Abstract Submitted
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Asymptotic calculation of the velocity field for shallow- water waves ALEXANDER SACHS, SHIU-CHIN TSAI, University of Massachusetts Lowell — An approximate calculation is made of the velocity field for the propagation of a soliton on the surface of a fluid in a channel of constant depth, The time evolution equation for the stream function for a viscous fluid described by the Navier-Stokes equation is solved for large distances from the crest of the soliton. Boundary conditions at the bottom and at the free surface are included. The results for the velocity field are in fairly good agreement with the numerical calculation of C.J. Tang et al. (1)

(1) C.J. Tang,V.C. Patel and L. Landweber, J.Comut. Phys. **88**, 86 (1990)

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