

On Canonical Transformation for Water Waves

A.I. Dyachenko^{1,2*}, ***V.E. Zakharov***^{1,2,3}, ***D.I. Kachulin***²

¹*L.D. Landau Institute of Theoretical Physics RAS, Chernogolovka, Russia*

²*Novosibirsk State University, Novosibirsk, Russia*

³*P.N. Lebedev Physical Institute RAS, Moscow, Russia*

**email-address: alexd@itp.ac.ru*

Zakharov equation for gravity water waves implies cumbersome expression for canonical transformation from physical variables η and ψ to normal canonical variable b . In this article we show that this expression can be essentially simplified for the case when all waves move in the same direction. This transformation can be written in X-space instead of K-space in very simple form. Compact expression for canonical transformation is derived.

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