1023-35-453 **Dambaru D Bhatta*** (bhattad@utpa.edu), 1201 W University Drive, The University of Texas-Pan American, Edinburg, TX 78541. *Asymptotic behavior of the integrand for free surface elevation in axisymmetric water wave problem.*

We present the asymptotic behavior of the integrand in the evaluation of the free surface elevation function arising in axisymmetric water wave problem. The initial and boundary value problem is presented in terms of velocity potential and free surface elevation functions. Derivation of analytical expressions for the velocity potential and free surface elevation is discussed in general. Zeroes of the integrand are computed considering an initial free surface elevation. Asymptotic results are presented for deep water case for the same free surface elevation function. (Received September 13, 2006)