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# The dynamic and structure wind waves during strong offshore wind from remote sensing data

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For the analysis, field measurements of turbulence characteristics in the layer 1 – 21 m above the sea surface and wind waves at the fetch of about 1 km were used under the wind from the shore having mountain terrain. In the case of the offshore breeze air flow is similar to a jet stream of stably stratified cold air over a warm sea with a maximum speed at a height of about 6 m. The resulting estimates of the height of internal boundary layer are of more than an order of magnitude smaller than traditional ones based only on the change in surface roughness between land and sea. The investigations of near surface wind fields features in internal reservoirs and various regions of seas during last years were conducted by optical complex. The structure of near surface wind fields, eddies, wind fronts, katabatic wind flows for ranges from hundreds meters to some tens kilometers were recorded and analyzed. Derived data of optical monitoring of water surface may serve for future investigations of near surface wind features.