Turkish Journal of Physics

🔍 [Keywords](#)
🔍 [Authors](#)

Multiple Scales Method for a Matrix KdV Equation

Mehmet Naci ÖZER
Department of Mathematics, Faculty of Arts and Science
University of Osmangazi, 26480 Eskişehir-TURKEY
e-mail: mnozer@fen.ogu.edu.tr

Abstract: In this paper the method of multiple scales is used to derive an integrable matrix non-linear Schrödinger equation (MNLS) as an amplitude equation from the Matrix Korteweg-de Vries equation (MKdV) associated with symmetric spaces. Then the integrability of the MNLS equation is deduced by the derivation of the spectral problem for the MNLS equation from the spectral problem for the MKdV equation.

@

phys@tubitak.gov.tr

[Scientific Journals Home Page](#)