Abstract View

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Statistical Properties of the Kinematics and Dynamics of Nonlinear Waves

C.C. Tung

North Carolina State University, Raleigh, NC 27695

N.E. Huang

NASA/GSFC/GLAS, Goddard Space Flight Center, Greenbelt, MD 20771

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ABSTRACT

The probability density function and the first three statistical moments of velocity, acceleration and pressure of a gravity wave field, for points in the vicinity of still water level, are obtained taking into consideration the effects of free surface fluctuation and using the second-order Stokes wave model. These results reduce to those obtained previously by Tung using linear wave theory.