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## Empirical Parameterization of the Wind-induced Drift Currents

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Results of measurements of the drift currents induced by waves and wind at the wavy water surface are presented. The measurements were executed by means of surface floats in a large tank with the dimensions of 32.5x1x2 m<sup>3</sup>. Three cases were studied: (i) regular (narrow-band) mechanical waves; (ii) irregular (wide-band) mechanical waves; and (iii) wind waves.

The measured surface-drift currents induced by mechanical waves,  $U_d$ , are compared with the Stokes drift at the surface,  $U_{St}$ , estimated by the well-known formula with the integral over a wave spectrum. In this case, it was found that ratio  $U_d / U_{St}$  is varying in the range 0.5 – 0.93 and slightly growing with the decrease of wave steepness, having no visible dependence on the breaking intensity. These estimations are used to separate the wind-induced drift current,  $U_{dw}$ , from the total drift at the presence of wind.

In the case of wind waves, the wind-induced part of the surface drift,  $U_{dw}$ , is compared with the friction velocity,  $u_*$ . In our measurements, the ratio  $U_{dw} / u_*$  varies systematically in the range 0.65 – 1.2. Taking into account the percentage of wave breaking,  $Br$ , the wave age,  $A$ , and the wave steepness,  $\sigma = ak_p$ , it was found the parameterization:  $U_{dw} = (Br + \sigma A) u_*$ , which corresponds to the observations with the mean error less than 10%. For the first time, this ratio provides the dependence of the surface wind drift on the surface wave parameters.