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Turbulent wind waves over the water stream

M.V. Zavolgensky, P.B. Rutkevich

Space Research Institute (IKI) 117997, 84/32 Profsoyuznaya Str, Moscow, Russia / Phone $+7(495)\,333\text{-}52\text{-}12$ / Fax $+7(495)\,913\text{-}30\text{-}40$

Interaction of water stream and wind above leads to generation of waves on the water surface. The mechanism of wave formation may not only have gravitational origin, but also can have a turbulent nature, if the water and wind streams are not parallel. In this work we present results of theoretical model of wave formation, in particular we determine the propagation azimuth and growth rate of wave generation, the wavelength and velocity, wavelengths corresponding to the highest velocity, and other characteristics. We also report a new solution, responsible for formation of steady waves. These waves exist on the water surface and do not interact with conventional gravitational waves. Such waves are often observed during air photographic survey and usually called as Langmuir stripes.