Numerical Study of Solitary Wave Solution to the BBM Equation

H. Kalisch¹, T-N. Nguyen², and <u>H. Y. Nguyen³</u>

Abstract: Solitary waves at the surface of water, which solution to the Benjamin-Bona-Mahony (BBM) equation are studied numerically by using a spectral method. Various cases of collision between two solitary waves of elevation, depression or mixed are performed. The phase-shift and dispersive wavetrain due to these interactions are tabulated and compared.

 ^{1,2} Department of Mathematics University of Bergen Johannes Brunsgate 12
5008 Bergen, Norway Henrik.Kalisch@math.uib.no, Nguyet.Nguyen@math.uib.no

³ Department of Applied Mathematics and Social Sciences (MASS) Haute Bretagne, Place du Recteur H. Le Moal, CS 24307 35043 Rennes Cedex, France hai-yen.nguyen@uhb.fr