtained during the Vilanova i la geltru experiments [2], under reduced longshore currents and spilling/plunging breaking waves are compared with experiments performed at the Barcelona harbour. The [U+FB01]eld-measurements include several tests across the surf and enclosed zones. The measured turbulent properties are compared with macroturbulence characteristics and parameterisations [2,3]. Di[U+FB00]usion is measured and related to the local velocity spectra so that a generalized Richardson law may be used, Numerical models on turbulent dispersion for different spectra are compared with the measurements [4,5].

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